The Great Grid Upgrade

Sea Link

Sea Link

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Generic Quantitative Risk Assessment - Friston

May 2024

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Mott MacDonald
St Vincent Plaza
319 St Vincent Street
Glasgow G2 5LD
United Kingdom

T +44 (0)141 222 4500
mottmac.com

Sea Link FEED

Generic Quantitative Risk Assessment - Friston

May 2024

Mott MacDonald Limited. Registered in England and Wales no. 1243967.
Registered office: Mott MacDonald House, 8-10 Sydenham Road, Croydon CR0 2EE, United Kingdom

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Executive summary

Aspect	Details
Site Name	Sea Link, Friston
Site Location	The project area is located in Suffolk, between Saxmundham and Aldeburgh, and runs adjacent to several smaller villages including Friston.
Proposed Development	The proposed development includes: ● A new converter station and substation near Friston; ● High Voltage Alternating Current (HVAC) cable to connect the converter station to the substation; ● High Voltage Direct Current (HVDC) cables to connect the converter station to marine HVDC cable; ● A series of permanent access routes for the construction of the scheme; ● Other ancillary works including pylon modification; ● A series of construction compounds along the length of the scheme in support of construction; ● Drainage infrastructure. Note not all of the elements of the proposed development are included in the scope of this report. This report looks at the risk to sensitive receptors from the HVDC cable route and converter station.
Report Objectives	● Summarise available geo-environmental information from the project specific ground investigation at Friston, Suffolk for the HVDC route and Converter Station. ● Revise the existing Conceptual Site Model (CSM) included in the Sea Link Friston: Preliminary Risk Assessment [1] using this ground investigation information. ● Produce a Quantitative Risk Assessment, detailing if pollutant linkages are present and assess the risk to receptors. ● Determine the following development steps for the Scheme with respect to the geo-environmental setting of the proposed development.
Ground Investigation (GI) Summary	A site-specific ground investigation was undertaken in 2023 by Structural Soils Ltd and comprised: ● 12 No. Cable percussive boreholes; ● 26 No. Machine dug trial pits; ● Installations for groundwater monitoring, including installation of automatic data loggers (divers) to monitor long-term groundwater levels; ● Geotechnical laboratory testing on soils; ● Chemical laboratory testing on soils and groundwater; ● Groundwater monitoring.
Ground and Groundwater Conditions	The ground encountered beneath the proposed site generally comprises the following strata (recorded proven thickness in brackets) sequence listed from generally shallower to deeper strata: ● Made Ground (0.28->0.95m); ● Topsoil (0.25-0.60m); ● Alluvium (1.1-2.3m); ● Lowestoft Formation – Diamicton (0.6-9.0m); ● Lowestoft Formation – Sand and Gravel (2.28-9.7m); ● Crag Group (>12.75-20.15m); ● London Clay Formation (>8.05m).
Geo-environmental Conclusions	● There are no exceedances of human health screening criteria and marginal exceedances of Environmental Quality Standards (EQS) and UK drinking water standards of heavy metals and inorganics; ● The risk to human health has been assessed as low to very low risk;

Aspect	Details
	● The risk to the built environment has been assessed low risk; ● The risk to the water environment is assessed as low to moderate/low risk.
Geo-environmental Recommendations	● Based on the information gathered through the ground investigation, remediation is not considered to be required; ● Further ground investigation will be required should the design proposals change; ● Construction and maintenance workers should use site-specific Risk Assessments and Method Statements (RAMS) and a Construction Environmental Management Plan (CEMP), including the use of appropriate personal protective equipment (PPE) at all times during construction; ● Construction drawings indicate the relocation of soil stockpiles during construction. The re-use of this material may require additional risk assessment depending on the quantity of material to be reused, which may include detailed modelling, further sampling and validation testing to ensure suitability for re-use of material that will ensure hazardous substances are not introduced to the groundwater at unacceptable concentrations. If the quantity of soil exceeds the environmental permit exemption limit, reuse of material should be done under a materials management plan or re-use of waste environment permit, which should be in place prior to the commencement of excavated material movement. ● Dewatering during construction works is anticipated to be required. Extracted groundwater may not be suitable for discharge to surface waters without treatment – water may need to be treated before discharge or taken offsite for disposal; discussions should be held with the Environment Agency. ● Preliminary waste classification using HazWasteOnline™ indicates that the on-site soils would likely be classified as non-hazardous.. It is recommended that a waste contractor is contacted to discuss appropriate options for disposal if construction works require removal of soils from site. Further waste screening and waste acceptance criteria (WAC) testing may be required dependent on the location and quantity of soils to be disposed of from the site. ● In the event that unexpected contamination be encountered during the construction phase, works will cease and the local planning authority will be advised. The extent of any contamination will be investigated, and an action plan will be developed. This will be communicated to the local planning authority prior to works commencing. ● The UXO risk across the site has been assessed as medium to medium/high risk by SafeLane Global. Prior to any shallow or deep excavations during construction and/or further ground investigation, they recommend: – UXO Safety and awareness briefing; – Site Specific Safety Instructions Training Course; – Non-intrusive (NI) magnetometer survey (greenfield areas only) (for shallow intrusive works); – Target investigation (required as a follow-on from NI magnetometer survey for shallow intrusive works); – Search and Clear; – Explosive Ordnance Disposal (EOD) Engineer Watching Brief (for brownfield areas unsuitable for NI magnetometer survey); – Intrusive Magnetometer Survey of pile/borehole positions (for deep intrusive activities); – Additional offshore works recommendations. ● Further archaeological investigation may be necessary during construction works subject to consultation with the Local Authority or heritage specialist.

1 Introduction

1.1 Description of the project

Mott MacDonald Limited have been commissioned by National Grid to act as FEED consultants on the Sea Link project. This includes supporting National Grid with the delivery through to the Development Consents Order (DCO) submission, decision, and input to the Works Information for the Main Works Tender to the construction phase of the project. The project involves a 2GW high voltage direct current (HVDC) link between Friston, in Suffolk, and Richborough, in Kent, which forms part of the solution to resolve the operational boundary issues in the South Coast, East Coast and London Areas.

For the connection in Friston, the Sea Link FEED Friston: Preliminary Risk Assessment (PRA) (ref: SEAL-MMD-SEAL-ENG-REG-0056) [1] identified two potential high voltage direct current (HVDC) routes for the substation connection. The southern route was identified for selection and is brought forward into this report.

This report represents the Generic Quantitative Risk Assessment (GQRA) for the Sea Link connection in Friston, Suffolk. The scope of the report is defined in Section 1.3. A separate GQRA (*ref: SEAL-MMD-SEAL-ENG-REP-0691*) has been produced for Richborough, Kent.

1.2 Development proposals

A site location plan is presented in Figure 1.1. The development proposal at Friston, Suffolk is summarised below:

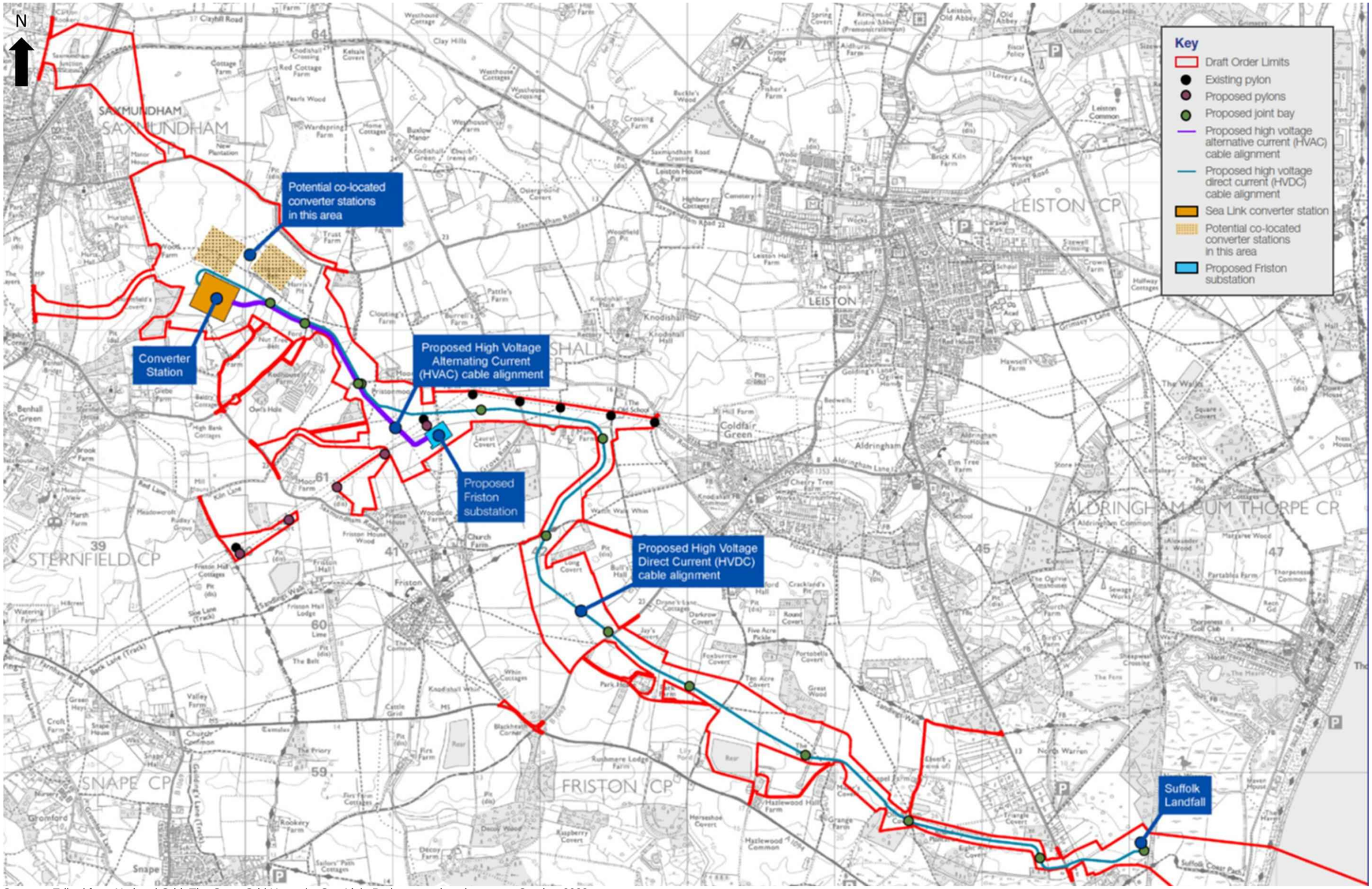
- A Converter Station (2GW, up to 26m tall plus external equipment such as lightning protection etc.) is proposed to the south-east of Saxmundham, with potential co-location options located in close proximity.
- A High Voltage Alternating Current (HVAC) underground cable of c. 1.7km in length and High Voltage Direct Current (HVDC) underground cable of c. 10km in length.
  - The HVAC cable route connects from the proposed Converter Station to Friston Substation;
  - The HVDC cable route connects from the proposed Converter Station to the off-shore marine HVDC cable adjacent to the coastline, c. 900m on-shore;
  - A construction swathe associated with the cable construction, ranging between 40m to 112m wide during construction dependent on the options for future ducts / cables;
  - Selected areas of the cable route require Horizontal Directional Drilling, including for example the eastern end of the scheme for the HVDC offshore connection.
- A series of permanent access routes for construction of the scheme including the Converter Station, as well as access routes for Friston Substation and access for construction along the length of the cable route. One permanent access route option for the Converter Station includes interface with the railway north of Saxmundham which is anticipated via a bridge, and another crosses the River Fromus south-east of Saxmundham.
- Other ancillary works including pylon modification.
- A series of construction compounds located along the length of the scheme in support of construction. It should be noted that the site boundary of the Draft Order is wider in some areas to allow for flexibility of the exact compound locations.
- Drainage infrastructure including permanent attenuation ponds associated with the proposed works;

- Substation Connection – HVAC connection to the proposed new Friston Substation.

The project proposals for Sea Link have been developed as a standalone project but include for opportunities to co-locate infrastructure for up to two other projects at the converter station location, along the cable corridors and at the landfall location.

It should be noted that this report considers works associated with the converter station, HVDC cable route and connection to the proposed Friston Substation only and does not cover works associated with the substation itself, which is outside the scope of this report. In addition, only on-shore elements of the work are covered in this report, with off-shore elements assessed by others.

Figure 1.1: Site Location Plan from Sea Link – Project Proposal – National Grid (2023)



Source: Edited from National Grid, The Great Grid Upgrade, Sea Link, Project overview document, October 2023

1.3 Scope and objectives of the report

The report summarises the geo-environmental information gained from a ground investigation between 11 September and 13 October 2023, conducted by Structural Soils Limited. The areas for assessment involve the HVDC cable route and the Converter Station. The proposed substation will not be designed and built by Mott MacDonald. Therefore, information collated in the Sea Link FEED PRA [1] relevant to the substation is evaluated and reproduced in this report where it is considered that this information will assist the reader or help inform the risk assessment for either the cable route or the Converter Station.

This report does not discuss geotechnical risks as these are summarised in the Sea Link Friston: Ground Investigation Report [2].

This report does not assess the geo-environmental conditions at the substation, nor the boreholes designated as “Red Penguin” at the coastal boundary (refer to Section 2). Offshore geo-environmental conditions are not discussed in this report.

The report has the following objectives:

- Summarise available geo-environmental information from the ground investigation at Friston, Suffolk for the HVDC route and Converter Station;
- Revise the existing Conceptual Site Model (CSM) included in the Sea Link Friston: Preliminary Risk Assessment (ref: SEAL-MMD-SEAL-ENG-REG-0056) [1] using this ground investigation information;
- Produce a Quantitative Risk Assessment, detailing if pollutant linkages are present and assess the risk to receptors;
- Make recommendations for further work or mitigation needed in respect of geo-environmental risks associated with the proposed development.

1.4 Sources of information

The following principal sources of information have been used in the production of this GQRA. A complete list of sources used is provided at the end of the document.

- Sea Link Feed: Geotechnical and Geo-environmental Preliminary Risk Assessment (Desk Study) Report – Friston (Document ref: SEAL-MMD-ENG-REG-0056), written by Mott MacDonald
- Factual Report on Ground Investigation, Suffolk Onshore Cable Link , written by Structural Soils Limited [3]
- Groundsure Insight Report [4]

1.5 Report limitations

Groundsure data [4] was obtained for the area within the cable swathe, referred to as “on site”, based on the development proposal current at the time of writing. As part of the Groundsure search, data is obtained for the surrounding area between 250m and 2km from the site boundary depending on the data set. Should the development proposals change during design development, the recommendations and conclusions of this report may need to be revised.

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To the extent that this document is informed by information obtained in previous or recent ground investigations, persons using or relying on it should recognise that any such investigation can examine only a fraction of the subsurface conditions. In any ground investigation there remains a risk that pockets or “hotspots” of contamination or other ground hazards may not be identified, because investigations are necessarily based on sampling at localised points. Certain indicators or evidence of hazardous substances or conditions may have been outside the portion of the subsurface investigated or monitored, and thus may not have been identified or their full significance appreciated.

Mott MacDonald Limited is not insured for, and therefore will not undertake surveys to identify asbestos or provide any guidance on the treatment of asbestos, or similarly for toxic mould. Should the presence of asbestos or toxic mould be suspected during the course of the study, Mott MacDonald Limited would recommend the appointment of a specialist contractor to address the issue and would not provide advice on risk or remedial measures.

2 Site Setting

This section presents a high-level summary of the key existing information available at the site. Reference should be made to the Mott MacDonald Limited Geotechnical and Geo-environmental Preliminary Risk Assessment (SEAL-MMD-SEAL-ENG-REG-0056) [1] for full details, as well as a series of drawings prepared in production with this report, detailed below:

- Mott MacDonald Limited, National Grid (Sea Link) Order, Ground Investigation – Exploratory hole location plan including superficial geology, historical and current land-uses. Sheet 1 to 10, Drawing reference: SEAL-MMD-SEAL-ENG-DWG-0685;
- Mott MacDonald Limited, National Grid (Sea Link) Order, Ground Investigation – Exploratory hole location plan including bedrock geology, historical and current land-uses Drawing reference: SEAL-MMD-SEAL-ENG-DWG-0685.

As stated in Section 1.3, this GQRA does not assess each proposed asset for the Sea Link Friston connection. The geo-environmental conditions at the substation are not included within Mott MacDonalds scope. Two boreholes are located to the east of the site adjacent to Thorpe Road between Aldeburgh and Thorpness on the inland connection for the cable, these are designated as “Red Penguin” boreholes and discussed in the Red Penguin consultant’s report.

2.1 Site Information

2.1.1 Site location

The project area is located in Suffolk, between Saxmundham and Aldeburgh and runs adjacent to several smaller villages along its length e.g. Sternfield, Friston, Coldfair Green.

2.1.2 Site description and current land uses

The following details for the Converter Station and cable route as summarised individually across Tables 2.1 and 2.2 below.

Table 2.1: Site setting – Friston Substation Connection

Aspect	Detail
Site name	Friston – Convertor Station (CS)
Site location	It is proposed to locate the CS approximately 1.3km southeast of Saxmundham and 850m northeast of Sternfield, between the B1119 and B1122 roads, approximately 9km north-west of Aldeburgh, Suffolk.
Local authority	East Suffolk
Co-ordinates (British National Grid)	639800E 262300N (approximate centre)
Site area	6.5 hectares
Access and Security	The site area is located within an area of agricultural fields which are generally bounded by hedges, ditches, and access tracks. Access routes are required to be constructed to access the site, several routes are proposed including links to the B1119 to the north and/or west.
Land Use and Ground Cover	The site comprises arable agricultural land. The northern and eastern extents of the site are bounded by wooded areas – Bloomfield’s Covert, Ash Belt, Harris’s Belt and Nut Tree Belt. A further wooded area, Leekhill Plantation, a reservoir and a series of ponds are located to the south along with Hill Farm.

Aspect	Detail
Utilities and Services	Buried utilities or overhead power lines are not anticipated in the vicinity of the site based on available utility mapping, however, it is likely that field drains are present given the agricultural land use.
Surrounding Area	The site lies within agricultural land bounded by two farms (Wood Farm and Hill Farm) the B1119 bounds the north and west sides of the site which passes approximately in a roughly east-west direction approximately 600m to the north and in a roughly north south direction 1km to the west. The B1121 is located approximately 700m to the south. A small reservoir is located approximately 200m to the southwest.

Table 2.2: Site setting – Cable Route Corridor

Aspect	Detail
Site name	Friston – Cable Route Corridor
Site location	It is proposed to locate the CS approximately 1.4km south of Coldfair Green between the B1069 and B1122 roads, approximately 3km north-west of Aldeburgh, Suffolk.
Local authority	East Suffolk
Co-ordinates (British National Grid)	646064E 258516N HDD reception at start of onshore HVDC cable route 641485E 261389N approximate end of HVAC cable route/ Friston substation
Length and width of corridor	The cable route corridor comprises a standard 90m wide construction swathe with localised widening at locations of proposed construction compounds, and is approximately 12km in length.
Land Use and Ground Cover	The majority of the cable route corridor is located within rural agricultural land crossing two B roads and a number of unclassified roads. Much of the area between the landfall cable route sections and the coastline has an environmental designation including designated Special Protection Area (SPA) and Sites of Special Scientific Interest (SSSI). There are several areas of woodland located within the construction swathe and Aldeburgh Golf Course located within the eastern extent of the selected HVDC cable route option. The cable route is located within 100m of an ancient woodland approximately 2.5km from the eastern start of the route and the construction swathe is adjacent to an ancient woodland to the south of the Friston Substation location.
Utilities and Services	Several utilities pass across the cable route alignments including but not limited to: • HVAC cable route: – UK Power Networks and Northumbrian Water at chainage (Ch.) Ch.2800 – BT Openreach at Ch.2620 – UK Power Networks at Ch.930 and Ch.715 and the temporary construction compound • Southern HVDC cable route option: – Northumbrian Water at Ch.580 – Cadent gas at Ch.580 – Virgin Media at Ch.580

2.2 Topography

The site is situated within lowland glacial terrain close to the coast. The ground levels rise from 0 metres above ordnance datum (mAOD) at the beach to around +15m AOD at Friston in the centre of the scheme, and up to approximately +25mAOD at the Converter Station at Saxmundham, although the overall terrain is gently undulating including crossing of river valleys such as the River Fromus at the western extent of the scheme.

A detailed summary of the topographic information across the site is presented within the Sea Link FEED PRA [1], with a high-level summary included below:

- At the western extent of the scheme, ground levels rise from c. 9 – 14m AOD in the valley of the River Fromus gently to the Saxmundham Converter Station site, located at approximately 23 – 25m AOD.
- Ground levels are undulating within the glacial terrain across the length of the scheme with levels between c.11m AOD up to maximum levels of c. 23m AOD across the length of the cable routes and are approximately 16 – 18m AOD at the Friston Substation connection in the centre of the site.
- The ground levels begin to gently decrease towards the coast north-west of Aldeburgh, down to 0m AOD at the coast.

2.3 Site history

The site history for the proposed development is divided between the Converter Station and HVDC southern route option. Table 2.3 and Table 2.4 are reproduced and edited from the Sea Link FEED PRA [1] to reflect the extended cable route and new converter station location to the northwest of Friston. The collated site histories are within 500m of the proposed development.

Table 2.3: Converter Station: Historical Developments Summary

Map (scale)	On-site	Off-site
1885 (1:10,560)	The site comprises agricultural land.	The surrounding area comprises wooded areas and agricultural land use with farm buildings including Hill Farm and an area labelled Bloomfields Covert. and residential properties. An old sand pit is located approximately 200m to the south of the site. Small ponds are located in the vicinity of the converter station. A wooded area labelled Harris's Pit is located 300m to the east of the site.
1897 (1:10,560)	No significant changes.	No significant changes identified.
1905 (1:10,560)	No significant changes identified.	No significant changes identified.
1957 (1:10,000)	No significant changes identified.	No significant changes identified.
2000-2014 (aerial imagery)	No significant changes identified.	No significant changes identified.
2019 (aerial imagery)	No significant changes identified.	Reservoir present approximately 200m to the southwest of the site
2021-2023 (aerial imagery)	No significant changes identified.	No significant changes identified.

Table 2.4: Cable Route Corridor: Historical Developments Summary

Map (scale)	On-site	Off-site
1882 – 1883 (1:10,560) 1882 (1:2,500)	The route largely comprises agricultural land.	The surrounding largely comprises agricultural land and wooded areas including several farms. Several ponds and pits are located along the extent of the route. An old sand pit is located c. 200m to the south of the route and c. 650m from the western extent of the route.

Map (scale)	On-site	Off-site
		Harris's Pit is located c. 100m north of the route and c. 750m from the western extent of the route. Sand pits and ponds located near Hazlewood Hall, c.350m south of the site, c.6.5km for the western extent of the route.
1903 (1:10,560) 1926 (1:10,560) 1927 (1:2,500)	No significant changes identified.	Crag pit located at c. 300m from the eastern side of the cable route and c. 700m to the south of the cable route, with residential properties nearby - Sand pit recorded at Hazlewood Hall, c. 2.6km from the eastern side of the cable route start and c. 300m to the south of the cable route.
1938 (1:10,560) 1947 (1:10,560) 1953 (1:10,560) 1945 – 1965 (1:25,000)	No significant changes identified.	No significant changes identified.
1949 – 1970 (1:10,560) 1971(1:10,560) 1975 (1:2,500) 1975 (1:10,000)	No significant changes identified.	No significant changes identified.
1995 (1:2,500) 2000 (aerial imagery) 2001 (1:10,000) 2010 (1:10,000)	No significant changes identified.	Large reservoir present adjacent to Hazlewood Hall Farm c. 2.6km from the eastern side of the cable route start and c. 150m to the south of the cable route
2021 (aerial imagery) 2022 (1:10,000)	No significant changes identified.	Reservoir present approximately 200m to the southwest of the site of the western extent of the cable route.

2.4 Summary of the Preliminary Risk Assessment

2.4.1 Previous ground investigation, SPR

The Sea Link Friston – PRA [1] includes a summary of previous ground investigation conducted by Scottish Power Renewables (SPR) in 2021 in the vicinity of the proposed new substation connection.

A high-level review of the SPR ground investigation indicated that:

- Soil samples had low concentrations of metals and inorganic compounds, below the commercial Generic Assessment Criteria (GAC) of 1% soil organic matter (SOM).
- No asbestos was detected in any of the soil samples.
- Total Petroleum Hydrocarbons (TPH) and Polycyclic Aromatic Hydrocarbons (PAH) concentrations were marginally above laboratory detection limits in a small number of trial pit samples.
- No Volatile Organic Compounds (VOCs) were detected in any sample.
- Two of the groundwater samples in the Lowestoft Formation and Crag had concentrations of PAHs marginally above detection limits, and one sample had TPH concentrations slightly above the detection limits.

- Waste Acceptance Criteria (WAC) testing indicated that the bulk of the tested material would be classified as stable non-reactive hazardous waste, likely suitable for disposal in a hazardous waste landfill due to measured pH (above six). One sample (WS004 at 1.00m bgl) would be suitable for a hazardous waste landfill due to measured total organic carbon concentrations.
- The derived ground gas Characteristic Situation (CS) for the area, based on CIRIA C665 guidance, was CS-1, very low risk.

2.4.2 The Conceptual Site Model

The Sea Link FEED PRA [1] concludes with a CSM summarising potential geo-environmental risks.

Table 2.5 provides a brief summary of the CSM. For further information, refer to the Preliminary Risk Assessment [1].

Table 2.5: Summary of the Sea Link Friston PRA CSM

Receptor	Contaminant sources	Risk (greatest reported)
Construction workers	Potentially contaminated: On-site soils (from regional agricultural land use, railway land and historical ground workings – the infilling of pits); Off-site soils (from historical ground workings and industrial land uses – the nearby Sizewell Nuclear Power Station); Groundwater from on- and off-site land uses. Potential ground gas from infilled pits and Made Ground.	Low
Future site users		Low
Groundwater in Alluvium and Lowestoft Formation (Secondary A, Secondary B and Secondary Undifferentiated classifications)		Moderate/low
Groundwater in the Crag Group (Principal aquifer)		Moderate/low
Construction materials and/or the built environment		Low
Above- and below-ground water features		Moderate/low

The PRA concluded that there is not considered to be a significant source of contamination at the proposed Converter Station, nor the majority of the cable route corridor(s) or the substation connection [1].

The most notable sources of potential contamination include historical clay/sand pits (which may contain contaminated fill material) and historical railway lines,. Limited contamination sources are present in discrete areas along the cable corridor routes – these areas were suggested for targeting with ground investigation.

This CSM will be refined using site-specific ground investigation data in Section 6.7.

3 Environmental Records

3.1 Published geology

The British Geological Survey (BGS) 1:50,000 Series Solid and Drift geological map, sheet 191 Saxmundham [5], indicates the site to be predominantly underlain by the Lowestoft Formation (Till) which overlies the Crag Group. Minor areas of Alluvium can be expected along the River Fromus near Saxmundham.

Plans presenting the superficial geology in relation to the proposed cable route corridor, convertor station, substation locations and ground investigation location plans are presented in SEAL-MMD-SEAL-ENG-DWG-0685 (Figure A.1) with the bedrock geology presented on drawings SEAL-MMD-SEAL-ENG-DWG-0685 (Figure A.2), to provide a generalised view of the entire study area. The BGS GeoIndex [6] confirms the underlying geological profile shown on the geological map.

Descriptions of the stratum expected to be present at the site given by the BGS Lexicon of Named Rock Units [7] are presented in Table 3.1. Tidal Flat Deposits and Marine Beach Deposits have been included in the table, however; these deposits are only expected within the vicinity of the offshore HDD section at landfall and are not indicated to be present within the onshore cable route corridor.

Table 3.1: BGS Lexicon of named rock units

Stratum	Age Range	Parent Unit	Description
Tidal Flat Deposits (TFD)	Quaternary Period	Intertidal Deposits (ITD)	Normally consolidated soft silty clay, with layers of peat, sand and a basal gravel. A stronger, desiccated surface zone is sometimes present.
Marine Beach Deposits (MBD)	Holocene Epoch	N/A	Shingle, sand, silt and clay, may be bedded or chaotic. Beach deposits may be in the form of dunes, sheets or banks, in association with the marine environment
Alluvium (ALV)	Holocene Epoch	Fluvial Deposits (FLUV)	Clay, silt, sand and gravel. Unconsolidated detrital material deposited by a river, stream or other body of running water. Normally soft to firm consolidated, compressible silty clay, but can contain layers of silt, sand, peat and basal gravel.
Lowestoft Formation (LOFT)	Anglian Stage	Albion Glacigenic Group (ALBI)	An extensive sheet of chalky till, together with outwash sands and gravels, silts and clays. The till is characterised by its chalk and flint content. The carbonate content of the till matrix is about 30%. Extremely variable thickness, up to 60m in buried valleys.
Chillesford Clay Member (CFC)	Pre-Pastonian/ Baventian Stage	Norwich Crag Formation (NCG)	Mainly unfossiliferous pale grey silty clay with rare sand laminae. Overlies the Chillesford Church Sand Member, locally oversteps onto Coralline Crag Formation and Red Crag Formation. 6m thick.
Chillesford Church Sand Member (CFB)	Antian/ Bramertonian Stage	Norwich Crag Formation (NCG)	Well sorted fine to medium grained micaceous buff to pale brown, quartz sand. Overlies the Red Crag Formation. Up to 13m thick, local to parts of Suffolk.
Crag Group – Sand (CRAG)	Pliocene Epoch to Pleistocene Epoch	Great Britain Superficial Deposits Supergroup (GBG)	Sands, gravel, silts and clays. The sands are characteristically dark green from glauconitic but weathers bright orange with haematite 'iron pans'. The gravels in the lower part are almost entirely composed of flint. Those higher up include up to 10% of quartzite from the Midlands, igneous rocks from Wales, and chert from the Upper Greensand of south-east England. Up to 70m onshore.
Coralline Crag Formation (CCG)	Pliocene Epoch to Gelasian Age	Crag Group (CRAG)	Carbonate rich skeletal sands. Thickness approximately 25m maximum onshore.

Stratum	Age Range	Parent Unit	Description
Thames Group (THAM)	Ypresian Age	N/A	Mainly silty clays and clays, some sandy or gravelly, with some silts, sands, gravels and calcareous mudstones. Up to 150m thick.

3.1.1 Encountered geology

The PRA summarises BGS GeoIndex boreholes and boreholes from Scottish Power Renewables (SPR) Factual Report on Ground Investigation EA1N Onshore GI [8], The SPR ground investigation locations were located mostly to the north of the proposed cable route, a small area of overlap with the proposed development and the SPR ground investigation occurs approximately 1.2 to the east of the Friston Substation.

The following sections summarise the existing boreholes identified on the BGS GeoIndex and SPR where considered relevant in vicinity of the site.

3.1.1.1 Converter Station

No existing boreholes, either historical BGS or Client provided are available within 1km of the proposed Saxmundham Converter Station site.

3.1.1.2 HVAC/ HVDC cable route corridor

Very few BGS exploratory holes are available along the alignment of the HVAC/ HVDC cable route, only 3 no. boreholes (TM45NE10, TM45SW5 and TM46SW41) have been identified using the BGS GeoIndex (a large number of holes are drilled for wells and therefore do not contain ground profile information and are of limited use). There is one SPR trial pit (TP103) carried out as part of the SPR investigation located along the cable route approximately 1.2km east of the Friston Substation.

There are no existing holes located between the coastline and Leiston Road, approximately 1.3km inland, however; geological mapping indicates Tidal Flat Deposits to be present within the majority of the offshore HDD section, with a small section having no superficial cover before the Lowestoft Formation is encountered. For the remainder of the route up to the convertor station, the following ground profile presented in Table 3.2 is anticipated based on the available existing information. This should be treated with caution due to limited information available from the historical records, and due to the changes in ground level observed across the site.

Table 3.2: Anticipated Ground Profile from BGS Boreholes –HVDC cable route

Stratum	Depth to top m bgl	Thickness m
At Leiston Rd (ch 600) - TM45NE10		
CRAG	0	19.1
THAM	19.1	>1.8
Approximately 1km west of Leiston Rd (ch 1800) – TM45NW5		
Topsoil (TS)	0	0.6
LOFT	0.6	13.11
CRAG	13.71	>38.1
Approximately 1.2km east of the Friston Substation – SPR TP103		
TS	0	0.4
LOFT	0.4	>2.8
North of Friston substation - TM46SW41		
LOFT	0	26.5
CRAG	26.5	>5.5

The Crag has been described in the TM45NE10 borehole log as dark yellowish orange fine to medium grained SAND, moderately well sorted with rare 10mm thick silty clay layers and shell fragments below 3.1m bgl to a depth of 4.5m overlying dark yellowish orange slightly glauconitic calcarenite becoming greenish grey with abundant glauconite.The LOFT has been described in TP103 as orangish brown silty slightly gravelly fine to coarse SAND, gravel is angular to subrounded fine to coarse flint to 0.8m bgl overlying yellowish brown silty slightly gravelly fine to medium SAND, gravel is angular to subangular fine to coarse flint and extremely weak sandstone.

3.2 Hydrology and hydrogeology

3.2.1 Hydrology

3.2.1.1 Converter station

No surface water features have been identified within the construction swathe in the vicinity of the convertor station.

A surface water reservoir is located immediately west of the construction swathe near Bloomfields Covert.

3.2.1.2 Cable route corridor

Three lakes are located to the north of the HVDC cable route option between approximate Ch 1500 and Ch 1900, the closest being around 60m from the construction swathe. The nearest and furthest are marked as swimming lakes on OS mapping, and the third is referenced as a pond in the Groundsure historical surface ground workings section [4].

A surface water reservoir is located approximately 40m south of the construction swathe at Hazelwood Hill Farm.

A drainage ditch is located approximately 30m north of the HVDC cable route option at the eastern end of the route which also extends from the southern end of the construction swathe at Ch 0 and connects to the area of man-made drained coastal ground to the east.

The Hundred River is located to the north of the HVDC cable, at its closest point it is located c. 330m away from the HVDC cable route. The River Alde is located to the south of the HVDC cable route, at its closest it is located c. 1.3km away from the HVDC cable route.

3.2.1.3 Construction Access Route

One of the Construction access routes extends west from the converter station towards the B1121 and includes a crossing of the River Fromus, within the construction swathe is a field drain.

3.2.2 Hydrogeology

Details of the aquifers and the location within the construction swathe as obtained from the Groundsure report [9] and DEFRA MAGIC map [10].

The Superficial aquifers vary along the construction swathe, and correspond to the underlying superficial geology. Where the Lowestoft Formation is a sand and gravel, the aquifer is a Secondary A aquifer, where the Lowestoft Formation is Glacial Till the Secondary Undifferentiated Aquifer (the superficial geology is illustrated in Figure A.1).

The bedrock aquifers along the construction swathe are designated a Principal Aquifer (CRAG). The groundwater flow direction in the CRAG aquifer is interpreted as towards the southeast from groundwater mapping [11].

The Environment Agency classification [12] for the different types of aquifers is as follows:

- Secondary A – Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formally classified as minor aquifers.
- Secondary B – Predominantly lower permeability layers which may store/ yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers.
- Secondary Undifferentiated – Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type.

3.2.2.1 Source Protection Zones

The Groundsure report indicates that the HVDC cable route, the Converter Station, the HVAC cable route and the substation connection all lie within Zone 3, Total Catchment of a groundwater Source Protection Zone (SPZ).

3.3 Sensitive land uses

The eastern section of the cable route is in an area of outstanding natural beauty. Adjacent to the proposed development but not within the proposed development there are SSSIs, Special Protection Areas (SPA) and Ancient Woodland. The SSSIs and SPAs are located to the east of the cable route.

3.4 Coal mining

The Groundsure report [4] indicates the following:

- There are no non-mining records or mining cavities identified within 1000m of the construction swathe.
- There are no records on site of the site being in a Johnson Poole and Bloomer (JPB) mining area and no records on site of coal mining.
- There are no records on site of gypsum or kaolin and ball clay extraction or tin mining on site.

3.5 Unexploded ordnance

Following a Preliminary Unexploded Ordnance (UXO) Risk Assessment a detailed UXO risk assessment was commissioned.

Two detailed UXO Risk assessment were carried out by SafeLane Global Ltd. The two reports cover the site area, Report reference: 9758-1 RA dated 23 June 2023 [13] covers the cable route up to the Friston Substation and Report Reference: 9758-1 RA dated 23 June 2023 [14] covers the area west of the Friston substation (including access routes, converter station and HVDC and HVAC cable routes).

The detailed risk assessment assessed the risk from UXO as Medium Risk to Medium/High Risk for shallow and deep intrusive works. Recommended risk mitigation included:

- UXO Safety and awareness briefing;
- Site Specific Safety Instructions Training Course;

- Non-intrusive (NI) magnetometer survey (greenfield areas only) (for shallow intrusive works);
- Target investigation (required as a follow-on from NI magnetometer survey for shallow intrusive works);
- Search and Clear;
- Explosive Ordnance Disposal (EOD) Engineer Watching Brief (for brownfield areas unsuitable for NI magnetometer survey);
- Intrusive Magnetometer Survey of pile/borehole positions (for deep intrusive activities);
- Additional offshore works recommendations are included in [14].

It should be noted the high-risk areas are in areas outside of the scope of this report (the northern proposed cable route and coastal areas).

3.6 Radon

The site is in an area where <1% of dwellings exceed the Radon Action Level – no radon protection measures are required as reported in the Groundsure report [4].

4 Ground investigation

4.1 Programme

In 2023, a ground investigation was undertaken between 11 September and 13 October by Structural Soils Limited, summarised in the following Factual Report:

- SEA Link FEED – Suffolk Onshore Cable Link, Factual Report on Ground Investigation, Report No: 56835-01 (03), April 2024 [3]

The locations of the exploratory holes are presented in Figure A.1 (Appendix A). This included:

- 12 No. Cable percussive boreholes to maximum depths of approximately 30m bgl;
- 26 No. Machine dug trial pits undertaken to maximum depths of approximately 4m bgl;
- Installations for groundwater monitoring, including installation of automatic data loggers (divers) to monitor long-term groundwater levels;
- Geotechnical laboratory testing on soils;
- Chemical laboratory testing on soils and groundwater;
- Establishing ground locations of exploratory holes;
- Factual reporting to BS EN 1997-2-2007 incorporating corrigendum June 2010;
- Groundwater monitoring for a period of approximately two months following the completion of fieldwork, followed by 12 months of monitoring with automatic data divers in selected exploratory holes. Monitoring of data divers is in progress at the time of writing.

Geotechnical information is summarised in a separate Ground Investigation Report (GIR) written by Mott MacDonald [2].

4.2 Exploratory works

4.2.1 Geo-environmental Sampling and Laboratory Testing

As part of the ground investigation at the site, targeted geo-environmental testing was conducted in accordance with established procedures including BS10175 (2011+A2:2017) Code of Practice for the Investigation of Potentially Contaminated Sites, BS5930 (2015 +A1:2020) and Environment Agency Land Contamination Risk Management (LCRM) guidance, to determine the presence and degree of contamination. Geo-environmental soil samples were generally obtained at depths of 0.2m, 0.5m, 1.0m and 1.5m, and at 1m intervals though any deeper Made Ground and at observations of visual and olfactory evidence of contamination.

Post fieldwork groundwater levels were recorded in monitoring wells on five visits on the 19 and 20 October 2023, 1 and 2 November, 16 and 17 November and 30 November and 1 December 2023 and 12 and 13 December 2023. Groundwater sampling was undertaken on the 1 and 16 November and 12 December 2023. An additional groundwater sampling round was undertaken on boreholes F22-BH310 and F22-BH502A on 30 April 2024.

Table 4.1 summarises the geo-environmental testing as part of the ground investigation.

Table 4.1: Geo-environmental Testing Suites

Medium	Testing suite	Analysis number	Determinants / parameters
Soil	Mott MacDonald Comprehensive Soil Suite	31	Arsenic (As), asbestos (screen and quantification), barium (Ba), beryllium (Be), boron (B), cadmium (Cd), chromium (Cr, trivalent

Medium	Testing suite	Analysis number	Determinants / parameters
			and hexavalent), copper (Cu), cyanide (free and total), fraction of organic carbon (FOC), lead (Pb), manganese (Mn), mercury (Hg, elemental, inorganic and methyl), molybdenum (Mb), nickel (Ni), pH, phenols (total), polycyclic aromatic hydrocarbons (PAHs; USEPA 16 speciated), selenium (Se), sulphate (water soluble), sulphur (total), vanadium (V), zinc (Zn), soil organic matter (SOM), total organic Carbon (TOC)
	Total Petroleum Hydrocarbons Criteria Working Group soil suite (TPH-CWG)	4	TPH-CWG, Aliphatic and Aromatic split, including Benzene, Toluene, Ethylbenzene and Xylenes (BTEX)
	Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) soil suite	1	BTEX
	Polychlorinated Biphenyls (PCBs)	4	PCB 12 Congeners (WHO Standard): 77, 167, 169, 189, 81, 105, 114, 118, 123, 126, 156, 157
	Pesticides	13	Cypermethrin, Diazinon, Dimethoate, Linuron, Mecoprop, Permethrin, Alachlor, Atrazine, Carbaryl, Chlorfenvinphos, Chlorpyrifos-ethyl, Aldrin, Dieldrin, Endrin, Isodrin, DDT, DDE, DDD, Diuron, Alpha-Endosulfan, Beta-Endosulfan, Isoproturon, Simazine, Trifluralin, Bentazone, Fentitrothion, Malathion, Dichlorvos, Alpha-Hexachlorocyclohexanes (including Lindane), Beta-Hexachlorocyclohexanes (including Lindane), Gamma-Hexachlorocyclohexanes (including Lindane)
Soil leachate	Mott MacDonald Comprehensive Leachate Suite	4	As, ammoniacal nitrogen as N, Antimony (Sb), B, Ba, Be, Calcium (Ca), Cd, Cl, Cr (III and VI), Cu, cyanide (free and complex), fluoride, Fe, Pb, Mg, Mn, Hg, Mb, Ni, pH, phenols (speciated), Se, sulphate, V, Zn
Groundwater	Mott MacDonald Comprehensive Groundwater Suite	7	As, ammoniacal nitrogen as N, Antimony (Sb), B, Ba, Be, Calcium (Ca), Cd, Chloride (Cl), Cr (III and VI), Cu, cyanide (free and complex), fluoride, hardness ($CaCO_3$), Fe, Pb, Mg, Mn, Hg, Mb, Ni, nitrate as NO_3, pH, phenols (speciated), Se, sodium (Na), sulphate, Sulphur, TPH-CWG V, Zn, Total Dissolved Solids, PAHs (USEPA 16 speciated), VOCs, alkalinity
Waste Acceptance Criteria (WAC)	Comprehensive WAC	16	Leachate Suite and Solid Waste Suite.

Note the number of tests completed in Table 4.1 varies from the number of samples in Table 5 of the Structural Soils factual report as the samples from the Red Penguin boreholes are not included and two additional groundwater samples were scheduled after the Structural Soils factual report was issued.

4.3 Post Fieldwork Installation Monitoring

Groundwater monitoring standpipes (50mm diameter) were installed in six boreholes across the Scheme. A summary of the installation is provided in Table 4.2, the location of the boreholes is illustrated in Figure A.1 (Appendix A).

Due to the variable geology which is shown to underly the site (Table 3.1), a brief description of target strata is provided.

Table 4.2: Groundwater installation summary

Borehole ID	Ground Elevation (mAOD)	Response Zone (m bgl)	Target strata (brief description)	Tests scheduled (dates)
F22-BH306	25.24	11.00 – 14.00 [11.24 - 14.24 mAOD]	Crag Group (dense to very dense slightly gravelly clayey fine to medium sand)	None (borehole dry at each monitoring round)
F22-BH308	24.14	15.00 – 21.00 [3.14 – 8.14 mAOD]	Crag Group (very dense slightly gravelly clayey fine to medium sand)	01/11/2023 16/11/2023 12/12/2023
F22-BH309	24.58	4.00 – 8.00 [18.58 – 20.58 mAOD]	Lowestoft Formation (very stiff slightly gravelly slightly sandy silty clay)	None (borehole dry at each monitoring round)
F22-BH310	24.79	25.00 – 28.00 [0.21 to 3.21 metres **below** ordnance datum]	Crag Group (medium dense to dense slightly gravelly fine to medium sand)	12/12/23 01/05/2024
F22-BH502A	7.85	5.00 – 10.00 [2.85mAOD to 1.25 metres **below** ordnance datum]	Crag Group (dense slightly gravelly clayey fine to medium sand)	12/12/23 01/05/2024

4.3.1 Obstructions

Table 4.3 summarises the re-location of holes due to unsuitable ground conditions.

Table 4.3: Relocation of exploratory positions during the ground investigation

Hole ID	Termination depth (m bgl)	Reason for re-location
F22-BH502A	25.55	At F22-BH502, the shelling tool shoe detached into the hole at 4.50m bgl. As it was not retrievable, F22-BH502 was terminated at 4.50m bgl and F22-BH502A was drilled.
F22-TP222A	4.00	There was potential identification of flint and arrowheads of archaeological importance at F22-TP222, 0.45m bgl. Hence, F22-TP222 was terminated and F22-TP222A was excavated.
F22-TP513A	1.20	F22-TP513 collapsed at surface at 1.30m bgl. F22-TP513A reached target depth.

4.3.2 Visual and/or olfactory evidence of potential contamination

Asbestos was not visually detected in any sample during the ground investigation.

A hydrocarbon odour with staining was noted in Made Ground at F22-BH501 between 0.55 and 0.90m bgl. Whilst fainter, the hydrocarbon odour was also identified in the underlying Alluvium (0.90 to 1.50m bgl).

Made Ground was noted in ten exploratory holes, including two of the re-located holes (RedP-BH1A and F22-TP222A). Inert Made Ground materials (ceramics, glass, brick and a plastic fragment) were generally noted within the Made Ground deposits. However, these materials were not found in each Made Ground location.

4.3.3 Deviating samples

Deviating samples were noted by the testing laboratory. Deviating determinands of soil samples are summarised in Table 4.4.

Table 4.4: Deviation summary in soil samples

BH ID	Depth (m bgl)	Determinands which are deviating	Explanation
F22-TP222A	0.50	Pesticides: Bentazone, cypermethrin, linuron, alachlor, carbaryl, diuron, isoproturon, MCPP (mecoprop)	Holding time exceedance due to no sampling time provided.
F22-TP314	0.20		
F22-TP316	0.50		

Note: Potentially only deviating due to sampling dates not being provided to sub-contracted lab.

Deviating samples in groundwater determinands are summarised in Table 4.5.

Table 4.5: Deviation summary in groundwater samples

BH ID	Monitoring round and sample date	Determinands which are deviating	Explanation
F22-BH308	Monitoring Round 1: Sampled 01/11/2023	Hexavalent chromium	Holding time exceedance
F22-BH308	Monitoring Round 2: Sampled 16/11/2023	Hexavalent chromium, cyanide (free and total), nitrate, phenols (speciated HPLC), PAH (16MS)	Holding time exceedance
F22-BH308	Monitoring Round 3: Sampled 13/12/2023	Phenols (speciated HPLC)	Holding time exceedance
F22-BH310	Monitoring Round 3: Sampled 13/12/2023		
F22-BH502A	Monitoring Round 3: Sampled 13/12/2023		

5 Ground Conditions

This section of the report discusses the deposits likely to be encountered on site. The assessment is based on the geological unit allocations at the time of ground investigation but may be subject to review and amendment during future stages of design and completion of additional site investigation.

This section provides a summary of the encountered ground conditions at the Converter Station, access routes and substation connection. The information summarised below is covered in more detail in the Sea Link: Friston GIR produced by Mott MacDonald [2].

Discussion of ground aggressivity is provided in Section 6 of the GIR.

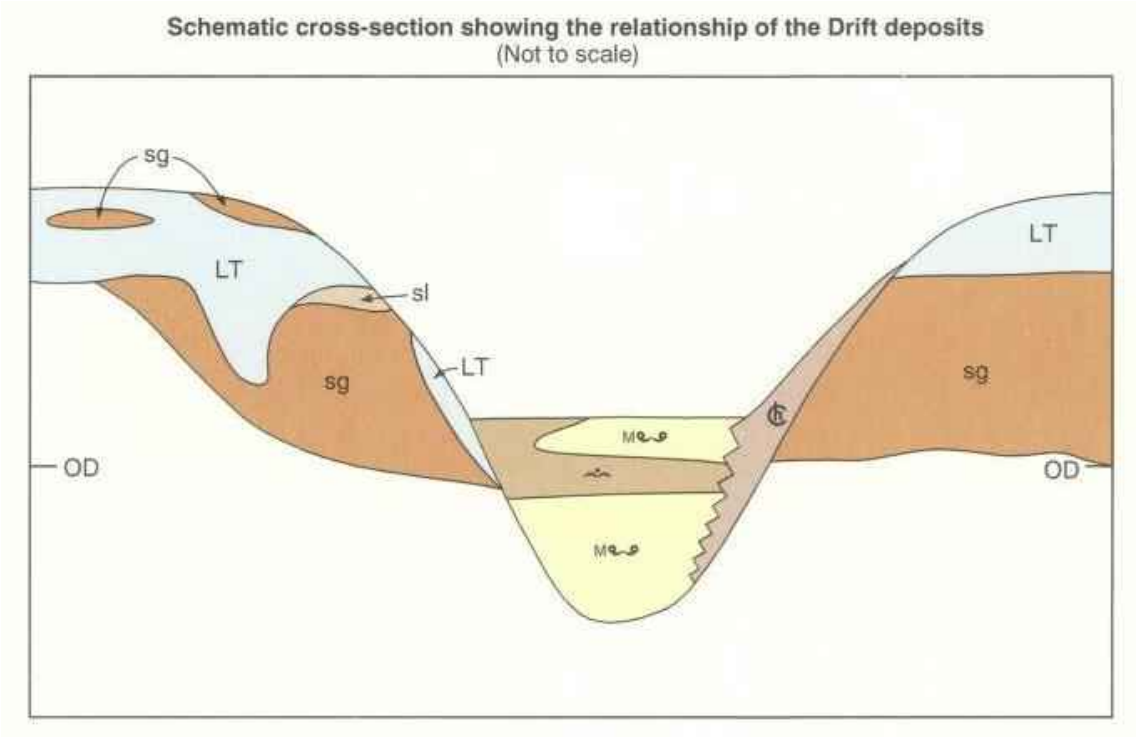
5.1 Ground Models From Site Specific Investigation

A series of ground models have been prepared summarising the ground conditions across the site footprint. These have been separated due to their spatial relationship with the anticipated geology and the proposed works, with a plan showing these in Figure 5.2 and Figure 5.3.

It should be noted that some of the ground models including the substation connection and its access road is based on engineering log information from the 2021 GI undertaken for SPR by Structural Soils Limited.

A conceptual relationship between the superficial deposits in vicinity of the Haul Road and Converter Station from west to east is shown indicatively in Figure 5.1 to provide context to later parts of this section and report.

Figure 5.1: Sketch of superficial deposit relationship



Source: Annotated schematic interrelations of drift deposits from British Geological Survey, 1:50,000 Series, Sheet 191, Saxmundham. LT = Lowestoft Till, sg = sands and gravels, sl = silt, Ch = Head, M = Alluvium

Figure 5.2: Spatial relationship of ground models – Sheet 1

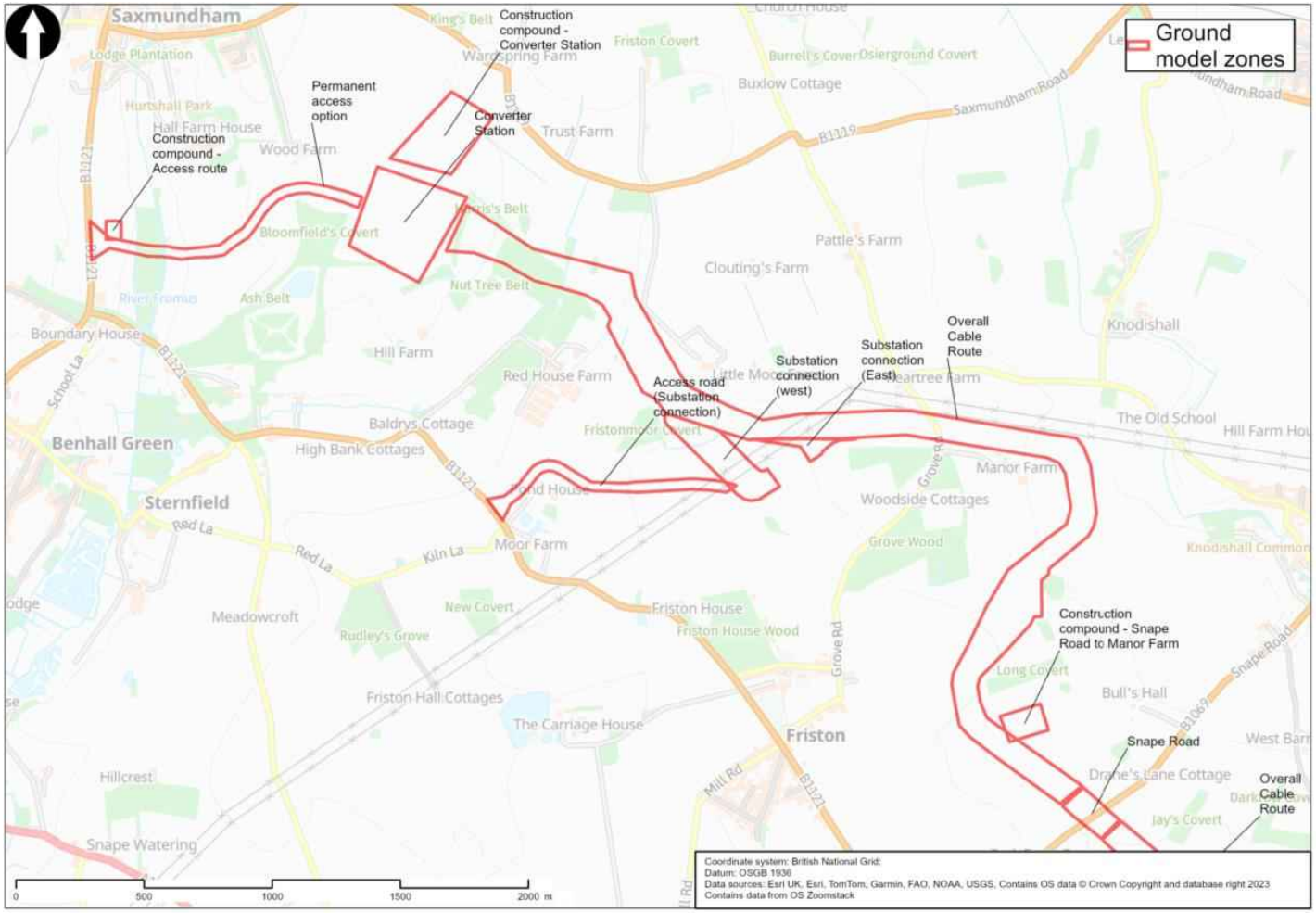
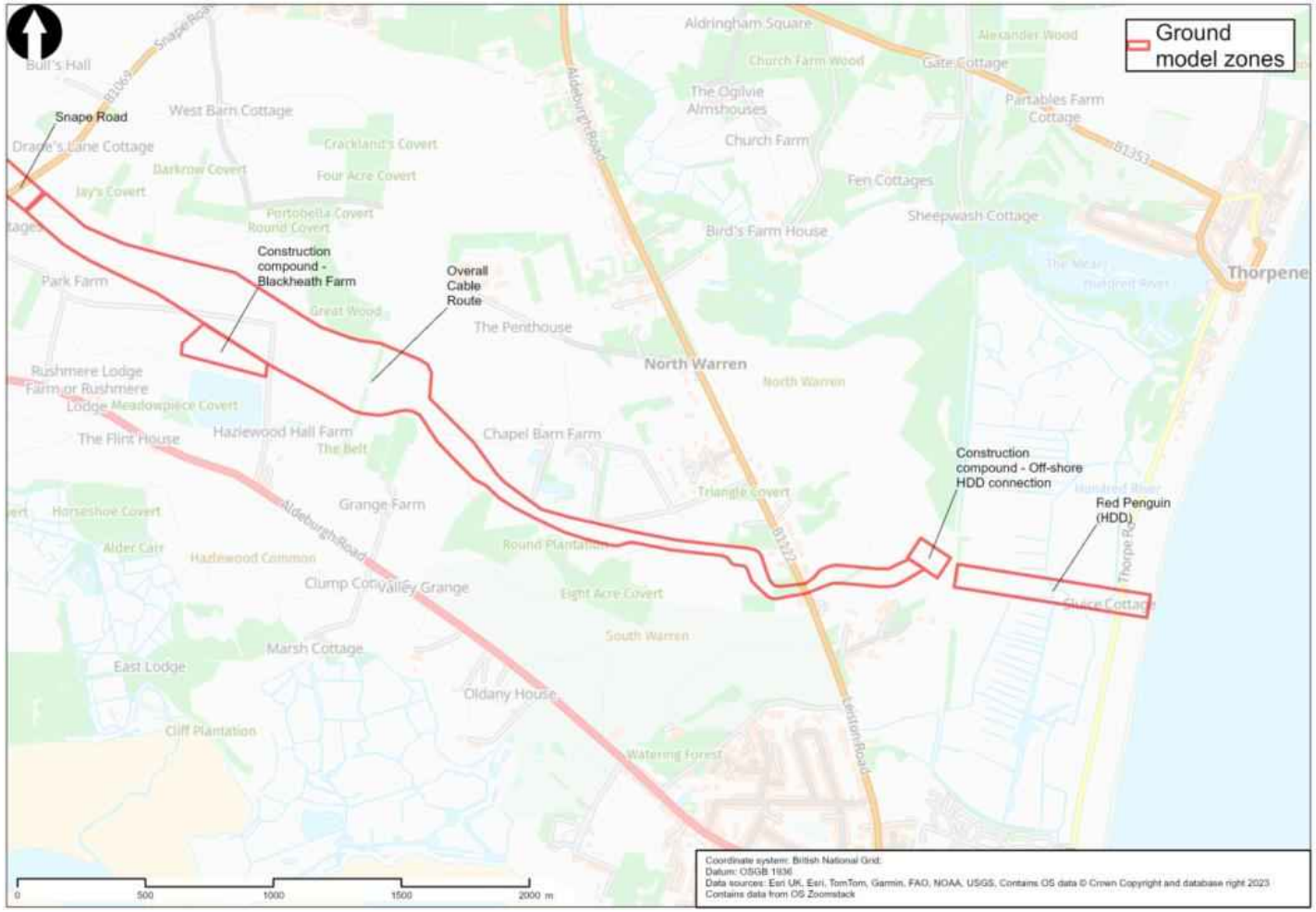


Figure 5.3: Spatial relationship of ground models – Sheet 2



5.1.1 Converter Station

Table 5.1 presents the ground model for the Converter Station.

Table 5.1: Ground model – Converter Station

Stratum	Top depth (m bgl) [m AOD]	Bottom depth (m bgl) [m AOD]	Thickness (m)
Topsoil Crops overlying: Soft to firm dark brown to brown slightly gravelly slightly sandy CLAY /to slightly clayey slightly sandy slightly gravelly SILT with occasional rootlets (>3mm diameter). Gravel is angular to rounded coarse flint, sandstone, mudstone.	0.0 [25.24 – 23.15]	0.25 – 0.35 [24.94 – 22.85]	0.25 – 0.35
Lowestoft Formation (Diamicton) Soft / firm to (generally becoming) stiff to very stiff locally friable yellowish brown becoming bluish brown to dark grey with depth slightly sandy slightly to gravelly CLAY with low cobble content (in one instance slightly sandy SILT). Pockets / lenses of fine to coarse / clayey or silty sand, rare fragments of lignite or pockets of silt. Rootlets present (<3mm diameter) throughout. Gravel is angular to rounded fine to coarse quartz, Chalk and flint. Cobbles are flint and Chalk. Occasional beds of orangish brown clayey gravelly to very gravelly fine to coarse SAND or sandy angular to rounded GRAVEL of flint and Chalk with a low cobble content of flint, between 0.25 – 0.55m in thickness. (BH310, TP311, TP313). Rare boulder sized fragments of Chalk encountered (e.g. TP310).	0.25 – 0.35 [24.94 – 22.85]	8.20 – 9.30 [16.21 – 15.28]	7.90 – 9.00
Lowestoft Formation (Sand and Gravel) Dense to very dense yellowish or orangish brown mottled dark grey / white slightly gravelly clayey fine to coarse SAND. Gravel is angular to rounded fine to medium flint and chalk with rare shell fragments noted in BH306. In BH307, a 3.5m thick bed of very stiff slightly gravelly slightly sandy silty CLAY was recorded at 13m bgl, suggesting local variation in this unit and potential to encounter cohesive beds.	8.2 – 9.3 [16.21 – 15.28]	13.0 – 19.0 (>25[1]) [9.09 – 5.58, (>0.59[1)]]	4.7 – 9.7 (>16.8[1])
Crag Group Dense to very dense orangish brown or dark grey mottled orangish grey slightly to gravelly clayey or silty fine to coarse SAND with rare to occasional shell fragments and flasers of dark grey clay / soft grey silty nodules. Gravel is angular to rounded fine to medium flint. Locally encountered as very stiff thinly laminated grey to dark grey sandy silty CLAY with rare shell fragments (thickness not proven in BH309), and a bed 0.20m thick medium strong orangish brown moderately weathered fine to coarse SANDSTONE with iron straining – recovered as gravel / cobble sized fragments recorded in BH310.	15.7 – 19.0 [9.09 – 5.58]	>28.45** [< -3.66]	>12.75*

* Thickness not proven

** Base not proven

1 – In BH308 it was not possible to differentiate between the Lowestoft Formation Sand and Gravel and underlying Crag Group based on available information, unit thickness should therefore be treated with caution

5.1.2 Permanent Access routes

An overall summary of the ground conditions along proposed access routes are summarised across Table 5.2 and Table 5.3.

The geology along the access roads across the site vary due to changes in the ground conditions across the sites. An indicative cross-section through the geological conditions is presented in Figure 5.1 for the Converter Station access option, and a sketch geological cross-section of encountered geology presented in Section 5.2.

Table 5.2: Ground model – Permanent access option (Converter Station)

Stratum	Top depth (m bgl)	Bottom depth (m bgl)	Thickness (m)
Topsoil Grass overlying soft / friable brown mottled orangish brown slightly gravelly sandy CLAY with occasional to frequent rootlets (>4mm), or slightly gravelly fine to medium SAND. Gravel is subangular to subrounded fine to medium flint, Chalk and limestone. Rare plastic fragments.	0 – 0.30	0.30 – 0.55	0.30 - 0.55
Made Ground [interpreted to be reworked Alluvium] Soft black mottled orangish brown slightly gravelly sandy CLAY with occasional glass fragments and hydrocarbon odour / staining [Encountered in BH501 only]	0.55	0.90	0.45
Alluvium Very loose to loose dark grey mottled black or greyish brown mottled orange slightly clayey slightly gravelly fine to coarse SAND with a slight hydrocarbon odour. Clay is soft. Occasional shell fragments. Becoming medium dense with depth in BH501. [Encountered in vicinity of the River Fromus only – BH501, BH502 and BH502A]	0.20 – 0.90	2.00 – 2.50	1.10 – 2.30
Lowestoft Formation (Sand and Gravel) Orange to yellowish brown slightly gravelly slightly to silty or clayey fine to coarse SAND. Local low cobble content of angular flint. Occasional roots and rootlets <15mm at the top of the unit. Gravel is angular to subrounded fine to coarse flint. [TP513, TP514, TP515]]	0.30 – 3.70	>4.0	>1.95
Lowestoft Formation (Diamicton) Firm orangish brown becoming stiff to very stiff friable bluish grey slightly sandy gravelly (locally silty to very silty) CLAY with a low cobble content. Occasional bands of orangish brown to grey fine to medium sand near its top, and rare bands of brown SILT at approximately 3.6m bgl (e.g. TP518). Gravel is angular to rounded fine to coarse flint, Chalk, sandstone, limestone. Cobbles are angular to rounded flint and Chalk. In TP511, encountered as: Orangish brown slightly gravelly silty fine SAND. Occasional pockets to frequent lenses of soft greenish brown mottled orangish brown sandy clay. Gravel is angular to subrounded fine to coarse quartz and flint – 2.8m thickness. Overlying Soft to firm friable greenish brown mottled orangish brown slightly gravelly slightly sandy CLAY with frequent lenses of greenish brown clayey fine sand and occasional pockets of dark orangish brown silt. Gravel is angular to subrounded Chalk and flint (0.9m thickness, not proven) Not encountered in proximity of River Fromus [TP511, TP515, TP516, TP518]	0.30	>4.0	3.4 – >3.7
Crag Group Dense multicolour slightly sandy angular to subrounded fine to coarse GRAVEL of flint. Sand is fine to coarse (2.1m thick, BH501 only) Medium dense to very dense orangish brown becoming grey slightly gravelly fine to coarse locally silty or clayey SAND. Occasional flasers of brown/ bluish grey clay, and rare to frequent shell fragments Gravel is	2.0 – 2.30	17.5 – 18.2	15.5 – 15.9

Stratum	Top depth (m bgl)	Bottom depth (m bgl)	Thickness (m)
angular to subrounded fine flint, with occasional to frequent shell fragments below 2.5 – 7m bgl. Occasional gravel of siltstone between 12 – 13m bgl (BH501) [Encountered in vicinity of the River Fromus only – BH501, BH502 and BH502A]			
London Clay Formation Stiff to very stiff bluish grey slightly sandy silty CLAY with occasional shell fragments. Sand is fine. [Encountered in vicinity of the River Fromus only – BH501 and BH502A]	17.5 – 18.2	>25.55**	>8.05*

* Thickness not proven
** Base not proven

Note: No investigation undertaken along the majority of access option 2. To be treated with caution, and subject to confirmation through any additional investigation at the next design stage.

The ground conditions for the Friston Substation access route (presented in Table 5.3) are summarised from a series of trial pits undertaken as part of the SPR GI. The following exploratory holes have been used to summarise the ground model:

- TP001 to TP007, TP012, TP013
- BH011, BH024

In TP012, the Diamicton appeared to underly beds of the sand and gravel in the Lowestoft Formation, hence potential for local variation in the top depth of the Diamicton deposit even within areas where it may not be mapped (likely due to variable depositional environment as presented in Figure 5.1). Where the Diamicton was recorded at surface it was shown to be thin towards its margins, as expected based on the BGS mapping.

Table 5.3: Ground model – Friston substation access route

Stratum	Top depth (m bgl)	Bottom depth (m bgl)	Thickness (m)
Made Ground Firm dark brown slightly sandy slightly gravelly CLAY with frequent roots/rootlets. Gravel is subangular to rounded fine to coarse flint, chert and brick fragments [Encountered in TP007 and TP013 only]	0	0.28 – 0.30	0.28 – 0.30
Topsoil Firm to stiff brown organic slightly gravelly sandy SILT, to slightly gravelly slightly to very clayey or silty fine to medium SAND. Gravel is angular to subangular fine to coarse flint and chalk	0	0.40 – 0.58	0.40 – 0.58
Lowestoft Formation - Diamicton Firm to very stiff grey / dark bluish grey mottled orange grey mottled red slightly sandy slightly to very gravelly silty CLAY with a low cobble content. Locally with lenses or pockets or orangish brown clayey or silty sand. Gravel is subangular to rounded fine to coarse Chalk and flint. Cobbles are subangular flint, chert and Chalk Occasional beds of orangish brown silty fine to coarse SAND (up to 0.40m in thickness) at the top of the unit. [Not recorded in TP006]	0.40 – 0.50 Locally up to 2.6	1.0 – >3.5*	0.60 – >3.0**
Lowestoft Formation – Sand and Gravel Dense orangish to yellowish brown mottled grey slightly clayey or slightly silty locally slightly gravelly fine to coarse SAND with occasional distinct	0.30 – 0.58	2.60 – >3.5**	2.28 – 3.3 (>3.1*)

Stratum	Top depth (m bgl)	Bottom depth (m bgl)	Thickness (m)
gravel bands (e.g. between 0.9 – 1.2m bgl in TP0012), and occasional silt/clay bands. [Encountered in TP006, TP012, TP013, BH011, BH024]			
Crag Group Very dense light orangish brown very gravelly slightly silty fine to coarse SAND. Gravel is subangular to rounded fine to medium flint. [Encountered in BH024 only]	3.5	>15.0**	>11.5*

* Thickness not proven
** Base not proven

Groundwater was only recorded in the Crag Group in BH024 between depths of 9.1 – 10.5m bgl.

5.1.3 Cable route

This section describes the ground models reviewed for the length of the cable route, including the substation connection. The location of these are presented in Figure 5.2 and Figure 5.3.

Several other exploratory holes are located along the length of the route however have been presented in a separate ground model due to the nature of the proposed works and engineering descriptions of the materials, including the Snape Road where material was encountered with a greater granular content (see Section 5.1.5.2) and for individual construction compounds.

5.1.3.1 Cable route

The exploratory holes reviewed for the ground model along the cable route comprise both GI undertaken from 2023 as well as from the SPR investigation in 2021 from the centre of the site in vicinity of the substation (see Section 2.3, Figure 4.1 and Appendix A). A summary of the exploratory holes reviewed along the cable route are presented below.

The ground conditions expected across the length of the cable route vary as it transects several different glacial units along the length of the site, summarised in Table 5.4. These are discussed later in the report where the models have been separated based on expected geology for the purpose of design.

It should be noted that the glacial deposits are variable in nature (see Figure 5.1), with both cohesive and granular materials being recorded throughout the site. Due to the variability over short spatial distances, the exploratory holes from the SPR GI have been summarised separately. The following exploratory holes are reviewed in this section:

2023 GI:

- TP203 – TP205
- TP218
- TP220 – TP222A
- TP229

SPR GI (2021)

- TP056 – TP062
- WS01

In a few instances where the Lowestoft Formation – Sand and Gravel is recorded on the BGS mapping, sandy silts were present near surface. It is currently unclear but it is possible this could be associated with the clay and silt member of the formation (despite not being recorded

on the BGS mapping), or this could potentially be related to variability within the sand and gravel.

Table 5.4: Ground model – cable route – 2023 GI

Stratum	Top depth (m bgl)	Bottom depth (m bgl)	Thickness (m)
Made Ground Brown slightly to gravelly silty fine to medium SAND with frequent rootlets. Gravel is angular to rounded fine to coarse flint, Chalk, mudstone, sandstone, occasional brick and pottery fragments. Suspected worked flints and arrow heads within TP222. Encountered in TP218, TP222 and TP222A only	0	0.20 – 0.95*	0.20 – >0.95**
Topsoil Grass or crops overlying brown slightly gravelly clayey or silty fine SAND locally with frequent rootlets and described as organic. Gravel is angular to subrounded fine to coarse quartz, flint and Chalk.	0	0.20 – 0.60	0.30 – 0.50
Lowestoft Formation – Diamicton At its top in TP203, WS001 Orangish brown slightly to gravelly silty fine SAND. Gravel is angular to subangular fine to coarse flint 0.50 – 0.75m in thickness Firm becoming stiff friable light greenish brown mottled orangish brown, or dark orangish brown slightly gravelly slightly to sandy CLAY. Gravel is angular to subrounded fine to coarse flint and Chalk. TP203, TP218	0.30 – 3.70	>4.1*	>3.60**
Lowestoft Formation – Sand and Gravel General description Yellowish or orangish brown slightly to very gravelly slightly to clayey or silty to very silty fine to coarse SAND. Local low cobble content of angular flint. Gravel is subangular to subrounded coarse quartz/quartzite, flint, Chalk. and mudstone Locally recorded as: ● Soft friable orangish brown slightly gravelly sandy SILT (0.50m thickness at the top of the deposit in TP204) ● Firm to very stiff greenish brown mottled orangish brown slightly gravelly sandy silty CLAY. Gravel is angular to subangular fine to coarse flint. Occasional pockets of soft greenish brown silt. – 2.9m in thickness in TP204 / TP204A. ● Soft friable orangish brown slightly gravelly very sandy SILT of 3.4m thickness. Frequent lenses and pockets of firm friable greenish brown mottled orangish brown sandy CLAY. [TP218] TP204, TP218, TP220, TP222, TP222A	0.20 – 0.30	3.80 – >4.20*	3.50 – >3.90**
Possible Crag Group (Chillesford Church Clay Member) Stiff friable thinly laminated orangish brown mottled light grey and reddish brown slightly sandy silty CLAY with occasional iron staining. [Encountered in TP222A only]	3.80	>4.0*	>0.20**

* Thickness not proven
** Base not proven

Although the Diamicton is recorded on BGS mapping across the area where the 2021 GI was undertaken summarised below, it thins where it bisects the site (see Appendix A) and appears to be slightly more variable in nature than encountered in other areas of the site, with other units of the Lowestoft Formation also likely to be present in this area of the cable route. For this reason, the 2021 SPR GI has been summarised separately in Table 5.5.

Table 5.5: Ground model – cable route – 2021 SPR GI

Stratum	Top depth (m bgl)	Bottom depth (m bgl)	Thickness (m)
Topsoil Brown to dark brown slightly gravelly very silty fine to coarse SAND. Locally described as organic. Gravel is subangular to rounded fine to coarse flint	0.0	0.30 – 0.60	0.30 – 0.60
Lowestoft Formation – Diamicton Variable: At its top: ● Dark orange brown very silty slightly to gravelly fine to coarse SAND with rare thin bands of soft orange brown sandy clay – 0.90m to 1.6m in thickness Overlying ● Firm to stiff light brown to orangish brown slightly to sandy slightly gravelly CLAY with occasional thick bands of orange clayey slightly gravelly fine to coarse sand in TP058. Gravel is angular to rounded fine to coarse flint and Chalk – 0.90 – 1.0m in thickness [WS001, TP058 only]	0.30 – 0.45	2.25 – 2.90	1.65 – 2.60
Possible Lowestoft Formation – Silt and Clay Soft to firm orange brown slightly gravelly sandy SILT. Slightly organic in TP062. Gravel is subrounded to rounded medium to coarse flint. [TP059 and TP062 only]	0.50	1.10 – 1.20	0.60 – 0.70
Lowestoft Formation – Sand and Gravel Orangish brown slightly gravelly silty to very silty fine to coarse SAND. Occasional pockets of silt. Gravel is subangular to rounded fine to coarse flint. In TP060, a bed of 0.40m thickness described as stiff to very stiff grey mottled cream slightly sandy gravelly SILT with rare shell fragments is recorded, with gravel of angular to rounded fine to coarse flint and chalk. [TP056, TP057, TP059, TP060]	0.30 – 2.90	>3.70* - > 5.0*	>3.05**

* Thickness not proven
** Base not proven

5.1.3.2 Substation connection

Exploratory holes reviewed as part of the ground model for the substation connection are from the SPR investigation in 2021 (see Section 2.3, Figure 4.1). A summary of the exploratory holes reviewed in this area of the site are presented below, with the ground model shown in Table 5.6, with its extents shown in Figure 5.2.

- TP013, TP024 – TP026
- BH007, H011, BH025, BH026

The Diamicton thins towards its margins as shown on the BGS 1:50,000 mapping, and is absent in the western end of the substation connection, where the Lowestoft Formation – Sand and Gravel are encountered.

It should be noted that the engineering descriptions of the Lowestoft Formation Sand and Gravel and the Crag Group can be similar and they can sometimes be difficult to distinguish on the engineering logs.

Table 5.6: Ground Model – Substation Connection

Stratum	Top depth (m bgl)	Bottom depth (m bgl)	Thickness (m)
Topsoil Dark brown silty slightly gravelly sandy CLAY. Gravel is angular fine to coarse of flint, quartz and Chalk	0.0	0.28 – 0.40	0.28 – 0.40
Made Ground Firm to stiff dark brown slightly gravelly CLAY with frequent roots / rootlets. Gravel is subangular to subrounded fine to medium flint, chert and brick fragments [Encountered in TP013, BH025 only]	0.0	0.30 – 0.58	0.30 – 0.58
Lowestoft Formation – Diamicton Firm / Stiff to very stiff light to dark greyish or greenish brown becoming dark grey (locally mottled orange) slightly sandy slightly gravelly CLAY. Gravel is angular fine to medium Chalk. Occasional beds of orangish brown very silty sand up to 0.10m in thickness. [TP010, TP025, TP026, BH007, BH025, BH026]	0.28 – 0.58	1.50 – 3.90	1.20 – 3.17 (>3.5*)
Lowestoft Formation – Sand and Gravel Loose to dense light or dark orangish/ yellowish brown mottled yellow (locally slightly gravelly) slightly to silty or clayey fine to coarse SAND. Gravel is angular to rounded fine to coarse flint / sandstone. [TP010, TP013, TP024, BH007, BH025, BH026]	0.30 – 1.50	<3.50** – 8.50	2.20 – 3.60 >2.7*
Crag Group Medium to very dense yellowish brown to dark orangish brown slightly silty slightly gravelly fine SAND. Gravel is subangular to rounded fine to medium flint, siltstone / sandstone [BH007, BH025, BH026]	5.70 – 8.50	15.34*	>9.44**

* Thickness not proven
** Base not proven

Groundwater was encountered in the Crag Group in BH025 at approximately 13.5m bgl.

5.1.3.3 Snape Road

Table 5.7 presents the ground conditions encountered in vicinity of the Snape Road, as well as the Snape Road to Manor Farm construction compound. The Lowestoft Formation (Diamicton) is recorded on the BGS mapping, though the material encountered was variable and contained a greater granular content and sand and gravel beds than encountered elsewhere across the wider site, such as the Converter Station. This may suggest spatial variability within the deposit, which is anticipated due to its formation environment.

Table 5.7: Ground Model – Snape Road

Stratum	Top depth (m bgl)	Bottom depth (m bgl)	Thickness (m)
Made Ground / Topsoil Grass overlying brown slightly gravelly clayey to very clayey fine to coarse SAND with a rare plastic fragment. Gravel is angular to subrounded fine to coarse quartz and flint [Plastic fragment encountered in TP511 only]	0	0.30 – 0.50	0.30 – 0.50
Lowestoft Formation – Sand and Gravel Orangish brown slightly gravelly silty fine SAND. Locally clayey with pockets of soft greenish brown mottled orangish brown sandy CLAY. Gravel is angular to subrounded fine to coarse quartz and flint.	0.30 – 0.50	1.10 – 3.1	0.60 – 2.80

Stratum	Top depth (m bgl)	Bottom depth (m bgl)	Thickness (m)
Lowestoft Formation – Diamicton Soft to firm (locally becoming stiff) friable greenish brown mottled orangish brown, or orangish brown slightly gravelly slightly to sandy CLAY. Frequent lenses of greenish brown clayey fine sand, occasional pockets of dark orangish brown silt [TP511], and sand bands noted throughout [BH203]. Gravel is angular to subrounded Chalk and flint.	1.10 – 3.10	>4.0* – 6.0	>0.90* – 3.50
Possible Lowestoft Formation – Sand and Gravel Medium dense orangish brown slightly gravelly fine to coarse SAND. Gravel is subangular to rounded fine to medium flint [Encountered in BH203 only]	6.0	10.0	4.0
Possible Crag Group Very dense orangish brown gravelly fine to coarse SAND. Gravel is angular to rounded fine to medium flint [Encountered in BH203 only]	10.0	15.37*	>5.37**

*Base depth not proven **Thickness not proven

5.1.4 Construction compounds

A series of construction compounds are proposed at the site, shown in Figure 5.2 – Figure 5.3 and are briefly described below from west to east across the site:

- Permanent access route (to Converter Station)
- Converter Station construction compound
  - Summarised in Section 5.1.1
- Two construction compounds associated with the Friston substation
  - Summarised in Section 5.1.3.
- Snape Road to Manor Farm
  - Summarised in 5.1.3.3
- Blackheath Farm
- Off-shore trenchless (HDD) connection

Only selected compounds were investigated as part of the 2023 GI which are summarised below. It should be noted that since the ground investigation was undertaken, design development has resulted in relocation of several of the proposed construction compounds. The ground conditions anticipated at these locations are presented in the below tables.

Several of the construction compounds are located adjacent to existing ground models or areas already summarised in this section, and this is captured above where relevant.

Permanent access route (to Converter Station)

The potential ground conditions at this construction compound are summarised below. It is indicated as being approximately 30m west of the Alluvium boundary associated with the River Fromus from BGS 1:50,000 mapping and as indicated in Appendix A, therefore there could be potential to encounter Alluvium deposits. For reference to the potential Alluvium materials, reference should be made to Section 5.1.2 where these are summarised.

Table 5.8: Ground model – Temporary Construction Compound – Permanent Access (Converter station) (TP514)

Stratum	Top depth (m bgl)	Bottom depth (m bgl)	Thickness (m)
Made Ground / Topsoil Brown slightly gravelly fine to medium SAND with occasional rootlets. Gravel is angular to rounded flint, chalk and occasional brick fragments	0	0.35	0.35
Lowestoft Formation – Sand and Gravel Yellowish brown slightly gravelly clayey fine to medium SAND with a low cobble content. Gravel is angular to subangular fine flint. Cobbles are angular flint	0.30	>4.2*	>3.9**

*Base not proven **Thickness not proven

Blackheath Farm

The anticipated ground conditions encountered at the Blackheath Farm construction compound are summarised below.

Table 5.9: Ground model – Temporary Construction Compound – Blackheath Farm (TP404)

Stratum	Top depth (m bgl)	Bottom depth (m bgl)	Thickness (m)
Made Ground / Topsoil Crops overlying dark brown slightly gravelly silty fine SAND. Rare wooden fence post (600 x 509 x 50mm). Gravel is angular to subangular fine to coarse Chalk and flint	0	0.30	0.30
Lowestoft Formation – Sand and Gravel Dark orangish brown becoming orangish brown mottled yellowish brown slightly clayey gravelly fine to coarse SAND with a low cobble content. ~Cobbles are subangular flint	0.30	>4.2*	>3.9**

*Base not proven **Thickness not proven

Offshore trenchless (HDD) connection

The anticipated ground conditions encountered at the off-shore HDD connection at the eastern end of the cable route are summarised below. It should be noted that no exploratory holes were undertaken within the footprint of the construction compound, and it is anticipated that the Crag Group may be encountered in the footprint of the compound. Its engineering description is anticipated to be similar to the Lowestoft Formation – Sand and gravel, though this should be treated with caution subject to site-specific confirmation.

Table 5.10: Ground model – Temporary construction compound – Offshore HDD connection (TP222A)

Stratum	Top depth (m bgl)	Bottom depth (m bgl)	Thickness (m)
Made Ground Grass overlying brown slightly gravelly silty fine SAND with a low cobble content. Gravel is subangular to subrounded fine to coarse flint, quartz, limestone, pottery fragments and brick. Cobbles are angular flint.	0	0.30	0.30
Lowestoft Formation – Sand and Gravel Orangish brown gravelly slightly silty fine to coarse SAND. Gravel is angular to subrounded fine to medium flint and quartzite.	0.30	3.80	3.50

Stratum	Top depth (m bgl)	Bottom depth (m bgl)	Thickness (m)
Chillesford Church Clay Member (Crag Group) Stiff friable thinly laminated orangish brown mottled light grey / reddish brown slightly sandy silty CLAY with occasional iron staining.	3.80	>4.0*	>0.20**

*Base not proven **Thickness not proven

5.1.5 Trenchless crossings (HDD)

This section summarises ground models in areas where trenchless crossings (i.e. HDD) is proposed.

5.1.5.1 Red Penguin

Two boreholes were undertaken as part of the on-shore scope to inform the HDD alignment at the landfall area, linking between on and off-shore. Red Penguin are responsible for the design of the HDD and off-shore elements, and these two boreholes were included within the on-shore ground investigation undertaken in 2023 to inform their design.

The location of the exploratory holes is shown in Figure 4.1, with a summary of the ground conditions encountered from these locations is presented in Table 5.11.

Table 5.11: Ground model – Red Penguin HDD

Stratum	Top depth (m bgl) [m AOD]	Bottom depth (m bgl) [m AOD]	Thickness (m)
Topsoil Orangish brown slightly gravelly fine to coarse SAND with rootlets (<2mm). Gravel is subangular to subrounded fine to medium chert. [Encountered in RedP-BH-4 only]	0 [4.62]	0.35 [4.27]	0.35
Made Ground Brown to black sandy angular to rounded fine to coarse GRAVEL with fragments of brick, glass, ceramic, concrete and occasional shell fragments. [Not encountered in RedP-BH-4]	0 [2.66 – 2.70]	1.50 - >2.50* [1.20 to >0.16**]	1.5 – 2.5**
Marine Beach Deposits Medium dense dark brown mottled multicoloured sandy subangular to rounded fine to coarse GRAVEL with occasional shell fragments	1.5 [1.2]	3.5 [-0.80]	2.0
Tidal Flat Deposits Very soft to soft grey mottled black CLAY with occasional shell fragments, staining and slight hydrocarbon odour. – 1.7m thick, overlying Spongy fibrous black PEAT with a strong hydrocarbon odour and staining – 1.5m thick	3.5 [-0.80]	6.75 [-4.05]	3.25
Possible Marine Beach Deposits Medium dense dark grey slightly sandy rounded fine to coarse GRAVEL with staining and slight hydrocarbon odour	6.75 [-4.05]	9.50 [-6.80]	2.75
Coralline Crag Formation Medium to very dense orange / orangish brown becoming light/ dark grey slightly clayey gravelly fine to coarse SAND with occasional to frequent shell fragments. Gravel is angular fine to coarse cemented sand and occasional cemented shells. Bed 0.1m thick of very stiff friable orangish brown mottled black and grey very sandy SILT with slight organic odour	0.35 – 9.5 [4.27 – -6.80	20.50 – 24.70 [-15.88 to -22.00]	15.50 – 20.15
London Clay Formation	20.50 – 24.70	>29.95*	>9.95**

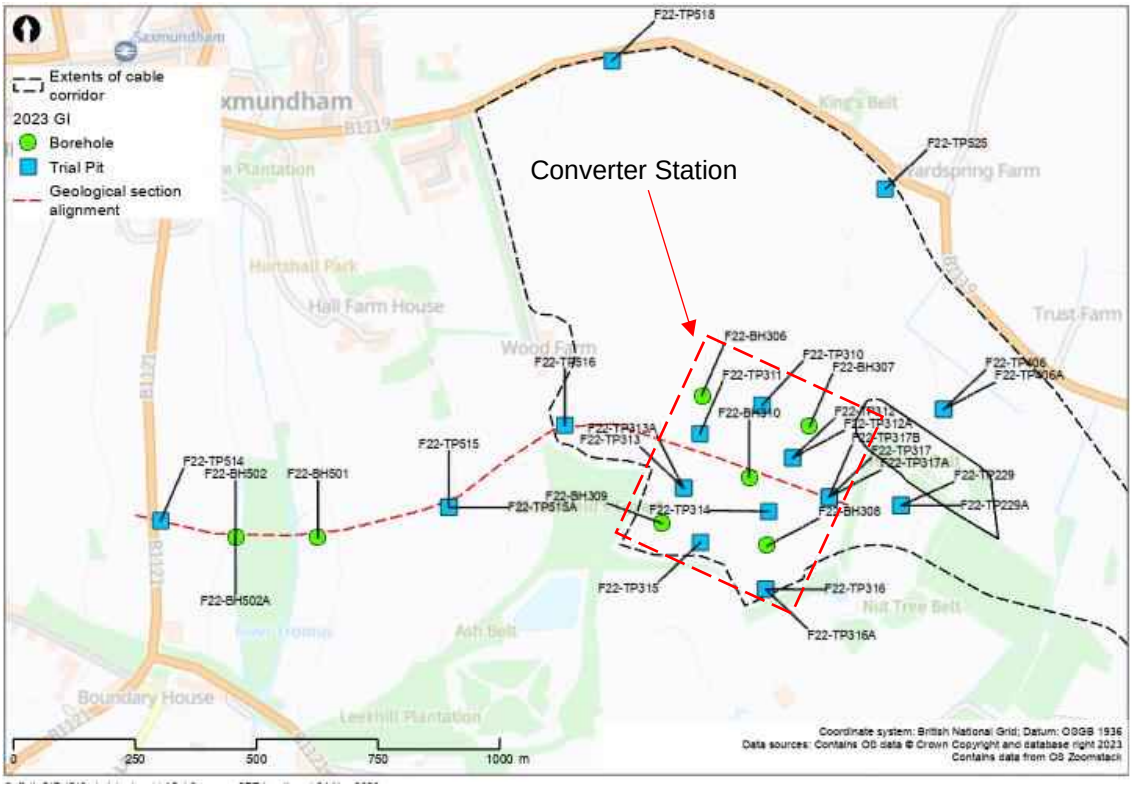
Stratum	Top depth (m bgl) [m AOD]	Bottom depth (m bgl) [m AOD]	Thickness (m)
Firm becoming stiff to very stiff closely to very closely fissured dark grey CLAY. Slightly gravelly at its top.	[-15.88 to -22.00]	[<27.25*]	

*Base depth not proven **Thickness not proven

5.2 Ground model visualisation

A geological section has been prepared through the western end of the project, from the access road south of Saxmundham to the Converter Station site. The section alignment is presented in Figure 5.4.

Figure 5.4: Sketch geological section alignment at Converter Station



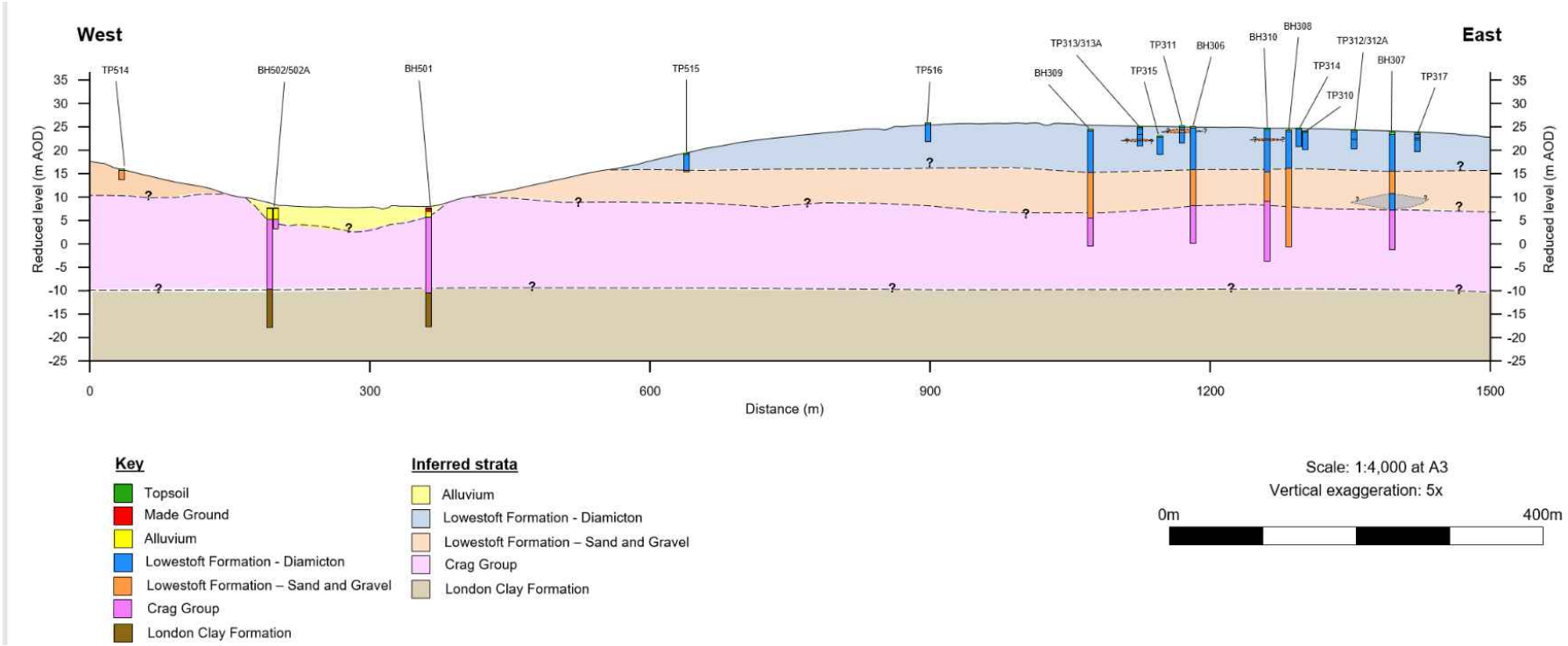
Due to the variable nature of ground conditions along the cable route, other areas have not been presented via geological sections. In addition, for the eastern end of the project north of Aldeburgh, exploratory holes will be reviewed in more detail by Red Penguin to inform their HDD alignments (RedP-BH01, BH01A and BH4).

The data has been extrapolated based on the geological relationships and distributions indicated on the BGS mapping, and is shown to broadly correlate with the expected geology. As discussed above and within Section 6, distinguishing between the Lowestoft Formation – Sand and Gravel and the underlying Crag Group can be difficult due to its weathering and potential for reworking during deposition, therefore the inferred strata boundaries should be treated with caution. Although present at surface across the majority of locations, Topsoil has not been separated on the section but is known to be present.

Limited topographic information is available along the section alignment, therefore ground levels have been estimated based on freely available open-source LIDAR information available at 1m

resolution on the Department for Environment, Food & Rural Affairs (DEFRA) Data Services Platform (2024). Due to limited information in the valley of the River Fromus, it is not possible to fully understand the inter-relationship of the Alluvium deposits and their potential maximum thickness, including any potential presence of organic clays or peats. Only an idealised, simplified geological section has been presented based on the current available information.

Figure 5.5: Sketch geological cross section - Saxmundham



5.3 Groundwater

During the ground investigation, groundwater strikes and seepages were recorded in a number of the exploratory hole locations. It is possible that additional strikes were encountered in the Lowestoft Formation (granular) or Crag Group, however, as water was added to assist drilling, these may have been masked.

Table 5.12: Summary of groundwater strikes

Site area	Hole ID	Strata	Depth (m bgl) [m AOD]	Range of depth (m bgl) [m AOD]	Nature of strike	Remarks
Haul Road / River Fromus crossing	BH502	Alluvium	1.20 [7.54]	-	Seepage	No rise recorded
	BH502	Crag Group	4.5 [3.24]	Rose to 1.2 [6.54] after 20 minutes	Strike	
	BH502A	Alluvium	2.4 [5.45]	Rose to 1.4 [6.45] after 20 minutes		
	BH502A	London Clay Formation	22.0 [-14.15]	Rose to 4.0 [3.85] after 20 minutes		
Converter Station	TP313	Lowestoft Formation	2.4 [22.58]	-	Seepage	Perched groundwater within granular bed/pocket
	TP315	Lowestoft Formation	1.7 [21.45]	-	Seepage	Perched groundwater within gravel pocket

6 Generic Quantitative Risk Assessment

6.1 Introduction

The primary regulatory regime, under which contaminated land in the UK (excluding Northern Ireland) is managed, is Part IIA of the Environmental Protection Act (EPA) 1990 (Environmental Protection Act, Section 57 Environment Act – Part IIa, 1990), although numerous other subsidiary Regulations are also relevant (including Land Contamination: Risk Management – LCRM [15]).

This chapter includes the GQRA for the proposed development. This is completed by adopting a strategy for the assessment of potential land contamination based on current guidance documents related to Part IIA of the EPA. A summary of applicable English legislation and regulatory guidance used for the assessment of land contamination is presented in Appendix E.

As established in Section 1.3, the “Red Penguin” boreholes are not interpreted in this report.

6.2 Planning framework

New development is regulated under the Town and Country Planning Act 1990 (as amended). This regime provides a mechanism for the planning authority to enforce the proper investigation of a development site in order to ensure that once development has occurred the site is suitable for its intended use. In England, the National Planning Policy Framework (NPPF) provides guidance on the implementation of contaminated land and pollution management requirements to address contamination risks associated with future site uses through the planning system. Paragraphs 180, 189, 190, and 191 of the December 2023 NPPF state the following:

180: Planning policies and decisions should contribute to and enhance the natural and local environment by:

- Preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
- Remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

189: Planning Policies and decisions should ensure that:

- A site is suitable for its proposed use taking account of ground conditions and any risks arising from land instability and contamination. This includes risks arising from natural hazards or former activities such as mining, and any proposals for mitigation including land remediation (as well as potential threats on the natural environment arising from that remediation);
- After remediation, as a minimum, land should not be capable of being determined as contaminated land under Part IIA of the Environmental Protection Act 1990; and
- Adequate site investigation information, prepared by a competent person, is available to inform these assessments.

190: Where a site is affected by contamination or land stability issues, responsibility for securing a safe development rests with the developer and/or landowner.

191: Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development.

6.3 Methodology

The strategy for this GQRA of potential land contamination adopted in this report is based on current CIRIA C552 (2001) Contaminated Land Risk Assessment – A Guide to Good Practice document . The methodology for assessing risks is presented in Appendix E.

This GQRA involves the selection of appropriate screening criteria, screening of ground investigation data, and subsequent interpretation. This interpretation is applied to refine the previous CSM included in the Sea Link Friston: Preliminary Risk Assessment (PRA) [1]. This refined risk assessment is included in Section 6.7. If the results of this risk assessment indicate that areas of land contamination are present which constitute unacceptable risks, consideration may then be given to the most appropriate means to minimise and manage these risks.

6.4 Generic Assessment Criteria

6.4.1 Human health criteria

Available Generic Assessment Criteria (GAC) for human health have been derived for specific land uses and soil organic matter (SOM). GACs are available for a SOM content of 1.0% (most conservative), 2.5% and 6.0% (least conservative).

The first step in the selection of GAC is to determine the most appropriate generic land use scenario of the proposed development. To do so, the following characteristics of the proposed development are considered:

- The Converter Station will not be accessible to the general public and will be considered a commercial land use following development.
- The site is typically surrounded by agricultural land;
- The Converter Station will be underlain by hardstanding;
- The cable connection will be buried and therefore inaccessible to site-end users (agricultural users and the public);
- There are no residential receptors within the proposed development area;
- Maintenance workers and/or site-end users will be mandated to wear appropriate personal protective equipment (PPE).

The characteristics of the development are most reflective of the “Commercial” and “Public Open Space” generic end use. This is because pathways to off-site human receptors are very unlikely to be significant. Therefore, the GAC derived for a Commercial end-use and Public Open Space end-use scenario have been applied to soil data to characterise risk from soil-bound contamination. The values for a SOM of 1% were selected due to the percentage of SOM that was calculated from the total organic carbon testing undertaken. The average SOM was calculated as 1.80%, from the average total organic carbon of 1.05%w/w.

Soil data were screened against a hierarchical framework consisting of widely used GAC derived by different organisations. Preferentially, the Suitable for Use Levels (S4ULs) developed by Land Quality Management and the Chartered Institute of Environmental Health (LQM/CIEH) were applied. Where necessary, values were supplemented using GAC produced by CL:AIRE, 2010. Further information on screening criteria is included in Appendix C.

6.4.2 Controlled waters criteria

Due to the proximity of surface water features, specifically lakes (60m north) and drainage ditch (30m north) and reservoirs, (40m south)to the proposed construction areas, the Surface Freshwater Environmental Quality Standards (Annual Average; EQS-AA) were selected as appropriate screening criteria.

Due to the identification of underlying aquifers (the Lowestoft Formation which is designated as Secondary A and Secondary Undifferentiated, and the Crag Group which is denoted as a Principal aquifer; refer to Section 3.2.2), the United Kingdom Drinking Water Standards (UK DWS) were also selected as appropriate screening criteria, considerate of the potential for the aquifer to be used for drinking water / food production purposes.

Therefore, a non-hierarchical framework of the EQS-AA and UK DWS were applied to geo-environmental data.

Site specific predicted no effect concentrations (PNEC) were derived for the site using Metal Bioavailability Assessment Tool (M-BAT) [16]. These have been used as site specific EQS values for Copper, Nickel, Zinc and Manganese. The PNEC values are displayed in Table 6.1. They were calculated from the average values of the pH and calcium and dissolved organic carbon (DOC). The pH and calcium values were taken from the five water samples.

Laboratory testing was not carried out to quantify the dissolved organic carbon (DOC) in the groundwater samples, so a proxy value has been taken from the nearest freshwater body (Hundred River, 330m to the west at closest) with sampling information available on the Environmental Agency Water Quality Archive [17]. The sampling point ID is AN-THP006 Thorpeness Hundred R. B1122 Aldringham. located c. 1.6km to the north of the cable route. Due to the lack of more proximal samples this dataset has been used, but consideration should be taken when considering the calculated PNEC values. A median DOC value of 4.757 mg/l from the ten most recent samples (8 Apr 2019 to 12 Apr 2024) was used to calculate the PNEC values.

Table 6.1: Calculated PNEC Values

Determinant	PNEC Value (ug/l)
Copper	20.67
Manganese	534.91
Nickel	15.13
Zinc	27.06

The calculation for the PNEC values is included in Appendix F.

6.5 Human Health Risk Assessment

6.5.1 Soils screening

Soil laboratory testing was undertaken on 35 samples in total and compared with the human health GAC described in Section 6.4.1. The complete set of laboratory chemical tests data is included within the Structural Soils Factual Report (Appendix A). The results of the soil screening are included in Appendix G.1. The soil tests were distributed as 13 from topsoil, two samples from Made Ground, three from Alluvium deposits and 17 in the Lowestoft Formation.

There were no exceedances when compared with the human health GAC. Asbestos identification testing was conducted on 32 samples, none of which identified asbestos.

Four samples were tested for TPH-CWG, two samples had concentrations of TPH above the limit of detection (LOD) but below GACs. The range of concentrations of the range of Aliphatics and Aromatics >C5-35 above LOD is 7-13mg/kg.

Total BTEX laboratory testing was carried out on 16 samples and speciated BTEX was carried out on 5 samples. All values were below the LOD.

PCB laboratory testing was carried out on four samples, all values were below the LOD.

PAH laboratory testing was completed on 31 samples, most of the samples were below the LOD, five samples had PAH concentrations above the LOD, the range of total USEPA 16 PAH values are 0.7-2.56mg/kg.

Laboratory testing for Pesticides was undertaken on 16 samples. The majority of samples were below the LOD. Pendimethalin was detected above the LOD in two samples with concentrations of 0.03 and 0.04 mg/kg detected. Four of the samples tested for pesticides, were classified as deviating due to no sampling time being provided to the lab (summarised above in Table 4.4), the samples were included in the risk assessment.

6.5.2 Human Health Risk Assessment Interpretation

In the available soils data, there are no exceedances of the Commercial end-use or Public Open Space end-use scenario GAC for 1% SOM. The 1% SOM GAC represents the most protective values of conservative criteria, therefore the risks to human health are considered to be low. Asbestos has not been identified in the samples tested.

6.6 Water Environment Risk Assessment

6.6.1 Soil leachate screening

Soil leachate laboratory testing was undertaken on four samples. The results of testing were compared against the EQS and UK DWS as described in Section 6.4.2. The screening results are included in Appendix G.2.

The soil leachate tests were distributed as: three samples from natural deposits (two in Lowestoft Formation and one in Alluvium) and one sample in Made Ground.

There were six recorded exceedances of the UK DWS and three exceedances of the EQS. The location and magnitude of the recorded exceedances are provided in Table 6.2.

It should be noted that a direct comparison of soil leachate test results with the water quality standards is a conservative method as it over-estimates the availability of determinands to dissolve.

Table 6.2: Exceedances of contaminants in soil leachate

Contaminant	Location of exceedance	Depth (m)	Strata	Concentration measured (mg/L)	UK DWS (mg/L)	EQS (mg/L)
Arsenic	F22-TP511	0.2	Made Ground	0.012	0.01	0.05
Chromium	F22-BH308	1	Lowestoft Formation	0.006	0.05	0.005
Copper	F22-TP511	0.2	Made Ground	0.021	2	0.02067
Iron	F22-BH308	1	Lowestoft Formation	0.408	0.2	1

Contaminant	Location of exceedance	Depth (m)	Strata	Concentration measured (mg/L)	UK DWS (mg/L)	EQS (mg/L)
	F22-TP511	0.2	Made Ground	0.445		
Lead	F22-TP511	0.2	Made Ground	0.037	0.01	0.0012
Zinc	F22-TP511	0.2	Made Ground	0.033	5	0.02706
Ammoniacal Nitrogen as N	F22-BH501	1	Alluvium	0.65	0.38	0.2
	F22-TP511	0.2	Made Ground	0.44		

6.6.2 Groundwater screening

Groundwater samples were taken from three different standpipes over four different monitoring rounds, giving a total of seven samples.

The results of the groundwater screening are included in Appendix C.3.

There are five exceedances of the UK DWS (two of which exceed the EQS screening value as well) and no additional exceedances of the EQS. The location and magnitude of the recorded exceedances are provided in (Table 6.3).

Table 6.3: Exceedances of contaminants in groundwater

Contaminant	Location of exceedance	Monitoring Round	Concentration measured (mg/L)	UK DWS (mg/L)	EQS (mg/L)
Iron	F22-BH308	3 (13/12/2023)	0.602	0.2	1.0
	F22-BH310	3 (13/12/2023)	4.83		
		4 (01/05/2024)	3.42		
Sulphate as SO_4	F22-BH308	1 (01/11/2023)	251	250	-
		2 (16/11/2023)	256		

The concentrations of dissolved iron at F22-BH308 at the first and second monitoring rounds were <0.01mg/L and 0.021mg/L respectively. The increased concentration at the third monitoring round appears anomalous.

At F22-BH310, the iron concentration is significantly elevated (4.83mg/L and 3.42mg/L). The borehole log notes “iron-staining” between 22.80 – 23.00m bgl above the standpipe response zone. The BGS Lexicon describes the Crag Group as “characteristically dark green from glauconite but weather bright orange with haematite ‘iron pans’”. Therefore, localised exceedances of iron may be naturally occurring due to the geology.

The concentrations of sulphate as SO_4 at F22-BH308 at the third monitoring round was 236mg/L, marginally below the UK DWS of 250mg/L.

6.6.3 Water Environment Risk Assessment – Interpretation

A number of minor exceedances of Freshwater EQS and UK DWS were measured in soil leachate samples, the majority of these relate to heavy metals and inorganics and typically show marginal exceedances of the GAC.

The groundwater samples show exceedances of iron and sulphate. The concentrations of determinants in the groundwater are greater than those measured in the leachate samples suggesting the site soils are not the source.

As a result of the development areas of hardstanding and surface water drainage at the converter station will reduce the rate of infiltration and leaching of potential unidentified contaminants from soil into the groundwater.

Attenuation ponds are included in the proposed development, these are located in areas of natural materials without any identified sources. The proposed attenuation ponds may increase the potential for leaching of determinants into the groundwater. To help assess the risk to groundwater receptors leachate samples were taken within each geological unit encountered along the cable route and found marginal exceedance of GACs.

6.7 Conceptual Site Model

6.7.1 Introduction

The Sea Link Friston PRA includes a CSM developed from preliminary information with reference to UK guidance including the Environment Agency's Land Contamination: Risk Management (LCRM) [15] and CIRIA C552 [18]. The PRA CSM has been summarised in Section 2.4.

Following the most recent ground investigation, the CSM has been refined (Figure 6.1) and the potential pollutant linkages have been updated. A summary of the potential sources, pathways and receptors and the potential pollutant linkages between them, according to the information collected to date, is presented below.

Following the procedures in LCRM, the existing CSM is updated below as according to site-specific ground conditions.

The preliminary risk assessment in the PRA identified potential contamination from off-site soils and off site ground gas sources (e.g. infilled pits). Due to the distance of off-site sources from the development they are not included within the risk assessment below. The closest identified ground gas source to the converter station is more than 200m from the site. Due to the nature of the development, the distance from a potential ground gas source and the absence of significant sources (i.e. significant depths of Made Ground) being identified during the GI, the risk from elevated ground gas concentrations is considered very low risk and is not included in the risk assessment.

The type of foundations for the converter station have not been confirmed at the time of writing, to be conservative deeper foundations (e.g. piles) have been considered in the risk assessment.

6.7.2 Sources

S1: Presence of metals (arsenic, lead, chromium, copper, iron and zinc) and ammoniacal nitrogen as N above the EQS and UK DWS in soil leachate in on-site soils;

S2: Presence of iron and sulphate as SO_4 above the EQS and UK DWS in groundwater on-site;

6.7.3 Pathways

P1: Human uptake (ingestion, dermal contact, inhalation of dusts from soils and/or groundwater)

P2: Leaching or movement of mobile contamination through unsaturated strata

P3: Movement of mobile contamination through saturated strata

P4: Man-made pathways e.g. attenuation ponds, excavation, cable route (including HDD) and foundations (piles)

P5: Direct contact with contaminated or corrosive soils/ water

P6: Surface run-off

6.7.4 Receptors

R1: Construction and maintenance workers

R2: Future site users, (operational workers)

R3: Construction materials / built environment (foundations and cables)

R4: Water environment:

R4a: Surface water (land drains, ponds, reservoirs and River Fromus)

R4b: Groundwater in Superficial Deposits (Secondary A/Undifferentiated aquifer – Lowestoft Formation)

R4c: Groundwater in bedrock deposits (Crag Group – Principal aquifer; Zone 3 of an SPZ).

6.7.5 Assumptions

The following assumptions have been made for the geo-environmental risk assessment (Table 6.4) of the Sea-Link Friston site area.

- The assessment assumed that no new sources of contamination will be introduced during the development – i.e. construction materials will be non-hazardous and inert, all imported topsoil will be compliant with BS 3882:2015 and any reused material will be suitable for use and managed under an appropriate regime (e.g. Definition of Waste: Development Industry Code of Practice (DoWWCOP), materials management plan or re-use of waste environment permit)
- It is assumed that a robust Construction Environmental Management Plan (CEMP) will be adopted during the works and, as a result, no contamination will occur from leaks and spills during construction e.g. from refuelling of plant, storage of chemicals.
- It is assumed that any structures that will be placed on the construction compound will be self contained and won't include any utilities.
- The assessment only applies to the development proposals detailed within this report.
- The risk assessment does not consider asbestos or radiological contamination.
- It is assumed that the location of the infiltration/ attenuation drainage will not be in areas of identified contamination sources or within Made Ground deposits

Figure 6.1: Updated CSM

Sources

S1: Presence of metals (arsenic, lead , chromium, copper, iron and zinc) and ammoniacal nitrogen as N above the EQS and UK DWS in soil leachate in on-site soils

S2: Presence of iron and sulphate as SO4 above the EQS and UK DWS in groundwater on-site

Pathways

P1: Human uptake (ingestion, dermal contact, inhalation of dusts from soils and/or groundwater)

P2: Leaching or movement of mobile contamination through unsaturated strata

P3: Movement of mobile contamination through saturated strata

P4: Man-made pathways e.g. attenuation ponds, excavation, cable route (including HDD) and foundations (piles)

P5: Direct contact with contaminated or corrosive soils/ water

P6: Surface run-off

Receptors

R1: Construction and maintenance workers

R2: Future site users, (operational workers)

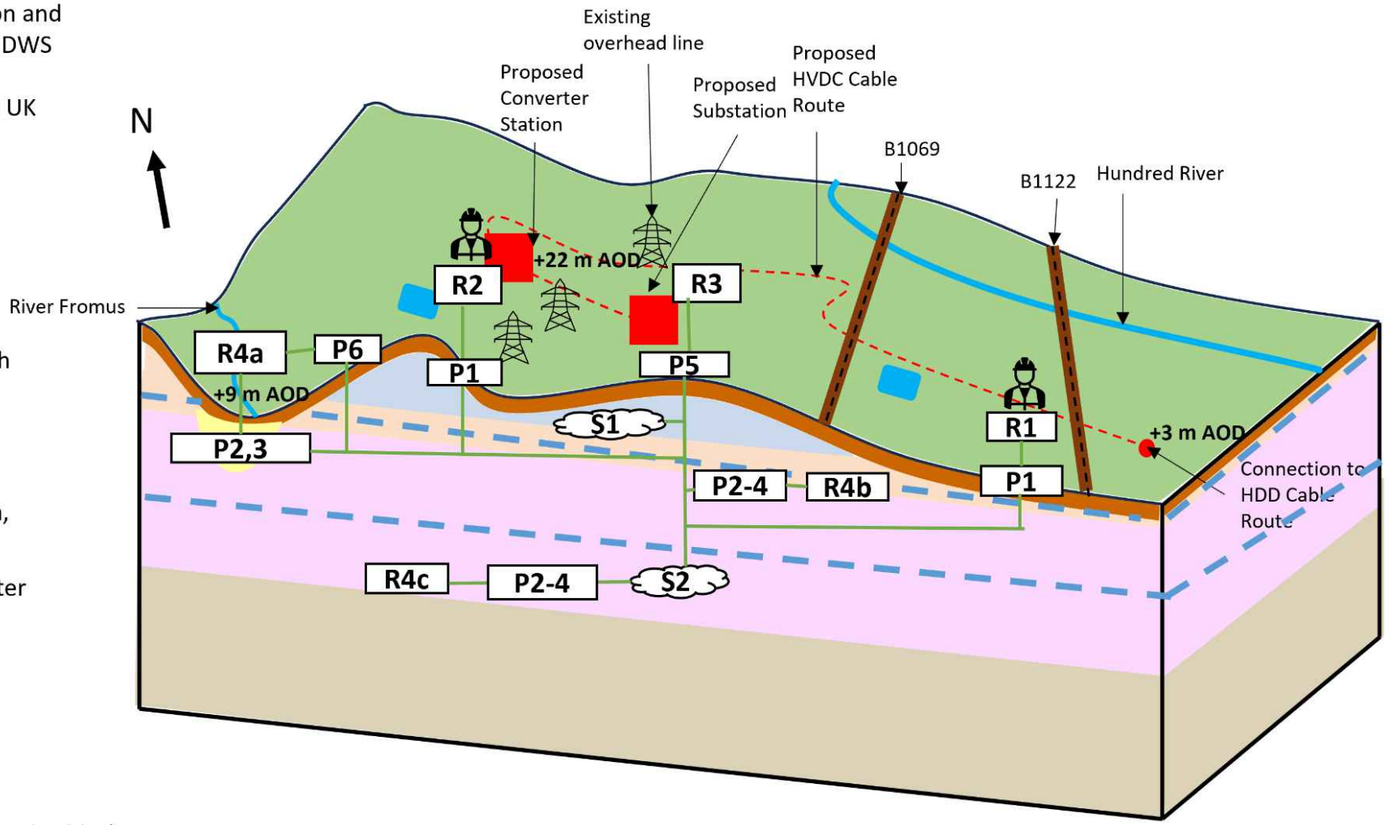
R3: Construction materials / built environment (foundations and cables)

R4: Water environment:

R4a: Surface water (land drains, ponds, reservoirs and River Fromus)

R4b: Groundwater in Superficial Deposits (Secondary A aquifer – Lowestoft Formation)

R4c: Groundwater in bedrock deposits (Crag Group – Principal aquifer; Zone 3 of an SPZ).



Source: Mott MacDonald 2024

Table 6.4: Contaminated Land Risk Assessment

Source	Pathway	Receptor	Current risk	Comments and mitigation measures
S1: Presence of heavy metals and inorganics above the EQS and UK DWS in soil leachate in on-site soils; **S2:** Presence of heavy metals and inorganics above the EQS and UK DWS in groundwater on-site;	**P1:** Human uptake (ingestion, dermal contact, inhalation of dusts/vapours from soils and/or groundwater)	**R1:** Construction and maintenance workers	Probability: Likely Consequence: Mild Risk: Low	Visual and olfactory evidence of potential contamination was recorded in one borehole during the ground investigation, this is considered a localised impact, the concentrations of hydrocarbons in this location were low at 13mg/kg. The laboratory testing confirmed all contaminant concentrations measured in the soils were below the screening GACs. The risk to construction and maintenance workers should be mitigated by adopting safe working practices covered under site-specific Risk Assessment Method Statements (RAMS) and a Construction Environmental Management Plan (CEMP). Mitigation measures should include the use of appropriate Personal Protective Equipment (PPE) at all times during construction and maintenance.
		R2: Future site users, (operational workers)	Probability: Low Consequence: Minor Risk: Very low	The risk to future site users is considered very low due to the lack of significant contamination source. In addition the HVDC cables will be buried and the Converter Station will be underlain by hardstanding, negating potential uptake pathways. Any materials replaced over the cable route will be suitable for use.
	P5: Direct contact with contaminated or corrosive soils/ water	**R3:** Construction materials / built environment (foundations and cables)	Probability: Likely Consequence: Mild Risk: Low	Risks to the construction materials / built environment should be mitigated at the detailed design stage by the selection of the appropriate concrete specification for the site. An assessment of soil aggressivity, including the indicative Design Sulphate (DS) and Aggressive Chemical Environment for Concrete (ACEC) has been undertaken as part of the Ground Investigation Report [2]. Reference should be made to the Ground Investigation Report for design recommendations.
	P2: Leaching or movement of mobile contamination through unsaturated strata **P3:** Movement of mobile contamination through saturated strata **P6:** Surface run-off	**R4a:** Surface water (land drains, River Fromus)	Probability: Low Consequence: Medium Risk: Low	Limited exceedances of the EQS and UK DWS were noted in leachate and groundwater. The exceedances may be natural in origin. Surface water receptors have been identified within influencing distance of the site and there is the potential for contaminants to enter surface water features through infiltration pathways and surface water run off from the development. The majority of the site is underlain by thickness of the Lowestoft Formation Diamicton which is interpreted to have a low permeability. It is noted that the magnitude of the exceedances of the aquatic environment GAC are minor, and remediation is not considered to be necessary. To mitigate the risk to surface waters, a suitable material re-use policy should be utilised, such as a CL:AIRE Materials Management Plan. If dewatering is required during construction, the groundwater may not be suitable for discharge to surface waters. An environmental permit may be required, potentially including treatment of groundwater pre-disposal. The requirement for permits or treatment is subject to regulatory consultation and approval.
	P2: Leaching or movement of mobile contamination through unsaturated strata **P3:** Movement of mobile contamination through saturated strata **P4:** Man-made pathways e.g. attenuation ponds, excavation, cable route (including HDD) and foundations (piles)	**R4b:** Groundwater in Superficial Deposits (Lowestoft Formation – Secondary A)	Probability: Low Consequence: Medium Risk: Moderate/Low	Minor contamination is present in groundwater. The monitoring borehole in the Lowestoft Formation was dry during monitoring rounds and no samples were able to be taken to characterise the groundwater. The leachate exceedances of DWS were marginal and are unlikely to leach significant concentrations of contaminants into the Lowestoft Formation. The exceedances may be natural in origin. The Lowestoft Formation is designated as a Secondary A aquifer. The proposed development may increase infiltration locally into the superficial aquifers, the converter station will be covered in hard standing which will reduce the rate of infiltration beneath the converter site. The cable route and proposed attenuation ponds are to be located in natural material. The attenuation ponds may increase infiltration locally, however no significant exceedance of leachable contaminants have been identified.
		R4c: Groundwater in bedrock deposits (Crag Group – Principal aquifer; Zone 3 of an SPZ)	Probability: Unlikely Consequence: Medium Risk: Low	The bedrock is designated as a Principal aquifer inside a Zone III Source Protection Zone, and therefore represents a receptor of high sensitivity. However, groundwater monitoring has only detected minor contamination in groundwater from the Crag Group, although exceedances may be natural in origin. The exceedances in groundwater are not reflected in soil leachate, although it is noted that groundwater and leachate testing has not been comprehensive. Remediation is not considered to be necessary. The proposed development may increase infiltration locally into the superficial aquifers, the converter station will be covered in hard standing which will reduce the rate of infiltration beneath the converter site. The cable route and proposed attenuation ponds are to be located in natural material. The attenuation ponds may increase infiltration locally, however no significant exceedance of leachable contaminants have been identified. If piling is proposed to occur into the Crag Group a Piling risk assessment is recommended.

7 Waste Soil Categorisation

7.1 Waste categorisation for soils

Waste classification is a two-stage process, with the first step comprising a hazard assessment of the soil quality data in line with the guidance set out in the Environment Agency waste classification technical guidance WM3 document. Once the hazardous properties of the materials are known, the second stage is to assess the potential performance of the materials in a landfill; this is undertaken by considering the results of waste acceptance criteria (WAC) testing.

Generally, wastes that are classified as hazardous will need to be deposited in a hazardous waste landfill or within a stable non-reactive hazardous waste cell in a non-hazardous waste landfill (depending on the WAC test results). Wastes that are shown to be non-hazardous may either be deposited in a non-hazardous waste landfill (for which no WAC tests are required) or as inert waste (which would require confirmation of suitability for this waste stream through WAC testing).

16 WAC tests were undertaken as part of the Structural Soils Ltd ground investigation. The results of the WAC testing are discussed below.

7.2 HazWasteOnline™ summary

Soil quality data from the investigation was entered into a hazard assessment tool, HazWasteOnline™ [19]. The tool uses the current WM3 technical guidance document to determine whether the substances contained in the soils tested exceed any risk phrases that would render the materials as ‘hazardous’ waste.

The tool includes a number of options for using the different valences (chemical species) or compounds that may be present. Where options were available these were generally set at the default (worst case assessment) for the model in accordance with the guidance set out in WM3.

It should be noted that hexavalent chromium (chromium VI) concentrations were found below laboratory detection limits within all samples, therefore, for the purposes of this assessment, it has been assumed that no chromic compounds are present.

The results of soil analyses from the site were entered into HazWasteOnline™ software to determine hazard assessment in line with the Environment Agency WMC guidance [20]. The results of the HazWasteOnline™ summary are available in Appendix H.

All samples were assessed as non-hazardous.

7.3 WAC Testing

Sixteen WAC tests were undertaken as part of the Structural Soils Ltd ground investigation. The results of the WAC testing are discussed below in Table 7.1

Table 7.1: Summary of waste classification

BH ID	Depth (m bgl)	Strata	Indicative WAC test result
F22-BH203	0.2	Topsoil	Inert
F22-BH306	1.0	Lowestoft Formation	Inert

BH ID	Depth (m bgl)	Strata	Indicative WAC test result
F22-BH307	1.0	Lowestoft Formation	Suitable for non-hazardous waste (unsuitable for inert due to fluoride)
F22-BH308	1.0	Lowestoft Formation	Suitable for non-hazardous waste (unsuitable for inert due to fluoride)
F22-BH310	0.5	Lowestoft Formation	Inert
F22-BH501	0.6	Made Ground	Suitable for non-hazardous waste (unsuitable for inert due to Total Organic Carbon, Sulphate as SO_4, Total Dissolved Solids)
F22-BH501	1.0	Alluvium	Inert
F22-BH502	1.0	Alluvium	Inert
F22-TP204	0.2	Topsoil	Inert
F22-TP311	0.7	Lowestoft Formation	Inert
F22-TP312	0.5	Lowestoft Formation	Inert
F22-TP315	0.5	Lowestoft Formation	Suitable for non-hazardous waste (unsuitable for inert due to fluoride)
F22-TP316	0.5	Lowestoft Formation	Inert
F22-TP404	0.2	Topsoil	Inert
F22-TP511	0.2	Made Ground	Inert
F22-TP514	0.5	Lowestoft Formation	Inert

Please note that it is the responsibility of the waste producer to ensure that all waste created on-site undergoes basic characterisation prior to disposal to an appropriate permitted landfill. It is also recommended that the soil laboratory test certificates be discussed with a waste operator, to confirm potential disposal and pre-treatment options, should excavation and off-site disposal of soils be required.

8 Conclusions and recommendation

Conclusions and recommendations for the site based on the findings from information gathered during the ground investigation is presented below.

8.1 Geo-environmental conclusions

The GQRA has assessed the identified pollutant linkages at the site as moderate/low to very low risk.

Ground investigation works completed at the site recorded visual and olfactory evidence of potential TPH contamination in one borehole at the site (F22-BH501). Laboratory testing of the Made Ground from this sample recorded low concentrations of TPH (13mg/kg) of bands >C21-35 and is considered a localised, low level impact.

There are no recorded exceedances of the human health GAC for a commercial end-use or Public Open Space end use scenario of 1% SOM. Asbestos was not identified in any of the samples during the ground investigation. The risk to human health has been evaluated as low to very low risk.

The risk to the built environment has been assessed as low.

The risk to the water environment (surface water receptors) is assessed to be low. Limited exceedances of the EQS and the UK DWS have been identified in soil leachate and groundwater.

The risk to groundwater (in the Lowestoft Formation and the Crag Group) is assessed as low to moderate/low. The contamination identified in the ground investigation is minor.

8.2 Geo-environmental recommendations

The following recommendations are provided to conclude this GQRA:

- According to the information gathered through the ground investigation, remediation is not considered to be required;
- Further ground investigation will be required should the design proposals change;
- Construction and maintenance workers should use site-specific RAMS and a CEMP, including the use of appropriate PPE at all times during construction;
- Construction drawings indicate the relocation of soil stockpiles during construction. The re-use of this material may require additional risk assessment depending on the quantity of material to be reused, which may include detailed modelling, further sampling and validation testing to ensure suitability for re-use of material that will ensure hazardous substances are not introduced to the groundwater at unacceptable concentrations. If the quantity of soil exceeds the exemption limit, re use of material should be done under a materials management plan or re-use of waste environment permit, which should be in place prior to the commencement of excavated material movement.
- Dewatering during construction works is anticipated to be required. Extracted groundwater may not be suitable for discharge to surface waters without treatment – water may need to be treated before discharge or taken offsite for disposal; discussions should be held with the Environment Agency.
- Preliminary waste classification using HazWasteOnline™ indicates that the on-site soils would likely be classified as non-hazardous. It is recommended that a waste contractor is contacted to discuss appropriate options for disposal if construction works require removal of

soils from site. Further waste screening and WAC testing may be required dependent on the location and quantity of soils to be disposed of from the site.

- In the event that unexpected contamination be encountered during the construction phase, works will cease and the local planning authority will be advised. The extent of any contamination will be investigated, and an action plan will be developed. This will be communicated to the local planning authority prior to works commencing.
- The UXO risk across the site has been assessed as medium to medium/high risk by SafeLane Global they recommended prior to any shallow or deep excavations during construction and/or further ground investigation:
  - UXO Safety and awareness briefing
  - Site Specific Safety Instructions Training Course
  - Non-intrusive (NI) magnetometer survey (greenfield areas only) (for shallow intrusive works)
  - Target investigation (required as a follow-on from NI magnetometer survey for shallow intrusive works)
  - Search and Clear
  - Explosive Ordnance Disposal (EOD) Engineer Watching Brief (for brownfield areas unsuitable for NI magnetometer survey)
  - Intrusive Magnetometer Survey of pile/borehole positions (for deep intrusive activities)
  - Additional offshore works recommendations
- Further archaeological investigation may be necessary during construction works subject to consultation with the Local Authority or heritage specialist.

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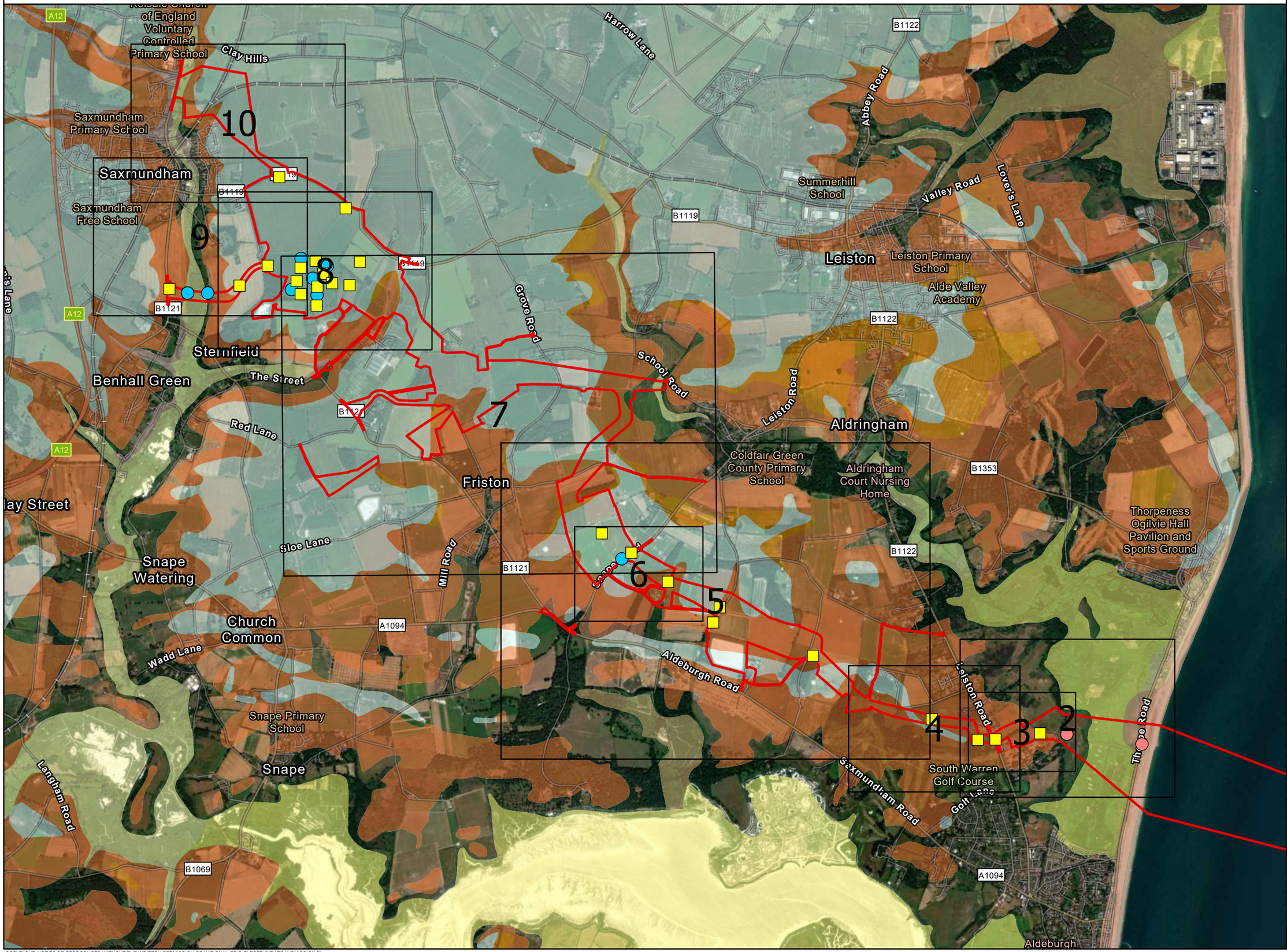
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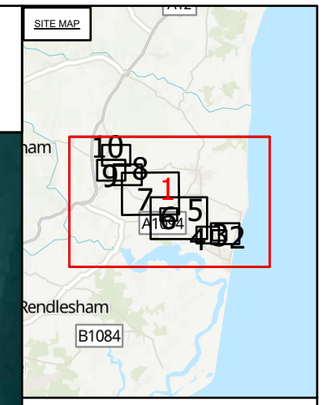
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A. Borehole Location Plan

Figure A.1: Exploratory Hole Location Plan (with Superficial Geology Background)

NATIONAL GRID (SEA LINK) ORDER
GROUND INVESTIGATION -
EXPLORATORY HOLE LOCATION PLAN
SUPERFICIAL GEOLOGY OVERVIEW
SHEET 1 OF 10
SUFFOLK





Legend

- Draft Order Limits

Exploratory hole locations (as built)

- Borehole
- Red Penguin Borehole
- Trial Pit

Superficial Geology

- Alluvium - Clay, silt, sand and gravel
- Lowestoft Formation - Clay and silt
- Lowestoft Formation - Diamicton
- Lowestoft Formation - Sand and gravel
- Marine Beach Deposits - Sand and gravel
- Tidal Flat Deposits - Clay and Silt
- Head - Clay, silt, sand and gravel

Notes

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SUPERFICIAL GEOLOGY OVERVIEW
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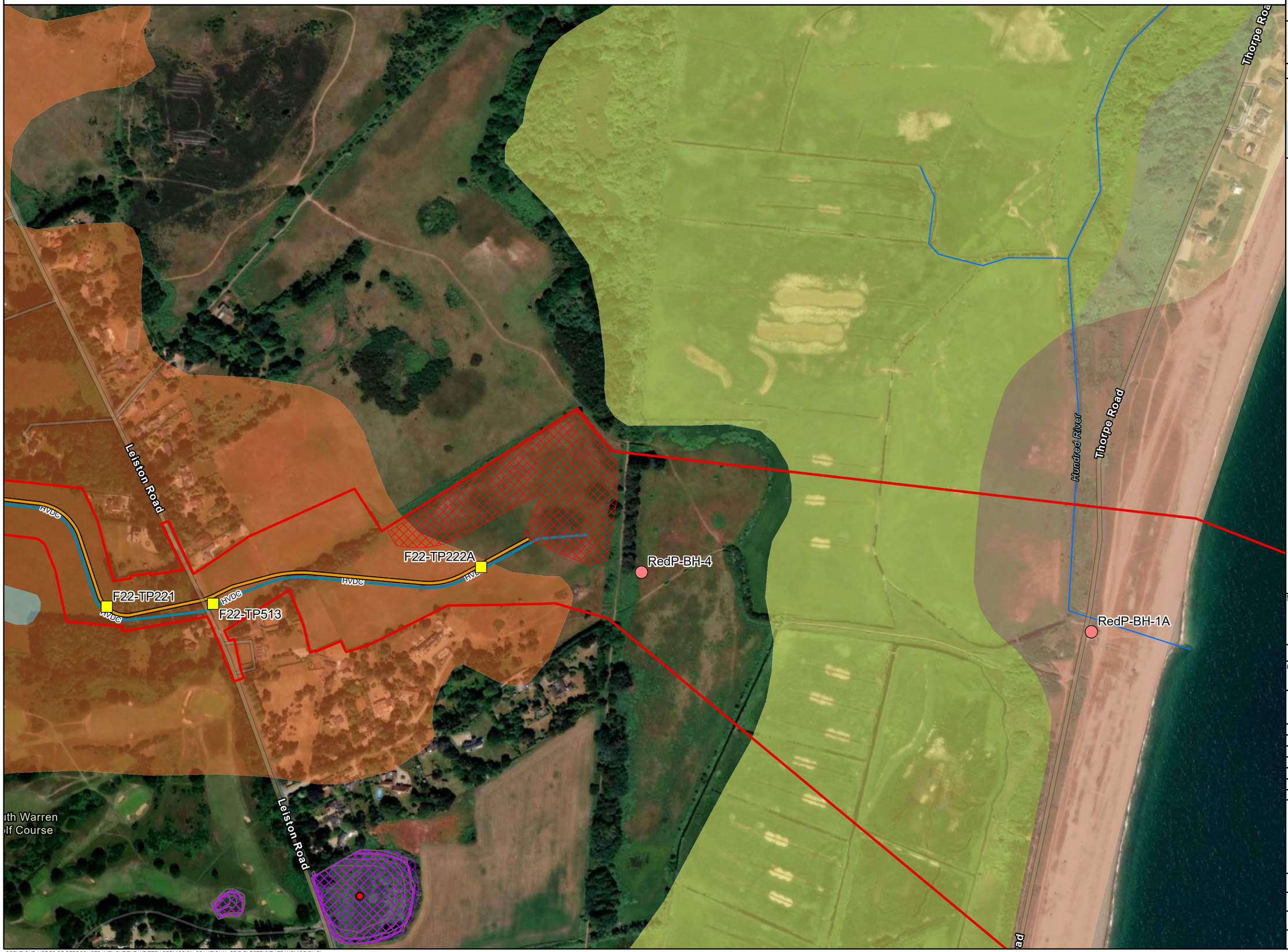
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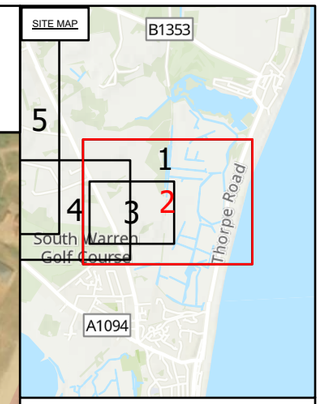
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NATIONAL GRID (SEA LINK) ORDER
GROUND INVESTIGATION -
EXPLORATORY HOLE LOCATION PLAN
INCLUDING SUPERFICIAL GEOLOGY AND HISTORICAL AND CURRENT LAND USES
SHEET 2 OF 10
SUFFOLK





Legend

- Draft Order Limits
- Proposed High Voltage Direct Current (HVDC) cable alignment
- Proposed construction compound
- Proposed access route

Exploratory hole locations (as built)
- Red Penguin Borehole
- Trial Pit

Key historical features
- Brit pit
- Historical industrial land uses
- Surface ground workings

Superficial Geology
- Alluvium - Clay, silt, sand and gravel
- Lowestoft Formation - Clay and silt
- Lowestoft Formation - Diamicton
- Lowestoft Formation - Sand and gravel
- Marine Beach Deposits - Sand and gravel
- Tidal Flat Deposits - Clay and Silt
- Head - Clay, silt, sand and gravel
- Watercourse

Notes
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Application Number
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National Grid Drawing Reference
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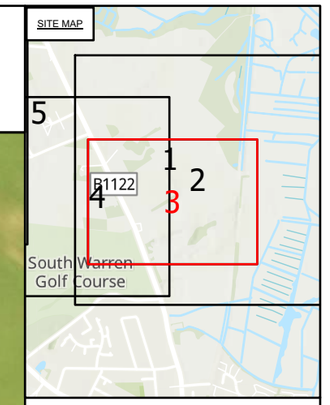
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GROUND INVESTIGATION -
EXPLORATORY HOLE LOCATION PLAN
INCLUDING SUPERFICIAL GEOLOGY AND HISTORICAL AND CURRENT LAND USES
SHEET 3 OF 10
SUFFOLK



SITE MAP



Legend

- Draft Order Limits
- Proposed High Voltage Direct Current (HVDC) cable alignment
- Proposed construction compound
- Proposed access route

Exploratory hole locations (as built)

- Red Penguin Borehole
- Trial Pit

Superficial Geology

- Alluvium - Clay, silt, sand and gravel
- Lowestoft Formation - Clay and silt
- Lowestoft Formation - Diamicton
- Lowestoft Formation - Sand and gravel
- Marine Beach Deposits - Sand and gravel
- Tidal Flat Deposits - Clay and Silt
- Head - Clay, silt, sand and gravel

Notes

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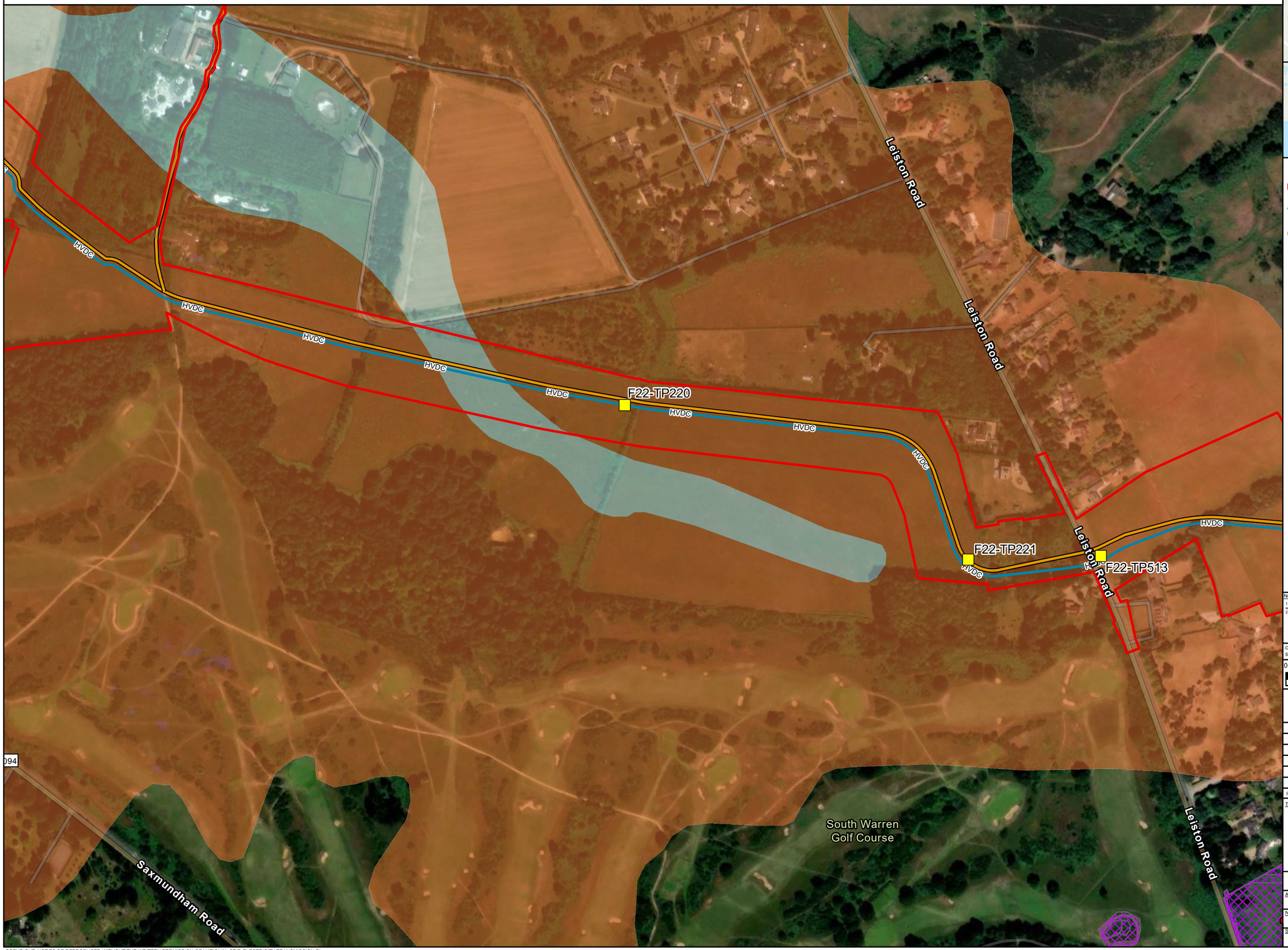
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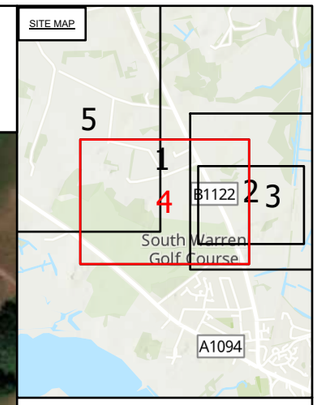
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GROUND INVESTIGATION -
EXPLORATORY HOLE LOCATION PLAN
INCLUDING SUPERFICIAL GEOLOGY AND HISTORICAL AND CURRENT LAND USES
SHEET 4 OF 10
SUFFOLK



SITE MAP



Legend

- Draft Order Limits
- Proposed High Voltage Direct Current (HVDC) cable alignment
- Proposed access route

Exploratory hole locations (as built)
- Trial Pit

Key historical features
- Brit pit
- Historical industrial land uses
- Surface ground workings

Superficial Geology
- Alluvium - Clay, silt, sand and gravel
- Lowestoft Formation - Clay and silt
- Lowestoft Formation - Diamicton
- Lowestoft Formation - Sand and gravel
- Marine Beach Deposits - Sand and gravel
- Tidal Flat Deposits - Clay and Silt
- Head - Clay, silt, sand and gravel

Notes
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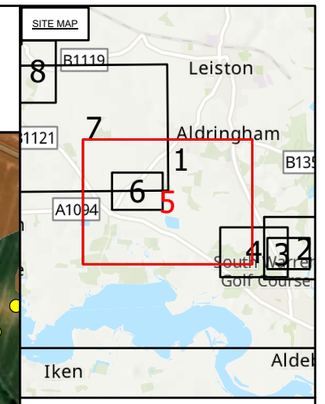
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GROUND INVESTIGATION -
EXPLORATORY HOLE LOCATION PLAN
INCLUDING SUPERFICIAL GEOLOGY AND HISTORICAL AND CURRENT LAND USES
SHEET 5 OF 10
SUFFOLK





Legend

- Draft Order Limits
- Proposed High Voltage Direct Current (HVDC) cable alignment
- Proposed construction compound
- Proposed access route

Exploratory hole locations (as built)

- Borehole
- Trial Pit
- BGS borehole
- SPR borehole

Key historical features

- Brit pit
- Historical industrial land uses
- Surface ground workings

Superficial Geology

- Alluvium - Clay, silt, sand and gravel
- Lowestoft Formation - Clay and silt
- Lowestoft Formation - Diamicton
- Lowestoft Formation - Sand and gravel
- Marine Beach Deposits - Sand and gravel
- Tidal Flat Deposits - Clay and Silt
- Head - Clay, silt, sand and gravel
- Watercourse

Notes

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Application Number: EN020026

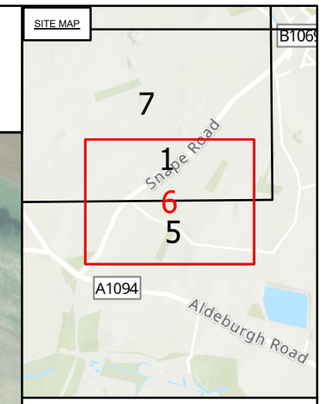
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NATIONAL GRID (SEA LINK) ORDER
GROUND INVESTIGATION -
EXPLORATORY HOLE LOCATION PLAN
INCLUDING SUPERFICIAL GEOLOGY AND HISTORICAL AND CURRENT LAND USES
SHEET 6 OF 10
SUFFOLK





Legend

- Draft Order Limits
- Proposed High Voltage Direct Current (HVDC) cable alignment
- Proposed construction compound
- Proposed access route

Exploratory hole locations (as built)
- Borehole
- Trial Pit

Key historical features
- Brit pit
- Historical industrial land uses
- Surface ground workings

Superficial Geology
- Alluvium - Clay, silt, sand and gravel
- Lowestoft Formation - Clay and silt
- Lowestoft Formation - Diamicton
- Lowestoft Formation - Sand and gravel
- Marine Beach Deposits - Sand and gravel
- Tidal Flat Deposits - Clay and Silt
- Head - Clay, silt, sand and gravel

Notes

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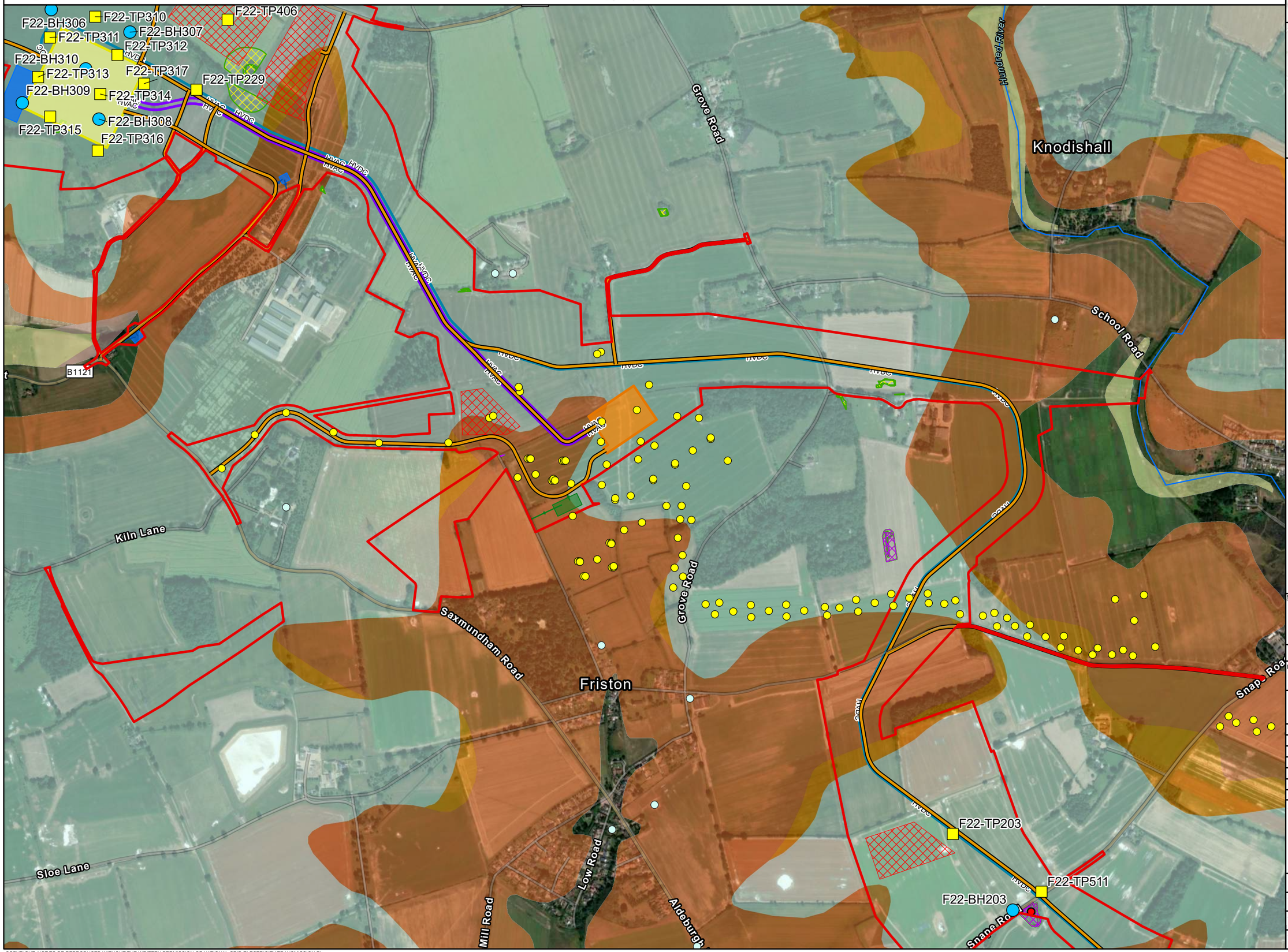
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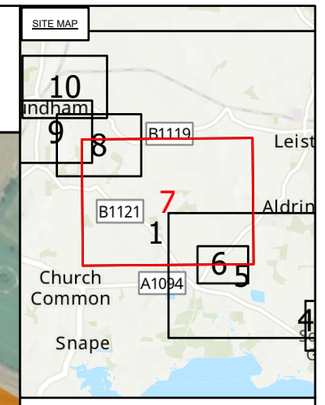
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INCLUDING SUPERFICIAL GEOLOGY AND HISTORICAL AND CURRENT LAND USES
SHEET 7 OF 10
SUFFOLK



SITE MAP



Legend

- Draft Order Limits
- Proposed substation
- Proposed converter station
- Proposed High Voltage Direct Current (HVDC) cable alignment
- Proposed High Voltage Alternating Current (HVAC) cable alignment
- Proposed construction compound
- Proposed permanent infiltration pond
- Proposed permanent infiltration outfall pipe
- Proposed permanent attenuation pond
- Proposed permanent attenuation outfall pipe
- Proposed access route

Exploratory hole locations (as built)

- Borehole
- Trial Pit
- BGS borehole
- SPR borehole

Key historical features

- Brit pit
- Historical industrial land uses
- Surface ground workings

Superficial Geology

- Alluvium - Clay, silt, sand and gravel
- Lowestoft Formation - Clay and silt
- Lowestoft Formation - Diamicton
- Lowestoft Formation - Sand and gravel
- Marine Beach Deposits - Sand and gravel
- Tidal Flat Deposits - Clay and Silt
- Head - Clay, silt, sand and gravel
- Watercourse

Notes

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F22-TP525
F22-BH306
F22-TP310
F22-TP516
F22-BH307
F22-TP311
F22-TP312
F22-BH310
F22-TP313
F22-TP317
F22-TP515
F22-TP314
F22-TP229
F22-BH309
F22-TP315
F22-BH308
F22-TP316
F22-TP406
B1119
Workhouse Lane
Fristonmoor Lane
HVDC
HVAC

SITE MAP
10
9
1
8
7
B1119
B1121

Legend

- Draft Order Limits
- Proposed converter station
- Proposed High Voltage Direct Current (HVDC) cable alignment
- Proposed High Voltage Alternating Current (HVAC) cable alignment
- Proposed construction compound
- Proposed permanent attenuation pond
- Proposed permanent attenuation outfall pipe
- Proposed access route

Exploratory hole locations (as built)

- Borehole
- Trial Pit
- Surface ground workings

Superficial Geology

- Alluvium - Clay, silt, sand and gravel
- Lowestoft Formation - Clay and silt
- Lowestoft Formation - Diamicton
- Lowestoft Formation - Sand and gravel
- Marine Beach Deposits - Sand and gravel
- Tidal Flat Deposits - Clay and Silt
- Head - Clay, silt, sand and gravel

Notes

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GROUND INVESTIGATION -
EXPLORATORY HOLE LOCATION PLAN
INCLUDING SUPERFICIAL GEOLOGY AND HISTORICAL AND CURRENT LAND USES
SHEET 9 OF 10
SUFFOLK

Saint John's Road
Museum
Saxmundham
Rendham Road
Saxmundham
Mill Hole
Saxmundham Free School
Saxmundham Free School
B1119
B1121
South Entrance
River Fromus
St John the Baptist's Church
B1119
B1119
F22-TP518
B1119
F22-BH306
F22-TP516
F22-TP311
HVDC
F22-TP313
F22-TP515
F22-BH309
F22-TP315
F22-TP514
F22-BH502
F22-BH501
F22-BH502A
River Fromus

SITE MAP
B1121
10
Saxmundham
B1119
1
9
8
B1121
7
A12
B1

Legend

- Draft Order Limits
- Proposed converter station
- Proposed High Voltage Direct Current (HVDC) cable alignment
- Proposed permanent attenuation pond
- Proposed permanent attenuation outfall pipe
- Proposed access route

Exploratory hole locations (as built)

- Borehole
- Trial Pit
- BGS borehole
- Surface ground workings

Superficial Geology

- Alluvium - Clay, silt, sand and gravel
- Lowestoft Formation - Clay and silt
- Lowestoft Formation - Diamicton
- Lowestoft Formation - Sand and gravel
- Marine Beach Deposits - Sand and gravel
- Tidal Flat Deposits - Clay and Silt
- Head - Clay, silt, sand and gravel
- Watercourse

Notes
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Sheet X Centroid Coordinate: 639653.31 Sheet Y Centroid Coordinate: 262573.09

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Metres

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GROUND INVESTIGATION -
EXPLORATORY HOLE LOCATION PLAN
INCLUDING SUPERFICIAL GEOLOGY
AND HISTORICAL AND CURRENT LAND USES
SHEET 9 OF 10
SUFFOLK

nationalgrid

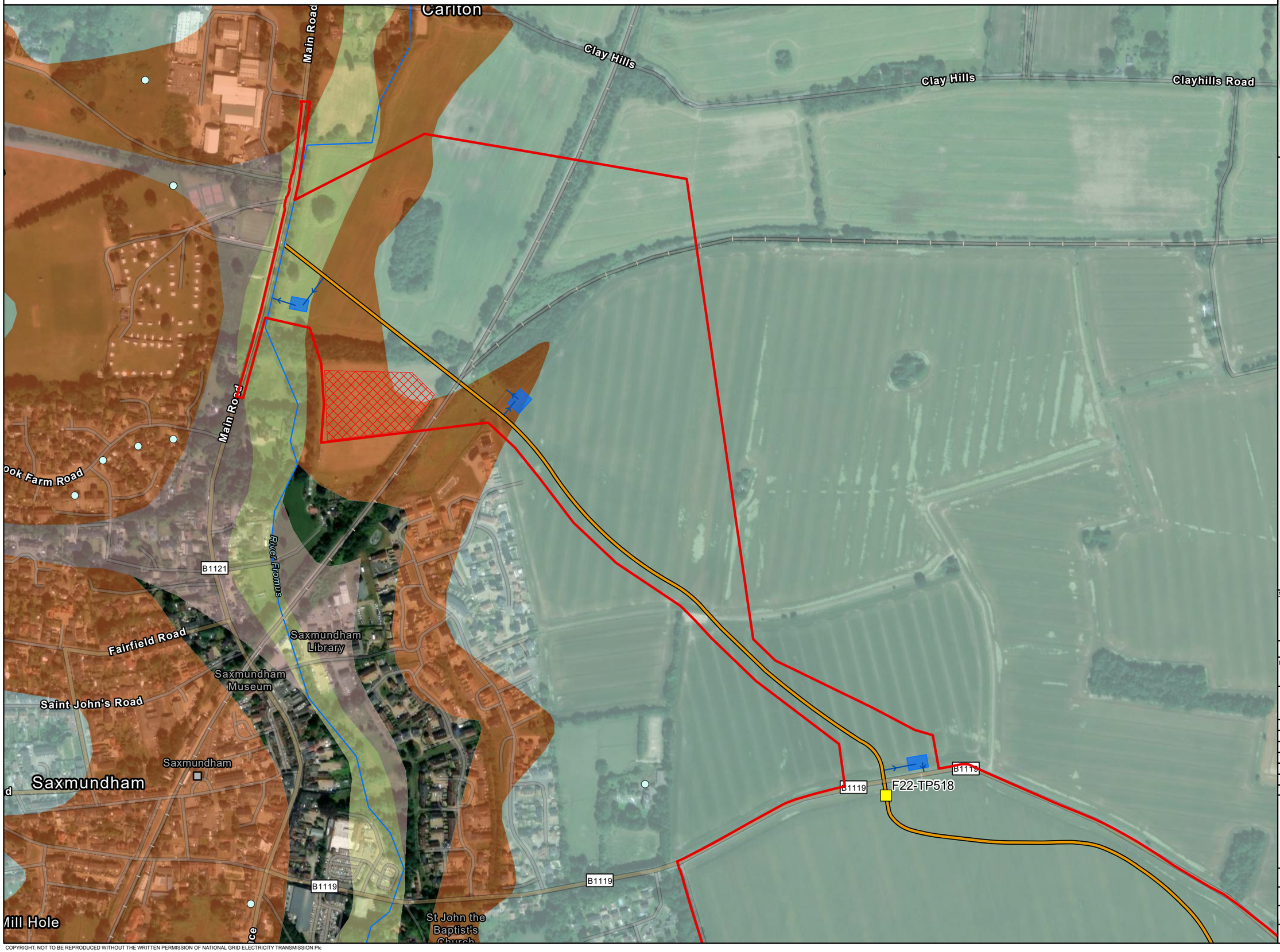
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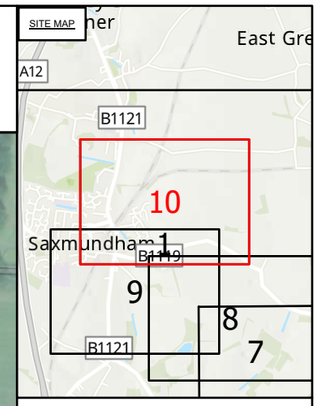
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NATIONAL GRID (SEA LINK) ORDER
GROUND INVESTIGATION -
EXPLORATORY HOLE LOCATION PLAN
INCLUDING SUPERFICIAL GEOLOGY AND HISTORICAL AND CURRENT LAND USES
SHEET 10 OF 10
SUFFOLK





Legend

- Draft Order Limits
- Proposed construction compound
- Proposed permanent attenuation pond
- Proposed permanent attenuation outfall pipe
- Proposed access route

Exploratory hole locations (as built)

- Trial Pit
- BGS borehole

Superficial Geology

- Alluvium - Clay, silt, sand and gravel
- Lowestoft Formation - Clay and silt
- Lowestoft Formation - Diamicton
- Lowestoft Formation - Sand and gravel
- Marine Beach Deposits - Sand and gravel
- Tidal Flat Deposits - Clay and Silt
- Head - Clay, silt, sand and gravel
- Watercourse

Notes

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0 50 100 200 Metres

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NATIONAL GRID (SEA LINK) ORDER
GROUND INVESTIGATION -
EXPLORATORY HOLE LOCATION PLAN
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AND HISTORICAL AND CURRENT LAND USES
SHEET 10 OF 10
SUFFOLK

nationalgrid

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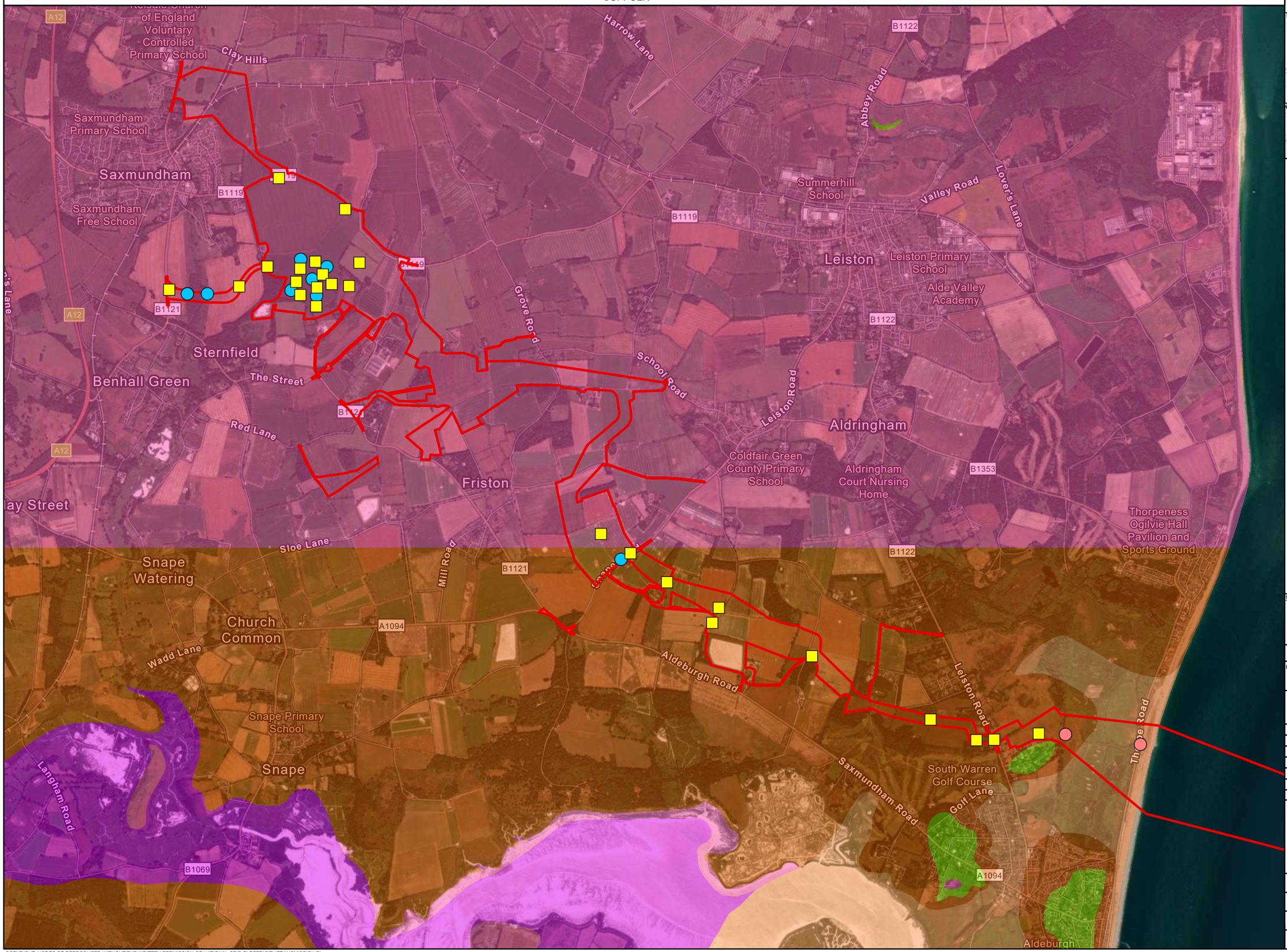
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Figure A.2: Exploratory Hole Location Plan (with Bedrock Geology Background)

NATIONAL GRID (SEA LINK) ORDER
GROUND INVESTIGATION -
EXPLORATORY HOLE LOCATION PLAN
BEDROCK GEOLOGY OVERVIEW
SHEET 1 OF 1
SUFFOLK





Legend

- Draft Order Limits
- Exploratory hole locations (as built)
  - Borehole
  - Red Penguin Borehole
  - Trial Pit
- Bedrock Geology
  - Chillesford Church Sand Member - Sand
  - Chillesford Clay Member - Clay, silty
  - Coralline Crag Formation - Calcarenite
  - Crag Group - Sand

Notes

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Coordinate System: British National Grid
Sheet X Centroid Coordinate: 642608.13 Sheet Y Centroid Coordinate:260598.86

0 295 590 1,180 Metres

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NATIONAL GRID (SEA LINK) ORDER
GROUND INVESTIGATION -
EXPLORATORY HOLE LOCATION PLAN
BEDROCK GEOLOGY OVERVIEW
SHEET 1 OF 1
SUFFOLK

nationalgrid

Application Number
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B. Factual Report



Suffolk Onshore Cable Link

Factual Report on Preliminary Ground Investigation

Report No: 563835-01 (03)

Client: National Grid

Engineer: Mott MacDonald Ltd

APRIL 2024

STRUCTURAL SOILS LTD

DOCUMENT ISSUE RECORD

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Document Title	Factual Report on Preliminary Ground Investigation
Client:	National Grid
Engineer:	Mott MacDonald Ltd
Status:	Final

Author	[redacted]	G Kavanagh BSc (Hons)
Technical Reviewer and Approver	[redacted]	A M Lumber BEng (Hons) CEng MICE
Report Issue Date		12 April 2024

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Issue	Date	Description	Prepared by
00	05.12.2023	Preliminary report. Laboratory testing in progress. Issued for information only. All data subject to further review and revision.	G. Kavanagh
01	13.03.2024	Draft Report. Laboratory testing in progress. Issued for information only. Data subject to further review and revision following completion of laboratory testing.	G. Kavanagh
02	28.03.2024	Final report with all geotechnical laboratory testing.	G. Kavanagh
03	12.04.2024	Updated in response to comments received.	G. Kavanagh/A. Lumber

STRUCTURAL SOILS LIMITED
E: ask@soils.co.uk www.soils.co.uk

Bristol ☐	The Old School, Stillhouse Lane, Bedminster, BRISTOL, BS3 4EB Tel: 0117 947 1000	**Castleford** ☐	The Potteries, Pottery Street, CASTLEFORD, West Yorkshire, WF10 1NJ Tel: 01977 552 255
Glasgow ☐	65 Sussex Street, GLASGOW, G41 1DX Tel: 0141 418 0471	**Hemel Hempstead** ☒	18 Frogmore Road, HEMEL HEMPSTEAD, Hertfordshire, HP3 9RT Tel: 01442 416 660
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1 INTRODUCTION

This preliminary investigation was carried out by Structural Soils Ltd (SSL) on the instructions of Mott MacDonald (the Engineer) on behalf of National Grid (the Client) as part of the Suffolk Onshore Cable Link project. The purpose of the work was to obtain preliminary geotechnical and preliminary geoenvironmental information for a proposed 2GW HVDC cable link between Richborough in Kent and Saxmundham in Suffolk.

For the purposes of this specific report only information related to the Suffolk site is included. The Suffolk site includes a new converter station in Saxmundham and the adjoining cable route as well as permanent haul routes from land fall in between Aldeburgh and Thorpeness to the Friston substation.

The scope of the investigation comprised cable percussive boreholes, mechanical trial pitting, in-situ sampling and testing, laboratory testing and the preparation of this report. The report contains a description of the site and the works carried out, the exploratory hole logs, in-situ and laboratory testing results.

SSL have undertaken other investigations for a different project, on part of this site, which are detailed in our factual ground investigation report, 735329-02 *EA2 Onshore GI Factual Report,* 2022 (see Reference 5.1).

The ground investigation has been carried out in accordance with the contract specification, and the general requirements of BS 5930:2015+A1:2020, BS 10175:2011+A2:2017, BS EN 1997-2:2007, BS EN ISO 22475-1:2021 and other relevant standards as identified below or elsewhere in this report.

This report presents the factual information obtained by the ground investigation including records of all field and laboratory work carried out. All information given in this report is based on the ground conditions encountered during the site work, and on the results of the field and laboratory work performed during the investigation.

Whilst every attempt is made to record full details of the strata encountered in the exploratory holes, techniques of hole formation and sampling will inevitably lead to disturbance, mixing or loss of material in some soils and rocks. There may be conditions at the site that have not been taken into account, such as unpredictable soil strata, contaminant concentrations, and water conditions between or below exploratory holes.

This report was prepared by SSL for the sole and exclusive use of National Grid in response to particular instructions. Any other parties using the information contained in this report do so at their own risk and any duty of care to those parties is excluded. No liability will be accepted after a period of 6 years from the date of the report.

2 SITE DESCRIPTION

2.1 Location and Topography

The site is located on the Suffolk coast and extends approximately 9 km, starting at the coast 1.4 km to the north of the town of Aldeburgh and then heading northeast to Saxmundham (see Site Location Map in Appendix A). The area of investigation crosses agricultural land with a flat lying topography. The British National Grid Reference for the site are: western most point TM 38582 62135, central point TM 42252 60143 and eastern most point TM 46818 58340 (see Exploratory Hole Location Plans in Appendix A).

The majority of the site works were located southeast of Saxmundham, at Wood Farm the proposed location of the new converter station. This part of the site consisted, of a large arable field bounded by the B1119 to the north running east-west, woodland to the west and further arable land to the south and east of the site. The converter station site was situated in the fields to the east of the main farmhouse.

The rest of the site consists of the proposed 2GW HVDC cable route trending east-west linking the proposed Saxmundham converter station to the future Friston substation (which does not form part of the project) down to the coast where the cable route reaches the RSPB North Warren nature reserve. From the RSPB North Warren nature reserve to the coast north of Aldeburgh the cable route will be constructed using Horizontal Directional Drilling (HDD) and the boreholes here were undertaken to inform the design of the landfall HDD section (the investigation for the offshore cable route was not within the scope of this report).

The cable route itself stretches approximately 7.5 km, passing 1.5 km north of the town of Friston through arable farmland to the north of Aldeburgh golf club. The cable route then continues from the RSPB North Warren nature reserve which forms part of the Leiston – Aldeburgh SSSI, where it then crosses under an old railway route running north-south. The cable route ends at the coast 1.5 km north of Aldeburgh off Thorpe Road in a public car parking lay by on the coast.

The ground elevation varies across the site from approximately 25 m down to 4 m above Ordnance Datum (AOD).

2.2 Geology

Information on the geology of the site was obtained from the following sources published by the British Geological Survey (BGS):

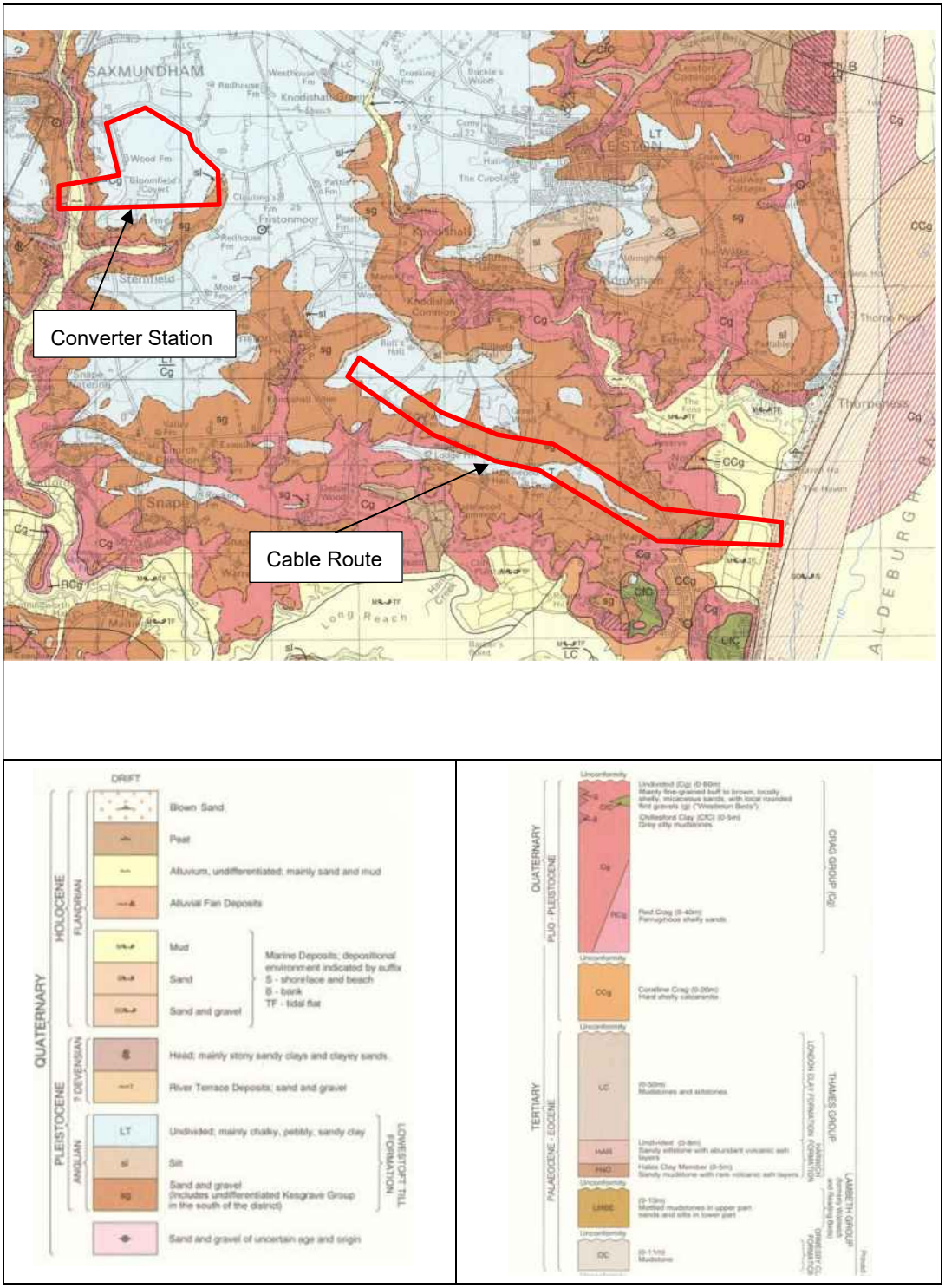
- BGS map (sheet 191 Saxmundham, scale 1:50,000, published 1996).
- The BGS GeoIndex (onshore) digital geology map, which utilises the most up to date names for geological units. (https://www.bgs.ac.uk/map-viewers/geoindex-onshore/)
- The BGS Lexicon of Named Rock Units, which provides typical descriptions for most geological units (https://webapps.bgs.ac.uk/lexicon/).

The site is shown to be underlain by the following strata. The Superficial Deposits might not occur in the sequence listed.

TABLE 1 : SUMMARY OF EXPECTED SITE GEOLOGY	
Geological Unit Name	**Description**
SUPERFICIAL DEPOSITS	
Lowestoft Formation	An extensive sheet of chalk till, with outwash sands, gravels, silts and clays. Characterised by its chalk and flint content. **Mapped as absent on the BGS Digital map within parts of the site where no Superficial Deposits recorded.**
Tidal Flat Deposits	Clay and silt. **Mapped only at the eastern end of the site, near the coastline.**
Marine Beach Deposits	Shingle, sand, silt and clay; may be bedded or chaotic; beach deposits may be in the form of dunes, sheets or banks; in association with the marine environment. **Mapped only at the eastern end of the site, along the coastline.**
Alluvium	Clay, silt, sand, gravel. **Mapped along the course of the River Fromus which is aligned north-south to the east of Saxmundham.**
SOLID GEOLOGY	
Crag Group	Mainly sand however can have gravel, silt and clay beds. Predominantly medium to coarse grained, shelly at base. Strongly iron-stained at surface, locally green at depth.
Coralline Crag formation	Carbonate-rich skeletal sands. moderately- to poorly-sorted medium-grained sand, the mud content is low. Basal lag gravel rich in pebbles of phosphatic mudstone largely derived from the Thames Group.
Thames Group *London Clay Formation* *Harwich Formation*	Clay, silty, blue-grey. Bioturbated silty clays and sandy clayey silts

Note: Information obtained from BGS digital records © NERC.

The BGS online maps portal provides access to scans of almost all maps produced by the BGS since 1932. An extract of the most recent available scanned map for the site is included below: BGS map (sheet 191 Saxmundham, scale 1:50,000, published 1996).



Note: Above images contain British Geological Survey materials ©NERC [2024].

3 FIELDWORK

3.1 General

The ground investigation was carried out by SSL between 11 September and 13 October 2023. The investigation was supervised by an engineer from SSL. The scope of works and positions were selected by Mott MacDonald, set out by SSL and adjusted where necessary to take account of buried or overhead services, or other restrictions. The exploratory hole and in-situ test locations are shown on the Exploratory Hole Location Plans presented in Appendix A.

3.2 Exploratory Holes

The exploratory holes are listed in the following table.

TABLE 2 :SCOPE OF INTRUSIVE WORKS			
Quantity	**Exploratory Hole Type**	**Maximum depth (m)**	**Hole / Test Numbers**
12	Cable Percussion Boreholes.	30.00	RedP-BH-1, RedP-BH-1A, RedP-BH-4, F22-BH203, F22-BH306, F22-BH307, F22-BH308, F22-BH309, F22-BH310, F22-BH501, F22-BH502, F22-BH502A
26	Machine Dug Trial Pits.	4.0	F22-TP203, F22-TP204, F22-TP205, F22-TP218, F22-TP220, F22-TP221, F22-TP222, F22-TP222A, F22-TP229 F22-TP310 - F22-TP317 F22-TP404, F22-TP406, F22-TP511, F22-TP513, F22-TP514, F22-TP515, F22-TP516, F22-TP518, F22-TP525
6	Hand (or Hand and Machine) Dug Trial Pit completed for thermal resistivity testing.	1.1	F22-TP203A, F22-TP204B, F22-TP205A, F22-TP218A, F22-TP229A, F22-TP317B
8	Machine Dug Trial Pits completed for Soakaway Infiltration Testing	2.30	F22-TP204A, F22-TP312A, F22-TP313A, F22-TP316A, F22-TP317A, F22-TP404A, F22-TP406, F22-TP513A

The exploratory hole logs are presented in Appendix B. These provide information including the equipment and methods used, samples taken, tests carried out, water observations and descriptions of the strata encountered. Explanation of the terms and abbreviations used on the logs is given in the Key to Exploratory Hole Records in Appendix B, together with other explanatory information.

The start date of the works were dictated by the harvesting of cropped fields and the objective was to complete the field works before the fields were ploughed.

Access to RedP-BH1, RedP-BH1A and RedP-BH4 were restricted to the month of September as these locations fell within the influence of the RSPB North Warren Nature Reserve which is within the Leiston-Aldeburgh SSSI and the boreholes were undertaken under a SSSI Assent from Natural England.

There were further restrictions on F22-TP220 and F22-TP221, it was necessary to complete these locations before the end of September as the Aldeburgh Golf Club had scheduled to start construction work within this area in October.

The holes were logged by an engineer in general accordance with the recommendations of BS 5930:2015+A1:2020 (which incorporates the requirements of BS EN ISO 14688-1:2018, 14688-2:2018 and 14689:2018). Detailed descriptions, together with relevant comments, are given on the logs.

Prior to the commencement of any exploratory hole or intrusive test all positions were checked for buried services by a specialist utility surveyor using a cable avoidance tool (CAT), signal generator ('genny'), and ground penetrating radar (GPR). The survey was carried out by RSK Safe Ground.

Inspection pits were hand dug at exploratory locations were noted on the relevant exploratory hole logs or in-situ test results.

Prior to commencement of intrusive works, the hole locations and the immediate vicinity were also scanned by a specialist UXO (Unexploded Ordnance) officer using a magnetometer to check for buried ferrous objects that could possibly be UXO.

A down hole UXO survey was also undertaken during drilling with the magnetometer being lowered to the base of the holes at regular intervals until past the maximum probable penetration depth of air dropped ordnance.

Where soakaway infiltration tests were required at a trial pit location these were completed in a second trial pits located near to the first pit. Trial pits numbered with a superscript of 'A' are those in which soakaway tests were completed, except for F22-TP203A, F22-TP205A, F22-TP218A and F22-TP229A as these were dug for in-situ thermal resistivity testing purposes, and F22-TP222A which was completed alongside F22-TP222 which was halted at 0.45 m depth due to evidence of archaeological activity having been encountered.

Further additional hand dug inspection pits F22-TP204B and F22-TP317B were completed for thermal resistivity purposes.

An archaeological watching brief was also undertaken by Headland Archaeology UK Ltd, during trial pitting operations to monitor and record archaeological findings associated with the preliminary geotechnical investigation. A summary of these findings can be found in the Headland Archaeology Report see Appendix H, *SLWB23 -115 Sea Link Feed - Friston, Suffolk- Archaeological Watching Brief on GI Works*, 2023 (see Reference 5.12).

A VES (Vertical Electrical Sounding) survey was completed to measure soil electrical resistivity by RSK Geosciences in the proposed Convertor Station site comprising of 4 survey lines covering the length and width of the field. The findings of this can be found in the Sea Link – Friston VES Report 2191228 – R01 (01) which is included in Appendix C (and also listed as Reference 5.13)

On completion of the works, a survey of the exploratory hole locations was undertaken using specialist Global Positioning System (GPS) equipment. The coordinates of each

exploratory hole were measured relative to British National Grid, and the level relative to Ordnance Datum. These are shown on the exploratory hole logs contained in Appendix B which have been printed with a reduced level column.

The as-built coordinates and elevation measured using the GPS equipment have been reported in full, however due to the limitations of this type of survey a nominal accuracy of +/- 0.05 m should be assumed.

3.3 Backfill and Instrumentation

On completion 50 mm diameter groundwater monitoring wells were installed in selected exploratory holes with upstanding covers and protective wooden fencing with the exception of RedP-BH01A with a flush protective cover due to its location in the parking layby, as agreed with the landowners. The design of the borehole installations having been decided by Mott MacDonald. The installation details are shown on the exploratory hole logs and on a summary table presented within Appendix B.

In addition, continuous water level data logging equipment was placed into the standpipes installed in F22-BH308, F22-BH310, RedP-BH-1A and F22-BH502A for continuous long-term fluctuations in groundwater levels to be monitored over the following 12 months. A barometric data logging equipment was installed within the head works in F22-BH306, as a central location for the site to record atmospheric pressure changes.

The remaining boreholes were backfilled with bentonite pellets, and natural arisings, including the reinstatement of the topsoil within the top 1.0 m to 1.2 m. The trial pits were backfilled with arisings, compacted in layers by the excavator with the use of a compactor plate and the bucket.

On completion of the post fieldwork monitoring the borehole standpipes will be decommissioned.

3.4 In-Situ Testing

The in-situ tests are listed in the following table. The test methods used are detailed on the test result sheets included in Appendix C, unless otherwise noted.

TABLE 3 :SCOPE OF IN-SITU TESTING		
Quantity	**In-situ Test**	**Remarks**
207	Standard Penetration Tests (SPT).	Carried out in boreholes; test results included on exploratory hole logs presented in Appendix B. SPT calibration certificates included in Appendix G.
3	Hand Vane* (HV) tests in borehole inspection pits (set of 3 measurements).	Test results included on exploratory hole logs presented in Appendix B. HV calibration certificates included in Appendix G. Both peak and residual strength measured in most cases.
4	Hand Penetrometer (HP) tests in borehole inspection pits (set of 3 measurements).	Test results included on exploratory hole logs presented in Appendix B.
30	Hand Vane* (HV) tests in trial pits (set of 3 measurements).	Carried out in trial pits and on excavated material from pits; test results included on exploratory hole logs presented in Appendix B. HV calibration certificates included in Appendix G. Both peak and residual strength measured in most cases.
6	Soakaway Infiltration Tests in unsupported trial pits (no granular infill)	Single filling completed for each test. Test results included in Appendix C.
2	Soakaway Infiltration Tests in supported trial pits (supported using clean nominal 20mm diameter granular fill)	Three fillings completed for each test. Test results included in Appendix C.
4	Soakaway Infiltration Tests in boreholes. (No ground water present in the borehole prior to test)	Carried out in boreholes at instructed depths whilst drilling. Test results included in Appendix C
2	Variable Head Permeability Tests. (groundwater present in borehole prior to test).	Carried out in boreholes at instructed depths whilst drilling. Test results included in Appendix C

TABLE 3 :SCOPE OF IN-SITU TESTING		
89	Photo-Ionisation Detector (PID) measurement of volatile hydrocarbons.	Measurement carried out on soils samples, results included on logs. Calibration certificates included in Appendix G.
26	TRL Dynamic Cone Penetration (DCP) Tests	Carried out adjacent to all 26 machine dug trial pits (except for pit F22-TP222A). 2 tests completed at F22-TP515 (second test location recorded as F22-TP15A). Test results included in Appendix C. Calibration certificates included in Appendix G.
16	Thermal resistivity probe tests	Carried out at 0.70 m, 0.90 m and 1.10 m. In trail pits F22-TP203A, F22-TP204B, F22-TP205A, F22-TP218A, F22-TP220, F22-TP221, F22-TP222, F22-TP229A, F22-TP310 - F22-TP317B Test results included in Appendix C. Calibration certificates included in Appendix G.
1	Vertical Electrical Sounding (VES) – Soil Electrical Resistivity Survey	Carried out by RSK Geosciences and including several transverses. The report is included in Appendix C.

Note: * All hand vane tests we completed using a hand vane tester which report a direct measurement of undrained shear strength based on a mathematical relationship between the applied torque and the cross-sectional area of the soil surface sheared in the test.

3.4.1 Standard Penetration Tests

Standard Penetration Tests (SPT) were carried out in the exploratory holes, where noted in the preceding sections, in accordance with BS EN ISO 22476-3:2005+A1:2011 using a hammer or hammers which had been calibrated for efficiency. The calibration certificates are included in Appendix G. Seating drives have been recorded in increments of 75 mm in accordance with recommended UK practice.

The SPT N-values are reported on the exploratory hole logs, on which the calibration number of the hammers used are recorded. The full results are presented in tabular format on the Summary of Standard Penetration Tests in Appendix C, on which the normalised N_{60} values are also reported, which are the equivalent N-value for a hammer delivering 60% of the theoretical drop energy. A plot showing both N values versus depth for all holes is also included.

3.4.2 California Bearing Ratio correlation tests using a TRL Dynamic Cone Penetrometer (DCP)

The in-situ CBR correlation tests were conducted using a TRL Dynamic Cone Penetrometer at each trial pit location in accordance with the manufacturer's guidance. The results are contained in Appendix C.

3.4.3 Soakaway Infiltration Tests in trial pits.

The Soakaway tests were undertaken in trial pits F22-TP204A, F22-TP312A, F22-TP313A, F22-TP316A, F22-TP317A, F22-TP404A, F22-TP406, and F22-TP513A in general accordance with recommended practice given in BRE Digest 365.

Test pits F22-TP404A and F22-TP513A were supported with granular fill and test water levels measured within a monitoring pipe placed within the fill. Three fillings were completed in each of these test pits.

BRE-365 does not define whether or how the calculation of soil infiltration values should be adjusted for tests completed within pits that are supported with granular fill. Based on trials completed by RSK Group Limited the infiltration rate should be adjusted by multiplying it by the specific yield of the granular fill, a property more representative of the behaviour in short term tests than basic porosity. For 20 mm clean granular fill a specific yield value of 0.23 has been determined, and this factor has been applied to the relevant test results.

The other tests pits were unsupported. All showed slow infiltration rates and only one filling of each pit was undertaken. These tests were halted after 3-5 hours (two of these also being halted on safety grounds due to thundery weather conditions). No soil infiltration rates could be calculated from these tests as the test water did not fall to the 25% full level in any test, all showing no or negligible falls in test water level. The test results are contained in Appendix C.

3.4.4 Soakaway Infiltration Tests in Boreholes.

Permeability tests were instructed in 4 boreholes that were dry (no standing groundwater level) at time of tests. These tests were completed using the methodology for falling head permeability tests in BS EN ISO 22282-1:2012 and -2:2012 and are presented as Borehole Soakaway Tests using the approach for soakaway tests completed in square or rectangular pits given in BRE Digest 365. Single test fillings were completed.

BRE-365 details a method for carrying out tests in rectangular (or square) pits. The methodology may be applied to circular holes provided that no groundwater is present, but soil infiltration rates calculated in this way should be considered tentative. Infiltration rates have not been calculated for three of the tests as either there was no fall in test water level, insufficient fall to justify a calculation of infiltration rate, or the test water level could not be raised sufficiently.

For the test completed in borehole F22-BH308 a non-standard calculation of soil infiltration rate has been made. In this test the borehole was 3 m deep, and the borehole casing withdrawn to 1.0 m above ground to create a 1.0 m long test section between 2.0-3.0 m depth. Water was added to nearly the top of the casing and monitored for 1 hour in which time it fell by almost 1 m, to slightly below ground level. During this time the water was draining away through a notionally contact surface area, the sides and base

of the borehole below the casing. The non-standard calculation of infiltration rate (f) was completed by dividing the volume of water that drained away during the test, V by the surface area of the test section, A and the test duration, t (f = V / (A x t)).

The test results are contained in Appendix C together with the results of variable head permeability tests completed in boreholes (see below).

3.4.5 Variable Head Permeability Tests.

The Variable Head Permeability tests were undertaken in RedP-BH1A in general accordance with BS EN ISO 22282-1:2012 and -2:2012. The test results are present in tabular and graphical format in Appendix C interspersed in hole and test order with the borehole soakaway test results.

A calculation of permeability value does not form part of the test report detailed in BS EN ISO 22282-2:2012. However, permeability values have been calculated and are reported on the test results where the test data is sufficient. For test number 2 where only a very small fall in test water level occurred over the duration of the test, the quoted permeability value should be considered a tentative estimate.

3.4.6 Thermal Resistivity

In-situ soil thermal resistivity testing was carried out within 16 trial pits (F22-TP203A, F22-TP204B, F22-TP205A, F22-TP218A, F22-TP220, F22-TP221, F22-TP222, F22-TP229A, F22-TP310 - F22-TP317B) at depths of 0.70 m, 0.90 m and 1.10 m using a Hukseflux FTN02 Thermal resistivity probe in accordance with ASTM D5334-08. Three measurements were made at each depth. The test results are presented in tabular form in Appendix C. Data is unable to be issued in AGS 4.0.4 format, therefore a CSV file will be provided.

3.4.7 Soil Electrical Resistivity Testing

The in-situ Soil Electrical Resistivity testing was carried out in accordance with BS1377: 1990: Part 9 using a ground resistivity meter.

Readings of resistivity were taken along four alignments. The readings were taken at different and equal spacings between the probe in a four electrode ‘Wenner style’ arrangement.

The results of the resistivity testing are given in Appendix C, reported as average values of earth resistivity.

3.5 Monitoring and Post Fieldwork Environmental Sampling

Groundwater levels were recorded manually throughout the field works prior to post fieldwork purging and monitoring as detailed in the In-Situ Monitoring Round Summary in Appendix F (rounds F1, F2 and F3).

Post fieldwork groundwater levels were recorded in the monitoring wells. Visit no.1. was completed on 19 and 20 of October 2023, visit 2 was completed on 1 and 2 November 2023, visit 3 was completed on 16 and 17 November 2023, visit 4 was completed on 30 November to 1 December and visit 5 was completed 12 and 13 December 2023. All visits

were completed by SSL engineers. The results together with the temporal (weather) conditions are tabulated in Appendix F.

It should be noted that groundwater levels, usually vary due to seasonal, atmospheric and/or other effects and may at times differ to those measured during the investigation.

On the first visit the wells were purged of three well volumes of groundwater (unless indicated otherwise on the monitoring results). On the second monitoring visit the monitoring locations were micro purged with water quality readings prior to water samples being taken with the use of a low flow peristaltic and bladder pumps with fresh tubing used for each monitoring location, to avoid the risk of cross contamination of water samples. Once the presence of water had been confirmed water level data loggers were installed.

The third and fifth round the monitoring locations were micro purged with water quality readings and further samples were taken as well as water level data loggers downloaded.

The fourth monitoring visit was undertaken on 30 November to 1 December 2023. In error, installation dips and the download of water level data loggers were carried out, no water samples were taken. Therefore, an additional fifth monitoring visit was undertaken on the 12 and 13 December 2023. To complete a full round of monitoring as previously mentioned.

The water level data loggers were left in place for download on visits 3, 4 and 5 as mentioned above and will be downloaded again after 12 months prior to decommissioning of borehole installations. These results will be distributed in an addendum to this report on completion of the final monitoring visit.

The recorded data was barometrically corrected to adjust the data for atmospheric pressure fluctuations using data from the barometric data logger closest to each water level data logger for which data was available, ‘step corrected’ using the corresponding manual water level measurements, and adjusted for any instances where a data logger was removed from the standpipe and not reinserted to the exact same depth. Occasional ‘blips’ occur in the data occur where a data logger took a scheduled measurement whilst it had been removed from a standpipe for download or water sampling. The measured groundwater levels and corresponding barometric pressures are presented graphically in Appendix F Notes are included on the plots of data logger measured water level to explain features of the data where appropriate. The corresponding manual water level measurements are also presented.

Due to the volume of data collected the water level data logger measurements are not included within the accompanying AGS data.

4 LABORATORY TESTING

Samples for potential geotechnical testing were returned to one of the Company's UKAS accredited laboratories, and those for potential geoenvironmental testing were sent to a sister company Envirolab Limited, a MCERTS and UKAS accredited testing laboratory. Laboratory tests were scheduled by Mott MacDonald. Tests carried out in accordance with MCERTS/UKAS standards where noted on the results sheets.

4.1 Geotechnical Laboratory Testing

Geotechnical laboratory testing was generally carried out in accordance with the relevant parts of:

- BS EN ISO 17892:2014-2022 Parts 1-12, *Geotechnical investigation and testing – Laboratory testing of soil*,
- BS 1377:2016-2022 Parts 1-3, *Methods of test for soils for civil engineering purposes* (for test methods not covered in BS EN ISO 17892),
- BS 1377:1990 Parts 1-8, *Methods of test for soils for civil engineering purposes* (for tests carried out to older legacy methods),
- BRE Special Digest 1:2005 (SD1) *Concrete in aggressive ground. Assessing the aggressive chemical environment*. Third edition.

The number of tests of each type completed are summarised below. The results are reported in tabular and/or graphical form and included as Appendix D of this report. The test methods used are detailed on the report sheets, and where non-standard procedures have been undertaken, this is recorded on the report sheet.

TABLE 4 : SUMMARY OF GEOTECHNICAL TESTING

Number of tests	Test	Remarks
Classification Tests		
177	Water content.	'Standalone' tests reported in the Summary of Water Content Tests. Tests completed as part of Liquid and plastic limit tests are reported with those results.
104	Liquid and plastic (Atterberg) limits.	4-point tests completed.
127	Particle size distribution by sieving.	
73	Particle size distribution by sedimentation.	
6	Density by linear measurement	
3	Split and describe of UT100 samples.	
Compressibility, Permeability and Durability Tests		
5	One-dimensional consolidation test.	

TABLE 4 : SUMMARY OF GEOTECHNICAL TESTING		
Number of tests	**Test**	**Remarks**
Performance Related Tests		
25	Dry density/moisture content relationship using 2.5kg rammer.	Test results combined and ordered by location and sample depth.
75	Moisture condition value at natural moisture content.	23 of the dry density/moisture condition value tests were completed using a CBR mould, and 2 using a standard Proctor mould. The MCV and CBR tests were completed at different compaction points during selected dry density/moisture content tests.
109	California Bearing Ratio (CBR) test on recompacted disturbed samples.	
Shear Strength - Total Stress		
1	Shear strength using hand vane.	
40	Shear strength of a set of three 60 mm x 60mm square specimens by direct shear, test	
22	Unconsolidated undrained strength of a single 100mm diameter specimen in triaxial compression without the measurement of pore pressure.	
Shear Strength – Effective Stress		
6	Consolidated undrained triaxial compression test with measurement of pore pressure single-stage or multi-stage test using 100mm diameter specimen.	
Chemical Tests: Soil		
12	Soil Electrical resistivity	
8	Thermal conductivity on undisturbed samples.	Each comprised 3 tests carried out at different moisture contents (30%, 15% and 5%). Where samples arrived with <5% moisture content only one test was completed. ASTM DS334-14 test methods. Total of 82 tests/determinations completed.
22	Thermal conductivity on disturbed samples.	
12	Carbonate content by rapid titration.	Test results reported in the Summary of Chemical Analyses.
9	Organic Matter Content.	
8	BRE SD1 Suite A (Greenfield site – pyrite absent)*.	
40	BRE SD1 Suite B (Greenfield site – pyrite present).	
Chemical Tests: Water		
12	BRE SD1 Suite – pH, sulphate, ammonical nitrogen, chloride, nitrate, magnesium.	Tests completed by Envirolab and reported with the Geoenvironmental Test Results in Appendix E.

Note:* Test(s) carried out to method approved in BRE Special Digest 1.

4.2 Geoenvironmental Laboratory Testing

The geoenvironmental testing carried out is summarised in the following table. The results are included as Appendix E of this report and include details of the test method.

TABLE 5 : SUMMARY OF GEOENVIRONMENTAL LABORATORY TESTING		
Numbers of tests	**Description**	**Notes**
SOIL		
36	MM General Soil Suite.	As, B, Ba, Be, Cd, Cr (Total and VI), Cu, Hg, Pb, Mg, Mn, Mo, Ni, Se, V, Zn, pH, Total Sulphur, Sulphate (water soluble), PAH (USEPA 16 speciated by GCMS), phenols (total), free and total Cyanide, SOM (%), TOC (%), moisture content.
7	MM TPH Soil Suite including BTEX	TPH CWG aro/ali split.
2	BTEX Soil Suite.	Benzene, toluene, ethylbenzene and xylene.
7	MM PCB Soil Suite.	Polychlorinated biphenyl (PCBs 12 WHO congeners)
16	MM Pesticides Soil Suite.	Cypermethrin, Diazinon, Dimethoate, Linuron, Mecoprop, Permethrin, Alachlor, Atrazine, Carbaryl, Chlorfenvinphos, Chlorpyrifos-ethyl, Aldrin, Dieldrin, Endrin, Isodrin, DDT, DDE, DDD, Diuron, Alpha-Endosulfan, Beta-Endosulfan, Isoproturon, Simazine, Trifluralin, Bentazone, Fentitrothion, Malathion, Dichlorvos, Alpha-Hexachlorocyclohexanes (including Lindane), Beta-Hexachlorocyclohexanes (including Lindane), Gamma-Hexachlorocyclohexanes (including Lindane)
WATER		
8	MM Comprehensive Water Suite	As, B, Ba, Be, Cd, Cr (Total and VI), Cu, Fe, Pb, Mg, Mn, Mo, Ni, Sb, Se, V, Zn, pH, sulphate (water soluble), sulphur, cyanide (free and total), ammoniacal nitrogen, chloride, fluoride, nitrate as NO3, Hardness (CaCO3), PAH (USEPA 16 speciated by GCMS), phenols (speciated), TPH (TPH CWG aliphatic/aromatic split by GCMS), VOC (USEPA speciated including BTEX), total dissolved solids (TDS).
LEACHATE (simulated leachates derived from soil samples)		
8	MM Comprehensive Leachate Suite BS EN 12457	As, B, Ba, Be, Ca, Cd, Cr (Total and VI), Cu, Fe, Hg, Pb, Mg, Mn, Mo, Ni, Sb, Se, V, Zn, pH, cyanide (free and complex), fluoride, ammoniacal nitrogen, chloride, phenols (speciated).
WASTE ACCEPTANCE CRITERIA (WAC)		
18	MM Waste Acceptance Suite	**Leachate Suite:** (one stage to BS:12457-2): As, Ba, Cd, Hg, Mo, Ni, Pb, Sb, Se, Zn, Cl-, F-, SO4, total dissolved solids (TDS), phenol index, dissolved organic carbon. **Solid Waste Suite:** Total organic carbon (TOC), loss on ignition, BTEX by GC-FID, pH, acid neutralisation capacity (CAN), PAH (total), pH, PCBs (7 congeners), mineral soil (C10-C40 compounds).

5 REFERENCES

5.1 Structural Soils Limited, Ground Investigation Report 735329-02 *EA2 Onshore GI Factual Report*, 2022

5.2 BS 5930:2015+A1:2020 *Code of practice for ground investigations*

5.3 BS 10175:2011+A2:2017 *Investigation of potentially contaminated sites: Code of practice*

5.4 BS EN 1997-2:2007 *Eurocode 7 — Geotechnical design. Part 2: Ground investigation and testing*

5.5 BS EN ISO 22475-1:2021 *Geotechnical investigation and testing - Sampling methods and groundwater measurements. Part 1: Technical principles for the sampling of soil, rock and groundwater*

5.6 British Geological Survey sheet 191 scale 1:50,000 Saxmundham, published 1996.

5.7 British Geological Survey, Geoindex (onshore) digital map viewer. Available online: [redacted]

5.8 British Geological Survey, Lexicon of Named Rock Units. Available online: https://webapps.bgs.ac.uk/lexicon/

5.9 British Geological Survey, BGS maps portal. Available online: [redacted]

5.10 BS EN ISO 14688-1:2018 *Geotechnical investigation and testing – Identification and classification of soil. Part 1: Identification and description*

5.11 BS EN ISO 14688-2:2018 *Geotechnical investigation and testing – Identification and classification of soil. Part 2: Principles for a classification*

5.12 Headland Archaeology Report, SLWB23 -115 Sea Link Feed - Friston, Suffolk- Archaeological Watching Brief on GI Works, 2023

5.13 2191228 – R01 (01) Sea Link – Friston VES Report, 2023.

5.14 BS EN ISO 22476-3:2005+A1:2011 *Geotechnical investigation and testing – Field testing. Part 3: Standard penetration test*

5.15 BS 1377-9:1990 *Methods for test for soils for civil engineering purposes. Part 9: In-situ tests*, incorporating Amendments Nos. 1 and 2

5.16 BRE Digest 365 (2016) *Soakaway Design*

5.17 BS EN ISO 22282-1:2012 *Geotechnical investigation and testing — Geohydraulic testing. Part 1: General rules*

5.18 BS EN ISO 22282-2:2012 *Geotechnical investigation and testing — Geohydraulic testing. Part 2: Water permeability tests in a borehole using open systems*

5.19 BS EN ISO 17892:2014-2022 *Geotechnical investigation and testing – Laboratory testing of soil. Parts 1-12*

5.20 BS 1377:2016-2022 *Methods of test for soils for civil engineering purposes. Parts 1-3*. (for test methods not covered by BS EN ISO 17892 series of standards)

5.21 BS 1377:1990 *Methods of test for soils for civil engineering purposes. Parts 1-8*. (for tests carried out using legacy methods)

5.22 BRE Special Digest 1:2005 (SD1), *Concrete in aggressive ground. Assessing the aggressive chemical environment. Third Edition*

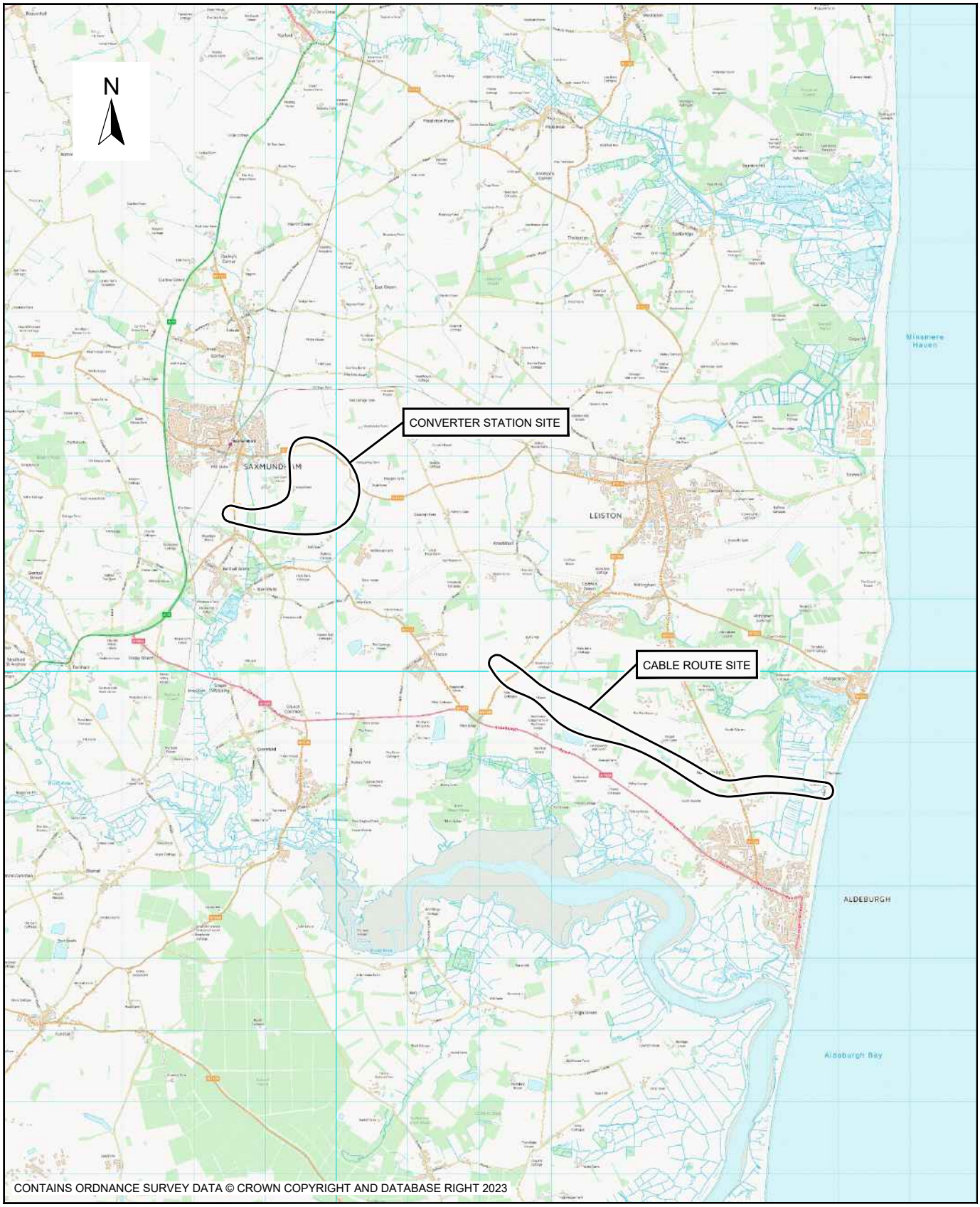
5.23 ASTM D5334–14, *Standard Test Method for Determination of Thermal Conductivity of Soil and Soft Rock by Thermal Needle Probe Procedure*

5.24 BS EN IS/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories.*

APPENDIX A -
PLANS AND DRAWINGS

(i) Site Location Plan

(ii) Exploratory Hole Location Plans



STRUCTURAL SOILS LTD
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT
Tel: 01442 416 660
ask@soils.co.uk
www.soils.co.uk

REV.	DATE	DESCRIPTION	BY	CHD.	APR.
00	06.12.2023	FIRST ISSUE	AA	AG	-

DIMENSION	SCALE	DRAWING STATUS
m	1:75,000	-

CLIENT

NATIONAL GRID

PROJECT

SEA LINK FEED - FRISTON

TITLE

SITE LOCATION MAP

JOB NO	GRID REF	SCALE BAR	ORIGIN SIZE	FIGURE
563835	TM 422 601	0 1,000 2,000 3,000 4,000m	A4	1


N
2.3
2.2
2.1
Sizewell
Leiston
Aldringham cum Thorpe
Friston
Aldeburgh
Blaxhall
Main Road
Priory Road
Abbey Road
Church Road
Station Road
Orford Road
Thorpeness Golf Club
A1094
A12
A1120
B1122
B1353
B1069
B1121
B1125
B1122
B1353
B1069
B1121
B1125
B1069
B1122
B1353
B1121
B1125
B1069
B1122
B1353
B1121
B1125
B1069
B1122
B1353



LEGEND

- BOREHOLE
- TRIAL PIT

NOTES

-

REV	DATE	DESCRIPTION	BY	CHD	APR
00	13.03.2024	FIRST ISSUE	AA	GK	-

DIMENSION	SCALE	ORIGIN SIZE
m	1:4000	A3

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18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Tel: 01442 416 660
ask@soils.co.uk
www.soils.co.uk

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TITLE

EXPLORATORY HOLE LOCATION PLAN

JOB NUMBER	FIGURE
563835	2.1
DRAWING STATUS	REV
-	00

SCALE BAR

0 40 80 120 160 200m



LEGEND

- BOREHOLE
- TRIAL PIT

NOTES

-

REV	DATE	DESCRIPTION	BY	CHD	APR
00	13.03.2024	FIRST ISSUE	AA	GK	-

DIMENSION	SCALE	ORIGIN SIZE
m	1:12500	A3

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18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Tel: 01442 416 660
ask@soils.co.uk
www.soils.co.uk

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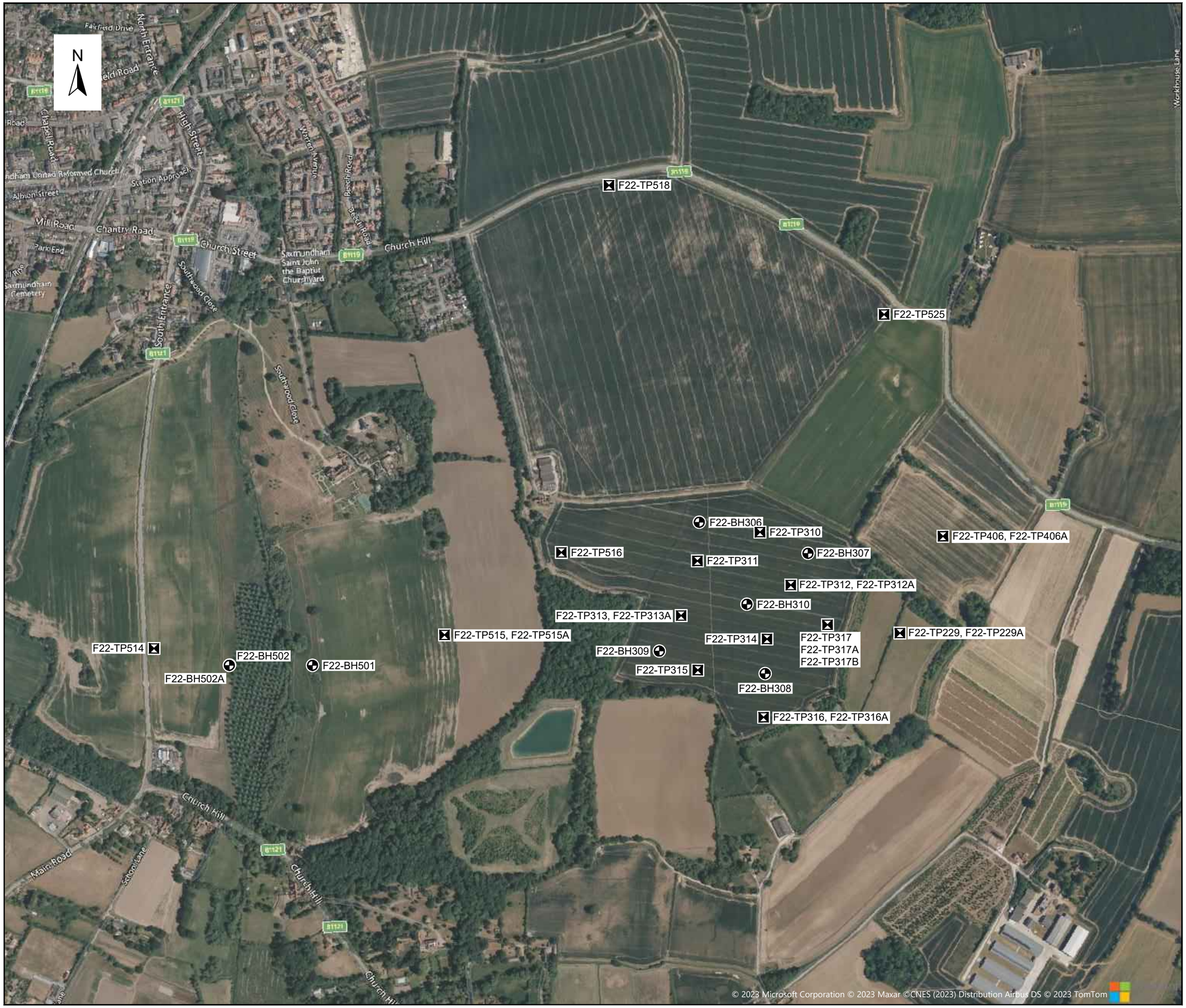
TITLE

EXPLORATORY HOLE LOCATION PLAN

JOB NUMBER	FIGURE
563835	2.2
DRAWING STATUS	REV
-	00

SCALE BAR

0 100 200 300 400 500m



LEGEND

- BOREHOLE
- TRIAL PIT

NOTES

-

REV	DATE	DESCRIPTION	BY	CHD	APR
00	13.03.2024	FIRST ISSUE	AA	GK	-

DIMENSION	SCALE	ORIGIN SIZE
m	1:7500	A3

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18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Tel: 01442 416 660
ask@soils.co.uk
www.soils.co.uk

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TITLE

EXPLORATORY HOLE LOCATION PLAN

JOB NUMBER	FIGURE
563835	2.3
DRAWING STATUS	REV
-	00

SCALE BAR

0 100 200 300 400m

APPENDIX B - EXPLORATORY HOLE RECORDS

(i) Key to Exploratory Hole Logs

(ii) Borehole Logs

(iii) Trial Pit Logs

(iv) Standpipe Summary Table

KEY TO EXPLORATORY HOLE LOGS - SUMMARY OF ABBREVIATIONS

SAMPLING

Sample type codes:

AMAL	=	Amalgamated sample.
B	=	Bulk disturbed sample.
D	=	Small disturbed sample.
DSPT	=	Small disturbed sample originating from SPT test.
ES	=	Soil sample for environmental testing.
EW	=	Water sample for environmental testing.
LB	=	Large bulk disturbed sample.
UT	=	Undisturbed thin wall sample.

Undisturbed sample detail codes:

$U_{(UT100)}$	=	Undisturbed sample UT100.

IN-SITU TESTING

$SPT_{(c)}$	=	Standard Penetration Test using a solid 60 degree cone.
SPT	=	Standard Penetration Test using split spoon sampler. ($_{(NR)}$ indicates 'No Sample Recovery').
	=	* denotes extrapolated N value. NP denotes 'No Penetration'.
HP	=	Hand Penetrometer Test. Value given as shear strength c_u, in kPa.
V	=	Field Vane Test. Peak value (c_u) & Residual value (c_r), given as shear strength in kPa.
PID	=	Photo Ionisation Detector Results, in ppm.

ADDITIONAL NOTES

1. All soil and rock descriptions and legends in general accordance with BS EN ISO 14688-1:2018, 14688-2:2018, 14689:2018, and BS5930:2015+A1:2020.
2. Material types divided by a broken line (- - -) indicates an unclear boundary.
3. Fracture spacings (If) quoted in the Description of Strata for specific strata or specific fracture sets are also quoted in mm, e.g. (25/80/230) referring to (Min/Avg/Max).
4. The data on any sheet within the report showing the AGS icon is available in the AGS format.

GINT_LIBRARY_V10_01.GLB|GrfcText G - LEGEND - 1 OF 2 | 563835_SEALINK_FRISTON.GPJ - v10_01 | 14/03/24 - 10:24 | GK1.
Structural Soils Ltd, Branch Office - Hemel Hempstead: 18 Frogmore Road, Hemel Hempstead, Hertfordshire, HP3 9RT. Tel: 01442 416660, Fax: 01442 437550, Web: www.soils.co.uk, Email:hemel@soils.co.uk.

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Contract Reference: **563835**

KEY TO EXPLORATORY HOLE LOGS - SUMMARY OF GRAPHIC SYMBOLS

WATER COLUMN SYMBOLS


First water strike, second water strike etc.


Standing water level following first strike, standing water level following second strike etc.


Seepage.


Standing water level recorded at documented date.

MATERIAL GRAPHIC LEGENDS


CLAY


Clayey gravelly SAND


Gravelly clayey SAND


Clayey SAND


Gravelly CLAY


Gravelly silty CLAY


Gravelly CLAY with BOULDERS


Gravelly CLAY with COBBLES


Gravelly silty CLAY with COBBLES


Gravelly SAND


Gravelly SAND with COBBLES


MADE GROUND


PEAT


SAND


Sandstone


Sandy CLAY


Sandy silty CLAY


Silty sandy CLAY


Sandy CLAY with COBBLES


Sandy GRAVEL

INSTRUMENTATION SYMBOLS


Backfill


Clay


Bentonite seal


Concrete


Gravel filter


Flush cover


Upstanding cover


Plain pipe


Slotted pipe

GINT_LIBRARY_V10_01.GLB|GrfcText G - LEGEND - 2 OF 2 | 563835_SEALINK_FRISTON.GPJ - v10_01 | 11/04/24 - 12:19 | GK1.
Structural Soils Ltd, Branch Office - Hemel Hempstead: 18 Frogmore Road, Hemel Hempstead, Hertfordshire, HP3 9RT. Tel: 01442 416660, Fax: 01442 437550, Web: www.soils.co.uk, Email:hemel@soils.co.uk.

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FINAL

BOREHOLE LOG

Contract:	Client:	Borehole:
Sealink Friston	**National Grid**	**F22-BH203**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	**05.10.23** End: **05.10.23**	**22.29**	**E:642411.3 N:259902.5**	**1** of **2**

Depth (m)	Samples & Testing: No	Type	Results	Backfill	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
0.20	101	ES	2xT+1xJ+1xV			Grass overlying brown slightly gravelly clayey fine SAND. Gravel is angular to subrounded fine to coarse quartz and flint. (TOPSOIL)	21.99	0.30	
0.20		PID	0.6ppm						
0.50-0.70	1	B				Dark orangish brown to orangish brown slightly gravelly very clayey fine to coarse SAND. Gravel is angular to subrounded fine to medium flint. (LOWESTOFT FORMATION)			
0.50	102	ES	2xT+1xJ+1xV						
0.50-0.60	2	D							
0.50		PID	1.3ppm						
1.00	103	ES	2xT+1xJ+1xV						
1.00-1.20	3	B							
1.00-1.10	4	D				1.20-1.65m : At 1.20m sand is loose.			
1.00		PID	1.9ppm					(2.20)	
1.20-1.65	1.65	SPT	N=8						
1.20-1.65	6	DSPT							
1.20-2.00	7	B							
2.00-2.45	2.45	SPT	N=17			2.00-2.45m : At 2.00m sand is medium dense			
2.00-3.00	10	B							
2.00-2.45	9	DSPT							
						Firm orangish brown mottled brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is angular to subangular fine to medium flint and chalk. (LOWESTOFT FORMATION) 2.50-6.00m : Sand bands through clay.	19.79	2.50	
3.00-3.45	11	SPT	N=14						
3.00-3.45	12	DSPT							
3.00-4.00	13	B							
4.00-4.45	14	SPT	N=10			4.00m : No SPT recovery.		(3.50)	
4.00-5.00	15	B							
4.50-4.60	16	D				4.50-4.60m : Sample at 4.50-4.60m was from a sand band.			
5.00-5.45	17	$UT_{(UT100)}$	62 blows 100% recovery						
5.00-6.00	19	B							
5.45-5.55	18	D							
6.00-6.45	20	SPT	N=27			Medium dense orangish brown slightly gravelly slightly silty fine to coarse SAND. Gravel is subangular to rounded fine to medium flint. (CRAG GROUP)	16.29	6.00	
6.00-6.45	21	DSPT							
6.00-7.00	22	B							
7.00-7.45	23	SPT	N=46			7.00m : Becomes dense below 7.00m			
7.00-7.45	24	DSPT							
7.00-8.00	25	B							
8.00-8.45	26	SPT	N=48					(4.00)	
8.00-8.45	27	DSPT							
8.00-9.00	28	B				8.50-10.00m : Slight increase in gravel content.			

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
04/10/23	11:00	0.00	None	N/R	
04/10/23	16:20	2.00	2.00	200	Dry
05/10/23	08:30	2.00	2.00	200	Dry
05/10/23	17:00	15.00	15.00	200	Dry

Chiselling / Slow Progress

From	To	Duration (hh:mm)

General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Inspection pit hand dug to 1.20m depth.
3. Down borehole checks for buried ferrous objects carried out during drilling by specialist unexploded ordnance (UXO) officer using magnetometer at regular intervals to 12.00m depth.
4. 3.0m of stainless steel casing used to lead the casing string.
5. On completion, borehole backfilled with bentonite pellets to 1.00m and arisings to ground level.
6. SPT hammer AR3104-2023 (E_r = 63.00%) used.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 3000 Mark 2**	[redacted]	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

BOREHOLE LOG

Contract:	Client:	Borehole:
Sealink Friston	**National Grid**	**F22-BH203**

Contract Ref:	Start: **05.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **05.10.23**	**22.29**	**E:642411.3 N:259902.5**	**2** of **2**

Depth (m)	Samples & Testing No	Type	Results	Backfill	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
9.00-9.41	29	SPT	5,6/6,11,21,12 for 35mm			Medium dense orangish brown slightly gravelly slightly silty fine to coarse SAND. Gravel is subangular to rounded fine to medium flint. (CRAG GROUP) *(stratum copied from 6.00m from previous sheet)* 9.00m : Becomes very dense below 9.00m.			
9.00-9.45	30	DSPT							
9.00-10.00	31	B							
10.00-10.35	32	SPT(c)	6,8/15,21,14 for 50mm			Very dense orangish brown slightly gravelly slightly silty fine to coarse SAND. Gravel is angular to rounded fine to medium flint. (CRAG GROUP)	12.29	10.00	
10.00-11.00	33	B							
10.50-10.60	34	D							
11.00-11.34	35	SPT(c)	6,9/14,24,12 for 40mm					(3.00)	
11.00-12.00	36	B							
11.50-11.60	37	D							
12.00-12.25	38	SPT(c)	7,18/27,13 for 35mm						
12.00-13.00	39	B							
12.50-12.60	40	D							
13.00-13.34	41	SPT	4,7/13,24,13 for 40mm			Very dense orangish brown slightly silty fine to medium SAND. (CRAG GROUP)	9.29	13.00	
13.00-13.45	42	DSPT							
13.00-14.00	43	B							
14.00-14.33	44	SPT	6,10/10,26,14 for 30mm					(2.37)	
14.00-14.45	45	DSPT							
14.00-15.00	46	B							
15.00-15.37	47	SPT	7,10/10,16,24 for 65mm						
15.00-15.45	48	DSPT							
						Borehole terminated at 15.37m depth.	6.92	15.37	

Boring Progress and Water Observations					
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 3000 Mark 2**	[redacted]	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

BOREHOLE LOG

Contract:	Client:	Borehole:
Sealink Friston	**National Grid**	**F22-BH306**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	**12.09.23** End: **18.09.23**	**25.24**	**E:639696.8 N:262445.3**	**1** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
						REWORKED: Crops overlying firm brown slightly gravelly slightly sandy CLAY. Gravel is angular to rounded coarse flint. Sand is fine.			
0.20-0.20	101	ES	2xT+1xJ+1xV			(TOPSOIL)	24.94	0.30	
0.20		PID	0.3ppm			Firm to stiff orangish brown mottled light grey slightly gravelly slightly sandy CLAY. Gravel is angular to rounded fine to coarse quartz, chalk and flint. Sand is fine to coarse. (LOWESTOFT FORMATION)		(0.90)	
0.40-0.60	1	B							
0.50-0.50	102	ES	2xT+1xJ+1xV						
0.50	2	D							
0.50		V	c_u=94/110/108						
0.50		V	c_r=44/44/42						
0.50		PID	0.4ppm			1.00-1.20m : Frequent lenses of orangish brown clayey fine to coarse sand (unknown dimensions).			
0.70-0.70	103	ES	2xT+1xJ+1xV						
0.70		PID	0.3ppm				24.04	1.20	
1.00-1.00	104	ES	2xT+1xJ+1xV			Firm to very stiff dark grey mottled white and brown locally slightly sandy slightly gravelly silty CLAY with occasional pockets of fine sand. Gravel is angular to rounded fine to coarse chalk and flint. sand is fine to coarse. (LOWESTOFT FORMATION)			
1.00-1.20	3	B							
1.00	4	D							
1.00		V	c_u=104/112/110						
1.00		V	c_r=30/14/14						
1.00		PID	0.3ppm						
1.50-1.95	5	$UT_{(UT100)}$	150 blows 89% recovery						
1.50-1.95	6	B							
1.95-2.10	7	D							
2.00	7	D							
2.50-2.95	8	SPT	N=15						
2.50-2.95	10	B							
2.50-2.95	9	DSPT							
3.00	11	D				3.00-3.50m : Becoming very gravelly.			
3.50-3.95	12	$UT_{(UT100)}$	150 blows 89% recovery			3.50m : Becoming very stiff			
3.50-3.95	13	B							
3.95	14	D							
4.00	14	D							
4.50-4.95	15	SPT	N=30						
4.50-4.95	16	DSPT							
4.50-4.95	17	B							
5.00	18	D						(8.10)	
5.50-5.95	19	$UT_{(UT100)}$	150 blows 100% recovery						
5.50-5.95	20	B							
5.95-6.15	21	D							
6.00	21	D							
6.50-6.95	22	SPT	N=43						
6.50-6.95	23	DSPT							
6.50-6.95	24	B							
7.00	25	D							
7.50-7.95	26	$UT_{(UT100)}$	150 blows 100% recovery						
7.50-7.95	27	B							
7.95-8.15	28	D							
8.00	28	D							
8.50-8.95	29	SPT	N=42						
8.50-8.95	30	DSPT							
8.50-8.95	31	B							

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
18/09/23	16:26	3.00	3.00	200	2.50
19/09/23	08:11	3.00	3.00	200	2.50
19/09/23	17:00	16.72	16.50	150	1.80
20/09/23	08:30	16.72	16.50	150	14.90
20/09/23	13:35	25.00	24.00	150	18.50

Chiselling / Slow Progress

From	To	Duration (hh:mm)

General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Inspection pit complete and cleared of services between 0.00-1.20m.
3. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
4. 3.0m of stainless steel casing used to lead the casing string.
5. No groundwater encountered.
6. 50mm diameter gas/groundwater monitoring well complete with

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 2500**	[redacted]	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

BOREHOLE LOG

Contract:	Client:	Borehole:
Sealink Friston	**National Grid**	**F22-BH306**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	**12.09.23** End: **18.09.23**	**25.24**	**E:639696.8 N:262445.3**	**2** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
9.00	32	D							
9.30-9.50	33	B				Dense to very dense orangish brown mottled dark grey and white slightly gravelly clayey fine to medium SAND. Gravel is angular to rounded fine to medium flint and chalk with rare shell fragments. (CRAG GROUP)	15.94	9.30	
9.50-9.94	34	SPT	6,9/11,12,14,13 for 65mm						
9.50-9.94	35	DSPT							
9.50-9.94	36	B							
10.00	37	D							
10.50-10.95	38	SPT	N=44			10.50m : Becoming less gravelly.			
10.50-10.95	39	DSPT							
10.50-10.95	40	B							
11.00	41	D							
11.50-11.95	42	SPT	N=48			11.50-11.95m : Gravel absent.			
11.50-11.95	43	DSPT							
11.50-11.95	44	B							
12.00	45	D							
12.50-12.95	46	SPT	N=49						
12.50-12.95	47	DSPT							
12.50-12.95	48	B							
13.00	48	D						(7.70)	
13.00	49	D							
13.50-13.72	49	SPT	6,17/50 for 70mm						
13.50-13.72	50	DSPT							
13.50-13.72	51	DSPT							
13.50-13.95	51	B							
13.50-13.72	52	B							
14.00	52	D							
14.00	53	D							
14.50-14.89	53	SPT	3,3/6,12,27,5 for 15mm						
14.50-14.89	54	DSPT							
14.50-14.95	55	DSPT							
14.50-14.95	55	B							
14.50-14.95	56	B							
15.00	56	D							
15.00	57	D							
15.50-15.88	57	SPT	3,5/9,15,20,6 for 5mm						
15.50-15.95	58	B							
15.50-16.95	59	B							
16.00	59	D							
16.50-16.72	60	SPT	3,10/50 for 70mm						
16.50-16.72	61	DSPT							
16.50-16.72	62	DSPT							
16.50-16.72	63	B							
17.00	64	D				Very dense dark grey slightly gravelly slightly clayey locally clayey fine to coarse SAND with rare shell fragments and flasers of dark grey clay. Gravel is angular to rounded fine to medium flint. (CRAG GROUP)	8.24	17.00	
17.50-17.74	65	SPT	6,11/45,5 for 15mm						
17.50-17.74	66	DSPT							
17.50-17.95	67	B							

Boring Progress and Water Observations					
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

raised protective cover and protective wooden fencing installed to 14.0m depth on completion. Response zone 11.0m to 14.0m depth.
7. SPT hammer AR1862-2023 (E_r = 75.00%) used.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 2500**	[redacted]	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

BOREHOLE LOG

Contract:	Client:	Borehole:
Sealink Friston	**National Grid**	**F22-BH306**

Contract Ref:	Start: **12.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **18.09.23**	**25.24**	**E:639696.8 N:262445.3**	**3** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
18.00	68	D				Very dense dark grey slightly gravelly slightly clayey locally clayey fine to coarse SAND with rare shell fragments and flasers of dark grey clay. Gravel is angular to rounded fine to medium flint. (CRAG GROUP) *(stratum copied from 17.00m from previous sheet)*			
18.50-18.74	69	SPT	6,9/45,5 for 15mm						
18.50-18.95	69	B							
18.50-18.74	70	DSPT							
18.50-18.95	71	B							
19.00	72	D							
19.50-19.81	73	SPT	5,10/13,29,8 for 10mm						
19.50-19.81	73	B							
19.50-19.81	74	DSPT							
19.50-19.95	75	B							
20.00	76	D							
20.50-20.72	77	SPT	5,13/50 for 70mm						
20.50-20.95	77	B							
20.50-20.72	78	DSPT							
20.50-20.95	79	B						(8.00)	
21.00	80	D							
21.50-21.83	81	SPT	3,7/12,24,14 for 30mm						
21.50-21.83	82	DSPT							
21.50-21.82	83	B							
22.00	84	D							
22.50-22.83	85	SPT	5,15/18,16,16 for 30mm						
22.50-22.83	86	DSPT							
22.50-22.95	87	B							
23.00	88	D							
23.50-23.82	89	SPT	3,4/12,18,20 for 20mm						
23.50-23.95	90	B							
24.00	91	D							
24.50-24.87	92	SPT	2,2/12,16,22 for 70mm						
24.50-24.87	93	DSPT							
24.50-24.95	94	B							
25.00	95	D				Borehole terminated at 25.00m depth.	0.24	25.00	

Boring Progress and Water Observations					
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 2500**	[redacted]	[redacted]	[redacted]

AGS

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STRUCTURAL SOILS

FINAL

BOREHOLE LOG

Contract:	Client:	Borehole:
Sealink Friston	**National Grid**	**F22-BH307**

Contract Ref:	Start: **12.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **27.09.23**	**23.88**	**E:639919.1 N:262381.8**	**1** of **3**

Depth (m)	Samples & Testing No	Type	Results	Backfill	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
0.20	101	ES	2xT+1xJ+1xV			REWORKED: Soft dark brown slightly sandy slightly gravelly CLAY with occasional rootlets <3mm diameter. Sand is fine to medium. Gravel is angular to rounded fine to coarse flint, mudstone, red sandstone, limestone and chalk. (TOPSOIL)	23.53	0.35	
0.20		PID	0.6ppm						
0.40-0.60	1	B							
0.50	102	ES	2xT+1xJ+1xV			Firm yellowish brown slightly gravelly slightly sandy CLAY. Gravel is angular to rounded fine to coarse flint, limestone and chalk. Sand is fine to coarse. (LOWESTOFT FORMATION) 0.80m : Becoming yellowish brown mottled grey.		(0.85)	
0.50	2	D							
0.50		V	c_u=67/67/72						
0.50		PID	0.5ppm						
1.00	103	ES	2xT+1xJ+1xV				22.68	1.20	
1.00-1.20	3	B							
1.00	4	D							
1.00		PID	0.4ppm			Firm grey mottled yellowish brown slightly gravelly slightly sandy silty CLAY with a medium cobble content. Gravel is angular to subrounded fine to coarse flint and occasional chalk. cobbles are angular to sub angular flint. Sand is fine to medium. (LOWESTOFT FORMATION)			
1.50-1.95	5	$UT_{(UT100)}$	100 blows 100% recovery						
1.50-1.95	6	B							
2.00	7	D						(1.75)	
2.50-2.95	8	SPT	N=20						
2.50-2.95	9	B							
3.00	10	D				Firm becoming very stiff orangish brown slightly gravelly slightly sandy silty CLAY. Gravel is subangular to subrounded fine to coarse chalk with occasional fragments of flint. Sand is fine to coarse. (LOWESTOFT FORMATION)	20.93	2.95	
3.50-3.95	11	$UT_{(UT100)}$	100 blows 100% recovery			3.50m : very stiff from 3.50m			
3.50-3.95	12	B							
3.95-4.10	13	D							
4.50-4.95	14	SPT	N=32						
4.50-4.95	15	DSPT							
4.50-4.95	16	B							
5.00	17	D							
5.50-5.95	18	$UT_{(UT100)}$	100 blows 89% recovery					(5.35)	
5.50-5.95	19	B							
5.95-6.10	20	D							
6.50-6.95	21	SPT	N=45						
6.50-6.95	22	DSPT							
6.50-6.95	23	B							
7.00	24	D							
7.50-7.95	25	$UT_{(UT100)}$	100 blows 100% recovery			7.50m : Sand content increasing with more frequent pockets of 30-50mm diameter. Gravel content decreasing.			
7.50-7.95	26	B							
7.95-8.10	27	D							
8.30-8.50	28	B				Dense to very dense yellowish orange and white slightly gravelly silty fine to medium SAND. Gravel is subangular to subrounded fine flint with occasional chalk. (LOWESTOFT FORMATION)	15.58	8.30	
8.50-8.82	29	SPT	8,12/18,22,10 for 20mm						
8.50-8.82	30	DSPT							
8.50-8.82	31	B							

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
21/09/23	17:00	1.20	None	N/R	Dry
22/09/23	08:30	1.20	None	N/R	Dry
26/09/23	09:06	1.20	None	250	1.00
26/09/23	17:00	7.00	6.00	200	Dry
27/09/23	08:12	7.00	6.00	200	Dry
27/09/23	16:53	19.79	19.50	150	10.50
28/09/23	08:12	19.79	19.50	150	12.00
28/09/23	11:23	25.00	25.00	150	13.50

Chiselling / Slow Progress

From	To	Duration (hh:mm)

General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Inspection pit hand dug to 1.20m depth.
3. Down borehole checks for buried ferrous objects carried out during drilling by specialist unexploded ordnance (UXO) officer using magnetometer at regular intervals to 12.00m depth.
4. 3.0m of stainless steel casing used to lead the casing string.
5. No groundwater encountered.
6. Cable percussion borehole terminated at 25.00m depth.
7. On completion, borehole backfilled with bentonite pellets to

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 2500**	[redacted]	[redacted]	[redacted]

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Structural Soils Ltd, Branch Office - Hemel Hempstead: 18 Frogmore Road, Hemel Hempstead, Hertfordshire, HP3 9RT. Tel: 01442 416660, Fax: 01442 437550, Web: www.soils.co.uk, Email: ask@soils.co.uk. | 22/04/24 - 16:42 | GK1 |

STRUCTURAL SOILS

FINAL

BOREHOLE LOG

Contract:	Client:	Borehole:
Sealink Friston	**National Grid**	**F22-BH307**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	**12.09.23** End: **27.09.23**	**23.88**	**E:639919.1 N:262381.8**	**2** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
9.00	32	D				Dense to very dense yellowish orange and white slightly gravelly silty fine to medium SAND. Gravel is subangular to subrounded fine flint with occasional chalk. (LOWESTOFT FORMATION) *(stratum copied from 8.30m from previous sheet)*			
9.50-9.95	33	SPT	N=44						
9.50-9.95	34	DSPT							
9.50-9.95	35	B							
10.00	36	D							
10.50-10.91	37	SPT	6,8/10,13,17,10 for 35mm					(4.70)	
10.50-10.91	38	DSPT							
10.50-10.91	39	B							
11.00	40	D							
11.50-11.95	41	SPT	N=46						
11.50-11.95	42	DSPT							
11.50-11.95	43	B							
12.00	44	D							
12.50-12.95	45	SPT	N=45						
12.50-12.95	46	DSPT							
12.50-12.95	47	B							
13.00	48	D				Very stiff grey mottled orangish brown slightly gravelly slightly sandy silty CLAY. Gravel is angular to subangular fine flint. Sand is fine to coarse. (CRAG GROUP) 13.00m : Increasing yellowish orange lenses fine to coarse SAND.	10.88	13.00	
13.20-13.50	49	B							
13.50-13.95	50	$UT_{(UT100)}$	125 blows 100% recovery						
13.50-13.95	51	B							
14.00	52	D							
14.50-14.95	53	SPT	N=41			14.50m : Decreasing gravel content, increasing sand content.		(3.50)	
14.50-14.95	54	DSPT							
14.50-14.95	55	B							
15.00	56	D							
15.50-15.95	57	$UT_{(UT100)}$	125 blows 100% recovery						
15.50-15.95	58	B							
16.00	59	D							
16.50-16.95	60	SPT	N=41			Dense to very dense orangish brown clayey fine to coarse SAND. (CRAG GROUP)	7.38	16.50	
16.50-16.95	61	DSPT							
16.50-16.95	62	B							
17.00	63	D							
17.50-17.95	64	SPT	N=34						
17.50-17.95	65	B							

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)

Chiselling / Slow Progress

From	To	Duration (hh:mm)

General Remarks

1.00m and arisings to ground level.
8. SPT hammer AR1862-2023 (E_r = 75.00%) used.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 2500**	[redacted]	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

BOREHOLE LOG

Contract:	Client:	Borehole:
Sealink Friston	**National Grid**	**F22-BH307**

Contract Ref:	Start: **12.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **27.09.23**	**23.88**	**E:639919.1 N:262381.8**	**3** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
18.00-18.50	66	B				Dense to very dense orangish brown clayey fine to coarse SAND. (CRAG GROUP) *(stratum copied from 16.50m from previous sheet)*			
18.50-18.95	67	$UT_{(UT100)}$	125 blows 89% recovery						
18.50-18.95	68	B							
19.00-19.50	69	B							
19.00-19.45	71	DSPT							
19.50-19.79	70	SPT	9,13/20,30 for 65mm						
19.50-19.79	71	DSPT							
19.50-19.79	72	B							
20.00	73	D						(7.50)	
20.50-20.95	74	SPT	N=44						
20.50-20.95	75	DSPT							
20.50-20.95	76	B							
21.00	77	D							
21.50-21.86	78	SPT	8,10/12,17,21 for 60mm						
21.50-21.86	79	DSPT							
21.50-21.86	80	B							
22.00	81	D							
22.50-22.79	82	SPT	5,13/20,30 for 65mm						
22.50-22.79	83	DSPT							
22.50-22.79	84	B							
23.00	85	D							
23.50-23.82	86	SPT	6,10/15,28,7 for 20mm						
23.50-23.82	87	DSPT							
23.50-23.82	88	B							
24.00	89	D				Very dense grey mottled orangish grey slightly gravelly clayey fine to coarse SAND. Gravel subangular to subrounded fine to medium flint. (CRAG GROUP)	-0.12	24.00	
24.00-24.50	90	B							
24.50-24.85	91	SPT	3,7/9,21,20 for 50mm					(1.00)	
24.50-24.85	92	DSPT							
24.50-24.85	93	B							
25.00-25.00	94	D				Borehole terminated at 25.00m depth.	-1.12	25.00	

Boring Progress and Water Observations					
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 2500**	[redacted]	[redacted]	[redacted]

AGS

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STRUCTURAL SOILS

FINAL

BOREHOLE LOG

Contract:	Client:	Borehole:
Sealink Friston	**National Grid**	**F22-BH308**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	**29.09.23** End: **03.10.23**	**24.41**	**E:639831.5 N:262136.0**	**1** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
0.20	101	ES				POSSIBLY REWORKED: Soft dark brown slightly gravelly slightly sandy CLAY with organic material and occasional rootlets. Gravel is angular to subangular fine to medium flint. Sand is fine. (TOPSOIL)	24.11	0.30	
0.40-0.60	1	B				Soft yellowish brown slightly sandy gravelly CLAY. Gravel is fine to coarse angular to rounded flint and chalk. Sand is fine to medium. (LOWESTOFT FORMATION)	23.76	0.65	
0.40	102	ES							
0.50	2	D							
0.60	103	ES							
0.70-0.90	3	B				Soft yellowish brown and grey slightly gravelly slightly sandy silty CLAY. Gravel is angular to rounded fine to coarse flint and chalk. Sand is fine to medium. (LOWESTOFT FORMATION) 1.00-1.20m : With occasional brown sand lens.			
0.80	4	D							
1.00	104	ES							
1.00-1.20	5	B							
1.00	6	D							
1.50-1.95	7	$UT_{(UT100)}$	75 blows 89% recovery			1.50m : Becoming stiff from 1.50m.		(1.85)	
1.50-1.95	8	B							
2.00	9	D							
2.50-2.95	10	SPT	N=23			Firm becoming very stiff with depth grey mottled white slightly sandy slightly gravelly silty CLAY with occasional pockets of fine sand. Gravel is angular to rounded fine to coarse flint and chalk. Sand is fine to coarse. (LOWESTOFT FORMATION)	21.91	2.50	
2.50-2.95	11	DSPT							
2.50-2.95	12	B							
3.00	13	D							
3.50-3.95	14	$UT_{(UT100)}$	1000 blows 100% recovery						
3.50-3.95	15	B							
3.95-4.10	16	D							
4.50-4.95	17	SPT	N=29						
4.50-4.95	18	DSPT							
4.50-4.95	19	B							
5.00	20	D				4.95-5.10m : Lignitic inclusions.		(5.70)	
5.50-5.95	21	$UT_{(UT100)}$	125 blows 100% recovery						
5.50-5.95	22	B							
6.00	23	D							
6.50-6.95	24	SPT	N=32						
6.50-6.95	25	DSPT							
6.50-6.95	26	B							
7.00	27	D							
7.50-7.95	28	$UT_{(UT100)}$	125 blows 89% recovery			7.50-8.00m : Orangish brown slightly sandy.			
7.50-7.95	29	B							
7.95-8.10	30	D							
8.20-8.50	31	B				Very dense brown and white locally slightly gravelly clayey fine to medium SAND with occasional shell fragments. Gravel is angular to rounded fine to medium flint and chalk. (CRAG GROUP)	16.21	8.20	
8.30	32	D							
8.50-8.93	33	SPT	6,8/10,12,14,14 for 55mm						
8.50-8.93	34	DSPT							
8.50-8.93	35	B							

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
29/09/23	10:37	2.00	1.50	250	Dry
02/10/23	10:55	1.00	1.50	250	Dry
02/10/23	16:18	8.93	6.00	200	Dry
03/10/23	08:28	8.93	6.00	150	Dry
03/10/23	17:15	20.00	20.00	150	16.50
04/10/23	08:57	20.00	20.00	150	17.30
04/10/23	14:49	25.00	25.00	150	17.50

Chiselling / Slow Progress

From	To	Duration (hh:mm)

General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Inspection pit hand dug to 1.20m depth.
3. Down borehole checks for buried ferrous objects carried out during drilling by specialist unexploded ordnance (UXO) officer using magnetometer at regular intervals to 12.00m depth.
4. 3.0m of stainless steel casing used to lead the casing string.
5. 50mm diameter standpipe piezometer complete with upstanding protective cover and protective wooden fencing installed to 21.00m depth on completion. Response zone 15m

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 2500**	[redacted]	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

BOREHOLE LOG

Contract:	Client:	Borehole:
Sealink Friston	**National Grid**	**F22-BH308**

Contract Ref:	Start: **29.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **03.10.23**	**24.41**	**E:639831.5 N:262136.0**	**2** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
9.00	36	D				Very dense brown and white locally slightly gravelly clayey fine to medium SAND with occasional shell fragments. Gravel is angular to rounded fine to medium flint and chalk. (CRAG GROUP) *(stratum copied from 8.20m from previous sheet)*			
9.50-9.92	37	SPT	4,6/10,13,15,12 for 45mm						
9.50-9.92	38	DSPT							
9.50-9.92	39	B							
10.00	40	D							
10.50-10.93	41	SPT	4,5/8,12,15,15 for 55mm						
10.50-10.93	42	DSPT							
10.50-10.93	43	B							
11.00	44	D							
11.50-11.87	45	SPT	5,7/10,15,25 for 70mm						
11.50-11.87	46	DSPT							
11.50-11.87	47	B							
12.00	48	D							
12.50-12.85	49	SPT	5,8/10,16,24 for 50mm						
12.50-12.85	50	DSPT							
12.50-12.85	51	B							
13.00	52	D							
13.50-13.83	53	SPT	6,10/15,25,10 for 30mm						
13.50-13.83	54	DSPT							
13.50-13.83	55	B							
14.00	56	D							
14.50-14.90	57	SPT	6,7/10,14,19,7 for 25mm			14.50m : Becoming gravelly.			
14.50-14.90	58	DSPT							
14.50-14.90	59	B							
15.00	60	D							
15.50-15.87	61	SPT	6,8/10,15,25 for 70mm						
15.50-15.87	62	DSPT							
15.50-15.87	63	B							
16.00	64	D							
16.50-16.86	65	SPT	6,8/11,17,22 for 60mm					(16.80)	
16.50-16.86	66	DSPT							
16.50-16.86	67	B							
17.00	68	D							
17.50-17.82	69	SPT	6,10/16,28,6 for 20mm						
17.50-17.82	70	DSPT							
17.50-17.82	71	B							

Boring Progress and Water Observations					
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

to 21m depth.
6. Cable percussion borehole terminated at 25.00m depth.
7. SPT hammer AR1862-2023 (E_r = 75.00%) used.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 2500**	[redacted]	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

BOREHOLE LOG

Contract:	Client:	Borehole:
Sealink Friston	**National Grid**	**F22-BH308**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	**29.09.23** End: **03.10.23**	**24.41**	**E:639831.5 N:262136.0**	**3** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
18.00	72	D				Very dense brown and white locally slightly gravelly clayey fine to medium SAND with occasional shell fragments. Gravel is angular to rounded fine to medium flint and chalk. (CRAG GROUP) *(stratum copied from 8.20m from previous sheet)*			
18.50-18.79	73	SPT	5,10/20,30 for 65mm						
18.50-18.79	74	DSPT							
18.50-18.79	75	B							
19.00	76	D							
19.50-19.83	77	SPT	5,6/14,25,11 for 30mm						
19.50-19.83	78	DSPT							
19.50-19.83	79	B							
20.00	80	D							
20.50-20.78	81	SPT	7,13/25,25 for 55mm						
20.50-20.78	82	DSPT							
20.50-20.78	83	B							
21.00	84	D							
21.50-21.95	85	SPT	N=9						
21.50-21.95	86	DSPT							
21.50-21.95	87	B							
22.00	88	D							
22.50-22.95	89	SPT	N=15			22.50m : Gravel content no longer evident.			
22.50-22.95	90	B							
23.00	91	D							
23.50-23.95	92	SPT	N=43						
23.50-23.95	93	DSPT							
23.50-23.95	94	B							
24.00	95	D							
24.50-24.93	96	SPT	3,6/9,11,14,16 for 55mm						
24.50-24.93	97	DSPT							
24.50-24.93	98	B							
25.00	99	D				Borehole terminated at 25.00m depth.	-0.59	25.00	

Boring Progress and Water Observations					
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 2500**	[redacted]	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

BOREHOLE LOG

Contract:	Client:	Borehole:
Sealink Friston	**National Grid**	**F22-BH309**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	**12.09.23** End: **15.09.23**	**24.58**	**E:639615.1 N:262181.9**	**1** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
0.20	101	ES				REWORKED: Soft to firm brown and orangish brown slightly gravelly sandy CLAY. Gravel is angular to rounded fine to coarse flint. Sand is fine to coarse.			
0.20		HP	c_u=25/50/25			(TOPSOIL)	24.28	0.30	
0.20		PID	1.7ppm			Firm light brown and orangish brown mottled grey slightly gravelly slightly sandy silty CLAY. Gravel is angular to rounded fine to coarse flint and chalk. Sand is fine to coarse.			
0.30-0.70	1	B				(LOWESTOFT FORMATION)	23.88	0.70	
0.30-0.70	2	D				Firm light brown and grey mottled orange slightly sandy slightly gravelly silty CLAY. Gravel is angular to rounded fine to medium flint and chalk. Sand is fine to coarse.			
0.40-0.60	1	B				(LOWESTOFT FORMATION)			
0.50	102	ES							
0.50	2	D							
0.50		PID	1.3ppm						
0.70	103	ES							
0.70-0.80	3	B							
0.70-1.00	4	D							
0.70		PID	1.3ppm						
1.00	104	ES							
1.00-1.20	5	B							
1.00-1.00	6	D						(2.30)	
1.50-1.95	7	$UT_{(UT100)}$	100 blows 100% recovery						
2.00	8	D				2.00-3.00m : Dark brown and grey, becoming less sandy.			
2.00-2.20	9	B							
2.50-2.95	10	SPT	N=17						
2.50-2.95	11	DSPT							
2.50-2.95	12	B							
						Very stiff dark grey mottled white slightly gravelly slightly sandy silty CLAY with occasional fragments of lignite. Gravel is angular to rounded fine to coarse flint and chalk. sand is fine to coarse.	21.58	3.00	
3.50-3.95	13	$UT_{(UT100)}$	125 blows 100% recovery			(LOWESTOFT FORMATION)			
3.95-4.10	14	D							
4.50-4.95	15	SPT	N=38						
4.50-4.95	16	DSPT							
4.50-4.95	17	B							
5.00	18	D							
5.50-5.95	19	$UT_{(UT100)}$	130 blows 100% recovery						
5.50-6.00	20	B							
6.00	21	D						(6.30)	
6.50-6.95	22	SPT	N=41						
6.50-6.95	23	DSPT							
6.50-6.95	24	B							
7.00	25	D							
7.50-7.95	26	$UT_{(UT100)}$	150 blows 67% recovery						
7.50-8.00	27	B							
8.00	28	D							
8.50-8.95	29	SPT	N=41						
8.50-8.95	30	DSPT							
8.50-8.95	31	B							

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
12/09/23	17:00	3.00	2.00	200	1.20
13/09/23	08:55	3.00	2.00	200	0.10
13/09/23	17:08	11.90	11.50	150	7.30
14/09/23	08:24	11.90	11.50	150	5.70
14/09/23	16:56	25.00	25.00	150	18.50
15/09/23	08:30	25.00	25.00	150	17.55

Chiselling / Slow Progress

From	To	Duration (hh:mm)

General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Inspection pit hand dug to 1.20m depth.
3. Down borehole checks for buried ferrous objects carried out during drilling by specialist unexploded ordnance (UXO) officer using magnetometer at regular intervals to 12.00m depth.
4. 3.0m of stainless steel casing used to lead the casing string.
5. No groundwater encountered.
6. Cable percussion borehole terminated at 25.00m depth.
7. 50mm diameter gas/groundwater monitoring well complete with

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 2500**	[redacted]	[redacted]	[redacted]

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Structural Soils Ltd, Branch Office - Hemel Hempstead: 18 Frogmore Road, Hemel Hempstead, Hertfordshire, HP3 9RT. Tel: 01442 416660, Fax: 01442 437550, Web: www.soils.co.uk, Email: ask@soils.co.uk. | 22/04/24 - 16:43 | GK1 |

STRUCTURAL SOILS

FINAL

BOREHOLE LOG

Contract:	Client:	Borehole:
Sealink Friston	**National Grid**	**F22-BH309**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	**12.09.23** End: **15.09.23**	**24.58**	**E:639615.1 N:262181.9**	**2** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
9.00	32	D							
9.30-9.50	33	B				Very dense orangish brown mottled dark grey and white slightly gravelly clayey fine to coarse SAND. Gravel is angular to rounded fine to medium flint and chalk. (CRAG GROUP)	15.28	9.30	
9.50-9.94	34	SPT	5,7/10,12,14,14 for 65mm			9.50-9.94m : Very silty possibly varying to slightly gravelly sandy SILT.			
9.50-9.94	35	DSPT							
9.50-9.94	36	B							
10.00	37	D							
10.50-10.94	38	SPT	4,8/14,16,20,60 for 75mm						
10.50-10.86	39	DSPT							
10.50-10.86	40	B							
11.00	41	D							
11.50-11.90	42	SPT	6,8/10,14,17,9 for 25mm						
11.50-11.90	43	DSPT						(5.20)	
11.50-11.90	44	B							
12.00	45	D							
12.50-12.87	46	SPT	4,5/10,16,24 for 70mm						
12.50-12.87	47	DSPT							
12.50-12.87	48	B							
13.00	49	D							
13.20-13.50	50	B							
13.30-13.50	50	B				13.30-13.50m : Becoming very gravelly, occasional shell fragments and quartz. Sand predominantly medium to coarse.			
13.50-13.86	51	SPT	2,3/5,15,30 for 60mm						
13.50-13.86	52	DSPT							
13.50-13.86	53	B							
14.00	54	D							
14.50-14.66	55	SPT	5,20/50 for 50mm			Very dense to dense brown slightly gravelly slightly silty fine to medium SAND. Gravel is angular to rounded fine to medium flint and chalk. (CRAG GROUP)	10.08	14.50	
14.50-14.66	56	DSPT				14.50-19.00m : Becoming brown, slightly gravelly sand. Sand fine to medium.			
14.50-15.00	57	B							
15.00	58	D							
15.50-15.95	59	SPT	N=46						
15.50-15.95	60	DSPT							
15.50-15.95	61	B							
16.00	62	D							
16.50-16.95	63	SPT	N=45						
16.50-16.95	64	DSPT						(4.50)	
16.50-16.95	65	B							
17.00	66	D							
17.50-17.95	67	SPT	N=39						
17.50-17.95	68	DSPT							
17.50-17.95	69	B							

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)

Chiselling / Slow Progress

From	To	Duration (hh:mm)

General Remarks

raised protective cover and protective wooden fencing installed to 8.0m depth on completion. Response zone 8.0m to 4.0m depth.
8. SPT hammer AR1862-2023 (E_r = 75.00%) used.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 2500**	[redacted]	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

BOREHOLE LOG

Contract:	Client:	Borehole:
Sealink Friston	**National Grid**	**F22-BH309**

Contract Ref:	Start: **12.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **15.09.23**	**24.58**	**E:639615.1 N:262181.9**	**3** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
18.00	70	D				Very dense to dense brown slightly gravelly slightly silty fine to medium SAND. Gravel is angular to rounded fine to medium flint and chalk. (CRAG GROUP) 14.50-19.00m : Becoming brown, slightly gravelly sand. Sand fine to medium. *(stratum copied from 14.50m from previous sheet)*			
18.50-18.95	71	SPT	N=46						
18.50-18.95	72	DSPT							
18.50-18.95	73	B							
19.00	74	D				Very dense orangish brown and grey fine to medium SAND with rare soft grey silt nodules. (CRAG GROUP)	5.58	19.00	
19.50-19.95	75	SPT	N=40						
19.50-19.95	76	B							
20.00	77	D							
20.50-20.80	78	SPT	4,15/20,30 for 75mm						
20.50-20.80	79	DSPT							
20.50-20.80	80	B						(5.40)	
21.00	81	D							
21.50-21.83	82	SPT	5,10/15,25,10 for 30mm						
21.50-21.82	83	DSPT							
21.50-21.82	84	B							
22.00	85	D							
22.50-22.95	86	SPT	N=39						
22.50-22.95	87	DSPT							
22.50-22.95	88	B							
23.00	89	D							
23.50-23.93	90	SPT	4,6/9,12,14,15 for 55mm						
23.50-23.93	91	DSPT							
23.50-23.93	92	B							
24.00	93	D							
24.40-24.50	94	B				Very stiff thinly laminated grey and dark grey sandy silty CLAY with rare shell fragments. Sand is fine. (CRAG GROUP)	0.18	24.40	
24.50-24.90	95	SPT	3,4/8,16,26,26 for 50mm					(0.60)	
24.50-24.85	96	DSPT							
24.50-24.85	97	B							
25.00	98	D				24.90-25.00m : probably passing back into SAND; sample from 25.00m was non-plastic in liquid and plastic limits test.	-0.42	25.00	
						Borehole terminated at 25.00m depth.			

Boring Progress and Water Observations					
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 2500**	[redacted]	[redacted]	[redacted]

AGS

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STRUCTURAL SOILS

FINAL

BOREHOLE LOG

Contract:	Client:	Borehole:
Sealink Friston	**National Grid**	**F22-BH310**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	**12.09.23** End: **14.09.23**	**24.79**	**E:639794.2 N:262277.7**	**1** of **4**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
0.20	101	ES	2xT+1xJ+1xV			REWORKED: Soft friable orangish brown sandy slightly gravelly CLAY. Gravel is angular to subrounded fine to coarse flint. Sand is fine to coarse. (TOPSOIL)	24.49	0.30	
0.20		HP	c_u=50/50/50			Soft friable orangish brown mottled grey slightly sandy slightly gravelly silty CLAY. Gravel is angular to rounded fine to coarse flint and chalk. Sand is fine to coarse. (LOWESTOFT FORMATION)	24.09	0.70	
0.20		PID	0.9ppm			Soft friable grey and orangish brown slightly sandy slightly gravelly CLAY. Gravel is angular to rounded fine to coarse flint and chalk. Sand is fine to coarse. (LOWESTOFT FORMATION)		(1.60)	
0.30-0.70	1	B							
0.30-0.70	2	D							
0.50	102	ES	2xT+1xJ+1xV						
0.50		HP	c_u=100/100/100						
0.50		PID	1.2ppm						
0.70-1.20	3	B							
0.70-1.20	4	D							
0.80		HP	c_u=125/150/125						
1.00	103	ES	2xT+1xJ+1xV						
1.00		PID	0.8ppm						
1.20-1.65	5	SPT	N=19						
1.20-1.65	6	DSPT							
1.20-2.00	7	B							
2.00-2.45	8	$UT_{(UT100)}$	67 blows 100% recovery				22.49	2.30	
2.45-2.55	9	D				Medium dense light orangish brown gravelly clayey fine to coarse SAND. Gravel is angular to rounded fine to coarse flint and chalk. (LOWESTOFT FORMATION)	22.24	2.55	
2.55-2.70	10	B				Soft orangish brown mottled grey slightly gravelly slightly sandy silty CLAY. Gravel is angular to rounded fine to coarse chalk. Sand is fine to coarse. (LOWESTOFT FORMATION)	22.09	2.70	
2.55-2.70	11	D							
2.70-3.00	12	B							
3.00-3.45	13	SPT	N=18						
3.00-3.45	14	DSPT				Firm to very stiff dark grey slightly gravelly slightly sandy silty CLAY with low cobble content. Gravel is angular to subrounded fine to coarse chalk and flint. Cobbles are angular to subangular flint. Sand is fine to coarse. (LOWESTOFT FORMATION)			
3.00-4.00	15	B							
3.00-4.00	16	D							
4.00-4.40	17	$UT_{(UT100)}$	100 blows 38% recovery						
4.00-5.00	19	B							
4.00-5.00	20	D							
4.40-4.60	18	D							
5.00-5.45	21	SPT	N=25						
5.00-5.45	22	DSPT							
5.00-6.00	23	B							
6.00-6.45	24	$UT_{(UT100)}$	100 blows 100% recovery					(6.60)	
6.00-7.00	26	B							
6.45-6.55	25	D							
7.00-7.45	27	SPT	N=33						
7.00-7.45	28	DSPT							
7.00-8.00	29	B							
7.00-8.00	30	D							
8.00-8.45	31	$UT_{(UT100)}$	100 blows 100% recovery						
8.00-9.00	33	B							
8.45-8.55	32	D							

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
12/09/23	17:44	5.00	5.00	200	Dry
13/09/23	08:40	5.00	5.00	200	4.40
13/09/23	17:42	20.00	20.00	200	18.90
14/09/23	08:00	20.00	20.00	150	16.80
14/09/23	17:45	28.00	28.00	150	11.30

Chiselling / Slow Progress

From	To	Duration (hh:mm)

General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Inspection pit hand dug to 1.20m depth.
3. No groundwater encountered.
4. 3.0m of stainless steel casing used to lead the casing string.
5. Down borehole checks for buried ferrous objects carried out during drilling by specialist unexploded ordnance (UXO) officer using magnetometer at regular intervals to 12.00m depth.
6. 50mm diameter gas/groundwater monitoring well complete with raised protective cover and protective wooden fencing installed

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 3000 Mark 2**	[redacted]	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

BOREHOLE LOG

Contract:	Client:	Borehole:
Sealink Friston	**National Grid**	**F22-BH310**

Contract Ref:	Start: **12.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **14.09.23**	**24.79**	**E:639794.2 N:262277.7**	**2** of **4**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
9.00-9.45	34	SPT	N=50						
9.00-9.45	35	DSPT							
9.30-10.00	36	B				Very dense orangish brown silty fine to medium SAND. (CRAG GROUP)	15.49	9.30	
10.00-10.40	37	SPT	6,9/13,15,15,7 for 20mm						
10.00-10.45	38	DSPT							
10.00-11.00	39	B							
11.00-11.45	40	SPT	N=25			11.00m : Becomes medium dense		(4.00)	
11.00-11.45	41	DSPT							
11.00-12.00	42	B							
12.00-12.45	43	SPT	N=27						
12.00-12.45	44	DSPT							
12.00-13.00	45	B							
13.00-13.38	46	SPT	5,7/11,15,21,3 for 5mm						
13.00-13.38	47	DSPT							
13.30-14.00	48	B				Dense orangish brown gravelly slightly silty fine to coarse SAND. Gravel is subangular to rounded fine to coarse flint. (CRAG GROUP)	11.49	13.30	
13.50-13.60	49	D							
14.00-14.42	50	SPT(c)	6,7/8,14,18,10 for 40mm			14.00m : Colour change to a darker shade of orangish brown.		(2.40)	
14.00-15.00	51	B							
14.50-14.60	52	D							
15.00-15.35	53	SPT(c)	6,6/15,21,14 for 50mm						
15.00-15.70	54	B							
15.50-15.60	55	D							
16.00-16.31	56	SPT	8,14/16,31,3 for 5mm			Very dense orangish brown locally silty fine to medium SAND with rare soft grey silty nodules. (CRAG GROUP)	9.09	15.70	
16.00-16.31	57	DSPT							
16.00-17.00	58	B							
17.00-17.35	59	SPT	6,8/13,19,18 for 50mm						
17.00-17.35	60	DSPT							
17.00-18.00	61	B							

Boring Progress and Water Observations					
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

to 28.00m depth on completion. Response zone 28.00m to 25.00m depth.
7. Cable percussion borehole terminated at 28.45m depth.
8. SPT hammer AR3104-2023 (E_r = 63.00%) used.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 3000 Mark 2**	[redacted]	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

BOREHOLE LOG

Contract:	Client:	Borehole:
Sealink Friston	**National Grid**	**F22-BH310**

Contract Ref:	Start: **12.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **14.09.23**	**24.79**	**E:639794.2 N:262277.7**	**3** of **4**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
18.00-18.41	62	SPT	6,7/9,12,19,10 for 35mm			Very dense orangish brown locally silty fine to medium SAND with rare soft grey silty nodules. (CRAG GROUP) *(stratum copied from 15.70m from previous sheet)*			
18.00-18.41	63	DSPT							
18.00-19.00	64	B							
19.00-19.37	65	SPT	3,4/14,16,20 for 65mm					(7.10)	
19.00-19.37	66	DSPT							
19.00-20.00	67	B							
20.00-20.38	68	SPT	6,8/12,13,25 for 75mm						
20.00-20.38	69	DSPT							
20.00-21.00	70	B							
21.00-21.34	71	SPT	3,8/16,22,12 for 40mm						
21.00-21.34	72	DSPT							
21.00-22.00	73	B							
22.00-22.44	74	SPT	3,4/6,9,16,19 for 60mm						
22.00-22.44	75	DSPT							
22.00-22.80	76	B							
22.80-22.90	77	B				Medium strong orangish brown fissured moderately weathered fine to coarse SANDSTONE with iron staining along a fissured surfaces. Recovered as orangish brown subangular fine to coarse gravel with low cobble content of sandstone. (CRAG GROUP)	1.99	22.80	
23.00-23.30	78	SPT	7,9/19,31 for 75mm				1.79	23.00	
23.00-23.30	79	DSPT							
23.00-24.00	80	B				Very dense orangish brown locally silty fine to coarse SAND with rare soft grey silty nodules. (CRAG GROUP)		(1.40)	
24.00-24.26	81	SPT	7,12/32,18 for 30mm						
24.40-25.00	82	B				Medium dense to dense grey slightly gravelly fine to medium SAND. Gravel is subrounded to rounded fine to medium flint. (CRAG GROUP)	0.39	24.40	
24.50-24.60	83	D							
25.00-25.45	84	SPT	N=50						
25.00-25.45	85	DSPT							
25.00-26.00	86	B							
26.00-26.45	87	SPT	N=23			26.00-27.00m : Gravelly			
26.00-26.45	88	DSPT						(4.05)	
26.00-27.00	89	B							

Boring Progress and Water Observations					
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 3000 Mark 2**	[redacted]	[redacted]	[redacted]

AGS

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STRUCTURAL SOILS

FINAL

BOREHOLE LOG

Contract:	Client:	Borehole:
Sealink Friston	**National Grid**	**F22-BH310**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	**12.09.23** End: **14.09.23**	**24.79**	**E:639794.2 N:262277.7**	**4** of **4**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
27.00-27.45	90	SPT	N=22			Medium dense to dense grey slightly gravelly fine to medium SAND. Gravel is subrounded to rounded fine to medium flint. (CRAG GROUP) *(stratum copied from 24.40m from previous sheet)* 27.00m : Shell fragments present.			
27.00-28.00	91	B							
27.50-27.60	92	D							
28.00-28.45	93	SPT	N=28						
28.00-28.45	94	DSPT							
						Borehole terminated at 28.45m depth.	-3.66	28.45	

Boring Progress and Water Observations					
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 3000 Mark 2**	[redacted]	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

BOREHOLE LOG

Contract:	Client:	Borehole:
Sealink Friston	**National Grid**	**F22-BH501**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	**09.10.23** End: **10.10.23**	**7.85**	**E:638906.2 N:262152.8**	**1** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
0.00-0.15	1	B				REWORKED: Friable brown mottled orangish brown slightly gravelly slightly sandy CLAY with frequent rootlets <4mm. Sand is fine to coarse. Gravel is angular to subangular fine chalk. (TOPSOIL)	7.70	0.15	
0.00-0.15	2	D							
0.10	101	ES	2xT+1xJ+1xV						
0.10		PID	0.2ppm						
0.15-0.55	3	B				MADE GROUND REWORKED: Soft orangish brown mottled brown and grey slightly gravelly slightly sandy silty CLAY with occasional rootlets <2mm. Sand is fine to coarse. Gravel is angular to subrounded fine to medium flint and chalk.	7.30	0.55	
0.20	102	ES	2xT+1xJ+1xV						
0.20-0.30	4	D							
0.20		PID	0.2ppm						
0.55-0.90	5	B				MADE GROUND: Soft black mottled orangish brown slightly gravelly sandy silty CLAY with occasional glass fragments and hydrocarbon odour with staining. Sand is fine to coarse. Gravel is angular fine to coarse flint.	6.95	0.90	
0.60	103	ES	2xT+1xJ+1xV						
0.60		PID	2.8ppm						
0.70-0.80	6	D				Very loose dark grey mottled black gravelly very clayey fine to coarse SAND with a slight hydrocarbon odour. Gravel is angular to subrounded fine to coarse flint. (ALLUVIUM)		(0.60)	
0.90-1.50	7	B							
1.00	104	ES	2xT+1xJ+1xV						
1.00		PID	1.8ppm				6.35	1.50	
1.10-1.20	8	D				Light brown slightly gravelly clayey fine to coarse SAND. Gravel is angular fine to coarse flint. (ALLUVIUM)		(0.50)	
1.20-1.65	9	SPT	N=4						
1.40	105	ES	2xT+1xJ+1xV						
1.40		PID	1.6ppm				5.85	2.00	
1.50-2.00	10	B				Medium dense becoming dense multicoloured (black, brown, grey, green, bluish grey) slightly sandy slightly clayey angular to subrounded fine to coarse GRAVEL of flint. Sand is fine to coarse. (ALLUVIUM)			
2.00-2.45	11	SPT	N=20						
2.00	106	ES	2xT+1xJ+1xV						
2.00-2.45	12	DSPT							
2.00-3.00	13	B							
2.00		PID	1.3ppm						
3.00-3.45	14	SPT(c)	N=33			3.00m : very sandy slightly clayey GRAVEL from 3.00m.		(2.10)	
3.00-4.00	15	B							
3.50-3.60	16	D							
4.00-4.45	17	SPT(c)	N=24				3.75	4.10	
4.00-5.00	18	B				Medium dense orangish brown slightly silty fine to coarse SAND. (CRAG GROUP)			
4.50-4.60	19	D							
5.00-5.45	20	SPT(c)	N=17						
5.00-6.00	21	B						(2.90)	
5.50-5.60	22	D							
6.00-6.45	23	SPT	N=17						
6.00-7.00	24	B							
6.50-6.60	25	D							
7.00-7.45	26	SPT	N=18			Medium dense to very dense orangish brown slightly gravelly slightly silty fine to coarse SAND with frequent shell fragments. Gravel is angular to subrounded fine flint. (CRAG GROUP)	0.85	7.00	
7.00-7.45	27	DSPT							
7.00-8.00	28	B							
8.00-8.45	29	SPT	N=26						
8.00-8.45	30	DSPT							
8.00-9.00	31	B							

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
09/10/23	16:46	9.00	9.00	200	2.80
10/10/23	08:32	9.00	9.00	200	2.10
10/10/23	10:15	11.00	10.70	200	2.00
10/10/23	17:33	20.90	18.00	150	2.60
11/10/23	11:05	20.90	18.00	150	2.60
11/10/23	17:00	25.00	18.00	150	4.90
11/10/23	17:00	25.00	None	150	4.90

Chiselling / Slow Progress

From	To	Duration (hh:mm)
18.00	18.20	00:30

General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Inspection pit hand dug to 1.20m depth.
3. 3.0m of stainless steel casing used to lead the casing string.
4. Down borehole checks for buried ferrous objects carried out during drilling by specialist unexploded ordnance (UXO) officer using magnetometer at regular intervals to 12.00m depth.
5. Cable percussion borehole terminated at 25.00m depth.
6. On completion, borehole backfilled with bentonite pellets.
7. SPT hammer AR3104-2023 (E_r = 63.00%) used.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 3000 Mark 2**	[redacted]	[redacted]	[redacted]

AGS

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Structural Soils Ltd, Branch Office - Hemel Hempstead: 18 Frogmore Road, Hemel Hempstead, Hertfordshire, HP3 9RT. Tel: 01442 416660, Fax: 01442 437550, Web: www.soils.co.uk, Email: ask@soils.co.uk. | 22/04/24 - 16:44 | GK1 |

STRUCTURAL SOILS

FINAL

BOREHOLE LOG

Contract:	Client:	Borehole:
Sealink Friston	**National Grid**	**F22-BH501**

Contract Ref:	Start: **09.10.23** End: **10.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835		**7.85**	**E:638906.2 N:262152.8**	**2** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
9.00-9.45 9.00-9.45 9.00-10.00	32 33 34	SPT DSPT B	N=44			Medium dense to very dense orangish brown slightly gravelly slightly silty fine to coarse SAND with frequent shell fragments. Gravel is angular to subrounded fine flint. (CRAG GROUP) *(stratum copied from 7.00m from previous sheet)*		(5.00)	
10.00-10.34 10.00-10.45 10.00-11.00	35 36 37	SPT DSPT B	4,6/13,21,16 for 40mm						
11.00-11.38 11.00-11.45 11.00-12.00	38 39 40	SPT DSPT B	5,7/11,18,21 for 75mm						
12.00-12.32 12.00-12.45 12.00-13.00	41 42 43	SPT DSPT B	5,99/17,24,9 for 20mm			Very dense grey gravelly slightly silty fine to coarse SAND with frequent shell fragments. Gravel is angular fine to coarse siltstone and flint. (CRAG GROUP)	-4.15	12.00 (1.00)	
13.00-13.30 13.00-13.45 13.00-14.00	44 45 46	SPT DSPT B	7,12/18,32 for 75mm			Very dense grey slightly gravelly slightly silty fine to coarse SAND with frequent shell fragments. (CRAG GROUP)	-5.15	13.00	
14.00-14.45 14.00-14.45 14.00-15.00	47 48 49	SPT DSPT B	N=50						
15.00-15.37 15.00-15.45 15.00-16.00	50 51 52	SPT DSPT B	6,9/11,18,21 for 65mm					(5.00)	
16.00-16.38 16.00-16.45 16.00-17.00	53 54 55	SPT DSPT B	7,11/14,16,20 for 75mm						
17.00-17.44 17.00-17.45 17.00-18.00	56 57 58	SPT DSPT B	4,9/9,11,11,14 for 65mm						

Boring Progress and Water Observations					
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 3000 Mark 2**	[redacted]	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

BOREHOLE LOG

Contract:	Client:	Borehole:
Sealink Friston	**National Grid**	**F22-BH501**

Contract Ref:	Start: **09.10.23** End: **10.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835		**7.85**	**E:638906.2 N:262152.8**	**3** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
18.00-18.39	59	SPT(c)	7,7/12,15,19,4 for 10mm			Very dense grey slightly gravelly slightly silty fine to coarse SAND with frequent shell fragments. Gravel is angular to rounded fine to coarse flint. (CRAG GROUP)	-10.15	18.00	
18.00-18.20	60	B					-10.35	18.20	
18.10-18.20	61	D							
18.20-19.00	62	B				Stiff grey slightly gravelly slightly sandy silty CLAY. (LONDON CLAY FORMATION)			
19.00-19.45	63	SPT	N=23						
19.00-19.45	64	DSPT							
19.00-20.00	65	B							
20.00-20.40	66	$UT_{(UT100)}$	70 blows 100% recovery						
20.00-21.00	68	B							
20.45-20.55	67	D				20.45-20.55m : Gravel absent			
21.00-21.45	69	SPT	N=26						
21.00-21.45	70	DSPT							
21.00-22.00	71	B						(7.25)	
22.00-22.45	72	$UT_{(UT100)}$	100 blows 108% recovery						
22.00-23.00	74	B							
22.45-22.55	73	D							
23.00-23.45	75	SPT	N=26			23.00-24.00m : Gravel absent			
23.00-23.45	76	DSPT							
23.00-24.00	77	B							
24.00-24.45	78	$UT_{(UT100)}$	100 blows 100% recovery						
24.00-25.00	80	B							
24.45-24.55	79	D				24.50-25.00m : Occasional subangular to subrounded fine to medium flint.			
25.00-25.45	81	SPT	N=31						
25.00-25.45	82	DSPT							
						Borehole terminated at 25.45m depth.	-17.60	25.45	

Boring Progress and Water Observations					
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 3000 Mark 2**	[redacted]	[redacted]	[redacted]

AGS

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STRUCTURAL SOILS

FINAL

BOREHOLE LOG

Contract:	Client:	Borehole:
Sealink Friston	**National Grid**	**F22-BH502**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	**05.10.23** End: **05.10.23**	**7.74**	**E:638736.7 N:262153.4**	**1** of **2**

Depth (m)	Samples & Testing: No	Type	Results	Backfill	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
0.15	101	ES				Soft dark brown slightly gravelly sandy CLAY with occasional rootlets. Gravel is angular to rounded fine to medium flint. Sand is fine to coarse. (TOPSOIL). (TOPSOIL)	7.54	0.20	
0.30	102	ES							
0.50	1	D				Greyish brown mottled orange gravelly clayey fine to coarse SAND with low cobble content and occasional shell fragments. Gravel is sub angular to rounded fine to coarse sandstone. Cobbles are sub angular sandstone. (ALLUVIUM)		(1.30)	
0.50-0.80	2	B							
1.00	103	ES				1.00-1.20m : Clay content increases.			
1.00	3	D							
1.00-1.20	4	B							
1.50-1.95	5	SPT	N=10			Soft brown mottled black and white slightly gravelly slightly sandy clayey SILT with occasional shell fragments. Gravel is angular to rounded fine to coarse flint. Sand is fine to coarse. (ALLUVIUM)	6.24	1.50	
1.50-1.95	6	DSPT						(1.00)	
1.50-1.95	7	B							
2.50-2.95	8	SPT	N=8			Brown sandy silty CLAY with occasional shell fragments. (CRAG GROUP)	5.24	2.50	
2.50-2.95	10	B						(0.50)	
2.50-2.95	9	DSPT							
3.00	11	D				Loose dark grey brownish orange very silty fine to coarse SAND with occasional shell fragments. (CRAG GROUP)	4.74	3.00	
3.50-3.95	12	$UT_{(UT100)}$	30 blows 96% recovery					(1.50)	
3.50-3.95	13	B							
3.95-4.10	14	D							
4.00	14	D							
						Borehole terminated at 4.50m depth.	3.24	4.50	

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
05/10/23	14:15	4.00	4.00	200	1.50

Chiselling / Slow Progress

From	To	Duration (hh:mm)

General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Inspection pit hand dug to 1.20m depth.
3. Down borehole checks for buried ferrous objects carried out during drilling by specialist unexploded ordnance (UXO) officer using magnetometer at regular intervals to 4.50m depth.
4. Failed to get Disturbed sample at 2.0m as the 250mm casing environmental seal failed so the recovery was predominantly bentonite.
5. Terminated the borehole at 4.50m, shoe from the shelling tool

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 2500**	[redacted]	[redacted]	[redacted]

AGS

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STRUCTURAL SOILS

FINAL

BOREHOLE LOG

Contract:	Client:	Borehole:
Sealink Friston	**National Grid**	**F22-BH502**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	**05.10.23**	**7.74**	**E:638736.7 N:262153.4**	**2** of **2**
	End: **05.10.23**			

Depth (m)	Samples & Testing: No	Type	Results	Backfill	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)	From	To	Duration (hh:mm)	detached, attempted to retrieve the shoe with no success, unable to proceed with borehole. 6. SPT hammer AR1862-2023 (E_r = 75.00%) used.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 2500**	[redacted]	[redacted]	[redacted]

AGS

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STRUCTURAL SOILS

FINAL

BOREHOLE LOG

Contract:	Client:	Borehole:
Sealink Friston	**National Grid**	**F22-BH502A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	**06.10.23** End: **10.10.23**	**7.85**	**E:638736.1 N:262152.8**	**1** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
						Soft dark brown slightly gravelly sandy CLAY with occasional rootlets. Gravel is angular to rounded fine to medium. Sand is fine to coarse. (TOPSOIL)	7.65	0.20	
						Greyish brown mottled orange slightly gravelly clayey fine to coarse SAND with low cobble content and occasional shell fragments. Gravel is sub angular to rounded fine to coarse sandstone. Cobbles are subangular sandstone. (ALLUVIUM)		(1.30)	
					1		6.35	1.50	
						Soft brown mottled black and white slightly gravelly slightly sandy clayey SILT with occasional shell fragments. Gravel is angular to rounded fine to coarse flint. Sand is fine to coarse. (ALLUVIUM)		(1.00)	
					1		5.35	2.50	
						Brown sandy silty CLAY with occasional shell fragments. (CRAG GROUP)		(0.50)	
						Medium dense dark grey and brownish orange slightly gravelly very silty fine to coarse SAND with occasional shell fragments. Gravel is angular to rounded fine to medium flint. (CRAG GROUP)	4.85	3.00	
4.50-4.95	15	SPT	N=18		1				
4.50-4.95	16	DSPT							
4.50-4.95	17	B							
5.00	18	D						(3.00)	
5.50-5.95	19	SPT	N=15						
5.50-5.95	20	DSPT							
5.50-5.95	21	B							
6.00	22	D				Dense brown to brownish orange slightly gravelly clayey fine to medium SAND with occasional shell fragments. Gravel is angular to rounded fine to medium flint. (CRAG GROUP)	1.85	6.00	
6.50-6.95	23	SPT	N=33						
6.50-6.95	24	DSPT							
6.50-6.95	24	B							
6.50-6.95	25	B							
7.00	25	D						(2.00)	
7.00	26	D							
7.50-7.95	27	SPT	N=29			7.50m : Sand becomes coarse			
7.50-7.95	28	DSPT							
7.50-7.95	29	B							
8.00	30	D				Medium dense to very dense brown locally clayey fine to medium SAND with flasers of brown clay and rare shell fragments. (CRAG GROUP)	-0.15	8.00	
8.50-8.95	31	SPT	N=22						
8.50-8.95	32	DSPT							
8.50-8.95	33	B							

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
06/10/23	10:41	7.00	7.00	200	2.40
09/10/23	10:40	7.00	7.00	200	2.15
09/10/23	16:32	15.50	15.00	200	5.50
10/10/23	10:00	15.00	15.00	200	2.60
10/10/23	17:08	23.95	18.00	200	2.40
11/10/23	08:24	23.95	18.00	200	1.65
11/10/23	17:15	25.55	18.00	200	1.72

Chiselling / Slow Progress

From	To	Duration (hh:mm)

General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Inspection pit hand dug to 1.20m depth.
3. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
4. 3.0m of stainless steel casing used to lead the casing string.
5. Cable percussion borehole terminated at 25.55m depth.
6. 50mm diameter standpipe piezometer complete with raised protective cover and protective wooden fencing installed to

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 2500**	[redacted]	[redacted]	[redacted]

AGS

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STRUCTURAL SOILS

FINAL

BOREHOLE LOG

Contract:	Client:	Borehole:
Sealink Friston	**National Grid**	**F22-BH502A**

Contract Ref:	Start: **06.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **10.10.23**	**7.85**	**E:638736.1 N:262152.8**	**2** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
9.00	34	D				Medium dense to very dense brown locally clayey fine to medium SAND with flasers of brown clay and rare shell fragments. (CRAG GROUP) *(stratum copied from 8.00m from previous sheet)*			
9.50-9.95	35	SPT	N=18						
9.50-9.95	36	DSPT							
9.50-9.95	37	B							
10.00	38	D						(4.50)	
10.50-10.95	39	SPT	N=35						
10.50-10.95	40	DSPT							
10.50-10.95	41	B							
11.00	42	D							
11.50-11.82	43	SPT	7,13/19,23,8 for 20mm						
11.50-11.82	44	DSPT							
11.50-11.95	45	B							
12.00	46	D							
12.50-12.82	47	SPT	2,3/7,21,22 for 20mm			Very dense bluish grey locally clayey fine to medium SAND with flasers of bluish grey clay and occasional shell fragments. (CRAG GROUP)	-4.65	12.50	
12.50-12.82	48	DSPT							
12.50-12.95	49	B							
13.00	50	D							
13.50-13.81	51	SPT	2,7/12,22,16 for 10mm						
13.50-13.81	52	DSPT							
13.50-13.95	53	B							
14.00	54	D							
14.50-14.81	55	SPT	4,6/15,30,5 for 10mm						
14.50-14.81	56	DSPT							
14.50-14.95	57	B							
15.00	58	D						(5.00)	
15.50-15.83	59	SPT	4,7/16,23,11 for 30mm						
15.50-15.83	60	DSPT							
15.50-15.95	61	B							
16.00	62	D							
16.50-16.89	63	SPT	1,2/4,11,25,10 for 15mm			16.50-20.00m : Rare angular coarse flint.			
16.50-16.89	64	DSPT							
16.50-16.95	65	B							
17.00	66	D							
17.50-17.55	67	SPT	25/50 for 35mm			Very stiff bluish grey slightly sandy silty CLAY with occasional shell fragments. Sand is fine to coarse. (LONDON CLAY FORMATION)	-9.65	17.50	
17.50-17.95	68	B							

Boring Progress and Water Observations					
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

10.00m depth on completion. Response zone 5.00m to 10.00m depth.
7. Samples not taken down to 4.0m, due to location being a redrill, as instructed by the designer.
8. Cable percussion borehole terminated at 25.00m depth.
9. SPT hammer AR1862-2023 (E_r = 75.00%) used.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 2500**	[redacted]	[redacted]	[redacted]

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Structural Soils Ltd, Branch Office - Hemel Hempstead: 18 Frogmore Road, Hemel Hempstead, Hertfordshire, HP3 9RT. Tel: 01442 416660, Fax: 01442 437550, Web: www.soils.co.uk, Email: ask@soils.co.uk. | 22/04/24 - 16:44 | GK1 |

STRUCTURAL SOILS

FINAL

BOREHOLE LOG

Contract:	Client:	Borehole:
Sealink Friston	**National Grid**	**F22-BH502A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	**06.10.23** End: **10.10.23**	**7.85**	**E:638736.1 N:262152.8**	**3** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
18.00	69	D				Very stiff bluish grey slightly sandy silty CLAY with occasional shell fragments. Sand is fine to coarse. (LONDON CLAY FORMATION) *(stratum copied from 17.50m from previous sheet)*			
18.50-18.95	70	$UT_{(UT100)}$	150 blows 100% recovery						
18.50-18.95	71	B							
18.95-19.10	72	D							
19.00	72	D							
19.50-19.95	73	SPT	N=33						
19.50-19.95	74	DSPT							
19.50-19.95	75	B							
20.00	76	D				20.00-24.00m : Rare shell fragments.			
20.50-20.95	77	$UT_{(UT100)}$	125 blows 100% recovery					(6.50)	
20.50-20.95	78	B							
20.95-21.10	79	D							
21.00	79	D							
21.50-21.95	80	SPT	N=35						
21.50-21.95	81	DSPT							
21.50-21.95	82	B			1				
22.00	83	D							
22.50-22.95	84	$UT_{(UT100)}$	100 blows 100% recovery						
22.50-22.95	85	B							
23.00	86	D							
23.50-23.95	87	SPT	N=42						
23.50-23.95	88	DSPT							
23.50-23.95	89	B							
24.00	90	D				Very stiff bluish grey slightly sandy slightly gravelly silty CLAY. Sand is fine to coarse. (LONDON CLAY FORMATION)	-16.15	24.00	
24.50-24.95	91	$UT_{(UT100)}$	100 blows 100% recovery					(1.55)	
24.50-24.95	92	B							
24.95-25.10	93	D							
25.10-25.55	94	SPT	N=33						
25.10-25.55	95	DSPT							
						Borehole terminated at 25.55m depth.	-17.70	25.55	

Boring Progress and Water Observations					
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 2500**	[redacted]	[redacted]	[redacted]

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Structural Soils Ltd, Branch Office - Hemel Hempstead: 18 Frogmore Road, Hemel Hempstead, Hertfordshire, HP3 9RT. Tel: 01442 416660, Fax: 01442 437550, Web: www.soils.co.uk, Email: ask@soils.co.uk. | 22/04/24 - 16:44 | GK1 |

STRUCTURAL SOILS

FINAL

BOREHOLE LOG

Contract:	Client:	Borehole:
Sealink Friston	**National Grid**	**RedP-BH-1**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	**21.09.23** End: **22.09.23**	**2.66**	**E:646816.5 N:258336.5**	**1** of **1**

Depth (m)	Samples & Testing: No	Type	Results	Backfill	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
0.20	101	ES	2xT+1xJ+1xV			MADE GROUND: Black mottled dark brown sandy subangular to rounded fine to coarse GRAVEL of flint with occasional glass and ceramic fragments. Sand is fine to coarse.	2.51	0.15	
0.20		PID	0.4ppm			MADE GROUND: Dark brown sandy subrounded to rounded fine to coarse GRAVEL of flint with occasional glass fragments. Sand is fine to coarse. (MADE GROUND)		(0.65)	
0.50-0.80	1	B							
0.50	102	ES	2xT+1xJ+1xV				1.86	0.80	
0.50-0.60	2	D				MADE GROUND: Dark brown sandy subrounded to rounded fine to coarse GRAVEL of flint with occasional glass and shell fragments. Sand is fine to coarse. (MADE GROUND)		(0.50)	
0.50		PID	0.7ppm						
1.00	103	ES	2xT+1xJ+1xV				1.36	1.30	
1.00-1.20	3	B				MADE GROUND: Brown mottled multicoloured (grey, orange, blue, light blue, green) sandy angular to rounded fine to coarse GRAVEL with occasional shell fragments. Sand is medium to coarse. (MADE GROUND)		(0.70)	
1.00-1.10	4	D							
1.00		PID	1.2ppm						
1.20-1.65	5	SPT(c)	N=9						
1.20-2.00	6	B							
1.50-1.60	7	D							
1.50		PID	1.7ppm						
2.00-2.14	8	SPT(c)	25/50 for 75mm			MADE GROUND: Brown mottled multicoloured (grey, orange, blue, light blue, green) sandy angular to rounded fine to coarse GRAVEL with concrete fragments. Sand is medium to coarse. (MADE GROUND) 2.00-2.03m : Concrete layer.	0.66	2.00	
2.00-2.50	9	B						(0.50)	
						Borehole terminated at 2.50m depth.	0.16	2.50	

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
22/09/23	11:05	2.00	200.00	200	Dry
25/09/23	11:02	2.00	2.00	200	Dry
25/09/23	13:00	2.50	2.50	200	2.30

Chiselling / Slow Progress

From	To	Duration (hh:mm)

General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
3. Borehole terminated at 2.50m after encountering concrete obstruction.
4. Backfilled with arisings from 1.00m to GL.
5. SPT hammer AR3104-2023 (E_r = 63.00%) used.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 3000 Mark 2**	[redacted]	[redacted]	[redacted]

AGS

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STRUCTURAL SOILS

FINAL

BOREHOLE LOG

Contract:	Client:	Borehole:
Sealink Friston	**National Grid**	**RedP-BH-1A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	**25.09.23** End: **03.10.23**	**2.70**	**E:646813.6 N:258334.2**	**1** of **4**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
0.00-0.30	1	B				MADE GROUND: Black sandy angular to rounded fine to coarse GRAVEL with brick fragments. Sand is fine to coarse.			
0.10-0.20	2	D							
0.20	101	ES	2xT+1xJ+1xV						
0.20		PID	1.6ppm						
0.30-1.00	3	B				MADE GROUND: Dark brown sandy subangular to rounded fine to coarse GRAVEL with ceramic fragments. Sand is fine to coarse.	2.40	0.30	
0.35	102	ES	2xT+1xJ+1xV						
0.35		PID	1.4ppm						
0.50	103	ES	2xT+1xJ+1xV						
0.50-0.60	4	D						(1.20)	
0.50		PID	1.6ppm						
1.00	104	ES	2xT+1xJ+1xV						
1.00-1.20	5	B							
1.00-1.10	6	D							
1.00		PID	2.5ppm						
1.50-1.95	7	SPT(c)	N=12			Medium dense dark brown mottled multicoloured (grey, orange, blue, light blue, green) sandy slightly silty subangular to rounded fine to coarse GRAVEL with occasional shell fragments. Sand is fine to coarse.	1.20	1.50	
1.50	105	ES	2xT+1xJ+1xV						
1.50-2.50	8	B							
1.50-1.60	9	D							
1.50		PID	1.3ppm						
					1				
2.50-2.95	10	SPT(c)	N=12					(2.00)	
2.50	106	ES	2xT+1xJ+1xV						
2.50-3.50	11	B							
2.50		PID	1.2ppm						
3.00-3.10	12	D							
3.50-3.95	13	SPT	N=4			Very soft to soft grey mottled black CLAY with occasional shell fragments, staining and slight hydrocarbon odour. (TIDAL FLAT DEPOSITS)	-0.80	3.50	
3.50	107	ES	2xT+1xJ+1xV						
3.50-3.95	14	DSPT							
3.50-4.50	15	B							
3.50		PID	1.4ppm					(1.70)	
4.50-4.95	16	$UT_{(UT100)}$	20 blows 100% recovery						
4.50-5.20	18	B							
4.95-5.05	17	D							
5.20	108	ES	2xT+1xJ+1xV		1	Spongy fibrous black PEAT with a strong hydrocarbon odour and staining. (PEAT)	-2.50	5.20	
5.20-5.50	19	B							
5.20		PID	2.8ppm						
5.30-5.40	20	D						(1.30)	
5.50-5.95	21	SPT	N=11						
5.50-5.95	22	DSPT							
5.50-6.50	23	B							
6.50-6.95	24	$UT_{(UT100)}$	20 blows 100% recovery			Soft dark grey mottled black and dark brown sandy CLAY. (TIDAL FLAT DEPOSITS)	-3.80	6.50	
6.75-7.50	25	B				Medium dense dark grey slightly sandy rounded fine to coarse GRAVEL with staining and slight hydrocarbon odour. Sand is medium to coarse. (MARINE BEACH DEPOSIT)	-4.05	6.75	
7.00-7.10	26	D							
7.50-7.95	27	SPT	N=13					(2.75)	
7.50-7.95	28	DSPT							
7.50-8.50	29	B							
8.50-8.95	30	SPT	N=27						
8.50-8.95	31	DSPT							
8.50-9.50	32	B							

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
26/09/23	16:55	2.50	2.50	200	2.30
27/09/23	09:00	2.50	2.50	200	2.20
27/09/23	17:15	10.00	10.00	200	3.50
28/09/23	08:55	10.00	10.00	200	1.97
28/09/23	17:10	17.50	16.50	200	3.50
29/09/23	08:40	17.50	16.50	200	2.30
29/09/23	12:09	18.00	17.50	150	2.40
02/10/23	11:41	18.00	18.00	150	2.60

Chiselling / Slow Progress

From	To	Duration (hh:mm)

General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Inspection pit hand dug to 1.20m depth.
3. 3.00m of stainless steel casing used to lead the casing string.
4. Down borehole checks for buried ferrous objects carried out during drilling by specialist unexploded ordnance (UXO) officer using magnetometer at regular intervals to 12.00m depth.
5. 50mm diameter standpipe piezometer (complete with flush protective cover) installed to 23.50m depth on completion. Response zone 20.50m to 23.50m depth.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 3000 Mark 2**	[redacted]	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

BOREHOLE LOG

Contract:	Client:	Borehole:
Sealink Friston	**National Grid**	**RedP-BH-1A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	**25.09.23** End: **03.10.23**	**2.70**	**E:646813.6 N:258334.2**	**2** of **4**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
						Medium dense dark grey slightly sandy rounded fine to coarse GRAVEL with staining and slight hydrocarbon odour. Sand is medium to coarse. (MARINE BEACH DEPOSIT) *(stratum copied from 6.75m from previous sheet)*			
9.50-9.95	33	SPT	N=24			Medium dense to dense dark grey gravelly fine to coarse SAND with occasional shell fragments. Gravel is angular fine to coarse cemented sand. (CRAG GROUP)	-6.80	9.50	
9.50-9.95	34	DSPT							
9.50-10.50	35	B						(1.20)	
10.50-10.91	36	SPT	6,9/11,13,12,14 for 35mm						
10.50-10.95	37	DSPT				Very stiff friable orangish brown mottled black and grey very sandy SILT with a slight organic odour. Sand is fine to coarse. (CRAG GROUP)	-8.00	10.70	
10.50-11.50	38	B					-8.10	10.80	
						Dense to very dense dark grey very gravelly slightly clayey fine to coarse SAND with frequent shell fragments. Gravel is angular fine to coarse cemented sand. (CRAG GROUP)			
11.50-11.95	39	SPT	N=45						
11.50-11.95	40	DSPT						(3.00)	
11.50-12.50	41	B							
12.50-12.95	42	SPT	N=29						
12.50-12.95	43	DSPT							
12.50-13.50	44	B							
13.50-13.95	45	SPT	N=41						
13.50-13.95	46	DSPT							
13.50-14.50	47	B							
						Dense orangish brown slightly clayey fine to coarse SAND. (CRAG GROUP)	-11.10	13.80	
							-11.20	13.90	
						Very dense dark grey gravelly fine to coarse SAND with frequent shell fragments. Gravel is angular fine to coarse cemented sand. (CRAG GROUP)		(0.85)	
14.50-14.94	48	SPT	5,7/13,11,11,15 for 65mm						
14.50-14.95	49	DSPT					-12.05	14.75	
14.50-15.50	50	B				Very dense orangish brown slightly clayey fine to coarse SAND. (CRAG GROUP)	-12.20	14.90	
						Very dense dark grey very gravelly slightly clayey fine to coarse SAND with frequent shell fragments. Gravel is angular fine to coarse cemented sand and cemented shells. (CRAG GROUP)			
15.50-15.89	51	SPT	5,6/10,11,16,13 for 15mm			15.50-16.50m : With medium cobble content.			
15.50-15.95	52	DSPT							
15.50-16.50	53	B						(3.10)	
16.50-16.89	54	SPT	8,8/11,11,13,15 for 15mm						
16.50-16.95	55	DSPT							
16.50-17.50	56	B							
17.50-17.95	57	SPT	N=30			17.50-18.50m : Gravel absent			
17.50-17.95	58	DSPT							
17.50-18.50	59	B							

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
02/10/23	14:56	19.00	19.00	200	1.69
03/10/23	08:05	19.00	19.00	200	2.75
03/10/23	17:57	29.95	30.00	150	13.40

Chiselling / Slow Progress

From	To	Duration (hh:mm)

General Remarks

6. SPT hammer AR3104-2023 (E_r = 63.00%) used.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 3000 Mark 2**	[redacted]	[redacted]	[redacted]

AGS

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STRUCTURAL SOILS

FINAL

BOREHOLE LOG

Contract:	Client:	Borehole:
Sealink Friston	**National Grid**	**RedP-BH-1A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	**25.09.23** End: **03.10.23**	**2.70**	**E:646813.6 N:258334.2**	**3** of **4**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
						Dense orangish brown gravelly fine to coarse SAND. Gravel is angular fine to coarse cemented sand. (CRAG GROUP)	-15.30	18.00	
18.50-18.95	60	SPT	N=43						
18.50-18.95	61	DSPT							
18.50-19.50	62	B						(2.50)	
19.50-19.92	63	SPT	6,8/11,12,15,12 for 40mm						
19.50-19.95	64	DSPT							
19.50-20.50	65	B							
						Very dense light grey to grey fine to coarse SAND with frequent shell fragments. (CRAG GROUP)	-17.80	20.50	
20.50-20.95	66	SPT	N=50						
20.50-20.95	67	DSPT							
20.50-21.50	68	B							
21.50-21.92	69	SPT	4,5/9,10,16,15 for 45mm						
21.50	101	EW							
21.50	201	EW							
21.50	301	EW							
21.50-21.95	70	DSPT							
21.50-22.50	71	B						(4.00)	
22.50-22.83	72	SPT	3,8/12,21,17 for 30mm						
22.50-22.95	73	DSPT							
22.50-23.50	74	B							
23.50-23.79	75	SPT	3,10/26,24 for 65mm						
23.50-23.95	76	DSPT							
23.50-24.50	77	B							
24.50-24.94	78	SPT	5,8/11,12,15,12 for 65mm			Very dense grey slightly gravelly fine to coarse SAND with frequent shell fragments. Gravel is subrounded to rounded fine to medium. (CRAG GROUP)	-21.80	24.50	
24.50-24.95	79	DSPT					-22.00	24.70	
24.50-24.70	80	B							
24.70-25.50	81	B				Firm grey slightly sandy slightly gravelly CLAY. Gravel is subrounded to rounded fine to medium. (LONDON CLAY FORMATION)		(0.80)	
25.00-25.10	82	D							
25.50-25.95	83	SPT	N=42			Stiff to very stiff grey thickly laminated slightly sandy CLAY. (LONDON CLAY FORMATION)	-22.80	25.50	
25.50-25.95	84	DSPT							
25.50-26.50	85	B							
26.50-26.80	86	$UT_{(UT100)}$	100 blows 50% recovery						
26.50-27.50	88	B							

Boring Progress and Water Observations					
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 3000 Mark 2**	[redacted]	[redacted]	[redacted]

AGS

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STRUCTURAL SOILS

FINAL

BOREHOLE LOG

Contract:	Client:	Borehole:
Sealink Friston	**National Grid**	**RedP-BH-1A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	**25.09.23** End: **03.10.23**	**2.70**	**E:646813.6 N:258334.2**	**4** of **4**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
26.95-27.05	87	D				Stiff to very stiff grey thickly laminated slightly sandy CLAY. (LONDON CLAY FORMATION) *(stratum copied from 25.50m from previous sheet)*			
27.50-27.95	89	$UT_{(UT100)}$	100 blows 78% recovery					(4.50)	
27.50-28.50	91	B							
27.95-28.05	90	D							
28.50-28.95	92	SPT	N=44						
28.50-28.95	93	DSPT							
28.50-29.50	94	B							
29.50-29.95	95	SPT	N=42						
29.50-29.95	96	DSPT							
29.50-30.00	97	B							
						Borehole terminated at 30.00m depth.	-27.30	30.00	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)	From	To	Duration (hh:mm)	

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 3000 Mark 2**	[redacted]	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log BOREHOLE LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01,
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STRUCTURAL SOILS

FINAL

BOREHOLE LOG

Contract:	Client:	Borehole:
Sealink Friston	**National Grid**	**RedP-BH-4**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	**18.09.23** End: **21.09.23**	**4.62**	**E:646178.5 N:258418.3**	**1** of **4**

Depth (m)	Samples & Testing: No	Type	Results	Backfill	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
0.20	101	ES	2xT+1xJ+1xV			Orangish brown slightly gravelly fine to coarse SAND with rootlets <2mm. Gravel is subangular to subrounded fine to medium flint.			
0.20		PID	0.0ppm						
0.35-0.70	1	B					4.27	0.35	
0.50	102	ES	2xT+1xJ+1xV			Medium dense orange mottled orangish brown slightly gravelly very clayey fine to medium SAND. Gravel is subangular to subrounded fine to medium flint. (CRAG GROUP)			
0.50-0.60	2	D							
0.50		PID	1.0ppm						
0.70-1.20	3	B							
1.00	103	ES	2xT+1xJ+1xV					(1.85)	
1.00-1.10	4	D							
1.00		PID	1.5ppm						
1.20-1.65	5	SPT	N=11						
1.20-1.65	6	DSPT							
1.20-2.00	7	B							
2.00-2.45	8	SPT	N=14						
2.00-3.00	10	B							
2.00-2.45	9	DSPT				Medium dense orange mottled orangish brown slightly gravelly fine to coarse SAND with occasional shell fragments. Gravel is angular to subrounded fine to coarse cemented sand. (CRAG GROUP)	2.42	2.20	
								(0.80)	
3.00-3.45	11	SPT	N=14			Medium dense to very dense orange mottled orangish brown very gravelly slightly clayey fine to coarse SAND with occasional shell fragments. Gravel is angular to subrounded fine to coarse cemented sand. (CRAG GROUP) 3.00-4.00m : With medium cobble content.	1.62	3.00	
3.00-3.45	12	DSPT							
3.00-4.00	13	B							
4.00-4.45	14	SPT	N=19						
4.00-4.45	15	DSPT							
4.00-5.00	16	B							
5.00-5.45	17	SPT	N=17						
5.00-5.45	18	DSPT							
5.00-6.00	19	B							
6.00-6.45	20	SPT	N=20						
6.00-6.45	21	DSPT							
6.00-7.00	22	B						(7.00)	
7.00-7.45	23	SPT	N=19						
7.00-7.45	24	DSPT							
7.00-8.00	25	B							
8.00-8.45	26	SPT	N=19			8.00-9.00m : With medium cobble content.			
8.00-8.45	27	DSPT							
8.00-9.00	28	B							

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
18/09/23	17:51	7.50	7.50	200	6.10
19/09/23	08:28	7.50	7.50	200	4.20
19/09/23	12:30	15.00	15.00	200	4.60
19/09/23	17:01	20.50	20.50	150	2.80
20/09/23	08:09	20.50	20.50	150	5.10
20/09/23	16:22	30.00	30.00	150	8.70

Chiselling / Slow Progress

From	To	Duration (hh:mm)

General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Inspection pit hand dug to 1.20m depth.
3. 3.0m of stainless steel casing used to lead the casing string.
4. Down borehole checks for buried ferrous objects carried out during drilling by specialist unexploded ordnance (UXO) officer using magnetometer at regular intervals to 12.00m depth.
5. On completion, borehole backfilled with bentonite pellets to 1.00m and arisings to ground level.
6. Borehole terminated at 30.00m depth.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 3000 Mark 2**	[redacted]	[redacted]	[redacted]

AGS

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STRUCTURAL SOILS

FINAL

BOREHOLE LOG

Contract:	Client:	Borehole:
Sealink Friston	**National Grid**	**RedP-BH-4**

Contract Ref:	Start: **18.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **21.09.23**	**4.62**	**E:646178.5 N:258418.3**	**2** of **4**

Depth (m)	Samples & Testing: No	Type	Results	Backfill	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
9.00-9.45 9.00-9.45 9.00-10.00	29 30 31	SPT DSPT B	N=26			Medium dense to very dense orange mottled orangish brown very gravelly slightly clayey fine to coarse SAND with occasional shell fragments. Gravel is angular to subrounded fine to coarse cemented sand. (CRAG GROUP) 3.00-4.00m : With medium cobble content.*(stratum copied from 3.00m from previous sheet)*			
10.00-10.45 10.00-10.45 10.00-11.00	32 33 34	SPT DSPT B	N=36			Very dense orange mottled orangish brown very gravelly slightly clayey fine to coarse SAND with occasional shell fragments. Gravel is angular to subrounded fine to coarse cemented sand. (CRAG GROUP)	-5.38	10.00	
11.00-11.45 11.00-11.45 11.00-12.00	35 36 37	SPT DSPT B	N=43			11.00-17.00m : with medium becoming low cobble content.			
12.00-12.40 12.00-12.40 12.00-13.00	38 39 40	SPT DSPT B	5,7/11,13,19,7 for 25mm						
13.00-13.42 13.00-13.45 13.00-14.00	41 42 43	SPT DSPT B	5,6/9,12,16,13 for 45mm					(7.80)	
14.00-14.41 14.00-14.41 14.00-15.00	44 45 46	SPT DSPT B	6,8/12,13,17,8 for 30mm						
15.00-15.32 15.00-15.32 15.00-16.00	47 48 49	SPT DSPT B	9,12/19,25,6 for 15mm						
16.00-16.41 16.00-16.41 16.00-17.00	50 51 52	SPT DSPT B	12,13/13,15,15,7 for 35mm						
17.00-17.40 17.00-17.40 17.00-17.80	53 54 55	SPT DSPT B	6,7/11,16,17,6 for 20mm						
17.80-18.00	56	B				*Description on next sheet*	-13.18	17.80	

Boring Progress and Water Observations					
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

7. SPT hammer AR3104-2023 (E_r = 63.00%) used.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 3000 Mark 2**	[redacted]	[redacted]	[redacted]

AGS

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STRUCTURAL SOILS

FINAL

BOREHOLE LOG

Contract:	Client:	Borehole:
Sealink Friston	**National Grid**	**RedP-BH-4**

Contract Ref:	Start: **18.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **21.09.23**	**4.62**	**E:646178.5 N:258418.3**	**3** of **4**

Depth (m)	Samples & Testing: No	Type	Results	Backfill	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
18.00-18.38	57	SPT	7,7/9,14,24,3 for 5mm			Very dense grey mottled light grey slightly gravelly clayey fine to coarse SAND with occasional shell fragments. Gravel is angular to subrounded fine to coarse cemented sand. (CRAG GROUP) *(stratum copied from 17.80m from previous sheet)*			
18.00-18.38	58	DSPT							
18.00-19.00	59	B							
19.00-19.38	60	SPT	10,12/16,16,18 for 75mm					(2.70)	
19.00-19.38	61	DSPT							
19.00-20.00	62	B							
20.00-20.39	63	SPT	7,9/11,13,21,5 for 15mm						
20.00-20.39	64	DSPT							
20.50-21.00	65	B					-15.88	20.50	
20.50-20.60	66	D				Stiff to very stiff thickly laminated very closely to closely fissured dark grey CLAY with pockets of dark grey mottled grey slightly sandy silty clay. (LONDON CLAY FORMATION)			
21.00-21.40	67	$UT_{(UT100)}$	100 blows 75% recovery						
21.00-22.00	68	B							
21.50-21.60	69	D							
22.00-22.45	70	SPT	N=48						
22.00-22.45	71	DSPT							
22.00-23.00	72	B							
23.00-23.40	73	$UT_{(UT100)}$	100 blows 75% recovery						
23.00-24.00	75	B							
23.45-23.55	74	D							
24.00-24.45	76	SPT	N=49						
24.00-24.45	77	DSPT							
24.00-25.00	78	B							
25.00-25.40	79	$UT_{(UT100)}$	100 blows 63% recovery						
25.00-26.00	81	B							
25.45-25.55	80	D						(9.95)	
26.00-26.44	82	SPT	8,9/9,12,14,15 for 65mm						
26.00-26.44	83	DSPT							
26.00-27.00	84	B							

Boring Progress and Water Observations					
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 3000 Mark 2**	[redacted]	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

BOREHOLE LOG

Contract:	Client:	Borehole:
Sealink Friston	**National Grid**	**RedP-BH-4**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **21.09.23**	**4.62**	**E:646178.5 N:258418.3**	**4** of **4**

Depth (m)	Samples & Testing: No	Type	Results	Backfill	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
27.00-27.30	85	$UT_{(UT100)}$	100 blows 83% recovery			Stiff to very stiff thickly laminated very closely to closely fissured dark grey CLAY with pockets of dark grey mottled grey slightly sandy silty clay. (LONDON CLAY FORMATION) *(stratum copied from 20.50m from previous sheet)*			
27.00-28.00	87	B							
27.45-27.55	86	D							
28.00-28.45	88	SPT	N=48						
28.00-28.45	89	DSPT							
28.00-29.00	90	B				28.40-28.45m : Band of light grey angular to subrounded fine to medium gravel.			
29.00-29.30	91	$UT_{(UT100)}$	110 blows 67% recovery						
29.00-30.00	93	B							
29.45-29.55	92	D							
30.00-30.45	94	SPT	N=48						
30.00-30.45	95	DSPT							
						Borehole terminated at 30.45m depth.	-25.83	30.45	

Boring Progress and Water Observations					
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 3000 Mark 2**	[redacted]	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

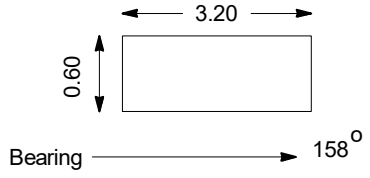
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Sealink Friston	**National Grid**	**F22-TP203**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **28.09.23**	**22.84**	**E:642242.0 N:260117.6**	**1** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
0.10-0.50	1	B				Grass overlying brown slightly gravelly clayey fine SAND. Gravel is angular to subrounded fine to medium quartz, flint and chalk. (TOPSOIL)		(0.50)	
0.20-0.20	101	ES	2xT+1xJ+1xV						
0.20-0.20	2	D							
0.20		PID	1.3ppm				22.34	0.50	
0.60-0.60	102	ES	2xT+1xJ+1xV			Orangish brown slightly gravelly silty fine to coarse SAND. Gravel is angular to subangular fine to coarse flint. (LOWESTOFT FORMATION)		(0.60)	
0.60-1.10	3	B							
0.60-0.60	4	D							
0.60		PID	3.8ppm			0.90-1.10m : Clayey.	21.74	1.10	
1.20-1.70	5	B				Firm friable light greenish brown mottled orangish brown slightly gravelly sandy CLAY. Gravel is angular to subrounded fine to coarse flint and chalk. Sand is fine to coarse. (LOWESTOFT FORMATION)		(3.00)	
1.20-1.20	6	D							
1.20		V	c_u=68/72/70						
1.20		V	c_r=22/10/34						
1.50-2.00	7	LB				1.50-4.10m : Stiff.			
1.70		V	c_u=102/114/120						
1.70		V	c_r=44/48/56						
2.00		V	c_u=130/110/90						
2.00		V	c_r=40/24/34						
2.20-2.70	8	B							
2.20-2.20	9	D							
3.20-3.70	10	B							
3.20-3.20	11	D							
4.00-4.00	12	B					18.74	4.10	
4.00-4.00	13	D				Trial pit terminated at 4.10m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
3. DCP test undertaken.
4. No groundwater encountered.
5. Trial pit terminated at scheduled depth of 4.10m.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP203**
Contract Ref:	Start: **28.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **28.09.23**	**22.84**	**E:642242.0 N:260117.6**	**2** of **3**

Top Soil





Sub soil

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP203**
Contract Ref:	Start: **28.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **28.09.23**	**22.84**	**E:642242.0 N:260117.6**	**3** of **3**

South face





West face

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

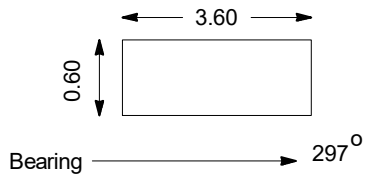
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Sealink Friston	**National Grid**	**F22-TP204**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **27.09.23**	**14.68**	**E:642801.5 N:259708.3**	**1** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
0.10-0.30	1	B				Crops overlying brown slightly gravelly silty fine SAND. Gravel is angular to subangular fine to coarse flint. (TOPSOIL)		(0.30)	
0.20-0.20	101	ES	2xT+1xJ+1xV				14.38	0.30	
0.20-0.20	2	D				Soft friable orangish brown slightly gravelly sandy silty CLAY. Sand is fine to coarse. Gravel is angular to subangular fine to coarse flint. (LOWESTOFT FORMATION)			
0.20		PID	0.1ppm					(0.50)	
0.50-0.50	102	ES	2xT+1xJ+1xV						
0.50-1.00	3	B							
0.50-0.50	4	D							
0.50		PID	0.5ppm				13.88	0.80	
1.00-1.50	5	B				Firm to very stiff greenish brown mottled orangish brown slightly gravelly sandy silty CLAY. Sand is fine to coarse. Gravel is angular to subangular fine to medium flint. (LOWESTOFT FORMATION)			
1.00-1.00	6	D							
1.00-1.50	7	LB							
1.00		V	c_u=66/62/84						
1.00		V	c_r=24/28/24						
1.50		V	c_u=66/74/76						
1.50		V	c_r=22/14/18			1.60-3.70m : Occasional pockets (<70x50x50mm) of soft light greenish brown SILT.			
2.00-2.50	8	B				2.00-3.70m : Occasional subrounded flint nodules (<200x110x100mm).			
2.00-2.00	9	D							
2.00		V	c_u=74/72/62					(2.90)	
2.00		V	c_r=28/50/28						
3.00-3.50	10	B							
3.00-3.00	11	D				3.40-3.70m : Gravel is angular to subrounded flint, chalk and coal.			
							10.98	3.70	
3.80-4.20	12	B				Yellowish brown mottled orangish brown clayey fine to medium SAND. Gravel is subangular to subrounded coarse flint and chalk. (LOWESTOFT FORMATION)			
3.80-3.80	13	D						(0.50)	
							10.48	4.20	
						Trial pit terminated at 4.20m depth.			

Plan (Not to Scale)



General Remarks

1. Trial pit re-positioned from S towards NW due to possible archaeological ditch feature identified at 0.40m depth.
2. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
3. DCP testing undertaken.
4. No groundwater encountered.
5. Trial pit terminated at scheduled depth of 4.20m.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP204**
Contract Ref:	Start: **27.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **27.09.23**	**14.68**	**E:642801.5 N:259708.3**	**2** of **3**

Top soil spoil





Sub soil spoil

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP204**
Contract Ref:	Start: **27.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **27.09.23**	**14.68**	**E:642801.5 N:259708.3**	**3** of **3**

North West face





North East face

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

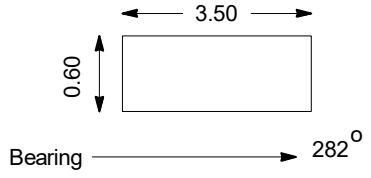
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Sealink Friston	**National Grid**	**F22-TP204A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	**03.10.23** End: **03.10.23**	**14.68**	**E:642801.5 N:259708.3**	**1** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Crops overlying brown slightly gravelly clayey fine SAND. Gravel is angular to subrounded quartz and flint. (TOPSOIL)	14.38	(0.30) 0.30	
						Dark orangish brown slightly gravelly silty fine SAND. Gravel is angular to subrounded fine to coarse quartz and flint. (LOWESTOFT FORMATION)	13.98	(0.40) 0.70	
						Firm to stiff light greenish brown mottled light grey and orangish brown sandy silty CLAY with a low cobble content. Sand is fine. Cobbles are angular flint (<100x80x70mm). (LOWESTOFT FORMATION)	12.38	(1.60) 2.30	
						Trial pit terminated at 2.30m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
3. Trial pit widened and stepped to 0.30m to prevent collapse of sidewalls.
4. Soakaway test undertaken in trial pit with water level filled to 1.32m bgl.
5. No groundwater encountered.
6. Trial pit terminated at scheduled depth of 2.30m.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

AGS

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STRUCTURAL SOILS

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TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP204A**
Contract Ref:	Start: **03.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **03.10.23**	**14.68**	**E:642801.5 N:259708.3**	**2** of **3**

Top soil spoil





Sub soil spoil

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP204A**
Contract Ref:	Start: **03.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **03.10.23**	**14.68**	**E:642801.5 N:259708.3**	**3** of **3**

West face





North face

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

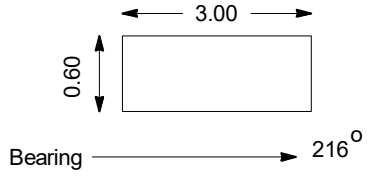
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Sealink Friston	**National Grid**	**F22-TP205**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	**26.09.23**	**15.53**	**E:643240.6 N:259491.7**	**1** of **3**
	End: **26.09.23**			

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
0.10-0.30	1	B				Crops overlying brown slightly gravelly fine silty SAND. Gravel is subangular to subrounded fine to coarse flint, quartz and quartzite.		(0.30)	
0.20-0.20	101	ES	2xT+1xJ+1xV			(TOPSOIL)	15.23	0.30	
0.20-0.20	2	D				Orangish brown slightly gravelly slightly clayey fine to coarse SAND. Gravel is angular to subrounded fine to coarse quartz and flint.			
0.20		PID	0.1ppm						
0.50-0.50	102	ES	2xT+1xJ+1xV			(LOWESTOFT FORMATION)			
0.50-1.00	3	B							
0.50-0.50	4	D							
0.50		PID	0.5ppm						
1.00-1.50	5	B				1.00-1.00m : Rare subrounded flint nodules (<100x90x60mm).			
1.00-1.00	6	D				1.10-2.00m : Yellowish brown mottled orangish brown.		(1.70)	
1.50-2.00	7	LB							
							13.53	2.00	
2.00-2.00	8	B				Trial pit terminated at 2.00m depth.			
2.00-2.00	9	D							

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
3. No groundwater encountered.
4. No hand shear vane tests undertaken due to insufficient fine soil.
5. DCP testing undertaken.
6. Trial pit terminated at 2.00m due to significant collapse of NW and SE sides between 0.00-2.00m.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP205**
Contract Ref:	Start: **26.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **26.09.23**	**15.53**	**E:643240.6 N:259491.7**	**2** of **3**

Top soil spoil





Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP205**
Contract Ref:	Start: **26.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **26.09.23**	**15.53**	**E:643240.6 N:259491.7**	**3** of **3**

South West face





North West face

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

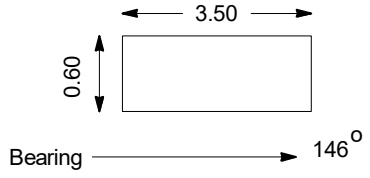
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Sealink Friston	**National Grid**	**F22-TP218**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **29.09.23**	**19.70**	**E:644029.8 N:259081.1**	**1** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
0.10-0.20	1	B				MADE GROUND: Grass overlying brown slightly gravelly silty fine SAND with occasional brick fragments (<90x50x30mm) and roots (<300x18mm). Gravel is angular to subangular fine to coarse flint.		(0.30)	
0.10-0.10	101	ES	2xT+1xJ+1xV						
0.10-0.10	2	D					19.40	0.30	
0.10		PID	0.5ppm			(TOPSOIL)			
0.50-0.50	102	ES	2xT+1xJ+1xV			Soft friable orangish brown slightly gravelly sandy SILT. Sand is fine to coarse. Gravel is angular to subrounded fine to medium quartz and flint. (LOWESTOFT FORMATION)			
0.50-1.00	3	B							
0.50-0.50	4	D							
0.50		PID	0.9ppm						
1.00-1.50	5	B				1.10-3.70m : Frequent lenses (<250x150x80mm) and pockets (<60x50x50mm) of firm friable greenish brown mottled orangish brown sandy clay.			
1.00-1.00	6	D							
1.00-1.50	7	LB							
2.00-2.50	8	B						(3.40)	
2.00-2.00	9	D							
3.00-3.50	10	B				3.00-3.70m : Becoming very sandy, lenses and pockets are soft friable greenish brown mottled orangish brown sandy clay. Sand is fine.			
3.00-3.00	11	D							
							16.00	3.70	
3.80-4.00	12	B				Stiff friable greenish brown slightly gravelly slightly sandy CLAY. Gravel is angular to subrounded fine to coarse chalk and flint. Sand is fine to coarse. (LOWESTOFT FORMATION)		(0.30)	
3.80-3.80	13	D							
3.80			Too friable				15.70	4.00	
						Trial pit terminated at 4.0m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
3. DCP testing undertaken.
4. No groundwater encountered.
5. No hand shear vane tests undertaken due to insufficient fine soil.
6. Trial pit terminated at scheduled depth of 4.00m.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP218**
Contract Ref:	Start: **29.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **29.09.23**	**19.70**	**E:644029.8 N:259081.1**	**2** of **3**

Top soils spoil





Sub soils spoil

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP218**
Contract Ref:	Start: **29.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **29.09.23**	**19.70**	**E:644029.8 N:259081.1**	**3** of **3**

North East face





South West face

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

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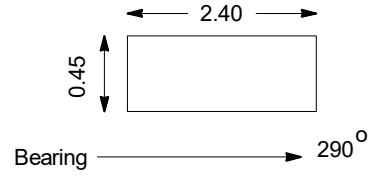
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Sealink Friston	**National Grid**	**F22-TP220**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	**13.09.23** End: **13.09.23**	**19.70**	**E:645035.1 N:258544.6**	**1** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
0.15	101	ES	2xT+1xJ+1xV			Grass over dark brown slightly silty gravelly fine to medium SAND with frequent rootlets <3mm diameter. Gravel is subrounded to rounded fine to medium mudstone and sandstone. (TOPSOIL)	19.50	0.20	
0.15		PID	0.3ppm						
0.50	1	D				Orangish brown gravelly clayey fine to medium SAND. Gravel is angular to rounded fine to coarse flint, mudstone, sandstone and limestone. (LOWESTOFT FORMATION)		(0.90)	
0.50	102	ES	2xT+1xJ+1xV						
0.50-0.70	2	B							
0.50		PID	0.2ppm						
0.70	3	D							
0.70-0.90	4	B							
0.90	5	D					18.60	1.10	
1.05	7	D				Orangish brown gravelly silty fine to medium SAND. Gravel is angular to rounded fine to coarse flint and mudstone. (LOWESTOFT FORMATION)			
1.10-1.30	8	LB							
1.30	9	D				1.40m : Becoming very gravelly SAND.		(0.70)	
							17.90	1.80	
1.90-2.10	10	LB				Orangish brown very gravelly fine to coarse SAND with a low cobble content. Gravel is angular to rounded flint and mudstone. Cobbles are angular flint. (LOWESTOFT FORMATION)			
2.00	11	D							
2.90-3.10	12	B						(2.20)	
3.00	13	D							
3.80-4.00	14	B							
3.90	15	D					15.70	4.00	
						Trial pit terminated at 4.00m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
3. DCP and thermal resistivity testing undertaken.
4. Northern sidewall on topsoil stockpile heap side collapsed to 3.6m bgl.
5. No groundwater encountered.
6. Trial pit terminated at scheduled depth of 4.00m

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP220**
Contract Ref:	Start: **13.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **13.09.23**	**19.70**	**E:645035.1 N:258544.6**	**2** of **3**

Spoil





North face

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP220**
Contract Ref:	Start: **13.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **13.09.23**	**19.70**	**E:645035.1 N:258544.6**	**3** of **3**

South face





East face

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

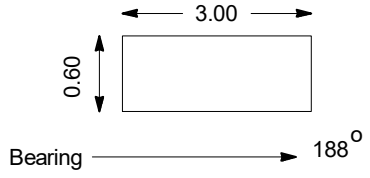
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Sealink Friston	**National Grid**	**F22-TP221**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **12.09.23**	**18.22**	**E:645423.8 N:258369.8**	**1** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
0.10-0.30	2	B				Grass overlying light greyish brown slightly gravelly silty fine SAND. Gravel is angular to subrounded coarse flint and quartzite.		(0.30)	
0.20-0.20	1	D				(TOPSOIL)	17.92	0.30	
0.20-0.20	101	ES	2xT+1xJ+1xV			Orangish brown gravelly silty fine to coarse SAND. Gravel is subangular to rounded fine to medium quartz, quartzite and flint. (LOWESTOFT FORMATION)			
0.20		PID	0.0ppm						
0.50-0.50	102	ES	2xT+1xJ+1xV						
0.50-0.50	3	D							
0.50-0.70	4	B							
0.50		PID	0.5ppm						
0.70-0.70	5	D							
0.90-0.90	16	D							
0.90-1.10	6	B							
1.00-1.50	15	LB				1.50-4.00m : Fine to medium sand.			
1.00-1.00	7	D							
1.10-1.10	8	D							
2.00-2.00	10	D							
2.00-2.50	9	B						(3.70)	
3.00-3.50	11	B							
3.00-3.00	12	D				3.10-4.00m : Occasional pockets (<55x40x20mm) of reddish brown fine sand.			
							14.22	4.00	
4.00-4.00	13	B				Trial pit terminated at 4.00m depth.			
4.00-4.00	14	D							

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
3. Significant collapse of the east sidewall between 0.30-4.00m.
4. DCP and thermal resistivity testing undertaken.
5. No groundwater encountered.
6. No hand shear vane tests undertaken due to insufficient fine soil.
7. Trial pit terminated at scheduled depth of 4.00m.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

AGS

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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP221**
Contract Ref:	Start: **12.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **12.09.23**	**18.22**	**E:645423.8 N:258369.8**	**2** of **3**

Top soil spoil





Sub soil spoil

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

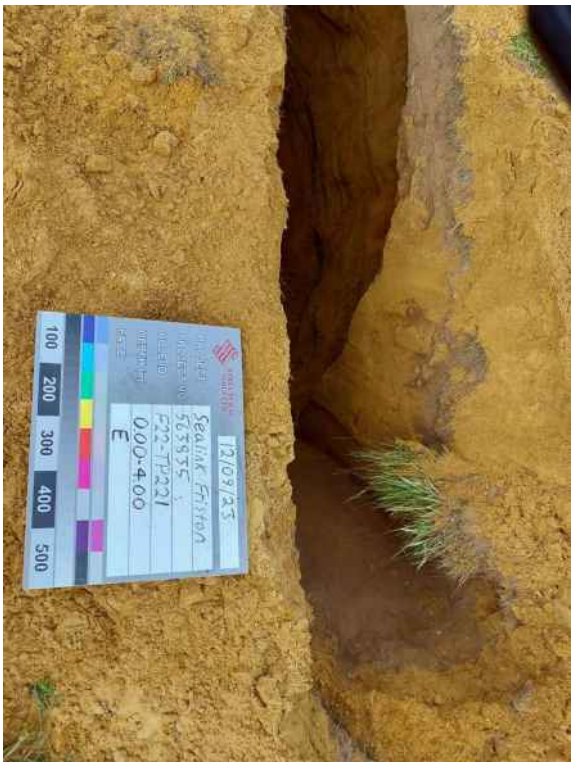
FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP221**
Contract Ref:	Start: **12.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **12.09.23**	**18.22**	**E:645423.8 N:258369.8**	**3** of **3**

South Face





East face

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

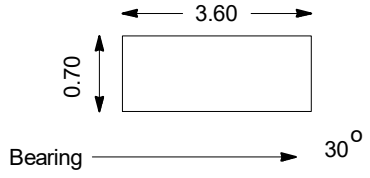
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Sealink Friston	**National Grid**	**F22-TP222**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	**15.09.23** End: **15.09.23**	**10.88**	**E:645947.7 N:258415.5**	**1** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
0.10 0.10	101	ES PID	2xT+1xJ+1xV 0.0ppm			MADE GROUND: Dark brown gravelly fine to medium SAND with frequent rootlets. Gravel is angular to rounded fine to medium flint, mudstone, sandstone and occasional brick fragments. (MADE GROUND)	10.73 10.43	0.15 (0.30) 0.45	
0.40 0.40	102	ES PID	2xT+1xJ+1xV 0.1ppm			MADE GROUND: Dark brown gravelly fine to coarse SAND with frequent rootlets. Gravel is angular to rounded fine to medium flint, limestone, mudstone, sandstone and occasional brick fragments and whole bricks. Anthropogenic material collected by archaeologist including flint and suspected arrow heads.		(0.50)	
						Excavation terminated at 0.45m depth, but TRL-DCP continued at this location to 0.95m depth.	9.92	0.95	
						Trial pit terminated at 0.95m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
3. DCP and thermal resistivity testing undertaken.
4. No groundwater encountered
5. Pit terminated at 0.45m at base of anthropogenic remains.
6. Pit to be reattempted as F22-TP222A.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP222**
Contract Ref:	Start: **15.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **15.09.23**	**10.88**	**E:645947.7 N:258415.5**	**2** of **3**

Top soil spoil





South east

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP222**
Contract Ref:	Start: **15.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **15.09.23**	**10.88**	**E:645947.7 N:258415.5**	**3** of **3**

North West face





North West face

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

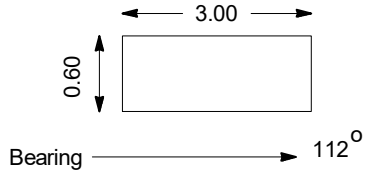
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Sealink Friston	**National Grid**	**F22-TP222A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	**19.09.23** End: **19.09.23**	**10.46**	**E:645952.1 N:258425.7**	**1** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
0.10-0.30	1	B				MADE GROUND: Grass overlying brown slightly gravelly silty fine SAND with a low cobble content. Gravel is subangular to subrounded fine to coarse flint, quartz, quartzite, limestone, rare terracotta pottery fragments (50x50x10mm) and a brick fragment (45x40x15mm). Cobbles are angular flint (100x80x70mm). (MADE GROUND)		(0.30)	
0.20-0.20	101	ES	2xT+1xJ+1xV				10.16	0.30	
0.20-0.20	2	D							
0.20		PID	0.1ppm						
0.50-0.50	102	ES	2xT+1xJ+1xV			Orangish brown gravelly slightly silty fine to coarse SAND. Gravel is angular to subrounded fine to medium flint and quartzite. (CRAG GROUP)			
0.50-0.70	3	B							
0.50-0.50	4	D							
0.50		PID	0.4ppm						
0.90-1.10	5	B							
1.00-1.00	6	D				1.00-3.80m : Yellowish brown mottled orangish brown.			
1.50-2.00	7	LB							
2.00-2.50	8	B						(3.50)	
2.00-2.00	9	D							
						2.60-3.80m : Gravel is angular to subrounded fine to medium sandstone, flint, quartz and quartzite.			
3.00-3.50	10	B							
3.00-3.00	11	D					6.66	3.80	
3.90		V	c_u=58/68/66			Stiff friable thinly laminated (1.0/1.25/1.50mm) orangish brown mottled light grey and reddish brown slightly sandy silty CLAY with occasional iron staining (60x30mm). Sand is fine. (CRAG GROUP)	6.46	4.00	
3.90		V	c_r=24/20/22						
4.00-4.00	12	B							
4.00-4.00	13	D				Trial pit terminated at 4.00m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
3. Tril pit is reattempt of F22-TP222 due presence of anthropogenic remains.
4. No groundwater encountered.
5. Trial pit terminated at scheduled depth of 4.00m.

All dimensions in metres | Scale: **1:2**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP222A**
Contract Ref:	Start: **19.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **19.09.23**	**10.46**	**E:645952.1 N:258425.7**	**2** of **3**

Top soil spoil





Sub soil spoil

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP222A**
Contract Ref:	Start: **19.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **19.09.23**	**10.46**	**E:645952.1 N:258425.7**	**3** of **3**

West face





East Face

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

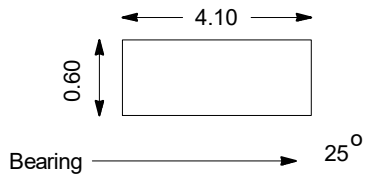
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Sealink Friston	**National Grid**	**F22-TP229**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	**27.09.23** End: **27.09.23**	**20.91**	**E:640107.0 N:262218.8**	**1** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Crop stubble over soft dark brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular to rounded fine to coarse flint, red sandstone, mudstone, limestone and chalk. (TOPSOIL)		(0.30)	
0.20	101	ES	2xT+1xJ+1xV				20.61	0.30	
0.20		PID	0.7ppm						
						Firm orangish brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular to rounded fine to coarse flint, red sandstone, mudstone, limestone and chalk. (LOWESTOFT FORMATION)			
0.50	1	D							
0.50	102	ES	2xT+1xJ+1xV						
0.50-0.70	2	B							
0.50		PID	1.2ppm			0.70m : Becoming friable yellowish brown mottled grey CLAY.			
0.60		V	c_u=60/66/72						
0.60		V	c_r=20/33/36						
0.70	3	D							
0.70-0.90	4	B							
0.90	5	D							
0.90-1.10	6	B							
1.10	7	D							
1.10-1.30	8	B							
						1.40m : Bands of orangish brown silty fine to medium SAND.		(2.30)	
1.50-1.70	15	LB							
1.60		V	c_u=62/71/70						
1.60		V	c_r=30/22/25						
						1.90-2.50m : Pocket of sandy SILT in southern half of trial pit. Sand is fine.			
2.10-2.30	10	B							
2.10	9	D					18.31	2.60	
						Firm dark bluish grey gravelly CLAY with low boulder content recovered as gravel. Boulders are subangular chalk (~0.6m x 0.3m x 0.4m). (LOWESTOFT FORMATION)			
3.00	11	D				2.60m : Becoming dark bluish grey gravelly CLAY with low boulder content recovered as gravel. Boulders are subangular chalk (~0.6m x 0.3m x 0.4m).			
3.00-3.20	12	B						(1.40)	
3.80	13	D							
3.80-4.00	14	B					16.91	4.00	
						Trial pit terminated at 4.00m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
3. DCP testing undertaken.
4. No groundwater encountered.
5. Trial pit terminated at scheduled depth of 4.00m.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP229**
Contract Ref:	Start: **27.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **27.09.23**	**20.91**	**E:640107.0 N:262218.8**	**2** of **3**

Spoil





South West face

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP229**
Contract Ref:	Start: **27.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **27.09.23**	**20.91**	**E:640107.0 N:262218.8**	**3** of **3**

North east face





North East face

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

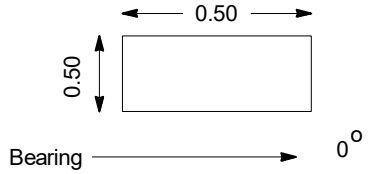
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Sealink Friston	**National Grid**	**F22-TP229A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **05.10.23**	**20.91**	**E:640107.0 N:262218.8**	**1** of **1**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Crop stubble overlying soft brown slightly gravelly silty CLAY. Gravel is angular to subangular fine to coarse flint and chalk. (TOPSOIL)	20.61	(0.30) 0.30	
						Firm greenish brown mottled orangish brown slightly gravelly slightly sandy CLAY. Gravel is angular to subangular fine to coarse flint and chalk. Sand is fine to coarse. (LOWESTOFT FORMATION)	20.21	(0.40) 0.70	
0.70-0.70	1	D				Stiff light grey mottled greenish brown slightly gravelly silty CLAY. Gravel is angular to subangular fine to coarse flint and chalk. (LOWESTOFT FORMATION)	19.81	(0.40) 1.10	
0.90-0.90	2	D							
1.10-1.10	3	D				Trial pit terminated at 1.10m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
3. Hand dug pit to 1.10m for thermal resistivity purposes.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Inspection pit + Hand dug	**Hand tools**	[redacted]	[redacted]

AGS

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STRUCTURAL SOILS

FINAL

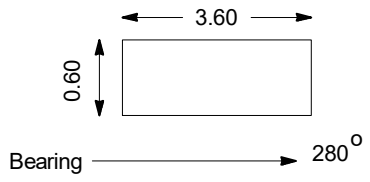
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Sealink Friston	**National Grid**	**F22-TP310**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **18.09.23**	**24.20**	**E:639820.9 N:262425.1**	**1** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Crop stubble over soft dark brown slightly sandy slightly gravelly slightly silty CLAY with occasional rootlets <5mm diameter and branches <15mm diameter. Sand is fine. Gravel is subangular to rounded limestone, mudstone, flint and occasional brick fragments. (TOPSOIL)	23.95	0.25	
0.20	101	ES	2xT+1xJ+1xV			Very stiff yellowish brown slightly sandy slightly gravelly silty CLAY with frequent rootlets <3mm diameter. Sand is fine to coarse. Gravel is angular to rounded fine to coarse flint, limestone, red sandstone and lignite. (LOWESTOFT FORMATION)			
0.20		PID	0.2ppm						
0.50	1	D							
0.50	102	ES	2xT+1xJ+1xV						
0.50-0.70	2	B							
0.50		V	c_u=65/50/53						
0.50		V	c_r=29/28/35						
0.50		PID	0.2ppm						
0.70	3	D				0.60m : Becoming stiff friable CLAY. No hand vanes possible.			
0.70-0.90	4	B				1.00-1.60m : Occasional pocket of SAND.			
0.90	5	D				1.10m : Becoming very gravelly.			
0.90-1.10	6	B							
1.10	7	D							
1.10-1.30	8	B							
						1.60m : Becoming very stiff brown mottled grey CLAY.			
1.70-1.90	10	LB				1.70-1.95m : Boulder of limestone encountered in base of trial pit. Dimensions 0.4m x >0.6m (width of trial pit).			
1.70	9	D							
						2.10m : Becoming orangish brown mottled bluish grey gravelly CLAY with low cobble content. Cobbles are rounded limestone.		(3.75)	
2.70	11	D							
2.70-2.90	12	B							
3.70	13	D							
3.70-3.90	14	B					20.20	4.00	
						Trial pit terminated at 4.00m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
3. DCP and Thermal resistivity testing undertaken.
4. No groundwater encountered.
5. Trial pit terminated at scheduled depth of 4.00m.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP310**
Contract Ref:	Start: **18.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **18.09.23**	**24.20**	**E:639820.9 N:262425.1**	**2** of **3**

Spoil





South face

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP310**
Contract Ref:	Start: **18.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **18.09.23**	**24.20**	**E:639820.9 N:262425.1**	**3** of **3**

West Face





North face

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

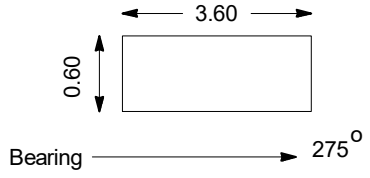
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Sealink Friston	**National Grid**	**F22-TP311**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **18.09.23**	**25.33**	**E:639693.0 N:262366.3**	**1** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Crop stubble over dark brown slightly sandy slightly gravelly slightly clayey SILT with occasional rootlets <3mm diameter. Sand is fine. Gravel is subangular to rounded fine to medium limestone, mudstone and flint.		(0.30)	
0.20	101	ES	2xT+1xJ+1xV				25.03	0.30	
0.20		PID	0.1ppm			(TOPSOIL)			
0.30-0.45	5	B					24.88	0.45	
0.40	4	D				Very stiff orangish brown slightly sandy gravelly SILT. Sand is fine to medium. Gravel is rounded fine limestone.			
0.50	1	D				(LOWESTOFT FORMATION)			
0.50	102	ES	2xT+1xJ+1xV			0.40m : Dilatancy test undertaken indicated silt.		(0.45)	
0.50	6	D							
0.50-0.70	7	B				Very stiff orangish brown slightly sandy gravelly silty CLAY. Gravel is angular to rounded fine to coarse flint and limestone. sand is fine to coarse.			
0.50		PID	0.2ppm				24.43	0.90	
0.70	2	D				(LOWESTOFT FORMATION)			
0.70-0.90	8	LB				0.75m : Becoming stiff friable CLAY.			
0.70		V	c_u=45/50/60						
0.70		V	c_r=30/27/34						
0.90-1.10	9	B				Orangish brown very gravelly fine to coarse SAND. Gravel is angular to rounded fine to coarse flint and limestone.		(0.55)	
1.10-1.30	10	B				(LOWESTOFT FORMATION)			
1.10	3	D							
1.30	11	D					23.88	1.45	
1.50-1.70	12	B				Very stiff greyish brown slightly gravelly slightly sandy silty CLAY. Gravel is angular to rounded fine to coarse limestone and flint. Sand is fine to coarse.			
1.60	13	D				(LOWESTOFT FORMATION)			
1.60		V	c_u=77/98/78						
1.60		V	c_r=18/34/21						
						2.10m : Becoming very stiff friable bluish grey CLAY.			
2.50-2.70	14	B						(2.25)	
2.60	15	D							
						3.10m : Becoming brownish grey CLAY.			
3.50-3.70	16	B							
3.60	17	D					21.63	3.70	
						Trial pit terminated at 3.70m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
3. DCP and Thermal resistivity testing undertaken.
4. No groundwater encountered.
5. Trial pit refused at a depth of 3.70m due to stiff Clay.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP311**
Contract Ref:	Start: **18.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **18.09.23**	**25.33**	**E:639693.0 N:262366.3**	**2** of **3**

Spoil





East face

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP311**
Contract Ref:	Start: **18.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **18.09.23**	**25.33**	**E:639693.0 N:262366.3**	**3** of **3**

South face





North face

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

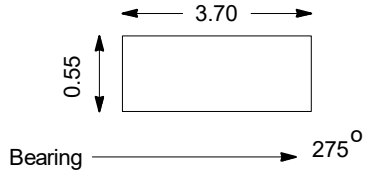
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Sealink Friston	**National Grid**	**F22-TP312**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **20.09.23**	**24.40**	**E:639883.9 N:262316.9**	**1** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Crop stubble over soft dark brown slightly sandy slightly gravelly silty CLAY with occasional rootlets <3mm diameter. Sand is fine to coarse. Gravel is subangular to rounded fine to medium limestone, mudstone and flint. (TOPSOIL)	24.15	0.25	
0.20	101	ES	2xT+1xJ+1xV			Firm to very stiff orangish brown slightly gravelly slightly sandy silty CLAY. Gravel is angular to rounded fine to medium flint, mudstone, red sandstone and limestone. Sand is fine to coarse. (LOWESTOFT FORMATION)			
0.20		PID	0.0ppm						
0.50	102	ES	2xT+1xJ+1xV						
0.50-0.70	4	B							
0.50	5	D							
0.50		PID	1.5ppm			0.50m : Occasional pockets of orangish brown silty fine SAND.			
0.60		V	c_u=57/52/81			0.70m : Friable orangish brown mottled grey CLAY.			
0.60		V	c_r=34/32/44						
0.70	1	D							
0.70-0.90	6	B							
0.90	2	D							
0.90-1.10	7	B				1.10m : Becoming stiff friable grey very gravelly CLAY. No hand vanes possible.			
0.90-1.10	9	LB							
1.10	3	D							
1.10-1.30	8	B							
2.00-2.20	10	B				1.90m : Becoming bluish grey slightly gravelly slightly sandy CLAY with frequent rootlets <5mm diameter.			
2.00	11	D						(3.75)	
3.00-3.20	12	B				2.60m : Becoming very stiff dark yellowish brown mottled grey CLAY with a low cobble content. Cobbles are rounded limestone.			
3.00	13	D							
3.80-4.00	14	B							
3.80	15	D					20.40	4.00	
						Trial pit terminated at 4.00m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
3. DCP and Thermal resistivity testing undertaken.
4. No groundwater encountered.
5. Trial pit terminated at scheduled depth of 4.00m.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP312**
Contract Ref:	Start: **20.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **20.09.23**	**24.40**	**E:639883.9 N:262316.9**	**2** of **3**

Spoil





North face

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP312**
Contract Ref:	Start: **20.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **20.09.23**	**24.40**	**E:639883.9 N:262316.9**	**3** of **3**

South face





West face

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

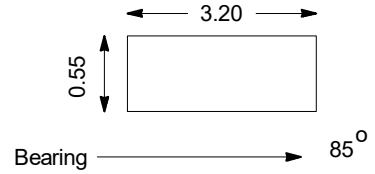
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Sealink Friston	**National Grid**	**F22-TP312A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **02.10.23**	**24.40**	**E:639883.9 N:262316.9**	**1** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Crop stubble over soft dark brown slightly silty slightly sandy slightly gravelly CLAY with occasional rootlets <3mm diameter. Sand is fine. Gravel is subangular to rounded chalk, mudstone and flint. (TOPSOIL)	24.15	0.25	
						Firm to stiff orangish brown slightly sandy slightly gravelly silty CLAY with pockets of silty fine sand. Gravel is angular to rounded flint, mudstone, red sandstone and chalk. (LOWESTOFT FORMATION) 0.80m : Becoming friable orangish brown mottled grey CLAY. 1.30m : Becoming orangish brown mottled bluish grey CLAY.		(1.75)	
						Trial pit terminated at 2.00m depth.	22.40	2.00	

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
3. No groundwater encountered.
4. Pit terminated at target depth of 2.00m with soakaway test undertaken between 1.00m and 2.00m.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP312A**
Contract Ref:	Start: **02.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **02.10.23**	**24.40**	**E:639883.9 N:262316.9**	**2** of **3**





Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP312A**
Contract Ref:	Start: **02.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **02.10.23**	**24.40**	**E:639883.9 N:262316.9**	**3** of **3**





Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

AGS

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

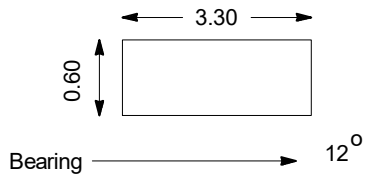
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Sealink Friston	**National Grid**	**F22-TP313**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **14.09.23**	**24.98**	**E:639659.7 N:262254.6**	**1** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Crop stubble over soft dark brown slightly silty slightly sandy slightly gravelly CLAY with occasional rootlets <3mm diameter. Sand is fine. Gravel is subangular to rounded fine to coarse of limestone, mudstone and flint.		(0.30)	
0.20	101	ES	2xT+1xJ+1xV				24.68	0.30	
0.20		PID	0.3ppm			(TOPSOIL)			
0.50	1	D				Very stiff yellowish brown slightly gravelly slightly sandy silty CLAY. Gravel is angular to subrounded fine to coarse limestone, flint and red sandstone. Sand is fine to coarse. (LOWESTOFT FORMATION)			
0.50	102	ES	2xT+1xJ+1xV						
0.50-0.70	2	B							
0.50		PID	0.6ppm			0.40-0.70m : Pocket of orangish brown medium to coarse SAND (maximum width 0.3m) in north eastern sidewall.			
0.60		V	c_u=112/110/>160						
0.60		V	c_r=22/22/24			0.60m : Becoming stiff to very stiff CLAY.			
0.70	3	D							
0.70-0.90	4	B				0.90m : Becoming friable bluish grey very stiff CLAY. No hand vanes possible.			
0.90	5	D							
0.90-1.10	6	B							
1.10	7	D							
1.10-1.30	8	B							
1.30	9	D						(2.30)	
1.80-2.00	10	LB							
1.90	11	D							
				≈			22.38	2.60	
2.60-2.90	12	B				Yellowish brown sandy angular to rounded GRAVEL of flint and limestone with a low cobble content. Sand is medium to coarse. Cobbles are angular flint. (LOWESTOFT FORMATION)		(0.30)	
2.70	13	D					22.08	2.90	
						Very stiff dark greyish brown gravelly CLAY with frequent black rootlets <3mm diameter. Gravel is rounded fine to medium limestone. (LOWESTOFT FORMATION)			
								(1.10)	
3.60-3.80	14	B							
3.70	15	D							
3.70		V	c_u=92/92/>130						
3.70		V	c_r=42/42/48				20.98	4.00	
						Trial pit terminated at 4.00m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
3. DCP and Thermal resistivity testing undertaken.
4. Perched groundwater encountered at 2.40m.
5. Trial pit terminated at scheduled depth of 4.00m.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP313**
Contract Ref:	Start: **14.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **14.09.23**	**24.98**	**E:639659.7 N:262254.6**	**2** of **3**





East face

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP313**
Contract Ref:	Start: **14.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **14.09.23**	**24.98**	**E:639659.7 N:262254.6**	**3** of **3**

West face





South face

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

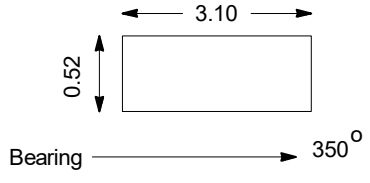
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Sealink Friston	**National Grid**	**F22-TP313A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **02.10.23**	**24.98**	**E:639659.7 N:262254.6**	**1** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Crop stubble over soft dark brown slightly sandy slightly gravelly silty CLAY with occasional rootlets <3mm diameter. Sand is fine. Gravel is subangular to rounded limestone, mudstone and flint. (TOPSOIL)	24.68	(0.30) 0.30	
						Firm yellowish brown gravelly CLAY. Gravel is angular to subrounded fine to coarse chalk, flint and red sandstone. (LOWESTOFT FORMATION)			
						0.60m : Medium cobble content. Cobbles are angular flint.		(1.20)	
						1.00m : Becoming stiff friable CLAY.			
						1.40m : Becoming orangish brown mottled bluish grey CLAY.	23.48	1.50	
						Trial pit terminated at 1.50m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
3. No groundwater encountered.
4. Pit terminated at target depth of 1.50m and soakaway test undertaken between 0.50m and 1.50m.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP313A**
Contract Ref:	Start: **02.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **02.10.23**	**24.98**	**E:639659.7 N:262254.6**	**2** of **3**





Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP313A**
Contract Ref:	Start: **02.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **02.10.23**	**24.98**	**E:639659.7 N:262254.6**	**3** of **3**





Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

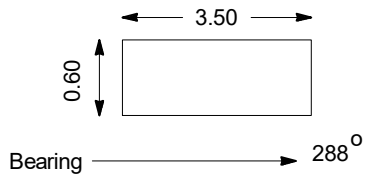
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Sealink Friston	**National Grid**	**F22-TP314**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **21.09.23**	**24.86**	**E:639835.2 N:262206.6**	**1** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
0.10-0.30	4	B				Crops overlying soft brown slightly gravelly slightly sandy SILT. Gravel is angular to subrounded fine to coarse chalk, flint and quartzite. (TOPSOIL)	24.56	(0.30) 0.30	
0.20-0.20	101	ES	2xT+1xJ+1xV						
0.20-0.20	5	D							
0.20		PID	0.2ppm			Stiff greenish brown mottled orangish brown and light grey slightly gravelly slightly sandy silty CLAY. Gravel is angular to subrounded fine flint and chalk. Sand is fine to medium. (LOWESTOFT FORMATION)			
0.50-0.50	102	ES	2xT+1xJ+1xV						
0.50-0.70	6	B							
0.50-0.50	7	D							
0.50		V	c_u=90/94/92			0.75-0.85m : Old Victorian terracotta pipe (<1800x100mm) (Field Drain).		(1.00)	
0.50		V	c_r=34/64/58						
0.50		PID	0.5ppm			0.90-1.30m : Friable with frequent pockets (<60x60mm) of orangish brown silty fine sand.			
0.70-0.70	1	D				1.00-1.30m : Frequent lenses (<600x200mm) of orangish brown silty fine sand.			
0.70-0.90	8	B							
0.90-0.90	2	D							
0.90-1.10	9	B							
1.00-1.00	10	D					23.56	1.30	
1.10-1.10	3	D				Stiff light grey mottled greenish brown slightly gravelly slightly sandy silty CLAY with a low cobble content. Gravel is subangular to subrounded fine to medium chalk and flint. Sand is fine to coarse. Cobbles are subangular to subrounded chalk and flint (<90x80x60mm). (LOWESTOFT FORMATION)			
1.40-1.90	11	LB							
1.50		V	c_u=130					(0.60)	
1.50		V	c_r=30						
							22.96	1.90	
2.00-2.50	12	B				Stiff dark bluish grey mottled greenish brown slightly gravelly silty CLAY with a low cobble content, occasional decomposed root fragments (<40x18x3mm), rootlets and pockets of soft orangish brown silt (<35x30mm). Gravel is angular to subangular fine to coarse flint and chalk. Cobbles are subangular to subrounded chalk and flint (<95x85x65mm). (LOWESTOFT FORMATION)			
2.00-2.00	13	D							
2.00		V	c_u=130/130/130						
2.00		V	c_r=40/50/46						
								(2.10)	
3.00-3.50	14	B							
3.00-3.00	15	D							
							20.86	4.00	
4.00-4.00	16	B				Trial pit terminated at 4.00m depth.			
4.00-4.00	17	D							

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
3. DCP and Thermal resistivity testing undertaken.
4. No groundwater encountered.
5. Terracotta pipe encountered at 0.75m depth, which was reinstated with 250mm pipe lengths and 20mm gravel before backfilling the trial pit with arisings.
6. Trial pit terminated at scheduled depth of 4.00m.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

AGS

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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP314**
Contract Ref:	Start: **21.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **21.09.23**	**24.86**	**E:639835.2 N:262206.6**	**2** of **3**

Top soil spoil





Sub soil spoil

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP314**
Contract Ref:	Start: **21.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **21.09.23**	**24.86**	**E:639835.2 N:262206.6**	**3** of **3**

West face





North face

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

AGS

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STRUCTURAL SOILS

FINAL

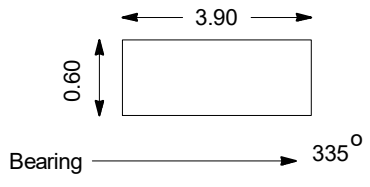
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Sealink Friston	**National Grid**	**F22-TP315**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **21.09.23**	**23.15**	**E:639693.8 N:262143.0**	**1** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Crop stubble over soft dark brown slightly sandy slightly gravelly silty CLAY with occasional rootlets <5mm diameter. Sand is fine. Gravel is angular to subrounded fine to coarse flint, limestone and chalk.		(0.30)	
0.20	101	ES	2xT+1xJ+1xV				22.85	0.30	
0.20		PID	0.0ppm			(TOPSOIL)			
						Stiff to very stiff friable orangish brown slightly gravelly sandy silty CLAY. Sand is fine to coarse. Gravel is angular to rounded fine to medium flint, limestone, chalk, red sandstone and mudstone.			
0.50	102	ES	2xT+1xJ+1xV						
0.50	3	D							
0.50-0.70	4	B							
0.50		V	c_u=49/70/41						
0.50		V	c_r=23/31/18						
0.50		PID	0.0ppm						
0.70	1	D				(LOWESTOFT FORMATION)			
0.70-0.90	5	B				0.70m : Becoming stiff friable orangish brown mottled grey gravelly CLAY.			
0.90	2	D				0.90m : Becoming slightly sandy			
0.90-1.10	6	B				1.10m : Low cobble content. Cobbles are angular to subangular flint and mudstone.			
1.10-1.30	15	LB							
1.10	7	D							
1.10-1.30	8	B							
				≈		1.70-1.80m : Pocket of gravel with slight seepage.			
						1.80m : Becoming dark bluish grey CLAY.			
2.00-2.20	10	B							
2.00	9	D						(3.70)	
2.20		V	c_u=100/91/102						
2.20		V	c_r=24/23/35						
3.00	11	D							
3.00-3.20	12	B							
3.80-4.00	14	B							
							19.15	4.00	
4.00	13	D				Trial pit terminated at 4.00m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
3. DCP and Thermal resistivity testing undertaken.
4. Minor side wall collapse of gravelly material due to water seepage.
5. Trial pit terminated at scheduled depth of 4.00m.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP315**
Contract Ref:	Start: **21.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **21.09.23**	**23.15**	**E:639693.8 N:262143.0**	**2** of **3**

Spoil





East face

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP315**
Contract Ref:	Start: **21.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **21.09.23**	**23.15**	**E:639693.8 N:262143.0**	**3** of **3**

West face





North face

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

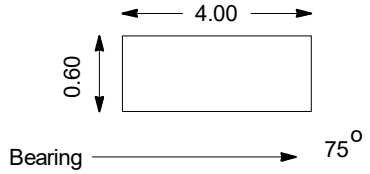
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Sealink Friston	**National Grid**	**F22-TP316**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	**19.09.23**	**23.74**	**E:639828.3 N:262046.8**	**1** of **4**
	End: **19.09.23**			

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Crop stubble over soft dark brown slightly sandy slightly gravelly silty CLAY with occasional rootlets <3mm diameter. Sand is fine. Gravel is subangular to rounded limestone, mudstone and flint.			
0.20	101	ES	2xT+1xJ+1xV				23.49	0.25	
0.20		PID	0.4ppm			(TOPSOIL)			
						Very stiff orangish brown slightly gravelly sandy silty CLAY. Gravel is angular to rounded fine to coarse flint, limestone and red sandstone. Sand is fine to coarse.			
0.50	1	D				(LOWESTOFT FORMATION)			
0.50	102	ES	2xT+1xJ+1xV			0.35m : Suspected round house ditch identified by archaeologist in southern end of pit.			
0.50-0.70	2	B				0.60m : Suspected gravel trench overlying land drain encountered in 052 orientation.			
0.50		PID	0.5ppm			0.90m : Becoming grey recovered as tabular blocks.			
0.70	3	D				1.10m : becoming slightly sandy and pockets of off white weathered CHALK recovered as soft gravelly silt.			
0.70-0.90	4	B							
0.80		V	c_u=57/56/66						
0.80		V	c_r=22/21/24						
0.90	5	D							
0.90-1.10	6	B							
1.10	7	D							
1.10-1.30	8	B							
1.30-1.50	10	LB							
1.30	9	D							
1.80		V	c_u=79/81/90			1.80m : Becoming brownish grey.			
1.80		V	c_r=34/21/33					(3.75)	
2.30	11	D							
2.30-2.50	12	B							
						3.00m : Becoming bluish grey with a low cobble content. Cobbles are rounded of limestone and tabular subangular mudstone.			
3.30	13	D							
3.30-3.50	14	B							
						3.70m : Becoming friable.			
3.80	15	D							
3.80-4.00	16	B					19.74	4.00	
						Trial pit terminated at 4.00m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
3. DCP and Thermal resistivity testing undertaken.
4. No groundwater encountered.
5. Pit terminated at 0.35m due to suspected round house ditch identified in southern end of pit.
6. Pit moved to the north and re-excavated the next day.
7. Gravel channel identified in south end of pit at an orientation of 052 degrees (suspected land drain

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

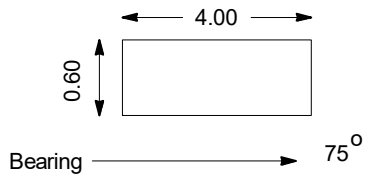
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Sealink Friston	**National Grid**	**F22-TP316**

Contract Ref:	Start: **19.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **19.09.23**	**23.74**	**E:639828.3 N:262046.8**	**2** of **4**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						

Plan (Not to Scale)



General Remarks

infill).
8. Trial pit terminated at scheduled depth of 4.00m.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

AGS

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP316**
Contract Ref:	Start: **19.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **19.09.23**	**23.74**	**E:639828.3 N:262046.8**	**3** of **4**

Top soil spoil





Sub soil spoil

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP316**
Contract Ref:	Start: **19.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **19.09.23**	**23.74**	**E:639828.3 N:262046.8**	**4** of **4**

West face





North face

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

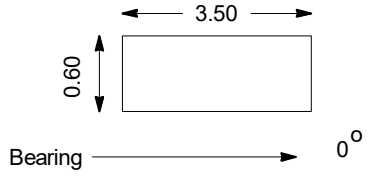
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Sealink Friston	**National Grid**	**F22-TP316A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **02.10.23**	**23.74**	**E:639828.3 N:262046.8**	**1** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Crops overlying soft brown slightly gravelly slightly sandy CLAY. Gravel is angular to subangular fine to coarse chalk and flint. Sand is fine. (TOPSOIL)	23.44	(0.30) 0.30	
						Firm greenish brown mottled orangish brown slightly gravelly slightly sandy CLAY with a low cobble content and occasional pockets of orangish brown clayey fine sand (<50x50mm). Gravel is angular to subangular fine to coarse chalk and flint. Sand is fine. Cobbles are angular flint (<110x100x90mm). (LOWESTOFT FORMATION)	22.74	(0.70) 1.00	
						Stiff friable light grey mottled greenish brown slightly gravelly silty CLAY with a low cobble content. Gravel is angular to subrounded fine to coarse chalk and flint. Cobbles are subrounded chalk (<80x80x60mm). (LOWESTOFT FORMATION)	21.74	(1.00) 2.00	
						Trial pit terminated at 2.00m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
3. No groundwater encountered.
4. Trial pit terminated at 2.0m with soakaway test undertaken between 1.00 to 2.00m bgl.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP316A**
Contract Ref:	Start: **02.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **02.10.23**	**23.74**	**E:639828.3 N:262046.8**	**2** of **3**





Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP316A**
Contract Ref:	Start: **02.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **02.10.23**	**23.74**	**E:639828.3 N:262046.8**	**3** of **3**





Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

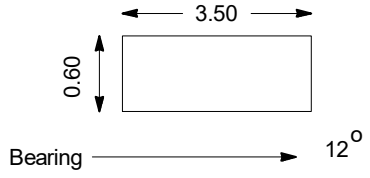
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Sealink Friston	**National Grid**	**F22-TP317**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **20.09.23**	**23.79**	**E:639959.0 N:262235.8**	**1** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
0.10-0.30	1	B				Crops overlying soft brown slightly gravelly slightly sandy CLAY. Gravel is angular to subrounded fine to coarse flint and chalk. Sand is fine to coarse. (TOPSOIL)	23.49	(0.30) 0.30	
0.20-0.20	101	ES	2xT+1xJ+1xV			Firm to very stiff greenish brown mottled orangish brown and light grey slightly gravelly slightly sandy CLAY. Gravel is angular to subrounded fine to coarse flint and chalk. Sand is fine. (LOWESTOFT FORMATION)			
0.20-0.20	2	D							
0.20		PID	0.1ppm						
0.50-0.50	102	ES	2xT+1xJ+1xV						
0.50-0.70	3	B							
0.50-0.50	4	D							
0.50-1.00	5	LB							
0.50		V	c_u=78/70/64						
0.50		V	c_r=52/34/42						
0.50		PID	0.3ppm						
0.70-0.90	6	B				1.00-2.80m : Stiff friable.			
0.70-0.70	7	D				1.10-2.80m : Low cobble content (<110x90x90mm). Cobbles are sub angular flint.			
0.90-1.10	8	B							
0.90-0.90	9	D						(2.50)	
1.10-1.10	10	D							
2.00-2.50	11	B					20.99	2.80	
2.00-2.00	12	D							
3.00-3.50	13	B				Very stiff dark grey mottled greenish brown slightly gravelly slightly sandy silty CLAY with occasional decomposed roots (<60x15mm) and rootlets. Gravel is angular to subrounded fine to coarse chalk, flint, quartz, iron banded sandstone and mudstone. (LOWESTOFT FORMATION)			
3.00-3.00	14	D						(1.20)	
4.00-4.00	15	B					19.79	4.00	
4.00-4.00	16	D				Trial pit terminated at 4.00m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
3. DCP testing undertaken.
4. No groundwater encountered.
5. Trial pit terminated at scheduled depth of 4.00m.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP317**
Contract Ref:	Start: **20.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **20.09.23**	**23.79**	**E:639959.0 N:262235.8**	**2** of **3**





Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP317**
Contract Ref:	Start: **20.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **20.09.23**	**23.79**	**E:639959.0 N:262235.8**	**3** of **3**





Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

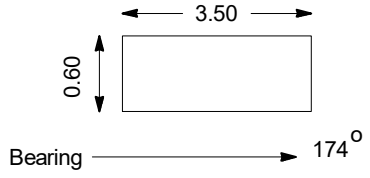
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Sealink Friston	**National Grid**	**F22-TP317A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **02.10.23**	**23.79**	**E:639959.0 N:262235.8**	**1** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Crops overlying soft brown slightly gravelly silty CLAY. Gravel is angular to subangular fine to coarse flint and chalk. (TOPSOIL)	23.49	(0.30) 0.30	
						Firm greenish brown mottled orangish brown slightly gravelly slightly sandy CLAY with occasional pockets of orangish brown clayey fine sand (<150x120mm). Gravel is angular to subangular fine to coarse chalk and flint. Sand is fine to coarse. (LOWESTOFT FORMATION)		(1.20)	
						1.30-1.50m : Rare cobbles (<150x100x60mm) of angular flint.	22.29	1.50	
						Trial pit terminated at 1.50m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
3. No groundwater encountered.
4. Photographs taken after completion of soakaway test.
5. Trial pit terminated at scheduled depth of 1.50m with soakaway test undertaken between 0.54m to 1.50m bgl.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP317A**
Contract Ref:	Start: **02.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **02.10.23**	**23.79**	**E:639959.0 N:262235.8**	**2** of **3**





Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP317A**
Contract Ref:	Start: **02.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **02.10.23**	**23.79**	**E:639959.0 N:262235.8**	**3** of **3**





Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

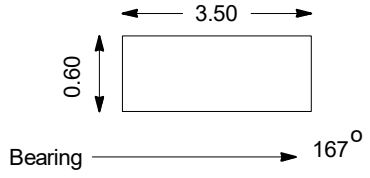
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Sealink Friston	**National Grid**	**F22-TP404**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **26.09.23**	**13.06**	**E:643184.7 N:259363.9**	**1** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
0.10-0.30	1	B				MADE GROUND: Crops overlying dark brown slightly gravelly silty fine SAND with a rare wooden fence post (600x50x50mm). Gravel is angular to subangular fine to coarse chalk and flint.		(0.30)	
0.20-0.20	101	ES	2xT+1xJ+1xV			(MADE GROUND)	12.76	0.30	
0.20-0.20	2	D				Dark orangish brown gravelly fine to coarse SAND. Gravel is angular to subrounded flint, quartz and quartzite.			
0.20		PID	0.0ppm			(LOWESTOFT FORMATION)		(0.50)	
0.50-0.50	102	ES	2xT+1xJ+1xV						
0.50-0.80	3	B							
0.50-0.50	4	D							
0.50		PID	0.4ppm				12.26	0.80	
						Orangish brown mottled yellowish brown very gravelly clayey fine to coarse SAND with a low cobble content. Gravel is angular to subrounded fine to coarse quartzite and flint. Cobbles are subangular flint (<120x100x80mm).			
1.00-1.50	5	B				(LOWESTOFT FORMATION)			
1.00-1.00	6	D							
1.00-1.50	7	LB							
2.00-2.50	8	B				2.00-4.20m : Yellowish brown mottled orangish brown and light grey. Slightly gravelly.			
2.00-2.00	9	D						(3.40)	
3.00-3.50	10	B							
3.00-3.00	11	D							
4.00-4.00	12	B							
4.00-4.00	13	D					8.86	4.20	
						Trial pit terminated at 4.20m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
3. No groundwater encountered.
4. DCP testing undertaken.
5. Trial pit terminated at scheduled depth of 4.20m.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP404**
Contract Ref:	Start: **26.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **26.09.23**	**13.06**	**E:643184.7 N:259363.9**	**2** of **3**





Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP404**
Contract Ref:	Start: **26.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **26.09.23**	**13.06**	**E:643184.7 N:259363.9**	**3** of **3**





Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

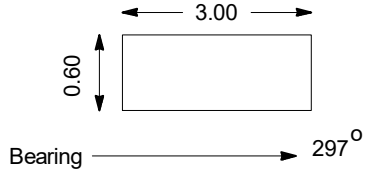
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Sealink Friston	**National Grid**	**F22-TP404A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **04.10.23**	**13.06**	**E:643184.7 N:259363.9**	**1** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Brown slightly gravelly silty fine SAND. Gravel is angular to rounded fine to coarse flint, chalk, quartz and quartzite. (TOPSOIL)	12.56	(0.50) 0.50	
						Dark orangish brown gravelly fine SAND. Gravel is angular to subrounded fine to coarse flint, quartz and quartzite. (LOWESTOFT FORMATION)	12.36	0.70	
						Orangish brown mottled yellowish brown gravelly fine to medium SAND with a low cobble content and occasional pockets of firm friable light greyish brown gravelly clay (<65x62x50mm). Gravel is angular to subrounded fine to coarse quartzite and flint. Cobbles are angular to subangular flint (<100x80x70mm). (LOWESTOFT FORMATION)	11.26	(1.10) 1.80	
						Trial pit terminated at 1.80m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
3. No groundwater encountered.
4. Soakaway test undertaken in trial pit filled with clean 20mm gravel filled to 0.80m to prevent sidewall collapse and water level filled to 1.10m bgl.
5. Trial pit terminated at scheduled depth of 1.80m.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

AGS

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP404A**
Contract Ref:	Start: **04.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **04.10.23**	**13.06**	**E:643184.7 N:259363.9**	**2** of **3**





Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP404A**
Contract Ref:	Start: **04.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **04.10.23**	**13.06**	**E:643184.7 N:259363.9**	**3** of **3**





Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

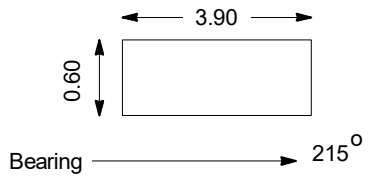
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Sealink Friston	**National Grid**	**F22-TP406**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	**27.09.23** End: **27.09.23**	**20.57**	**E:640194.9 N:262416.6**	**1** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Crop stubble over soft dark brown slightly gravelly sandy silty CLAY with occasional rootlets <3mm diameter. Sand is fine and medium. Gravel is angular to rounded fine to coarse flint, limestone and chalk.		(0.30)	
0.20	101	ES	2xT+1xJ+1xV				20.27	0.30	
0.20		PID	1.3ppm			(TOPSOIL)			
						Firm orangish brown slightly gravelly slightly sandy silty CLAY. Sand is fine to coarse. Gravel is angular to rounded fine to medium flint, mudstone, red sandstone, limestone and chalk. (LOWESTOFT FORMATION)			
0.50	1	D				0.50m : Pockets of silty fine to medium SAND.			
0.50	102	ES	2xT+1xJ+1xV			0.70m : Becoming stiff friable yellowish brown mottled grey CLAY.			
0.50-0.70	2	B							
0.50		PID	1.3ppm						
0.60		V	c_u=70/48/72						
0.60		V	c_r=36/34/48						
0.70	3	D							
0.70-0.90	4	B							
0.80-1.00	15	LB							
0.90	5	D							
0.90-1.10	6	B							
1.10	7	D							
1.10-1.30	8	B							
						1.70m : Becoming orangish brown mottled bluish grey CLAY with a low cobble content. Cobbles are subangular of chalk.			
2.00-2.20	10	B							
2.00	9	D						(3.70)	
2.10		V	c_u=96/103/106						
2.10		V	c_r=40/23/50						
						2.60m : Becoming very stiff friable bluish grey CLAY.			
3.00	11	D							
3.00-3.20	12	B							
3.80	13	D							
3.80-4.00	14	B					16.57	4.00	
						Trial pit terminated at 4.00m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
3. DCP testing undertaken.
4. No groundwater encountered.
5. Trial pit terminated at scheduled depth of 4.00m.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP406**
Contract Ref:	Start: **27.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **27.09.23**	**20.57**	**E:640194.9 N:262416.6**	**2** of **3**





Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP406**
Contract Ref:	Start: **27.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **27.09.23**	**20.57**	**E:640194.9 N:262416.6**	**3** of **3**





Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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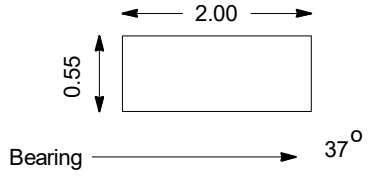
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Sealink Friston	**National Grid**	**F22-TP406A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **03.10.23**	**20.57**	**E:640194.9 N:262416.6**	**1** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Crop stubble over soft dark brown slightly gravelly sandy silty CLAY with occasional rootlets <3mm diameter. Sand is fine to medium. Gravel is angular to rounded fine to coarse flint and limestone including chalk.		(0.30)	
						(TOPSOIL)	20.27	0.30	
						Firm orangish brown slightly sandy slightly gravelly silty CLAY. Sand is fine to medium. Gravel is angular to rounded fine to coarse flint, mudstone, red sandstone and chalk. (LOWESTOFT FORMATION) 0.50m : Pockets of silty fine to medium SAND. 0.70m : Becoming stiff friable yellowish brown mottled grey CLAY. 1.00m : Low cobble content. Cobbles are angular flint.		(1.20)	
						Trial pit terminated at 1.50m depth.	19.07	1.50	

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
3. No groundwater encountered.
4. Pit sides stable excluding minor topsoil during test.
5. Pit terminated at target depth of 1.50m with infiltration test undertaken between 0.49m and 1.50m bgl.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

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TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP406A**
Contract Ref:	Start: **03.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **03.10.23**	**20.57**	**E:640194.9 N:262416.6**	**2** of **3**





Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP406A**
Contract Ref:	Start: **03.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **03.10.23**	**20.57**	**E:640194.9 N:262416.6**	**3** of **3**





Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

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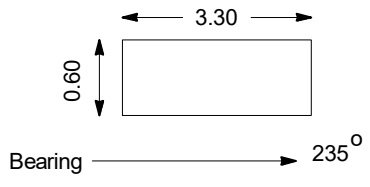
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Sealink Friston	**National Grid**	**F22-TP511**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **28.09.23**	**22.59**	**E:642492.3 N:259954.4**	**1** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
0.10-0.30	1	B				MADE GROUND: Grass overlying brown slightly gravelly clayey fine SAND with a rare plastic fragment (30x30x5mm). Gravel is angular to subrounded fine to coarse quartz and flint.		(0.30)	
0.20-0.20	101	ES	2xT+1xJ+1xV			(MADE GROUND)	22.29	0.30	
0.20-0.20	2	D				Orangish brown gravelly silty fine SAND. Gravel is angular to subrounded fine to coarse quartz and flint.			
0.20		PID	1.8ppm			(LOWESTOFT FORMATION)			
0.50-0.50	102	ES	2xT+1xJ+1xV						
0.50-1.00	3	B							
0.50-0.50	4	D							
0.50		PID	5.4ppm						
1.00-1.50	5	B				1.00-3.10m : Greenish brown mottled orangish brown clayey sand with occasional pockets (<50x50x40mm) of soft greenish brown mottled orangish brown sandy clay. Sand is fine.		(2.80)	
1.00-1.00	6	D							
1.00-1.50	7	LB							
2.00-2.50	8	B							
2.00-2.00	9	D							
						2.60-3.10m : Frequent lenses (<650x70mm) of soft greenish brown sandy clay. Sand is fine.			
							19.49	3.10	
3.20-3.70	10	B				Soft to firm friable greenish brown mottled orangish brown slightly gravelly sandy CLAY with frequent lenses of greenish brown clayey fine sand and occasional pockets of dark orangish brown silt (<20x15mm). Gravel is angular to subrounded chalk and flint.			
3.20-3.20	11	D				(LOWESTOFT FORMATION)		(0.90)	
3.20		V	c_u=48						
3.20		V	c_r=22						
							18.59	4.00	
4.00-4.00	12	B				Trial pit terminated at 4.00m depth.			
4.00-4.00	13	D							

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
3. DCP testing undertaken.
4. No groundwater encountered.
5. Trial pit terminated at scheduled depth of 4.00m.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

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TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP511**
Contract Ref:	Start: **28.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **28.09.23**	**22.59**	**E:642492.3 N:259954.4**	**2** of **3**





Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP511**
Contract Ref:	Start: **28.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **28.09.23**	**22.59**	**E:642492.3 N:259954.4**	**3** of **3**





Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

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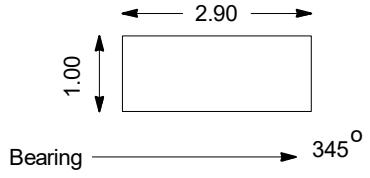
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Sealink Friston	**National Grid**	**F22-TP513**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **28.09.23**	**17.37**	**E:645573.9 N:258373.8**	**1** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
0.20	101	ES	2xT+1xJ+1xV			Grass over dark brown slightly gravelly fine and medium SAND with frequent roots and rootlets <15mm diameter. Gravel is subangular to subrounded fine to medium flint. (TOPSOIL)		(0.35)	
0.20		PID	0.1ppm				17.02	0.35	
0.50	1	D				Orangish brown gravelly clayey fine to coarse SAND with occasional roots and rootlets <15mm diameter. Gravel is subangular to subrounded fine to coarse flint. (LOWESTOFT FORMATION)		(0.35)	
0.50	102	ES	2xT+1xJ+1xV						
0.50-0.70	2	B					16.67	0.70	
0.50		PID	0.0ppm			Yellowish brown slightly gravelly clayey fine to coarse SAND. Gravel is angular to subrounded fine to medium flint. (CRAG GROUP)		(0.60)	
0.70	3	D							
0.70-0.90	4	B							
0.90	5	D							
0.90-1.10	6	B							
1.10	7	D							
1.10-1.30	8	B							
1.10-1.30	9	LB					16.07	1.30	
						Trial pit terminated at 1.30m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
3. DCP testing undertaken.
4. No groundwater encountered.
5. Trial pit terminated at depth of 1.30m due to collapse from surface.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP513**
Contract Ref:	Start: **28.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **28.09.23**	**17.37**	**E:645573.9 N:258373.8**	**2** of **3**





Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP513**
Contract Ref:	Start: **28.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **28.09.23**	**17.37**	**E:645573.9 N:258373.8**	**3** of **3**



Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

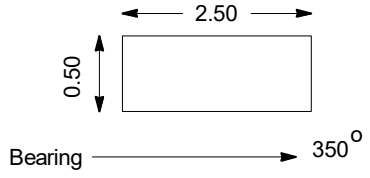
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Sealink Friston	**National Grid**	**F22-TP513A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **04.10.23**	**17.37**	**E:645573.9 N:258373.8**	**1** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Grass over dark brown slightly gravelly fine and medium SAND with frequent roots and rootlets <15mm diameter. Gravel is subangular to subrounded fine to medium flint. (TOPSOIL)	17.02	(0.35) 0.35	
						Orangish brown gravelly fine to medium SAND with occasional roots and rootlets <15mm diameter. Gravel is subangular to subrounded fine to medium flint. (LOWESTOFT FORMATION)	16.77	0.60	
						Yellowish brown gravelly fine to coarse SAND. Gravel is angular to subrounded fine to coarse flint. (LOWESTOFT FORMATION)	16.17	(0.60) 1.20	
						Trial pit terminated at 1.20m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
3. No groundwater encountered.
4. Pit terminated at target depth of 1.2m and immediately filled with 20mm gravel for undertaking a soakaway test between 0.4m and 1.2m bgl.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP513A**
Contract Ref:	Start: **04.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **04.10.23**	**17.37**	**E:645573.9 N:258373.8**	**2** of **3**





Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

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TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP513A**
Contract Ref:	Start: **04.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **04.10.23**	**17.37**	**E:645573.9 N:258373.8**	**3** of **3**





Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

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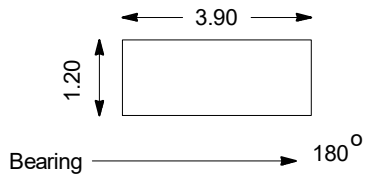
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Sealink Friston	**National Grid**	**F22-TP514**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	**28.09.23** End: **28.09.23**	**16.08**	**E:638582.2 N:262187.4**	**1** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
0.20	101	ES	2xT+1xJ+1xV			MADE GROUND: Brown slightly gravelly fine to medium SAND with occasional rootlets <3mm diameter. Gravel is angular to rounded flint, chalk and occasional brick fragments. (TOPSOIL)		(0.35)	
0.20		PID	0.9ppm				15.73	0.35	
0.50	1	D				Orangish brown slightly gravelly silty fine to medium SAND. Gravel is angular to subangular fine to medium flint. (LOWESTOFT FORMATION)			
0.50	102	ES	2xT+1xJ+1xV					(0.55)	
0.50-0.70	2	B							
0.50		PID	0.9ppm						
0.70	3	D					15.18	0.90	
0.70-0.90	4	B				Yellowish brown slightly gravelly clayey fine to medium SAND with a low cobble content. Gravel is angular to subangular fine flint. Cobbles are angular flint. (CRAG GROUP)			
0.90	5	D							
0.90-1.10	6	B							
1.10-1.30	15	LB						(1.40)	
1.10	7	D							
1.10-1.30	8	B							
2.00-2.20	10	B							
2.00	9	D					13.78	2.30	
						Trial pit terminated at 2.30m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
3. DCP testing undertaken.
4. No groundwater encountered.
5. Trial Pit terminated due to collapse of sidewall from surface to 2.30m, trial pits width of ~1.2m after collapse.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP514**
Contract Ref:	Start: **28.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **28.09.23**	**16.08**	**E:638582.2 N:262187.4**	**2** of **3**





Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP514**
Contract Ref:	Start: **28.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **28.09.23**	**16.08**	**E:638582.2 N:262187.4**	**3** of **3**





Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

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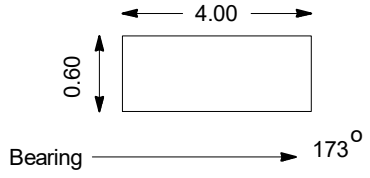
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Sealink Friston	**National Grid**	**F22-TP515**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **28.09.23**	**19.48**	**E:639176.0 N:262215.0**	**1** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						MADE GROUND: Crop over dark brown slightly gravelly silty fine to medium SAND with occasional rootlets <3mm diameter. Gravel is angular to rounded flint, chalk and occasional brick fragments.		(0.30)	
0.20	101	ES	2xT+1xJ+1xV				19.18	0.30	
0.20		PID	0.2ppm			(TOPSOIL)			
						Firm orangish brown slightly sandy gravelly slightly sandy CLAY with a low cobble content. Sand is fine to medium. Gravel is angular to rounded fine to coarse flint and chalk. Cobbles are angular to rounded flint and chalk. (LOWESTOFT FORMATION)			
0.50	1	D							
0.50	102	ES	2xT+1xJ+1xV						
0.50-0.70	2	B							
0.50		PID	0.2ppm						
0.60		V	c_u=70/58/53						
0.60		V	c_r=40/36/16						
0.70	3	D				0.90m : Becoming friable orangish brown mottled grey slightly gravelly slightly sandy CLAY.			
0.70-0.90	4	B							
0.80-1.00	15	B							
0.90	5	D							
0.90-1.10	6	B							
1.10	7	D							
1.10-1.30	8	B							
						1.60m : Becoming stiff friable bluish grey slightly gravelly slightly sandy CLAY. No hand vanes possible.			
2.00-2.20	10	B						(3.40)	
2.00	9	D							
3.00	11	D					15.78	3.70	
3.00-3.20	12	B							
						Orangish brown silty fine to medium SAND. (CRAG GROUP)		(0.30)	
3.80	13	D					15.48	4.00	
3.80-4.00	14	B							
						Trial pit terminated at 4.00m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
3. DCP testing undertaken (2 no. tests due to shallow refusal in first test).
4. No groundwater encountered.
5. Trial pit terminated at scheduled depth of 4.00m.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

AGS

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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP515**
Contract Ref:	Start: **28.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **28.09.23**	**19.48**	**E:639176.0 N:262215.0**	**2** of **3**





Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP515**
Contract Ref:	Start: **28.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **28.09.23**	**19.48**	**E:639176.0 N:262215.0**	**3** of **3**





Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

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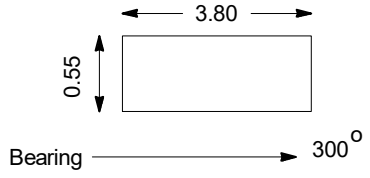
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Sealink Friston	**National Grid**	**F22-TP516**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **26.09.23**	**25.95**	**E:639414.9 N:262383.6**	**1** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
0.20	101	ES	2xT+1xJ+1xV			Soft dark brown slightly gravelly CLAY with occasional rootlets <3mm diameter. Gravel is subrounded to rounded limestone and chalk. (TOPSOIL)	25.60	(0.35) 0.35	
0.20		PID	0.1ppm						
0.50	1	D				Stiff to very stiff orangish brown slightly gravelly slightly sandy silty CLAY. Sand is fine to coarse. Gravel is angular to rounded fine to coarse flint, red sandstone, limestone and chalk. (LOWESTOFT FORMATION)			
0.50	102	ES	2xT+1xJ+1xV						
0.50-0.70	2	B							
0.50		V	c_u=52/50/73			0.50m : Suspected historic land drain encountered in south eastern corner of pit in 250 degree orientation. (Modern drains indicated in east-west orientation). Confirmed historic land drain by landowner.			
0.50		V	c_r=33/26/42						
0.50		PID	0.0ppm						
0.70-0.90	15	LB				0.60m : Becoming friable orangish brown mottled grey slightly gravelly slightly sandy CLAY.			
0.70	3	D							
0.70-0.90	4	B				0.70m : Bands of orangish brown fine to medium SAND.			
0.90	5	D				0.90m : Bands of grey fine to medium SAND.			
0.90-1.10	6	B							
1.10	7	D							
1.10-1.30	8	B							
1.50		V	c_u=120/113/104			1.50m : Becoming stiff brownish grey slightly gravelly slightly sandy CLAY.			
1.50		V	c_r=40/31/32						
2.00-2.20	10	B							
2.00	9	D						(3.65)	
						2.70m : Becoming bluish grey.			
3.00	11	D							
3.00-3.20	12	B							
3.80	13	D							
3.80-4.00	14	B					21.95	4.00	
						Trial pit terminated at 4.00m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
3. DCP testing undertaken.
4. No groundwater encountered.
5. Trial pit terminated at scheduled depth of 4.00m.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP516**
Contract Ref:	Start: **26.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **26.09.23**	**25.95**	**E:639414.9 N:262383.6**	**2** of **3**





Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

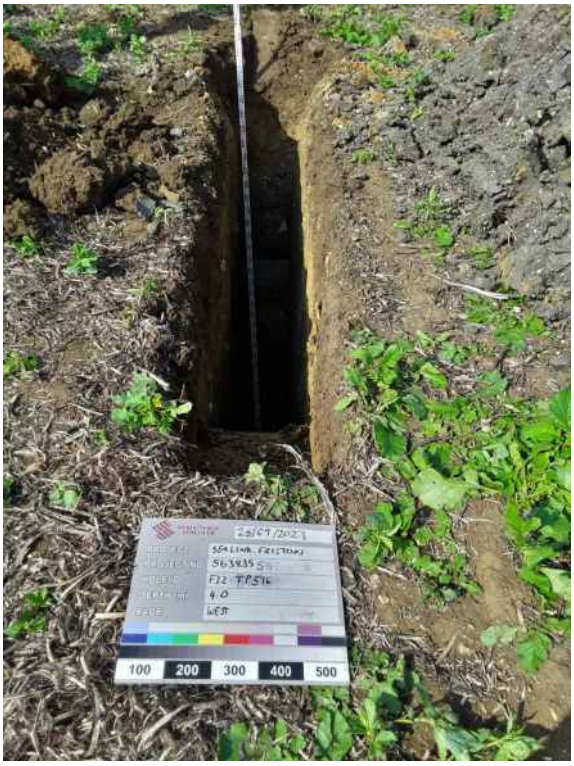
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STRUCTURAL SOILS

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TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP516**
Contract Ref:	Start: **26.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **26.09.23**	**25.95**	**E:639414.9 N:262383.6**	**3** of **3**





Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

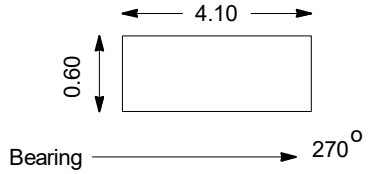
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Sealink Friston	**National Grid**	**F22-TP518**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **25.09.23**	**28.96**	**E:639512.2 N:263133.9**	**1** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Crop stubble over soft dark brown slightly sandy slightly gravelly CLAY with occasional rootlets <3mm diameter. Sand is fine to medium. Gravel is angular to rounded fine to coarse flint, limestone, chalk and red sandstone. (TOPSOIL)	28.71	0.25	
0.20	101	ES	2xT+1xJ+1xV						
0.20		PID	0.2ppm						
0.50	1	D				Firm to very stiff friable orangish brown slightly gravelly slightly sandy silty CLAY. Sand is fine to coarse. Gravel is angular to rounded fine to medium flint, limestone and chalk. (LOWESTOFT FORMATION)			
0.50	102	ES	2xT+1xJ+1xV						
0.50-0.70	2	B							
0.50		PID	0.1ppm			0.70m : Becoming yellowish brown mottled grey CLAY. No hand vanes possible due to friable consistency.			
0.70	3	D							
0.70-0.90	4	B							
0.90	5	D							
0.90-1.10	6	B							
1.00-1.20	15	LB				1.10m : Low cobble content. Cobbles are angular flint and limestone.			
1.10	7	D							
1.10-1.30	8	B							
						1.60m : Becoming brownish grey.			
2.00-2.20	10	B							
2.00	9	D						(3.75)	
						2.40m : Becoming bluish grey.			
3.00	11	D				3.00m : Locally grades to slightly gravelly slightly sandy clayey SILT			
3.00-3.20	12	B							
						3.60m : Bands of brown Silt.			
3.80	13	D							
3.80-4.00	14	B					24.96	4.00	
						Trial pit terminated at 4.00m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
3. DCP testing undertaken.
4. No groundwater encountered.
5. Trial pit terminated at scheduled depth of 4.00m.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
Structural Soils Ltd, Branch Office - Hemel Hempstead: 18 Frogmore Road, Hemel Hempstead, Hertfordshire, HP3 9RT. Tel: 01442 416660, Fax: 01442 437550, Web: www.soils.co.uk, Email: ask@soils.co.uk. | 11/04/24 - 12:17 | GK1 |

STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP518**
Contract Ref:	Start: **25.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **25.09.23**	**28.96**	**E:639512.2 N:263133.9**	**2** of **3**





Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
Structural Soils Ltd, Branch Office - Hemel Hempstead: 18 Frogmore Road, Hemel Hempstead, Hertfordshire, HP3 9RT. Tel: 01442 416660, Fax: 01442 437550, Web: www.soils.co.uk, Email: ask@soils.co.uk. | 11/04/24 - 12:17 | GK1 |

STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP518**
Contract Ref:	Start: **25.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **25.09.23**	**28.96**	**E:639512.2 N:263133.9**	**3** of **3**





Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
Structural Soils Ltd, Branch Office - Hemel Hempstead: 18 Frogmore Road, Hemel Hempstead, Hertfordshire, HP3 9RT. Tel: 01442 416660, Fax: 01442 437550, Web: www.soils.co.uk, Email: ask@soils.co.uk. | 11/04/24 - 12:17 | GK1 |

STRUCTURAL SOILS

FINAL

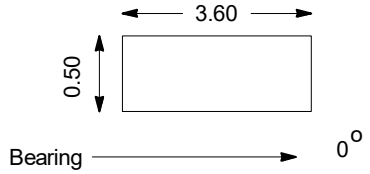
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
Sealink Friston	**National Grid**	**F22-TP525**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **25.09.23**	**19.02**	**E:640074.6 N:262869.9**	**1** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
0.10-0.30	1	B				Crops overlying firm friable brown slightly gravelly slightly sandy CLAY. Gravel is angular to subangular fine to coarse flint and chalk. Sand is fine to coarse. (TOPSOIL)	18.72	(0.30) 0.30	
0.20-0.20	101	ES	2xT+1xJ+1xV						
0.20-0.20	2	D							
0.20		PID	0.0ppm						
0.50-0.50	102	ES	2xT+1xJ+1xV			Stiff orangish brown slightly gravelly sandy CLAY with a low cobble content. Gravel is angular to rounded fine to coarse flint, quartz and chalk. Cobbles are subangular flint (<120x70x50mm). (LOWESTOFT FORMATION)			
0.50-1.00	3	B							
0.50-0.50	4	D							
0.50		PID	0.3ppm					(0.90)	
1.00-1.20	5	B					17.82	1.20	
1.00-1.00	6	D							
1.00		V	c_u=130/110/118						
1.00		V	c_r=52/34/36						
1.50-2.00	7	B				Orangish brown slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to rounded fine to medium quartz, quartzite and flint. (LOWESTOFT FORMATION)			
1.50-1.50	8	D							
1.50-2.00	9	LB							
						2.10-3.00m : Occasional lenses (<220x40mm) of stiff thinly laminated (0.5/0.75/1.00mm) greenish brown slightly gravelly slightly sandy clay.			
2.50-3.00	10	B						(2.80)	
2.50-2.50	11	D							
3.50-4.00	12	B					15.02	4.00	
3.50-3.50	13	D							
4.00-4.00	14	D				Trial pit terminated at 4.00m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
3. DCP testing undertaken.
4. No groundwater encountered.
5. Trial pit terminated at scheduled depth of 4.00m.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP525**
Contract Ref:	Start: **25.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **25.09.23**	**19.02**	**E:640074.6 N:262869.9**	**2** of **3**





Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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STRUCTURAL SOILS

FINAL

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
Sealink Friston		**National Grid**		**F22-TP525**
Contract Ref:	Start: **25.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563835	End: **25.09.23**	**19.02**	**E:640074.6 N:262869.9**	**3** of **3**





Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	[redacted]	[redacted]

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log TRIAL PIT LOG - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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SUMMARY OF INSTALLATION AND PIEZOMETER CHARACTERISTICS

Exploratory Position ID	Pipe Caption	Cover Level (m)	Pipe Top Level (m)	Ground Level (m AOD)	Length of Pipe (m)	Piezo meter Depth (m)	Response Zone Top (m)	Response Zone Base (m)	Slotted Pipe Top (m)	Slotted Pipe Base (m)	Pipe Internal Diameter (mm)	Targetted Ground	Remarks
F22-BH306	NA	---	---	25.24	14.00	---	11.00	14.00	11.00	14.00	50	---	
F22-BH308	NA	---	---	24.41	21.00	---	15.00	21.00	15.00	21.00	50	---	
F22-BH309	NA	---	---	24.58	8.00	---	4.00	8.00	4.00	8.00	50	---	
F22-BH310	NA	---	---	24.79	28.00	---	25.00	28.00	25.00	28.00	50	---	
F22-BH502A	NA	---	---	7.85	10.00	---	5.00	10.00	5.00	10.00	50	---	
RedP-BH-1A	NA	---	---	2.70	23.50	---	20.50	23.50	20.50	23.50	50	---	

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Compiled By	Date	Contract Ref:
GKAVANAGH	08.03.24	563835

Contract: **Sealink Friston**

AGS

APPENDIX C -
IN-SITU TESTING

(i) Standard Penetration Test (SPT) Summary Sheet

(ii) SPT N value versus Depth Plot

(iii) TRL Dynamic Cone Penetrometer Test Results

(iv) Permeability Test Results

(v) Soakaway Test Results

(vi) Thermal Resistivity Test Results

(vii) Soil Electrical Resistivity (Vertical Electrical Sounding, or 'VES') Test Report

STANDARD PENETRATION TEST SUMMARY TABLE

Exploratory Position ID	Depth (m)	Hole Dia (mm)	Casing Depth (m)	Water Depth (m)	Seating Drive		Test Drive			Hammer ID	Calibration Date	Energy Ratio (%)	N_{60}	Comments
					Blows	Pen (mm)	Blows	R (mm)	Result					
F22-BH203	1.20	200	15.00	1.00	0,1	150	2,2,2,2		N=8	AR3104-2023	21/04/2023	63	8	
	2.00	200	15.00	Dry	3,3	150	4,4,4,5		N=17	AR3104-2023	21/04/2023	63	18	
	3.00	200	3.00	Dry	1,1	150	2,3,3,6		N=14	AR3104-2023	21/04/2023	63	15	
	4.00	200	4.00	3.90	0,1	150	2,2,3,3		N=10	AR3104-2023	21/04/2023	63	10	
	6.00	200	6.00	Dry	4,5	150	6,7,7,7		N=27	AR3104-2023	21/04/2023	63	28	
	7.00	200	7.00	5.50	4,6	150	7,8,15,16		N=46	AR3104-2023	21/04/2023	63	48	
	8.00	200	7.50	6.40	5,6	150	7,8,16,17		N=48	AR3104-2023	21/04/2023	63	50	
	9.00	200	9.00	7.50	5,6	150	6,11,21,12+	260	5,6/6,11,21,12	AR3104-2023	21/04/2023	63		
									for 35mm					
	10.00	200	10.00	9.60	6,8	150	15,21,14+	200	6,8/15,21,14	AR3104-2023	21/04/2023	63		SPT(c)
									for 50mm					
	11.00	200	11.00	Dry	6,9	150	14,24,12+	190	6,9/14,24,12	AR3104-2023	21/04/2023	63		SPT(c)
									for 40mm					
	12.00	200	12.00	11.40	7,18	135	27,13+	110	7,18/27,13	AR3104-2023	21/04/2023	63		SPT(c)
									for 35mm					
	13.00	200	13.00	Dry	4,7	150	13,24,13+	190	4,7/13,24,13	AR3104-2023	21/04/2023	63		
									for 40mm					
	14.00	200	14.00	Dry	6,10	150	10,26,14+	180	6,10/10,26,14	AR3104-2023	21/04/2023	63		

Notes:
1. Tests carried out in general accordance with BS EN ISO 22476-3:2005+A1:2011.
2. Reported blows are for 75mm penetration unless indicated "+".
3. Where full test drive was not achieved, actual penetration (R) and total test drive blows are reported.
4. Tests carried out using a split spoon sampler unless noted as SPT(c) (denotes use of solid cone method) in the comments column.
5. Entries in the water depth column reflects the measured water depth at time of test.

N_{60} = (Measured hammer energy ratio / 60) x N value

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Compiled By	Date	Contract Ref:
GKAVANAGH	**13.03.24**	**563835**
Contract: **Sealink Friston**		Page: **1** of **18**

STANDARD PENETRATION TEST SUMMARY TABLE

Exploratory Position ID	Depth (m)	Hole Dia (mm)	Casing Depth (m)	Water Depth (m)	Seating Drive		Test Drive			Hammer ID	Calibration Date	Energy Ratio (%)	N_{60}	Comments
					Blows	Pen (mm)	Blows	R (mm)	Result					
									for 30mm					
	15.00	200	15.00	Dry	7,10	150	10,16,24+	215	7,10/10,16,24	AR3104-2023	21/04/2023	63		
									for 65mm					
F22-BH306	2.50	200	2.50	1.50	2,3	150	3,3,4,5		N=15	AR1862-2023	10/03/2023	75	19	
	4.50	200	3.00	Dry	3,5	150	7,7,8,8		N=30	AR1862-2023	10/03/2023	75	38	
	6.50	200	6.00	Dry	5,6	150	9,10,11,13		N=43	AR1862-2023	10/03/2023	75	54	
	8.50	200	7.50	Dry	3,6	150	9,9,11,13		N=42	AR1862-2023	10/03/2023	75	52	
	9.50	200	9.00	Dry	6,9	150	11,12,14,13+	290	6,9/11,12,14,13	AR1862-2023	10/03/2023	75		
									for 65mm					
	10.50	200	10.50	8.50	6,7	150	9,11,12,12		N=44	AR1862-2023	10/03/2023	75	55	
	11.50	200	10.50	9.50	3,6	150	9,12,13,14		N=48	AR1862-2023	10/03/2023	75	60	
	12.50	200	10.50	10.50	3,6	150	9,12,13,15		N=49	AR1862-2023	10/03/2023	75	61	
	13.50	200	13.50	11.80	6,17	150	50+	70	6,17/50	AR1862-2023	10/03/2023	75		
									for 70mm					
	14.50	200	14.50	12.50	3,3	150	6,12,27,5+	240	3,3/6,12,27,5	AR1862-2023	10/03/2023	75		
									for 15mm					
	15.50	200	15.50	13.50	3,5	150	9,15,20,6+	230	3,5/9,15,20,6	AR1862-2023	10/03/2023	75		
									for 5mm					

Notes:
1. Tests carried out in general accordance with BS EN ISO 22476-3:2005+A1:2011.
2. Reported blows are for 75mm penetration unless indicated "+".
3. Where full test drive was not achieved, actual penetration (R) and total test drive blows are reported.
4. Tests carried out using a split spoon sampler unless noted as SPT(c) (denotes use of solid cone method) in the comments column.
5. Entries in the water depth column reflects the measured water depth at time of test.

N_{60} = (Measured hammer energy ratio / 60) x N value

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Hertfordshire
HP3 9RT

Compiled By		Date	Contract Ref:
	GKAVANAGH	**13.03.24**	**563835**
Contract: **Sealink Friston**			Page: **2** of **18**

STANDARD PENETRATION TEST SUMMARY TABLE

Exploratory Position ID	Depth (m)	Hole Dia (mm)	Casing Depth (m)	Water Depth (m)	Seating Drive		Test Drive			Hammer ID	Calibration Date	Energy Ratio (%)	N_{60}	Comments
					Blows	Pen (mm)	Blows	R (mm)	Result					
F22-BH306	16.50	200	16.50	14.60	3,10	150	50+	70	3,10/50	AR1862-2023	10/03/2023	75		
									for 70mm					
	17.50	150	17.50	15.40	6,11	150	45,5+	90	6,11/45,5	AR1862-2023	10/03/2023	75		
									for 15mm					
	18.50	150	18.50	16.50	6,9	150	45,5+	90	6,9/45,5	AR1862-2023	10/03/2023	75		
									for 15mm					
	19.50	150	19.50	16.50	5,10	150	13,29,8+	160	5,10/13,29,8	AR1862-2023	10/03/2023	75		
									for 10mm					
	20.50	150	20.50	17.00	5,13	150	50+	70	5,13/50	AR1862-2023	10/03/2023	75		
									for 70mm					
	21.50	150	21.50	18.00	3,7	150	12,24,14+	180	3,7/12,24,14	AR1862-2023	10/03/2023	75		
									for 30mm					
	22.50	150	22.50	18.00	5,15	150	18,16,16+	180	5,15/18,16,16	AR1862-2023	10/03/2023	75		
									for 30mm					
	23.50	150	23.50	20.50	3,4	150	12,18,20+	170	3,4/12,18,20	AR1862-2023	10/03/2023	75		
									for 20mm					
	24.50	150	24.50	18.50	2,2	150	12,16,22+	220	2,2/12,16,22	AR1862-2023	10/03/2023	75		
									for 70mm					

Notes:
1. Tests carried out in general accordance with BS EN ISO 22476-3:2005+A1:2011.
2. Reported blows are for 75mm penetration unless indicated "+".
3. Where full test drive was not achieved, actual penetration (R) and total test drive blows are reported.
4. Tests carried out using a split spoon sampler unless noted as SPT(c) (denotes use of solid cone method) in the comments column.
5. Entries in the water depth column reflects the measured water depth at time of test.

N_{60} = (Measured hammer energy ratio / 60) x N value

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Hertfordshire
HP3 9RT

Compiled By	Date	Contract Ref:
GKAVANAGH	**13.03.24**	**563835**
Contract: **Sealink Friston**		Page: **3** of **18**

STANDARD PENETRATION TEST SUMMARY TABLE

Exploratory Position ID	Depth (m)	Hole Dia (mm)	Casing Depth (m)	Water Depth (m)	Seating Drive		Test Drive			Hammer ID	Calibration Date	Energy Ratio (%)	N_{60}	Comments
					Blows	Pen (mm)	Blows	R (mm)	Result					
F22-BH307	2.50	250	2.50	Dry	1,2	150	3,4,6,7		N=20	AR1862-2023	10/03/2023	75	25	
	4.50	200	3.00	Dry	2,4	150	6,7,9,10		N=32	AR1862-2023	10/03/2023	75	40	
	6.50	150	6.00	Dry	5,7	150	8,10,12,15		N=45	AR1862-2023	10/03/2023	75	56	
	8.50	150	6.00	Dry	8,12	150	18,22,10+	170	8,12/18,22,10	AR1862-2023	10/03/2023	75		
									for 20mm					
	9.50	150	9.50	8.00	5,8	150	9,10,12,13		N=44	AR1862-2023	10/03/2023	75	55	
	10.50	150	10.50	7.50	6,8	150	10,13,17,10+	260	6,8/10,13,17,10	AR1862-2023	10/03/2023	75		
									for 35mm					
	11.50	150	11.50	7.50	7,8	150	9,10,12,15		N=46	AR1862-2023	10/03/2023	75	58	
	12.50	150	12.50	8.00	6,6	150	8,11,12,14		N=45	AR1862-2023	10/03/2023	75	56	
	14.50	150	14.50	8.50	9,10	150	9,10,10,12		N=41	AR1862-2023	10/03/2023	75	51	
	16.50	150	16.50	10.50	5,7	150	8,9,11,13		N=41	AR1862-2023	10/03/2023	75	51	
	17.50	150	17.50	11.50	5,6	150	7,8,9,10		N=34	AR1862-2023	10/03/2023	75	42	
	19.50	150	19.50	10.50	9,13	150	20,30+	140	9,13/20,30	AR1862-2023	10/03/2023	75		
									for 65mm					
	20.50	150	20.50	12.50	5,7	150	8,10,12,14		N=44	AR1862-2023	10/03/2023	75	55	
	21.50	150	21.50	12.50	8,10	150	12,17,21+	210	8,10/12,17,21	AR1862-2023	10/03/2023	75		
									for 60mm					

Notes:
1. Tests carried out in general accordance with BS EN ISO 22476-3:2005+A1:2011.
2. Reported blows are for 75mm penetration unless indicated "+".
3. Where full test drive was not achieved, actual penetration (R) and total test drive blows are reported.
4. Tests carried out using a split spoon sampler unless noted as SPT(c) (denotes use of solid cone method) in the comments column.
5. Entries in the water depth column reflects the measured water depth at time of test.

N_{60} = (Measured hammer energy ratio / 60) x N value

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Hertfordshire
HP3 9RT

Compiled By	Date	Contract Ref:
GKAVANAGH	**13.03.24**	**563835**

Contract: **Sealink Friston**

STANDARD PENETRATION TEST SUMMARY TABLE

Exploratory Position ID	Depth (m)	Hole Dia (mm)	Casing Depth (m)	Water Depth (m)	Seating Drive		Test Drive			Hammer ID	Calibration Date	Energy Ratio (%)	N_{60}	Comments
					Blows	Pen (mm)	Blows	R (mm)	Result					
F22-BH307	22.50	150	22.50	12.50	5,13	150	20,30+	140	5,13/20,30	AR1862-2023	10/03/2023	75		
									for 65mm					
	23.50	150	23.50	13.00	6,10	150	15,28,7+	170	6,10/15,28,7	AR1862-2023	10/03/2023	75		
									for 20mm					
	24.50	150	24.50	13.50	3,7	150	9,21,20+	200	3,7/9,21,20	AR1862-2023	10/03/2023	75		
									for 50mm					
F22-BH308	2.50	150	2.50	Dry	2,3	150	5,5,6,7		N=23	AR1862-2023	10/03/2023	75	29	
	4.50	150	4.00	Dry	3,3	150	6,7,8,8		N=29	AR1862-2023	10/03/2023	75	36	
	6.50	150	6.00	Dry	3,5	150	6,7,9,10		N=32	AR1862-2023	10/03/2023	75	40	
	8.50	150	6.00	Dry	6,8	150	10,12,14,14+	280	6,8/10,12,14,14	AR1862-2023	10/03/2023	75		
									for 55mm					
	9.50	150	9.50	6.70	4,6	150	10,13,15,12+	270	4,6/10,13,15,12	AR1862-2023	10/03/2023	75		
									for 45mm					
	10.50	150	10.50	7.00	4,5	150	8,12,15,15+	280	4,5/8,12,15,15	AR1862-2023	10/03/2023	75		
									for 55mm					
	11.50	150	11.50	6.50	5,7	150	10,15,25+	220	5,7/10,15,25	AR1862-2023	10/03/2023	75		
									for 70mm					
	12.50	150	12.50	7.30	5,8	150	10,16,24+	200	5,8/10,16,24	AR1862-2023	10/03/2023	75		

Notes:
1. Tests carried out in general accordance with BS EN ISO 22476-3:2005+A1:2011.
2. Reported blows are for 75mm penetration unless indicated "+".
3. Where full test drive was not achieved, actual penetration (R) and total test drive blows are reported.
4. Tests carried out using a split spoon sampler unless noted as SPT(c) (denotes use of solid cone method) in the comments column.
5. Entries in the water depth column reflects the measured water depth at time of test.

N_{60} = (Measured hammer energy ratio / 60) x N value

STRUCTURAL SOILS
18 Frogmore Road
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Hertfordshire
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STANDARD PENETRATION TEST SUMMARY TABLE

Exploratory Position ID	Depth (m)	Hole Dia (mm)	Casing Depth (m)	Water Depth (m)	Seating Drive		Test Drive			Hammer ID	Calibration Date	Energy Ratio (%)	N_{60}	Comments
					Blows	Pen (mm)	Blows	R (mm)	Result					
									for 50mm					
	13.50	150	13.50	10.50	6,10	150	15,25,10+	180	6,10/15,25,10	AR1862-2023	10/03/2023	75		
									for 30mm					
	14.50	150	14.50	11.00	6,7	150	10,14,19,7+	250	6,7/10,14,19,7	AR1862-2023	10/03/2023	75		
									for 25mm					
	15.50	150	15.50	11.50	6,8	150	10,15,25+	220	6,8/10,15,25	AR1862-2023	10/03/2023	75		
									for 70mm					
	16.50	150	16.50	13.00	6,8	150	11,17,22+	210	6,8/11,17,22	AR1862-2023	10/03/2023	75		
									for 60mm					
	17.50	150	17.50	14.50	6,10	150	16,28,6+	170	6,10/16,28,6	AR1862-2023	10/03/2023	75		
									for 20mm					
	18.50	150	18.50	15.30	5,10	150	20,30+	140	5,10/20,30	AR1862-2023	10/03/2023	75		
									for 65mm					
	19.50	150	19.50	16.00	5,6	150	14,25,11+	180	5,6/14,25,11	AR1862-2023	10/03/2023	75		
									for 30mm					
	20.50	150	20.50	16.20	7,13	150	25,25+	130	7,13/25,25	AR1862-2023	10/03/2023	75		
									for 55mm					
	21.50	150	21.50	17.30	2,2	150	2,2,2,3		N=9	AR1862-2023	10/03/2023	75	11	

Notes:
1. Tests carried out in general accordance with BS EN ISO 22476-3:2005+A1:2011.
2. Reported blows are for 75mm penetration unless indicated "+".
3. Where full test drive was not achieved, actual penetration (R) and total test drive blows are reported.
4. Tests carried out using a split spoon sampler unless noted as SPT(c) (denotes use of solid cone method) in the comments column.
5. Entries in the water depth column reflects the measured water depth at time of test.

N_{60} = (Measured hammer energy ratio / 60) x N value

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Contract: **Sealink Friston**

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STANDARD PENETRATION TEST SUMMARY TABLE

Exploratory Position ID	Depth (m)	Hole Dia (mm)	Casing Depth (m)	Water Depth (m)	Seating Drive		Test Drive			Hammer ID	Calibration Date	Energy Ratio (%)	N_{60}	Comments
					Blows	Pen (mm)	Blows	R (mm)	Result					
F22-BH308	22.50	150	22.50	17.02	1,1	150	2,3,4,6		N=15	AR1862-2023	10/03/2023	75	19	
	23.50	150	23.50	17.00	4,5	150	6,9,13,15		N=43	AR1862-2023	10/03/2023	75	54	
	24.50	150	24.50	17.50	3,6	150	9,11,14,16+	280	3,6/9,11,14,16	AR1862-2023	10/03/2023	75		
									for 55mm					
F22-BH309	2.50	200	2.50	Dry	2,3	150	3,3,5,6		N=17	AR1862-2023	10/03/2023	75	21	
	4.50	200	4.50	Dry	4,5	150	8,9,10,11		N=38	AR1862-2023	10/03/2023	75	48	
	6.50	200	6.00	Dry	5,6	150	8,9,11,13		N=41	AR1862-2023	10/03/2023	75	51	
	8.50	200	7.50	Dry	5,5	150	8,10,10,13		N=41	AR1862-2023	10/03/2023	75	51	
	9.50	150	9.00	Dry	5,7	150	10,12,14,14+	290	5,7/10,12,14,14	AR1862-2023	10/03/2023	75		
									for 65mm					
	10.50	150	10.50	7.50	4,8	150	14,16,20+,60		4,8/14,16,20,60	AR1862-2023	10/03/2023	75		
									for 75mm					
	11.50	150	11.50	7.30	6,8	150	10,14,17,9+	250	6,8/10,14,17,9	AR1862-2023	10/03/2023	75		
									for 25mm					
	12.50	150	12.00	7.50	4,5	150	10,16,24+	220	4,5/10,16,24	AR1862-2023	10/03/2023	75		
									for 70mm					
	13.50	150	13.50	11.00	2,3	150	5,15,30+	210	2,3/5,15,30	AR1862-2023	10/03/2023	75		
									for 60mm					

Notes:
1. Tests carried out in general accordance with BS EN ISO 22476-3:2005+A1:2011.
2. Reported blows are for 75mm penetration unless indicated "+".
3. Where full test drive was not achieved, actual penetration (R) and total test drive blows are reported.
4. Tests carried out using a split spoon sampler unless noted as SPT(c) (denotes use of solid cone method) in the comments column.
5. Entries in the water depth column reflects the measured water depth at time of test.

N_{60} = (Measured hammer energy ratio / 60) x N value

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STANDARD PENETRATION TEST SUMMARY TABLE

Exploratory Position ID	Depth (m)	Hole Dia (mm)	Casing Depth (m)	Water Depth (m)	Seating Drive		Test Drive			Hammer ID	Calibration Date	Energy Ratio (%)	N_{60}	Comments
					Blows	Pen (mm)	Blows	R (mm)	Result					
F22-BH309	14.50	150	14.50	11.50	5,20	110	50+	50	5,20/50	AR1862-2023	10/03/2023	75		
									for 50mm					
	15.50	150	15.00	14.00	4,5	150	10,11,12,13		N=46	AR1862-2023	10/03/2023	75	58	
	16.50	150	16.50	15.00	4,5	150	8,10,12,15		N=45	AR1862-2023	10/03/2023	75	56	
	17.50	150	17.50	16.30	4,4	150	5,8,11,15		N=39	AR1862-2023	10/03/2023	75	49	
	18.50	150	18.00	17.50	4,5	150	8,10,13,15		N=46	AR1862-2023	10/03/2023	75	58	
	19.50	150	19.50	14.50	4,5	150	6,9,12,13		N=40	AR1862-2023	10/03/2023	75	50	
	20.50	150	20.50	16.50	4,15	150	20,30	150	4,15/20,30	AR1862-2023	10/03/2023	75		
									for 75mm					
	21.50	150	21.00	17.60	5,10	150	15,25,10+	180	5,10/15,25,10	AR1862-2023	10/03/2023	75		
									for 30mm					
	22.50	150	22.50	18.00	5,6	150	8,9,10,12		N=39	AR1862-2023	10/03/2023	75	49	
	23.50	150	23.40	18.50	4,6	150	9,12,14,15+	280	4,6/9,12,14,15	AR1862-2023	10/03/2023	75		
									for 55mm					
	24.50	150	24.50	18.50	3,4	150	8,16,26+,26+	250	3,4/8,16,26,26	AR1862-2023	10/03/2023	75		
									for 50mm					
F22-BH310	1.20	250	1.20	Dry	2,3	150	5,5,4,5		N=19	AR3104-2023	21/04/2023	63	20	
	3.00	200	3.00	Dry	3,4	150	4,4,5,5		N=18	AR3104-2023	21/04/2023	63	19	

Notes:
1. Tests carried out in general accordance with BS EN ISO 22476-3:2005+A1:2011.
2. Reported blows are for 75mm penetration unless indicated "+".
3. Where full test drive was not achieved, actual penetration (R) and total test drive blows are reported.
4. Tests carried out using a split spoon sampler unless noted as SPT(c) (denotes use of solid cone method) in the comments column.
5. Entries in the water depth column reflects the measured water depth at time of test.

N_{60} = (Measured hammer energy ratio / 60) x N value

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STANDARD PENETRATION TEST SUMMARY TABLE

Exploratory Position ID	Depth (m)	Hole Dia (mm)	Casing Depth (m)	Water Depth (m)	Seating Drive		Test Drive			Hammer ID	Calibration Date	Energy Ratio (%)	N_{60}	Comments
					Blows	Pen (mm)	Blows	R (mm)	Result					
F22-BH310	5.00	200	4.50	Dry	4,5	150	5,6,7,7		N=25	AR3104-2023	21/04/2023	63	26	
	7.00	150	6.00	Dry	3,6	150	7,8,9,9		N=33	AR3104-2023	21/04/2023	63	35	
	9.00	150	9.00	Dry	4,7	150	10,12,13,15		N=50	AR3104-2023	21/04/2023	63	52	
	10.00	150	10.00	Dry	6,9	150	13,15,15,7+	245	6,9/13,15,15,7	AR3104-2023	21/04/2023	63		
									for 20mm					
	11.00	150	11.00	Dry	4,5	150	5,6,6,8		N=25	AR3104-2023	21/04/2023	63	26	
	12.00	150	12.00	Dry	5,5	150	7,6,7,7		N=27	AR3104-2023	21/04/2023	63	28	
	13.00	150	13.00	13.60	5,7	150	11,15,21,3+	230	5,7/11,15,21,3	AR3104-2023	21/04/2023	63		
									for 5mm					
	14.00	150	14.00	Dry	6,7	150	8,14,18,10+	265	6,7/8,14,18,10	AR3104-2023	21/04/2023	63		SPT(c)
									for 40mm					
	15.00	150	15.00	14.30	6,6	150	15,21,14+	200	6,6/15,21,14	AR3104-2023	21/04/2023	63		SPT(c)
									for 50mm					
	16.00	150	16.00	15.80	8,14	150	16,31,3+	155	8,14/16,31,3	AR3104-2023	21/04/2023	63		
									for 5mm					
	17.00	150	17.00	16.90	6,8	150	13,19,18+	200	6,8/13,19,18	AR3104-2023	21/04/2023	63		
									for 50mm					
	18.00	150	18.00	Dry	6,7	150	9,12,19,10+	260	6,7/9,12,19,10	AR3104-2023	21/04/2023	63		

Notes:
1. Tests carried out in general accordance with BS EN ISO 22476-3:2005+A1:2011.
2. Reported blows are for 75mm penetration unless indicated "+".
3. Where full test drive was not achieved, actual penetration (R) and total test drive blows are reported.
4. Tests carried out using a split spoon sampler unless noted as SPT(c) (denotes use of solid cone method) in the comments column.
5. Entries in the water depth column reflects the measured water depth at time of test.

N_{60} = (Measured hammer energy ratio / 60) x N value

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18 Frogmore Road
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Compiled By	Date	Contract Ref:
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STANDARD PENETRATION TEST SUMMARY TABLE

Exploratory Position ID	Depth (m)	Hole Dia (mm)	Casing Depth (m)	Water Depth (m)	Seating Drive		Test Drive			Hammer ID	Calibration Date	Energy Ratio (%)	N_{60}	Comments
					Blows	Pen (mm)	Blows	R (mm)	Result					
									for 35mm					
	19.00	150	19.00	18.00	3,4	150	14,16,20+	215	3,4/14,16,20	AR3104-2023	21/04/2023	63		
									for 65mm					
	20.00	150	20.00	16.80	6,8	150	12,13,25	225	6,8/12,13,25	AR3104-2023	21/04/2023	63		
									for 75mm					
	21.00	150	21.00	18.60	3,8	150	16,22,12+	190	3,8/16,22,12	AR3104-2023	21/04/2023	63		
									for 40mm					
	22.00	150	22.00	19.00	3,4	150	6,9,16,19+	285	3,4/6,9,16,19	AR3104-2023	21/04/2023	63		
									for 60mm					
	23.00	150	23.00	11.70	7,9	150	19,31	150	7,9/19,31	AR3104-2023	21/04/2023	63		
									for 75mm					
	24.00	150	24.00	11.10	7,12	150	32,18+	105	7,12/32,18	AR3104-2023	21/04/2023	63		
									for 30mm					
	25.00	150	25.00	17.00	3,4	150	5,5,9,31		N=50	AR3104-2023	21/04/2023	63	52	
	26.00	150	26.00	18.20	3,4	150	4,6,6,7		N=23	AR3104-2023	21/04/2023	63	24	
	27.00	150	27.00	19.00	3,3	150	4,5,6,7		N=22	AR3104-2023	21/04/2023	63	23	
	28.00	150	28.00	11.00	4,4	150	6,6,7,9		N=28	AR3104-2023	21/04/2023	63	29	

Notes:
1. Tests carried out in general accordance with BS EN ISO 22476-3:2005+A1:2011.
2. Reported blows are for 75mm penetration unless indicated "+".
3. Where full test drive was not achieved, actual penetration (R) and total test drive blows are reported.
4. Tests carried out using a split spoon sampler unless noted as SPT(c) (denotes use of solid cone method) in the comments column.
5. Entries in the water depth column reflects the measured water depth at time of test.

N_{60} = (Measured hammer energy ratio / 60) x N value

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STANDARD PENETRATION TEST SUMMARY TABLE

Exploratory Position ID	Depth (m)	Hole Dia (mm)	Casing Depth (m)	Water Depth (m)	Seating Drive		Test Drive			Hammer ID	Calibration Date	Energy Ratio (%)	N_{60}	Comments
					Blows	Pen (mm)	Blows	R (mm)	Result					
F22-BH501	1.20	200	1.50	Dry	0,1	150	1,1,1,1		N=4	AR3104-2023	21/04/2023	63	4	
	2.00	200	2.00	Dry	3,4	150	4,5,5,6		N=20	AR3104-2023	21/04/2023	63	21	
	3.00	200	3.00	2.00	6,7	150	7,8,9,9		N=33	AR3104-2023	21/04/2023	63	35	SPT(c)
	4.00	200	4.00	2.00	3,3	150	4,6,7,7		N=24	AR3104-2023	21/04/2023	63	25	SPT(c)
	5.00	200	6.00	2.20	3,3	150	3,4,5,5		N=17	AR3104-2023	21/04/2023	63	18	SPT(c)
	6.00	200	6.00	2.20	3,3	150	3,4,5,5		N=17	AR3104-2023	21/04/2023	63	18	
	7.00	200	7.00	2.10	3,3	150	4,4,5,5		N=18	AR3104-2023	21/04/2023	63	19	
	8.00	200	8.00	3.10	4,4	150	5,5,7,9		N=26	AR3104-2023	21/04/2023	63	27	
	9.00	200	9.00	3.30	3,4	150	6,12,12,14		N=44	AR3104-2023	21/04/2023	63	46	
	10.00	200	10.00	2.60	4,6	150	13,21,16+	190	4,6/13,21,16	AR3104-2023	21/04/2023	63		
									for 40mm					
	11.00	200	11.00	2.00	5,7	150	11,18,21	225	5,7/11,18,21	AR3104-2023	21/04/2023	63		
									for 75mm					
	12.00	200	12.00	3.00	5,99	150	17,24,9+	170	5,99/17,24,9	AR3104-2023	21/04/2023	63		
									for 20mm					
	13.00	200	13.00	2.00	7,12	150	18,32	150	7,12/18,32	AR3104-2023	21/04/2023	63		
									for 75mm					
	14.00	200	14.00	0.00	4,7	150	9,11,14,16		N=50	AR3104-2023	21/04/2023	63	52	

Notes:
1. Tests carried out in general accordance with BS EN ISO 22476-3:2005+A1:2011.
2. Reported blows are for 75mm penetration unless indicated "+".
3. Where full test drive was not achieved, actual penetration (R) and total test drive blows are reported.
4. Tests carried out using a split spoon sampler unless noted as SPT(c) (denotes use of solid cone method) in the comments column.
5. Entries in the water depth column reflects the measured water depth at time of test.

N_{60} = (Measured hammer energy ratio / 60) x N value

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STANDARD PENETRATION TEST SUMMARY TABLE

Exploratory Position ID	Depth (m)	Hole Dia (mm)	Casing Depth (m)	Water Depth (m)	Seating Drive		Test Drive			Hammer ID	Calibration Date	Energy Ratio (%)	N_{60}	Comments
					Blows	Pen (mm)	Blows	R (mm)	Result					
F22-BH501	15.00	200	15.00	0.00	6,9	150	11,18,21+	215	6,9/11,18,21	AR3104-2023	21/04/2023	63		
									for 65mm					
	16.00	200	16.00	0.00	7,11	150	14,16,20	225	7,11/14,16,20	AR3104-2023	21/04/2023	63		
									for 75mm					
	17.00	200	17.00	0.00	4,9	150	9,11,11,14+	290	4,9/9,11,11,14	AR3104-2023	21/04/2023	63		
									for 65mm					
	18.00	200	18.00	0.00	7,7	150	12,15,19,4+	235	7,7/12,15,19,4	AR3104-2023	21/04/2023	63		SPT(c)
									for 10mm					
	19.00	200	18.00	6.20	4,5	150	5,5,6,7		N=23	AR3104-2023	21/04/2023	63	24	
	21.00	200	21.00	0.00	4,5	150	5,6,7,8		N=26	AR3104-2023	21/04/2023	63	27	
	23.00	200	18.00	4.10	4,5	150	6,6,7,7		N=26	AR3104-2023	21/04/2023	63	27	
	25.00	200	18.00	4.70	4,5	150	5,7,9,10		N=31	AR3104-2023	21/04/2023	63	33	
F22-BH502	1.50	250	1.50	1.48	2,2	150	2,2,3,3		N=10	AR1862-2023	10/03/2023	75	12	
	2.50	250	2.50	1.30	1,1	150	2,2,2,2		N=8	AR1862-2023	10/03/2023	75	10	
F22-BH502A	4.50	200	4.50	1.50	2,2	150	4,4,4,6		N=18	AR1862-2023	10/03/2023	75	22	
	5.50	200	5.50	2.40	3,4	150	3,3,4,5		N=15	AR1862-2023	10/03/2023	75	19	

Notes:
1. Tests carried out in general accordance with BS EN ISO 22476-3:2005+A1:2011.
2. Reported blows are for 75mm penetration unless indicated "+".
3. Where full test drive was not achieved, actual penetration (R) and total test drive blows are reported.
4. Tests carried out using a split spoon sampler unless noted as SPT(c) (denotes use of solid cone method) in the comments column.
5. Entries in the water depth column reflects the measured water depth at time of test.

N_{60} = (Measured hammer energy ratio / 60) x N value

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STANDARD PENETRATION TEST SUMMARY TABLE

Exploratory Position ID	Depth (m)	Hole Dia (mm)	Casing Depth (m)	Water Depth (m)	Seating Drive		Test Drive			Hammer ID	Calibration Date	Energy Ratio (%)	N_{60}	Comments
					Blows	Pen (mm)	Blows	R (mm)	Result					
F22-BH502A	6.50	200	6.00	2.50	2,4	150	8,7,9,9		N=33	AR1862-2023	10/03/2023	75	41	
	7.50	200	7.50	2.50	2,3	150	5,7,7,10		N=29	AR1862-2023	10/03/2023	75	36	
	8.50	200	8.50	3.50	2,3	150	3,4,7,8		N=22	AR1862-2023	10/03/2023	75	28	
	9.50	200	9.50	3.70	3,3	150	5,4,4,5		N=18	AR1862-2023	10/03/2023	75	22	
	10.50	200	10.50	4.00	3,4	150	7,6,9,13		N=35	AR1862-2023	10/03/2023	75	44	
	11.50	200	11.50	4.10	7,13	150	19,23,8+	170	7,13/19,23,8	AR1862-2023	10/03/2023	75		
									for 20mm					
	12.50	200	12.50	4.50	2,3	150	7,21,22+	170	2,3/7,21,22	AR1862-2023	10/03/2023	75		
									for 20mm					
	13.50	200	13.50	4.45	2,7	150	12,22,16+	160	2,7/12,22,16	AR1862-2023	10/03/2023	75		
									for 10mm					
	14.50	200	14.50	5.50	4,6	150	15,30,5+	160	4,6/15,30,5	AR1862-2023	10/03/2023	75		
									for 10mm					
	15.50	200	15.50	3.80	4,7	150	16,23,11+	180	4,7/16,23,11	AR1862-2023	10/03/2023	75		
									for 30mm					
	16.50	200	16.50	3.50	1,2	150	4,11,25,10+	240	1,2/4,11,25,10	AR1862-2023	10/03/2023	75		
									for 15mm					
	17.50	200	17.00	5.20	25	15	50+	35	25/50	AR1862-2023	10/03/2023	75		

Notes:
1. Tests carried out in general accordance with BS EN ISO 22476-3:2005+A1:2011.
2. Reported blows are for 75mm penetration unless indicated "+".
3. Where full test drive was not achieved, actual penetration (R) and total test drive blows are reported.
4. Tests carried out using a split spoon sampler unless noted as SPT(c) (denotes use of solid cone method) in the comments column.
5. Entries in the water depth column reflects the measured water depth at time of test.

N_{60} = (Measured hammer energy ratio / 60) x N value

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By	Date	Contract Ref:
GKAVANAGH	**13.03.24**	**563835**
Contract: **Sealink Friston**		Page: **13** of **18**

STANDARD PENETRATION TEST SUMMARY TABLE

Exploratory Position ID	Depth (m)	Hole Dia (mm)	Casing Depth (m)	Water Depth (m)	Seating Drive		Test Drive			Hammer ID	Calibration Date	Energy Ratio (%)	N_{60}	Comments
					Blows	Pen (mm)	Blows	R (mm)	Result					
									for 35mm					
	19.50	200	18.00	Dry	6,7	150	7,7,8,11		N=33	AR1862-2023	10/03/2023	75	41	
	21.50	200	18.00	20.50	6,8	150	8,8,9,10		N=35	AR1862-2023	10/03/2023	75	44	
	23.50	200	18.00	2.30	7,8	150	9,10,11,12		N=42	AR1862-2023	10/03/2023	75	52	
	25.10	200	18.00	1.60	4,5	150	7,8,9,9		N=33	AR1862-2023	10/03/2023	75	41	
RedP-BH-1	1.20	200	1.20	Dry	3,3	150	2,2,2,3		N=9	AR3104-2023	21/04/2023	63	9	SPT(c)
	2.00	200	2.00	Dry	25	60	50	75	25/50	AR3104-2023	21/04/2023	63		SPT(c)
									for 75mm					
RedP-BH-1A	1.50	200	1.50	Dry	6,7	150	8,2,1,1		N=12	AR3104-2023	21/04/2023	63	13	SPT(c)
	2.50	200	2.50	2.30	2,3	150	3,3,3,3		N=12	AR3104-2023	21/04/2023	63	13	SPT(c)
	3.50	200	3.00	2.00	0,0	150	1,1,1,1		N=4	AR3104-2023	21/04/2023	63	4	
	5.50	200	5.50	2.00	1,1	150	2,2,3,4		N=11	AR3104-2023	21/04/2023	63	12	
	7.50	200	7.50	4.00	1,2	150	2,3,4,4		N=13	AR3104-2023	21/04/2023	63	14	
	8.50	200	8.50	3.00	5,5	150	6,6,7,8		N=27	AR3104-2023	21/04/2023	63	28	
	9.50	200	9.50	4.50	2,3	150	5,6,6,7		N=24	AR3104-2023	21/04/2023	63	25	
	10.50	200	10.50	2.50	6,9	150	11,13,12,14+	260	6,9/11,13,12,14	AR3104-2023	21/04/2023	63		
									for 35mm					

Notes:
1. Tests carried out in general accordance with BS EN ISO 22476-3:2005+A1:2011.
2. Reported blows are for 75mm penetration unless indicated "+".
3. Where full test drive was not achieved, actual penetration (R) and total test drive blows are reported.
4. Tests carried out using a split spoon sampler unless noted as SPT(c) (denotes use of solid cone method) in the comments column.
5. Entries in the water depth column reflects the measured water depth at time of test.

N_{60} = (Measured hammer energy ratio / 60) x N value

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Compiled By	Date	Contract Ref:
GKAVANAGH	**13.03.24**	**563835**
Contract: **Sealink Friston**		Page: **14** of **18**

STANDARD PENETRATION TEST SUMMARY TABLE

Exploratory Position ID	Depth (m)	Hole Dia (mm)	Casing Depth (m)	Water Depth (m)	Seating Drive		Test Drive			Hammer ID	Calibration Date	Energy Ratio (%)	N_{60}	Comments
					Blows	Pen (mm)	Blows	R (mm)	Result					
RedP-BH-1A	11.50	200	11.50	2.50	6,7	150	10,12,11,12		N=45	AR3104-2023	21/04/2023	63	47	
	12.50	200	12.50	2.30	3,4	150	4,8,8,9		N=29	AR3104-2023	21/04/2023	63	30	
	13.50	200	13.50	2.60	4,8	150	8,9,11,13		N=41	AR3104-2023	21/04/2023	63	43	
	14.50	200	14.50	3.50	5,7	150	13,11,11,15+	290	5,7/13,11,11,15	AR3104-2023	21/04/2023	63		
									for 65mm					
	15.50	200	15.00	3.50	5,6	150	10,11,16,13+	240	5,6/10,11,16,13	AR3104-2023	21/04/2023	63		
									for 15mm					
	16.50	200	16.50	4.50	8,8	150	11,11,13,15+	240	8,8/11,11,13,15	AR3104-2023	21/04/2023	63		
									for 15mm					
	17.50	150	17.50	2.30	1,2	150	5,8,8,9		N=30	AR3104-2023	21/04/2023	63	32	
	18.50	150	18.50	0.00	1,3	150	7,9,12,15		N=43	AR3104-2023	21/04/2023	63	45	
	19.50	150	19.50	0.00	6,8	150	11,12,15,12+	265	6,8/11,12,15,12	AR3104-2023	21/04/2023	63		
									for 40mm					
	20.50	150	20.50	0.00	4,9	150	12,15,21,2		N=50	AR3104-2023	21/04/2023	63	52	
	21.50	150	21.50	0.00	4,5	150	9,10,16,15+	270	4,5/9,10,16,15	AR3104-2023	21/04/2023	63		
									for 45mm					
	22.50	150	22.50	0.00	3,8	150	12,21,17+	180	3,8/12,21,17	AR3104-2023	21/04/2023	63		
									for 30mm					

Notes:
1. Tests carried out in general accordance with BS EN ISO 22476-3:2005+A1:2011.
2. Reported blows are for 75mm penetration unless indicated "+".
3. Where full test drive was not achieved, actual penetration (R) and total test drive blows are reported.
4. Tests carried out using a split spoon sampler unless noted as SPT(c) (denotes use of solid cone method) in the comments column.
5. Entries in the water depth column reflects the measured water depth at time of test.

N_{60} = (Measured hammer energy ratio / 60) x N value

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Compiled By	Date	Contract Ref:
GKAVANAGH	**13.03.24**	**563835**

Contract: **Sealink Friston**

STANDARD PENETRATION TEST SUMMARY TABLE

Exploratory Position ID	Depth (m)	Hole Dia (mm)	Casing Depth (m)	Water Depth (m)	Seating Drive		Test Drive			Hammer ID	Calibration Date	Energy Ratio (%)	N_{60}	Comments
					Blows	Pen (mm)	Blows	R (mm)	Result					
RedP-BH-1A	23.50	150	23.50	0.00	3,10	150	26,24+	140	3,10/26,24	AR3104-2023	21/04/2023	63		
									for 65mm					
	24.50	150	24.00	0.00	5,8	150	11,12,15,12+	290	5,8/11,12,15,12	AR3104-2023	21/04/2023	63		
									for 65mm					
	25.50	150	25.50	0.00	4,6	150	7,11,12,12		N=42	AR3104-2023	21/04/2023	63	44	
	28.50	150	25.50	12.60	4,6	150	8,9,12,15		N=44	AR3104-2023	21/04/2023	63	46	
	29.50	150	25.50	13.40	6,6	150	9,9,11,13		N=42	AR3104-2023	21/04/2023	63	44	
RedP-BH-4	1.20	150	1.20	Dry	2,2	150	3,2,3,3		N=11	AR3104-2023	21/04/2023	63	12	
	2.00	150	2.00	1.50	2,3	150	3,3,4,4		N=14	AR3104-2023	21/04/2023	63	15	
	3.00	150	3.00	2.90	2,2	150	3,3,4,4		N=14	AR3104-2023	21/04/2023	63	15	
	4.00	150	4.00	3.80	2,3	150	4,3,5,7		N=19	AR3104-2023	21/04/2023	63	20	
	5.00	150	4.50	4.50	4,5	150	3,4,5,5		N=17	AR3104-2023	21/04/2023	63	18	
	6.00	150	6.00	4.50	3,4	150	5,5,5,5		N=20	AR3104-2023	21/04/2023	63	21	
	7.00	150	7.00	6.10	3,4	150	4,4,5,6		N=19	AR3104-2023	21/04/2023	63	20	
	8.00	150	8.00	5.00	3,4	150	4,4,5,6		N=19	AR3104-2023	21/04/2023	63	20	
	9.00	150	9.00	4.30	2,4	150	5,6,7,8		N=26	AR3104-2023	21/04/2023	63	27	
	10.00	150	10.00	4.70	4,5	150	5,7,11,13		N=36	AR3104-2023	21/04/2023	63	38	

Notes:
1. Tests carried out in general accordance with BS EN ISO 22476-3:2005+A1:2011.
2. Reported blows are for 75mm penetration unless indicated "+".
3. Where full test drive was not achieved, actual penetration (R) and total test drive blows are reported.
4. Tests carried out using a split spoon sampler unless noted as SPT(c) (denotes use of solid cone method) in the comments column.
5. Entries in the water depth column reflects the measured water depth at time of test.

N_{60} = (Measured hammer energy ratio / 60) x N value

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Compiled By	Date	Contract Ref:
GKAVANAGH	**13.03.24**	**563835**
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STANDARD PENETRATION TEST SUMMARY TABLE

Exploratory Position ID	Depth (m)	Hole Dia (mm)	Casing Depth (m)	Water Depth (m)	Seating Drive		Test Drive			Hammer ID	Calibration Date	Energy Ratio (%)	N_{60}	Comments
					Blows	Pen (mm)	Blows	R (mm)	Result					
RedP-BH-4	11.00	150	10.50	4.50	5,5	150	6,8,14,15		N=43	AR3104-2023	21/04/2023	63	45	
	12.00	150	12.00	4.00	5,7	150	11,13,19,7+	250	5,7/11,13,19,7	AR3104-2023	21/04/2023	63		
									for 25mm					
	13.00	150	13.00	4.50	5,6	150	9,12,16,13+	270	5,6/9,12,16,13	AR3104-2023	21/04/2023	63		
									for 45mm					
	14.00	150	14.00	4.60	6,8	150	12,13,17,8+	255	6,8/12,13,17,8	AR3104-2023	21/04/2023	63		
									for 30mm					
	15.00	150	15.00	4.60	9,12	150	19,25,6+	165	9,12/19,25,6	AR3104-2023	21/04/2023	63		
									for 15mm					
	16.00	150	16.00	1.00	12,13	150	13,15,15,7+	260	12,13/13,15,15,7	AR3104-2023	21/04/2023	63		
									for 35mm					
	17.00	150	17.00	2.10	6,7	150	11,16,17,6+	245	6,7/11,16,17,6	AR3104-2023	21/04/2023	63		
									for 20mm					
	18.00	150	18.00	2.30	7,7	150	9,14,24,3+	230	7,7/9,14,24,3	AR3104-2023	21/04/2023	63		
									for 5mm					
	19.00	150	19.00	2.60	10,12	150	16,16,18	225	10,12/16,16,18	AR3104-2023	21/04/2023	63		
									for 75mm					
	20.00	150	20.00	2.70	7,9	150	11,13,21,5+	240	7,9/11,13,21,5	AR3104-2023	21/04/2023	63		

Notes:
1. Tests carried out in general accordance with BS EN ISO 22476-3:2005+A1:2011.
2. Reported blows are for 75mm penetration unless indicated "+".
3. Where full test drive was not achieved, actual penetration (R) and total test drive blows are reported.
4. Tests carried out using a split spoon sampler unless noted as SPT(c) (denotes use of solid cone method) in the comments column.
5. Entries in the water depth column reflects the measured water depth at time of test.

N_{60} = (Measured hammer energy ratio / 60) x N value

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By	Date	Contract Ref:
GKAVANAGH	**13.03.24**	**563835**

Contract: **Sealink Friston**

STANDARD PENETRATION TEST SUMMARY TABLE

Exploratory Position ID	Depth (m)	Hole Dia (mm)	Casing Depth (m)	Water Depth (m)	Seating Drive		Test Drive			Hammer ID	Calibration Date	Energy Ratio (%)	N_{60}	Comments
					Blows	Pen (mm)	Blows	R (mm)	Result					
									for 15mm					
	22.00	150	22.00	10.3!	7,7	150	11,12,12,13		N=48	AR3104-2023	21/04/2023	63	50	
	24.00	150	22.80	23.70	8,8	150	10,12,12,15		N=49	AR3104-2023	21/04/2023	63	51	
	26.00	150	22.50	25.20	8,9	150	9,12,14,15+	290	8,9/9,12,14,15	AR3104-2023	21/04/2023	63		
									for 65mm					
	28.00	150	22.50	27.60	7,9	150	11,11,12,14		N=48	AR3104-2023	21/04/2023	63	50	
	30.00	150	22.50	29.10	6,7	150	8,10,15,15		N=48	AR3104-2023	21/04/2023	63	50	

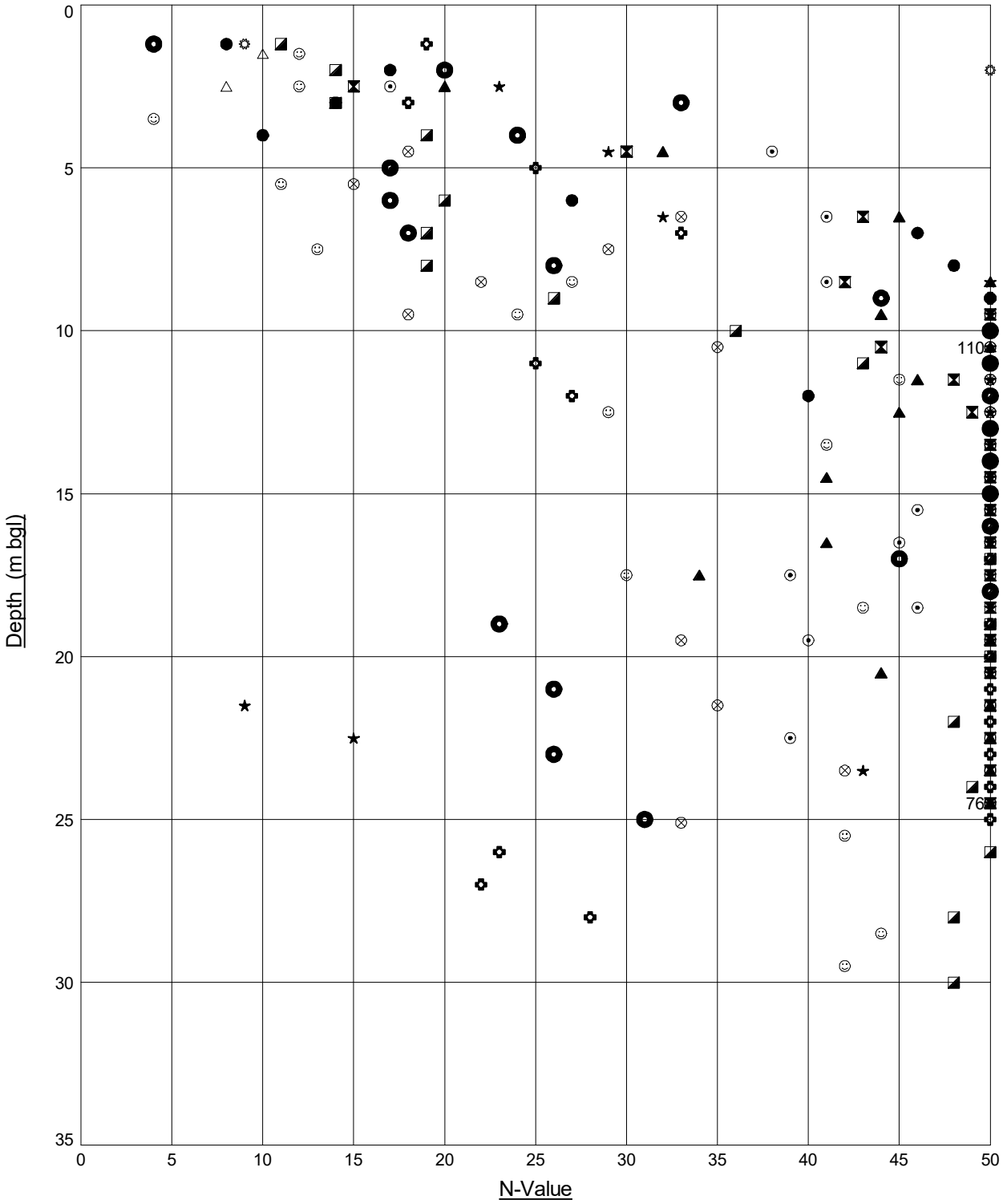
Notes:
1. Tests carried out in general accordance with BS EN ISO 22476-3:2005+A1:2011.
2. Reported blows are for 75mm penetration unless indicated "+".
3. Where full test drive was not achieved, actual penetration (R) and total test drive blows are reported.
4. Tests carried out using a split spoon sampler unless noted as SPT(c) (denotes use of solid cone method) in the comments column.
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N_{60} = (Measured hammer energy ratio / 60) x N value

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	GKAVANAGH	**13.03.24**	**563835**
Contract: **Sealink Friston**			Page: **18** of **18**

STANDARD PENETRATION TEST (SPT N-Value) vs DEPTH



Key: ● = F22-BH203, ⊠ = F22-BH306, ▲ = F22-BH307, ★ = F22-BH308, ⊙ = F22-BH309, ✿ = F22-BH310, ◉ = F22-BH501, △ = F22-BH502, ⊗ = F22-BH502A, ☼ = RedP-BH-1, ☺ = RedP-BH-1A, ◪ = RedP-BH-4

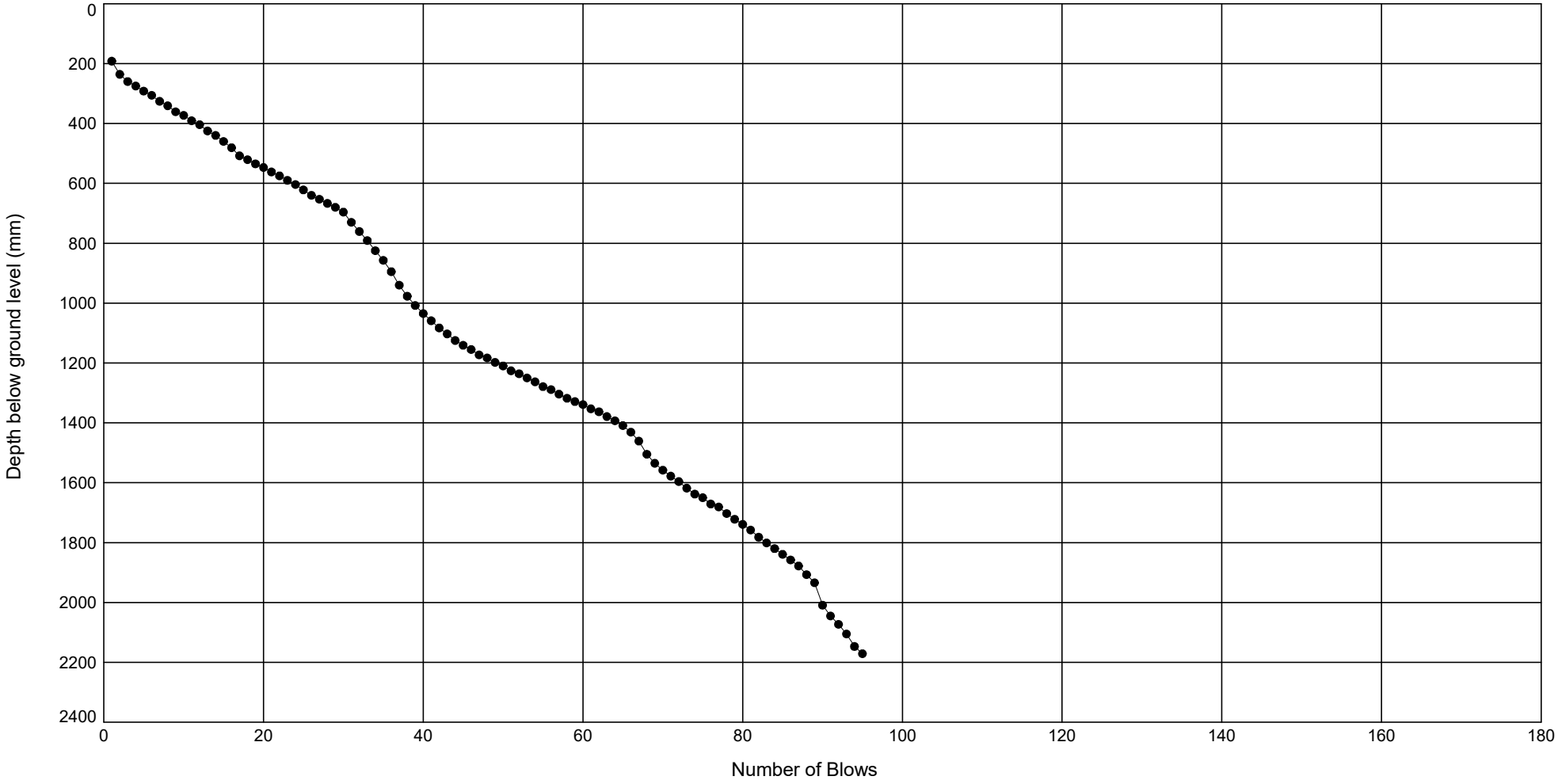
STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Contract **Sealink Friston**	Date **13.03.24**	Compiled By
	Client **National Grid**	Contract Ref: **563835**	

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph G - PLOTS - SITE - GENERAL - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 13/03/24 - 16:36 | GK1 |

DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **F22-TP203** Test Date : **28.09.23** Test Number : **1**

Ground Level (m AOD): **22.84** National Grid Co-ordinates: **E:642242.0 N:260117.6**



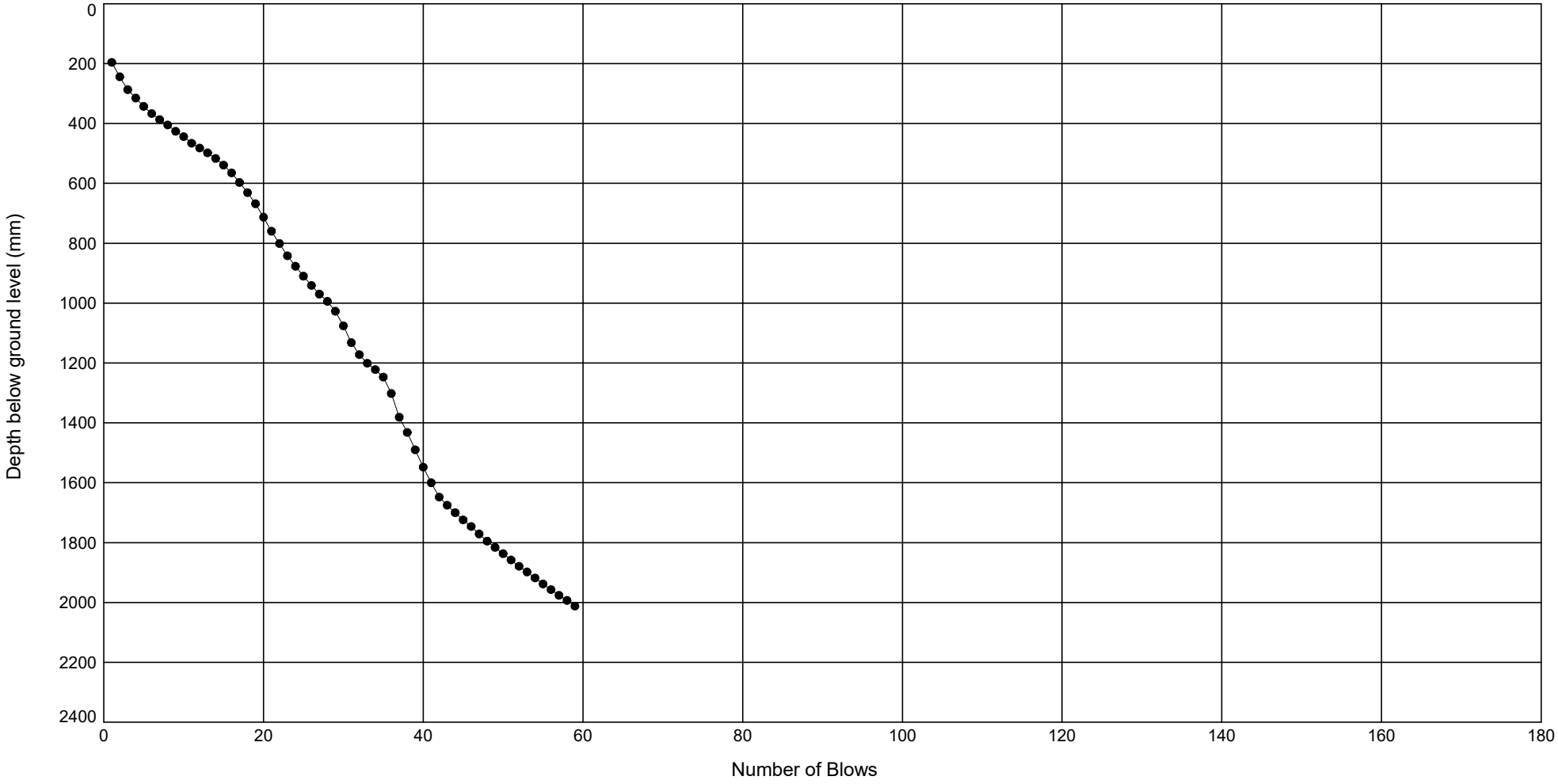
STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	28/09/23	[redacted]	13/03/24
	Contract			Contract Ref:
	Sealink Friston			**563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - DCP - 1 - BLOWS VS DEPTH - A4L | 563835_SEALINK_FRISTON.GPJ - v10_01. | 14/03/24 - 09:20 | AML1 |

DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **F22-TP204** Test Date : **22.09.23** Test Number : **1**

Ground Level (m AOD): **14.68** National Grid Co-ordinates: **E:642801.5 N:259708.3**



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Test Supervisor	Date	Checked By	Date
[redacted]	**22/09/23**	[redacted]	**14/03/24**

Contract

Sealink Friston

Contract Ref:

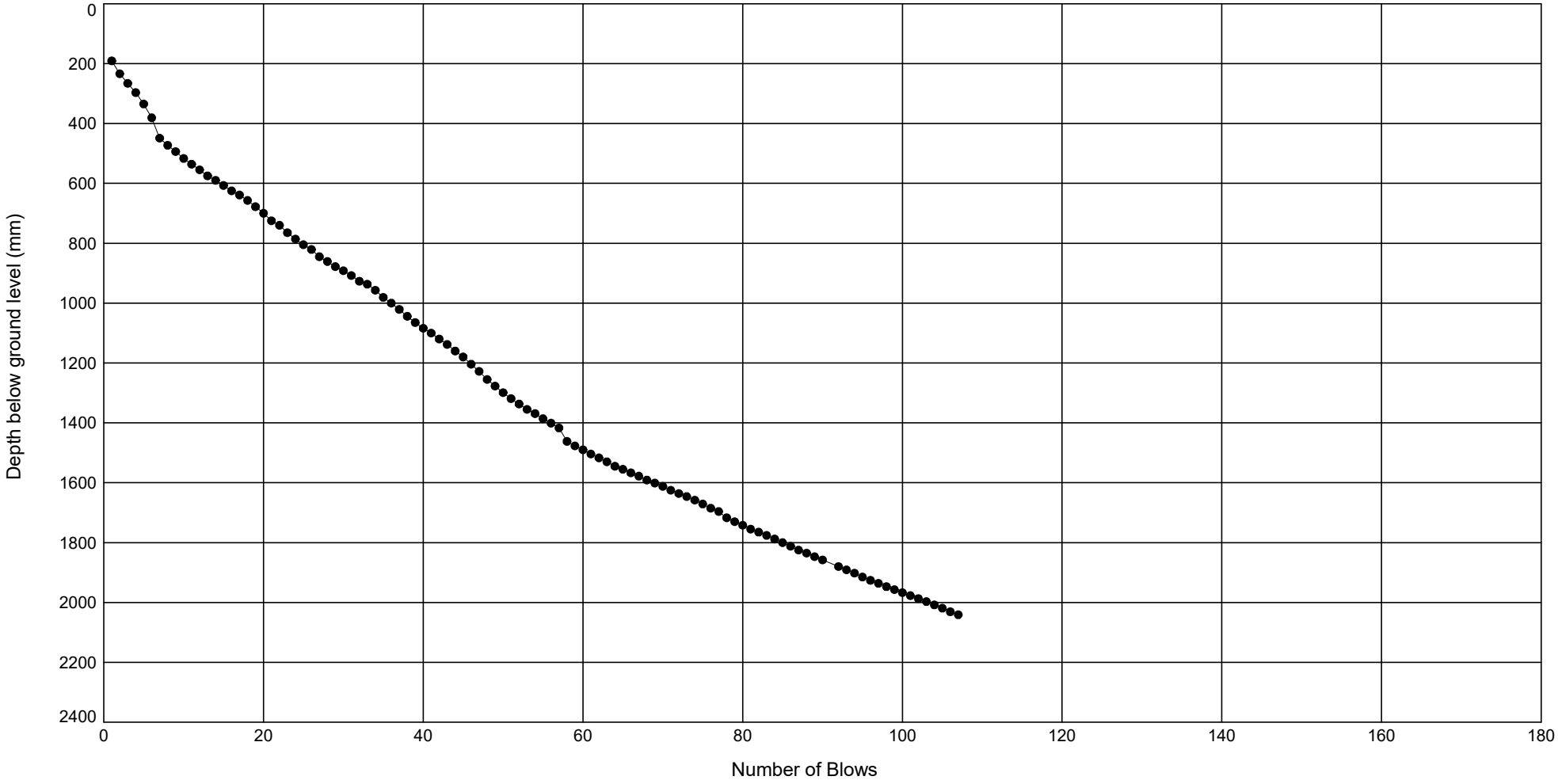
563835

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - DCP - 1 - BLOWS VS DEPTH - A4L | 563835_SEALINK_FRISTON.GPJ - v10_01. | 14/03/24 - 09:20 | AML1 |

DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **F22-TP205** Test Date : **22.09.23** Test Number : **1**

Ground Level (m AOD): **15.53** National Grid Co-ordinates: **E:643240.6 N:259491.7**



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Test Supervisor	Date	Checked By	Date
[redacted]	**22/09/23**	[redacted]	**14/03/24**

Contract

Sealink Friston

Contract Ref:

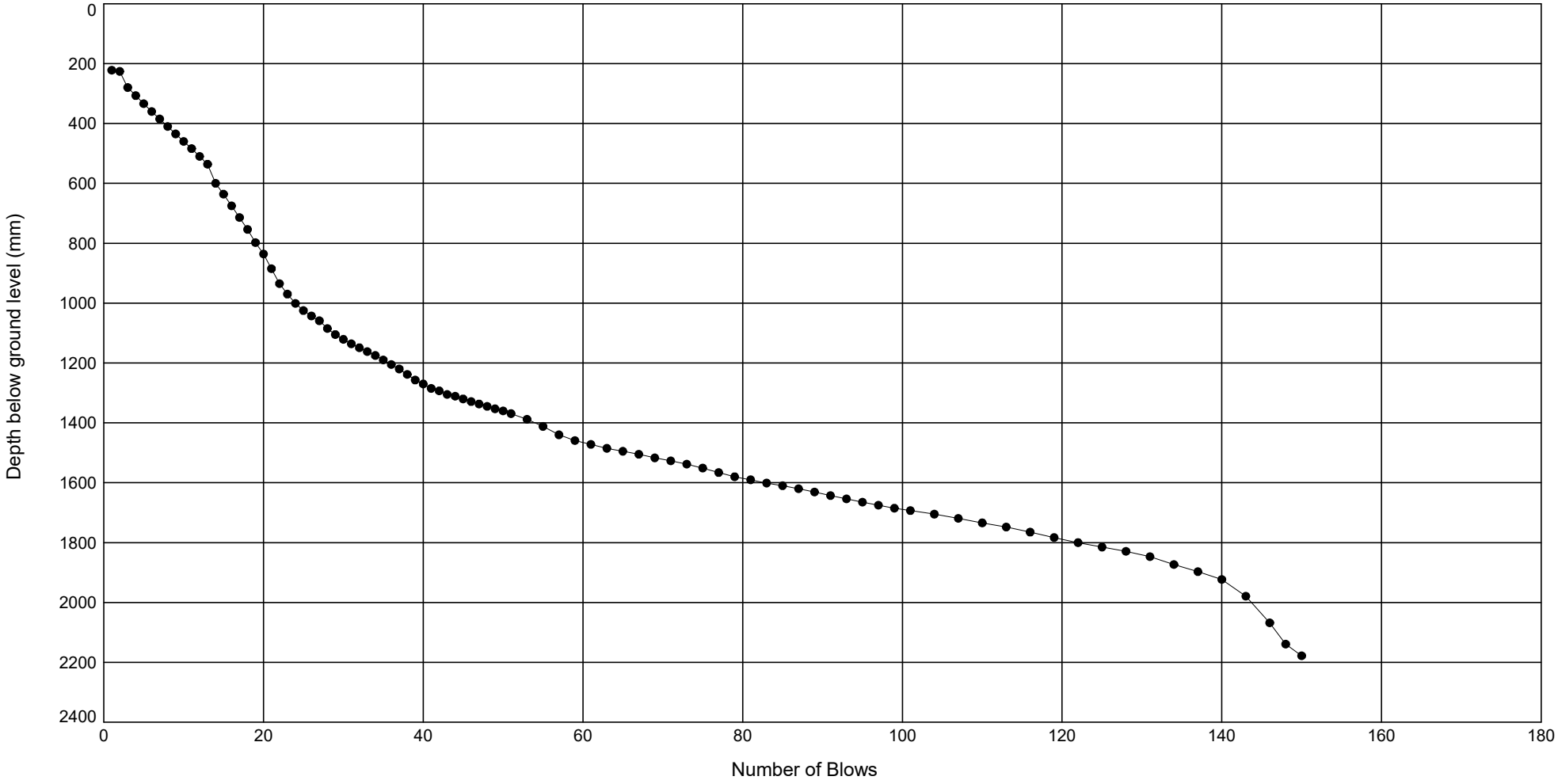
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GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - DCP - 1 - BLOWS VS DEPTH - A4L | 563835_SEALINK_FRISTON.GPJ - v10_01. | 14/03/24 - 09:20 | AML1 |

DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **F22-TP218** Test Date : **29.09.23** Test Number : **1**

Ground Level (m AOD): **19.70** National Grid Co-ordinates: **E:644029.8 N:259081.1**



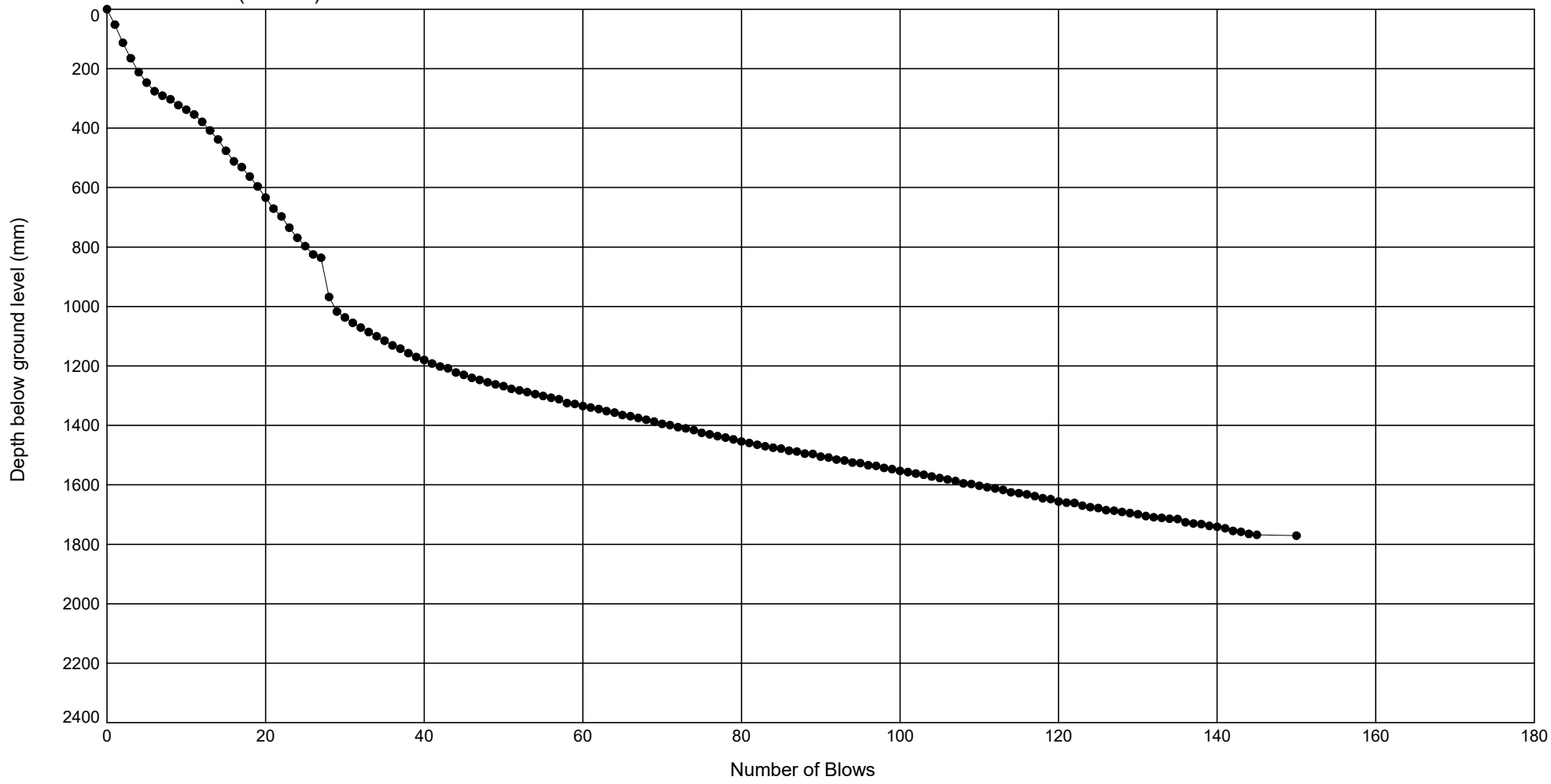
STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**29/09/23**	[redacted]	**13/03/24**
	Contract **Sealink Friston**			Contract Ref: **563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - DCP - 1 - BLOWS VS DEPTH - A4L | 563835_SEALINK_FRISTON.GPJ - v10_01. | 14/03/24 - 09:20 | AML1 |

DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **F22-TP220** Test Date : **12.09.23** Test Number : **1**

Ground Level (m AOD): **19.70** National Grid Co-ordinates: **E:645035.1 N:258544.6**



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Test Supervisor	Date	Checked By	Date	Contract Ref:
[redacted]	12/09/23	[redacted]	14/03/24	563835

Contract

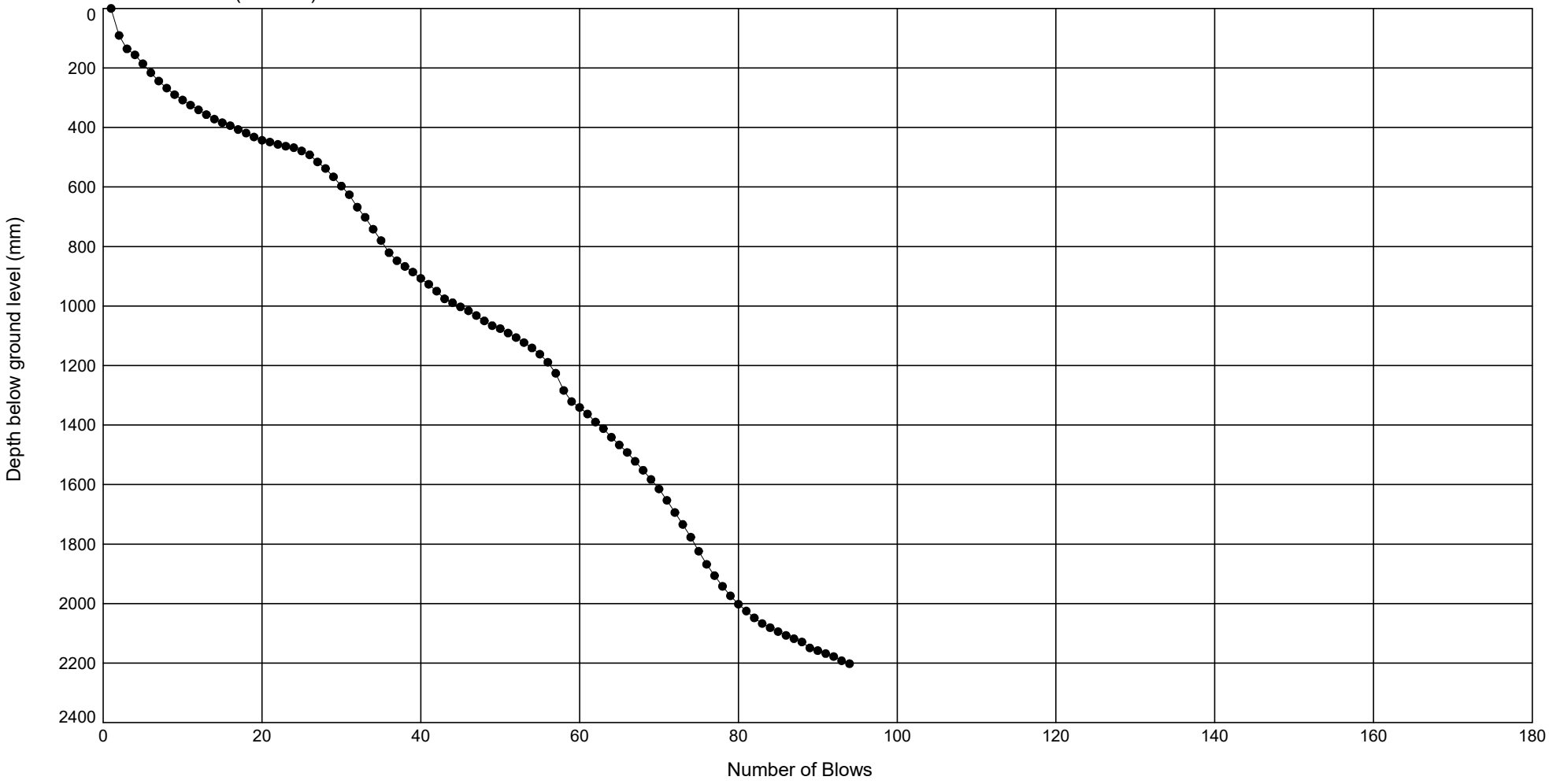
Sealink Friston

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DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **F22-TP221** Test Date : **12.09.23** Test Number : **1**

Ground Level (m AOD): **18.22** National Grid Co-ordinates: **E:645423.8 N:258369.8**



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Test Supervisor	Date	Checked By	Date
[redacted]	12/09/23	[redacted]	14/03/24

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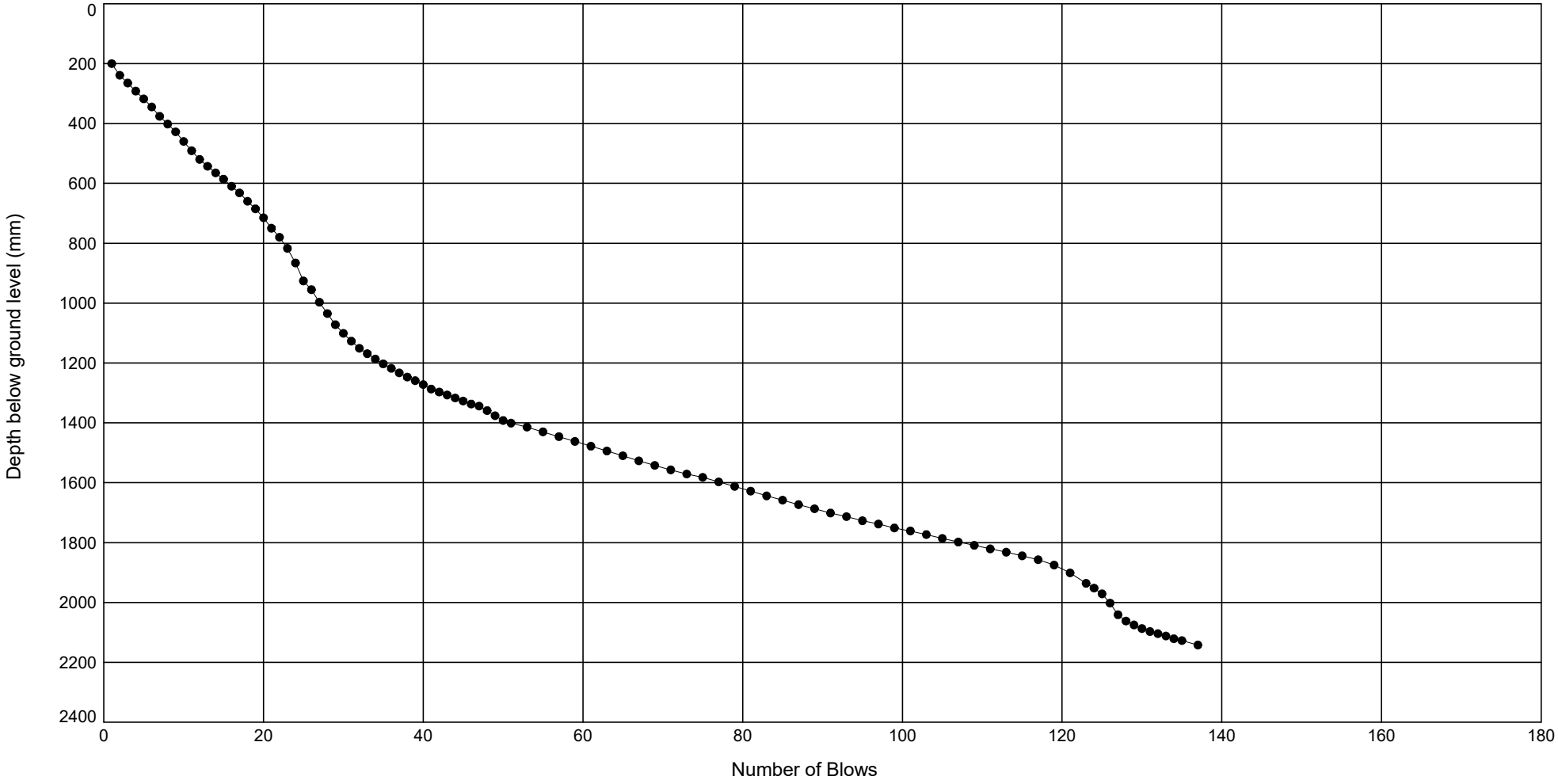
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DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **F22-TP222** Test Date : **13.09.23** Test Number : **1**

Ground Level (m AOD): **10.88** National Grid Co-ordinates: **E:645947.7 N:258415.5**



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[redacted]	13/09/23	[redacted]	14/03/24	563835

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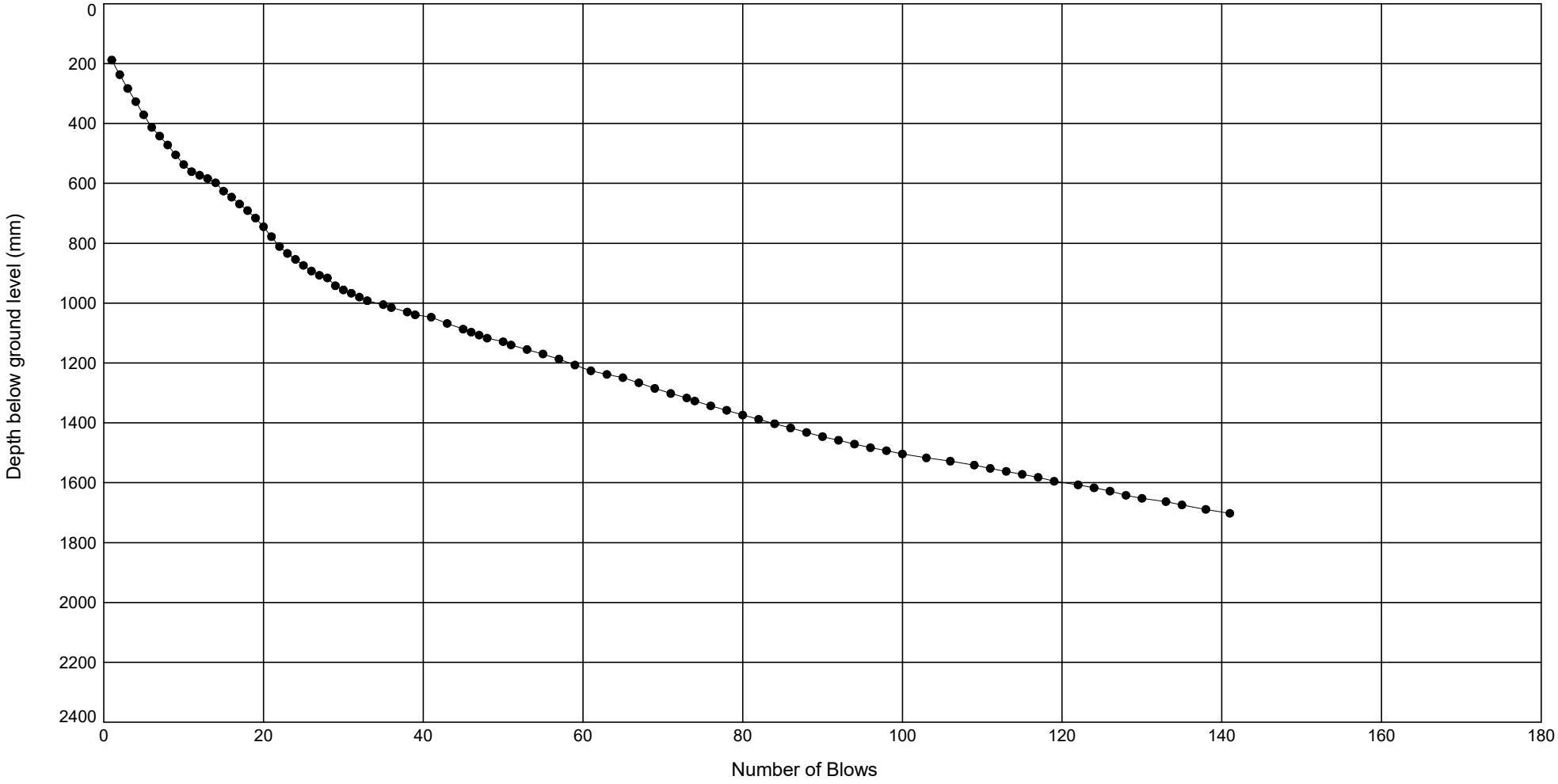
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DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **F22-TP229** Test Date : **27.09.23** Test Number : **1**

Ground Level (m AOD): **20.91** National Grid Co-ordinates: **E:640107.0 N:262218.8**



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Contract

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Contract Ref:

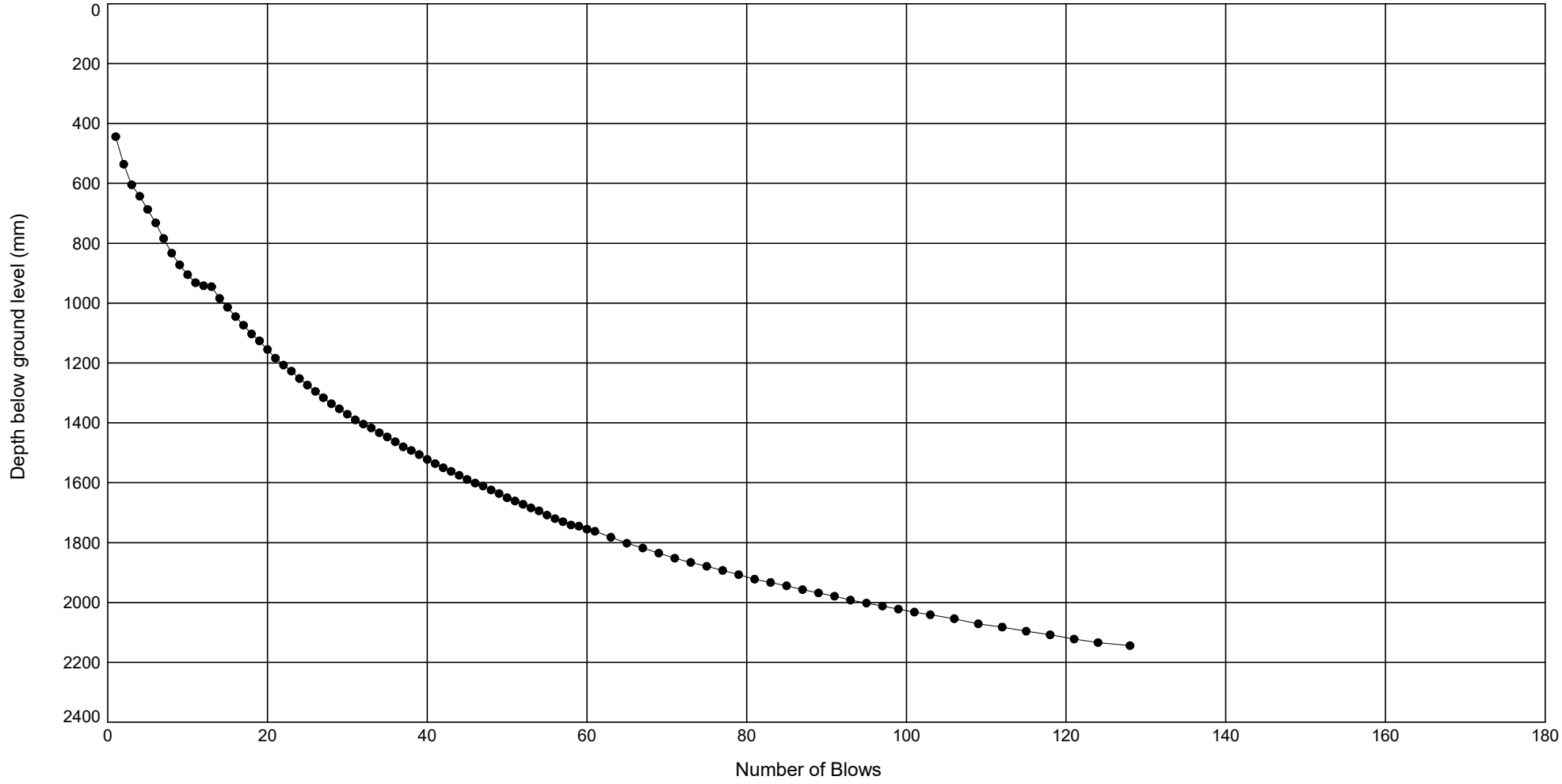
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DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **F22-TP310** Test Date : **15.09.23** Test Number : **1**

Ground Level (m AOD): **24.20** National Grid Co-ordinates: **E:639820.9 N:262425.1**



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Contract Ref:

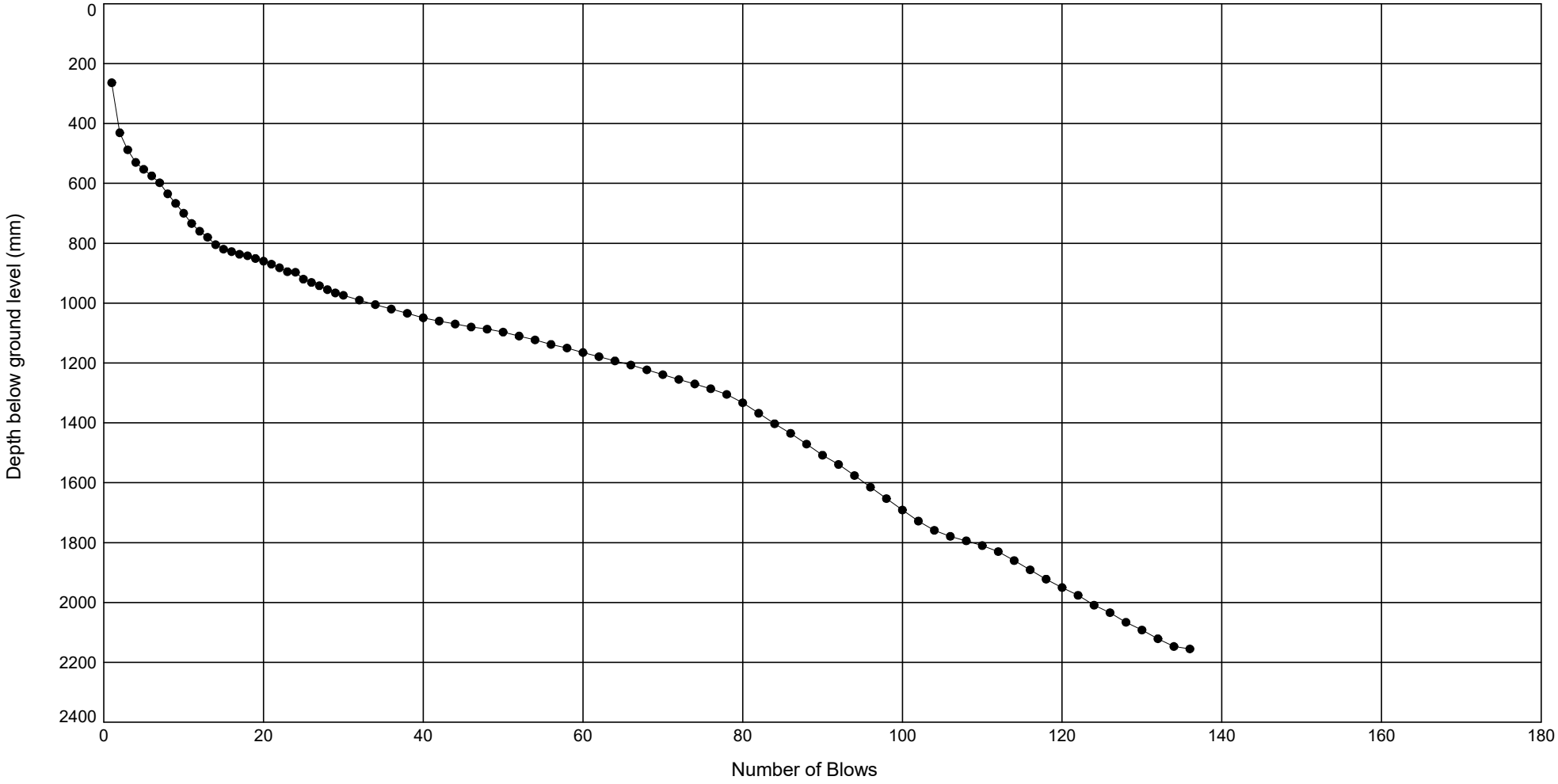
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DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **F22-TP311** Test Date : **15.09.23** Test Number : **1**

Ground Level (m AOD): **25.33** National Grid Co-ordinates: **E:639693.0 N:262366.3**



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Contract Ref:

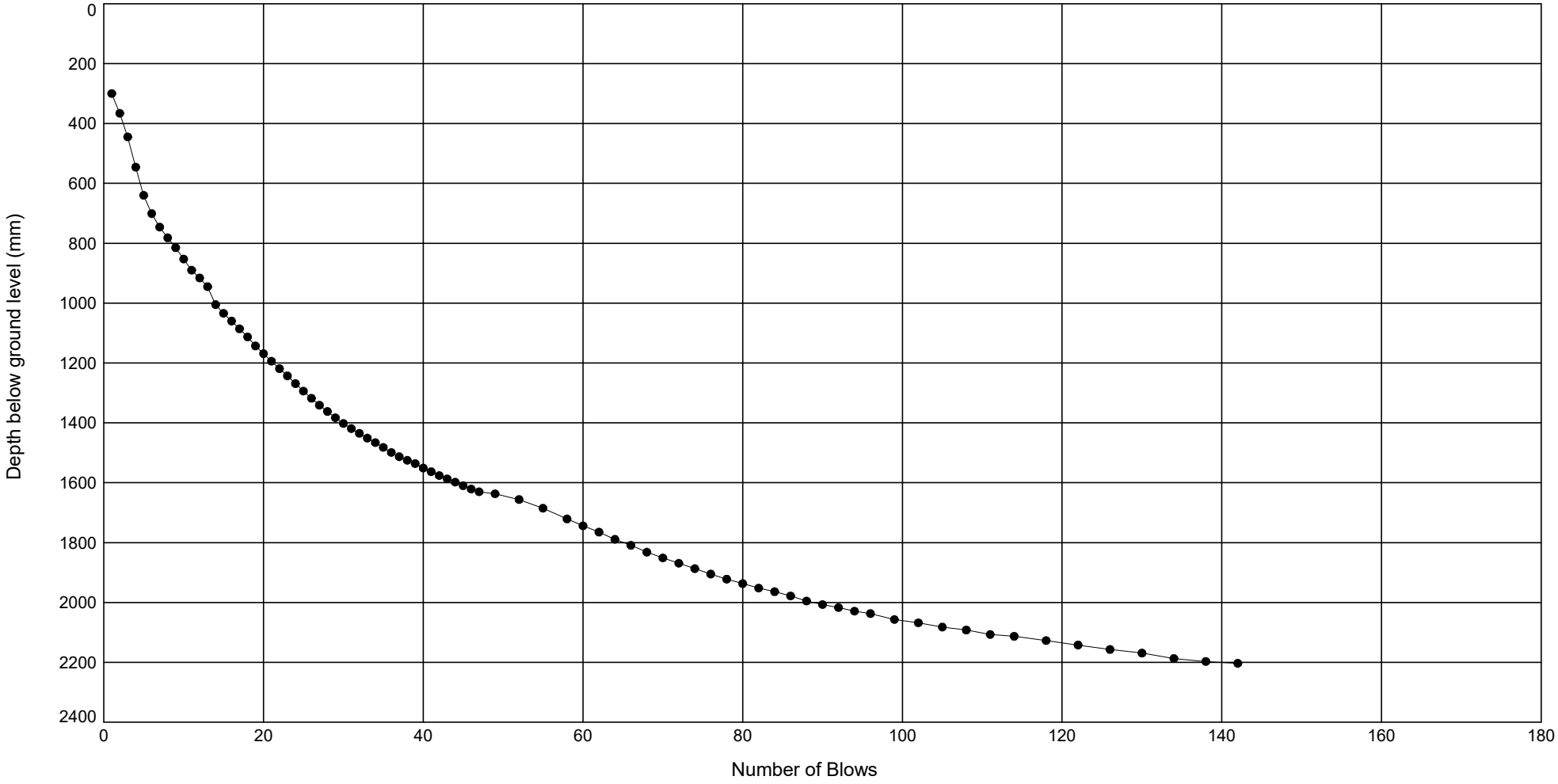
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DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **F22-TP312** Test Date : **18.09.23** Test Number : **1**

Ground Level (m AOD): **24.40** National Grid Co-ordinates: **E:639883.9 N:262316.9**



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[redacted]	18/09/23	[redacted]	13/03/24	563835

Contract

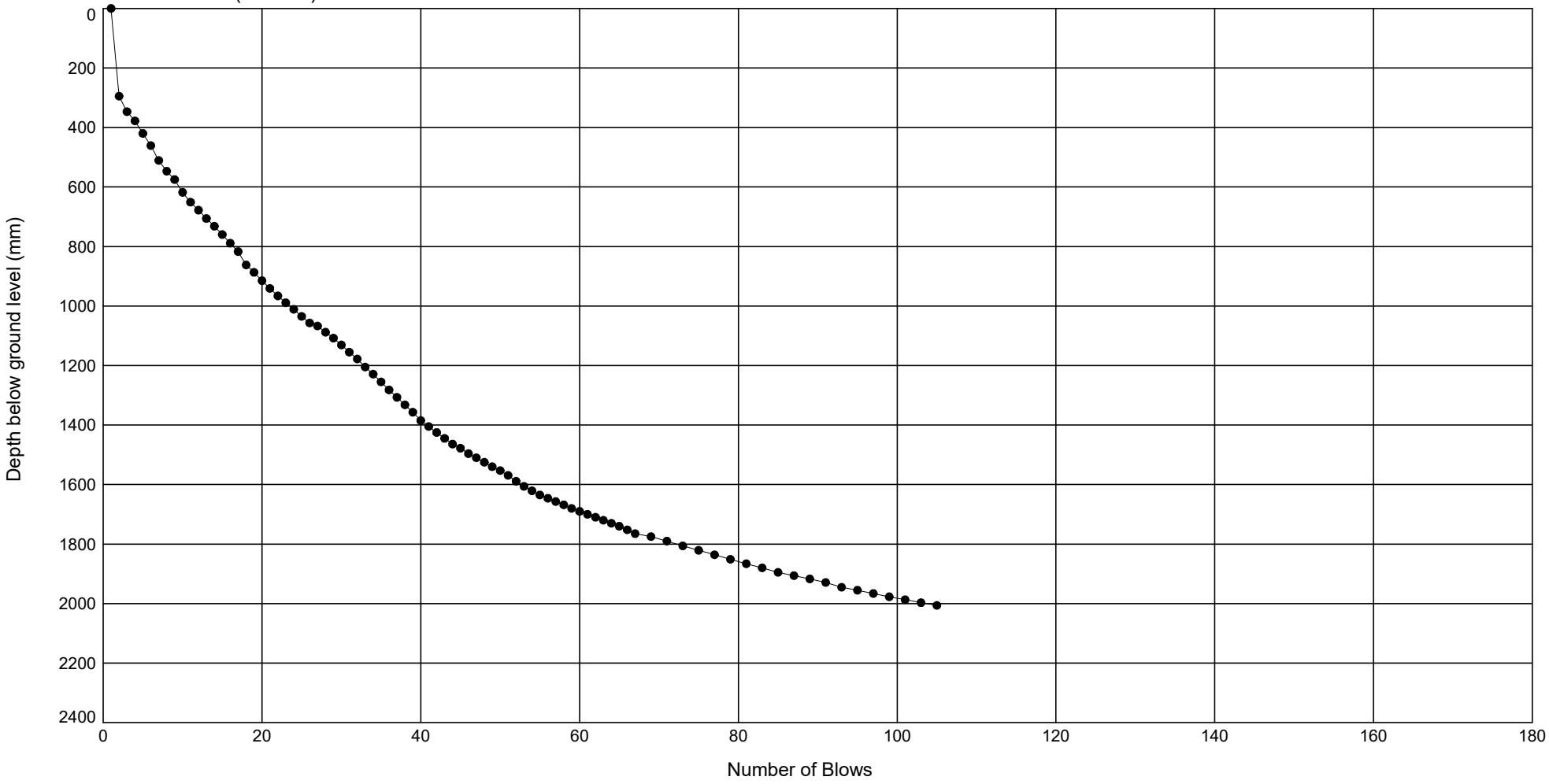
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DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **F22-TP313** Test Date : **14.09.23** Test Number : **1**

Ground Level (m AOD): **24.98** National Grid Co-ordinates: **E:639659.7 N:262254.6**



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Contract Ref:

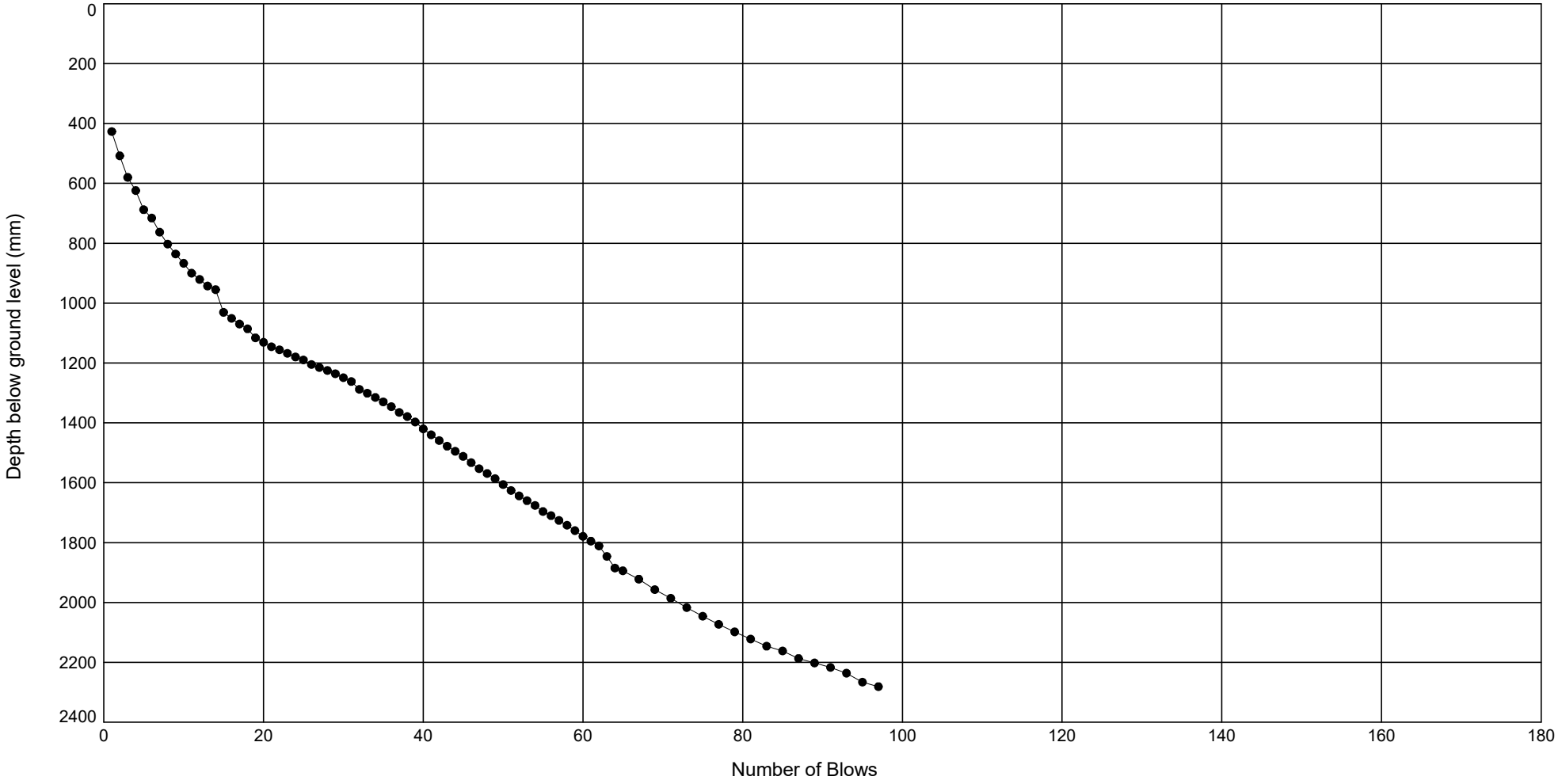
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DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **F22-TP314** Test Date : **18.09.23** Test Number : **1**

Ground Level (m AOD): **24.86** National Grid Co-ordinates: **E:639835.2 N:262206.6**



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Test Supervisor	Date	Checked By	Date	Contract Ref:
[redacted]	18/09/23	[redacted]	14/03/24	563835

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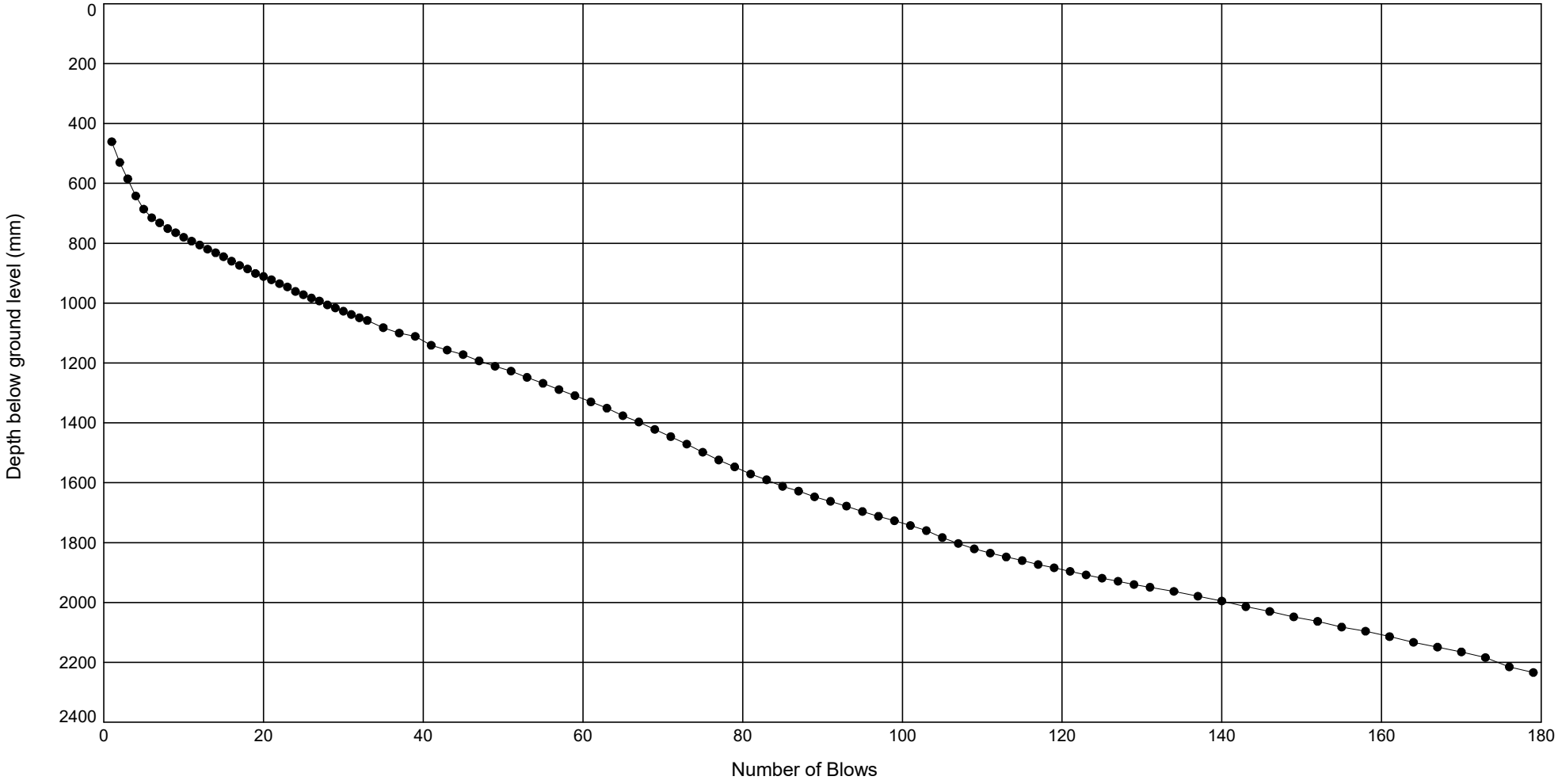
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DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **F22-TP315** Test Date : **18.09.23** Test Number : **1**

Ground Level (m AOD): **23.15** National Grid Co-ordinates: **E:639693.8 N:262143.0**



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Contract Ref:

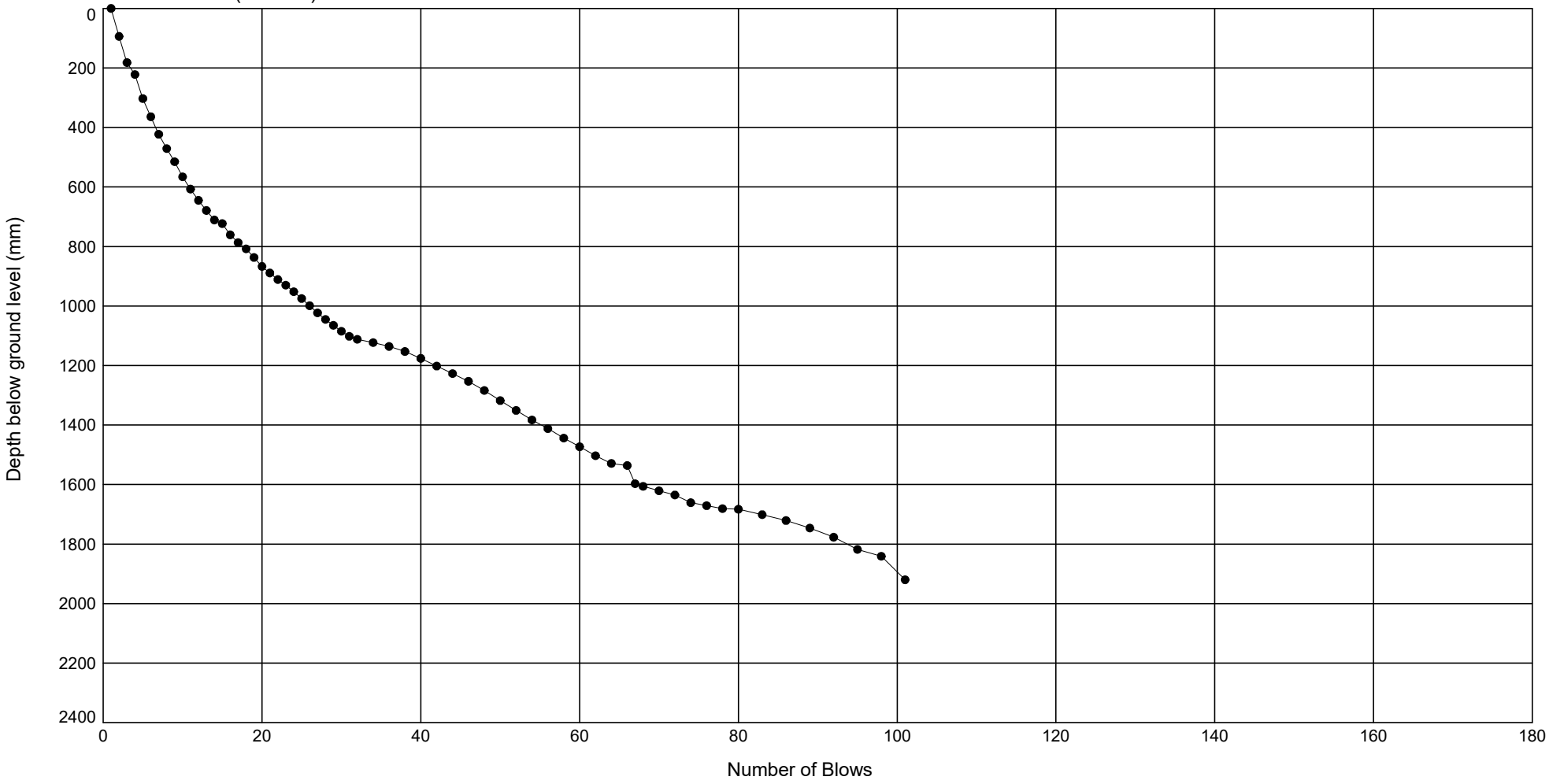
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DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **F22-TP316** Test Date : **19.09.23** Test Number : **1**

Ground Level (m AOD): **23.74** National Grid Co-ordinates: **E:639828.3 N:262046.8**



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Contract Ref:

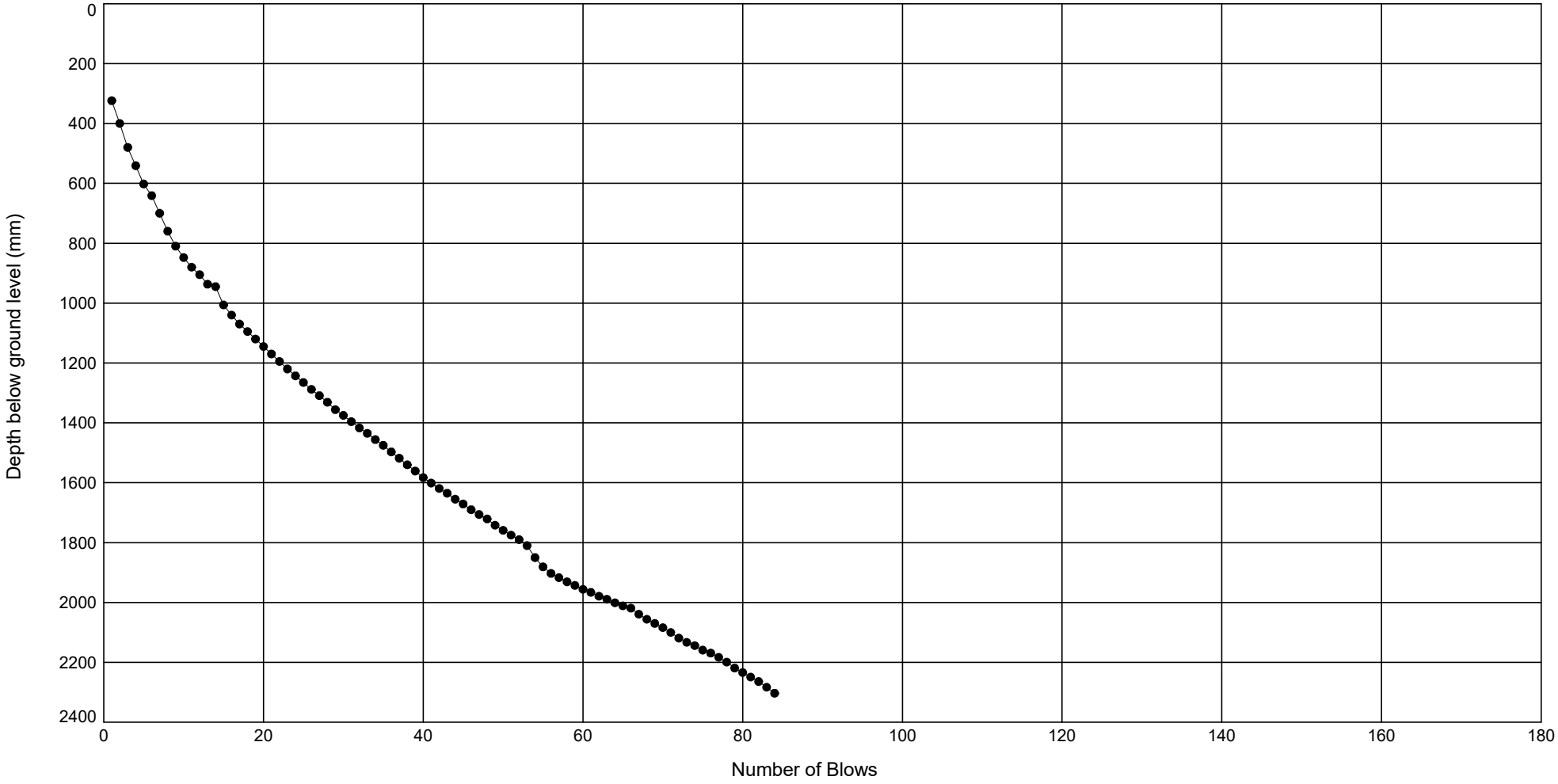
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DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **F22-TP317** Test Date : **20.09.23** Test Number : **1**

Ground Level (m AOD): **23.79** National Grid Co-ordinates: **E:639959.0 N:262235.8**



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Contract Ref:

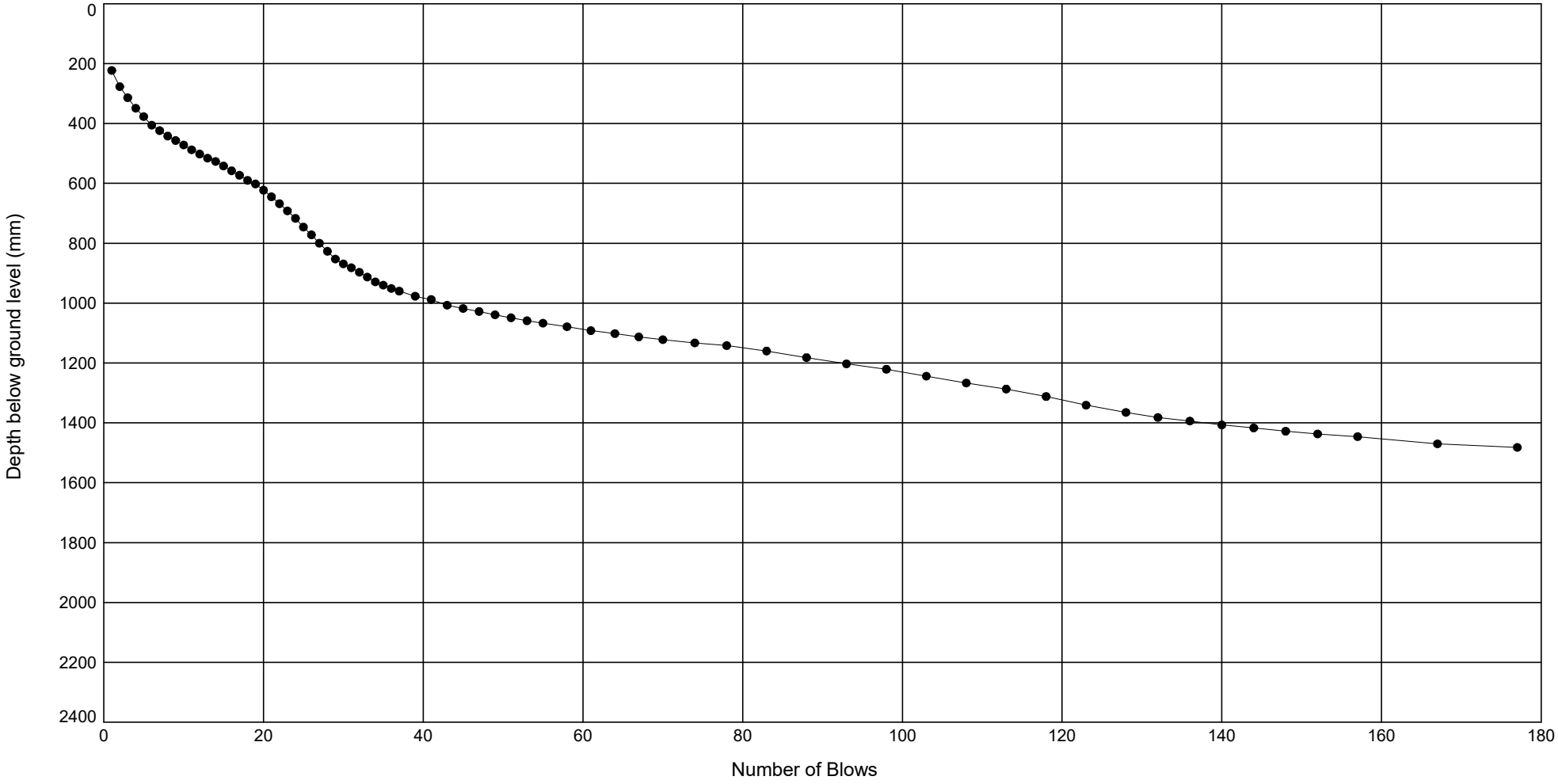
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DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **F22-TP404** Test Date : **26.09.23** Test Number : **1**

Ground Level (m AOD): **13.06** National Grid Co-ordinates: **E:643184.7 N:259363.9**



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Contract Ref:

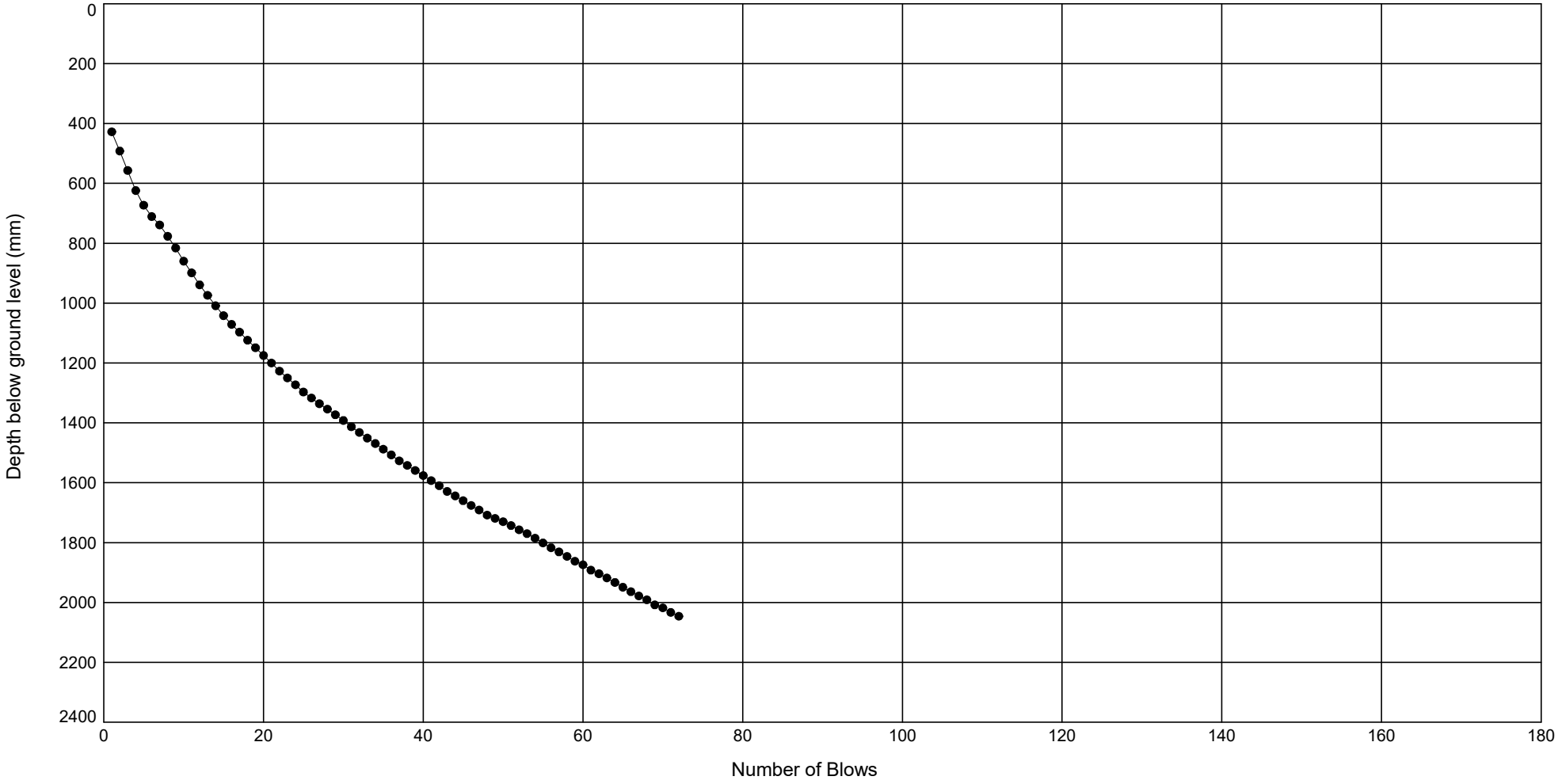
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DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **F22-TP406** Test Date : **27.09.23** Test Number : **1**

Ground Level (m AOD): **20.57** National Grid Co-ordinates: **E:640194.9 N:262416.6**



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Contract Ref:

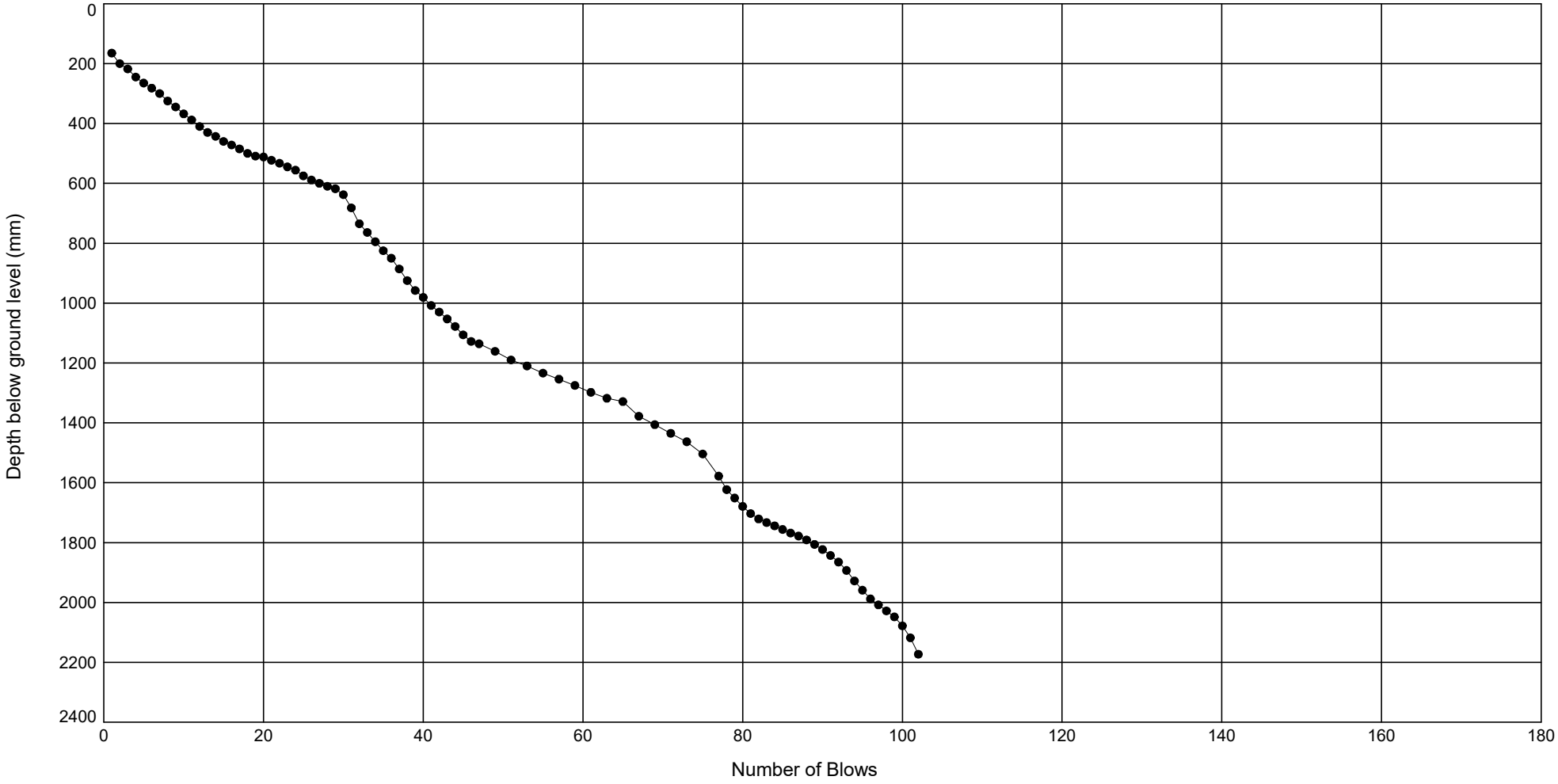
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DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **F22-TP511** Test Date : **28.09.23** Test Number : **1**

Ground Level (m AOD): **22.59** National Grid Co-ordinates: **E:642492.3 N:259954.4**



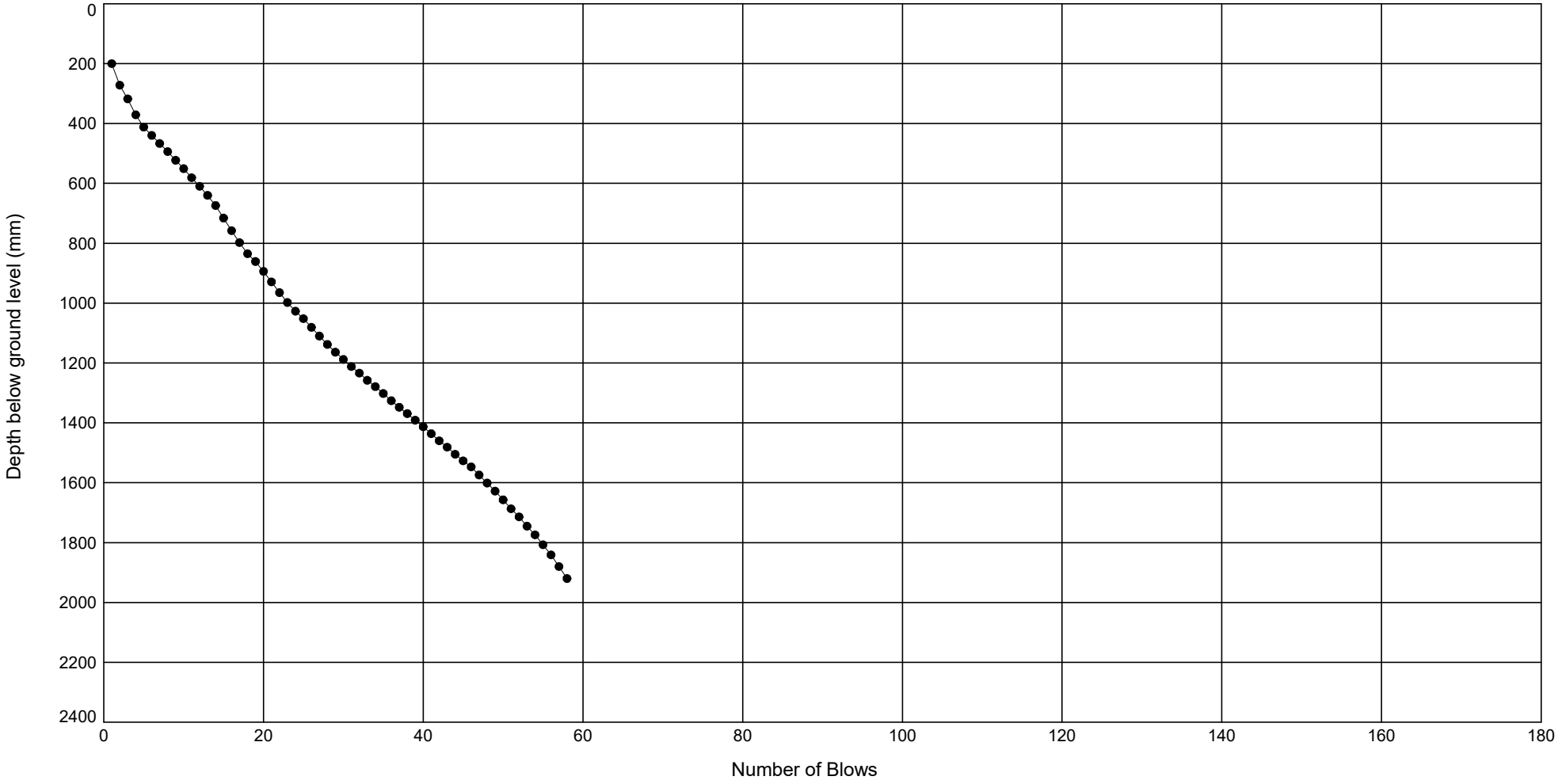
STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
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	Contract **Sealink Friston**			Contract Ref: **563835**

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DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **F22-TP513** Test Date : **29.09.23** Test Number : **1**

Ground Level (m AOD): **17.37** National Grid Co-ordinates: **E:645573.9 N:258373.8**



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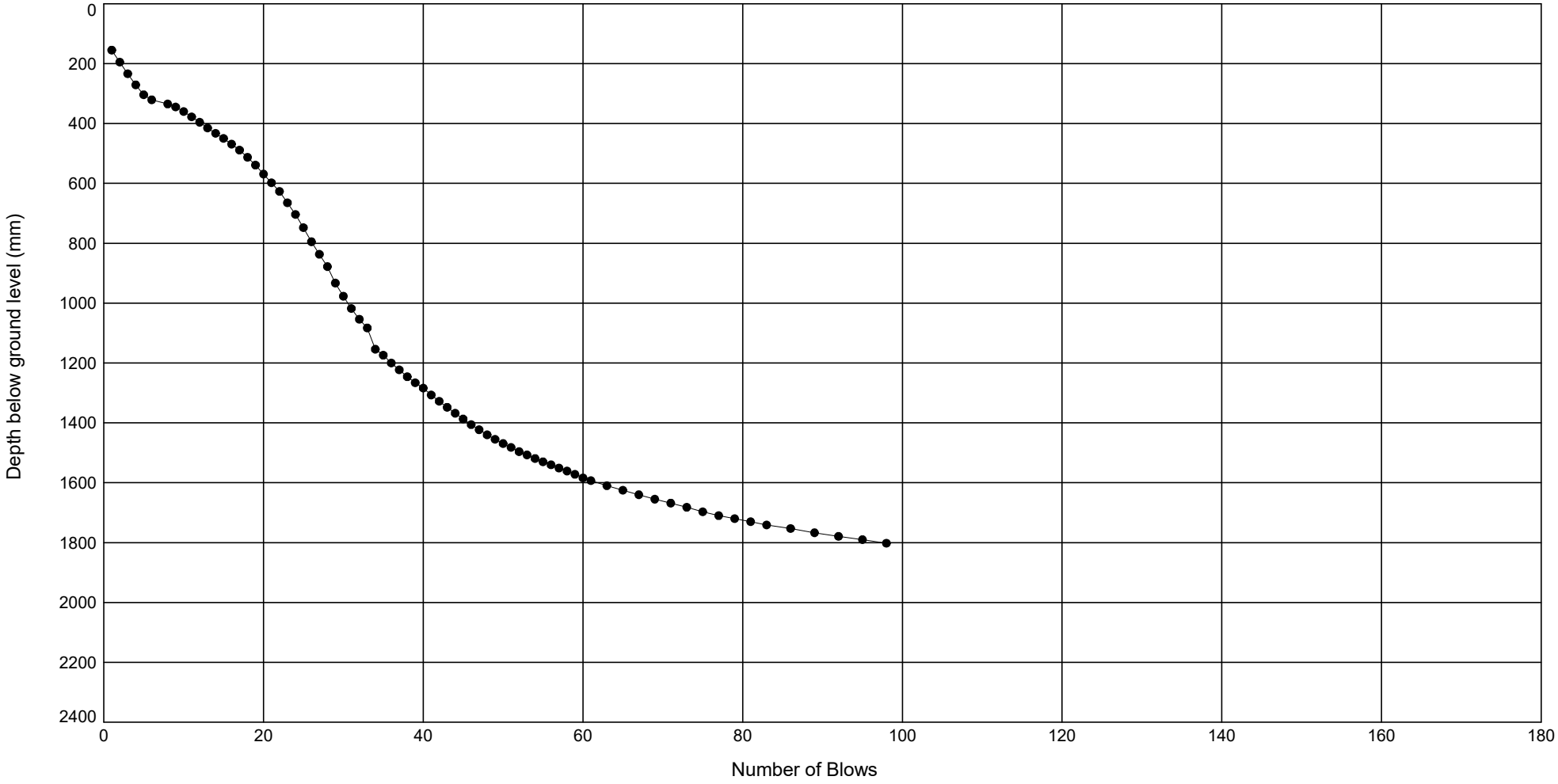
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DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **F22-TP514** Test Date : **28.09.23** Test Number : **1**

Ground Level (m AOD): **16.08** National Grid Co-ordinates: **E:638582.2 N:262187.4**



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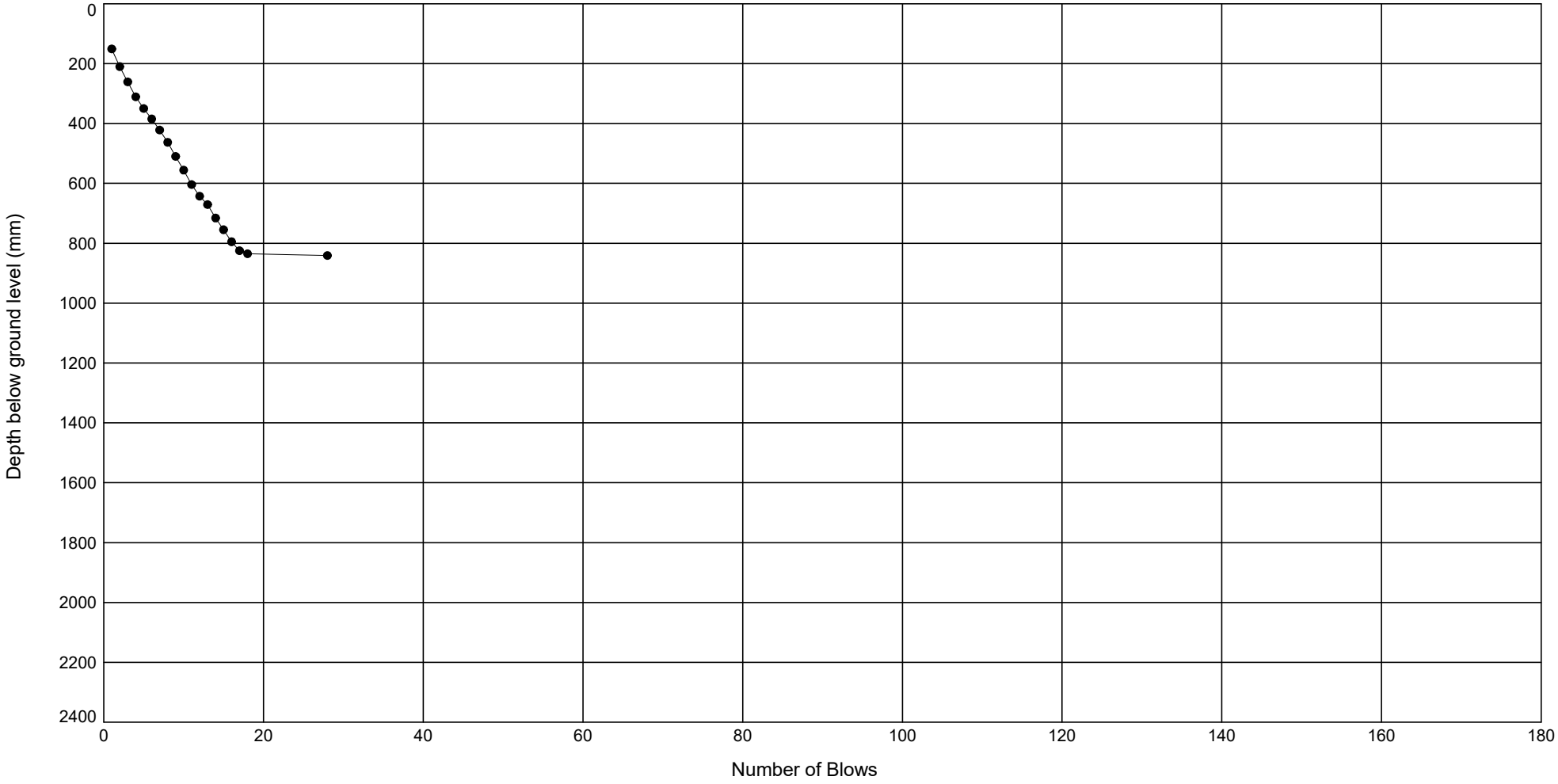
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DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **F22-TP515** Test Date : **28.09.23** Test Number : **1**

Ground Level (m AOD): **19.48** National Grid Co-ordinates: **E:639176.0 N:262215.0**



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Contract Ref:

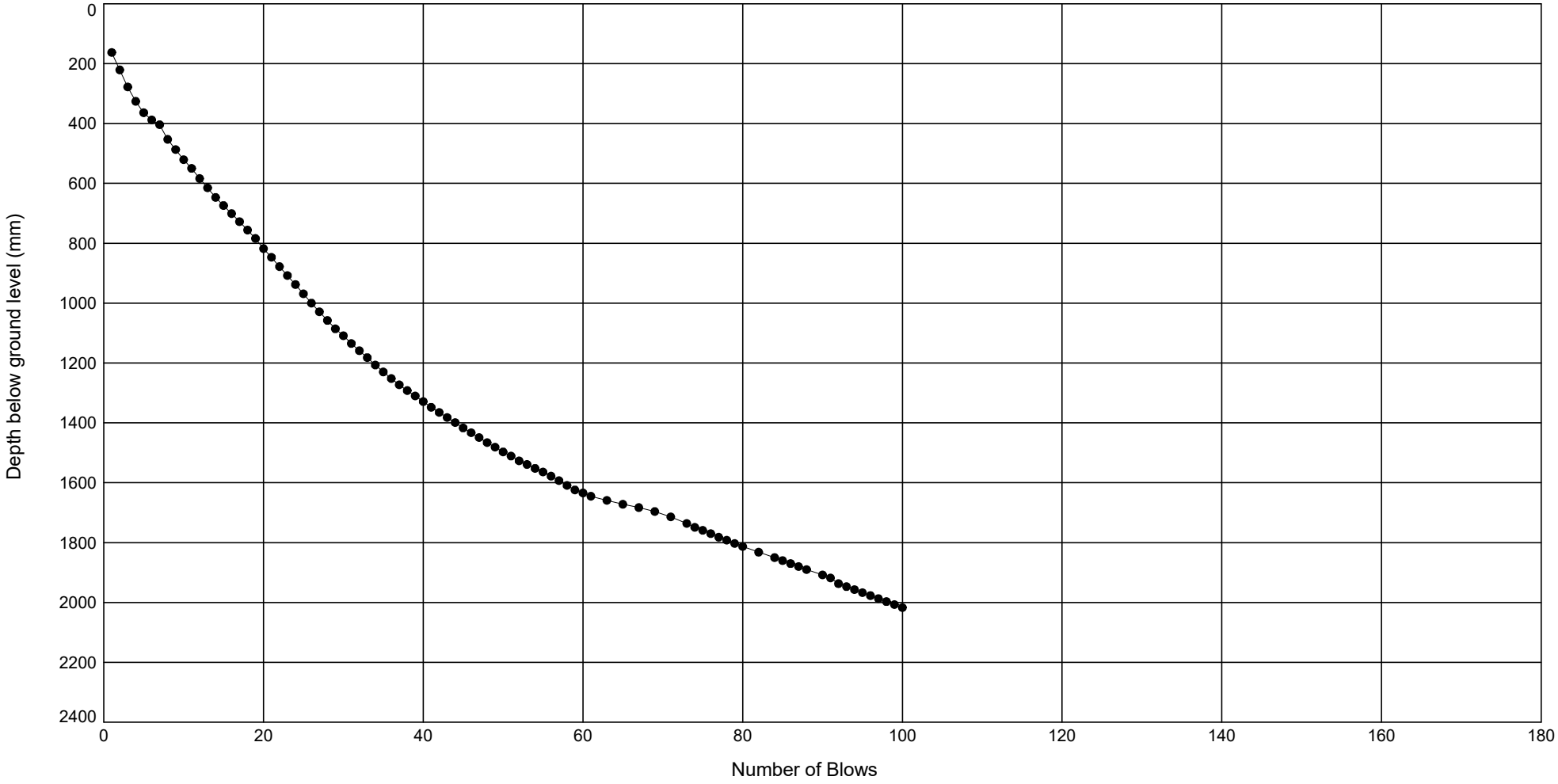
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DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **F22-TP515A** Test Date : **28.09.23** Test Number : **1**

Ground Level (m AOD): **19.48** National Grid Co-ordinates: **E:639176.0 N:262215.0**



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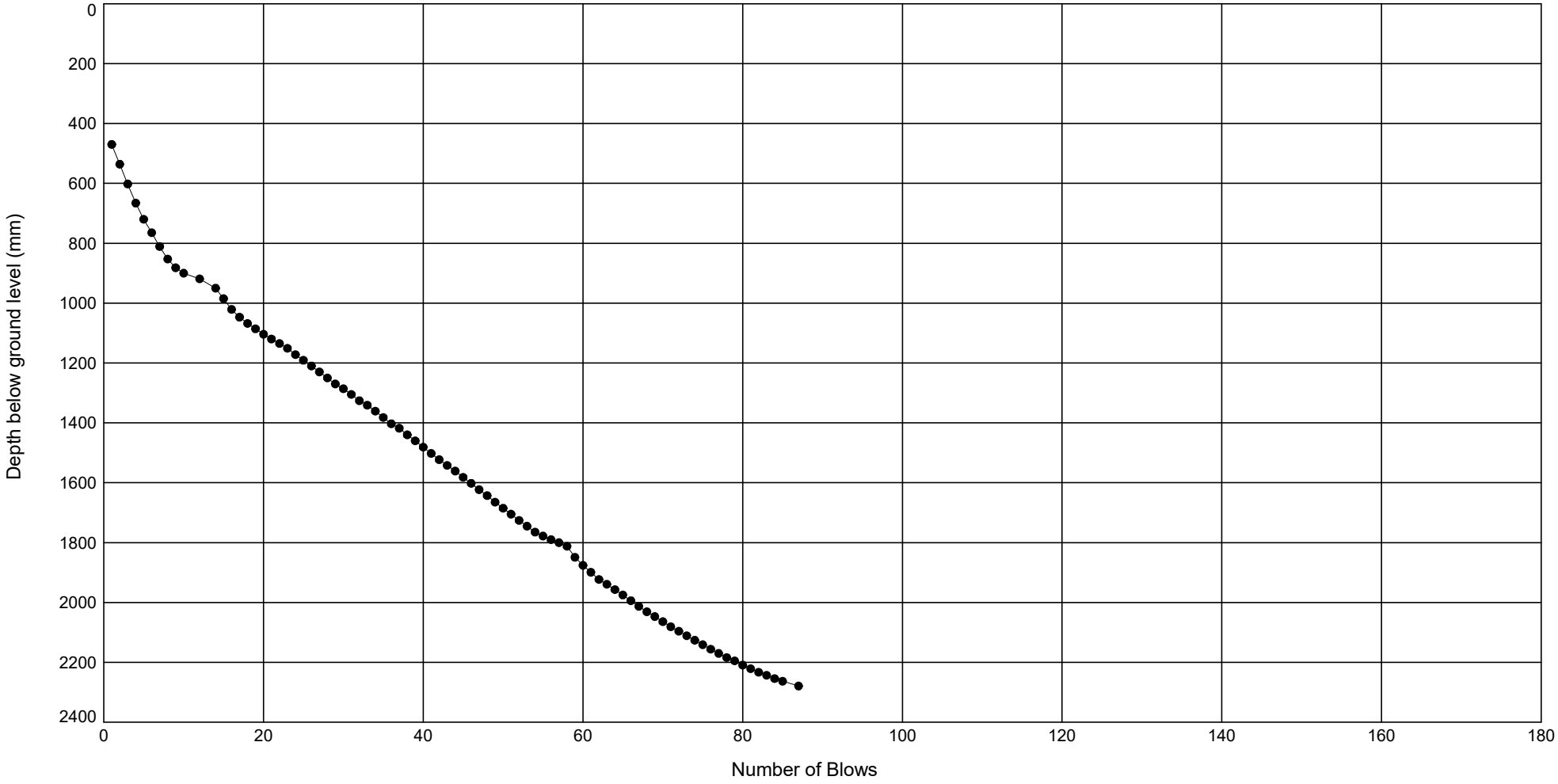
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DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **F22-TP516** Test Date : **14.09.23** Test Number : **1**

Ground Level (m AOD): **25.95** National Grid Co-ordinates: **E:639414.9 N:262383.6**



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Contract

Sealink Friston

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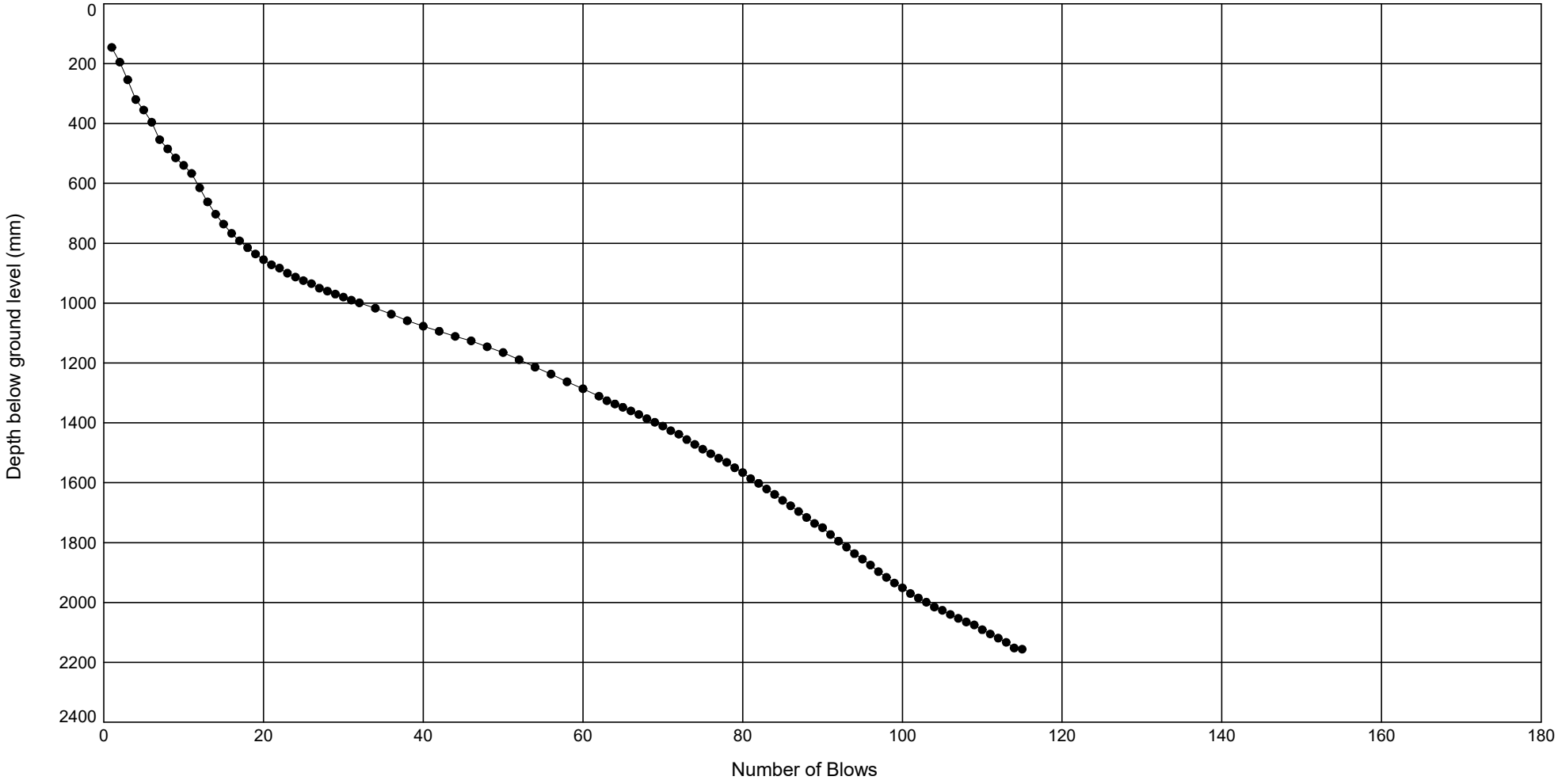
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DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **F22-TP518** Test Date : **14.09.23** Test Number : **1**

Ground Level (m AOD): **28.96** National Grid Co-ordinates: **E:639512.2 N:263133.9**



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Test Supervisor	Date	Checked By	Date
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Contract

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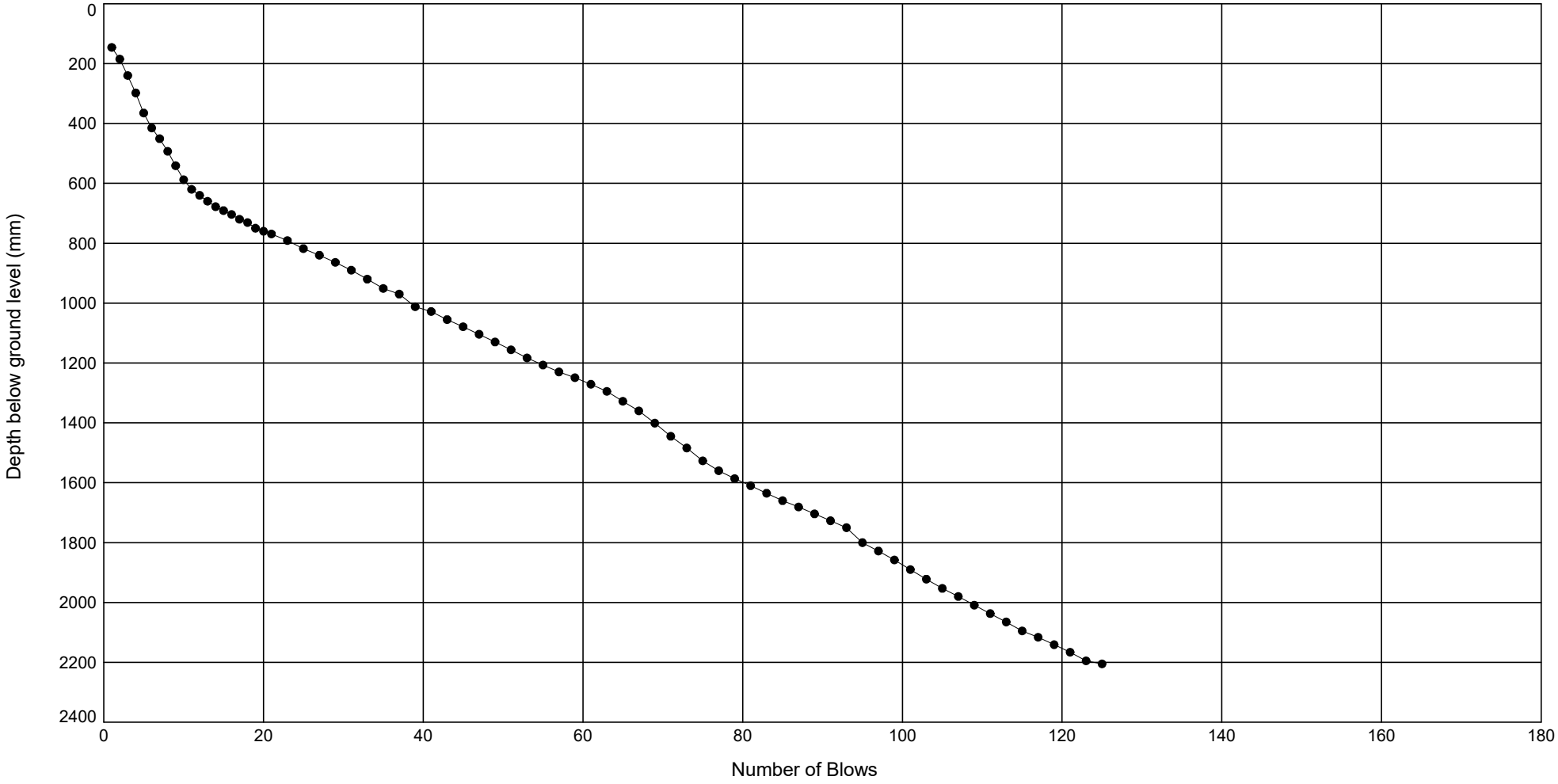
563835

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - DCP - 1 - BLOWS VS DEPTH - A4L | 563835_SEALINK_FRISTON.GPJ - v10_01. | 14/03/24 - 09:20 | AML1 |

DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **F22-TP525** Test Date : **20.09.23** Test Number : **1**

Ground Level (m AOD): **19.02** National Grid Co-ordinates: **E:640074.6 N:262869.9**



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Supervisor	Date	Checked By	Date
[redacted]	**20/09/23**	[redacted]	**14/03/24**

Contract

Sealink Friston

Contract Ref:

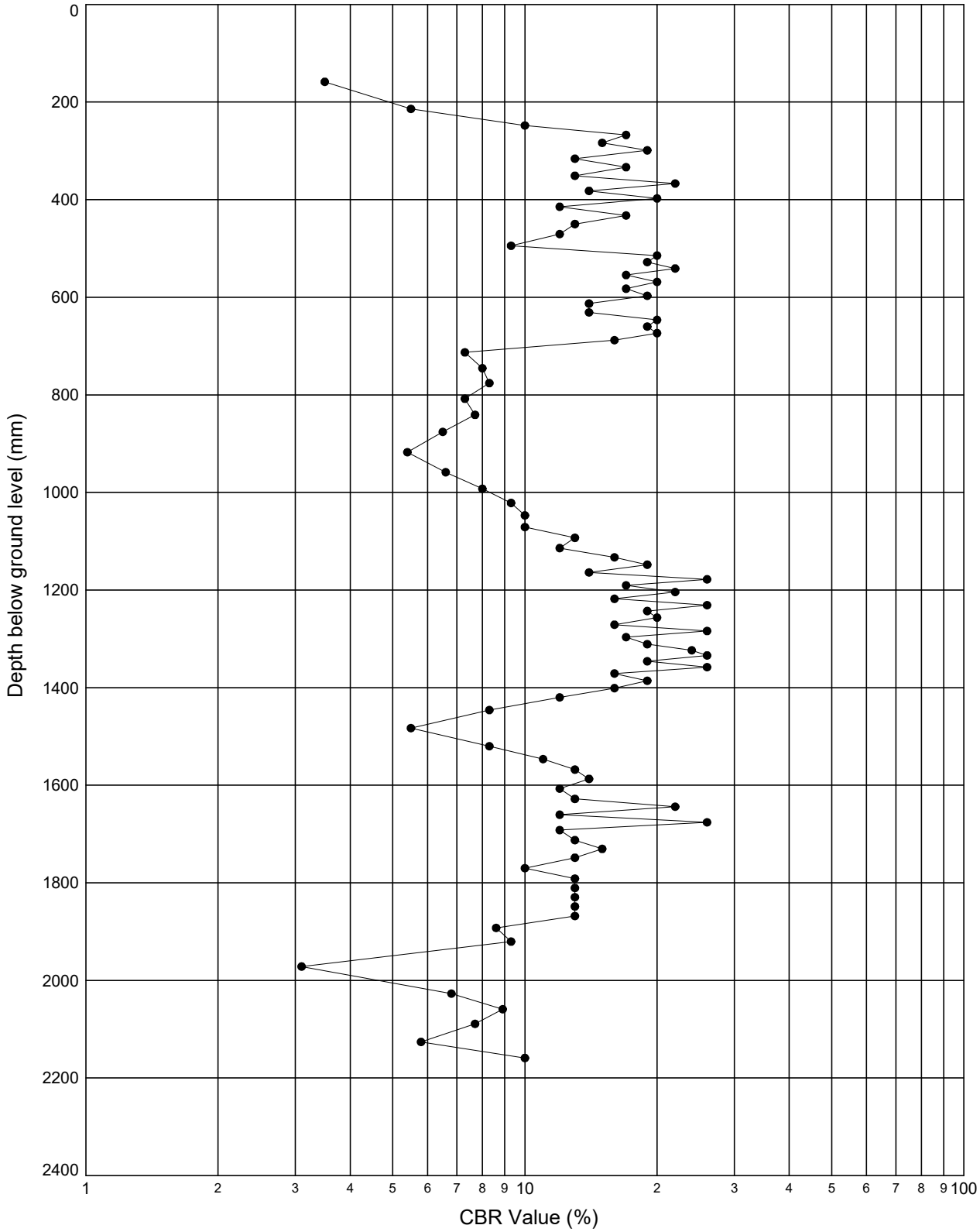
563835

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - DCP - 1 - BLOWS VS DEPTH - A4L | 563835_SEALINK_FRISTON.GPJ - v10_01. | 14/03/24 - 09:20 | AML1 |

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **F22-TP203** Test Date : **28.09.23** Test Number : **1**

Ground Level (m AOD): **22.84** National Grid Co-ordinates: **E:642242.0 N:260117.6**



Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

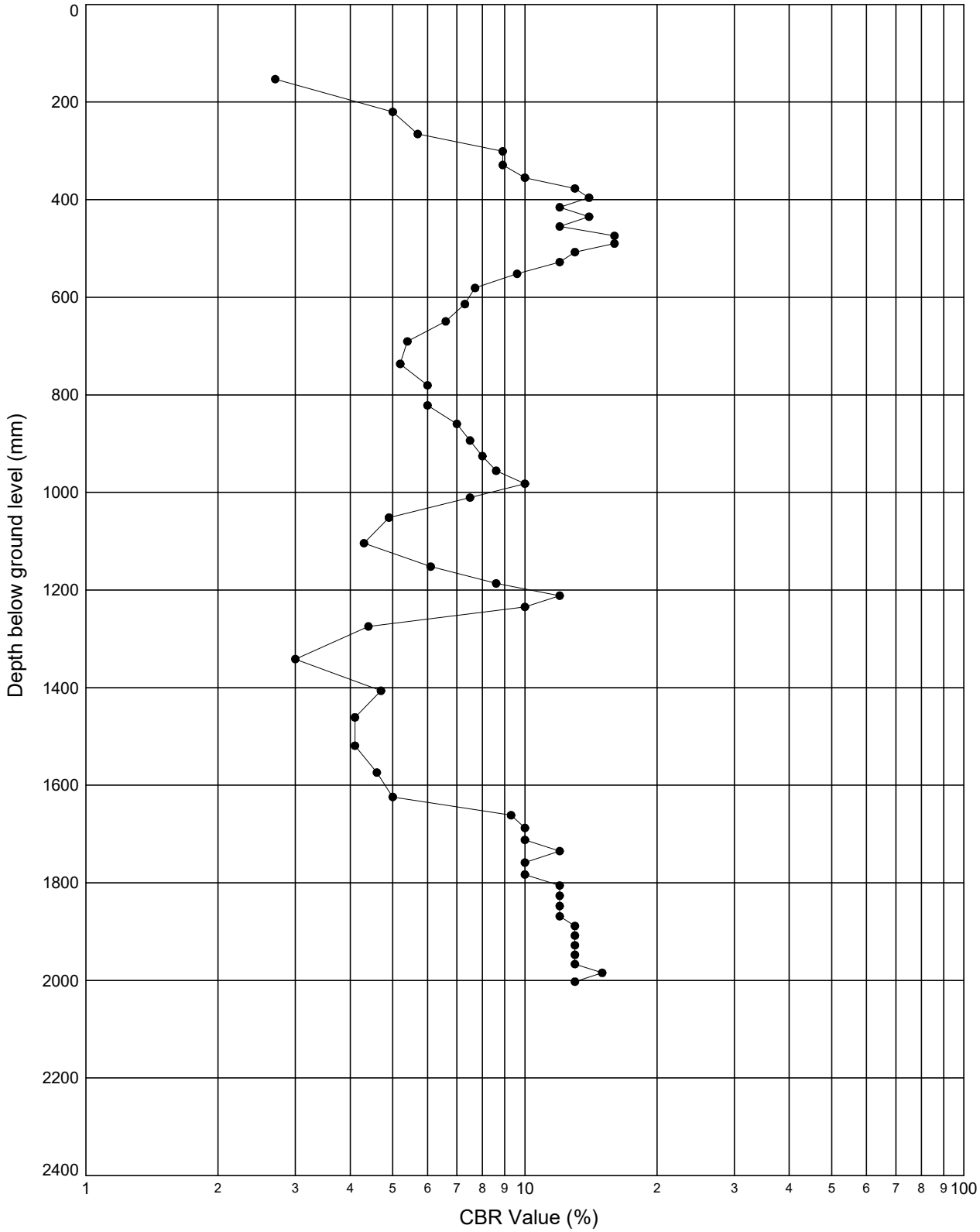
STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**28/09/23**	[redacted]	**13/03/24**
	Contract **Sealink Friston**		Contract Ref: **563835**	

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - DCP - 2 - CBR VALUE VS DEPTH - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 14/03/24 - 09:21 | AML1 |

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **F22-TP204** Test Date : **22.09.23** Test Number : **1**

Ground Level (m AOD): **14.68** National Grid Co-ordinates: **E:642801.5 N:259708.3**



Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

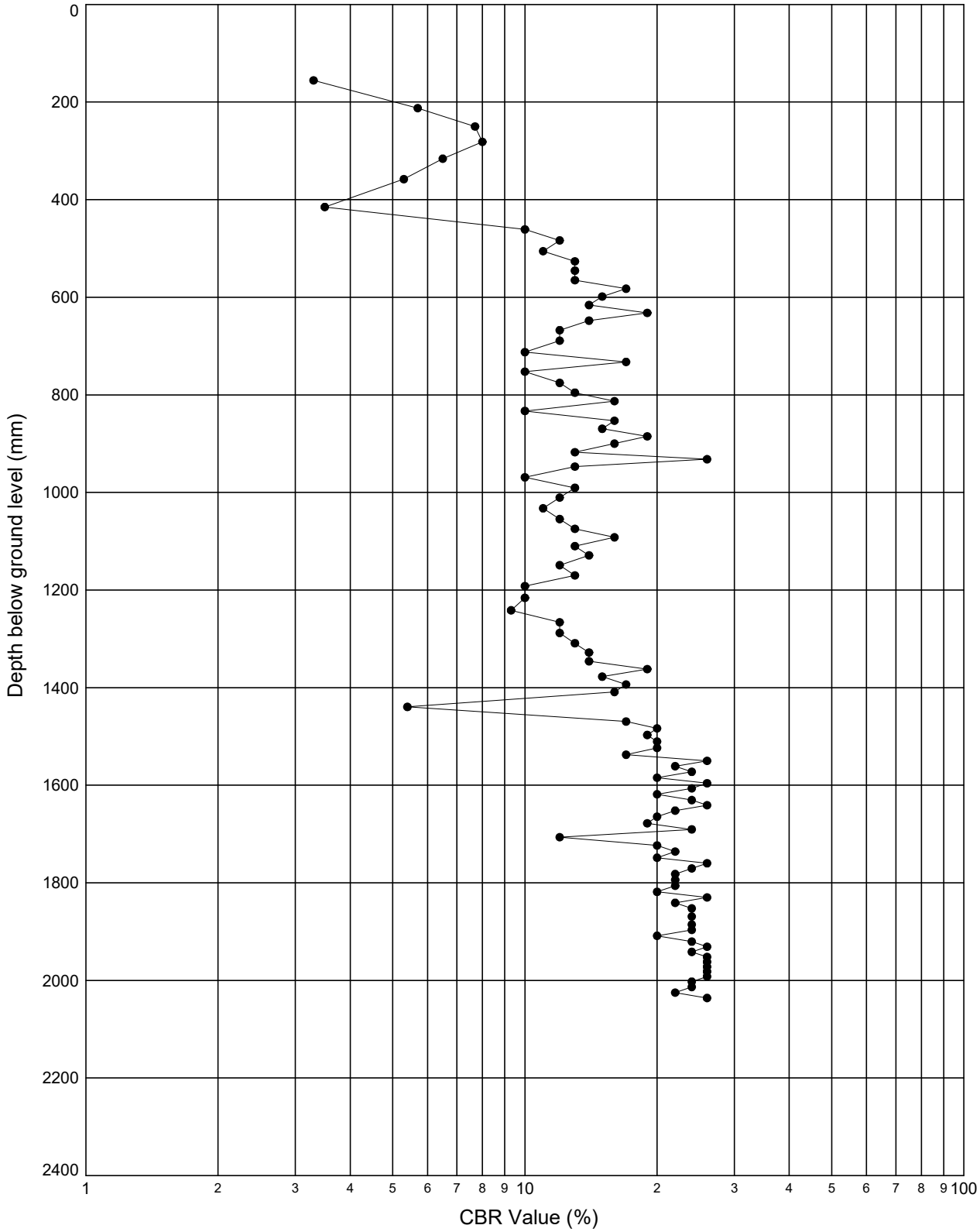
STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**22/09/23**	[redacted]	**14/03/24**
	Contract **Sealink Friston**		Contract Ref: **563835**	

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - DCP - 2 - CBR VALUE VS DEPTH - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 14/03/24 - 09:21 | AML1 |

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **F22-TP205** Test Date : **22.09.23** Test Number : **1**

Ground Level (m AOD): **15.53** National Grid Co-ordinates: **E:643240.6 N:259491.7**



Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

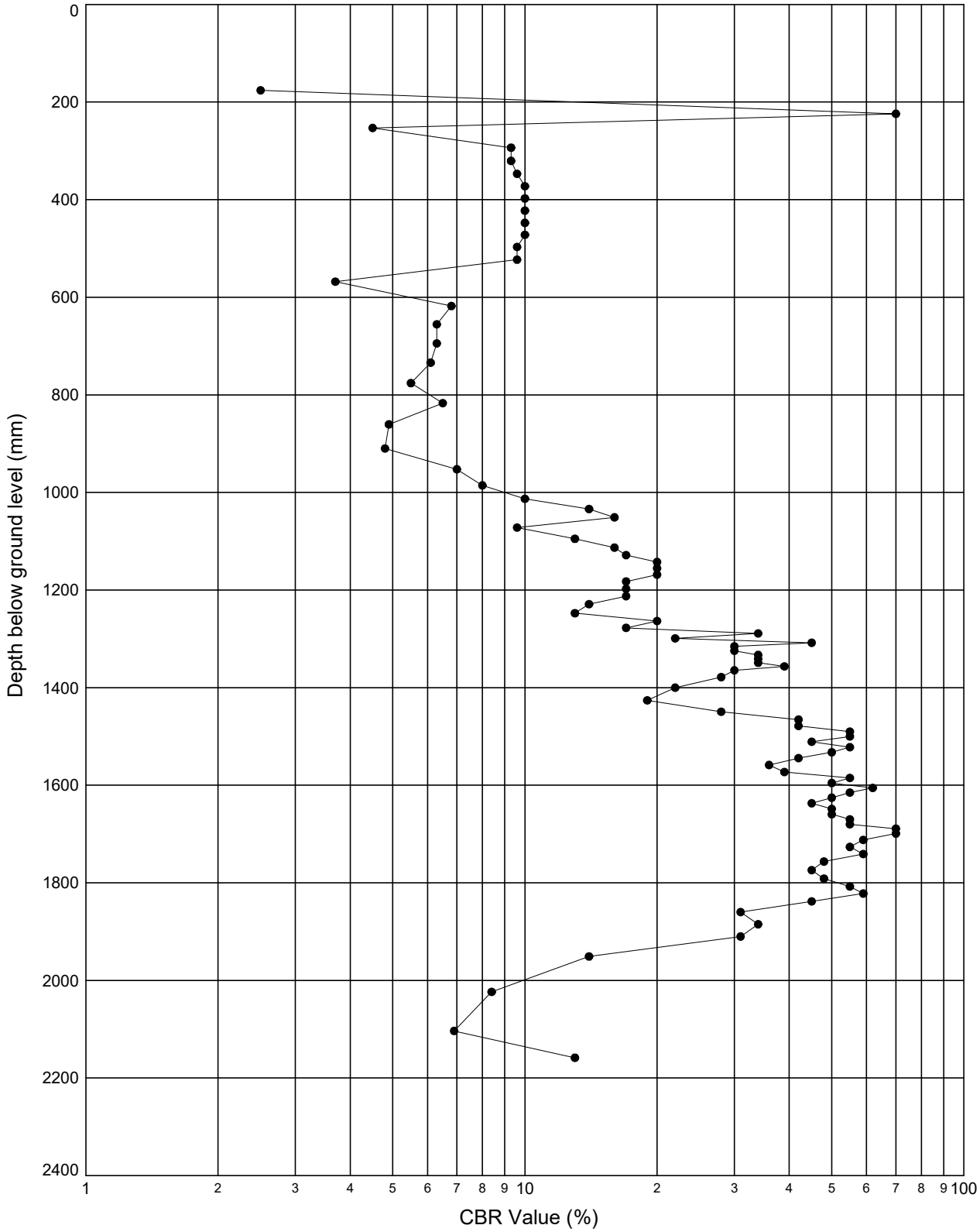
STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**22/09/23**	[redacted]	**14/03/24**
	Contract **Sealink Friston**		Contract Ref: **563835**	

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - DCP - 2 - CBR VALUE VS DEPTH - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 14/03/24 - 09:21 | AML1 |

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **F22-TP218** Test Date : **29.09.23** Test Number : **1**

Ground Level (m AOD): **19.70** National Grid Co-ordinates: **E:644029.8 N:259081.1**



Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

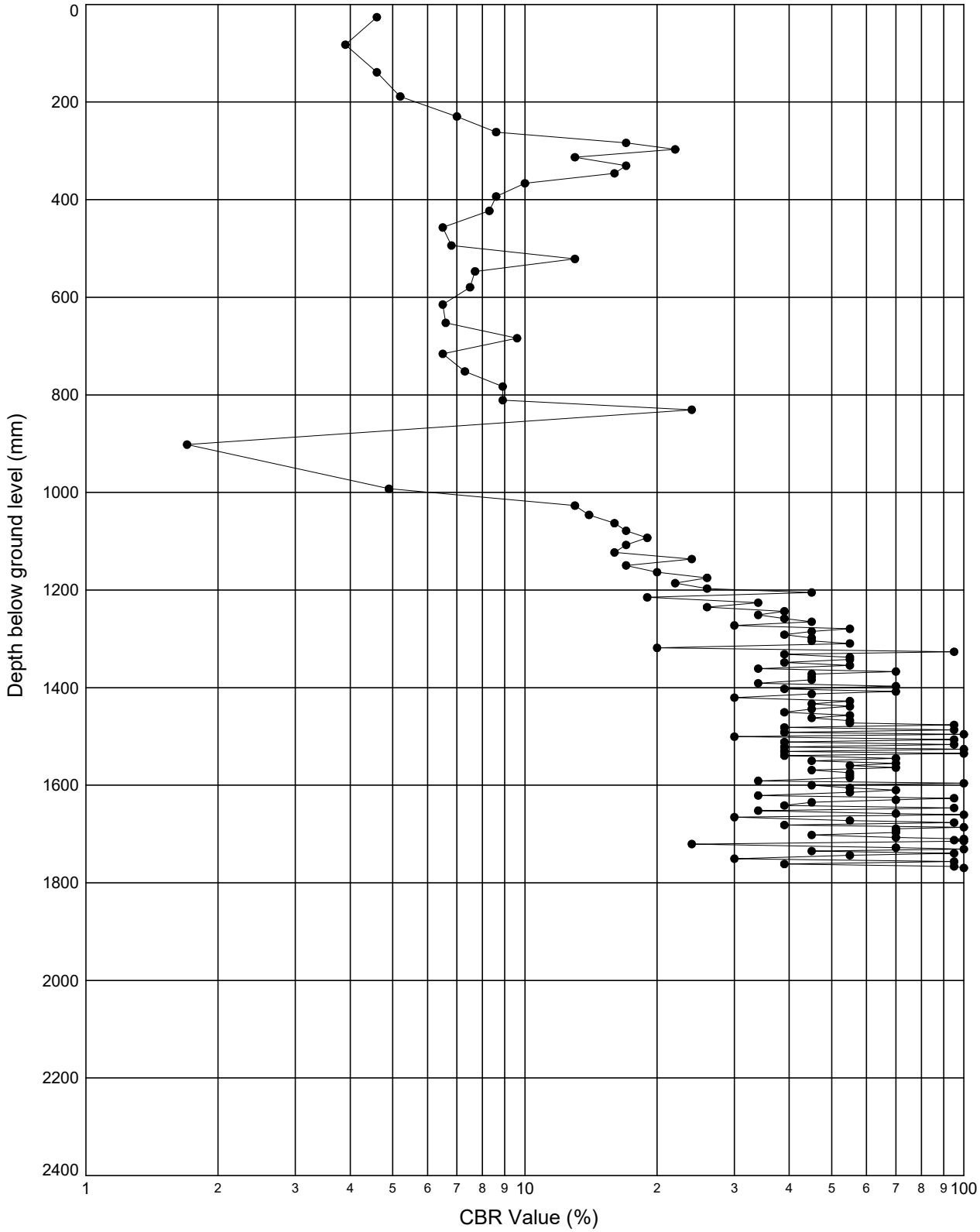
STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**29/09/23**	[redacted]	**13/03/24**
	Contract **Sealink Friston**		Contract Ref: **563835**	

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - DCP - 2 - CBR VALUE VS DEPTH - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 14/03/24 - 09:21 | AML1 |

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **F22-TP220** Test Date : **12.09.23** Test Number : **1**

Ground Level (m AOD): **19.70** National Grid Co-ordinates: **E:645035.1 N:258544.6**



Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

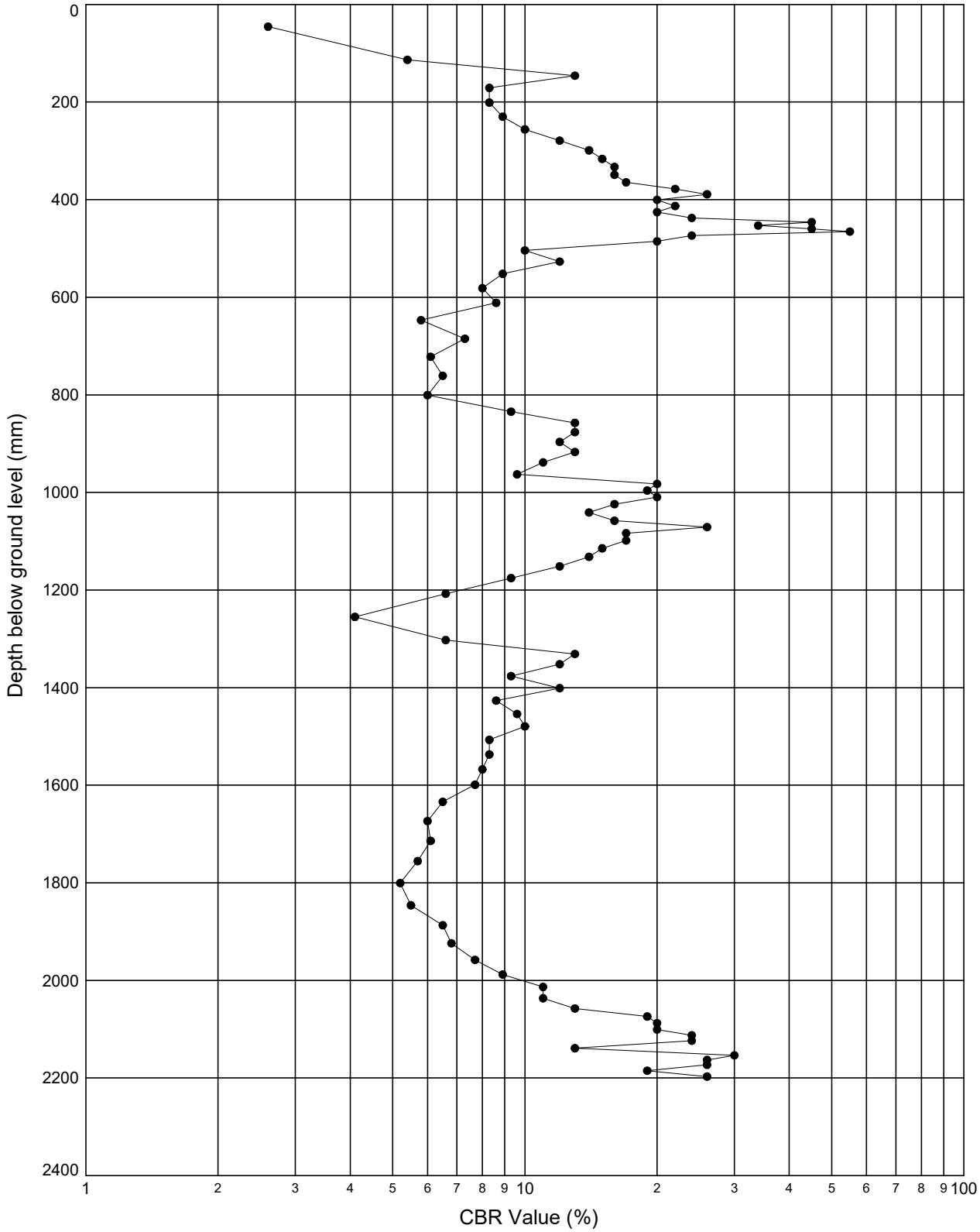
STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**12/09/23**	[redacted]	**14/03/24**
	Contract **Sealink Friston**		Contract Ref: **563835**	

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - DCP - 2 - CBR VALUE VS DEPTH - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 14/03/24 - 09:21 | AML1 |

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **F22-TP221** Test Date : **12.09.23** Test Number : **1**

Ground Level (m AOD): **18.22** National Grid Co-ordinates: **E:645423.8 N:258369.8**



Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

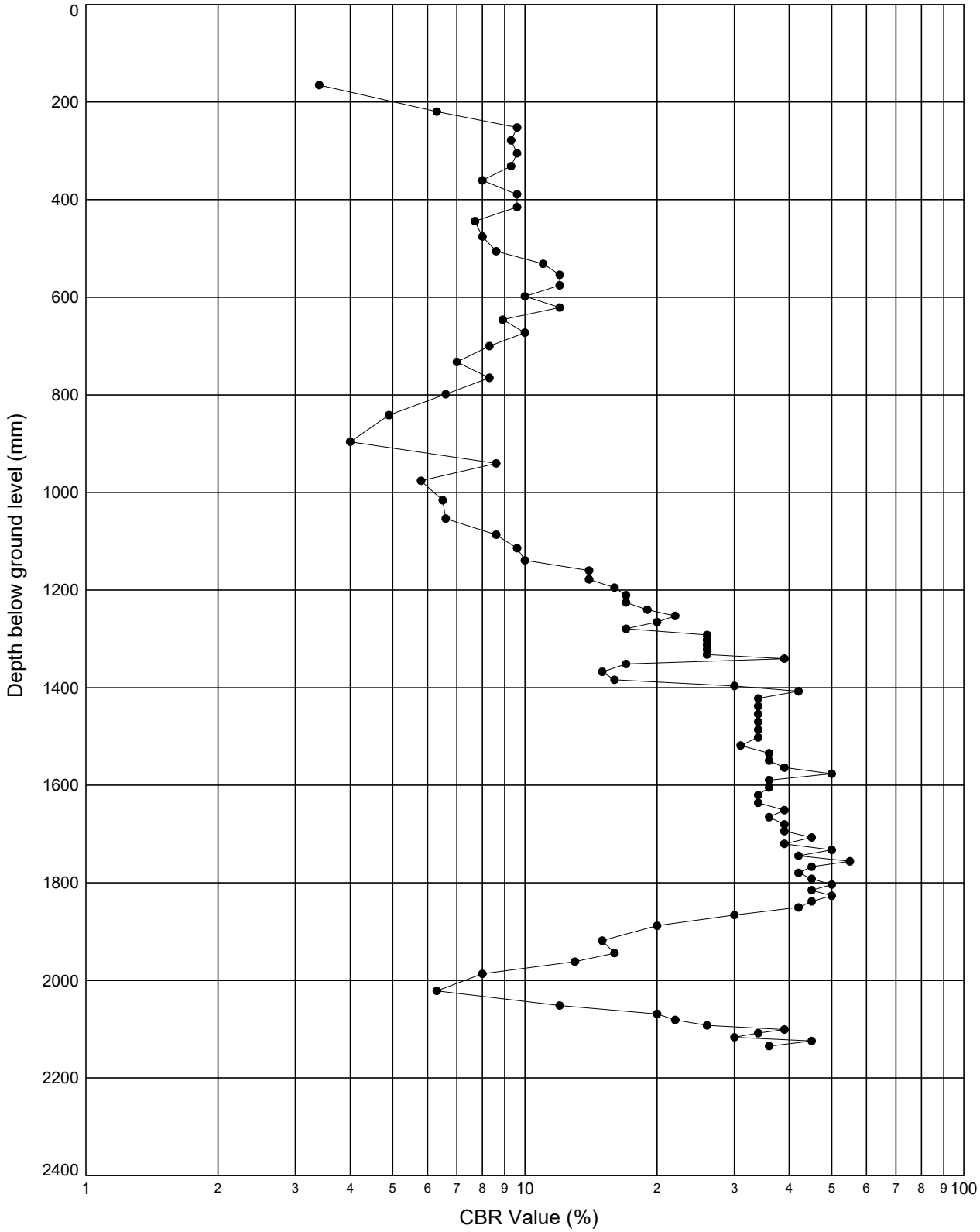
STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**12/09/23**	[redacted]	**14/03/24**
	Contract **Sealink Friston**		Contract Ref: **563835**	

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - DCP - 2 - CBR VALUE VS DEPTH - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 14/03/24 - 09:21 | AML1 |

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **F22-TP222** Test Date : **13.09.23** Test Number : **1**

Ground Level (m AOD): **10.88** National Grid Co-ordinates: **E:645947.7 N:258415.5**



Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

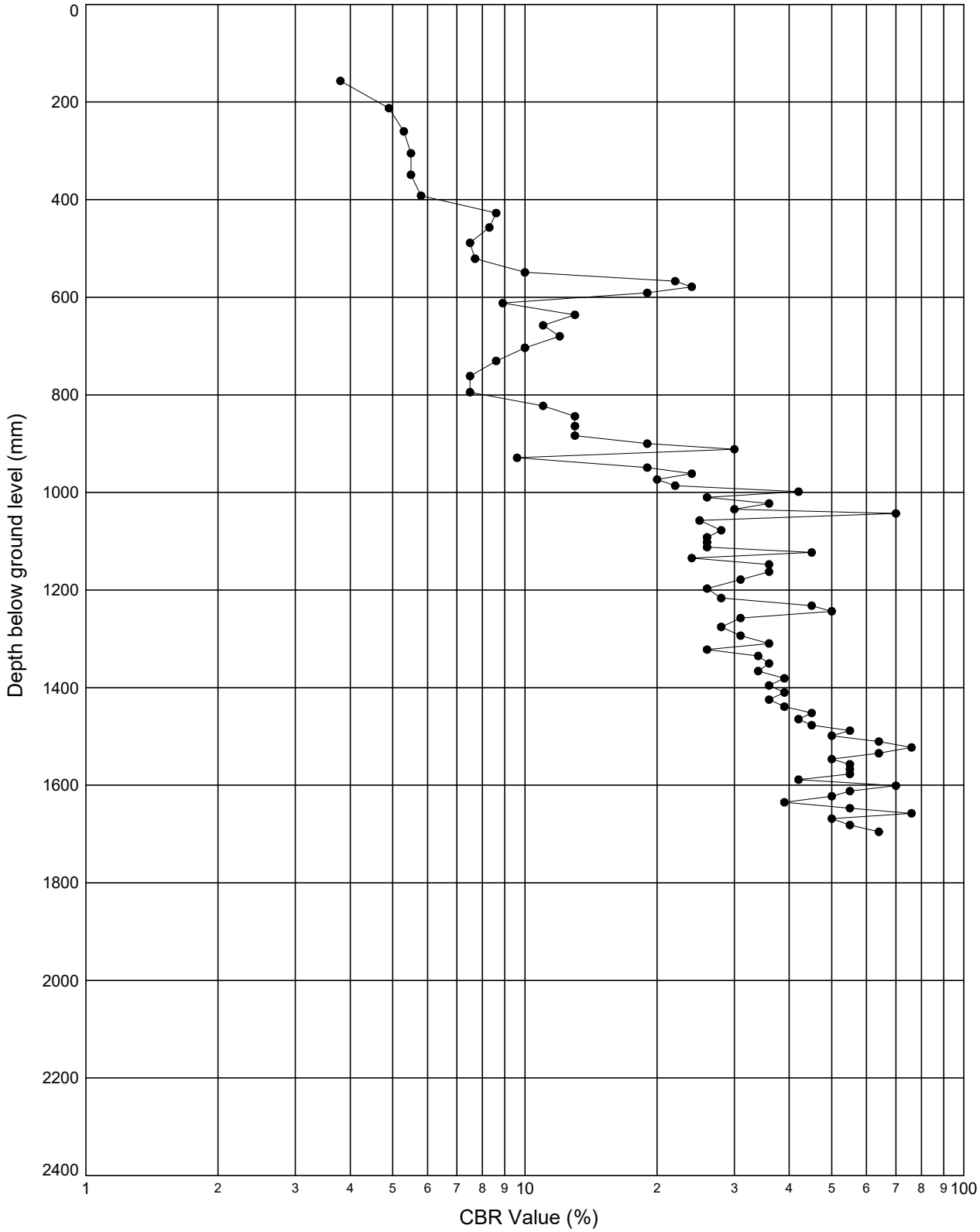
STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	13/09/23	[redacted]	14/03/24
	Contract **Sealink Friston**		Contract Ref: **563835**	

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - DCP - 2 - CBR VALUE VS DEPTH - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 14/03/24 - 09:21 | AML1 |

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **F22-TP229** Test Date : **27.09.23** Test Number : **1**

Ground Level (m AOD): **20.91** National Grid Co-ordinates: **E:640107.0 N:262218.8**



Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

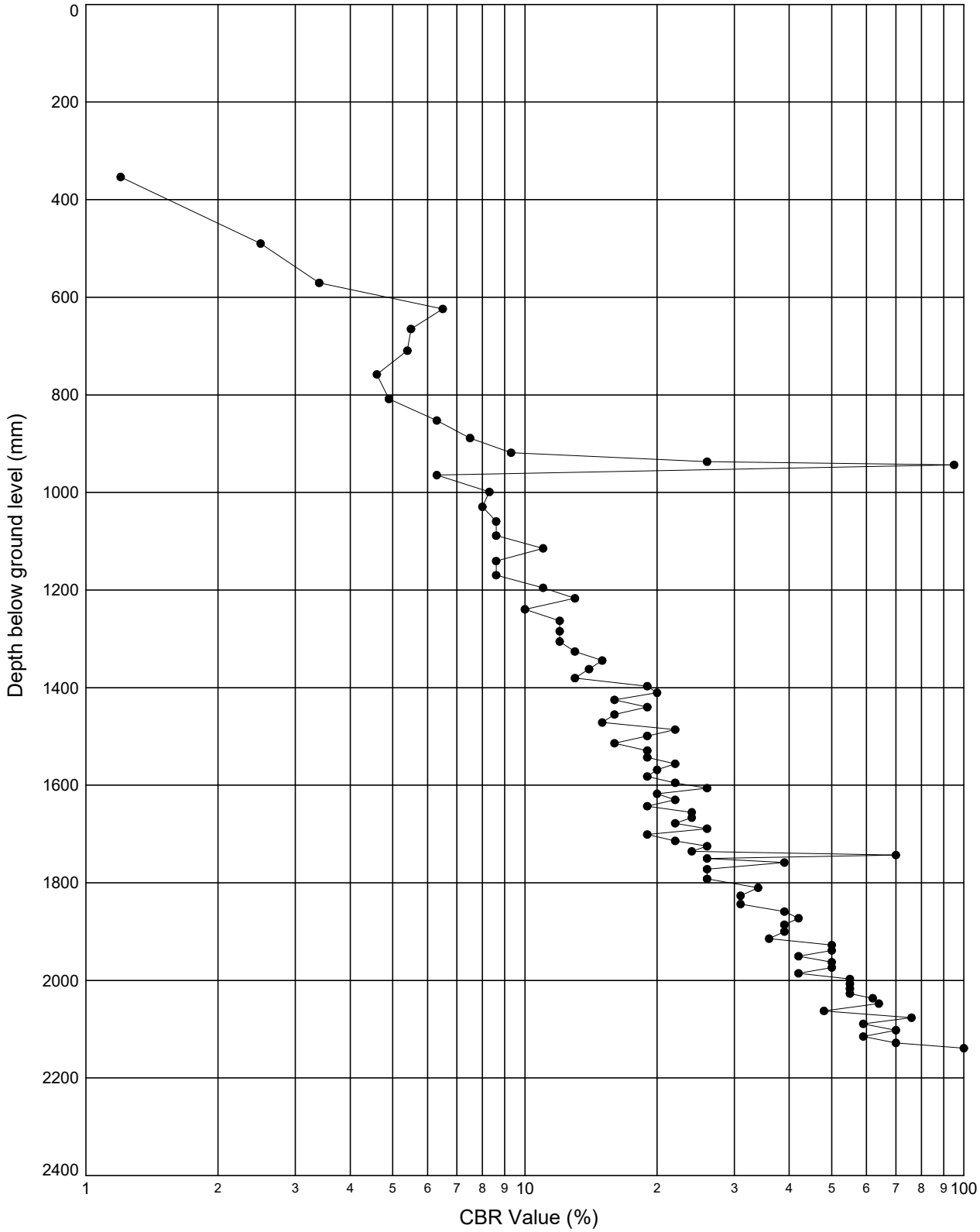
STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**27/09/23**	[redacted]	**13/03/24**
	Contract **Sealink Friston**		Contract Ref: **563835**	

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - DCP - 2 - CBR VALUE VS DEPTH - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 14/03/24 - 09:21 | AML1 |

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **F22-TP310** Test Date : **15.09.23** Test Number : **1**

Ground Level (m AOD): **24.20** National Grid Co-ordinates: **E:639820.9 N:262425.1**



Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

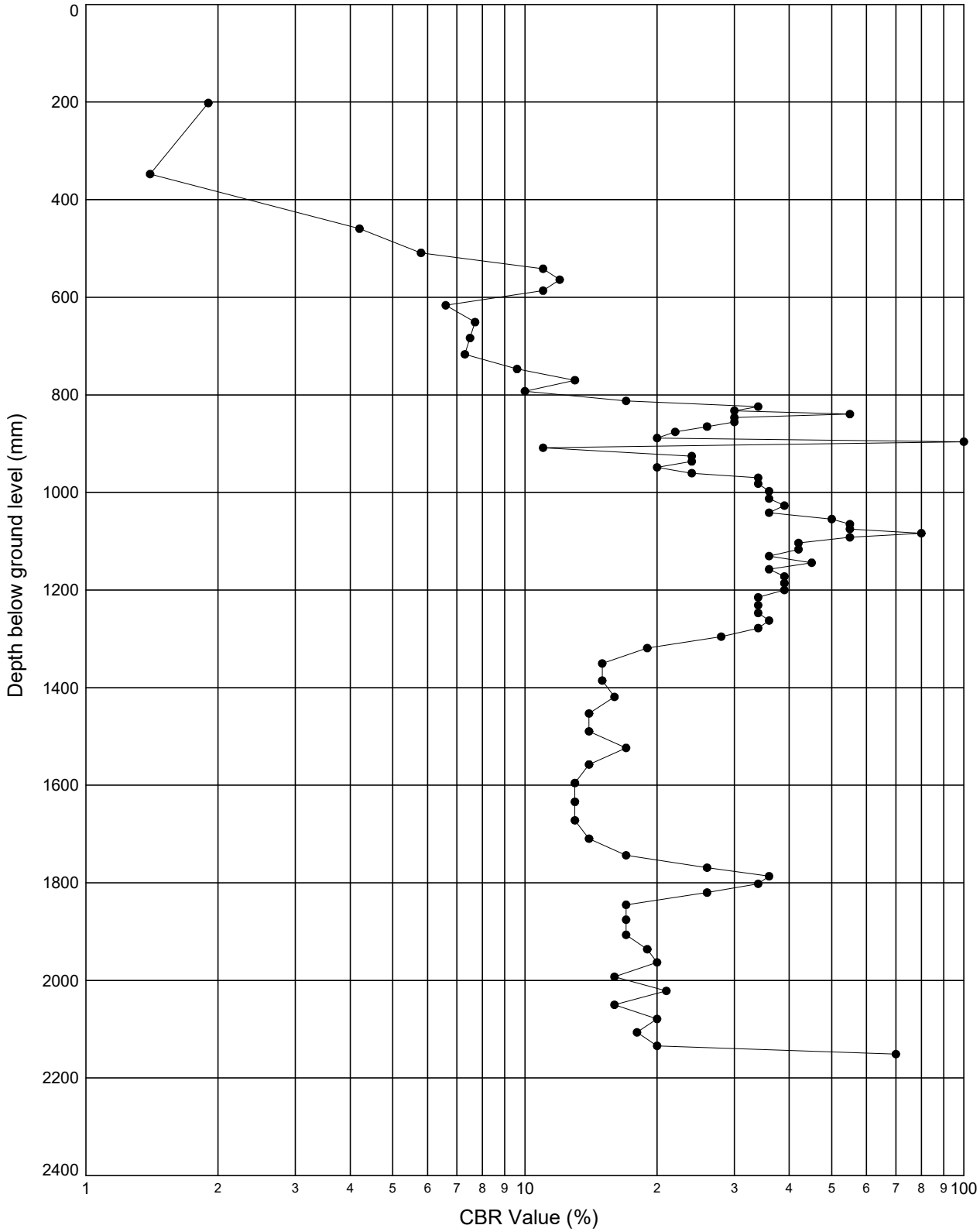
STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**15/09/23**	[redacted]	**13/03/24**
	Contract **Sealink Friston**		Contract Ref: **563835**	

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - DCP - 2 - CBR VALUE VS DEPTH - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 14/03/24 - 09:21 | AML1 |

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **F22-TP311** Test Date : **15.09.23** Test Number : **1**

Ground Level (m AOD): **25.33** National Grid Co-ordinates: **E:639693.0 N:262366.3**



Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Supervisor	Date	Checked By	Date
[redacted]	15/09/23	[redacted]	13/03/24

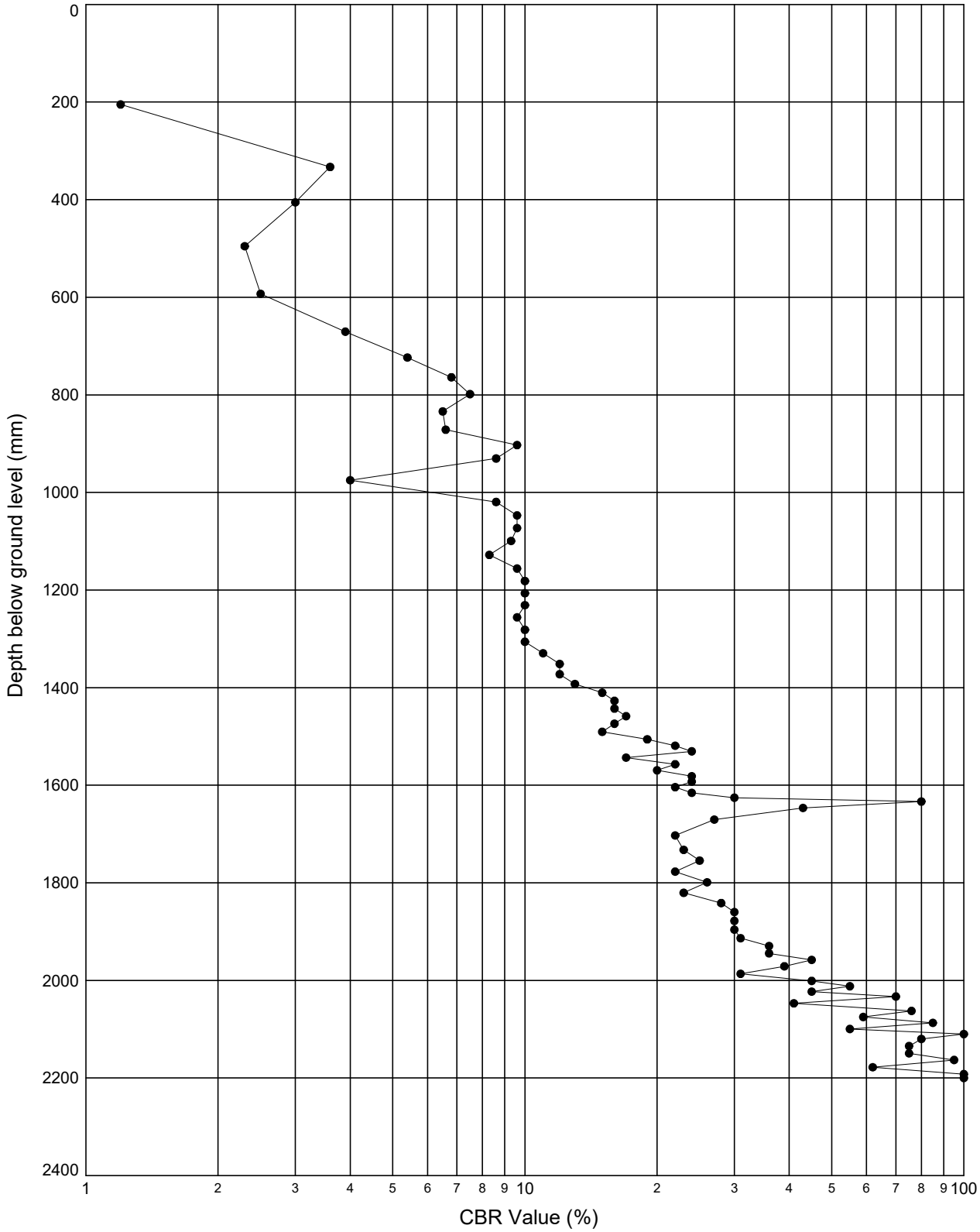
Contract	Contract Ref:
Sealink Friston	**563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - DCP - 2 - CBR VALUE VS DEPTH - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 14/03/24 - 09:21 | AML1 |

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **F22-TP312** Test Date : **18.09.23** Test Number : **1**

Ground Level (m AOD): **24.40** National Grid Co-ordinates: **E:639883.9 N:262316.9**



Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

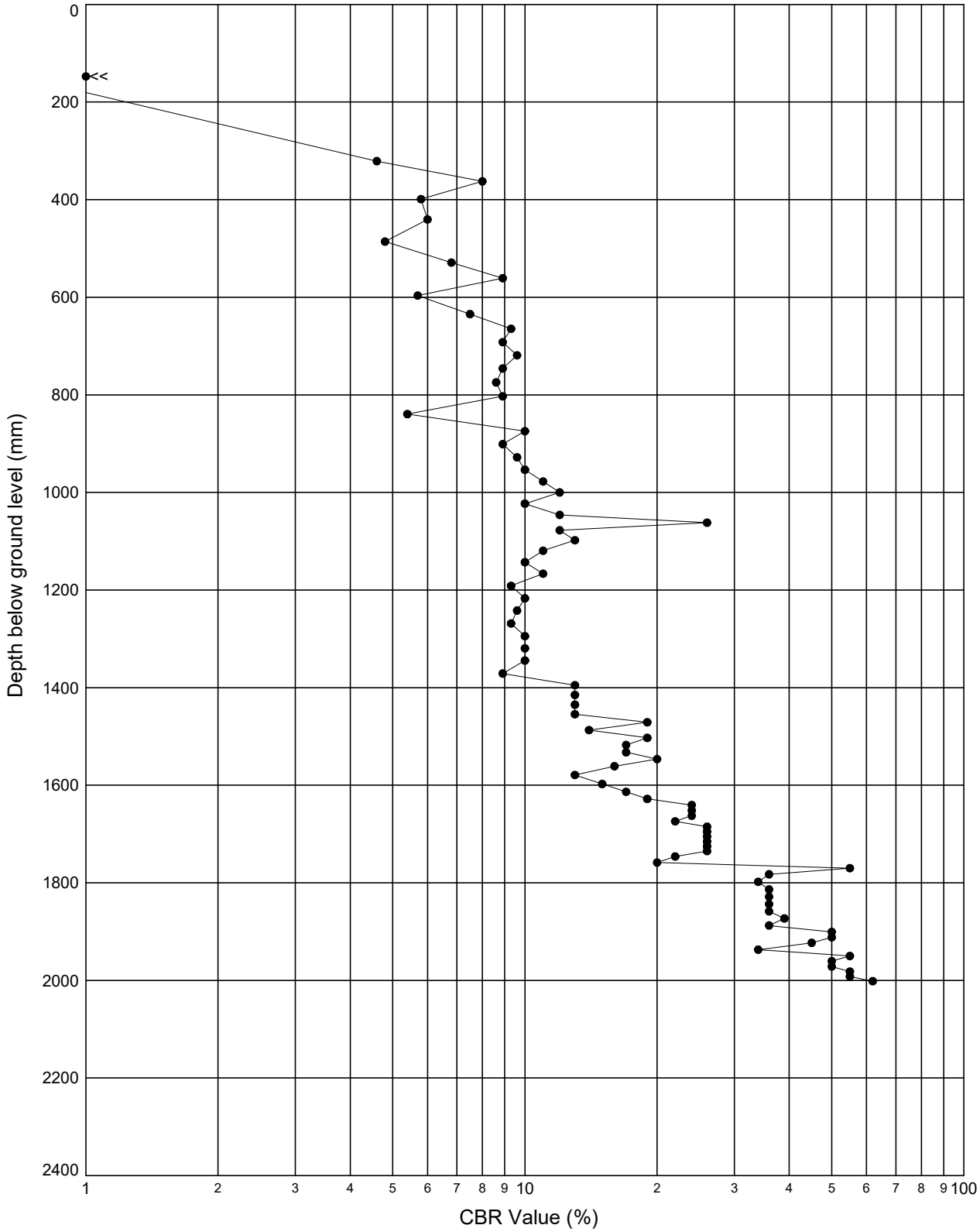
STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**18/09/23**	[redacted]	**13/03/24**
	Contract **Sealink Friston**		Contract Ref: **563835**	

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - DCP - 2 - CBR VALUE VS DEPTH - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 14/03/24 - 09:21 | AML1 |

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **F22-TP313** Test Date : **14.09.23** Test Number : **1**

Ground Level (m AOD): **24.98** National Grid Co-ordinates: **E:639659.7 N:262254.6**



Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

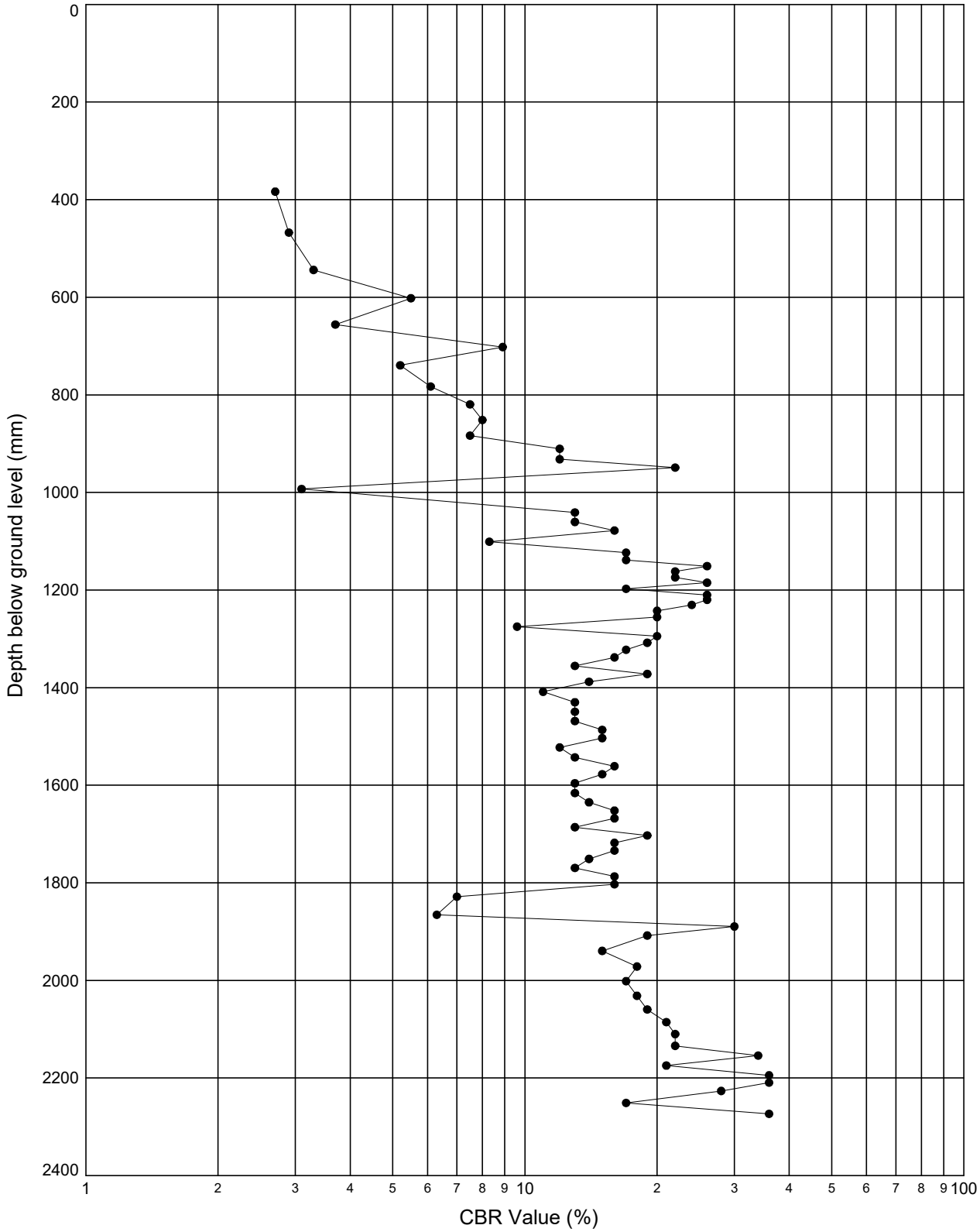
STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**14/09/23**	[redacted]	**14/03/24**
	Contract **Sealink Friston**		Contract Ref: **563835**	

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - DCP - 2 - CBR VALUE VS DEPTH - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 14/03/24 - 09:21 | AML1 |

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **F22-TP314** Test Date : **18.09.23** Test Number : **1**

Ground Level (m AOD): **24.86** National Grid Co-ordinates: **E:639835.2 N:262206.6**



Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

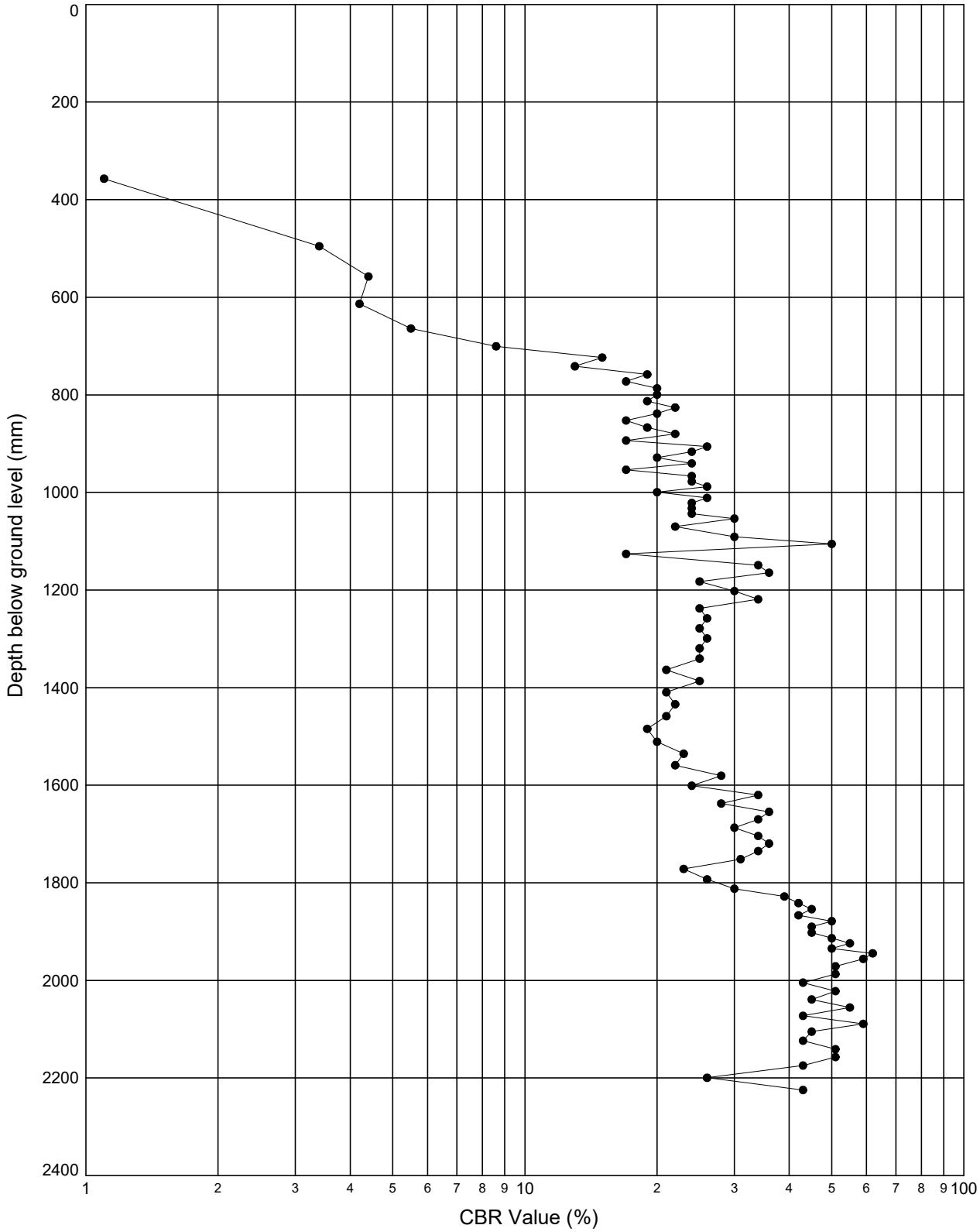
STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**18/09/23**	[redacted]	**14/03/24**
	Contract **Sealink Friston**		Contract Ref: **563835**	

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - DCP - 2 - CBR VALUE VS DEPTH - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 14/03/24 - 09:21 | AML1 |

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **F22-TP315** Test Date : **18.09.23** Test Number : **1**

Ground Level (m AOD): **23.15** National Grid Co-ordinates: **E:639693.8 N:262143.0**



Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

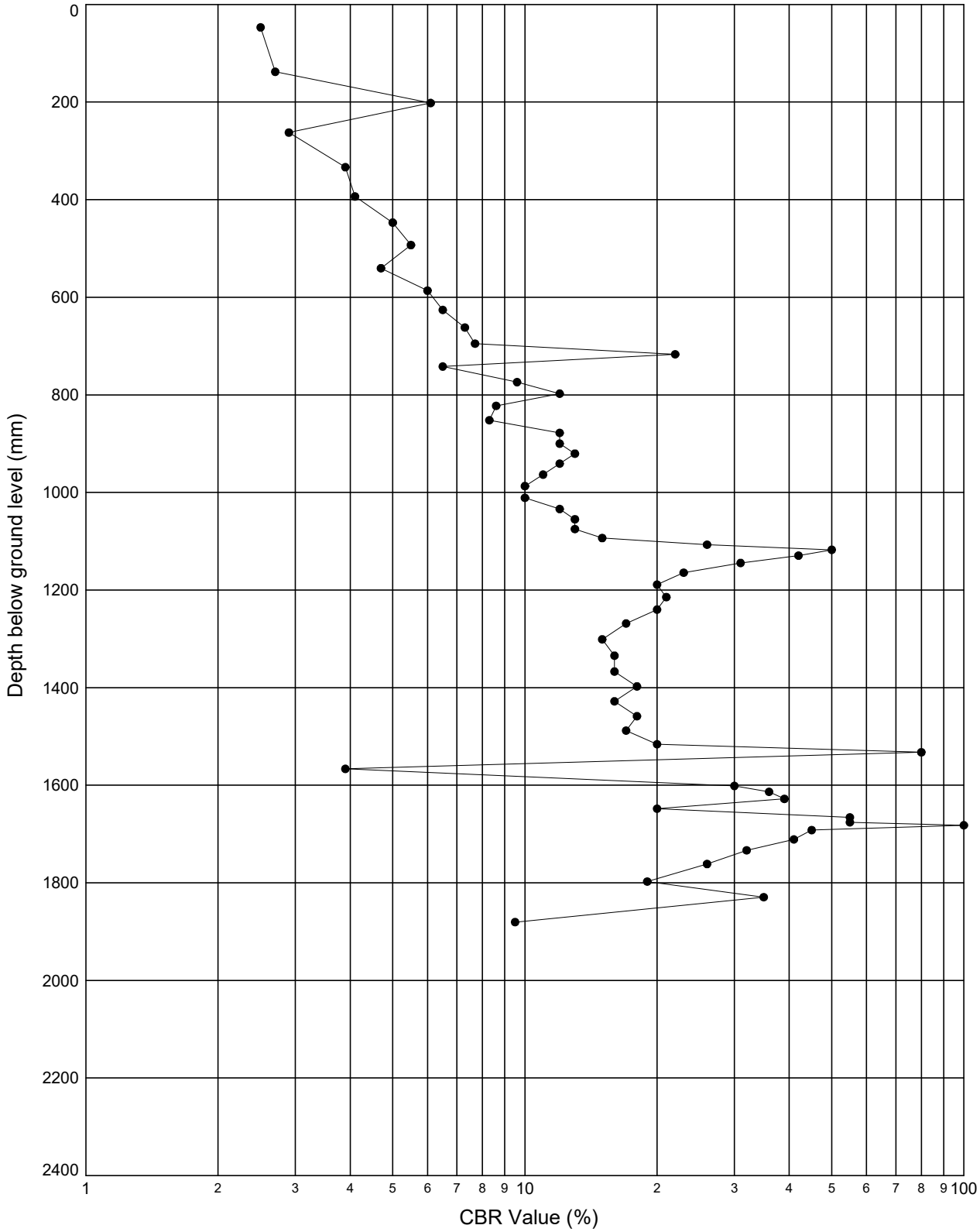
STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**18/09/23**	[redacted]	**14/03/24**
	Contract **Sealink Friston**		Contract Ref: **563835**	

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - DCP - 2 - CBR VALUE VS DEPTH - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 14/03/24 - 09:21 | AML1 |

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **F22-TP316** Test Date : **19.09.23** Test Number : **1**

Ground Level (m AOD): **23.74** National Grid Co-ordinates: **E:639828.3 N:262046.8**



Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

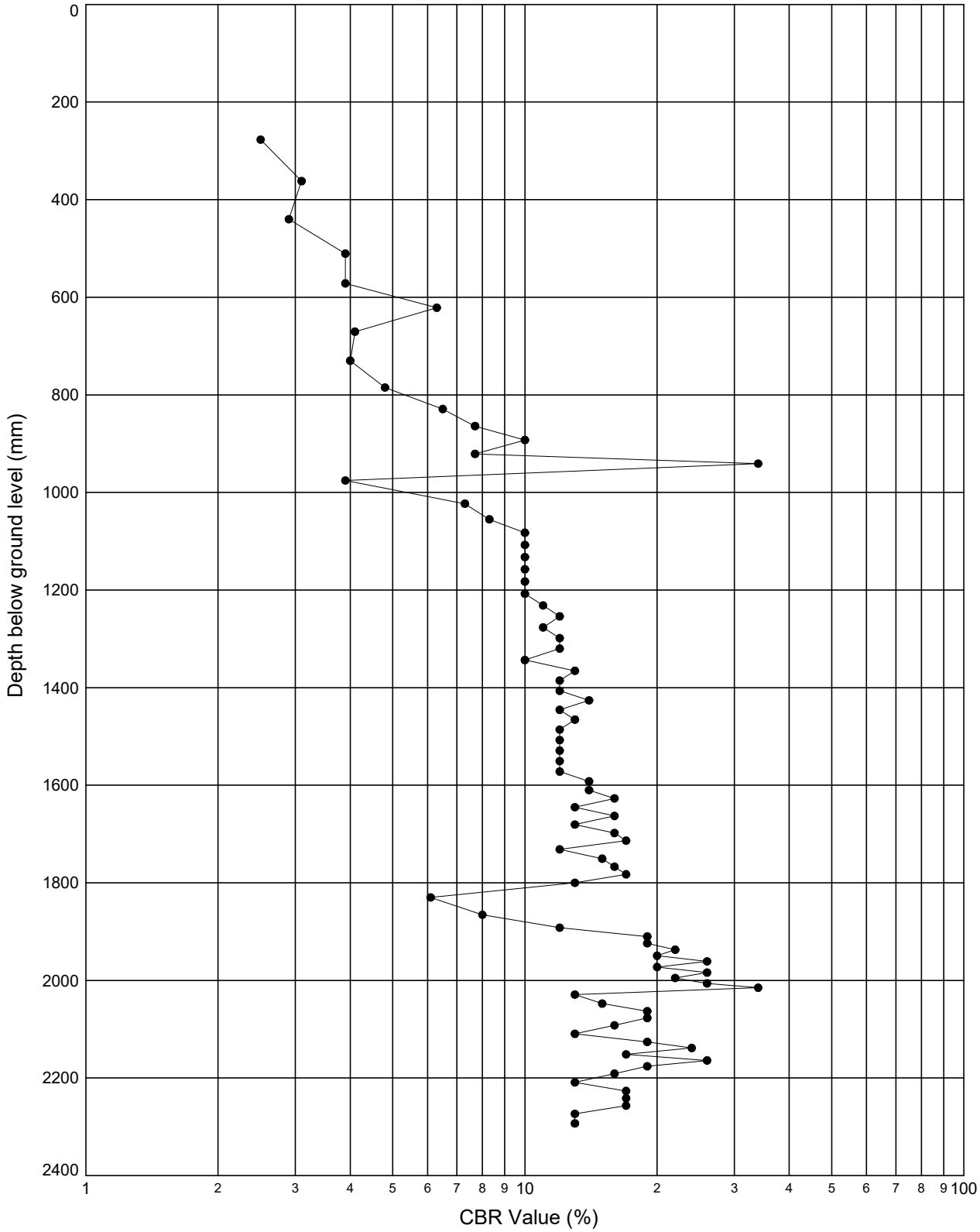
STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**19/09/23**	[redacted]	**14/03/24**
	Contract **Sealink Friston**		Contract Ref: **563835**	

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - DCP - 2 - CBR VALUE VS DEPTH - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 14/03/24 - 09:21 | AML1 |

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **F22-TP317** Test Date : **20.09.23** Test Number : **1**

Ground Level (m AOD): **23.79** National Grid Co-ordinates: **E:639959.0 N:262235.8**



Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

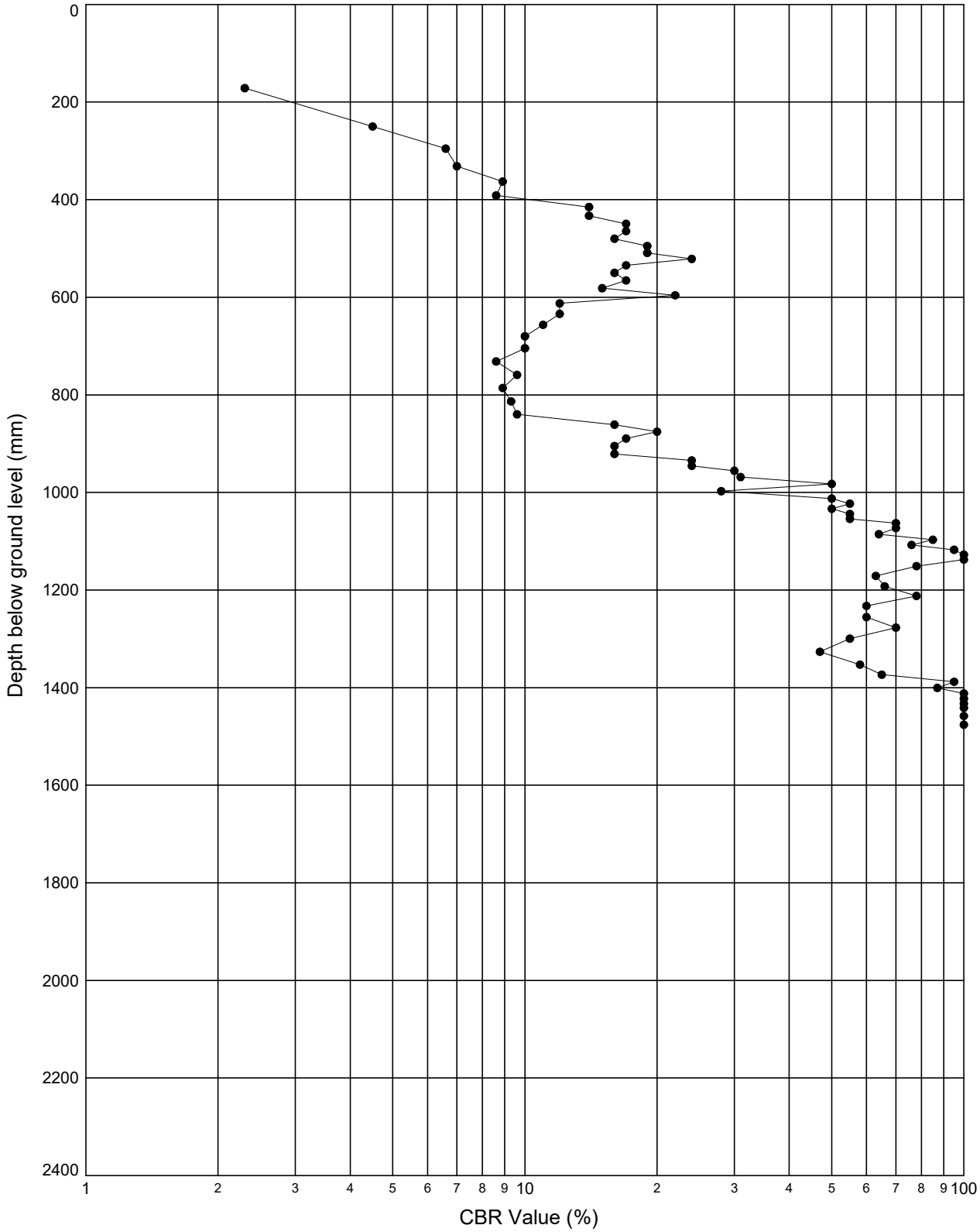
STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**20/09/23**	[redacted]	**13/03/24**
	Contract **Sealink Friston**		Contract Ref: **563835**	

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - DCP - 2 - CBR VALUE VS DEPTH - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 14/03/24 - 09:21 | AML1 |

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **F22-TP404** Test Date : **26.09.23** Test Number : **1**

Ground Level (m AOD): **13.06** National Grid Co-ordinates: **E:643184.7 N:259363.9**



Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

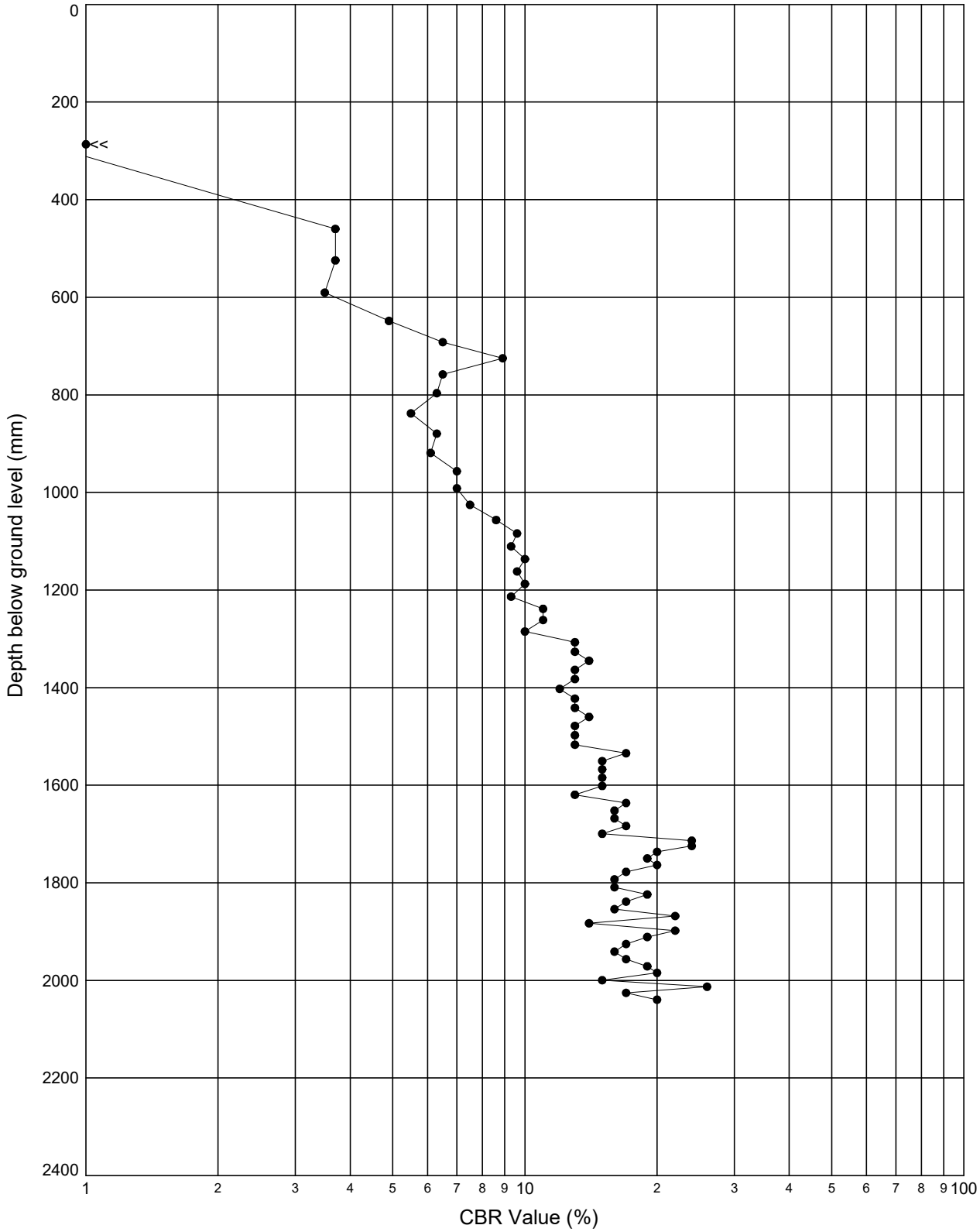
STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**26/09/23**	[redacted]	**13/03/24**
	Contract **Sealink Friston**		Contract Ref: **563835**	

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - DCP - 2 - CBR VALUE VS DEPTH - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 14/03/24 - 09:21 | AML1 |

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **F22-TP406** Test Date : **27.09.23** Test Number : **1**

Ground Level (m AOD): **20.57** National Grid Co-ordinates: **E:640194.9 N:262416.6**



Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

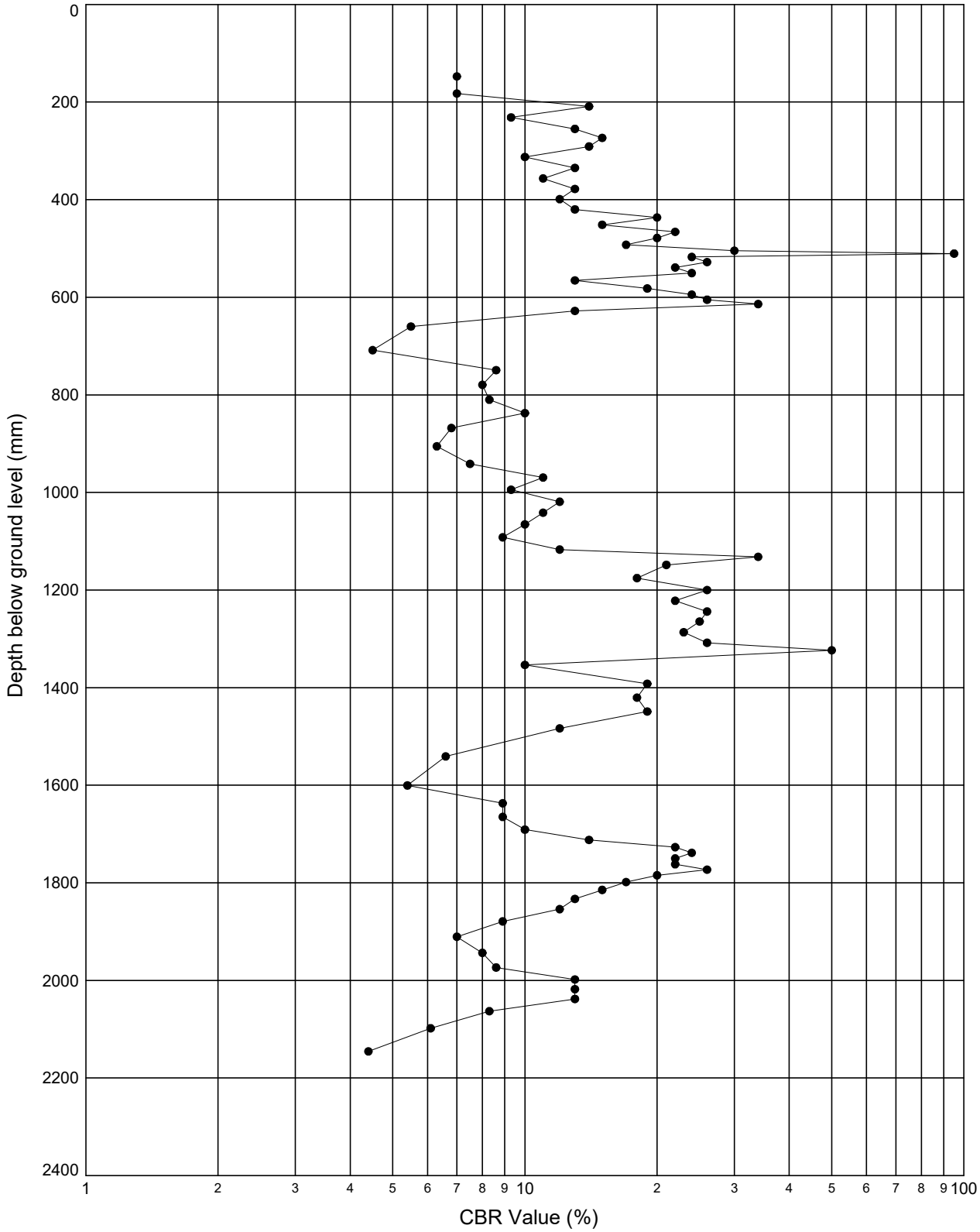
STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**27/09/23**	[redacted]	**13/03/24**
	Contract **Sealink Friston**		Contract Ref: **563835**	

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - DCP - 2 - CBR VALUE VS DEPTH - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 14/03/24 - 09:21 | AML1 |

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **F22-TP511** Test Date : **28.09.23** Test Number : **1**

Ground Level (m AOD): **22.59** National Grid Co-ordinates: **E:642492.3 N:259954.4**



Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

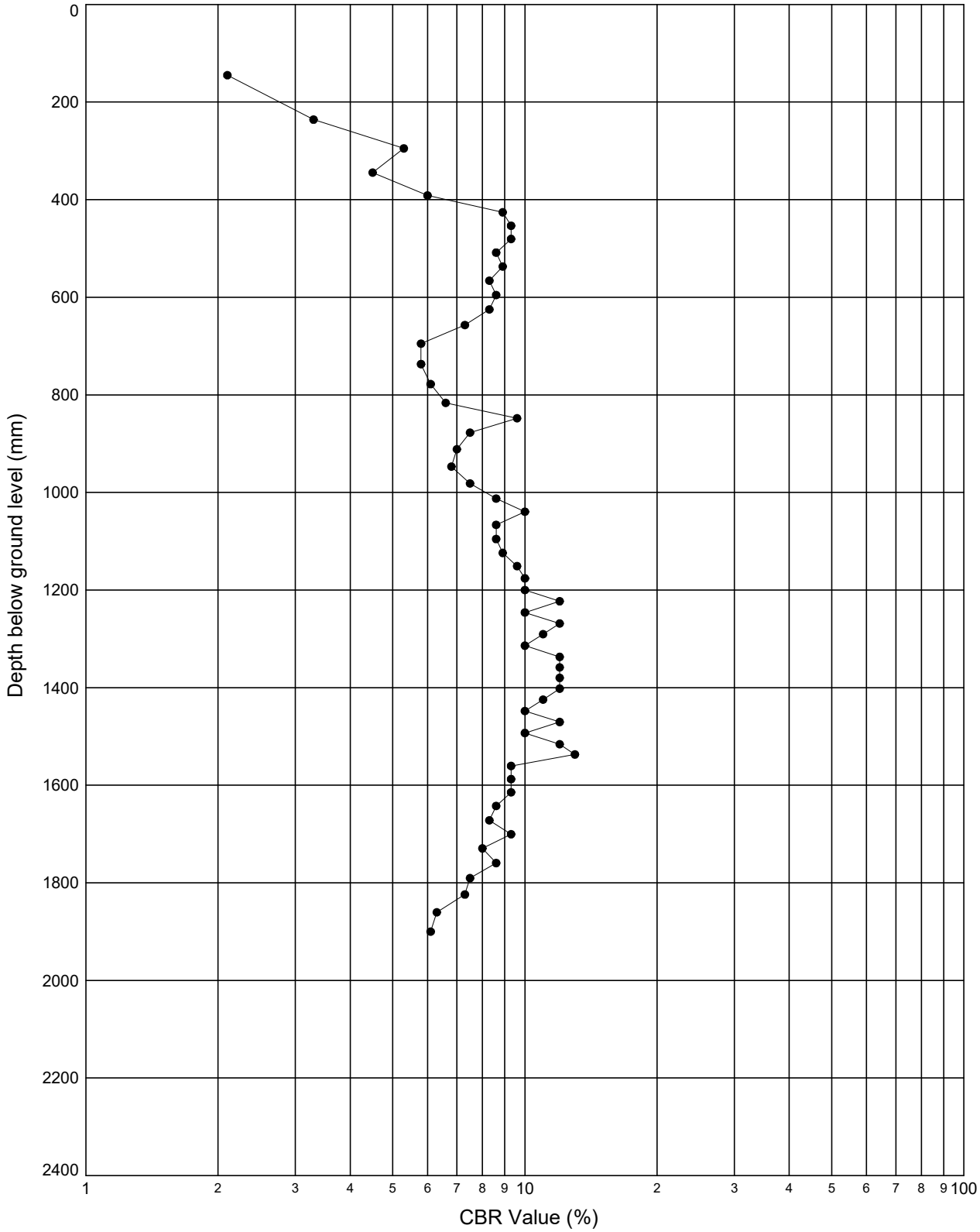
STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**28/09/23**	[redacted]	**13/03/24**
	Contract **Sealink Friston**		Contract Ref: **563835**	

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - DCP - 2 - CBR VALUE VS DEPTH - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 14/03/24 - 09:21 | AML1 |

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **F22-TP513** Test Date : **29.09.23** Test Number : **1**

Ground Level (m AOD): **17.37** National Grid Co-ordinates: **E:645573.9 N:258373.8**



Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

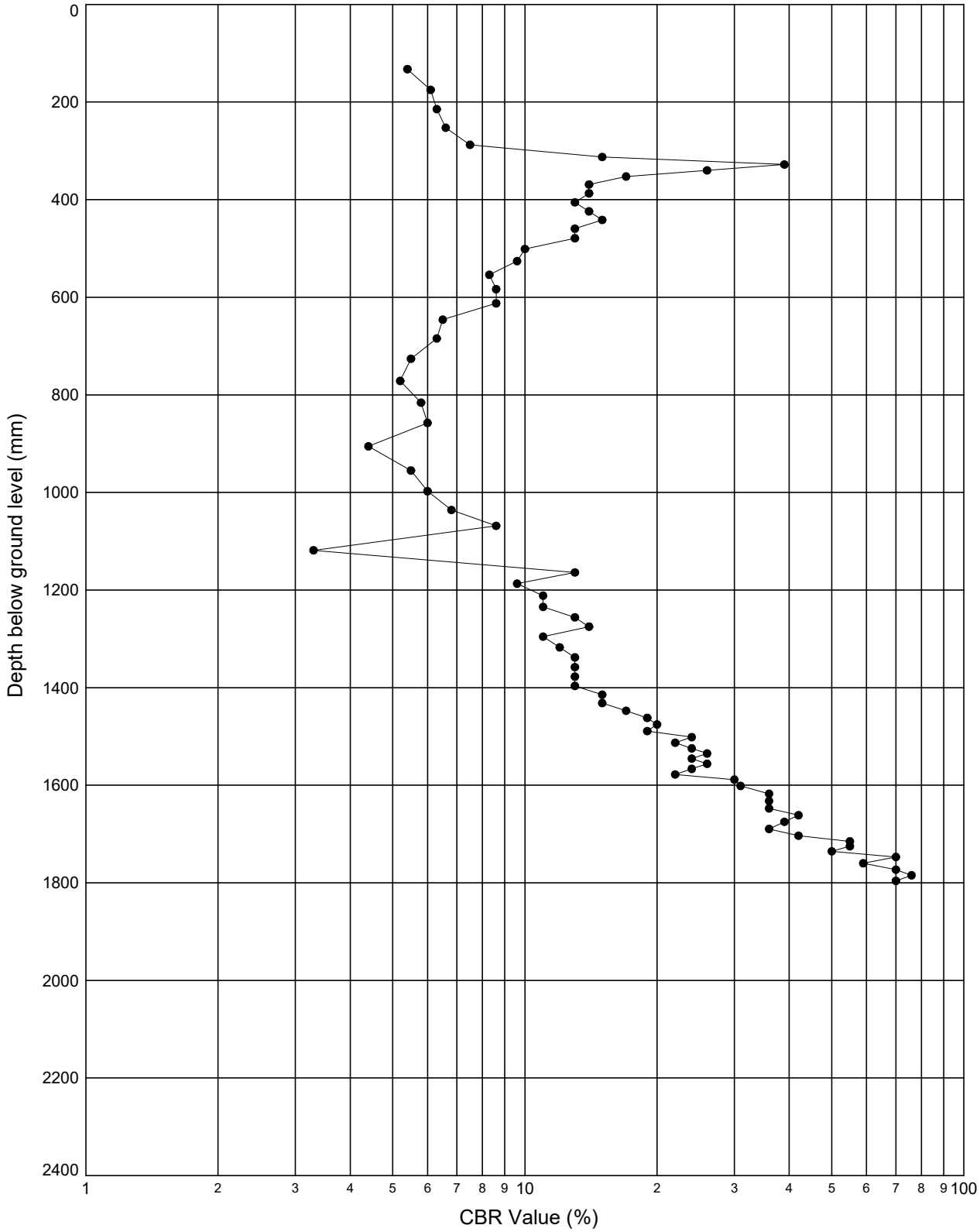
STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**29/09/23**	[redacted]	**13/03/24**
	Contract **Sealink Friston**		Contract Ref: **563835**	

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - DCP - 2 - CBR VALUE VS DEPTH - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 14/03/24 - 09:21 | AML1 |

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **F22-TP514** Test Date : **28.09.23** Test Number : **1**

Ground Level (m AOD): **16.08** National Grid Co-ordinates: **E:638582.2 N:262187.4**



Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

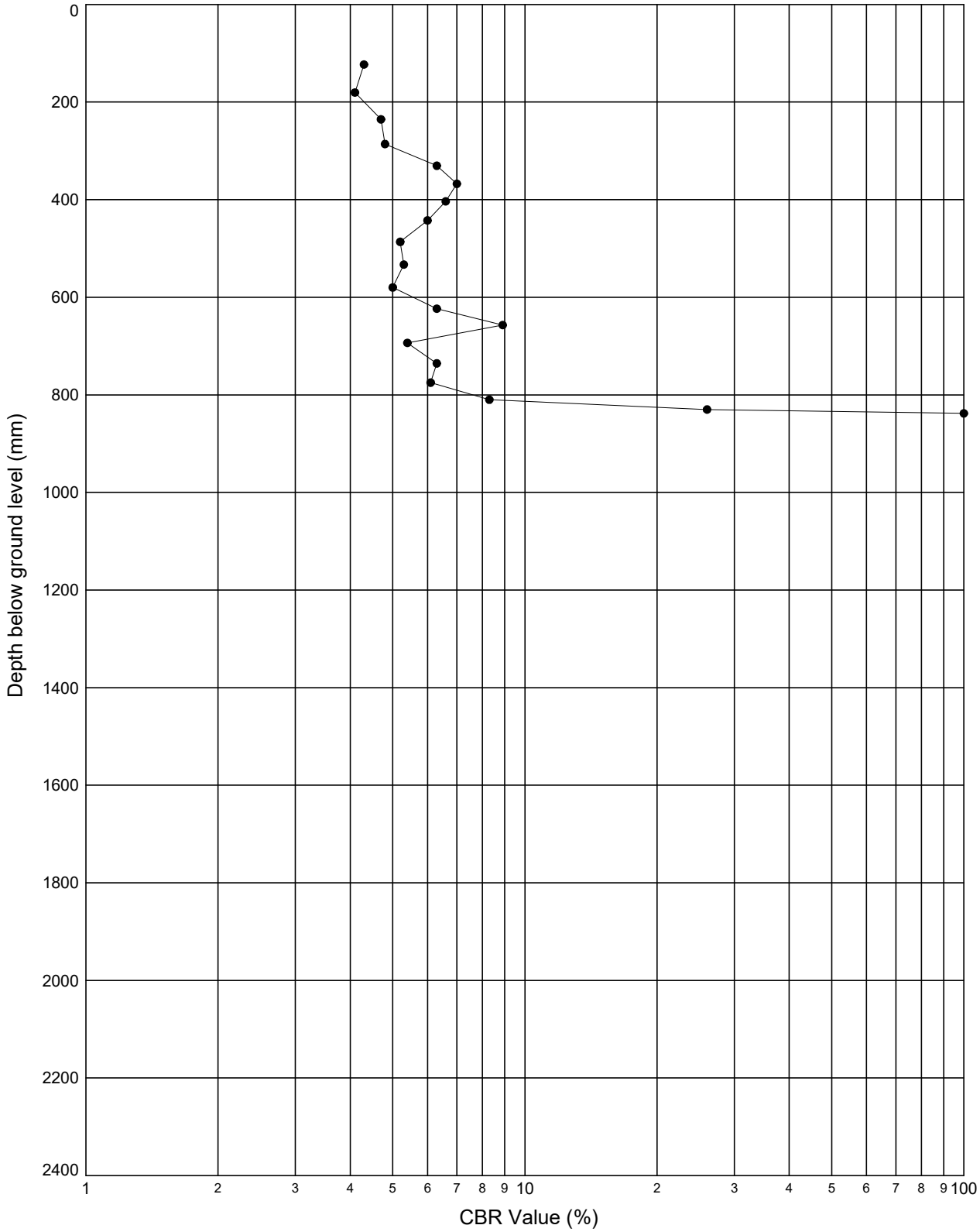
STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**28/09/23**	[redacted]	**13/03/24**
	Contract **Sealink Friston**		Contract Ref: **563835**	

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - DCP - 2 - CBR VALUE VS DEPTH - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 14/03/24 - 09:21 | AML1 |

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **F22-TP515** Test Date : **28.09.23** Test Number : **1**

Ground Level (m AOD): **19.48** National Grid Co-ordinates: **E:639176.0 N:262215.0**



Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

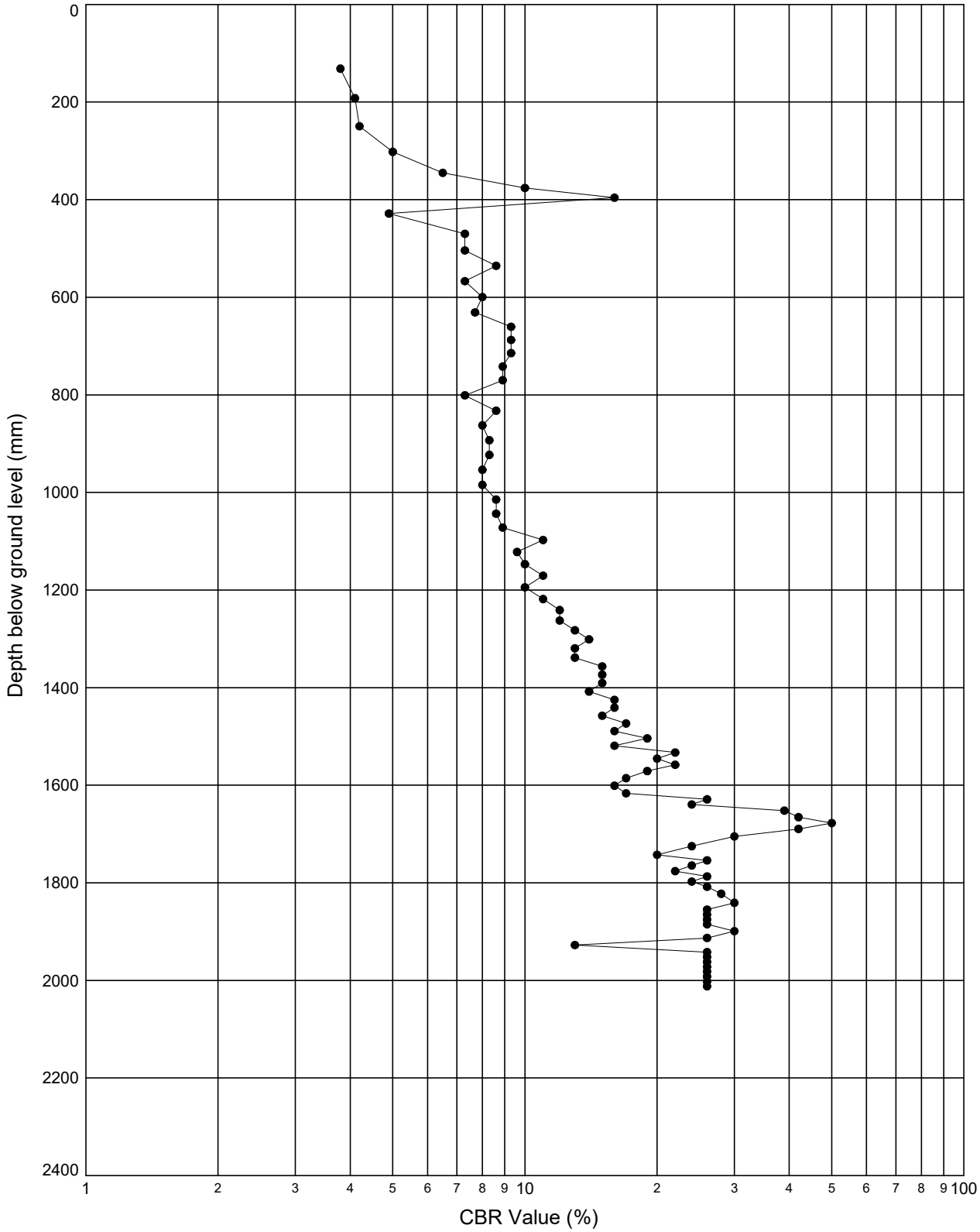
STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**28/09/23**	[redacted]	**13/03/24**
	Contract **Sealink Friston**		Contract Ref: **563835**	

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - DCP - 2 - CBR VALUE VS DEPTH - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 14/03/24 - 09:21 | AML1 |

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **F22-TP515A** Test Date : **28.09.23** Test Number : **1**

Ground Level (m AOD): **19.48** National Grid Co-ordinates: **E:639176.0 N:262215.0**



Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Supervisor	Date	Checked By	Date
[redacted]	**28/09/23**	[redacted]	**13/03/24**

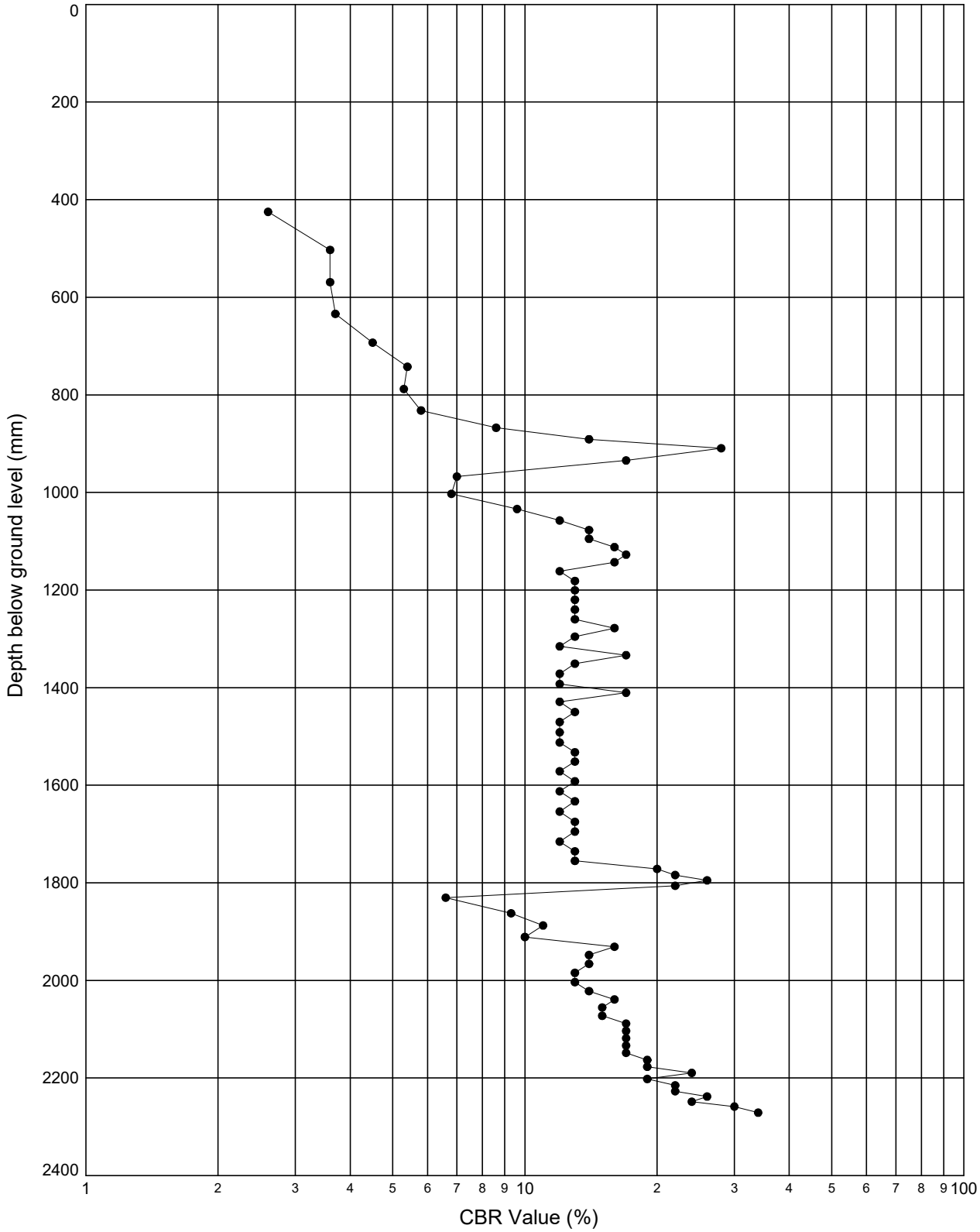
Contract	Contract Ref:
Sealink Friston	**563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - DCP - 2 - CBR VALUE VS DEPTH - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 14/03/24 - 09:21 | AML1 |

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **F22-TP516** Test Date : **14.09.23** Test Number : **1**

Ground Level (m AOD): **25.95** National Grid Co-ordinates: **E:639414.9 N:262383.6**



Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

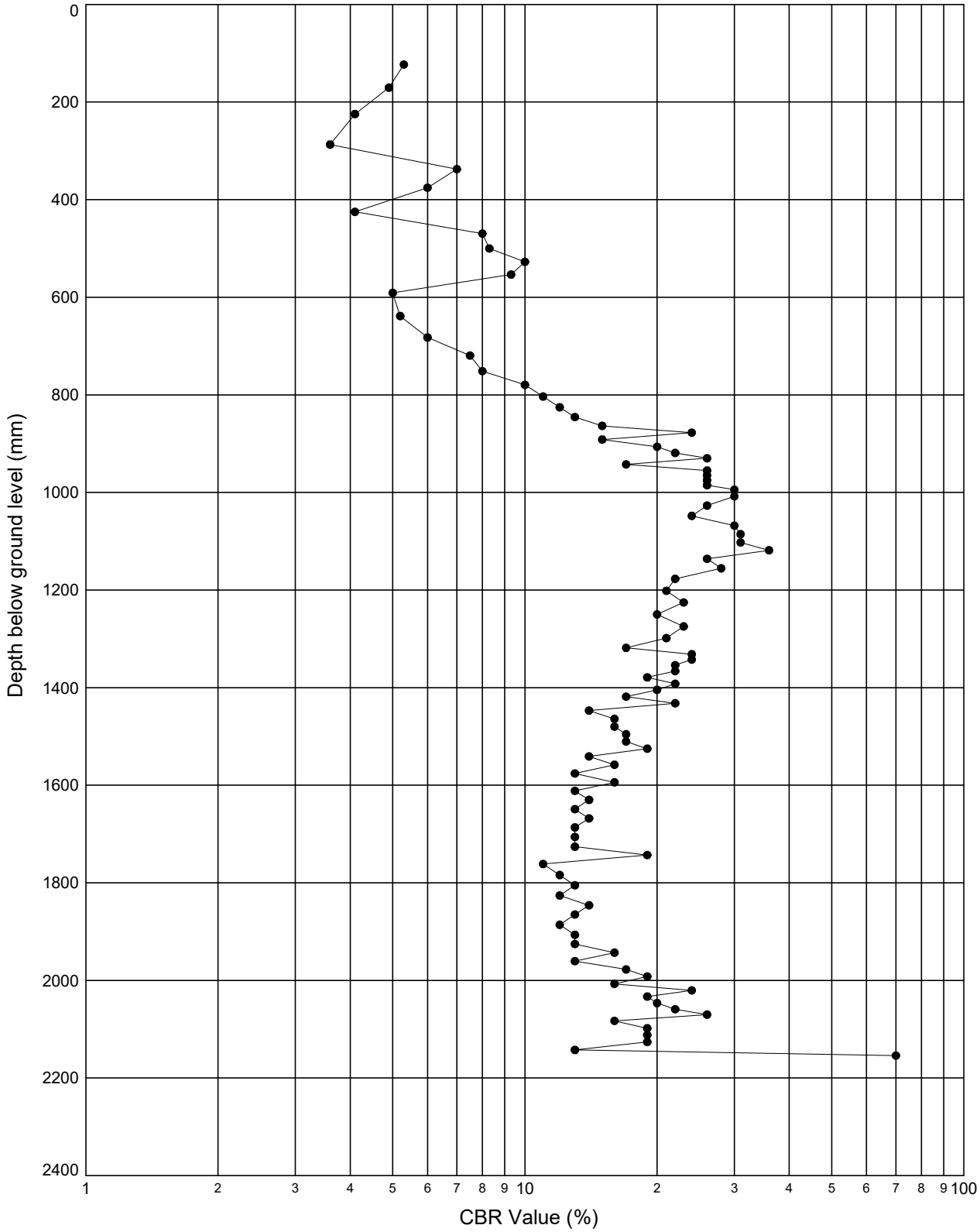
STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**14/09/23**	[redacted]	**13/03/24**
	Contract **Sealink Friston**		Contract Ref: **563835**	

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - DCP - 2 - CBR VALUE VS DEPTH - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 14/03/24 - 09:21 | AML1 |

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **F22-TP518** Test Date : **14.09.23** Test Number : **1**

Ground Level (m AOD): **28.96** National Grid Co-ordinates: **E:639512.2 N:263133.9**



Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

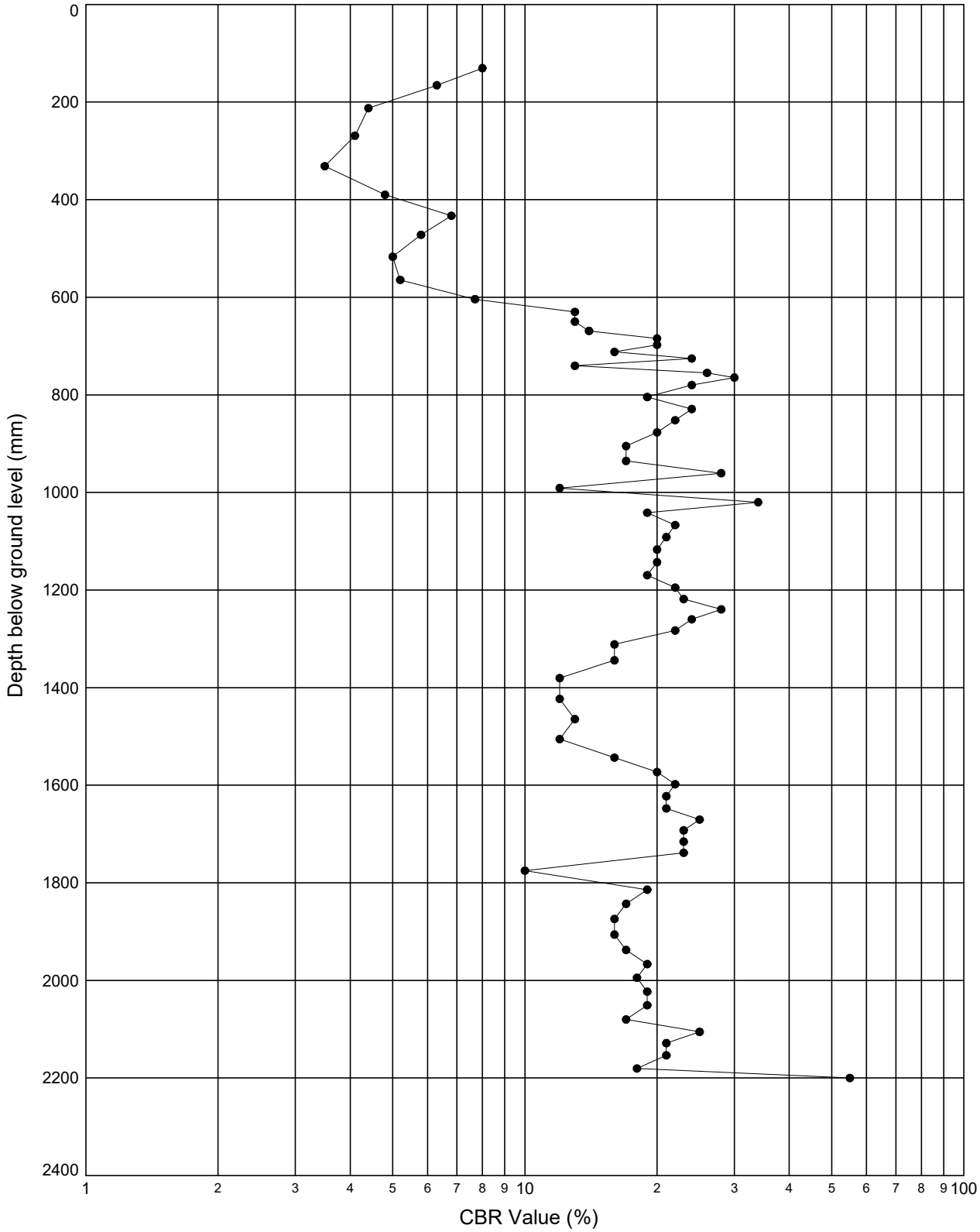
STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**14/09/23**	[redacted]	**13/03/24**
	Contract **Sealink Friston**		Contract Ref: **563835**	

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - DCP - 2 - CBR VALUE VS DEPTH - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 14/03/24 - 09:21 | AML1 |

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **F22-TP525** Test Date : **20.09.23** Test Number : **1**

Ground Level (m AOD): **19.02** National Grid Co-ordinates: **E:640074.6 N:262869.9**



Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**20/09/23**	[redacted]	**14/03/24**
	Contract **Sealink Friston**		Contract Ref: **563835**	

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - DCP - 2 - CBR VALUE VS DEPTH - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 14/03/24 - 09:21 | AML1 |

IN-SITU PERMEABILITY TEST - FALLING HEAD
In accordance with BS EN ISO 22282-2:2012

Position ID : **RedP-BH-1A** Depth (m below GL): **12.00-13.00** Test Number: **1**

Test Date: **28/09/2023** Test Supervisor: [redacted]

Ground Level (m AOD): **2.70** National Grid Co-ordinates: **E:646813.6 N:258334.2**

TEST SETUP DETAILS

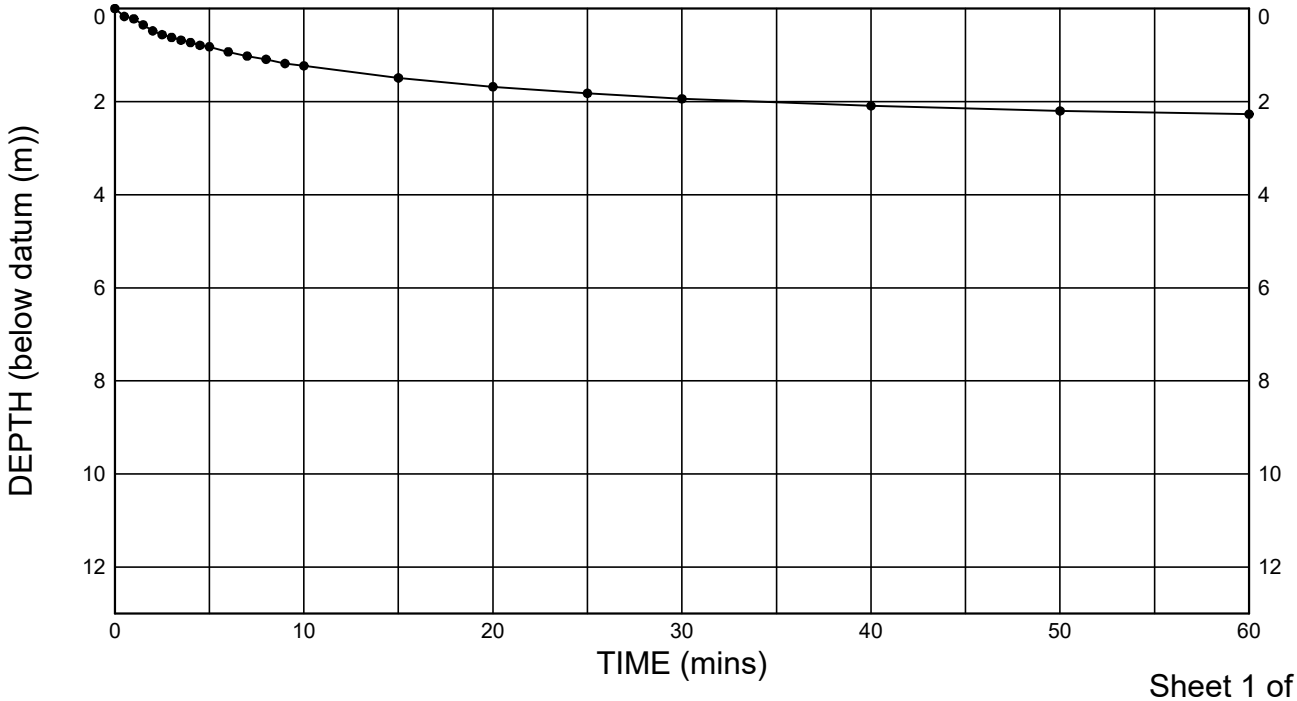
Depth measurements recorded from ground level.

Depth to top of response zone:	**12.00** m	Borehole diameter:	**200** mm
Depth to base of response zone:	**13.00** m	Depth to base of casing:	**12.00** m
Length of response zone:	**1.00** m	Casing diameter:	**200** mm
Initial groundwater level prior to test:	**2.00** m	Soil/Rock Description:	**Gravelly sand.**
Depth to base of borehole at start of test:	**13.00** m	Hydrogeological conditions:	**Entire test section below GW**
Depth to base of borehole at completion of test:	**13.00** m	Weather:	**Cloudy**

TEST MEASUREMENTS

Time (hh:mm:ss)	Water depth (m)	Head (m)	H/Ho	Time (hh:mm:ss)	Water depth (m)	Head (m)	H/Ho	Time (hh:mm:ss)	Water depth (m)	Head (m)	H/Ho	Time (hh:mm:ss)	Water depth (m)	Head (m)	H/Ho
11:51:00	0.00	2.30	1.00	11:56:00	0.82	1.48	0.64	12:31:00	2.09	0.21	0.09				
11:51:30	0.17	2.13	0.93	11:57:00	0.93	1.37	0.60	12:41:00	2.20	0.10	0.04				
11:52:00	0.22	2.08	0.90	11:58:00	1.02	1.28	0.56	12:51:00	2.27	0.03	0.01				
11:52:30	0.35	1.95	0.85	11:59:00	1.09	1.21	0.53								
11:53:00	0.48	1.82	0.79	12:00:00	1.18	1.12	0.49								
11:53:30	0.56	1.74	0.76	12:01:00	1.23	1.07	0.47								
11:54:00	0.62	1.68	0.73	12:06:00	1.49	0.81	0.35								
11:54:30	0.68	1.62	0.70	12:11:00	1.68	0.62	0.27								
11:55:00	0.73	1.57	0.68	12:16:00	1.82	0.48	0.21								
11:55:30	0.79	1.51	0.66	12:21:00	1.94	0.36	0.16								

PLOT OF WATER DEPTH AGAINST TIME



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Operator	Checked By	Date
[redacted]	[redacted]	**07/03/24**

Contract: **Sealink Friston**

Contract Ref: **563835**

Client: **National Grid**

AGS

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - BH PERM 22282 - 1 OF 2 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 07/03/24 - 15:58 | AML1 |

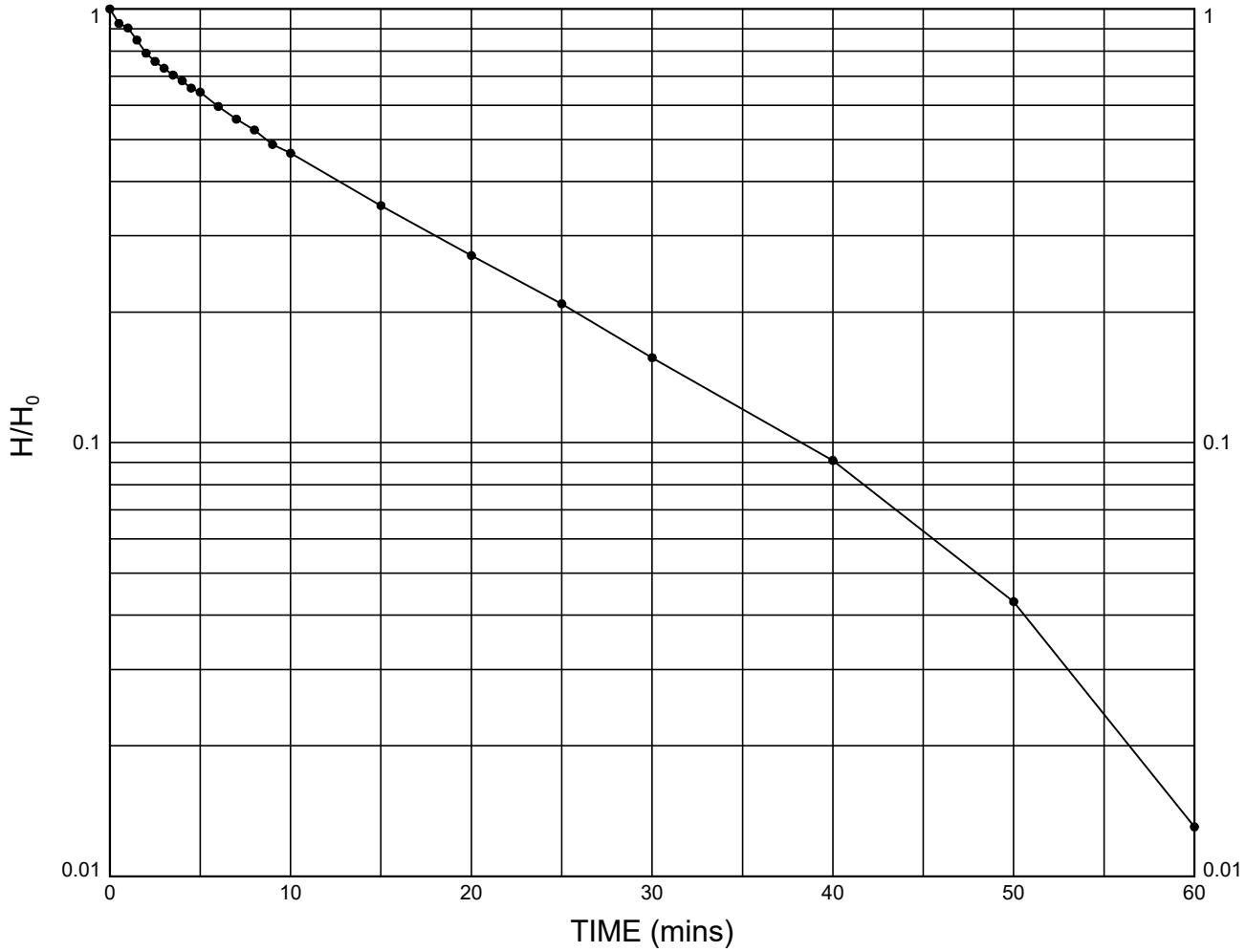
IN-SITU PERMEABILITY TEST - FALLING HEAD
In accordance with BS EN ISO 22282-2:2012

Position ID : **RedP-BH-1A** Depth (m below GL): **12.00-13.00** Test Number: **1**

Test Date: **28/09/2023** Test Supervisor: [redacted]

Ground Level (m AOD): **2.70** British National Grid Co-ordinates: E:646813.6 N:258334.2

PLOT OF H/Ho AGAINST TIME



Cross Sectional Area, A	=	**0.03142**	m^2
Intake Factor, F	=	**NA**	m
Basic Time Lag, T (from plot)	=	**846**	sec
In-situ Permeability, k	=	**1.36×10^{-5}**	m/sec

Notes : **Permeability calculated using Hvorslev method in accordance with BS EN ISO 22282-2 (2012). To enable calculation of permeability an assumed standing water level of 2.3m below datum was used to determine head, H. Although the previous assumed standing water level has been used in the calculation of permeability the measured groundwater level prior to the test was recorded as 2m below datum. Assumed standing water level is that observed at start of next drilling shift following test (hole at 17.00m, casing at 16.50m).**

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Operator	Checked By	Date
[redacted]	[redacted]	**07/03/24**

Contract: **Sealink Friston**

Contract Ref: **563835**

Client: **National Grid**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - BH PERM 22282 - 2 OF 2 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 07/03/24 - 15:58 | AML1 |

IN-SITU PERMEABILITY TEST - FALLING HEAD
In accordance with BS EN ISO 22282-2:2012

Position ID : **RedP-BH-1A** Depth (m below GL): **18.00-19.00** Test Number: **2**

Test Date: **02/10/2023** Test Supervisor: [redacted]

Ground Level (m AOD): **2.70** National Grid Co-ordinates: **E:646813.6 N:258334.2**

TEST SETUP DETAILS

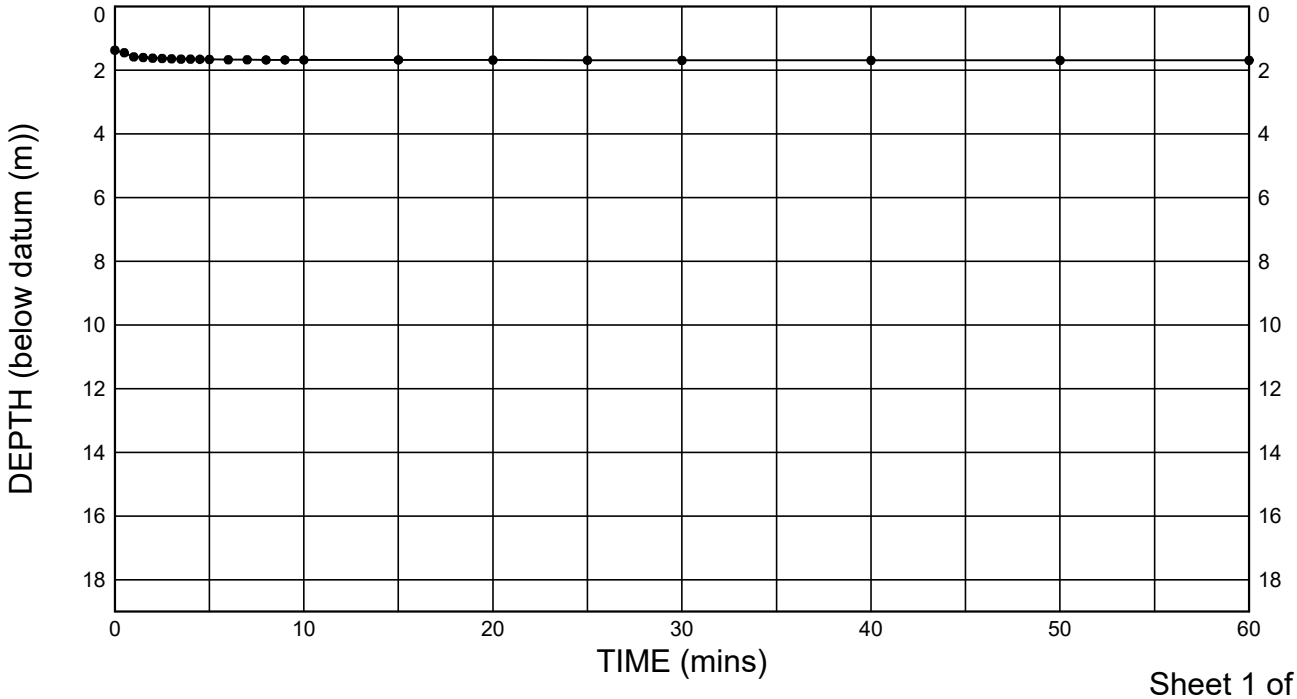
Depth measurements recorded from ground level.

Depth to top of response zone:	**18.00** m	Borehole diameter:	**165** mm
Depth to base of response zone:	**19.00** m	Depth to base of casing:	**18.00** m
Length of response zone:	**1.00** m	Casing diameter:	**165** mm
Initial groundwater level prior to test:	**2.06** m	Soil/Rock Description:	**Gravelly sand.**
Depth to base of borehole at start of test:	**19.00** m	Hydrogeological conditions:	**Entire test section below GW**
Depth to base of borehole at completion of test:	**19.00** m	Weather:	**Cloudy**

TEST MEASUREMENTS

Time (hh:mm:ss)	Water depth (m)	Head (m)	H/Ho	Time (hh:mm:ss)	Water depth (m)	Head (m)	H/Ho	Time (hh:mm:ss)	Water depth (m)	Head (m)	H/Ho	Time (hh:mm:ss)	Water depth (m)	Head (m)	H/Ho
13:00:00	1.37	1.38	1.00	13:05:00	1.66	1.09	0.79	13:40:00	1.69	1.06	0.77				
13:00:30	1.45	1.30	0.94	13:06:00	1.67	1.08	0.78	13:50:00	1.69	1.06	0.77				
13:01:00	1.58	1.17	0.85	13:07:00	1.67	1.08	0.78	14:00:00	1.69	1.06	0.77				
13:01:30	1.60	1.15	0.83	13:08:00	1.68	1.08	0.78								
13:02:00	1.62	1.13	0.82	13:09:00	1.68	1.08	0.78								
13:02:30	1.63	1.12	0.81	13:10:00	1.68	1.08	0.78								
13:03:00	1.64	1.11	0.80	13:15:00	1.68	1.08	0.78								
13:03:30	1.65	1.10	0.80	13:20:00	1.68	1.07	0.78								
13:04:00	1.65	1.10	0.80	13:25:00	1.69	1.06	0.77								
13:04:30	1.66	1.10	0.79	13:30:00	1.69	1.06	0.77								

PLOT OF WATER DEPTH AGAINST TIME



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Operator	Checked By	Date
[redacted]	[redacted]	**07/03/24**

Contract: **Sealink Friston**

Contract Ref: **563835**

Client: **National Grid**

AGS

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - BH PERM 22282 - 1 OF 2 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 07/03/24 - 15:59 | AML1 |

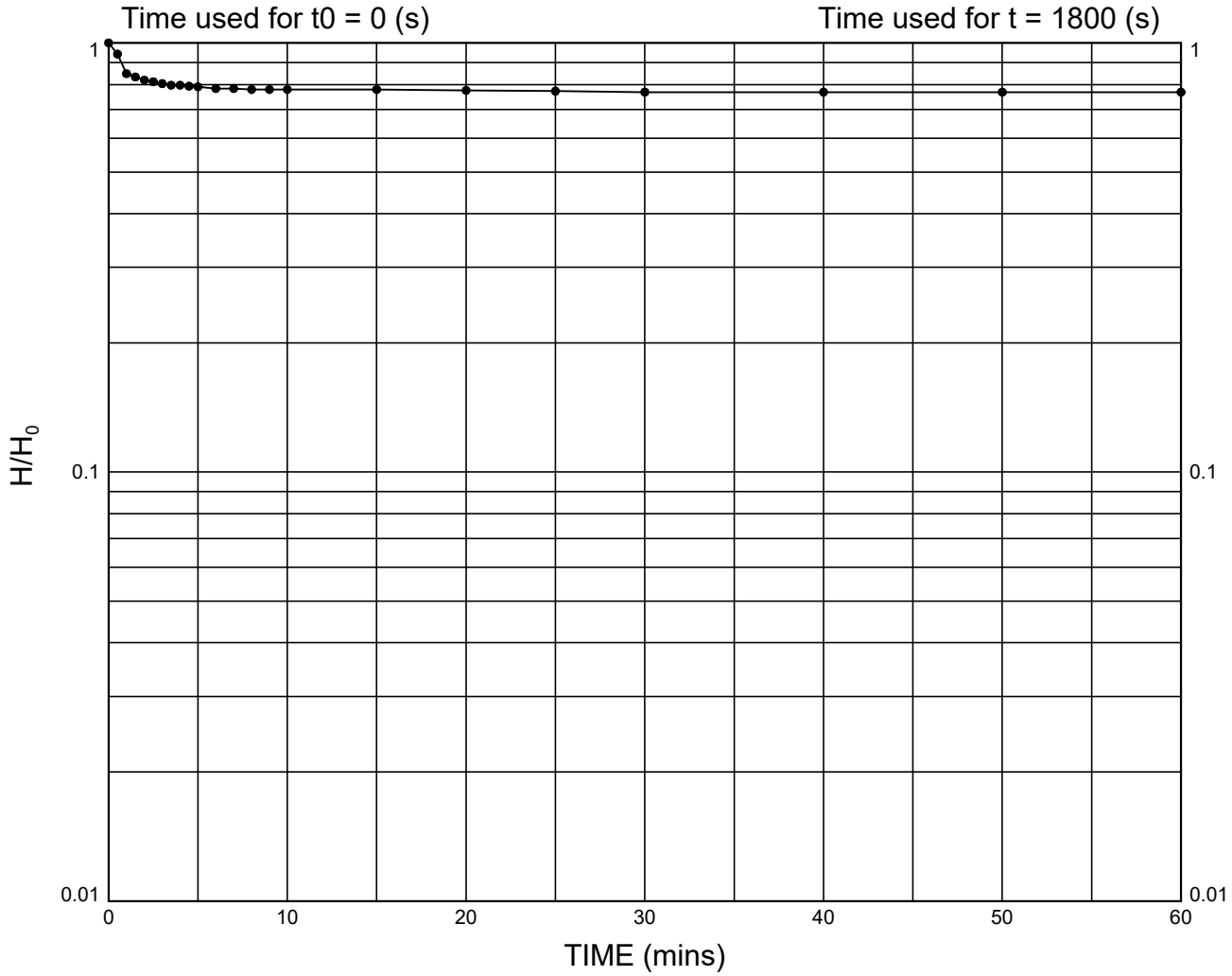
IN-SITU PERMEABILITY TEST - FALLING HEAD
In accordance with BS EN ISO 22282-2:2012

Position ID : **RedP-BH-1A** Depth (m below GL): **18.00-19.00** Test Number: **2**

Test Date: **02/10/2023** Test Supervisor: [redacted]

Ground Level (m AOD): **2.70** British National Grid Co-ordinates: E:646813.6 N:258334.2

PLOT OF H/Ho AGAINST TIME



Diameter of Test Section, D	=	**0.165**	m
Cross Sectional Area of Liaison Tube, A	=	**0.02138**	m^2
Test Section Length, L	=	**1.00**	m
Shape Factor, F	=	**2.51**	m
Time, $t - t_0$	=	**1800**	sec
In-situ Permeability, k	=	**$1.25x10^{-6}$**	m/sec

Notes : **Permeability calculated using velocity graph method in accordance with BS EN ISO 22282-2 (2012). To enable calculation of permeability an assumed standing water level of 2.75m below datum was used to determine head, H. Although the previous assumed standing water level has been used in the calculation of permeability the measured groundwater level prior to the test was recorded as 2.06m below datum. Small fall in water level (220mm in 1 hour). Quoted permeability value is a tentative estimate. Assumed standing water level is that in borehole at start of shiift following test.**

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Operator	Checked By	Date
[redacted]	[redacted]	**07/03/24**

Contract: **Sealink Friston**

Contract Ref: **563835**

Client: **National Grid**

AGS

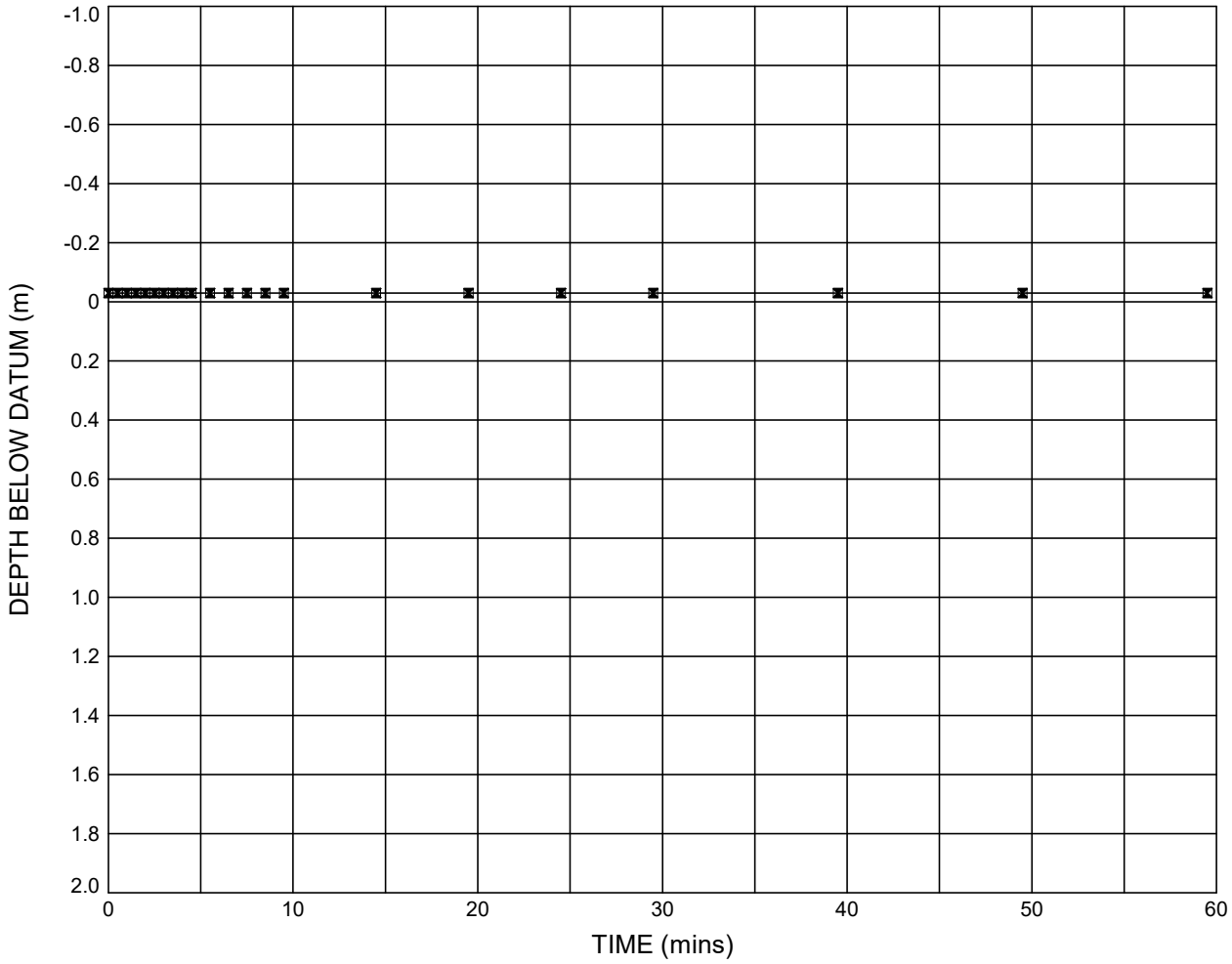
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - BH PERM 22282 - 2 OF 2 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 07/03/24 - 15:59 | AML1 |

BOREHOLE SOAKAWAY TEST
NON STANDARD TEST

Test position: F22-BH306

Ground Level (m AOD): **25.24** British National Grid Co-ordinates:E:639696.8 N:262445.3

PLOT OF DEPTH OF WATER BELOW DATUM AGAINST TIME



Notes : No drop in water level recorded during test therefore no calculation of infiltration possible.
Test carried out with casing raised 0.03m above ground level, with test section within slightly gravelly CLAY.

Test hole details:

Measurement datum was **GL**
Hole depth at start of test: **2.00**mBGL
Borehole diameter: **250**mm
Depth to base of casing: **1.50**mBGL

Legend:

Test 1 (18/09/2023)

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Operator	Checked By	Date
[redacted]	[redacted]	**07/03/24**
Contract: **Sealink Friston**	Contract Ref: **563835**	
	Client: **National Grid**	

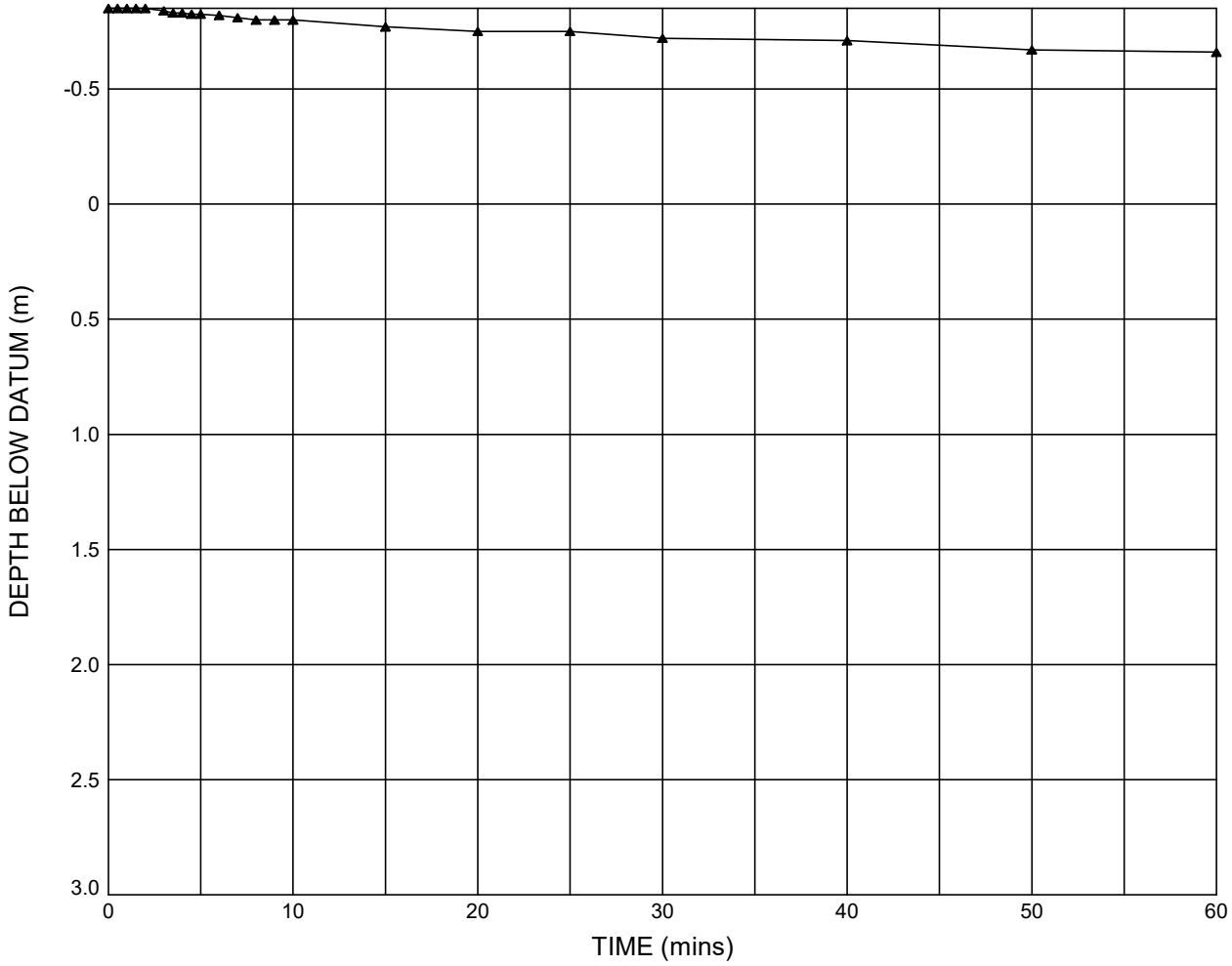
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - BH SOAKAWAY - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 07/03/24 - 17:09 | AML1 |

BOREHOLE SOAKAWAY TEST
NON STANDARD TEST

Test position: F22-BH307

Ground Level (m AOD): **23.88** British National Grid Co-ordinates:E:639919.1 N:262381.8

PLOT OF DEPTH OF WATER BELOW DATUM AGAINST TIME



Notes : Test carried out with casing raised 0.85m above ground level. Test section was in gravelly CLAY. Insufficient fall in water level to estimate soil infiltration rate (190mm in 1 hour).

Test hole details:

Measurement datum was **GL**
Hole depth at start of test: **3.00**mBGL
Borehole diameter: **200**mm
Depth to base of casing: **2.15**mBGL

Legend:

▲ Test 1 (26/09/2023)

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Operator	Checked By	Date
[redacted]	[redacted]	**12/03/24**

Contract: **Sealink Friston**

Contract Ref: **563835**

Client: **National Grid**

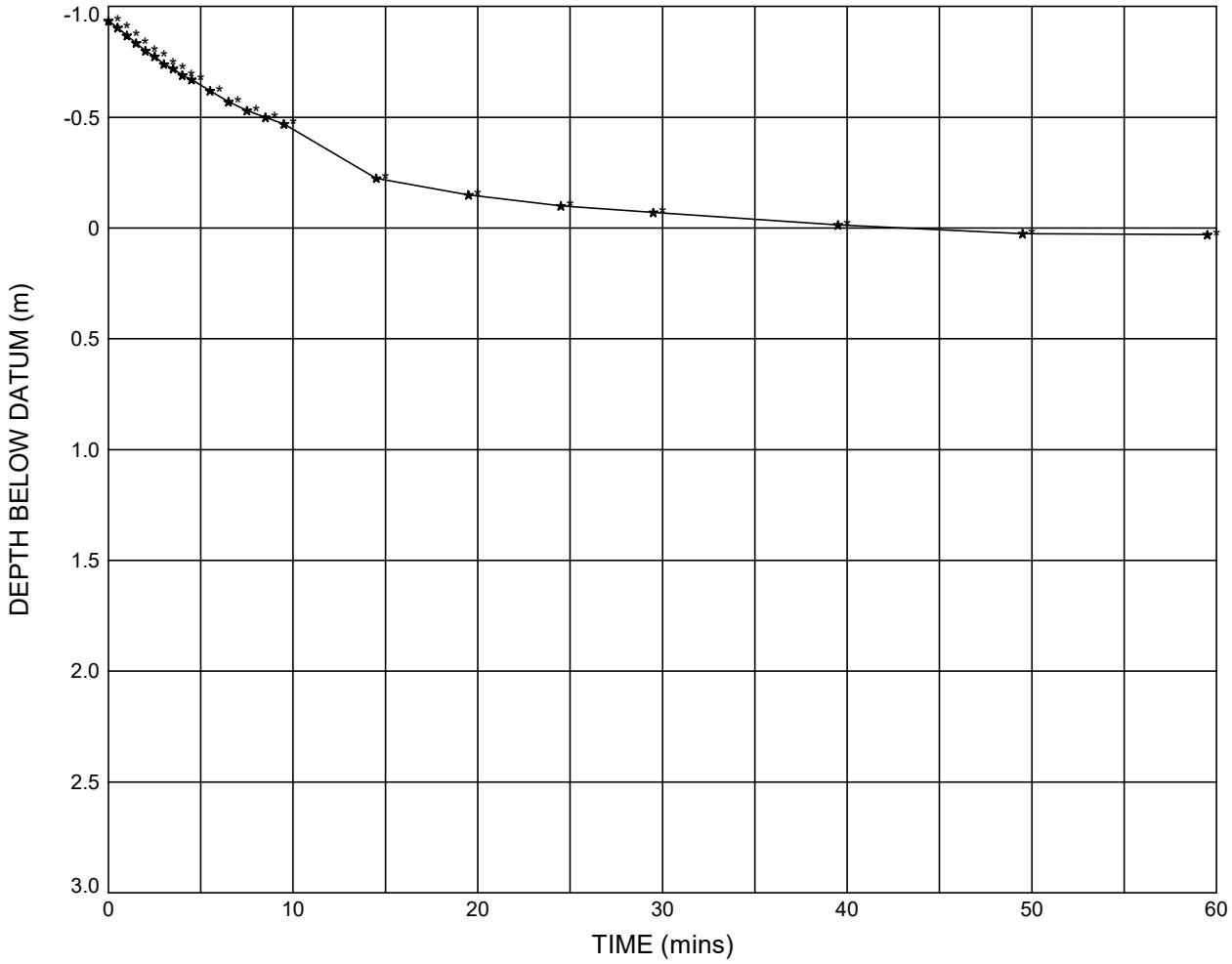
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - BH SOAKAWAY - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 12/03/24 - 11:24 | AML1 |

BOREHOLE SOAKAWAY TEST
NON STANDARD TEST

Test position: F22-BH308

Ground Level (m AOD): **24.41** British National Grid Co-ordinates:E:639831.5 N:262136.0

PLOT OF DEPTH OF WATER BELOW DATUM AGAINST TIME



Due to the presence of casing in the test hole the infiltration rate has been calculated using a subset of the test data. Only test readings within cased section (marked with a *) have been used (i.e. from -0.935m to 0.030m).

Volume of water soaking away,	**0.030316**	m^3
Surface area,	**0.6957**	m^2
Time to drain,	**3570**	secs
Infiltration rate,	**1.29x10-5**	m/sec

Test water depth remains above casing base depth throughout soakaway test. Test carried out with casing raised 1m above ground level. Test section was in gravelly CLAY. Approximate soil infiltration rate calculated using volume of water that drained away during test, the test section surface area and the test duration.

Test hole details:

Measurement datum was **GL**
Hole depth at start of test: **3.00**mBGL
Borehole diameter: **200**mm
Depth to base of casing: **2.00**mBGL

Legend:

★ Test 1 (02/10/2023)

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Operator	Checked By	Date
[redacted]	[redacted]	**05/04/24**

Contract: **Sealink Friston**

Contract Ref: **563835**

Client: **National Grid**

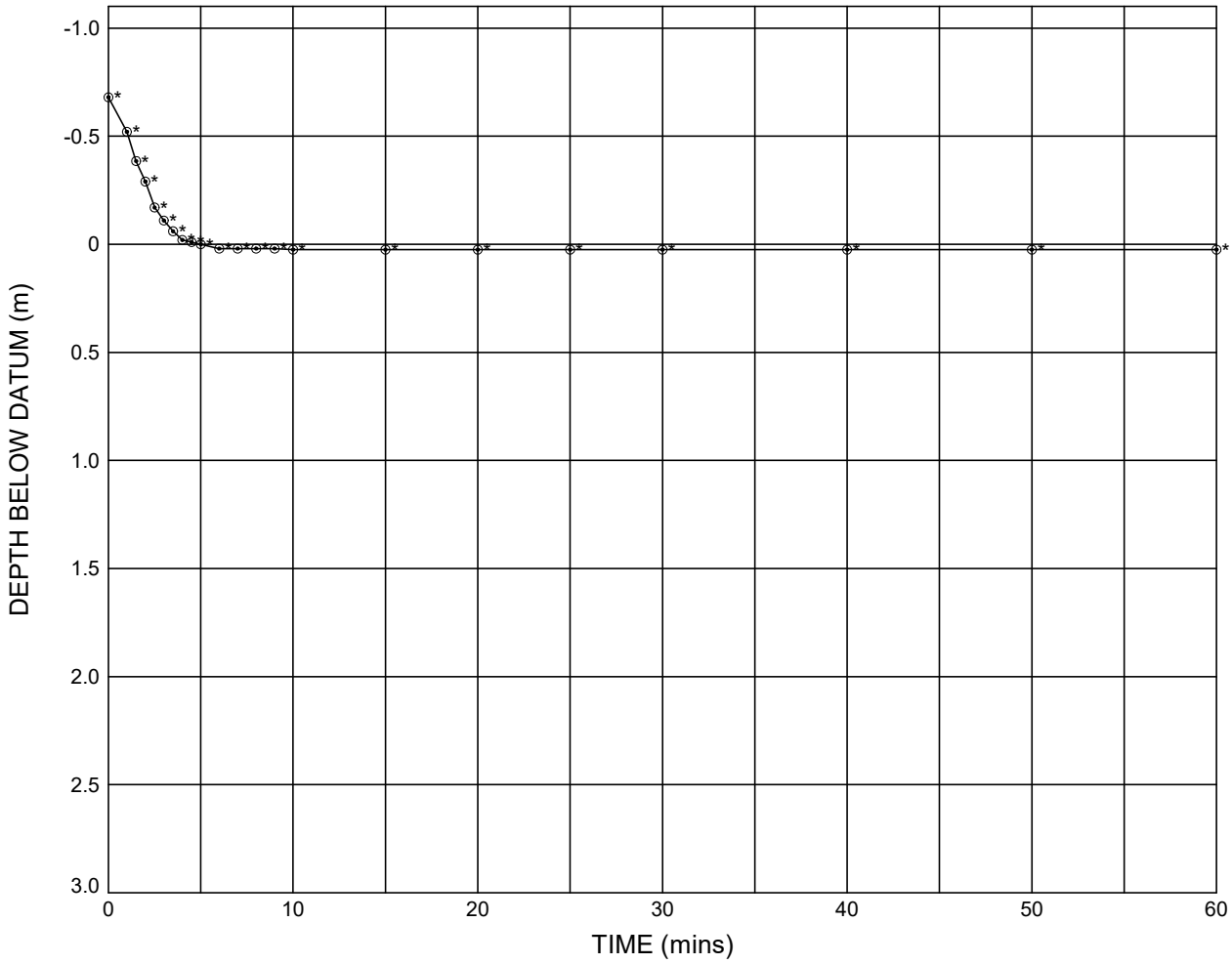
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - BH SOAKAWAY - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 05/04/24 - 09:40 | AML1 |

BOREHOLE SOAKAWAY TEST
NON STANDARD TEST

Test position: F22-BH309

Ground Level (m AOD): **24.58** British National Grid Co-ordinates:E:639615.1 N:262181.9

PLOT OF DEPTH OF WATER BELOW DATUM AGAINST TIME



Due to the presence of casing in the test hole the infiltration rate has been calculated using a subset of the test data. Only test readings within cased section (marked with a *) have been used (i.e. from -0.680m to 0.025m).

Volume of water soaking away,	**NA**	m^3
Surface area,	**NA**	m^2
Time to drain,	**NA**	secs
Infiltration rate,	**NA**	m/sec

Test water depth remains above casing base depth throughout soakaway test. Test carried out with casing raised 1.10m above ground level. Test section was in gravelly CLAY. Unable to calculate soil infiltration rate as test water did not fall to the 25% full level.

Test hole details:

Measurement datum was **GL**
Hole depth at start of test: **3.00**mBGL
Borehole diameter: **200**mm
Depth to base of casing: **2.00**mBGL

Legend:

⊙ Test 1 (12/09/2023)

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Operator	Checked By	Date
[redacted]	[redacted]	**12/03/24**

Contract: **Sealink Friston**

Contract Ref: **563835**

Client: **National Grid**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - BH SOAKAWAY - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 12/03/24 - 11:26 | AML1 |

FULL SCALE SOAKAWAY TEST

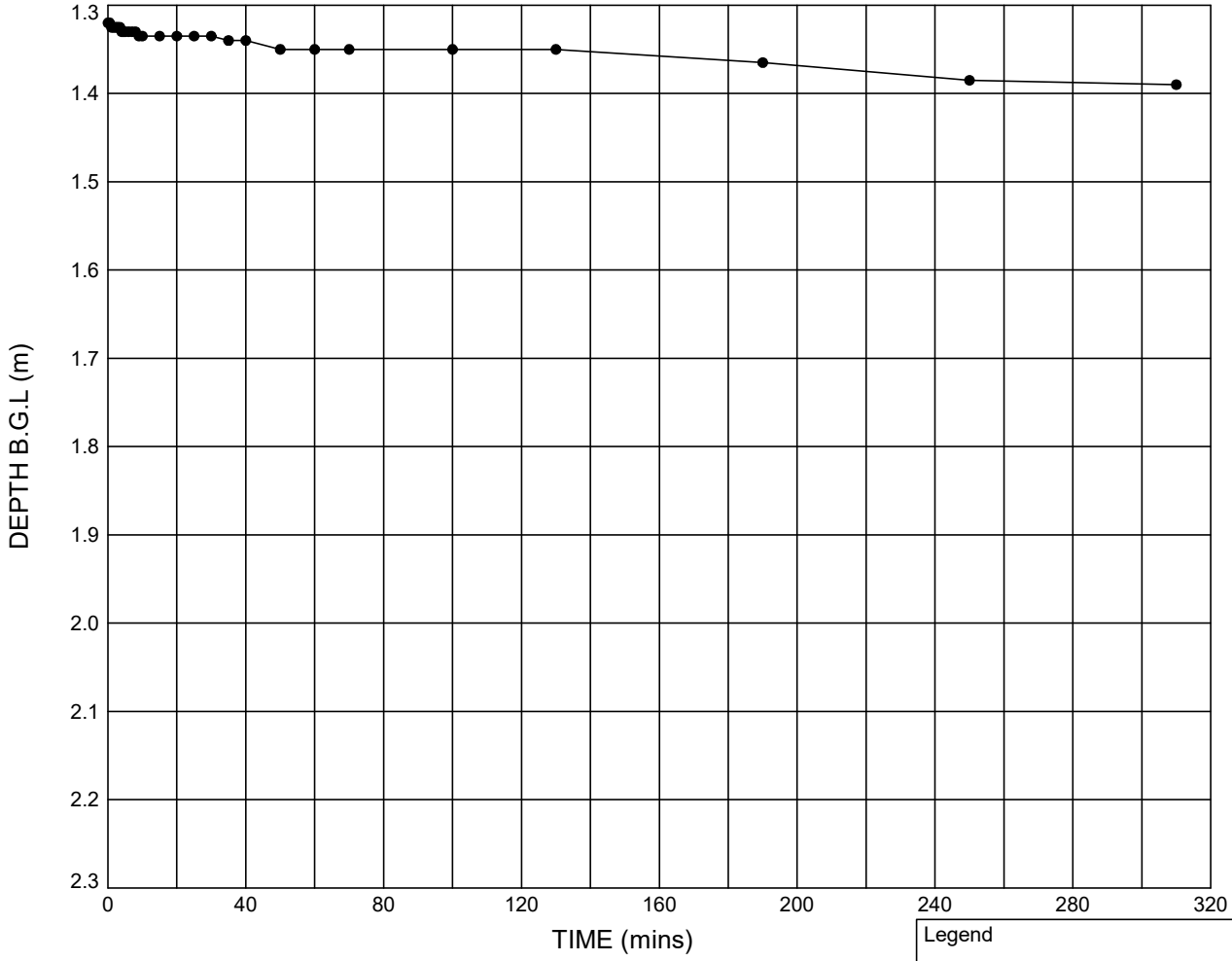
In accordance with BRE Digest 365

Soakaway Test - Position ID : **F22-TP204A**

Test Supervisor : **MCapitani**

Ground Level (m AOD): **14.68** National Grid Co-ordinates: **E:642801.5 N:259708.3**

PLOT OF DEPTH OF WATER BELOW GROUND LEVEL AGAINST TIME



Test 1

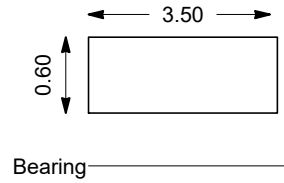
Pit start depth:	=	**2.30**	m
Pit final depth:	=	**2.25**	m
Effective depth, De	=	**0.98**	m
Effective storage volume, V_{p75-25}	=	**NA**	m^3
Surface area, a_{s50}	=	**NA**	m^2
Time, t_{p75-25}	=	**NA**	secs
Infiltration rate, f	=	**NA**	m/s

Notes: Test 1 - No calculation of infiltration rate due to insufficient drop in water level (70mm in over 5 hours).

Legend

● Test 1 (03.10.23)

Plan (Not to scale)



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By	Date	Checked By	Date
[redacted]	**07/03/24**	[redacted]	**07/03/24**

Contract: **Sealink Friston**

Contract Ref: **563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - TP SOAKAWAY - 2 - FINAL REPORT - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 07/03/24 - 14:16 | AML1 |

FULL SCALE SOAKAWAY TEST

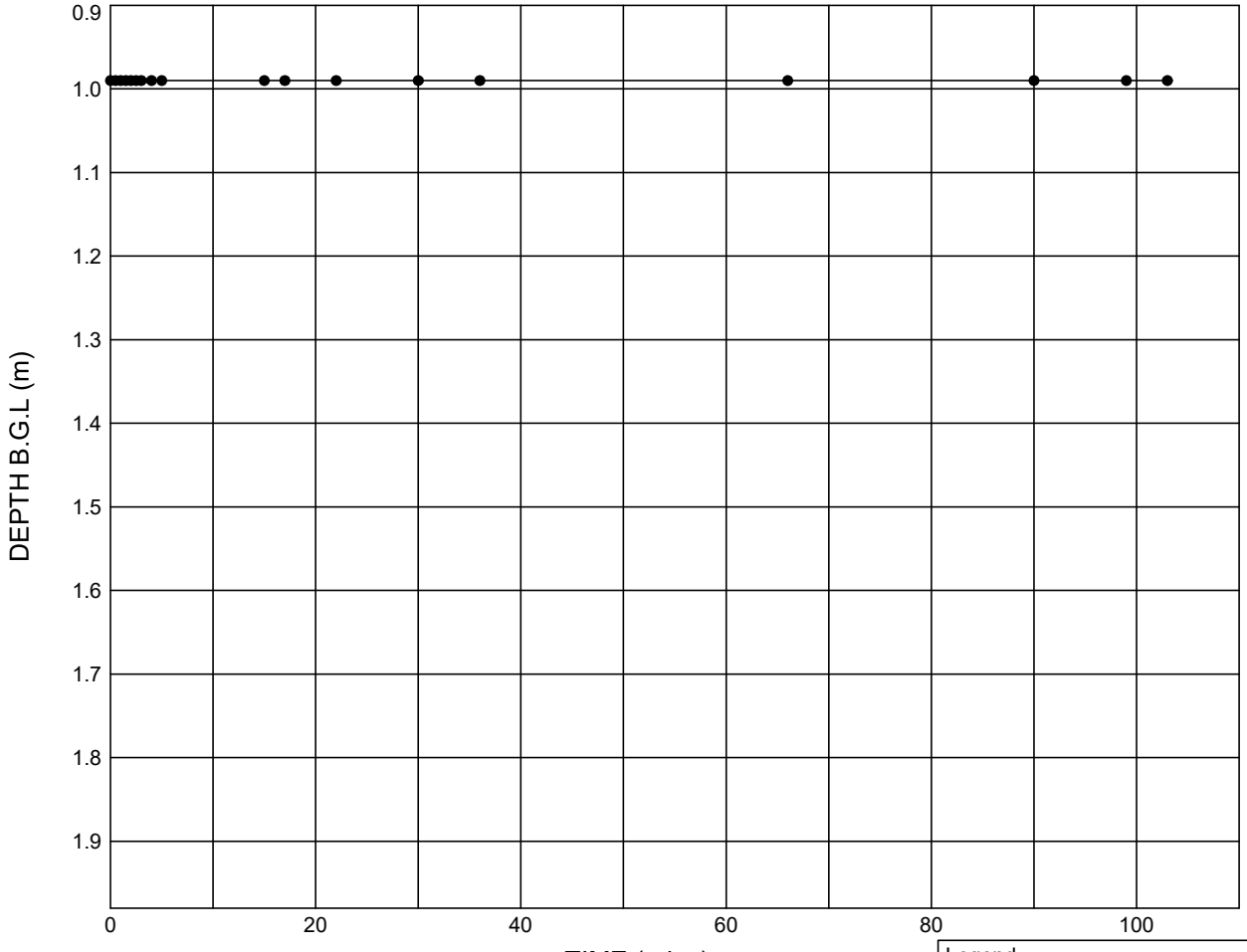
In accordance with BRE Digest 365

Soakaway Test - Position ID : **F22-TP312A**

Test Supervisor : **HTribick**

Ground Level (m AOD): **24.40** National Grid Co-ordinates: **E:639883.9 N:262316.9**

PLOT OF DEPTH OF WATER BELOW GROUND LEVEL AGAINST TIME



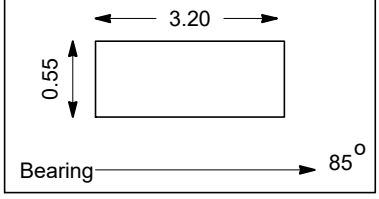
Pit start depth:	=	**1.98**	m
Pit final depth:	=	**1.98**	m
Effective depth, De	=	**0.99**	m
Effective storage volume, V_{p75-25}	=	**NA**	m^3
Surface area, a_{s50}	=	**NA**	m^2
Time, t_{p75-25}	=	**NA**	secs
Infiltration rate, f	=	**NA**	m/s

Notes: Test 1 - Test terminated after 103 minutes due to thunder of increasing in frequency & loudness. No calculation of infiltration rate due to no drop in water level.

Legend

● Test 1 (02.10.23)

Plan (Not to scale)



	Compiled By	Date	Checked By	Date
	[redacted]	**07/03/24**	[redacted]	**07/03/24**

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Contract: **Sealink Friston**

Contract Ref: **563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - TP SOAKAWAY - 2 - FINAL REPORT - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 07/03/24 - 14:17 | AML1 |

FULL SCALE SOAKAWAY TEST

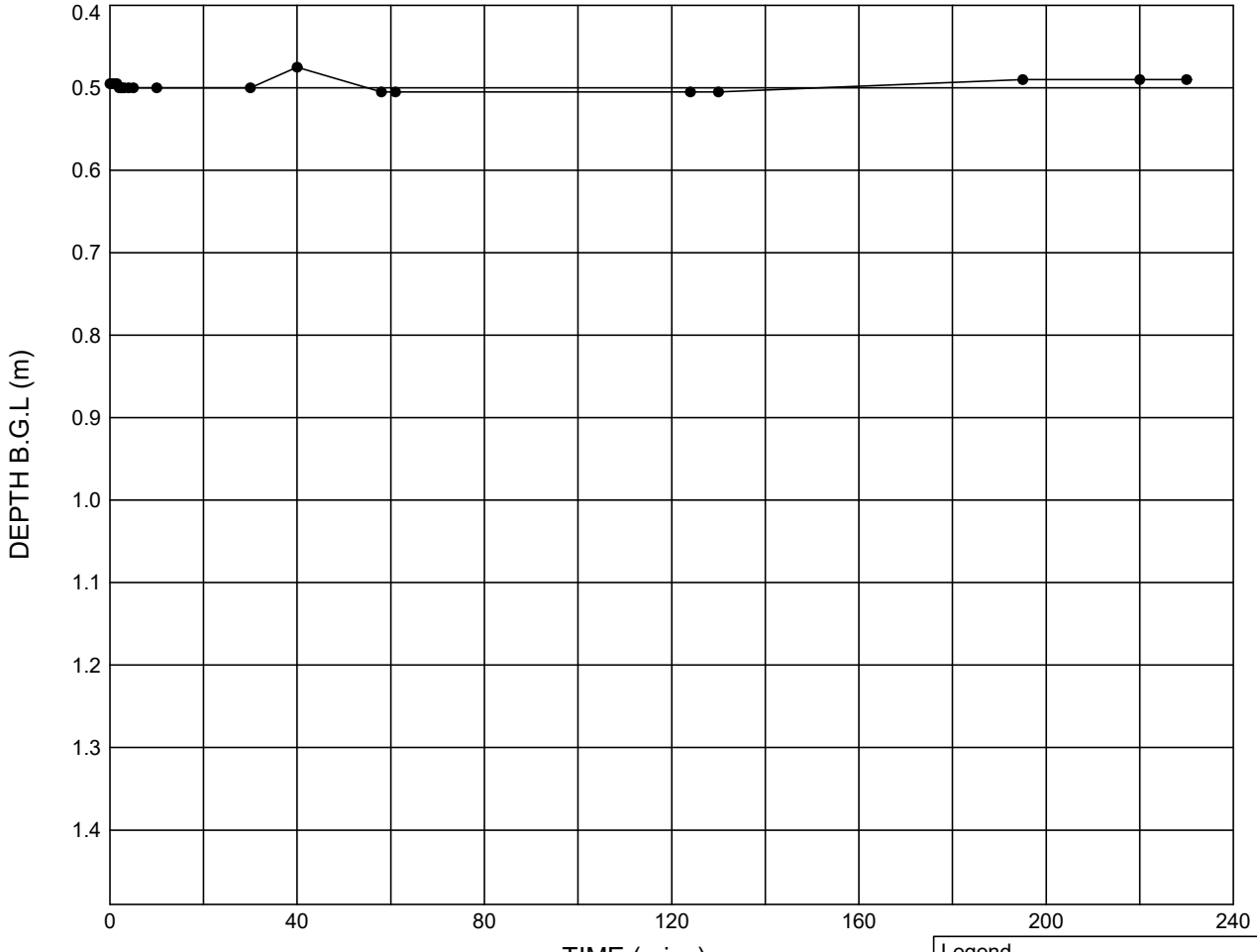
In accordance with BRE Digest 365

Soakaway Test - Position ID : **F22-TP313A**

Test Supervisor : **HTribick**

Ground Level (m AOD): **24.98** National Grid Co-ordinates: **E:639659.7 N:262254.6**

PLOT OF DEPTH OF WATER BELOW GROUND LEVEL AGAINST TIME



Test 1

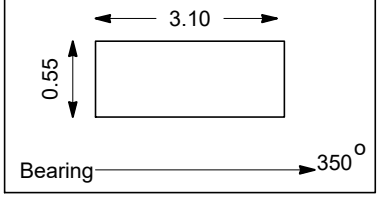
Pit start depth:	=	**1.49**	m
Pit final depth:	=	**1.49**	m
Effective depth, De	=	**1.00**	m
Effective storage volume, V_{p75-25}	=	**NA**	m^3
Surface area, a_{s50}	=	**NA**	m^2
Time, t_{p75-25}	=	**NA**	secs
Infiltration rate, f	=	**NA**	m/s

Notes: Test 1 - Test terminated after 3hrs 40 minutes due to thunder of ncreasing frequency and loudness. No calculaton of infiltration rate due to negligible change in water level (measured level rising or falling by up to 20mm throughout test).

Legend

● Test 1 (02.10.23)

Plan (Not to scale)



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By	Date	Checked By	Date
[redacted]	**07/03/24**	[redacted]	**07/03/24**

Contract: **Sealink Friston**

Contract Ref: **563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - TP SOAKAWAY - 2 - FINAL REPORT - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 07/03/24 - 14:18 | AML1 |

FULL SCALE SOAKAWAY TEST

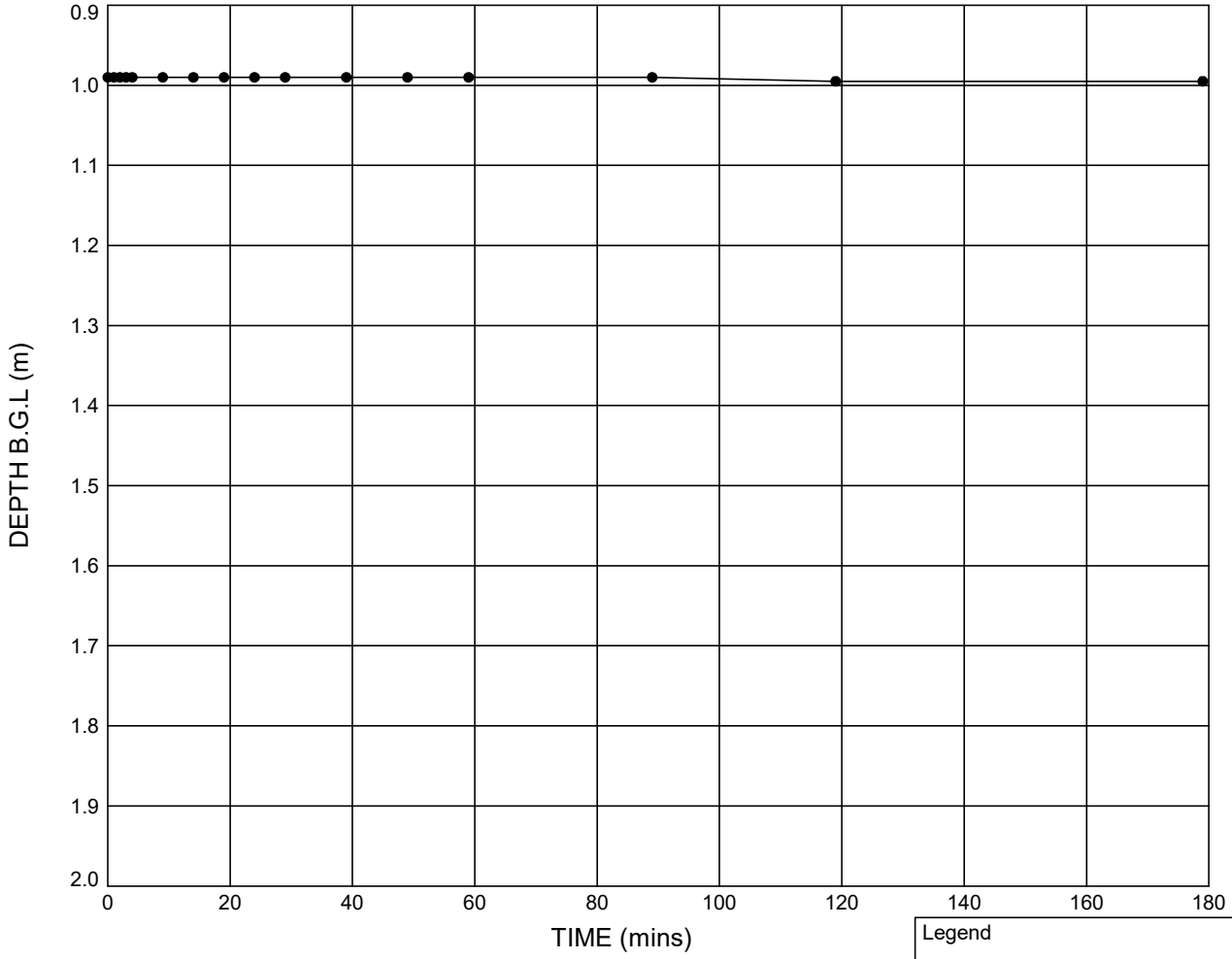
In accordance with BRE Digest 365

Soakaway Test - Position ID : **F22-TP316A**

Test Supervisor : **MCapitani**

Ground Level (m AOD): **23.74** National Grid Co-ordinates: **E:639828.3 N:262046.8**

PLOT OF DEPTH OF WATER BELOW GROUND LEVEL AGAINST TIME



Test 1

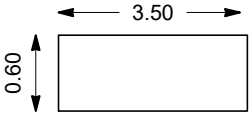
Pit start depth:	=	**2.00**	m
Pit final depth:	=	**2.00**	m
Effective depth, De	=	**1.01**	m
Effective storage volume, V_{p75-25}	=	**NA**	m^3
Surface area, a_{s50}	=	**NA**	m^2
Time, t_{p75-25}	=	**NA**	secs
Infiltration rate, f	=	**NA**	m/s

Notes: Test 1 - No calculation of infiltration rate due to insufficient drop in water level (5mm over 3 hours).

Legend

● Test 1 (02.10.23)

Plan (Not to scale)



No Bearing Taken

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By	Date	Checked By	Date
[redacted]	**07/03/24**	[redacted]	**07/03/24**

Contract	Contract Ref:
Sealink Friston	**563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - TP SOAKAWAY - 2 - FINAL REPORT - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 07/03/24 - 14:18 | AML1 |

FULL SCALE SOAKAWAY TEST

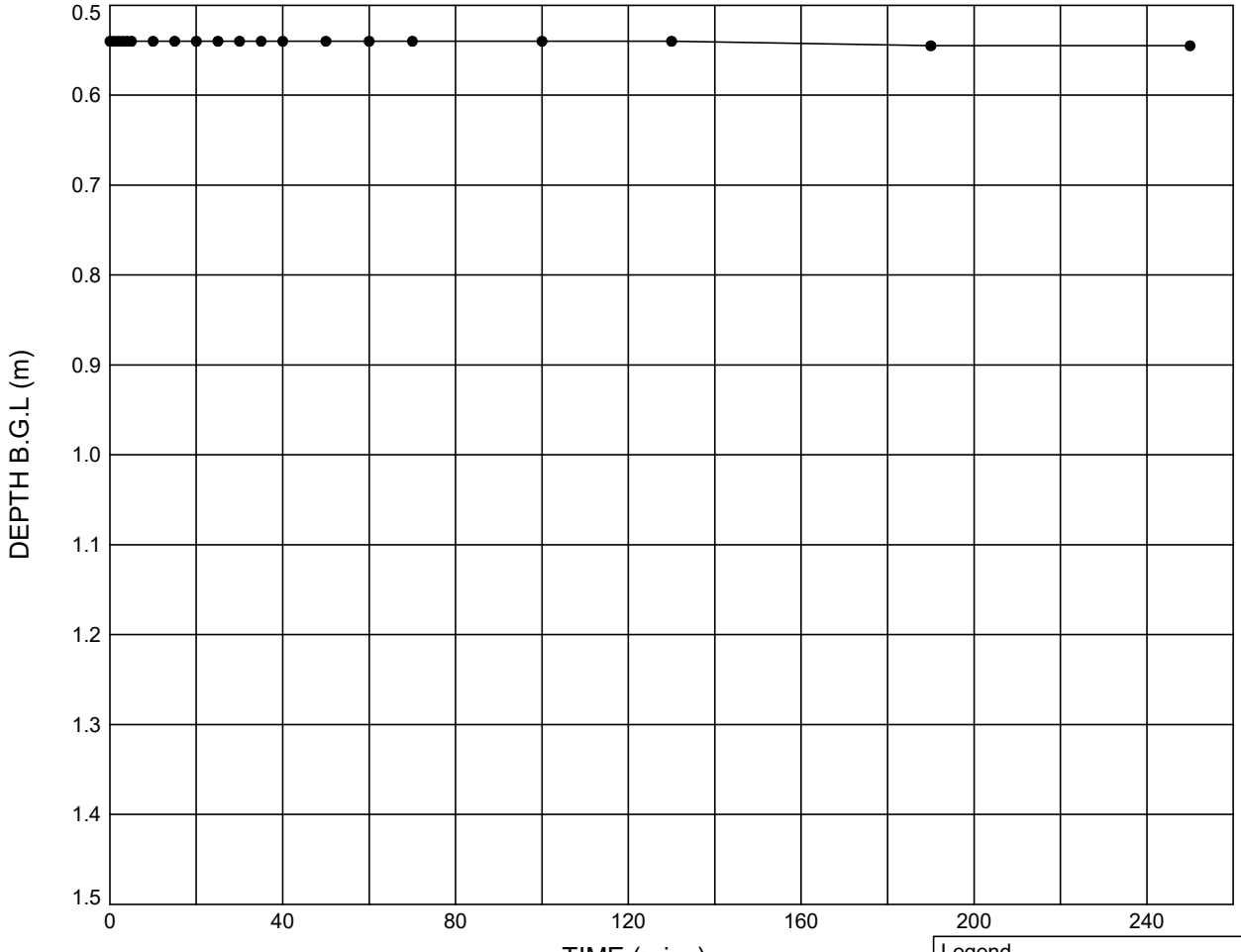
In accordance with BRE Digest 365

Soakaway Test - Position ID : **F22-TP317A**

Test Supervisor : **MCapitani**

Ground Level (m AOD): **23.79** National Grid Co-ordinates: **E:639959.0 N:262235.8**

PLOT OF DEPTH OF WATER BELOW GROUND LEVEL AGAINST TIME



Test 1

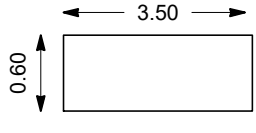
Pit start depth:	=	**1.50**	m
Pit final depth:	=	**1.40**	m
Effective depth, De	=	**0.96**	m
Effective storage volume, V_{p75-25}	=	**NA**	m^3
Surface area, a_{s50}	=	**NA**	m^2
Time, t_{p75-25}	=	**NA**	secs
Infiltration rate, f	=	**NA**	m/s

Notes: Test 1 - Slow inflitration due to being conducted in fine soils (test water level fell 5mm over 4 hours). Final pit depth 1.40m after baling water out. No calculation of infiltration rate due to insufficient drop in water level.

Legend

● Test 1 (02.10.23)

Plan (Not to scale)



No Bearing Taken

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By	Date	Checked By	Date
[redacted]	**07/03/24**	[redacted]	**07/03/24**

Contract	Contract Ref:
Sealink Friston	**563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - TP SOAKAWAY - 2 - FINAL REPORT - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 07/03/24 - 14:22 | AML1 |

FULL SCALE SOAKAWAY TEST

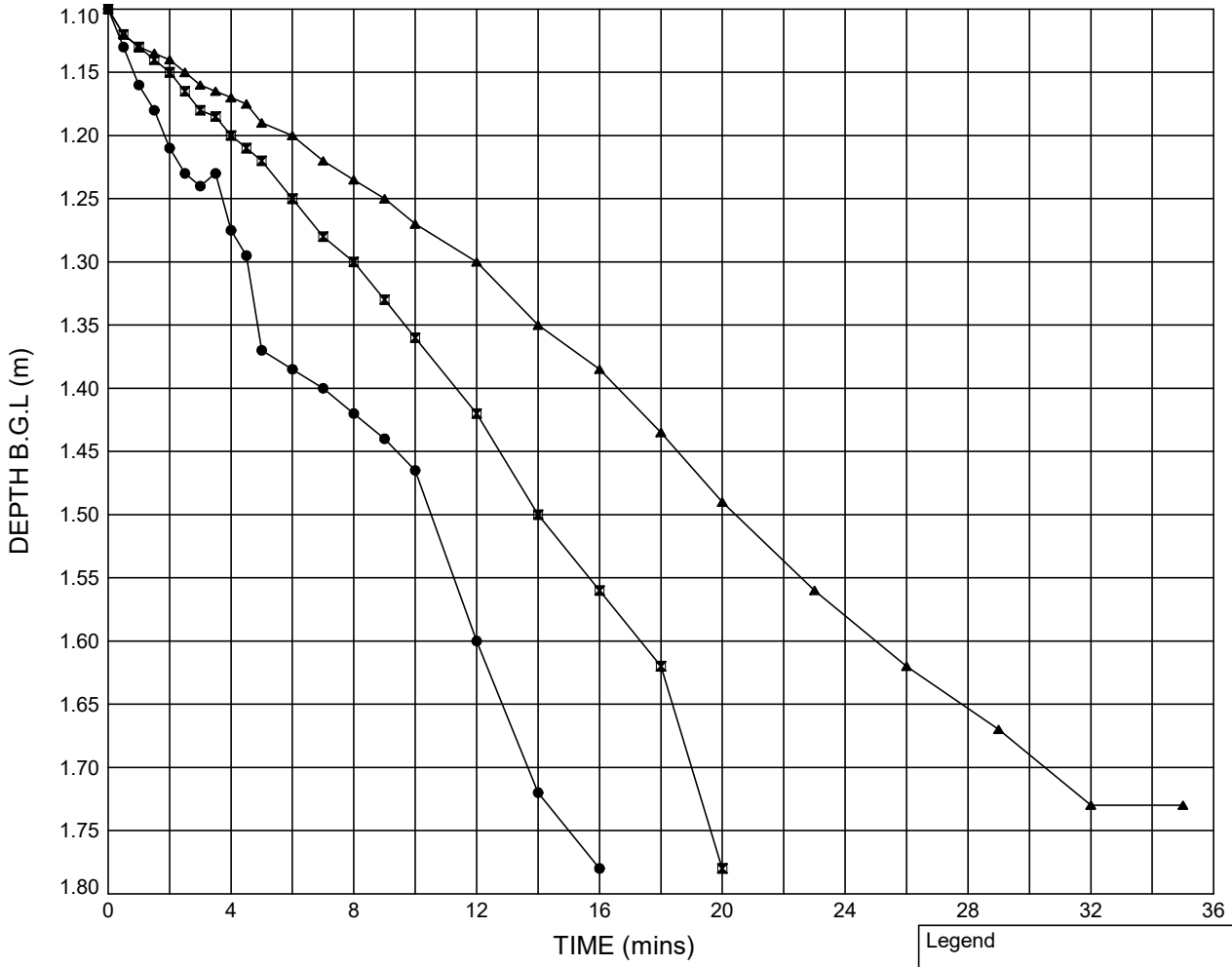
In accordance with BRE Digest 365

Soakaway Test - Position ID : **F22-TP404A**

Test Supervisor : **MCapitani**

Ground Level (m AOD): **13.06** National Grid Co-ordinates: **E:643184.7 N:259363.9**

PLOT OF DEPTH OF WATER BELOW GROUND LEVEL AGAINST TIME



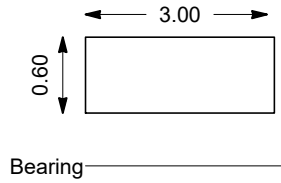
		Test 1	Test 2	Test 3	
Pit start depth:	=	*1.80*	*1.80*	**1.80**	m
Pit final depth:	=	*1.70*	*1.66*	**1.65**	m
Effective depth, De	=	*0.70*	*0.70*	**0.70**	m
Fill Porosity	=	*23*	*23*	**23**	%
Effective storage volume, V_{p75-25}	=	*0.1449*	*0.1449*	**0.1449**	m^3
Surface area, a_{s50}	=	*4.3200*	*4.3200*	**4.3200**	m^2
Time, t_{p75-25}	=	*505.0*	*674.0*	**958.0**	secs
Infiltration rate, f	=	*$6.64x10^{-5}$*	*$4.98x10^{-5}$*	**$3.50x10^{-5}$**	m/s

Notes: Test 1 - Pit supported using clean 35mm diameter granular fill.

Legend

- Test 1 (04.10.23)
- Test 2 (04.10.23)
- Test 3 (04.10.23)

Plan (Not to scale)



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By	Date	Checked By	Date
[redacted]	07/03/24	[redacted]	07/03/24

Contract: **Sealink Friston**

Contract Ref: **563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - TP SOAKAWAY - 2 - FINAL REPORT - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 07/03/24 - 14:19 | AML I |

FULL SCALE SOAKAWAY TEST

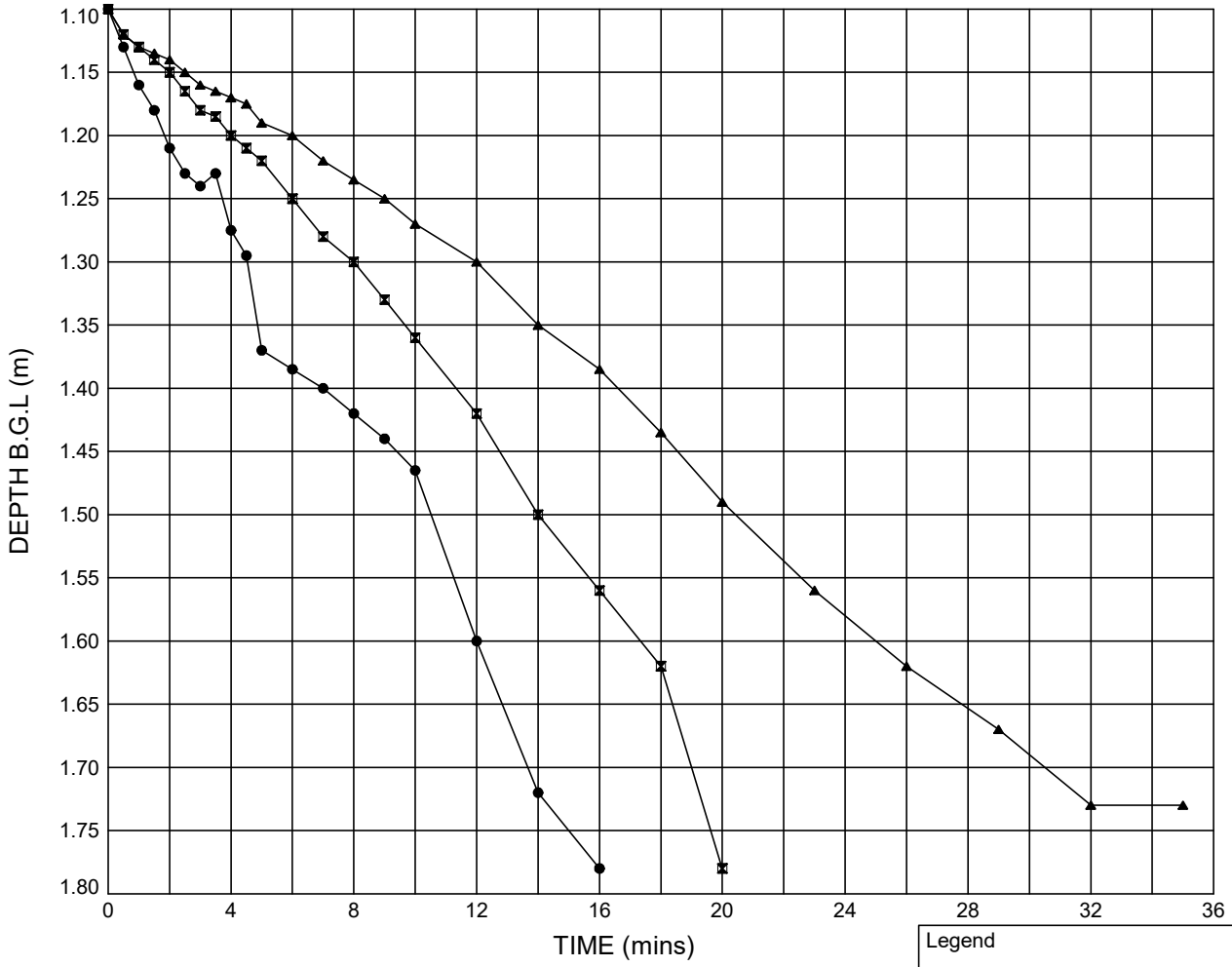
In accordance with BRE Digest 365

Soakaway Test - Position ID : **F22-TP404A**

Test Supervisor : **MCapitani**

Ground Level (m AOD): **13.06** National Grid Co-ordinates: **E:643184.7 N:259363.9**

PLOT OF DEPTH OF WATER BELOW GROUND LEVEL AGAINST TIME



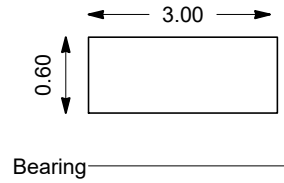
		Test 1	Test 2	Test 3	
Pit start depth:	=	*1.80*	*1.80*	**1.80**	m
Pit final depth:	=	*1.70*	*1.66*	**1.65**	m
Effective depth, De	=	*0.70*	*0.70*	**0.70**	m
Fill Porosity	=	*23*	*23*	**23**	%
Effective storage volume, V_{p75-25}	=	*0.1449*	*0.1449*	**0.1449**	m^3
Surface area, a_{s50}	=	*4.3200*	*4.3200*	**4.3200**	m^2
Time, t_{p75-25}	=	*505.0*	*674.0*	**958.0**	secs
Infiltration rate, f	=	*$6.64x10^{-5}$*	*$4.98x10^{-5}$*	**$3.50x10^{-5}$**	m/s

Notes: Test 1 - Pit supported using clean 35mm diameter granular fill.

Legend

- Test 1 (04.10.23)
- Test 2 (04.10.23)
- Test 3 (04.10.23)

Plan (Not to scale)



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By	Date	Checked By	Date
[redacted]	07/03/24	[redacted]	07/03/24

Contract: **Sealink Friston**

Contract Ref: **563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - TP SOAKAWAY - 2 - FINAL REPORT - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 07/03/24 - 14:21 | AML1 |

FULL SCALE SOAKAWAY TEST

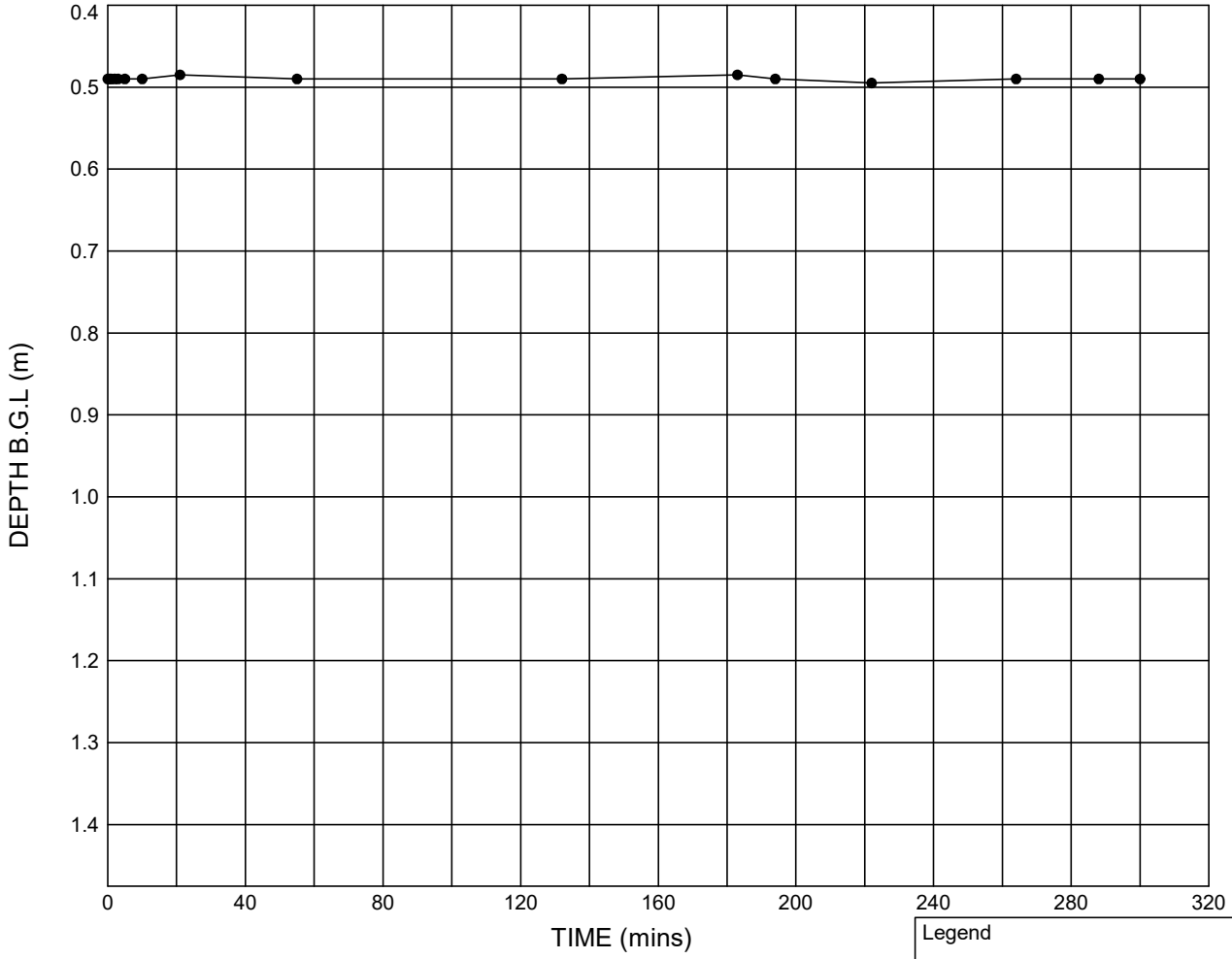
In accordance with BRE Digest 365

Soakaway Test - Position ID : **F22-TP406A**

Test Supervisor : **HTribick**

Ground Level (m AOD): **20.57** National Grid Co-ordinates: **E:640194.9 N:262416.6**

PLOT OF DEPTH OF WATER BELOW GROUND LEVEL AGAINST TIME



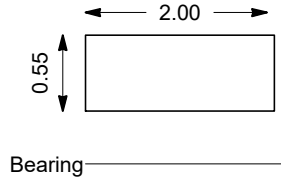
Legend

● Test 1 (03.10.23)

Pit start depth:	=	**1.48**	m
Pit final depth:	=	**1.43**	m
Effective depth, De	=	**0.99**	m
Effective storage volume, V_{p75-25}	=	**NA**	m^3
Surface area, a_{s50}	=	**NA**	m^2
Time, t_{p75-25}	=	**NA**	secs
Infiltration rate, f	=	**NA**	m/s

Notes: Test 1 - Topsoil caved in at 11:06, increasing test water level. Light rain between 14:10-14:20. No calculation of infiltration rate due to no change in test water level.

Plan (Not to scale)



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By	Date	Checked By	Date
[redacted]	**07/03/24**	[redacted]	**07/03/24**

Contract: **Sealink Friston**

Contract Ref: **563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - TP SOAKAWAY - 2 - FINAL REPORT - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 07/03/24 - 14:21 | AML1 |

FULL SCALE SOAKAWAY TEST

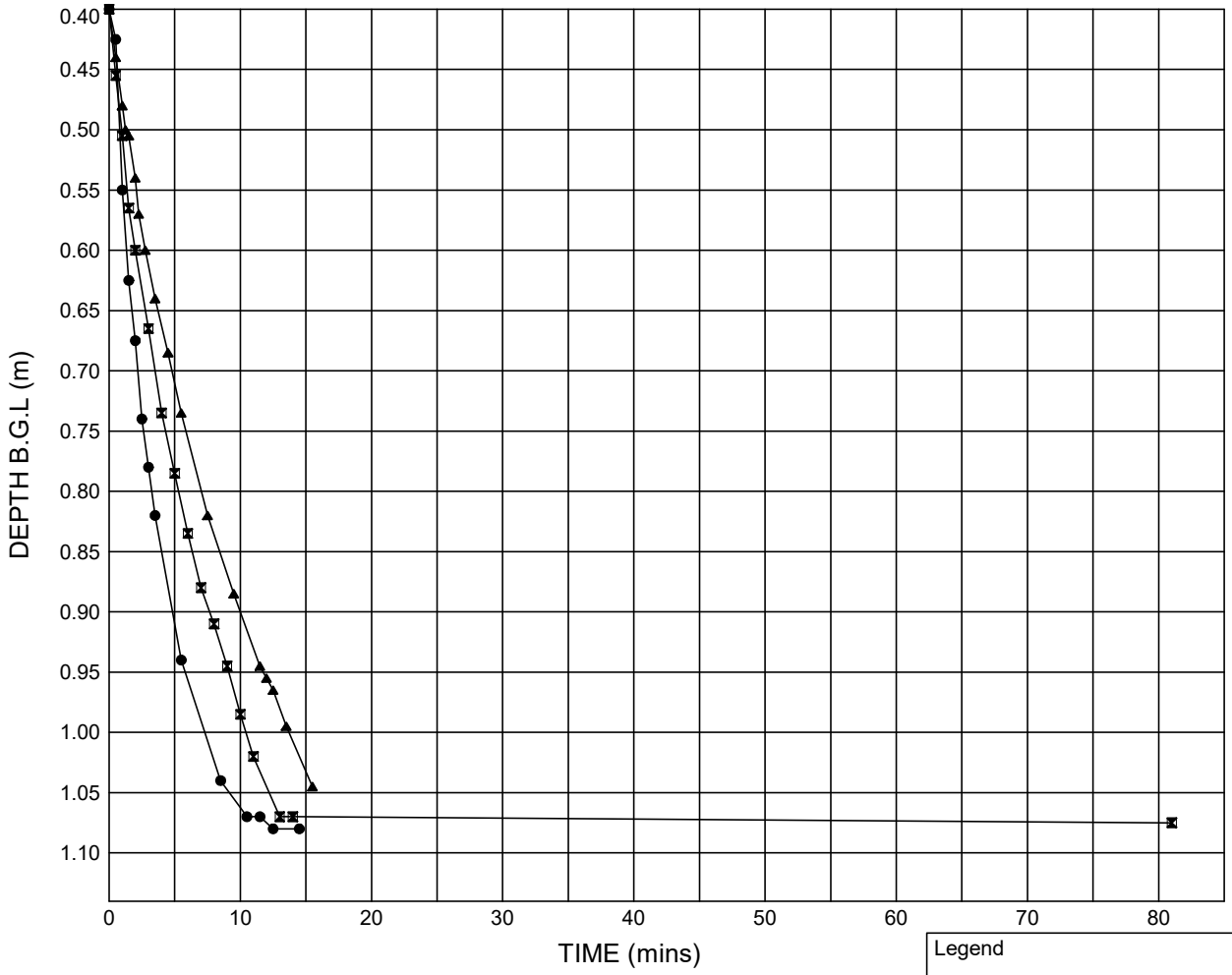
In accordance with BRE Digest 365

Soakaway Test - Position ID : **F22-TP513A**

Test Supervisor : **HTribick**

Ground Level (m AOD): **17.37** National Grid Co-ordinates: **E:645573.9 N:258373.8**

PLOT OF DEPTH OF WATER BELOW GROUND LEVEL AGAINST TIME



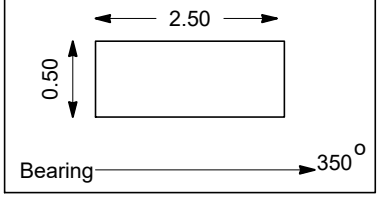
		Test 1	Test 2	Test 3	
Pit start depth:	=	*1.14*	*1.14*	**1.14**	m
Pit final depth:	=	*1.10*	*1.10*	**1.10**	m
Effective depth, De	=	*0.74*	*0.74*	**0.74**	m
Fill Porosity	=	*23*	*23*	**23**	%
Effective storage volume, V_{p75-25}	=	*1.0640*	*1.0640*	**1.0640**	m^3
Surface area, a_{s50}	=	*3.4700*	*3.4700*	**3.4700**	m^2
Time, t_{p75-25}	=	*283.0*	*448.0*	**570.0**	secs
Infiltration rate, f	=	$1.08x10^{-4}$	$6.84x10^{-5}$	**$5.38x10^{-5}$**	m/s

Notes: Test 1 - Test completed with granular fill used to support pit.

Legend

●	Test 1	(04.10.23)
⧓	Test 2	(04.10.23)
▲	Test 3	(04.10.23)

Plan (Not to scale)



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By	Date	Checked By	Date
[redacted]	07/03/24	[redacted]	07/03/24

Contract	Contract Ref:
Sealink Friston	**563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph I - TP SOAKAWAY - 2 - FINAL REPORT - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 07/03/24 - 14:23 | AML1 |

SUMMARY OF IN-SITU THERMAL RESISTIVITY TESTS

In accordance with IEEE 442:2017

Exploratory Position	Location	Depth of Probe (m)	Date of Test	Soil Temp (°C)	Average Thermal Conductivity (W/K.m)	SD Thermal Conductivity (W/K.m)	Average Thermal Resistivity (K.cm/W)	SD Thermal Resistivity (K.cm/W)	Weather Conditions	
F22-TP203A	-	0.70	06/10/23	15.9	2.754	0.077	36.31	1.02		
F22-TP203A	-	0.70	06/10/23	16.0	3.809	0.108	26.25	0.74		
F22-TP203A	-	0.70	06/10/23	15.9	3.268	0.063	30.60	0.59		
F22-TP203A	-	0.90	06/10/23	16.1	1.911	0.008	52.33	0.22		
F22-TP203A	-	0.90	06/10/23	16.2	1.994	0.073	50.15	1.84		
F22-TP203A	-	0.90	06/10/23	16.1	2.172	0.068	46.04	1.44		
F22-TP203A	-	1.10	06/10/23	16.2	2.522	0.017	39.65	0.27		
F22-TP203A	-	1.10	06/10/23	16.4	3.075	0.105	32.52	1.11		

STRUCTURAL SOILS
1a Princess Street
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Exploratory Position	Location	Depth of Probe (m)	Date of Test	Soil Temp (°C)	Average Thermal Conductivity (W/K.m)	SD Thermal Conductivity (W/K.m)	Average Thermal Resistivity (K.cm/W)	SD Thermal Resistivity (K.cm/W)	Weather Conditions	
F22-TP203A	-	1.10	06/10/23	16.3	2.193	0.022	45.60	0.46		
F22-TP204B	-	0.70	05/10/23	15.7	2.401	0.097	41.65	1.68		
F22-TP204B	-	0.70	05/10/23	15.8	2.526	0.058	39.59	0.91		
F22-TP204B	-	0.70	05/10/23	15.8	3.394	0.056	29.46	0.49		
F22-TP204B	-	0.90	05/10/23	16.2	2.712	0.062	36.87	0.84		
F22-TP204B	-	0.90	05/10/23	16.3	3.539	0.128	28.26	1.02		
F22-TP204B	-	0.90	05/10/23	16.1	1.996	0.052	50.10	1.31		
F22-TP204B	-	1.10	05/10/23	16.5	3.654	0.068	27.37	0.51		

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F22-TP204B	-	1.10	05/10/23	16.5	4.033	0.102	24.80	0.63		
F22-TP204B	-	1.10	05/10/23	16.4	2.816	0.096	35.51	1.21		
F22-TP205A	-	0.70	06/10/23	15.6	2.084	0.027	47.98	0.62		
F22-TP205A	-	0.70	06/10/23	15.9	3.049	0.090	32.80	0.97		
F22-TP205A	-	0.70	06/10/23	15.6	2.214	0.036	45.17	0.73		
F22-TP205A	-	0.90	06/10/23	16.0	2.636	0.014	37.94	0.20		
F22-TP205A	-	0.90	06/10/23	16.3	2.597	0.041	38.51	0.61		
F22-TP205A	-	0.90	06/10/23	16.1	2.688	0.036	37.20	0.50		

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F22-TP205A	-	1.10	06/10/23	16.1	1.837	0.053	54.44	1.57		
F22-TP205A	-	1.10	06/10/23	16.1	1.746	0.042	57.27	1.38		
F22-TP205A	-	1.10	06/10/23	16.2	2.177	0.041	45.93	0.87		
F22-TP218A	-	0.70	05/10/23	15.9	2.444	0.051	40.92	0.85		
F22-TP218A	-	0.70	05/10/23	16.0	2.206	0.056	45.33	1.15		
F22-TP218A	-	0.70	05/10/23	15.8	1.923	0.025	52.00	0.68		
F22-TP218A	-	0.90	05/10/23	16.1	1.982	0.013	50.45	0.33		
F22-TP218A	-	0.90	05/10/23	16.2	2.493	0.032	40.11	0.51		

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SUMMARY OF IN-SITU THERMAL RESISTIVITY TESTS

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Exploratory Position	Location	Depth of Probe (m)	Date of Test	Soil Temp (°C)	Average Thermal Conductivity (W/K.m)	SD Thermal Conductivity (W/K.m)	Average Thermal Resistivity (K.cm/W)	SD Thermal Resistivity (K.cm/W)	Weather Conditions	
F22-TP218A	-	0.90	05/10/23	16.3	2.706	0.085	36.95	1.16		
F22-TP218A	-	1.10	05/10/23	16.1	2.265	0.027	44.15	0.53		
F22-TP218A	-	1.10	05/10/23	16.1	1.677	0.060	59.63	2.13		
F22-TP218A	-	1.10	05/10/23	16.1	2.044	0.052	48.92	1.24		
F22-TP220	-	0.70	13/09/23	19.2	2.057	0.198	48.61	4.68	Sunny, 17.0°C	
F22-TP220	-	0.70	13/09/23	19.3	1.365	0.025	73.26	1.34	Overcast, 17.0°C	
F22-TP220	-	0.70	13/09/23	19.0	3.194	0.267	31.31	2.62	Sunny, 18.0°C	
F22-TP220	-	0.90	13/09/23	19.3	2.198	0.070	45.50	1.45	Sunny, 18.0°C	

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F22-TP220	-	0.90	13/09/23	19.1	1.548	0.028	64.60	1.17	Sunny, 18.0°C	
F22-TP220	-	0.90	13/09/23	18.9	1.484	0.037	67.39	1.68	Sunny, 18.0°C	
F22-TP220	-	1.10	13/09/23	18.0	1.947	0.112	51.36	2.95	Sunny, 18.0°C	
F22-TP220	-	1.10	13/09/23	20.3	2.526	0.123	39.59	1.93	Sunny, 18.0°C	
F22-TP220	-	1.10	13/09/23	19.5	2.726	0.124	36.68	1.67	Sunny, 18.0°C	
F22-TP221	-	0.70	12/09/23	19.5	0.969	0.005	103.20	0.53	Clear, 21.0°C	
F22-TP221	-	0.70	12/09/23	19.8	0.595	0.019	168.07	5.37	Clear, 21.0°C	
F22-TP221	-	0.70	12/09/23	20.6	0.864	0.017	115.74	2.28	Clear, 21.0°C	

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F22-TP221	-	0.90	12/09/23	19.2	0.682	0.046	146.63	9.89	Clear, 21.0°C	
F22-TP221	-	0.90	12/09/23	19.4	0.868	0.077	115.21	10.22	Clear, 21.0°C	
F22-TP221	-	0.90	12/09/23	19.3	0.844	0.080	118.48	11.23	Clear, 21.0°C	
F22-TP221	-	1.10	12/09/23	19.0	0.803	0.022	124.53	3.41	Clear, 21.0°C	
F22-TP221	-	1.10	12/09/23	19.0	0.864	0.044	115.74	5.89	Clear, 21.0°C	
F22-TP221	-	1.10	12/09/23	19.1	0.934	0.049	107.07	5.62	Clear, 21.0°C	
F22-TP222	-	0.70	13/09/23	18.4	1.545	0.172	64.72	7.21	Clear, 19.0°C	
F22-TP222	-	0.70	13/09/23	18.3	1.249	0.071	80.06	4.55	Clear, 19.0°C	

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F22-TP222	-	0.70	13/09/23	18.4	1.487	0.053	67.25	2.40	Clear, 19.0°C	
F22-TP222	-	0.90	13/09/23	17.9	1.678	0.094	59.59	3.34	Clear, 19.0°C	
F22-TP222	-	0.90	13/09/23	18.0	1.853	0.207	53.97	6.03	Clear, 19.0°C	
F22-TP222	-	0.90	13/09/23	18.0	1.707	0.085	58.58	2.92	Clear, 19.0°C	
F22-TP222	-	1.10	13/09/23	18.5	2.419	0.119	41.34	2.03	Clear, 19.0°C	
F22-TP222	-	1.10	13/09/23	17.7	1.727	0.054	57.90	1.81	Clear, 19.0°C	
F22-TP222	-	1.10	13/09/23	17.7	1.778	0.051	56.24	1.61	Clear, 19.0°C	
F22-TP229A	-	0.70	05/10/23	16.2	1.925	0.064	51.95	1.73		

STRUCTURAL SOILS
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F22-TP229A	-	0.70	05/10/23	16.4	2.419	0.031	41.34	0.53		
F22-TP229A	-	0.70	05/10/23	16.3	2.180	0.019	45.87	0.40		
F22-TP229A	-	0.90	05/10/23	16.8	2.554	0.044	39.15	0.67		
F22-TP229A	-	0.90	05/10/23	16.6	2.770	0.089	36.10	1.16		
F22-TP229A	-	0.90	05/10/23	16.7	2.853	0.053	35.05	0.65		
F22-TP229A	-	1.10	05/10/23	16.7	3.708	0.119	26.97	0.87		
F22-TP229A	-	1.10	05/10/23	16.4	2.008	0.039	49.80	0.97		
F22-TP229A	-	1.10	05/10/23	16.5	2.387	0.026	41.89	0.46		

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F22-TP310	-	0.70	15/09/23	17.9	2.189	0.023	45.68	0.48	Clear, 18.0°C	
F22-TP310	-	0.70	15/09/23	17.9	2.958	0.476	33.81	5.44	Clear, 18.0°C	
F22-TP310	-	0.70	15/09/23	18.0	2.443	0.159	40.93	2.66	Clear, 18.0°C	
F22-TP310	-	0.90	15/09/23	20.7	2.479	0.060	40.34	0.98	Clear, 18.0°C	
F22-TP310	-	0.90	15/09/23	19.0	1.745	0.030	57.31	0.99	Clear, 18.0°C	
F22-TP310	-	0.90	15/09/23	19.0	1.730	0.025	57.80	0.84	Clear, 18.0°C	
F22-TP310	-	1.10	15/09/23	18.8	2.580	0.036	38.76	0.54	Clear, 18.0°C	
F22-TP310	-	1.10	15/09/23	18.3	3.077	0.082	32.50	0.87	Clear, 18.0°C	

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F22-TP310	-	1.10	15/09/23	18.1	1.328	0.085	75.30	4.82	Clear, 18.0°C	
F22-TP311	-	0.70	18/09/23	19.1	2.529	0.107	39.54	1.67	Clear, 17.0°C	
F22-TP311	-	0.70	18/09/23	19.0	1.873	0.137	53.39	3.91	Clear, 17.0°C	
F22-TP311	-	0.70	18/09/23	18.7	1.998	0.379	50.05	9.49	Clear, 17.0°C	
F22-TP311	-	0.90	18/09/23	18.3	1.806	0.006	55.37	0.18	Clear, 17.0°C	
F22-TP311	-	0.90	18/09/23	18.4	2.742	0.188	36.47	2.50	Clear, 17.0°C	
F22-TP311	-	0.90	18/09/23	18.3	1.666	0.015	60.02	0.54	Clear, 17.0°C	
F22-TP311	-	1.10	18/09/23	24.3	4.011	0.485	24.93	3.01	Overcast, 17.0°C	

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F22-TP311	-	1.10	18/09/23	22.9	2.897	0.495	34.52	5.90	Overcast, 17.0°C	
F22-TP311	-	1.10	18/09/23	23.0	3.103	0.131	32.23	1.36	Overcast, 17.0°C	
F22-TP312	-	0.70	18/09/23	18.0	1.691	0.019	59.14	0.66	Overcast, 19.0°C	
F22-TP312	-	0.70	18/09/23	18.1	2.060	0.067	48.54	1.58	Overcast, 19.0°C	
F22-TP312	-	0.70	18/09/23	18.4	2.367	0.063	42.25	1.12	Overcast, 19.0°C	
F22-TP312	-	0.90	18/09/23	19.3	2.152	0.050	46.47	1.08	Overcast, 19.0°C	
F22-TP312	-	0.90	18/09/23	19.4	2.890	0.099	34.60	1.19	Overcast, 19.0°C	
F22-TP312	-	1.10	18/09/23	18.7	1.514	0.061	66.05	2.66	Overcast, 19.0°C	

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F22-TP312	-	1.10	18/09/23	18.5	1.517	0.030	65.92	1.30	Overcast, 19.0°C	
F22-TP312	-	1.10	18/09/23	18.6	1.754	0.064	57.01	2.08	Overcast, 19.0°C	
F22-TP313	-	0.70	14/09/23	18.7	1.860	0.207	53.76	5.98	Sunny, 18.0°C	
F22-TP313	-	0.70	14/09/23	19.6	0.819	0.232	122.10	34.59	Cloudy, 18.0°C	
F22-TP313	-	0.70	14/09/23	19.4	1.644	0.013	60.83	0.48	Sunny, 18.0°C	
F22-TP313	-	0.90	14/09/23	18.6	1.818	0.040	55.01	1.21	Sunny, 20.0°C	
F22-TP313	-	0.90	14/09/23	19.0	2.068	0.046	48.36	1.08	Sunny, 20.0°C	
F22-TP313	-	0.90	14/09/23	18.9	1.916	0.056	52.19	1.53	Sunny, 20.0°C	

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F22-TP313	-	1.10	14/09/23	18.7	1.853	0.038	53.97	1.11	Sunny/Cloudy, 21.0°C	
F22-TP313	-	1.10	14/09/23	17.8	1.817	0.047	55.04	1.42	Sunny/Cloudy, 21.0°C	
F22-TP313	-	1.10	14/09/23	17.6	1.595	0.045	62.70	1.77	Cloudy, 21.0°C	
F22-TP314	-	0.70	19/09/23	18.7	3.186	0.487	31.39	4.80	Rain, 18.0°C	
F22-TP314	-	0.70	19/09/23	18.3	0.937	0.219	106.72	24.94	Rain, 18.0°C	
F22-TP314	-	0.70	19/09/23	18.5	1.140	0.421	87.72	32.39	Rain, 18.0°C	
F22-TP314	-	0.90	19/09/23	19.0	2.582	0.135	38.73	2.02	Rain, 18.0°C	
F22-TP314	-	0.90	19/09/23	17.7	2.439	0.162	41.00	2.72	Rain, 18.0°C	

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Date: **14.03.24**

Contract Ref: **563835**

Contract: **Sealink Friston**

SUMMARY OF IN-SITU THERMAL RESISTIVITY TESTS

In accordance with IEEE 442:2017

Exploratory Position	Location	Depth of Probe (m)	Date of Test	Soil Temp (°C)	Average Thermal Conductivity (W/K.m)	SD Thermal Conductivity (W/K.m)	Average Thermal Resistivity (K.cm/W)	SD Thermal Resistivity (K.cm/W)	Weather Conditions	
F22-TP314	-	0.90	19/09/23	17.6	2.303	0.060	43.42	1.13	Rain, 18.0°C	
F22-TP314	-	1.10	19/09/23	17.6	1.786	0.017	55.99	0.53	Rain, 18.0°C	
F22-TP314	-	1.10	19/09/23	18.0	2.297	0.441	43.54	8.36	Rain, 18.0°C	
F22-TP314	-	1.10	19/09/23	17.2	1.999	0.113	50.03	2.83	Rain, 18.0°C	
F22-TP315	-	0.70	21/09/23	17.2	2.304	0.087	43.40	1.64	Overcast, 16.0°C	
F22-TP315	-	0.70	21/09/23	17.6	2.888	0.049	34.63	0.59	Overcast, 16.0°C	
F22-TP315	-	0.70	21/09/23	18.9	1.316	0.026	75.99	1.50	Overcast, 16.0°C	
F22-TP315	-	0.90	21/09/23	18.0	2.159	0.391	46.32	8.39	Overcast, 16.0°C	

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In accordance with IEEE 442:2017

Exploratory Position	Location	Depth of Probe (m)	Date of Test	Soil Temp (°C)	Average Thermal Conductivity (W/K.m)	SD Thermal Conductivity (W/K.m)	Average Thermal Resistivity (K.cm/W)	SD Thermal Resistivity (K.cm/W)	Weather Conditions	
F22-TP315	-	0.90	21/09/23	17.2	1.875	0.140	53.33	3.98	Overcast, 17.0°C	
F22-TP315	-	0.90	21/09/23	18.0	1.933	0.320	51.73	8.56	Overcast, 17.0°C	
F22-TP315	-	1.10	21/09/23	17.2	2.425	0.050	41.24	0.85	Overcast, 17.0°C	
F22-TP315	-	1.10	21/09/23	17.1	1.760	0.063	56.82	2.03	Overcast, 17.0°C	
F22-TP315	-	1.10	21/09/23	17.4	1.068	0.037	93.63	3.24	Overcast, 17.0°C	
F22-TP316	-	0.70	19/09/23	18.0	2.122	0.310	47.13	6.88	Overcast, 18.0°C	
F22-TP316	-	0.70	19/09/23	18.8	3.396	0.244	29.45	2.12	Overcast, 18.0°C	
F22-TP316	-	0.70	19/09/23	18.7	2.288	0.105	43.71	2.01	Overcast, 19.0°C	

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Exploratory Position	Location	Depth of Probe (m)	Date of Test	Soil Temp (°C)	Average Thermal Conductivity (W/K.m)	SD Thermal Conductivity (W/K.m)	Average Thermal Resistivity (K.cm/W)	SD Thermal Resistivity (K.cm/W)	Weather Conditions	
F22-TP316	-	0.90	19/09/23	19.4	4.430	0.318	22.57	1.62	Overcast, 19.0°C	
F22-TP316	-	0.90	19/09/23	18.5	3.257	0.112	30.70	1.06	Overcast, 19.0°C	
F22-TP316	-	0.90	19/09/23	18.1	1.802	0.023	55.49	0.71	Overcast, 19.0°C	
F22-TP316	-	1.10	19/09/23	17.5	2.108	0.043	47.44	0.97	Overcast, 20.0°C	
F22-TP316	-	1.10	19/09/23	17.6	1.811	0.021	55.22	0.64	Overcast, 20.0°C	
F22-TP316	-	1.10	19/09/23	17.5	1.914	0.012	52.25	0.33	Overcast, 20.0°C	
F22-TP317B	-	0.70	05/10/23	15.3	1.599	0.021	62.54	0.82		
F22-TP317B	-	0.70	05/10/23	15.5	2.132	0.047	46.90	1.03		

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SUMMARY OF IN-SITU THERMAL RESISTIVITY TESTS

In accordance with IEEE 442:2017

Exploratory Position	Location	Depth of Probe (m)	Date of Test	Soil Temp (°C)	Average Thermal Conductivity (W/K.m)	SD Thermal Conductivity (W/K.m)	Average Thermal Resistivity (K.cm/W)	SD Thermal Resistivity (K.cm/W)	Weather Conditions	
F22-TP317B	-	0.70	05/10/23	15.3	1.755	0.019	56.98	0.62		
F22-TP317B	-	0.90	05/10/23	15.7	2.194	0.066	45.58	1.37		
F22-TP317B	-	0.90	05/10/23	16.1	2.086	0.029	47.94	0.67		
F22-TP317B	-	0.90	05/10/23	16.3	2.163	0.016	46.23	0.34		
F22-TP317B	-	1.10	05/10/23	17.7	2.651	0.027	37.72	0.38		
F22-TP317B	-	1.10	05/10/23	15.9	2.208	0.045	45.29	0.92		
F22-TP317B	-	1.10	05/10/23	16.0	2.348	0.033	42.59	0.60		

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National Grid

Sea Link – Friston

VES Report

Project no. 2191228

RSK GEOSCIENCES

March 2024

RSK GENERAL NOTES

Project No.: 2191228 - R01 (02)

Title: VES Report, Sea Link – Friston

Client: National Grid

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Office: 18 Frogmore Road, Hemel Hempstead, Hertfordshire, HP3 9RT, UK

Author	[redacted] *BSc MSc FGS* Consultant Geophysicist	**Technical reviewer**	[redacted] *CGeol* Associate Director
Signature	[redacted]	Signature	[redacted]
Project manager	[redacted] *CGeol* Associate Director	**Quality reviewer**	[redacted] CGeol Associate Director
Signature	[redacted]	Signature	[redacted]

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Revision ref.	**Date**	**Reason for revision**	**Amended by:**	**Approved by:**
Rev 00	28/09/23	First issue	n/a	see above
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Rev 02	26/03/24	Text update	n/a	see above

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Where field investigations have been carried out, these have been restricted to a level of detail required to achieve the stated objectives of the work.

This work has been undertaken in accordance with the quality management system of RSK Environment.

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EXECUTIVE SUMMARY

On the instructions of Nick Harper of Structural Soils, on behalf of National Grid, RSK Environment Ltd has carried out a geophysical survey to investigate the soil resistivity values at 4 no. locations within the footprint of a proposed converter station for the Sea Link project near Saxmundhum, Suffolk.

Project Findings

Site Setting and Current Usage	The site is located at Wood Farm, Suffolk and is currently used as farmland.
Survey Objectives	To determine the soil resistivity at 4 no. locations in the area of interest in Field ref F22.
Geophysical Techniques Employed	The geophysical techniques employed were that of Vertical Electrical Sounding (VES) method. The equipment used was the Allied Campus Ohmega resistivity meter. The penetration depth of the survey was approximately 70 mbgl where access allowed.
Geophysical Investigation Findings	Values of soil electrical resistivity have been collected across the site at 4 no. locations. The VES data are presented in **Appendix B** and the model inversions presented in **Plates 1-4**. Modelling the resistivity data indicates four or five layers; these are interpreted as a layer of topsoil and weathered clay overlying Lowestoft Formation, Crag and Thames Group.

1 INTRODUCTION

1.1 Introductions

On the instructions of Nick Harper of Structural Soils on behalf of National Grid, RSK Environment Ltd has carried out a geophysical survey to investigate the soil resistivity values at 4 no. locations within the footprint of a proposed converter station for the Sea Link project near the town of Saxmundham, Suffolk..

1.2 Details of the Project

The project was carried out to an agreed brief, and included the following:

- A soil resistivity survey comprising the vertical electric sounding (VES) method at 4 no. locations;
- An Interpretative report.

1.3 Limitations

Non-intrusive geophysical techniques seek to locate boundaries across which there is a marked contrast in physical properties. Such a contrast may be detected remotely because it gives rise to a geophysical anomaly, which is indicative of variation in a physical property relative to some background value. Insufficient contrast (including high levels of cultural noise) can result in masking of the sought anomaly. Therefore, there may be other conditions prevailing at the site which have not been revealed by this investigation and which have therefore not been taken into account in this report.

The response of the ground to different physical forces can be highly variable. Interpretation of the responses contained in this report is based on experience in similar environments and site conditions.

The materials encountered and samples obtained during on-site intrusive investigations represent only a small proportion of the materials present on-site. It should be accepted, therefore, that the interpretation from remotely sensed geophysical data may be inconsistent with that arising from direct methods of investigation.

The following limitations and assumptions apply to VES surveys:

- Interpretation methods assume horizontal (or parallel) layered conditions where each layer has a uniform electrical resistivity. If subsurface conditions cannot be reasonably approximated by this assumption, then results will be in error.

- Thin layers or multiple layers with similar resistivities may not be detected.
- Ambiguities in interpretation can arise from equivalence (where two resistive layers carry nearly the same electric current if the products of their resistivity and thickness are equal).
- Ambiguities in interpretation arising from suppression (where resistant layers are sandwiched between more conductive layers).
- Extremely resistive materials will prevent current injection into the ground.
- The resistivity method is sensitive to electrical interference from a variety of sources. It is inherently sensitive to electrical interference. Spatial variables caused by geologic factors and cultural factors can also produce electrical noise.
- Natural (ambient) sources of noise include lightning or natural earth currents may induce a voltage in resistivity cables.
- Geologic sources of noise include local in-homogeneities near electrodes that may result in measurement error and variations in the subsurface that are not the object of the survey.
- Resistivity measurements may be influenced by nearby cultural features (such as power lines, radio stations, cathodic pipeline protection, and other geophysical equipment) that generate electrical or electromagnetic fields. Pipelines, fences, and metal buildings may also affect them.

2 THE SITE

2.1 Site Location

Site location details are presented in **Table 1** and an extract of the 1:25,000 Ordnance Survey map showing the location of the site is given in **Figure 1**.

Table 1. Site location details

Site name	Sea Link – Friston
Full site address and postcode	Field Ref F22. Wood Farm, Saxmundham IP17 1XE
National Grid reference (centre of site)	TM 433 595

2.2 Site Description

The site boundary and current site layout are shown on **Figure 2**. The site comprises Field / land parcel ref F22, and covers an area of c. 21.3 hectares. It is currently occupied by an open field used for crop.

2.3 Geology and Ground Conditions

The BGS online geological map indicates the site is underlain by superficial deposit comprising of chalky till, sands, gravels, silts and clay from the Lowestoft Formation, below which lies the Crag Group (sands). BGS borehole records from near the site suggest London Clay and/or Reading Formation underlie the Crag. Borehole records provided by Structural Soils from locations within the field confirm the strata encountered with clay to 9.3m depth, below which lies sands to c. 23m depth underlain by Crag.

3 THE SURVEY

3.1 Objective and Geophysical Approach

A geophysical survey was commissioned to seek to determine the soil resistivity across Field F22 at the location of the proposed converter station for the Sea Link project in Suffolk.

The geophysical technique employed was that an electrical resistivity survey comprising the vertical electrical sounding (VES) method. The geophysical fieldwork was conducted between the 19th and 22nd September 2023.

VES surveys were carried out at 4 no. locations, distributed across the whole area of the site.

3.2 The Electrical Resistivity Sounding Technique

An electrical resistivity sounding examines the electrical properties of the ground as a function of depth and/or horizontal distance. Different rocks often exhibit different values of electrical resistivity. Variations in subsurface resistivity can be measured at the surface, and layer thicknesses and resistivities calculated.

3.2.1 Theory

An electrical resistivity sounding investigates the ground resistivity as a function of depth. For any single measurement of ground resistance, an alternating electric current is injected into the subsurface via two metal stakes (electrodes) planted into the ground. One electrode behaves as the current source, whilst the current is returned to the surface to complete the electrical circuit through a second electrode. The current passing through the ground sets up a distribution of potential in the subsurface which is sampled by two additional electrodes (potential electrodes) across which a voltage is measured. The ratio of voltage to current is the resistance, R, of the ground through which the current has passed (**Figure 3A**).

To perform a Wenner resistivity sounding, the electrode spacing, a, is progressively increased between measurements while keeping the centre of the electrode arrangement fixed (**Figure 3B**). This introduces the current into the earth at greater and greater depths so permitting an examination of ground resistance with increasing depth. The resulting resistances are then converted to values of apparent resistivity, ρ_a, using the equation $2*\pi*a*RA$, where a is the spacing in metres and RA is the average resistivity in Ω. This equation can be used where the depth that the electrodes are inserted in to the ground

is small compared to the distance between electrodes. Generally, the burying depth must be less than 5% of the electrode separation (a).

The values calculated (plotted on a sounding curve) are intimately related to the geometry of the electrodes used to obtain them and hence are termed *apparent*, not true, resistivities. In order to produce one-dimensional models of the true ground resistivities and thicknesses, the data set is interpreted using a modern computer software package (**Figure 3C**).

3.2.2 Application to Site

The Wenner array was deployed at site for the measurement of the ground resistivity. The Wenner array maintains an equal separation between each of the four electrodes such that the total length of the array is three times the electrode separation.

The location of the survey lines were pre-defined by the client. The resistivity soundings were recorded at the following 'a' spacing: 0.3 m, 0.5 m, 1 m, 2 m, 3 m, 4 m, 5 m, 7 m, 10 m, 15 m, 20 m, 27 m, 36 m, 54 m, 81 m, 100 m, 120 m and 130 m. Where access allowed, longer lines also includes spacings of 140 m, 150 m, 160 m and 180 m.

3.2.3 Equipment

The instrument used to complete the resistivity sounding was the Campus Ohmega resistivity meter manufactured by Allied Associates Ltd. The serial no. of the equipment used was 259. See equipment specifications and conformance sheet in **Appendix A**.

3.3 Survey Design

Resistivity testing was undertaken at 4 no. locations. The locations and 'a' spacings were predetermined by the client. For line 6, an additional spacing of 150m was added to increase the maximum spacing as was allowed for on site.

The survey lines were located using a Smart Rover GPS, providing accurate location data referenced to the Ordnance Survey OSGB36 National Grid system. The layout of the resistivity lines are shown in **Figure 2.** The locations of the tests are presented in **Table 2** below.

Table 2. Location of the resistivity tests

Test Location	Total Length	Max 'a' spacing	Centre Easting	Centre Northing
5	390 m	130 m	639598.113	262315.623
6	450 m	150 m	639743.616	262118.621
7	540 m	180 m	639764.598	262263.116
8	480 m	160 m	639817.609	262302.083

As per accepted standards for such tests (BS1377:9 section 5.1 and BS7430 section 9.4) the electrodes were inserted into the ground no greater than 5% of the electrode spacing ('a' spacing). At shorter electrode spacings (up to 2 m) the current electrodes were inserted to a maximum depth of 100 mm and the potential electrodes to a maximum depth of 50 mm. For each measurement 12 individual readings were acquired, by collecting 3 sets of 4 cycles at each measurement interval. The readings were monitored during acquisition with readings being accepted if the error between subsequent cycles was less than 5%.

4 DATA INTERPRETATION

4.1 Data Quality

The electrical resistivity data were of good quality. Noisy and spurious data points have been removed from the resistivity dataset before inversion. Contact resistances were within accepted quality check limits for all lines.

Generally the soil allowed for a good electrode contact with the ground. After inversion through Aarhus SPIA DC, nearly all of the model residuals were under 1%, which are considered to be a good fit to the recorded data. Location 5 has a residual error of 1.1%. **Table 3** shows RMS values across obtained for all test lcoations.

Table 3. Summary of Resistivity Inversion RMS values

TEST LOCATION	RESIDUAL ERROR (%)
5	1.10
6	0.55
7	0.64
8	0.56

4.2 Results and Discussion

The average soil resistivity in Ω and Ωm for each spacing at each test location is shown below in Table 4.

Table 4. Summary of Resistivity Sounding results for each location

	Site Location							
Spacing	Test Route 5		Test Route 6		Test Route 7		Test Route 8	
C1-P1 / P1-P2 / P2-C2	Ω	Ω.m	Ω	Ω.m	Ω	Ω.m	Ω	Ω.m
0.3	5.05	9.52	8.62	16.25	8.89	16.75	8.15	15.37
0.5	4.46	14.02	5.71	17.94	4.97	15.62	5.04	15.83
0.7	3.13	13.74	4.33	19.03	3.58	15.73	3.19	14.03
1	2.11	13.23	3.13	19.65	2.39	14.99	2.54	15.93
2	0.90	11.25	1.60	20.05	1.05	13.25	1.38	17.30
3	0.56	10.64	1.08	20.35	0.74	13.91	0.83	15.67
4	0.44	10.98	0.85	21.42	0.54	13.45	0.65	16.40
5	0.35	10.88	0.71	22.21	0.44	13.92	0.55	17.41

7	0.27	12.07	0.56	24.82	0.34	15.05	0.41	17.83
10	0.24	14.99	0.48	30.34	0.29	17.92	0.33	20.63
15	0.21	19.97	0.41	38.58	0.25	24.01	0.27	25.86
20	0.20	25.69	0.39	48.68	0.25	30.87	0.26	32.78
27	0.20	33.71	0.36	60.57	0.23	39.21	0.26	43.28
36	0.18	40.07	0.31	70.45	0.21	48.39	0.24	55.01
54	0.15	50.17	0.25	85.49	0.15	51.19	0.18	60.69
81	0.11	53.64	0.15	74.54	0.13	66.98	0.12	61.99
100	0.08	53.04	0.12	74.62	0.10	62.62	0.10	60.58
120	0.07	50.57	0.08	62.44	0.08	59.00	0.07	54.53
130	0.06	50.70	0.07	60.23	0.06	51.59	0.07	55.54
140	**	**	0.06	53.84	0.06	49.93	0.06	49.10
150*	*	*	0.06*	52.61*	*	*	*	*
160	**	**	**	**	0.04	43.12	0.04	44.57
180	**	**	**	**	0.03	36.08	**	**

Notes:

* 150m spacing used only for Line 6 to allow the collection additional data point.

** No data due as maximum survey line length reached.

The full resistivity sounding data has been presented in a standard format in **Appendix B.** Details of the survey location, site details, meteorological and ground conditions are also provided. Resistance and calculated resistivity data are presented Data are presented in both tabular and graphical format and the apparent resistivity curve is presented.

The soil parameters were estimated from inspection of the plotted curves and optimised to achieve “best fit”. This was undertaken using Aarhus SPIA DC inversion software. This inverts from an initial model to find the optimum fit through the measured data. This model has been used as a basis for inversions. The inverted models are displayed in **Plates 1-4** and model values in **Tables 5-8**. The models have been compared against a borehole log from BGS records (nearest BGS record reference TM36SE6) together with a number of Structural Soils boreholes recorded within field F22. The models produced are in broad agreement with the borehole logs.

4.2.1 Location 5

The best fit model for location 5 is presented below in **Plate 2** and the accompanying details of the model are displayed in **Table 5**.

The left-hand image presents the observed data points on a graph. The best fit curve is shown as a line through the points. The graph shows “a” spacing on the x-axis vs apparent resistivity on the y-axis, both using a logarithmic scale. The right-hand image displays the resistivity-depth model that is derived from the best fit curve, with resistivity on the x-axis vs depth on the y-axis, displayed on a logarithmic and linear scale respectively.

Plate 1: VES model for location 5

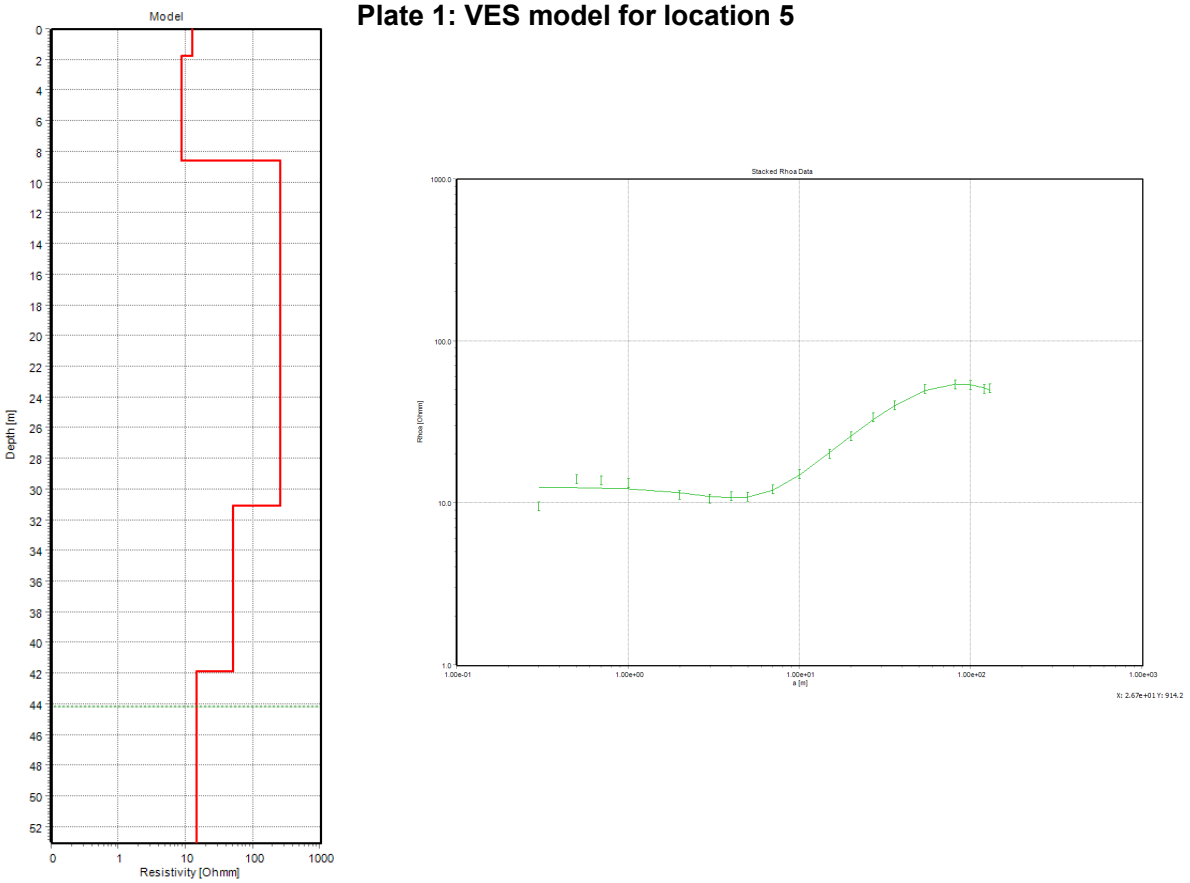


Table 5: VES model data for location 5

Layer	Rho	Thickness of layer (m)	Cumulative depth (m)	Inferred geological scenario (Predominant strata type)
1	12.4	1.75	1.75	Topsoil and weathered clay
2	8.74	6.83	8.59	Lowestoft Formation
3	255	22.5	31.0	Crag
4	50.1	10.8	41.8	Crag
5	14.4		>41.8	Thames Group

4.2.2 Location 6

The best fit model for location 6 is presented below in **Plate 3** and the accompanying details of the model are displayed in **Table 6**.

Plate 2: VES model for location 6

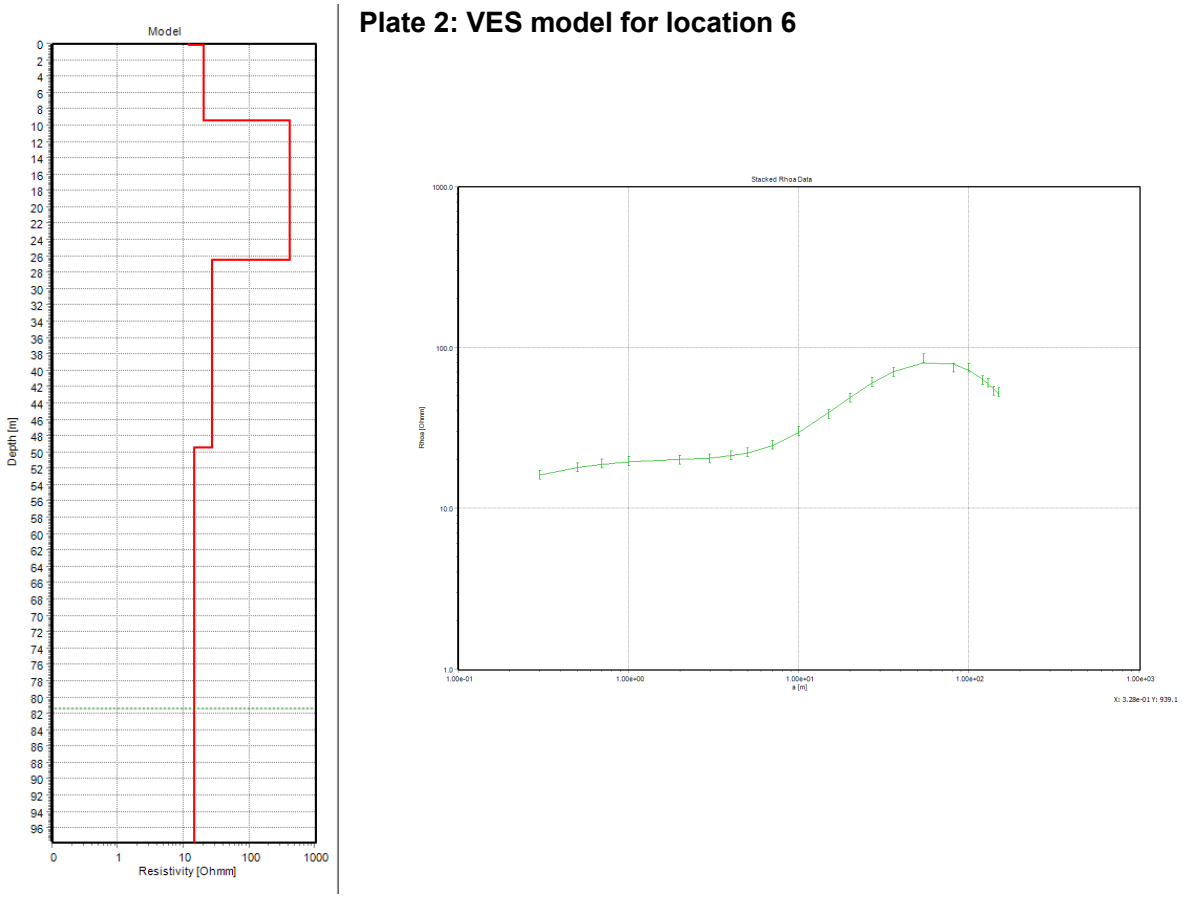


Table 6: VES model data for location 6

Layer	Rho	Thickness of layer (m)	Cumulative depth (m)	Inferred geological scenario (Predominant strata type)
1	11.9	0.125	0.125	Topsoil and weathered clay
2	20.3	9.21	9.33	Lowestoft Formation
3	408	17.1	26.4	Crag
4	27.2	22.9	49.3	Crag
5	14.7		>49.3	Thames Group

4.2.3 Location 7

The best fit model for location 7 is presented below in **Plate 4** and the accompanying details of the model are displayed in **Table 7**.

Plate 3: VES model for location 7

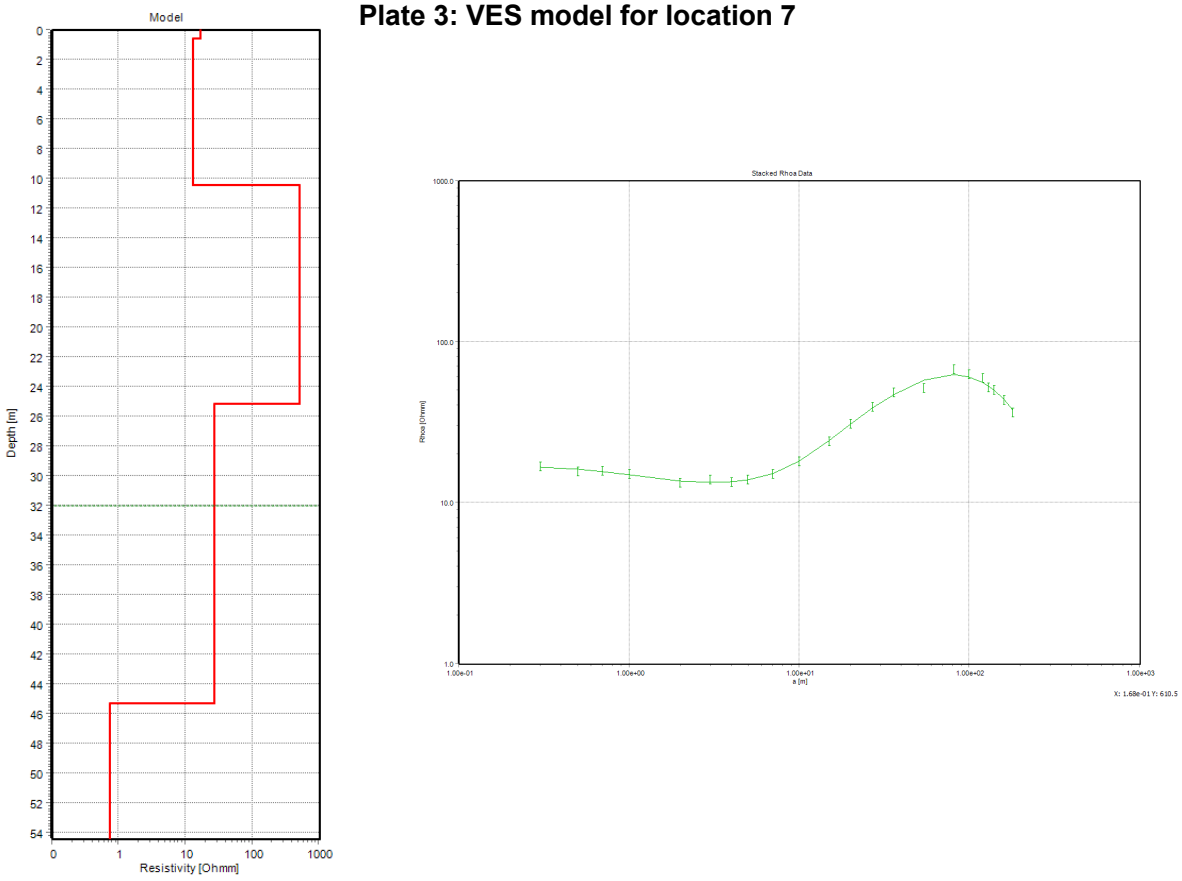


Table 7: VES model data for location 7

Layer	Rho	Thickness of layer (m)	Cumulative depth (m)	Inferred geological scenario (Predominant strata type)
1	16.7	0.588	0.588	Topsoil and weathered clay
2	12.7	9.82	10.4	Lowestoft Formation
3	521	14.7	25.1	Crag
4	27.5	20.2	45.3	Crag
5	0.725		>45.3	Thames Group

4.2.4 Location 8

The best fit model for location 8 is presented below in **Plate 5** and the accompanying details of the model are displayed in **Table 8**.

Plate 4: VES model for location 8

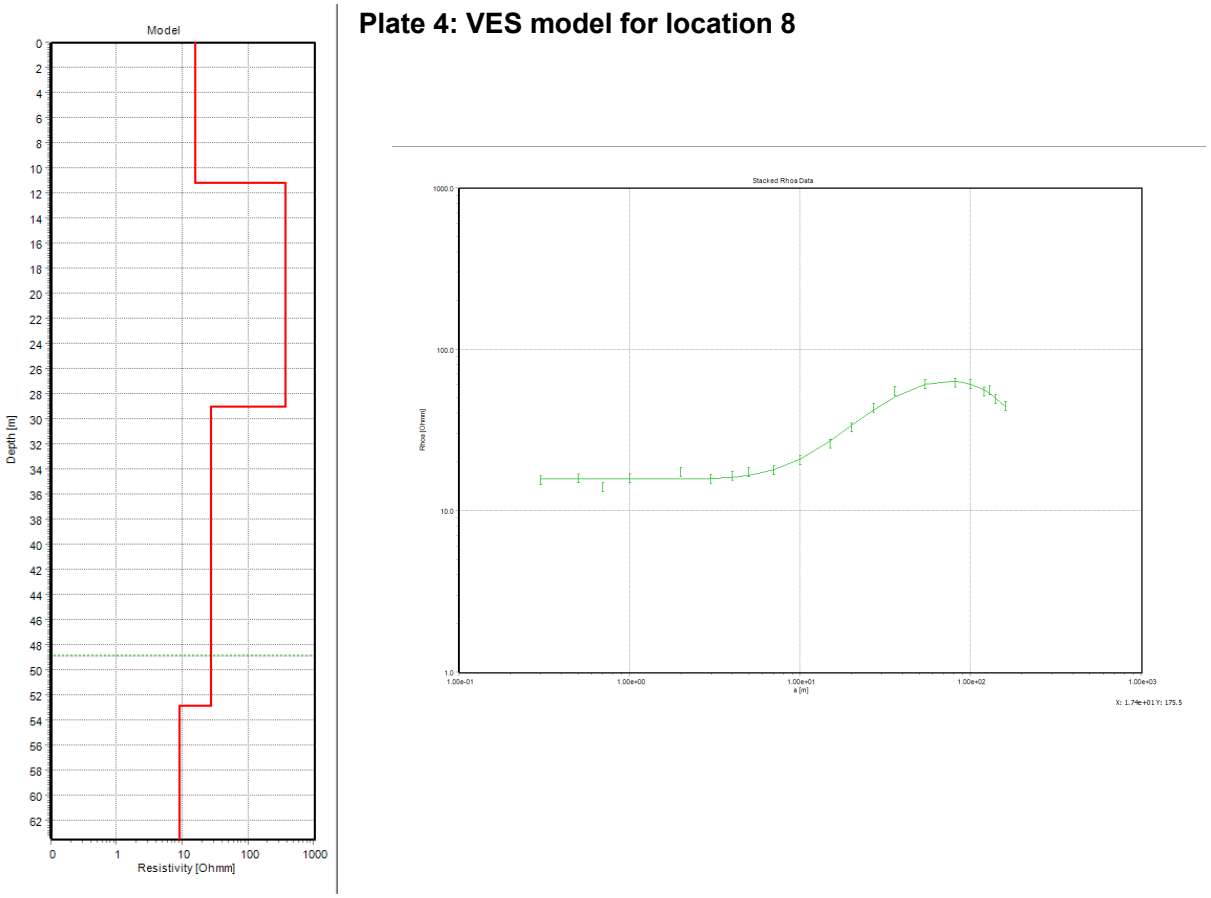


Table 8: VES model data for location 8

Layer	Rho	Thickness of layer (m)	Cumulative depth (m)	Inferred geological scenario (Predominant strata type)
1	15.7	11.2	11.2	Lowestoft Formation
2	369	17.8	29.0	Crag
3	27.3	23.9	52.8	Crag
4	8.9		>52.8	Thames Group

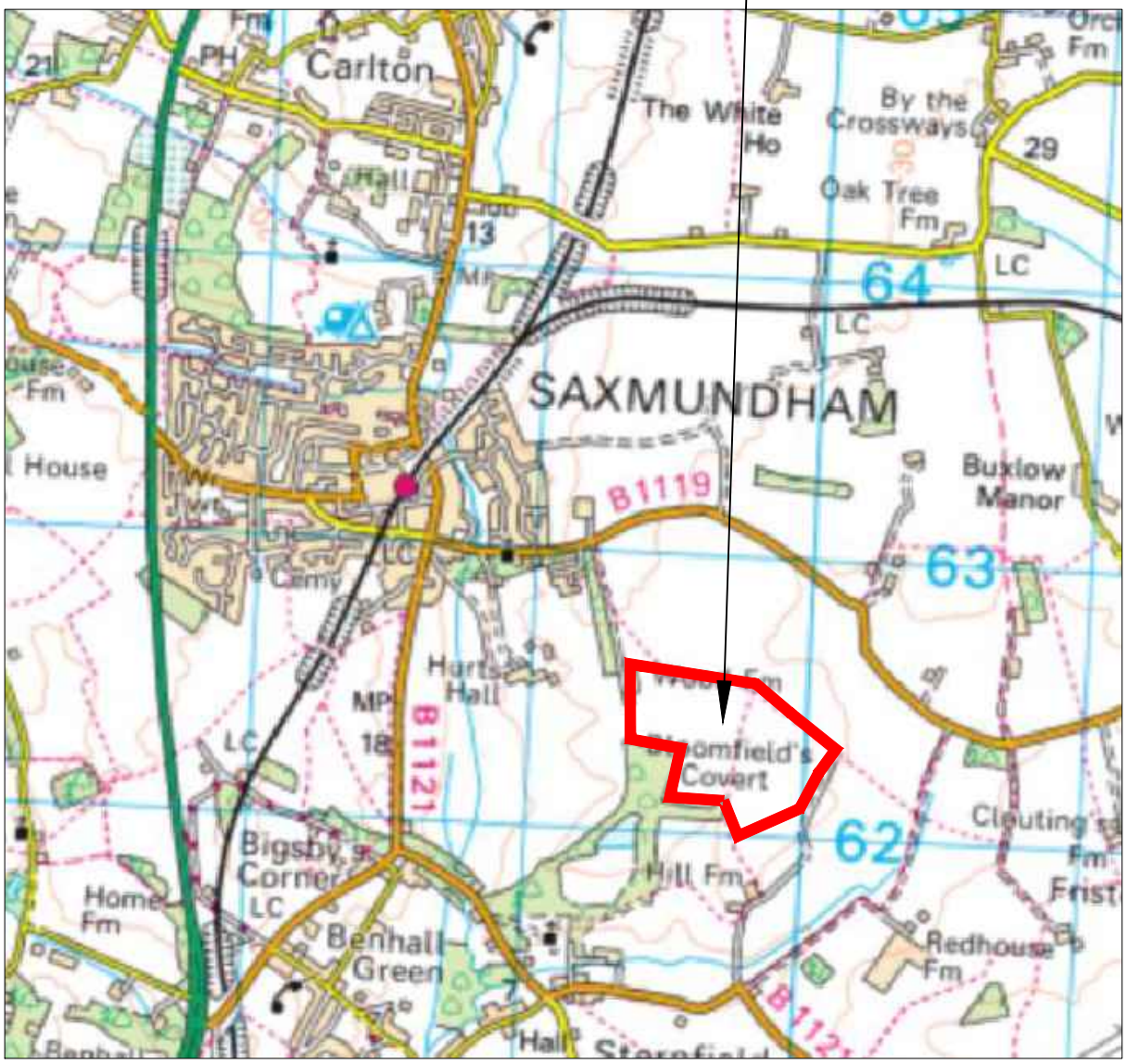
5 SUMMARY AND CONCLUSIONS

- On the instructions of Nick Harper of Structural Soils, on behalf of National Grid ('the Client') RSK Geophysics carried out a geophysical survey to investigate the soil resistivity values at 4 no. locations in Field ref F22 for the Sea Link project in Suffolk.
- The geophysical technique employed was that of vertical electrical sounding (VES).
- The site work was undertaken between 19th and 22nd September 2023.
- Values of soil electrical resistivity have been collected across the site at 4 no. locations. Modelling the resistivity data generally indicates four or five layers; a layer of topsoil and weathered clay, overlying The Lowestoft Formation, Crag and Thames Group. The VES data are presented in Appendix B and the model inversions presented in Plates 1-4.

FIGURES

Figure 1 Site Location
Figure 2 Site Layout and Geophysical Survey Layout
Figure 3 The Electrical Resistivty Sounding Technique

Converter Station
Site Location



Scale

0 0.4 0.8 1.2 1.6 2.0km

NOTES

(1) Extract from Ordnance Survey 1 : 25000 scale map.
(2) Reproduced from Ordnance Survey mapping with the permission of the Controller of Her Majesty's Stationery Office. Crown Copyright reserved (Licence No:AL100014807).

RSK GEOSCIENCES safeground

Drawing Title: SITE LOCATION

National Grid Reference: TM 42252 60143

Client: NATIONAL GRID

Drawn	Date	Checked	Date	Approved	Date
LW	15/01/24	MJS	15/01/24	MJS	15/01/24

Scale	Orig Size	Dimensions
1:25,000	A4	

Project Title: SEALINK - FRISTON

Project No.	Drawing File
2191228	2191228 Figure 1

Drawing No.	Rev.
2191228 Figure 1 Sheet 1 of 1	01



N
NORTH
INDICATIVE

NOTES

The specific risks associated with the content of this drawing are considered to be:-

(1) See RSK report reference 2191228 R01(00) for details

KEY

LOCATION OF A VERTICAL ELECTRICAL SOUNDING SURVEY LINE (CIRCLE SHOW CENTRE OF LINE/TEST LOCATION)

Rev.	Date	Amendment	Drawn	Chkd.	Appd.

RSK GEOSCIENCES
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT
United Kingdom
Tel: +44 1442 437500
Twitter: follow @RSK_Geophysics
Email: RSKGeophysicsEnquiries@rsk.co.uk
Web: www.rsk.co.uk
www.rskgeophysics.com

Client
NATIONAL GRID

Project Title
FRISTON

Drawing Title
SITE LAYOUT
AND VES TEST LOCATIONS

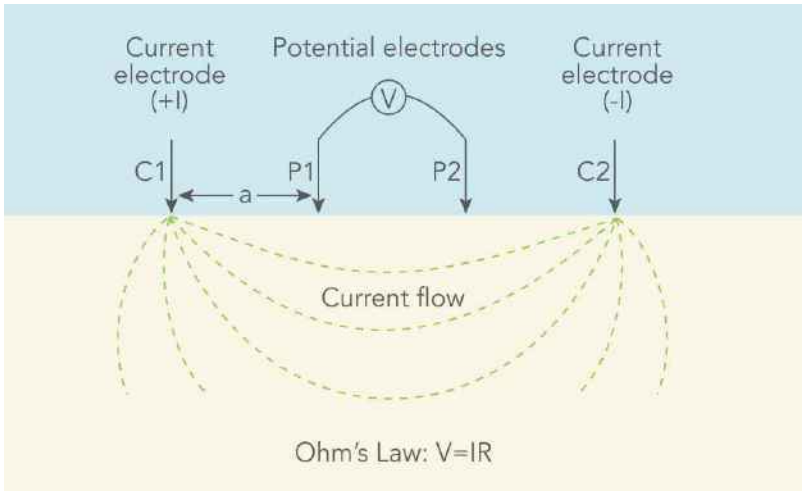
Drawn	Date	Checked	Date	Approved	Date
LW	26/09/23	MJS	28/09/23	MJS	28/09/23

Scale	Orig Size	Dimensions
1:1000	A2	

Project No.	Drawing File
2191228	2191228 Figure 2

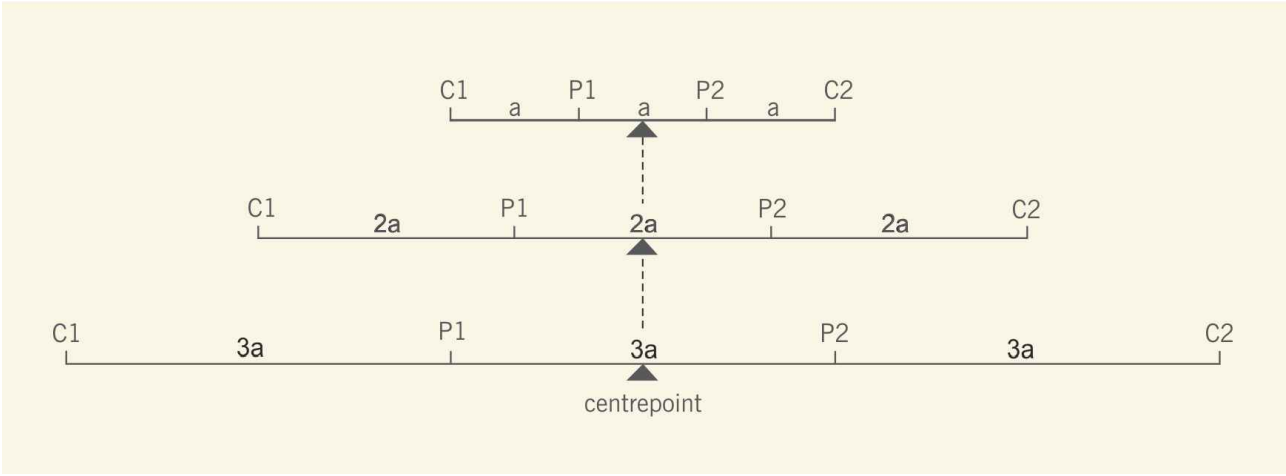
Drawing No.	Rev.
219228 Figure 2 Sheet 1 of 1	

Scale
0 20 40 60 80 100m

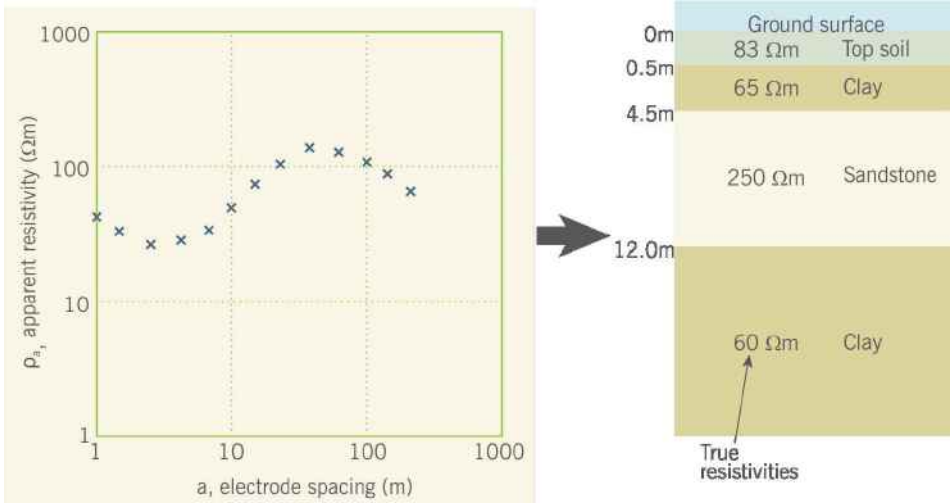


A Obtaining a measurement of ground resistance

B Conducting a sounding using the Wenner electrode array



C A 4-layer sounding and interpreted model of the subsurface



RSK GEOSCIENCES
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT
United Kingdom
Tel: +44 1442 437500
Twitter: follow @RSK_Geophysics
Email: RSKGeophysicsEnquiries@rsk.co.uk
Web: www.rsk.co.uk
www.environmental-geophysics.co.uk

Client: NATIONAL GRID

Project Title: FRISTON

Drawing Title: THE ELECTRICAL RESISTIVITY SOUNDING TECHNIQUE

Drawn	Date	Checked	Date	Approved	Date
LW	26/09/23	MJS	28/09/23	MJS	28/09/23

Scale	Orig Size	Dimensions
As shown	A4	

Project No.	Drawing File
2191228	2191228 Fig. 3

Drawing No.	Rev.
2191228 Fig.3 Sheet 1 of 1	

APPENDIX A

Equipment Specification Sheet

CAMPUS OHMEGA SYSTEM



3 OHMEGA SPECIFICATIONS

TRANSMITTER

Maximum power output:	18W
Current range :	0.5mA to 100 mA (200 mA when fitted)
Square wave repetition:	8.4s, 4.2s. 2.8s.
Number of readings averaged:	1 to 16.

RECEIVER

Input voltage range:	0 –180V with auto gain averaging.
Input impedance:	22MΩ.
Measurement range:	360KΩ – 0.001Ω.
Low pass filter	
Display:	80 character alphanumeric liquid crystal
Power supply:	Rechargeable sealed lead acid. 7 Amp/h @ 12v

GENERAL

Weight:	6kg
Electrode capacity	2 Current, 2 Potential

CAMPUS OHMEGA

RSK GEOSCIENCES

ALLIED ASSOCIATES GEOPHYSICAL LTD
Concept House,
8, The Townsend Centre
Blackburn Road
DUNSTABLE, Bedfordshire, U.K.
LU5 5BQ
Tel: 01582 606999
Fax: 01582 606991

CALIBRATION CERTIFICATE

This is to confirm that this instrument conforms to the manufacturer's specification.
Test resistors are 0.1% tolerance and are checked on a Thurlby D.V.M. model 1503-HA serial number B8892 - HA

Equipment:	RESISTIVITY	**Type:**	OHMEGA
Date :	28th September 2022	**Manufacturer:**	Allied Associates
S/N :	259	**Tested by:**	C. ELDIN
Temperature :	21.5 ° C		
Visual Inspection :	NEW		
Cable(s) Condition :	NEW		
Accessories Complete :	YES		
Battery condition :	NEW		

Current Setting :	**Resistors 10 Ω :**	**1 kΩ :**	**10 kΩ :**	**100 kΩ :**
0.5 mA	10.00	1.001k	10.02k	99.87k
1 mA	10.00	1.000k	10.00k	100.0k
2 mA	9.97	1.000k	9.98k	NA
5 mA	10.00	1.001k	10.00k	NA
10 mA	9.96	0.998k	9.98k	NA
20mA	10.00	0.999k	NA	NA
50 mA	10.00	1.006k	NA	NA
100 mA	NA	NA	NA	NA
200 mA	10.06	NA	NA	NA

ENGINEER'S SIGNATURE:

[redacted]

APPENDIX B

Resistivity Data

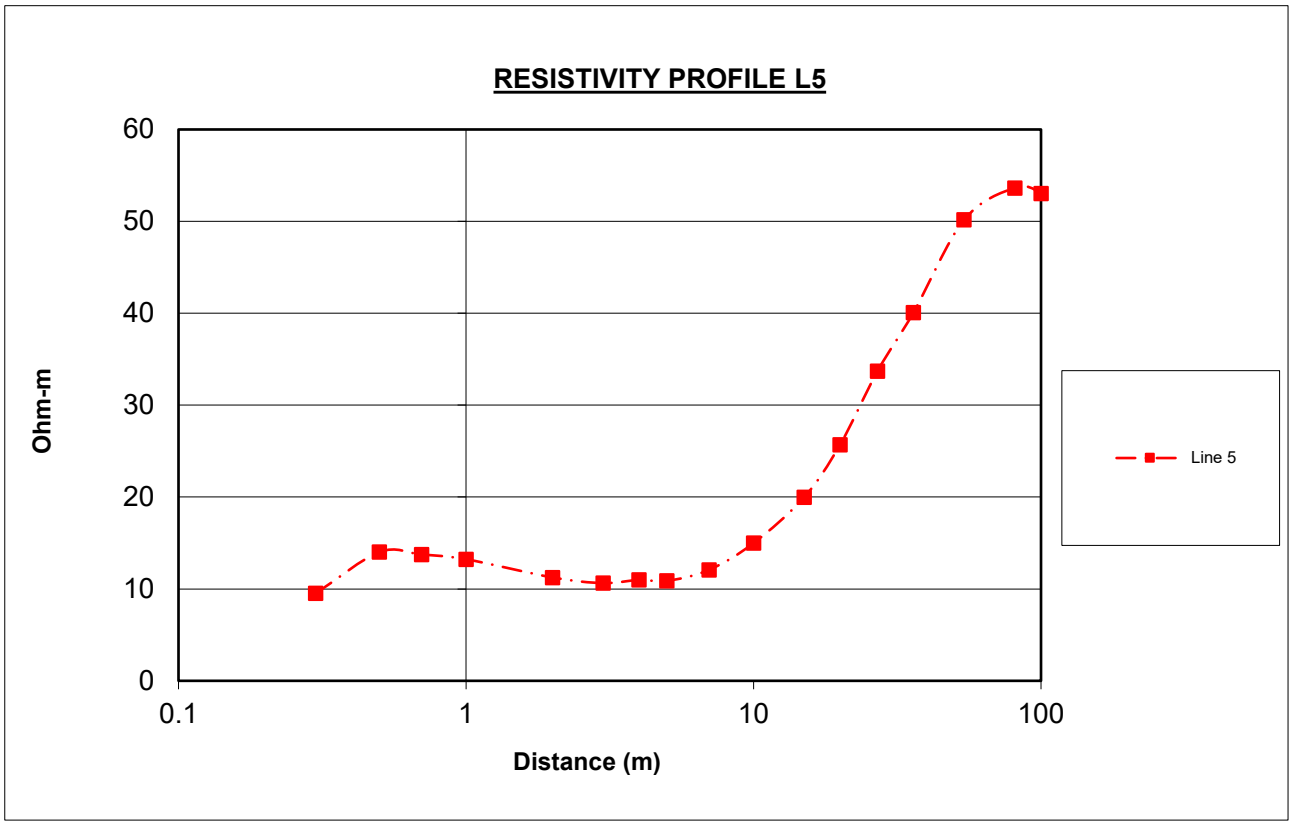
VES Data **Location 5 - APPENDIX B**

Date:	21-Sep-23
Centre OS Co-Ordinates:	639598.1130E, 262315.6230N, 25.707mAOD
Start OS Co-Ordinates:	639525.3930E, 262134.7250N, 24.823mAOD
End OS Co-Ordinates:	639671.0930E, 262496.3240N, 25.118mAOD
Weather Conditions:	Overcast, dry
Ground Condtions:	Wet
Air Temperature:	16°C
Humidity:	70%
Soil type:	Cohesive; clayey
Equipment:	Ohmega Resistivity Meter - serial no. 259
Operators:	JM, JBB

Line 5

Sounding #	Electrode Spacing, A (m)	Resistance, R (ohms) [1]	Resistance, R (ohms) [1]	Resistance, R (ohms) [1]	Average Resistance, R (ohms) [2]	Apparent Resisitivity, pa (ohm.m)	Current (mA)
1	0.3	5.052	5.042	5.052	5.049	9.52	0.5
2	0.5	4.444	4.465	4.475	4.461	14.02	0.5
3	0.7	3.159	3.108	3.108	3.125	13.74	0.5
4	1	2.085	2.126	2.106	2.106	13.23	0.5
5	2	0.893	0.896	0.897	0.895	11.25	0.5
6	3	0.5629	0.5649	0.5649	0.564	10.64	1
7	4	0.4282	0.4394	0.4434	0.437	10.98	1
8	5	0.3462	0.3472	0.3452	0.346	10.88	1
9	7	0.2728	0.2870	0.2637	0.275	12.07	1
10	10	0.2365	0.2395	0.2395	0.239	14.99	2
11	15	0.2106	0.2126	0.2126	0.212	19.97	2
12	20	0.2021	0.2051	0.2061	0.204	25.69	2
13	27	0.1980	0.1960	0.2021	0.199	33.71	5
14	36	0.1799	0.1748	0.1768	0.177	40.07	2
15	54	0.1435	0.1516	0.1485	0.148	50.17	2
16	81	0.1061	0.1030	0.1071	0.105	53.64	2
17	100	0.08570	0.08206	0.08550	0.084	53.04	5
18	120	0.06832	0.06579	0.06711	0.067	50.57	5
19	130	0.06050	0.06407	0.06165	0.062	50.70	5

Notes
[1] 4 no. cycles were taken per reading
[2] Average of 3 sets of readings
[3] Depth of all electrodes was 100mm
[4] Measurement not taken due to presence of buried service or surface obstruction


RESISTIVITY PROFILE L5
Ohm-m
60
50
40
30
20
10
0
0.1
1
10
100
Distance (m)
Line 5

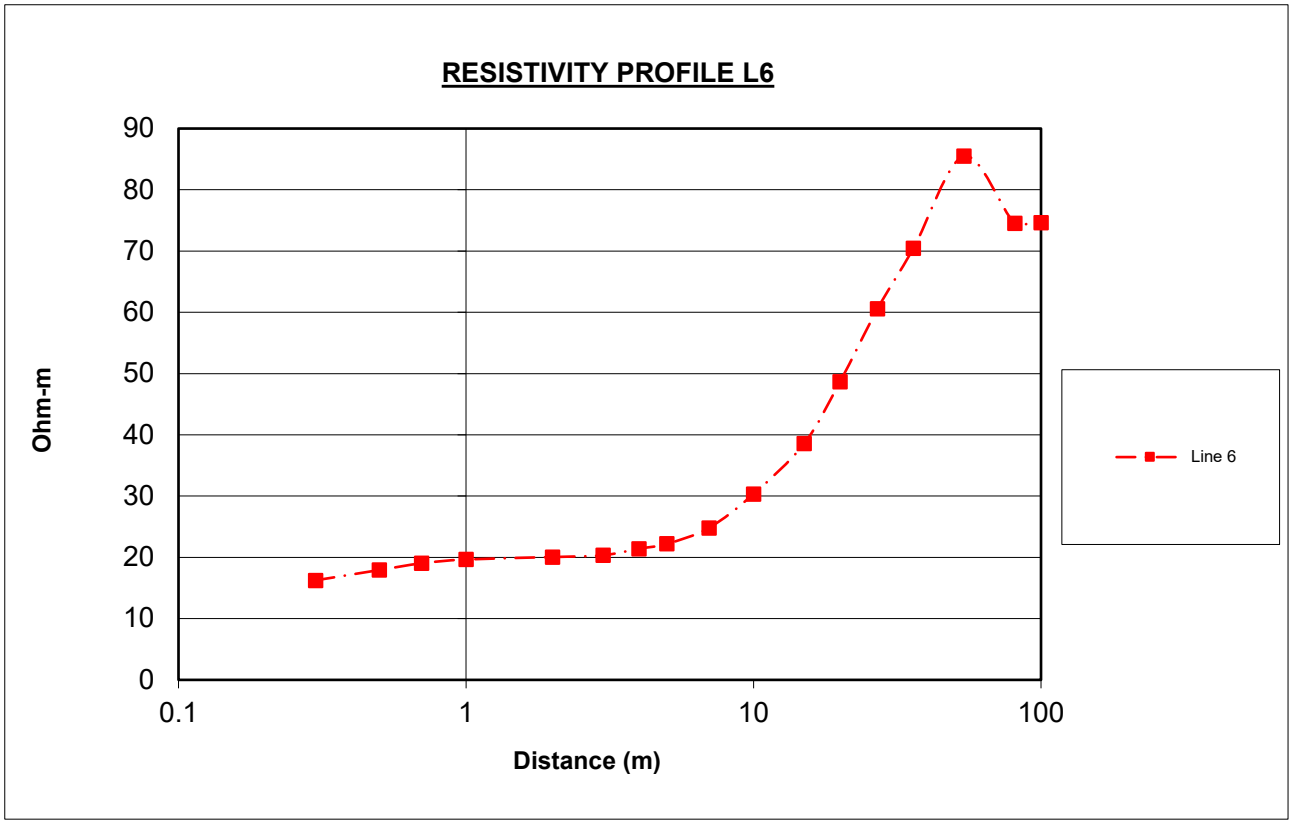
VES Data **Location 6 - APPENDIX B**

Date:	19-Sep-23
Centre OS Co-Ordinates:	639743.516E, 262118.521N, 22.943mAOD
Start OS Co-Ordinates:	639967.964E, 262104.816N, 23.752mAOD
End OS Co-Ordinates:	639518.901E, 262132.107N, 25.002mAOD
Weather Conditions:	Sunny, dry
Ground Condtions:	Dry
Air Temperature:	17°C
Humidity:	75%
Soil type:	Cohesive; clayey
Equipment:	Ohmega Resistivity Meter - serial no. 259
Operators:	JM, JBB

Line 6

Sounding #	Electrode Spacing, A (m)	Resistance, R (ohms) [1]	Resistance, R (ohms) [1]	Resistance, R (ohms) [1]	Average Resistance, R (ohms) [2]	Apparent Resisitivity, pa (ohm.m)	Current (mA)
1	0.3	8.626	8.626	8.616	8.623	16.25	0.5
2	0.5	5.710	5.710	5.710	5.710	17.94	0.5
3	0.7	4.323	4.333	4.323	4.326	19.03	0.5
4	1	3.128	3.128	3.128	3.128	19.65	0.5
5	2	1.599	1.589	1.599	1.596	20.05	0.5
6	3	1.073	1.083	1.083	1.080	20.35	0.5
7	4	0.8515	0.8484	0.8565	0.852	21.42	0.5
8	5	0.7077	0.7067	0.7067	0.707	22.21	0.5
9	7	0.5599	0.5680	0.5649	0.564	24.82	0.5
10	10	0.4870	0.4819	0.4799	0.483	30.34	0.5
11	15	0.4151	0.4131	0.3999	0.409	38.58	0.5
12	20	0.3867	0.3867	0.3888	0.387	48.68	1
13	27	0.3604	0.3574	0.3533	0.357	60.57	1
14	36	0.3108	0.3118	0.3118	0.311	70.45	1
15	54	0.2405	0.2597	0.2557	0.252	85.49	1
16	81	0.1468	0.1458	0.1468	0.146	74.54	1
17	100	0.1225	0.1144	0.1194	0.119	74.62	1
18	120	0.08262	0.08231	0.08353	0.083	62.44	1
19	130	0.07573	0.07371	0.07178	0.074	60.23	1
20	140	0.06225	0.05993	0.06145	0.061	53.84	5
21	150	0.05619	0.05568	0.05558	0.056	52.61	10

Notes
[1] 4 no. cycles were taken per reading
[2] Average of 3 sets of readings
[3] Depth of all electrodes was 100mm
[4] Measurement not taken due to presence of buried service or surface obstruction


RESISTIVITY PROFILE L6
Ohm-m
90
80
70
60
50
40
30
20
10
0
0.1
1
10
100
Distance (m)
Line 6

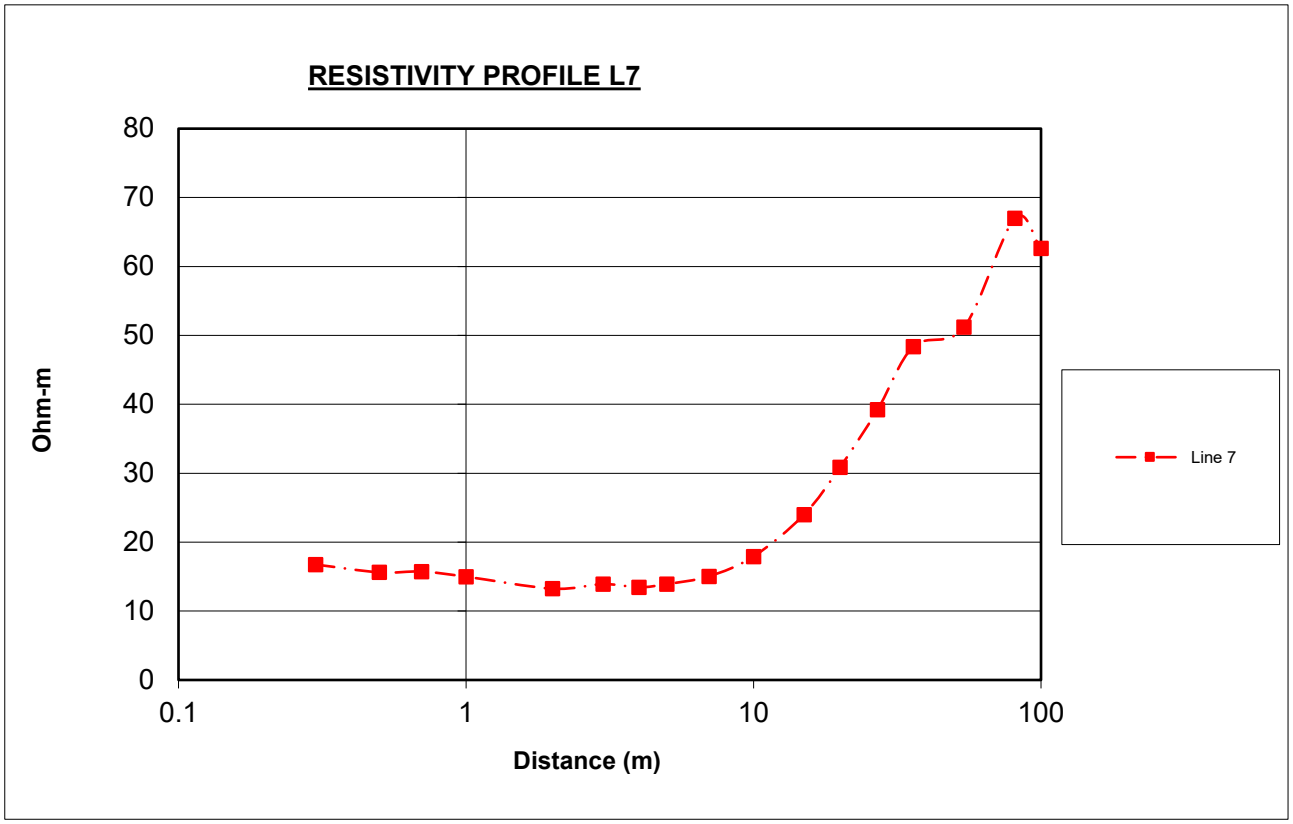
VES Data **Location 7 - APPENDIX B**

Date:	20/09/2023 to 21/09/2023	
Centre OS Co-Ordinates:	639764.498E, 262263.016N, 24.902mAOD	
Start OS Co-Ordinates:	639526.724E, 26135.239N, 24.891mAOD	
End OS Co-Ordinates:	640001.469E, 262392.135N, 23.370mAOD	
Weather Conditions:	Day 1: Sunny, dry	Day 2: Overcast, dry
Ground Condtions:	Day 1: Dry	Day 2: Wet
Air Temperature:	Day 1: 19°C	Day 2: 13°C
Humidity:	Day 1: 70%	Day 2: 90%
Soil type:	Cohesive; clayey	
Equipment:	Ohmega Resistivity Meter - serial no. 259	
Operators:	JM, JBB	

Line 7

Sounding #	Electrode Spacing, A (m)	Resistance, R (ohms) [1]	Resistance, R (ohms) [1]	Resistance, R (ohms) [1]	Average Resistance, R (ohms) [2]	Apparent Resisitivity, pa (ohm.m)	Current (mA)
1	0.3	8.889	8.879	8.889	8.886	16.75	0.5
2	0.5	4.971	4.971	4.971	4.971	15.62	0.5
3	0.7	3.574	3.584	3.574	3.577	15.73	0.5
4	1	2.328	2.425	2.405	2.386	14.99	0.5
5	2	1.051	1.071	1.041	1.054	13.25	0.5
6	3	0.7441	0.7381	0.732	0.738	13.91	0.5
7	4	0.5326	0.5235	0.5498	0.535	13.45	1
8	5	0.4424	0.4455	0.4414	0.443	13.92	1
9	7	0.3452	0.3422	0.3391	0.342	15.05	1
10	10	0.2875	0.2835	0.2845	0.285	17.92	1
11	15	0.2551	0.2541	0.2551	0.255	24.01	1
12	20	0.2460	0.2460	0.2450	0.246	30.87	1
13	27	0.2318	0.2288	0.2328	0.231	39.21	1
14	36	0.2146	0.2116	0.2156	0.214	48.39	1
15	54	0.1556	0.1495	0.1475	0.151	51.19	1
16	81	0.1326	0.1316	0.1306	0.132	66.98	1
17	100	0.1004	0.0975	0.1011	0.100	62.62	1
18	120	0.08095	0.07529	0.07853	0.078	59.00	2
19	130	0.06205	0.06175	0.06569	0.063	51.59	5
20	140	0.05639	0.05761	0.05629	0.057	49.93	5
21	160	0.04343	0.04272	0.04252	0.043	43.12	5
22	180	0.03062	0.03254	0.03254	0.032	36.08	5

Notes
[1] 4 no. cycles were taken per reading
[2] Average of 3 sets of readings
[3] Depth of all electrodes was 100mm
[4] Measurement not taken due to presence of buried service or surface obstruction
[5] Data collected over two days, data from A spacing 100m+ collected on second day


RESISTIVITY PROFILE L7
Ohm-m
80
70
60
50
40
30
20
10
0
0.1
1
10
100
Distance (m)
Line 7

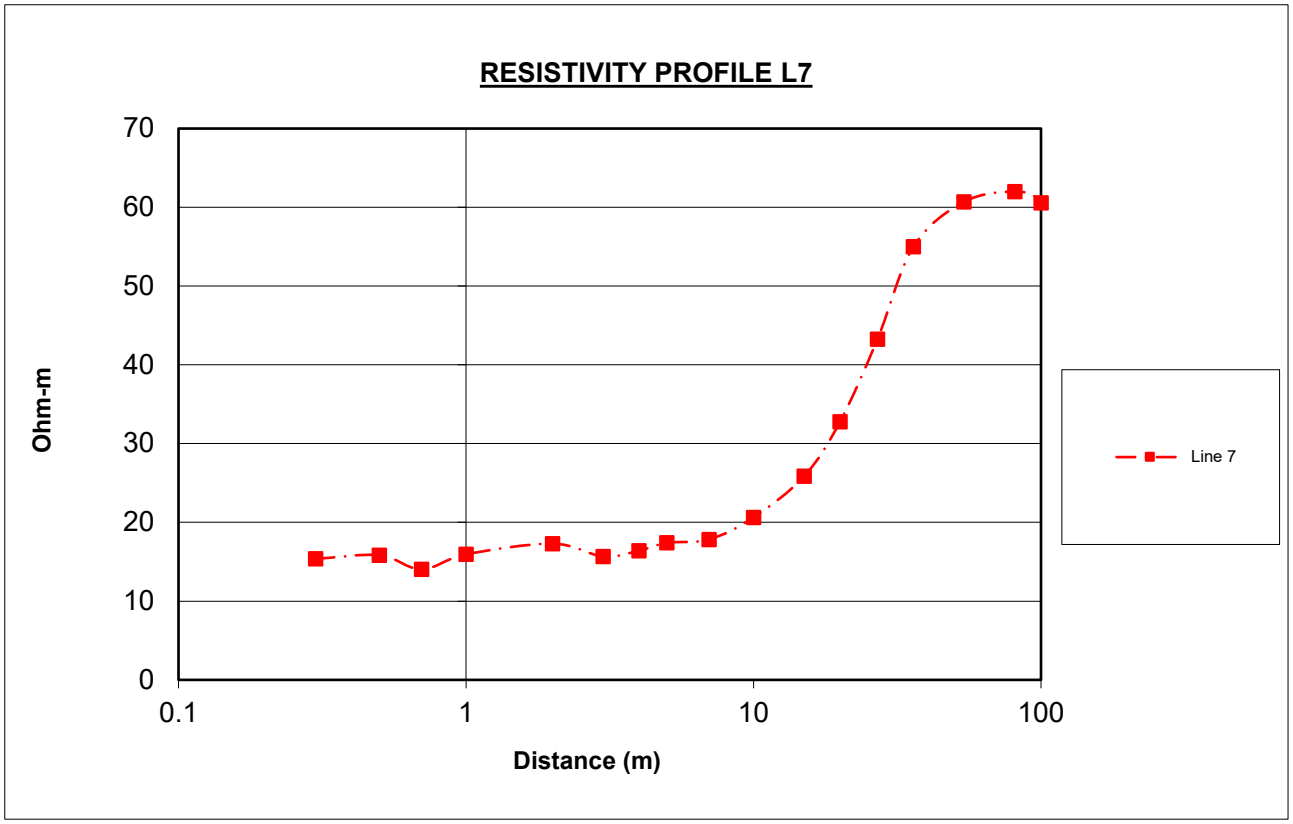
VES Data **Location 8 - APPENDIX B**

Date:	20-Sep-23
Centre OS Co-Ordinates:	639817.509E, 262301.983N, 24.809mAOD
Start OS Co-Ordinates:	639960.075E, 262109.092N, 23.668mAOD
End OS Co-Ordinates:	639674.985E, 262494.937N, 25.094mAOD
Weather Conditions:	Day 1: Sunny, dry
Ground Condtions:	Day 1: Dry
Air Temperature:	Day 1: 19°C
Humidity:	70%
Soil type:	Cohesive; clayey
Equipment:	Ohmega Resistivity Meter - serial no. 259
Operators:	JM, JBB

Line 7

Sounding #	Electrode Spacing, A (m)	Resistance, R (ohms) [1]	Resistance, R (ohms) [1]	Resistance, R (ohms) [1]	Average Resistance, R (ohms) [2]	Apparent Resisitivity, pa (ohm.m)	Current (mA)
1	0.3	8.15	8.16	8.15	8.153	15.37	0.5
2	0.5	5.032	5.042	5.042	5.039	15.83	0.5
3	0.7	3.163	3.193	3.214	3.190	14.03	0.5
4	1	2.546	2.531	2.531	2.536	15.93	0.5
5	2	1.407	1.356	1.366	1.376	17.30	0.5
6	3	0.8338	0.8287	0.8318	0.831	15.67	1
7	4	0.6520	0.6520	0.6540	0.653	16.40	1
8	5	0.5568	0.5518	0.5538	0.554	17.41	1
9	7	0.4070	0.4039	0.4050	0.405	17.83	1
10	10	0.3290	0.3260	0.3300	0.328	20.63	1
11	15	0.2754	0.2743	0.2733	0.274	25.86	2
12	20	0.2612	0.2602	0.2612	0.261	32.78	2
13	27	0.2551	0.2551	0.2551	0.255	43.28	2
14	36	0.2486	0.2385	0.2425	0.243	55.01	2
15	54	0.1802	0.1782	0.1782	0.179	60.69	2
16	81	0.1235	0.1235	0.1184	0.122	61.99	2
17	100	0.09578	0.09639	0.09709	0.096	60.58	2
18	120	0.07239	0.07188	0.07269	0.072	54.53	5
19	130	0.06773	0.06844	0.06783	0.068	55.54	5
20	140	0.05922	0.04922	0.05902	0.056	49.10	5
21	160	0.04497	0.04436	0.04366	0.044	44.57	5

Notes
[1] 4 no. cycles were taken per reading
[2] Average of 3 sets of readings
[3] Depth of all electrodes was 100mm
[4] Measurement not taken due to presence of buried service or surface obstruction
[5] Data collected over two days, data from A spacing 100m+ collected on second day


RESISTIVITY PROFILE L7
Ohm-m
70
60
50
40
30
20
10
0
0.1
1
10
100
Distance (m)
Line 7

APPENDIX D - GEOTECHNICAL LABORATORY TESTING

(i) Laboratory Test Verification Sheet **(OMITTED FROM DRAFT REPORT)**

(ii) Laboratory Test Results

TESTING VERIFICATION CERTIFICATE

1774

The test results included in this report are certified as:-

ISSUE STATUS: **FINAL**

In accordance with the Structural Soils Ltd Laboratory Quality Management System, results sheets and summaries of results issued by the laboratory are checked by an approved signatory. The integrity of the test data and results are ensured by control of the computer system employed by the laboratory as part of the Software Verification Program as detailed in the Laboratory Quality Manual.

This testing verification certificate covers all testing compiled on or before the following datetime: **10/04/2024 12:45:13**.

Testing reported after this date is not covered by this Verification Certificate.



Approved Signatory
Alan Frost (Data Quality Manager)

(Head Office)
Bristol Laboratory
Unit 1A, Princess Street
Bedminster
Bristol
BS3 4AG

Castleford Laboratory
The Potteries, Pottery Street
Castleford
West Yorkshire
WF10 1NJ

Hemel Laboratory
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Tonbridge Laboratory
Anerley Court, Half Moon Lane
Hildenborough
Tonbridge
TN11 9HU

STRUCTURAL SOILS LTD	Contract: **Sealink Friston**	Job No: **563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | GrfcText L - LAB VERIFICATION REPORT - V02 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
Structural Soils Ltd, Branch Office - Hemel Hempstead: 18 Frogmore Road, Hemel Hempstead, Hertfordshire, HP3 9RT. Tel: 01442 262323, Fax: 01442 262683, Web: www.soils.co.uk, Email: ask@soils.co.uk. | 10/04/24 - 12:45 | AF3 |

SUMMARY OF WATER CONTENT TESTS

In accordance with BS EN ISO 17892-1:2014+A1:2022

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content (%)	Drying Temperature (degC)	Description	Lab location
F22-BH203	9	DSPT	2.00	9.3	105	Orangish brown slightly gravelly sandy CLAY	H
F22-BH203	12	DSPT	3.00	21.3	105	Orangish brown slightly gravelly sandy silty CLAY	H
F22-BH203	24	DSPT	7.00	17.4	105	Orangish brown slightly silty SAND	H
F22-BH203	34	D	10.50	19.9	105	Light brown slightly gravelly slightly silty SAND	H
F22-BH203	42	DSPT	13.00	14.2	105	Orangish brown slightly silty SAND	H
F22-BH306	44	B	11.50	18.1	105	Orangish brown clayey SAND	H
F22-BH306	52	B	13.50	14.4	105	Orangish brown slightly gravelly clayey SAND	H
F22-BH306	59	B	15.50	19.0	105	Orangish brown clayey SAND	H
F22-BH306	69	B	18.50	19.6	105	Grey mottled brown slightly gravelly clayey SAND	H
F22-BH306	87	B	22.50	23.2	105	Grey clayey SAND	H
F22-BH307	43	B	11.50	16.1	105	Light brown slightly gravelly silty SAND	H
F22-BH307	66	B	18.00	33.3	105	Orangish brown sandy CLAY	H
F22-BH307	73	D	20.00	18.6	105	Orangish brown clayey SAND	H
F22-BH307	84	B	22.50	20.3	105	Orangish brown clayey SAND	H
F22-BH308	39	B	9.50	21.9	105	Brown very clayey SAND	H
F22-BH308	48	D	12.00	43.9	105	Brown very clayey SAND (large amount of standing water in tub)	H
F22-BH308	59	B	14.50	14.1	105	Brown gravelly slightly clayey SAND	H
F22-BH308	75	B	18.50	23.2	105	Brown gravelly clayey SAND	H

Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

STRUCTURAL SOILS LTD

Compiled By: [redacted]

Date: **04.03.24**

Contract: **Sealink Friston**

Contract Ref: **563835**

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SUMMARY OF WATER CONTENT TESTS

In accordance with BS EN ISO 17892-1:2014+A1:2022

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content (%)	Drying Temperature (degC)	Description	Lab location
F22-BH308	84	D	21.00	35.8	105	Brown clayey SAND (large amount of standing water in tub)	H
F22-BH308	90	B	22.50	20.2	105	Brown slightly clayey SAND	H
F22-BH309	19	UT	5.50	16.7	105	Dark grey mottled white slightly sandy slightly gravelly silty CLAY	B
F22-BH309	37	D	10.00	19.4	105	Orangish brown mottled grey slightly gravelly clayey SAND	H
F22-BH309	54	D	14.00	19.5	105	Orangish brown gravelly slightly silty SAND	H
F22-BH309	66	D	17.00	17.3	105	Brown slightly gravelly slightly silty SAND	H
F22-BH309	77	D	20.00	25.0	105	Orangish brown slightly gravelly slightly silty SAND	H
F22-BH309	89	D	23.00	18.4	105	Orangish brown mottled grey slightly gravelly slightly silty SAND	H
F22-BH310	38	DSPT	10.00	9.3	105	Orangish brown silty SAND	H
F22-BH310	52	D	14.50	18.2	105	Orangish brown gravelly slightly silty SAND	H
F22-BH310	66	DSPT	19.00	20.0	105	Orangish brown slightly gravelly silty SAND	H
F22-BH310	83	D	24.50	24.6	105	Orangish brown slightly gravelly silty SAND	H
F22-BH501	8	D	1.10	29.5	105	Dark brown gravelly very clayey SAND	H
F22-BH501	16	D	3.50	11.0	105	Brown very sandy slightly clayey GRAVEL	H
F22-BH501	22	D	5.50	25.3	105	Brown slightly silty SAND	H
F22-BH501	30	DSPT	8.00	20.9	105	Orangish brown slightly gravelly slightly silty SAND	H
F22-BH501	36	DSPT	10.00	18.6	105	Orangish brown slightly gravelly slightly silty SAND	H
F22-BH501	42	DSPT	12.00	20.4	105	Grey gravelly slightly silty SAND	H

Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

STRUCTURAL SOILS LTD

Compiled By		Date	Contract Ref:
[redacted]	[redacted]	**04.03.24**	**563835**
Contract: **Sealink Friston**			

SUMMARY OF WATER CONTENT TESTS

In accordance with BS EN ISO 17892-1:2014+A1:2022

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content (%)	Drying Temperature (degC)	Description	Lab location
F22-BH501	45	DSPT	13.00	19.7	105	Grey slightly silty SAND with some shell fragments	H
F22-BH501	57	DSPT	17.00	23.8	105	Grey slightly silty SAND with some shell fragments	H
F22-BH502	1	D	0.50	14.9	105	Greyish brown gravelly clayey SAND with low cobble content	H
F22-BH502	6	DSPT	1.50	16.1	105	Light brown slightly gravelly sandy clayey SILT	H
F22-BH502	14	D	3.95	13.1	105	Light brown silty SAND	H
F22-BH502A	18	D	5.00	40.5	105	Light brown gravelly clayey SAND	H
F22-BH502A	26	D	7.00	20.3	105	Orangish brown slightly gravelly clayey SAND	H
F22-BH502A	38	D	10.00	46.2	105	Orangish brown clayey SAND	H
F22-BH502A	54	D	14.00	19.3	105	Brown slightly clayey SAND	H
F22-TP203	1	B	0.10	12.5	105	Dark brown gravelly very clayey SAND	H
F22-TP204	13	D	3.80	5.8	105	Yellowish brown clayey SAND	H
F22-TP218	5	B	1.00	15.3	105	Orangish brown slightly gravelly sandy silty CLAY	H
F22-TP218	10	B	3.00	14.0	105	Orangish brown slightly gravelly very clayey SAND	H
F22-TP220	9	D	1.30	7.6	105	Orangish brown gravelly silty SAND	H
F22-TP404	2	D	0.20	8.0	105	Dark brown slightly gravelly silty SAND	H
F22-TP511	5	B	1.00	11.1	105	Orangish brown gravelly clayey SAND	H
F22-TP513	2	B	0.50	4.6	105	Orangish brown gravelly clayey SAND	H
F22-TP513	4	B	0.70	4.5	105	Yellowish brown slightly gravelly slightly clayey SAND	H

Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

STRUCTURAL SOILS LTD

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Date: **04.03.24**

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SUMMARY OF WATER CONTENT TESTS

In accordance with BS EN ISO 17892-1:2014+A1:2022

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content (%)	Drying Temperature (degC)	Description	Lab location
F22-TP514	2	B	0.50	7.7	105	Orangish brown gravelly clayey SAND	H
F22-TP514	6	B	0.90	4.7	105	Yellowish brown slightly gravelly clayey SAND	H
F22-TP525	7	B	1.50	8.3	105	Orangish brown slightly gravelly very clayey SAND	H
RedP-BH-1A	9	D	1.50	3.7	105	Brown mottled grey and white sandy slightly silty GRAVEL	H
RedP-BH-1A	28	DSPT	7.50	36.5	105	Grey slightly gravelly silty SAND	H
RedP-BH-1A	34	DSPT	9.50	52.5	105	Dark grey gravelly slightly clayey SAND	H
RedP-BH-1A	43	DSPT	12.50	28.1	105	Dark grey slightly clayey SAND	H
RedP-BH-1A	49	DSPT	14.50	28.2	105	Dark grey clayey SAND	H
RedP-BH-1A	55	DSPT	16.50	27.2	105	Brown mottled dark grey clayey SAND	H
RedP-BH-1A	61	DSPT	18.50	28.0	105	Orangish brown clayey SAND	H
RedP-BH-1A	67	DSPT	20.50	27.8	105	Grey gravelly SAND	H
RedP-BH-1A	73	DSPT	22.50	24.9	105	Grey gravelly silty SAND	H
RedP-BH-4	4	D	1.00	9.3	105	Orangish brown slightly gravelly clayey SAND	H
RedP-BH-4	12	DSPT	3.00	9.3	105	Orangish brown very gravelly clayey SAND with medium cobble content	H
RedP-BH-4	21	DSPT	6.00	34.4	105	Orangish brown slightly gravelly slightly sandy CLAY	H
RedP-BH-4	30	DSPT	9.00	28.1	105	Orangish brown gravelly slightly clayey SAND	H
RedP-BH-4	42	DSPT	13.00	26.7	105	Orangish brown gravelly slightly clayey SAND	H
RedP-BH-4	51	DSPT	16.00	22.9	105	Orangish brown very gravelly slightly clayey SAND	H

Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

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SUMMARY OF WATER CONTENT TESTS

In accordance with BS EN ISO 17892-1:2014+A1:2022

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content (%)	Drying Temperature (degC)	Description	Lab location
RedP-BH-4	61	DSPT	19.00	23.3	105	Grey slightly gravelly silty SAND	**H**

Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

STRUCTURAL SOILS LTD

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Date: **04.03.24**

Contract Ref: **563835**

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SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 2,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Bulk Density Mg/m^3	Dry Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
F22-BH203	9	DSPT	2.00	9.3							Orangish brown slightly gravelly sandy CLAY
F22-BH203	12	DSPT	3.00	21.3							Orangish brown slightly gravelly sandy silty CLAY
F22-BH203	16	D	4.50	15.1			NP	NP	NP	90	Brown slightly gravelly very clayey SAND
F22-BH203	24	DSPT	7.00	17.4							Orangish brown slightly silty SAND
F22-BH203	34	D	10.50	19.9							Light brown slightly gravelly slightly silty SAND
F22-BH203	42	DSPT	13.00	14.2							Orangish brown slightly silty SAND
F22-BH306	2	D	0.50	18.4			48	24	24	92	Orangish brown slightly gravelly slightly sandy CLAY
F22-BH306	4	D	1.00	14.1			44	21	23	85	Orangish brown slightly gravelly sandy CLAY

SYMBOLS: * denotes BS 1377

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SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 2,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Bulk Density Mg/m^3	Dry Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
F22-BH306	7	D	2.00	20.0			49	22	27	93	Grey mottled white slightly sandy slightly gravelly CLAY
F22-BH306	14	D	4.00	19.0			49	22	27	88	Grey mottled white slightly sandy slightly gravelly CLAY
F22-BH306	21	D	6.00	14.6			43	20	23	91	Grey mottled white slightly sandy slightly gravelly CLAY
F22-BH306	27	B	7.50	16.5			46	22	24	77	Grey mottled white slightly sandy slightly gravelly CLAY
F22-BH306	44	B	11.50	18.1							Orangish brown clayey SAND
F22-BH306	52	B	13.50	14.4							Orangish brown slightly gravelly clayey SAND
F22-BH306	59	B	15.50	19.0							Orangish brown clayey SAND
F22-BH306	69	B	18.50	19.6							Grey mottled brown slightly gravelly clayey SAND

SYMBOLS: * denotes BS 1377

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Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Bulk Density Mg/m^3	Dry Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
F22-BH306	87	B	22.50	23.2							Grey clayey SAND
F22-BH307	2	D	0.50	24.3			48	22	26	95	Yellowish brown mottled white slightly gravelly slightly sandy CLAY
F22-BH307	7	D	2.00	25.1			43	20	23	84	Brown mottled white slightly gravelly slightly sandy CLAY
F22-BH307	13	D	3.95	19.0			49	23	26	86	Orangish brown mottled white slightly gravelly slightly sandy CLAY
F22-BH307	20	D	5.95	16.2			42	19	23	85	Dark grey mottled white slightly gravelly slightly sandy CLAY
F22-BH307	27	D	7.95	15.9			47	22	25	86	Orangish brown mottled white slightly gravelly slightly sandy CLAY
F22-BH307	43	B	11.50	16.1							Light brown slightly gravelly silty SAND
F22-BH307	52	D	14.00	28.4			48	25	23	98	Brown slightly gravelly slightly sandy silty CLAY

SYMBOLS: * denotes BS 1377

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SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 2,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Bulk Density Mg/m^3	Dry Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
F22-BH307	59	D	16.00	35.1			27	18	9	93	Brown slightly gravelly slightly sandy silty CLAY
F22-BH307	66	B	18.00	33.3							Orangish brown sandy CLAY
F22-BH307	73	D	20.00	18.6							Orangish brown clayey SAND
F22-BH307	84	B	22.50	20.3							Orangish brown clayey SAND
F22-BH308	2	D	0.50	21.7			58	18	40	95	Yellowish brown slightly gravelly slightly sandy CLAY
F22-BH308	6	D	1.00	15.8			58	24	34	92	Yellowish brown mottled grey slightly gravelly slightly sandy CLAY
F22-BH308	16	D	3.95	19.9			50	22	28	91	Grey slightly sandy slightly gravelly CLAY
F22-BH308	23	D	6.00	20.2			46	22	24	87	Brown slightly sandy slightly gravelly CLAY

SYMBOLS: * denotes BS 1377

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SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 2,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Bulk Density Mg/m^3	Dry Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
F22-BH308	30	D	7.95	14.4			57	27	30	76	Brown mottled white slightly gravelly slightly sandy silty CLAY
F22-BH308	39	B	9.50	21.9							Brown very clayey SAND
F22-BH308	48	D	12.00	43.9							Brown very clayey SAND (large amount of standing water in tub)
F22-BH308	59	B	14.50	14.1							Brown gravelly slightly clayey SAND
F22-BH308	75	B	18.50	23.2							Brown gravelly clayey SAND
F22-BH308	84	D	21.00	35.8							Brown clayey SAND (large amount of standing water in tub)
F22-BH308	90	B	22.50	20.2							Brown slightly clayey SAND
F22-BH309	2	D	0.30	17.5			48	22	26	84	Orangish brown slightly gravelly slightly sandy CLAY

SYMBOLS: * denotes BS 1377

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SUMMARY OF SOIL CLASSIFICATION TESTS

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Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Bulk Density Mg/m^3	Dry Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
F22-BH309	4	D	0.70	16.6			69	21	48	90	Light brown slightly gravelly slightly sandy silty CLAY
F22-BH309	7	UT	1.50	18.1			38	20	18	84	Grey slightly sandy slightly gravelly silty CLAY
F22-BH309	14	D	3.95	19.8			47	25	22	81	Brownish grey mottled white slightly sandy slightly gravelly silty CLAY
F22-BH309	19	UT	5.50	16.7							Dark grey mottled white slightly sandy slightly gravelly silty CLAY
F22-BH309	21	D	6.00	25.8			43	19	24	89	Grey mottled white slightly gravelly slightly sandy silty CLAY
F22-BH309	28	D	8.00	15.8			43	20	23	92	Grey slightly gravelly slightly sandy silty CLAY
F22-BH309	37	D	10.00	19.4							Orangish brown mottled grey slightly gravelly clayey SAND
F22-BH309	54	D	14.00	19.5							Orangish brown gravelly slightly silty SAND

SYMBOLS: * denotes BS 1377

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SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 2,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Bulk Density Mg/m^3	Dry Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
F22-BH309	66	D	17.00	17.3							Brown slightly gravelly slightly silty SAND
F22-BH309	77	D	20.00	25.0							Orangish brown slightly gravelly slightly silty SAND
F22-BH309	89	D	23.00	18.4							Orangish brown mottled grey slightly gravelly slightly silty SAND
F22-BH309	98	D	25.00	17.1			NP	NP	NP	39	Brownish grey silty SAND
F22-BH310	2	D	0.30	23.2			49	26	23	94	Orangish brown slightly sandy slightly gravelly silty CLAY
F22-BH310	4	D	0.70	18.6			45	23	22	92	Grey mottled orangish brown slightly sandy slightly gravelly silty CLAY
F22-BH310	8	UT	2.00	18.4			27	16	11	80	Grey mottled orangish brown slightly sandy slightly gravelly silty CLAY
F22-BH310	11	D	2.55	19.7			40	18	22	70	Orangish brown mottled grey slightly gravelly slightly sandy silty CLAY

SYMBOLS: * denotes BS 1377

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In accordance with Part 1,Part 2,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Bulk Density Mg/m^3	Dry Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
F22-BH310	16	D	3.00	20.4			69	41	28	87	Dark grey mottled light brown slightly gravelly slightly sandy SILT
F22-BH310	20	D	4.00	24.5			42	20	22	92	Dark grey slightly gravelly slightly sandy silty CLAY
F22-BH310	32	D	8.45	15.3			69	31	38	85	Grey mottled white and brown slightly sandy slightly gravelly silty CLAY
F22-BH310	38	DSPT	10.00	9.3							Orangish brown silty SAND
F22-BH310	52	D	14.50	18.2							Orangish brown gravelly slightly silty SAND
F22-BH310	66	DSPT	19.00	20.0							Orangish brown slightly gravelly silty SAND
F22-BH310	83	D	24.50	24.6							Orangish brown slightly gravelly silty SAND
F22-BH501	4	D	0.20	55.6			80	40	40	93	Orangish brown slightly gravelly slightly sandy clayey SILT

SYMBOLS: * denotes BS 1377

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SUMMARY OF SOIL CLASSIFICATION TESTS

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Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Bulk Density Mg/m^3	Dry Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
F22-BH501	6	D	0.70	67.2			67	36	31	93	Black slightly gravelly sandy clayey organic SILT
F22-BH501	8	D	1.10	29.5							Dark brown gravelly very clayey SAND
F22-BH501	16	D	3.50	11.0							Brown very sandy slightly clayey GRAVEL
F22-BH501	22	D	5.50	25.3							Brown slightly silty SAND
F22-BH501	30	DSPT	8.00	20.9							Orangish brown slightly gravelly slightly silty SAND
F22-BH501	36	DSPT	10.00	18.6							Orangish brown slightly gravelly slightly silty SAND
F22-BH501	42	DSPT	12.00	20.4							Grey gravelly slightly silty SAND
F22-BH501	45	DSPT	13.00	19.7							Grey slightly silty SAND with some shell fragments

SYMBOLS: * denotes BS 1377

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SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 2,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Bulk Density Mg/m^3	Dry Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
F22-BH501	57	DSPT	17.00	23.8							Grey slightly silty SAND with some shell fragments
F22-BH501	61	D	18.10	16.8			NP	NP	NP	47	Light grey slightly gravelly silty SAND with some shell fragments
F22-BH501	67	D	20.45	38.5			81	37	44	100	Dark grey slightly sandy clayey SILT
F22-BH501	73	D	22.45	50.3			61	30	31	94	Grey slightly sandy silty CLAY
F22-BH501	79	D	24.45	30.9			62	34	28	99	Dark brown slightly sandy clayey SILT
F22-BH502	1	D	0.50	14.9							Greyish brown gravelly clayey SAND with low cobble content
F22-BH502	6	DSPT	1.50	16.1							Light brown slightly gravelly sandy clayey SILT
F22-BH502	14	D	3.95	13.1							Light brown silty SAND

SYMBOLS: * denotes BS 1377

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Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Bulk Density Mg/m^3	Dry Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
F22-BH502A	18	D	5.00	40.5							Light brown gravelly clayey SAND
F22-BH502A	26	D	7.00	20.3							Orangish brown slightly gravelly clayey SAND
F22-BH502A	38	D	10.00	46.2							Orangish brown clayey SAND
F22-BH502A	54	D	14.00	19.3							Brown slightly clayey SAND
F22-BH502A	72	D	19.00	43.5			69	29	40	100	Grey slightly sandy silty CLAY
F22-BH502A	79	D	21.00	38.6			68	26	42	100	Dark brown slightly sandy silty CLAY
F22-BH502A	86	D	23.00	27.5			69	28	41	100	Dark brown slightly sandy silty CLAY
F22-BH502A	93	D	24.95	30.6			70	30	40	100	Dark grey slightly sandy CLAY

SYMBOLS: * denotes BS 1377

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SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 2,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Bulk Density Mg/m^3	Dry Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
F22-TP203	1	B	0.10	12.5							Dark brown gravelly very clayey SAND
F22-TP203	6	D	1.20	10.8			42	19	23	83	Orangish brown gravelly very clayey SAND
F22-TP203	9	D	2.20	17.0			42	18	24	88	Light brown slightly gravelly sandy CLAY
F22-TP204	6	D	1.00	14.0			42	19	23	88	Orangish brown slightly gravelly sandy silty CLAY
F22-TP204	9	D	2.00	14.1			42	31	11	93	Orangish brown slightly gravelly sandy clayey SILT
F22-TP204	13	D	3.80	5.8							Yellowish brown clayey SAND
F22-TP205	4	D	0.50	6.5			NP	NP	NP	76	Orangish brown gravelly silty SAND
F22-TP218	5	B	1.00	15.3							Orangish brown slightly gravelly sandy silty CLAY

SYMBOLS: * denotes BS 1377

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SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 2,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Bulk Density Mg/m^3	Dry Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
F22-TP218	10	B	3.00	14.0							Orangish brown slightly gravelly very clayey SAND
F22-TP220	1	D	0.50	4.5			NP	NP	NP	79	Orangish brown gravelly clayey SAND
											Amalgamation comprises: F22-TP220, Depth:0.50, Ref:1, Type:D + F22-TP220,
											Depth:0.90, Ref:5, Type:D
F22-TP220	9	D	1.30	7.6							Orangish brown gravelly silty SAND
F22-TP221	1	D	0.20	2.9			NP	NP	NP	79	Light brown slightly gravelly slightly silty SAND
F22-TP221	10	D	2.00	13.2			NP	NP	NP	100	Orangish brown silty SAND
F22-TP222A	6	D	1.00	3.6			NP	NP	NP	45	Orangish brown gravelly slightly silty SAND
F22-TP222A	9	D	2.00	4.9			NP	NP	NP	30	Orangish brown gravelly slightly silty SAND

SYMBOLS: * denotes BS 1377

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SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 2,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Bulk Density Mg/m^3	Dry Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
F22-TP229	1	D	0.50	17.7			45	20	25	89	Orangish brown mottled white slightly sandy slightly gravelly CLAY
F22-TP229	7	D	1.10	16.8			40	21	19	90	Orangish brown mottled white and grey slightly gravelly slightly sandy CLAY
F22-TP310	1	D	0.50	17.4			47	21	26	91	Yellowish brown mottled grey slightly gravelly slightly sandy CLAY
F22-TP310	9	D	1.70	17.1			43	20	23	93	Brown mottled white and grey slightly gravelly slightly sandy CLAY
F22-TP310	11	D	2.70	19.2			46	27	19	90	Dark brown mottled white slightly sandy slightly gravelly CLAY
F22-TP311	4	D	0.40	20.4			72	32	40	81	Orangish brown mottled dark brown slightly sandy slightly gravelly silty CLAY
F22-TP311	2	D	0.70	20.5			68	24	44	87	Orangish brown slightly gravelly slightly sandy CLAY
F22-TP311	15	D	2.60	21.6			45	25	20	85	Dark grey mottled white slightly sandy slightly gravelly silty CLAY

SYMBOLS: * denotes BS 1377

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SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 2,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Bulk Density Mg/m^3	Dry Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
F22-TP312	1	D	0.70	17.5			44	21	23	93	Brown mottled white and grey slightly gravelly slightly sandy CLAY
F22-TP312	11	D	2.00	16.1			45	22	23	80	Bluish grey slightly gravelly slightly sandy silty CLAY
F22-TP312	13	D	3.00	20.6			49	23	26	89	Dark grey mottled dark brown and white slightly sandy slightly gravelly CLAY
F22-TP313	1	D	0.50	19.8			51	25	26	91	Yellowish brown mottled grey slightly sandy slightly gravelly CLAY
F22-TP313	7	D	1.10	15.6			49	21	28	92	Yellowish brown slightly gravelly slightly sandy silty CLAY
F22-TP313	15	D	3.70	21.6			46	23	23	91	Dark brown mottled orangish brown slightly sandy slightly gravelly CLAY
F22-TP314	5	D	0.20	23.1			80	41	39	93	Dark brown slightly gravelly slightly sandy clayey SILT
F22-TP314	1	D	0.70	23.7			68	20	48	98	Greenish brown mottled orangish brown slightly gravelly slightly sandy CLAY

SYMBOLS: * denotes BS 1377

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SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 2,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Bulk Density Mg/m^3	Dry Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
F22-TP314	3	D	1.10	22.7			69	25	44	98	Brown mottled white and grey slightly sandy CLAY
F22-TP315	2	D	0.90	17.3			51	22	29	87	Orangish brown slightly gravelly slightly sandy silty CLAY
F22-TP315	9	D	2.00	19.6			45	25	20	93	Orangish brown mottled brown slightly gravelly slightly sandy silty CLAY
F22-TP315	11	D	3.00	21.4			49	21	28	92	Dark grey mottled white slightly gravelly slightly sandy CLAY
F22-TP316	3	D	0.70	24.6			68	31	37	96	Grey mottled white slightly gravelly slightly sandy silty CLAY
F22-TP316	9	D	1.30	19.8			46	33	13	83	White mottled dark brown mottled CHALK
F22-TP316	13	D	3.30	20.3			49	23	26	89	Dark brown mottled white and brown slightly sandy slightly gravelly CLAY with
											chalk
F22-TP317	4	D	0.50	18.4			57	22	35	89	Greenish brown mottled orangish brown and grey slightly gravelly slightly sandy
											CLAY

SYMBOLS: * denotes BS 1377

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SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 2,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Bulk Density Mg/m^3	Dry Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
F22-TP317	12	D	2.00	15.9			44	23	21	86	Greenish brown mottled orangish brown and grey slightly gravelly slightly sandy
											CLAY
F22-TP317	16	D	4.00	21.4			49	24	25	88	Dark grey mottled greenish brown slightly gravelly slightly sandy silty CLAY
F22-TP404	2	D	0.20	8.0							Dark brown slightly gravelly silty SAND
F22-TP404	10	B	3.00	8.0			NP	NP	NP	67	Orangish brown very gravelly slightly clayey SAND
F22-TP406	1	D	0.50	21.1			59	27	32	93	Orangish brown slightly gravelly slightly sandy silty CLAY
F22-TP406	5	D	0.90	19.1			58	18	40	85	Yellowish brown mottled grey slightly gravelly slightly sandy CLAY
F22-TP406	9	D	2.00	20.5			45	26	19	94	Orangish brown mottled grey slightly gravelly slightly sandy silty CLAY
F22-TP511	5	B	1.00	11.1							Orangish brown gravelly clayey SAND

SYMBOLS: * denotes BS 1377

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SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 2,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Bulk Density Mg/m^3	Dry Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
F22-TP511	11	D	3.20	12.0			49	15	34	85	Greenish brown slightly gravelly sandy CLAY
F22-TP513	2	B	0.50	4.6							Orangish brown gravelly clayey SAND
F22-TP513	4	B	0.70	4.5							Yellowish brown slightly gravelly slightly clayey SAND
F22-TP514	2	B	0.50	7.7							Orangish brown gravelly clayey SAND
F22-TP514	6	B	0.90	4.7							Yellowish brown slightly gravelly clayey SAND
F22-TP515	1	D	0.50	23.1			42	18	24	93	Orangish brown slightly gravelly slightly sandy CLAY
F22-TP515	5	D	0.90	20.9			58	26	32	91	Orangish brown slightly gravelly slightly sandy CLAY
F22-TP515	9	D	2.00	19.1			47	18	29	81	Grey mottled brown slightly gravelly slightly sandy CLAY

SYMBOLS: * denotes BS 1377

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SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 2,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Bulk Density Mg/m^3	Dry Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
F22-TP516	1	D	0.50	23.3			51	20	31	94	Orangish brown slightly gravelly slightly sandy CLAY
F22-TP516	5	D	0.90	18.4			47	21	26	91	Orangish brown mottled grey slightly gravelly slightly sandy CLAY
F22-TP516	9	D	2.00	20.6			53	23	30	94	Dark brown slightly gravelly slightly sandy CLAY
F22-TP518	7	D	1.10	10.0			51	25	26	87	Light brown slightly gravelly slightly sandy CLAY
F22-TP518	11	D	3.00	19.1			39	29	10	92	Greyish brown slightly gravelly slightly sandy clayey SILT
F22-TP525	4	D	0.50	18.5			67	35	32	77	Dark brown slightly gravelly sandy silty CLAY
F22-TP525	7	B	1.50	8.3							Orangish brown slightly gravelly very clayey SAND
RedP-BH-1A	9	D	1.50	3.7							Brown mottled grey and white sandy slightly silty GRAVEL

SYMBOLS: * denotes BS 1377

STRUCTURAL SOILS LTD	Contract: **Sealink Friston**	Contract Ref: **563835**

SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 2,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Bulk Density Mg/m^3	Dry Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
RedP-BH-1A	16	UT	4.50	40.5	1.79	1.28					Dark grey mottled black and brown slightly sandy CLAY
RedP-BH-1A	17	D	4.95	47.2			46	22	24	100	Light brown mottled grey slightly sandy CLAY
RedP-BH-1A	20	D	5.30	170			NP	NP	NP	75	Dark brown PEAT
RedP-BH-1A	24	UT	6.50	22.6	2.03	1.66					Dark grey mottled black and dark brown sandy CLAY
RedP-BH-1A	28	DSPT	7.50	36.5							Grey slightly gravelly silty SAND
RedP-BH-1A	34	DSPT	9.50	52.5							Dark grey gravelly slightly clayey SAND
RedP-BH-1A		AMAL	10.50	26.2			NP	NP	NP	57	Grey very gravelly slightly clayey SAND
											Amalgamation comprises: RedP-BH-1A, Depth:10.50, Ref:37, Type:DSPT +
											RedP-BH-1A, Depth:11.50, Ref:40, Type:DSPT

SYMBOLS: * denotes BS 1377

STRUCTURAL SOILS LTD

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SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 2,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Bulk Density Mg/m^3	Dry Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
RedP-BH-1A	43	DSPT	12.50	28.1							Dark grey slightly clayey SAND
RedP-BH-1A	49	DSPT	14.50	28.2							Dark grey clayey SAND
RedP-BH-1A	55	DSPT	16.50	27.2							Brown mottled dark grey clayey SAND
RedP-BH-1A	61	DSPT	18.50	28.0							Orangish brown clayey SAND
RedP-BH-1A	67	DSPT	20.50	27.8							Grey gravelly SAND
RedP-BH-1A	73	DSPT	22.50	24.9							Grey gravelly silty SAND
RedP-BH-1A	82	D	25.00	31.0			81	38	43	89	Grey slightly sandy slightly gravelly CLAY
RedP-BH-1A	87	D	26.95	31.9			61	27	34	100	Dark brown silty CLAY

SYMBOLS: * denotes BS 1377

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SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 2,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Bulk Density Mg/m^3	Dry Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
RedP-BH-1A	89	UT	27.50	32.9	1.94	1.46					Dark brown silty CLAY
RedP-BH-1A	96	DSPT	29.50	32.8			45	31	14	100	Dark brown clayey SILT
RedP-BH-4	4	D	1.00	9.3							Orangish brown slightly gravelly clayey SAND
RedP-BH-4	12	DSPT	3.00	9.3							Orangish brown very gravelly clayey SAND with medium cobble content
RedP-BH-4	21	DSPT	6.00	34.4							Orangish brown slightly gravelly slightly sandy CLAY
RedP-BH-4	30	DSPT	9.00	28.1							Orangish brown gravelly slightly clayey SAND
RedP-BH-4	42	DSPT	13.00	26.7							Orangish brown gravelly slightly clayey SAND
RedP-BH-4	51	DSPT	16.00	22.9							Orangish brown very gravelly slightly clayey SAND

SYMBOLS: * denotes BS 1377

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SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 2,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Bulk Density Mg/m^3	Dry Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
RedP-BH-4	61	DSPT	19.00	23.3							Grey slightly gravelly silty SAND
RedP-BH-4	67	UT	21.00	30.2	1.97	1.51					Dark grey CLAY
RedP-BH-4	69	D	21.50	39.7			42	19	23	96	Dark grey slightly gravelly CLAY
RedP-BH-4	74	D	23.45	32.2			42	18	24	100	Brown CLAY
RedP-BH-4	79	UT	25.00	29.9	1.99	1.53					Dark brown silty CLAY
RedP-BH-4	80	D	25.45	32.0			98	42	56	100	Dark brown silty CLAY
RedP-BH-4	86	D	27.45	31.9			45	32	13	100	Dark brown CLAY
RedP-BH-4	91	UT	29.00	33.6	1.93	1.44					Dark brown CLAY

SYMBOLS: * denotes BS 1377

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In accordance with Part 1,Part 2,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Bulk Density Mg/m^3	Dry Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
RedP-BH-4	92	D	29.45	31.2			45	24	21	100	Dark brown CLAY

SYMBOLS: * denotes BS 1377

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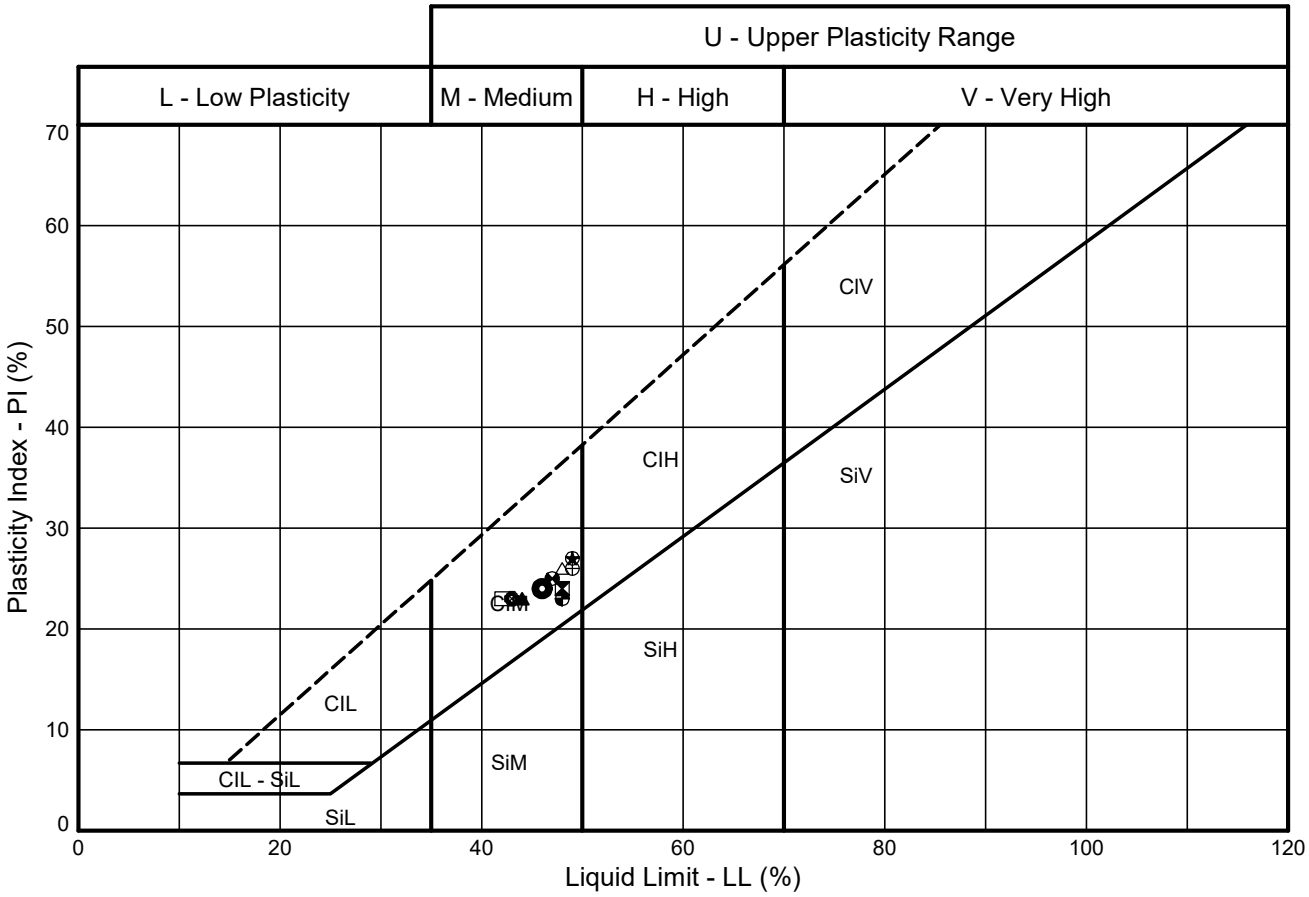
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PI vs LL CHART

According to BS EN 14688-2:2018
Testing in accordance with BS EN ISO 17892-12:2018+A1:2021



Sample Identification				Test Method #	Preparation Method +	WC	LL	PL	PI	<425µm	Lab location	Notes
	Exploratory Position ID	Sample	Depth (m)			%	%	%	%	%		
	F22-BH203	16D	4.50	5.3/5.5/6.5	5.2.7	15.1	NP	NP	NP	90	H	
⊠	F22-BH306	2D	0.50	5.3/5.5/6.5	5.2.7	18.4	48	24	24	92	H	I
▲	F22-BH306	4D	1.00	5.3/5.5/6.5	5.2.7	14.1	44	21	23	85	H	I
★	F22-BH306	7D	2.00	5.3/5.5/6.5	5.2.7	20.0	49	22	27	93	H	I
⊙	F22-BH306	14D	4.00	5.3/5.5/6.5	5.2.7	19.0	49	22	27	88	H	I
✿	F22-BH306	21D	6.00	5.3/5.5/6.5	5.2.7	14.6	43	20	23	91	H	I
●	F22-BH306	27B	7.50	5.3/5.5/6.5	5.2.7	16.5	46	22	24	77	H	I
△	F22-BH307	2D	0.50	5.3/5.5/6.5	5.2.7	24.3	48	22	26	95	H	I
⊗	F22-BH307	7D	2.00	5.3/5.5/6.5	5.2.7	25.1	43	20	23	84	H	I
⊕	F22-BH307	13D	3.95	5.3/5.5/6.5	5.2.7	19.0	49	23	26	86	H	I
□	F22-BH307	20D	5.95	5.3/5.5/6.5	5.2.7	16.2	42	19	23	85	H	I
⊛	F22-BH307	27D	7.95	5.3/5.5/6.5	5.2.7	15.9	47	22	25	86	H	I
◕	F22-BH307	52D	14.00	5.3/5.5/6.5	5.2.7	28.4	48	25	23	98	H	I

Tested in accordance with the following clauses of BS EN ISO 17892-12:2018+A1:2021
5.3 - Cone Penetrometer Method; 5.3.14 - One-Point Cone Penetrometer Method; 5.4 - Casagrande Method; 5.5 - Plastic Limit Method; 6.5 - Plasticity Index

Water Content (WC) tested in accordance with BS EN ISO 17892-1:2014

+ Tested in accordance with the following clauses of BS EN ISO 17892-12:2018+A1:2021
5.2.1 - Natural State and 5.2.7 - Wet Sieved

Key: * = Non-standard test, NP = Non plastic, I = Increasing WC, D = Decreasing WC.

Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

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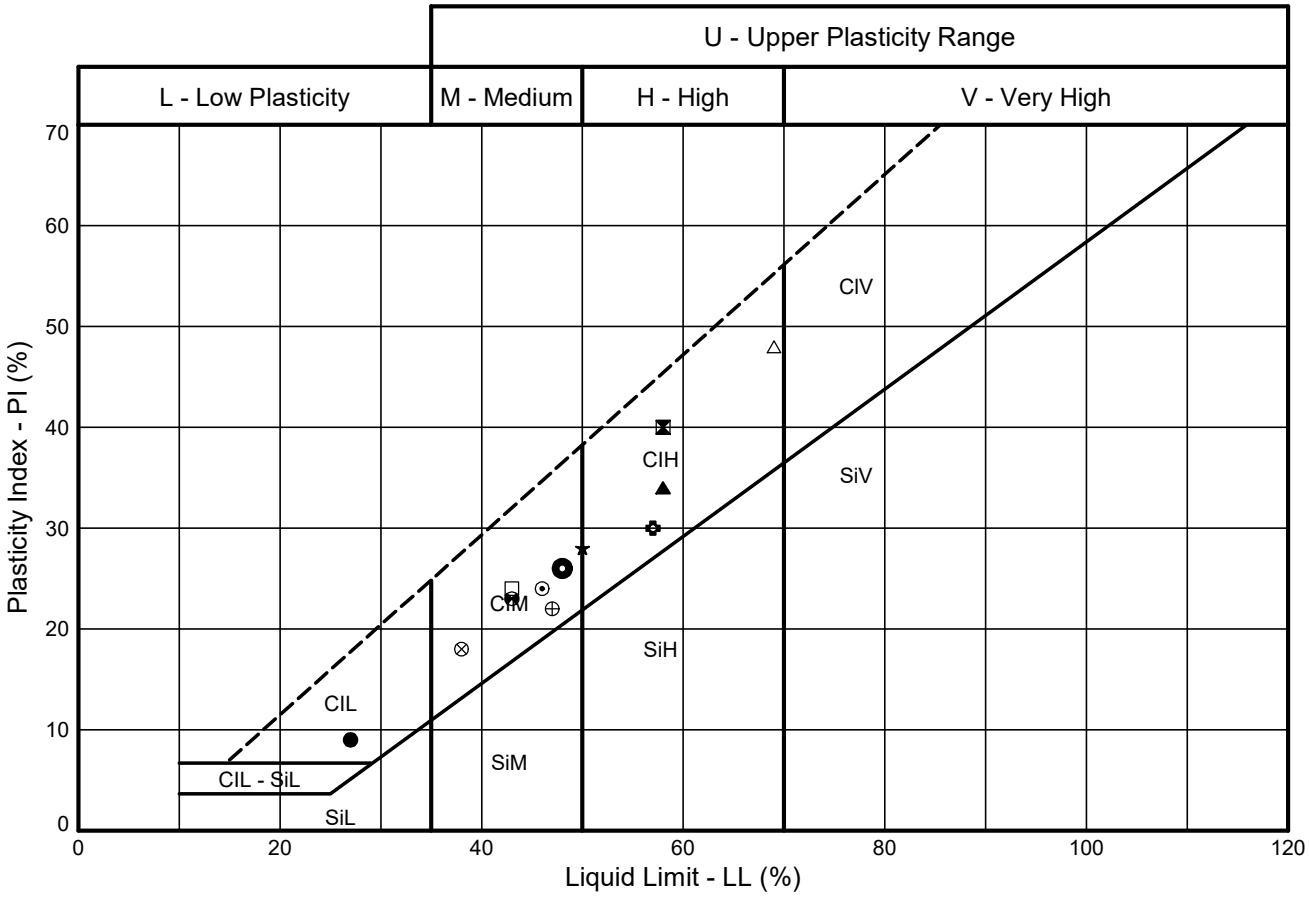
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Contract: **Sealink Friston**		Contract Ref: **563835**

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Structural Soils Ltd, Branch Office - Hemel Hempstead: 18 Frogmore Road, Hemel Hempstead, Hertfordshire, HP3 9RT. Tel: 01442 262323, Fax: 01442 262683, Web: www.soils.co.uk, Email: ask@soils.co.uk. | 04/03/24 - 14:35 | AF3 |

PI vs LL CHART

According to BS EN 14688-2:2018
Testing in accordance with BS EN ISO 17892-12:2018+A1:2021



Sample Identification				Test Method #	Preparation Method +	WC %	LL %	PL %	PI %	<425µm %	Lab location	Notes
	Exploratory Position ID	Sample	Depth (m)									
●	F22-BH307	59D	16.00	5.3/5.5/6.5	5.2.7	35.1	27	18	9	93	H	I
⊠	F22-BH308	2D	0.50	5.3/5.5/6.5	5.2.7	21.7	58	18	40	95	H	I
▲	F22-BH308	6D	1.00	5.3/5.5/6.5	5.2.7	15.8	58	24	34	92	H	I
★	F22-BH308	16D	3.95	5.3/5.5/6.5	5.2.7	19.9	50	22	28	91	H	I
⊙	F22-BH308	23D	6.00	5.3/5.5/6.5	5.2.7	20.2	46	22	24	87	H	I
✿	F22-BH308	30D	7.95	5.3/5.5/6.5	5.2.7	14.4	57	27	30	76	H	I
◉	F22-BH309	2D	0.30	5.3/5.5/6.5	5.2.7	17.5	48	22	26	84	H	I
△	F22-BH309	4D	0.70	5.3/5.5/6.5	5.2.7	16.6	69	21	48	90	H	I
⊗	F22-BH309	7UT	1.50	5.3/5.5/6.5	5.2.1	18.1	38	20	18	84	B	I
⊕	F22-BH309	14D	3.95	5.3/5.5/6.5	5.2.7	19.8	47	25	22	81	H	I
□	F22-BH309	21D	6.00	5.3/5.5/6.5	5.2.7	25.8	43	19	24	89	H	I
⊛	F22-BH309	28D	8.00	5.3/5.5/6.5	5.2.7	15.8	43	20	23	92	H	I
	F22-BH309	98D	25.00	5.3/5.5/6.5	5.2.7	17.1	NP	NP	NP	39	H	

Tested in accordance with the following clauses of BS EN ISO 17892-12:2018+A1:2021
5.3 - Cone Penetrometer Method; 5.3.14 - One-Point Cone Penetrometer Method; 5.4 - Casagrande Method; 5.5 - Plastic Limit Method; 6.5 - Plasticity Index

Water Content (WC) tested in accordance with BS EN ISO 17892-1:2014

+ Tested in accordance with the following clauses of BS EN ISO 17892-12:2018+A1:2021
5.2.1 - Natural State and 5.2.7 - Wet Sieved

Key: * = Non-standard test, NP = Non plastic, I = Increasing WC, D = Decreasing WC.

Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

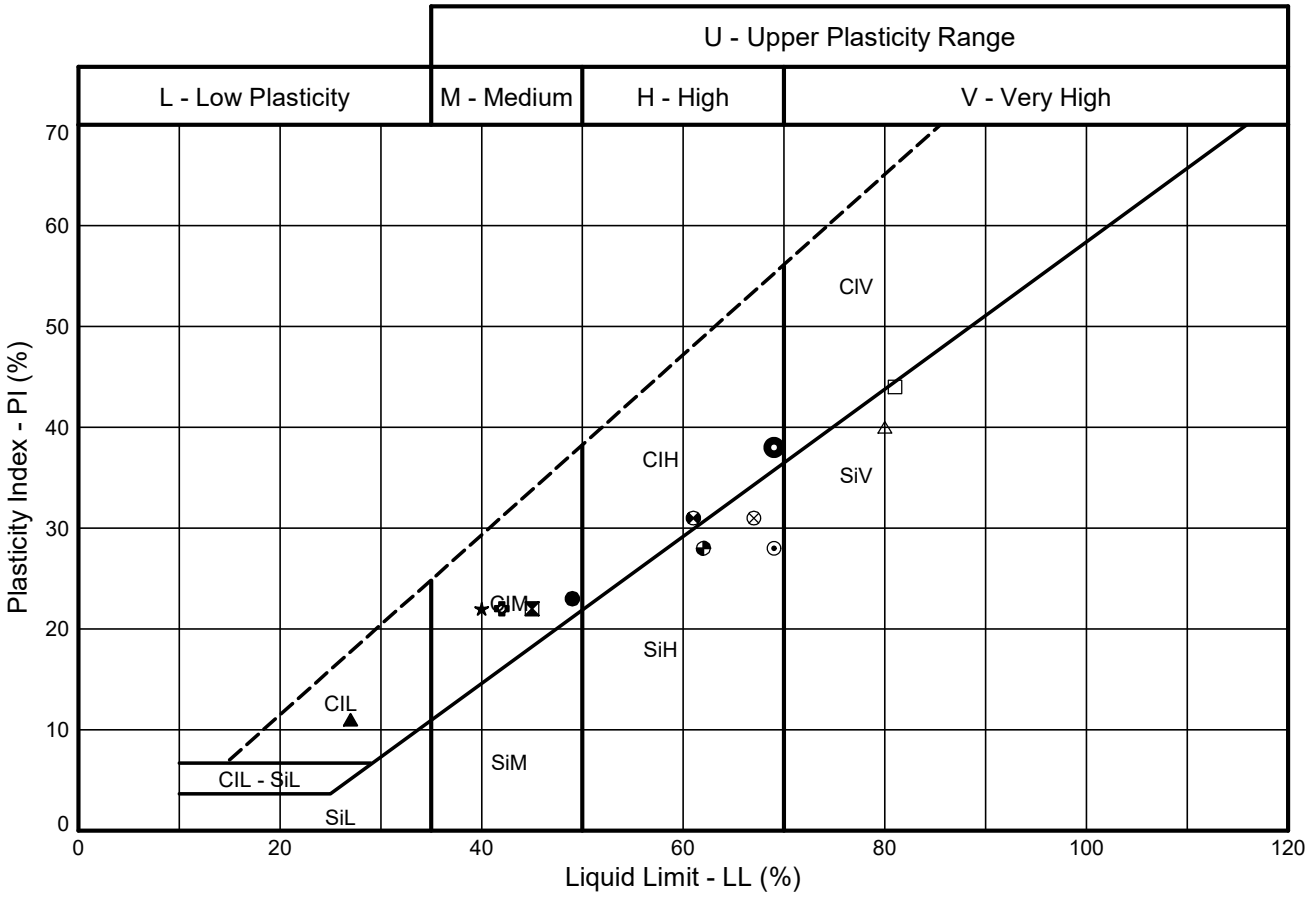
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Compiled By		Date
[redacted]	[redacted]	04/03/24
Contract: **Sealink Friston**		Contract Ref: **563835**

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PI vs LL CHART

According to BS EN 14688-2:2018
Testing in accordance with BS EN ISO 17892-12:2018+A1:2021



Sample Identification				Test Method #	Preparation Method +	WC	LL	PL	PI	<425µm	Lab location	Notes
	Exploratory Position ID	Sample	Depth (m)			%	%	%	%	%		
●	F22-BH310	2D	0.30	5.3/5.5/6.5	5.2.7	23.2	49	26	23	94	H	I
⊠	F22-BH310	4D	0.70	5.3/5.5/6.5	5.2.7	18.6	45	23	22	92	H	I
▲	F22-BH310	8UT	2.00	5.3/5.5/6.5	5.2.7	18.4	27	16	11	80	B	I
★	F22-BH310	11D	2.55	5.3/5.5/6.5	5.2.7	19.7	40	18	22	70	H	I
⊙	F22-BH310	16D	3.00	5.3/5.5/6.5	5.2.7	20.4	69	41	28	87	H	I
✿	F22-BH310	20D	4.00	5.3/5.5/6.5	5.2.7	24.5	42	20	22	92	H	I
●	F22-BH310	32D	8.45	5.3/5.5/6.5	5.2.7	15.3	69	31	38	85	H	I
△	F22-BH501	4D	0.20	5.3/5.5/6.5	5.2.7	55.6	80	40	40	93	H	I
⊗	F22-BH501	6D	0.70	5.3/5.5/6.5	5.2.7	67.2	67	36	31	93	H	I
	F22-BH501	61D	18.10	5.3/5.5/6.5	5.2.7	16.8	NP	NP	NP	47	H	
□	F22-BH501	67D	20.45	5.3/5.5/6.5	5.2.7	38.5	81	37	44	100	H	I
⊛	F22-BH501	73D	22.45	5.3/5.5/6.5	5.2.7	50.3	61	30	31	94	H	I
◕	F22-BH501	79D	24.45	5.3/5.5/6.5	5.2.7	30.9	62	34	28	99	H	I

Tested in accordance with the following clauses of BS EN ISO 17892-12:2018+A1:2021
5.3 - Cone Penetrometer Method; 5.3.14 - One-Point Cone Penetrometer Method; 5.4 - Casagrande Method; 5.5 - Plastic Limit Method; 6.5 - Plasticity Index

Water Content (WC) tested in accordance with BS EN ISO 17892-1:2014

+ Tested in accordance with the following clauses of BS EN ISO 17892-12:2018+A1:2021
5.2.1 - Natural State and 5.2.7 - Wet Sieved

Key: * = Non-standard test, NP = Non plastic, I = Increasing WC, D = Decreasing WC.

Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

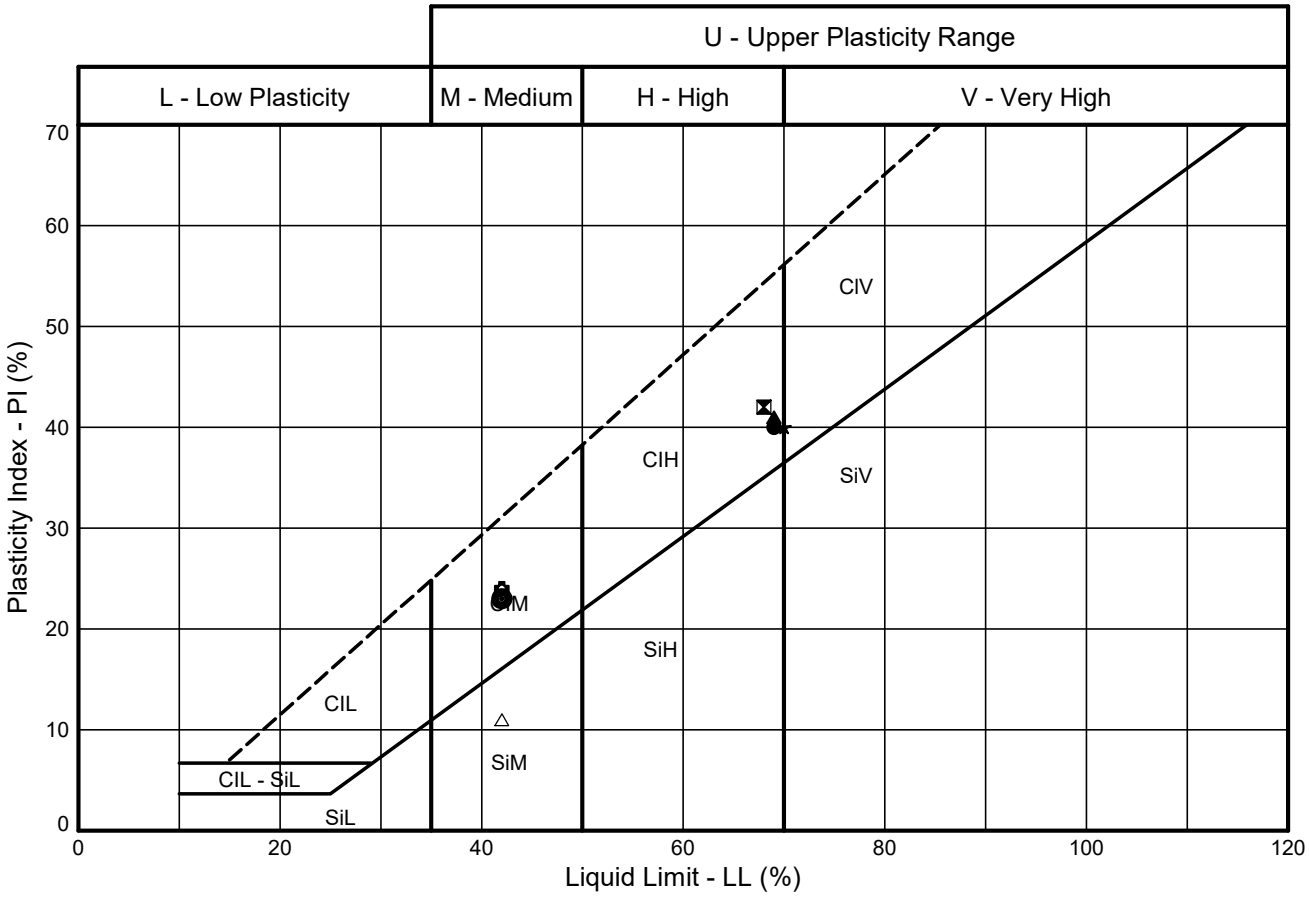
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Compiled By		Date
[redacted]	[redacted]	04/03/24
Contract: **Sealink Friston**		Contract Ref: **563835**

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PI vs LL CHART

According to BS EN 14688-2:2018
Testing in accordance with BS EN ISO 17892-12:2018+A1:2021



Sample Identification				Test Method #	Preparation Method +	WC %	LL %	PL %	PI %	<425µm %	Lab location	Notes
	Exploratory Position ID	Sample	Depth (m)									
●	F22-BH502A	72D	19.00	5.3/5.5/6.5	5.2.7	43.5	69	29	40	100	H	I
⊠	F22-BH502A	79D	21.00	5.3/5.5/6.5	5.2.1	38.6	68	26	42	100	H	I
▲	F22-BH502A	86D	23.00	5.3/5.5/6.5	5.2.1	27.5	69	28	41	100	H	I
★	F22-BH502A	93D	24.95	5.3/5.5/6.5	5.2.7	30.6	70	30	40	100	H	I
⊙	F22-TP203	6D	1.20	5.3/5.5/6.5	5.2.7	10.8	42	19	23	83	H	I
✿	F22-TP203	9D	2.20	5.3/5.5/6.5	5.2.7	17.0	42	18	24	88	H	I
◉	F22-TP204	6D	1.00	5.3/5.5/6.5	5.2.7	14.0	42	19	23	88	H	I
△	F22-TP204	9D	2.00	5.3/5.5/6.5	5.2.7	14.1	42	31	11	93	H	I
	F22-TP205	4D	0.50	5.3/5.5/6.5	5.2.7	6.5	NP	NP	NP	76	H	
	F22-TP220	1D	0.50	5.3/5.5/6.5	5.2.7	4.5	NP	NP	NP	79	H	
	F22-TP221	1D	0.20	5.3/5.5/6.5	5.2.7	2.9	NP	NP	NP	79	H	
	F22-TP221	10D	2.00	5.3/5.5/6.5	5.2.1	13.2	NP	NP	NP	100	H	
	F22-TP222A	6D	1.00	5.3/5.5/6.5	5.2.7	3.6	NP	NP	NP	45	H	

Tested in accordance with the following clauses of BS EN ISO 17892-12:2018+A1:2021
5.3 - Cone Penetrometer Method; 5.3.14 - One-Point Cone Penetrometer Method; 5.4 - Casagrande Method; 5.5 - Plastic Limit Method; 6.5 - Plasticity Index

Water Content (WC) tested in accordance with BS EN ISO 17892-1:2014

+ Tested in accordance with the following clauses of BS EN ISO 17892-12:2018+A1:2021
5.2.1 - Natural State and 5.2.7 - Wet Sieved

Key: * = Non-standard test, NP = Non plastic, I = Increasing WC, D = Decreasing WC.

Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

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Compiled By		Date
[redacted]	[redacted]	04/03/24

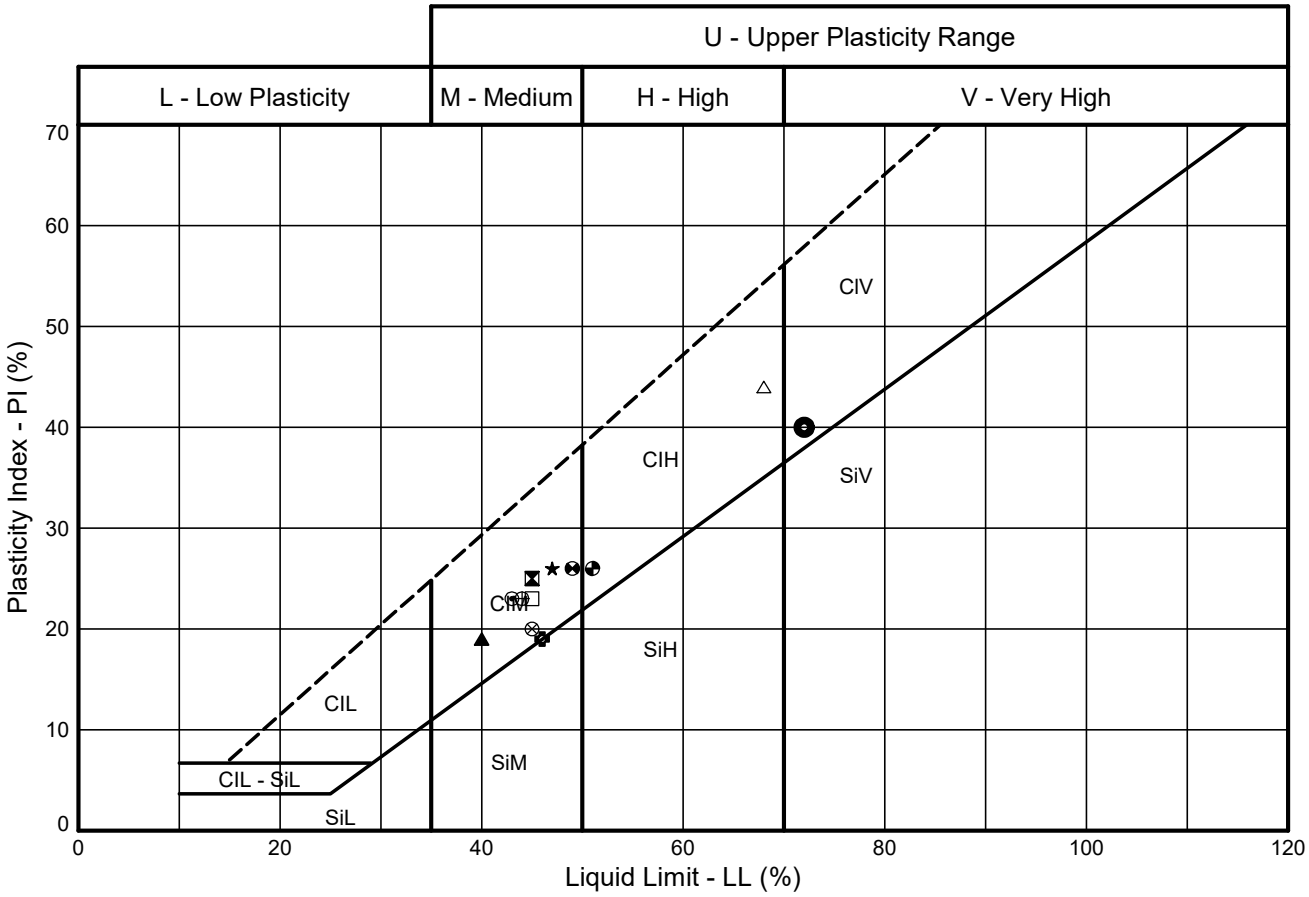
Contract	Contract Ref:
Sealink Friston	**563835**

AGS

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PI vs LL CHART

According to BS EN 14688-2:2018
Testing in accordance with BS EN ISO 17892-12:2018+A1:2021



Sample Identification				Test Method #	Preparation Method +	WC	LL	PL	PI	<425µm	Lab location	Notes
	Exploratory Position ID	Sample	Depth (m)			%	%	%	%	%		
	F22-TP222A	9D	2.00	5.3/5.5/6.5	5.2.7	4.9	NP	NP	NP	30	H	
⊠	F22-TP229	1D	0.50	5.3/5.5/6.5	5.2.7	17.7	45	20	25	89	H	I
▲	F22-TP229	7D	1.10	5.3/5.5/6.5	5.2.7	16.8	40	21	19	90	H	I
★	F22-TP310	1D	0.50	5.3/5.5/6.5	5.2.7	17.4	47	21	26	91	H	I
⊙	F22-TP310	9D	1.70	5.3/5.5/6.5	5.2.7	17.1	43	20	23	93	H	I
✿	F22-TP310	11D	2.70	5.3/5.5/6.5	5.2.7	19.2	46	27	19	90	H	I
●	F22-TP311	4D	0.40	5.3/5.5/6.5	5.2.7	20.4	72	32	40	81	H	I
△	F22-TP311	2D	0.70	5.3/5.5/6.5	5.2.7	20.5	68	24	44	87	H	I
⊗	F22-TP311	15D	2.60	5.3/5.5/6.5	5.2.7	21.6	45	25	20	85	H	I
⊕	F22-TP312	1D	0.70	5.3/5.5/6.5	5.2.7	17.5	44	21	23	93	H	I
□	F22-TP312	11D	2.00	5.3/5.5/6.5	5.2.7	16.1	45	22	23	80	H	I
⊛	F22-TP312	13D	3.00	5.3/5.5/6.5	5.2.7	20.6	49	23	26	89	H	I
◕	F22-TP313	1D	0.50	5.3/5.5/6.5	5.2.7	19.8	51	25	26	91	H	I

Tested in accordance with the following clauses of BS EN ISO 17892-12:2018+A1:2021
5.3 - Cone Penetrometer Method; 5.3.14 - One-Point Cone Penetrometer Method; 5.4 - Casagrande Method; 5.5 - Plastic Limit Method; 6.5 - Plasticity Index

Water Content (WC) tested in accordance with BS EN ISO 17892-1:2014

+ Tested in accordance with the following clauses of BS EN ISO 17892-12:2018+A1:2021
5.2.1 - Natural State and 5.2.7 - Wet Sieved

Key: * = Non-standard test, NP = Non plastic, I = Increasing WC, D = Decreasing WC.

Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

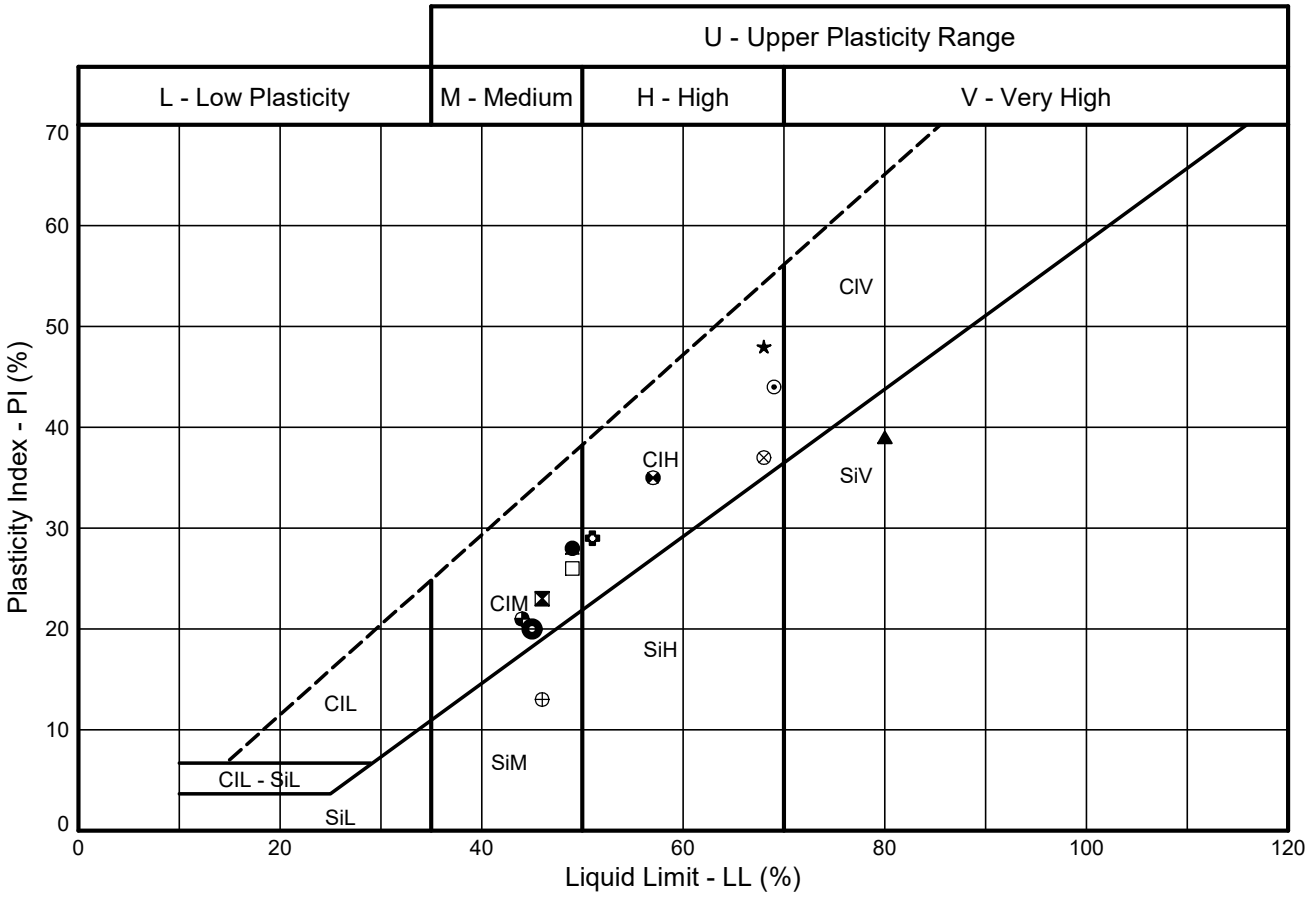
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Compiled By		Date
[redacted]	[redacted]	04/03/24
Contract: **Sealink Friston**		Contract Ref: **563835**

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PI vs LL CHART

According to BS EN 14688-2:2018
Testing in accordance with BS EN ISO 17892-12:2018+A1:2021



Sample Identification				Test Method #	Preparation Method +	WC %	LL %	PL %	PI %	<425µm %	Lab location	Notes
	Exploratory Position ID	Sample	Depth (m)									
●	F22-TP313	7D	1.10	5.3/5.5/6.5	5.2.7	15.6	49	21	28	92	H	I
⊠	F22-TP313	15D	3.70	5.3/5.5/6.5	5.2.7	21.6	46	23	23	91	H	I
▲	F22-TP314	5D	0.20	5.3/5.5/6.5	5.2.7	23.1	80	41	39	93	H	I
★	F22-TP314	1D	0.70	5.3/5.5/6.5	5.2.7	23.7	68	20	48	98	H	I
⊙	F22-TP314	3D	1.10	5.3/5.5/6.5	5.2.7	22.7	69	25	44	98	H	I
✿	F22-TP315	2D	0.90	5.3/5.5/6.5	5.2.7	17.3	51	22	29	87	H	I
●	F22-TP315	9D	2.00	5.3/5.5/6.5	5.2.7	19.6	45	25	20	93	H	I
△	F22-TP315	11D	3.00	5.3/5.5/6.5	5.2.7	21.4	49	21	28	92	H	I
⊗	F22-TP316	3D	0.70	5.3/5.5/6.5	5.2.7	24.6	68	31	37	96	H	I
⊕	F22-TP316	9D	1.30	5.3/5.5/6.5	5.2.7	19.8	46	33	13	83	H	I
□	F22-TP316	13D	3.30	5.3/5.5/6.5	5.2.7	20.3	49	23	26	89	H	I
⊗	F22-TP317	4D	0.50	5.3/5.5/6.5	5.2.7	18.4	57	22	35	89	H	I
◕	F22-TP317	12D	2.00	5.3/5.5/6.5	5.2.7	15.9	44	23	21	86	H	I

Tested in accordance with the following clauses of BS EN ISO 17892-12:2018+A1:2021
5.3 - Cone Penetrometer Method; 5.3.14 - One-Point Cone Penetrometer Method; 5.4 - Casagrande Method; 5.5 - Plastic Limit Method; 6.5 - Plasticity Index

Water Content (WC) tested in accordance with BS EN ISO 17892-1:2014

+ Tested in accordance with the following clauses of BS EN ISO 17892-12:2018+A1:2021
5.2.1 - Natural State and 5.2.7 - Wet Sieved

Key: * = Non-standard test, NP = Non plastic, I = Increasing WC, D = Decreasing WC.

Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

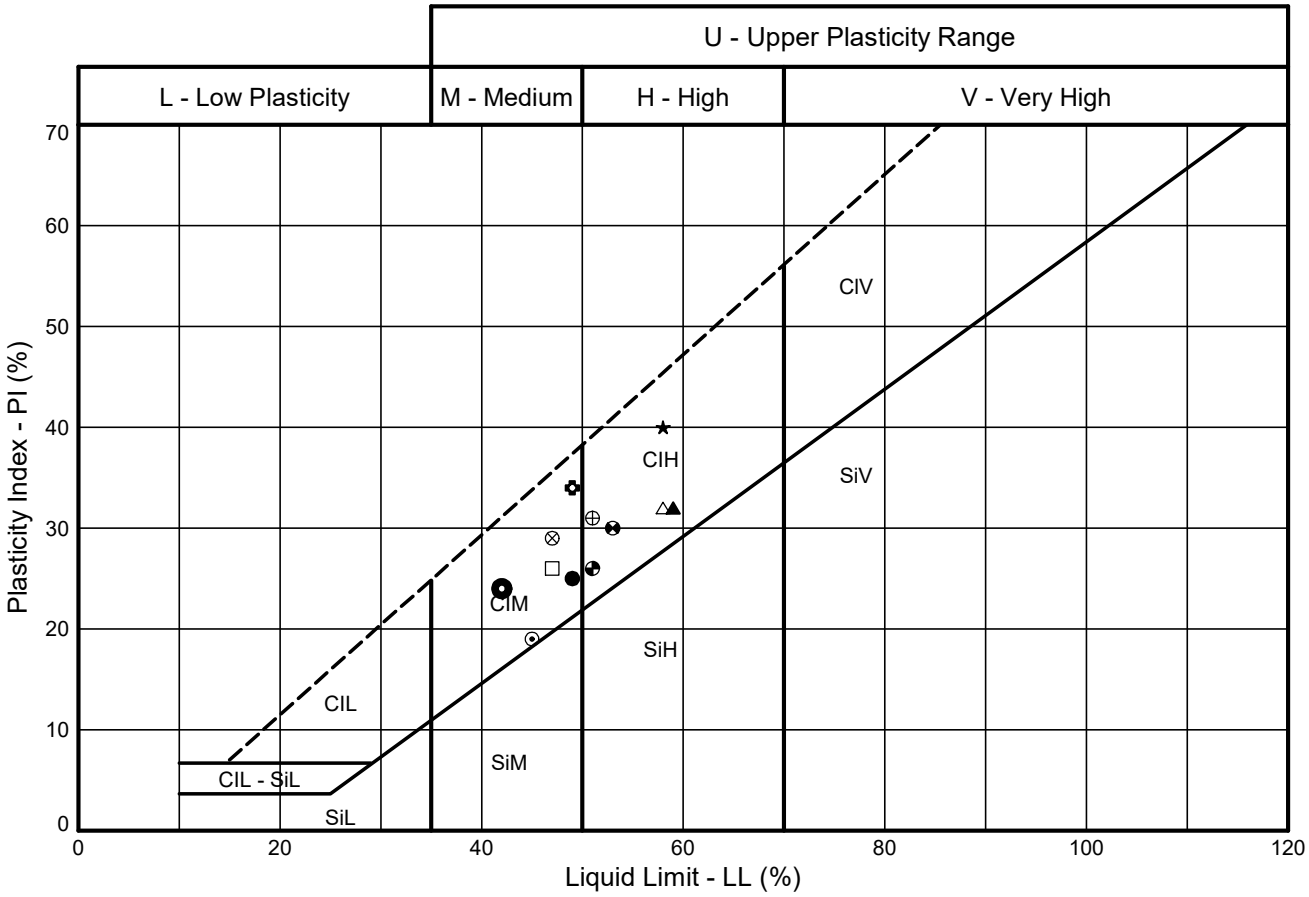
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Contract: **Sealink Friston**		Contract Ref: **563835**

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PI vs LL CHART

According to BS EN 14688-2:2018
Testing in accordance with BS EN ISO 17892-12:2018+A1:2021



Sample Identification				Test Method #	Preparation Method +	WC %	LL %	PL %	PI %	<425µm %	Lab location	Notes
	Exploratory Position ID	Sample	Depth (m)									
●	F22-TP317	16D	4.00	5.3/5.5/6.5	5.2.7	21.4	49	24	25	88	H	I
	F22-TP404	10B	3.00	5.3/5.5/6.5	5.2.7	8.0	NP	NP	NP	67	H	
▲	F22-TP406	1D	0.50	5.3/5.5/6.5	5.2.7	21.1	59	27	32	93	H	I
★	F22-TP406	5D	0.90	5.3/5.5/6.5	5.2.7	19.1	58	18	40	85	H	I
⊙	F22-TP406	9D	2.00	5.3/5.5/6.5	5.2.7	20.5	45	26	19	94	H	I
✿	F22-TP511	11D	3.20	5.3/5.5/6.5	5.2.7	12.0	49	15	34	85	H	I
◉	F22-TP515	1D	0.50	5.3/5.5/6.5	5.2.7	23.1	42	18	24	93	H	I
△	F22-TP515	5D	0.90	5.3/5.5/6.5	5.2.7	20.9	58	26	32	91	H	I
⊗	F22-TP515	9D	2.00	5.3/5.5/6.5	5.2.7	19.1	47	18	29	81	H	I
⊕	F22-TP516	1D	0.50	5.3/5.5/6.5	5.2.7	23.3	51	20	31	94	H	I
□	F22-TP516	5D	0.90	5.3/5.5/6.5	5.2.7	18.4	47	21	26	91	H	I
⊠	F22-TP516	9D	2.00	5.3/5.5/6.5	5.2.7	20.6	53	23	30	94	H	I
◕	F22-TP518	7D	1.10	5.3/5.5/6.5	5.2.7	10.0	51	25	26	87	H	I

Tested in accordance with the following clauses of BS EN ISO 17892-12:2018+A1:2021
5.3 - Cone Penetrometer Method; 5.3.14 - One-Point Cone Penetrometer Method; 5.4 - Casagrande Method; 5.5 - Plastic Limit Method; 6.5 - Plasticity Index

Water Content (WC) tested in accordance with BS EN ISO 17892-1:2014

+ Tested in accordance with the following clauses of BS EN ISO 17892-12:2018+A1:2021
5.2.1 - Natural State and 5.2.7 - Wet Sieved

Key: * = Non-standard test, NP = Non plastic, I = Increasing WC, D = Decreasing WC.

Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

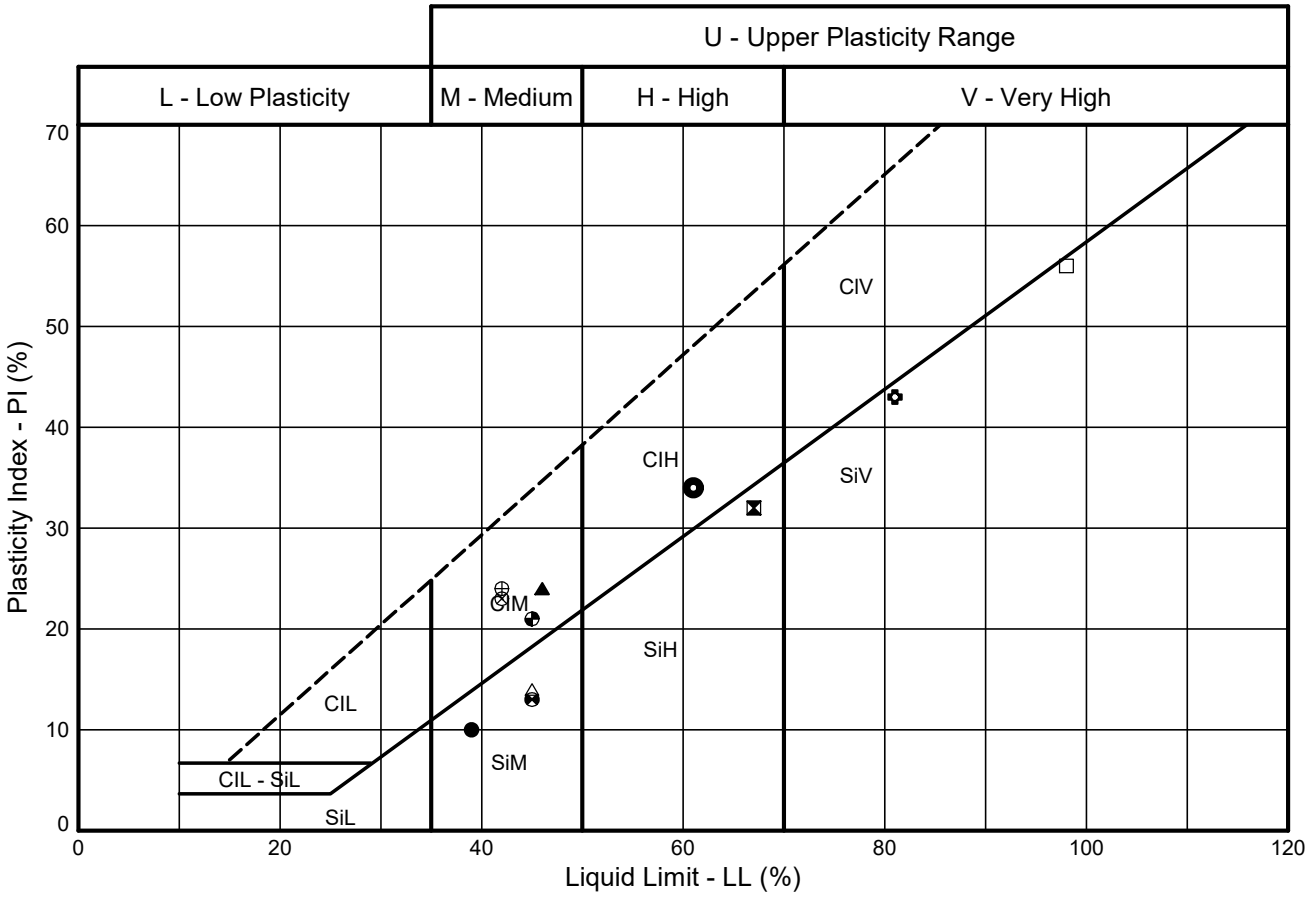
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Contract: **Sealink Friston**		Contract Ref: **563835**

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PI vs LL CHART

According to BS EN 14688-2:2018
Testing in accordance with BS EN ISO 17892-12:2018+A1:2021



Sample Identification				Test Method #	Preparation Method +	WC %	LL %	PL %	PI %	<425µm %	Lab location	Notes
	Exploratory Position ID	Sample	Depth (m)									
●	F22-TP518	11D	3.00	5.3/5.5/6.5	5.2.7	19.1	39	29	10	92	H	I
⊠	F22-TP525	4D	0.50	5.3/5.5/6.5	5.2.7	18.5	67	35	32	77	H	I
▲	RedP-BH-1A	17D	4.95	5.3/5.5/6.5	5.2.7	47.2	46	22	24	100	H	I
	RedP-BH-1A	20D	5.30	5.3/5.5/6.5	5.2.7	170	NP	NP	NP	75	H	
	RedP-BH-1A	37DSPT	10.50	5.3/5.5/6.5	5.2.7	26.2	NP	NP	NP	57	H	
✿	RedP-BH-1A	82D	25.00	5.3/5.5/6.5	5.2.7	31.0	81	38	43	89	H	I
◉	RedP-BH-1A	87D	26.95	5.3/5.5/6.5	5.2.1	31.9	61	27	34	100	H	I
△	RedP-BH-1A	96DSPT	29.50	5.3/5.5/6.5	5.2.1	32.8	45	31	14	100	H	I
⊗	RedP-BH-4	69D	21.50	5.3/5.5/6.5	5.2.7	39.7	42	19	23	96	H	I
⊕	RedP-BH-4	74D	23.45	5.3/5.5/6.5	5.2.7	32.2	42	18	24	100	H	I
□	RedP-BH-4	80D	25.45	5.3/5.5/6.5	5.2.7	32.0	98	42	56	100	H	I
⊠	RedP-BH-4	86D	27.45	5.3/5.5/6.5	5.2.1	31.9	45	32	13	100	H	I
◕	RedP-BH-4	92D	29.45	5.3/5.5/6.5	5.2.7	31.2	45	24	21	100	H	I

Tested in accordance with the following clauses of BS EN ISO 17892-12:2018+A1:2021
5.3 - Cone Penetrometer Method; 5.3.14 - One-Point Cone Penetrometer Method; 5.4 - Casagrande Method; 5.5 - Plastic Limit Method; 6.5 - Plasticity Index

Water Content (WC) tested in accordance with BS EN ISO 17892-1:2014

+ Tested in accordance with the following clauses of BS EN ISO 17892-12:2018+A1:2021
5.2.1 - Natural State and 5.2.7 - Wet Sieved

Key: * = Non-standard test, NP = Non plastic, I = Increasing WC, D = Decreasing WC.

Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

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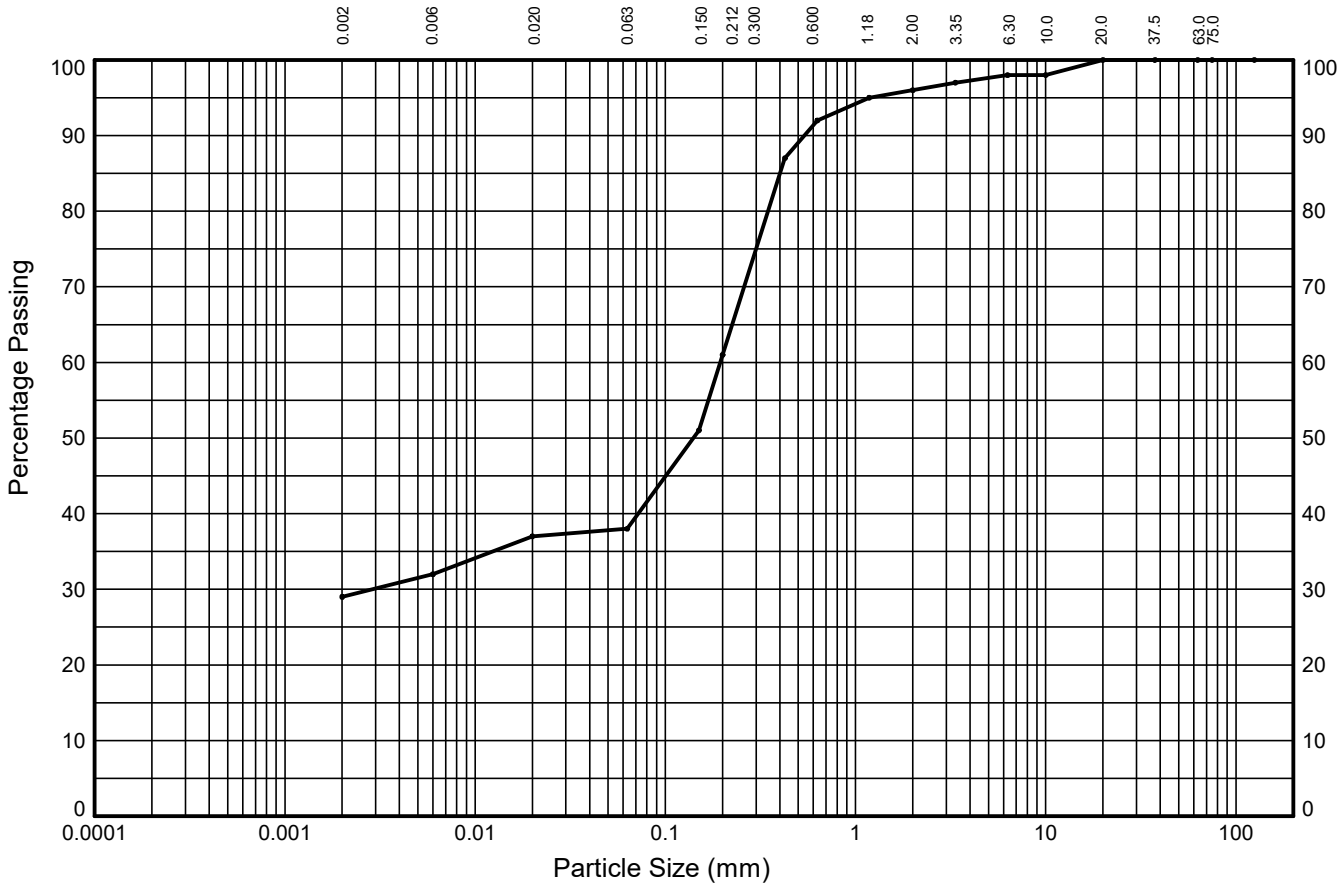
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Contract: **Sealink Friston**		Contract Ref: **563835**

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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH203** Sample Ref: **7** Sample Type: **B** Depth (m): **1.20**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	3%	5%	1%	23%	31%	4%	2%	2%	0%	
	SILT			SAND			GRAVEL			
29%	9%			58%			4%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**98**
6.30	**98**
3.35	**97**
2.00	**96**
1.18	**95**
0.630	**92**
0.425	**87**
0.200	**61**
0.150	**51**
0.063	**38**

Particle Diameter (mm)	Percent Passing (%)
0.02	**37**
0.006	**32**
0.002	**29**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.003**
D_{50} (mm)	**0.140**
D_{60} (mm)	**0.194**
D_{85} (mm)	**0.401**
D_{90} (mm)	**0.538**
C_U	**NA**
C_C	**NA**

Soil Description:

Orangish brown slightly gravelly sandy CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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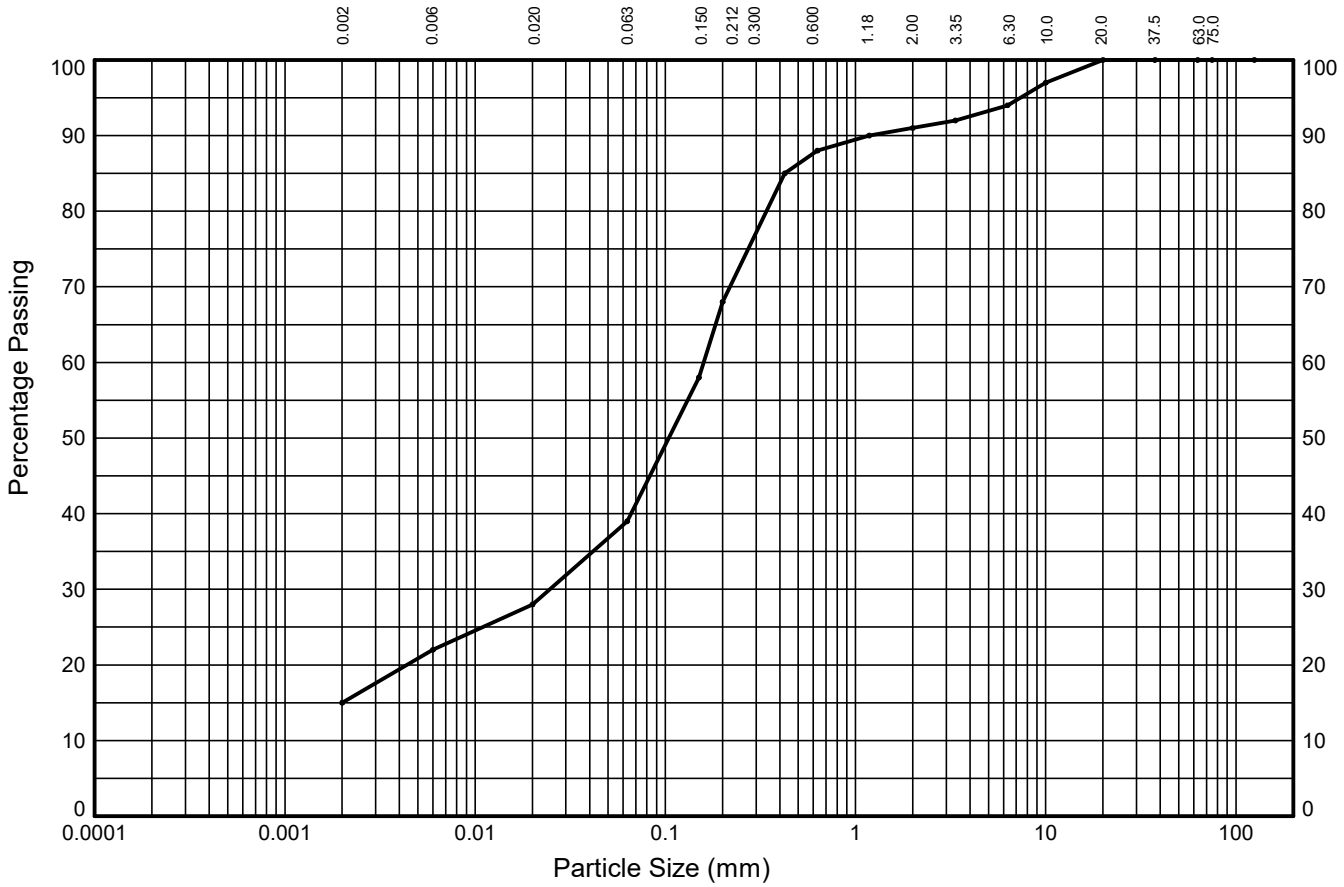
Compiled By		Date
[redacted]	[redacted]	05/03/24
Contract: **Sealink Friston**		Contract Ref: **563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - PSD - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH203** Sample Ref: **13** Sample Type: **B** Depth (m): **3.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	7%	6%	11%	29%	20%	3%	3%	6%	0%	
	SILT			SAND			GRAVEL			
15%	24%			52%			9%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**97**
6.30	**94**
3.35	**92**
2.00	**91**
1.18	**90**
0.630	**88**
0.425	**85**
0.200	**68**
0.150	**58**
0.063	**39**

Particle Diameter (mm)	Percent Passing (%)
0.02	**28**
0.006	**22**
0.002	**15**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**0.002**
D_{30} (mm)	**0.025**
D_{50} (mm)	**0.104**
D_{60} (mm)	**0.159**
D_{85} (mm)	**0.425**
D_{90} (mm)	**1.180**
C_U	**NA**
C_C	**NA**

Soil Description:

Orangish brown slightly gravelly sandy silty CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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Contract: **Sealink Friston** Contract Ref: **563835**

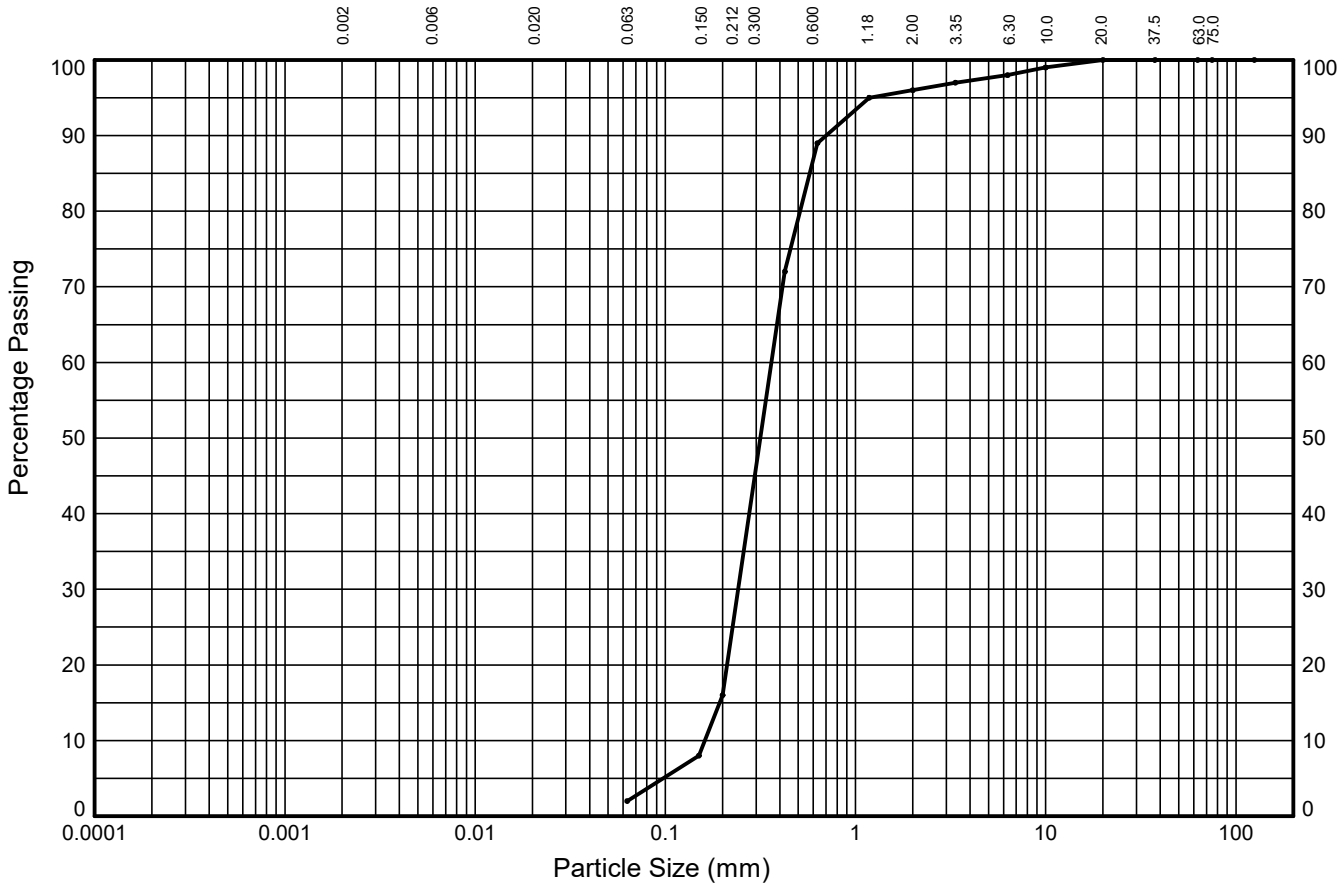
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH203** Sample Ref: **28** Sample Type: **B** Depth (m): **8.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	14%	73%	7%	2%	2%	0%	
	SILT			SAND			GRAVEL			
2%				94%			4%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**99**
6.30	**98**
3.35	**97**
2.00	**96**
1.18	**95**
0.630	**89**
0.425	**72**
0.200	**16**
0.150	**8**
0.063	**2**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.161**
D_{15} (mm)	**0.193**
D_{30} (mm)	**0.241**
D_{50} (mm)	**0.316**
D_{60} (mm)	**0.362**
D_{85} (mm)	**0.574**
D_{90} (mm)	**0.699**
C_U	**2.2**
C_C	**1.0**

Soil Description:

Orangish brown slightly gravelly slightly silty SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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Contract: **Sealink Friston** Contract Ref: **563835**

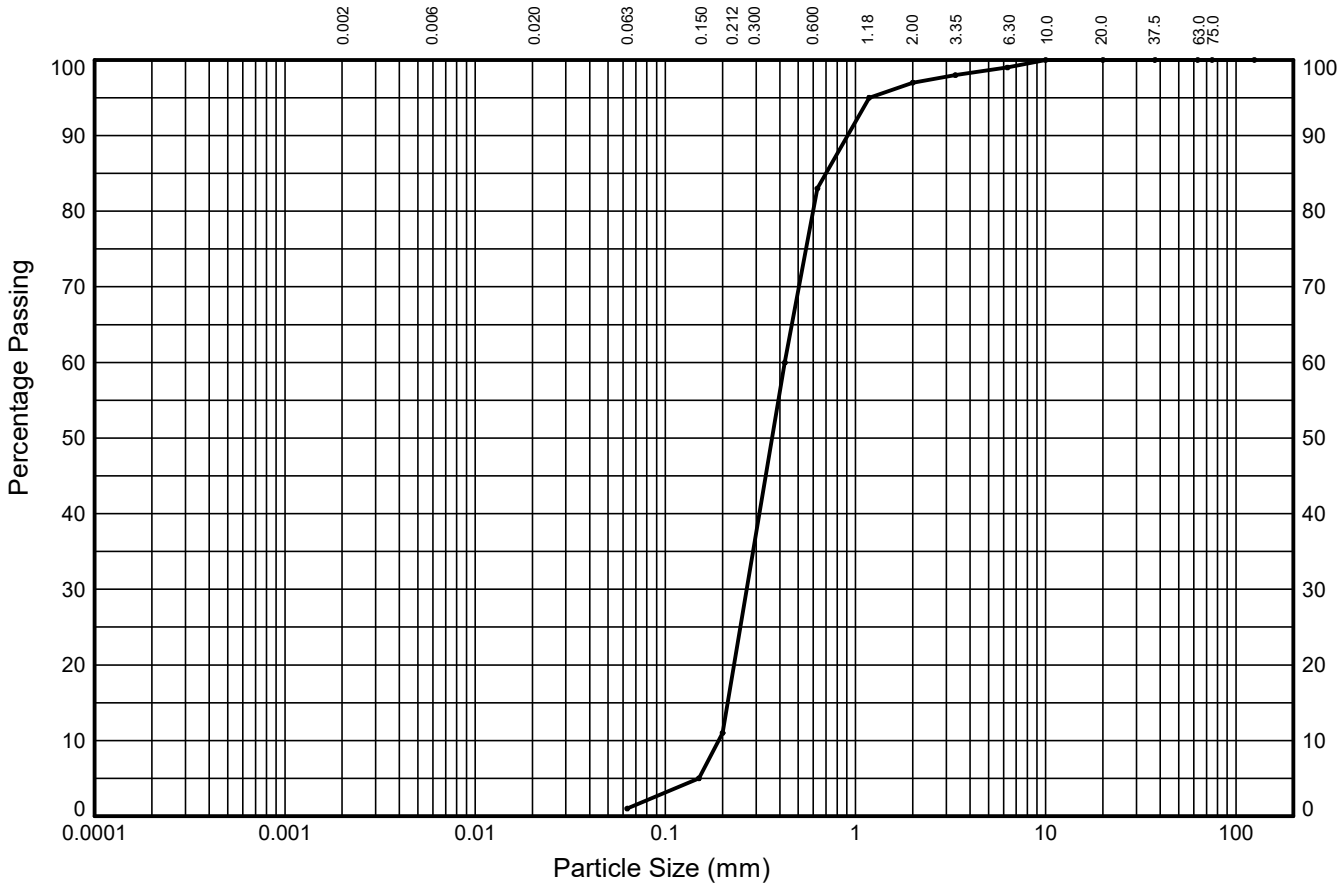
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH203** Sample Ref: **36** Sample Type: **B** Depth (m): **11.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	10%	72%	14%	2%	1%	0%	
	SILT			SAND			GRAVEL			
1%				96%			3%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**99**
3.35	**98**
2.00	**97**
1.18	**95**
0.630	**83**
0.425	**60**
0.200	**11**
0.150	**5**
0.063	**1**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.191**
D_{15} (mm)	**0.213**
D_{30} (mm)	**0.268**
D_{50} (mm)	**0.364**
D_{60} (mm)	**0.425**
D_{85} (mm)	**0.699**
D_{90} (mm)	**0.908**
C_U	**2.2**
C_C	**0.89**

Soil Description:

Light brown slightly gravelly slightly silty SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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Contract	Contract Ref:
Sealink Friston	**563835**

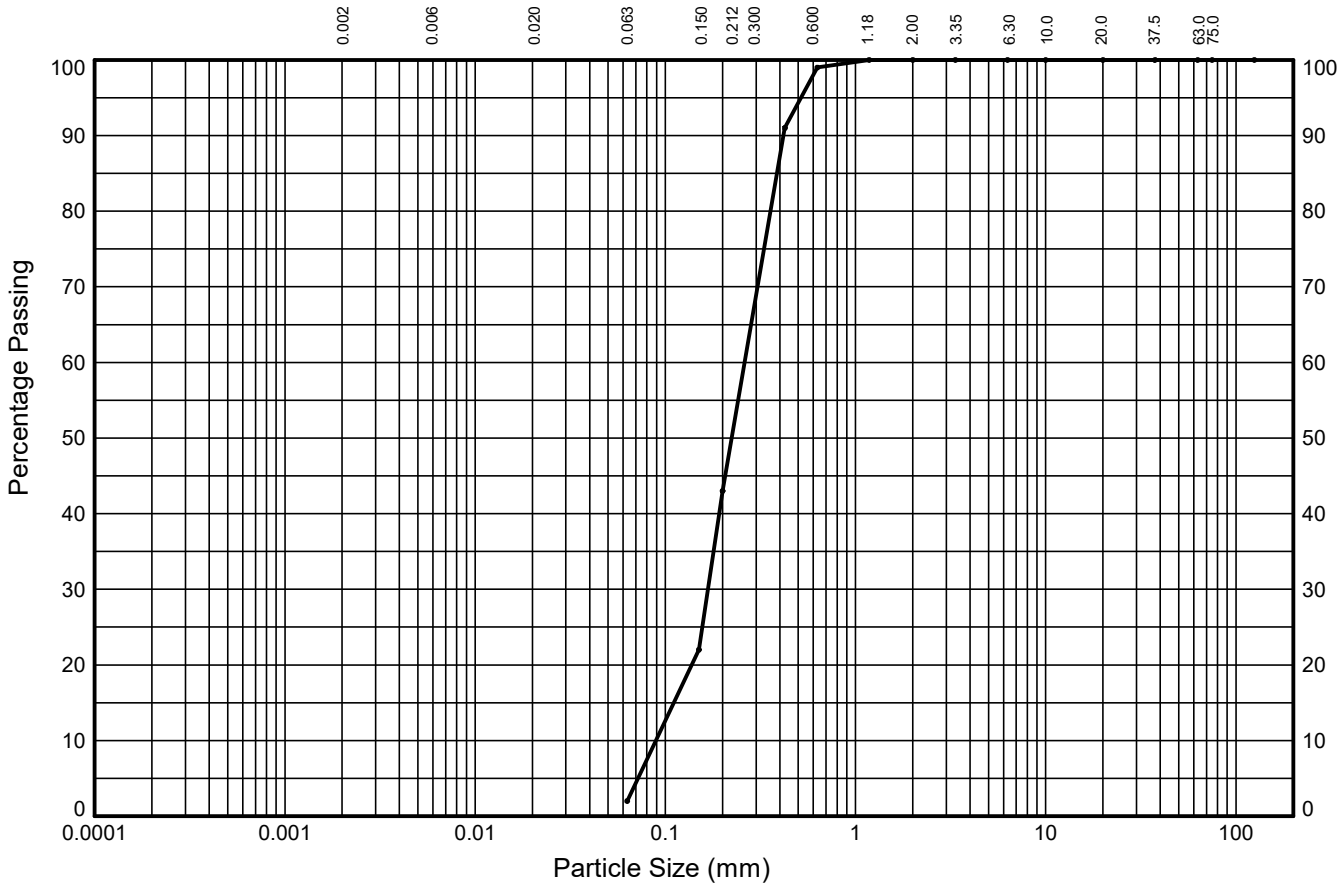
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH203** Sample Ref: **46** Sample Type: **B** Depth (m): **14.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	41%	56%	1%	0%	0%	0%	
	SILT			SAND			GRAVEL			
2%				98%			0%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**100**
3.35	**100**
2.00	**100**
1.18	**100**
0.630	**99**
0.425	**91**
0.200	**43**
0.150	**22**
0.063	**2**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.089**
D_{15} (mm)	**0.111**
D_{30} (mm)	**0.167**
D_{50} (mm)	**0.223**
D_{60} (mm)	**0.261**
D_{85} (mm)	**0.387**
D_{90} (mm)	**0.418**
C_U	**2.9**
C_C	**1.2**

Soil Description:

Orangish brown slightly silty SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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Contract: **Sealink Friston** Contract Ref: **563835**

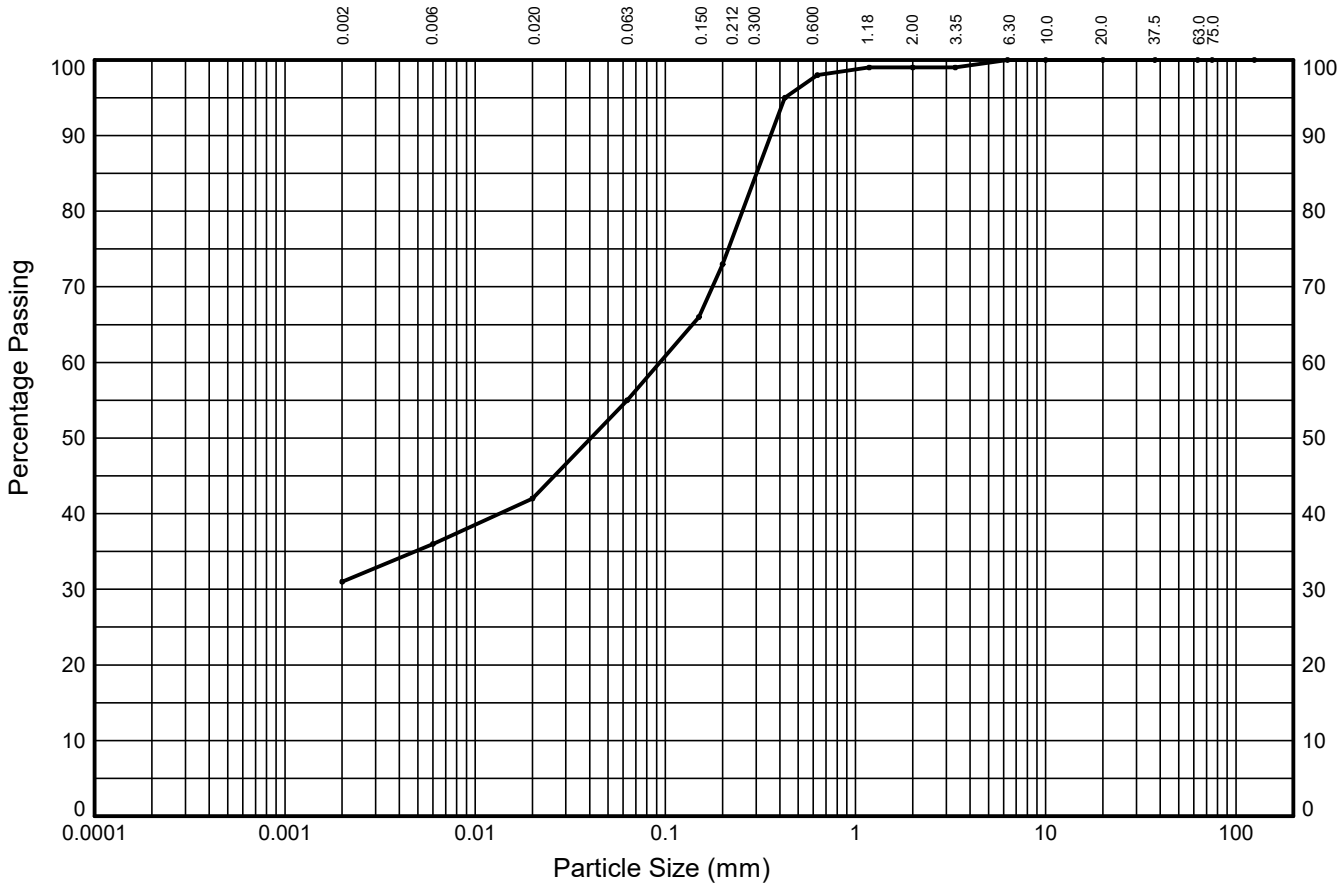
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GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - PSD - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH306** Sample Ref: **3** Sample Type: **B** Depth (m): **1.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	5%	6%	13%	18%	25%	1%	1%	0%	0%	
	SILT			SAND			GRAVEL			
31%	24%			44%			1%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**100**
3.35	**99**
2.00	**99**
1.18	**99**
0.630	**98**
0.425	**95**
0.200	**73**
0.150	**66**
0.063	**55**

Particle Diameter (mm)	Percent Passing (%)
0.02	**42**
0.006	**36**
0.002	**31**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**0.041**
D_{60} (mm)	**0.093**
D_{85} (mm)	**0.302**
D_{90} (mm)	**0.358**
C_U	**NA**
C_C	**NA**

Soil Description:

Orangish brown slightly gravelly sandy CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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Contract: **Sealink Friston**

Contract Ref: **563835**

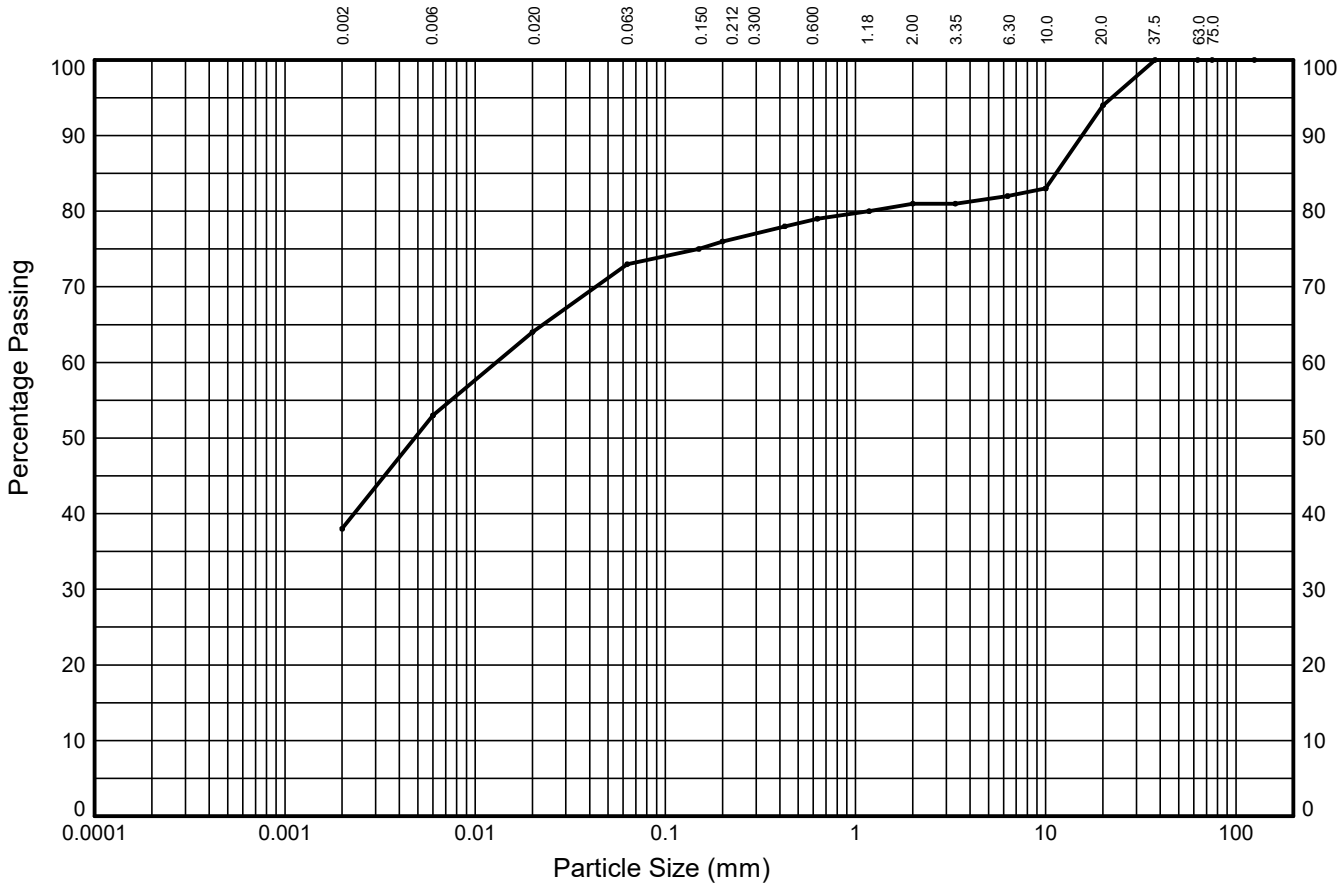
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH306** Sample Ref: **13** Sample Type: **B** Depth (m): **3.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	15%	11%	9%	3%	3%	2%	1%	12%	6%	
	SILT			SAND			GRAVEL			
38%	35%			8%			19%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**94**
10.0	**83**
6.30	**82**
3.35	**81**
2.00	**81**
1.18	**80**
0.630	**79**
0.425	**78**
0.200	**76**
0.150	**75**
0.063	**73**

Particle Diameter (mm)	Percent Passing (%)
0.02	**64**
0.006	**53**
0.002	**38**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**0.005**
D_{60} (mm)	**0.013**
D_{85} (mm)	**11.343**
D_{90} (mm)	**15.544**
C_U	**NA**
C_C	**NA**

Soil Description:

Grey mottled white slightly sandy slightly gravelly CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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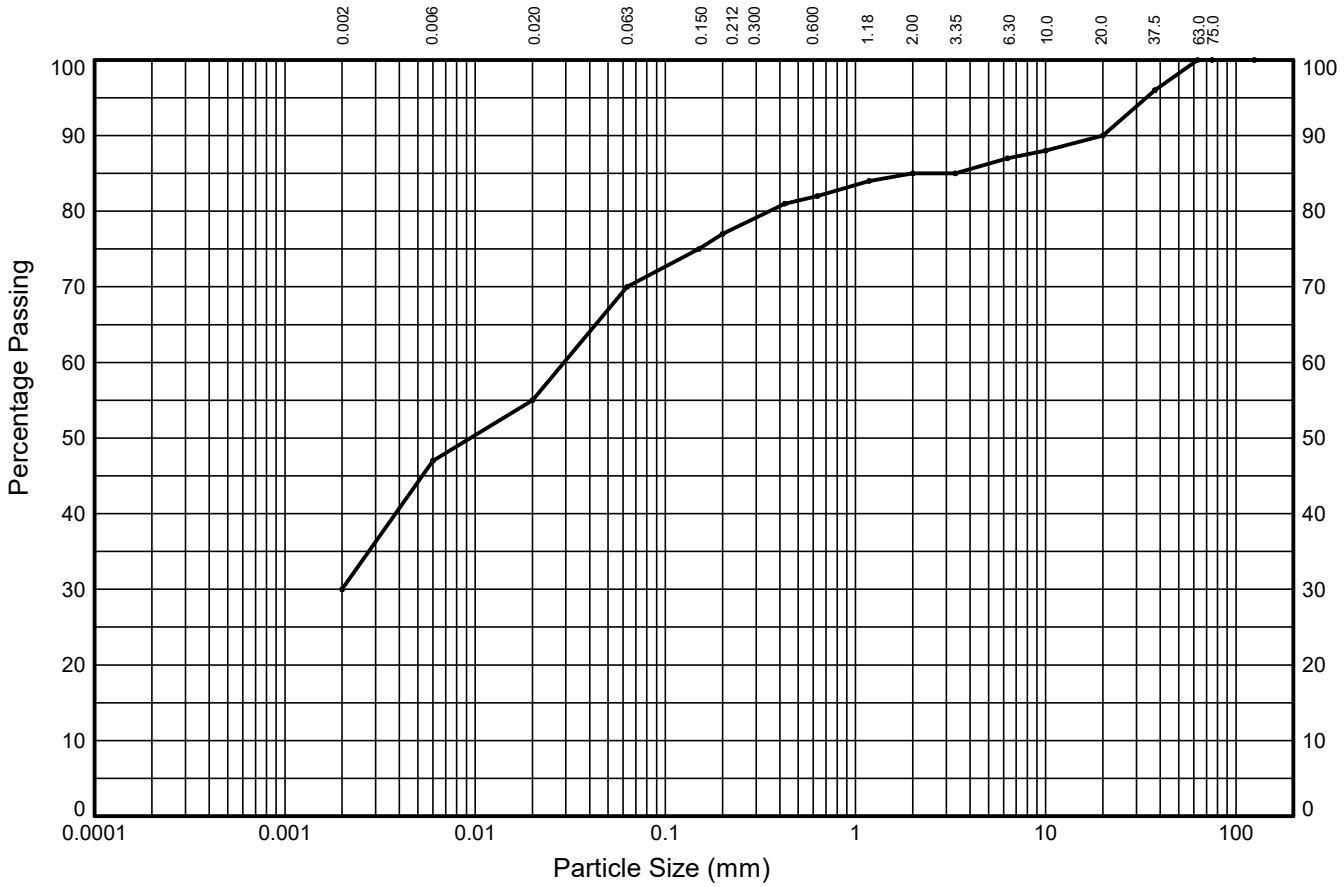
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Contract: **Sealink Friston**		Contract Ref: **563835**

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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH306** Sample Ref: **24** Sample Type: **B** Depth (m): **6.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	17%	8%	15%	7%	5%	3%	2%	3%	10%	
	SILT			SAND			GRAVEL			
30%	40%			15%			15%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**96**
20.0	**90**
10.0	**88**
6.30	**87**
3.35	**85**
2.00	**85**
1.18	**84**
0.630	**82**
0.425	**81**
0.200	**77**
0.150	**75**
0.063	**70**

Particle Diameter (mm)	Percent Passing (%)
0.02	**55**
0.006	**47**
0.002	**30**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.002**
D_{50} (mm)	**0.009**
D_{60} (mm)	**0.029**
D_{85} (mm)	**2.000**
D_{90} (mm)	**20.000**
C_U	**NA**
C_C	**NA**

Soil Description:

Grey mottled white slightly sandy slightly gravelly silty CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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Contract		Contract Ref:
Sealink Friston		**563835**

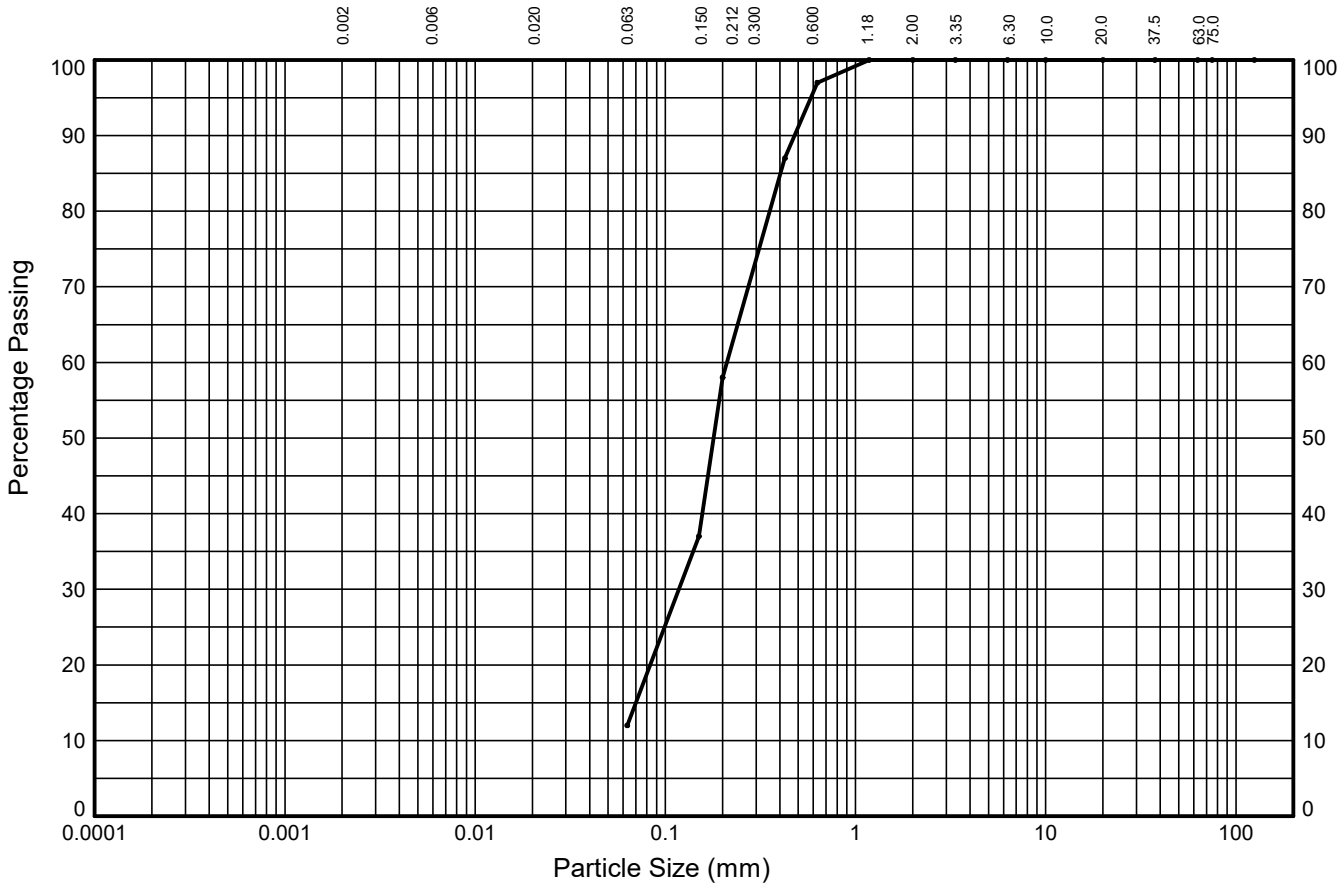
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH306** Sample Ref: **44** Sample Type: **B** Depth (m): **11.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	46%	39%	3%	0%	0%	0%	
	SILT			SAND			GRAVEL			
12%				88%			0%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**100**
3.35	**100**
2.00	**100**
1.18	**100**
0.630	**97**
0.425	**87**
0.200	**58**
0.150	**37**
0.063	**12**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**0.070**
D_{30} (mm)	**0.118**
D_{50} (mm)	**0.179**
D_{60} (mm)	**0.211**
D_{85} (mm)	**0.403**
D_{90} (mm)	**0.478**
C_U	**NA**
C_C	**NA**

Soil Description:

Orangish brown clayey SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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Contract		Contract Ref:
Sealink Friston		**563835**

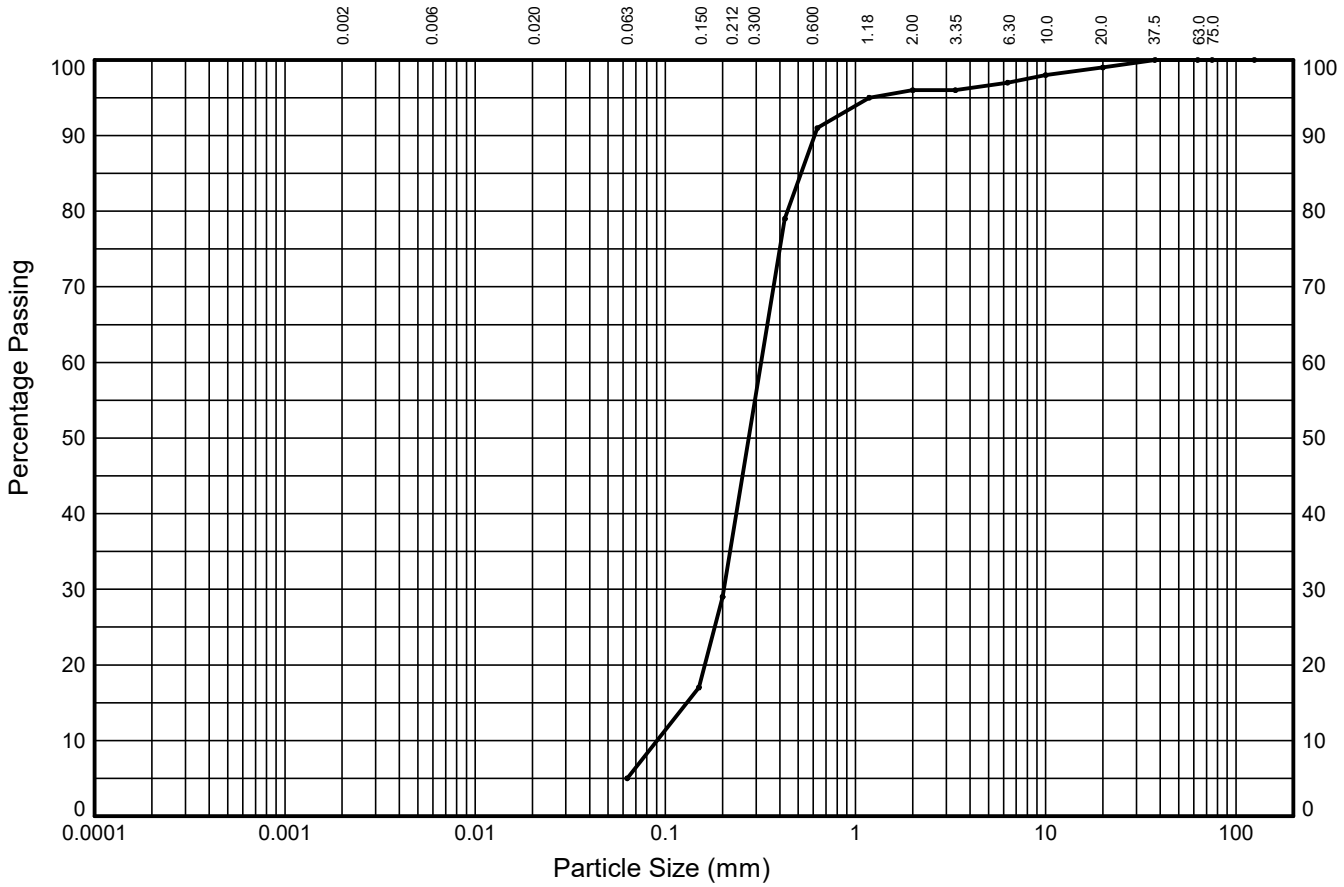
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH306** Sample Ref: **52** Sample Type: **B** Depth (m): **13.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	24%	62%	5%	1%	2%	1%	
	SILT			SAND			GRAVEL			
5%				91%			4%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**99**
10.0	**98**
6.30	**97**
3.35	**96**
2.00	**96**
1.18	**95**
0.630	**91**
0.425	**79**
0.200	**29**
0.150	**17**
0.063	**5**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.090**
D_{15} (mm)	**0.130**
D_{30} (mm)	**0.203**
D_{50} (mm)	**0.274**
D_{60} (mm)	**0.319**
D_{85} (mm)	**0.517**
D_{90} (mm)	**0.610**
C_U	**3.5**
C_C	**1.4**

Soil Description:

Orangish brown slightly gravelly clayey SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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Contract		Contract Ref:
Sealink Friston		**563835**

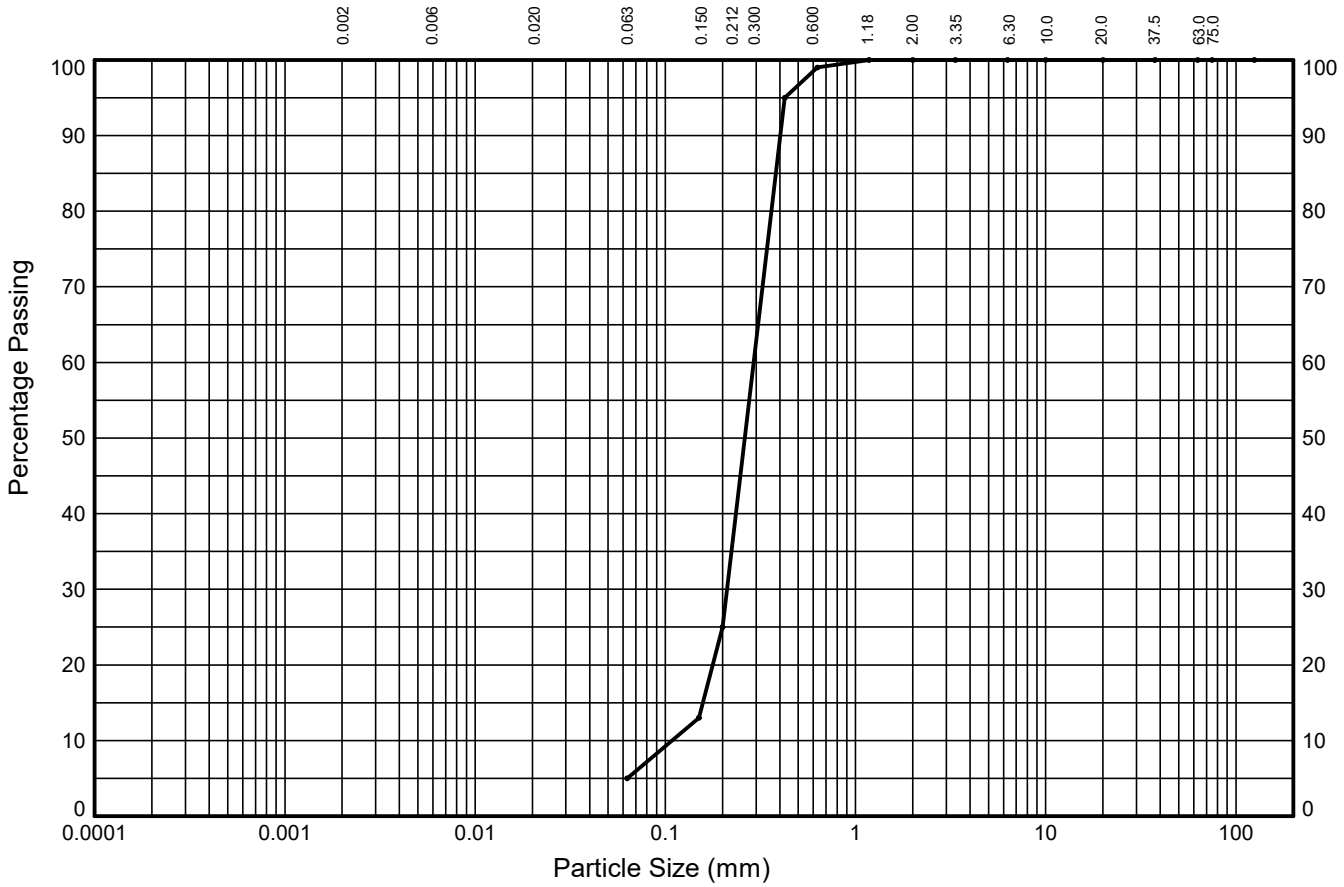
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH306** Sample Ref: **59** Sample Type: **B** Depth (m): **15.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	20%	74%	1%	0%	0%	0%	
	SILT			SAND			GRAVEL			
5%				95%			0%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**100**
3.35	**100**
2.00	**100**
1.18	**100**
0.630	**99**
0.425	**95**
0.200	**25**
0.150	**13**
0.063	**5**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.108**
D_{15} (mm)	**0.157**
D_{30} (mm)	**0.211**
D_{50} (mm)	**0.262**
D_{60} (mm)	**0.292**
D_{85} (mm)	**0.382**
D_{90} (mm)	**0.403**
C_U	**2.7**
C_C	**1.4**

Soil Description:

Orangish brown clayey SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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Contract: **Sealink Friston**

Contract Ref: **563835**

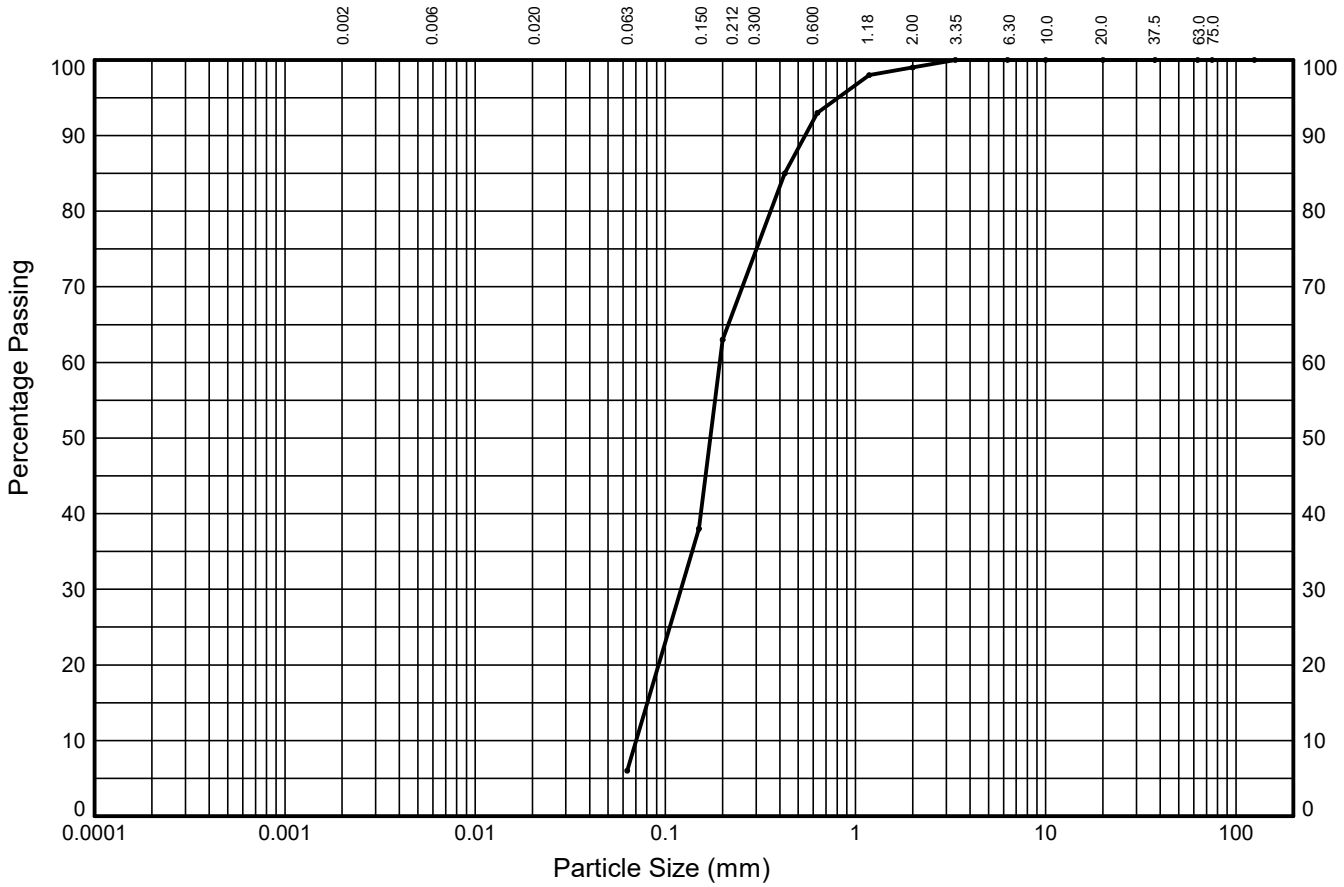
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH306** Sample Ref: **69** Sample Type: **B** Depth (m): **18.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	57%	30%	6%	1%	0%	0%	
	SILT			SAND			GRAVEL			
6%				93%			1%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**100**
3.35	**100**
2.00	**99**
1.18	**98**
0.630	**93**
0.425	**85**
0.200	**63**
0.150	**38**
0.063	**6**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.070**
D_{15} (mm)	**0.080**
D_{30} (mm)	**0.121**
D_{50} (mm)	**0.172**
D_{60} (mm)	**0.193**
D_{85} (mm)	**0.425**
D_{90} (mm)	**0.544**
C_U	**2.8**
C_C	**1.1**

Soil Description:

Grey mottled brown slightly gravelly clayey SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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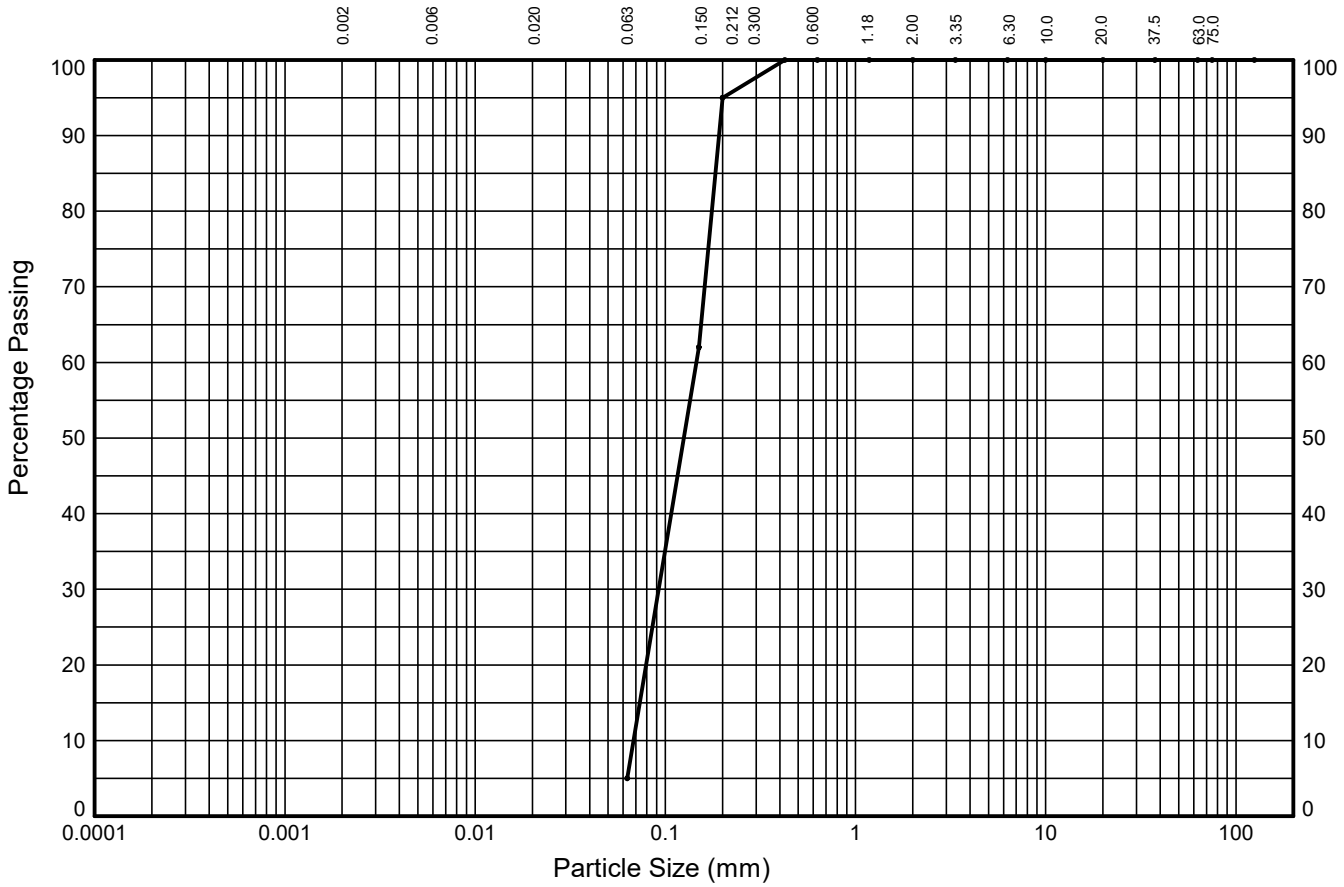
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH306** Sample Ref: **87** Sample Type: **B** Depth (m): **22.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	90%	5%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
5%				95%			0%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**100**
3.35	**100**
2.00	**100**
1.18	**100**
0.630	**100**
0.425	**100**
0.200	**95**
0.150	**62**
0.063	**5**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.068**
D_{15} (mm)	**0.073**
D_{30} (mm)	**0.092**
D_{50} (mm)	**0.125**
D_{60} (mm)	**0.146**
D_{85} (mm)	**0.183**
D_{90} (mm)	**0.191**
C_U	**2.1**
C_C	**0.86**

Soil Description:

Grey clayey SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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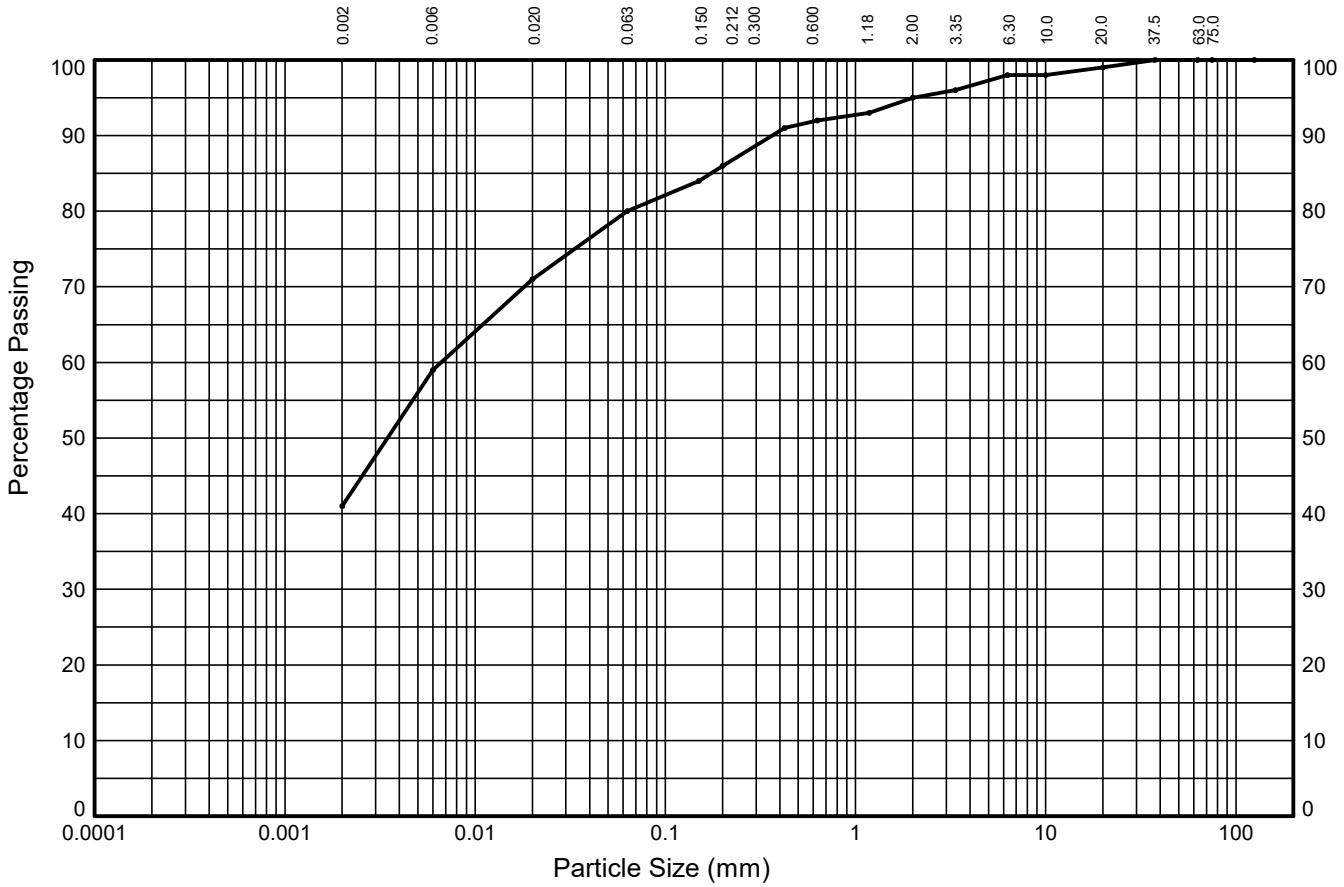
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH307** Sample Ref: **3** Sample Type: **B** Depth (m): **1.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	18%	12%	9%	6%	6%	3%	3%	1%	1%	
	SILT			SAND			GRAVEL			
41%	39%			15%			5%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**99**
10.0	**98**
6.30	**98**
3.35	**96**
2.00	**95**
1.18	**93**
0.630	**92**
0.425	**91**
0.200	**86**
0.150	**84**
0.063	**80**

Particle Diameter (mm)	Percent Passing (%)
0.02	**71**
0.006	**59**
0.002	**41**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**0.003**
D_{60} (mm)	**0.007**
D_{85} (mm)	**0.173**
D_{90} (mm)	**0.366**
C_U	**NA**
C_C	**NA**

Soil Description:

Yellowish brown slightly gravelly slightly sandy CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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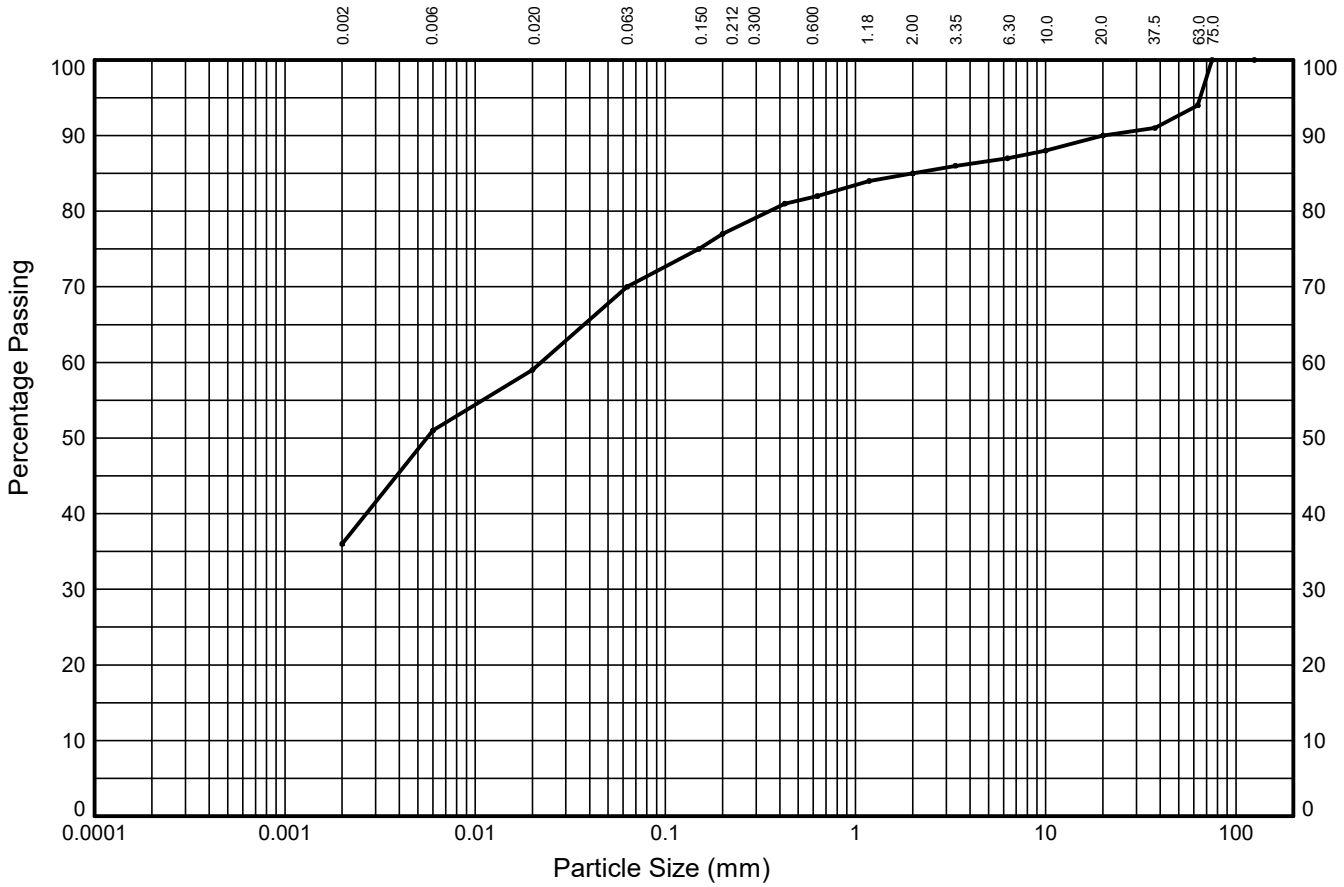
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH307** Sample Ref: **9** Sample Type: **B** Depth (m): **2.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	15%	8%	11%	7%	5%	3%	2%	3%	4%	
	SILT			SAND			GRAVEL			
36%	34%			15%			9%			6%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**94**
37.5	**91**
20.0	**90**
10.0	**88**
6.30	**87**
3.35	**86**
2.00	**85**
1.18	**84**
0.630	**82**
0.425	**81**
0.200	**77**
0.150	**75**
0.063	**70**

Particle Diameter (mm)	Percent Passing (%)
0.02	**59**
0.006	**51**
0.002	**36**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**0.006**
D_{60} (mm)	**0.022**
D_{85} (mm)	**2.000**
D_{90} (mm)	**20.000**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown mottled white slightly gravelly slightly sandy CLAY with medium cobble content

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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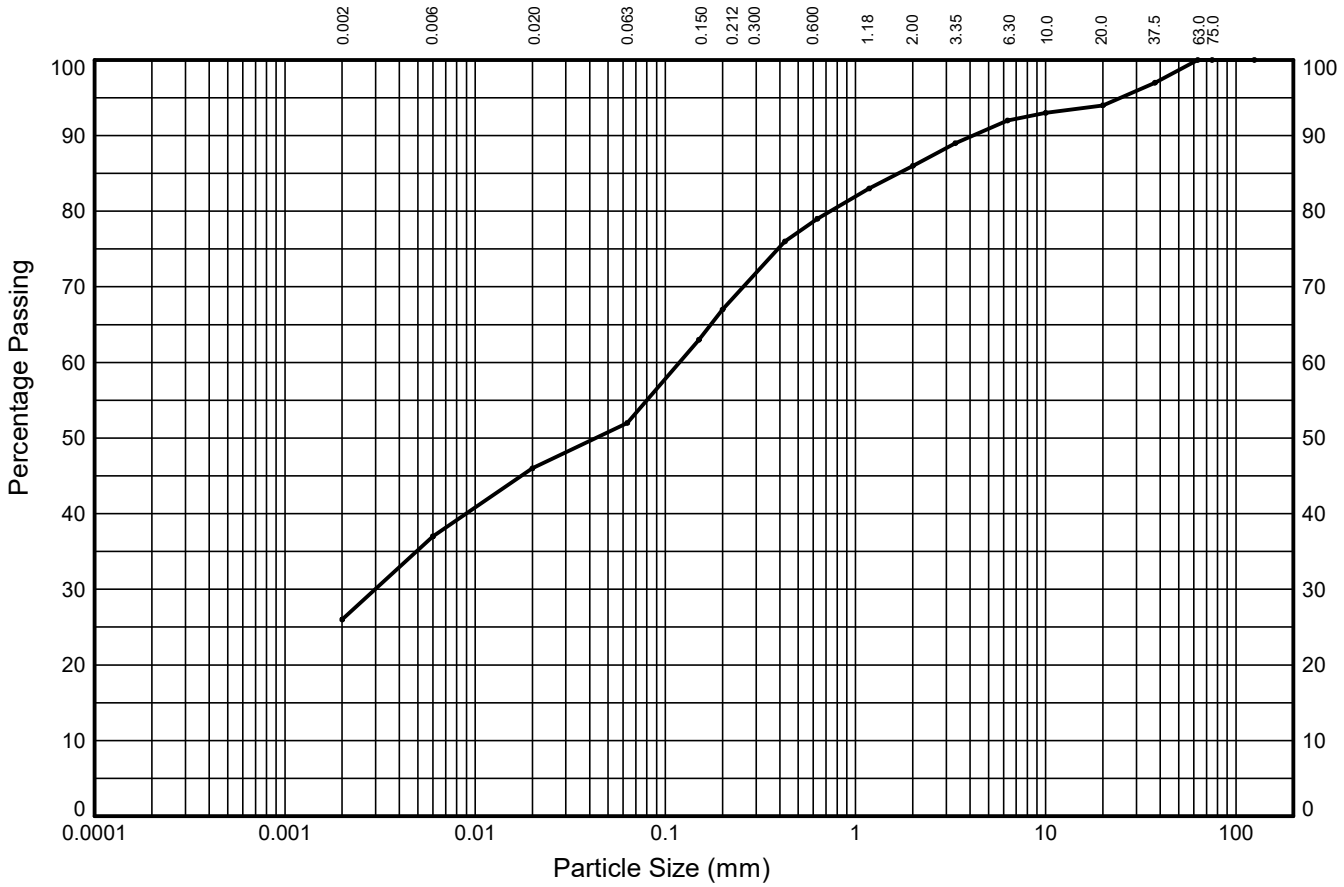
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH307** Sample Ref: **19** Sample Type: **B** Depth (m): **5.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	11%	9%	6%	15%	12%	7%	6%	2%	6%	
	SILT			SAND			GRAVEL			
26%	26%			34%			14%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**97**
20.0	**94**
10.0	**93**
6.30	**92**
3.35	**89**
2.00	**86**
1.18	**83**
0.630	**79**
0.425	**76**
0.200	**67**
0.150	**63**
0.063	**52**

Particle Diameter (mm)	Percent Passing (%)
0.02	**46**
0.006	**37**
0.002	**26**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.003**
D_{50} (mm)	**0.043**
D_{60} (mm)	**0.118**
D_{85} (mm)	**1.677**
D_{90} (mm)	**4.135**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark grey mottled white slightly gravelly slightly sandy CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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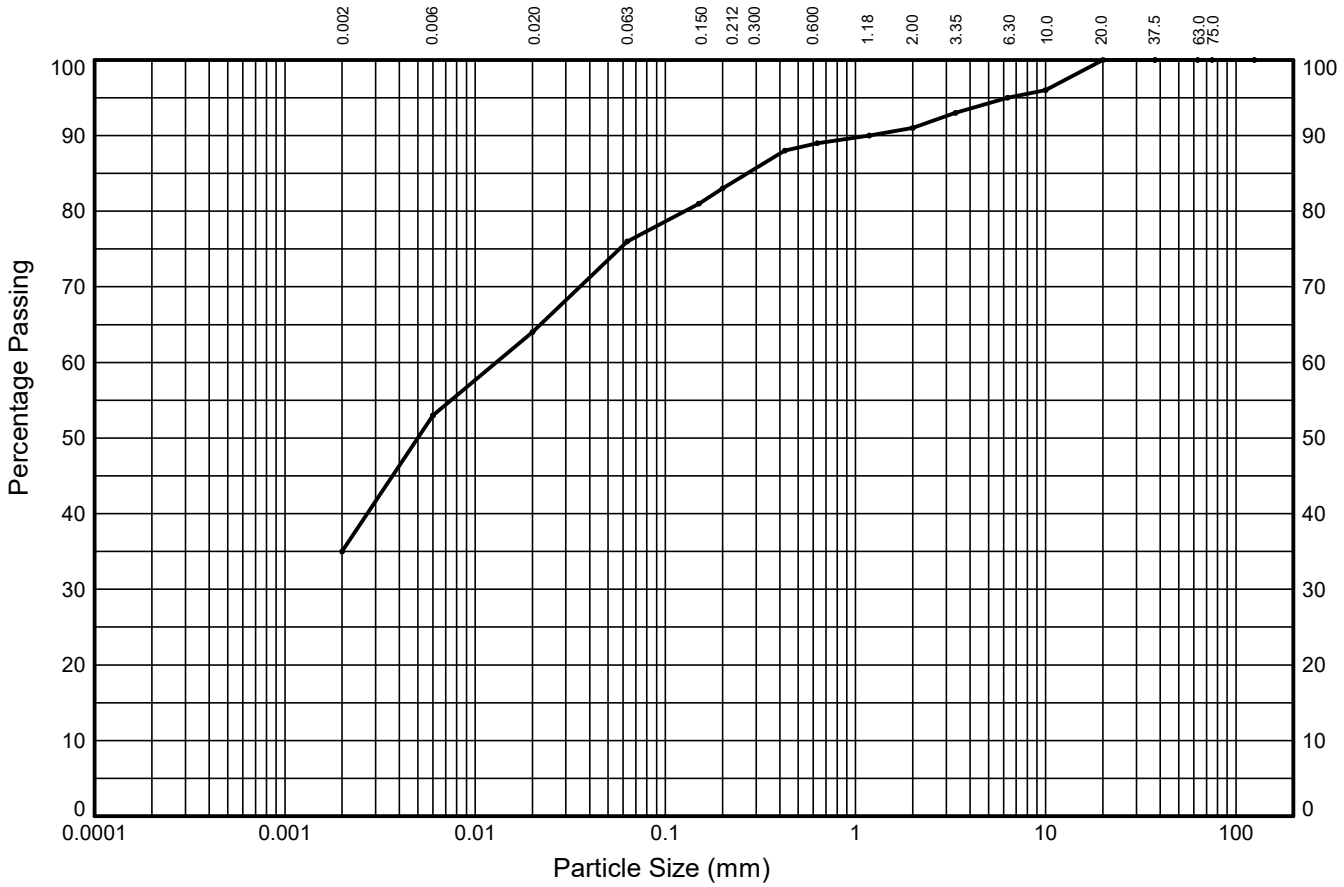
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH307** Sample Ref: **23** Sample Type: **B** Depth (m): **6.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	18%	11%	12%	7%	6%	2%	4%	5%	0%	
	SILT			SAND			GRAVEL			
35%	41%			15%			9%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**96**
6.30	**95**
3.35	**93**
2.00	**91**
1.18	**90**
0.630	**89**
0.425	**88**
0.200	**83**
0.150	**81**
0.063	**76**

Particle Diameter (mm)	Percent Passing (%)
0.02	**64**
0.006	**53**
0.002	**35**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**0.005**
D_{60} (mm)	**0.013**
D_{85} (mm)	**0.270**
D_{90} (mm)	**1.180**
C_U	**NA**
C_C	**NA**

Soil Description:

Grey mottled white slightly gravelly slightly sandy CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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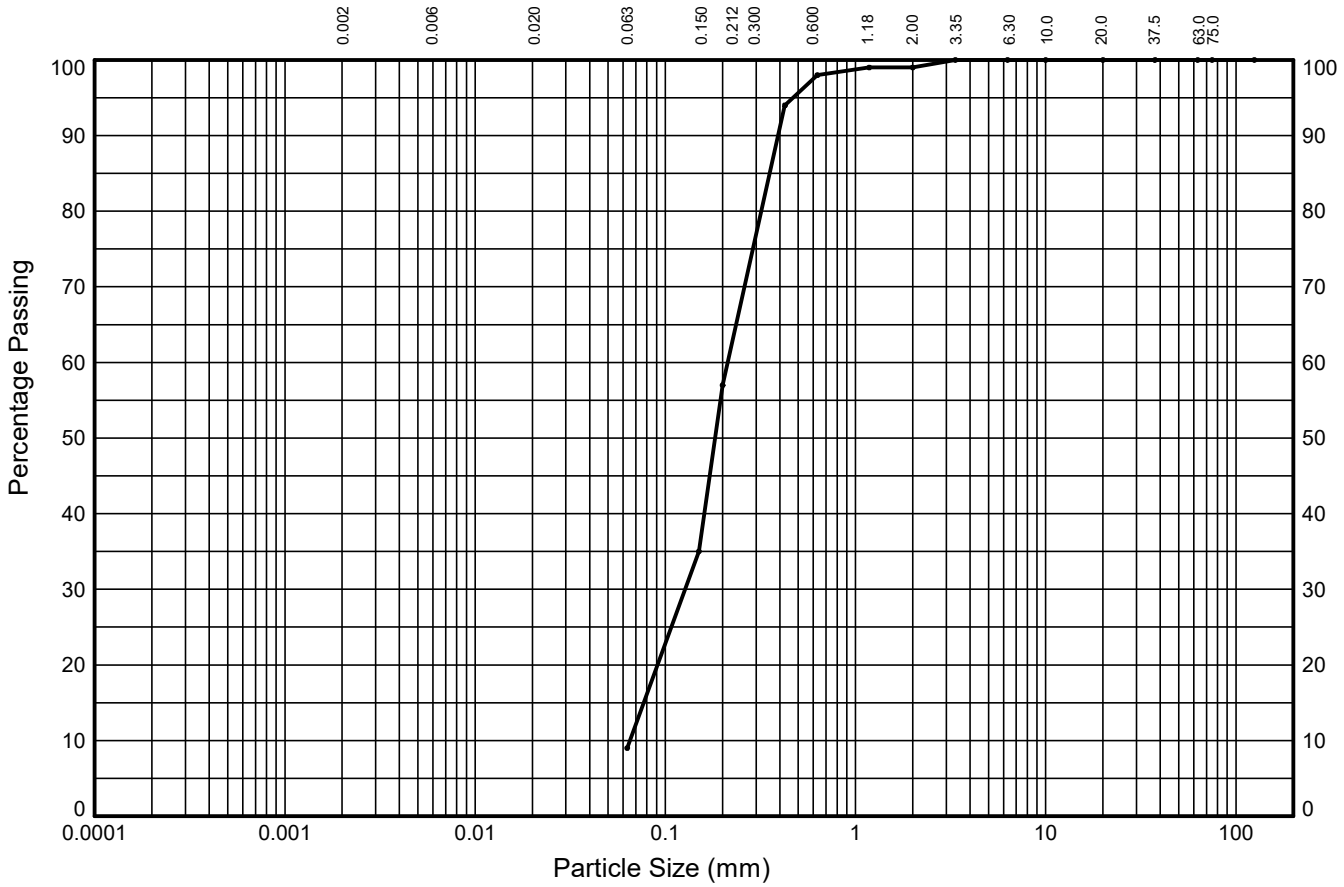
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH307** Sample Ref: **43** Sample Type: **B** Depth (m): **11.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	48%	41%	1%	1%	0%	0%	
	SILT			SAND			GRAVEL			
9%				90%			1%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**100**
3.35	**100**
2.00	**99**
1.18	**99**
0.630	**98**
0.425	**94**
0.200	**57**
0.150	**35**
0.063	**9**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.065**
D_{15} (mm)	**0.077**
D_{30} (mm)	**0.127**
D_{50} (mm)	**0.183**
D_{60} (mm)	**0.213**
D_{85} (mm)	**0.354**
D_{90} (mm)	**0.392**
C_U	**3.3**
C_C	**1.2**

Soil Description:

Light brown slightly gravelly silty SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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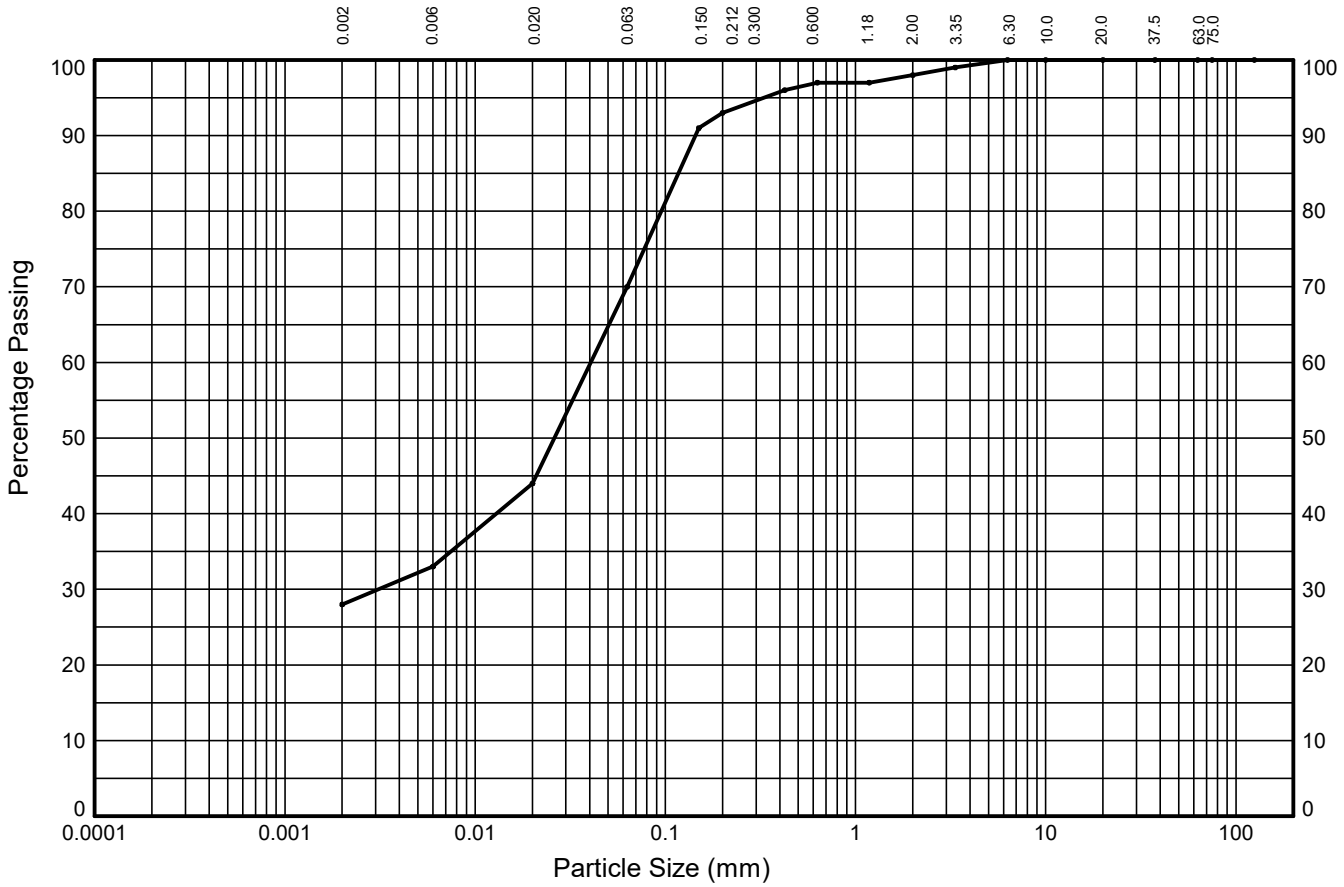
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Contract: **Sealink Friston**		Contract Ref: **563835**

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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH307** Sample Ref: **55** Sample Type: **B** Depth (m): **14.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	5%	11%	26%	23%	4%	1%	2%	0%	0%	
	SILT			SAND			GRAVEL			
28%	42%			28%			2%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**100**
3.35	**99**
2.00	**98**
1.18	**97**
0.630	**97**
0.425	**96**
0.200	**93**
0.150	**91**
0.063	**70**

Particle Diameter (mm)	Percent Passing (%)
0.02	**44**
0.006	**33**
0.002	**28**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.003**
D_{50} (mm)	**0.026**
D_{60} (mm)	**0.041**
D_{85} (mm)	**0.117**
D_{90} (mm)	**0.144**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown slightly gravelly slightly sandy silty CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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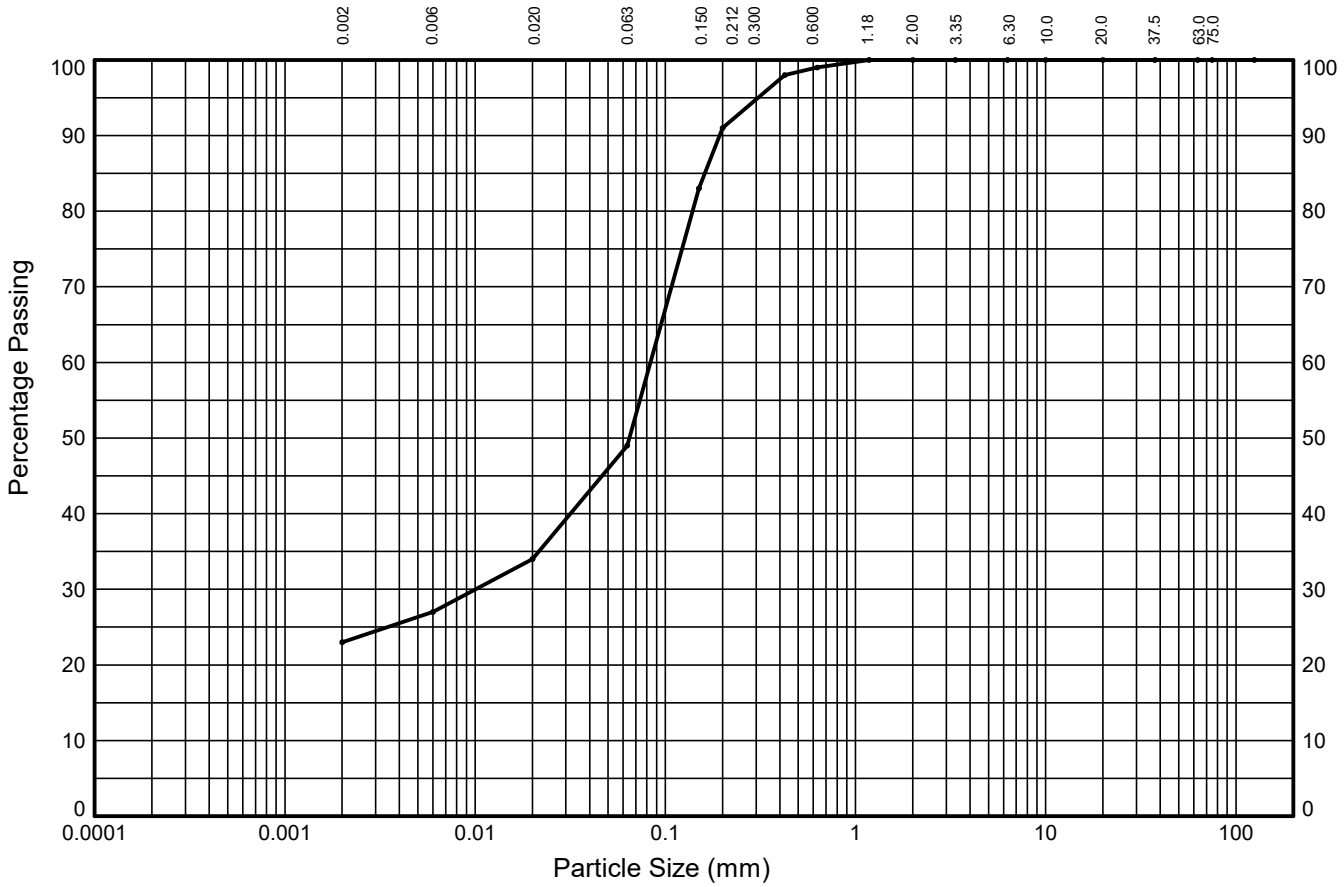
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH307** Sample Ref: **66** Sample Type: **B** Depth (m): **18.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	4%	7%	15%	42%	8%	1%	0%	0%	0%	
	SILT			SAND			GRAVEL			
23%	26%			51%			0%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**100**
3.35	**100**
2.00	**100**
1.18	**100**
0.630	**99**
0.425	**98**
0.200	**91**
0.150	**83**
0.063	**49**

Particle Diameter (mm)	Percent Passing (%)
0.02	**34**
0.006	**27**
0.002	**23**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.010**
D_{50} (mm)	**0.065**
D_{60} (mm)	**0.083**
D_{85} (mm)	**0.161**
D_{90} (mm)	**0.193**
C_U	**NA**
C_C	**NA**

Soil Description:

Orangish brown sandy CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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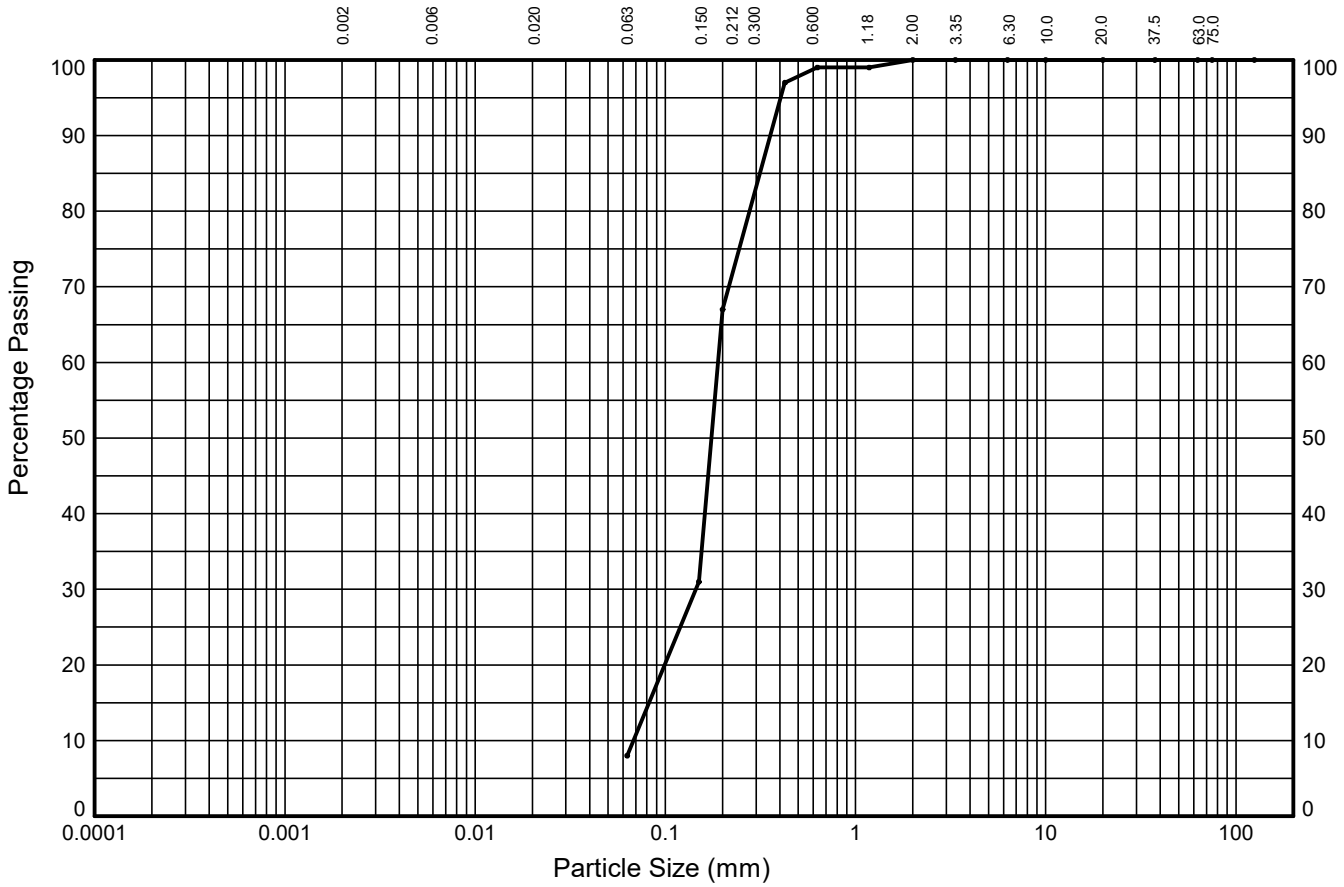
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH307** Sample Ref: **84** Sample Type: **B** Depth (m): **22.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	59%	32%	1%	0%	0%	0%	
	SILT			SAND			GRAVEL			
8%				92%			0%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**100**
3.35	**100**
2.00	**100**
1.18	**99**
0.630	**99**
0.425	**97**
0.200	**67**
0.150	**31**
0.063	**8**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.068**
D_{15} (mm)	**0.082**
D_{30} (mm)	**0.144**
D_{50} (mm)	**0.175**
D_{60} (mm)	**0.189**
D_{85} (mm)	**0.314**
D_{90} (mm)	**0.356**
C_U	**2.8**
C_C	**1.6**

Soil Description:

Orangish brown clayey SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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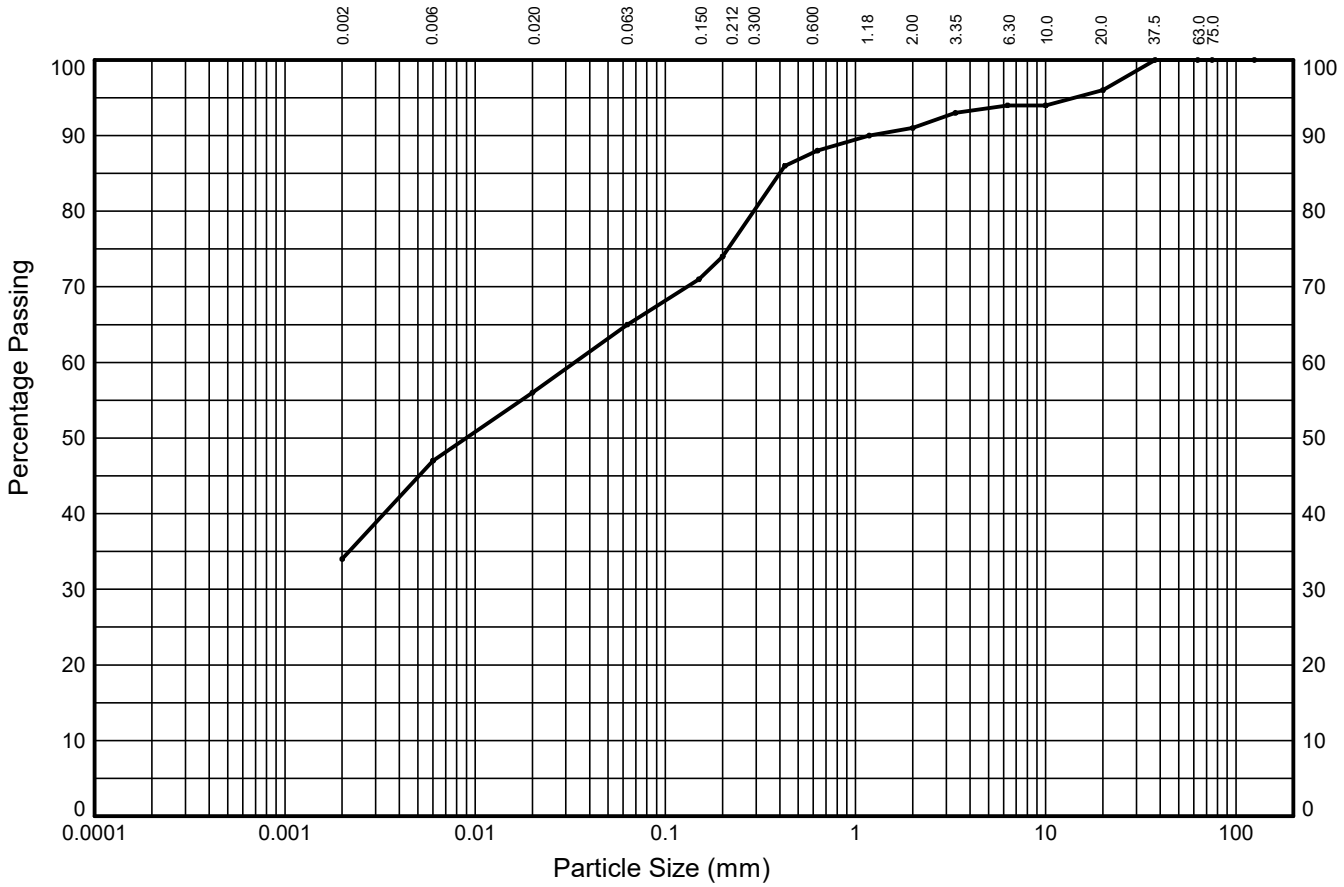
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH308** Sample Ref: **5** Sample Type: **B** Depth (m): **1.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	13%	9%	9%	9%	14%	3%	3%	2%	4%	
	SILT			SAND			GRAVEL			
34%	31%			26%			9%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**96**
10.0	**94**
6.30	**94**
3.35	**93**
2.00	**91**
1.18	**90**
0.630	**88**
0.425	**86**
0.200	**74**
0.150	**71**
0.063	**65**

Particle Diameter (mm)	Percent Passing (%)
0.02	**56**
0.006	**47**
0.002	**34**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**0.009**
D_{60} (mm)	**0.033**
D_{85} (mm)	**0.399**
D_{90} (mm)	**1.180**
C_U	**NA**
C_C	**NA**

Soil Description:

Yellowish brown mottled grey slightly gravelly slightly sandy CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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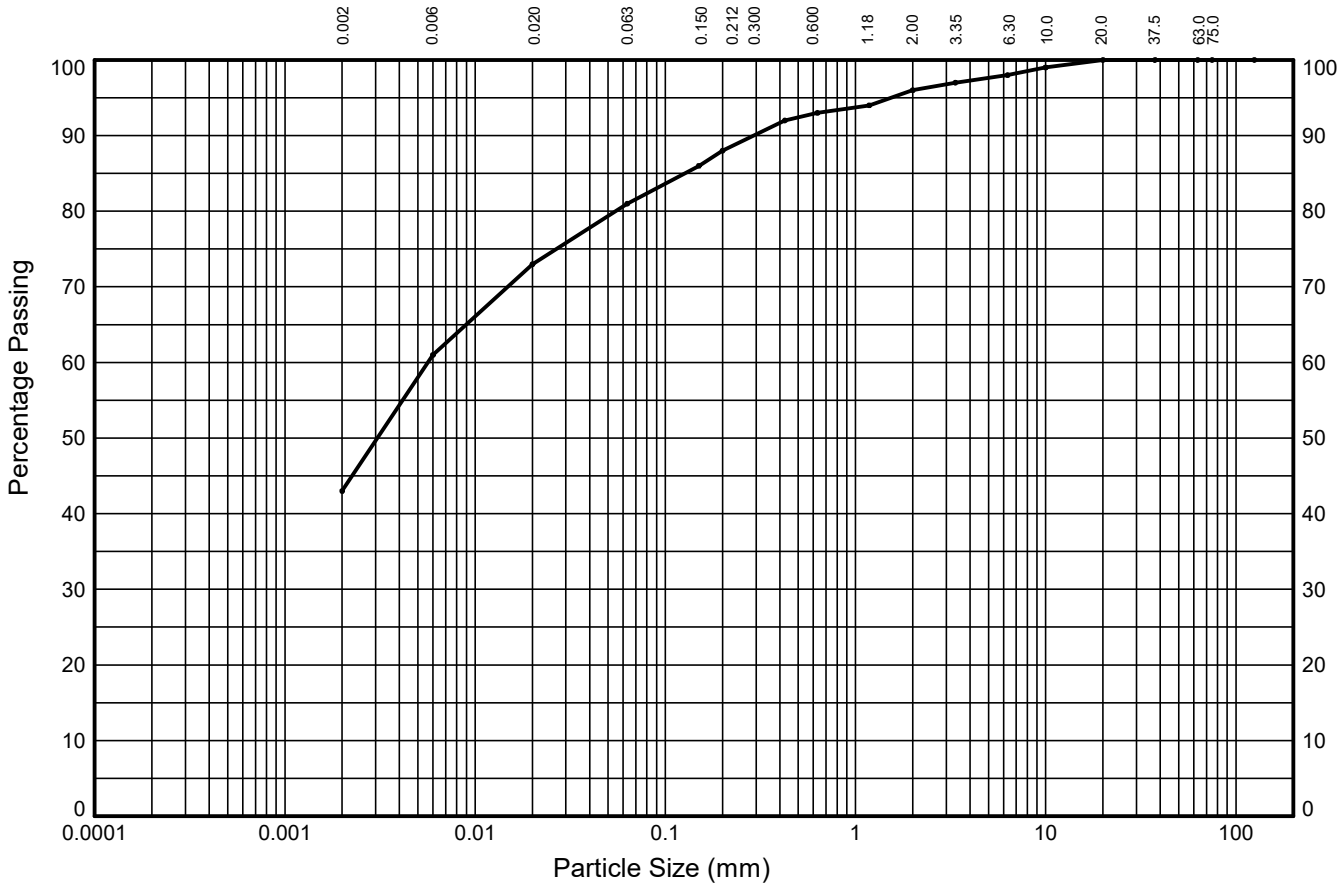
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH308** Sample Ref: **15** Sample Type: **B** Depth (m): **3.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	18%	12%	8%	7%	5%	3%	2%	2%	0%	
	SILT			SAND			GRAVEL			
43%	38%			15%			4%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**99**
6.30	**98**
3.35	**97**
2.00	**96**
1.18	**94**
0.630	**93**
0.425	**92**
0.200	**88**
0.150	**86**
0.063	**81**

Particle Diameter (mm)	Percent Passing (%)
0.02	**73**
0.006	**61**
0.002	**43**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**0.003**
D_{60} (mm)	**0.006**
D_{85} (mm)	**0.126**
D_{90} (mm)	**0.292**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark grey slightly gravelly slightly sandy CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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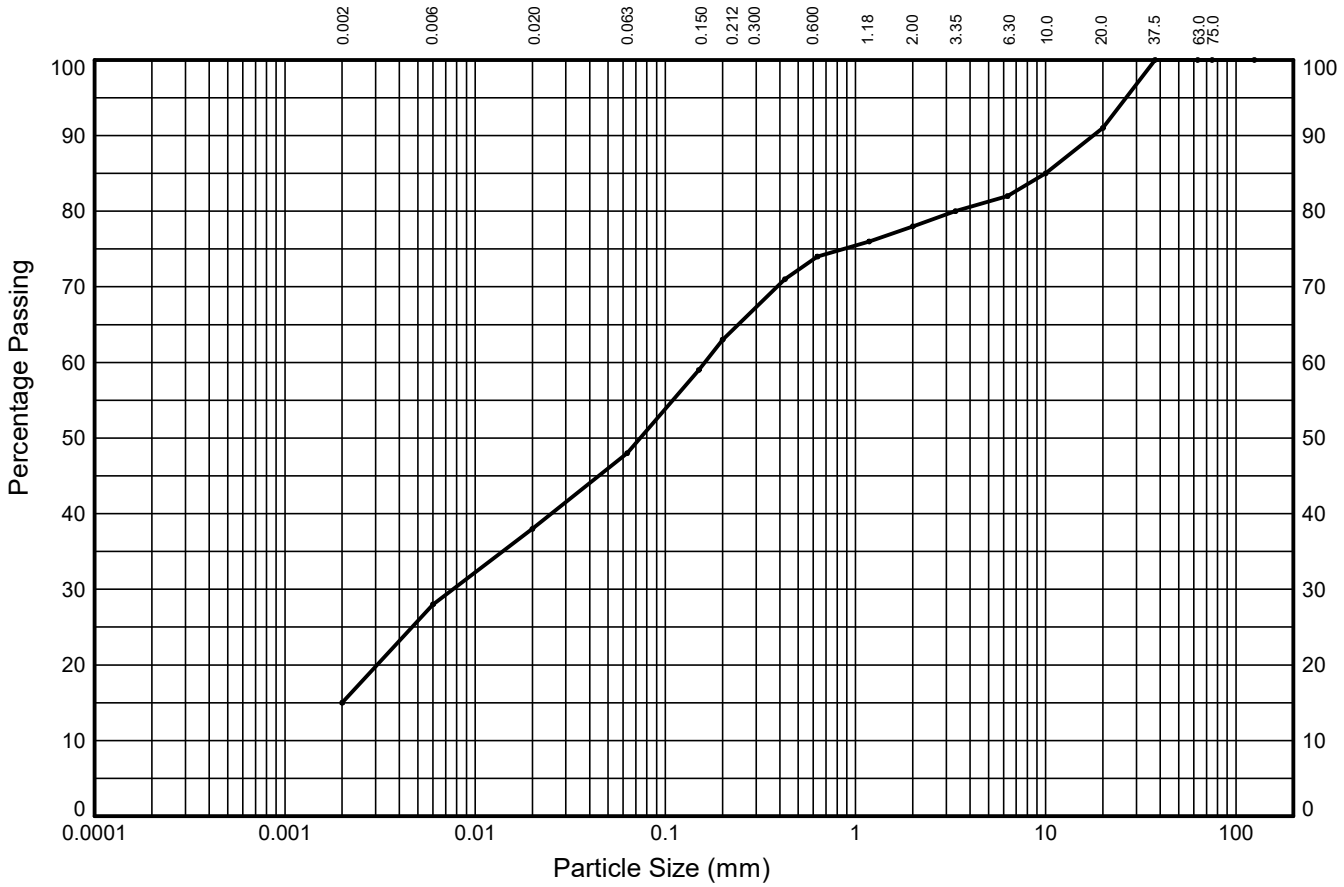
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH308** Sample Ref: **29** Sample Type: **B** Depth (m): **7.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	13%	10%	10%	15%	11%	4%	4%	9%	9%	
	SILT			SAND			GRAVEL			
15%	33%			30%			22%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**91**
10.0	**85**
6.30	**82**
3.35	**80**
2.00	**78**
1.18	**76**
0.630	**74**
0.425	**71**
0.200	**63**
0.150	**59**
0.063	**48**

Particle Diameter (mm)	Percent Passing (%)
0.02	**38**
0.006	**28**
0.002	**15**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**0.002**
D_{30} (mm)	**0.008**
D_{50} (mm)	**0.074**
D_{60} (mm)	**0.161**
D_{85} (mm)	**10.000**
D_{90} (mm)	**17.818**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown slightly gravelly slightly sandy clayey SILT

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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Contract Ref: **563835**

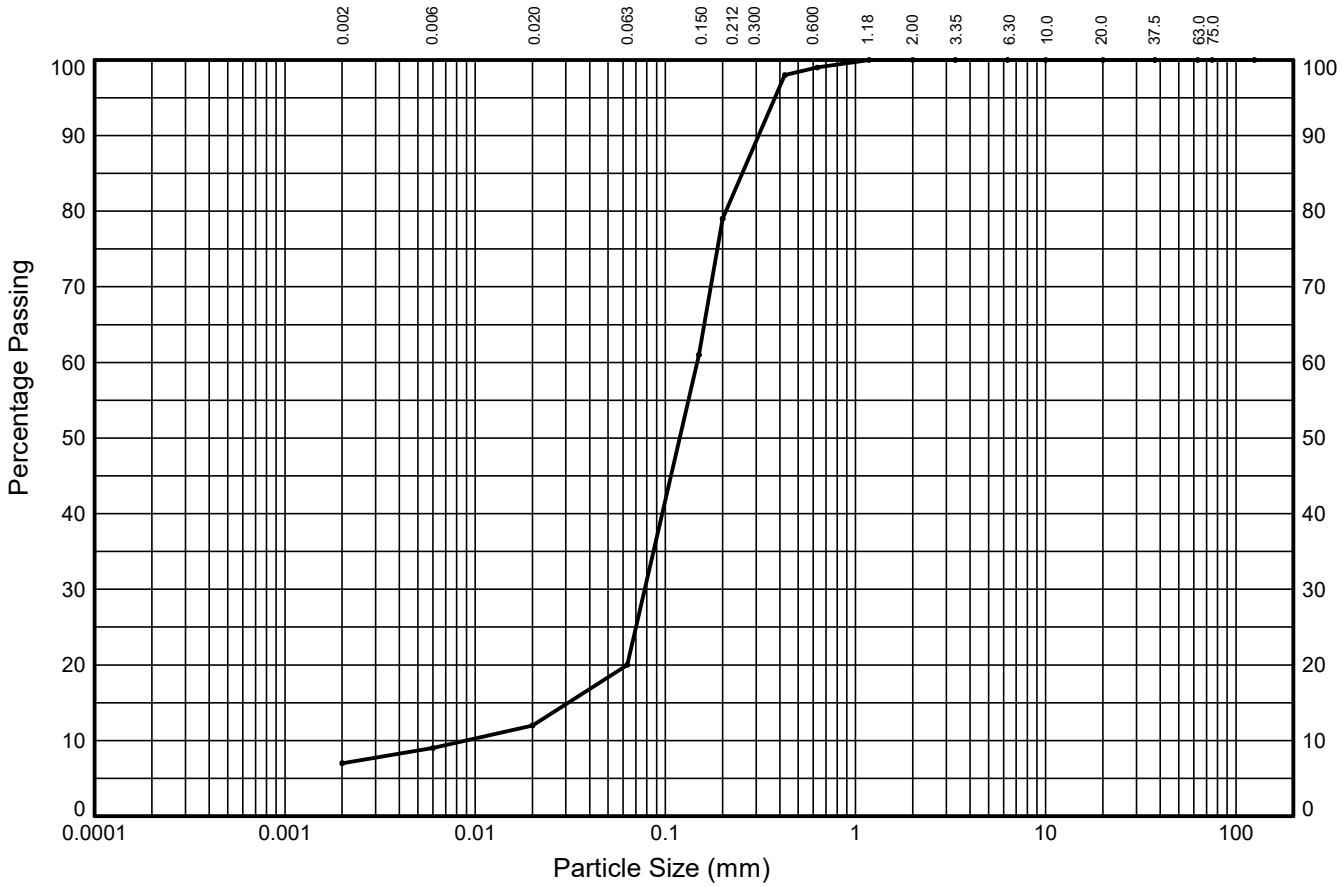
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH308** Sample Ref: **39** Sample Type: **B** Depth (m): **9.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	2%	3%	8%	59%	20%	1%	0%	0%	0%	
	SILT			SAND			GRAVEL			
7%	13%			80%			0%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**100**
3.35	**100**
2.00	**100**
1.18	**100**
0.630	**99**
0.425	**98**
0.200	**79**
0.150	**61**
0.063	**20**

Particle Diameter (mm)	Percent Passing (%)
0.02	**12**
0.006	**9**
0.002	**7**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.009**
D_{15} (mm)	**0.031**
D_{30} (mm)	**0.078**
D_{50} (mm)	**0.119**
D_{60} (mm)	**0.147**
D_{85} (mm)	**0.254**
D_{90} (mm)	**0.309**
C_U	**16**
C_C	**5**

Soil Description:

Brown very clayey SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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Contract Ref: **563835**

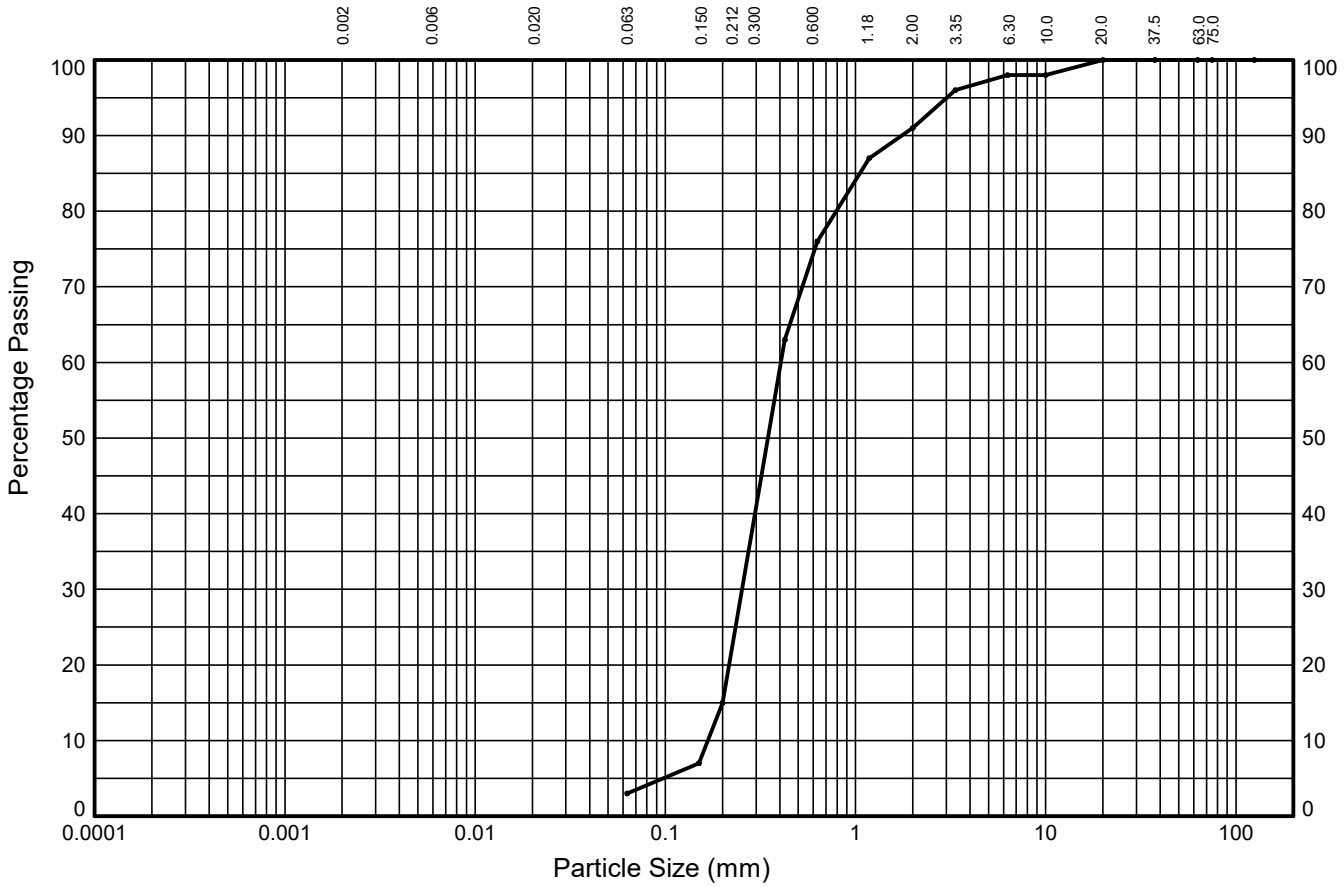
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH308** Sample Ref: **59** Sample Type: **B** Depth (m): **14.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	12%	61%	15%	7%	2%	0%	
	SILT			SAND			GRAVEL			
3%				88%			9%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**98**
6.30	**98**
3.35	**96**
2.00	**91**
1.18	**87**
0.630	**76**
0.425	**63**
0.200	**15**
0.150	**7**
0.063	**3**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.167**
D_{15} (mm)	**0.200**
D_{30} (mm)	**0.253**
D_{50} (mm)	**0.347**
D_{60} (mm)	**0.405**
D_{85} (mm)	**1.053**
D_{90} (mm)	**1.753**
C_U	**2.4**
C_C	**0.95**

Soil Description:

Brown gravelly slightly clayey SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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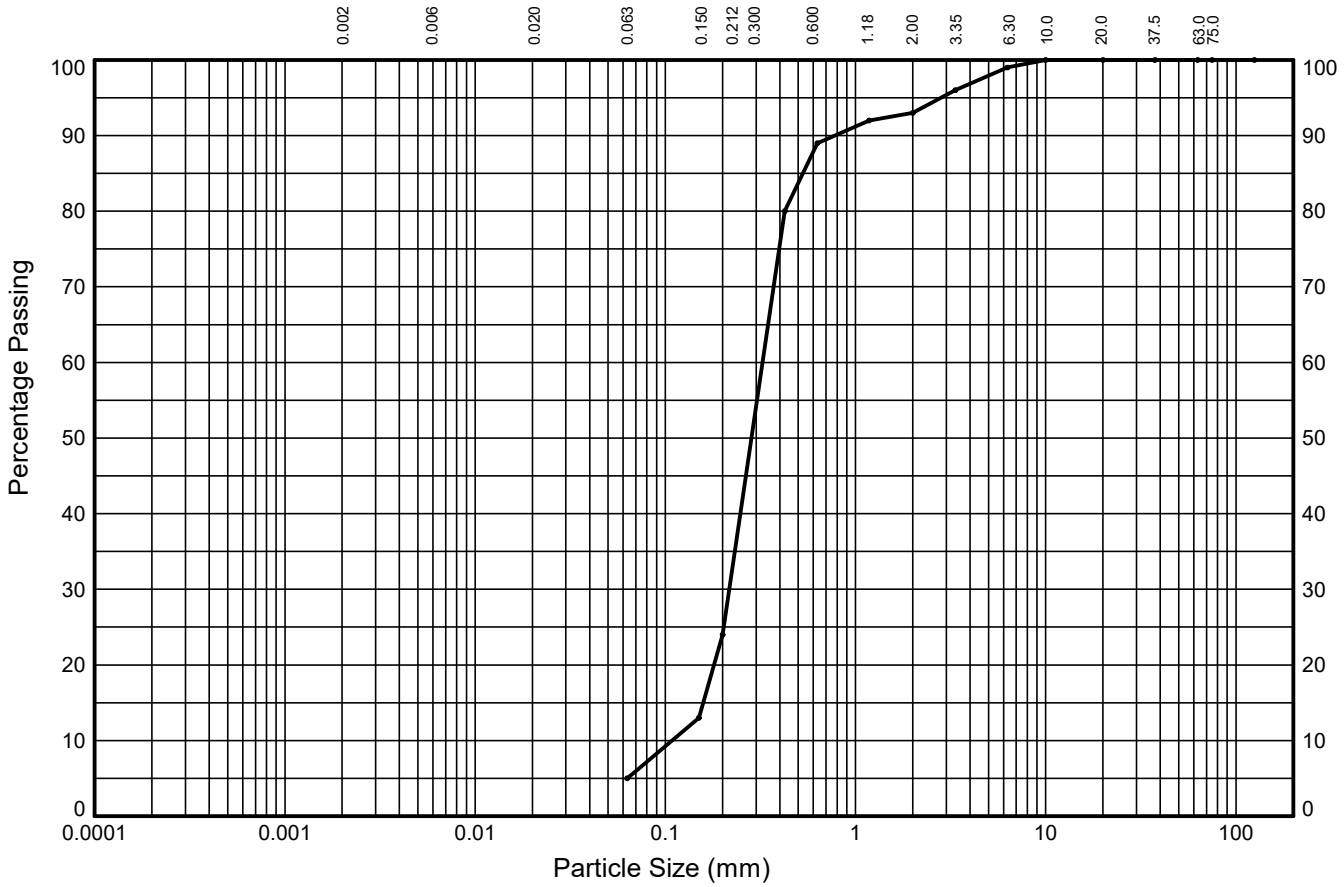
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH308** Sample Ref: **75** Sample Type: **B** Depth (m): **18.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	19%	65%	4%	6%	1%	0%	
	SILT			SAND			GRAVEL			
5%				88%			7%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**99**
3.35	**96**
2.00	**93**
1.18	**92**
0.630	**89**
0.425	**80**
0.200	**24**
0.150	**13**
0.063	**5**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.108**
D_{15} (mm)	**0.158**
D_{30} (mm)	**0.217**
D_{50} (mm)	**0.284**
D_{60} (mm)	**0.325**
D_{85} (mm)	**0.529**
D_{90} (mm)	**0.777**
C_U	**3.0**
C_C	**1.3**

Soil Description:

Brown gravelly clayey SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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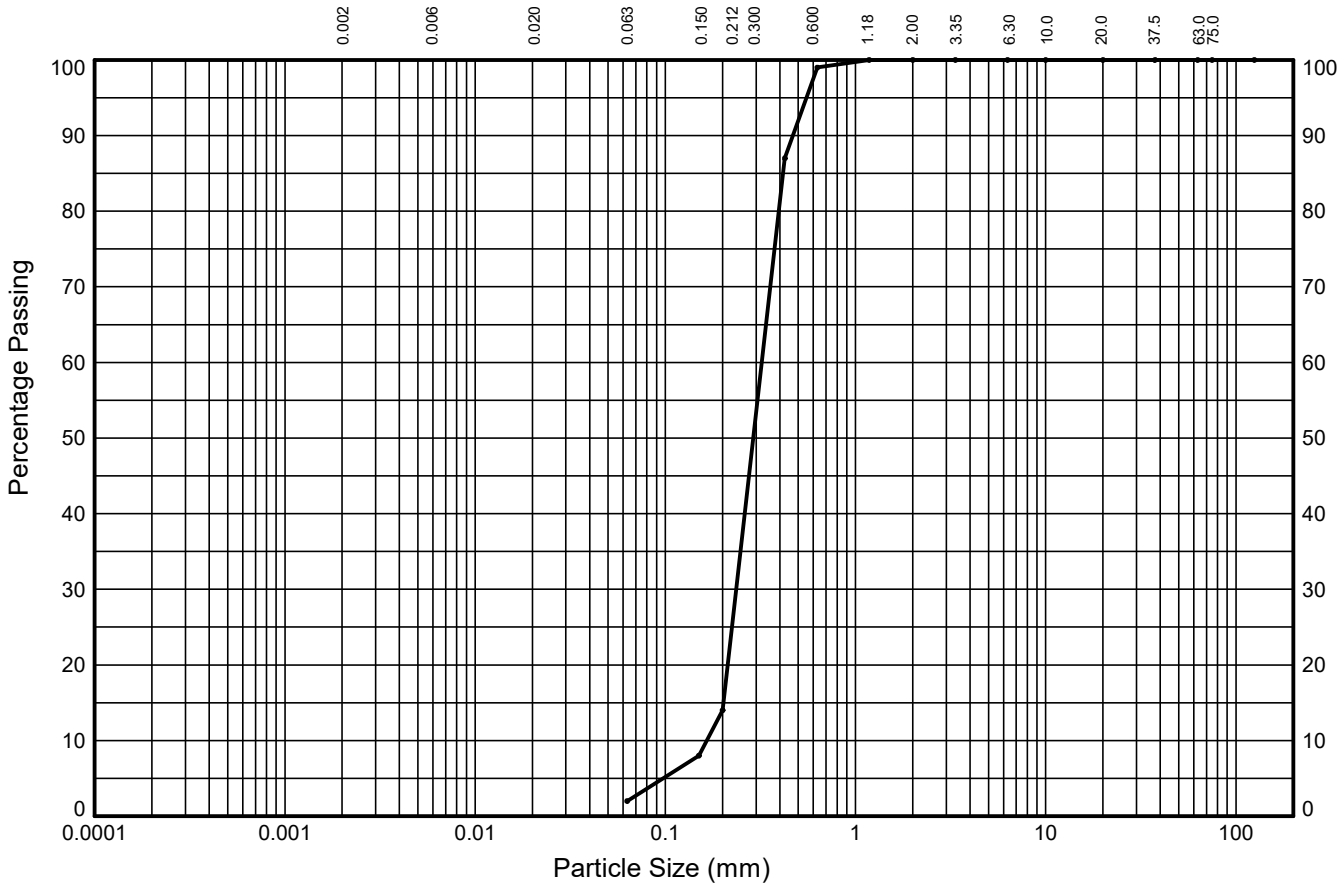
Compiled By		Date
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Contract: **Sealink Friston**		Contract Ref: **563835**

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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH308** Sample Ref: **90** Sample Type: **B** Depth (m): **22.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	12%	85%	1%	0%	0%	0%	
	SILT			SAND			GRAVEL			
2%				98%			0%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**100**
3.35	**100**
2.00	**100**
1.18	**100**
0.630	**99**
0.425	**87**
0.200	**14**
0.150	**8**
0.063	**2**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.165**
D_{15} (mm)	**0.202**
D_{30} (mm)	**0.236**
D_{50} (mm)	**0.290**
D_{60} (mm)	**0.322**
D_{85} (mm)	**0.416**
D_{90} (mm)	**0.469**
C_U	**1.9**
C_C	**1.0**

Soil Description:

Brown slightly clayey SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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Contract		Contract Ref:
Sealink Friston		**563835**

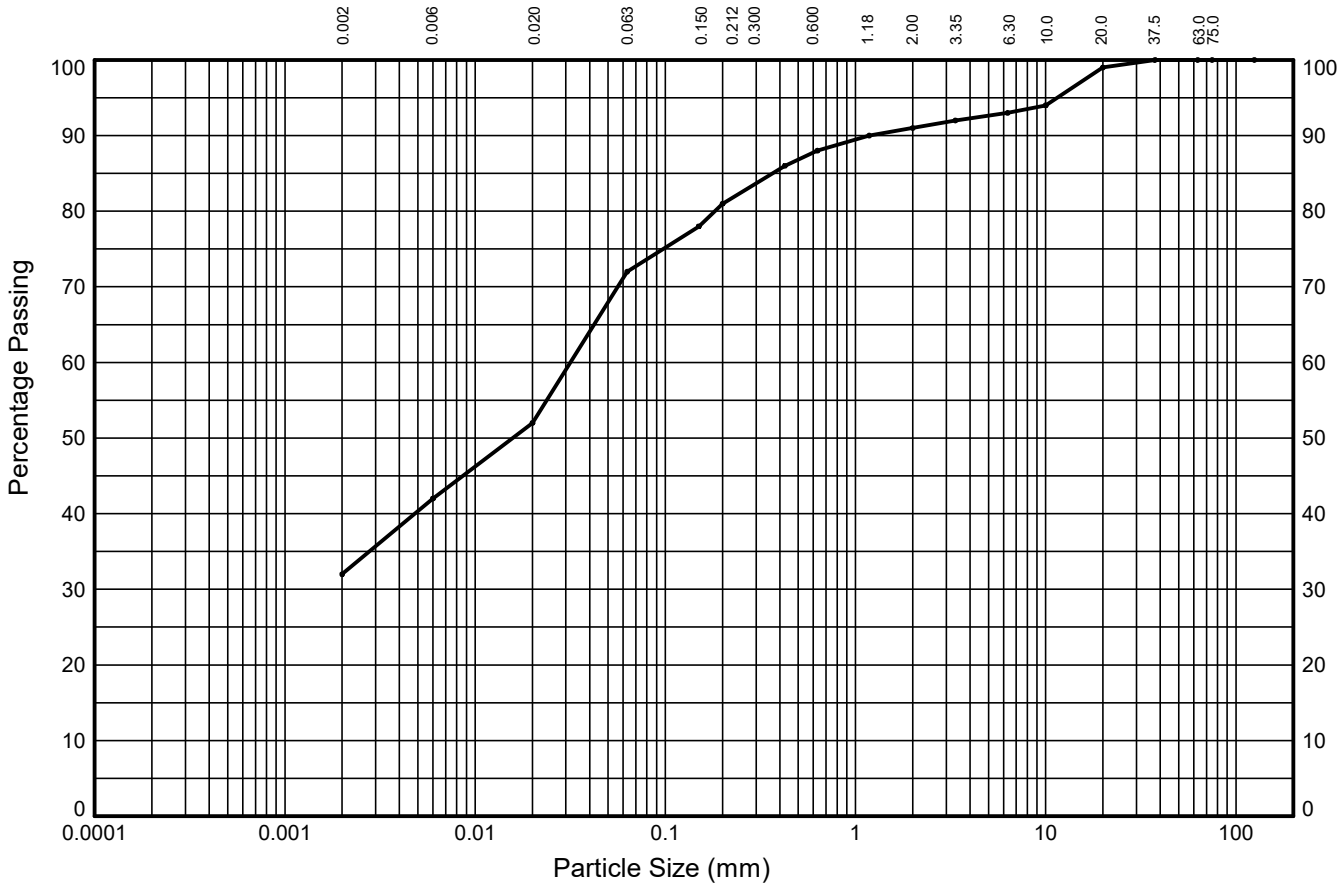
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH309** Sample Ref: **3** Sample Type: **B** Depth (m): **0.70**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	10%	10%	20%	9%	7%	3%	2%	6%	1%	
	SILT			SAND			GRAVEL			
32%	40%			19%			9%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**99**
10.0	**94**
6.30	**93**
3.35	**92**
2.00	**91**
1.18	**90**
0.630	**88**
0.425	**86**
0.200	**81**
0.150	**78**
0.063	**72**

Particle Diameter (mm)	Percent Passing (%)
0.02	**52**
0.006	**42**
0.002	**32**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**0.016**
D_{60} (mm)	**0.032**
D_{85} (mm)	**0.366**
D_{90} (mm)	**1.180**
C_U	**NA**
C_C	**NA**

Soil Description:

Light brown slightly gravelly slightly sandy silty CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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Contract: **Sealink Friston**

Contract Ref: **563835**

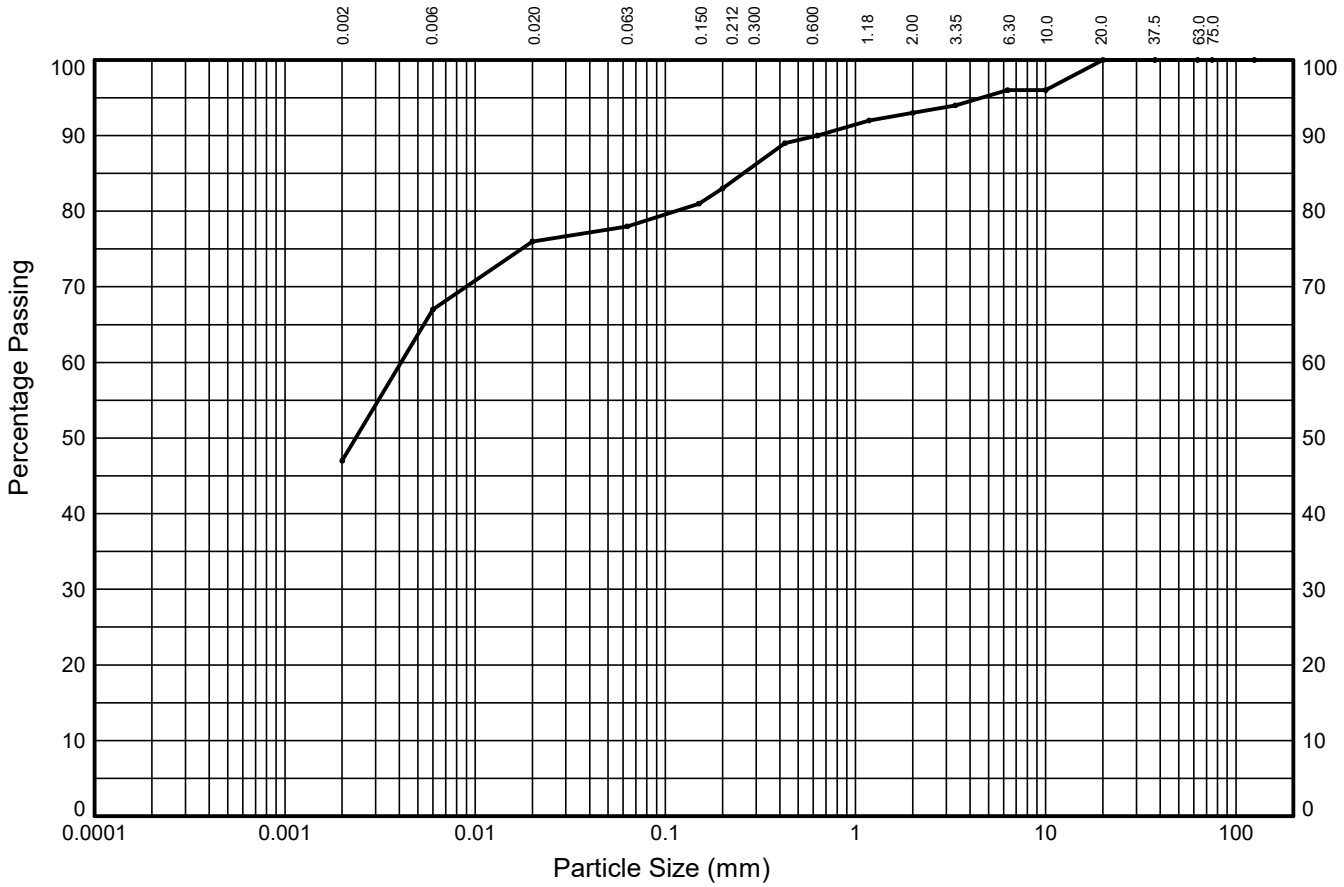
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH309** Sample Ref: **12** Sample Type: **B** Depth (m): **2.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	20%	9%	2%	5%	7%	3%	3%	4%	0%	
	SILT			SAND			GRAVEL			
47%	31%			15%			7%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**96**
6.30	**96**
3.35	**94**
2.00	**93**
1.18	**92**
0.630	**90**
0.425	**89**
0.200	**83**
0.150	**81**
0.063	**78**

Particle Diameter (mm)	Percent Passing (%)
0.02	**76**
0.006	**67**
0.002	**47**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**0.002**
D_{60} (mm)	**0.004**
D_{85} (mm)	**0.257**
D_{90} (mm)	**0.630**
C_U	**NA**
C_C	**NA**

Soil Description:

Greyish brown slightly gravelly slightly sandy CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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Contract: **Sealink Friston**

Contract Ref: **563835**

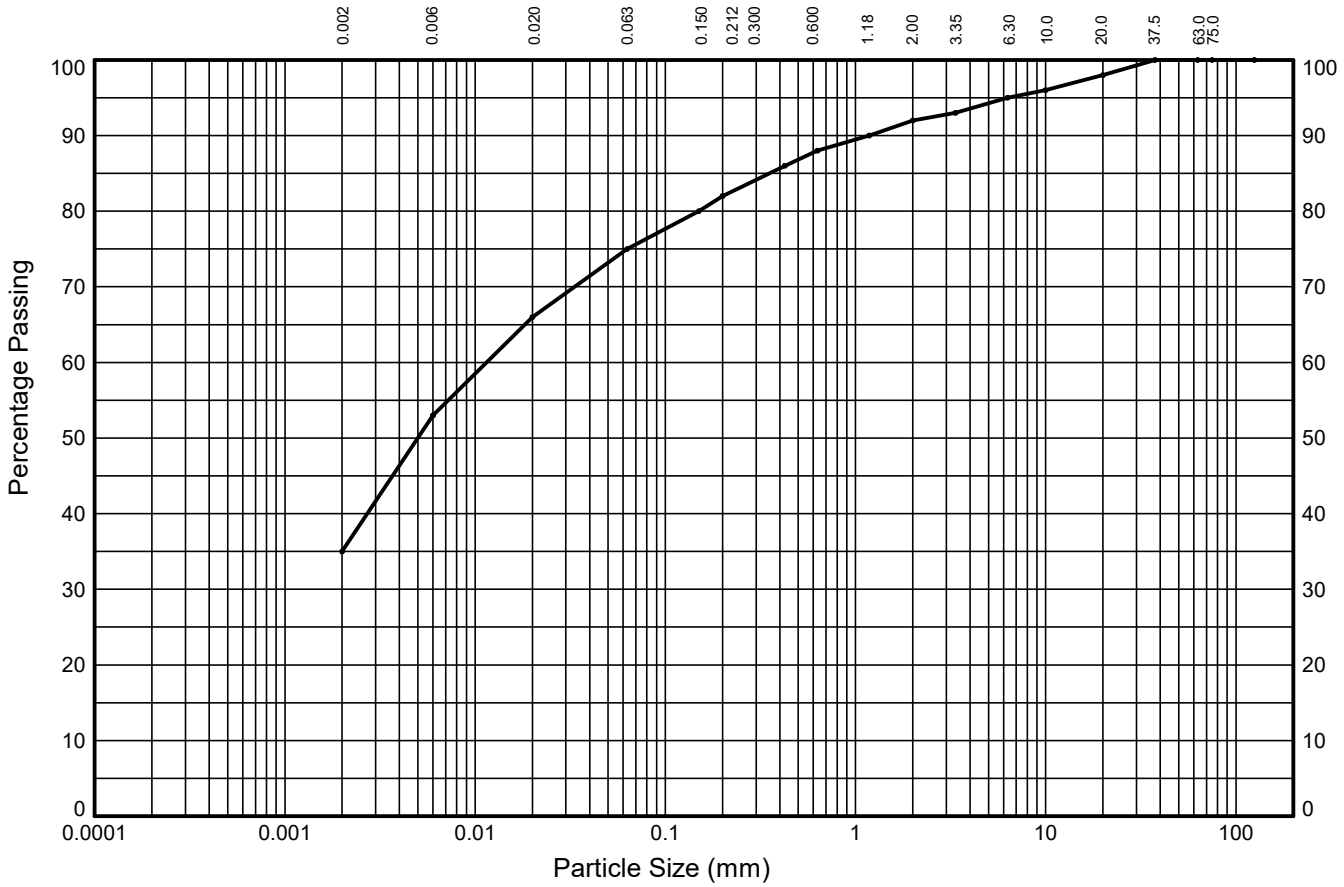
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH309** Sample Ref: **24** Sample Type: **B** Depth (m): **6.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	18%	13%	9%	7%	6%	4%	3%	3%	2%	
	SILT			SAND			GRAVEL			
35%	40%			17%			8%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**98**
10.0	**96**
6.30	**95**
3.35	**93**
2.00	**92**
1.18	**90**
0.630	**88**
0.425	**86**
0.200	**82**
0.150	**80**
0.063	**75**

Particle Diameter (mm)	Percent Passing (%)
0.02	**66**
0.006	**53**
0.002	**35**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**0.005**
D_{60} (mm)	**0.011**
D_{85} (mm)	**0.352**
D_{90} (mm)	**1.180**
C_U	**NA**
C_C	**NA**

Soil Description:

Grey mottled white slightly gravelly slightly sandy silty CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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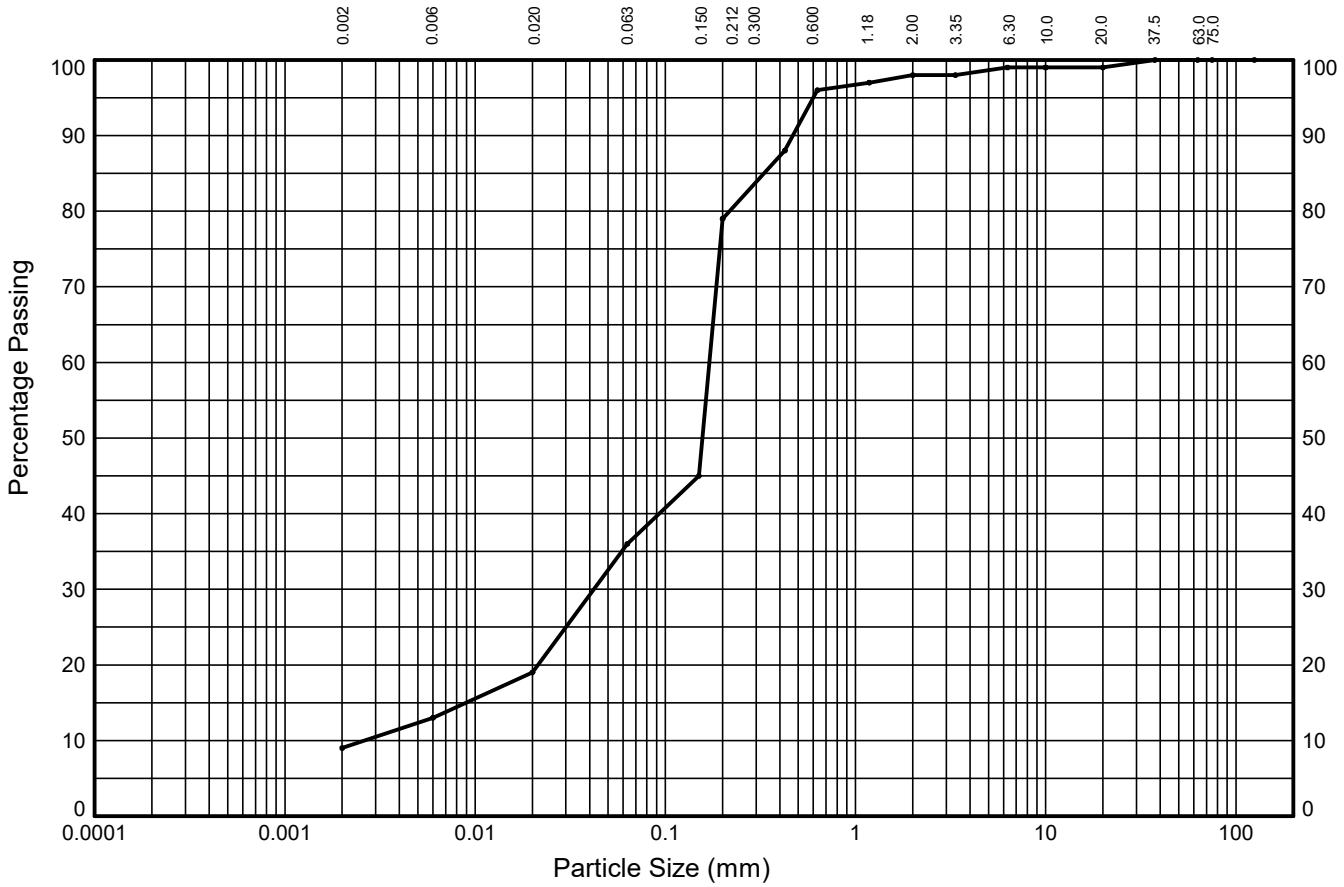
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.3 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH309** Sample Ref: **36** Sample Type: **B** Depth (m): **9.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	4%	6%	17%	43%	17%	2%	1%	0%	1%	
	SILT			SAND			GRAVEL			
9%	27%			62%			2%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**99**
10.0	**99**
6.30	**99**
3.35	**98**
2.00	**98**
1.18	**97**
0.630	**96**
0.425	**88**
0.200	**79**
0.150	**45**
0.063	**36**

Particle Diameter (mm)	Percent Passing (%)
0.02	**19**
0.006	**13**
0.002	**9**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.003**
D_{15} (mm)	**0.009**
D_{30} (mm)	**0.042**
D_{50} (mm)	**0.156**
D_{60} (mm)	**0.170**
D_{85} (mm)	**0.331**
D_{90} (mm)	**0.469**
C_U	**65**
C_C	**4**

Soil Description:

Orangish brown slightly gravelly sandy SILT

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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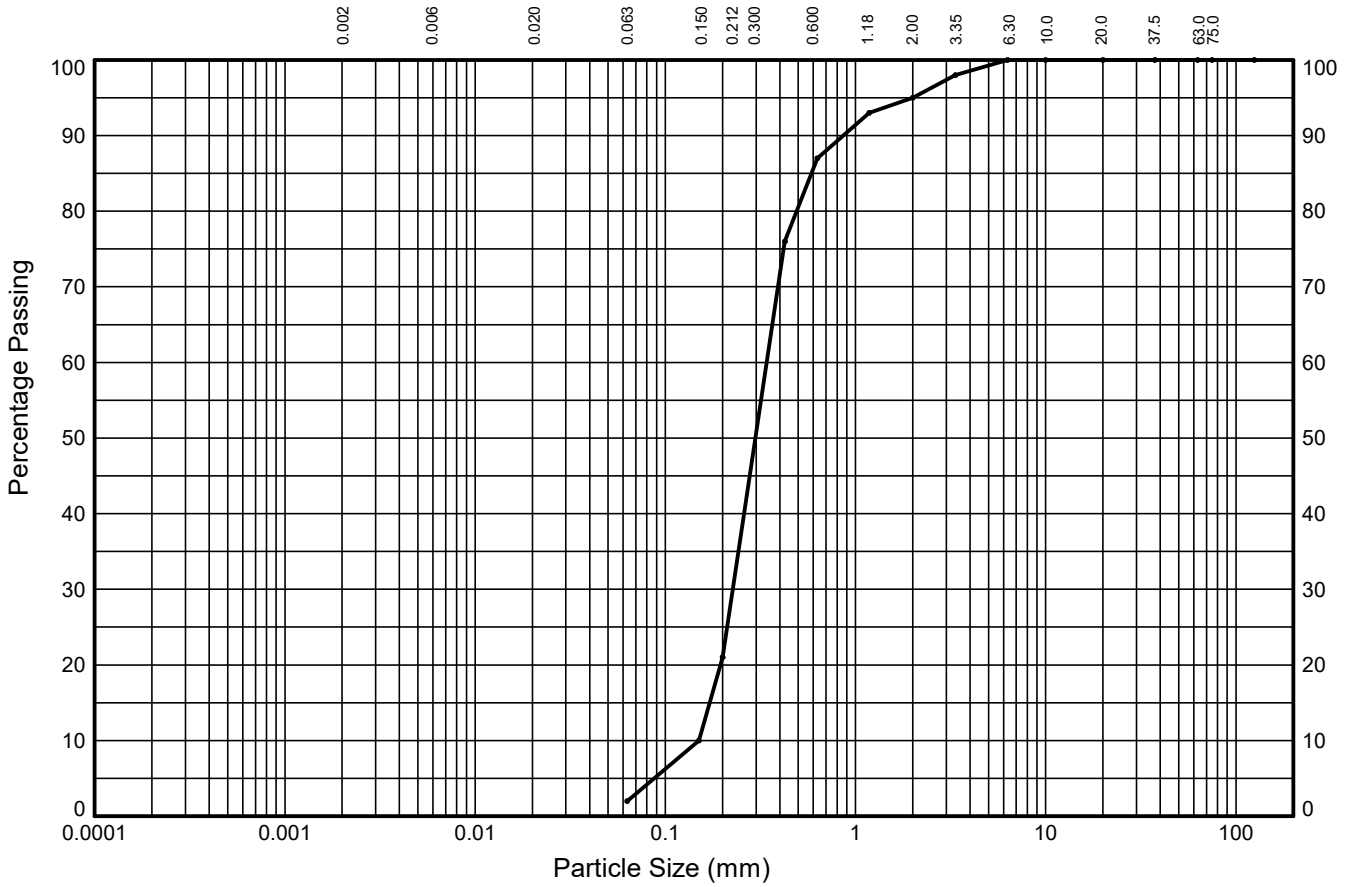
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH309** Sample Ref: **53** Sample Type: **B** Depth (m): **13.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	19%	66%	8%	5%	0%	0%	
	SILT			SAND			GRAVEL			
2%				93%			5%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**100**
3.35	**98**
2.00	**95**
1.18	**93**
0.630	**87**
0.425	**76**
0.200	**21**
0.150	**10**
0.063	**2**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.150**
D_{15} (mm)	**0.171**
D_{30} (mm)	**0.226**
D_{50} (mm)	**0.298**
D_{60} (mm)	**0.341**
D_{85} (mm)	**0.586**
D_{90} (mm)	**0.862**
C_U	**2.3**
C_C	**1.00**

Soil Description:

Orangish brown gravelly slightly silty SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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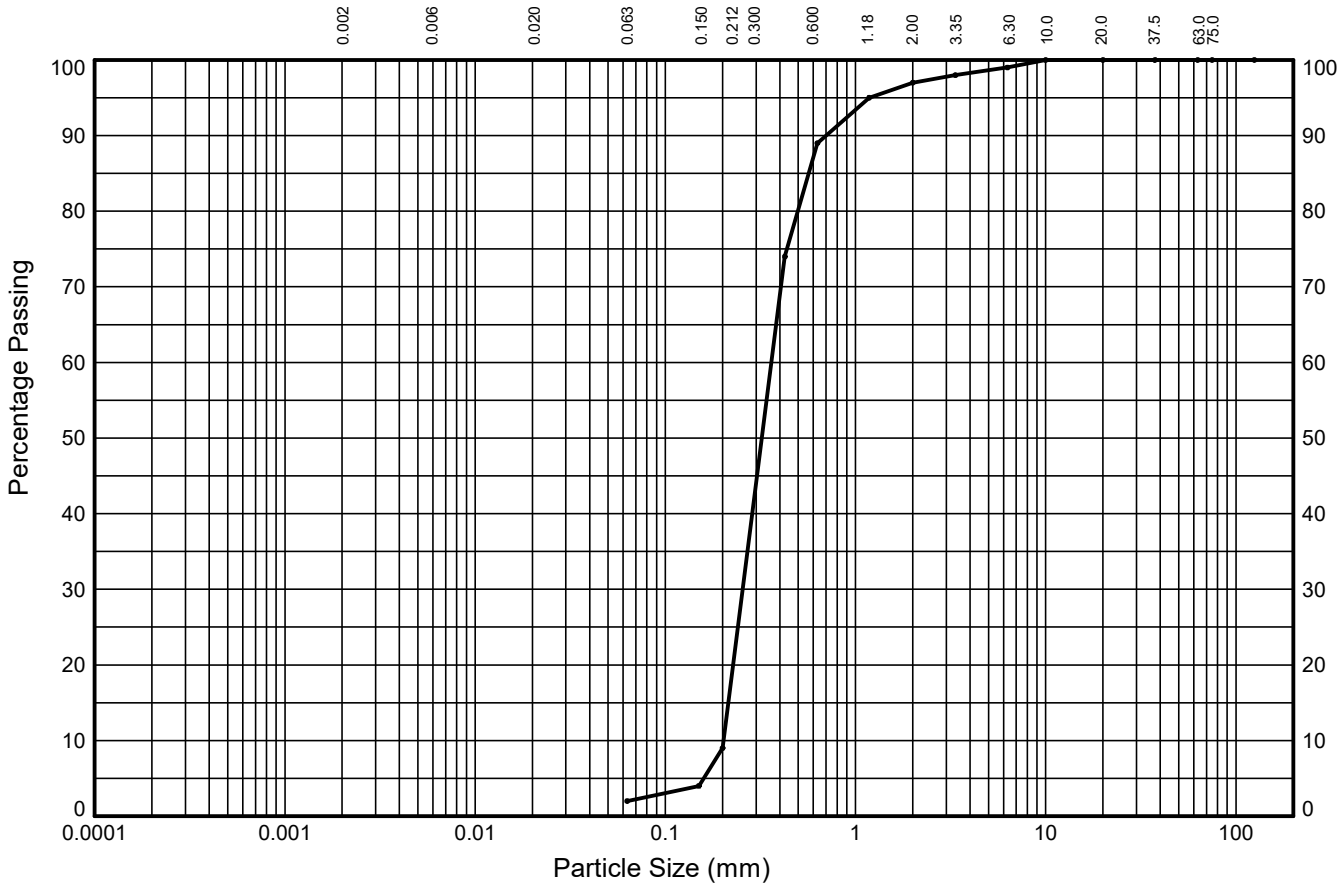
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH309** Sample Ref: **65** Sample Type: **B** Depth (m): **16.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	7%	80%	8%	2%	1%	0%	
	SILT			SAND			GRAVEL			
2%				95%			3%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**99**
3.35	**98**
2.00	**97**
1.18	**95**
0.630	**89**
0.425	**74**
0.200	**9**
0.150	**4**
0.063	**2**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.202**
D_{15} (mm)	**0.214**
D_{30} (mm)	**0.255**
D_{50} (mm)	**0.322**
D_{60} (mm)	**0.361**
D_{85} (mm)	**0.567**
D_{90} (mm)	**0.699**
C_U	**1.8**
C_C	**0.89**

Soil Description:

Brown slightly gravelly slightly silty SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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Contract Ref: **563835**

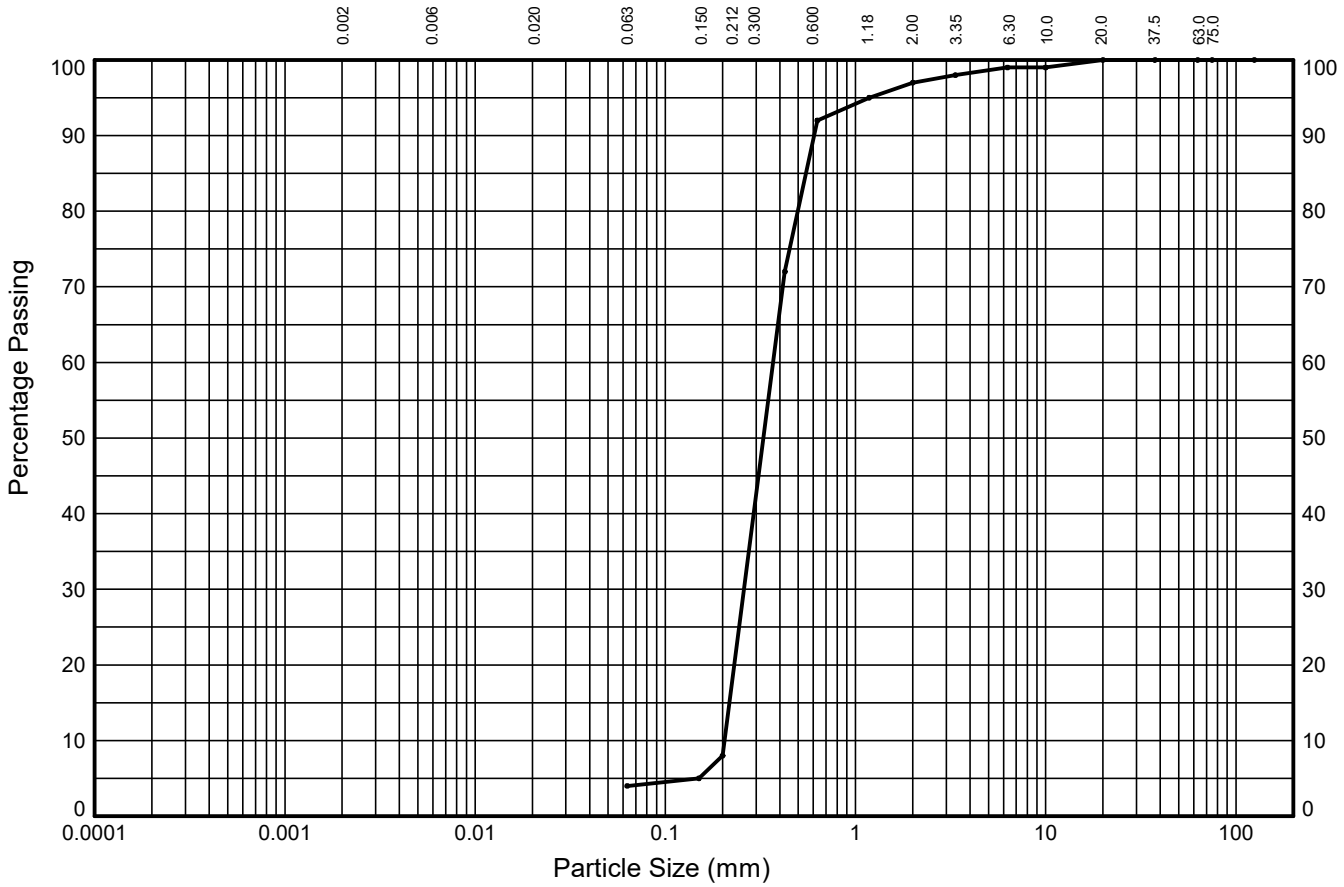
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH309** Sample Ref: **76** Sample Type: **B** Depth (m): **19.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	4%	84%	5%	2%	1%	0%	
	SILT			SAND			GRAVEL			
4%				93%			3%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**99**
6.30	**99**
3.35	**98**
2.00	**97**
1.18	**95**
0.630	**92**
0.425	**72**
0.200	**8**
0.150	**5**
0.063	**4**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.205**
D_{15} (mm)	**0.217**
D_{30} (mm)	**0.259**
D_{50} (mm)	**0.328**
D_{60} (mm)	**0.369**
D_{85} (mm)	**0.549**
D_{90} (mm)	**0.606**
C_U	**1.8**
C_C	**0.89**

Soil Description:

Orangish brown slightly gravelly slightly silty SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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Contract Ref: **563835**

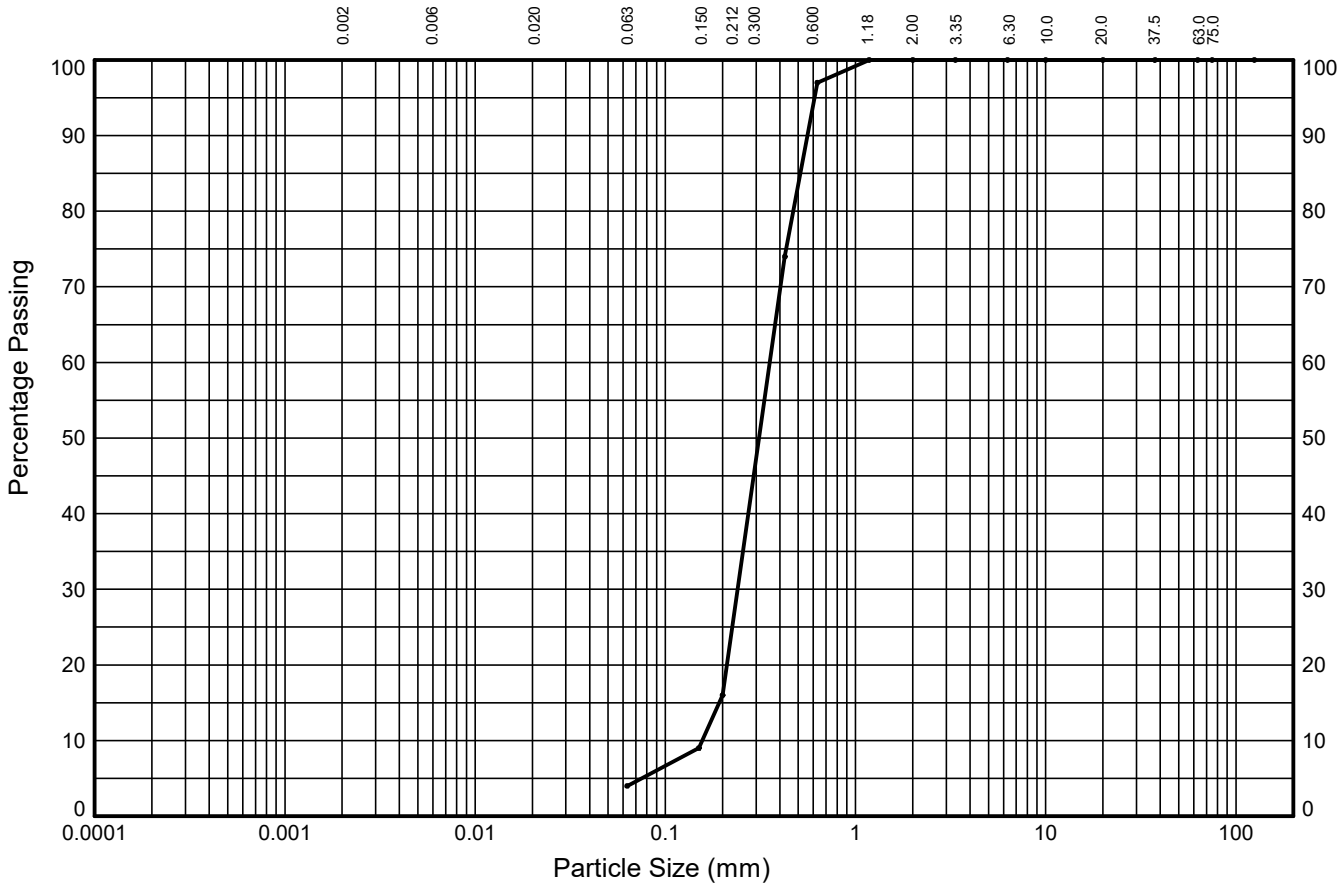
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH309** Sample Ref: **88** Sample Type: **B** Depth (m): **22.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	12%	81%	3%	0%	0%	0%	
	SILT			SAND			GRAVEL			
4%				96%			0%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**100**
3.35	**100**
2.00	**100**
1.18	**100**
0.630	**97**
0.425	**74**
0.200	**16**
0.150	**9**
0.063	**4**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.156**
D_{15} (mm)	**0.192**
D_{30} (mm)	**0.240**
D_{50} (mm)	**0.311**
D_{60} (mm)	**0.354**
D_{85} (mm)	**0.513**
D_{90} (mm)	**0.559**
C_U	**2.3**
C_C	**1.0**

Soil Description:

Orangish brown slightly silty SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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Compiled By: [redacted] [redacted]

Date: **05/03/24**

Contract: **Sealink Friston**

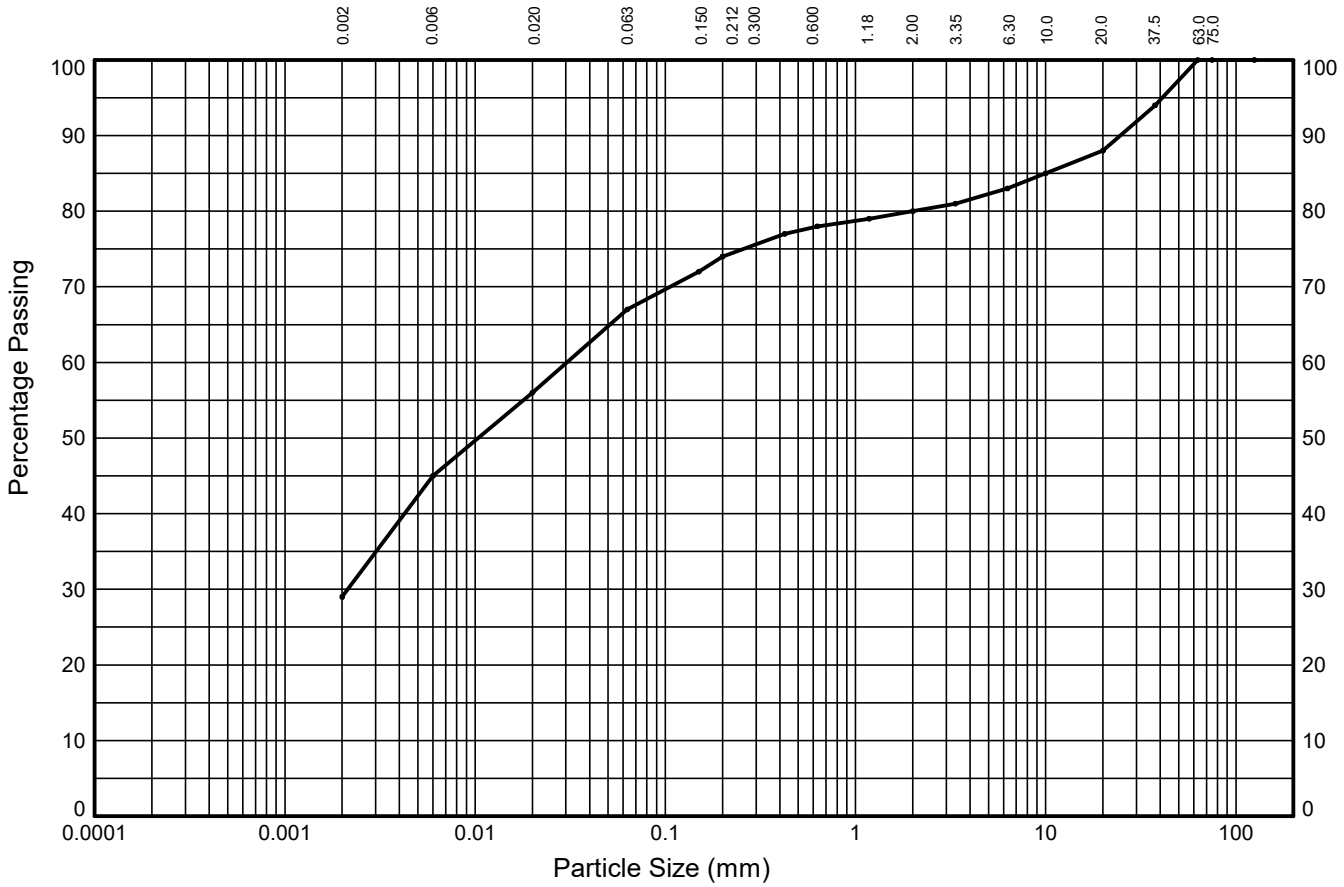
Contract Ref: **563835**

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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH310** Sample Ref: **3** Sample Type: **B** Depth (m): **0.70**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	16%	11%	11%	7%	4%	2%	3%	5%	12%	
	SILT			SAND			GRAVEL			
29%	38%			13%			20%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**94**
20.0	**88**
10.0	**85**
6.30	**83**
3.35	**81**
2.00	**80**
1.18	**79**
0.630	**78**
0.425	**77**
0.200	**74**
0.150	**72**
0.063	**67**

Particle Diameter (mm)	Percent Passing (%)
0.02	**56**
0.006	**45**
0.002	**29**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.002**
D_{50} (mm)	**0.010**
D_{60} (mm)	**0.030**
D_{85} (mm)	**10.000**
D_{90} (mm)	**24.662**
C_U	**NA**
C_C	**NA**

Soil Description:

Grey mottled orangish brown slightly sandy slightly gravelly silty CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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Contract: **Sealink Friston**

Contract Ref: **563835**

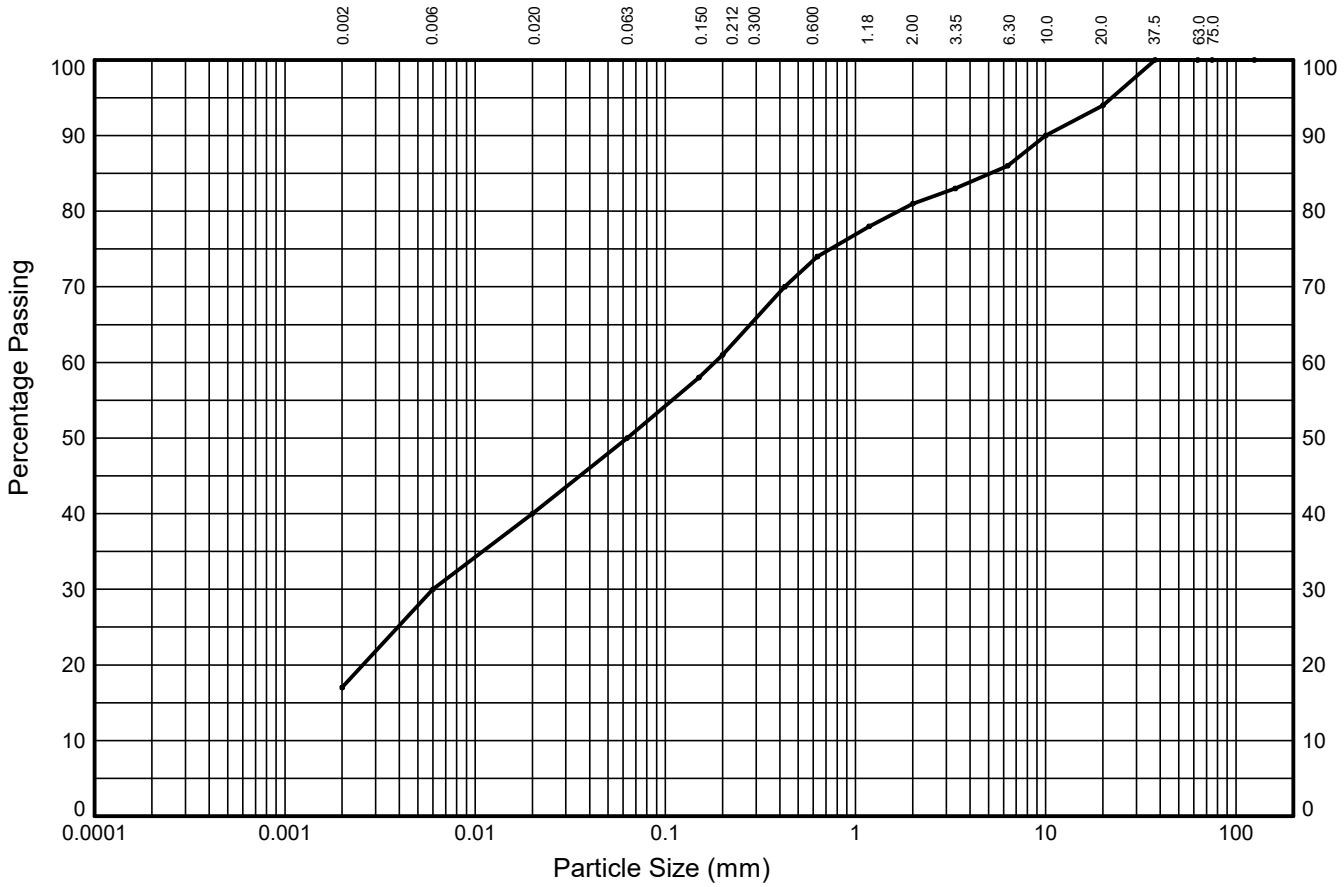
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH310** Sample Ref: **10** Sample Type: **B** Depth (m): **2.55**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	13%	10%	10%	11%	13%	7%	5%	8%	6%	
	SILT			SAND			GRAVEL			
17%	33%			31%			19%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**94**
10.0	**90**
6.30	**86**
3.35	**83**
2.00	**81**
1.18	**78**
0.630	**74**
0.425	**70**
0.200	**61**
0.150	**58**
0.063	**50**

Particle Diameter (mm)	Percent Passing (%)
0.02	**40**
0.006	**30**
0.002	**17**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.006**
D_{50} (mm)	**0.063**
D_{60} (mm)	**0.182**
D_{85} (mm)	**5.104**
D_{90} (mm)	**10.000**
C_U	**NA**
C_C	**NA**

Soil Description:

Orangish brown mottled grey slightly gravelly slightly sandy silty CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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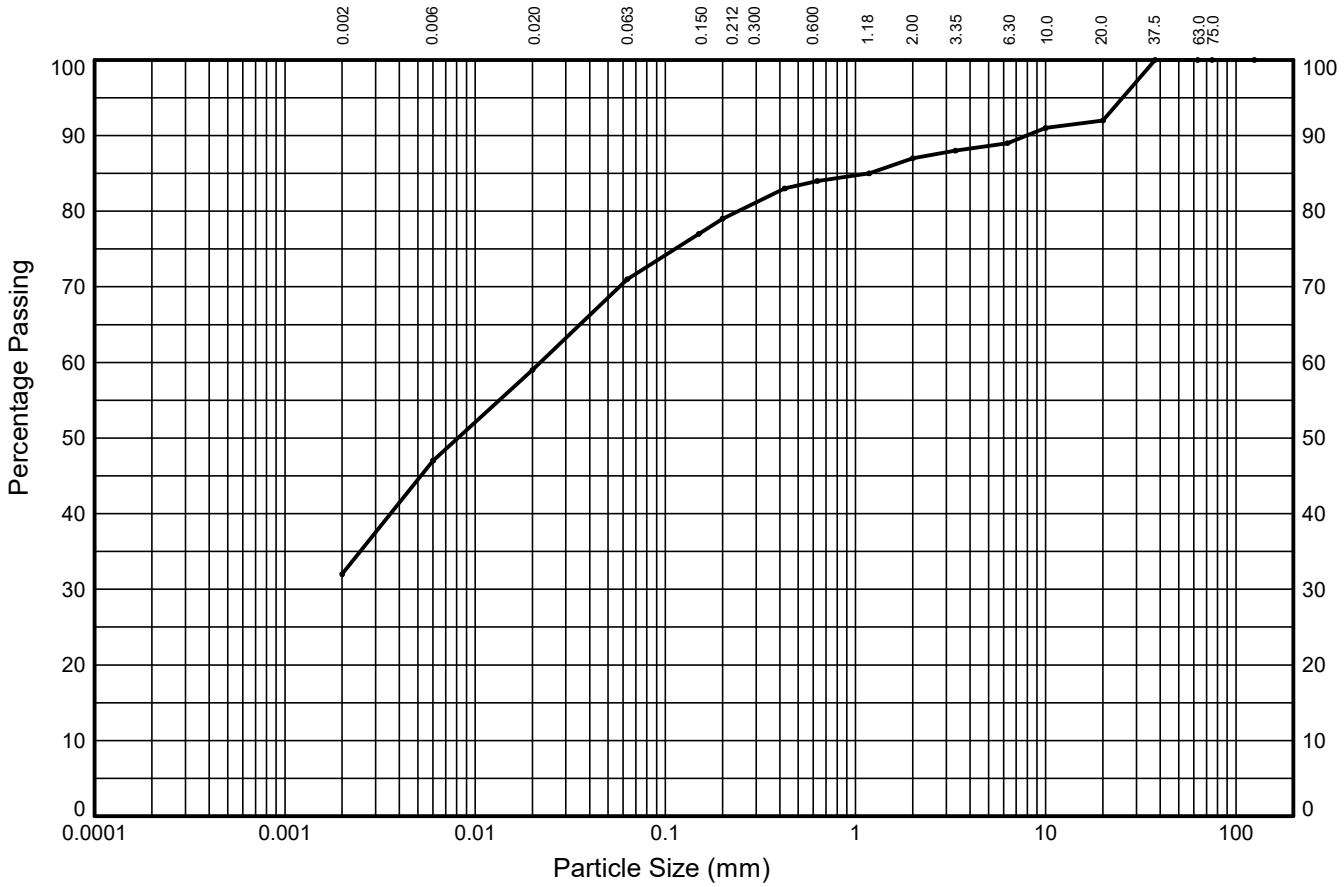
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Contract: **Sealink Friston**		Contract Ref: **563835**

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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH310** Sample Ref: **23** Sample Type: **B** Depth (m): **5.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	15%	12%	12%	8%	5%	3%	2%	3%	8%	
	SILT			SAND			GRAVEL			
32%	39%			16%			13%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**92**
10.0	**91**
6.30	**89**
3.35	**88**
2.00	**87**
1.18	**85**
0.630	**84**
0.425	**83**
0.200	**79**
0.150	**77**
0.063	**71**

Particle Diameter (mm)	Percent Passing (%)
0.02	**59**
0.006	**47**
0.002	**32**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**0.008**
D_{60} (mm)	**0.022**
D_{85} (mm)	**1.180**
D_{90} (mm)	**7.937**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark grey slightly gravelly slightly sandy silty CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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Contract: **Sealink Friston**

Contract Ref: **563835**

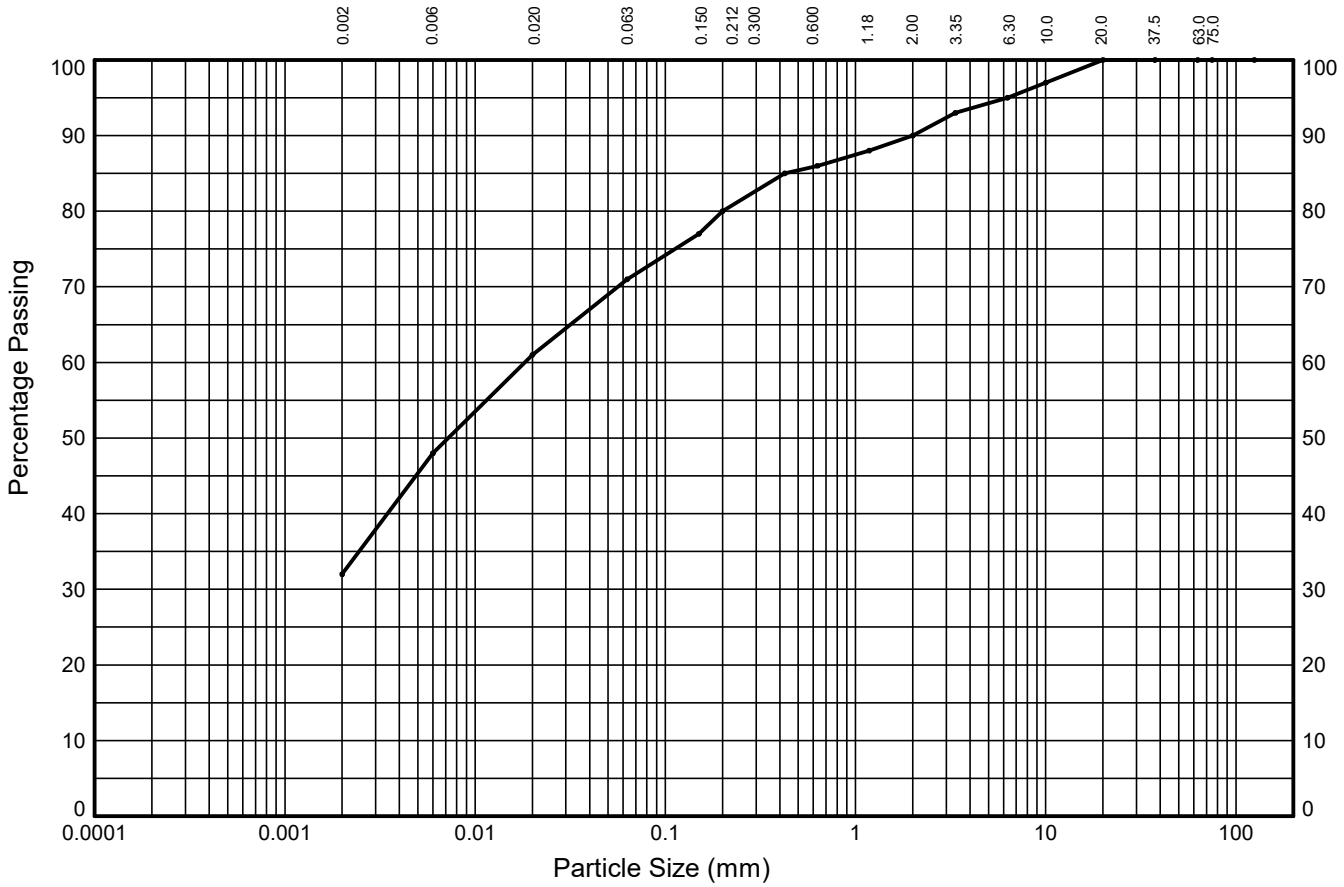
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.3 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH310** Sample Ref: **29** Sample Type: **B** Depth (m): **7.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	16%	13%	10%	9%	6%	4%	5%	5%	0%	
	SILT			SAND			GRAVEL			
32%	39%			19%			10%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**97**
6.30	**95**
3.35	**93**
2.00	**90**
1.18	**88**
0.630	**86**
0.425	**85**
0.200	**80**
0.150	**77**
0.063	**71**

Particle Diameter (mm)	Percent Passing (%)
0.02	**61**
0.006	**48**
0.002	**32**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**0.007**
D_{60} (mm)	**0.018**
D_{85} (mm)	**0.425**
D_{90} (mm)	**2.000**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark grey slightly gravelly slightly sandy silty CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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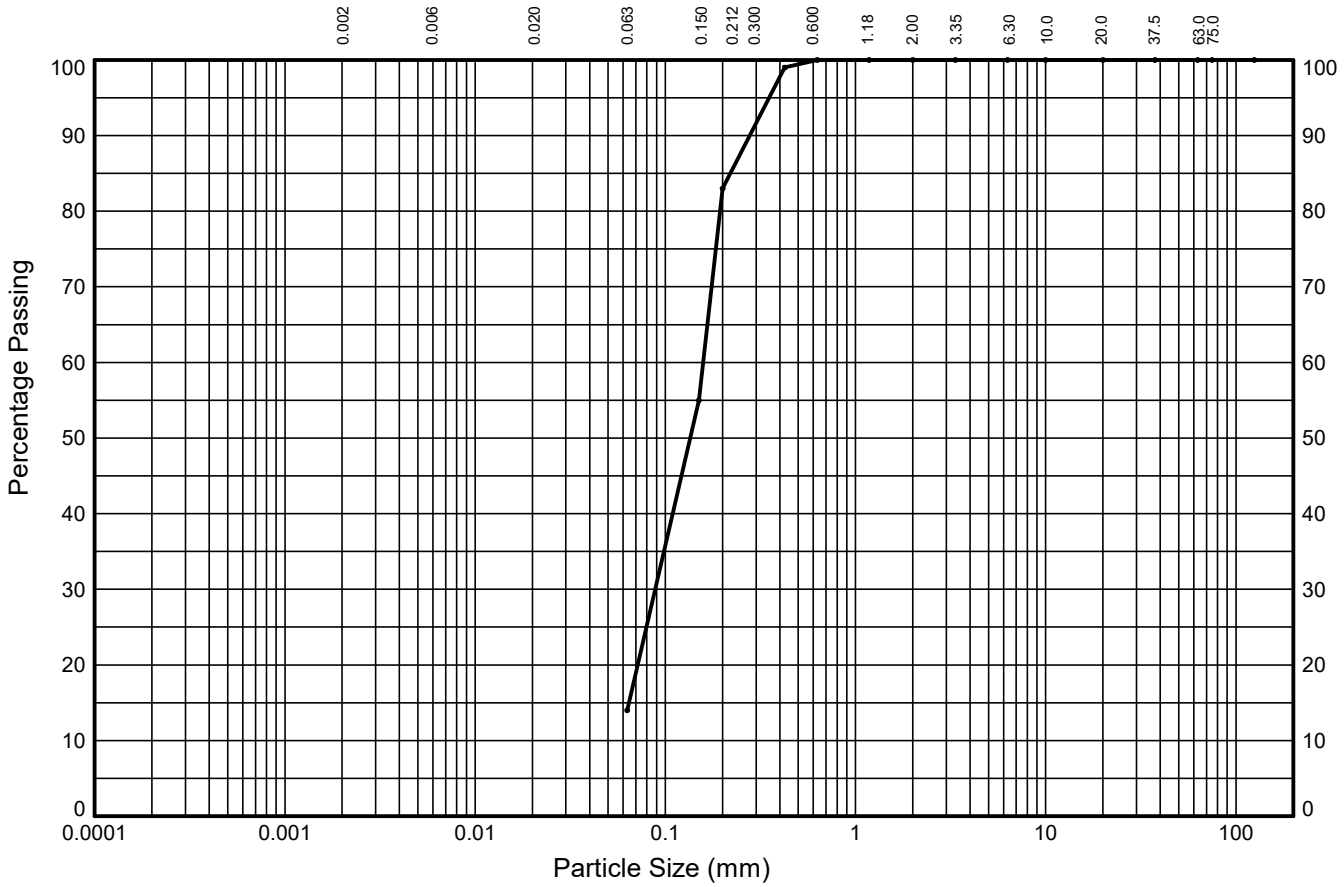
Contract: **Sealink Friston** Contract Ref: **563835**

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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH310** Sample Ref: **39** Sample Type: **B** Depth (m): **10.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	69%	17%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
14%				86%			0%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**100**
3.35	**100**
2.00	**100**
1.18	**100**
0.630	**100**
0.425	**99**
0.200	**83**
0.150	**55**
0.063	**14**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**0.064**
D_{30} (mm)	**0.088**
D_{50} (mm)	**0.135**
D_{60} (mm)	**0.158**
D_{85} (mm)	**0.220**
D_{90} (mm)	**0.278**
C_U	**NA**
C_C	**NA**

Soil Description:

Orangish brown silty SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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Contract: **Sealink Friston**

Contract Ref: **563835**

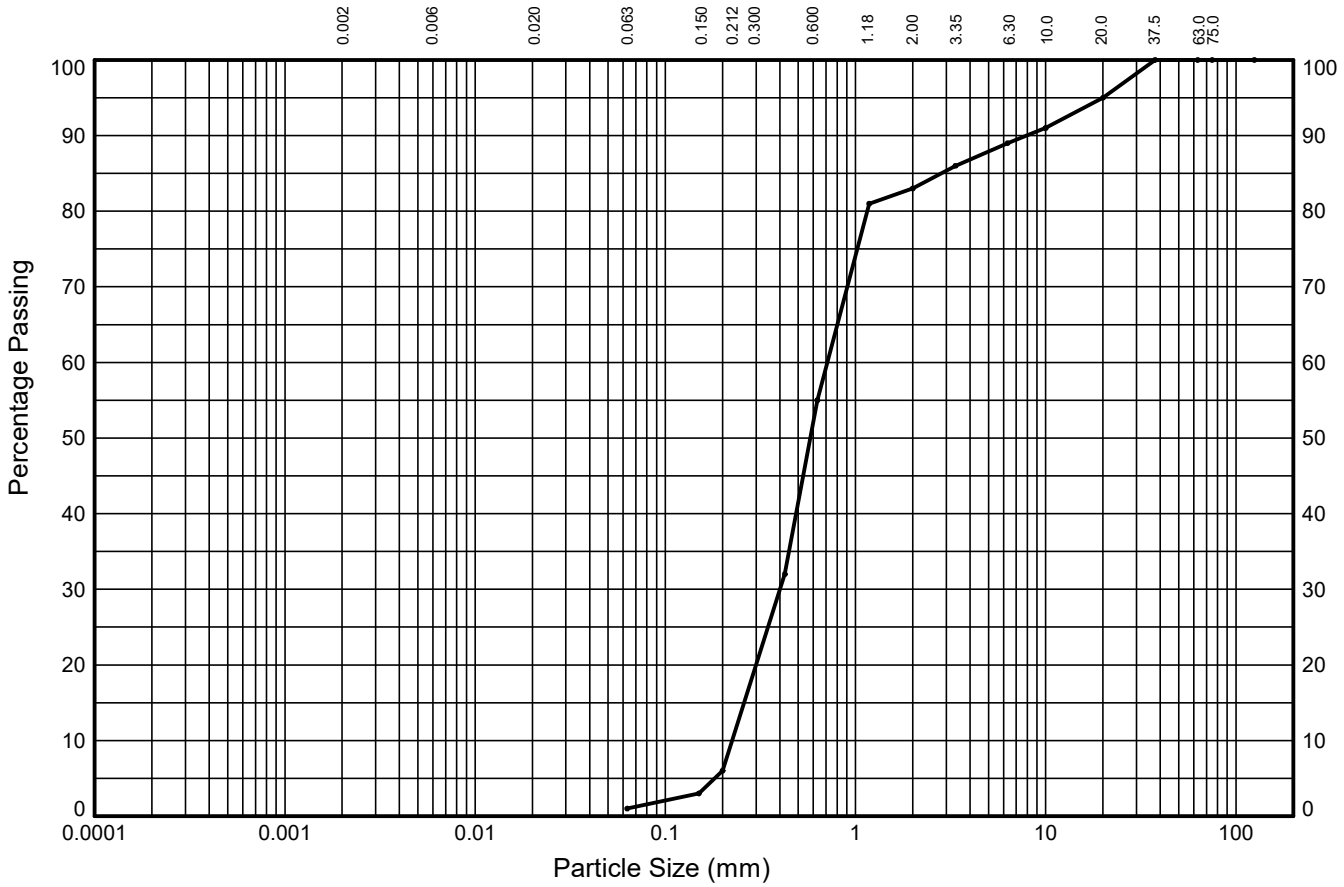
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH310** Sample Ref: **51** Sample Type: **B** Depth (m): **14.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	5%	49%	28%	6%	6%	5%	
	SILT			SAND			GRAVEL			
1%				82%			17%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**95**
10.0	**91**
6.30	**89**
3.35	**86**
2.00	**83**
1.18	**81**
0.630	**55**
0.425	**32**
0.200	**6**
0.150	**3**
0.063	**1**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.225**
D_{15} (mm)	**0.260**
D_{30} (mm)	**0.401**
D_{50} (mm)	**0.578**
D_{60} (mm)	**0.711**
D_{85} (mm)	**2.821**
D_{90} (mm)	**7.937**
C_U	**3.2**
C_C	**1.0**

Soil Description:

Orangish brown gravelly slightly silty SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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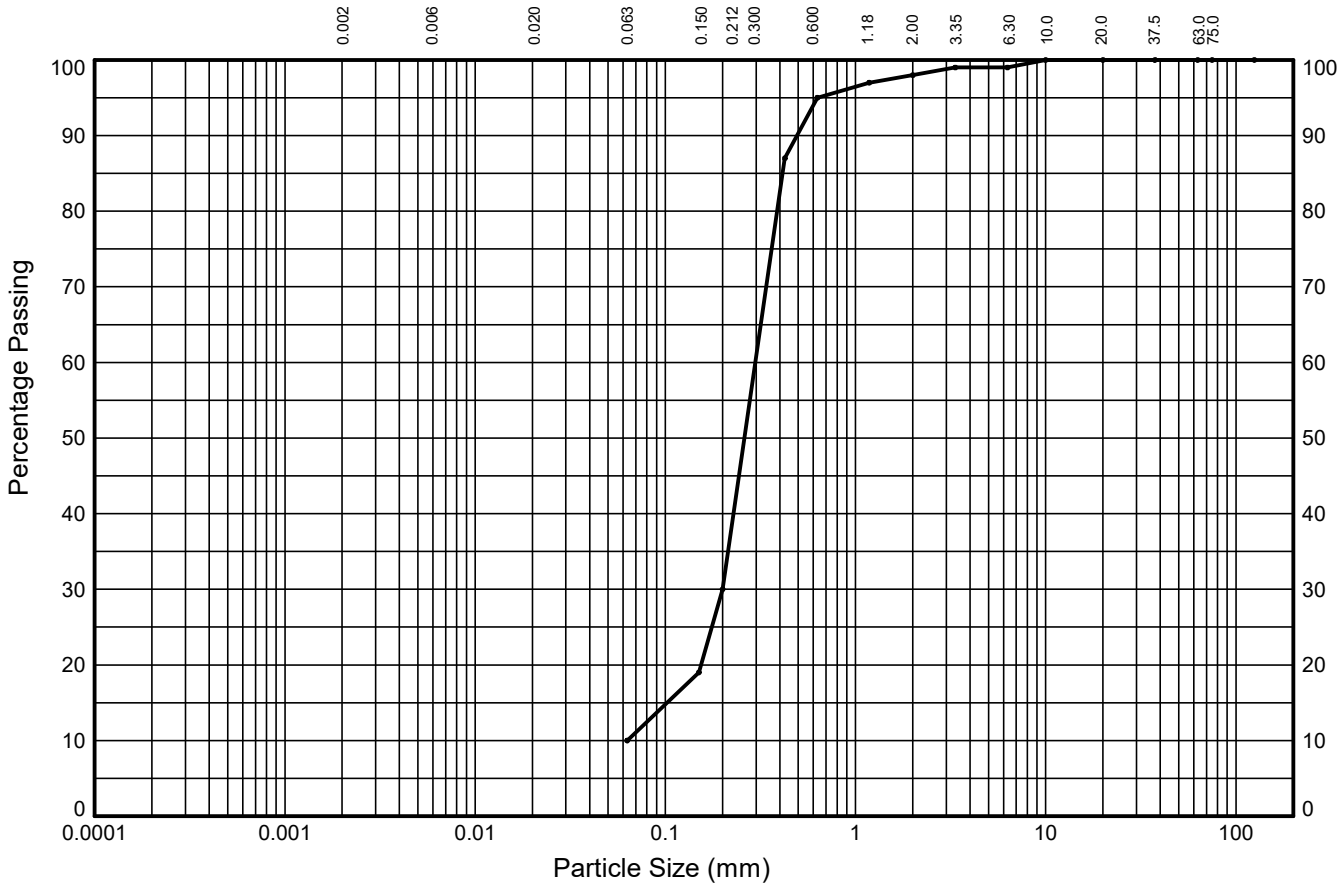
Contract Ref: **563835**

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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH310** Sample Ref: **64** Sample Type: **B** Depth (m): **18.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	20%	65%	3%	1%	1%	0%	
	SILT			SAND			GRAVEL			
10%				88%			2%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**99**
3.35	**99**
2.00	**98**
1.18	**97**
0.630	**95**
0.425	**87**
0.200	**30**
0.150	**19**
0.063	**10**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.063**
D_{15} (mm)	**0.102**
D_{30} (mm)	**0.200**
D_{50} (mm)	**0.261**
D_{60} (mm)	**0.297**
D_{85} (mm)	**0.414**
D_{90} (mm)	**0.493**
C_U	**4.7**
C_C	**2.1**

Soil Description:

Orangish brown slightly gravelly silty SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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Contract: **Sealink Friston**

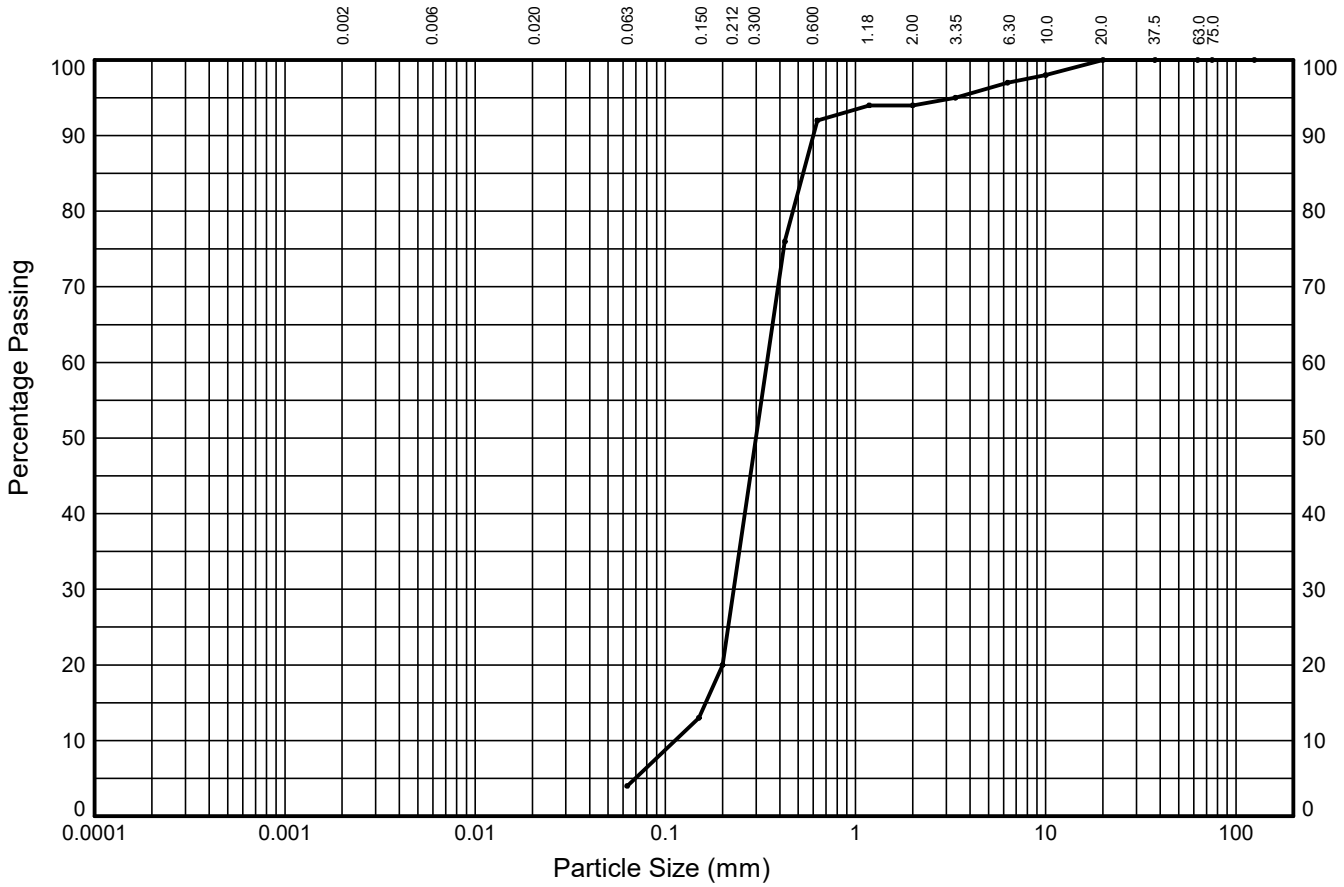
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH310** Sample Ref: **89** Sample Type: **B** Depth (m): **26.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	16%	72%	2%	3%	3%	0%	
	SILT			SAND			GRAVEL			
4%				90%			6%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**98**
6.30	**97**
3.35	**95**
2.00	**94**
1.18	**94**
0.630	**92**
0.425	**76**
0.200	**20**
0.150	**13**
0.063	**4**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.112**
D_{15} (mm)	**0.163**
D_{30} (mm)	**0.229**
D_{50} (mm)	**0.300**
D_{60} (mm)	**0.343**
D_{85} (mm)	**0.530**
D_{90} (mm)	**0.600**
C_U	**3.1**
C_C	**1.4**

Soil Description:

Orangish brown gravelly slightly silty SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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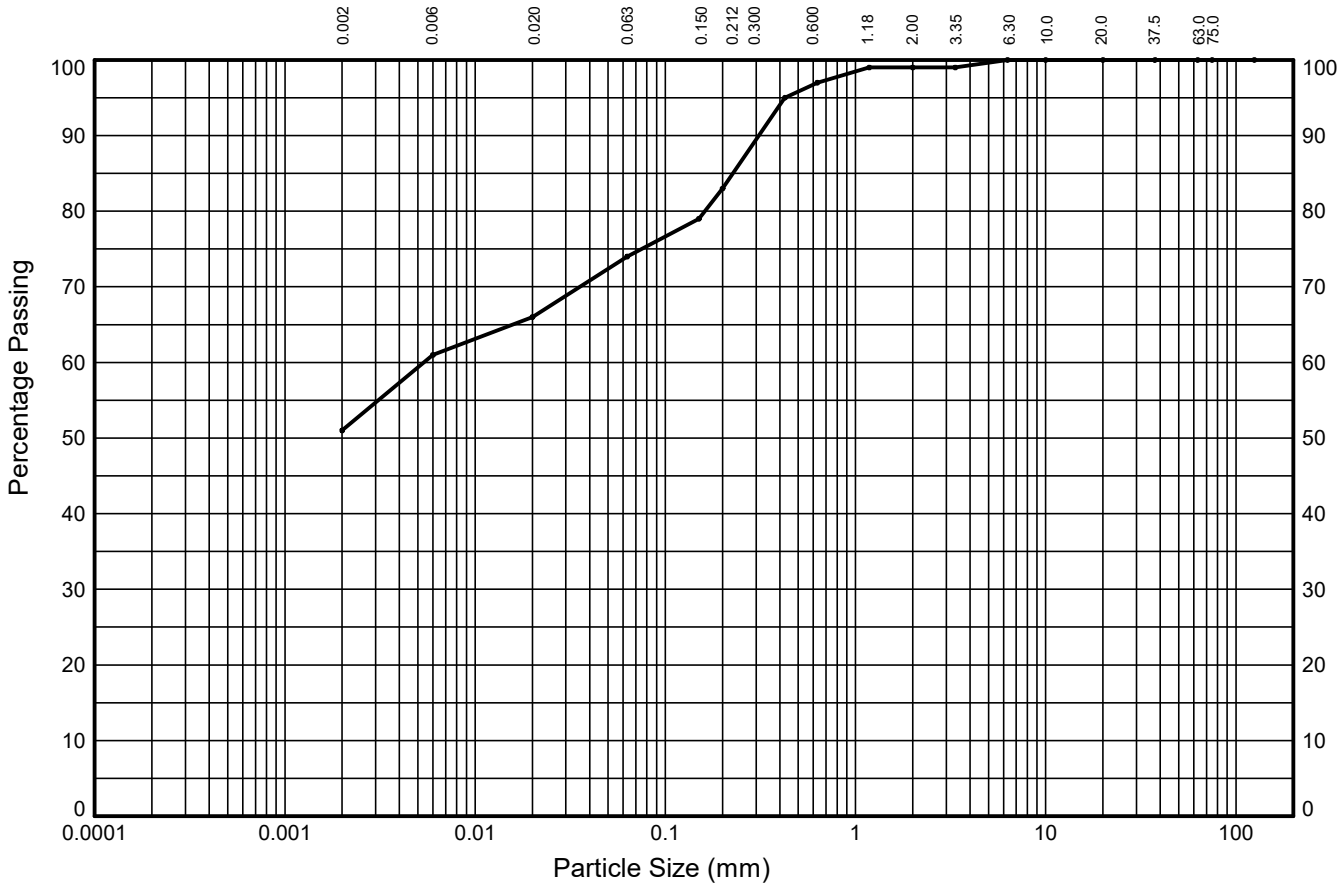
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH501** Sample Ref: **3** Sample Type: **B** Depth (m): **0.15**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	10%	5%	8%	9%	14%	2%	1%	0%	0%	
	SILT			SAND			GRAVEL			
51%	23%			25%			1%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**100**
3.35	**99**
2.00	**99**
1.18	**99**
0.630	**97**
0.425	**95**
0.200	**83**
0.150	**79**
0.063	**74**

Particle Diameter (mm)	Percent Passing (%)
0.02	**66**
0.006	**61**
0.002	**51**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**NA**
D_{60} (mm)	**0.005**
D_{85} (mm)	**0.227**
D_{90} (mm)	**0.310**
C_U	**NA**
C_C	**NA**

Soil Description:

Orangish brown slightly gravelly slightly sandy CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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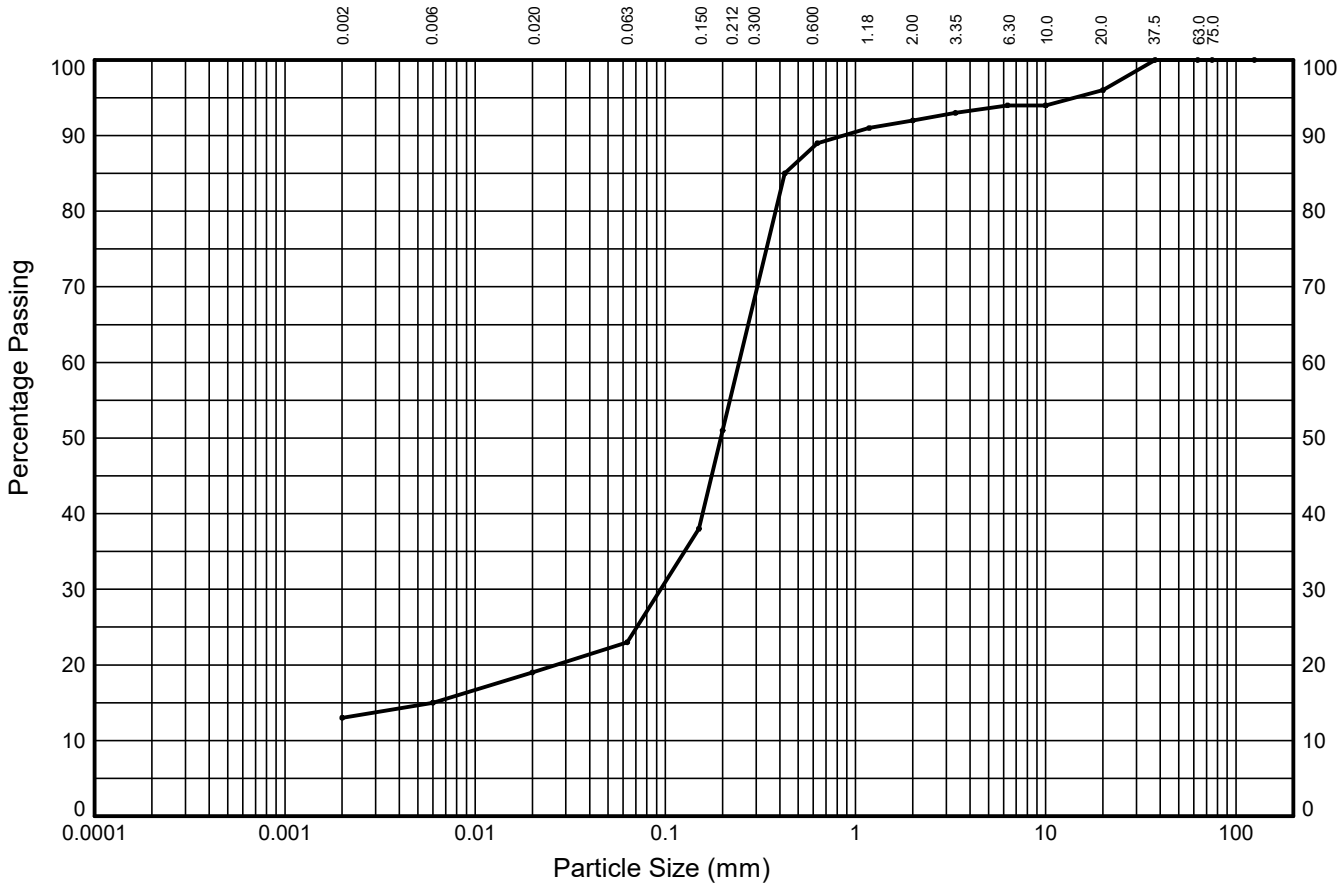
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Contract: **Sealink Friston**		Contract Ref: **563835**

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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH501** Sample Ref: **7** Sample Type: **B** Depth (m): **0.90**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	2%	4%	4%	28%	38%	3%	2%	2%	4%	
	SILT			SAND			GRAVEL			
13%	10%			69%			8%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**96**
10.0	**94**
6.30	**94**
3.35	**93**
2.00	**92**
1.18	**91**
0.630	**89**
0.425	**85**
0.200	**51**
0.150	**38**
0.063	**23**

Particle Diameter (mm)	Percent Passing (%)
0.02	**19**
0.006	**15**
0.002	**13**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**0.006**
D_{30} (mm)	**0.094**
D_{50} (mm)	**0.196**
D_{60} (mm)	**0.244**
D_{85} (mm)	**0.425**
D_{90} (mm)	**0.862**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark grey mottled black gravelly very clayey SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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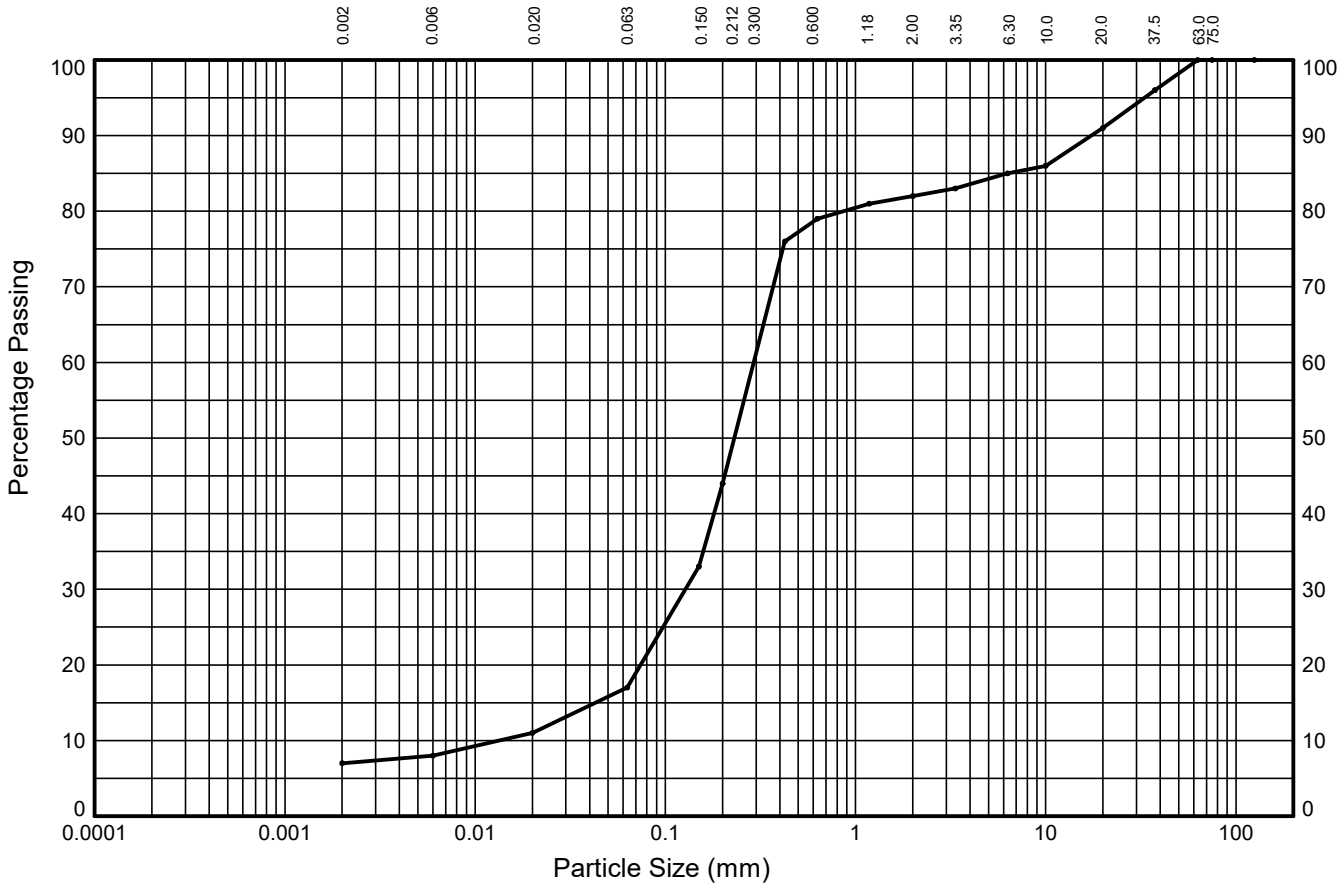
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH501** Sample Ref: **10** Sample Type: **B** Depth (m): **1.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	1%	3%	6%	27%	35%	3%	3%	6%	9%	
	SILT			SAND			GRAVEL			
7%	10%			65%			18%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**96**
20.0	**91**
10.0	**86**
6.30	**85**
3.35	**83**
2.00	**82**
1.18	**81**
0.630	**79**
0.425	**76**
0.200	**44**
0.150	**33**
0.063	**17**

Particle Diameter (mm)	Percent Passing (%)
0.02	**11**
0.006	**8**
0.002	**7**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.013**
D_{15} (mm)	**0.043**
D_{30} (mm)	**0.127**
D_{50} (mm)	**0.230**
D_{60} (mm)	**0.292**
D_{85} (mm)	**6.300**
D_{90} (mm)	**17.411**
C_U	**22**
C_C	**4**

Soil Description:

Brown gravelly clayey SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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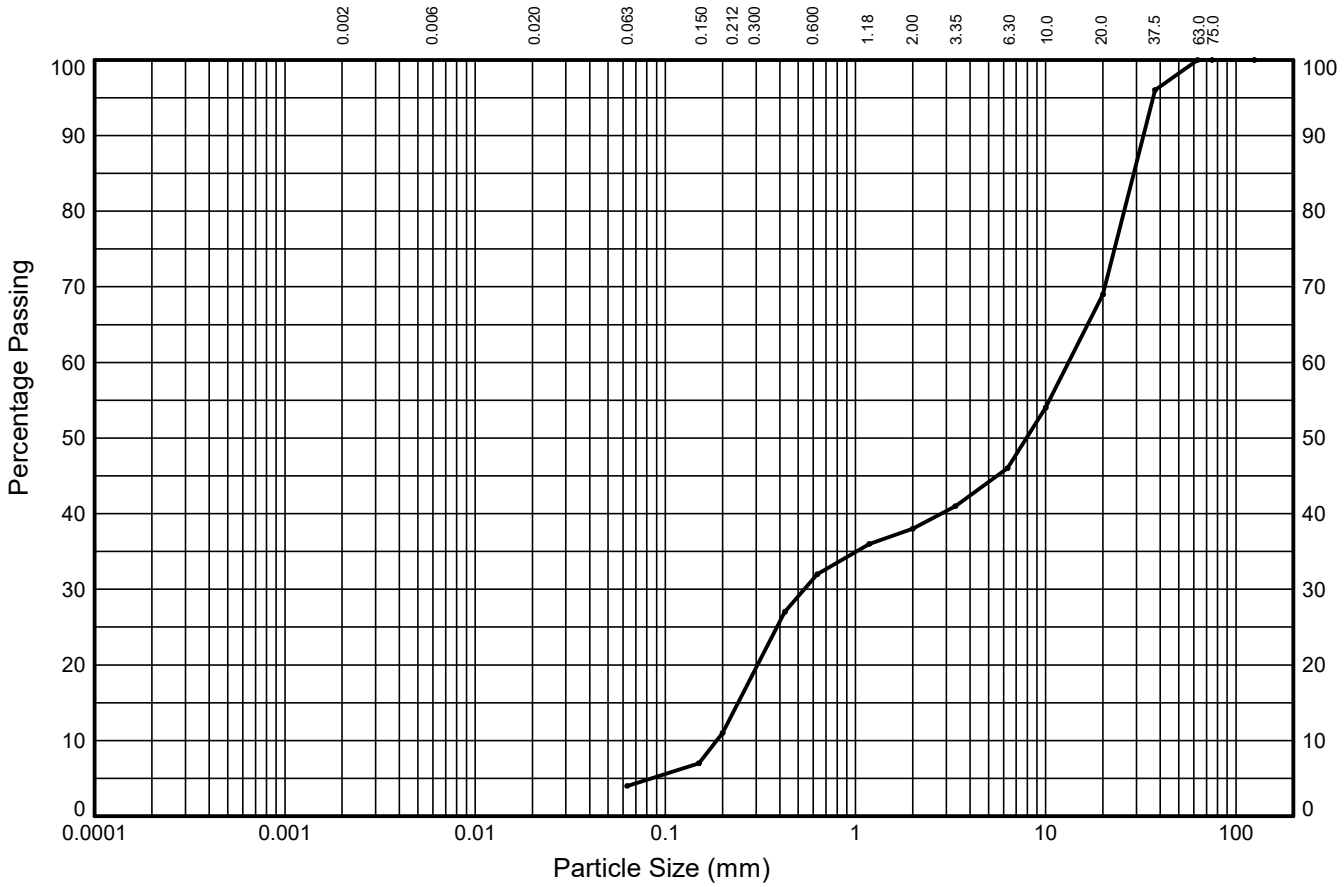
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH501** Sample Ref: **15** Sample Type: **B** Depth (m): **3.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	7%	21%	6%	8%	23%	31%	
	SILT			SAND			GRAVEL			
4%				34%			62%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**96**
20.0	**69**
10.0	**54**
6.30	**46**
3.35	**41**
2.00	**38**
1.18	**36**
0.630	**32**
0.425	**27**
0.200	**11**
0.150	**7**
0.063	**4**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.186**
D_{15} (mm)	**0.241**
D_{30} (mm)	**0.538**
D_{50} (mm)	**7.937**
D_{60} (mm)	**13.195**
D_{85} (mm)	**29.027**
D_{90} (mm)	**32.611**
C_U	**71**
C_C	**0.12**

Soil Description:

Brown very sandy slightly clayey GRAVEL

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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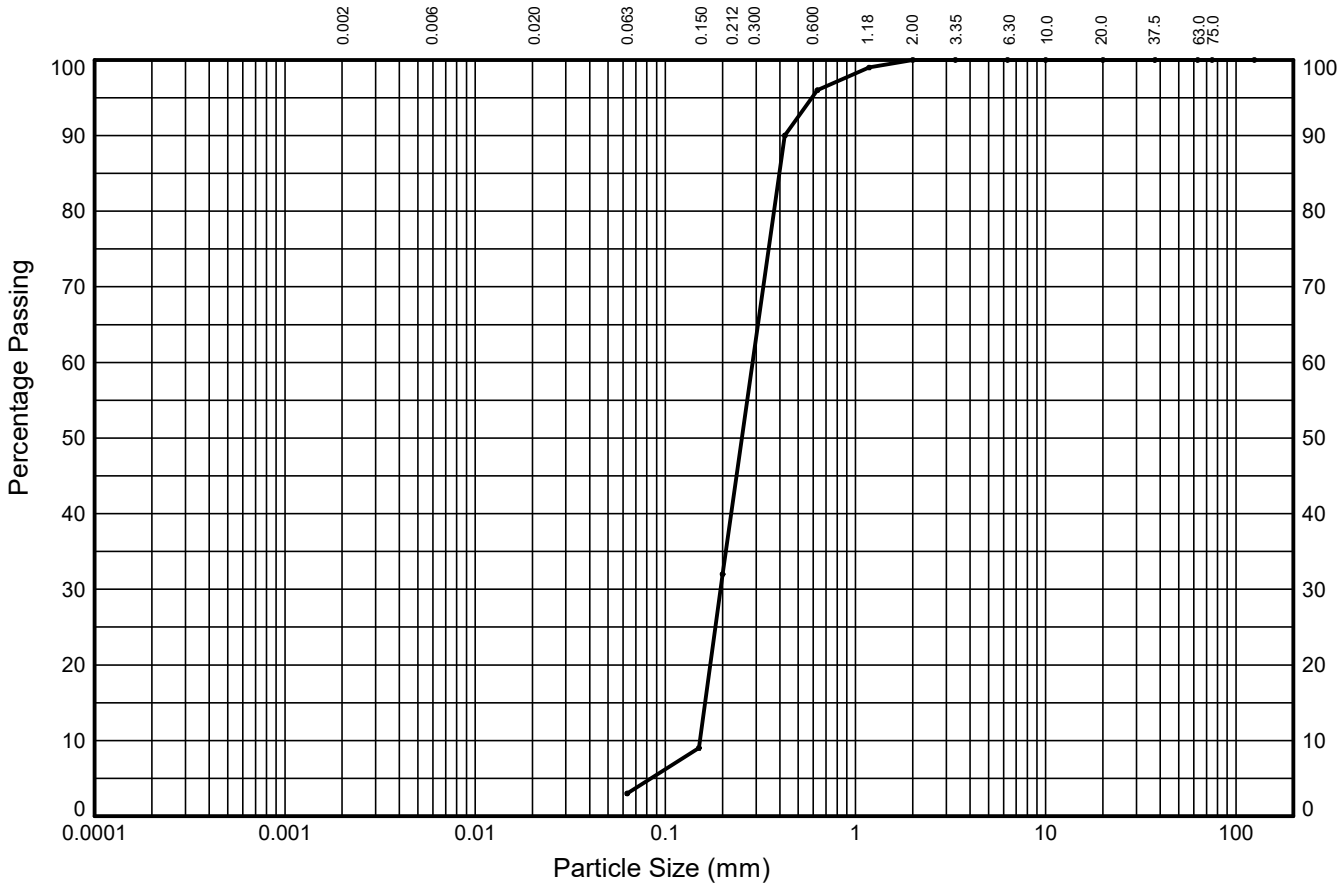
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH501** Sample Ref: **24** Sample Type: **B** Depth (m): **6.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	29%	64%	4%	0%	0%	0%	
	SILT			SAND			GRAVEL			
3%				97%			0%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**100**
3.35	**100**
2.00	**100**
1.18	**99**
0.630	**96**
0.425	**90**
0.200	**32**
0.150	**9**
0.063	**3**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.152**
D_{15} (mm)	**0.162**
D_{30} (mm)	**0.195**
D_{50} (mm)	**0.253**
D_{60} (mm)	**0.288**
D_{85} (mm)	**0.398**
D_{90} (mm)	**0.425**
C_U	**1.9**
C_C	**0.87**

Soil Description:

Brown slightly silty SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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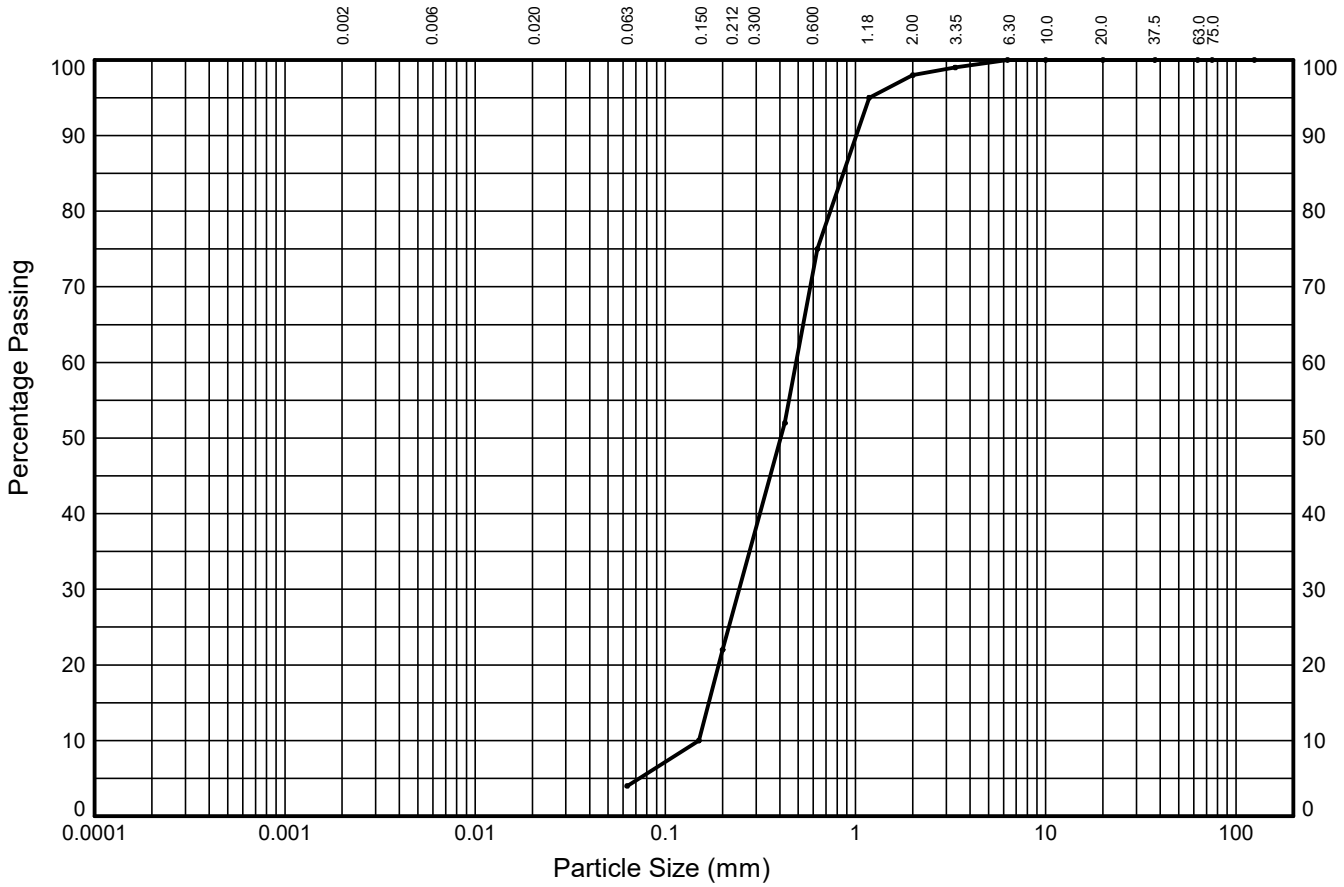
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH501** Sample Ref: **31** Sample Type: **B** Depth (m): **8.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	18%	53%	23%	2%	0%	0%	
	SILT			SAND			GRAVEL			
4%				94%			2%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**100**
3.35	**99**
2.00	**98**
1.18	**95**
0.630	**75**
0.425	**52**
0.200	**22**
0.150	**10**
0.063	**4**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.150**
D_{15} (mm)	**0.169**
D_{30} (mm)	**0.245**
D_{50} (mm)	**0.404**
D_{60} (mm)	**0.487**
D_{85} (mm)	**0.862**
D_{90} (mm)	**1.009**
C_U	**3.2**
C_C	**0.82**

Soil Description:

Orangish brown slightly gravelly slightly silty SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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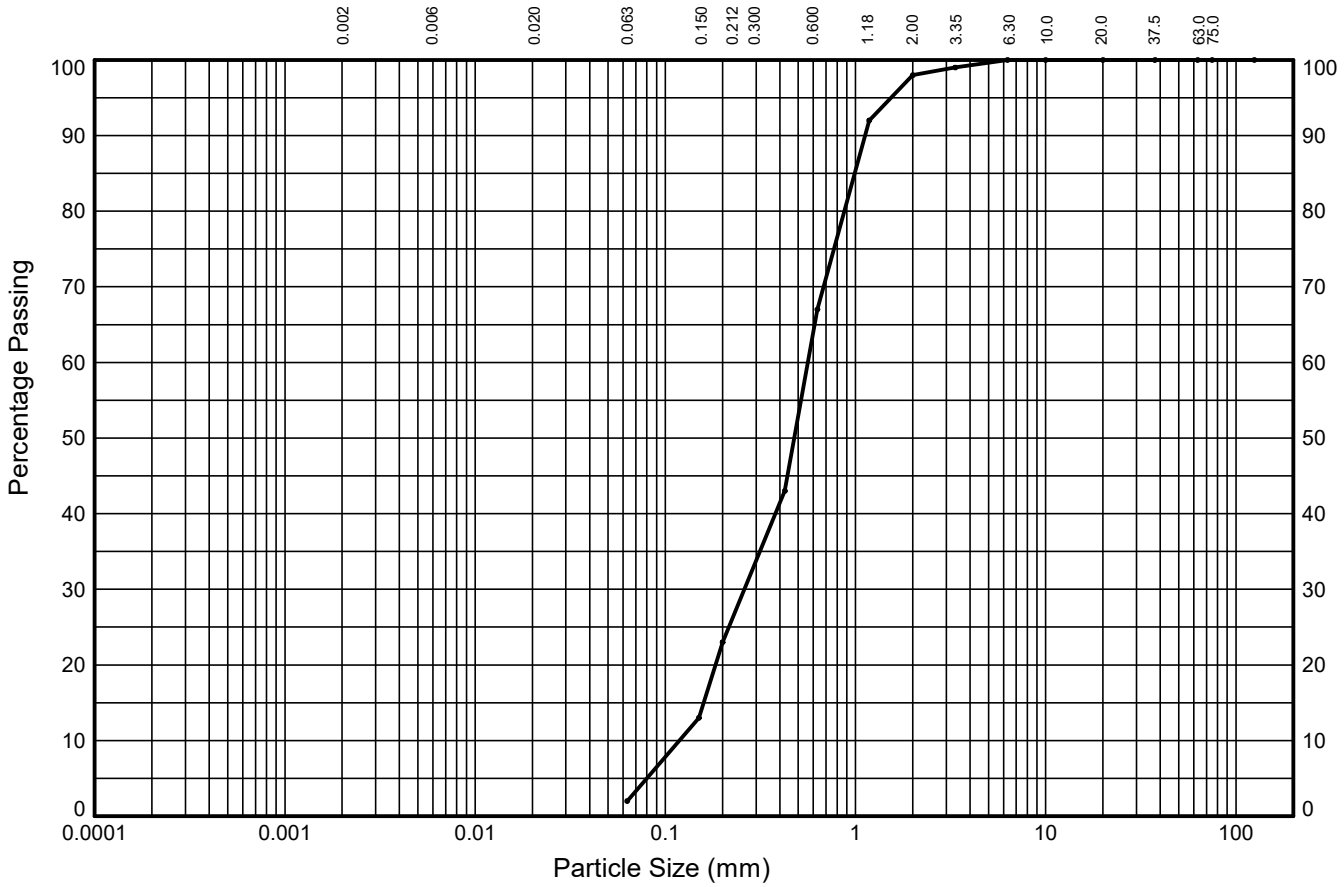
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH501** Sample Ref: **37** Sample Type: **B** Depth (m): **10.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	21%	44%	31%	2%	0%	0%	
	SILT			SAND			GRAVEL			
2%				96%			2%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**100**
3.35	**99**
2.00	**98**
1.18	**92**
0.630	**67**
0.425	**43**
0.200	**23**
0.150	**13**
0.063	**2**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.118**
D_{15} (mm)	**0.159**
D_{30} (mm)	**0.260**
D_{50} (mm)	**0.477**
D_{60} (mm)	**0.562**
D_{85} (mm)	**0.990**
D_{90} (mm)	**1.122**
C_U	**4.7**
C_C	**1.0**

Soil Description:

Orangish brown slightly gravelly slightly silty SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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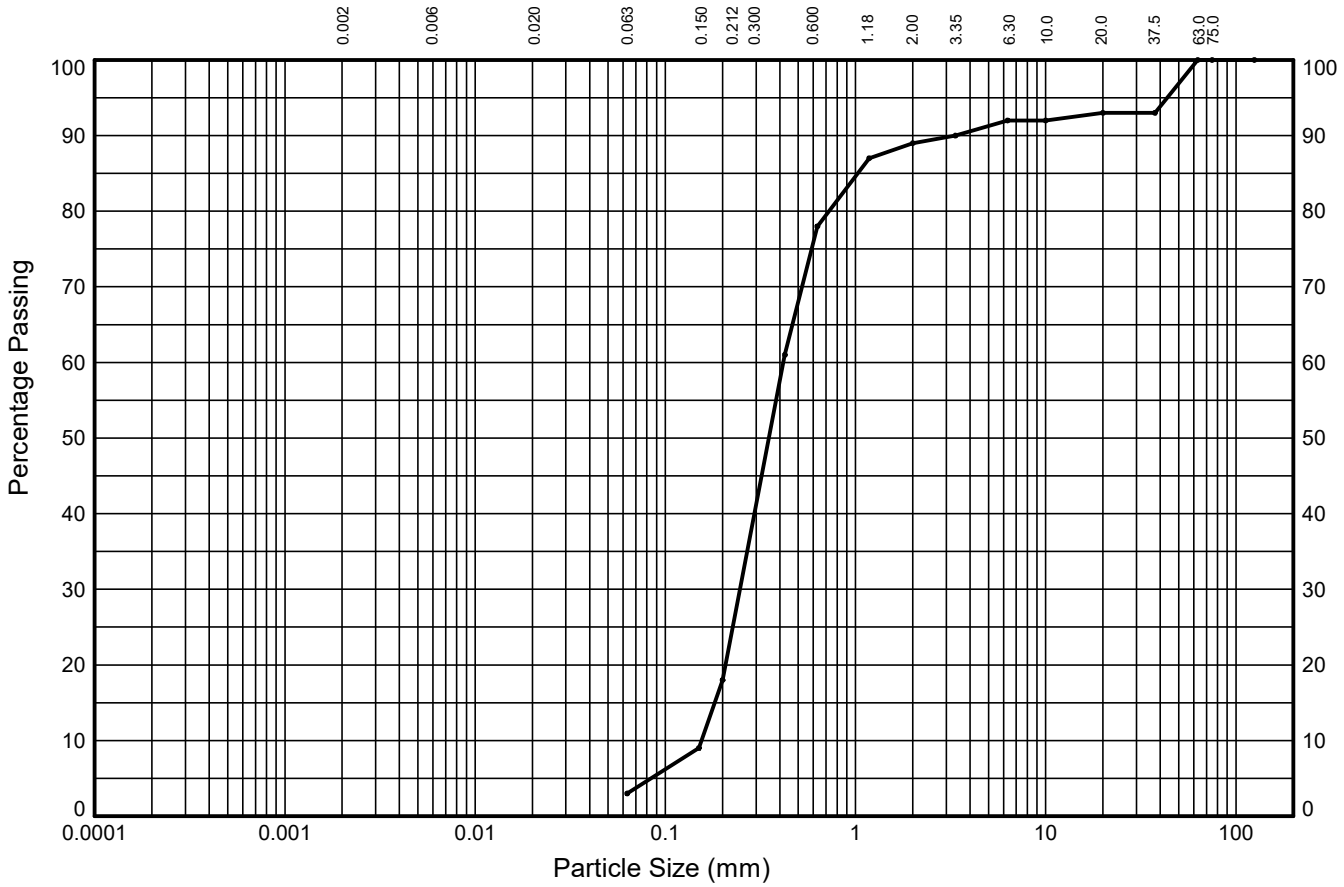
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH501** Sample Ref: **43** Sample Type: **B** Depth (m): **12.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	15%	60%	11%	3%	1%	7%	
	SILT			SAND			GRAVEL			
3%				86%			11%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**93**
20.0	**93**
10.0	**92**
6.30	**92**
3.35	**90**
2.00	**89**
1.18	**87**
0.630	**78**
0.425	**61**
0.200	**18**
0.150	**9**
0.063	**3**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.155**
D_{15} (mm)	**0.182**
D_{30} (mm)	**0.247**
D_{50} (mm)	**0.350**
D_{60} (mm)	**0.418**
D_{85} (mm)	**1.026**
D_{90} (mm)	**3.350**
C_U	**2.7**
C_C	**0.94**

Soil Description:

Grey gravelly slightly silty SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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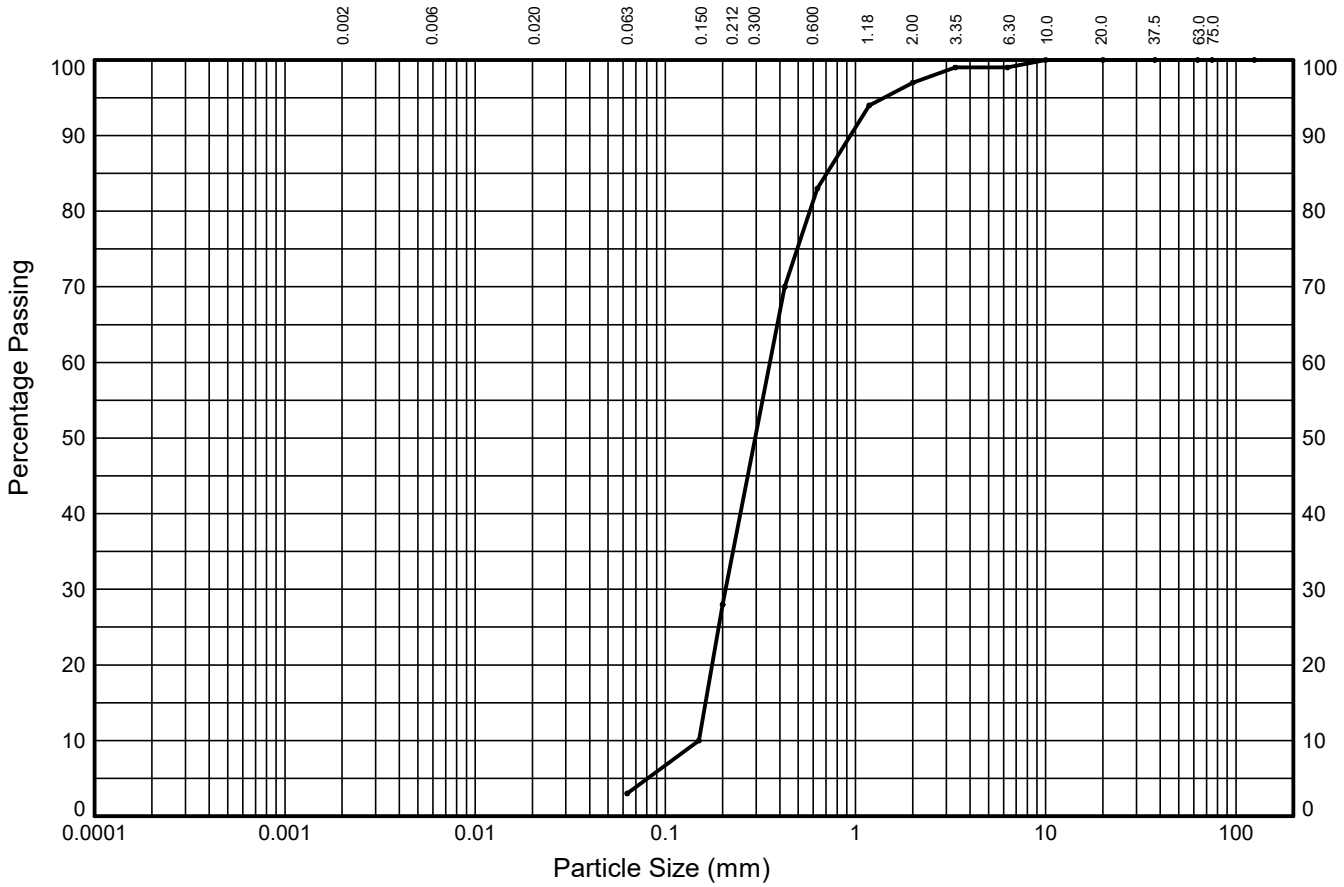
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH501** Sample Ref: **49** Sample Type: **B** Depth (m): **14.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	25%	55%	14%	2%	1%	0%	
	SILT			SAND			GRAVEL			
3%				94%			3%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**99**
3.35	**99**
2.00	**97**
1.18	**94**
0.630	**83**
0.425	**70**
0.200	**28**
0.150	**10**
0.063	**3**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.150**
D_{15} (mm)	**0.162**
D_{30} (mm)	**0.207**
D_{50} (mm)	**0.297**
D_{60} (mm)	**0.355**
D_{85} (mm)	**0.706**
D_{90} (mm)	**0.939**
C_U	**2.4**
C_C	**0.81**

Soil Description:

Grey slightly gravelly slightly silty SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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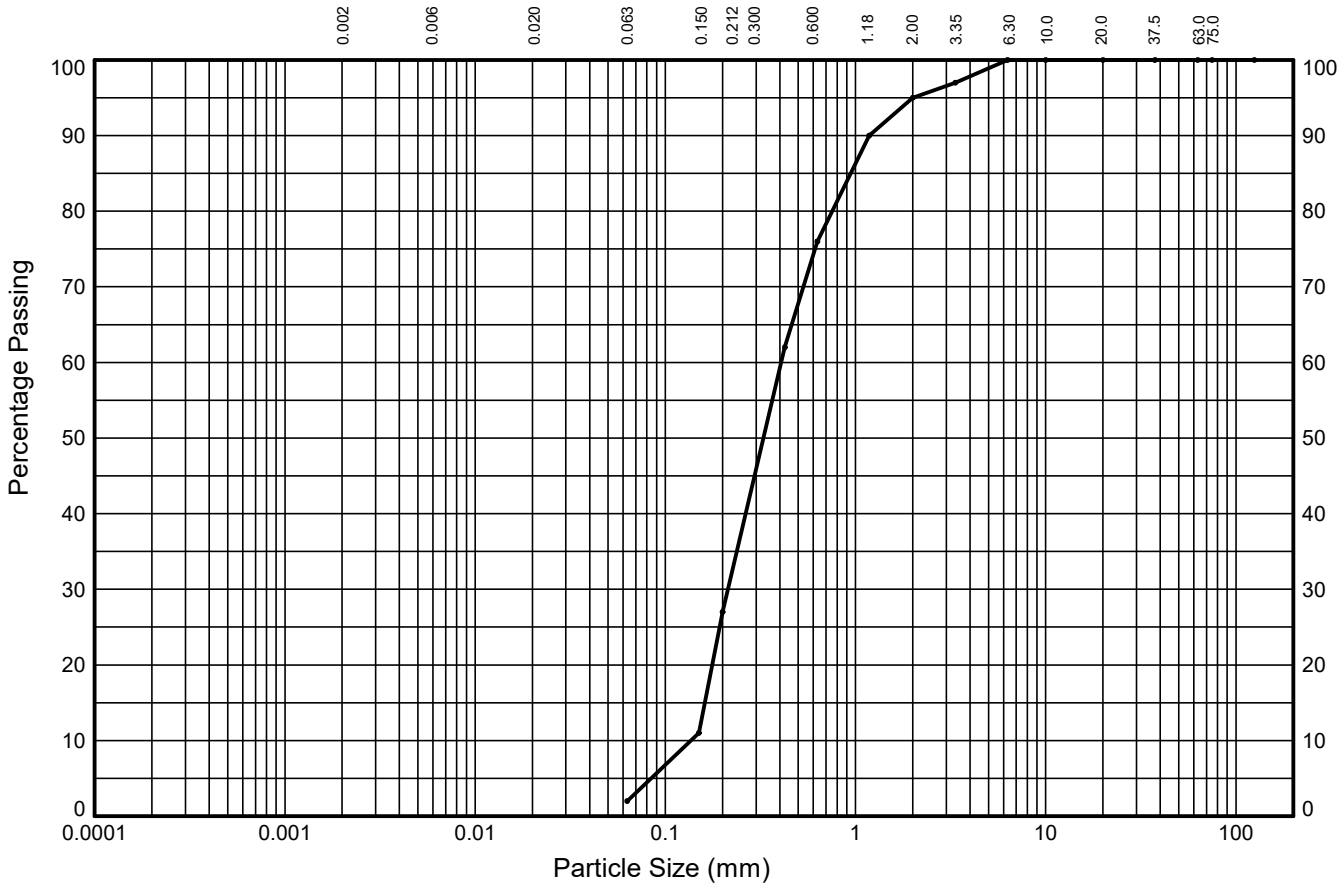
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH501** Sample Ref: **55** Sample Type: **B** Depth (m): **16.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	25%	49%	19%	5%	0%	0%	
	SILT			SAND			GRAVEL			
2%				93%			5%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**100**
3.35	**97**
2.00	**95**
1.18	**90**
0.630	**76**
0.425	**62**
0.200	**27**
0.150	**11**
0.063	**2**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.136**
D_{15} (mm)	**0.161**
D_{30} (mm)	**0.213**
D_{50} (mm)	**0.328**
D_{60} (mm)	**0.407**
D_{85} (mm)	**0.943**
D_{90} (mm)	**1.180**
C_U	**3.0**
C_C	**0.82**

Soil Description:

Grey gravelly slightly silty SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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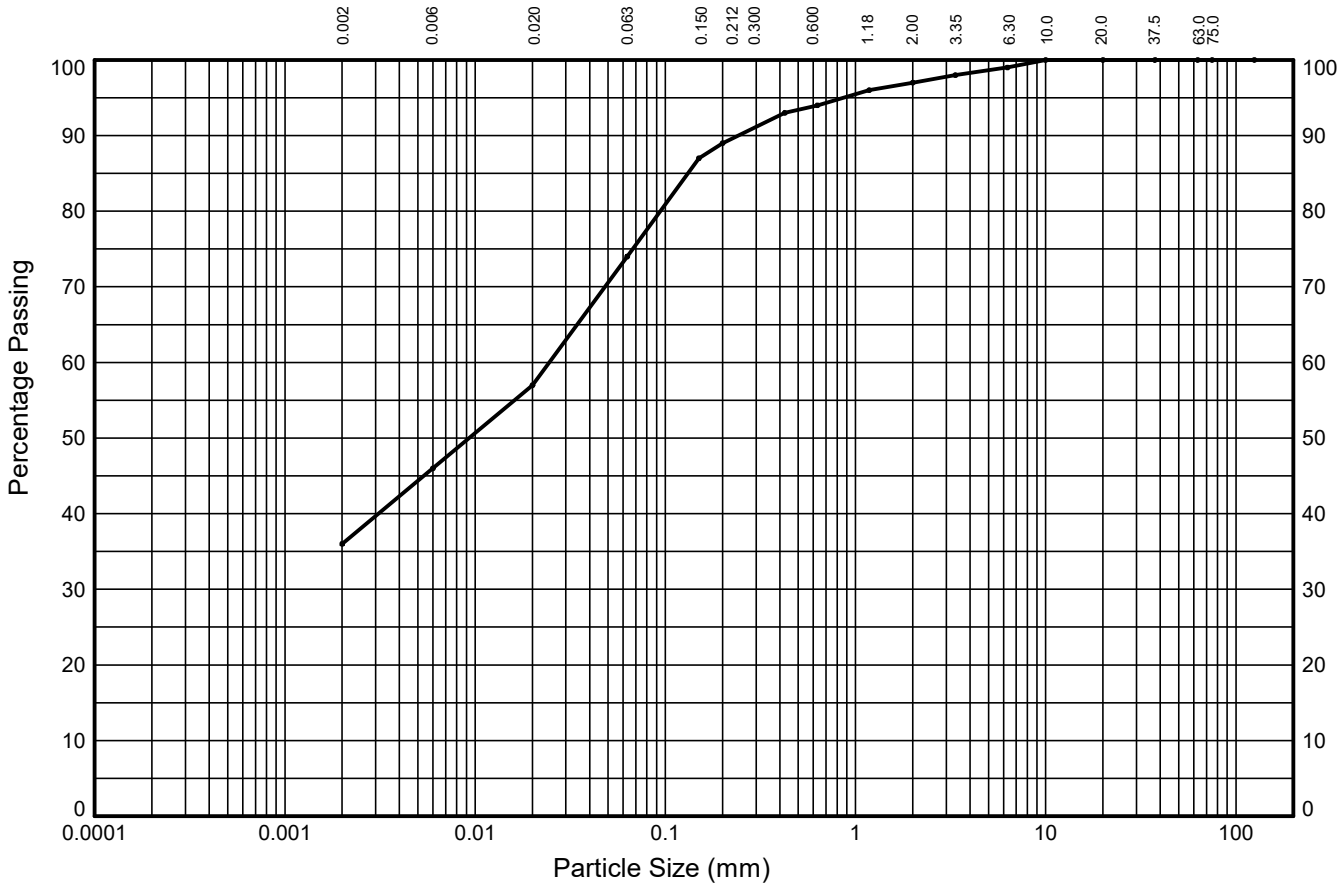
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH501** Sample Ref: **65** Sample Type: **B** Depth (m): **19.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	10%	11%	17%	15%	5%	3%	2%	1%	0%	
	SILT			SAND			GRAVEL			
36%	38%			23%			3%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**99**
3.35	**98**
2.00	**97**
1.18	**96**
0.630	**94**
0.425	**93**
0.200	**89**
0.150	**87**
0.063	**74**

Particle Diameter (mm)	Percent Passing (%)
0.02	**57**
0.006	**46**
0.002	**36**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**0.009**
D_{60} (mm)	**0.024**
D_{85} (mm)	**0.131**
D_{90} (mm)	**0.241**
C_U	**NA**
C_C	**NA**

Soil Description:

Grey slightly gravelly slightly sandy silty CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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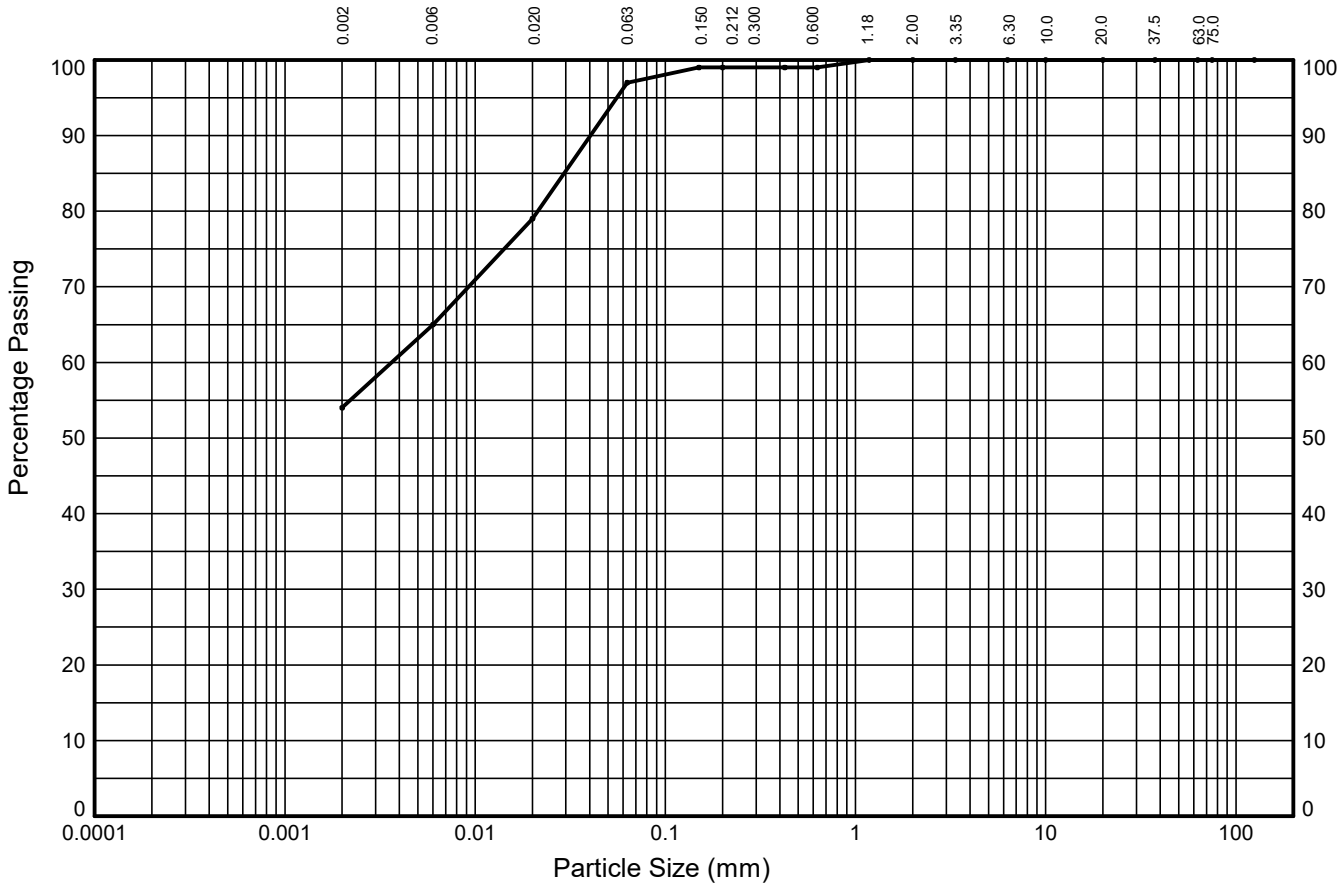
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH501** Sample Ref: **77** Sample Type: **B** Depth (m): **23.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	11%	14%	18%	2%	0%	1%	0%	0%	0%	
	SILT			SAND			GRAVEL			
54%	43%			3%			0%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**100**
3.35	**100**
2.00	**100**
1.18	**100**
0.630	**99**
0.425	**99**
0.200	**99**
0.150	**99**
0.063	**97**

Particle Diameter (mm)	Percent Passing (%)
0.02	**79**
0.006	**65**
0.002	**54**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**NA**
D_{60} (mm)	**0.004**
D_{85} (mm)	**0.029**
D_{90} (mm)	**0.040**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark brown slightly sandy CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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Contract Ref: **563835**

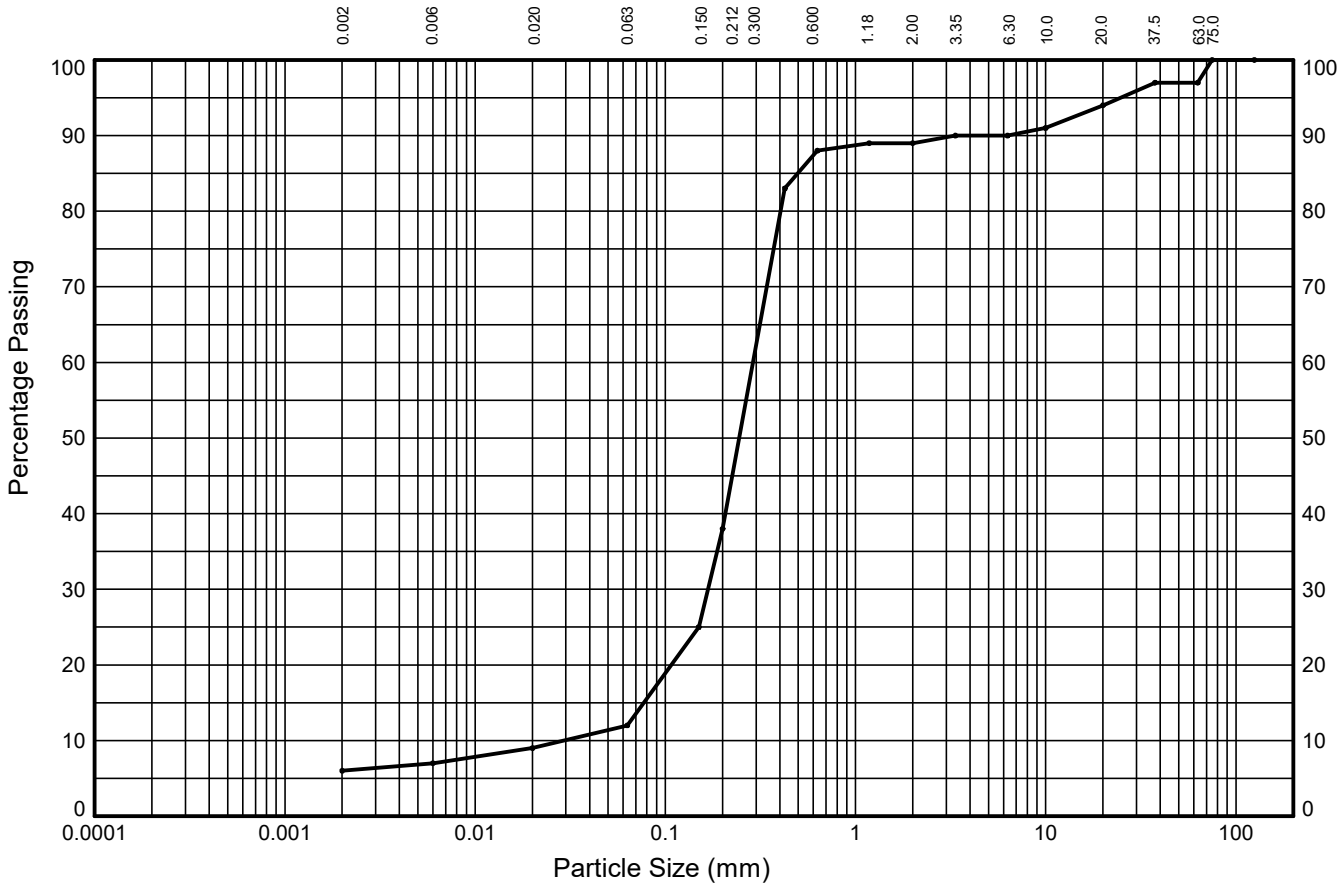
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH502** Sample Ref: **2** Sample Type: **B** Depth (m): **0.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	1%	2%	3%	26%	50%	1%	1%	4%	3%	
	SILT			SAND			GRAVEL			
6%	6%			77%			8%			3%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**97**
37.5	**97**
20.0	**94**
10.0	**91**
6.30	**90**
3.35	**90**
2.00	**89**
1.18	**89**
0.630	**88**
0.425	**83**
0.200	**38**
0.150	**25**
0.063	**12**

Particle Diameter (mm)	Percent Passing (%)
0.02	**9**
0.006	**7**
0.002	**6**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.029**
D_{15} (mm)	**0.077**
D_{30} (mm)	**0.168**
D_{50} (mm)	**0.245**
D_{60} (mm)	**0.289**
D_{85} (mm)	**0.497**
D_{90} (mm)	**3.350**
C_U	**9.9**
C_C	**3.3**

Soil Description:

Greyish brown gravelly clayey SAND with low cobble content

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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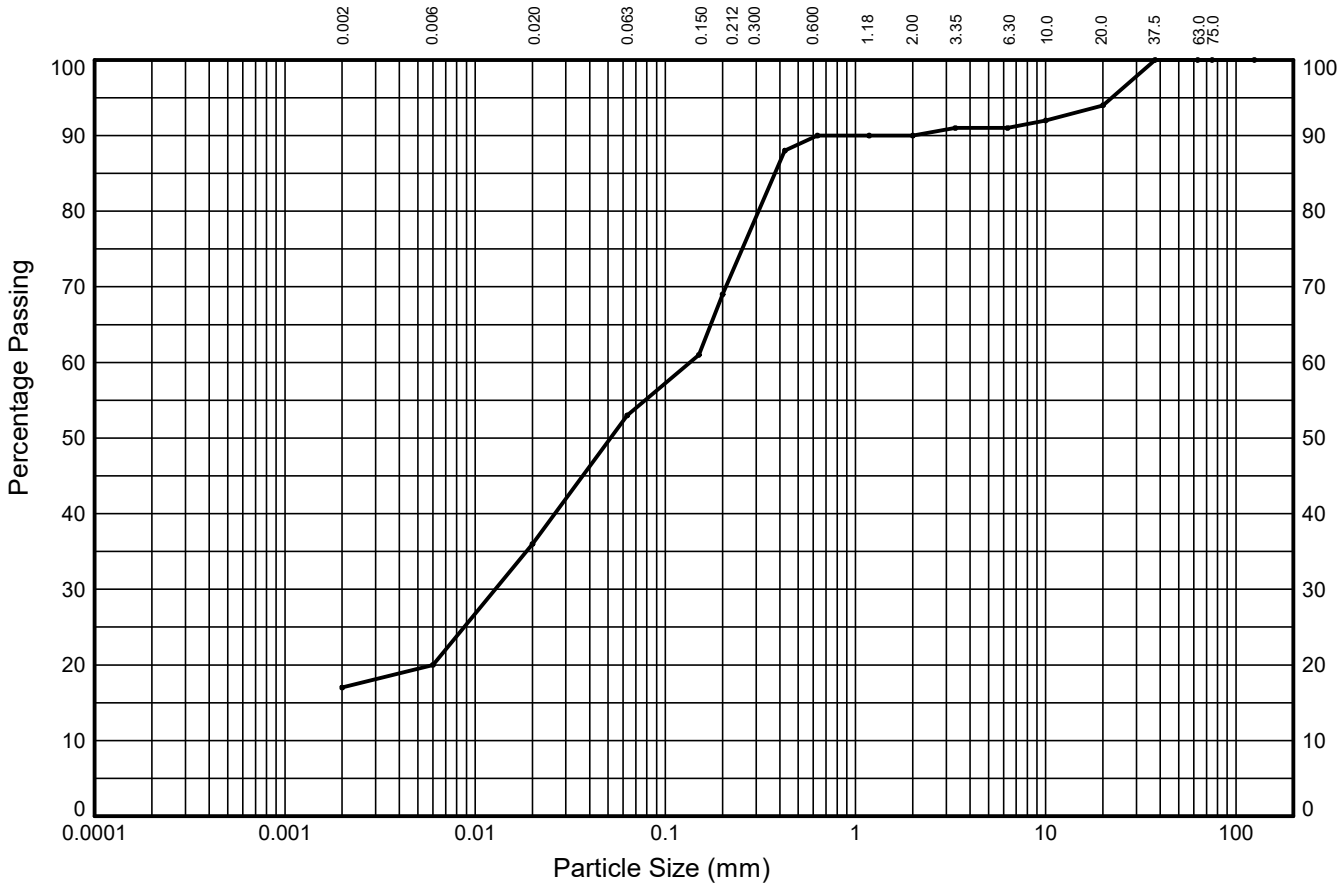
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH502** Sample Ref: **10** Sample Type: **B** Depth (m): **2.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	3%	16%	17%	16%	21%	0%	1%	3%	6%	
	SILT			SAND			GRAVEL			
17%	36%			37%			10%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**94**
10.0	**92**
6.30	**91**
3.35	**91**
2.00	**90**
1.18	**90**
0.630	**90**
0.425	**88**
0.200	**69**
0.150	**61**
0.063	**53**

Particle Diameter (mm)	Percent Passing (%)
0.02	**36**
0.006	**20**
0.002	**17**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.013**
D_{50} (mm)	**0.051**
D_{60} (mm)	**0.135**
D_{85} (mm)	**0.377**
D_{90} (mm)	**0.630**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown slightly gravelly sandy clayey SILT

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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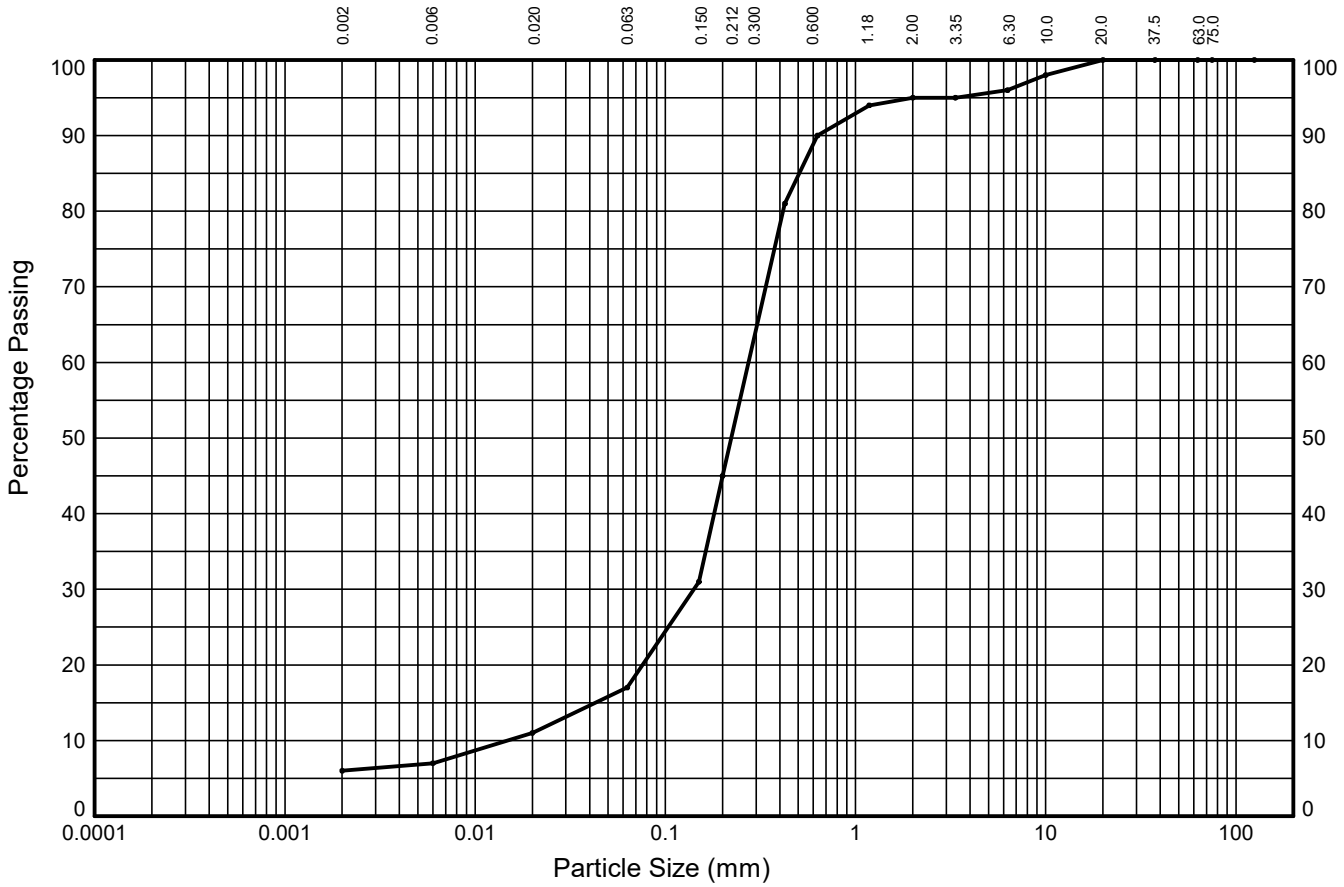
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH502A** Sample Ref: **21** Sample Type: **B** Depth (m): **5.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	1%	4%	6%	28%	45%	5%	1%	4%	0%	
	SILT			SAND			GRAVEL			
6%	11%			78%			5%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**98**
6.30	**96**
3.35	**95**
2.00	**95**
1.18	**94**
0.630	**90**
0.425	**81**
0.200	**45**
0.150	**31**
0.063	**17**

Particle Diameter (mm)	Percent Passing (%)
0.02	**11**
0.006	**7**
0.002	**6**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.015**
D_{15} (mm)	**0.043**
D_{30} (mm)	**0.141**
D_{50} (mm)	**0.222**
D_{60} (mm)	**0.274**
D_{85} (mm)	**0.506**
D_{90} (mm)	**0.630**
C_U	**18**
C_C	**5**

Soil Description:

Light brown gravelly clayey SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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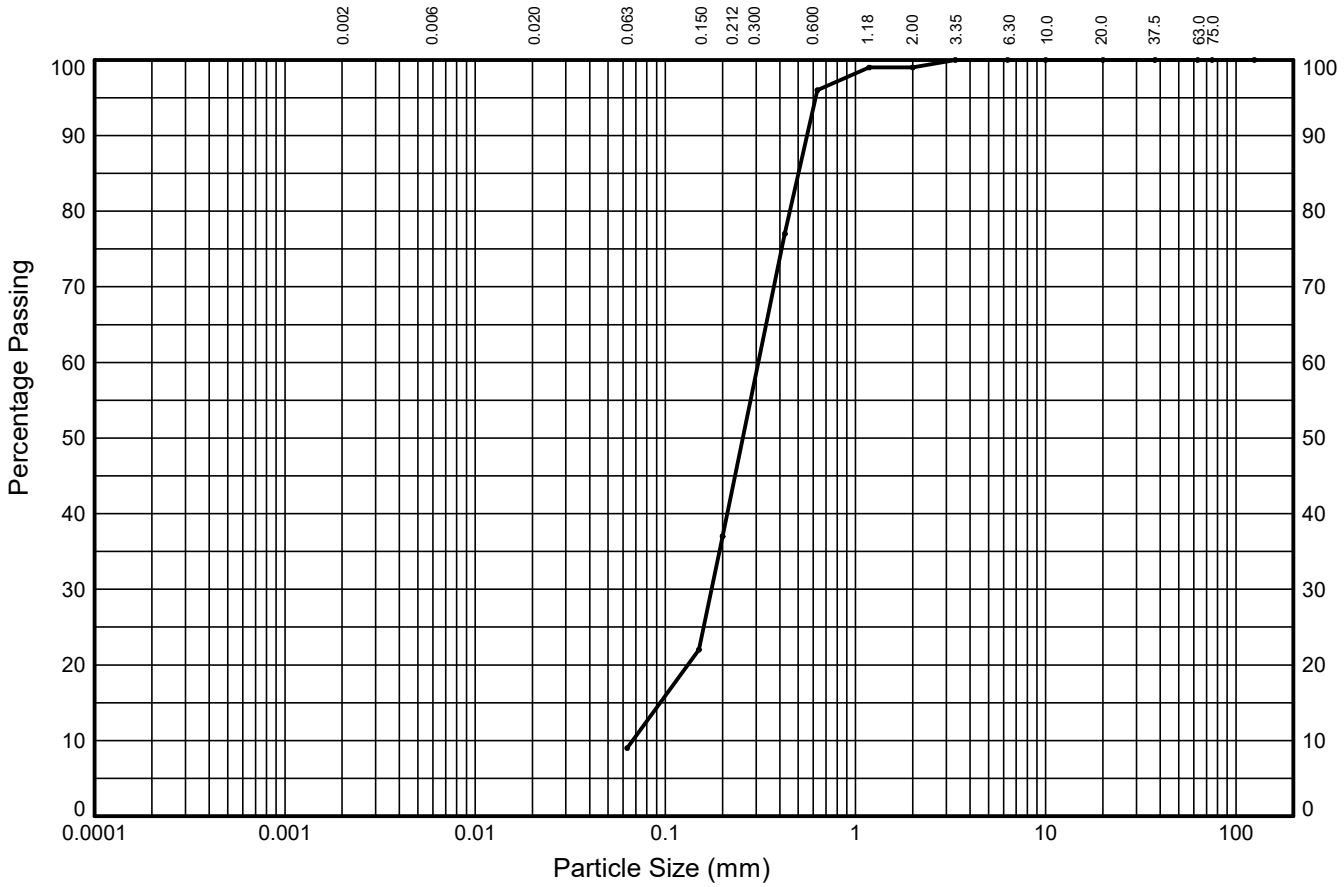
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH502A** Sample Ref: **29** Sample Type: **B** Depth (m): **7.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	28%	59%	3%	1%	0%	0%	
	SILT			SAND			GRAVEL			
9%				90%			1%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**100**
3.35	**100**
2.00	**99**
1.18	**99**
0.630	**96**
0.425	**77**
0.200	**37**
0.150	**22**
0.063	**9**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.067**
D_{15} (mm)	**0.094**
D_{30} (mm)	**0.175**
D_{50} (mm)	**0.256**
D_{60} (mm)	**0.309**
D_{85} (mm)	**0.502**
D_{90} (mm)	**0.556**
C_U	**4.6**
C_C	**1.5**

Soil Description:

Orangish brown slightly gravelly clayey SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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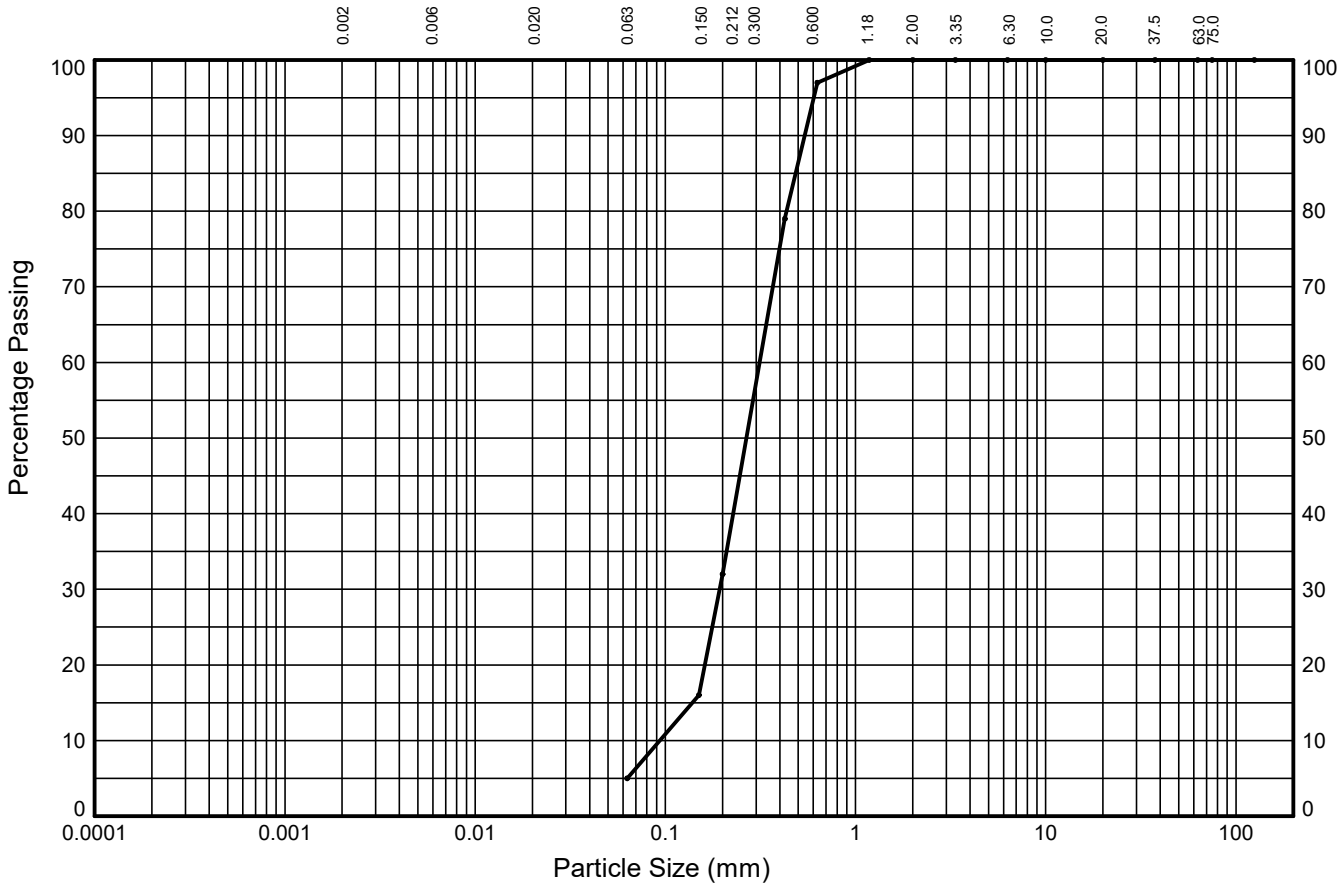
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH502A** Sample Ref: **37** Sample Type: **B** Depth (m): **9.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	27%	65%	3%	0%	0%	0%	
	SILT			SAND			GRAVEL			
5%				95%			0%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**100**
3.35	**100**
2.00	**100**
1.18	**100**
0.630	**97**
0.425	**79**
0.200	**32**
0.150	**16**
0.063	**5**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.093**
D_{15} (mm)	**0.139**
D_{30} (mm)	**0.193**
D_{50} (mm)	**0.267**
D_{60} (mm)	**0.313**
D_{85} (mm)	**0.485**
D_{90} (mm)	**0.541**
C_U	**3.4**
C_C	**1.3**

Soil Description:

Orangish brown clayey SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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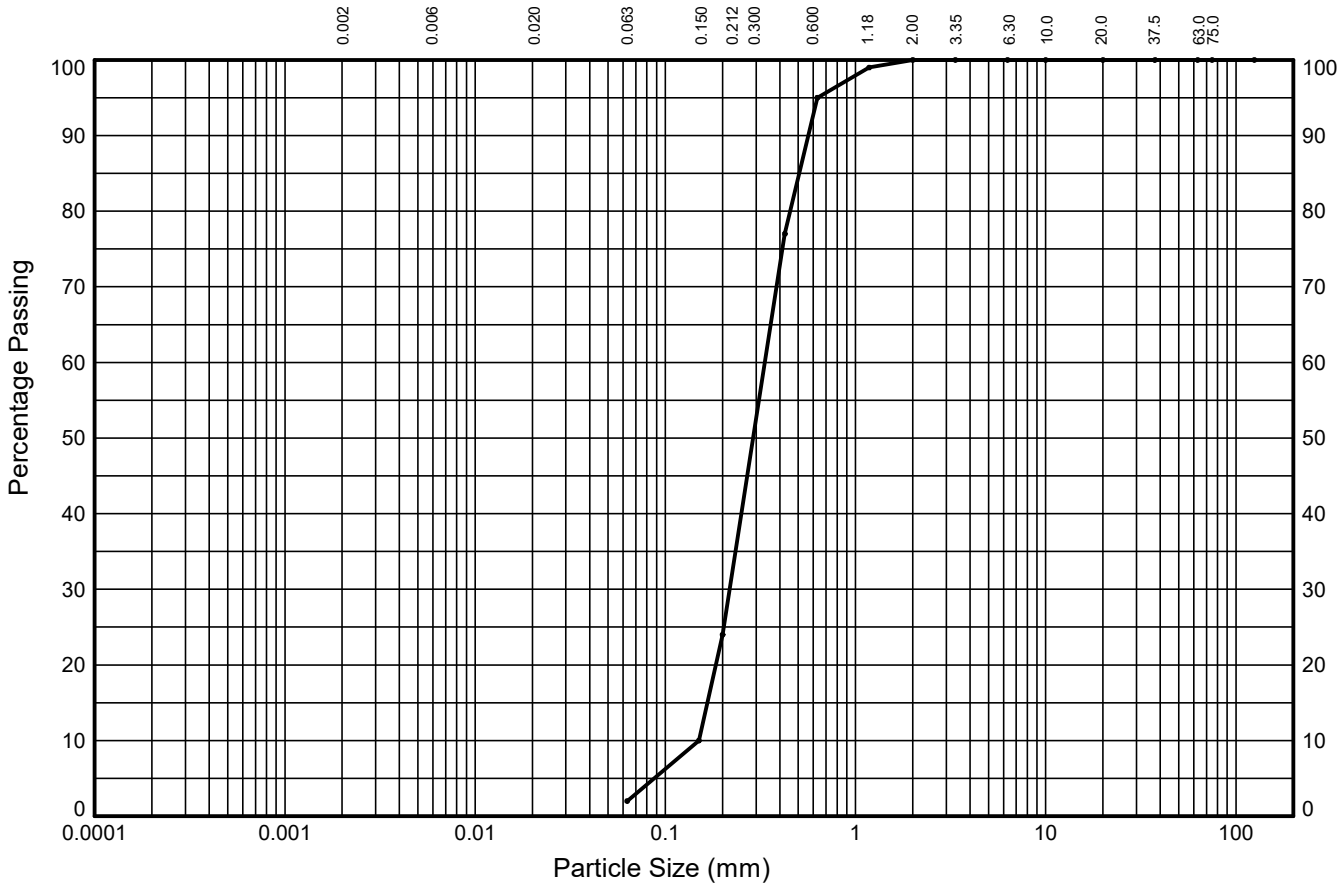
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH502A** Sample Ref: **53** Sample Type: **B** Depth (m): **13.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	22%	71%	5%	0%	0%	0%	
	SILT			SAND			GRAVEL			
2%				98%			0%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**100**
3.35	**100**
2.00	**100**
1.18	**99**
0.630	**95**
0.425	**77**
0.200	**24**
0.150	**10**
0.063	**2**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.150**
D_{15} (mm)	**0.166**
D_{30} (mm)	**0.218**
D_{50} (mm)	**0.289**
D_{60} (mm)	**0.334**
D_{85} (mm)	**0.506**
D_{90} (mm)	**0.565**
C_U	**2.2**
C_C	**0.95**

Soil Description:

Brown slightly clayey SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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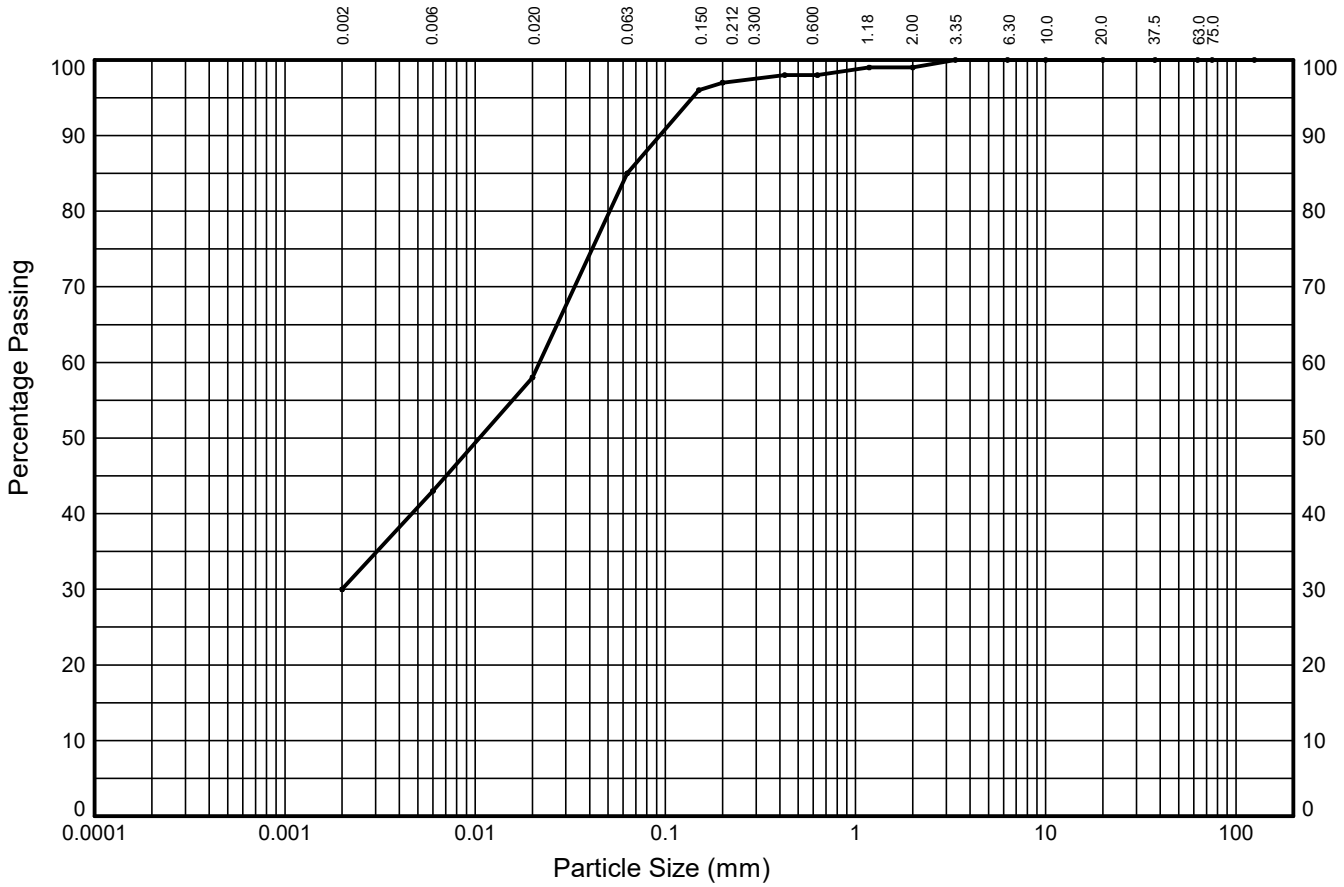
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH502A** Sample Ref: **82** Sample Type: **B** Depth (m): **21.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	13%	15%	27%	12%	1%	1%	1%	0%	0%	
	SILT			SAND			GRAVEL			
30%	55%			14%			1%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**100**
3.35	**100**
2.00	**99**
1.18	**99**
0.630	**98**
0.425	**98**
0.200	**97**
0.150	**96**
0.063	**85**

Particle Diameter (mm)	Percent Passing (%)
0.02	**58**
0.006	**43**
0.002	**30**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.002**
D_{50} (mm)	**0.011**
D_{60} (mm)	**0.022**
D_{85} (mm)	**0.063**
D_{90} (mm)	**0.093**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark brown mottled grey slightly gravelly slightly sandy silty CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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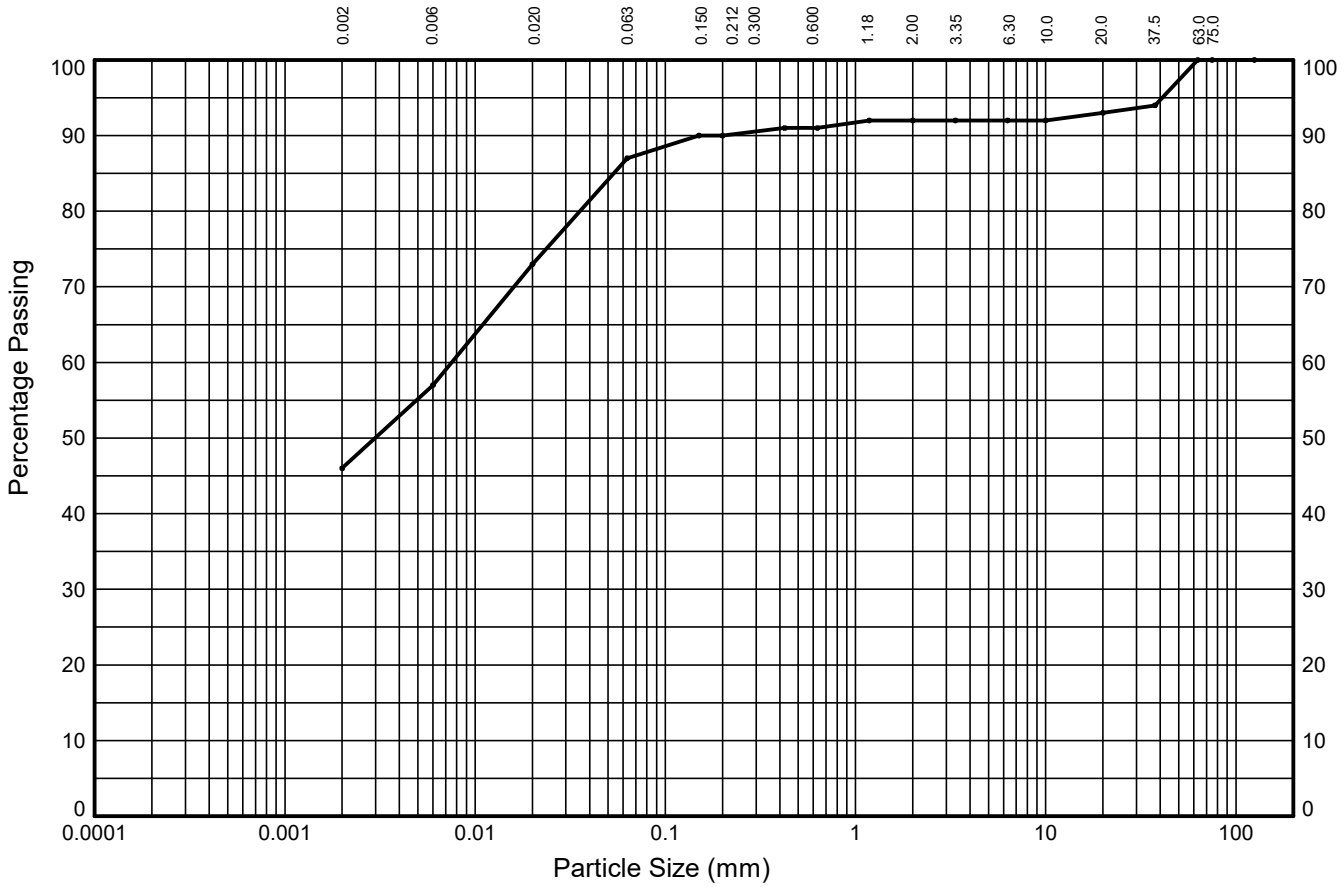
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GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - PSD - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-BH502A** Sample Ref: **92** Sample Type: **B** Depth (m): **24.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	11%	16%	14%	3%	1%	1%	0%	1%	7%	
	SILT			SAND			GRAVEL			
46%	41%			5%			8%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**94**
20.0	**93**
10.0	**92**
6.30	**92**
3.35	**92**
2.00	**92**
1.18	**92**
0.630	**91**
0.425	**91**
0.200	**90**
0.150	**90**
0.063	**87**

Particle Diameter (mm)	Percent Passing (%)
0.02	**73**
0.006	**57**
0.002	**46**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**0.003**
D_{60} (mm)	**0.008**
D_{85} (mm)	**0.053**
D_{90} (mm)	**0.150**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark grey slightly sandy slightly gravelly CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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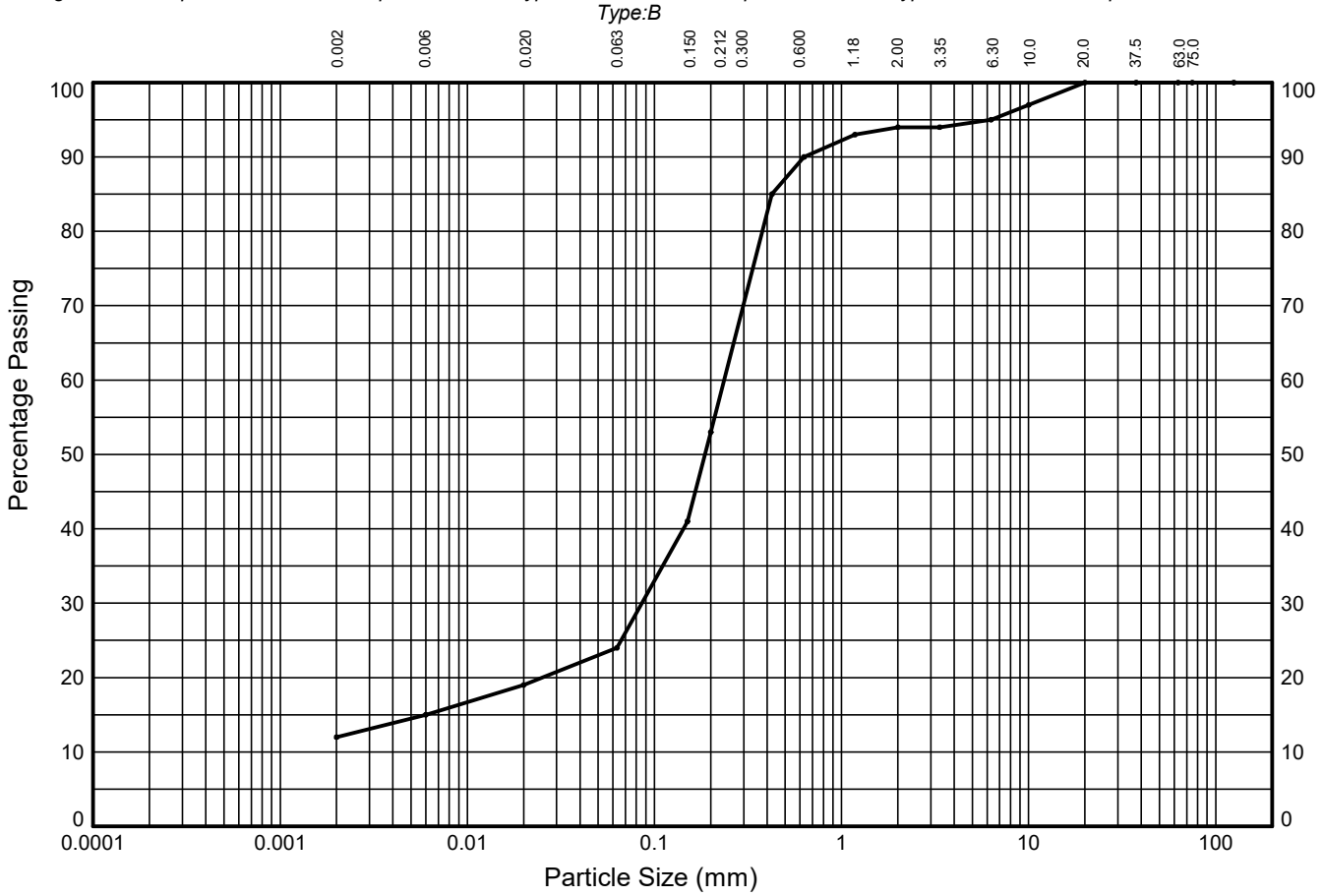
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP203** Sample Ref: **1** Sample Type: **B** Depth (m): **0.10**

Amalgamation comprises: F22-TP203 Depth:1.50 Ref:7 Type:LB + F22-TP203 Depth:3.20 Ref:10 Type:B + F22-TP203 Depth:12.00 Ref:4 Type:B



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	3%	4%	5%	29%	37%	4%	1%	5%	0%	
	SILT			SAND			GRAVEL			
12%	12%			70%			6%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**97**
6.30	**95**
3.35	**94**
2.00	**94**
1.18	**93**
0.630	**90**
0.425	**85**
0.200	**53**
0.150	**41**
0.063	**24**

Particle Diameter (mm)	Percent Passing (%)
0.02	**19**
0.006	**15**
0.002	**12**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**0.006**
D_{30} (mm)	**0.086**
D_{50} (mm)	**0.186**
D_{60} (mm)	**0.236**
D_{85} (mm)	**0.425**
D_{90} (mm)	**0.630**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark brown gravelly very clayey SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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Date: **05/03/24**

Contract: **Sealink Friston**

Contract Ref: **563835**

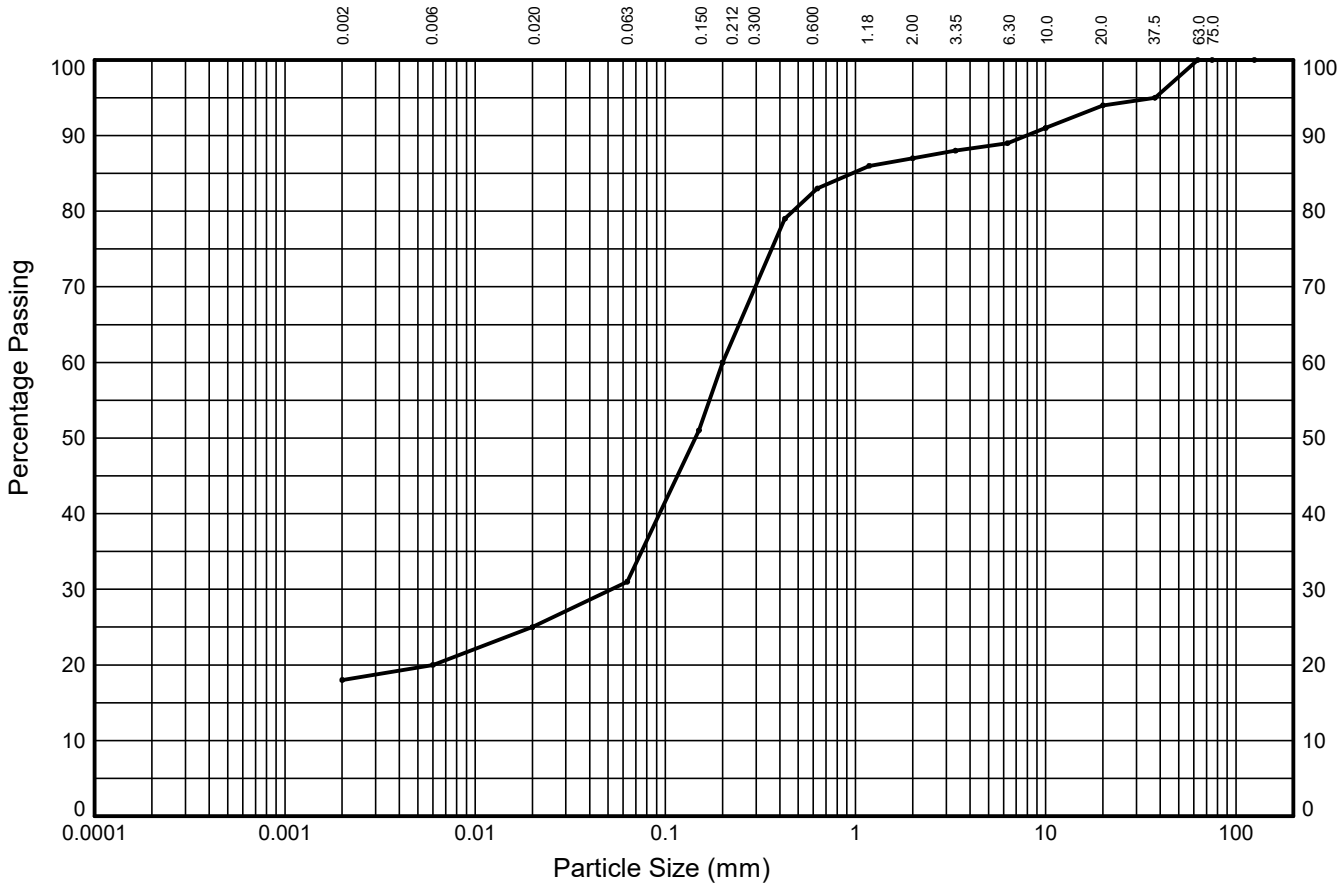
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP203** Sample Ref: **5** Sample Type: **B** Depth (m): **1.20**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	2%	5%	6%	29%	23%	4%	2%	5%	6%	
	SILT			SAND			GRAVEL			
18%	13%			56%			13%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**95**
20.0	**94**
10.0	**91**
6.30	**89**
3.35	**88**
2.00	**87**
1.18	**86**
0.630	**83**
0.425	**79**
0.200	**60**
0.150	**51**
0.063	**31**

Particle Diameter (mm)	Percent Passing (%)
0.02	**25**
0.006	**20**
0.002	**18**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.052**
D_{50} (mm)	**0.144**
D_{60} (mm)	**0.200**
D_{85} (mm)	**0.957**
D_{90} (mm)	**7.937**
C_U	**NA**
C_C	**NA**

Soil Description:

Orangish brown gravelly very clayey SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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Contract	Contract Ref:
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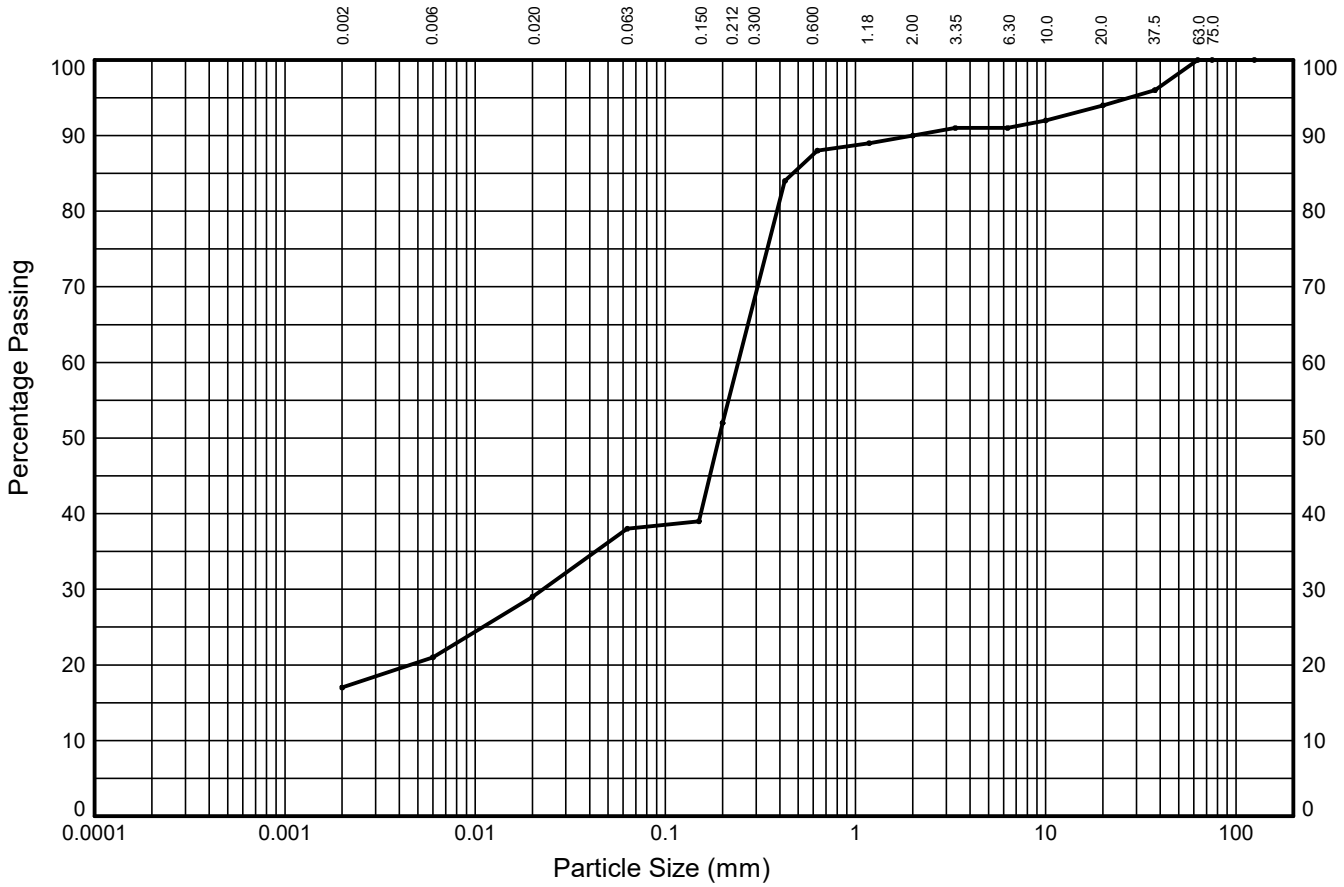
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP204** Sample Ref: **3** Sample Type: **B** Depth (m): **0.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	4%	8%	9%	14%	36%	2%	1%	3%	6%	
	SILT			SAND			GRAVEL			
17%	21%			52%			10%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**96**
20.0	**94**
10.0	**92**
6.30	**91**
3.35	**91**
2.00	**90**
1.18	**89**
0.630	**88**
0.425	**84**
0.200	**52**
0.150	**39**
0.063	**38**

Particle Diameter (mm)	Percent Passing (%)
0.02	**29**
0.006	**21**
0.002	**17**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.023**
D_{50} (mm)	**0.191**
D_{60} (mm)	**0.241**
D_{85} (mm)	**0.469**
D_{90} (mm)	**2.000**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark orangish brown slightly gravelly sandy silty CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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Contract: **Sealink Friston**

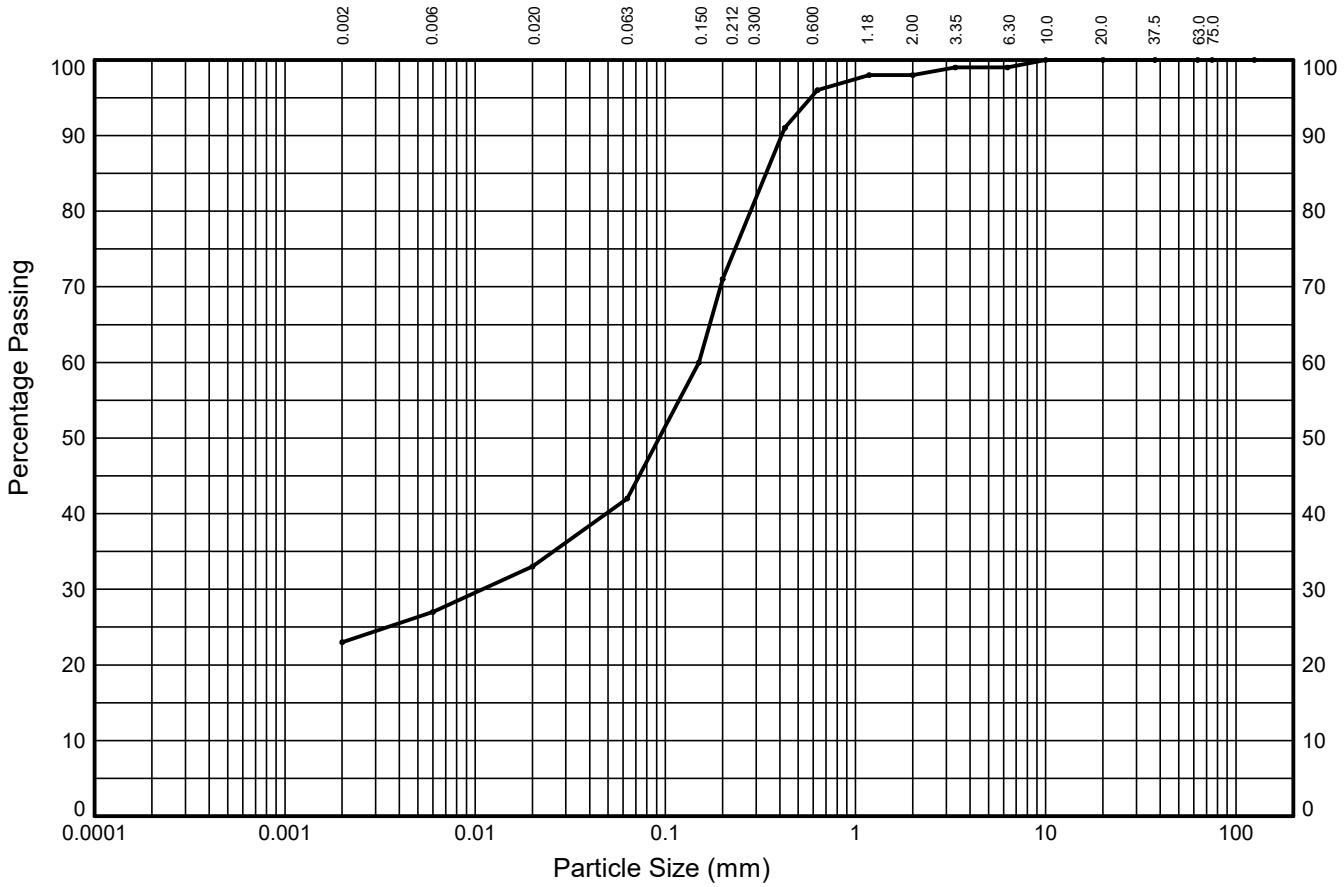
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP204** Sample Ref: **8** Sample Type: **B** Depth (m): **2.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	4%	6%	9%	29%	25%	2%	1%	1%	0%	
	SILT			SAND			GRAVEL			
23%	19%			56%			2%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**99**
3.35	**99**
2.00	**98**
1.18	**98**
0.630	**96**
0.425	**91**
0.200	**71**
0.150	**60**
0.063	**42**

Particle Diameter (mm)	Percent Passing (%)
0.02	**33**
0.006	**27**
0.002	**23**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.011**
D_{50} (mm)	**0.093**
D_{60} (mm)	**0.150**
D_{85} (mm)	**0.339**
D_{90} (mm)	**0.409**
C_U	**NA**
C_C	**NA**

Soil Description:

Orangish brown slightly gravelly sandy clayey SILT

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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Contract		Contract Ref:
Sealink Friston		**563835**

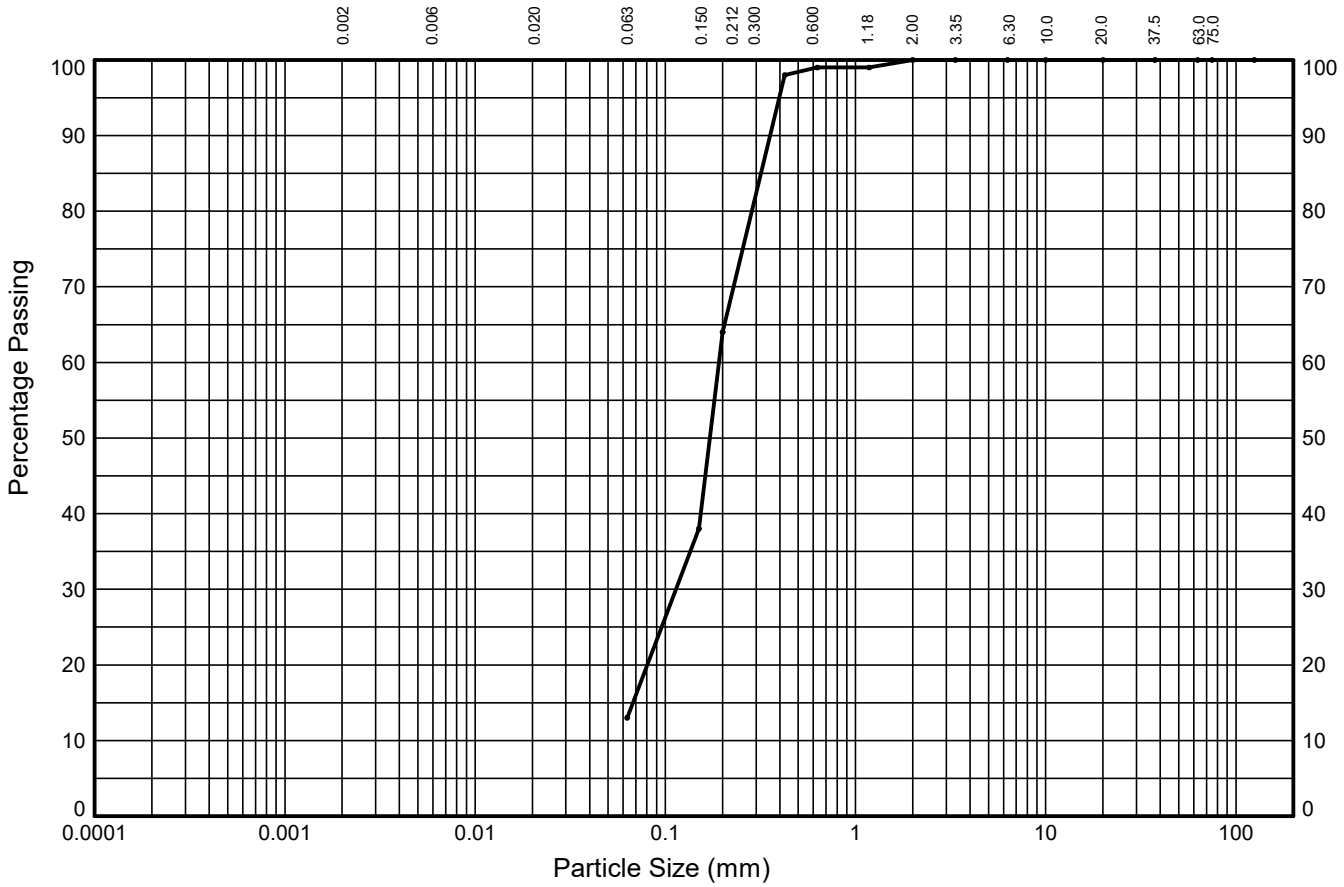
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP204** Sample Ref: **12** Sample Type: **B** Depth (m): **3.80**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	51%	35%	1%	0%	0%	0%	
	SILT			SAND			GRAVEL			
13%				87%			0%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**100**
3.35	**100**
2.00	**100**
1.18	**99**
0.630	**99**
0.425	**98**
0.200	**64**
0.150	**38**
0.063	**13**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**0.068**
D_{30} (mm)	**0.114**
D_{50} (mm)	**0.171**
D_{60} (mm)	**0.191**
D_{85} (mm)	**0.319**
D_{90} (mm)	**0.356**
C_U	**NA**
C_C	**NA**

Soil Description:

Yellowish brown clayey SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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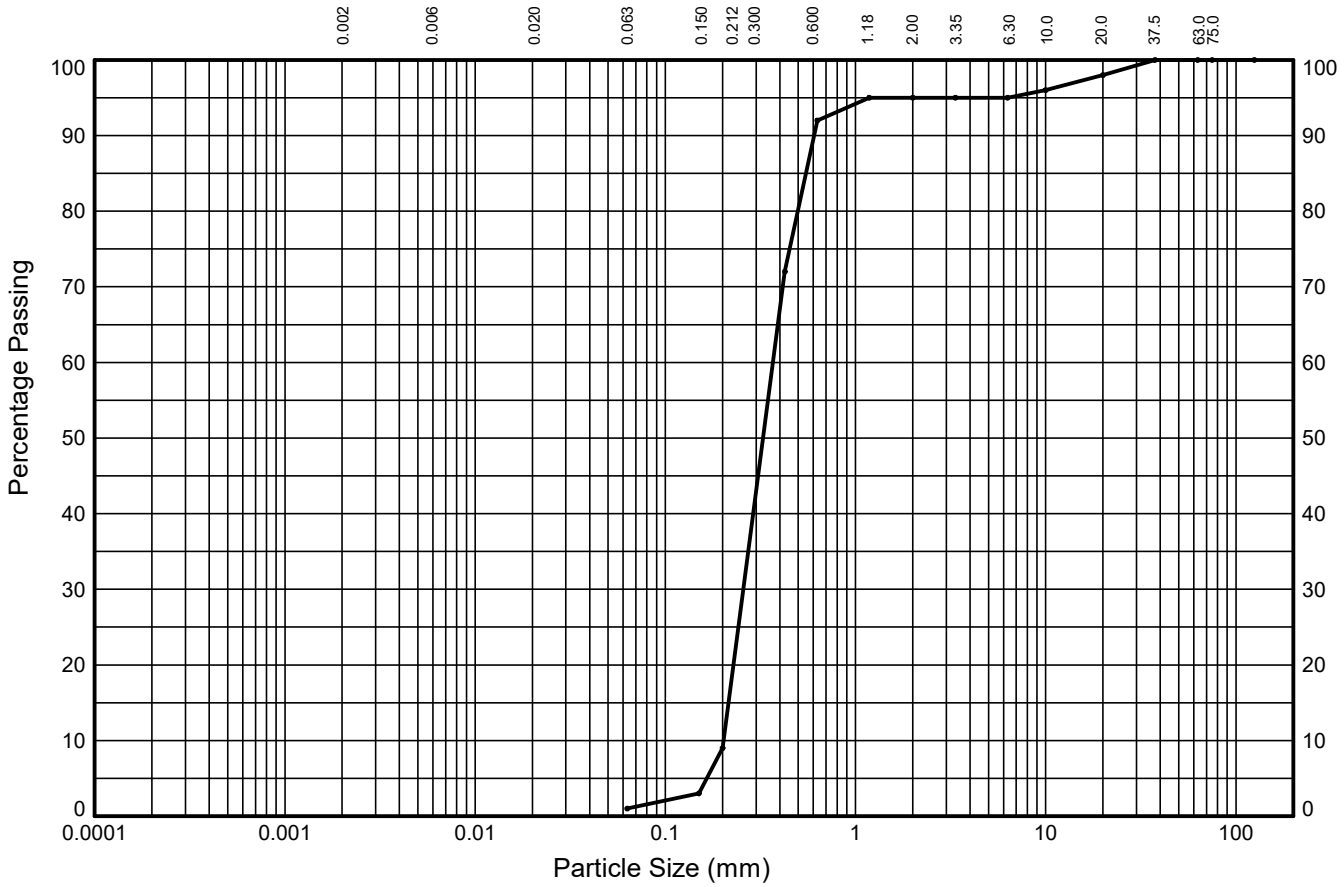
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP205** Sample Ref: **5** Sample Type: **B** Depth (m): **1.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	8%	83%	3%	0%	3%	2%	
	SILT			SAND			GRAVEL			
1%				94%			5%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**98**
10.0	**96**
6.30	**95**
3.35	**95**
2.00	**95**
1.18	**95**
0.630	**92**
0.425	**72**
0.200	**9**
0.150	**3**
0.063	**1**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.202**
D_{15} (mm)	**0.215**
D_{30} (mm)	**0.257**
D_{50} (mm)	**0.327**
D_{60} (mm)	**0.368**
D_{85} (mm)	**0.549**
D_{90} (mm)	**0.606**
C_U	**1.8**
C_C	**0.89**

Soil Description:

Orangish brown gravelly slightly silty SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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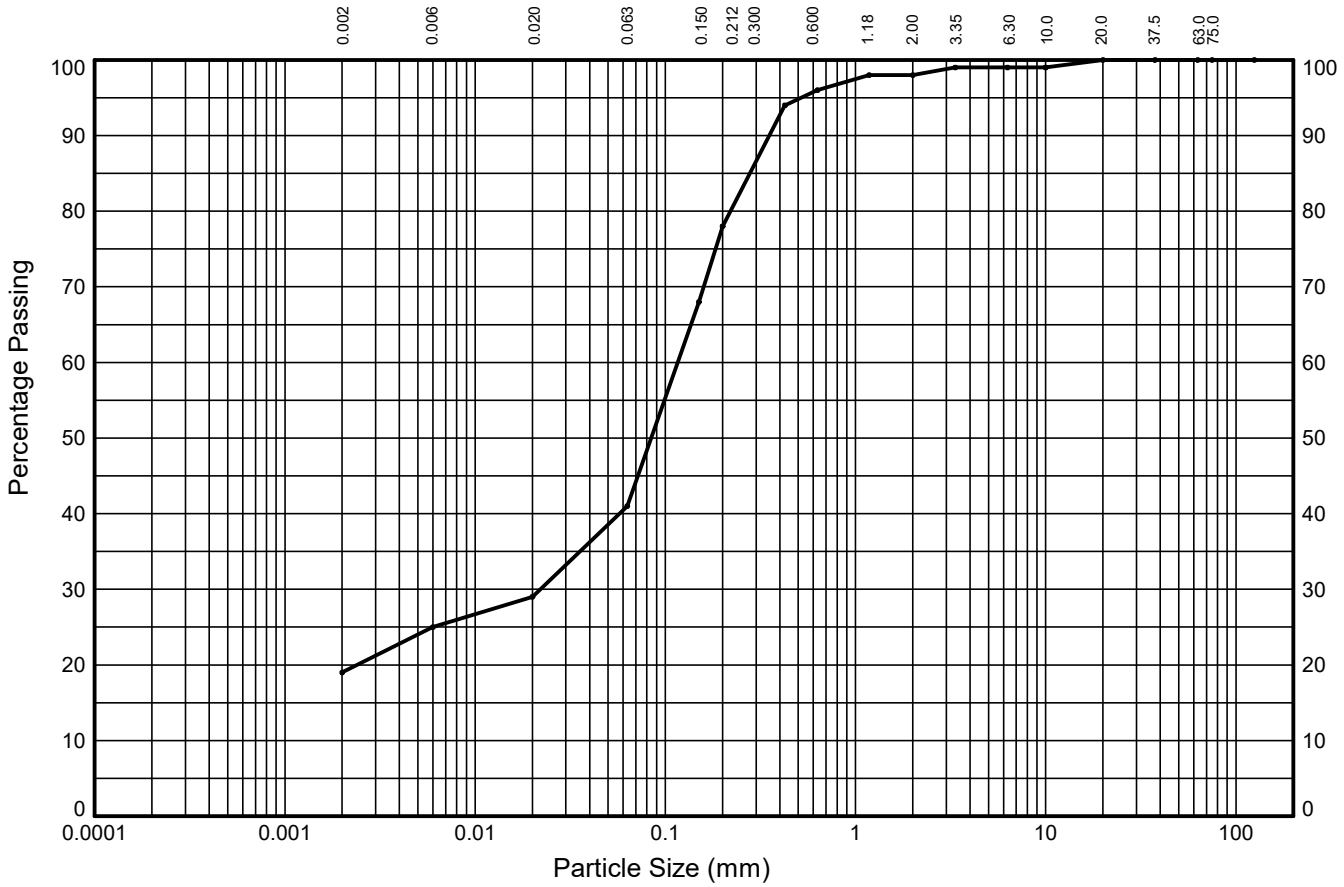
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP218** Sample Ref: **5** Sample Type: **B** Depth (m): **1.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	6%	4%	12%	37%	18%	2%	1%	1%	0%	
	SILT			SAND			GRAVEL			
19%	22%			57%			2%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**99**
6.30	**99**
3.35	**99**
2.00	**98**
1.18	**98**
0.630	**96**
0.425	**94**
0.200	**78**
0.150	**68**
0.063	**41**

Particle Diameter (mm)	Percent Passing (%)
0.02	**29**
0.006	**25**
0.002	**19**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.022**
D_{50} (mm)	**0.084**
D_{60} (mm)	**0.116**
D_{85} (mm)	**0.278**
D_{90} (mm)	**0.352**
C_U	**NA**
C_C	**NA**

Soil Description:

Orangish brown slightly gravelly sandy silty CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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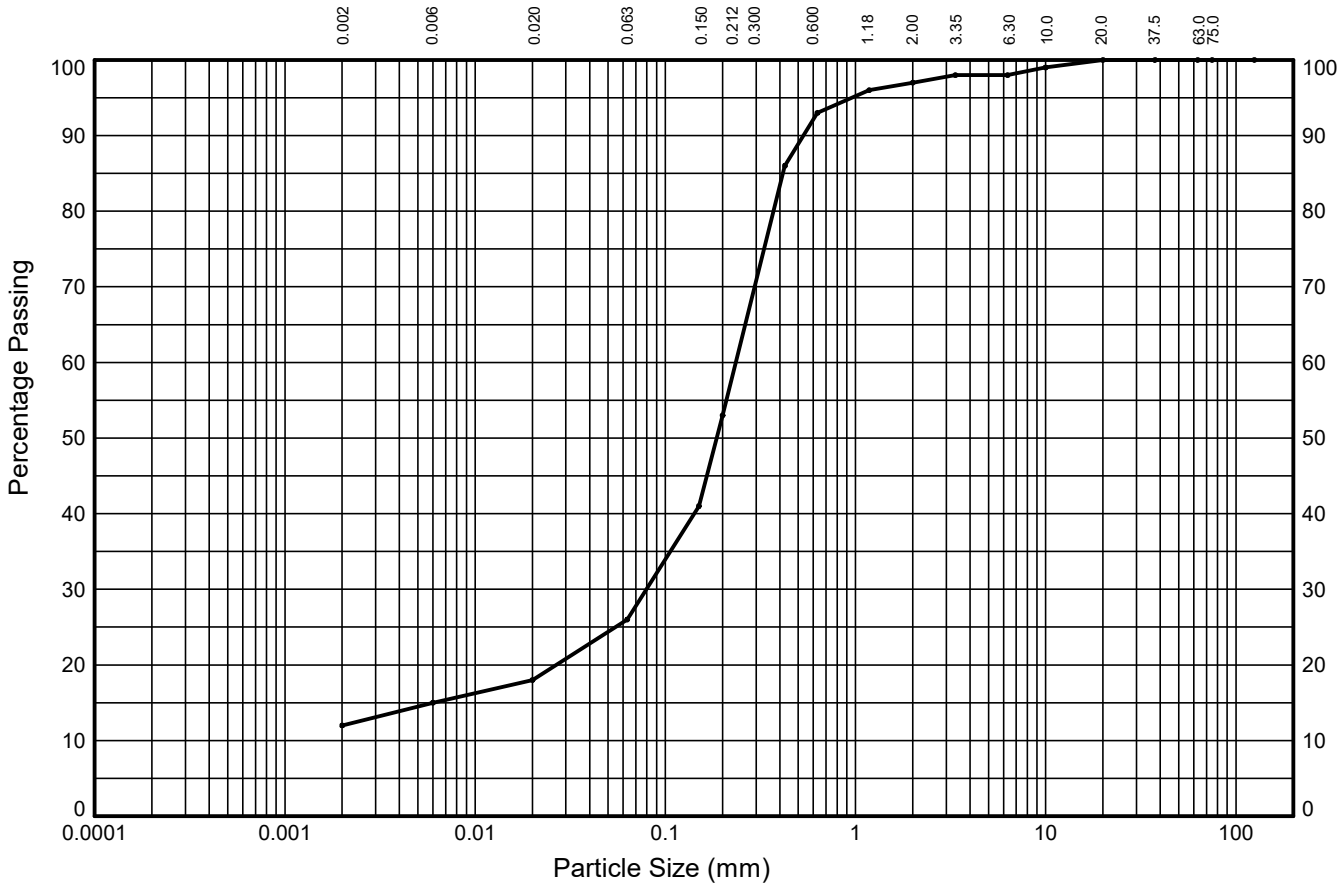
Compiled By		Date
[redacted]	[redacted]	**25/03/24**
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP218** Sample Ref: **10** Sample Type: **B** Depth (m): **3.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	3%	3%	8%	27%	40%	4%	1%	2%	0%	
	SILT			SAND			GRAVEL			
12%	14%			71%			3%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**99**
6.30	**98**
3.35	**98**
2.00	**97**
1.18	**96**
0.630	**93**
0.425	**86**
0.200	**53**
0.150	**41**
0.063	**26**

Particle Diameter (mm)	Percent Passing (%)
0.02	**18**
0.006	**15**
0.002	**12**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**0.006**
D_{30} (mm)	**0.079**
D_{50} (mm)	**0.186**
D_{60} (mm)	**0.235**
D_{85} (mm)	**0.415**
D_{90} (mm)	**0.532**
C_U	**NA**
C_C	**NA**

Soil Description:

Orangish brown slightly gravelly very clayey SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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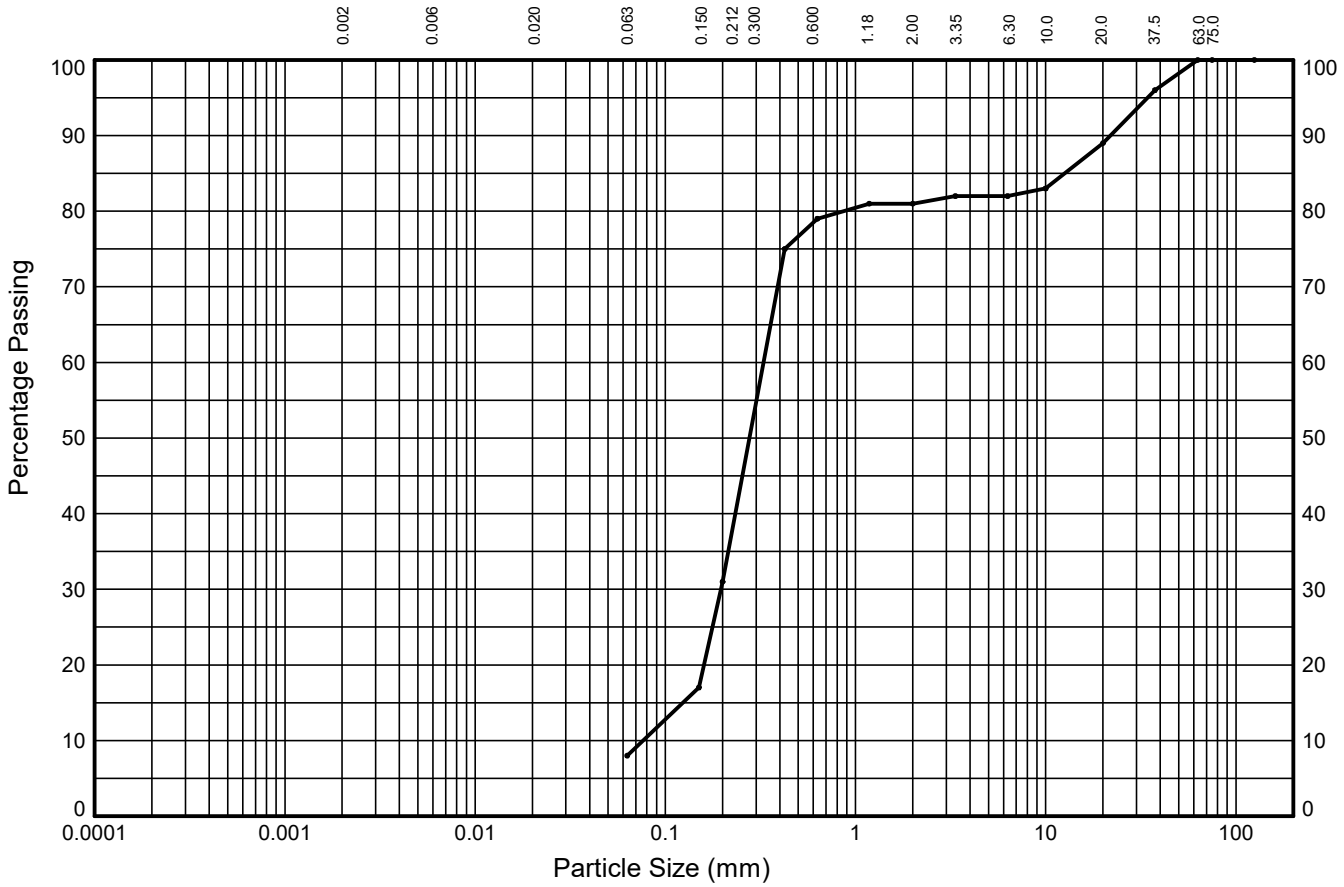
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Contract: **Sealink Friston**		Contract Ref: **563835**

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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP220** Sample Ref: **2** Sample Type: **B** Depth (m): **0.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	23%	48%	2%	1%	7%	11%	
	SILT			SAND			GRAVEL			
8%				73%			19%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**96**
20.0	**89**
10.0	**83**
6.30	**82**
3.35	**82**
2.00	**81**
1.18	**81**
0.630	**79**
0.425	**75**
0.200	**31**
0.150	**17**
0.063	**8**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.076**
D_{15} (mm)	**0.124**
D_{30} (mm)	**0.196**
D_{50} (mm)	**0.277**
D_{60} (mm)	**0.329**
D_{85} (mm)	**12.599**
D_{90} (mm)	**21.879**
C_U	**4.3**
C_C	**1.5**

Soil Description:

Orangish brown gravelly clayey SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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Contract	Contract Ref:
Sealink Friston	**563835**

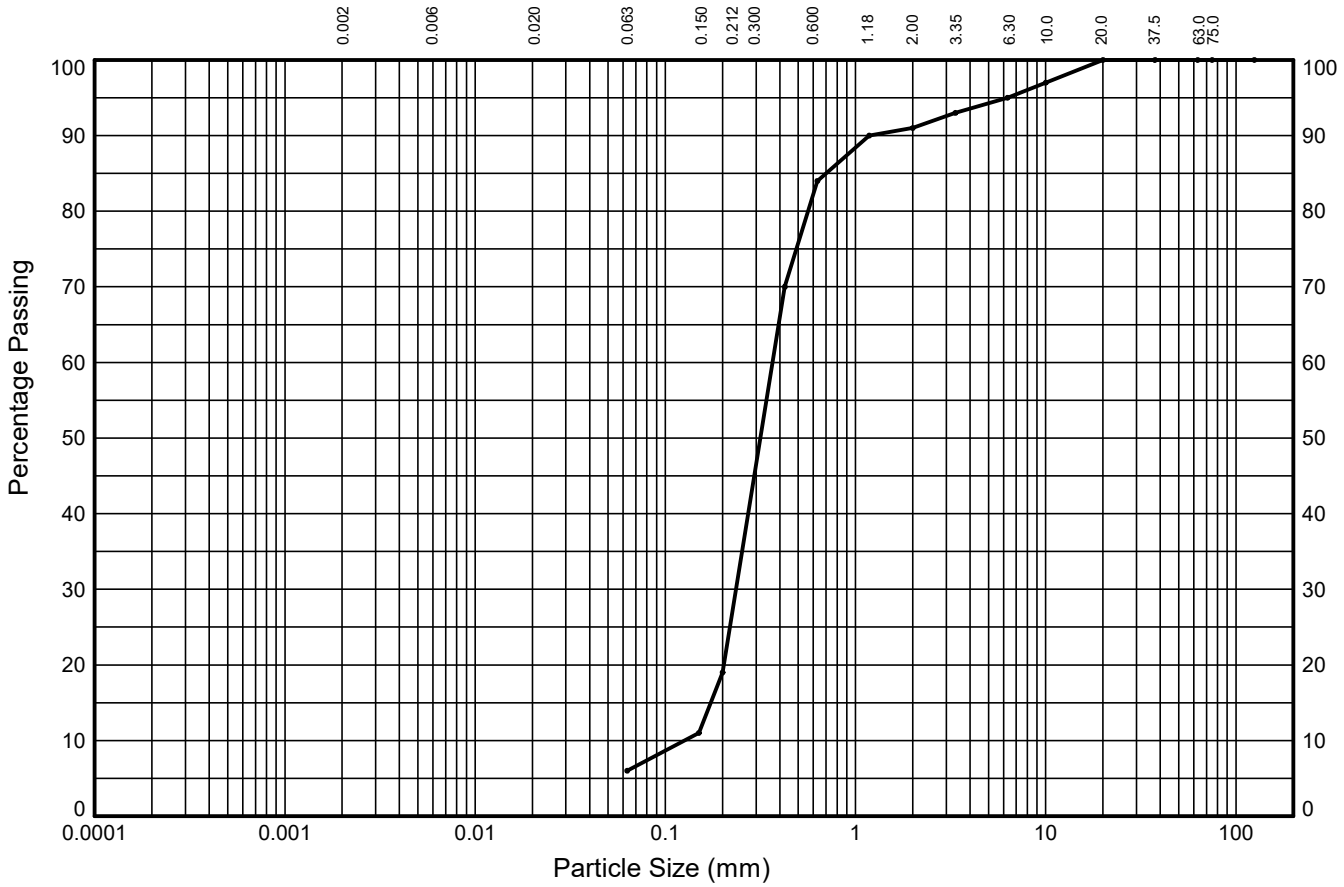
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP221** Sample Ref: **6** Sample Type: **B** Depth (m): **0.90**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	13%	65%	7%	4%	5%	0%	
	SILT			SAND			GRAVEL			
6%				85%			9%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**97**
6.30	**95**
3.35	**93**
2.00	**91**
1.18	**90**
0.630	**84**
0.425	**70**
0.200	**19**
0.150	**11**
0.063	**6**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.126**
D_{15} (mm)	**0.173**
D_{30} (mm)	**0.235**
D_{50} (mm)	**0.316**
D_{60} (mm)	**0.367**
D_{85} (mm)	**0.699**
D_{90} (mm)	**1.180**
C_U	**2.9**
C_C	**1.2**

Soil Description:

Orangish brown gravelly silty SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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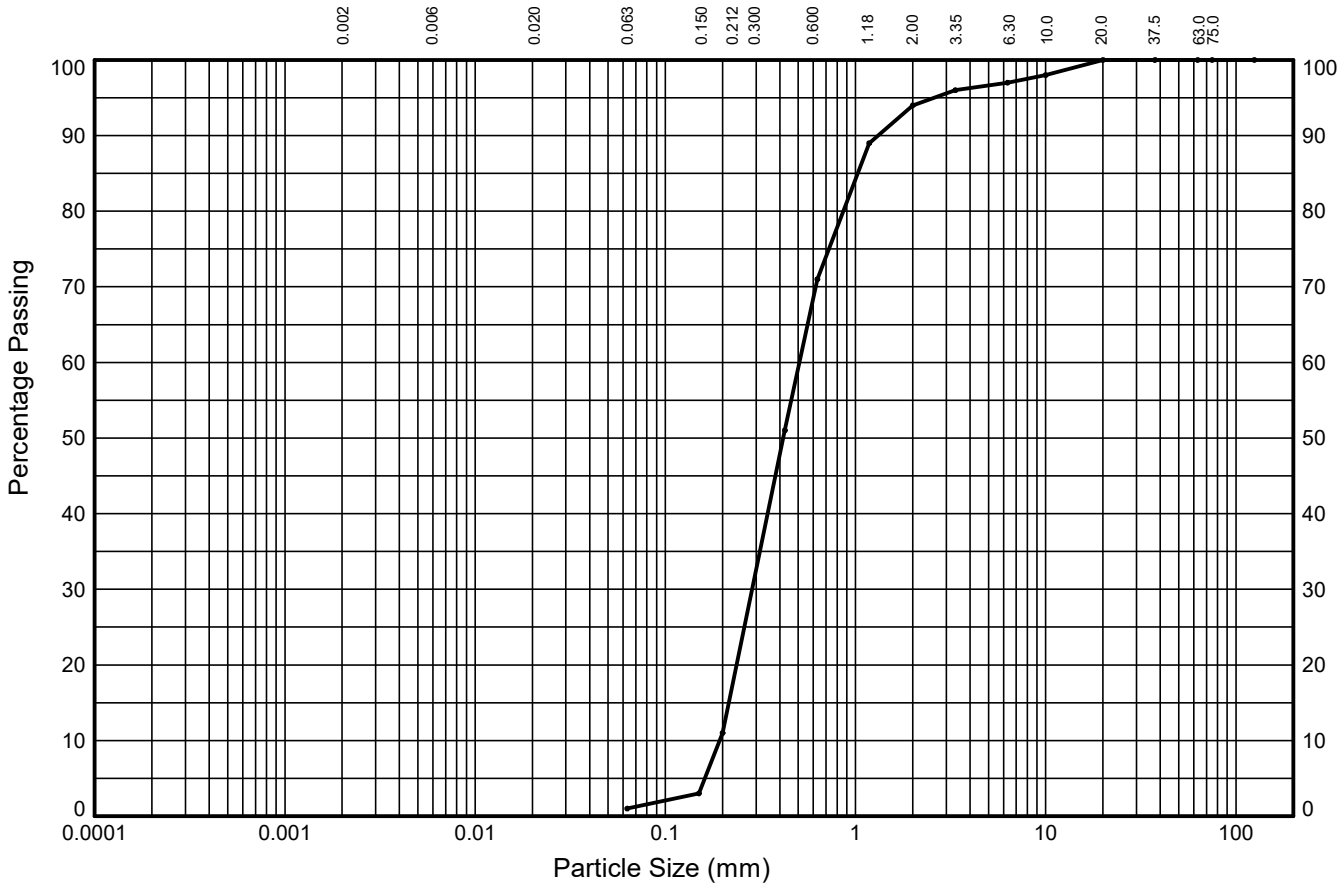
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP222A** Sample Ref: **8** Sample Type: **B** Depth (m): **2.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	10%	60%	23%	3%	3%	0%	
	SILT			SAND			GRAVEL			
1%				93%			6%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**98**
6.30	**97**
3.35	**96**
2.00	**94**
1.18	**89**
0.630	**71**
0.425	**51**
0.200	**11**
0.150	**3**
0.063	**1**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.193**
D_{15} (mm)	**0.216**
D_{30} (mm)	**0.286**
D_{50} (mm)	**0.417**
D_{60} (mm)	**0.507**
D_{85} (mm)	**1.026**
D_{90} (mm)	**1.311**
C_U	**2.6**
C_C	**0.84**

Soil Description:

Orangish brown gravelly slightly silty SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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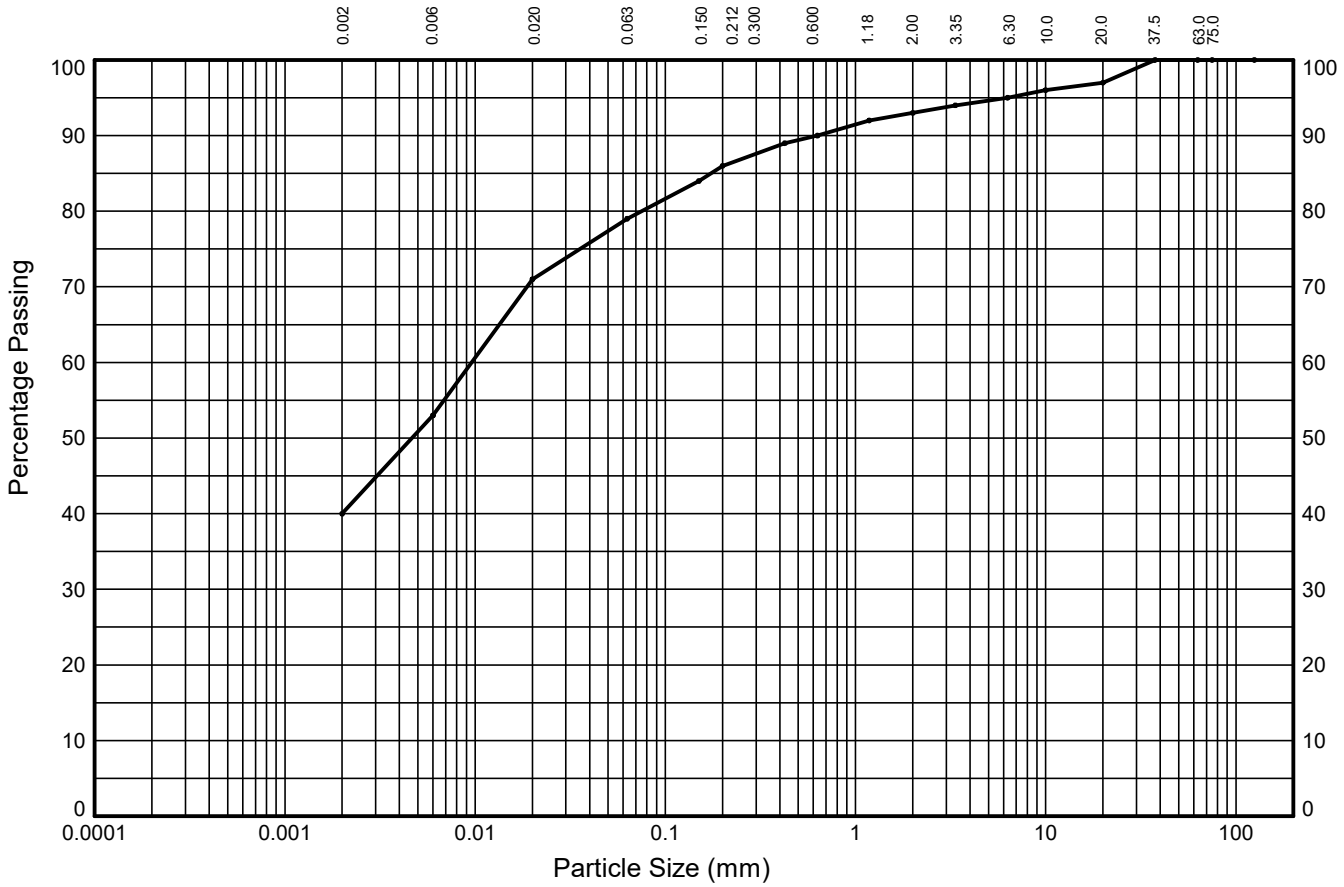
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP229** Sample Ref: **8** Sample Type: **B** Depth (m): **1.10**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	13%	18%	8%	7%	4%	3%	2%	2%	3%	
	SILT			SAND			GRAVEL			
40%	39%			14%			7%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**97**
10.0	**96**
6.30	**95**
3.35	**94**
2.00	**93**
1.18	**92**
0.630	**90**
0.425	**89**
0.200	**86**
0.150	**84**
0.063	**79**

Particle Diameter (mm)	Percent Passing (%)
0.02	**71**
0.006	**53**
0.002	**40**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**0.005**
D_{60} (mm)	**0.010**
D_{85} (mm)	**0.173**
D_{90} (mm)	**0.630**
C_U	**NA**
C_C	**NA**

Soil Description:

Orangish brown mottled white and grey slightly gravelly slightly sandy CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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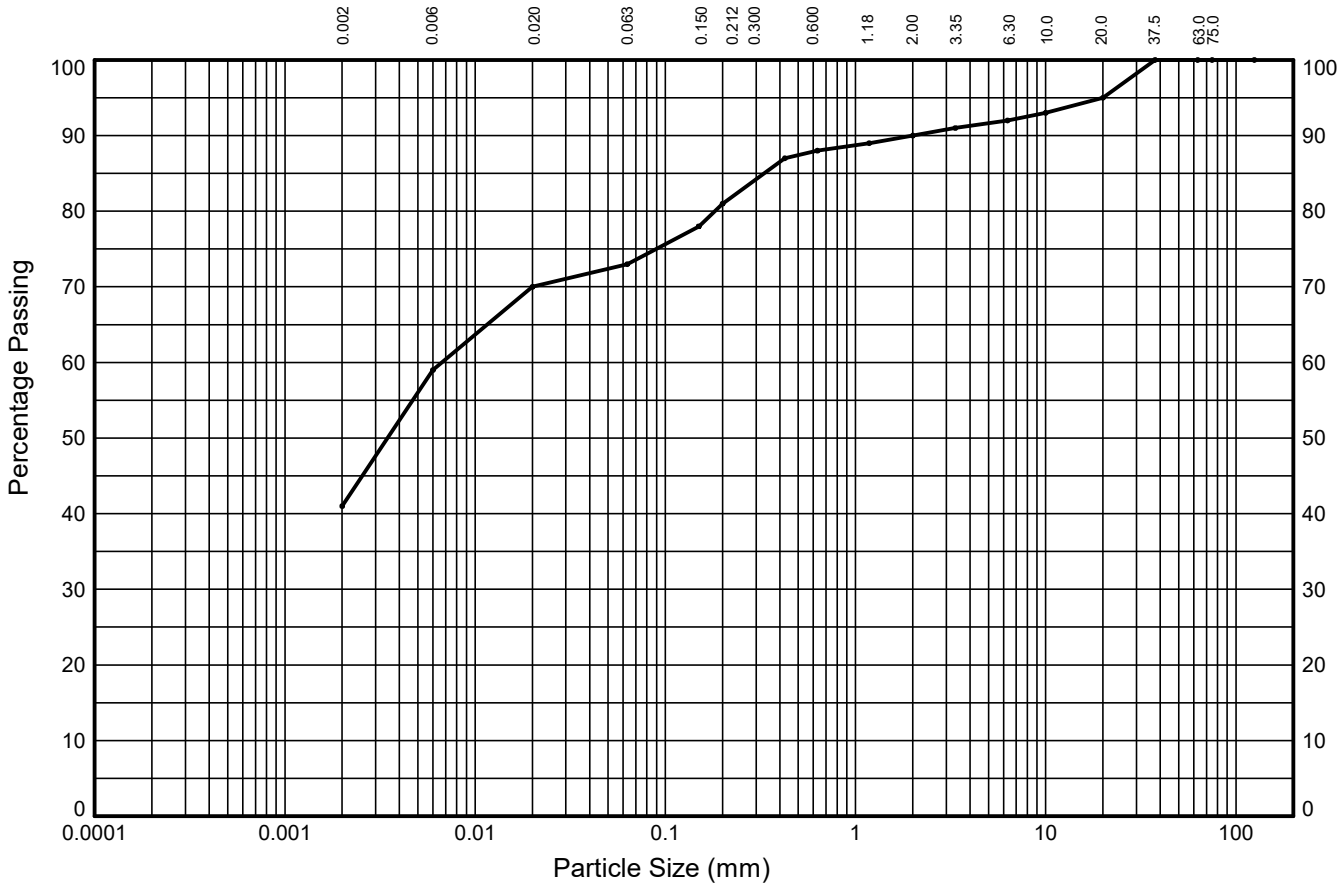
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP310** Sample Ref: **2** Sample Type: **B** Depth (m): **0.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	18%	11%	3%	8%	7%	2%	2%	3%	5%	
	SILT			SAND			GRAVEL			
41%	32%			17%			10%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**95**
10.0	**93**
6.30	**92**
3.35	**91**
2.00	**90**
1.18	**89**
0.630	**88**
0.425	**87**
0.200	**81**
0.150	**78**
0.063	**73**

Particle Diameter (mm)	Percent Passing (%)
0.02	**70**
0.006	**59**
0.002	**41**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**0.003**
D_{60} (mm)	**0.007**
D_{85} (mm)	**0.331**
D_{90} (mm)	**2.000**
C_U	**NA**
C_C	**NA**

Soil Description:

Yellowish brown mottled grey slightly gravelly slightly sandy CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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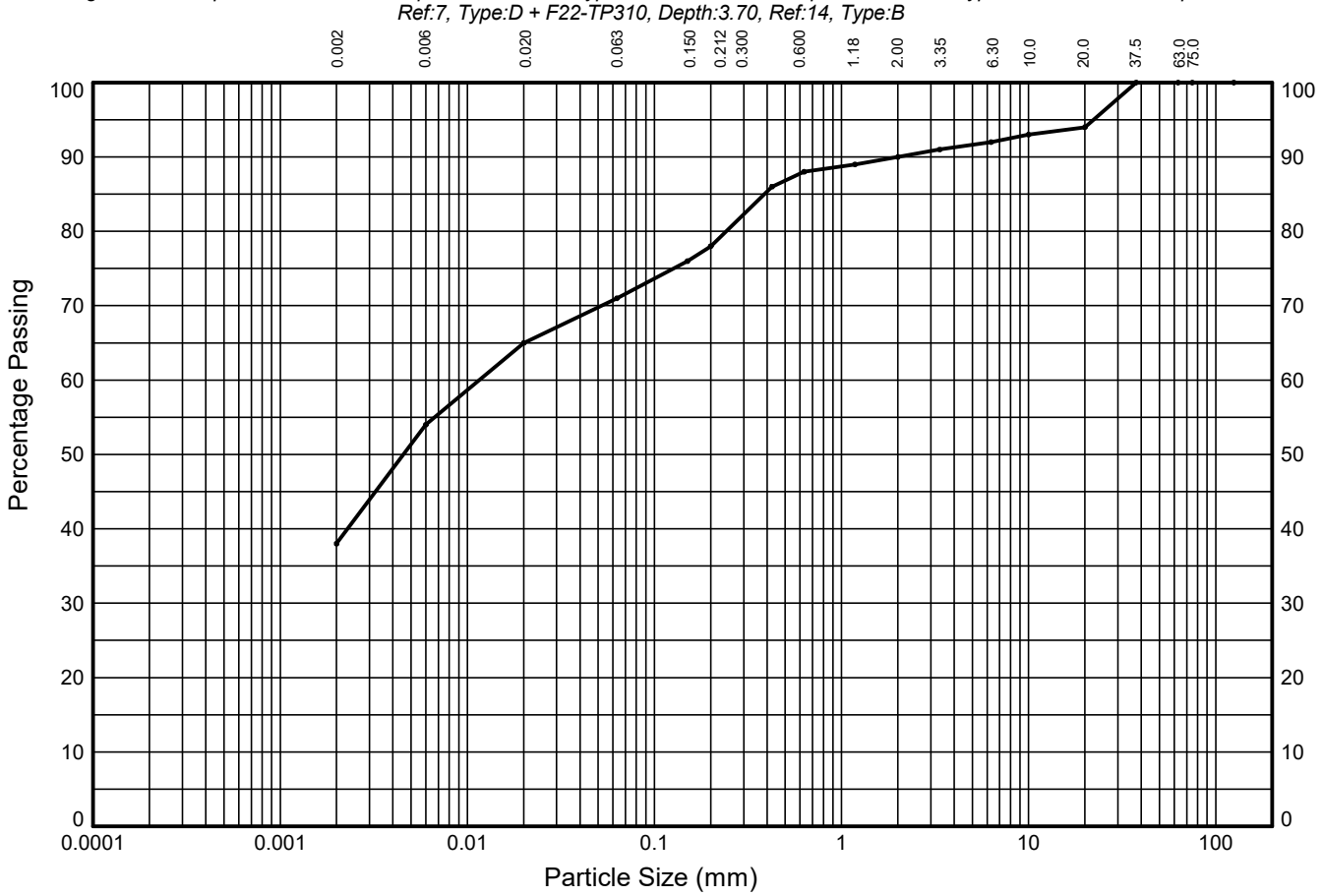
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP310** Sample Ref: Sample Type: **AMAL** Depth (m): **1.70**

Amalgamation comprises: F22-TP310, Depth:1.70, Ref:10, Type:LB + F22-TP310, Depth:0.90, Ref:6, Type:B + F22-TP310, Depth:1.10, Ref:7, Type:D + F22-TP310, Depth:3.70, Ref:14, Type:B



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	16%	11%	6%	7%	10%	2%	2%	2%	6%	
	SILT			SAND			GRAVEL			
38%	33%			19%			10%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**94**
10.0	**93**
6.30	**92**
3.35	**91**
2.00	**90**
1.18	**89**
0.630	**88**
0.425	**86**
0.200	**78**
0.150	**76**
0.063	**71**

Particle Diameter (mm)	Percent Passing (%)
0.02	**65**
0.006	**54**
0.002	**38**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**0.005**
D_{60} (mm)	**0.012**
D_{85} (mm)	**0.387**
D_{90} (mm)	**2.000**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown mottled white and grey slightly gravelly slightly sandy CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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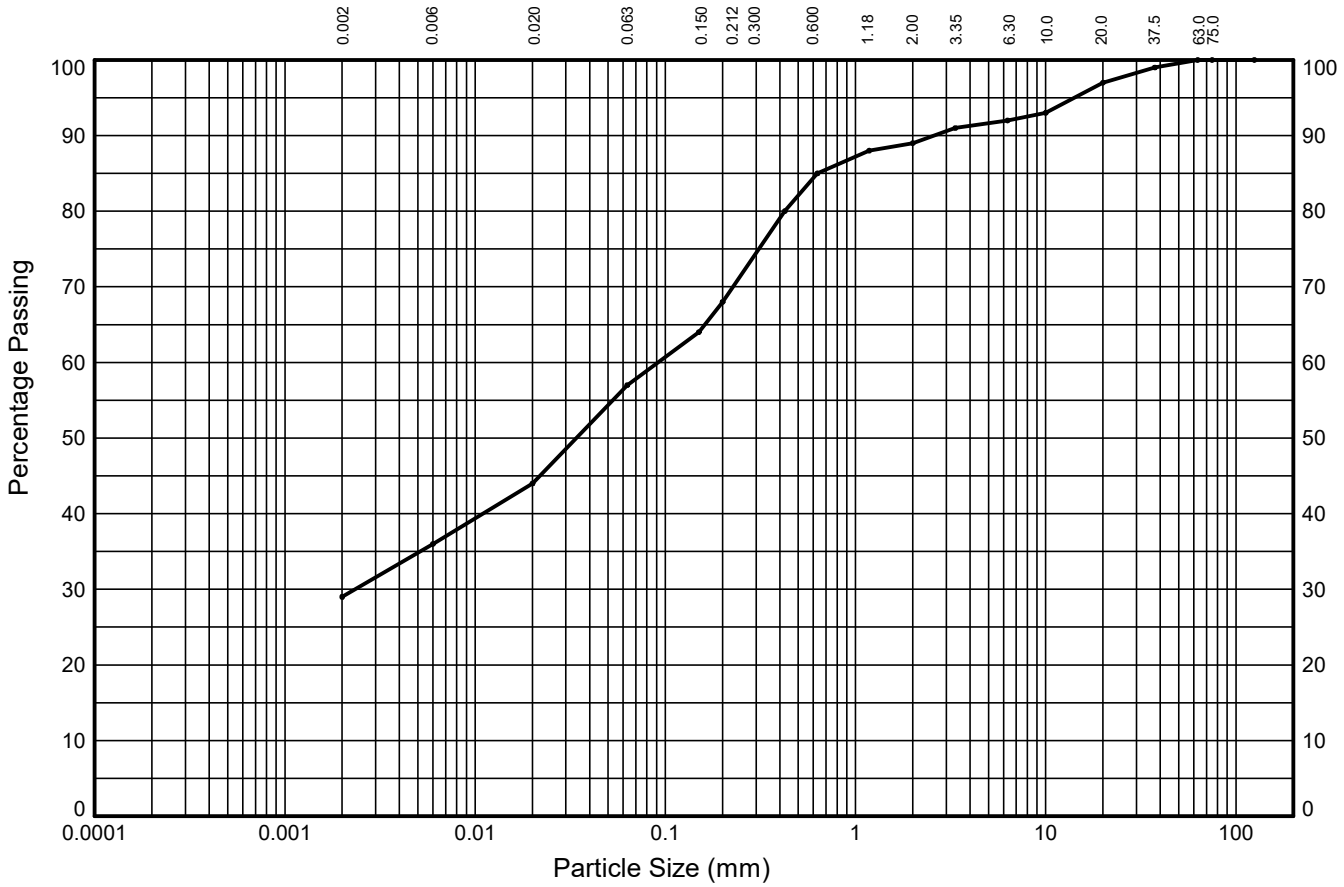
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP311** Sample Ref: Sample Type: **AMAL** Depth (m): **0.70**

Amalgamation comprises: F22-TP311 Depth:0.70 Ref:8 Type:LB + F22-TP311 Depth:0.50 Ref:7 Type:B



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	7%	8%	13%	11%	17%	4%	3%	5%	3%	
	SILT			SAND			GRAVEL			
29%	28%			32%			11%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**99**
20.0	**97**
10.0	**93**
6.30	**92**
3.35	**91**
2.00	**89**
1.18	**88**
0.630	**85**
0.425	**80**
0.200	**68**
0.150	**64**
0.063	**57**

Particle Diameter (mm)	Percent Passing (%)
0.02	**44**
0.006	**36**
0.002	**29**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.002**
D_{50} (mm)	**0.034**
D_{60} (mm)	**0.091**
D_{85} (mm)	**0.630**
D_{90} (mm)	**2.588**
C_U	**NA**
C_C	**NA**

Soil Description:

Orangish brown slightly gravelly slightly sandy CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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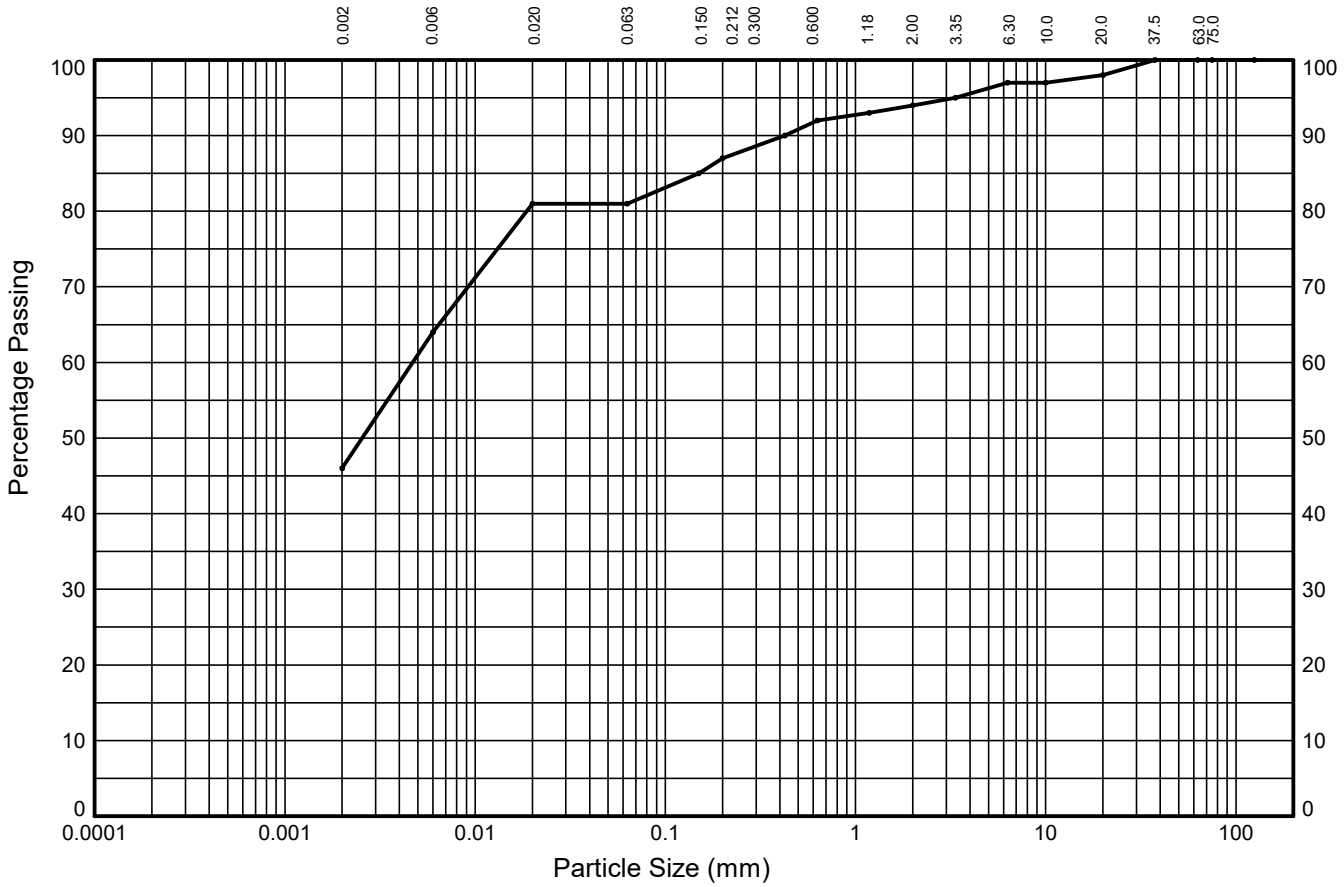
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP311** Sample Ref: **12** Sample Type: **B** Depth (m): **1.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	18%	17%	0%	6%	5%	2%	3%	1%	2%	
	SILT			SAND			GRAVEL			
46%	35%			13%			6%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**98**
10.0	**97**
6.30	**97**
3.35	**95**
2.00	**94**
1.18	**93**
0.630	**92**
0.425	**90**
0.200	**87**
0.150	**85**
0.063	**81**

Particle Diameter (mm)	Percent Passing (%)
0.02	**81**
0.006	**64**
0.002	**46**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**0.003**
D_{60} (mm)	**0.005**
D_{85} (mm)	**0.150**
D_{90} (mm)	**0.425**
C_U	**NA**
C_C	**NA**

Soil Description:

Greyish brown mottled orangish brown and grey slightly gravelly slightly sandy CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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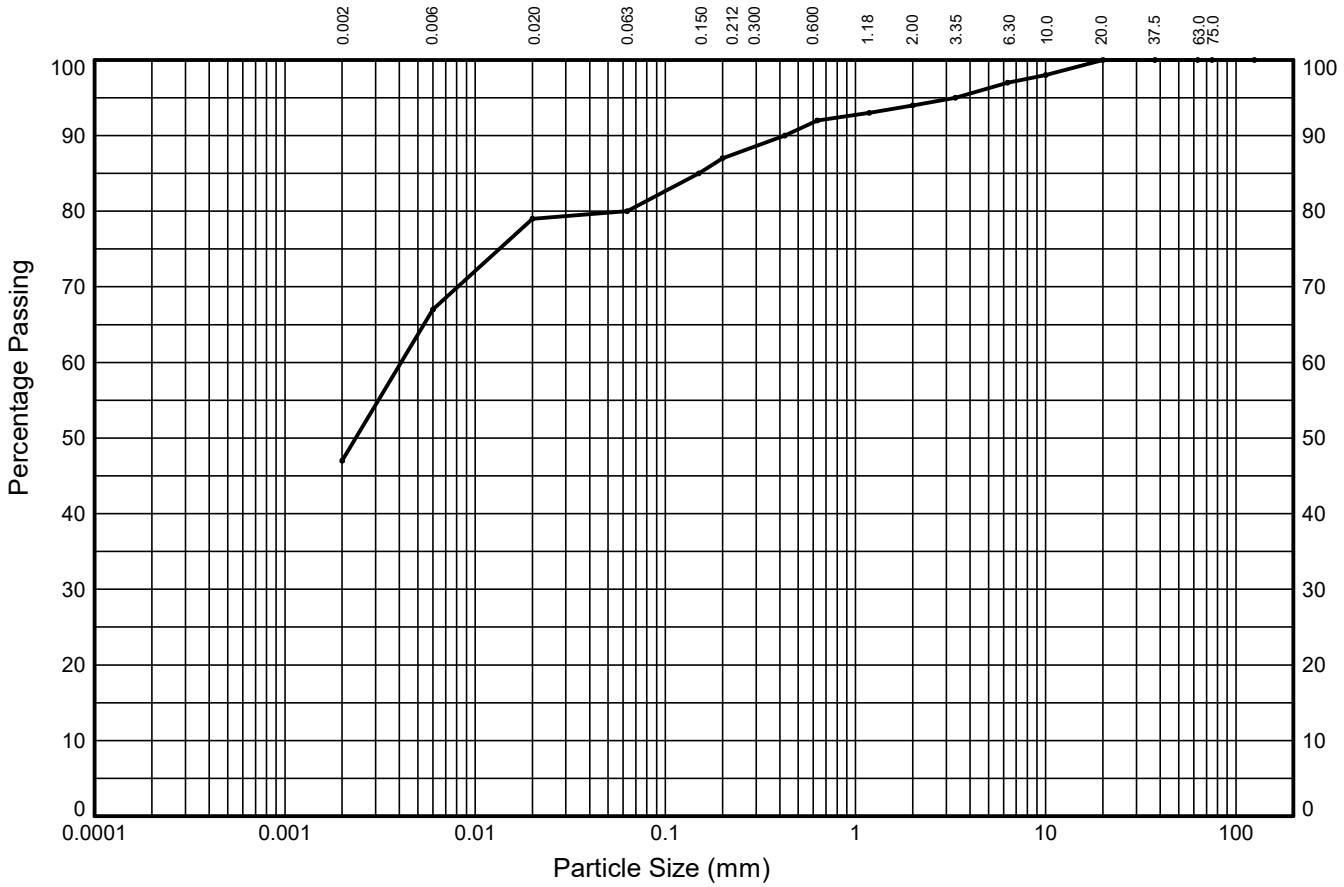
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP312** Sample Ref: **7** Sample Type: **B** Depth (m): **0.90**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	20%	12%	1%	7%	5%	2%	3%	3%	0%	
	SILT			SAND			GRAVEL			
47%	33%			14%			6%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**98**
6.30	**97**
3.35	**95**
2.00	**94**
1.18	**93**
0.630	**92**
0.425	**90**
0.200	**87**
0.150	**85**
0.063	**80**

Particle Diameter (mm)	Percent Passing (%)
0.02	**79**
0.006	**67**
0.002	**47**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**0.002**
D_{60} (mm)	**0.004**
D_{85} (mm)	**0.150**
D_{90} (mm)	**0.425**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown mottled white and grey slightly gravelly slightly sandy CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

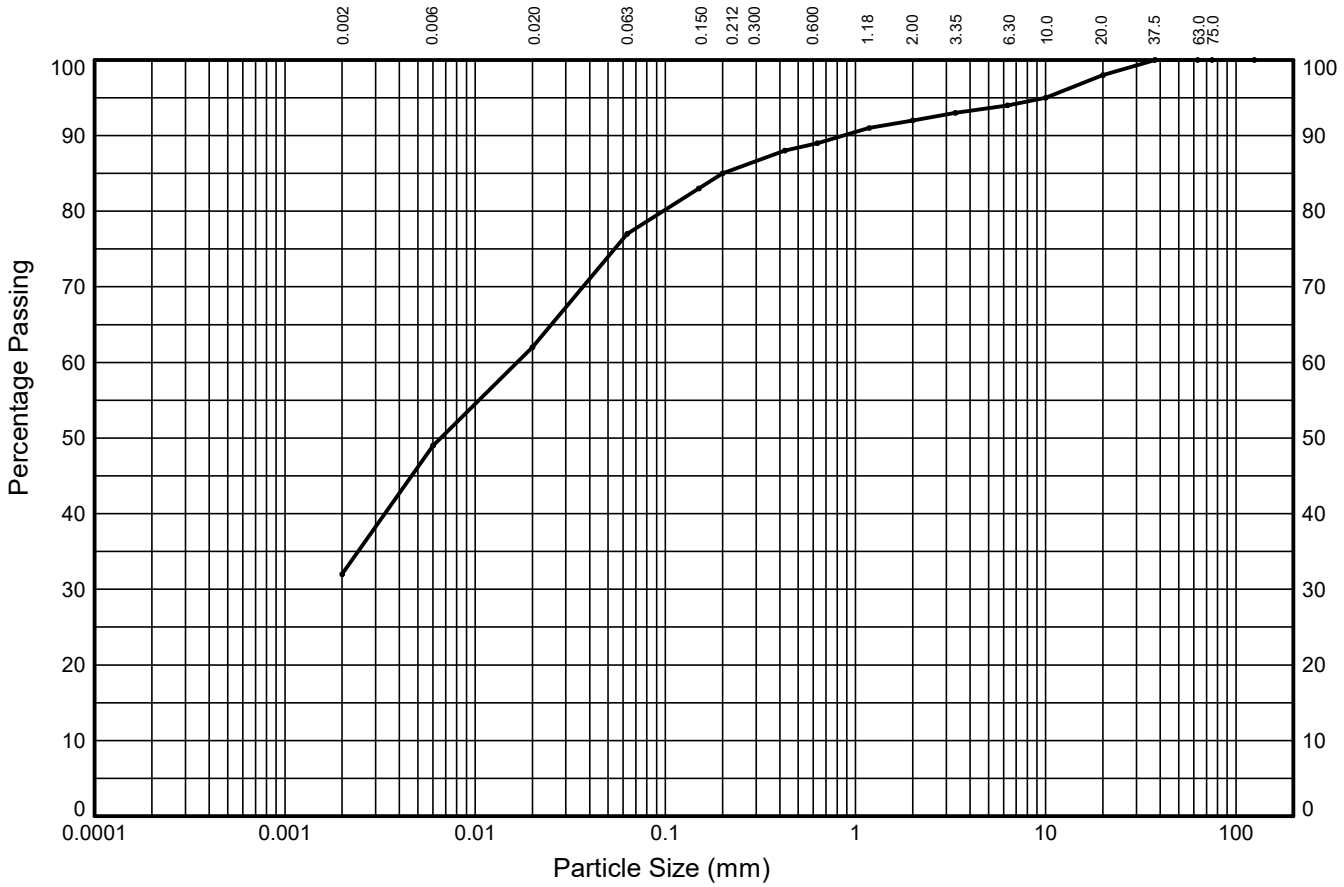
Compiled By		Date
[redacted]	[redacted]	05/03/24
Contract: **Sealink Friston**		Contract Ref: **563835**

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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.3 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP312** Sample Ref: **10** Sample Type: **B** Depth (m): **2.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	17%	13%	15%	8%	4%	3%	2%	4%	2%	
	SILT			SAND			GRAVEL			
32%	45%			15%			8%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**98**
10.0	**95**
6.30	**94**
3.35	**93**
2.00	**92**
1.18	**91**
0.630	**89**
0.425	**88**
0.200	**85**
0.150	**83**
0.063	**77**

Particle Diameter (mm)	Percent Passing (%)
0.02	**62**
0.006	**49**
0.002	**32**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**0.007**
D_{60} (mm)	**0.017**
D_{85} (mm)	**0.200**
D_{90} (mm)	**0.862**
C_U	**NA**
C_C	**NA**

Soil Description:

Bluish grey slightly gravelly slightly sandy silty CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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1a Princess Street
Bedminster
Bristol
BS3 4AG

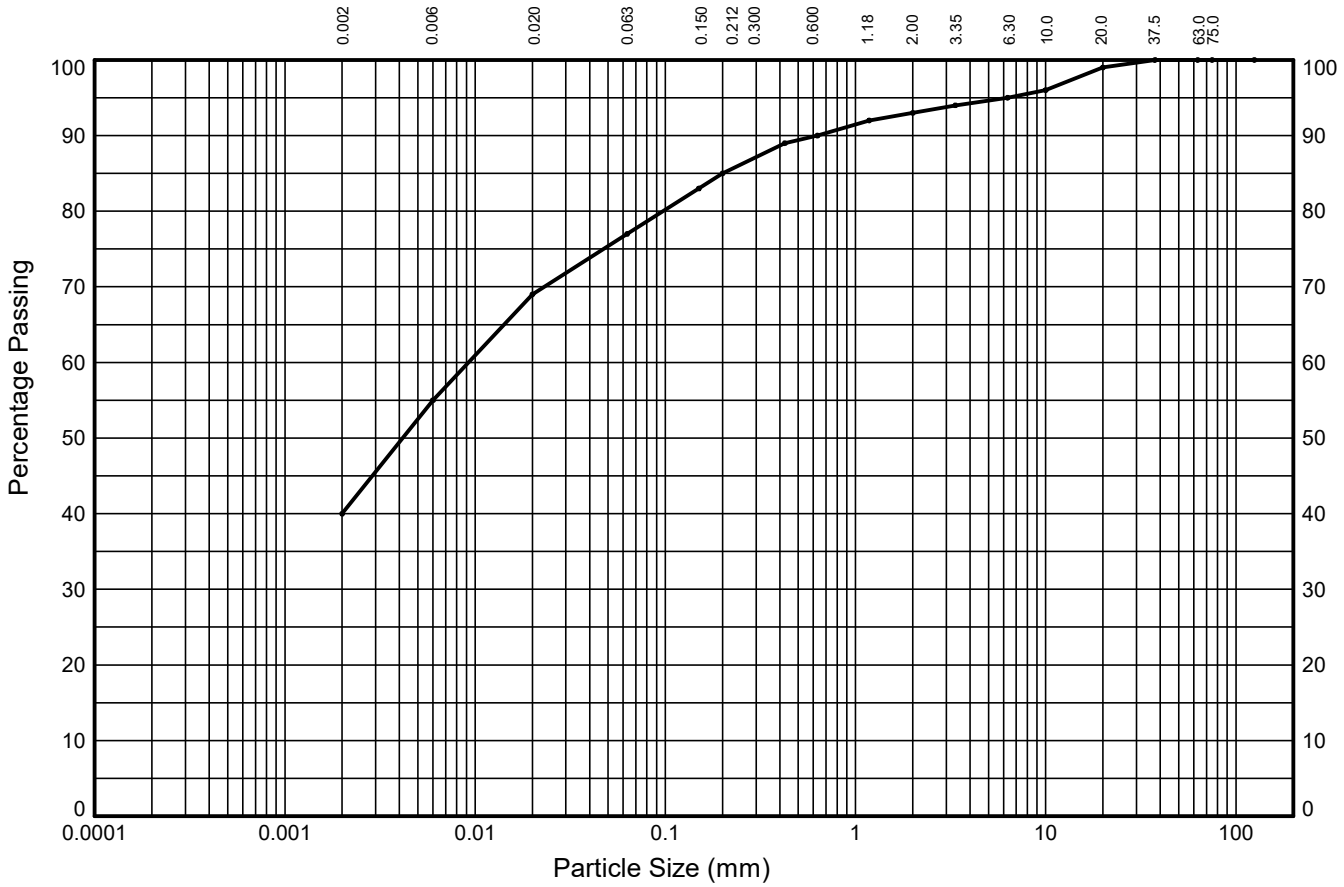
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Contract		Contract Ref:
Sealink Friston		**563835**

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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP313** Sample Ref: **6** Sample Type: **B** Depth (m): **0.90**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	15%	14%	8%	8%	5%	3%	2%	4%	1%	
	SILT			SAND			GRAVEL			
40%	37%			16%			7%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**99**
10.0	**96**
6.30	**95**
3.35	**94**
2.00	**93**
1.18	**92**
0.630	**90**
0.425	**89**
0.200	**85**
0.150	**83**
0.063	**77**

Particle Diameter (mm)	Percent Passing (%)
0.02	**69**
0.006	**55**
0.002	**40**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**0.004**
D_{60} (mm)	**0.009**
D_{85} (mm)	**0.200**
D_{90} (mm)	**0.630**
C_U	**NA**
C_C	**NA**

Soil Description:

Yellowish brown slightly gravelly slightly sandy silty CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By		Date
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Contract: **Sealink Friston**		Contract Ref: **563835**

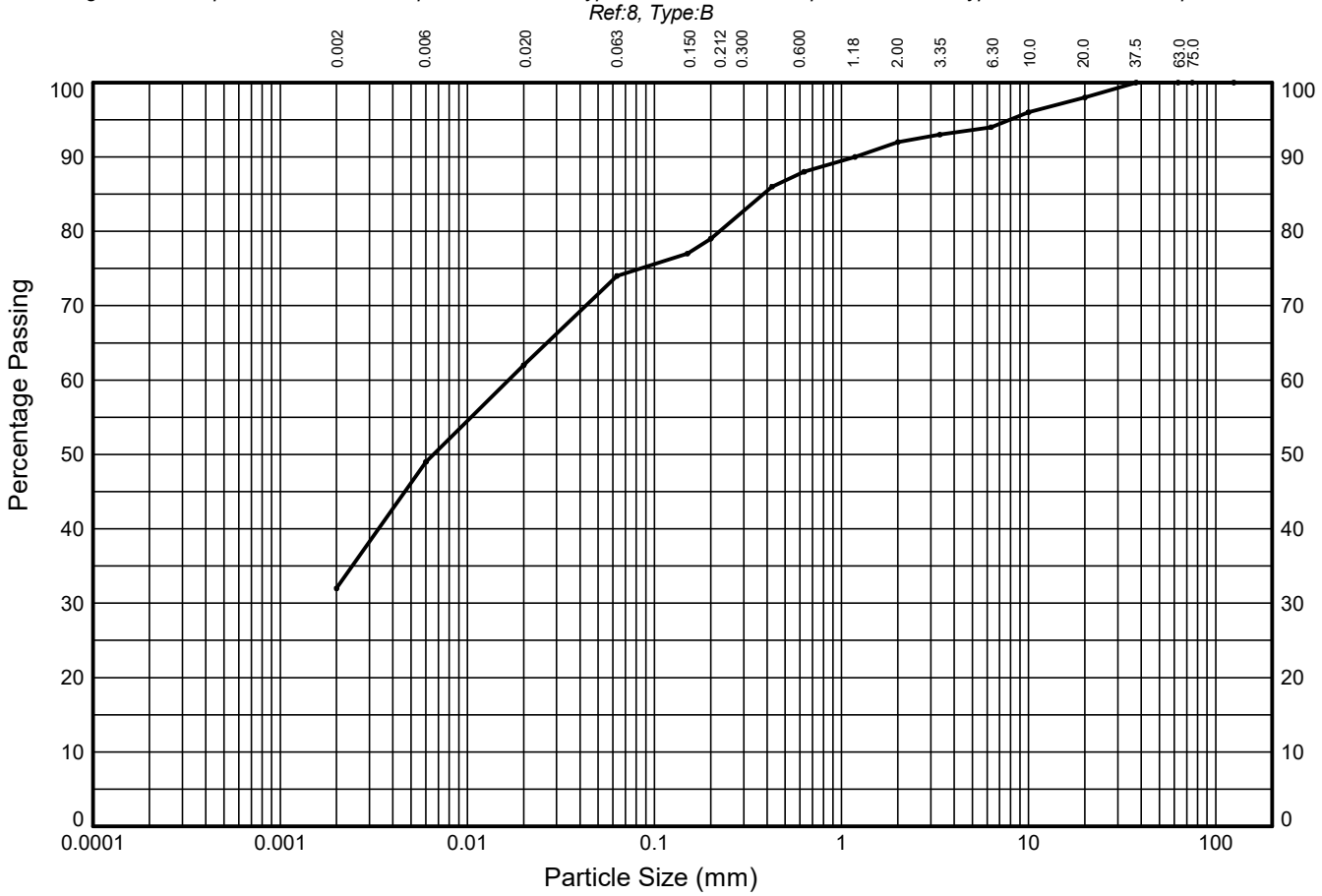
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP313** Sample Ref: Sample Type: **AMAL** Depth (m): **1.80**

Amalgamation comprises: F22-TP313, Depth:1.80, Ref:10, Type:LB + F22-TP313, Depth:0.90, Ref:6, Type:B + F22-TP313, Depth:1.10, Ref:8, Type:B



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	17%	13%	12%	5%	9%	4%	2%	4%	2%	
	SILT			SAND			GRAVEL			
32%	42%			18%			8%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**98**
10.0	**96**
6.30	**94**
3.35	**93**
2.00	**92**
1.18	**90**
0.630	**88**
0.425	**86**
0.200	**79**
0.150	**77**
0.063	**74**

Particle Diameter (mm)	Percent Passing (%)
0.02	**62**
0.006	**49**
0.002	**32**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**0.007**
D_{60} (mm)	**0.017**
D_{85} (mm)	**0.382**
D_{90} (mm)	**1.180**
C_U	**NA**
C_C	**NA**

Soil Description:

Grey slightly gravelly slightly sandy silty CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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The Potteries
Pottery Street
Castleford
W. Yorkshire WF10 1NJ

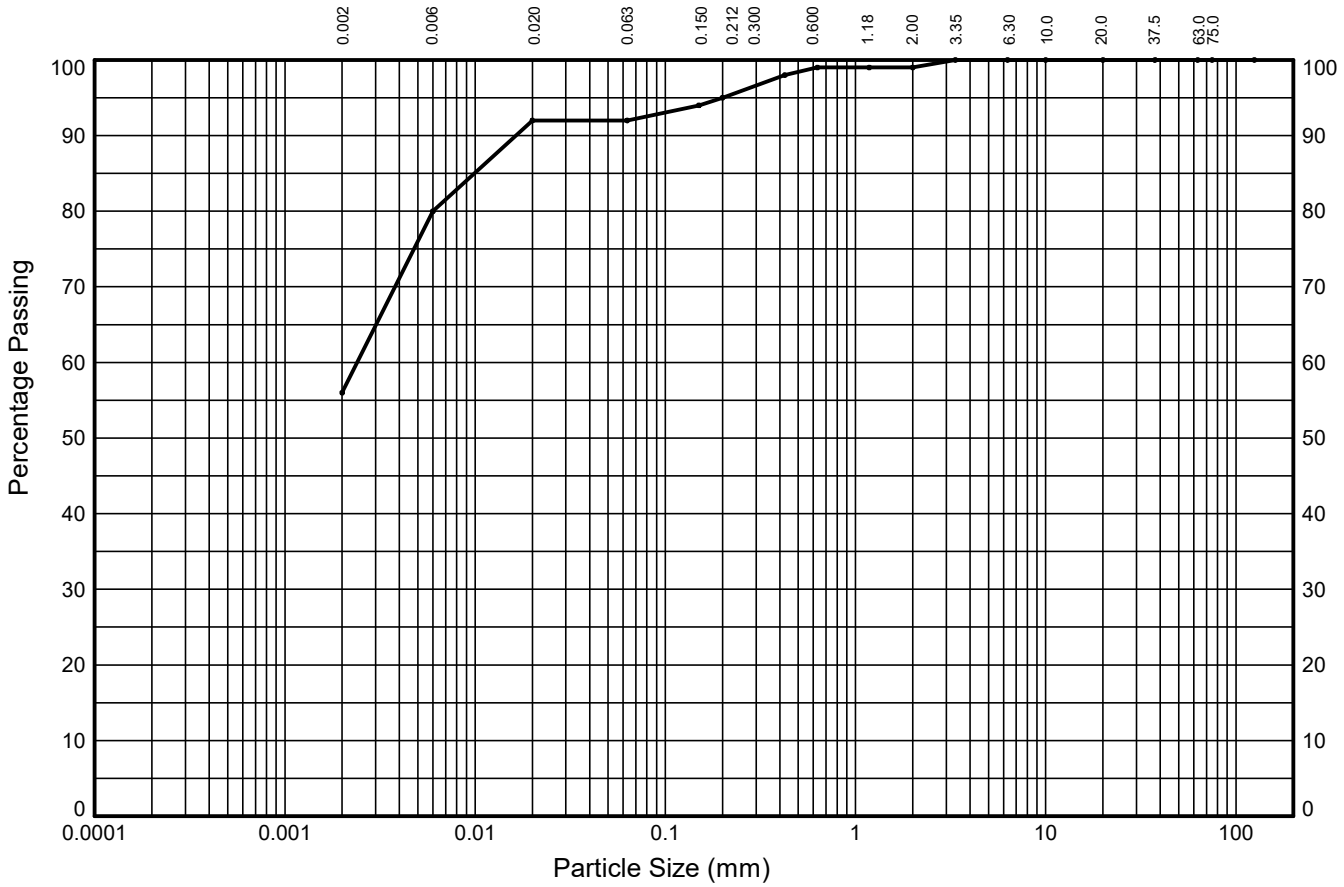
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Contract		Contract Ref:
Sealink Friston		**563835**

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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP314** Sample Ref: **6** Sample Type: **B** Depth (m): **0.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	24%	12%	0%	3%	4%	0%	1%	0%	0%	
	SILT			SAND			GRAVEL			
56%	36%			7%			1%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**100**
3.35	**100**
2.00	**99**
1.18	**99**
0.630	**99**
0.425	**98**
0.200	**95**
0.150	**94**
0.063	**92**

Particle Diameter (mm)	Percent Passing (%)
0.02	**92**
0.006	**80**
0.002	**56**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**NA**
D_{60} (mm)	**0.002**
D_{85} (mm)	**0.010**
D_{90} (mm)	**0.016**
C_U	**NA**
C_C	**NA**

Soil Description:

Greenish brown mottled orangish brown slightly gravelly slightly sandy CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

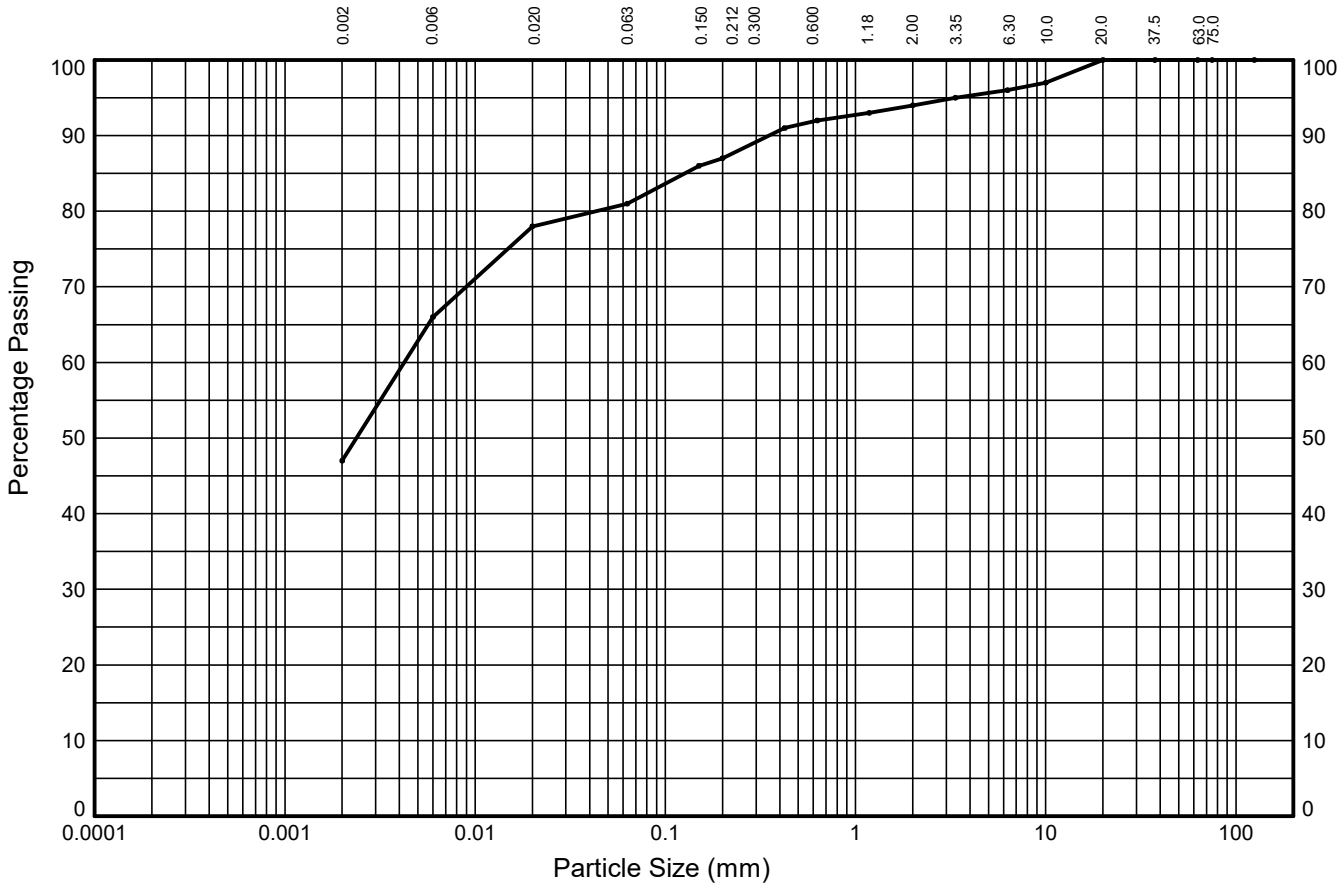
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Contract: **Sealink Friston**		Contract Ref: **563835**

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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP314** Sample Ref: **11** Sample Type: **LB** Depth (m): **1.40**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	19%	12%	3%	6%	5%	2%	2%	4%	0%	
	SILT			SAND			GRAVEL			
47%	34%			13%			6%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**97**
6.30	**96**
3.35	**95**
2.00	**94**
1.18	**93**
0.630	**92**
0.425	**91**
0.200	**87**
0.150	**86**
0.063	**81**

Particle Diameter (mm)	Percent Passing (%)
0.02	**78**
0.006	**66**
0.002	**47**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**0.002**
D_{60} (mm)	**0.004**
D_{85} (mm)	**0.126**
D_{90} (mm)	**0.352**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark brown mottled white slightly gravelly slightly sandy CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

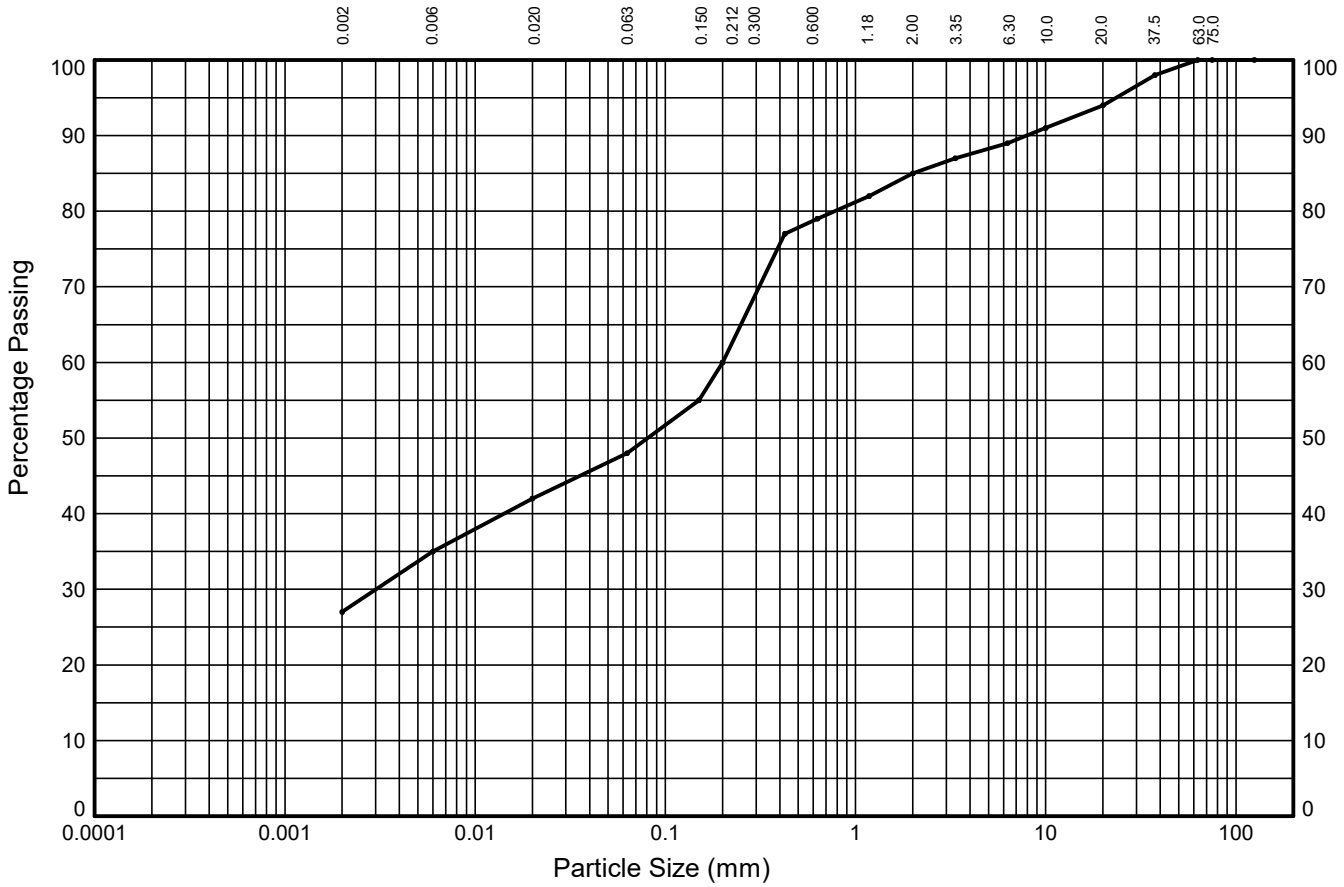
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GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - PSD - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP315** Sample Ref: **4** Sample Type: **B** Depth (m): **0.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	8%	7%	6%	12%	19%	6%	4%	5%	6%	
	SILT			SAND			GRAVEL			
27%	21%			37%			15%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**98**
20.0	**94**
10.0	**91**
6.30	**89**
3.35	**87**
2.00	**85**
1.18	**82**
0.630	**79**
0.425	**77**
0.200	**60**
0.150	**55**
0.063	**48**

Particle Diameter (mm)	Percent Passing (%)
0.02	**42**
0.006	**35**
0.002	**27**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.003**
D_{50} (mm)	**0.081**
D_{60} (mm)	**0.200**
D_{85} (mm)	**2.000**
D_{90} (mm)	**7.937**
C_U	**NA**
C_C	**NA**

Soil Description:

Orangish brown mottled white and black slightly gravelly sandy CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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18 Frogmore Road
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Hertfordshire
HP3 9RT

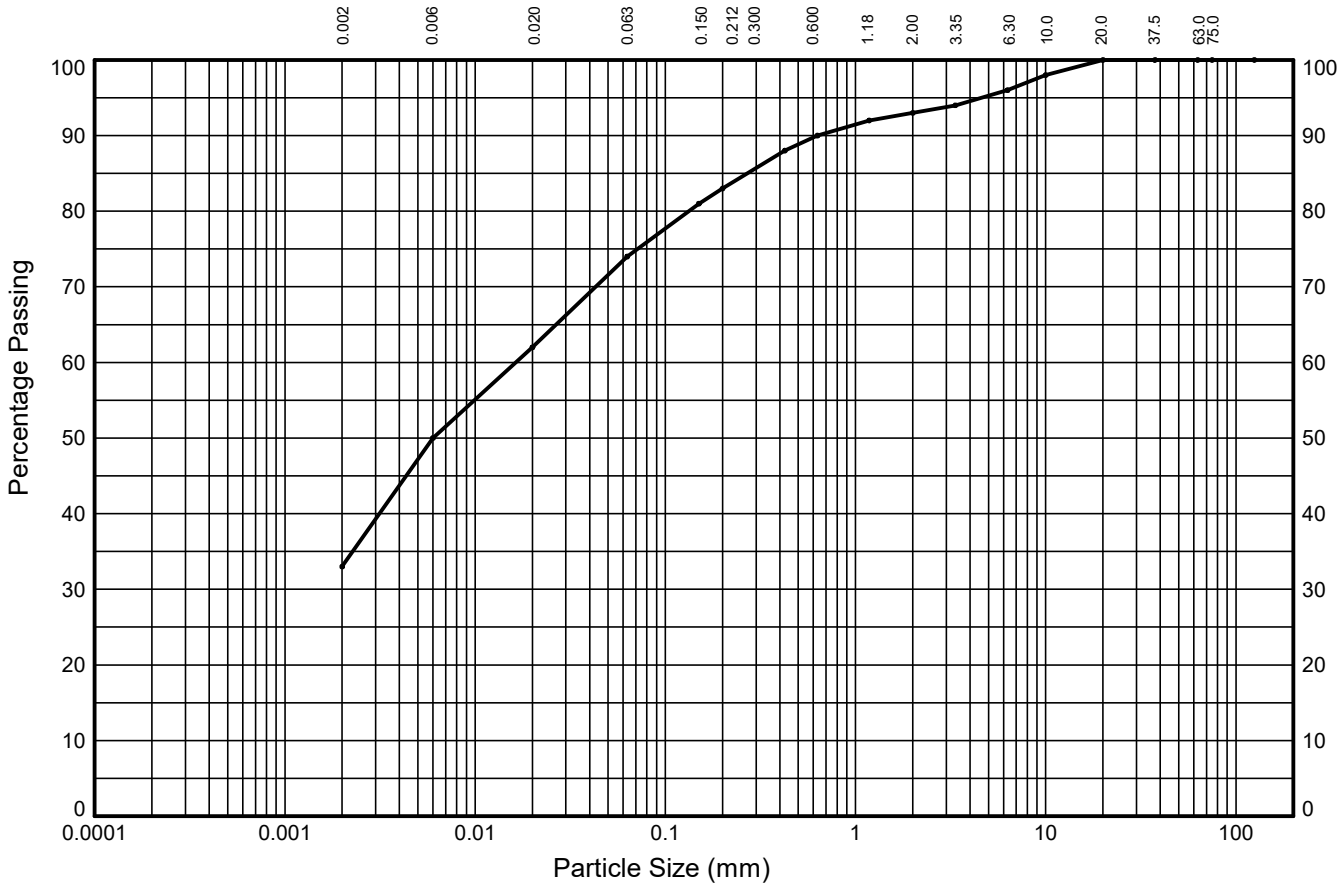
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP315** Sample Ref: **6** Sample Type: **B** Depth (m): **0.90**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	17%	12%	12%	9%	7%	3%	3%	4%	0%	
	SILT			SAND			GRAVEL			
33%	41%			19%			7%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**98**
6.30	**96**
3.35	**94**
2.00	**93**
1.18	**92**
0.630	**90**
0.425	**88**
0.200	**83**
0.150	**81**
0.063	**74**

Particle Diameter (mm)	Percent Passing (%)
0.02	**62**
0.006	**50**
0.002	**33**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**0.006**
D_{60} (mm)	**0.016**
D_{85} (mm)	**0.270**
D_{90} (mm)	**0.630**
C_U	**NA**
C_C	**NA**

Soil Description:

Orangish brown slightly gravelly slightly sandy silty CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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Hertfordshire
HP3 9RT

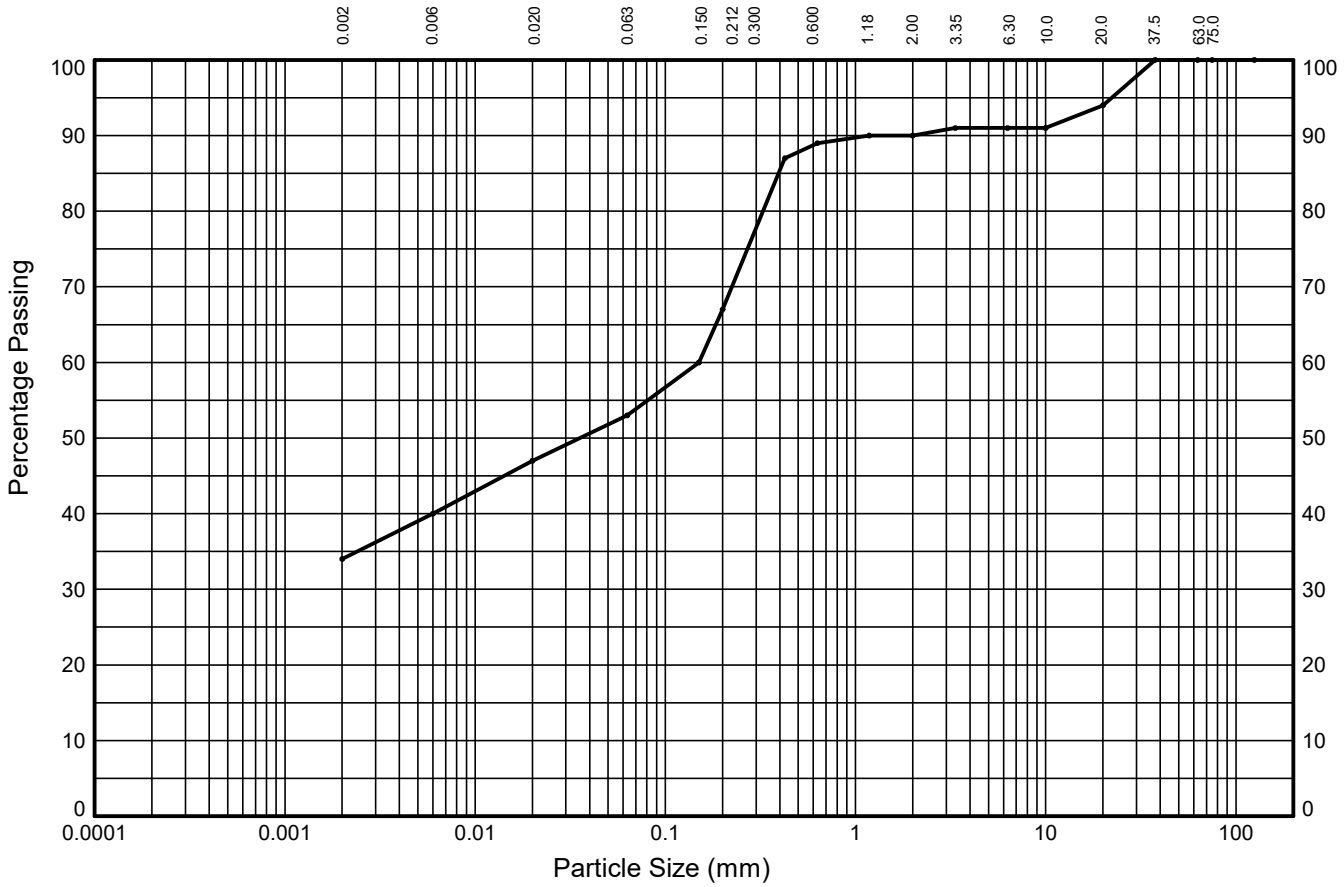
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Contract: **Sealink Friston**		Contract Ref: **563835**

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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP316** Sample Ref: **2** Sample Type: **B** Depth (m): **0.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	6%	7%	6%	14%	22%	1%	1%	3%	6%	
	SILT			SAND			GRAVEL			
34%	19%			37%			10%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**94**
10.0	**91**
6.30	**91**
3.35	**91**
2.00	**90**
1.18	**90**
0.630	**89**
0.425	**87**
0.200	**67**
0.150	**60**
0.063	**53**

Particle Diameter (mm)	Percent Passing (%)
0.02	**47**
0.006	**40**
0.002	**34**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**0.035**
D_{60} (mm)	**0.150**
D_{85} (mm)	**0.394**
D_{90} (mm)	**1.180**
C_U	**NA**
C_C	**NA**

Soil Description:

Orangish brown slightly gravelly sandy CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
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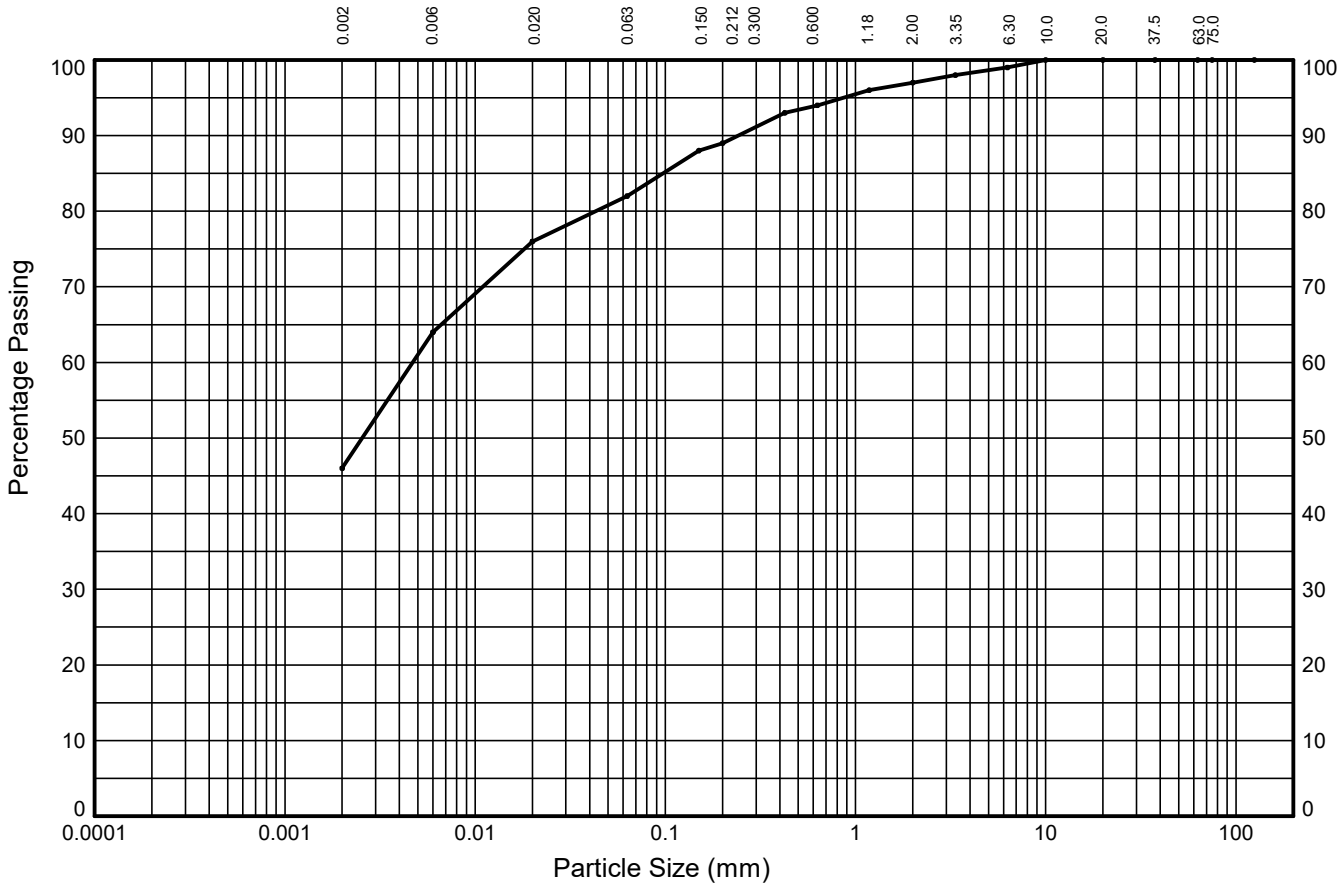
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Contract: **Sealink Friston**		Contract Ref: **563835**

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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP316** Sample Ref: **8** Sample Type: **B** Depth (m): **1.10**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	18%	12%	6%	7%	5%	3%	2%	1%	0%	
	SILT			SAND			GRAVEL			
46%	36%			15%			3%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**99**
3.35	**98**
2.00	**97**
1.18	**96**
0.630	**94**
0.425	**93**
0.200	**89**
0.150	**88**
0.063	**82**

Particle Diameter (mm)	Percent Passing (%)
0.02	**76**
0.006	**64**
0.002	**46**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**0.003**
D_{60} (mm)	**0.005**
D_{85} (mm)	**0.097**
D_{90} (mm)	**0.241**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark brown mottled white and dark grey slightly gravelly slightly sandy CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

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[redacted]	[redacted]	05/03/24
Contract: **Sealink Friston**		Contract Ref: **563835**

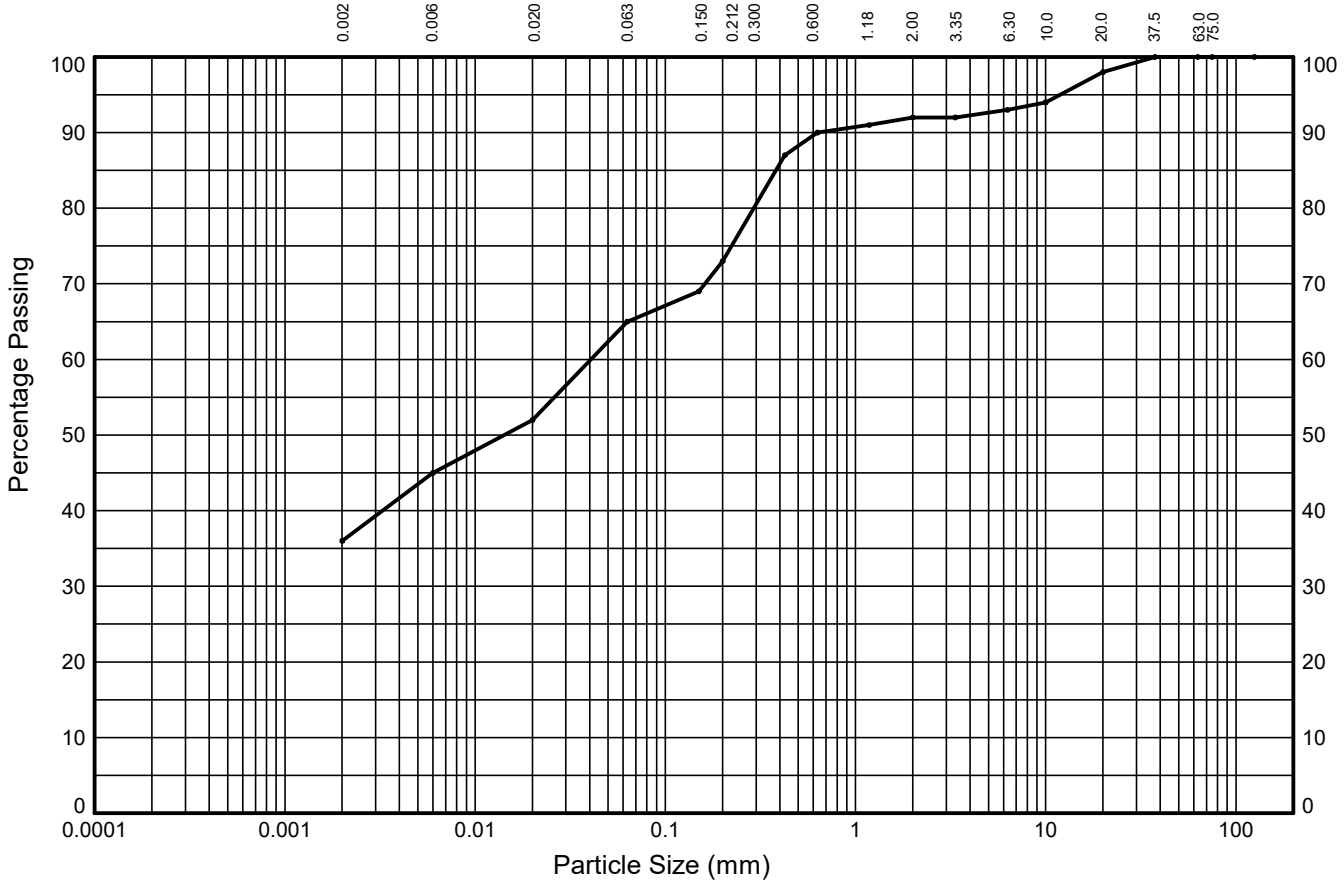
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP317** Sample Ref: Sample Type: **AMAL** Depth (m): **0.50**

Amalgamation comprises: F22-TP317, Depth:0.50, Ref:5, Type:LB + F22-TP317, Depth:0.50, Ref:3, Type:B + F22-TP317, Depth:0.70, Ref:6, Type:B + F22-TP317, Depth:2.00, Ref:11, Type:B



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	9%	7%	13%	8%	17%	2%	1%	5%	2%	
	SILT			SAND			GRAVEL			
36%	29%			27%			8%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**98**
10.0	**94**
6.30	**93**
3.35	**92**
2.00	**92**
1.18	**91**
0.630	**90**
0.425	**87**
0.200	**73**
0.150	**69**
0.063	**65**

Particle Diameter (mm)	Percent Passing (%)
0.02	**52**
0.006	**45**
0.002	**36**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**0.014**
D_{60} (mm)	**0.041**
D_{85} (mm)	**0.382**
D_{90} (mm)	**0.630**
C_U	**NA**
C_C	**NA**

Soil Description:

Greenish brown mottled orangish brown slightly gravelly slightly sandy CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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The Potteries
Pottery Street
Castleford
W. Yorkshire WF10 1NJ

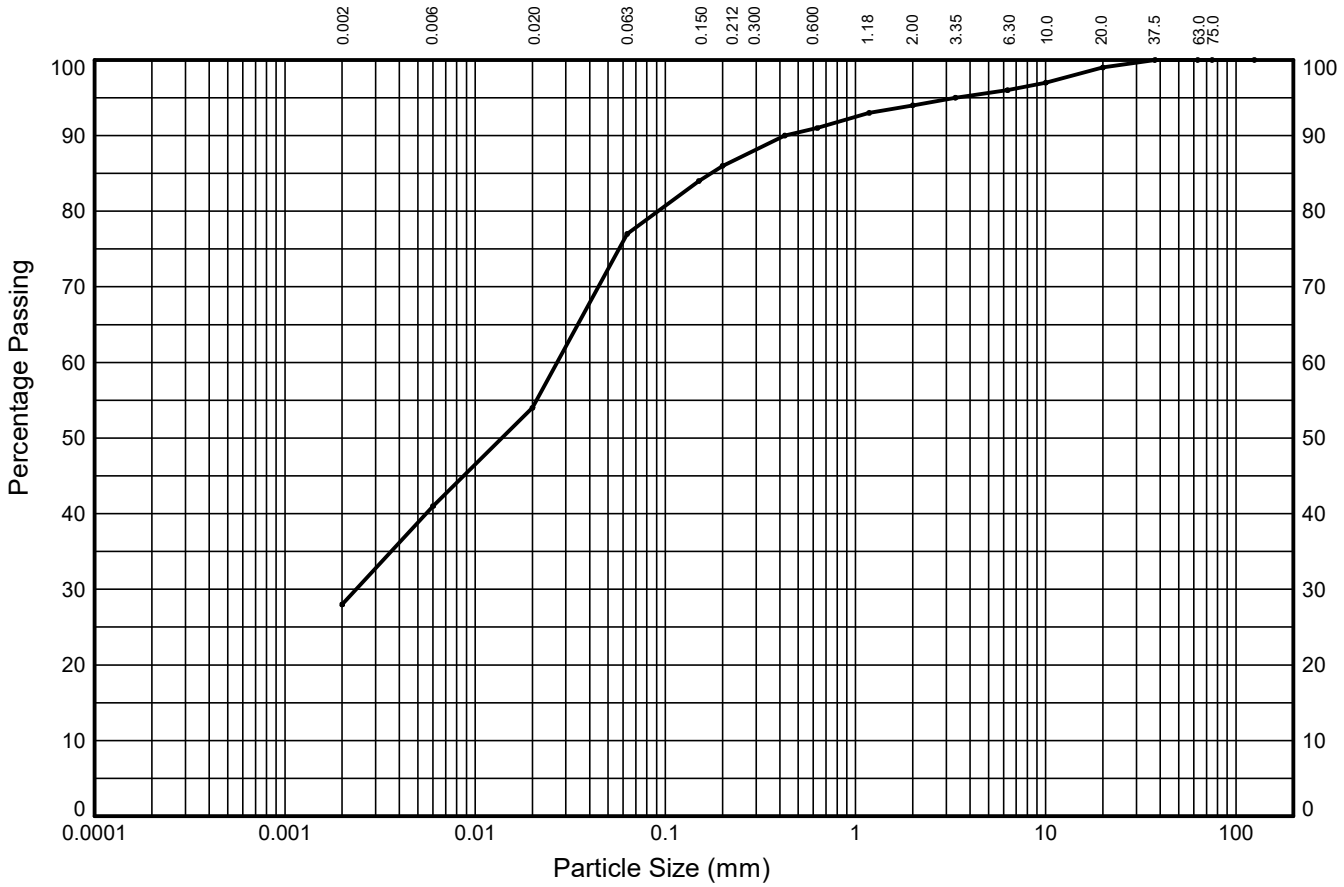
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Contract		Contract Ref:
Sealink Friston		**563835**

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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP317** Sample Ref: **13** Sample Type: **B** Depth (m): **3.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	13%	13%	23%	9%	5%	3%	2%	3%	1%	
	SILT			SAND			GRAVEL			
28%	49%			17%			6%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**99**
10.0	**97**
6.30	**96**
3.35	**95**
2.00	**94**
1.18	**93**
0.630	**91**
0.425	**90**
0.200	**86**
0.150	**84**
0.063	**77**

Particle Diameter (mm)	Percent Passing (%)
0.02	**54**
0.006	**41**
0.002	**28**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.002**
D_{50} (mm)	**0.014**
D_{60} (mm)	**0.027**
D_{85} (mm)	**0.173**
D_{90} (mm)	**0.425**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark grey mottled greenish brown slightly gravelly slightly sandy silty CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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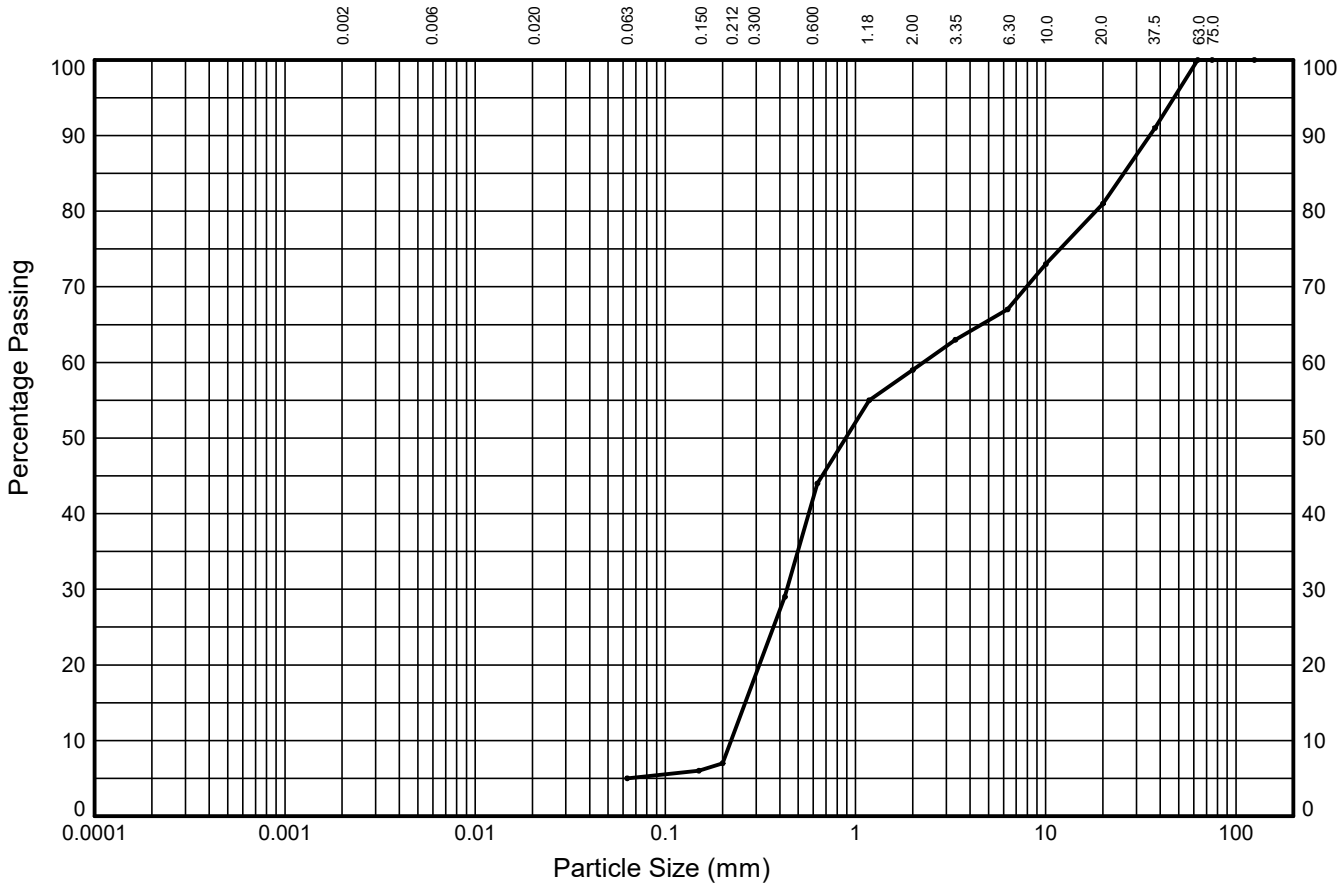
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Contract: **Sealink Friston**		Contract Ref: **563835**

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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP404** Sample Ref: **5** Sample Type: **B** Depth (m): **1.00**



CLAY										
	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	2%	37%	15%	8%	14%	19%	
	SILT			SAND			GRAVEL			
5%				54%			41%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**91**
20.0	**81**
10.0	**73**
6.30	**67**
3.35	**63**
2.00	**59**
1.18	**55**
0.630	**44**
0.425	**29**
0.200	**7**
0.150	**6**
0.063	**5**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.222**
D_{15} (mm)	**0.263**
D_{30} (mm)	**0.436**
D_{50} (mm)	**0.887**
D_{60} (mm)	**2.275**
D_{85} (mm)	**25.718**
D_{90} (mm)	**35.215**
C_U	**10**
C_C	**0.38**

Soil Description:

Dark brown very gravelly clayey SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By		Date
[redacted]	[redacted]	05/03/24

Contract	Contract Ref:
Sealink Friston	**563835**

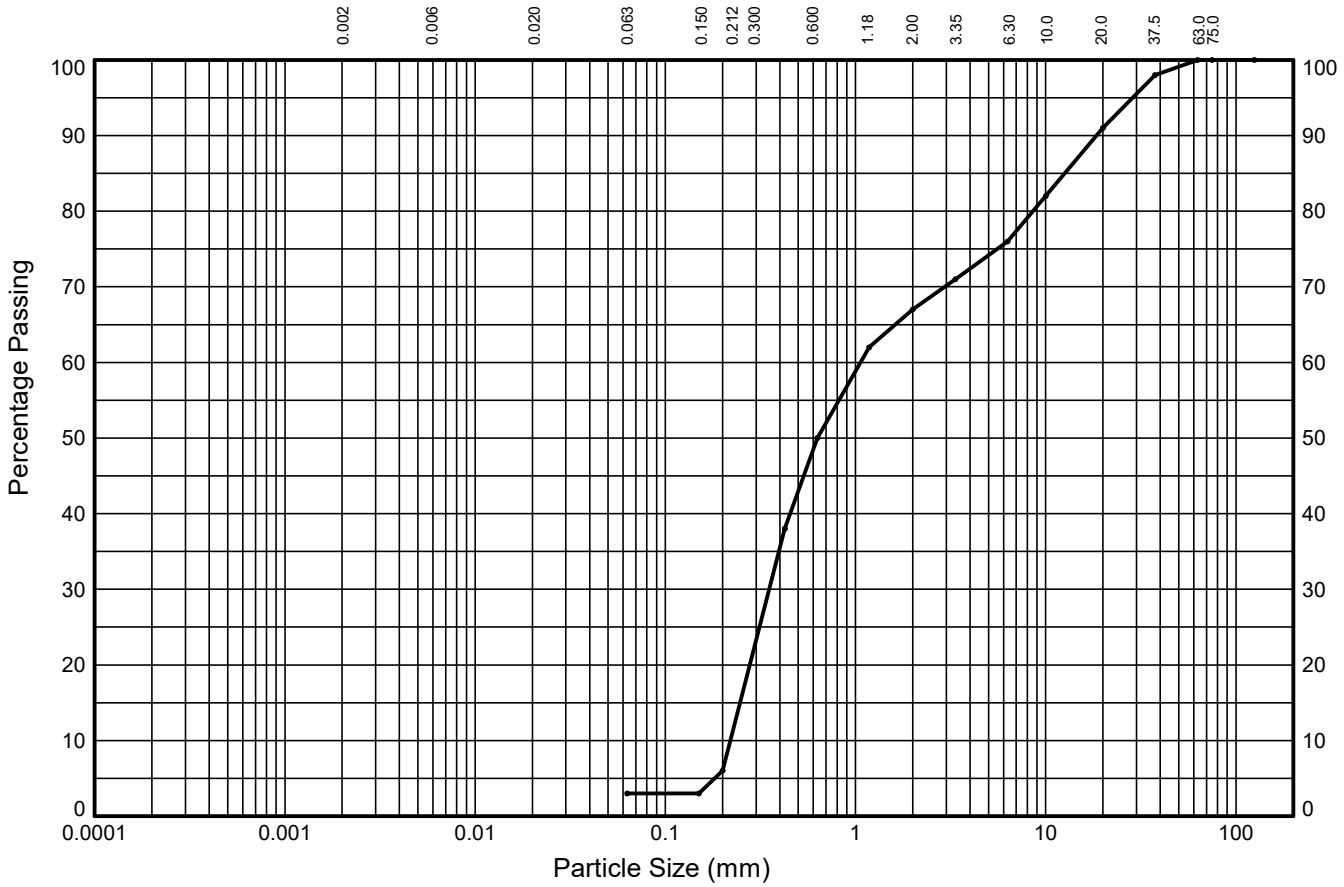
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP404** Sample Ref: **8** Sample Type: **B** Depth (m): **2.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	3%	44%	17%	9%	15%	9%	
	SILT			SAND			GRAVEL			
3%				64%			33%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**98**
20.0	**91**
10.0	**82**
6.30	**76**
3.35	**71**
2.00	**67**
1.18	**62**
0.630	**50**
0.425	**38**
0.200	**6**
0.150	**3**
0.063	**3**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.220**
D_{15} (mm)	**0.247**
D_{30} (mm)	**0.352**
D_{50} (mm)	**0.630**
D_{60} (mm)	**1.063**
D_{85} (mm)	**12.599**
D_{90} (mm)	**18.517**
C_U	**4.8**
C_C	**0.53**

Soil Description:

Orangish brown very gravelly slightly clayey SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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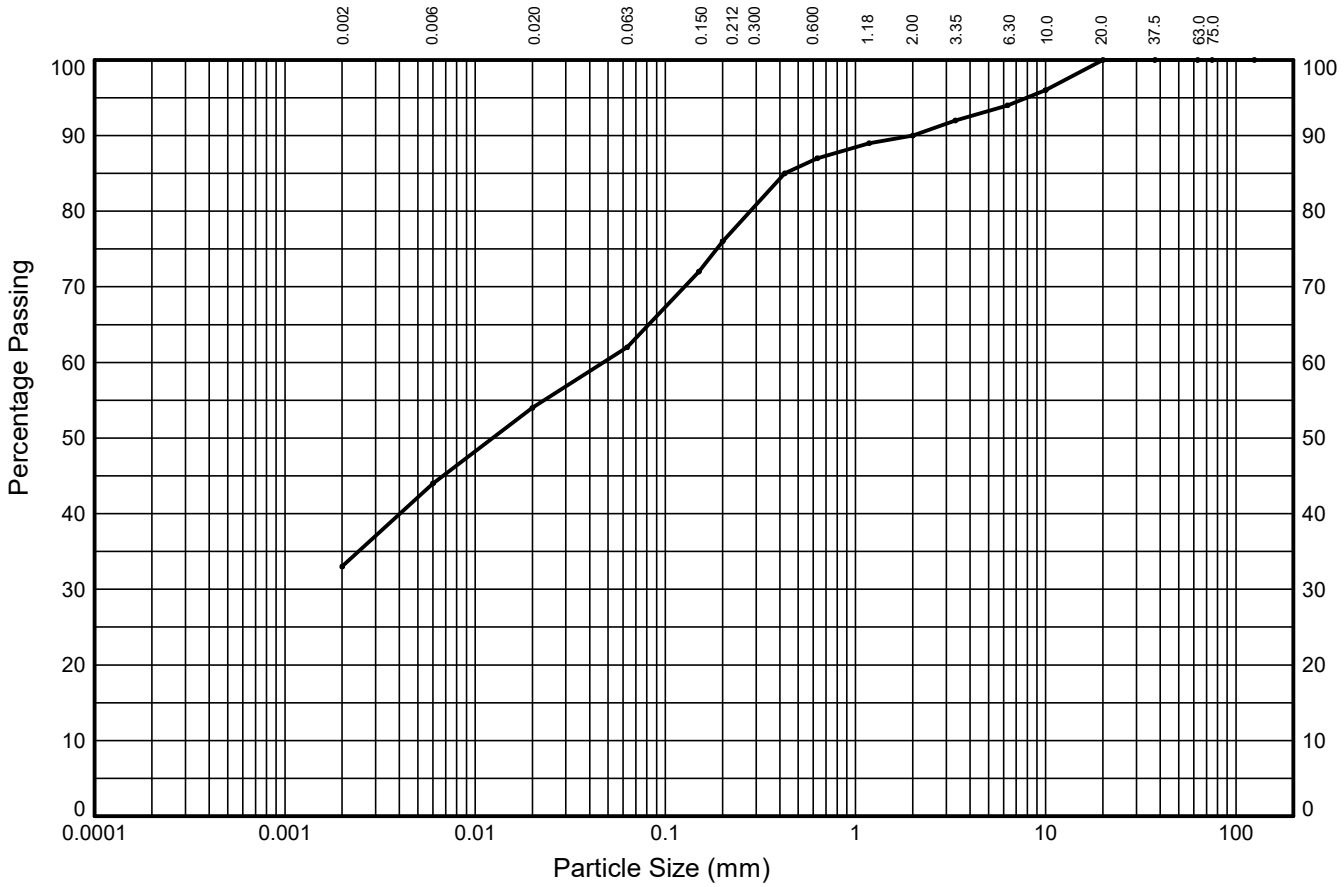
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Contract: **Sealink Friston**		Contract Ref: **563835**

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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP406** Sample Ref: **4** Sample Type: **B** Depth (m): **0.70**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	11%	10%	8%	14%	11%	3%	4%	6%	0%	
	SILT			SAND			GRAVEL			
33%	29%			28%			10%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**96**
6.30	**94**
3.35	**92**
2.00	**90**
1.18	**89**
0.630	**87**
0.425	**85**
0.200	**76**
0.150	**72**
0.063	**62**

Particle Diameter (mm)	Percent Passing (%)
0.02	**54**
0.006	**44**
0.002	**33**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**0.012**
D_{60} (mm)	**0.047**
D_{85} (mm)	**0.425**
D_{90} (mm)	**2.000**
C_U	**NA**
C_C	**NA**

Soil Description:

Light brown mottled orangish brown, black and white slightly gravelly slightly sandy CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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18 Frogmore Road
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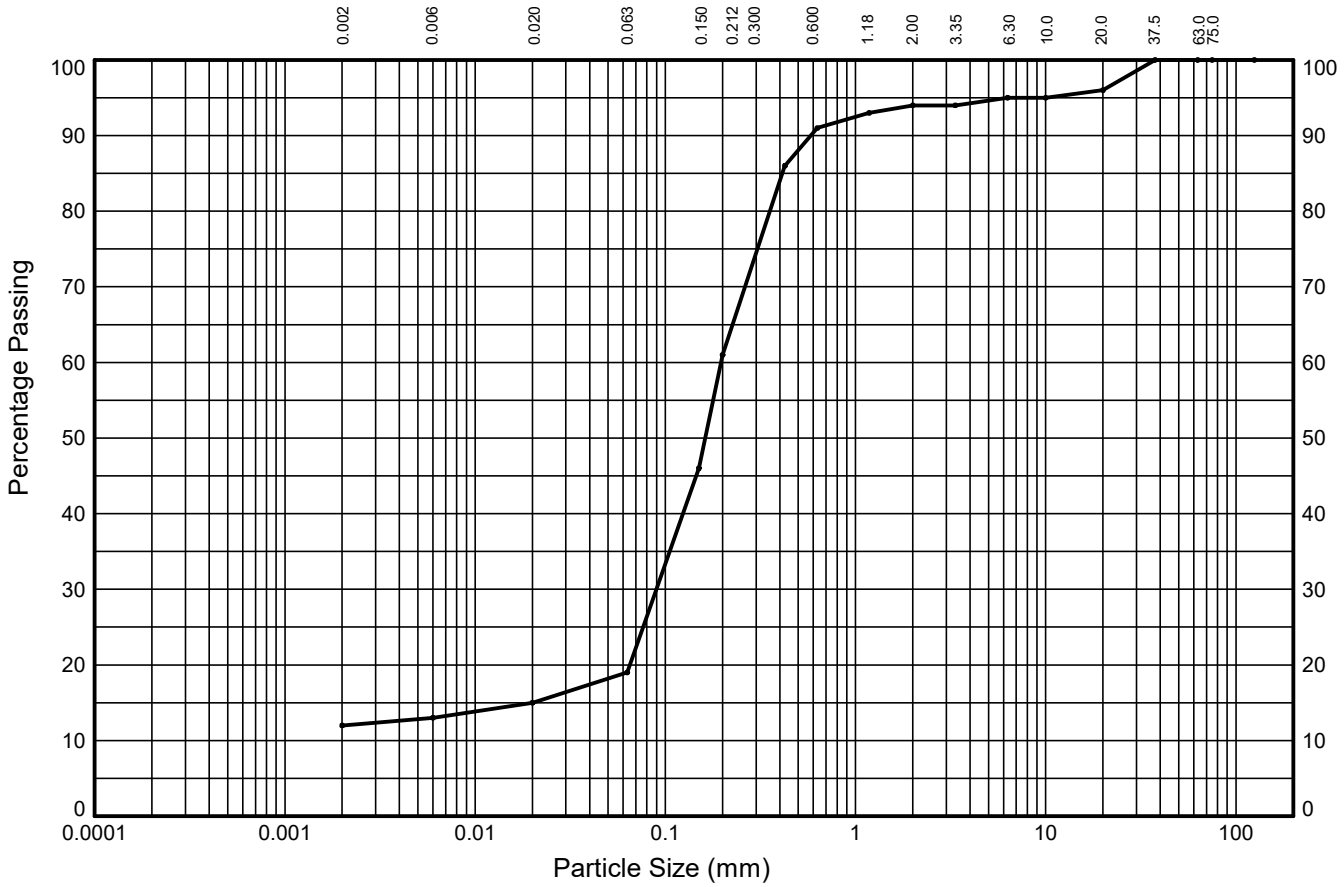
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP511** Sample Ref: **5** Sample Type: **B** Depth (m): **1.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	1%	2%	4%	42%	30%	3%	1%	1%	4%	
	SILT			SAND			GRAVEL			
12%	7%			75%			6%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**96**
10.0	**95**
6.30	**95**
3.35	**94**
2.00	**94**
1.18	**93**
0.630	**91**
0.425	**86**
0.200	**61**
0.150	**46**
0.063	**19**

Particle Diameter (mm)	Percent Passing (%)
0.02	**15**
0.006	**13**
0.002	**12**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**0.020**
D_{30} (mm)	**0.090**
D_{50} (mm)	**0.162**
D_{60} (mm)	**0.196**
D_{85} (mm)	**0.412**
D_{90} (mm)	**0.582**
C_U	**NA**
C_C	**NA**

Soil Description:

Orangish brown gravelly clayey SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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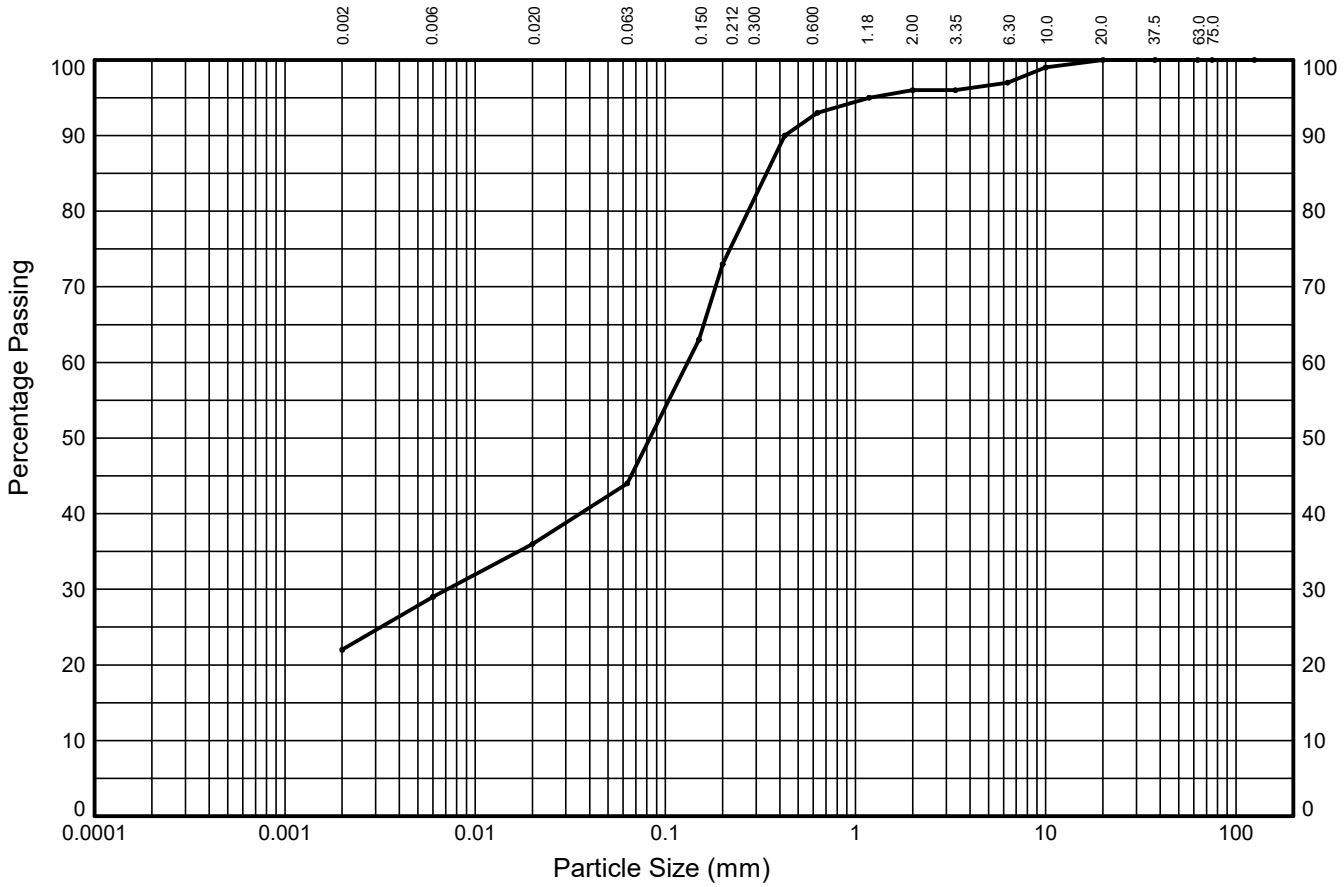
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Contract: **Sealink Friston**		Contract Ref: **563835**

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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP511** Sample Ref: **10** Sample Type: **B** Depth (m): **3.20**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	7%	7%	8%	29%	20%	3%	1%	3%	0%	
	SILT			SAND			GRAVEL			
22%	22%			52%			4%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**99**
6.30	**97**
3.35	**96**
2.00	**96**
1.18	**95**
0.630	**93**
0.425	**90**
0.200	**73**
0.150	**63**
0.063	**44**

Particle Diameter (mm)	Percent Passing (%)
0.02	**36**
0.006	**29**
0.002	**22**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.007**
D_{50} (mm)	**0.083**
D_{60} (mm)	**0.131**
D_{85} (mm)	**0.340**
D_{90} (mm)	**0.425**
C_U	**NA**
C_C	**NA**

Soil Description:

Greenish brown slightly gravelly sandy CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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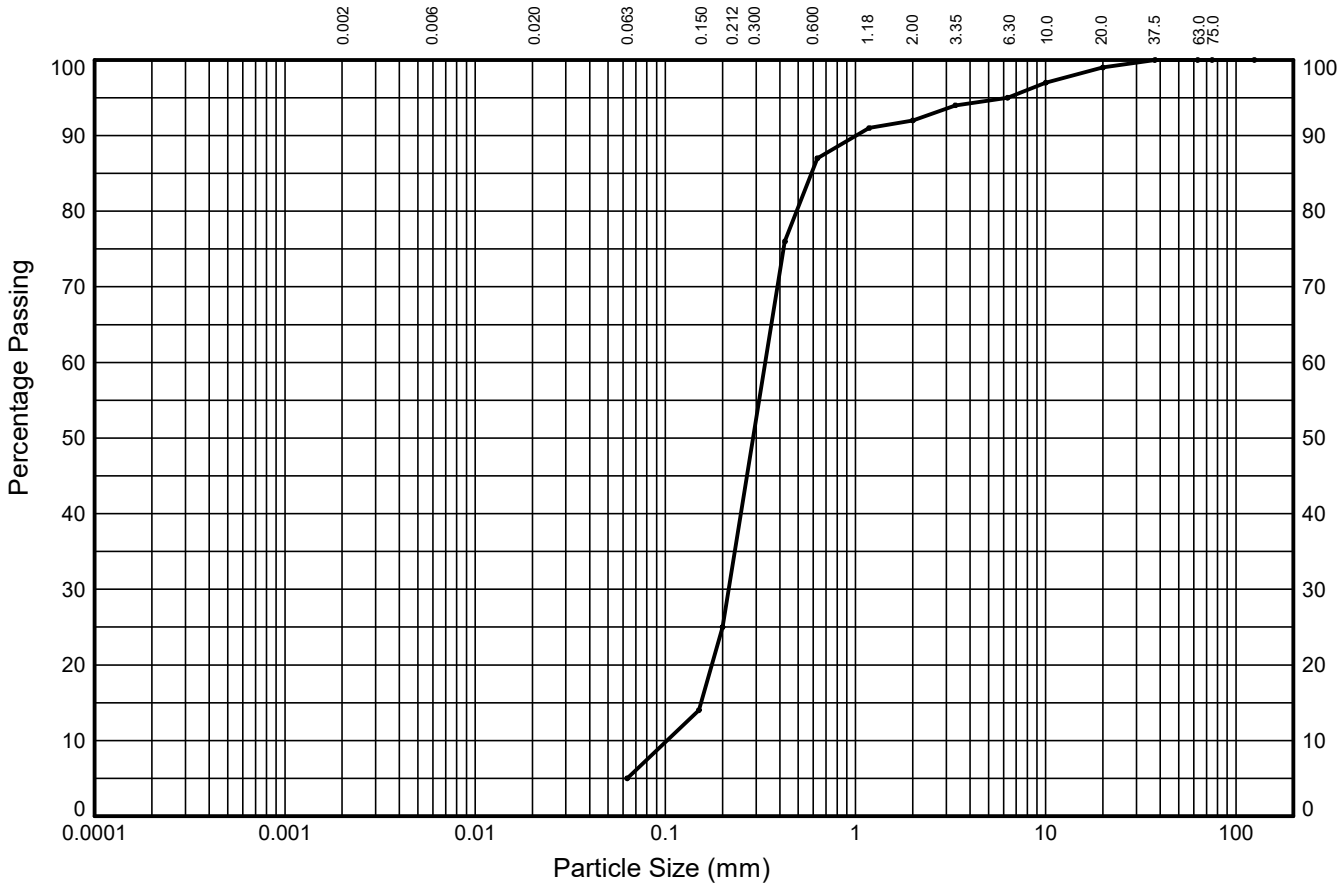
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP513** Sample Ref: **2** Sample Type: **B** Depth (m): **0.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	20%	62%	5%	3%	4%	1%	
	SILT			SAND			GRAVEL			
5%				87%			8%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**99**
10.0	**97**
6.30	**95**
3.35	**94**
2.00	**92**
1.18	**91**
0.630	**87**
0.425	**76**
0.200	**25**
0.150	**14**
0.063	**5**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.102**
D_{15} (mm)	**0.154**
D_{30} (mm)	**0.215**
D_{50} (mm)	**0.289**
D_{60} (mm)	**0.335**
D_{85} (mm)	**0.586**
D_{90} (mm)	**1.009**
C_U	**3.3**
C_C	**1.4**

Soil Description:

Orangish brown gravelly clayey SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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18 Frogmore Road
Hemel Hempstead
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Contract	Contract Ref:
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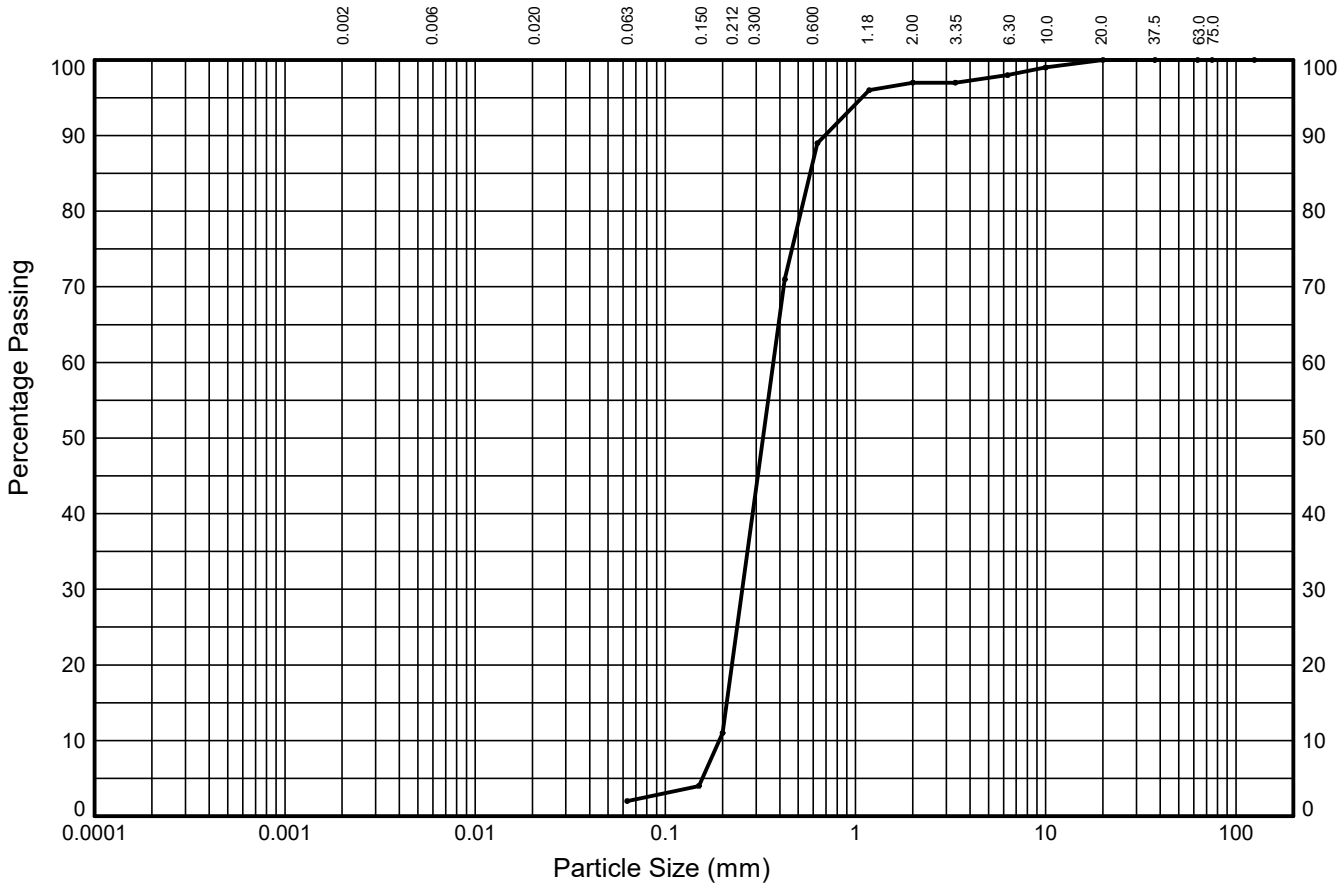
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP513** Sample Ref: **8** Sample Type: **B** Depth (m): **1.10**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	9%	78%	8%	1%	2%	0%	
	SILT			SAND			GRAVEL			
2%				95%			3%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**99**
6.30	**98**
3.35	**97**
2.00	**97**
1.18	**96**
0.630	**89**
0.425	**71**
0.200	**11**
0.150	**4**
0.063	**2**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.192**
D_{15} (mm)	**0.210**
D_{30} (mm)	**0.254**
D_{50} (mm)	**0.326**
D_{60} (mm)	**0.370**
D_{85} (mm)	**0.577**
D_{90} (mm)	**0.689**
C_U	**1.9**
C_C	**0.91**

Soil Description:

Brown slightly gravelly slightly clayey SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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Contract	Contract Ref:
Sealink Friston	**563835**

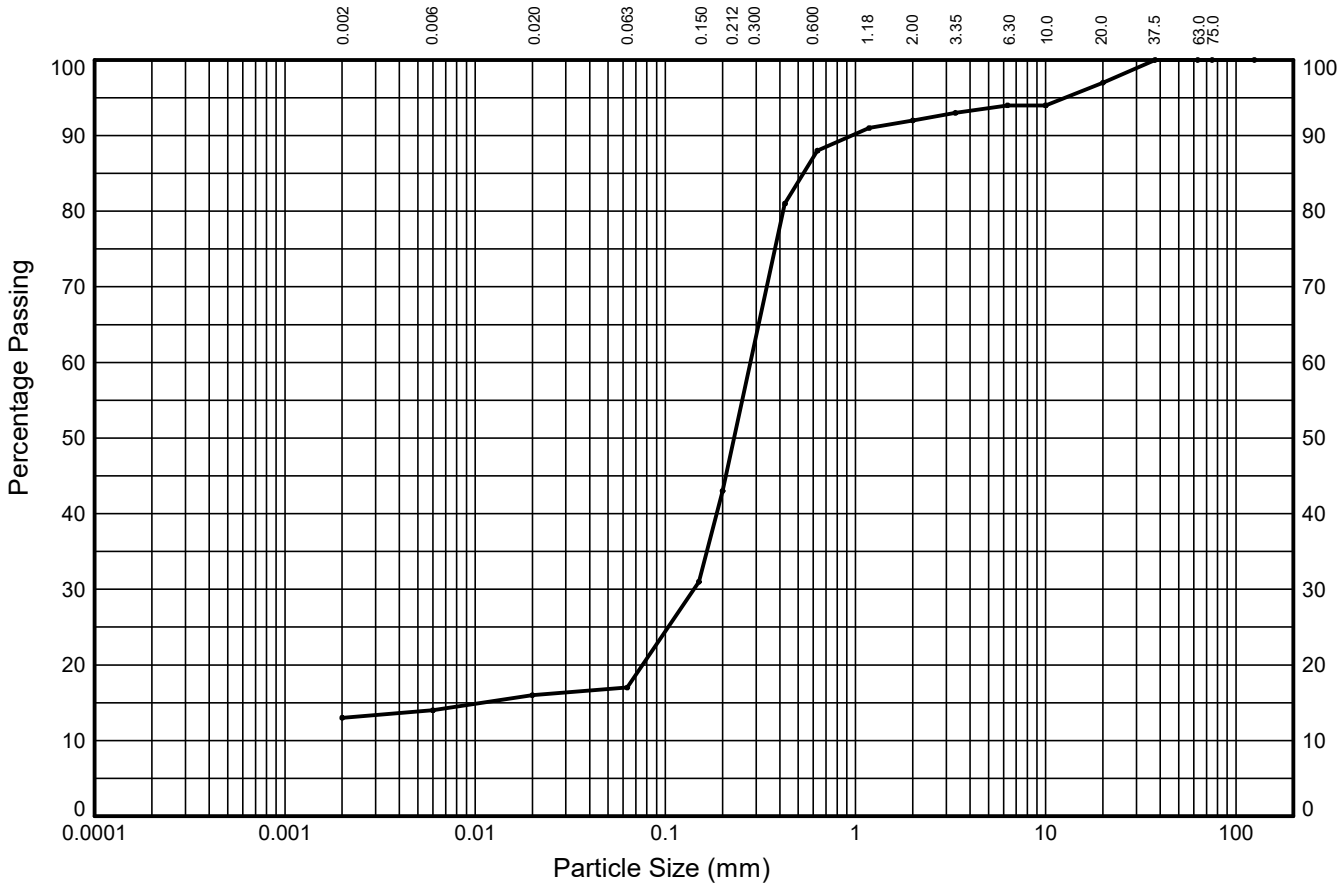
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP514** Sample Ref: **2** Sample Type: **B** Depth (m): **0.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	1%	2%	1%	26%	45%	4%	2%	3%	3%	
	SILT			SAND			GRAVEL			
13%	4%			75%			8%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**97**
10.0	**94**
6.30	**94**
3.35	**93**
2.00	**92**
1.18	**91**
0.630	**88**
0.425	**81**
0.200	**43**
0.150	**31**
0.063	**17**

Particle Diameter (mm)	Percent Passing (%)
0.02	**16**
0.006	**14**
0.002	**13**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**0.011**
D_{30} (mm)	**0.141**
D_{50} (mm)	**0.230**
D_{60} (mm)	**0.280**
D_{85} (mm)	**0.532**
D_{90} (mm)	**0.957**
C_U	**NA**
C_C	**NA**

Soil Description:

Orangish brown gravelly clayey SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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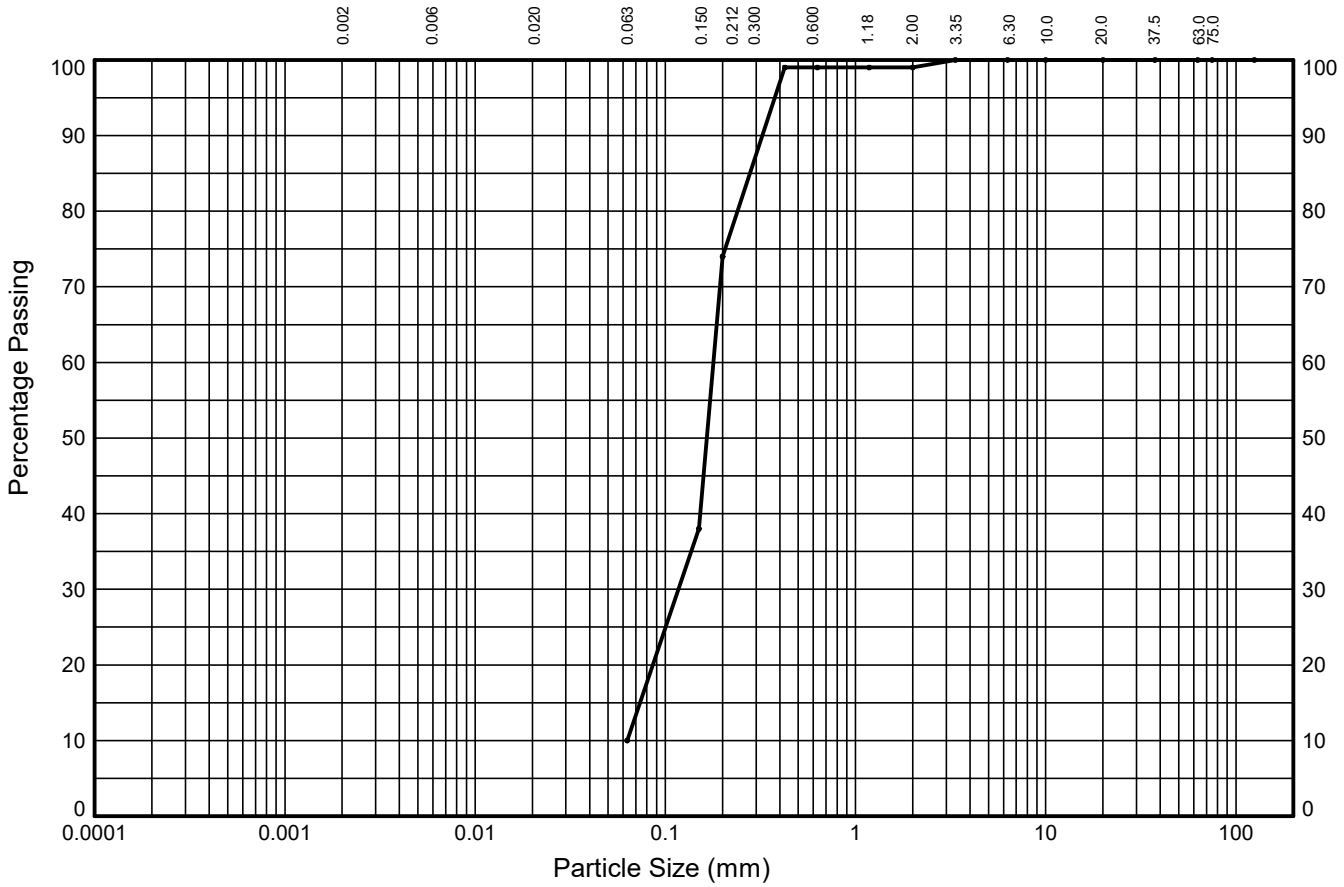
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP514** Sample Ref: **10** Sample Type: **B** Depth (m): **2.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	64%	25%	0%	1%	0%	0%	
	SILT			SAND			GRAVEL			
10%				89%			1%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**100**
3.35	**100**
2.00	**99**
1.18	**99**
0.630	**99**
0.425	**99**
0.200	**74**
0.150	**38**
0.063	**10**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.063**
D_{15} (mm)	**0.074**
D_{30} (mm)	**0.117**
D_{50} (mm)	**0.165**
D_{60} (mm)	**0.179**
D_{85} (mm)	**0.279**
D_{90} (mm)	**0.324**
C_U	**2.8**
C_C	**1.2**

Soil Description:

Yellowish brown slightly gravelly clayey SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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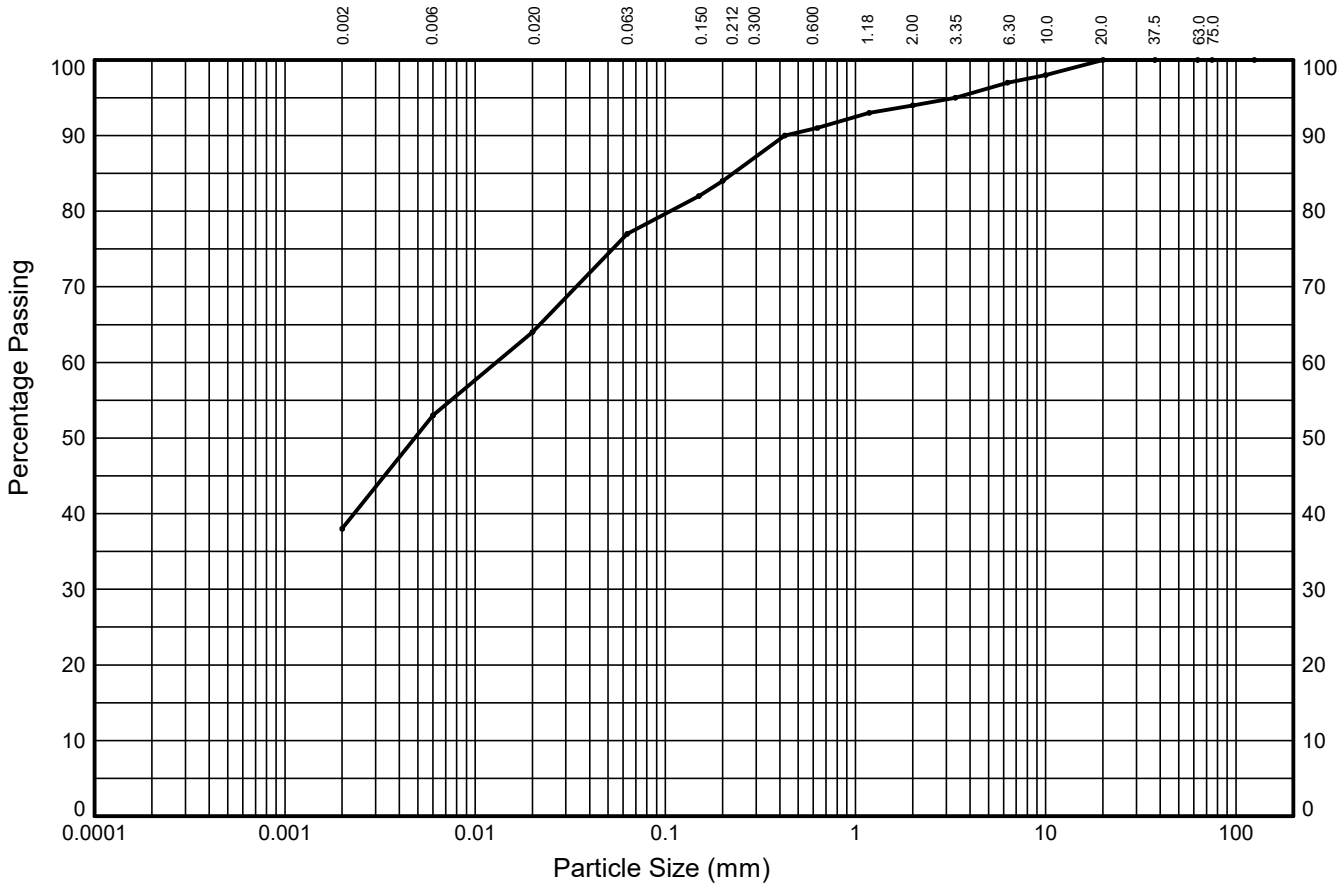
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP515** Sample Ref: **2** Sample Type: **B** Depth (m): **0.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	15%	11%	13%	7%	7%	3%	3%	3%	0%	
	SILT			SAND			GRAVEL			
38%	39%			17%			6%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**98**
6.30	**97**
3.35	**95**
2.00	**94**
1.18	**93**
0.630	**91**
0.425	**90**
0.200	**84**
0.150	**82**
0.063	**77**

Particle Diameter (mm)	Percent Passing (%)
0.02	**64**
0.006	**53**
0.002	**38**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**0.005**
D_{60} (mm)	**0.013**
D_{85} (mm)	**0.227**
D_{90} (mm)	**0.425**
C_U	**NA**
C_C	**NA**

Soil Description:

Orangish brown slightly gravelly slightly sandy CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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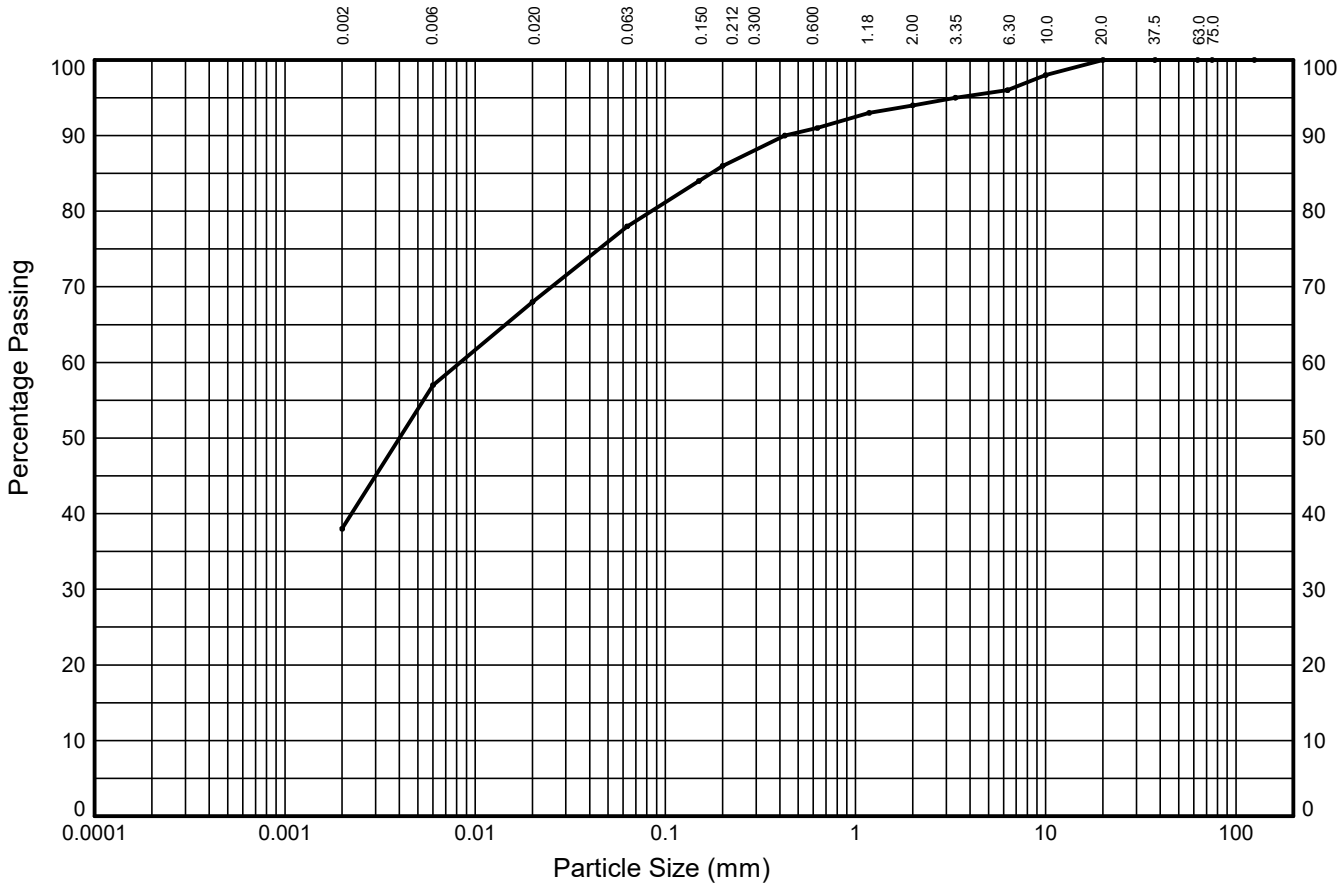
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP515** Sample Ref: **10** Sample Type: **B** Depth (m): **2.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	19%	11%	10%	8%	5%	3%	2%	4%	0%	
	SILT			SAND			GRAVEL			
38%	40%			16%			6%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**98**
6.30	**96**
3.35	**95**
2.00	**94**
1.18	**93**
0.630	**91**
0.425	**90**
0.200	**86**
0.150	**84**
0.063	**78**

Particle Diameter (mm)	Percent Passing (%)
0.02	**68**
0.006	**57**
0.002	**38**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**0.004**
D_{60} (mm)	**0.008**
D_{85} (mm)	**0.173**
D_{90} (mm)	**0.425**
C_U	**NA**
C_C	**NA**

Soil Description:

Grey mottled brown slightly gravelly slightly sandy CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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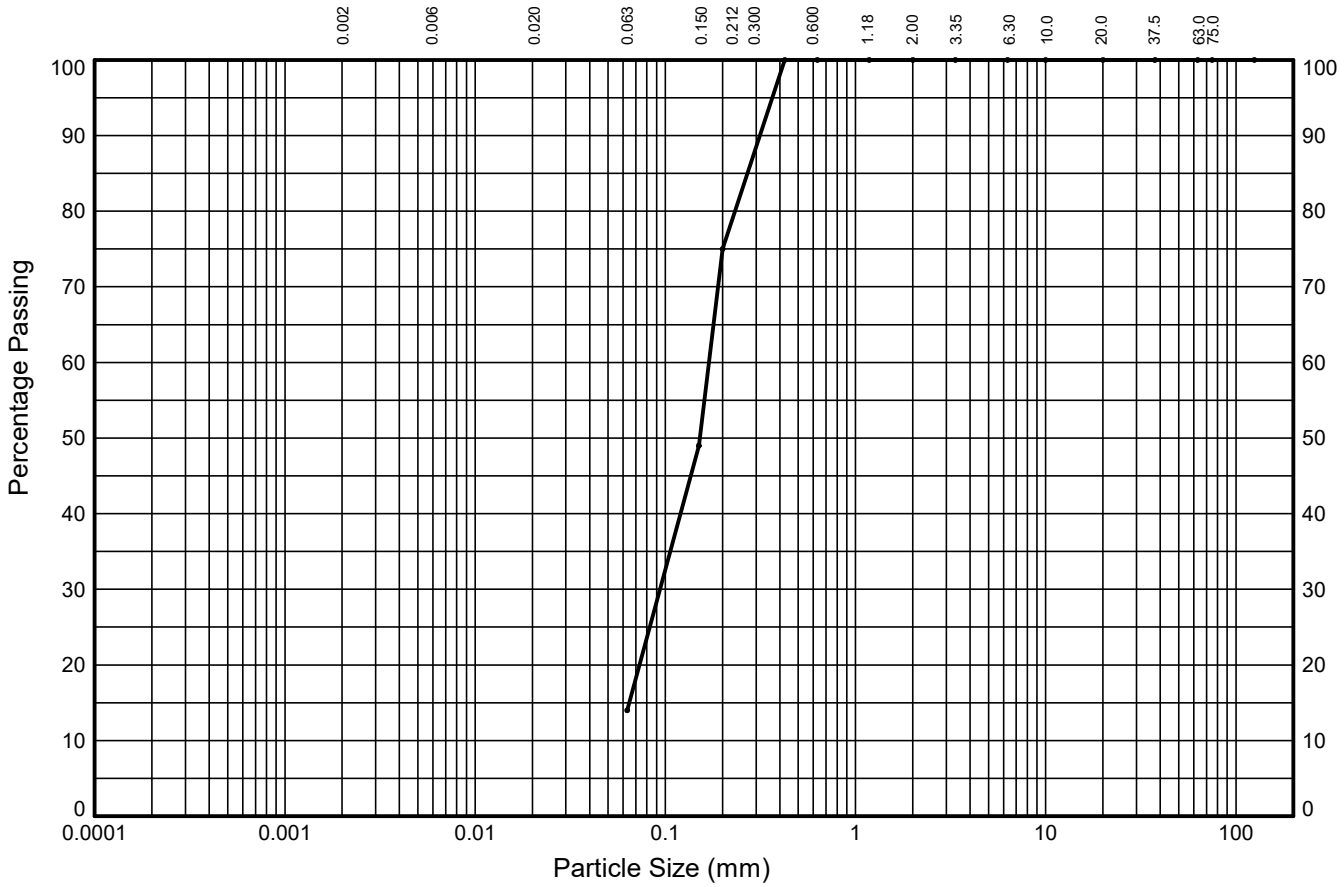
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP515** Sample Ref: **14** Sample Type: **B** Depth (m): **3.80**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	61%	25%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
14%				86%			0%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**100**
3.35	**100**
2.00	**100**
1.18	**100**
0.630	**100**
0.425	**100**
0.200	**75**
0.150	**49**
0.063	**14**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**0.065**
D_{30} (mm)	**0.094**
D_{50} (mm)	**0.152**
D_{60} (mm)	**0.169**
D_{85} (mm)	**0.270**
D_{90} (mm)	**0.314**
C_U	**NA**
C_C	**NA**

Soil Description:

Orangish brown silty SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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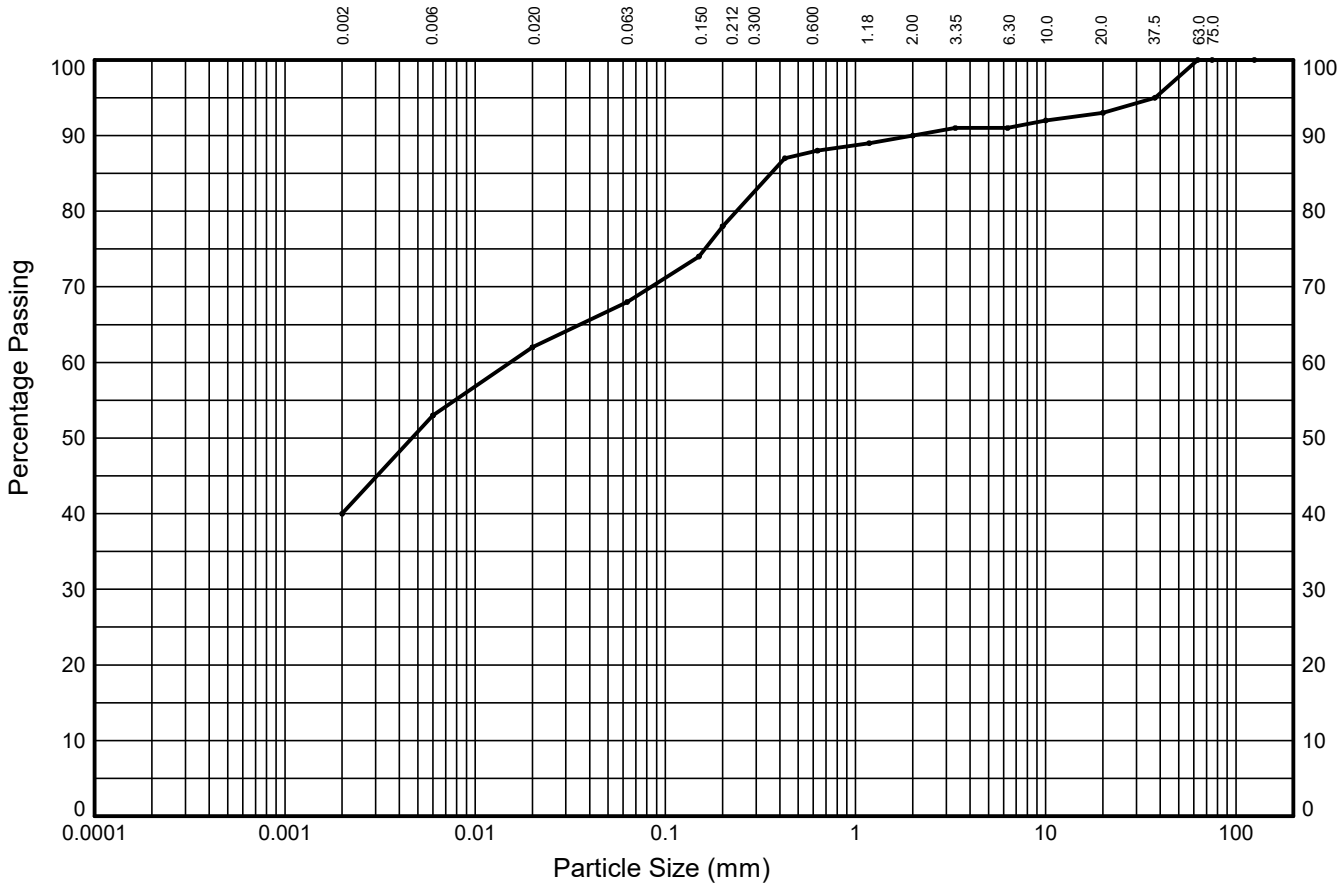
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP516** Sample Ref: **4** Sample Type: **B** Depth (m): **0.70**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	13%	9%	6%	10%	10%	2%	1%	2%	7%	
	SILT			SAND			GRAVEL			
40%	28%			22%			10%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**95**
20.0	**93**
10.0	**92**
6.30	**91**
3.35	**91**
2.00	**90**
1.18	**89**
0.630	**88**
0.425	**87**
0.200	**78**
0.150	**74**
0.063	**68**

Particle Diameter (mm)	Percent Passing (%)
0.02	**62**
0.006	**53**
0.002	**40**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**0.005**
D_{60} (mm)	**0.015**
D_{85} (mm)	**0.359**
D_{90} (mm)	**2.000**
C_U	**NA**
C_C	**NA**

Soil Description:

Grey mottled light brown and dark brown slightly gravelly slightly sandy CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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Contract	Contract Ref:
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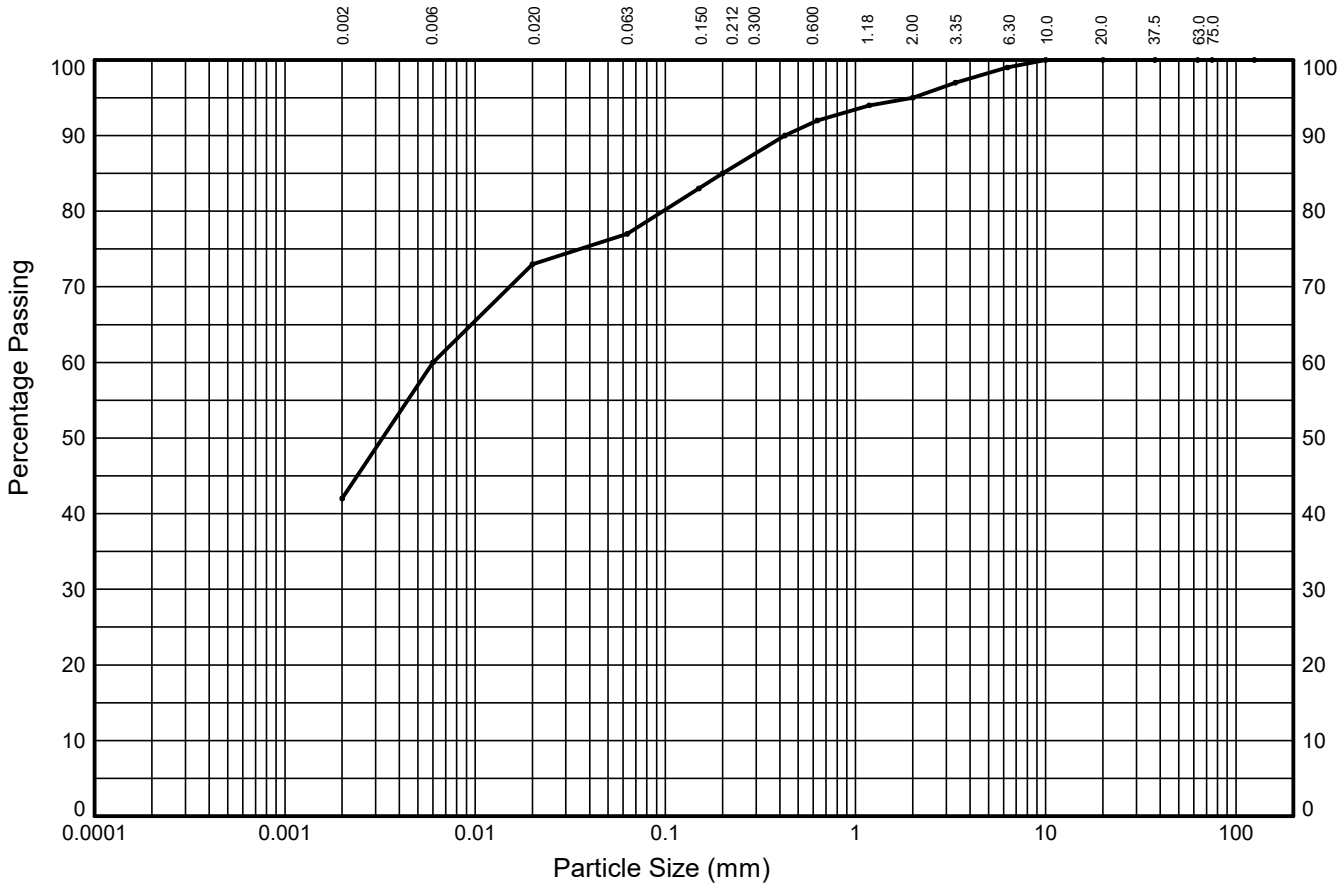
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP518** Sample Ref: **8** Sample Type: **B** Depth (m): **1.10**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	18%	13%	4%	8%	7%	3%	4%	1%	0%	
	SILT			SAND			GRAVEL			
42%	35%			18%			5%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**99**
3.35	**97**
2.00	**95**
1.18	**94**
0.630	**92**
0.425	**90**
0.200	**85**
0.150	**83**
0.063	**77**

Particle Diameter (mm)	Percent Passing (%)
0.02	**73**
0.006	**60**
0.002	**42**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**0.003**
D_{60} (mm)	**0.006**
D_{85} (mm)	**0.200**
D_{90} (mm)	**0.425**
C_U	**NA**
C_C	**NA**

Soil Description:

Light brown slightly gravelly slightly sandy CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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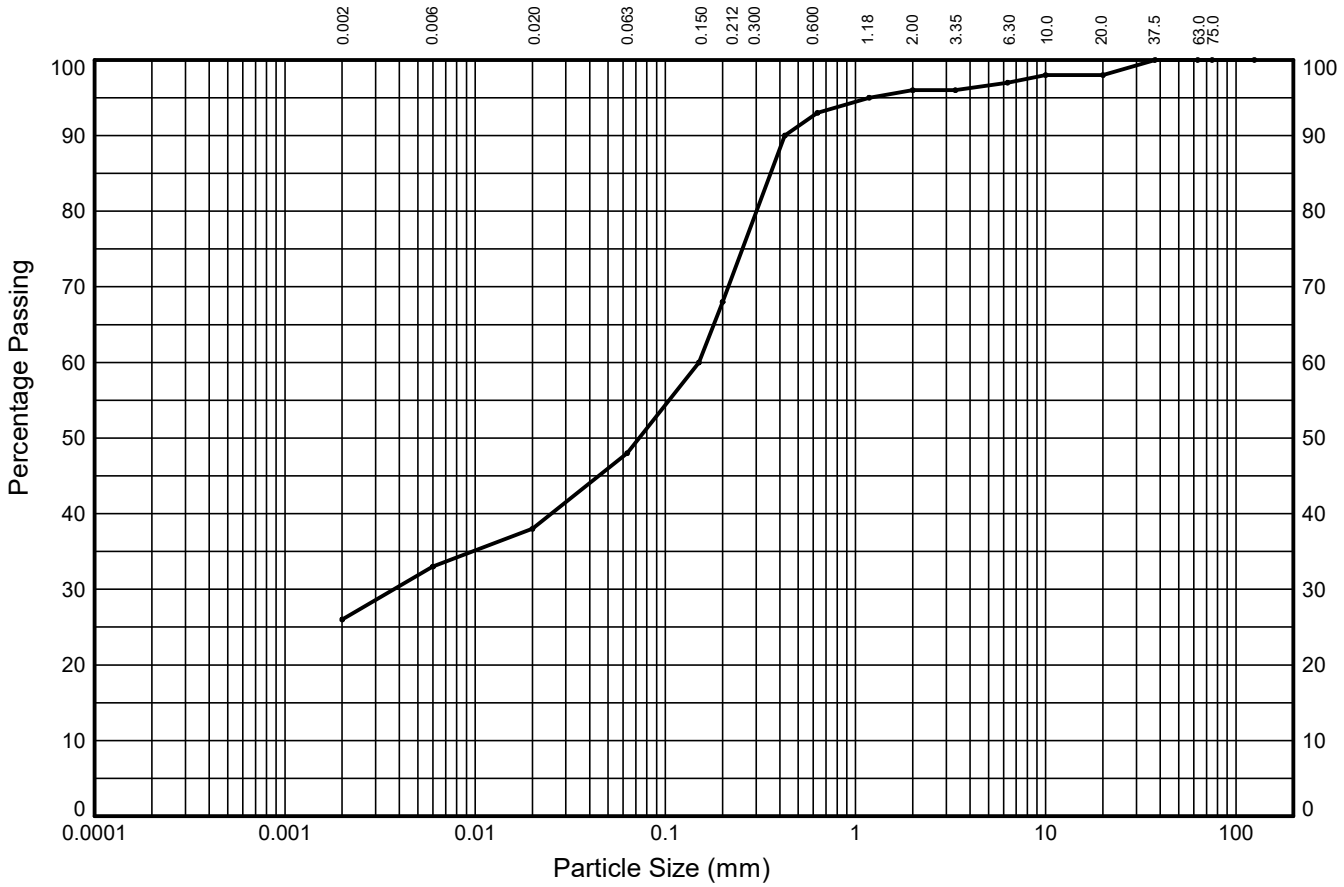
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP525** Sample Ref: **3** Sample Type: **B** Depth (m): **0.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	7%	5%	10%	20%	25%	3%	1%	1%	2%	
	SILT			SAND			GRAVEL			
26%	22%			48%			4%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**98**
10.0	**98**
6.30	**97**
3.35	**96**
2.00	**96**
1.18	**95**
0.630	**93**
0.425	**90**
0.200	**68**
0.150	**60**
0.063	**48**

Particle Diameter (mm)	Percent Passing (%)
0.02	**38**
0.006	**33**
0.002	**26**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.004**
D_{50} (mm)	**0.073**
D_{60} (mm)	**0.150**
D_{85} (mm)	**0.358**
D_{90} (mm)	**0.425**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark brown slightly gravelly sandy silty CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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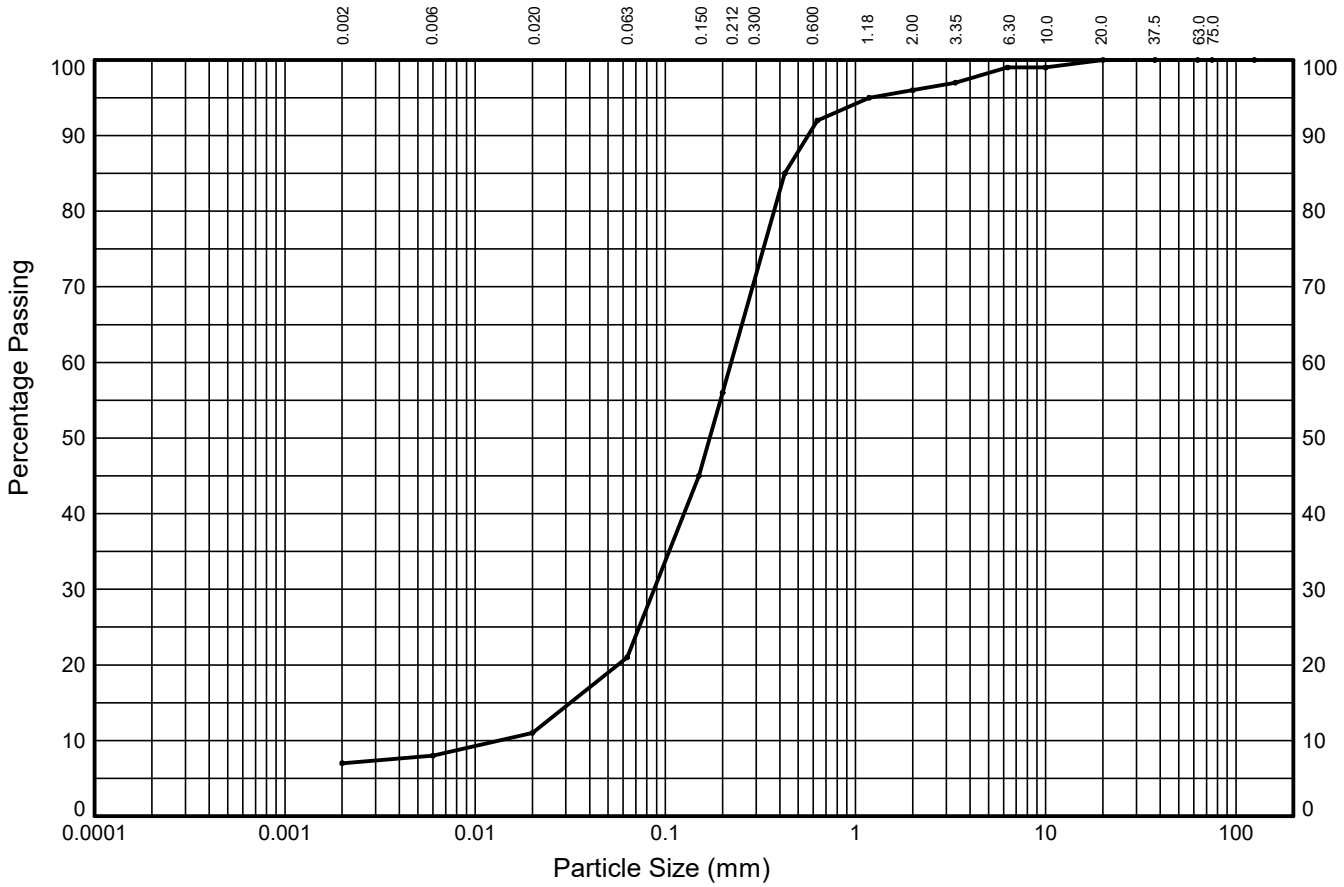
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **F22-TP525** Sample Ref: **7** Sample Type: **B** Depth (m): **1.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	1%	3%	10%	35%	36%	4%	3%	1%	0%	
	SILT			SAND			GRAVEL			
7%	14%			75%			4%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**99**
6.30	**99**
3.35	**97**
2.00	**96**
1.18	**95**
0.630	**92**
0.425	**85**
0.200	**56**
0.150	**45**
0.063	**21**

Particle Diameter (mm)	Percent Passing (%)
0.02	**11**
0.006	**8**
0.002	**7**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.013**
D_{15} (mm)	**0.032**
D_{30} (mm)	**0.087**
D_{50} (mm)	**0.171**
D_{60} (mm)	**0.222**
D_{85} (mm)	**0.425**
D_{90} (mm)	**0.563**
C_U	**17**
C_C	**3**

Soil Description:

Orangish brown slightly gravelly very clayey SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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18 Frogmore Road
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Hertfordshire
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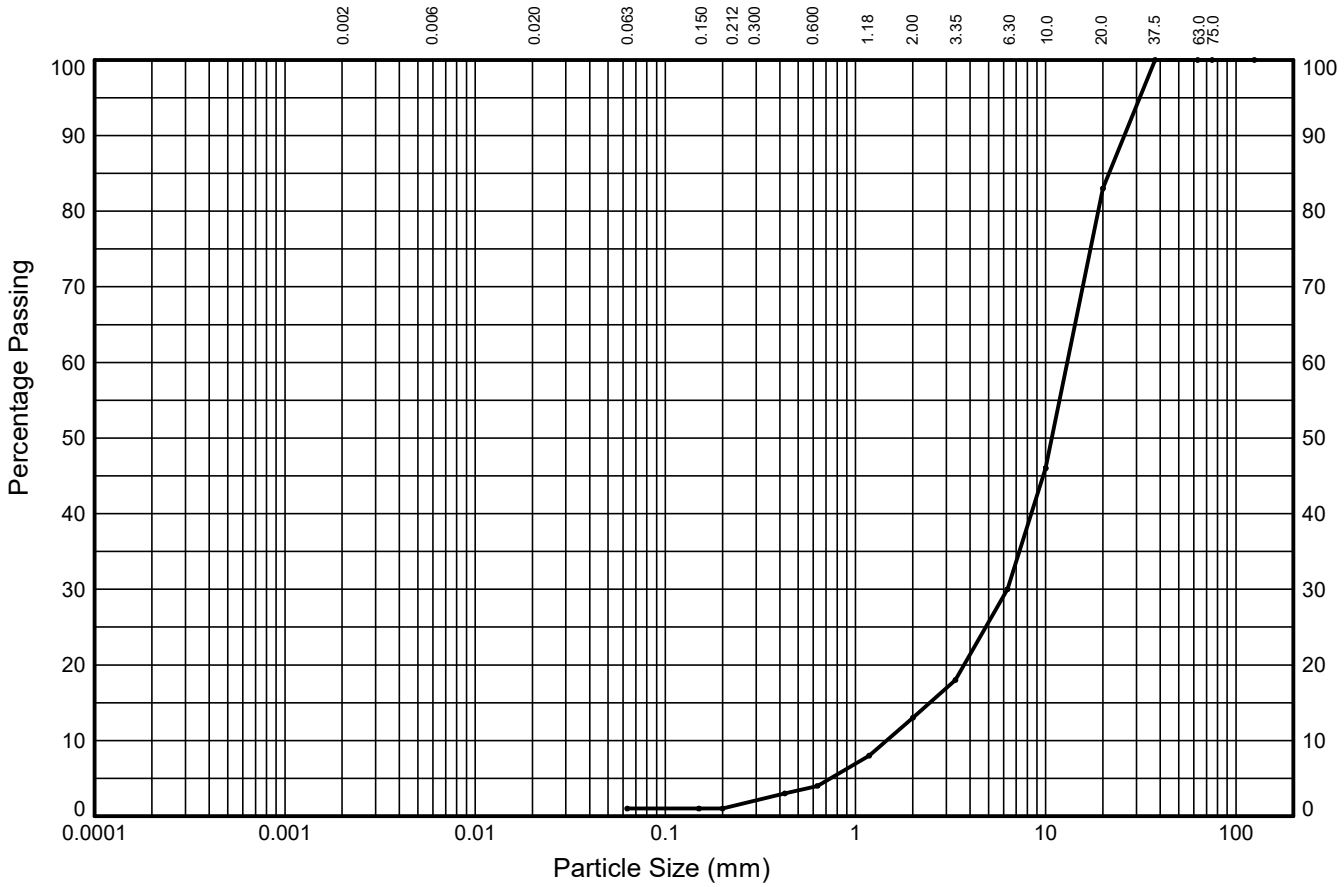
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **RedP-BH-1A** Sample Ref: **8** Sample Type: **B** Depth (m): **1.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	0%	3%	9%	17%	53%	17%	
	SILT			SAND			GRAVEL			
1%				12%			87%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**83**
10.0	**46**
6.30	**30**
3.35	**18**
2.00	**13**
1.18	**8**
0.630	**4**
0.425	**3**
0.200	**1**
0.150	**1**
0.063	**1**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**1.457**
D_{15} (mm)	**2.458**
D_{30} (mm)	**6.300**
D_{50} (mm)	**10.778**
D_{60} (mm)	**12.999**
D_{85} (mm)	**21.535**
D_{90} (mm)	**25.909**
C_U	**8.9**
C_C	**2.1**

Soil Description:

Brown mottled grey and white sandy slightly silty GRAVEL

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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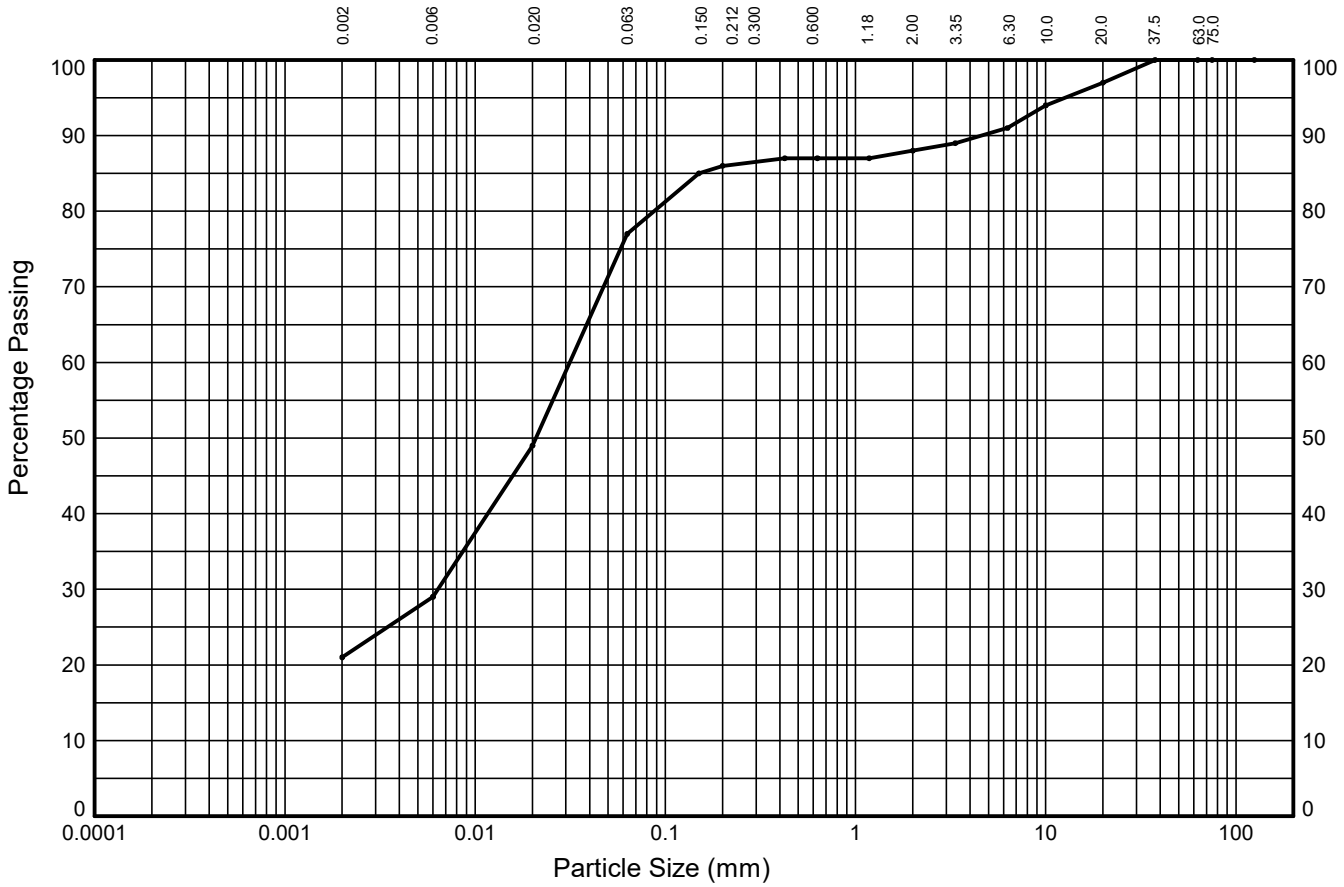
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **RedP-BH-1A** Sample Ref: **15** Sample Type: **B** Depth (m): **3.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	8%	20%	28%	9%	1%	1%	3%	6%	3%	
	SILT			SAND			GRAVEL			
21%	56%			11%			12%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**97**
10.0	**94**
6.30	**91**
3.35	**89**
2.00	**88**
1.18	**87**
0.630	**87**
0.425	**87**
0.200	**86**
0.150	**85**
0.063	**77**

Particle Diameter (mm)	Percent Passing (%)
0.02	**49**
0.006	**29**
0.002	**21**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.006**
D_{50} (mm)	**0.021**
D_{60} (mm)	**0.031**
D_{85} (mm)	**0.150**
D_{90} (mm)	**4.594**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark grey slightly sandy slightly gravelly clayey SILT

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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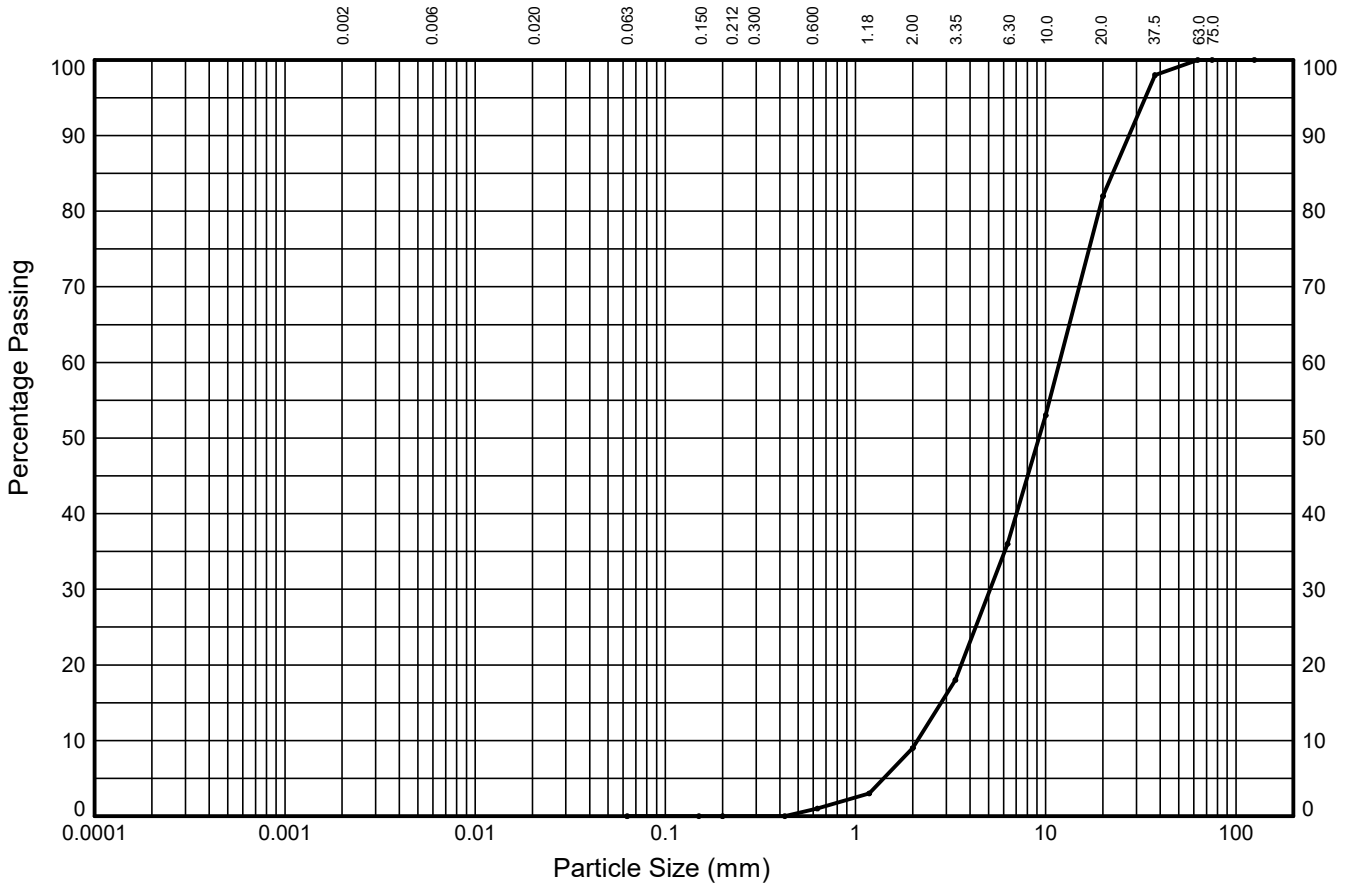
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016
NON-STANDARD TEST

Position ID: **RedP-BH-1A** Sample Ref: **32** Sample Type: **B** Depth (m): **8.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	0%	1%	8%	27%	46%	18%	
	SILT			SAND			GRAVEL			
0%				9%			91%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**98**
20.0	**82**
10.0	**53**
6.30	**36**
3.35	**18**
2.00	**9**
1.18	**3**
0.630	**1**
0.425	**0**
0.200	**0**
0.150	**0**
0.063	**0**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**2.118**
D_{15} (mm)	**2.821**
D_{30} (mm)	**5.104**
D_{50} (mm)	**9.217**
D_{60} (mm)	**11.821**
D_{85} (mm)	**22.502**
D_{90} (mm)	**27.386**
C_U	**5.6**
C_C	**1.0**

Soil Description:

Multi-coloured (brown, grey, white and orange) sandy GRAVEL

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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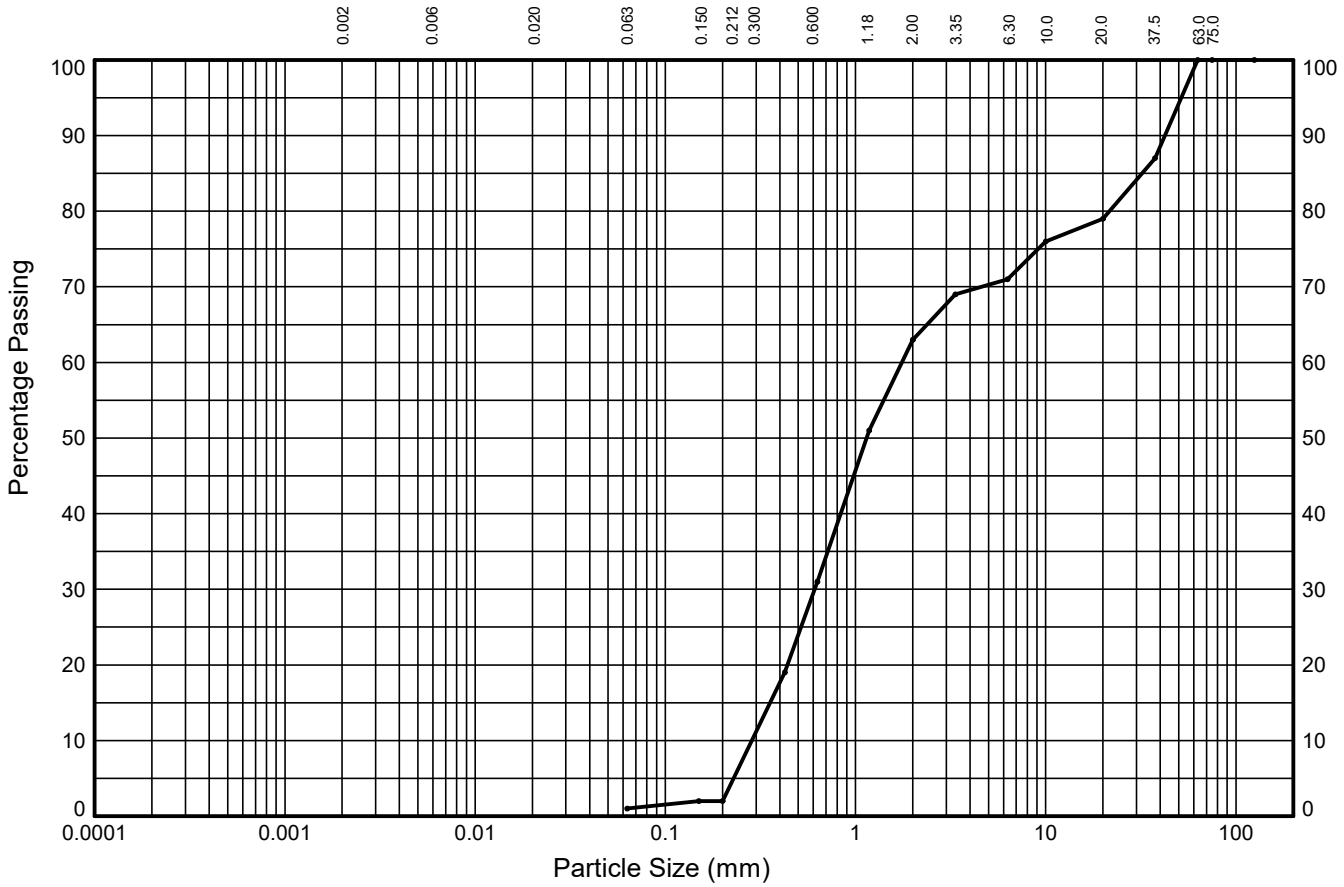
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **RedP-BH-1A** Sample Ref: **41** Sample Type: **B** Depth (m): **11.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	1%	29%	32%	8%	8%	21%	
	SILT			SAND			GRAVEL			
1%				62%			37%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**87**
20.0	**79**
10.0	**76**
6.30	**71**
3.35	**69**
2.00	**63**
1.18	**51**
0.630	**31**
0.425	**19**
0.200	**2**
0.150	**2**
0.063	**1**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.285**
D_{15} (mm)	**0.356**
D_{30} (mm)	**0.610**
D_{50} (mm)	**1.144**
D_{60} (mm)	**1.753**
D_{85} (mm)	**32.047**
D_{90} (mm)	**42.269**
C_U	**6.1**
C_C	**0.74**

Soil Description:

Dark grey very gravelly slightly silty SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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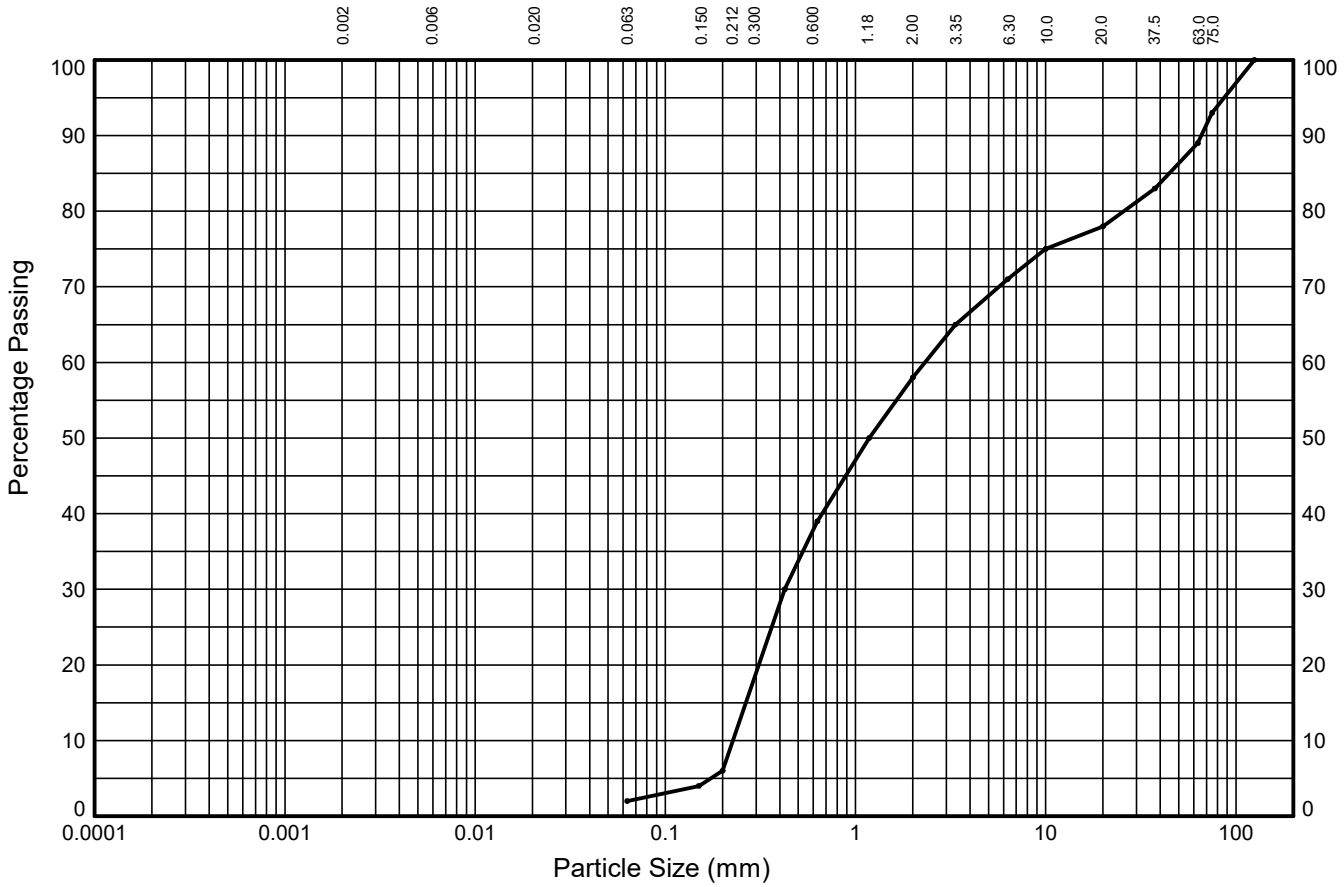
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016
NON-STANDARD TEST

Position ID: **RedP-BH-1A** Sample Ref: **53** Sample Type: **B** Depth (m): **15.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	4%	33%	19%	13%	7%	11%	
	SILT			SAND			GRAVEL			
2%				56%			31%			11%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**93**
63.0	**89**
37.5	**83**
20.0	**78**
10.0	**75**
6.30	**71**
3.35	**65**
2.00	**58**
1.18	**50**
0.630	**39**
0.425	**30**
0.200	**6**
0.150	**4**
0.063	**2**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.227**
D_{15} (mm)	**0.265**
D_{30} (mm)	**0.425**
D_{50} (mm)	**1.180**
D_{60} (mm)	**2.318**
D_{85} (mm)	**44.579**
D_{90} (mm)	**65.807**
C_U	**10**
C_C	**0.34**

Soil Description:

Dark grey very gravelly slightly clayey SAND with medium cobble content

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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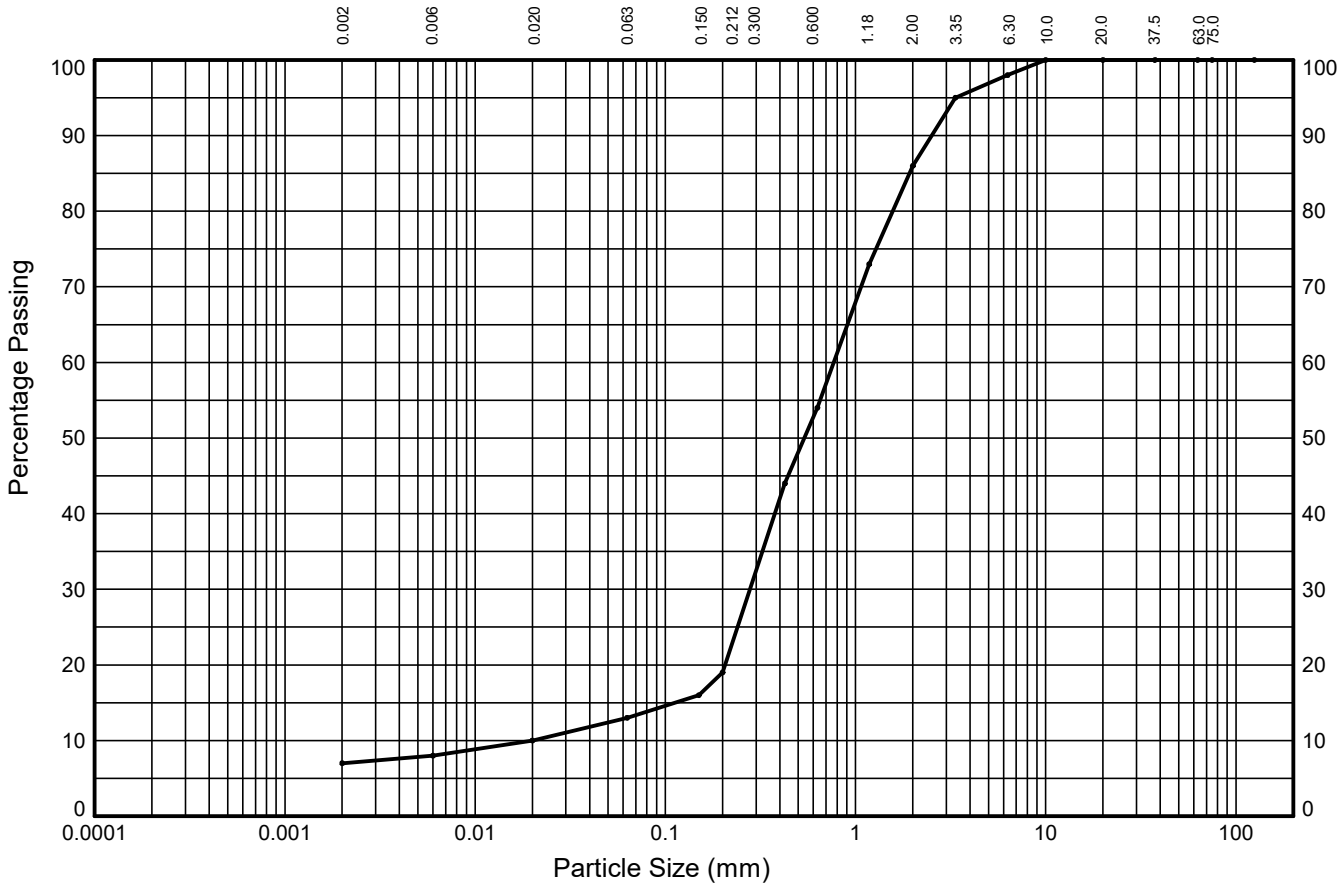
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.3 of BS EN ISO 17892:Part 4:2016

Position ID: **RedP-BH-1A** Sample Ref: **59** Sample Type: **B** Depth (m): **17.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	1%	2%	3%	6%	35%	32%	12%	2%	0%	
	SILT			SAND			GRAVEL			
7%	6%			73%			14%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**98**
3.35	**95**
2.00	**86**
1.18	**73**
0.630	**54**
0.425	**44**
0.200	**19**
0.150	**16**
0.063	**13**

Particle Diameter (mm)	Percent Passing (%)
0.02	**10**
0.006	**8**
0.002	**7**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.020**
D_{15} (mm)	**0.112**
D_{30} (mm)	**0.279**
D_{50} (mm)	**0.538**
D_{60} (mm)	**0.768**
D_{85} (mm)	**1.920**
D_{90} (mm)	**2.515**
C_U	**38**
C_C	**5**

Soil Description:

Orangish brown gravelly very clayey SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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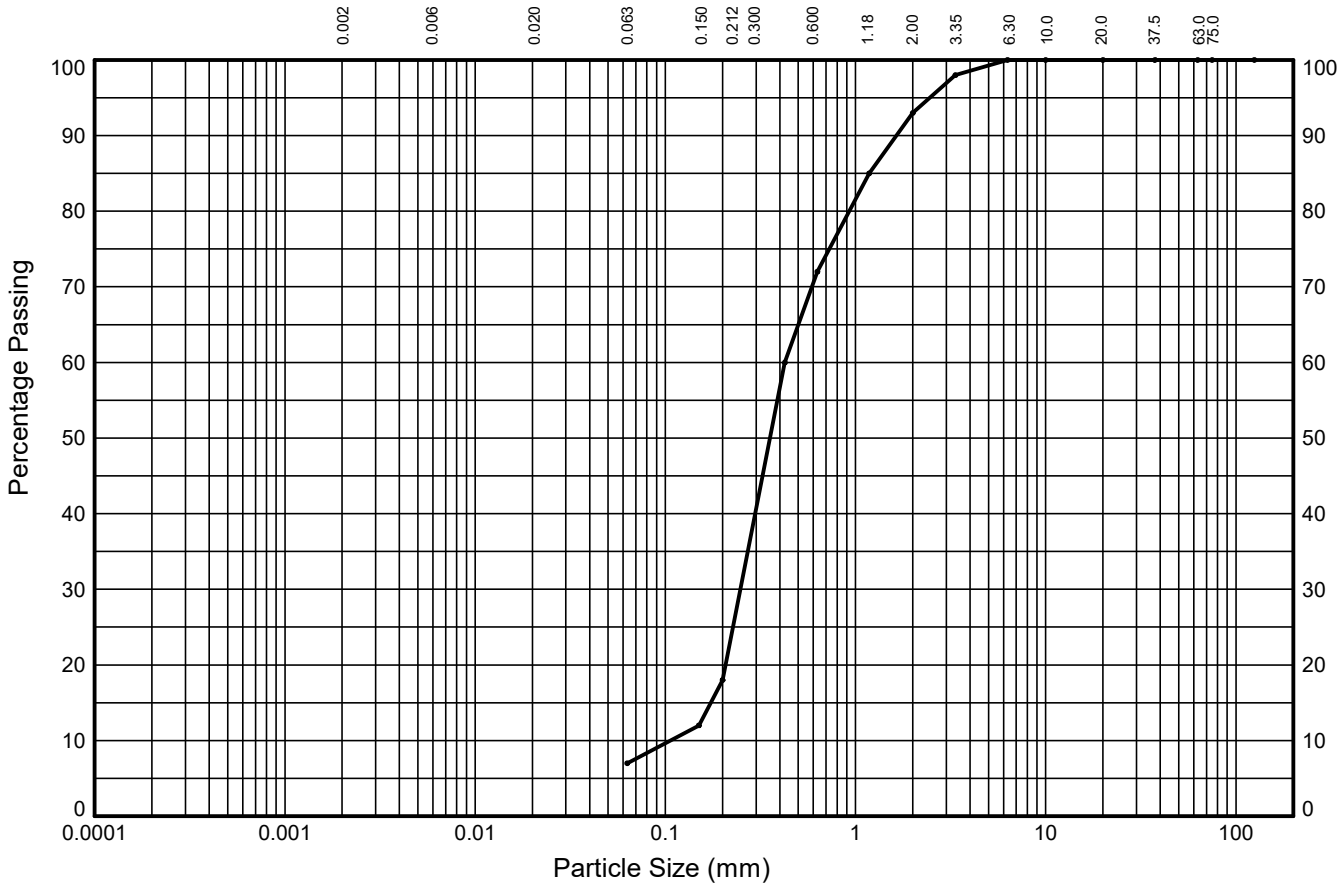
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **RedP-BH-1A** Sample Ref: **71** Sample Type: **B** Depth (m): **21.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	11%	54%	21%	7%	0%	0%	
	SILT			SAND			GRAVEL			
7%				86%			7%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**100**
3.35	**98**
2.00	**93**
1.18	**85**
0.630	**72**
0.425	**60**
0.200	**18**
0.150	**12**
0.063	**7**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.106**
D_{15} (mm)	**0.173**
D_{30} (mm)	**0.248**
D_{50} (mm)	**0.355**
D_{60} (mm)	**0.425**
D_{85} (mm)	**1.180**
D_{90} (mm)	**1.641**
C_U	**4.0**
C_C	**1.4**

Soil Description:

Grey gravelly silty SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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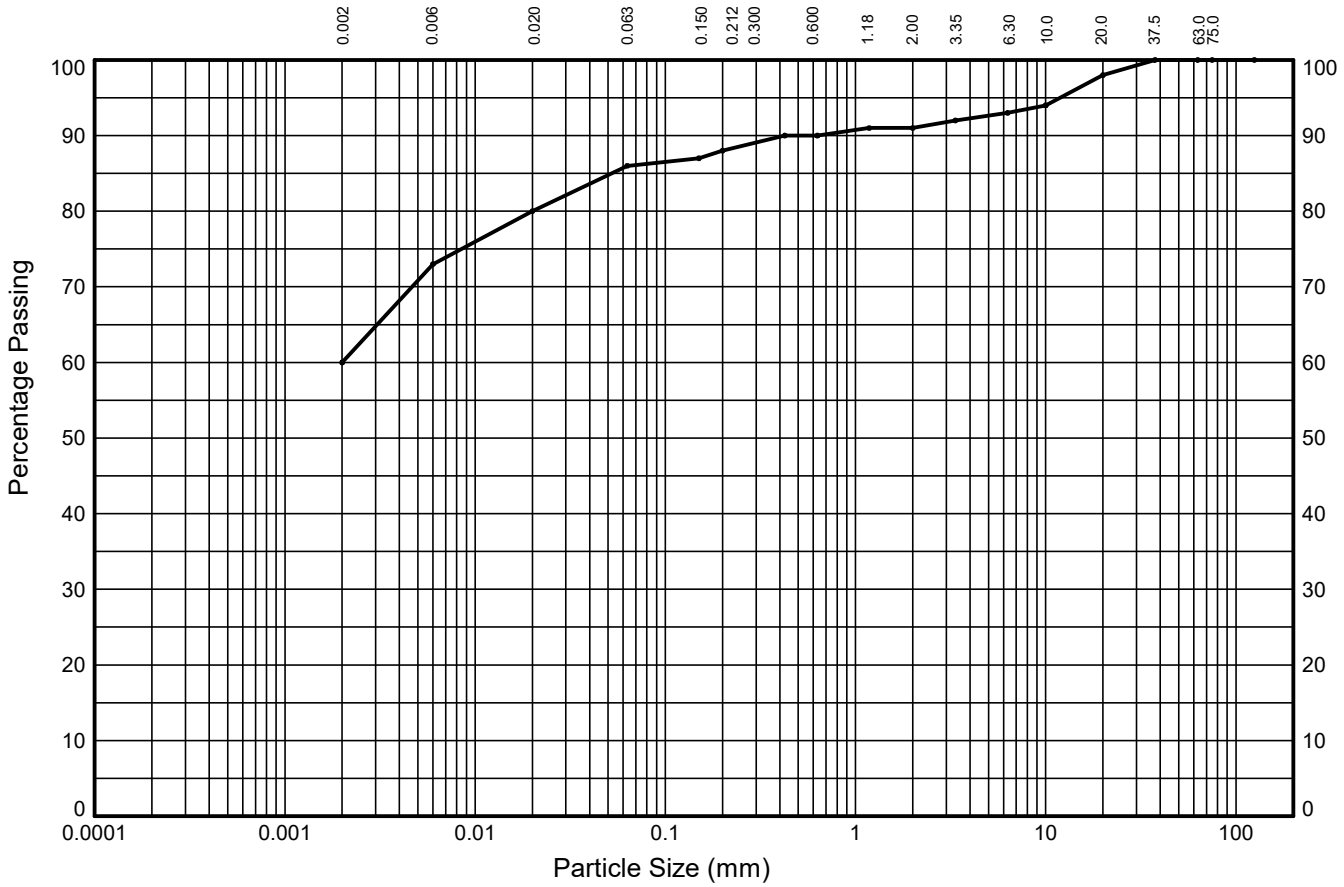
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **RedP-BH-1A** Sample Ref: **81** Sample Type: **B** Depth (m): **24.70**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	13%	7%	6%	2%	2%	1%	2%	5%	2%	
	SILT			SAND			GRAVEL			
60%	26%			5%			9%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**98**
10.0	**94**
6.30	**93**
3.35	**92**
2.00	**91**
1.18	**91**
0.630	**90**
0.425	**90**
0.200	**88**
0.150	**87**
0.063	**86**

Particle Diameter (mm)	Percent Passing (%)
0.02	**80**
0.006	**73**
0.002	**60**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**NA**
D_{60} (mm)	**0.002**
D_{85} (mm)	**0.052**
D_{90} (mm)	**0.425**
C_U	**NA**
C_C	**NA**

Soil Description:

Grey slightly sandy slightly gravelly CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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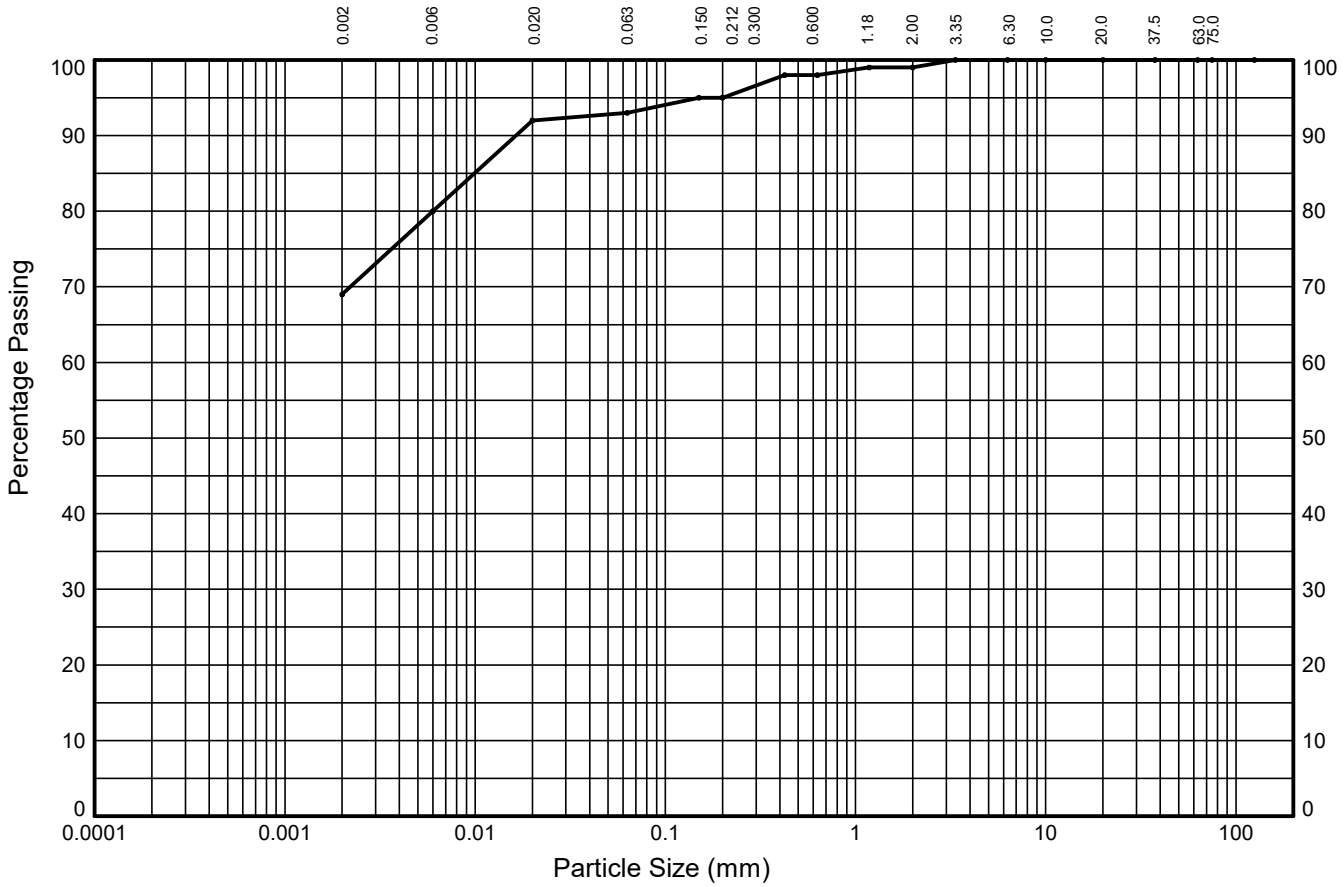
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **RedP-BH-1A** Sample Ref: **85** Sample Type: **B** Depth (m): **25.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	11%	12%	1%	2%	3%	1%	1%	0%	0%	
	SILT			SAND			GRAVEL			
69%	24%			6%			1%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**100**
3.35	**100**
2.00	**99**
1.18	**99**
0.630	**98**
0.425	**98**
0.200	**95**
0.150	**95**
0.063	**93**

Particle Diameter (mm)	Percent Passing (%)
0.02	**92**
0.006	**80**
0.002	**69**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**NA**
D_{60} (mm)	**NA**
D_{85} (mm)	**0.010**
D_{90} (mm)	**0.016**
C_U	**NA**
C_C	**NA**

Soil Description:

Grey slightly gravelly slightly sandy CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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18 Frogmore Road
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Hertfordshire
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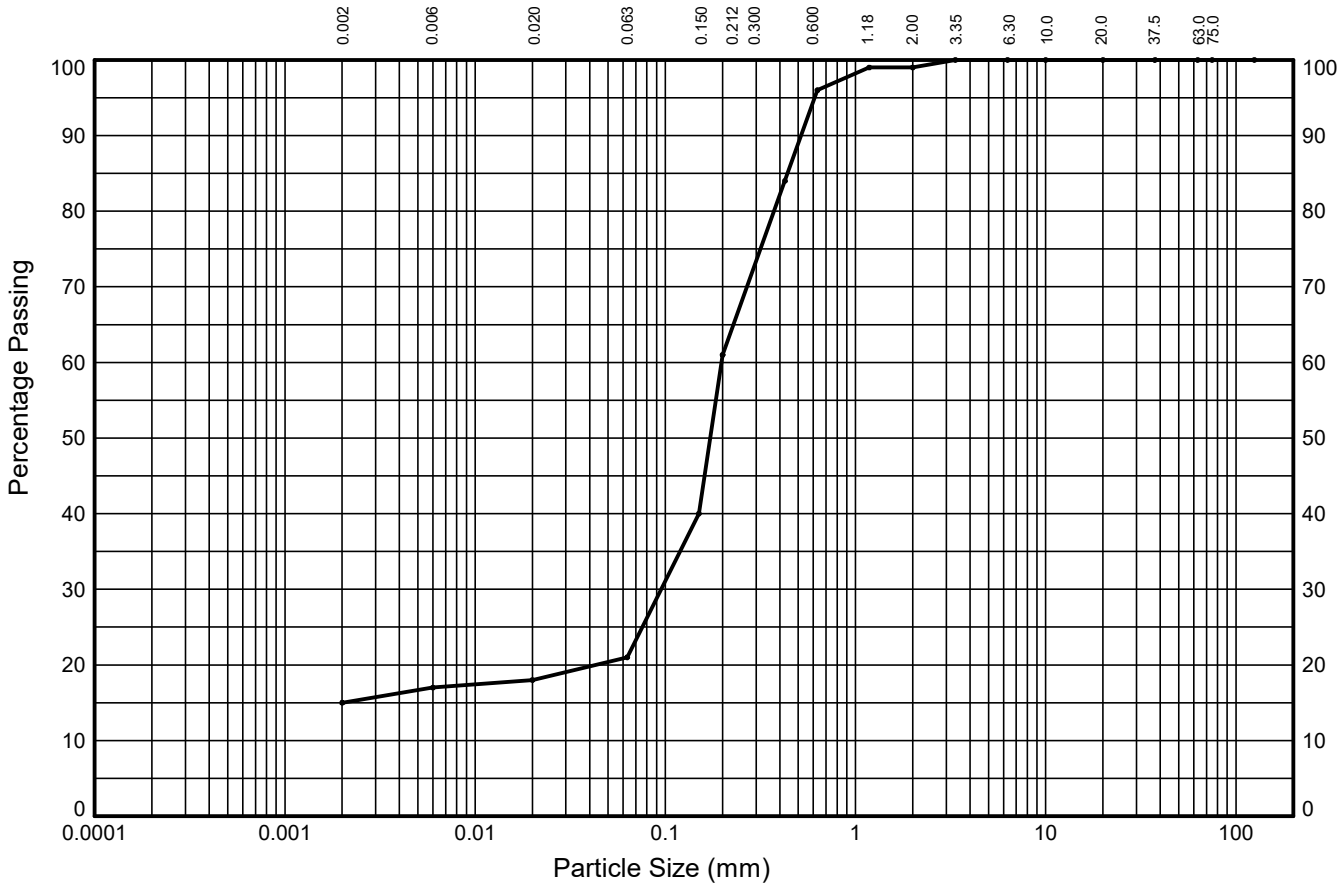
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Contract: **Sealink Friston**		Contract Ref: **563835**

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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **RedP-BH-4** Sample Ref: **3** Sample Type: **B** Depth (m): **0.70**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	2%	1%	3%	40%	35%	3%	1%	0%	0%	
	SILT			SAND			GRAVEL			
15%	6%			78%			1%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**100**
3.35	**100**
2.00	**99**
1.18	**99**
0.630	**96**
0.425	**84**
0.200	**61**
0.150	**40**
0.063	**21**

Particle Diameter (mm)	Percent Passing (%)
0.02	**18**
0.006	**17**
0.002	**15**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**0.002**
D_{30} (mm)	**0.095**
D_{50} (mm)	**0.172**
D_{60} (mm)	**0.197**
D_{85} (mm)	**0.439**
D_{90} (mm)	**0.517**
C_U	**NA**
C_C	**NA**

Soil Description:

Orangish brown slightly gravelly very clayey SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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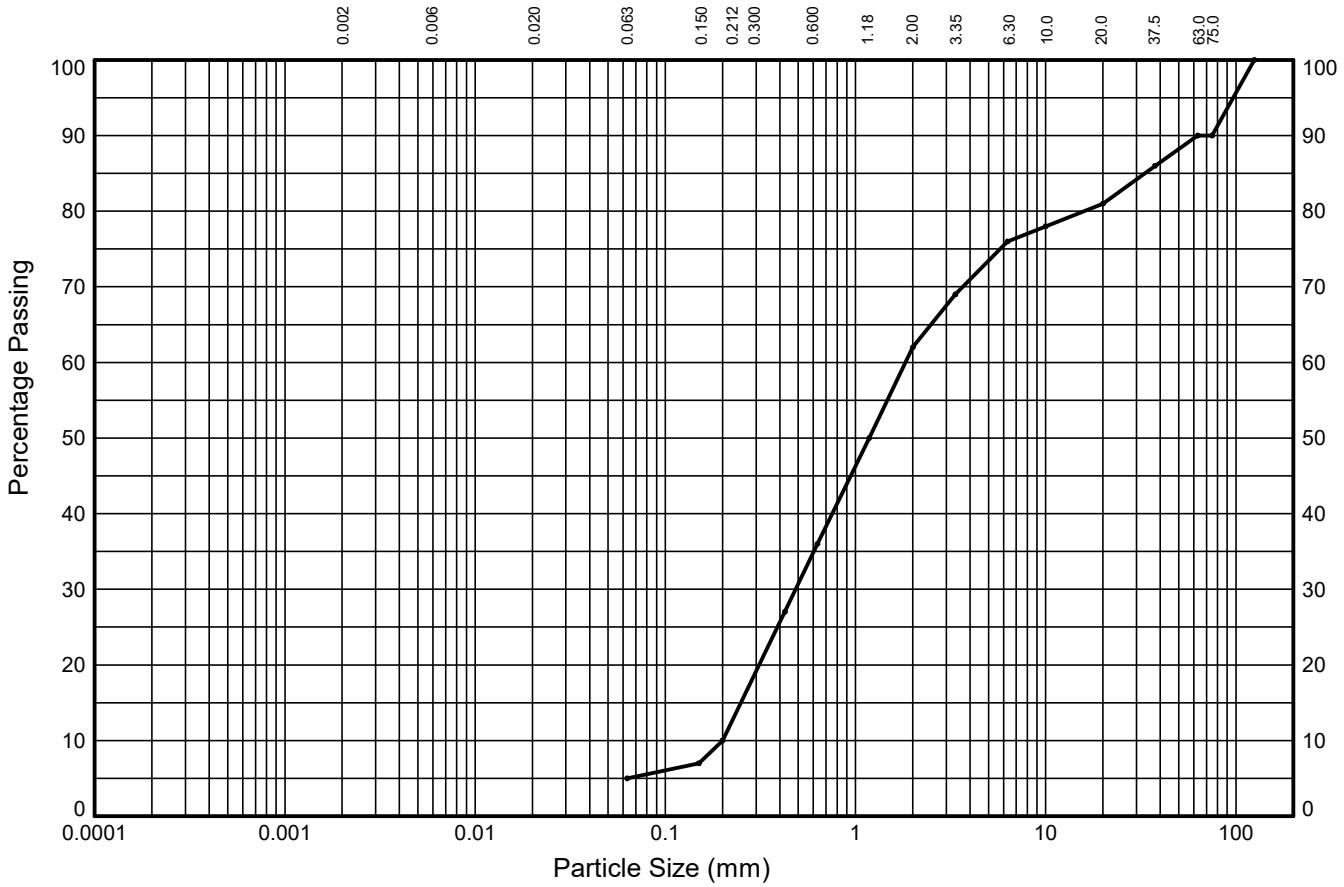
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Contract: **Sealink Friston**		Contract Ref: **563835**

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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016
NON-STANDARD TEST

Position ID: **RedP-BH-4** Sample Ref: **13** Sample Type: **B** Depth (m): **3.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	5%	26%	26%	14%	5%	9%	
	SILT			SAND			GRAVEL			
5%				57%			28%			10%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**90**
63.0	**90**
37.5	**86**
20.0	**81**
10.0	**78**
6.30	**76**
3.35	**69**
2.00	**62**
1.18	**50**
0.630	**36**
0.425	**27**
0.200	**10**
0.150	**7**
0.063	**5**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.200**
D_{15} (mm)	**0.250**
D_{30} (mm)	**0.485**
D_{50} (mm)	**1.180**
D_{60} (mm)	**1.832**
D_{85} (mm)	**33.070**
D_{90} (mm)	**63.000**
C_U	**9.2**
C_C	**0.64**

Soil Description:
Orangish brown very gravelly clayey SAND with medium cobble content

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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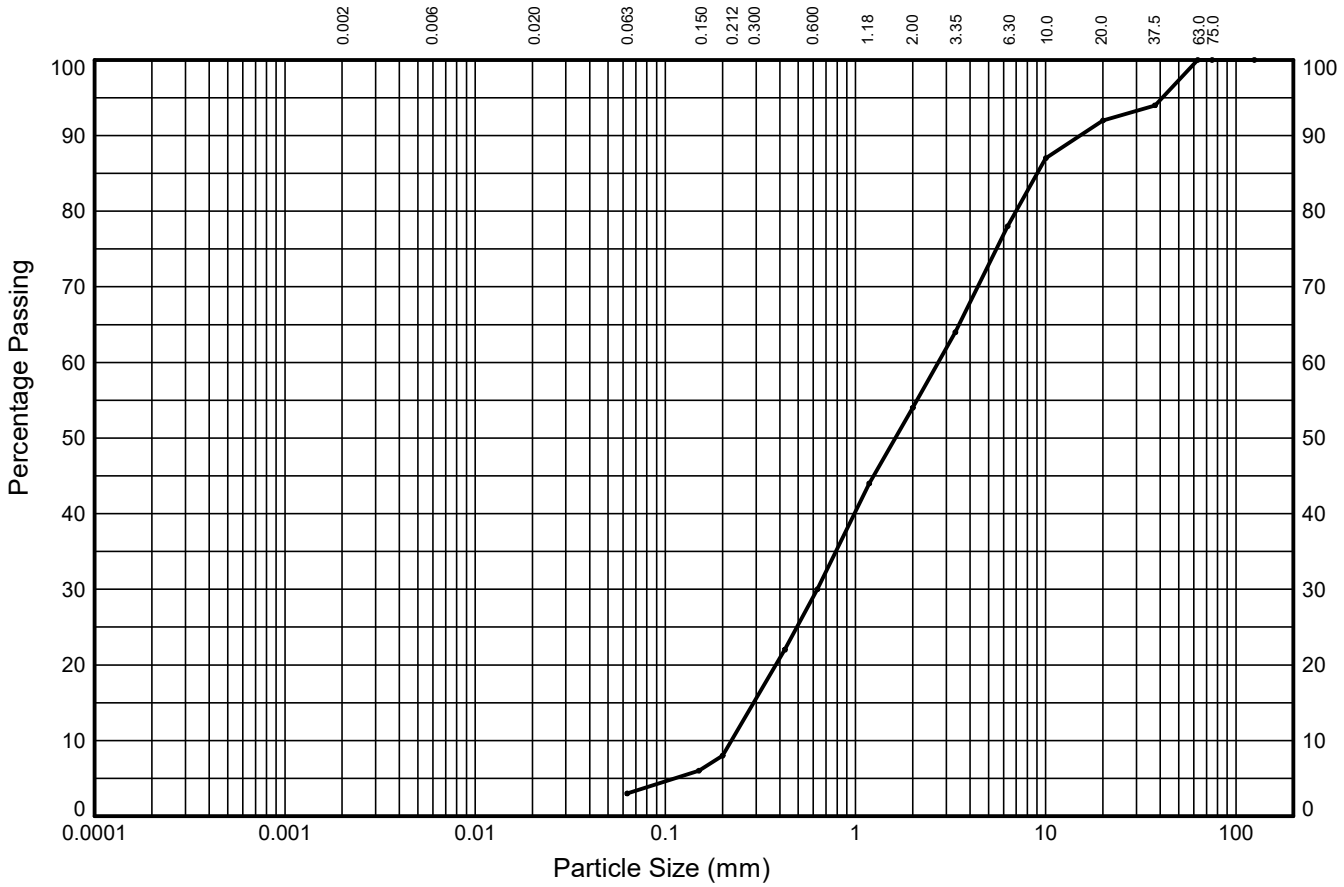
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Contract: **Sealink Friston**		Contract Ref: **563835**

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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **RedP-BH-4** Sample Ref: **19** Sample Type: **B** Depth (m): **5.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	5%	22%	24%	24%	14%	8%	
	SILT			SAND			GRAVEL			
3%				51%			46%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**94**
20.0	**92**
10.0	**87**
6.30	**78**
3.35	**64**
2.00	**54**
1.18	**44**
0.630	**30**
0.425	**22**
0.200	**8**
0.150	**6**
0.063	**3**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.223**
D_{15} (mm)	**0.292**
D_{30} (mm)	**0.630**
D_{50} (mm)	**1.619**
D_{60} (mm)	**2.725**
D_{85} (mm)	**9.024**
D_{90} (mm)	**15.157**
C_U	**12**
C_C	**0.65**

Soil Description:

Orangish brown gravelly slightly clayey SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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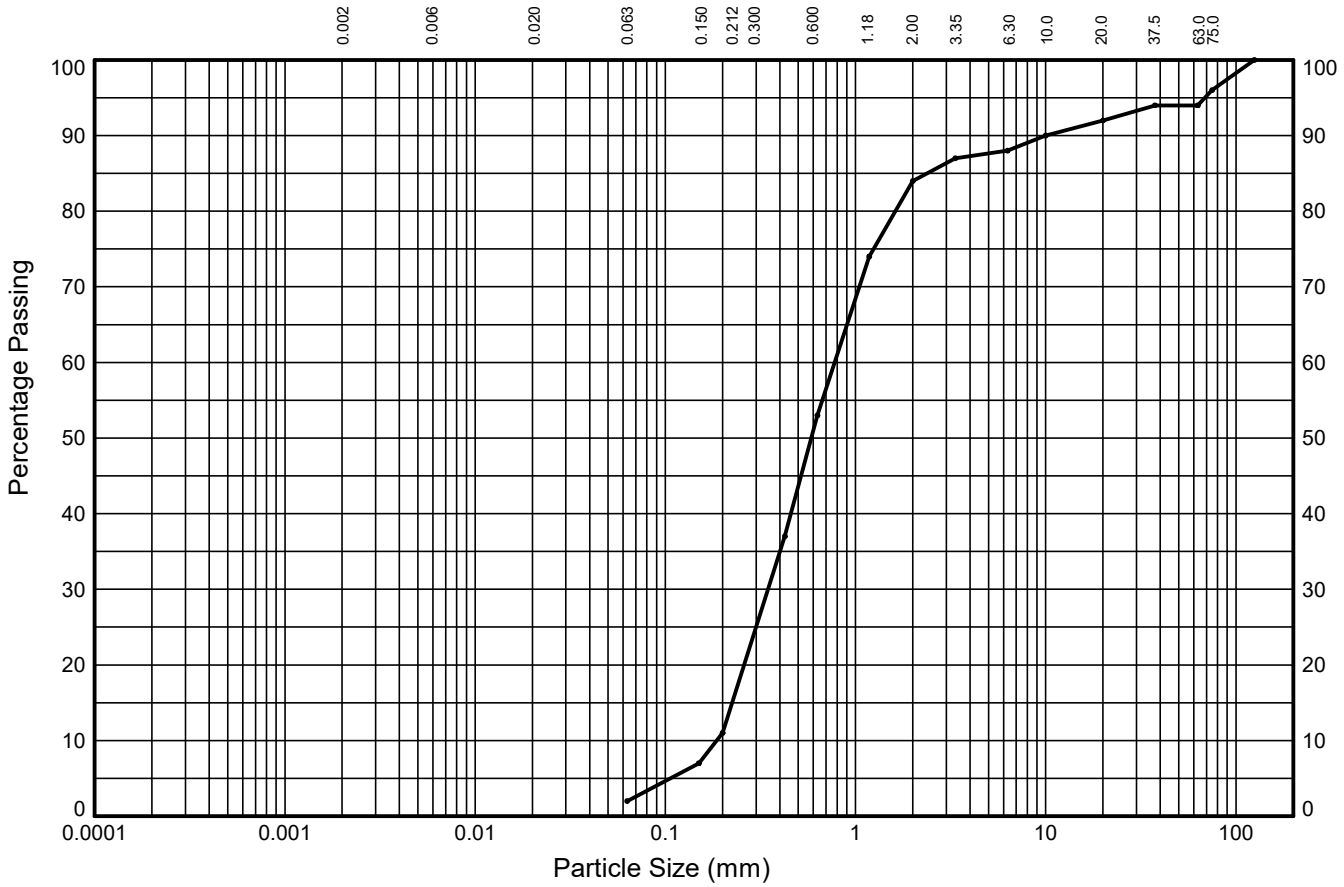
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **RedP-BH-4** Sample Ref: **28** Sample Type: **B** Depth (m): **8.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	9%	42%	31%	4%	4%	2%	
	SILT			SAND			GRAVEL			
2%				82%			10%			6%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**96**
63.0	**94**
37.5	**94**
20.0	**92**
10.0	**90**
6.30	**88**
3.35	**87**
2.00	**84**
1.18	**74**
0.630	**53**
0.425	**37**
0.200	**11**
0.150	**7**
0.063	**2**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.186**
D_{15} (mm)	**0.225**
D_{30} (mm)	**0.347**
D_{50} (mm)	**0.585**
D_{60} (mm)	**0.777**
D_{85} (mm)	**2.375**
D_{90} (mm)	**10.000**
C_U	**4.2**
C_C	**0.83**

Soil Description:

Orangish brown gravelly slightly clayey SAND with medium cobble content

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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Contract	Contract Ref:
Sealink Friston	**563835**

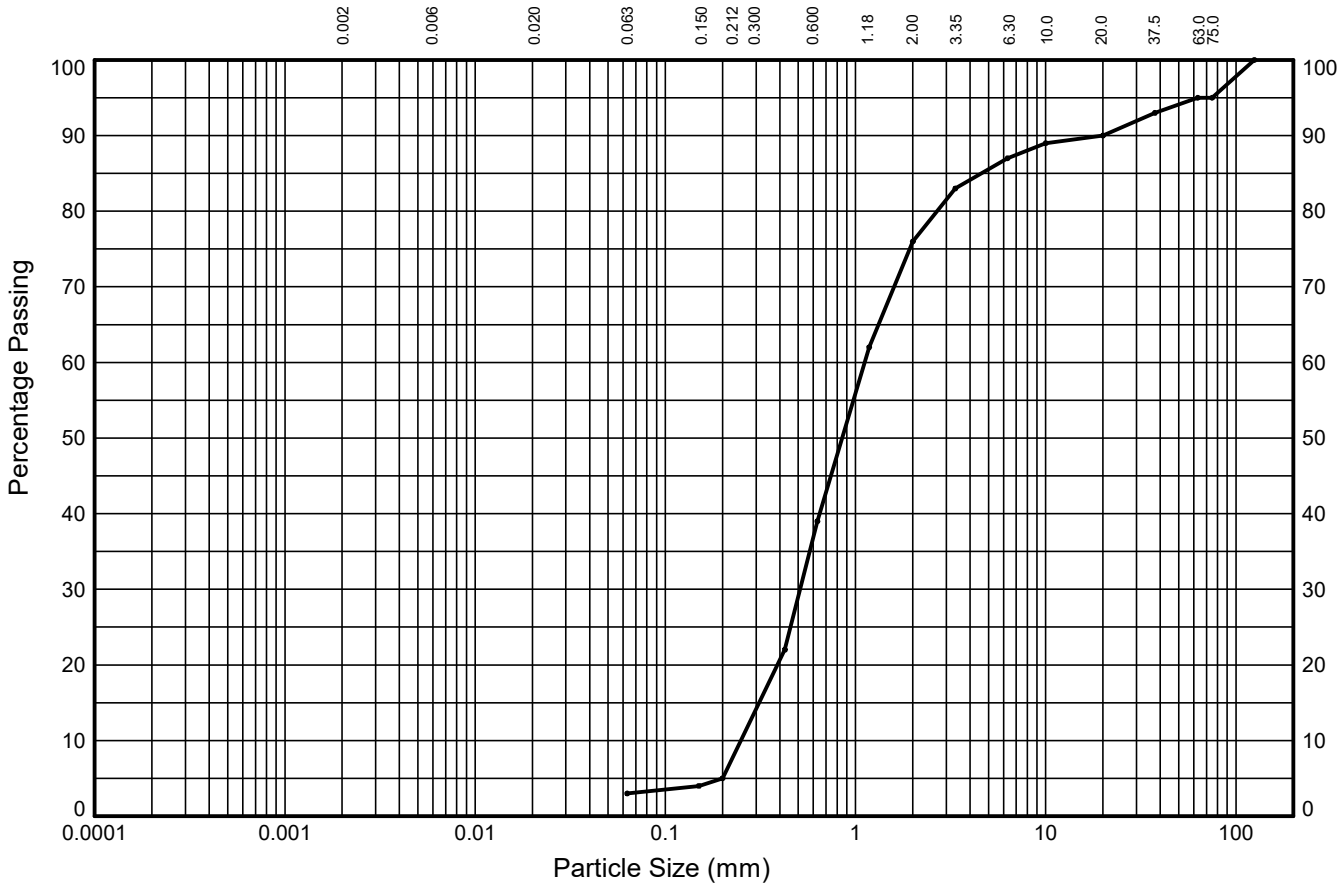
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **RedP-BH-4** Sample Ref: **37** Sample Type: **B** Depth (m): **11.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	2%	34%	37%	11%	3%	5%	
	SILT			SAND			GRAVEL			
3%				73%			19%			5%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**95**
63.0	**95**
37.5	**93**
20.0	**90**
10.0	**89**
6.30	**87**
3.35	**83**
2.00	**76**
1.18	**62**
0.630	**39**
0.425	**22**
0.200	**5**
0.150	**4**
0.063	**3**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.250**
D_{15} (mm)	**0.312**
D_{30} (mm)	**0.511**
D_{50} (mm)	**0.851**
D_{60} (mm)	**1.117**
D_{85} (mm)	**4.594**
D_{90} (mm)	**20.000**
C_U	**4.5**
C_C	**0.94**

Soil Description:

Orangish brown gravelly slightly silty SAND with medium cobble content

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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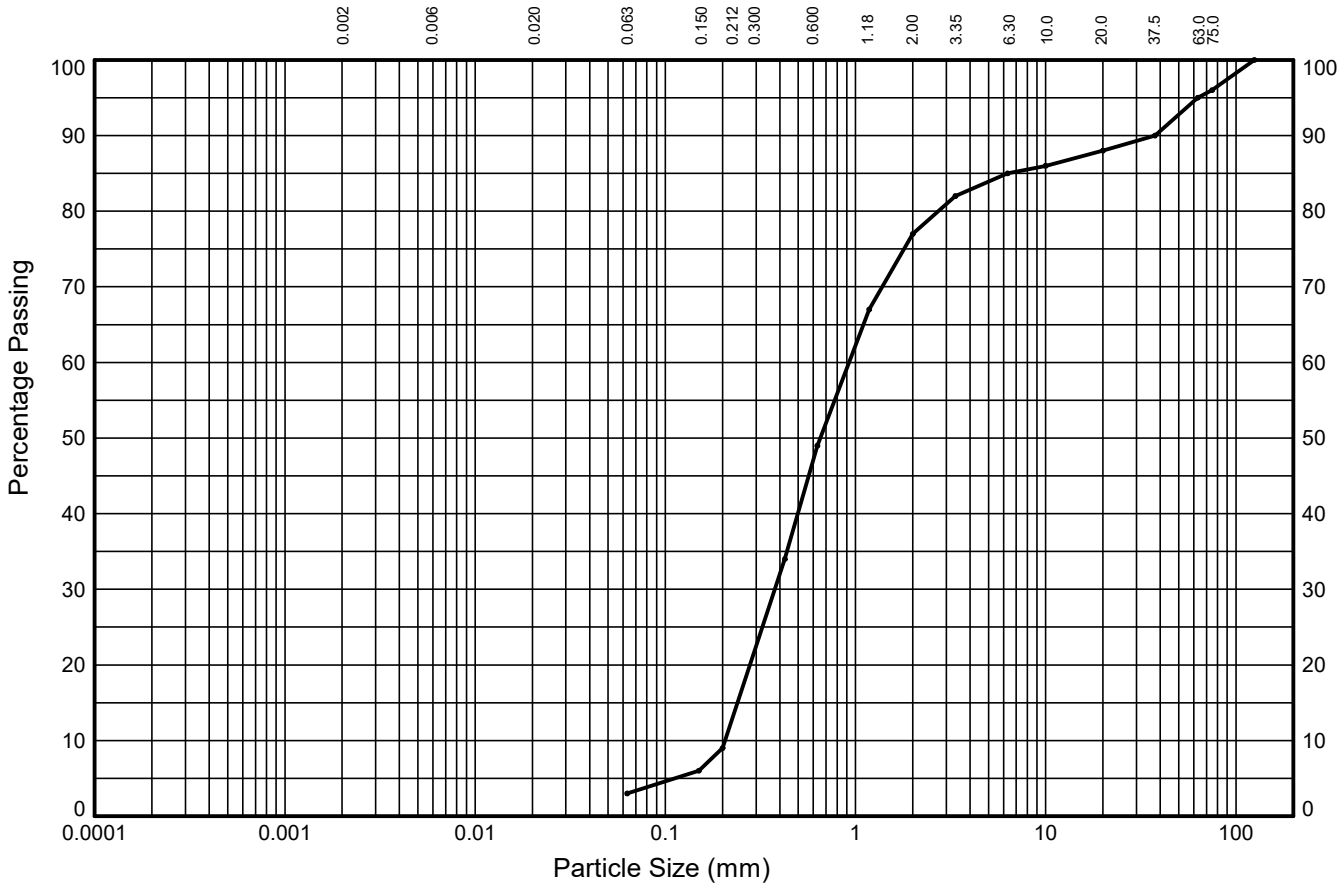
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **RedP-BH-4** Sample Ref: **43** Sample Type: **B** Depth (m): **13.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	6%	40%	28%	8%	3%	7%	
	SILT			SAND			GRAVEL			
3%				74%			18%			5%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**96**
63.0	**95**
37.5	**90**
20.0	**88**
10.0	**86**
6.30	**85**
3.35	**82**
2.00	**77**
1.18	**67**
0.630	**49**
0.425	**34**
0.200	**9**
0.150	**6**
0.063	**3**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.206**
D_{15} (mm)	**0.240**
D_{30} (mm)	**0.377**
D_{50} (mm)	**0.652**
D_{60} (mm)	**0.924**
D_{85} (mm)	**6.300**
D_{90} (mm)	**37.500**
C_U	**4.5**
C_C	**0.74**

Soil Description:

Orangish brown gravelly slightly clayey SAND with medium cobble content

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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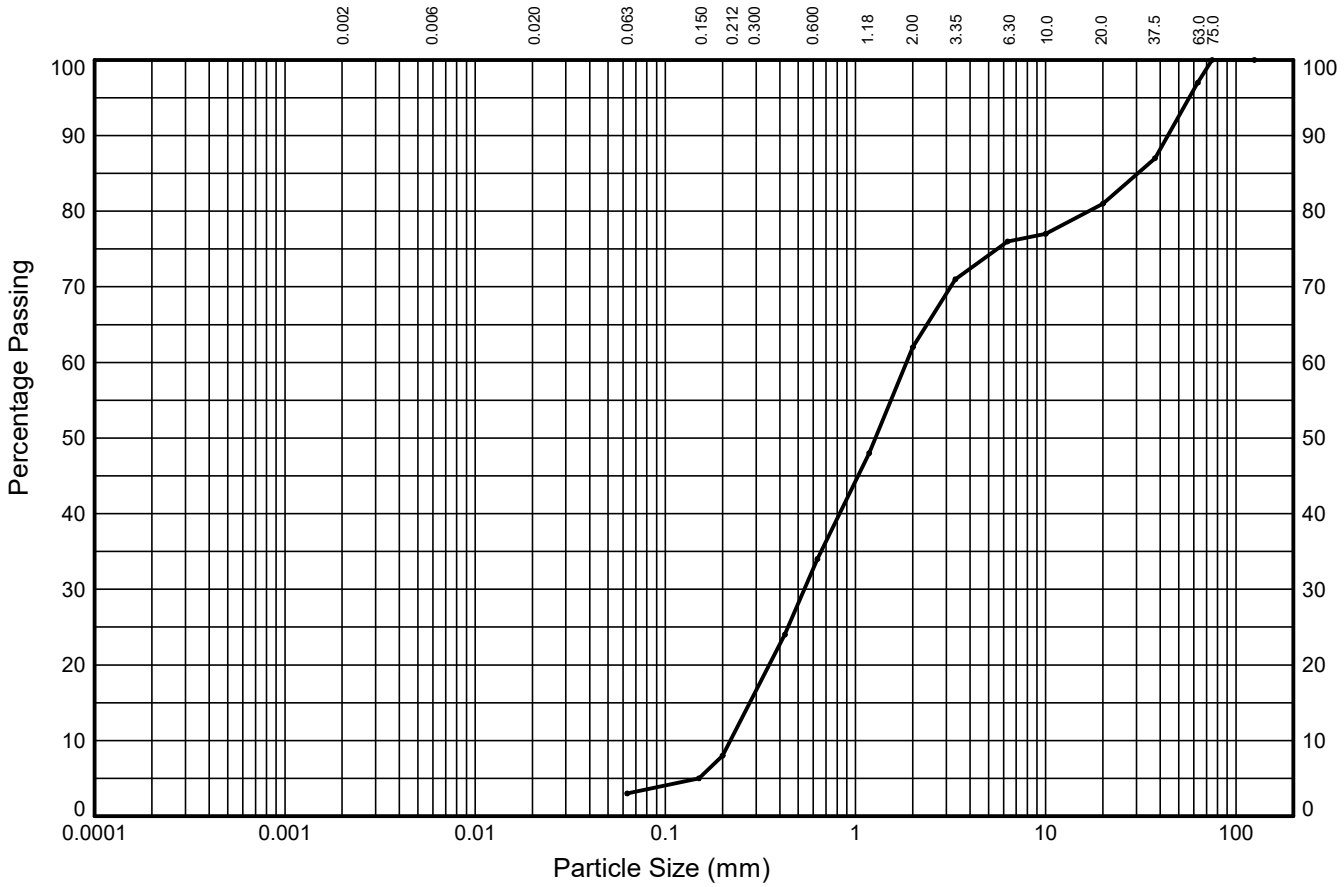
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **RedP-BH-4** Sample Ref: **52** Sample Type: **B** Depth (m): **16.00**



CLAY										
fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
-	-	-	5%	26%	28%	14%	5%	16%	
SILT			SAND			GRAVEL			
3%			59%			35%			3%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**97**
37.5	**87**
20.0	**81**
10.0	**77**
6.30	**76**
3.35	**71**
2.00	**62**
1.18	**48**
0.630	**34**
0.425	**24**
0.200	**8**
0.150	**5**
0.063	**3**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.220**
D_{15} (mm)	**0.278**
D_{30} (mm)	**0.538**
D_{50} (mm)	**1.272**
D_{60} (mm)	**1.855**
D_{85} (mm)	**30.411**
D_{90} (mm)	**43.815**
C_U	**8.4**
C_C	**0.71**

Soil Description:

Orangish brown very gravelly slightly clayey SAND with low cobble content

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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Sealink Friston		**563835**

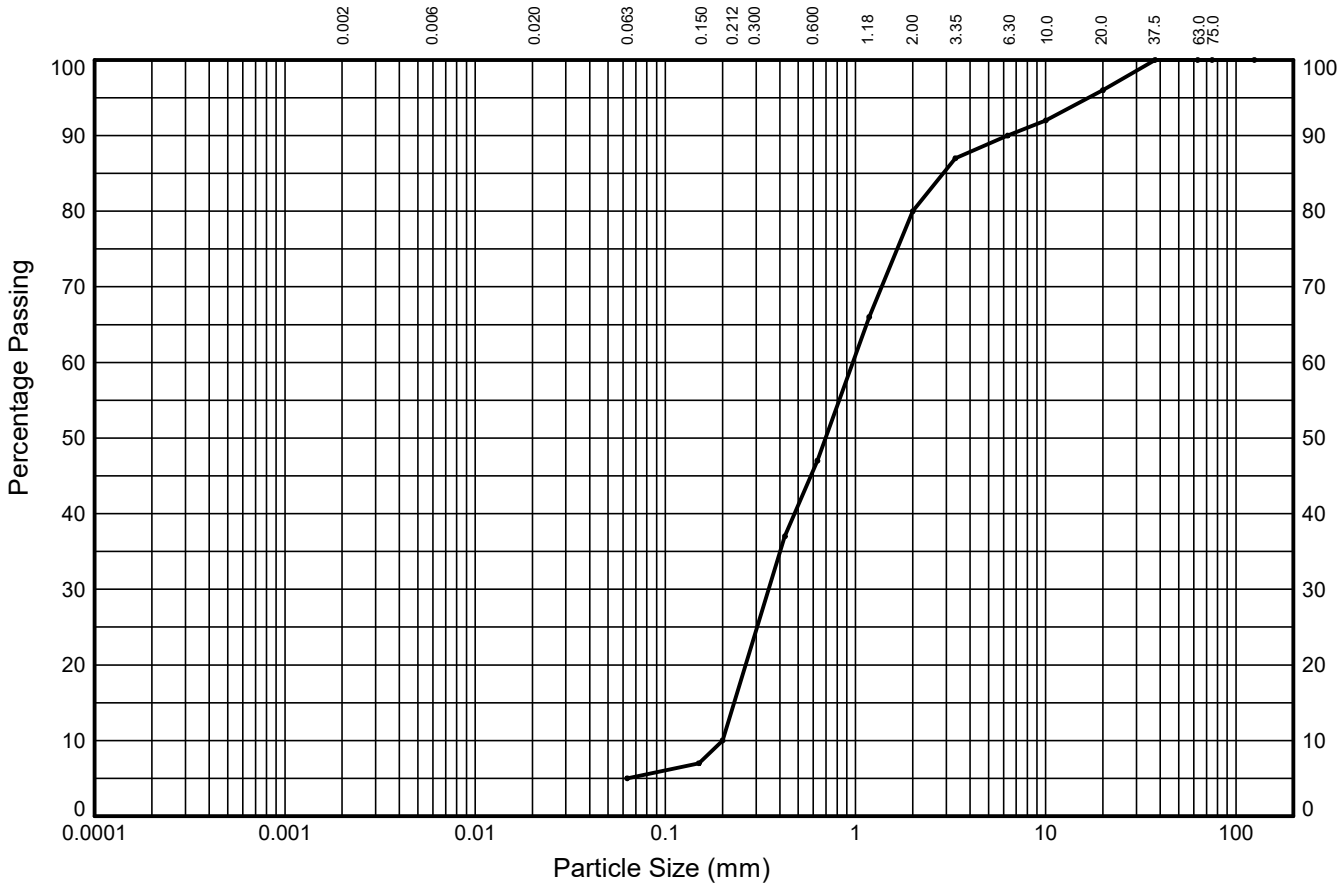
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2 of BS EN ISO 17892:Part 4:2016

Position ID: **RedP-BH-4** Sample Ref: **59** Sample Type: **B** Depth (m): **18.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	-	-	-	5%	37%	33%	10%	6%	4%	
	SILT			SAND			GRAVEL			
5%				75%			20%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**96**
10.0	**92**
6.30	**90**
3.35	**87**
2.00	**80**
1.18	**66**
0.630	**47**
0.425	**37**
0.200	**10**
0.150	**7**
0.063	**5**

Particle Diameter (mm)	Percent Passing (%)

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.200**
D_{15} (mm)	**0.230**
D_{30} (mm)	**0.350**
D_{50} (mm)	**0.696**
D_{60} (mm)	**0.968**
D_{85} (mm)	**2.891**
D_{90} (mm)	**6.300**
C_U	**4.8**
C_C	**0.63**

Soil Description:

Grey very gravelly clayey SAND

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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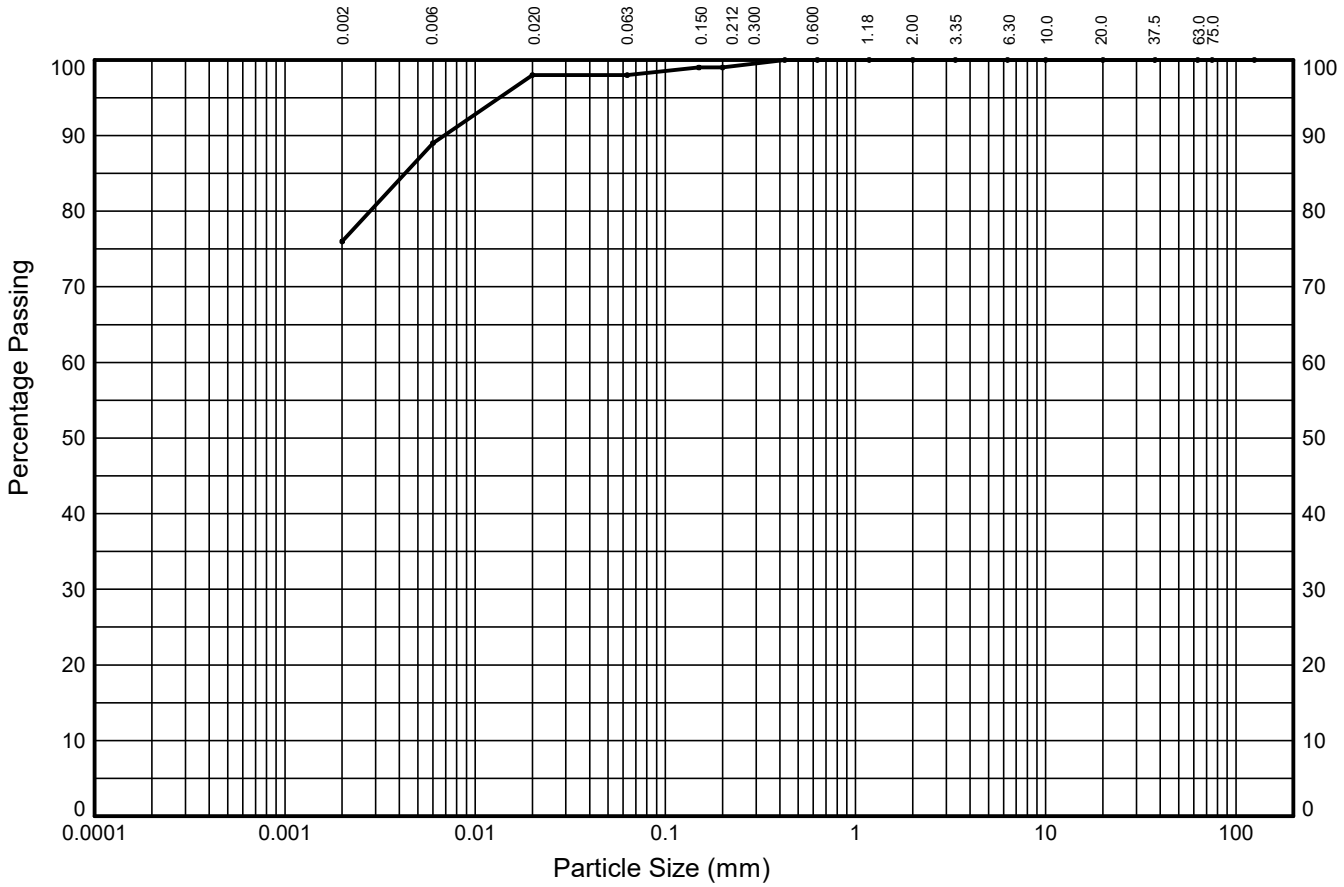
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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **RedP-BH-4** Sample Ref: **75** Sample Type: **B** Depth (m): **23.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	13%	9%	0%	1%	1%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
76%	22%			2%			0%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**100**
3.35	**100**
2.00	**100**
1.18	**100**
0.630	**100**
0.425	**100**
0.200	**99**
0.150	**99**
0.063	**98**

Particle Diameter (mm)	Percent Passing (%)
0.02	**98**
0.006	**89**
0.002	**76**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**NA**
D_{60} (mm)	**NA**
D_{85} (mm)	**0.004**
D_{90} (mm)	**0.007**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown slightly sandy CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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Hertfordshire
HP3 9RT

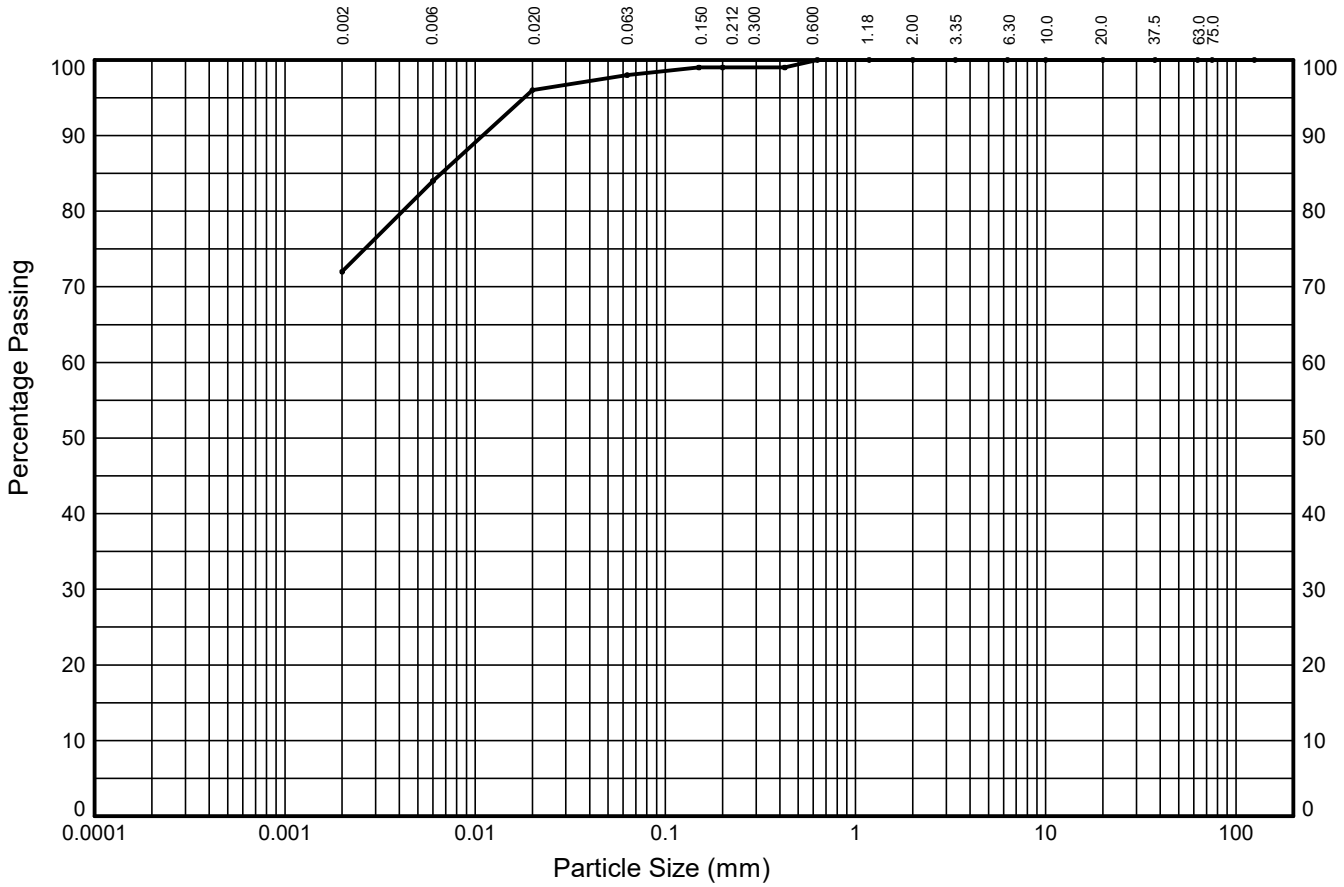
Compiled By		Date
[redacted]	[redacted]	05/03/24
Contract: **Sealink Friston**		Contract Ref: **563835**

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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **RedP-BH-4** Sample Ref: **87** Sample Type: **B** Depth (m): **27.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	12%	12%	2%	1%	1%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
72%	26%			2%			0%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**100**
10.0	**100**
6.30	**100**
3.35	**100**
2.00	**100**
1.18	**100**
0.630	**100**
0.425	**99**
0.200	**99**
0.150	**99**
0.063	**98**

Particle Diameter (mm)	Percent Passing (%)
0.02	**96**
0.006	**84**
0.002	**72**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**NA**
D_{50} (mm)	**NA**
D_{60} (mm)	**NA**
D_{85} (mm)	**0.007**
D_{90} (mm)	**0.011**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark brown slightly sandy CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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Hertfordshire
HP3 9RT

Compiled By		Date
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Contract	Contract Ref:
Sealink Friston	**563835**

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STRUCTURAL SOILS

SAMPLE REPORT

Contract:	Client:	Exploratory Position:
Sealink Friston	**National Grid**	**F22-BH307**
Contract Ref:	Sample Details:	Sheet:
563835	Depth (m): **5.50** - Base (m): **5.95** - Ref: **18** - Type: **UT**	**1** of **1**



Sample Description

5.50-5.95: Very stiff dark grey mottled brown, white and light grey slightly sandy slightly gravelly CLAY. Gravel is angular to subrounded fine to coarse chalk and angular to subangular coarse flint. Sand is fine to coarse

Logged By:	MBattle
Undisturbed Type:	U-UT100
Blows:	100
Recovery:	89%
Sampled:	26/09/2023
Sampled By:	HTribick



GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | GrfcText G - SAMPLE DESCRIPTION REPORT V7 | 563835_SEALINK_FRISTON.GPJ - v10_01. | 04/03/24 - 14:18 | AF3 |

STRUCTURAL SOILS

SAMPLE REPORT

Contract:	Client:	Exploratory Position:
Sealink Friston	**National Grid**	**F22-BH308**

Contract Ref:	Sample Details:	Sheet:
563835	Depth (m): **7.50** - Base (m): **7.95** - Ref: **28** - Type: **UT**	**1** of **1**



Sample Description

7.50-7.95m: Firm to stiff becoming very stiff brown mottled white and orangish brown slightly gravelly slightly sandy CLAY. Gravel is subangular to rounded coarse chalk. Sand is fine to coarse.

Logged By:	MBattle
Undisturbed Type:	U-UT100
Blows:	125
Recovery:	89%
Sampled:	02/10/2023



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STRUCTURAL SOILS

SAMPLE REPORT

Contract:	Client:	Exploratory Position:
Sealink Friston	**National Grid**	**F22-BH309**
Contract Ref:	Sample Details:	Sheet:
563835	Depth (m): **3.50** - Base (m): **3.95** - Ref: **13** - Type: **UT**	**1** of **1**

Sample Description

3.50-3.54m: Stiff to very stiff greyish brown mottled white slightly sandy gravelly CLAY. Gravel is subangular to subrounded fine to medium chalk. Sand is fine to coarse.

3.54-3.77m: Stiff to very stiff dark brown mottled grey and white slightly sandy slightly gravelly CLAY. Gravel is angular to rounded fine to medium chalk. Sand is fine to coarse.

3.77-3.95m: Very stiff grey mottled white and brown slightly sandy slightly gravelly CLAY. Gravel is angular to rounded fine to medium chalk. Sand is fine to coarse.

Logged By:	MBattle
Undisturbed Type:	U-UT100
Blows:	125
Recovery:	100%
Sampled:	13/09/2023
Sampled By:	PFelstead



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SUMMARY OF HAND PENETROMETER & HAND VANE & TORVANE TEST RESULTS

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Moisture Content (%)	Vane Type	Average Reading (kPa)	Sample Description	Lab location
F22-BH310	24	UT	6.26	19	HVP	>254	Dark grey slightly gravelly slightly sandy silty CLAY	**B**

Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

Key : HVP = Hand Vane (Peak), HVR = Hand Vane (Remoulded), PP = Pocket Penetrometer, TV = Torvane.

Moisture Content in accordance with clause 3.2 of BS1377:Part 2

STRUCTURAL SOILS
1a Princess Street
Bedminster
Bristol
BS3 4AG

Compiled By: [redacted] [redacted]

Date: **27.02.24**

Contract Ref: **563835**

Contract: **Sealink Friston**

SUMMARY OF DENSITY TESTS

In accordance with BS EN ISO 17892-2 : 2014 Clause 6.1.1 (Linear Method)

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content (%)	Bulk Density (Mg/m^3)	Dry Density (Mg/m^3)	Volume (if less than 50 cm^3)	Description	Lab location
RedP-BH-1A	16	UT	4.50	40.5	1.79	1.28	-	Dark grey mottled black and brown slightly sandy CLAY	**H**
RedP-BH-1A	24	UT	6.50	22.6	2.03	1.66	-	Dark grey mottled black and dark brown sandy CLAY	**H**
RedP-BH-1A	89	UT	27.50	32.9	1.94	1.46	-	Dark brown silty CLAY	**H**
RedP-BH-4	67	UT	21.00	30.2	1.97	1.51	-	Dark grey CLAY	**H**
RedP-BH-4	79	UT	25.00	29.9	1.99	1.53	-	Dark brown silty CLAY	**H**
RedP-BH-4	91	UT	29.00	33.6	1.93	1.44	-	Dark brown CLAY	**H**

Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

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Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By: [redacted] [redacted]

Date: **04.03.24**

Contract: **Sealink Friston**

Contract Ref: **563835**

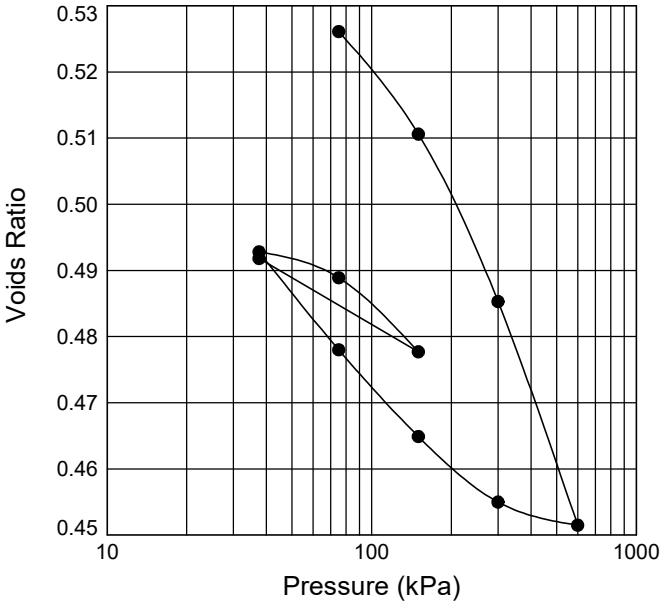
AGS

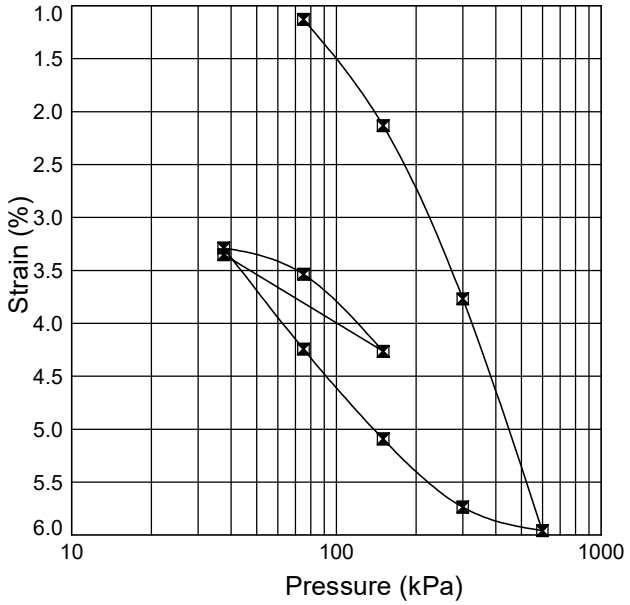
ONE-DIMENSIONAL CONSOLIDATION TEST

In accordance with BS EN ISO 17892 Part 5

Position ID: **F22-BH306** Sample Ref: **5** Sample Type: **UT** Depth (m): **1.71**

Description : Grey mottled brown slightly sandy slightly gravelly CLAY





SPECIMEN DETAILS	INITIAL	FINAL
Diameter (mm) :	75.00	75.00
Height (mm) :	18.95	18.32
Assumed Particle Density (Mg/m^3) :	2.65	2.65
Water Content (%) :	20.4	20.5
Wet Density (Mg/m^3) :	2.07	2.14
Dry Density (Mg/m^3) :	1.72	1.78
Voids Ratio :	0.5435	0.4918

TEST DETAILS

Stage	Duration (days)	Pressure (kPa)	Strain (%)	Void Ratio	M_v (m^2/MN)	T_{90} (min)	C_v (m^2/yr)	Comments etc.
Loading	1	0 - 75	1.129	0.5261	0.15	3.1	13	
Loading	1	75 - 150	2.132	0.5106	0.14	13	2.9	
Loading	1	150 - 300	3.768	0.4853	0.11	15	2.5	
Loading	1	300 - 600	5.958	0.4515	0.076	26	1.4	
Unloading	1	600 - 300	5.736	0.4550	NA	NA	NA	
Unloading	1	300 - 150	5.092	0.4649	NA	NA	NA	
Unloading	1	150 - 75	4.243	0.4780	NA	NA	NA	
Unloading	1	75 - 37.5	3.288	0.4928	NA	NA	NA	
Loading	1	37.5 - 75	3.536	0.4889	0.068	24	1.5	
Loading	1	75 - 150	4.264	0.4777	0.10	39	0.94	
Unloading	1	150 - 37.5	3.351	0.4918	NA	NA	NA	

Notes: Method of time-setting used (min): **T_{90}.** Average temperature during test (degC): **20.4**.
Frame Correction Applied

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1a Princess Street
Bedminster
Bristol
BS3 4AG

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Contract: **Sealink Friston**		Contract Ref: **563835**

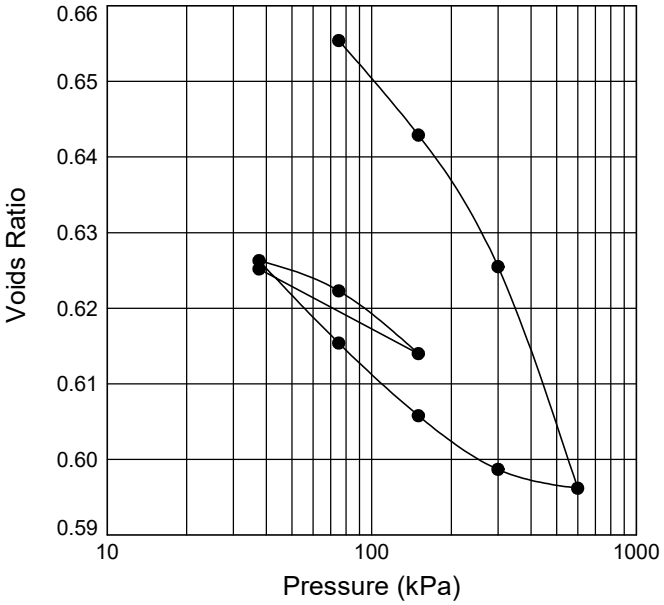
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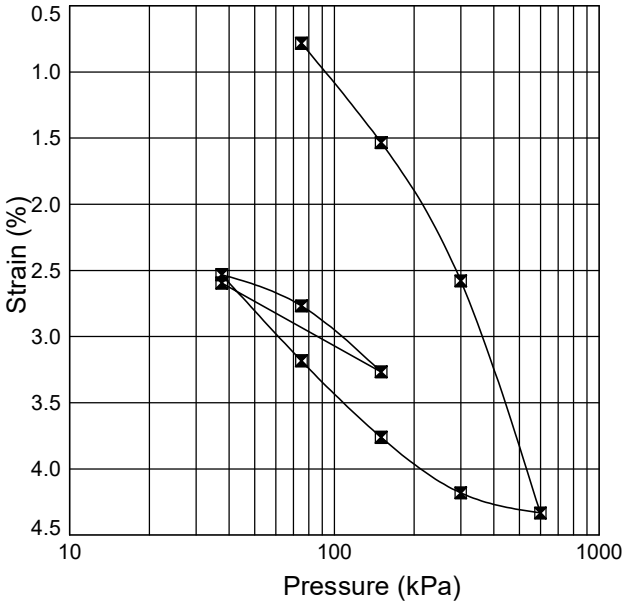
ONE-DIMENSIONAL CONSOLIDATION TEST

In accordance with BS EN ISO 17892 Part 5

Position ID: **F22-BH307** Sample Ref: **5** Sample Type: **UT** Depth (m): **1.90**

Description : Grey mottled yellowish brown slightly sandy slightly gravelly CLAY





SPECIMEN DETAILS	INITIAL	FINAL
Diameter (mm) :	75.78	75.78
Height (mm) :	19.04	18.55
Assumed Particle Density (Mg/m^3) :	2.65	2.65
Water Content (%) :	25.4	25.3
Wet Density (Mg/m^3) :	1.99	2.04
Dry Density (Mg/m^3) :	1.59	1.63
Voids Ratio :	0.6685	0.6252

TEST DETAILS

Stage	Duration (days)	Pressure (kPa)	Strain (%)	Void Ratio	M_v (m^2/MN)	T_{90} (min)	C_v (m^2/yr)	Comments etc.
Loading	1	0 - 75	0.783	0.6554	0.10	1.8	22	
Loading	1	75 - 150	1.534	0.6429	0.10	5	7.9	
Loading	1	150 - 300	2.579	0.6255	0.071	3.7	10	
Loading	1	300 - 600	4.333	0.5962	0.060	6	6.0	
Unloading	1	600 - 300	4.181	0.5987	NA	NA	NA	
Unloading	1	300 - 150	3.761	0.6058	NA	NA	NA	
Unloading	1	150 - 75	3.183	0.6154	NA	NA	NA	
Unloading	1	75 - 37.5	2.532	0.6263	NA	NA	NA	
Loading	1	37.5 - 75	2.768	0.6223	0.065	4.7	8.1	
Loading	1	75 - 150	3.267	0.6140	0.068	8	4.8	
Unloading	1	150 - 37.5	2.595	0.6252	NA	NA	NA	

Notes: Method of time-setting used (min): **T_{90}.** Average temperature during test (degC): **20.4**.
Frame Correction Applied

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Bristol
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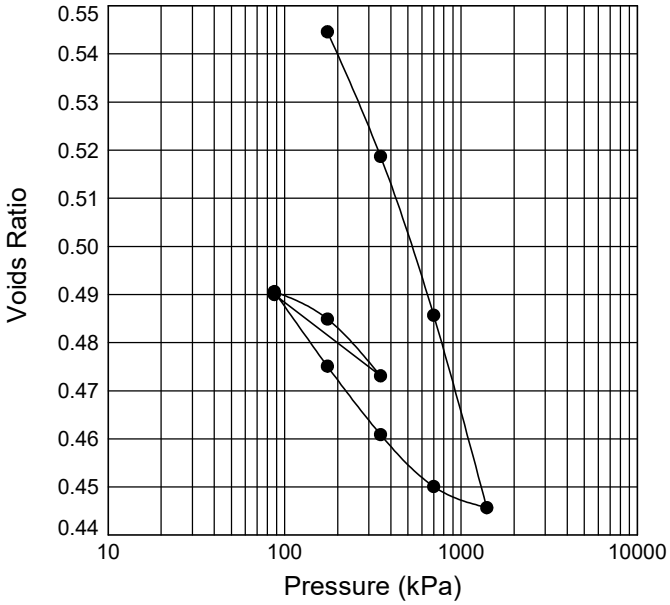
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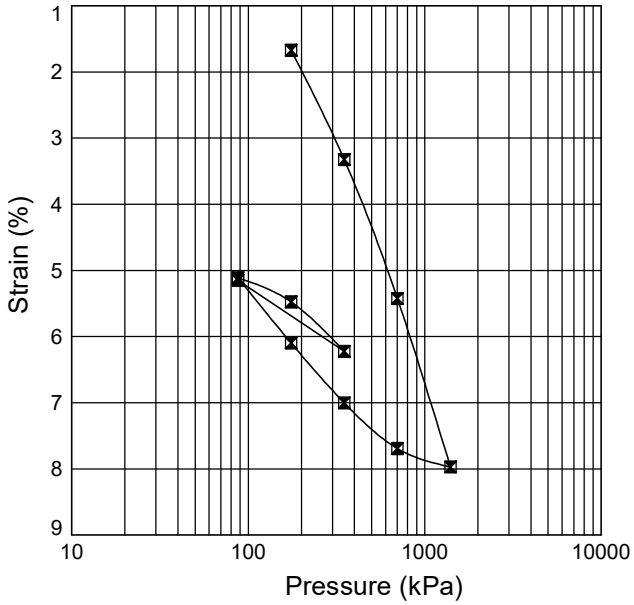
ONE-DIMENSIONAL CONSOLIDATION TEST

In accordance with BS EN ISO 17892 Part 5

Position ID: **F22-BH308** Sample Ref: **14** Sample Type: **UT** Depth (m): **3.62**

Description : Grey slightly sandy slightly gravelly CLAY





SPECIMEN DETAILS	INITIAL	FINAL
Diameter (mm) :	75.00	75.00
Height (mm) :	19.01	18.03
Assumed Particle Density (Mg/m^3) :	2.65	2.65
Water Content (%) :	21.7	20.2
Wet Density (Mg/m^3) :	2.05	2.14
Dry Density (Mg/m^3) :	1.69	1.78
Voids Ratio :	0.5709	0.4900

TEST DETAILS

Stage	Duration (days)	Pressure (kPa)	Strain (%)	Void Ratio	M_v (m^2/MN)	T_{90} (min)	C_v (m^2/yr)	Comments etc.
Loading	1	0 - 175	1.673	0.5446	0.096	13	3.0	
Loading	1	175 - 350	3.325	0.5187	0.096	15	2.5	
Loading	1	350 - 700	5.424	0.4857	0.062	23	1.6	
Loading	1	700 - 1400	7.970	0.4457	0.038	24	1.4	
Unloading	1	1400 - 700	7.691	0.4501	NA	NA	NA	
Unloading	1	700 - 350	7.002	0.4609	NA	NA	NA	
Unloading	1	350 - 175	6.097	0.4751	NA	NA	NA	
Unloading	1	175 - 87.5	5.113	0.4906	NA	NA	NA	
Loading	1	87.5 - 175	5.476	0.4849	0.044	33	1.1	
Loading	1	175 - 350	6.223	0.4731	0.045	28	1.3	
Unloading	1	350 - 87.5	5.150	0.4900	NA	NA	NA	

Notes: Method of time-setting used (min): **T_{90}.** Average temperature during test (degC): **20.4**.
Frame Correction Applied

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1a Princess Street
Bedminster
Bristol
BS3 4AG

Compiled By		Date
[redacted]	[redacted]	07/12/23
Contract: **Sealink Friston**		Contract Ref: **563835**

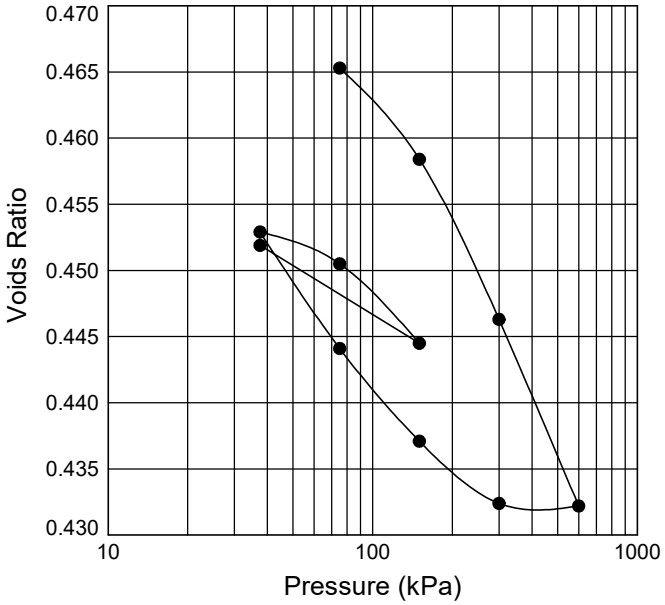
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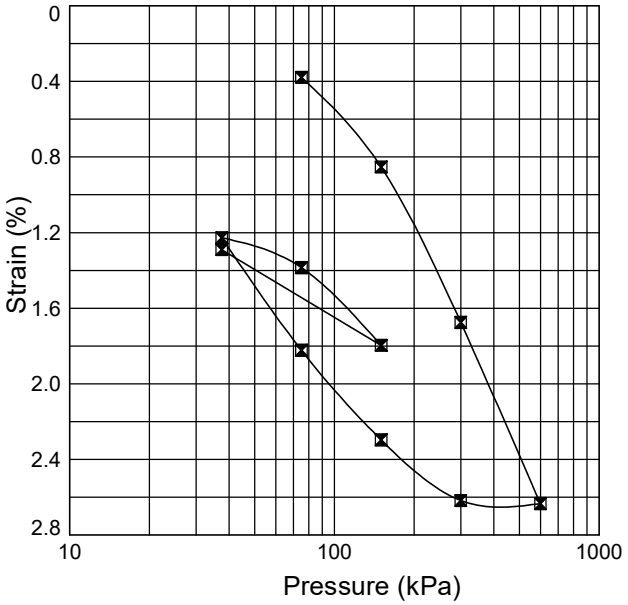
ONE-DIMENSIONAL CONSOLIDATION TEST

In accordance with BS EN ISO 17892 Part 5

Position ID: **F22-BH309** Sample Ref: **7** Sample Type: **UT** Depth (m): **1.63**

Description : Brown mottled grey slightly sandy slightly gravelly silty CLAY





SPECIMEN DETAILS	INITIAL	FINAL
Diameter (mm) :	75.00	75.00
Height (mm) :	18.99	18.75
Assumed Particle Density (Mg/m^3) :	2.65	2.65
Water Content (%) :	18.1	18.4
Wet Density (Mg/m^3) :	2.13	2.16
Dry Density (Mg/m^3) :	1.80	1.82
Voids Ratio :	0.4709	0.4519

TEST DETAILS

Stage	Duration (days)	Pressure (kPa)	Strain (%)	Void Ratio	M_v (m^2/MN)	T_{90} (min)	C_v (m^2/yr)	Comments etc.
Loading	1	0 - 75	0.379	0.4653	0.051	0.7	57	
Loading	1	75 - 150	0.853	0.4584	0.063	3.7	11	
Loading	1	150 - 300	1.675	0.4463	0.055	4.4	8.9	
Loading	1	300 - 600	2.633	0.4322	0.032	4.7	8.2	
Unloading	1	600 - 300	2.617	0.4324	NA	NA	NA	
Unloading	1	300 - 150	2.296	0.4371	NA	NA	NA	
Unloading	1	150 - 75	1.822	0.4441	NA	NA	NA	
Unloading	1	75 - 37.5	1.227	0.4529	NA	NA	NA	
Loading	1	37.5 - 75	1.385	0.4505	0.043	15	2.6	
Loading	1	75 - 150	1.796	0.4445	0.056	12	3.2	
Unloading	1	150 - 37.5	1.290	0.4519	NA	NA	NA	

Notes: Method of time-setting used (min): **T_{90}.** Average temperature during test (degC): **19.5**.
Frame Correction Applied

STRUCTURAL SOILS
1a Princess Street
Bedminster
Bristol
BS3 4AG

Compiled By		Date
[redacted]	[redacted]	27/02/24
Contract: **Sealink Friston**		Contract Ref: **563835**

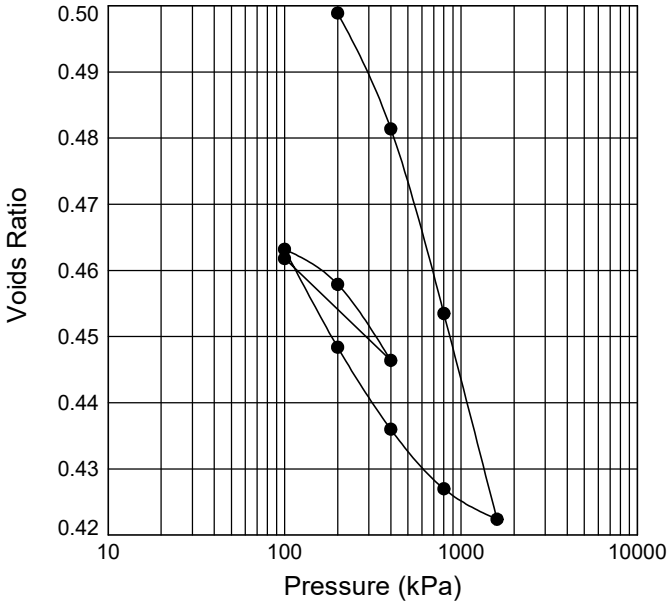
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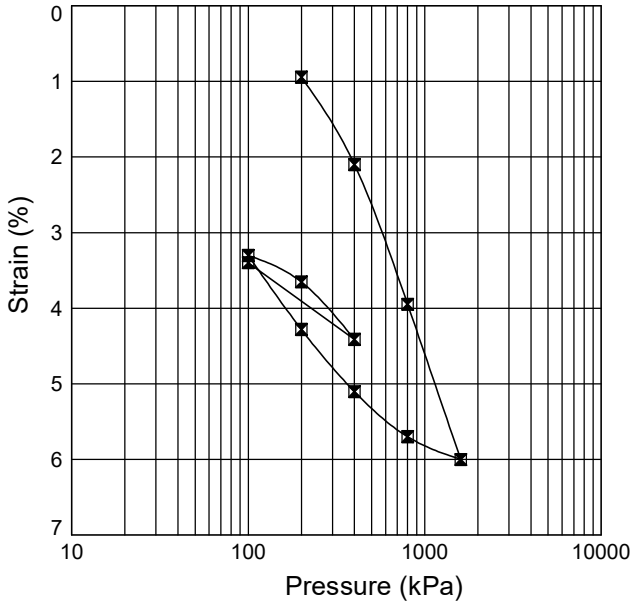
ONE-DIMENSIONAL CONSOLIDATION TEST

In accordance with BS EN ISO 17892 Part 5

Position ID: **F22-BH310** Sample Ref: **17** Sample Type: **UT** Depth (m): **4.31**

Description : Dark grey slightly gravelly slightly sandy silty CLAY





SPECIMEN DETAILS	INITIAL	FINAL
Diameter (mm) :	75.00	75.00
Height (mm) :	18.95	18.31
Assumed Particle Density (Mg/m^3) :	2.65	2.65
Water Content (%) :	18.2	18.9
Wet Density (Mg/m^3) :	2.07	2.16
Dry Density (Mg/m^3) :	1.75	1.81
Voids Ratio :	0.5132	0.4618

TEST DETAILS

Stage	Duration (days)	Pressure (kPa)	Strain (%)	Void Ratio	M_v (m^2/MN)	T_{90} (min)	C_v (m^2/yr)	Comments etc.
Loading	1	0 - 200	0.945	0.4989	0.047	0.8	49	
Loading	1	200 - 400	2.100	0.4814	0.058	2.1	18	
Loading	1	400 - 800	3.947	0.4535	0.047	2.3	16	
Loading	1	800 - 1600	6.000	0.4224	0.027	9	4.0	
Unloading	1	1600 - 800	5.699	0.4270	NA	NA	NA	
Unloading	1	800 - 400	5.103	0.4360	NA	NA	NA	
Unloading	1	400 - 200	4.280	0.4484	NA	NA	NA	
Unloading	1	200 - 100	3.303	0.4632	NA	NA	NA	
Loading	1	100 - 200	3.652	0.4579	0.036	18	2.1	
Loading	1	200 - 400	4.412	0.4464	0.039	15	2.5	
Unloading	1	400 - 100	3.398	0.4618	NA	NA	NA	

Notes: Method of time-setting used (min): **T_{90}.** Average temperature during test (degC): **19.5**.
Frame Correction Applied

STRUCTURAL SOILS
1a Princess Street
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Bristol
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Compiled By		Date
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Contract: **Sealink Friston**		Contract Ref: **563835**

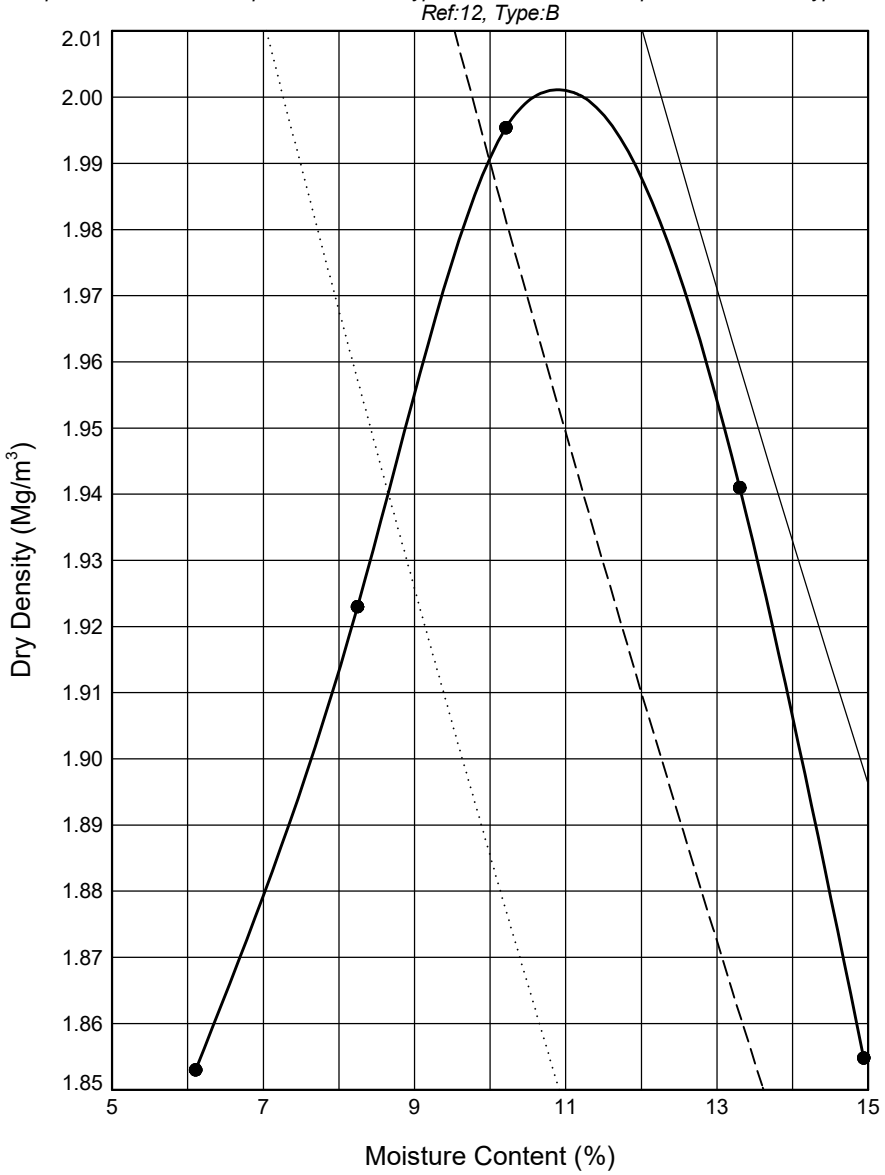
GINT_LIBRARY_V10_01.GLB | LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - 1D CONSOL DL -1- A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
Structural Soils Ltd, Branch Office - Bristol Lab: 1a Princess Street, Bedminster, Bristol, BS3 4AG. Tel: 0117-947-1000, Fax: 0117-947-1004, Web: www.soils.co.uk, Email: ask@soils.co.uk. | 27/02/24 - 13:09 | AF3 |

DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **F22-TP203** Sample Ref: Sample Type: **AMAL** Depth (m): **1.50**

Amalgamation comprises: F22-TP203, Depth:1.50, Ref:7, Type:LB + F22-TP203, Depth:3.20, Ref:10, Type:B + F22-TP203, Depth:4.00, Ref:12, Type:B



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**13**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m³)	:	**2.00**
% Retained on 37.5mm BS Sieve	:	**3**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**11**
% Retained on 20.0mm BS Sieve	:	**1**	Type of Mould	:	**CBR**	Method Used: **Clause 11.4**		
Particle Density - assumed (Mg/m³)	:	**2.65**				Remarks: **CBR and MCV tests carried out at each point**		
Size of Soil Pieces	:	**<37.5mm**	Separate samples were used.					

Sample Description	Key to Air Voids Lines		
Brown mottled orangish brown gravelly very clayey SAND	——— 0%	– – – – 5%	····· 10%

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Compiled By		Date
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Contract: **Sealink Friston**		Contract Ref: **563835**

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Structural Soils Ltd, Branch Office - Castleford: The Potteries, Pottery Street, Castleford, West Yorkshire, WF10 1NJ. Tel: 01977-552255, Fax: 01977-552299, Web: www.soils.co.uk, Email: ask@soils.co.uk. | 05/03/24 - 10:01 | AF3 |

MOISTURE CONDITION VALUE

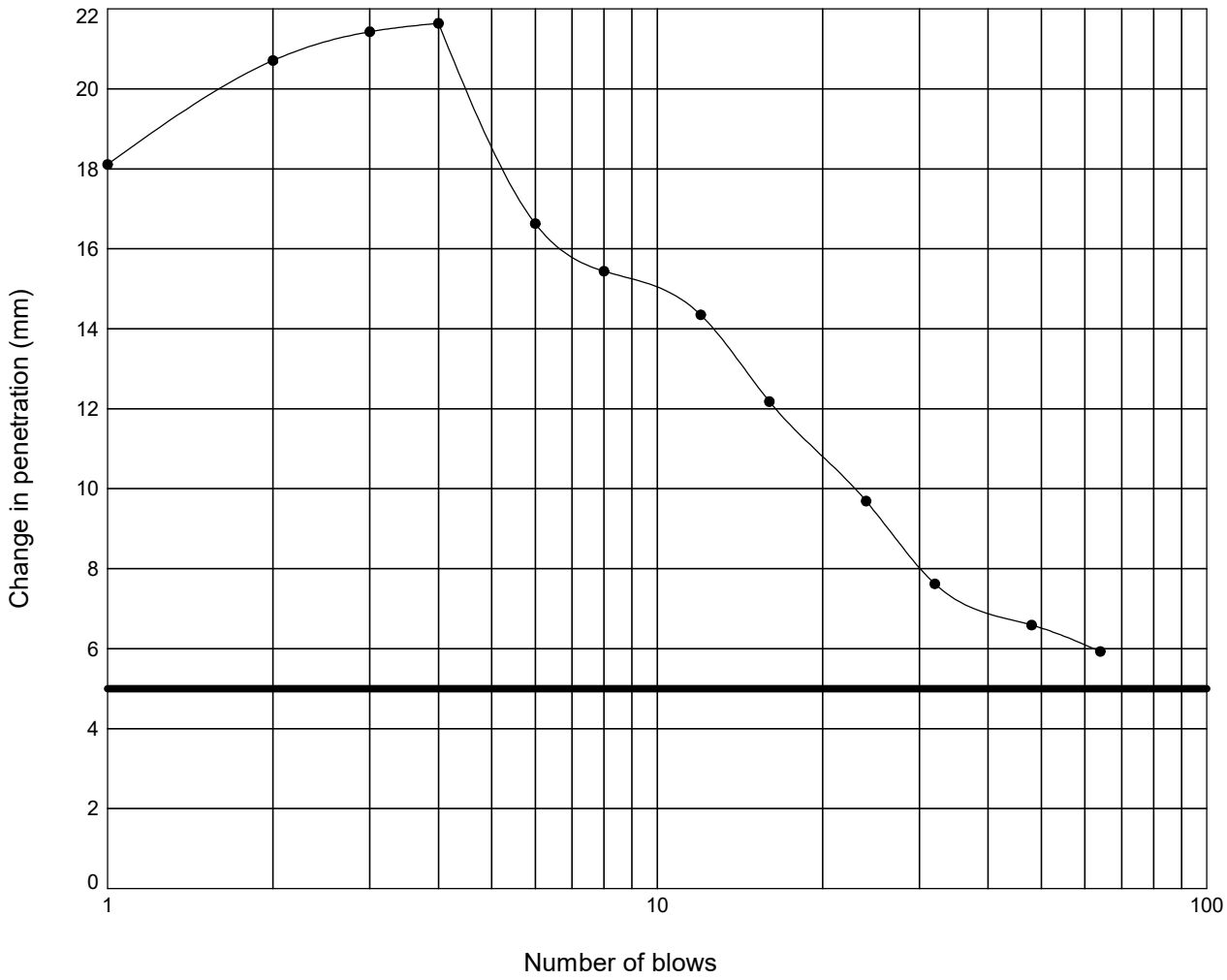
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP203** Sample Ref: Sample Type: **AMAL** Depth (m): **1.50**

Amalgamation comprises: F22-TP203, Depth:1.50, Ref:7, Type:LB + F22-TP203, Depth:3.20, Ref:10, Type:B + F22-TP203, Depth:4.00, Ref:12, Type:B

Description : **Brown mottled orangish brown gravelly very clayey SAND**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	7.3	%
Percentage retained on 20 mm sieve :	=	3	%
Moisture Condition Value :	=	16.2	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Sealink Friston	**563835**

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MOISTURE CONDITION VALUE

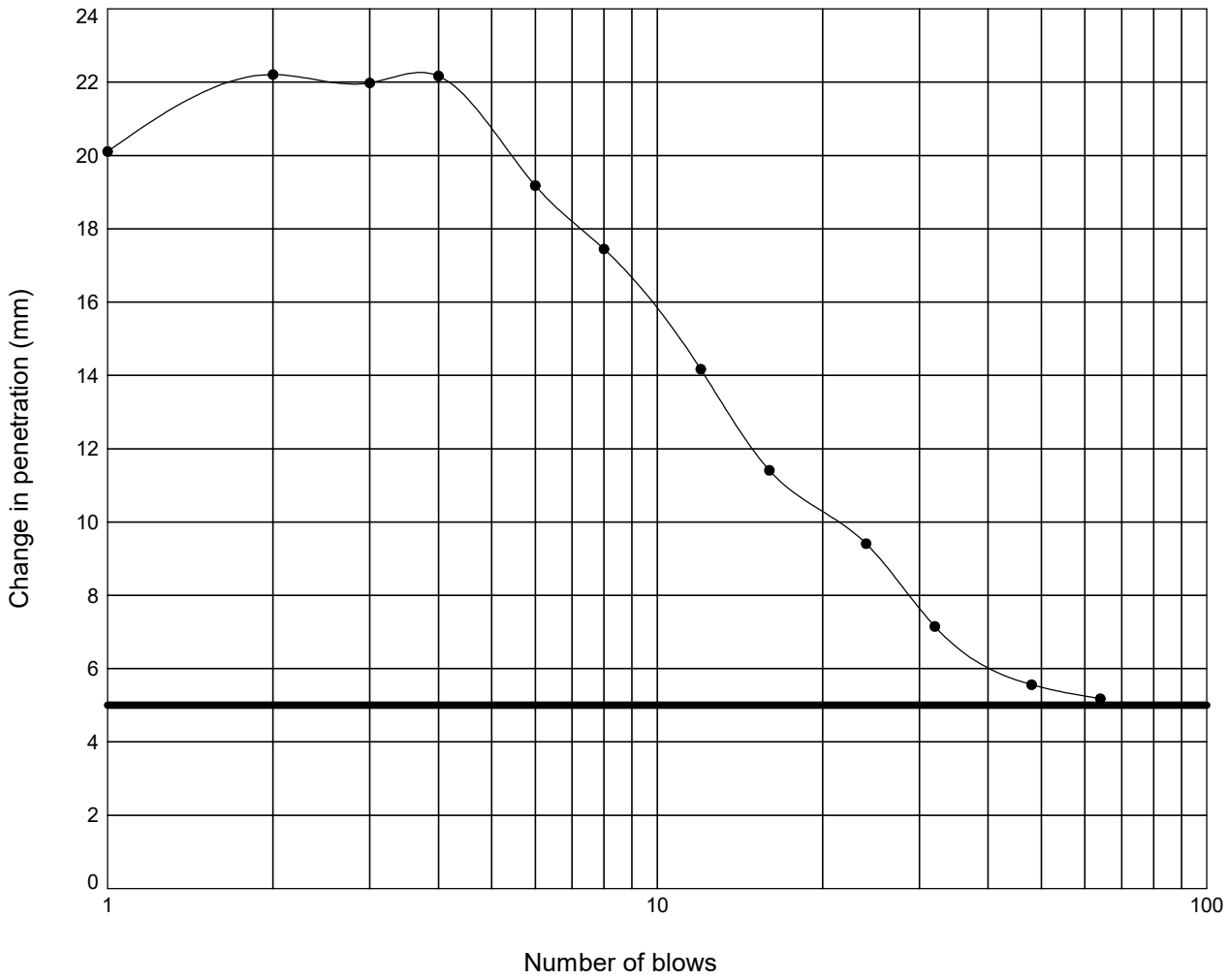
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP203** Sample Ref: Sample Type: **AMAL** Depth (m): **1.50**

Amalgamation comprises: F22-TP203, Depth:1.50, Ref:7, Type:LB + F22-TP203, Depth:3.20, Ref:10, Type:B + F22-TP203, Depth:4.00, Ref:12, Type:B

Description : **Brown mottled orangish brown gravelly very clayey SAND**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	= 8.7	%
Percentage retained on 20 mm sieve :	= 4	%
Moisture Condition Value :	= 14.9	
Interpretation of curve:	= Steepest straight line - Fig 9	

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Contract		Contract Ref:
Sealink Friston		**563835**

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MOISTURE CONDITION VALUE

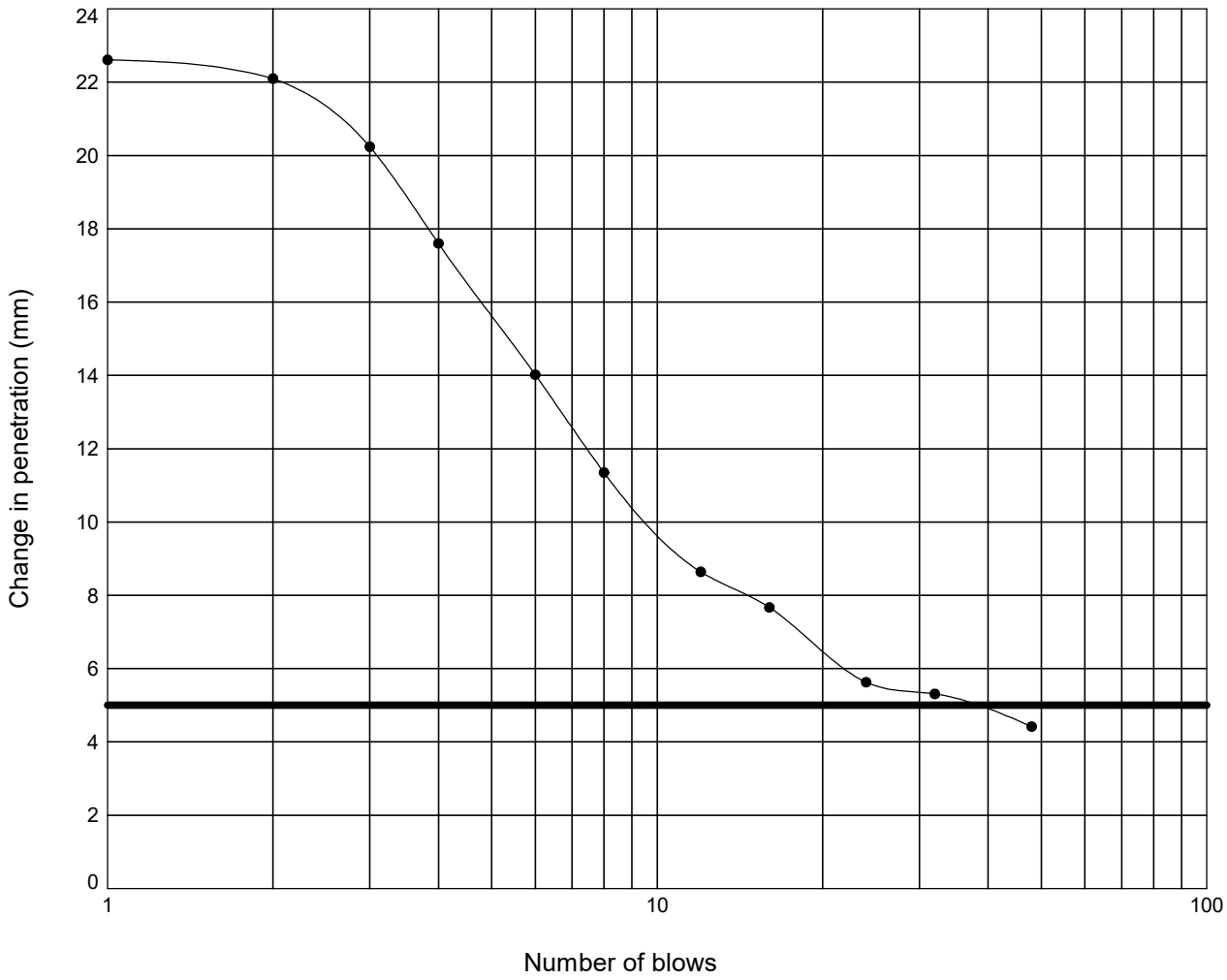
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP203** Sample Ref: Sample Type: **AMAL** Depth (m): **1.50**

Amalgamation comprises: F22-TP203, Depth:1.50, Ref:7, Type:LB + F22-TP203, Depth:3.20, Ref:10, Type:B + F22-TP203, Depth:4.00, Ref:12, Type:B

Description : **Brown mottled orangish brown gravelly very clayey SAND**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	= 12	%
Percentage retained on 20 mm sieve :	= 4	%
Moisture Condition Value :	= 12.0	
Interpretation of curve:	= Steepest straight line - Fig 9	

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MOISTURE CONDITION VALUE

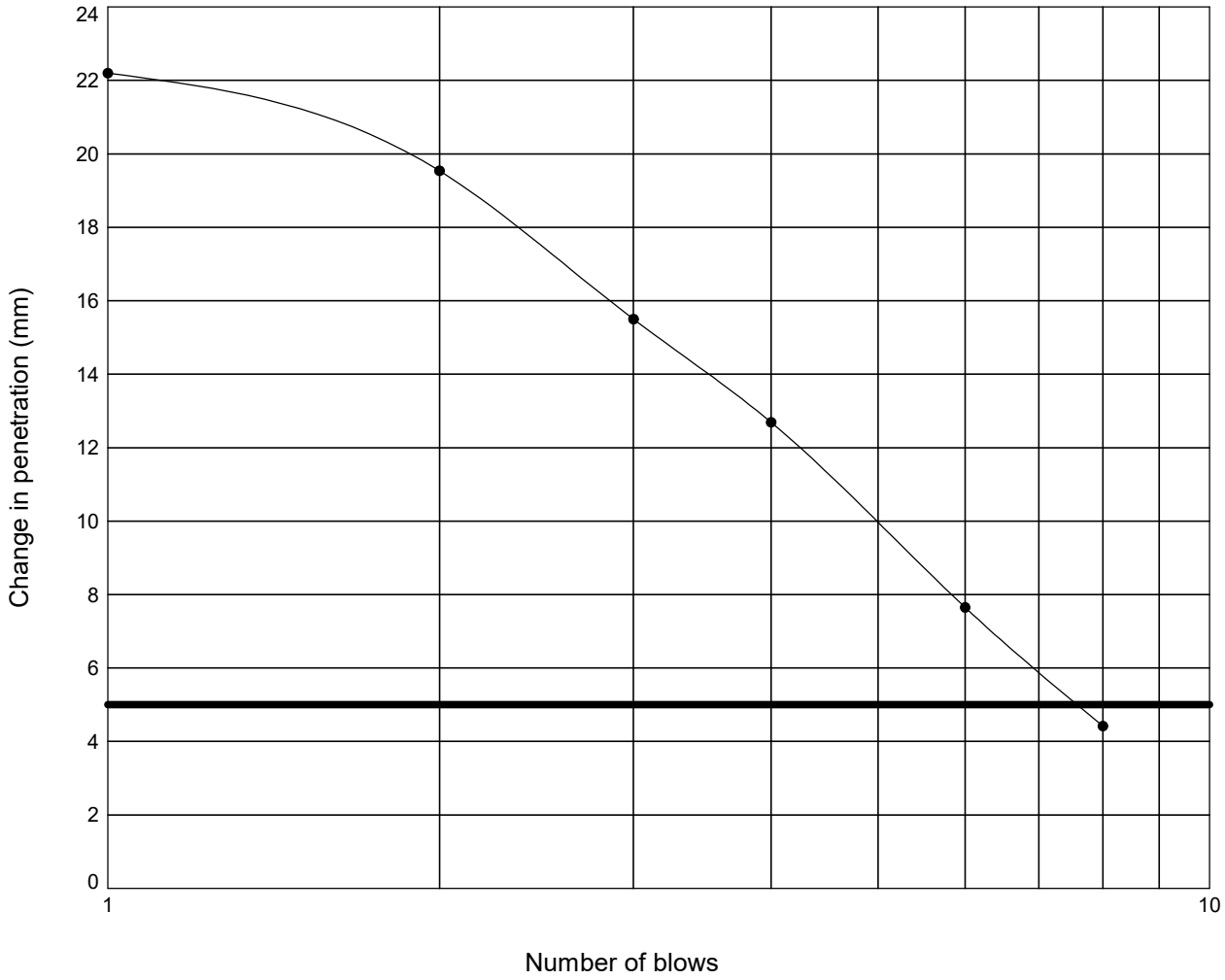
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP203** Sample Ref: Sample Type: **AMAL** Depth (m): **1.50**

Amalgamation comprises: F22-TP203, Depth:1.50, Ref:7, Type:LB + F22-TP203, Depth:3.20, Ref:10, Type:B + F22-TP203, Depth:4.00, Ref:12, Type:B

Description : **Brown mottled orangish brown gravelly very clayey SAND**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	= 12	%
Percentage retained on 20 mm sieve :	= 4	%
Moisture Condition Value :	= 8.7	
Interpretation of curve:	= Steepest straight line - Fig 9	

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MOISTURE CONDITION VALUE

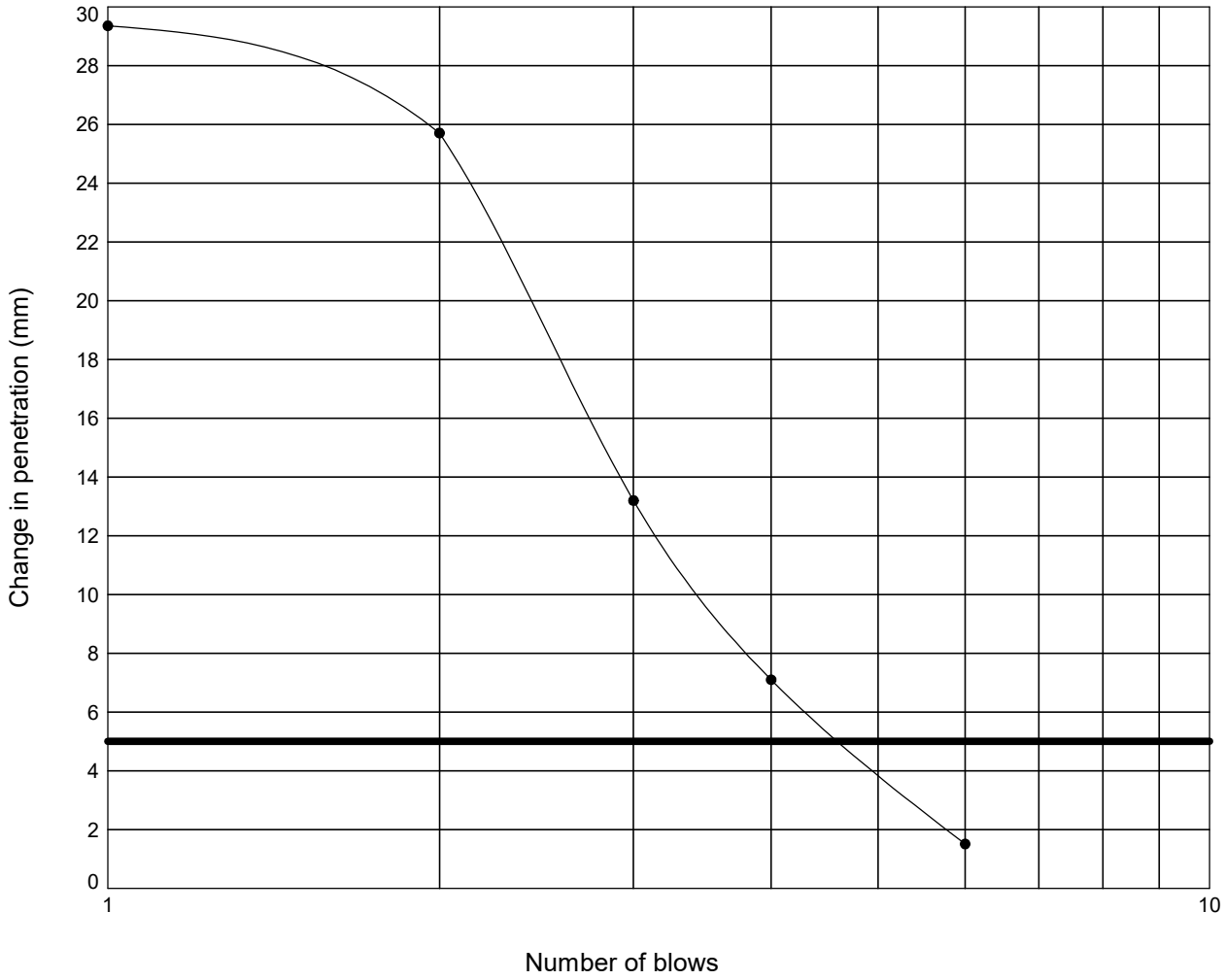
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP203** Sample Ref: Sample Type: **AMAL** Depth (m): **1.50**

Amalgamation comprises: F22-TP203, Depth:1.50, Ref:7, Type:LB + F22-TP203, Depth:3.20, Ref:10, Type:B + F22-TP203, Depth:4.00, Ref:12, Type:B

Description : **Brown mottled orangish brown gravelly very clayey SAND**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	16	%
Percentage retained on 20 mm sieve :	=	4	%
Moisture Condition Value :	=	5.9	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract	Contract Ref:
Sealink Friston	**563835**

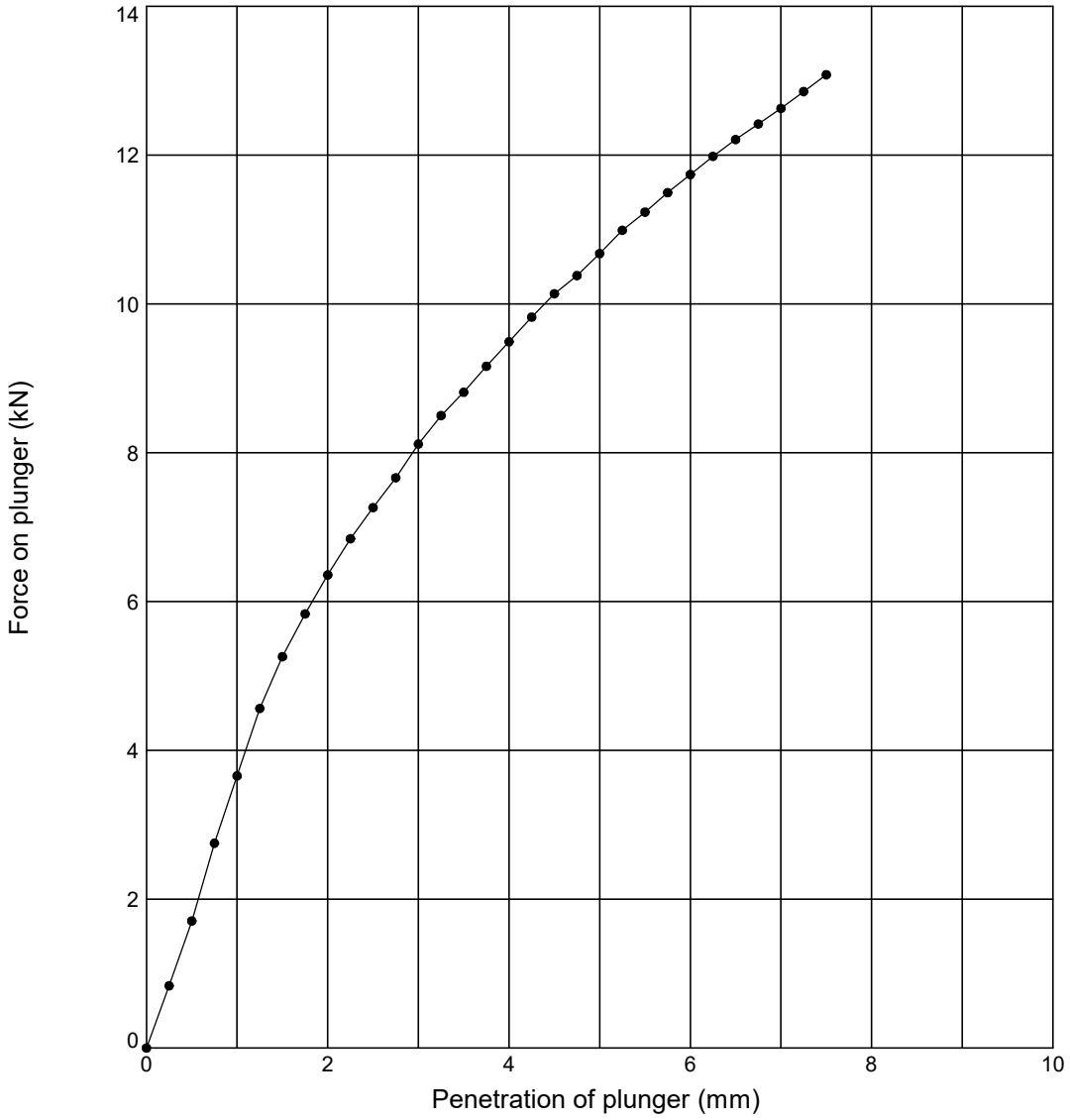
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - MCV -3- NATURAL FINAL - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP203** Sample Ref: Sample Type: **AMAL** Depth (m): **1.50**

Amalgamation comprises: F22-TP203, Depth:1.50, Ref:7, Type:LB + F22-TP203, Depth:3.20, Ref:10, Type:B + F22-TP203, Depth:4.00, Ref:12, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**6.1**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**6.0**	**6.2**
Initial Bulk Density (Mg/m^3)	:	**1.97**	Surcharge (kg)	:	**4.0**	CBR value (%)	**55**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.85**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**4**	Swelling (mm)	:	**-**			

Sample Description	Key
Brown mottled orangish brown gravelly very clayey SAND	● **Top** ⧓ **Base**

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Compiled By		Date
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Contract	Contract Ref:
Sealink Friston	**563835**

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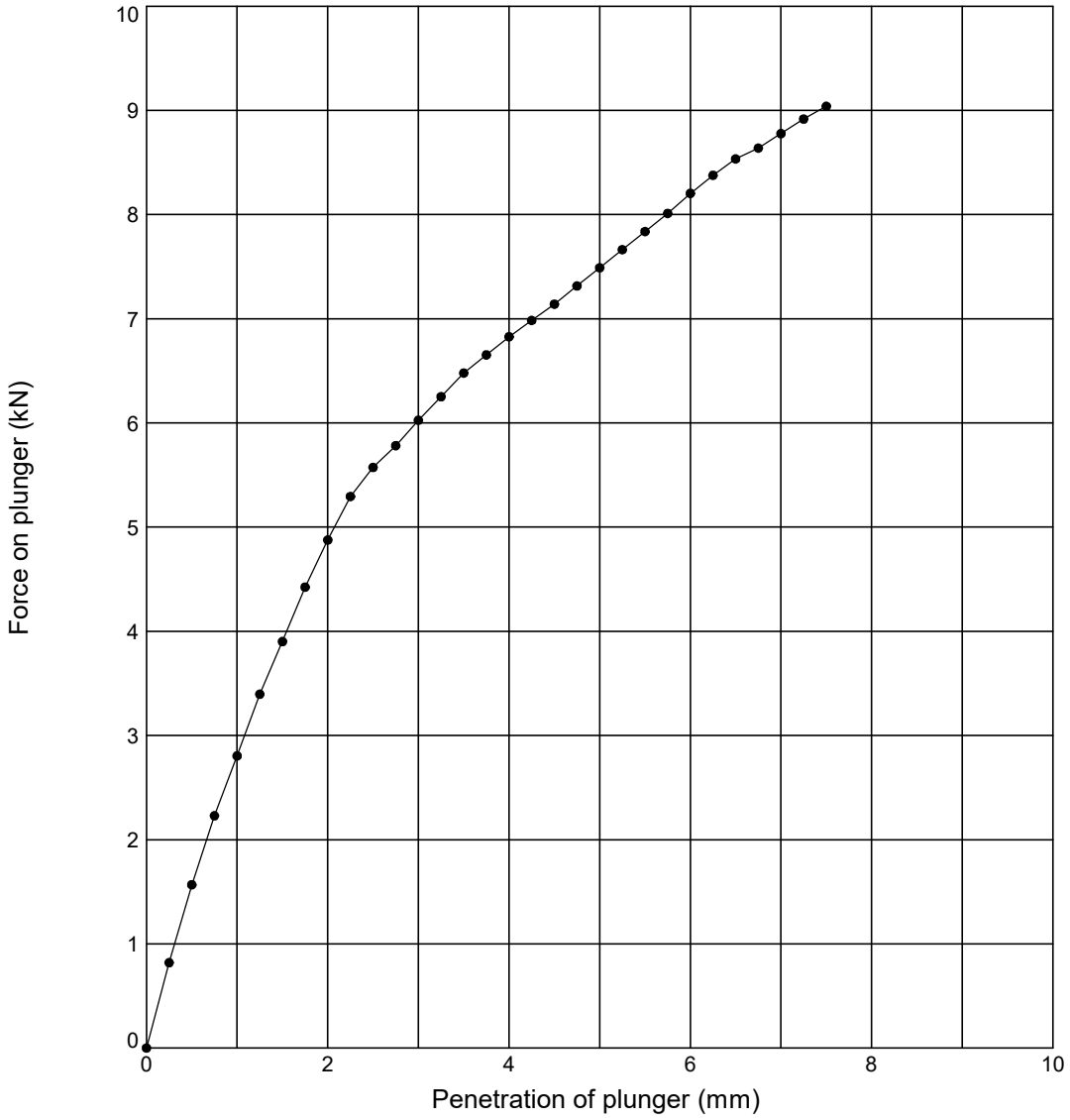
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - CBR - LAB -3- REPORT - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP203** Sample Ref: Sample Type: **AMAL** Depth (m): **1.50**

Amalgamation comprises: F22-TP203, Depth:1.50, Ref:7, Type:LB + F22-TP203, Depth:3.20, Ref:10, Type:B + F22-TP203, Depth:4.00, Ref:12, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**8.2**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**8.2**	**8.3**
Initial Bulk Density (Mg/m^3)	:	**2.07**	Surcharge (kg)	:	**4.0**	CBR value (%)	**42**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.91**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**4**	Swelling (mm)	:	**-**			

Sample Description	Key
Brown mottled orangish brown gravelly very clayey SAND	● **Top** ⊠ **Base**

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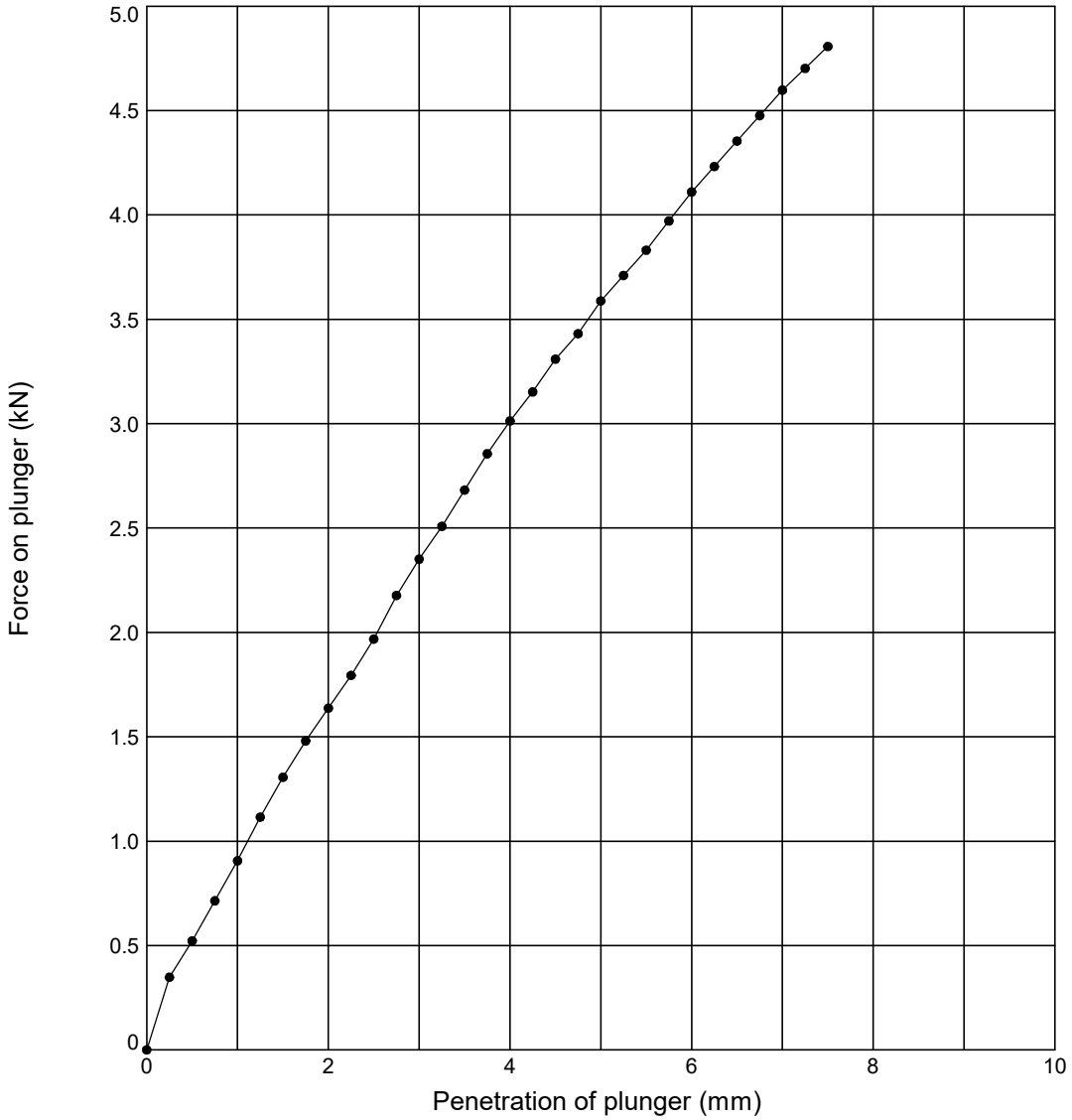
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP203** Sample Ref: Sample Type: **AMAL** Depth (m): **1.50**

Amalgamation comprises: F22-TP203, Depth:1.50, Ref:7, Type:LB + F22-TP203, Depth:3.20, Ref:10, Type:B + F22-TP203, Depth:4.00, Ref:12, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**10**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**10**	**10**
Initial Bulk Density (Mg/m^3)	:	**2.20**	Surcharge (kg)	:	**4.0**	CBR value (%)	**18**	**NA**
Initial Dry Density (Mg/m^3)	:	**2.00**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**4**	Swelling (mm)	:	**-**			

Sample Description	Key
Brown mottled orangish brown gravelly very clayey SAND	● **Top** ⊠ **Base**

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Compiled By		Date
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Contract	Contract Ref:
Sealink Friston	**563835**

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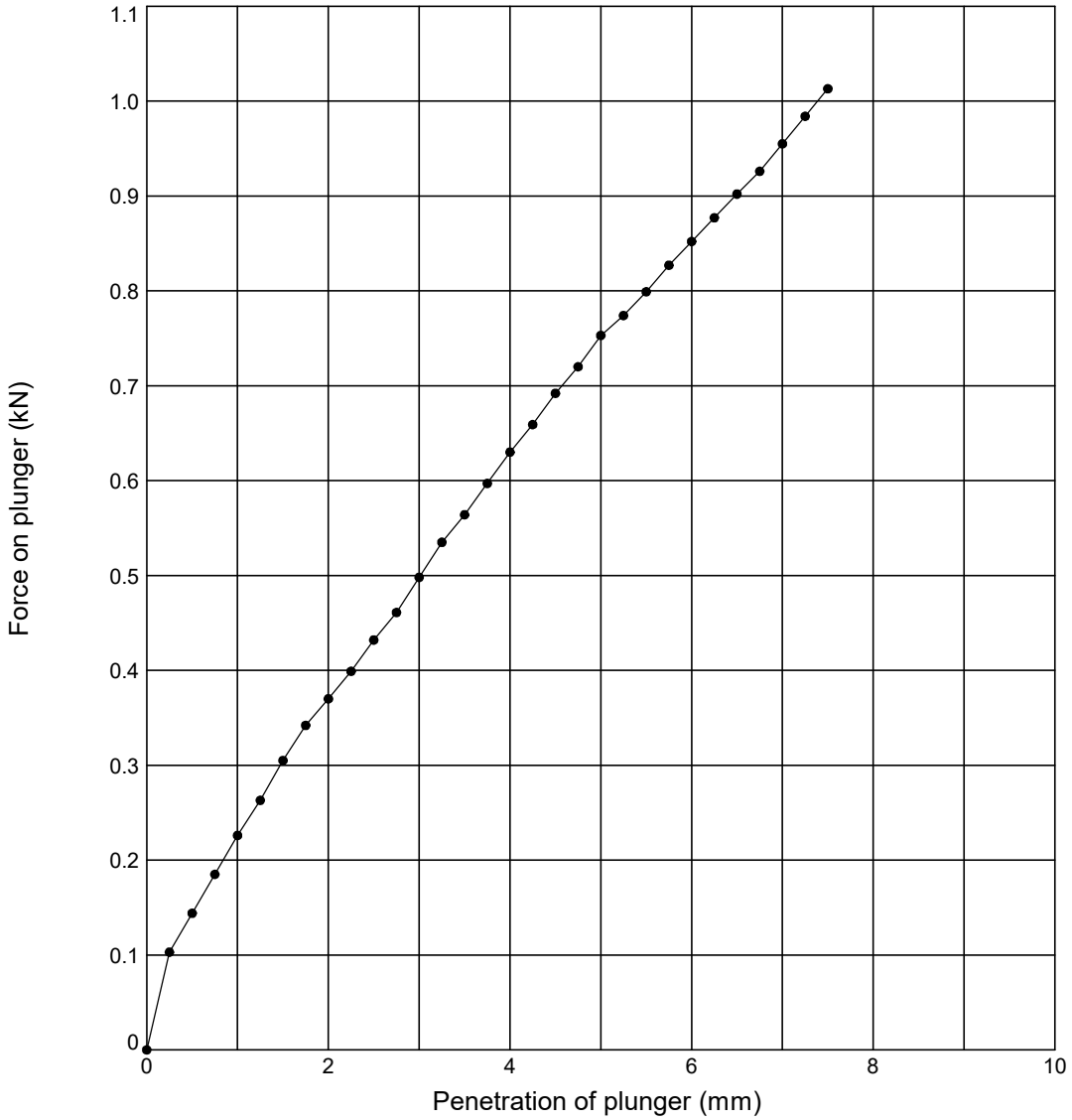
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP203** Sample Ref: Sample Type: **AMAL** Depth (m): **1.50**

Amalgamation comprises: F22-TP203, Depth:1.50, Ref:7, Type:LB + F22-TP203, Depth:3.20, Ref:10, Type:B + F22-TP203, Depth:4.00, Ref:12, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**13**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**13**	**14**
Initial Bulk Density (Mg/m^3)	:	**2.20**	Surcharge (kg)	:	**4.0**	CBR value (%)	**3.8**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.95**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**4**	Swelling (mm)	:	**-**			

Sample Description	Key
Brown mottled orangish brown gravelly very clayey SAND	● **Top** ⊠ **Base**

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Compiled By		Date
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Contract	Contract Ref:
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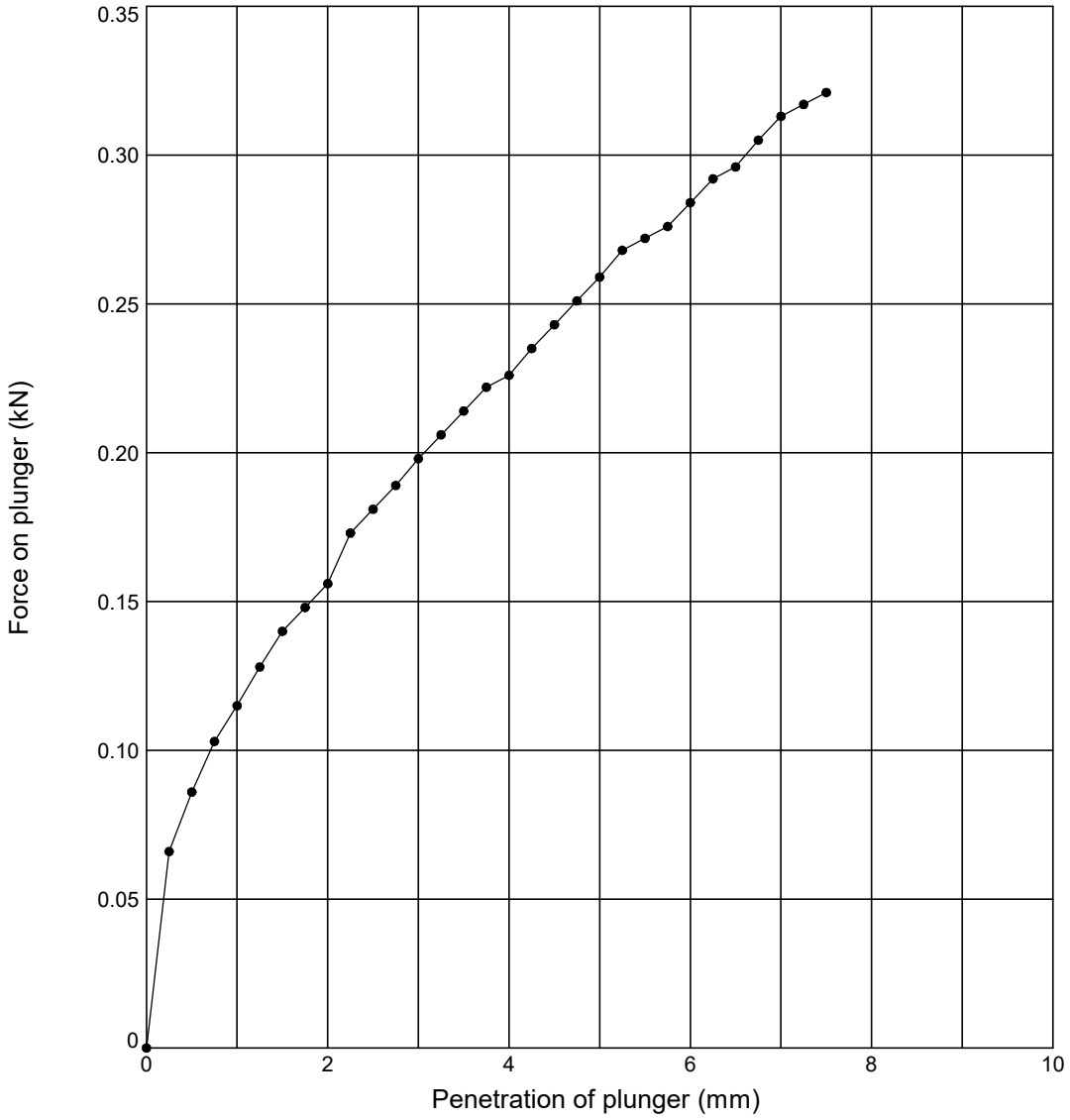
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP203** Sample Ref: Sample Type: **AMAL** Depth (m): **1.50**

Amalgamation comprises: F22-TP203, Depth:1.50, Ref:7, Type:LB + F22-TP203, Depth:3.20, Ref:10, Type:B + F22-TP203, Depth:4.00, Ref:12, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**15**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**15**	**15**
Initial Bulk Density (Mg/m^3)	:	**2.13**	Surcharge (kg)	:	**4.0**	CBR value (%)	**1.4**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.85**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**4**	Swelling (mm)	:	**-**			

Sample Description	Key
Brown mottled orangish brown gravelly very clayey SAND	● **Top** ⊠ **Base**

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Compiled By		Date
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Contract	Contract Ref:
Sealink Friston	**563835**

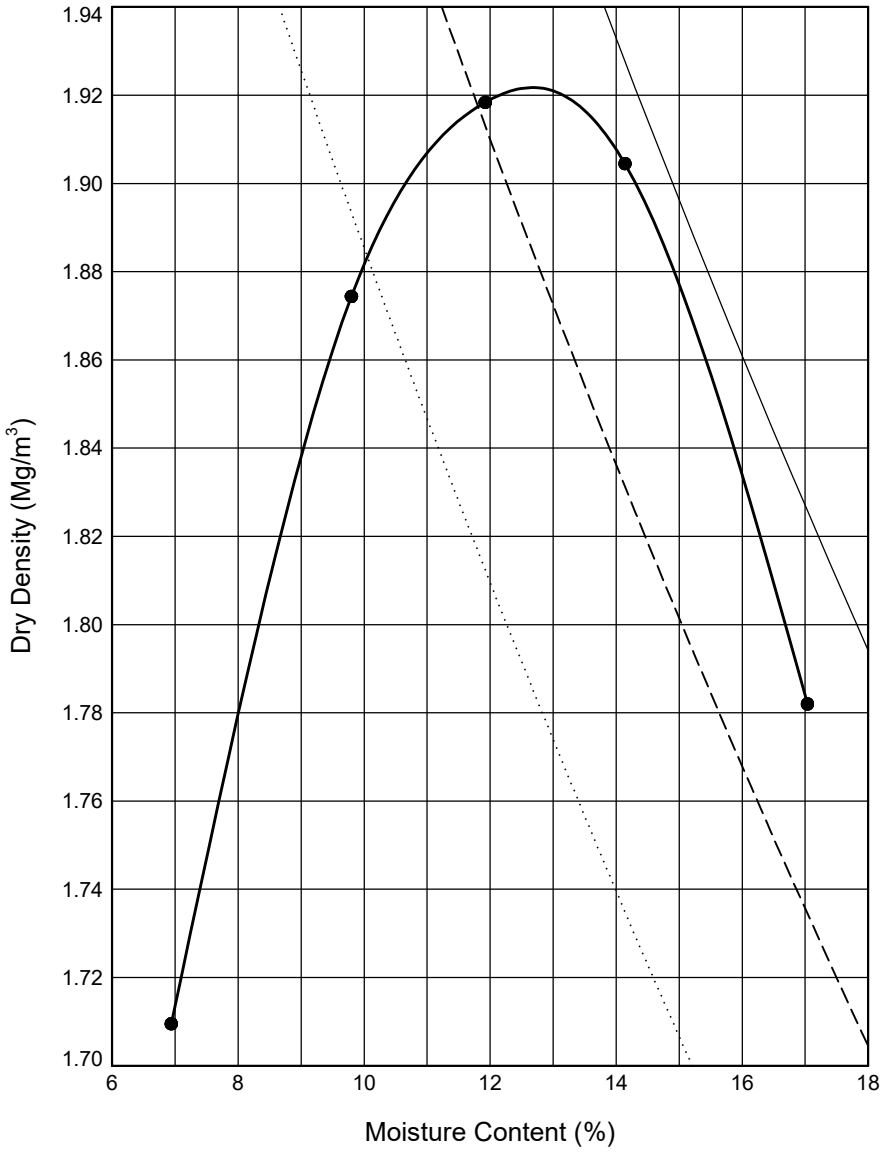
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GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - CBR - LAB -3- REPORT - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01
Structural Soils Ltd, Branch Office - Castleford: The Potteries, Pottery Street, Castleford, West Yorkshire, WF10 1NJ. Tel: 01977-552255, Fax: 01977-552299, Web: www.soils.co.uk, Email: ask@soils.co.uk. | 05/03/24 - 10:22 | AF3 |

DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **F22-TP204** Sample Ref: **7** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions		Test Details	Test Results
Initial Moisture Content (%) : **14**		Compaction Type : **Light**	Maximum Dry Density (Mg/m³) : **1.92**
% Retained on 37.5mm BS Sieve : **0**		Mass of Rammer (kg): **2.5**	Optimum Moisture Content (%) : **13**
% Retained on 20.0mm BS Sieve : **1**		Type of Mould : **1 LITRE**	Method Used: **Clause 11.3**
Particle Density - assumed (Mg/m³) : **2.65**			Remarks: **CBR and MCV tests carried out at each point**
Size of Soil Pieces : **<20mm**		Separate samples were used.	

Sample Description	Key to Air Voids Lines		
Orangish brown slightly gravelly sandy silty CLAY	——— 0%	– – – – 5%	····· 10%

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Compiled By		Date
[redacted]	[redacted]	**22/01/24**
Contract: **Sealink Friston**		Contract Ref: **563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - COMPACTIONS - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
Structural Soils Ltd, Branch Office - Hemel Hempstead: 18 Frogmore Road, Hemel Hempstead, Hertfordshire, HP3 9RT. Tel: 01442-262323, Fax: 01442-262683, Web: www.soils.co.uk, Email: ask@soils.co.uk | 22/01/24 - 10:32 | AF3 |

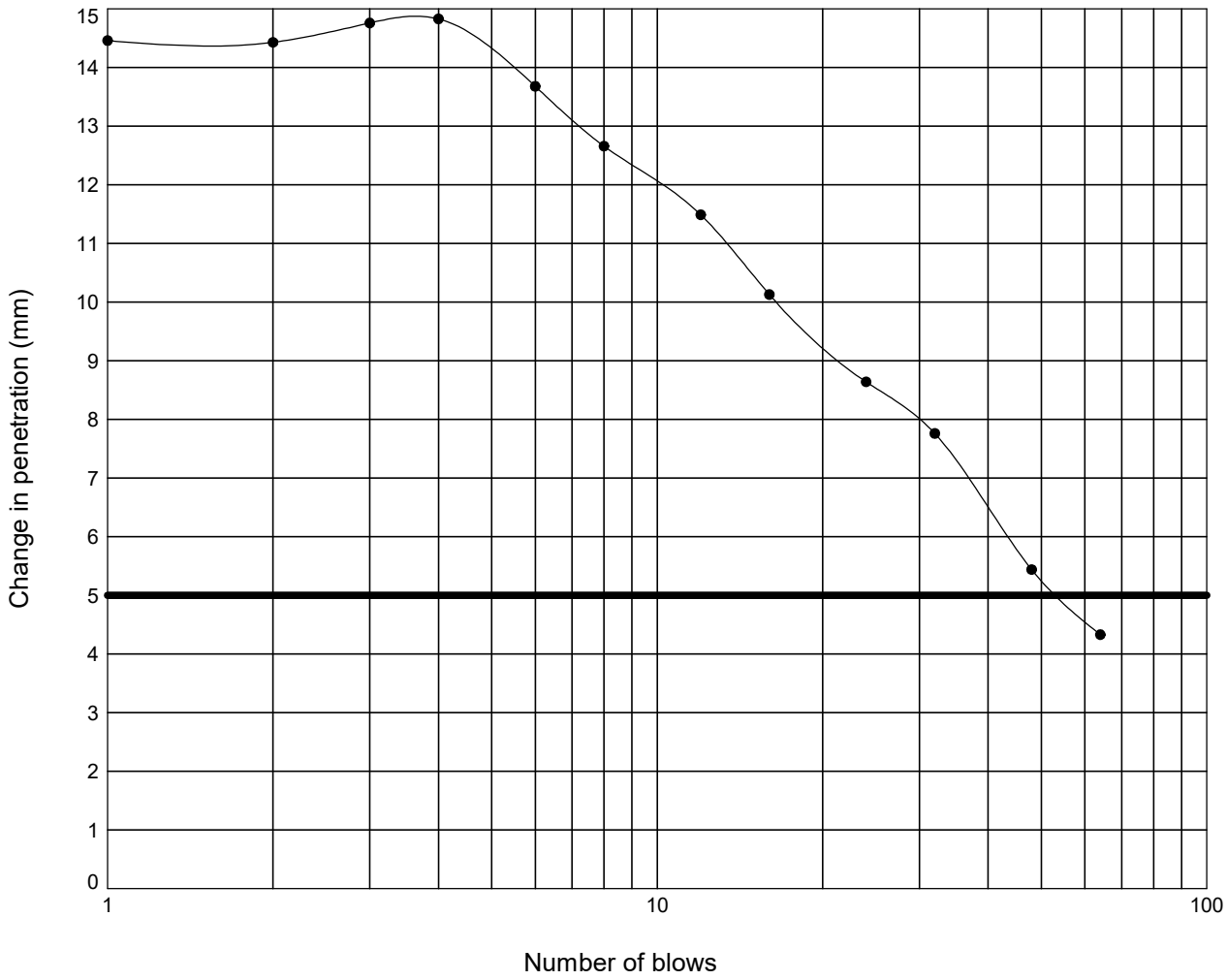
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP204** Sample Ref: **7** Sample Type: **LB** Depth (m): **1.00**

Description : **Orangish brown slightly gravelly sandy silty CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	7.1	%
Percentage retained on 20 mm sieve :	=	1	%
Moisture Condition Value :	=	17.1	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract	Contract Ref:
Sealink Friston	**563835**

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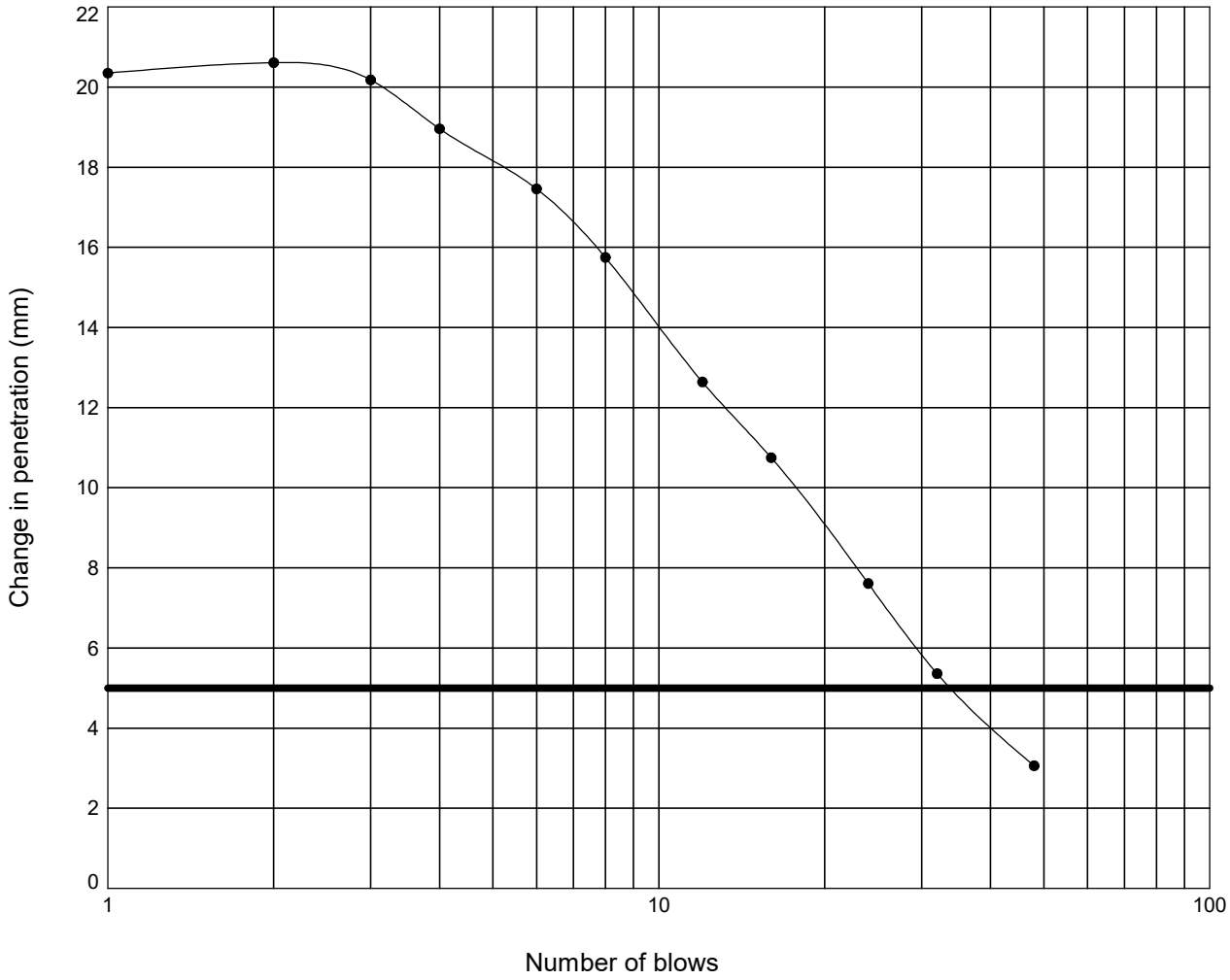
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP204** Sample Ref: **7** Sample Type: **LB** Depth (m): **1.00**

Description : **Orangish brown slightly gravelly sandy silty CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	9.7	%
Percentage retained on 20 mm sieve :	=	1	%
Moisture Condition Value :	=	15.3	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract	Contract Ref:
Sealink Friston	**563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - MCV -3- NATURAL FINAL - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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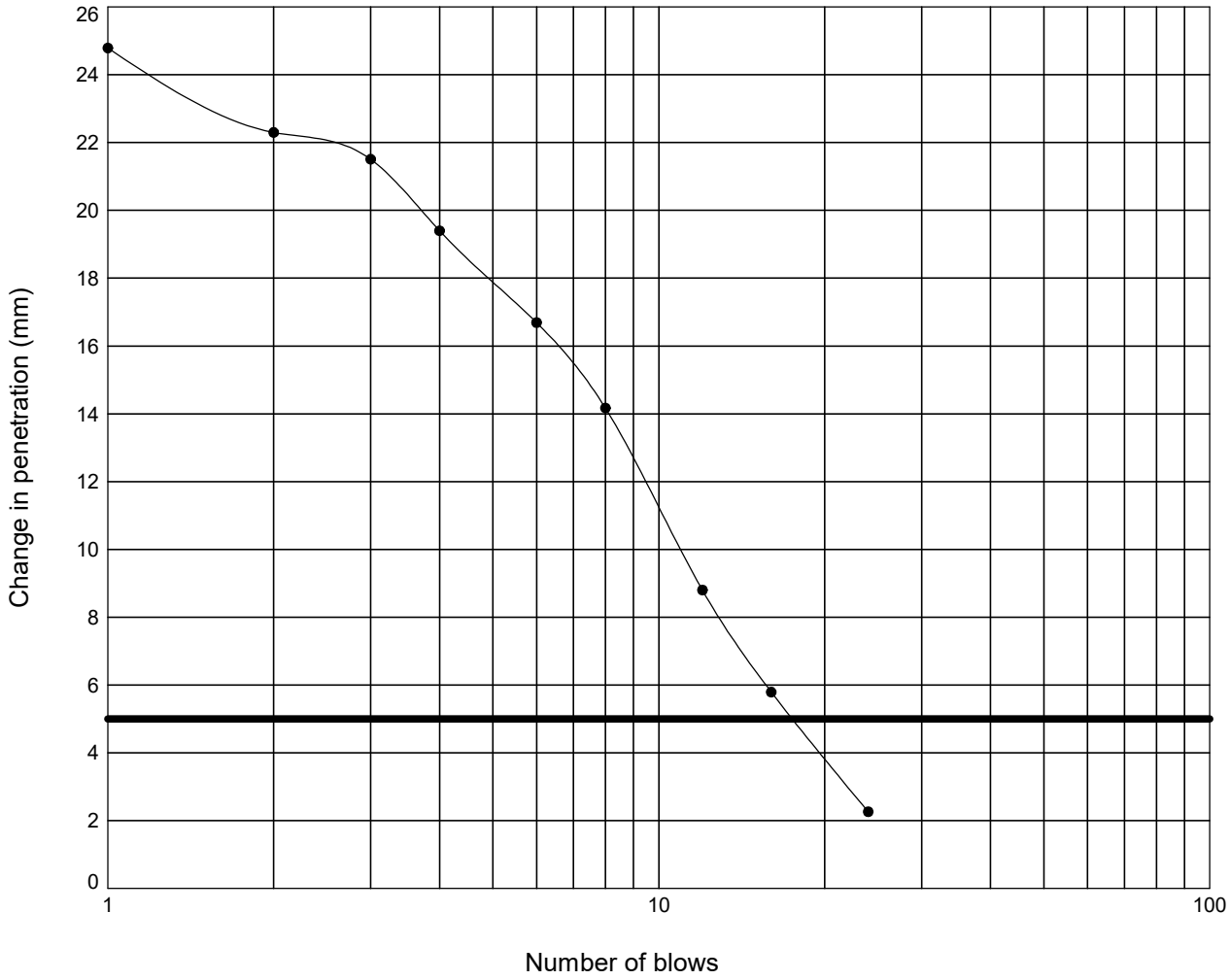
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP204** Sample Ref: **7** Sample Type: **LB** Depth (m): **1.00**

Description : **Orangish brown slightly gravelly sandy silty CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	11	%
Percentage retained on 20 mm sieve :	=	1	%
Moisture Condition Value :	=	12.0	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract	Contract Ref:
Sealink Friston	**563835**

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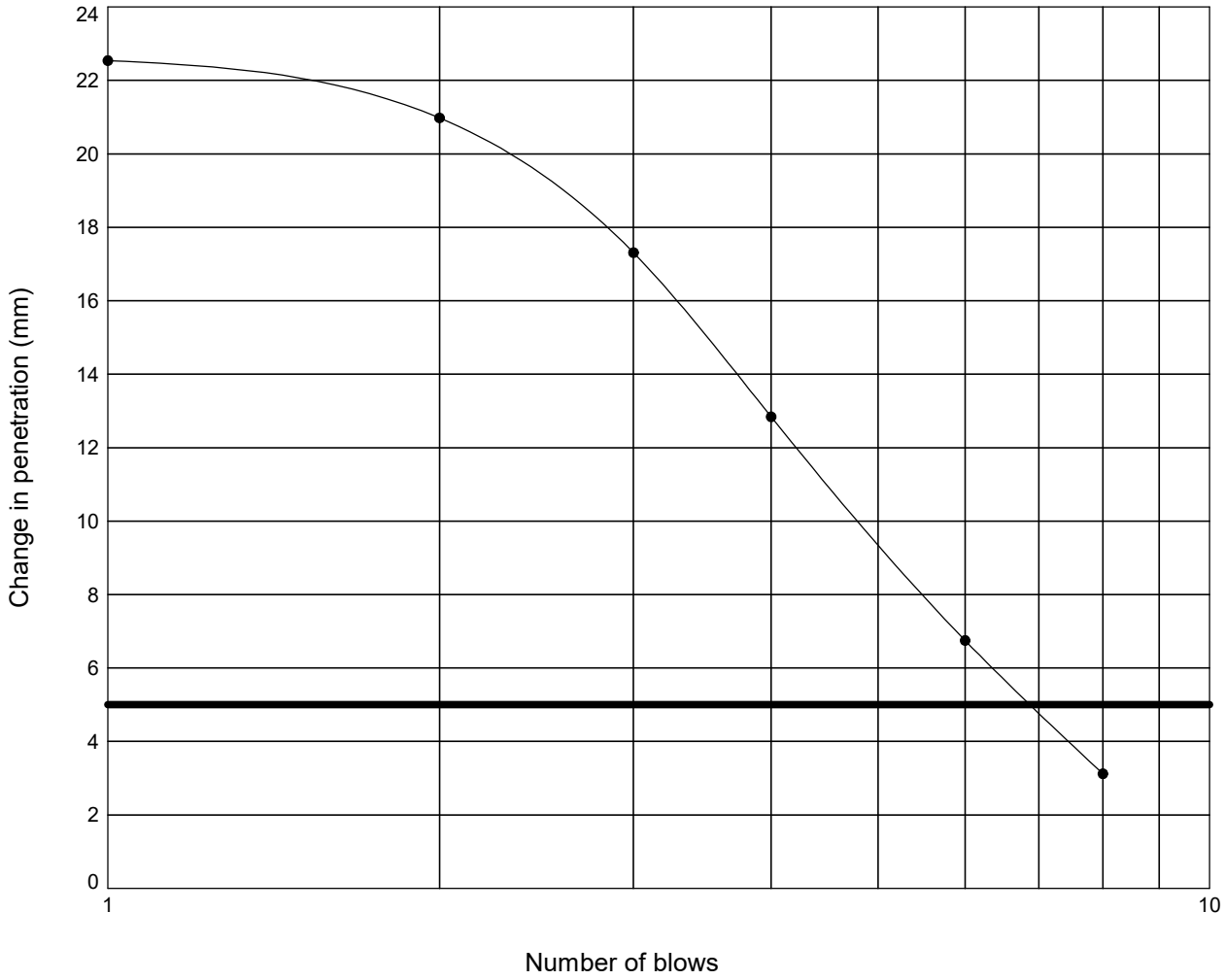
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP204** Sample Ref: **7** Sample Type: **LB** Depth (m): **1.00**

Description : **Orangish brown slightly gravelly sandy silty CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	14	%
Percentage retained on 20 mm sieve :	=	1	%
Moisture Condition Value :	=	8.2	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract	Contract Ref:
Sealink Friston	**563835**

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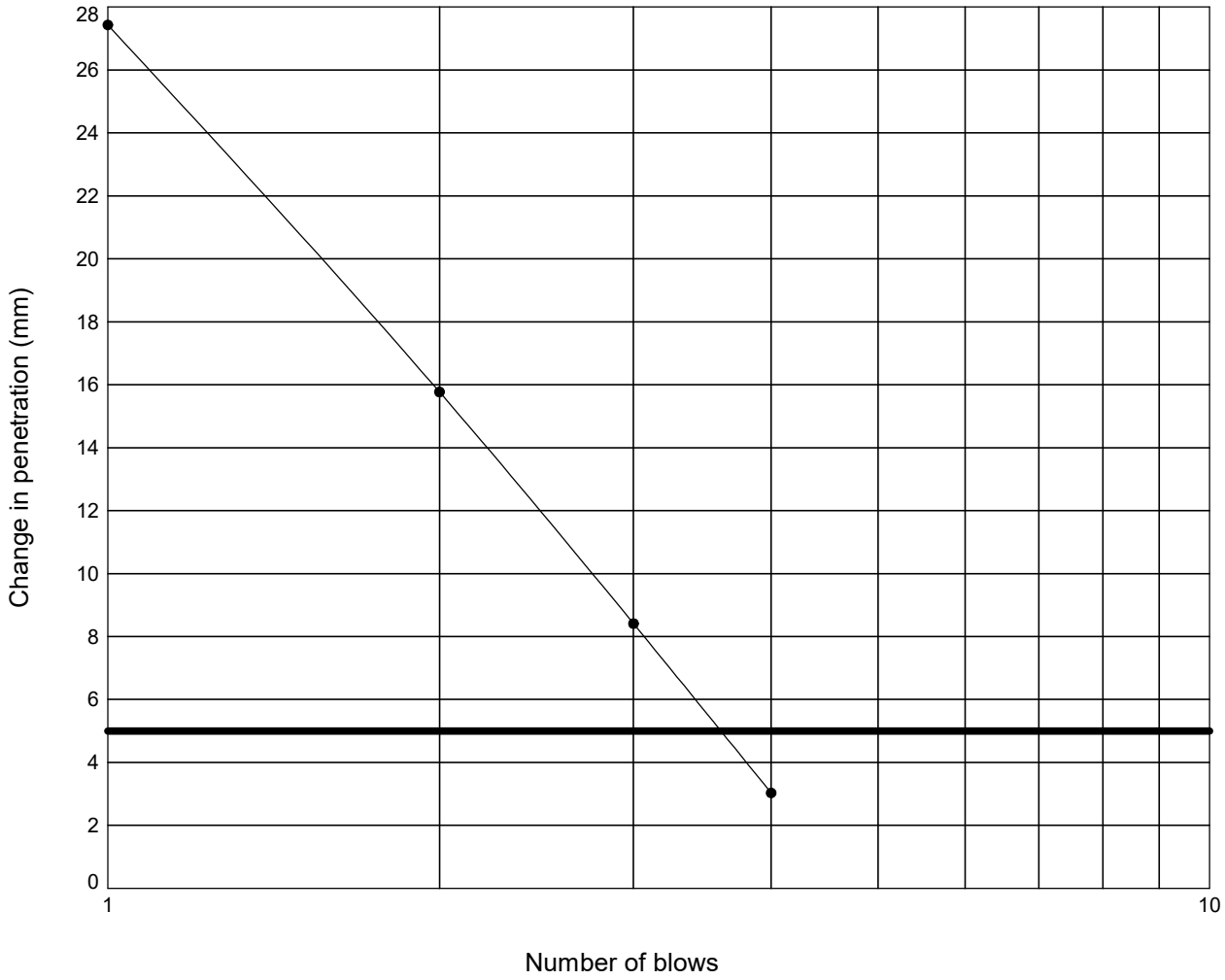
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP204** Sample Ref: **7** Sample Type: **LB** Depth (m): **1.00**

Description : **Orangish brown slightly gravelly sandy silty CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	17	%
Percentage retained on 20 mm sieve :	=	1	%
Moisture Condition Value :	=	5.6	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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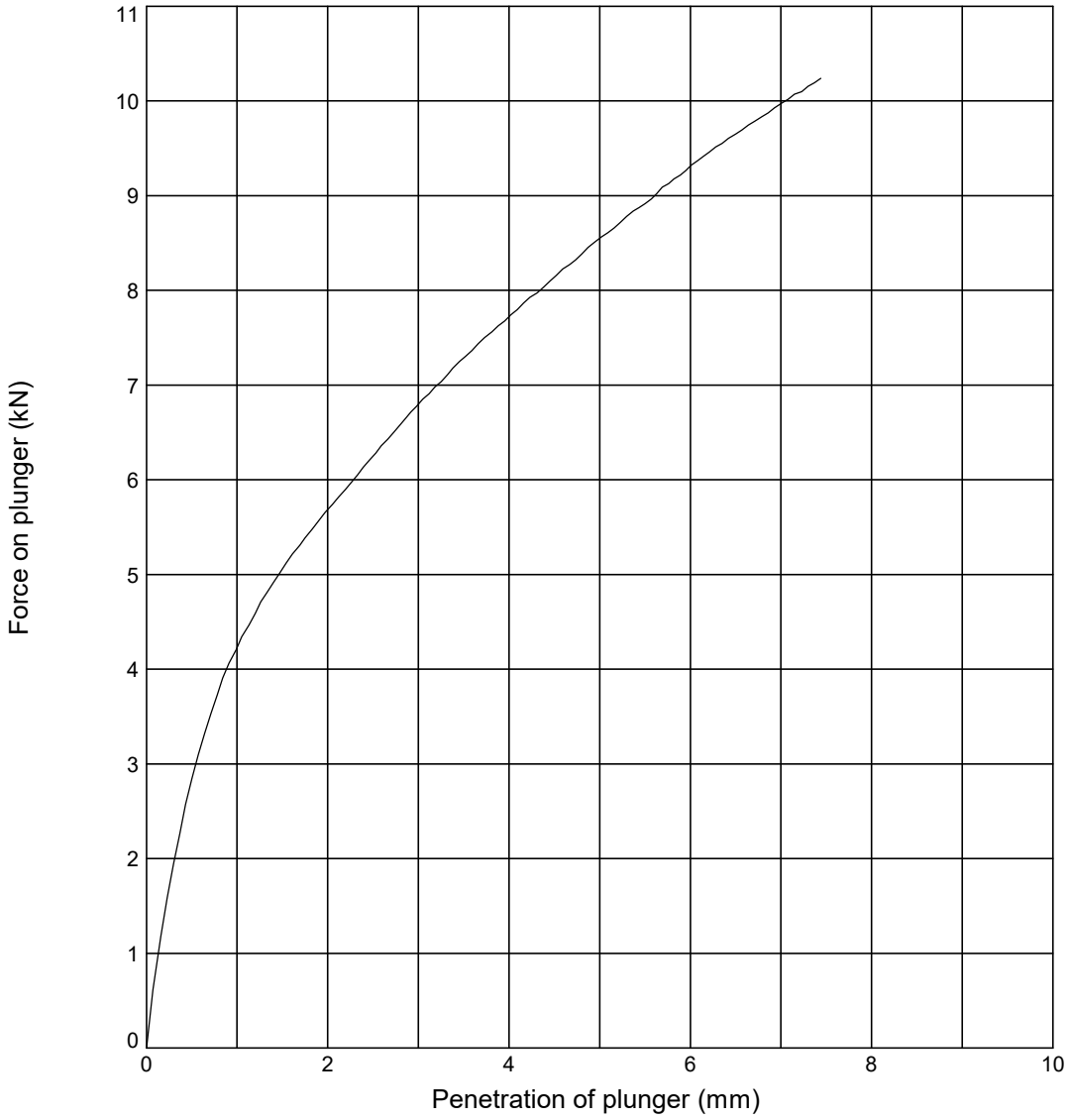
Contract	Contract Ref:
Sealink Friston	**563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - MCV -3- NATURAL FINAL - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP204** Sample Ref: **7** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**6.9**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**6.8**	**6.9**
Initial Bulk Density (Mg/m^3)	:	**1.92**	Surcharge (kg)	:	**4.1**	CBR Value (%)	**47**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.80**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**1**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Orangish brown slightly gravelly sandy silty CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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Contract	Contract Ref:
Sealink Friston	**563835**

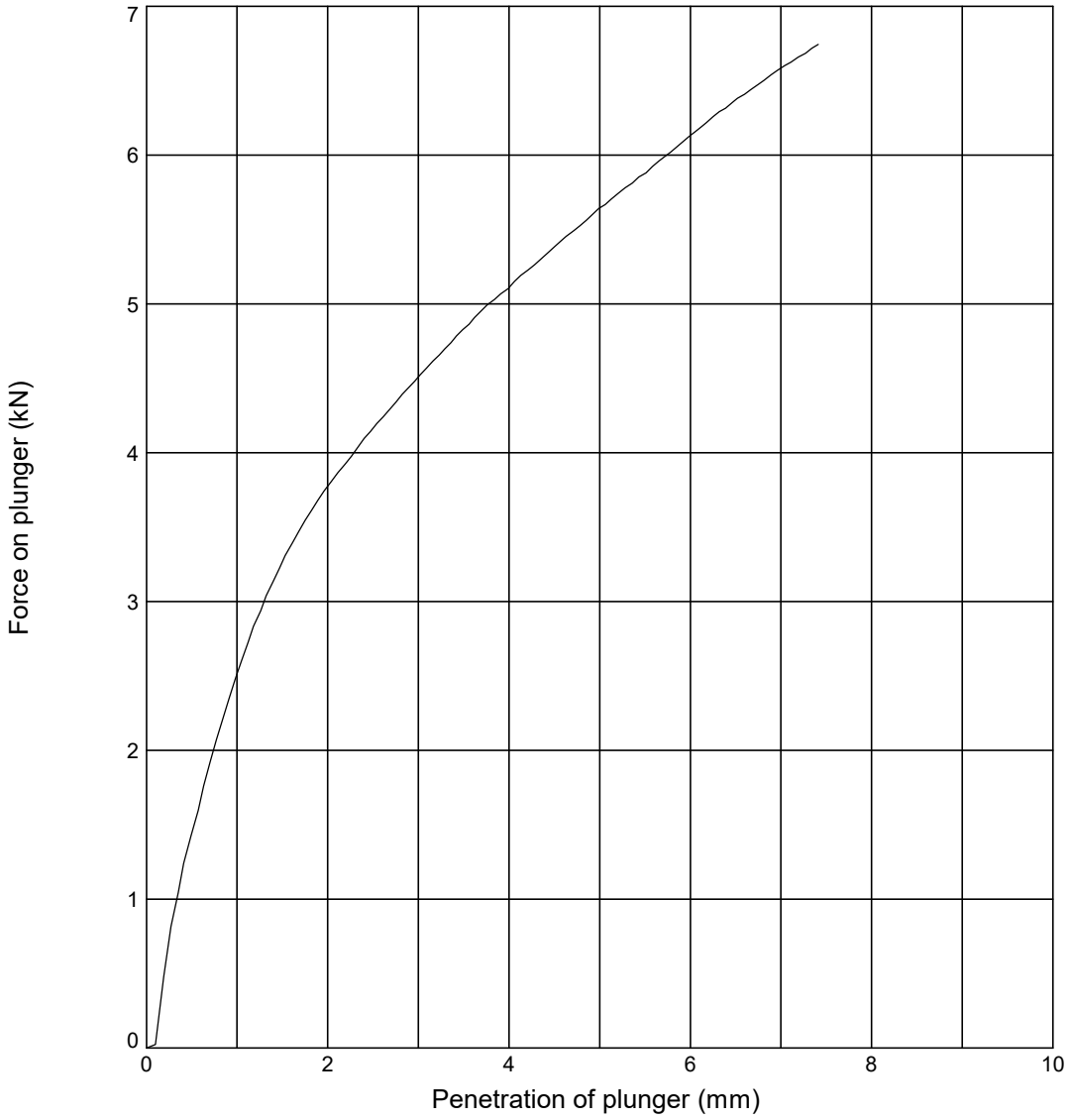
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GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - CBR DATALOGGED - 1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP204** Sample Ref: **7** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**9.8**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**9.5**	**9.5**
Initial Bulk Density (Mg/m^3)	:	**2.09**	Surcharge (kg)	:	**4.1**	CBR Value (%)	**32**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.90**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**0.1**	**NA**
% Retained on 20mm Sieve	:	**1**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**32**	**NA**

Sample Description	Key
Orangish brown slightly gravelly sandy silty CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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Hertfordshire
HP3 9RT

Compiled By		Date
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Contract	Contract Ref:
Sealink Friston	**563835**

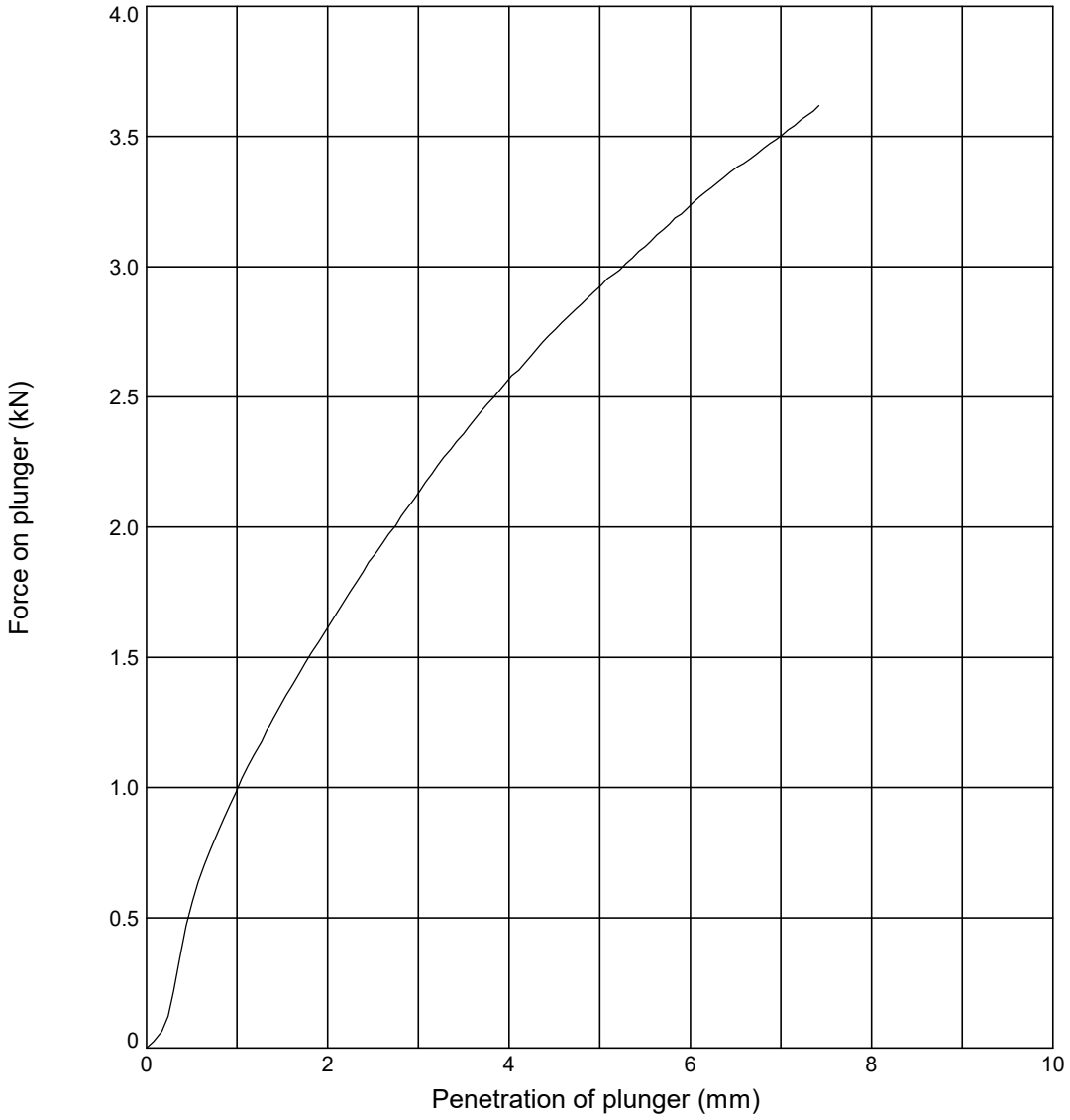
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP204** Sample Ref: **7** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**11**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**11**	**11**
Initial Bulk Density (Mg/m^3)	:	**2.14**	Surcharge (kg)	:	**4.1**	CBR Value (%)	**15**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.93**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**0.2**	**NA**
% Retained on 20mm Sieve	:	**1**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**15**	**NA**

Sample Description	Key
Orangish brown slightly gravelly sandy silty CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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Sealink Friston	**563835**

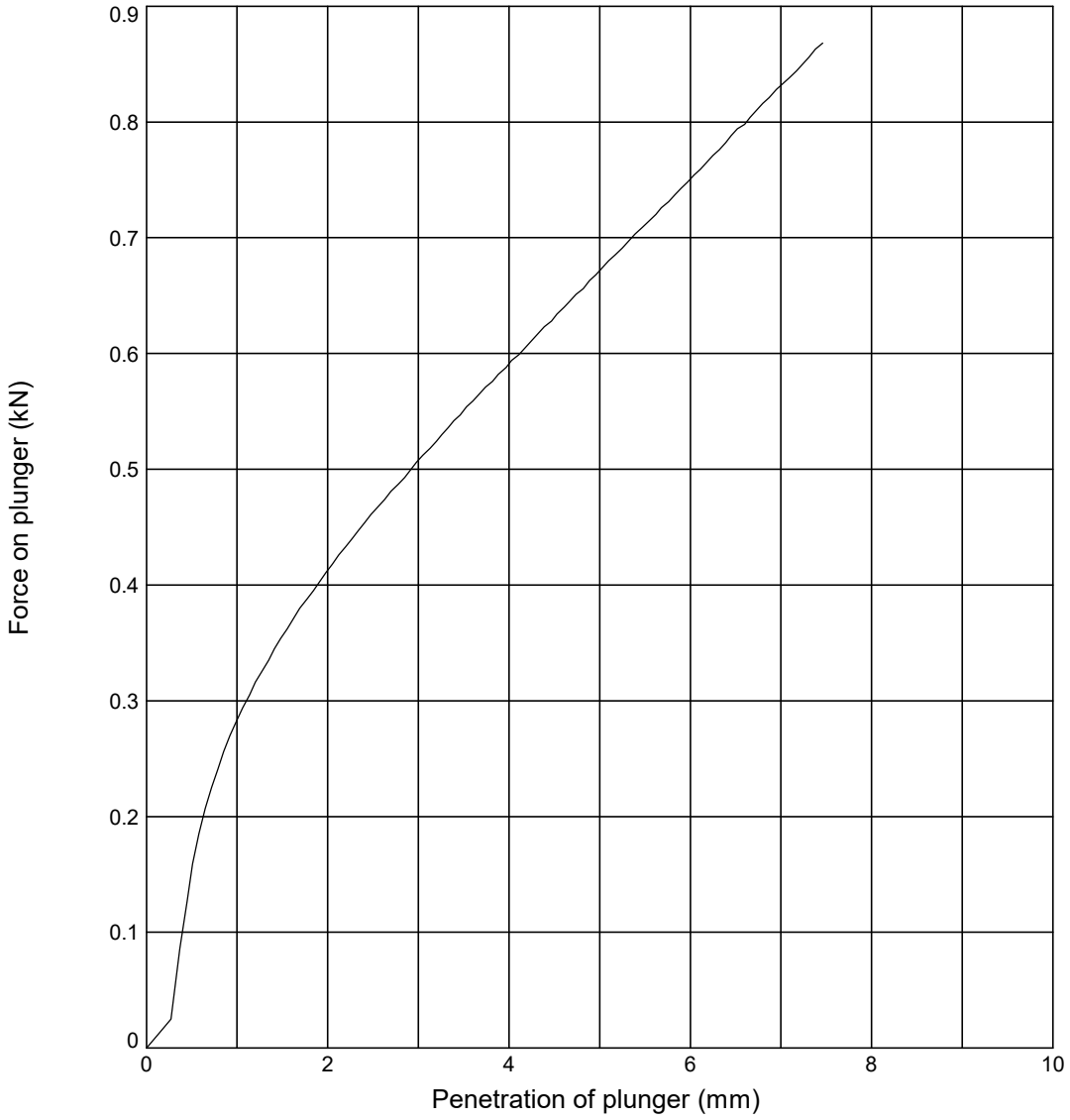
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP204** Sample Ref: **7** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**14**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**14**	**14**
Initial Bulk Density (Mg/m^3)	:	**2.09**	Surcharge (kg)	:	**4.1**	CBR Value (%)	**3.5**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.83**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**0.25**	**NA**
% Retained on 20mm Sieve	:	**1**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**3.7**	**NA**

Sample Description	Key
Orangish brown slightly gravelly sandy silty CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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Contract	Contract Ref:
Sealink Friston	**563835**

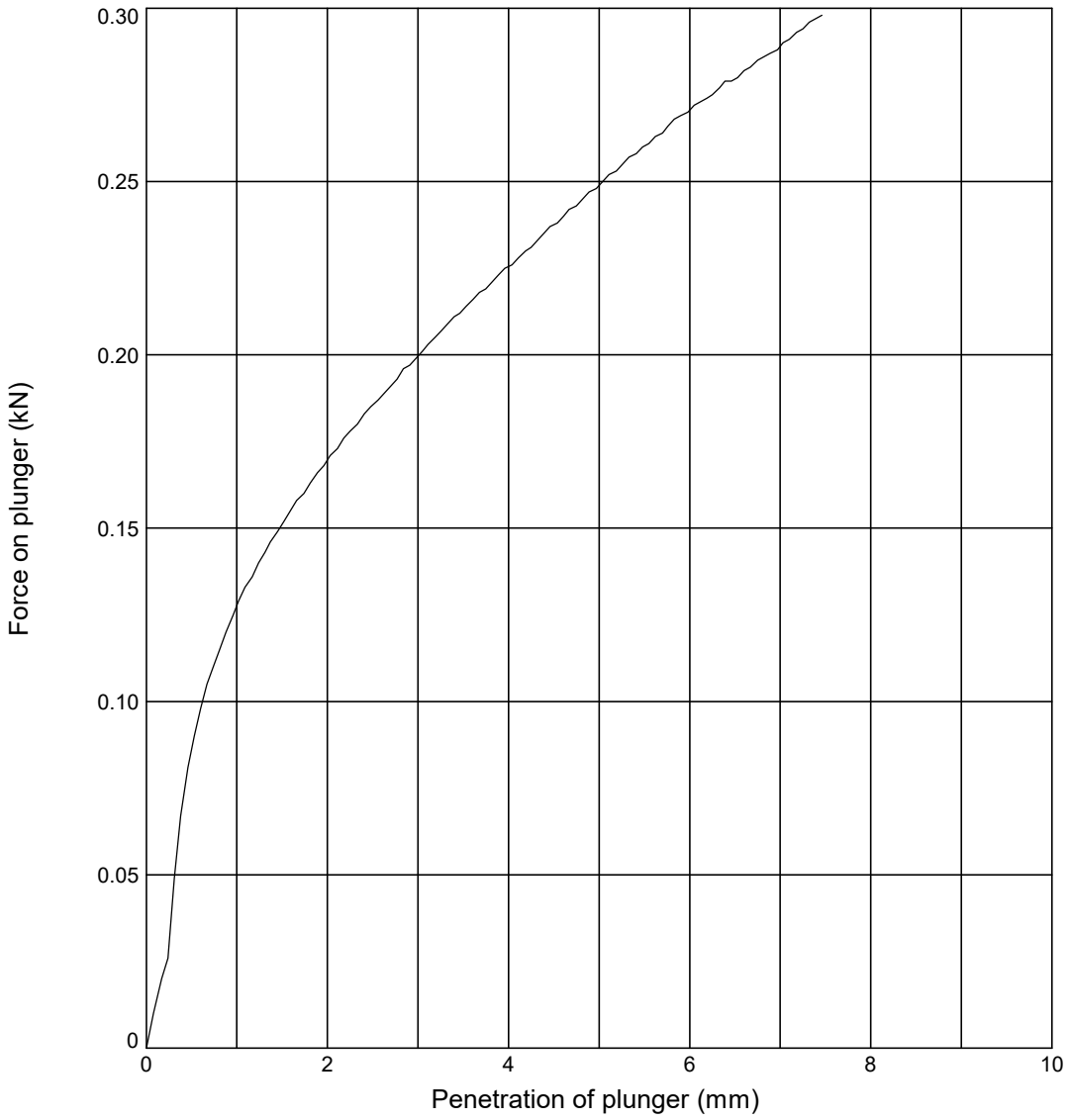
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP204** Sample Ref: **7** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**17**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**17**	**17**
Initial Bulk Density (Mg/m^3)	:	**2.09**	Surcharge (kg)	:	**4.1**	CBR Value (%)	**1.4**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.78**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**0.15**	**NA**
% Retained on 20mm Sieve	:	**1**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**1.4**	**NA**

Sample Description	Key
Orangish brown slightly gravelly sandy silty CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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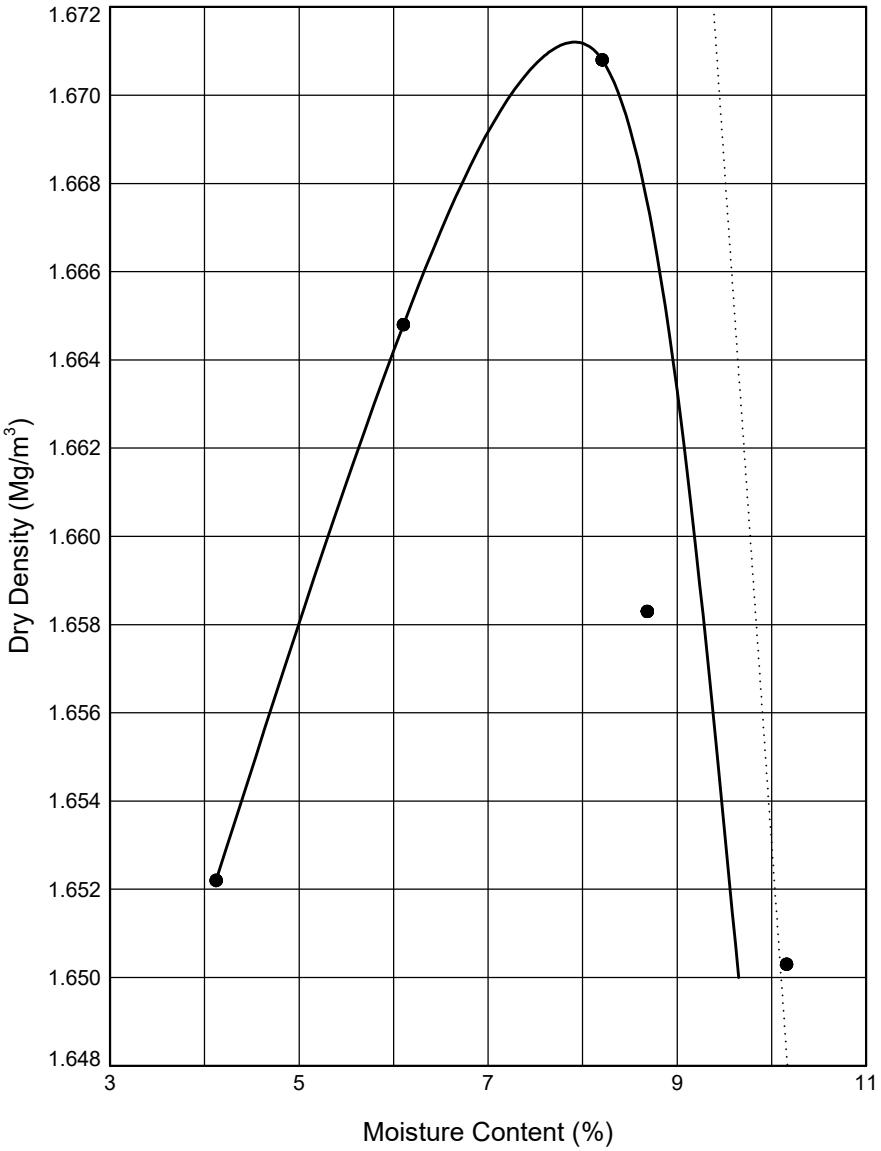
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DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **F22-TP205** Sample Ref: **7** Sample Type: **LB** Depth (m): **1.50**



Initial Sample Conditions			Test Details		Test Results	
Initial Moisture Content (%)	:	**4.1**	Compaction Type	: **Light**	Maximum Dry Density (Mg/m^3)	: **1.67**
% Retained on 37.5mm BS Sieve	:	**0**	Mass of Rammer (kg):	**2.5**	Optimum Moisture Content (%)	: **7.9**
% Retained on 20.0mm BS Sieve	:	**1**	Type of Mould	: **1 LITRE**	Method Used: **Clause 11.3**	
Particle Density - assumed (Mg/m^3)	:	**2.25**			Remarks: **CBR test carried out at each point. Material is unsuitable for MCV tests**	
Size of Soil Pieces	:	**<20mm**	Separate samples were used.			

Sample Description	Key to Air Voids Lines		
Light brown slightly gravelly slightly clayey SAND	——— 0%	– – – – 5%	····· 10%

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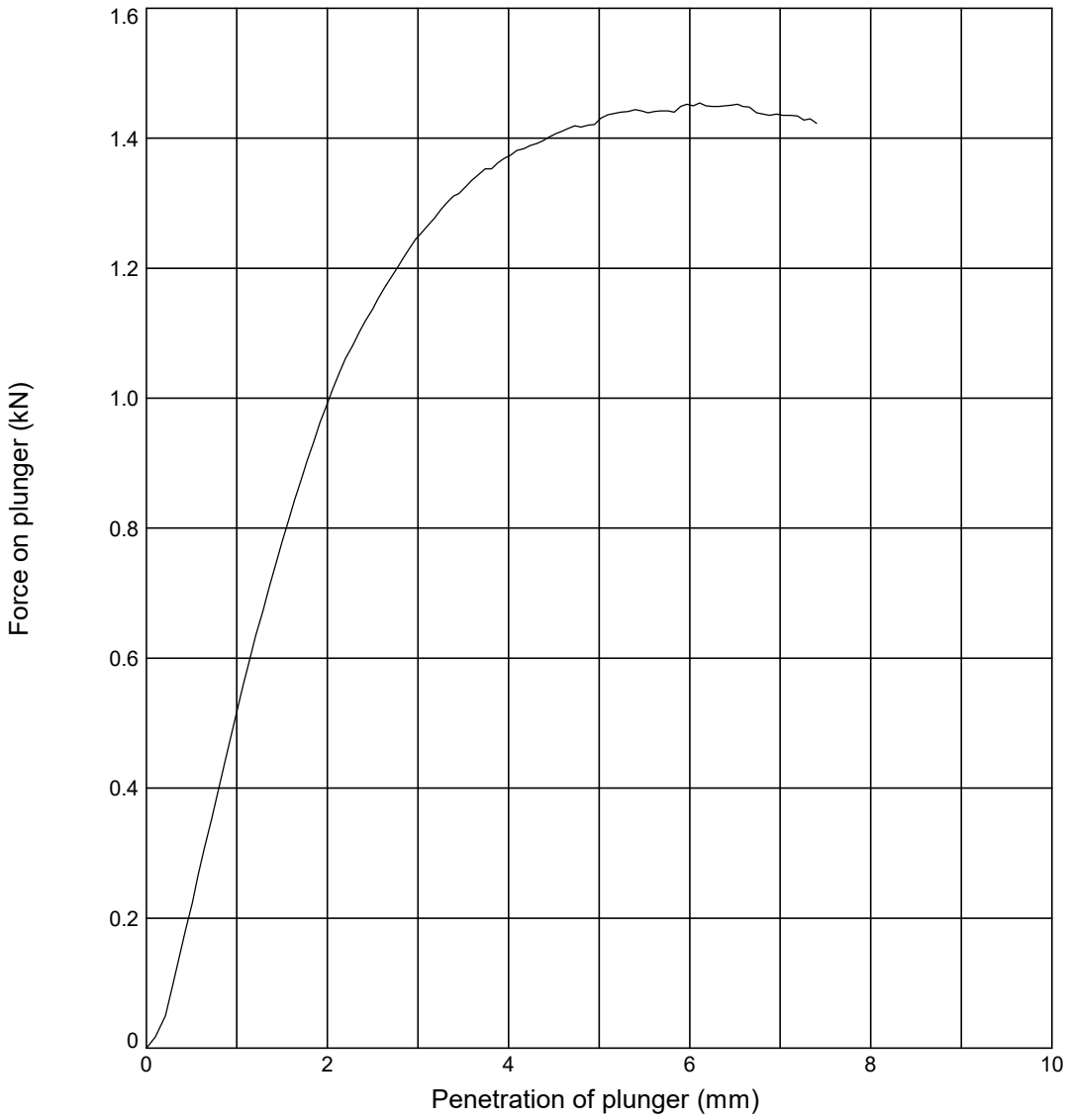
Contract	Contract Ref:
Sealink Friston	**563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - COMPACTIONS - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
Structural Soils Ltd, Branch Office - Hemel Hempstead: 18 Frogmore Road, Hemel Hempstead, Hertfordshire, HP3 9RT. Tel: 01442-262323, Fax: 01442-262683, Web: www.soils.co.uk, Email: ask@soils.co.uk | 22/01/24 - 10:50 | AF3 |

LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP205** Sample Ref: **7** Sample Type: **LB** Depth (m): **1.50**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**4.2**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**4.2**	**4.2**
Initial Bulk Density (Mg/m^3)	:	**1.74**	Surcharge (kg)	:	**4.1**	CBR Value (%)	**8.6**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.67**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**0.13**	**NA**
% Retained on 20mm Sieve	:	**1**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**8.9**	**NA**

Sample Description	Key
Light brown slightly gravelly slightly clayey SAND	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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Contract	Contract Ref:
Sealink Friston	**563835**

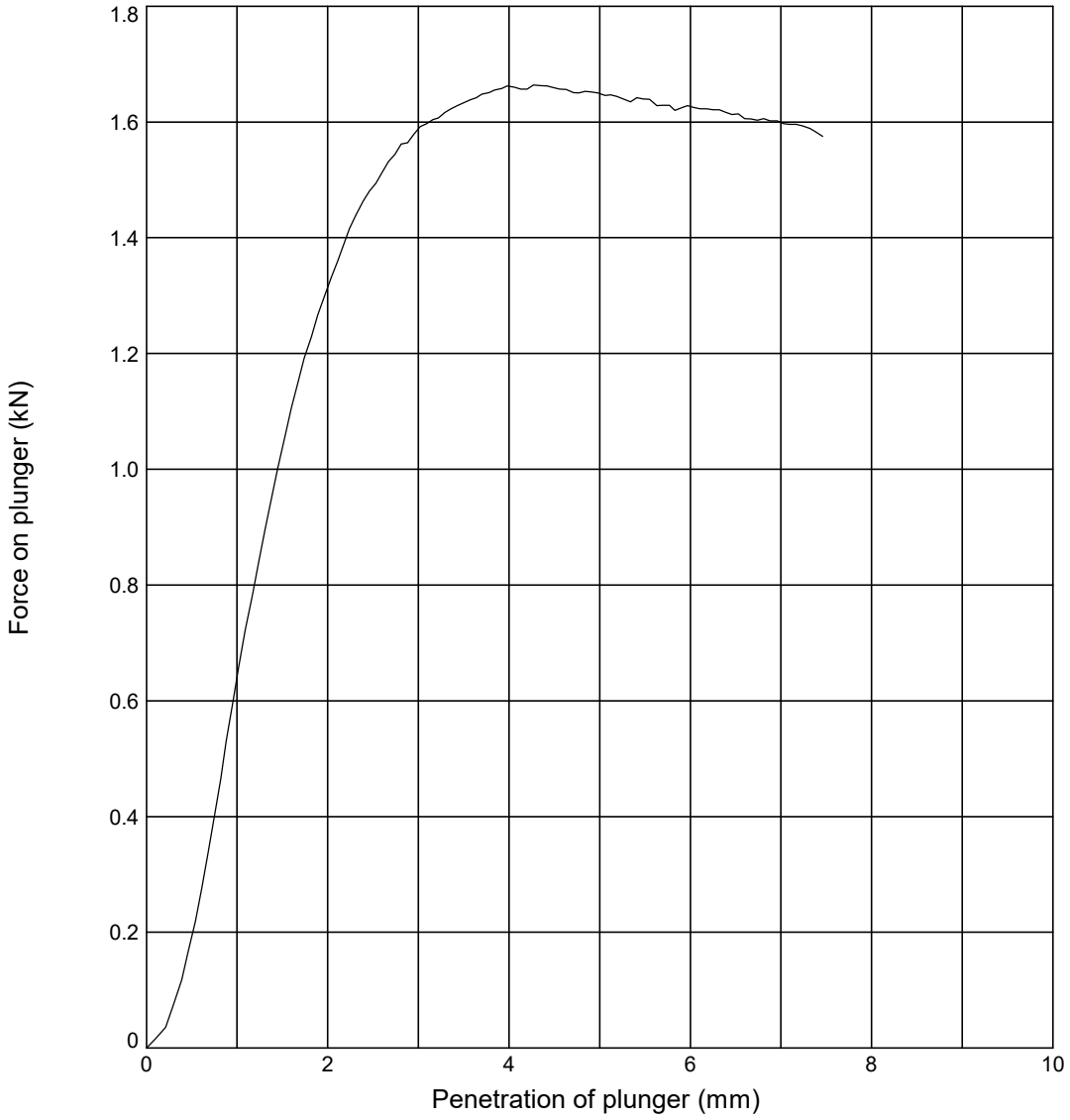
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP205** Sample Ref: **7** Sample Type: **LB** Depth (m): **1.50**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**6.3**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**5.4**	**7.2**
Initial Bulk Density (Mg/m^3)	:	**1.77**	Surcharge (kg)	:	**4.1**	CBR Value (%)	**11**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.66**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**0.31**	**NA**
% Retained on 20mm Sieve	:	**1**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**12**	**NA**

Sample Description	Key
Light brown slightly gravelly slightly clayey SAND	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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Contract	Contract Ref:
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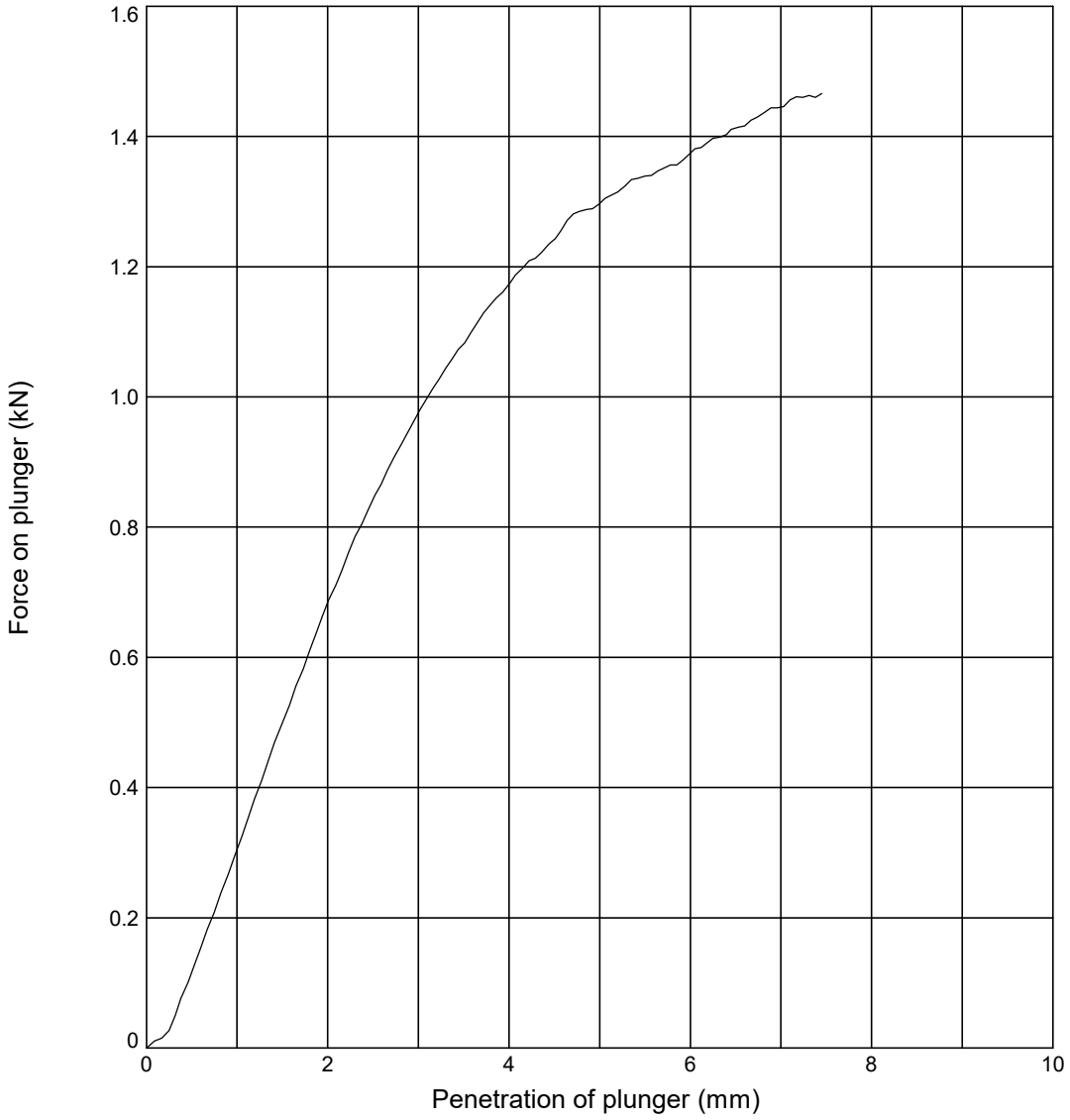
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP205** Sample Ref: **7** Sample Type: **LB** Depth (m): **1.50**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**8.2**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**6.6**	**8.9**
Initial Bulk Density (Mg/m^3)	:	**1.82**	Surcharge (kg)	:	**4.1**	CBR Value (%)	**6.5**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.68**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**0.23**	**NA**
% Retained on 20mm Sieve	:	**1**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**6.9**	**NA**

Sample Description	Key
Light brown slightly gravelly slightly clayey SAND	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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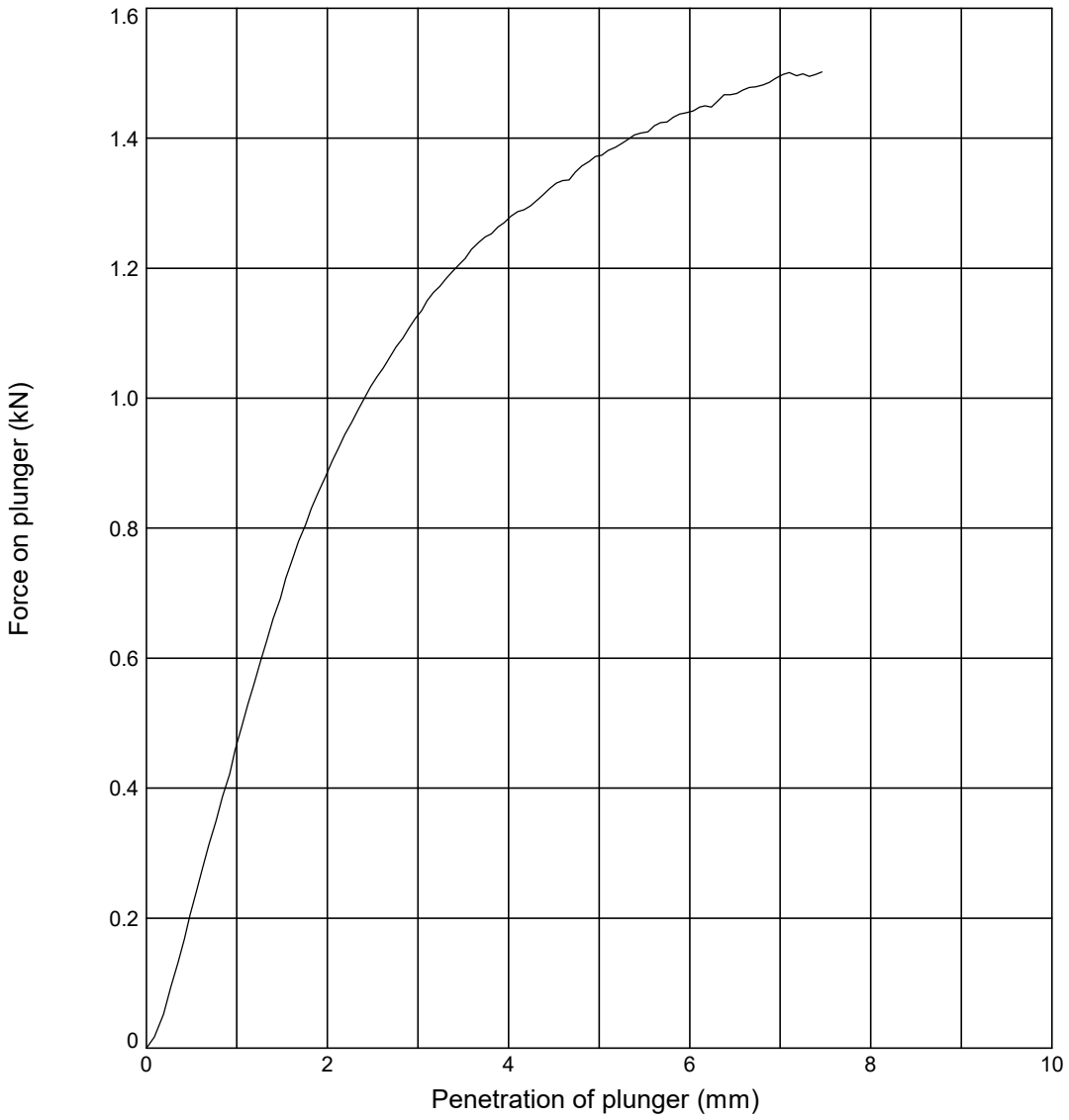
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP205** Sample Ref: **7** Sample Type: **LB** Depth (m): **1.50**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**6.7**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**5.6**	**8.4**
Initial Bulk Density (Mg/m^3)	:	**1.78**	Surcharge (kg)	:	**4.1**	CBR Value (%)	**7.7**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.67**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**0.11**	**NA**
% Retained on 20mm Sieve	:	**1**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**7.9**	**NA**

Sample Description	Key
Light brown slightly gravelly slightly clayey SAND	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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Contract	Contract Ref:
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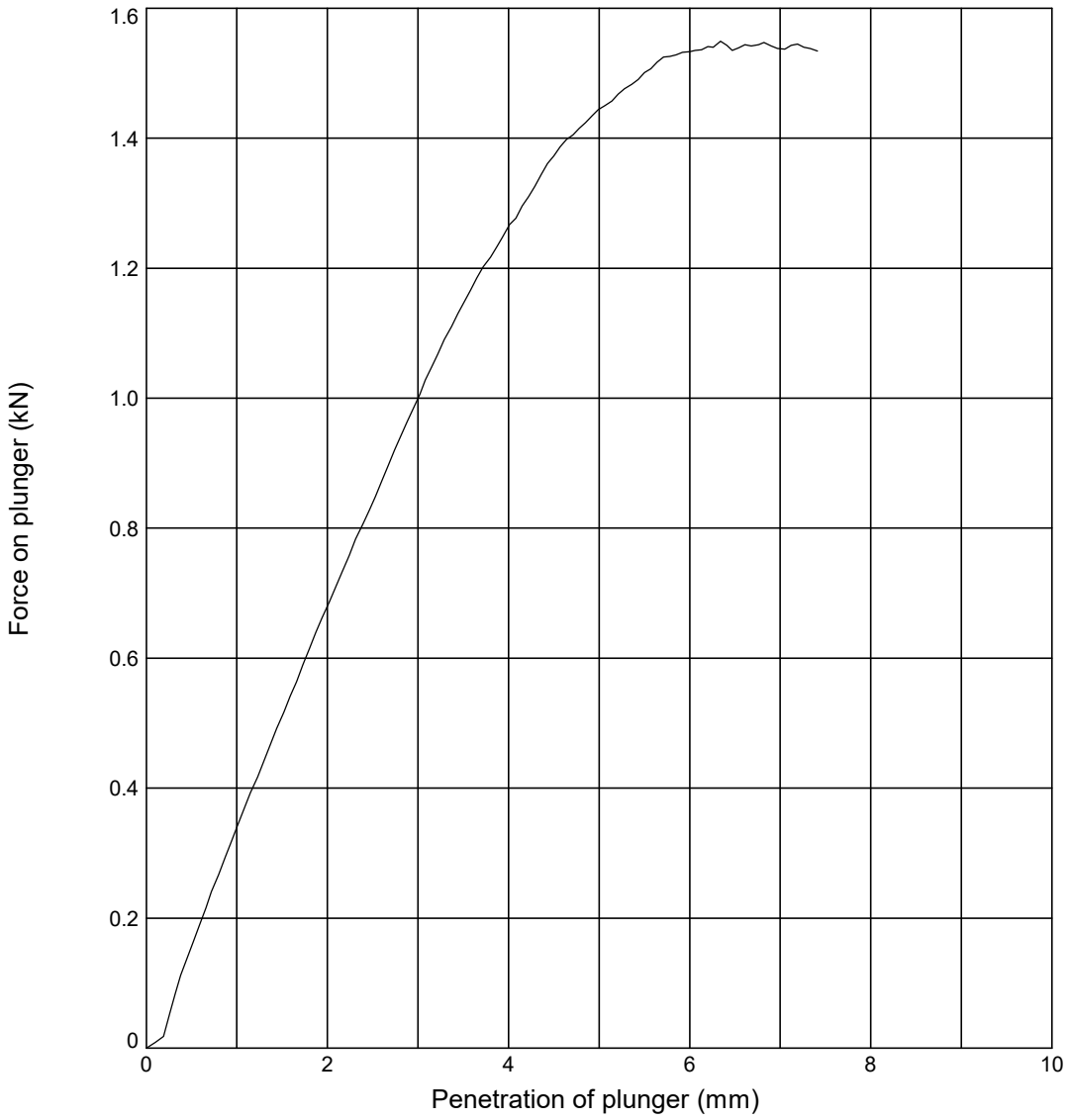
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GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - CBR DATALOGGED - 1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP205** Sample Ref: **7** Sample Type: **LB** Depth (m): **1.50**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**10**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**8.9**	**11**
Initial Bulk Density (Mg/m^3)	:	**1.82**	Surcharge (kg)	:	**4.1**	CBR Value (%)	**7.2**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.65**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**0.1**	**NA**
% Retained on 20mm Sieve	:	**1**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**7.3**	**NA**

Sample Description	Key
Light brown slightly gravelly slightly clayey SAND	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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Contract	Contract Ref:
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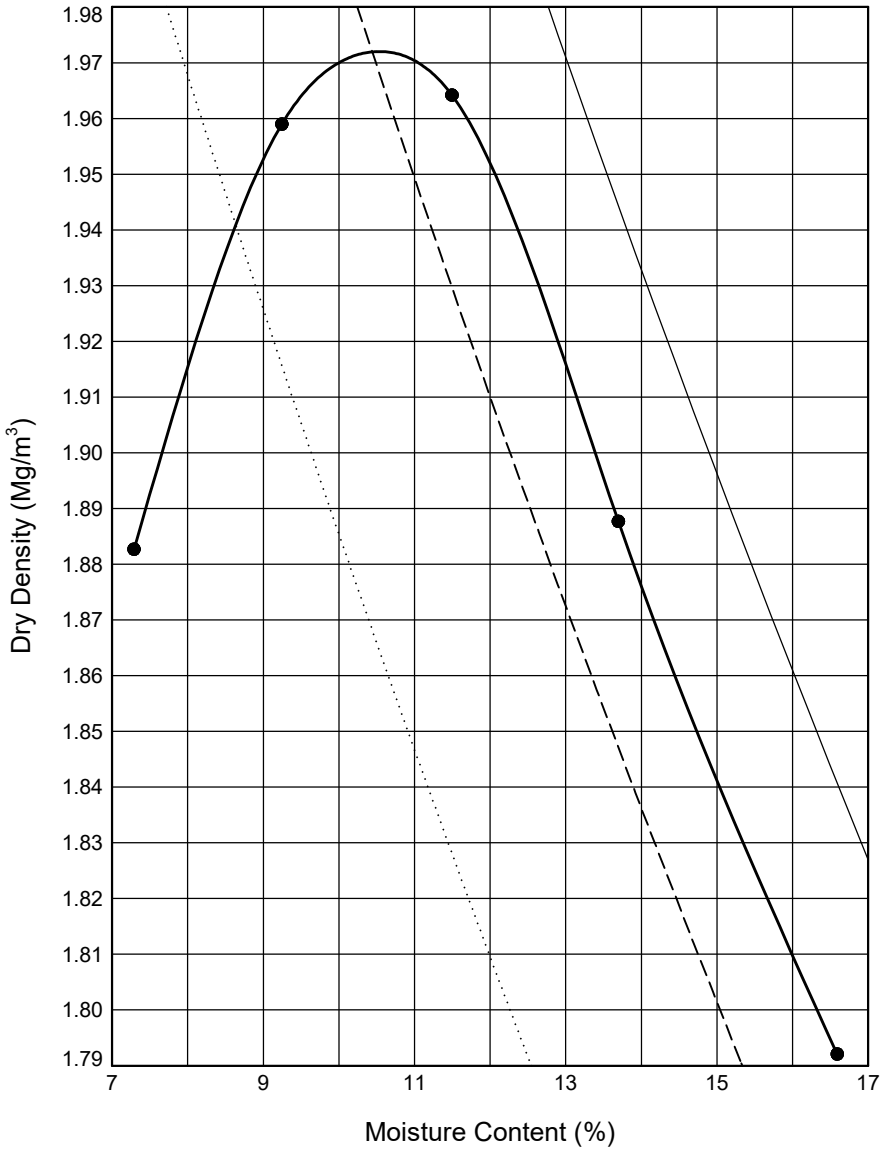
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DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **F22-TP218** Sample Ref: **7** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**14**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m³)	:	**1.97**
% Retained on 37.5mm BS Sieve	:	**0**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**11**
% Retained on 20.0mm BS Sieve	:	**1**	Type of Mould	:	**CBR**	Method Used: **Clause 11.4**		
Particle Density - assumed (Mg/m³)	:	**2.65**				Remarks: **CBR test carried out at each point. Material is too soft to obtain CBR value at wettest point. Material is unsuitable for MCV tests**		
Size of Soil Pieces	:	**<37.5**	Separate samples were used.					

Sample Description	Key to Air Voids Lines		
Orangish brown slightly gravelly sandy silty CLAY	——— 0%	– – – – 5%	····· 10%

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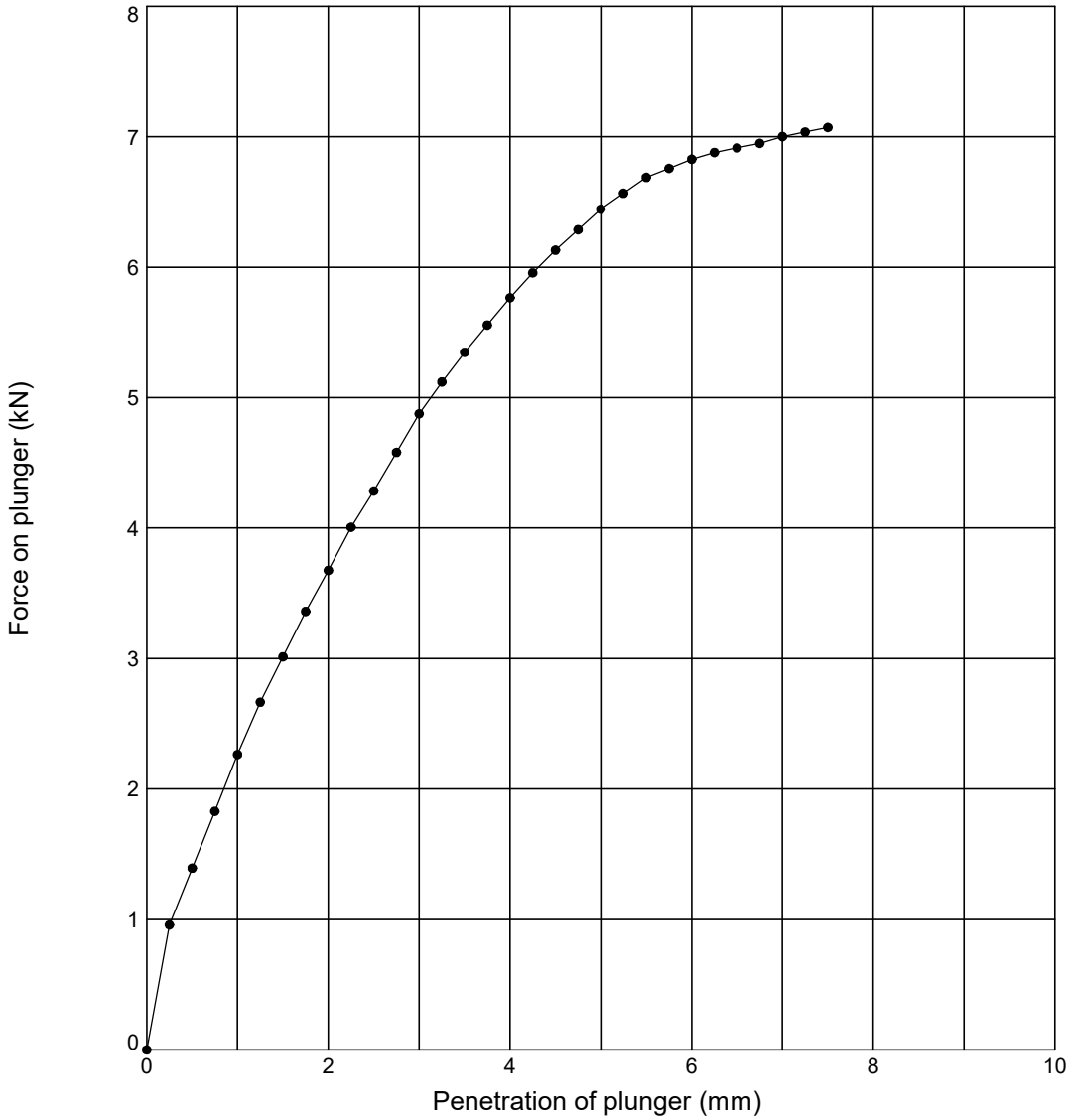
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP218** Sample Ref: **7** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**7.3**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**7.1**	**7.6**
Initial Bulk Density (Mg/m^3)	:	**2.02**	Surcharge (kg)	:	**4.0**	CBR value (%)	**32**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.88**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**1**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown slightly gravelly sandy silty CLAY	● **Top** ⧓ **Base**

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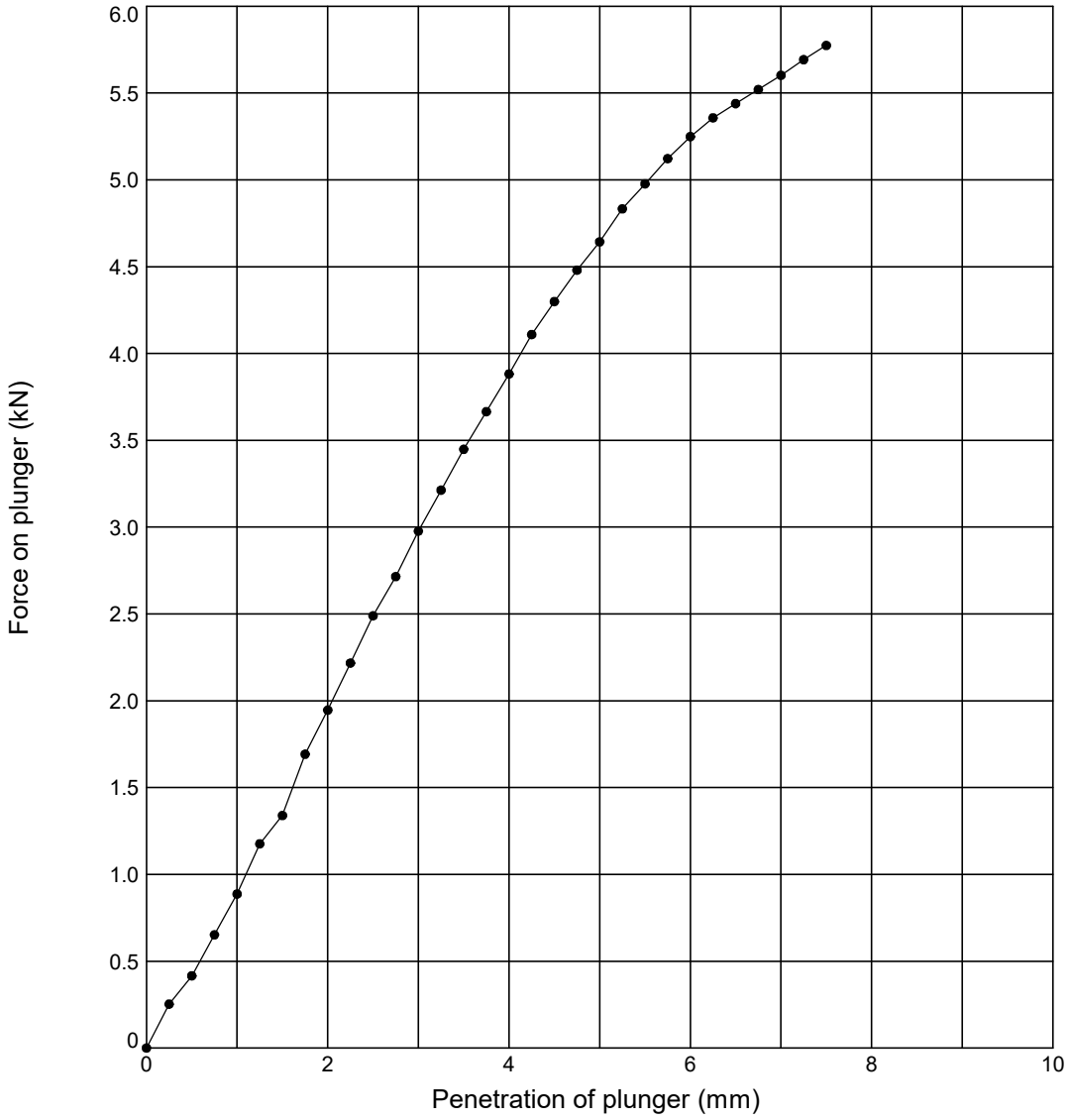
Contract	Contract Ref:
Sealink Friston	**563835**

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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP218** Sample Ref: **7** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**9.2**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**9.2**	**9.3**
Initial Bulk Density (Mg/m^3)	:	**2.14**	Surcharge (kg)	:	**4.0**	CBR value (%)	**23**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.96**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**1**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown slightly gravelly sandy silty CLAY	● **Top** ⧓ **Base**

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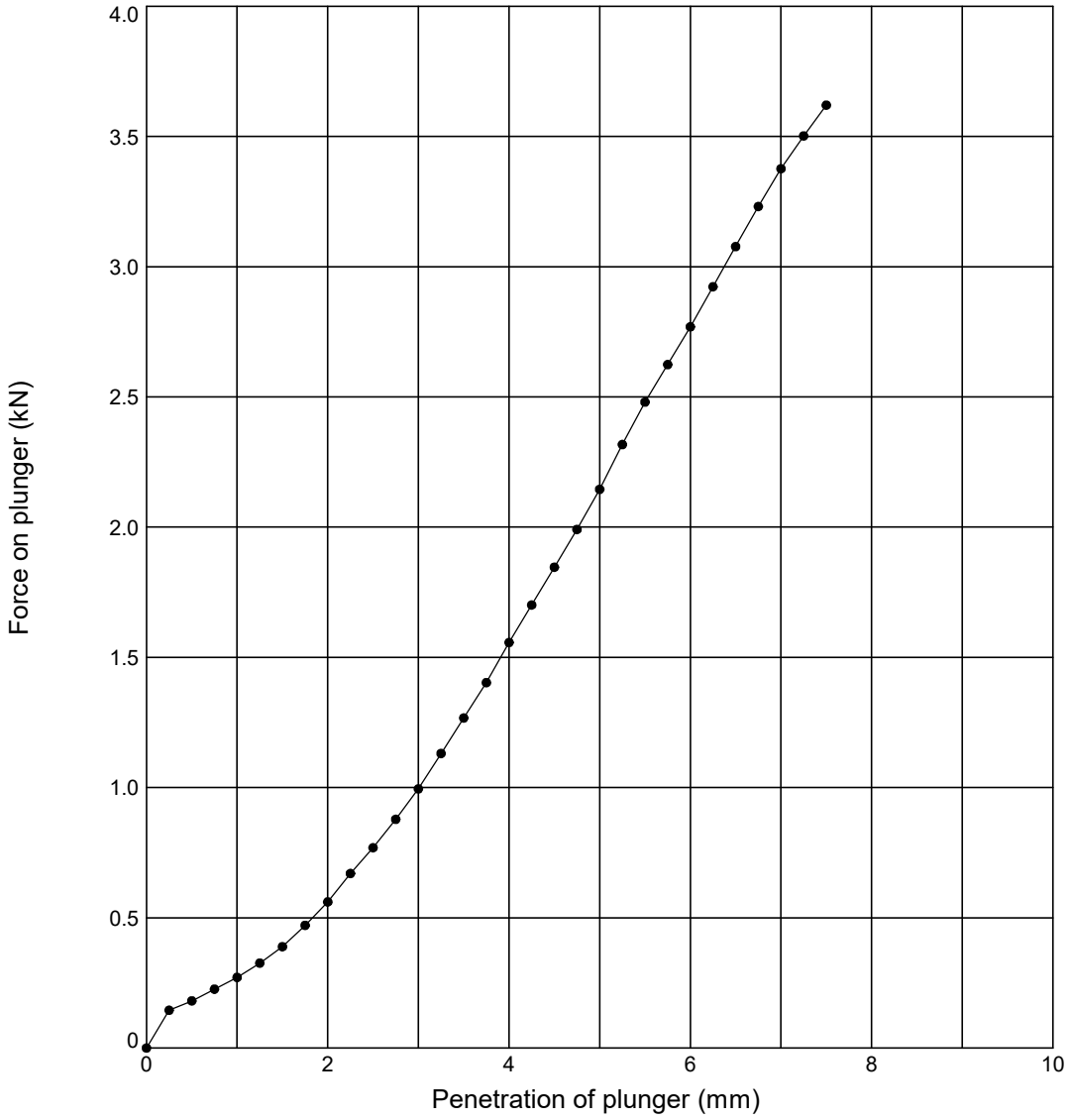
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP218** Sample Ref: **7** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**12**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**12**	**11**
Initial Bulk Density (Mg/m^3)	:	**2.19**	Surcharge (kg)	:	**4.0**	CBR value (%)	**11**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.95**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**1**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown slightly gravelly sandy silty CLAY	● **Top** ⊠ **Base**

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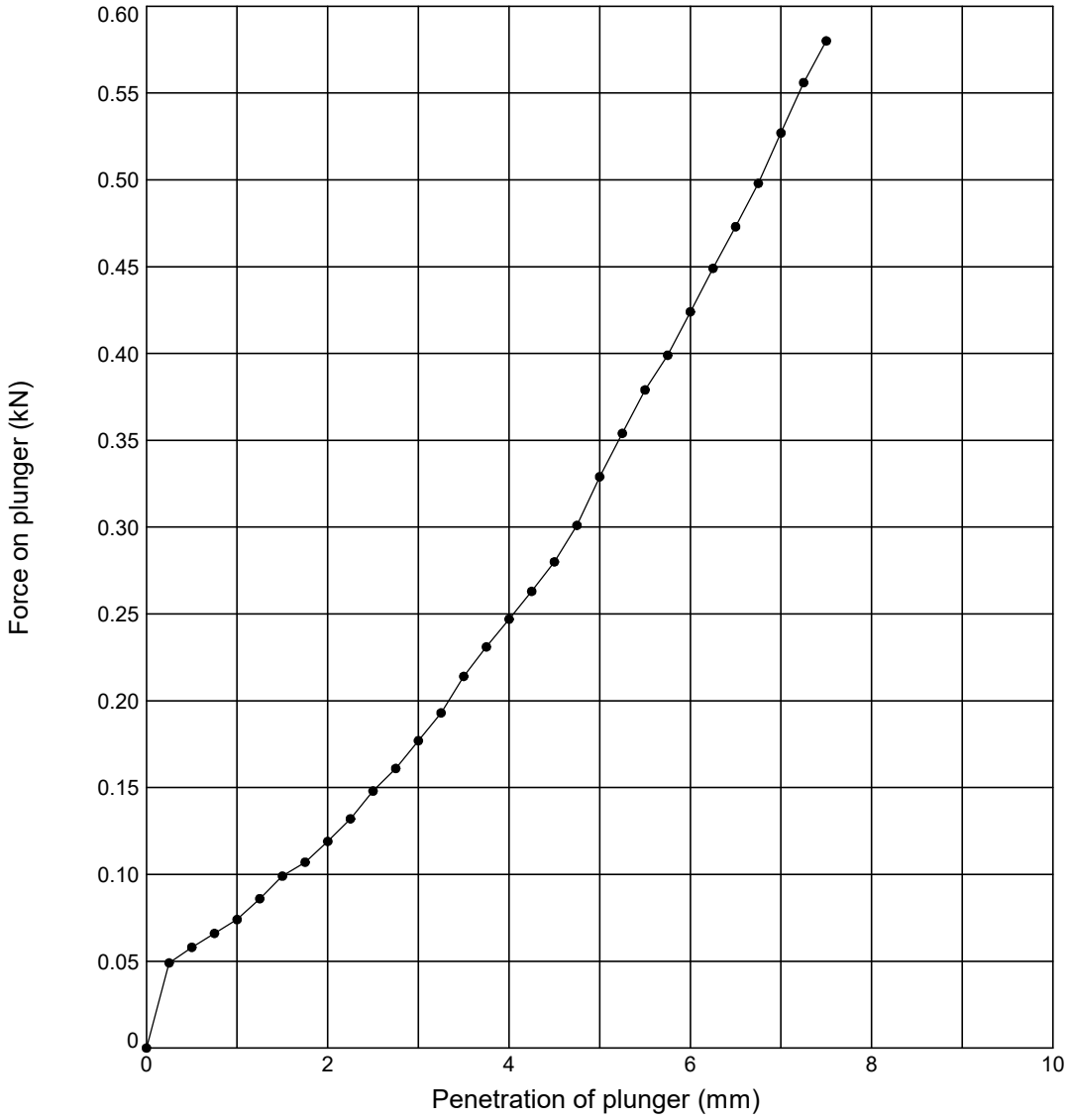
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP218** Sample Ref: **7** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**14**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**14**	**14**
Initial Bulk Density (Mg/m^3)	:	**2.15**	Surcharge (kg)	:	**4.0**	CBR value (%)	**1.6**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.88**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**1**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown slightly gravelly sandy silty CLAY	● **Top** ⊠ **Base**

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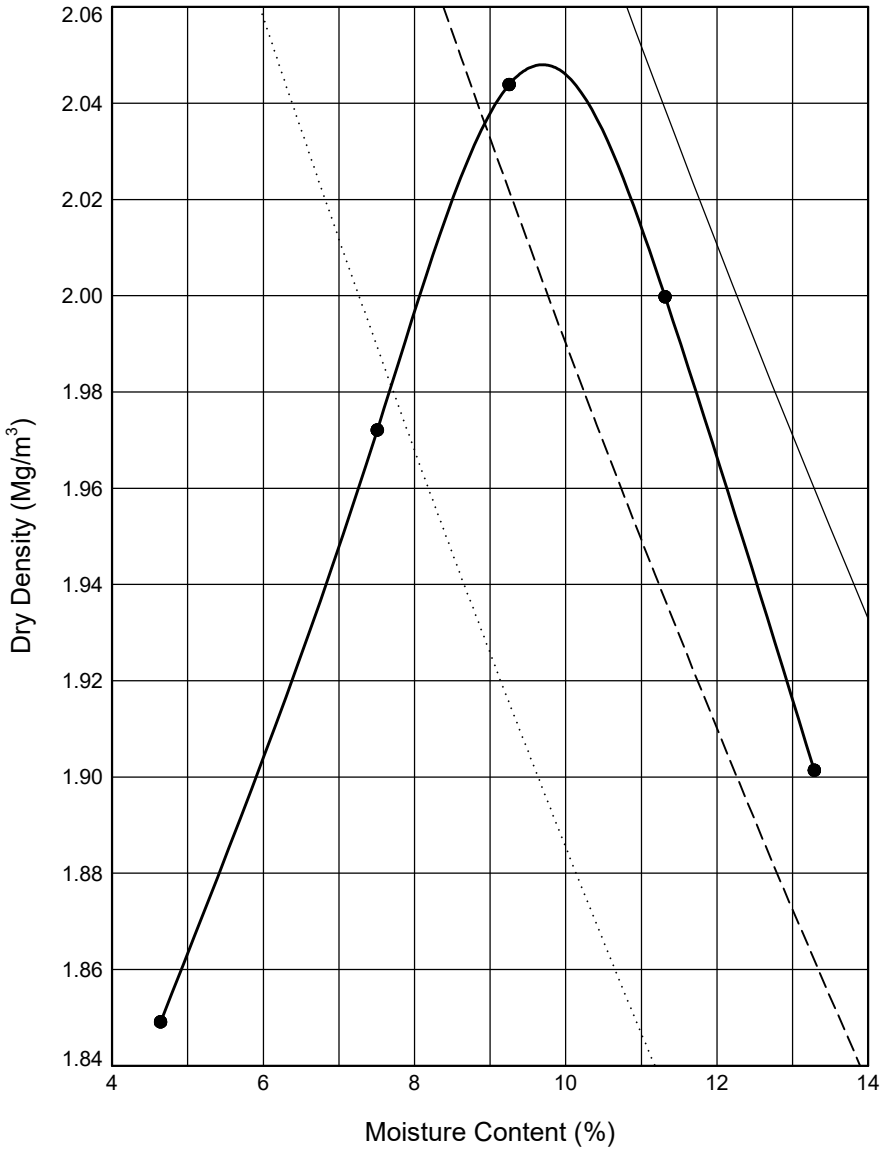
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DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **F22-TP220** Sample Ref: Sample Type: **AMAL** Depth (m): **1.10**

Amalgamation comprises: F22-TP220, Depth:1.10, Ref:8, Type:LB + F22-TP220, Depth:3.80, Ref:14, Type:B



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**9.3**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m³)	:	**2.05**
% Retained on 37.5mm BS Sieve	:	**3**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**9.7**
% Retained on 20.0mm BS Sieve	:	**3**	Type of Mould	:	**CBR**	Method Used: **Clause 11.4**		
Particle Density - assumed (Mg/m³)	:	**2.65**				Remarks: **CBR test carried out at each point. Material is unsuitable for MCV tests**		
Size of Soil Pieces	:	**<37.5mm**	Separate samples were used.					

Sample Description	Key to Air Voids Lines		
Orangish brown gravelly silty SAND	——— 0%	– – – – 5%	····· 10%

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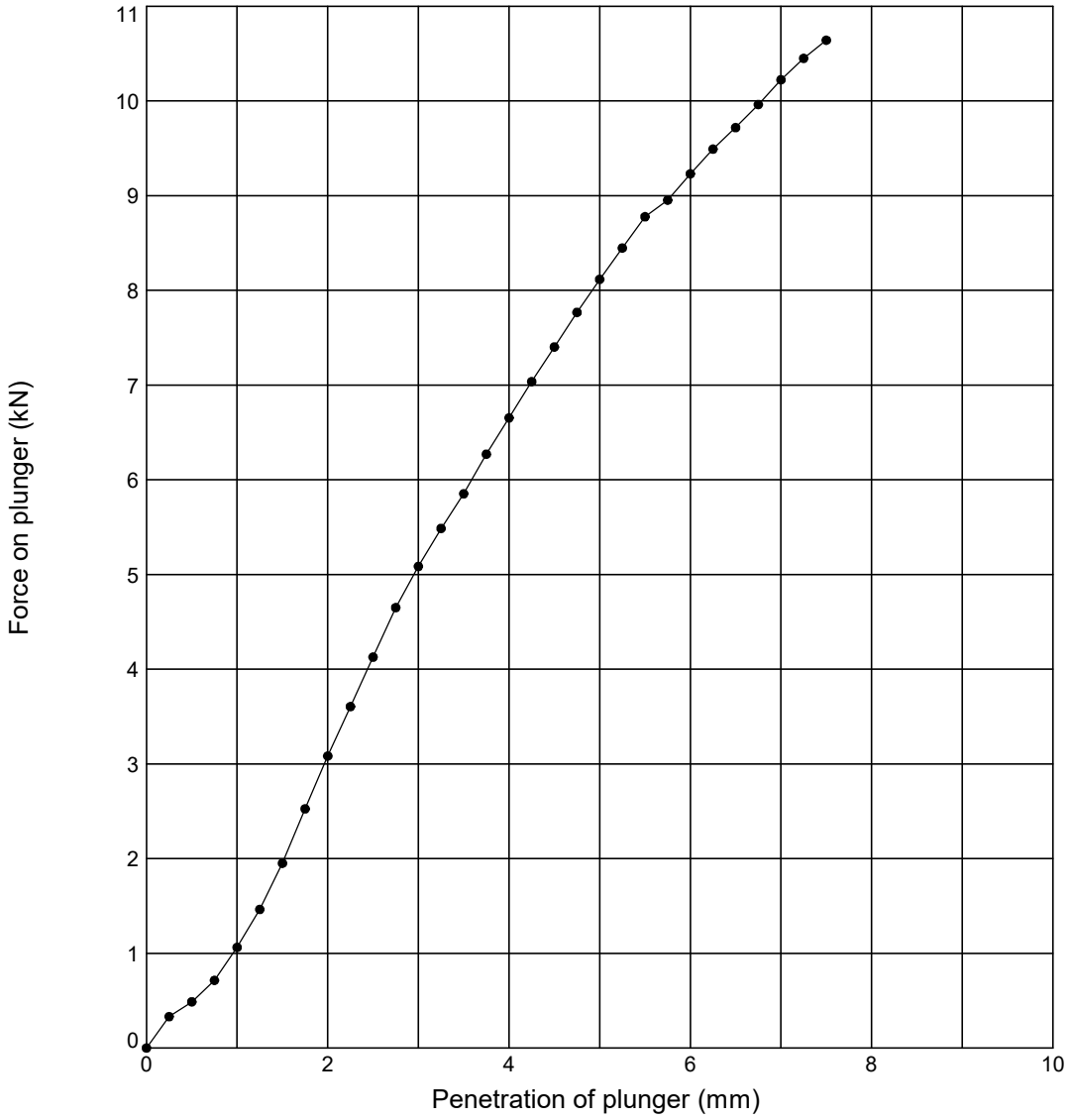
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP220** Sample Ref: Sample Type: **AMAL** Depth (m): **1.10**

Amalgamation comprises: F22-TP220, Depth:1.10, Ref:8, Type:LB + F22-TP220, Depth:3.80, Ref:14, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**4.6**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**4.6**	**4.7**
Initial Bulk Density (Mg/m^3)	:	**1.94**	Surcharge (kg)	:	**4.0**	CBR value (%)	**41**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.85**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**6**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown gravelly silty SAND	● **Top** ⧓ **Base**

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Contract	Contract Ref:
Sealink Friston	**563835**

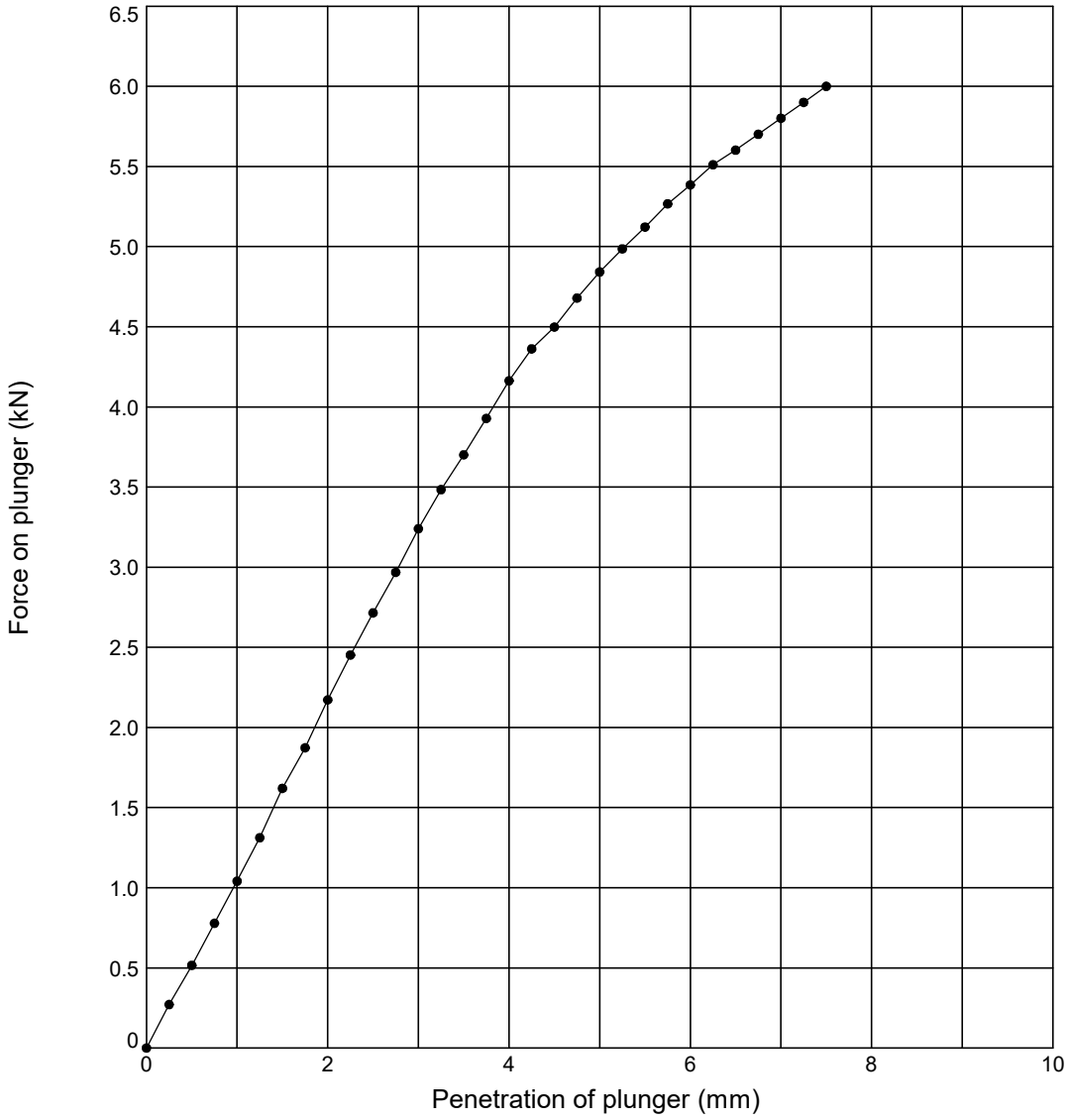
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP220** Sample Ref: Sample Type: **AMAL** Depth (m): **1.10**

Amalgamation comprises: F22-TP220, Depth:1.10, Ref:8, Type:LB + F22-TP220, Depth:3.80, Ref:14, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**7.5**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**7.5**	**7.5**
Initial Bulk Density (Mg/m^3)	:	**2.12**	Surcharge (kg)	:	**4.0**	CBR value (%)	**24**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.97**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**6**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown gravelly silty SAND	● **Top** ⧓ **Base**

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Contract	Contract Ref:
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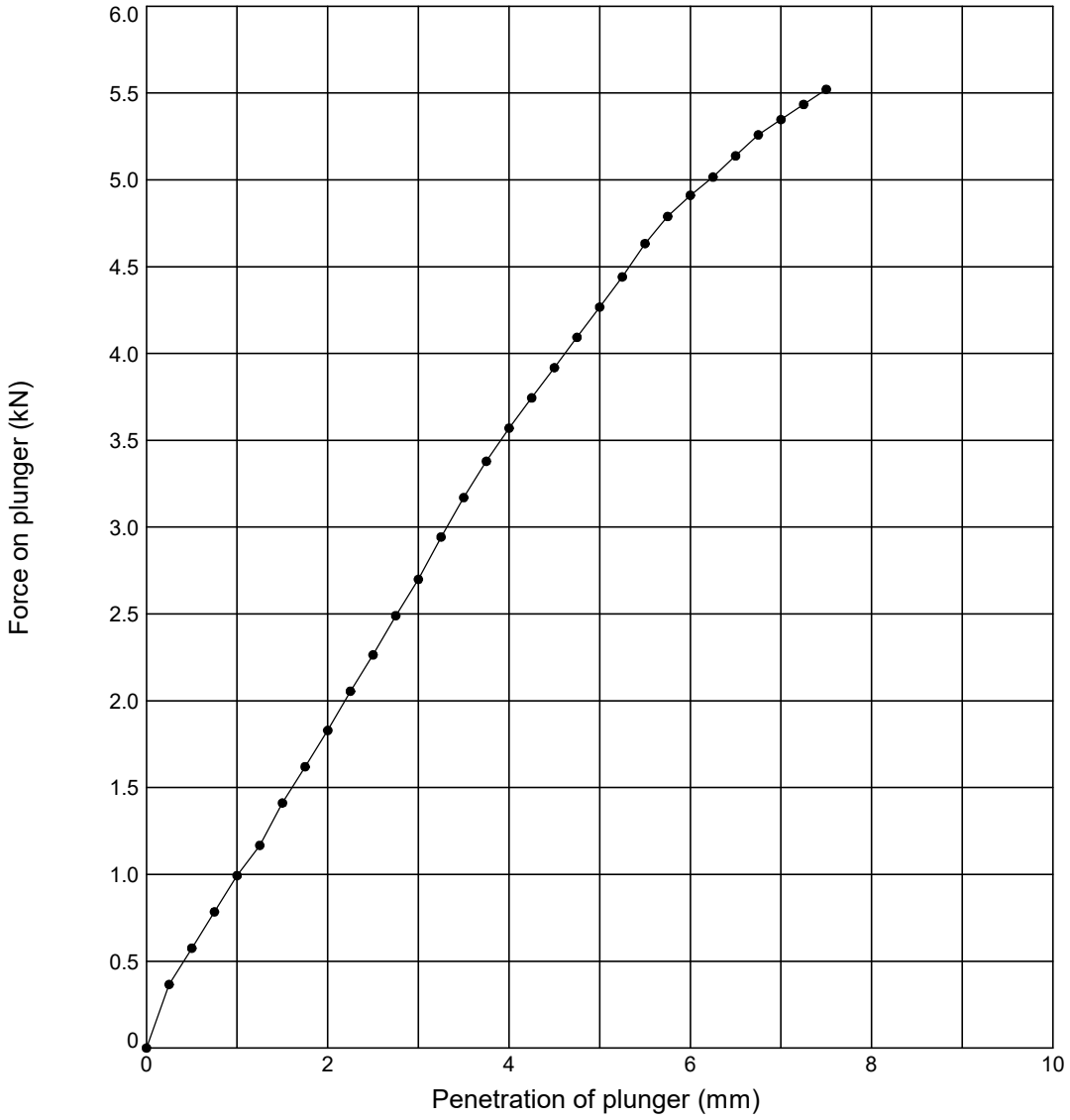
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP220** Sample Ref: Sample Type: **AMAL** Depth (m): **1.10**

Amalgamation comprises: F22-TP220, Depth:1.10, Ref:8, Type:LB + F22-TP220, Depth:3.80, Ref:14, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**9.2**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**9.4**	**9.1**
Initial Bulk Density (Mg/m^3)	:	**2.23**	Surcharge (kg)	:	**4.0**	CBR value (%)	**21**	**NA**
Initial Dry Density (Mg/m^3)	:	**2.04**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**6**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown gravelly silty SAND	● **Top** ⧓ **Base**

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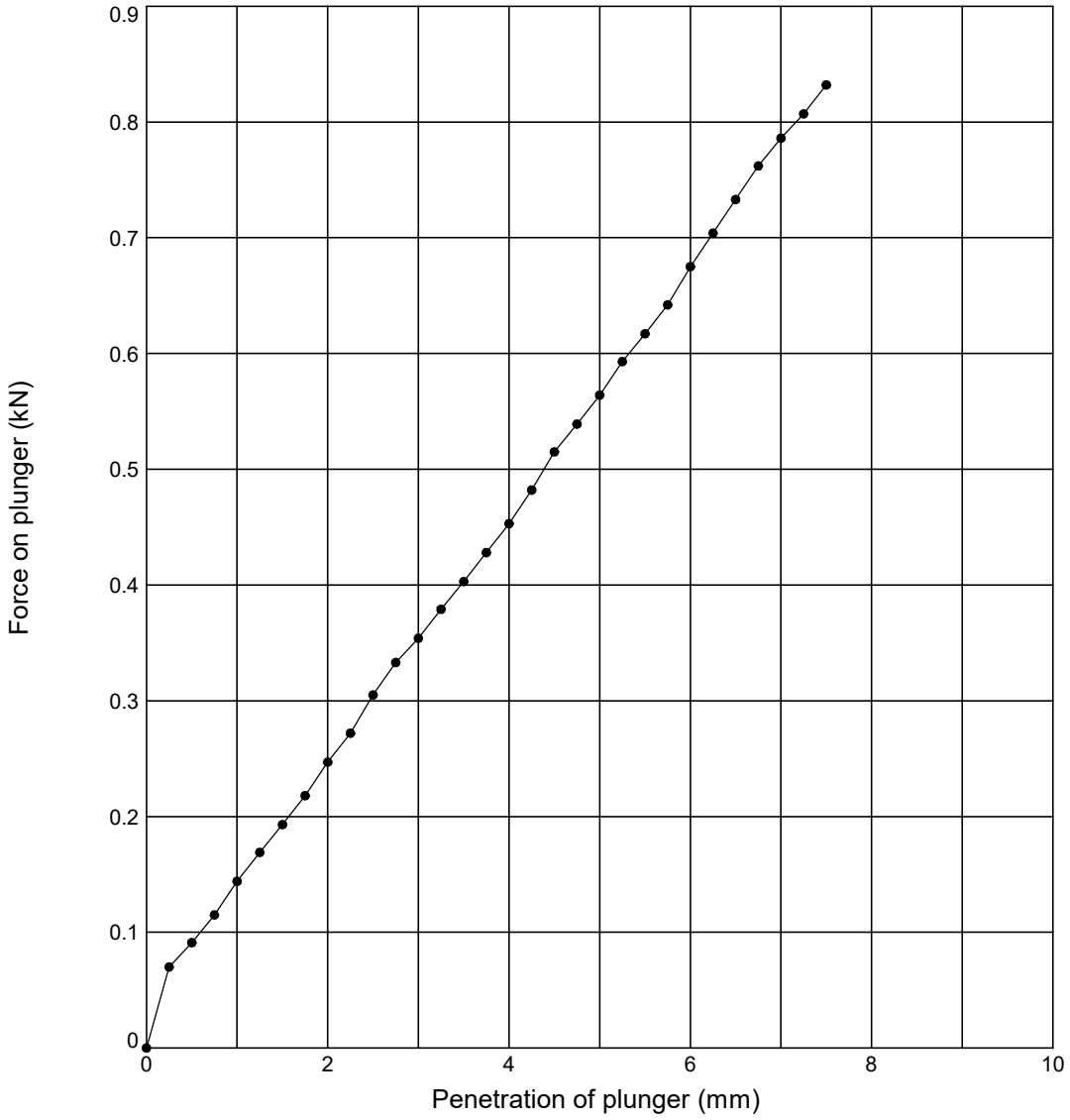
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP220** Sample Ref: Sample Type: **AMAL** Depth (m): **1.10**

Amalgamation comprises: F22-TP220, Depth:1.10, Ref:8, Type:LB + F22-TP220, Depth:3.80, Ref:14, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**11**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**12**	**11**
Initial Bulk Density (Mg/m^3)	:	**2.23**	Surcharge (kg)	:	**4.0**	CBR value (%)	**2.8**	**NA**
Initial Dry Density (Mg/m^3)	:	**2.00**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**6**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown gravelly silty SAND	● **Top** ⊠ **Base**

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Contract	Contract Ref:
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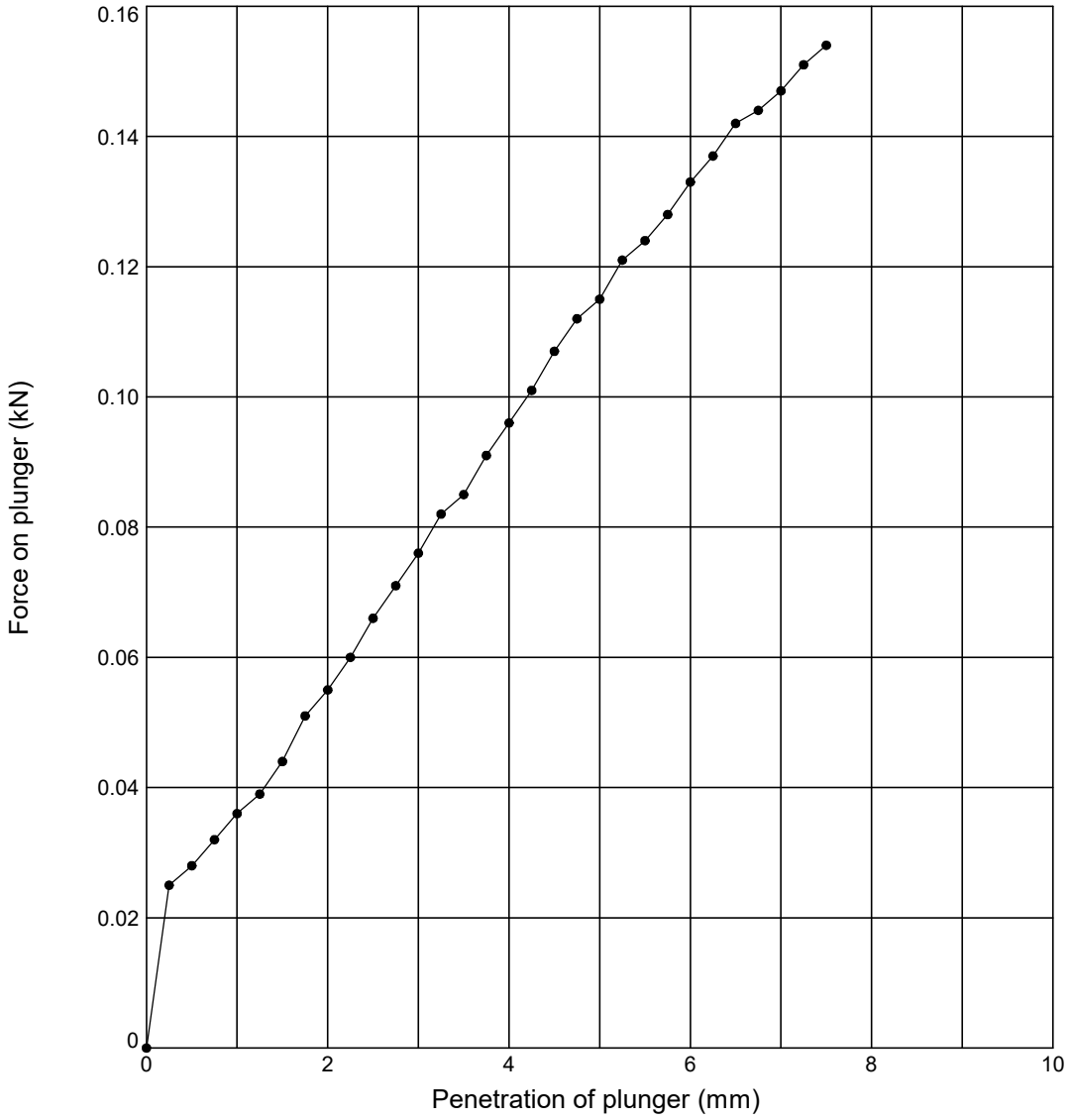
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP220** Sample Ref: Sample Type: **AMAL** Depth (m): **1.10**

Amalgamation comprises: F22-TP220, Depth:1.10, Ref:8, Type:LB + F22-TP220, Depth:3.80, Ref:14, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**13**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**13**	**14**
Initial Bulk Density (Mg/m^3)	:	**2.15**	Surcharge (kg)	:	**4.0**	CBR value (%)	**0.58**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.90**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**6**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown gravelly silty SAND	● **Top** ⊠ **Base**

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Contract	Contract Ref:
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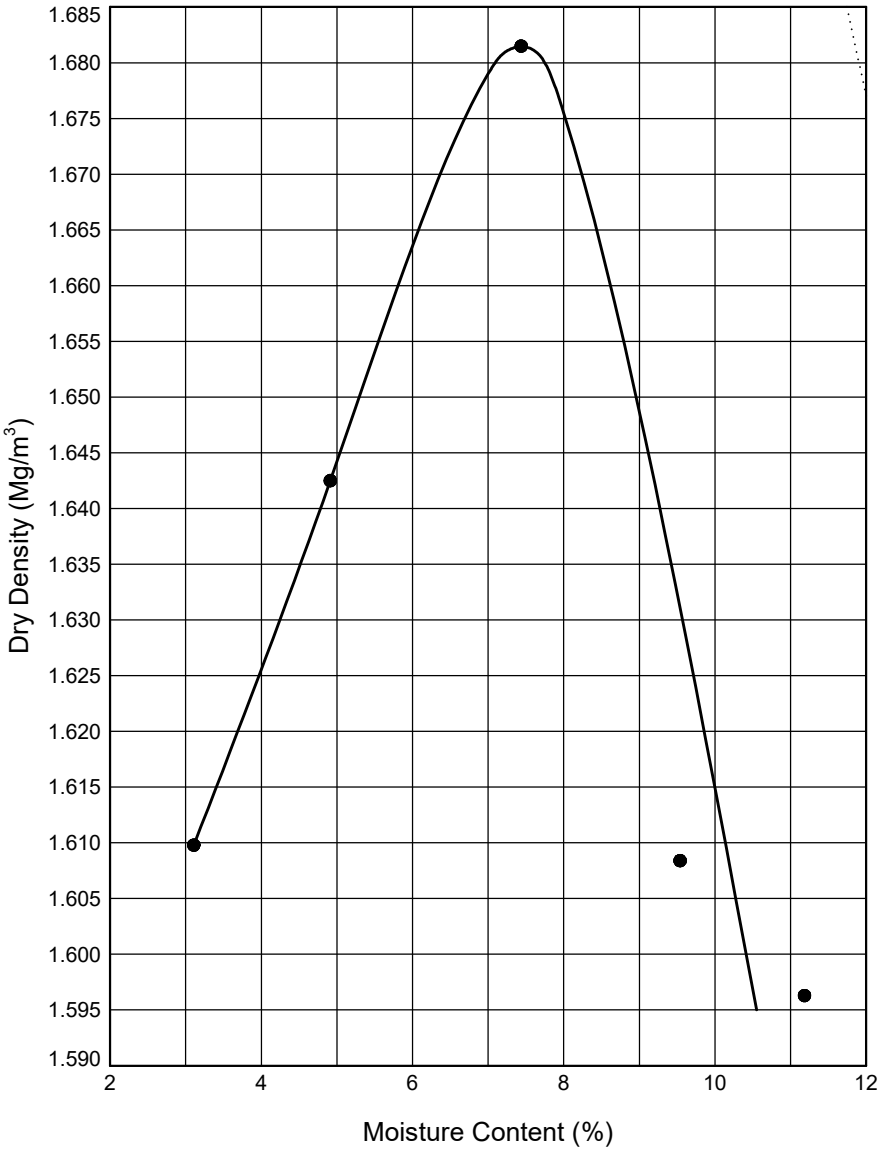
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DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **F22-TP221** Sample Ref: **15** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**4.9**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m^3)	:	**1.68**
% Retained on 37.5mm BS Sieve	:	**0**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**7.4**
% Retained on 20.0mm BS Sieve	:	**0**	Type of Mould	:	**CBR**	Method Used: **Clause 11.4**		
Particle Density - assumed (Mg/m^3)	:	**2.40**				Remarks: **CBR test carried out at each point. Material is unsuitable for MCV tests**		
Size of Soil Pieces	:	**<37.5mm**	Separate samples were used.					

Sample Description	Key to Air Voids Lines		
Orangish brown gravelly silty SAND	——— 0%	– – – – 5%	····· 10%

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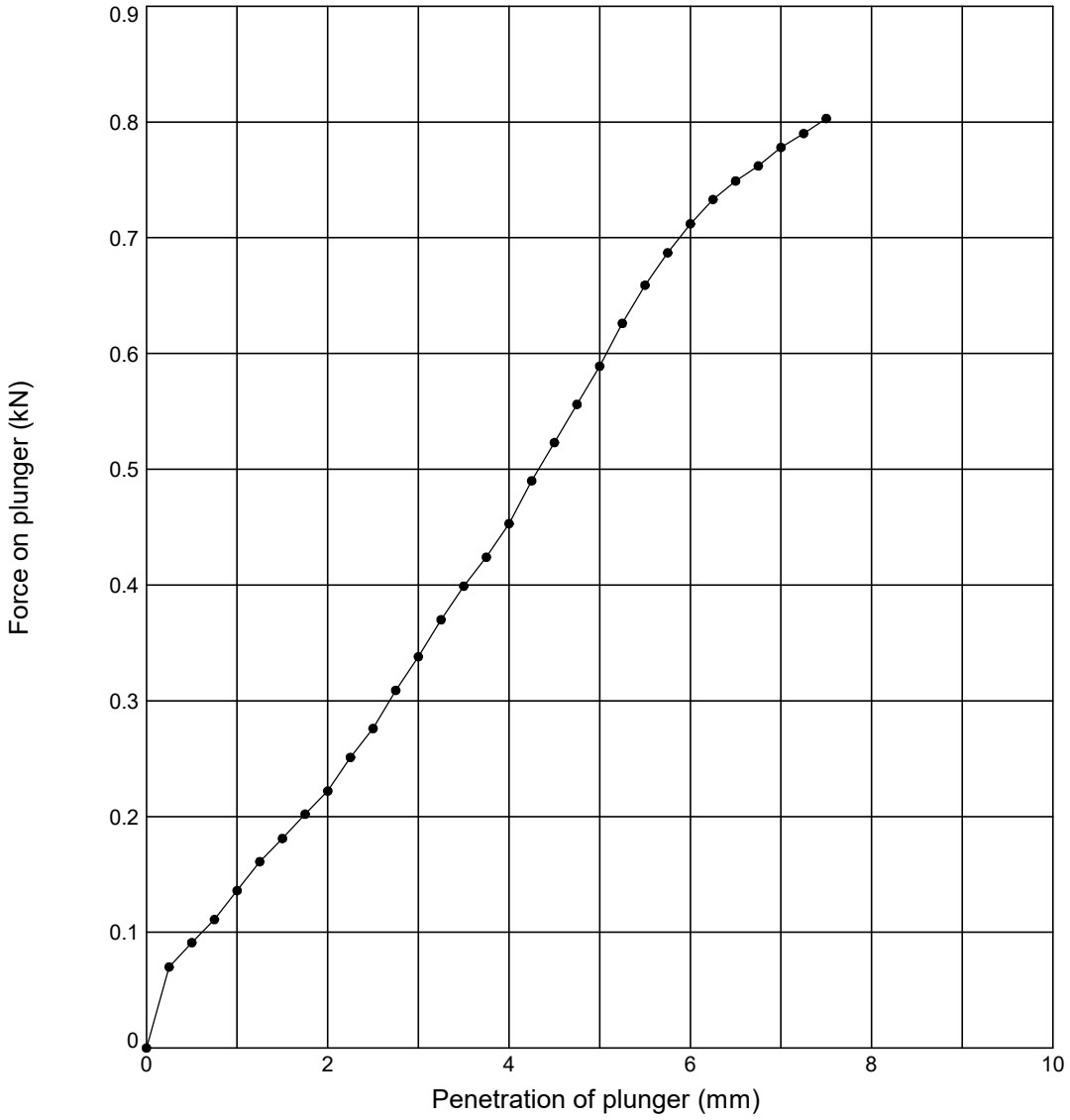
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP221** Sample Ref: **15** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**3.1**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**3.1**	**3.1**
Initial Bulk Density (Mg/m^3)	:	**1.66**	Surcharge (kg)	:	**4.0**	CBR value (%)	**2.9**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.61**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**0**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown gravelly silty SAND	● **Top** ⧓ **Base**

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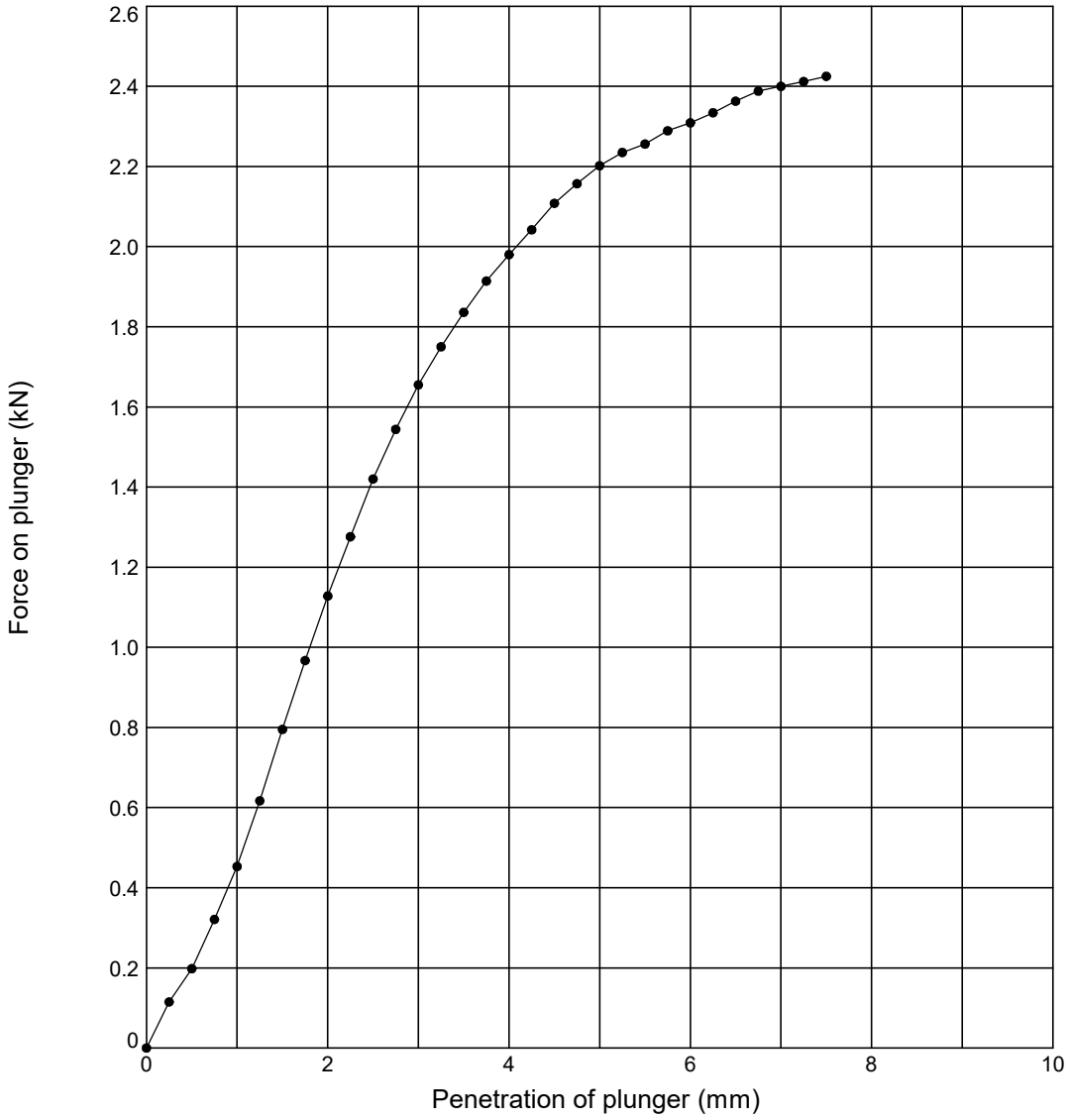
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP221** Sample Ref: **15** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**4.9**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**4.8**	**5.0**
Initial Bulk Density (Mg/m^3)	:	**1.72**	Surcharge (kg)	:	**4.0**	CBR value (%)	**11**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.64**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**0**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown gravelly silty SAND	● **Top** ⧓ **Base**

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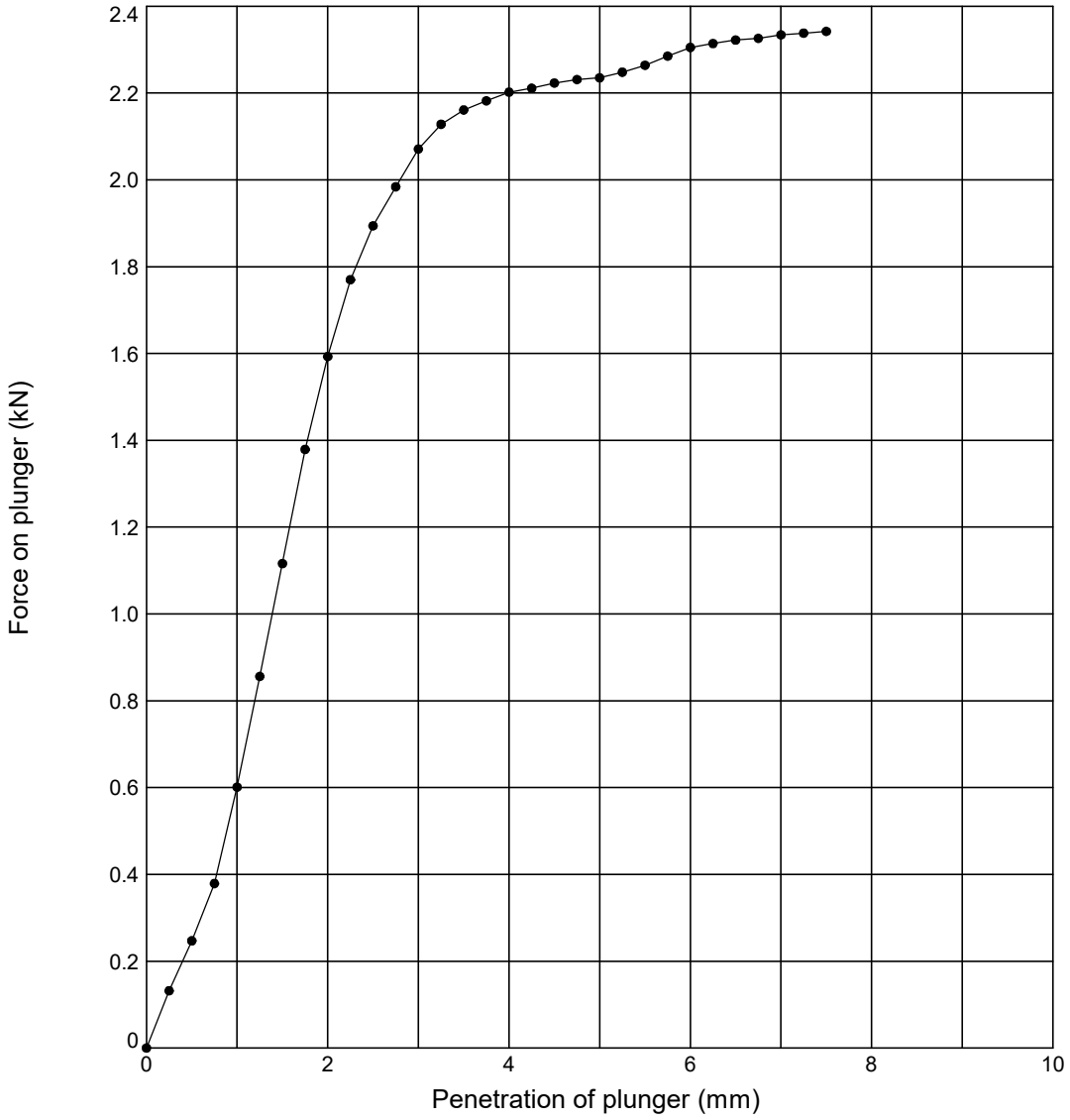
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP221** Sample Ref: **15** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**7.4**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**7.0**	**7.8**
Initial Bulk Density (Mg/m^3)	:	**1.81**	Surcharge (kg)	:	**4.0**	CBR value (%)	**14**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.69**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**0**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown gravelly silty SAND	● **Top** ⧓ **Base**

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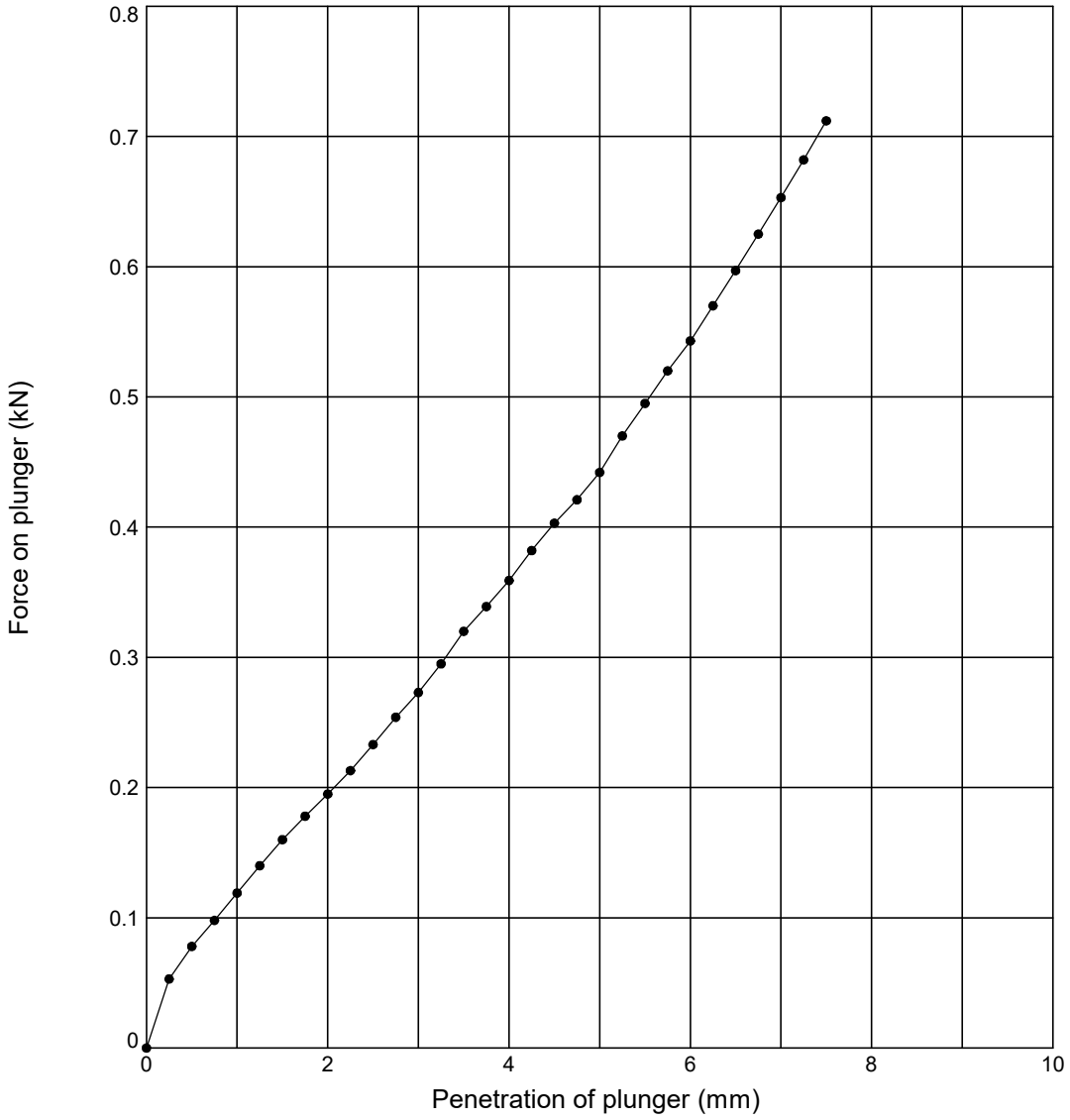
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP221** Sample Ref: **15** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**9.5**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**9.3**	**9.7**
Initial Bulk Density (Mg/m^3)	:	**1.76**	Surcharge (kg)	:	**4.0**	CBR value (%)	**2.2**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.61**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**0**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown gravelly silty SAND	● **Top** ⧓ **Base**

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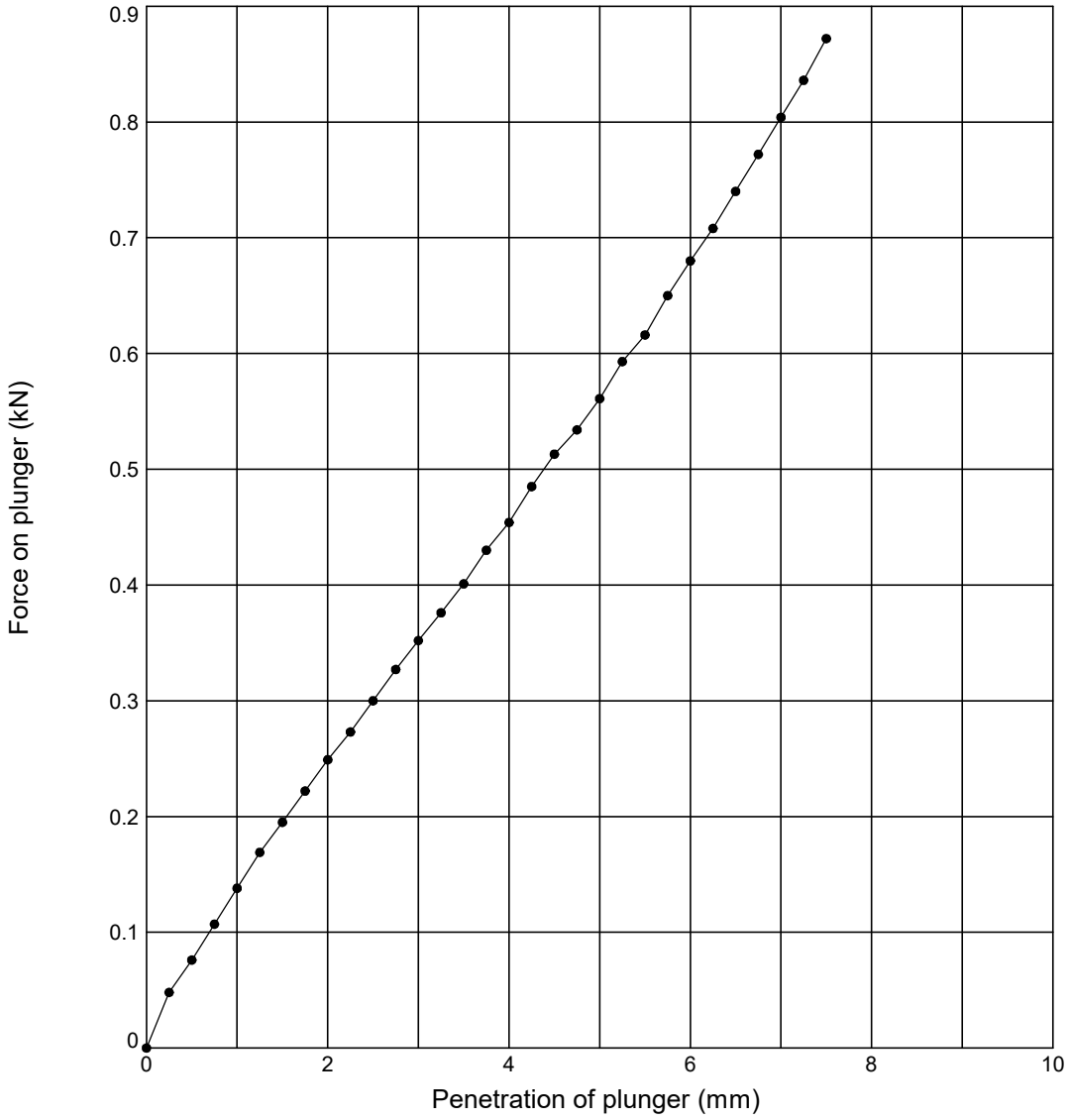
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP221** Sample Ref: **15** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**11**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**11**	**12**
Initial Bulk Density (Mg/m^3)	:	**1.78**	Surcharge (kg)	:	**4.0**	CBR value (%)	**2.8**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.60**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**0**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown gravelly silty SAND	● **Top** ⊠ **Base**

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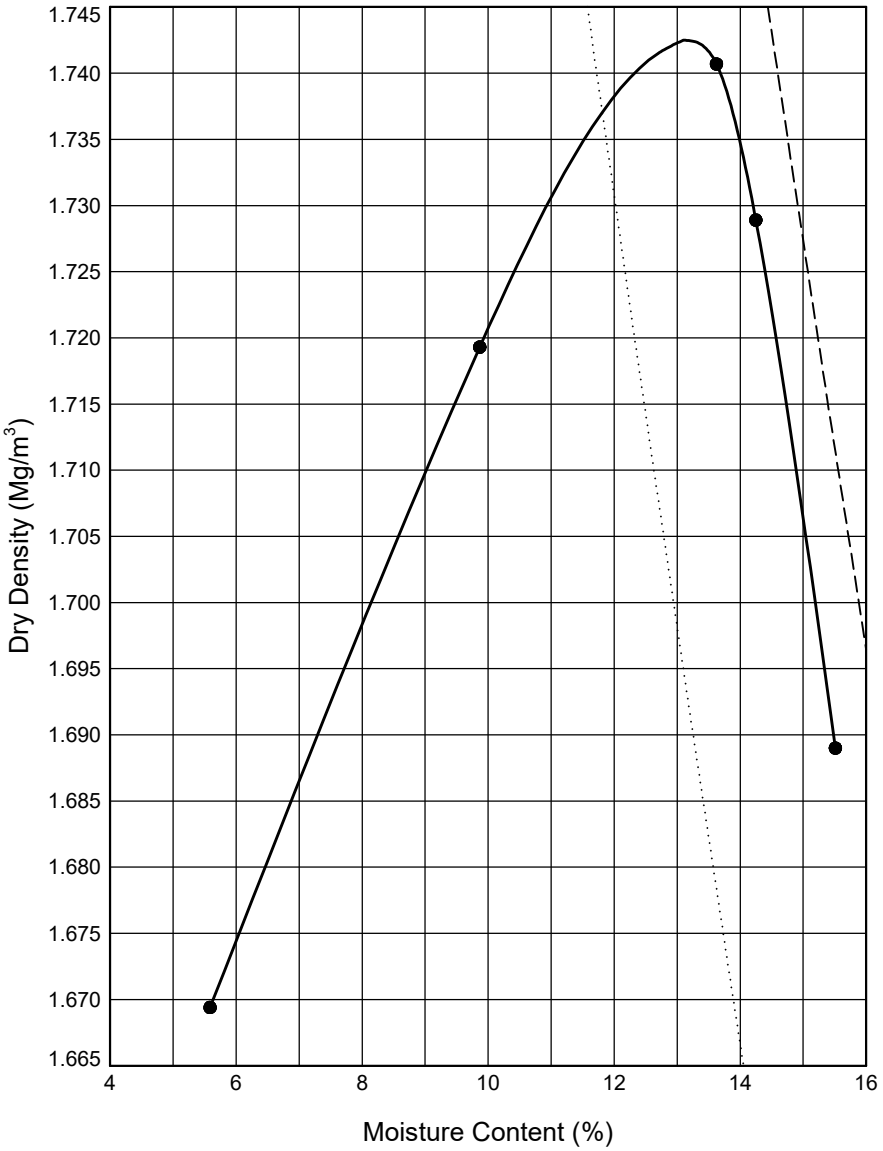
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DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **F22-TP222A** Sample Ref: **7** Sample Type: **LB** Depth (m): **1.50**



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**5.6**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m³)	:	**1.74**
% Retained on 37.5mm BS Sieve	:	**0**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**13**
% Retained on 20.0mm BS Sieve	:	**0**	Type of Mould	:	**CBR**	Method Used: **Clause 11.4**		
Particle Density - assumed (Mg/m³)	:	**2.50**				Remarks: **CBR test carried out at each point. CBR was missed on point at 5.6%. No material left. Material is unsuitable for MCV tests.**		
Size of Soil Pieces	:	**<37.5mm**	Separate samples were used.					

Sample Description	Key to Air Voids Lines		
Orangish brown gravelly slightly silty SAND	——— 0%	– – – – 5%	····· 10%

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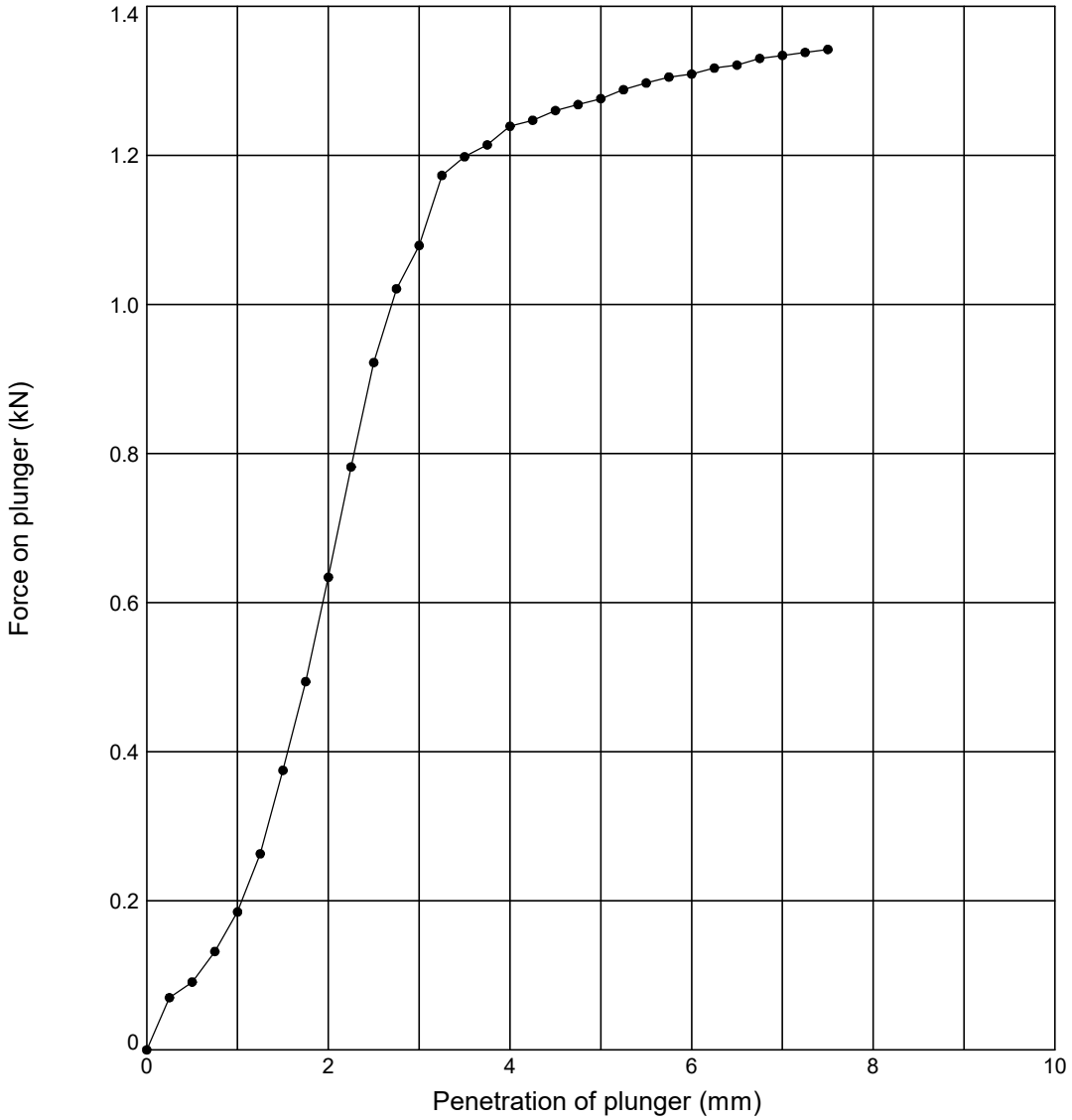
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP222A** Sample Ref: **7** Sample Type: **LB** Depth (m): **1.50**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**9.9**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**9.0**	**11**
Initial Bulk Density (Mg/m^3)	:	**1.89**	Surcharge (kg)	:	**4.0**	CBR value (%)	**7.0**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.72**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**0**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown gravelly slightly silty SAND	● **Top** ⊠ **Base**

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The Potteries
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Compiled By		Date
[redacted]	[redacted]	**05/03/24**

Contract	Contract Ref:
Sealink Friston	**563835**

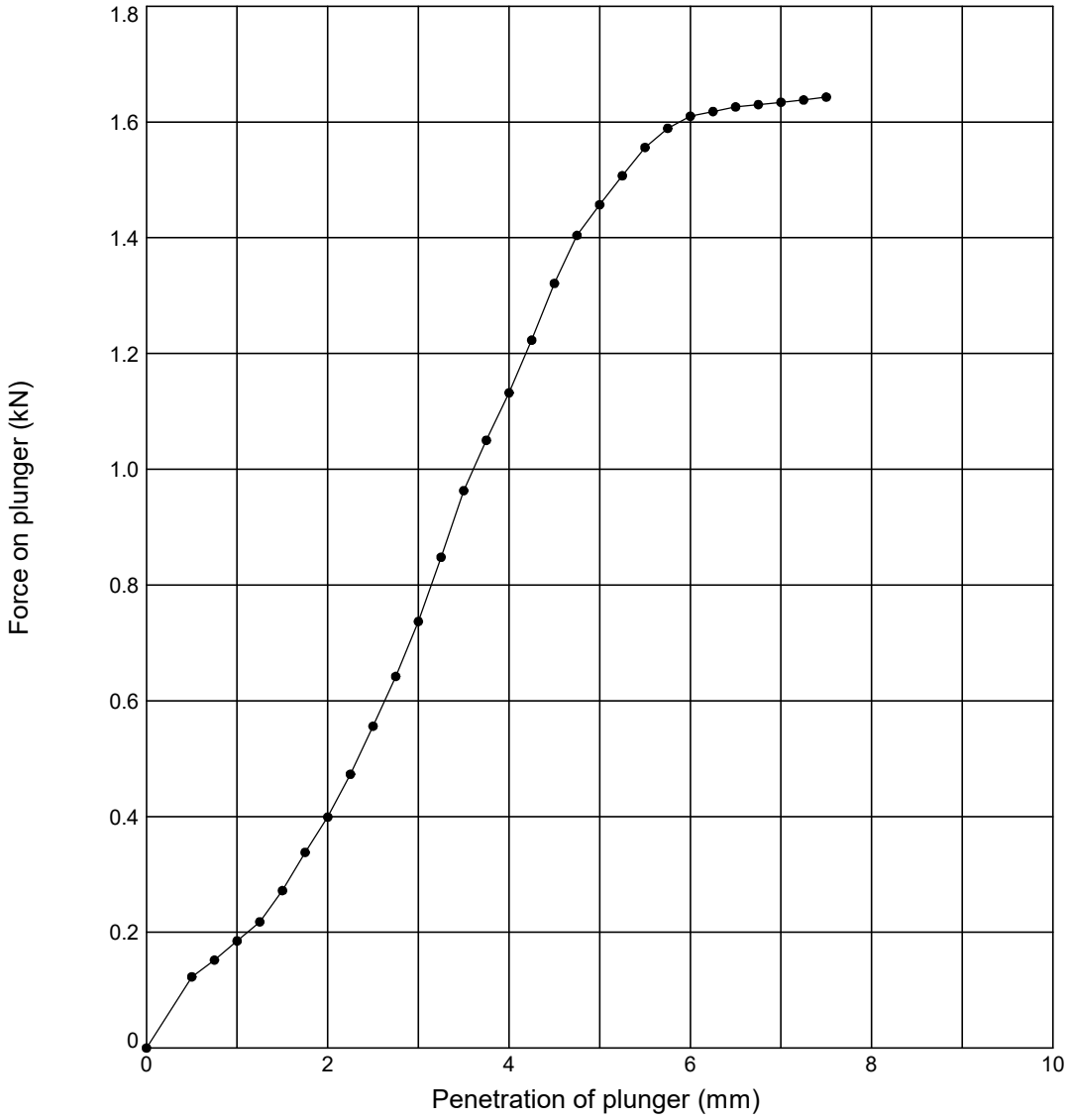
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP222A** Sample Ref: **7** Sample Type: **LB** Depth (m): **1.50**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**14**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**14**	**13**
Initial Bulk Density (Mg/m^3)	:	**1.98**	Surcharge (kg)	:	**4.0**	CBR value (%)	**7.3**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.74**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**0**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown gravelly slightly silty SAND	● **Top** ⧓ **Base**

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Contract	Contract Ref:
Sealink Friston	**563835**

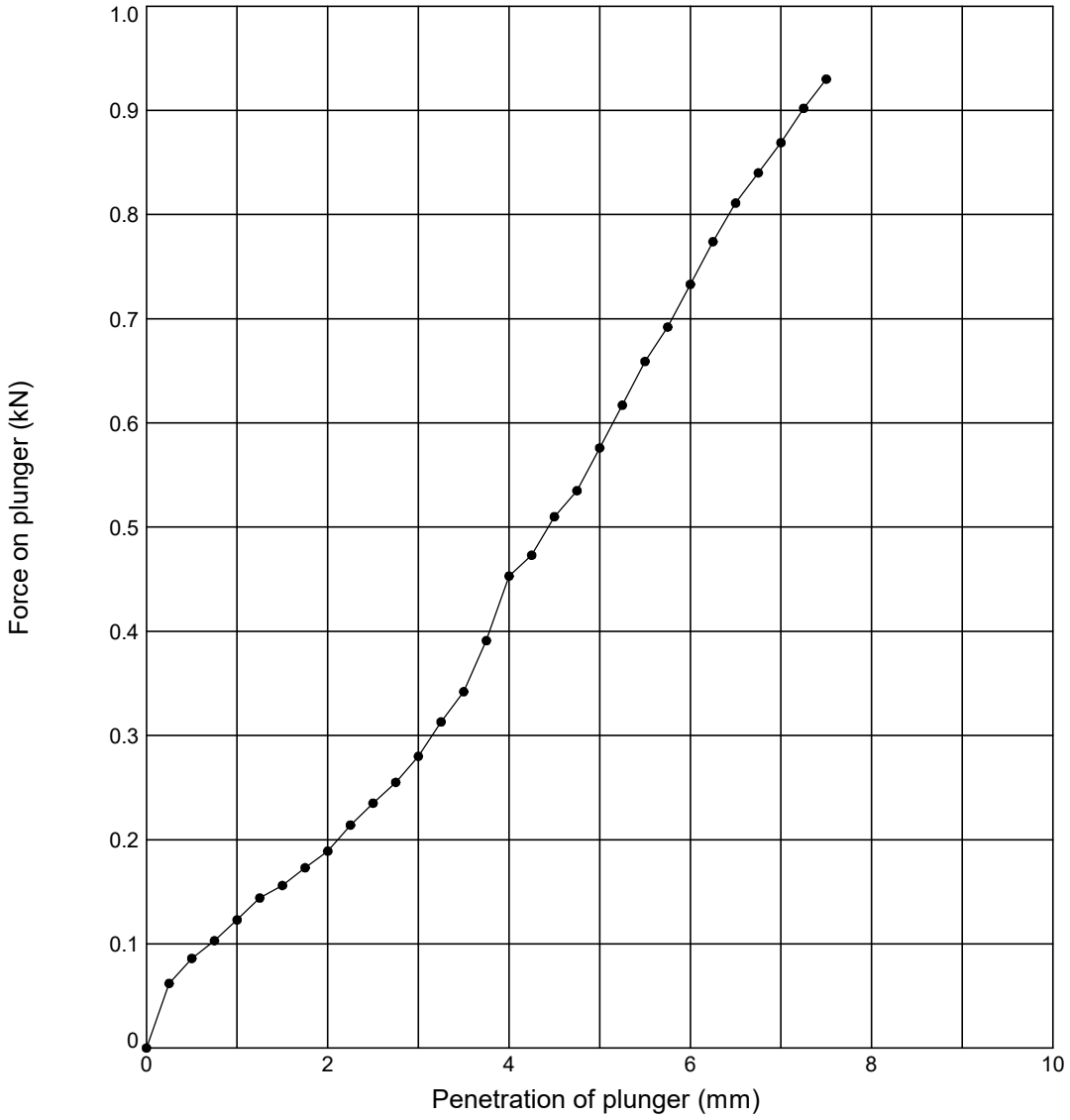
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP222A** Sample Ref: **7** Sample Type: **LB** Depth (m): **1.50**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**14**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**15**	**13**
Initial Bulk Density (Mg/m^3)	:	**1.98**	Surcharge (kg)	:	**4.0**	CBR value (%)	**2.9**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.73**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**0**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown gravelly slightly silty SAND	● **Top** ⧓ **Base**

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Contract	Contract Ref:
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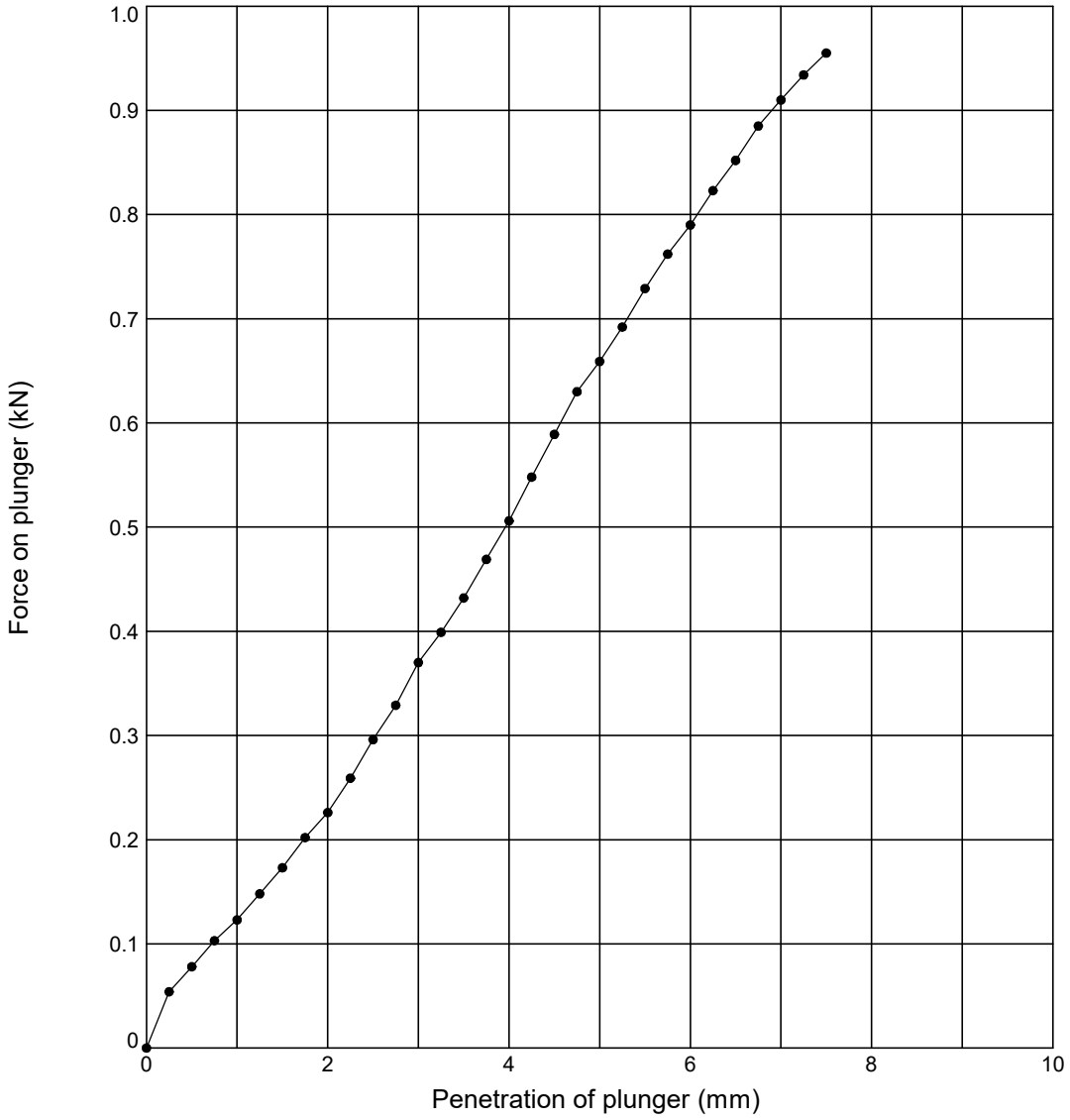
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP222A** Sample Ref: **7** Sample Type: **LB** Depth (m): **1.50**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**16**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**16**	**15**
Initial Bulk Density (Mg/m^3)	:	**1.95**	Surcharge (kg)	:	**6.0**	CBR value (%)	**3.3**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.69**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**0**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown gravelly slightly silty SAND	● **Top** ⧓ **Base**

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Compiled By		Date
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Contract	Contract Ref:
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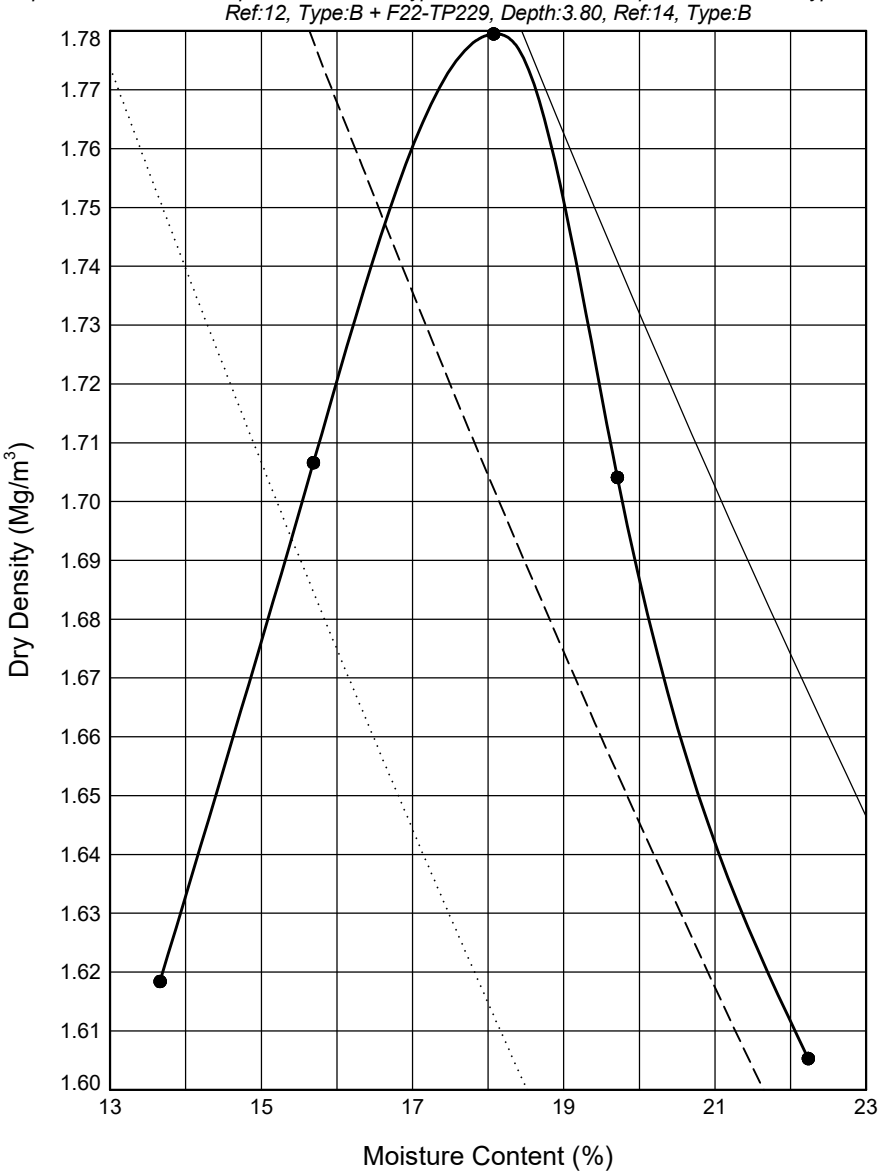
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DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **F22-TP229** Sample Ref: Sample Type: **AMAL** Depth (m): **1.50**

Amalgamation comprises: F22-TP229, Depth:1.50, Ref:15, Type:LB + F22-TP229, Depth:2.10, Ref:10, Type:LB + F22-TP229, Depth:3.00, Ref:12, Type:B + F22-TP229, Depth:3.80, Ref:14, Type:B



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**18**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m³)	:	**1.78**
% Retained on 37.5mm BS Sieve	:	**1**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**18**
% Retained on 20.0mm BS Sieve	:	**2**	Type of Mould	:	**CBR**	Method Used: **Clause 11.4**		
Particle Density - assumed (Mg/m³)	:	**2.65**				Remarks: **MCV test carried out at each point. CBR carried out on the wettest point only**		
Size of Soil Pieces	:	**<37.5mm**	Separate samples were used.					

Sample Description	Key to Air Voids Lines		
Orangish brown mottled white slightly gravelly slightly sandy CLAY	——— 0%	– – – – 5%	····· 10%

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Contract	Contract Ref:
Sealink Friston	**563835**

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MOISTURE CONDITION VALUE

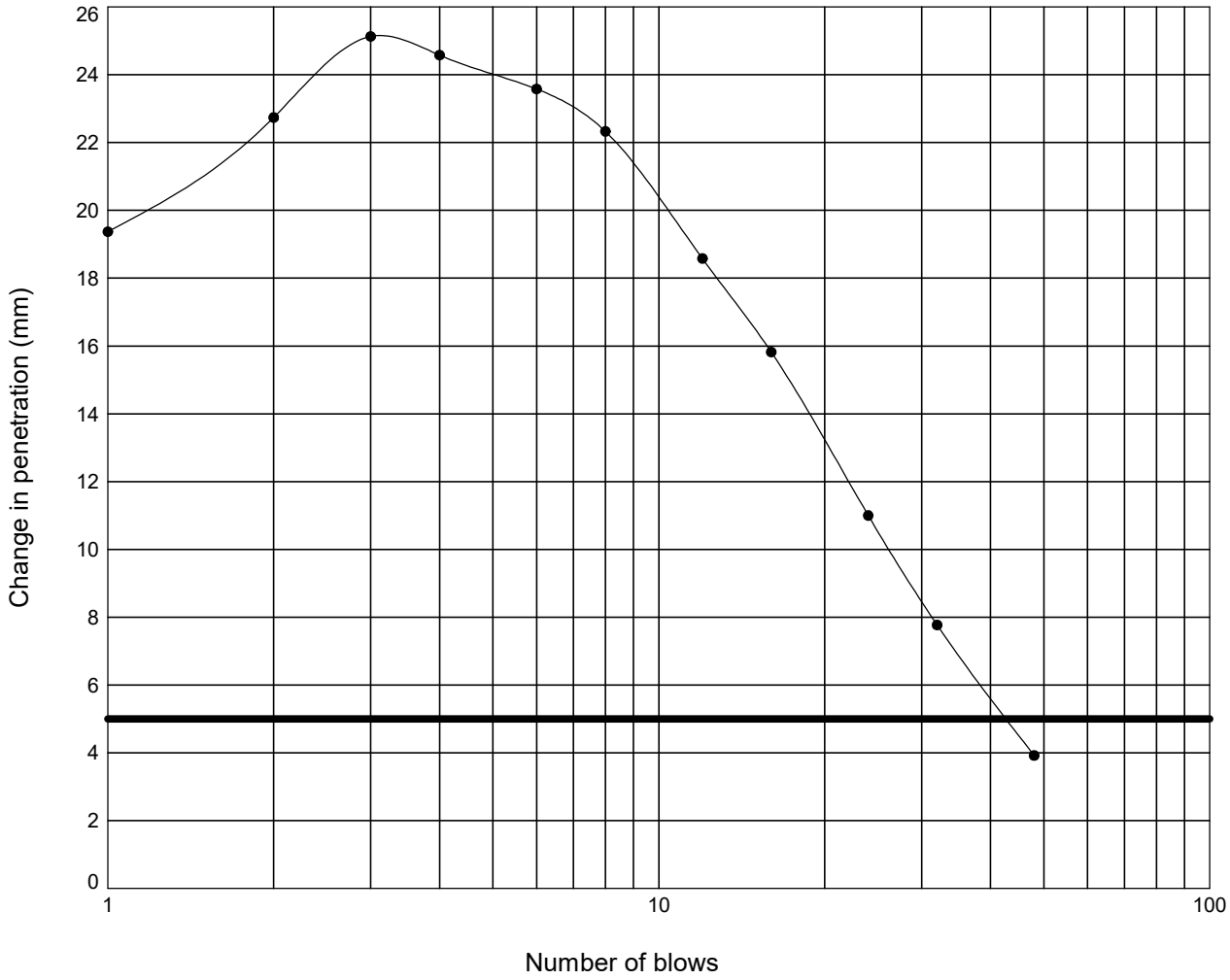
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP229** Sample Ref: Sample Type: **AMAL** Depth (m): **1.50**

Amalgamation comprises: F22-TP229, Depth:1.50, Ref:15, Type:LB + F22-TP229, Depth:2.10, Ref:10, Type:LB + F22-TP229, Depth:3.00, Ref:12, Type:B + F22-TP229, Depth:3.80, Ref:14, Type:B

Description : **Orangish brown mottled white slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	13	%
Percentage retained on 20 mm sieve :	=	3	%
Moisture Condition Value :	=	16.0	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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MOISTURE CONDITION VALUE

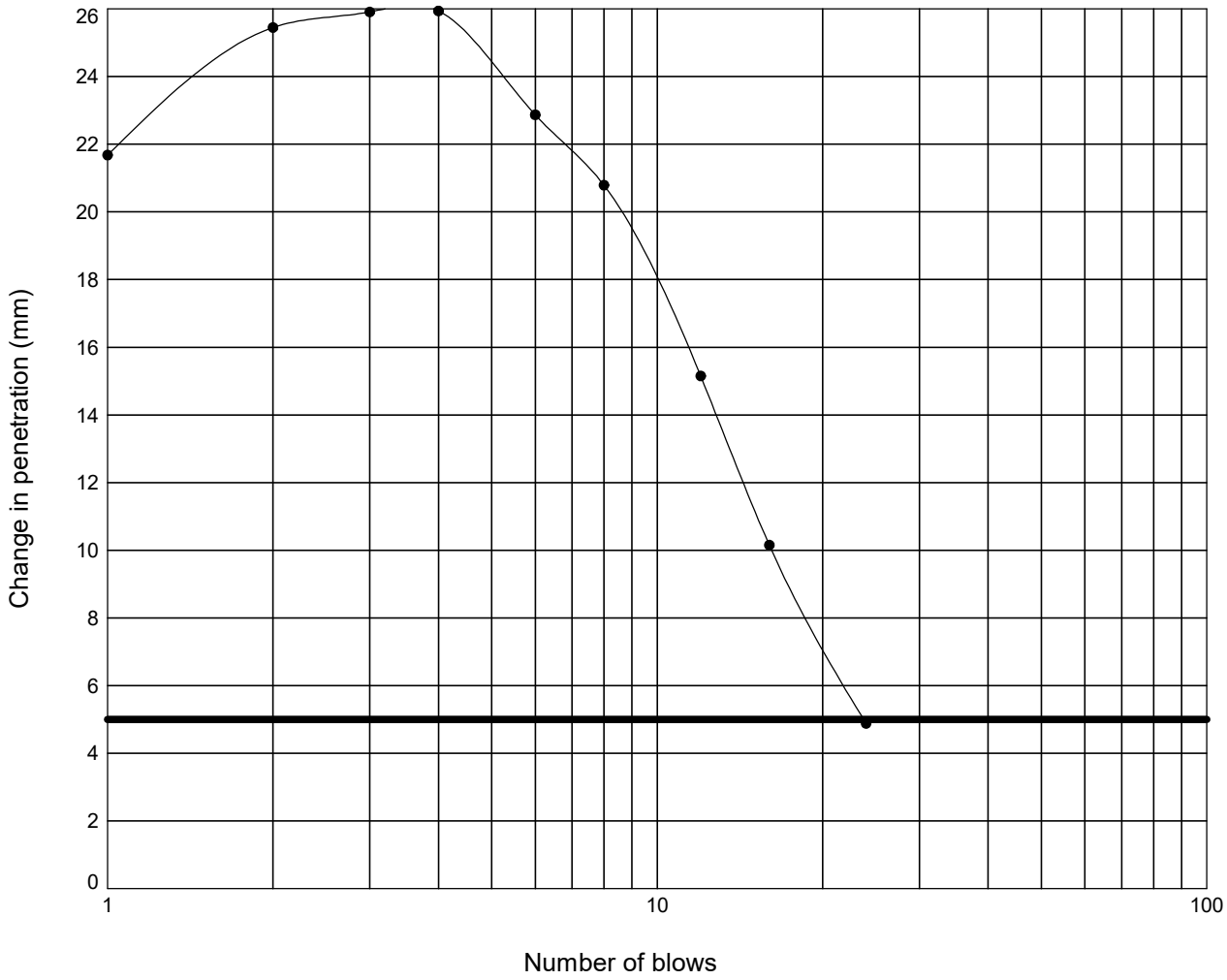
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP229** Sample Ref: Sample Type: **AMAL** Depth (m): **1.50**

Amalgamation comprises: F22-TP229, Depth:1.50, Ref:15, Type:LB + F22-TP229, Depth:2.10, Ref:10, Type:LB + F22-TP229, Depth:3.00, Ref:12, Type:B + F22-TP229, Depth:3.80, Ref:14, Type:B

Description : **Orangish brown mottled white slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	16	%
Percentage retained on 20 mm sieve :	=	3	%
Moisture Condition Value :	=	13.3	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Compiled By		Date
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Contract	Contract Ref:
Sealink Friston	**563835**

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MOISTURE CONDITION VALUE

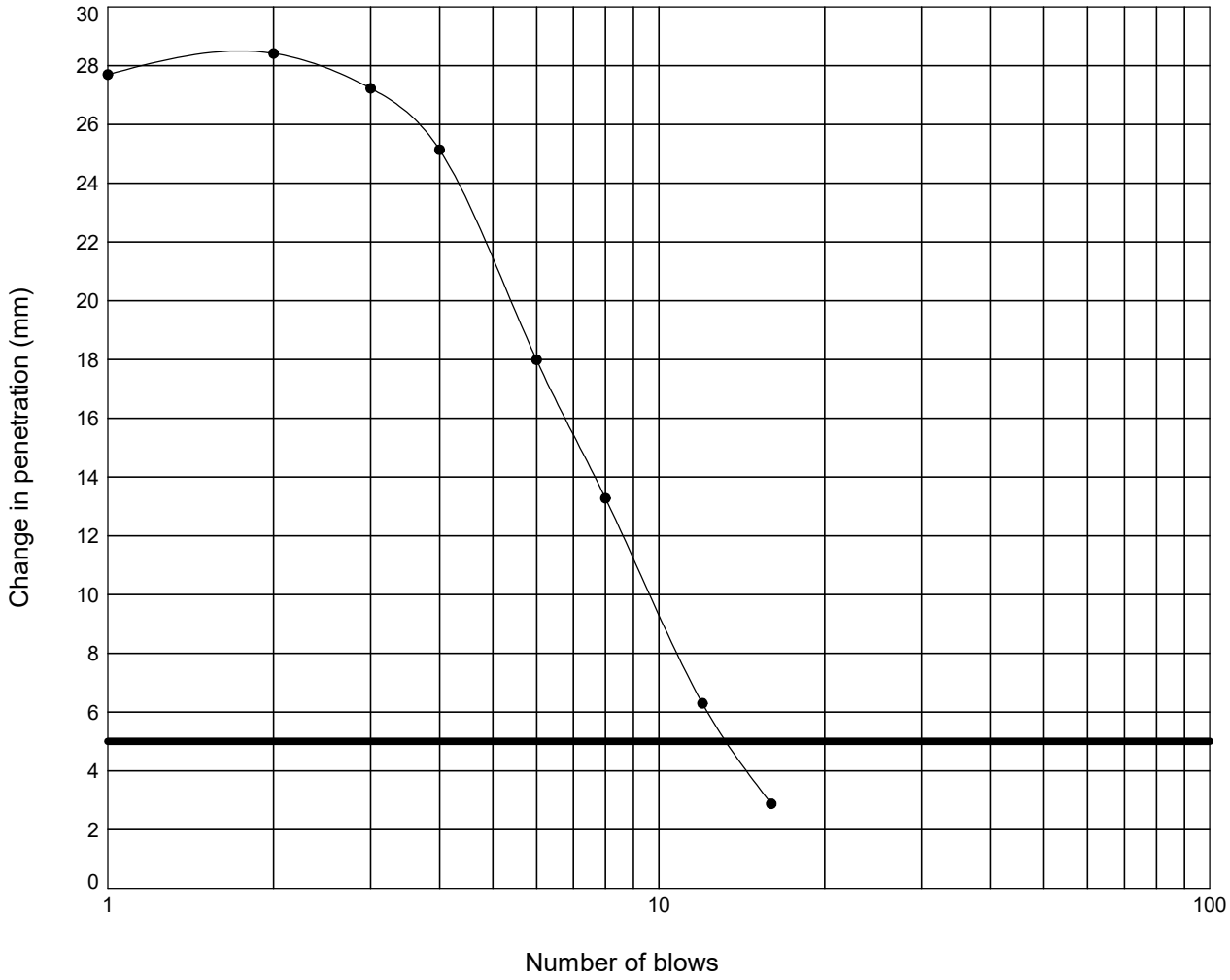
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP229** Sample Ref: Sample Type: **AMAL** Depth (m): **1.50**

Amalgamation comprises: F22-TP229, Depth:1.50, Ref:15, Type:LB + F22-TP229, Depth:2.10, Ref:10, Type:LB + F22-TP229, Depth:3.00, Ref:12, Type:B + F22-TP229, Depth:3.80, Ref:14, Type:B

Description : **Orangish brown mottled white slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	18	%
Percentage retained on 20 mm sieve :	=	3	%
Moisture Condition Value :	=	11.1	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract		Contract Ref:
Sealink Friston		**563835**

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MOISTURE CONDITION VALUE

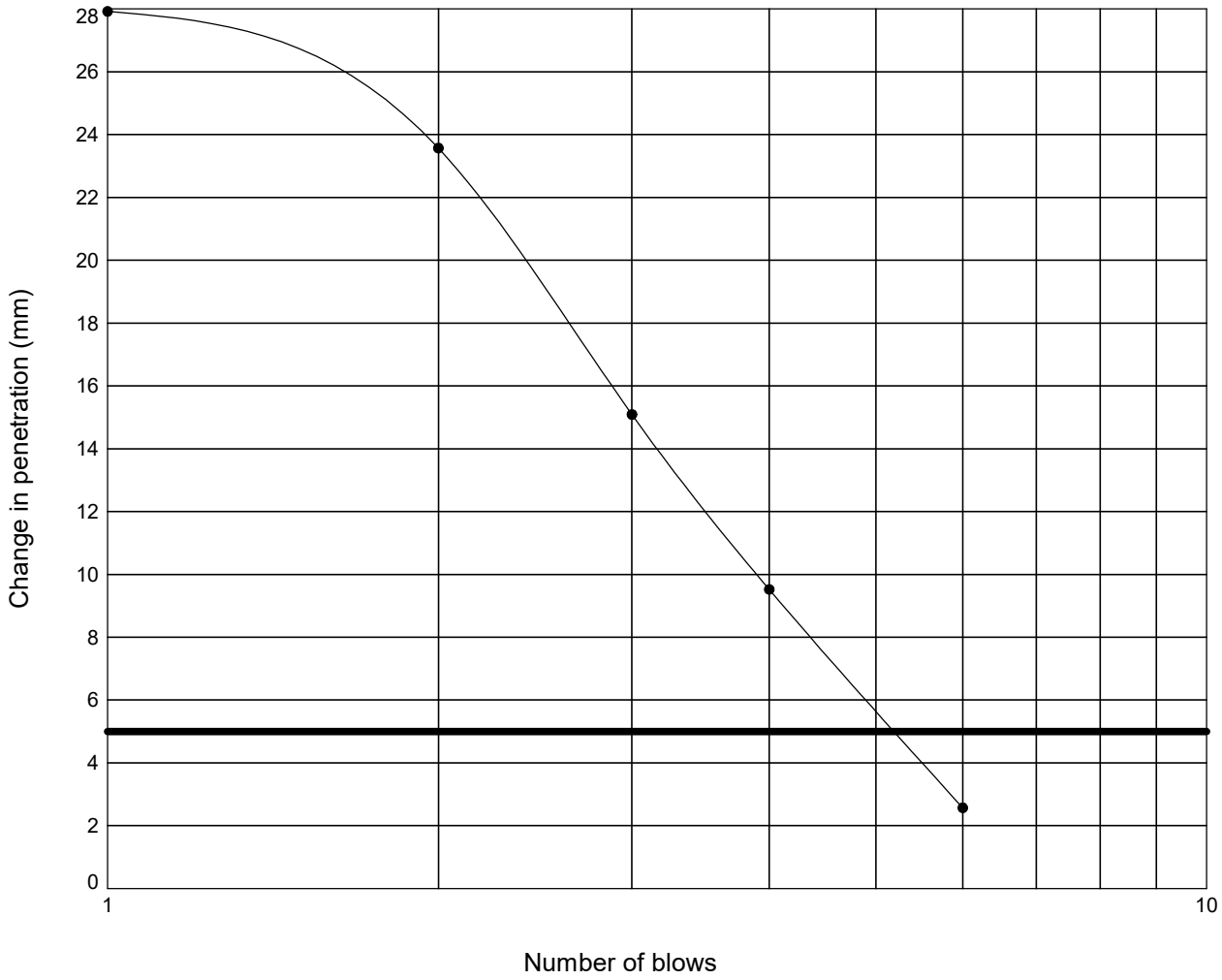
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP229** Sample Ref: Sample Type: **AMAL** Depth (m): **1.50**

Amalgamation comprises: F22-TP229, Depth:1.50, Ref:15, Type:LB + F22-TP229, Depth:2.10, Ref:10, Type:LB + F22-TP229, Depth:3.00, Ref:12, Type:B + F22-TP229, Depth:3.80, Ref:14, Type:B

Description : **Orangish brown mottled white slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	20	%
Percentage retained on 20 mm sieve :	=	3	%
Moisture Condition Value :	=	7.0	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract: **Sealink Friston**		Contract Ref: **563835**

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MOISTURE CONDITION VALUE

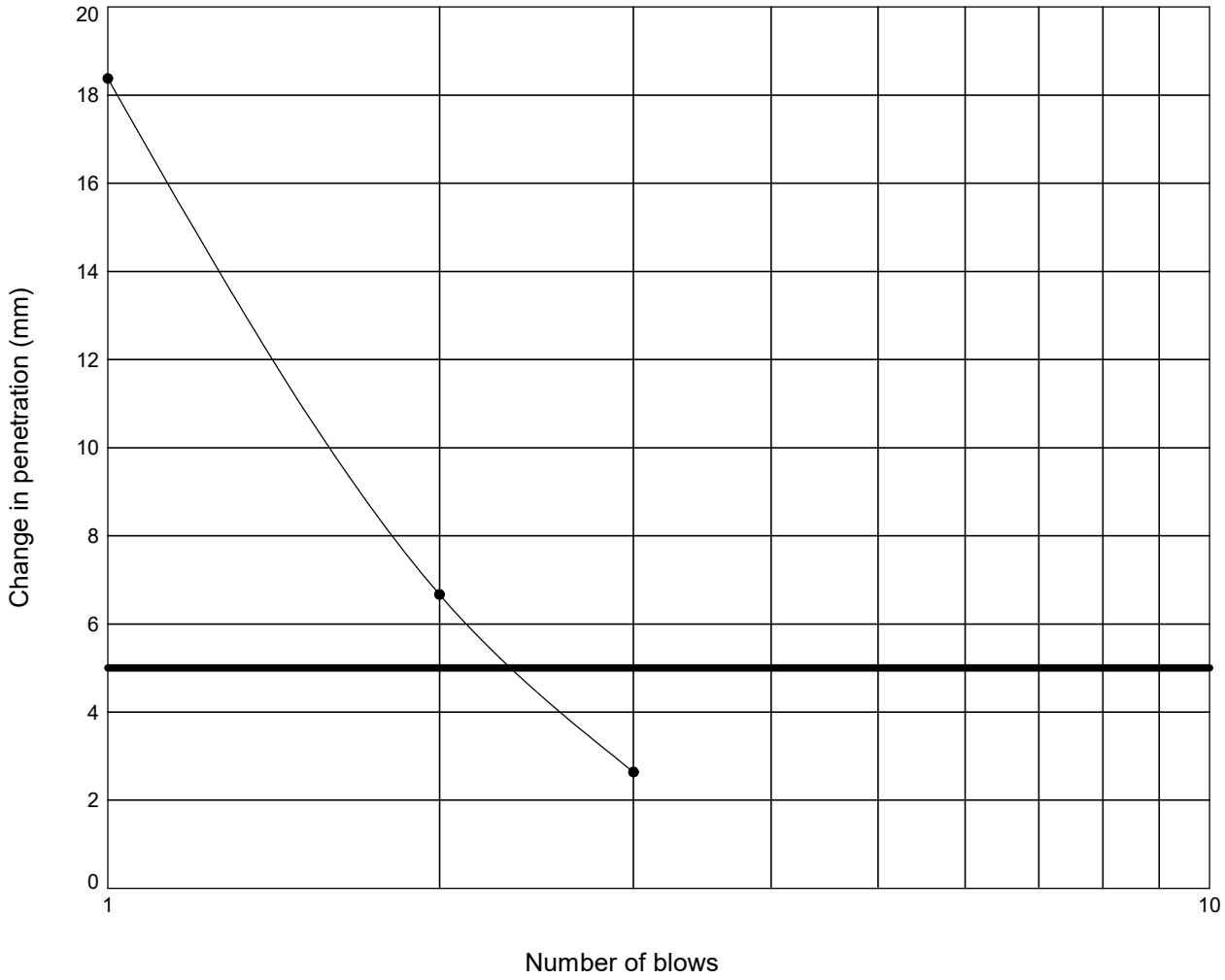
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP229** Sample Ref: Sample Type: **AMAL** Depth (m): **1.50**

Amalgamation comprises: F22-TP229, Depth:1.50, Ref:15, Type:LB + F22-TP229, Depth:2.10, Ref:10, Type:LB + F22-TP229, Depth:3.00, Ref:12, Type:B + F22-TP229, Depth:3.80, Ref:14, Type:B

Description : **Orangish brown mottled white slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	= 22	%
Percentage retained on 20 mm sieve :	= 3	%
Moisture Condition Value :	= 3.4	
Interpretation of curve:	= Steepest straight line - Fig 9	

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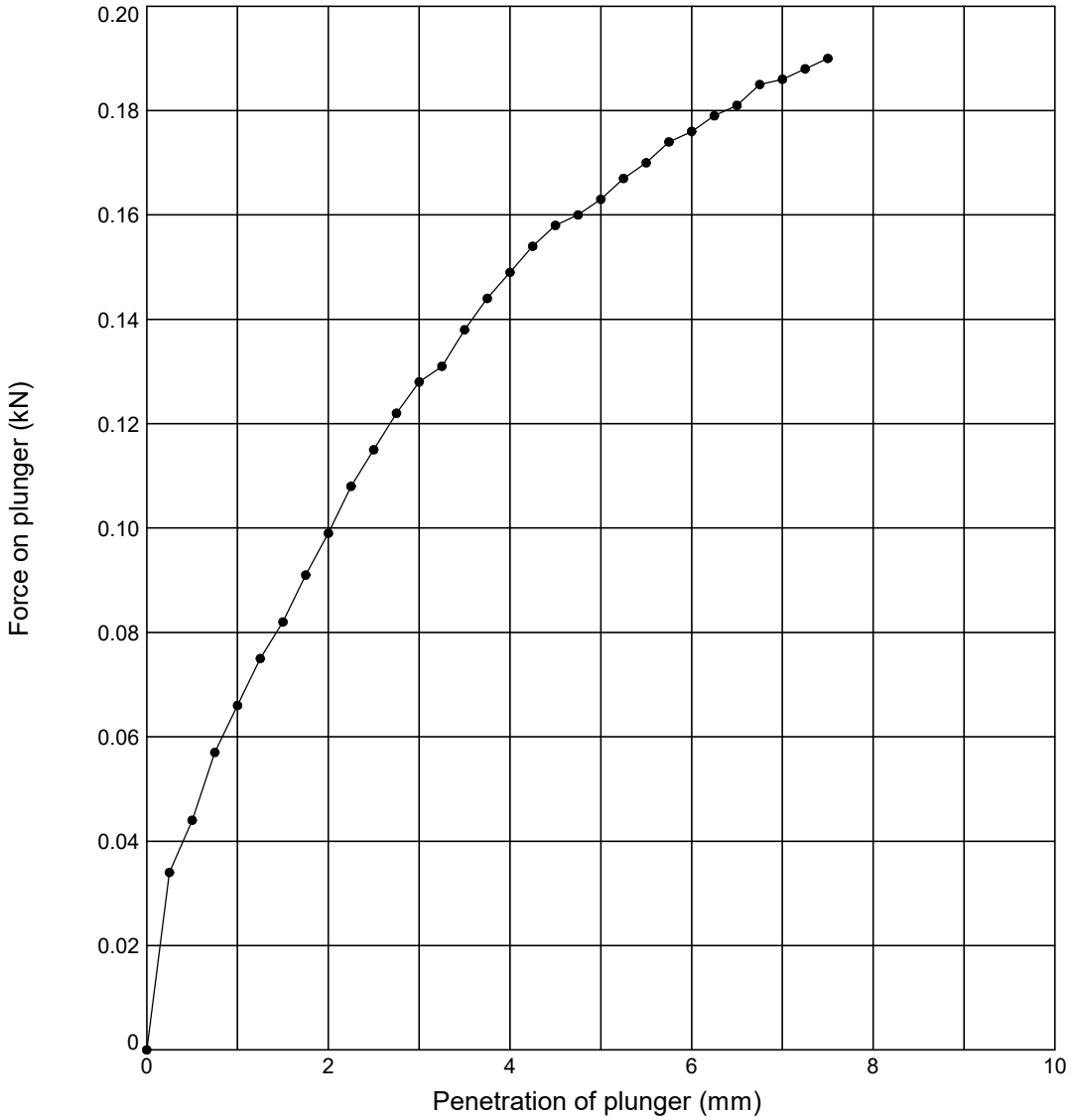
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP229** Sample Ref: Sample Type: **AMAL** Depth (m): **1.50**

Amalgamation comprises: F22-TP229, Depth:1.50, Ref:15, Type:LB + F22-TP229, Depth:2.10, Ref:10, Type:LB + F22-TP229, Depth:3.00, Ref:12, Type:B + F22-TP229, Depth:3.80, Ref:14, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**22**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**23**	**22**
Initial Bulk Density (Mg/m^3)	:	**1.96**	Surcharge (kg)	:	**4.0**	CBR value (%)	**0.87**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.60**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**3**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown mottled white slightly gravelly slightly sandy CLAY	● **Top** ⊠ **Base**

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Contract	Contract Ref:
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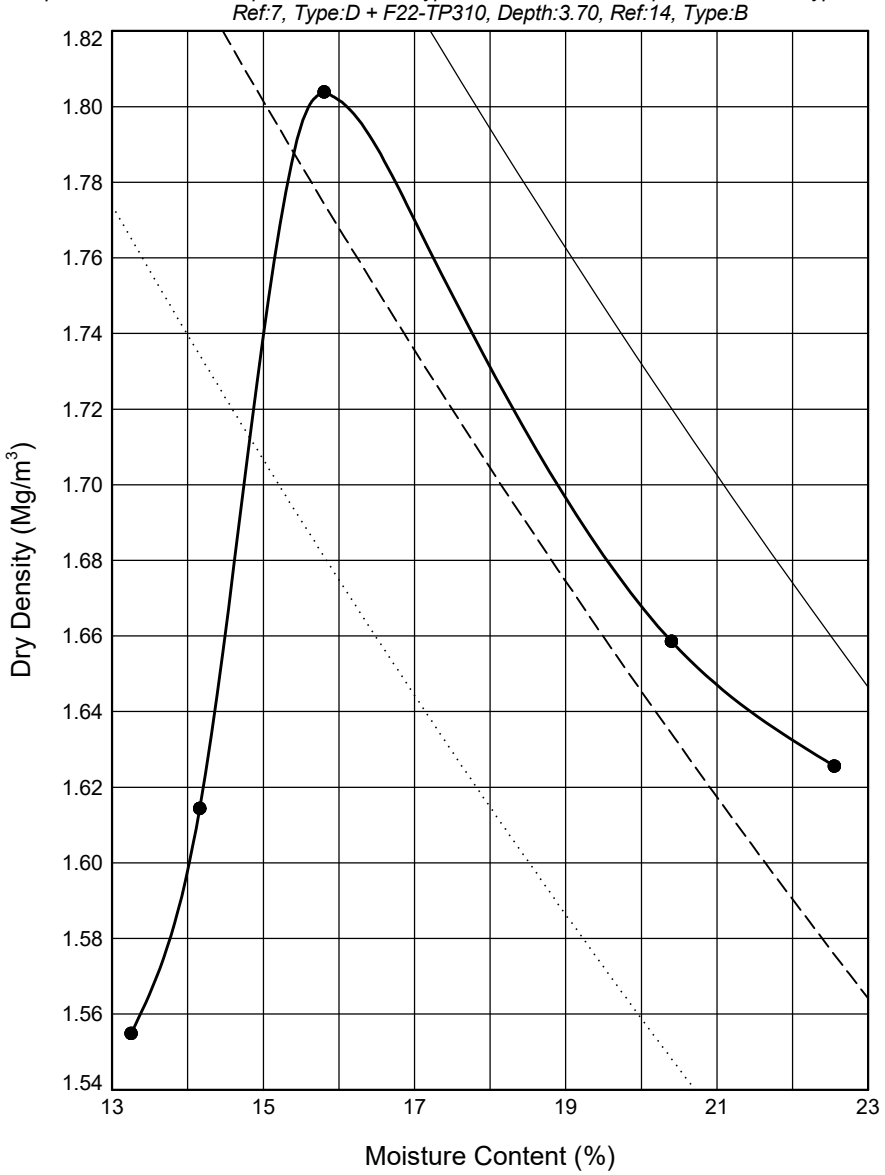
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DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **F22-TP310** Sample Ref: Sample Type: **AMAL** Depth (m): **1.70**

Amalgamation comprises: F22-TP310, Depth:1.70, Ref:10, Type:LB + F22-TP310, Depth:0.90, Ref:6, Type:B + F22-TP310, Depth:1.10, Ref:7, Type:D + F22-TP310, Depth:3.70, Ref:14, Type:B



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**16**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m³)	:	**1.80**
% Retained on 37.5mm BS Sieve	:	**0**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**16**
% Retained on 20.0mm BS Sieve	:	**2**	Type of Mould	:	**CBR**	Method Used: **Clause 11.4**		
Particle Density - assumed (Mg/m³)	:	**2.65**				Remarks: **CBR and MCV tests carried out at each point**		
Size of Soil Pieces	:	**<37.5mm**	Separate samples were used.					

Sample Description	Key to Air Voids Lines		
Brown mottled white and grey slightly gravelly slightly sandy CLAY	——— 0%	– – – – 5%	····· 10%

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MOISTURE CONDITION VALUE

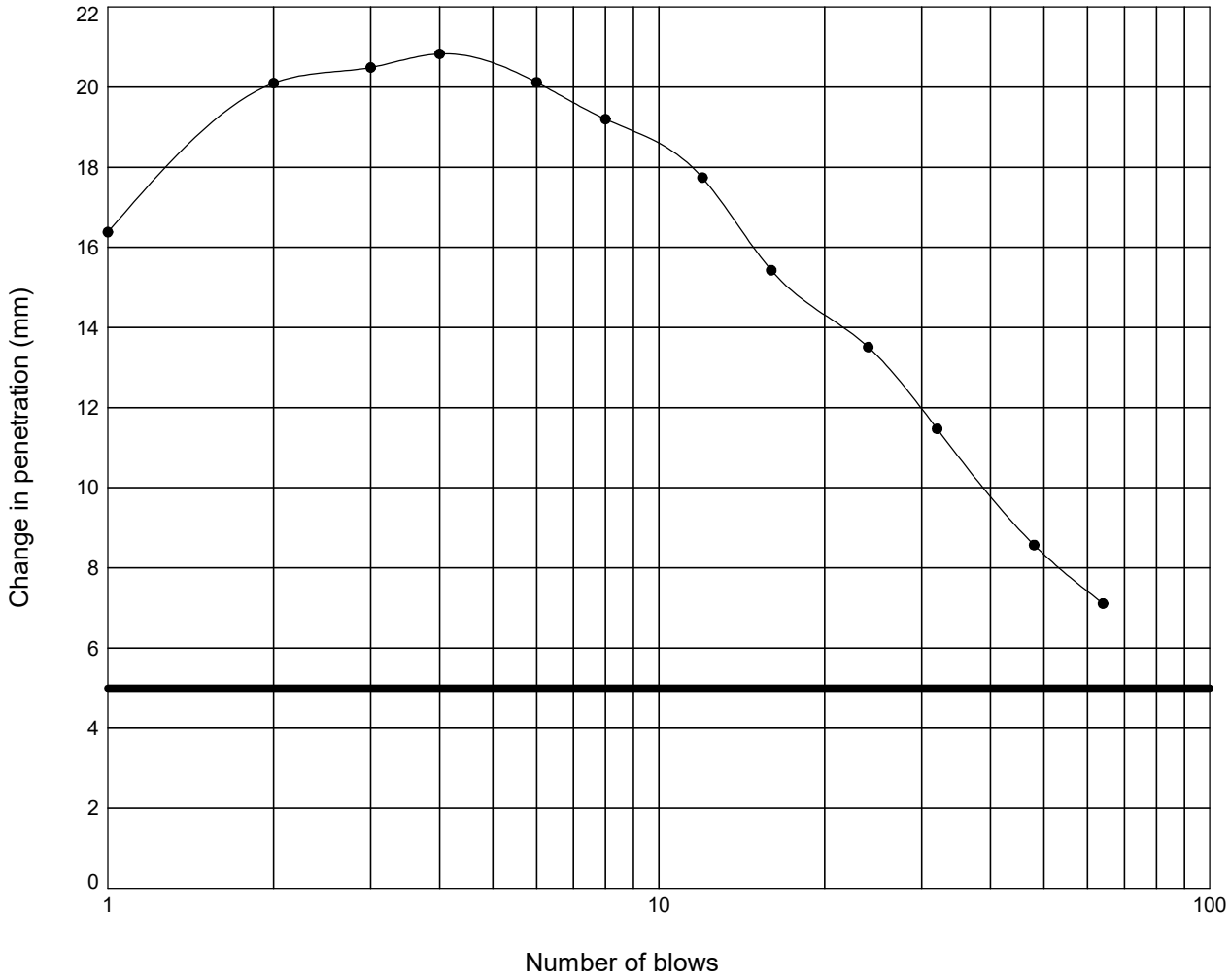
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP310** Sample Ref: Sample Type: **AMAL** Depth (m): **1.70**

Amalgamation comprises: F22-TP310, Depth:1.70, Ref:10, Type:LB + F22-TP310, Depth:0.90, Ref:6, Type:B + F22-TP310, Depth:1.10, Ref:7, Type:D + F22-TP310, Depth:3.70, Ref:14, Type:B

Description : **Brown mottled white and grey slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	11.6	%
Percentage retained on 20 mm sieve :	=	2	%
Moisture Condition Value :	=	19.0	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract		Contract Ref:
Sealink Friston		**563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - MCV -3- NATURAL FINAL - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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MOISTURE CONDITION VALUE

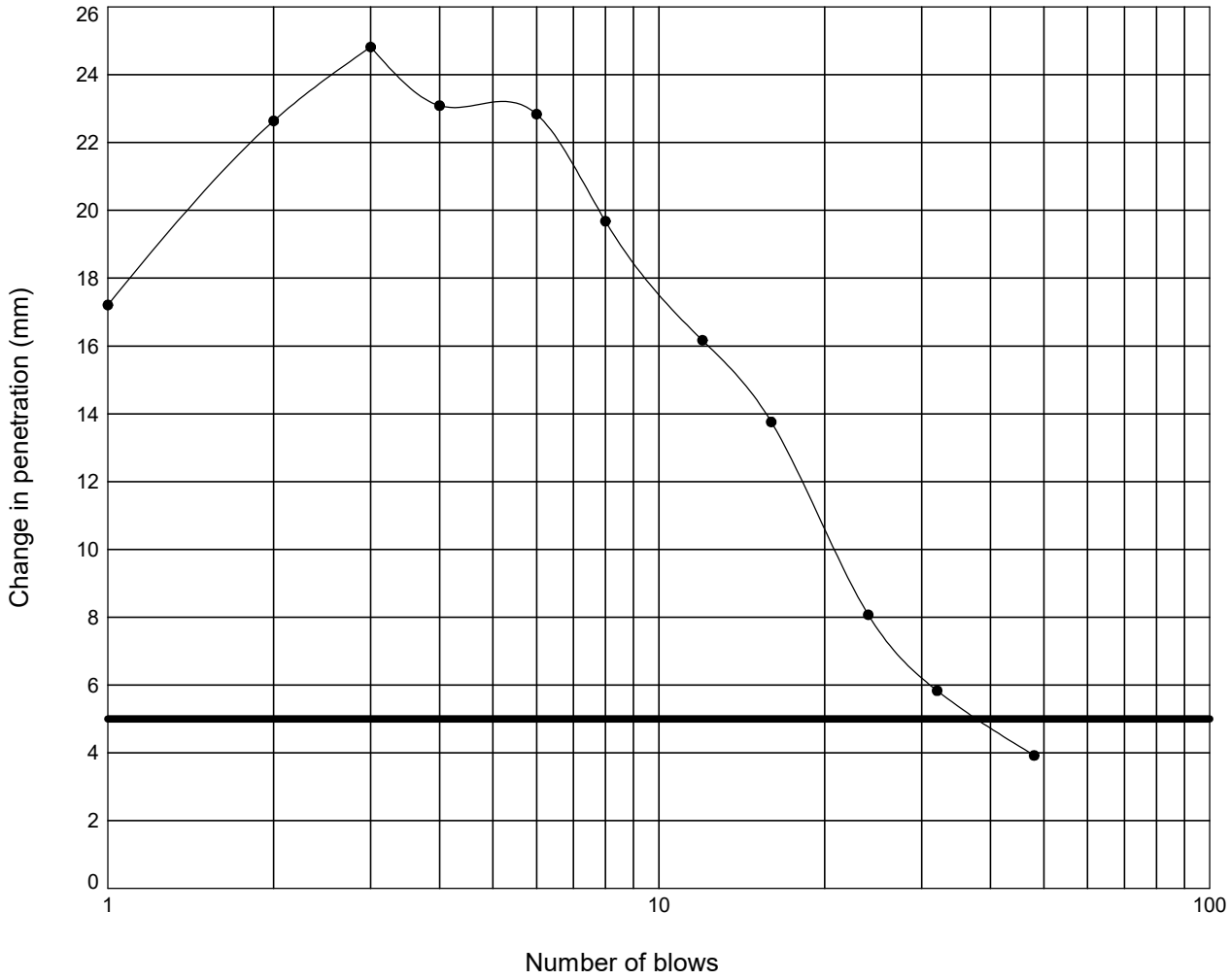
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP310** Sample Ref: Sample Type: **AMAL** Depth (m): **1.70**

Amalgamation comprises: F22-TP310, Depth:1.70, Ref:10, Type:LB + F22-TP310, Depth:0.90, Ref:6, Type:B + F22-TP310, Depth:1.10, Ref:7, Type:D + F22-TP310, Depth:3.70, Ref:14, Type:B

Description : **Brown mottled white and grey slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	15.7	%
Percentage retained on 20 mm sieve :	=	2	%
Moisture Condition Value :	=	14.8	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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MOISTURE CONDITION VALUE

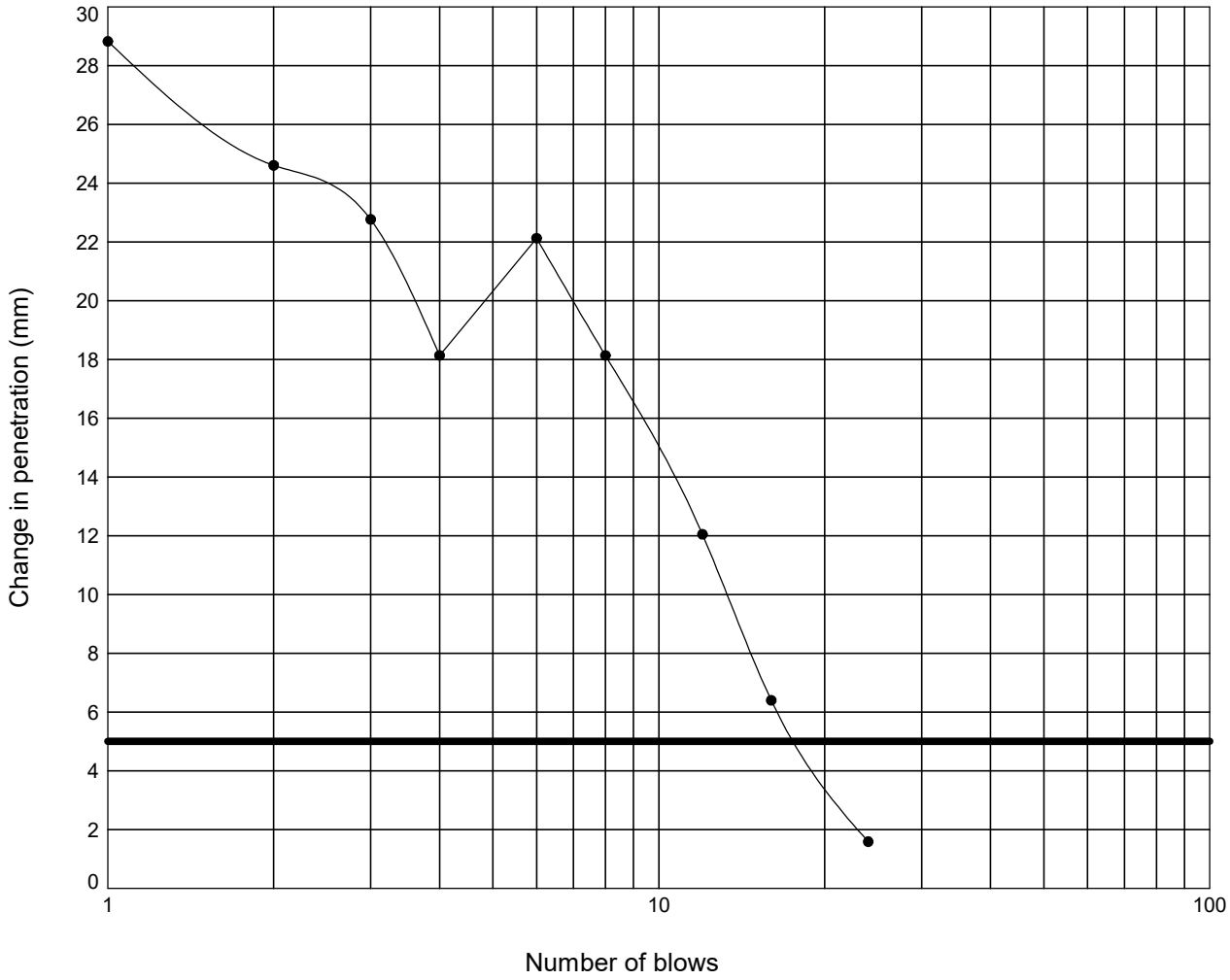
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP310** Sample Ref: Sample Type: **AMAL** Depth (m): **1.70**

Amalgamation comprises: F22-TP310, Depth:1.70, Ref:10, Type:LB + F22-TP310, Depth:0.90, Ref:6, Type:B + F22-TP310, Depth:1.10, Ref:7, Type:D + F22-TP310, Depth:3.70, Ref:14, Type:B

Description : **Brown mottled white and grey slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	18.1	%
Percentage retained on 20 mm sieve :	=	2	%
Moisture Condition Value :	=	12.4	
Interpretation of curve:	=		

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Contract	Contract Ref:
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MOISTURE CONDITION VALUE

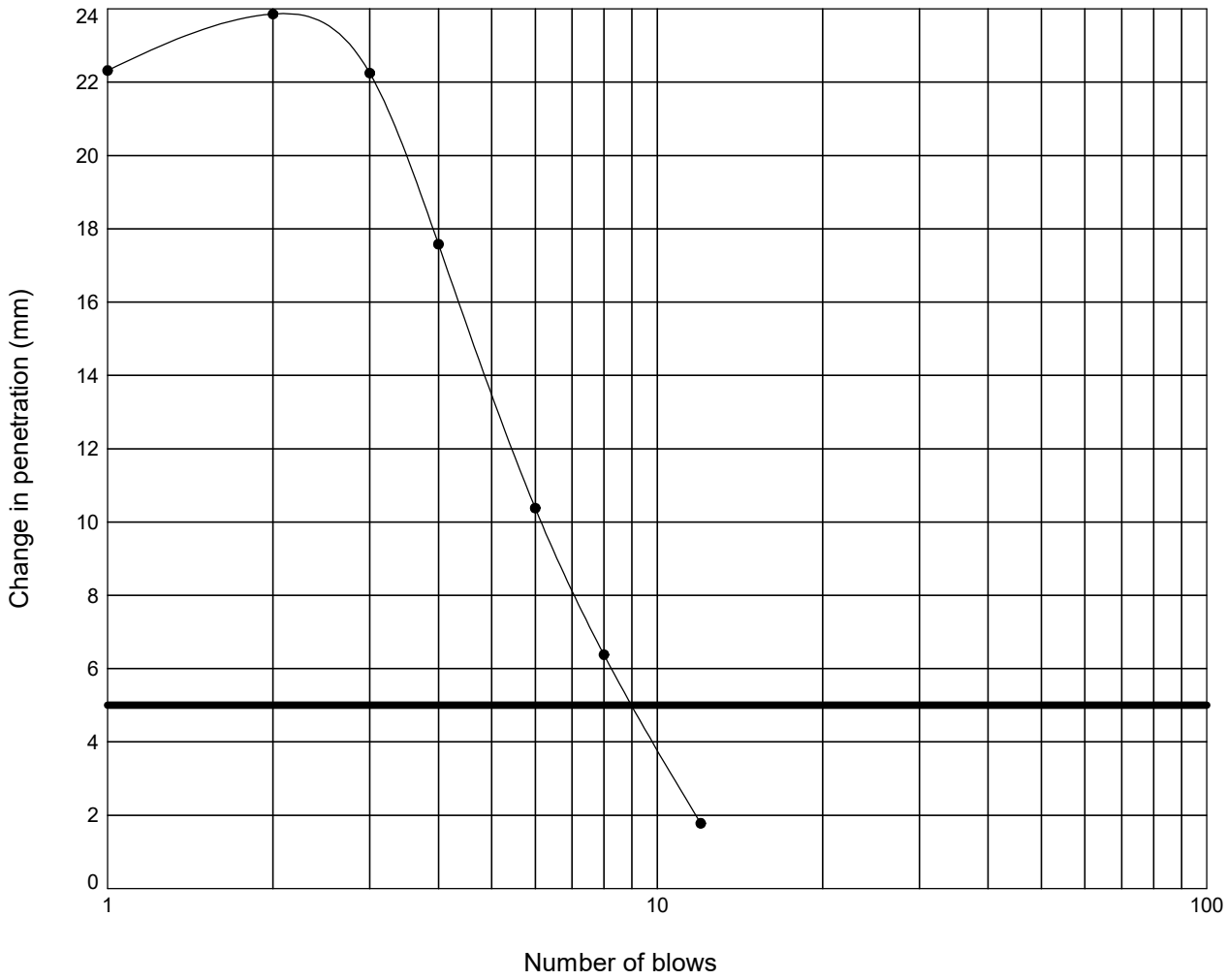
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP310** Sample Ref: Sample Type: **AMAL** Depth (m): **1.70**

Amalgamation comprises: F22-TP310, Depth:1.70, Ref:10, Type:LB + F22-TP310, Depth:0.90, Ref:6, Type:B + F22-TP310, Depth:1.10, Ref:7, Type:D + F22-TP310, Depth:3.70, Ref:14, Type:B

Description : **Brown mottled white and grey slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	20.6	%
Percentage retained on 20 mm sieve :	=	2	%
Moisture Condition Value :	=	9.1	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Sealink Friston		**563835**

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MOISTURE CONDITION VALUE

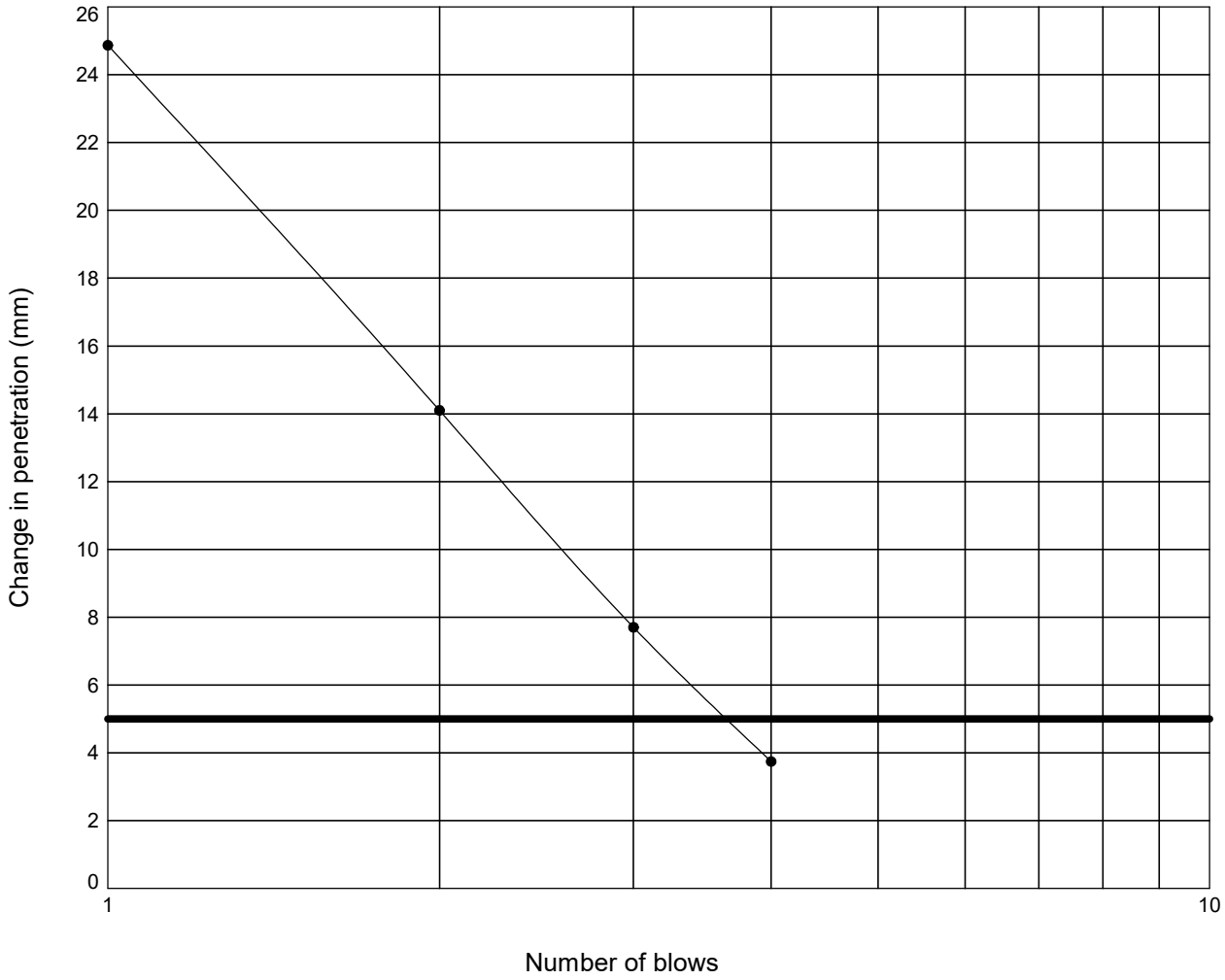
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP310** Sample Ref: Sample Type: **AMAL** Depth (m): **1.70**

Amalgamation comprises: F22-TP310, Depth:1.70, Ref:10, Type:LB + F22-TP310, Depth:0.90, Ref:6, Type:B + F22-TP310, Depth:1.10, Ref:7, Type:D + F22-TP310, Depth:3.70, Ref:14, Type:B

Description : **Brown mottled white and grey slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	22.3	%
Percentage retained on 20 mm sieve :	=	2	%
Moisture Condition Value :	=	5.5	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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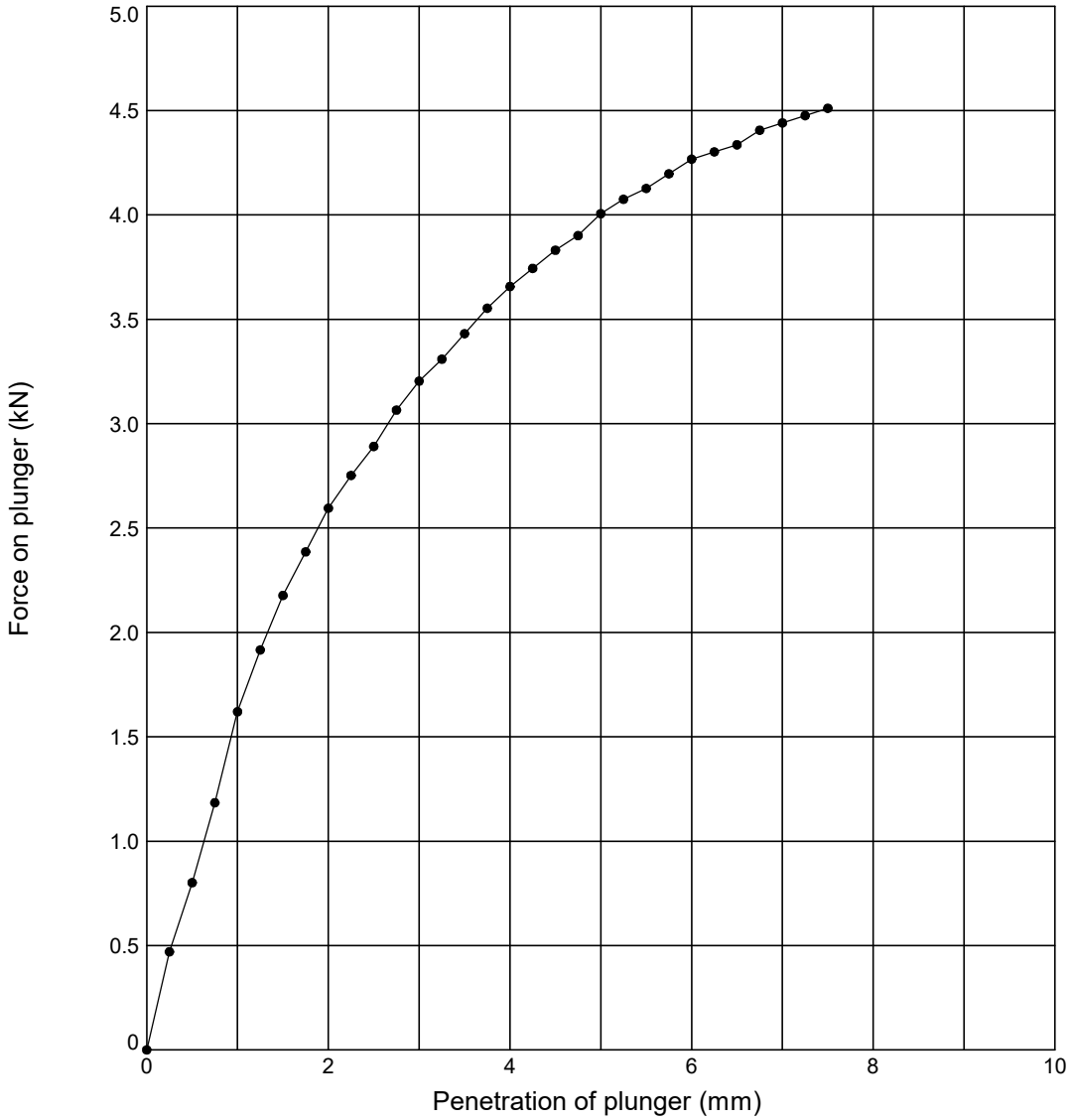
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP310** Sample Ref: Sample Type: **AMAL** Depth (m): **1.70**

Amalgamation comprises: F22-TP310, Depth:1.70, Ref:10, Type:LB + F22-TP310, Depth:0.90, Ref:6, Type:B + F22-TP310, Depth:1.10, Ref:7, Type:D + F22-TP310, Depth:3.70, Ref:14, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**13**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**13**	**13**
Initial Bulk Density (Mg/m^3)	:	**1.72**	Surcharge (kg)	:	**4.0**	CBR value (%)	**22**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.52**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**2**	Swelling (mm)	:	**-**			

Sample Description	Key
Brown mottled white and grey slightly gravelly slightly sandy CLAY	● **Top** ⊠ **Base**

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Contract	Contract Ref:
Sealink Friston	**563835**

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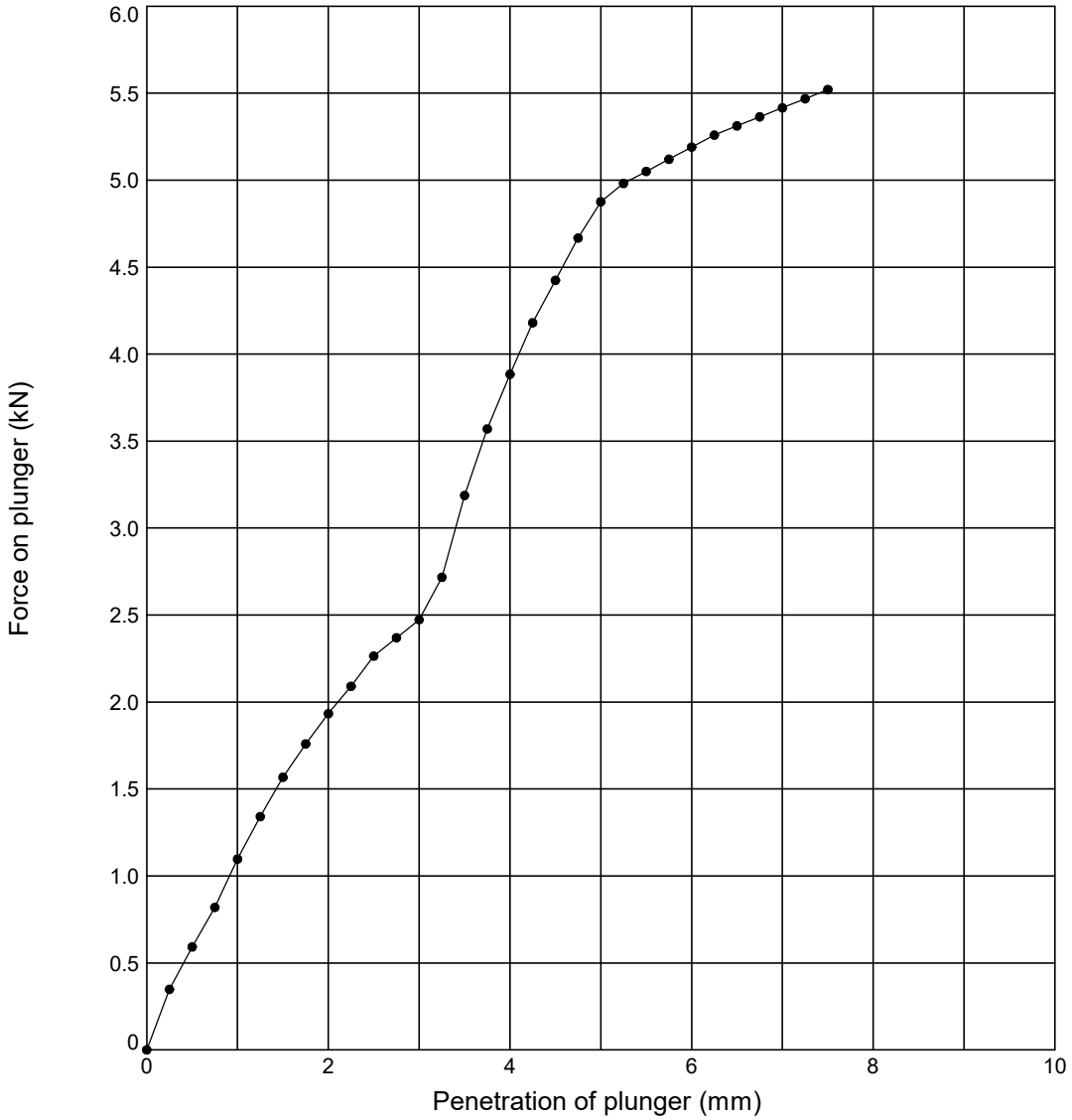
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP310** Sample Ref: Sample Type: **AMAL** Depth (m): **1.70**

Amalgamation comprises: F22-TP310, Depth:1.70, Ref:10, Type:LB + F22-TP310, Depth:0.90, Ref:6, Type:B + F22-TP310, Depth:1.10, Ref:7, Type:D + F22-TP310, Depth:3.70, Ref:14, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**14**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**14**	**14**
Initial Bulk Density (Mg/m^3)	:	**1.84**	Surcharge (kg)	:	**4.0**	CBR value (%)	**24**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.61**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**2**	Swelling (mm)	:	**-**			

Sample Description	Key
Brown mottled white and grey slightly gravelly slightly sandy CLAY	● **Top** ⧓ **Base**

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Contract	Contract Ref:
Sealink Friston	**563835**

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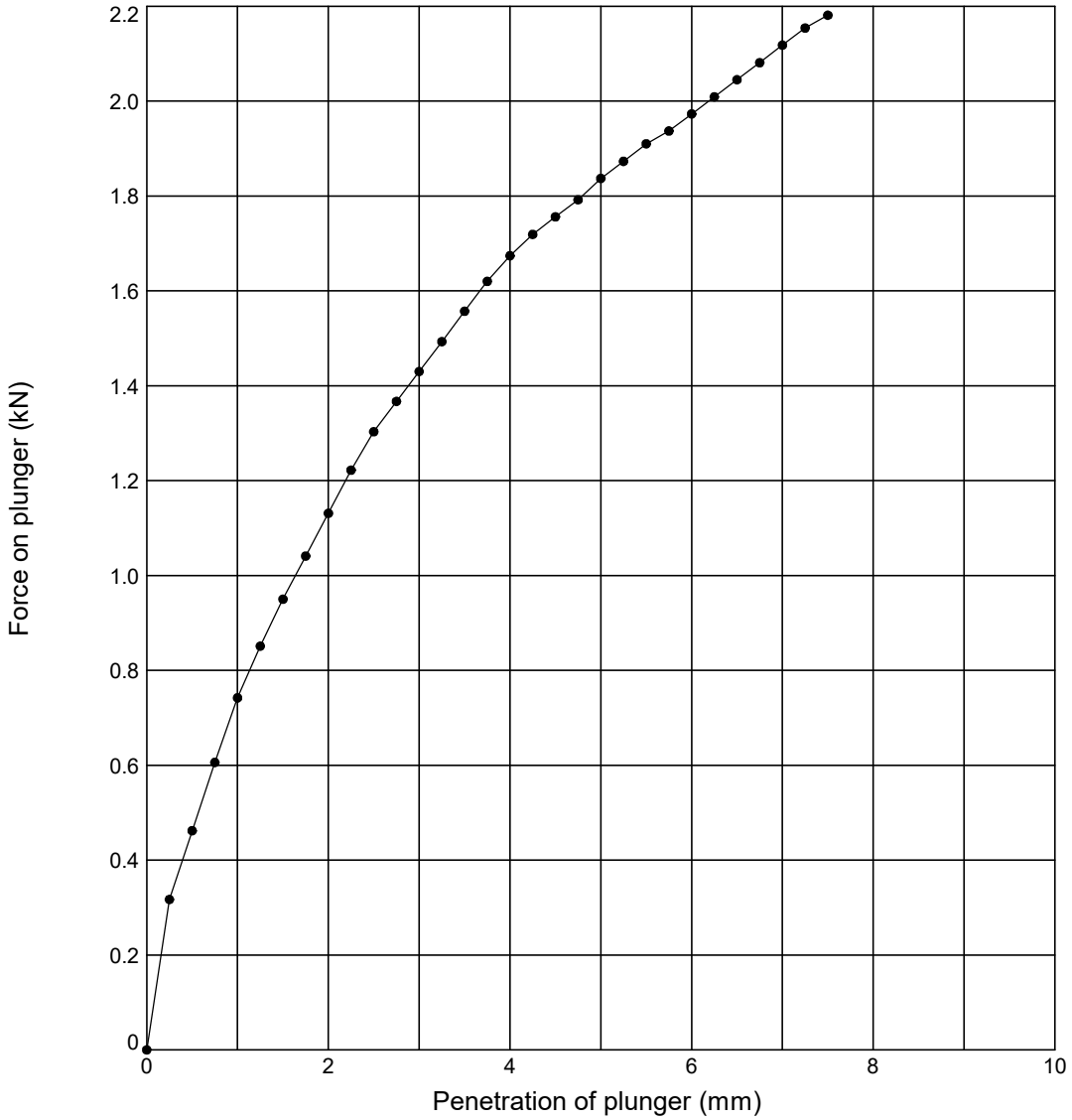
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP310** Sample Ref: Sample Type: **AMAL** Depth (m): **1.70**

Amalgamation comprises: F22-TP310, Depth:1.70, Ref:10, Type:LB + F22-TP310, Depth:0.90, Ref:6, Type:B + F22-TP310, Depth:1.10, Ref:7, Type:D + F22-TP310, Depth:3.70, Ref:14, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**16**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**16**	**16**
Initial Bulk Density (Mg/m^3)	:	**2.09**	Surcharge (kg)	:	**4.0**	CBR value (%)	**9.8**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.80**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**2**	Swelling (mm)	:	**-**			

Sample Description	Key
Brown mottled white and grey slightly gravelly slightly sandy CLAY	● **Top** ⧓ **Base**

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Contract	Contract Ref:
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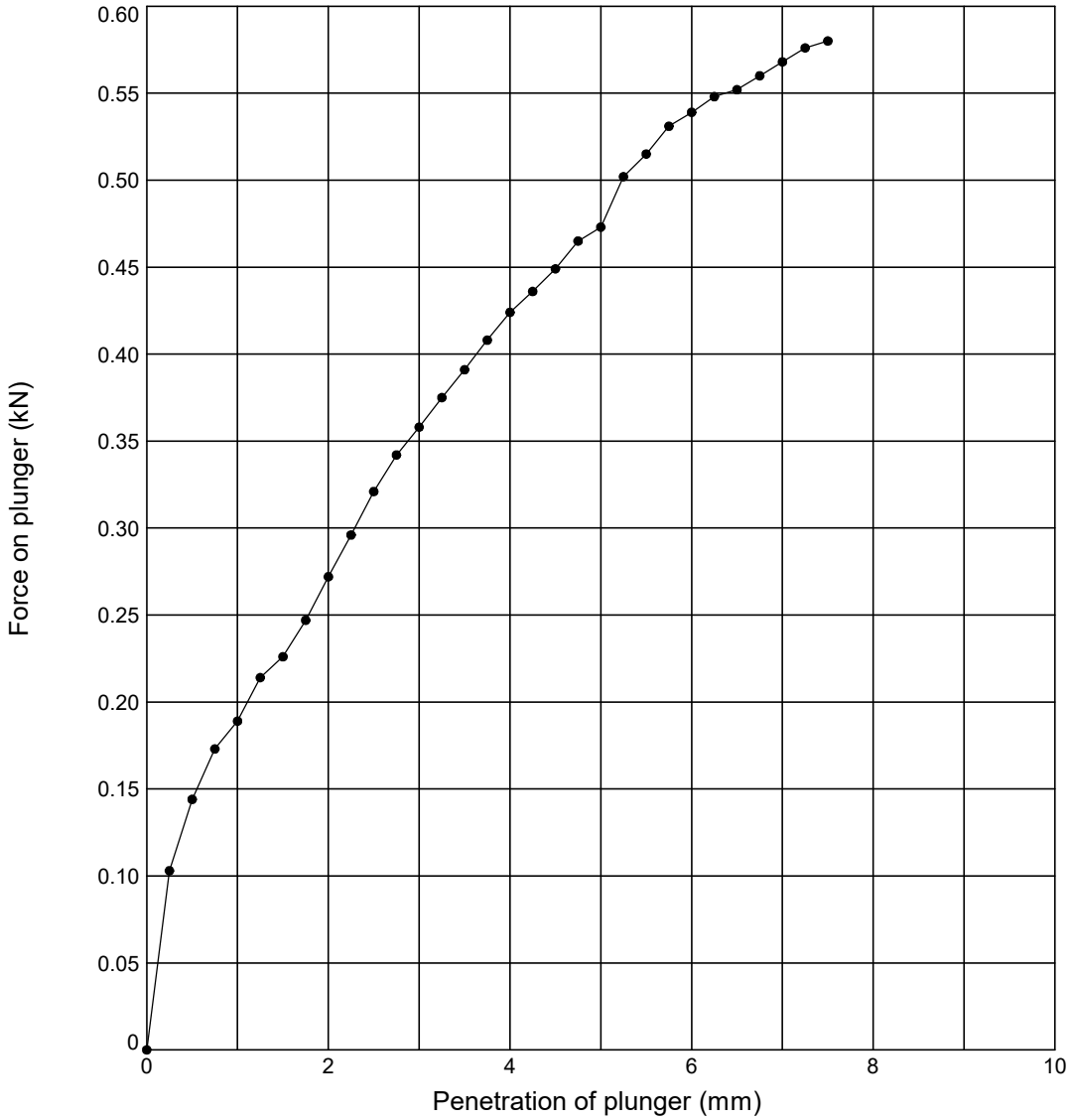
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP310** Sample Ref: Sample Type: **AMAL** Depth (m): **1.70**

Amalgamation comprises: F22-TP310, Depth:1.70, Ref:10, Type:LB + F22-TP310, Depth:0.90, Ref:6, Type:B + F22-TP310, Depth:1.10, Ref:7, Type:D + F22-TP310, Depth:3.70, Ref:14, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**20**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**20**	**20**
Initial Bulk Density (Mg/m^3)	:	**2.00**	Surcharge (kg)	:	**4.0**	CBR value (%)	**2.4**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.66**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**2**	Swelling (mm)	:	**-**			

Sample Description	Key
Brown mottled white and grey slightly gravelly slightly sandy CLAY	● **Top** ⊠ **Base**

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Compiled By		Date
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Contract	Contract Ref:
Sealink Friston	**563835**

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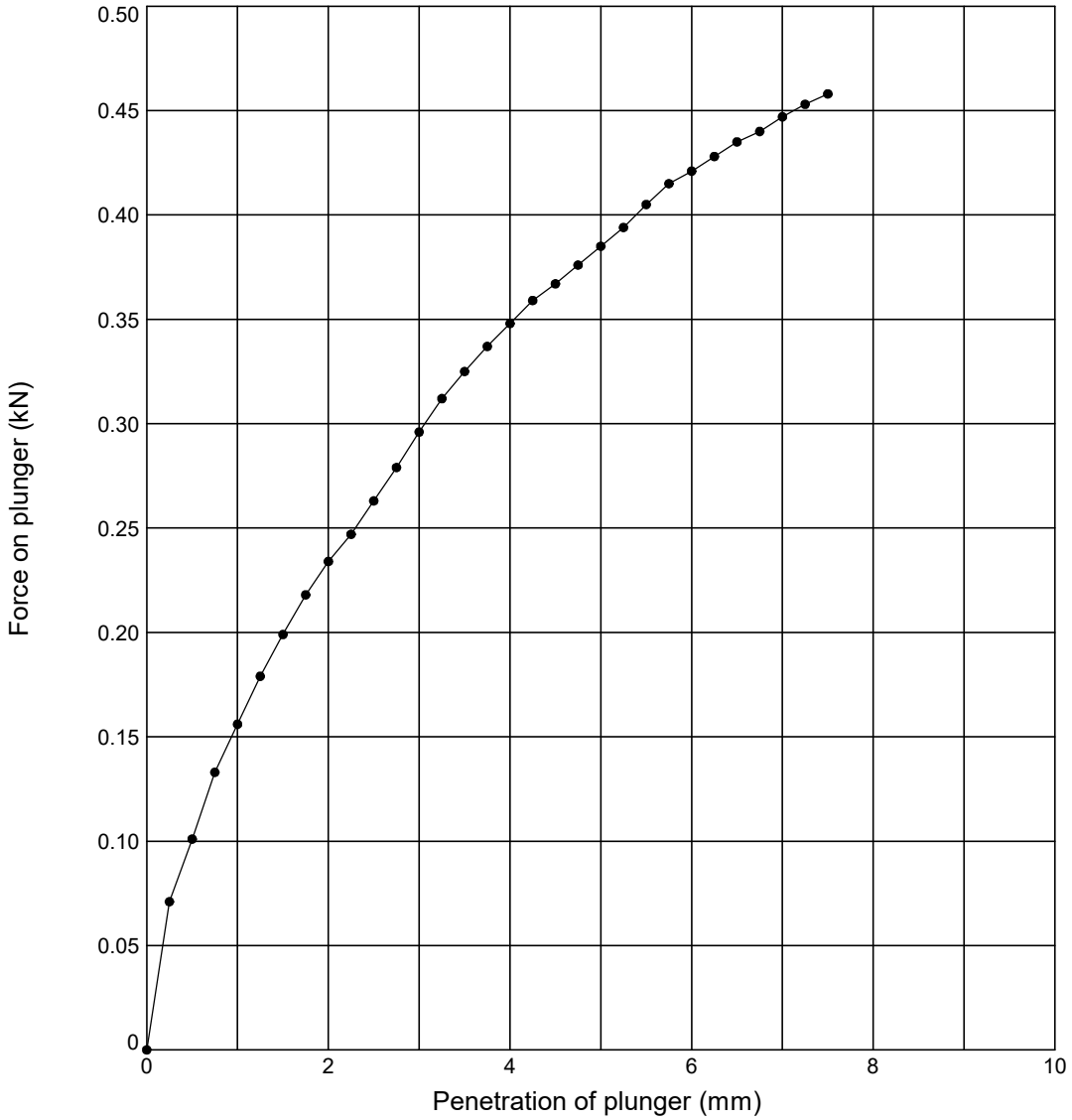
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP310** Sample Ref: Sample Type: **AMAL** Depth (m): **1.70**

Amalgamation comprises: F22-TP310, Depth:1.70, Ref:10, Type:LB + F22-TP310, Depth:0.90, Ref:6, Type:B + F22-TP310, Depth:1.10, Ref:7, Type:D + F22-TP310, Depth:3.70, Ref:14, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**23**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**23**	**22**
Initial Bulk Density (Mg/m^3)	:	**1.99**	Surcharge (kg)	:	**4.0**	CBR value (%)	**2.0**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.62**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**2**	Swelling (mm)	:	**-**			

Sample Description	Key
Brown mottled white and grey slightly gravelly slightly sandy CLAY	● **Top** ⧓ **Base**

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Compiled By		Date
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Contract	Contract Ref:
Sealink Friston	**563835**

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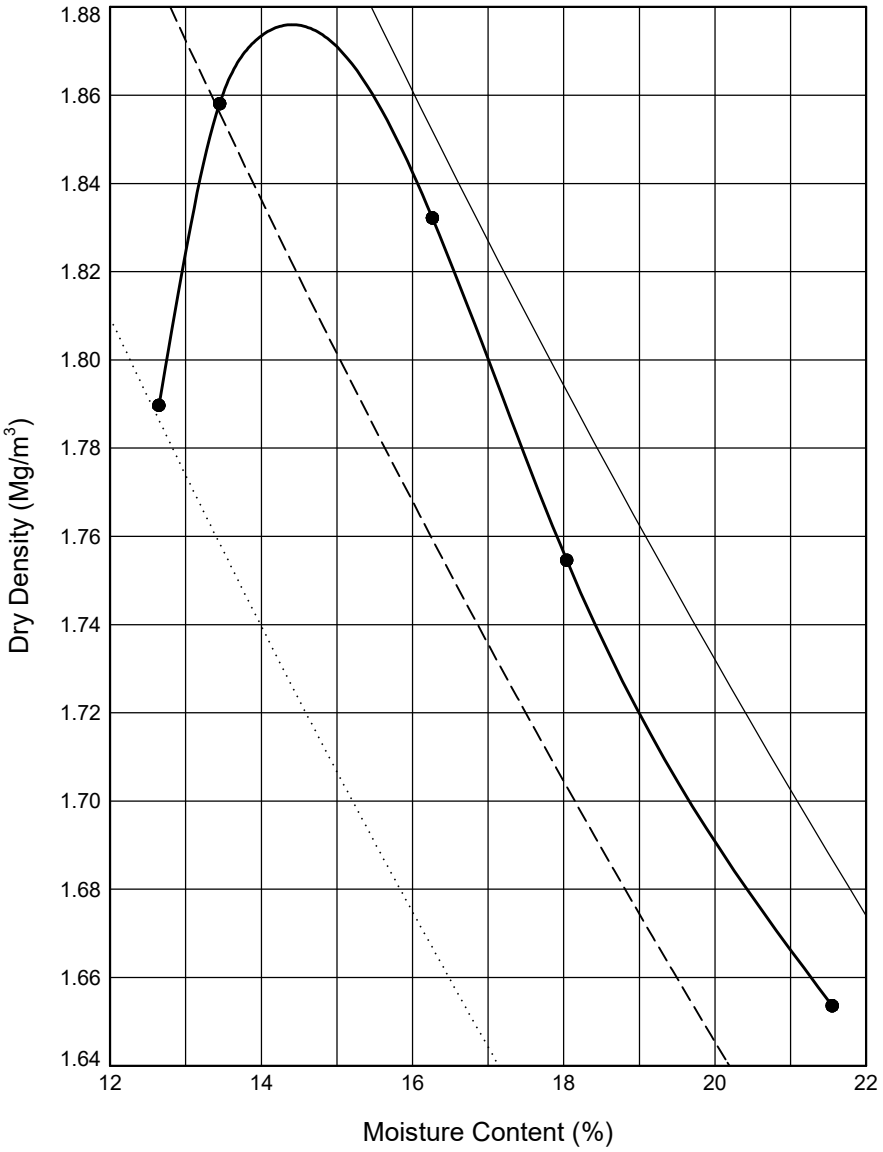
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DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **F22-TP311** Sample Ref: Sample Type: **AMAL** Depth (m): **0.70**

Amalgamation comprises: F22-TP311, Depth:0.70, Ref:8, Type:LB + F22-TP311, Depth:0.50, Ref:7, Type:B



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**16**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m³)	:	**1.88**
% Retained on 37.5mm BS Sieve	:	**1**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**14**
% Retained on 20.0mm BS Sieve	:	**3**	Type of Mould	:	**CBR**	Method Used: **Clause 11.4**		
Particle Density - assumed (Mg/m³)	:	**2.65**				Remarks: **CBR and MCV tests carried out at each point**		
Size of Soil Pieces	:	**<37.5mm**	Separate samples were used.					

Sample Description	Key to Air Voids Lines		
Orangish brown slightly gravelly slightly sandy CLAY	——— 0%	– – – – 5%	····· 10%

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Compiled By		Date
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Contract: **Sealink Friston**		Contract Ref: **563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - COMPACTIONS - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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MOISTURE CONDITION VALUE

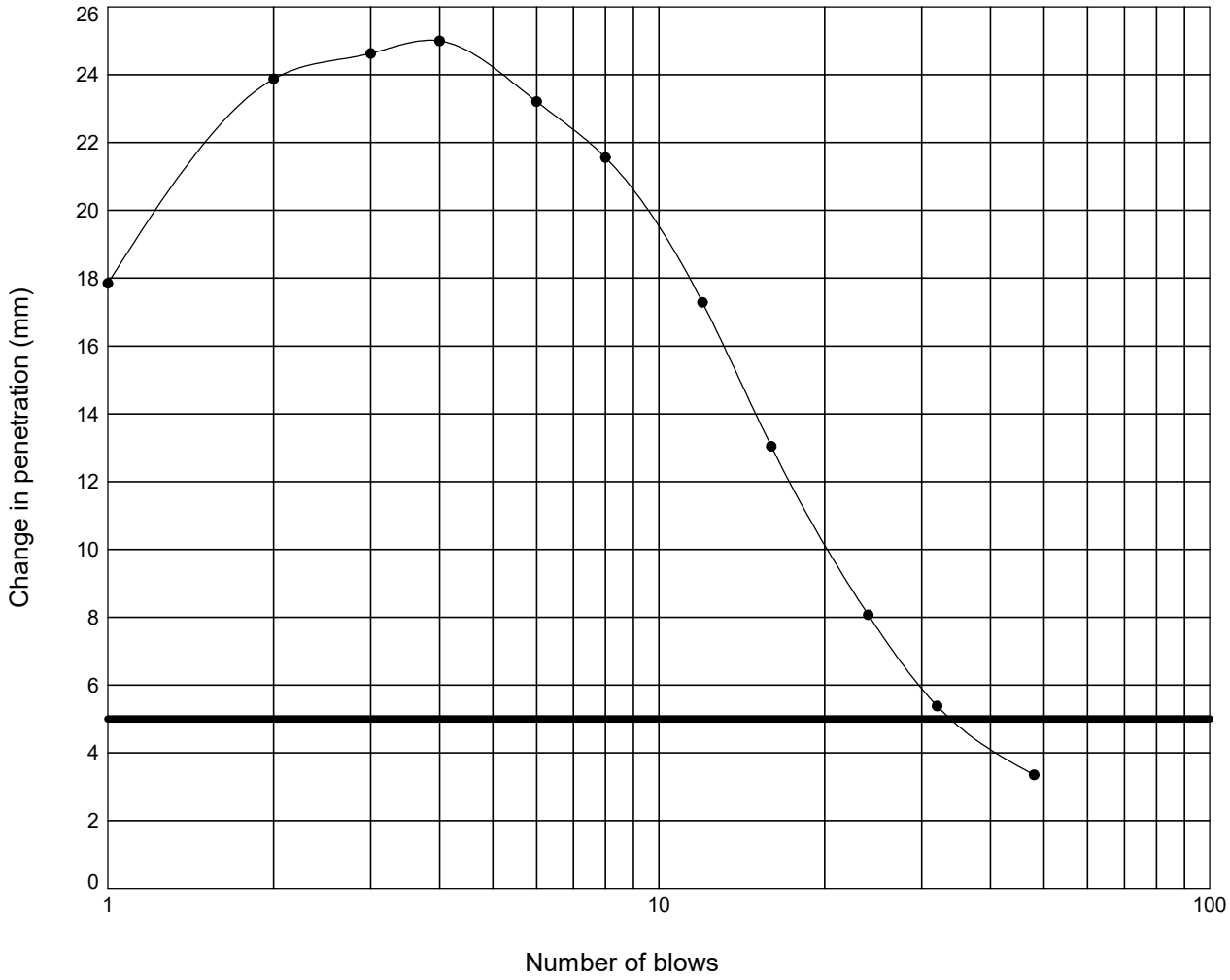
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP311** Sample Ref: Sample Type: **AMAL** Depth (m): **0.70**

Amalgamation comprises: F22-TP311, Depth:0.70, Ref:8, Type:LB + F22-TP311, Depth:0.50, Ref:7, Type:B

Description : **Orangish brown slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	14	%
Percentage retained on 20 mm sieve :	=	3	%
Moisture Condition Value :	=	14.4	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract	Contract Ref:
Sealink Friston	**563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - MCV -3- NATURAL FINAL - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
Structural Soils Ltd, Branch Office - Castleford: The Potteries, Pottery Street, Castleford, West Yorkshire, WF10 1NJ. Tel: 01977-552255, Fax: 01977-552299, Web: www.soils.co.uk, Email: ask@soils.co.uk. | 15/03/24 - 11:46 | AF3 |

MOISTURE CONDITION VALUE

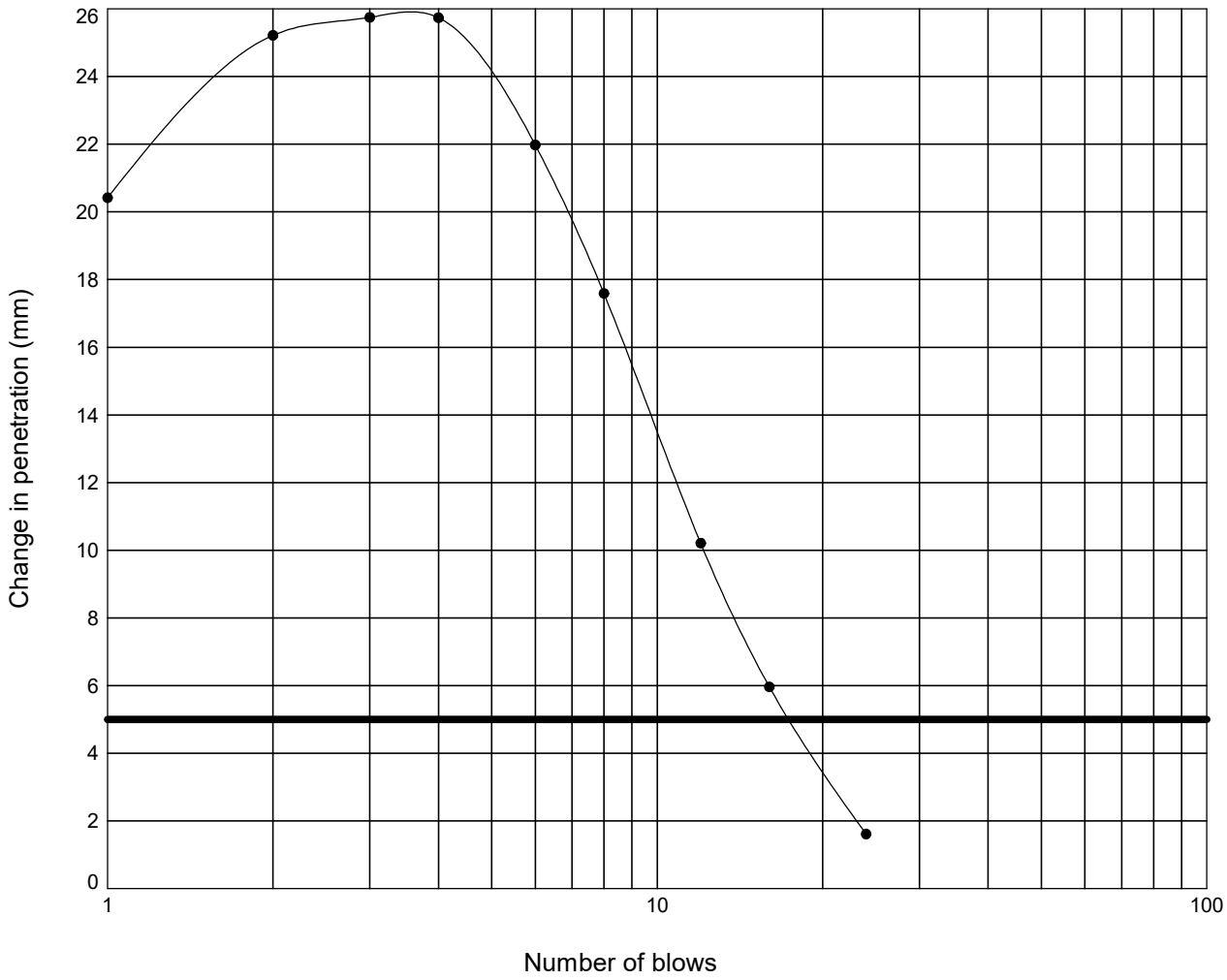
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP311** Sample Ref: Sample Type: **AMAL** Depth (m): **0.70**

Amalgamation comprises: F22-TP311, Depth:0.70, Ref:8, Type:LB + F22-TP311, Depth:0.50, Ref:7, Type:B

Description : **Orangish brown slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	17	%
Percentage retained on 20 mm sieve :	=	3	%
Moisture Condition Value :	=	12.0	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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MOISTURE CONDITION VALUE

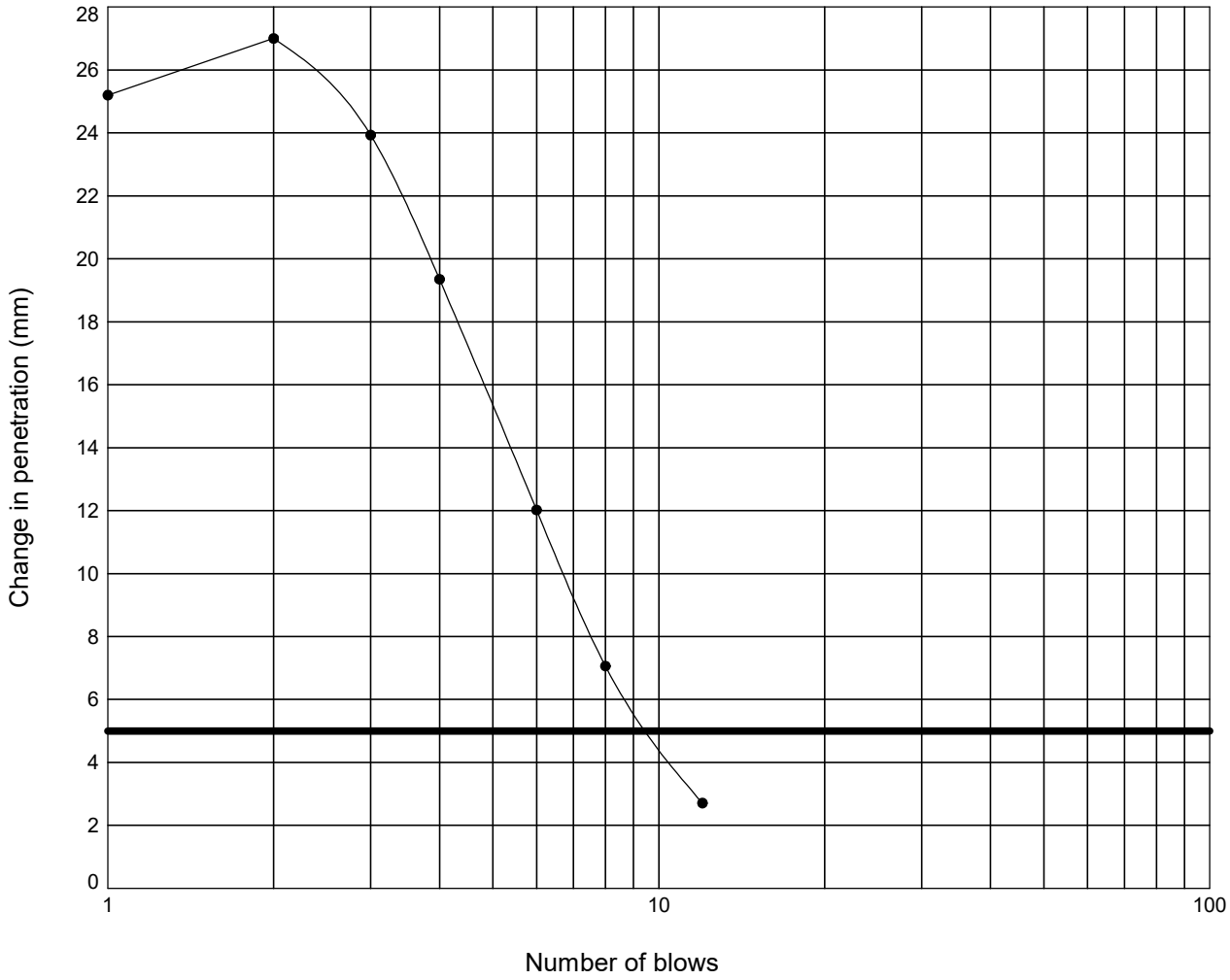
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP311** Sample Ref: Sample Type: **AMAL** Depth (m): **0.70**

Amalgamation comprises: F22-TP311, Depth:0.70, Ref:8, Type:LB + F22-TP311, Depth:0.50, Ref:7, Type:B

Description : **Orangish brown slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	18	%
Percentage retained on 20 mm sieve :	=	3	%
Moisture Condition Value :	=	9.5	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract		Contract Ref:
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MOISTURE CONDITION VALUE

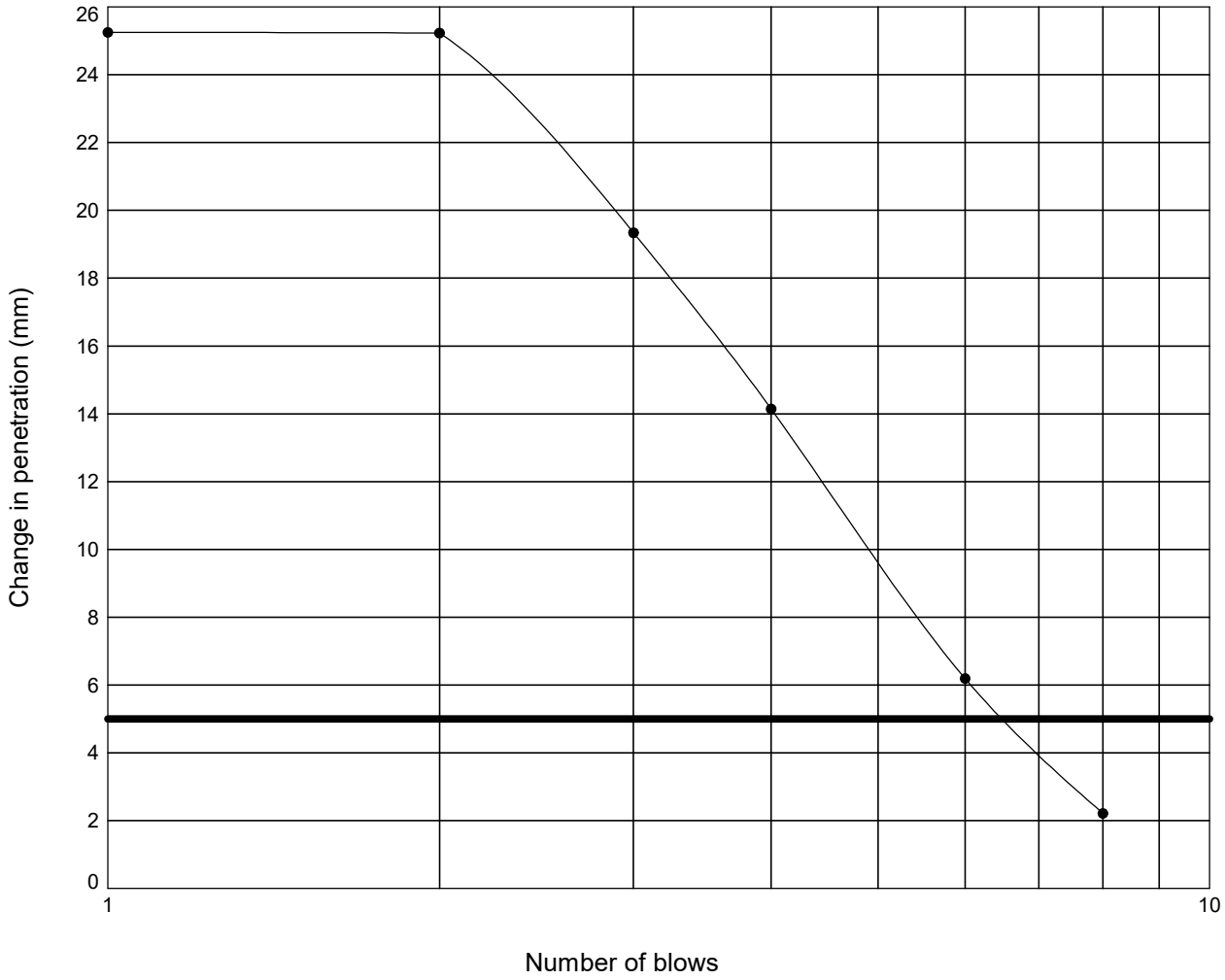
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP311** Sample Ref: Sample Type: **AMAL** Depth (m): **0.70**

Amalgamation comprises: F22-TP311, Depth:0.70, Ref:8, Type:LB + F22-TP311, Depth:0.50, Ref:7, Type:B

Description : **Orangish brown slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	19	%
Percentage retained on 20 mm sieve :	=	3	%
Moisture Condition Value :	=	8.0	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Compiled By		Date
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Contract	Contract Ref:
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Structural Soils Ltd, Branch Office - Castleford: The Potteries, Pottery Street, Castleford, West Yorkshire, WF10 1NJ. Tel: 01977-552255, Fax: 01977-552299, Web: www.soils.co.uk, Email: ask@soils.co.uk. | 15/03/24 - 11:48 | AF3 |

MOISTURE CONDITION VALUE

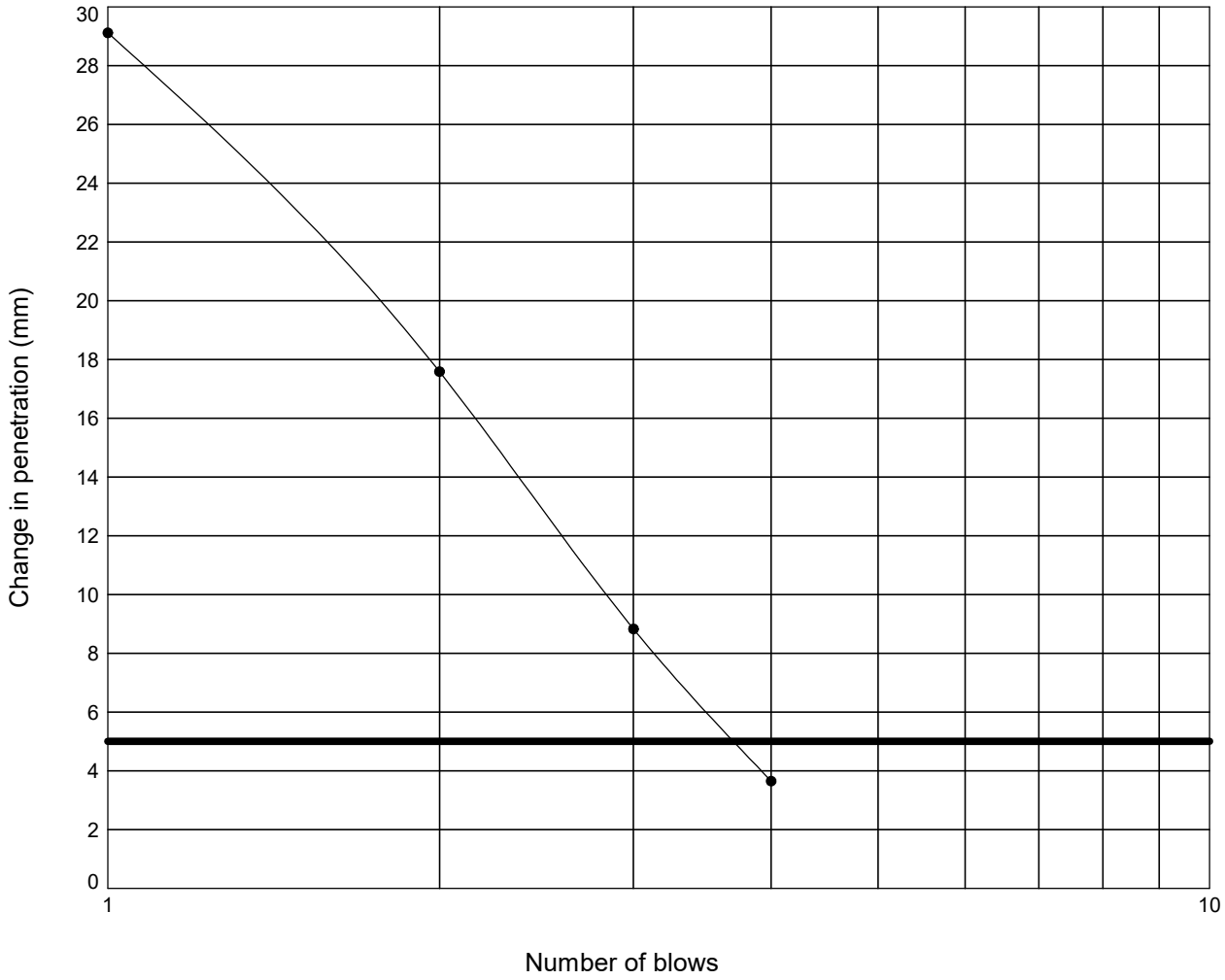
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP311** Sample Ref: Sample Type: **AMAL** Depth (m): **0.70**

Amalgamation comprises: F22-TP311, Depth:0.70, Ref:8, Type:LB + F22-TP311, Depth:0.50, Ref:7, Type:B

Description : **Orangish brown slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	20	%
Percentage retained on 20 mm sieve :	=	3	%
Moisture Condition Value :	=	5.5	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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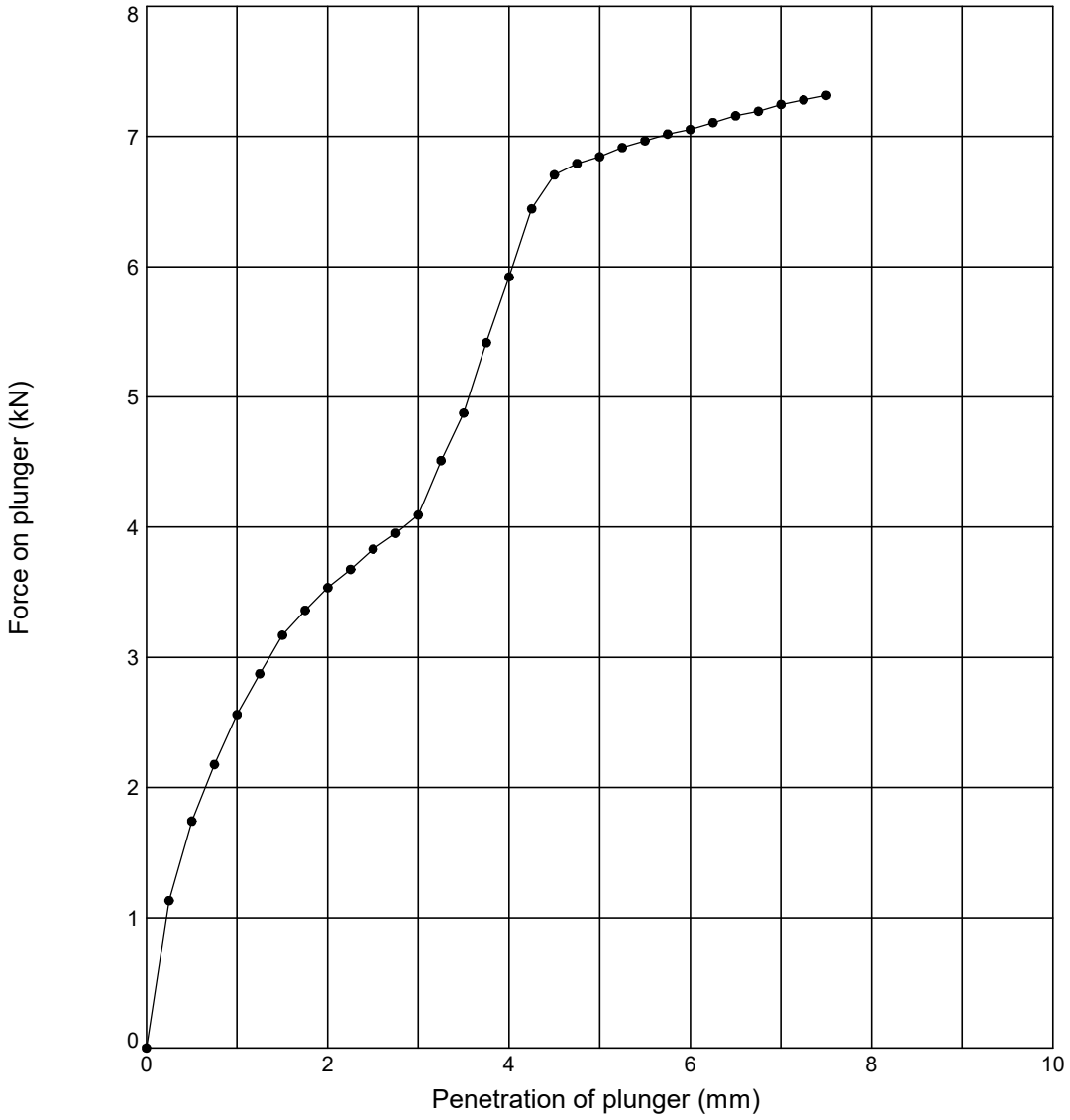
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - MCV -3- NATURAL FINAL - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP311** Sample Ref: Sample Type: **AMAL** Depth (m): **0.70**

Amalgamation comprises: F22-TP311, Depth:0.70, Ref:8, Type:LB + F22-TP311, Depth:0.50, Ref:7, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**13**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**12**	**14**
Initial Bulk Density (Mg/m^3)	:	**2.02**	Surcharge (kg)	:	**4.0**	CBR value (%)	**34**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.79**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**3**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown slightly gravelly slightly sandy CLAY	● **Top** ⧓ **Base**

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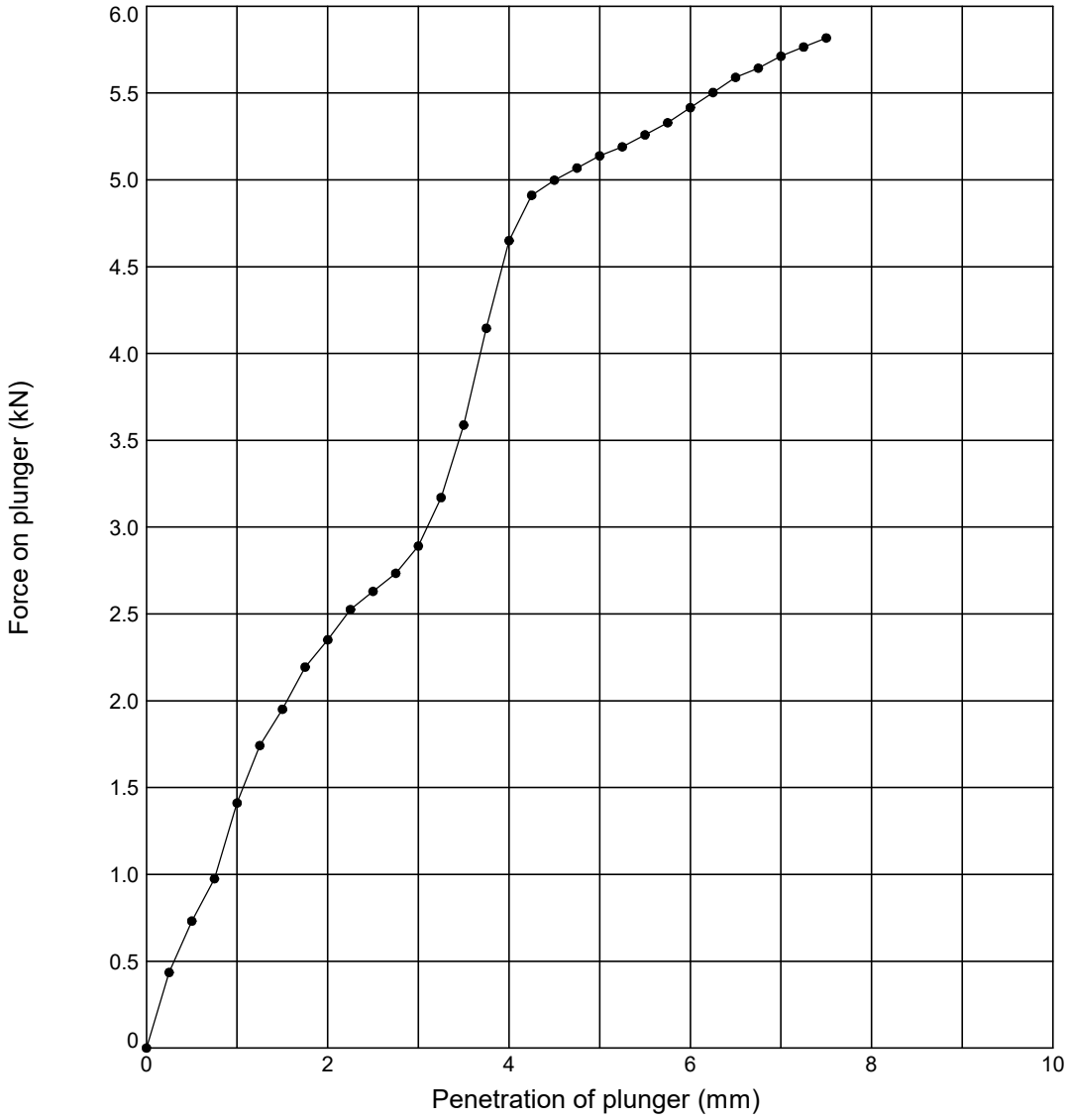
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - CBR - LAB -3- REPORT - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP311** Sample Ref: Sample Type: **AMAL** Depth (m): **0.70**

Amalgamation comprises: F22-TP311, Depth:0.70, Ref:8, Type:LB + F22-TP311, Depth:0.50, Ref:7, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**13**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**13**	**14**
Initial Bulk Density (Mg/m^3)	:	**2.11**	Surcharge (kg)	:	**4.0**	CBR value (%)	**26**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.86**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**3**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown slightly gravelly slightly sandy CLAY	● **Top** ⧓ **Base**

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Contract	Contract Ref:
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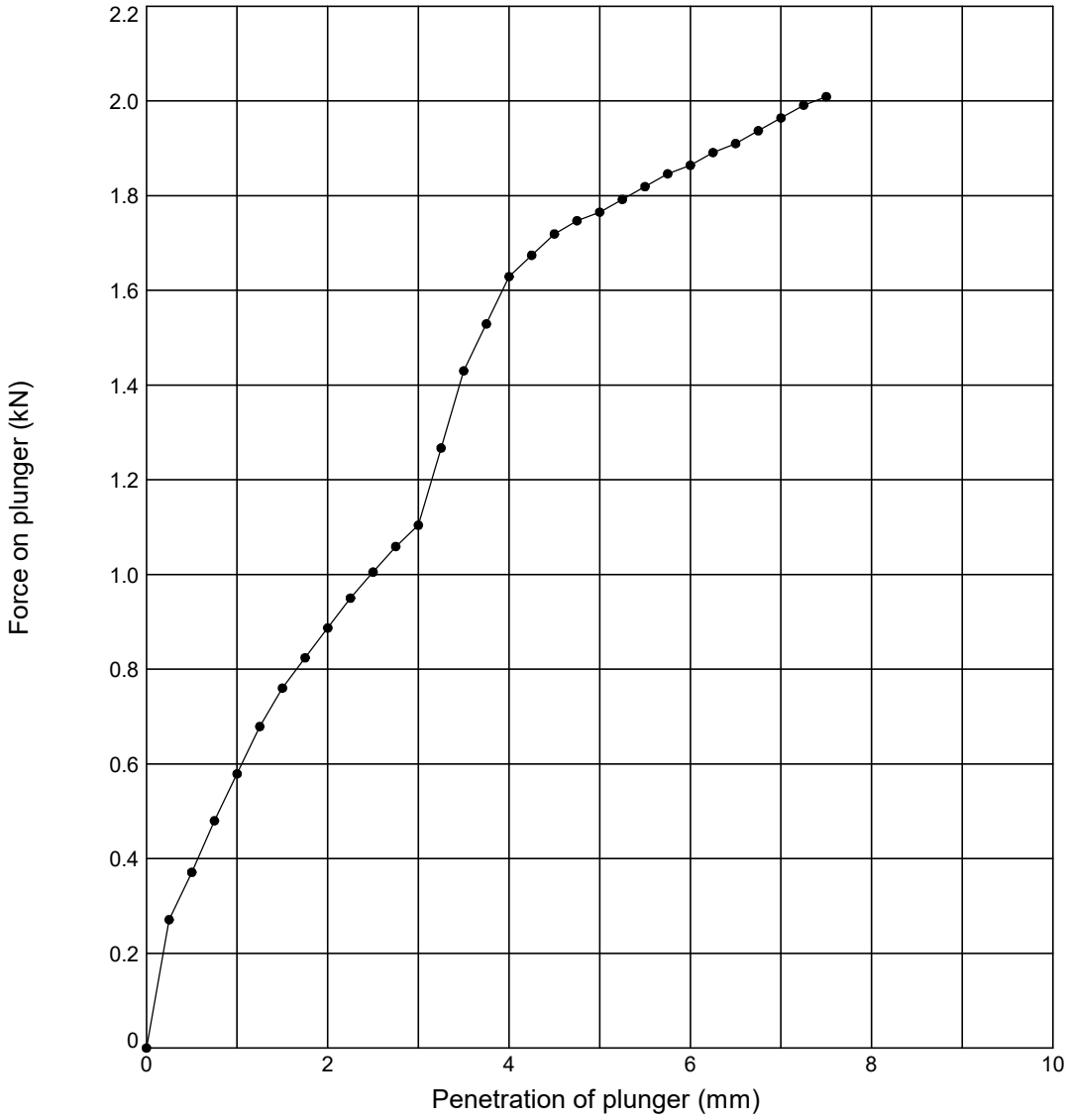
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - CBR - LAB -3- REPORT - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP311** Sample Ref: Sample Type: **AMAL** Depth (m): **0.70**

Amalgamation comprises: F22-TP311, Depth:0.70, Ref:8, Type:LB + F22-TP311, Depth:0.50, Ref:7, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**16**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**17**	**15**
Initial Bulk Density (Mg/m^3)	:	**2.13**	Surcharge (kg)	:	**4.0**	CBR value (%)	**8.8**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.83**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**3**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown slightly gravelly slightly sandy CLAY	● **Top** ⊠ **Base**

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Contract	Contract Ref:
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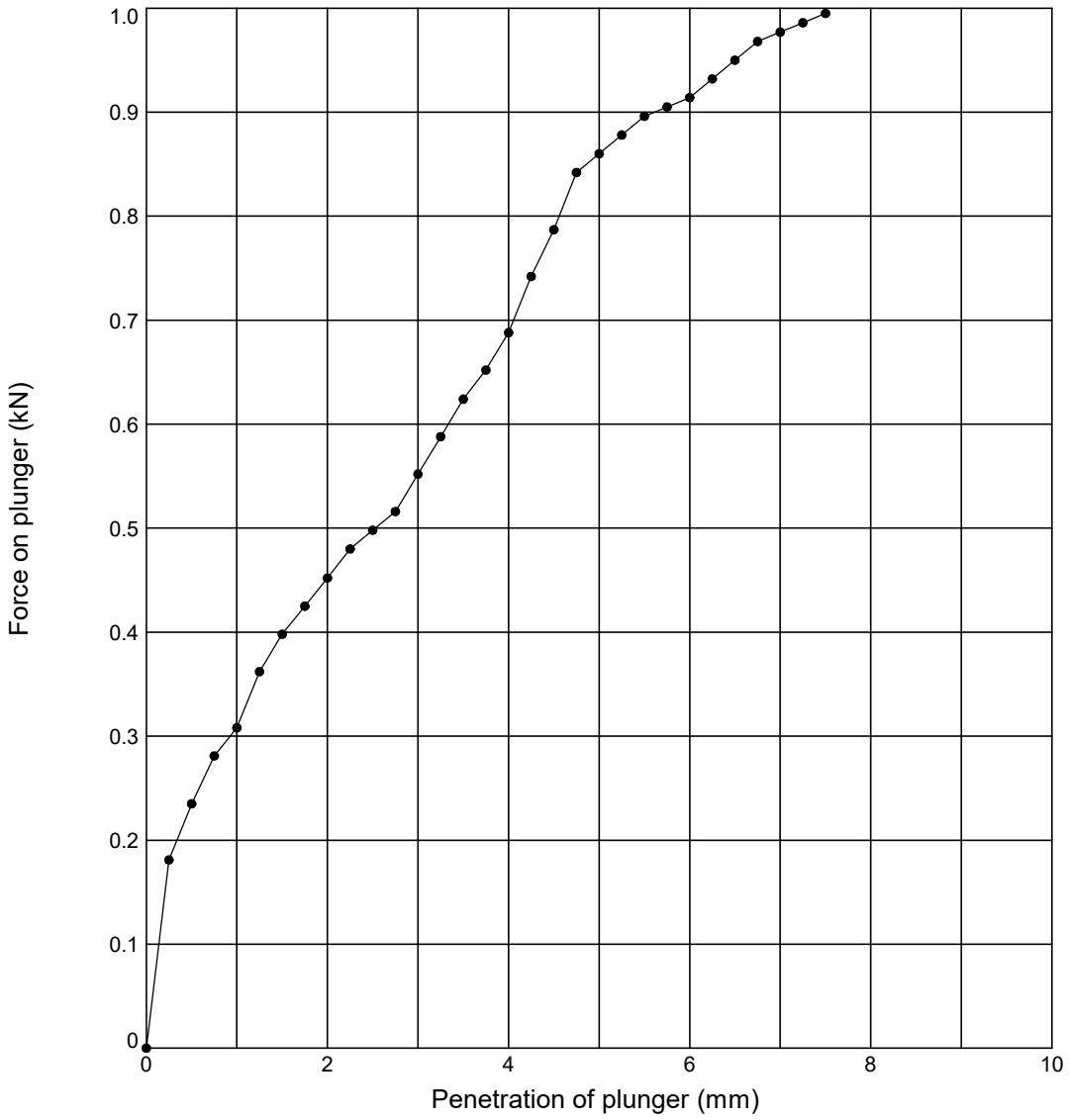
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - CBR - LAB -3- REPORT - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP311** Sample Ref: Sample Type: **AMAL** Depth (m): **0.70**

Amalgamation comprises: F22-TP311, Depth:0.70, Ref:8, Type:LB + F22-TP311, Depth:0.50, Ref:7, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**18**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**17**	**19**
Initial Bulk Density (Mg/m^3)	:	**2.07**	Surcharge (kg)	:	**4.0**	CBR value (%)	**4.3**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.75**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**3**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown slightly gravelly slightly sandy CLAY	● **Top** ⊠ **Base**

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Contract	Contract Ref:
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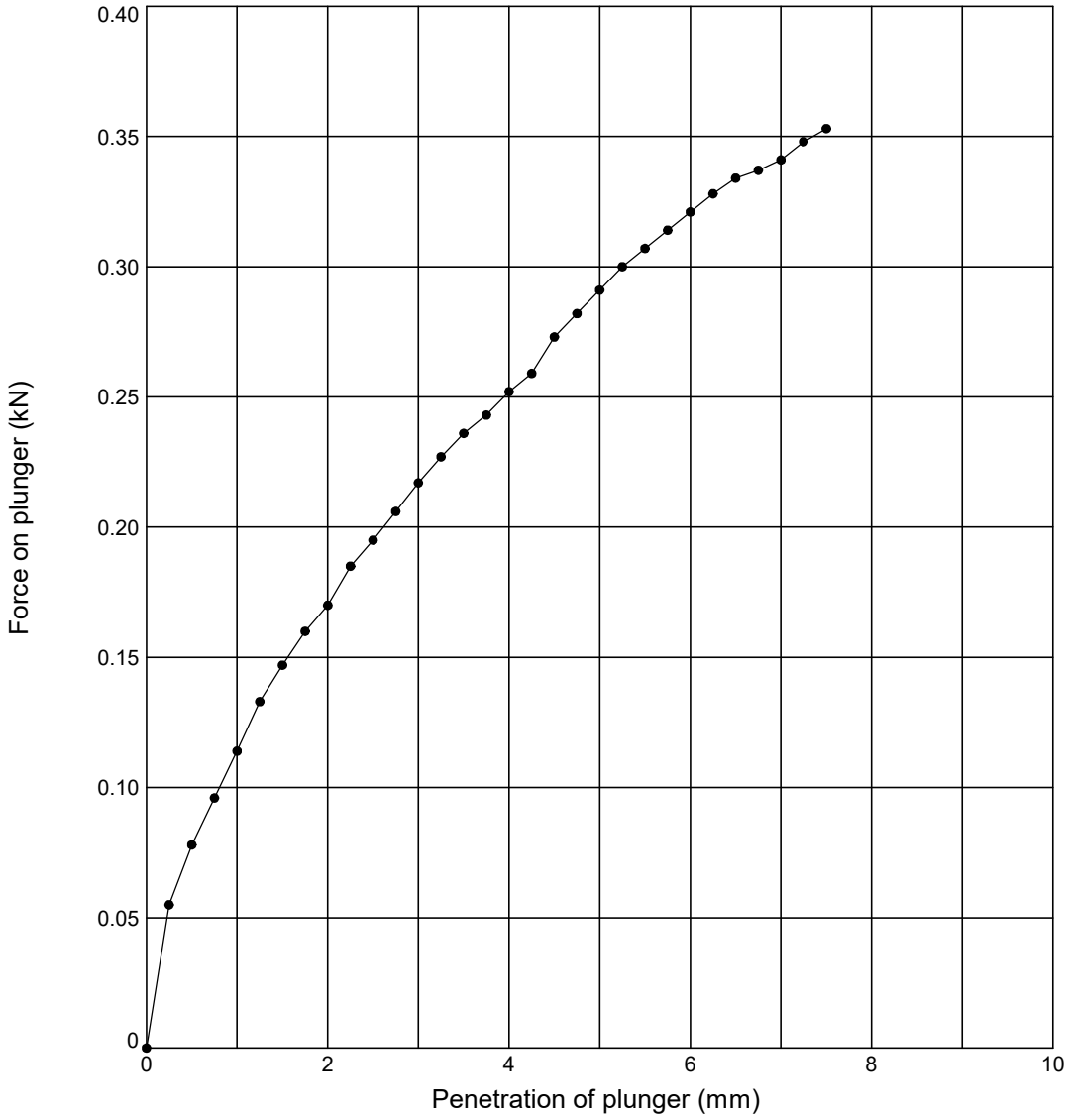
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - CBR - LAB -3- REPORT - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP311** Sample Ref: Sample Type: **AMAL** Depth (m): **0.70**

Amalgamation comprises: F22-TP311, Depth:0.70, Ref:8, Type:LB + F22-TP311, Depth:0.50, Ref:7, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**22**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**22**	**21**
Initial Bulk Density (Mg/m^3)	:	**2.01**	Surcharge (kg)	:	**4.0**	CBR value (%)	**1.5**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.65**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**3**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown slightly gravelly slightly sandy CLAY	● **Top** ⧓ **Base**

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Contract	Contract Ref:
Sealink Friston	**563835**

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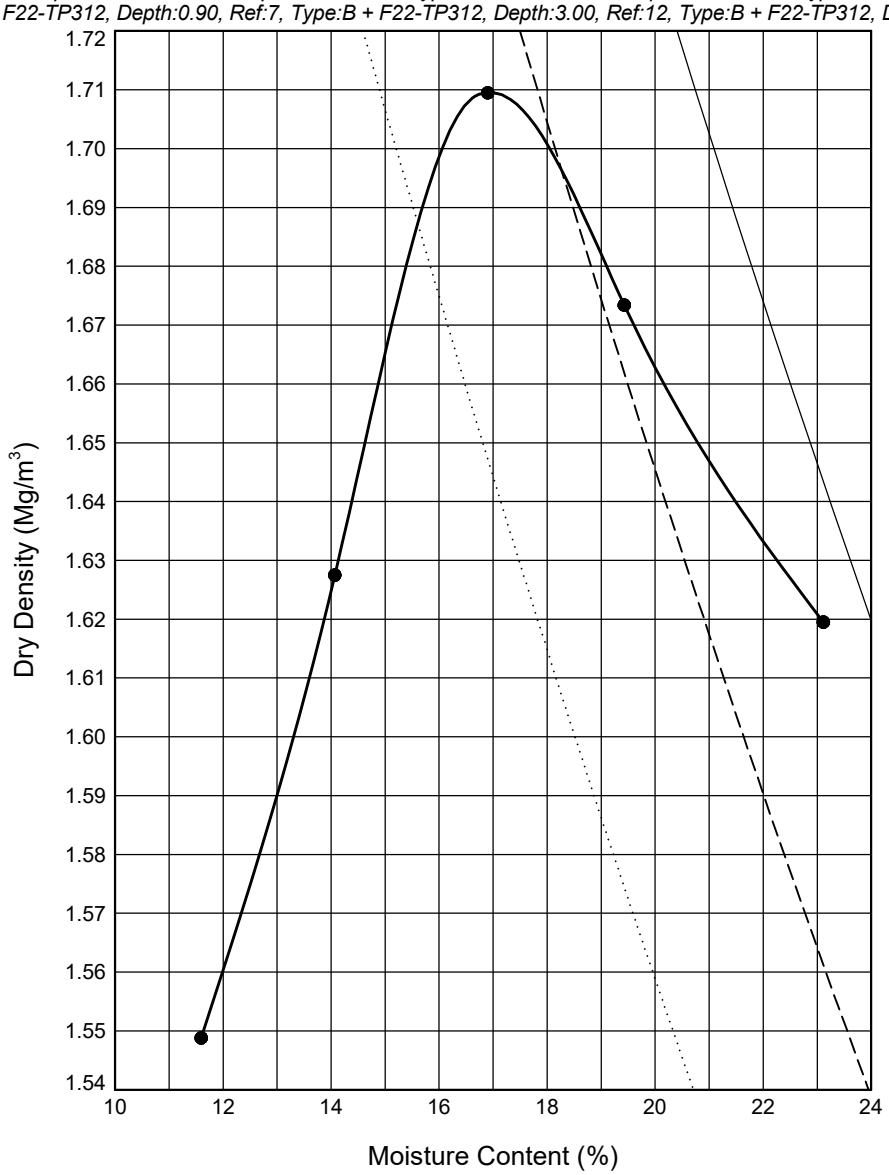
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - CBR - LAB -3- REPORT - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01
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DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **F22-TP312** Sample Ref: Sample Type: **AMAL** Depth (m): **0.90**

Amalgamation comprises: F22-TP312, Depth:0.90, Ref:9, Type:LB + F22-TP312, Depth:0.50, Ref:4, Type:B + F22-TP312, Depth:0.70, Ref:6, Type:B + F22-TP312, Depth:0.90, Ref:7, Type:B + F22-TP312, Depth:3.00, Ref:12, Type:B + F22-TP312, Depth:3.80, Ref:15, Type:D



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**19**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m^3)	:	**1.71**
% Retained on 37.5mm BS Sieve	:	**1**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**17**
% Retained on 20.0mm BS Sieve	:	**1**	Type of Mould	:	**CBR**	Method Used: **Clause 11.4**		
Particle Density - assumed (Mg/m^3)	:	**2.65**				Remarks: **CBR and MCV tests carried out at each point**		
Size of Soil Pieces	:	**<37.5mm**	Separate samples were used.					

Sample Description	Key to Air Voids Lines		
Brown mottled white and grey slightly gravelly slightly sandy CLAY	——— 0%	– – – – 5%	····· 10%

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18 Frogmore Road
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Hertfordshire
HP3 9RT

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Sealink Friston	**563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - COMPACTIONS - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
Structural Soils Ltd, Branch Office - Hemel Hempstead: 18 Frogmore Road, Hemel Hempstead, Hertfordshire, HP3 9RT. Tel: 01442-262323, Fax: 01442-262683, Web: www.soils.co.uk, Email: ask@soils.co.uk | 26/02/24 - 13:33 | AF3 |

MOISTURE CONDITION VALUE

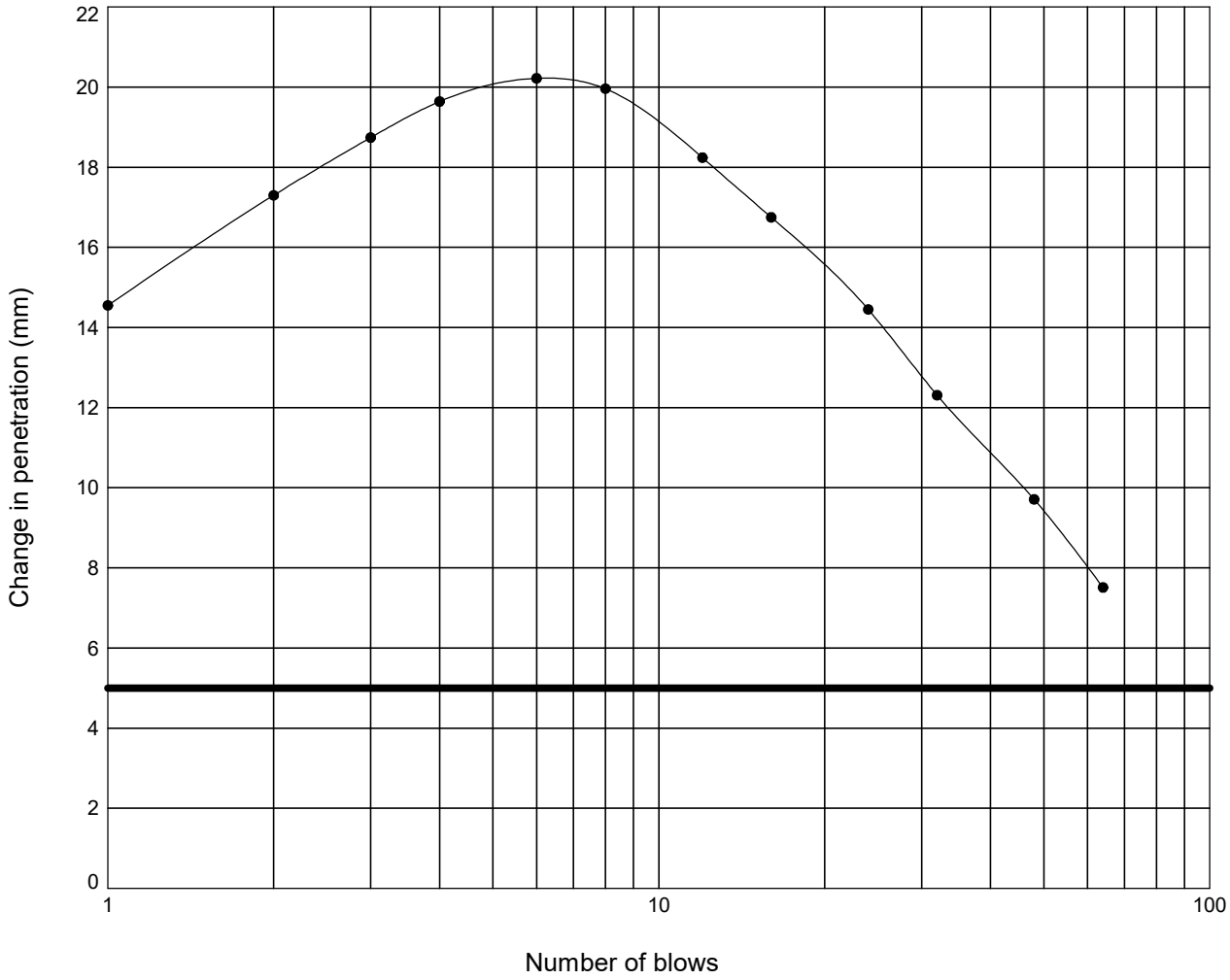
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP312** Sample Ref: Sample Type: **AMAL** Depth (m): **0.90**

Amalgamation comprises: F22-TP312, Depth:0.90, Ref:9, Type:LB + F22-TP312, Depth:0.50, Ref:4, Type:B + F22-TP312, Depth:0.70, Ref:6, Type:B + F22-TP312, Depth:0.90, Ref:7, Type:B + F22-TP312, Depth:3.00, Ref:12, Type:B + F22-TP312, Depth:3.80, Ref:15, Type:D

Description : **Brown mottled white and grey slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	12	%
Percentage retained on 20 mm sieve :	=	2	%
Moisture Condition Value :	=	19.3	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Hertfordshire
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MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP312** Sample Ref: Sample Type: **AMAL** Depth (m): **0.90**

Amalgamation comprises: F22-TP312, Depth:0.90, Ref:9, Type:LB + F22-TP312, Depth:0.50, Ref:4, Type:B + F22-TP312, Depth:0.70, Ref:6, Type:B + F22-TP312, Depth:0.90, Ref:7, Type:B + F22-TP312, Depth:3.00, Ref:12, Type:B + F22-TP312, Depth:3.80, Ref:15, Type:D

Description : **Brown mottled white and grey slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	14	%
Percentage retained on 20 mm sieve :	=	2	%
Moisture Condition Value :	=	17.6	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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HP3 9RT

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[redacted]	[redacted]	26/02/24

Contract	Contract Ref:
Sealink Friston	**563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - MCV -3- NATURAL FINAL - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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MOISTURE CONDITION VALUE

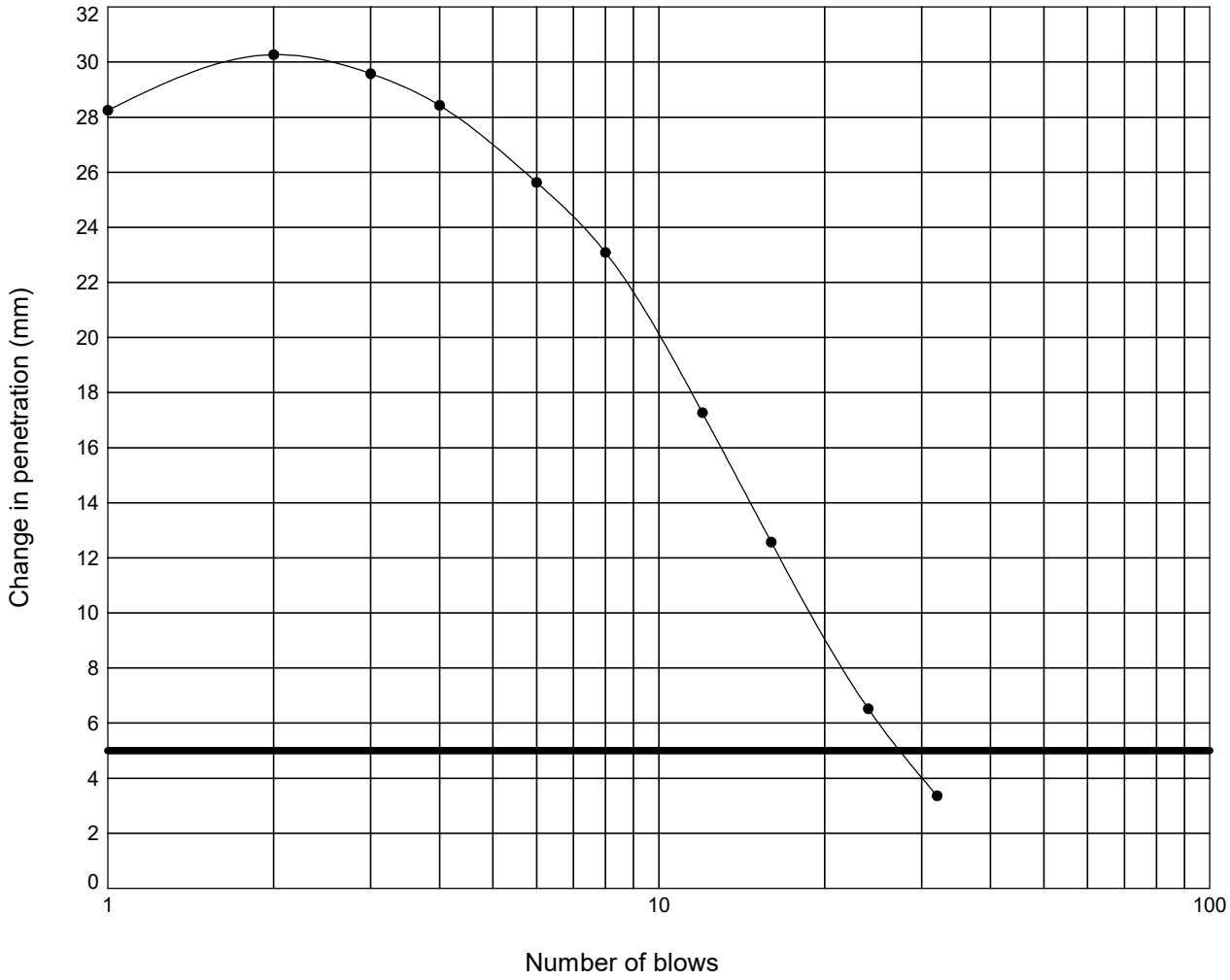
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP312** Sample Ref: Sample Type: **AMAL** Depth (m): **0.90**

Amalgamation comprises: F22-TP312, Depth:0.90, Ref:9, Type:LB + F22-TP312, Depth:0.50, Ref:4, Type:B + F22-TP312, Depth:0.70, Ref:6, Type:B + F22-TP312, Depth:0.90, Ref:7, Type:B + F22-TP312, Depth:3.00, Ref:12, Type:B + F22-TP312, Depth:3.80, Ref:15, Type:D

Description : **Brown mottled white and grey slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	16	%
Percentage retained on 20 mm sieve :	=	2	%
Moisture Condition Value :	=	14.1	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract	Contract Ref:
Sealink Friston	**563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - MCV -3- NATURAL FINAL - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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MOISTURE CONDITION VALUE

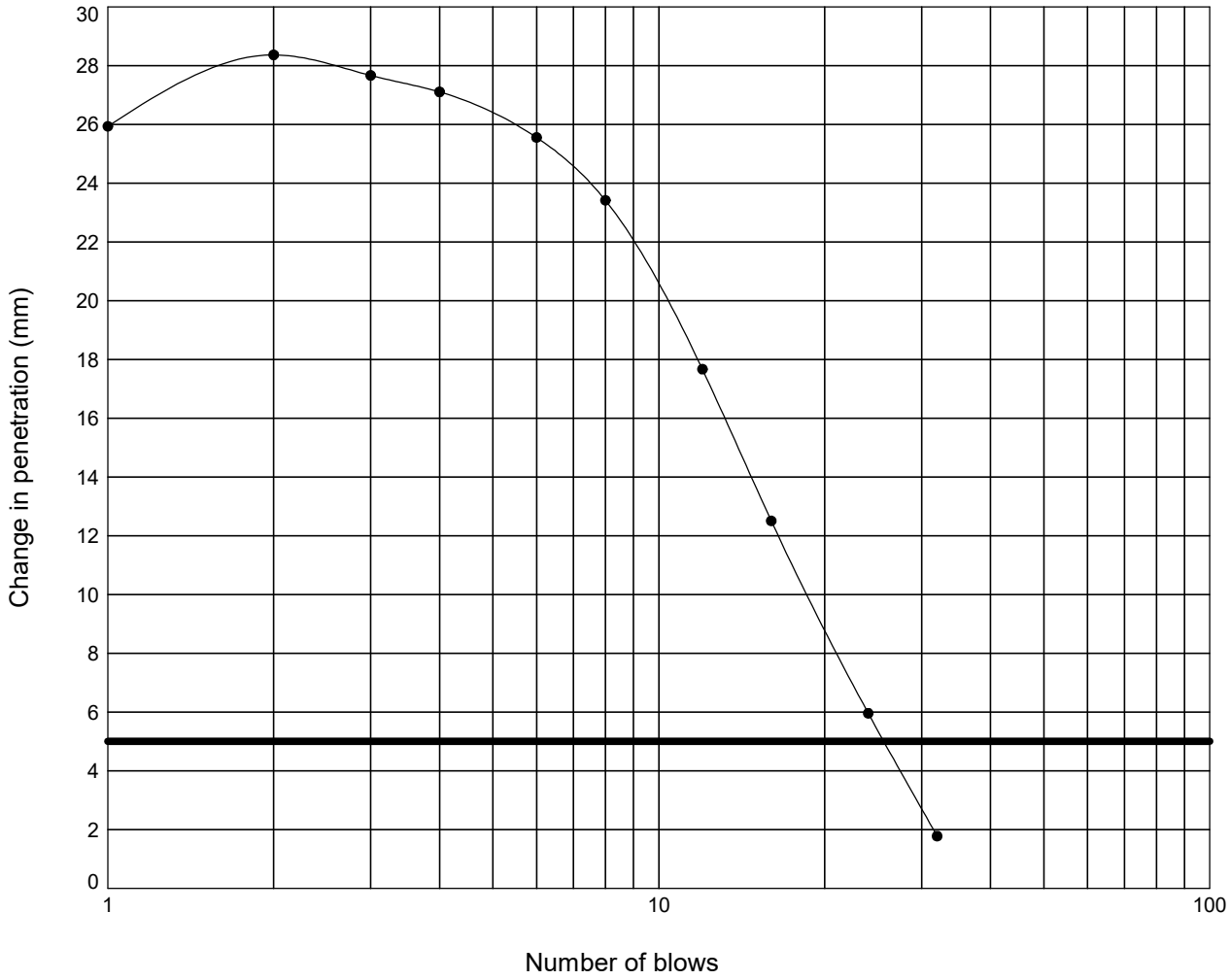
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP312** Sample Ref: Sample Type: **AMAL** Depth (m): **0.90**

Amalgamation comprises: F22-TP312, Depth:0.90, Ref:9, Type:LB + F22-TP312, Depth:0.50, Ref:4, Type:B + F22-TP312, Depth:0.70, Ref:6, Type:B + F22-TP312, Depth:0.90, Ref:7, Type:B + F22-TP312, Depth:3.00, Ref:12, Type:B + F22-TP312, Depth:3.80, Ref:15, Type:D

Description : **Brown mottled white and grey slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	21	%
Percentage retained on 20 mm sieve :	=	2	%
Moisture Condition Value :	=	13.9	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract	Contract Ref:
Sealink Friston	**563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - MCV -3- NATURAL FINAL - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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MOISTURE CONDITION VALUE

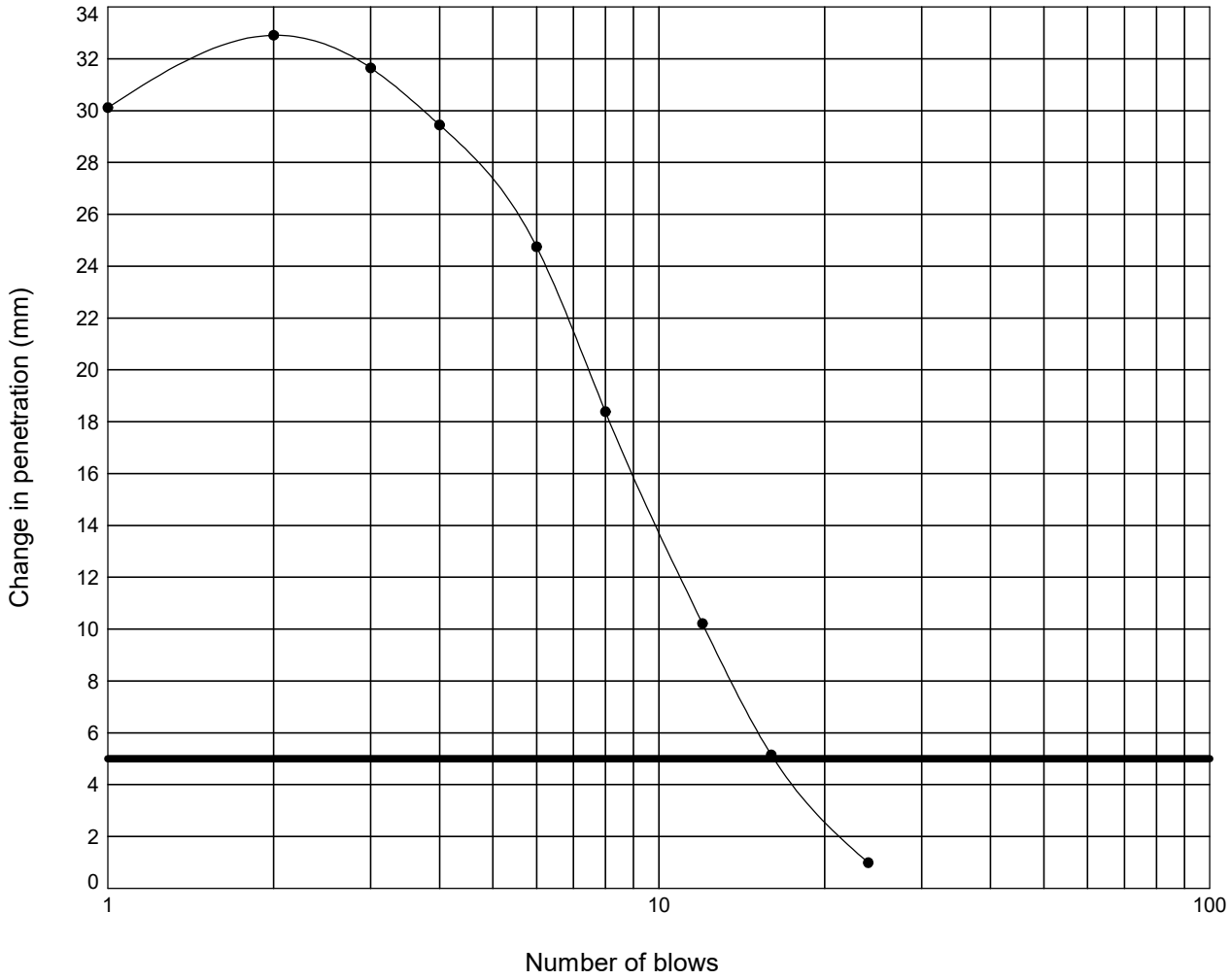
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP312** Sample Ref: Sample Type: **AMAL** Depth (m): **0.90**

Amalgamation comprises: F22-TP312, Depth:0.90, Ref:9, Type:LB + F22-TP312, Depth:0.50, Ref:4, Type:B + F22-TP312, Depth:0.70, Ref:6, Type:B + F22-TP312, Depth:0.90, Ref:7, Type:B + F22-TP312, Depth:3.00, Ref:12, Type:B + F22-TP312, Depth:3.80, Ref:15, Type:D

Description : **Brown mottled white and grey slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	22	%
Percentage retained on 20 mm sieve :	=	2	%
Moisture Condition Value :	=	11.7	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract	Contract Ref:
Sealink Friston	**563835**

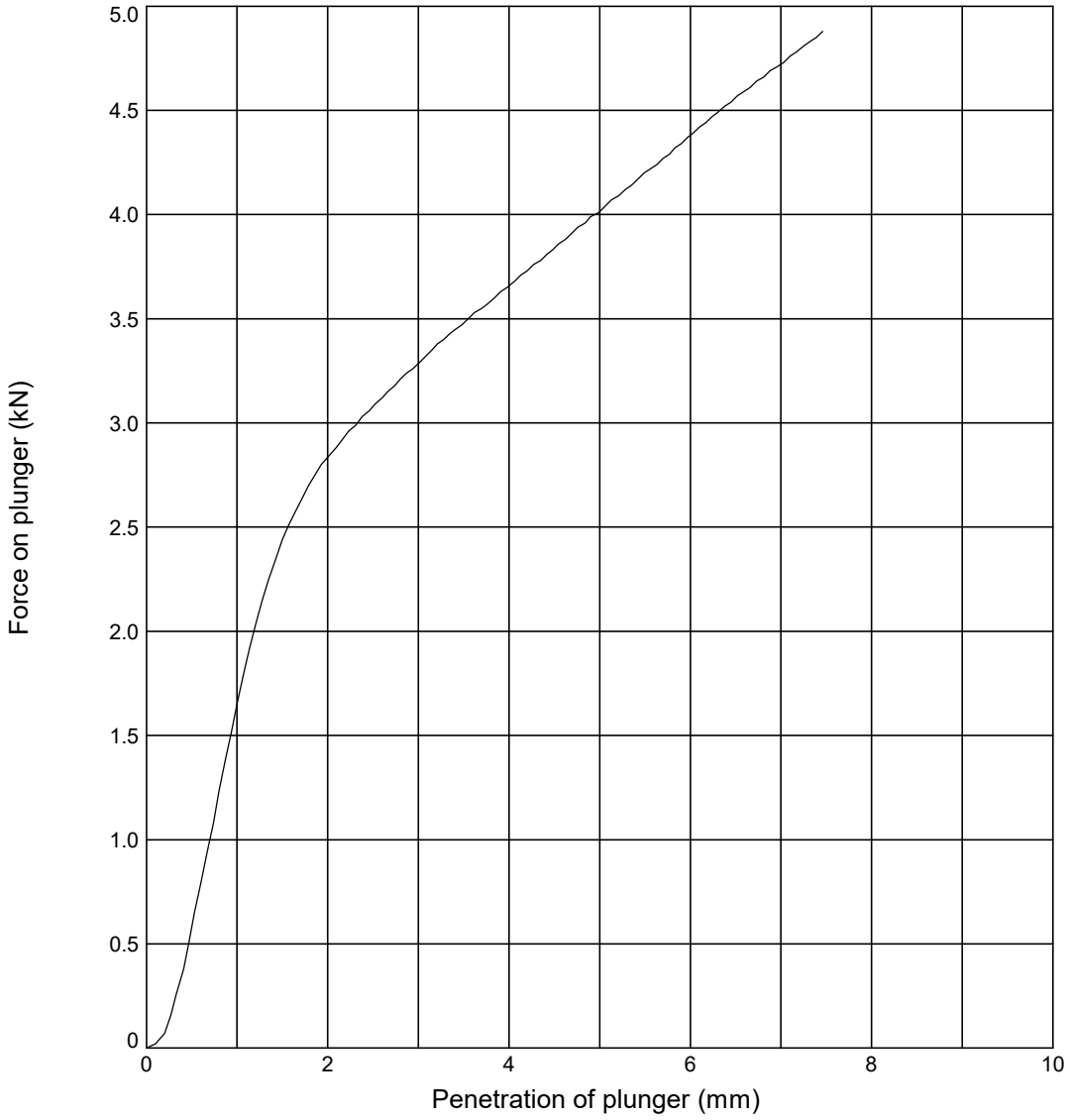
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - MCV -3- NATURAL FINAL - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
Structural Soils Ltd, Branch Office - Hemel Hempstead: 18 Frogmore Road, Hemel Hempstead, Hertfordshire, HP3 9RT. Tel: 01442-262323, Fax: 01442-262683, Web: www.soils.co.uk, Email: ask@soils.co.uk | 26/02/24 - 13:45 | AF3 |

LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP312** Sample Ref: Sample Type: **AMAL** Depth (m): **0.90**

Amalgamation comprises: F22-TP312, Depth:0.90, Ref:9, Type:LB + F22-TP312, Depth:0.50, Ref:4, Type:B + F22-TP312, Depth:0.70, Ref:6, Type:B + F22-TP312, Depth:0.90, Ref:7, Type:B + F22-TP312, Depth:3.00, Ref:12, Type:B + F22-TP312, Depth:3.80, Ref:15, Type:D



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**11**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**12**	**12**
Initial Bulk Density (Mg/m^3)	:	**1.72**	Surcharge (kg)	:	**4.1**	CBR Value (%)	**23**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.55**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**0.25**	**0.2**
% Retained on 20mm Sieve	:	**2**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**24**	**0.0**

Sample Description	Key
Brown mottled white and grey slightly gravelly slightly sandy CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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18 Frogmore Road
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Compiled By		Date
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Contract	Contract Ref:
Sealink Friston	**563835**

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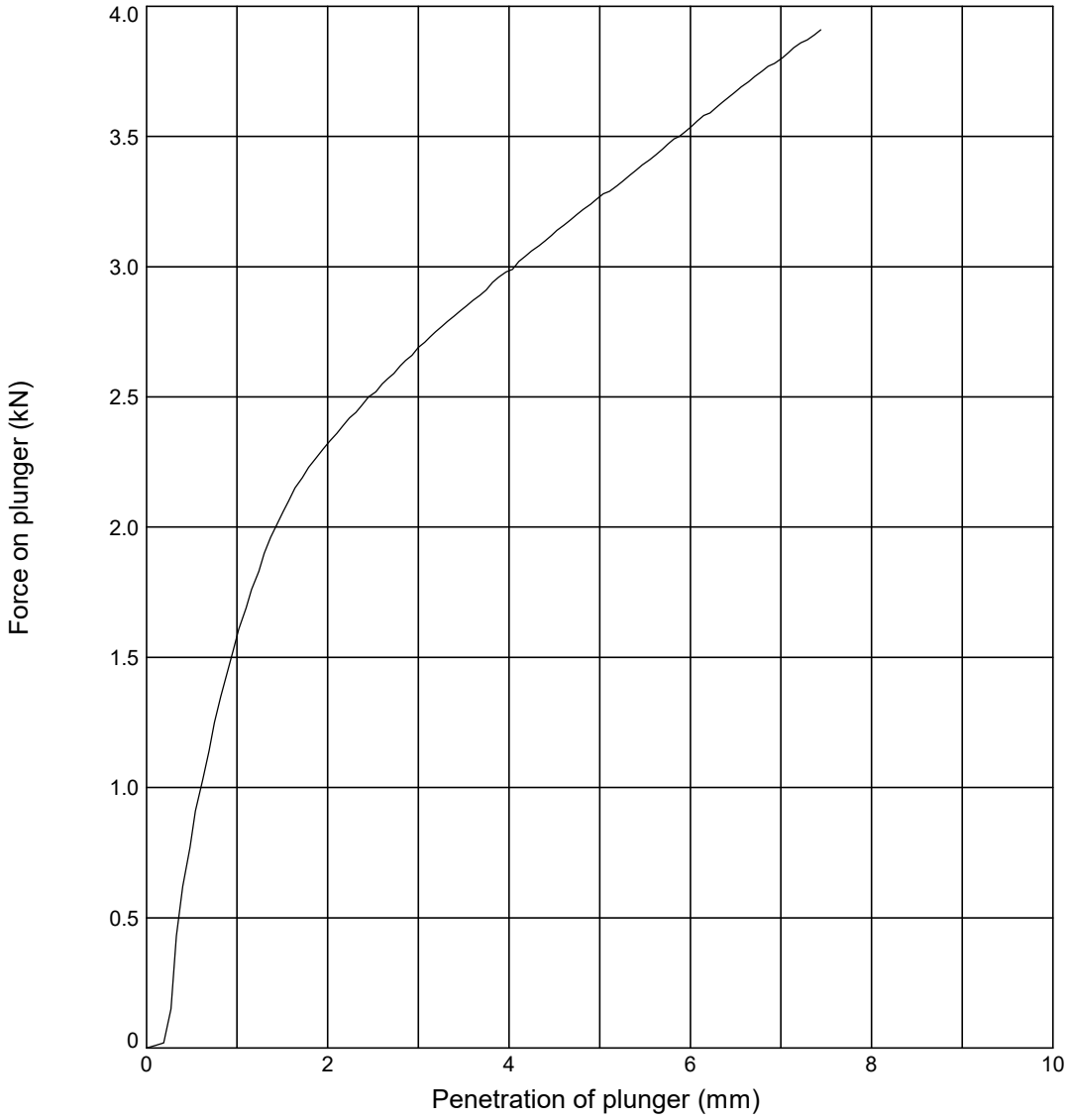
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - CBR DATALOGGED - 1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP312** Sample Ref: Sample Type: **AMAL** Depth (m): **0.90**

Amalgamation comprises: F22-TP312, Depth:0.90, Ref:9, Type:LB + F22-TP312, Depth:0.50, Ref:4, Type:B + F22-TP312, Depth:0.70, Ref:6, Type:B + F22-TP312, Depth:0.90, Ref:7, Type:B + F22-TP312, Depth:3.00, Ref:12, Type:B + F22-TP312, Depth:3.80, Ref:15, Type:D



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**14**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**14**	**14**
Initial Bulk Density (Mg/m^3)	:	**1.90**	Surcharge (kg)	:	**4.1**	CBR Value (%)	**19**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.66**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**0.2**	**NA**
% Retained on 20mm Sieve	:	**2**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**20**	**NA**

Sample Description	Key
Brown mottled white and grey slightly gravelly slightly sandy CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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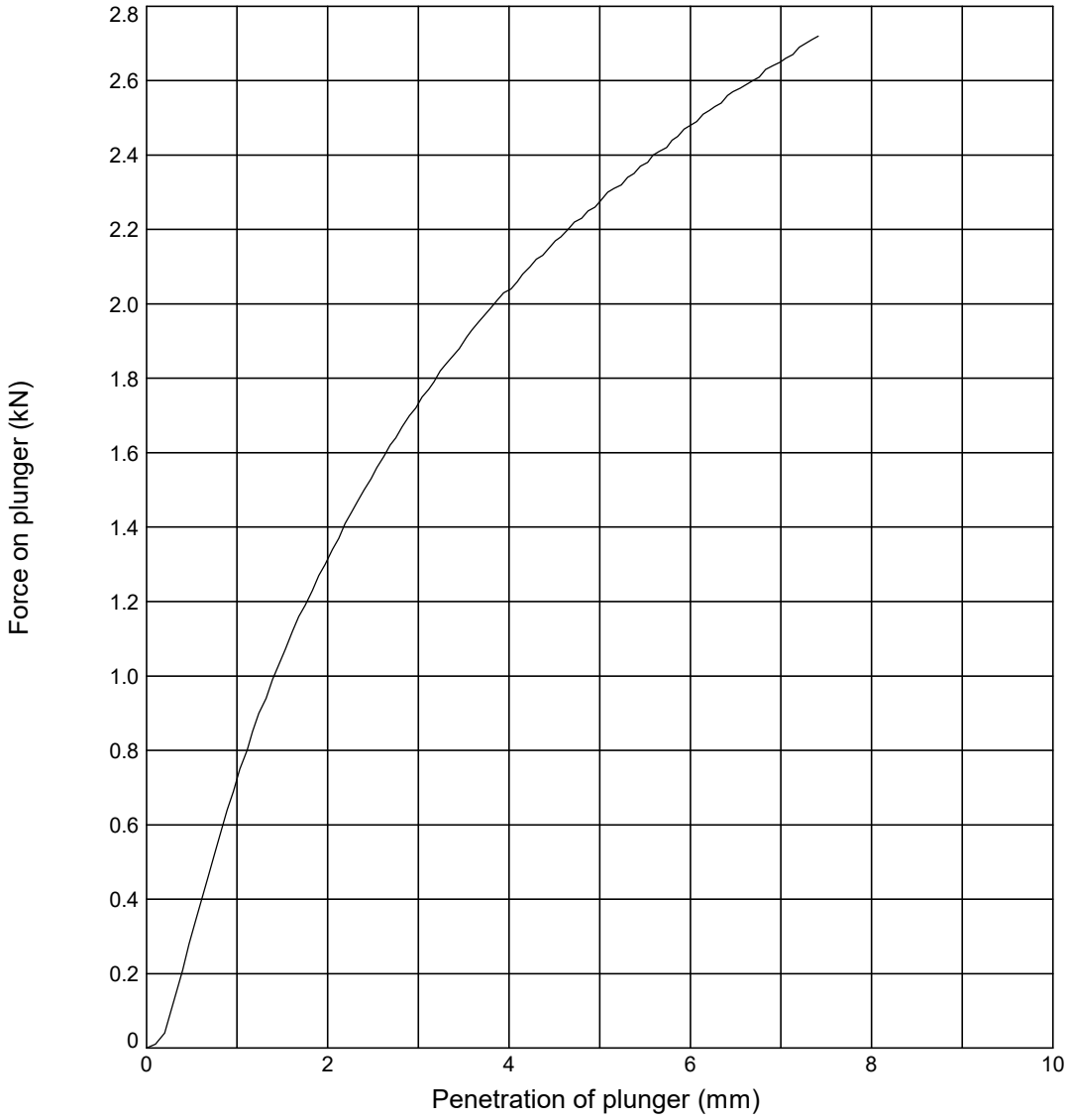
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - CBR DATALOGGED - 1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP312** Sample Ref: Sample Type: **AMAL** Depth (m): **0.90**

Amalgamation comprises: F22-TP312, Depth:0.90, Ref:9, Type:LB + F22-TP312, Depth:0.50, Ref:4, Type:B + F22-TP312, Depth:0.70, Ref:6, Type:B + F22-TP312, Depth:0.90, Ref:7, Type:B + F22-TP312, Depth:3.00, Ref:12, Type:B + F22-TP312, Depth:3.80, Ref:15, Type:D



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**17**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**16**	**17**
Initial Bulk Density (Mg/m^3)	:	**1.99**	Surcharge (kg)	:	**4.1**	CBR Value (%)	**12**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.70**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**0.2**	**NA**
% Retained on 20mm Sieve	:	**2**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**12**	**NA**

Sample Description	Key
Brown mottled white and grey slightly gravelly slightly sandy CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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Compiled By		Date
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Contract	Contract Ref:
Sealink Friston	**563835**

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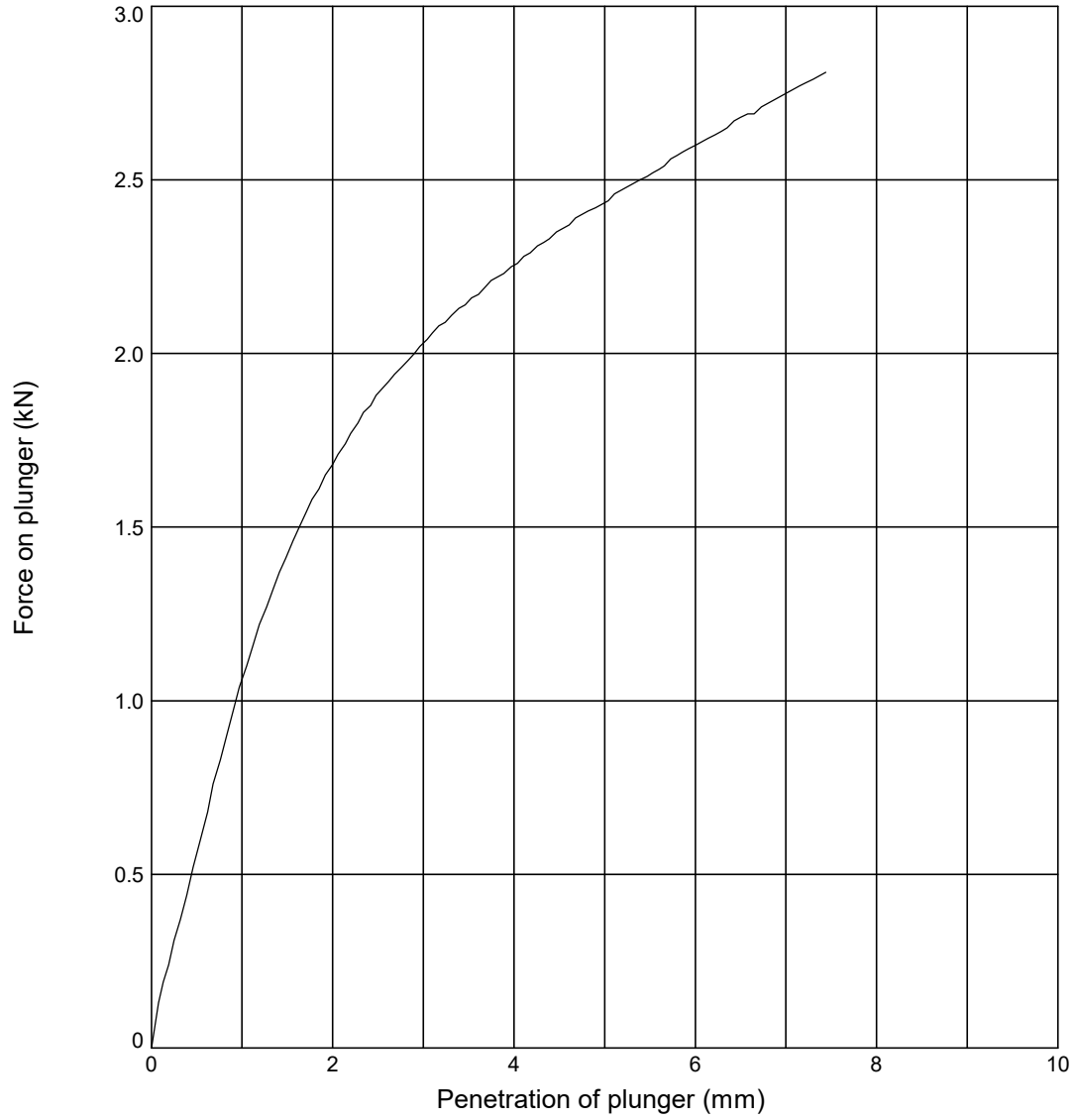
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - CBR DATALOGGED - 1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP312** Sample Ref: Sample Type: **AMAL** Depth (m): **0.90**

Amalgamation comprises: F22-TP312, Depth:0.90, Ref:9, Type:LB + F22-TP312, Depth:0.50, Ref:4, Type:B + F22-TP312, Depth:0.70, Ref:6, Type:B + F22-TP312, Depth:0.90, Ref:7, Type:B + F22-TP312, Depth:3.00, Ref:12, Type:B + F22-TP312, Depth:3.80, Ref:15, Type:D



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**21**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**20**	**20**
Initial Bulk Density (Mg/m^3)	:	**1.95**	Surcharge (kg)	:	**4.1**	CBR Value (%)	**14**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.62**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**2**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Brown mottled white and grey slightly gravelly slightly sandy CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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Contract	Contract Ref:
Sealink Friston	**563835**

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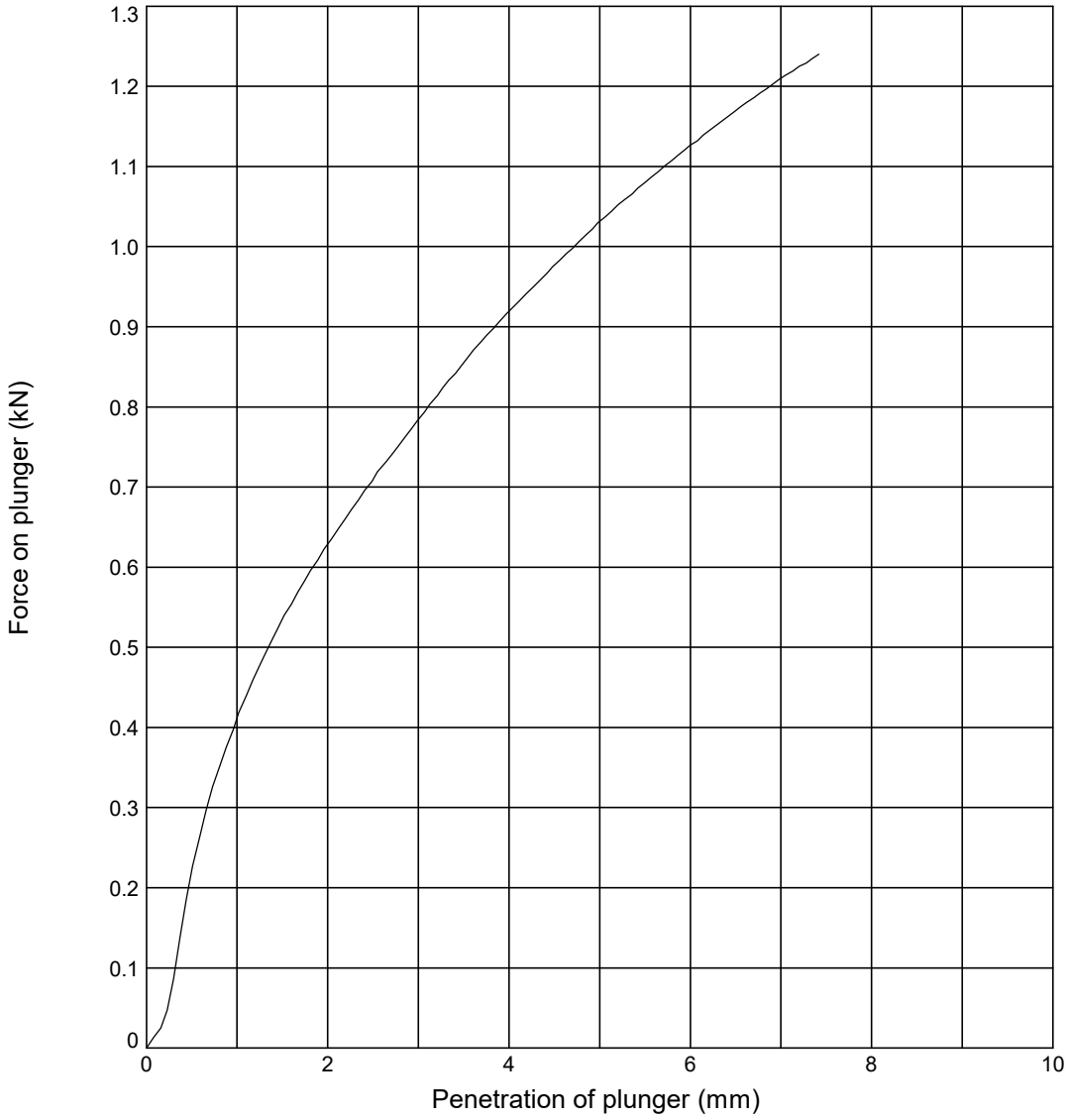
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP312** Sample Ref: Sample Type: **AMAL** Depth (m): **0.90**

Amalgamation comprises: F22-TP312, Depth:0.90, Ref:9, Type:LB + F22-TP312, Depth:0.50, Ref:4, Type:B + F22-TP312, Depth:0.70, Ref:6, Type:B + F22-TP312, Depth:0.90, Ref:7, Type:B + F22-TP312, Depth:3.00, Ref:12, Type:B + F22-TP312, Depth:3.80, Ref:15, Type:D



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**23**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**23**	**24**
Initial Bulk Density (Mg/m^3)	:	**1.99**	Surcharge (kg)	:	**4.1**	CBR Value (%)	**5.4**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.62**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**0.2**	**0.8**
% Retained on 20mm Sieve	:	**2**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**5.6**	**0.0**

Sample Description	Key
Brown mottled white and grey slightly gravelly slightly sandy CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By		Date
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Contract	Contract Ref:
Sealink Friston	**563835**

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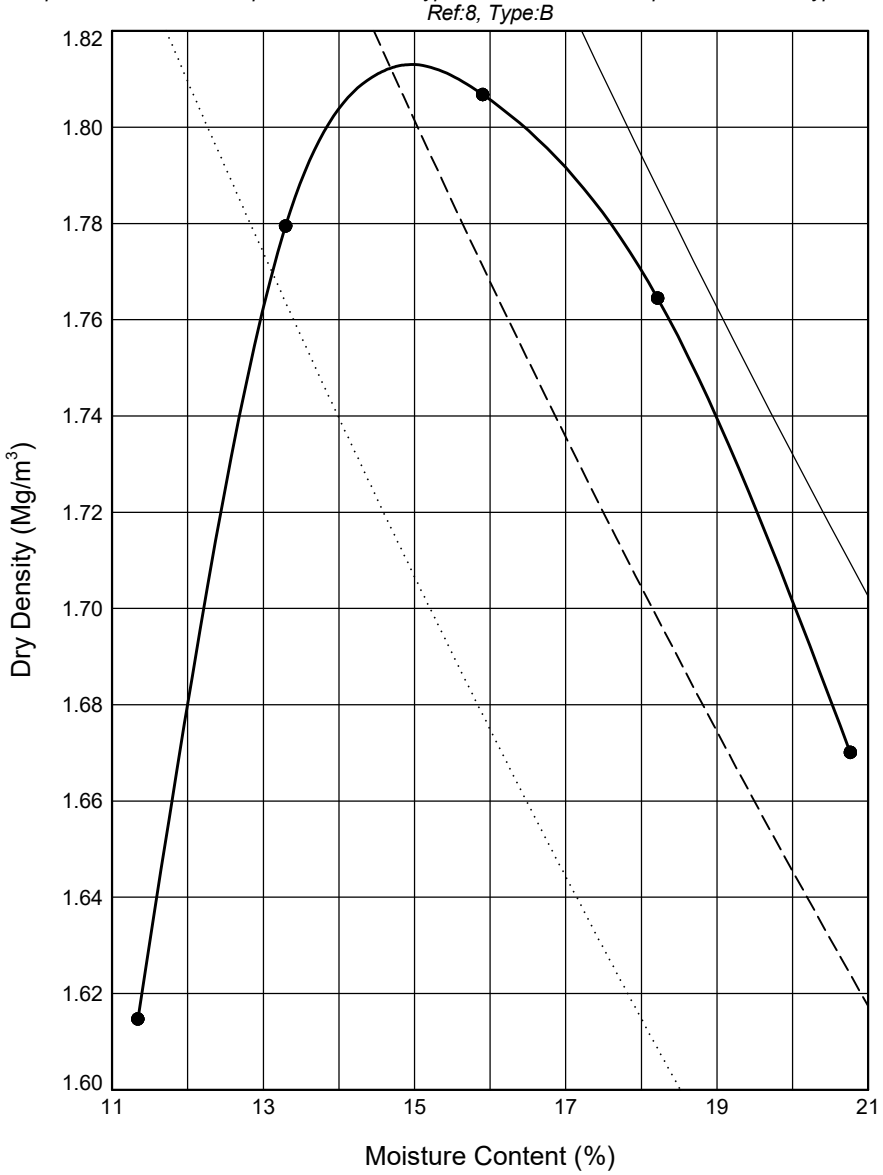
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DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **F22-TP313** Sample Ref: Sample Type: **AMAL** Depth (m): **1.80**

Amalgamation comprises: F22-TP313, Depth:1.80, Ref:10, Type:LB + F22-TP313, Depth:0.90, Ref:6, Type:B + F22-TP313, Depth:1.10, Ref:8, Type:B



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**16**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m^3)	:	**1.81**
% Retained on 37.5mm BS Sieve	:	**0**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**15**
% Retained on 20.0mm BS Sieve	:	**0**	Type of Mould	:	**CBR**	Method Used: **Clause 11.4**		
Particle Density - assumed (Mg/m^3)	:	**2.65**				Remarks: **CBR and MCV tests carried out at each point**		
Size of Soil Pieces	:	**<37.5mm**	Separate samples were used.					

Sample Description	Key to Air Voids Lines		
Grey slightly gravelly slightly sandy silty CLAY	——— 0%	– – – – 5%	····· 10%

STRUCTURAL SOILS
The Potteries
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Castleford
W. Yorkshire WF10 1NJ

Compiled By		Date
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Contract: **Sealink Friston**		Contract Ref: **563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - COMPACTIONS - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
Structural Soils Ltd, Branch Office - Castleford: The Potteries, Pottery Street, Castleford, West Yorkshire, WF10 1NJ. Tel: 01977-552255, Fax: 01977-552299, Web: www.soils.co.uk, Email: ask@soils.co.uk. | 05/03/24 - 12:04 | AF3 |

MOISTURE CONDITION VALUE

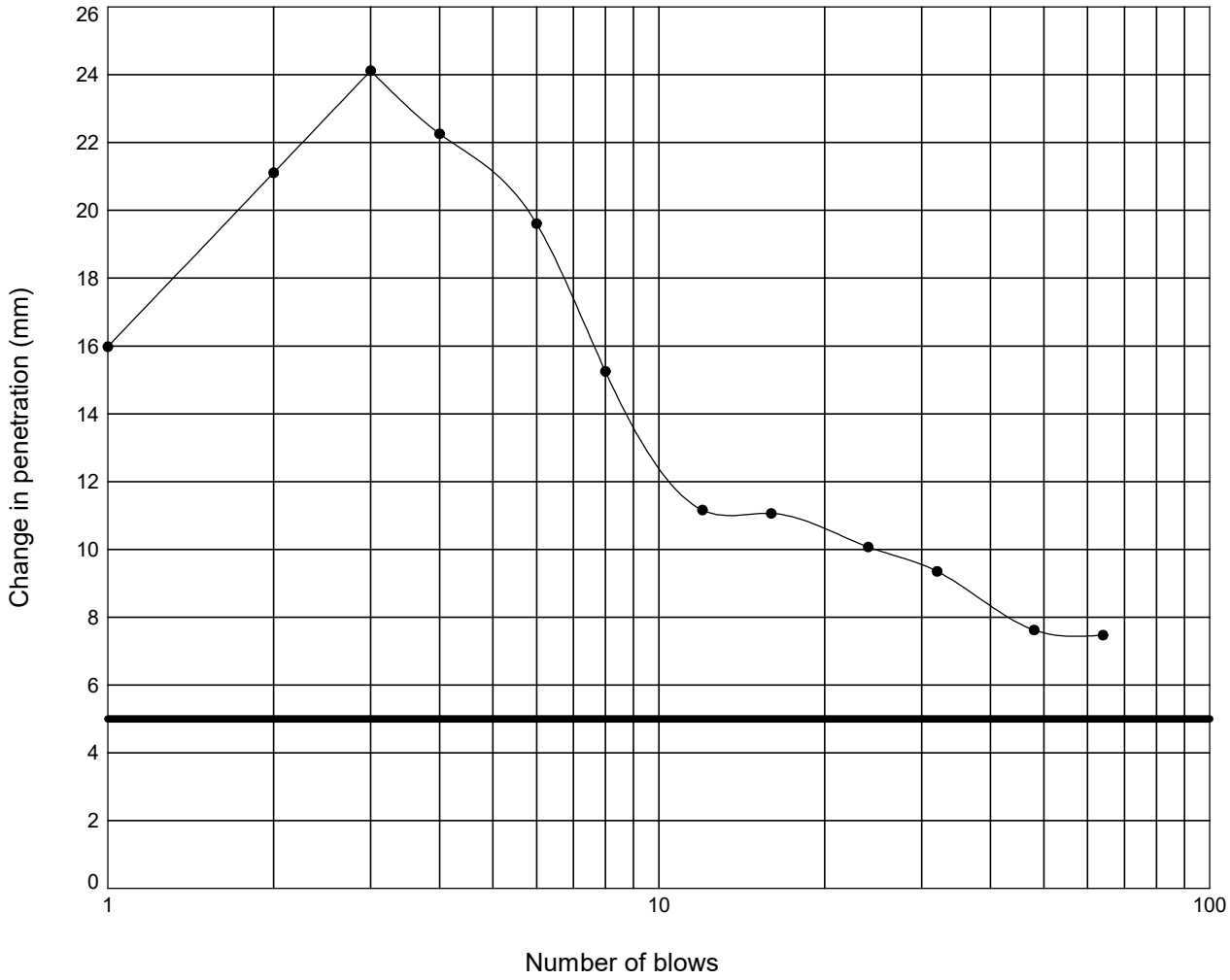
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP313** Sample Ref: Sample Type: **AMAL** Depth (m): **1.80**

Amalgamation comprises: F22-TP313, Depth:1.80, Ref:10, Type:LB + F22-TP313, Depth:0.90, Ref:6, Type:B + F22-TP313, Depth:1.10, Ref:8, Type:B

Description : **Grey slightly gravelly slightly sandy silty CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	11	%
Percentage retained on 20 mm sieve :	=	1	%
Moisture Condition Value :	=	17.7	
Interpretation of curve:	=	Curve of best fit - Fig 10	

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[redacted]	[redacted]	05/03/24
Contract		Contract Ref:
Sealink Friston		**563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - MCV -3- NATURAL FINAL - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
Structural Soils Ltd, Branch Office - Castleford: The Potteries, Pottery Street, Castleford, West Yorkshire, WF10 1NJ. Tel: 01977-552255, Fax: 01977-552299, Web: www.soils.co.uk, Email: ask@soils.co.uk. | 05/03/24 - 12:07 | AF3 |

MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP313** Sample Ref: Sample Type: **AMAL** Depth (m): **1.80**

Amalgamation comprises: F22-TP313, Depth:1.80, Ref:10, Type:LB + F22-TP313, Depth:0.90, Ref:6, Type:B + F22-TP313, Depth:1.10, Ref:8, Type:B

Description : **Grey slightly gravelly slightly sandy silty CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	13	%
Percentage retained on 20 mm sieve :	=	1	%
Moisture Condition Value :	=	16.2	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Compiled By		Date
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Contract		Contract Ref:
Sealink Friston		**563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - MCV -3- NATURAL FINAL - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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MOISTURE CONDITION VALUE

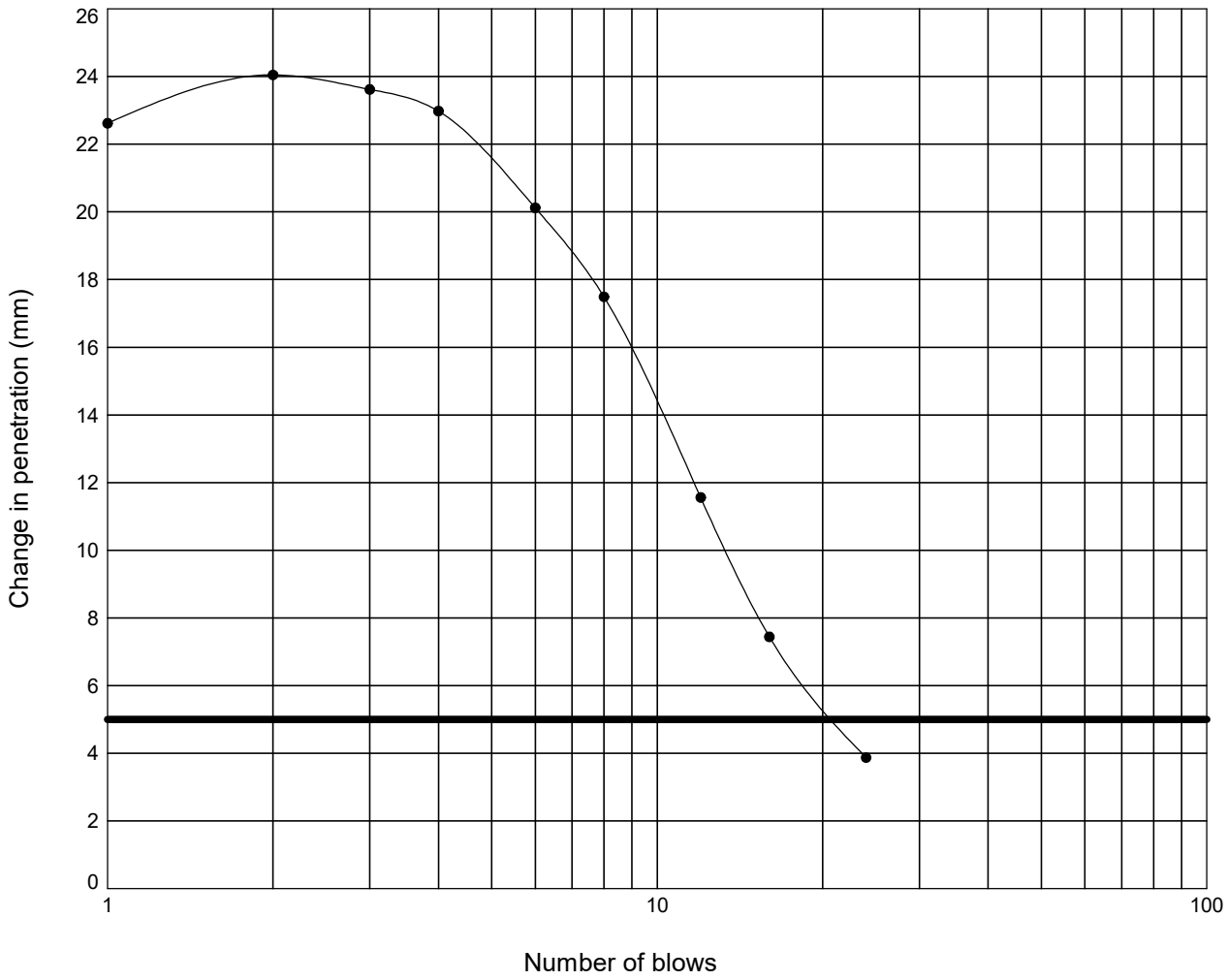
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP313** Sample Ref: Sample Type: **AMAL** Depth (m): **1.80**

Amalgamation comprises: F22-TP313, Depth:1.80, Ref:10, Type:LB + F22-TP313, Depth:0.90, Ref:6, Type:B + F22-TP313, Depth:1.10, Ref:8, Type:B

Description : **Grey slightly gravelly slightly sandy silty CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	15	%
Percentage retained on 20 mm sieve :	=	1	%
Moisture Condition Value :	=	12.7	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Compiled By		Date
[redacted]	[redacted]	05/03/24
Contract		Contract Ref:
Sealink Friston		**563835**

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MOISTURE CONDITION VALUE

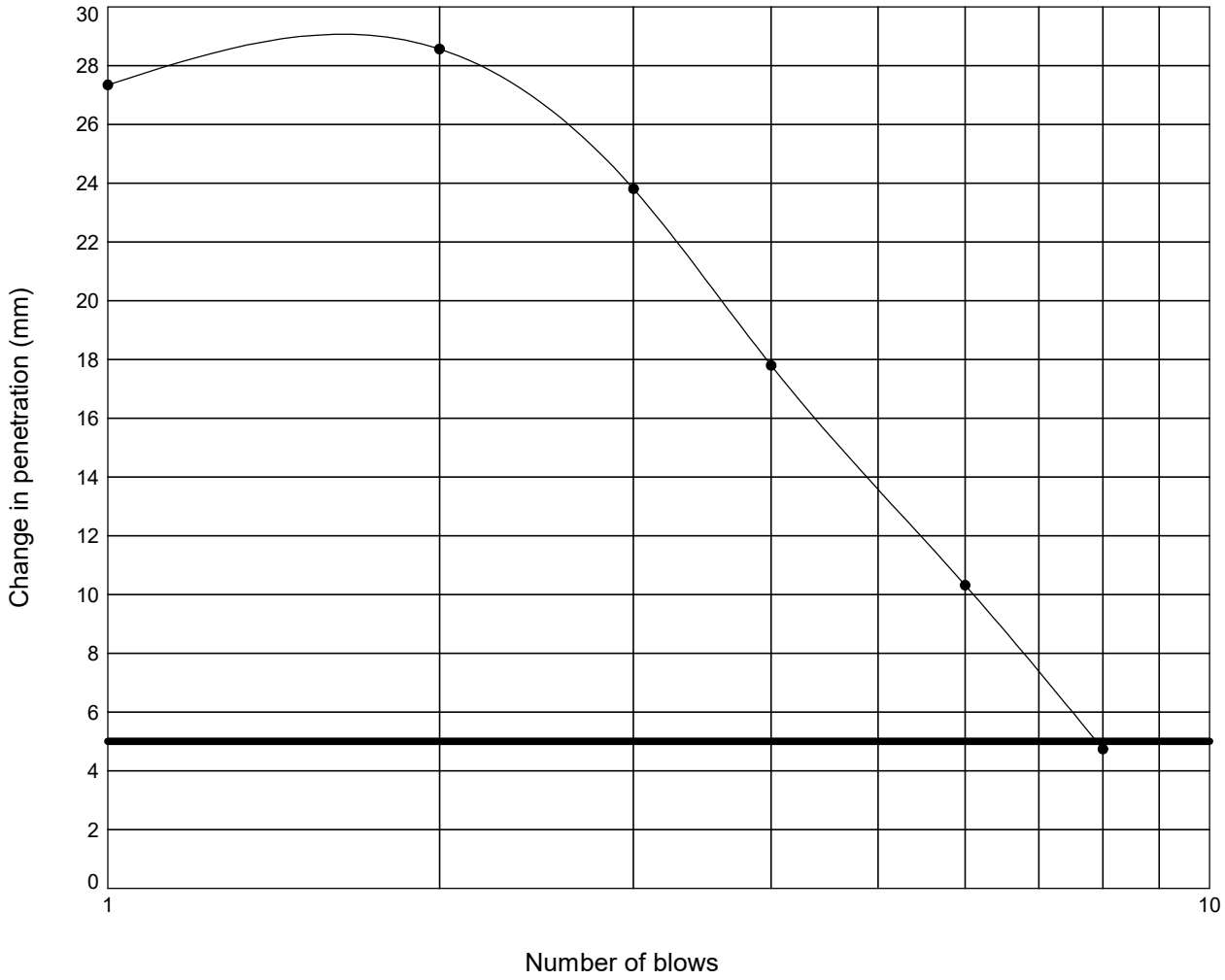
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP313** Sample Ref: Sample Type: **AMAL** Depth (m): **1.80**

Amalgamation comprises: F22-TP313, Depth:1.80, Ref:10, Type:LB + F22-TP313, Depth:0.90, Ref:6, Type:B + F22-TP313, Depth:1.10, Ref:8, Type:B

Description : **Grey slightly gravelly slightly sandy silty CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	18	%
Percentage retained on 20 mm sieve :	=	1	%
Moisture Condition Value :	=	8.7	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract		Contract Ref:
Sealink Friston		**563835**

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MOISTURE CONDITION VALUE

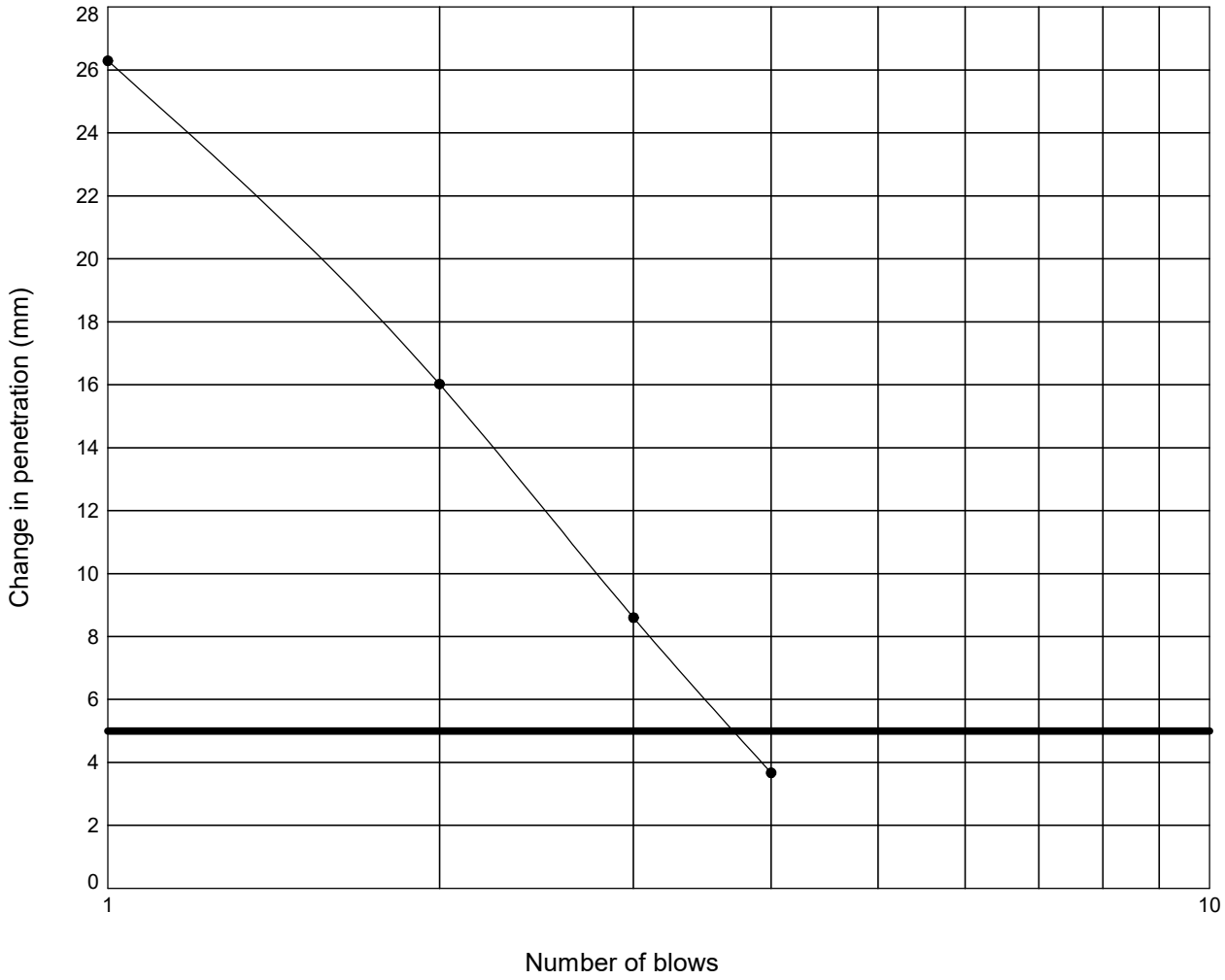
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP313** Sample Ref: Sample Type: **AMAL** Depth (m): **1.80**

Amalgamation comprises: F22-TP313, Depth:1.80, Ref:10, Type:LB + F22-TP313, Depth:0.90, Ref:6, Type:B + F22-TP313, Depth:1.10, Ref:8, Type:B

Description : **Grey slightly gravelly slightly sandy silty CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	20	%
Percentage retained on 20 mm sieve :	=	1	%
Moisture Condition Value :	=	5.6	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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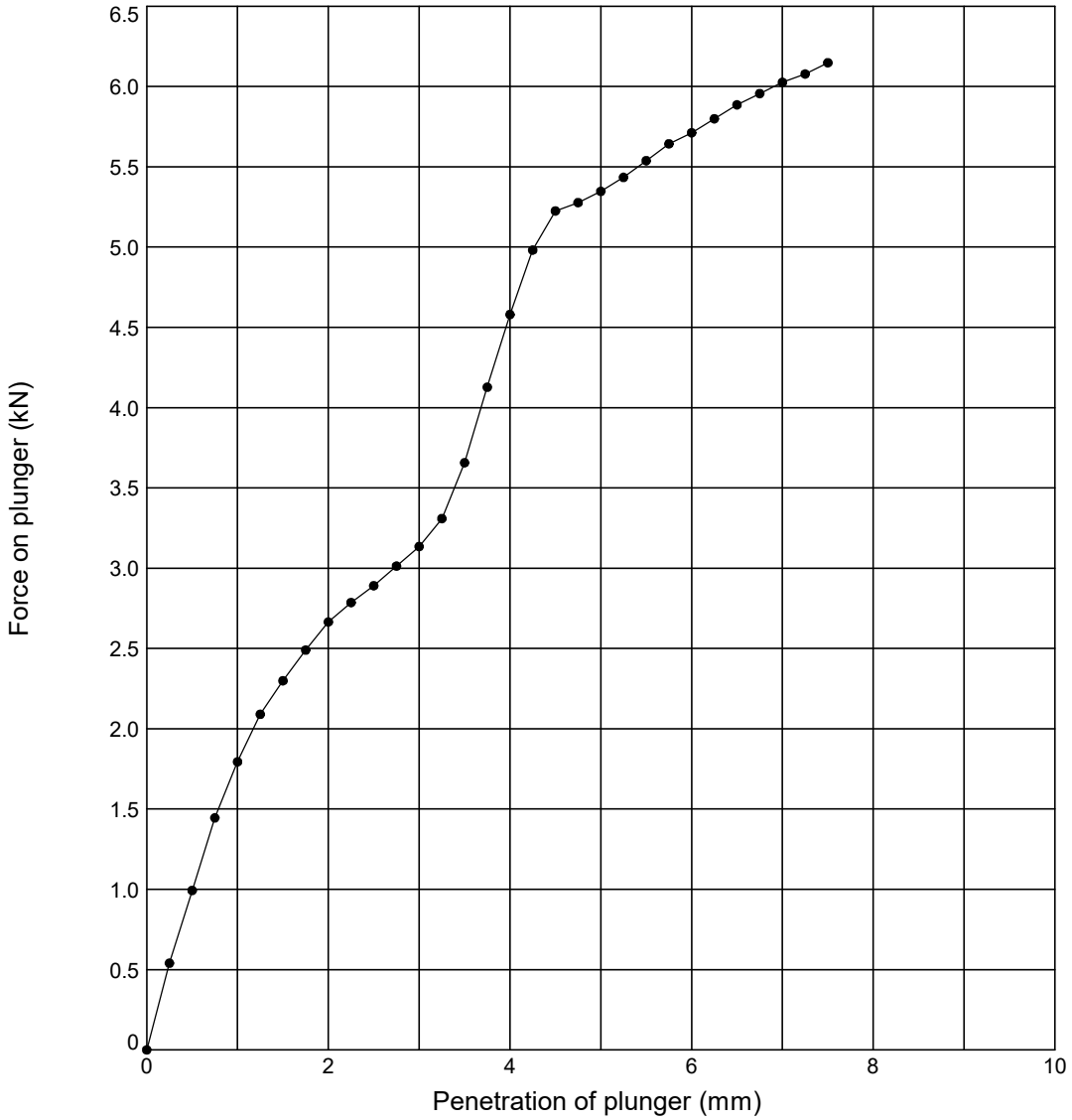
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - MCV -3- NATURAL FINAL - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP313** Sample Ref: Sample Type: **AMAL** Depth (m): **1.80**

Amalgamation comprises: F22-TP313, Depth:1.80, Ref:10, Type:LB + F22-TP313, Depth:0.90, Ref:6, Type:B + F22-TP313, Depth:1.10, Ref:8, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**11**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**12**	**11**
Initial Bulk Density (Mg/m^3)	:	**1.80**	Surcharge (kg)	:	**4.0**	CBR value (%)	**27**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.62**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**1**	Swelling (mm)	:	**-**			

Sample Description	Key
Grey slightly gravelly slightly sandy silty CLAY	● **Top** ⊠ **Base**

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Contract	Contract Ref:
Sealink Friston	**563835**

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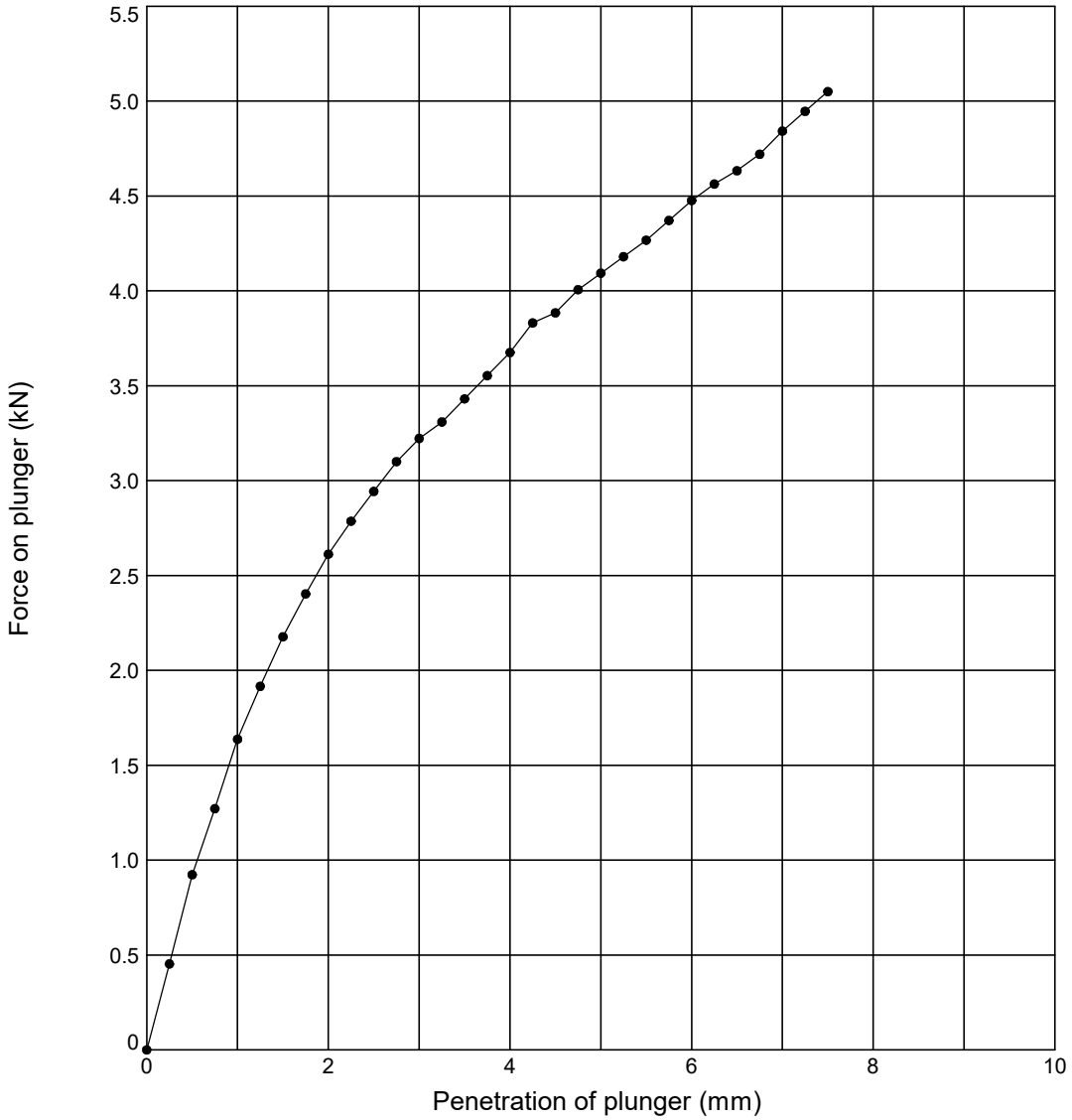
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - CBR - LAB -3- REPORT - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP313** Sample Ref: Sample Type: **AMAL** Depth (m): **1.80**

Amalgamation comprises: F22-TP313, Depth:1.80, Ref:10, Type:LB + F22-TP313, Depth:0.90, Ref:6, Type:B + F22-TP313, Depth:1.10, Ref:8, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**13**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**14**	**13**
Initial Bulk Density (Mg/m^3)	:	**2.02**	Surcharge (kg)	:	**4.0**	CBR value (%)	**22**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.78**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**1**	Swelling (mm)	:	**-**			

Sample Description	Key
Grey slightly gravelly slightly sandy silty CLAY	● **Top** ⊠ **Base**

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Contract	Contract Ref:
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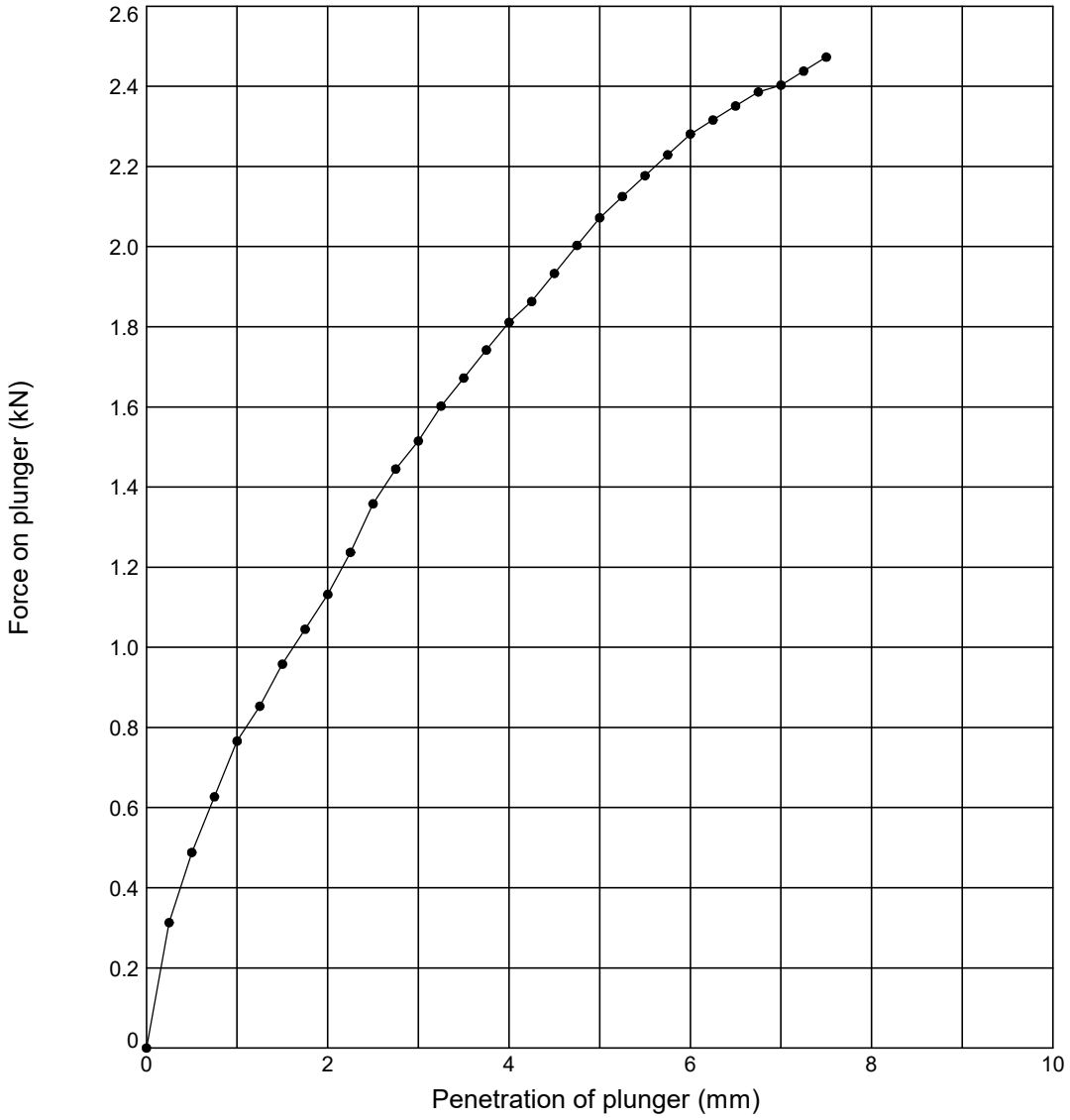
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - CBR - LAB -3- REPORT - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP313** Sample Ref: Sample Type: **AMAL** Depth (m): **1.80**

Amalgamation comprises: F22-TP313, Depth:1.80, Ref:10, Type:LB + F22-TP313, Depth:0.90, Ref:6, Type:B + F22-TP313, Depth:1.10, Ref:8, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**16**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**16**	**16**
Initial Bulk Density (Mg/m^3)	:	**2.09**	Surcharge (kg)	:	**4.0**	CBR value (%)	**10**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.80**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**1**	Swelling (mm)	:	**-**			

Sample Description	Key
Grey slightly gravelly slightly sandy silty CLAY	● **Top** ⊠ **Base**

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Compiled By		Date
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Contract	Contract Ref:
Sealink Friston	**563835**

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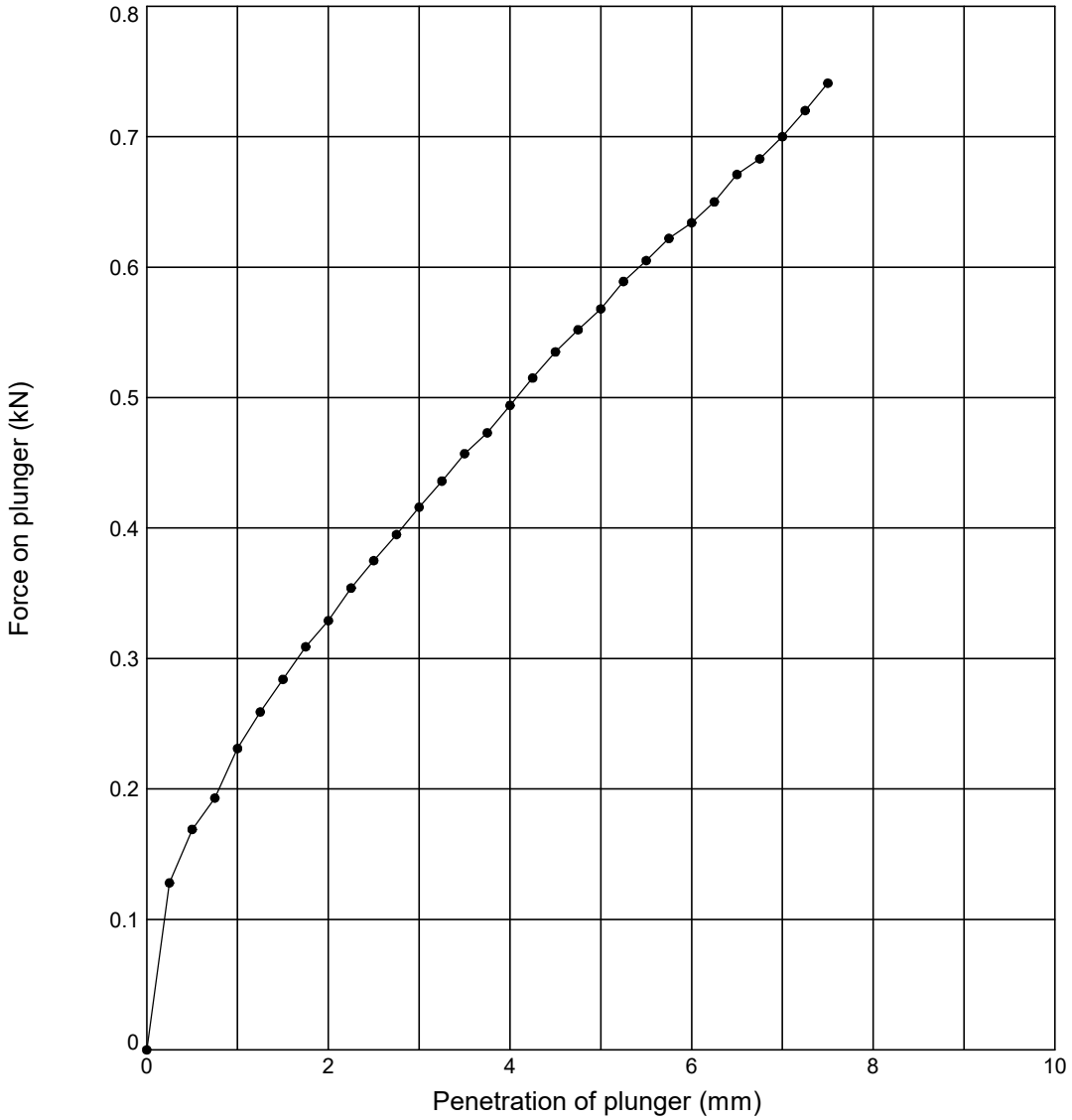
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - CBR - LAB -3- REPORT - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP313** Sample Ref: Sample Type: **AMAL** Depth (m): **1.80**

Amalgamation comprises: F22-TP313, Depth:1.80, Ref:10, Type:LB + F22-TP313, Depth:0.90, Ref:6, Type:B + F22-TP313, Depth:1.10, Ref:8, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**18**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**18**	**18**
Initial Bulk Density (Mg/m^3)	:	**2.09**	Surcharge (kg)	:	**4.0**	CBR value (%)	**2.8**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.77**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**1**	Swelling (mm)	:	**-**			

Sample Description	Key
Grey slightly gravelly slightly sandy silty CLAY	● **Top** ⊠ **Base**

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Contract	Contract Ref:
Sealink Friston	**563835**

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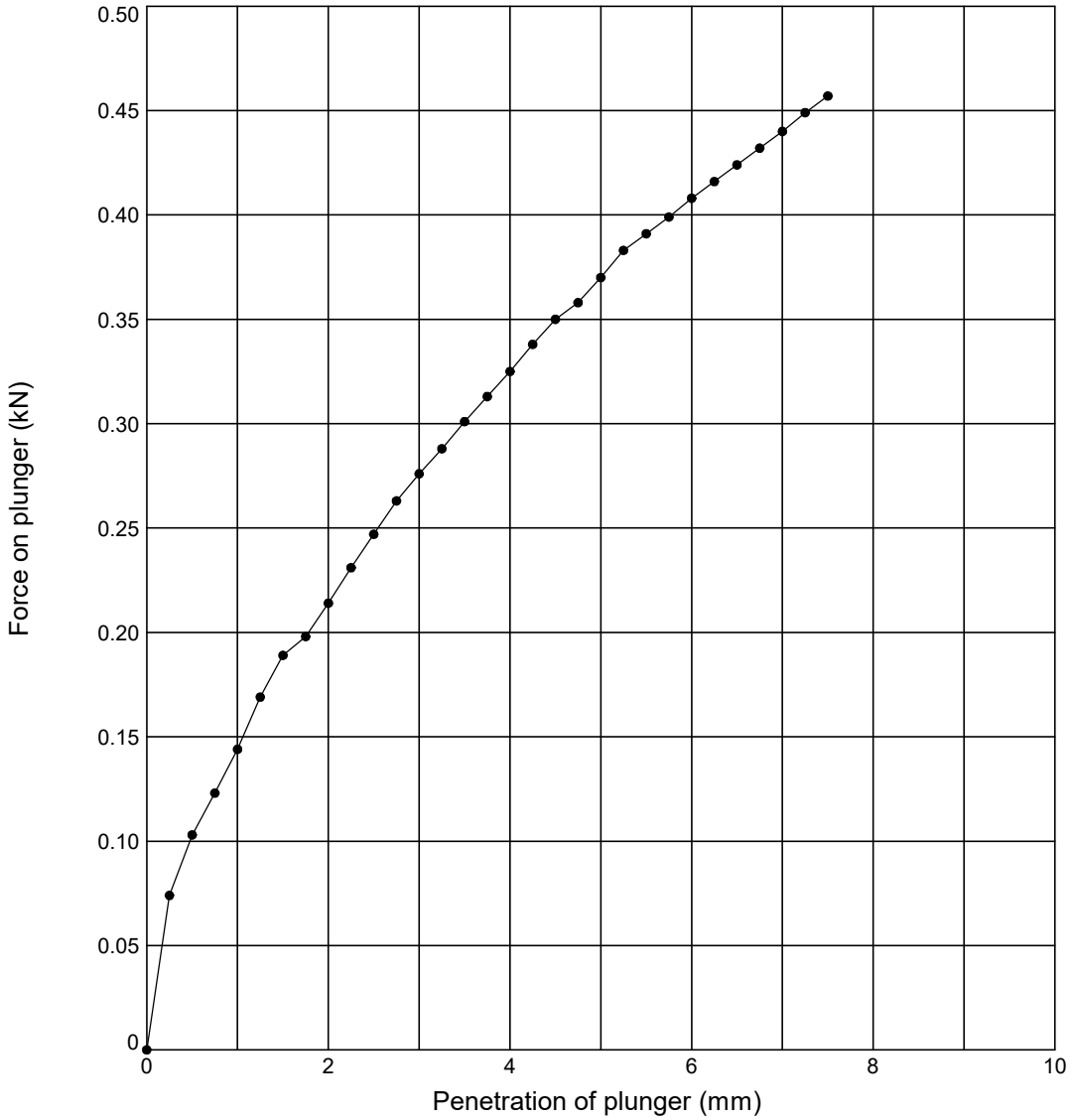
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP313** Sample Ref: Sample Type: **AMAL** Depth (m): **1.80**

Amalgamation comprises: F22-TP313, Depth:1.80, Ref:10, Type:LB + F22-TP313, Depth:0.90, Ref:6, Type:B + F22-TP313, Depth:1.10, Ref:8, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**21**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**20**	**21**
Initial Bulk Density (Mg/m^3)	:	**2.02**	Surcharge (kg)	:	**4.0**	CBR value (%)	**1.9**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.67**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**1**	Swelling (mm)	:	**-**			

Sample Description	Key
Grey slightly gravelly slightly sandy silty CLAY	● **Top** ⊠ **Base**

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Contract	Contract Ref:
Sealink Friston	**563835**

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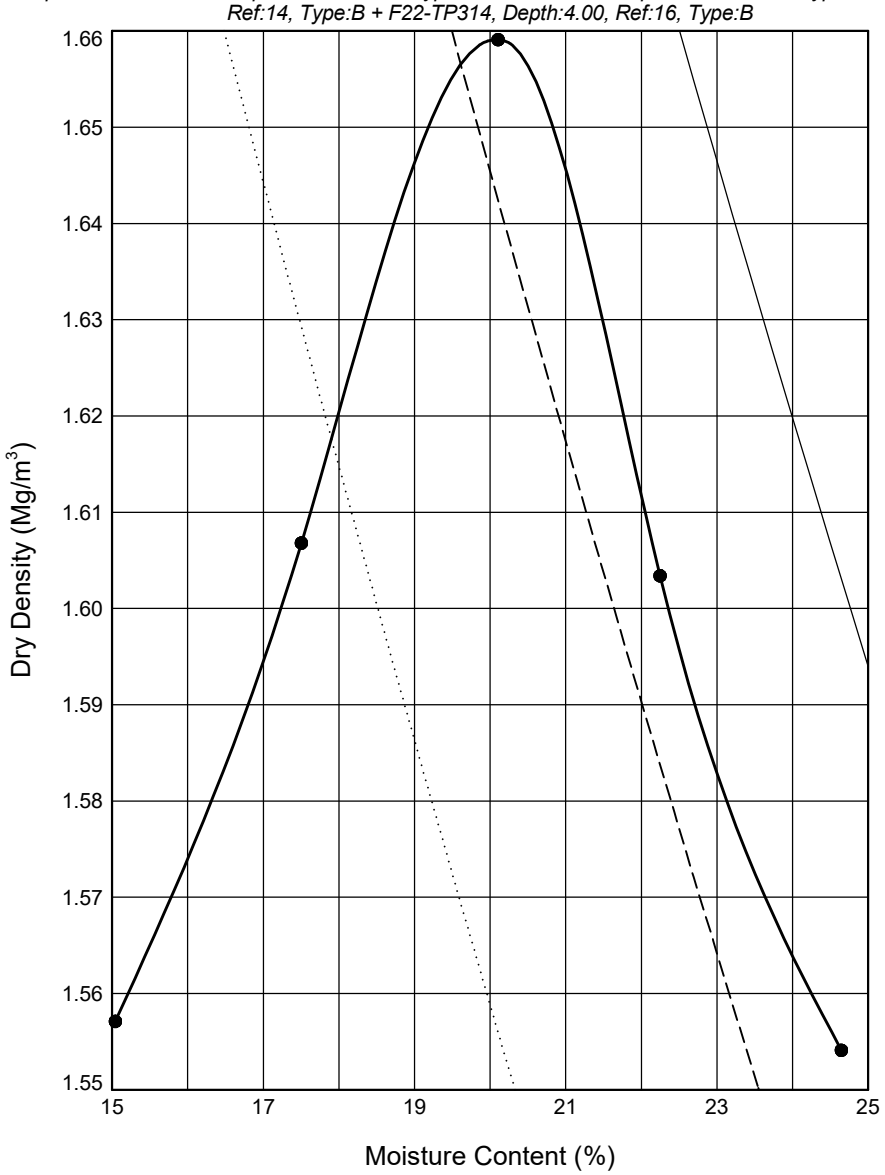
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - CBR - LAB -3- REPORT - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01
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DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **F22-TP314** Sample Ref: Sample Type: **AMAL** Depth (m): **1.40**

Amalgamation comprises: F22-TP314, Depth:1.40, Ref:11, Type:B + F22-TP314, Depth:2.00, Ref:12, Type:B + F22-TP314, Depth:3.00, Ref:14, Type:B + F22-TP314, Depth:4.00, Ref:16, Type:B



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**20**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m³)	:	**1.66**
% Retained on 37.5mm BS Sieve	:	**0**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**20**
% Retained on 20.0mm BS Sieve	:	**1**	Type of Mould	:	**CBR**	Method Used: **Clause 11.4**		
Particle Density - assumed (Mg/m³)	:	**2.65**				Remarks: **MCV test carried out at each point. CBR carried out on the 2 wettest points only**		
Size of Soil Pieces	:	**<37.5mm**	Separate samples were used.					

Sample Description	Key to Air Voids Lines		
Dark brown mottled white slightly gravelly slightly sandy CLAY	——— 0%	– – – – 5%	····· 10%

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Contract	Contract Ref:
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GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - COMPACTIONS - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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MOISTURE CONDITION VALUE

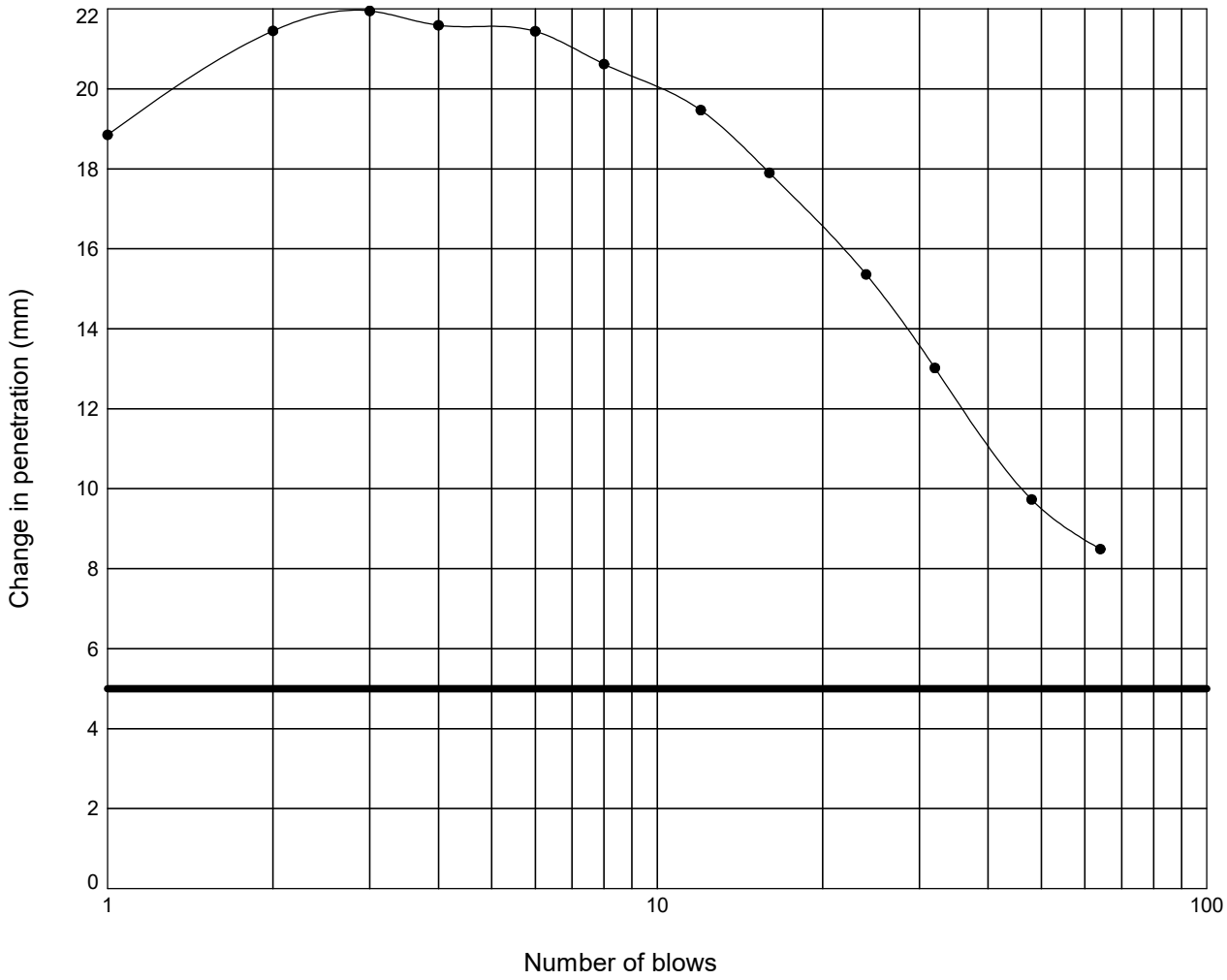
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP314** Sample Ref: Sample Type: **AMAL** Depth (m): **1.40**

Amalgamation comprises: F22-TP314, Depth:1.40, Ref:11, Type:B + F22-TP314, Depth:2.00, Ref:12, Type:B + F22-TP314, Depth:3.00, Ref:14, Type:B + F22-TP314, Depth:4.00, Ref:16, Type:B

Description : **Dark brown mottled white slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	14	%
Percentage retained on 20 mm sieve :	=	1	%
Moisture Condition Value :	=	19.3	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract		Contract Ref:
Sealink Friston		**563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - MCV -3- NATURAL FINAL - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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MOISTURE CONDITION VALUE

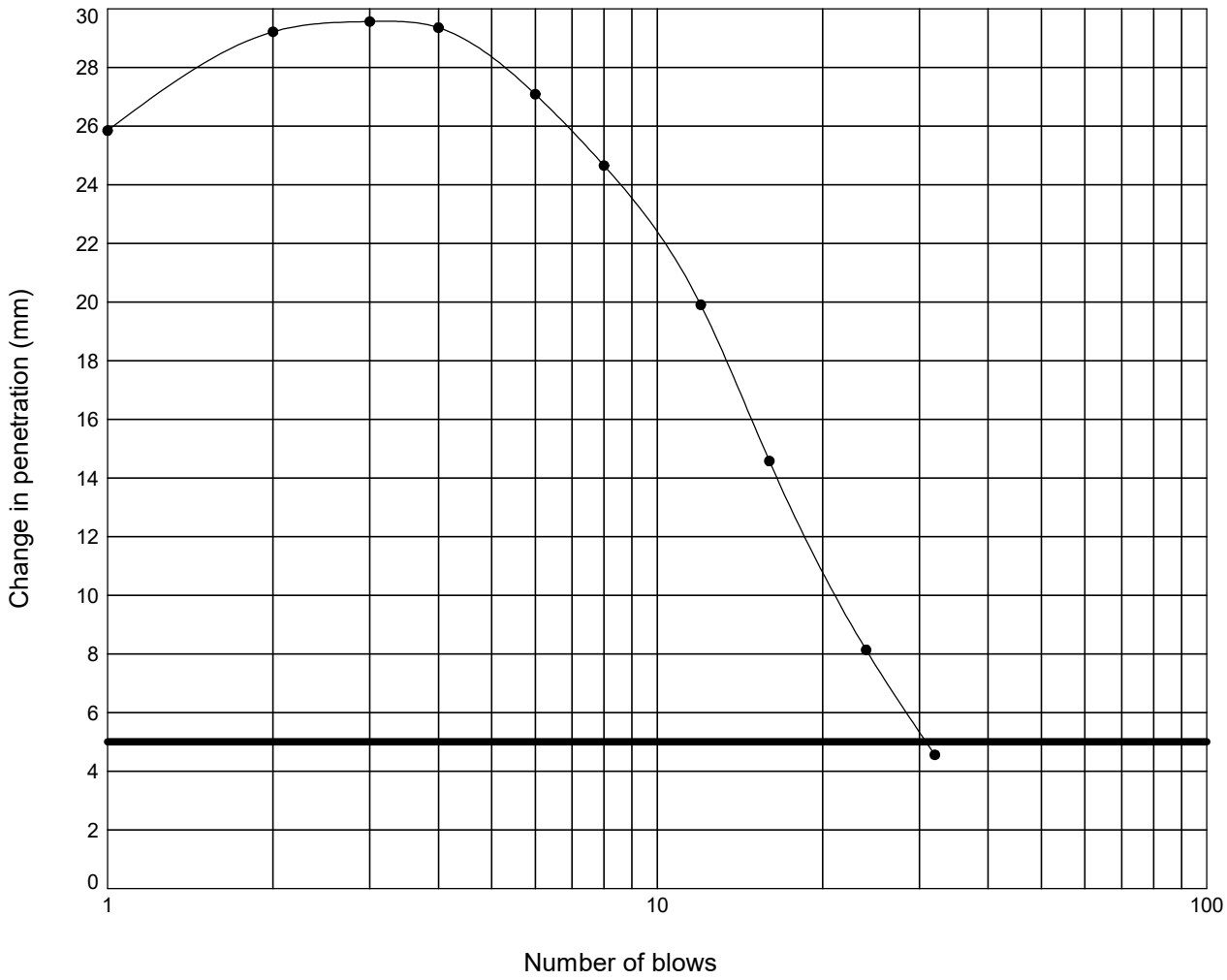
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP314** Sample Ref: Sample Type: **AMAL** Depth (m): **1.40**

Amalgamation comprises: F22-TP314, Depth:1.40, Ref:11, Type:B + F22-TP314, Depth:2.00, Ref:12, Type:B + F22-TP314, Depth:3.00, Ref:14, Type:B + F22-TP314, Depth:4.00, Ref:16, Type:B

Description : **Dark brown mottled white slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	= 17	%
Percentage retained on 20 mm sieve :	= 1	%
Moisture Condition Value :	= 14.3	
Interpretation of curve:	= Steepest straight line - Fig 9	

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Compiled By		Date
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Contract	Contract Ref:
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MOISTURE CONDITION VALUE

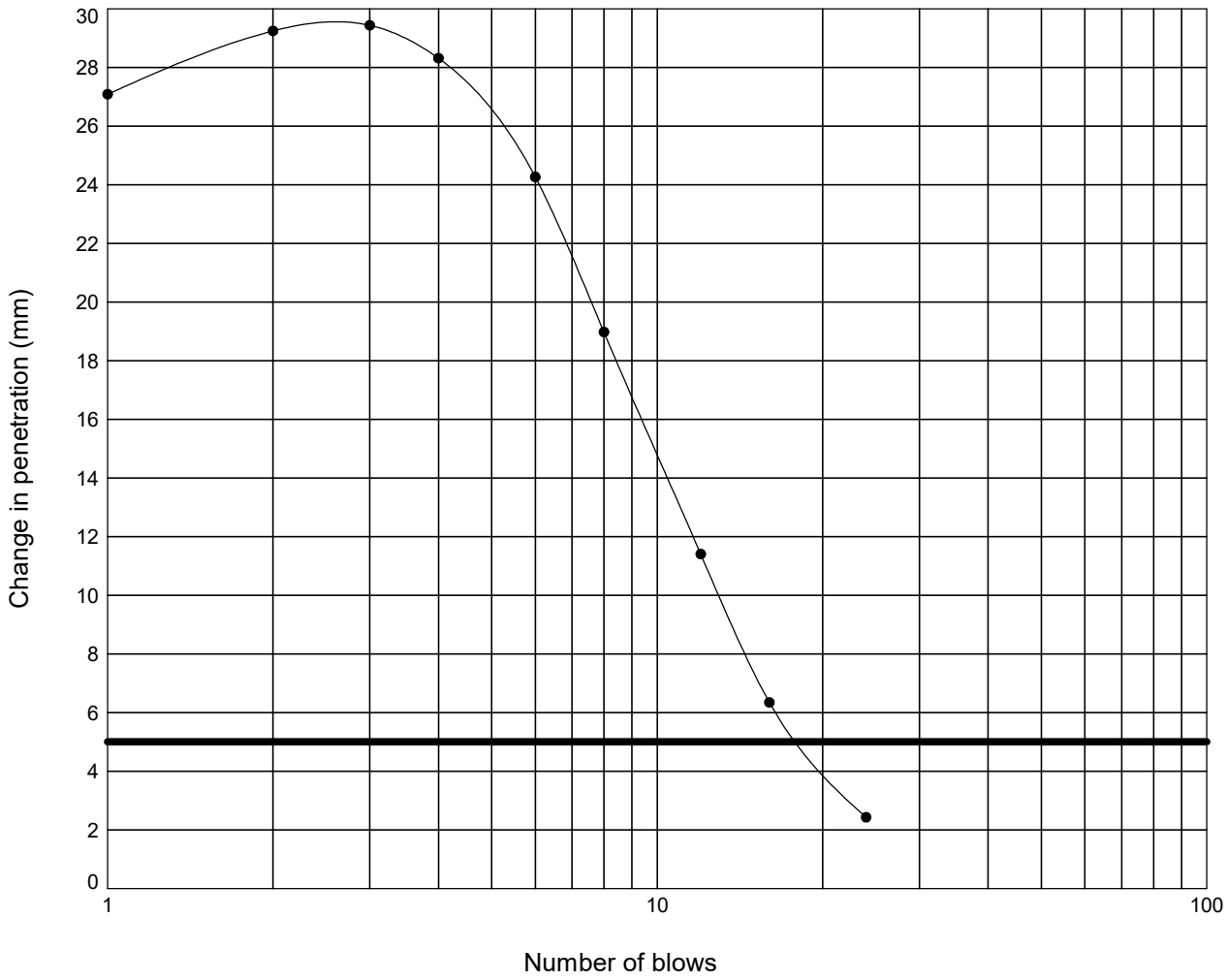
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP314** Sample Ref: Sample Type: **AMAL** Depth (m): **1.40**

Amalgamation comprises: F22-TP314, Depth:1.40, Ref:11, Type:B + F22-TP314, Depth:2.00, Ref:12, Type:B + F22-TP314, Depth:3.00, Ref:14, Type:B + F22-TP314, Depth:4.00, Ref:16, Type:B

Description : **Dark brown mottled white slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	17	%
Percentage retained on 20 mm sieve :	=	1	%
Moisture Condition Value :	=	12.3	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract: **Sealink Friston**		Contract Ref: **563835**

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MOISTURE CONDITION VALUE

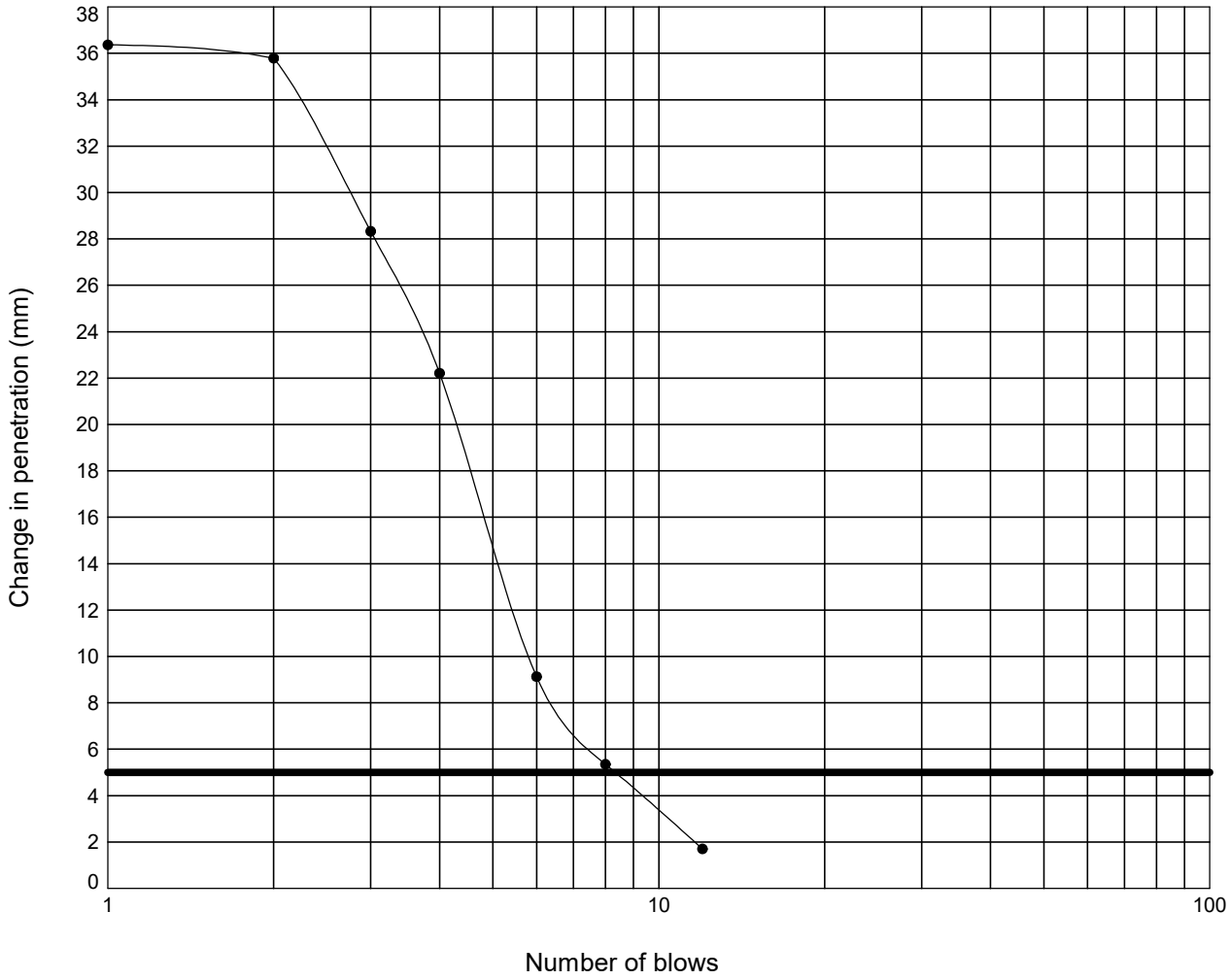
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP314** Sample Ref: Sample Type: **AMAL** Depth (m): **1.40**

Amalgamation comprises: F22-TP314, Depth:1.40, Ref:11, Type:B + F22-TP314, Depth:2.00, Ref:12, Type:B + F22-TP314, Depth:3.00, Ref:14, Type:B + F22-TP314, Depth:4.00, Ref:16, Type:B

Description : **Dark brown mottled white slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	20	%
Percentage retained on 20 mm sieve :	=	1	%
Moisture Condition Value :	=	8.3	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract		Contract Ref:
Sealink Friston		**563835**

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MOISTURE CONDITION VALUE

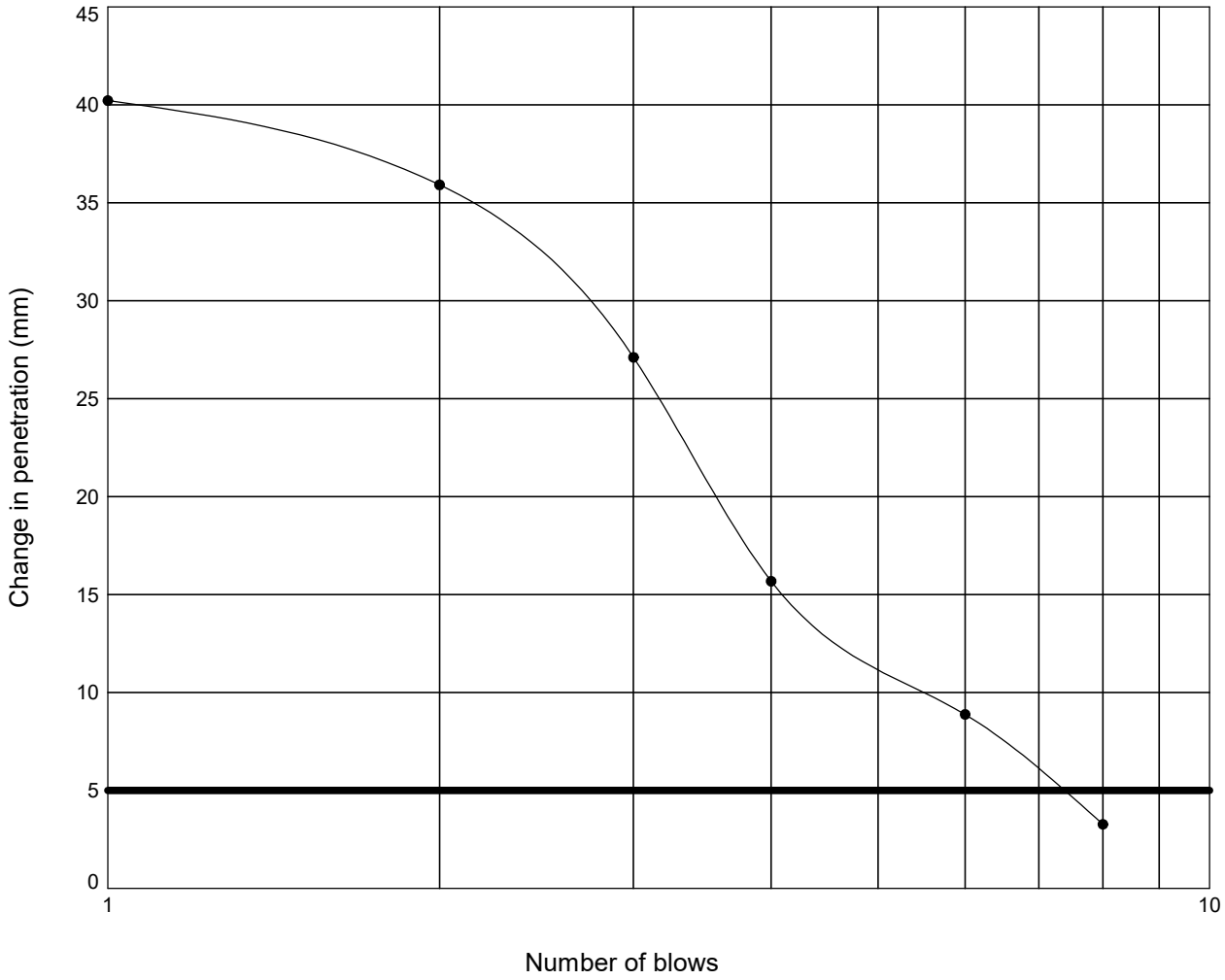
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP314** Sample Ref: Sample Type: **AMAL** Depth (m): **1.40**

Amalgamation comprises: F22-TP314, Depth:1.40, Ref:11, Type:B + F22-TP314, Depth:2.00, Ref:12, Type:B + F22-TP314, Depth:3.00, Ref:14, Type:B + F22-TP314, Depth:4.00, Ref:16, Type:B

Description : **Dark brown mottled white slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	= 21	%
Percentage retained on 20 mm sieve :	= 1	%
Moisture Condition Value :	= 7.2	
Interpretation of curve:	= Steepest straight line - Fig 9	

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Contract	Contract Ref:
Sealink Friston	**563835**

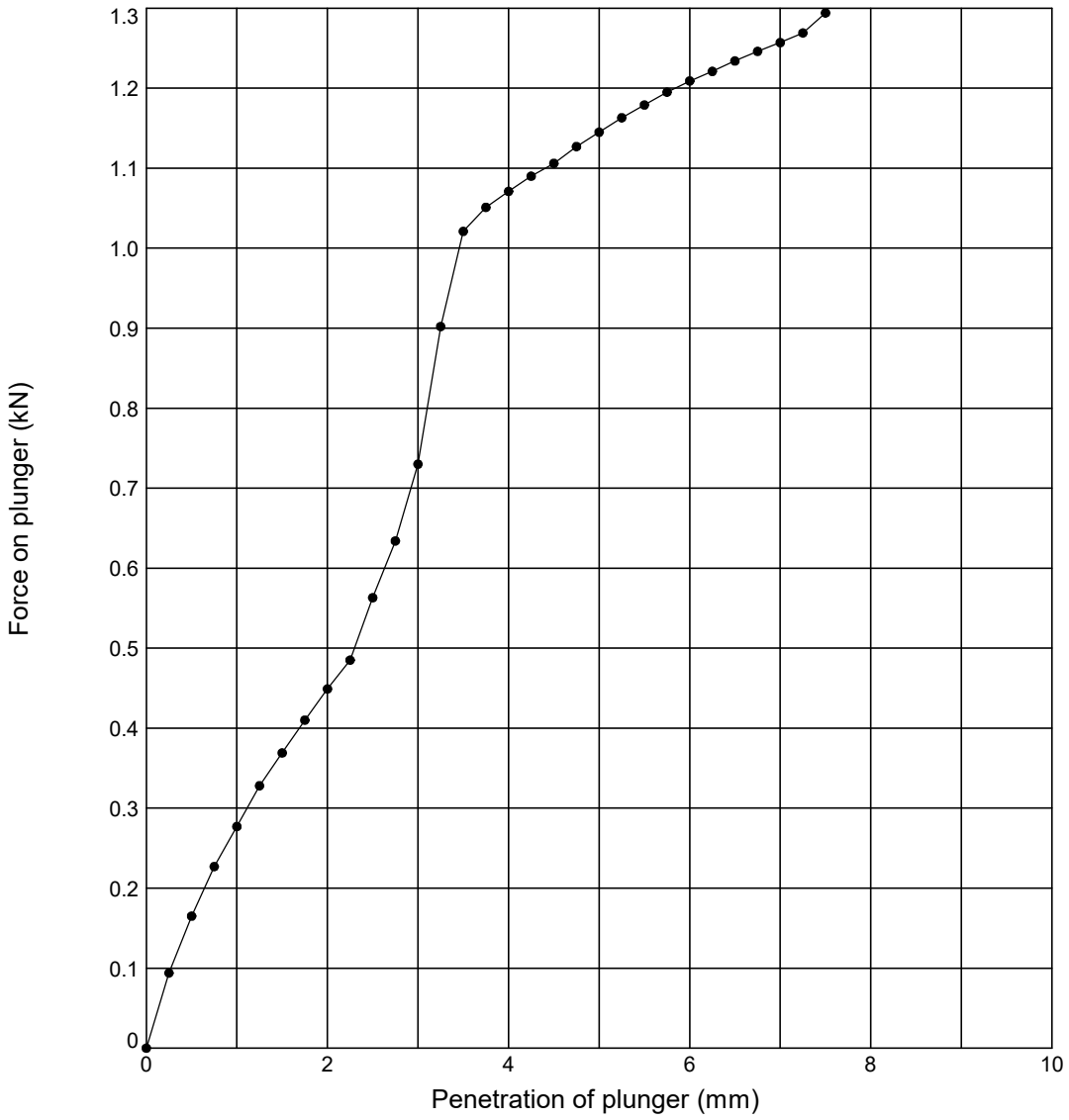
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP314** Sample Ref: Sample Type: **AMAL** Depth (m): **1.40**

Amalgamation comprises: F22-TP314, Depth:1.40, Ref:11, Type:B + F22-TP314, Depth:2.00, Ref:12, Type:B + F22-TP314, Depth:3.00, Ref:14, Type:B + F22-TP314, Depth:4.00, Ref:16, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**22**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**22**	**23**
Initial Bulk Density (Mg/m^3)	:	**1.96**	Surcharge (kg)	:	**4.0**	CBR value (%)	**5.7**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.60**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**1**	Swelling (mm)	:	**-**			

Sample Description	Key
Dark brown mottled white slightly gravelly slightly sandy CLAY	● **Top** ⊠ **Base**

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Contract	Contract Ref:
Sealink Friston	**563835**

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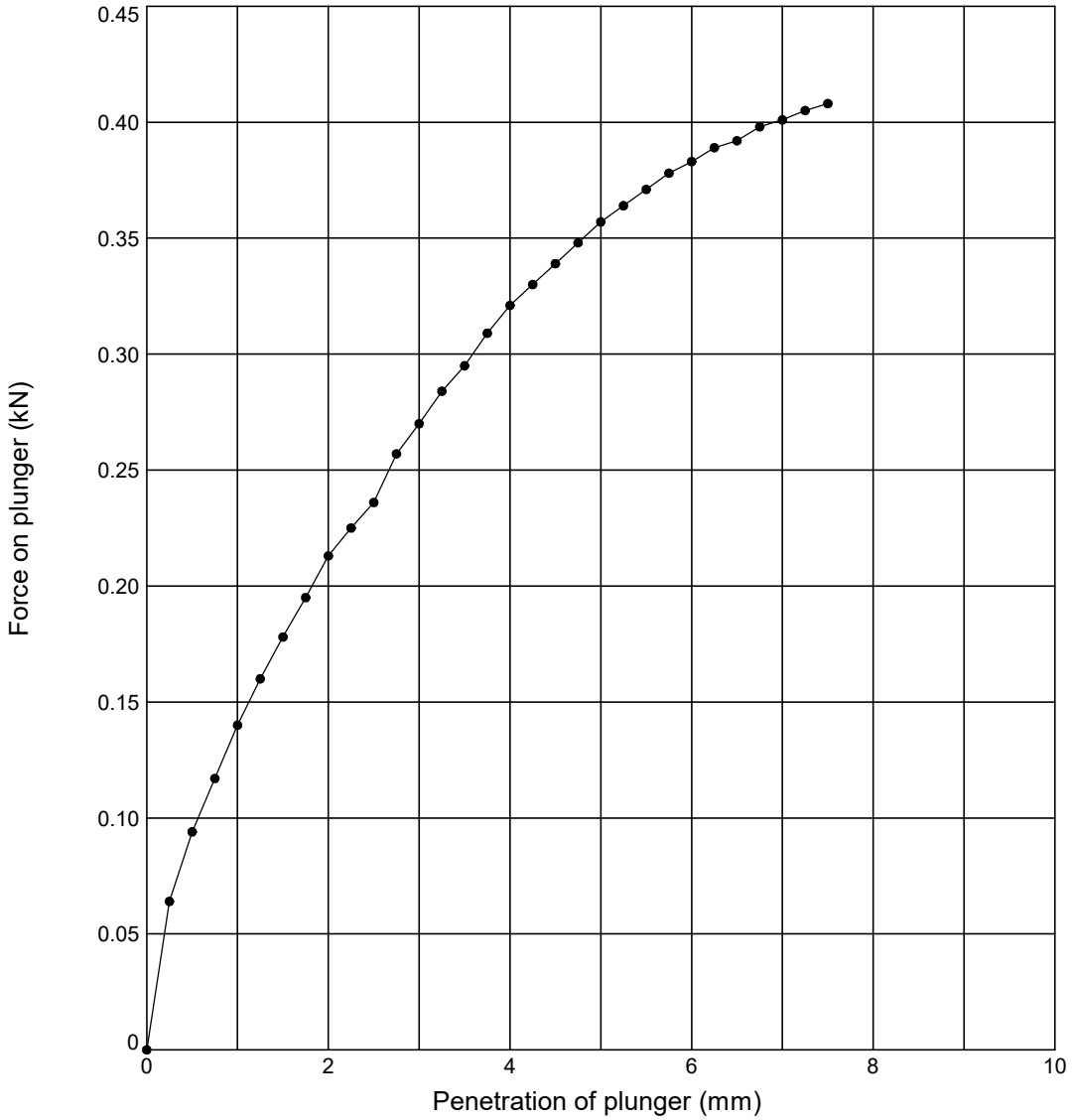
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP314** Sample Ref: Sample Type: **AMAL** Depth (m): **1.40**

Amalgamation comprises: F22-TP314, Depth:1.40, Ref:11, Type:B + F22-TP314, Depth:2.00, Ref:12, Type:B + F22-TP314, Depth:3.00, Ref:14, Type:B + F22-TP314, Depth:4.00, Ref:16, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**25**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**25**	**25**
Initial Bulk Density (Mg/m^3)	:	**1.94**	Surcharge (kg)	:	**4.0**	CBR value (%)	**1.8**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.56**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**1**	Swelling (mm)	:	**-**			

Sample Description	Key
Dark brown mottled white slightly gravelly slightly sandy CLAY	● **Top** ⊠ **Base**

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Compiled By		Date
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Contract	Contract Ref:
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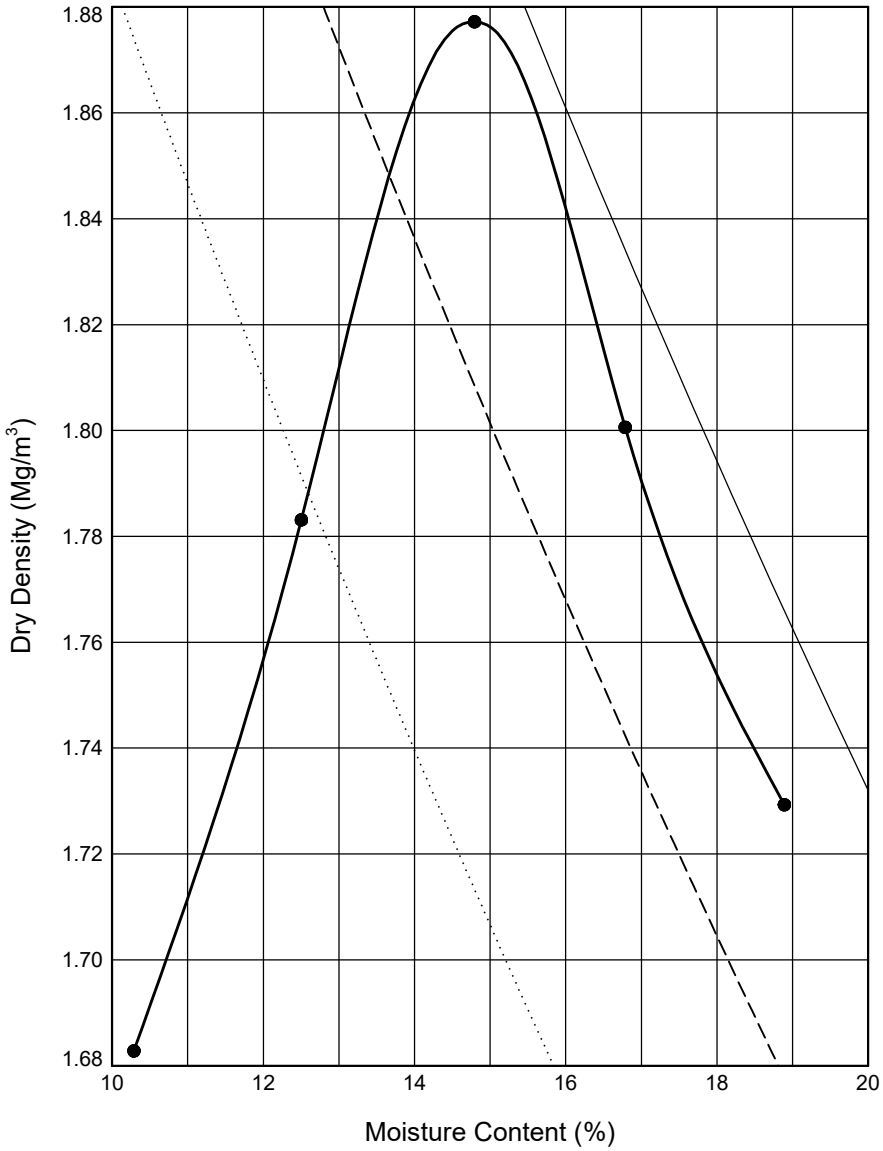
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DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **F22-TP315** Sample Ref: Sample Type: **AMAL** Depth (m): **1.10**

Amalgamation comprises: F22-TP315, Depth:1.10, Ref:15, Type:LB + F22-TP315, Depth:1.10, Ref:8, Type:B



Initial Sample Conditions		Test Details		Test Results	
Initial Moisture Content (%)	: **15**	Compaction Type	: **Light**	Maximum Dry Density (Mg/m³)	: **1.88**
% Retained on 37.5mm BS Sieve	: **4**	Mass of Rammer (kg):	**2.5**	Optimum Moisture Content (%)	: **15**
% Retained on 20.0mm BS Sieve	: **2**	Type of Mould	: **CBR**	Method Used: **Clause 11.4**	
Particle Density - assumed (Mg/m³)	: **2.65**			Remarks: **CBR and MCV tests carried out at each point**	
Size of Soil Pieces	:**<37.5mm**	Separate samples were used.			

Sample Description	Key to Air Voids Lines		
Orangish brown slightly gravelly slightly sandy silty CLAY	——— 0%	– – – – 5%	····· 10%

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MOISTURE CONDITION VALUE

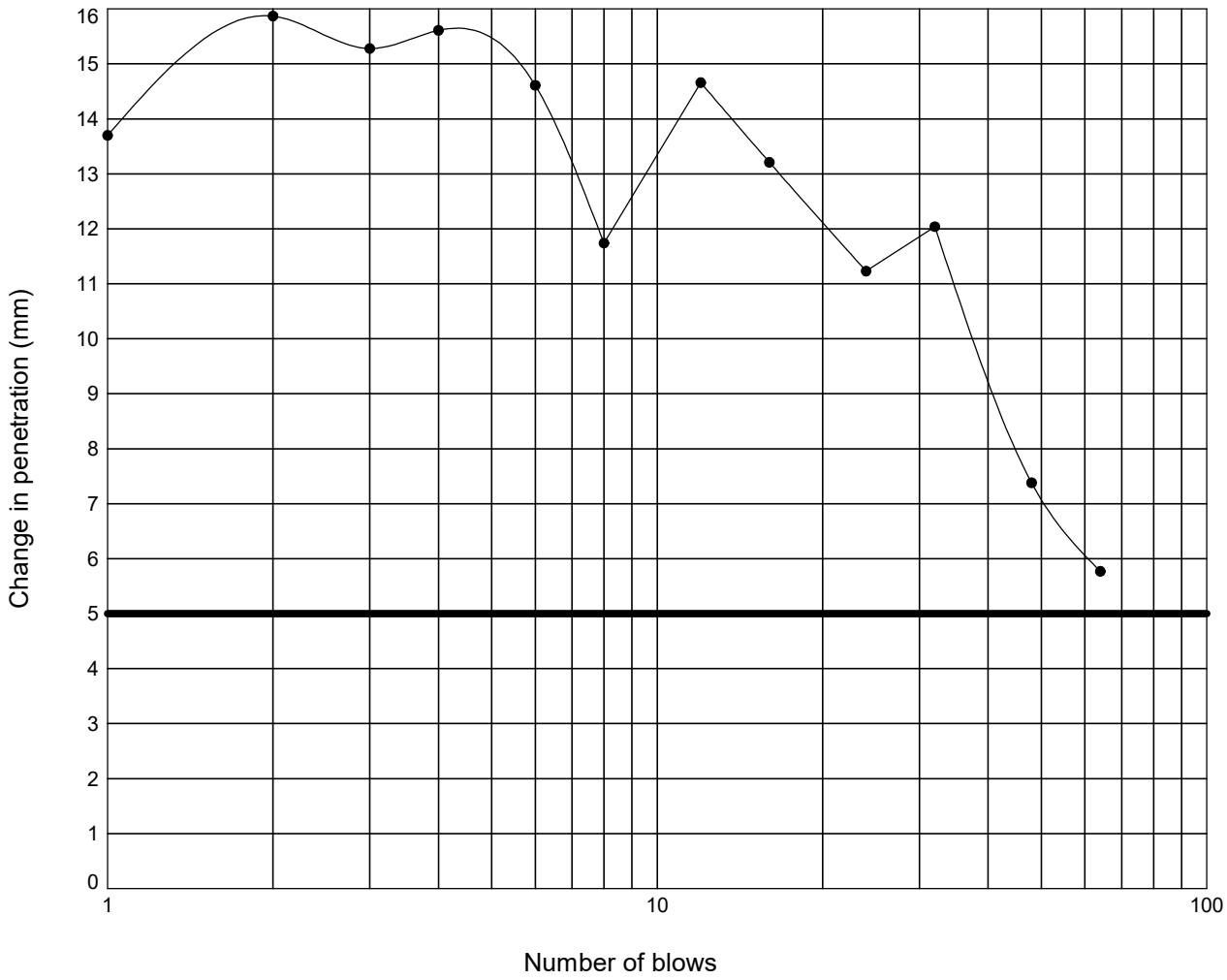
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP315** Sample Ref: Sample Type: **AMAL** Depth (m): **1.10**

Amalgamation comprises: F22-TP315, Depth:1.10, Ref:15, Type:LB + F22-TP315, Depth:1.10, Ref:8, Type:B

Description : **Orangish brown slightly gravelly slightly sandy silty CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	= 10.0	%
Percentage retained on 20 mm sieve :	= 5	%
Moisture Condition Value :	= 18.7	
Interpretation of curve:	= Curve of best fit - Fig 10	

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Contract: **Sealink Friston**		Contract Ref: **563835**

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MOISTURE CONDITION VALUE

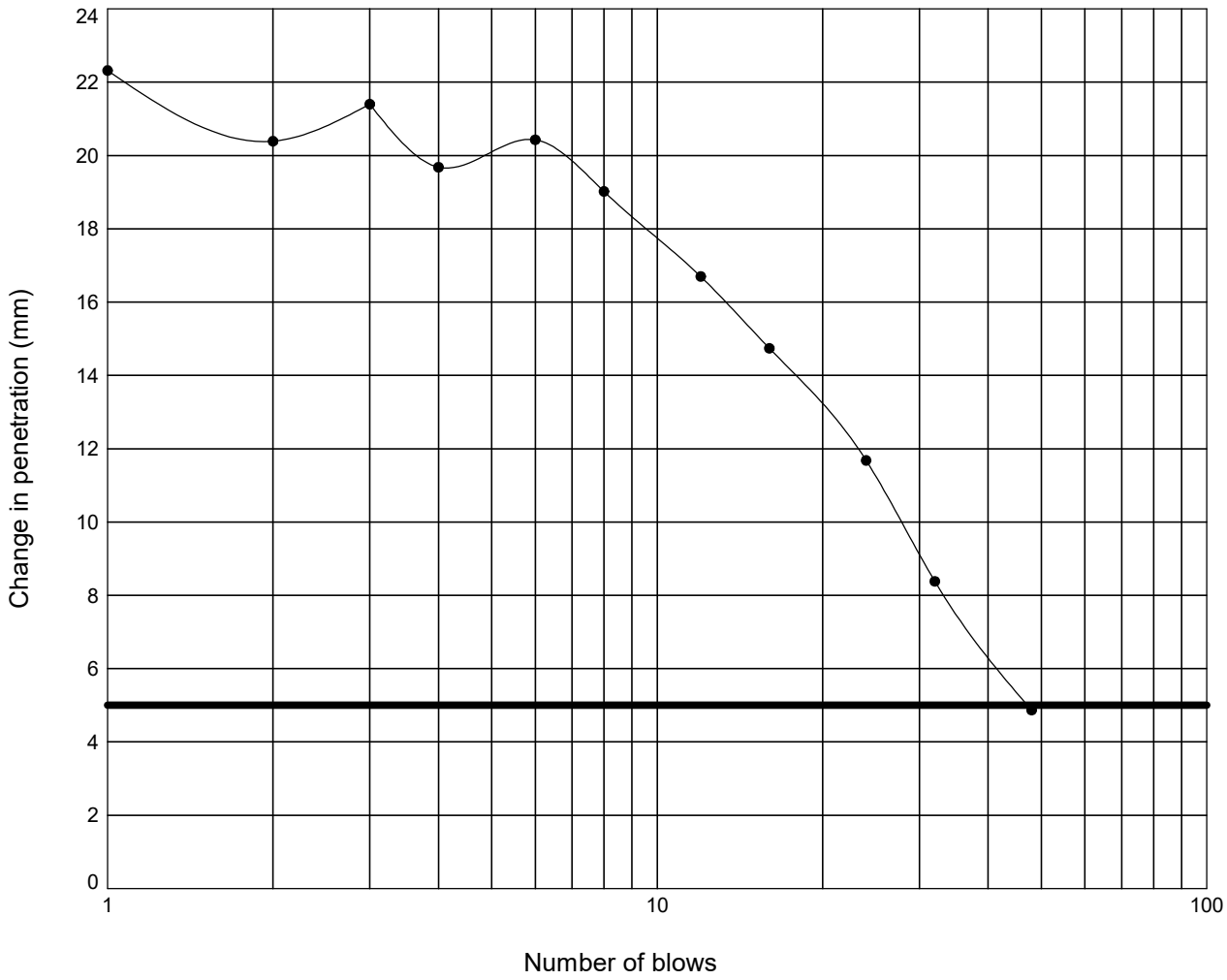
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP315** Sample Ref: Sample Type: **AMAL** Depth (m): **1.10**

Amalgamation comprises: F22-TP315, Depth:1.10, Ref:15, Type:LB + F22-TP315, Depth:1.10, Ref:8, Type:B

Description : **Orangish brown slightly gravelly slightly sandy silty CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	13	%
Percentage retained on 20 mm sieve :	=	5	%
Moisture Condition Value :	=	16.3	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract		Contract Ref:
Sealink Friston		**563835**

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MOISTURE CONDITION VALUE

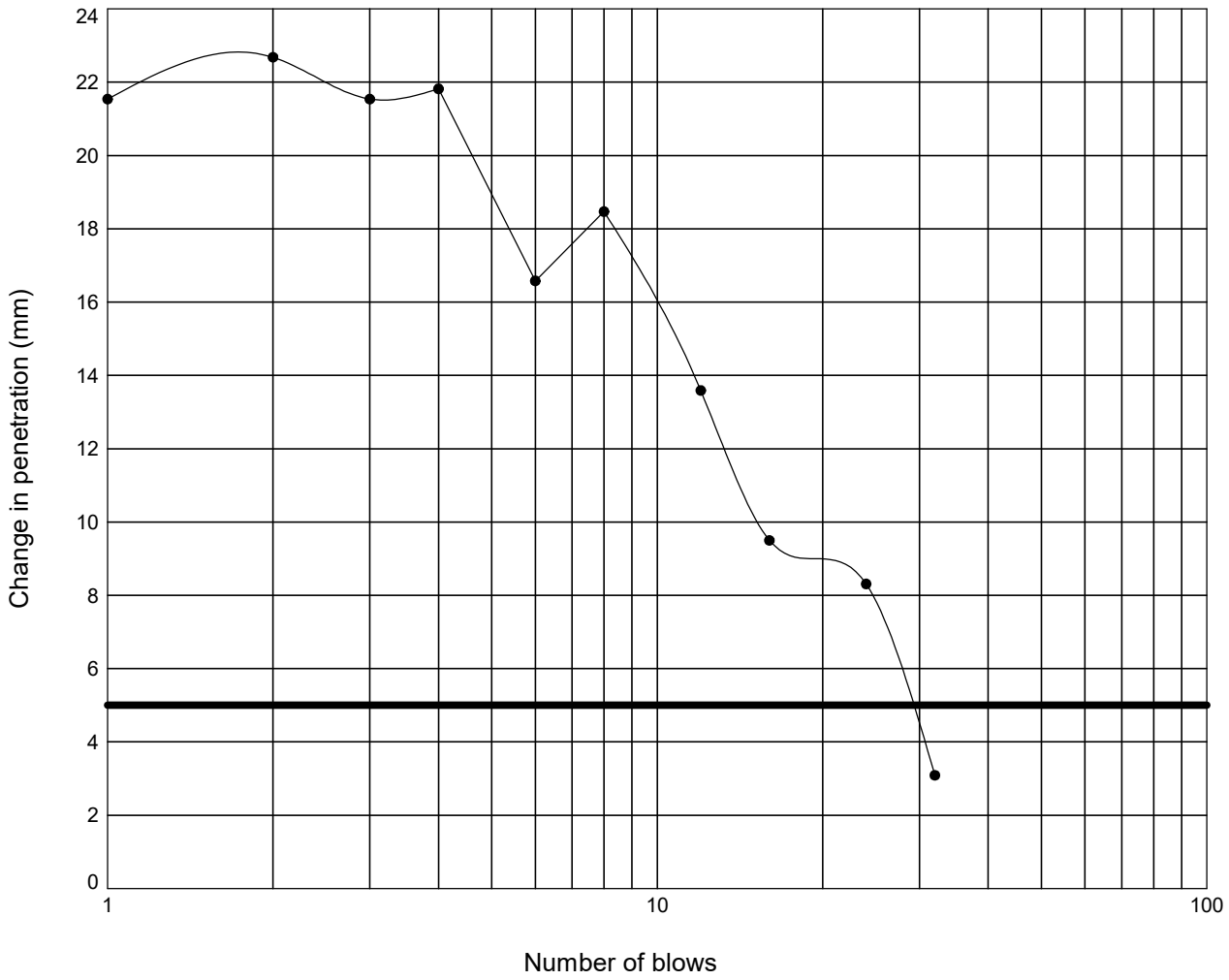
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP315** Sample Ref: Sample Type: **AMAL** Depth (m): **1.10**

Amalgamation comprises: F22-TP315, Depth:1.10, Ref:15, Type:LB + F22-TP315, Depth:1.10, Ref:8, Type:B

Description : **Orangish brown slightly gravelly slightly sandy silty CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	15	%
Percentage retained on 20 mm sieve :	=	5	%
Moisture Condition Value :	=	16.0	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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MOISTURE CONDITION VALUE

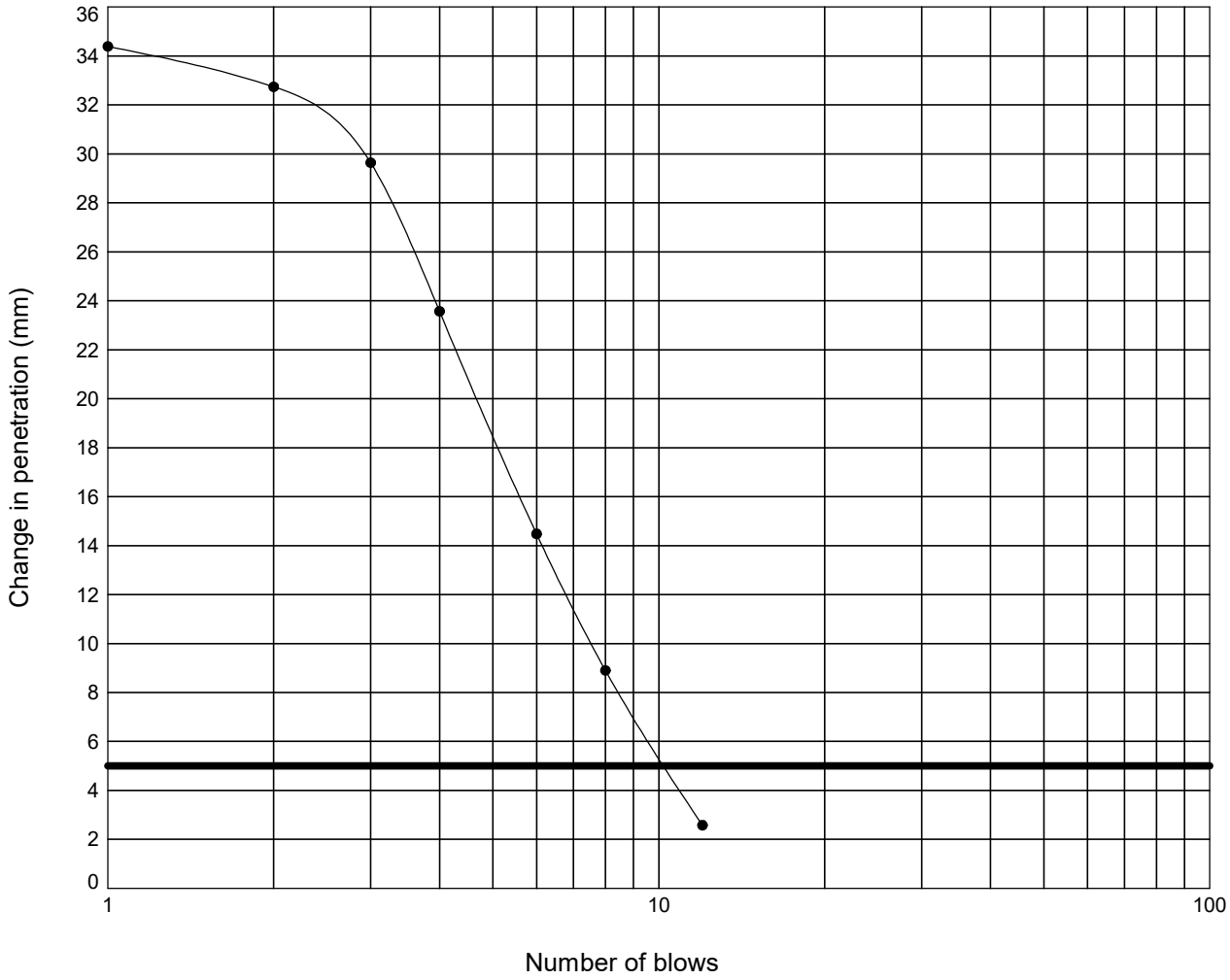
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP315** Sample Ref: Sample Type: **AMAL** Depth (m): **1.10**

Amalgamation comprises: F22-TP315, Depth:1.10, Ref:15, Type:LB + F22-TP315, Depth:1.10, Ref:8, Type:B

Description : **Orangish brown slightly gravelly slightly sandy silty CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	17	%
Percentage retained on 20 mm sieve :	=	6	%
Moisture Condition Value :	=	9.6	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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MOISTURE CONDITION VALUE

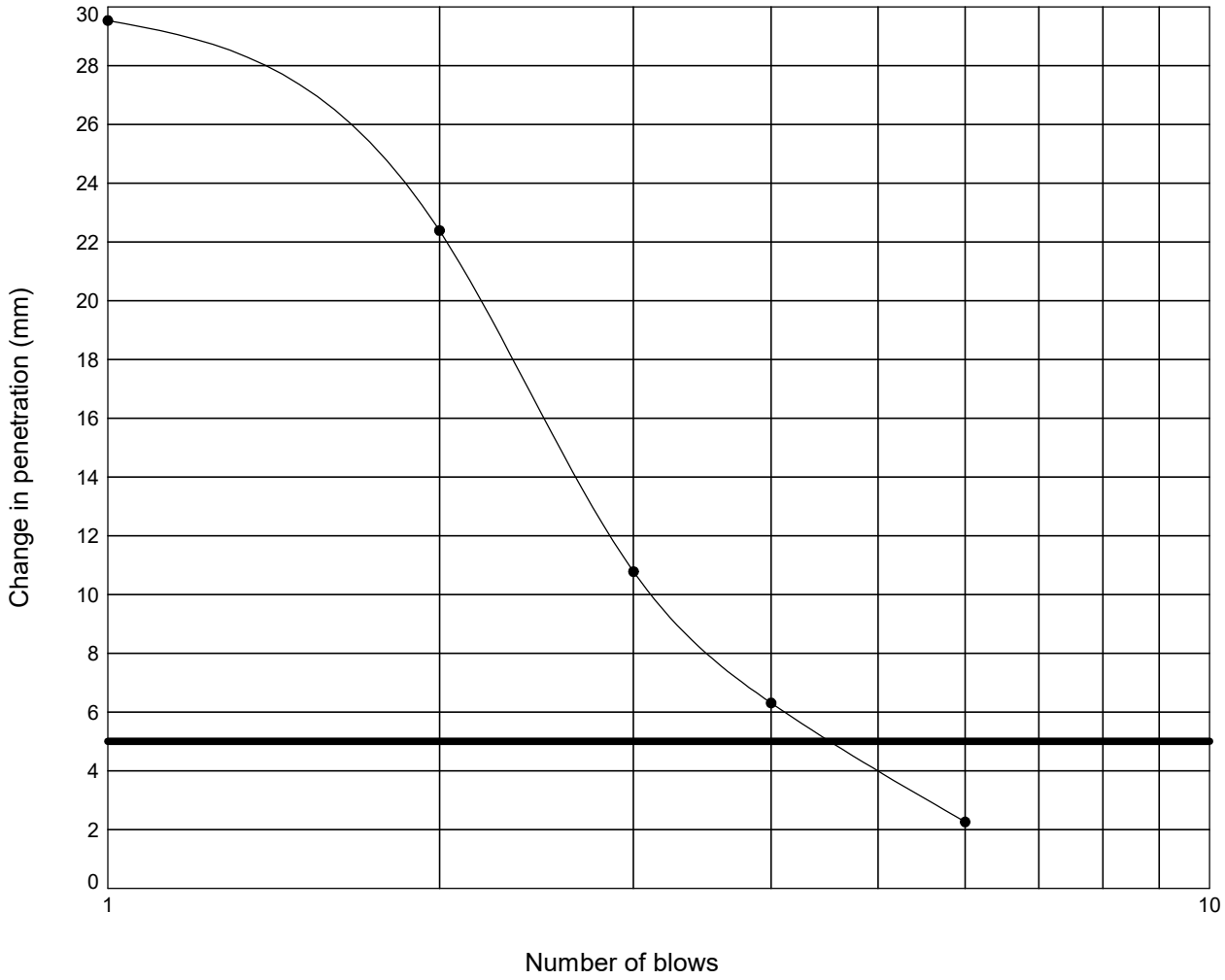
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP315** Sample Ref: Sample Type: **AMAL** Depth (m): **1.10**

Amalgamation comprises: F22-TP315, Depth:1.10, Ref:15, Type:LB + F22-TP315, Depth:1.10, Ref:8, Type:B

Description : **Orangish brown slightly gravelly slightly sandy silty CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	19	%
Percentage retained on 20 mm sieve :	=	6	%
Moisture Condition Value :	=	5.6	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract		Contract Ref:
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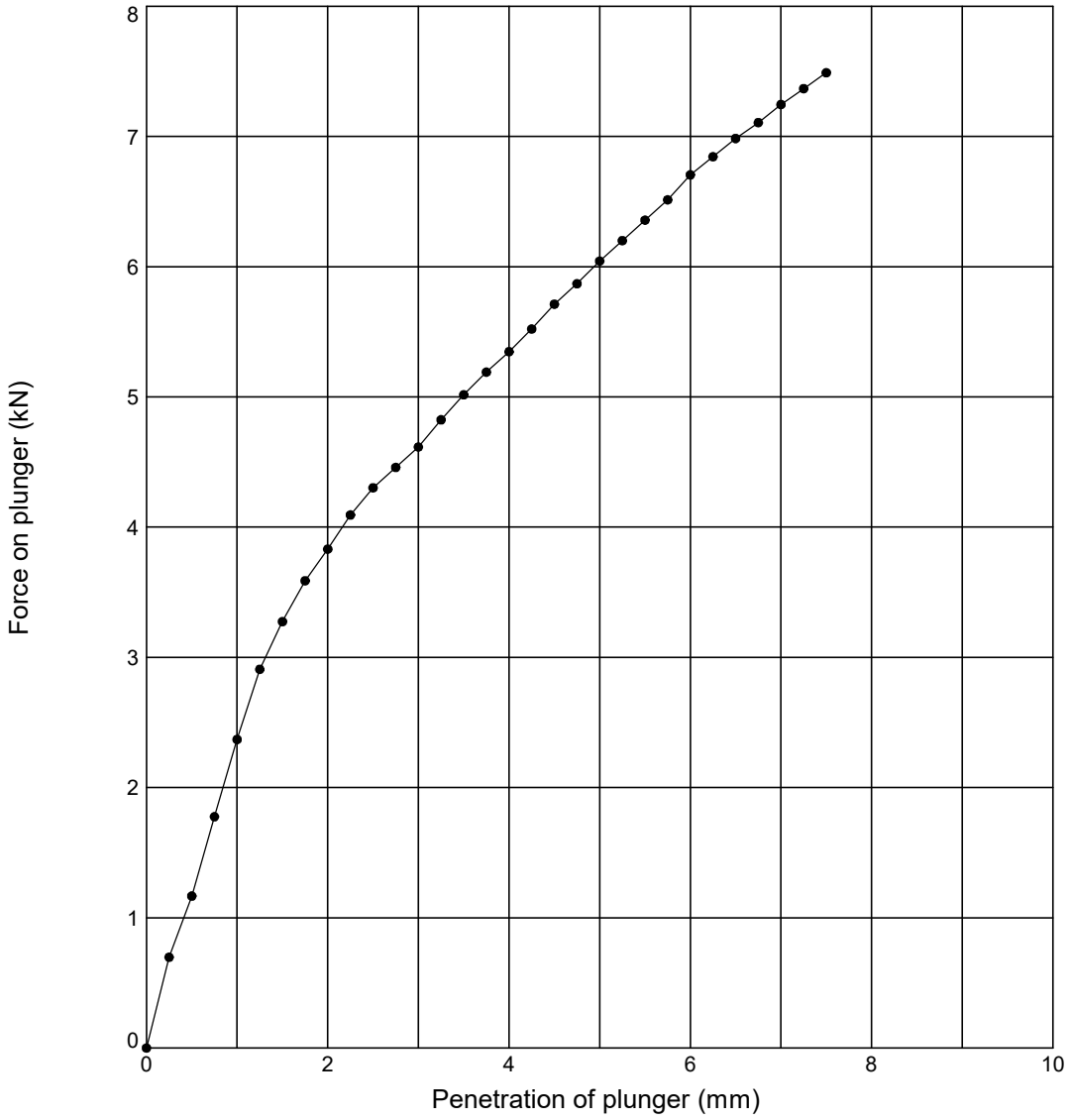
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP315** Sample Ref: Sample Type: **AMAL** Depth (m): **1.10**

Amalgamation comprises: F22-TP315, Depth:1.10, Ref:15, Type:LB + F22-TP315, Depth:1.10, Ref:8, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**10**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**10**	**10**
Initial Bulk Density (Mg/m^3)	:	**1.86**	Surcharge (kg)	:	**4.0**	CBR value (%)	**32**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.69**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**0**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown slightly gravelly slightly sandy silty CLAY	● **Top** ⊠ **Base**

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Compiled By		Date
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Contract	Contract Ref:
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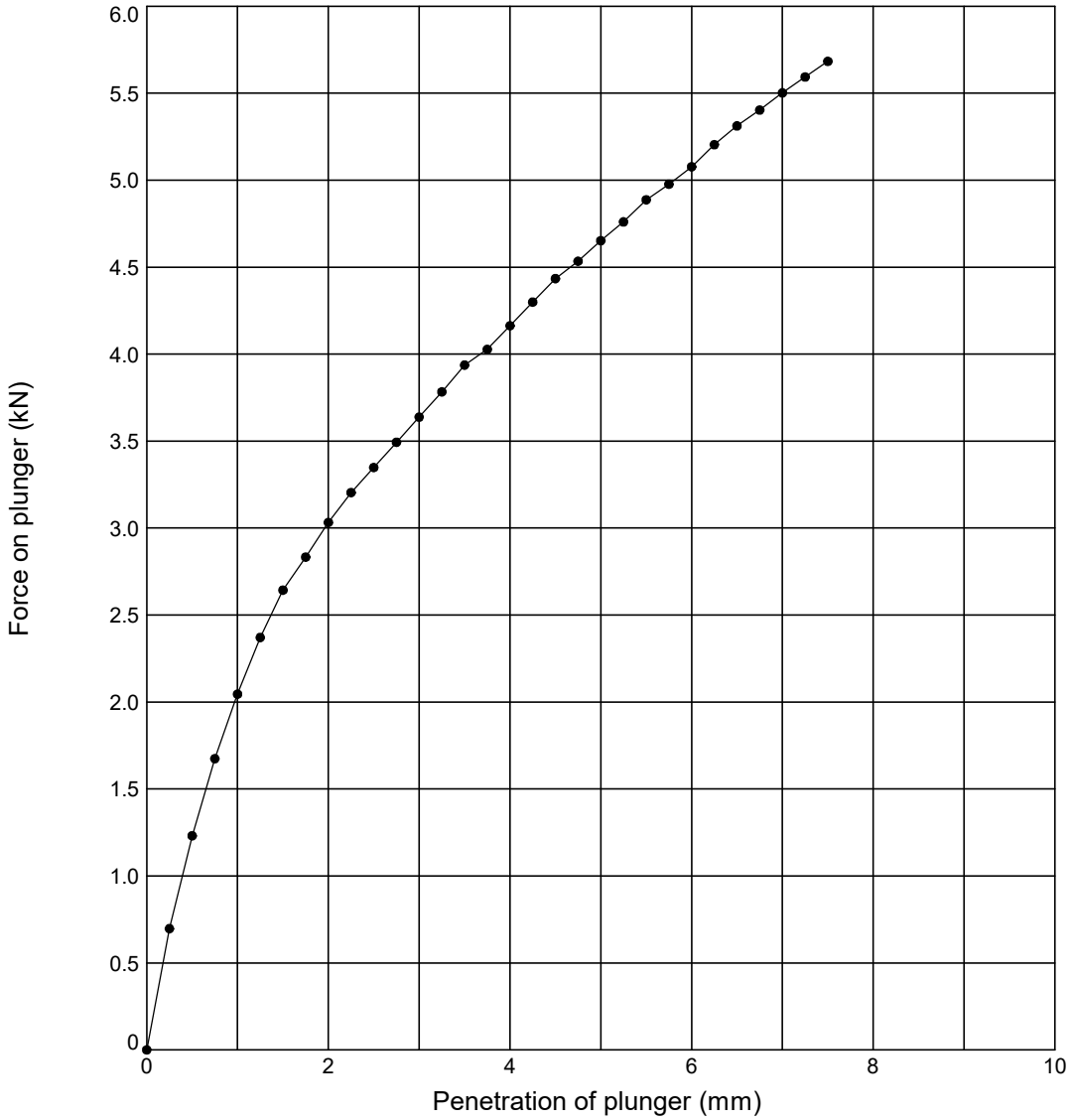
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP315** Sample Ref: Sample Type: **AMAL** Depth (m): **1.10**

Amalgamation comprises: F22-TP315, Depth:1.10, Ref:15, Type:LB + F22-TP315, Depth:1.10, Ref:8, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**13**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**13**	**13**
Initial Bulk Density (Mg/m^3)	:	**2.01**	Surcharge (kg)	:	**4.0**	CBR value (%)	**25**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.79**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**0**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown slightly gravelly slightly sandy silty CLAY	● **Top** ⧓ **Base**

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Sealink Friston	**563835**

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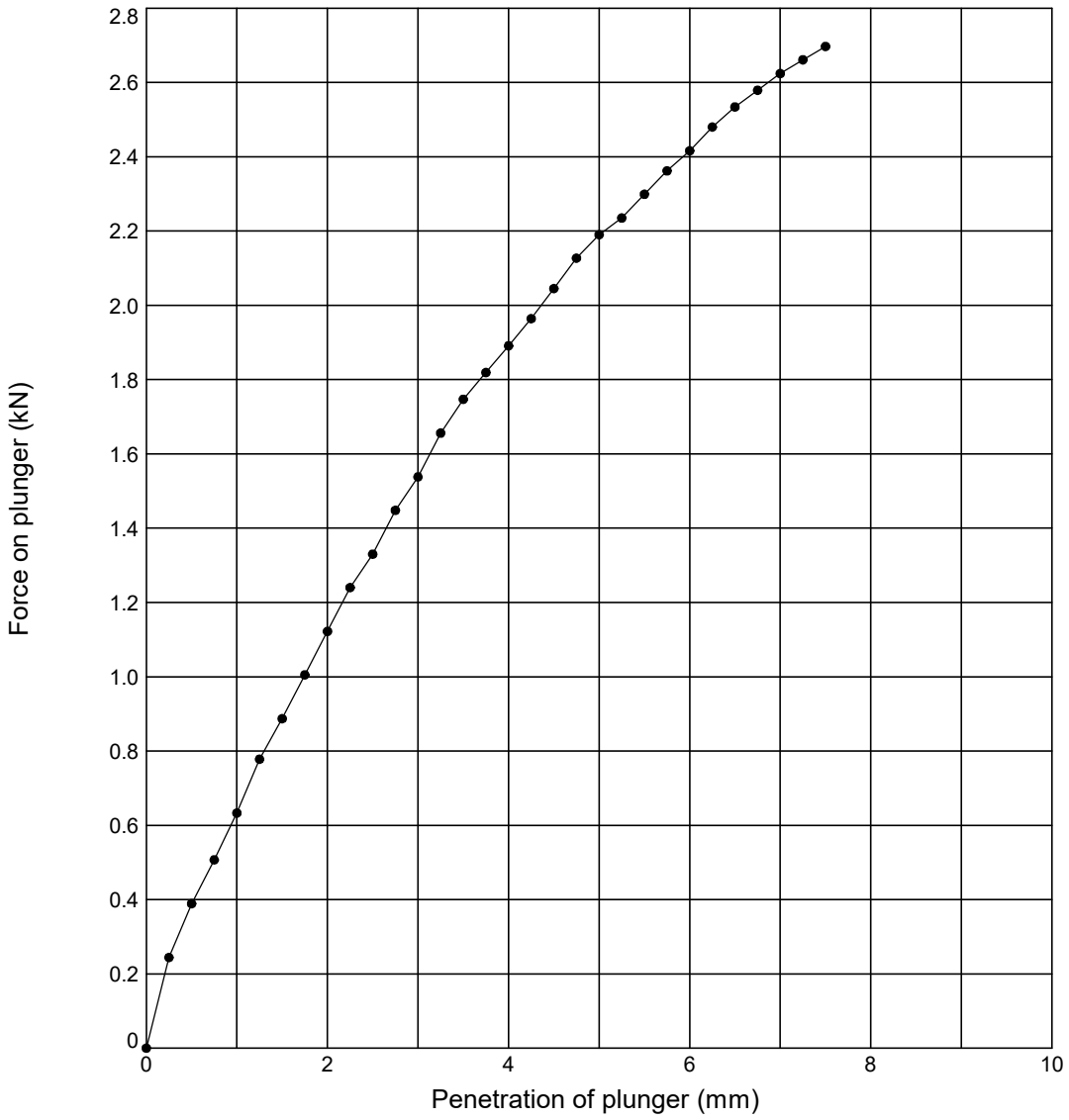
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP315** Sample Ref: Sample Type: **AMAL** Depth (m): **1.10**

Amalgamation comprises: F22-TP315, Depth:1.10, Ref:15, Type:LB + F22-TP315, Depth:1.10, Ref:8, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**15**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**15**	**15**
Initial Bulk Density (Mg/m^3)	:	**2.16**	Surcharge (kg)	:	**4.0**	CBR value (%)	**11**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.88**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**0**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown slightly gravelly slightly sandy silty CLAY	● **Top** ⊠ **Base**

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Sealink Friston	**563835**

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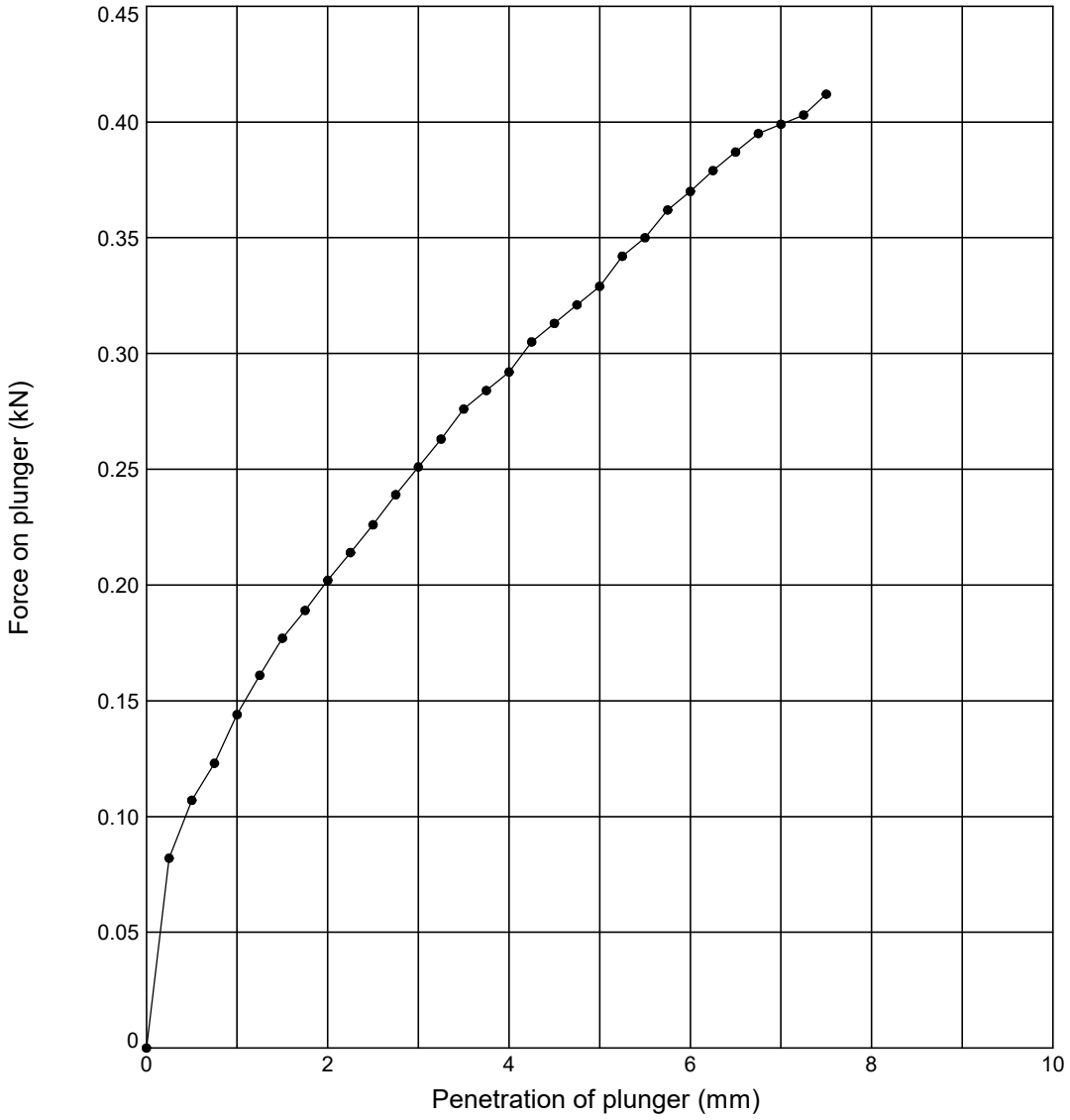
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP315** Sample Ref: Sample Type: **AMAL** Depth (m): **1.10**

Amalgamation comprises: F22-TP315, Depth:1.10, Ref:15, Type:LB + F22-TP315, Depth:1.10, Ref:8, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**17**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**17**	**17**
Initial Bulk Density (Mg/m^3)	:	**2.08**	Surcharge (kg)	:	**4.0**	CBR value (%)	**1.7**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.78**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**0**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown slightly gravelly slightly sandy silty CLAY	● **Top** ⊠ **Base**

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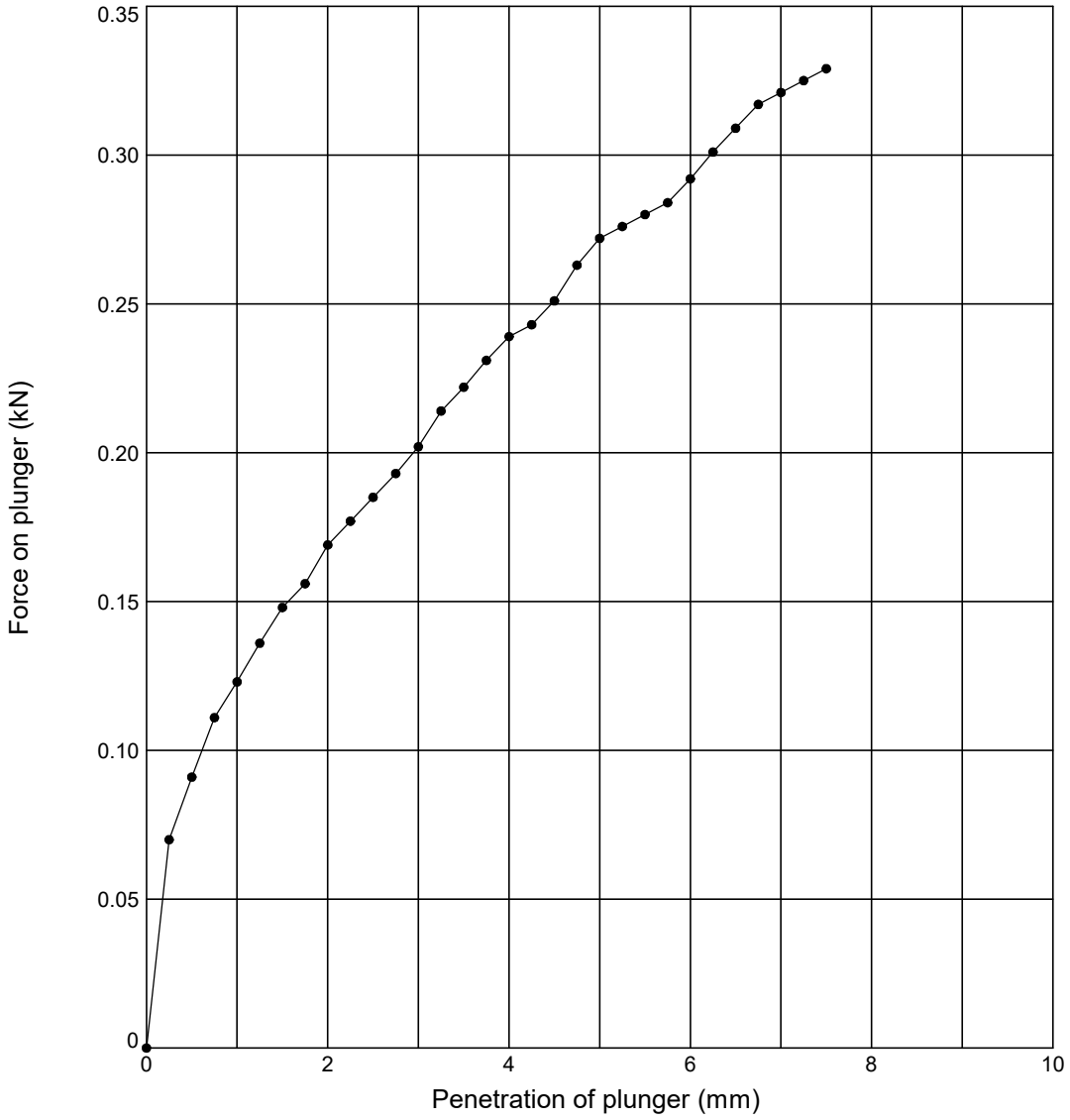
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP315** Sample Ref: Sample Type: **AMAL** Depth (m): **1.10**

Amalgamation comprises: F22-TP315, Depth:1.10, Ref:15, Type:LB + F22-TP315, Depth:1.10, Ref:8, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**19**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**19**	**18**
Initial Bulk Density (Mg/m^3)	:	**2.06**	Surcharge (kg)	:	**4.0**	CBR value (%)	**1.4**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.73**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**0**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown slightly gravelly slightly sandy silty CLAY	● **Top** ⧓ **Base**

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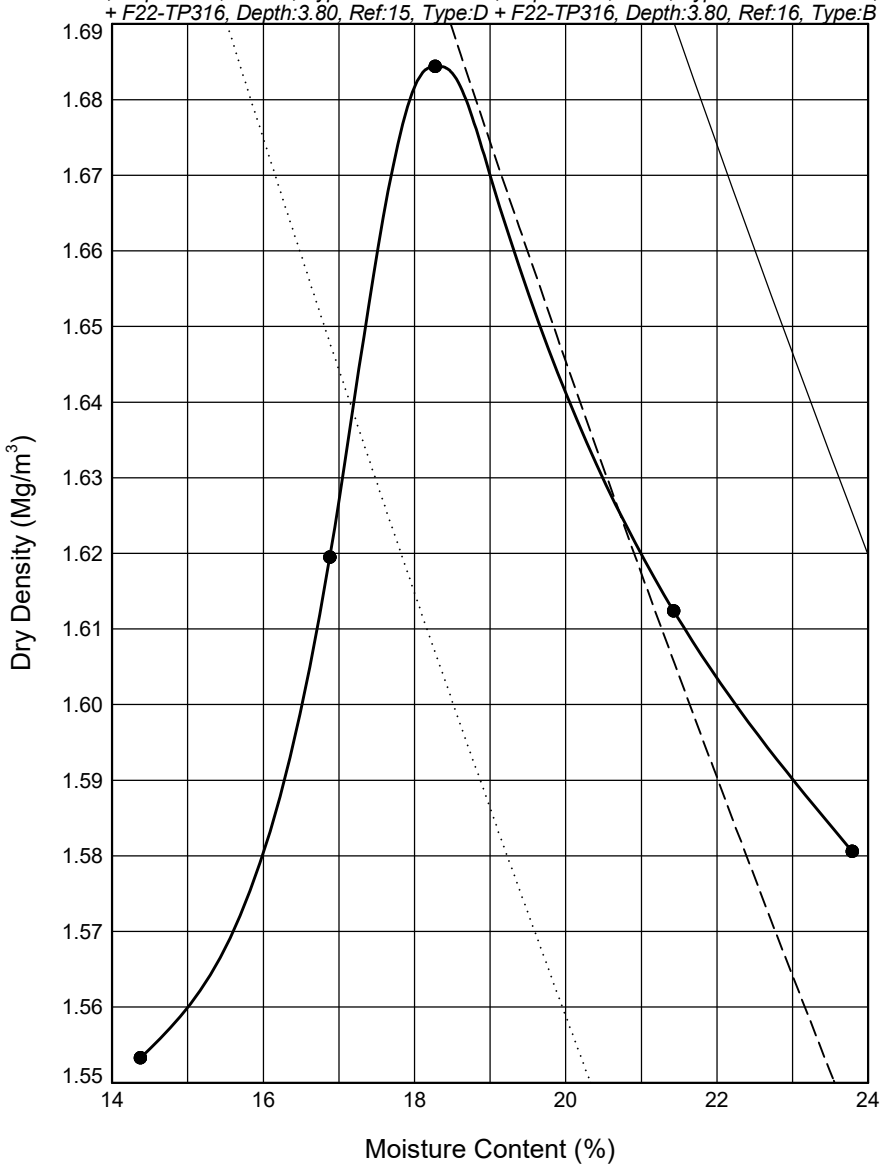
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DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **F22-TP316** Sample Ref: Sample Type: **AMAL** Depth (m): **1.30**

Amalgamation comprises: F22-TP316, Depth:1.30, Ref:10, Type:LB + F22-TP316, Depth:0.90, Ref:6, Type:B + F22-TP316, Depth:1.10, Ref:7, Type:D + F22-TP316, Depth:2.30, Ref:12, Type:B + F22-TP316, Depth:0.50, Ref:1, Type:D + F22-TP316, Depth:0.90, Ref:5, Type:D + F22-TP316, Depth:3.80, Ref:15, Type:D + F22-TP316, Depth:3.80, Ref:16, Type:B



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**18**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m^3)	:	**1.68**
% Retained on 37.5mm BS Sieve	:	**2**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**18**
% Retained on 20.0mm BS Sieve	:	**1**	Type of Mould	:	**CBR**	Method Used: **Clause 11.4**		
Particle Density - assumed (Mg/m^3)	:	**2.65**				Remarks: **MCV test carried out at each point. CBR carried out on the wettest point only**		
Size of Soil Pieces	:	**<37.5mm**	Separate samples were used.					

Sample Description	Key to Air Voids Lines		
Dark brown mottled white slightly gravelly slightly sandy silty CLAY	——— 0%	– – – – 5%	····· 10%

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Contract	Contract Ref:
Sealink Friston	**563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - COMPACTIONS - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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MOISTURE CONDITION VALUE

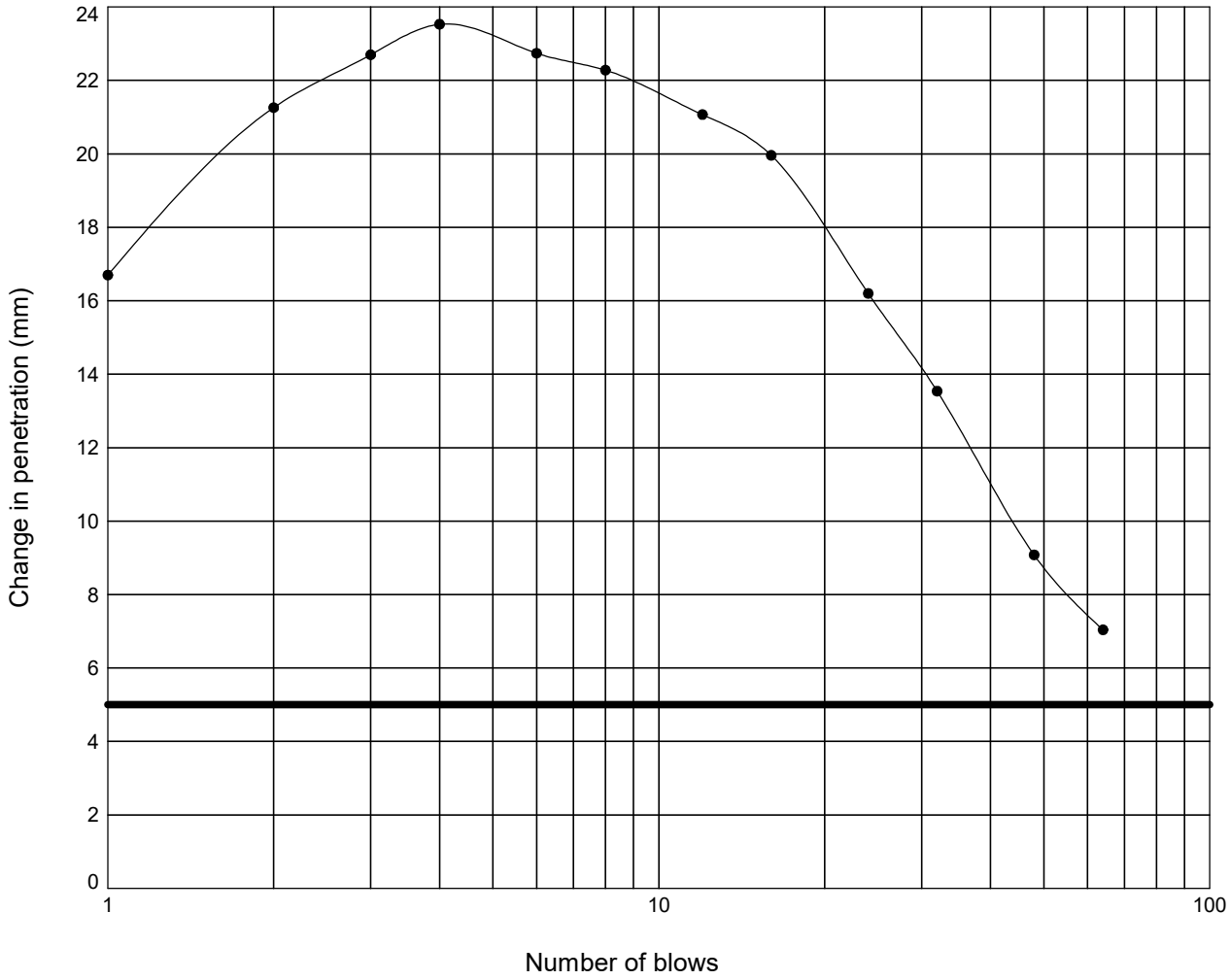
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP316** Sample Ref: Sample Type: **AMAL** Depth (m): **1.30**

Amalgamation comprises: F22-TP316, Depth:1.30, Ref:10, Type:LB + F22-TP316, Depth:0.90, Ref:6, Type:B + F22-TP316, Depth:1.10, Ref:7, Type:D + F22-TP316, Depth:2.30, Ref:12, Type:B + F22-TP316, Depth:0.50, Ref:1, Type:D + F22-TP316, Depth:0.90, Ref:5, Type:D + F22-TP316, Depth:3.80, Ref:15, Type:D + F22-TP316, Depth:3.80, Ref:16, Type:B

Description : **Dark brown mottled white slightly gravelly slightly sandy silty CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	15	%
Percentage retained on 20 mm sieve :	=	2	%
Moisture Condition Value :	=	18.4	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Sealink Friston		**563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - MCV -3- NATURAL FINAL - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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MOISTURE CONDITION VALUE

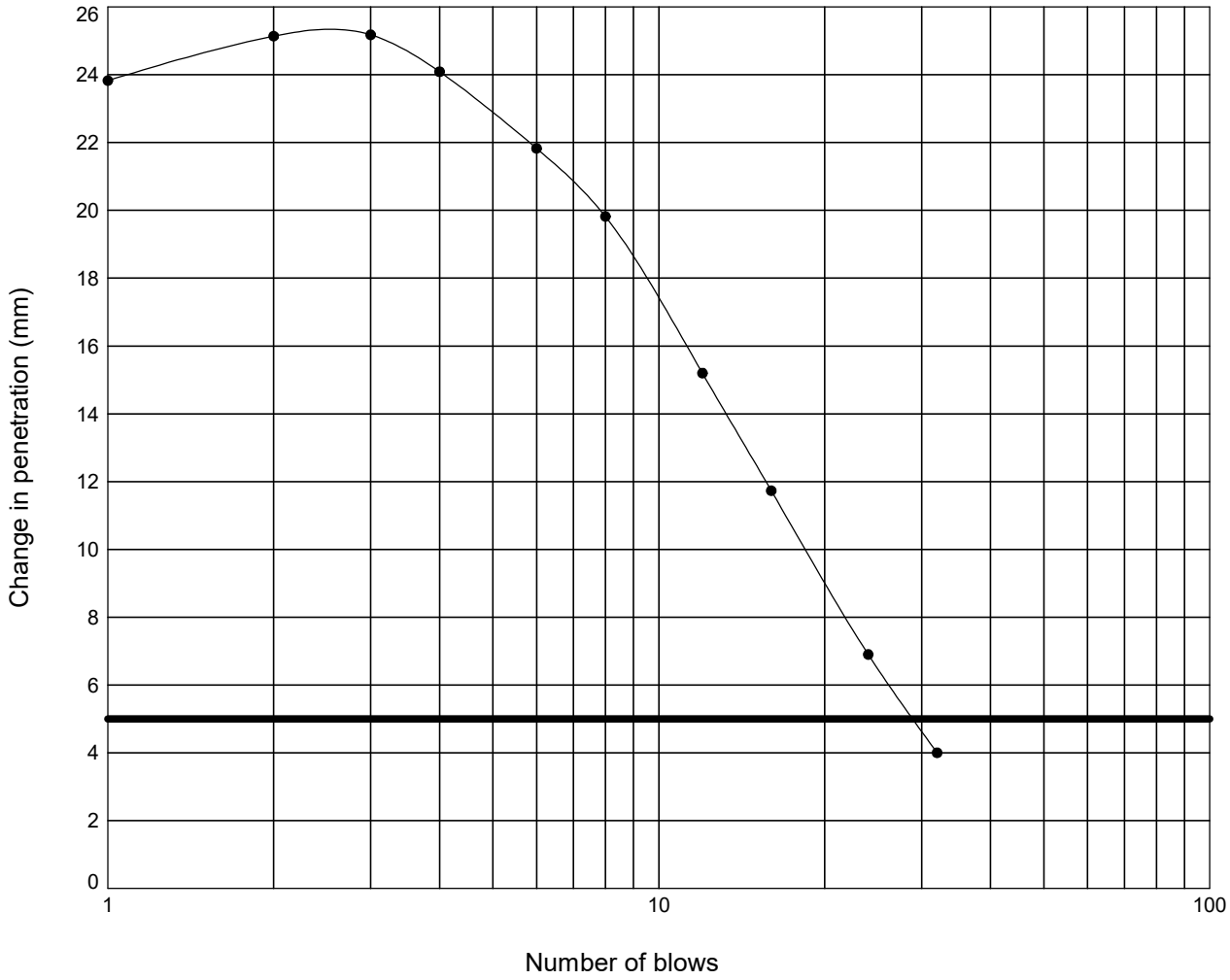
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP316** Sample Ref: Sample Type: **AMAL** Depth (m): **1.30**

Amalgamation comprises: F22-TP316, Depth:1.30, Ref:10, Type:LB + F22-TP316, Depth:0.90, Ref:6, Type:B + F22-TP316, Depth:1.10, Ref:7, Type:D + F22-TP316, Depth:2.30, Ref:12, Type:B + F22-TP316, Depth:0.50, Ref:1, Type:D + F22-TP316, Depth:0.90, Ref:5, Type:D + F22-TP316, Depth:3.80, Ref:15, Type:D + F22-TP316, Depth:3.80, Ref:16, Type:B

Description : **Dark brown mottled white slightly gravelly slightly sandy silty CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	17	%
Percentage retained on 20 mm sieve :	=	3	%
Moisture Condition Value :	=	14.5	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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MOISTURE CONDITION VALUE

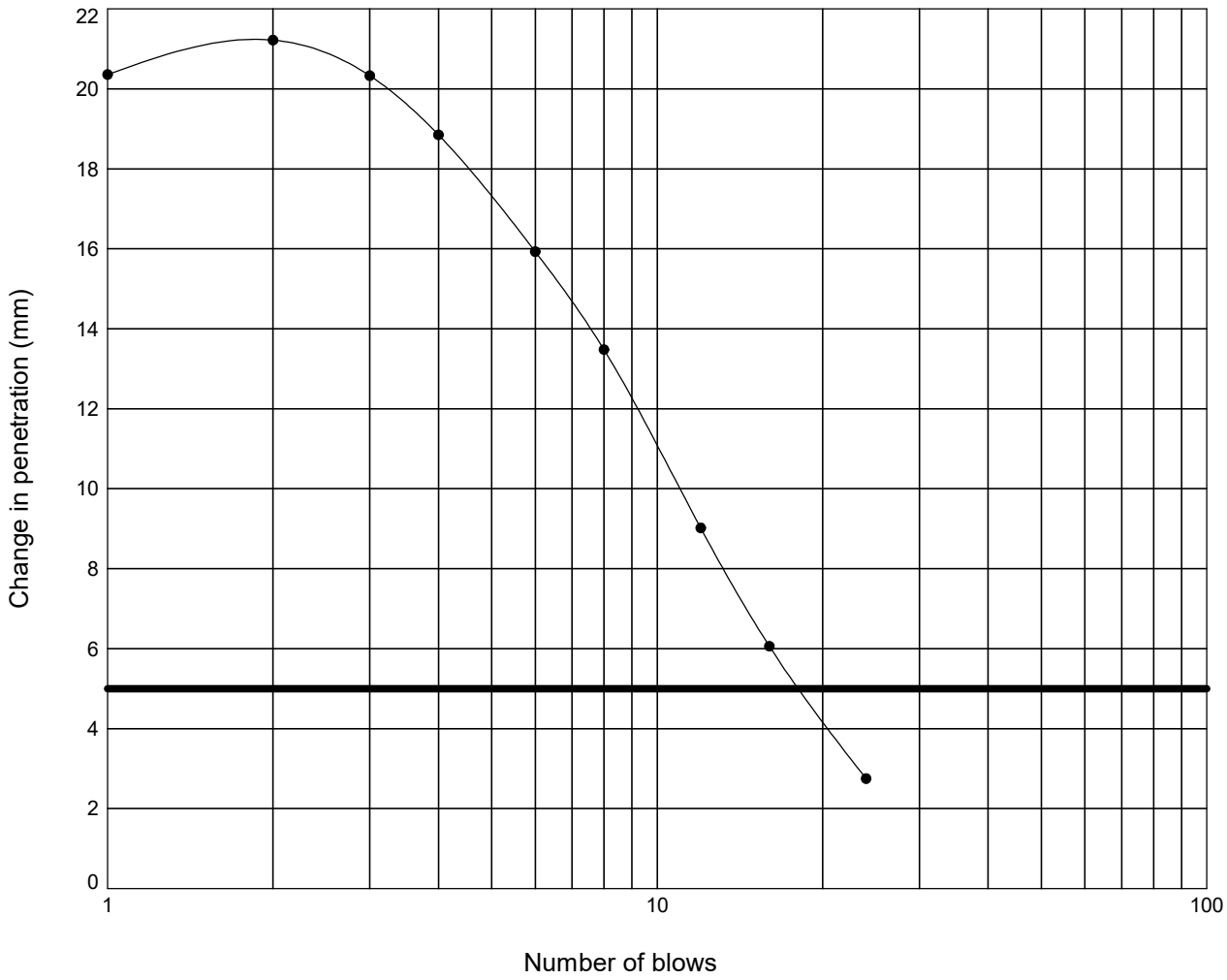
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP316** Sample Ref: Sample Type: **AMAL** Depth (m): **1.30**

Amalgamation comprises: F22-TP316, Depth:1.30, Ref:10, Type:LB + F22-TP316, Depth:0.90, Ref:6, Type:B + F22-TP316, Depth:1.10, Ref:7, Type:D + F22-TP316, Depth:2.30, Ref:12, Type:B + F22-TP316, Depth:0.50, Ref:1, Type:D + F22-TP316, Depth:0.90, Ref:5, Type:D + F22-TP316, Depth:3.80, Ref:15, Type:D + F22-TP316, Depth:3.80, Ref:16, Type:B

Description : **Dark brown mottled white slightly gravelly slightly sandy silty CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	18	%
Percentage retained on 20 mm sieve :	=	3	%
Moisture Condition Value :	=	12.4	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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MOISTURE CONDITION VALUE

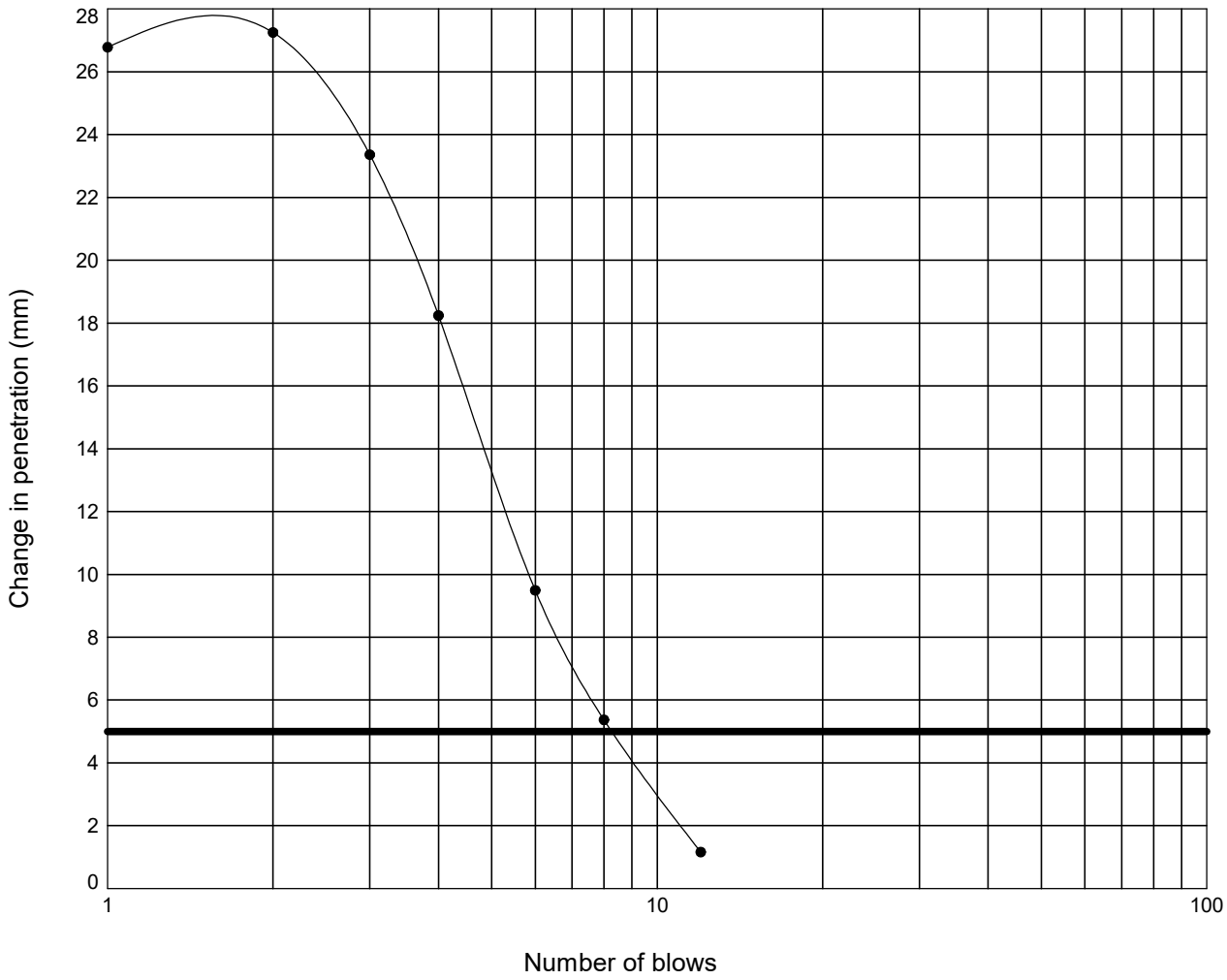
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP316** Sample Ref: Sample Type: **AMAL** Depth (m): **1.30**

Amalgamation comprises: F22-TP316, Depth:1.30, Ref:10, Type:LB + F22-TP316, Depth:0.90, Ref:6, Type:B + F22-TP316, Depth:1.10, Ref:7, Type:D + F22-TP316, Depth:2.30, Ref:12, Type:B + F22-TP316, Depth:0.50, Ref:1, Type:D + F22-TP316, Depth:0.90, Ref:5, Type:D + F22-TP316, Depth:3.80, Ref:15, Type:D + F22-TP316, Depth:3.80, Ref:16, Type:B

Description : **Dark brown mottled white slightly gravelly slightly sandy silty CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	21	%
Percentage retained on 20 mm sieve :	=	3	%
Moisture Condition Value :	=	8.7	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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MOISTURE CONDITION VALUE

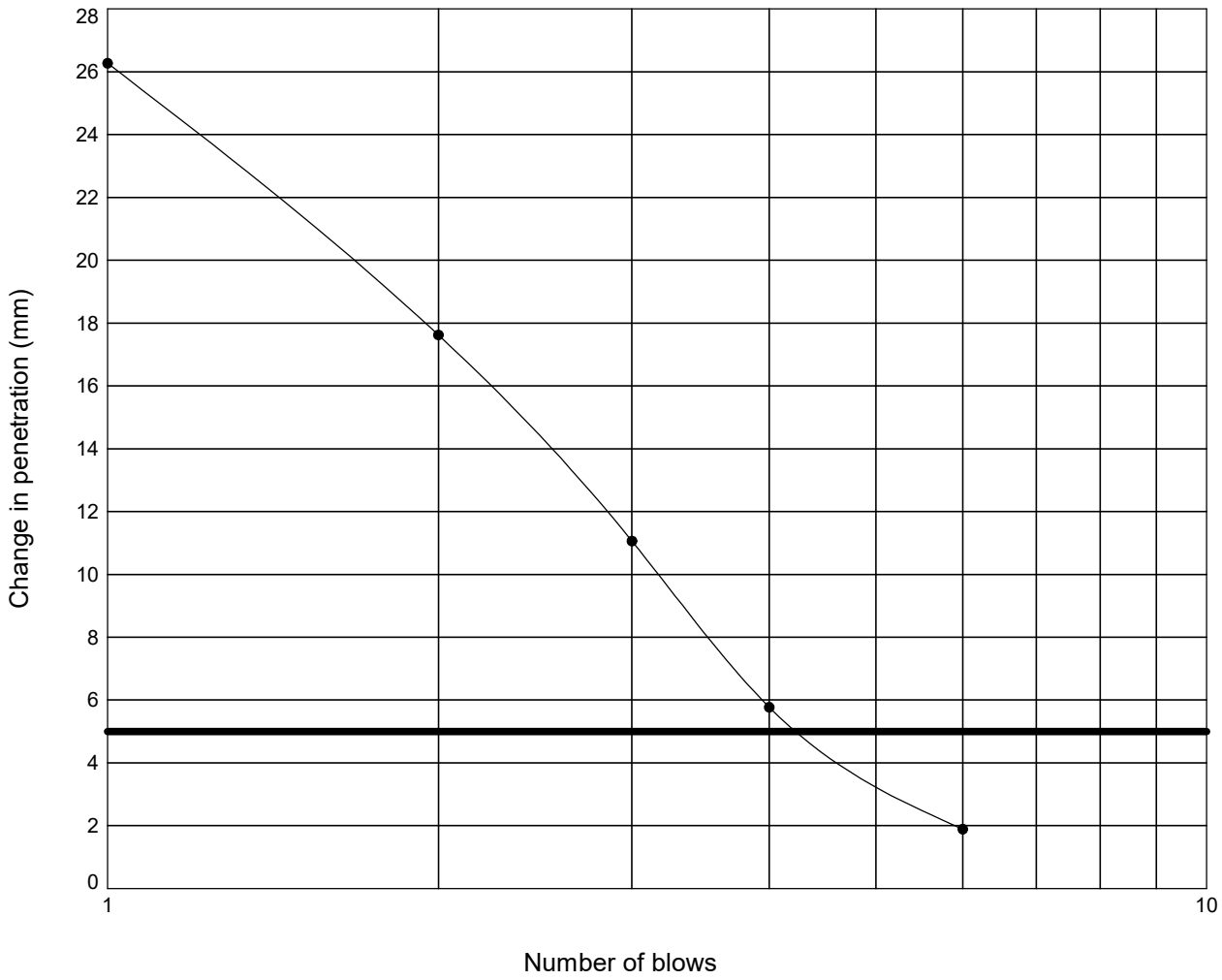
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP316** Sample Ref: Sample Type: **AMAL** Depth (m): **1.30**

Amalgamation comprises: F22-TP316, Depth:1.30, Ref:10, Type:LB + F22-TP316, Depth:0.90, Ref:6, Type:B + F22-TP316, Depth:1.10, Ref:7, Type:D + F22-TP316, Depth:2.30, Ref:12, Type:B + F22-TP316, Depth:0.50, Ref:1, Type:D + F22-TP316, Depth:0.90, Ref:5, Type:D + F22-TP316, Depth:3.80, Ref:15, Type:D + F22-TP316, Depth:3.80, Ref:16, Type:B

Description : **Dark brown mottled white slightly gravelly slightly sandy silty CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	23	%
Percentage retained on 20 mm sieve :	=	3	%
Moisture Condition Value :	=	6.2	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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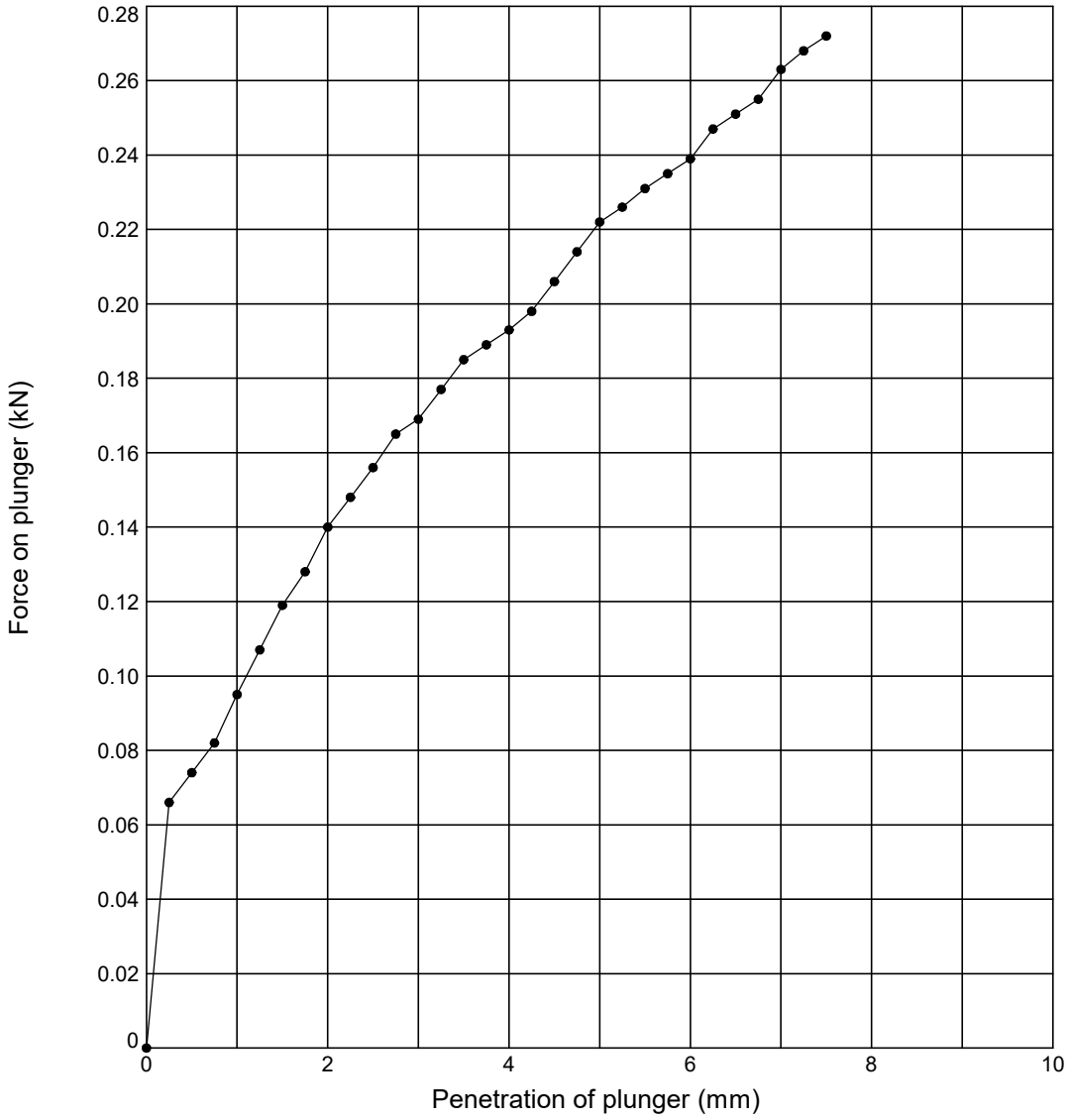
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - MCV -3- NATURAL FINAL - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP316** Sample Ref: Sample Type: **AMAL** Depth (m): **1.30**

Amalgamation comprises: F22-TP316, Depth:1.30, Ref:10, Type:LB + F22-TP316, Depth:0.90, Ref:6, Type:B + F22-TP316, Depth:1.10, Ref:7, Type:D + F22-TP316, Depth:2.30, Ref:12, Type:B + F22-TP316, Depth:0.50, Ref:1, Type:D + F22-TP316, Depth:0.90, Ref:5, Type:D + F22-TP316, Depth:3.80, Ref:15, Type:D + F22-TP316, Depth:3.80, Ref:16, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**24**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**25**	**23**
Initial Bulk Density (Mg/m^3)	:	**1.96**	Surcharge (kg)	:	**4.0**	CBR value (%)	**1.2**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.58**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**0**	Swelling (mm)	:	**-**			

Sample Description	Key
Dark brown mottled white slightly gravelly slightly sandy silty CLAY	● **Top** ⊠ **Base**

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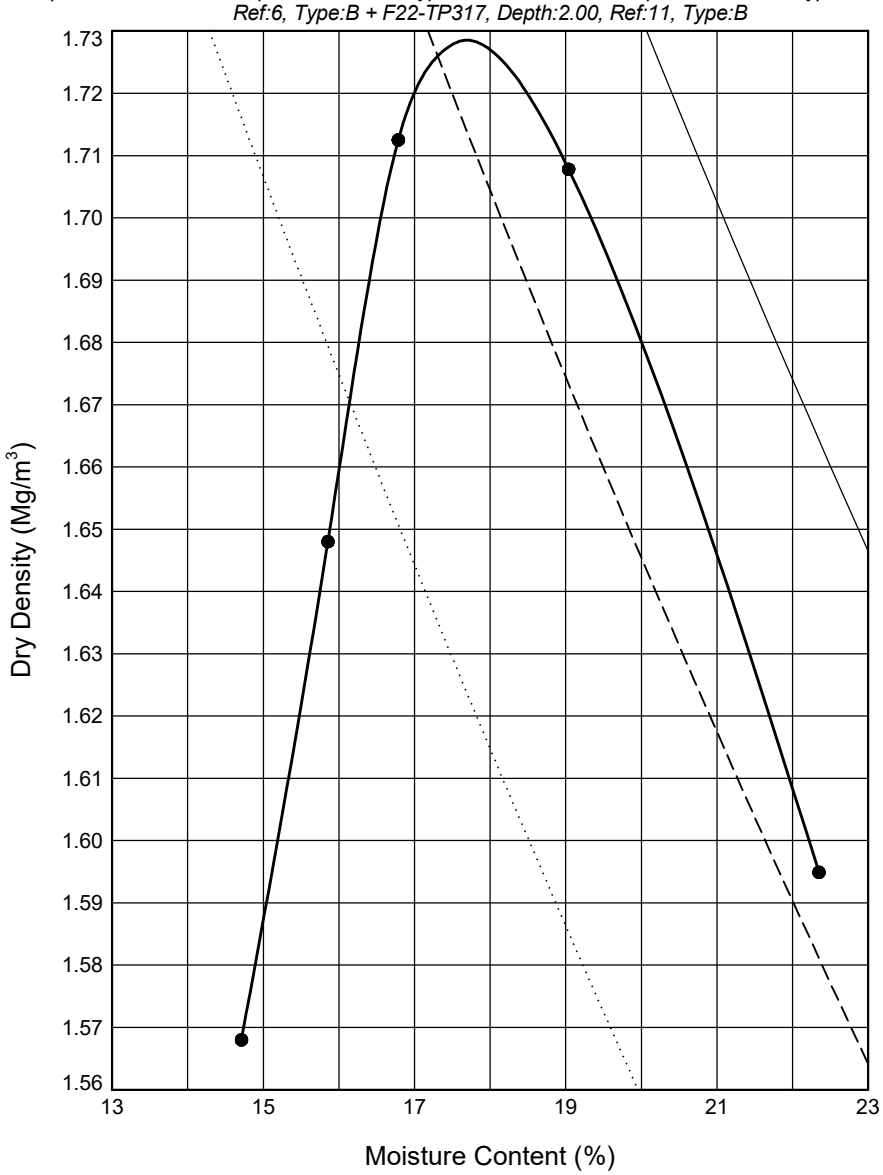
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - CBR - LAB -3- REPORT - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01
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DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **F22-TP317** Sample Ref: Sample Type: **AMAL** Depth (m): **0.50**

Amalgamation comprises: F22-TP317, Depth:0.50, Ref:5, Type:LB + F22-TP317, Depth:0.50, Ref:3, Type:B + F22-TP317, Depth:0.70, Ref:6, Type:B + F22-TP317, Depth:2.00, Ref:11, Type:B



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**17**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m³)	:	**1.73**
% Retained on 37.5mm BS Sieve	:	**0**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**18**
% Retained on 20.0mm BS Sieve	:	**1**	Type of Mould	:	**CBR**	Method Used: **Clause 11.4**		
Particle Density - assumed (Mg/m³)	:	**2.65**				Remarks: **MCV test carried out at each point. CBR carried out on the 2 wettest points only**		
Size of Soil Pieces	:	**<37.5mm**	Single sample was used.					

Sample Description	Key to Air Voids Lines		
Greenish brown mottled orangish brown slightly gravelly slightly sandy CLAY	——— 0%	– – – – 5%	····· 10%

STRUCTURAL SOILS
The Potteries
Pottery Street
Castleford
W. Yorkshire WF10 1NJ

Compiled By		Date
[redacted]	[redacted]	**18/03/24**

Contract	Contract Ref:
Sealink Friston	**563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - COMPACTIONS - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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MOISTURE CONDITION VALUE

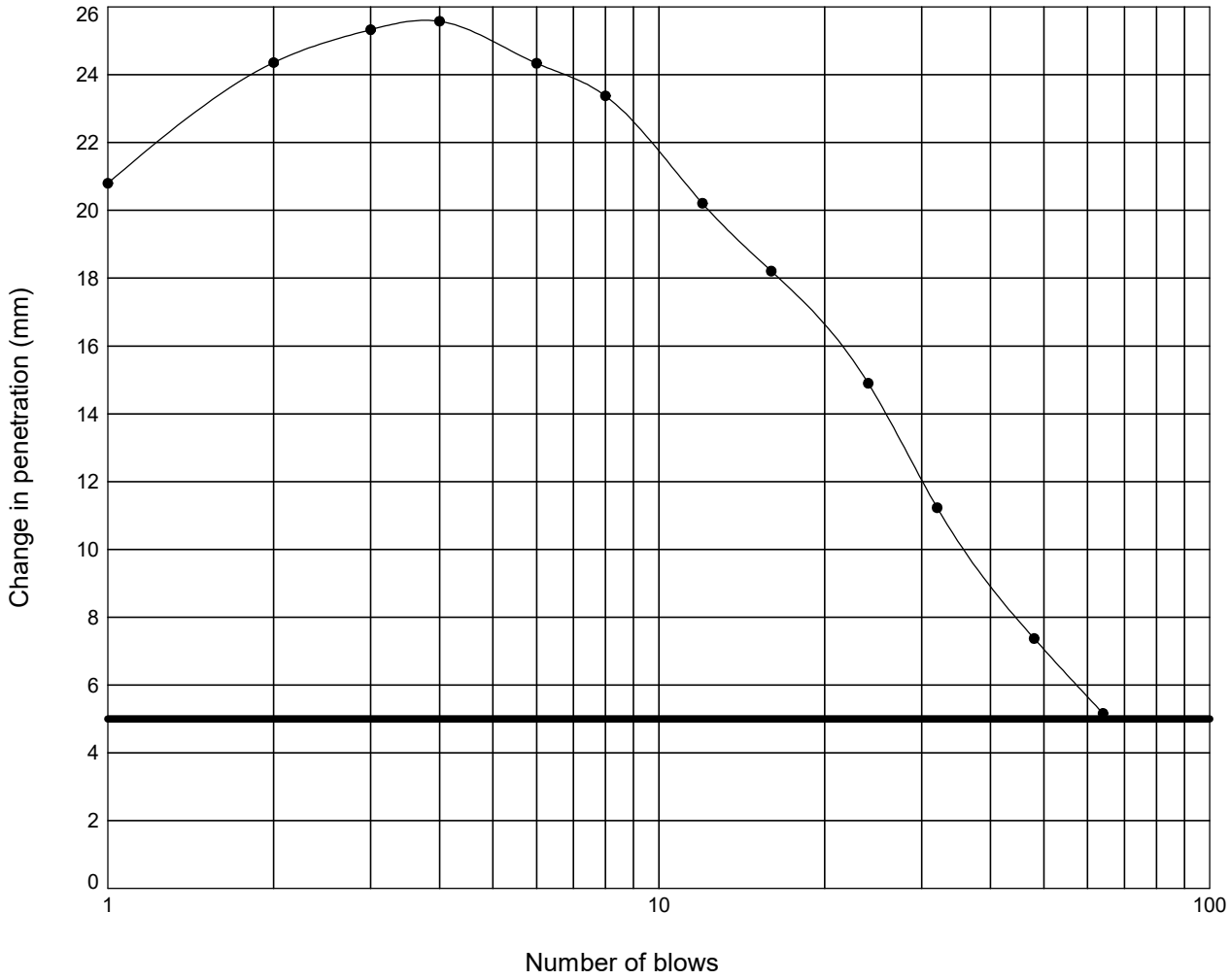
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP317** Sample Ref: Sample Type: **AMAL** Depth (m): **0.50**

Amalgamation comprises: F22-TP317, Depth:0.50, Ref:5, Type:LB + F22-TP317, Depth:0.50, Ref:3, Type:B + F22-TP317, Depth:0.70, Ref:6, Type:B + F22-TP317, Depth:2.00, Ref:11, Type:B

Description : **Greenish brown mottled orangish brown slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	14	%
Percentage retained on 20 mm sieve :	=	1	%
Moisture Condition Value :	=	17.2	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract	Contract Ref:
Sealink Friston	**563835**

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MOISTURE CONDITION VALUE

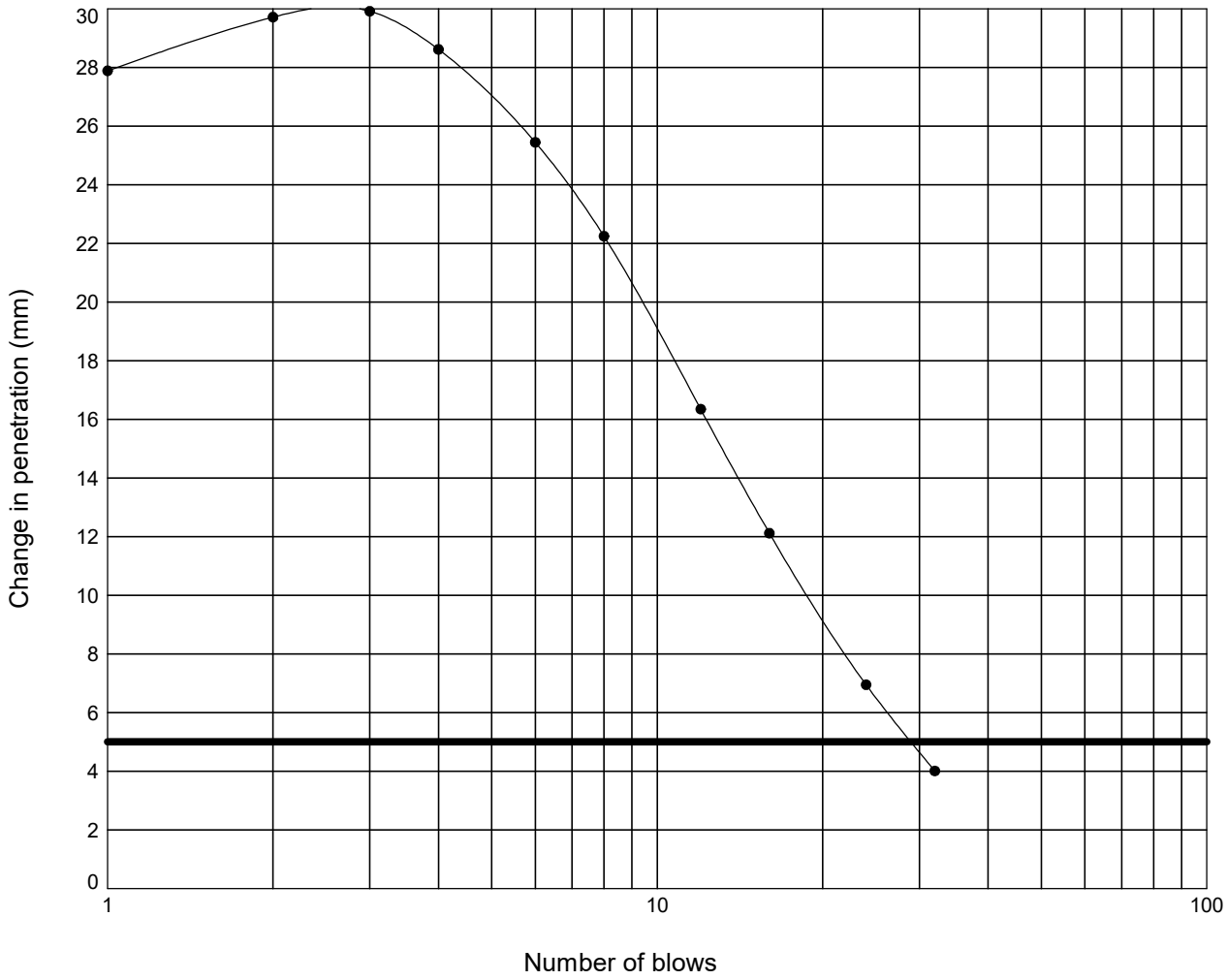
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP317** Sample Ref: Sample Type: **AMAL** Depth (m): **0.50**

Amalgamation comprises: F22-TP317, Depth:0.50, Ref:5, Type:LB + F22-TP317, Depth:0.50, Ref:3, Type:B + F22-TP317, Depth:0.70, Ref:6, Type:B + F22-TP317, Depth:2.00, Ref:11, Type:B

Description : **Greenish brown mottled orangish brown slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	= 17	%
Percentage retained on 20 mm sieve :	= 1	%
Moisture Condition Value :	= 14.1	
Interpretation of curve:	= Steepest straight line - Fig 9	

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Compiled By		Date
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MOISTURE CONDITION VALUE

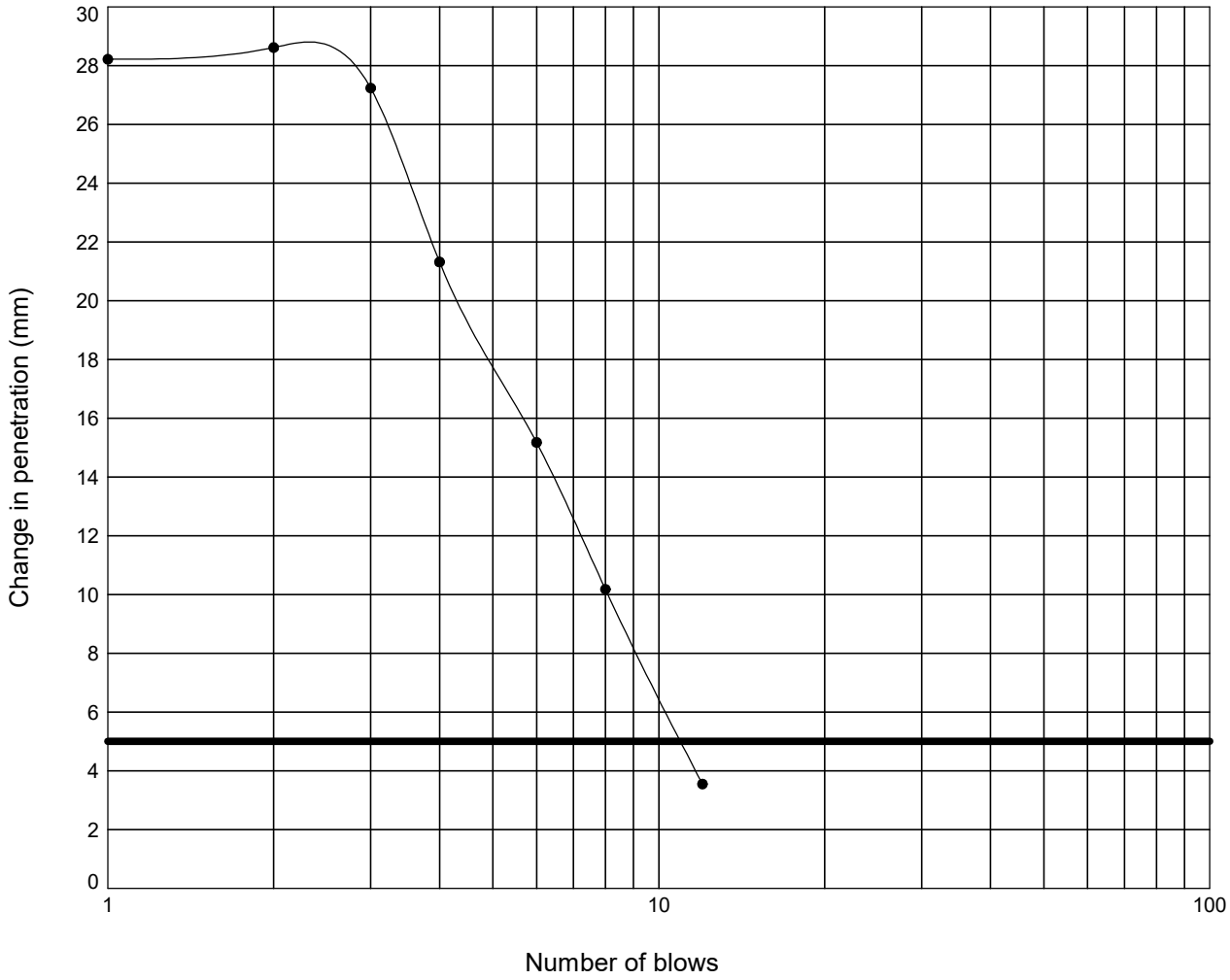
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP317** Sample Ref: Sample Type: **AMAL** Depth (m): **0.50**

Amalgamation comprises: F22-TP317, Depth:0.50, Ref:5, Type:LB + F22-TP317, Depth:0.50, Ref:3, Type:B + F22-TP317, Depth:0.70, Ref:6, Type:B + F22-TP317, Depth:2.00, Ref:11, Type:B

Description : **Greenish brown mottled orangish brown slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	19	%
Percentage retained on 20 mm sieve :	=	1	%
Moisture Condition Value :	=	10.3	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract	Contract Ref:
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MOISTURE CONDITION VALUE

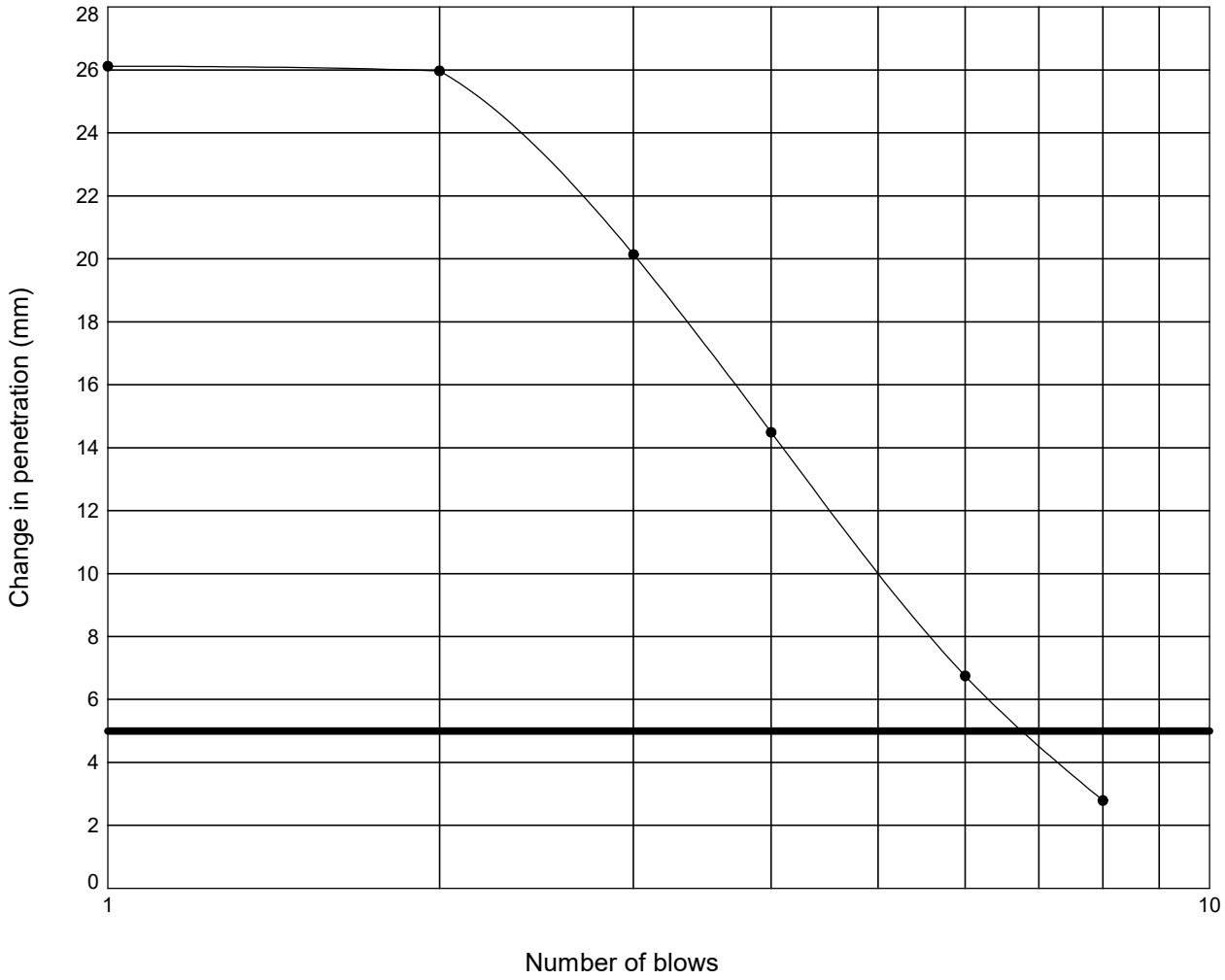
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP317** Sample Ref: Sample Type: **AMAL** Depth (m): **0.50**

Amalgamation comprises: F22-TP317, Depth:0.50, Ref:5, Type:LB + F22-TP317, Depth:0.50, Ref:3, Type:B + F22-TP317, Depth:0.70, Ref:6, Type:B + F22-TP317, Depth:2.00, Ref:11, Type:B

Description : **Greenish brown mottled orangish brown slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	22	%
Percentage retained on 20 mm sieve :	=	1	%
Moisture Condition Value :	=	8.1	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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MOISTURE CONDITION VALUE

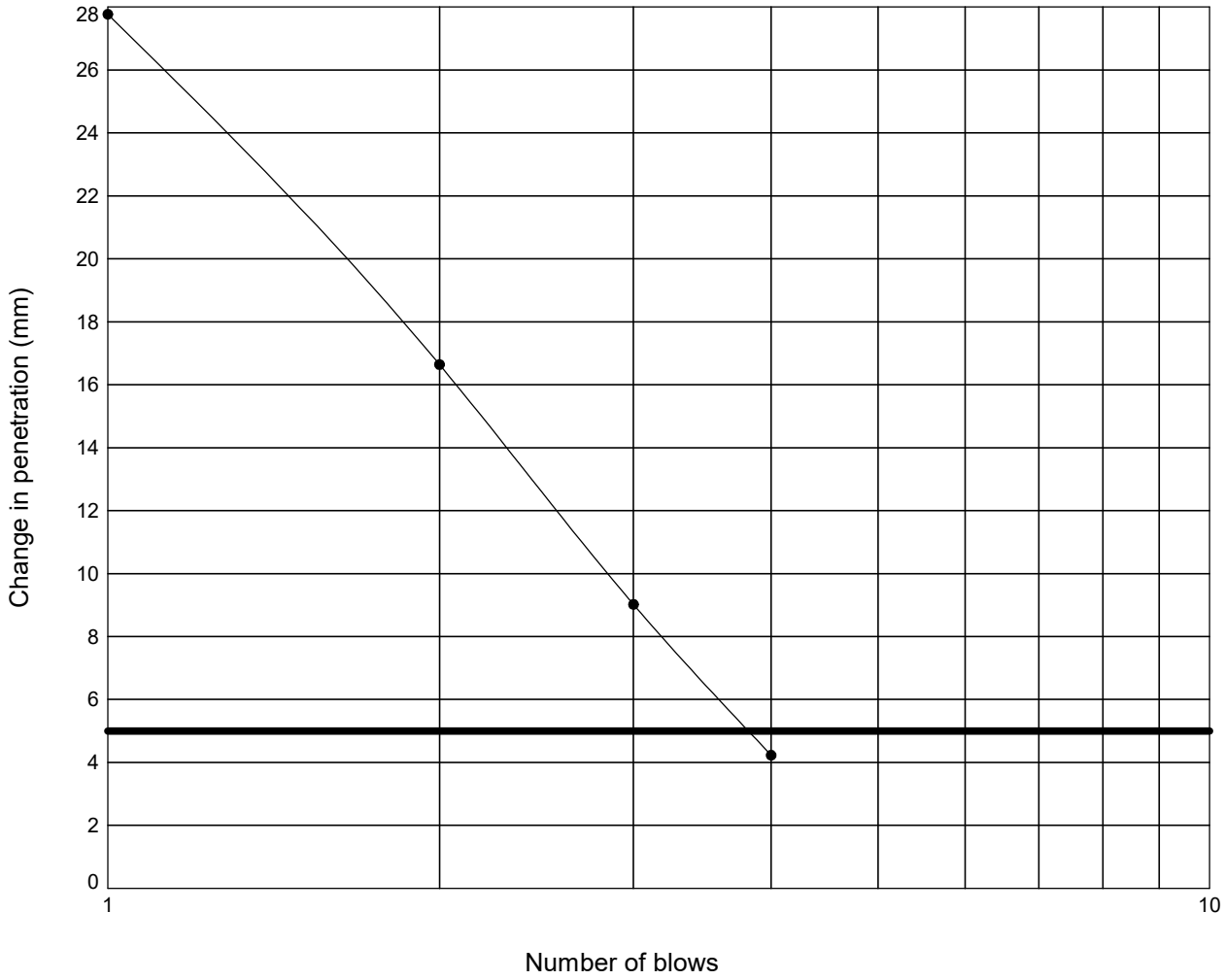
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP317** Sample Ref: Sample Type: **AMAL** Depth (m): **0.50**

Amalgamation comprises: F22-TP317, Depth:0.50, Ref:5, Type:LB + F22-TP317, Depth:0.50, Ref:3, Type:B + F22-TP317, Depth:0.70, Ref:6, Type:B + F22-TP317, Depth:2.00, Ref:11, Type:B

Description : **Greenish brown mottled orangish brown slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	24	%
Percentage retained on 20 mm sieve :	=	1	%
Moisture Condition Value :	=	5.7	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract	Contract Ref:
Sealink Friston	**563835**

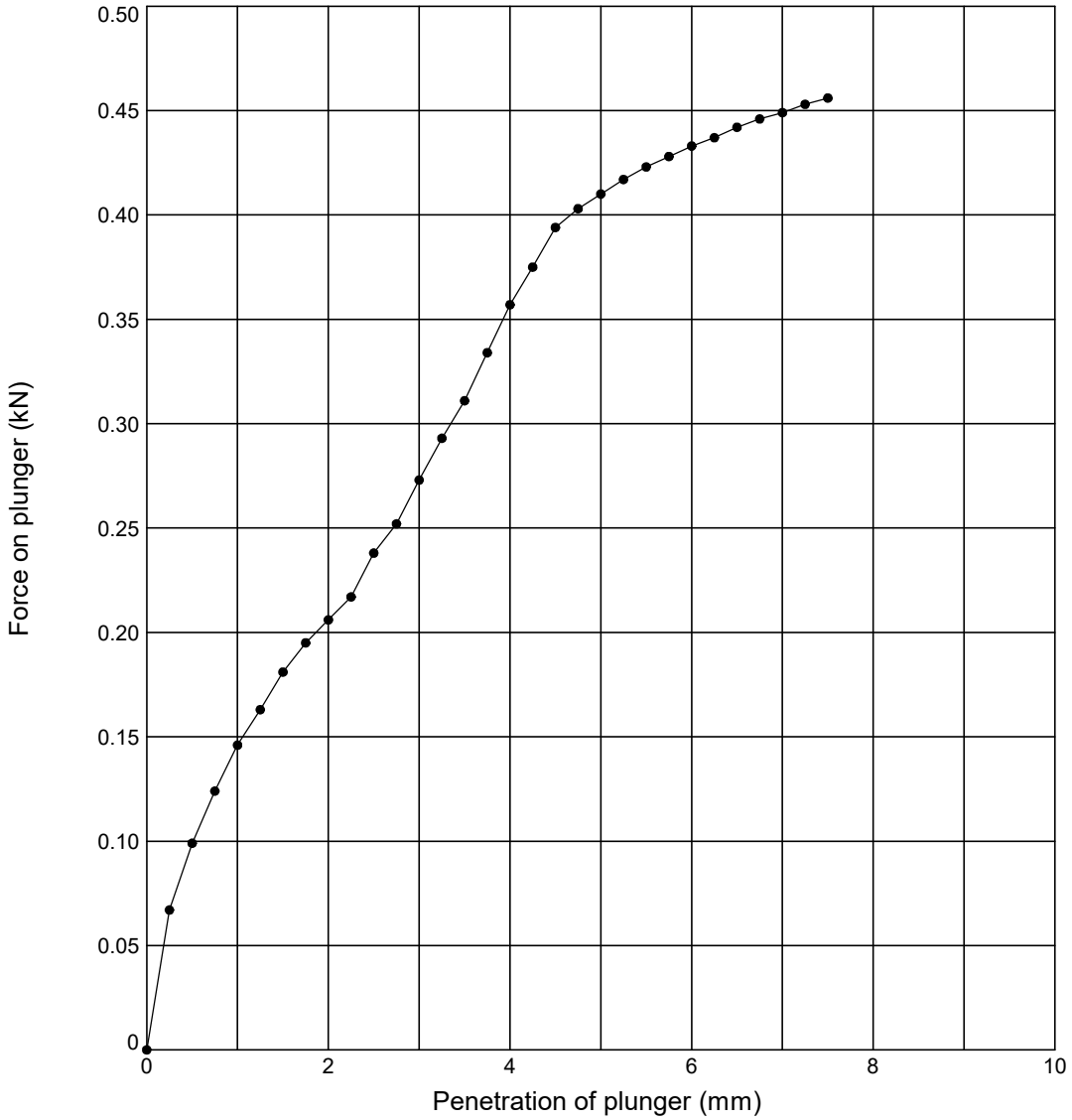
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP317** Sample Ref: Sample Type: **AMAL** Depth (m): **0.50**

Amalgamation comprises: F22-TP317, Depth:0.50, Ref:5, Type:LB + F22-TP317, Depth:0.50, Ref:3, Type:B + F22-TP317, Depth:0.70, Ref:6, Type:B + F22-TP317, Depth:2.00, Ref:11, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**22**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**23**	**22**
Initial Bulk Density (Mg/m^3)	:	**1.95**	Surcharge (kg)	:	**4.0**	CBR value (%)	**2.1**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.59**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**1**	Swelling (mm)	:	**-**			

Sample Description	Key
Greenish brown mottled orangish brown slightly gravelly slightly sandy CLAY	● **Top** ⧓ **Base**

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Pottery Street
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W. Yorkshire WF10 1NJ

Compiled By		Date
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Contract	Contract Ref:
Sealink Friston	**563835**

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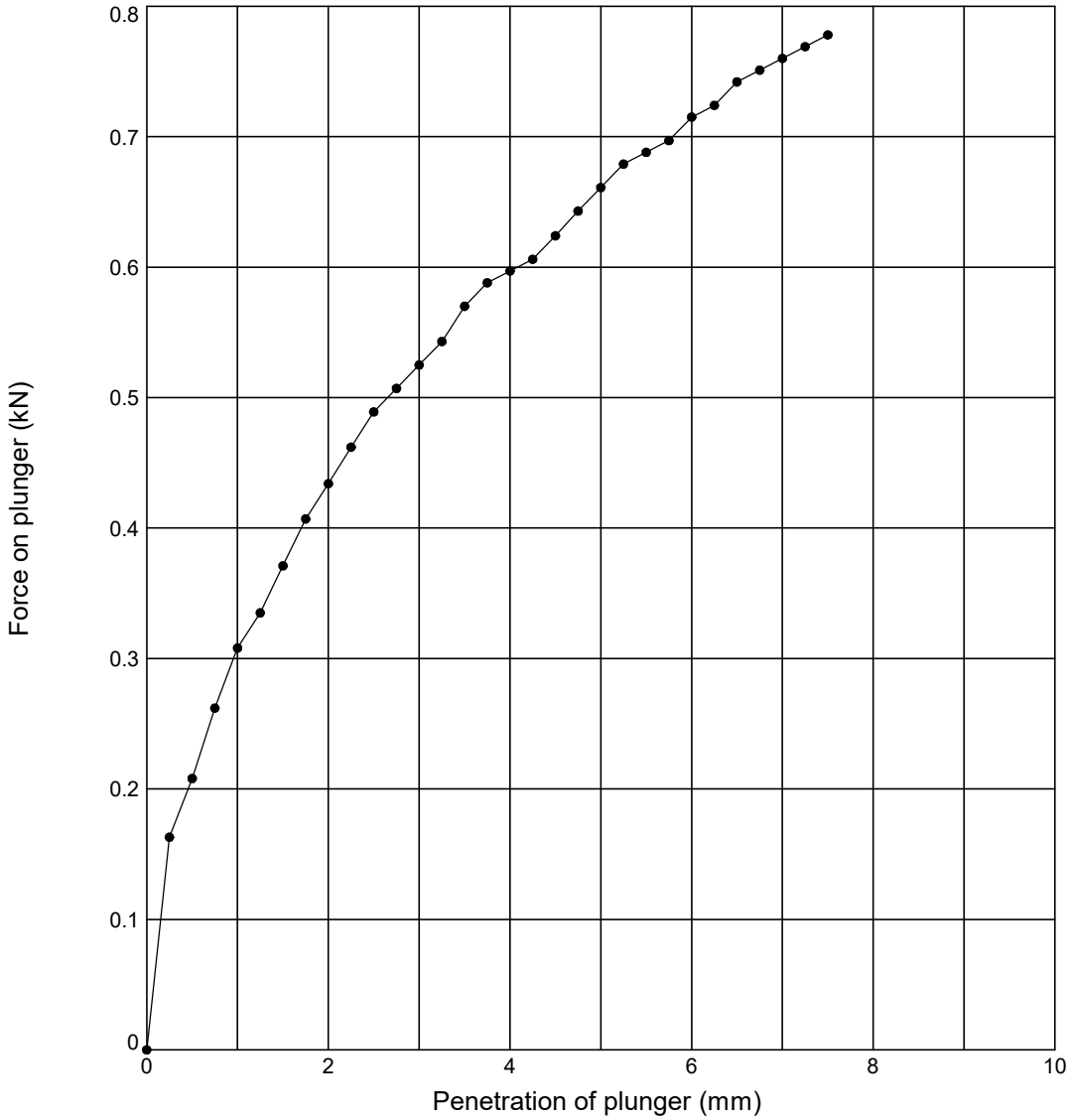
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP317** Sample Ref: Sample Type: **AMAL** Depth (m): **0.50**

Amalgamation comprises: F22-TP317, Depth:0.50, Ref:5, Type:LB + F22-TP317, Depth:0.50, Ref:3, Type:B + F22-TP317, Depth:0.70, Ref:6, Type:B + F22-TP317, Depth:2.00, Ref:11, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**19**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**18**	**20**
Initial Bulk Density (Mg/m^3)	:	**2.03**	Surcharge (kg)	:	**4.0**	CBR value (%)	**3.7**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.71**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**1**	Swelling (mm)	:	**-**			

Sample Description	Key
Greenish brown mottled orangish brown slightly gravelly slightly sandy CLAY	● **Top** ⧓ **Base**

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Contract	Contract Ref:
Sealink Friston	**563835**

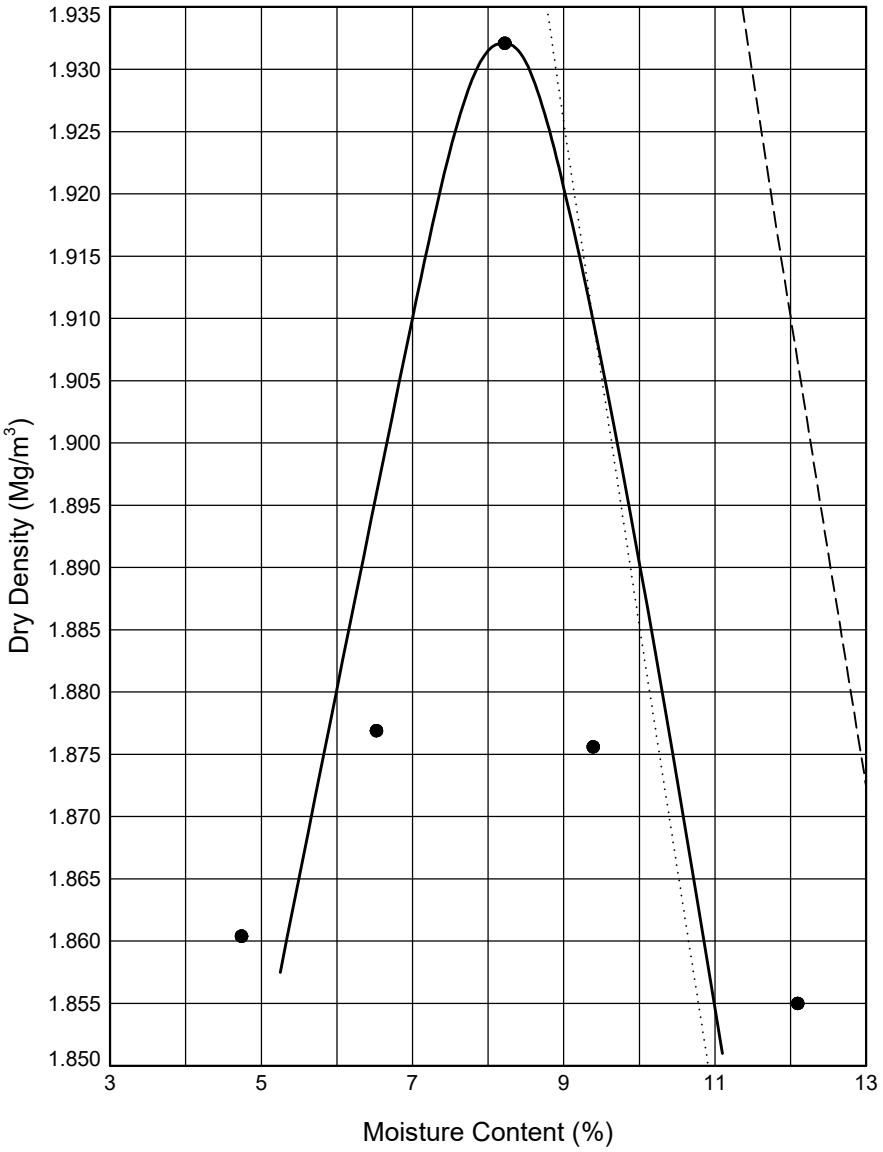
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DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **F22-TP404** Sample Ref: **7** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**4.7**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m³)	:	**1.93**
% Retained on 37.5mm BS Sieve	:	**4**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**8.2**
% Retained on 20.0mm BS Sieve	:	**12**	Type of Mould	:	**CBR**	Method Used: **Clause 11.4**		
Particle Density - assumed (Mg/m³)	:	**2.65**				Remarks: **CBR test carried out at each point. Material is unsuitable for MCV tests**		
Size of Soil Pieces	:	**<37.5mm**	Separate samples were used.					

Sample Description	Key to Air Voids Lines		
Dark brown very gravelly clayey SAND	——— 0%	– – – – 5%	····· 10%

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HP3 9RT

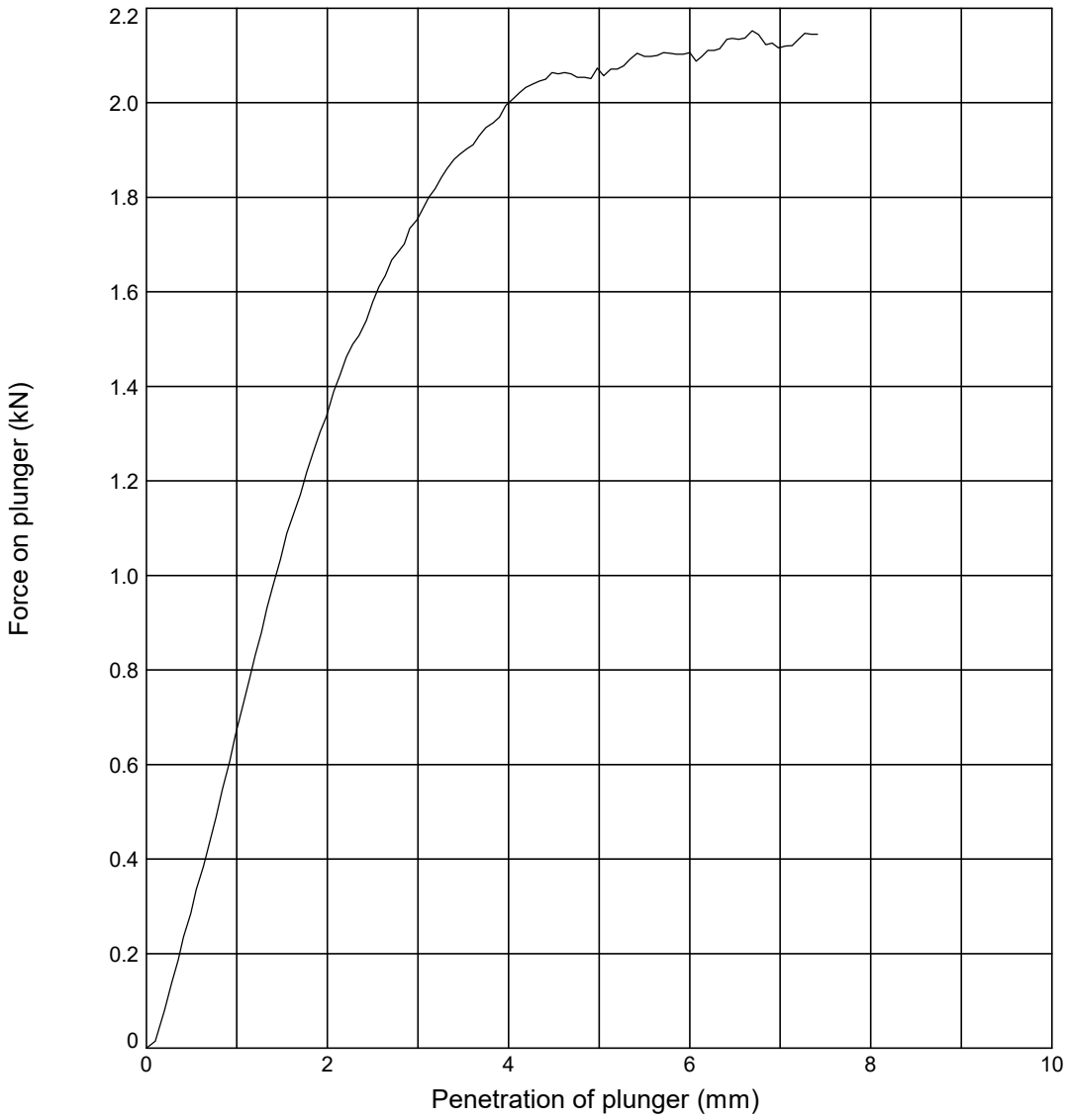
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Contract: **Sealink Friston**		Contract Ref: **563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - COMPACTIONS - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
Structural Soils Ltd, Branch Office - Hemel Hempstead: 18 Frogmore Road, Hemel Hempstead, Hertfordshire, HP3 9RT. Tel: 01442-262323, Fax: 01442-262683, Web: www.soils.co.uk, Email: ask@soils.co.uk | 22/01/24 - 11:07 | AF3 |

LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP404** Sample Ref: **7** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**4.8**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**4.8**	**4.7**
Initial Bulk Density (Mg/m^3)	:	**1.92**	Surcharge (kg)	:	**4.1**	CBR Value (%)	**12**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.83**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**0.11**	**NA**
% Retained on 20mm Sieve	:	**16**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**12**	**NA**

Sample Description	Key
Dark brown very gravelly clayey SAND	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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Contract	Contract Ref:
Sealink Friston	**563835**

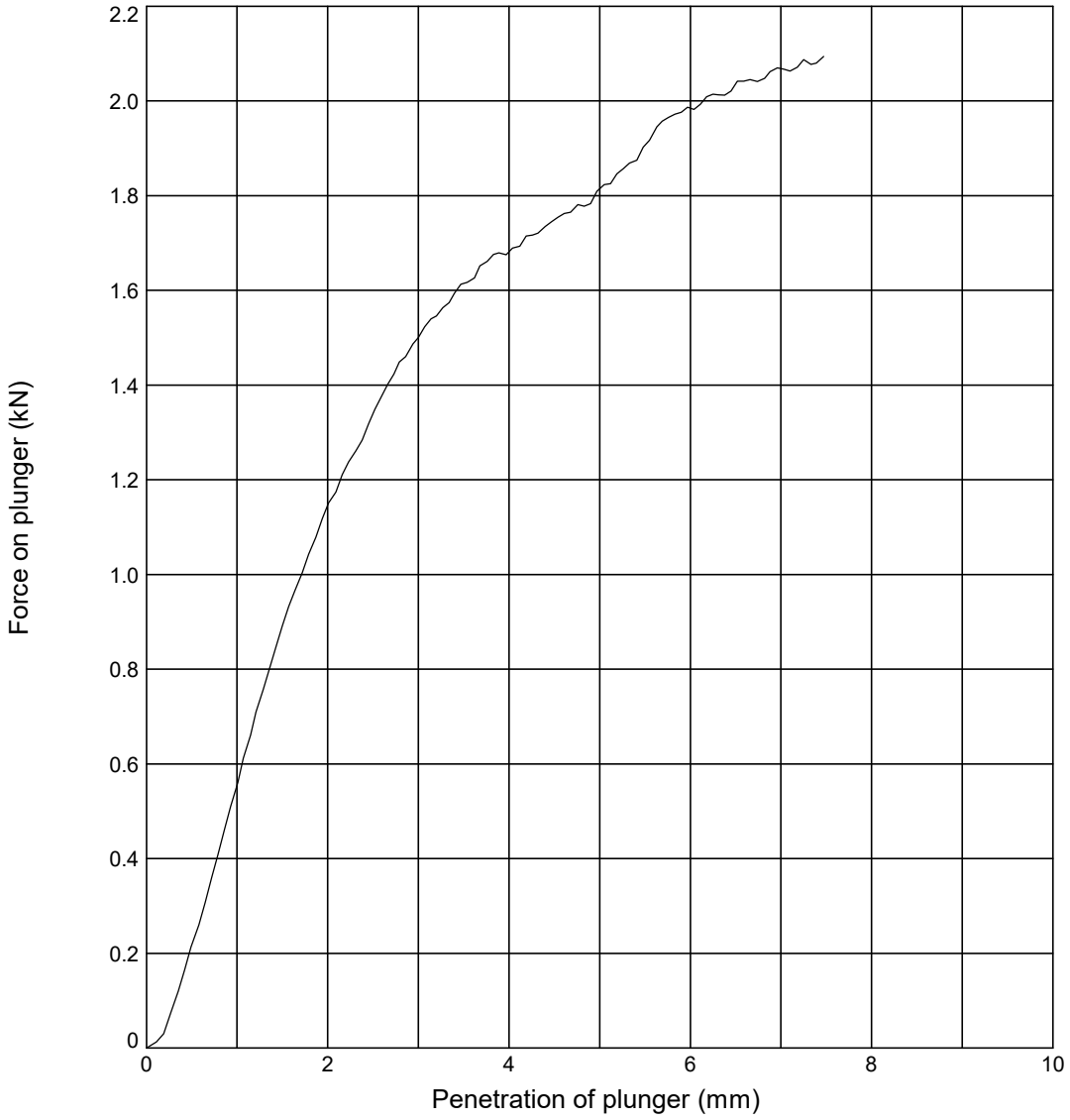
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP404** Sample Ref: **7** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**6.5**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**6.2**	**7.3**
Initial Bulk Density (Mg/m^3)	:	**1.95**	Surcharge (kg)	:	**4.1**	CBR Value (%)	**10**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.83**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**0.2**	**NA**
% Retained on 20mm Sieve	:	**16**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**11**	**NA**

Sample Description	Key
Dark brown very gravelly clayey SAND	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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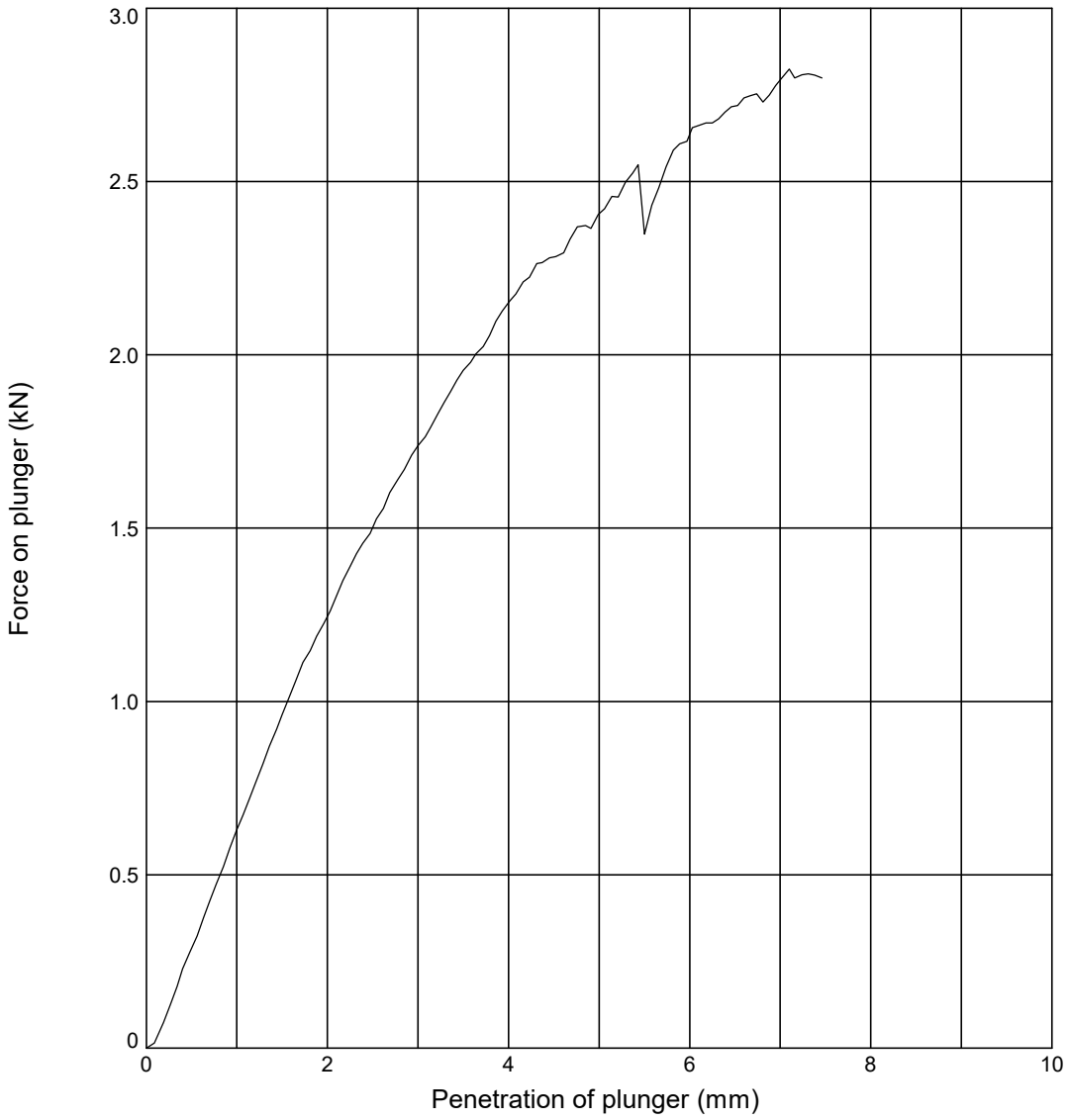
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP404** Sample Ref: **7** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**7.8**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**7.2**	**6.9**
Initial Bulk Density (Mg/m^3)	:	**1.98**	Surcharge (kg)	:	**4.1**	CBR Value (%)	**12**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.84**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**0.1**	**NA**
% Retained on 20mm Sieve	:	**16**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**12**	**NA**

Sample Description	Key
Dark brown very gravelly clayey SAND	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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Contract	Contract Ref:
Sealink Friston	**563835**

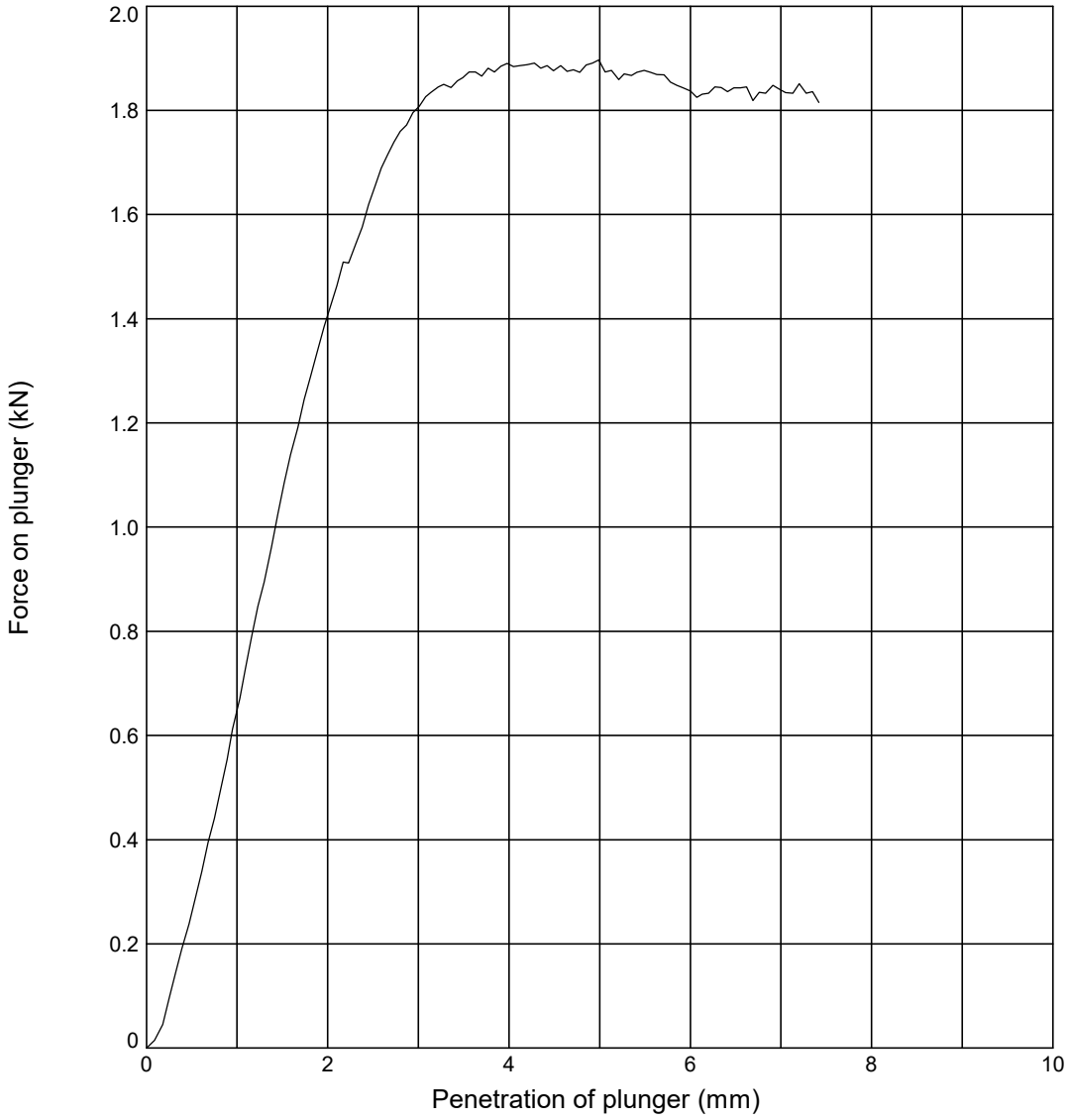
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GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - CBR DATALOGGED - 1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP404** Sample Ref: **7** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**9.3**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**8.7**	**10**
Initial Bulk Density (Mg/m^3)	:	**2.05**	Surcharge (kg)	:	**4.1**	CBR Value (%)	**12**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.88**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**0.2**	**NA**
% Retained on 20mm Sieve	:	**17**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**13**	**NA**

Sample Description	Key
Dark brown very gravelly clayey SAND	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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Contract	Contract Ref:
Sealink Friston	**563835**

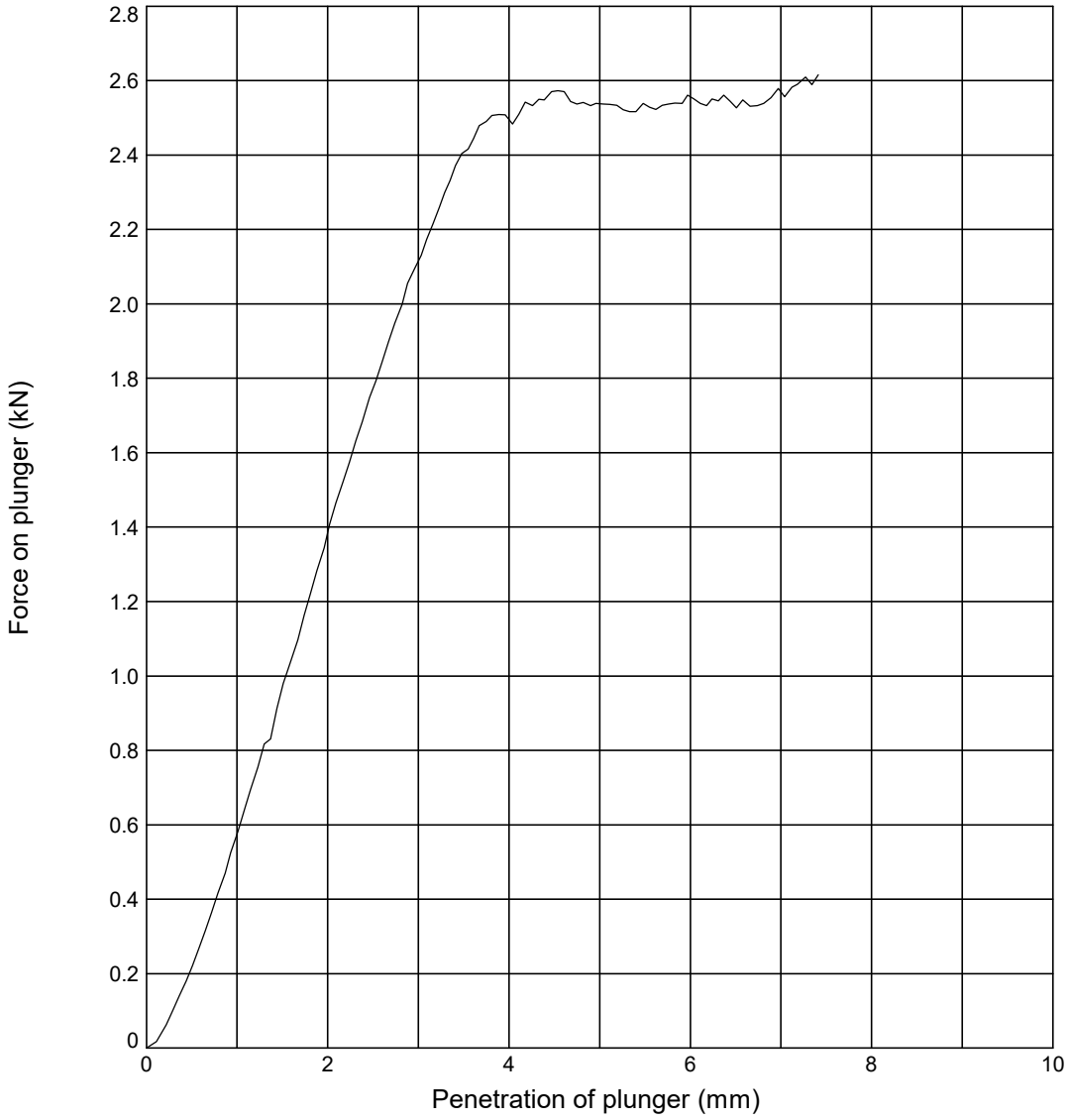
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GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - CBR DATALOGGED - 1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP404** Sample Ref: **7** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**11**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**11**	**12**
Initial Bulk Density (Mg/m^3)	:	**2.07**	Surcharge (kg)	:	**4.1**	CBR Value (%)	**13**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.86**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**0.3**	**NA**
% Retained on 20mm Sieve	:	**17**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**15**	**NA**

Sample Description	Key
Dark brown very gravelly clayey SAND	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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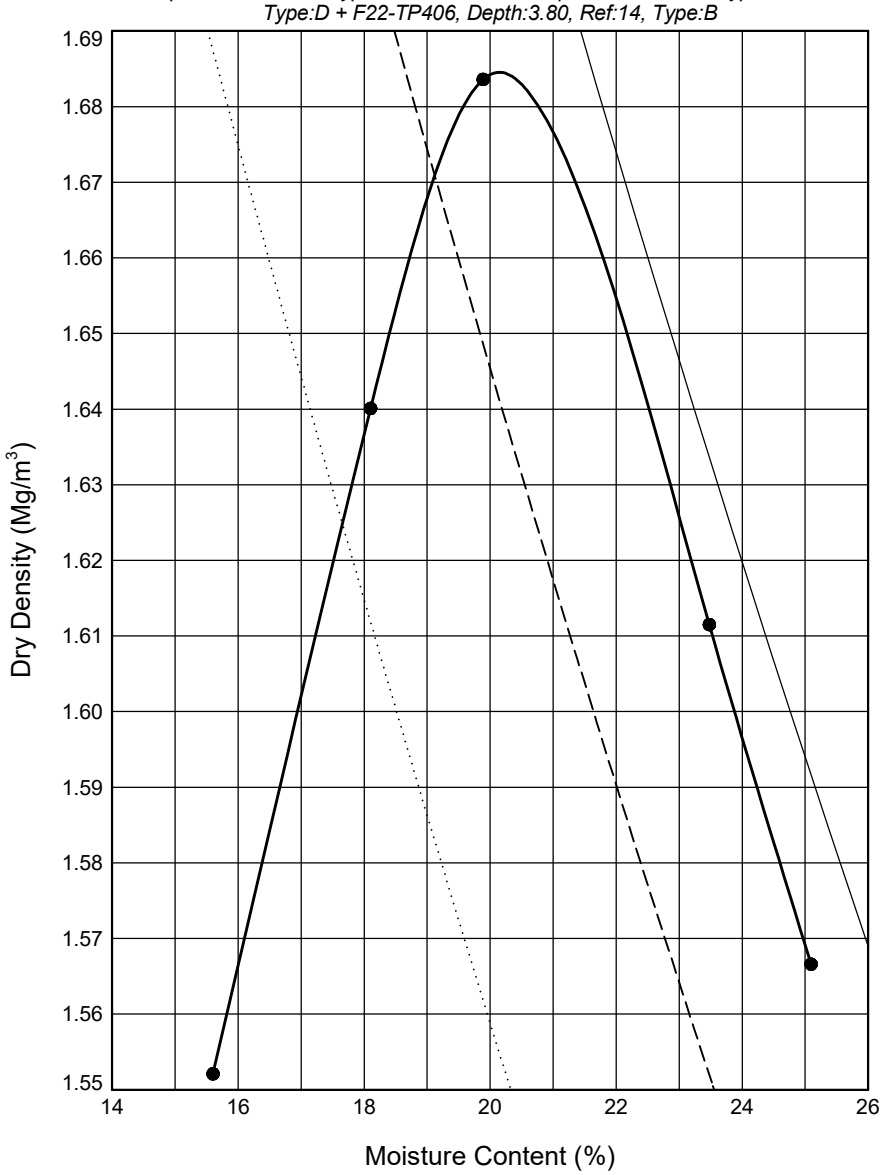
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DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **F22-TP406** Sample Ref: Sample Type: **AMAL** Depth (m): **0.80**

Amalgamation comprises: F22-TP406, Depth:0.80, Ref:15, Type:LB + F22-TP406, Depth:0.90, Ref:6, Type:B + F22-TP406, Depth:1.10, Ref:8, Type:B + F22-TP406, Depth:2.00, Ref:10, Type:B + F22-TP406, Depth:3.00, Ref:12, Type:B + F22-TP406, Depth:3.80, Ref:13, Type:D + F22-TP406, Depth:3.80, Ref:14, Type:B



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**18**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m³)	:	**1.68**
% Retained on 37.5mm BS Sieve	:	**1**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**20**
% Retained on 20.0mm BS Sieve	:	**0**	Type of Mould	:	**CBR**	Method Used: **Clause 11.4**		
Particle Density - assumed (Mg/m³)	:	**2.65**				Remarks: **CBR and MCV tests carried out at each point**		
Size of Soil Pieces	:	**<37.5mm**	Separate samples were used.					

Sample Description	Key to Air Voids Lines		
Grey slightly gravelly slightly sandy CLAY with chalk	——— 0%	– – – – 5%	····· 10%

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MOISTURE CONDITION VALUE

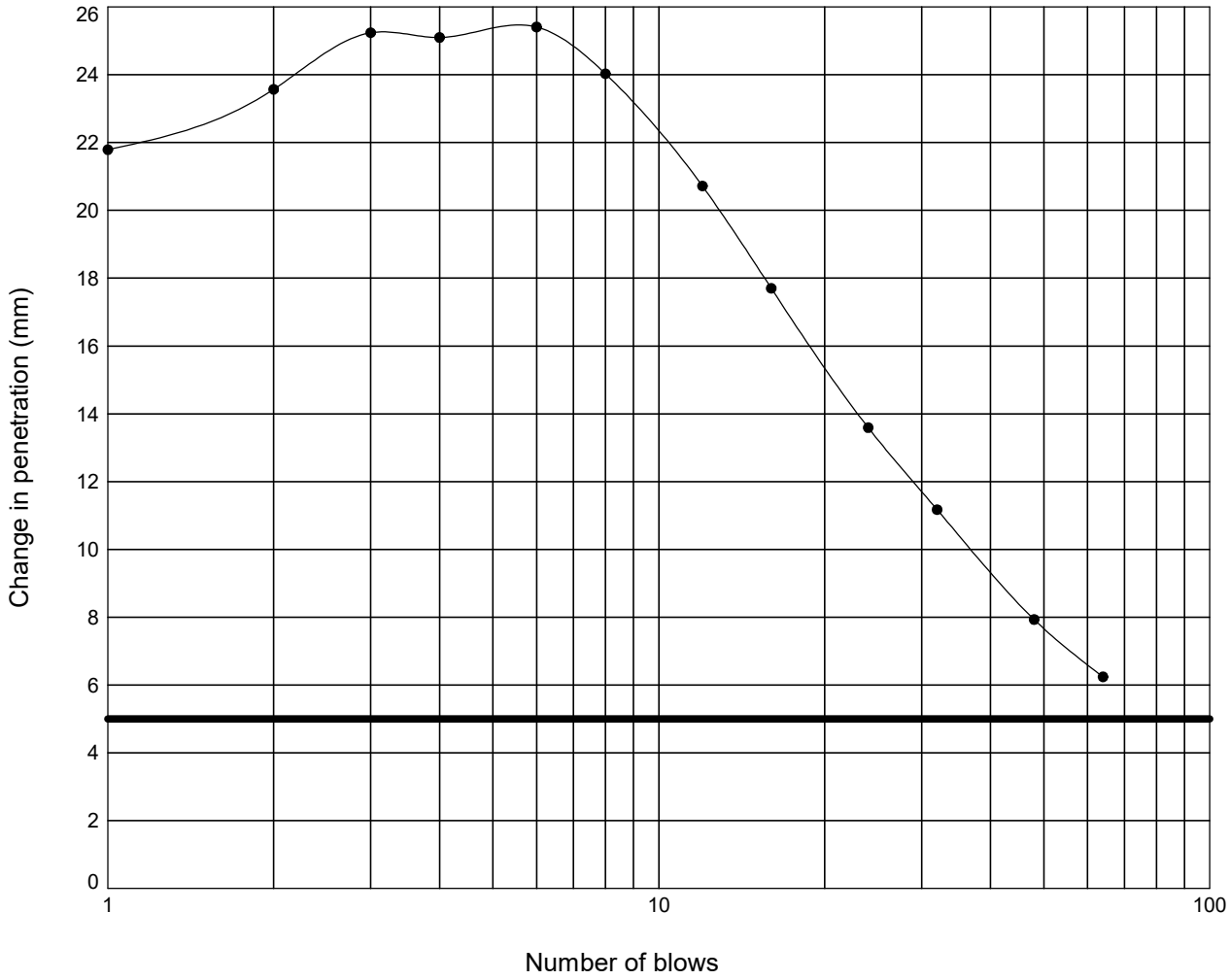
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP406** Sample Ref: Sample Type: **AMAL** Depth (m): **0.80**

Amalgamation comprises: F22-TP406, Depth:0.80, Ref:15, Type:LB + F22-TP406, Depth:0.90, Ref:6, Type:B + F22-TP406, Depth:1.10, Ref:8, Type:B + F22-TP406, Depth:2.00, Ref:10, Type:B + F22-TP406, Depth:3.00, Ref:12, Type:B + F22-TP406, Depth:3.80, Ref:13, Type:D + F22-TP406, Depth:3.80, Ref:14, Type:B

Description : **Grey slightly gravelly slightly sandy CLAY with chalk**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	15	%
Percentage retained on 20 mm sieve :	=	1	%
Moisture Condition Value :	=	17.3	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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MOISTURE CONDITION VALUE

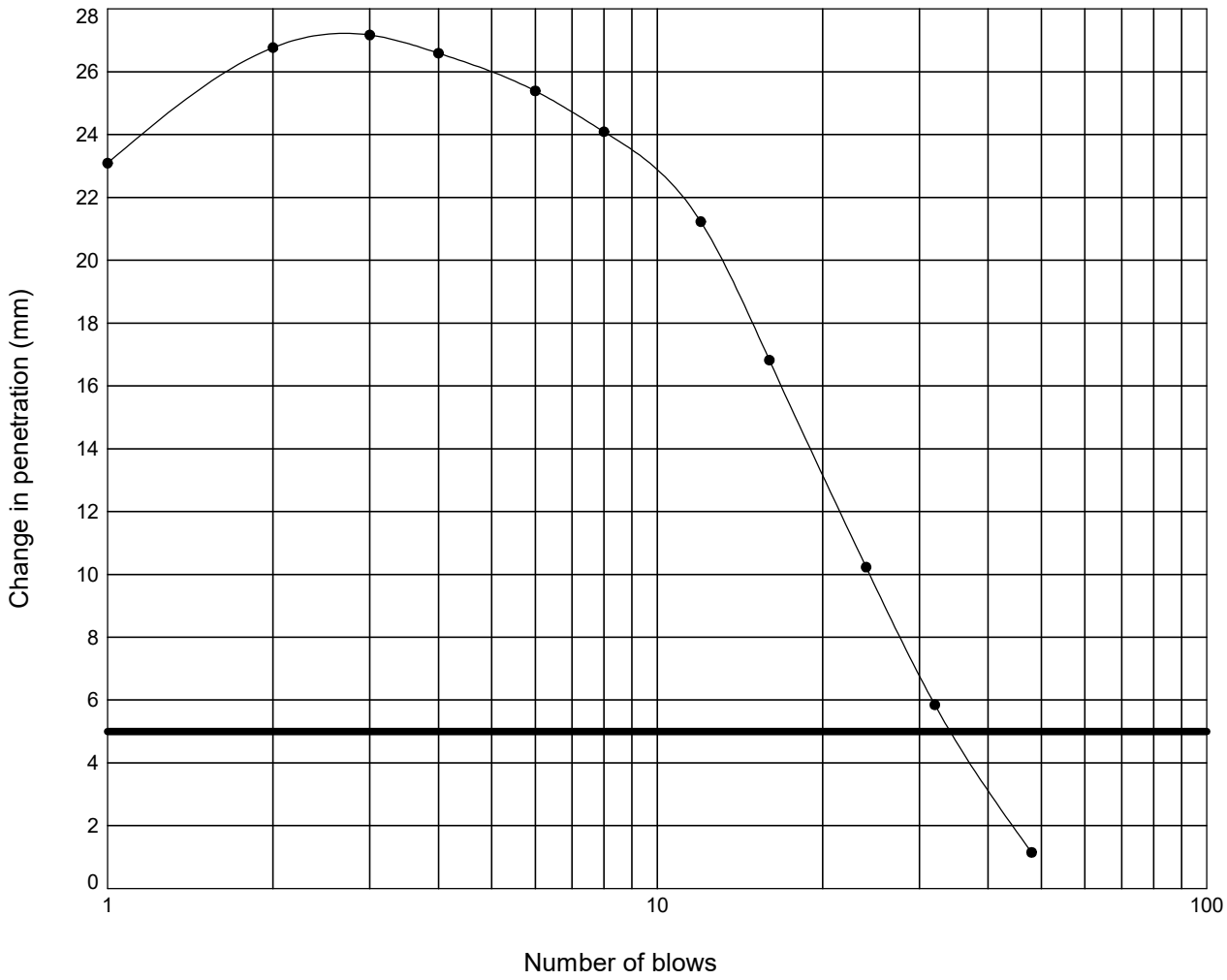
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP406** Sample Ref: Sample Type: **AMAL** Depth (m): **0.80**

Amalgamation comprises: F22-TP406, Depth:0.80, Ref:15, Type:LB + F22-TP406, Depth:0.90, Ref:6, Type:B + F22-TP406, Depth:1.10, Ref:8, Type:B + F22-TP406, Depth:2.00, Ref:10, Type:B + F22-TP406, Depth:3.00, Ref:12, Type:B + F22-TP406, Depth:3.80, Ref:13, Type:D + F22-TP406, Depth:3.80, Ref:14, Type:B

Description : **Grey slightly gravelly slightly sandy CLAY with chalk**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	19	%
Percentage retained on 20 mm sieve :	=	1	%
Moisture Condition Value :	=	15.2	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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MOISTURE CONDITION VALUE

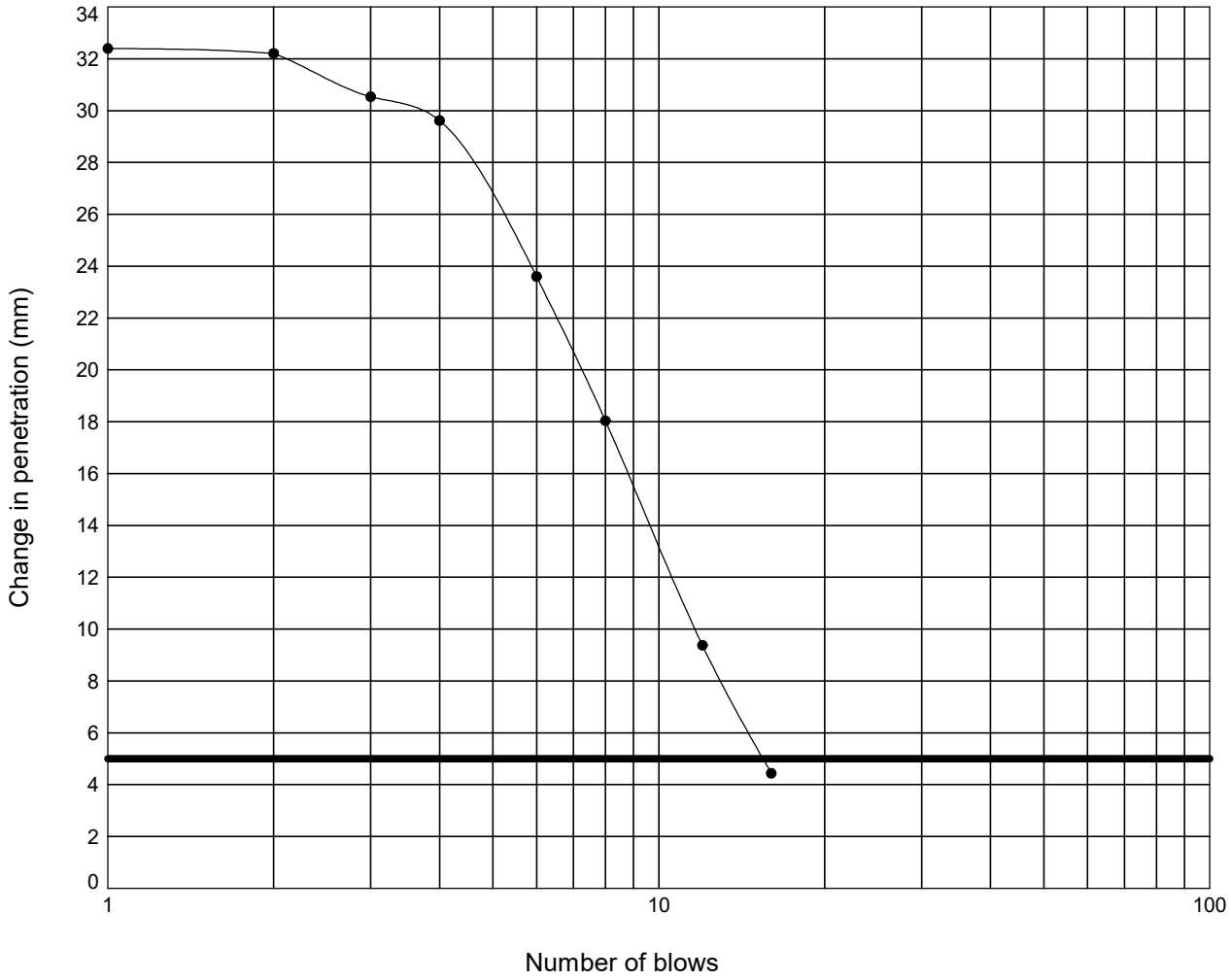
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP406** Sample Ref: Sample Type: **AMAL** Depth (m): **0.80**

Amalgamation comprises: F22-TP406, Depth:0.80, Ref:15, Type:LB + F22-TP406, Depth:0.90, Ref:6, Type:B + F22-TP406, Depth:1.10, Ref:8, Type:B + F22-TP406, Depth:2.00, Ref:10, Type:B + F22-TP406, Depth:3.00, Ref:12, Type:B + F22-TP406, Depth:3.80, Ref:13, Type:D + F22-TP406, Depth:3.80, Ref:14, Type:B

Description : **Grey slightly gravelly slightly sandy CLAY with chalk**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	21	%
Percentage retained on 20 mm sieve :	=	1	%
Moisture Condition Value :	=	11.7	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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MOISTURE CONDITION VALUE

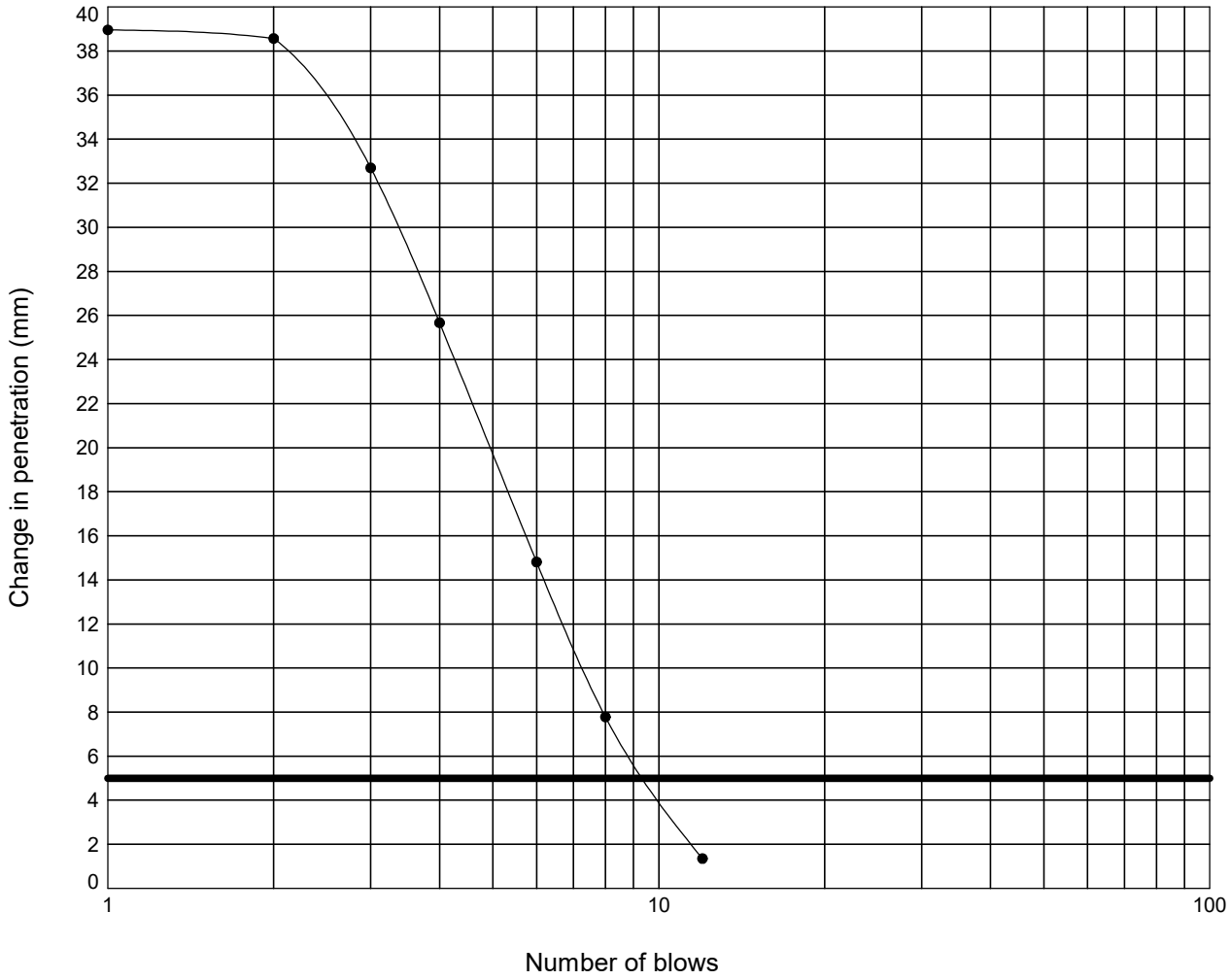
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP406** Sample Ref: Sample Type: **AMAL** Depth (m): **0.80**

Amalgamation comprises: F22-TP406, Depth:0.80, Ref:15, Type:LB + F22-TP406, Depth:0.90, Ref:6, Type:B + F22-TP406, Depth:1.10, Ref:8, Type:B + F22-TP406, Depth:2.00, Ref:10, Type:B + F22-TP406, Depth:3.00, Ref:12, Type:B + F22-TP406, Depth:3.80, Ref:13, Type:D + F22-TP406, Depth:3.80, Ref:14, Type:B

Description : **Grey slightly gravelly slightly sandy CLAY with chalk**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	24	%
Percentage retained on 20 mm sieve :	=	1	%
Moisture Condition Value :	=	9.4	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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MOISTURE CONDITION VALUE

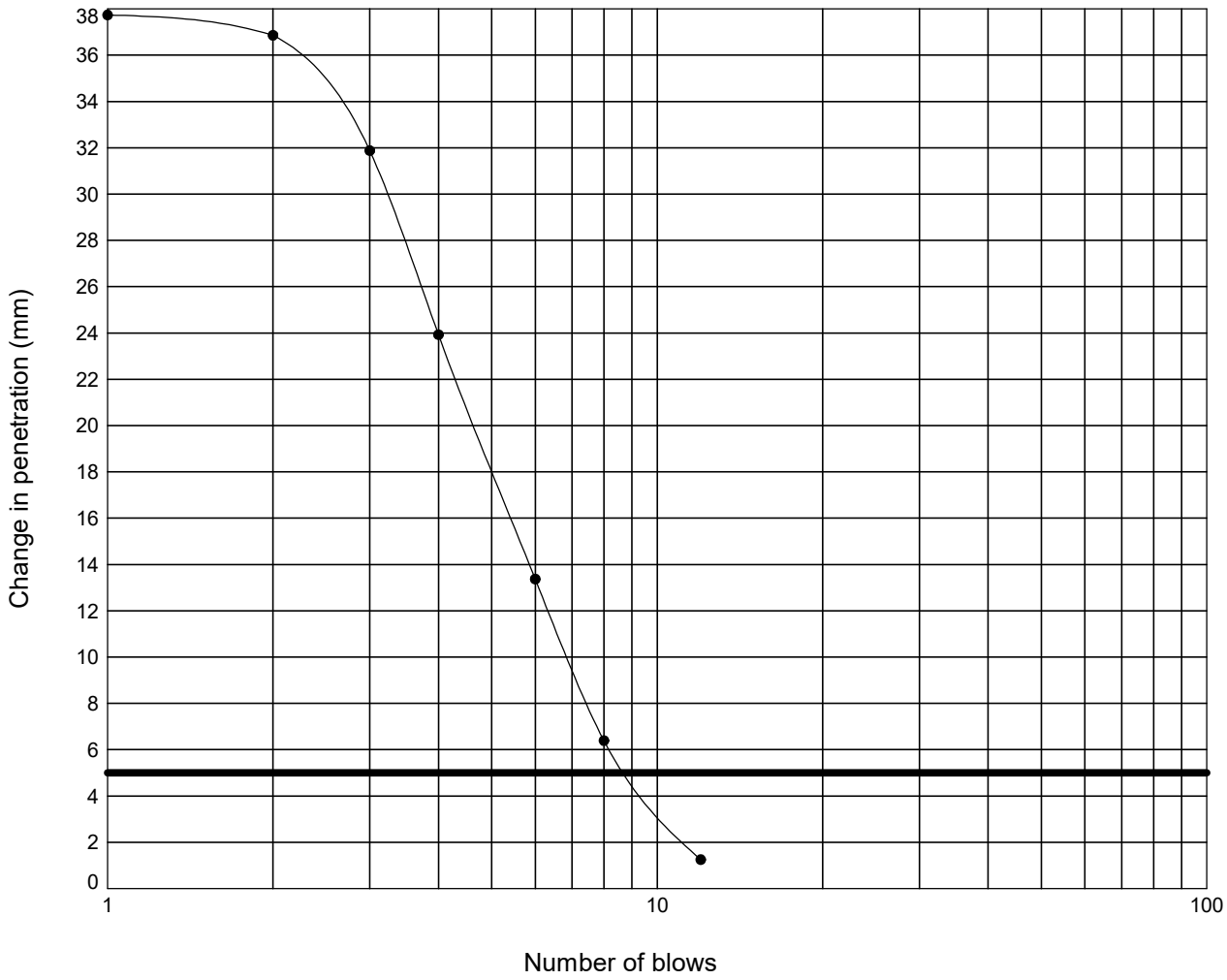
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP406** Sample Ref: Sample Type: **AMAL** Depth (m): **0.80**

Amalgamation comprises: F22-TP406, Depth:0.80, Ref:15, Type:LB + F22-TP406, Depth:0.90, Ref:6, Type:B + F22-TP406, Depth:1.10, Ref:8, Type:B + F22-TP406, Depth:2.00, Ref:10, Type:B + F22-TP406, Depth:3.00, Ref:12, Type:B + F22-TP406, Depth:3.80, Ref:13, Type:D + F22-TP406, Depth:3.80, Ref:14, Type:B

Description : **Grey slightly gravelly slightly sandy CLAY with chalk**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	24	%
Percentage retained on 20 mm sieve :	=	1	%
Moisture Condition Value :	=	9.0	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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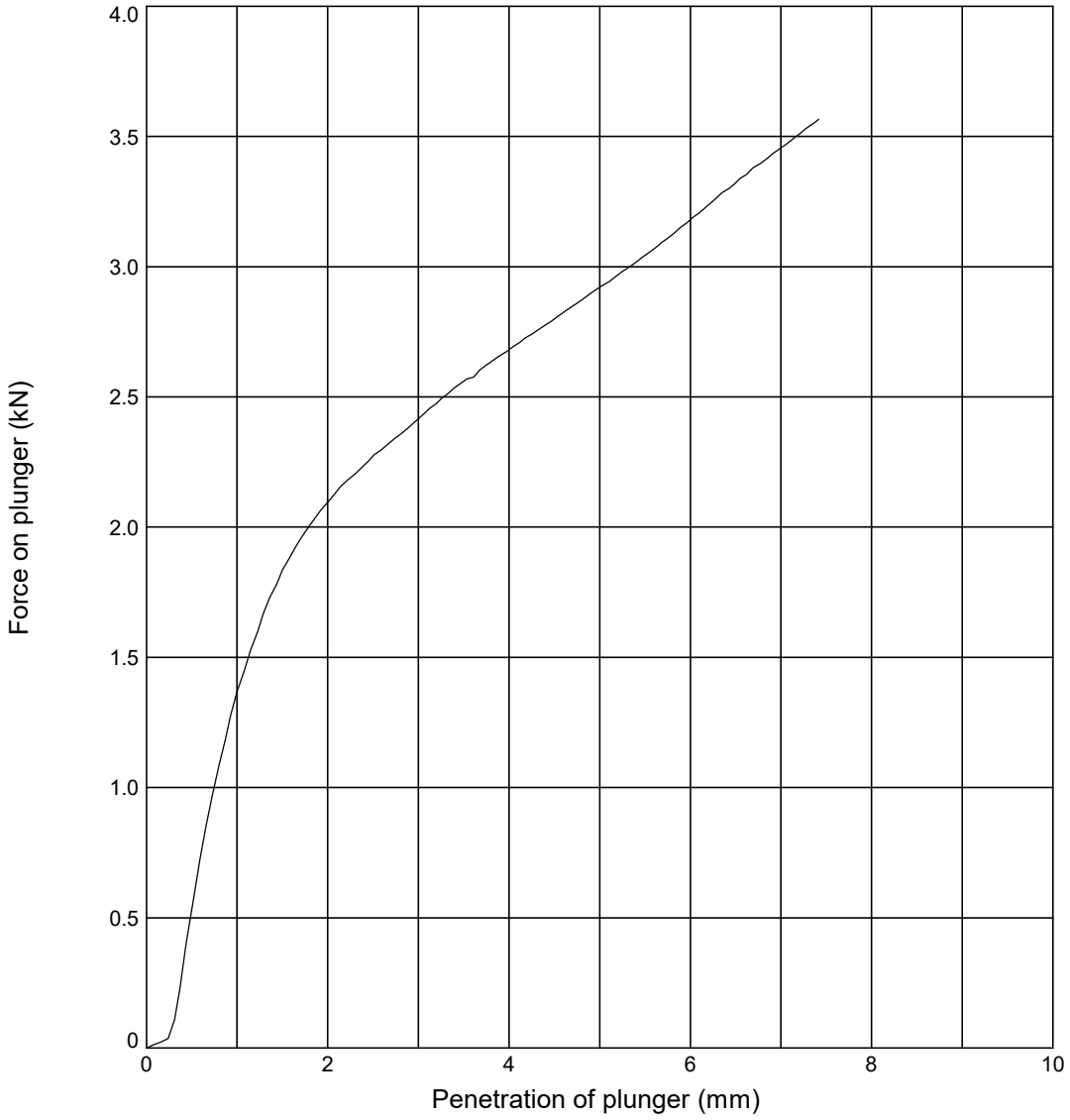
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - MCV -3- NATURAL FINAL - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP406** Sample Ref: Sample Type: **AMAL** Depth (m): **0.80**

Amalgamation comprises: F22-TP406, Depth:0.80, Ref:15, Type:LB + F22-TP406, Depth:0.90, Ref:6, Type:B + F22-TP406, Depth:1.10, Ref:8, Type:B + F22-TP406, Depth:2.00, Ref:10, Type:B + F22-TP406, Depth:3.00, Ref:12, Type:B + F22-TP406, Depth:3.80, Ref:13, Type:D + F22-TP406, Depth:3.80, Ref:14, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**16**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**16**	**16**
Initial Bulk Density (Mg/m^3)	:	**1.80**	Surcharge (kg)	:	**4.1**	CBR Value (%)	**17**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.55**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**0.3**	**NA**
% Retained on 20mm Sieve	:	**1**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**18**	**NA**

Sample Description	Key
Grey slightly gravelly slightly sandy CLAY with chalk	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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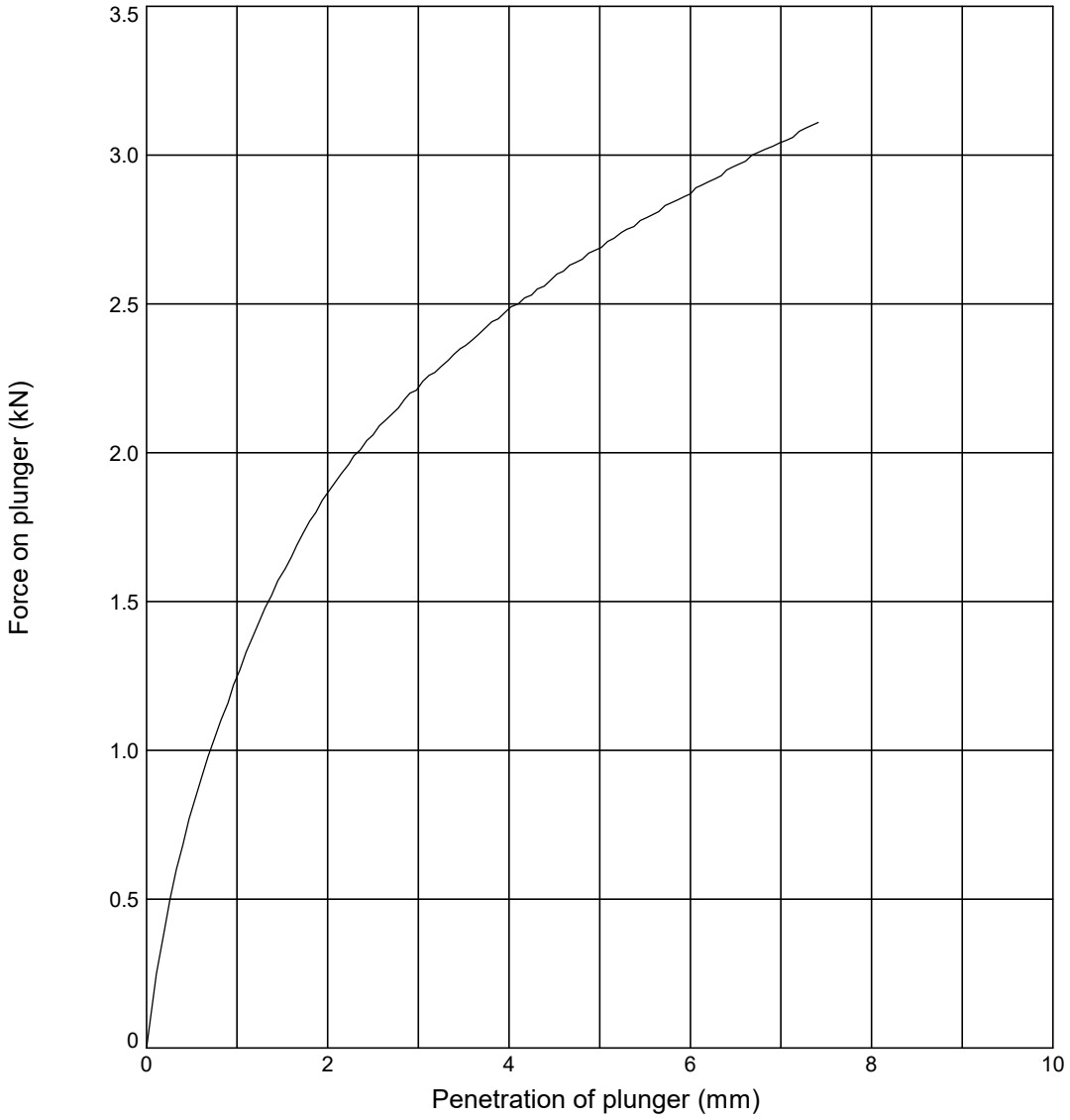
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP406** Sample Ref: Sample Type: **AMAL** Depth (m): **0.80**

Amalgamation comprises: F22-TP406, Depth:0.80, Ref:15, Type:LB + F22-TP406, Depth:0.90, Ref:6, Type:B + F22-TP406, Depth:1.10, Ref:8, Type:B + F22-TP406, Depth:2.00, Ref:10, Type:B + F22-TP406, Depth:3.00, Ref:12, Type:B + F22-TP406, Depth:3.80, Ref:13, Type:D + F22-TP406, Depth:3.80, Ref:14, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**19**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**19**	**19**
Initial Bulk Density (Mg/m^3)	:	**1.93**	Surcharge (kg)	:	**4.1**	CBR Value (%)	**16**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.63**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**1**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Grey slightly gravelly slightly sandy CLAY with chalk	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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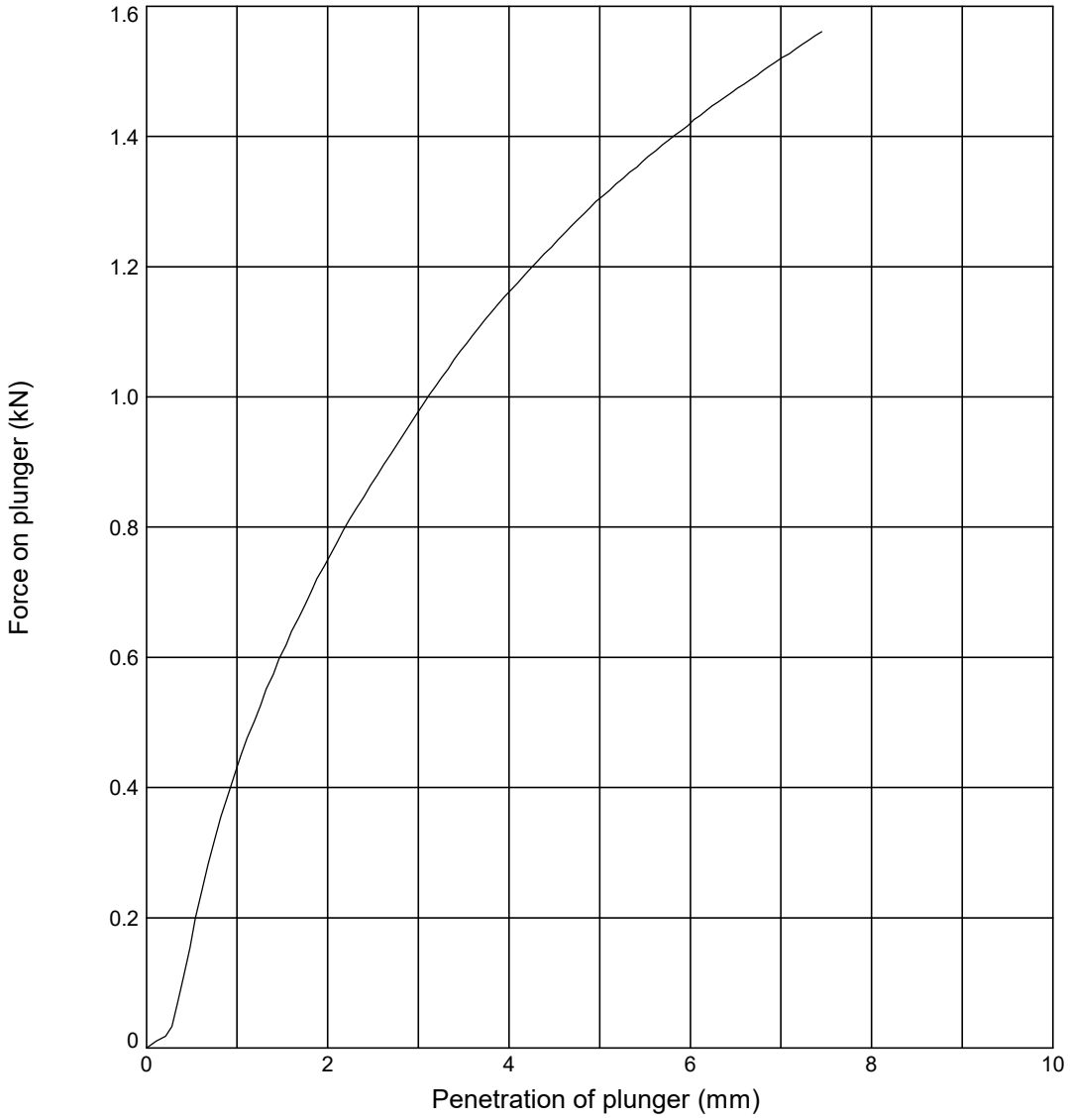
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - CBR DATALOGGED - 1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP406** Sample Ref: Sample Type: **AMAL** Depth (m): **0.80**

Amalgamation comprises: F22-TP406, Depth:0.80, Ref:15, Type:LB + F22-TP406, Depth:0.90, Ref:6, Type:B + F22-TP406, Depth:1.10, Ref:8, Type:B + F22-TP406, Depth:2.00, Ref:10, Type:B + F22-TP406, Depth:3.00, Ref:12, Type:B + F22-TP406, Depth:3.80, Ref:13, Type:D + F22-TP406, Depth:3.80, Ref:14, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**20**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**21**	**20**
Initial Bulk Density (Mg/m^3)	:	**2.00**	Surcharge (kg)	:	**4.1**	CBR Value (%)	**6.6**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.67**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**0.25**	**NA**
% Retained on 20mm Sieve	:	**1**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**7.0**	**NA**

Sample Description	Key
Grey slightly gravelly slightly sandy CLAY with chalk	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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Contract	Contract Ref:
Sealink Friston	**563835**

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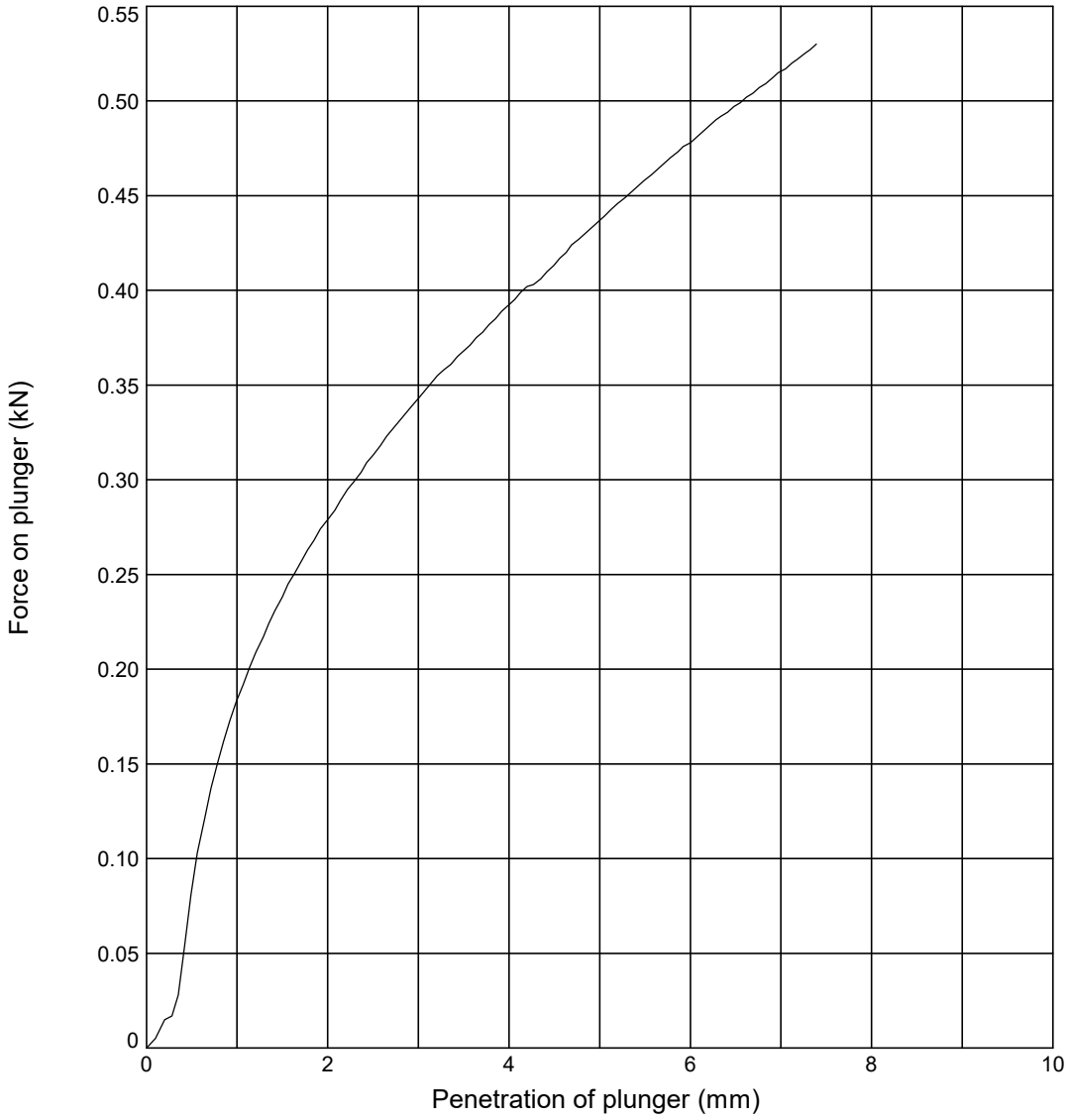
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP406** Sample Ref: Sample Type: **AMAL** Depth (m): **0.80**

Amalgamation comprises: F22-TP406, Depth:0.80, Ref:15, Type:LB + F22-TP406, Depth:0.90, Ref:6, Type:B + F22-TP406, Depth:1.10, Ref:8, Type:B + F22-TP406, Depth:2.00, Ref:10, Type:B + F22-TP406, Depth:3.00, Ref:12, Type:B + F22-TP406, Depth:3.80, Ref:13, Type:D + F22-TP406, Depth:3.80, Ref:14, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**23**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**24**	**23**
Initial Bulk Density (Mg/m^3)	:	**1.97**	Surcharge (kg)	:	**4.1**	CBR Value (%)	**2.4**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.60**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**0.275**	**NA**
% Retained on 20mm Sieve	:	**1**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**2.5**	**NA**

Sample Description	Key
Grey slightly gravelly slightly sandy CLAY with chalk	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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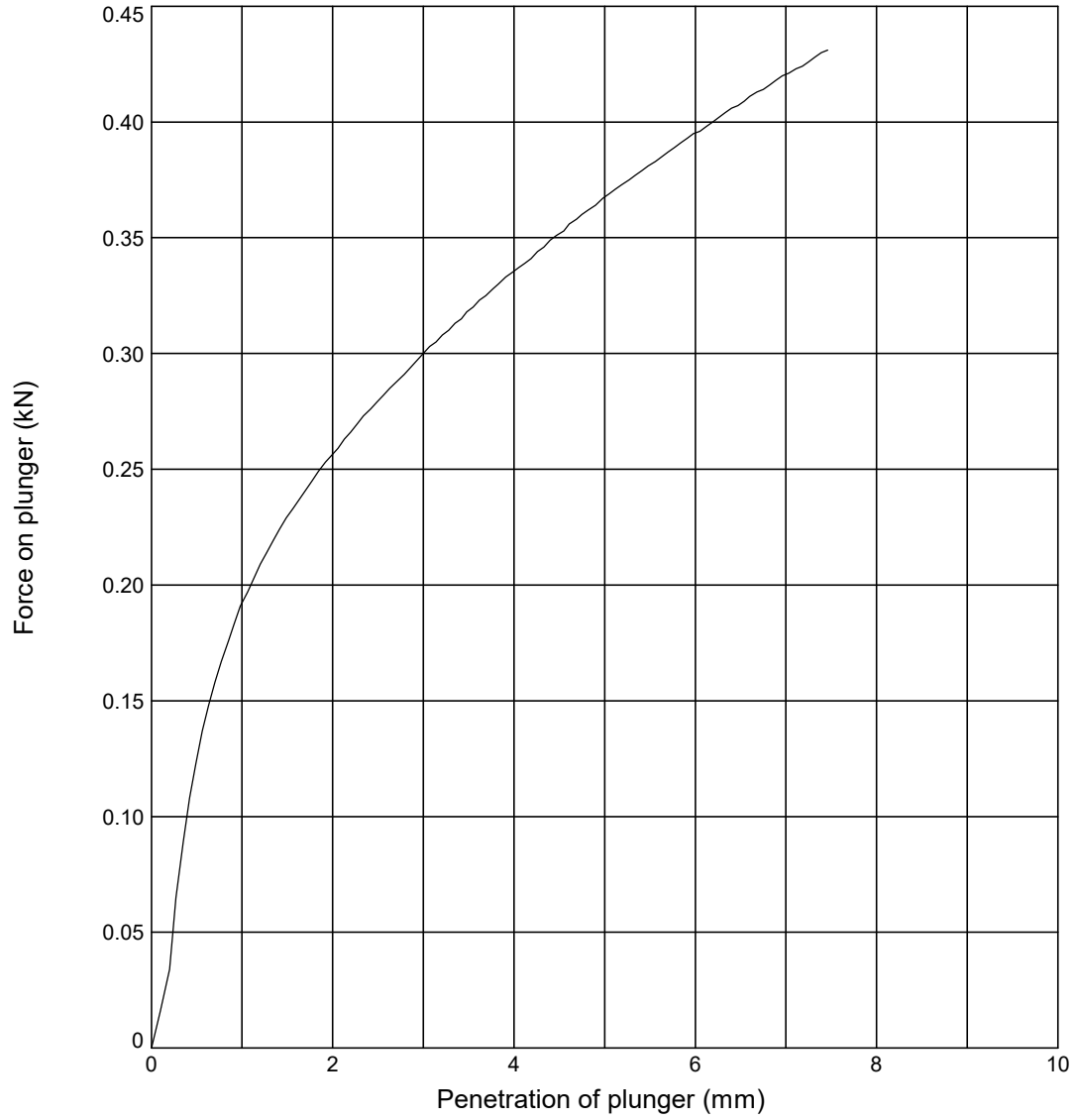
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP406** Sample Ref: Sample Type: **AMAL** Depth (m): **0.80**

Amalgamation comprises: F22-TP406, Depth:0.80, Ref:15, Type:LB + F22-TP406, Depth:0.90, Ref:6, Type:B + F22-TP406, Depth:1.10, Ref:8, Type:B + F22-TP406, Depth:2.00, Ref:10, Type:B + F22-TP406, Depth:3.00, Ref:12, Type:B + F22-TP406, Depth:3.80, Ref:13, Type:D + F22-TP406, Depth:3.80, Ref:14, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**25**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**24**	**25**
Initial Bulk Density (Mg/m^3)	:	**1.96**	Surcharge (kg)	:	**4.1**	CBR Value (%)	**2.1**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.57**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**0.1**	**NA**
% Retained on 20mm Sieve	:	**7**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**2.2**	**NA**

Sample Description	Key
Grey slightly gravelly slightly sandy CLAY with chalk	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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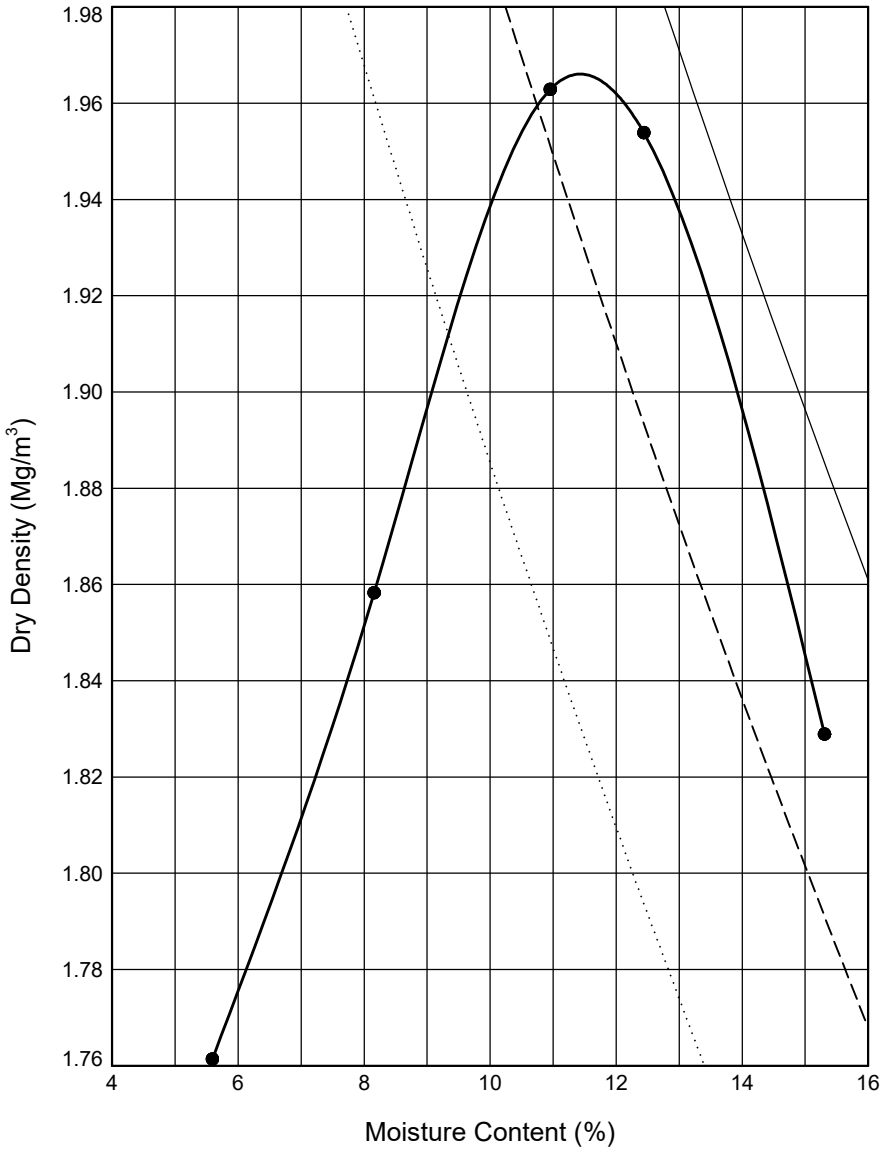
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DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **F22-TP511** Sample Ref: Sample Type: **AMAL** Depth (m): **1.50**

Amalgamation comprises: F22-TP511, Depth:1.50, Ref:7, Type:LB + F22-TP511, Depth:2.00, Ref:8, Type:B



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**12**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m³)	:	**1.97**
% Retained on 37.5mm BS Sieve	:	**1**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**11**
% Retained on 20.0mm BS Sieve	:	**0**	Type of Mould	:	**CBR**	Method Used: **Clause 11.4**		
Particle Density - assumed (Mg/m³)	:	**2.65**				Remarks: **CBR test carried out at each point. Material is unsuitable for MCV tests**		
Size of Soil Pieces	:	**<37.5mm**	Separate samples were used.					

Sample Description	Key to Air Voids Lines		
Brown slightly gravelly slightly clayey SAND	——— 0%	– – – – 5%	····· 10%

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Contract	Contract Ref:
Sealink Friston	**563835**

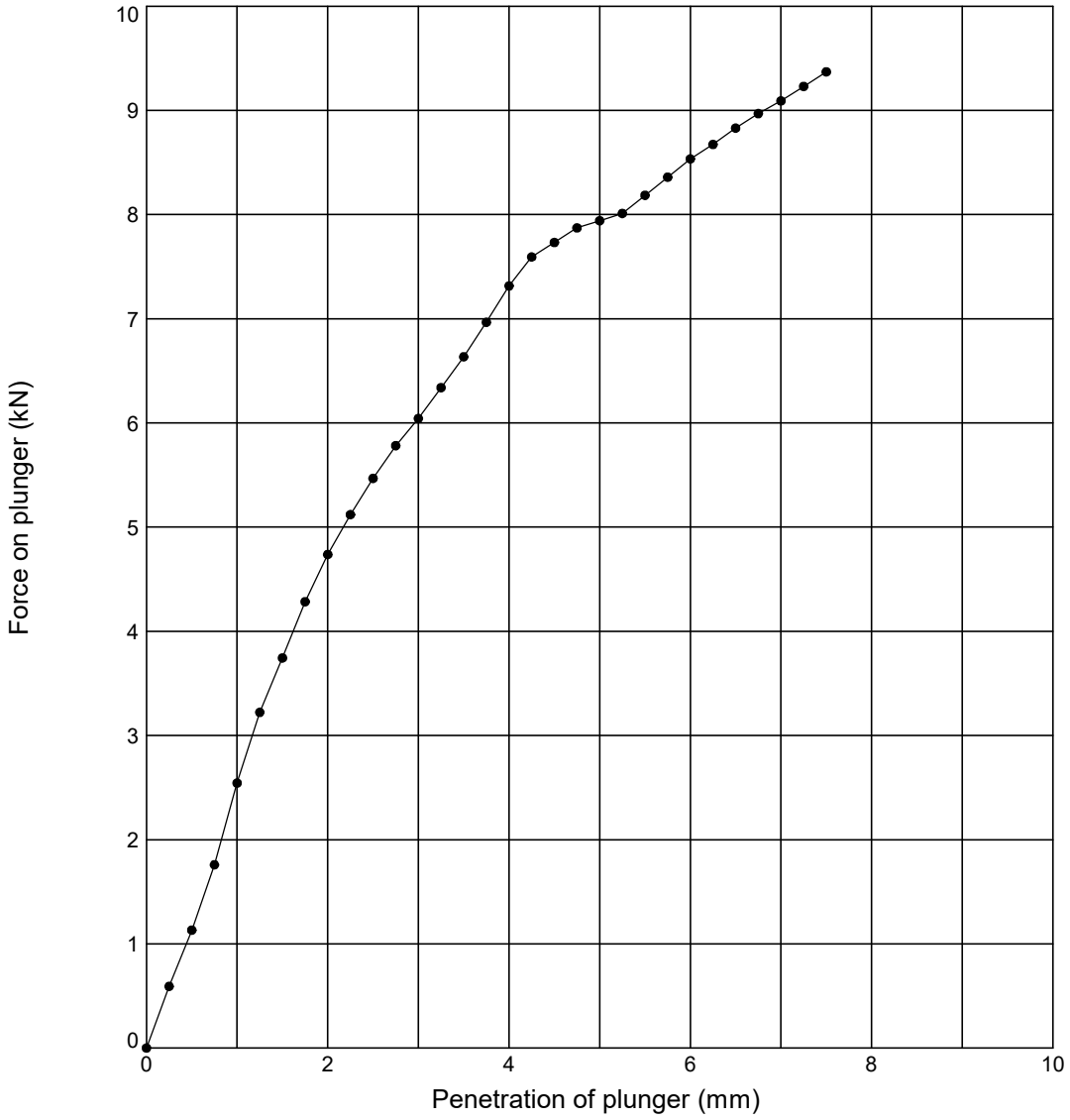
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP511** Sample Ref: Sample Type: **AMAL** Depth (m): **1.50**

Amalgamation comprises: F22-TP511, Depth:1.50, Ref:7, Type:LB + F22-TP511, Depth:2.00, Ref:8, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**5.6**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**5.4**	**5.7**
Initial Bulk Density (Mg/m^3)	:	**1.86**	Surcharge (kg)	:	**4.0**	CBR value (%)	**41**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.76**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**1**	Swelling (mm)	:	**-**			

Sample Description	Key
Brown slightly gravelly slightly clayey SAND	● **Top** ⧓ **Base**

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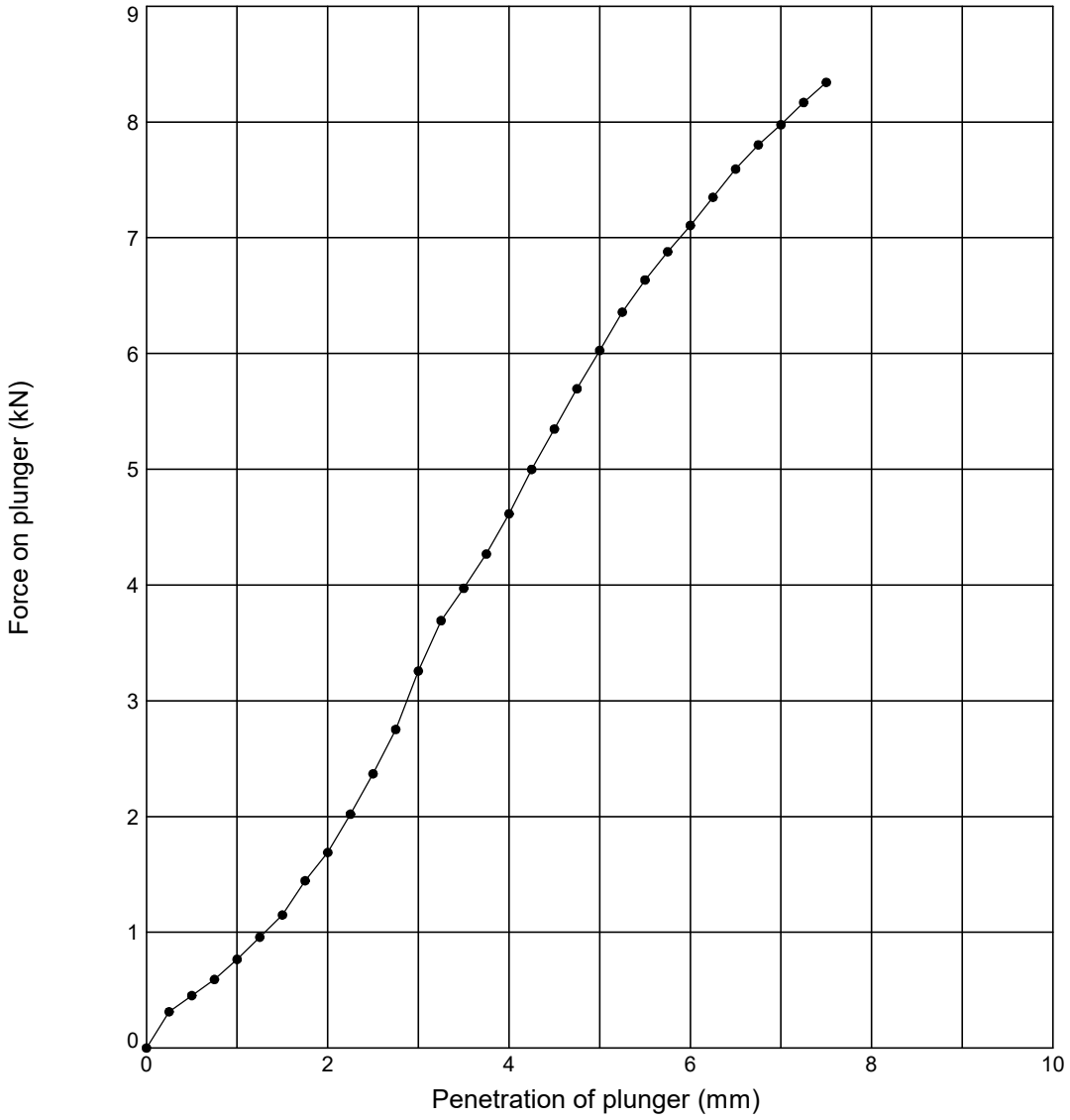
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP511** Sample Ref: Sample Type: **AMAL** Depth (m): **1.50**

Amalgamation comprises: F22-TP511, Depth:1.50, Ref:7, Type:LB + F22-TP511, Depth:2.00, Ref:8, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**8.2**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**8.0**	**8.4**
Initial Bulk Density (Mg/m^3)	:	**2.01**	Surcharge (kg)	:	**4.0**	CBR value (%)	**30**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.86**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**1**	Swelling (mm)	:	**-**			

Sample Description	Key
Brown slightly gravelly slightly clayey SAND	● **Top** ⧓ **Base**

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Sealink Friston	**563835**

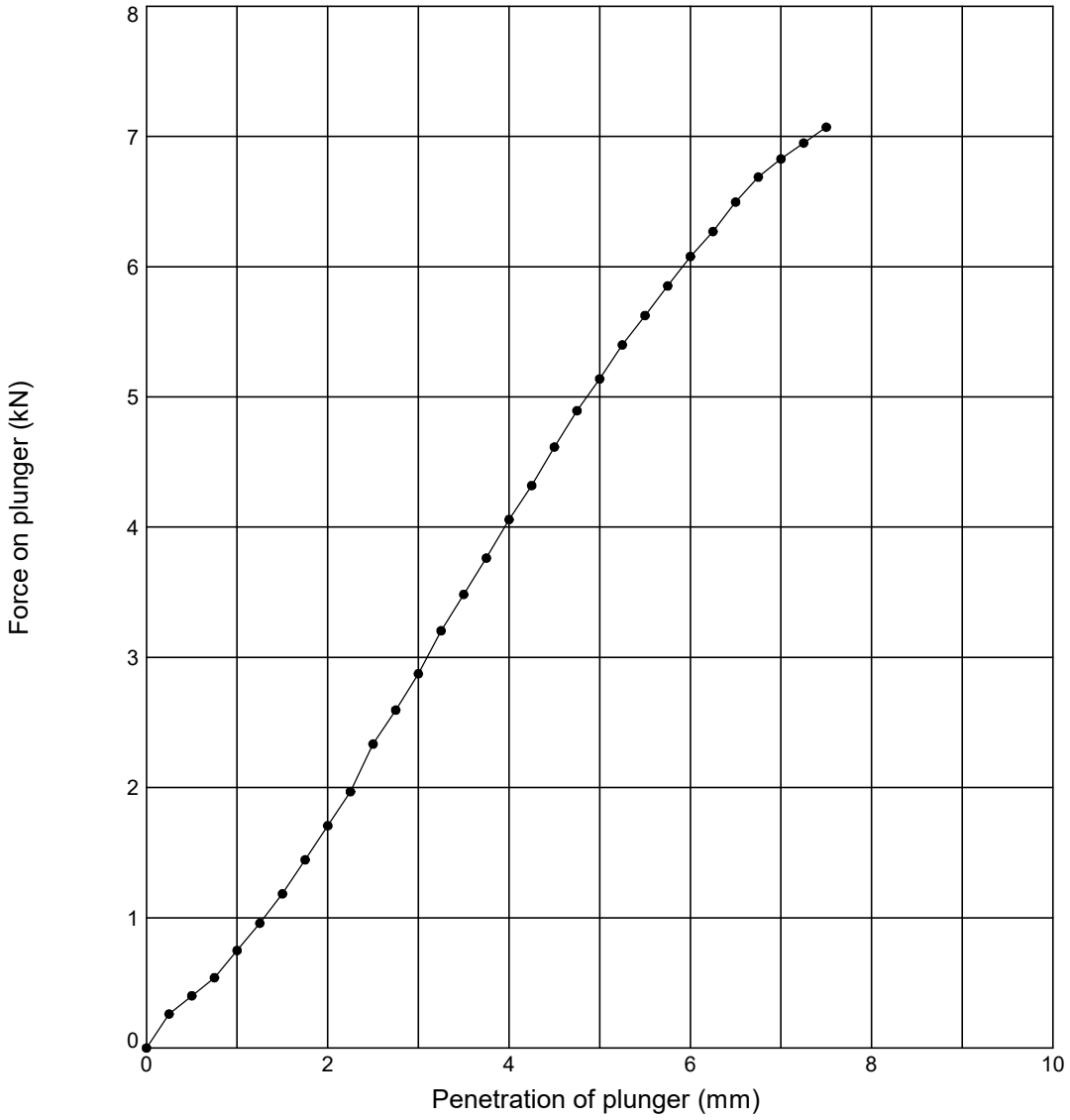
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP511** Sample Ref: Sample Type: **AMAL** Depth (m): **1.50**

Amalgamation comprises: F22-TP511, Depth:1.50, Ref:7, Type:LB + F22-TP511, Depth:2.00, Ref:8, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**11**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**11**	**11**
Initial Bulk Density (Mg/m^3)	:	**2.18**	Surcharge (kg)	:	**4.0**	CBR value (%)	**26**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.96**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**1**	Swelling (mm)	:	**-**			

Sample Description	Key
Brown slightly gravelly slightly clayey SAND	● **Top** ⊠ **Base**

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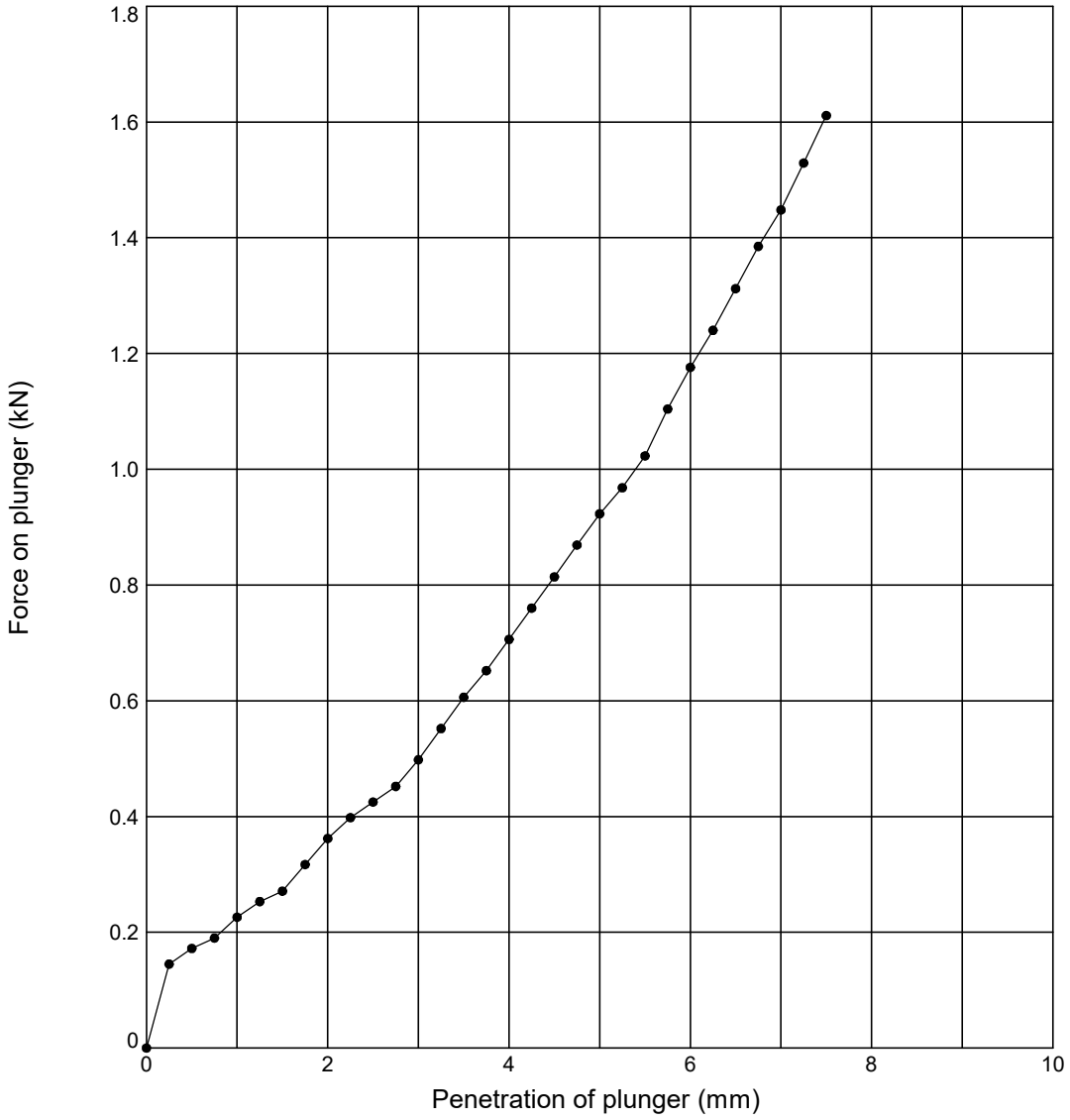
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP511** Sample Ref: Sample Type: **AMAL** Depth (m): **1.50**

Amalgamation comprises: F22-TP511, Depth:1.50, Ref:7, Type:LB + F22-TP511, Depth:2.00, Ref:8, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**12**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**13**	**12**
Initial Bulk Density (Mg/m^3)	:	**2.20**	Surcharge (kg)	:	**4.0**	CBR value (%)	**4.6**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.96**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**1**	Swelling (mm)	:	**-**			

Sample Description	Key
Brown slightly gravelly slightly clayey SAND	● **Top** ⊠ **Base**

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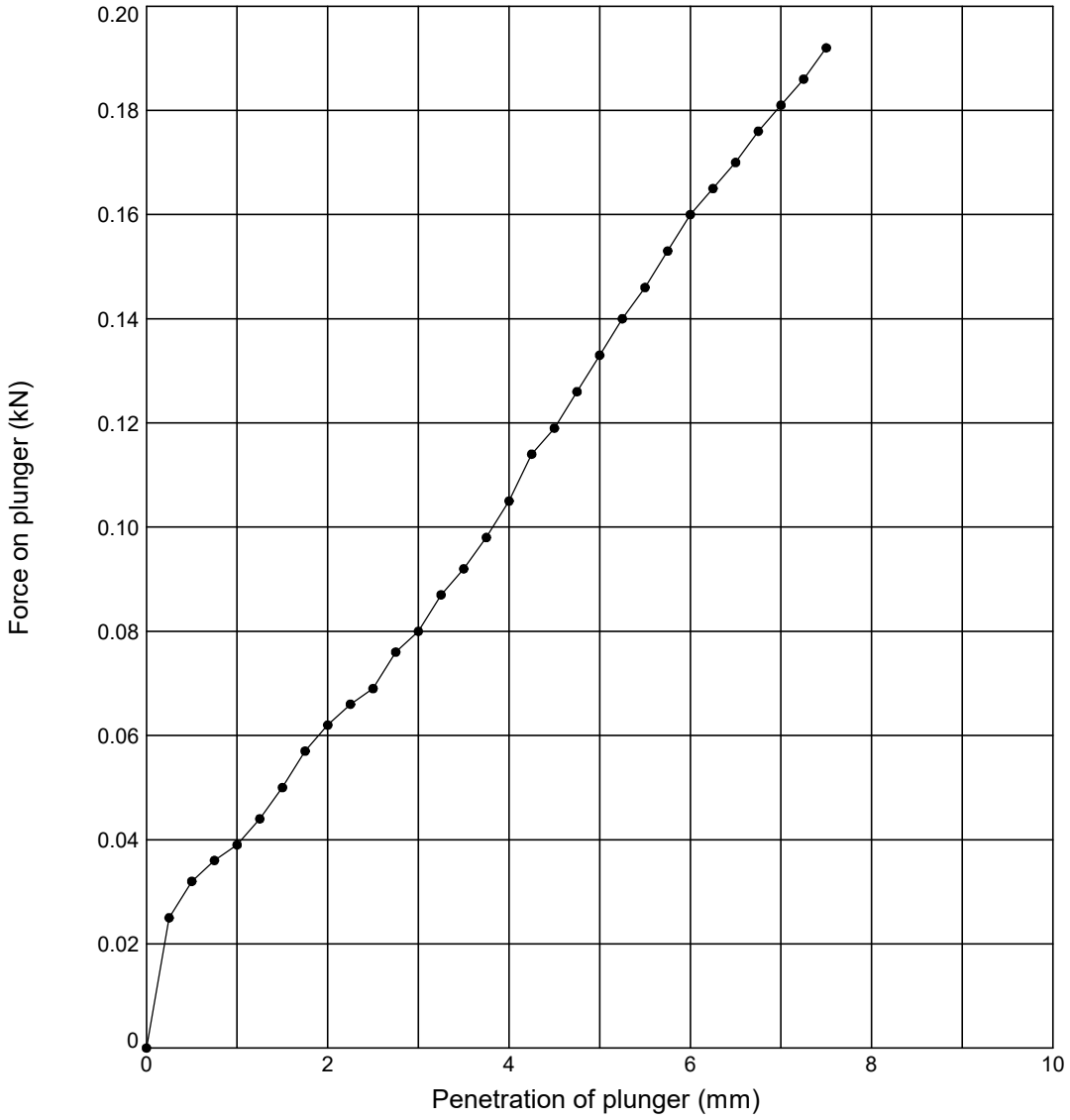
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP511** Sample Ref: Sample Type: **AMAL** Depth (m): **1.50**

Amalgamation comprises: F22-TP511, Depth:1.50, Ref:7, Type:LB + F22-TP511, Depth:2.00, Ref:8, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**15**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**15**	**15**
Initial Bulk Density (Mg/m^3)	:	**2.11**	Surcharge (kg)	:	**4.0**	CBR value (%)	**0.67**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.83**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**1**	Swelling (mm)	:	**-**			

Sample Description	Key
Brown slightly gravelly slightly clayey SAND	● **Top** ⊠ **Base**

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W. Yorkshire WF10 1NJ

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Contract	Contract Ref:
Sealink Friston	**563835**

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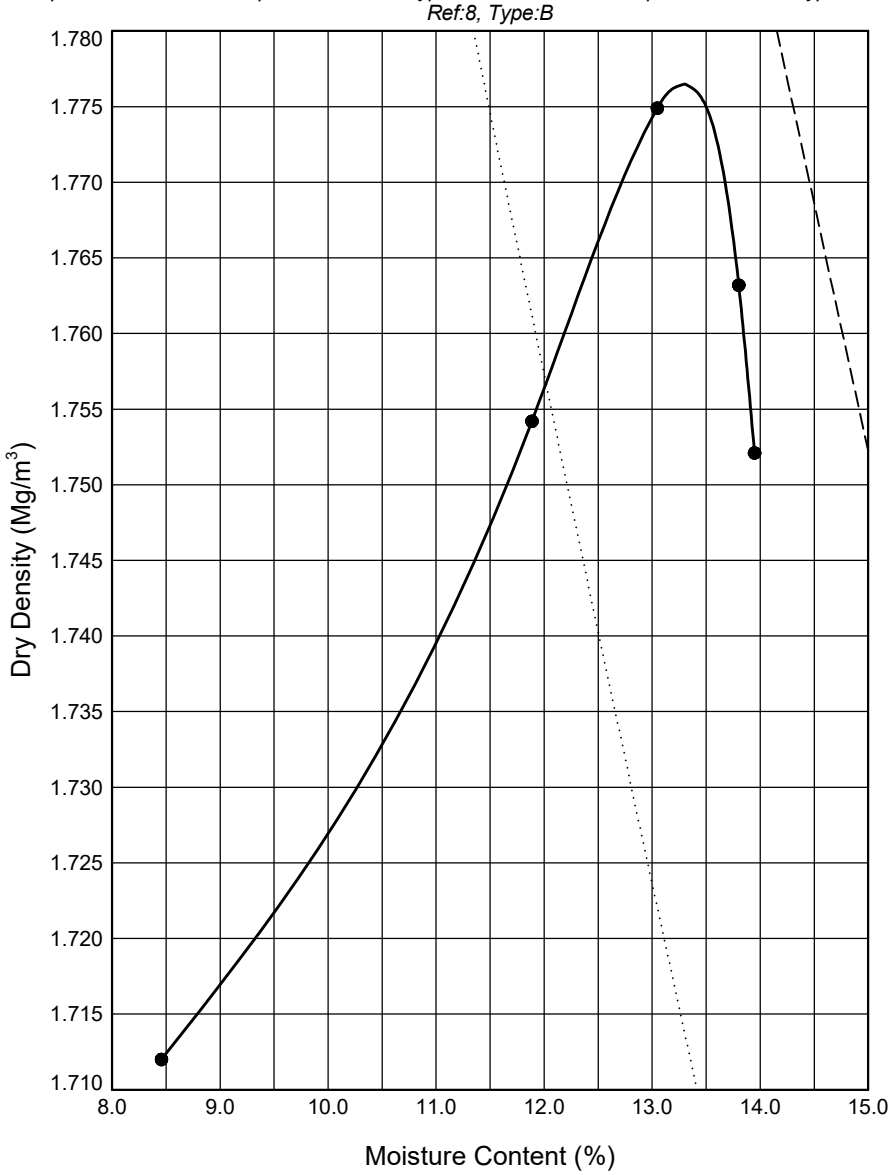
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DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **F22-TP513** Sample Ref: Sample Type: **AMAL** Depth (m): **1.10**

Amalgamation comprises: F22-TP513, Depth:1.10, Ref:9, Type:LB + F22-TP513, Depth:0.90, Ref:6, Type:B + F22-TP513, Depth:1.10, Ref:8, Type:B



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**6.5**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m³)	:	**1.78**
% Retained on 37.5mm BS Sieve	:	**0**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**13**
% Retained on 20.0mm BS Sieve	:	**1**	Type of Mould	:	**CBR**	Method Used: **Clause 11.4**		
Particle Density - assumed (Mg/m³)	:	**2.55**				Remarks: **CBR test carried out at each point. Material is unsuitable for MCV tests**		
Size of Soil Pieces	:	**<37.5mm**	Separate samples were used.					

Sample Description	Key to Air Voids Lines		
Yellowish brown slightly gravelly slightly clayey SAND	——— 0%	– – – – 5%	····· 10%

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Contract: **Sealink Friston**		Contract Ref: **563835**

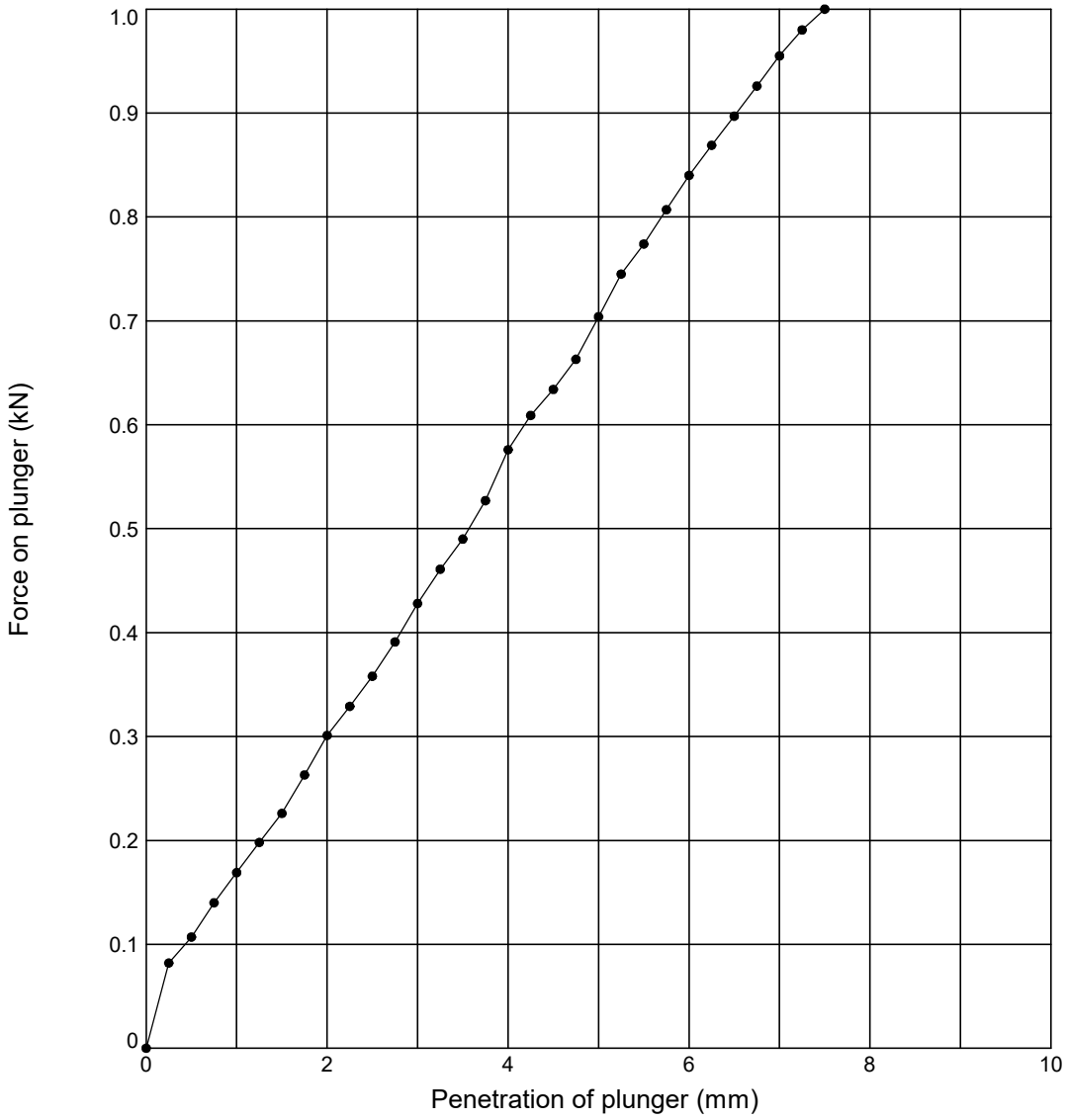
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP513** Sample Ref: Sample Type: **AMAL** Depth (m): **1.10**

Amalgamation comprises: F22-TP513, Depth:1.10, Ref:9, Type:LB + F22-TP513, Depth:0.90, Ref:6, Type:B + F22-TP513, Depth:1.10, Ref:8, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**8.5**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**8.5**	**8.4**
Initial Bulk Density (Mg/m^3)	:	**1.86**	Surcharge (kg)	:	**2.5**	CBR value (%)	**3.5**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.72**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**2**	Swelling (mm)	:	**-**			

Sample Description	Key
Yellowish brown slightly gravelly slightly clayey SAND	● **Top** ⊠ **Base**

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Contract	Contract Ref:
Sealink Friston	**563835**

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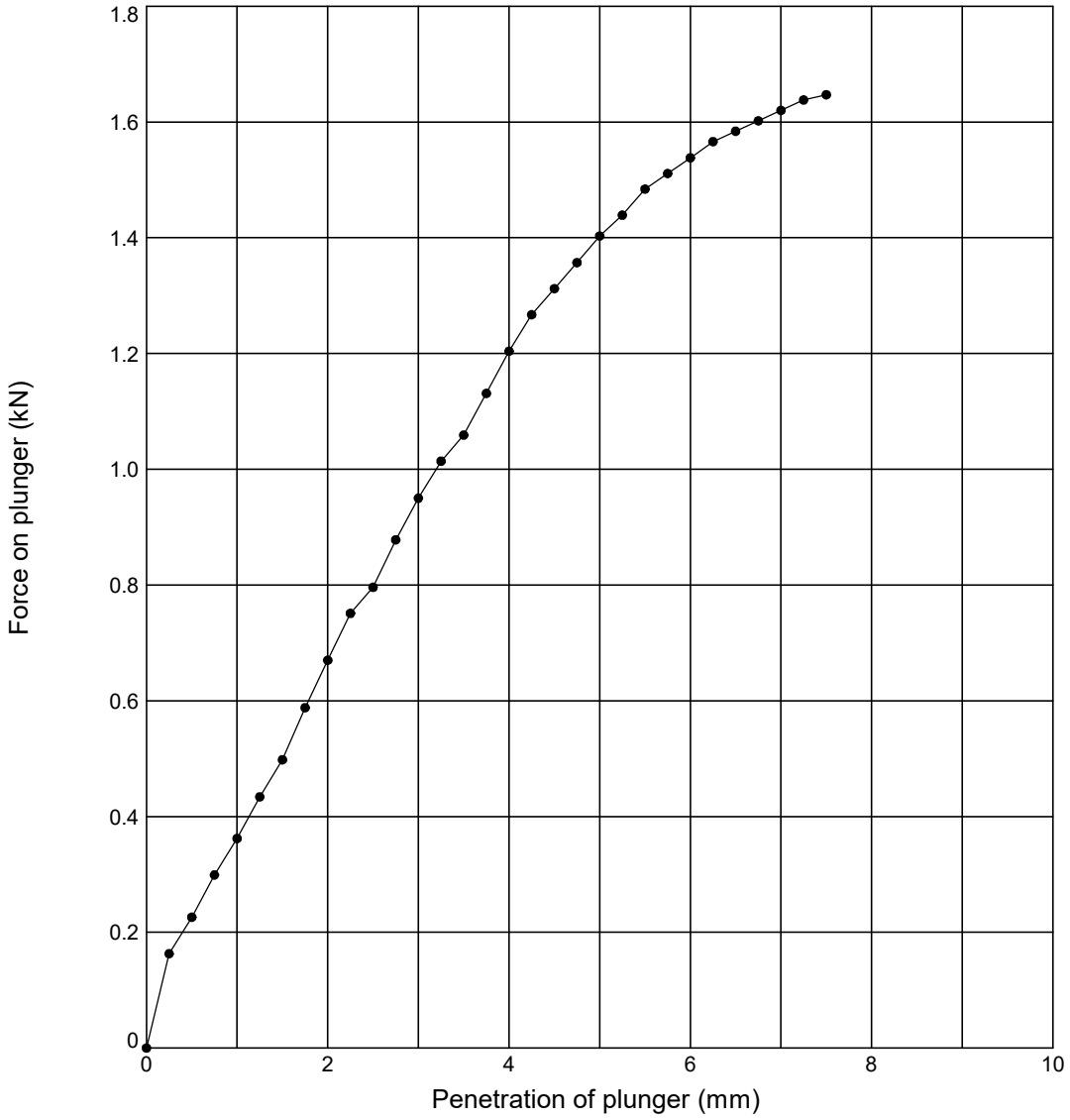
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP513** Sample Ref: Sample Type: **AMAL** Depth (m): **1.10**

Amalgamation comprises: F22-TP513, Depth:1.10, Ref:9, Type:LB + F22-TP513, Depth:0.90, Ref:6, Type:B + F22-TP513, Depth:1.10, Ref:8, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**12**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**11**	**12**
Initial Bulk Density (Mg/m^3)	:	**1.96**	Surcharge (kg)	:	**4.0**	CBR value (%)	**7.0**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.75**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**2**	Swelling (mm)	:	**-**			

Sample Description	Key
Yellowish brown slightly gravelly slightly clayey SAND	● **Top** ⊠ **Base**

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Contract	Contract Ref:
Sealink Friston	**563835**

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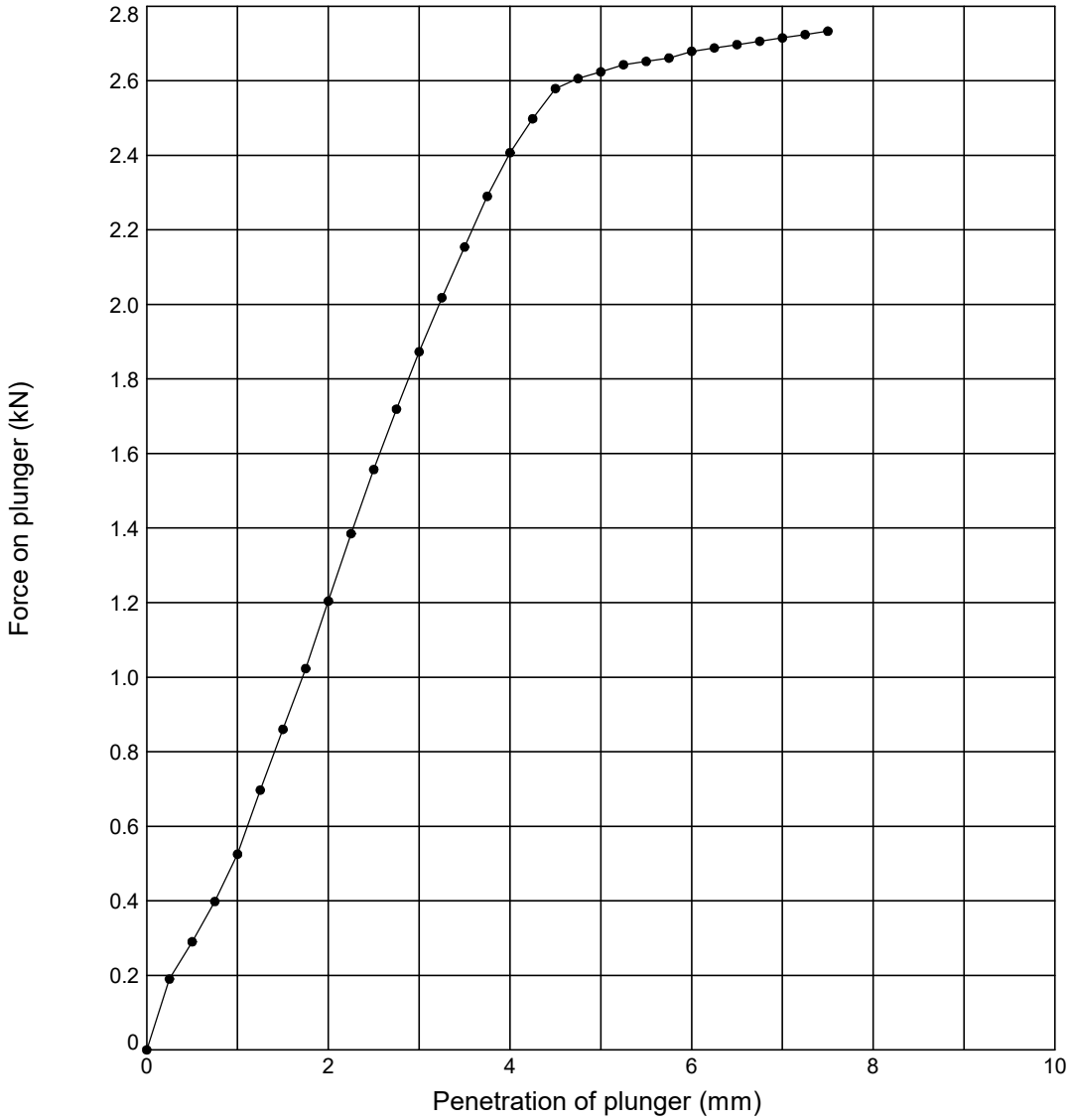
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP513** Sample Ref: Sample Type: **AMAL** Depth (m): **1.10**

Amalgamation comprises: F22-TP513, Depth:1.10, Ref:9, Type:LB + F22-TP513, Depth:0.90, Ref:6, Type:B + F22-TP513, Depth:1.10, Ref:8, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**13**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**13**	**13**
Initial Bulk Density (Mg/m^3)	:	**2.01**	Surcharge (kg)	:	**4.0**	CBR value (%)	**13**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.78**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**2**	Swelling (mm)	:	**-**			

Sample Description	Key
Yellowish brown slightly gravelly slightly clayey SAND	● **Top** ⧓ **Base**

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Contract	Contract Ref:
Sealink Friston	**563835**

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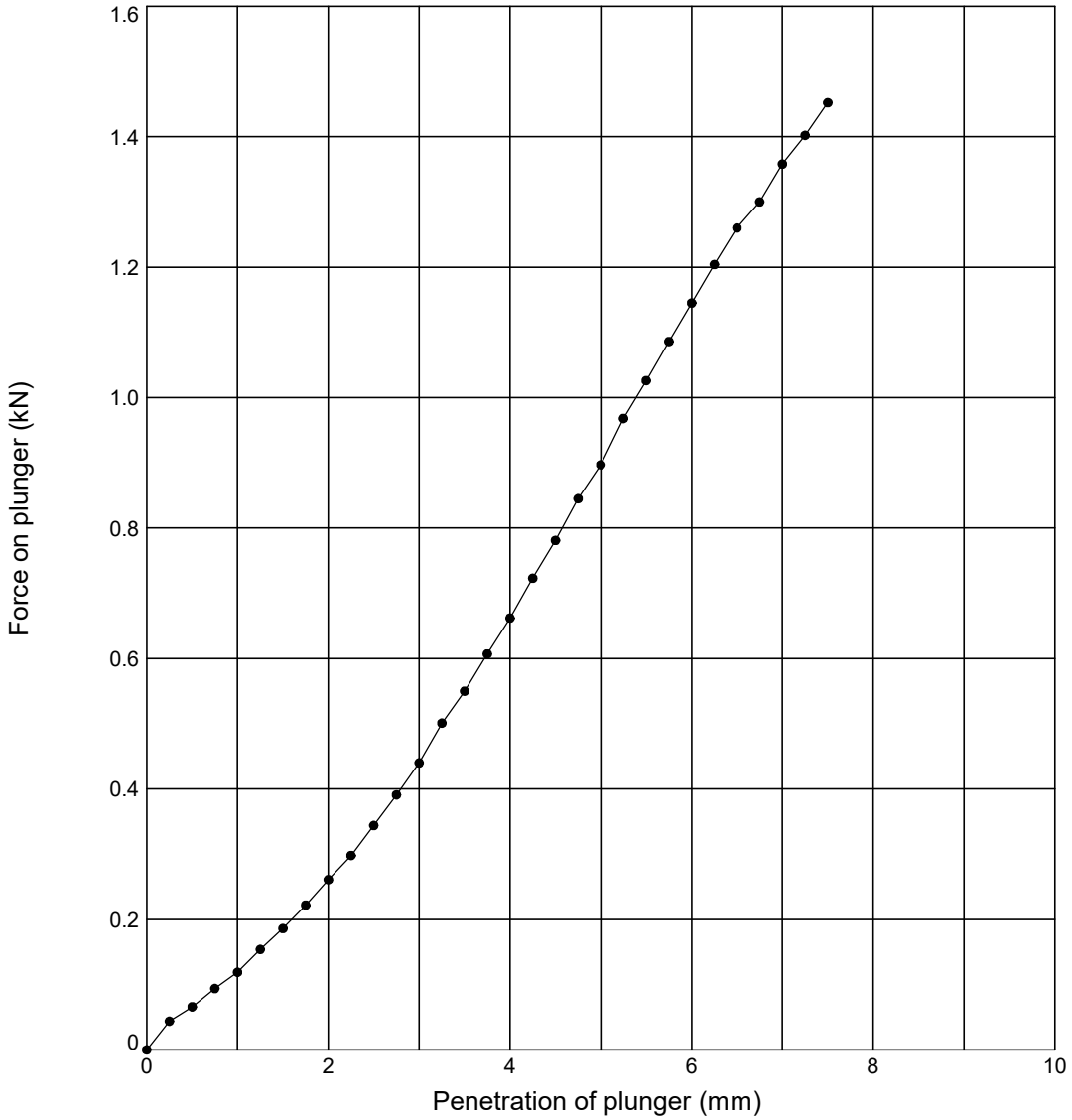
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP513** Sample Ref: Sample Type: **AMAL** Depth (m): **1.10**

Amalgamation comprises: F22-TP513, Depth:1.10, Ref:9, Type:LB + F22-TP513, Depth:0.90, Ref:6, Type:B + F22-TP513, Depth:1.10, Ref:8, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**14**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**15**	**13**
Initial Bulk Density (Mg/m^3)	:	**2.01**	Surcharge (kg)	:	**4.0**	CBR value (%)	**4.5**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.76**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**2**	Swelling (mm)	:	**-**			

Sample Description	Key
Yellowish brown slightly gravelly slightly clayey SAND	● **Top** ⧓ **Base**

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Contract	Contract Ref:
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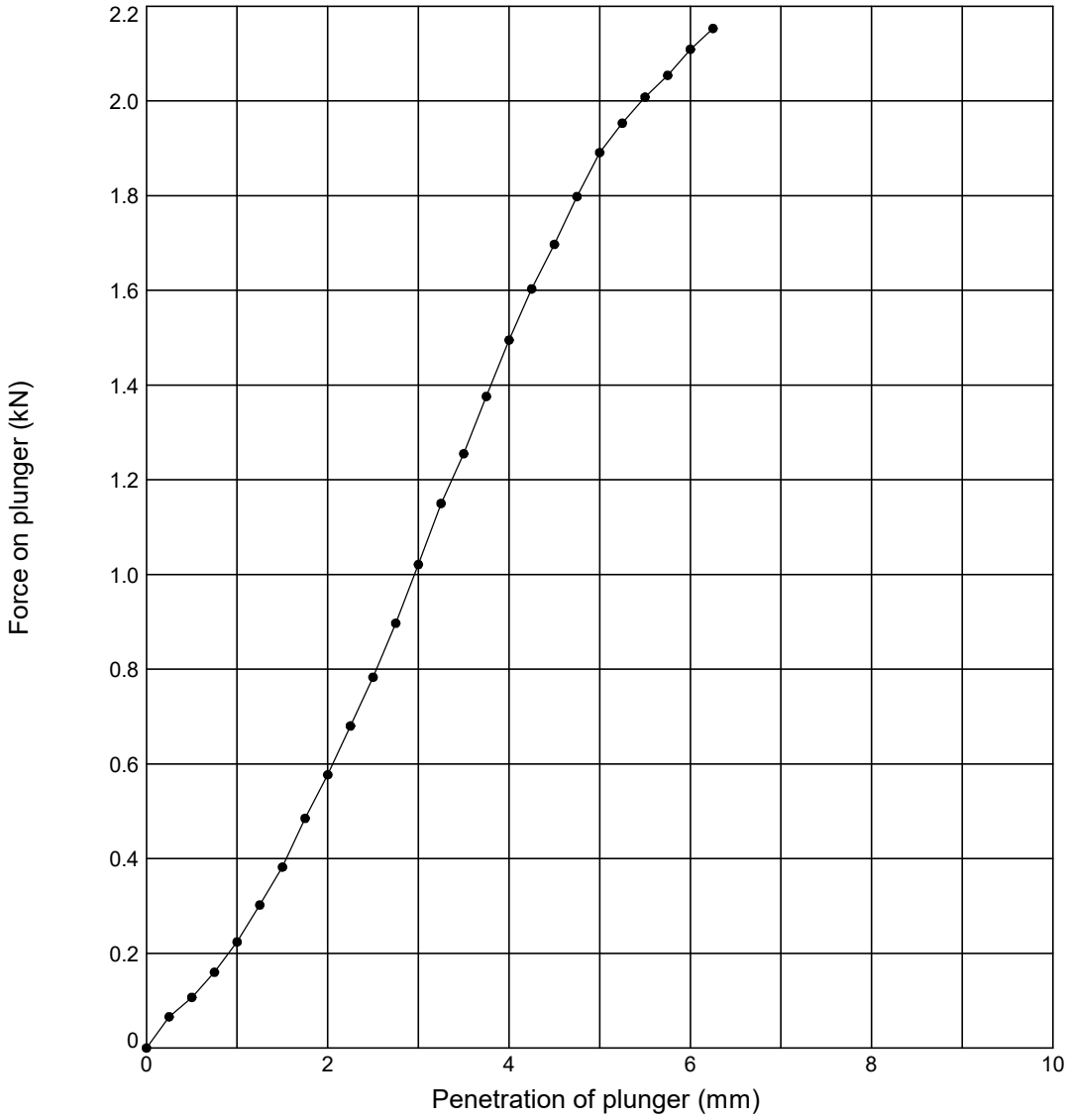
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP513** Sample Ref: Sample Type: **AMAL** Depth (m): **1.10**

Amalgamation comprises: F22-TP513, Depth:1.10, Ref:9, Type:LB + F22-TP513, Depth:0.90, Ref:6, Type:B + F22-TP513, Depth:1.10, Ref:8, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**14**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**14**	**13**
Initial Bulk Density (Mg/m^3)	:	**2.00**	Surcharge (kg)	:	**4.0**	CBR value (%)	**9.5**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.76**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**2**	Swelling (mm)	:	**-**			

Sample Description	Key
Yellowish brown slightly gravelly slightly clayey SAND	● **Top** ⧓ **Base**

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Contract	Contract Ref:
Sealink Friston	**563835**

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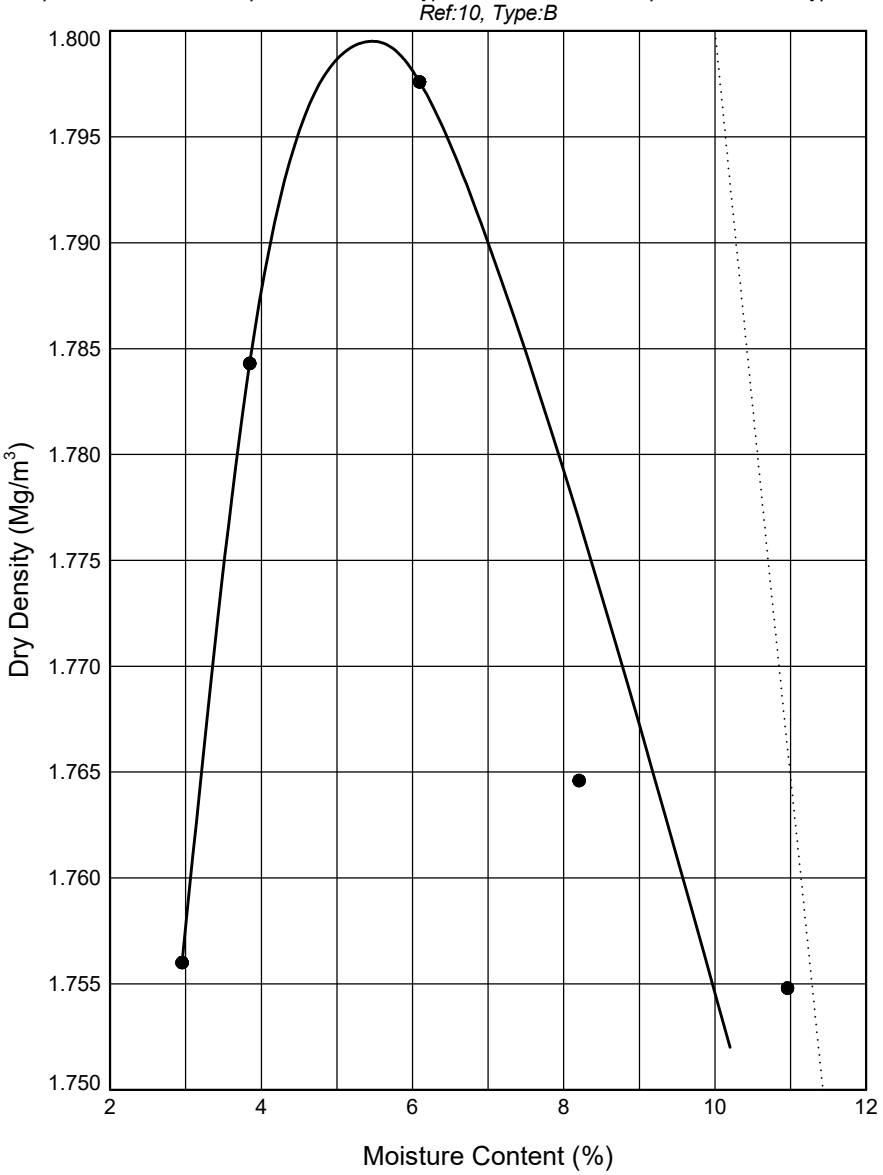
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DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **F22-TP514** Sample Ref: Sample Type: **AMAL** Depth (m): **1.10**

Amalgamation comprises: F22-TP514, Depth:1.10, Ref:15, Type:LB + F22-TP514, Depth:0.90, Ref:6, Type:B + F22-TP514, Depth:2.00, Ref:10, Type:B



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**6.1**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m^3)	:	**1.80**
% Retained on 37.5mm BS Sieve	:	**0**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**5.4**
% Retained on 20.0mm BS Sieve	:	**1**	Type of Mould	:	**CBR**	Method Used: **Clause 11.4**		
Particle Density - assumed (Mg/m^3)	:	**2.50**				Remarks: **CBR test carried out at each point. Material is unsuitable for MCV tests**		
Size of Soil Pieces	:	**<37.5mm**	Separate samples were used.					

Sample Description	Key to Air Voids Lines		
Yellowish brown slightly gravelly clayey SAND	——— 0%	– – – – 5%	····· 10%

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Contract: **Sealink Friston**	Contract Ref: **563835**	

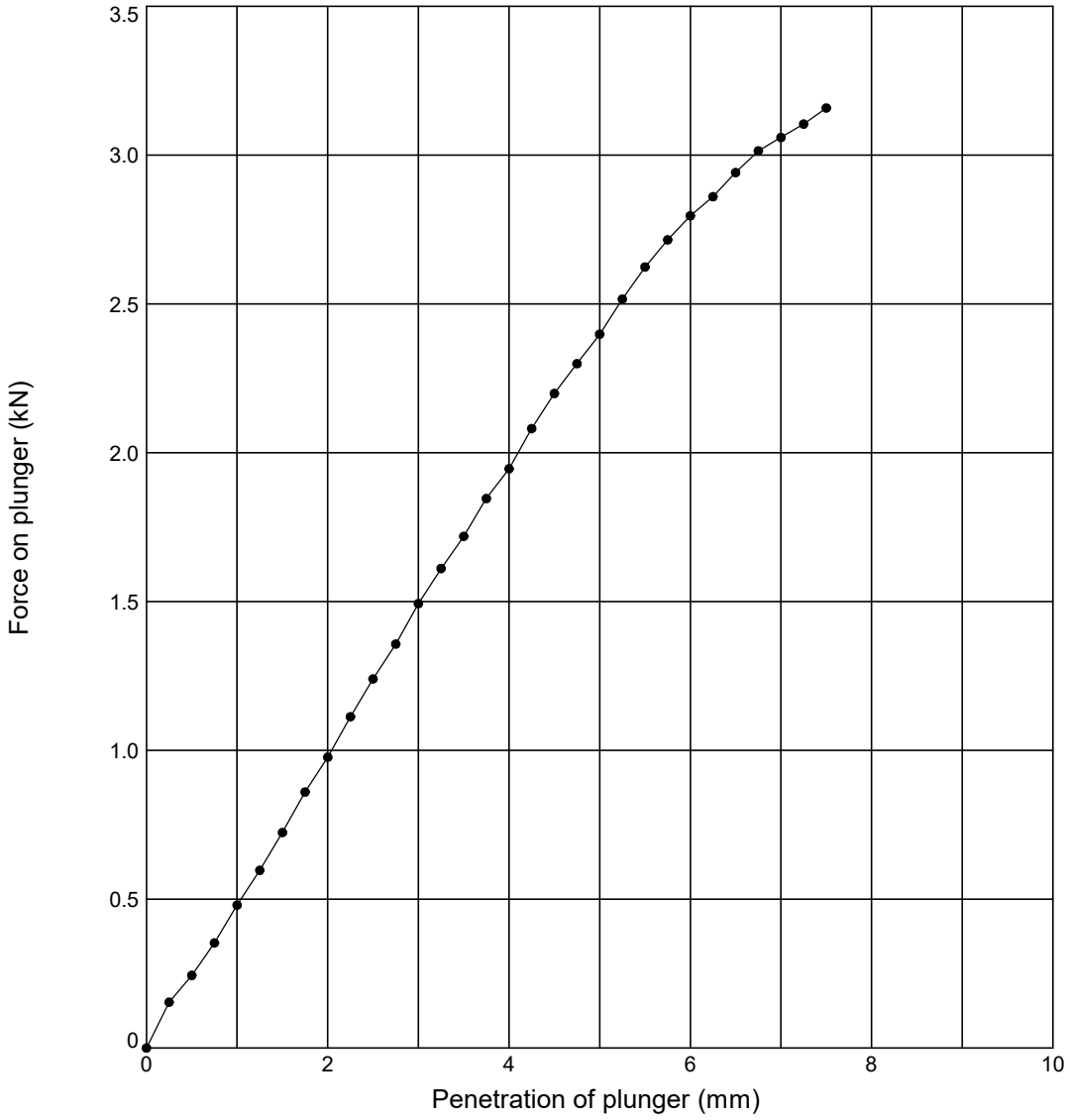
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP514** Sample Ref: Sample Type: **AMAL** Depth (m): **1.10**

Amalgamation comprises: F22-TP514, Depth:1.10, Ref:15, Type:LB + F22-TP514, Depth:0.90, Ref:6, Type:B + F22-TP514, Depth:2.00, Ref:10, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**3.0**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**3.0**	**2.9**
Initial Bulk Density (Mg/m^3)	:	**1.81**	Surcharge (kg)	:	**4.0**	CBR value (%)	**12**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.76**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**1**	Swelling (mm)	:	**-**			

Sample Description	Key
Yellowish brown slightly gravelly clayey SAND	● **Top** ⊠ **Base**

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Contract	Contract Ref:
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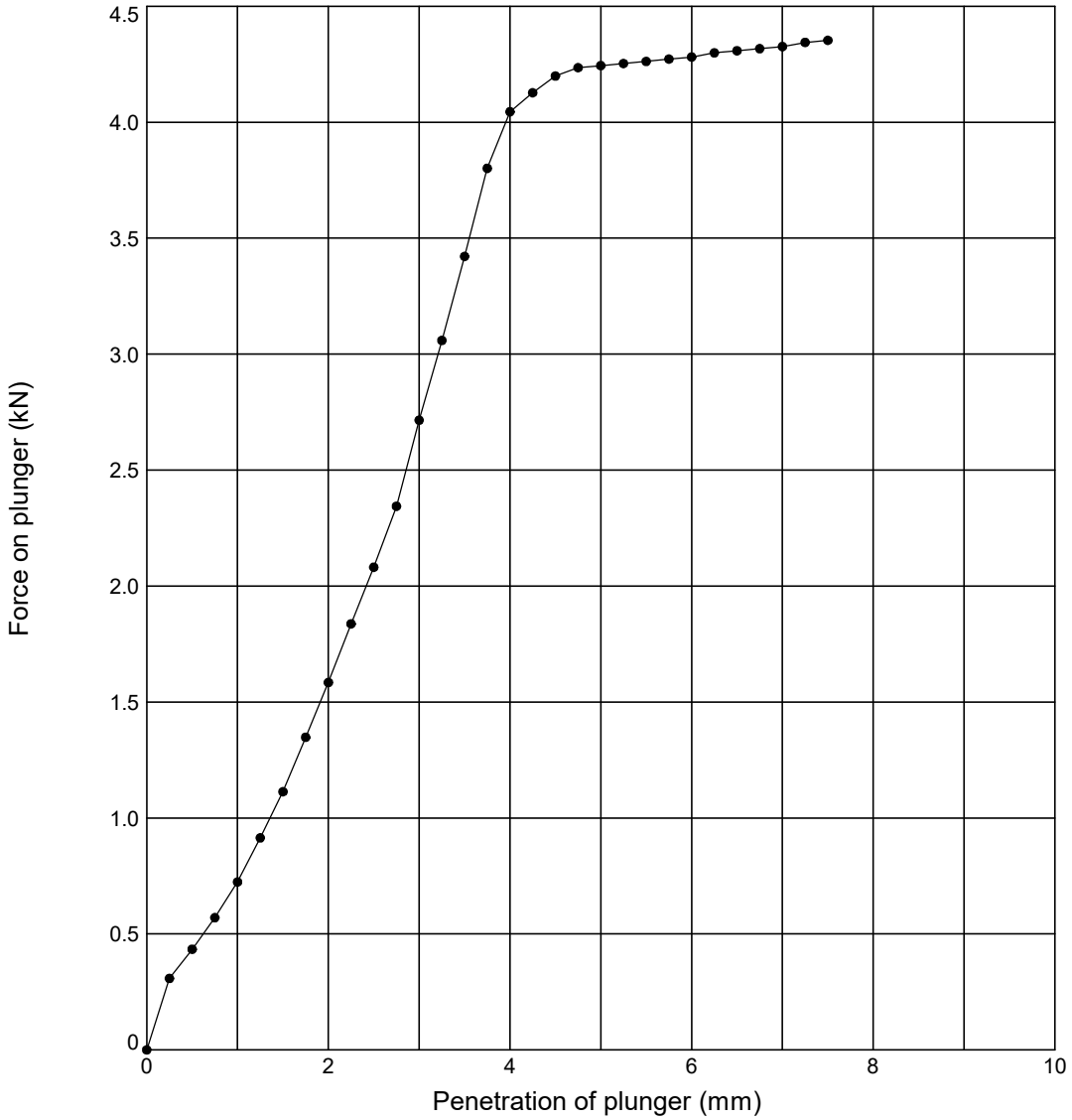
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP514** Sample Ref: Sample Type: **AMAL** Depth (m): **1.10**

Amalgamation comprises: F22-TP514, Depth:1.10, Ref:15, Type:LB + F22-TP514, Depth:0.90, Ref:6, Type:B + F22-TP514, Depth:2.00, Ref:10, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**3.8**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**3.8**	**3.9**
Initial Bulk Density (Mg/m^3)	:	**1.85**	Surcharge (kg)	:	**4.0**	CBR value (%)	**21**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.78**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**1**	Swelling (mm)	:	**-**			

Sample Description	Key
Yellowish brown slightly gravelly clayey SAND	● **Top** ⧓ **Base**

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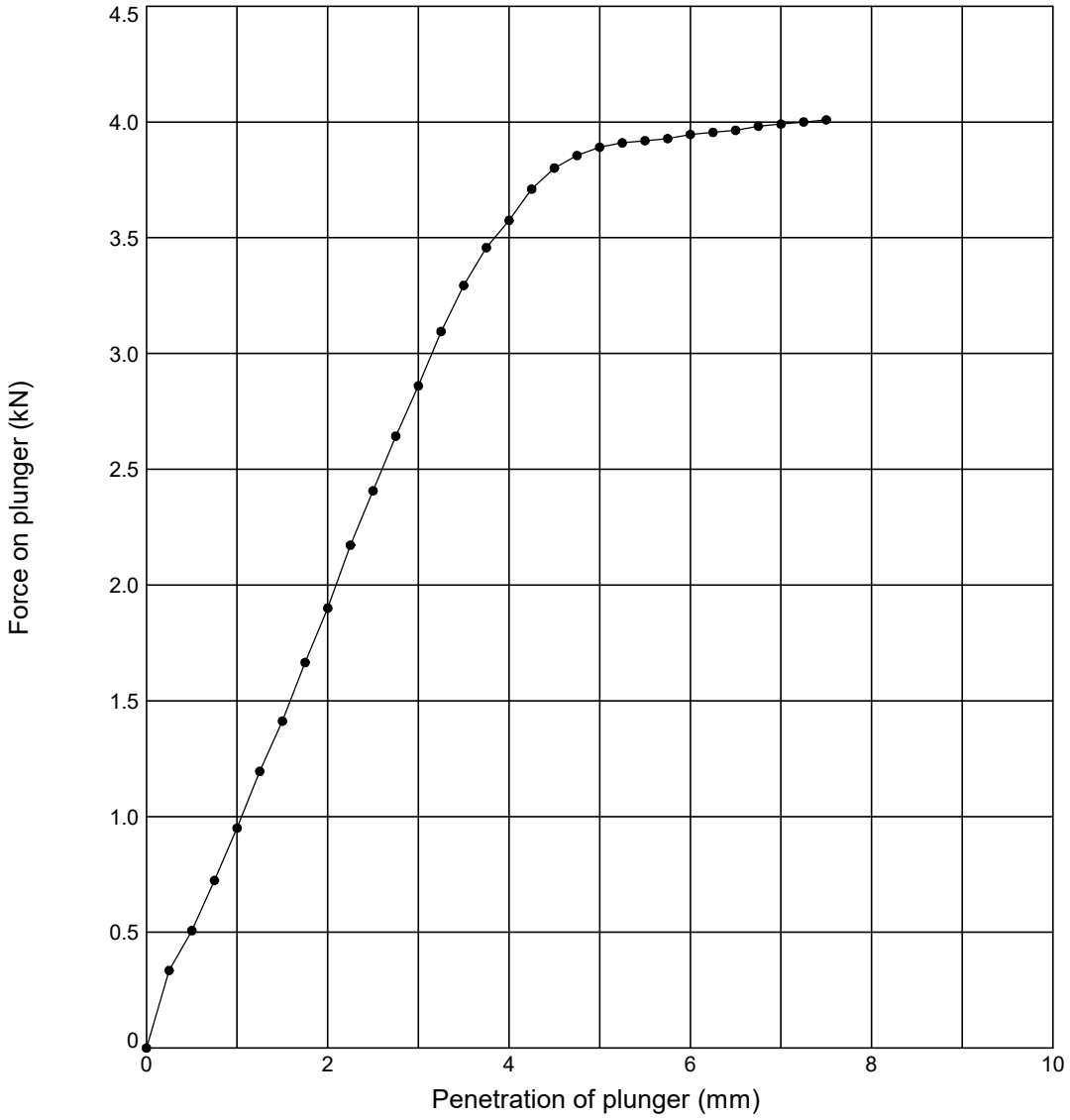
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP514** Sample Ref: Sample Type: **AMAL** Depth (m): **1.10**

Amalgamation comprises: F22-TP514, Depth:1.10, Ref:15, Type:LB + F22-TP514, Depth:0.90, Ref:6, Type:B + F22-TP514, Depth:2.00, Ref:10, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**6.1**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**6.0**	**6.2**
Initial Bulk Density (Mg/m^3)	:	**1.91**	Surcharge (kg)	:	**4.0**	CBR value (%)	**19**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.80**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**1**	Swelling (mm)	:	**-**			

Sample Description	Key
Yellowish brown slightly gravelly clayey SAND	● **Top** ⧓ **Base**

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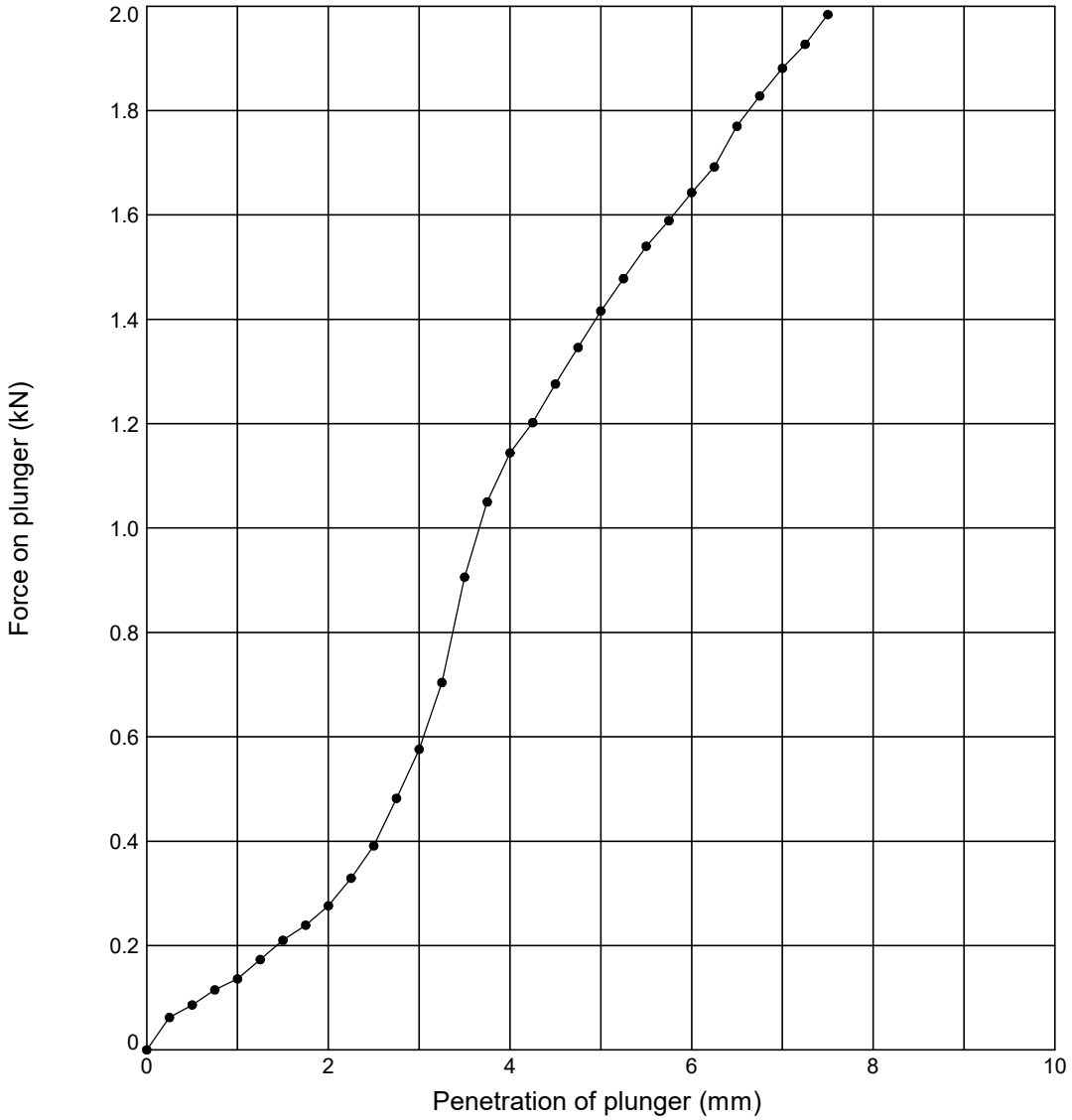
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP514** Sample Ref: Sample Type: **AMAL** Depth (m): **1.10**

Amalgamation comprises: F22-TP514, Depth:1.10, Ref:15, Type:LB + F22-TP514, Depth:0.90, Ref:6, Type:B + F22-TP514, Depth:2.00, Ref:10, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**8.2**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**8.4**	**8.0**
Initial Bulk Density (Mg/m^3)	:	**1.91**	Surcharge (kg)	:	**4.0**	CBR value (%)	**7.1**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.77**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**1**	Swelling (mm)	:	**-**			

Sample Description	Key
Yellowish brown slightly gravelly clayey SAND	● **Top** ⊠ **Base**

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Contract	Contract Ref:
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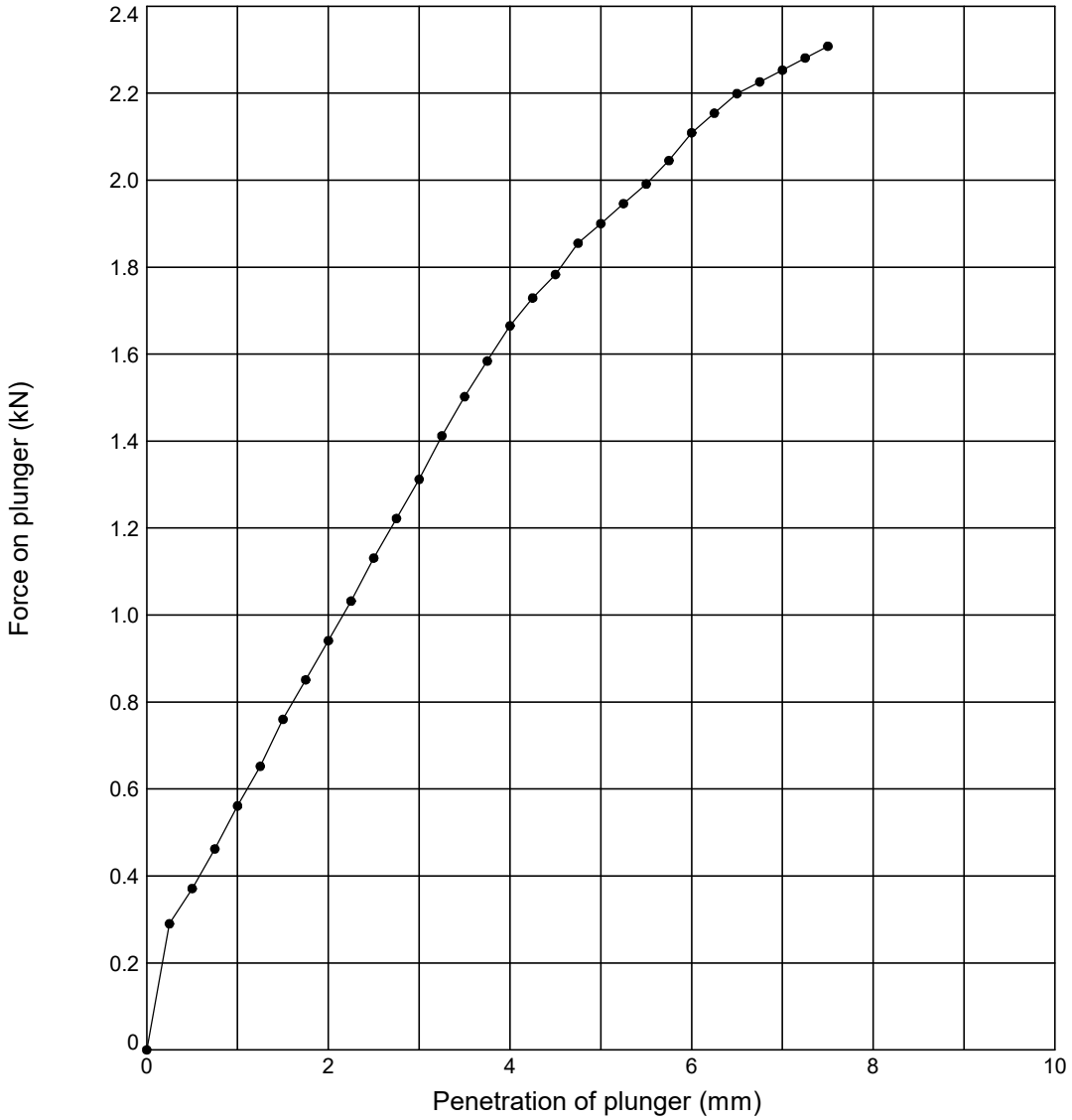
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP514** Sample Ref: Sample Type: **AMAL** Depth (m): **1.10**

Amalgamation comprises: F22-TP514, Depth:1.10, Ref:15, Type:LB + F22-TP514, Depth:0.90, Ref:6, Type:B + F22-TP514, Depth:2.00, Ref:10, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**11**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**11**	**11**
Initial Bulk Density (Mg/m^3)	:	**1.95**	Surcharge (kg)	:	**4.0**	CBR value (%)	**9.5**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.76**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**1**	Swelling (mm)	:	**-**			

Sample Description	Key
Yellowish brown slightly gravelly clayey SAND	● **Top** ⊠ **Base**

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Contract	Contract Ref:
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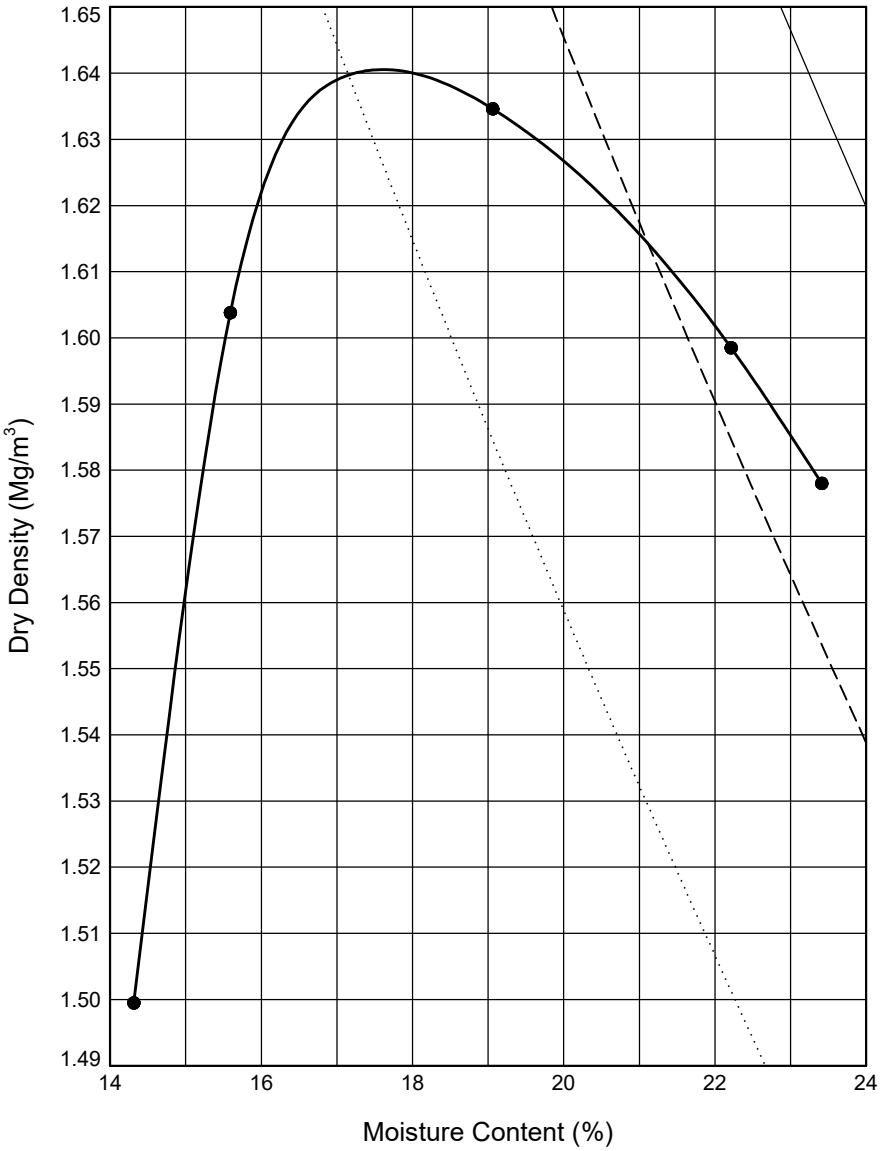
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DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **F22-TP515** Sample Ref: Sample Type: **AMAL** Depth (m): **0.70**

Amalgamation comprises: F22-TP515, Depth:0.70, Ref:4, Type:B + F22-TP515, Depth:0.80, Ref:15, Type:B



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**19**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m³)	:	**1.64**
% Retained on 37.5mm BS Sieve	:	**3**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**18**
% Retained on 20.0mm BS Sieve	:	**3**	Type of Mould	:	**CBR**	Method Used: **Clause 11.4**		
Particle Density - assumed (Mg/m³)	:	**2.65**				Remarks: **CBR and MCV tests carried out at each point**		
Size of Soil Pieces	:	**<37.5mm**	Separate samples were used.					

Sample Description	Key to Air Voids Lines		
Orangish brown slightly gravelly slightly sandy CLAY	——— 0%	– – – – 5%	····· 10%

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MOISTURE CONDITION VALUE

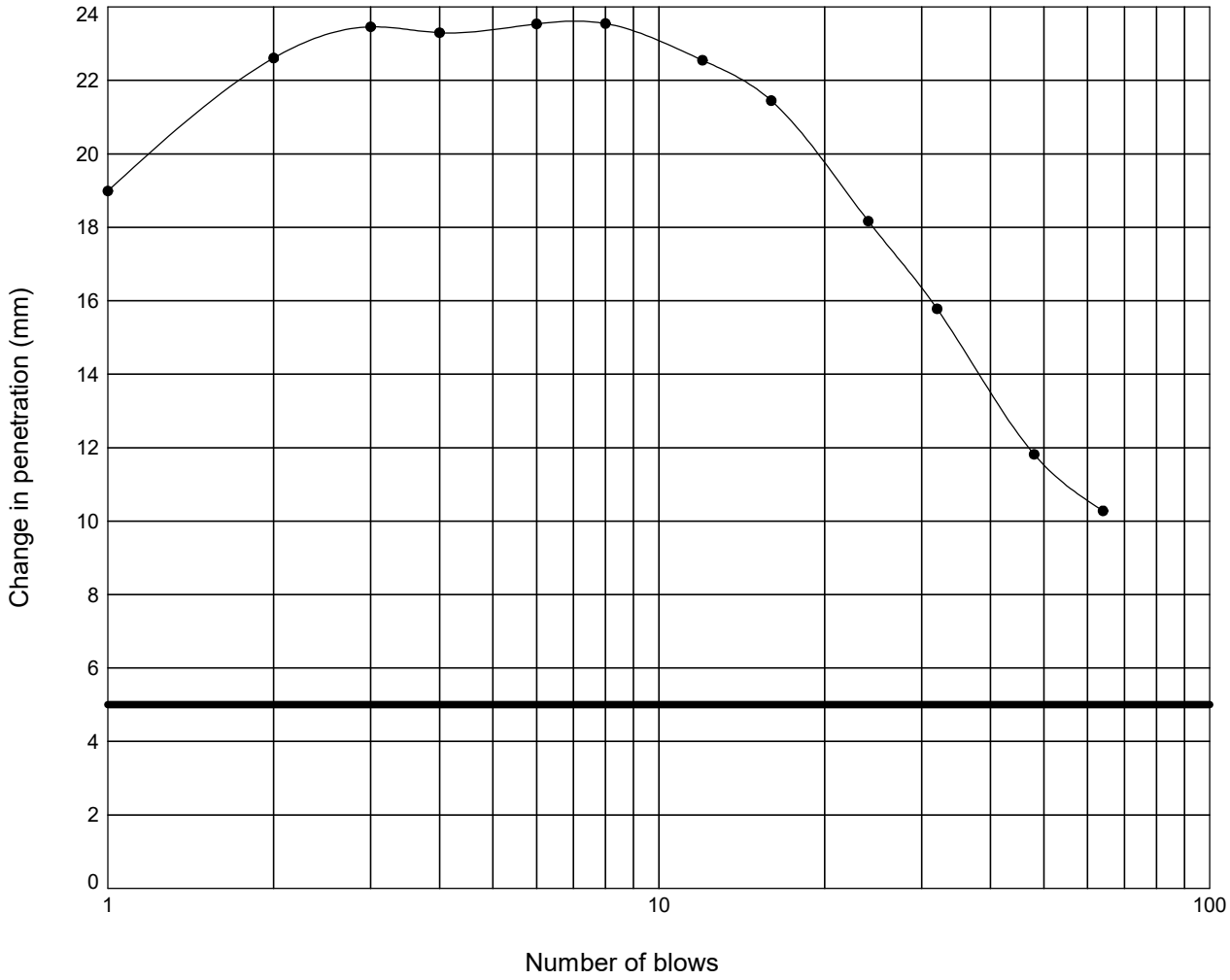
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP515** Sample Ref: Sample Type: **AMAL** Depth (m): **0.70**

Amalgamation comprises: F22-TP515, Depth:0.70, Ref:4, Type:B + F22-TP515, Depth:0.80, Ref:15, Type:B

Description : **Orangish brown slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	14	%
Percentage retained on 20 mm sieve :	=	5	%
Moisture Condition Value :	=	19.8	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract	Contract Ref:
Sealink Friston	**563835**

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MOISTURE CONDITION VALUE

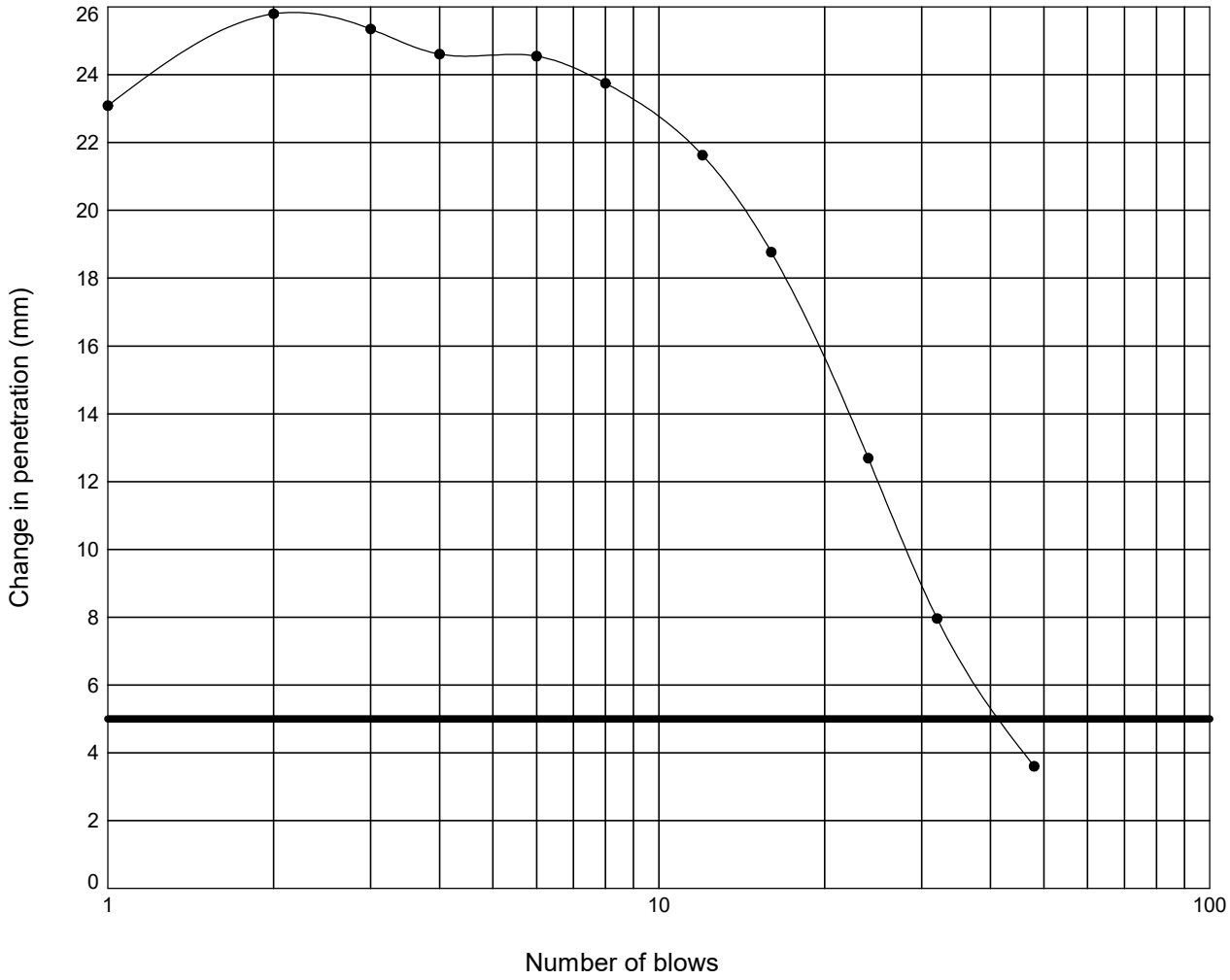
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP515** Sample Ref: Sample Type: **AMAL** Depth (m): **0.70**

Amalgamation comprises: F22-TP515, Depth:0.70, Ref:4, Type:B + F22-TP515, Depth:0.80, Ref:15, Type:B

Description : **Orangish brown slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	16	%
Percentage retained on 20 mm sieve :	=	6	%
Moisture Condition Value :	=	15.8	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract	Contract Ref:
Sealink Friston	**563835**

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MOISTURE CONDITION VALUE

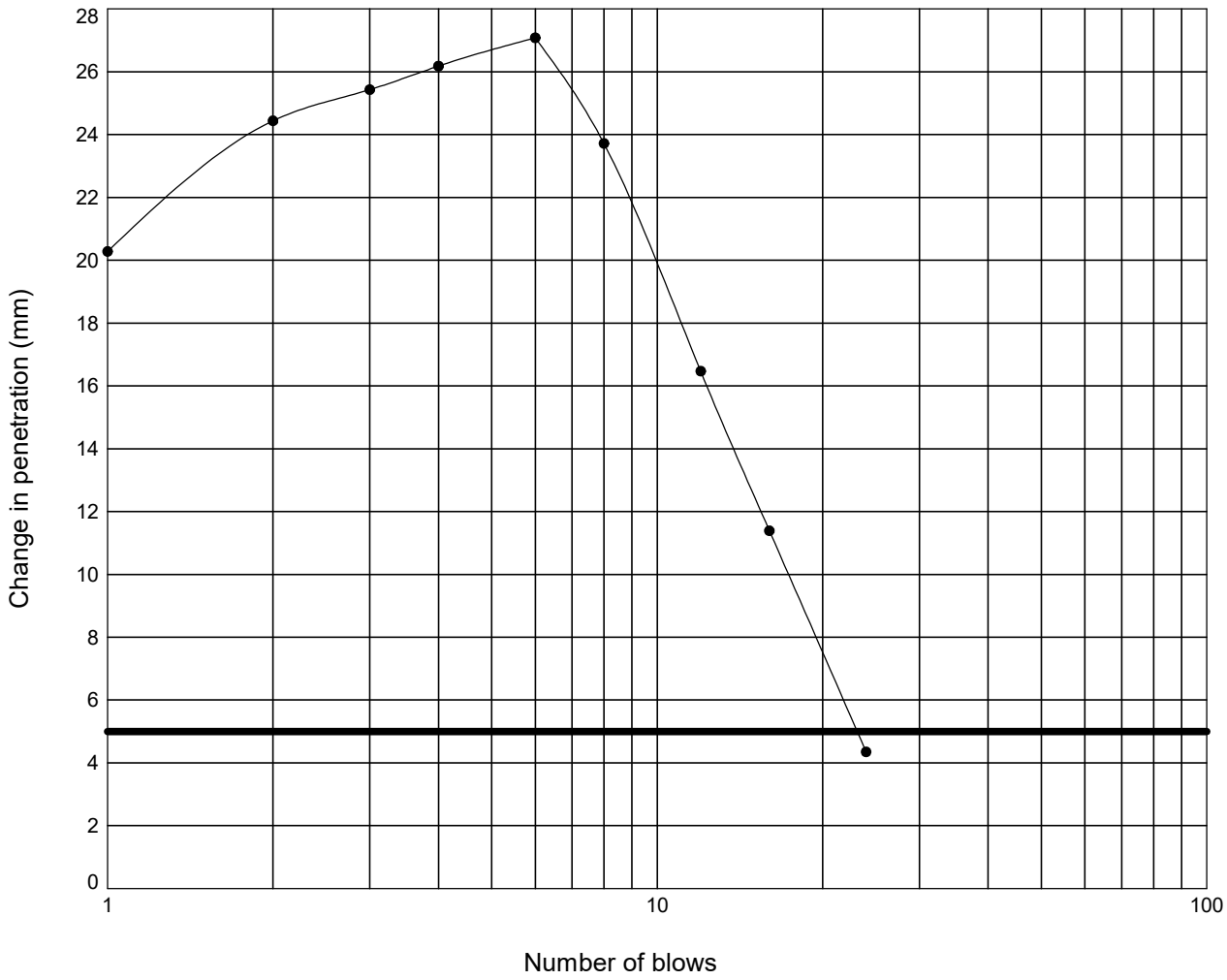
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP515** Sample Ref: Sample Type: **AMAL** Depth (m): **0.70**

Amalgamation comprises: F22-TP515, Depth:0.70, Ref:4, Type:B + F22-TP515, Depth:0.80, Ref:15, Type:B

Description : **Orangish brown slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	18	%
Percentage retained on 20 mm sieve :	=	6	%
Moisture Condition Value :	=	13.6	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract	Contract Ref:
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MOISTURE CONDITION VALUE

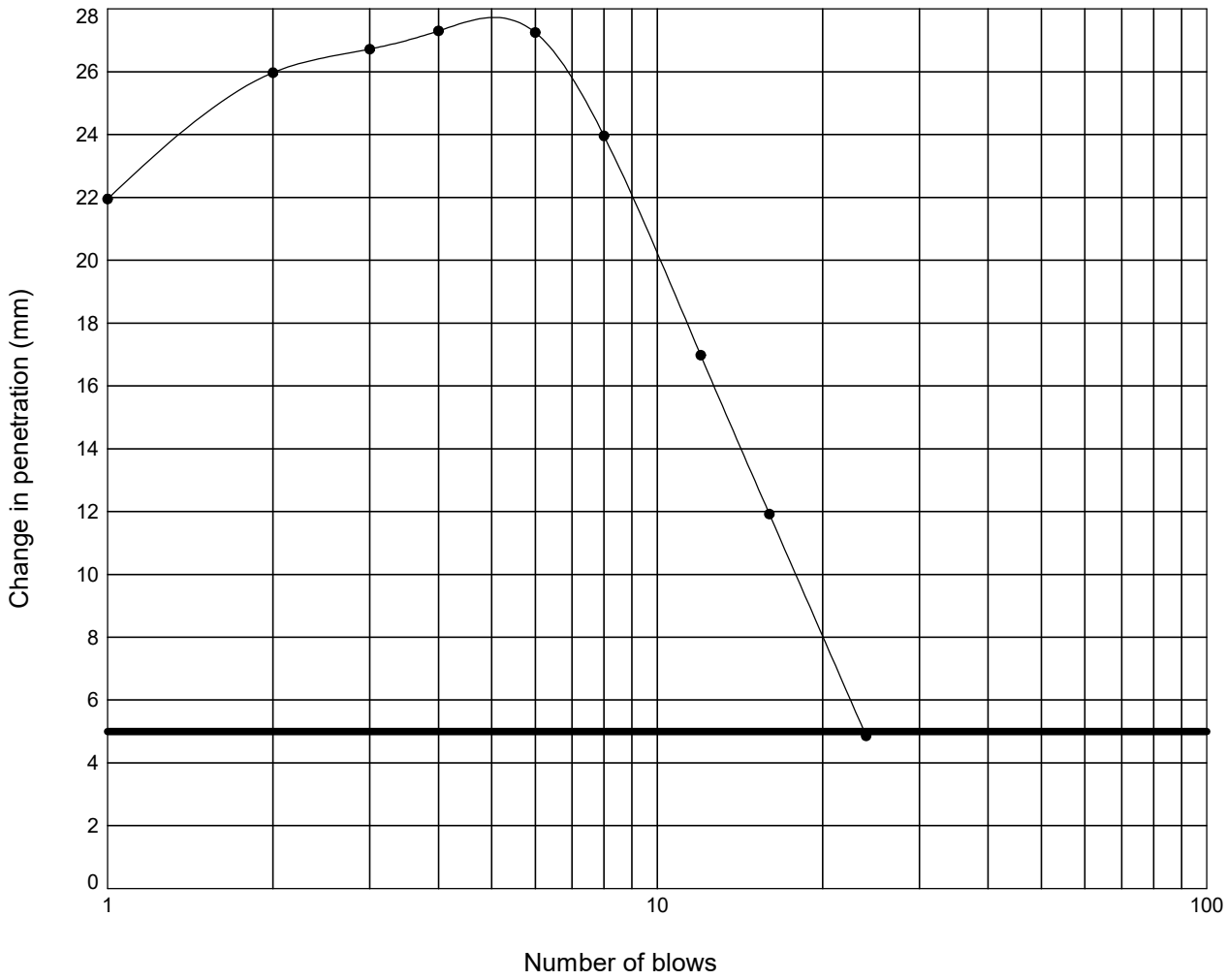
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP515** Sample Ref: Sample Type: **AMAL** Depth (m): **0.70**

Amalgamation comprises: F22-TP515, Depth:0.70, Ref:4, Type:B + F22-TP515, Depth:0.80, Ref:15, Type:B

Description : **Orangish brown slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	20	%
Percentage retained on 20 mm sieve :	=	6	%
Moisture Condition Value :	=	13.7	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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MOISTURE CONDITION VALUE

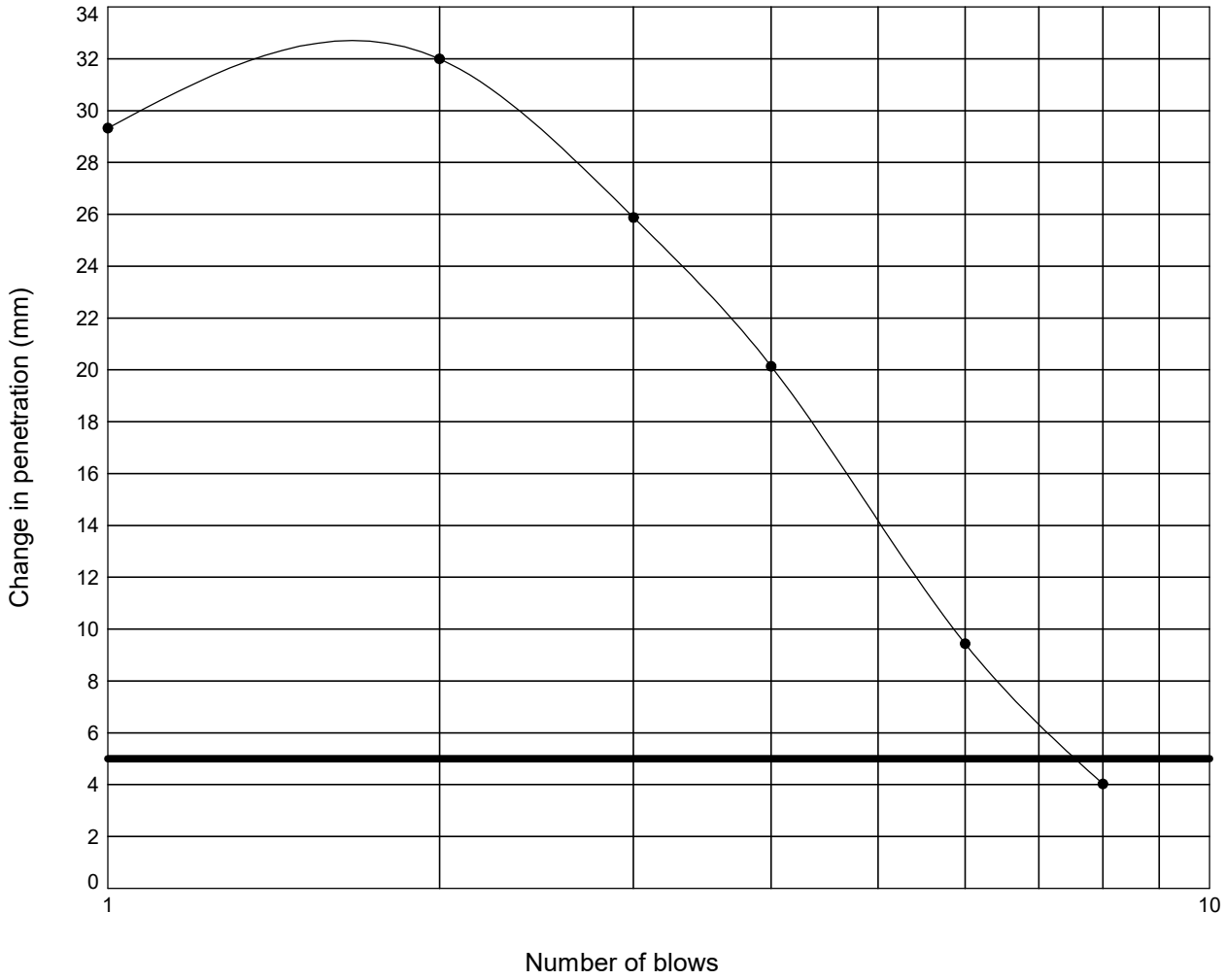
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP515** Sample Ref: Sample Type: **AMAL** Depth (m): **0.70**

Amalgamation comprises: F22-TP515, Depth:0.70, Ref:4, Type:B + F22-TP515, Depth:0.80, Ref:15, Type:B

Description : **Orangish brown slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	24	%
Percentage retained on 20 mm sieve :	=	6	%
Moisture Condition Value :	=	8.5	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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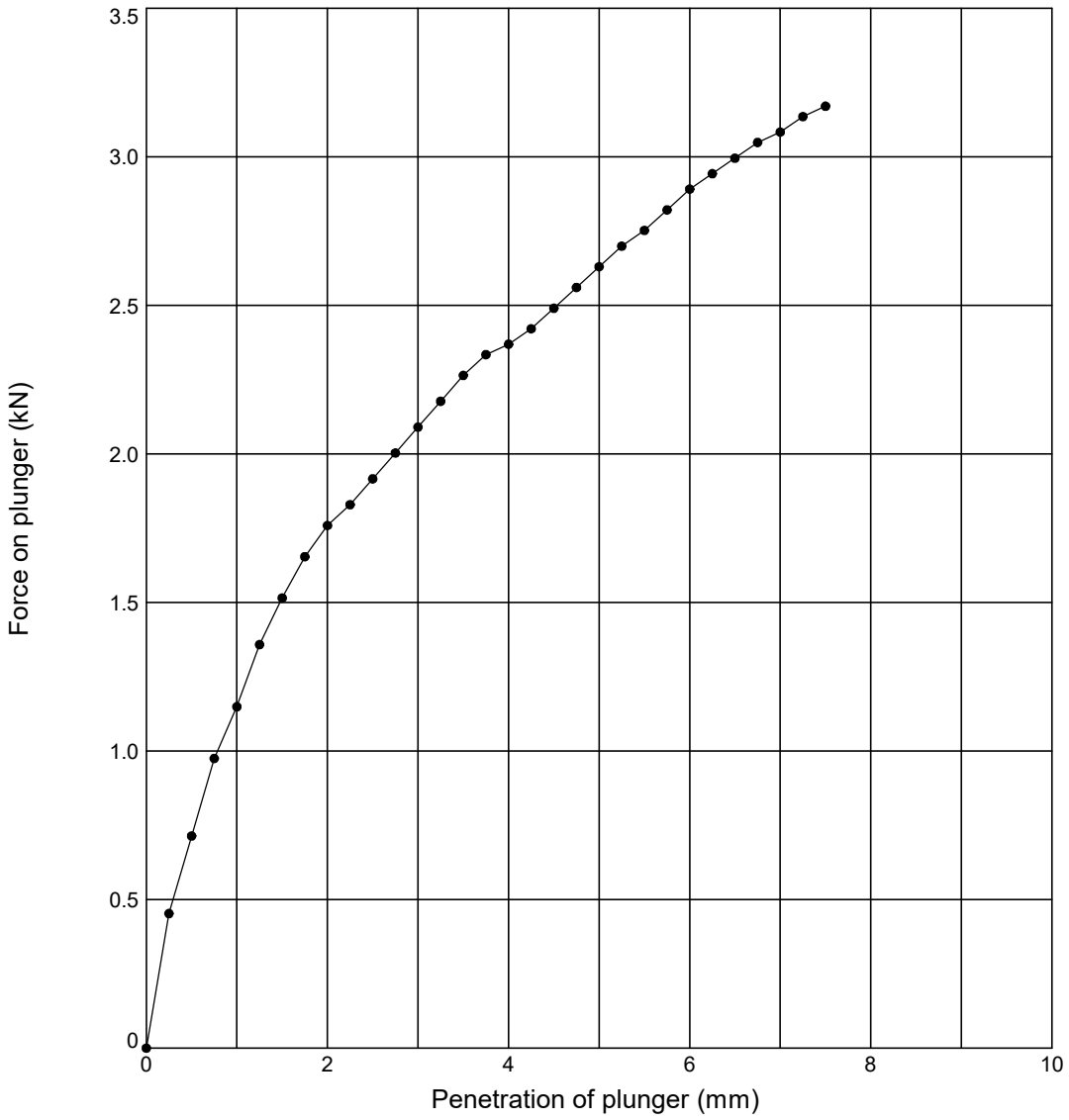
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP515** Sample Ref: Sample Type: **AMAL** Depth (m): **0.70**

Amalgamation comprises: F22-TP515, Depth:0.70, Ref:4, Type:B + F22-TP515, Depth:0.80, Ref:15, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**14**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**14**	**15**
Initial Bulk Density (Mg/m^3)	:	**1.71**	Surcharge (kg)	:	**4.0**	CBR value (%)	**14**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.50**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**6**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown slightly gravelly slightly sandy CLAY	● **Top** ⊠ **Base**

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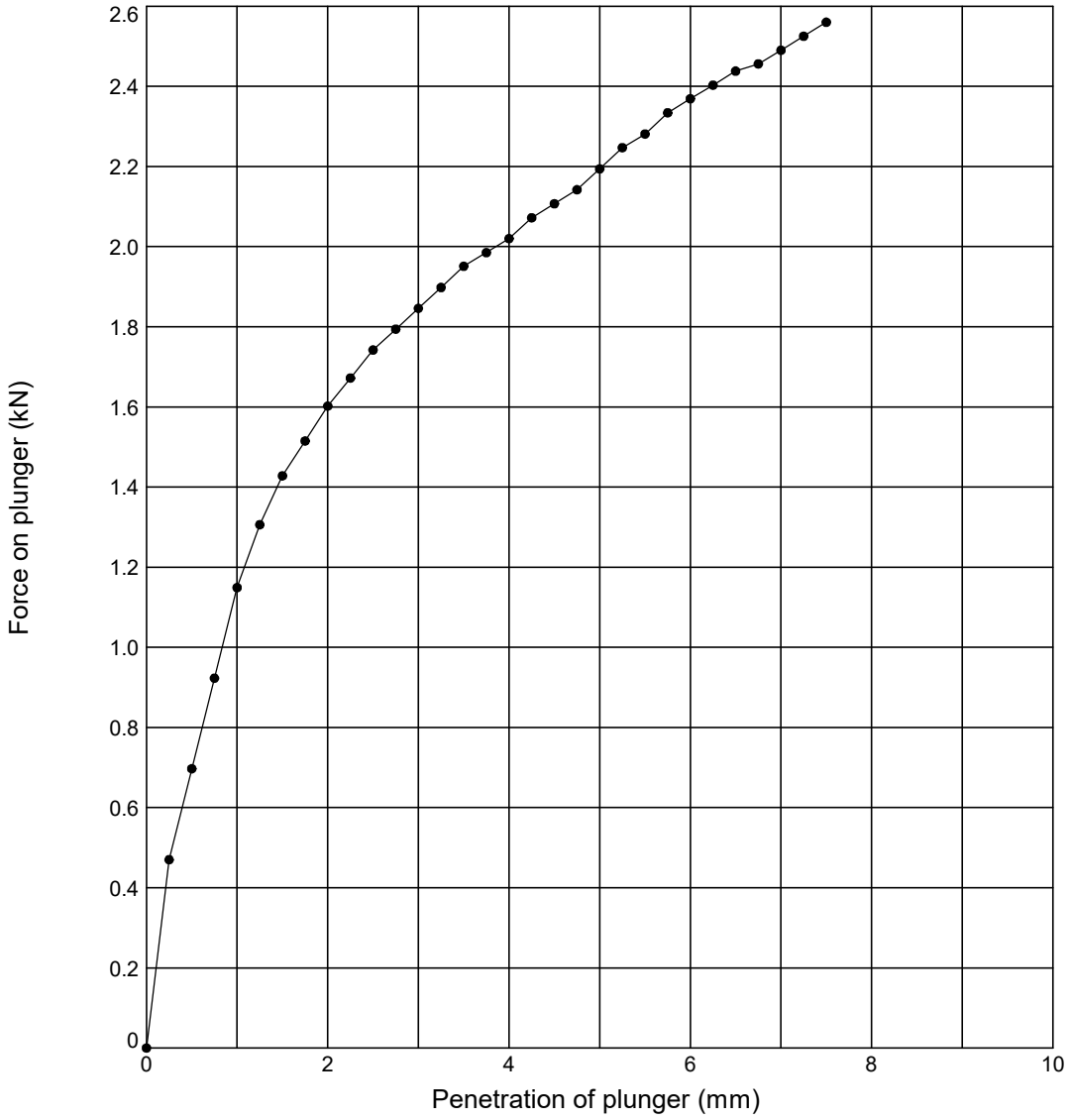
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP515** Sample Ref: Sample Type: **AMAL** Depth (m): **0.70**

Amalgamation comprises: F22-TP515, Depth:0.70, Ref:4, Type:B + F22-TP515, Depth:0.80, Ref:15, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**16**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**15**	**16**
Initial Bulk Density (Mg/m^3)	:	**1.85**	Surcharge (kg)	:	**4.0**	CBR value (%)	**13**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.60**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**6**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown slightly gravelly slightly sandy CLAY	● **Top** ⧓ **Base**

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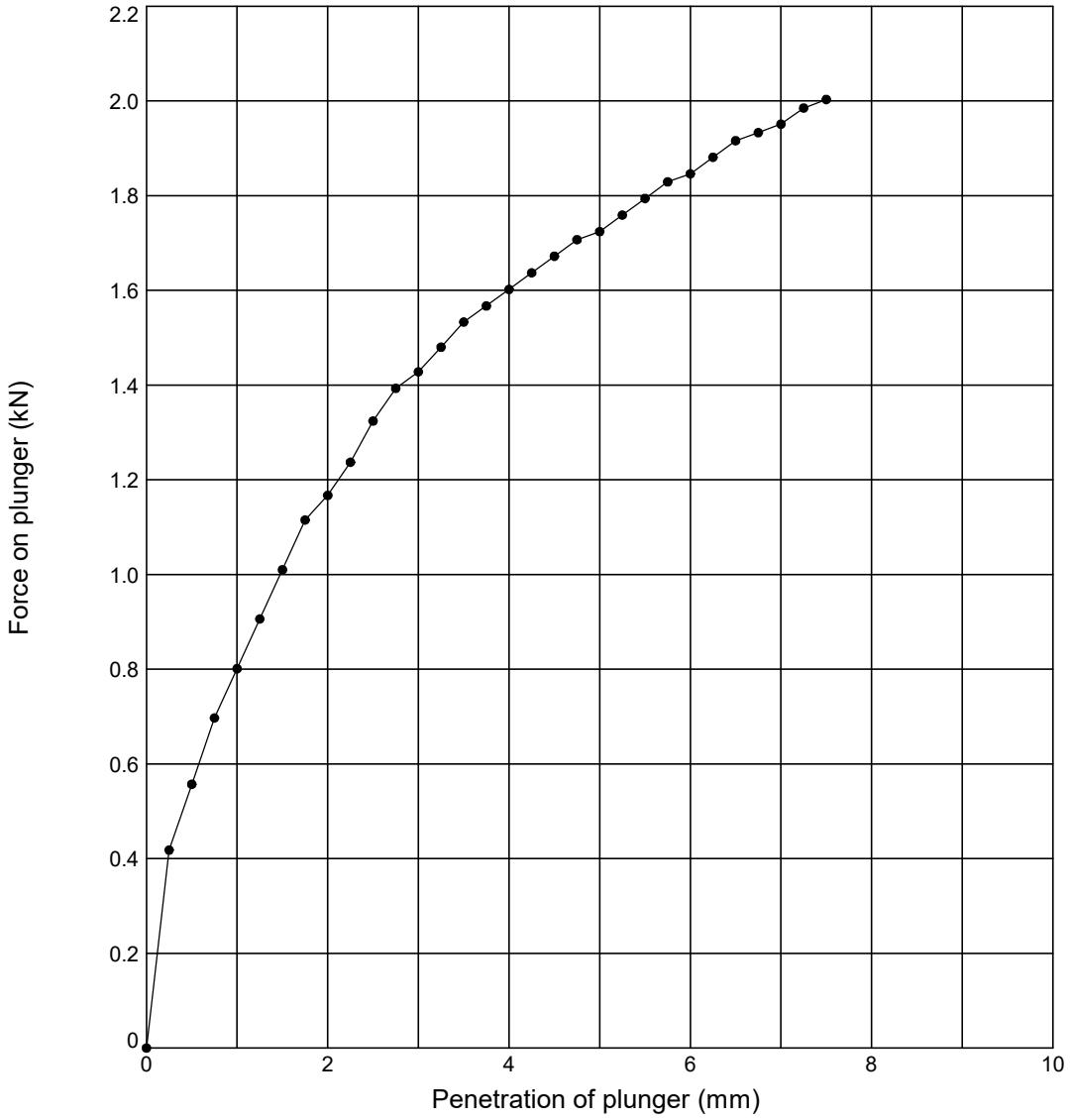
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP515** Sample Ref: Sample Type: **AMAL** Depth (m): **0.70**

Amalgamation comprises: F22-TP515, Depth:0.70, Ref:4, Type:B + F22-TP515, Depth:0.80, Ref:15, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**19**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**19**	**19**
Initial Bulk Density (Mg/m^3)	:	**1.95**	Surcharge (kg)	:	**4.0**	CBR value (%)	**10.0**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.64**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**6**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown slightly gravelly slightly sandy CLAY	● **Top** ⊠ **Base**

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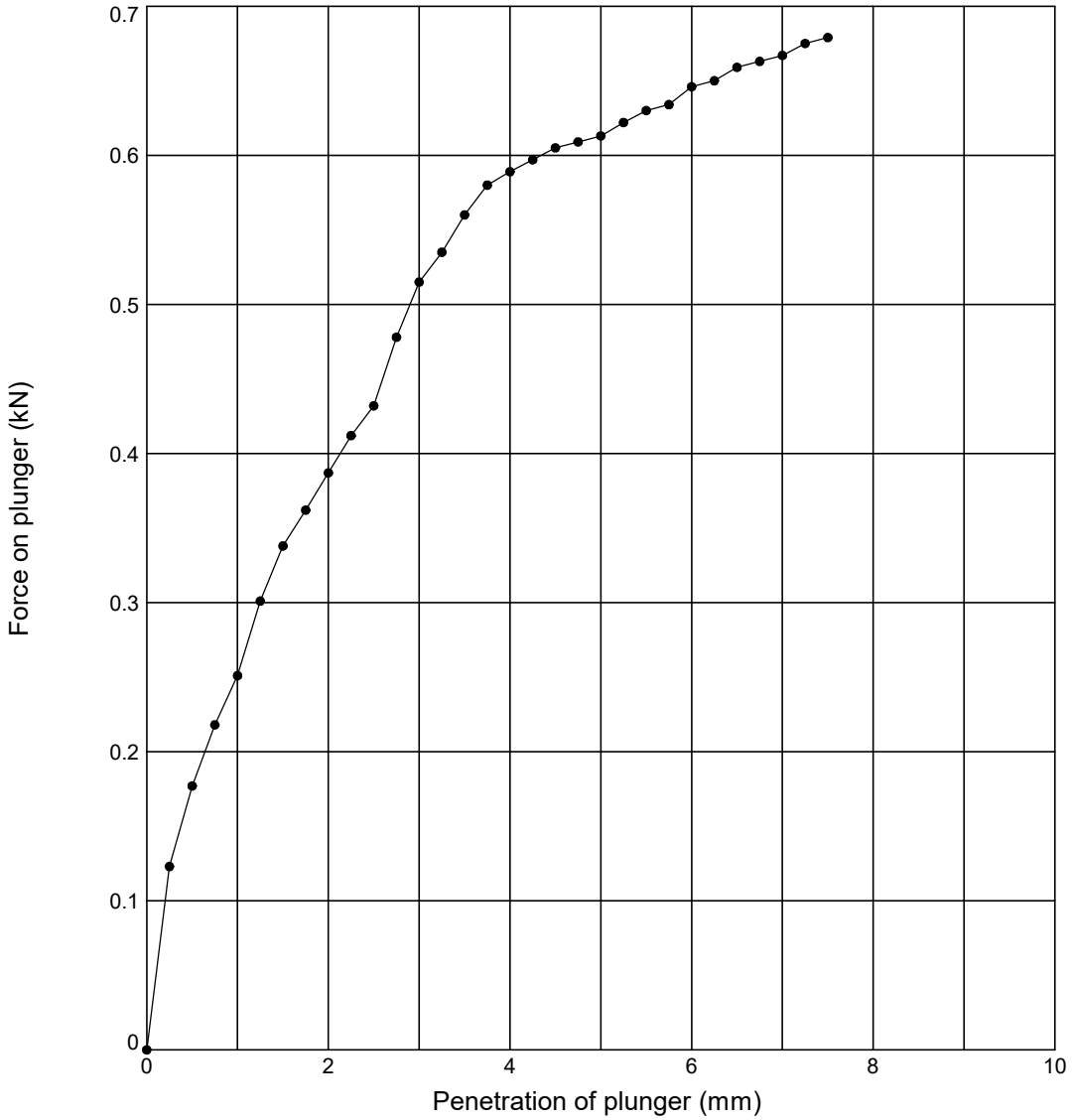
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP515** Sample Ref: Sample Type: **AMAL** Depth (m): **0.70**

Amalgamation comprises: F22-TP515, Depth:0.70, Ref:4, Type:B + F22-TP515, Depth:0.80, Ref:15, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**22**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**23**	**21**
Initial Bulk Density (Mg/m^3)	:	**1.95**	Surcharge (kg)	:	**4.0**	CBR value (%)	**3.3**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.60**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**6**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown slightly gravelly slightly sandy CLAY	● **Top** ⧓ **Base**

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Contract	Contract Ref:
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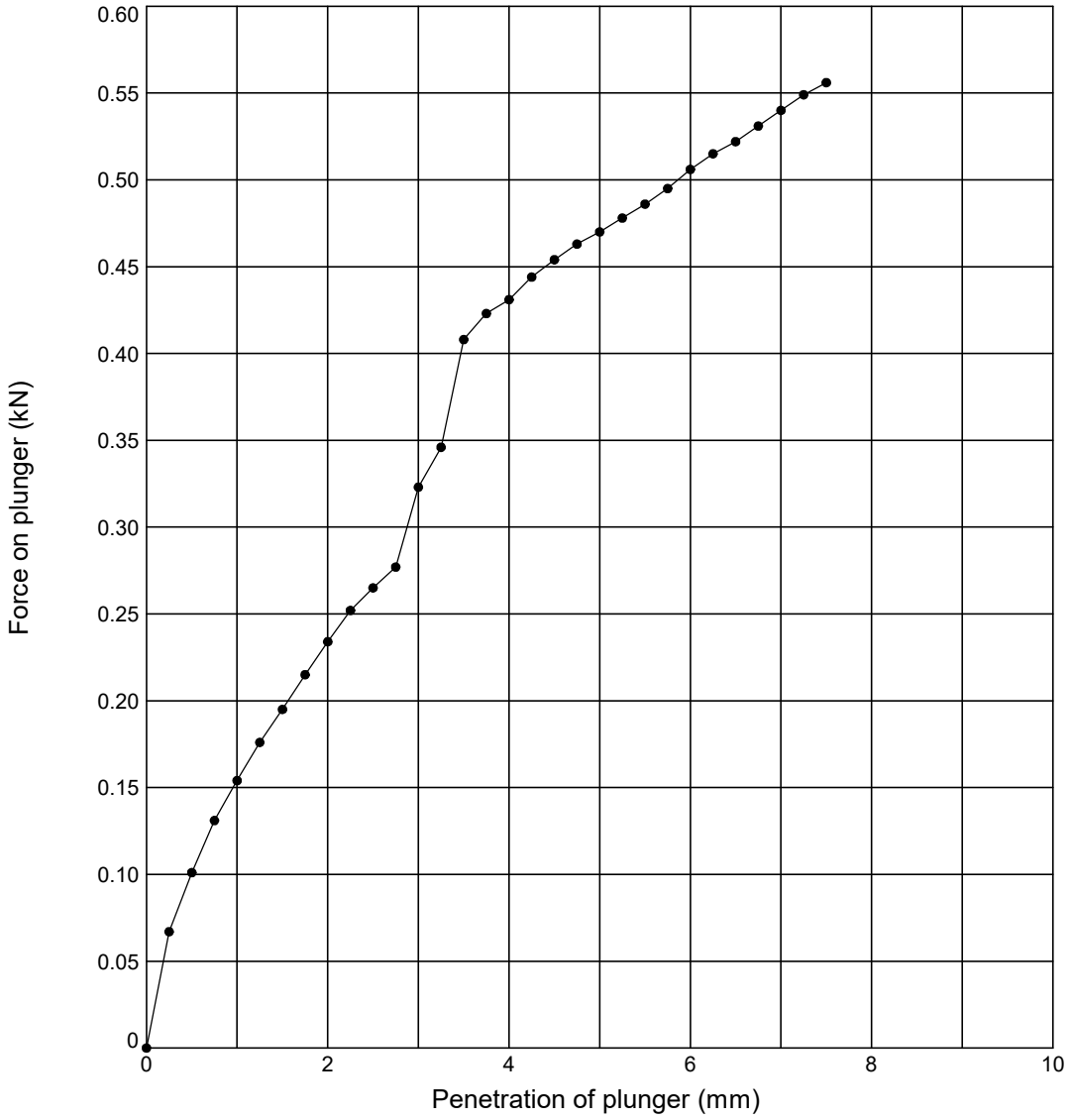
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP515** Sample Ref: Sample Type: **AMAL** Depth (m): **0.70**

Amalgamation comprises: F22-TP515, Depth:0.70, Ref:4, Type:B + F22-TP515, Depth:0.80, Ref:15, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**23**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**24**	**22**
Initial Bulk Density (Mg/m^3)	:	**1.95**	Surcharge (kg)	:	**4.0**	CBR value (%)	**2.4**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.58**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**0**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown slightly gravelly slightly sandy CLAY	● **Top** ⧓ **Base**

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Contract	Contract Ref:
Sealink Friston	**563835**

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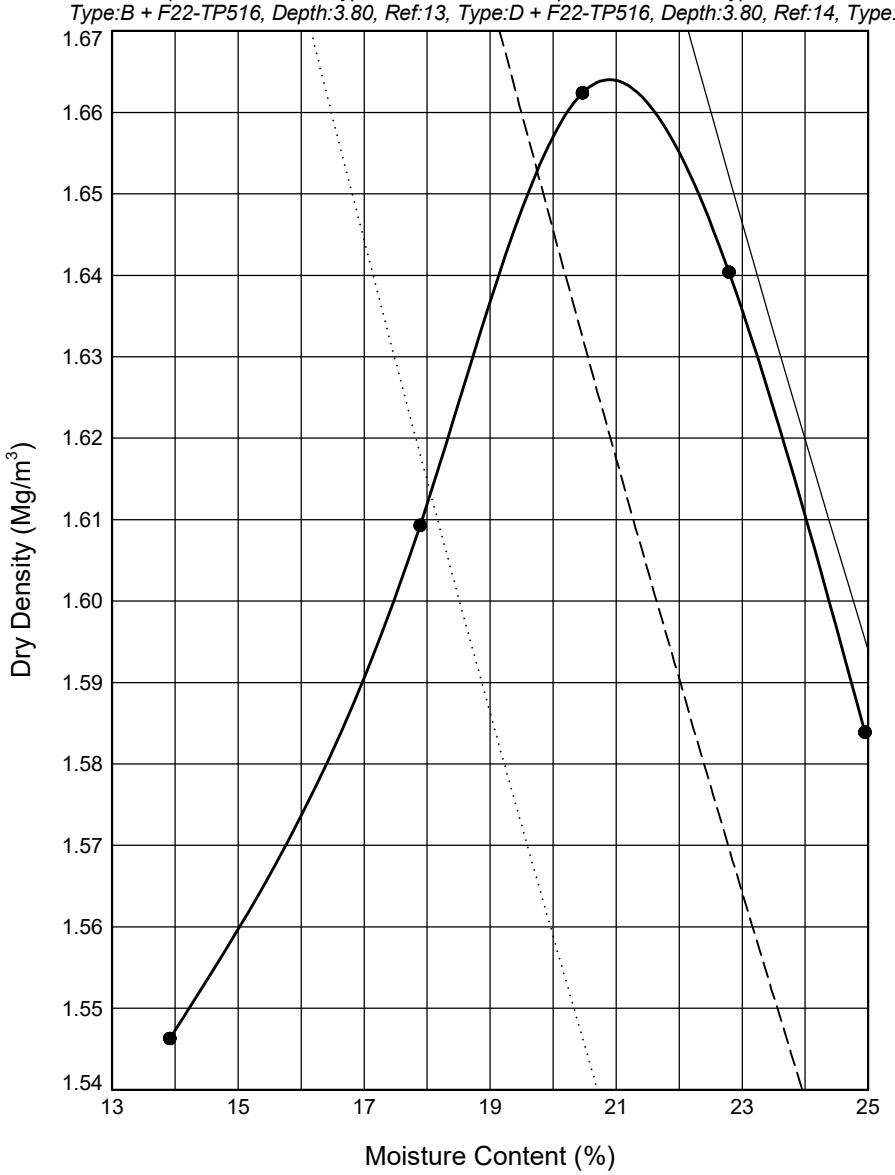
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DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **F22-TP516** Sample Ref: Sample Type: **AMAL** Depth (m): **0.70**

Amalgamation comprises: F22-TP516, Depth:0.70, Ref:15, Type:LB + F22-TP516, Depth:0.90, Ref:6, Type:B + F22-TP516, Depth:1.10, Ref:8, Type:B + F22-TP516, Depth:2.00, Ref:10, Type:B + F22-TP516, Depth:3.00, Ref:11, Type:D + F22-TP516, Depth:3.00, Ref:12, Type:B + F22-TP516, Depth:3.80, Ref:13, Type:D + F22-TP516, Depth:3.80, Ref:14, Type:B



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**20**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m³)	:	**1.66**
% Retained on 37.5mm BS Sieve	:	**8**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**21**
% Retained on 20.0mm BS Sieve	:	**2**	Type of Mould	:	**CBR**	Method Used: **Clause 11.4**		
Particle Density - assumed (Mg/m³)	:	**2.65**				Remarks: **CBR and MCV tests carried out at each point**		
Size of Soil Pieces	:	**<37.5mm**	Separate samples were used.					

Sample Description	Key to Air Voids Lines		
Dark grey slightly gravelly slightly sandy CLAY	——— 0%	– – – – 5%	····· 10%

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18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

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[redacted]	[redacted]	**26/02/24**

Contract	Contract Ref:
Sealink Friston	**563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - COMPACTIONS - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
Structural Soils Ltd, Branch Office - Hemel Hempstead: 18 Frogmore Road, Hemel Hempstead, Hertfordshire, HP3 9RT. Tel: 01442-262323, Fax: 01442-262683, Web: www.soils.co.uk, Email: ask@soils.co.uk | 26/02/24 - 14:30 | AF3 |

MOISTURE CONDITION VALUE

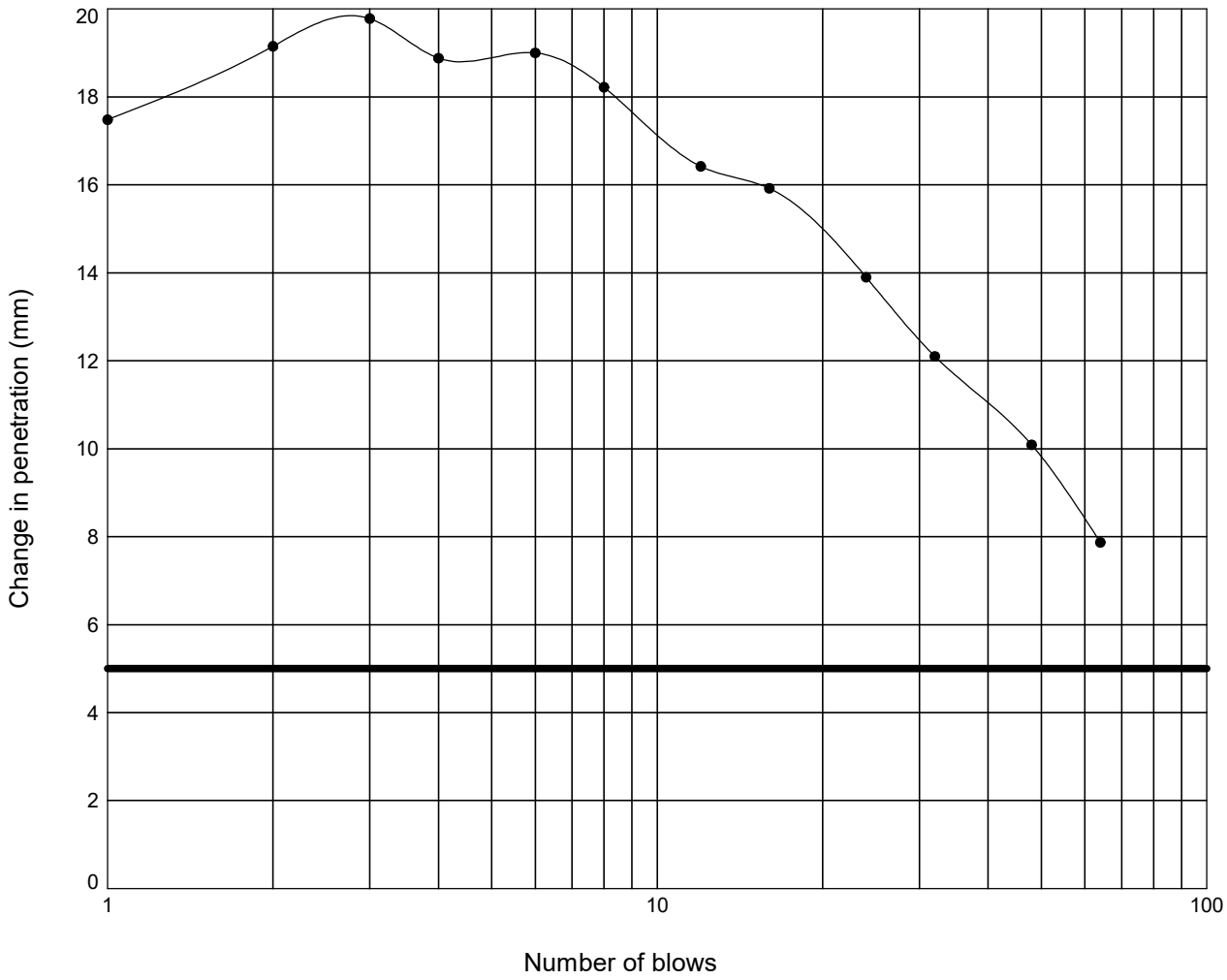
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP516** Sample Ref: Sample Type: **AMAL** Depth (m): **0.70**

Amalgamation comprises: F22-TP516, Depth:0.70, Ref:15, Type:LB + F22-TP516, Depth:0.90, Ref:6, Type:B + F22-TP516, Depth:1.10, Ref:8, Type:B + F22-TP516, Depth:2.00, Ref:10, Type:B + F22-TP516, Depth:3.00, Ref:11, Type:D + F22-TP516, Depth:3.00, Ref:12, Type:B + F22-TP516, Depth:3.80, Ref:13, Type:D + F22-TP516, Depth:3.80, Ref:14, Type:B

Description : **Dark grey slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	15	%
Percentage retained on 20 mm sieve :	=	2	%
Moisture Condition Value :	=	19.7	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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MOISTURE CONDITION VALUE

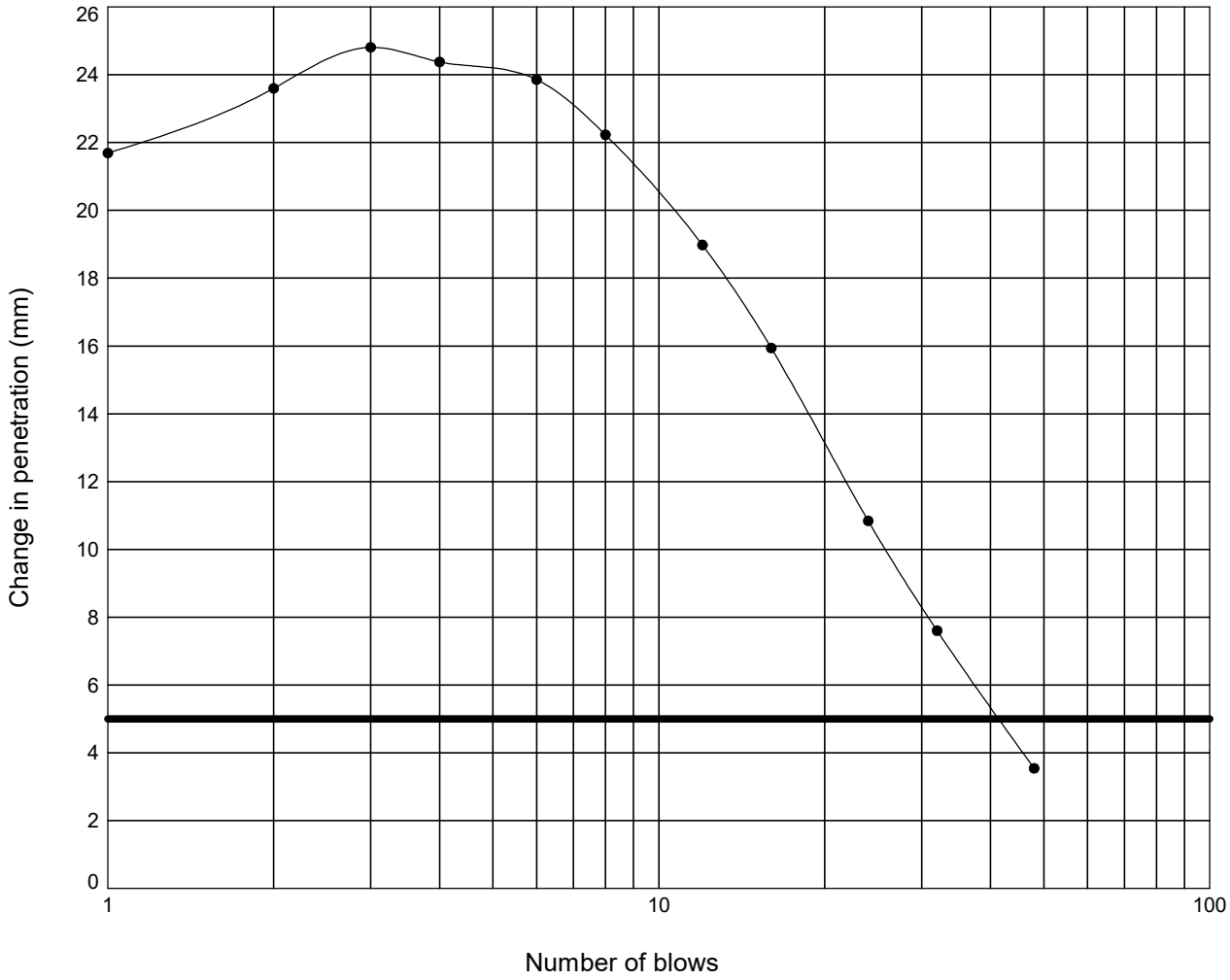
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP516** Sample Ref: Sample Type: **AMAL** Depth (m): **0.70**

Amalgamation comprises: F22-TP516, Depth:0.70, Ref:15, Type:LB + F22-TP516, Depth:0.90, Ref:6, Type:B + F22-TP516, Depth:1.10, Ref:8, Type:B + F22-TP516, Depth:2.00, Ref:10, Type:B + F22-TP516, Depth:3.00, Ref:11, Type:D + F22-TP516, Depth:3.00, Ref:12, Type:B + F22-TP516, Depth:3.80, Ref:13, Type:D + F22-TP516, Depth:3.80, Ref:14, Type:B

Description : **Dark grey slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	17	%
Percentage retained on 20 mm sieve :	=	2	%
Moisture Condition Value :	=	15.8	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Compiled By		Date
[redacted]	[redacted]	26/02/24

Contract	Contract Ref:
Sealink Friston	**563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - MCV -3- NATURAL FINAL - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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MOISTURE CONDITION VALUE

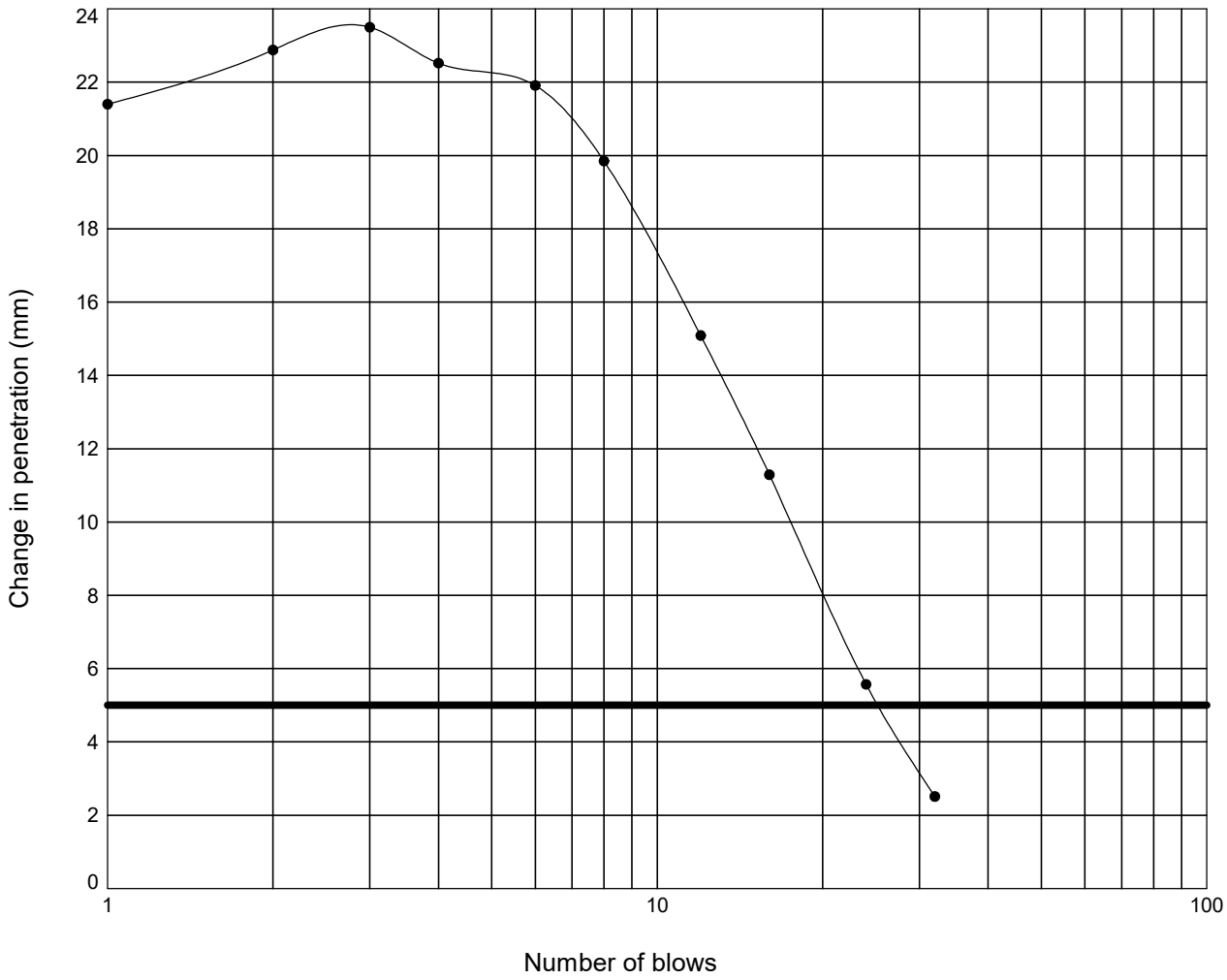
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP516** Sample Ref: Sample Type: **AMAL** Depth (m): **0.70**

Amalgamation comprises: F22-TP516, Depth:0.70, Ref:15, Type:LB + F22-TP516, Depth:0.90, Ref:6, Type:B + F22-TP516, Depth:1.10, Ref:8, Type:B + F22-TP516, Depth:2.00, Ref:10, Type:B + F22-TP516, Depth:3.00, Ref:11, Type:D + F22-TP516, Depth:3.00, Ref:12, Type:B + F22-TP516, Depth:3.80, Ref:13, Type:D + F22-TP516, Depth:3.80, Ref:14, Type:B

Description : **Dark grey slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	= 20	%
Percentage retained on 20 mm sieve :	= 2	%
Moisture Condition Value :	= 14.0	
Interpretation of curve:	= Steepest straight line - Fig 9	

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Contract	Contract Ref:
Sealink Friston	**563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - MCV -3- NATURAL FINAL - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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MOISTURE CONDITION VALUE

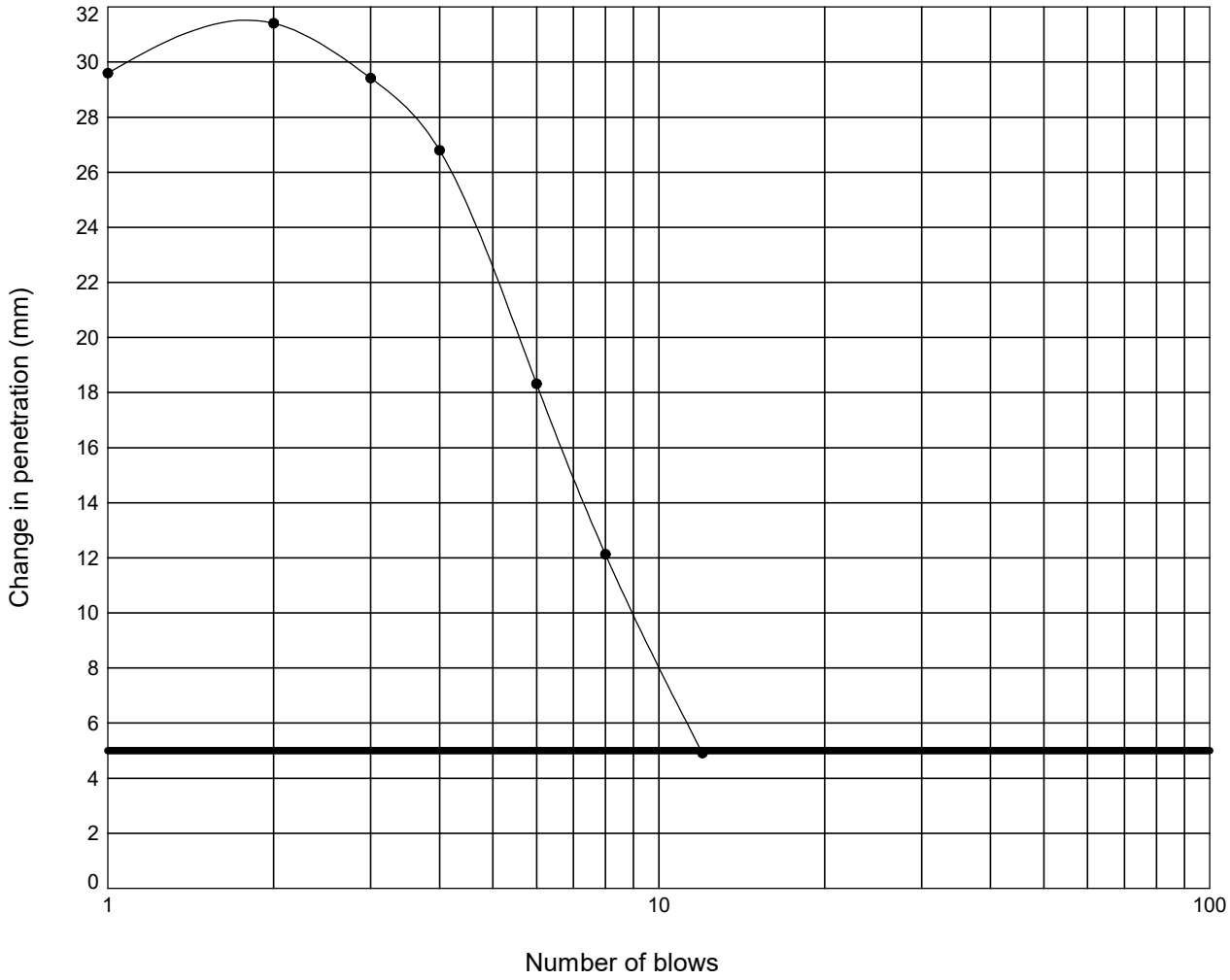
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP516** Sample Ref: Sample Type: **AMAL** Depth (m): **0.70**

Amalgamation comprises: F22-TP516, Depth:0.70, Ref:15, Type:LB + F22-TP516, Depth:0.90, Ref:6, Type:B + F22-TP516, Depth:1.10, Ref:8, Type:B + F22-TP516, Depth:2.00, Ref:10, Type:B + F22-TP516, Depth:3.00, Ref:11, Type:D + F22-TP516, Depth:3.00, Ref:12, Type:B + F22-TP516, Depth:3.80, Ref:13, Type:D + F22-TP516, Depth:3.80, Ref:14, Type:B

Description : **Dark grey slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	23	%
Percentage retained on 20 mm sieve :	=	2	%
Moisture Condition Value :	=	10.5	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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MOISTURE CONDITION VALUE

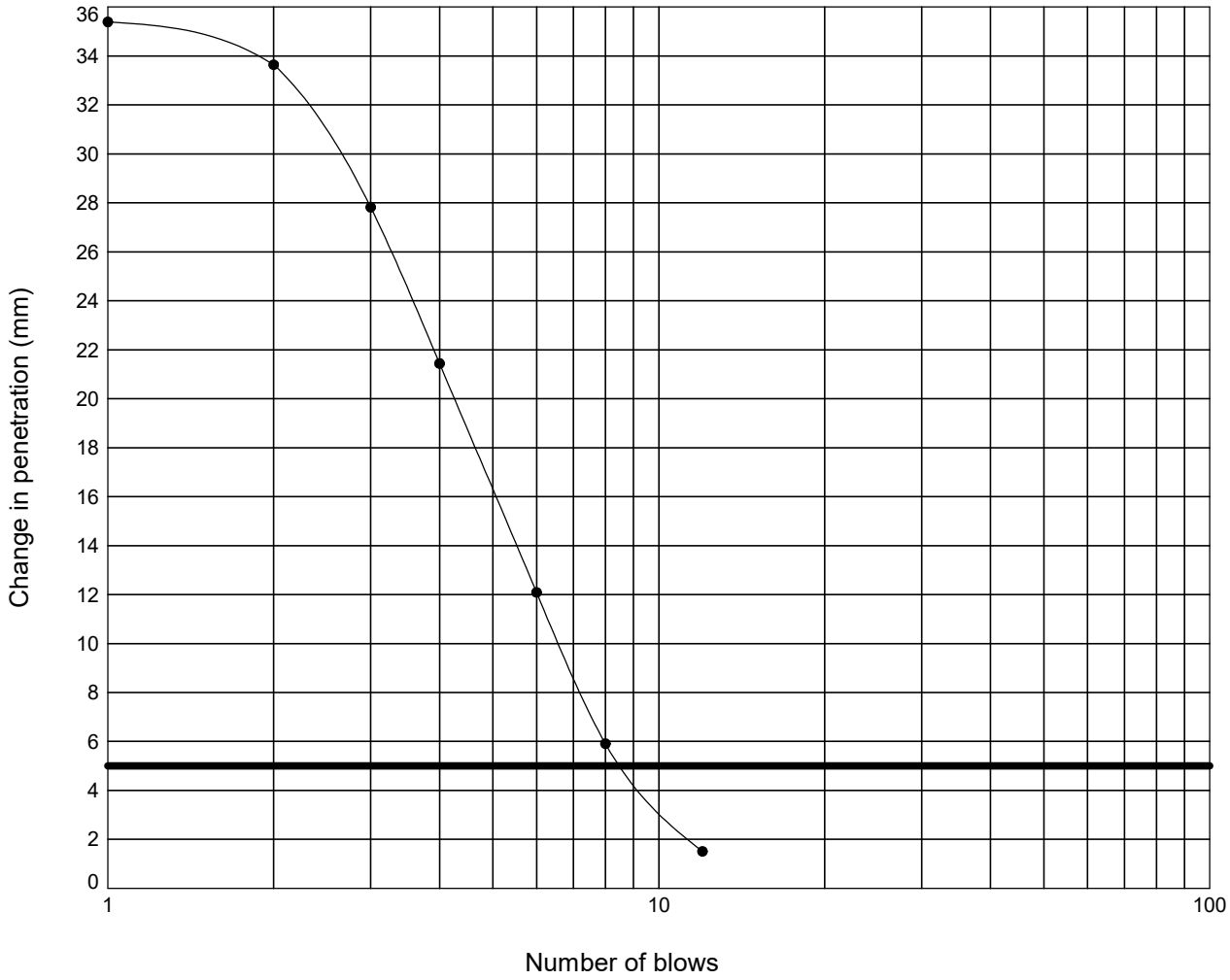
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP516** Sample Ref: Sample Type: **AMAL** Depth (m): **0.70**

Amalgamation comprises: F22-TP516, Depth:0.70, Ref:15, Type:LB + F22-TP516, Depth:0.90, Ref:6, Type:B + F22-TP516, Depth:1.10, Ref:8, Type:B + F22-TP516, Depth:2.00, Ref:10, Type:B + F22-TP516, Depth:3.00, Ref:11, Type:D + F22-TP516, Depth:3.00, Ref:12, Type:B + F22-TP516, Depth:3.80, Ref:13, Type:D + F22-TP516, Depth:3.80, Ref:14, Type:B

Description : **Dark grey slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	24	%
Percentage retained on 20 mm sieve :	=	2	%
Moisture Condition Value :	=	9.2	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract	Contract Ref:
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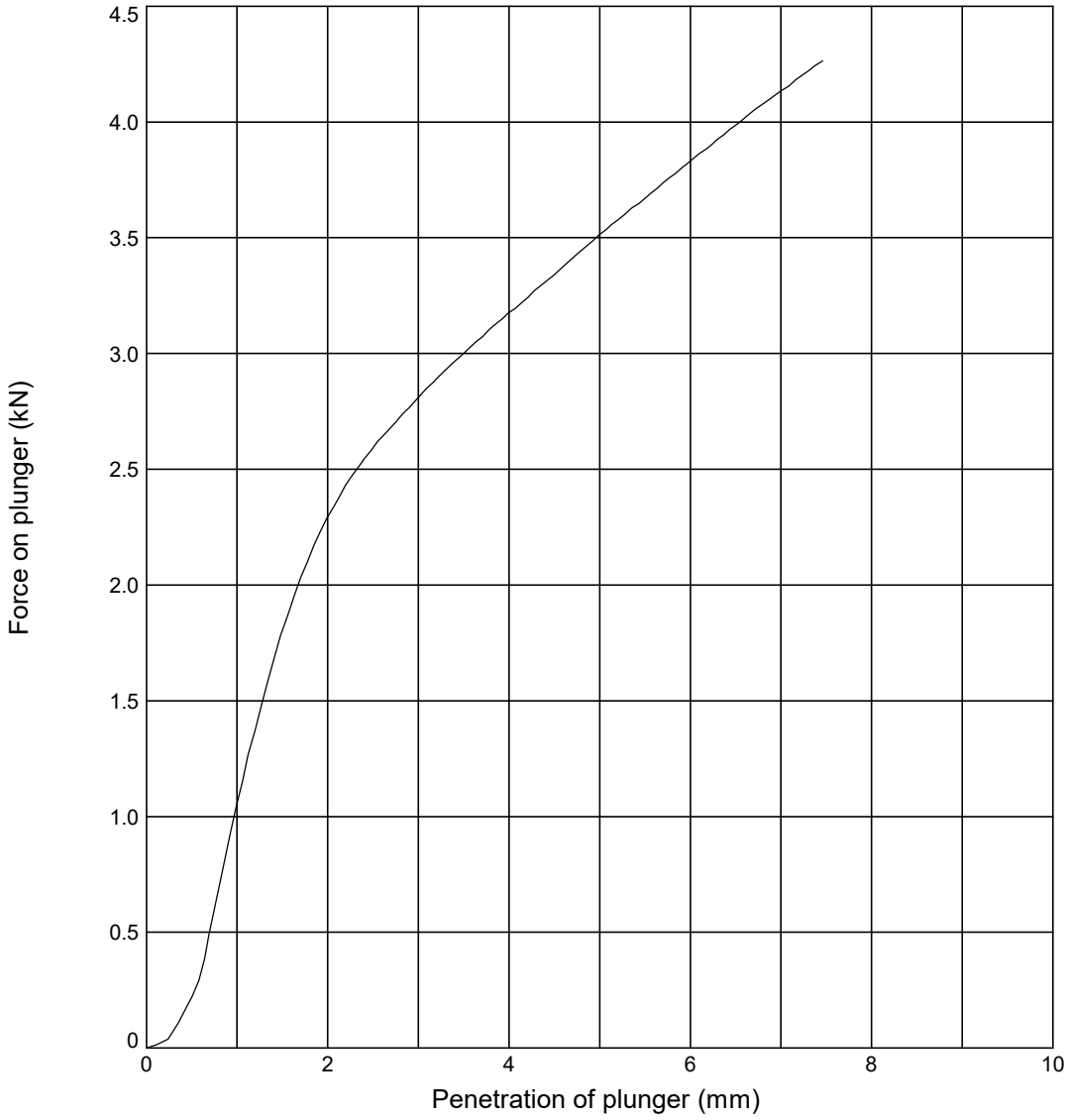
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - MCV -3- NATURAL FINAL - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP516** Sample Ref: Sample Type: **AMAL** Depth (m): **0.70**

Amalgamation comprises: F22-TP516, Depth:0.70, Ref:15, Type:LB + F22-TP516, Depth:0.90, Ref:6, Type:B + F22-TP516, Depth:1.10, Ref:8, Type:B + F22-TP516, Depth:2.00, Ref:10, Type:B + F22-TP516, Depth:3.00, Ref:11, Type:D + F22-TP516, Depth:3.00, Ref:12, Type:B + F22-TP516, Depth:3.80, Ref:13, Type:D + F22-TP516, Depth:3.80, Ref:14, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**14**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**15**	**14**
Initial Bulk Density (Mg/m^3)	:	**1.73**	Surcharge (kg)	:	**4.1**	CBR Value (%)	**20**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.52**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**0.6**	**NA**
% Retained on 20mm Sieve	:	**2**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**22**	**NA**

Sample Description	Key
Dark grey slightly gravelly slightly sandy CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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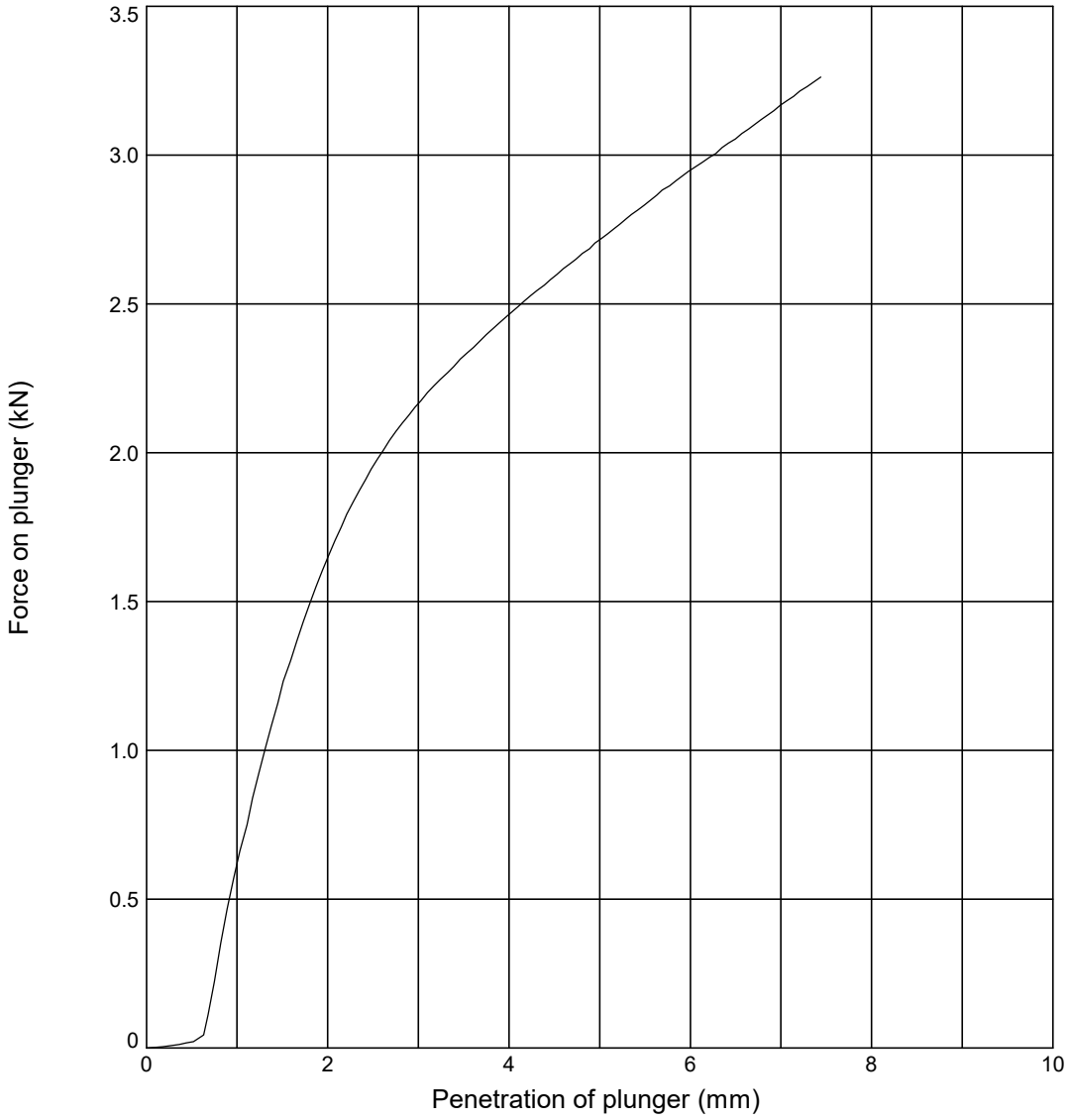
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - CBR DATALOGGED - 1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP516** Sample Ref: Sample Type: **AMAL** Depth (m): **0.70**

Amalgamation comprises: F22-TP516, Depth:0.70, Ref:15, Type:LB + F22-TP516, Depth:0.90, Ref:6, Type:B + F22-TP516, Depth:1.10, Ref:8, Type:B + F22-TP516, Depth:2.00, Ref:10, Type:B + F22-TP516, Depth:3.00, Ref:11, Type:D + F22-TP516, Depth:3.00, Ref:12, Type:B + F22-TP516, Depth:3.80, Ref:13, Type:D + F22-TP516, Depth:3.80, Ref:14, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**18**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**17**	**18**
Initial Bulk Density (Mg/m^3)	:	**1.87**	Surcharge (kg)	:	**4.1**	CBR Value (%)	**15**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.59**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**0.6**	**NA**
% Retained on 20mm Sieve	:	**2**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**17**	**NA**

Sample Description	Key
Dark grey slightly gravelly slightly sandy CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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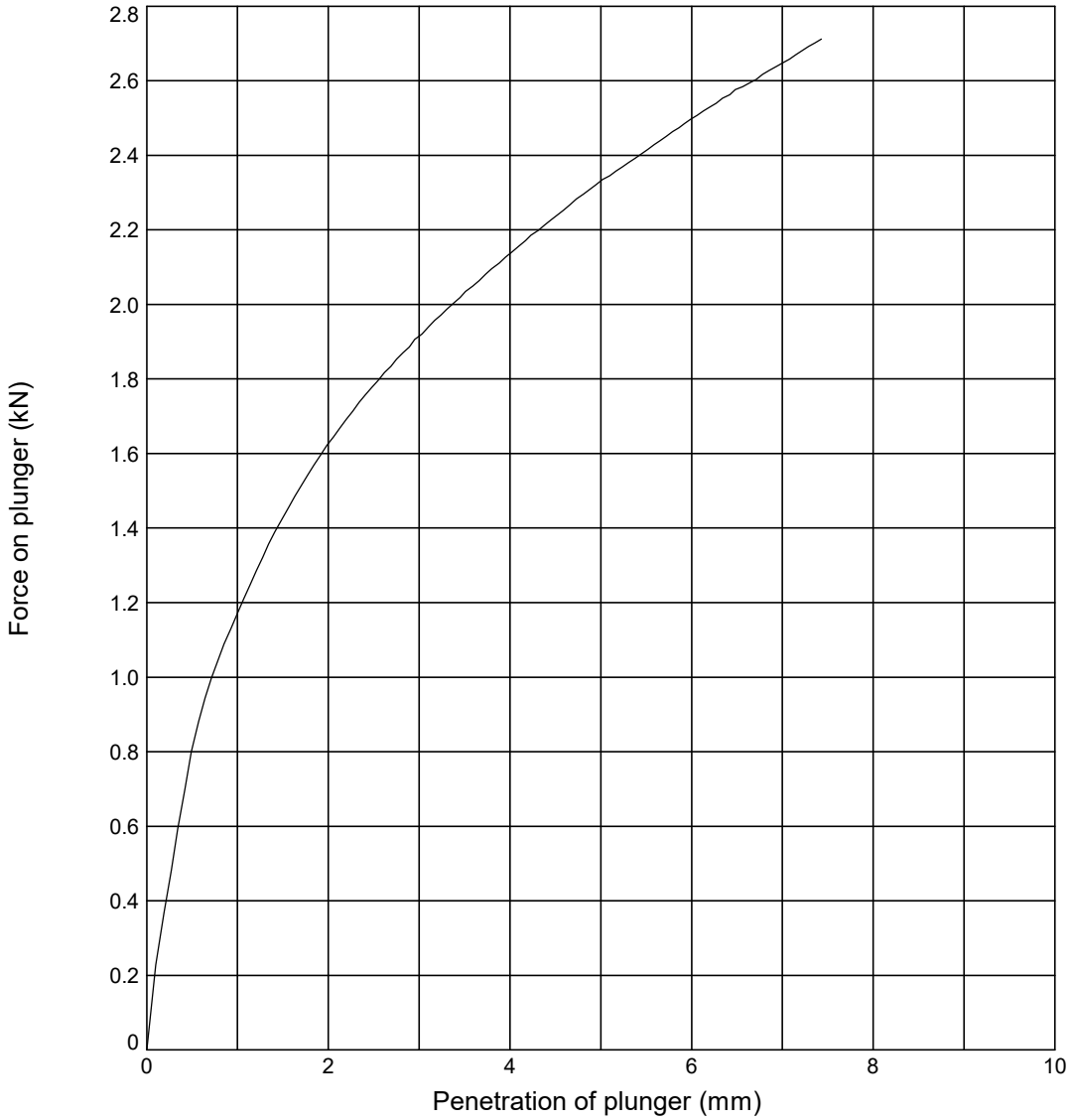
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - CBR DATALOGGED - 1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP516** Sample Ref: Sample Type: **AMAL** Depth (m): **0.70**

Amalgamation comprises: F22-TP516, Depth:0.70, Ref:15, Type:LB + F22-TP516, Depth:0.90, Ref:6, Type:B + F22-TP516, Depth:1.10, Ref:8, Type:B + F22-TP516, Depth:2.00, Ref:10, Type:B + F22-TP516, Depth:3.00, Ref:11, Type:D + F22-TP516, Depth:3.00, Ref:12, Type:B + F22-TP516, Depth:3.80, Ref:13, Type:D + F22-TP516, Depth:3.80, Ref:14, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**20**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**20**	**20**
Initial Bulk Density (Mg/m^3)	:	**1.98**	Surcharge (kg)	:	**4.1**	CBR Value (%)	**14**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.65**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**2**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Dark grey slightly gravelly slightly sandy CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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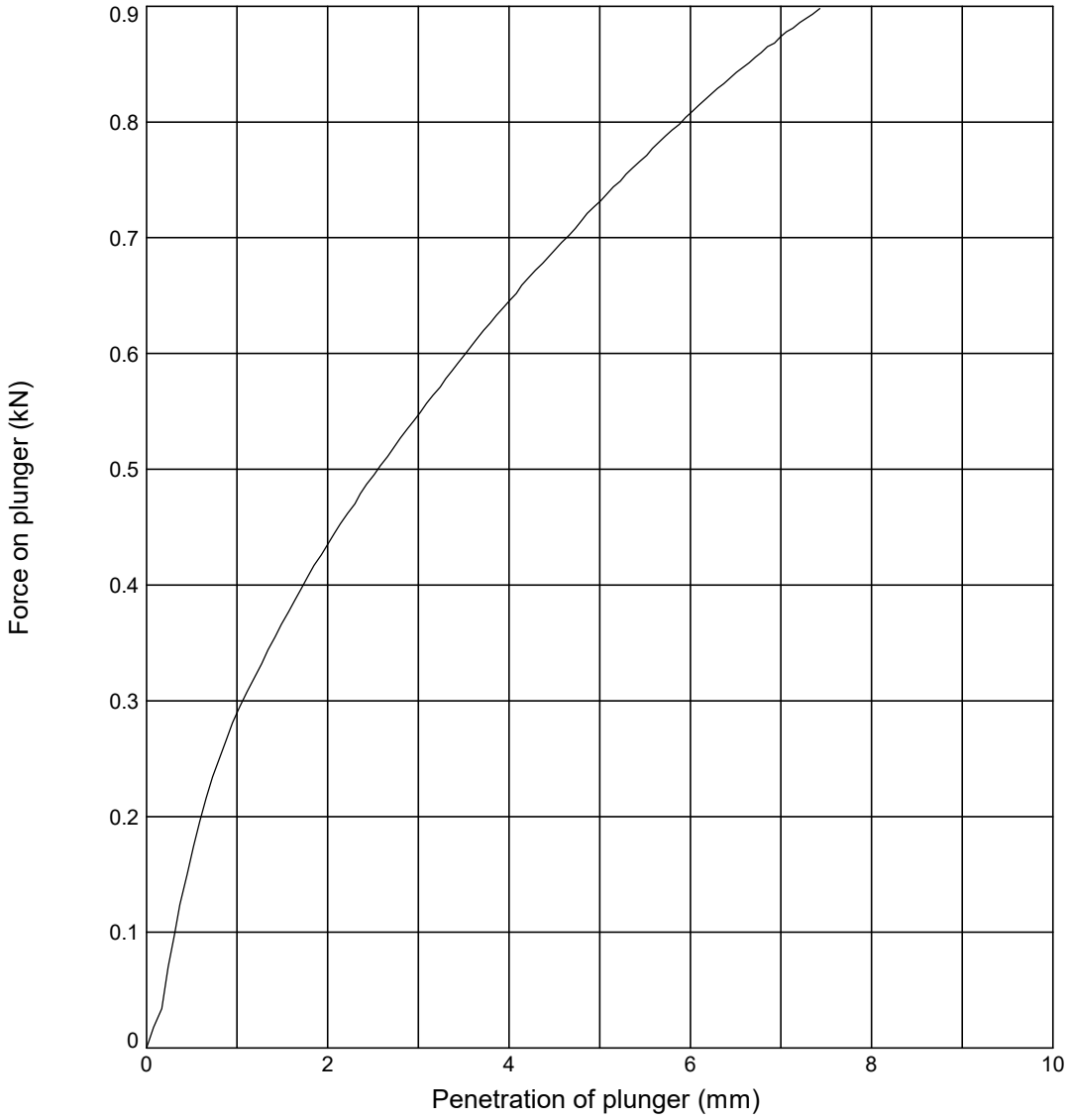
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP516** Sample Ref: Sample Type: **AMAL** Depth (m): **0.70**

Amalgamation comprises: F22-TP516, Depth:0.70, Ref:15, Type:LB + F22-TP516, Depth:0.90, Ref:6, Type:B + F22-TP516, Depth:1.10, Ref:8, Type:B + F22-TP516, Depth:2.00, Ref:10, Type:B + F22-TP516, Depth:3.00, Ref:11, Type:D + F22-TP516, Depth:3.00, Ref:12, Type:B + F22-TP516, Depth:3.80, Ref:13, Type:D + F22-TP516, Depth:3.80, Ref:14, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**23**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**24**	**23**
Initial Bulk Density (Mg/m^3)	:	**2.00**	Surcharge (kg)	:	**4.1**	CBR Value (%)	**3.7**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.62**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**0.1**	**NA**
% Retained on 20mm Sieve	:	**2**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**3.8**	**NA**

Sample Description	Key
Dark grey slightly gravelly slightly sandy CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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Contract	Contract Ref:
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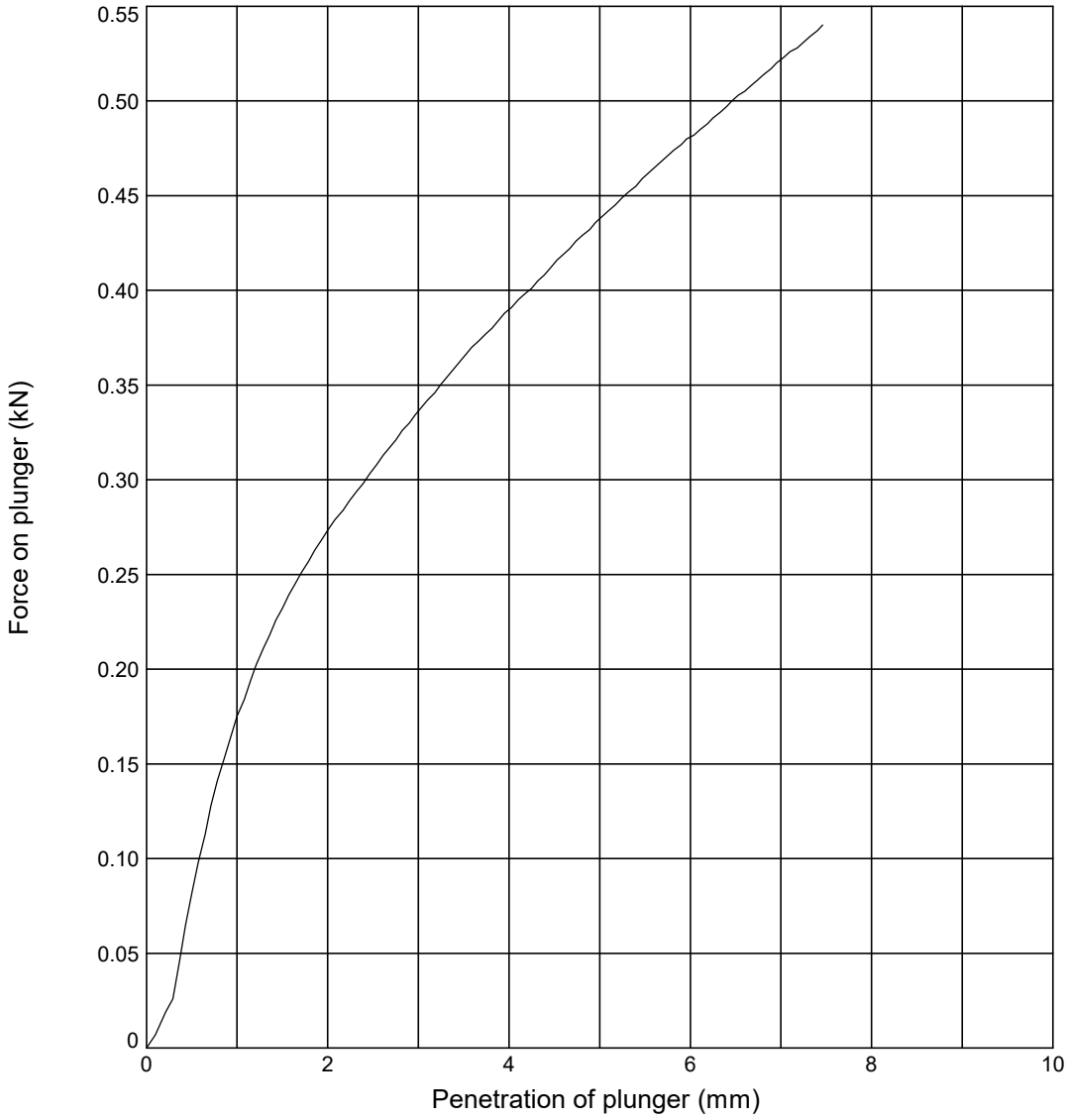
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP516** Sample Ref: Sample Type: **AMAL** Depth (m): **0.70**

Amalgamation comprises: F22-TP516, Depth:0.70, Ref:15, Type:LB + F22-TP516, Depth:0.90, Ref:6, Type:B + F22-TP516, Depth:1.10, Ref:8, Type:B + F22-TP516, Depth:2.00, Ref:10, Type:B + F22-TP516, Depth:3.00, Ref:11, Type:D + F22-TP516, Depth:3.00, Ref:12, Type:B + F22-TP516, Depth:3.80, Ref:13, Type:D + F22-TP516, Depth:3.80, Ref:14, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**25**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**24**	**26**
Initial Bulk Density (Mg/m^3)	:	**1.97**	Surcharge (kg)	:	**4.1**	CBR Value (%)	**2.3**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.58**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**0.2**	**NA**
% Retained on 20mm Sieve	:	**2**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**2.4**	**NA**

Sample Description	Key
Dark grey slightly gravelly slightly sandy CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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Contract	Contract Ref:
Sealink Friston	**563835**

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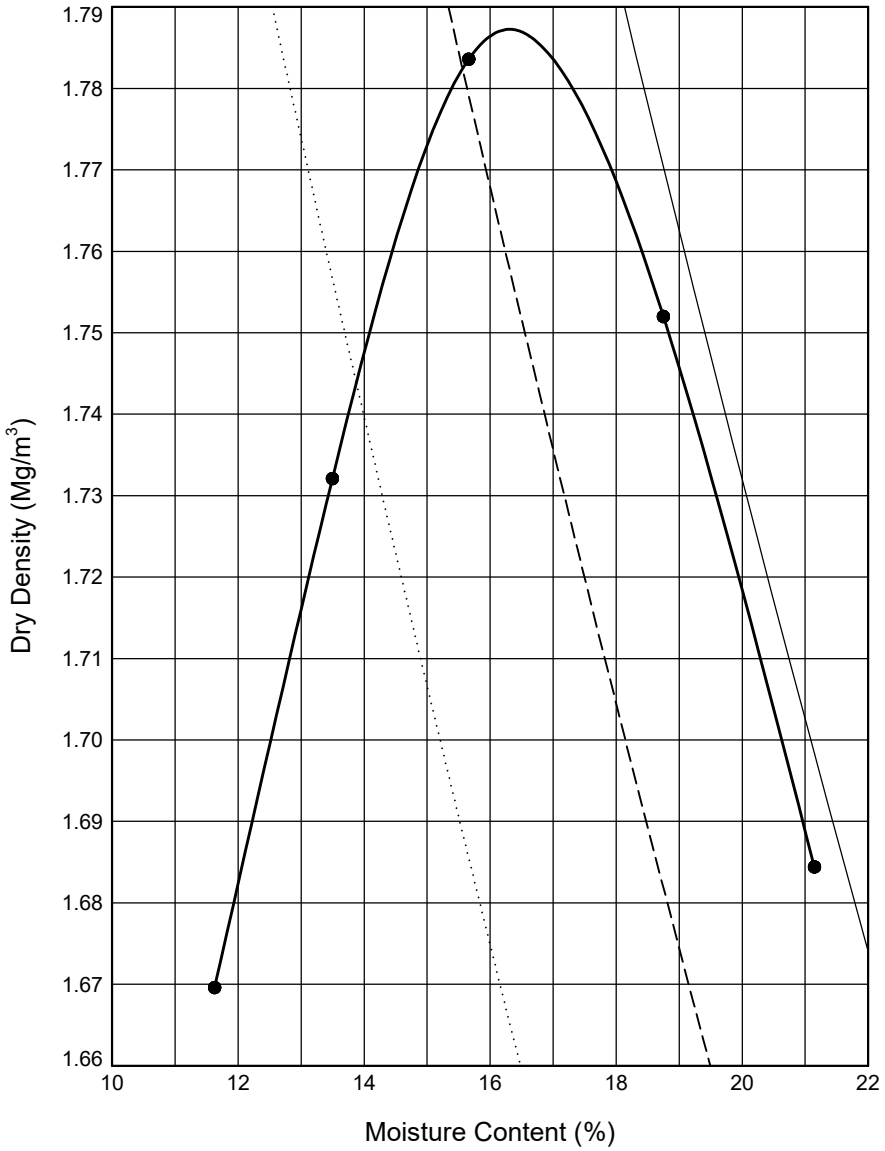
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DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **F22-TP518** Sample Ref: Sample Type: **AMAL** Depth (m): **1.00**

Amalgamation comprises: F22-TP518, Depth:1.00, Ref:15, Type:LB + F22-TP518, Depth:0.50, Ref:2, Type:B + F22-TP518, Depth:0.70, Ref:3, Type:D + F22-TP518, Depth:0.70, Ref:4, Type:B + F22-TP518, Depth:0.90, Ref:5, Type:D + F22-TP518, Depth:0.90, Ref:6, Type:D + F22-TP518, Depth:2.00, Ref:9, Type:D + F22-TP518, Depth:2.00, Ref:10, Type:B + F22-TP518, Depth:3.00, Ref:12, Type:B + F22-TP518, Depth:3.80, Ref:13, Type:D + F22-TP518, Depth:3.80, Ref:14, Type:B



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**12**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m³)	:	**1.79**
% Retained on 37.5mm BS Sieve	:	**1**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**16**
% Retained on 20.0mm BS Sieve	:	**0**	Type of Mould	:	**CBR**	Method Used: **Clause 11.4**		
Particle Density - assumed (Mg/m³)	:	**2.65**				Remarks: **CBR and MCV tests carried out at each point**		
Size of Soil Pieces	:	**<37.5mm**	Separate samples were used.					

Sample Description	Key to Air Voids Lines		
Light brown slightly gravelly slightly sandy CLAY	——— 0%	– – – – 5%	····· 10%

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[redacted]	[redacted]	**27/02/24**
Contract: **Sealink Friston**		Contract Ref: **563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - COMPACTIONS - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
Structural Soils Ltd, Branch Office - Hemel Hempstead: 18 Frogmore Road, Hemel Hempstead, Hertfordshire, HP3 9RT. Tel: 01442-262323, Fax: 01442-262683, Web: www.soils.co.uk, Email: ask@soils.co.uk | 27/02/24 - 09:07 | AF3 |

MOISTURE CONDITION VALUE

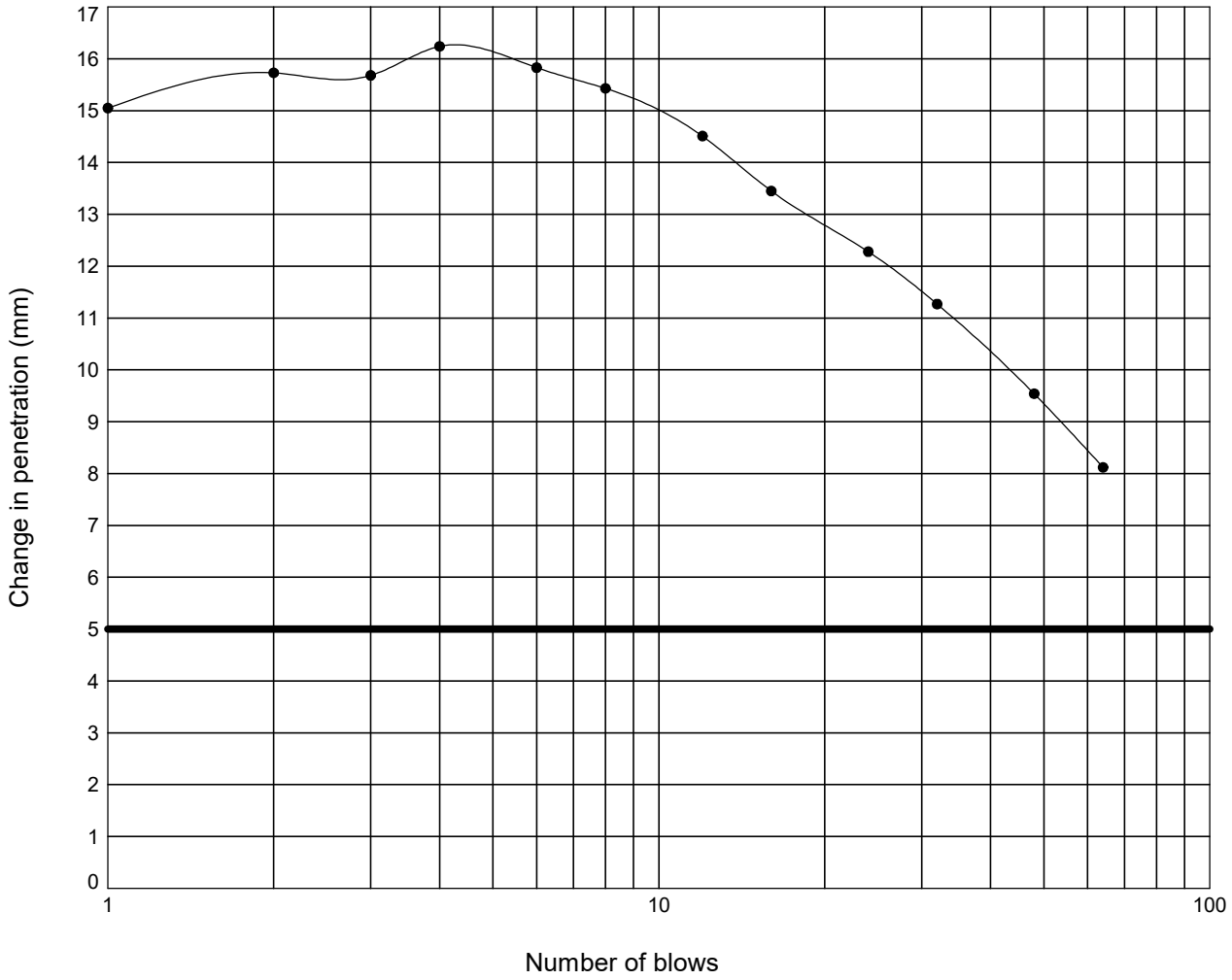
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP518** Sample Ref: Sample Type: **AMAL** Depth (m): **1.00**

Amalgamation comprises: F22-TP518 Depth:1.00 Ref:15 Type:LB + F22-TP518 Depth:0.50 Ref:2 Type:B + F22-TP518 Depth:0.70 Ref:3 Type:D + F22-TP518 Depth:0.70 Ref:4 Type:B + F22-TP518 Depth:0.90 Ref:5 Type:D + F22-TP518 Depth:0.90 Ref:6 Type:D + F22-TP518 Depth:2.00 Ref:9 Type:D + F22-TP518 Depth:2.00 Ref:10 Type:B + F22-TP518 Depth:3.00 Ref:12 Type:B + F22-TP518 Depth:3.80 Ref:13 Type:D + F22-TP518 Depth:3.80 Ref:14 Type:B

Description : **Light brown slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	12	%
Percentage retained on 20 mm sieve :	=	2	%
Moisture Condition Value :	=	20.8	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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[redacted]	[redacted]	27/02/24

Contract	Contract Ref:
Sealink Friston	**563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - MCV -3- NATURAL FINAL - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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MOISTURE CONDITION VALUE

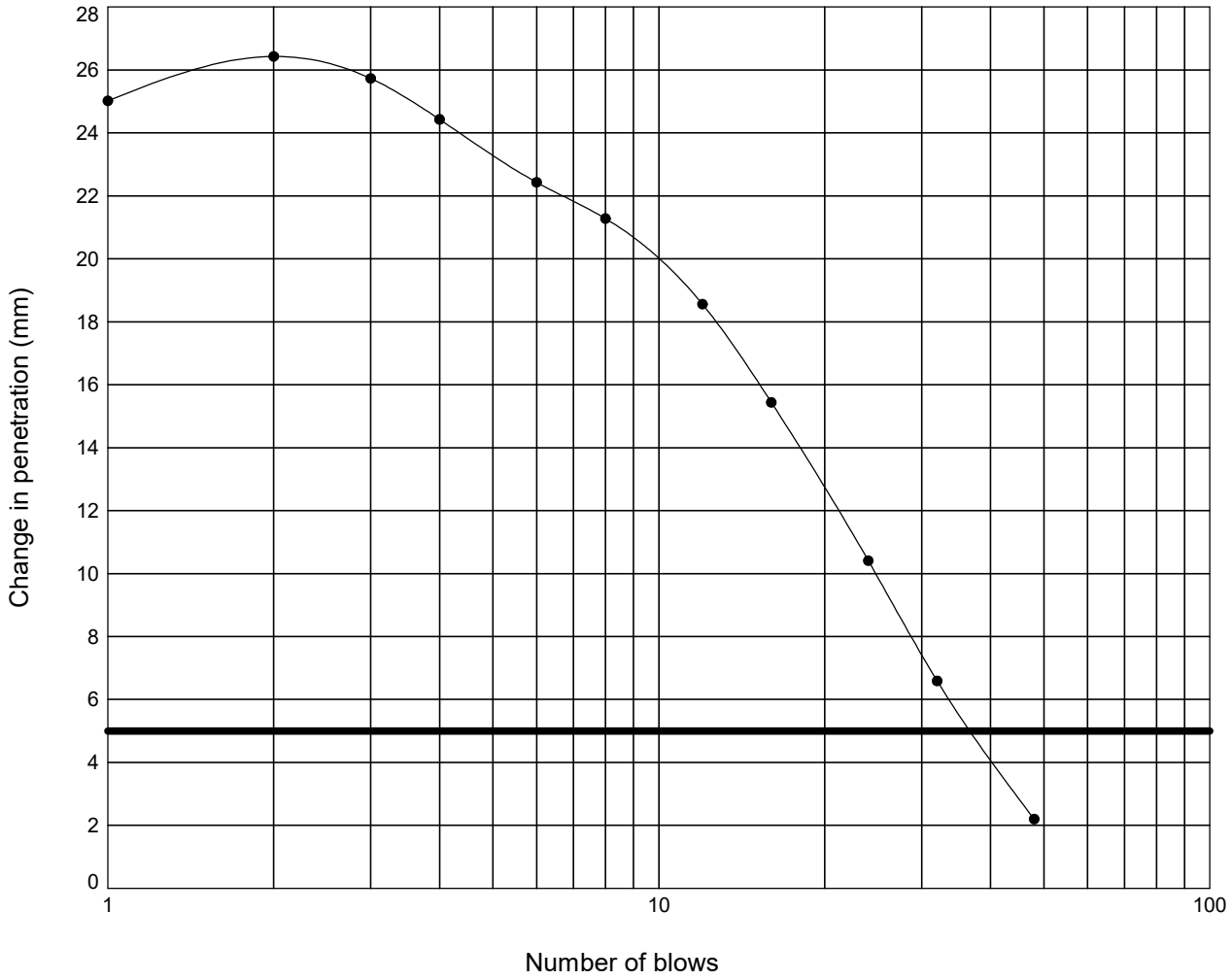
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP518** Sample Ref: Sample Type: **AMAL** Depth (m): **1.00**

Amalgamation comprises: F22-TP518 Depth:1.00 Ref:15 Type:LB + F22-TP518 Depth:0.50 Ref:2 Type:B + F22-TP518 Depth:0.70 Ref:3 Type:D + F22-TP518 Depth:0.70 Ref:4 Type:B + F22-TP518 Depth:0.90 Ref:5 Type:D + F22-TP518 Depth:0.90 Ref:6 Type:D + F22-TP518 Depth:2.00 Ref:9 Type:D + F22-TP518 Depth:2.00 Ref:10 Type:B + F22-TP518 Depth:3.00 Ref:12 Type:B + F22-TP518 Depth:3.80 Ref:13 Type:D + F22-TP518 Depth:3.80 Ref:14 Type:B

Description : **Light brown slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	14	%
Percentage retained on 20 mm sieve :	=	2	%
Moisture Condition Value :	=	15.6	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract	Contract Ref:
Sealink Friston	**563835**

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MOISTURE CONDITION VALUE

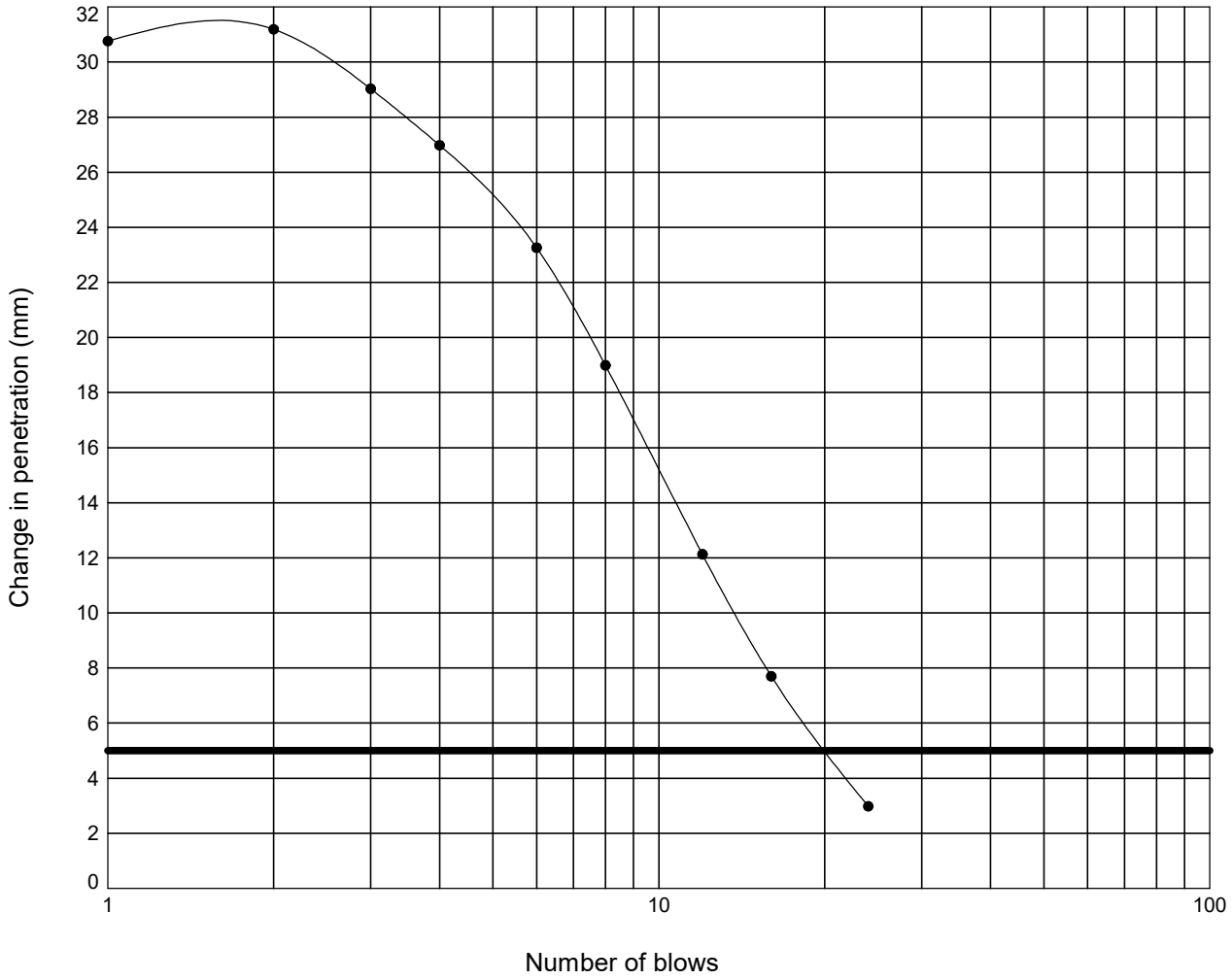
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP518** Sample Ref: Sample Type: **AMAL** Depth (m): **1.00**

Amalgamation comprises: F22-TP518 Depth:1.00 Ref:15 Type:LB + F22-TP518 Depth:0.50 Ref:2 Type:B + F22-TP518 Depth:0.70 Ref:3 Type:D + F22-TP518 Depth:0.70 Ref:4 Type:B + F22-TP518 Depth:0.90 Ref:5 Type:D + F22-TP518 Depth:0.90 Ref:6 Type:D + F22-TP518 Depth:2.00 Ref:9 Type:D + F22-TP518 Depth:2.00 Ref:10 Type:B + F22-TP518 Depth:3.00 Ref:12 Type:B + F22-TP518 Depth:3.80 Ref:13 Type:D + F22-TP518 Depth:3.80 Ref:14 Type:B

Description : **Light brown slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	15	%
Percentage retained on 20 mm sieve :	=	2	%
Moisture Condition Value :	=	12.6	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract	Contract Ref:
Sealink Friston	**563835**

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MOISTURE CONDITION VALUE

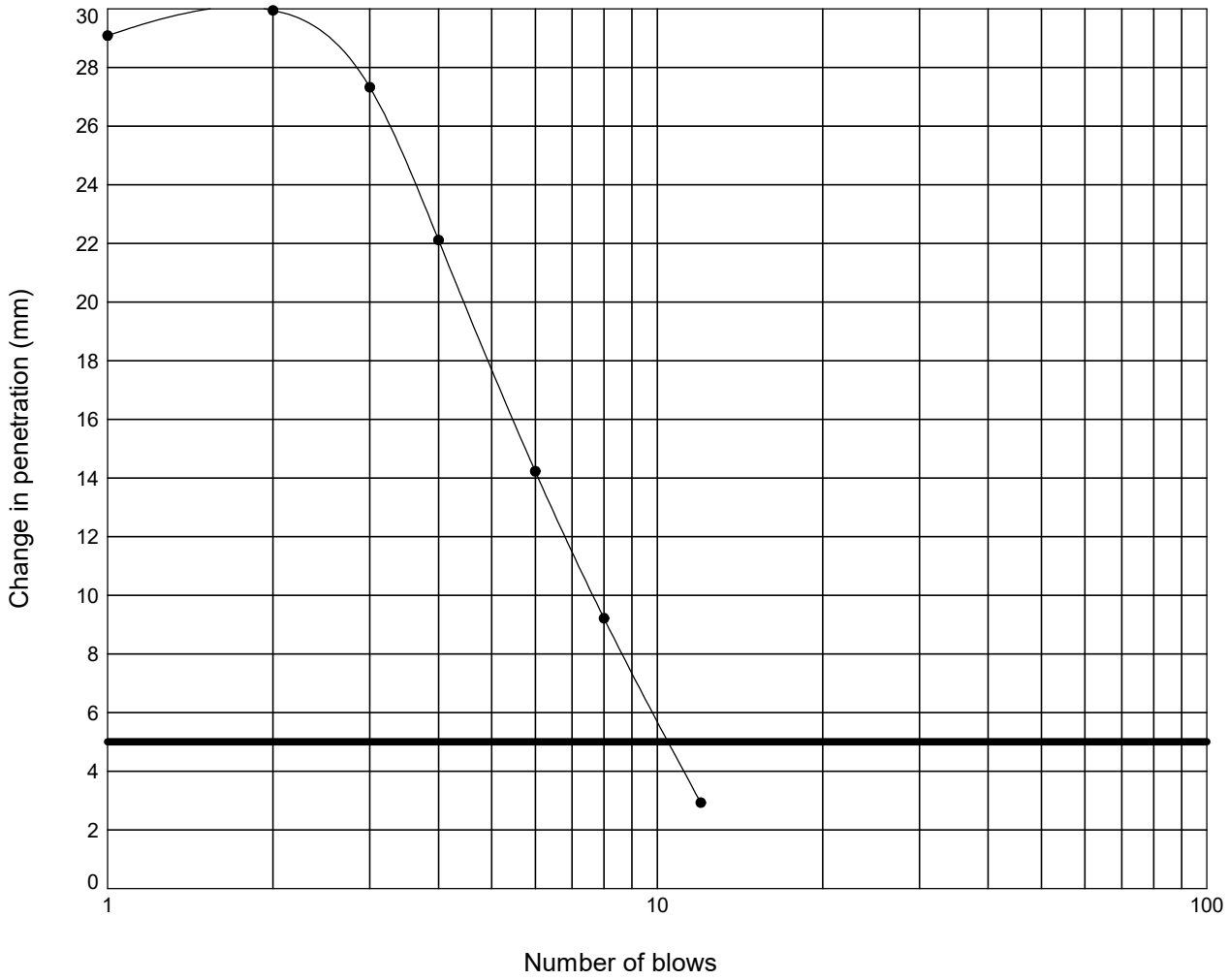
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP518** Sample Ref: Sample Type: **AMAL** Depth (m): **1.00**

Amalgamation comprises: F22-TP518 Depth:1.00 Ref:15 Type:LB + F22-TP518 Depth:0.50 Ref:2 Type:B + F22-TP518 Depth:0.70 Ref:3 Type:D + F22-TP518 Depth:0.70 Ref:4 Type:B + F22-TP518 Depth:0.90 Ref:5 Type:D + F22-TP518 Depth:0.90 Ref:6 Type:D + F22-TP518 Depth:2.00 Ref:9 Type:D + F22-TP518 Depth:2.00 Ref:10 Type:B + F22-TP518 Depth:3.00 Ref:12 Type:B + F22-TP518 Depth:3.80 Ref:13 Type:D + F22-TP518 Depth:3.80 Ref:14 Type:B

Description : **Light brown slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	17	%
Percentage retained on 20 mm sieve :	=	2	%
Moisture Condition Value :	=	9.8	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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MOISTURE CONDITION VALUE

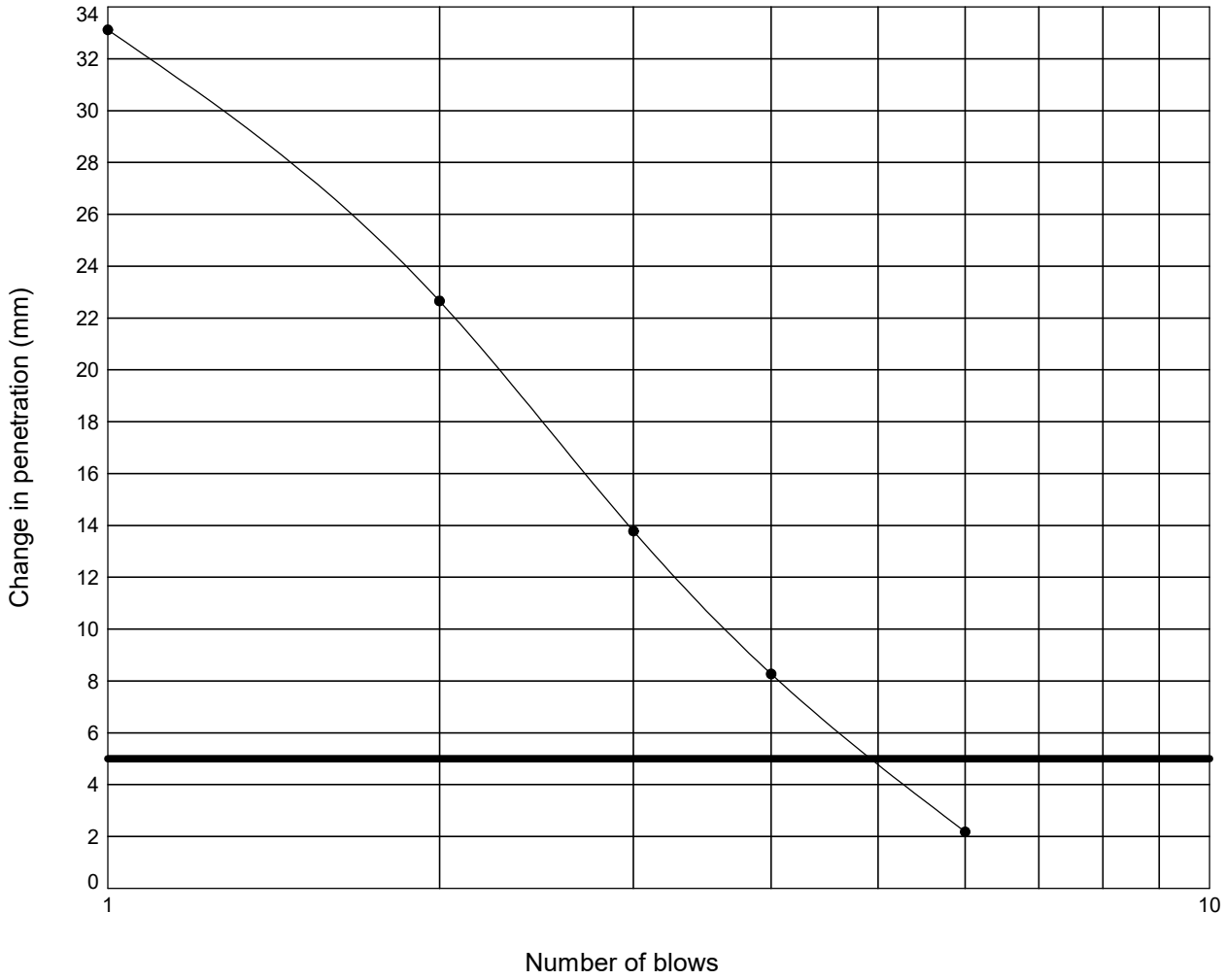
In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **F22-TP518** Sample Ref: Sample Type: **AMAL** Depth (m): **1.00**

Amalgamation comprises: F22-TP518 Depth:1.00 Ref:15 Type:LB + F22-TP518 Depth:0.50 Ref:2 Type:B + F22-TP518 Depth:0.70 Ref:3 Type:D + F22-TP518 Depth:0.70 Ref:4 Type:B + F22-TP518 Depth:0.90 Ref:5 Type:D + F22-TP518 Depth:0.90 Ref:6 Type:D + F22-TP518 Depth:2.00 Ref:9 Type:D + F22-TP518 Depth:2.00 Ref:10 Type:B + F22-TP518 Depth:3.00 Ref:12 Type:B + F22-TP518 Depth:3.80 Ref:13 Type:D + F22-TP518 Depth:3.80 Ref:14 Type:B

Description : **Light brown slightly gravelly slightly sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	21	%
Percentage retained on 20 mm sieve :	=	2	%
Moisture Condition Value :	=	6.5	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Sealink Friston	**563835**

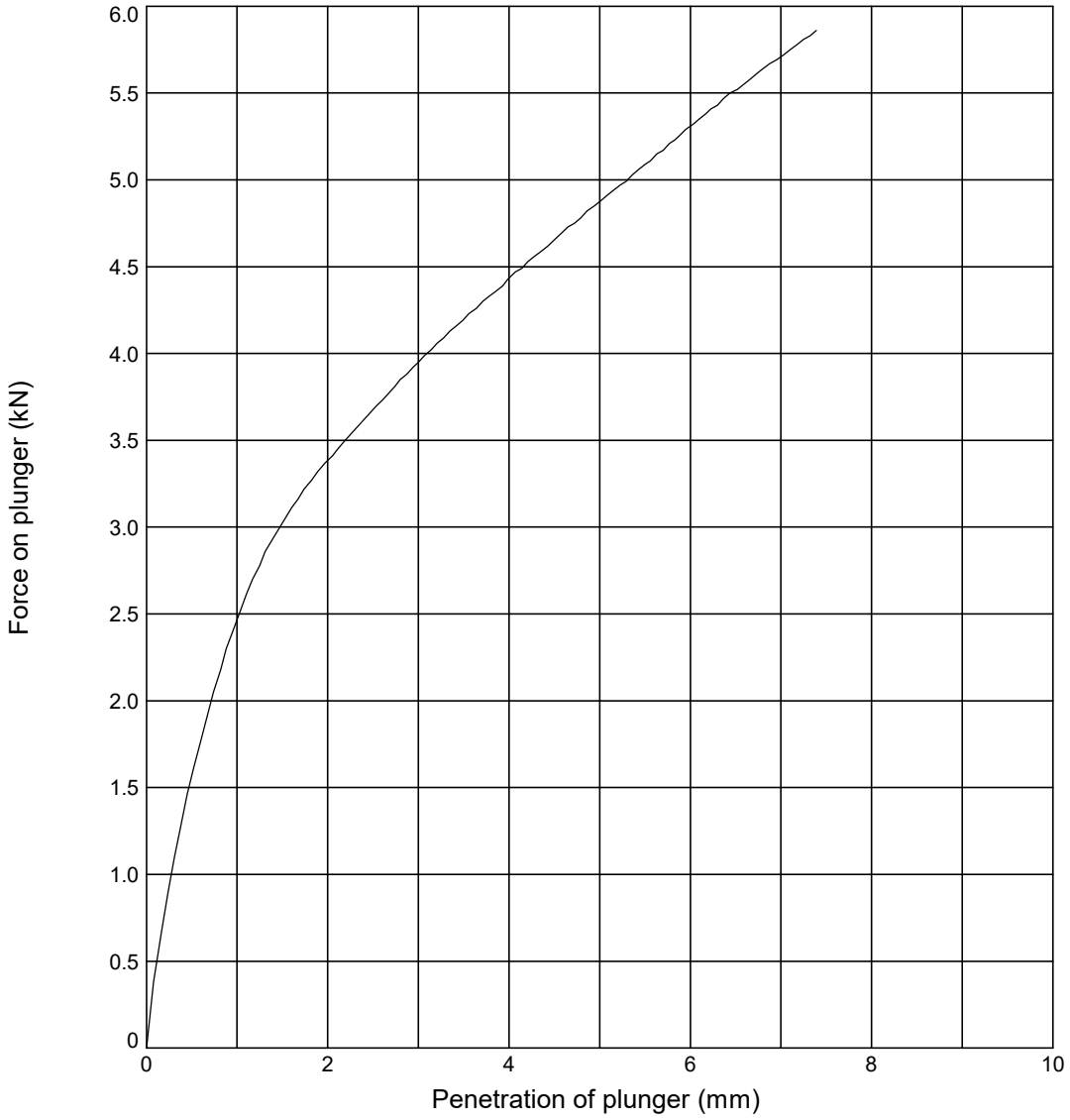
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - MCV -3- NATURAL FINAL - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP518** Sample Ref: Sample Type: **AMAL** Depth (m): **1.00**

Amalgamation comprises: F22-TP518, Depth:1.00, Ref:15, Type:LB + F22-TP518, Depth:0.50, Ref:2, Type:B + F22-TP518, Depth:0.70, Ref:3, Type:D + F22-TP518, Depth:0.70, Ref:4, Type:B + F22-TP518, Depth:0.90, Ref:5, Type:D + F22-TP518, Depth:0.90, Ref:6, Type:D + F22-TP518, Depth:2.00, Ref:9, Type:D + F22-TP518, Depth:2.00, Ref:10, Type:B + F22-TP518, Depth:3.00, Ref:12, Type:B + F22-TP518, Depth:3.80, Ref:13, Type:D + F22-TP518, Depth:3.80, Ref:14, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**12**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**12**	**12**
Initial Bulk Density (Mg/m^3)	:	**1.88**	Surcharge (kg)	:	**4.1**	CBR Value (%)	**28**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.68**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**2**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Light brown slightly gravelly slightly sandy CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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Sealink Friston	**563835**

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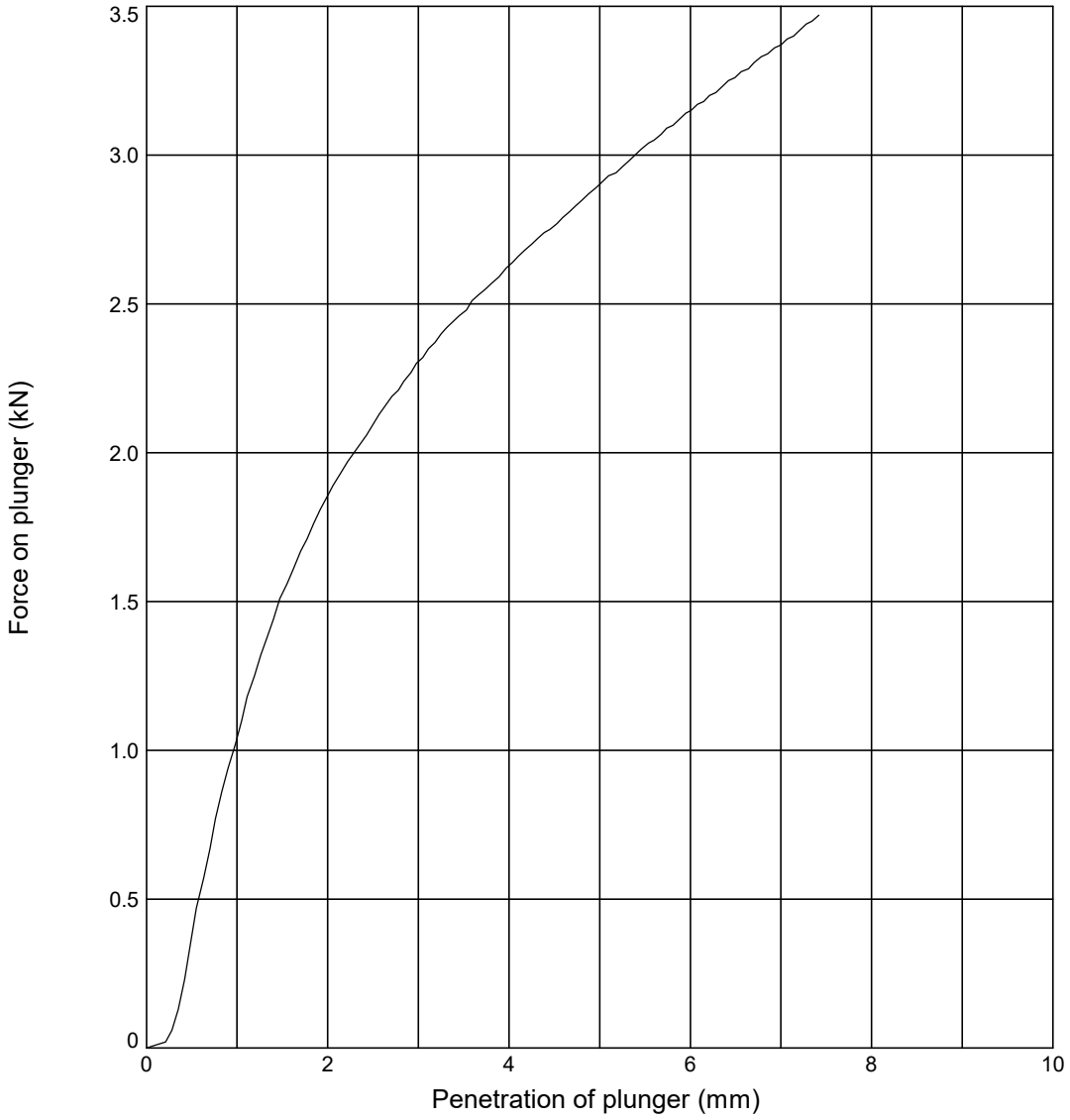
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - CBR DATALOGGED - 1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP518** Sample Ref: Sample Type: **AMAL** Depth (m): **1.00**

Amalgamation comprises: F22-TP518, Depth:1.00, Ref:15, Type:LB + F22-TP518, Depth:0.50, Ref:2, Type:B + F22-TP518, Depth:0.70, Ref:3, Type:D + F22-TP518, Depth:0.70, Ref:4, Type:B + F22-TP518, Depth:0.90, Ref:5, Type:D + F22-TP518, Depth:0.90, Ref:6, Type:D + F22-TP518, Depth:2.00, Ref:9, Type:D + F22-TP518, Depth:2.00, Ref:10, Type:B + F22-TP518, Depth:3.00, Ref:12, Type:B + F22-TP518, Depth:3.80, Ref:13, Type:D + F22-TP518, Depth:3.80, Ref:14, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**13**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**14**	**14**
Initial Bulk Density (Mg/m^3)	:	**1.95**	Surcharge (kg)	:	**4.1**	CBR Value (%)	**16**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.72**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**0.3**	**NA**
% Retained on 20mm Sieve	:	**2**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**17**	**NA**

Sample Description	Key
Light brown slightly gravelly slightly sandy CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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Contract	Contract Ref:
Sealink Friston	**563835**

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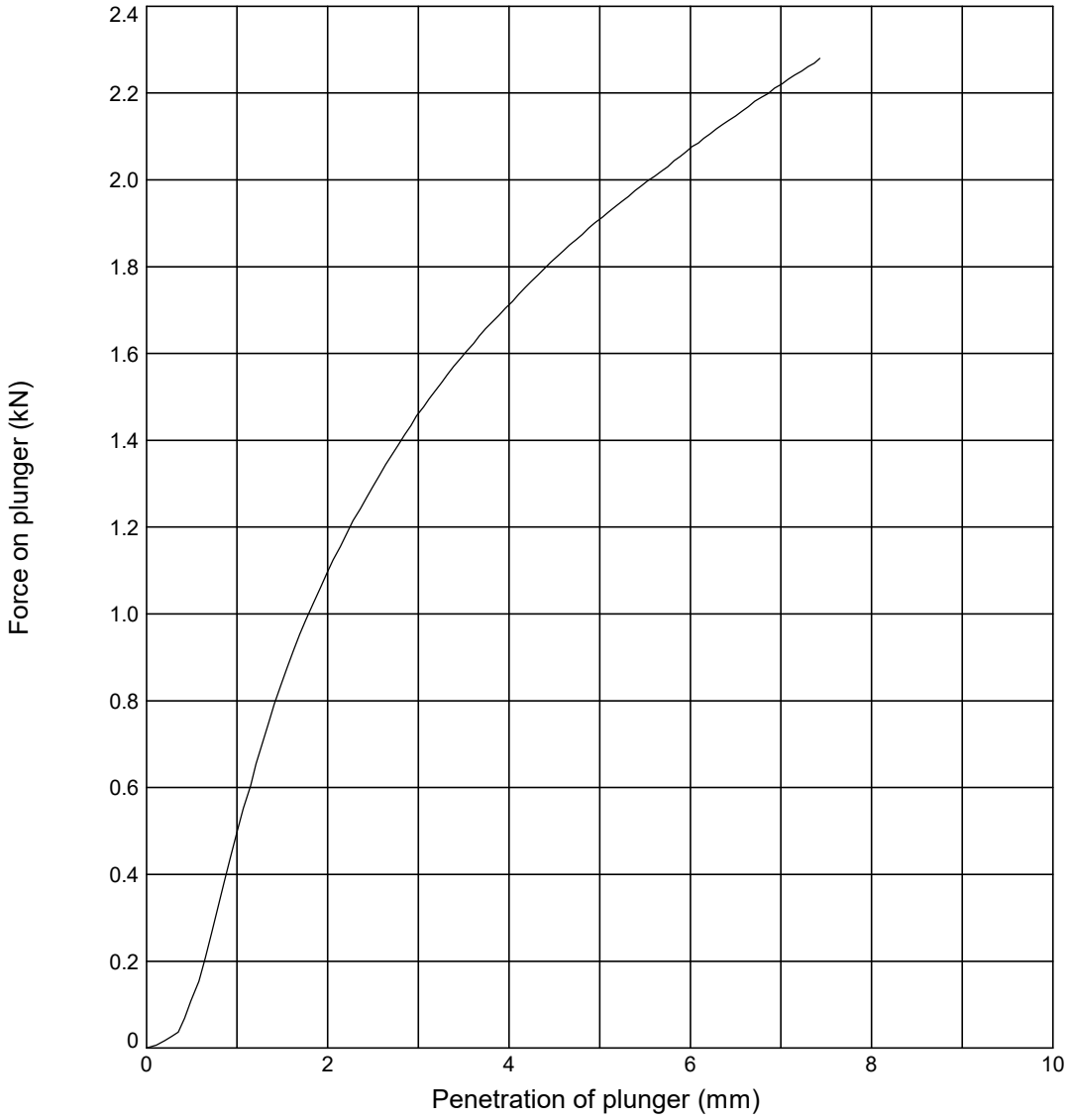
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP518** Sample Ref: Sample Type: **AMAL** Depth (m): **1.00**

Amalgamation comprises: F22-TP518, Depth:1.00, Ref:15, Type:LB + F22-TP518, Depth:0.50, Ref:2, Type:B + F22-TP518, Depth:0.70, Ref:3, Type:D + F22-TP518, Depth:0.70, Ref:4, Type:B + F22-TP518, Depth:0.90, Ref:5, Type:D + F22-TP518, Depth:0.90, Ref:6, Type:D + F22-TP518, Depth:2.00, Ref:9, Type:D + F22-TP518, Depth:2.00, Ref:10, Type:B + F22-TP518, Depth:3.00, Ref:12, Type:B + F22-TP518, Depth:3.80, Ref:13, Type:D + F22-TP518, Depth:3.80, Ref:14, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**16**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**15**	**16**
Initial Bulk Density (Mg/m^3)	:	**2.07**	Surcharge (kg)	:	**4.1**	CBR Value (%)	**9.8**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.79**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**0.4**	**NA**
% Retained on 20mm Sieve	:	**2**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**11**	**NA**

Sample Description	Key
Light brown slightly gravelly slightly sandy CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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Contract	Contract Ref:
Sealink Friston	**563835**

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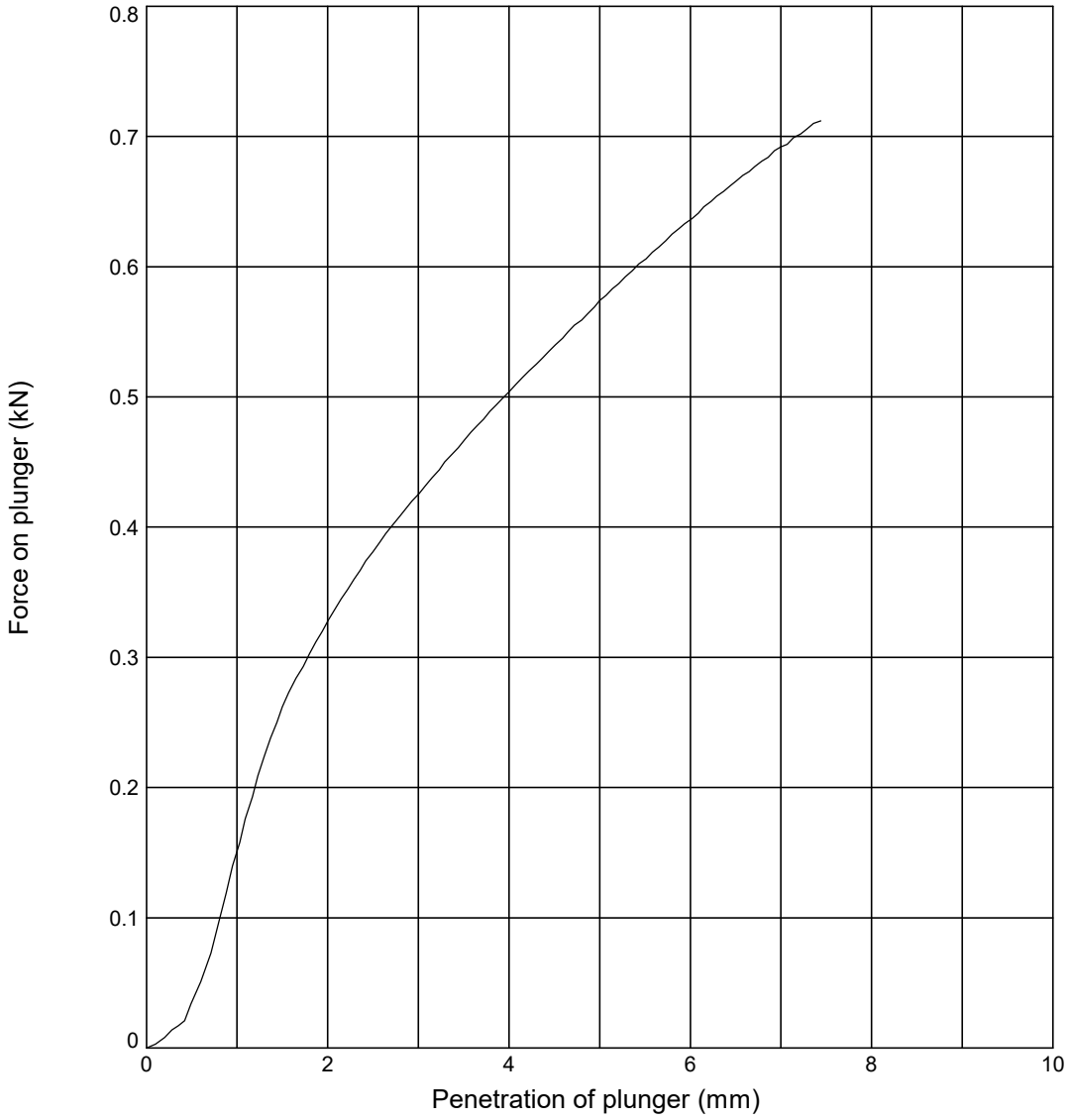
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - CBR DATALOGGED - 1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP518** Sample Ref: Sample Type: **AMAL** Depth (m): **1.00**

Amalgamation comprises: F22-TP518, Depth:1.00, Ref:15, Type:LB + F22-TP518, Depth:0.50, Ref:2, Type:B + F22-TP518, Depth:0.70, Ref:3, Type:D + F22-TP518, Depth:0.70, Ref:4, Type:B + F22-TP518, Depth:0.90, Ref:5, Type:D + F22-TP518, Depth:0.90, Ref:6, Type:D + F22-TP518, Depth:2.00, Ref:9, Type:D + F22-TP518, Depth:2.00, Ref:10, Type:B + F22-TP518, Depth:3.00, Ref:12, Type:B + F22-TP518, Depth:3.80, Ref:13, Type:D + F22-TP518, Depth:3.80, Ref:14, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**18**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**18**	**19**
Initial Bulk Density (Mg/m^3)	:	**2.07**	Surcharge (kg)	:	**4.1**	CBR Value (%)	**2.9**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.75**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**0.45**	**NA**
% Retained on 20mm Sieve	:	**2**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**3.2**	**NA**

Sample Description	Key
Light brown slightly gravelly slightly sandy CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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Contract	Contract Ref:
Sealink Friston	**563835**

AGS

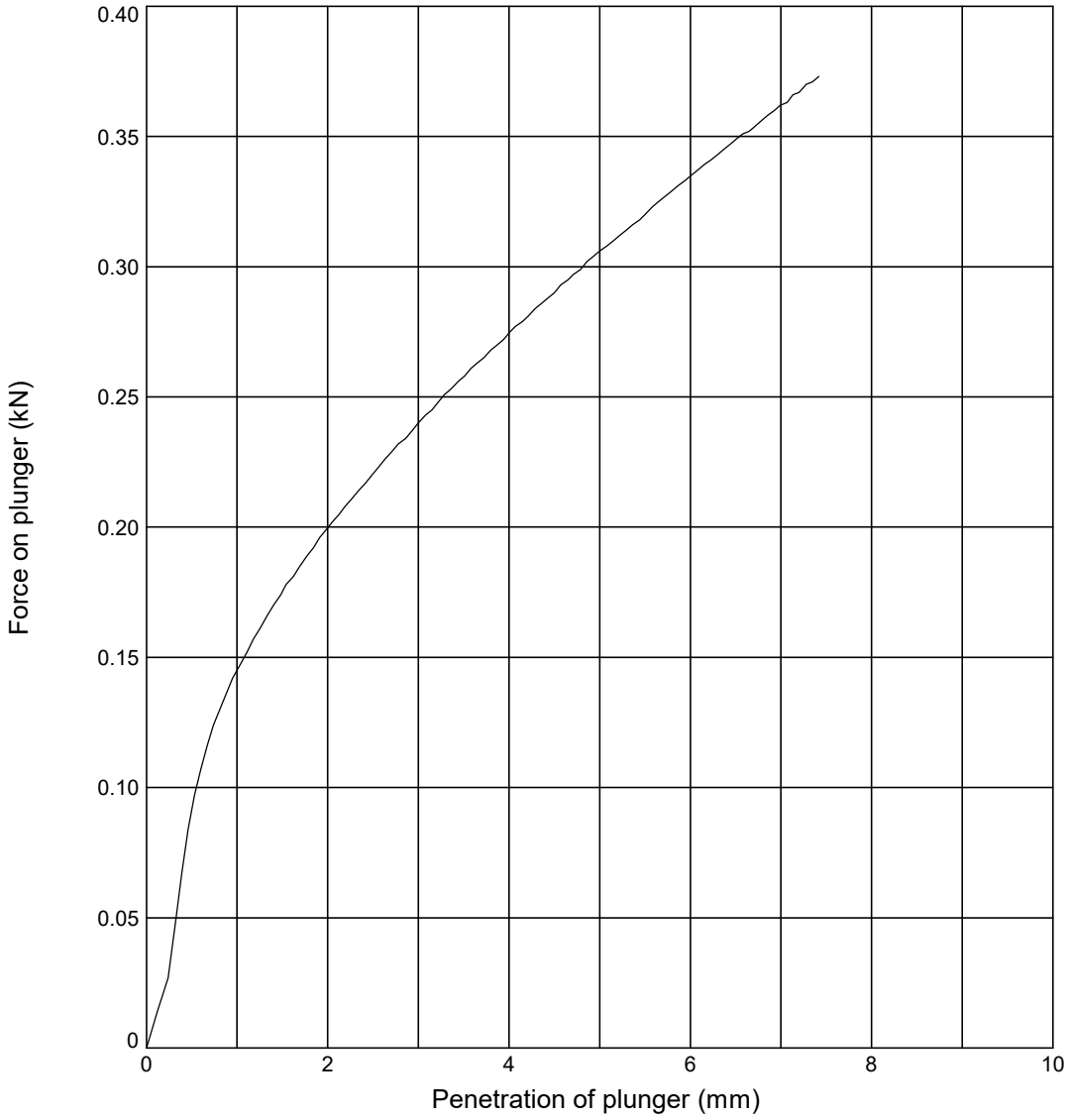
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - CBR DATALOGGED - 1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP518** Sample Ref: Sample Type: **AMAL** Depth (m): **1.00**

Amalgamation comprises: F22-TP518, Depth:1.00, Ref:15, Type:LB + F22-TP518, Depth:0.50, Ref:2, Type:B + F22-TP518, Depth:0.70, Ref:3, Type:D + F22-TP518, Depth:0.70, Ref:4, Type:B + F22-TP518, Depth:0.90, Ref:5, Type:D + F22-TP518, Depth:0.90, Ref:6, Type:D + F22-TP518, Depth:2.00, Ref:9, Type:D + F22-TP518, Depth:2.00, Ref:10, Type:B + F22-TP518, Depth:3.00, Ref:12, Type:B + F22-TP518, Depth:3.80, Ref:13, Type:D + F22-TP518, Depth:3.80, Ref:14, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**21**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**21**	**21**
Initial Bulk Density (Mg/m^3)	:	**2.02**	Surcharge (kg)	:	**4.1**	CBR Value (%)	**1.7**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.67**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**0.15**	**NA**
% Retained on 20mm Sieve	:	**2**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**1.7**	**NA**

Sample Description	Key
Light brown slightly gravelly slightly sandy CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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18 Frogmore Road
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Hertfordshire
HP3 9RT

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Contract	Contract Ref:
Sealink Friston	**563835**

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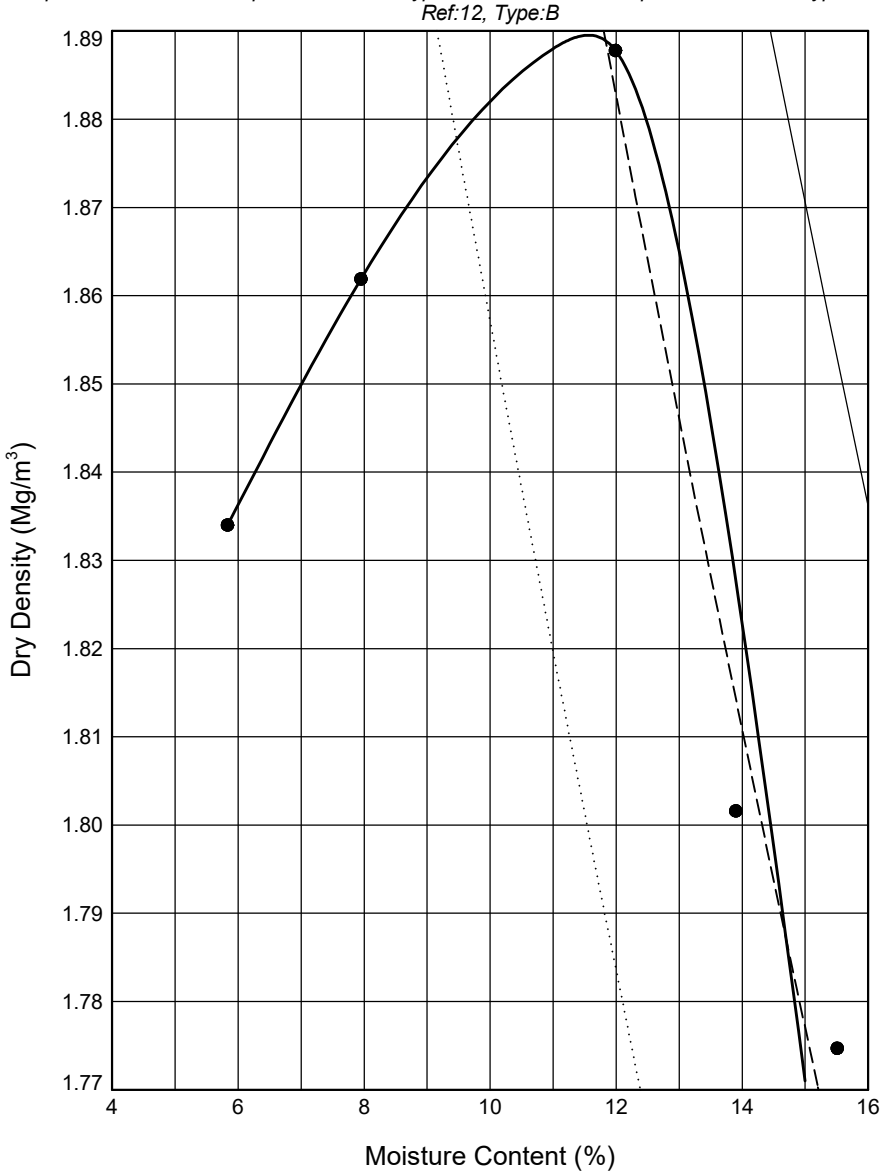
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DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **F22-TP525** Sample Ref: Sample Type: **AMAL** Depth (m): **1.50**

Amalgamation comprises: F22-TP525, Depth:1.50, Ref:9, Type:LB + F22-TP525, Depth:2.50, Ref:10, Type:B + F22-TP525, Depth:3.50, Ref:12, Type:B



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**8.0**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m³)	:	**1.89**
% Retained on 37.5mm BS Sieve	:	**0**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**12**
% Retained on 20.0mm BS Sieve	:	**1**	Type of Mould	:	**CBR**	Method Used: **Clause 11.4**		
Particle Density - assumed (Mg/m³)	:	**2.60**				Remarks: **CBR test carried out at each point. Material is unsuitable for MCV tests**		
Size of Soil Pieces	:	**<37.5mm**	Separate samples were used.					

Sample Description	Key to Air Voids Lines		
Orangish brown slightly gravelly clayey SAND	——— 0%	– – – – 5%	····· 10%

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Sealink Friston	**563835**

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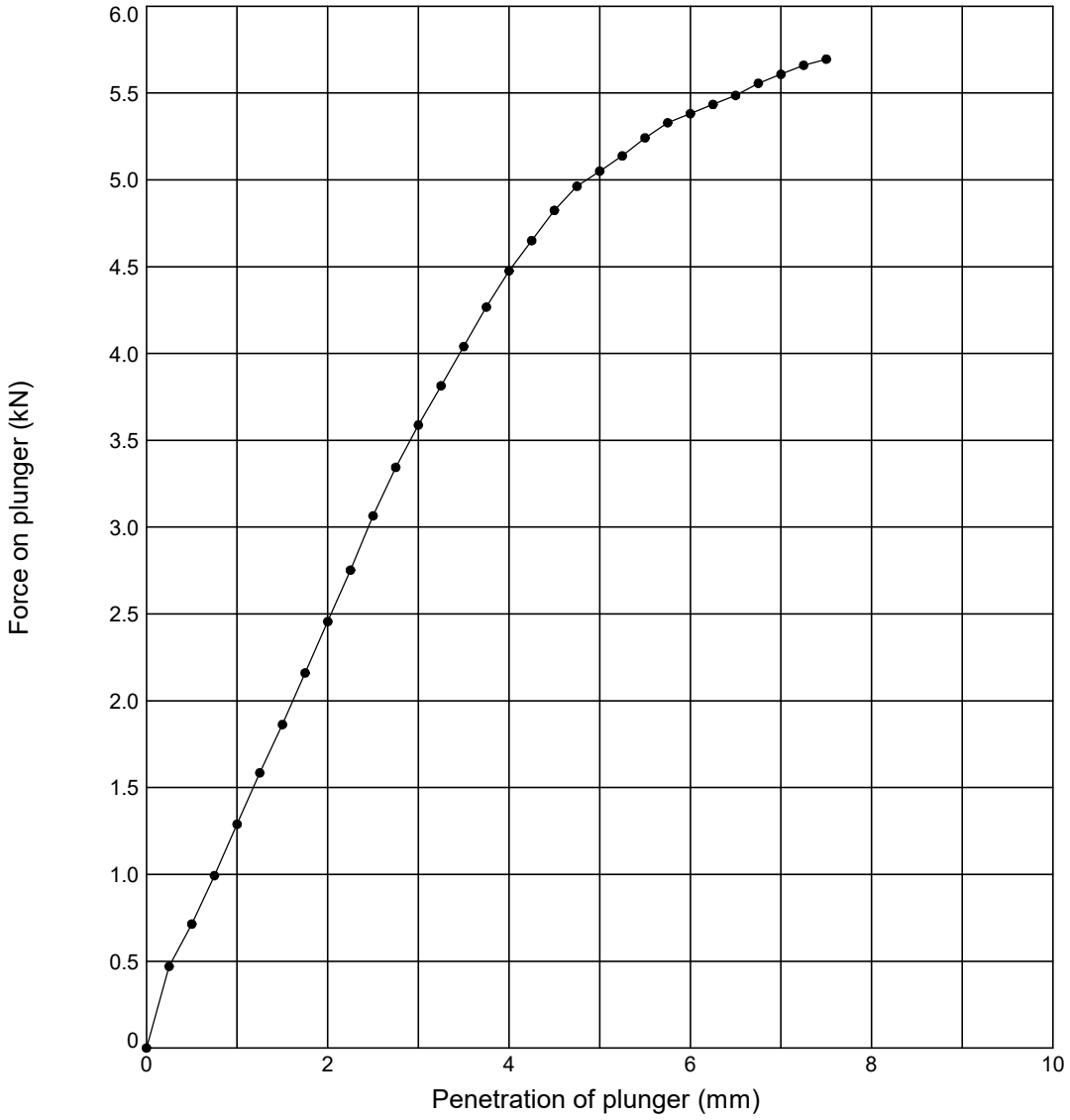
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP525** Sample Ref: Sample Type: **AMAL** Depth (m): **1.50**

Amalgamation comprises: F22-TP525, Depth:1.50, Ref:9, Type:LB + F22-TP525, Depth:2.50, Ref:10, Type:B + F22-TP525, Depth:3.50, Ref:12, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**5.8**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**5.7**	**5.9**
Initial Bulk Density (Mg/m^3)	:	**1.94**	Surcharge (kg)	:	**4.0**	CBR value (%)	**25**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.83**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**0**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown slightly gravelly clayey SAND	● **Top** ⧓ **Base**

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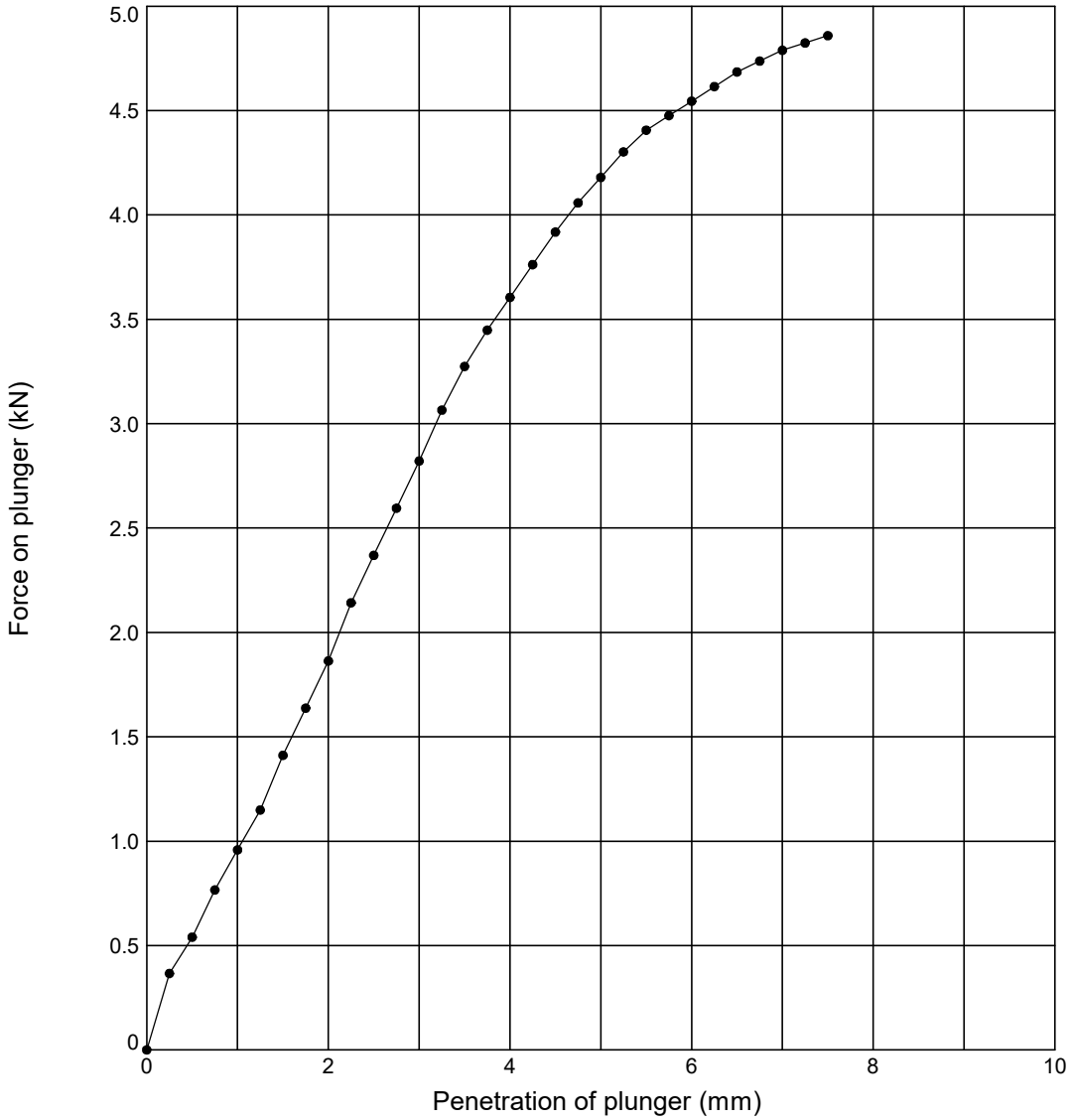
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP525** Sample Ref: Sample Type: **AMAL** Depth (m): **1.50**

Amalgamation comprises: F22-TP525, Depth:1.50, Ref:9, Type:LB + F22-TP525, Depth:2.50, Ref:10, Type:B + F22-TP525, Depth:3.50, Ref:12, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**8.0**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**7.9**	**8.0**
Initial Bulk Density (Mg/m^3)	:	**2.01**	Surcharge (kg)	:	**4.0**	CBR value (%)	**21**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.86**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**1**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown slightly gravelly clayey SAND	● **Top** ⊠ **Base**

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Contract	Contract Ref:
Sealink Friston	**563835**

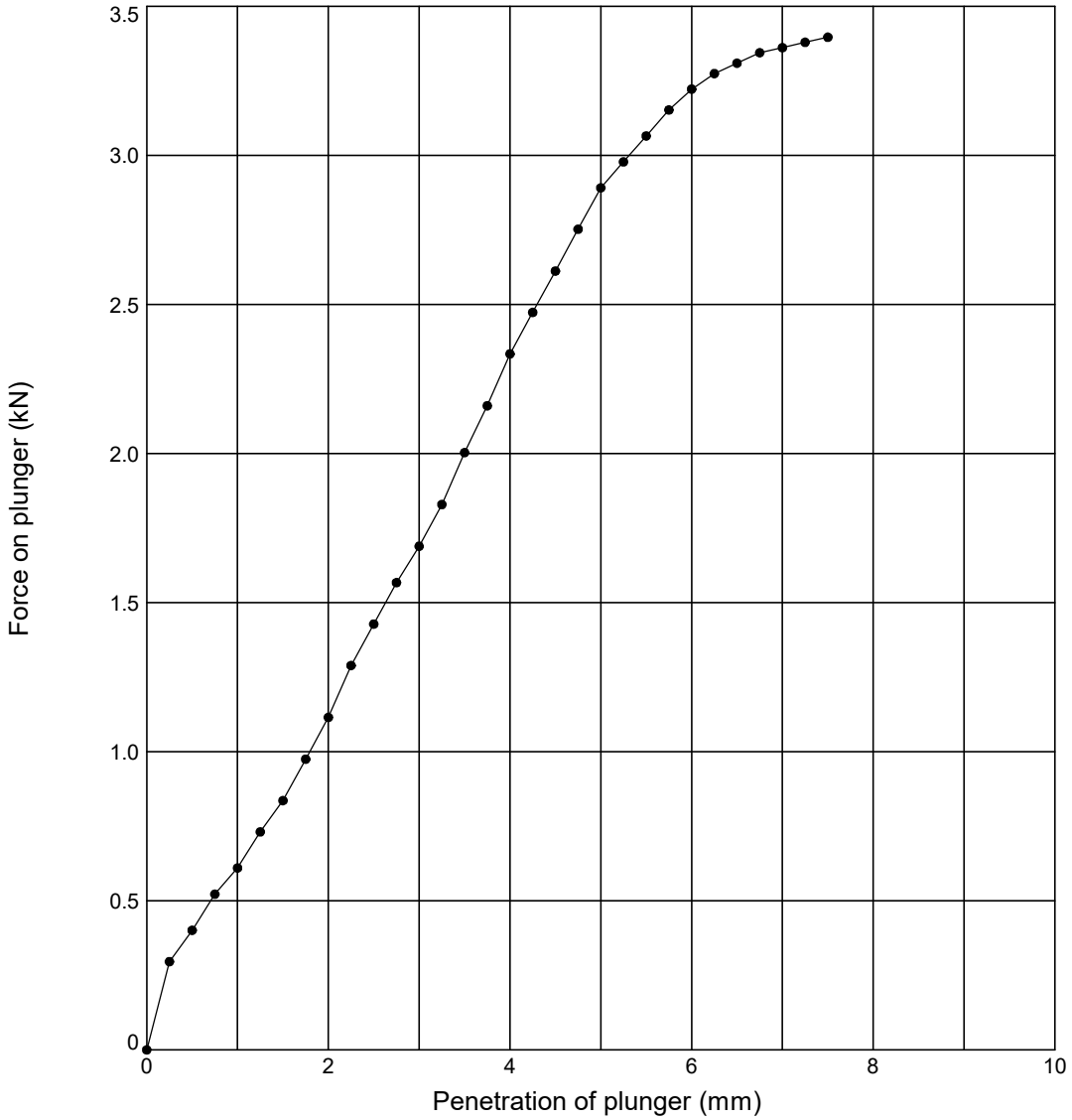
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - CBR - LAB -3- REPORT - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP525** Sample Ref: Sample Type: **AMAL** Depth (m): **1.50**

Amalgamation comprises: F22-TP525, Depth:1.50, Ref:9, Type:LB + F22-TP525, Depth:2.50, Ref:10, Type:B + F22-TP525, Depth:3.50, Ref:12, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**12**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**12**	**12**
Initial Bulk Density (Mg/m^3)	:	**2.11**	Surcharge (kg)	:	**4.0**	CBR value (%)	**14**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.89**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**1**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown slightly gravelly clayey SAND	● **Top** ⧓ **Base**

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Contract	Contract Ref:
Sealink Friston	**563835**

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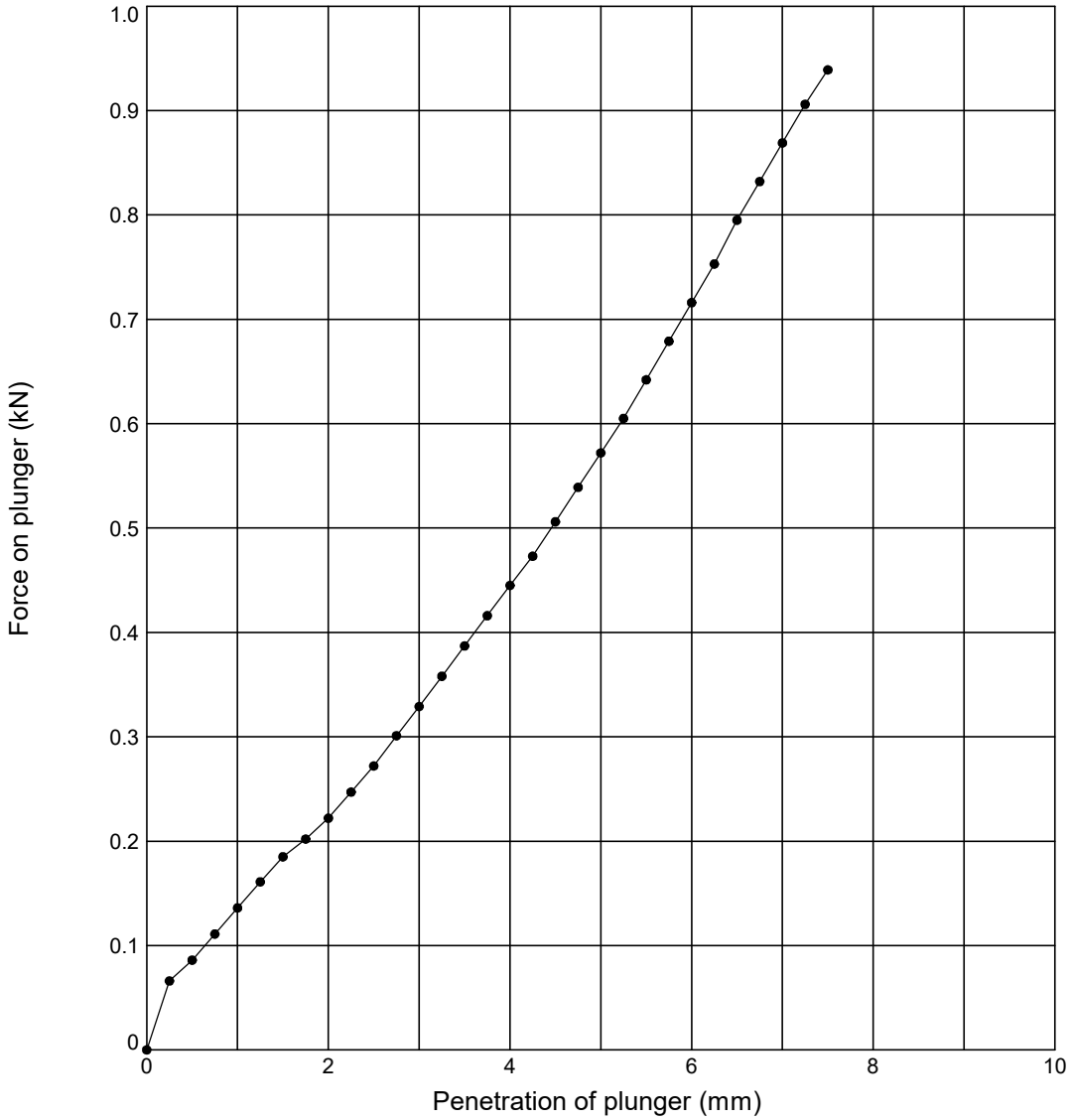
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP525** Sample Ref: Sample Type: **AMAL** Depth (m): **1.50**

Amalgamation comprises: F22-TP525, Depth:1.50, Ref:9, Type:LB + F22-TP525, Depth:2.50, Ref:10, Type:B + F22-TP525, Depth:3.50, Ref:12, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**14**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**13**	**14**
Initial Bulk Density (Mg/m^3)	:	**2.05**	Surcharge (kg)	:	**4.0**	CBR value (%)	**2.9**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.80**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**0**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown slightly gravelly clayey SAND	● **Top** ⊠ **Base**

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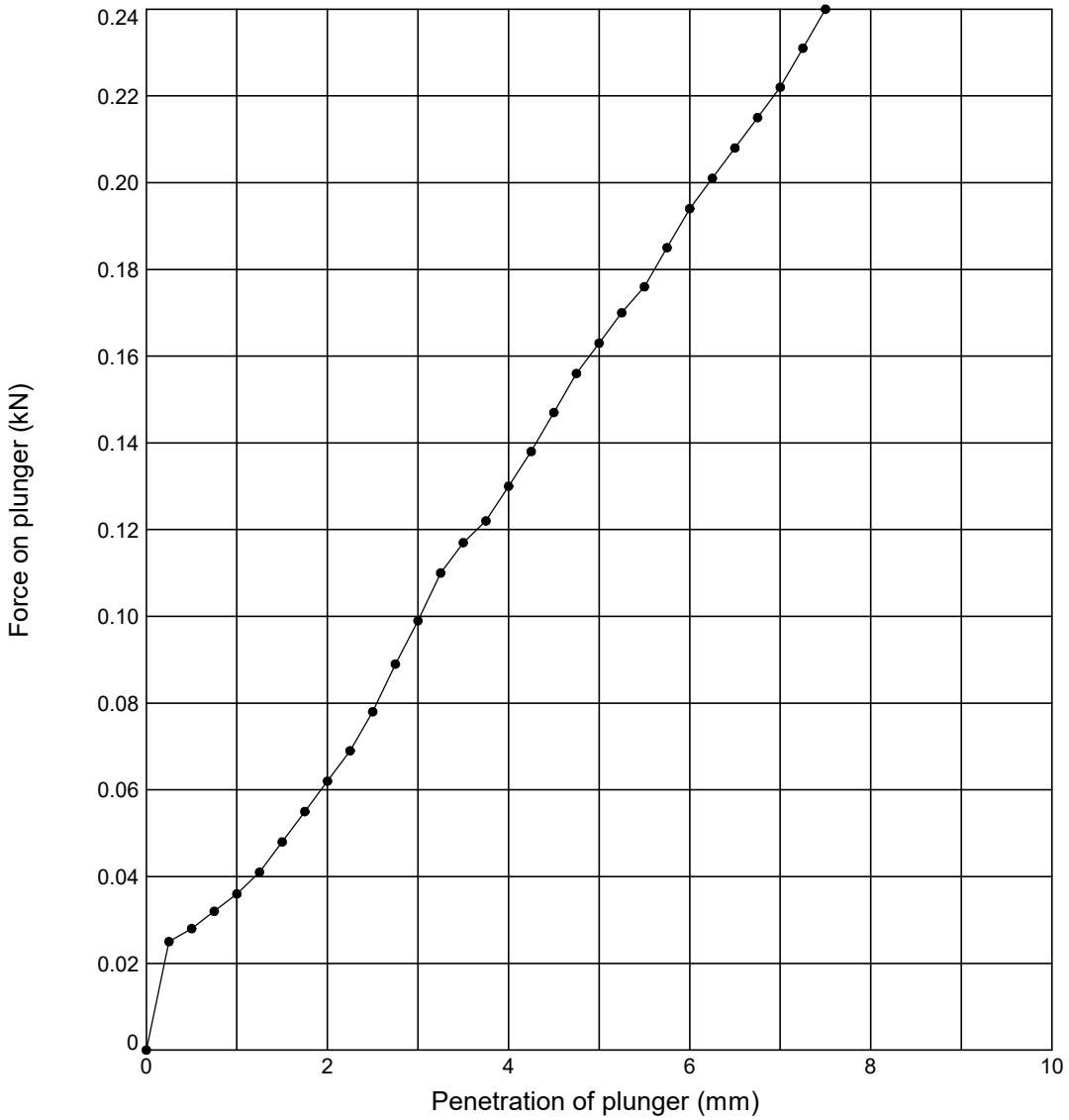
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LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **F22-TP525** Sample Ref: Sample Type: **AMAL** Depth (m): **1.50**

Amalgamation comprises: F22-TP525, Depth:1.50, Ref:9, Type:LB + F22-TP525, Depth:2.50, Ref:10, Type:B + F22-TP525, Depth:3.50, Ref:12, Type:B



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**16**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**16**	**15**
Initial Bulk Density (Mg/m^3)	:	**2.05**	Surcharge (kg)	:	**4.0**	CBR value (%)	**0.82**	**NA**
Initial Dry Density (Mg/m^3)	:	**1.77**	Soaking Time (hrs)	:	**-**	Remarks: **Test carried out at corresponding compaction point from dry density/moisture content relationship test**		
% retained on 20mm sieve	:	**0**	Swelling (mm)	:	**-**			

Sample Description	Key
Orangish brown slightly gravelly clayey SAND	● **Top** ⧓ **Base**

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ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

In accordance with BS EN ISO 17892 Part 9

Borehole : **F22-BH306** Sample Ref : **19** Sample Type : **UT** Depth (m) : **5.53**

Description : **Dark grey slightly sandy slightly gravelly CLAY**

Condition : **Undisturbed.**

Saturation Type : **Back Pressure.** Side Drains : **Y.**

SPECIMEN DETAILS			
Initial Diameter (mm)	103.54		
Initial Height (mm)	207.35		
Initial Mass (g)	3793.83		
Sample Orientation	Vertical		
Initial Water Content (%)	16.1		
Initial Bulk Density (Mg/m^3)	2.17		
Initial Dry Density (Mg/m^3)	1.87		
Initial Voids Ratio	0.4108		
Initial B-Value	0.65		
Final Water Content (%)	17.1		
Final Bulk Density (Mg/m^3)	2.25		
Final Dry Density (Mg/m^3)	1.92		
SATURATION			
Duration (days)	4		
Final B-Value	1		
Voids Ratio	0.4108		
CONSOLIDATION			
Stage	1		
Duration (days)	2		
Cell Pressure (kPa)	450		
Back Pressure (kPa)	340		
Initial Volume (cm^3)	1745		
Final Volume (cm^3)	1703		
Voids Ratio	0.3769		
Effective Major Principal Stress (kPa)	110		
Effective Minor Principal Stress (kPa)	110		
Ext. Axial Strain (%)	-		
Ext. Volumetric Strain (%)	2.40		

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1a Princess Street
Bedminster
Bristol
BS3 4AG

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Contract:	Contract Ref:
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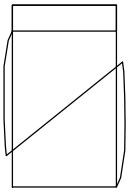
In accordance with BS EN ISO 17892 Part 9

Borehole : **F22-BH306** Sample Ref : **19** Sample Type : **UT** Depth (m) : **5.53**

Description : **Dark grey slightly sandy slightly gravelly CLAY**

Condition : **Undisturbed.**

Saturation Type : **Back Pressure.** Side Drains : **Y.**

COMPRESSION			
Duration (days)	2		
Cell Pressure (kPa)	450		
Initial Porewater Pressure (kPa)	341		
Strain Rate (mm/min)	0.00714		
Failure Criteria	Maximum Deviator Stress		
Axial Strain at Failure (%)	6.30		
Time to Failure (h)	30.3		
Deviator Stress at Failure (kPa)	285		
Vertical Membrane Correction at Failure (kPa)	1.728		
Horizontal Membrane Correction at Failure (kPa)	0.195		
Side Drain Correction at Failure (kPa)	3.701		
Porewater Pressure at Failure (kPa)	307		
Effective Major Principal Stress (kPa)	429		
Effective Minor Principal Stress (kPa)	143		
Effective Principal Stress Ratio	2.99		
Pore Pressure Coefficient - A_f	-0.12		
Mode of Failure Brittle (shear plane)			
Effective Cohesion (kPa) : **NA**		Angle of Shear Resistance (degs) : **NA**	

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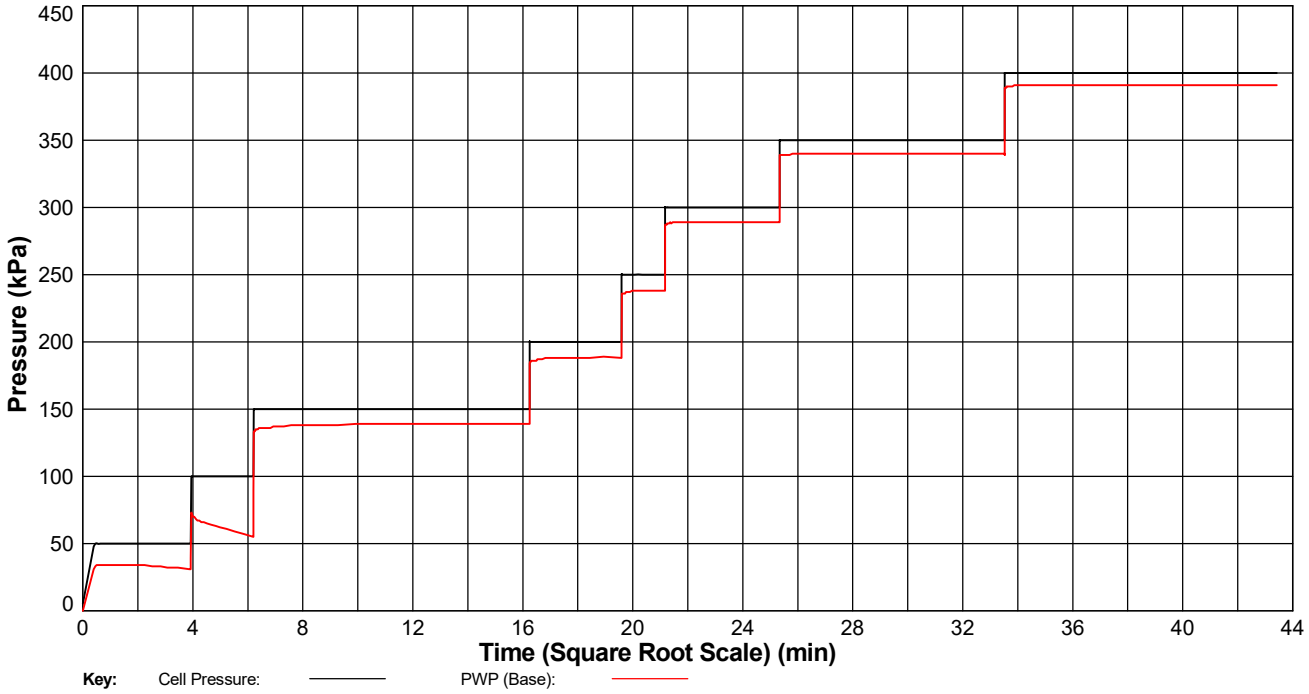
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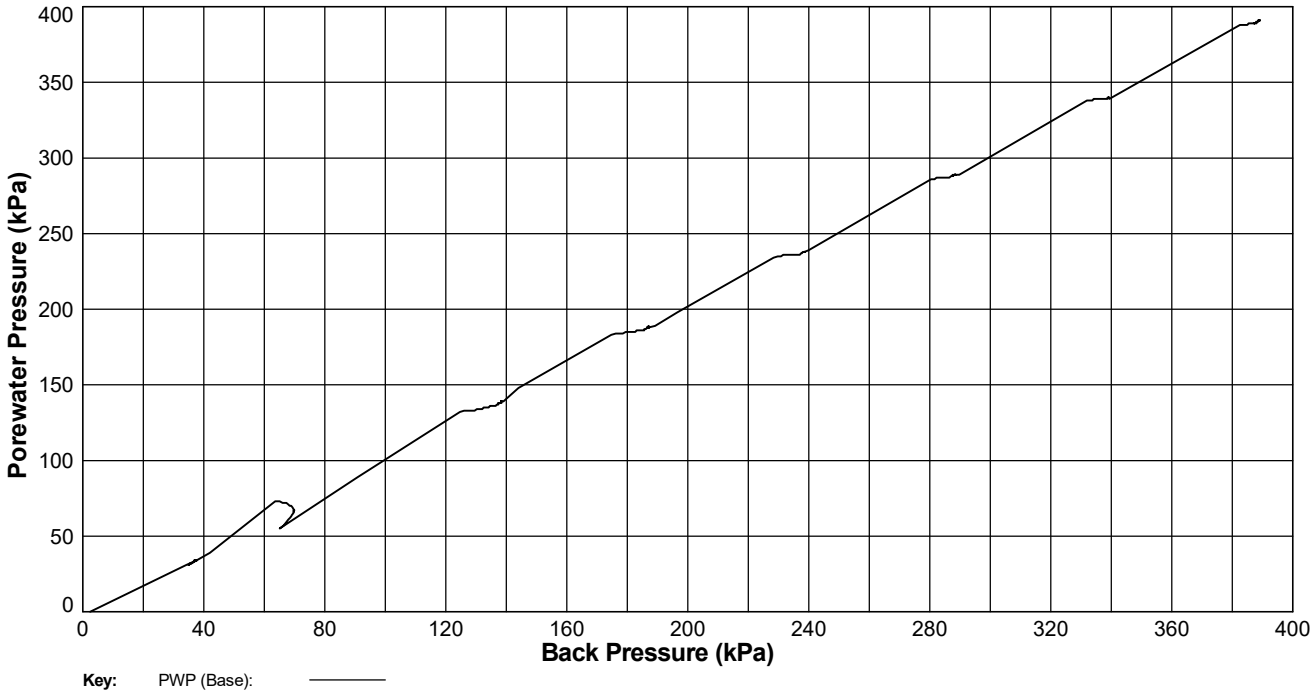
In accordance with BS EN ISO 17892 Part 9

Position ID: **F22-BH306** Sample Ref: **19** Sample Type: **UT** Depth (m): **5.53**

SATURATION



SATURATION



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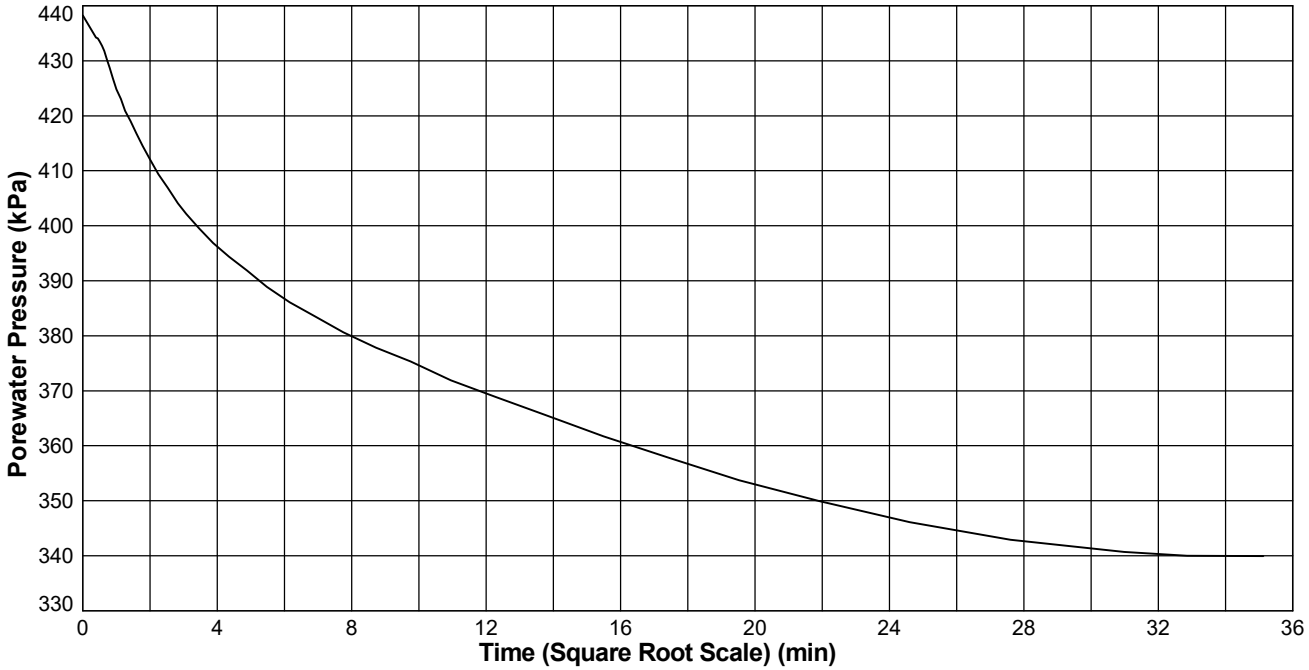
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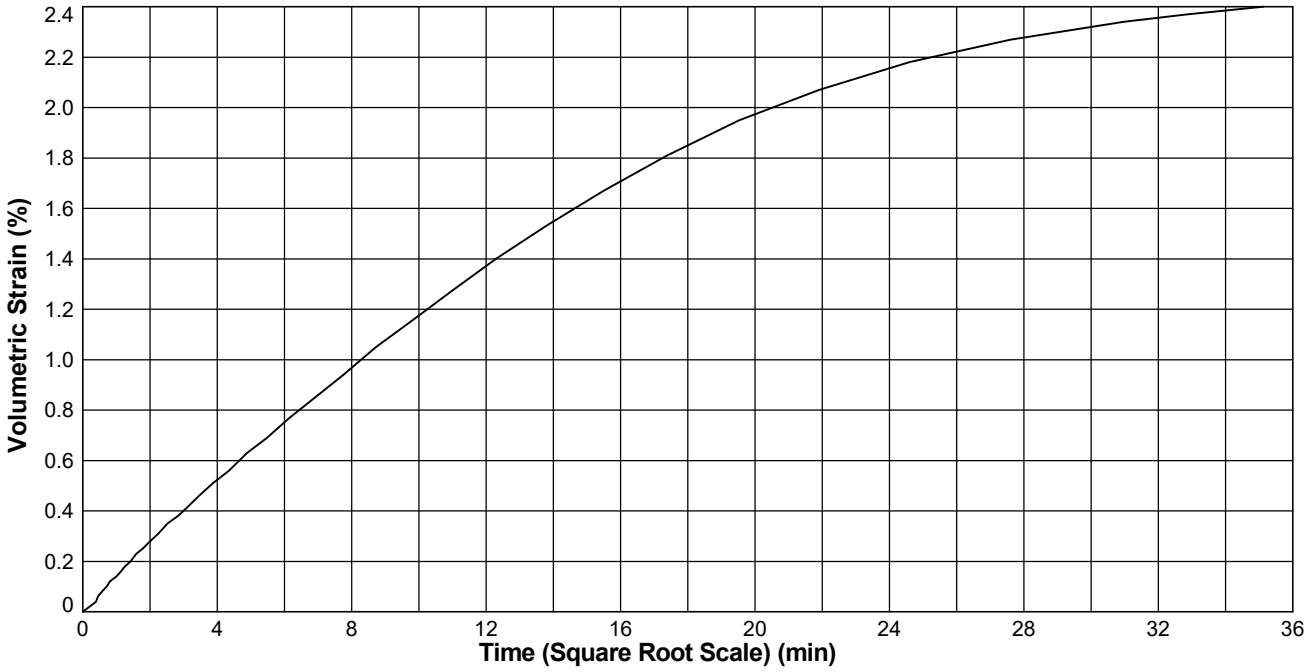
Position ID: **F22-BH306** Sample Ref: **19** Sample Type: **UT** Depth (m): **5.53**

CONSOLIDATION



Key: PWP (Base):

CONSOLIDATION



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Contract: **Sealink Friston**		Contract Ref: **563835**

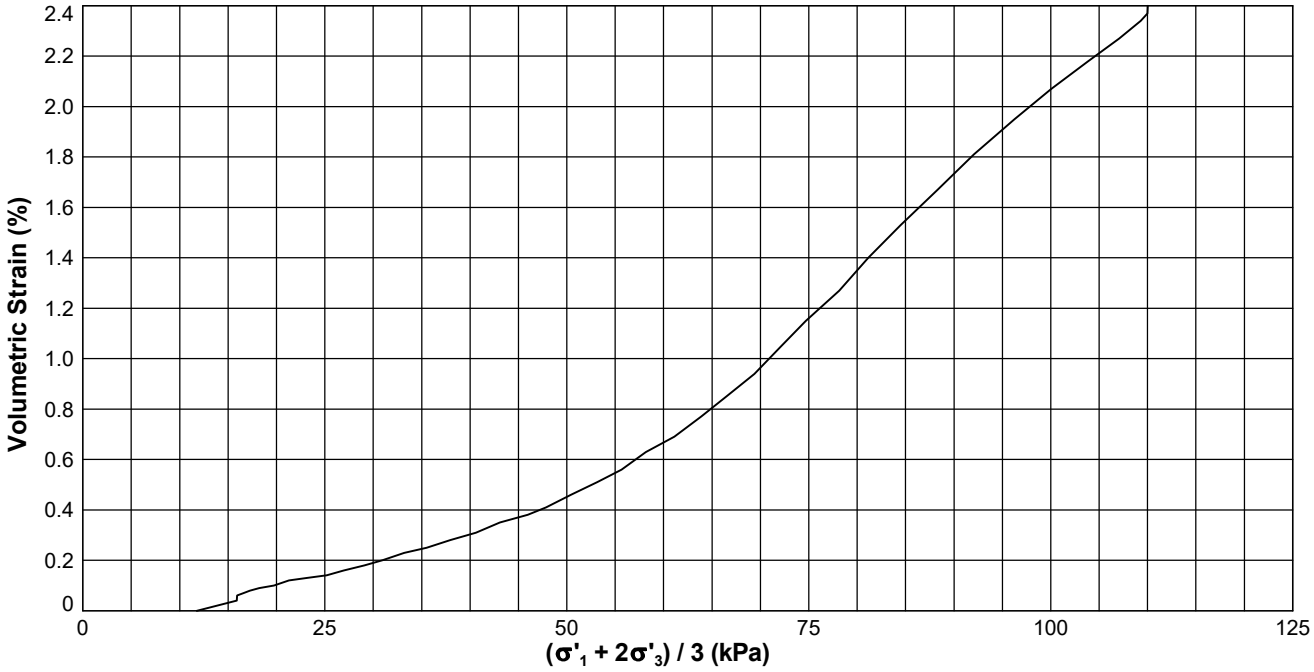
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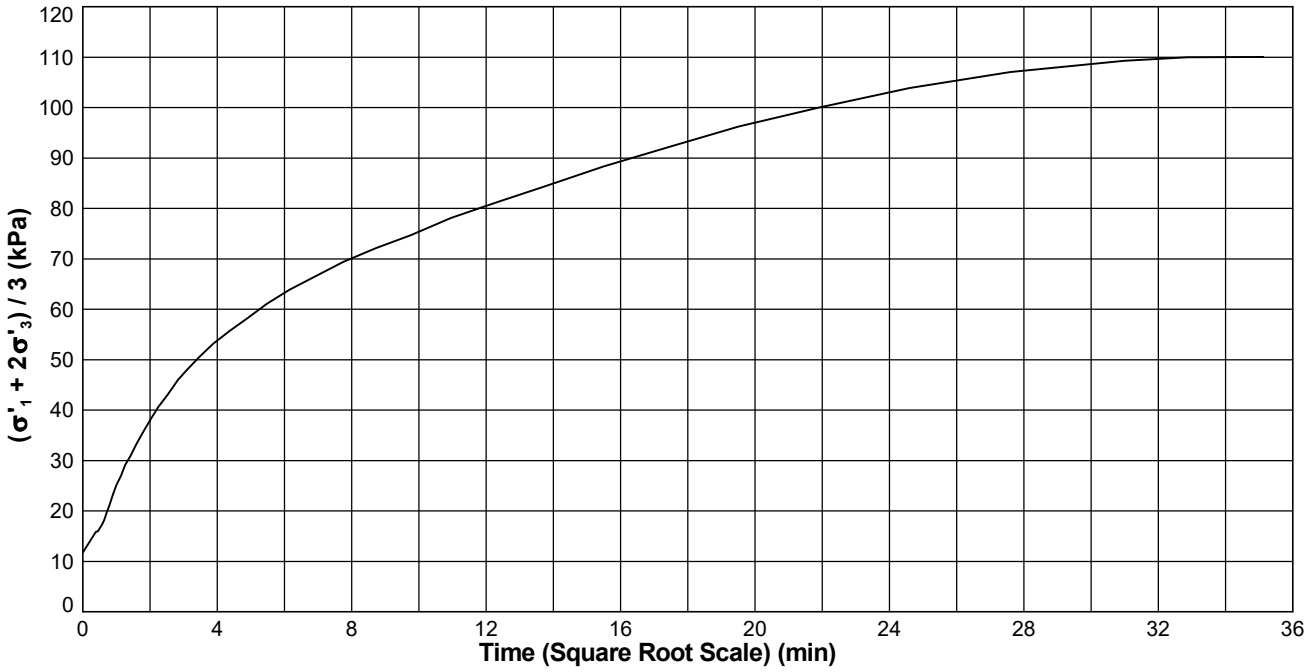
In accordance with BS EN ISO 17892 Part 9

Position ID: **F22-BH306** Sample Ref: **19** Sample Type: **UT** Depth (m): **5.53**

CONSOLIDATION



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Key: ext. (Base): ————

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BS3 4AG

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[redacted]	[redacted]	07/12/23
Contract: **Sealink Friston**		Contract Ref: **563835**

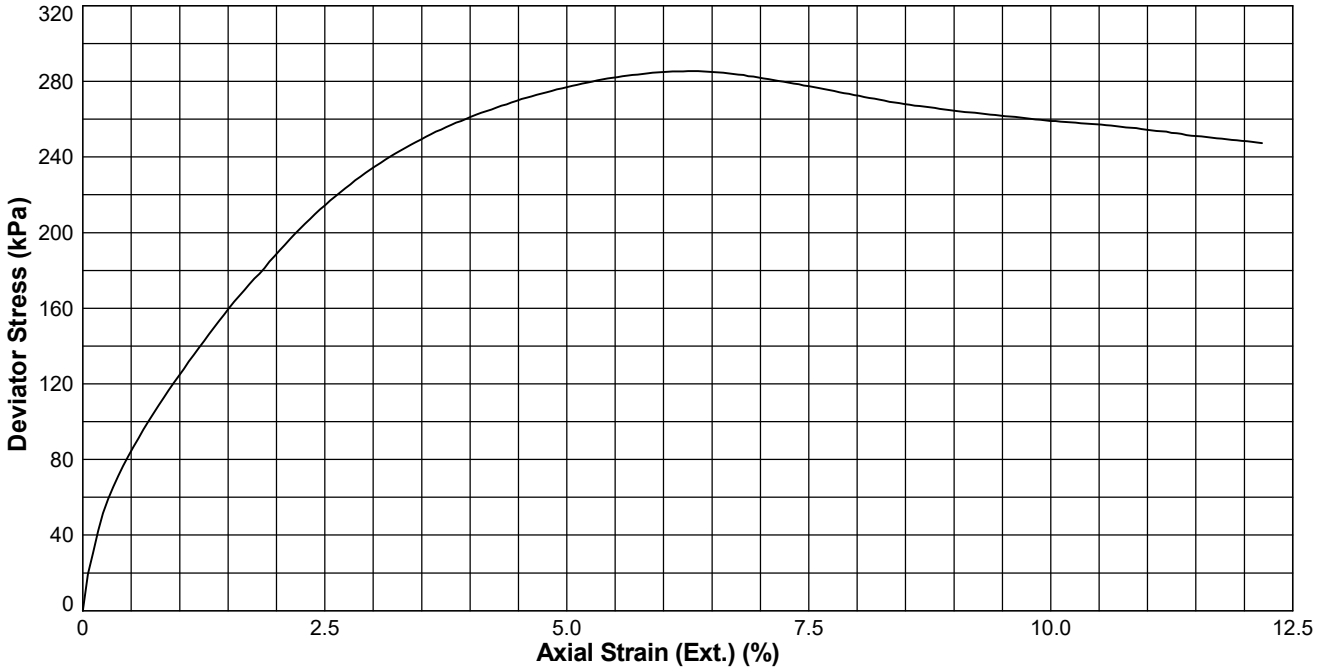
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ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

In accordance with BS EN ISO 17892 Part 9

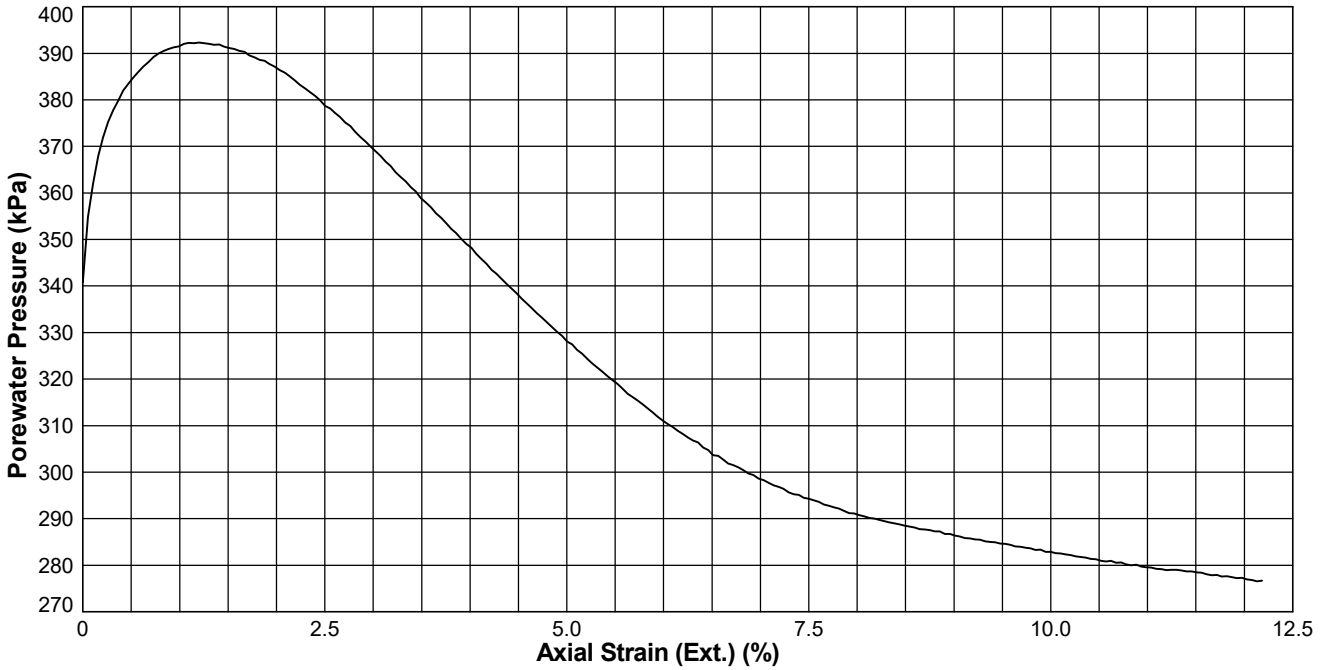
Position ID: **F22-BH306** Sample Ref: **19** Sample Type: **UT** Depth (m): **5.53**

SHEAR



Key: ext.:

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Key: PWP (Base):

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1a Princess Street
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[redacted]	[redacted]	**07/12/23**
Contract: **Sealink Friston**		Contract Ref: **563835**

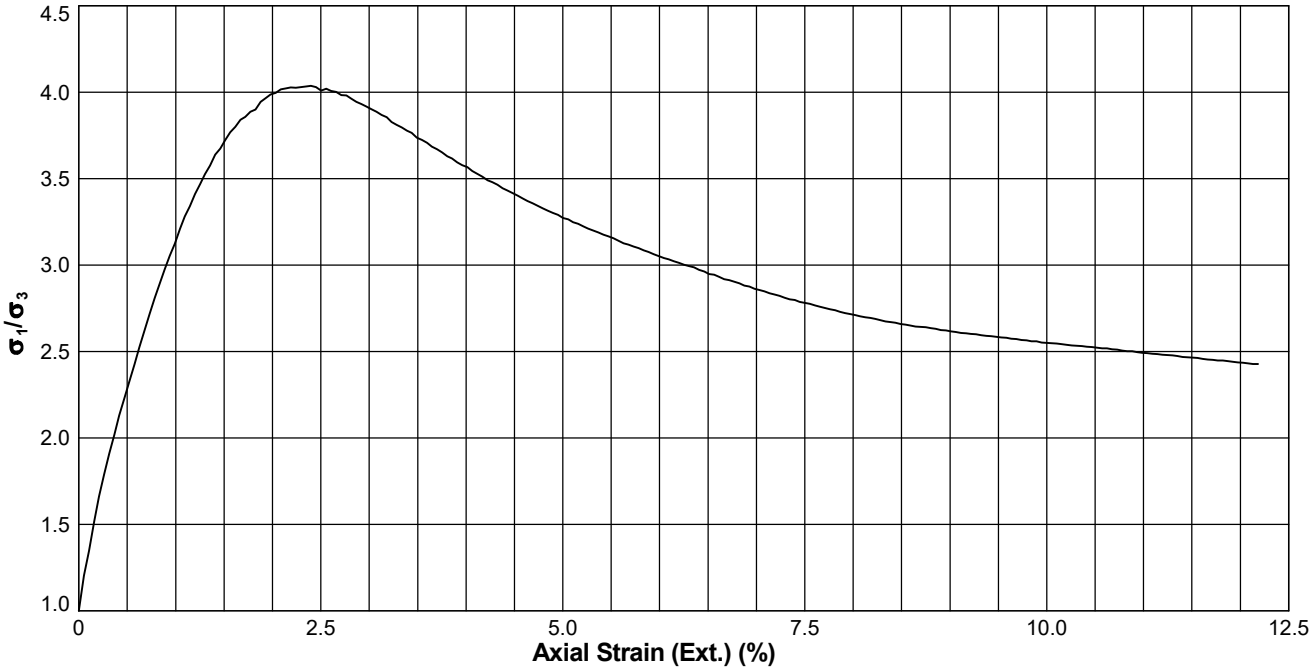
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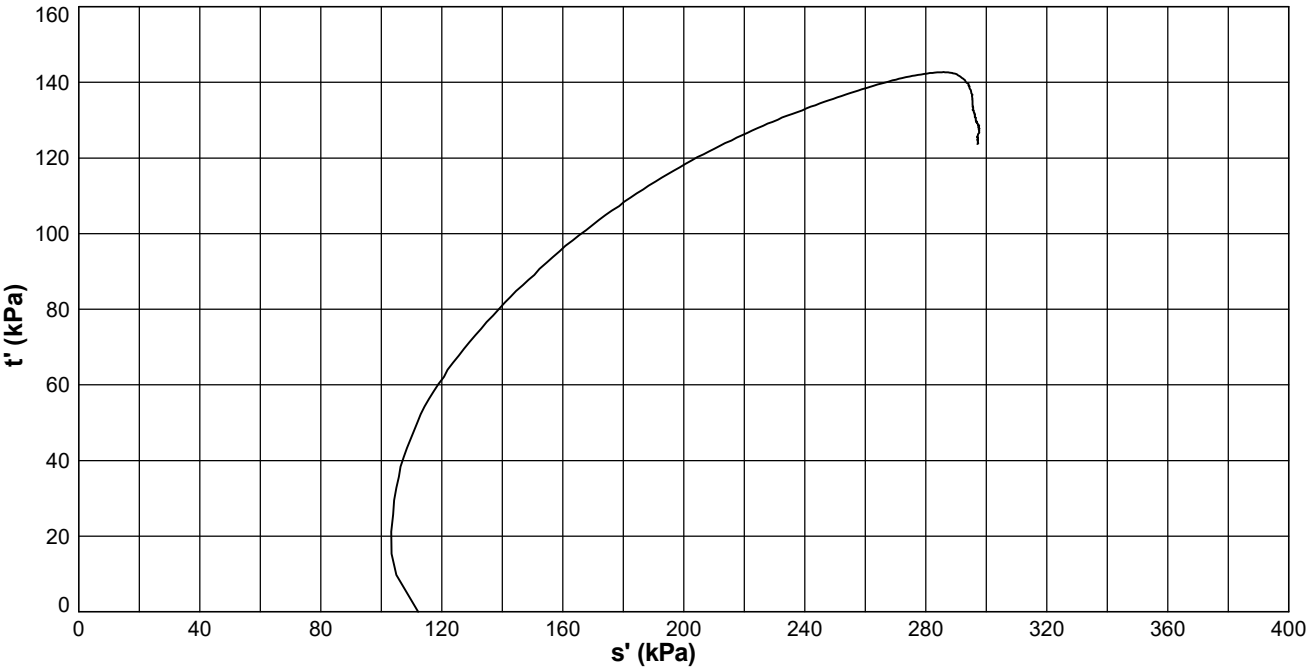
Position ID: **F22-BH306** Sample Ref: **19** Sample Type: **UT** Depth (m): **5.53**

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	Contract: **Sealink Friston**	Contract Ref: **563835**

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ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

In accordance with BS EN ISO 17892 Part 9

Borehole : **F22-BH309** Sample Ref : **19** Sample Type : **UT** Depth (m) : **5.54**

Description : **Dark grey mottled white slightly sandy slightly gravelly silty CLAY**

Condition : **Undisturbed.**

Saturation Type : **Back Pressure.** Side Drains : **Y.**

SPECIMEN DETAILS			
Initial Diameter (mm)	103.24		
Initial Height (mm)	201.8		
Initial Mass (g)	3674.94		
Sample Orientation	Vertical		
Initial Water Content (%)	16.5		
Initial Bulk Density (Mg/m^3)	2.18		
Initial Dry Density (Mg/m^3)	1.87		
Initial Voids Ratio	0.4149		
Initial B-Value	0.85		
Final Water Content (%)	18.5		
Final Bulk Density (Mg/m^3)	2.27		
Final Dry Density (Mg/m^3)	1.91		
SATURATION			
Duration (days)	5		
Final B-Value	0.96		
Voids Ratio	0.4149		
CONSOLIDATION			
Stage	1		
Duration (days)	1		
Cell Pressure (kPa)	550		
Back Pressure (kPa)	440		
Initial Volume (cm^3)	1689		
Final Volume (cm^3)	1649		
Voids Ratio	0.3813		
Effective Major Principal Stress (kPa)	111		
Effective Minor Principal Stress (kPa)	111		
Ext. Axial Strain (%)	-		
Ext. Volumetric Strain (%)	2.37		

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Contract:	Contract Ref:
Sealink Friston	**563835**

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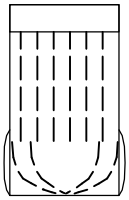
In accordance with BS EN ISO 17892 Part 9

Borehole : **F22-BH309** Sample Ref : **19** Sample Type : **UT** Depth (m) : **5.54**

Description : **Dark grey mottled white slightly sandy slightly gravelly silty CLAY**

Condition : **Undisturbed.**

Saturation Type : **Back Pressure.** Side Drains : **Y.**

COMPRESSION			
Duration (days)	3		
Cell Pressure (kPa)	550		
Initial Porewater Pressure (kPa)	440		
Strain Rate (mm/min)	0.00695		
Failure Criteria	Maximum Deviator Stress		
Axial Strain at Failure (%)	10.21		
Time to Failure (h)	49.5		
Deviator Stress at Failure (kPa)	238		
Vertical Membrane Correction at Failure (kPa)	1.992		
Horizontal Membrane Correction at Failure (kPa)	0.143		
Side Drain Correction at Failure (kPa)	3.710		
Porewater Pressure at Failure (kPa)	393		
Effective Major Principal Stress (kPa)	395		
Effective Minor Principal Stress (kPa)	157		
Effective Principal Stress Ratio	2.51		
Pore Pressure Coefficient - A_f	-0.20		
Mode of Failure Semi-plastic (bulging, shear & axial splitting)			

Effective Cohesion (kPa) : **NA**	Angle of Shear Resistance (degs) : **NA**

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Contract: **Sealink Friston**	Contract Ref: **563835**

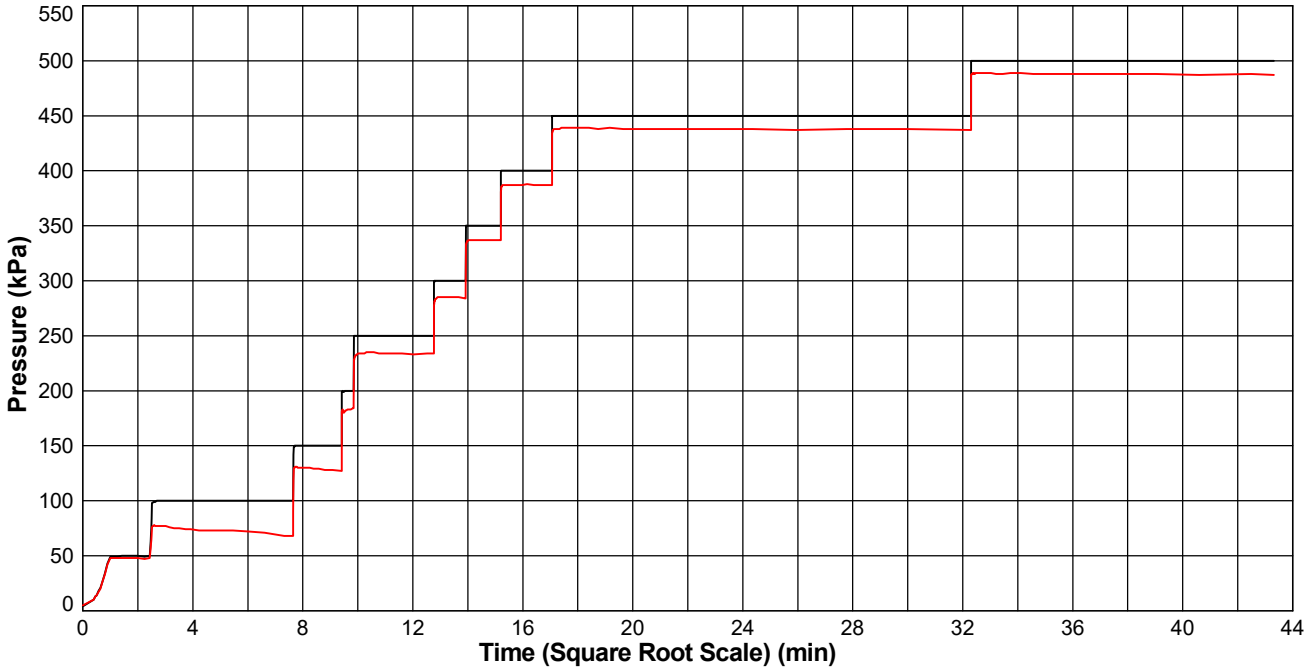
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ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

In accordance with BS EN ISO 17892 Part 9

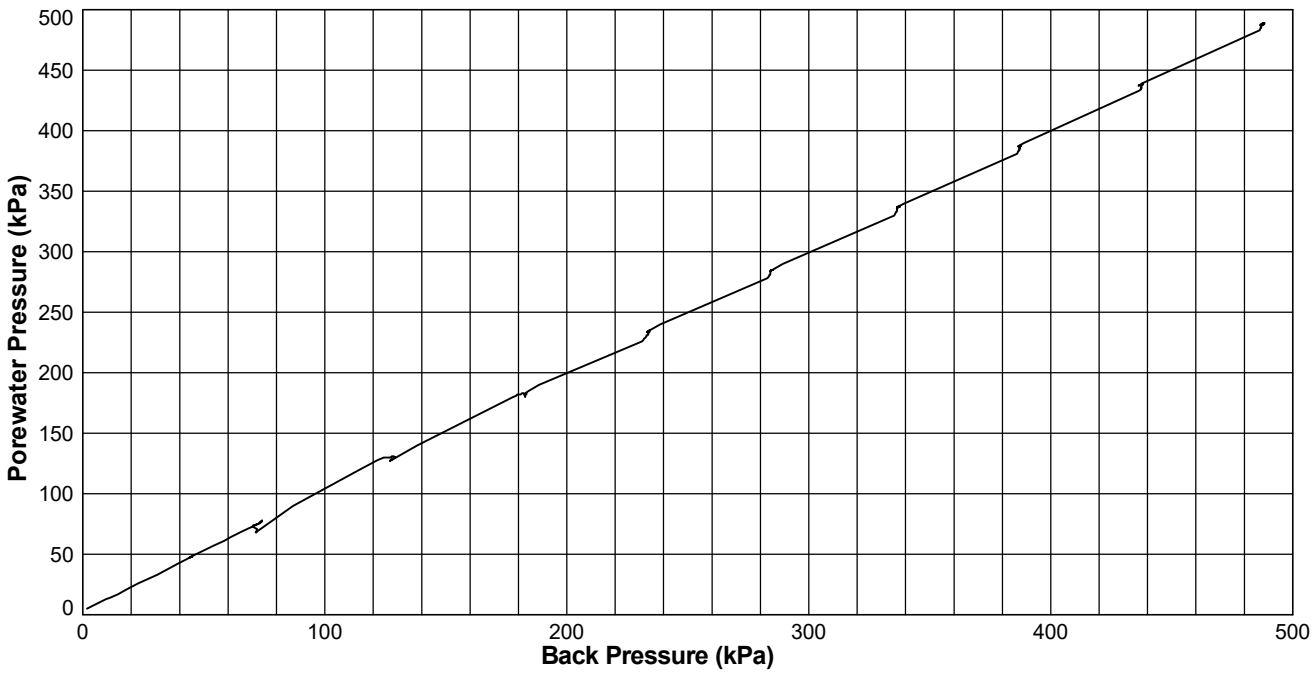
Position ID: **F22-BH309** Sample Ref: **19** Sample Type: **UT** Depth (m): **5.54**

SATURATION



Key: Cell Pressure: PWP (Base):

SATURATION



Key: PWP (Base):

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	Contract **Sealink Friston**	Contract Ref: **563835**

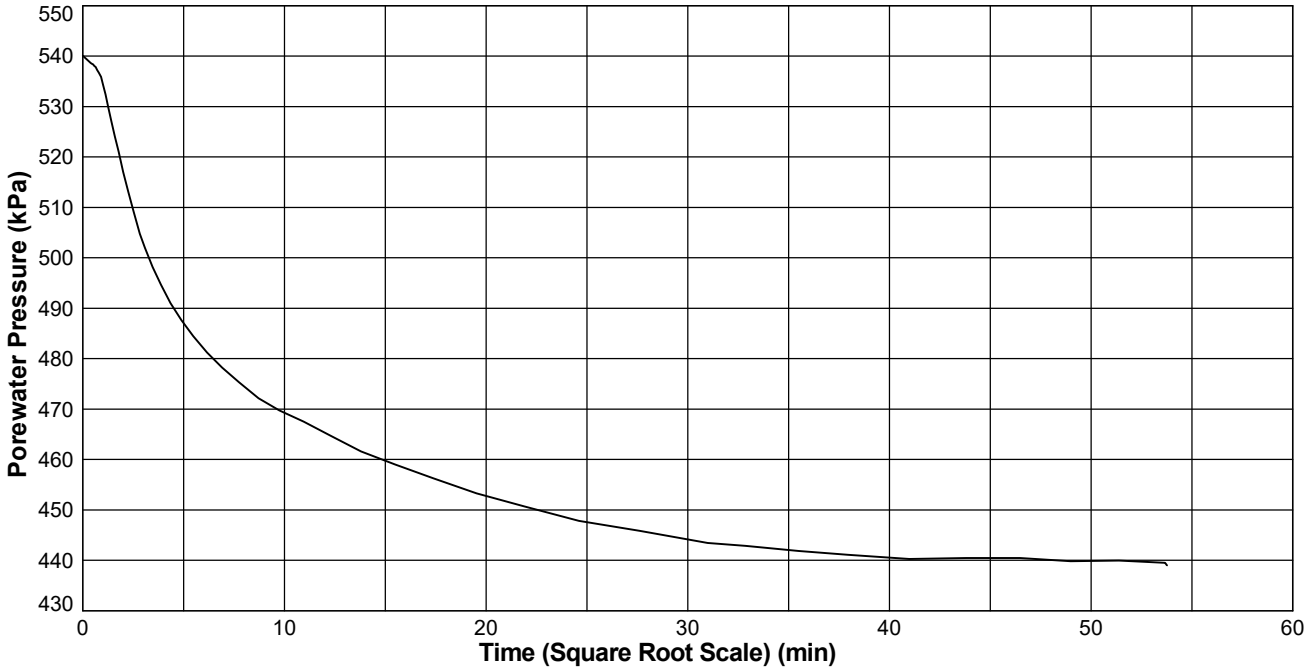
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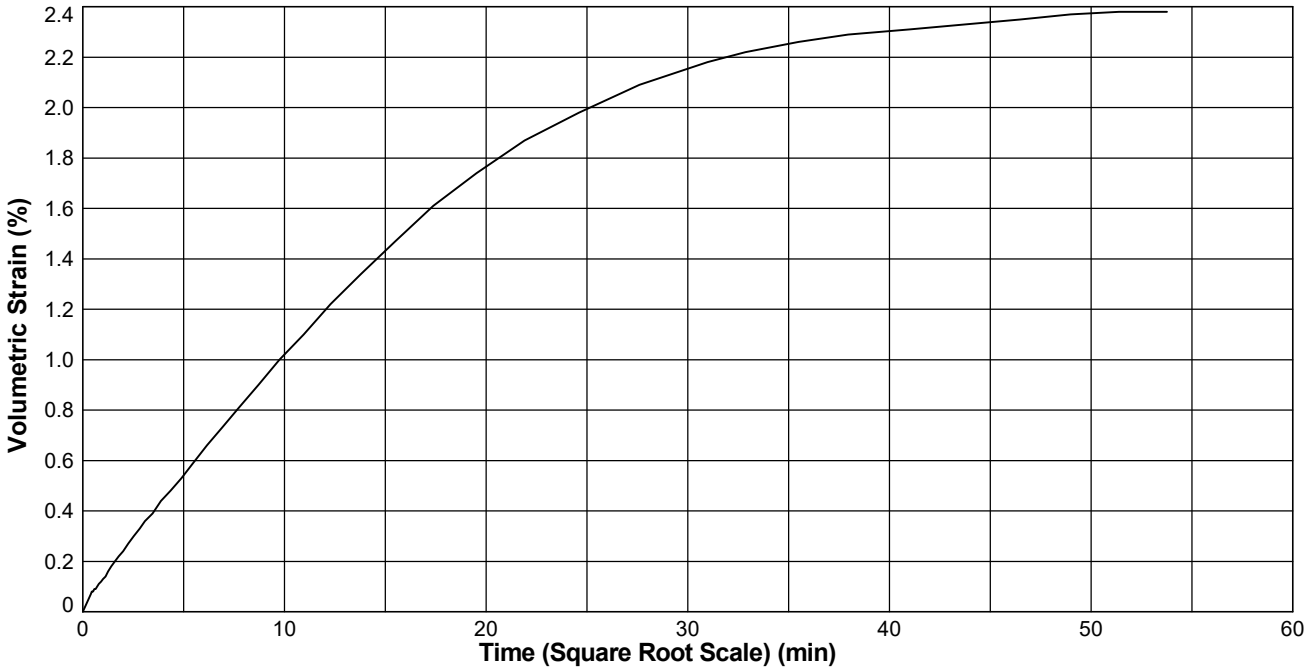
Position ID: **F22-BH309** Sample Ref: **19** Sample Type: **UT** Depth (m): **5.54**

CONSOLIDATION



Key: PWP (Base):

CONSOLIDATION



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Contract: **Sealink Friston**		Contract Ref: **563835**

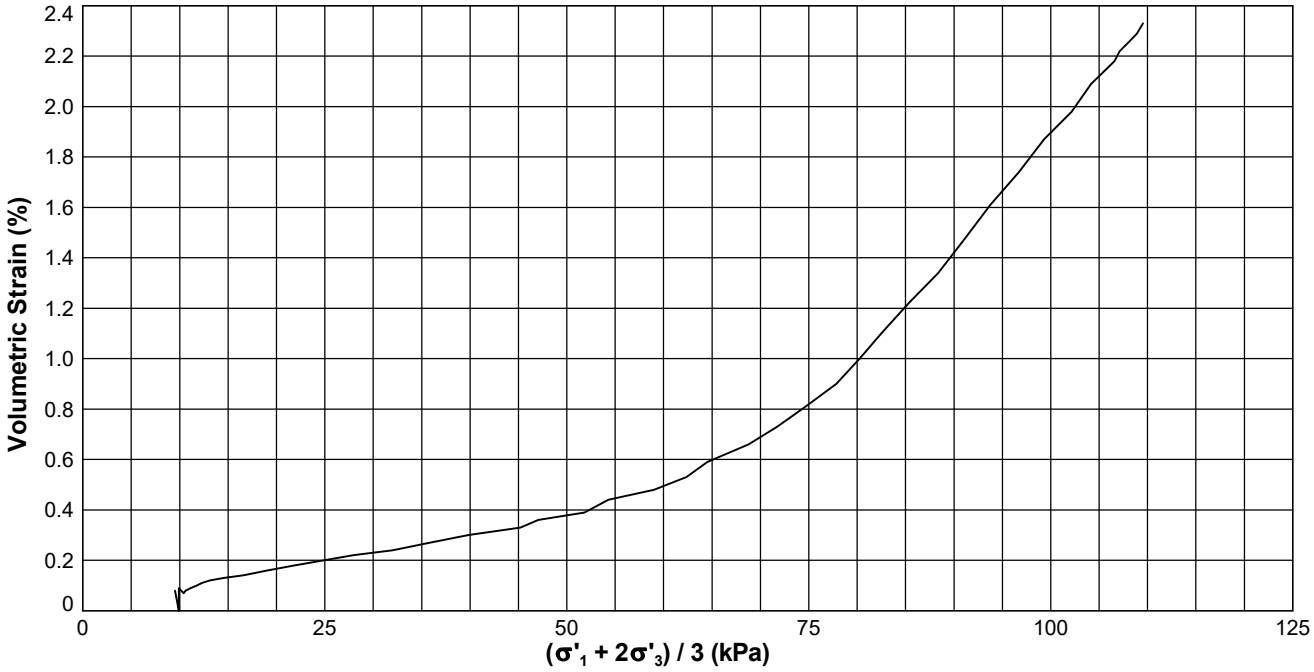
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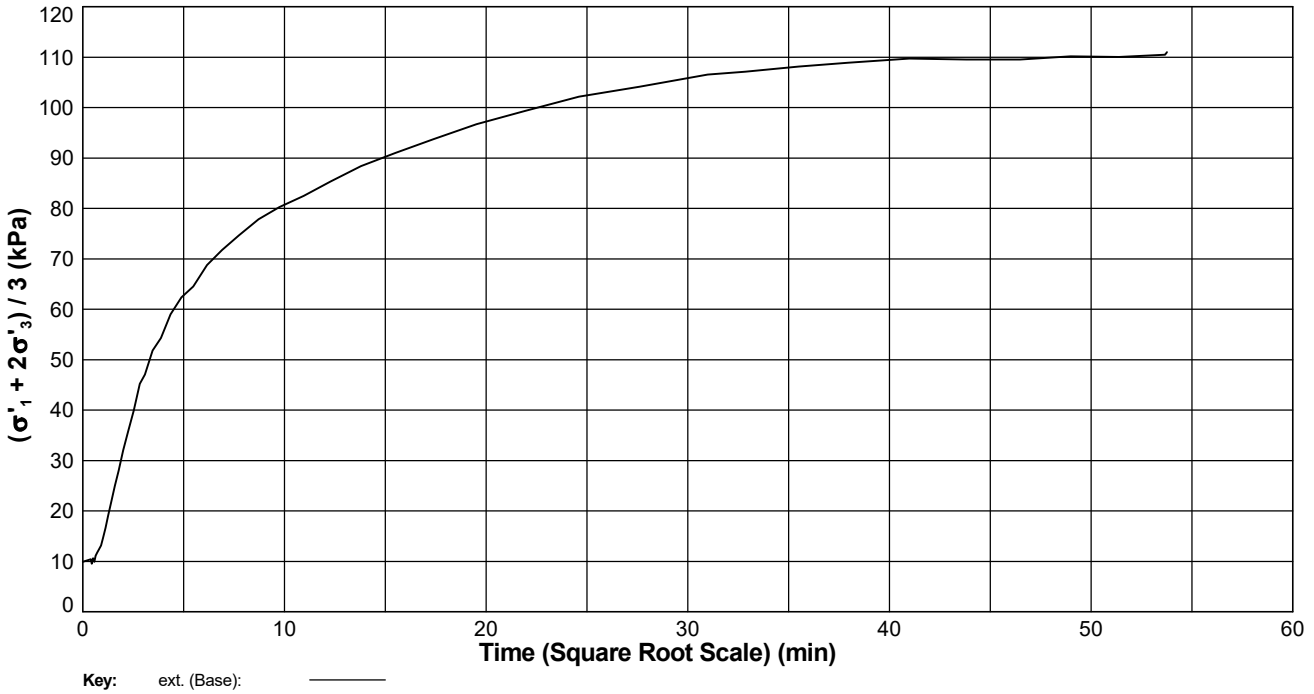
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Position ID: **F22-BH309** Sample Ref: **19** Sample Type: **UT** Depth (m): **5.54**

CONSOLIDATION



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Contract: **Sealink Friston**		Contract Ref: **563835**

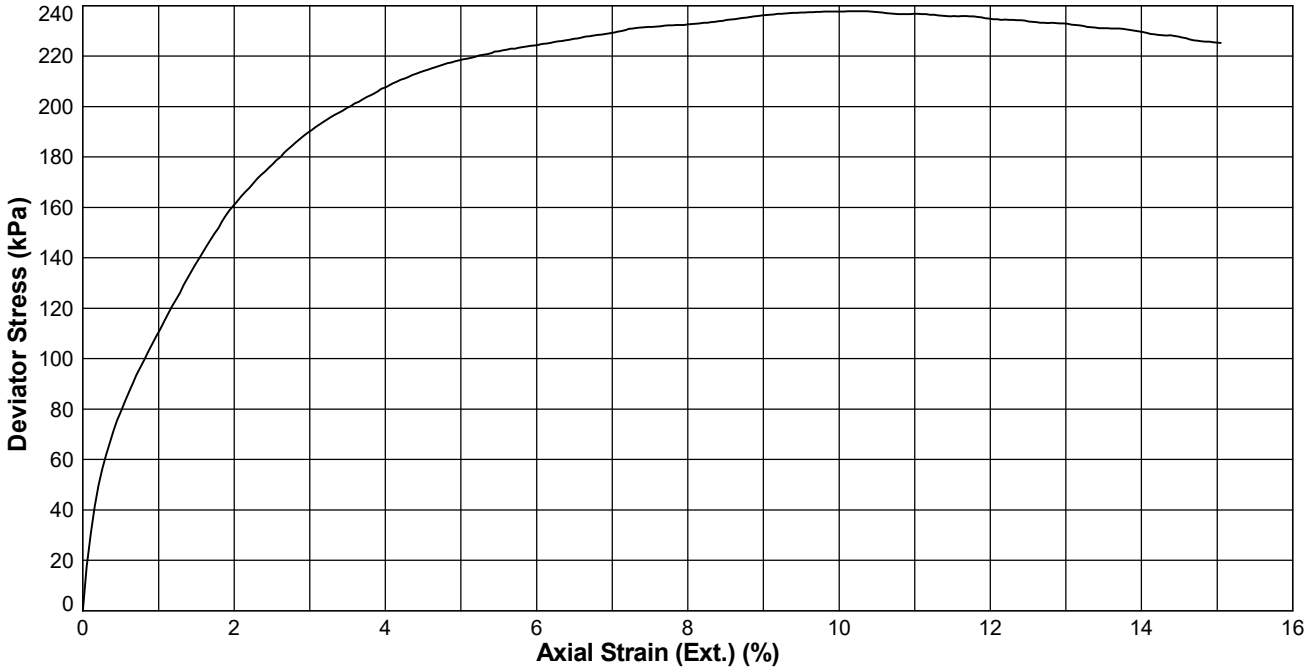
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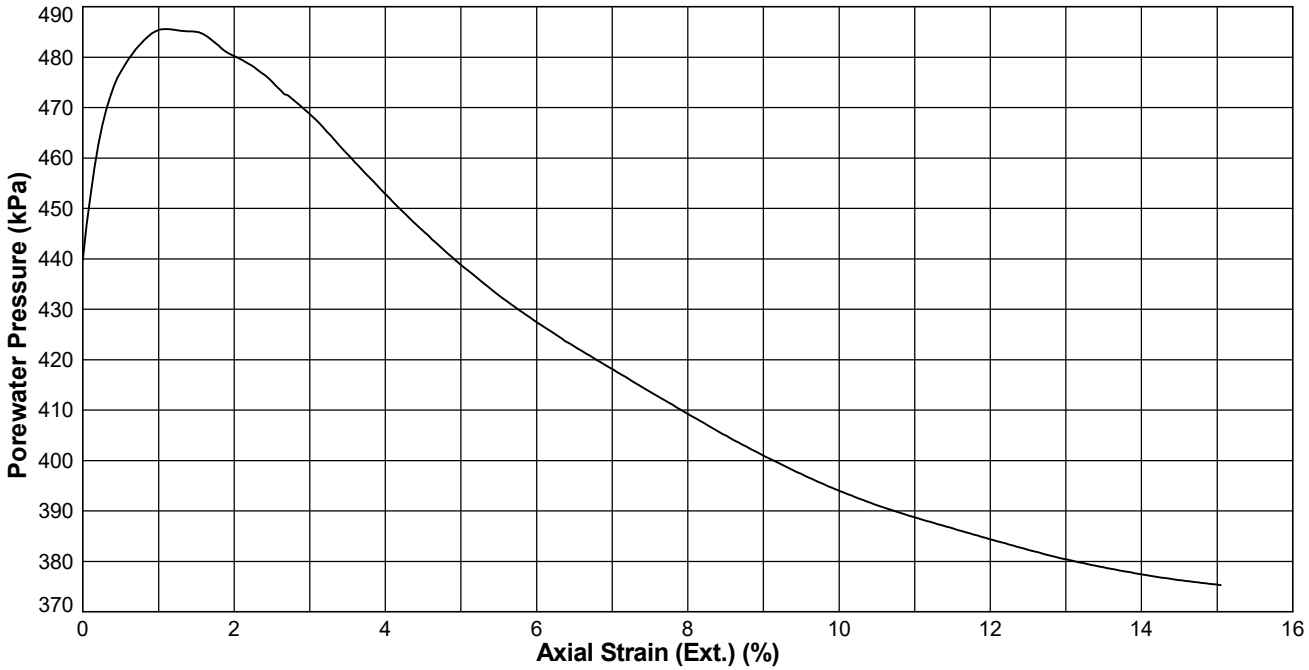
Position ID: **F22-BH309** Sample Ref: **19** Sample Type: **UT** Depth (m): **5.54**

SHEAR



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Contract: **Sealink Friston**		Contract Ref: **563835**

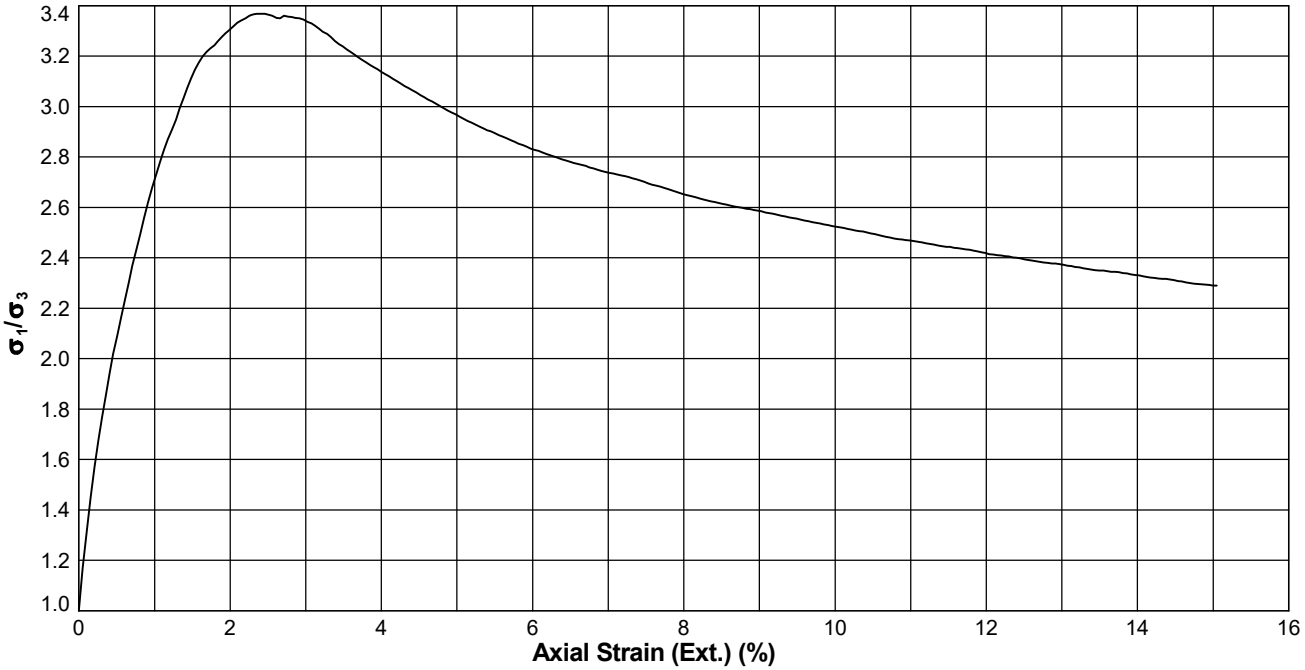
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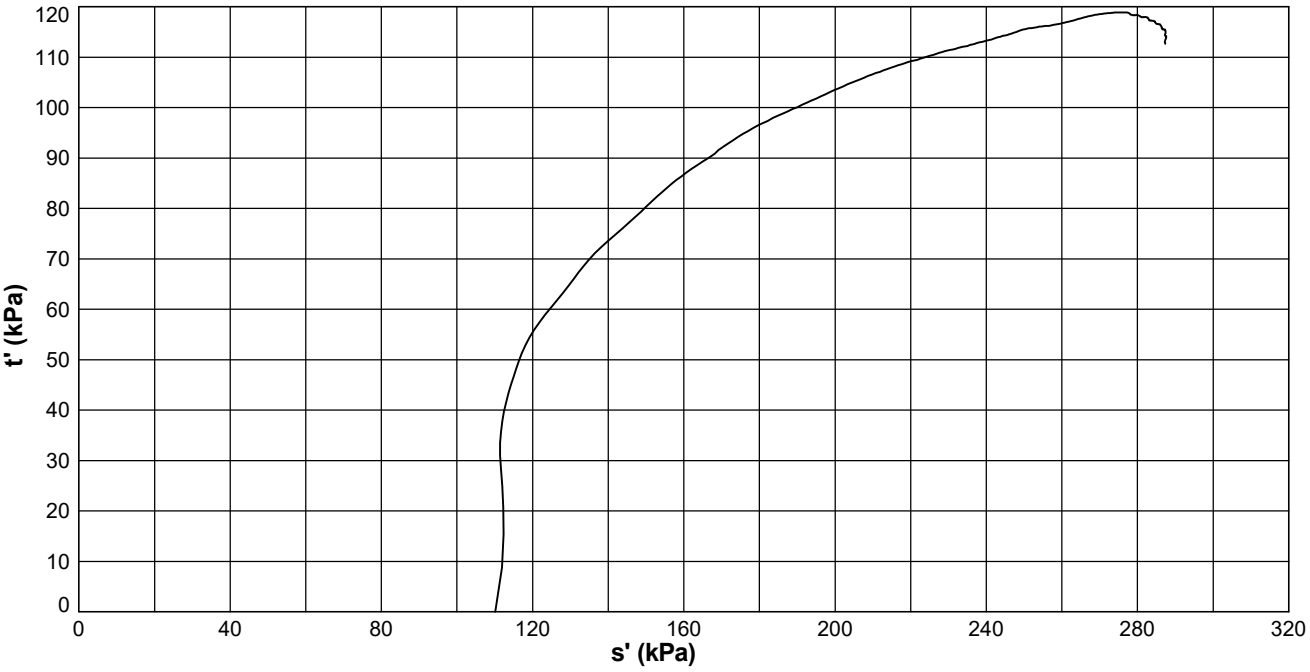
Position ID: **F22-BH309** Sample Ref: **19** Sample Type: **UT** Depth (m): **5.54**

SHEAR



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ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

In accordance with BS EN ISO 17892 Part 9

Borehole : **F22-BH310** Sample Ref : **24** Sample Type : **UT** Depth (m) : **6.05**

Description : **Dark grey slightly gravelly slightly sandy silty CLAY**

Condition : **Undisturbed.**

Saturation Type : **Back Pressure.** Side Drains : **Y.**

SPECIMEN DETAILS			
Initial Diameter (mm)	103.28		
Initial Height (mm)	202.18		
Initial Mass (g)	3496.42		
Sample Orientation	Vertical		
Initial Water Content (%)	22.8		
Initial Bulk Density (Mg/m^3)	2.06		
Initial Dry Density (Mg/m^3)	1.68		
Initial Voids Ratio	0.5719		
Initial B-Value	0.89		
Final Water Content (%)	21.2		
Final Bulk Density (Mg/m^3)	2.10		
Final Dry Density (Mg/m^3)	1.73		
SATURATION			
Duration (days)	2		
Final B-Value	0.96		
Voids Ratio	0.5719		
CONSOLIDATION			
Stage	1		
Duration (days)	2		
Cell Pressure (kPa)	395		
Back Pressure (kPa)	340		
Initial Volume (cm^3)	1694		
Final Volume (cm^3)	1646		
Voids Ratio	0.5272		
Effective Major Principal Stress (kPa)	54		
Effective Minor Principal Stress (kPa)	54		
Ext. Axial Strain (%)	-		
Ext. Volumetric Strain (%)	2.85		

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Contract:	Contract Ref:
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ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

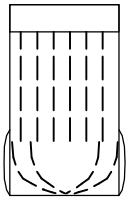
In accordance with BS EN ISO 17892 Part 9

Borehole : **F22-BH310** Sample Ref : **24** Sample Type : **UT** Depth (m) : **6.05**

Description : **Dark grey slightly gravelly slightly sandy silty CLAY**

Condition : **Undisturbed.**

Saturation Type : **Back Pressure.** Side Drains : **Y.**

COMPRESSION			
Duration (days)	4		
Cell Pressure (kPa)	395		
Initial Porewater Pressure (kPa)	343		
Strain Rate (mm/min)	0.00522		
Failure Criteria	Maximum Deviator Stress		
Axial Strain at Failure (%)	8.06		
Time to Failure (h)	51.3		
Deviator Stress at Failure (kPa)	69		
Vertical Membrane Correction at Failure (kPa)	2.184		
Horizontal Membrane Correction at Failure (kPa)	0.230		
Side Drain Correction at Failure (kPa)	3.715		
Porewater Pressure at Failure (kPa)	356		
Effective Major Principal Stress (kPa)	108		
Effective Minor Principal Stress (kPa)	39		
Effective Principal Stress Ratio	2.76		
Pore Pressure Coefficient - A_f	0.19		
Mode of Failure Semi-plastic (bulging, shear & axial splitting)			

Effective Cohesion (kPa) : **NA**	Angle of Shear Resistance (degs) : **NA**

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Contract:	Contract Ref:
Sealink Friston	**563835**

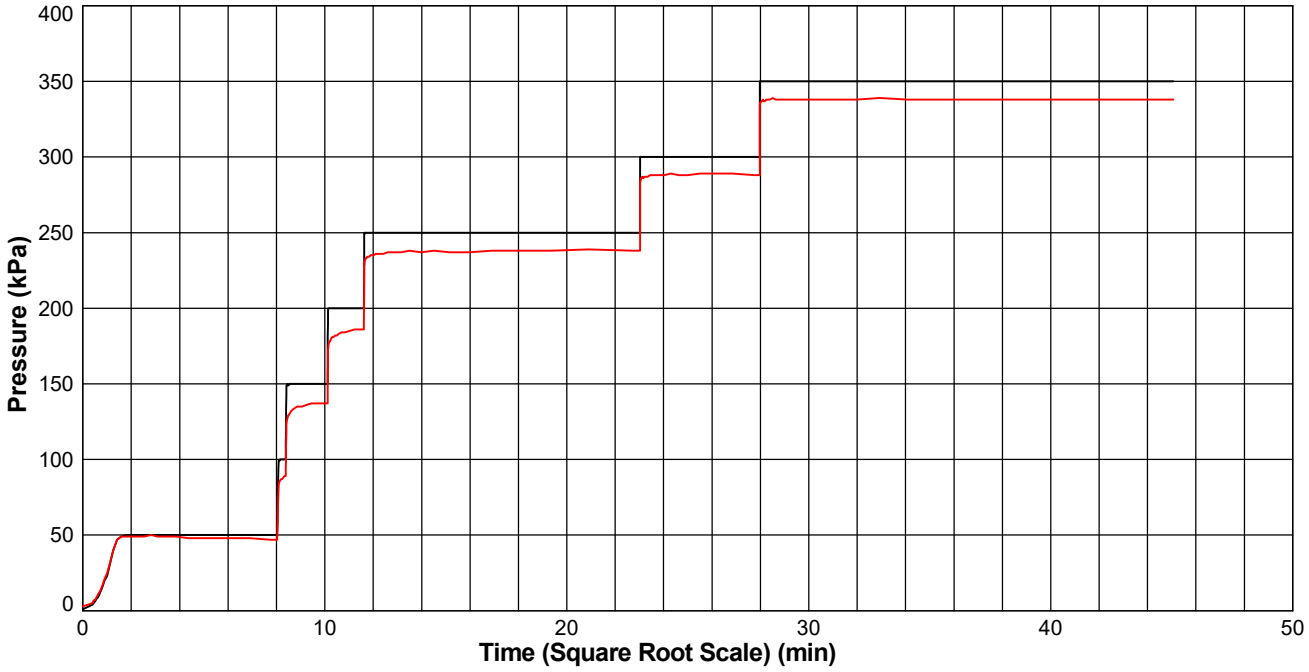
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ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

In accordance with BS EN ISO 17892 Part 9

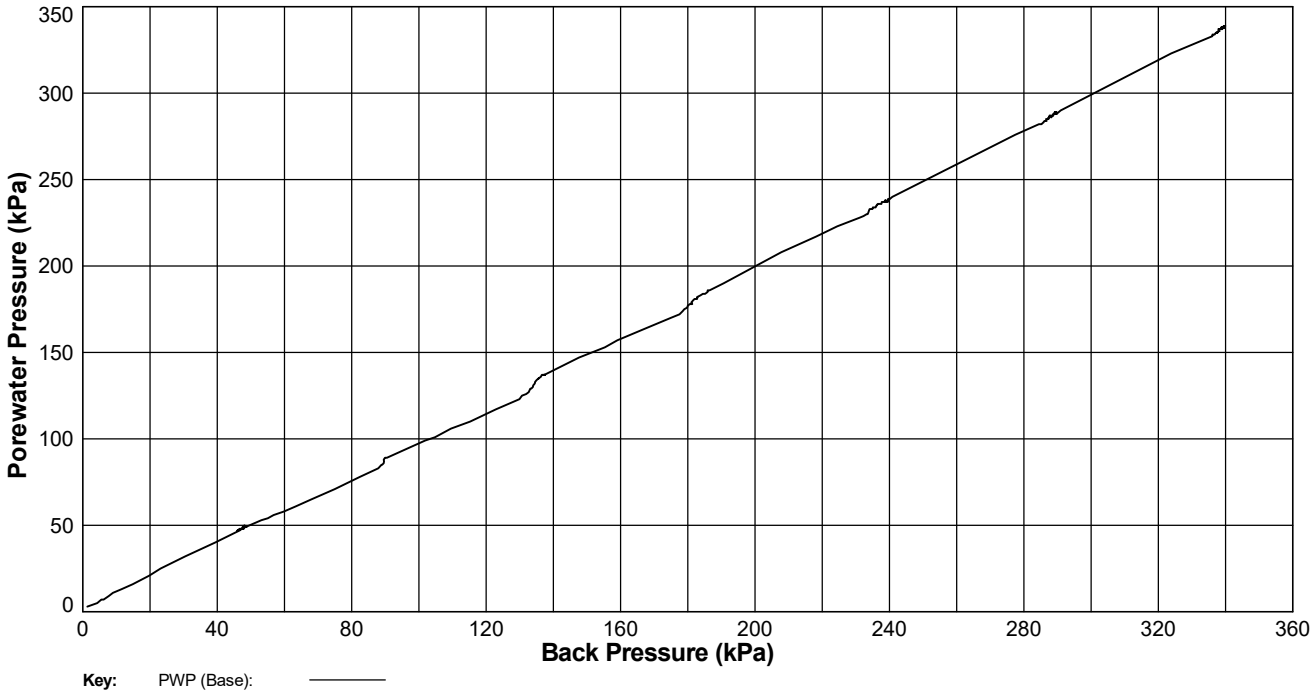
Position ID: **F22-BH310** Sample Ref: **24** Sample Type: **UT** Depth (m): **6.05**

SATURATION



Key: Cell Pressure: PWP (Base):

SATURATION



Key: PWP (Base):

STRUCTURAL SOILS 1a Princess Street Bedminster Bristol BS3 4AG	Compiled By [redacted] [redacted]	Date **27/02/24**
	Contract **Sealink Friston**	Contract Ref: **563835**

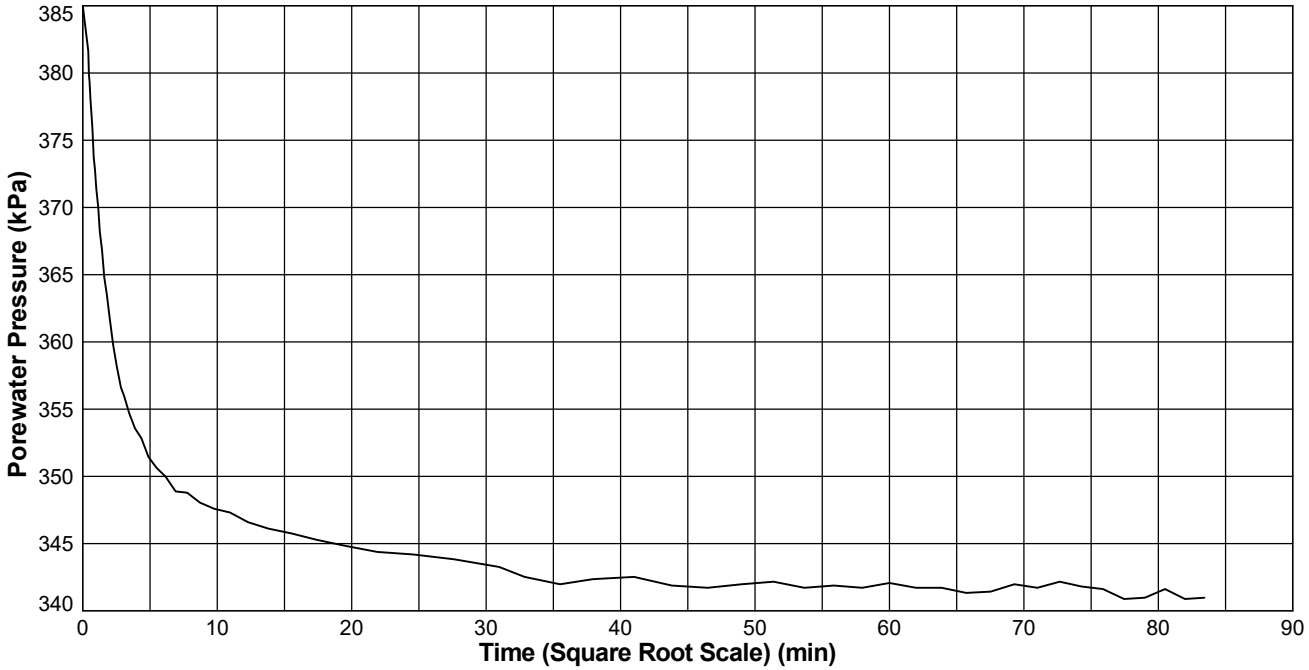
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - EFFECTIVE STRESS - GRAPH 1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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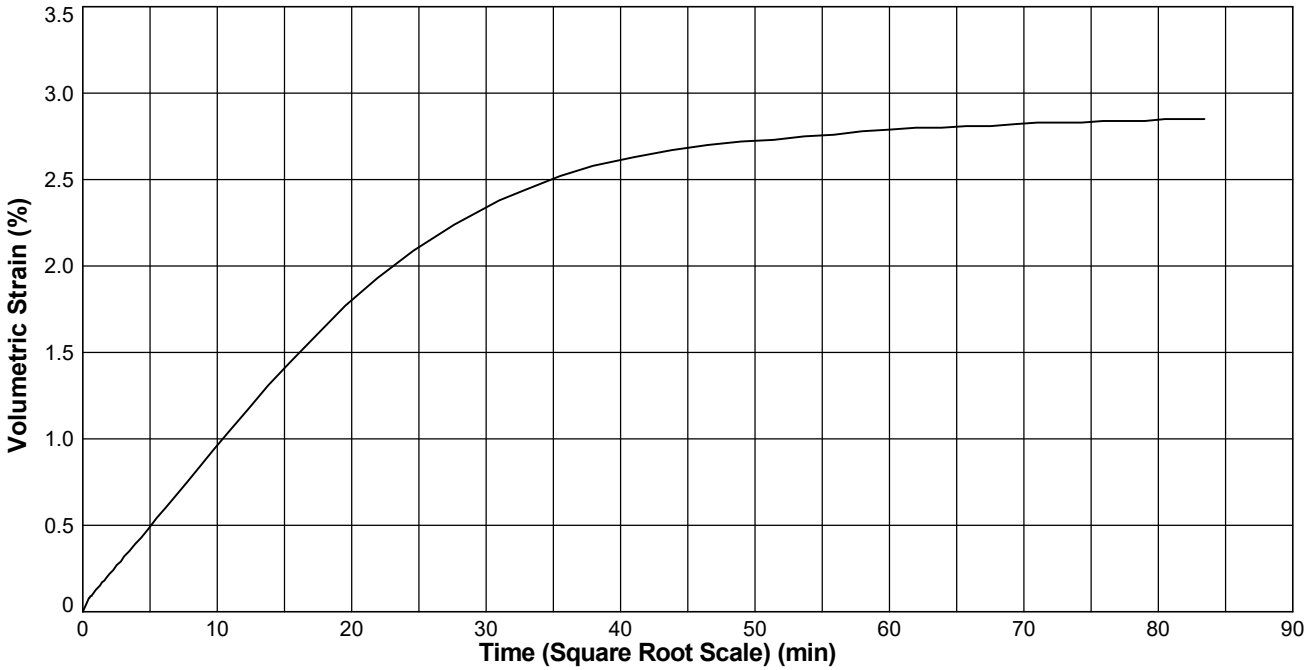
Position ID: **F22-BH310** Sample Ref: **24** Sample Type: **UT** Depth (m): **6.05**

CONSOLIDATION



Key: PWP (Base):

CONSOLIDATION



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	[redacted] [redacted]	**27/02/24**
	Contract: **Sealink Friston**	Contract Ref: **563835**

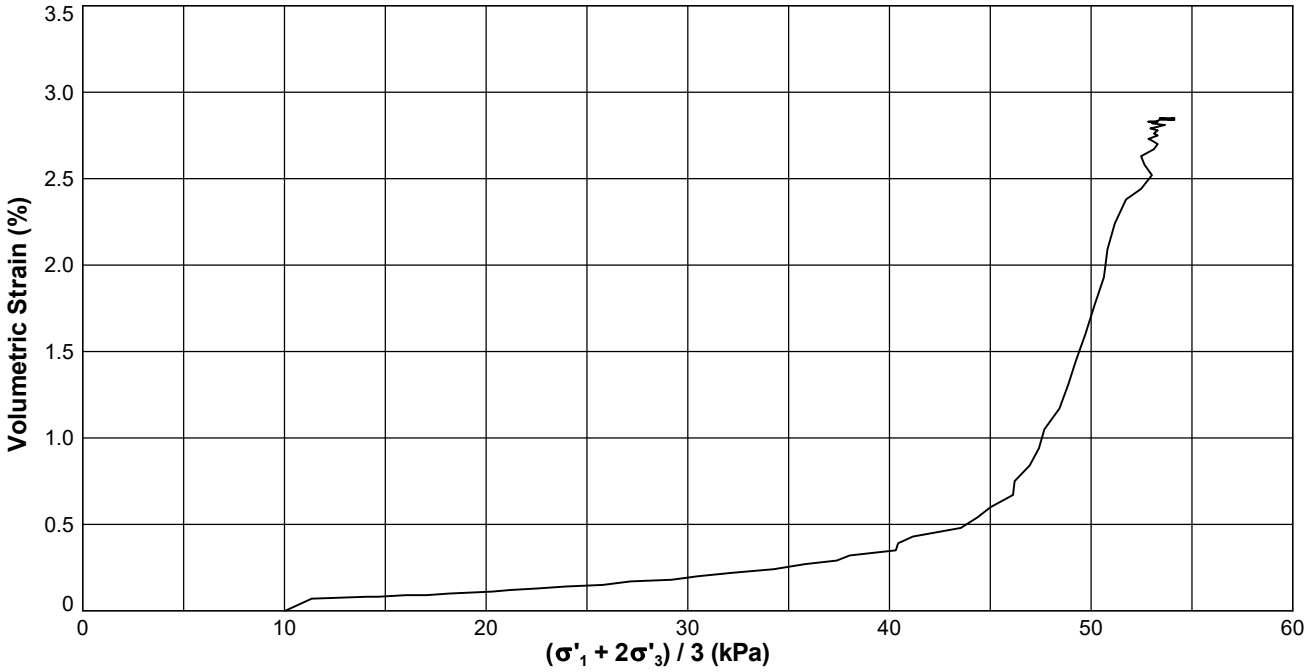
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ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

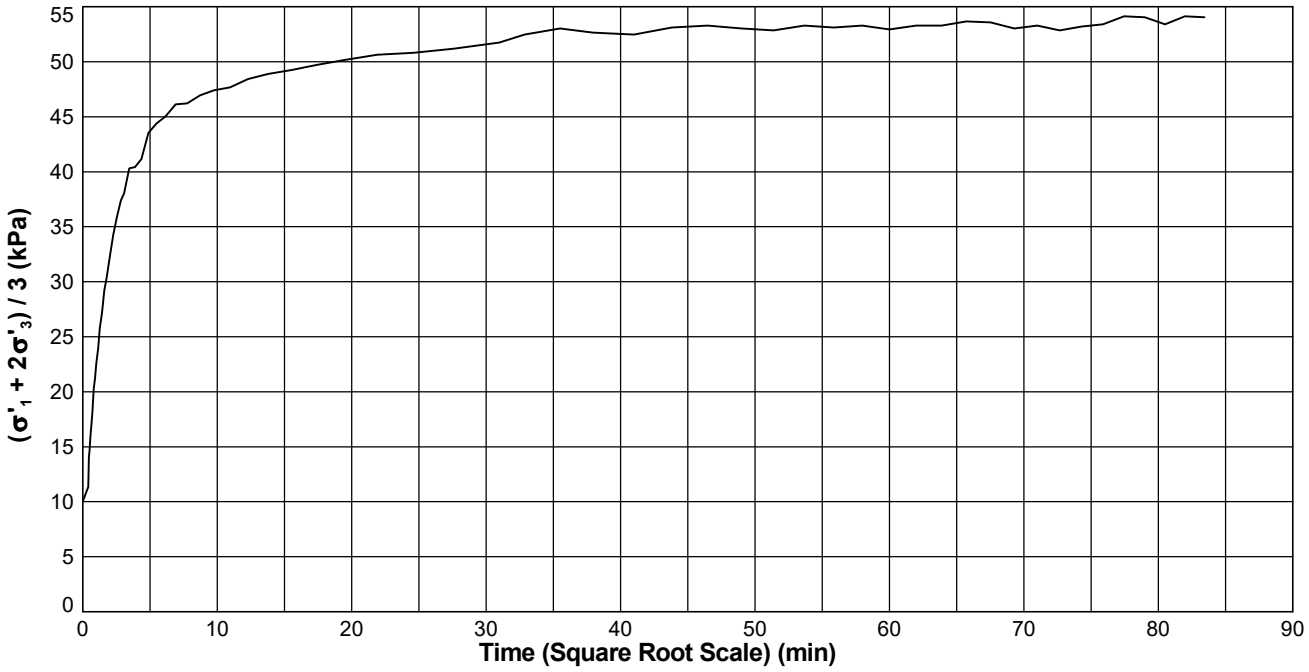
In accordance with BS EN ISO 17892 Part 9

Position ID: **F22-BH310** Sample Ref: **24** Sample Type: **UT** Depth (m): **6.05**

CONSOLIDATION



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	Contract **Sealink Friston**		Contract Ref: **563835**

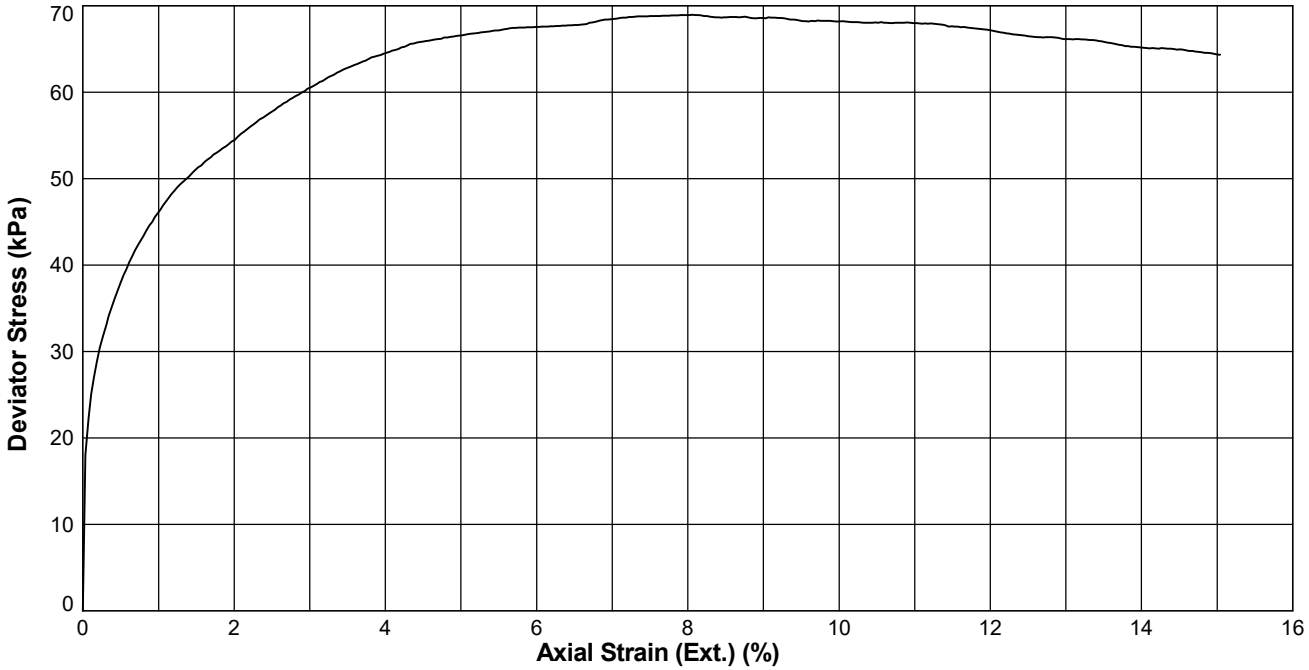
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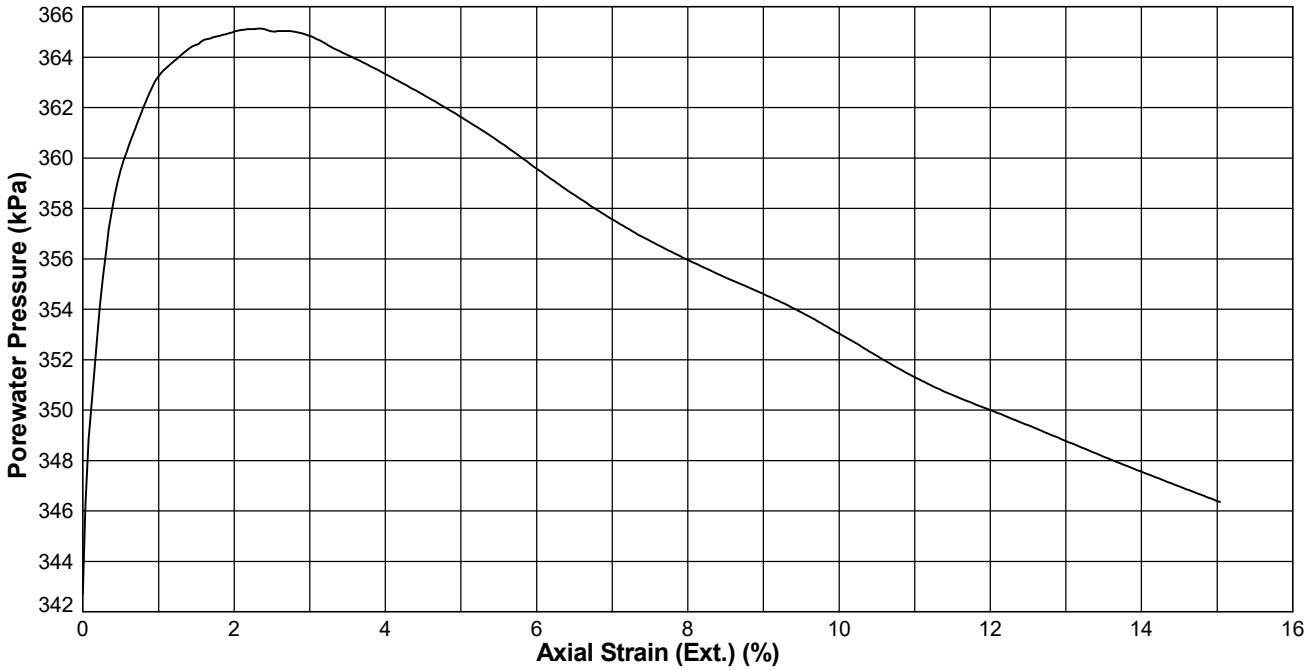
Position ID: **F22-BH310** Sample Ref: **24** Sample Type: **UT** Depth (m): **6.05**

SHEAR



Key: ext.: ————

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Key: PWP (Base): ————

STRUCTURAL SOILS 1a Princess Street Bedminster Bristol BS3 4AG	Compiled By		Date
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	Contract **Sealink Friston**	Contract Ref: **563835**	

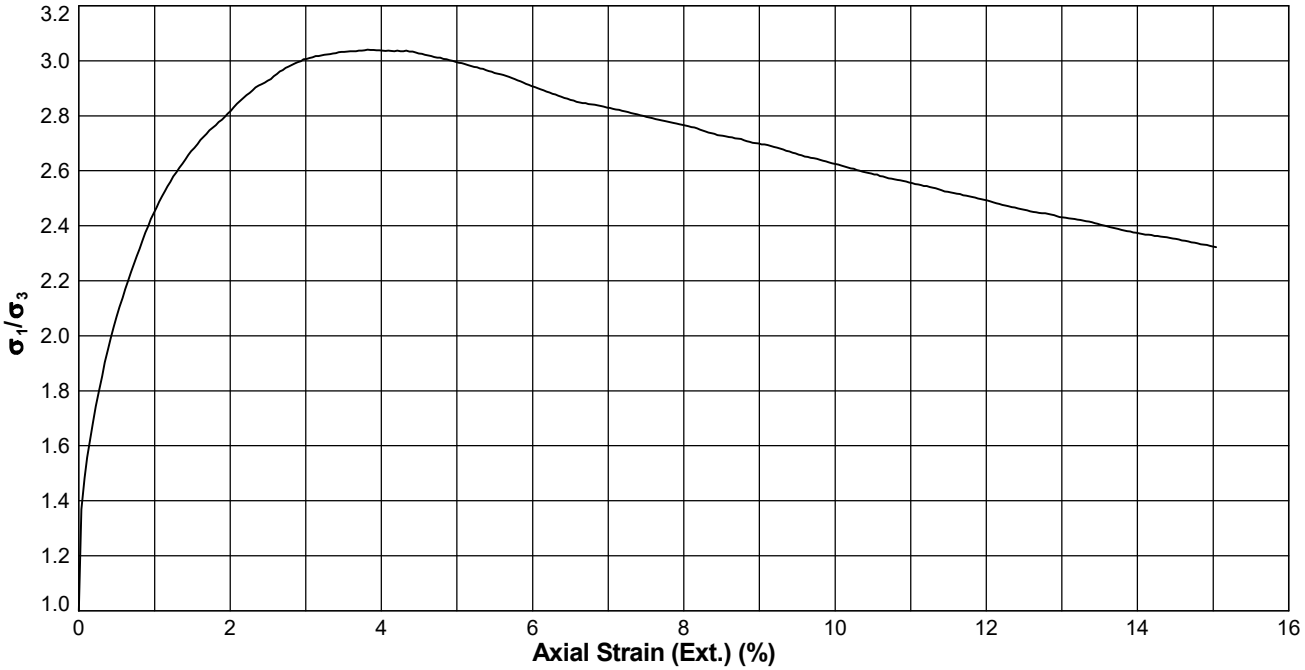
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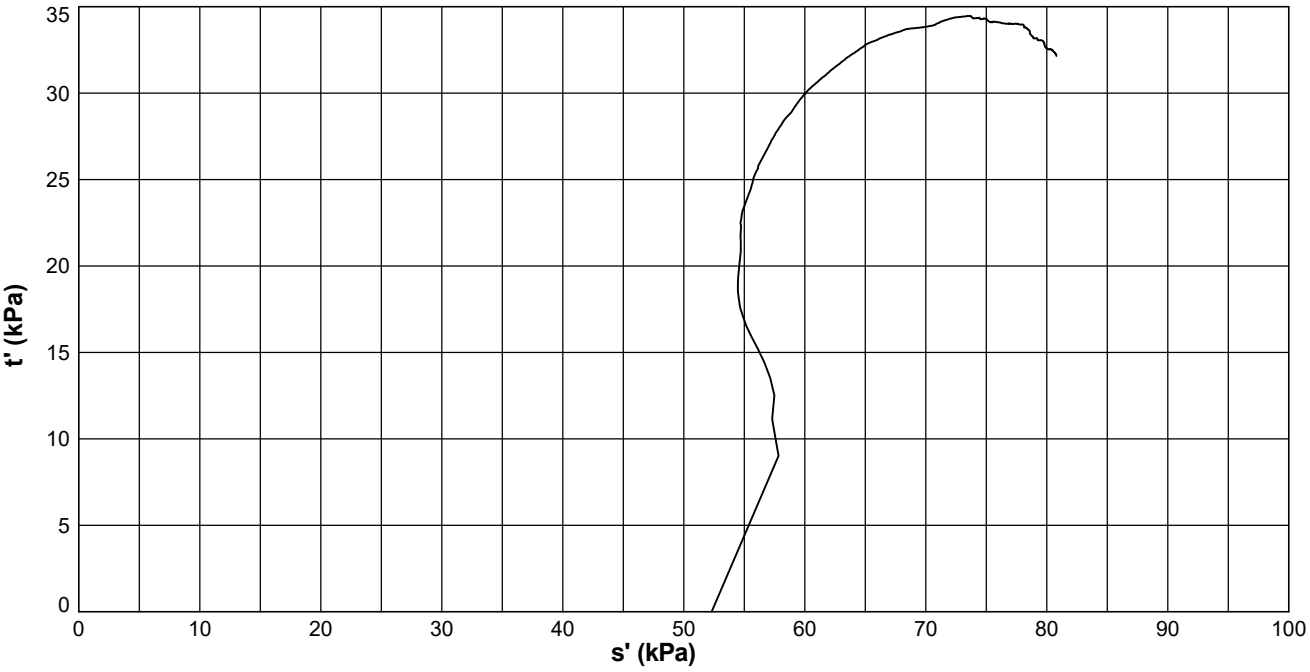
Position ID: **F22-BH310** Sample Ref: **24** Sample Type: **UT** Depth (m): **6.05**

SHEAR



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STRUCTURAL SOILS 1a Princess Street Bedminster Bristol BS3 4AG	Compiled By		Date
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	Contract **Sealink Friston**		Contract Ref: **563835**

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ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

In accordance with BS EN ISO 17892 Part 9

Borehole : **F22-BH501** Sample Ref : **72** Sample Type : **UT** Depth (m) : **22.16**

Description : **Grey slightly sandy silty CLAY**

Condition : **Undisturbed.**

Saturation Type : **Back Pressure.** Side Drains : **Y.**

SPECIMEN DETAILS			
Initial Diameter (mm)	102.52		
Initial Height (mm)	199.28		
Initial Mass (g)	3075.82		
Sample Orientation	Vertical		
Initial Water Content (%)	38.6		
Initial Bulk Density (Mg/m^3)	1.87		
Initial Dry Density (Mg/m^3)	1.35		
Initial Voids Ratio	0.9589		
Initial B-Value	0.79		
Final Water Content (%)	35.8		
Final Bulk Density (Mg/m^3)	1.96		
Final Dry Density (Mg/m^3)	1.44		
SATURATION			
Duration (days)	2		
Final B-Value	0.98		
Voids Ratio	0.9589		
CONSOLIDATION			
Stage	1		
Duration (days)	2		
Cell Pressure (kPa)	580		
Back Pressure (kPa)	340		
Initial Volume (cm^3)	1645		
Final Volume (cm^3)	1540		
Voids Ratio	0.8342		
Effective Major Principal Stress (kPa)	234		
Effective Minor Principal Stress (kPa)	234		
Ext. Axial Strain (%)	-		
Ext. Volumetric Strain (%)	6.37		

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Contract:	Contract Ref:
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GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | GrfcTbl L - EFFECTIVE STRESS - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 20/03/24 - 10:44 | AF3 |

ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

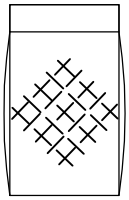
In accordance with BS EN ISO 17892 Part 9

Borehole : **F22-BH501** Sample Ref : **72** Sample Type : **UT** Depth (m) : **22.16**

Description : **Grey slightly sandy silty CLAY**

Condition : **Undisturbed.**

Saturation Type : **Back Pressure.** Side Drains : **Y.**

COMPRESSION			
Duration (days)	3		
Cell Pressure (kPa)	580		
Initial Porewater Pressure (kPa)	346		
Strain Rate (mm/min)	0.00677		
Failure Criteria	Maximum Deviator Stress		
Axial Strain at Failure (%)	6.74		
Time to Failure (h)	32.3		
Deviator Stress at Failure (kPa)	277		
Vertical Membrane Correction at Failure (kPa)	1.714		
Horizontal Membrane Correction at Failure (kPa)	0.410		
Side Drain Correction at Failure (kPa)	3.790		
Porewater Pressure at Failure (kPa)	469		
Effective Major Principal Stress (kPa)	387		
Effective Minor Principal Stress (kPa)	111		
Effective Principal Stress Ratio	3.50		
Pore Pressure Coefficient - A_f	0.45		
Mode of Failure Semi-plastic (intermediate)			

Effective Cohesion (kPa) : **NA**	Angle of Shear Resistance (degs) : **NA**

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Contract: **Sealink Friston**	Contract Ref: **563835**

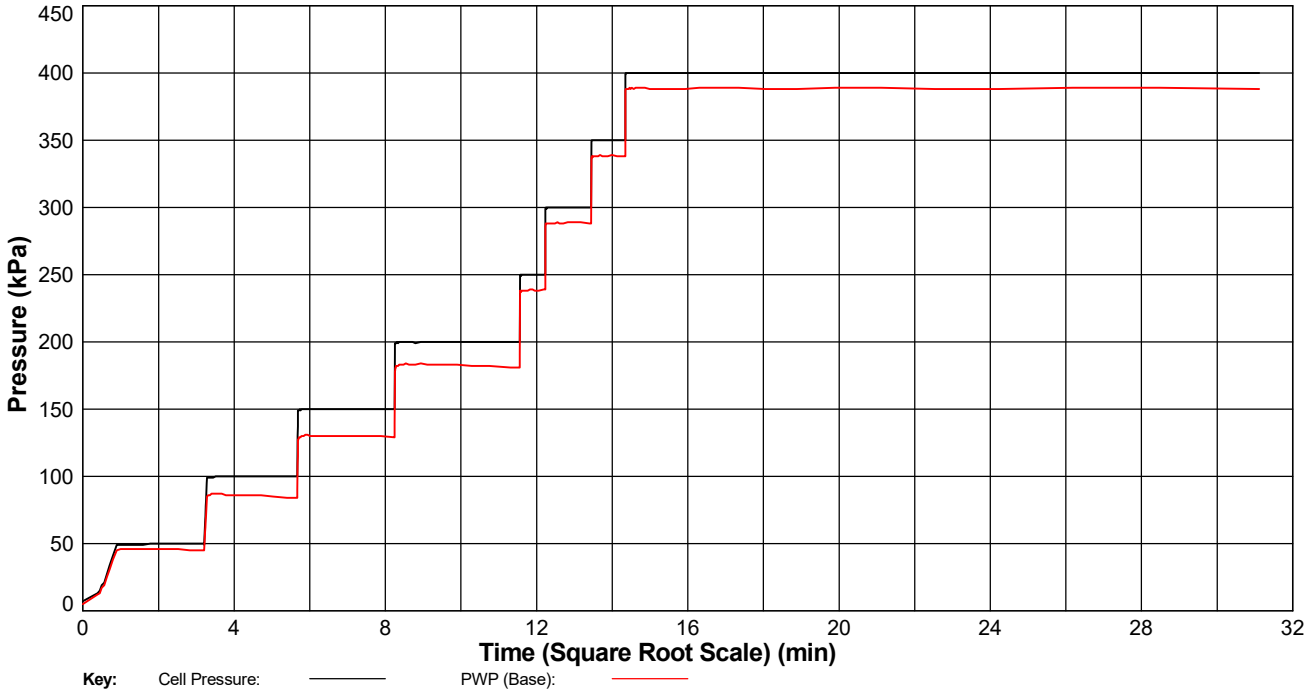
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ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

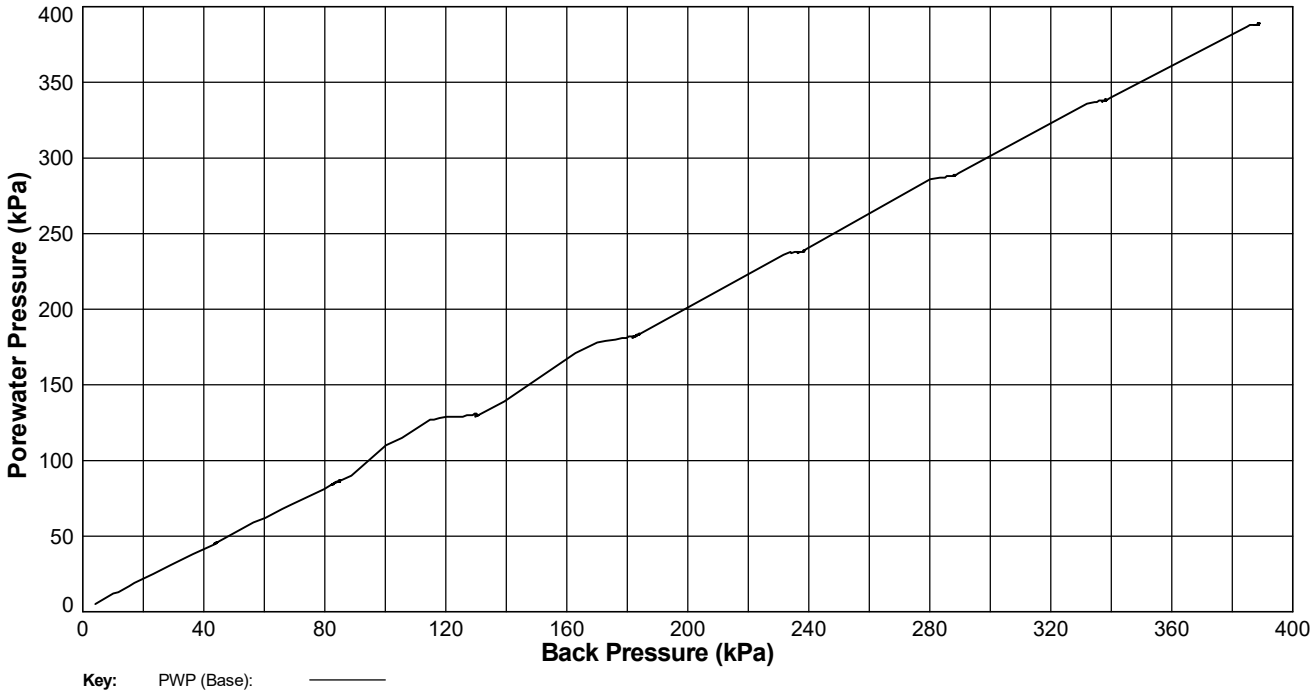
In accordance with BS EN ISO 17892 Part 9

Position ID: **F22-BH501** Sample Ref: **72** Sample Type: **UT** Depth (m): **22.16**

SATURATION



SATURATION



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	Contract **Sealink Friston**	Contract Ref: **563835**	

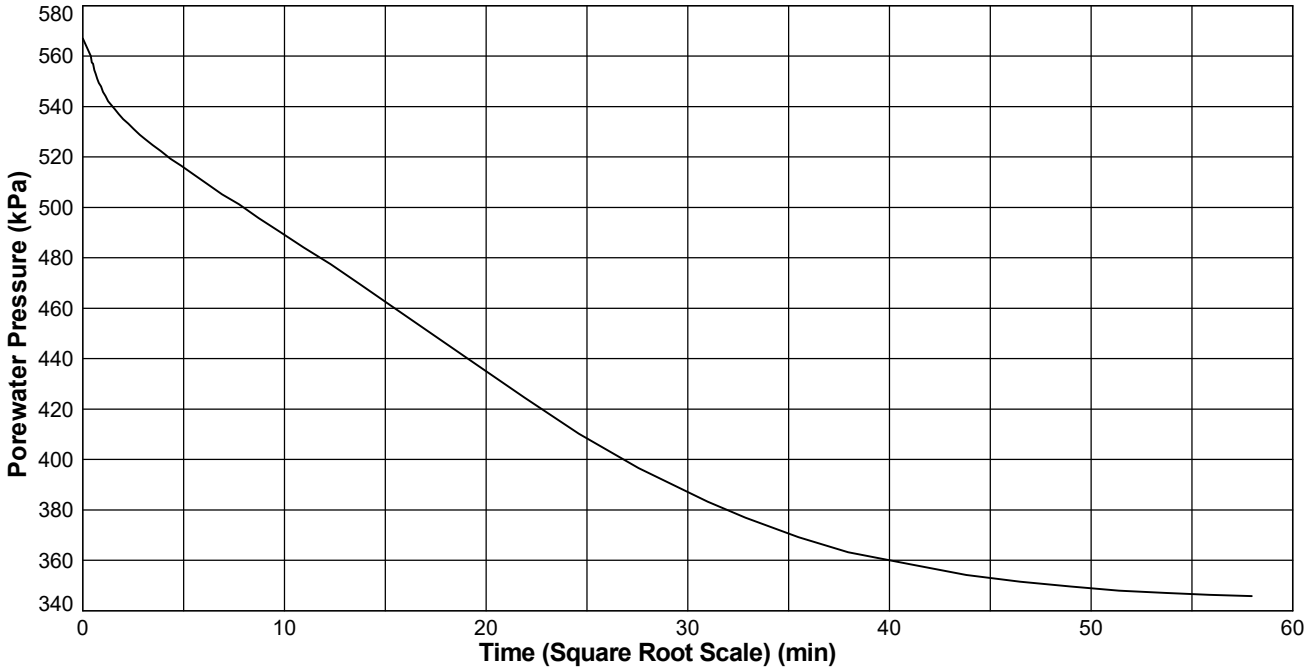
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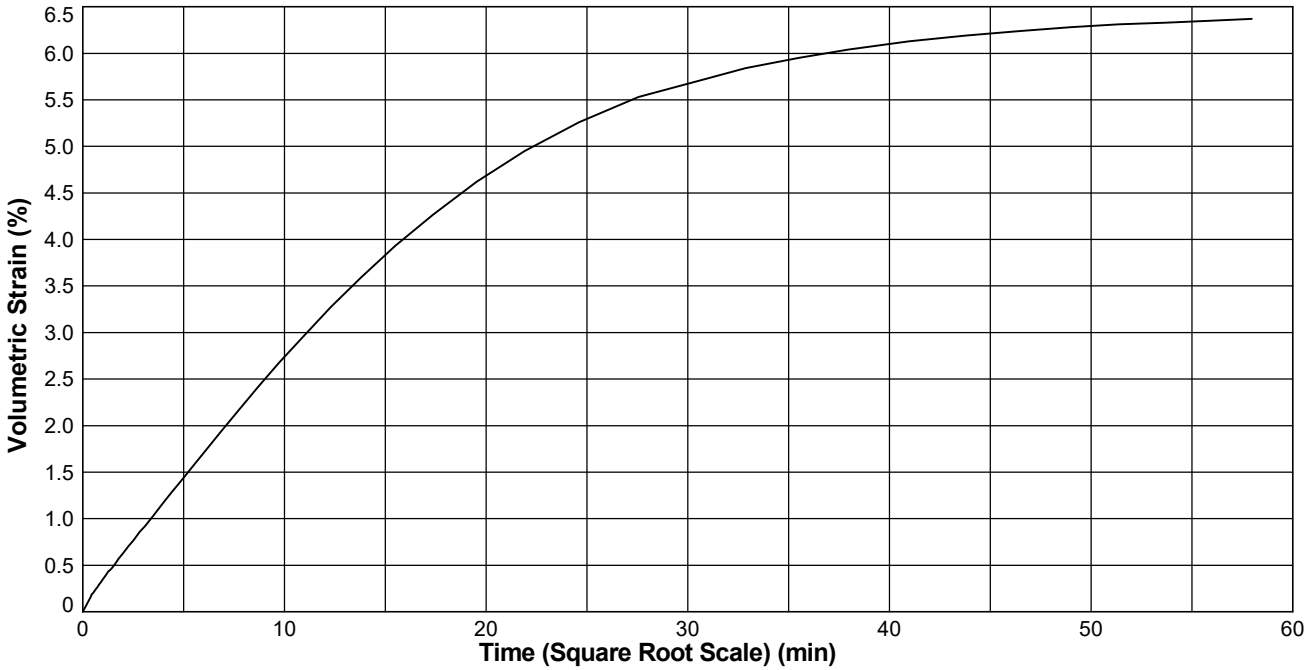
Position ID: **F22-BH501** Sample Ref: **72** Sample Type: **UT** Depth (m): **22.16**

CONSOLIDATION



Key: PWP (Base):

CONSOLIDATION



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	Contract **Sealink Friston**	Contract Ref: **563835**	

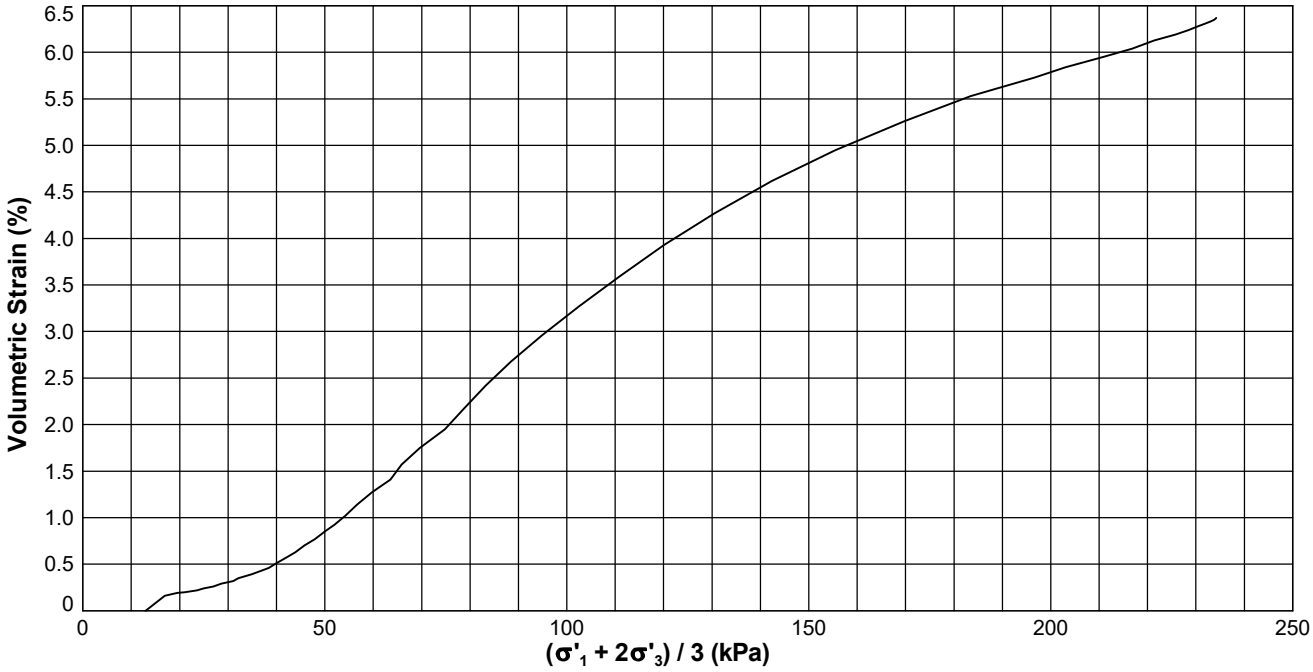
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ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

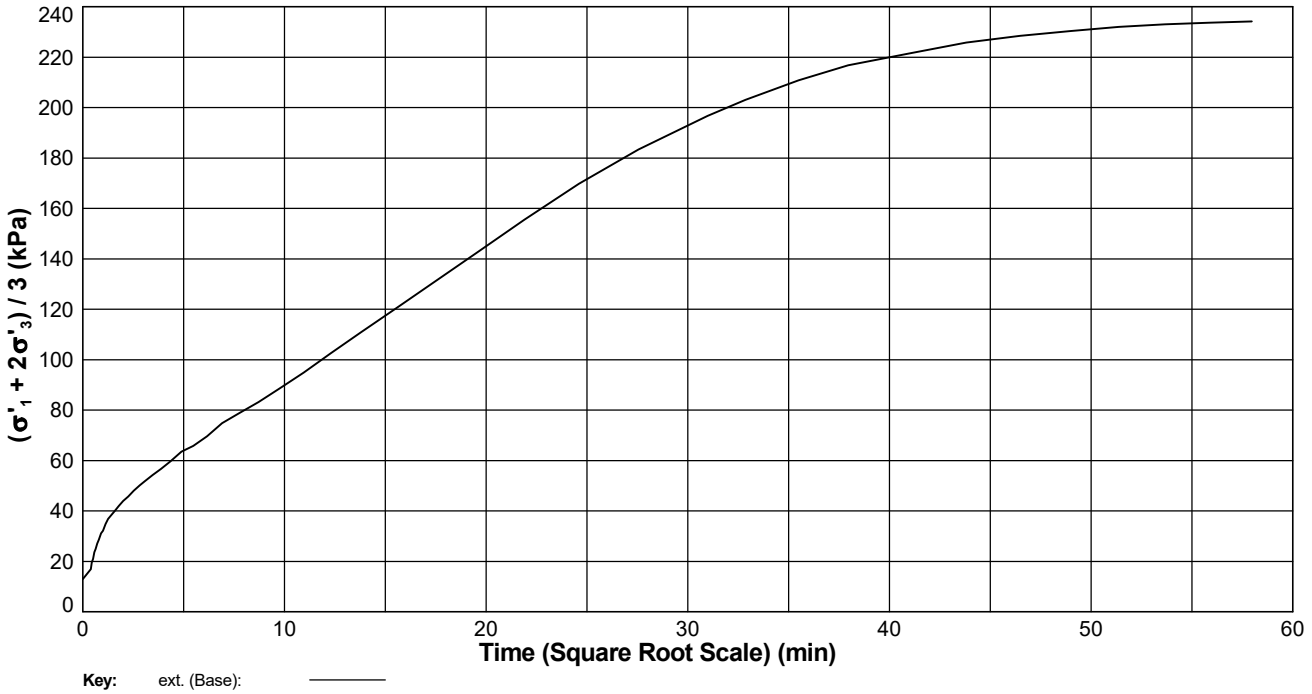
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Position ID: **F22-BH501** Sample Ref: **72** Sample Type: **UT** Depth (m): **22.16**

CONSOLIDATION



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Contract: **Sealink Friston**		Contract Ref: **563835**

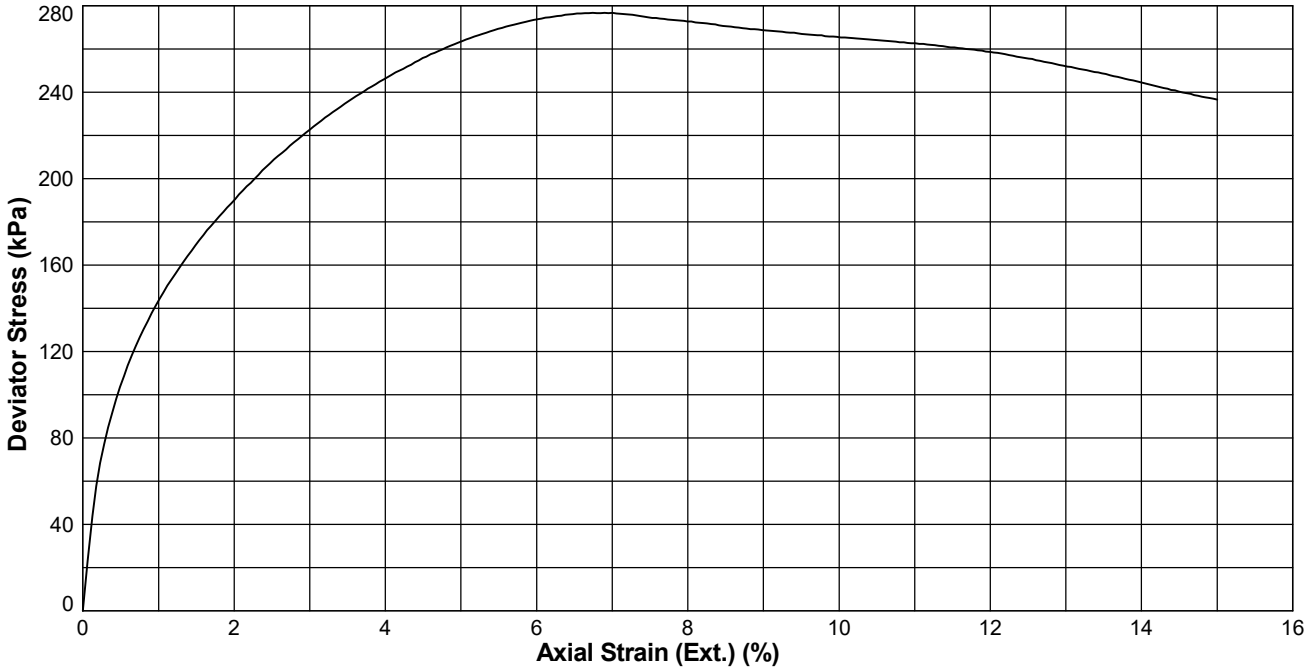
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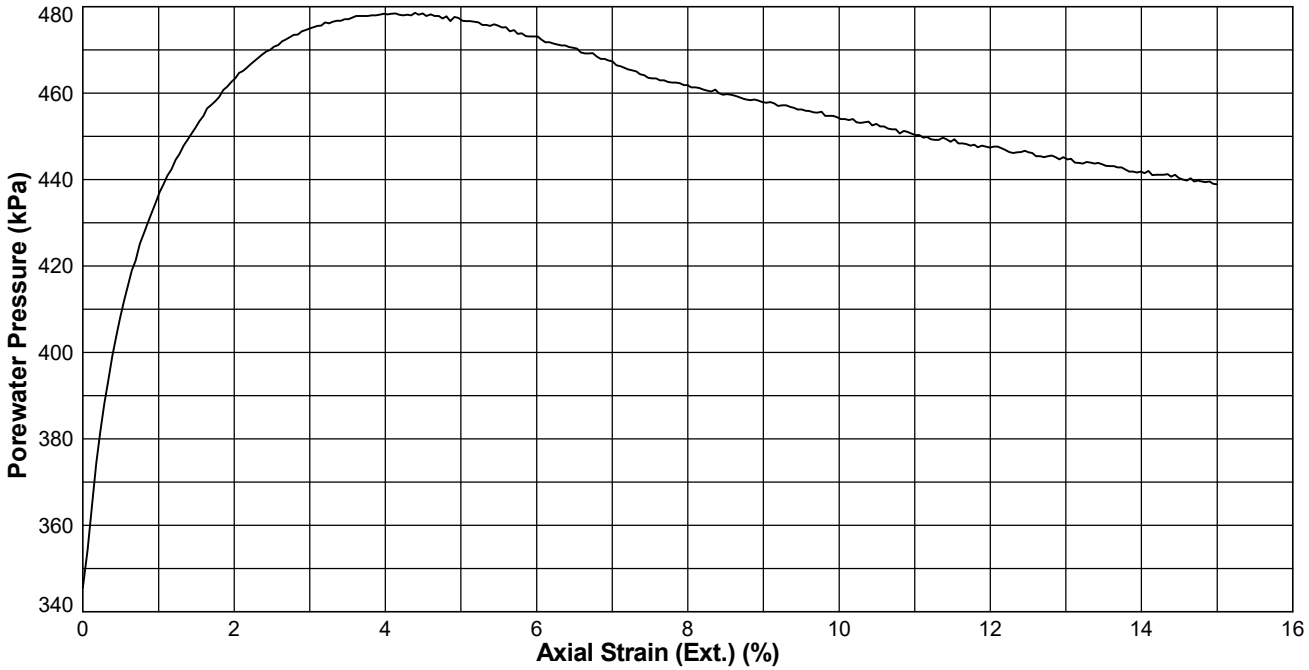
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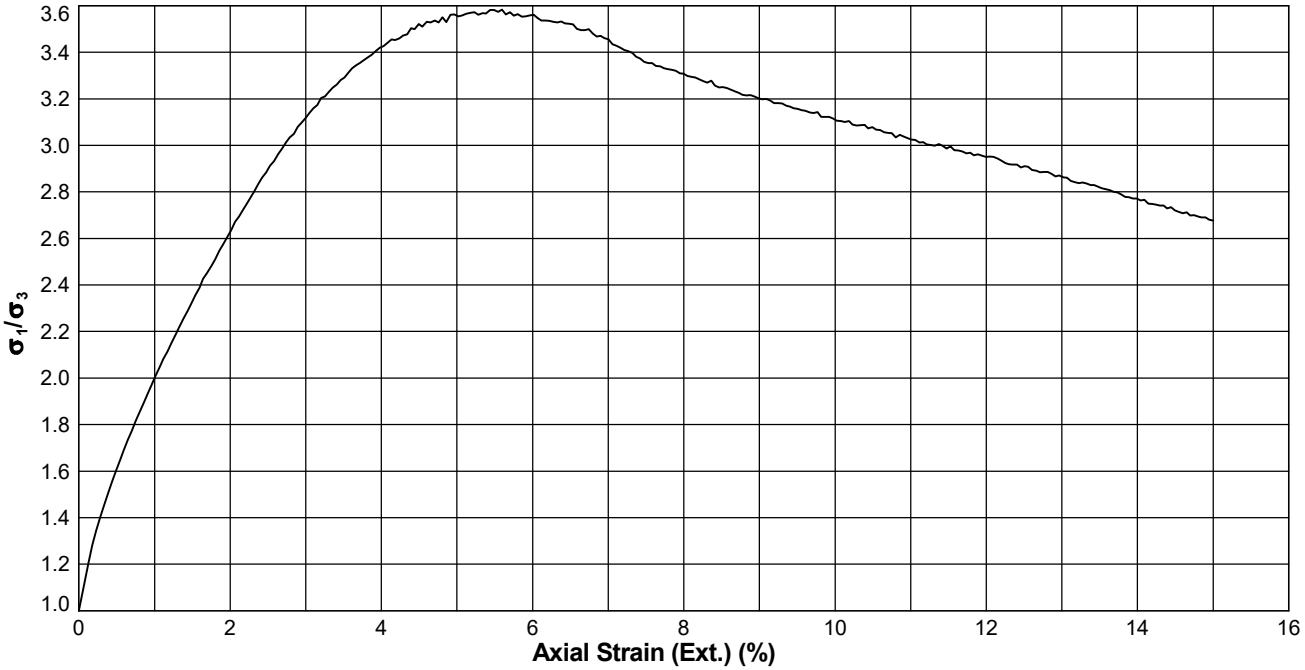
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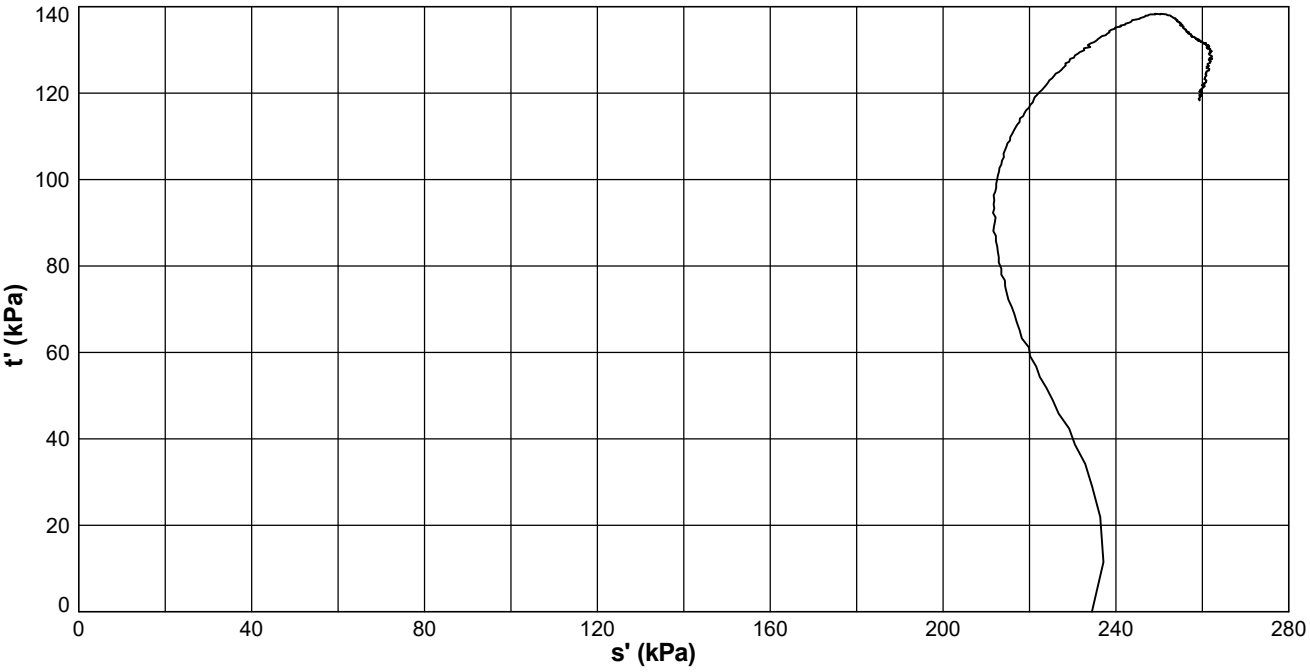
Position ID: **F22-BH501** Sample Ref: **72** Sample Type: **UT** Depth (m): **22.16**

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ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

In accordance with BS EN ISO 17892 Part 9

Borehole : **F22-BH502A** Sample Ref : **77** Sample Type : **UT** Depth (m) : **20.54**

Description : **Grey slightly sandy silty CLAY**

Condition : **Undisturbed.**

Saturation Type : **Back Pressure.** Side Drains : **Y.**

SPECIMEN DETAILS			
Initial Diameter (mm)	102.56		
Initial Height (mm)	198.95		
Initial Mass (g)	2877.46		
Sample Orientation	Vertical		
Initial Water Content (%)	49.3		
Initial Bulk Density (Mg/m^3)	1.75		
Initial Dry Density (Mg/m^3)	1.17		
Initial Voids Ratio	1.2113		
Initial B-Value	0.72		
Final Water Content (%)	49.7		
Final Bulk Density (Mg/m^3)	1.81		
Final Dry Density (Mg/m^3)	1.21		
SATURATION			
Duration (days)	2		
Final B-Value	0.95		
Voids Ratio	1.2113		
CONSOLIDATION			
Stage	1		
Duration (days)	1		
Cell Pressure (kPa)	460		
Back Pressure (kPa)	340		
Initial Volume (cm^3)	1644		
Final Volume (cm^3)	1598		
Voids Ratio	1.1496		
Effective Major Principal Stress (kPa)	119		
Effective Minor Principal Stress (kPa)	119		
Ext. Axial Strain (%)	-		
Ext. Volumetric Strain (%)	2.79		

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Contract:	Contract Ref:
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GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | GrfcTbl L - EFFECTIVE STRESS - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01. | 20/03/24 - 11:12 | AF3 |

ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

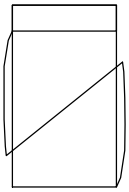
In accordance with BS EN ISO 17892 Part 9

Borehole : **F22-BH502A** Sample Ref : **77** Sample Type : **UT** Depth (m) : **20.54**

Description : **Grey slightly sandy silty CLAY**

Condition : **Undisturbed.**

Saturation Type : **Back Pressure.** Side Drains : **Y.**

COMPRESSION			
Duration (days)	1		
Cell Pressure (kPa)	460		
Initial Porewater Pressure (kPa)	341		
Strain Rate (mm/min)			
Failure Criteria	Maximum Deviator Stress		
Axial Strain at Failure (%)	4.04		
Time to Failure (h)	13.0		
Deviator Stress at Failure (kPa)	219		
Vertical Membrane Correction at Failure (kPa)	1.067		
Horizontal Membrane Correction at Failure (kPa)	0.200		
Side Drain Correction at Failure (kPa)	3.740		
Porewater Pressure at Failure (kPa)	404		
Effective Major Principal Stress (kPa)	276		
Effective Minor Principal Stress (kPa)	56		
Effective Principal Stress Ratio	4.89		
Pore Pressure Coefficient - A_f	0.28		
Mode of Failure Brittle (shear plane)			

Effective Cohesion (kPa) : **NA**	Angle of Shear Resistance (degs) : **NA**

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Contract: **Sealink Friston**	Contract Ref: **563835**

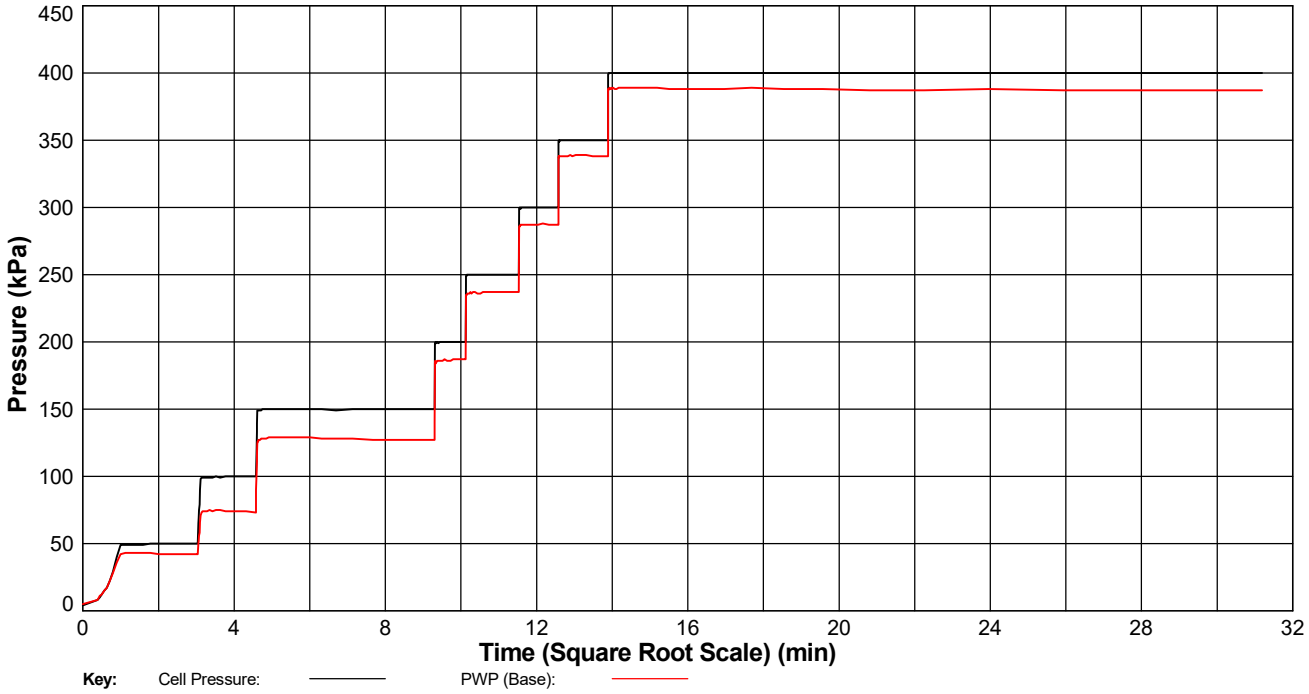
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ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

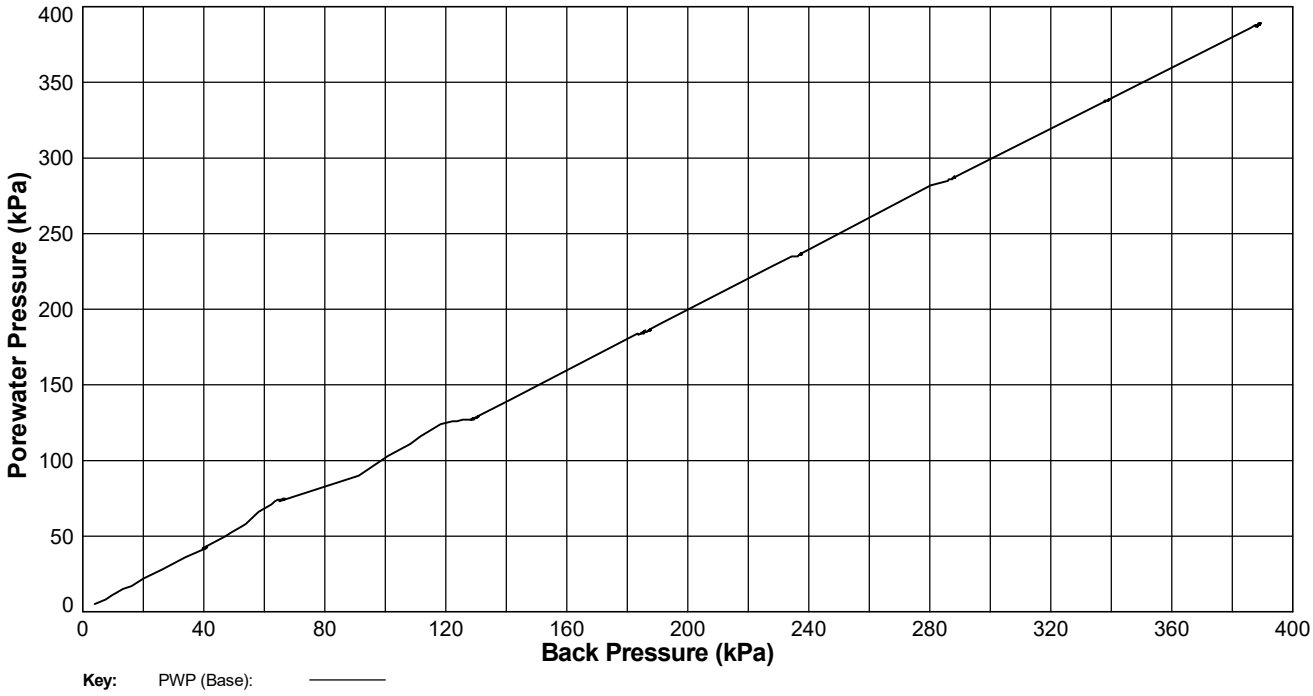
In accordance with BS EN ISO 17892 Part 9

Position ID: **F22-BH502A** Sample Ref: **77** Sample Type: **UT** Depth (m): **20.54**

SATURATION



SATURATION



STRUCTURAL SOILS 1a Princess Street Bedminster Bristol BS3 4AG	Compiled By		Date
	[redacted]	[redacted]	20/03/24
	Contract **Sealink Friston**	Contract Ref: **563835**	

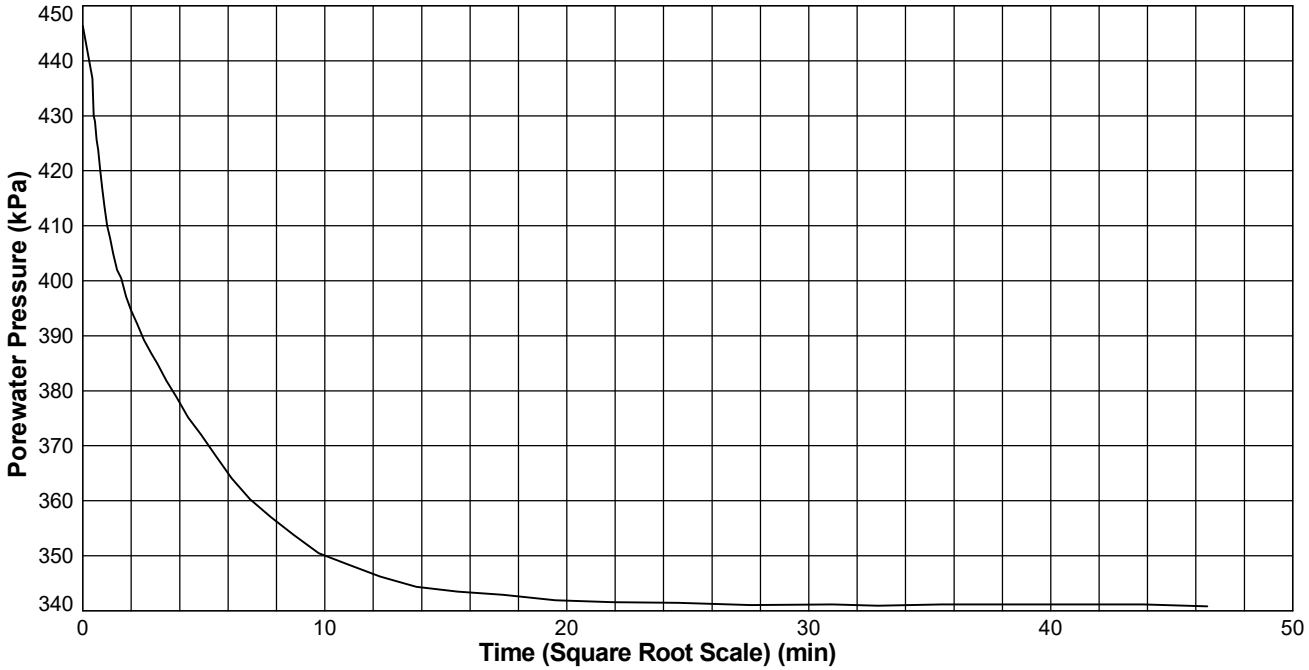
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In accordance with BS EN ISO 17892 Part 9

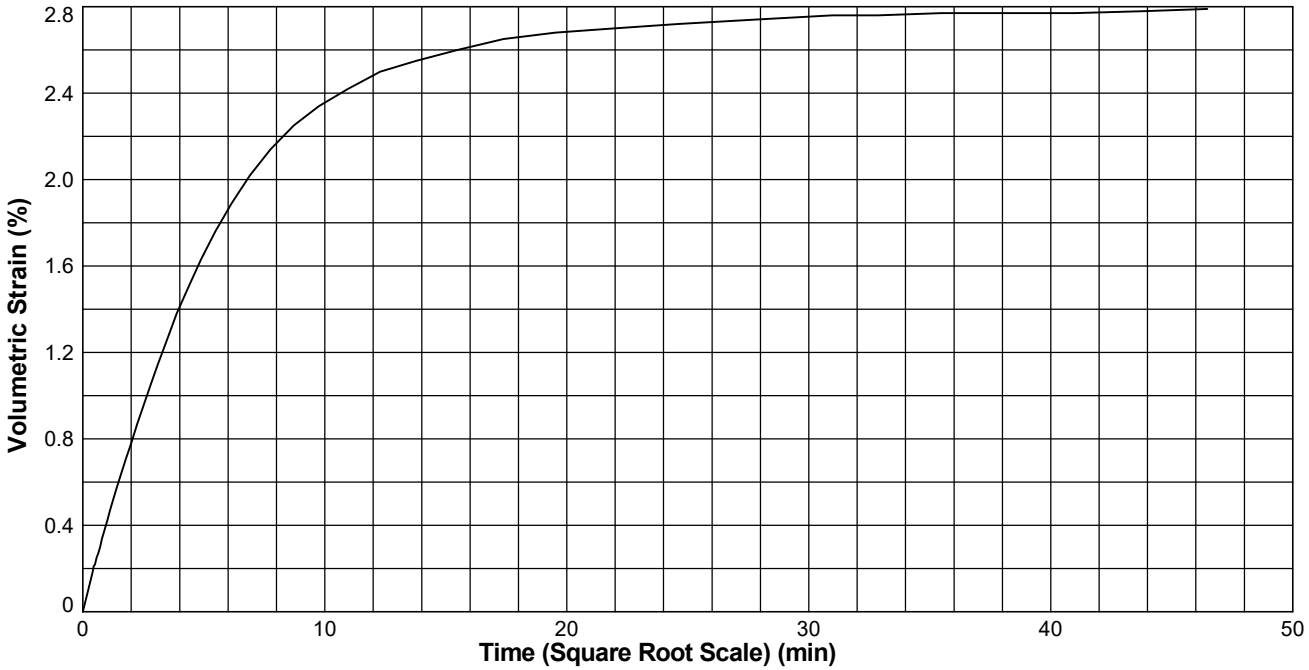
Position ID: **F22-BH502A** Sample Ref: **77** Sample Type: **UT** Depth (m): **20.54**

CONSOLIDATION



Key: PWP (Base):

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	Contract **Sealink Friston**	Contract Ref: **563835**

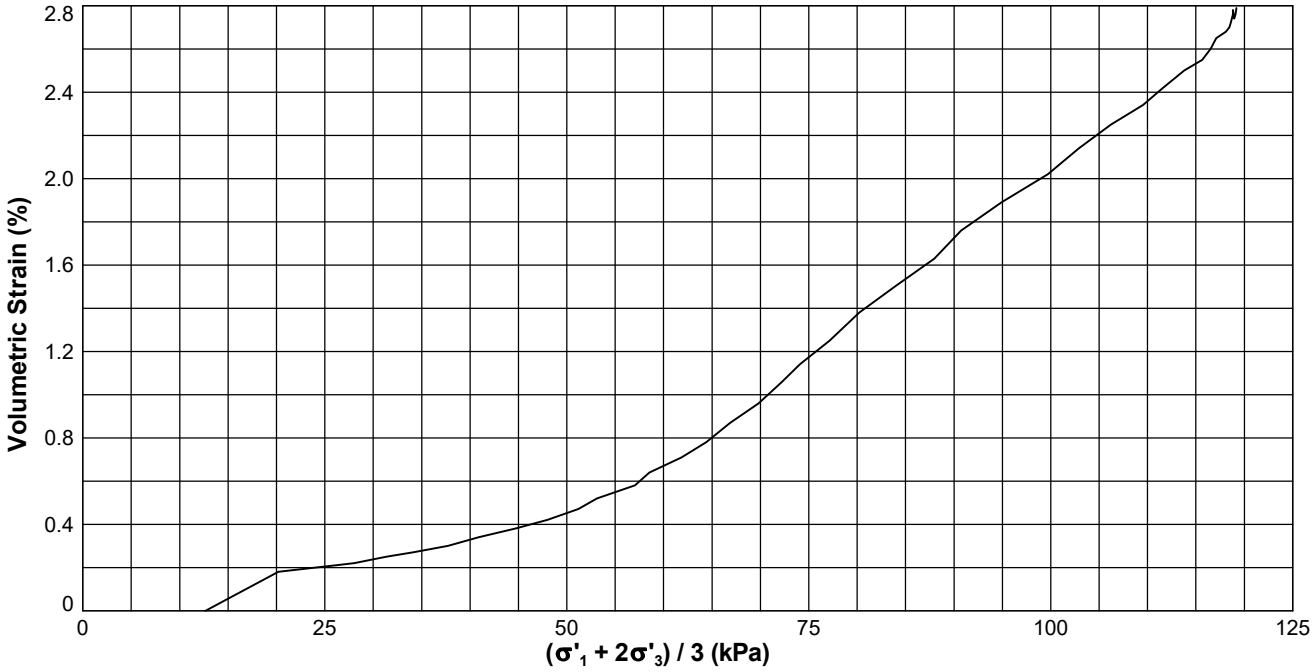
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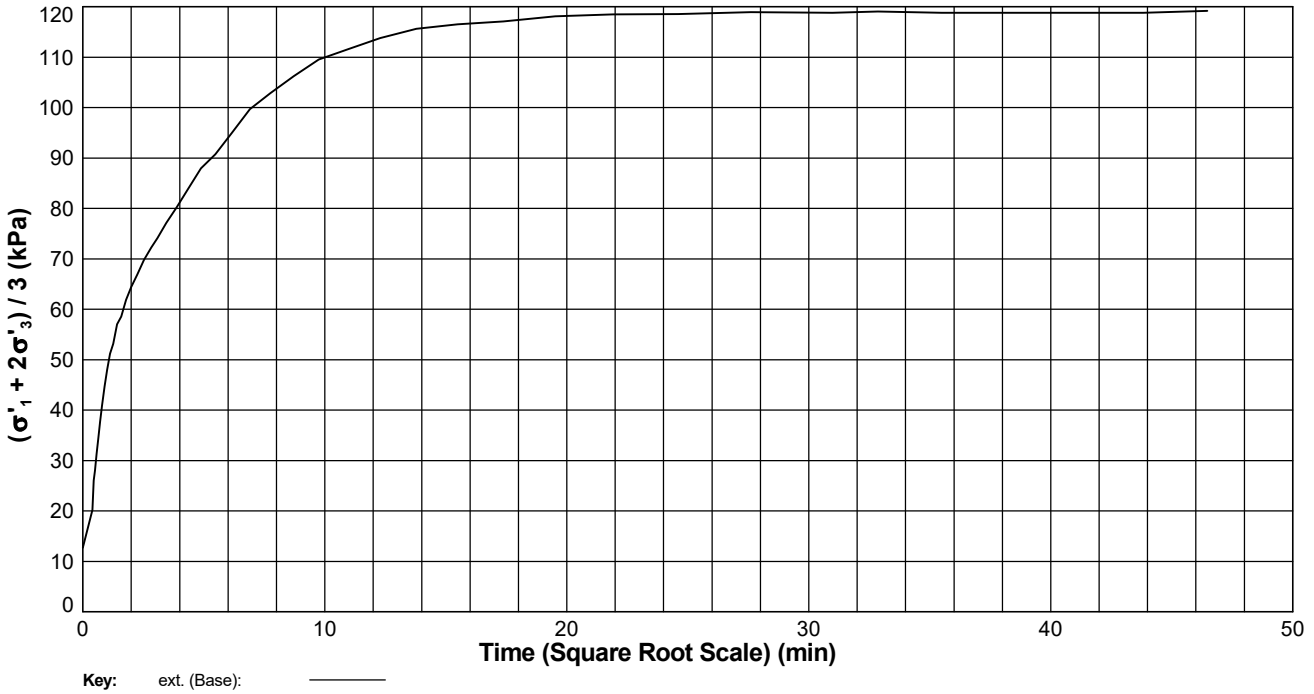
In accordance with BS EN ISO 17892 Part 9

Position ID: **F22-BH502A** Sample Ref: **77** Sample Type: **UT** Depth (m): **20.54**

CONSOLIDATION



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	Contract **Sealink Friston**	Contract Ref: **563835**	

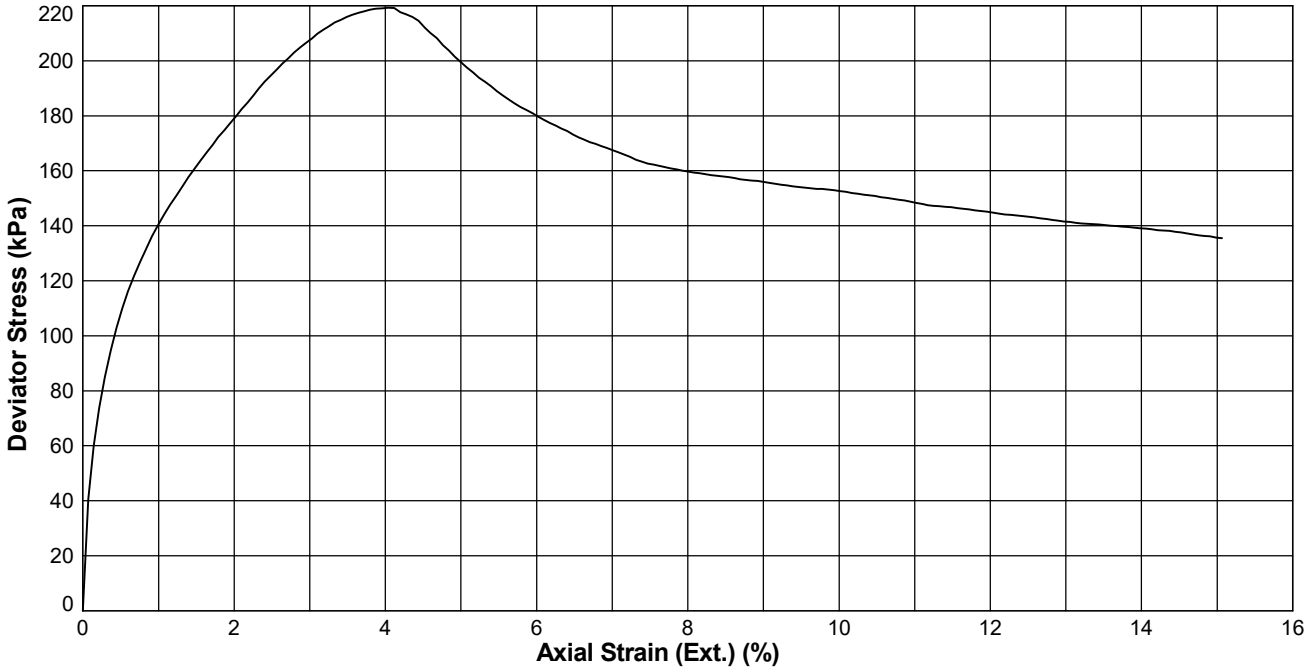
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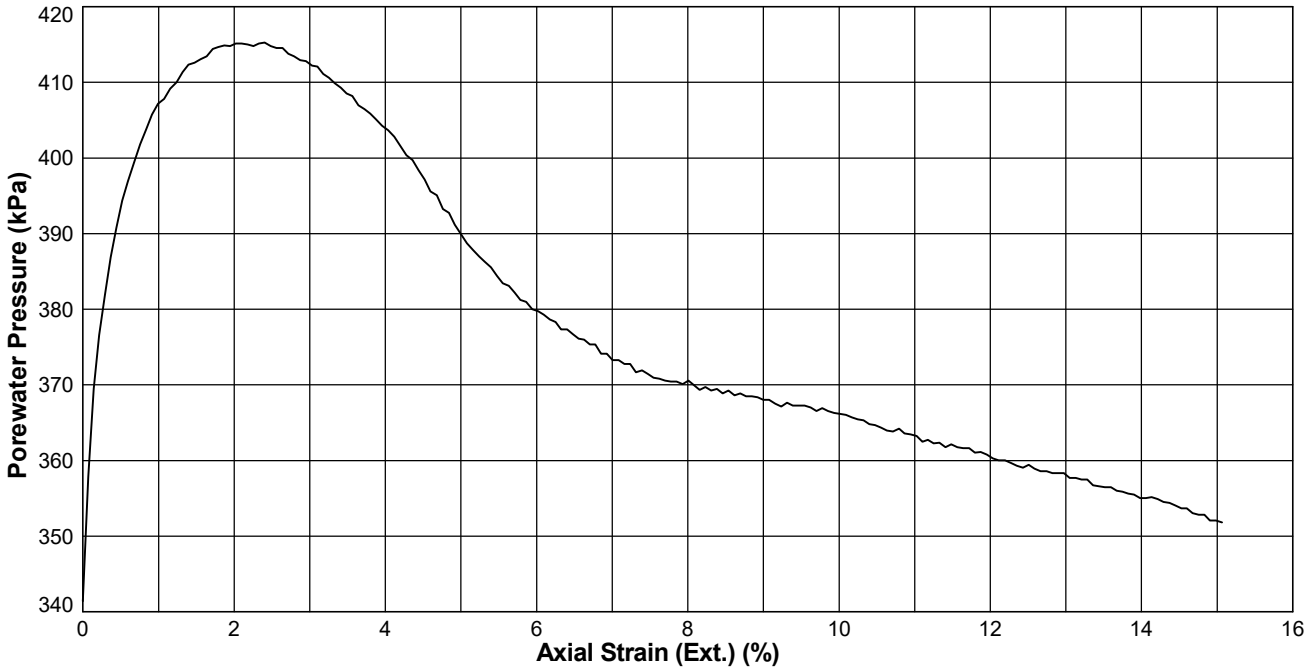
Position ID: **F22-BH502A** Sample Ref: **77** Sample Type: **UT** Depth (m): **20.54**

SHEAR



Key: ext.: ————

SHEAR



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1a Princess Street
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Contract: **Sealink Friston**		Contract Ref: **563835**

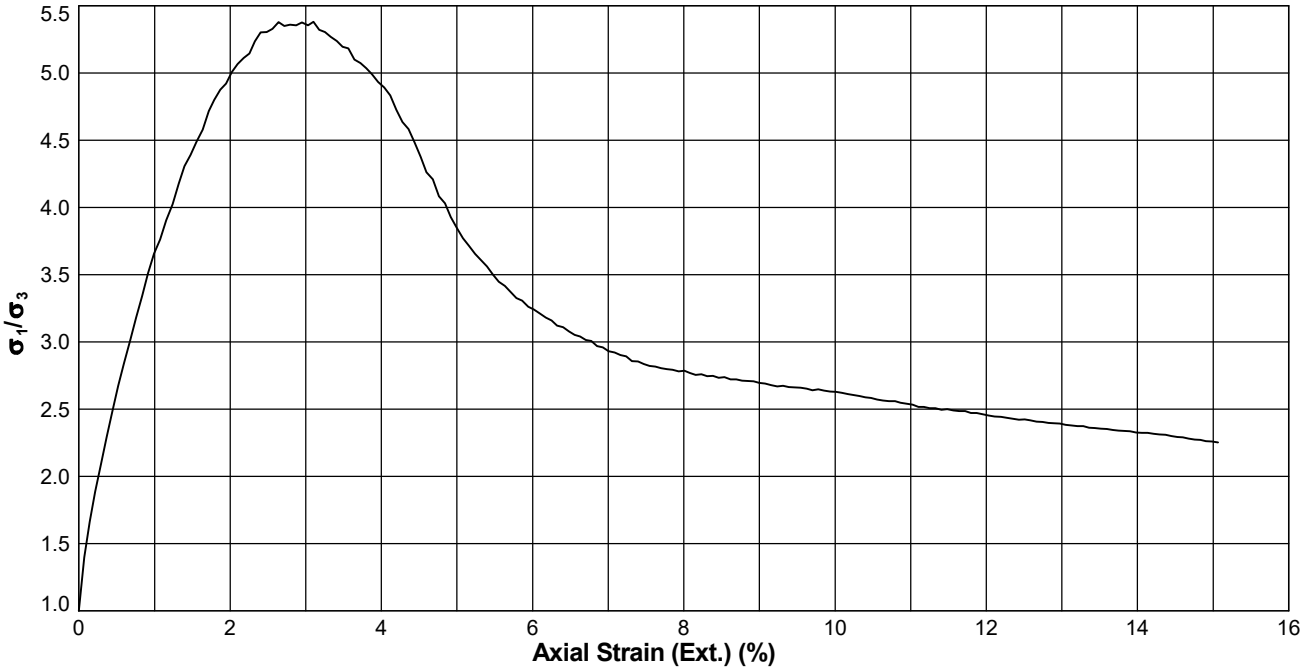
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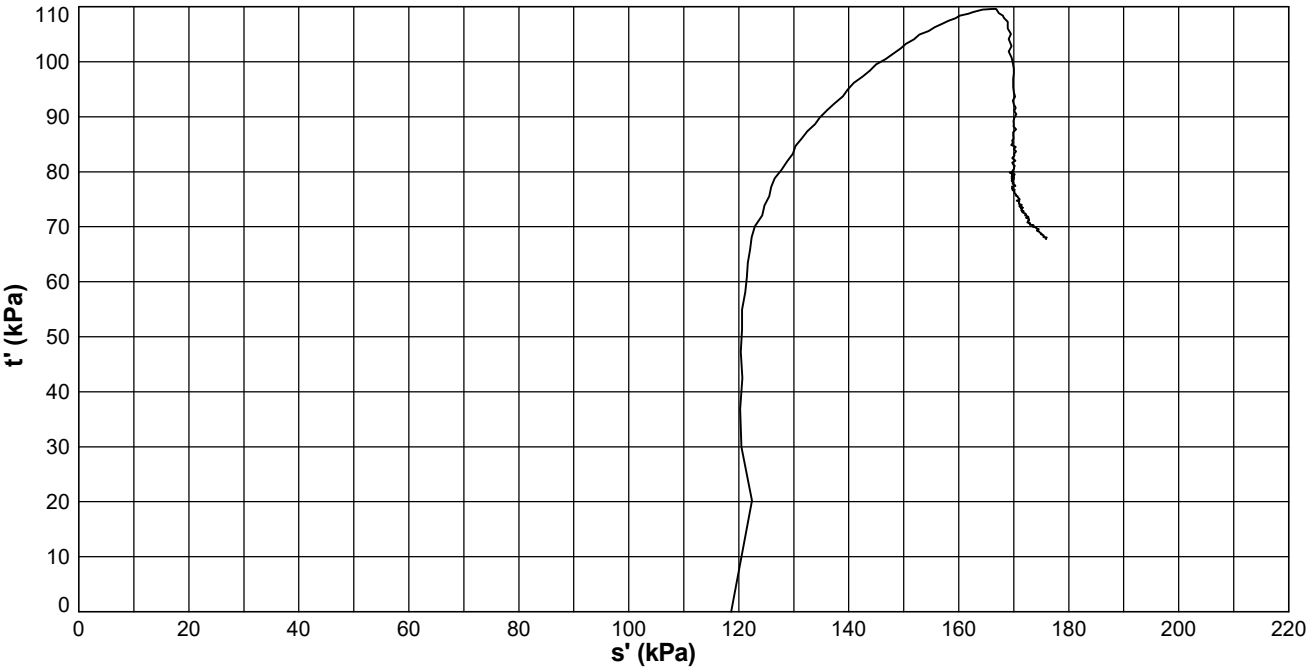
Position ID: **F22-BH502A** Sample Ref: **77** Sample Type: **UT** Depth (m): **20.54**

SHEAR



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Contract: **Sealink Friston**		Contract Ref: **563835**

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ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

In accordance with BS EN ISO 17892 Part 9

Borehole : **F22-BH502A** Sample Ref : **84** Sample Type : **UT** Depth (m) : **22.60**

Description : **Grey slightly sandy silty CLAY**

Condition : **Undisturbed.**

Saturation Type : **Back Pressure.** Side Drains : **Y.**

SPECIMEN DETAILS			
Initial Diameter (mm)	103.17		
Initial Height (mm)	199.37		
Initial Mass (g)	3001.99		
Sample Orientation	Vertical		
Initial Water Content (%)	44.7		
Initial Bulk Density (Mg/m^3)	1.80		
Initial Dry Density (Mg/m^3)	1.25		
Initial Voids Ratio	1.0820		
Initial B-Value	0.73		
Final Water Content (%)	40.6		
Final Bulk Density (Mg/m^3)	1.89		
Final Dry Density (Mg/m^3)	1.34		
SATURATION			
Duration (days)	2		
Final B-Value	0.98		
Voids Ratio	1.082		
CONSOLIDATION			
Stage	1		
Duration (days)	2		
Cell Pressure (kPa)	820		
Back Pressure (kPa)	340		
Initial Volume (cm^3)	1667		
Final Volume (cm^3)	1548		
Voids Ratio	0.9338		
Effective Major Principal Stress (kPa)	465		
Effective Minor Principal Stress (kPa)	465		
Ext. Axial Strain (%)	-		
Ext. Volumetric Strain (%)	7.12		

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Contract:	Contract Ref:
Sealink Friston	**563835**

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ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

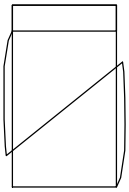
In accordance with BS EN ISO 17892 Part 9

Borehole : **F22-BH502A** Sample Ref : **84** Sample Type : **UT** Depth (m) : **22.60**

Description : **Grey slightly sandy silty CLAY**

Condition : **Undisturbed.**

Saturation Type : **Back Pressure.** Side Drains : **Y.**

COMPRESSION			
Duration (days)	2		
Cell Pressure (kPa)	820		
Initial Porewater Pressure (kPa)	353		
Strain Rate (mm/min)	0.00676		
Failure Criteria	Maximum Deviator Stress		
Axial Strain at Failure (%)	3.77		
Time to Failure (h)	17.8		
Deviator Stress at Failure (kPa)	423		
Vertical Membrane Correction at Failure (kPa)	1.452		
Horizontal Membrane Correction at Failure (kPa)	0.561		
Side Drain Correction at Failure (kPa)	3.776		
Porewater Pressure at Failure (kPa)	638		
Effective Major Principal Stress (kPa)	604		
Effective Minor Principal Stress (kPa)	182		
Effective Principal Stress Ratio	3.33		
Pore Pressure Coefficient - A_f	0.68		
Mode of Failure Brittle (shear plane)			

Effective Cohesion (kPa) : **NA**	Angle of Shear Resistance (degs) : **NA**

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Compiled By	Date
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Contract: **Sealink Friston**	Contract Ref: **563835**

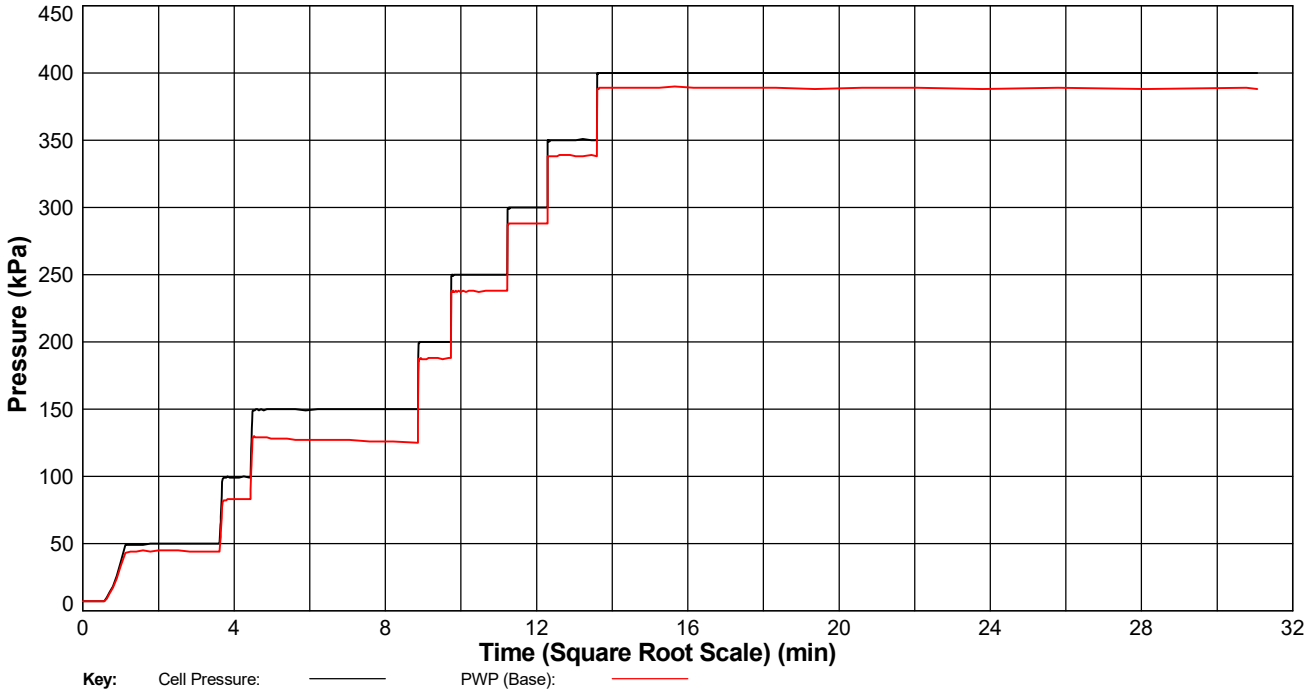
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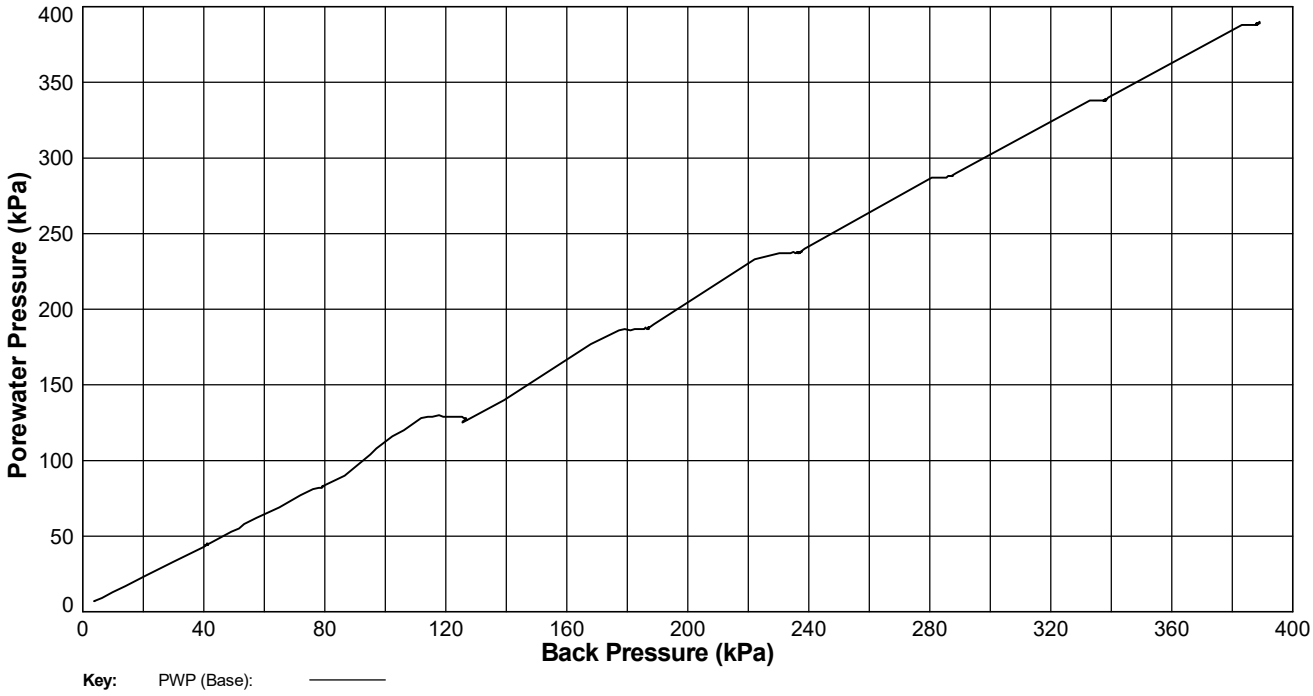
In accordance with BS EN ISO 17892 Part 9

Position ID: **F22-BH502A** Sample Ref: **84** Sample Type: **UT** Depth (m): **22.60**

SATURATION



SATURATION



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	Contract **Sealink Friston**	Contract Ref: **563835**	

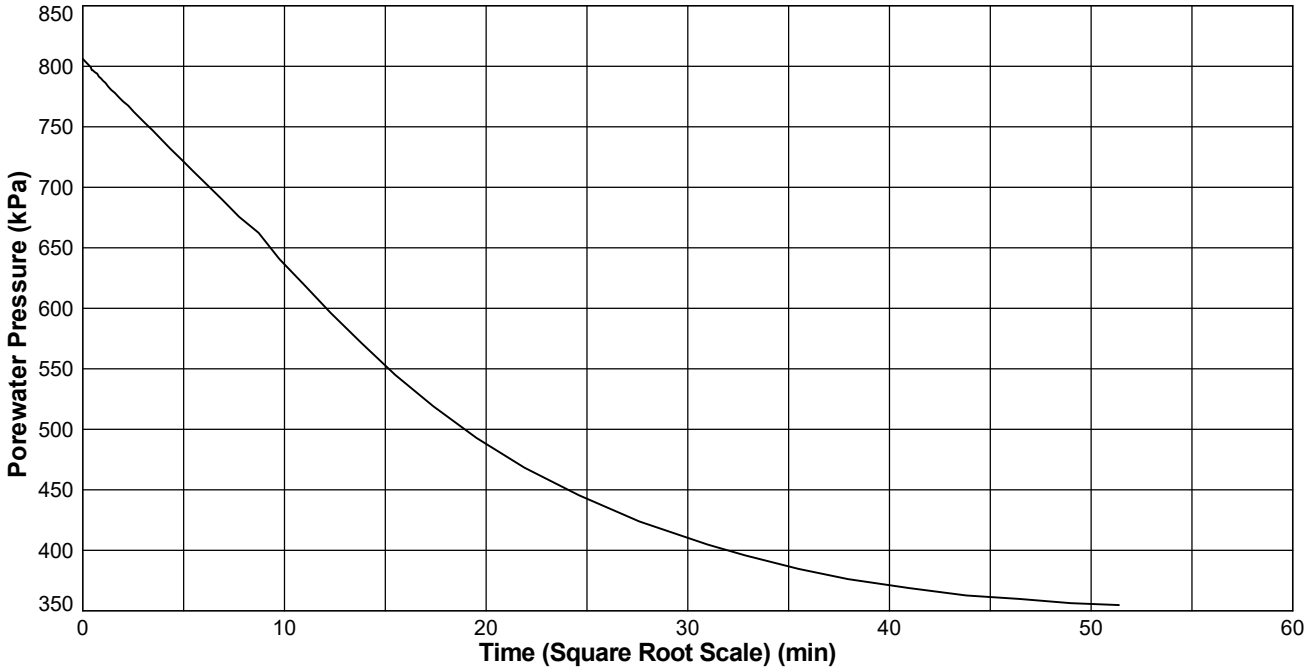
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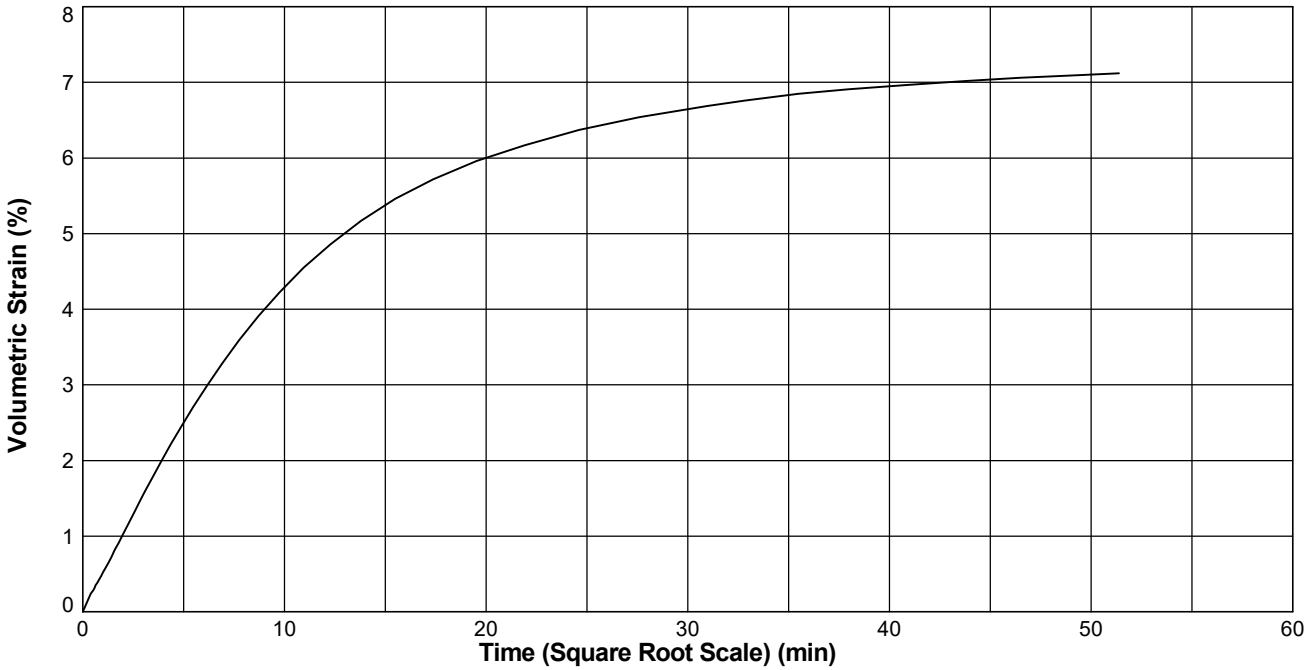
Position ID: **F22-BH502A** Sample Ref: **84** Sample Type: **UT** Depth (m): **22.60**

CONSOLIDATION



Key: PWP (Base):

CONSOLIDATION



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	Contract: **Sealink Friston**	Contract Ref: **563835**

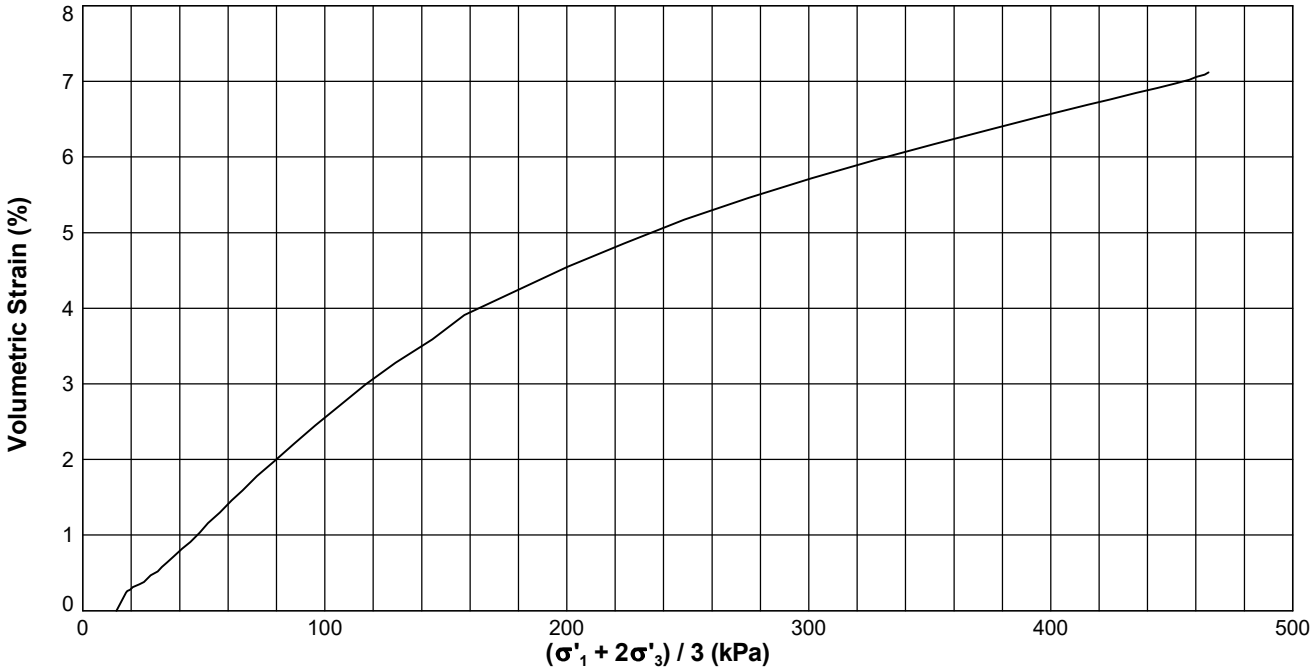
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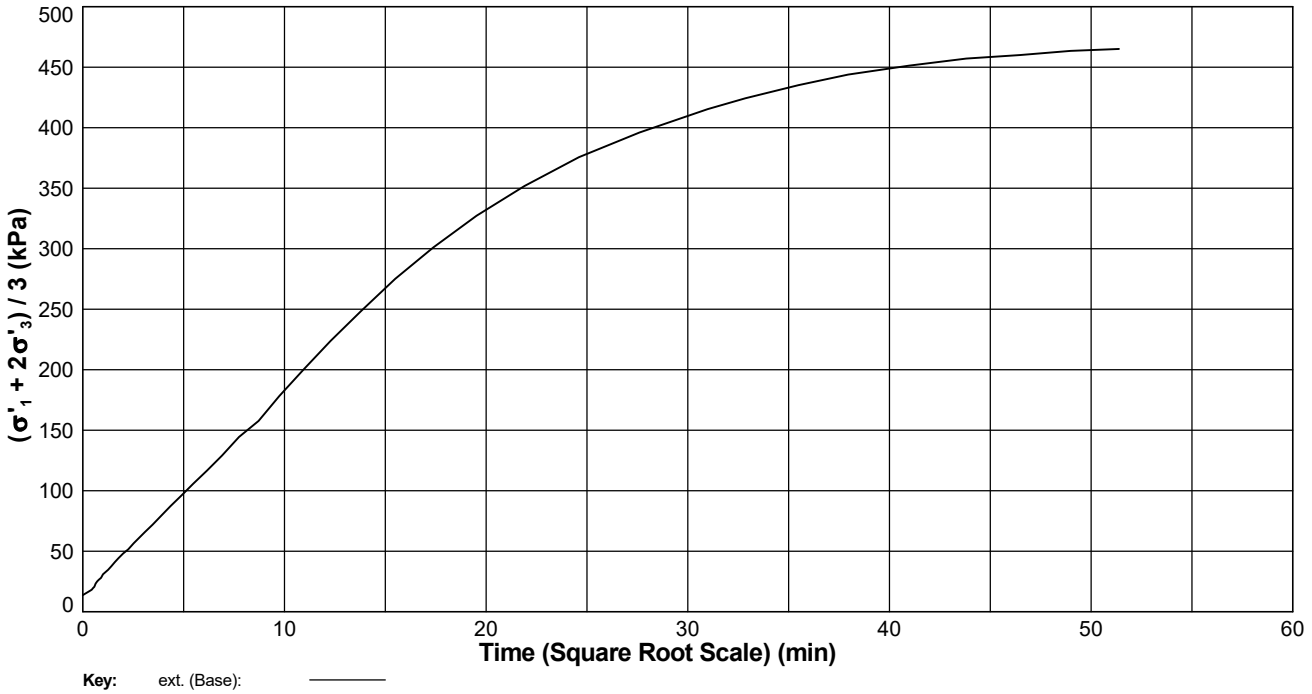
In accordance with BS EN ISO 17892 Part 9

Position ID: **F22-BH502A** Sample Ref: **84** Sample Type: **UT** Depth (m): **22.60**

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1a Princess Street
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Contract: **Sealink Friston**		Contract Ref: **563835**

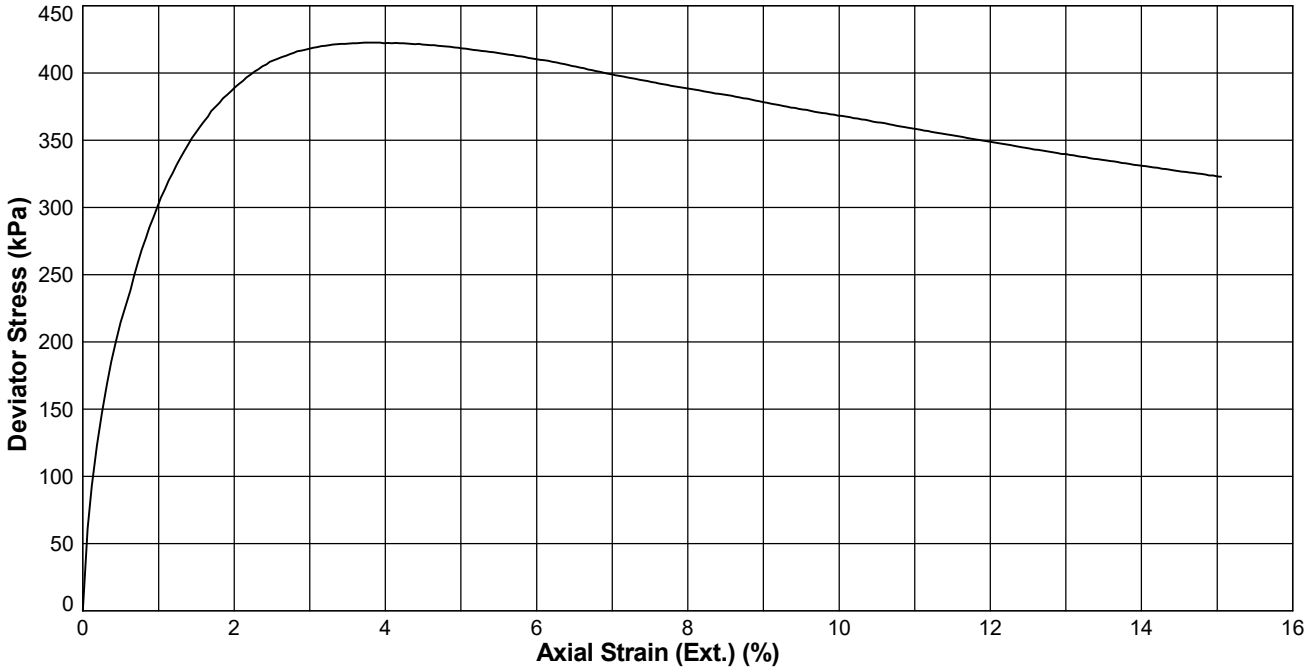
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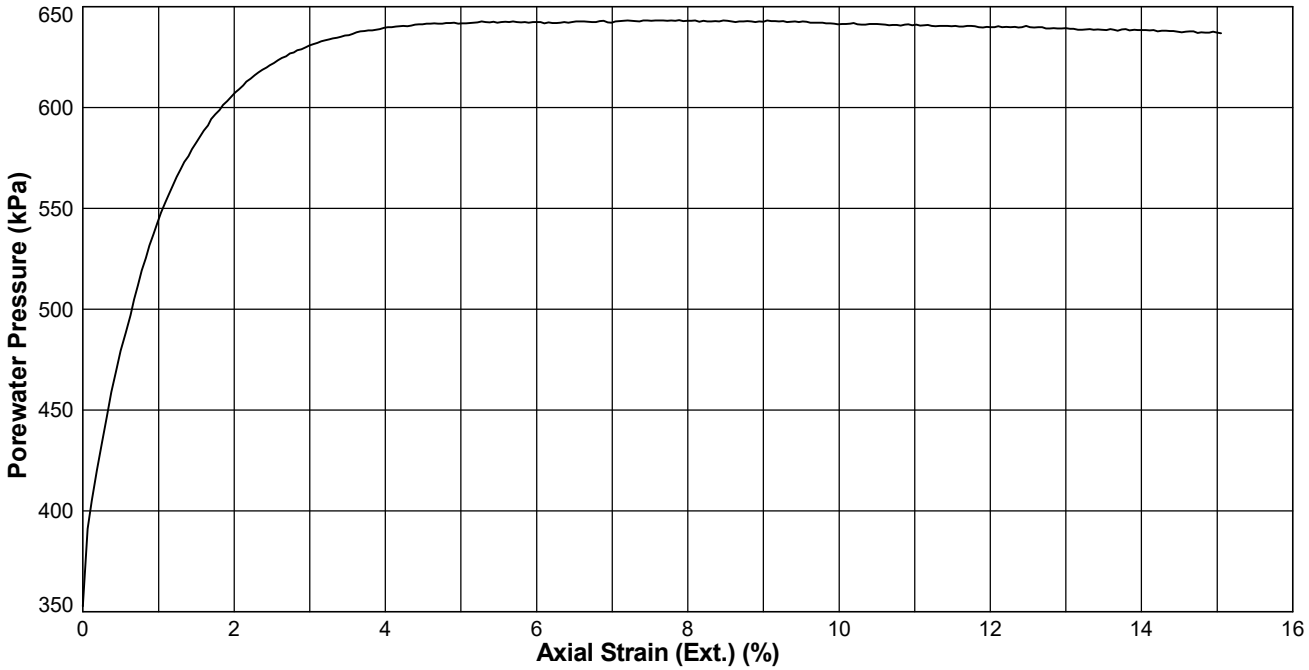
Position ID: **F22-BH502A** Sample Ref: **84** Sample Type: **UT** Depth (m): **22.60**

SHEAR



Key: ext.: ————

SHEAR



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	Contract **Sealink Friston**	Contract Ref: **563835**

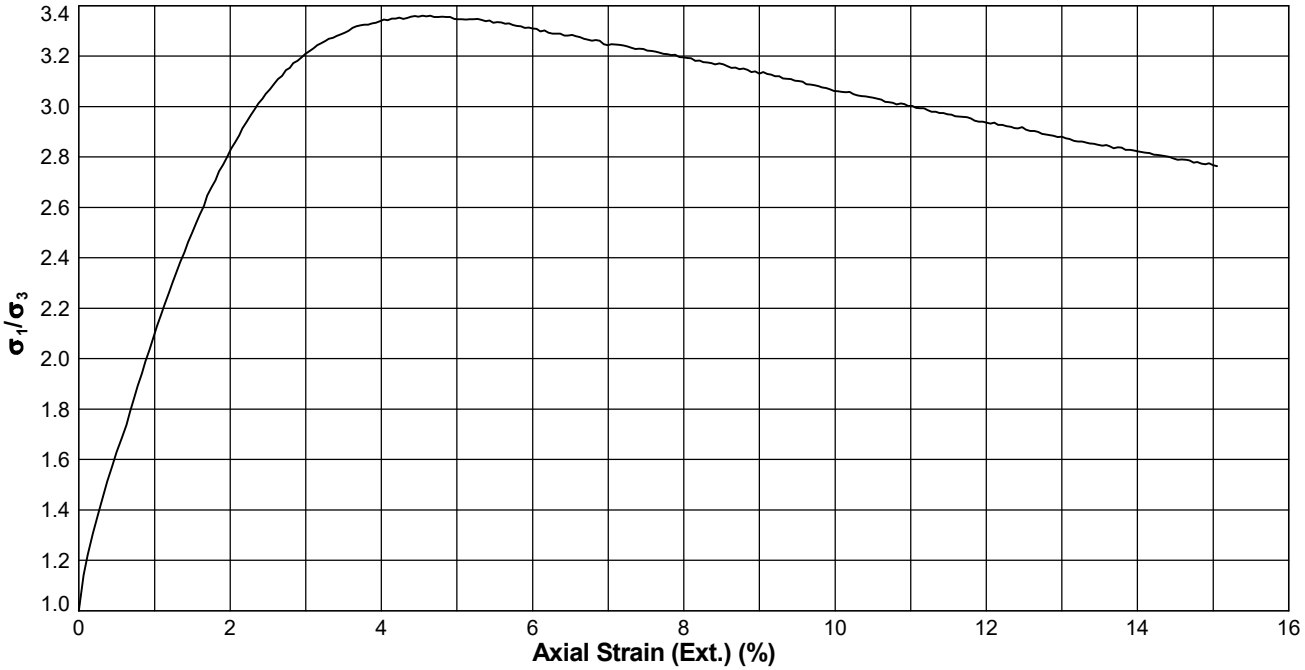
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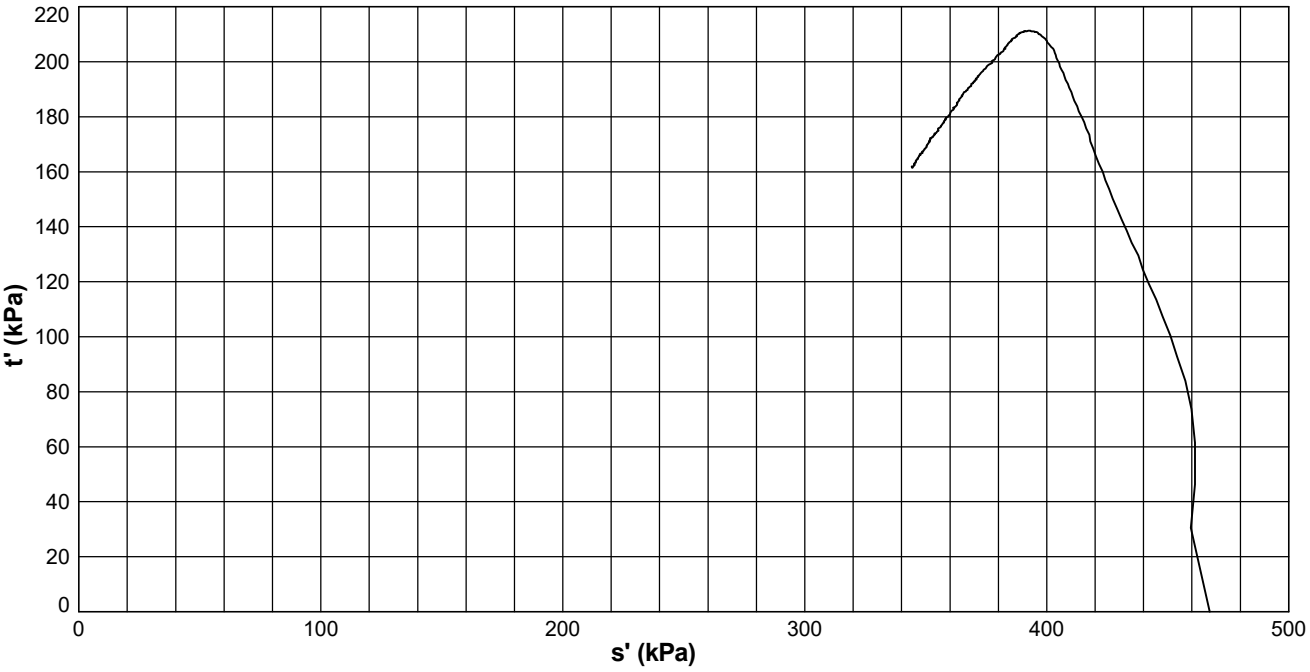
Position ID: **F22-BH502A** Sample Ref: **84** Sample Type: **UT** Depth (m): **22.60**

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	Contract: **Sealink Friston**	Contract Ref: **563835**

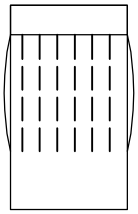
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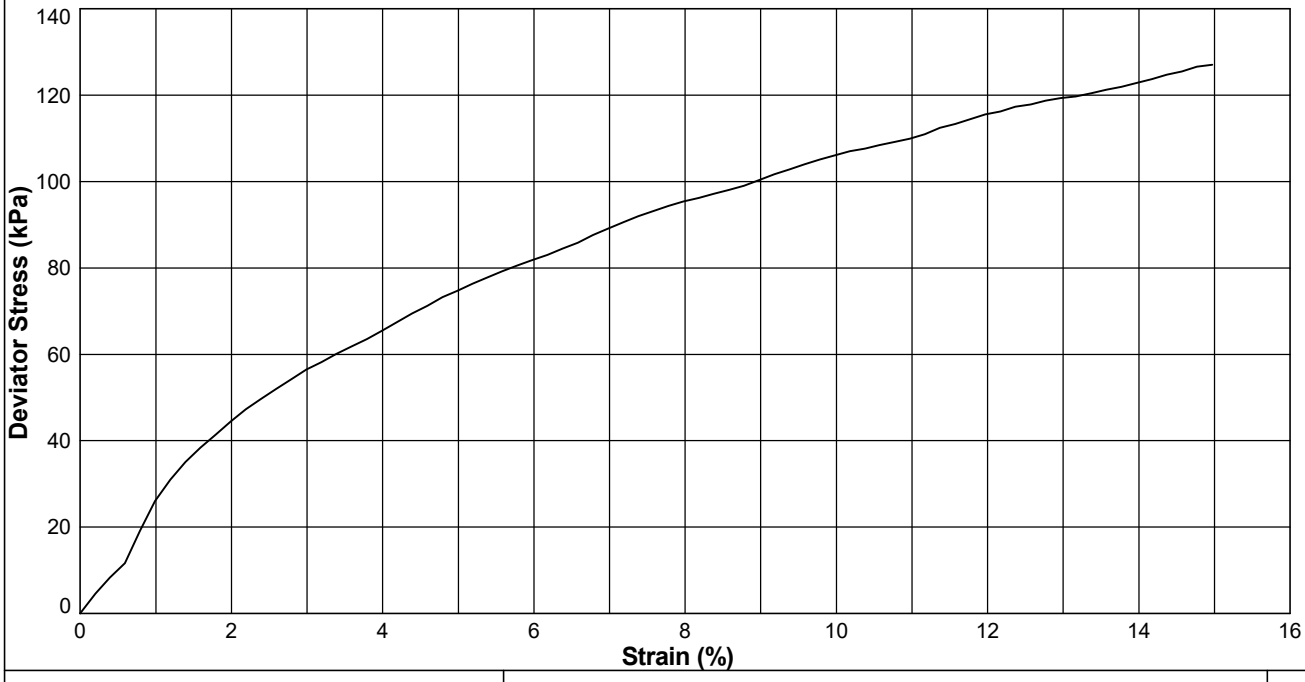
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8

Position ID: **F22-BH203** Sample Ref: **17** Sample Type: **UT** Depth (m): **5.00**

Description : **Orangish brown mottled brown slightly gravelly sandy CLAY**
Non-standard notes : **Failed perpendicularity check**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**103.36**		
	Height	(mm)	**198.98**		
	Water Content	(%)	**13.4**		
	Bulk Density	(Mg/m^3)	**2.23**		
	Dry Density	(Mg/m^3)	**1.97**		
	Void Ratio		**0.3459**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.77**		
	Rate of Axial Displacement	(%/min)	**0.80**		
	Cell Pressure	(kPa)	**100**		
	Membrane Correction	(kPa)	**2.28**		
	Corrected Deviator Stress	(kPa)	**127**		
	Undrained Shear Strength	(kPa)	**64**		
FAILURE DETAILS	Strain at Failure	(%)	**15.0**		
	Mode of Failure 1 : **Semi-plastic (axial splitting with bulging)**				



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18 Frogmore Road
Hemel Hempstead
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HP3 9RT

Compiled By		Date
[redacted]	[redacted]	**05/03/24**

Contract	Contract Ref:
Sealink Friston	**563835**

AGS

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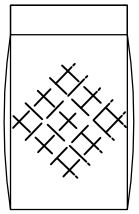
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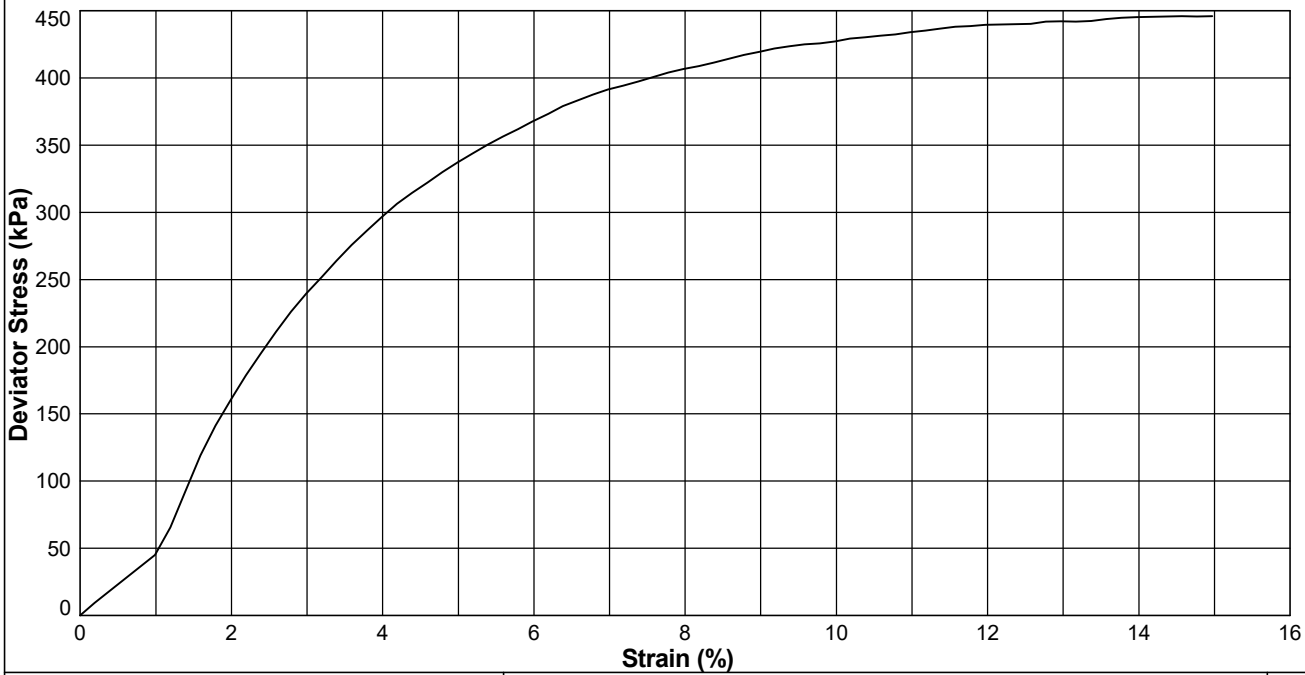
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Position ID: **F22-BH306** Sample Ref: **12** Sample Type: **UT** Depth (m): **3.50**

Description : **Grey mottled white slightly sandy slightly gravelly CLAY**

Non-standard notes : **Failed flatness check**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**103.75**		
	Height	(mm)	**200.32**		
	Water Content	(%)	**19.6**		
	Bulk Density	(Mg/m^3)	**2.09**		
	Dry Density	(Mg/m^3)	**1.75**		
	Void Ratio		**0.5167**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.77**		
	Rate of Axial Displacement	(%/min)	**1.20**		
	Cell Pressure	(kPa)	**70**		
	Membrane Correction	(kPa)	**2.23**		
	Corrected Deviator Stress	(kPa)	**446**		
	Undrained Shear Strength	(kPa)	**223**		
FAILURE DETAILS	Strain at Failure	(%)	**14.6**		
	Mode of Failure 1 : **Semi-plastic (intermediate)**				



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Contract: **Sealink Friston**		Contract Ref: **563835**

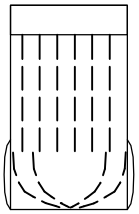
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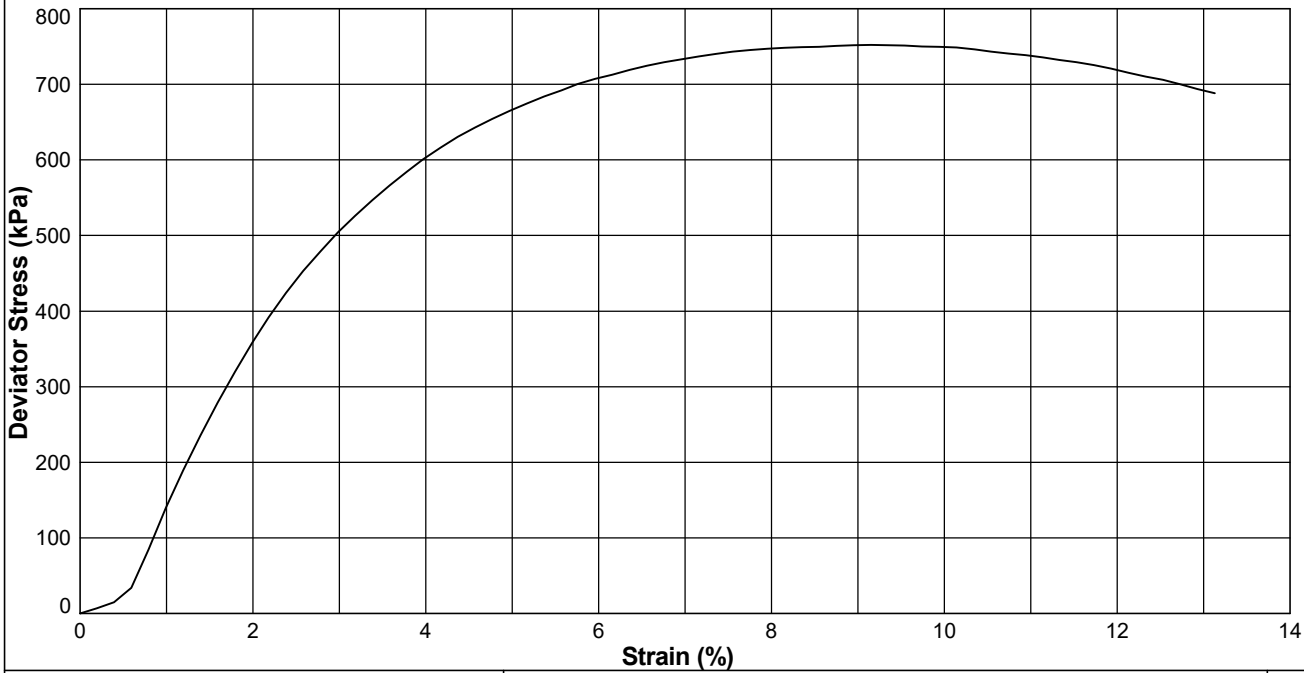
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In accordance with BS EN ISO 17892 Part 8

Position ID: **F22-BH306** Sample Ref: **26** Sample Type: **UT** Depth (m): **7.50**

Description : **Grey mottled white slightly sandy slightly gravelly CLAY**
Non-standard notes : **Failed flatness and perpendicularity checks**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**103.43**		
	Height	(mm)	**208.36**		
	Water Content	(%)	**14.4**		
	Bulk Density	(Mg/m^3)	**2.22**		
	Dry Density	(Mg/m^3)	**1.94**		
	Void Ratio		**0.3627**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.54**		
	Rate of Axial Displacement	(%/min)	**0.72**		
	Cell Pressure	(kPa)	**150**		
	Membrane Correction	(kPa)	**1.12**		
	Corrected Deviator Stress	(kPa)	**752**		
	Undrained Shear Strength	(kPa)	**376**		
FAILURE DETAILS	Strain at Failure	(%)	**9.2**		
	Mode of Failure 1 : **Semi-plastic (bulging, shear & axial splitting)**				



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Contract	Contract Ref:
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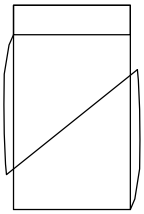
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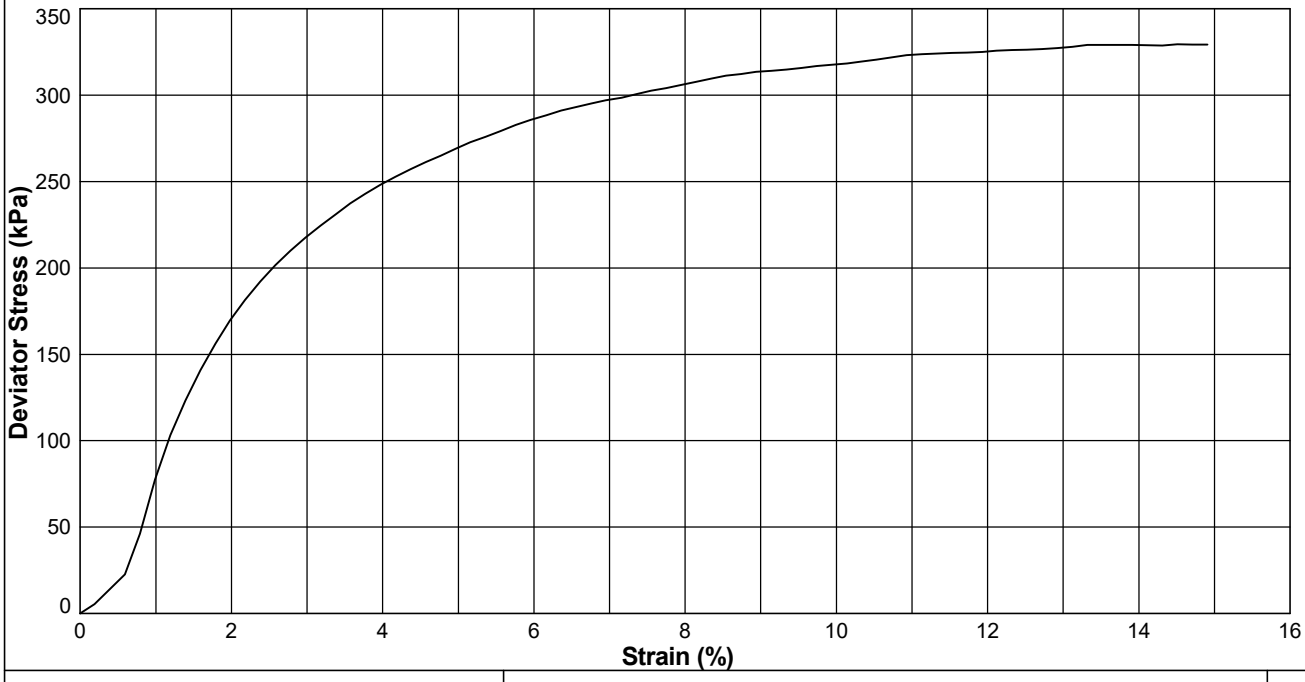
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In accordance with BS EN ISO 17892 Part 8

Position ID: **F22-BH307** Sample Ref: **11** Sample Type: **UT** Depth (m): **3.50**

Description : **Orangish brown mottled white slightly gravelly slightly sandy CLAY**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**103.55**		
	Height	(mm)	**206.88**		
	Water Content	(%)	**20.1**		
	Bulk Density	(Mg/m^3)	**2.11**		
	Dry Density	(Mg/m^3)	**1.75**		
	Void Ratio		**0.5106**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.77**		
	Rate of Axial Displacement	(%/min)	**0.92**		
	Cell Pressure	(kPa)	**70**		
	Membrane Correction	(kPa)	**2.22**		
	Corrected Deviator Stress	(kPa)	**329**		
	Undrained Shear Strength	(kPa)	**165**		
FAILURE DETAILS	Strain at Failure	(%)	**14.5**		
	Mode of Failure 1 : **Brittle (shear plane)**				



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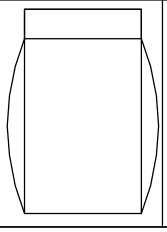
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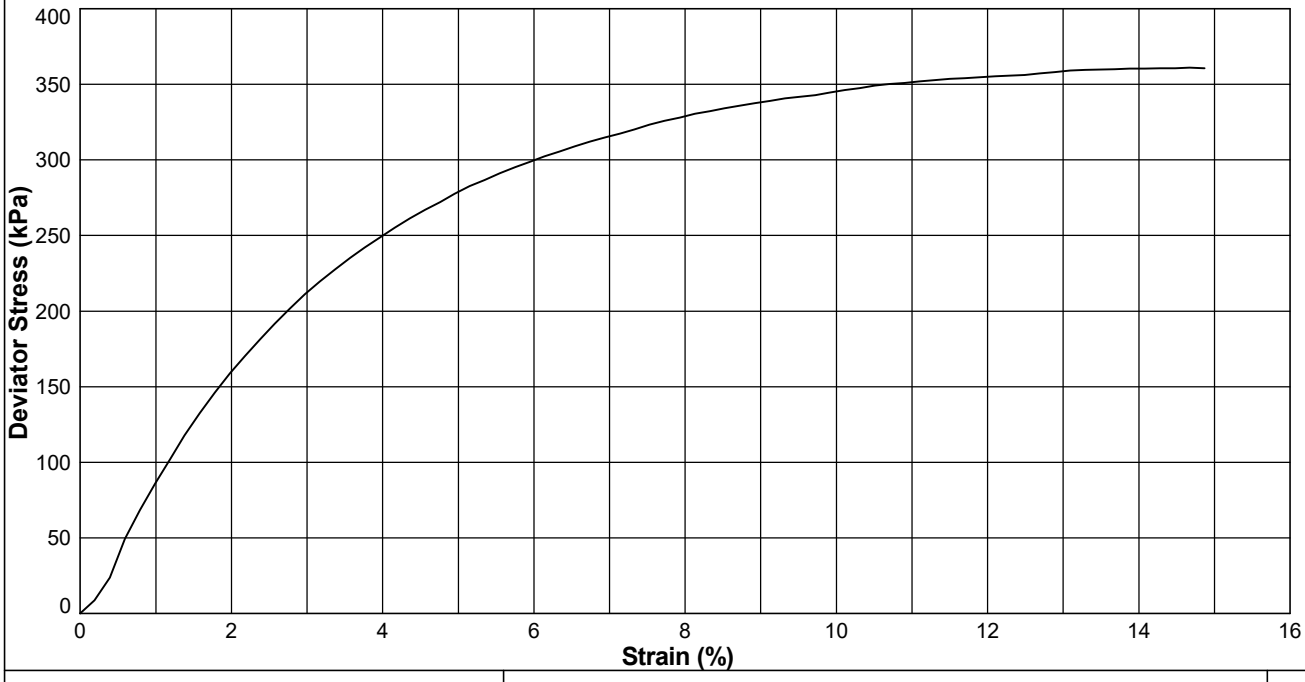
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In accordance with BS EN ISO 17892 Part 8

Position ID: **F22-BH307** Sample Ref: **25** Sample Type: **UT** Depth (m): **7.50**

Description : **Orangish brown mottled white slightly gravelly slightly sandy CLAY**
Non-standard notes : **Failed flatness and perpendicularity checks**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**104.15**		
	Height	(mm)	**191.29**		
	Water Content	(%)	**16.3**		
	Bulk Density	(Mg/m^3)	**2.12**		
	Dry Density	(Mg/m^3)	**1.82**		
	Void Ratio		**0.4558**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.77**		
	Rate of Axial Displacement	(%/min)	**1.15**		
	Cell Pressure	(kPa)	**150**		
	Membrane Correction	(kPa)	**2.23**		
	Corrected Deviator Stress	(kPa)	**361**		
	Undrained Shear Strength	(kPa)	**180**		
FAILURE DETAILS	Strain at Failure	(%)	**14.7**		
	Mode of Failure 1 : **Plastic (Barrelling)**				



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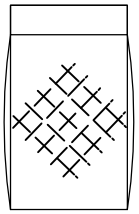
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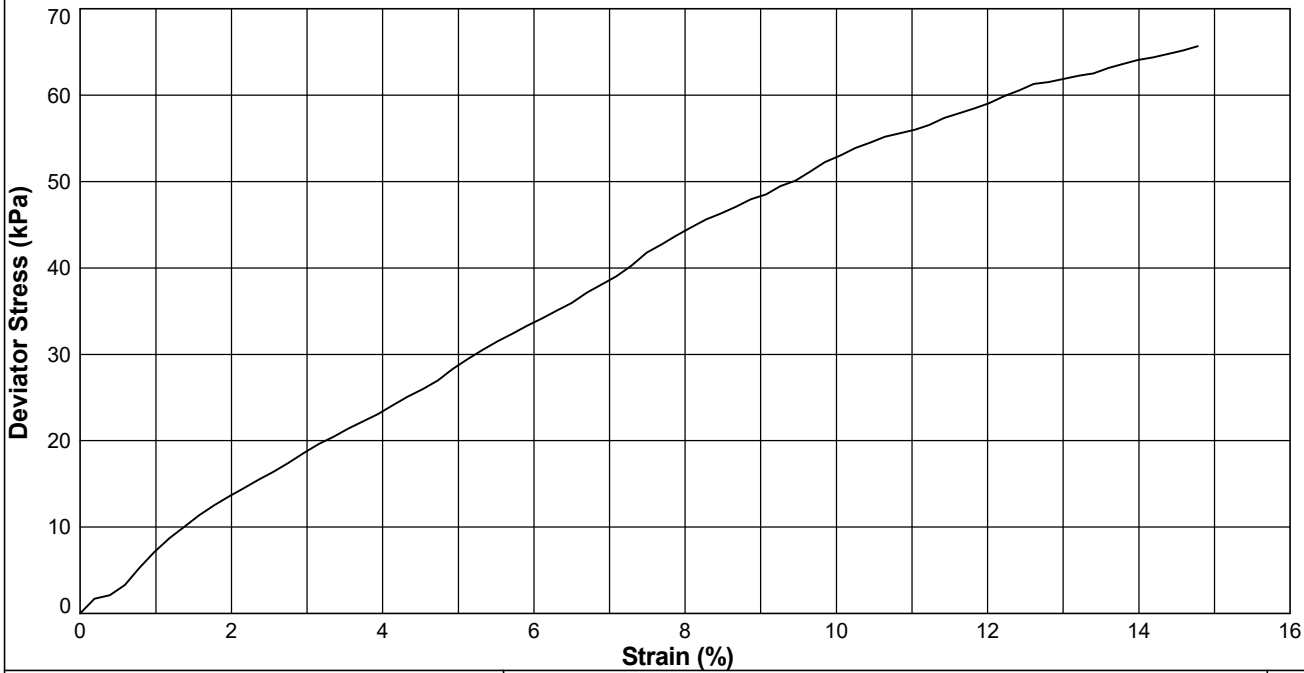
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In accordance with BS EN ISO 17892 Part 8

Position ID: **F22-BH307** Sample Ref: **57** Sample Type: **UT** Depth (m): **15.50**

Description : **Brown slightly sandy silty CLAY**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**96.37**		
	Height	(mm)	**204.19**		
	Water Content	(%)	**26.3**		
	Bulk Density	(Mg/m^3)	**2.03**		
	Dry Density	(Mg/m^3)	**1.60**		
	Void Ratio		**0.6522**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.65**		
	Rate of Axial Displacement	(%/min)	**1.08**		
	Cell Pressure	(kPa)	**310**		
	Membrane Correction	(kPa)	**2.05**		
	Corrected Deviator Stress	(kPa)	**66**		
	Undrained Shear Strength	(kPa)	**33**		
FAILURE DETAILS	Strain at Failure	(%)	**14.8**		
	Mode of Failure 1 : **Semi-plastic (intermediate)**				



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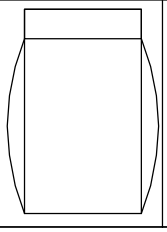
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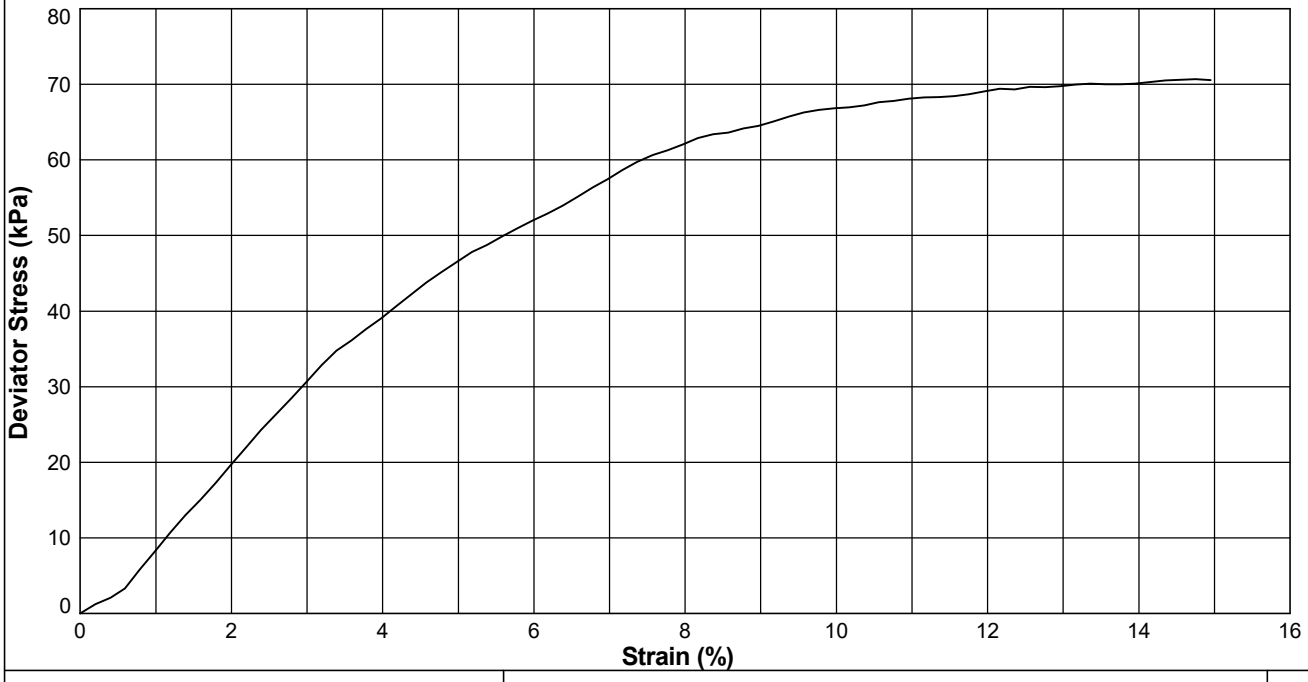
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In accordance with BS EN ISO 17892 Part 8

Position ID: **F22-BH307** Sample Ref: **67** Sample Type: **UT** Depth (m): **18.50**

Description : **Orangish brown mottled light brown slightly gravelly sandy CLAY**
Non-standard notes : **Failed flatness check**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**102.41**		
	Height	(mm)	**200.22**		
	Water Content	(%)	**25.0**		
	Bulk Density	(Mg/m^3)	**2.04**		
	Dry Density	(Mg/m^3)	**1.64**		
	Void Ratio		**0.6200**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.51**		
	Rate of Axial Displacement	(%/min)	**1.45**		
	Cell Pressure	(kPa)	**370**		
	Membrane Correction	(kPa)	**1.51**		
	Corrected Deviator Stress	(kPa)	**71**		
	Undrained Shear Strength	(kPa)	**35**		
FAILURE DETAILS	Strain at Failure	(%)	**14.8**		
	Mode of Failure 1 : **Plastic (Barrelling)**				



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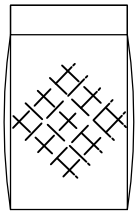
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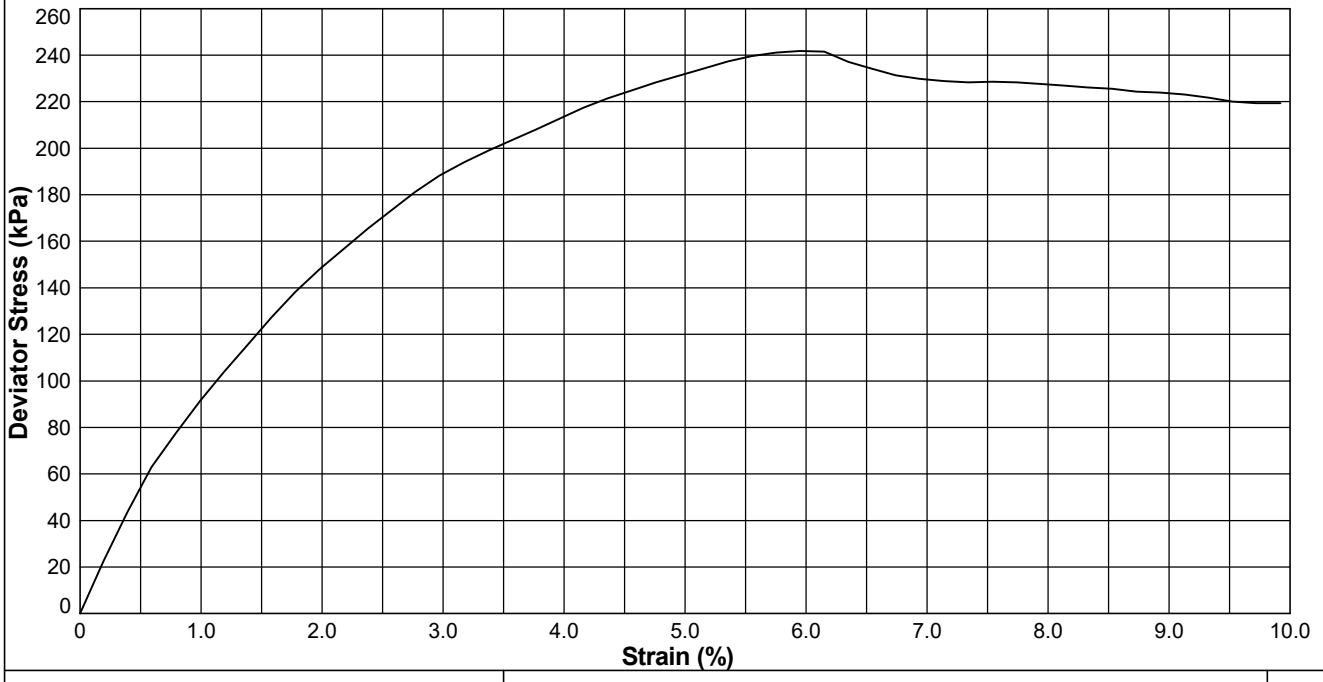
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In accordance with BS EN ISO 17892 Part 8

Position ID: **F22-BH308** Sample Ref: **7** Sample Type: **UT** Depth (m): **1.50**

Description : **Yellowish brown mottled grey slightly gravelly slightly sandy CLAY**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**102.83**		
	Height	(mm)	**207.13**		
	Water Content	(%)	**20.2**		
	Bulk Density	(Mg/m^3)	**2.09**		
	Dry Density	(Mg/m^3)	**1.74**		
	Void Ratio		**0.5211**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.74**		
	Rate of Axial Displacement	(%/min)	**0.97**		
	Cell Pressure	(kPa)	**30**		
	Membrane Correction	(kPa)	**1.10**		
	Corrected Deviator Stress	(kPa)	**242**		
	Undrained Shear Strength	(kPa)	**121**		
FAILURE DETAILS	Strain at Failure	(%)	**6.0**		
	Mode of Failure 1 : **Semi-plastic (intermediate)**				



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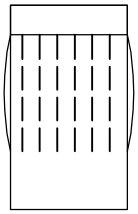
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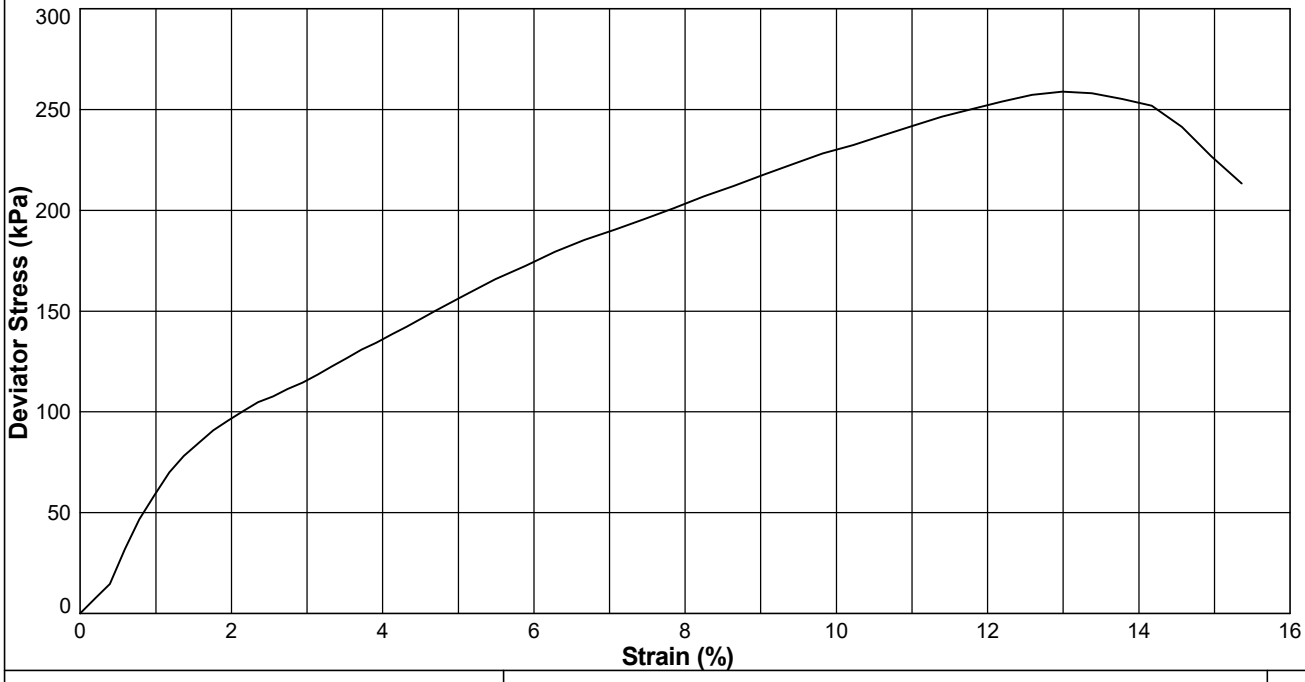
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In accordance with BS EN ISO 17892 Part 8

Position ID: **F22-BH308** Sample Ref: **21** Sample Type: **UT** Depth (m): **5.58**

Description : **Brown slightly sandy gravelly CLAY**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**102.35**		
	Height	(mm)	**198.79**		
	Water Content	(%)	**23.3**		
	Bulk Density	(Mg/m^3)	**2.06**		
	Dry Density	(Mg/m^3)	**1.67**		
	Void Ratio		**0.5850**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.52**		
	Rate of Axial Displacement	(%/min)	**1.01**		
	Cell Pressure	(kPa)	**110**		
	Membrane Correction	(kPa)	**1.40**		
	Corrected Deviator Stress	(kPa)	**259**		
	Undrained Shear Strength	(kPa)	**129**		
FAILURE DETAILS	Strain at Failure	(%)	**13.0**		
	Mode of Failure 1 : **Semi-plastic (axial splitting with bulging)**				



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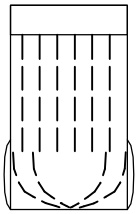
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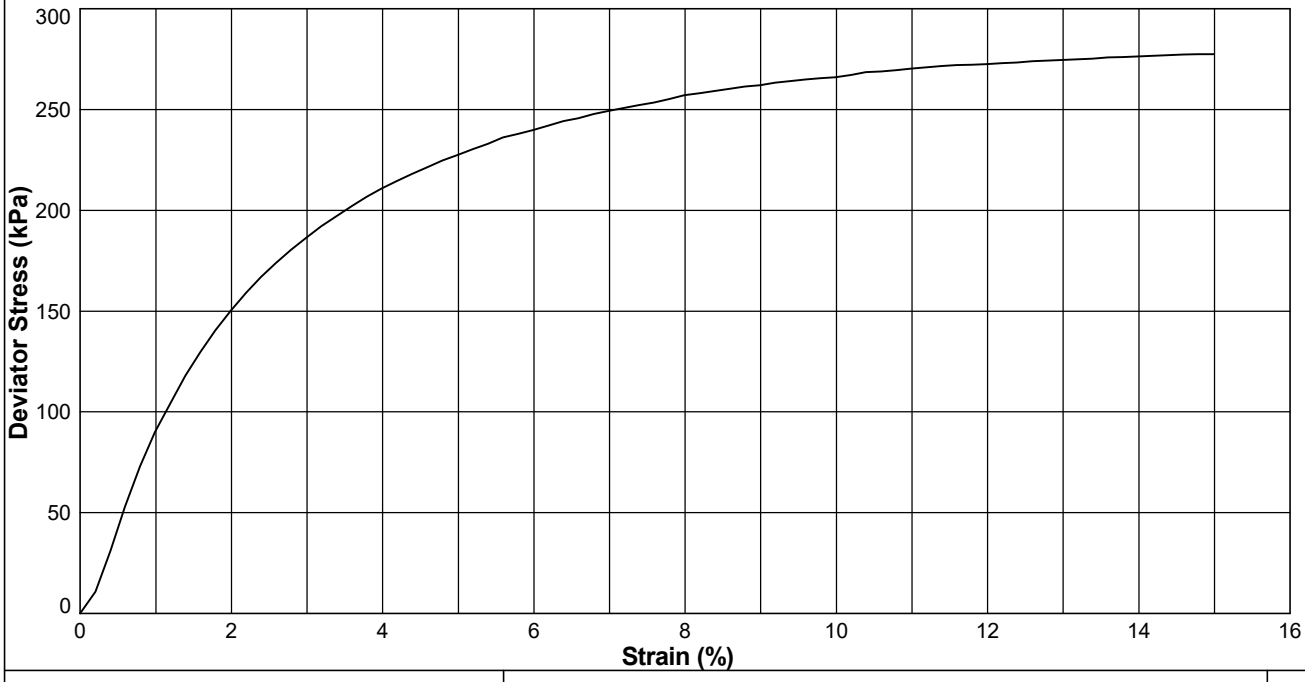
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In accordance with BS EN ISO 17892 Part 8

Position ID: **F22-BH309** Sample Ref: **13** Sample Type: **UT** Depth (m): **3.50**

Description : **Dark grey mottled white slightly gravelly slightly sandy CLAY**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**104.31**		
	Height	(mm)	**208.19**		
	Water Content	(%)	**20.3**		
	Bulk Density	(Mg/m^3)	**2.05**		
	Dry Density	(Mg/m^3)	**1.71**		
	Void Ratio		**0.5541**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.57**		
	Rate of Axial Displacement	(%/min)	**1.59**		
	Cell Pressure	(kPa)	**70**		
	Membrane Correction	(kPa)	**1.67**		
	Corrected Deviator Stress	(kPa)	**277**		
	Undrained Shear Strength	(kPa)	**139**		
FAILURE DETAILS	Strain at Failure	(%)	**15.0**		
	Mode of Failure 1 : **Semi-plastic (bulging, shear & axial splitting)**				



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Contract: **Sealink Friston**		Contract Ref: **563835**

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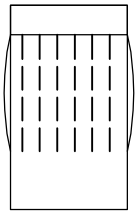
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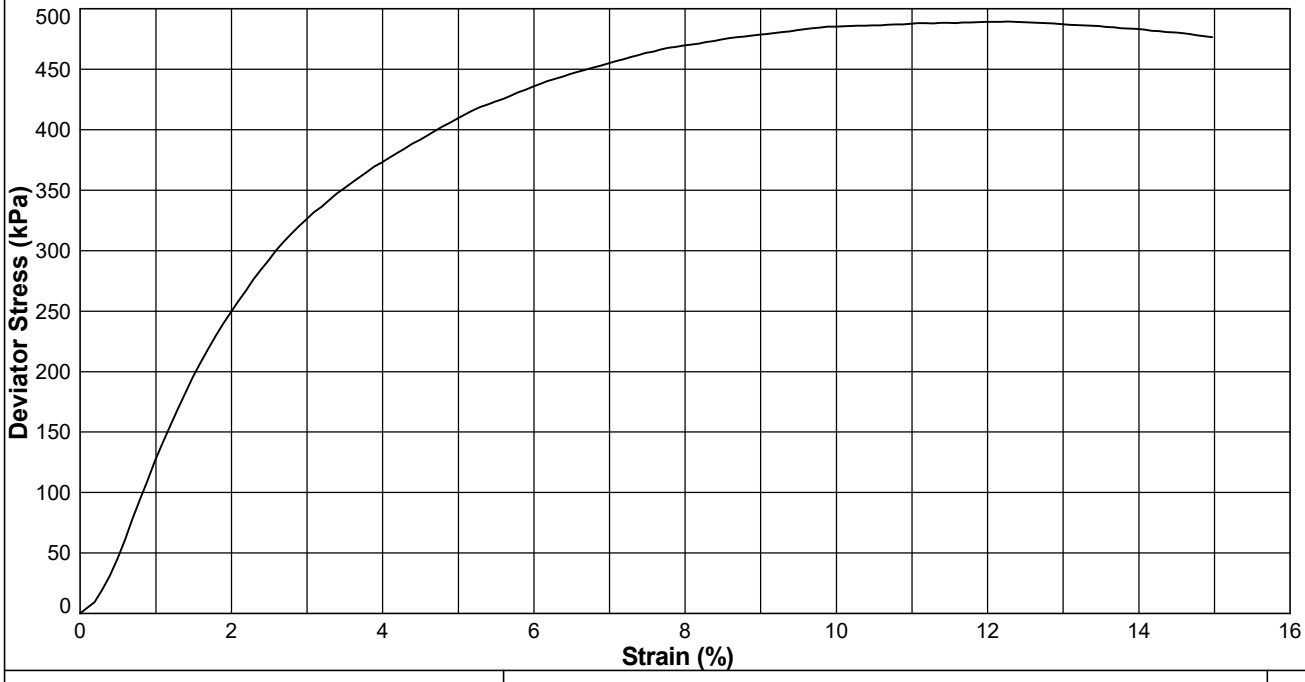
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8

Position ID: **F22-BH309** Sample Ref: **26** Sample Type: **UT** Depth (m): **7.50**

Description : **Grey mottled white slightly gravelly slightly sandy silty CLAY**
Non-standard notes : **Failed perpendicularity check**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**103.04**		
	Height	(mm)	**207.76**		
	Water Content	(%)	**17.0**		
	Bulk Density	(Mg/m^3)	**2.19**		
	Dry Density	(Mg/m^3)	**1.87**		
	Void Ratio		**0.4169**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.68**		
	Rate of Axial Displacement	(%/min)	**0.63**		
	Cell Pressure	(kPa)	**150**		
	Membrane Correction	(kPa)	**1.75**		
	Corrected Deviator Stress	(kPa)	**489**		
	Undrained Shear Strength	(kPa)	**245**		
FAILURE DETAILS	Strain at Failure	(%)	**12.3**		
	Mode of Failure 1 : **Semi-plastic (axial splitting with bulging)**				



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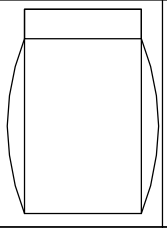
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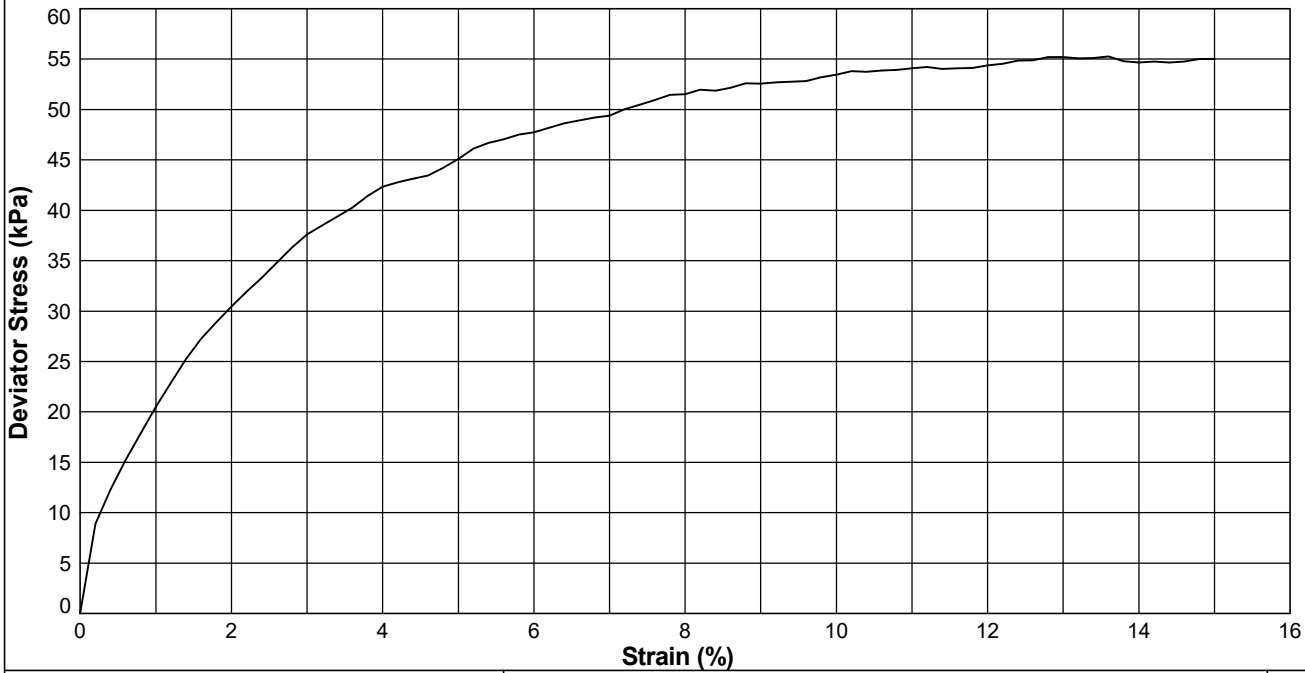
In accordance with BS EN ISO 17892 Part 8

Position ID: **F22-BH310** Sample Ref: **31** Sample Type: **UT** Depth (m): **8.00**

Description : **Grey mottled white slightly sandy gravelly CLAY**

Non-standard notes : **Failed flatness and perpendicularity checks**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**99.77**		
	Height	(mm)	**209.62**		
	Water Content	(%)	**19.6**		
	Bulk Density	(Mg/m^3)	**2.13**		
	Dry Density	(Mg/m^3)	**1.78**		
	Void Ratio		**0.4861**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.66**		
	Rate of Axial Displacement	(%/min)	**1.48**		
	Cell Pressure	(kPa)	**165**		
	Membrane Correction	(kPa)	**1.89**		
	Corrected Deviator Stress	(kPa)	**55**		
	Undrained Shear Strength	(kPa)	**28**		
FAILURE DETAILS	Strain at Failure	(%)	**13.6**		
	Mode of Failure 1 : **Plastic (Barrelling)**				



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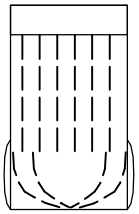
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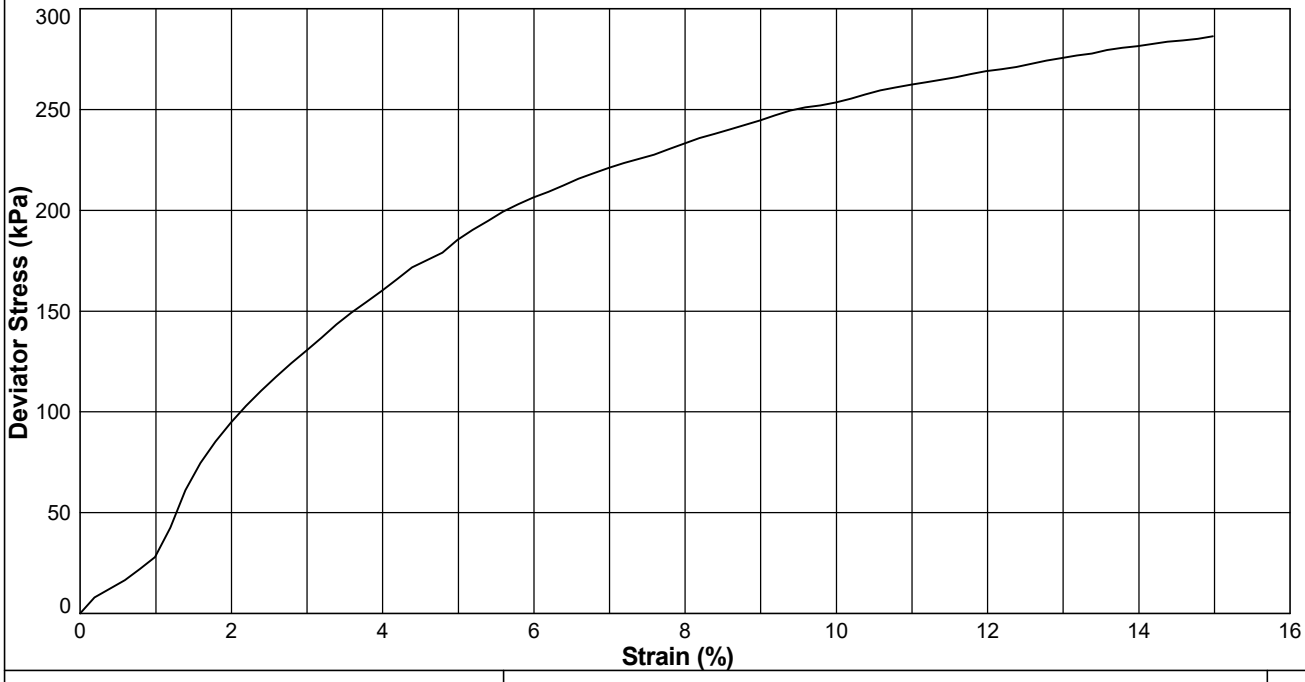
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8

Position ID: **F22-BH501** Sample Ref: **66** Sample Type: **UT** Depth (m): **20.00**

Description : **Grey slightly gravelly slightly sandy silty CLAY**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**102.50**		
	Height	(mm)	**207.33**		
	Water Content	(%)	**38.7**		
	Bulk Density	(Mg/m^3)	**1.84**		
	Dry Density	(Mg/m^3)	**1.33**		
	Void Ratio		**0.9930**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.57**		
	Rate of Axial Displacement	(%/min)	**1.40**		
	Cell Pressure	(kPa)	**400**		
	Membrane Correction	(kPa)	**1.70**		
	Corrected Deviator Stress	(kPa)	**286**		
	Undrained Shear Strength	(kPa)	**143**		
FAILURE DETAILS	Strain at Failure	(%)	**15.0**		
	Mode of Failure 1 : **Semi-plastic (bulging, shear & axial splitting)**				



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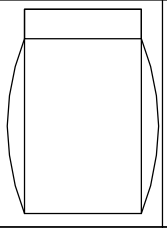
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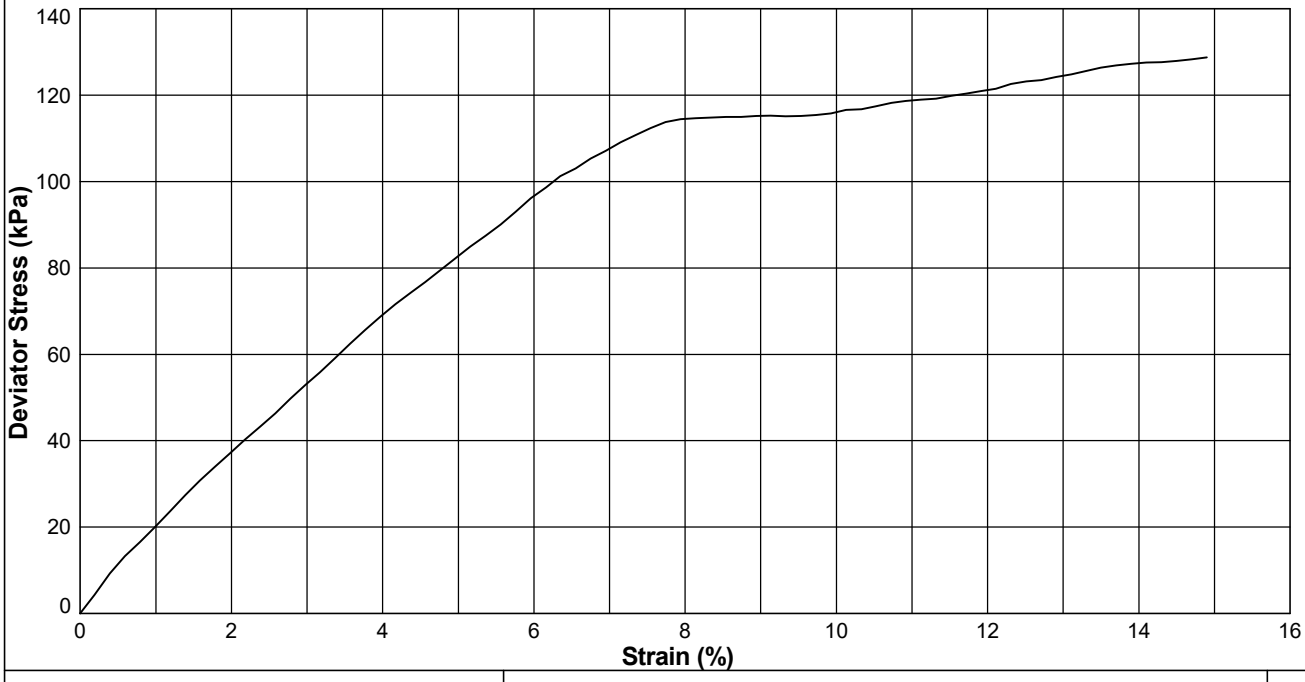
In accordance with BS EN ISO 17892 Part 8

Position ID: **F22-BH502** Sample Ref: **12** Sample Type: **UT** Depth (m): **3.50**

Description : **Brown slightly gravelly very clayey SAND**

Non-standard notes : **Failed perpendicularity check**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**101.20**		
	Height	(mm)	**208.74**		
	Water Content	(%)	**13.1**		
	Bulk Density	(Mg/m^3)	**2.31**		
	Dry Density	(Mg/m^3)	**2.04**		
	Void Ratio		**0.2973**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.68**		
	Rate of Axial Displacement	(%/min)	**1.77**		
	Cell Pressure	(kPa)	**60**		
	Membrane Correction	(kPa)	**2.05**		
	Corrected Deviator Stress	(kPa)	**129**		
	Undrained Shear Strength	(kPa)	**64**		
FAILURE DETAILS	Strain at Failure	(%)	**14.9**		
	Mode of Failure 1 : **Plastic (Barrelling)**				



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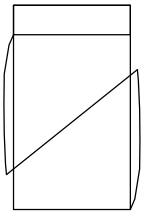
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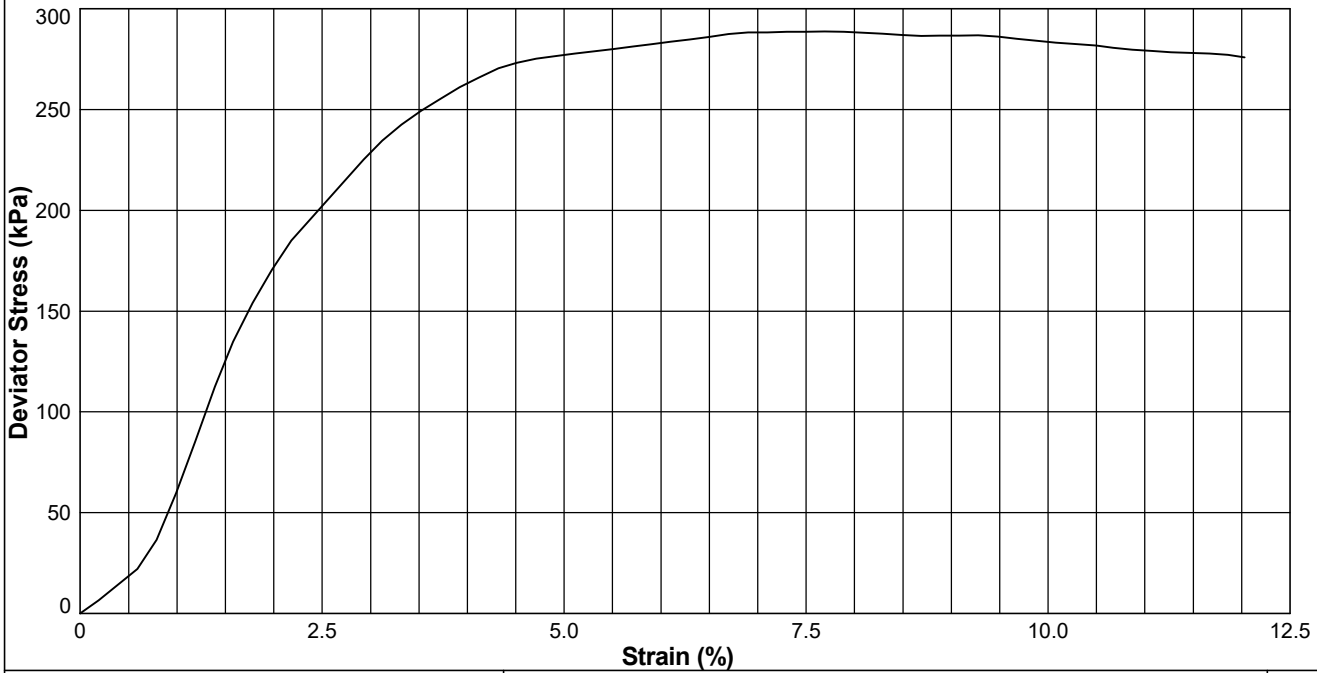
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8

Position ID: **F22-BH502A** Sample Ref: **70** Sample Type: **UT** Depth (m): **18.50**

Description : **Grey slightly sandy silty CLAY with occasional shell fragments**
Non-standard notes : **Failed flatness check**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**103.68**		
	Height	(mm)	**203.78**		
	Water Content	(%)	**45.0**		
	Bulk Density	(Mg/m^3)	**1.82**		
	Dry Density	(Mg/m^3)	**1.25**		
	Void Ratio		**1.1152**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.66**		
	Rate of Axial Displacement	(%/min)	**1.32**		
	Cell Pressure	(kPa)	**370**		
	Membrane Correction	(kPa)	**1.19**		
	Corrected Deviator Stress	(kPa)	**289**		
	Undrained Shear Strength	(kPa)	**144**		
FAILURE DETAILS	Strain at Failure	(%)	**7.7**		
	Mode of Failure 1 : **Brittle (shear plane)**				



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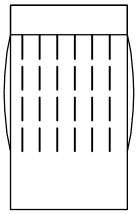
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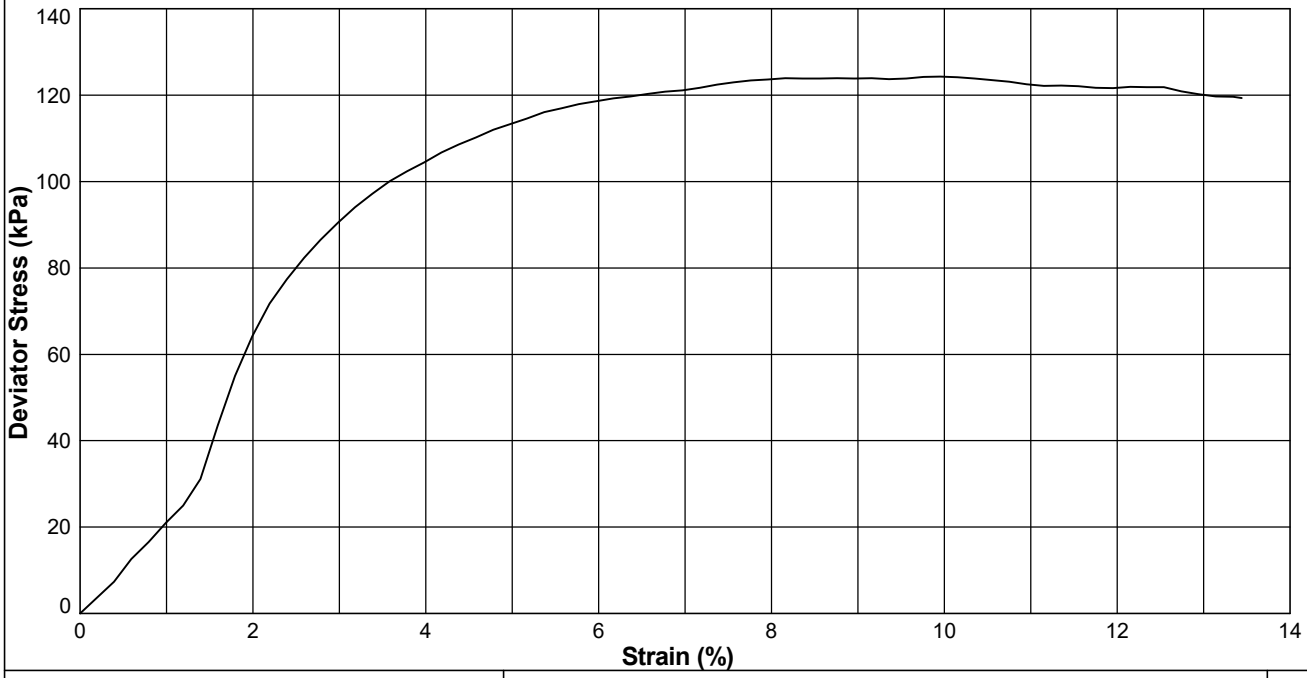
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8

Position ID: **F22-BH502A** Sample Ref: **91** Sample Type: **UT** Depth (m): **24.50**

Description : **Dark grey slightly sandy CLAY**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**102.12**		
	Height	(mm)	**205.21**		
	Water Content	(%)	**35.9**		
	Bulk Density	(Mg/m^3)	**1.86**		
	Dry Density	(Mg/m^3)	**1.37**		
	Void Ratio		**0.9360**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.65**		
	Rate of Axial Displacement	(%/min)	**1.80**		
	Cell Pressure	(kPa)	**490**		
	Membrane Correction	(kPa)	**1.46**		
	Corrected Deviator Stress	(kPa)	**124**		
	Undrained Shear Strength	(kPa)	**62**		
FAILURE DETAILS	Strain at Failure	(%)	**10.0**		
	Mode of Failure 1 : **Semi-plastic (axial splitting with bulging)**				



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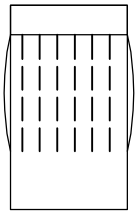
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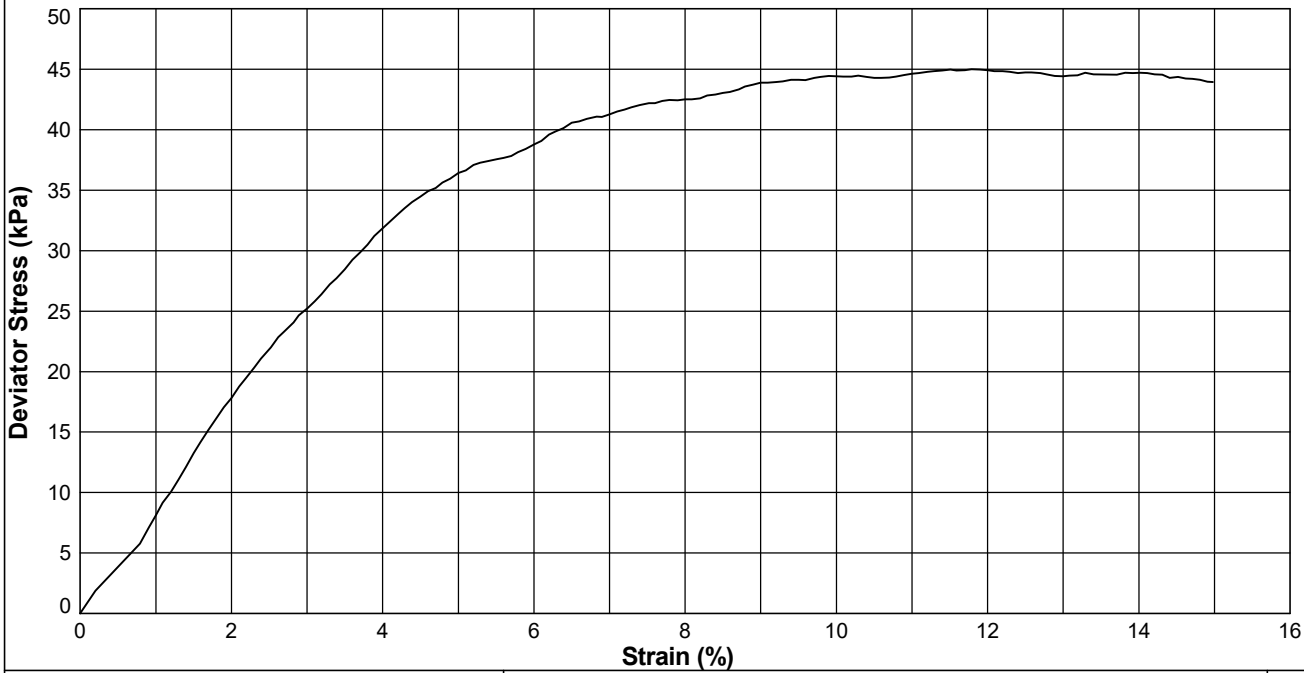
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8

Position ID: **RedP-BH-1A** Sample Ref: **16** Sample Type: **UT** Depth (m): **4.50**

Description : **Dark grey mottled black and brown slightly sandy CLAY**
Non-standard notes : **Failed flatess check**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**100.94**		
	Height	(mm)	**204.43**		
	Water Content	(%)	**40.5**		
	Bulk Density	(Mg/m^3)	**1.79**		
	Dry Density	(Mg/m^3)	**1.28**		
	Void Ratio		**1.0771**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.66**		
	Rate of Axial Displacement	(%/min)	**1.96**		
	Cell Pressure	(kPa)	**90**		
	Membrane Correction	(kPa)	**1.69**		
	Corrected Deviator Stress	(kPa)	**45**		
	Undrained Shear Strength	(kPa)	**22**		
FAILURE DETAILS	Strain at Failure	(%)	**11.8**		
	Mode of Failure 1 : **Semi-plastic (axial splitting with bulging)**				



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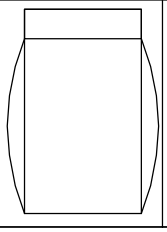
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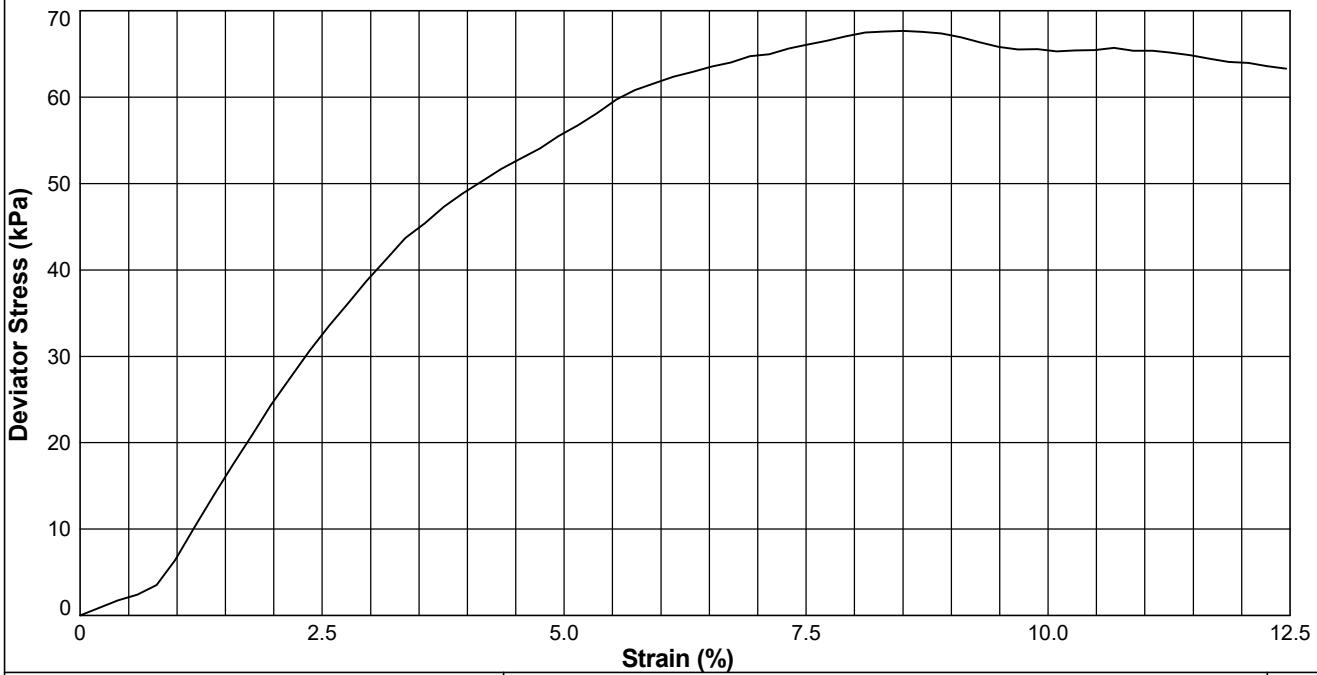
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8

Position ID: **RedP-BH-1A** Sample Ref: **24** Sample Type: **UT** Depth (m): **6.50**

Description : **Dark grey mottled black and dark brown sandy CLAY**
Non-standard notes : **Failed perpendicularity check**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**100.85**		
	Height	(mm)	**193.87**		
	Water Content	(%)	**22.6**		
	Bulk Density	(Mg/m^3)	**2.03**		
	Dry Density	(Mg/m^3)	**1.66**		
	Void Ratio		**0.6006**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.66**		
	Rate of Axial Displacement	(%/min)	**2.06**		
	Cell Pressure	(kPa)	**130**		
	Membrane Correction	(kPa)	**1.32**		
	Corrected Deviator Stress	(kPa)	**68**		
	Undrained Shear Strength	(kPa)	**34**		
FAILURE DETAILS	Strain at Failure	(%)	**8.5**		
	Mode of Failure 1 : **Plastic (Barrelling)**				



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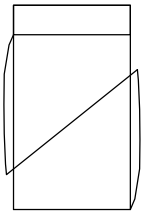
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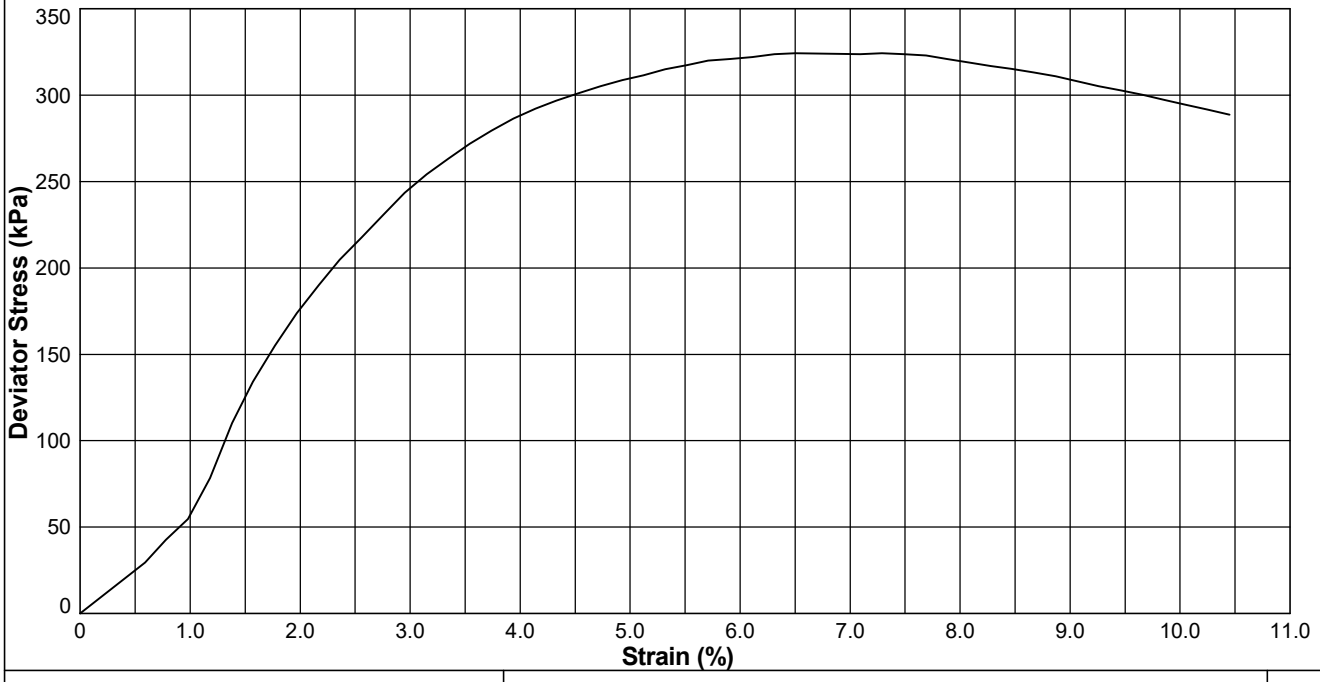
In accordance with BS EN ISO 17892 Part 8

Position ID: **RedP-BH-1A** Sample Ref: **89** Sample Type: **UT** Depth (m): **27.50**

Description : **Dark brown silty CLAY**

Non-standard notes : **Failed the flatness check**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**103.42**		
	Height	(mm)	**203.85**		
	Water Content	(%)	**32.9**		
	Bulk Density	(Mg/m^3)	**1.92**		
	Dry Density	(Mg/m^3)	**1.44**		
	Void Ratio		**0.8346**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.65**		
	Rate of Axial Displacement	(%/min)	**0.98**		
	Cell Pressure	(kPa)	**550**		
	Membrane Correction	(kPa)	**1.12**		
	Corrected Deviator Stress	(kPa)	**324**		
	Undrained Shear Strength	(kPa)	**162**		
FAILURE DETAILS	Strain at Failure	(%)	**7.3**		
	Mode of Failure 1 : **Brittle (shear plane)**				



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[redacted]	[redacted]	**05/03/24**
Contract: **Sealink Friston**		Contract Ref: **563835**

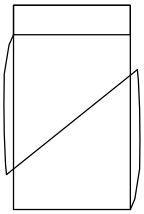
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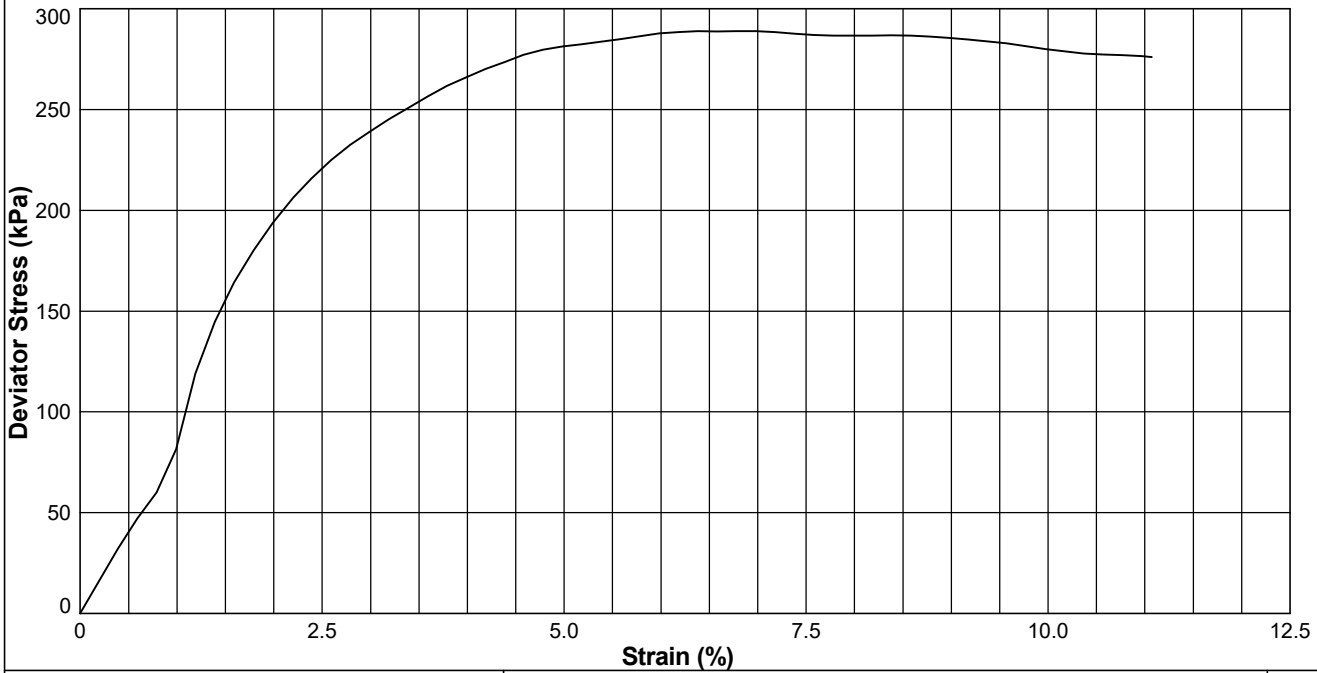
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8

Position ID: **RedP-BH-4** Sample Ref: **67** Sample Type: **UT** Depth (m): **21.00**

Description : **Dark grey CLAY**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**103.36**		
	Height	(mm)	**207.43**		
	Water Content	(%)	**30.2**		
	Bulk Density	(Mg/m^3)	**1.96**		
	Dry Density	(Mg/m^3)	**1.51**		
	Void Ratio		**0.7563**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.66**		
	Rate of Axial Displacement	(%/min)	**1.01**		
	Cell Pressure	(kPa)	**420**		
	Membrane Correction	(kPa)	**1.10**		
	Corrected Deviator Stress	(kPa)	**289**		
	Undrained Shear Strength	(kPa)	**144**		
FAILURE DETAILS	Strain at Failure	(%)	**7.0**		
	Mode of Failure 1 : **Brittle (shear plane)**				



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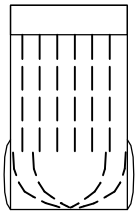
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

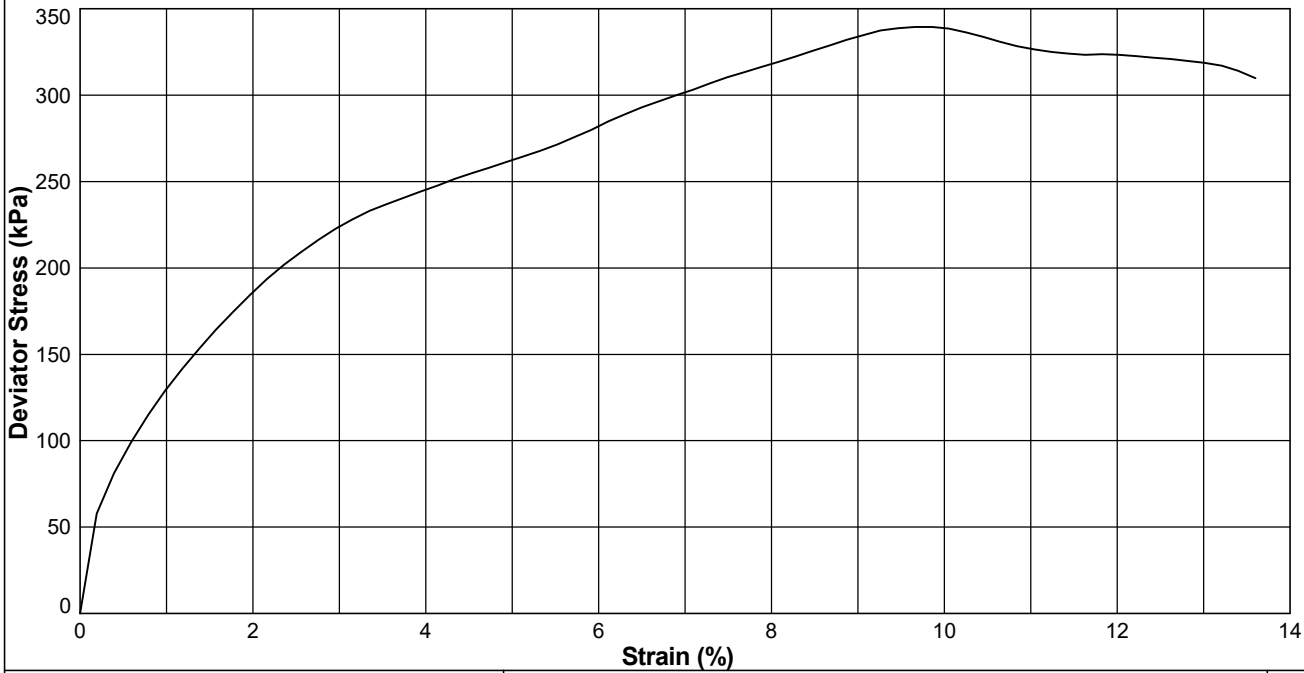
In accordance with BS EN ISO 17892 Part 8

Position ID: **RedP-BH-4** Sample Ref: **79** Sample Type: **UT** Depth (m): **25.00**

Description : **Dark brown silty CLAY**

Non-standard notes : **Short sample. Failed flatness and perpendicularity checks**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**103.11**		
	Height	(mm)	**173.63**		
	Water Content	(%)	**29.9**		
	Bulk Density	(Mg/m^3)	**1.99**		
	Dry Density	(Mg/m^3)	**1.53**		
	Void Ratio		**0.7296**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.51**		
	Rate of Axial Displacement	(%/min)	**1.67**		
	Cell Pressure	(kPa)	**500**		
	Membrane Correction	(kPa)	**1.13**		
	Corrected Deviator Stress	(kPa)	**339**		
	Undrained Shear Strength	(kPa)	**170**		
FAILURE DETAILS	Strain at Failure	(%)	**9.9**		
	Mode of Failure 1 : **Semi-plastic (bulging, shear & axial splitting)**				



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Contract	Contract Ref:
Sealink Friston	**563835**

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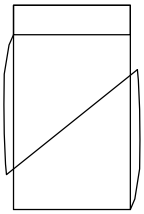
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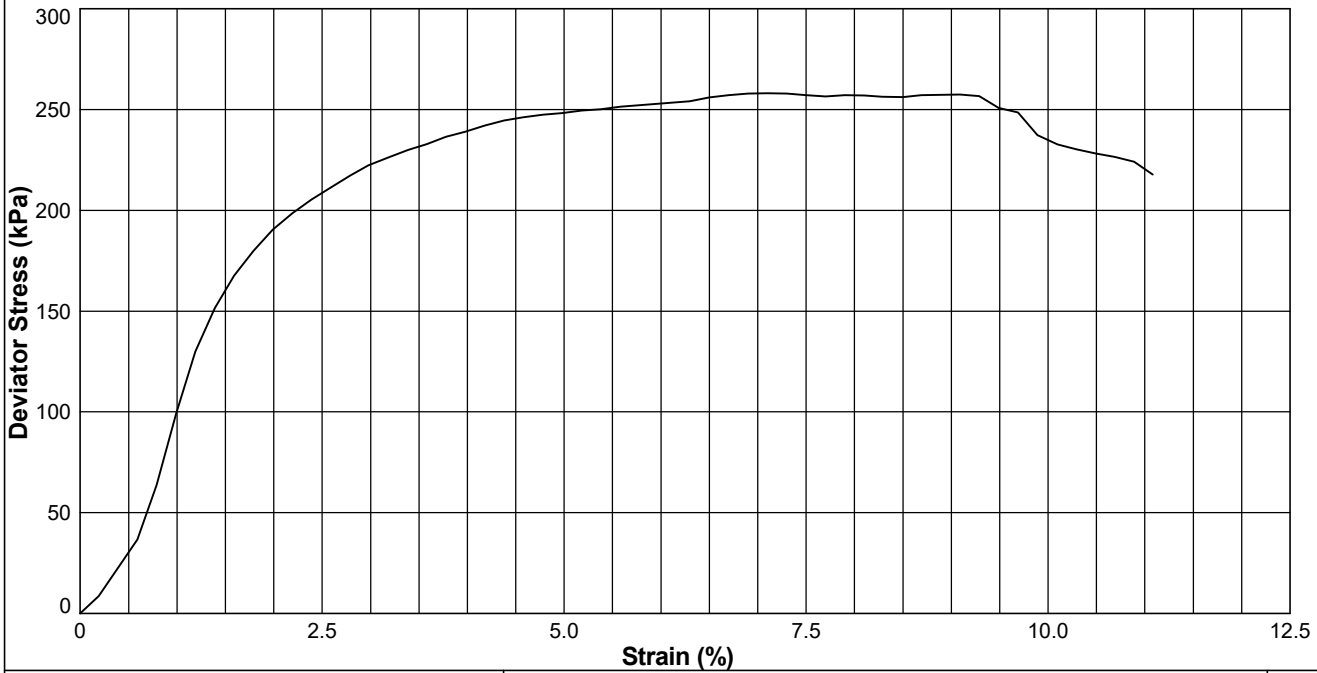
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8

Position ID: **RedP-BH-4** Sample Ref: **91** Sample Type: **UT** Depth (m): **29.00**

Description : **Dark brown CLAY**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**103.56**		
	Height	(mm)	**199.28**		
	Water Content	(%)	**33.6**		
	Bulk Density	(Mg/m^3)	**1.93**		
	Dry Density	(Mg/m^3)	**1.44**		
	Void Ratio		**0.8392**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.80**		
	Rate of Axial Displacement	(%/min)	**1.51**		
	Cell Pressure	(kPa)	**580**		
	Membrane Correction	(kPa)	**1.35**		
	Corrected Deviator Stress	(kPa)	**258**		
	Undrained Shear Strength	(kPa)	**129**		
FAILURE DETAILS	Strain at Failure	(%)	**7.1**		
	Mode of Failure 1 : **Brittle (shear plane)**				



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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **F22-BH203** Sample Ref: **10** Sample Type: **B** Depth (m): **2.00**

Description: **Orangish brown slightly gravelly sandy CLAY**

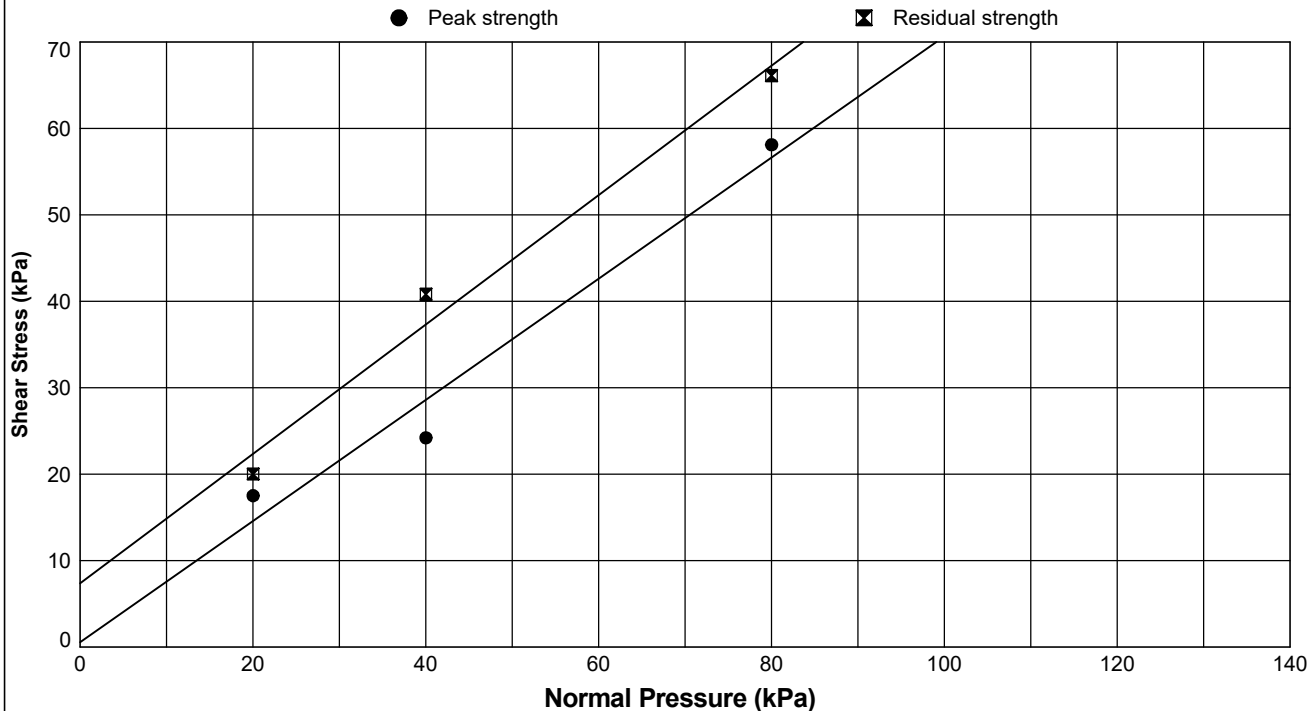
Sample Condition: **Recompacted**

Start Date: **08/02/2024**

End Date: **21/02/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**14.8**	**12.6**	**12.1**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**23.1**	**23.6**	**23.4**
	Initial Bulk Density	(Mg/m^3)	**2.03**	**2.03**	**2.03**
	Initial Dry Density	(Mg/m^3)	**1.77**	**1.81**	**1.81**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Measured)}$
	Initial Voids Ratio		**0.4986**	**0.4677**	**0.4621**
	Initial Degree of Saturation	(%)	**79**	**72**	**69**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**6**	**6**	**6**
CONSOLIDATION	Normal Pressure	(kPa)	**20**	**40**	**80**
	Consolidated Height	(mm)	**21.5**	**21.9**	**21.3**
	Voids Ratio after Consolidation		**0.3928**	**0.3612**	**0.3319**
SHEAR	Shearing Rate	(mm/min)	**0.0209**	**0.0236**	**0.0449**
	Horiz. Displacement at Peak Shear Stress	(mm)	**3.2**	**3.2**	**6.6**
	Voids Ratio after Shear		**0.2311**	**0.2424**	**0.1174**
	Peak Shear Stress	(kPa)	**18**	**24**	**58**
	Residual Shear Stress	(kPa)	**20**	**41**	**66**

PEAK STRENGTH	Effective Cohesion (C')	**1**	(kPa)	Effective Angle of Friction (ϕ')	**35**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**7**	(kPa)	Residual Angle of Friction (ϕ'_R)	**37**	(deg)



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Contract: **Sealink Friston**		Contract Ref: **563835**

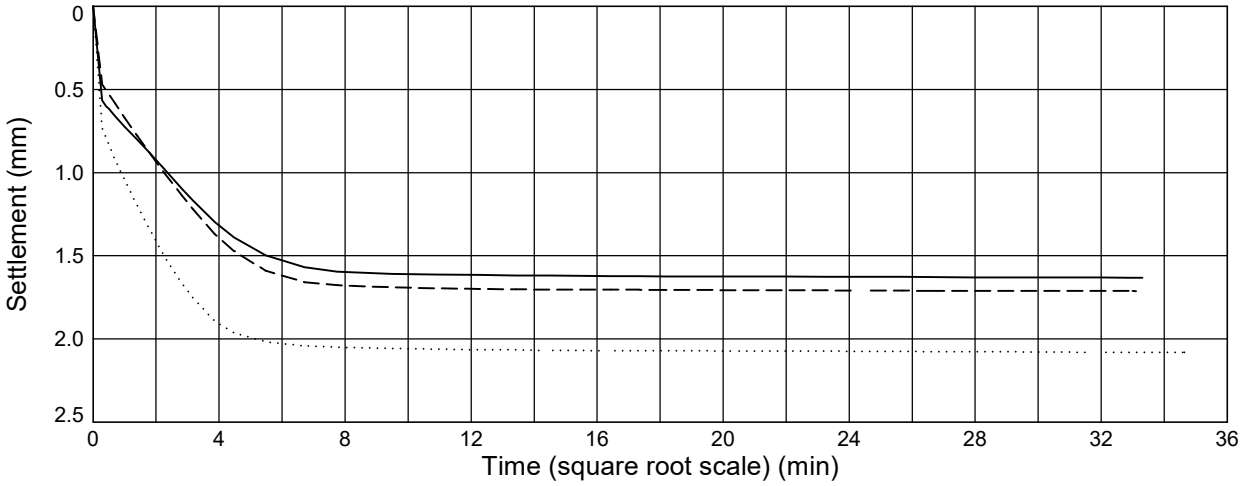
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

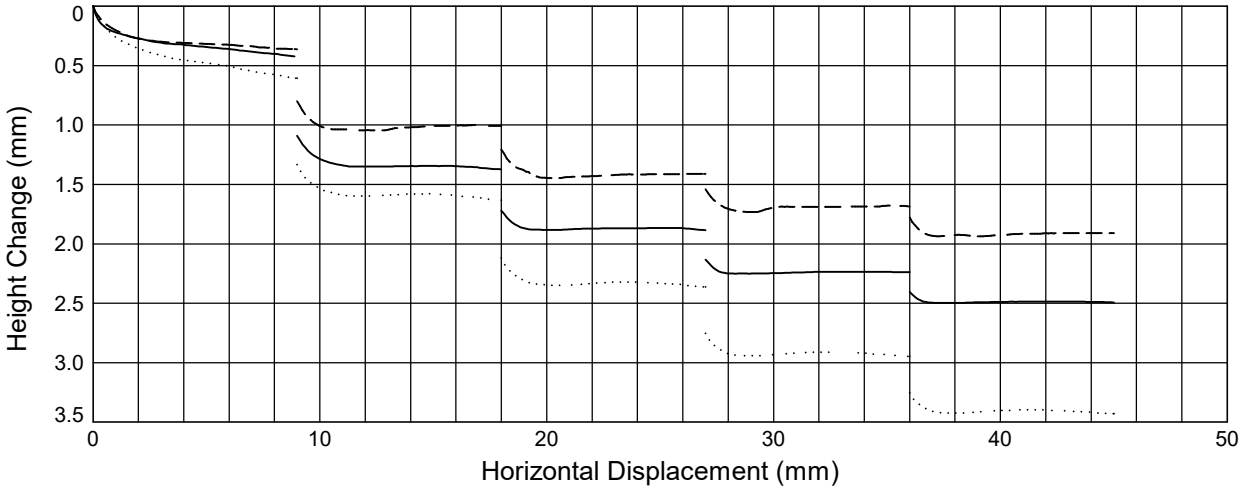
In accordance with BS EN ISO 17892-10

Position ID: **F22-BH203** Sample Ref: **10** Sample Type: **B** Depth (m): **2.00**

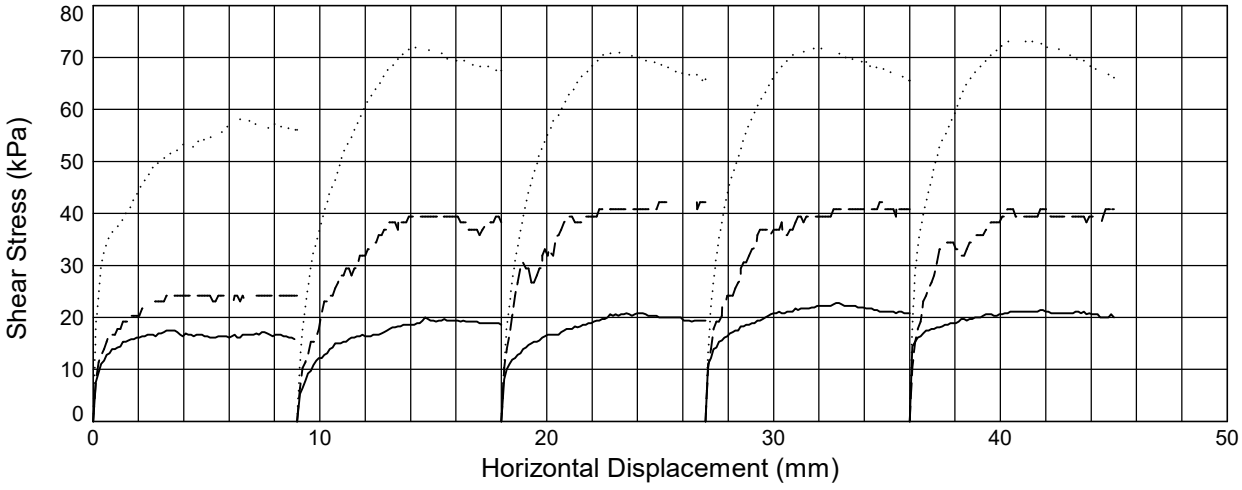
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**20** kPa) *Dashed Line* = Specimen 2 (**40** kPa) *Dotted Line* = Specimen 3 (**80** kPa)

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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **F22-BH203** Sample Ref: **25** Sample Type: **B** Depth (m): **7.00**

Description: **Orangish brown slightly gravelly slightly silty SAND**

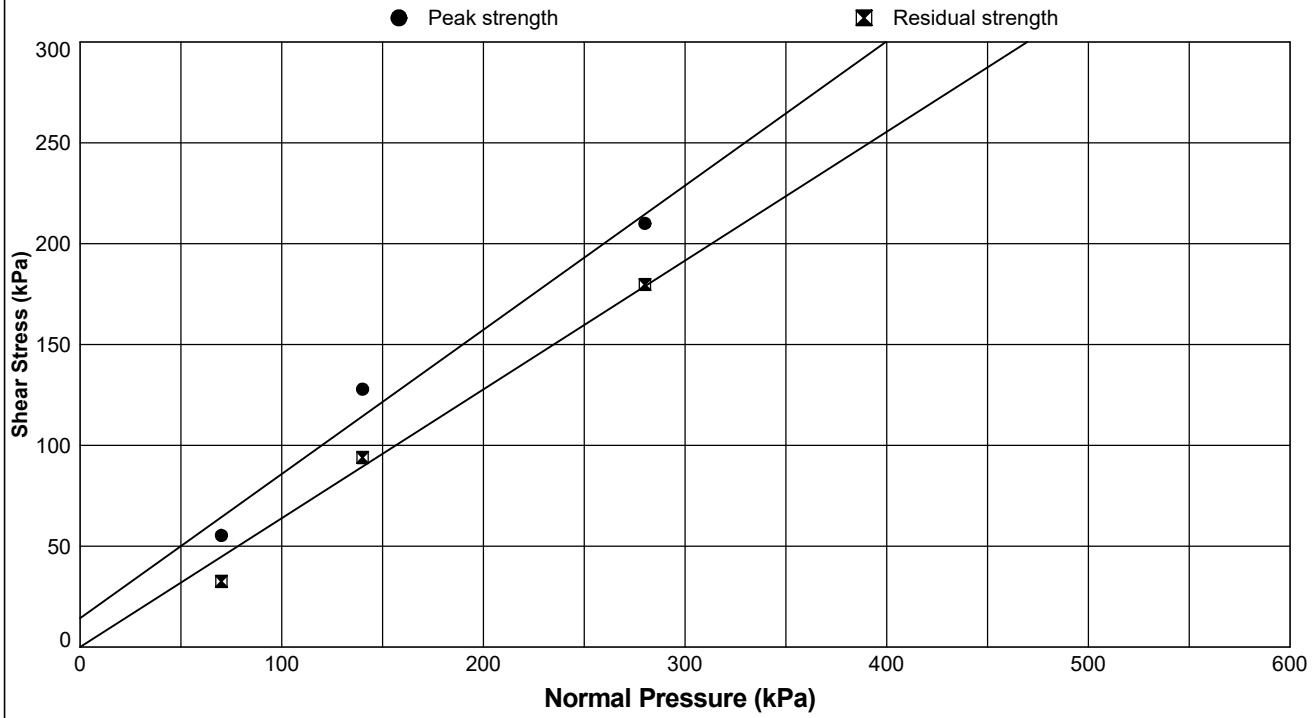
Sample Condition: **Recompacted**

Start Date: **02/02/2024**

End Date: **08/02/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**19.0**	**16.9**	**18.3**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**22.9**	**23.0**	**22.9**
	Initial Bulk Density	(Mg/m^3)	**1.92**	**1.93**	**1.92**
	Initial Dry Density	(Mg/m^3)	**1.62**	**1.65**	**1.62**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**0.6392**	**0.6071**	**0.6312**
	Initial Degree of Saturation	(%)	**79**	**74**	**77**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**6**	**6**	**6**
CONSOLIDATION	Normal Pressure	(kPa)	**70**	**140**	**280**
	Consolidated Height	(mm)	**22.3**	**21.7**	**22.0**
	Voids Ratio after Consolidation		**0.5906**	**0.5197**	**0.5673**
SHEAR	Shearing Rate	(mm/min)	**0.0832**	**0.0796**	**0.0810**
	Horiz. Displacement at Peak Shear Stress	(mm)	**5.3**	**8.9**	**2.8**
	Voids Ratio after Shear		**-0.0860**	**0.1582**	**0.1655**
	Peak Shear Stress	(kPa)	**55**	**128**	**210**
	Residual Shear Stress	(kPa)	**33**	**94**	**180**

PEAK STRENGTH	Effective Cohesion (C')	**14** (kPa)	Effective Angle of Friction (ϕ')	**35.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**0** (kPa)	Residual Angle of Friction (ϕ'_R)	**32.5**	(deg)



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Contract: **Sealink Friston**		Contract Ref: **563835**

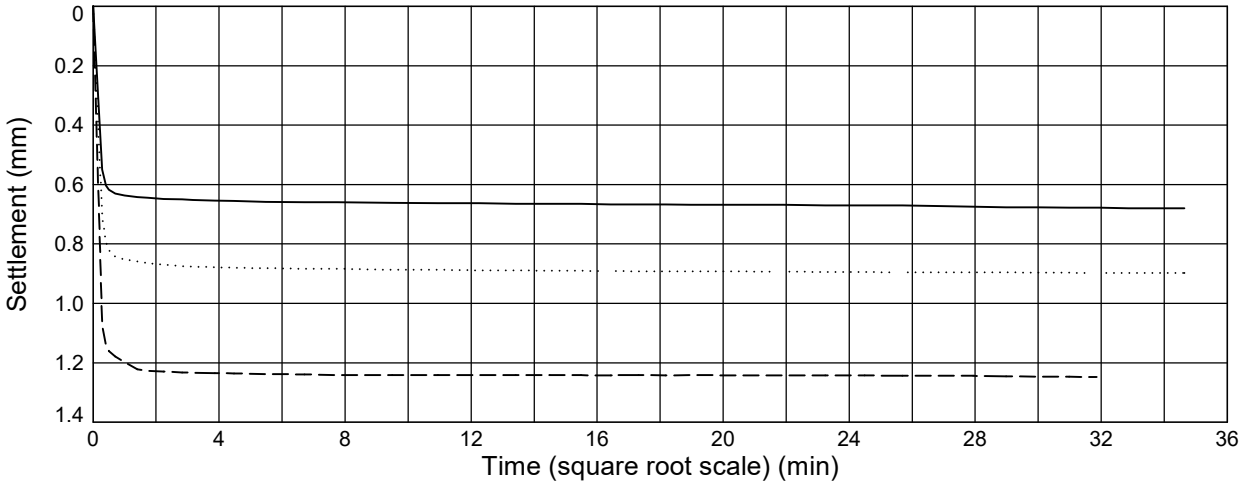
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

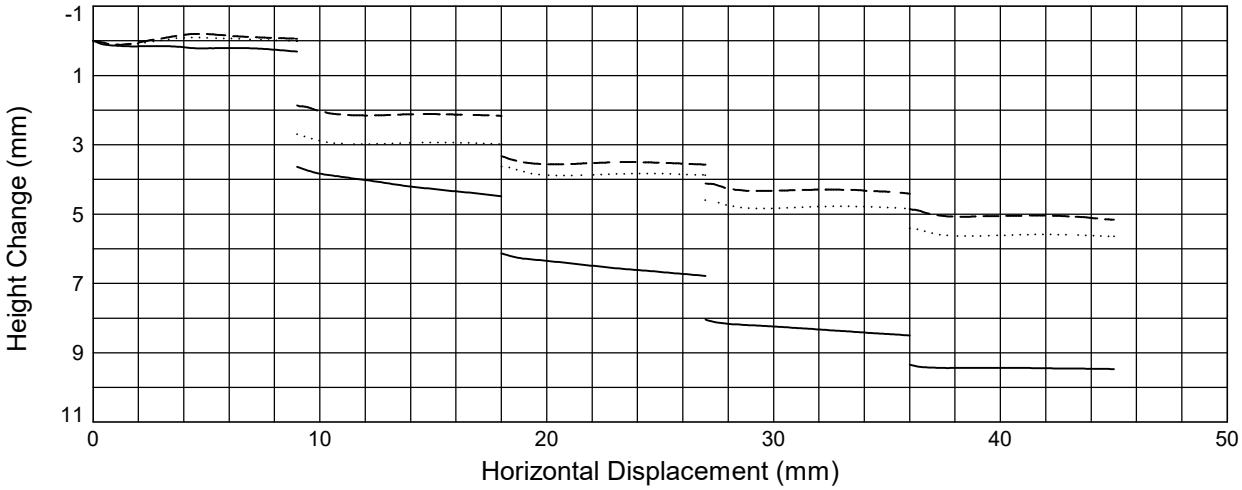
In accordance with BS EN ISO 17892-10

Position ID: **F22-BH203** Sample Ref: **25** Sample Type: **B** Depth (m): **7.00**

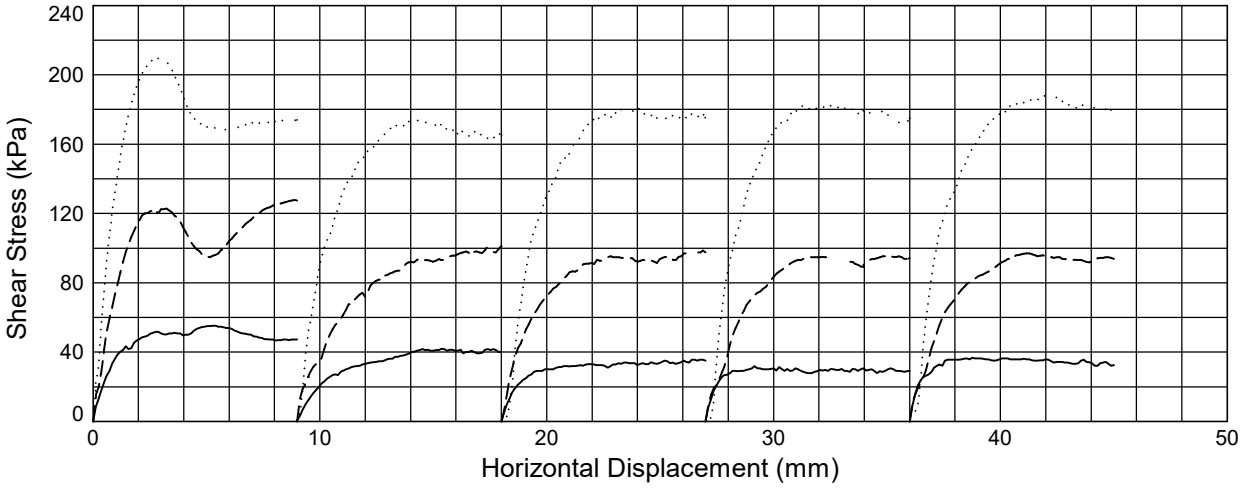
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**70** kPa) *Dashed Line* = Specimen 2 (**140** kPa) *Dotted Line* = Specimen 3 (**280** kPa)

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Compiled By		Date
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Contract: **Sealink Friston**		Contract Ref: **563835**

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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **F22-BH203** Sample Ref: **33** Sample Type: **B** Depth (m): **10.00**

Description: **Light brown gravelly slightly silty SAND**

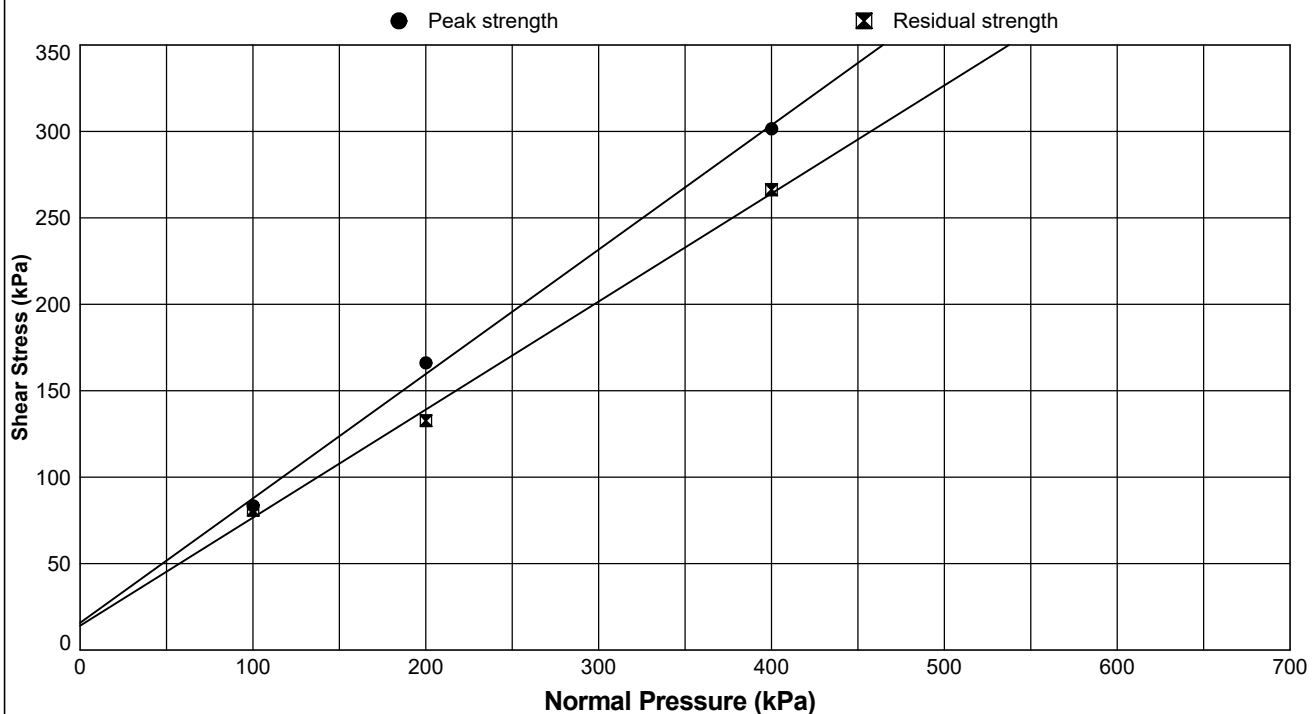
Sample Condition: **Recompacted**

Start Date: **12/12/2023**

End Date: **14/12/2023**

SPECIMEN NUMBER			1	2	3
PROPERTIES	Initial Water Content	(%)	**12.0**	**12.0**	**12.0**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**19.2**	**19.2**	**19.2**
	Initial Bulk Density	(Mg/m^3)	**1.80**	**1.80**	**1.80**
	Initial Dry Density	(Mg/m^3)	**1.60**	**1.60**	**1.60**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**0.6522**	**0.6522**	**0.6526**
	Initial Degree of Saturation	(%)	**49**	**49**	**49**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**3**	**3**	**3**
CONSOLIDATION	Normal Pressure	(kPa)	**100**	**200**	**400**
	Consolidated Height	(mm)	**18.3**	**18.9**	**18.4**
	Voids Ratio after Consolidation		**0.5798**	**0.6250**	**0.5905**
SHEAR	Shearing Rate	(mm/min)	**0.0371**	**0.0371**	**0.0440**
	Horiz. Displacement at Peak Shear Stress	(mm)	**2.3**	**2.3**	**2.3**
	Voids Ratio after Shear		**0.4966**	**0.6020**	**0.5525**
	Peak Shear Stress	(kPa)	**83**	**166**	**301**
	Residual Shear Stress	(kPa)	**81**	**133**	**266**

PEAK STRENGTH	Effective Cohesion (C')	**16** (kPa)	Effective Angle of Friction (ϕ')	**35.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**14** (kPa)	Residual Angle of Friction (ϕ'_R)	**32**	(deg)



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1a Princess Street
Bedminster
Bristol
BS3 4AG

Compiled By		Date
[redacted]	[redacted]	**20/12/23**
Contract: **Sealink Friston**		Contract Ref: **563835**

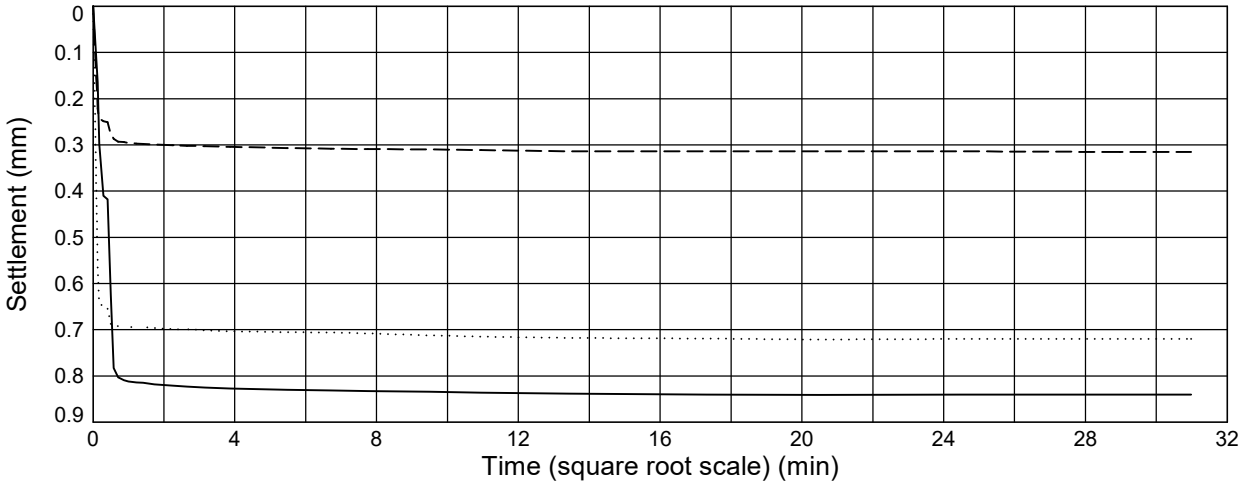
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - SBOX - AUTO - P1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

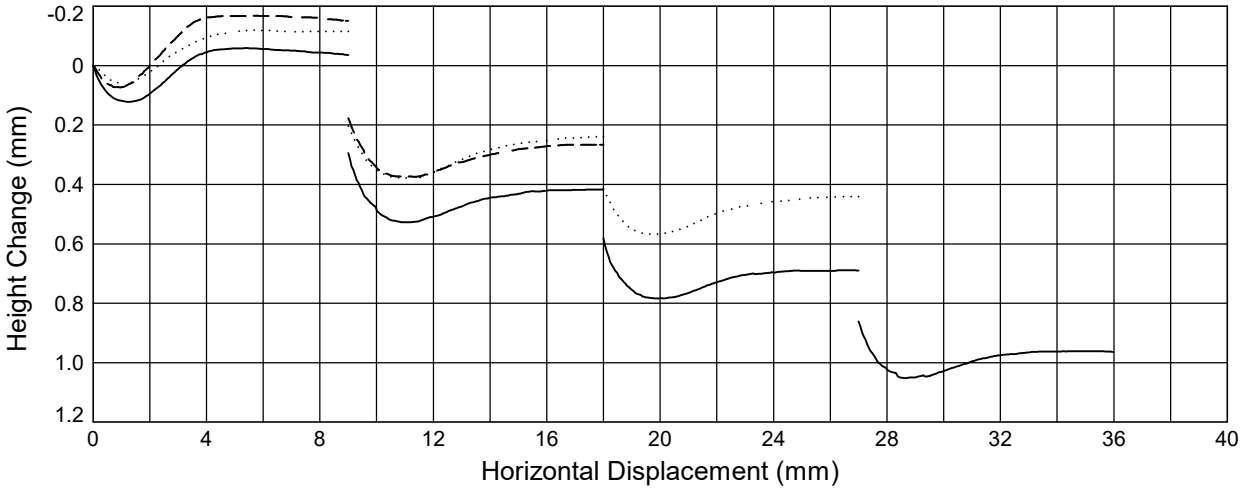
In accordance with BS EN ISO 17892-10

Position ID: **F22-BH203** Sample Ref: **33** Sample Type: **B** Depth (m): **10.00**

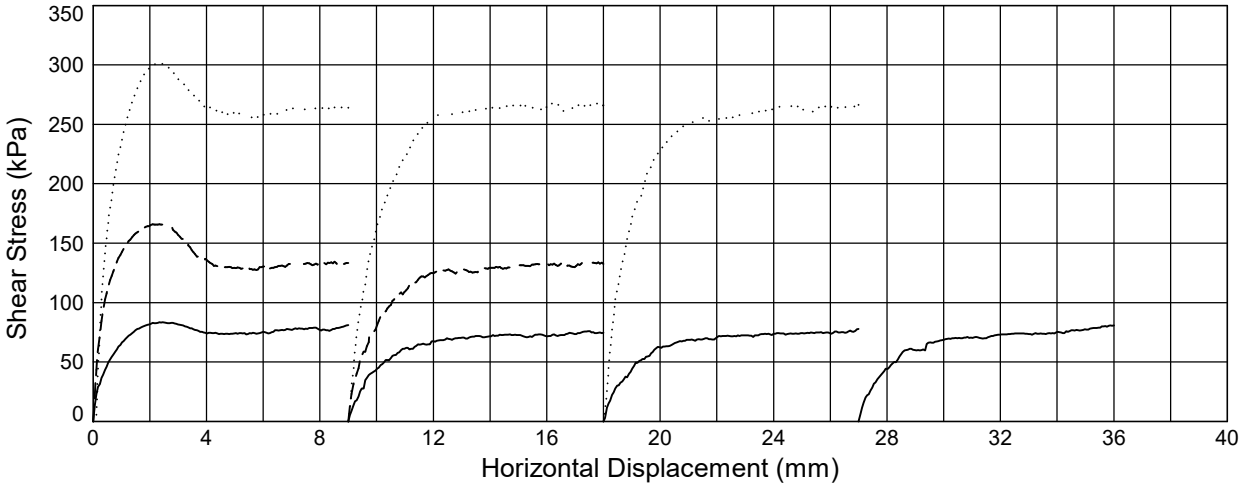
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**100** kPa) *Dashed Line* = Specimen 2 (**200** kPa) *Dotted Line* = Specimen 3 (**400** kPa)

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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **F22-BH203** Sample Ref: **43** Sample Type: **B** Depth (m): **13.00**

Description: **Orangish brown slightly gravelly slightly silty SAND**

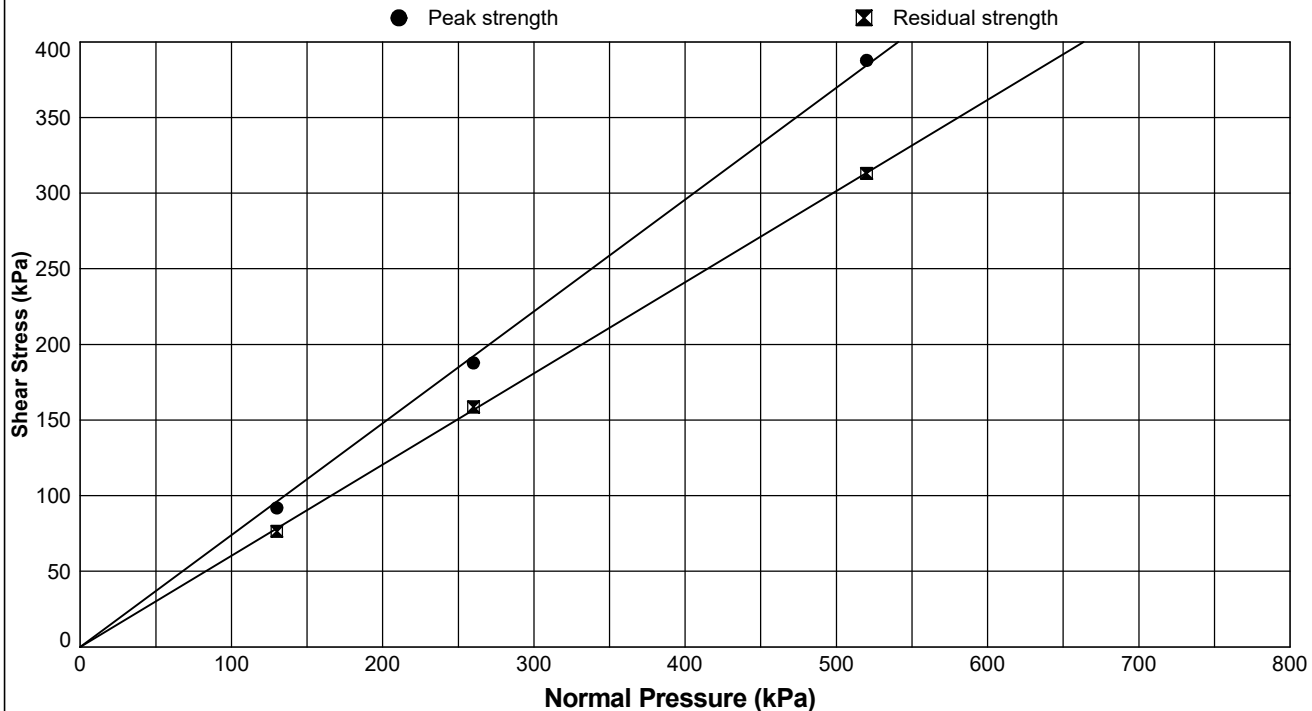
Sample Condition: **Recompacted**

Start Date: **13/12/2023**

End Date: **15/12/2023**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**17.0**	**17.0**	**17.0**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**19.2**	**19.2**	**19.2**
	Initial Bulk Density	(Mg/m^3)	**1.85**	**1.85**	**1.85**
	Initial Dry Density	(Mg/m^3)	**1.58**	**1.58**	**1.58**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**0.6790**	**0.6795**	**0.6789**
	Initial Degree of Saturation	(%)	**66**	**66**	**66**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**3**	**3**	**3**
CONSOLIDATION	Normal Pressure	(kPa)	**130**	**260**	**520**
	Consolidated Height	(mm)	**18.1**	**18.5**	**18.4**
	Voids Ratio after Consolidation		**0.5891**	**0.6204**	**0.6079**
SHEAR	Shearing Rate	(mm/min)	**0.0312**	**0.0380**	**0.0420**
	Horiz. Displacement at Peak Shear Stress	(mm)	**2.3**	**2.6**	**3.1**
	Voids Ratio after Shear		**0.3097**	**0.5385**	**0.4473**
	Peak Shear Stress	(kPa)	**92**	**188**	**388**
	Residual Shear Stress	(kPa)	**76**	**159**	**313**

PEAK STRENGTH	Effective Cohesion (C')	**0** (kPa)	Effective Angle of Friction (ϕ')	**36.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**0** (kPa)	Residual Angle of Friction (ϕ'_R)	**31**	(deg)



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Contract: **Sealink Friston**		Contract Ref: **563835**

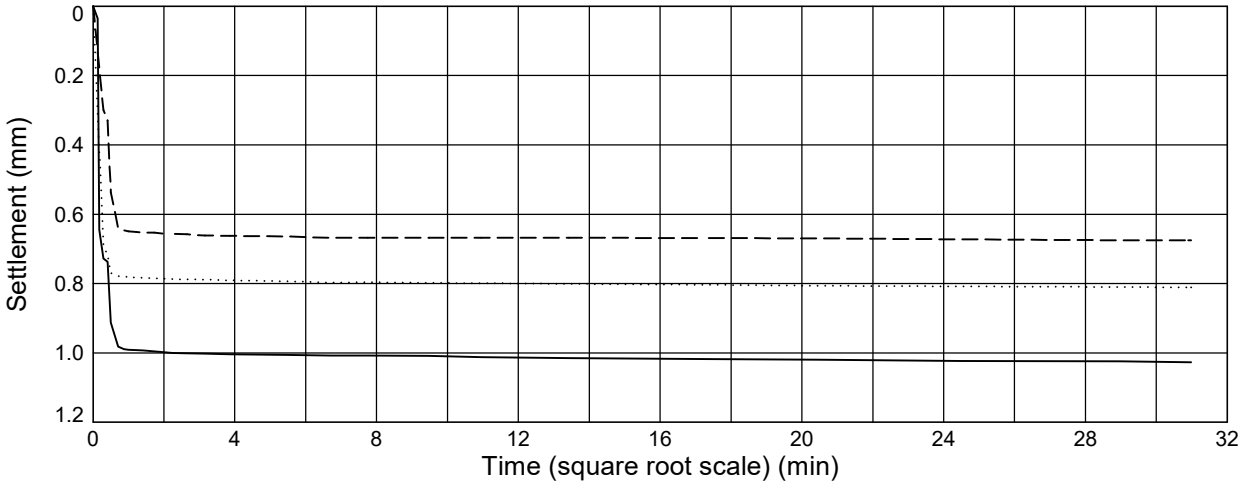
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - SBOX - AUTO - P1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

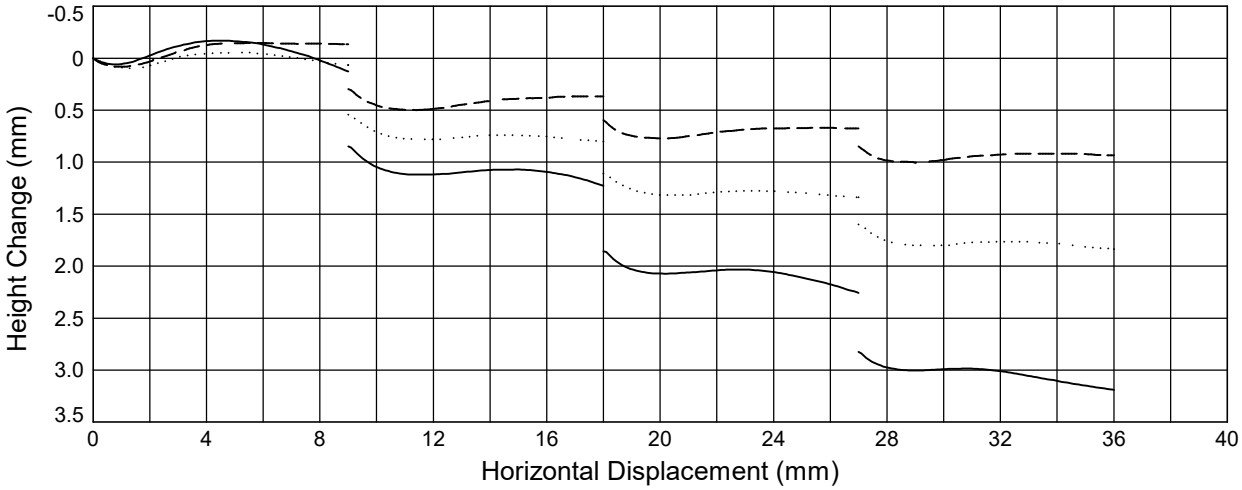
In accordance with BS EN ISO 17892-10

Position ID: **F22-BH203** Sample Ref: **43** Sample Type: **B** Depth (m): **13.00**

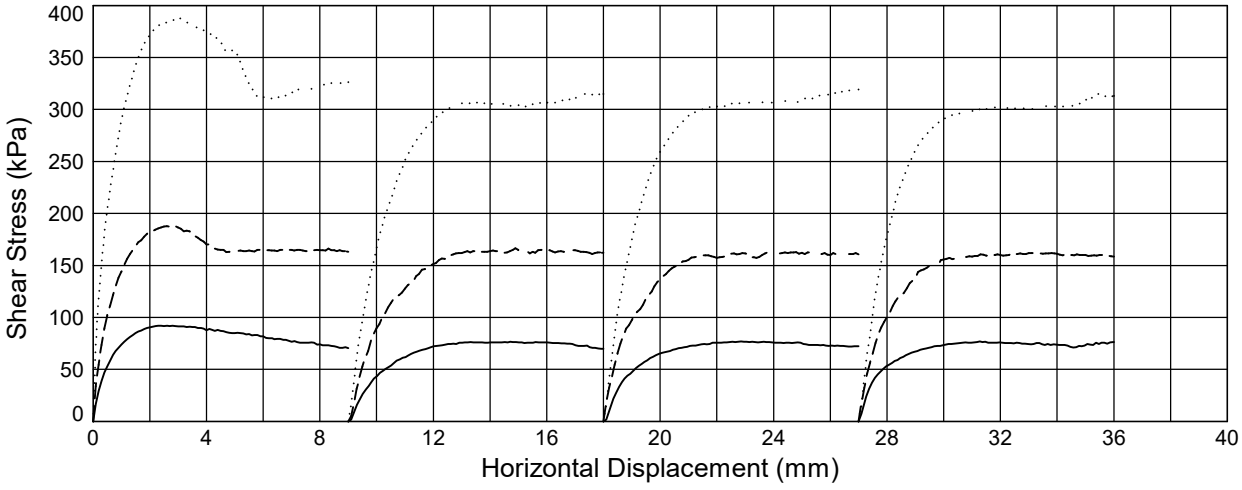
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**130** kPa) *Dashed Line* = Specimen 2 (**260** kPa) *Dotted Line* = Specimen 3 (**520** kPa)

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Compiled By		Date
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Contract: **Sealink Friston**		Contract Ref: **563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - SBOX - AUTO - P2.1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **F22-BH306** Sample Ref: **56** Sample Type: **B** Depth (m): **14.50**

Description: **Orangish brown slightly gravelly clayey SAND**

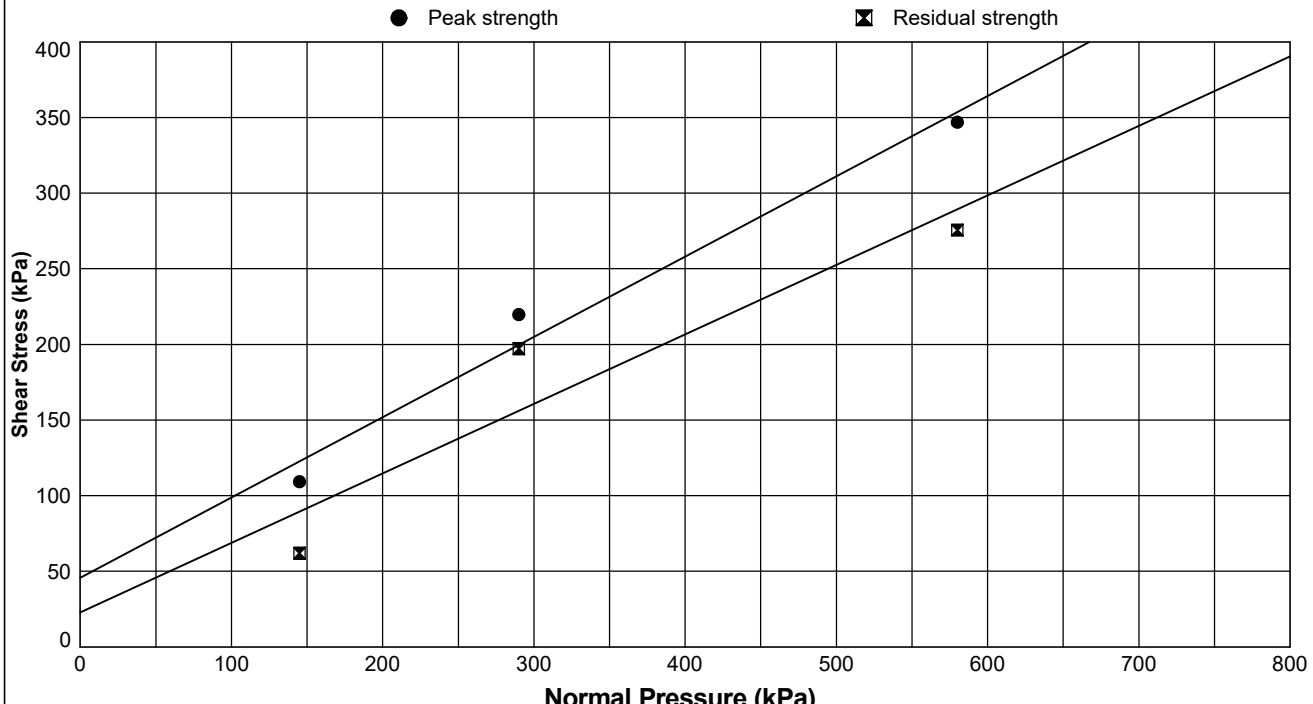
Sample Condition: **Recompacted**

Start Date: **09/02/2024**

End Date: **19/02/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**16.8**	**16.7**	**17.9**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**23.2**	**23.2**	**23.2**
	Initial Bulk Density	(Mg/m^3)	**1.83**	**1.83**	**1.83**
	Initial Dry Density	(Mg/m^3)	**1.56**	**1.57**	**1.55**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**0.6941**	**0.6873**	**0.7062**
	Initial Degree of Saturation	(%)	**64**	**64**	**67**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**6**	**6**	**6**
CONSOLIDATION	Normal Pressure	(kPa)	**145**	**290**	**580**
	Consolidated Height	(mm)	**22.3**	**21.9**	**22.0**
	Voids Ratio after Consolidation		**0.6310**	**0.5925**	**0.6219**
SHEAR	Shearing Rate	(mm/min)	**0.1003**	**0.1154**	**0.1099**
	Horiz. Displacement at Peak Shear Stress	(mm)	**6.2**	**3.4**	**8.4**
	Voids Ratio after Shear		**0.0984**	**0.3177**	**-0.0415**
	Peak Shear Stress	(kPa)	**109**	**220**	**347**
	Residual Shear Stress	(kPa)	**62**	**197**	**276**

PEAK STRENGTH	Effective Cohesion (C')	**46** (kPa)	Effective Angle of Friction (ϕ')	**28**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**0** (kPa)	Residual Angle of Friction (ϕ'_R)	**24.5**	(deg)



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Contract	Contract Ref:
Sealink Friston	**563835**

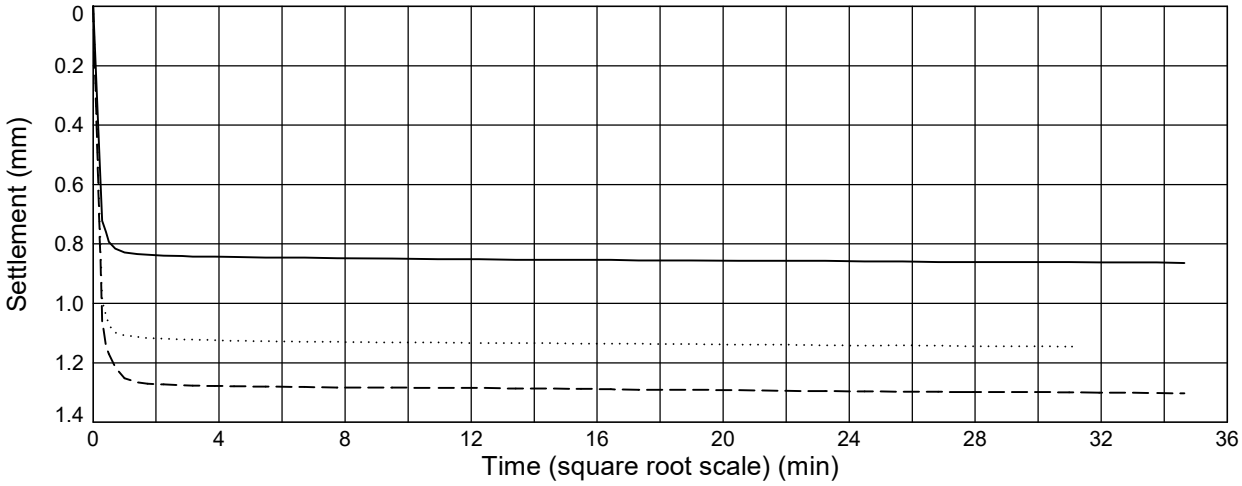
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

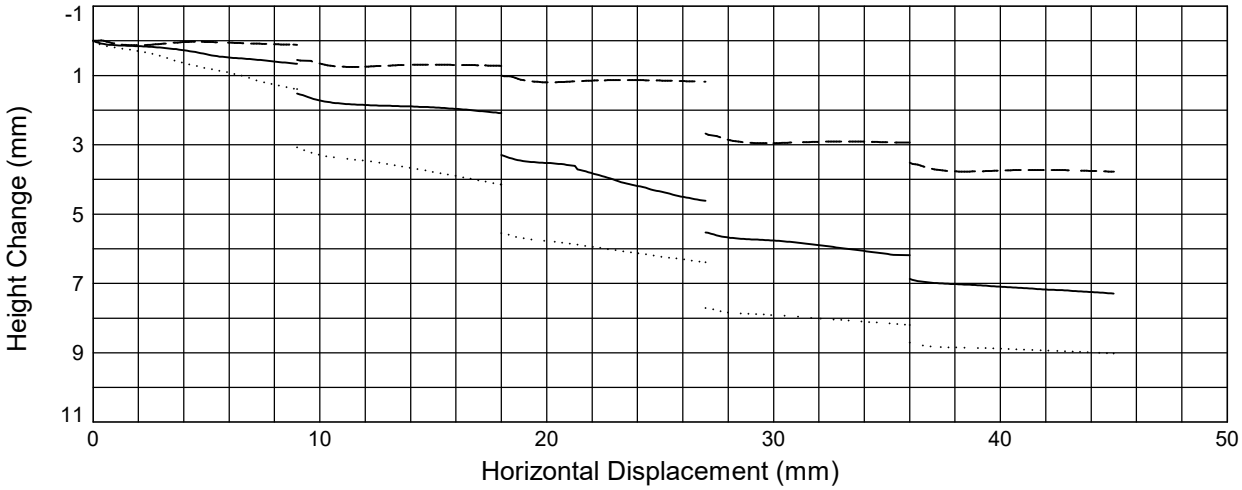
In accordance with BS EN ISO 17892-10

Position ID: **F22-BH306** Sample Ref: **56** Sample Type: **B** Depth (m): **14.50**

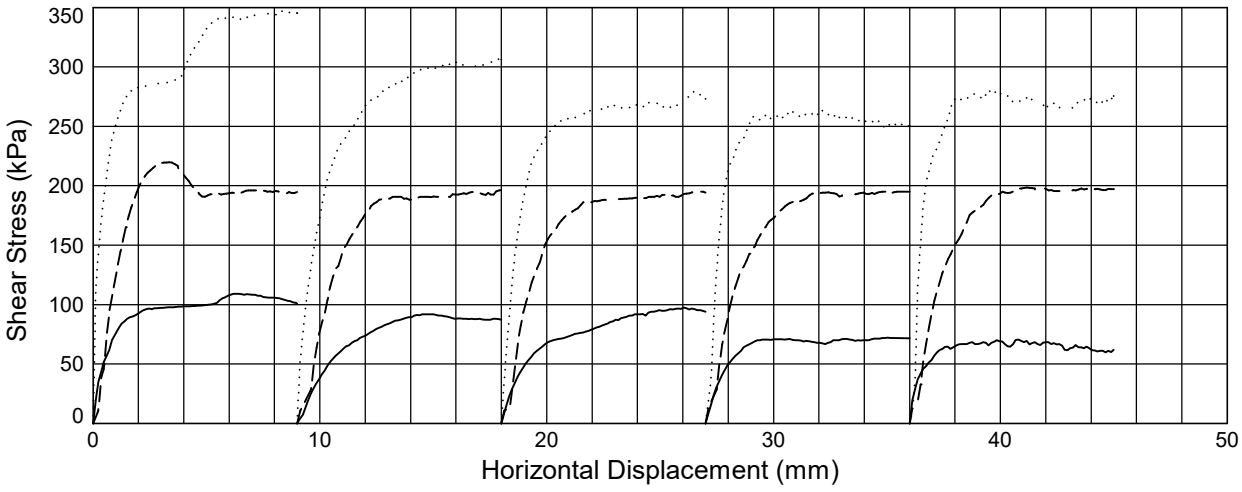
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**145** kPa) *Dashed Line* = Specimen 2 (**290** kPa) *Dotted Line* = Specimen 3 (**580** kPa)

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Compiled By		Date
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Contract: **Sealink Friston**		Contract Ref: **563835**

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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **F22-BH306** Sample Ref: **83** Sample Type: **B** Depth (m): **21.50**

Description: **Grey clayey SAND**

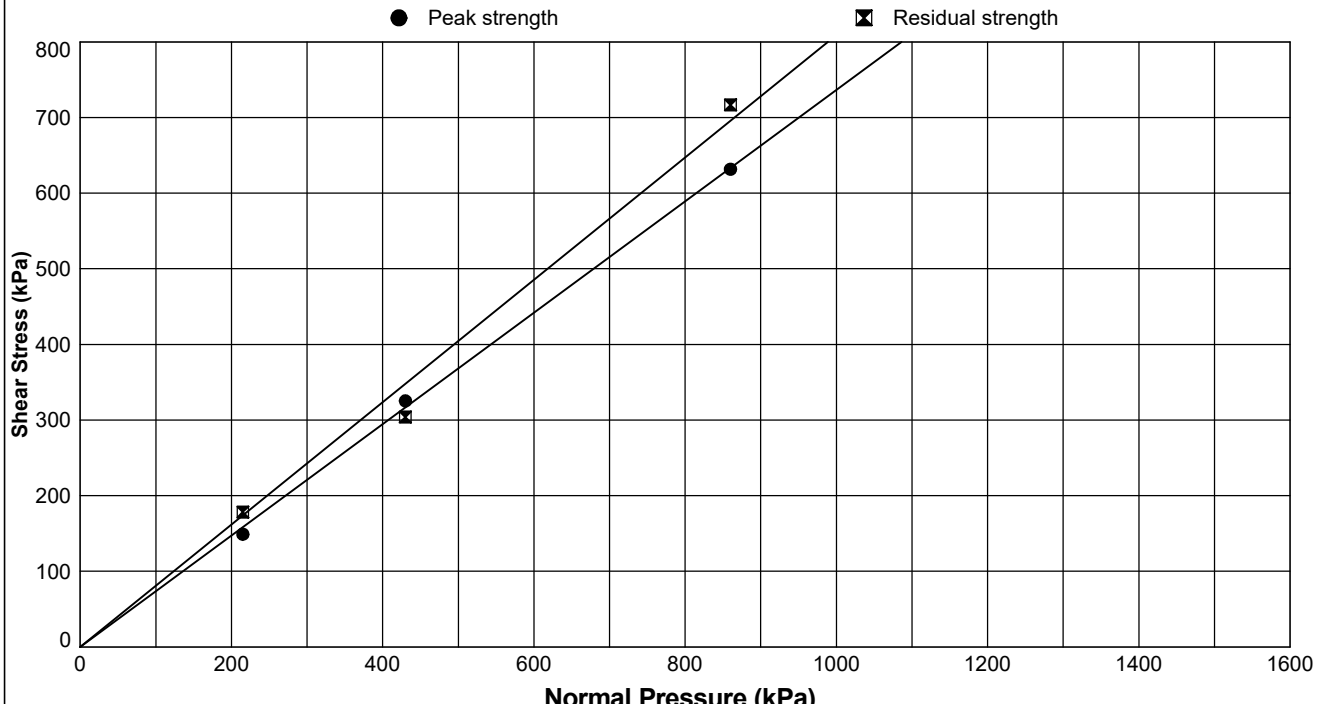
Sample Condition: **Recompacted**

Start Date: **14/12/2023**

End Date: **19/12/2023**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**19.2**	**19.2**	**19.1**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**22.8**	**22.7**	**22.7**
	Initial Bulk Density	(Mg/m^3)	**1.83**	**1.83**	**1.83**
	Initial Dry Density	(Mg/m^3)	**1.54**	**1.54**	**1.54**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**0.7219**	**0.7247**	**0.7201**
	Initial Degree of Saturation	(%)	**70**	**70**	**70**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**5**	**5**	**5**
CONSOLIDATION	Normal Pressure	(kPa)	**215**	**430**	**860**
	Consolidated Height	(mm)	**21.7**	**21.8**	**21.3**
	Voids Ratio after Consolidation		**0.6412**	**0.6601**	**0.6137**
SHEAR	Shearing Rate	(mm/min)	**0.0962**	**0.0785**	**0.0874**
	Horiz. Displacement at Peak Shear Stress	(mm)	**2.0**	**2.0**	**3.1**
	Voids Ratio after Shear		**0.5010**	**0.5182**	**0.4544**
	Peak Shear Stress	(kPa)	**149**	**325**	**632**
	Residual Shear Stress	(kPa)	**178**	**304**	**717**

PEAK STRENGTH	Effective Cohesion (C')	**0** (kPa)	Effective Angle of Friction (ϕ')	**36.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**0** (kPa)	Residual Angle of Friction (ϕ'_R)	**39**	(deg)



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Compiled By		Date
[redacted]	[redacted]	**05/03/24**

Contract	Contract Ref:
Sealink Friston	**563835**

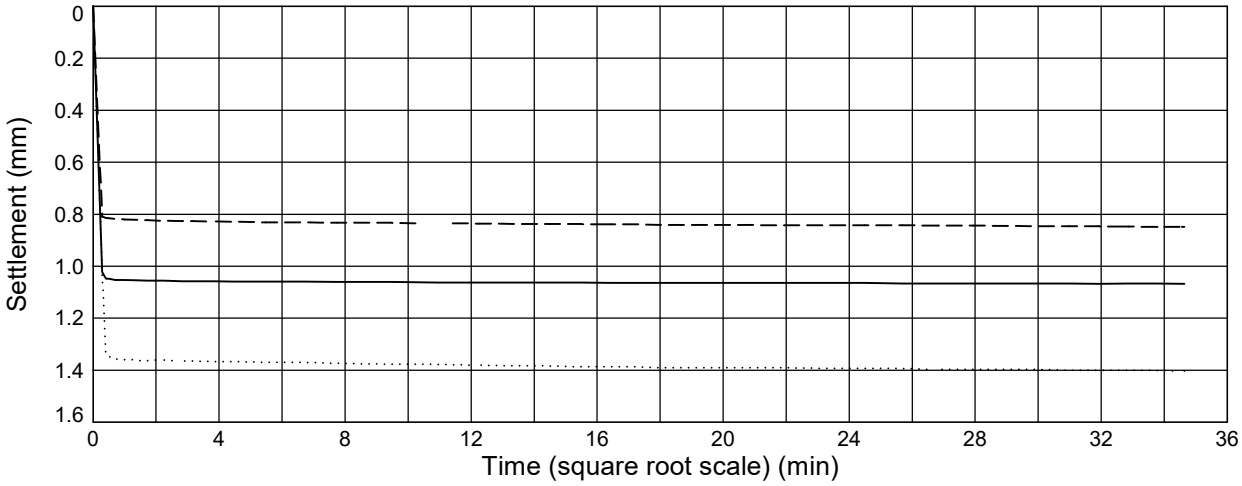
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

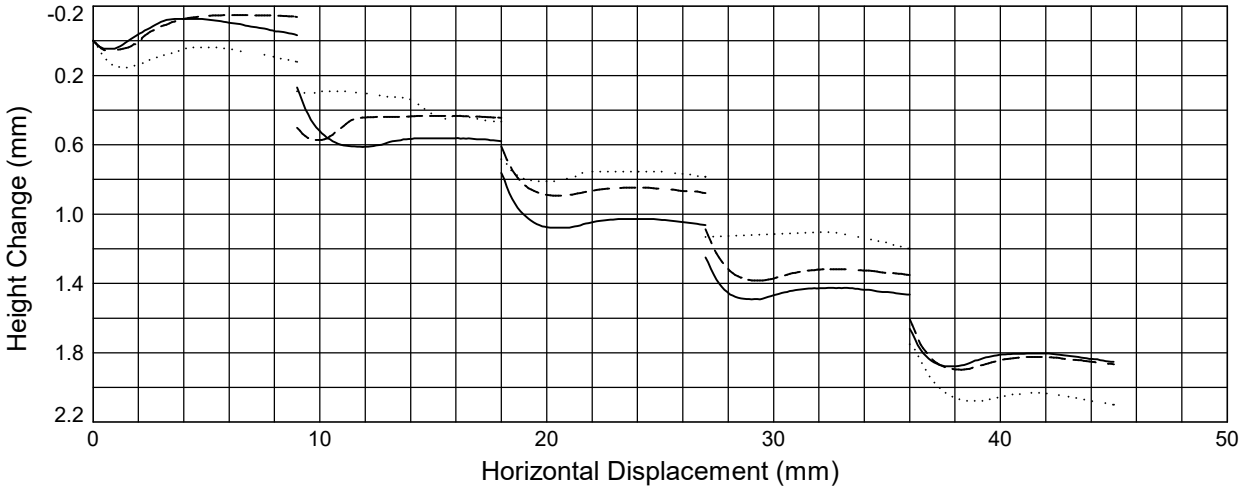
In accordance with BS EN ISO 17892-10

Position ID: **F22-BH306** Sample Ref: **83** Sample Type: **B** Depth (m): **21.50**

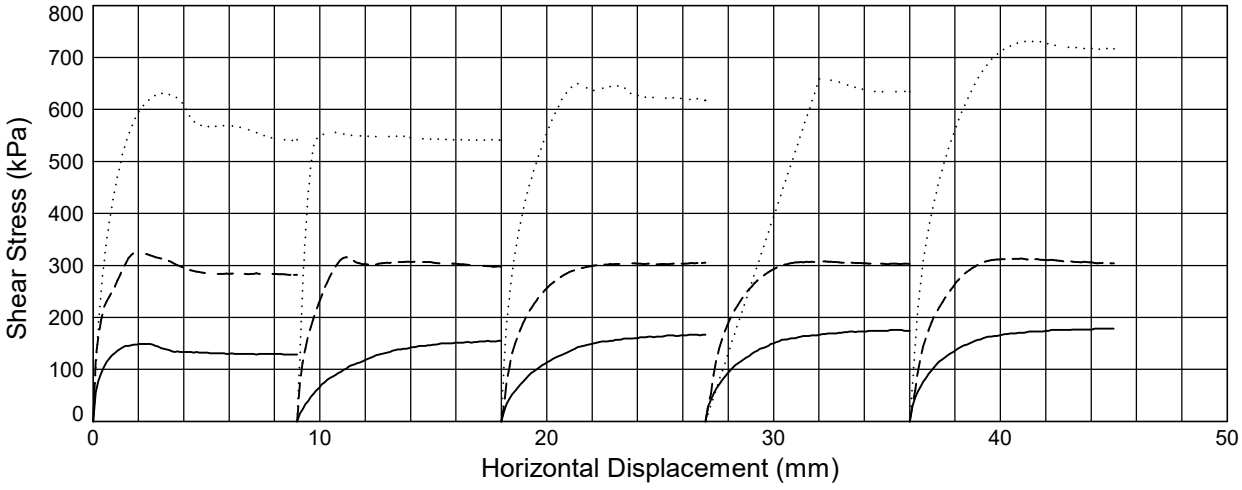
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**215** kPa) *Dashed Line* = Specimen 2 (**430** kPa) *Dotted Line* = Specimen 3 (**860** kPa)

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Contract: **Sealink Friston**		Contract Ref: **563835**

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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **F22-BH307** Sample Ref: **35** Sample Type: **B** Depth (m): **9.50**

Description: **Yellowish brown silty SAND**

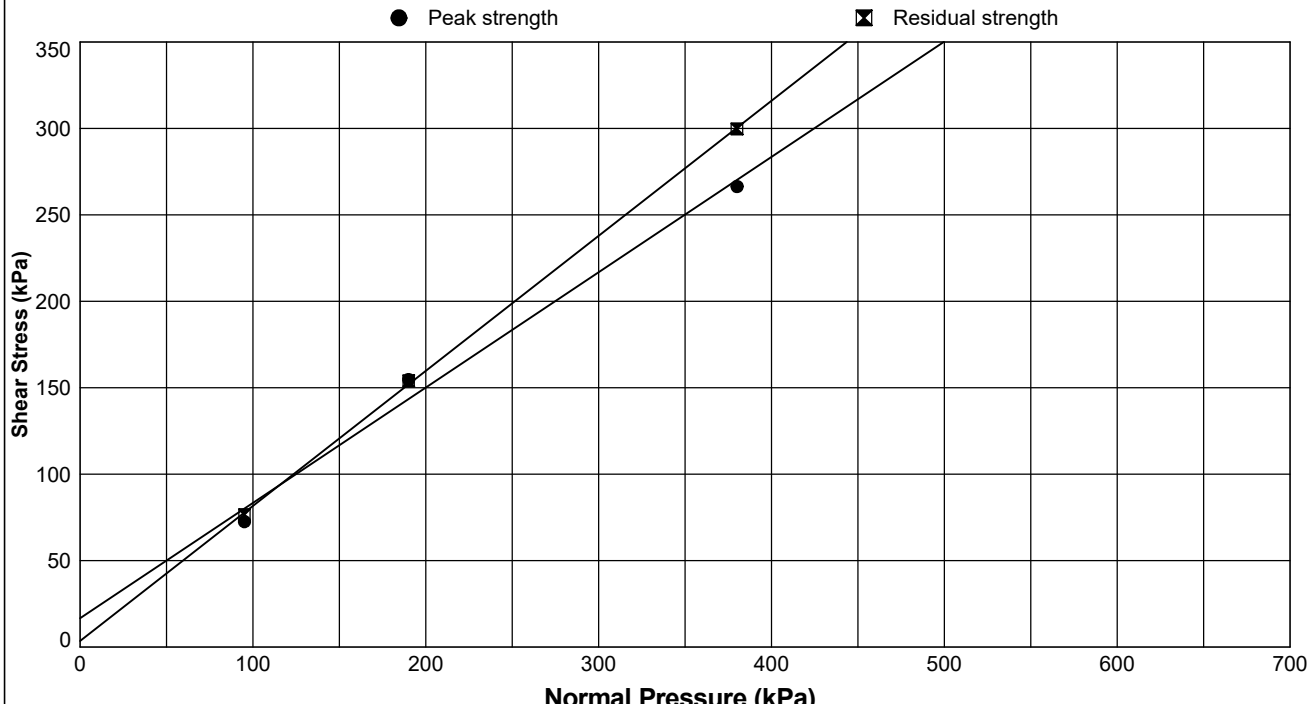
Sample Condition: **Recompacted**

Start Date: **05/02/2024**

End Date: **12/02/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**15.1**	**14.1**	**14.1**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**23.5**	**23.3**	**23.5**
	Initial Bulk Density	(Mg/m^3)	**2.01**	**2.01**	**2.01**
	Initial Dry Density	(Mg/m^3)	**1.74**	**1.76**	**1.76**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**0.5210**	**0.5072**	**0.5051**
	Initial Degree of Saturation	(%)	**77**	**74**	**74**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**4**	**4**	**5**
CONSOLIDATION	Normal Pressure	(kPa)	**95**	**190**	**380**
	Consolidated Height	(mm)	**22.5**	**22.3**	**22.5**
	Voids Ratio after Consolidation		**0.4572**	**0.4410**	**0.4417**
SHEAR	Shearing Rate	(mm/min)	**0.1049**	**0.0721**	**0.1099**
	Horiz. Displacement at Peak Shear Stress	(mm)	**2.6**	**3.0**	**2.6**
	Voids Ratio after Shear		**0.2287**	**0.2870**	**0.2937**
	Peak Shear Stress	(kPa)	**73**	**155**	**266**
	Residual Shear Stress	(kPa)	**76**	**154**	**300**

PEAK STRENGTH	Effective Cohesion (C')	**17** (kPa)	Effective Angle of Friction (ϕ')	**33.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**4** (kPa)	Residual Angle of Friction (ϕ'_R)	**38**	(deg)



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Compiled By: [redacted]

Date: **19/03/24**

Contract: **Sealink Friston**

Contract Ref: **563835**

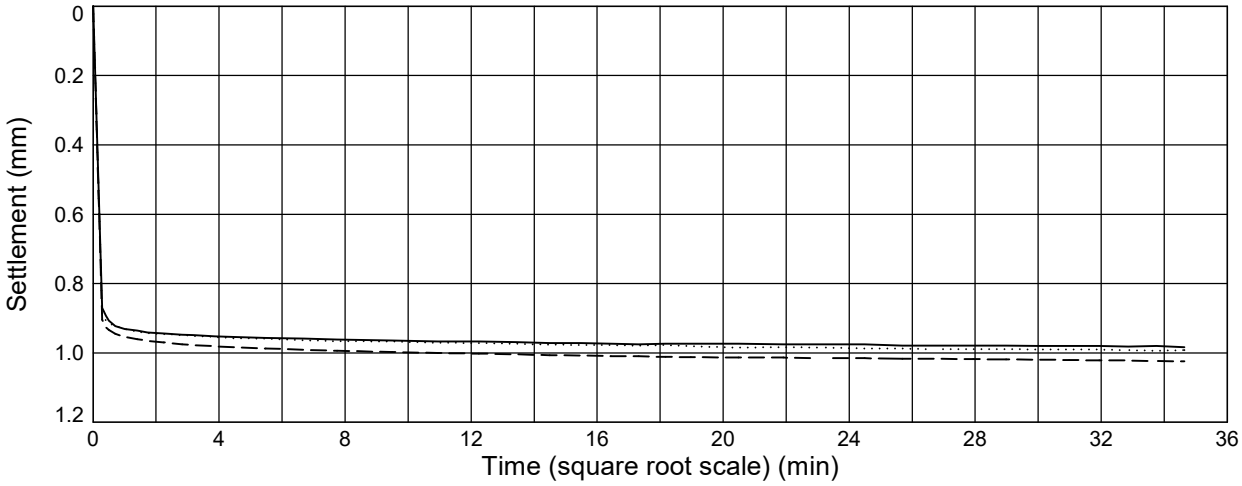
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - SBOX - AUTO - P1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

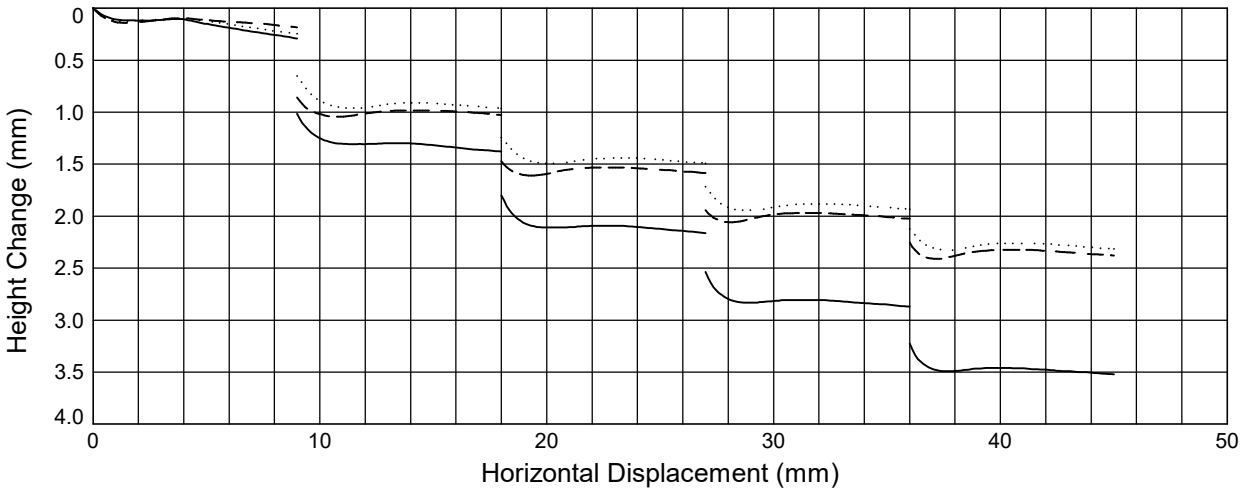
In accordance with BS EN ISO 17892-10

Position ID: **F22-BH307** Sample Ref: **35** Sample Type: **B** Depth (m): **9.50**

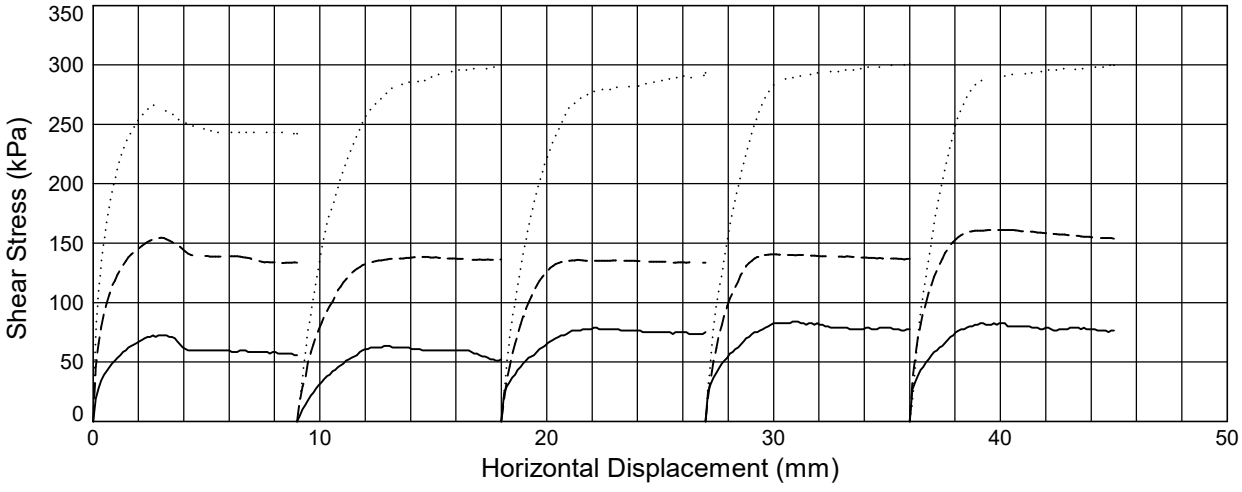
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**95** kPa) *Dashed Line* = Specimen 2 (**190** kPa) *Dotted Line* = Specimen 3 (**380** kPa)

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Compiled By		Date
[redacted]	[redacted]	**19/03/24**
Contract: **Sealink Friston**		Contract Ref: **563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - SBOX - AUTO - P2.1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **F22-BH307** Sample Ref: **65** Sample Type: **B** Depth (m): **17.50**

Description: **Brown slightly sandy silty CLAY**

Sample Condition: **Recompacted**

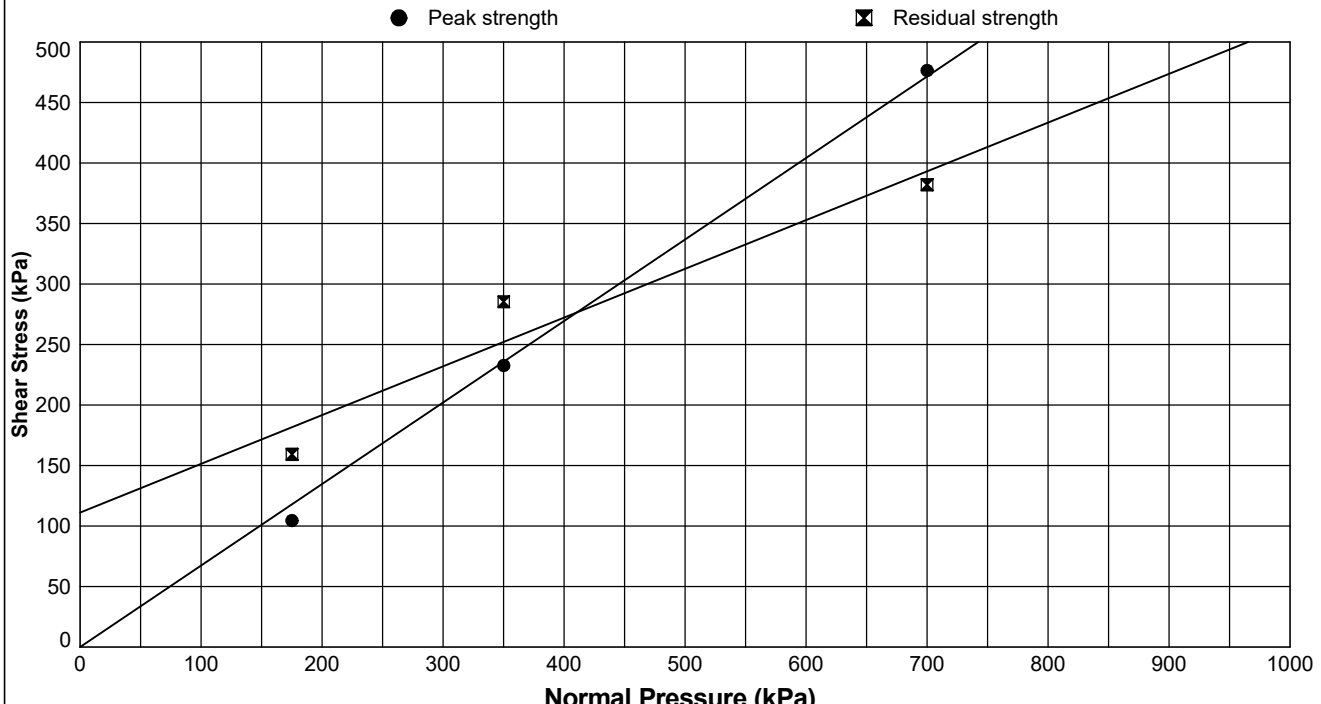
Remarks : **Water content was reduced to enable remoulding**

Start Date: **26/02/2024**

End Date: **29/02/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**15.4**	**14.8**	**13.3**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**23.6**	**23.4**	**23.1**
	Initial Bulk Density	(Mg/m^3)	**1.94**	**1.94**	**1.95**
	Initial Dry Density	(Mg/m^3)	**1.68**	**1.69**	**1.72**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**0.5737**	**0.5641**	**0.5420**
	Initial Degree of Saturation	(%)	**71**	**69**	**65**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**4**	**4**	**4**
CONSOLIDATION	Normal Pressure	(kPa)	**175**	**350**	**700**
	Consolidated Height	(mm)	**20.7**	**19.4**	**16.3**
	Voids Ratio after Consolidation		**0.3847**	**0.3001**	**0.0872**
SHEAR	Shearing Rate	(mm/min)	**0.0531**	**0.0757**	**0.1282**
	Horiz. Displacement at Peak Shear Stress	(mm)	**5.5**	**6.0**	**2.8**
	Voids Ratio after Shear		**0.2303**	**0.0974**	**-0.0677**
	Peak Shear Stress	(kPa)	**104**	**233**	**476**
	Residual Shear Stress	(kPa)	**159**	**285**	**382**

PEAK STRENGTH	Effective Cohesion (C')	**0** (kPa)	Effective Angle of Friction (ϕ')	**34**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**146** (kPa)	Residual Angle of Friction (ϕ'_R)	**22**	(deg)



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Compiled By		Date
[redacted]	[redacted]	**19/03/24**
Contract: **Sealink Friston**		Contract Ref: **563835**

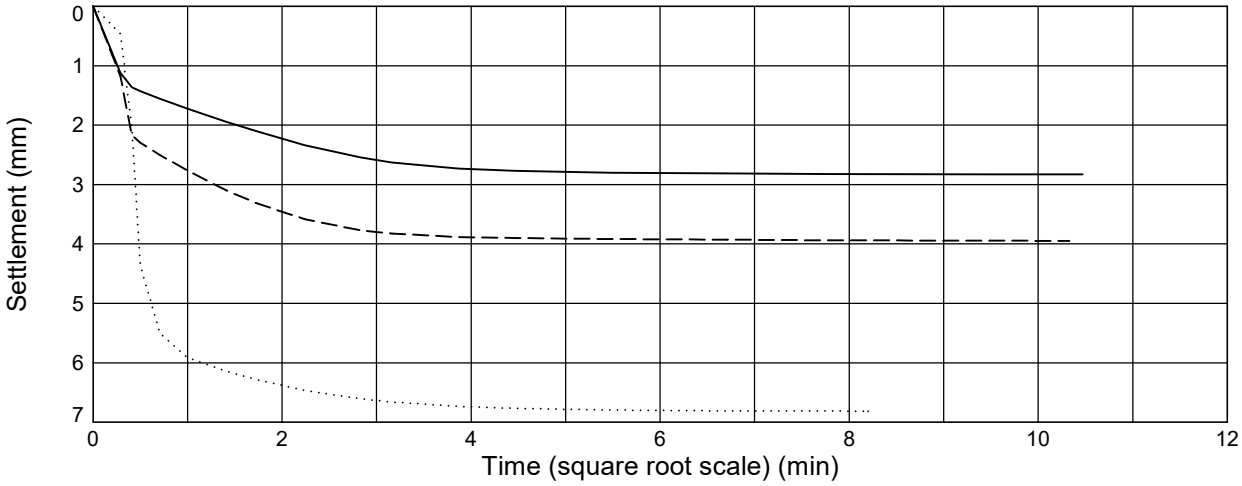
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - SBOX - AUTO - P1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

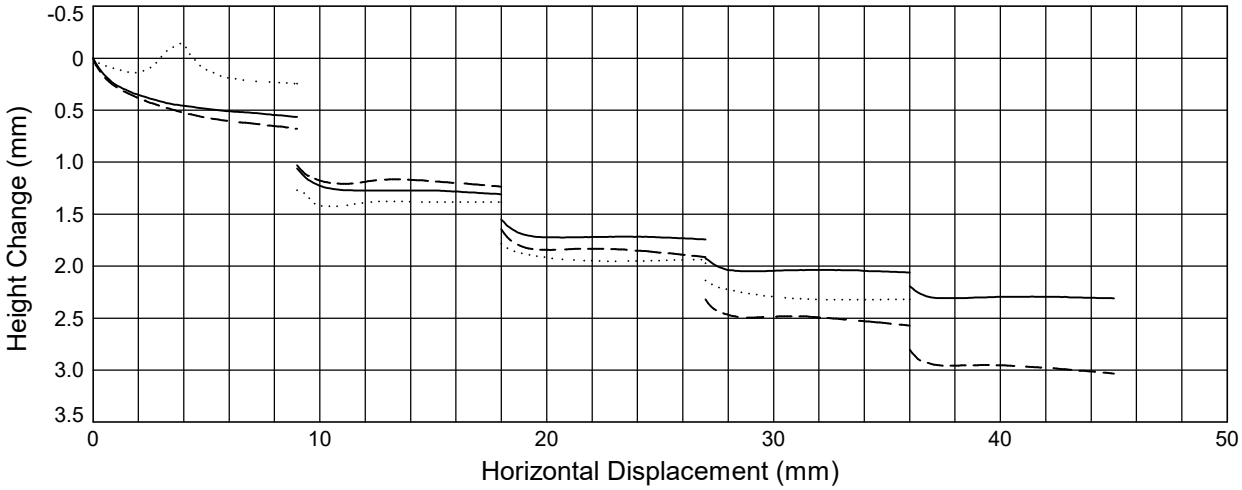
In accordance with BS EN ISO 17892-10

Position ID: **F22-BH307** Sample Ref: **65** Sample Type: **B** Depth (m): **17.50**

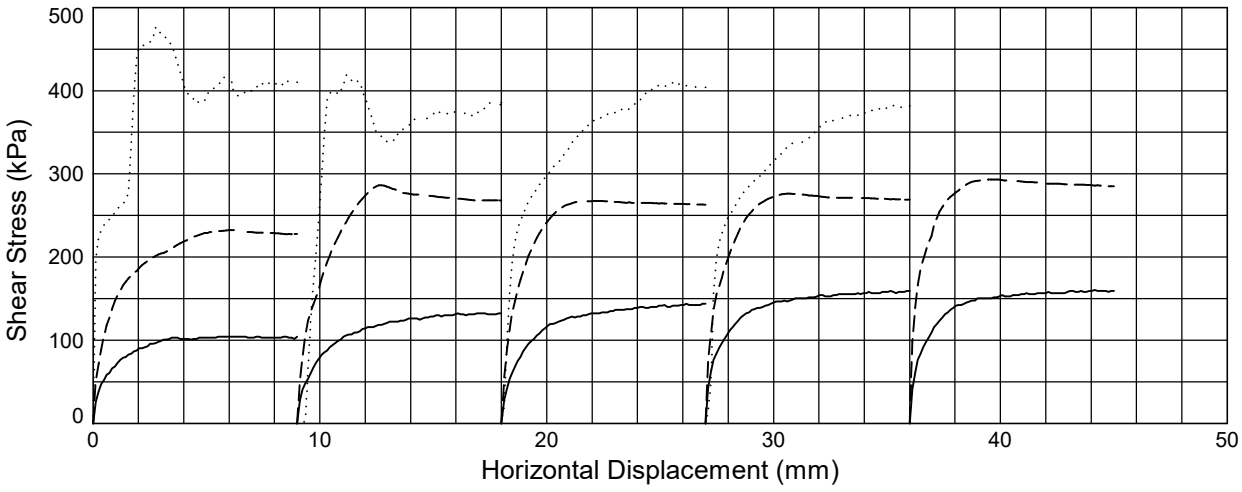
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**175** kPa) *Dashed Line* = Specimen 2 (**350** kPa) *Dotted Line* = Specimen 3 (**700** kPa)

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Compiled By		Date
[redacted]	[redacted]	**19/03/24**
Contract: **Sealink Friston**		Contract Ref: **563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - SBOX - AUTO - P2.1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **F22-BH307** Sample Ref: **80** Sample Type: **B** Depth (m): **21.50**

Description: **Orangish brown slightly gravelly clayey SAND**

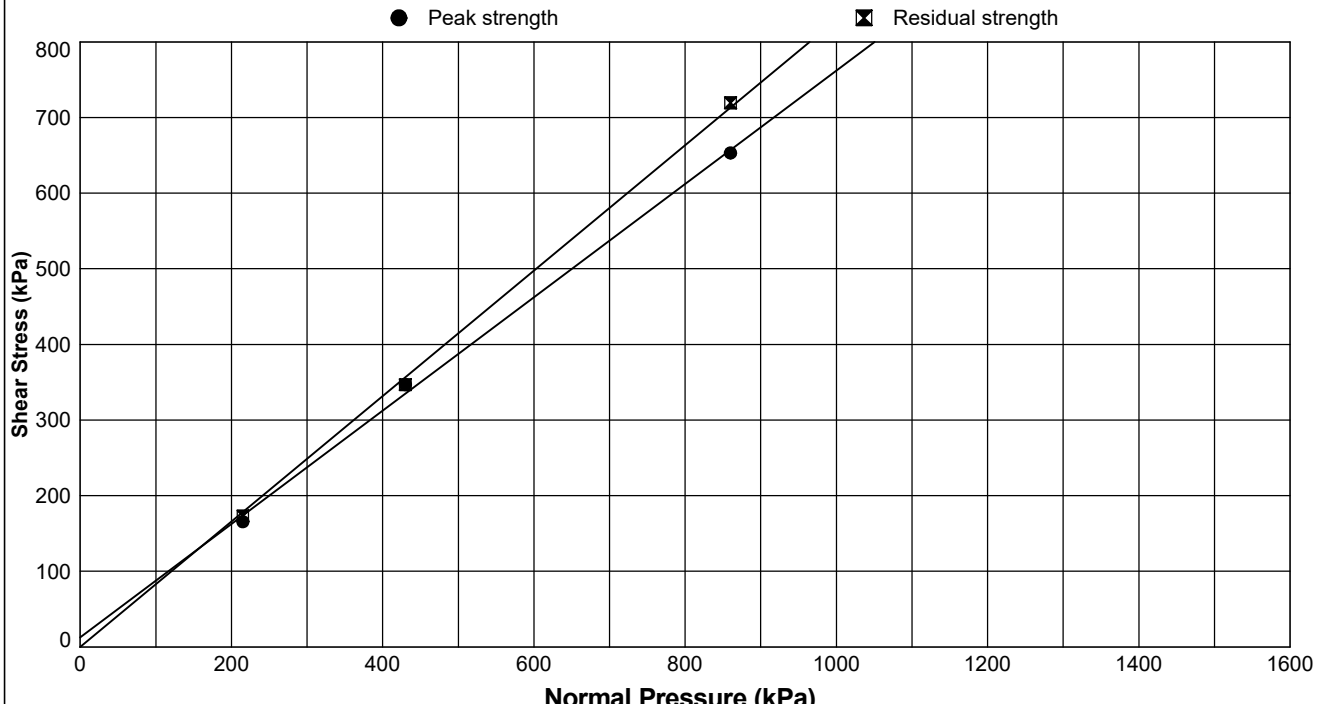
Sample Condition: **Recompacted**

Start Date: **02/01/2024**

End Date: **04/01/2024**

SPECIMEN NUMBER			1	2	3
PROPERTIES	Initial Water Content	(%)	**15.9**	**15.6**	**15.9**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**22.7**	**22.7**	**22.7**
	Initial Bulk Density	(Mg/m^3)	**1.97**	**1.97**	**1.98**
	Initial Dry Density	(Mg/m^3)	**1.70**	**1.70**	**1.71**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**0.5588**	**0.5562**	**0.5542**
	Initial Degree of Saturation	(%)	**75**	**75**	**76**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**3**	**3**	**3**
CONSOLIDATION	Normal Pressure	(kPa)	**215**	**430**	**860**
	Consolidated Height	(mm)	**21.9**	**21.2**	**21.6**
	Voids Ratio after Consolidation		**0.5041**	**0.4526**	**0.4823**
SHEAR	Shearing Rate	(mm/min)	**0.1061**	**0.1183**	**0.1282**
	Horiz. Displacement at Peak Shear Stress	(mm)	**2.2**	**2.2**	**2.8**
	Voids Ratio after Shear		**0.2808**	**0.3073**	**0.2469**
	Peak Shear Stress	(kPa)	**166**	**347**	**653**
	Residual Shear Stress	(kPa)	**173**	**347**	**719**

PEAK STRENGTH	Effective Cohesion (C')	**12** (kPa)	Effective Angle of Friction (ϕ')	**37**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**0** (kPa)	Residual Angle of Friction (ϕ'_R)	**39.5**	(deg)



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Compiled By		Date
[redacted]	[redacted]	**05/03/24**
Contract: **Sealink Friston**		Contract Ref: **563835**

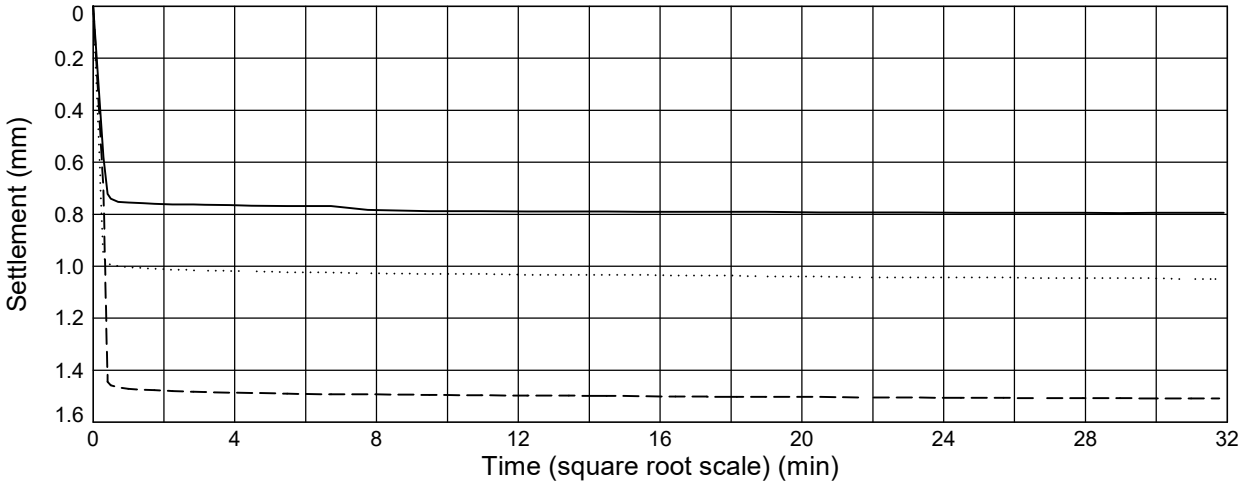
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - SBOX - AUTO - P1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

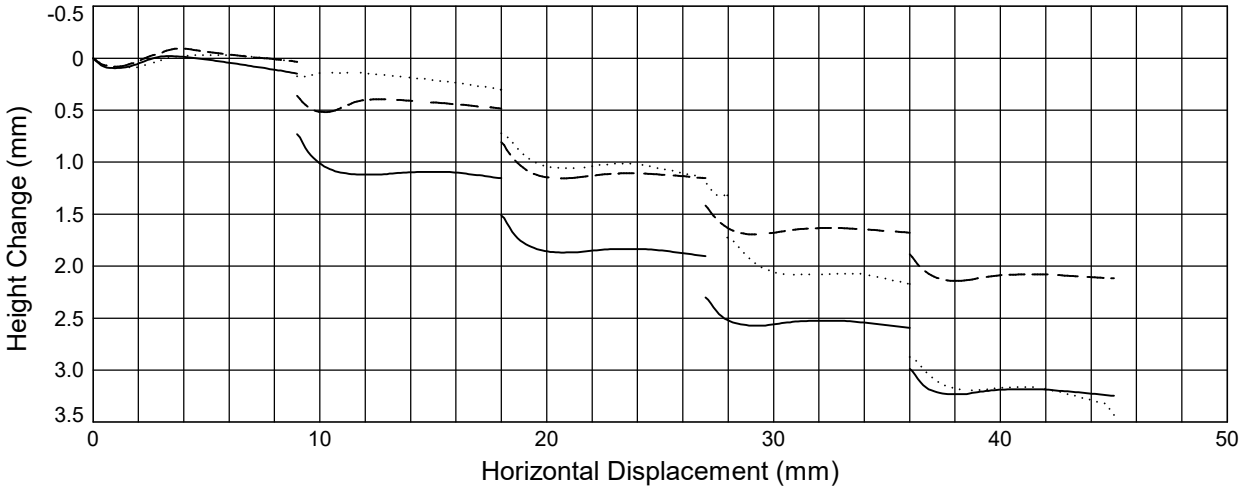
In accordance with BS EN ISO 17892-10

Position ID: **F22-BH307** Sample Ref: **80** Sample Type: **B** Depth (m): **21.50**

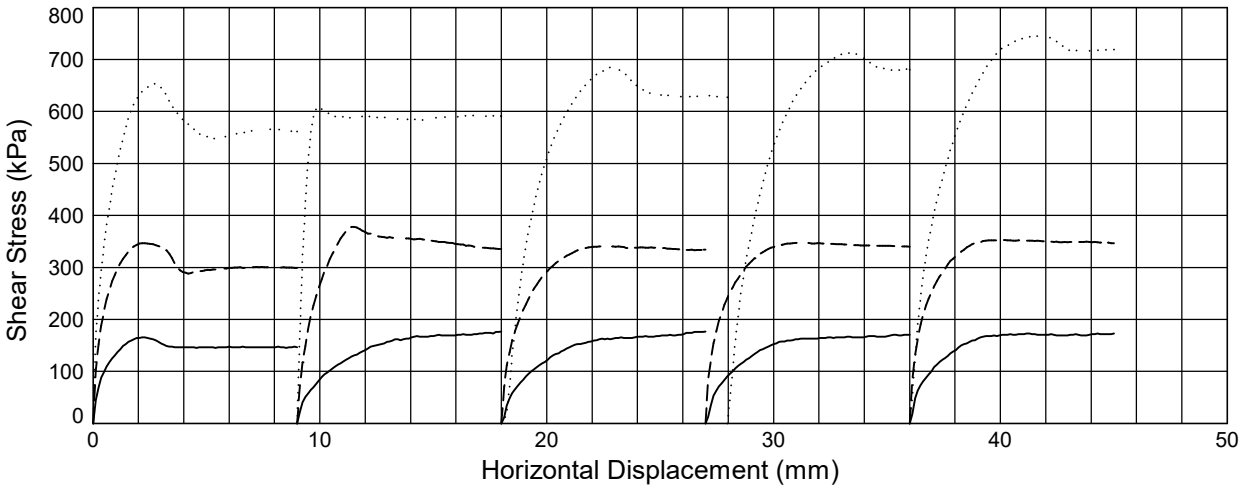
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**215** kPa) *Dashed Line* = Specimen 2 (**430** kPa) *Dotted Line* = Specimen 3 (**860** kPa)

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Compiled By		Date
[redacted]	[redacted]	**05/03/24**
Contract: **Sealink Friston**		Contract Ref: **563835**

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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **F22-BH308** Sample Ref: **43** Sample Type: **B** Depth (m): **10.50**

Description: **Brown clayey SAND**

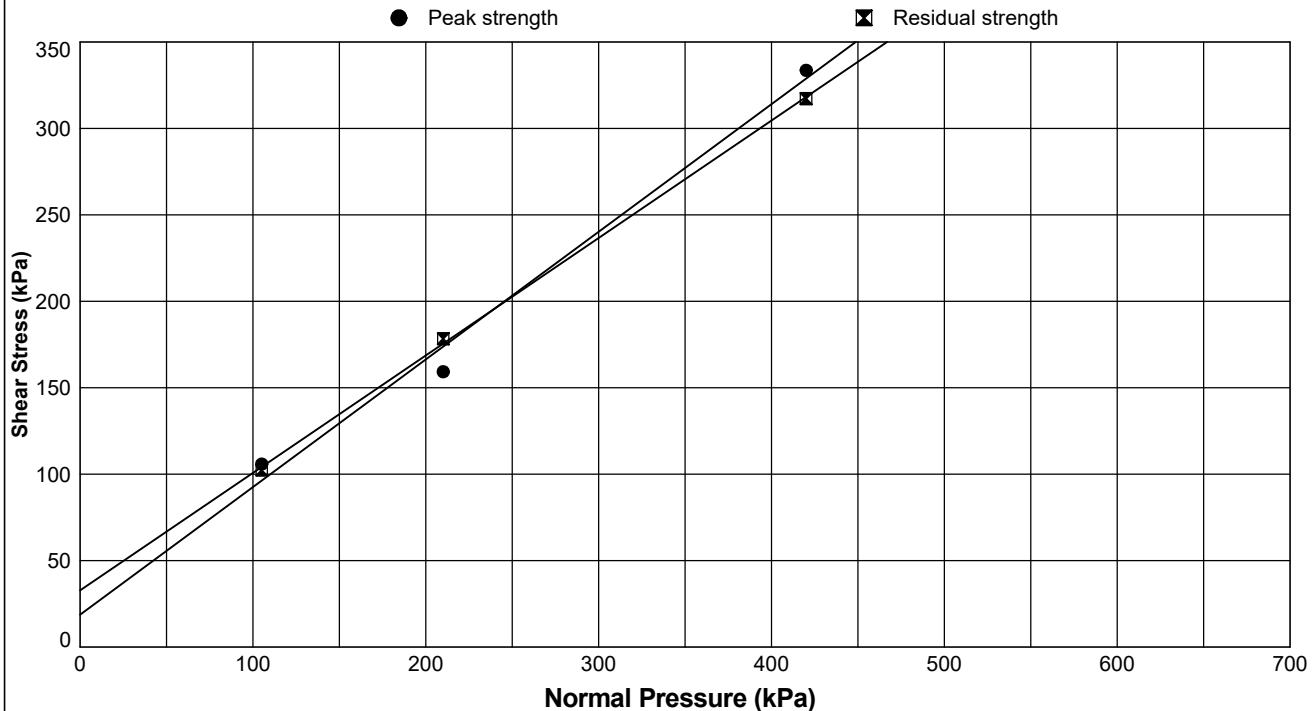
Sample Condition: **Recompacted**

Start Date: **12/01/2024**

End Date: **22/01/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**16.8**	**16.8**	**17.3**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**23.0**	**22.9**	**23.0**
	Initial Bulk Density	(Mg/m^3)	**1.89**	**1.89**	**1.89**
	Initial Dry Density	(Mg/m^3)	**1.61**	**1.61**	**1.61**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**0.6414**	**0.6414**	**0.6488**
	Initial Degree of Saturation	(%)	**69**	**69**	**71**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**4**	**4**	**4**
CONSOLIDATION	Normal Pressure	(kPa)	**105**	**210**	**420**
	Consolidated Height	(mm)	**22.1**	**21.9**	**21.7**
	Voids Ratio after Consolidation		**0.5755**	**0.5731**	**0.5566**
SHEAR	Shearing Rate	(mm/min)	**0.0832**	**0.1026**	**0.0993**
	Horiz. Displacement at Peak Shear Stress	(mm)	**1.4**	**2.4**	**1.9**
	Voids Ratio after Shear		**0.4394**	**0.3373**	**0.4029**
	Peak Shear Stress	(kPa)	**106**	**159**	**334**
	Residual Shear Stress	(kPa)	**102**	**178**	**317**

PEAK STRENGTH	Effective Cohesion (C')	**19** (kPa)	Effective Angle of Friction (ϕ')	**36.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**33** (kPa)	Residual Angle of Friction (ϕ'_R)	**34**	(deg)



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Compiled By		Date
[redacted]	[redacted]	**19/03/24**

Contract	Contract Ref:
Sealink Friston	**563835**

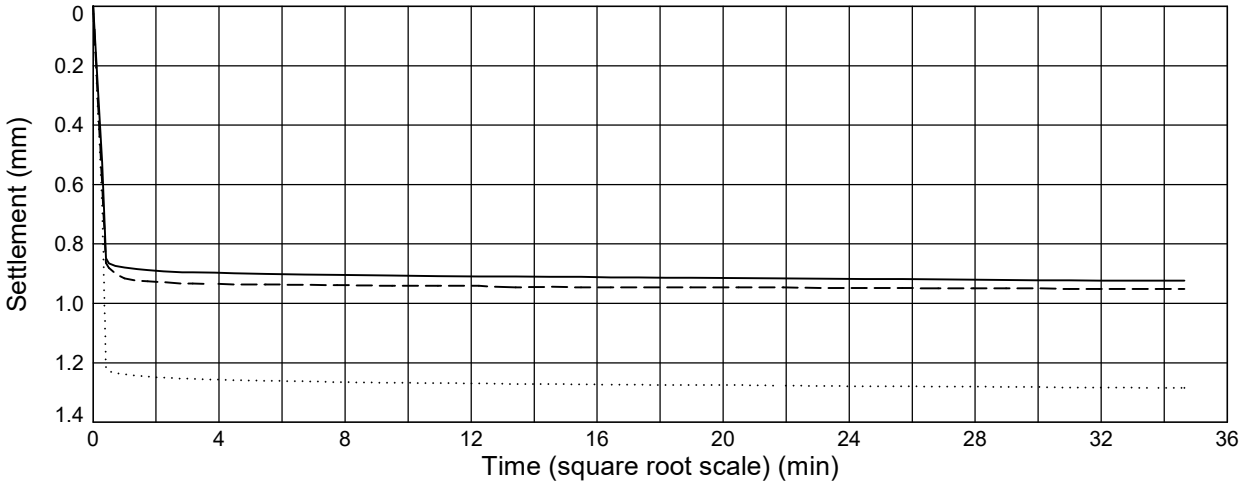
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - SBOX - AUTO - P1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

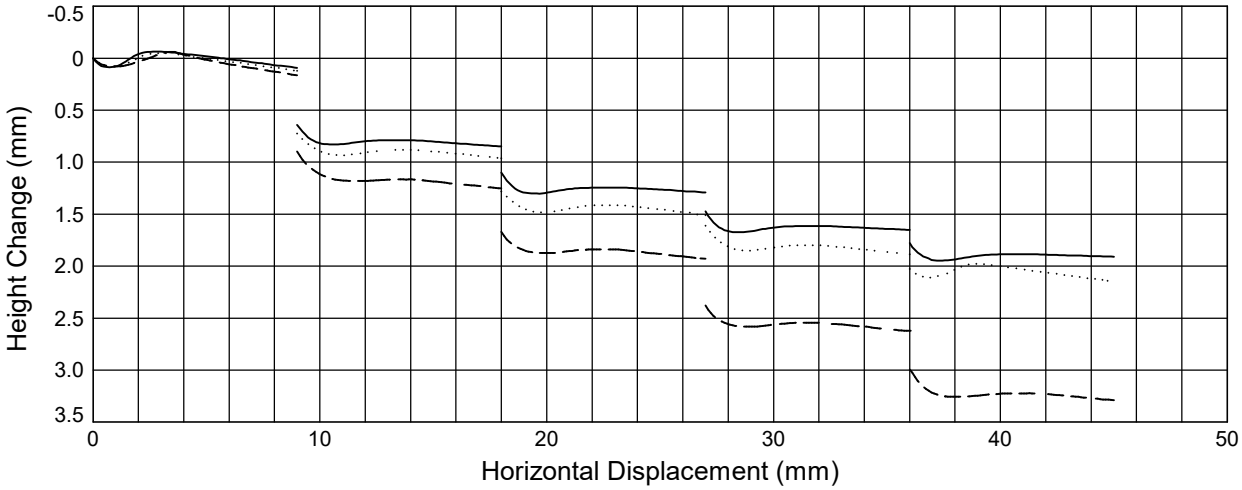
In accordance with BS EN ISO 17892-10

Position ID: **F22-BH308** Sample Ref: **43** Sample Type: **B** Depth (m): **10.50**

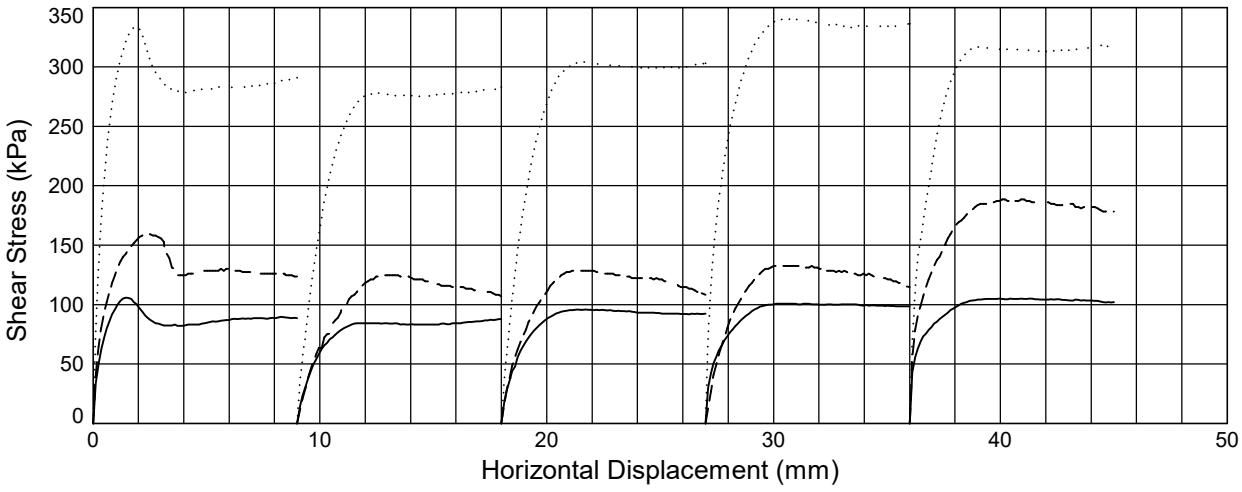
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**105** kPa) *Dashed Line* = Specimen 2 (**210** kPa) *Dotted Line* = Specimen 3 (**420** kPa)

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Compiled By		Date
[redacted]	[redacted]	**19/03/24**
Contract: **Sealink Friston**		Contract Ref: **563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - SBOX - AUTO - P2.1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **F22-BH308** Sample Ref: **63** Sample Type: **B** Depth (m): **15.50**

Description: **Brown slightly gravelly slightly clayey SAND**

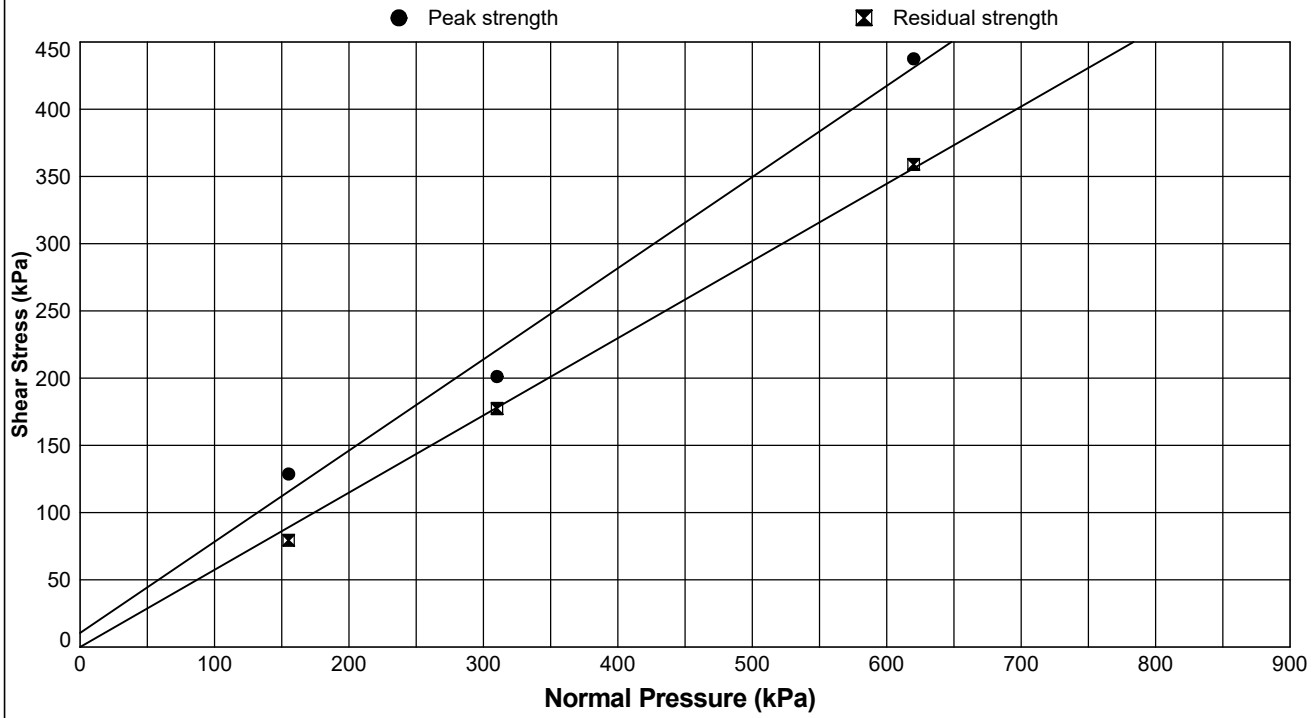
Sample Condition: **Recompacted**

Start Date: **21/02/2024**

End Date: **28/02/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**14.8**	**15.2**	**14.1**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**23.2**	**23.3**	**23.3**
	Initial Bulk Density	(Mg/m^3)	**1.83**	**1.83**	**1.83**
	Initial Dry Density	(Mg/m^3)	**1.59**	**1.59**	**1.60**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**0.6630**	**0.6689**	**0.6556**
	Initial Degree of Saturation	(%)	**59**	**60**	**57**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**6**	**6**	**6**
CONSOLIDATION	Normal Pressure	(kPa)	**155**	**310**	**620**
	Consolidated Height	(mm)	**22.4**	**22.2**	**22.2**
	Voids Ratio after Consolidation		**0.6039**	**0.5844**	**0.5725**
SHEAR	Shearing Rate	(mm/min)	**0.1539**	**0.1399**	**0.1399**
	Horiz. Displacement at Peak Shear Stress	(mm)	**1.9**	**38.8**	**4.7**
	Voids Ratio after Shear		**0.4984**	**0.3723**	**0.2853**
	Peak Shear Stress	(kPa)	**129**	**201**	**438**
	Residual Shear Stress	(kPa)	**79**	**177**	**359**

PEAK STRENGTH	Effective Cohesion (C')	**10**	(kPa)	Effective Angle of Friction (ϕ')	**34**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**0**	(kPa)	Residual Angle of Friction (ϕ'_R)	**30**	(deg)



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Compiled By		Date
[redacted]	[redacted]	**19/03/24**

Contract	Contract Ref:
Sealink Friston	**563835**

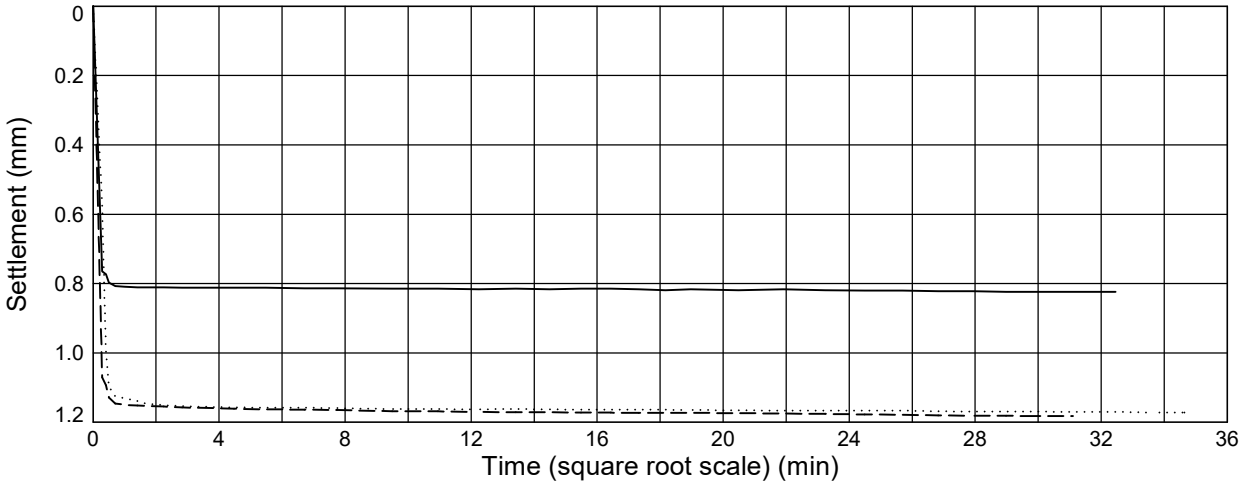
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - SBOX - AUTO - P1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

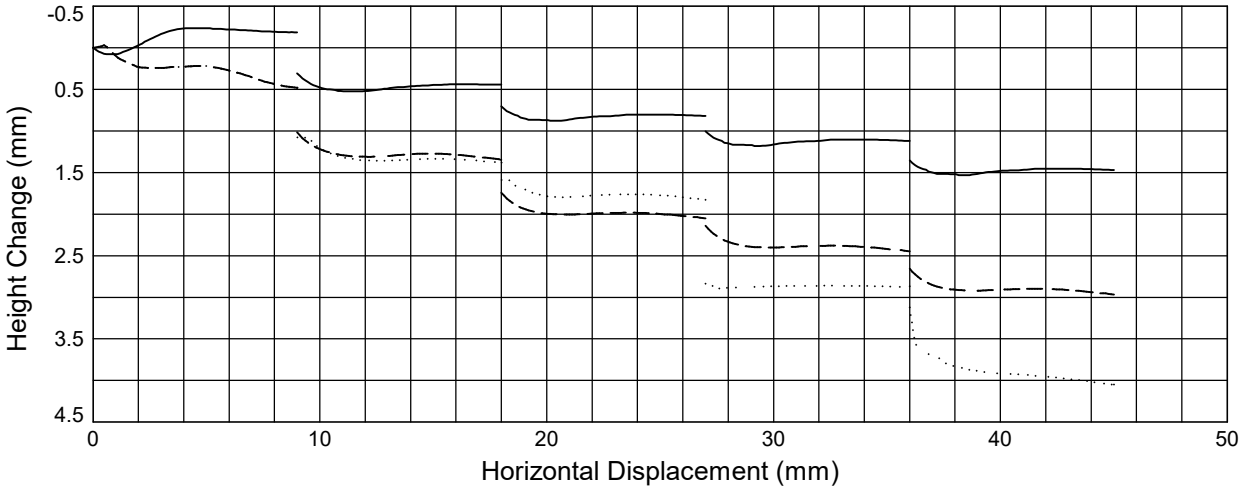
In accordance with BS EN ISO 17892-10

Position ID: **F22-BH308** Sample Ref: **63** Sample Type: **B** Depth (m): **15.50**

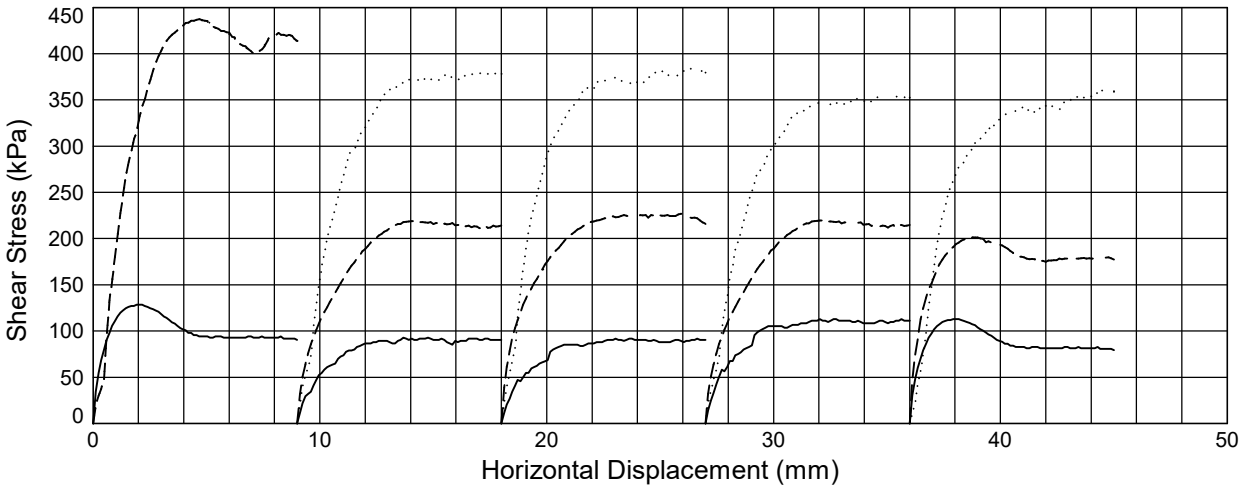
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**155** kPa) *Dashed Line* = Specimen 2 (**310** kPa) *Dotted Line* = Specimen 3 (**620** kPa)

STRUCTURAL SOILS
The Potteries
Pottery Street
Castleford
W. Yorkshire WF10 1NJ

Compiled By		Date
[redacted]	[redacted]	**19/03/24**
Contract: **Sealink Friston**		Contract Ref: **563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - SBOX - AUTO - P2.1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **F22-BH308** Sample Ref: **79** Sample Type: **B** Depth (m): **19.50**

Description: **Brown clayey SAND**

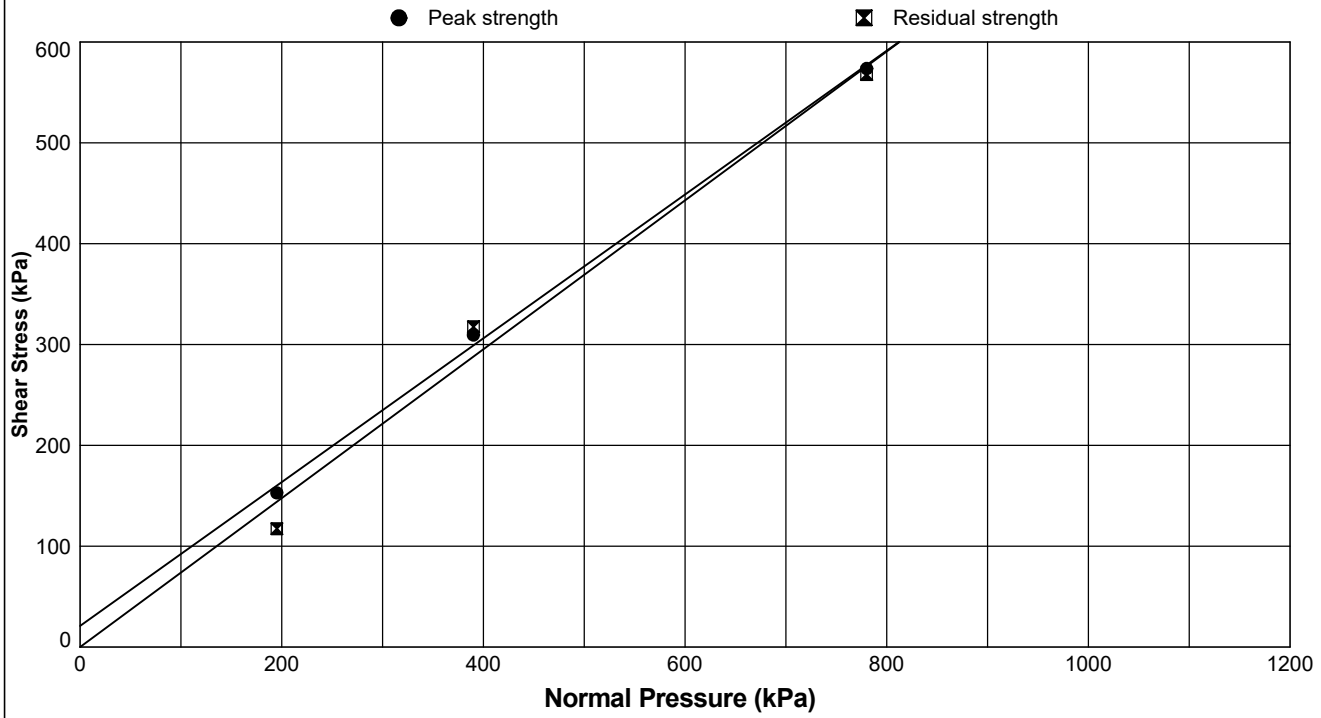
Sample Condition: **Recompacted**

Start Date: **11/12/2023**

End Date: **14/12/2023**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**16.8**	**16.1**	**15.4**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**22.9**	**22.9**	**23.0**
	Initial Bulk Density	(Mg/m^3)	**1.92**	**1.93**	**1.92**
	Initial Dry Density	(Mg/m^3)	**1.65**	**1.66**	**1.67**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**0.6089**	**0.5977**	**0.5906**
	Initial Degree of Saturation	(%)	**73**	**71**	**69**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**4**	**3**	**3**
CONSOLIDATION	Normal Pressure	(kPa)	**195**	**390**	**780**
	Consolidated Height	(mm)	**22.2**	**21.6**	**21.7**
	Voids Ratio after Consolidation		**0.5566**	**0.5047**	**0.4986**
SHEAR	Shearing Rate	(mm/min)	**0.0962**	**0.1709**	**0.1619**
	Horiz. Displacement at Peak Shear Stress	(mm)	**1.9**	**2.0**	**2.6**
	Voids Ratio after Shear		**0.3756**	**0.3336**	**0.3705**
	Peak Shear Stress	(kPa)	**153**	**309**	**574**
	Residual Shear Stress	(kPa)	**117**	**318**	**568**

PEAK STRENGTH	Effective Cohesion (C')	**21** (kPa)	Effective Angle of Friction (ϕ')	**35.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**0** (kPa)	Residual Angle of Friction (ϕ'_R)	**36.5**	(deg)



STRUCTURAL SOILS
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Compiled By		Date
[redacted]	[redacted]	**05/03/24**

Contract	Contract Ref:
Sealink Friston	**563835**

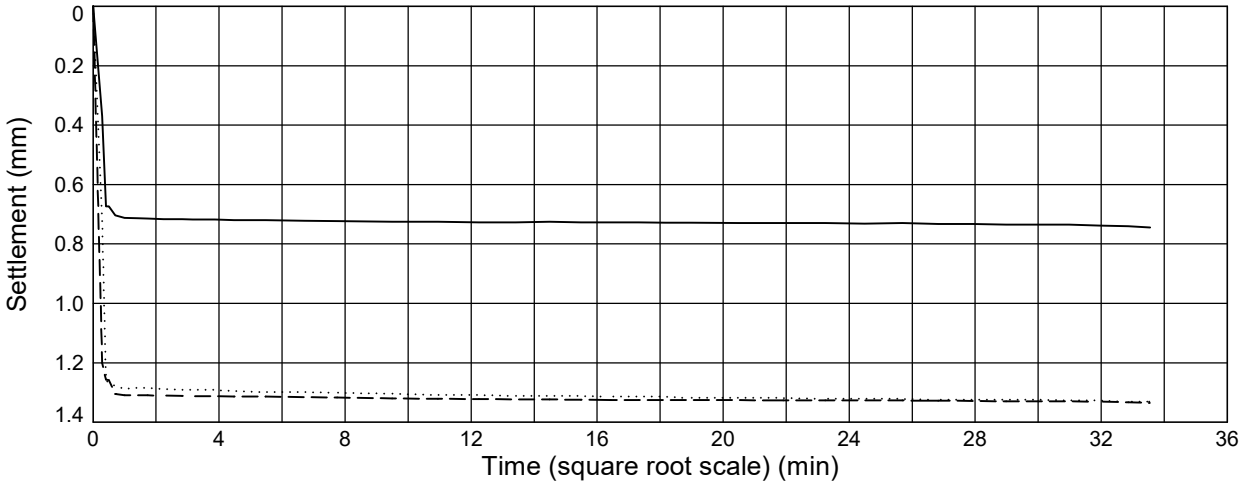
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

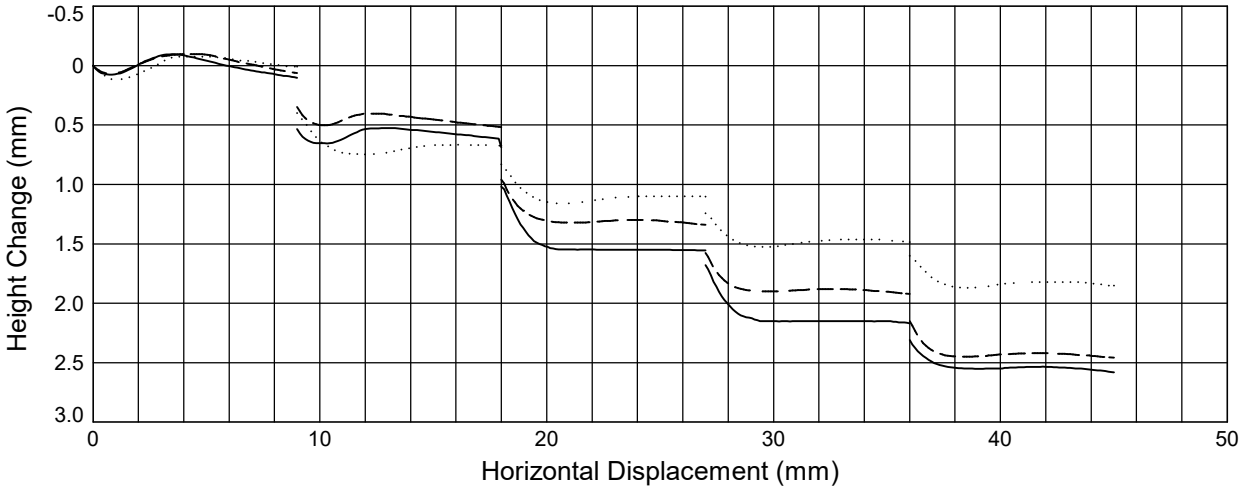
In accordance with BS EN ISO 17892-10

Position ID: **F22-BH308** Sample Ref: **79** Sample Type: **B** Depth (m): **19.50**

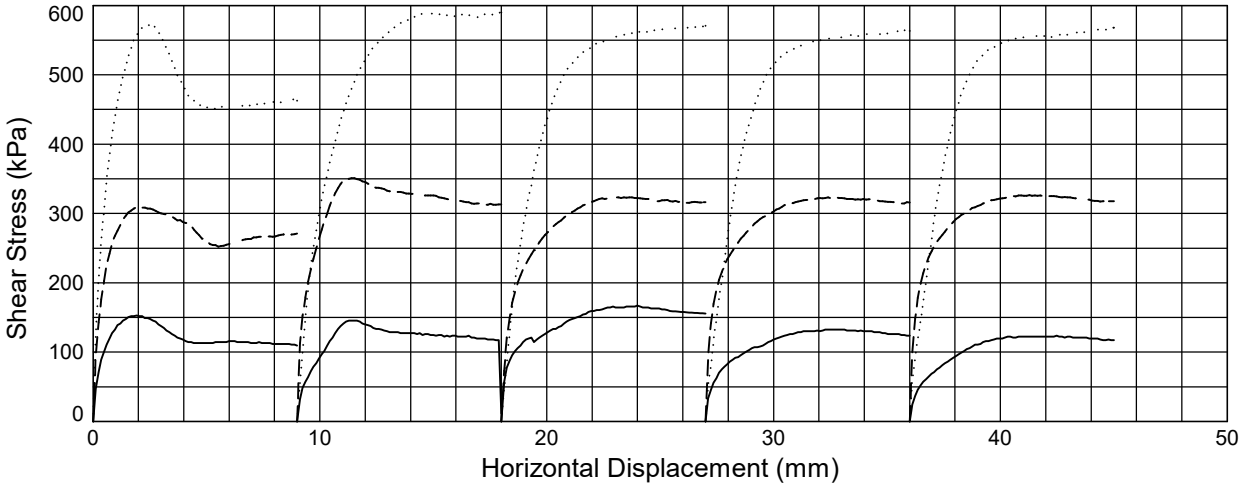
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**195** kPa) *Dashed Line* = Specimen 2 (**390** kPa) *Dotted Line* = Specimen 3 (**780** kPa)

STRUCTURAL SOILS
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W. Yorkshire WF10 1NJ

Compiled By		Date
[redacted]	[redacted]	**05/03/24**
Contract: **Sealink Friston**		Contract Ref: **563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - SBOX - AUTO - P2.1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **F22-BH308** Sample Ref: **94** Sample Type: **B** Depth (m): **23.50**

Description: **Brown slightly gravelly slightly clayey SAND**

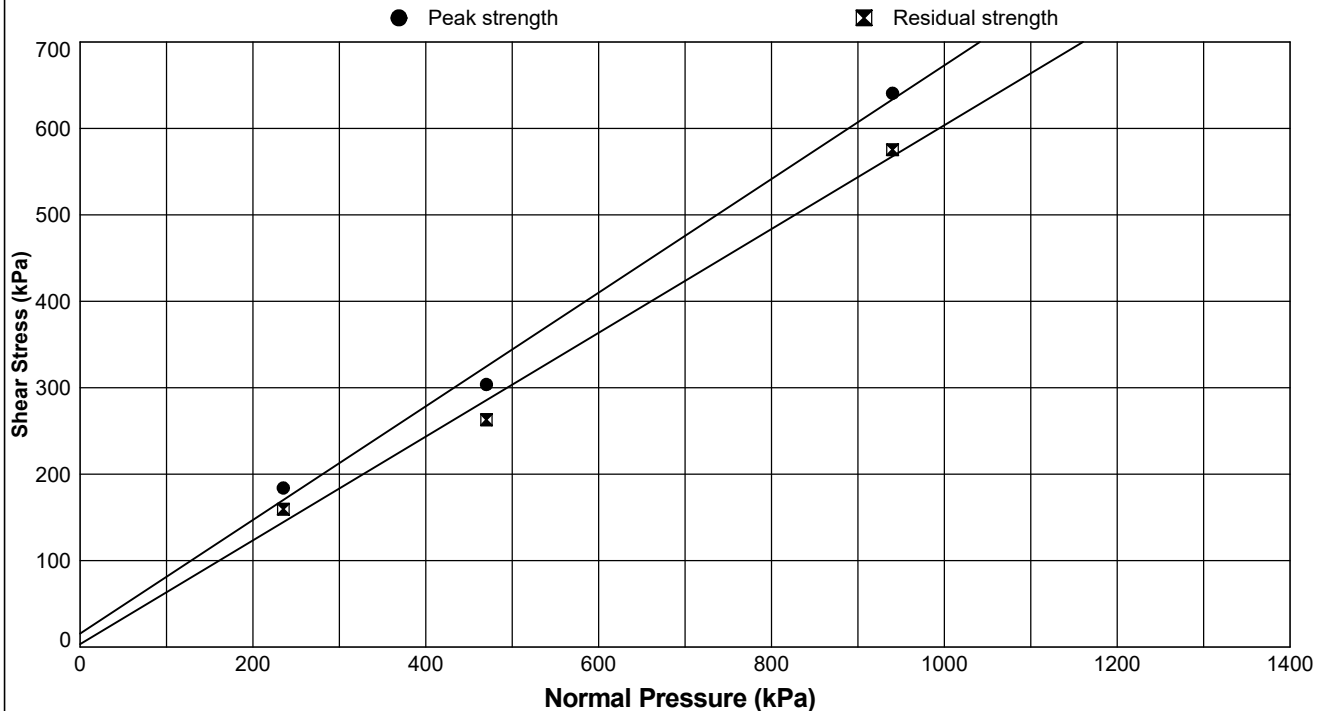
Sample Condition: **Recompacted**

Start Date: **14/02/2024**

End Date: **22/02/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**18.8**	**19.1**	**16.8**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**23.0**	**23.3**	**23.3**
	Initial Bulk Density	(Mg/m^3)	**1.78**	**1.78**	**1.79**
	Initial Dry Density	(Mg/m^3)	**1.50**	**1.50**	**1.53**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**0.7678**	**0.7705**	**0.7333**
	Initial Degree of Saturation	(%)	**65**	**66**	**61**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**6**	**3**	**3**
CONSOLIDATION	Normal Pressure	(kPa)	**235**	**470**	**940**
	Consolidated Height	(mm)	**21.9**	**22.5**	**21.9**
	Voids Ratio after Consolidation		**0.6826**	**0.7089**	**0.6306**
SHEAR	Shearing Rate	(mm/min)	**0.1539**	**0.1923**	**0.2564**
	Horiz. Displacement at Peak Shear Stress	(mm)	**4.0**	**7.9**	**4.0**
	Voids Ratio after Shear		**0.4018**	**0.1575**	**0.2913**
	Peak Shear Stress	(kPa)	**184**	**304**	**641**
	Residual Shear Stress	(kPa)	**159**	**263**	**575**

PEAK STRENGTH	Effective Cohesion (C')	**15** (kPa)	Effective Angle of Friction (ϕ')	**33.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**3** (kPa)	Residual Angle of Friction (ϕ'_R)	**31**	(deg)



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Compiled By		Date
[redacted]	[redacted]	**19/03/24**
Contract: **Sealink Friston**		Contract Ref: **563835**

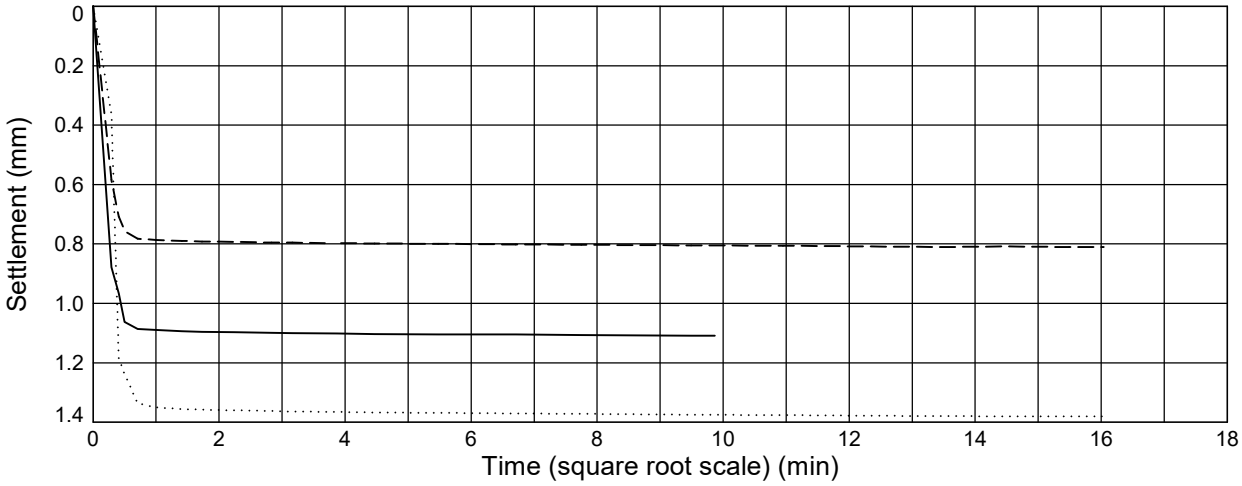
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

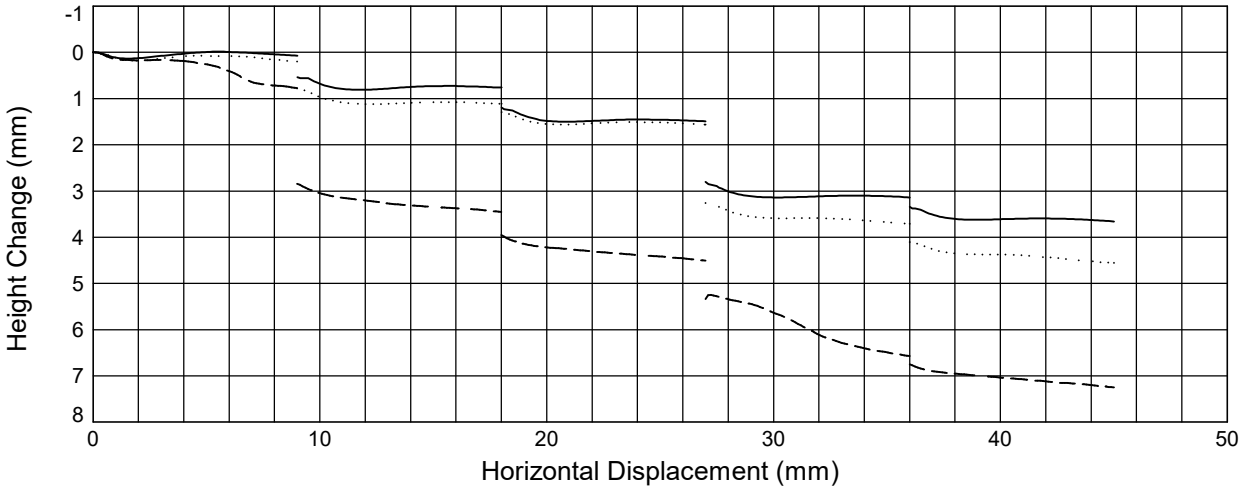
In accordance with BS EN ISO 17892-10

Position ID: **F22-BH308** Sample Ref: **94** Sample Type: **B** Depth (m): **23.50**

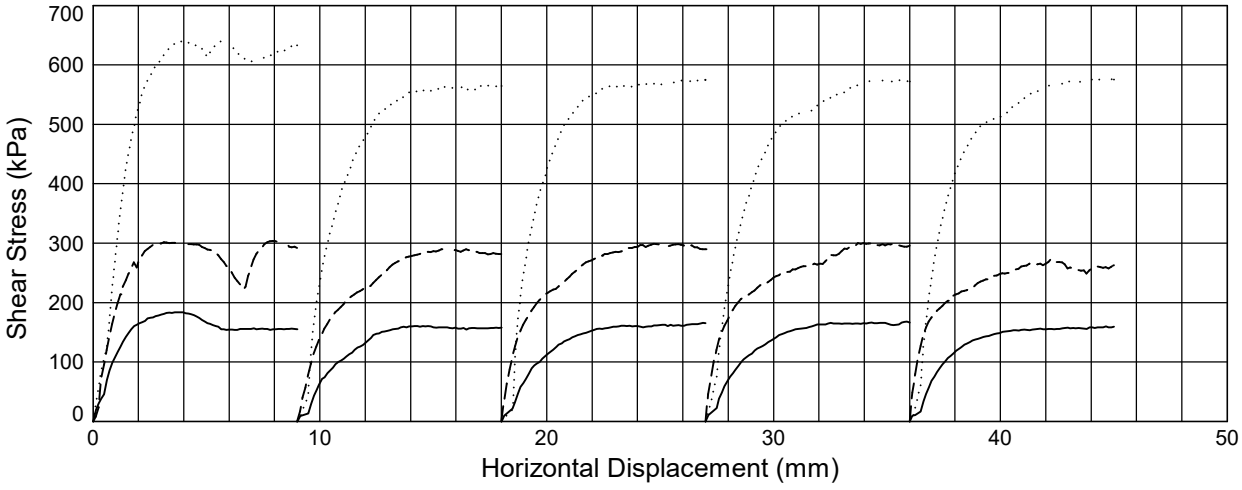
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**235** kPa) *Dashed Line* = Specimen 2 (**470** kPa) *Dotted Line* = Specimen 3 (**940** kPa)

STRUCTURAL SOILS
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W. Yorkshire WF10 1NJ

Compiled By		Date
[redacted]	[redacted]	**19/03/24**
Contract: **Sealink Friston**		Contract Ref: **563835**

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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **F22-BH309** Sample Ref: **36** Sample Type: **B** Depth (m): **9.50**

Description: **Orangish brown slightly gravelly sandy SILT**

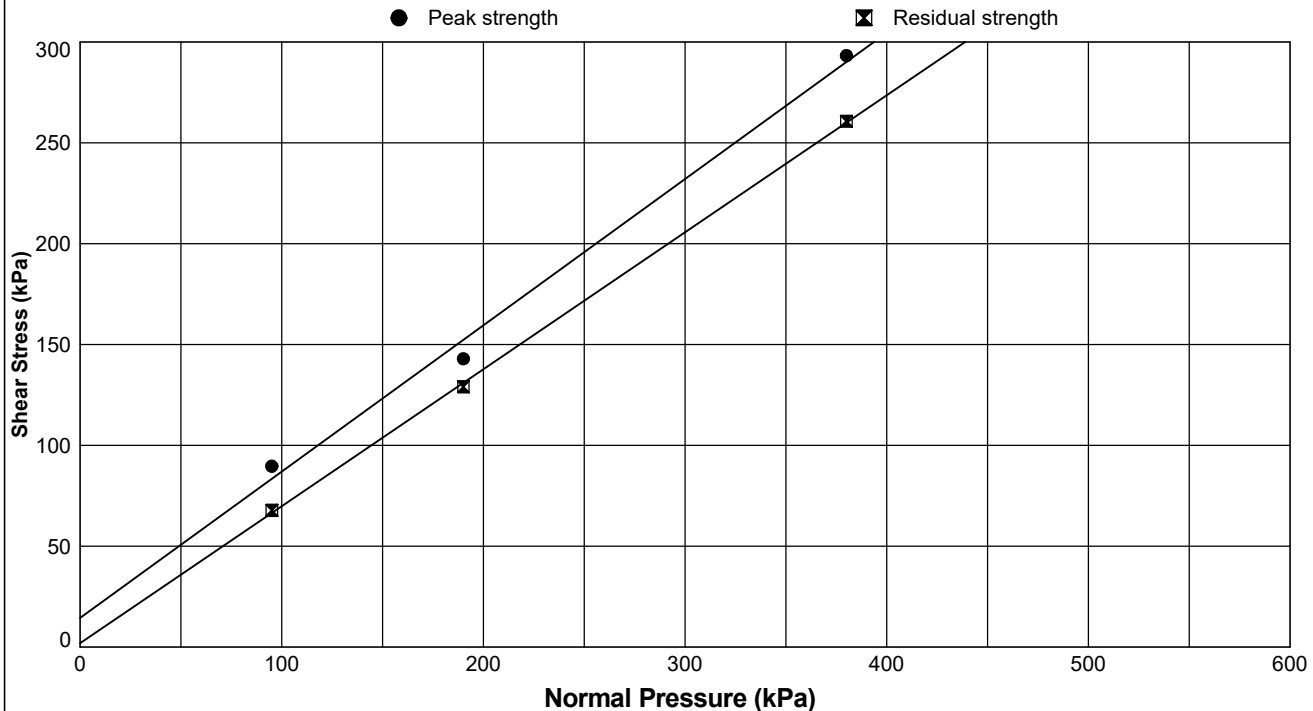
Sample Condition: **Recompacted**

Start Date: **18/12/2023**

End Date: **20/12/2023**

SPECIMEN NUMBER			1	2	3
PROPERTIES	Initial Water Content	(%)	**22.1**	**22.1**	**22.1**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**19.1**	**19.1**	**19.1**
	Initial Bulk Density	(Mg/m^3)	**2.02**	**2.02**	**2.02**
	Initial Dry Density	(Mg/m^3)	**1.66**	**1.65**	**1.66**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**0.6008**	**0.6015**	**0.6009**
	Initial Degree of Saturation	(%)	**98**	**98**	**98**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**3**	**3**	**3**
CONSOLIDATION	Normal Pressure	(kPa)	**95**	**190**	**380**
	Consolidated Height	(mm)	**17.9**	**17.7**	**17.3**
	Voids Ratio after Consolidation		**0.4998**	**0.4799**	**0.4488**
SHEAR	Shearing Rate	(mm/min)	**0.0261**	**0.0298**	**0.0310**
	Horiz. Displacement at Peak Shear Stress	(mm)	**5.8**	**6.0**	**8.8**
	Voids Ratio after Shear		**0.3701**	**0.3671**	**0.3054**
	Peak Shear Stress	(kPa)	**90**	**143**	**293**
	Residual Shear Stress	(kPa)	**68**	**129**	**261**

PEAK STRENGTH	Effective Cohesion (C')	**14** (kPa)	Effective Angle of Friction (ϕ')	**36**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**2** (kPa)	Residual Angle of Friction (ϕ'_R)	**34**	(deg)



STRUCTURAL SOILS
1a Princess Street
Bedminster
Bristol
BS3 4AG

Compiled By: [redacted]

Date: **25/01/24**

Contract: **Sealink Friston**

Contract Ref: **563835**

AGS

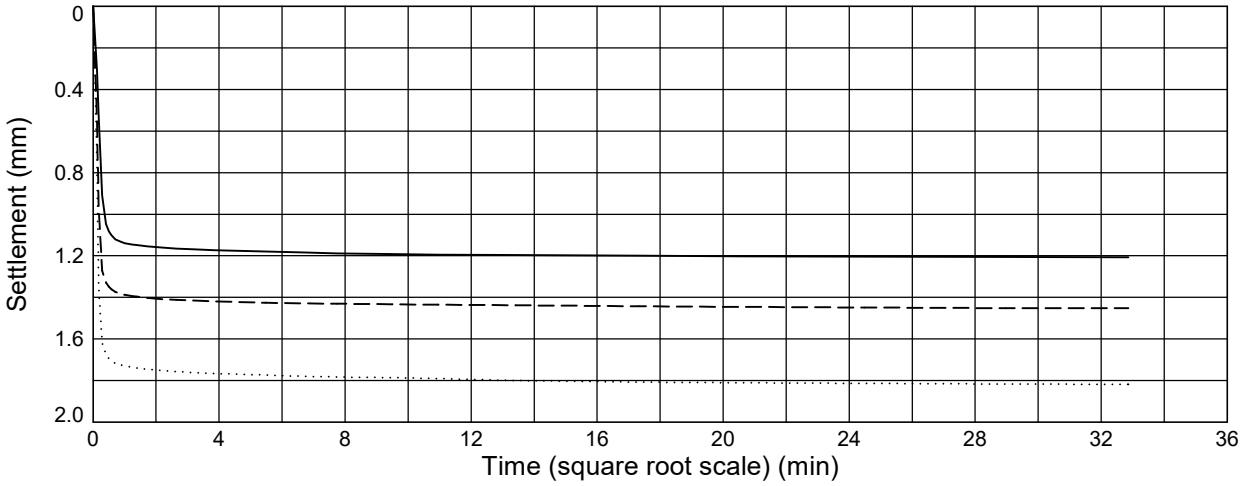
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

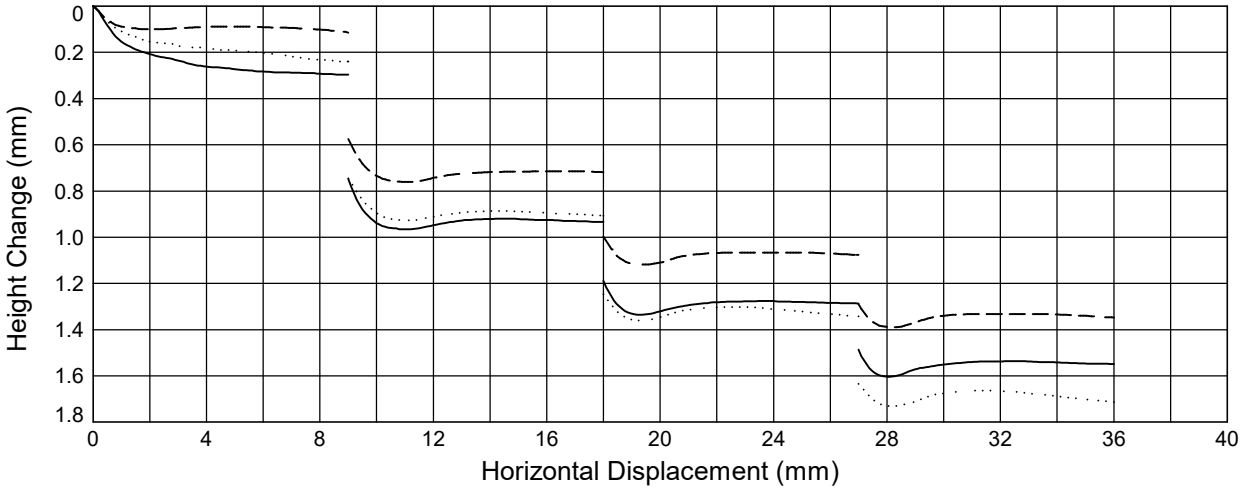
In accordance with BS EN ISO 17892-10

Position ID: **F22-BH309** Sample Ref: **36** Sample Type: **B** Depth (m): **9.50**

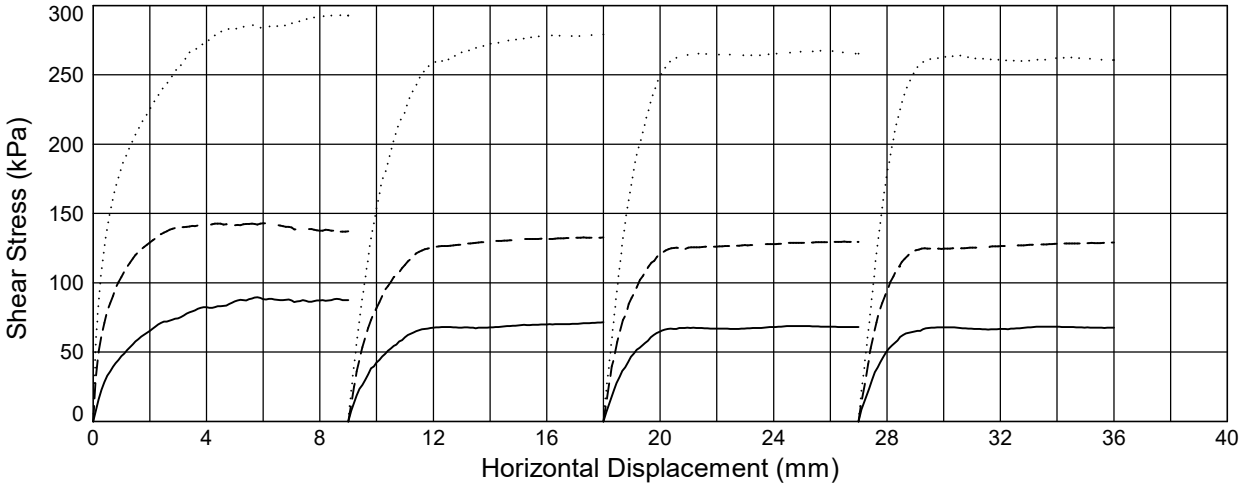
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**95** kPa) *Dashed Line* = Specimen 2 (**190** kPa) *Dotted Line* = Specimen 3 (**380** kPa)

STRUCTURAL SOILS
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Bristol
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Compiled By		Date
[redacted]	[redacted]	**25/01/24**
Contract: **Sealink Friston**		Contract Ref: **563835**

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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **F22-BH309** Sample Ref: **53** Sample Type: **B** Depth (m): **13.50**

Description: **Orangish brown gravelly slightly silty SAND**

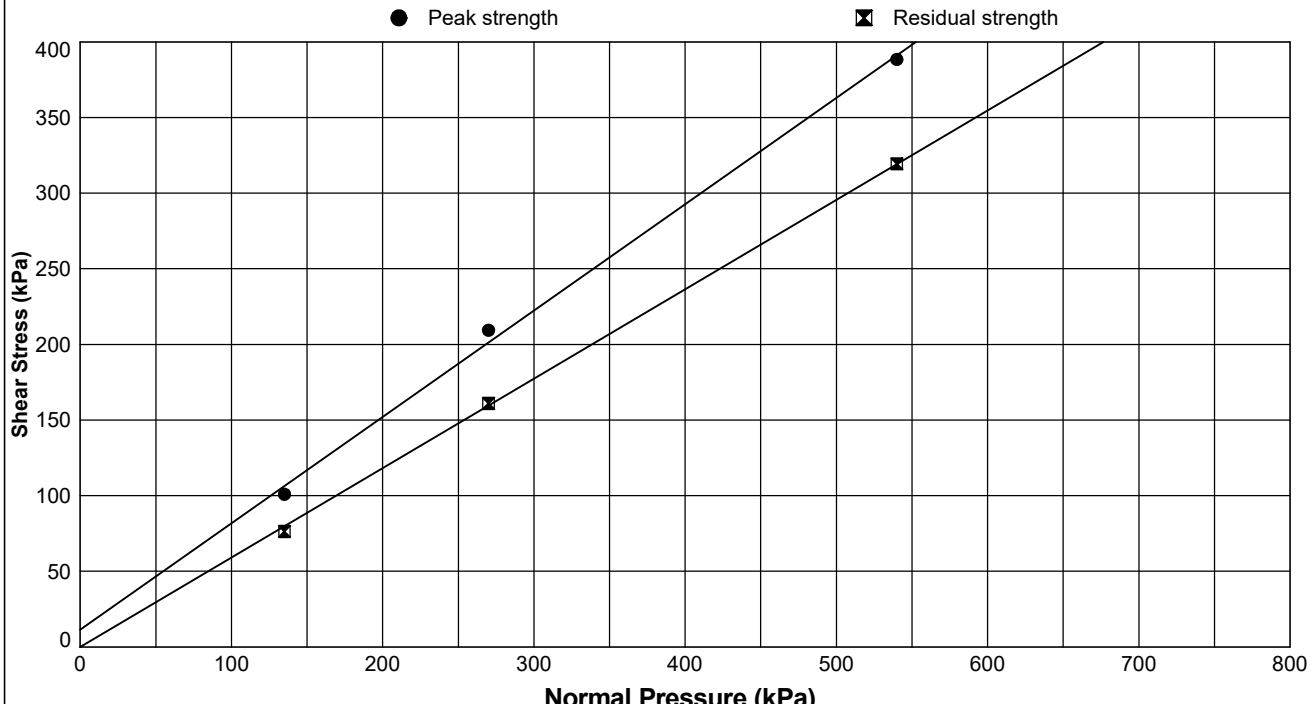
Sample Condition: **Recompacted**

Start Date: **18/12/2023**

End Date: **21/12/2023**

SPECIMEN NUMBER			1	2	3
PROPERTIES	Initial Water Content	(%)	**13.8**	**13.8**	**13.8**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**19.2**	**19.2**	**19.2**
	Initial Bulk Density	(Mg/m^3)	**1.81**	**1.81**	**1.81**
	Initial Dry Density	(Mg/m^3)	**1.59**	**1.59**	**1.59**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**0.6623**	**0.6630**	**0.6625**
	Initial Degree of Saturation	(%)	**55**	**55**	**55**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**4**	**4**	**4**
CONSOLIDATION	Normal Pressure	(kPa)	**135**	**270**	**540**
	Consolidated Height	(mm)	**18.7**	**18.5**	**18.5**
	Voids Ratio after Consolidation		**0.6233**	**0.6030**	**0.6025**
SHEAR	Shearing Rate	(mm/min)	**0.0526**	**0.0541**	**0.0556**
	Horiz. Displacement at Peak Shear Stress	(mm)	**2.1**	**2.6**	**2.3**
	Voids Ratio after Shear		**0.5453**	**0.5058**	**0.3769**
	Peak Shear Stress	(kPa)	**101**	**209**	**388**
	Residual Shear Stress	(kPa)	**76**	**161**	**319**

PEAK STRENGTH	Effective Cohesion (C')	**11** (kPa)	Effective Angle of Friction (ϕ')	**35**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**0** (kPa)	Residual Angle of Friction (ϕ'_R)	**30.5**	(deg)



STRUCTURAL SOILS
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Bedminster
Bristol
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Compiled By		Date
[redacted]	[redacted]	**05/04/24**
Contract: **Sealink Friston**		Contract Ref: **563835**

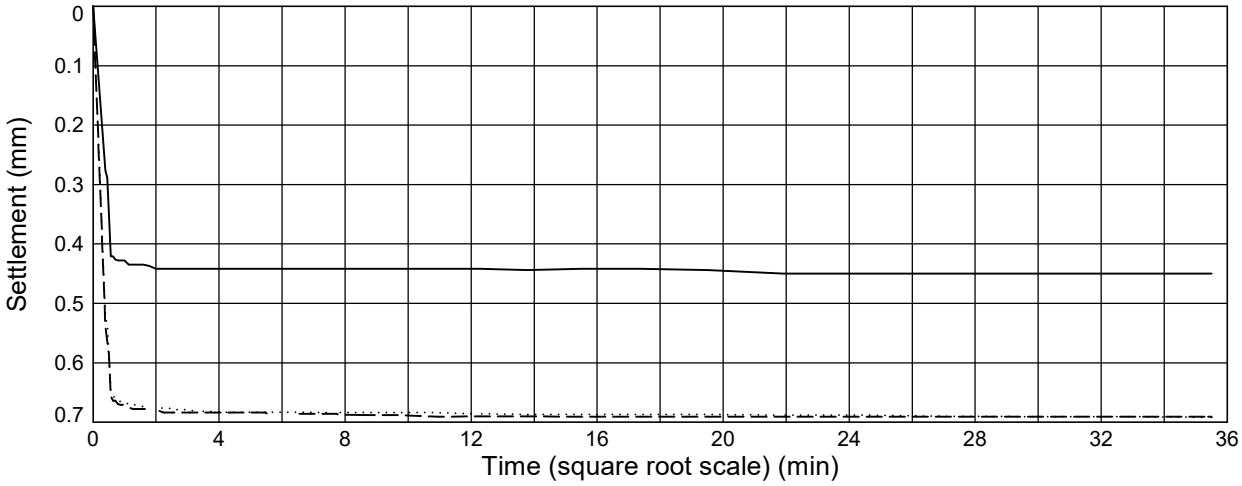
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

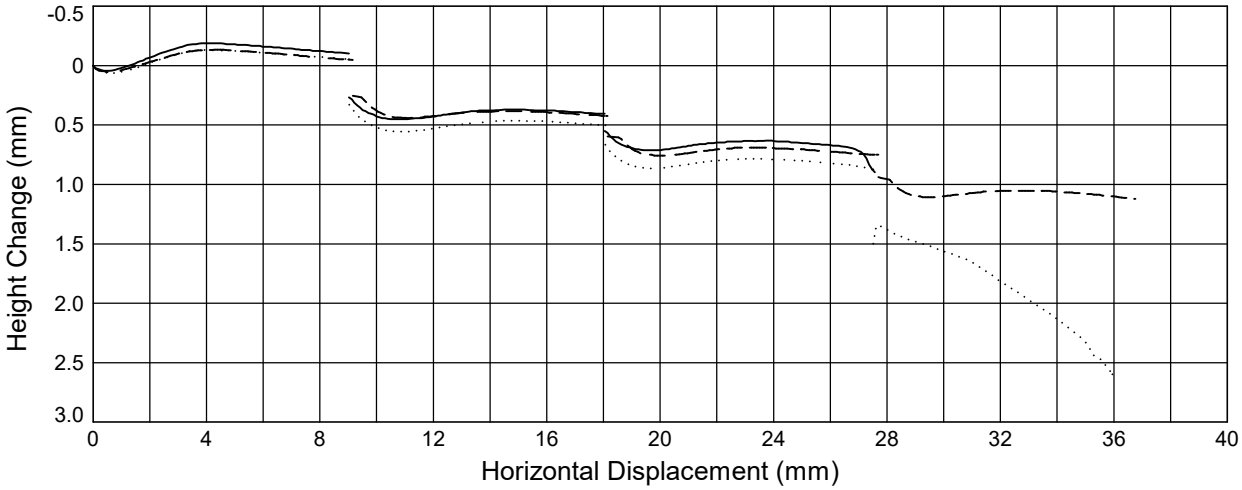
In accordance with BS EN ISO 17892-10

Position ID: **F22-BH309** Sample Ref: **53** Sample Type: **B** Depth (m): **13.50**

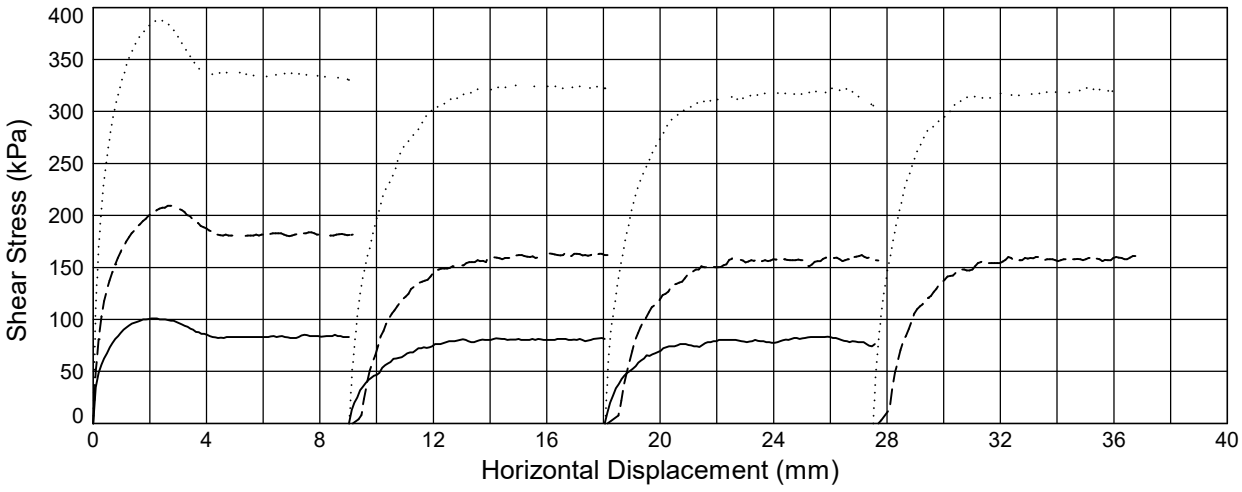
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**135** kPa) *Dashed Line* = Specimen 2 (**270** kPa) *Dotted Line* = Specimen 3 (**540** kPa)

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Compiled By		Date
[redacted]	[redacted]	**05/04/24**
Contract: **Sealink Friston**		Contract Ref: **563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - SBOX - AUTO - P2.1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **F22-BH309** Sample Ref: **65** Sample Type: **B** Depth (m): **16.50**

Description: **Brown slightly gravelly slightly silty SAND**

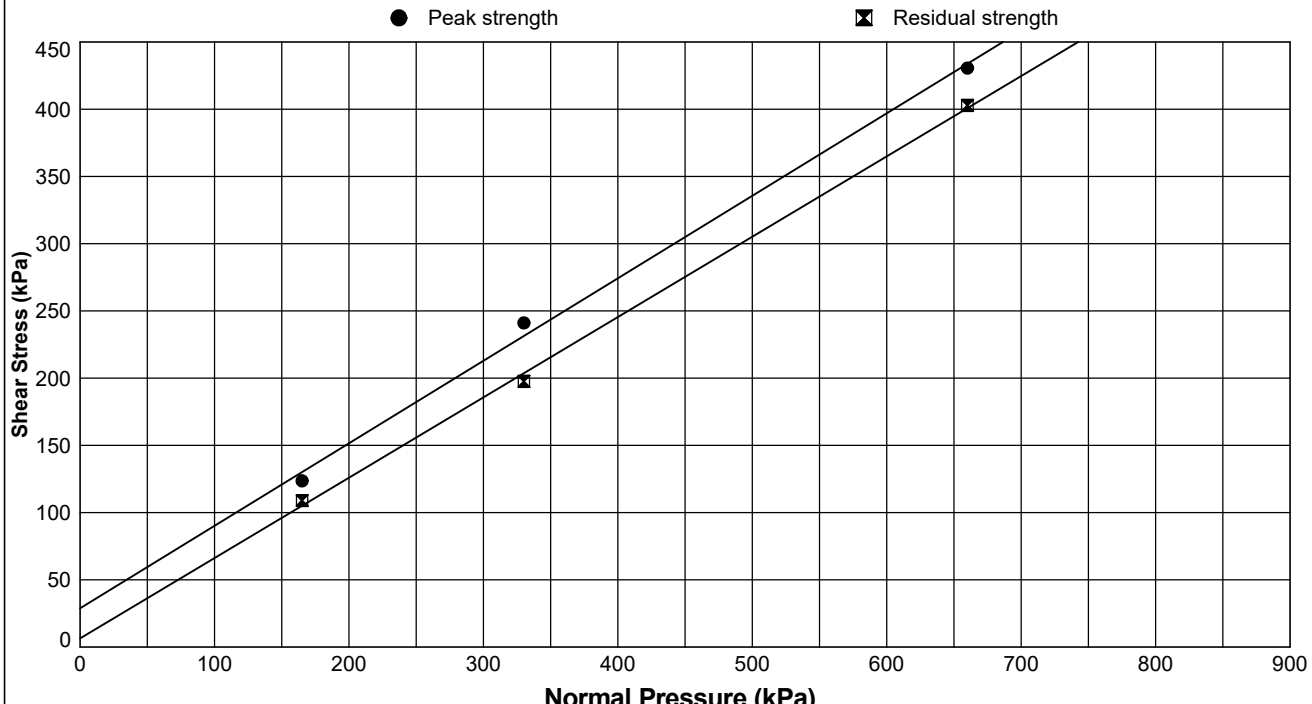
Sample Condition: **Recompacted**

Start Date: **20/12/2023**

End Date: **22/12/2023**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**12.9**	**12.9**	**12.9**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**19.2**	**19.2**	**19.2**
	Initial Bulk Density	(Mg/m^3)	**1.76**	**1.76**	**1.76**
	Initial Dry Density	(Mg/m^3)	**1.56**	**1.56**	**1.56**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**0.6983**	**0.6982**	**0.6982**
	Initial Degree of Saturation	(%)	**49**	**49**	**49**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**3**	**3**	**3**
CONSOLIDATION	Normal Pressure	(kPa)	**165**	**330**	**660**
	Consolidated Height	(mm)	**18.3**	**18.2**	**18.1**
	Voids Ratio after Consolidation		**0.6253**	**0.6161**	**0.6004**
SHEAR	Shearing Rate	(mm/min)	**0.0588**	**0.0895**	**0.0984**
	Horiz. Displacement at Peak Shear Stress	(mm)	**3.6**	**2.8**	**3.6**
	Voids Ratio after Shear		**0.4954**	**0.5276**	**0.3154**
	Peak Shear Stress	(kPa)	**124**	**241**	**431**
	Residual Shear Stress	(kPa)	**109**	**198**	**403**

PEAK STRENGTH	Effective Cohesion (C')	**29** (kPa)	Effective Angle of Friction (ϕ')	**31.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**8** (kPa)	Residual Angle of Friction (ϕ'_R)	**31**	(deg)



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Compiled By		Date
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Contract	Contract Ref:
Sealink Friston	**563835**

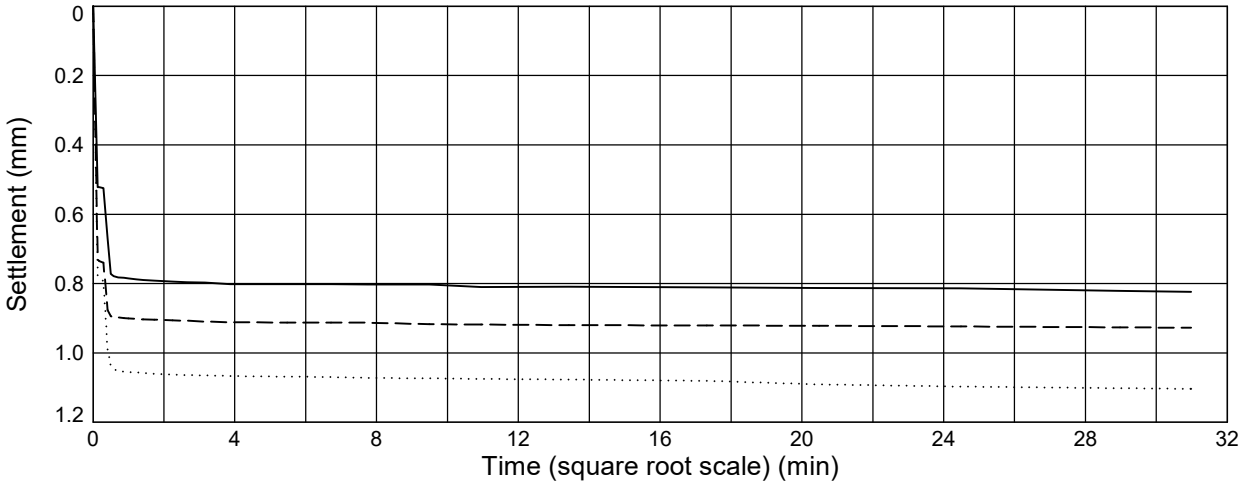
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - SBOX - AUTO - P1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

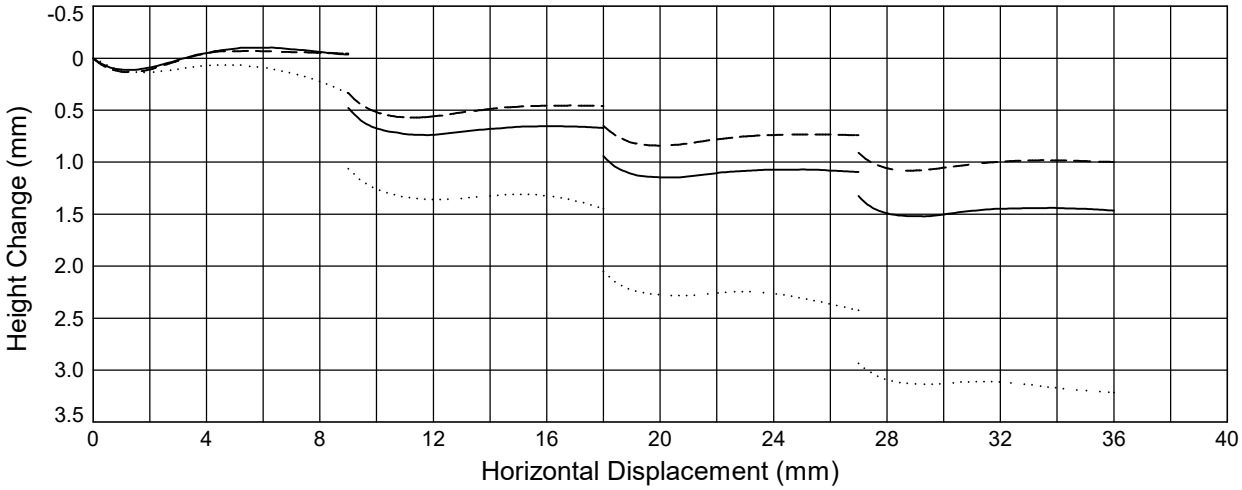
In accordance with BS EN ISO 17892-10

Position ID: **F22-BH309** Sample Ref: **65** Sample Type: **B** Depth (m): **16.50**

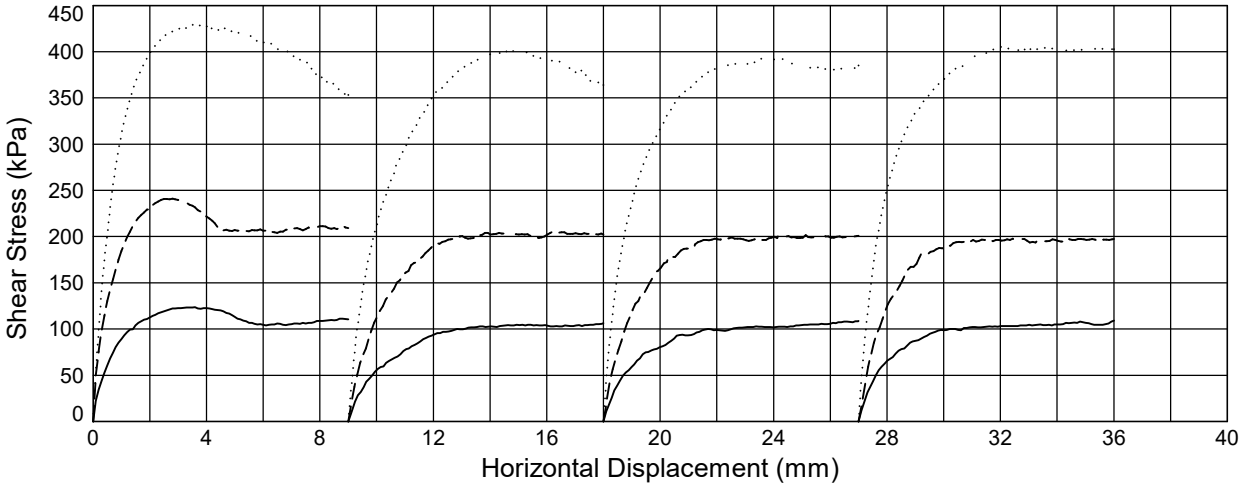
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**165** kPa) *Dashed Line* = Specimen 2 (**330** kPa) *Dotted Line* = Specimen 3 (**660** kPa)

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Compiled By		Date
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Contract: **Sealink Friston**		Contract Ref: **563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - SBOX - AUTO - P2.1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **F22-BH309** Sample Ref: **76** Sample Type: **B** Depth (m): **19.50**

Description: **Orangish brown slightly gravelly slightly silty SAND**

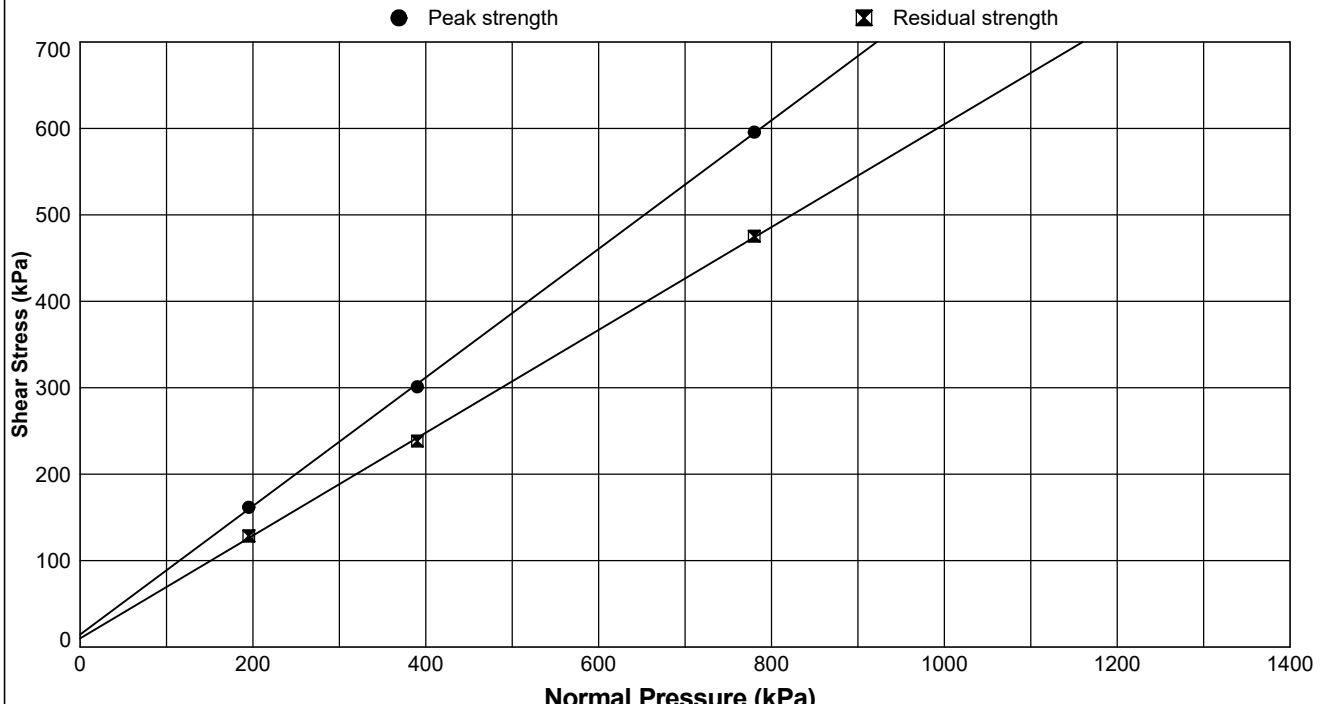
Sample Condition: **Recompacted**

Start Date: **20/12/2023**

End Date: **22/12/2023**

SPECIMEN NUMBER			1	2	3
PROPERTIES	Initial Water Content	(%)	**16.3**	**16.3**	**16.3**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**19.2**	**19.2**	**19.2**
	Initial Bulk Density	(Mg/m^3)	**1.90**	**1.90**	**1.90**
	Initial Dry Density	(Mg/m^3)	**1.64**	**1.63**	**1.64**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**0.6203**	**0.6209**	**0.6201**
	Initial Degree of Saturation	(%)	**70**	**70**	**70**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**3**	**3**	**3**
CONSOLIDATION	Normal Pressure	(kPa)	**195**	**390**	**780**
	Consolidated Height	(mm)	**18.7**	**18.8**	**18.0**
	Voids Ratio after Consolidation		**0.5772**	**0.5894**	**0.5161**
SHEAR	Shearing Rate	(mm/min)	**0.0469**	**0.0518**	**0.0656**
	Horiz. Displacement at Peak Shear Stress	(mm)	**2.1**	**1.8**	**2.7**
	Voids Ratio after Shear		**0.5114**	**0.5332**	**0.4252**
	Peak Shear Stress	(kPa)	**162**	**301**	**596**
	Residual Shear Stress	(kPa)	**128**	**238**	**475**

PEAK STRENGTH	Effective Cohesion (C')	**14** (kPa)	Effective Angle of Friction (ϕ')	**36.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**10** (kPa)	Residual Angle of Friction (ϕ'_R)	**31**	(deg)



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Contract: **Sealink Friston**		Contract Ref: **563835**

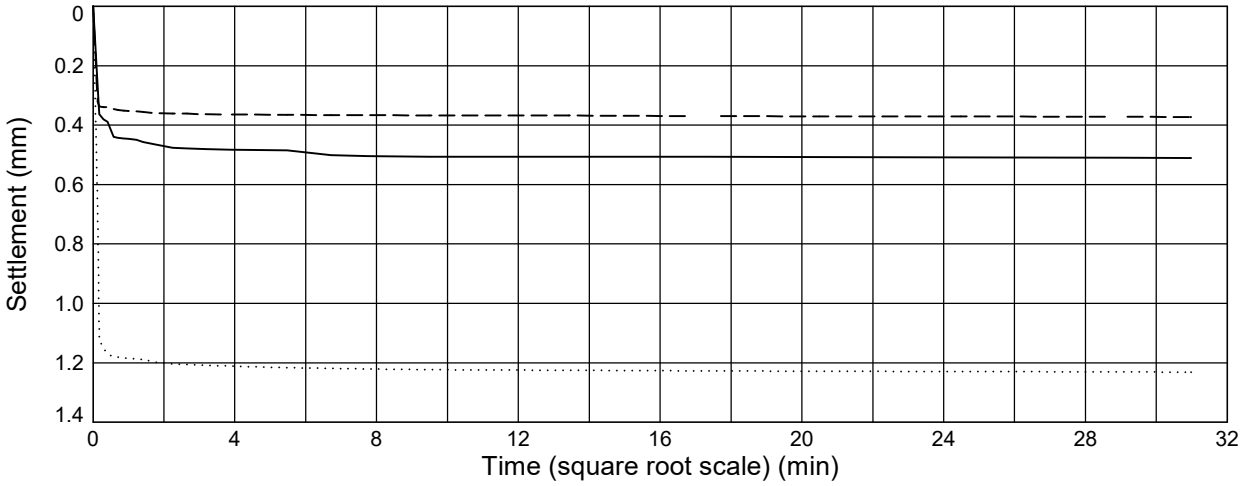
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - SBOX - AUTO - P1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

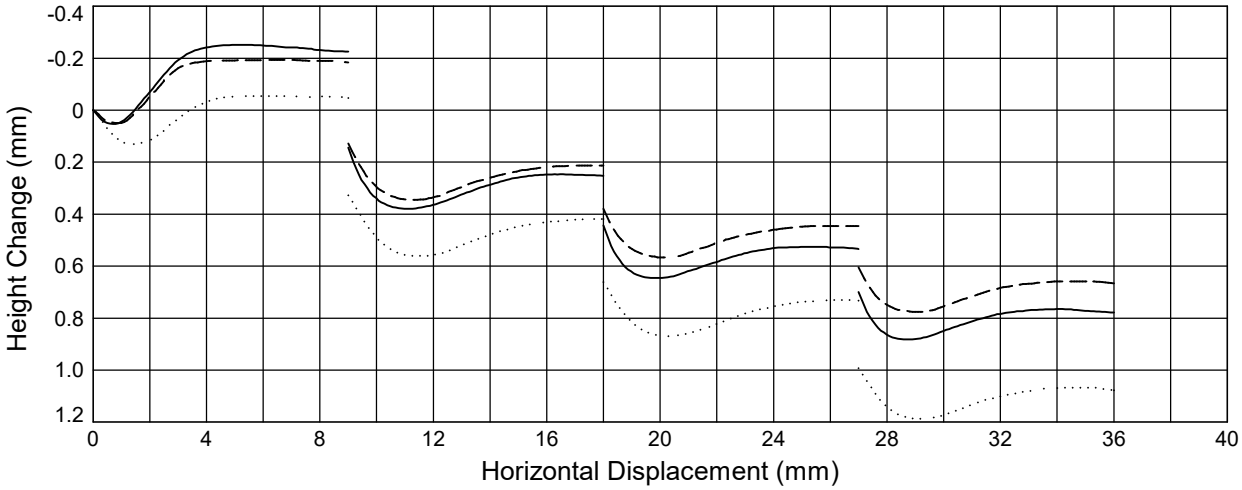
In accordance with BS EN ISO 17892-10

Position ID: **F22-BH309** Sample Ref: **76** Sample Type: **B** Depth (m): **19.50**

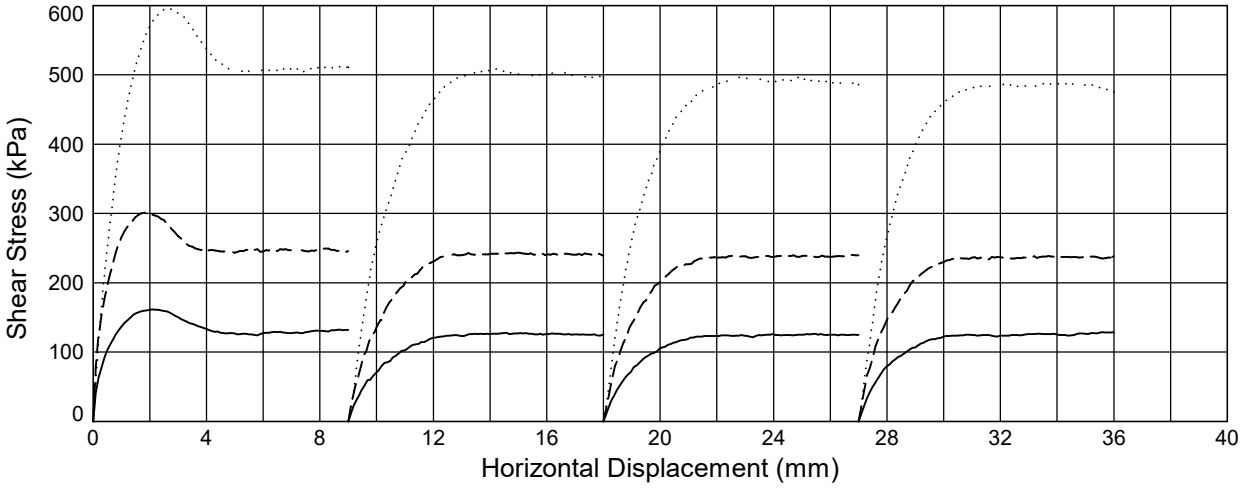
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**195** kPa) *Dashed Line* = Specimen 2 (**390** kPa) *Dotted Line* = Specimen 3 (**780** kPa)

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Compiled By		Date
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Contract: **Sealink Friston**		Contract Ref: **563835**

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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **F22-BH309** Sample Ref: **88** Sample Type: **B** Depth (m): **22.50**

Description: **Orangish brown slightly silty SAND**

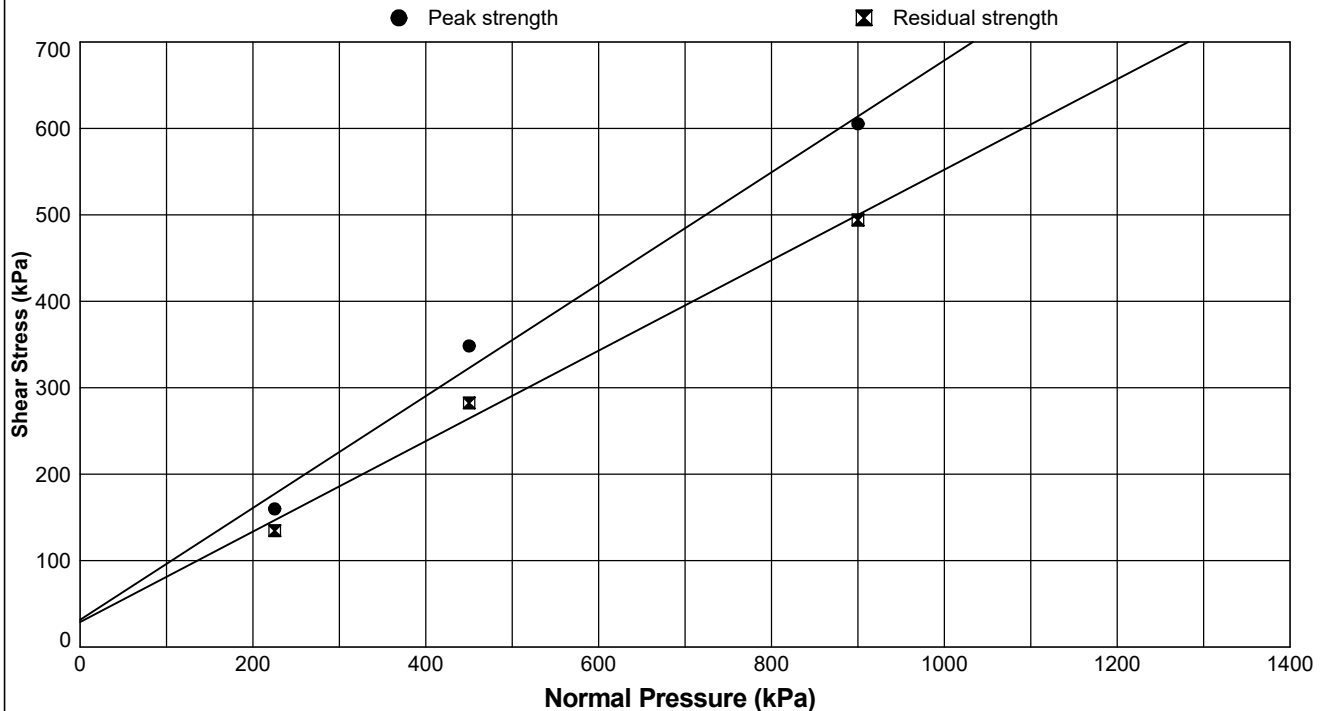
Sample Condition: **Recompacted**

Start Date: **02/01/2024**

End Date: **04/01/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**15.7**	**15.7**	**15.7**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**19.1**	**19.1**	**19.1**
	Initial Bulk Density	(Mg/m^3)	**1.86**	**1.86**	**1.86**
	Initial Dry Density	(Mg/m^3)	**1.60**	**1.60**	**1.60**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**0.6525**	**0.6525**	**0.6527**
	Initial Degree of Saturation	(%)	**64**	**64**	**64**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**3**	**3**	**3**
CONSOLIDATION	Normal Pressure	(kPa)	**225**	**450**	**900**
	Consolidated Height	(mm)	**18.5**	**18.5**	**18.0**
	Voids Ratio after Consolidation		**0.5989**	**0.5996**	**0.5605**
SHEAR	Shearing Rate	(mm/min)	**0.0301**	**0.0355**	**0.0390**
	Horiz. Displacement at Peak Shear Stress	(mm)	**2.8**	**2.7**	**3.7**
	Voids Ratio after Shear		**0.5007**	**0.3475**	**0.3828**
	Peak Shear Stress	(kPa)	**160**	**348**	**605**
	Residual Shear Stress	(kPa)	**134**	**282**	**494**

PEAK STRENGTH	Effective Cohesion (C')	**31** (kPa)	Effective Angle of Friction (ϕ')	**33**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**29** (kPa)	Residual Angle of Friction (ϕ'_R)	**27.5**	(deg)



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Compiled By		Date
[redacted]	[redacted]	**25/01/24**
Contract: **Sealink Friston**		Contract Ref: **563835**

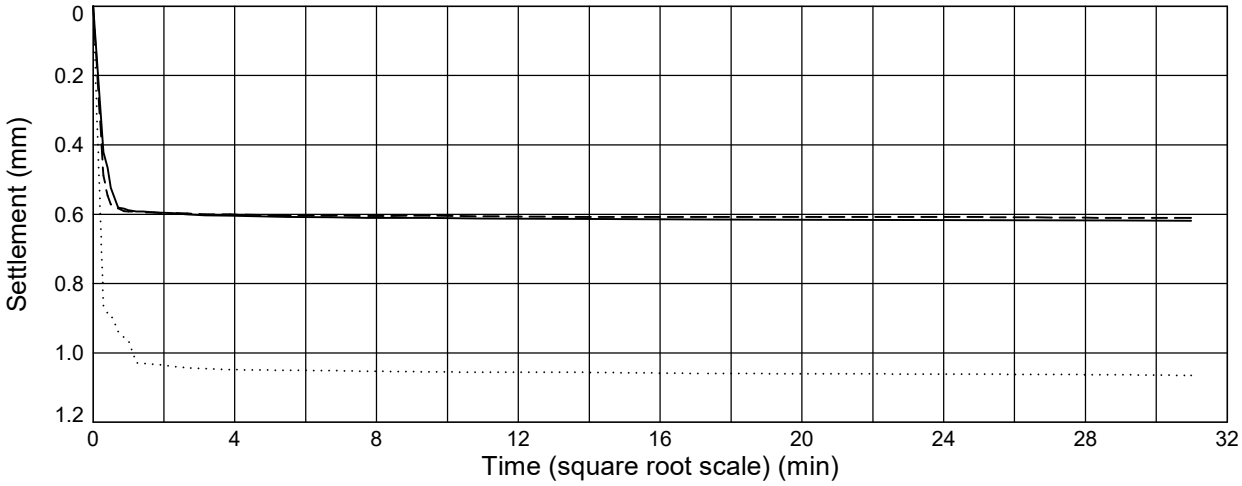
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - SBOX - AUTO - P1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

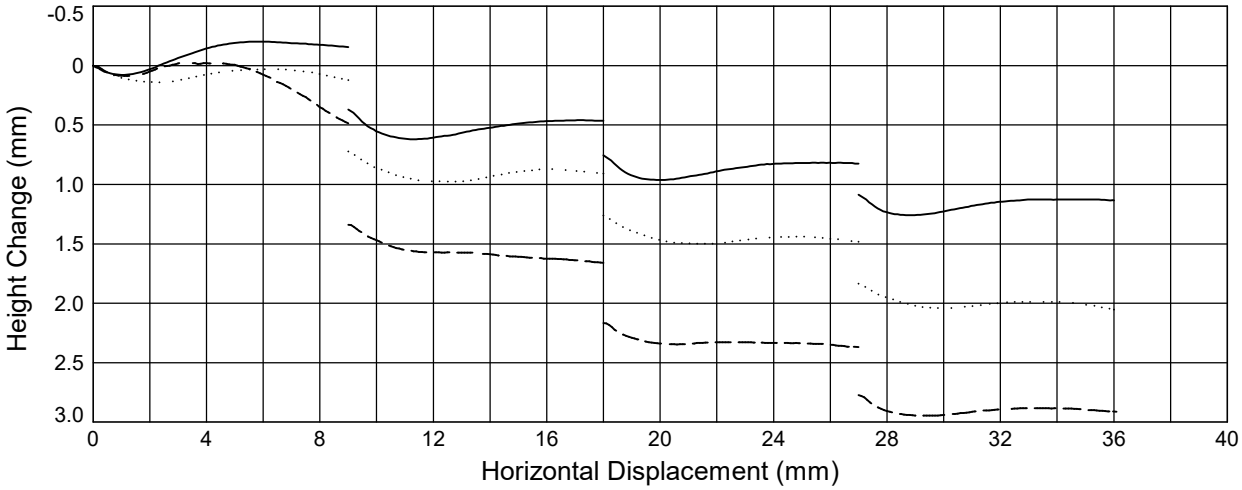
In accordance with BS EN ISO 17892-10

Position ID: **F22-BH309** Sample Ref: **88** Sample Type: **B** Depth (m): **22.50**

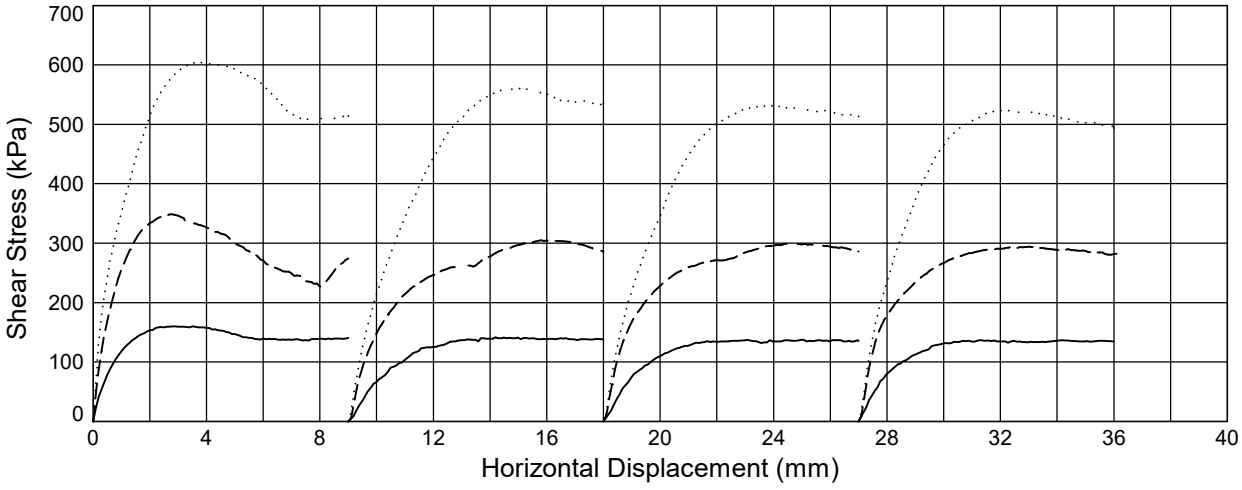
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**225** kPa) *Dashed Line* = Specimen 2 (**450** kPa) *Dotted Line* = Specimen 3 (**900** kPa)

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Compiled By		Date
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Contract: **Sealink Friston**		Contract Ref: **563835**

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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **F22-BH310** Sample Ref: **39** Sample Type: **B** Depth (m): **10.00**

Description: **Orangish brown silty SAND**

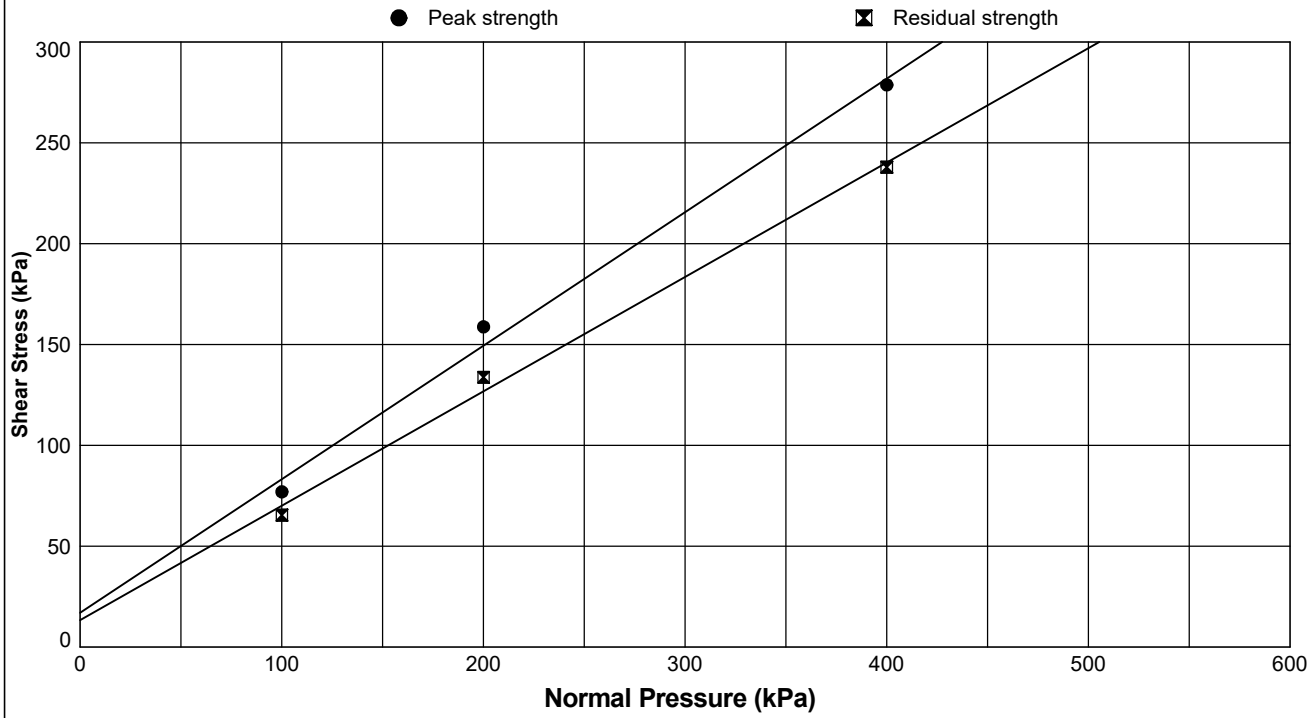
Sample Condition: **Recompacted**

Start Date: **02/01/2024**

End Date: **05/01/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**21.6**	**21.6**	**21.6**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**19.0**	**19.0**	**19.0**
	Initial Bulk Density	(Mg/m^3)	**1.95**	**1.95**	**1.95**
	Initial Dry Density	(Mg/m^3)	**1.60**	**1.60**	**1.60**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**0.6544**	**0.6542**	**0.6546**
	Initial Degree of Saturation	(%)	**87**	**87**	**87**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**4**	**4**	**4**
CONSOLIDATION	Normal Pressure	(kPa)	**100**	**200**	**400**
	Consolidated Height	(mm)	**18.4**	**18.3**	**18.1**
	Voids Ratio after Consolidation		**0.6018**	**0.5917**	**0.5715**
SHEAR	Shearing Rate	(mm/min)	**0.0164**	**0.0186**	**0.0194**
	Horiz. Displacement at Peak Shear Stress	(mm)	**2.3**	**2.6**	**2.9**
	Voids Ratio after Shear		**0.4659**	**0.4958**	**0.3558**
	Peak Shear Stress	(kPa)	**77**	**159**	**279**
	Residual Shear Stress	(kPa)	**65**	**134**	**238**

PEAK STRENGTH	Effective Cohesion (C')	**17** (kPa)	Effective Angle of Friction (ϕ')	**33.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**13** (kPa)	Residual Angle of Friction (ϕ'_R)	**29.5**	(deg)



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Compiled By		Date
[redacted]	[redacted]	**25/01/24**
Contract: **Sealink Friston**		Contract Ref: **563835**

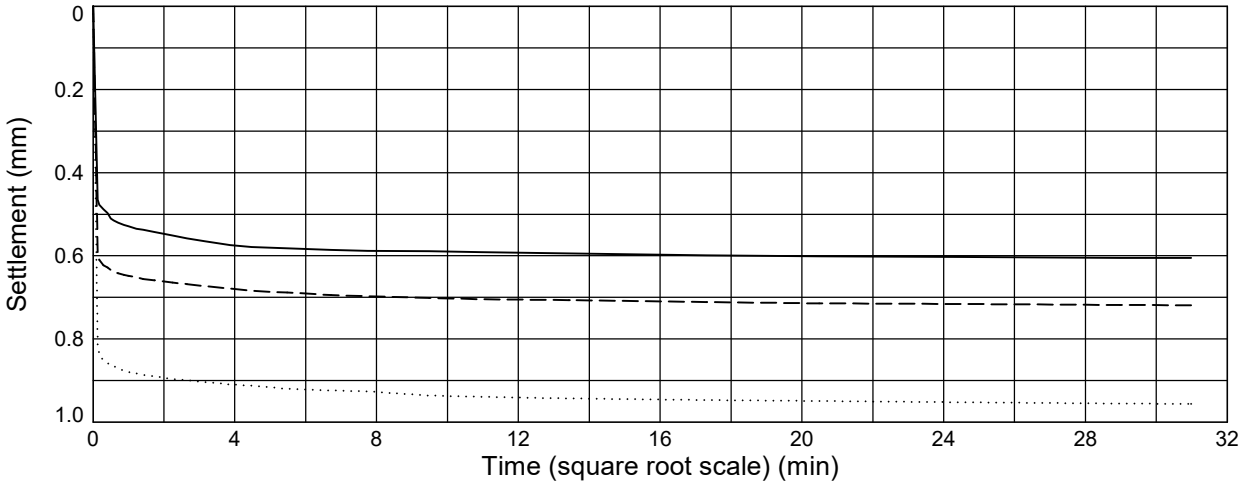
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - SBOX - AUTO - P1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

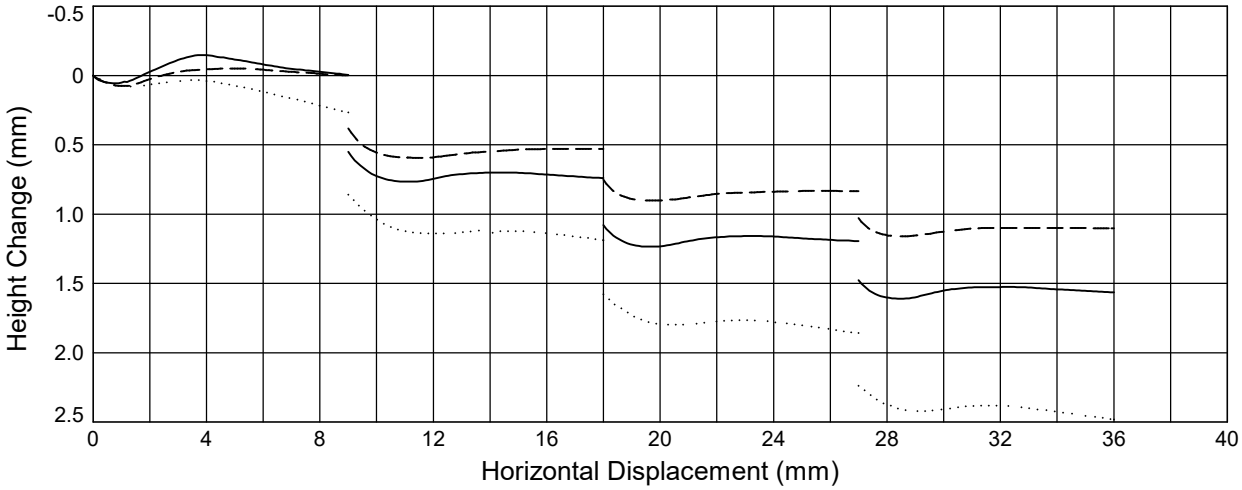
In accordance with BS EN ISO 17892-10

Position ID: **F22-BH310** Sample Ref: **39** Sample Type: **B** Depth (m): **10.00**

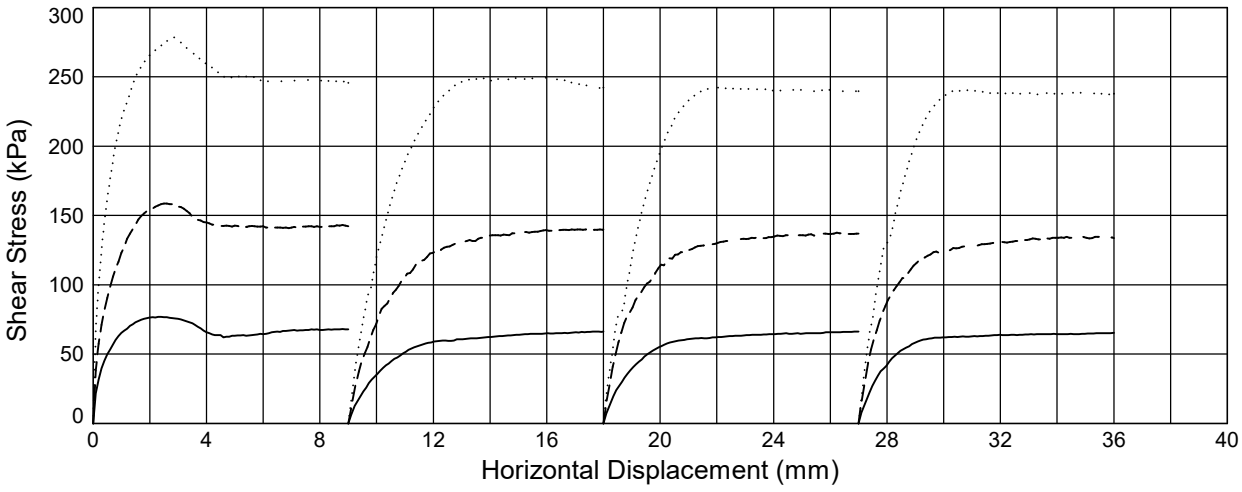
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**100** kPa) *Dashed Line* = Specimen 2 (**200** kPa) *Dotted Line* = Specimen 3 (**400** kPa)

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Compiled By		Date
[redacted]	[redacted]	**25/01/24**
Contract: **Sealink Friston**		Contract Ref: **563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - SBOX - AUTO - P2.1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **F22-BH310** Sample Ref: **51** Sample Type: **B** Depth (m): **14.00**

Description: **Orangish brown gravelly slightly silty SAND**

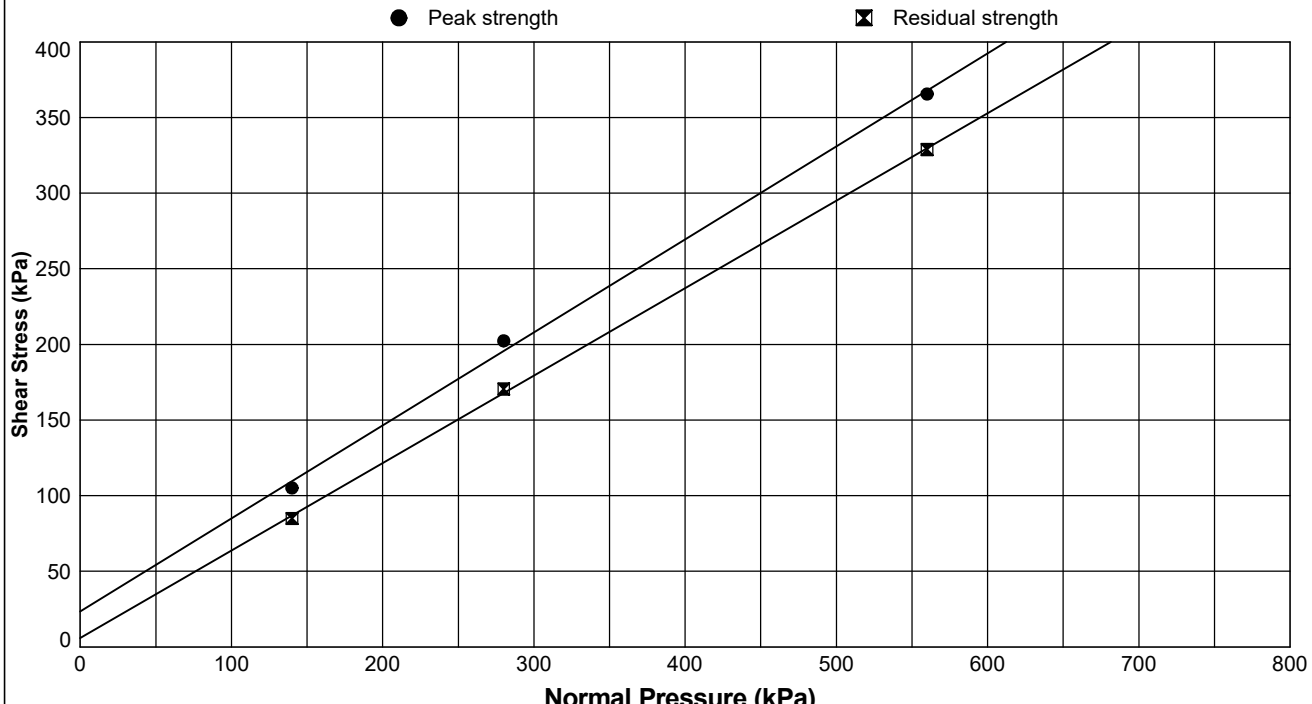
Sample Condition: **Recompacted**

Start Date: **02/01/2024**

End Date: **04/01/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**10.6**	**10.6**	**10.6**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**19.1**	**19.1**	**19.1**
	Initial Bulk Density	(Mg/m^3)	**1.76**	**1.76**	**1.76**
	Initial Dry Density	(Mg/m^3)	**1.59**	**1.59**	**1.59**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**0.6662**	**0.6665**	**0.6650**
	Initial Degree of Saturation	(%)	**42**	**42**	**42**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**3**	**3**	**3**
CONSOLIDATION	Normal Pressure	(kPa)	**140**	**280**	**560**
	Consolidated Height	(mm)	**18.1**	**18.2**	**17.3**
	Voids Ratio after Consolidation		**0.5776**	**0.5845**	**0.5079**
SHEAR	Shearing Rate	(mm/min)	**0.0361**	**0.0386**	**0.0588**
	Horiz. Displacement at Peak Shear Stress	(mm)	**2.7**	**3.6**	**3.9**
	Voids Ratio after Shear		**0.4933**	**0.4681**	**0.3878**
	Peak Shear Stress	(kPa)	**105**	**202**	**366**
	Residual Shear Stress	(kPa)	**85**	**171**	**329**

PEAK STRENGTH	Effective Cohesion (C')	**23** (kPa)	Effective Angle of Friction (ϕ')	**31.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**6** (kPa)	Residual Angle of Friction (ϕ'_R)	**30**	(deg)



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Contract: **Sealink Friston**		Contract Ref: **563835**

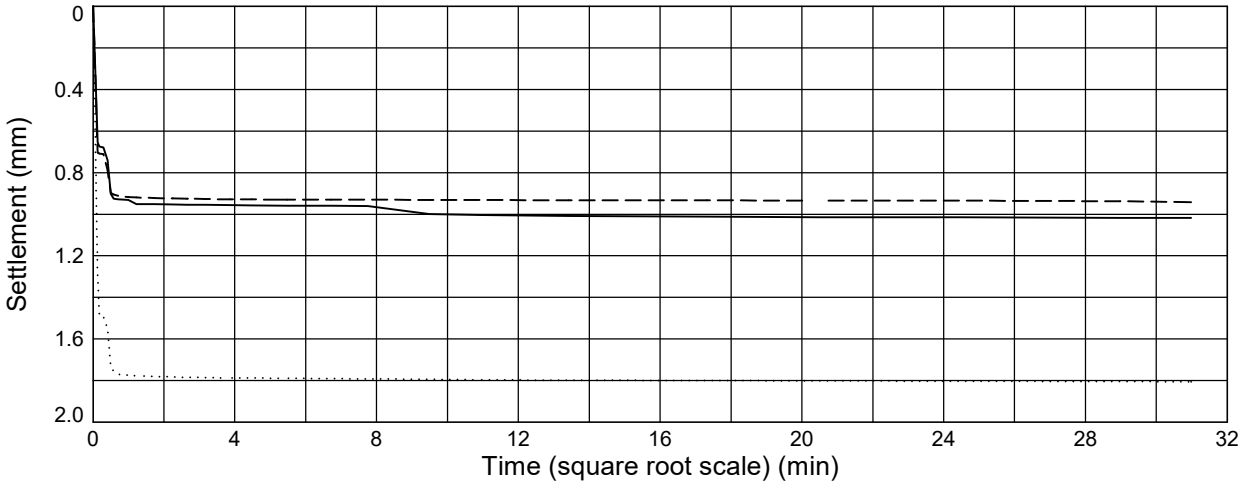
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - SBOX - AUTO - P1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

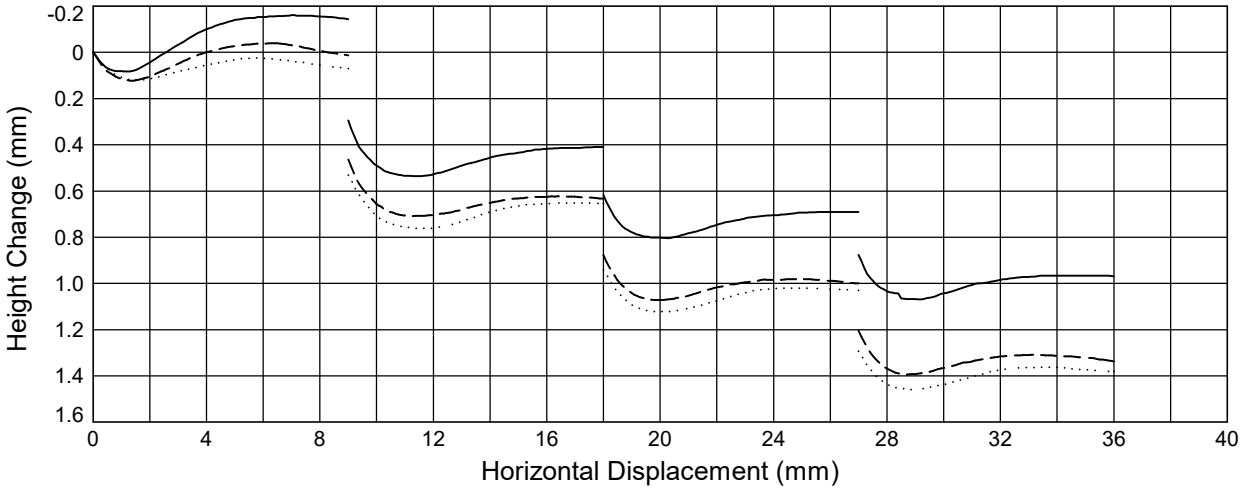
In accordance with BS EN ISO 17892-10

Position ID: **F22-BH310** Sample Ref: **51** Sample Type: **B** Depth (m): **14.00**

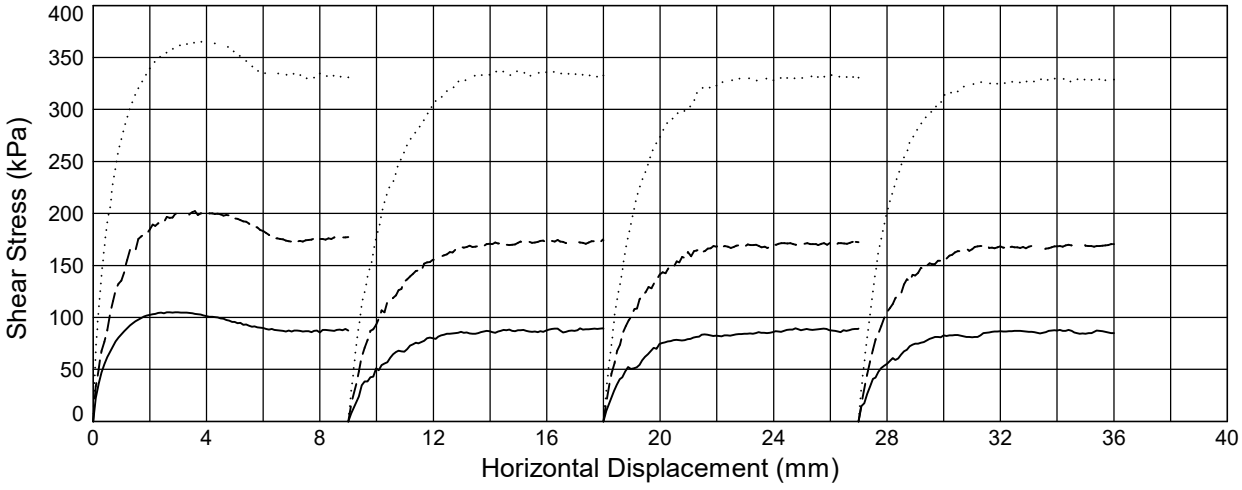
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**140** kPa) *Dashed Line* = Specimen 2 (**280** kPa) *Dotted Line* = Specimen 3 (**560** kPa)

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Contract: **Sealink Friston**		Contract Ref: **563835**

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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **F22-BH310** Sample Ref: **64** Sample Type: **B** Depth (m): **18.00**

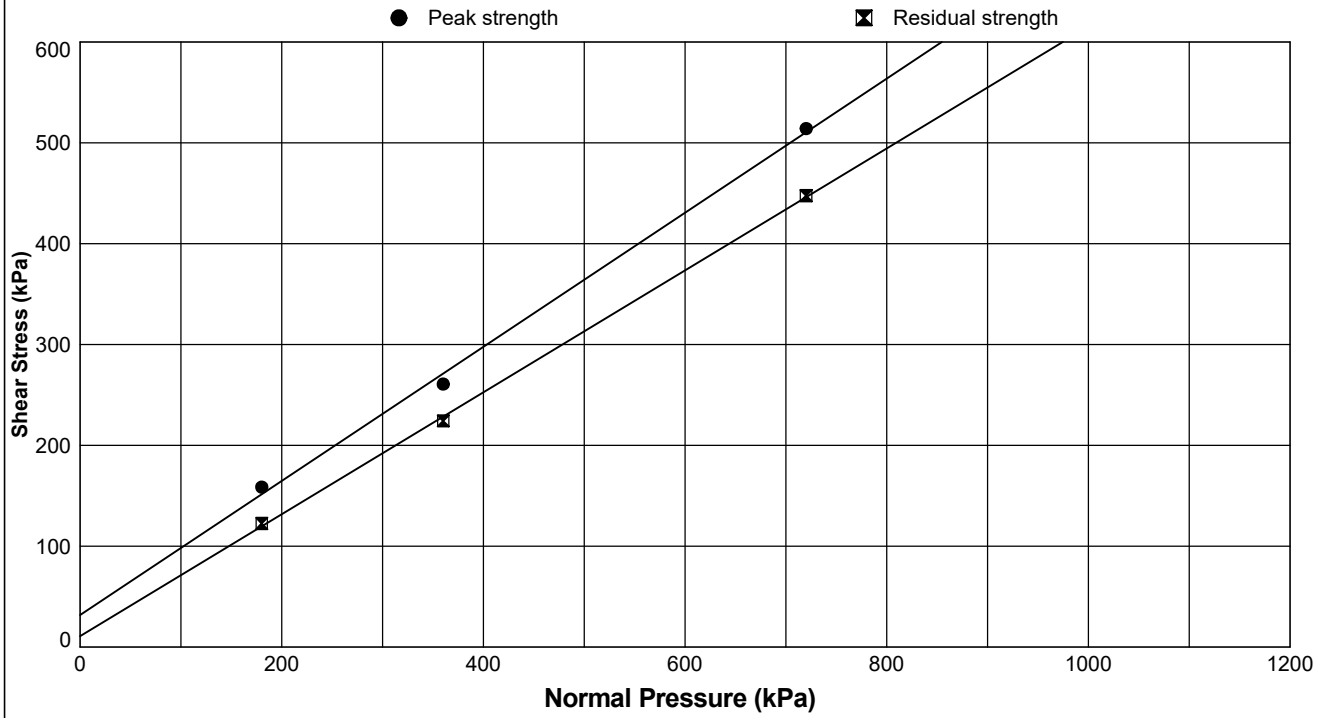
Description: **Light brown slightly gravelly silty SAND**

Sample Condition: **Recompacted**

Start Date: **02/01/2024**

End Date: **04/01/2024**

SPECIMEN NUMBER				1	2	3
PROPERTIES	Initial Water Content		(%)	**16.7**	**16.7**	**16.7**
	Initial Length (L_1)		(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)		(mm)	**60.0**	**60.0**	**60.0**
	Initial Height		(mm)	**19.2**	**19.2**	**19.2**
	Initial Bulk Density		(Mg/m^3)	**1.99**	**1.99**	**1.99**
	Initial Dry Density		(Mg/m^3)	**1.71**	**1.71**	**1.71**
	Particle Density		(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio			**0.5539**	**0.5535**	**0.5529**
	Initial Degree of Saturation		(%)	**80**	**80**	**80**
TEST CONDITIONS	Specimen Conditions			**Submerged**	**Submerged**	**Submerged**
	Test Duration		(days)	**3**	**3**	**3**
CONSOLIDATION	Normal Pressure		(kPa)	**180**	**360**	**720**
	Consolidated Height		(mm)	**17.8**	**18.2**	**18.0**
	Voids Ratio after Consolidation			**0.4447**	**0.4744**	**0.4549**
SHEAR	Shearing Rate		(mm/min)	**0.0423**	**0.0469**	**0.0635**
	Horiz. Displacement at Peak Shear Stress		(mm)	**2.8**	**2.4**	**2.9**
	Voids Ratio after Shear			**0.3371**	**0.4007**	**0.3688**
	Peak Shear Stress		(kPa)	**159**	**261**	**514**
	Residual Shear Stress		(kPa)	**122**	**224**	**448**
PEAK STRENGTH	Effective Cohesion (C')	**32**	(kPa)	Effective Angle of Friction (ϕ')		**33.5** (deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**11**	(kPa)	Residual Angle of Friction (ϕ'_R)		**31** (deg)



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Contract: **Sealink Friston**		Contract Ref: **563835**

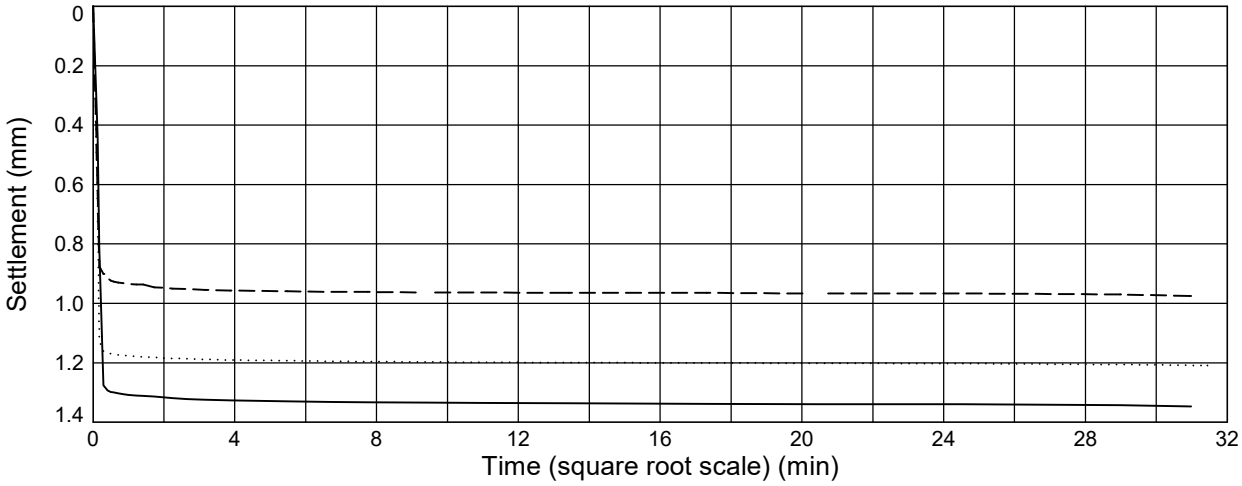
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - SBOX - AUTO - P1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

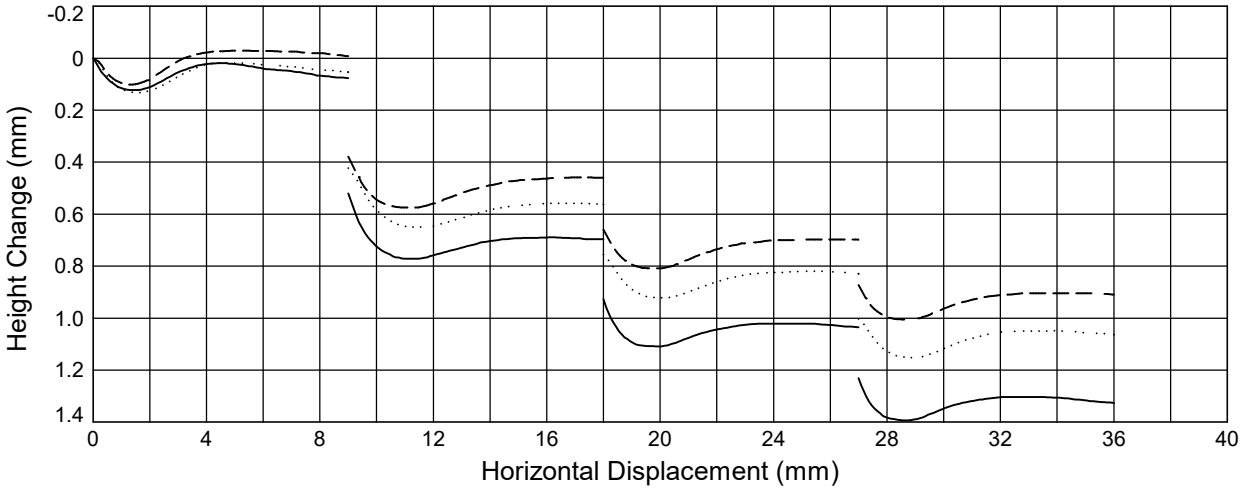
In accordance with BS EN ISO 17892-10

Position ID: **F22-BH310** Sample Ref: **64** Sample Type: **B** Depth (m): **18.00**

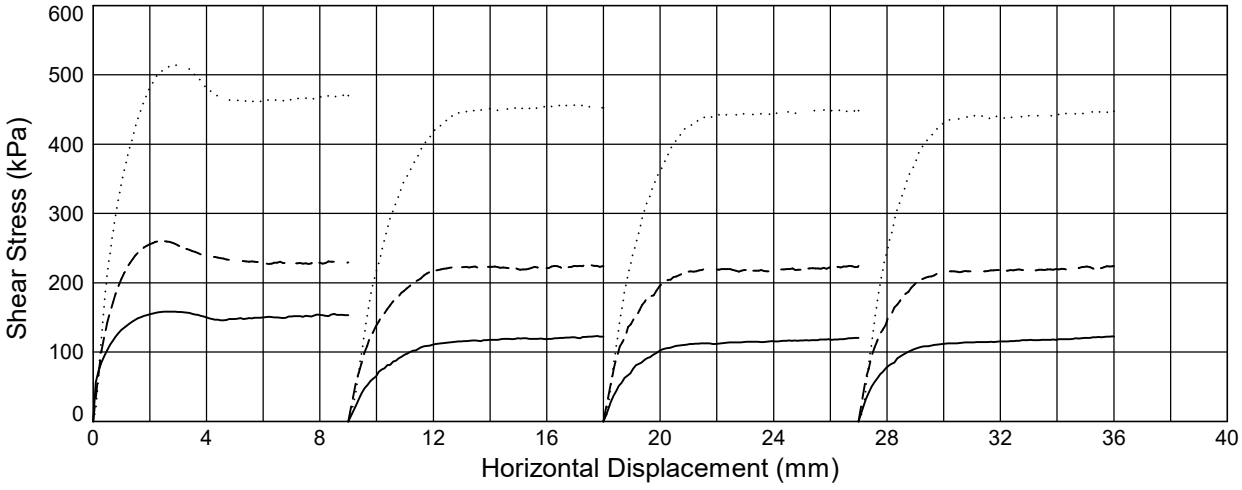
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**180** kPa) *Dashed Line* = Specimen 2 (**360** kPa) *Dotted Line* = Specimen 3 (**720** kPa)

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Compiled By		Date
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Contract: **Sealink Friston**		Contract Ref: **563835**

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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **F22-BH501** Sample Ref: **13** Sample Type: **B** Depth (m): **2.00**

Description: **Brown very sandy slightly clayey GRAVEL**

Sample Condition: **Recompacted**

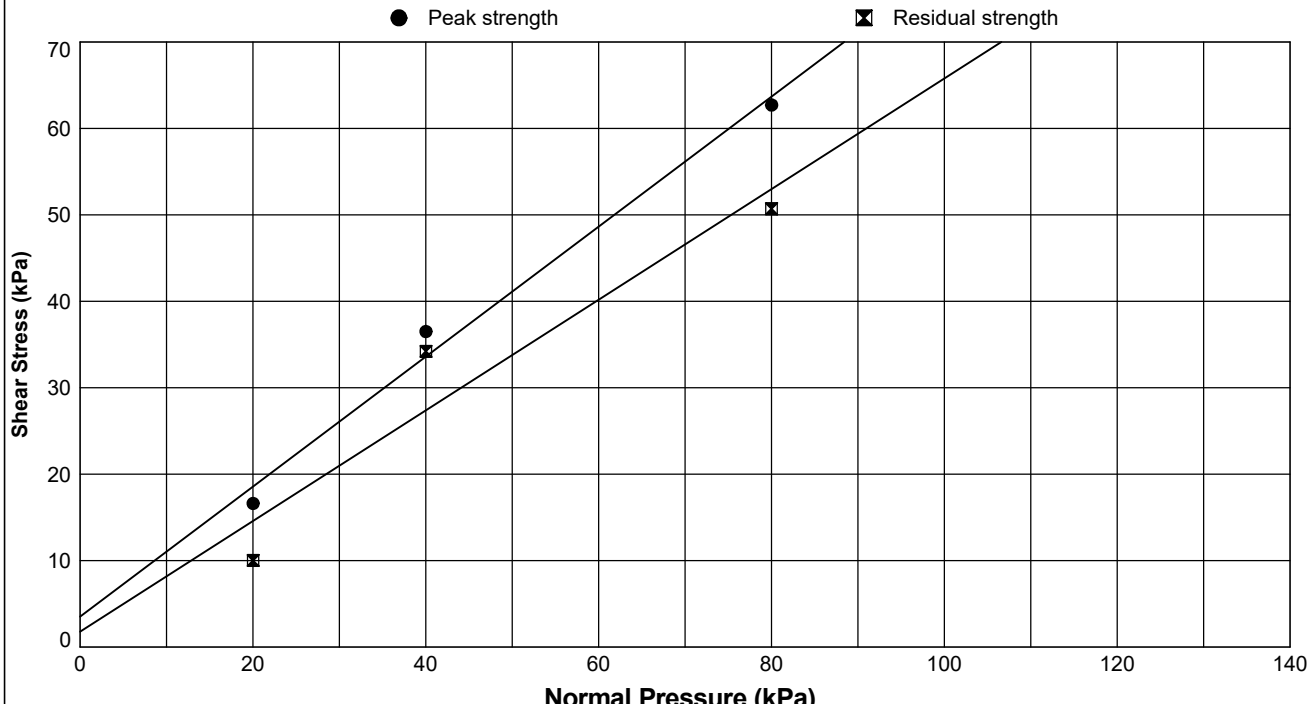
Remarks : **All material >2mm removed prior to test**

Start Date: **07/03/2024**

End Date: **10/03/2024**

SPECIMEN NUMBER			1	2	3
PROPERTIES	Initial Water Content	(%)	**13.9**	**13.9**	**13.9**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**20.3**	**20.3**	**20.3**
	Initial Bulk Density	(Mg/m^3)	**2.02**	**2.02**	**2.02**
	Initial Dry Density	(Mg/m^3)	**1.78**	**1.78**	**1.78**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**0.4920**	**0.4925**	**0.4916**
	Initial Degree of Saturation	(%)	**75**	**75**	**75**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**3**	**3**	**3**
CONSOLIDATION	Normal Pressure	(kPa)	**20**	**40**	**80**
	Consolidated Height	(mm)	**20.2**	**20.2**	**20.0**
	Voids Ratio after Consolidation		**0.4860**	**0.4795**	**0.4648**
SHEAR	Shearing Rate	(mm/min)	**0.0158**	**0.0194**	**0.0203**
	Horiz. Displacement at Peak Shear Stress	(mm)	**1.1**	**1.5**	**1.6**
	Voids Ratio after Shear		**0.4593**	**0.4467**	**0.4170**
	Peak Shear Stress	(kPa)	**17**	**37**	**63**
	Residual Shear Stress	(kPa)	**10**	**34**	**51**

PEAK STRENGTH	Effective Cohesion (C')	**4** (kPa)	Effective Angle of Friction (ϕ')	**37**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**2** (kPa)	Residual Angle of Friction (ϕ'_R)	**32.5**	(deg)



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Contract	Contract Ref:
Sealink Friston	**563835**

AGS

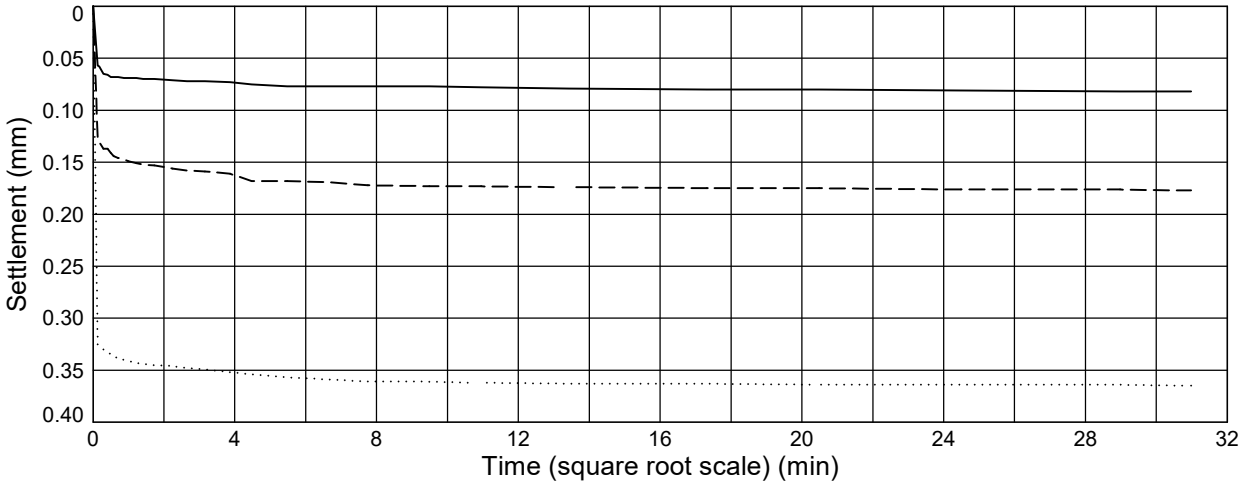
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - SBOX - AUTO - P1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

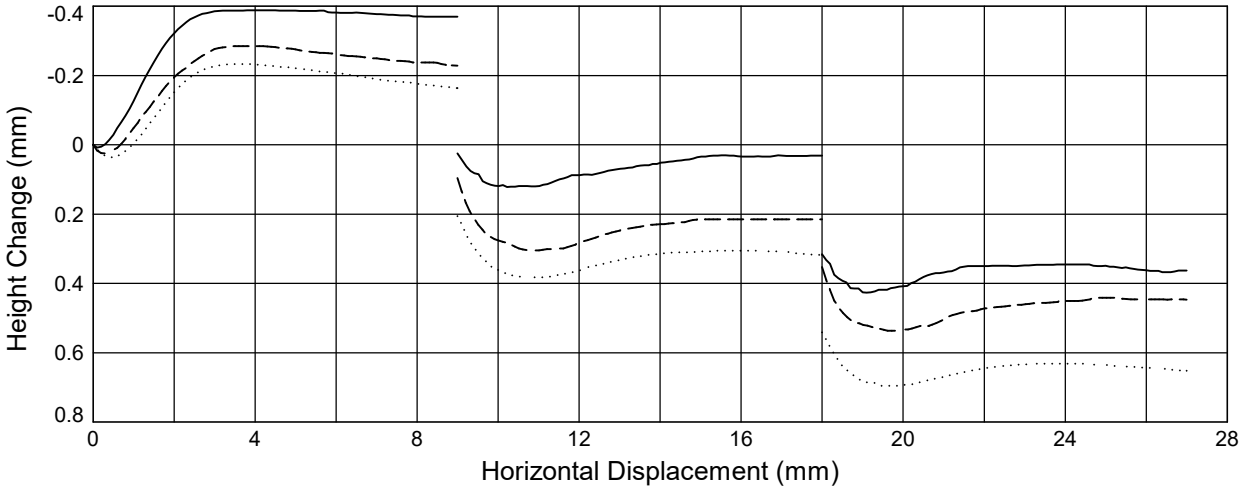
In accordance with BS EN ISO 17892-10

Position ID: **F22-BH501** Sample Ref: **13** Sample Type: **B** Depth (m): **2.00**

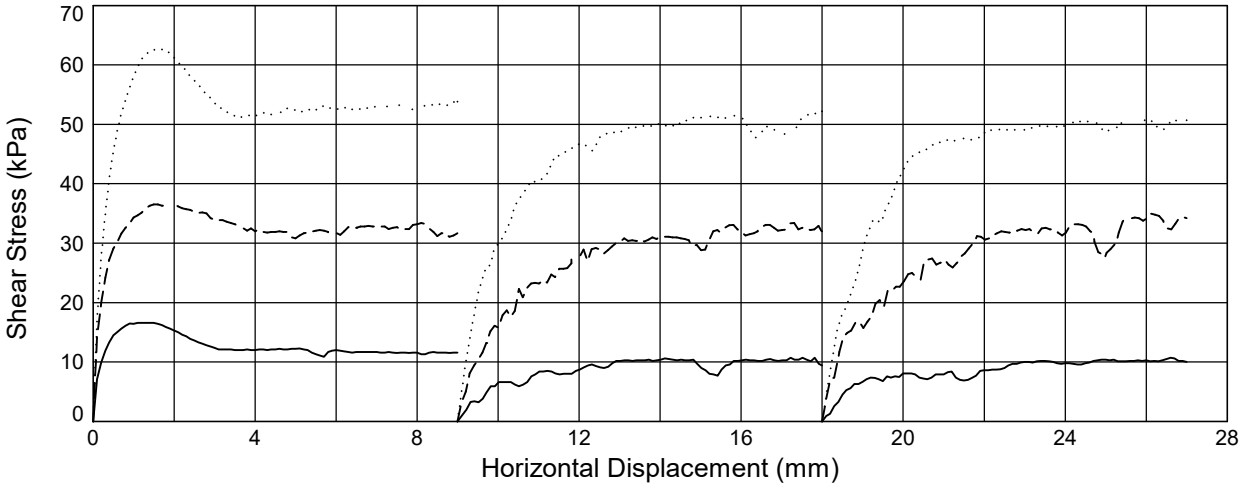
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**20** kPa) *Dashed Line* = Specimen 2 (**40** kPa) *Dotted Line* = Specimen 3 (**80** kPa)

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Compiled By		Date
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Contract: **Sealink Friston**		Contract Ref: **563835**

GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - SBOX - AUTO - P2.1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **F22-BH501** Sample Ref: **21** Sample Type: **B** Depth (m): **5.00**

Description: **Light brown slightly gravelly slightly silty SAND**

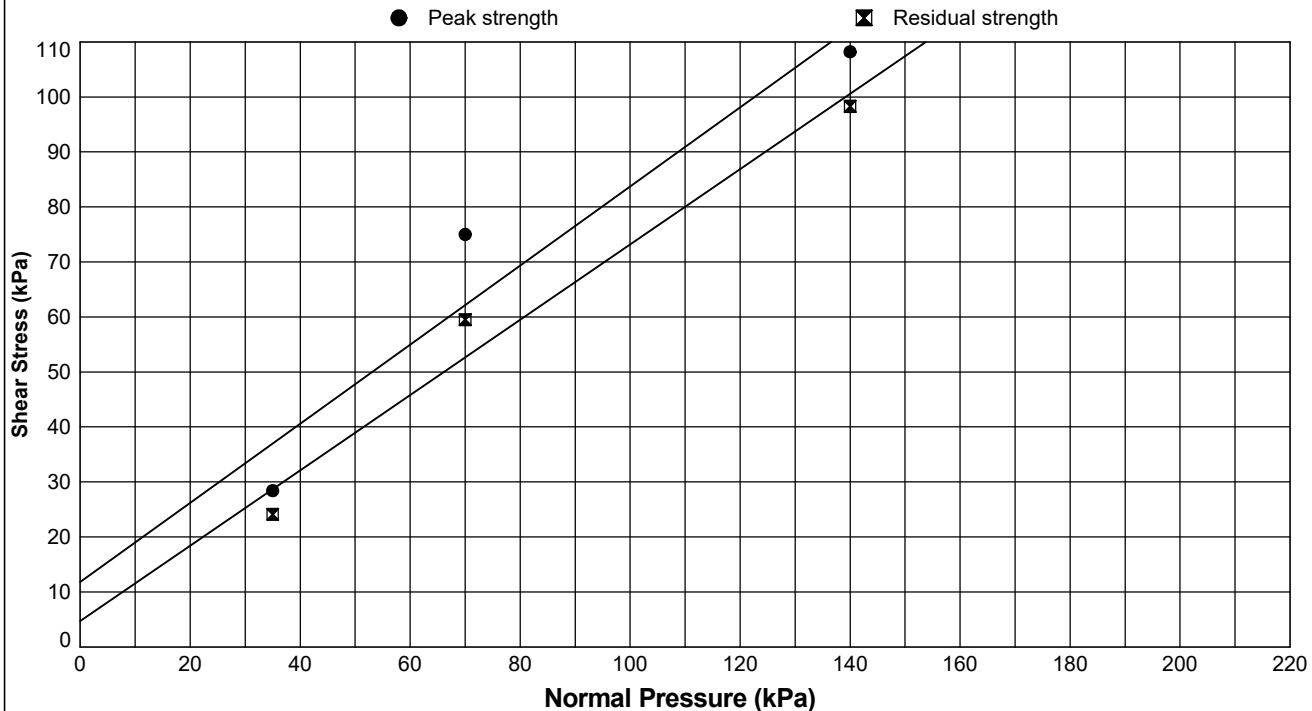
Sample Condition: **Recompacted**

Start Date: **07/03/2024**

End Date: **10/03/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**17.1**	**17.1**	**17.1**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**20.4**	**20.4**	**20.4**
	Initial Bulk Density	(Mg/m^3)	**1.76**	**1.76**	**1.76**
	Initial Dry Density	(Mg/m^3)	**1.50**	**1.50**	**1.50**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**0.7636**	**0.7627**	**0.7638**
	Initial Degree of Saturation	(%)	**59**	**59**	**59**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)			
CONSOLIDATION	Normal Pressure	(kPa)	**35**	**70**	**140**
	Consolidated Height	(mm)	**19.8**	**19.7**	**19.2**
	Voids Ratio after Consolidation		**0.7144**	**0.7010**	**0.6643**
SHEAR	Shearing Rate	(mm/min)	**0.0287**	**0.0339**	**0.0386**
	Horiz. Displacement at Peak Shear Stress	(mm)	**2.5**	**2.2**	**1.7**
	Voids Ratio after Shear		**0.6510**	**0.6484**	**0.6079**
	Peak Shear Stress	(kPa)	**28**	**75**	**108**
	Residual Shear Stress	(kPa)	**24**	**60**	**98**

PEAK STRENGTH	Effective Cohesion (C')	**12** (kPa)	Effective Angle of Friction (ϕ')	**35.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**5** (kPa)	Residual Angle of Friction (ϕ'_R)	**34.5**	(deg)



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Compiled By: [redacted]

Date: **20/03/24**

Contract: **Sealink Friston**

Contract Ref: **563835**

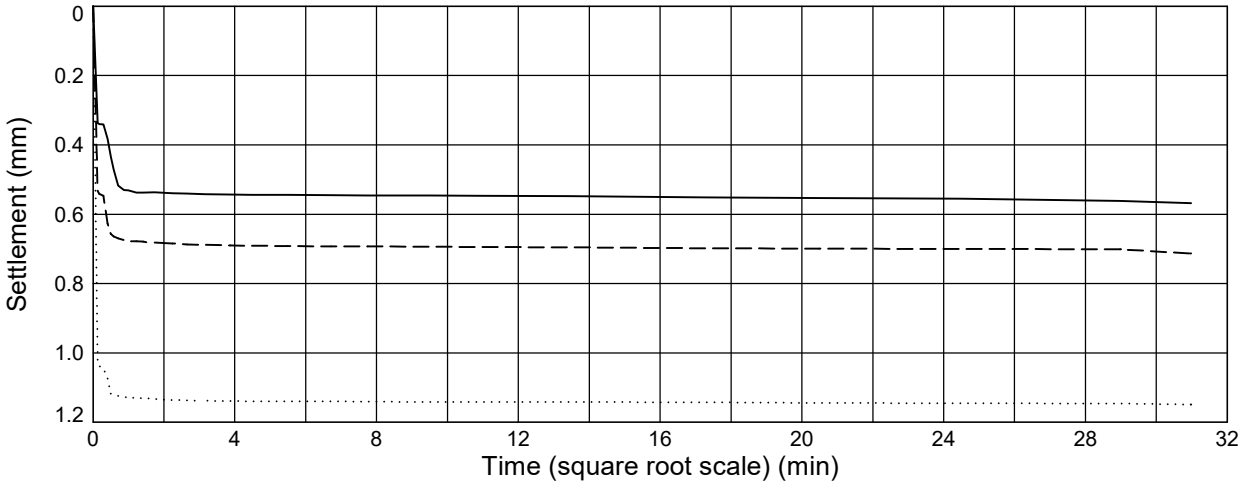
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - SBOX - AUTO - P1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

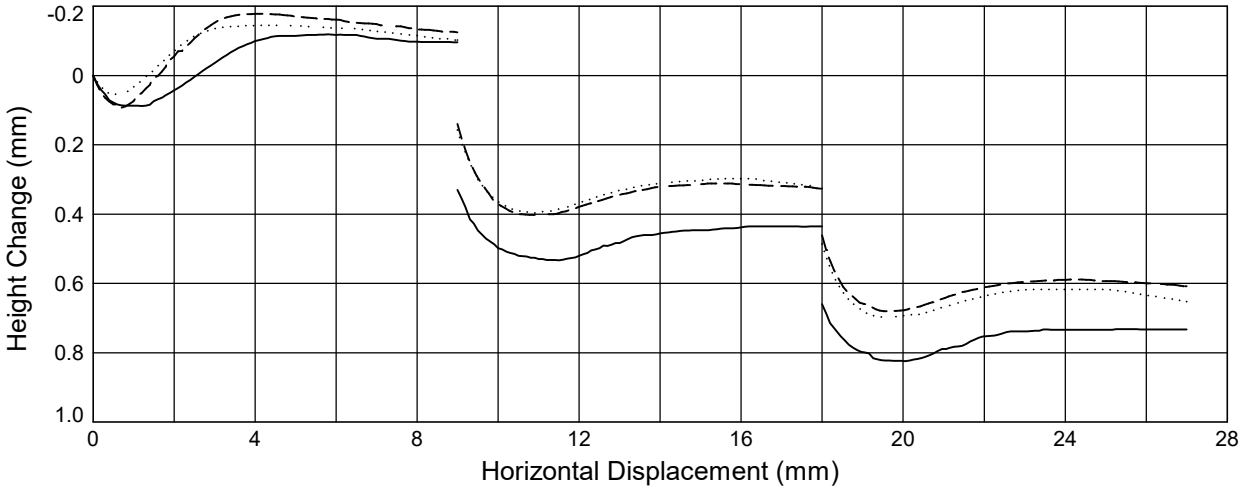
In accordance with BS EN ISO 17892-10

Position ID: **F22-BH501** Sample Ref: **21** Sample Type: **B** Depth (m): **5.00**

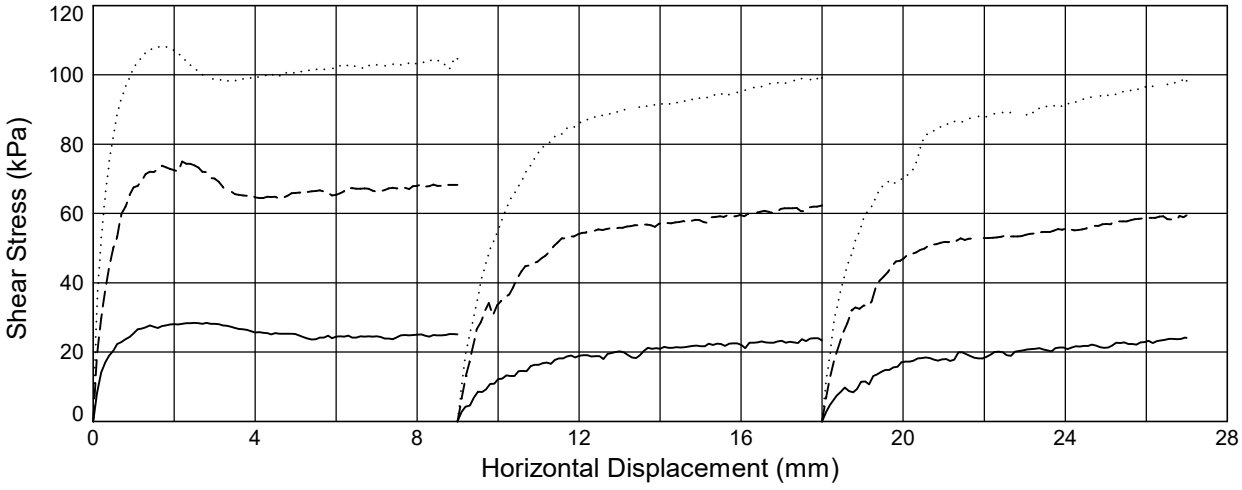
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**35** kPa) *Dashed Line* = Specimen 2 (**70** kPa) *Dotted Line* = Specimen 3 (**140** kPa)

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Compiled By		Date
[redacted]	[redacted]	**20/03/24**
Contract: **Sealink Friston**		Contract Ref: **563835**

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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

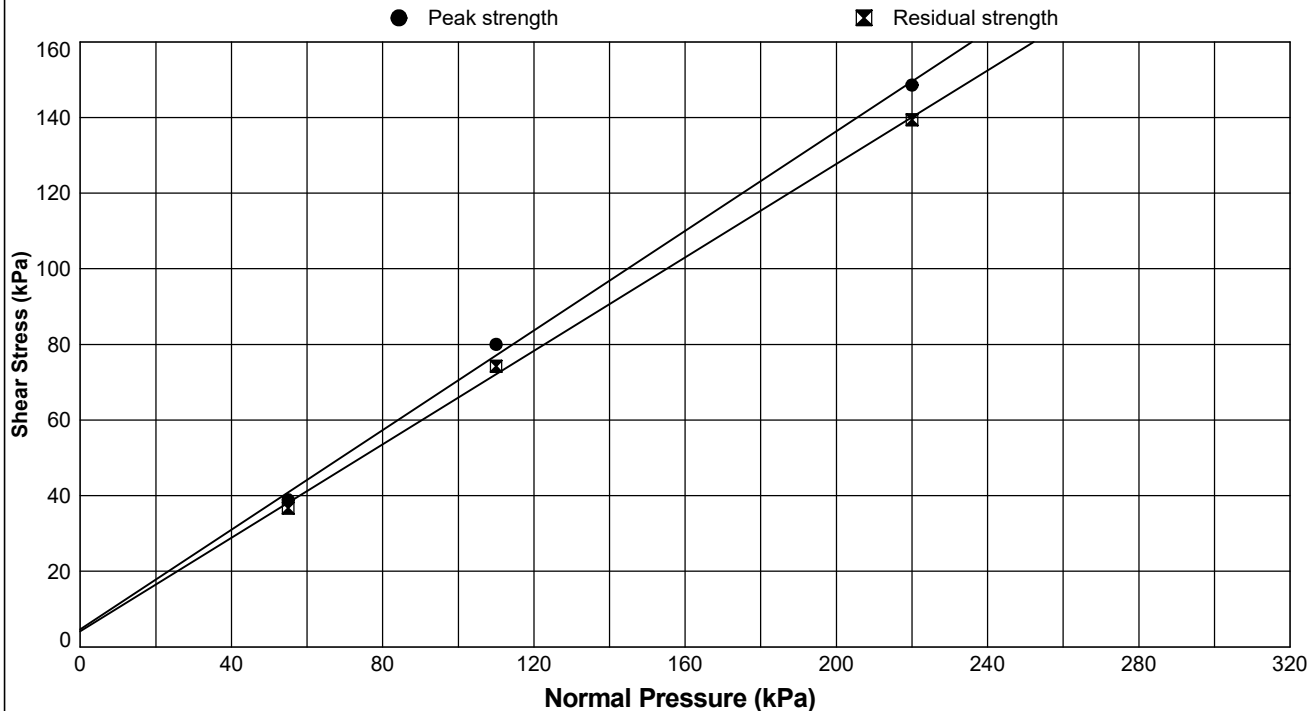
Position ID: **F22-BH501** Sample Ref: **34** Sample Type: **B** Depth (m): **9.00**

Description: **Orangish brown slightly silty SAND with frequent shell fragments** Start Date: **05/03/2024**

Sample Condition: **Recompacted** End Date: **07/03/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**11.7**	**11.7**	**11.7**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**20.3**	**20.3**	**20.3**
	Initial Bulk Density	(Mg/m^3)	**1.68**	**1.68**	**1.68**
	Initial Dry Density	(Mg/m^3)	**1.50**	**1.50**	**1.50**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**0.7644**	**0.7626**	**0.7638**
	Initial Degree of Saturation	(%)	**40**	**41**	**40**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**3**	**3**	**3**
CONSOLIDATION	Normal Pressure	(kPa)	**55**	**110**	**220**
	Consolidated Height	(mm)	**19.9**	**19.9**	**19.6**
	Voids Ratio after Consolidation		**0.7311**	**0.7273**	**0.6997**
SHEAR	Shearing Rate	(mm/min)	**0.0180**	**0.0207**	**0.0239**
	Horiz. Displacement at Peak Shear Stress	(mm)	**2.9**	**3.1**	**2.5**
	Voids Ratio after Shear		**0.6245**	**0.6143**	**0.5423**
	Peak Shear Stress	(kPa)	**39**	**80**	**149**
	Residual Shear Stress	(kPa)	**37**	**74**	**139**

PEAK STRENGTH	Effective Cohesion (C')	**5**	(kPa)	Effective Angle of Friction (ϕ')	**33.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**4**	(kPa)	Residual Angle of Friction (ϕ'_R)	**31.5**	(deg)



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Contract	Contract Ref:
Sealink Friston	**563835**

AGS

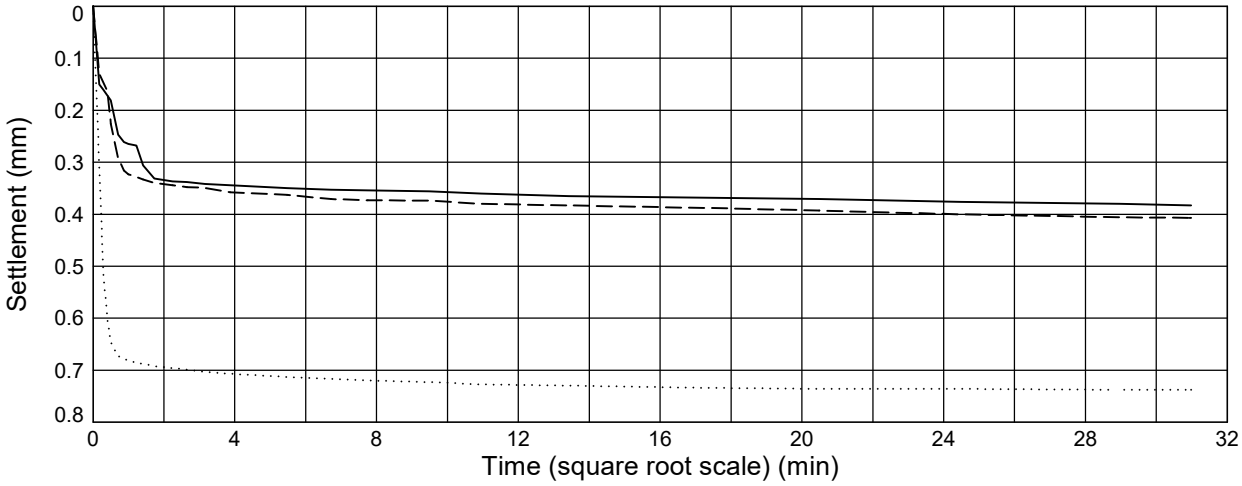
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

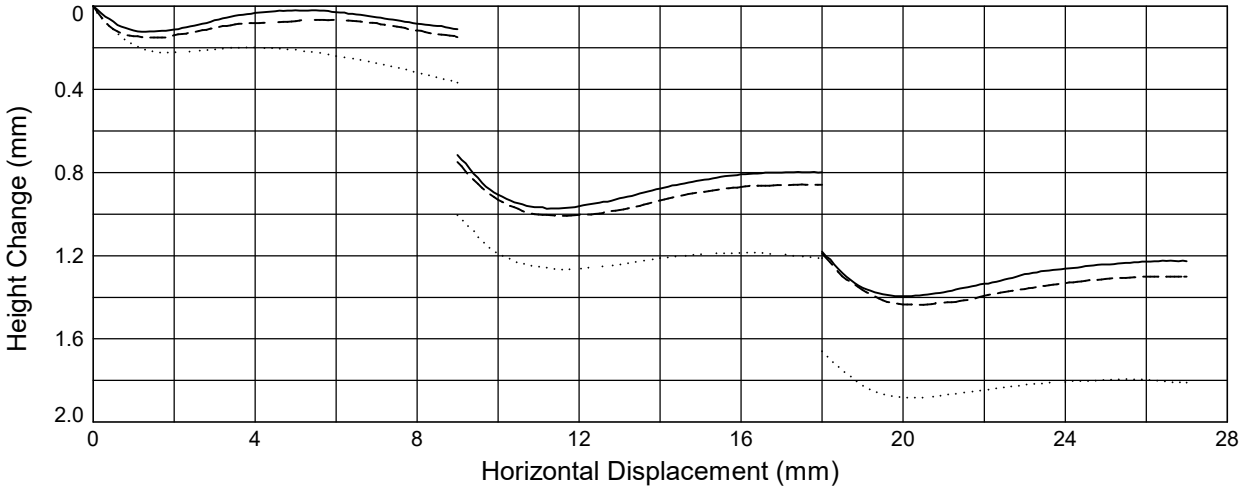
In accordance with BS EN ISO 17892-10

Position ID: **F22-BH501** Sample Ref: **34** Sample Type: **B** Depth (m): **9.00**

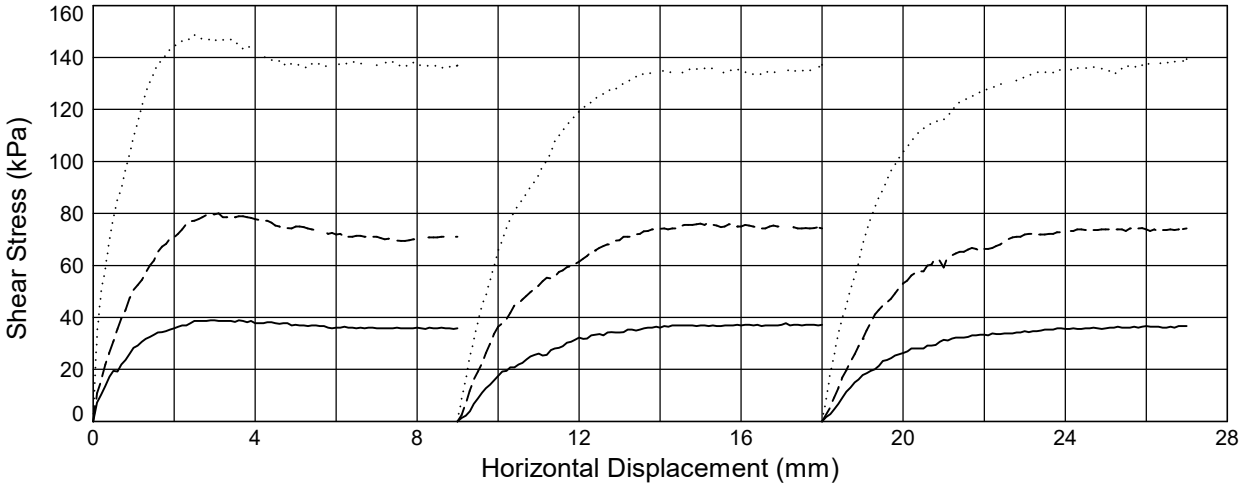
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**55** kPa) *Dashed Line* = Specimen 2 (**110** kPa) *Dotted Line* = Specimen 3 (**220** kPa)

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Contract: **Sealink Friston**		Contract Ref: **563835**

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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **F22-BH501** Sample Ref: **52** Sample Type: **B** Depth (m): **15.00**

Description: **Dark brown gravelly silty SAND with frequent shell fragments**

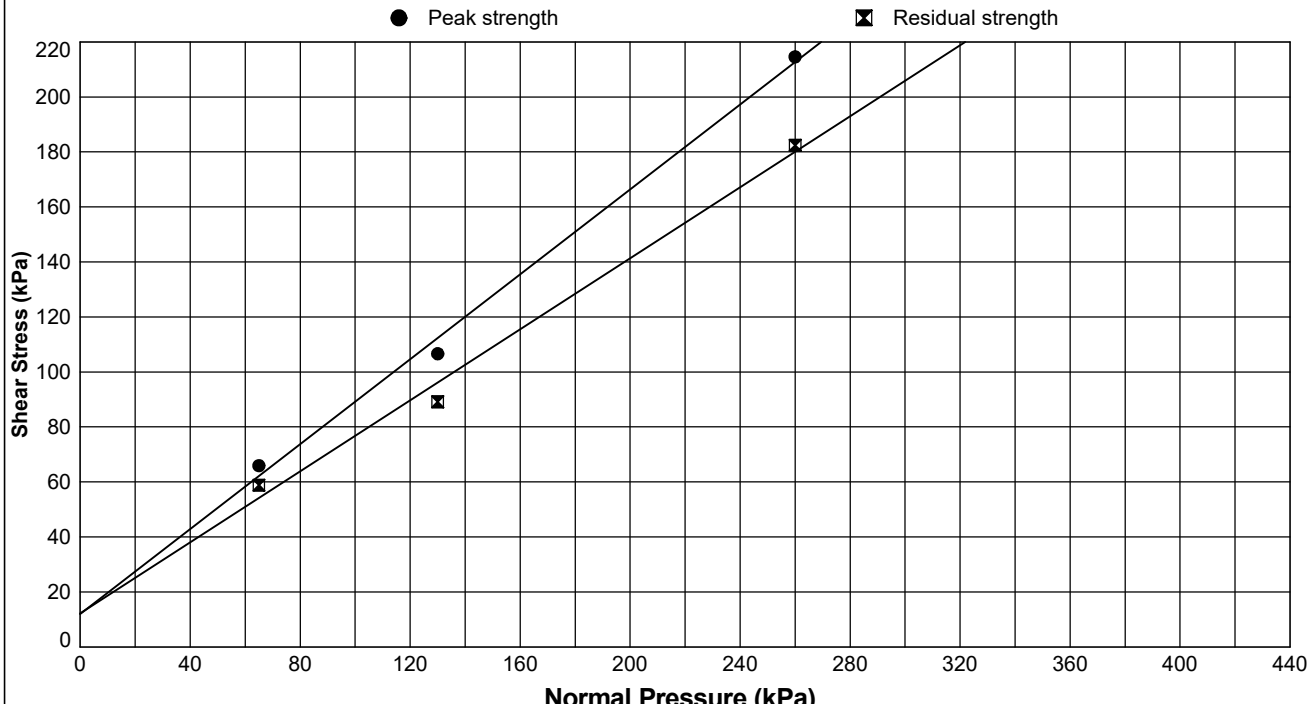
Sample Condition: **Recompacted**

Start Date: **01/03/2024**

End Date: **05/03/2024**

SPECIMEN NUMBER			1	2	3
PROPERTIES	Initial Water Content	(%)	**18.3**	**18.3**	**18.3**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**20.2**	**20.2**	**20.2**
	Initial Bulk Density	(Mg/m^3)	**1.88**	**1.88**	**1.88**
	Initial Dry Density	(Mg/m^3)	**1.59**	**1.59**	**1.59**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**0.6632**	**0.6637**	**0.6633**
	Initial Degree of Saturation	(%)	**73**	**73**	**73**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**3**	**3**	**3**
CONSOLIDATION	Normal Pressure	(kPa)	**65**	**130**	**260**
	Consolidated Height	(mm)	**19.6**	**19.8**	**19.5**
	Voids Ratio after Consolidation		**0.6160**	**0.6348**	**0.6087**
SHEAR	Shearing Rate	(mm/min)	**0.0402**	**0.0469**	**0.0518**
	Horiz. Displacement at Peak Shear Stress	(mm)	**9.0**	**1.4**	**8.7**
	Voids Ratio after Shear		**0.5893**	**0.6043**	**0.5384**
	Peak Shear Stress	(kPa)	**66**	**107**	**215**
	Residual Shear Stress	(kPa)	**59**	**89**	**182**

PEAK STRENGTH	Effective Cohesion (C')	**12**	(kPa)	Effective Angle of Friction (ϕ')	**37.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**12**	(kPa)	Residual Angle of Friction (ϕ'_R)	**33**	(deg)



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Contract: **Sealink Friston**

Contract Ref: **563835**

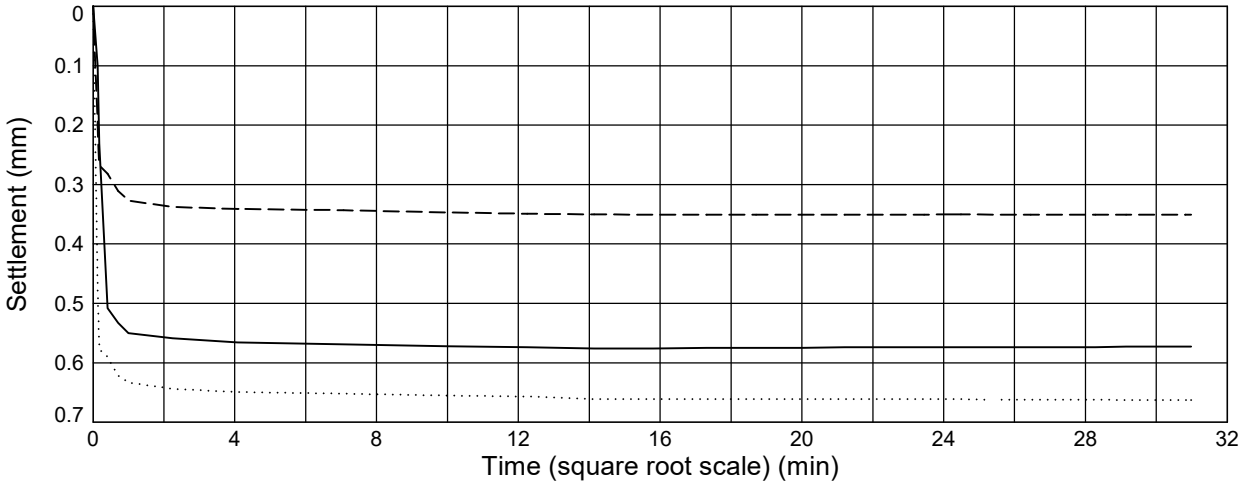
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

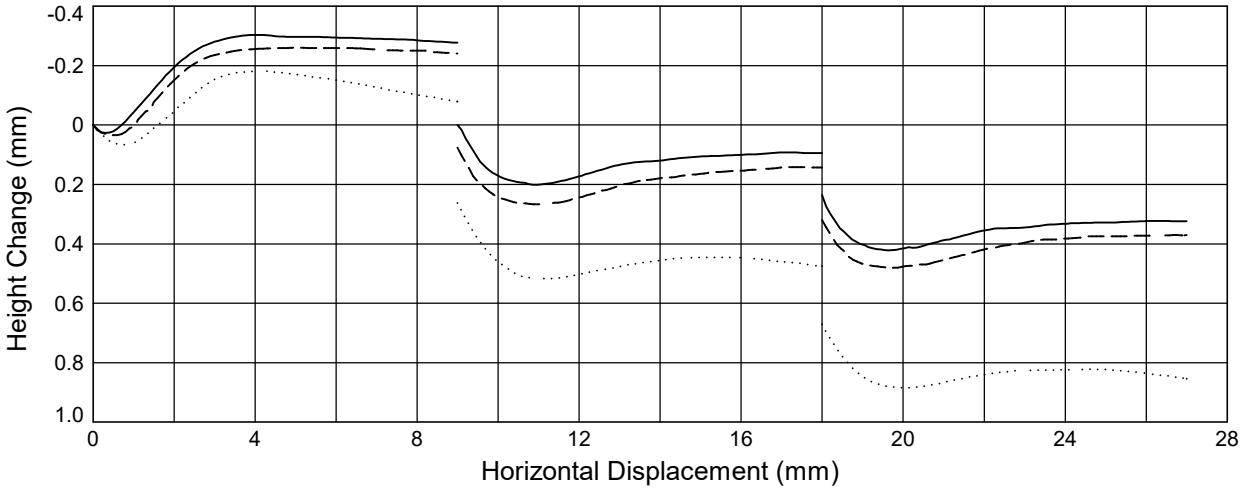
In accordance with BS EN ISO 17892-10

Position ID: **F22-BH501** Sample Ref: **52** Sample Type: **B** Depth (m): **15.00**

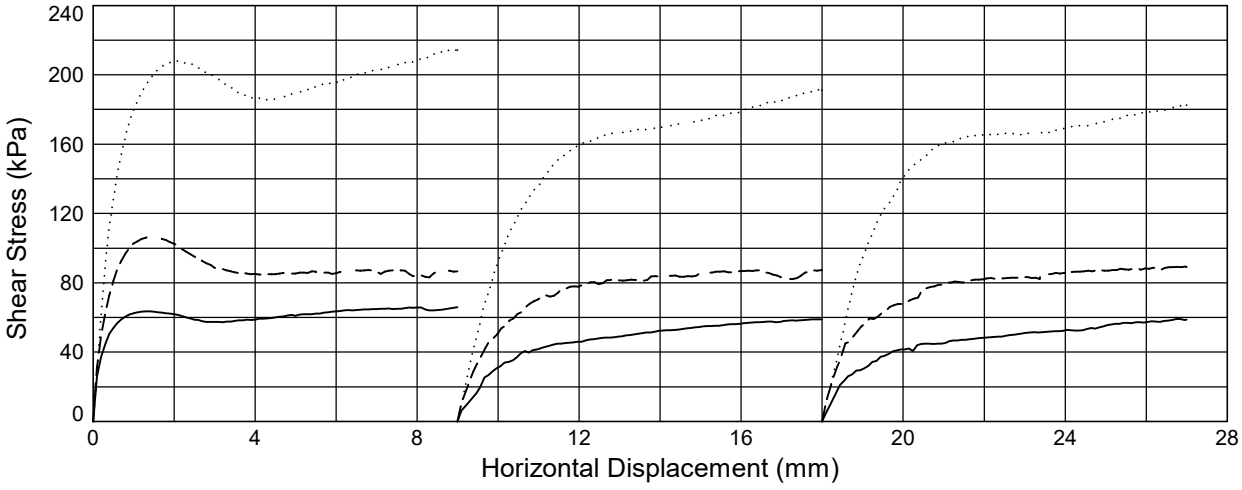
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**65** kPa) *Dashed Line* = Specimen 2 (**130** kPa) *Dotted Line* = Specimen 3 (**260** kPa)

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Contract: **Sealink Friston**		Contract Ref: **563835**

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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **F22-BH502** Sample Ref: **7** Sample Type: **B** Depth (m): **1.50**

Description: **Brown slightly gravelly sandy clayey SILT**

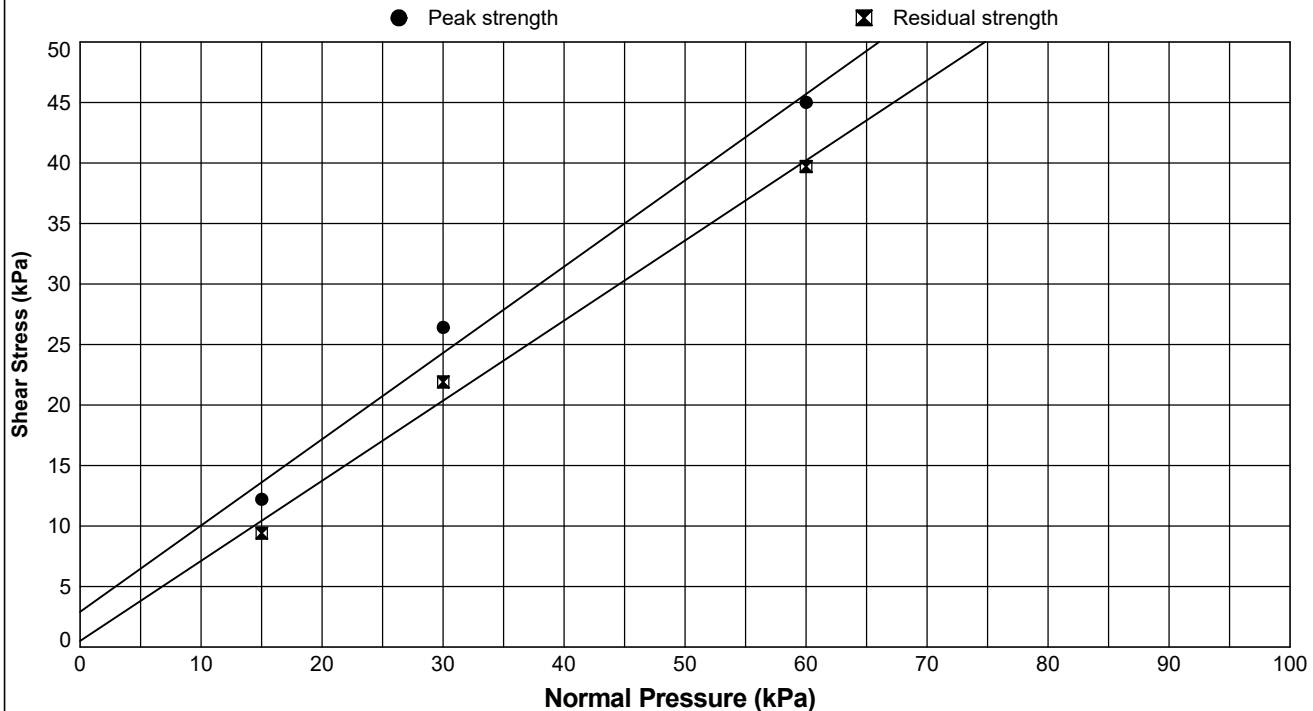
Sample Condition: **Recompacted**

Start Date: **07/03/2024**

End Date: **10/03/2024**

SPECIMEN NUMBER			1	2	3
PROPERTIES	Initial Water Content	(%)	**16.5**	**16.5**	**16.5**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**20.4**	**20.4**	**20.4**
	Initial Bulk Density	(Mg/m^3)	**2.13**	**2.13**	**2.13**
	Initial Dry Density	(Mg/m^3)	**1.83**	**1.83**	**1.83**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**0.4495**	**0.4493**	**0.4493**
	Initial Degree of Saturation	(%)	**97**	**97**	**97**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**4**	**4**	**4**
CONSOLIDATION	Normal Pressure	(kPa)	**15**	**30**	**60**
	Consolidated Height	(mm)	**19.8**	**19.4**	**19.0**
	Voids Ratio after Consolidation		**0.4069**	**0.3836**	**0.3551**
SHEAR	Shearing Rate	(mm/min)	**0.0052**	**0.0060**	**0.0067**
	Horiz. Displacement at Peak Shear Stress	(mm)	**3.0**	**4.1**	**3.9**
	Voids Ratio after Shear		**0.3438**	**0.3086**	**0.2744**
	Peak Shear Stress	(kPa)	**12**	**26**	**45**
	Residual Shear Stress	(kPa)	**9**	**22**	**40**

PEAK STRENGTH	Effective Cohesion (C')	**3** (kPa)	Effective Angle of Friction (ϕ')	**35.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**1** (kPa)	Residual Angle of Friction (ϕ'_R)	**33.5**	(deg)



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Contract: **Sealink Friston**

Contract Ref: **563835**

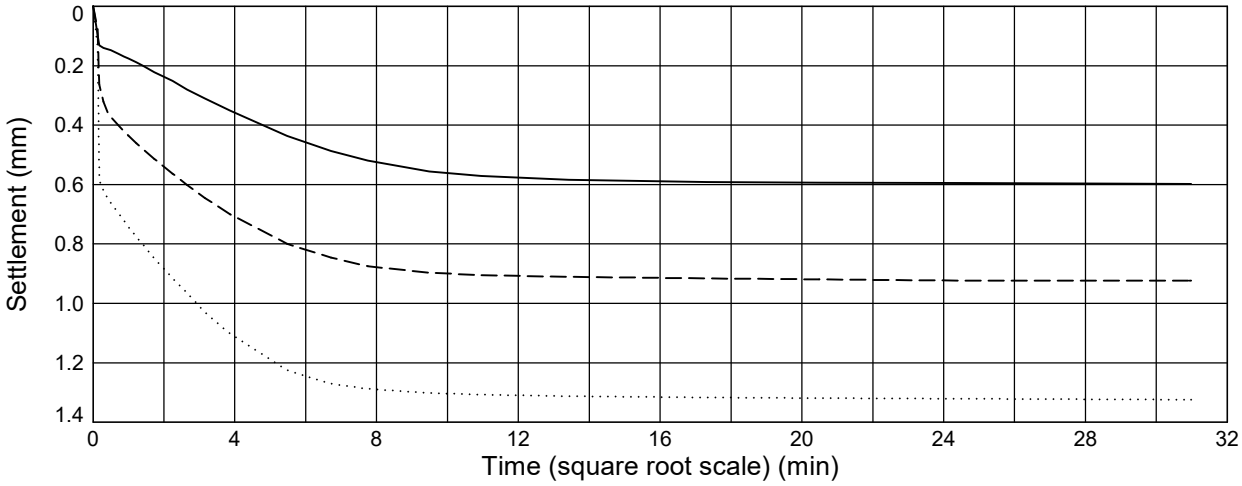
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

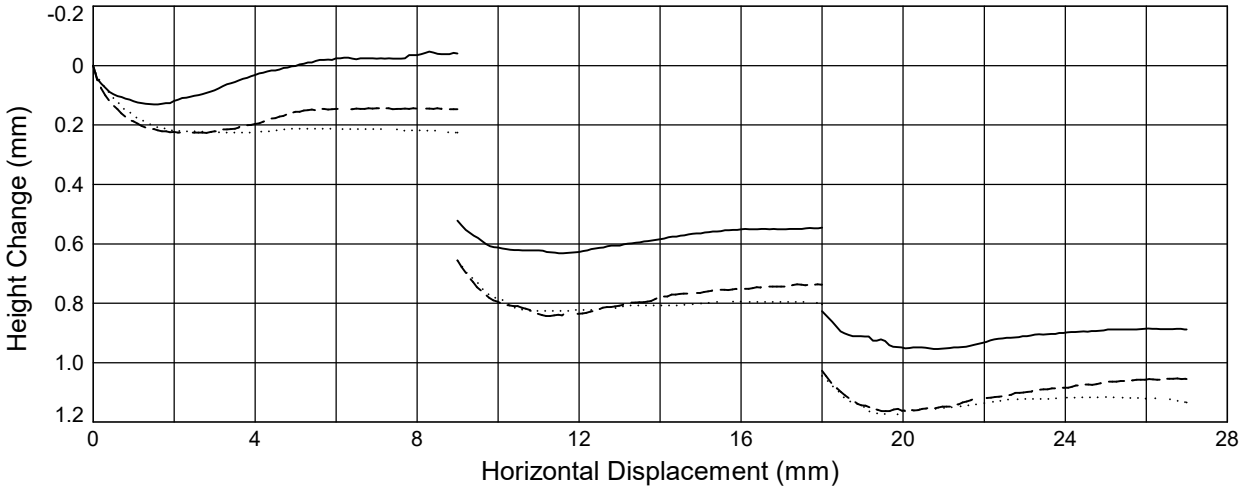
In accordance with BS EN ISO 17892-10

Position ID: **F22-BH502** Sample Ref: **7** Sample Type: **B** Depth (m): **1.50**

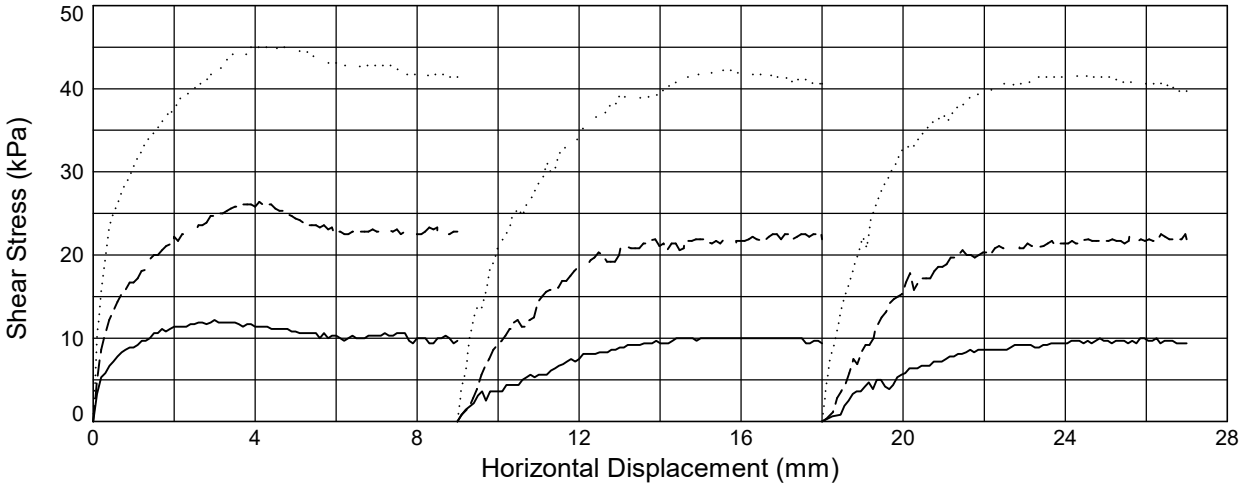
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**15** kPa) *Dashed Line* = Specimen 2 (**30** kPa) *Dotted Line* = Specimen 3 (**60** kPa)

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Compiled By		Date
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Contract: **Sealink Friston**		Contract Ref: **563835**

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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **F22-BH502A** Sample Ref: **17** Sample Type: **B** Depth (m): **4.50**

Description: **Light brown slightly gravelly clayey SAND**

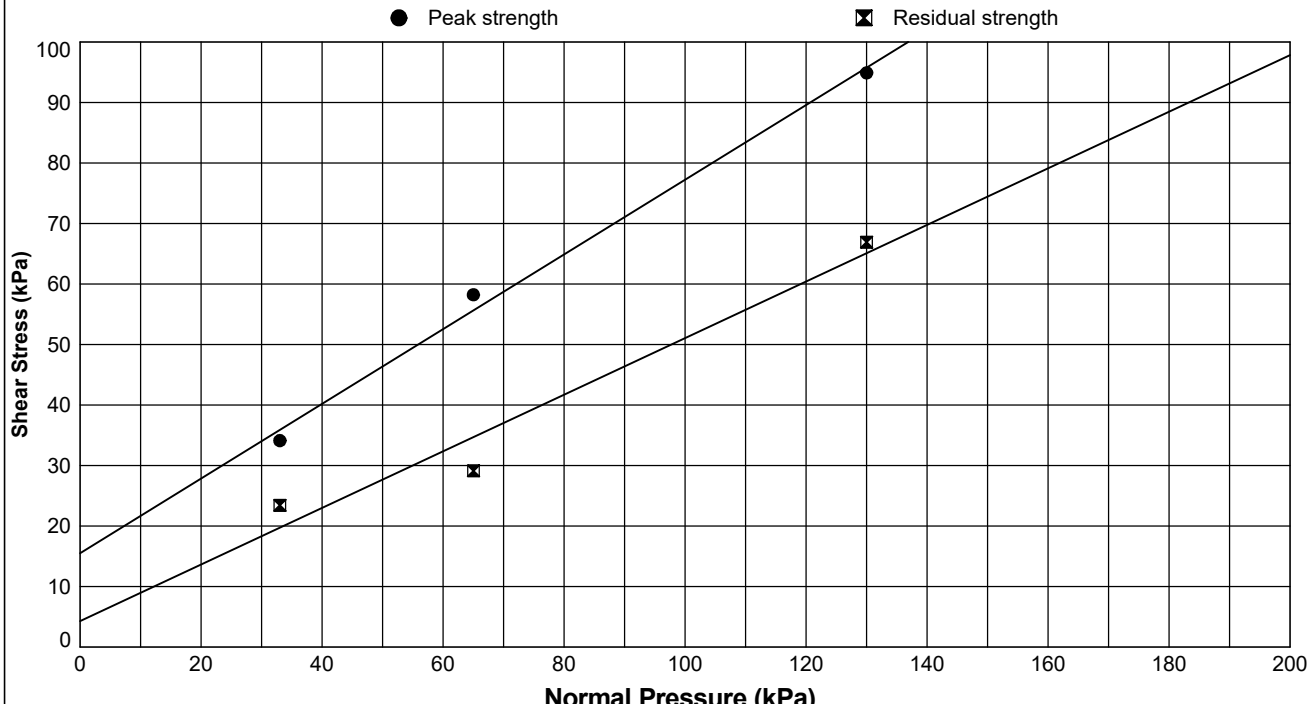
Sample Condition: **Recompacted**

Start Date: **11/03/2024**

End Date: **13/03/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**15.7**	**15.7**	**15.7**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**20.4**	**20.5**	**20.5**
	Initial Bulk Density	(Mg/m^3)	**2.15**	**2.14**	**2.14**
	Initial Dry Density	(Mg/m^3)	**1.86**	**1.85**	**1.85**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**0.4268**	**0.4289**	**0.4315**
	Initial Degree of Saturation	(%)	**97**	**97**	**96**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**3**	**3**	**3**
CONSOLIDATION	Normal Pressure	(kPa)	**33**	**65**	**130**
	Consolidated Height	(mm)	**19.8**	**19.5**	**19.3**
	Voids Ratio after Consolidation		**0.3833**	**0.3575**	**0.3524**
SHEAR	Shearing Rate	(mm/min)	**0.0400**	**0.0400**	**0.0400**
	Horiz. Displacement at Peak Shear Stress	(mm)	**3.5**	**3.1**	**8.7**
	Voids Ratio after Shear		**0.3249**	**0.2904**	**0.2766**
	Peak Shear Stress	(kPa)	**34**	**58**	**95**
	Residual Shear Stress	(kPa)	**23**	**29**	**67**

PEAK STRENGTH	Effective Cohesion (C')	**15** (kPa)	Effective Angle of Friction (ϕ')	**31.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**4** (kPa)	Residual Angle of Friction (ϕ'_R)	**25**	(deg)



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Compiled By		Date
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Contract: **Sealink Friston**		Contract Ref: **563835**

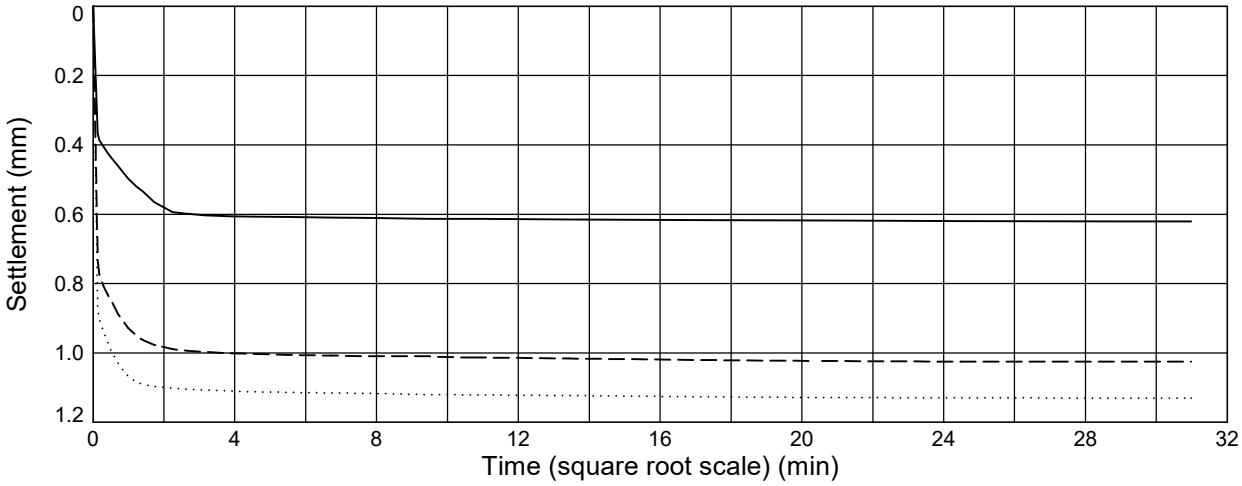
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

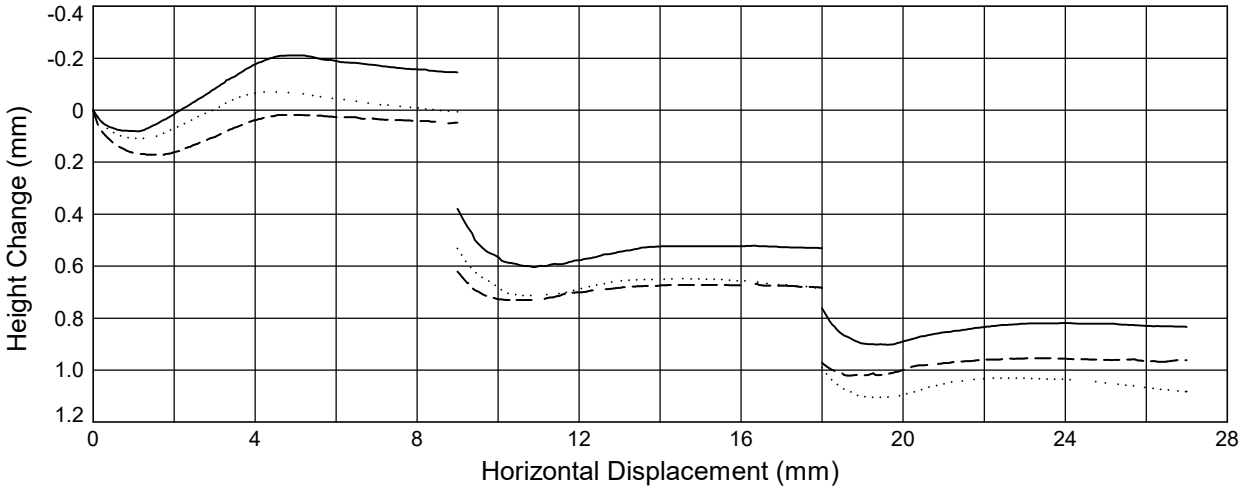
In accordance with BS EN ISO 17892-10

Position ID: **F22-BH502A** Sample Ref: **17** Sample Type: **B** Depth (m): **4.50**

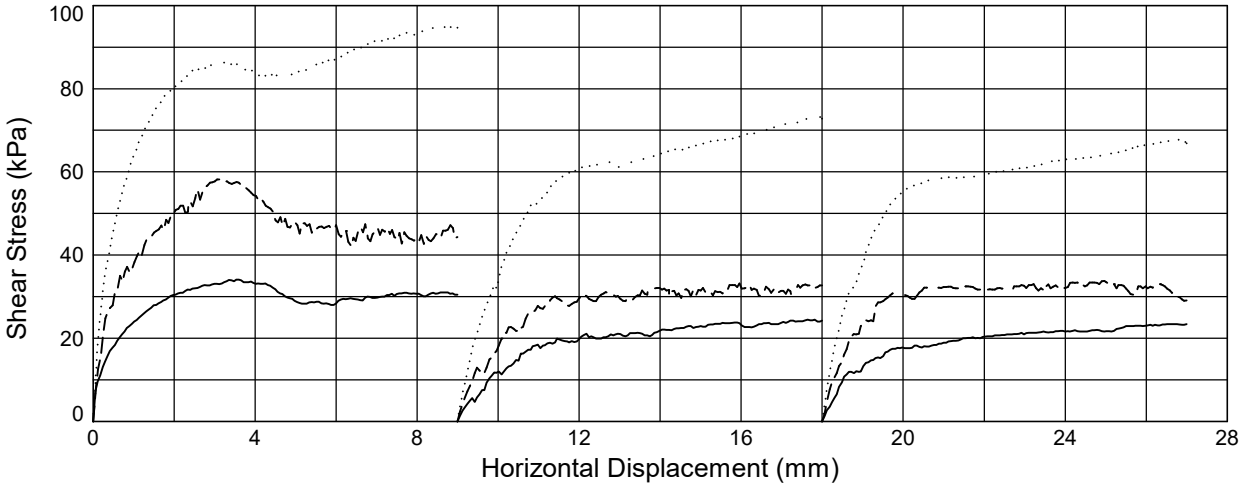
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**33** kPa) *Dashed Line* = Specimen 2 (**65** kPa) *Dotted Line* = Specimen 3 (**130** kPa)

STRUCTURAL SOILS 1a Princess Street Bedminster Bristol BS3 4AG	Compiled By	Date
	[redacted] [redacted]	**20/03/24**
	Contract: **Sealink Friston**	Contract Ref: **563835**

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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

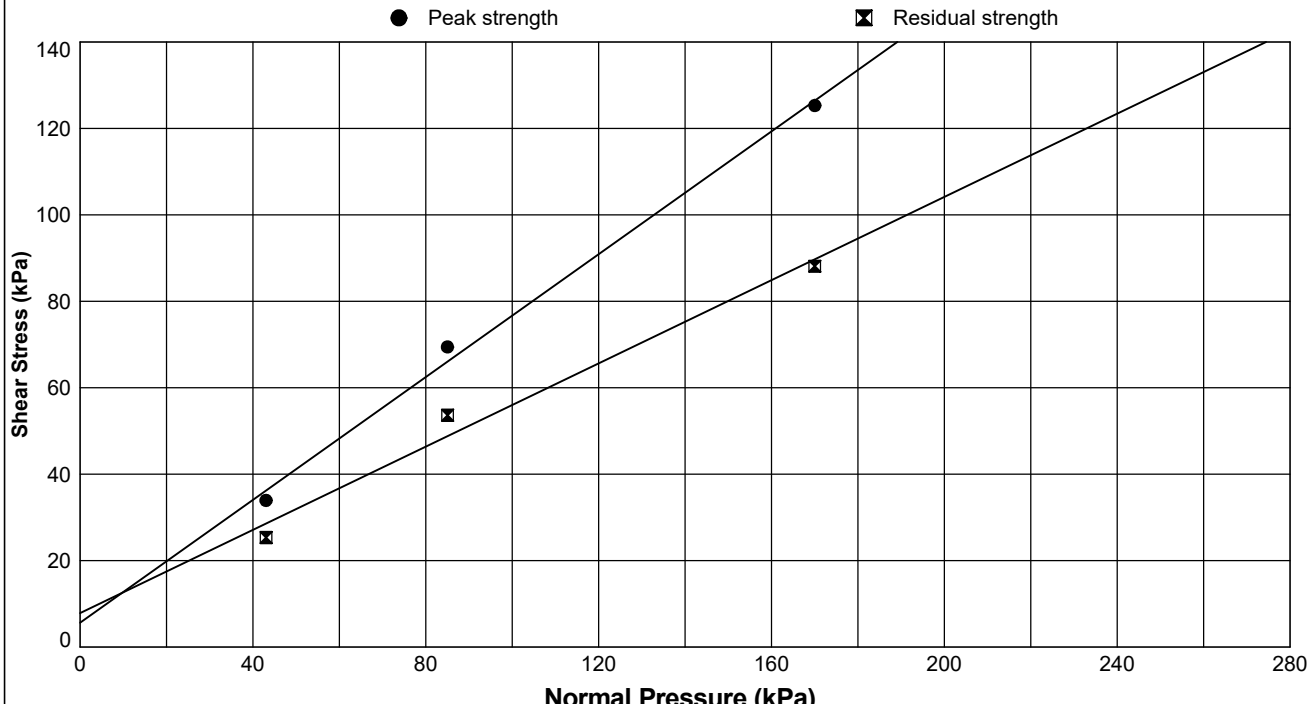
Position ID: **F22-BH502A** Sample Ref: **24** Sample Type: **B** Depth (m): **6.50**

Description: **Light brown clayey SAND with occasional shell fragments** Start Date: **01/03/2024**

Sample Condition: **Recompacted** End Date: **05/03/2024**

SPECIMEN NUMBER			1	2	3
PROPERTIES	Initial Water Content	(%)	**16.4**	**16.4**	**16.4**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**20.2**	**20.2**	**20.2**
	Initial Bulk Density	(Mg/m^3)	**2.05**	**2.05**	**2.05**
	Initial Dry Density	(Mg/m^3)	**1.76**	**1.76**	**1.76**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**0.5026**	**0.5031**	**0.5023**
	Initial Degree of Saturation	(%)	**86**	**86**	**86**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**3**	**3**	**3**
CONSOLIDATION	Normal Pressure	(kPa)	**43**	**85**	**170**
	Consolidated Height	(mm)	**20.1**	**19.9**	**19.9**
	Voids Ratio after Consolidation		**0.4903**	**0.4783**	**0.4808**
SHEAR	Shearing Rate	(mm/min)	**0.0410**	**0.0447**	**0.0474**
	Horiz. Displacement at Peak Shear Stress	(mm)	**1.7**	**2.1**	**2.0**
	Voids Ratio after Shear		**0.4511**	**0.4057**	**0.4248**
	Peak Shear Stress	(kPa)	**34**	**69**	**125**
	Residual Shear Stress	(kPa)	**25**	**54**	**88**

PEAK STRENGTH	Effective Cohesion (C')	**6**	(kPa)	Effective Angle of Friction (ϕ')	**35.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**8**	(kPa)	Residual Angle of Friction (ϕ'_R)	**25.5**	(deg)



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Compiled By		Date
[redacted]	[redacted]	**20/03/24**
Contract: **Sealink Friston**		Contract Ref: **563835**

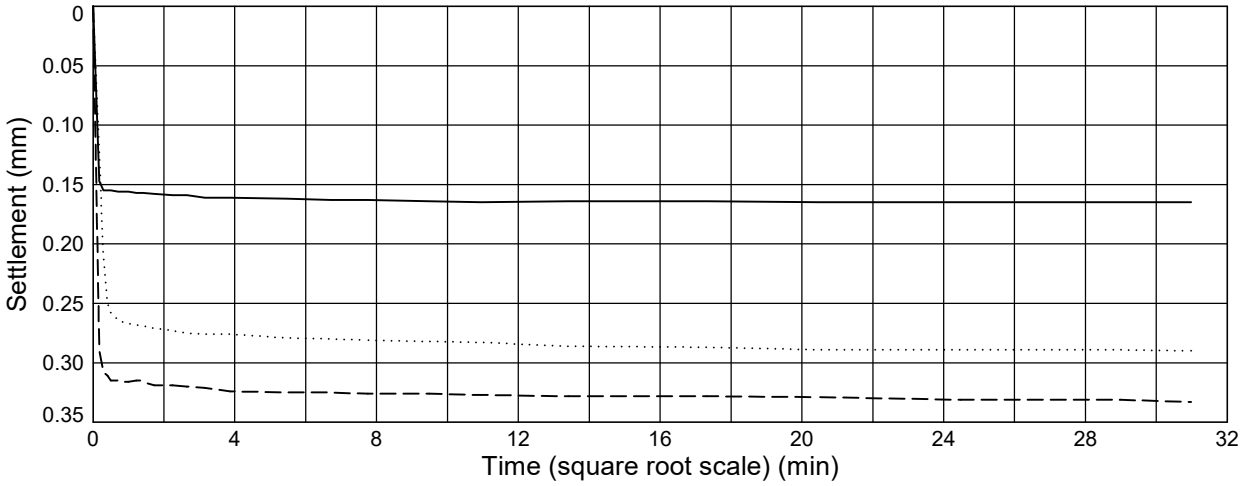
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - SBOX - AUTO - P1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

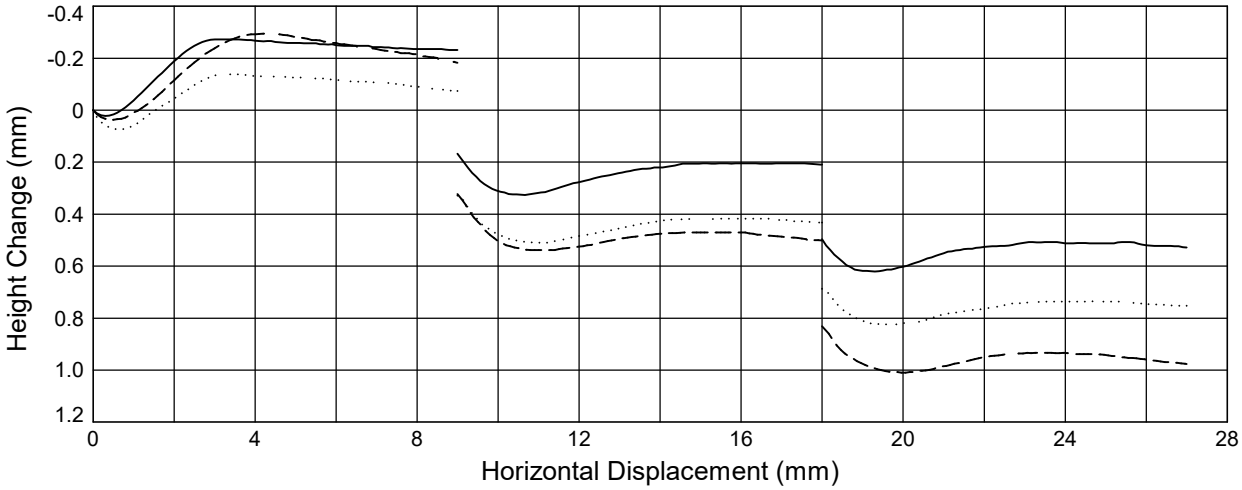
In accordance with BS EN ISO 17892-10

Position ID: **F22-BH502A** Sample Ref: **24** Sample Type: **B** Depth (m): **6.50**

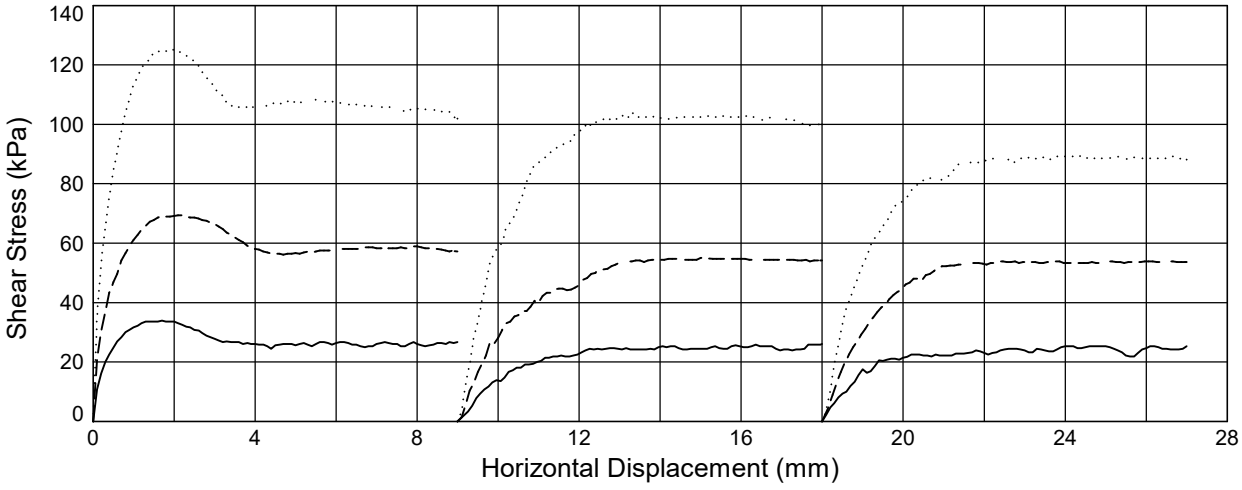
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**43** kPa) *Dashed Line* = Specimen 2 (**85** kPa) *Dotted Line* = Specimen 3 (**170** kPa)

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Compiled By		Date
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Contract: **Sealink Friston**		Contract Ref: **563835**

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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **F22-BH502A** Sample Ref: **41** Sample Type: **B** Depth (m): **10.50**

Description: **Brown slightly gravelly slightly clayey SAND**

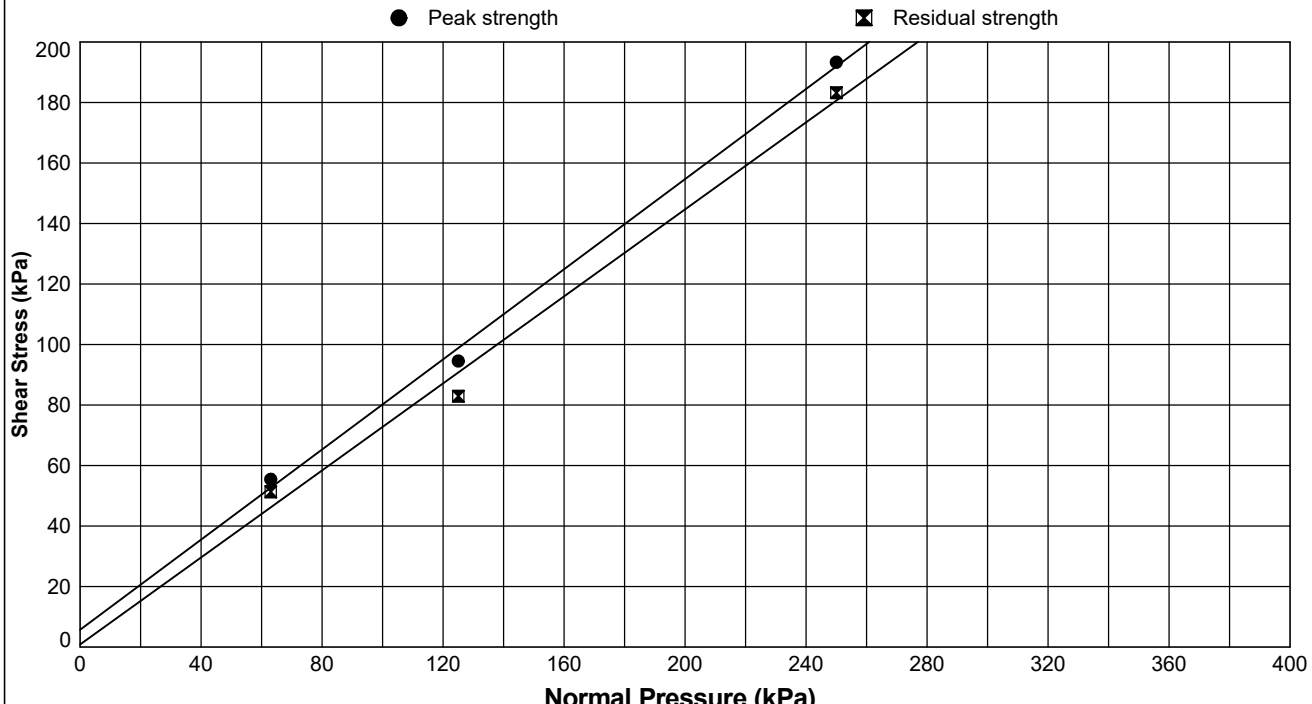
Sample Condition: **Recompacted**

Start Date: **03/03/2024**

End Date: **07/03/2024**

SPECIMEN NUMBER			1	2	3
PROPERTIES	Initial Water Content	(%)	**12.9**	**12.9**	**12.9**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**20.3**	**20.4**	**20.3**
	Initial Bulk Density	(Mg/m^3)	**1.83**	**1.83**	**1.83**
	Initial Dry Density	(Mg/m^3)	**1.62**	**1.62**	**1.62**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**0.6321**	**0.6327**	**0.6318**
	Initial Degree of Saturation	(%)	**54**	**54**	**54**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**3**	**3**	**3**
CONSOLIDATION	Normal Pressure	(kPa)	**63**	**125**	**250**
	Consolidated Height	(mm)	**19.8**	**20.1**	**19.9**
	Voids Ratio after Consolidation		**0.5873**	**0.6117**	**0.5967**
SHEAR	Shearing Rate	(mm/min)	**0.0402**	**0.0469**	**0.0492**
	Horiz. Displacement at Peak Shear Stress	(mm)	**8.7**	**1.5**	**2.3**
	Voids Ratio after Shear		**0.5284**	**0.5732**	**0.5354**
	Peak Shear Stress	(kPa)	**55**	**95**	**193**
	Residual Shear Stress	(kPa)	**51**	**83**	**183**

PEAK STRENGTH	Effective Cohesion (C')	**6** (kPa)	Effective Angle of Friction (ϕ')	**36.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**1** (kPa)	Residual Angle of Friction (ϕ'_R)	**35.5**	(deg)



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Date: **20/03/24**

Contract: **Sealink Friston**

Contract Ref: **563835**

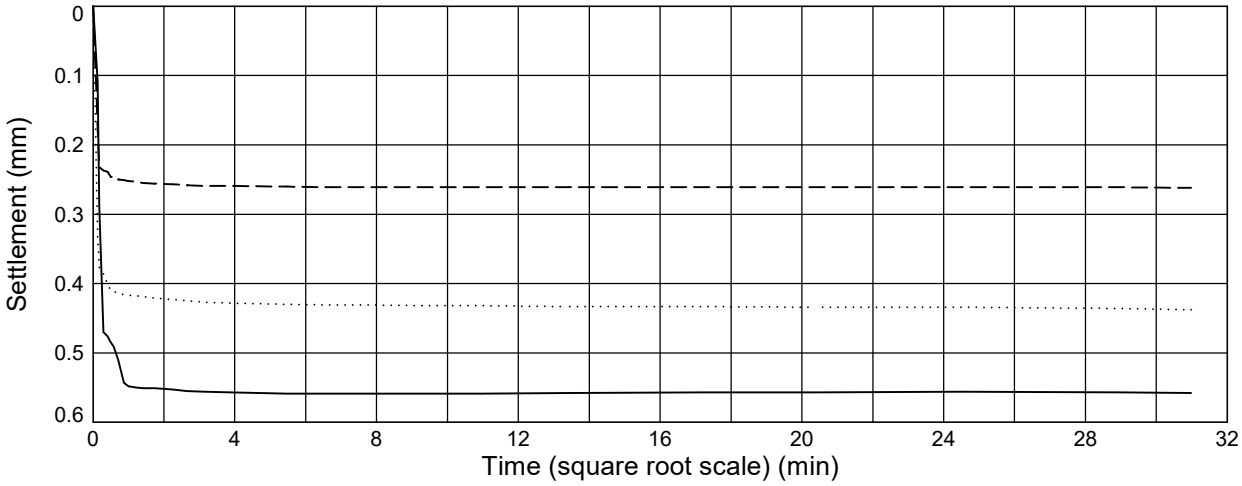
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

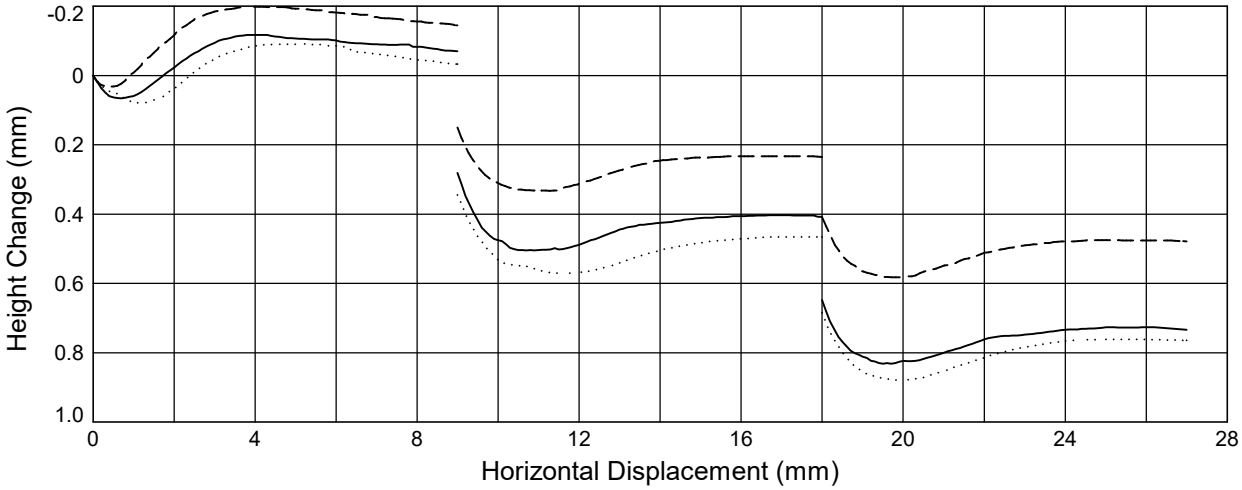
In accordance with BS EN ISO 17892-10

Position ID: **F22-BH502A** Sample Ref: **41** Sample Type: **B** Depth (m): **10.50**

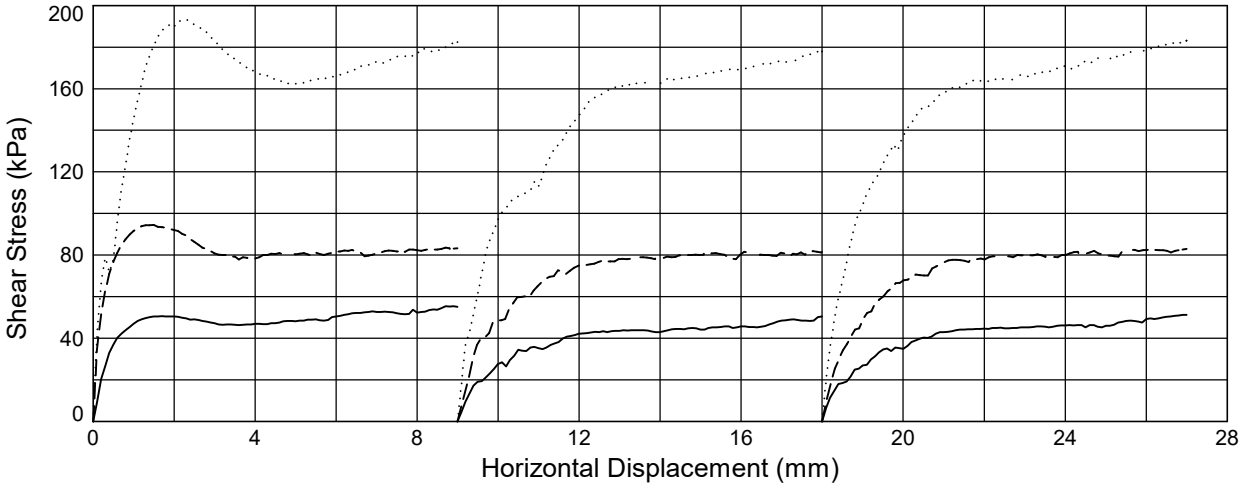
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**63** kPa) *Dashed Line* = Specimen 2 (**125** kPa) *Dotted Line* = Specimen 3 (**250** kPa)

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Compiled By		Date
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Contract: **Sealink Friston**		Contract Ref: **563835**

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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

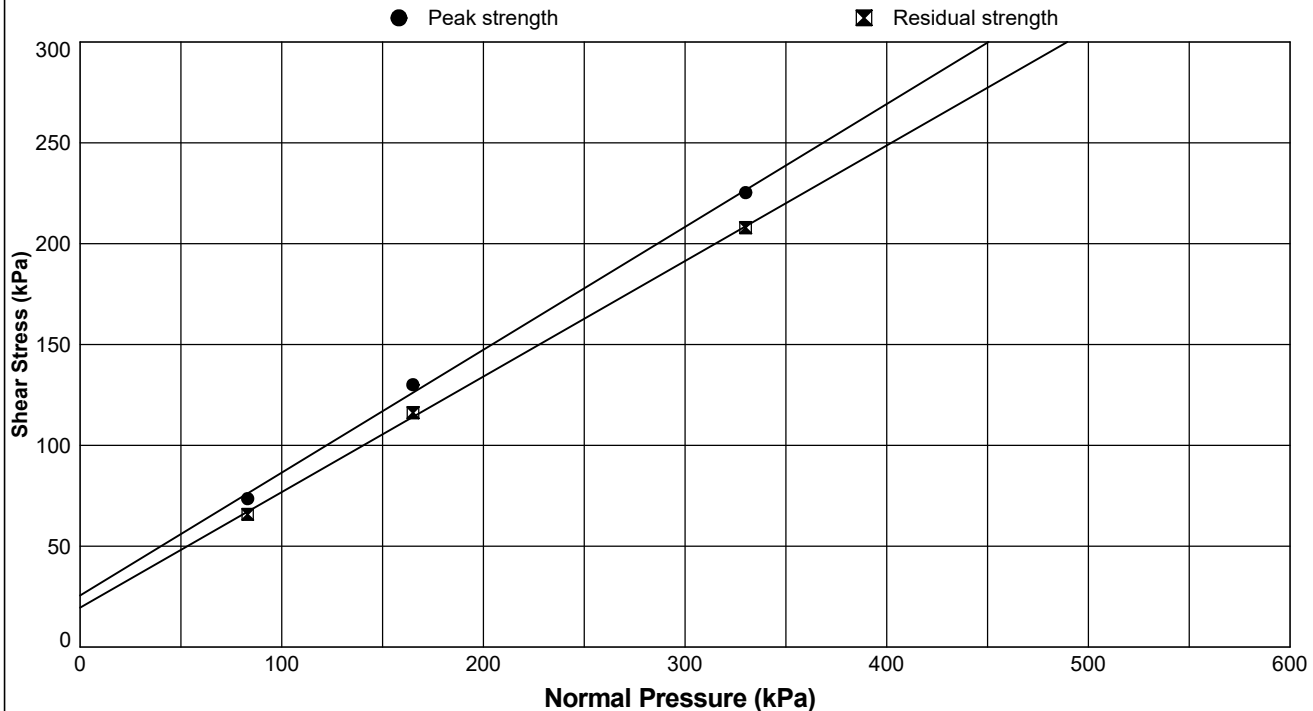
Position ID: **F22-BH502A** Sample Ref: **57** Sample Type: **B** Depth (m): **14.50**

Description: **Brown slightly gravelly slightly clayey SAND with occasional shell fragments** Start Date: **07/03/2024**

Sample Condition: **Recompacted** End Date: **10/03/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**12.1**	**12.1**	**12.1**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**20.3**	**20.4**	**20.4**
	Initial Bulk Density	(Mg/m^3)	**1.70**	**1.70**	**1.70**
	Initial Dry Density	(Mg/m^3)	**1.52**	**1.52**	**1.52**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**0.7479**	**0.7480**	**0.7473**
	Initial Degree of Saturation	(%)	**43**	**43**	**43**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**3**	**3**	**3**
CONSOLIDATION	Normal Pressure	(kPa)	**83**	**165**	**330**
	Consolidated Height	(mm)	**19.5**	**19.7**	**19.3**
	Voids Ratio after Consolidation		**0.6781**	**0.6922**	**0.6562**
SHEAR	Shearing Rate	(mm/min)	**0.0281**	**0.0294**	**0.0348**
	Horiz. Displacement at Peak Shear Stress	(mm)	**9.0**	**8.9**	**9.0**
	Voids Ratio after Shear		**0.6135**	**0.6082**	**0.5536**
	Peak Shear Stress	(kPa)	**74**	**130**	**225**
	Residual Shear Stress	(kPa)	**66**	**116**	**208**

PEAK STRENGTH	Effective Cohesion (C')	**26** (kPa)	Effective Angle of Friction (ϕ')	**31.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**20** (kPa)	Residual Angle of Friction (ϕ'_R)	**30**	(deg)



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Compiled By		Date
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Contract: **Sealink Friston**		Contract Ref: **563835**

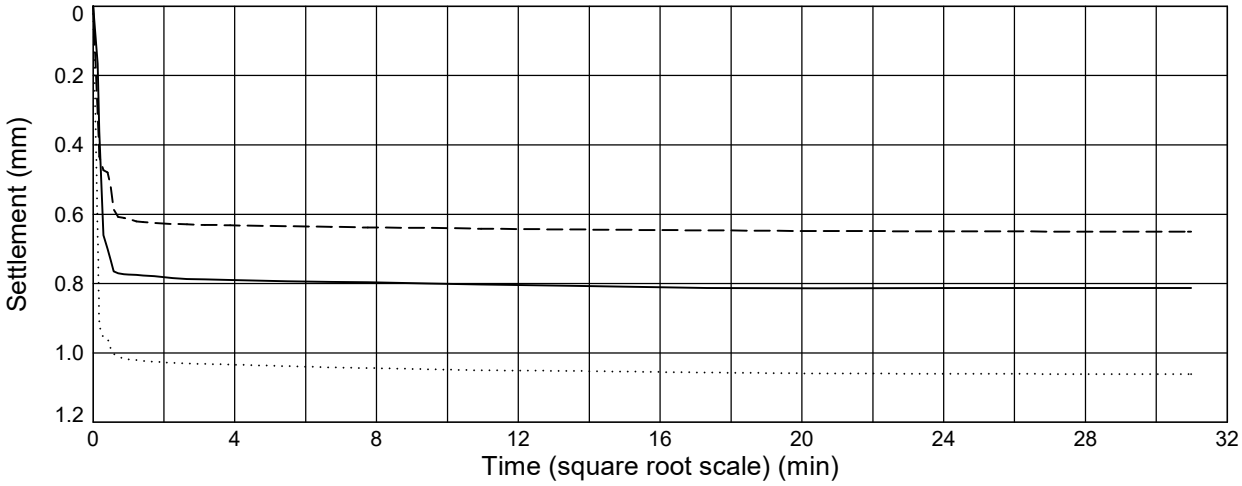
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

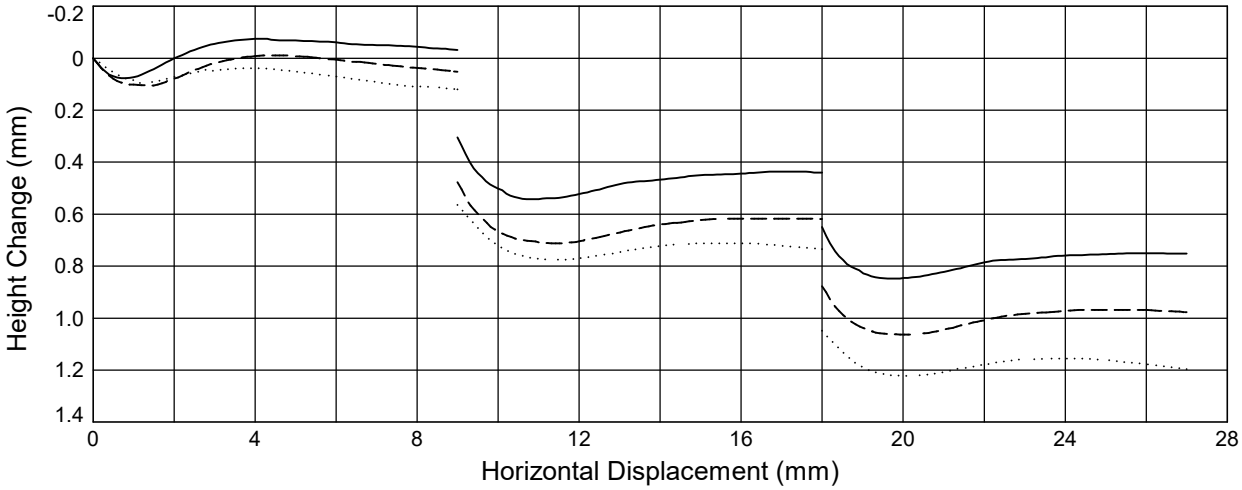
In accordance with BS EN ISO 17892-10

Position ID: **F22-BH502A** Sample Ref: **57** Sample Type: **B** Depth (m): **14.50**

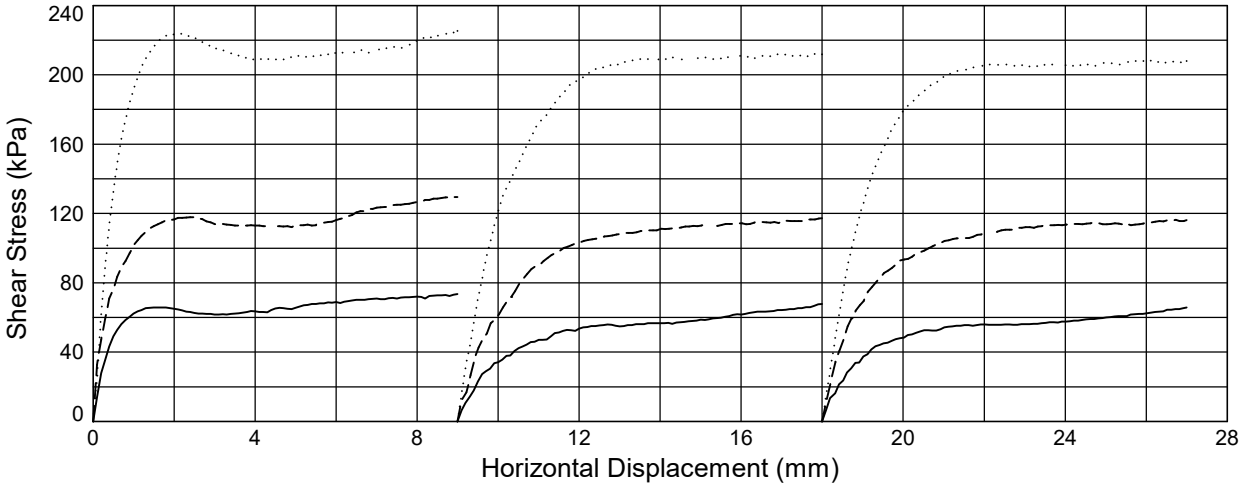
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**83** kPa) *Dashed Line* = Specimen 2 (**165** kPa) *Dotted Line* = Specimen 3 (**330** kPa)

STRUCTURAL SOILS
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Compiled By		Date
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Contract	Contract Ref:
Sealink Friston	**563835**

AGS

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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **RedP-BH-1A** Sample Ref: **29** Sample Type: **B** Depth (m): **7.50**

Description: **Grey slightly gravelly silty SAND**

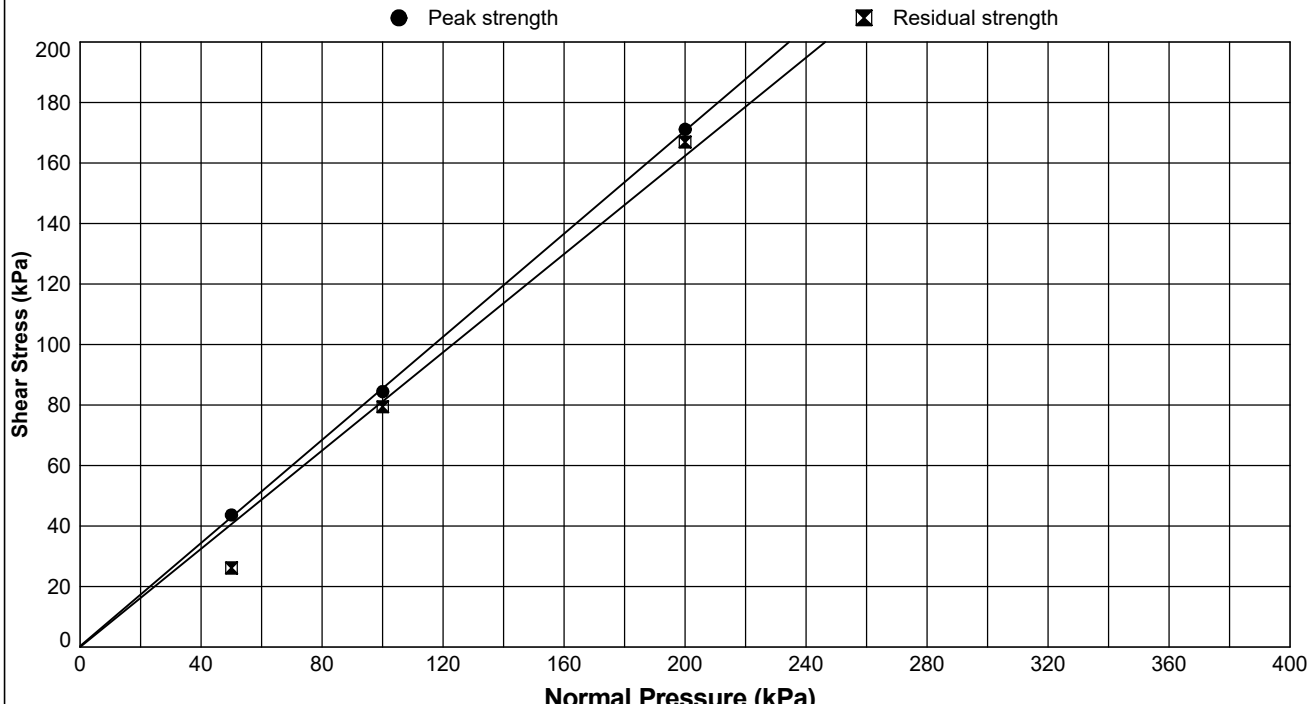
Sample Condition: **Recompacted**

Start Date: **15/01/2024**

End Date: **31/01/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**22.9**	**22.5**	**21.4**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**23.6**	**23.9**	**22.7**
	Initial Bulk Density	(Mg/m^3)	**1.93**	**1.92**	**1.93**
	Initial Dry Density	(Mg/m^3)	**1.57**	**1.57**	**1.59**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**0.6913**	**0.6878**	**0.6710**
	Initial Degree of Saturation	(%)	**88**	**87**	**85**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**5**	**5**	**3**
CONSOLIDATION	Normal Pressure	(kPa)	**50**	**100**	**200**
	Consolidated Height	(mm)	**23.2**	**23.1**	**21.5**
	Voids Ratio after Consolidation		**0.6667**	**0.6302**	**0.5817**
SHEAR	Shearing Rate	(mm/min)	**0.0754**	**0.0962**	**0.0986**
	Horiz. Displacement at Peak Shear Stress	(mm)	**6.4**	**3.4**	**4.1**
	Voids Ratio after Shear		**0.1619**	**0.2413**	**0.4084**
	Peak Shear Stress	(kPa)	**44**	**84**	**171**
	Residual Shear Stress	(kPa)	**26**	**79**	**167**

PEAK STRENGTH	Effective Cohesion (C')	**0** (kPa)	Effective Angle of Friction (ϕ')	**40.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**0** (kPa)	Residual Angle of Friction (ϕ'_R)	**39**	(deg)



STRUCTURAL SOILS
The Potteries
Pottery Street
Castleford
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Compiled By: [redacted]

Date: **19/03/24**

Contract: **Sealink Friston**

Contract Ref: **563835**

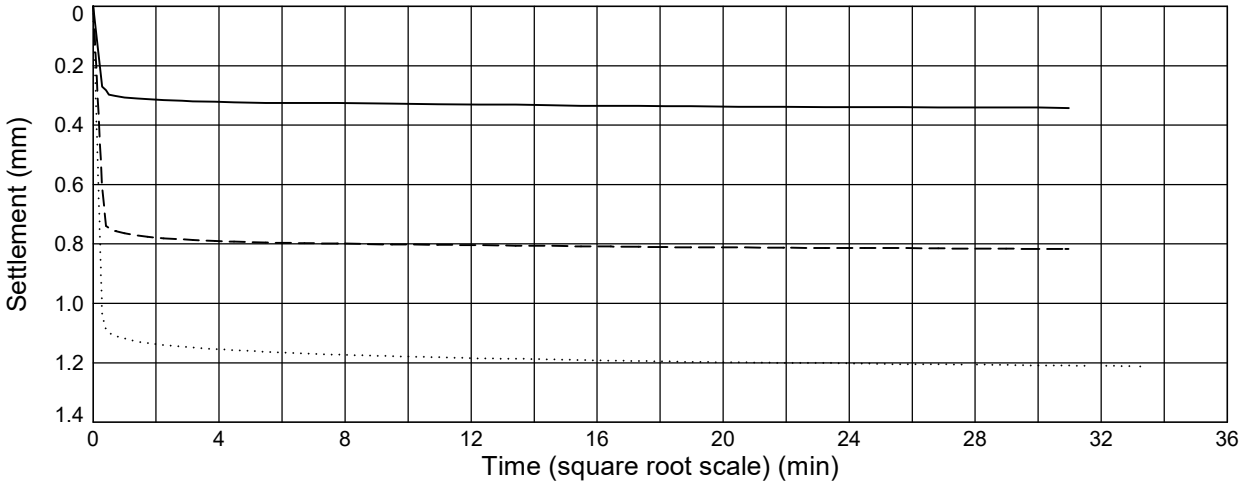
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

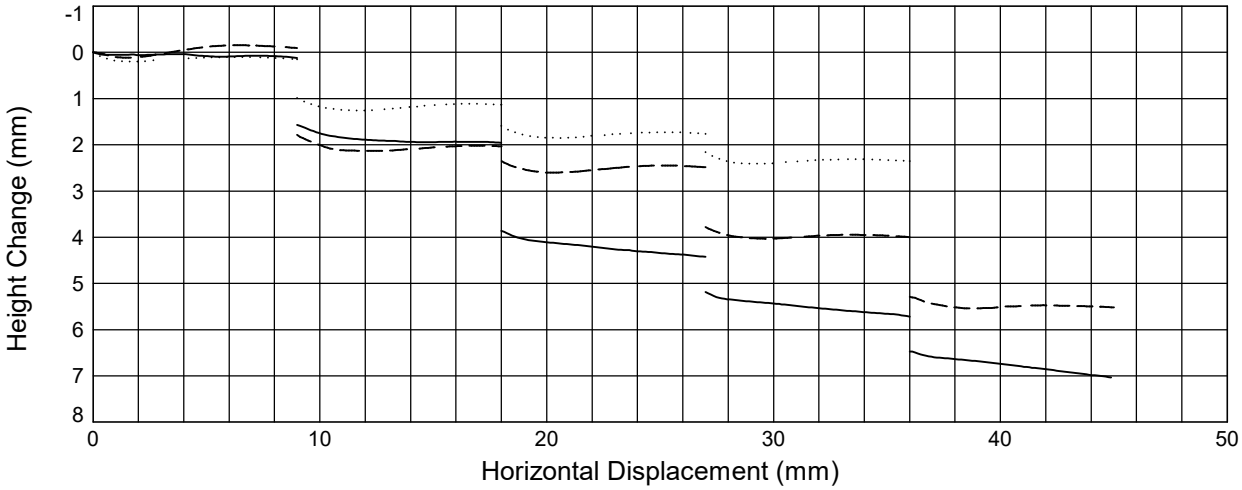
In accordance with BS EN ISO 17892-10

Position ID: **RedP-BH-1A** Sample Ref: **29** Sample Type: **B** Depth (m): **7.50**

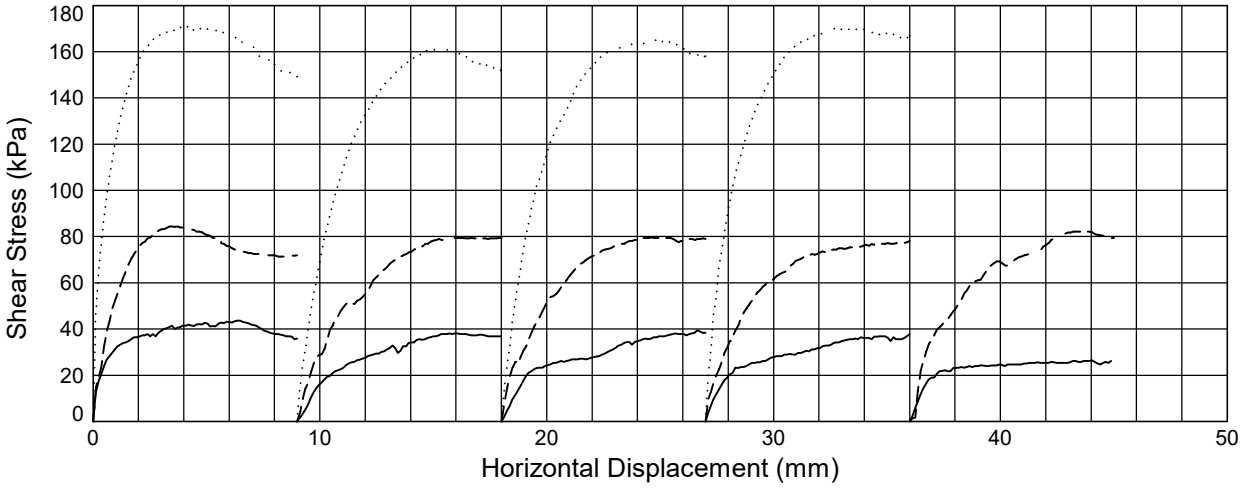
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**50** kPa) *Dashed Line* = Specimen 2 (**100** kPa) *Dotted Line* = Specimen 3 (**200** kPa)

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Compiled By		Date
[redacted]	[redacted]	**19/03/24**
Contract: **Sealink Friston**		Contract Ref: **563835**

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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **RedP-BH-1A** Sample Ref: **35** Sample Type: **B** Depth (m): **9.50**

Description: **Dark grey gravelly slightly clayey SAND**

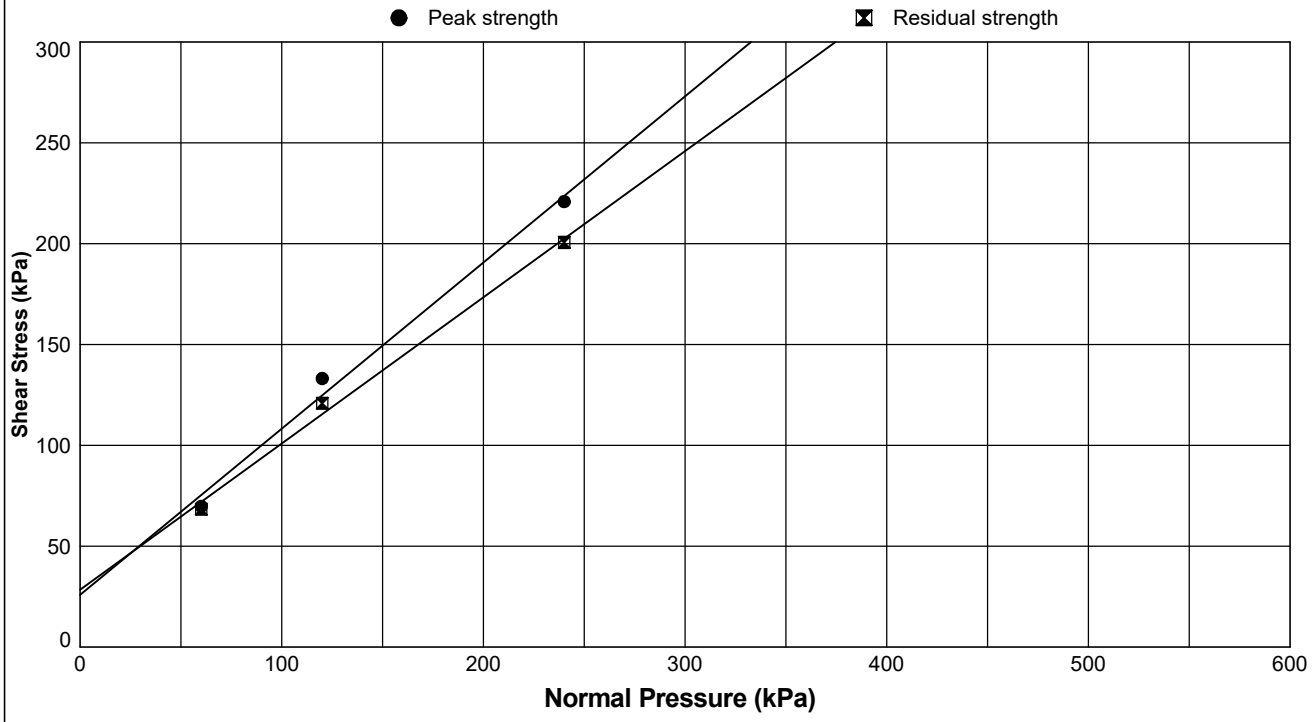
Sample Condition: **Recompacted**

Start Date: **10/01/2024**

End Date: **17/01/2024**

SPECIMEN NUMBER			1	2	3
PROPERTIES	Initial Water Content	(%)	**25.8**	**28.0**	**22.9**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**23.0**	**23.0**	**23.0**
	Initial Bulk Density	(Mg/m^3)	**1.68**	**1.68**	**1.69**
	Initial Dry Density	(Mg/m^3)	**1.34**	**1.32**	**1.37**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**0.9842**	**1.0144**	**0.9306**
	Initial Degree of Saturation	(%)	**70**	**73**	**65**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**3**	**3**	**4**
CONSOLIDATION	Normal Pressure	(kPa)	**60**	**120**	**240**
	Consolidated Height	(mm)	**22.5**	**22.2**	**23.5**
	Voids Ratio after Consolidation		**0.9476**	**0.9446**	**0.9708**
SHEAR	Shearing Rate	(mm/min)	**0.0932**	**0.1183**	**0.1026**
	Horiz. Displacement at Peak Shear Stress	(mm)	**3.1**	**2.8**	**3.4**
	Voids Ratio after Shear		**0.8337**	**0.7494**	**0.7665**
	Peak Shear Stress	(kPa)	**70**	**133**	**221**
	Residual Shear Stress	(kPa)	**68**	**121**	**201**

PEAK STRENGTH	Effective Cohesion (C')	**26** (kPa)	Effective Angle of Friction (ϕ')	**39.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**28** (kPa)	Residual Angle of Friction (ϕ'_R)	**36**	(deg)



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Compiled By		Date
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Contract: **Sealink Friston**		Contract Ref: **563835**

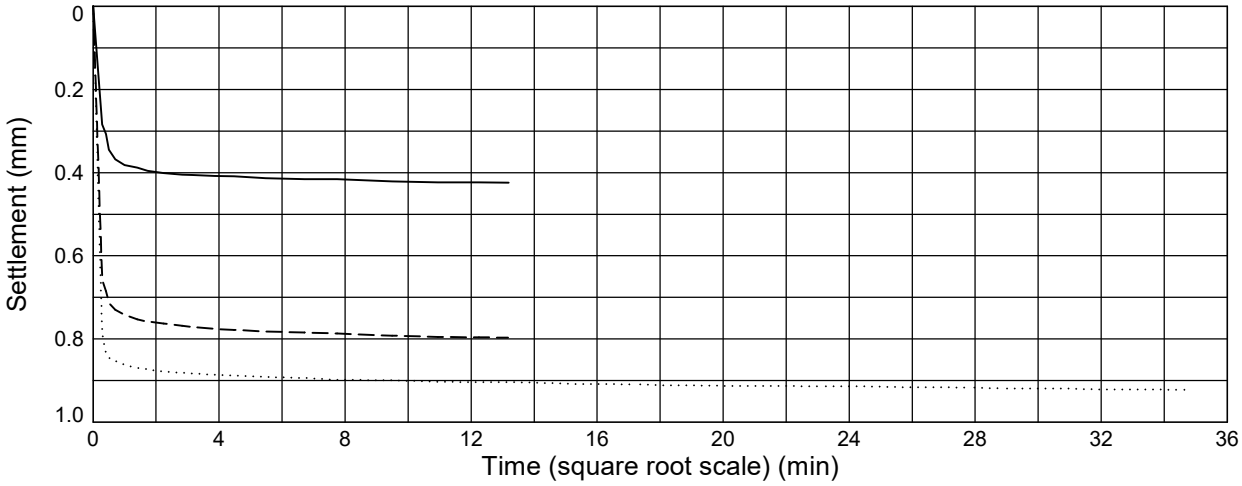
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - SBOX - AUTO - P1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

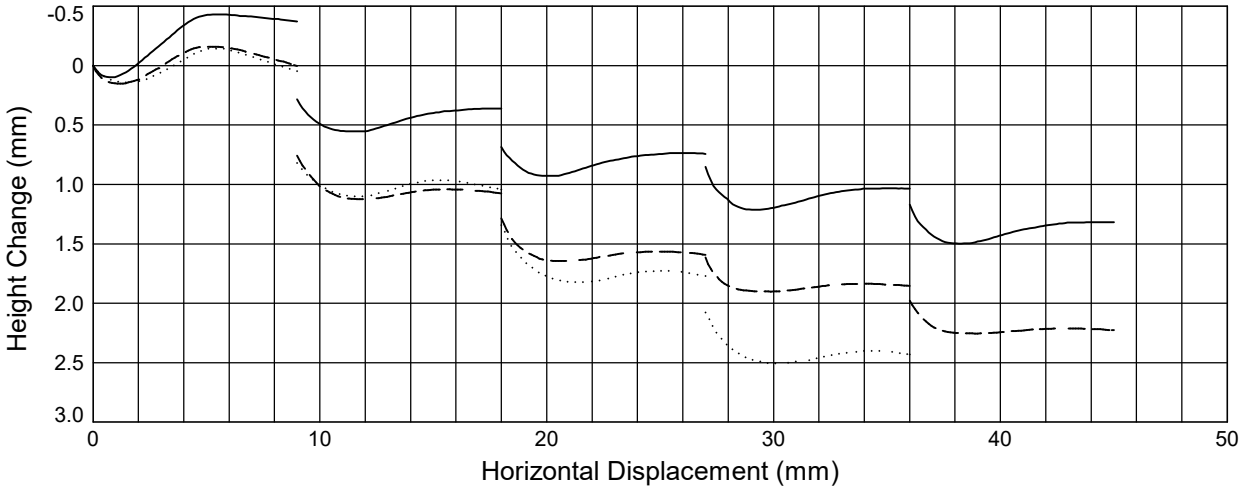
In accordance with BS EN ISO 17892-10

Position ID: **RedP-BH-1A** Sample Ref: **35** Sample Type: **B** Depth (m): **9.50**

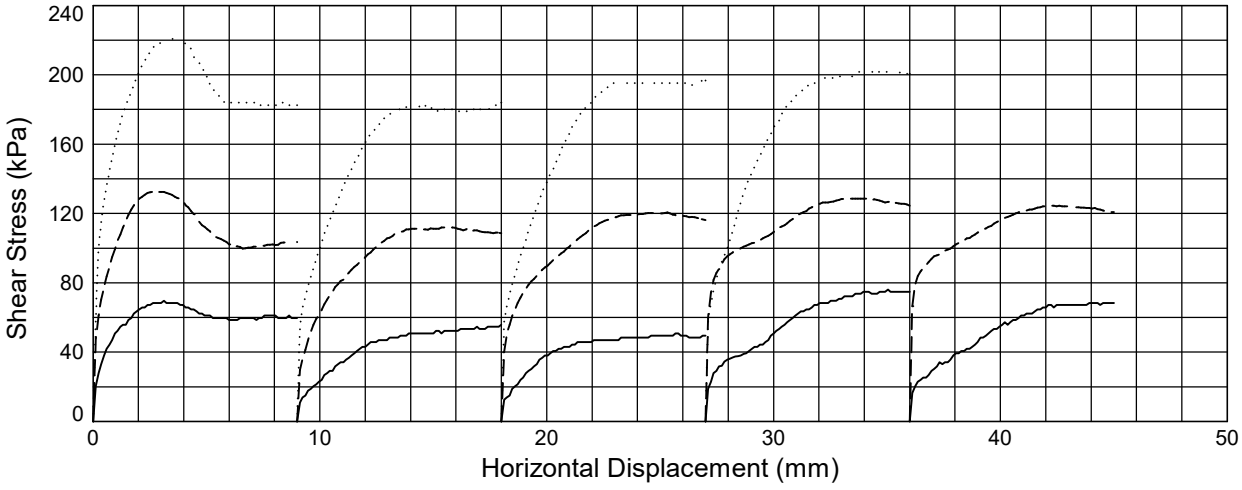
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**60** kPa) *Dashed Line* = Specimen 2 (**120** kPa) *Dotted Line* = Specimen 3 (**240** kPa)

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Compiled By		Date
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **RedP-BH-1A** Sample Ref: **44** Sample Type: **B** Depth (m): **12.50**

Description: **Dark grey gravelly slightly clayey SAND**

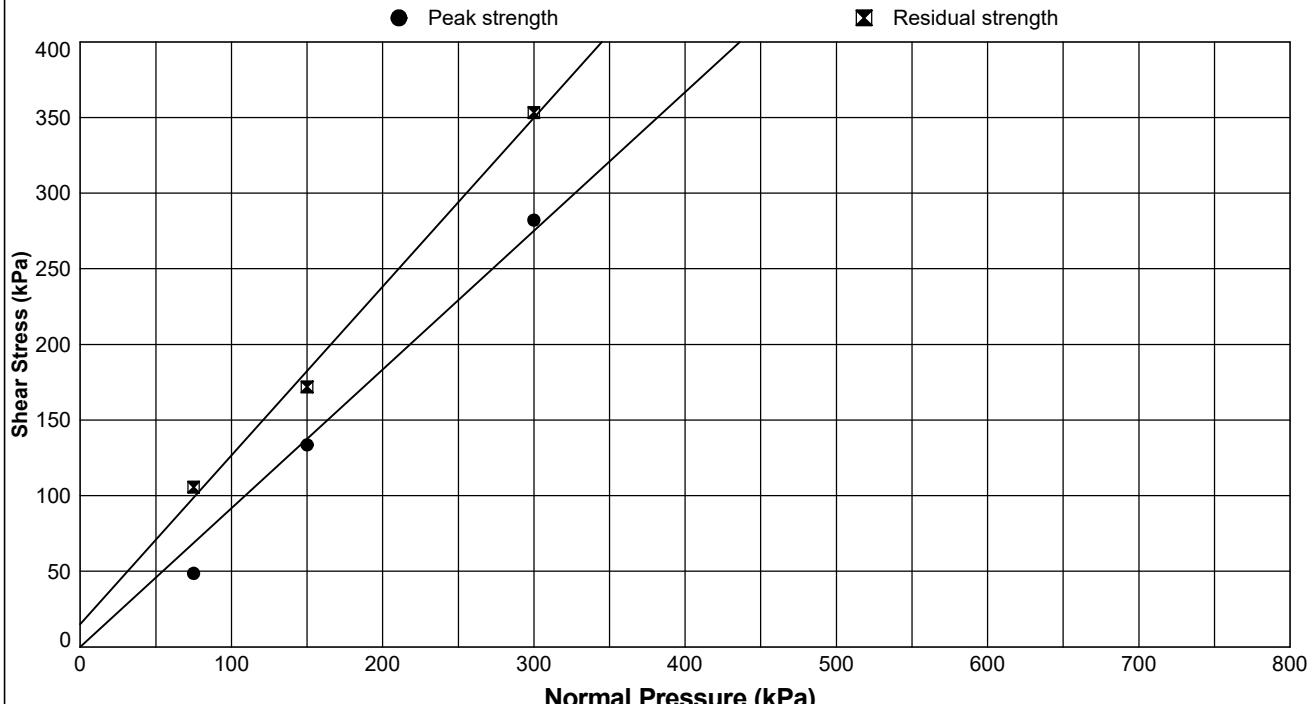
Sample Condition: **Recompacted**

Start Date: **29/01/2024**

End Date: **02/02/2024**

SPECIMEN NUMBER			1	2	3
PROPERTIES	Initial Water Content	(%)	**30.0**	**28.0**	**25.1**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**23.4**	**23.3**	**23.3**
	Initial Bulk Density	(Mg/m^3)	**1.42**	**1.43**	**1.43**
	Initial Dry Density	(Mg/m^3)	**1.10**	**1.12**	**1.14**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.4174**	**1.3723**	**1.3175**
	Initial Degree of Saturation	(%)	**56**	**54**	**50**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**3**	**3**	**3**
CONSOLIDATION	Normal Pressure	(kPa)	**75**	**150**	**300**
	Consolidated Height	(mm)	**22.2**	**21.9**	**21.0**
	Voids Ratio after Consolidation		**1.2984**	**1.2295**	**1.0936**
SHEAR	Shearing Rate	(mm/min)	**0.1215**	**0.0923**	**0.0855**
	Horiz. Displacement at Peak Shear Stress	(mm)	**7.7**	**3.8**	**7.8**
	Voids Ratio after Shear		**0.9741**	**0.9415**	**0.7928**
	Peak Shear Stress	(kPa)	**49**	**134**	**282**
	Residual Shear Stress	(kPa)	**106**	**172**	**353**

PEAK STRENGTH	Effective Cohesion (C')	**0** (kPa)	Effective Angle of Friction (ϕ')	**42.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**15** (kPa)	Residual Angle of Friction (ϕ'_R)	**48**	(deg)



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Contract: **Sealink Friston**		Contract Ref: **563835**

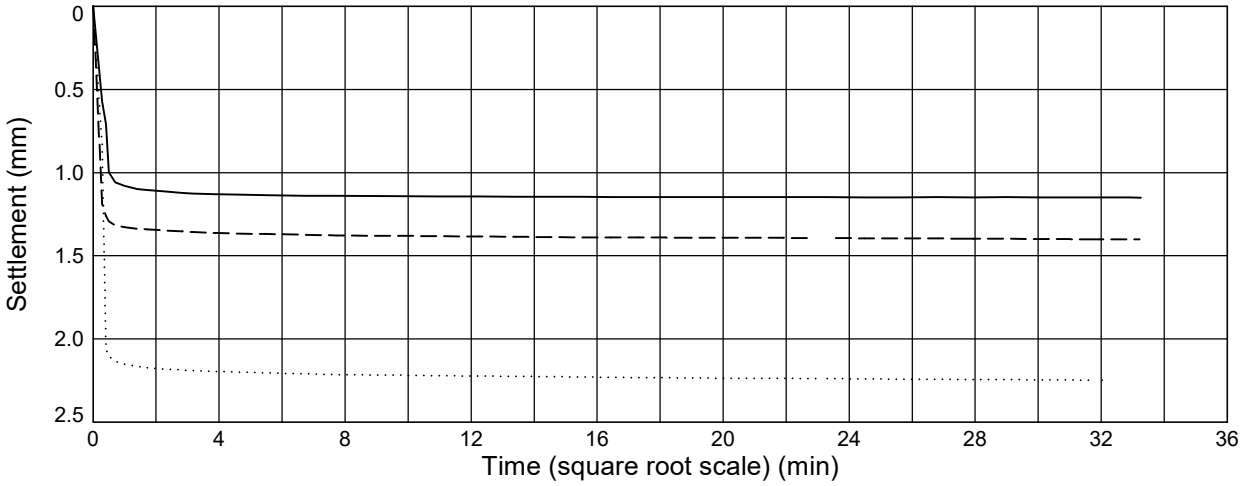
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

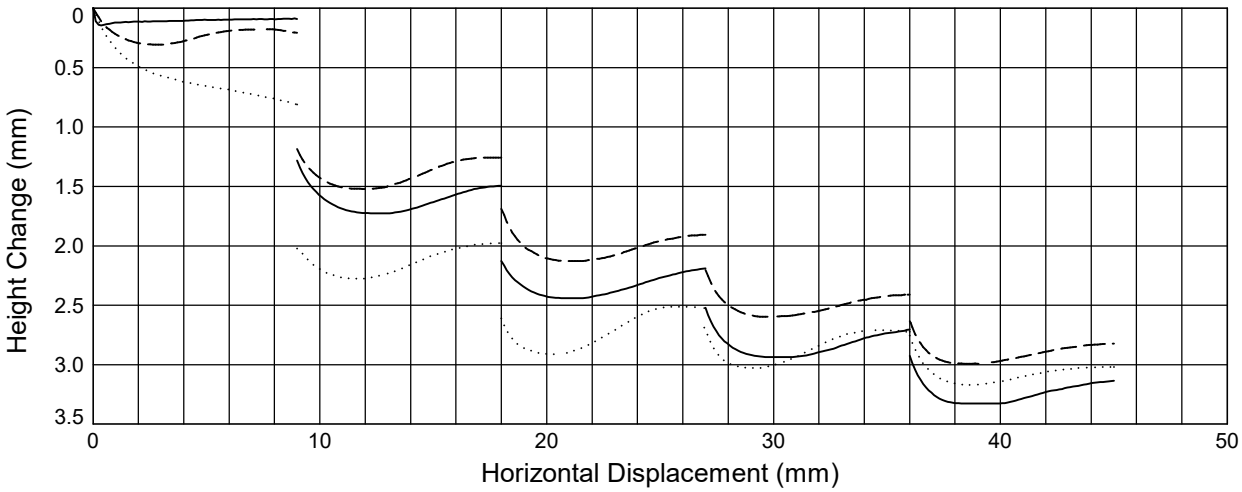
In accordance with BS EN ISO 17892-10

Position ID: **RedP-BH-1A** Sample Ref: **44** Sample Type: **B** Depth (m): **12.50**

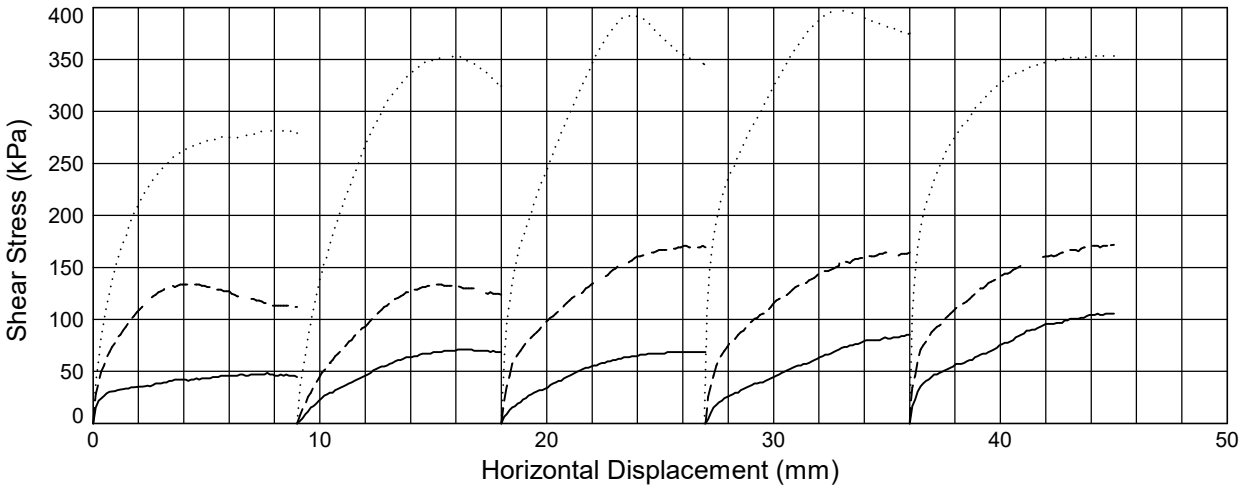
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**75** kPa) *Dashed Line* = Specimen 2 (**150** kPa) *Dotted Line* = Specimen 3 (**300** kPa)

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Compiled By		Date
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Contract: **Sealink Friston**		Contract Ref: **563835**

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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **RedP-BH-1A** Sample Ref: **56** Sample Type: **B** Depth (m): **16.50**

Description: **Light brown gravelly slightly clayey SAND**

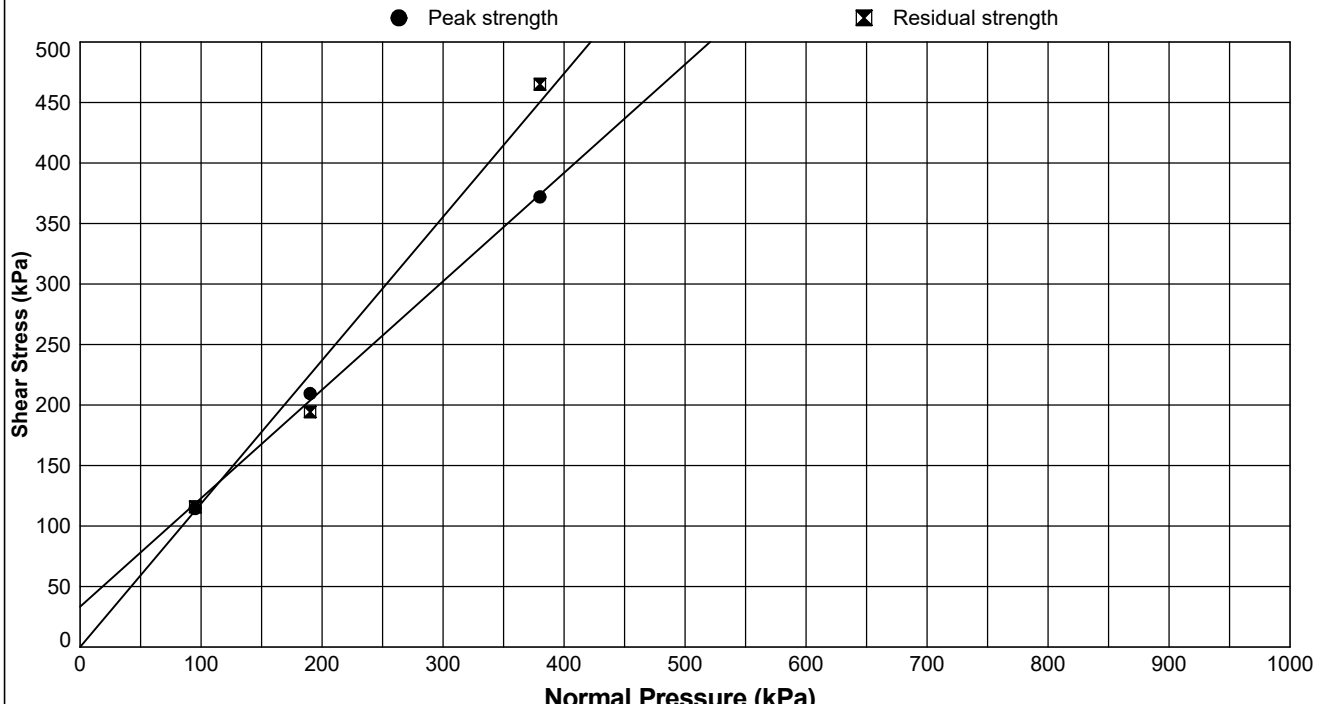
Sample Condition: **Recompacted**

Start Date: **06/12/2023**

End Date: **11/12/2023**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**30.1**	**28.8**	**25.9**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**23.0**	**23.1**	**22.8**
	Initial Bulk Density	(Mg/m^3)	**1.57**	**1.58**	**1.59**
	Initial Dry Density	(Mg/m^3)	**1.20**	**1.23**	**1.26**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.2019**	**1.1627**	**1.1030**
	Initial Degree of Saturation	(%)	**66**	**66**	**62**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**6**	**6**	**6**
CONSOLIDATION	Normal Pressure	(kPa)	**95**	**190**	**380**
	Consolidated Height	(mm)	**22.4**	**21.8**	**20.7**
	Voids Ratio after Consolidation		**1.1472**	**1.0428**	**0.9117**
SHEAR	Shearing Rate	(mm/min)	**0.0751**	**0.0855**	**0.1282**
	Horiz. Displacement at Peak Shear Stress	(mm)	**3.8**	**4.1**	**4.6**
	Voids Ratio after Shear		**0.9297**	**0.7912**	**0.6050**
	Peak Shear Stress	(kPa)	**114**	**209**	**372**
	Residual Shear Stress	(kPa)	**116**	**194**	**465**

PEAK STRENGTH	Effective Cohesion (C')	**33** (kPa)	Effective Angle of Friction (ϕ')	**42**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**0** (kPa)	Residual Angle of Friction (ϕ'_R)	**50**	(deg)



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Compiled By		Date
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Contract: **Sealink Friston**		Contract Ref: **563835**

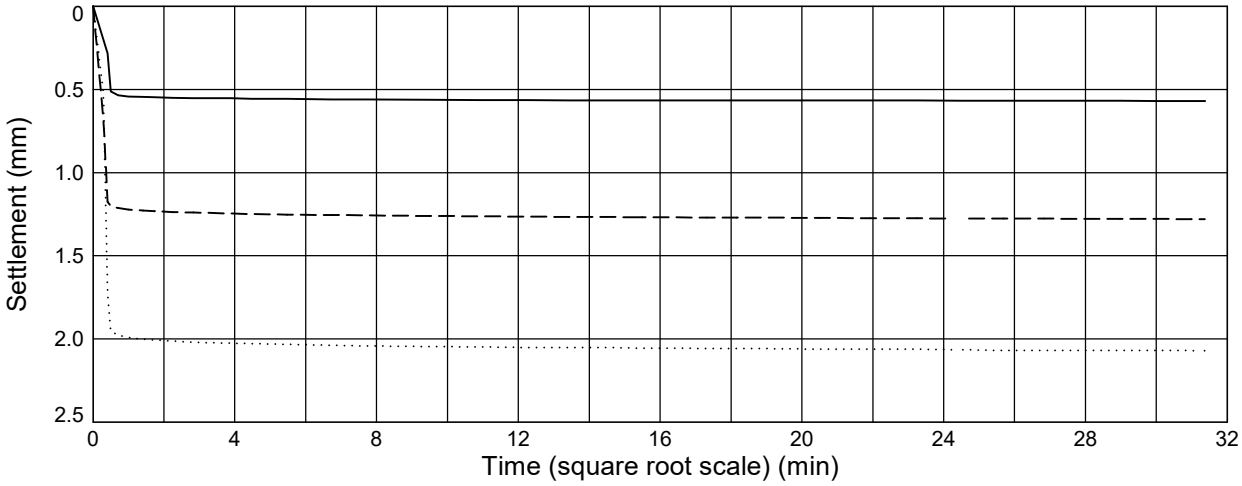
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

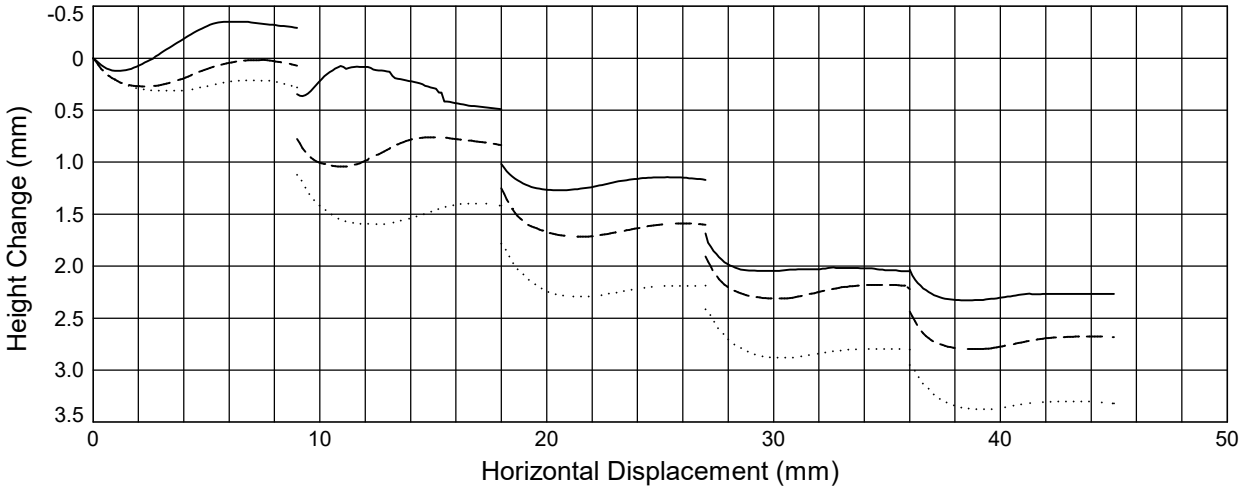
In accordance with BS EN ISO 17892-10

Position ID: **RedP-BH-1A** Sample Ref: **56** Sample Type: **B** Depth (m): **16.50**

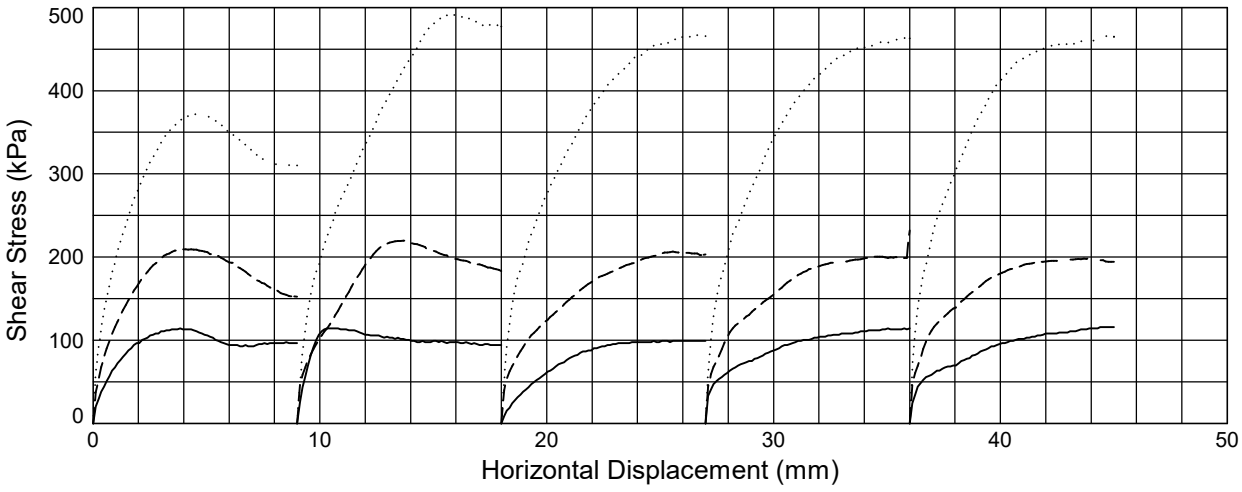
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**95** kPa) *Dashed Line* = Specimen 2 (**190** kPa) *Dotted Line* = Specimen 3 (**380** kPa)

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Contract: **Sealink Friston**		Contract Ref: **563835**

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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **RedP-BH-1A** Sample Ref: **62** Sample Type: **B** Depth (m): **18.50**

Description: **Orangish brown clayey SAND**

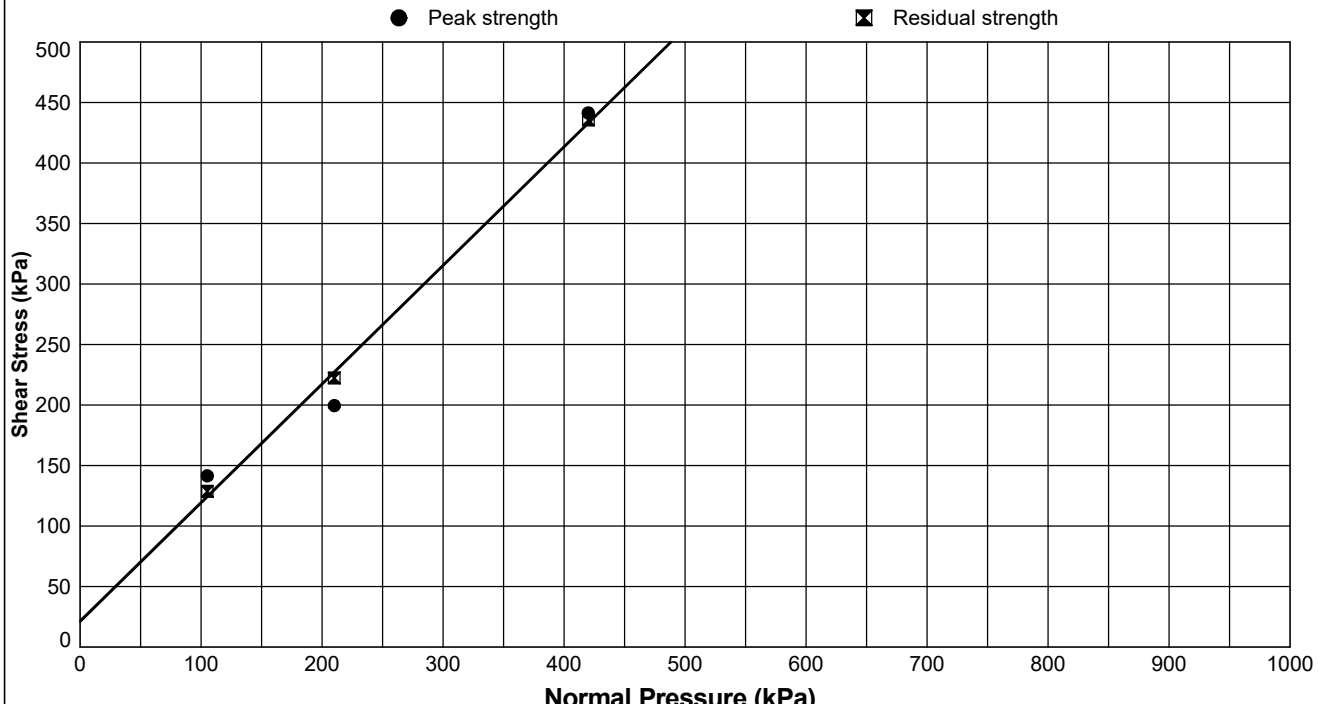
Sample Condition: **Recompacted**

Start Date: **28/11/2023**

End Date: **01/12/2023**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**33.6**	**28.2**	**23.4**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**23.8**	**24.2**	**23.8**
	Initial Bulk Density	(Mg/m^3)	**1.75**	**1.75**	**1.75**
	Initial Dry Density	(Mg/m^3)	**1.31**	**1.37**	**1.42**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.0179**	**0.9395**	**0.8720**
	Initial Degree of Saturation	(%)	**87**	**80**	**71**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**4**	**4**	**4**
CONSOLIDATION	Normal Pressure	(kPa)	**105**	**210**	**420**
	Consolidated Height	(mm)	**22.9**	**22.4**	**21.8**
	Voids Ratio after Consolidation		**0.9394**	**0.7972**	**0.7146**
SHEAR	Shearing Rate	(mm/min)	**0.0750**	**0.0993**	**0.1465**
	Horiz. Displacement at Peak Shear Stress	(mm)	**3.5**	**4.0**	**4.2**
	Voids Ratio after Shear		**0.7603**	**0.5545**	**0.4823**
	Peak Shear Stress	(kPa)	**141**	**199**	**441**
	Residual Shear Stress	(kPa)	**129**	**222**	**436**

PEAK STRENGTH	Effective Cohesion (C')	**20** (kPa)	Effective Angle of Friction (ϕ')	**44.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**22** (kPa)	Residual Angle of Friction (ϕ'_R)	**44.5**	(deg)



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Compiled By		Date
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Contract	Contract Ref:
Sealink Friston	**563835**

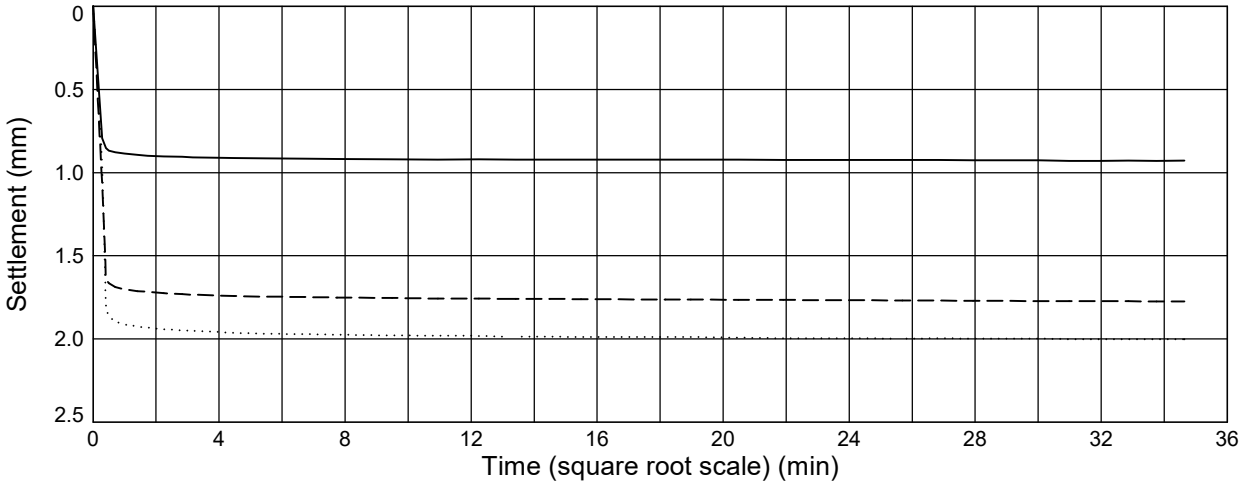
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

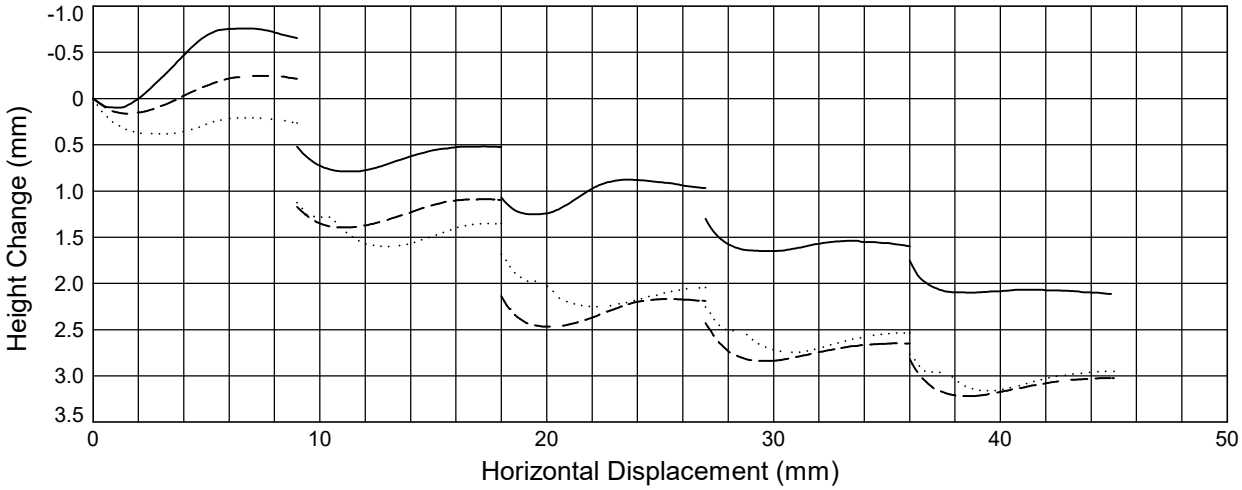
In accordance with BS EN ISO 17892-10

Position ID: **RedP-BH-1A** Sample Ref: **62** Sample Type: **B** Depth (m): **18.50**

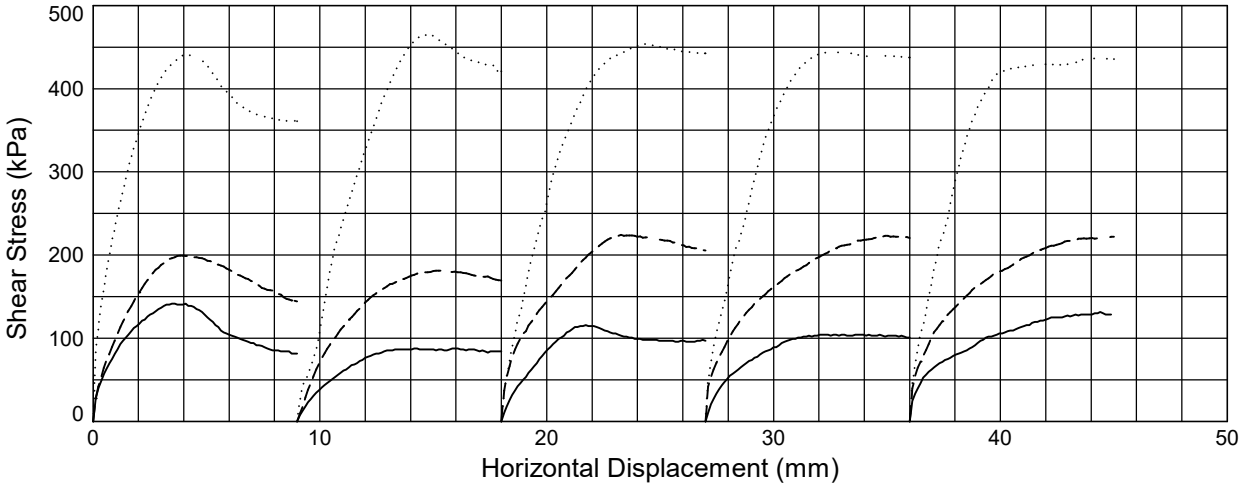
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**105** kPa) *Dashed Line* = Specimen 2 (**210** kPa) *Dotted Line* = Specimen 3 (**420** kPa)

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Compiled By		Date
[redacted]	[redacted]	**05/03/24**
Contract: **Sealink Friston**		Contract Ref: **563835**

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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **RedP-BH-1A** Sample Ref: **74** Sample Type: **B** Depth (m): **22.50**

Description: **Grey gravelly silty SAND**

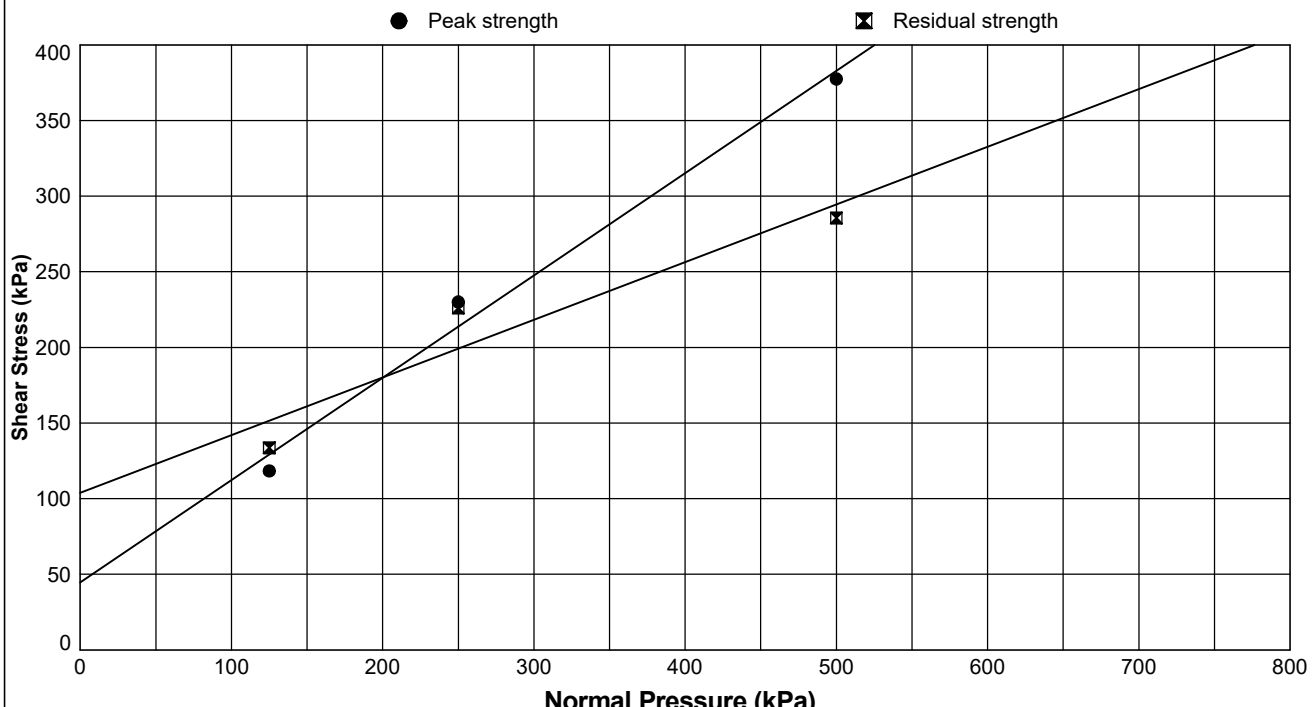
Sample Condition: **Recompacted**

Start Date: **05/01/2024**

End Date: **09/01/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**21.3**	**19.9**	**18.8**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**23.3**	**23.3**	**23.2**
	Initial Bulk Density	(Mg/m^3)	**1.82**	**1.82**	**1.82**
	Initial Dry Density	(Mg/m^3)	**1.50**	**1.52**	**1.54**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**0.7623**	**0.7445**	**0.7248**
	Initial Degree of Saturation	(%)	**74**	**71**	**69**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**5**	**5**	**5**
CONSOLIDATION	Normal Pressure	(kPa)	**125**	**250**	**500**
	Consolidated Height	(mm)	**22.4**	**22.2**	**22.2**
	Voids Ratio after Consolidation		**0.6933**	**0.6644**	**0.6494**
SHEAR	Shearing Rate	(mm/min)	**0.0993**	**0.0962**	**0.0932**
	Horiz. Displacement at Peak Shear Stress	(mm)	**3.0**	**3.2**	**5.5**
	Voids Ratio after Shear		**0.5146**	**0.5242**	**0.0528**
	Peak Shear Stress	(kPa)	**118**	**230**	**378**
	Residual Shear Stress	(kPa)	**134**	**226**	**286**

PEAK STRENGTH	Effective Cohesion (C')	**32**	(kPa)	Effective Angle of Friction (ϕ')	**34.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**83**	(kPa)	Residual Angle of Friction (ϕ'_R)	**21**	(deg)



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[redacted]	[redacted]	**20/03/24**
Contract: **Sealink Friston**		Contract Ref: **563835**

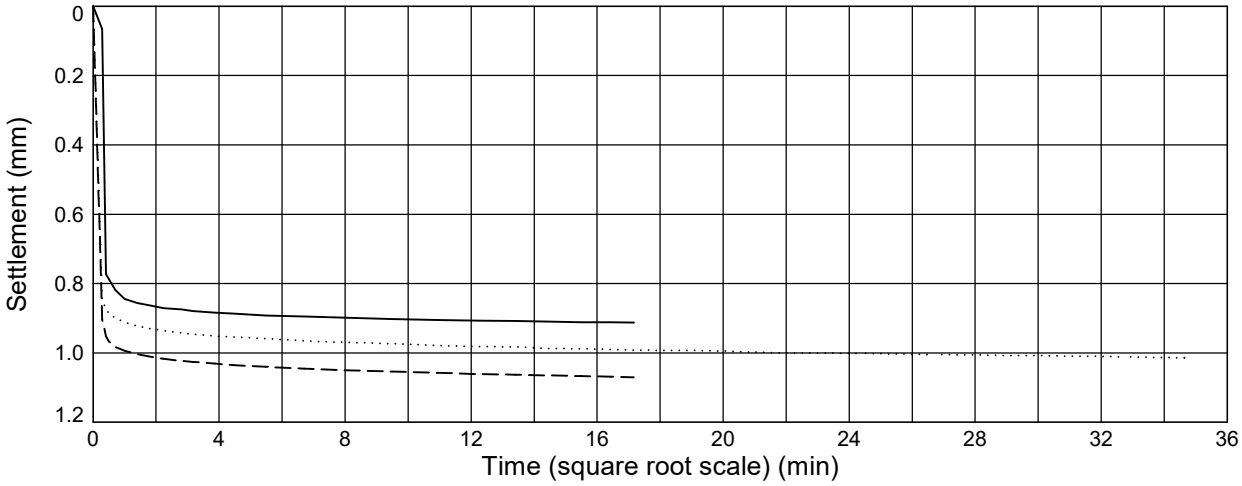
GINT_LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Graph L - SBOX - AUTO - P1 - A4P | 563835_SEALINK_FRISTON.GPJ - v10_01.
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

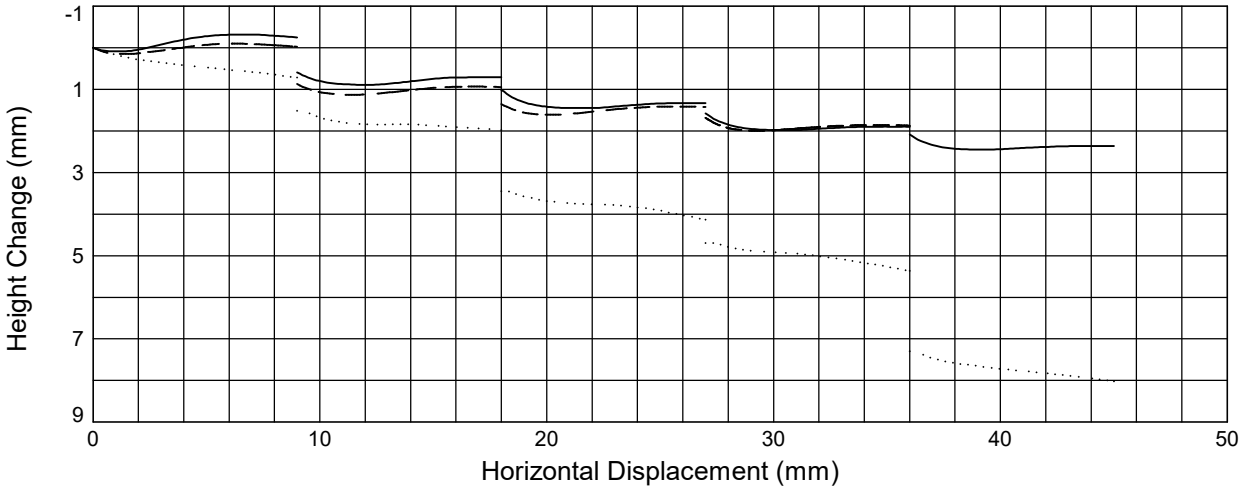
In accordance with BS EN ISO 17892-10

Position ID: **RedP-BH-1A** Sample Ref: **74** Sample Type: **B** Depth (m): **22.50**

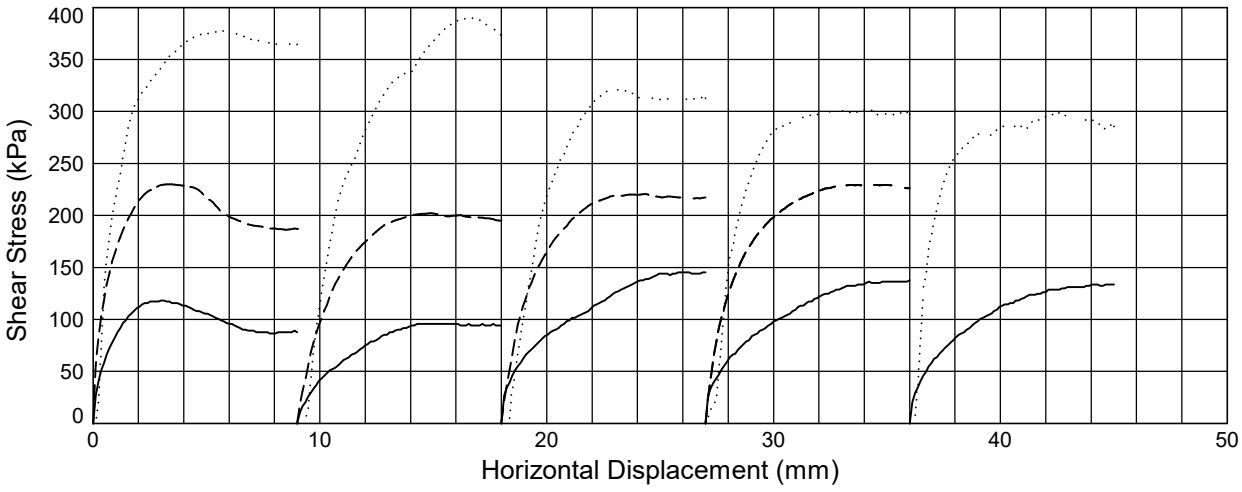
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**125** kPa) *Dashed Line* = Specimen 2 (**250** kPa) *Dotted Line* = Specimen 3 (**500** kPa)

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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **RedP-BH-4** Sample Ref: **19** Sample Type: **B** Depth (m): **5.00**

Description: **Orangish brown gravelly slightly clayey SAND**

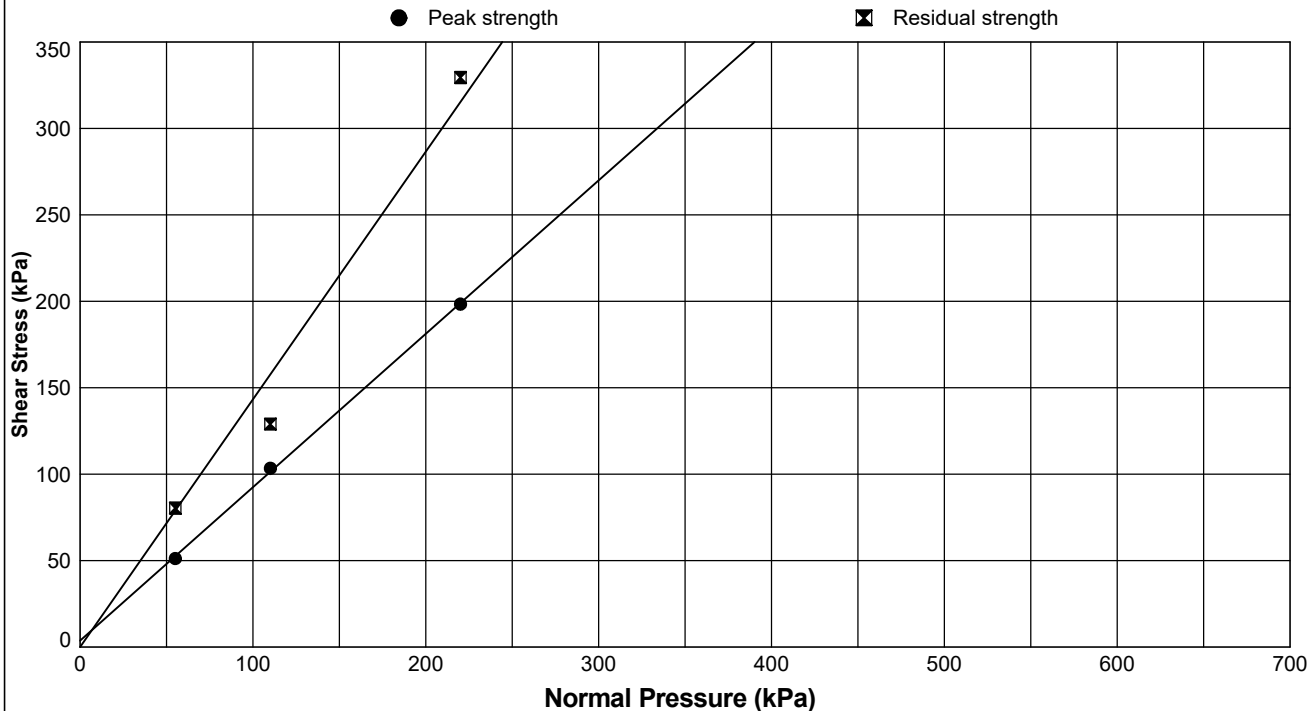
Sample Condition: **Recompacted**

Start Date: **21/11/2023**

End Date: **24/11/2023**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**30.7**	**29.8**	**25.8**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**22.9**	**22.9**	**22.6**
	Initial Bulk Density	(Mg/m^3)	**1.51**	**1.50**	**1.50**
	Initial Dry Density	(Mg/m^3)	**1.15**	**1.16**	**1.19**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.2981**	**1.2883**	**1.2214**
	Initial Degree of Saturation	(%)	**63**	**61**	**56**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**4**	**4**	**4**
CONSOLIDATION	Normal Pressure	(kPa)	**55**	**110**	**220**
	Consolidated Height	(mm)	**22.1**	**21.7**	**21.0**
	Voids Ratio after Consolidation		**1.2138**	**1.1685**	**1.0571**
SHEAR	Shearing Rate	(mm/min)	**0.1183**	**0.1140**	**0.1810**
	Horiz. Displacement at Peak Shear Stress	(mm)	**5.8**	**3.6**	**4.4**
	Voids Ratio after Shear		**0.9451**	**0.9335**	**0.7639**
	Peak Shear Stress	(kPa)	**51**	**103**	**198**
	Residual Shear Stress	(kPa)	**80**	**129**	**329**

PEAK STRENGTH	Effective Cohesion (C')	**4** (kPa)	Effective Angle of Friction (ϕ')	**41.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**0** (kPa)	Residual Angle of Friction (ϕ'_R)	**55**	(deg)



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Compiled By		Date
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Contract: **Sealink Friston**		Contract Ref: **563835**

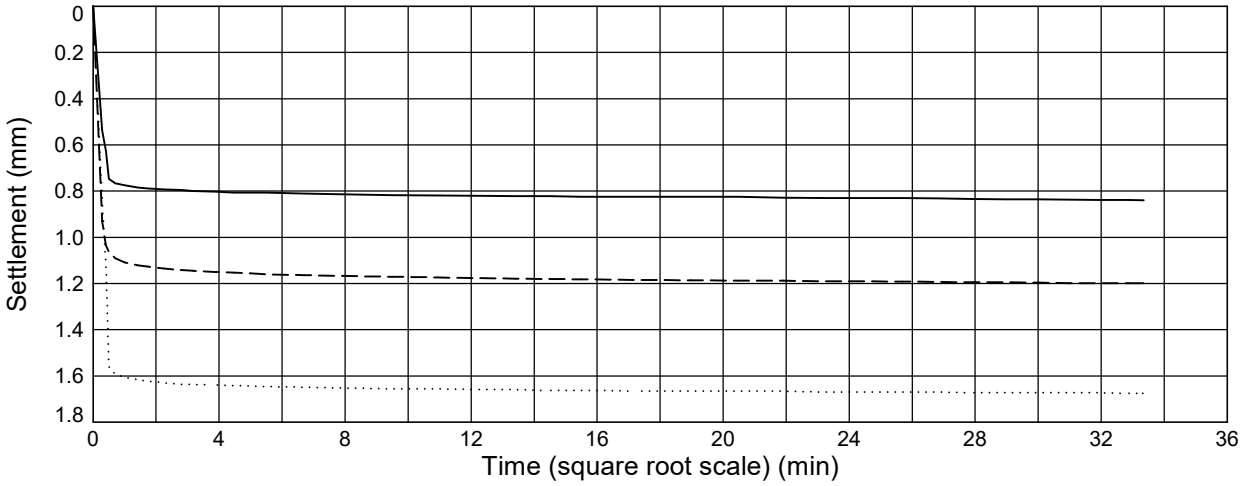
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

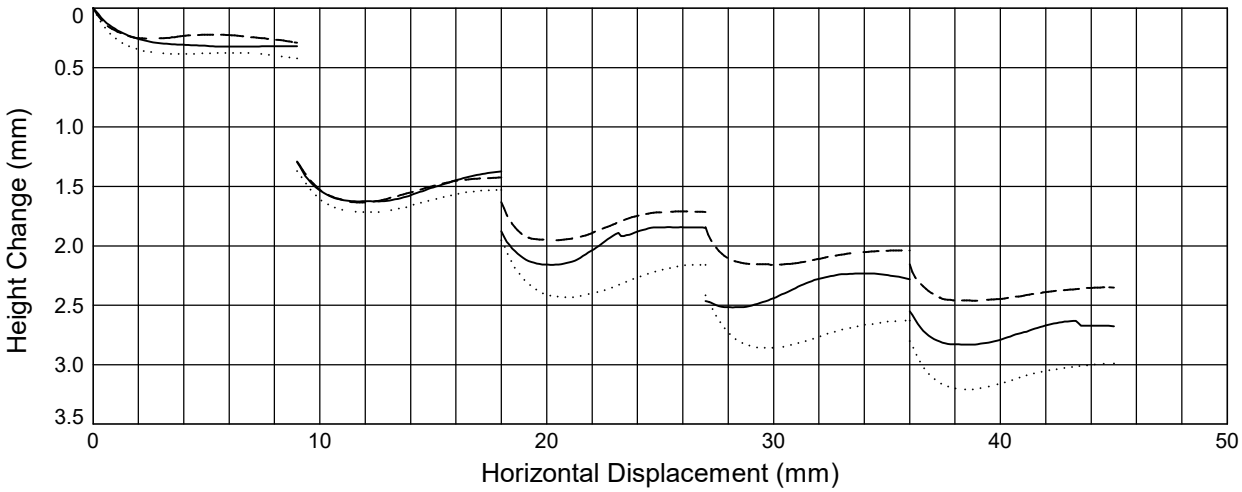
In accordance with BS EN ISO 17892-10

Position ID: **RedP-BH-4** Sample Ref: **19** Sample Type: **B** Depth (m): **5.00**

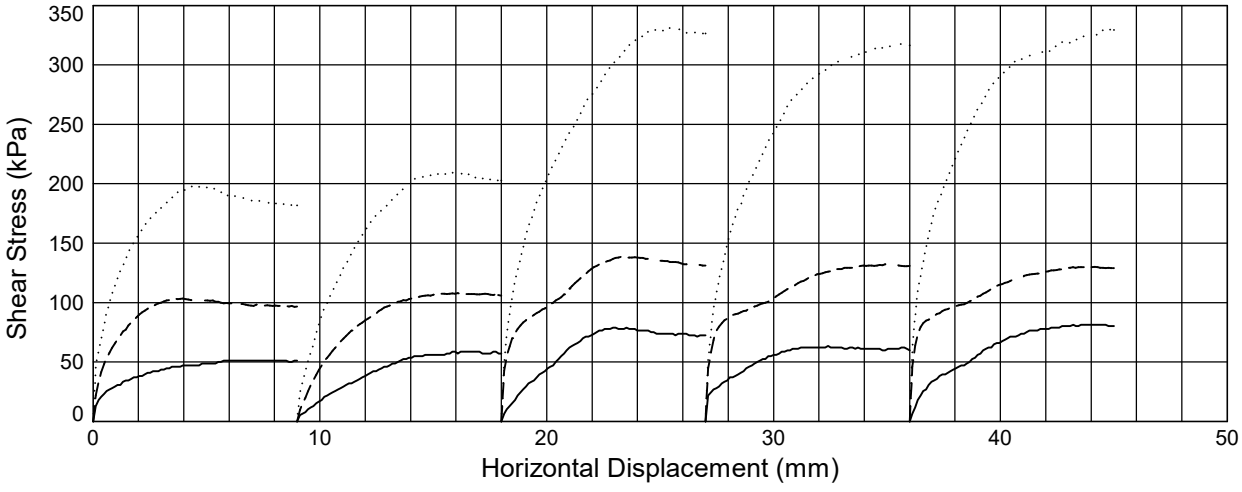
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**55** kPa) *Dashed Line* = Specimen 2 (**110** kPa) *Dotted Line* = Specimen 3 (**220** kPa)

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Contract: **Sealink Friston**		Contract Ref: **563835**

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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **RedP-BH-4** Sample Ref: **31** Sample Type: **B** Depth (m): **9.00**

Description: **Orangish brown gravelly slightly clayey SAND**

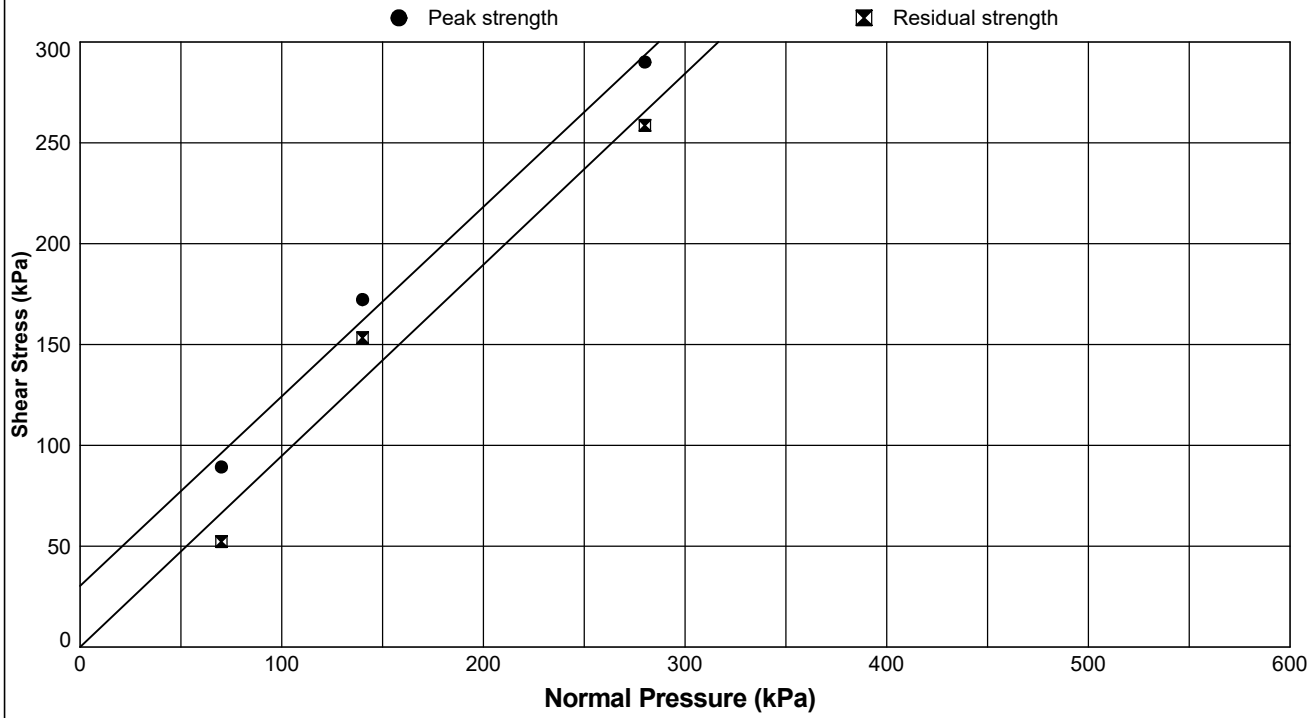
Sample Condition: **Recompacted**

Start Date: **13/11/2023**

End Date: **16/11/2023**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**27.5**	**25.4**	**23.8**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**23.2**	**23.4**	**23.4**
	Initial Bulk Density	(Mg/m^3)	**1.71**	**1.71**	**1.71**
	Initial Dry Density	(Mg/m^3)	**1.34**	**1.36**	**1.38**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**0.9773**	**0.9447**	**0.9208**
	Initial Degree of Saturation	(%)	**75**	**71**	**69**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**4**	**4**	**4**
CONSOLIDATION	Normal Pressure	(kPa)	**70**	**140**	**280**
	Consolidated Height	(mm)	**22.4**	**22.1**	**21.8**
	Voids Ratio after Consolidation		**0.9098**	**0.8377**	**0.7914**
SHEAR	Shearing Rate	(mm/min)	**0.1241**	**0.0874**	**0.0874**
	Horiz. Displacement at Peak Shear Stress	(mm)	**2.8**	**3.7**	**4.7**
	Voids Ratio after Shear		**0.7334**	**0.5818**	**0.4584**
	Peak Shear Stress	(kPa)	**89**	**172**	**290**
	Residual Shear Stress	(kPa)	**52**	**153**	**259**

PEAK STRENGTH	Effective Cohesion (C')	**30** (kPa)	Effective Angle of Friction (ϕ')	**43**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**0** (kPa)	Residual Angle of Friction (ϕ'_R)	**43.5**	(deg)



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Compiled By		Date
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Contract	Contract Ref:
Sealink Friston	**563835**

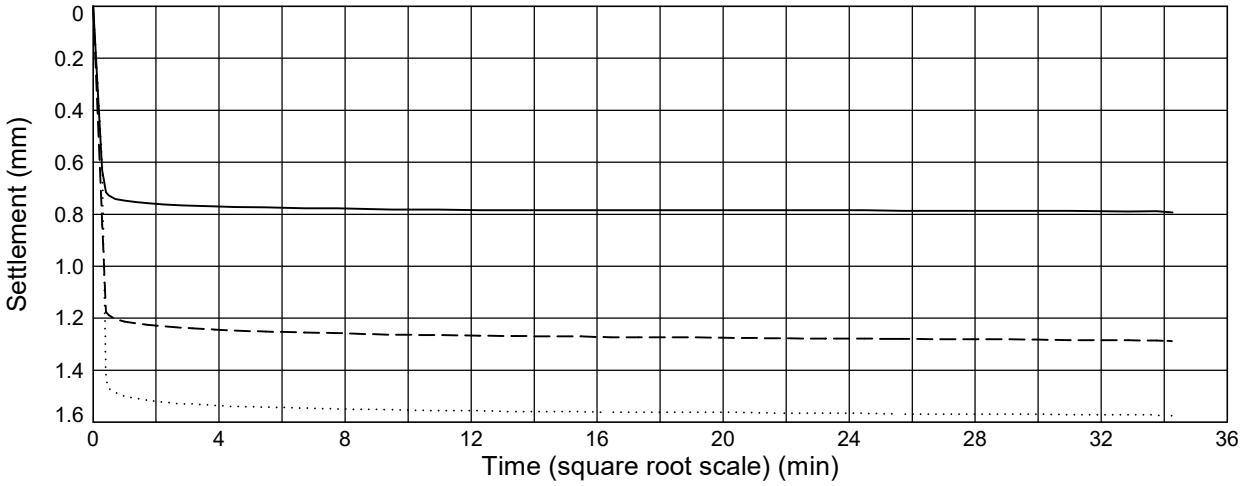
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

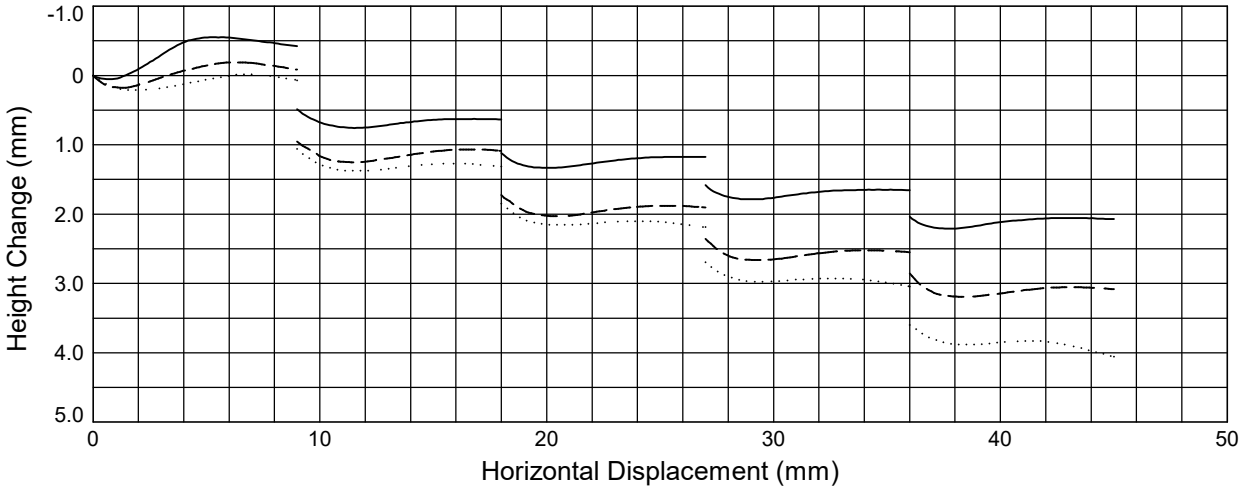
In accordance with BS EN ISO 17892-10

Position ID: **RedP-BH-4** Sample Ref: **31** Sample Type: **B** Depth (m): **9.00**

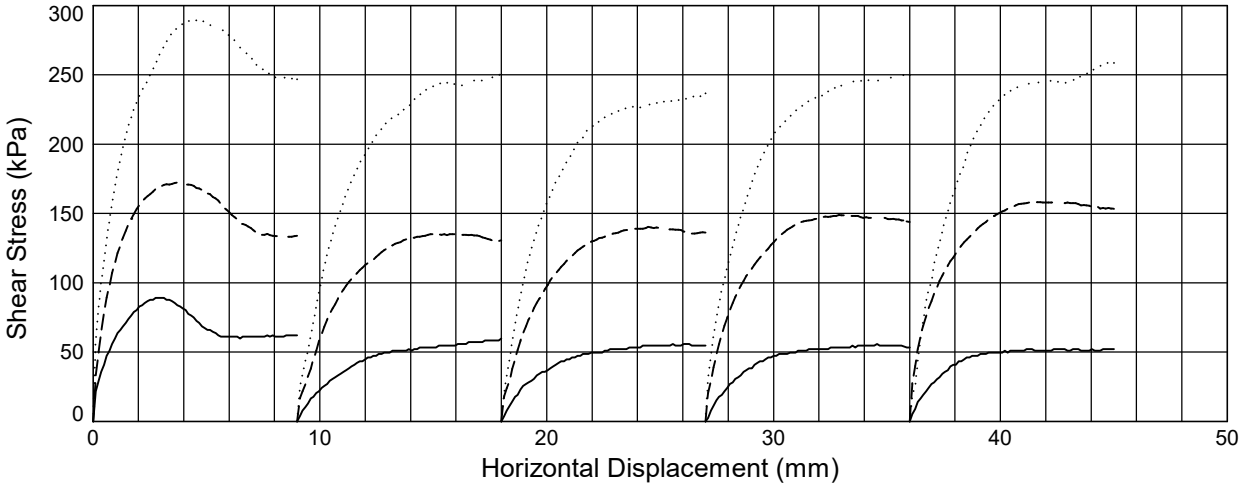
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**70** kPa) *Dashed Line* = Specimen 2 (**140** kPa) *Dotted Line* = Specimen 3 (**280** kPa)

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Compiled By		Date
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Contract: **Sealink Friston**		Contract Ref: **563835**

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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **RedP-BH-4** Sample Ref: **40** Sample Type: **B** Depth (m): **12.00**

Description: **Orangish brown slightly gravelly slightly silty SAND**

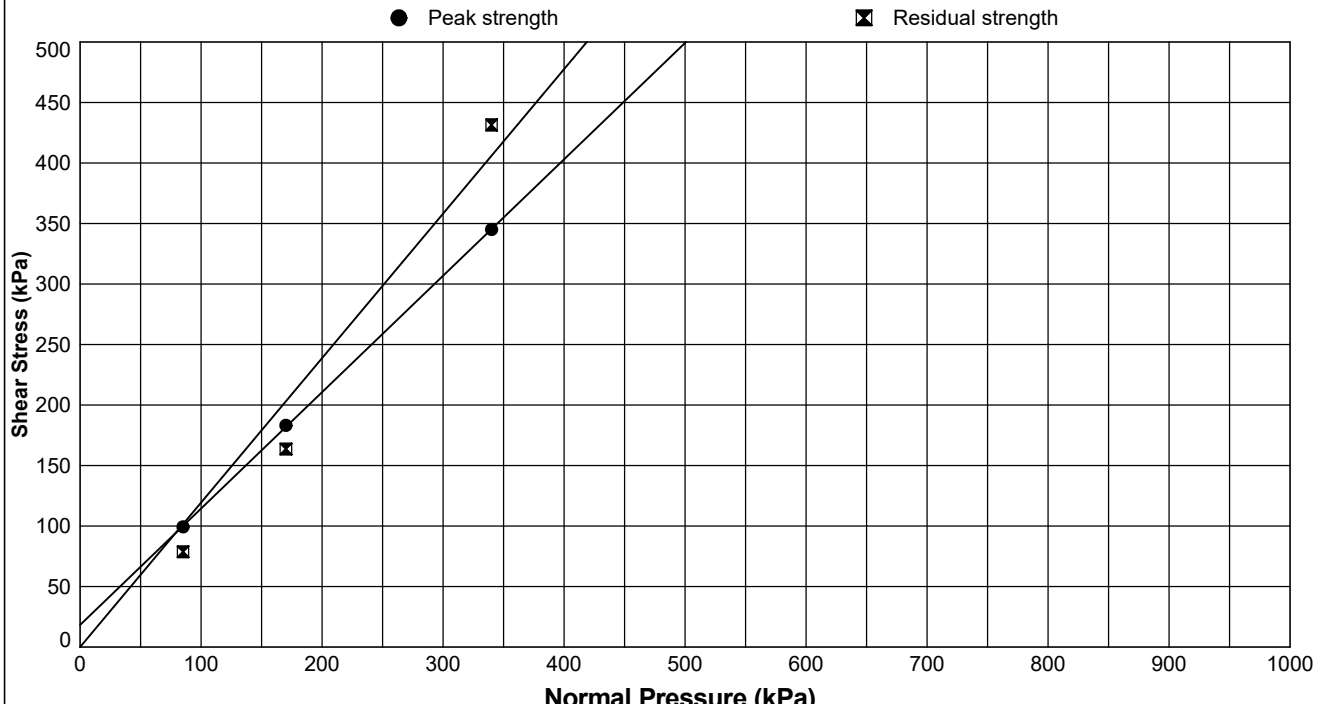
Sample Condition: **Recompacted**

Start Date: **16/11/2023**

End Date: **21/11/2023**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**23.5**	**22.6**	**19.5**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**23.1**	**23.1**	**23.4**
	Initial Bulk Density	(Mg/m^3)	**1.63**	**1.64**	**1.64**
	Initial Dry Density	(Mg/m^3)	**1.32**	**1.33**	**1.37**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.0060**	**0.9864**	**0.9362**
	Initial Degree of Saturation	(%)	**62**	**61**	**55**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**6**	**6**	**6**
CONSOLIDATION	Normal Pressure	(kPa)	**85**	**170**	**340**
	Consolidated Height	(mm)	**22.1**	**21.6**	**22.1**
	Voids Ratio after Consolidation		**0.9144**	**0.8523**	**0.8296**
SHEAR	Shearing Rate	(mm/min)	**0.1741**	**0.1619**	**0.1282**
	Horiz. Displacement at Peak Shear Stress	(mm)	**4.0**	**3.8**	**4.6**
	Voids Ratio after Shear		**0.7640**	**0.6335**	**0.6170**
	Peak Shear Stress	(kPa)	**99**	**183**	**345**
	Residual Shear Stress	(kPa)	**79**	**164**	**431**

PEAK STRENGTH	Effective Cohesion (C')	**18** (kPa)	Effective Angle of Friction (ϕ')	**44**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**0** (kPa)	Residual Angle of Friction (ϕ'_R)	**50**	(deg)



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Compiled By		Date
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Contract	Contract Ref:
Sealink Friston	**563835**

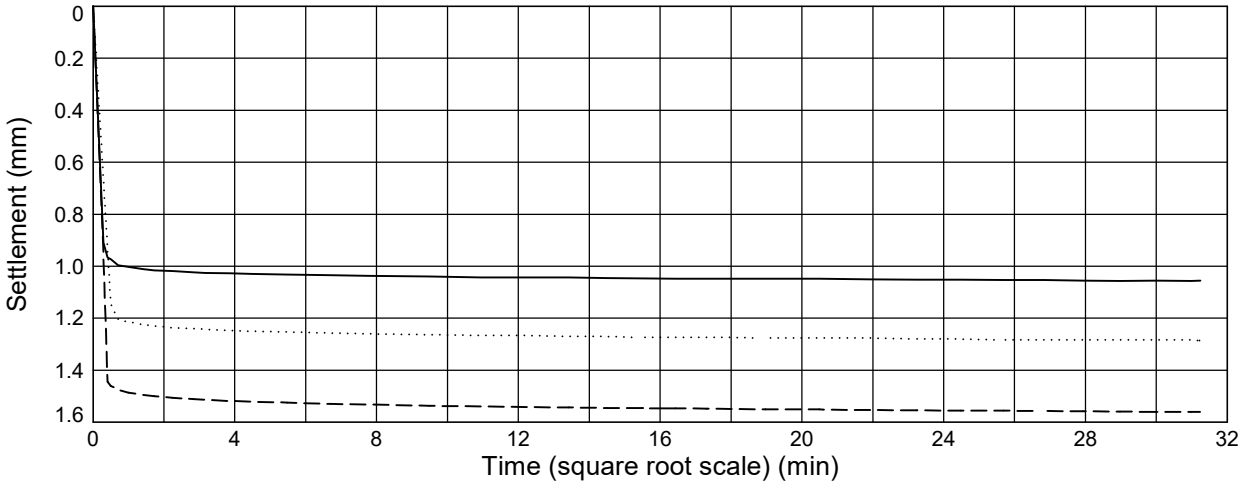
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

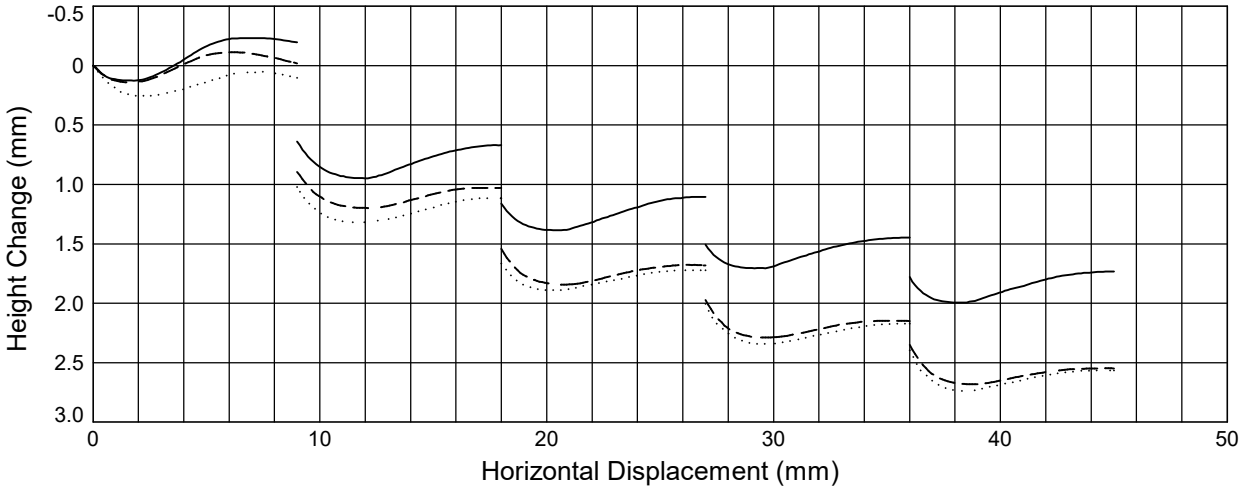
In accordance with BS EN ISO 17892-10

Position ID: **RedP-BH-4** Sample Ref: **40** Sample Type: **B** Depth (m): **12.00**

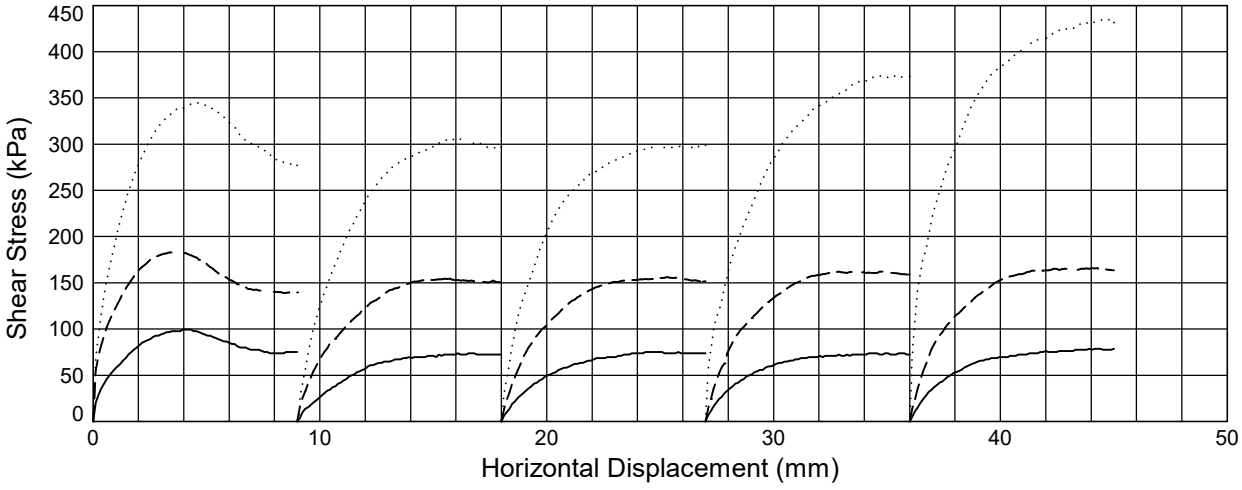
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**85** kPa) *Dashed Line* = Specimen 2 (**170** kPa) *Dotted Line* = Specimen 3 (**340** kPa)

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Compiled By		Date
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Contract	Contract Ref:
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **RedP-BH-4** Sample Ref: **55** Sample Type: **B** Depth (m): **17.00**

Description: **Orangish brown gravelly slightly clayey SAND**

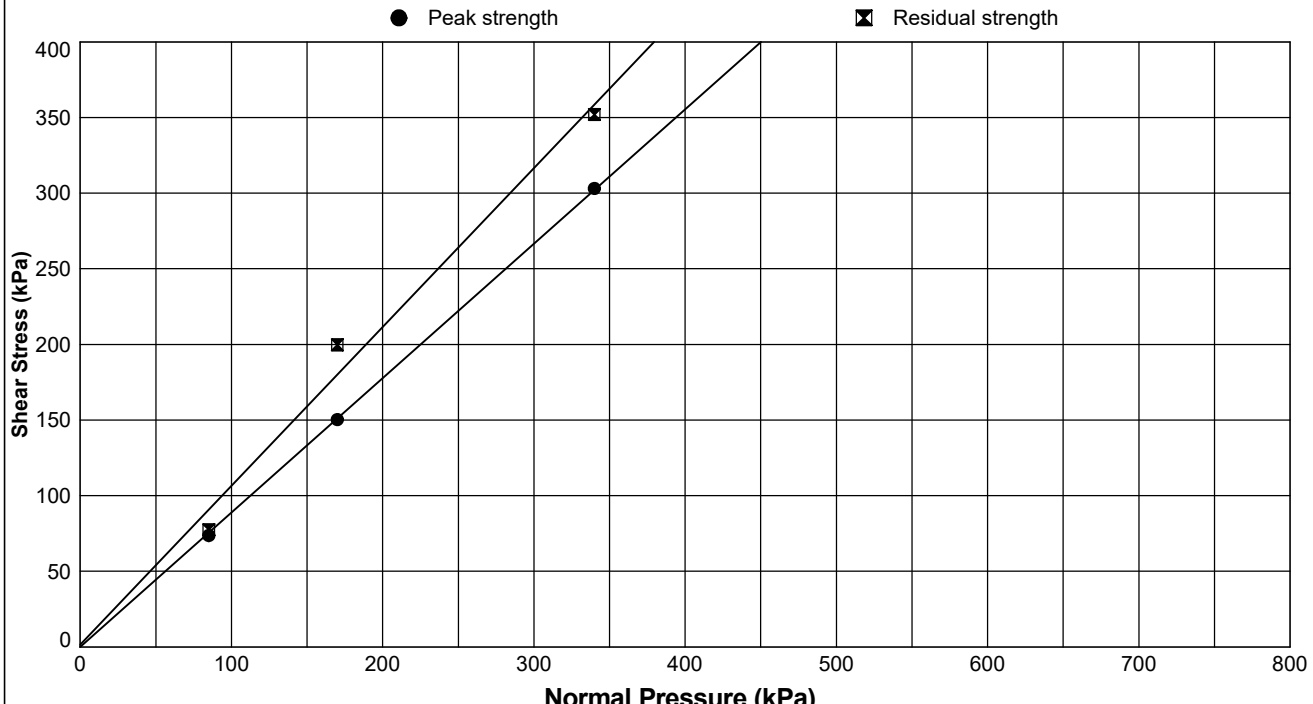
Sample Condition: **Recompacted**

Start Date: **06/11/2023**

End Date: **09/11/2023**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**27.6**	**27.3**	**23.0**
	Initial Length (L_1)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Width (L_2)	(mm)	**60.0**	**60.0**	**60.0**
	Initial Height	(mm)	**22.8**	**23.0**	**23.2**
	Initial Bulk Density	(Mg/m^3)	**1.41**	**1.42**	**1.42**
	Initial Dry Density	(Mg/m^3)	**1.11**	**1.11**	**1.15**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.3934**	**1.3824**	**1.3005**
	Initial Degree of Saturation	(%)	**53**	**52**	**47**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**4**	**4**	**4**
CONSOLIDATION	Normal Pressure	(kPa)	**85**	**170**	**340**
	Consolidated Height	(mm)	**21.6**	**21.1**	**21.1**
	Voids Ratio after Consolidation		**1.2644**	**1.1839**	**1.0861**
SHEAR	Shearing Rate	(mm/min)	**0.0475**	**0.0699**	**0.0855**
	Horiz. Displacement at Peak Shear Stress	(mm)	**5.9**	**7.2**	**7.7**
	Voids Ratio after Shear		**0.9383**	**0.7753**	**0.6882**
	Peak Shear Stress	(kPa)	**74**	**150**	**303**
	Residual Shear Stress	(kPa)	**78**	**200**	**352**

PEAK STRENGTH	Effective Cohesion (C')	**0** (kPa)	Effective Angle of Friction (ϕ')	**41.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C'_R)	**1** (kPa)	Residual Angle of Friction (ϕ'_R)	**46.5**	(deg)



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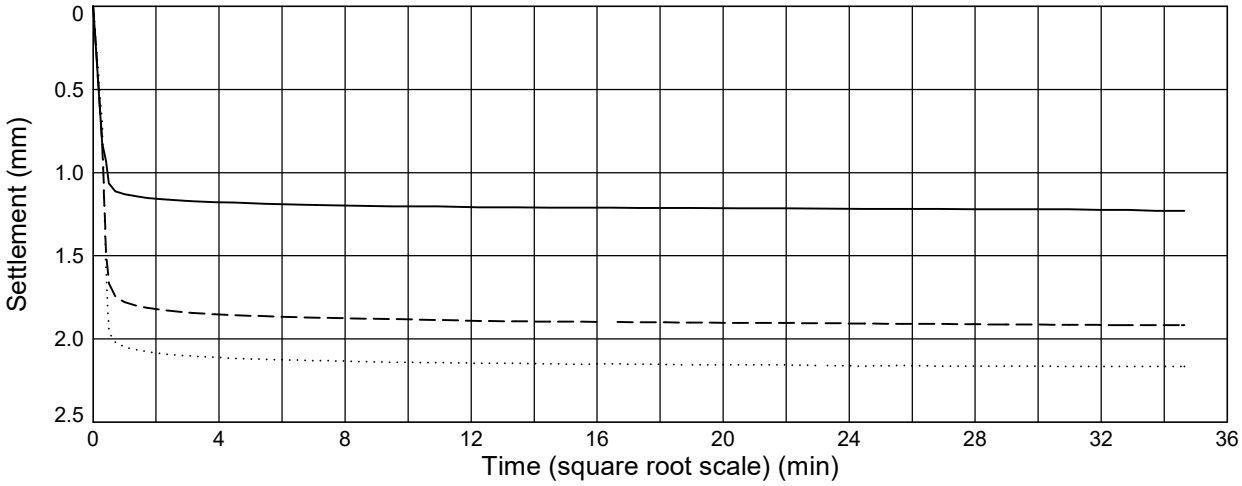
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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

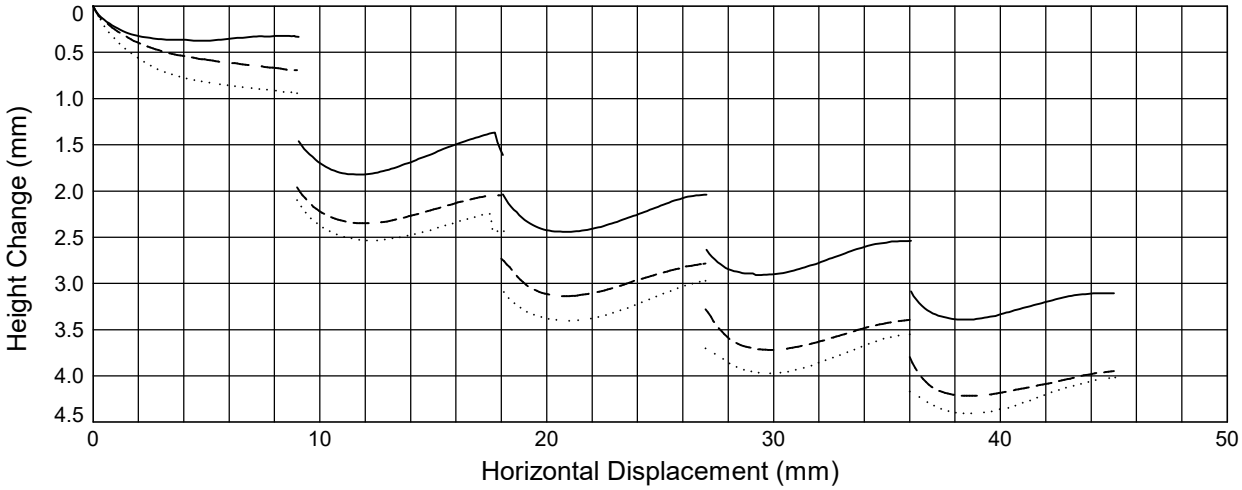
In accordance with BS EN ISO 17892-10

Position ID: **RedP-BH-4** Sample Ref: **55** Sample Type: **B** Depth (m): **17.00**

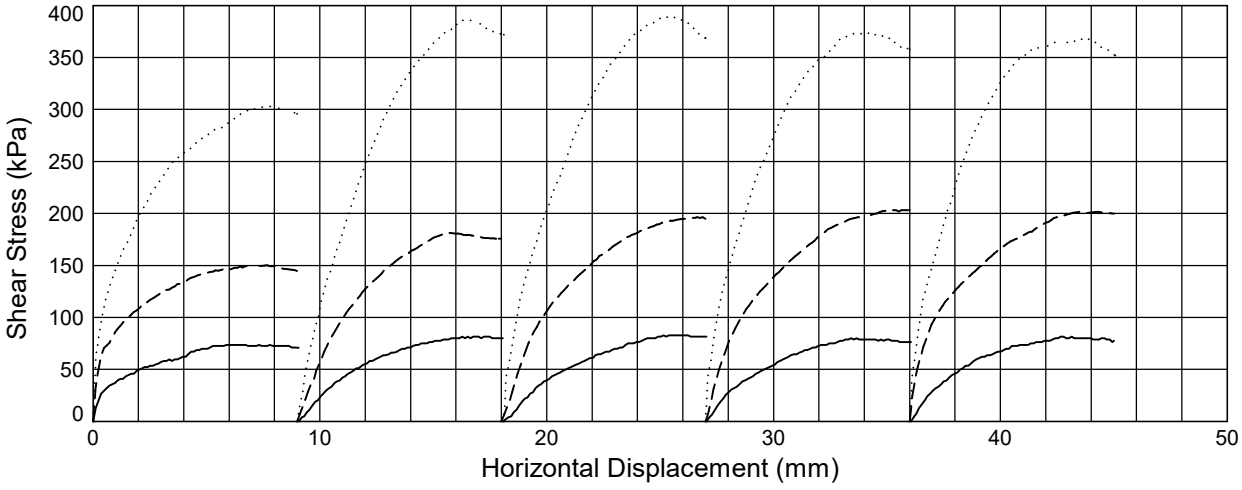
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**85** kPa) *Dashed Line* = Specimen 2 (**170** kPa) *Dotted Line* = Specimen 3 (**340** kPa)

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MEASUREMENT OF RESISTIVITY
OPEN CONTAINER METHOD

In accordance with BS1377:Part 3:2018 Clause 13.4
Water Content reported to BS EN ISO 17892-1:2014
Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **F22-BH306** Sample Ref: **10** Sample Type: **B** Depth (m): **2.50**

Description: **Grey slightly sandy slightly gravelly silty CLAY**

Water Content Condition: **As received** Remould Method: **Maximum achievable density**

Probe Material: **Stainless Steel** Number of Probes: **4** Probe Location in Sample: **End and side**

Probe Diameter (mm): **8** Probe Length (mm): **200** Probe Depth (mm): **30**

Probe Spacing (mm): **69.0**

Length of Test Specimen (mm): **108.20**

Diameter of Test Specimen (mm): **NA**

Water Content (%): **36.5**

Bulk Density (Mg/m^3): **1.83**

Dry Density (Mg/m^3): **1.34**

Temperature at Time of Test (^{o}C): **20.8**

Electrical Resistivity at 20^{o}C (ohm.m): **7.73**

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MEASUREMENT OF RESISTIVITY
OPEN CONTAINER METHOD

In accordance with BS1377:Part 3:2018 Clause 13.4
Water Content reported to BS EN ISO 17892-1:2014
Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **F22-BH307** Sample Ref: **39** Sample Type: **B** Depth (m): **10.50**

Description: **Yellowish brown slightly silty SAND**

Water Content Condition: **As received** Remould Method: **Maximum achievable density**

Probe Material: **Stainless Steel** Number of Probes: **4** Probe Location in Sample: **End and side**

Probe Diameter (mm): **8** Probe Length (mm): **200** Probe Depth (mm): **30**

Probe Spacing (mm): **68.9**

Length of Test Specimen (mm): **108.10**

Diameter of Test Specimen (mm): **NA**

Water Content (%): **16.1**

Bulk Density (Mg/m^3): **1.88**

Dry Density (Mg/m^3): **1.62**

Temperature at Time of Test (^oC): **21.0**

Electrical Resistivity at 20^oC (ohm.m): **25.25**

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MEASUREMENT OF RESISTIVITY
OPEN CONTAINER METHOD

In accordance with BS1377:Part 3:2018 Clause 13.4
Water Content reported to BS EN ISO 17892-1:2014
Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **F22-BH308** Sample Ref: **12** Sample Type: **B** Depth (m): **2.50**

Description: **Dark grey slightly sandy gravelly CLAY**

Water Content Condition: **As received** Remould Method: **Maximum achievable density**

Probe Material: **Stainless Steel** Number of Probes: **4** Probe Location in Sample: **End and side**

Probe Diameter (mm): **8** Probe Length (mm): **200** Probe Depth (mm): **30**

Probe Spacing (mm): **69.0**

Length of Test Specimen (mm): **108.20**

Diameter of Test Specimen (mm): **NA**

Water Content (%): **19.9**

Bulk Density (Mg/m^3): **2.02**

Dry Density (Mg/m^3): **1.68**

Temperature at Time of Test (^{o}C): **21.2**

Electrical Resistivity at 20^{o}C (ohm.m): **9.88**

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MEASUREMENT OF RESISTIVITY
OPEN CONTAINER METHOD

In accordance with BS1377:Part 3:2018 Clause 13.4
Water Content reported to BS EN ISO 17892-1:2014
Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **F22-BH309** Sample Ref: **17** Sample Type: **B** Depth (m): **4.50**

Description: **Dark grey slightly sandy slightly gravelly silty CLAY**

Water Content Condition: **As received** Remould Method: **Maximum achievable density**

Probe Material: **Stainless Steel** Number of Probes: **4** Probe Location in Sample: **End and side**

Probe Diameter (mm): **8** Probe Length (mm): **200** Probe Depth (mm): **30**

Probe Spacing (mm): **124.0**

Length of Test Specimen (mm): **219.20**

Diameter of Test Specimen (mm): **NA**

Water Content (%): **20.5**

Bulk Density (Mg/m^3): **2.02**

Dry Density (Mg/m^3): **1.68**

Temperature at Time of Test (^{o}C): **22.1**

Electrical Resistivity at 20^{o}C (ohm.m): **7.83**

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MEASUREMENT OF RESISTIVITY
OPEN CONTAINER METHOD

In accordance with BS1377:Part 3:2018 Clause 13.4
Water Content reported to BS EN ISO 17892-1:2014
Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **F22-BH310** Sample Ref: **29** Sample Type: **B** Depth (m): **7.00**

Description: **Dark grey slightly gravelly slightly sandy silty CLAY**

Water Content Condition: **As received** Remould Method: **Maximum achievable density**

Probe Material: **Stainless Steel** Number of Probes: **4** Probe Location in Sample: **End and side**

Probe Diameter (mm): **8** Probe Length (mm): **200** Probe Depth (mm): **30**

Probe Spacing (mm): **124.0**

Length of Test Specimen (mm): **219.20**

Diameter of Test Specimen (mm): **NA**

Water Content (%): **24.0**

Bulk Density (Mg/m^3): **1.97**

Dry Density (Mg/m^3): **1.59**

Temperature at Time of Test (^{o}C): **21.9**

Electrical Resistivity at 20^{o}C (ohm.m): **8.01**

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MEASUREMENT OF RESISTIVITY
OPEN CONTAINER METHOD

In accordance with BS1377:Part 3:2018 Clause 13.4
Water Content reported to BS EN ISO 17892-1:2014
Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **F22-TP310** Sample Ref: **8** Sample Type: **B** Depth (m): **1.10**

Description: **Yellowish brown mottled grey slightly sandy slightly gravelly CLAY**

Water Content Condition: **As received** Remould Method: **Maximum achievable density**

Probe Material: **Stainless Steel** Number of Probes: **4** Probe Location in Sample: **End and side**

Probe Diameter (mm): **8** Probe Length (mm): **200** Probe Depth (mm): **30**

Probe Spacing (mm): **124.0**

Length of Test Specimen (mm): **219.20**

Diameter of Test Specimen (mm): **NA**

Water Content (%): **17.0**

Bulk Density (Mg/m^3): **1.91**

Dry Density (Mg/m^3): **1.63**

Temperature at Time of Test (^{o}C): **20.8**

Electrical Resistivity at 20^{o}C (ohm.m): **17.39**

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MEASUREMENT OF RESISTIVITY
OPEN CONTAINER METHOD

In accordance with BS1377:Part 3:2018 Clause 13.4
Water Content reported to BS EN ISO 17892-1:2014
Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **F22-TP311** Sample Ref: **9** Sample Type: **B** Depth (m): **0.90**

Description: **Orangish brown very gravelly very clayey SAND**

Water Content Condition: **As received** Remould Method: **Maximum achievable density**

Probe Material: **Stainless Steel** Number of Probes: **4** Probe Location in Sample: **End and side**

Probe Diameter (mm): **8** Probe Length (mm): **200** Probe Depth (mm): **30**

Probe Spacing (mm): **124.0**

Length of Test Specimen (mm): **219.20**

Diameter of Test Specimen (mm): **NA**

Water Content (%): **18.8**

Bulk Density (Mg/m^3): **2.05**

Dry Density (Mg/m^3): **1.72**

Temperature at Time of Test (^{o}C): **21.2**

Electrical Resistivity at 20^{o}C (ohm.m): **24.80**

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MEASUREMENT OF RESISTIVITY
OPEN CONTAINER METHOD

In accordance with BS1377:Part 3:2018 Clause 13.4
Water Content reported to BS EN ISO 17892-1:2014
Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **F22-TP312** Sample Ref: **10** Sample Type: **B** Depth (m): **2.00**

Description: **Bluish grey slightly gravelly slightly sandy silty CLAY**

Water Content Condition: **As received** Remould Method: **Maximum achievable density**

Probe Material: **Stainless Steel** Number of Probes: **4** Probe Location in Sample: **End and side**

Probe Diameter (mm): **8** Probe Length (mm): **200** Probe Depth (mm): **30**

Probe Spacing (mm): **124.0**

Length of Test Specimen (mm): **219.20**

Diameter of Test Specimen (mm): **NA**

Water Content (%): **17.7**

Bulk Density (Mg/m^3): **1.91**

Dry Density (Mg/m^3): **1.63**

Temperature at Time of Test (^{o}C): **18.9**

Electrical Resistivity at 20^{o}C (ohm.m): **11.75**

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MEASUREMENT OF RESISTIVITY
OPEN CONTAINER METHOD

In accordance with BS1377:Part 3:2018 Clause 13.4
Water Content reported to BS EN ISO 17892-1:2014
Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **F22-TP313** Sample Ref: **2** Sample Type: **B** Depth (m): **0.50**

Description: **Yellowish brown mottled grey slightly sandy slightly gravelly CLAY**

Water Content Condition: **As received** Remould Method: **Maximum achievable density**

Probe Material: **Stainless Steel** Number of Probes: **4** Probe Location in Sample: **End and side**

Probe Diameter (mm): **8** Probe Length (mm): **200** Probe Depth (mm): **30**

Probe Spacing (mm): **124.0**

Length of Test Specimen (mm): **219.20**

Diameter of Test Specimen (mm): **NA**

Water Content (%): **18.4**

Bulk Density (Mg/m^3): **1.84**

Dry Density (Mg/m^3): **1.55**

Temperature at Time of Test (^oC): **22.1**

Electrical Resistivity at 20^oC (ohm.m): **18.46**

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MEASUREMENT OF RESISTIVITY
OPEN CONTAINER METHOD

In accordance with BS1377:Part 3:2018 Clause 13.4
Water Content reported to BS EN ISO 17892-1:2014
Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **F22-TP314** Sample Ref: **12** Sample Type: **B** Depth (m): **2.00**

Description: **Grey slightly sandy slightly gravelly silty CLAY**

Water Content Condition: **As received** Remould Method: **Maximum achievable density**

Probe Material: **Stainless Steel** Number of Probes: **4** Probe Location in Sample: **End and side**

Probe Diameter (mm): **8** Probe Length (mm): **200** Probe Depth (mm): **30**

Probe Spacing (mm): **124.0**

Length of Test Specimen (mm): **219.20**

Diameter of Test Specimen (mm): **NA**

Water Content (%): **19.4**

Bulk Density (Mg/m^3): **1.89**

Dry Density (Mg/m^3): **1.58**

Temperature at Time of Test (^oC): **19.5**

Electrical Resistivity at 20^oC (ohm.m): **15.19**

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MEASUREMENT OF RESISTIVITY
OPEN CONTAINER METHOD

In accordance with BS1377:Part 3:2018 Clause 13.4
Water Content reported to BS EN ISO 17892-1:2014
Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **F22-TP316** Sample Ref: **14** Sample Type: **B** Depth (m): **3.30**

Description: **Bluish grey slightly sandy slightly gravelly silty CLAY with low cobble content**

Water Content Condition: **As received** Remould Method: **Maximum achievable density**

Probe Material: **Stainless Steel** Number of Probes: **4** Probe Location in Sample: **End and side**

Probe Diameter (mm): **8** Probe Length (mm): **200** Probe Depth (mm): **30**

Probe Spacing (mm): **124.0**

Length of Test Specimen (mm): **219.20**

Diameter of Test Specimen (mm): **NA**

Water Content (%): **20.8**

Bulk Density (Mg/m^3): **1.87**

Dry Density (Mg/m^3): **1.55**

Temperature at Time of Test (^oC): **20.9**

Electrical Resistivity at 20^oC (ohm.m): **9.69**

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MEASUREMENT OF RESISTIVITY
OPEN CONTAINER METHOD

In accordance with BS1377:Part 3:2018 Clause 13.4
Water Content reported to BS EN ISO 17892-1:2014
Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **F22-TP317** Sample Ref: **15** Sample Type: **B** Depth (m): **4.00**

Description: **Dark grey mottled greenish brown slightly gravelly slightly sandy silty CLAY**

Water Content Condition: **As received** Remould Method: **Maximum achievable density**

Probe Material: **Stainless Steel** Number of Probes: **4** Probe Location in Sample: **End and side**

Probe Diameter (mm): **8** Probe Length (mm): **200** Probe Depth (mm): **30**

Probe Spacing (mm): **124.0**

Length of Test Specimen (mm): **219.20**

Diameter of Test Specimen (mm): **NA**

Water Content (%): **19.1**

Bulk Density (Mg/m^3): **1.85**

Dry Density (Mg/m^3): **1.56**

Temperature at Time of Test (^{o}C): **20.6**

Electrical Resistivity at 20^{o}C (ohm.m): **16.71**

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SUMMARY OF THERMAL RESISTIVITY TESTS

In accordance with ASTM D5334

Water Content reported to BS EN ISO 17892-1:2014, Bulk Density reported to BS EN ISO 17892-2:2014

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Initial Water Content (%)	Initial Bulk Density (Mg/m^3)	Initial Dry Density (Mg/m^3)	Thermal Conductivity (W/m K)	Thermal Resistivity (K.cm/W)	Soil Temperature (°C)	Description of Sample	Lab location
F22-BH306	5	UT	1.76	20.0	2.08	1.73	1.529	65.40	13.87	Grey mottled brown slightly sandy slightly gravelly CLAY. (Undisturbed. As received water content)	**B**
F22-BH306	5	UT	1.76	11.2	1.80	1.62	1.105	90.53	19.80	Grey mottled brown slightly sandy slightly gravelly CLAY. (Remoulded at target water content of 11.5%. Unable to achieve target bulk density of 2.08Mg/m^3)	**B**
F22-BH306	5	UT	1.76	3.3	1.63	1.58	0.538	185.67	21.07	Grey mottled brown slightly sandy slightly gravelly CLAY. (Remoulded at target water content of <5%. Unable to achieve target bulk density of 2.08Mg/m^3)	**B**
F22-BH307	5	UT	1.52	18.6	2.13	1.80	1.656	60.40	17.33	Grey mottled yellowish brown slightly sandy slightly gravelly CLAY. (Undisturbed. As received water content)	**B**
F22-BH307	5	UT	1.52	11.6	1.95	1.75	1.294	77.27	20.83	Grey mottled yellowish brown slightly sandy slightly gravelly CLAY. (Remoulded at target water content of 10.8%. Unable to achieve target bulk density of 2.13Mg/m^3)	**B**
F22-BH307	5	UT	1.52	3.6	1.71	1.65	0.636	157.00	21.67	Grey mottled yellowish brown slightly sandy slightly gravelly CLAY. (Remoulded at target water content of <5%. Unable to achieve target bulk density of 2.13Mg/m^3)	**B**
F22-BH308	14	UT	3.65	20.0	2.10	1.75	1.623	61.63	13.20	Grey slightly sandy slightly gravelly CLAY. (Undisturbed. As received water content)	**B**
F22-BH308	14	UT	3.65	11.5	1.88	1.68	1.262	79.23	20.80	Grey slightly sandy slightly gravelly CLAY. (Remoulded at target water content of 11.5%. Unable to achieve target bulk density of 2.10Mg/m^3)	**B**
F22-BH308	14	UT	3.65	2.9	1.66	1.61	0.528	189.67	21.40	Grey slightly sandy slightly gravelly CLAY. (Remoulded at target water content of <5%. Unable to achieve target bulk density of 2.10Mg/m^3)	**B**

Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

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1a Princess Street
Bedminster
Bristol
BS3 4AG

Compiled By: [redacted]

Date: **27.02.24**

Contract: **Sealink Friston**

Contract Ref: **563835**

SUMMARY OF THERMAL RESISTIVITY TESTS

In accordance with ASTM D5334

Water Content reported to BS EN ISO 17892-1:2014, Bulk Density reported to BS EN ISO 17892-2:2014

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Initial Water Content (%)	Initial Bulk Density (Mg/m^3)	Initial Dry Density (Mg/m^3)	Thermal Conductivity (W/m K)	Thermal Resistivity (K.cm/W)	Soil Temperature (°C)	Description of Sample	Lab location
F22-BH309	7	UT	1.53	18.0	2.11	1.79	1.662	59.97	16.90	Brown mottled grey slightly sandy slightly gravelly silty CLAY. (Undisturbed. As received water content)	**B**
F22-BH309	7	UT	1.53	8.4	2.05	1.89	1.458	68.63	19.30	Brown mottled grey slightly sandy slightly gravelly silty CLAY. (Undisturbed. Partially dried to target water content of 9%)	**B**
F22-BH309	7	UT	1.53	4.5	1.98	1.90	1.121	89.20	20.17	Brown mottled grey slightly sandy slightly gravelly silty CLAY. (Undisturbed. Partially dried to target water content of <5%)	**B**
F22-BH310	8	UT	2.04	19.3	2.17	1.82	1.782	57.20	18.27	Orangish brown slightly sandy slightly gravelly silty CLAY. (Undisturbed. As received water content)	**B**
F22-BH310	8	UT	2.04	8.2	1.98	1.83	1.367	73.20	18.90	Orangish brown slightly sandy slightly gravelly silty CLAY. (Undisturbed. Partially dried to target water content of 9.7%)	**B**
F22-BH310	8	UT	2.04	3.1	1.88	1.83	0.985	401.67	20.53	Orangish brown slightly sandy slightly gravelly silty CLAY. (Undisturbed. Partially dried to target water content of <5%)	**B**
F22-TP203	3	B	0.60	8.0	1.75	1.62	1.942	58.93	18.47	Orangish brown very gravelly silty SAND. (Remoulded at as received water content to target bulk density of $1.75Mg/m^3$).	**B**
F22-TP203	3	B	0.60	4.9	1.75	1.67	1.321	76.43	21.40	Orangish brown very gravelly silty SAND. (Remoulded at target water content of 5% to target bulk density of $1.75Mg/m^3$).	**B**
F22-TP203	3	B	0.60	2.1	1.75	1.72	0.688	145.67	20.53	Orangish brown very gravelly silty SAND. (Remoulded at target water content of <5% to target bulk density of $1.75Mg/m^3$).	**B**

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1a Princess Street
Bedminster
Bristol
BS3 4AG

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Contract: **Sealink Friston**			

SUMMARY OF THERMAL RESISTIVITY TESTS

In accordance with ASTM D5334

Water Content reported to BS EN ISO 17892-1:2014, Bulk Density reported to BS EN ISO 17892-2:2014

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Initial Water Content (%)	Initial Bulk Density (Mg/m^3)	Initial Dry Density (Mg/m^3)	Thermal Conductivity (W/m K)	Thermal Resistivity (K.cm/W)	Soil Temperature (°C)	Description of Sample	Lab location
F22-TP204	5	B	1.00	13.5	2.13	1.87	2.500	40.02	18.87	Orangish brown slightly gravelly sandy silty CLAY. (Remoulded at as received water content to target bulk density of $2.10Mg/m^3$).	**B**
F22-TP204	5	B	1.00	7.7	2.03	1.88	1.748	57.20	21.27	Orangish brown slightly gravelly sandy silty CLAY. (Remoulded at target water content of 8%. Unable to achieve target bulk density of $2.10Mg/m^3$).	**B**
F22-TP204	5	B	1.00	3.2	1.76	1.71	0.876	114.33	21.67	Orangish brown slightly gravelly sandy silty CLAY. (Remoulded at target water content of <5%. Unable to achieve target bulk density of $2.10Mg/m^3$).	**B**
F22-TP205	3	B	0.50	6.7	1.98	1.86	2.771	36.10	19.87	Orangish brown gravelly slightly silty SAND. (Remoulded at as received water content. Unable to achieve target bulk density of $2.10Mg/m^3$).	**B**
F22-TP218	3	B	0.50	9.1	1.75	1.61	2.548	39.27	17.90	Orangish brown slightly gravelly silty SAND. (Remoulded at as received water content to target bulk density of $1.75Mg/m^3$)	**B**
F22-TP218	3	B	0.50	6.4	1.76	1.65	2.155	46.63	19.40	Orangish brown slightly gravelly silty SAND. (Remoulded at target water of 6% content to target bulk density of $1.75Mg/m^3$)	**B**
F22-TP218	3	B	0.50	3.0	1.75	1.70	1.346	74.33	20.53	Orangish brown slightly gravelly silty SAND. (Remoulded at target water of 3% content to target bulk density of $1.75Mg/m^3$)	**B**
F22-TP220	4	B	0.70	6.2	1.75	1.65	1.983	50.47	19.63	Orangish brown gravelly slightly silty SAND. (Remoulded at as received water content to target bulk density of $1.75Mg/m^3$)	**B**
F22-TP221	4	B	0.50	4.2	1.75	1.68	1.528	67.57	21.27	Orangish brown slightly gravelly slightly silty SAND. (Remoulded at as received water content to target bulk density of $1.75Mg/m^3$)	**B**

Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

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SUMMARY OF THERMAL RESISTIVITY TESTS

In accordance with ASTM D5334

Water Content reported to BS EN ISO 17892-1:2014, Bulk Density reported to BS EN ISO 17892-2:2014

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Initial Water Content (%)	Initial Bulk Density (Mg/m^3)	Initial Dry Density (Mg/m^3)	Thermal Conductivity (W/m K)	Thermal Resistivity (K.cm/W)	Soil Temperature (^oC)	Description of Sample	Lab location
F22-TP222A	5	B	0.90	4.3	1.75	1.68	1.770	56.50	20.80	Orangish brown slightly gravelly slightly silty SAND. (Remoulded at as received water content to target bulk density of 1.75Mg/m^3)	**B**
F22-TP229	4	B	0.70	17.5	2.09	1.78	1.727	57.93	19.23	Yellowish brown mottled grey slightly sandy slightly gravelly CLAY. (Remoulded at as received water content to target bulk density of 2.10Mg/m^3)	**B**
F22-TP229	4	B	0.70	7.6	1.76	1.64	1.100	90.93	21.33	Yellowish brown mottled grey slightly sandy slightly gravelly CLAY. (Remoulded at target water content of 8.7%. Unable to achieve target bulk density of 2.10Mg/m^3)	**B**
F22-TP229	4	B	0.70	4.1	1.68	1.62	0.741	135.00	21.80	Yellowish brown mottled grey slightly sandy slightly gravelly CLAY. (Remoulded at target water content of <5%. Unable to achieve target bulk density of 2.10Mg/m^3)	**B**
F22-TP310	4	B	0.70	16.2	2.11	1.81	1.658	60.33	20.67	Yellowish brown slightly sandy gravelly silty CLAY. (Remoulded at as received water content to target bulk density of 2.10Mg/m^3)	**B**
F22-TP310	4	B	0.70	8.5	1.79	1.65	1.131	88.43	20.93	Yellowish brown slightly sandy gravelly silty CLAY. (Remoulded at target water content of 8.1%. Unable to achieve target bulk density of 2.10Mg/m^3)	**B**
F22-TP310	4	B	0.70	3.3	1.58	1.53	0.543	184.00	20.80	Yellowish brown slightly sandy gravelly silty CLAY. (Remoulded at target water content of <5%. Unable to achieve target bulk density of 2.10Mg/m^3)	**B**
F22-TP311	10	B	1.10	18.6	1.75	1.48	1.718	58.40	19.57	Orangish brown slightly gravelly slightly sandy CLAY. (Remoulded at as received water content to target bulk density of 1.75Mg/m^3)	**B**
F22-TP311	10	B	1.10	9.3	1.75	1.60	1.265	79.03	19.83	Orangish brown slightly gravelly slightly sandy CLAY. (Remoulded at target water content of 9% to target bulk density of 1.75Mg/m^3)	**B**

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Bristol
BS3 4AG

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Contract: **Sealink Friston**			

SUMMARY OF THERMAL RESISTIVITY TESTS

In accordance with ASTM D5334

Water Content reported to BS EN ISO 17892-1:2014, Bulk Density reported to BS EN ISO 17892-2:2014

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Initial Water Content (%)	Initial Bulk Density (Mg/m^3)	Initial Dry Density (Mg/m^3)	Thermal Conductivity (W/m K)	Thermal Resistivity (K.cm/W)	Soil Temperature (°C)	Description of Sample	Lab location
F22-TP311	10	B	1.10	2.8	1.75	1.70	0.712	140.33	22.30	Orangish brown slightly gravelly slightly sandy CLAY. (Remoulded at target water content of <5% to target bulk density of 1.75Mg/m^3)	**B**
F22-TP312	8	B	1.10	18.2	1.75	1.48	1.101	90.87	20.27	Grey slightly sandy gravelly silty CLAY. (Remoulded at as received water content to target bulk density of 1.75Mg/m^3)	**B**
F22-TP312	8	B	1.10	9.2	1.75	1.60	0.880	113.67	20.90	Grey slightly sandy gravelly silty CLAY. (Remoulded at target water content of 9.1% to target bulk density of 1.75Mg/m^3)	**B**
F22-TP312	8	B	1.10	3.9	1.62	1.56	0.708	141.67	21.60	Grey slightly sandy gravelly silty CLAY. (Remoulded at target water content of <5%. Unable to achieve target bulk density of 1.75Mg/m^3)	**B**
F22-TP313	4	B	0.70	17.9	2.10	1.78	1.619	61.87	18.87	Yellowish brown mottled grey slightly sandy slightly gravelly CLAY. (Remoulded at as received water content to target bulk density of 2.10Mg/m^3)	**B**
F22-TP313	4	B	0.70	8.7	1.69	1.56	0.960	104.33	20.87	Yellowish brown mottled grey slightly sandy slightly gravelly CLAY. (Remoulded at target water content of 9%. Unable to achieve target bulk density of 2.10Mg/m^3)	**B**
F22-TP313	4	B	0.70	3.8	1.57	1.51	0.580	172.67	20.77	Yellowish brown mottled grey slightly sandy slightly gravelly CLAY. (Remoulded at target water content of <5%. Unable to achieve target bulk density of 2.10Mg/m^3)	**B**
F22-TP314	9	B	0.90	16.4	2.10	1.80	1.933	51.80	20.80	Brown mottled orangish brown and grey slightly gravelly slightly sandy CLAY. (Remoulded at as received water content to target bulk density of 2.10Mg/m^3)	**B**
F22-TP314	9	B	0.90	7.4	1.85	1.72	1.360	73.73	21.30	Brown mottled orangish brown and grey slightly gravelly slightly sandy CLAY. (Remoulded at target water content of 8%. Unable to achieve target bulk density of 2.10Mg/m^3)	**B**

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Contract: **Sealink Friston**

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SUMMARY OF THERMAL RESISTIVITY TESTS

In accordance with ASTM D5334

Water Content reported to BS EN ISO 17892-1:2014, Bulk Density reported to BS EN ISO 17892-2:2014

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Initial Water Content (%)	Initial Bulk Density (Mg/m^3)	Initial Dry Density (Mg/m^3)	Thermal Conductivity (W/m K)	Thermal Resistivity (K.cm/W)	Soil Temperature (°C)	Description of Sample	Lab location
F22-TP314	9	B	0.90	5.6	1.80	1.71	0.605	165.33	21.23	Brown mottled orangish brown and grey slightly gravelly slightly sandy CLAY. (Remoulded at target water content of <5%. Unable to achieve target bulk density of 2.10Mg/m^3)	B
F22-TP315	5	B	0.70	14.2	2.10	1.84	1.897	52.70	19.50	Orangish brown slightly sandy slightly gravelly CLAY. (Remoulded at as received water content to target bulk density of 2.10Mg/m^3).	B
F22-TP315	5	B	0.70	6.2	1.80	1.69	1.068	93.64	19.85	Orangish brown slightly sandy slightly gravelly CLAY. (Remoulded at target water content of 7%. Unable to achieve target bulk density of 2.10Mg/m^3).	B
F22-TP315	5	B	0.70	3.5	1.77	1.71	0.790	126.67	20.40	Orangish brown slightly sandy slightly gravelly CLAY. (Remoulded at target water content of <5%. Unable to achieve target bulk density of 2.10Mg/m^3).	B
F22-TP316	4	B	0.70	18.2	2.10	1.78	1.619	61.77	19.23	Grey slightly gravelly slightly sandy silty CLAY. (Remoulded at as received water content to target bulk density of 2.10Mg/m^3)	B
F22-TP316	4	B	0.70	9.9	1.80	1.64	1.074	93.03	19.93	Grey slightly gravelly slightly sandy silty CLAY. (Remoulded at target water content of 10.6%. Unable to achieve target bulk density of 2.10Mg/m^3)	B
F22-TP316	4	B	0.70	3.0	1.55	1.51	0.462	216.67	21.20	Grey slightly gravelly slightly sandy silty CLAY. (Remoulded at target water content of <5%. Unable to achieve target bulk density of 2.10Mg/m^3)	B
F22-TP317	8	B	0.90	17.6	2.10	1.78	1.718	58.20	20.03	Greenish brown mottled grey slightly gravelly slightly sandy CLAY. (Remoulded at as received water content to target bulk density of 2.10Mg/m^3)	B
F22-TP317	8	B	0.90	9.1	2.10	1.92	1.393	71.83	19.80	Greenish brown mottled grey slightly gravelly slightly sandy CLAY. (Remoulded at target water content of 9% to target bulk density of 2.10Mg/m^3)	B

Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

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Contract: **Sealink Friston**

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SUMMARY OF THERMAL RESISTIVITY TESTS

In accordance with ASTM D5334

Water Content reported to BS EN ISO 17892-1:2014, Bulk Density reported to BS EN ISO 17892-2:2014

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Initial Water Content (%)	Initial Bulk Density (Mg/m^3)	Initial Dry Density (Mg/m^3)	Thermal Conductivity (W/m K)	Thermal Resistivity (K.cm/W)	Soil Temperature (°C)	Description of Sample	Lab location
F22-TP317	9	D	0.90	5.3	2.10	1.99	0.502	199.20	21.10	Greenish brown mottled grey slightly gravelly slightly sandy CLAY. (Remoulded at target water content of <5% to target bulk density of 2.10Mg/m^3)	**B**
RedP-BH-1A	38	B	10.50	23.5	1.75	1.42	1.287	77.67	18.23	Grey very gravelly slightly clayey SAND. (Remoulded at as received water content to target bulk density of 1.75Mg/m^3)	**B**
RedP-BH-1A	38	B	10.50	12.5	1.74	1.55	0.993	100.60	20.77	Grey very gravelly slightly clayey SAND. (Remoulded at target water content of 12% to target bulk density of 1.75Mg/m^3)	**B**
RedP-BH-1A	38	B	10.50	4.2	1.62	1.55	0.546	183.00	20.03	Grey very gravelly slightly clayey SAND. (Remoulded at target water content of <5%. Unable to achieve target bulk density of 1.75Mg/m^3)	**B**
RedP-BH-1A	59	B	17.50	31.1	1.83	1.39	1.271	78.67	20.83	Orangish brown gravelly very clayey SAND. (Remoulded at as received water content. Exceeded target bulk density of 1.75Mg/m^3)	**B**
RedP-BH-1A	59	B	17.50	15.8	1.72	1.48	0.839	119.33	19.73	Orangish brown gravelly very clayey SAND. (Remoulded at target water content of 15.5% to target bulk density of 1.75Mg/m^3)	**B**
RedP-BH-1A	59	B	17.50	3.6	1.53	1.47	0.582	172.00	21.63	Orangish brown gravelly very clayey SAND. (Remoulded at target water content of <5%. Unable to achieve target bulk density of 1.75Mg/m^3)	**B**
RedP-BH-1A	68	B	20.50	29.5	1.75	1.35	1.155	86.67	17.43	Grey gravelly SAND. (Remoulded at as received water content to target bulk density of 1.75Mg/m^3)	**B**
RedP-BH-1A	68	B	20.50	14.3	1.72	1.50	1.151	86.90	22.00	Grey gravelly SAND. (Remoulded at target water content of 14.5% to target bulk density of 1.75Mg/m^3)	**B**

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Contract: **Sealink Friston**			

SUMMARY OF THERMAL RESISTIVITY TESTS

In accordance with ASTM D5334

Water Content reported to BS EN ISO 17892-1:2014, Bulk Density reported to BS EN ISO 17892-2:2014

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Initial Water Content (%)	Initial Bulk Density (Mg/m^3)	Initial Dry Density (Mg/m^3)	Thermal Conductivity (W/m K)	Thermal Resistivity (K.cm/W)	Soil Temperature (°C)	Description of Sample	Lab location
RedP-BH-1A	68	B	20.50	2.9	1.55	1.50	0.349	286.33	21.07	Grey gravelly SAND. (Remoulded at target water content of <5% to target bulk density of 1.75Mg/m^3)	**B**
RedP-BH-1A	86	UT	26.53	40.2	1.82	1.30	1.229	81.37	13.00	Brown silty CLAY. (Undisturbed. As received water content)	**B**
RedP-BH-1A	86	UT	26.53	21.8	1.71	1.41	0.961	104.33	21.27	Brown silty CLAY. (Remoulded at target water content of 21.6%. Unable to achieve target bulk density of 1.82Mg/m^3)	**B**
RedP-BH-1A	86	UT	26.53	5.0	1.63	1.55	0.573	174.67	21.67	Brown silty CLAY. (Remoulded at target water content of <5%. Unable to achieve target bulk density of 1.82Mg/m^3)	**B**
RedP-BH-4	34	B	10.00	19.7	1.75	1.46	1.291	77.60	17.47	Orangish brown gravelly slightly silty SAND with low cobble content. (Remoulded at as received water content to target bulk density of 1.75Mg/m^3)	**B**
RedP-BH-4	34	B	10.00	12.4	1.70	1.52	1.081	92.53	20.43	Orangish brown gravelly slightly silty SAND with low cobble content. (Remoulded at target water content of 10%. Unable to achieve target bulk density of 1.75Mg/m^3)	**B**
RedP-BH-4	34	B	10.00	7.1	1.65	1.54	0.873	114.33	19.87	Orangish brown gravelly slightly silty SAND with low cobble content. (Minimum water content of 7.1% used to enable recompaction. Unable to achieve target bulk density of 1.75Mg/m^3)	**B**
RedP-BH-4	49	B	15.00	33.5	1.76	1.32	1.341	74.57	19.73	Orangish brown very gravelly very silty SAND. (Remoulded at as received water content to target bulk density of 1.75Mg/m^3)	**B**
RedP-BH-4	49	B	15.00	17.3	1.84	1.57	1.025	98.63	20.53	Orangish brown very gravelly very silty SAND. (Remoulded at target water content of 16%. Exceeded target bulk density of 1.75Mg/m^3)	**B**

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SUMMARY OF THERMAL RESISTIVITY TESTS

In accordance with ASTM D5334

Water Content reported to BS EN ISO 17892-1:2014, Bulk Density reported to BS EN ISO 17892-2:2014

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Initial Water Content (%)	Initial Bulk Density (Mg/m^3)	Initial Dry Density (Mg/m^3)	Thermal Conductivity (W/m K)	Thermal Resistivity (K.cm/W)	Soil Temperature (°C)	Description of Sample	Lab location
RedP-BH-4	49	B	15.00	5.2	1.75	1.67	1.046	95.67	19.80	Orangish brown very gravelly very silty SAND. (Remoulded at target water content of <5% to target bulk density of 1.75Mg/m^3)	**B**
RedP-BH-4	62	B	19.00	21.0	1.75	1.45	1.337	74.77	19.13	Grey slightly gravelly silty SAND. (Remoulded at as received water content to target bulk density of 1.75Mg/m^3)	**B**
RedP-BH-4	62	B	19.00	10.8	1.48	1.34	1.235	81.00	20.90	Grey slightly gravelly silty SAND. (Remoulded at target water content of 10.5% to target bulk density of 1.75Mg/m^3)	**B**
RedP-BH-4	62	B	19.00	3.9	1.71	1.64	0.736	136.00	19.03	Grey slightly gravelly silty SAND. (Remoulded at target water content of <5%. Unable to achieve target bulk density of 1.75Mg/m^3)	**B**
RedP-BH-4	73	UT	23.10	33.2	1.93	1.45	1.367	73.17	15.40	Brown CLAY. (Undisturbed. As received water content)	**B**
RedP-BH-4	73	UT	23.10	16.3	1.67	1.44	0.817	122.00	20.50	Brown CLAY. (Remoulded at target water content of 16.5%. Unable to achieve target bulk density of 1.93Mg/m^3)	**B**
RedP-BH-4	73	UT	23.10	3.4	1.62	1.57	0.445	224.33	21.73	Brown CLAY. (Remoulded at target water content of <5%. Unable to achieve target bulk density of 1.93Mg/m^3)	**B**
RedP-BH-4	85	UT	27.03	33.0	1.92	1.44	1.360	73.53	17.70	Brown CLAY. (Undisturbed. As received water content)	**B**
RedP-BH-4	85	UT	27.03	18.1	1.66	1.41	0.790	126.67	20.43	Brown CLAY. (Remoulded at target water content of 18%. Unable to achieve target bulk density of 1.92Mg/m^3).	**B**

Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

STRUCTURAL SOILS
1a Princess Street
Bedminster
Bristol
BS3 4AG

Compiled By: [redacted]

Date: **27.02.24**

Contract: **Sealink Friston**

Contract Ref: **563835**

SUMMARY OF THERMAL RESISTIVITY TESTS

In accordance with ASTM D5334

Water Content reported to BS EN ISO 17892-1:2014, Bulk Density reported to BS EN ISO 17892-2:2014

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Initial Water Content (%)	Initial Bulk Density (Mg/m^3)	Initial Dry Density (Mg/m^3)	Thermal Conductivity (W/m K)	Thermal Resistivity (K.cm/W)	Soil Temperature (^oC)	Description of Sample	Lab location
RedP-BH-4	85	UT	27.03	4.8	1.64	1.56	0.516	194.00	22.17	Brown CLAY. (Remoulded at target water content of <5%. Unable to achieve target bulk density of 1.92Mg/m^3).	**B**

Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

STRUCTURAL SOILS
1a Princess Street
Bedminster
Bristol
BS3 4AG

Compiled By		Date	Contract Ref:
[redacted]	[redacted]	**27.02.24**	**563835**
Contract: **Sealink Friston**			

SUMMARY OF CHEMICAL ANALYSES

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Acid Soluble Sulphate (% SO_4)	Aqueous Extract Sulphate (mg/l SO_4)	pH	Carbonate Content (%)	Organic Matter Content (%)	Total Sulphur (%)	Description
F22-BH203	18	D	5.45	<0.02	<10	8.62	20.2		<0.01	Orangish brown mottled brown slightly gravelly sandy CLAY
F22-BH203	37	D	11.50	<0.02	11	8.88			<0.01	Orangish brown slightly gravelly slightly silty SAND
F22-BH306	6	B	1.50	0.04	36	8.67	28.0		0.04	Dark grey mottled white and brown slightly sandy slightly gravelly CLAY
F22-BH306	73	B	19.50	0.08	347	7.15			0.16	Grey slightly gravelly clayey SAND
F22-BH307	4	D	1.00	0.04	32	8.52			0.02	Yellowish brown slightly gravelly slightly sandy CLAY
F22-BH307	10	D	3.00	0.04	76	8.47			0.05	Orangish brown mottled white slightly gravelly slightly sandy CLAY
F22-BH307	36	D	10.00				10.2			Yellowish brown slightly silty SAND
F22-BH308	8	B	1.50	0.05	99	8.51			0.04	Yellowish brown mottled grey slightly gravelly slightly sandy CLAY

NOTES:- Chemical tests were undertaken by Envirolab

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By: [redacted]

Date: **05.03.24**

Contract: **Sealink Friston**

Contract Ref: **563835**

AGS

SUMMARY OF CHEMICAL ANALYSES

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Acid Soluble Sulphate (% SO_4)	Aqueous Extract Sulphate (mg/l SO_4)	pH	Carbonate Content (%)	Organic Matter Content (%)	Total Sulphur (%)	Description
F22-BH308	9	D	2.00				13.1			Yellowish brown mottled grey slightly gravelly slightly sandy CLAY
F22-BH308	20	D	5.00	0.04	76	8.47			0.05	Grey mottled white slightly sandy slightly gravelly CLAY
F22-BH309	18	D	5.00	0.18	616	7.77	37.6		1.13	Dark grey mottled white slightly sandy slightly gravelly silty CLAY
F22-BH309	25	D	7.00					2.2		Grey mottled white slightly gravelly slightly sandy silty CLAY
F22-BH309	40	B	10.50	0.02	37	8.69			0.02	Orangish brown mottled dark grey and white slightly gravelly clayey SAND
F22-BH310	25	D	6.45				36.3			Dark grey slightly gravelly slightly sandy silty CLAY
F22-BH310	30	D	7.00	0.14	471	8.11			0.69	Dark grey slightly gravelly slightly sandy silty CLAY
F22-BH310	42	B	11.00		51.0	8.71				Orangish brown silty SAND

NOTES:- Chemical tests were undertaken by Envirolab

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By		Date
[redacted]	[redacted]	05.03.24
Contract: **Sealink Friston**		

Contract Ref: **563835**

AGS

SUMMARY OF CHEMICAL ANALYSES

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Acid Soluble Sulphate (% SO_4)	Aqueous Extract Sulphate (mg/l SO_4)	pH	Carbonate Content (%)	Organic Matter Content (%)	Total Sulphur (%)	Description
F22-BH501	5	B	0.55	0.87	1460	6.12		8.4	0.55	Black mottled orangish brown slightly gravelly sandy CLAY
F22-BH501	46	B	13.00	0.08	196	7.82			0.20	Grey slightly silty SAND with some shell fragments
F22-BH501	71	B	21.00	0.23	836	7.75			0.99	Grey slightly sandy silty CLAY
F22-BH502	4	B	1.00	<0.02	<10	7.27			<0.01	Greyish brown mottled orange gravelly clayey SAND
F22-BH502A	33	B	8.50	<0.02	26	7.12			0.02	Orangish brown slightly gravelly clayey SAND
F22-BH502A	68	B	17.50	0.54	1660	6.29			10.20	Grey slightly sandy silty CLAY
F22-TP203	8	B	2.20	<0.02	<10	8.05			<0.01	Light brown slightly gravelly sandy CLAY
F22-TP204	4	D	0.50	<0.02	<10	8.26			<0.01	Dark orangish brown slightly gravelly sandy silty CLAY

NOTES:- Chemical tests were undertaken by Envirolab

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By: [redacted]

Date: **05.03.24**

Contract: **Sealink Friston**

Contract Ref: **563835**

AGS

SUMMARY OF CHEMICAL ANALYSES

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Acid Soluble Sulphate (% SO_4)	Aqueous Extract Sulphate (mg/l SO_4)	pH	Carbonate Content (%)	Organic Matter Content (%)	Total Sulphur (%)	Description
F22-TP205	6	D	1.00	<0.02	<10	7.65			<0.01	Orangish brown gravelly slightly silty SAND
F22-TP218	5	B	1.00	<0.02	<10	7.78			<0.01	Orangish brown slightly gravelly sandy silty CLAY
F22-TP220	3	D	0.70		<10	7.85				Orangish brown gravelly slightly silty SAND
F22-TP221	8	D	1.10		<10	6.90				Orangish brown slightly gravelly silty SAND
F22-TP222A	4	D	0.50		<10	7.50				Orangish brown slightly gravelly slightly silty SAND
F22-TP229	5	D	0.90	0.03	12	8.35			0.03	Orangish brown slightly gravelly slightly sandy CLAY
F22-TP229	13	D	3.80				30.8			Dark bluish grey slightly sandy gravelly CLAY
F22-TP310	3	D	0.70	0.03	18	8.45		0.4	0.02	Yellowish brown slightly sandy gravelly silty CLAY

NOTES:- Chemical tests were undertaken by Envirolab

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By: [redacted]

Date: **05.03.24**

Contract: **Sealink Friston**

Contract Ref: **563835**

AGS

SUMMARY OF CHEMICAL ANALYSES

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Acid Soluble Sulphate (% SO_4)	Aqueous Extract Sulphate (mg/l SO_4)	pH	Carbonate Content (%)	Organic Matter Content (%)	Total Sulphur (%)	Description
F22-TP311	13	D	1.60	0.03	22	8.42	35.1		0.03	Greyish brown slightly gravelly slightly sandy CLAY
F22-TP312	3	D	1.10	0.03	21	8.53			0.02	Grey slightly sandy gravelly silty CLAY
F22-TP312	11	D	2.00					1.2		Bluish grey slightly gravelly slightly sandy silty CLAY
F22-TP313	5	D	0.90	0.04	<10	8.50		0.6	0.02	Yellowish brown slightly gravelly slightly sandy silty CLAY
F22-TP314	10	D	1.00	0.02	21	8.56			0.01	Brown mottled orangish brown and grey slightly gravelly slightly sandy CLAY
F22-TP314	13	D	2.00					1.0		Grey slightly sandy slightly gravelly silty CLAY
F22-TP315	7	D	1.10	0.04	42	8.90			0.02	Orangish brown slightly sandy gravelly silty CLAY
F22-TP316	11	D	2.30		59	8.37				Brownish grey slightly gravelly slightly sandy CLAY

NOTES:- Chemical tests were undertaken by Envirolab

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By: [redacted]

Date: **05.03.24**

Contract: **Sealink Friston**

Contract Ref: **563835**

AGS

SUMMARY OF CHEMICAL ANALYSES

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Acid Soluble Sulphate (% SO_4)	Aqueous Extract Sulphate (mg/l SO_4)	pH	Carbonate Content (%)	Organic Matter Content (%)	Total Sulphur (%)	Description
F22-TP317	14	D	3.00	0.03	28	8.30	29.9	1.8	0.06	Dark grey mottled greenish brown slightly gravelly slightly sandy silty CLAY
F22-TP404	4	D	0.50		<10	7.54				Dark orangish brown gravelly slightly silty SAND
F22-TP406	7	D	1.10	<0.02	<10	8.44			0.02	Yellowish brown mottled grey slightly gravelly slightly sandy CLAY
F22-TP406	11	D	3.00				33.1			Bluish grey slightly sandy CLAY
F22-TP511	3	B	0.50	<0.02	<10	7.71			0.02	Orangish brown slightly gravelly silty SAND
F22-TP513	6	B	0.90	<0.02	<10	8.15			<0.01	Yellowish brown slightly gravelly slightly clayey SAND
F22-TP514	4	B	0.70	<0.02	<10	8.46			<0.01	Orangish brown gravelly clayey SAND
F22-TP515	3	D	0.70				25.1			Orangish brown slightly gravelly slightly sandy CLAY

NOTES:- Chemical tests were undertaken by Envirolab

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By: [redacted]

Date: **05.03.24**

Contract: **Sealink Friston**

Contract Ref: **563835**

SUMMARY OF CHEMICAL ANALYSES

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Acid Soluble Sulphate (% SO_4)	Aqueous Extract Sulphate (mg/l SO_4)	pH	Carbonate Content (%)	Organic Matter Content (%)	Total Sulphur (%)	Description
F22-TP515	7	D	1.10	0.02	13	7.87			0.02	Orangish brown mottled grey slightly gravelly slightly sandy CLAY
F22-TP516	7	D	1.10	0.04	54	8.39			0.03	Orangish brown slightly gravelly slightly sandy CLAY
F22-TP518	1	D	0.50	<0.02	17	8.50			<0.01	Orangish brown slightly sandy slightly gravelly CLAY
F22-TP525	5	B	1.00	<0.02	<10	8.27			<0.01	Orangish brown slightly gravelly slightly sandy CLAY
F22-TP525	6	D	1.00				4.2			Orangish brown slightly gravelly slightly sandy CLAY
RedP-BH-1A	20	D	5.30					23.4		Dark brown PEAT
RedP-BH-1A	25	B	6.75	0.19	369	8.54			1.17	Dark grey sandy GRAVEL
RedP-BH-1A	37	DSPT	10.50					0.2		Grey very gravelly slightly clayey SAND

NOTES:- Chemical tests were undertaken by Envirolab

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By: [redacted]

Date: **05.03.24**

Contract: **Sealink Friston**

Contract Ref: **563835**

SUMMARY OF CHEMICAL ANALYSES

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Acid Soluble Sulphate (% SO_4)	Aqueous Extract Sulphate (mg/l SO_4)	pH	Carbonate Content (%)	Organic Matter Content (%)	Total Sulphur (%)	Description
RedP-BH-1A	65	B	19.50		380	8.38				Orangish brown gravelly slightly clayey SAND
RedP-BH-1A	90	D	27.95	0.16	431	8.18			0.27	Dark brown silty CLAY
RedP-BH-4	46	B	14.00		18	8.94				Orangish brown gravelly slightly clayey SAND
RedP-BH-4	78	B	24.00	0.23	922	7.95			0.47	Dark brown silty CLAY

NOTES:- Chemical tests were undertaken by Envirolab

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By		Date
[redacted]	[redacted]	05.03.24

Contract: **Sealink Friston**

Contract Ref: **563835**

APPENDIX E - GEOENVIRONMENTAL TESTING

(i) Laboratory Test Results

envirolab
Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 23/09168
Issue Number: 1 **Date:** 12 October, 2023

Client: Structural Soils Limited (Hemel Hempstead)
18 Frogmore Road
Hemel Hempstead
UK
HP3 9RT

Project Manager: [redacted]
Project Name: Sealink Friston
Project Ref: 563835
Order No: N/A
Date Samples Received: 14/09/23
Date Instructions Received: 15/09/23
Date Analysis Completed: 12/10/23

Approved by:

[redacted]
Client Manager

Envirolab Job Number: 23/09168

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09168/2	23/09168/4	23/09168/6					Units	Limit of Detection	Method ref
Client Sample No	102	102	101							
Client Sample ID	F22-TP221	F22-BH310	F22-BH309							
Depth to Top	0.50	0.50	0.20							
Depth To Bottom										
Date Sampled	12-Sep-23	12-Sep-23	12-Sep-23							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	1A	6A	6A							
% Moisture at 105C$_A$	27.2	30.4	26.6					% w/w	0.1	A-T-044
% Stones >10mm$_A$	7.2	<0.1	<0.1					% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	7.50	8.23	8.16					pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	<0.01	<0.01	<0.01					g/l	0.01	A-T-026s
Sulphur (total)$_D$	<50	130	195					mg/kg	50	A-T-024s
Cyanide (free)$_A$$^{M\#}$	<1	<1	<1					mg/kg	1	A-T-042sFCN
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2					mg/kg	0.2	A-T-050s
Organic Matter$_D$$^{M\#}$	0.6	0.8	2.3					% w/w	0.1	A-T-032s
Total Organic Carbon$_D$$^{M\#}$	0.31	0.45	1.33					% w/w	0.03	A-T-032s
Fraction of organic carbon$_D$$^{\#}$	0.0031	0.0045	0.0133					N/A	0.0003	A-T-032s
Arsenic$_D$$^{M\#}$	5	4	5					mg/kg	1	A-T-024s
Barium$_D$	9	58	36					mg/kg	1	A-T-024s
Beryllium$_D$	<0.5	1.3	0.6					mg/kg	0.5	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0	1.4					mg/kg	1	A-T-027s
Cadmium$_D$$^{M\#}$	<0.5	0.9	0.6					mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	4	19	10					mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	6	53	21					mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1					mg/kg	1	A-T-040s
Chromium (trivalent)	6	53	21					mg/kg	1	Calc
Lead$_D$$^{M\#}$	11	14	16					mg/kg	1	A-T-024s
Manganese$_D$$^{M\#}$	132	452	259					mg/kg	1	A-T-024s
Mercury$_D$	<0.17	1.34	<0.17					mg/kg	0.17	A-T-024s
Molybdenum$_D$$^{M\#}$	<1	<1	<1					mg/kg	1	A-T-024s
Nickel$_D$$^{M\#}$	6	40	14					mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	1	<1					mg/kg	1	A-T-024s
Vanadium$_D$$^{M\#}$	13	55	32					mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	21	49	41					mg/kg	5	A-T-024s
Leachate Prep BS EN 12457-1 (2:1) (1 no)$_A$	-	*	-							A-T-001
pH (leachable)$_A$	-	7.98	-					pH	0.01	A-T-031w
Ammoniacal nitrogen as N (leachable)$_A$	-	<0.05	-					mg/l	0.05	A-T-033w
Chloride (leachable)$_A$	-	<1.00	-					mg/l	1	A-T-026w
Fluoride (leachable)$_A$	-	0.53	-					mg/l	0.1	A-T-026w (F)
Sulphate (leachable)$_A$	-	4.37	-					mg/l	1	A-T-026w

Envirolab Job Number: 23/09168

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09168/2	23/09168/4	23/09168/6					Units	Limit of Detection	Method ref
Client Sample No	102	102	101							
Client Sample ID	F22-TP221	F22-BH310	F22-BH309							
Depth to Top	0.50	0.50	0.20							
Depth To Bottom										
Date Sampled	12-Sep-23	12-Sep-23	12-Sep-23							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	1A	6A	6A							
Cyanide (free) (leachable)$_A$	-	<0.005	-					mg/l	0.005	A-T-042wFCN
Cyanide (total) (leachable)$_A$	-	<0.005	-					mg/l	0.005	A-T-042wTCN
Cyanide (complex) (leachable)	-	<0.005	-					mg/l	0.005	Calc
Phenol (leachable)$_A$	-	<0.01	-					mg/l	0.01	A-T-050w
Cresols (leachable)$_A$	-	<0.01	-					mg/l	0.01	A-T-050w
Resorcinol (leachable)$_A$	-	<0.01	-					mg/l	0.01	A-T-050w
Catechol (leachable)$_A$	-	<0.01	-					mg/l	0.01	A-T-050w
Xylenols & Ethylphenols (leachable)$_A$	-	<0.01	-					mg/l	0.01	A-T-050w
Naphthols (leachable)$_A$	-	<0.01	-					mg/l	0.01	A-T-050w
Trimethylphenol (leachable)$_A$	-	<0.01	-					mg/l	0.01	A-T-050w
Phenols (total by HPLC) (leachable)$_A$	-	<0.01	-					mg/l	0.01	A-T-050w
Antimony (leachable)$_A$	-	<1	-					µg/l	1	A-T-025w
Arsenic (leachable)$_A$	-	<1	-					µg/l	1	A-T-025w
Boron (leachable)$_A$	-	23	-					µg/l	10	A-T-025w
Barium (leachable)$_A$	-	5	-					µg/l	1	A-T-025w
Beryllium (leachable)$_A$	-	<1	-					µg/l	1	A-T-025w
Cadmium (leachable)$_A$	-	<1	-					µg/l	1	A-T-025w
Copper (leachable)$_A$	-	<4	-					µg/l	4	A-T-025w
Chromium (leachable)$_A$	-	<1	-					µg/l	1	A-T-025w
Chromium (hexavalent) (leachable)$_A$	-	<0.05	-					mg/l	0.05	A-T-040w
Chromium (trivalent)	-	<0.05	-					mg/l	0.05	Calc
Iron (leachable)$_A$	-	<10	-					µg/l	10	A-T-025w
Lead (leachable)$_A$	-	<1	-					µg/l	1	A-T-025w
Manganese (leachable)$_A$	-	1	-					µg/l	1	A-T-025w
Magnesium (leachable)$_A$	-	<1	-					mg/l	1	A-T-049w
Mercury (leachable)$_A$	-	<0.1	-					µg/l	0.1	A-T-025w
Molybdenum (leachable)$_A$	-	<1	-					µg/l	1	A-T-025w
Nickel (leachable)$_A$	-	<2	-					µg/l	2	A-T-025w
Selenium (leachable)$_A$	-	<1	-					µg/l	1	A-T-025w
Vanadium (leachable)$_A$	-	<1	-					µg/l	1	A-T-025w
Zinc (leachable)$_A$	-	3	-					µg/l	2	A-T-025w
Bentazone$_A$	<0.10	-	-					mg/kg	0.1	Subcon RPS MH
Cypermethrin$_A$	<0.10	-	-					mg/kg	0.1	Subcon RPS MH

Envirolab Job Number: 23/09168 **Client Project Name: Sealink Friston**

Client Project Ref: 563835

Lab Sample ID	23/09168/2	23/09168/4	23/09168/6					Units	Limit of Detection	Method ref
Client Sample No	102	102	101							
Client Sample ID	F22-TP221	F22-BH310	F22-BH309							
Depth to Top	0.50	0.50	0.20							
Depth To Bottom										
Date Sampled	12-Sep-23	12-Sep-23	12-Sep-23							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	1A	6A	6A							
Linuron$_A$	<0.10	-	-					mg/kg	0.1	Subcon RPS MH
Alachlor$_A$	<0.02	-	-					mg/kg	0.02	Subcon RPS MH
Carbaryl$_A$	<0.10	-	-					mg/kg	0.1	Subcon RPS MH
Diuron$_A$	<0.10	-	-					mg/kg	0.1	Subcon RPS MH
Isoproturon$_A$	<0.10	-	-					mg/kg	0.1	Subcon RPS MH
MCPP; (Mecoprop)$_A$	<0.10	-	-					mg/kg	0.1	Subcon RPS MH
Calcium (leachable)$_A$	-	28	-					mg/l	1	A-T-049w

Lab Sample ID	23/09168/2	23/09168/4	23/09168/6					Units	Limit of Detection	Method ref
Client Sample No	102	102	101							
Client Sample ID	F22-TP221	F22-BH310	F22-BH309							
Depth to Top	0.50	0.50	0.20							
Depth To Bottom										
Date Sampled	12-Sep-23	12-Sep-23	12-Sep-23							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	1A	6A	6A							
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD	NAD	NAD							A-T-045
Asbestos Matrix (visual)$_{D}$	-	-	-							A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-	-							A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A	N/A							A-T-045
OCP+OPP Combined Pest Suite (incl. Atrazine and Simazine)										
Dichlobenil$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
Tecnazene$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
Trifluralin$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
alpha-Hexachlorocyclohexane (HCH)$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
Hexachlorobenzene (HCB) $_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
Simazine$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
Atrazine$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
beta-Hexachlorocyclohexane (HCH)$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
Quintozene (PCNB)$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
Chlorothalonil$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
delta-Hexachlorocyclohexane (HCH)$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
Triallate$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
Heptachlor$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
Aldrin$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
Triadimefon$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
Telodrin$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
Isodrin$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
Pendimethalin$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
Heptachlor epoxide$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
trans-Chlordane (Gamma)$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
o,p-DDE (2,4)$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
Endosulphan I (Alpha)$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
cis-Chlordane (Alpha)$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
p,p-DDE (4,4)$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
Dieldrin$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056

Lab Sample ID	23/09168/2	23/09168/4	23/09168/6					Units	Limit of Detection	Method ref
Client Sample No	102	102	101							
Client Sample ID	F22-TP221	F22-BH310	F22-BH309							
Depth to Top	0.50	0.50	0.20							
Depth To Bottom										
Date Sampled	12-Sep-23	12-Sep-23	12-Sep-23							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	1A	6A	6A							
o,p-DDD (2,4)$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Endrin$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Endosulphan II (Beta)$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
p,p-DDD (4,4)$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
o,p-DDT (2,4)$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Endrin Aldehyde$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Endrin Ketone$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Endosulphan Sulphate$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
p,p-DDT (4,4)$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
o,p-Methoxychlor$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
p,p-Methoxychlor$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Permethrin I (cis)$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Permethrin II (trans)$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Dichlorvos$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Mevinphos$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Demeton-S$_A$	<0.50	-	-					mg/kg	0.5	A-T-056
Demeton-O$_A$	<0.50	-	-					mg/kg	0.5	A-T-056
Phorate$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Dimethoate$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Propetamphos$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Diazinon (Dimpylate)$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Disulfoton$_A$	<0.10	-	-					mg/kg	0.1	A-T-056
Chlorpyrifos-methyl$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Parathion (Ethyl Parathion)$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Methyl Parathion$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Pirimiphos-methyl$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Fenitrothion$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Fensulphothion$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Fenthion$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Malathion$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Chlorfenvinphos$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Chlorpyrifos$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Trichloronate$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Prothiofos (Tokuthion)$_A$	<0.01	-	-					mg/kg	0.01	A-T-056

Envirolab Job Number: 23/09168

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09168/2	23/09168/4	23/09168/6					Units	Limit of Detection	Method ref
Client Sample No	102	102	101							
Client Sample ID	F22-TP221	F22-BH310	F22-BH309							
Depth to Top	0.50	0.50	0.20							
Depth To Bottom										
Date Sampled	12-Sep-23	12-Sep-23	12-Sep-23							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	1A	6A	6A							
Ethion$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Triazophos$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Carbophenothion$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Phosalone$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Azinphos-methyl$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Azinphos-ethyl$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Coumaphos$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
gamma-Hexachlorocyclohexane (HCH)$_A$	<0.01	-	-					mg/kg	0.01	A-T-056

Envirolab Job Number: 23/09168

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09168/2	23/09168/4	23/09168/6					Units	Limit of Detection	Method ref
Client Sample No	102	102	101							
Client Sample ID	F22-TP221	F22-BH310	F22-BH309							
Depth to Top	0.50	0.50	0.20							
Depth To Bottom										
Date Sampled	12-Sep-23	12-Sep-23	12-Sep-23							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	1A	6A	6A							
PAH-16MS										
Acenaphthene$_{A}^{M\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-019s
Acenaphthylene$_{A}^{M\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-019s
Anthracene$_{A}^{M\#}$	<0.02	<0.02	<0.02					mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_{A}^{M\#}$	<0.04	<0.04	<0.04					mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_{A}^{M\#}$	<0.04	<0.04	<0.04					mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_{A}^{M\#}$	<0.05	<0.05	<0.05					mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_{A}^{M\#}$	<0.05	<0.05	<0.05					mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_{A}^{M\#}$	<0.07	<0.07	<0.07					mg/kg	0.07	A-T-019s
Chrysene$_{A}^{M\#}$	<0.06	<0.06	<0.06					mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_{A}$	<0.04	<0.04	<0.04					mg/kg	0.04	A-T-019s
Fluoranthene$_{A}^{M\#}$	<0.08	<0.08	<0.08					mg/kg	0.08	A-T-019s
Fluorene$_{A}^{M\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_{A}^{M\#}$	<0.03	<0.03	<0.03					mg/kg	0.03	A-T-019s
Naphthalene $_{A}^{M\#}$	<0.03	<0.03	<0.03					mg/kg	0.03	A-T-019s
Phenanthrene$_{A}^{M\#}$	<0.03	<0.03	<0.03					mg/kg	0.03	A-T-019s
Pyrene$_{A}^{M\#}$	<0.07	<0.07	<0.07					mg/kg	0.07	A-T-019s
Total PAH-16MS$_{A}$	<0.08	<0.08	<0.08					mg/kg	0.01	A-T-019s

Report Notes

General
This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **six weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
Analytical results reflect the quality of the sample at the time of analysis only.
Opinions and Interpretations expressed are outside our scope of accreditation.
The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client.
A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

Key

Superscript "#"	Accredited to ISO 17025
Superscript "M"	Accredited to MCertS
Superscript "U"	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript "A"	Analysis performed on as-received Sample
Subscript "D"	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript "^"	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
N/A	Not applicable

Asbestos
Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis
Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing, and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25ºC / 11550µS/cm @ 20ºC fall outside the accreditation range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Structural Soils Limited (Hemel Hempstead), 18 Frogmore Road, Hemel Hempstead, UK, HP3 9RT

Project: Sealink Friston

Clients Project No: 563835

Project No: 23/09168

Date Received: 15/09/2023 (am)

Cool Box Temperatures (°C): 15.4 & 15.6

Lab Sample ID	23/09168/2
Client Sample No	102
Client Sample ID/Depth	F22-TP221 0.50m
Date Sampled	12/09/23
Deviation Code	
F	✓

Key

F *Maximum holding time exceeded between sampling date and analysis for analytes listed below*

HOLDING TIME EXCEEDANCES

Lab Sample ID	23/09168/2
Client Sample No	102
Client Sample ID/Depth	F22-TP221 0.50m
Date Sampled	12/09/23
Bentazone	✓
Cypermethrin	✓
Linuron	✓
Alachlor	✓
Carbaryl	✓
Diuron	✓
Isoproturon	✓
MCPP; (Mecoprop)	✓

Note: If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3 (for water samples 5 ± 3°C), ISO 18400-105:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	23/09168/2	23/09168/4	23/09168/6
Client Sample No	102	102	101
Client Sample ID/Depth	F22-TP221 0.50m	F22-BH310 0.50m	F22-BH309 0.20m
Date Sampled	12/09/23	12/09/23	12/09/23
A-T-004s		25/09/2023	
A-T-007s		22/09/2023	
A-T-019s	22/09/2023	26/09/2023	22/09/2023
A-T-022s		22/09/2023	
A-T-024s	25/09/2023	25/09/2023	25/09/2023
A-T-025w		02/10/2023	
A-T-026s	22/09/2023	22/09/2023	22/09/2023
A-T-026w		02/10/2023	
A-T-026w (F)		02/10/2023	
A-T-027s	22/09/2023	22/09/2023	22/09/2023
A-T-030s		22/09/2023	
A-T-031s	22/09/2023	22/09/2023	22/09/2023
A-T-031w		02/10/2023	
A-T-032s	22/09/2023	22/09/2023	22/09/2023
A-T-032w		02/10/2023	
A-T-033w		26/09/2023	
A-T-037w		02/10/2023	
A-T-040s	22/09/2023	22/09/2023	22/09/2023
A-T-040w		26/09/2023	
A-T-042sFCN	22/09/2023	22/09/2023	22/09/2023
A-T-042wFCN		25/09/2023	
A-T-042wTCN		25/09/2023	
A-T-044	28/09/2023	28/09/2023	28/09/2023
A-T-045	20/09/2023	20/09/2023	20/09/2023
A-T-049w		25/09/2023	
A-T-050s	22/09/2023	22/09/2023	22/09/2023
A-T-050w		02/10/2023	
A-T-056	27/09/2023		
A-T-ANCs		22/09/2023	
Calc	25/09/2023	26/09/2023	25/09/2023
Calc-no stones		02/10/2023	
Probe (w)		02/10/2023	

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

envirolab
Units 7 & 8, Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

Final Test Report

Envirolab Job Number: 23/09168
Issue Number: 1 Date: 12-Oct-23

Client: Structural Soils Limited (Hemel Hempstead)
18 Frogmore Road
Hemel Hempstead
UK
HP3 9RT

Project Manager: [redacted]
Project Name: Sealink Friston
Project Ref: 563835
Order No: N/A

Date Samples Received: 14-Sep-23
Date Instructions Received: 15-Sep-23
Date Analysis Completed: 12-Oct-23

Notes - Soil analysis

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones >10mm are removed or excluded from the sample prior to analysis and reported results corrected to a whole sample basis.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis.

Notes - General

This report shall not be reproduced, except in full, without written approval from Envirolab.

Subscript "A" indicates analysis performed on the sample as received. "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve, unless asbestos is found to be present in which case all analysis is performed on the sample as received.

All analysis is performed on the dried and crushed sample for samples with Matrix Code 7 and this supercedes any "A" subscripts.

All analysis is performed on the sample as received for soil samples from outside the European Union and this supercedes any "D" subscripts

For complex, multi-compound analysis, quality control results do not always fall within chart limits for every compound and we have criteria for reporting in these situations.

If results are in italic font they are associated with such quality control failures and may be unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid

Predominant Matrix Codes: 1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample

Secondary Matrix Codes: A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal, E = contains roots/twigs.

IS indicates Insufficient sample for analysis, NDP indicates No Determination Possible and NAD indicates No Asbestos Detected.

Analytical results reflect the quality of the sample at the time of analysis only. Opinions and interpretations expressed are outside the scope of our accreditation.

Please contact us if you need any further information.

HWOL TPH Code: EH_CU_1D_AL: Extractable hydrocarbons - i.e. everything extracted by the solvent(s), Clean-up - e.g. by florisil, silica gel, GC - Single coil gas chromatography, Aliphatics only

Approved by:

[redacted]

Client Manager

envirolab

Landfill WAC analysis must not be used for hazardous waste classification purposes. This analysis is only applicable for landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Sample Details						Landfill Waste Acceptance Criteria Limits		
Lab Sample ID	Method	ISO17025	MCERTS	23/09168/4				
Client Sample Number				102		Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
Client Sample ID				F22-BH310				
Depth to Top				0.5				
Depth to Bottom								
Date Sampled				12/09/2023				
Sample Type				Soil - ES				
Sample Matrix Code				6A				
Solid Waste Analysis								
pH (pH Units)$_D$	A-T-031	N	N	**8.23**		-	>6	-
ANC to pH 4 (mol/kg)$_D$	A-T-ANC	N	N	**1.71**		-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg)$_D$	A-T-ANC	N	N	**0.44**		-	to be evaluated	to be evaluated
Loss on Ignition (%)$_D$	A-T-030	N	N	**4.2**		-	-	10
Total Organic Carbon (%)$_D$	A-T-032	N	N	**0.45**		3	5	6
PAH Sum of 17 (mg/kg) $_A$	A-T-019	N	N	**<0.08**		100	-	-
Mineral Oil (mg/kg)$_{A\ EH_CU_1D_AL}$	A-T-007	N	N	**<10**		500	-	-
Sum of 7 PCBs (mg/kg)$_A$	A-T-004	N	N	**<0.007**		1	-	-
Sum of BTEX (mg/kg)$_A$	A-T-022	N	N	**<0.01**		6	-	-
Eluate Analysis				**10:1**	**10:1**	**Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)**		
				mg/l	**mg/kg**			
Arsenic	A-T-025	N	N	<0.001	**<0.01**	0.5	2	25
Barium	A-T-025	N	N	0.004	**0.040**	20	100	300
Cadmium	A-T-025	N	N	<0.001	**<0.01**	0.04	1	5
Chromium	A-T-025	N	N	<0.001	**<0.01**	0.5	10	70
Copper	A-T-025	N	N	<0.004	**<0.04**	2	50	100
Mercury	A-T-025	N	N	<0.0005	**<0.005**	0.01	0.2	2
Molybdenum	A-T-025	N	N	0.001	**0.010**	0.5	10	30
Nickel	A-T-025	N	N	<0.002	**<0.02**	0.4	10	40
Lead	A-T-025	N	N	<0.001	**<0.01**	0.5	10	50
Antimony	A-T-025	N	N	<0.001	**<0.01**	0.06	0.7	5
Selenium	A-T-025	N	N	<0.001	**<0.01**	0.1	0.5	7
Zinc	A-T-025	N	N	<0.002	**<0.02**	4	50	200
Chloride	A-T-026	N	N	<1.00	**<10**	800	15000	25000
Fluoride	A-T-026	N	N	0.6	**6.0**	10	150	500
Sulphate as SO_4	A-T-026	N	N	3	**28**	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	90	**900**	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	**<0.1**	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	<2.0	**<200**	500	800	1000
Leach Test Information								
pH (pH Units)	A-T-031	N	N	8.0				
Conductivity (µS/cm)	A-T-037	N	N	180				
Mass Sample (kg)				0.206				
Dry Matter (%)	A-T-044	N	N	84.9				

Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation

Certificate of Analysis

Report No.: **23-06436-1**

Issue No.: **1**
Date of Issue **11/10/2023**

Customer Details:	Envirolab Ltd, 7 - 8 Sandpits Business Park, Mottram Road, Hyde, Greater Manchester, SK14 3AR, United Kingdom
Customer Contact:	Aneta Dybek-Echtermeyer
Customer Order No.:	P0752414
Customer Reference:	Not Supplied
Quotation Reference:	Q22-00104 (Issue: 36)
Description:	1 geo sample
Date Received:	22/09/2023
Date Started:	27/09/2023
Date Completed:	11/10/2023
Test Methods:	Details available on request (refer to SOP code against relevant result/s)
Notes:	None



Approved By: [redacted], **LIMS Manager**

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service.
This certificate shall not be reproduced except in full without the prior written approval of the laboratory.
Observations and interpretations are outside of the scope of UKAS accreditation.
Results reported herein relate only to the items supplied to the laboratory for testing.
Results on an Interim Report are not dry-weight corrected.
Where the laboratory is not responsible for the sampling, results apply to the sample(s) as they were received.
The laboratory shall not be responsible for any information that is supplied by the customer that may affect the validity of results.

RPS Environmental Management Limited trading as RPS Mountainheath. Registered in England No. 01756175.
13 St Martins Way, Bedford, Bedfordshire, MK42 0LF. T +44 1462 480 400
A member of the RPS Group plc. Terms and conditions apply - copy on request

Results Summary

Report No.: 23-06436-1

Customer Reference: Not Supplied

Customer Order No: P0752414

Customer Sample No	**23/09168/2**
RPS Sample No	33036
Sample Type	**GEO**
Sample Matrix	SOIL
Sampling Date	12/09/2023

Determinand	CAS No	Codes	SOP	RL	Units	
carbaryl	63-25-2	N	L001	0.1	mg/kg DW	< 0.10
2,4,5-trichlorophenoxyacetic acid (2,4,5-T)	93-76-5	N	L340	0.1	mg/kg DW	< 0.10
2,4,5-TP (Fenoprop)	93-72-1	N	L340	0.1	mg/kg DW	< 0.10
2,4-dichlorophenoxyacetic acid (2,4-D)	94-75-7	N	L340	0.1	mg/kg DW	< 0.10
acifluorfen	50594-66-6	N	L340	0.1	mg/kg DW	< 0.10
bentazone	25057-89-0	N	L340	0.1	mg/kg DW	< 0.10
clopyralid	1702-17-6	N	L340	0.1	mg/kg DW	< 0.10
dichlorprop (2,4-DP)	120-36-5	N	L340	0.1	mg/kg DW	< 0.10
dinoseb (DNBP)	88-85-7	N	L340	0.1	mg/kg DW	< 0.10
2-methyl-4-chlorophenoxyacetic acid (MCPA)	94-74-6	N	L340	0.1	mg/kg DW	< 0.10
mecoprop (MCPP)	7085-19-0	N	L340	0.1	mg/kg DW	< 0.10
pentachlorophenol (PCP)	87-86-5	N	L340	0.1	mg/kg DW	< 0.10
2,3,6-trichlorobenzoic acid (2,3,6-TBA)	50-31-7	N	L340	0.1	mg/kg DW	< 0.10
4-(2,4-dichlorophenoxy)butanoic acid (2,4-DB)	94-82-6	N	L340	0.1	mg/kg DW	< 0.10
4-chlorophenoxyacetic acid (4-CPA)	122-88-3	N	L340	0.1	mg/kg DW	< 0.10
benazolin	3813-05-6	N	L340	0.1	mg/kg DW	< 0.10
bromoxynil	1689-84-5	N	L340	0.1	mg/kg DW	< 0.10
dicamba	1918-00-9	N	L340	0.1	mg/kg DW	< 0.10
diclofop	40843-25-2	N	L340	0.1	mg/kg DW	< 0.10
2-methyl-4,6-dinitrophenol (DNOC)	534-52-1	N	L340	0.1	mg/kg DW	< 0.10
flamprop	58667-63-3	N	L340	0.1	mg/kg DW	< 0.10
fluroxypyr	69377-81-7	N	L340	0.1	mg/kg DW	< 0.10
ioxynil	1689-83-4	N	L340	0.1	mg/kg DW	< 0.10
MCPB	94-81-5	N	L340	0.1	mg/kg DW	< 0.10
picloram	1918-02-1	N	L340	0.1	mg/kg DW	< 0.10
triclopyr	55335-06-3	N	L340	0.1	mg/kg DW	< 0.10
alachlor	15972-60-8	N	G029	0.02	mg/kg AR	< 0.02
chloroxuron	1982-47-4	N	L025	0.1	mg/kg DW	< 0.10
chlortoluron	15545-48-9	N	L025	0.1	mg/kg DW	< 0.10
diflubenzuron	35367-38-5	N	L025	0.1	mg/kg DW	< 0.10
dimefuron	34205-21-5	N	L025	0.1	mg/kg DW	< 0.10
diuron	330-54-1	N	L025	0.1	mg/kg DW	< 0.10
isoproturon	34123-59-6	N	L025	0.1	mg/kg DW	< 0.10
linuron	330-55-2	N	L025	0.1	mg/kg DW	< 0.10
methabenzthiazuron	18691-97-9	N	L025	0.1	mg/kg DW	< 0.10
metoxuron	19937-59-8	N	L025	0.1	mg/kg DW	< 0.10
monolinuron	1746-81-2	N	L025	0.1	mg/kg DW	< 0.10

Results Summary

Report No.: 23-06436-1

Customer Reference: Not Supplied

Customer Order No: P0752414

Customer Sample No	**23/09168/2**
RPS Sample No	33036
Sample Type	**GEO**
Sample Matrix	SOIL
Sampling Date	12/09/2023

Determinand	CAS No	Codes	SOP	RL	Units	
monuron	150-68-5	N	L025	0.1	mg/kg DW	< 0.10
pencycuron	66063-05-6	N	L025	0.1	mg/kg DW	< 0.10
bifenthrin	82657-04-3	N	G127	0.1	mg/kg DW	< 0.10
cyfluthrin, total	68359-37-5	N	G127	0.1	mg/kg DW	< 0.10
cyhalothrin, total	68085-85-8	N	G127	0.1	mg/kg DW	< 0.10
cypermethrin, total	52315-07-8	N	G127	0.1	mg/kg DW	< 0.10
deltamethrin	52918-63-5	N	G127	0.1	mg/kg DW	< 0.10
fenvalerate	51630-58-1	N	G127	0.1	mg/kg DW	< 0.10
permethrin, total	52645-53-1	N	G127	0.1	mg/kg DW	< 0.10
resmethrin	10453-86-8	N	G127	0.1	mg/kg DW	< 0.10
tetramethrin	7696-12-0	N	G127	0.1	mg/kg DW	< 0.10

Deviating Samples

Report No.: 23-06436-1

Customer Reference: Not Supplied

Customer Order No: P0752414

Our policy on Deviating Samples has been implemented in accordance with UKAS Policy on Deviating Samples (TPS63).
RPS is not responsible for the integrity of samples as received, unless RPS personnel performed the sampling. Samples submitted may be declared to be deviating.
Where applicable the analysis method remains UKAS accredited, however results reported for a deviating sample may be compromised.
Where no sampling date was supplied, samples have been declared to be deviating. If the date can be supplied, results may be reissued if assessed not deviating.
Where the sample container used was unsuitable or broken, the sample is flagged as deviating and re-sampling/re-submisson may be required.

RPS No.	Customer No.	Customer ID	Date Sampled	Containers Received	Deviating	Reason for Deviation
33036	23/09168/2		12/09/2023	plastic tub	No	

Report No.: 23-06436-1

Type	Matrix Code	Description
Food	CEREALPROD	Cereals, grains & products
Food	DRIEDFRUIT	Dried fruits
Food	FRIEDBAKED	Fried or baked food
Food	LEGUME	Legumes
Food	MEAT	Meat
Food	POWDERED	Powdered food
Food	PULSE	Pulses (dried legumes)
Food	VEGETABLES	Vegetables
Gas	TDTUBE	TD Tube
Gas	TENAX	Tenax Tube
Gas	TUBE	Tube
Gas	VAPOUR	Gas
Geological	SED_MAR	Marine Sediment
Geological	SED_RIV	River Sediment
Geological	SLUDG_SOL	Sludge (solid only)
Geological	SOIL	Soil
Liquid	BEVERAGE	Beverage
Liquid	BLOOD	Blood
Liquid	CONDENSATE	Condensate
Liquid	FORMULATN	Formula
Liquid	LEACHATE	Leachate
Liquid	OIL/GREASE	Oil or grease
Liquid	SLUDG_LIQ	Sludge (liquid only)
Liquid	SOLVENT	Solvent
Liquid	URINE	Urine
Sludge	SLUDG_WHL	Sludge for bulk route
Solid	BADGE	Badge
Solid	BEDDING	Bedding
Solid	BIOTA	Biota (general)
Solid	BIOTA_F	Biota (fish)
Solid	BIOTA_SF	Biota (shellfish)
Solid	CONSTRCTN	Construction materials
Solid	FABRIC	Fabrics & furnishing materials
Solid	FEED	Animal feed
Solid	FERTILISER	Fertiliser
Solid	FILTER	Filter
Solid	FOAM	Solid foam material
Solid	PACKAGING	Packaging material
Solid	PLANT	Plant (vegetation)
Solid	POWDER	Powder
Solid	SWAB	Swab
Water	BAL	Ballast Water
Water	BIL	Bilge Water
Water	DW	Drinking Water
Water	EFFLUENT	Effluent
Water	GW	Ground Water
Water	INFLUENT	Influent
Water	SALTW	Salt Water
Water	SW	Surface Water
Water	TW	Tap Water
Water	W	Water

Report No.: 23-06436-1

Key Code	Description
N	Not Accredited Test
U	UKAS Accredited Test - UKAS accreditation is only implied if the report carries the UKAS logo
UF	UKAS Flexible Scope Test
M	MCERTS Accredited Test - MCERTS accreditation is only implied if the report carries the MCERTS logo
O	Marine Management Organisation (MMO) Validated
SN	Subcontracted to approved laboratory not accredited for the test
SU	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
SIN	Subcontracted to internal RPS Group laboratory not accredited for the test
SIU	Subcontracted to internal RPS Group laboratory UKAS Accredited for the test
SIM	Subcontracted to internal RPS Group laboratory MCERTS/UKAS Accredited for the test
I/S (in results)	Insufficient Sample
U/S (in results)	Unsuitable Sample
S/C (in results)	See Comments
ND (in results)	Not Detected
L (in results)	Result is outside normal limits
DW (in units)	Results are expressed on a dry weight basis

Sample Type	Sample Retention and Disposal Period
Foodstuff	1 month (if frozen) from the issue date of this report
Waters	2 weeks from the issue date of this report
Other Liquids	1 month from the issue date of this report
Solids / Soils	1 month from the issue date of this report
Sediments	1 month from the issue date of this report

Note: Sample retention may be subject to agreement with the customer for particular projects

Where the dry solids value of a sample is low (<50%), reporting limits are automatically raised for all determinants analysed on an as-received basis.

Soil Typing	Description
Type 1	Clay - Brown
Type 2	Clay - Grey/Black
Type 3	Sand
Type 4	Top Soil (Standard)
Type 5	Top Soil (High Peat)
Type 6	Made Ground (>50% Clay)
Type 7	Made Ground (>50% Sand)
Type 8	Made Ground (>50% Top Soil)
Type X	Other

Dev code	Description
D	No sampling date provided.
T	No sampling time provided.
Z	Temperature of samples exceeded in transit/storage.
V	Excessive headspace for volatile determinands.
P	Sample submitted without required preservative(s).
C	Incorrect container.
H	Holding time exceeded (sampling to extraction).
X	Holding time exceeded (sampling to receipt).

Note: Where the following information is included in this certificate, it has usually been supplied by the customer: Customer Sample ID, Sample Location, Sample Depth, Sampling Date and Sampling Time. The laboratory shall not be responsible for any information that is supplied by the customer that may affect the validity of results.

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Units 7 & 8, Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

Final Test Report

Envirolab Job Number:	23/09307
Issue Number:	1 Date: 12-Oct-23
Client:	Structural Soils Limited (Hemel Hempstead) 18 Frogmore Road Hemel Hempstead UK HP3 9RT
Project Manager:	[redacted]
Project Name:	Sealink Friston
Project Ref:	563835
Order No:	N/A
Date Samples Received:	20-Sep-23
Date Instructions Received:	20-Sep-23
Date Analysis Completed:	12-Oct-23

Notes - Soil analysis

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones >10mm are removed or excluded from the sample prior to analysis and reported results corrected to a whole sample basis.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis.

Notes - General

This report shall not be reproduced, except in full, without written approval from Envirolab.

Subscript "A" indicates analysis performed on the sample as received. "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve, unless asbestos is found to be present in which case all analysis is performed on the sample as received.

All analysis is performed on the dried and crushed sample for samples with Matrix Code 7 and this supercedes any "A" subscripts.

All analysis is performed on the sample as received for soil samples from outside the European Union and this supercedes any "D" subscripts

For complex, multi-compound analysis, quality control results do not always fall within chart limits for every compound and we have criteria for reporting in these situations.

If results are in italic font they are associated with such quality control failures and may be unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid

Predominant Matrix Codes: 1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample

Secondary Matrix Codes: A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal, E = contains roots/twigs.

IS indicates Insufficient sample for analysis, NDP indicates No Determination Possible and NAD indicates No Asbestos Detected.

Analytical results reflect the quality of the sample at the time of analysis only. Opinions and interpretations expressed are outside the scope of our accreditation.

Please contact us if you need any further information.

HWOL TPH Code: EH_CU_1D_AL: Extractable hydrocarbons - i.e. everything extracted by the solvent(s), Clean-up - e.g. by florisil, silica gel, GC - Single coil gas chromatography, Aliphatics only

Approved by:

[redacted]

Client Manager

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Landfill WAC analysis must not be used for hazardous waste classification purposes. This analysis is only applicable for landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Sample Details						Landfill Waste Acceptance Criteria Limits		
Lab Sample ID	Method	ISO17025	MCERTS	23/09307/2				
Client Sample Number				**102**		Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
Client Sample ID				F22-TP311				
Depth to Top				0.7				
Depth to Bottom								
Date Sampled				18/09/2023				
Sample Type				Soil - ES				
Sample Matrix Code				6A				
Solid Waste Analysis								
pH (pH Units)$_D$	A-T-031	N	N	**8.38**		-	>6	-
ANC to pH 4 (mol/kg)$_D$	A-T-ANC	N	N	**2.12**		-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg)$_D$	A-T-ANC	N	N	**0.3**		-	to be evaluated	to be evaluated
Loss on Ignition (%)$_D$	A-T-030	N	N	**5.1**		-	-	10
Total Organic Carbon (%)$_D$	A-T-032	N	N	**0.41**		3	5	6
PAH Sum of 17 (mg/kg) $_A$	A-T-019	N	N	**<0.08**		100	-	-
Mineral Oil (mg/kg)$_{A\ EH_CU_1D_AL}$	A-T-007	N	N	**<30**		500	-	-
Sum of 7 PCBs (mg/kg)$_A$	A-T-004	N	N	**<0.007**		1	-	-
Sum of BTEX (mg/kg)$_A$	A-T-022	N	N	**<0.01**		6	-	-
Eluate Analysis				**10:1** mg/l	**10:1** mg/kg	**Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)**		
Arsenic	A-T-025	N	N	<0.001	**<0.01**	0.5	2	25
Barium	A-T-025	N	N	0.003	**0.030**	20	100	300
Cadmium	A-T-025	N	N	<0.001	**<0.01**	0.04	1	5
Chromium	A-T-025	N	N	<0.001	**<0.01**	0.5	10	70
Copper	A-T-025	N	N	<0.004	**<0.04**	2	50	100
Mercury	A-T-025	N	N	<0.0005	**<0.005**	0.01	0.2	2
Molybdenum	A-T-025	N	N	0.001	**0.010**	0.5	10	30
Nickel	A-T-025	N	N	<0.002	**<0.02**	0.4	10	40
Lead	A-T-025	N	N	<0.001	**<0.01**	0.5	10	50
Antimony	A-T-025	N	N	<0.001	**<0.01**	0.06	0.7	5
Selenium	A-T-025	N	N	<0.001	**<0.01**	0.1	0.5	7
Zinc	A-T-025	N	N	<0.002	**<0.02**	4	50	200
Chloride	A-T-026	N	N	<1.00	**<10**	800	15000	25000
Fluoride	A-T-026	N	N	0.9	**9.0**	10	150	500
Sulphate as SO_4	A-T-026	N	N	3	**26**	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	57	**570**	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	**<0.1**	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	<2.0	**<200**	500	800	1000
Leach Test Information								
pH (pH Units)	A-T-031	N	N	7.3				
Conductivity (µS/cm)	A-T-037	N	N	115				
Mass Sample (kg)				0.204				
Dry Matter (%)	A-T-044	N	N	85.7				

Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation

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Landfill WAC analysis must not be used for hazardous waste classification purposes. This analysis is only applicable for landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Sample Details						Landfill Waste Acceptance Criteria Limits		
Lab Sample ID	Method	ISO17025	MCERTS	23/09307/8				
Client Sample Number				**104**		Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
Client Sample ID				F22-BH306				
Depth to Top				1				
Depth to Bottom								
Date Sampled				18/09/2023				
Sample Type				Soil - ES				
Sample Matrix Code				5A				
Solid Waste Analysis								
pH (pH Units)$_D$	A-T-031	N	N	**8.38**		-	>6	-
ANC to pH 4 (mol/kg)$_D$	A-T-ANC	N	N	**1.68**		-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg)$_D$	A-T-ANC	N	N	**0.14**		-	to be evaluated	to be evaluated
Loss on Ignition (%)$_D$	A-T-030	N	N	**2.6**		-	-	10
Total Organic Carbon (%)$_D$	A-T-032	N	N	**0.16**		3	5	6
PAH Sum of 17 (mg/kg)$_A$	A-T-019	N	N	**<0.08**		100	-	-
Mineral Oil (mg/kg)$_{A\ EH_CU_1D_AL}$	A-T-007	N	N	**<30**		500	-	-
Sum of 7 PCBs (mg/kg)$_A$	A-T-004	N	N	**<0.007**		1	-	-
Sum of BTEX (mg/kg)$_A$	A-T-022	N	N	**<0.01**		6	-	-
Eluate Analysis				**10:1**	**10:1**	**Limit values for compliance leaching test using**		
				mg/l	**mg/kg**	**BS EN 12457-2 at L/S 10 l/kg (mg/kg)**		
Arsenic	A-T-025	N	N	<0.001	**<0.01**	0.5	2	25
Barium	A-T-025	N	N	0.007	**0.070**	20	100	300
Cadmium	A-T-025	N	N	<0.001	**<0.01**	0.04	1	5
Chromium	A-T-025	N	N	<0.001	**<0.01**	0.5	10	70
Copper	A-T-025	N	N	<0.004	**<0.04**	2	50	100
Mercury	A-T-025	N	N	<0.0005	**<0.005**	0.01	0.2	2
Molybdenum	A-T-025	N	N	0.007	**0.070**	0.5	10	30
Nickel	A-T-025	N	N	<0.002	**<0.02**	0.4	10	40
Lead	A-T-025	N	N	<0.001	**<0.01**	0.5	10	50
Antimony	A-T-025	N	N	<0.001	**<0.01**	0.06	0.7	5
Selenium	A-T-025	N	N	<0.001	**<0.01**	0.1	0.5	7
Zinc	A-T-025	N	N	0.002	**0.020**	4	50	200
Chloride	A-T-026	N	N	3	**25**	800	15000	25000
Fluoride	A-T-026	N	N	0.9	**9.0**	10	150	500
Sulphate as SO_4	A-T-026	N	N	15	**149**	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	48	**480**	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	**<0.1**	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	<2.0	**<200**	500	800	1000
Leach Test Information								
pH (pH Units)	A-T-031	N	N	7.5				
Conductivity (µS/cm)	A-T-037	N	N	96				
Mass Sample (kg)				0.188				
Dry Matter (%)	A-T-044	N	N	93.3				

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Landfill WAC analysis must not be used for hazardous waste classification purposes. This analysis is only applicable for landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Sample Details						Landfill Waste Acceptance Criteria Limits		
Lab Sample ID	Method	ISO17025	MCERTS	23/09307/10				
Client Sample Number				102		Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
Client Sample ID				RedP-BH4				
Depth to Top				0.5				
Depth to Bottom								
Date Sampled				18/09/2023				
Sample Type				Soil - ES				
Sample Matrix Code				1AE				
Solid Waste Analysis								
pH (pH Units)$_D$	A-T-031	N	N	**6.37**		-	>6	-
ANC to pH 4 (mol/kg)$_D$	A-T-ANC	N	N	**<0.01**		-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg)$_D$	A-T-ANC	N	N	**<0.01**		-	to be evaluated	to be evaluated
Loss on Ignition (%)$_D$	A-T-030	N	N	**1.3**		-	-	10
Total Organic Carbon (%)$_D$	A-T-032	N	N	**0.17**		3	5	6
PAH Sum of 17 (mg/kg)$_A$	A-T-019	N	N	**<0.08**		100	-	-
Mineral Oil (mg/kg)$_{A\ EH_CU_1D_AL}$	A-T-007	N	N	**<30**		500	-	-
Sum of 7 PCBs (mg/kg)$_A$	A-T-004	N	N	**<0.007**		1	-	-
Sum of BTEX (mg/kg)$_A$	A-T-022	N	N	**<0.01**		6	-	-
Eluate Analysis				**10:1** mg/l	**10:1** mg/kg	**Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)**		
Arsenic	A-T-025	N	N	0.002	**0.020**	0.5	2	25
Barium	A-T-025	N	N	0.006	**0.060**	20	100	300
Cadmium	A-T-025	N	N	<0.001	**<0.01**	0.04	1	5
Chromium	A-T-025	N	N	<0.001	**<0.01**	0.5	10	70
Copper	A-T-025	N	N	<0.004	**<0.04**	2	50	100
Mercury	A-T-025	N	N	<0.0005	**<0.005**	0.01	0.2	2
Molybdenum	A-T-025	N	N	<0.001	**<0.01**	0.5	10	30
Nickel	A-T-025	N	N	<0.002	**<0.02**	0.4	10	40
Lead	A-T-025	N	N	0.002	**0.020**	0.5	10	50
Antimony	A-T-025	N	N	<0.001	**<0.01**	0.06	0.7	5
Selenium	A-T-025	N	N	<0.001	**<0.01**	0.1	0.5	7
Zinc	A-T-025	N	N	0.005	**0.050**	4	50	200
Chloride	A-T-026	N	N	4	**37**	800	15000	25000
Fluoride	A-T-026	N	N	0.3	**3.0**	10	150	500
Sulphate as SO_4	A-T-026	N	N	8	**84**	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	<20	**<200**	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	**<0.1**	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	<2.0	**<200**	500	800	1000
Leach Test Information								
pH (pH Units)	A-T-031	N	N	7.7				
Conductivity (µS/cm)	A-T-037	N	N	14				
Mass Sample (kg)				0.184				
Dry Matter (%)	A-T-044	N	N	95				

Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation

envirolab
Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 23/09307
Issue Number: 1 **Date:** 12 October, 2023

Client: Structural Soils Limited (Hemel Hempstead)
18 Frogmore Road
Hemel Hempstead
UK
HP3 9RT

Project Manager: [redacted]
Project Name: Sealink Friston
Project Ref: 563835
Order No: N/A
Date Samples Received: 20/09/23
Date Instructions Received: 20/09/23
Date Analysis Completed: 12/10/23

Approved by:

[redacted]
Client Manager

Envirolab Job Number: 23/09307

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09307/2	23/09307/4	23/09307/8	23/09307/10				Units	Limit of Detection	Method ref
Client Sample No	102	102	104	102						
Client Sample ID	F22-TP311	F22-TP310	F22-BH306	RedP-BH4						
Depth to Top	0.70	0.50	1.00	0.50						
Depth To Bottom										
Date Sampled	18-Sep-23	18-Sep-23	18-Sep-23	18-Sep-23						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	6A	6A	5A	1AE						
% Moisture at 105C$_A$	27.6	29.0	26.7	15.7				% w/w	0.1	A-T-044
% Stones >10mm$_A$	10.5	7.2	12.3	3.8				% w/w	0.1	A-T-044
pH$_D^{M\#}$	8.38	8.26	8.38	6.37				pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D^{M\#}$	<0.01	<0.01	0.02	<0.01				g/l	0.01	A-T-026s
Sulphur (total)$_D$	78	71	86	<50				mg/kg	50	A-T-024s
Cyanide (free)$_A^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-042sFCN
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2	<0.2				mg/kg	0.2	A-T-050s
Organic Matter$_D^{M\#}$	0.7	0.8	0.3	0.3				% w/w	0.1	A-T-032s
Total Organic Carbon$_D^{M\#}$	0.41	0.50	0.16	0.17				% w/w	0.03	A-T-032s
Fraction of organic carbon$_D^{\#}$	0.0041	0.0050	0.0016	0.0017				N/A	0.0003	A-T-032s
Arsenic$_D^{M\#}$	4	3	4	5				mg/kg	1	A-T-024s
Barium$_D$	43	64	25	7				mg/kg	1	A-T-024s
Beryllium$_D$	1.0	1.2	0.5	<0.5				mg/kg	0.5	A-T-024s
Boron (water soluble)$_D^{M\#}$	<1.0	<1.0	<1.0	<1.0				mg/kg	1	A-T-027s
Cadmium$_D^{M\#}$	0.5	<0.5	<0.5	<0.5				mg/kg	0.5	A-T-024s
Copper$_D^{M\#}$	16	16	10	2				mg/kg	1	A-T-024s
Chromium$_D^{M\#}$	31	38	18	6				mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1	<1				mg/kg	1	A-T-040s
Chromium (trivalent)	31	38	18	6				mg/kg	1	Calc
Lead$_D^{M\#}$	11	11	5	4				mg/kg	1	A-T-024s
Manganese$_D^{M\#}$	323	590	136	152				mg/kg	1	A-T-024s
Mercury$_D$	0.88	0.41	0.94	<0.17				mg/kg	0.17	A-T-024s
Molybdenum$_D^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-024s
Nickel$_D^{M\#}$	27	37	18	4				mg/kg	1	A-T-024s
Selenium$_D^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-024s
Vanadium$_D^{M\#}$	45	55	26	12				mg/kg	1	A-T-024s
Zinc$_D^{M\#}$	45	47	32	13				mg/kg	5	A-T-024s
Leachate Prep BS EN 12457-1 (2:1) (1 no)$_A$	-	*	-	*						A-T-001
pH (leachable)$_A$	-	7.40	-	7.14				pH	0.01	A-T-031w
Ammoniacal nitrogen as N (leachable)$_A$	-	0.05	-	0.28				mg/l	0.05	A-T-033w
Chloride (leachable)$_A$	-	2.57	-	3.64				mg/l	1	A-T-026w
Fluoride (leachable)$_A$	-	0.69	-	0.43				mg/l	0.1	A-T-026w (F)
Sulphate (leachable)$_A$	-	4.03	-	2.67				mg/l	1	A-T-026w

Envirolab Job Number: 23/09307

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09307/2	23/09307/4	23/09307/8	23/09307/10				Units	Limit of Detection	Method ref
Client Sample No	102	102	104	102						
Client Sample ID	F22-TP311	F22-TP310	F22-BH306	RedP-BH4						
Depth to Top	0.70	0.50	1.00	0.50						
Depth To Bottom										
Date Sampled	18-Sep-23	18-Sep-23	18-Sep-23	18-Sep-23						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	6A	6A	5A	1AE						
Cyanide (free) (leachable)$_A$	-	<0.005	-	<0.005				mg/l	0.005	A-T-042wFCN
Cyanide (total) (leachable)$_A$	-	<0.005	-	<0.005				mg/l	0.005	A-T-042wTCN
Cyanide (complex) (leachable)	-	<0.005	-	<0.005				mg/l	0.005	Calc
Phenol (leachable)$_A$	-	<0.01	-	<0.01				mg/l	0.01	A-T-050w
Cresols (leachable)$_A$	-	<0.01	-	<0.01				mg/l	0.01	A-T-050w
Resorcinol (leachable)$_A$	-	<0.01	-	<0.01				mg/l	0.01	A-T-050w
Catechol (leachable)$_A$	-	<0.01	-	<0.01				mg/l	0.01	A-T-050w
Xylenols & Ethylphenols (leachable)$_A$	-	<0.01	-	<0.01				mg/l	0.01	A-T-050w
Naphthols (leachable)$_A$	-	<0.01	-	<0.01				mg/l	0.01	A-T-050w
Trimethylphenol (leachable)$_A$	-	<0.01	-	<0.01				mg/l	0.01	A-T-050w
Phenols (total by HPLC) (leachable)$_A$	-	<0.01	-	<0.01				mg/l	0.01	A-T-050w
Antimony (leachable)$_A$	-	<1	-	<1				µg/l	1	A-T-025w
Arsenic (leachable)$_A$	-	<1	-	3				µg/l	1	A-T-025w
Boron (leachable)$_A$	-	29	-	62				µg/l	10	A-T-025w
Barium (leachable)$_A$	-	5	-	17				µg/l	1	A-T-025w
Beryllium (leachable)$_A$	-	<1	-	<1				µg/l	1	A-T-025w
Cadmium (leachable)$_A$	-	<1	-	<1				µg/l	1	A-T-025w
Copper (leachable)$_A$	-	<4	-	7				µg/l	4	A-T-025w
Chromium (leachable)$_A$	-	<1	-	<1				µg/l	1	A-T-025w
Chromium (hexavalent) (leachable)$_A$	-	<0.05	-	<0.05				mg/l	0.05	A-T-040w
Chromium (trivalent)	-	<0.05	-	<0.05				mg/l	0.05	Calc
Iron (leachable)$_A$	-	23	-	239				µg/l	10	A-T-025w
Lead (leachable)$_A$	-	<1	-	5				µg/l	1	A-T-025w
Manganese (leachable)$_A$	-	1	-	56				µg/l	1	A-T-025w
Magnesium (leachable)$_A$	-	<1	-	5				mg/l	1	A-T-049w
Mercury (leachable)$_A$	-	<0.1	-	<0.1				µg/l	0.1	A-T-025w
Molybdenum (leachable)$_A$	-	<1	-	2				µg/l	1	A-T-025w
Nickel (leachable)$_A$	-	<2	-	3				µg/l	2	A-T-025w
Selenium (leachable)$_A$	-	<1	-	<1				µg/l	1	A-T-025w
Vanadium (leachable)$_A$	-	<1	-	4				µg/l	1	A-T-025w
Zinc (leachable)$_A$	-	2	-	469				µg/l	2	A-T-025w
Bentazone$_A$	-	-	-	<0.10				mg/kg	0.1	Subcon RPS MH
Cypermethrin$_A$	-	-	-	<0.10				mg/kg	0.1	Subcon RPS MH

Envirolab Job Number: 23/09307

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09307/2	23/09307/4	23/09307/8	23/09307/10				Units	Limit of Detection	Method ref
Client Sample No	102	102	104	102						
Client Sample ID	F22-TP311	F22-TP310	F22-BH306	RedP-BH4						
Depth to Top	0.70	0.50	1.00	0.50						
Depth To Bottom										
Date Sampled	18-Sep-23	18-Sep-23	18-Sep-23	18-Sep-23						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	6A	6A	5A	1AE						
Linuron$_A$	-	-	-	<0.10				mg/kg	0.1	Subcon RPS MH
Alachlor$_A$	-	-	-	<0.02				mg/kg	0.02	Subcon RPS MH
Carbaryl$_A$	-	-	-	<0.10				mg/kg	0.1	Subcon RPS MH
Diuron$_A$	-	-	-	<0.10				mg/kg	0.1	Subcon RPS MH
Isoproturon$_A$	-	-	-	<0.10				mg/kg	0.1	Subcon RPS MH
MCPP; (Mecoprop)$_A$	-	-	-	<0.10				mg/kg	0.1	Subcon RPS MH
Calcium (leachable)$_A$	-	30	-	8				mg/l	1	A-T-049w

Lab Sample ID	23/09307/2	23/09307/4	23/09307/8	23/09307/10				Units	Limit of Detection	Method ref
Client Sample No	102	102	104	102						
Client Sample ID	F22-TP311	F22-TP310	F22-BH306	RedP-BH4						
Depth to Top	0.70	0.50	1.00	0.50						
Depth To Bottom										
Date Sampled	18-Sep-23	18-Sep-23	18-Sep-23	18-Sep-23						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	6A	6A	5A	1AE						
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD	NAD	NAD	NAD						A-T-045
Asbestos Matrix (visual)$_{D}$	-	-	-	-						A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-	-	-						A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A	N/A	N/A						A-T-045
OCP+OPP Combined Pest Suite (incl. Atrazine and Simazine)										
Dichlobenil$_{A}$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Tecnazene$_{A}$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Trifluralin$_{A}$	-	-	-	<0.01				mg/kg	0.01	A-T-056
alpha-Hexachlorocyclohexane (HCH)$_{A}$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Hexachlorobenzene (HCB) $_{A}$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Simazine$_{A}$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Atrazine$_{A}$	-	-	-	<0.01				mg/kg	0.01	A-T-056
beta-Hexachlorocyclohexane (HCH)$_{A}$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Quintozene (PCNB)$_{A}$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Chlorothalonil$_{A}$	-	-	-	<0.01				mg/kg	0.01	A-T-056
delta-Hexachlorocyclohexane (HCH)$_{A}$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Triallate$_{A}$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Heptachlor$_{A}$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Aldrin$_{A}$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Triadimefon$_{A}$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Telodrin$_{A}$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Isodrin$_{A}$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Pendimethalin$_{A}$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Heptachlor epoxide$_{A}$	-	-	-	<0.01				mg/kg	0.01	A-T-056
trans-Chlordane (Gamma)$_{A}$	-	-	-	<0.01				mg/kg	0.01	A-T-056
o,p-DDE (2,4)$_{A}$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Endosulphan I (Alpha)$_{A}$	-	-	-	<0.01				mg/kg	0.01	A-T-056
cis-Chlordane (Alpha)$_{A}$	-	-	-	<0.01				mg/kg	0.01	A-T-056
p,p-DDE (4,4)$_{A}$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Dieldrin$_{A}$	-	-	-	<0.01				mg/kg	0.01	A-T-056

Lab Sample ID	23/09307/2	23/09307/4	23/09307/8	23/09307/10				Units	Limit of Detection	Method ref
Client Sample No	102	102	104	102						
Client Sample ID	F22-TP311	F22-TP310	F22-BH306	RedP-BH4						
Depth to Top	0.70	0.50	1.00	0.50						
Depth To Bottom										
Date Sampled	18-Sep-23	18-Sep-23	18-Sep-23	18-Sep-23						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	6A	6A	5A	1AE						
o,p-DDD (2,4)$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Endrin$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Endosulphan II (Beta)$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056
p,p-DDD (4,4)$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056
o,p-DDT (2,4)$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Endrin Aldehyde$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Endrin Ketone$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Endosulphan Sulphate$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056
p,p-DDT (4,4)$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056
o,p-Methoxychlor$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056
p,p-Methoxychlor$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Permethrin I (cis)$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Permethrin II (trans)$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Dichlorvos$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Mevinphos$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Demeton-S$_A$	-	-	-	<0.50				mg/kg	0.5	A-T-056
Demeton-O$_A$	-	-	-	<0.50				mg/kg	0.5	A-T-056
Phorate$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Dimethoate$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Propetamphos$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Diazinon (Dimpylate)$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Disulfoton$_A$	-	-	-	<0.10				mg/kg	0.1	A-T-056
Chlorpyrifos-methyl$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Parathion (Ethyl Parathion)$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Methyl Parathion$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Pirimiphos-methyl$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Fenitrothion$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Fensulphothion$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Fenthion$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Malathion$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Chlorfenvinphos$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Chlorpyrifos$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Trichloronate$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Prothiofos (Tokuthion)$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056

Envirolab Job Number: 23/09307 **Client Project Name: Sealink Friston**

Client Project Ref: 563835

Lab Sample ID	23/09307/2	23/09307/4	23/09307/8	23/09307/10				Units	Limit of Detection	Method ref
Client Sample No	102	102	104	102						
Client Sample ID	F22-TP311	F22-TP310	F22-BH306	RedP-BH4						
Depth to Top	0.70	0.50	1.00	0.50						
Depth To Bottom										
Date Sampled	18-Sep-23	18-Sep-23	18-Sep-23	18-Sep-23						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	6A	6A	5A	1AE						
Ethion$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Triazophos$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Carbophenothion$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Phosalone$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Azinphos-methyl$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Azinphos-ethyl$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056
Coumaphos$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056
gamma-Hexachlorocyclohexane (HCH)$_A$	-	-	-	<0.01				mg/kg	0.01	A-T-056

Envirolab Job Number: 23/09307

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09307/2	23/09307/4	23/09307/8	23/09307/10				Units	Limit of Detection	Method ref
Client Sample No	102	102	104	102						
Client Sample ID	F22-TP311	F22-TP310	F22-BH306	RedP-BH4						
Depth to Top	0.70	0.50	1.00	0.50						
Depth To Bottom										
Date Sampled	18-Sep-23	18-Sep-23	18-Sep-23	18-Sep-23						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	6A	6A	5A	1AE						
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	<0.02	<0.02	<0.02				mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04	<0.04				mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	<0.04	<0.04	<0.04	<0.04				mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	<0.05	<0.05	<0.05	<0.05				mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	<0.05	<0.05	<0.05				mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07	<0.07				mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	<0.06	<0.06	<0.06	<0.06				mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A$	<0.04	<0.04	<0.04	<0.04				mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	<0.08	<0.08	<0.08	<0.08				mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	<0.03	<0.03	<0.03	<0.03				mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03	<0.03				mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	<0.03	<0.03	<0.03	<0.03				mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	<0.07	<0.07	<0.07	<0.07				mg/kg	0.07	A-T-019s
Total PAH-16MS$_A$	<0.08	<0.08	<0.08	<0.08				mg/kg	0.01	A-T-019s

Envirolab Job Number: 23/09307

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09307/2	23/09307/4	23/09307/8	23/09307/10				Units	Limit of Detection	Method ref
Client Sample No	102	102	104	102						
Client Sample ID	F22-TP311	F22-TP310	F22-BH306	RedP-BH4						
Depth to Top	0.70	0.50	1.00	0.50						
Depth To Bottom										
Date Sampled	18-Sep-23	18-Sep-23	18-Sep-23	18-Sep-23						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	6A	6A	5A	1AE						
Speciated PCB-WHO12										
PCB BZ 81$_A^{M\#}$	-	<0.005	-	<0.005				mg/kg	0.005	A-T-004s
PCB BZ 105$_A^{M\#}$	-	<0.005	-	<0.005				mg/kg	0.005	A-T-004s
PCB BZ 114$_A^{M\#}$	-	<0.005	-	<0.005				mg/kg	0.005	A-T-004s
PCB BZ 118$_A^{M\#}$	-	<0.007	-	<0.007				mg/kg	0.007	A-T-004s
PCB BZ 123$_A^{M\#}$	-	<0.005	-	<0.005				mg/kg	0.005	A-T-004s
PCB BZ 126$_A^{M\#}$	-	<0.005	-	<0.005				mg/kg	0.005	A-T-004s
PCB BZ 156$_A^{M\#}$	-	<0.005	-	<0.005				mg/kg	0.005	A-T-004s
PCB BZ 157$_A^{M\#}$	-	<0.005	-	<0.005				mg/kg	0.005	A-T-004s
PCB BZ 167$_A^{M\#}$	-	<0.005	-	<0.005				mg/kg	0.005	A-T-004s
PCB BZ 169$_A^{M\#}$	-	<0.005	-	<0.005				mg/kg	0.005	A-T-004s
PCB BZ 189$_A^{M\#}$	-	<0.005	-	<0.005				mg/kg	0.005	A-T-004s
PCB BZ 77$_A^{M\#}$	-	<0.005	-	<0.005				mg/kg	0.005	A-T-004s
Total Speciated PCB-WHO12$_A^{M\#}$	-	<0.007	-	<0.007				mg/kg	0.005	A-T-004s

Envirolab Job Number: 23/09307

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09307/2	23/09307/4	23/09307/8	23/09307/10				Units	Limit of Detection	Method ref
Client Sample No	102	102	104	102						
Client Sample ID	F22-TP311	F22-TP310	F22-BH306	RedP-BH4						
Depth to Top	0.70	0.50	1.00	0.50						
Depth To Bottom										
Date Sampled	18-Sep-23	18-Sep-23	18-Sep-23	18-Sep-23						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	6A	6A	5A	1AE						
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	-	-	<0.01				mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	-	-	<0.01				mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	-	-	<1				mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	-	-	<1				mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1	-	-	<1				mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	<1	-	-	<1				mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	<1	-	-	<1				mg/kg	1	A-T-055s
Total Aliphatics$_A$	<1	-	-	<1				mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01	-	-	<0.01				mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01	-	-	<0.01				mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1	-	-	<1				mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1	-	-	<1				mg/kg	1	A-T-055s
Aro >C12-C16$_A^{M\#}$	<1	-	-	<1				mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	<1	-	-	<1				mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	<1	-	-	<1				mg/kg	1	A-T-055s
Total Aromatics$_A$	<1	-	-	<1				mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	<1	-	-	<1				mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01	-	-	<0.01				mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01	-	-	<0.01				mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01	-	-	<0.01				mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01	-	-	<0.01				mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01	-	-	<0.01				mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<0.01	-	-	<0.01				mg/kg	0.01	A-T-022s

Report Notes

General
This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **six weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
Analytical results reflect the quality of the sample at the time of analysis only.
Opinions and Interpretations expressed are outside our scope of accreditation.
The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client.
A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

Key

Superscript "#"	Accredited to ISO 17025
Superscript "M"	Accredited to MCertS
Superscript "U"	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript "A"	Analysis performed on as-received Sample
Subscript "D"	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript "^"	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
N/A	Not applicable

Asbestos
Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis
Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing, and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25ºC / 11550µS/cm @ 20ºC fall outside the accreditation range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Structural Soils Limited (Hemel Hempstead), 18 Frogmore Road, Hemel Hempstead, UK, HP3 9RT

Project: Sealink Friston

Clients Project No: 563835

Project No: 23/09307

Date Received: 20/09/2023 (am)

Cool Box Temperatures (°C): 15.0 - 16.5

Lab Sample ID	23/09307/10
Client Sample No	102
Client Sample ID/Depth	RedP-BH4 0.50m
Date Sampled	18/09/23
Deviation Code	
F	✓

Key
F *Maximum holding time exceeded between sampling date and analysis for analytes listed below*

HOLDING TIME EXCEEDANCES

Lab Sample ID	23/09307/10
Client Sample No	102
Client Sample ID/Depth	RedP-BH4 0.50m
Date Sampled	18/09/23
Bentazone	✓
Cypermethrin	✓
Linuron	✓
Alachlor	✓
Carbaryl	✓
Diuron	✓
Isoproturon	✓
MCPP; (Mecoprop)	✓

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	23/09307/2	23/09307/4	23/09307/8	23/09307/10
Client Sample No	102	102	104	102
Client Sample ID/Depth	F22-TP311 0.70m	F22-TP310 0.50m	F22-BH306 1.00m	RedP-BH4 0.50m
Date Sampled	18/09/23	18/09/23	18/09/23	18/09/23
A-T-004s	25/09/2023	25/09/2023	25/09/2023	25/09/2023
A-T-007s	25/09/2023		25/09/2023	25/09/2023
A-T-019s	27/09/2023	27/09/2023	27/09/2023	27/09/2023
A-T-022s	27/09/2023		27/09/2023	27/09/2023
A-T-024s	28/09/2023	28/09/2023	28/09/2023	28/09/2023
A-T-025w	02/10/2023	02/10/2023	02/10/2023	02/10/2023
A-T-026s	28/09/2023	28/09/2023	28/09/2023	28/09/2023
A-T-026w	02/10/2023	26/09/2023	02/10/2023	02/10/2023
A-T-026w (F)	02/10/2023	26/09/2023	02/10/2023	02/10/2023
A-T-027s	27/09/2023	27/09/2023	27/09/2023	27/09/2023
A-T-030s	27/09/2023		27/09/2023	27/09/2023
A-T-031s	28/09/2023	28/09/2023	28/09/2023	28/09/2023
A-T-031w	02/10/2023	25/09/2023	02/10/2023	02/10/2023
A-T-032s	27/09/2023	27/09/2023	27/09/2023	27/09/2023
A-T-032w	02/10/2023		02/10/2023	02/10/2023
A-T-033w		26/09/2023		26/09/2023
A-T-037w	02/10/2023		02/10/2023	02/10/2023
A-T-040s	28/09/2023	28/09/2023	28/09/2023	28/09/2023
A-T-040w		26/09/2023		26/09/2023
A-T-042sFCN	22/09/2023	22/09/2023	22/09/2023	22/09/2023
A-T-042wFCN		25/09/2023		25/09/2023
A-T-042wTCN		25/09/2023		25/09/2023
A-T-044	29/09/2023	29/09/2023	29/09/2023	29/09/2023
A-T-045	21/09/2023	21/09/2023	21/09/2023	21/09/2023
A-T-049w		25/09/2023		25/09/2023
A-T-050s	25/09/2023	25/09/2023	25/09/2023	25/09/2023
A-T-050w	02/10/2023	26/09/2023	02/10/2023	02/10/2023
A-T-055s	25/09/2023			25/09/2023
A-T-056				27/09/2023
A-T-ANCs	28/09/2023		28/09/2023	28/09/2023
Calc	28/09/2023	28/09/2023	28/09/2023	28/09/2023
Calc-As Recd	27/09/2023			27/09/2023

Lab Sample ID	23/09307/2	23/09307/4	23/09307/8	23/09307/10
Client Sample No	102	102	104	102
Client Sample ID/Depth	F22-TP311 0.70m	F22-TP310 0.50m	F22-BH306 1.00m	RedP-BH4 0.50m
Date Sampled	18/09/23	18/09/23	18/09/23	18/09/23
Calc-no stones	02/10/2023		02/10/2023	02/10/2023
Probe (w)	02/10/2023		02/10/2023	02/10/2023

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

Certificate of Analysis

Report No.: **23-06437-1**

Issue No.: **1**
Date of Issue **11/10/2023**

Customer Details:	Envirolab Ltd, 7 - 8 Sandpits Business Park, Mottram Road, Hyde, Greater Manchester, SK14 3AR, United Kingdom
Customer Contact:	[redacted]
Customer Order No.:	P0752411
Customer Reference:	Not Supplied
Quotation Reference:	Q22-00104 (Issue: 36)
Description:	1 geo sample
Date Received:	22/09/2023
Date Started:	27/09/2023
Date Completed:	11/10/2023
Test Methods:	Details available on request (refer to SOP code against relevant result/s)
Notes:	None

[redacted]

Approved By: [redacted], **LIMS Manager**

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service.
This certificate shall not be reproduced except in full without the prior written approval of the laboratory.
Observations and interpretations are outside of the scope of UKAS accreditation.
Results reported herein relate only to the items supplied to the laboratory for testing.
Results on an Interim Report are not dry-weight corrected.
Where the laboratory is not responsible for the sampling, results apply to the sample(s) as they were received.
The laboratory shall not be responsible for any information that is supplied by the customer that may affect the validity of results.

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Results Summary

Report No.: 23-06437-1

Customer Reference: Not Supplied

Customer Order No: P0752411

Customer Sample No	**23/09307/10**
RPS Sample No	33037
Sample Type	**GEO**
Sample Matrix	SOIL
Sampling Date	18/09/2023

Determinand	CAS No	Codes	SOP	RL	Units	
carbaryl	63-25-2	N	L001	0.1	mg/kg DW	< 0.10
2,4,5-trichlorophenoxyacetic acid (2,4,5-T)	93-76-5	N	L340	0.1	mg/kg DW	< 0.10
2,4,5-TP (Fenoprop)	93-72-1	N	L340	0.1	mg/kg DW	< 0.10
2,4-dichlorophenoxyacetic acid (2,4-D)	94-75-7	N	L340	0.1	mg/kg DW	< 0.10
acifluorfen	50594-66-6	N	L340	0.1	mg/kg DW	< 0.10
bentazone	25057-89-0	N	L340	0.1	mg/kg DW	< 0.10
clopyralid	1702-17-6	N	L340	0.1	mg/kg DW	< 0.10
dichlorprop (2,4-DP)	120-36-5	N	L340	0.1	mg/kg DW	< 0.10
dinoseb (DNBP)	88-85-7	N	L340	0.1	mg/kg DW	< 0.10
2-methyl-4-chlorophenoxyacetic acid (MCPA)	94-74-6	N	L340	0.1	mg/kg DW	< 0.10
mecoprop (MCPP)	7085-19-0	N	L340	0.1	mg/kg DW	< 0.10
pentachlorophenol (PCP)	87-86-5	N	L340	0.1	mg/kg DW	< 0.10
2,3,6-trichlorobenzoic acid (2,3,6-TBA)	50-31-7	N	L340	0.1	mg/kg DW	< 0.10
4-(2,4-dichlorophenoxy)butanoic acid (2,4-DB)	94-82-6	N	L340	0.1	mg/kg DW	< 0.10
4-chlorophenoxyacetic acid (4-CPA)	122-88-3	N	L340	0.1	mg/kg DW	< 0.10
benazolin	3813-05-6	N	L340	0.1	mg/kg DW	< 0.10
bromoxynil	1689-84-5	N	L340	0.1	mg/kg DW	< 0.10
dicamba	1918-00-9	N	L340	0.1	mg/kg DW	< 0.10
diclofop	40843-25-2	N	L340	0.1	mg/kg DW	< 0.10
2-methyl-4,6-dinitrophenol (DNOC)	534-52-1	N	L340	0.1	mg/kg DW	< 0.10
flamprop	58667-63-3	N	L340	0.1	mg/kg DW	< 0.10
fluroxypyr	69377-81-7	N	L340	0.1	mg/kg DW	< 0.10
ioxynil	1689-83-4	N	L340	0.1	mg/kg DW	< 0.10
MCPB	94-81-5	N	L340	0.1	mg/kg DW	< 0.10
picloram	1918-02-1	N	L340	0.1	mg/kg DW	< 0.10
triclopyr	55335-06-3	N	L340	0.1	mg/kg DW	< 0.10
alachlor	15972-60-8	N	G029	0.02	mg/kg AR	< 0.02
chloroxuron	1982-47-4	N	L025	0.1	mg/kg DW	< 0.10
chlortoluron	15545-48-9	N	L025	0.1	mg/kg DW	< 0.10
diflubenzuron	35367-38-5	N	L025	0.1	mg/kg DW	< 0.10
dimefuron	34205-21-5	N	L025	0.1	mg/kg DW	< 0.10
diuron	330-54-1	N	L025	0.1	mg/kg DW	< 0.10
isoproturon	34123-59-6	N	L025	0.1	mg/kg DW	< 0.10
linuron	330-55-2	N	L025	0.1	mg/kg DW	< 0.10
methabenzthiazuron	18691-97-9	N	L025	0.1	mg/kg DW	< 0.10
metoxuron	19937-59-8	N	L025	0.1	mg/kg DW	< 0.10
monolinuron	1746-81-2	N	L025	0.1	mg/kg DW	< 0.10
monuron	150-68-5	N	L025	0.1	mg/kg DW	< 0.10

Results Summary

Report No.: 23-06437-1

Customer Reference: Not Supplied

Customer Order No: P0752411

Customer Sample No	**23/09307/10**
RPS Sample No	33037
Sample Type	**GEO**
Sample Matrix	SOIL
Sampling Date	18/09/2023

Determinand	CAS No	Codes	SOP	RL	Units	
pencycuron	66063-05-6	N	L025	0.1	mg/kg DW	< 0.10
bifenthrin	82657-04-3	N	G127	0.1	mg/kg DW	< 0.10
cyfluthrin, total	68359-37-5	N	G127	0.1	mg/kg DW	< 0.10
cyhalothrin, total	68085-85-8	N	G127	0.1	mg/kg DW	< 0.10
cypermethrin, total	52315-07-8	N	G127	0.1	mg/kg DW	< 0.10
deltamethrin	52918-63-5	N	G127	0.1	mg/kg DW	< 0.10
fenvalerate	51630-58-1	N	G127	0.1	mg/kg DW	< 0.10
permethrin, total	52645-53-1	N	G127	0.1	mg/kg DW	< 0.10
resmethrin	10453-86-8	N	G127	0.1	mg/kg DW	< 0.10
tetramethrin	7696-12-0	N	G127	0.1	mg/kg DW	< 0.10

Deviating Samples

Report No.: 23-06437-1

Customer Reference: Not Supplied

Customer Order No: P0752411

Our policy on Deviating Samples has been implemented in accordance with UKAS Policy on Deviating Samples (TPS63).
RPS is not responsible for the integrity of samples as received, unless RPS personnel performed the sampling. Samples submitted may be declared to be deviating.
Where applicable the analysis method remains UKAS accredited, however results reported for a deviating sample may be compromised.
Where no sampling date was supplied, samples have been declared to be deviating. If the date can be supplied, results may be reissued if assessed not deviating.
Where the sample container used was unsuitable or broken, the sample is flagged as deviating and re-sampling/re-submisson may be required.

RPS No.	Customer No.	Customer ID	Date Sampled	Containers Received	Deviating	Reason for Deviation
33037	23/09307/10		18/09/2023	plastic tub	No	

Report No.: 23-06437-1

Type	Matrix Code	Description
Food	CEREALPROD	Cereals, grains & products
Food	DRIEDFRUIT	Dried fruits
Food	FRIEDBAKED	Fried or baked food
Food	LEGUME	Legumes
Food	MEAT	Meat
Food	POWDERED	Powdered food
Food	PULSE	Pulses (dried legumes)
Food	VEGETABLES	Vegetables
Gas	TDTUBE	TD Tube
Gas	TENAX	Tenax Tube
Gas	TUBE	Tube
Gas	VAPOUR	Gas
Geological	SED_MAR	Marine Sediment
Geological	SED_RIV	River Sediment
Geological	SLUDG_SOL	Sludge (solid only)
Geological	SOIL	Soil
Liquid	BEVERAGE	Beverage
Liquid	BLOOD	Blood
Liquid	CONDENSATE	Condensate
Liquid	FORMULATN	Formula
Liquid	LEACHATE	Leachate
Liquid	OIL/GREASE	Oil or grease
Liquid	SLUDG_LIQ	Sludge (liquid only)
Liquid	SOLVENT	Solvent
Liquid	URINE	Urine
Sludge	SLUDG_WHL	Sludge for bulk route
Solid	BADGE	Badge
Solid	BEDDING	Bedding
Solid	BIOTA	Biota (general)
Solid	BIOTA_F	Biota (fish)
Solid	BIOTA_SF	Biota (shellfish)
Solid	CONSTRCTN	Construction materials
Solid	FABRIC	Fabrics & furnishing materials
Solid	FEED	Animal feed
Solid	FERTILISER	Fertiliser
Solid	FILTER	Filter
Solid	FOAM	Solid foam material
Solid	PACKAGING	Packaging material
Solid	PLANT	Plant (vegetation)
Solid	POWDER	Powder
Solid	SWAB	Swab
Water	BAL	Ballast Water
Water	BIL	Bilge Water
Water	DW	Drinking Water
Water	EFFLUENT	Effluent
Water	GW	Ground Water
Water	INFLUENT	Influent
Water	SALTW	Salt Water
Water	SW	Surface Water
Water	TW	Tap Water
Water	W	Water

Report No.: 23-06437-1

Key Code	Description
N	Not Accredited Test
U	UKAS Accredited Test - UKAS accreditation is only implied if the report carries the UKAS logo
UF	UKAS Flexible Scope Test
M	MCERTS Accredited Test - MCERTS accreditation is only implied if the report carries the MCERTS logo
O	Marine Management Organisation (MMO) Validated
SN	Subcontracted to approved laboratory not accredited for the test
SU	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
SIN	Subcontracted to internal RPS Group laboratory not accredited for the test
SIU	Subcontracted to internal RPS Group laboratory UKAS Accredited for the test
SIM	Subcontracted to internal RPS Group laboratory MCERTS/UKAS Accredited for the test
I/S (in results)	Insufficient Sample
U/S (in results)	Unsuitable Sample
S/C (in results)	See Comments
ND (in results)	Not Detected
L (in results)	Result is outside normal limits
DW (in units)	Results are expressed on a dry weight basis

Sample Type	Sample Retention and Disposal Period
Foodstuff	1 month (if frozen) from the issue date of this report
Waters	2 weeks from the issue date of this report
Other Liquids	1 month from the issue date of this report
Solids / Soils	1 month from the issue date of this report
Sediments	1 month from the issue date of this report

Note: Sample retention may be subject to agreement with the customer for particular projects

Where the dry solids value of a sample is low (<50%), reporting limits are automatically raised for all determinants analysed on an as-received basis.

Soil Typing	Description
Type 1	Clay - Brown
Type 2	Clay - Grey/Black
Type 3	Sand
Type 4	Top Soil (Standard)
Type 5	Top Soil (High Peat)
Type 6	Made Ground (>50% Clay)
Type 7	Made Ground (>50% Sand)
Type 8	Made Ground (>50% Top Soil)
Type X	Other

Dev code	Description
D	No sampling date provided.
T	No sampling time provided.
Z	Temperature of samples exceeded in transit/storage.
V	Excessive headspace for volatile determinands.
P	Sample submitted without required preservative(s).
C	Incorrect container.
H	Holding time exceeded (sampling to extraction).
X	Holding time exceeded (sampling to receipt).

Note: Where the following information is included in this certificate, it has usually been supplied by the customer: Customer Sample ID, Sample Location, Sample Depth, Sampling Date and Sampling Time. The laboratory shall not be responsible for any information that is supplied by the customer that may affect the validity of results.

envirolab
Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 23/09311
Issue Number: 1 **Date:** 29 September, 2023

Client: Structural Soils Limited (Hemel Hempstead)
18 Frogmore Road
Hemel Hempstead
UK
HP3 9RT

Project Manager: [redacted]
Project Name: Sealink Friston
Project Ref: 563835
Order No: N/A
Date Samples Received: 20/09/23
Date Instructions Received: 20/09/23
Date Analysis Completed: 29/09/23

Approved by:

[redacted]
[redacted]
Client Manager

Envirolab Job Number: 23/09311

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09311/2							Units	Limit of Detection	Method ref
Client Sample No	102									
Client Sample ID	F22-TP220									
Depth to Top	0.5									
Depth To Bottom										
Date Sampled	13-Sep-23									
Sample Type	SOIL - ES									
Sample Matrix Code	1									
% Moisture at 105C$_A$	14.6							% w/w	0.1	A-T-044
% Stones >10mm$_A$	<0.1							% w/w	0.1	A-T-044
pH$_D^{M\#}$	8.03							pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D^{M\#}$	<0.01							g/l	0.01	A-T-026s
Sulphur (total)$_D$	<50							mg/kg	50	A-T-024s
Cyanide (free)$_A^{M\#}$	<1							mg/kg	1	A-T-042sFCN
Phenols - Total by HPLC$_A$	<0.2							mg/kg	0.2	A-T-050s
Organic Matter$_D^{M\#}$	0.5							% w/w	0.1	A-T-032s
Total Organic Carbon$_D^{M\#}$	0.27							% w/w	0.03	A-T-032s
Fraction of organic carbon$_D^{\#}$	0.0027							N/A	0.0003	A-T-032s
Arsenic$_D^{M\#}$	4							mg/kg	1	A-T-024s
Barium$_D$	13							mg/kg	1	A-T-024s
Beryllium$_D$	<0.5							mg/kg	0.5	A-T-024s
Boron (water soluble)$_D^{M\#}$	<1.0							mg/kg	1	A-T-027s
Cadmium$_D^{M\#}$	<0.5							mg/kg	0.5	A-T-024s
Copper$_D^{M\#}$	3							mg/kg	1	A-T-024s
Chromium$_D^{M\#}$	7							mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1							mg/kg	1	A-T-040s
Chromium (trivalent)	7							mg/kg	1	Calc
Lead$_D^{M\#}$	8							mg/kg	1	A-T-024s
Manganese$_D^{M\#}$	207							mg/kg	1	A-T-024s
Mercury$_D$	<0.17							mg/kg	0.17	A-T-024s
Molybdenum$_D^{M\#}$	<1							mg/kg	1	A-T-024s
Nickel$_D^{M\#}$	5							mg/kg	1	A-T-024s
Selenium$_D^{M\#}$	<1							mg/kg	1	A-T-024s
Vanadium$_D^{M\#}$	13							mg/kg	1	A-T-024s
Zinc$_D^{M\#}$	17							mg/kg	5	A-T-024s

Envirolab Job Number: 23/09311

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09311/2							Units	Limit of Detection	Method ref
Client Sample No	102									
Client Sample ID	F22-TP220									
Depth to Top	0.5									
Depth To Bottom										
Date Sampled	13-Sep-23									
Sample Type	SOIL - ES									
Sample Matrix Code	1									
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD									A-T-045
Asbestos Matrix (visual)$_{D}$	-									A-T-045
Asbestos Matrix (microscope)$_{D}$	-									A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A									A-T-045

Envirolab Job Number: 23/09311

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09311/2							Units	Limit of Detection	Method ref
Client Sample No	102									
Client Sample ID	F22-TP220									
Depth to Top	0.5									
Depth To Bottom										
Date Sampled	13-Sep-23									
Sample Type	SOIL - ES									
Sample Matrix Code	1									
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02							mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	<0.04							mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	<0.04							mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	<0.05							mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05							mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07							mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	<0.06							mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A$	<0.04							mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	<0.08							mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	<0.03							mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03^U							mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	<0.03							mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	<0.07							mg/kg	0.07	A-T-019s
Total PAH-16MS$_A$	<0.08							mg/kg	0.01	A-T-019s

Report Notes

General
This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **six weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
Analytical results reflect the quality of the sample at the time of analysis only.
Opinions and Interpretations expressed are outside our scope of accreditation.
The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client.
A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

Key

Superscript "#"	Accredited to ISO 17025
Superscript "M"	Accredited to MCertS
Superscript "U"	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript "A"	Analysis performed on as-received Sample
Subscript "D"	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript "^"	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
N/A	Not applicable

Asbestos
Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis
Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing, and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25ºC / 11550µS/cm @ 20ºC fall outside the accreditation range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Structural Soils Limited (Hemel Hempstead), 18 Frogmore Road, Hemel Hempstead, UK, HP3 9RT

Project: Sealink Friston

Clients Project No: 563835

Project No: 23/09311

Date Received: 20/09/2023 (am)

Cool Box Temperatures (°C): 16.2

NO DEVIATIONS IDENTIFIED

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	23/09311/2
Client Sample No	102
Client Sample ID/Depth	F22-TP220 0.5m
Date Sampled	13/09/23
A-T-019s	26/09/2023
A-T-024s	28/09/2023
A-T-026s	28/09/2023
A-T-027s	28/09/2023
A-T-031s	28/09/2023
A-T-032s	27/09/2023
A-T-040s	28/09/2023
A-T-042sFCN	26/09/2023
A-T-044	29/09/2023
A-T-045	21/09/2023
A-T-050s	25/09/2023
Calc	28/09/2023

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

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Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 23/09312
Issue Number: 1 **Date:** 03 October, 2023

Client: Structural Soils Limited (Hemel Hempstead)
18 Frogmore Road
Hemel Hempstead
UK
HP3 9RT

Project Manager: [redacted]
Project Name: Sealink Friston
Project Ref: 563835
Order No: N/A
Date Samples Received: 20/09/23
Date Instructions Received: 20/09/23
Date Analysis Completed: 03/10/23

Approved by:

[redacted]
Client Manager

envirolab

Envirolab Job Number: 23/09312

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09312/1	23/09312/2						Units	Limit of Detection	Method ref
Client Sample No	101	102								
Client Sample ID	F22-TP313	F22-TP313								
Depth to Top	0.20	0.50								
Depth To Bottom										
Date Sampled	14-Sep-23	14-Sep-23								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	6AE	6AE								
% Moisture at 105C$_A$	29.7	38.1						% w/w	0.1	A-T-044
% Stones >10mm$_A$	2.2	<0.1						% w/w	0.1	A-T-044
pH$_D^{M\#}$	8.16	8.36						pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D^{M\#}$	<0.01	<0.01						g/l	0.01	A-T-026s
Sulphur (total)$_D$	200	121						mg/kg	50	A-T-024s
Cyanide (free)$_A^{M\#}$	<1	<1						mg/kg	1	A-T-042sFCN
Phenols - Total by HPLC$_A$	<0.2	<0.2						mg/kg	0.2	A-T-050s
Organic Matter$_D^{M\#}$	2.2	1.2						% w/w	0.1	A-T-032s
Total Organic Carbon$_D^{M\#}$	1.24	0.70						% w/w	0.03	A-T-032s
Fraction of organic carbon$_D^{\#}$	0.0124	0.0070						N/A	0.0003	A-T-032s
Arsenic$_D^{M\#}$	4	4						mg/kg	1	A-T-024s
Barium$_D$	51	45						mg/kg	1	A-T-024s
Beryllium$_D$	0.8	1.1						mg/kg	0.5	A-T-024s
Boron (water soluble)$_D^{M\#}$	1.3	<1.0						mg/kg	1	A-T-027s
Cadmium$_D^{M\#}$	<0.5	0.5						mg/kg	0.5	A-T-024s
Copper$_D^{M\#}$	14	16						mg/kg	1	A-T-024s
Chromium$_D^{M\#}$	30	32						mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1						mg/kg	1	A-T-040s
Chromium (trivalent)	30	32						mg/kg	1	Calc
Lead$_D^{M\#}$	20	12						mg/kg	1	A-T-024s
Manganese$_D^{M\#}$	313	372						mg/kg	1	A-T-024s
Mercury$_D$	<0.17	1.16						mg/kg	0.17	A-T-024s
Molybdenum$_D^{M\#}$	<1	<1						mg/kg	1	A-T-024s
Nickel$_D^{M\#}$	21	29						mg/kg	1	A-T-024s
Selenium$_D^{M\#}$	<1	<1						mg/kg	1	A-T-024s
Vanadium$_D^{M\#}$	45	46						mg/kg	1	A-T-024s
Zinc$_D^{M\#}$	50	48						mg/kg	5	A-T-024s

Envirolab Job Number: 23/09312

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09312/1	23/09312/2						Units	Limit of Detection	Method ref
Client Sample No	101	102								
Client Sample ID	F22-TP313	F22-TP313								
Depth to Top	0.20	0.50								
Depth To Bottom										
Date Sampled	14-Sep-23	14-Sep-23								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	6AE	6AE								
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD	NAD								A-T-045
Asbestos Matrix (visual)$_{D}$	-	-								A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-								A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A								A-T-045

Envirolab Job Number: 23/09312

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09312/1	23/09312/2						Units	Limit of Detection	Method ref
Client Sample No	101	102								
Client Sample ID	F22-TP313	F22-TP313								
Depth to Top	0.20	0.50								
Depth To Bottom										
Date Sampled	14-Sep-23	14-Sep-23								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	6AE	6AE								
PAH-16MS										
Acenaphthene$_{A}^{M\#}$	<0.01	<0.01						mg/kg	0.01	A-T-019s
Acenaphthylene$_{A}^{M\#}$	<0.01	<0.01						mg/kg	0.01	A-T-019s
Anthracene$_{A}^{M\#}$	<0.02	<0.02						mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_{A}^{M\#}$	<0.04	<0.04						mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_{A}^{M\#}$	<0.04	<0.04						mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_{A}^{M\#}$	<0.05	<0.05						mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_{A}^{M\#}$	<0.05	<0.05						mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_{A}^{M\#}$	<0.07	<0.07						mg/kg	0.07	A-T-019s
Chrysene$_{A}^{M\#}$	<0.06	<0.06						mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_{A}$	<0.04	<0.04						mg/kg	0.04	A-T-019s
Fluoranthene$_{A}^{M\#}$	<0.08	<0.08						mg/kg	0.08	A-T-019s
Fluorene$_{A}^{M\#}$	<0.01	<0.01						mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_{A}^{M\#}$	<0.03	<0.03						mg/kg	0.03	A-T-019s
Naphthalene $_{A}^{M\#}$	<0.03^{U}	<0.03						mg/kg	0.03	A-T-019s
Phenanthrene$_{A}^{M\#}$	<0.03	<0.03						mg/kg	0.03	A-T-019s
Pyrene$_{A}^{M\#}$	<0.07	<0.07						mg/kg	0.07	A-T-019s
Total PAH-16MS$_{A}$	<0.08	<0.08						mg/kg	0.01	A-T-019s

Envirolab Job Number: 23/09312

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09312/1	23/09312/2						Units	Limit of Detection	Method ref
Client Sample No	101	102								
Client Sample ID	F22-TP313	F22-TP313								
Depth to Top	0.20	0.50								
Depth To Bottom										
Date Sampled	14-Sep-23	14-Sep-23								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	6AE	6AE								
Speciated PCB-WHO12										
PCB BZ 81$_{A}^{M\#}$	-	<0.005						mg/kg	0.005	A-T-004s
PCB BZ 105$_{A}^{M\#}$	-	<0.005						mg/kg	0.005	A-T-004s
PCB BZ 114$_{A}^{M\#}$	-	<0.005						mg/kg	0.005	A-T-004s
PCB BZ 118$_{A}^{M\#}$	-	<0.007						mg/kg	0.007	A-T-004s
PCB BZ 123$_{A}^{M\#}$	-	<0.005						mg/kg	0.005	A-T-004s
PCB BZ 126$_{A}^{M\#}$	-	<0.005						mg/kg	0.005	A-T-004s
PCB BZ 156$_{A}^{M\#}$	-	<0.005						mg/kg	0.005	A-T-004s
PCB BZ 157$_{A}^{M\#}$	-	<0.005						mg/kg	0.005	A-T-004s
PCB BZ 167$_{A}^{M\#}$	-	<0.005						mg/kg	0.005	A-T-004s
PCB BZ 169$_{A}^{M\#}$	-	<0.005						mg/kg	0.005	A-T-004s
PCB BZ 189$_{A}^{M\#}$	-	<0.005						mg/kg	0.005	A-T-004s
PCB BZ 77$_{A}^{M\#}$	-	<0.005						mg/kg	0.005	A-T-004s
Total Speciated PCB-WHO12$_{A}^{M\#}$	-	<0.007						mg/kg	0.005	A-T-004s

Report Notes

General
This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **six weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
Analytical results reflect the quality of the sample at the time of analysis only.
Opinions and Interpretations expressed are outside our scope of accreditation.
The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client.
A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

Key

Superscript "#"	Accredited to ISO 17025
Superscript "M"	Accredited to MCertS
Superscript "U"	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript "A"	Analysis performed on as-received Sample
Subscript "D"	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript "^"	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
N/A	Not applicable

Asbestos
Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis
Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing, and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25ºC / 11550µS/cm @ 20ºC fall outside the accreditation range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Structural Soils Limited (Hemel Hempstead), 18 Frogmore Road, Hemel Hempstead, UK, HP3 9RT

Project: Sealink Friston

Clients Project No: 563835

Project No: 23/09312

Date Received: 20/09/2023 (am)

Cool Box Temperatures (°C): 16.2

NO DEVIATIONS IDENTIFIED

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	23/09312/1	23/09312/2
Client Sample No	101	102
Client Sample ID/Depth	F22-TP313 0.20m	F22-TP313 0.50m
Date Sampled	14/09/23	14/09/23
A-T-004s		03/10/2023
A-T-019s	26/09/2023	01/10/2023
A-T-024s	28/09/2023	28/09/2023
A-T-026s	28/09/2023	28/09/2023
A-T-027s	28/09/2023	28/09/2023
A-T-031s	28/09/2023	28/09/2023
A-T-032s	27/09/2023	27/09/2023
A-T-040s	28/09/2023	28/09/2023
A-T-042sFCN	22/09/2023	26/09/2023
A-T-044	02/10/2023	03/10/2023
A-T-045	21/09/2023	25/09/2023
A-T-050s	26/09/2023	26/09/2023
Calc	28/09/2023	28/09/2023

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

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Units 7 & 8, Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

Final Test Report

Envirolab Job Number:	23/09376
Issue Number:	1 Date: 12-Oct-23
Client:	Structural Soils Limited (Hemel Hempstead) 18 Frogmore Road Hemel Hempstead UK HP3 9RT
Project Manager:	[redacted]
Project Name:	Sealink Friston
Project Ref:	563835
Order No:	N/A
Date Samples Received:	22-Sep-23
Date Instructions Received:	22-Sep-23
Date Analysis Completed:	12-Oct-23

Notes - Soil analysis

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones >10mm are removed or excluded from the sample prior to analysis and reported results corrected to a whole sample basis.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis.

Notes - General

This report shall not be reproduced, except in full, without written approval from Envirolab.

Subscript "A" indicates analysis performed on the sample as received. "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve, unless asbestos is found to be present in which case all analysis is performed on the sample as received.

All analysis is performed on the dried and crushed sample for samples with Matrix Code 7 and this supercedes any "A" subscripts.

All analysis is performed on the sample as received for soil samples from outside the European Union and this supercedes any "D" subscripts

For complex, multi-compound analysis, quality control results do not always fall within chart limits for every compound and we have criteria for reporting in these situations.

If results are in italic font they are associated with such quality control failures and may be unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid

Predominant Matrix Codes: 1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample

Secondary Matrix Codes: A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal, E = contains roots/twigs.

IS indicates Insufficient sample for analysis, NDP indicates No Determination Possible and NAD indicates No Asbestos Detected.

Analytical results reflect the quality of the sample at the time of analysis only. Opinions and interpretations expressed are outside the scope of our accreditation.

Please contact us if you need any further information.

HWOL TPH Code: EH_CU_1D_AL: Extractable hydrocarbons - i.e. everything extracted by the solvent(s), Clean-up - e.g. by florisil, silica gel, GC - Single coil gas chromatography, Aliphatics only

Approved by:

[redacted]

[redacted]
Client Manager

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Landfill WAC analysis must not be used for hazardous waste classification purposes. This analysis is only applicable for landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Sample Details						Landfill Waste Acceptance Criteria Limits		
Lab Sample ID	Method	ISO17025	MCERTS	23/09376/2				
Client Sample Number				102		Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
Client Sample ID				F22-TP312				
Depth to Top				0.5				
Depth to Bottom								
Date Sampled				20/09/2023				
Sample Type				Soil - ES				
Sample Matrix Code				6A				
Solid Waste Analysis								
pH (pH Units)$_D$	A-T-031	N	N	**8.34**		-	>6	-
ANC to pH 4 (mol/kg)$_D$	A-T-ANC	N	N	**2.84**		-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg)$_D$	A-T-ANC	N	N	**0.29**		-	to be evaluated	to be evaluated
Loss on Ignition (%)$_D$	A-T-030	N	N	**5.3**		-	-	10
Total Organic Carbon (%)$_D$	A-T-032	N	N	**0.41**		3	5	6
PAH Sum of 17 (mg/kg) $_A$	A-T-019	N	N	**<0.08**		100	-	-
Mineral Oil (mg/kg)$_{A\ EH_CU_1D_AL}$	A-T-007	N	N	**<10**		500	-	-
Sum of 7 PCBs (mg/kg)$_A$	A-T-004	N	N	**<0.007**		1	-	-
Sum of BTEX (mg/kg)$_A$	A-T-022	N	N	**<0.01**		6	-	-
Eluate Analysis				**10:1**	**10:1**	**Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)**		
				mg/l	**mg/kg**			
Arsenic	A-T-025	N	N	0.001	**0.010**	0.5	2	25
Barium	A-T-025	N	N	0.013	**0.130**	20	100	300
Cadmium	A-T-025	N	N	<0.001	**<0.01**	0.04	1	5
Chromium	A-T-025	N	N	<0.001	**<0.01**	0.5	10	70
Copper	A-T-025	N	N	<0.004	**<0.04**	2	50	100
Mercury	A-T-025	N	N	<0.0005	**<0.005**	0.01	0.2	2
Molybdenum	A-T-025	N	N	<0.001	**<0.01**	0.5	10	30
Nickel	A-T-025	N	N	<0.002	**<0.02**	0.4	10	40
Lead	A-T-025	N	N	0.002	**0.020**	0.5	10	50
Antimony	A-T-025	N	N	<0.001	**<0.01**	0.06	0.7	5
Selenium	A-T-025	N	N	<0.001	**<0.01**	0.1	0.5	7
Zinc	A-T-025	N	N	<0.002	**<0.02**	4	50	200
Chloride	A-T-026	N	N	4	**35**	800	15000	25000
Fluoride	A-T-026	N	N	0.8	**8.0**	10	150	500
Sulphate as SO_4	A-T-026	N	N	12	**120**	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	55	**550**	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	**<0.1**	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	<2.0	**<200**	500	800	1000
Leach Test Information								
pH (pH Units)	A-T-031	N	N	7.3				
Conductivity (µS/cm)	A-T-037	N	N	110				
Mass Sample (kg)				0.214				
Dry Matter (%)	A-T-044	N	N	81.9				

Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation

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Landfill WAC analysis must not be used for hazardous waste classification purposes. This analysis is only applicable for landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Sample Details						Landfill Waste Acceptance Criteria Limits		
Lab Sample ID	Method	ISO17025	MCERTS	23/09376/4				
Client Sample Number				102		Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
Client Sample ID				F22-TP316				
Depth to Top				0.5				
Depth to Bottom								
Date Sampled				20/09/2023				
Sample Type				Soil - ES				
Sample Matrix Code				6A				
Solid Waste Analysis								
pH (pH Units)$_D$	A-T-031	N	N	**7.67**		-	>6	-
ANC to pH 4 (mol/kg)$_D$	A-T-ANC	N	N	**0.1**		-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg)$_D$	A-T-ANC	N	N	**0.05**		-	to be evaluated	to be evaluated
Loss on Ignition (%)$_D$	A-T-030	N	N	**5.2**		-	-	10
Total Organic Carbon (%)$_D$	A-T-032	N	N	**0.34**		3	5	6
PAH Sum of 17 (mg/kg) $_A$	A-T-019	N	N	**<0.08**		100	-	-
Mineral Oil (mg/kg)$_{A\ EH_CU_1D_AL}$	A-T-007	N	N	**<10**		500	-	-
Sum of 7 PCBs (mg/kg)$_A$	A-T-004	N	N	**<0.007**		1	-	-
Sum of BTEX (mg/kg)$_A$	A-T-022	N	N	**<0.01**		6	-	-
Eluate Analysis				**10:1**	**10:1**	**Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)**		
				mg/l	**mg/kg**			
Arsenic	A-T-025	N	N	<0.001	**<0.01**	0.5	2	25
Barium	A-T-025	N	N	0.010	**0.100**	20	100	300
Cadmium	A-T-025	N	N	<0.001	**<0.01**	0.04	1	5
Chromium	A-T-025	N	N	<0.001	**<0.01**	0.5	10	70
Copper	A-T-025	N	N	<0.004	**<0.04**	2	50	100
Mercury	A-T-025	N	N	<0.0005	**<0.005**	0.01	0.2	2
Molybdenum	A-T-025	N	N	0.001	**0.010**	0.5	10	30
Nickel	A-T-025	N	N	<0.002	**<0.02**	0.4	10	40
Lead	A-T-025	N	N	<0.001	**<0.01**	0.5	10	50
Antimony	A-T-025	N	N	<0.001	**<0.01**	0.06	0.7	5
Selenium	A-T-025	N	N	<0.001	**<0.01**	0.1	0.5	7
Zinc	A-T-025	N	N	0.002	**0.020**	4	50	200
Chloride	A-T-026	N	N	1	**15**	800	15000	25000
Fluoride	A-T-026	N	N	0.7	**7.0**	10	150	500
Sulphate as SO_4	A-T-026	N	N	8	**80**	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	50	**500**	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	**<0.1**	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	<2.0	**<200**	500	800	1000
Leach Test Information								
pH (pH Units)	A-T-031	N	N	7.4				
Conductivity (µS/cm)	A-T-037	N	N	99				
Mass Sample (kg)				0.208				
Dry Matter (%)	A-T-044	N	N	84.3				

Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation

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Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 23/09376
Issue Number: 1 **Date:** 12 October, 2023

Client: Structural Soils Limited (Hemel Hempstead)
18 Frogmore Road
Hemel Hempstead
UK
HP3 9RT

Project Manager: [redacted]
Project Name: Sealink Friston
Project Ref: 563835
Order No: N/A
Date Samples Received: 22/09/23
Date Instructions Received: 22/09/23
Date Analysis Completed: 12/10/23

Approved by:

[redacted]
[redacted]
Client Manager

Envirolab Job Number: 23/09376

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09376/2	23/09376/4	23/09376/6					Units	Limit of Detection	Method ref
Client Sample No	102	102	102							
Client Sample ID	F22-TP312	F22-TP316	F22-TP317							
Depth to Top	0.50	0.50	0.50							
Depth To Bottom										
Date Sampled	20-Sep-23	20-Sep-23	20-Sep-23							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	6A	6A	3							
% Moisture at 105C$_A$	28.2	28.7	27.6					% w/w	0.1	A-T-044
% Stones >10mm$_A$	<0.1	<0.1	<0.1					% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	8.34	7.67	8.40					pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	<0.01	<0.01	<0.01					g/l	0.01	A-T-026s
Sulphur (total)$_D$	96	79	54					mg/kg	50	A-T-024s
Cyanide (free)$_A$$^{M\#}$	<1	<1	<1					mg/kg	1	A-T-042sFCN
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2					mg/kg	0.2	A-T-050s
Organic Matter$_D$$^{M\#}$	0.7	0.6	0.3					% w/w	0.1	A-T-032s
Total Organic Carbon$_D$$^{M\#}$	0.41	0.34	0.20					% w/w	0.03	A-T-032s
Fraction of organic carbon$_D$$^{\#}$	0.0041	0.0034	0.0020					N/A	0.0003	A-T-032s
Arsenic$_D$$^{M\#}$	4	3	3					mg/kg	1	A-T-024s
Barium$_D$	50	60	44					mg/kg	1	A-T-024s
Beryllium$_D$	1.1	1.2	0.8					mg/kg	0.5	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0	<1.0					mg/kg	1	A-T-027s
Cadmium$_D$$^{M\#}$	0.8	0.8	0.6					mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	18	17	10					mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	35	42	31					mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1					mg/kg	1	A-T-040s
Chromium (trivalent)	35	42	31					mg/kg	1	Calc
Lead$_D$$^{M\#}$	10	12	10					mg/kg	1	A-T-024s
Manganese$_D$$^{M\#}$	404	474	285					mg/kg	1	A-T-024s
Mercury$_D$	0.81	<0.17	<0.17					mg/kg	0.17	A-T-024s
Molybdenum$_D$$^{M\#}$	<1	<1	<1					mg/kg	1	A-T-024s
Nickel$_D$$^{M\#}$	34	30	20					mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	1	1	1					mg/kg	1	A-T-024s
Vanadium$_D$$^{M\#}$	52	61	45					mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	41	61	43					mg/kg	5	A-T-024s
Bentazone$_A$	-	<0.10	-					mg/kg	0.1	Subcon RPS MH
Cypermethrin$_A$	-	<0.10	-					mg/kg	0.1	Subcon RPS MH
Linuron$_A$	-	<0.10	-					mg/kg	0.1	Subcon RPS MH
Alachlor$_A$	-	<0.02	-					mg/kg	0.02	Subcon RPS MH
Carbaryl$_A$	-	<0.10	-					mg/kg	0.1	Subcon RPS MH
Diuron$_A$	-	<0.10	-					mg/kg	0.1	Subcon RPS MH

Envirolab Job Number: 23/09376

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09376/2	23/09376/4	23/09376/6					Units	Limit of Detection	Method ref
Client Sample No	102	102	102							
Client Sample ID	F22-TP312	F22-TP316	F22-TP317							
Depth to Top	0.50	0.50	0.50							
Depth To Bottom										
Date Sampled	20-Sep-23	20-Sep-23	20-Sep-23							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	6A	6A	3							
Isoproturon$_A$	-	<0.10	-					mg/kg	0.1	Subcon RPS MH
MCPP; (Mecoprop)$_A$	-	<0.10	-					mg/kg	0.1	Subcon RPS MH

Lab Sample ID	23/09376/2	23/09376/4	23/09376/6					Units	Limit of Detection	Method ref
Client Sample No	102	102	102							
Client Sample ID	F22-TP312	F22-TP316	F22-TP317							
Depth to Top	0.50	0.50	0.50							
Depth To Bottom										
Date Sampled	20-Sep-23	20-Sep-23	20-Sep-23							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	6A	6A	3							
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD	NAD	NAD							A-T-045
Asbestos Matrix (visual)$_{D}$	-	-	-							A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-	-							A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A	N/A							A-T-045
OCP+OPP Combined Pest Suite (incl. Atrazine and Simazine)										
Dichlobenil$_{A}$	-	<0.01	-					mg/kg	0.01	A-T-056
Tecnazene$_{A}$	-	<0.01	-					mg/kg	0.01	A-T-056
Trifluralin$_{A}$	-	<0.01	-					mg/kg	0.01	A-T-056
alpha-Hexachlorocyclohexane (HCH)$_{A}$	-	<0.01	-					mg/kg	0.01	A-T-056
Hexachlorobenzene (HCB) $_{A}$	-	<0.01	-					mg/kg	0.01	A-T-056
Simazine$_{A}$	-	<0.01	-					mg/kg	0.01	A-T-056
Atrazine$_{A}$	-	<0.01	-					mg/kg	0.01	A-T-056
beta-Hexachlorocyclohexane (HCH)$_{A}$	-	<0.01	-					mg/kg	0.01	A-T-056
Quintozene (PCNB)$_{A}$	-	<0.01	-					mg/kg	0.01	A-T-056
Chlorothalonil$_{A}$	-	<0.01	-					mg/kg	0.01	A-T-056
delta-Hexachlorocyclohexane (HCH)$_{A}$	-	<0.01	-					mg/kg	0.01	A-T-056
Triallate$_{A}$	-	<0.01	-					mg/kg	0.01	A-T-056
Heptachlor$_{A}$	-	<0.01	-					mg/kg	0.01	A-T-056
Aldrin$_{A}$	-	<0.01	-					mg/kg	0.01	A-T-056
Triadimefon$_{A}$	-	<0.01	-					mg/kg	0.01	A-T-056
Telodrin$_{A}$	-	<0.01	-					mg/kg	0.01	A-T-056
Isodrin$_{A}$	-	<0.01	-					mg/kg	0.01	A-T-056
Pendimethalin$_{A}$	-	0.03	-					mg/kg	0.01	A-T-056
Heptachlor epoxide$_{A}$	-	<0.01	-					mg/kg	0.01	A-T-056
trans-Chlordane (Gamma)$_{A}$	-	<0.01	-					mg/kg	0.01	A-T-056
o,p-DDE (2,4)$_{A}$	-	<0.01	-					mg/kg	0.01	A-T-056
Endosulphan I (Alpha)$_{A}$	-	<0.01	-					mg/kg	0.01	A-T-056
cis-Chlordane (Alpha)$_{A}$	-	<0.01	-					mg/kg	0.01	A-T-056
p,p-DDE (4,4)$_{A}$	-	<0.01	-					mg/kg	0.01	A-T-056
Dieldrin$_{A}$	-	<0.01	-					mg/kg	0.01	A-T-056

Lab Sample ID	23/09376/2	23/09376/4	23/09376/6					Units	Limit of Detection	Method ref
Client Sample No	102	102	102							
Client Sample ID	F22-TP312	F22-TP316	F22-TP317							
Depth to Top	0.50	0.50	0.50							
Depth To Bottom										
Date Sampled	20-Sep-23	20-Sep-23	20-Sep-23							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	6A	6A	3							
o,p-DDD (2,4)$_A$	-	<0.01	-					mg/kg	0.01	A-T-056
Endrin$_A$	-	<0.01	-					mg/kg	0.01	A-T-056
Endosulphan II (Beta)$_A$	-	<0.01	-					mg/kg	0.01	A-T-056
p,p-DDD (4,4)$_A$	-	<0.01	-					mg/kg	0.01	A-T-056
o,p-DDT (2,4)$_A$	-	<0.01	-					mg/kg	0.01	A-T-056
Endrin Aldehyde$_A$	-	<0.01	-					mg/kg	0.01	A-T-056
Endrin Ketone$_A$	-	<0.01	-					mg/kg	0.01	A-T-056
Endosulphan Sulphate$_A$	-	<0.01	-					mg/kg	0.01	A-T-056
p,p-DDT (4,4)$_A$	-	<0.01	-					mg/kg	0.01	A-T-056
o,p-Methoxychlor$_A$	-	<0.01	-					mg/kg	0.01	A-T-056
p,p-Methoxychlor$_A$	-	<0.01	-					mg/kg	0.01	A-T-056
Permethrin I (cis)$_A$	-	<0.01	-					mg/kg	0.01	A-T-056
Permethrin II (trans)$_A$	-	<0.01	-					mg/kg	0.01	A-T-056
Dichlorvos$_A$	-	<0.01	-					mg/kg	0.01	A-T-056
Mevinphos$_A$	-	<0.01	-					mg/kg	0.01	A-T-056
Demeton-S$_A$	-	<0.50	-					mg/kg	0.5	A-T-056
Demeton-O$_A$	-	<0.50	-					mg/kg	0.5	A-T-056
Phorate$_A$	-	<0.01	-					mg/kg	0.01	A-T-056
Dimethoate$_A$	-	<0.01	-					mg/kg	0.01	A-T-056
Propetamphos$_A$	-	<0.01	-					mg/kg	0.01	A-T-056
Diazinon (Dimpylate)$_A$	-	<0.01	-					mg/kg	0.01	A-T-056
Disulfoton$_A$	-	<0.10	-					mg/kg	0.1	A-T-056
Chlorpyrifos-methyl$_A$	-	<0.01	-					mg/kg	0.01	A-T-056
Parathion (Ethyl Parathion)$_A$	-	<0.01	-					mg/kg	0.01	A-T-056
Methyl Parathion$_A$	-	<0.01	-					mg/kg	0.01	A-T-056
Pirimiphos-methyl$_A$	-	<0.01	-					mg/kg	0.01	A-T-056
Fenitrothion$_A$	-	<0.01	-					mg/kg	0.01	A-T-056
Fensulphothion$_A$	-	<0.01	-					mg/kg	0.01	A-T-056
Fenthion$_A$	-	<0.01	-					mg/kg	0.01	A-T-056
Malathion$_A$	-	<0.01	-					mg/kg	0.01	A-T-056
Chlorfenvinphos$_A$	-	<0.01	-					mg/kg	0.01	A-T-056
Chlorpyrifos$_A$	-	<0.01	-					mg/kg	0.01	A-T-056
Trichloronate$_A$	-	<0.01	-					mg/kg	0.01	A-T-056
Prothiofos (Tokuthion)$_A$	-	<0.01	-					mg/kg	0.01	A-T-056

Envirolab Job Number: 23/09376

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09376/2	23/09376/4	23/09376/6					Units	Limit of Detection	Method ref
Client Sample No	102	102	102							
Client Sample ID	F22-TP312	F22-TP316	F22-TP317							
Depth to Top	0.50	0.50	0.50							
Depth To Bottom										
Date Sampled	20-Sep-23	20-Sep-23	20-Sep-23							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	6A	6A	3							
Ethion$_A$	-	<0.01	-					mg/kg	0.01	A-T-056
Triazophos$_A$	-	<0.01	-					mg/kg	0.01	A-T-056
Carbophenothion$_A$	-	<0.01	-					mg/kg	0.01	A-T-056
Phosalone$_A$	-	<0.01	-					mg/kg	0.01	A-T-056
Azinphos-methyl$_A$	-	<0.01	-					mg/kg	0.01	A-T-056
Azinphos-ethyl$_A$	-	<0.01	-					mg/kg	0.01	A-T-056
Coumaphos$_A$	-	<0.01	-					mg/kg	0.01	A-T-056
gamma-Hexachlorocyclohexane (HCH)$_A$	-	<0.01	-					mg/kg	0.01	A-T-056

Envirolab Job Number: 23/09376

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09376/2	23/09376/4	23/09376/6					Units	Limit of Detection	Method ref
Client Sample No	102	102	102							
Client Sample ID	F22-TP312	F22-TP316	F22-TP317							
Depth to Top	0.50	0.50	0.50							
Depth To Bottom										
Date Sampled	20-Sep-23	20-Sep-23	20-Sep-23							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	6A	6A	3							
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	<0.02	<0.02					mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04					mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	<0.04	<0.04	<0.04					mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	<0.05	<0.05	<0.05					mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	<0.05	<0.05					mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07					mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	<0.06	<0.06	<0.06					mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A$	<0.04	<0.04	<0.04					mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	<0.08	<0.08	<0.08					mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	<0.03	<0.03	<0.03					mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03^U	<0.03^U	<0.03^U					mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	<0.03	<0.03	<0.03					mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	<0.07	<0.07	<0.07					mg/kg	0.07	A-T-019s
Total PAH-16MS$_A$	<0.08	<0.08	<0.08					mg/kg	0.01	A-T-019s

Envirolab Job Number: 23/09376

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09376/2	23/09376/4	23/09376/6					Units	Limit of Detection	Method ref
Client Sample No	102	102	102							
Client Sample ID	F22-TP312	F22-TP316	F22-TP317							
Depth to Top	0.50	0.50	0.50							
Depth To Bottom										
Date Sampled	20-Sep-23	20-Sep-23	20-Sep-23							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	6A	6A	3							
TPH CWG with Clean Up										
Ali >C5-C6$_A$	-	-	<0.01					mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	-	-	<0.01					mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	-	-	<1					mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	-	-	<1					mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	-	-	<1					mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	-	-	<1					mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	-	-	<1					mg/kg	1	A-T-055s
Total Aliphatics$_A$	-	-	<1					mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	-	-	<0.01					mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	-	-	<0.01					mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	-	-	<1					mg/kg	1	A-T-055s
Aro >C10-C12$_A$	-	-	<1					mg/kg	1	A-T-055s
Aro >C12-C16$_A^{M\#}$	-	-	<1					mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	-	-	<1					mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	-	-	<1					mg/kg	1	A-T-055s
Total Aromatics$_A$	-	-	<1					mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	-	-	<1					mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	-	-	<0.01					mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	-	-	<0.01					mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	-	-	<0.01					mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	-	-	<0.01					mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	-	-	<0.01					mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	-	-	<0.01					mg/kg	0.01	A-T-022s

Report Notes

General
This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **six weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
Analytical results reflect the quality of the sample at the time of analysis only.
Opinions and Interpretations expressed are outside our scope of accreditation.
The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client.
A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

Key

Superscript "#"	Accredited to ISO 17025
Superscript "M"	Accredited to MCertS
Superscript "U"	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript "A"	Analysis performed on as-received Sample
Subscript "D"	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript "^"	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
N/A	Not applicable

Asbestos
Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis
Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing, and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25ºC / 11550µS/cm @ 20ºC fall outside the accreditation range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Structural Soils Limited (Hemel Hempstead), 18 Frogmore Road, Hemel Hempstead, UK, HP3 9RT

Project: Sealink Friston

Clients Project No: 563835

Project No: 23/09376

Date Received: 22/09/2023 (am)

Cool Box Temperatures (°C): 12.7 & 13.1

Lab Sample ID	23/09376/4
Client Sample No	102
Client Sample ID/Depth	F22-TP316 0.50m
Date Sampled	20/09/23
Deviation Code	
F	✓

Key
F *Maximum holding time exceeded between sampling date and analysis for analytes listed below*

HOLDING TIME EXCEEDANCES

Lab Sample ID	23/09376/4
Client Sample No	102
Client Sample ID/Depth	F22-TP316 0.50m
Date Sampled	20/09/23
Bentazone	✓
Cypermethrin	✓
Linuron	✓
Alachlor	✓
Carbaryl	✓
Diuron	✓
Isoproturon	✓
MCPP; (Mecoprop)	✓

Note: If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3 (for water samples 5 ± 3°C), ISO 18400-105:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	23/09376/2	23/09376/4	23/09376/6
Client Sample No	102	102	102
Client Sample ID/Depth	F22-TP312 0.50m	F22-TP316 0.50m	F22-TP317 0.50m
Date Sampled	20/09/23	20/09/23	20/09/23
A-T-004s	02/10/2023	02/10/2023	
A-T-007s	26/09/2023	26/09/2023	
A-T-019s	02/10/2023	02/10/2023	26/09/2023
A-T-022s	26/09/2023	26/09/2023	26/09/2023
A-T-024s	03/10/2023	02/10/2023	02/10/2023
A-T-025w	09/10/2023	09/10/2023	
A-T-026s	02/10/2023	02/10/2023	02/10/2023
A-T-026w	09/10/2023	09/10/2023	
A-T-026w (F)	09/10/2023	09/10/2023	
A-T-027s	29/09/2023	29/09/2023	29/09/2023
A-T-030s	02/10/2023	02/10/2023	
A-T-031s	02/10/2023	02/10/2023	02/10/2023
A-T-031w	09/10/2023	09/10/2023	
A-T-032s	02/10/2023	02/10/2023	02/10/2023
A-T-032w	09/10/2023	09/10/2023	
A-T-037w	09/10/2023	09/10/2023	
A-T-040s	02/10/2023	02/10/2023	02/10/2023
A-T-042sFCN	26/09/2023	26/09/2023	26/09/2023
A-T-044	02/10/2023	02/10/2023	02/10/2023
A-T-045	25/09/2023	25/09/2023	25/09/2023
A-T-050s	27/09/2023	27/09/2023	27/09/2023
A-T-050w	09/10/2023	09/10/2023	
A-T-055s			27/09/2023
A-T-056		27/09/2023	
A-T-ANCs	02/10/2023	02/10/2023	
Calc	03/10/2023	02/10/2023	02/10/2023
Calc-As Recd			27/09/2023
Calc-no stones	09/10/2023	09/10/2023	
Probe (w)	09/10/2023	09/10/2023	

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

Certificate of Analysis

Report No.: **23-06472-1**

Issue No.: **1**
Date of Issue **11/10/2023**

Customer Details:	Envirolab Ltd, 7 - 8 Sandpits Business Park, Mottram Road, Hyde, Greater Manchester, SK14 3AR, United Kingdom
Customer Contact:	[redacted]
Customer Order No.:	P0752424
Customer Reference:	Not Supplied
Quotation Reference:	Q22-00104 (Issue: 36)
Description:	1 geo sample
Date Received:	22/09/2023
Date Started:	27/09/2023
Date Completed:	11/10/2023
Test Methods:	Details available on request (refer to SOP code against relevant result/s)
Notes:	None

[redacted]

Approved By: [redacted], **LIMS Manager**

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service.
This certificate shall not be reproduced except in full without the prior written approval of the laboratory.
Observations and interpretations are outside of the scope of UKAS accreditation.
Results reported herein relate only to the items supplied to the laboratory for testing.
Results on an Interim Report are not dry-weight corrected.
Where the laboratory is not responsible for the sampling, results apply to the sample(s) as they were received.
The laboratory shall not be responsible for any information that is supplied by the customer that may affect the validity of results.

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Results Summary

Report No.: 23-06472-1

Customer Reference: Not Supplied

Customer Order No: P0752424

Customer Sample No	**23/09376/4**
RPS Sample No	33111
Sample Type	**GEO**
Sample Matrix	SOIL
Sampling Date	20/09/2023

Determinand	CAS No	Codes	SOP	RL	Units	
carbaryl	63-25-2	N	L001	0.1	mg/kg DW	< 0.10
2,4,5-trichlorophenoxyacetic acid (2,4,5-T)	93-76-5	N	L340	0.1	mg/kg DW	< 0.10
2,4,5-TP (Fenoprop)	93-72-1	N	L340	0.1	mg/kg DW	< 0.10
2,4-dichlorophenoxyacetic acid (2,4-D)	94-75-7	N	L340	0.1	mg/kg DW	< 0.10
acifluorfen	50594-66-6	N	L340	0.1	mg/kg DW	< 0.10
bentazone	25057-89-0	N	L340	0.1	mg/kg DW	< 0.10
clopyralid	1702-17-6	N	L340	0.1	mg/kg DW	< 0.10
dichlorprop (2,4-DP)	120-36-5	N	L340	0.1	mg/kg DW	< 0.10
dinoseb (DNBP)	88-85-7	N	L340	0.1	mg/kg DW	< 0.10
2-methyl-4-chlorophenoxyacetic acid (MCPA)	94-74-6	N	L340	0.1	mg/kg DW	< 0.10
mecoprop (MCPP)	7085-19-0	N	L340	0.1	mg/kg DW	< 0.10
pentachlorophenol (PCP)	87-86-5	N	L340	0.1	mg/kg DW	< 0.10
2,3,6-trichlorobenzoic acid (2,3,6-TBA)	50-31-7	N	L340	0.1	mg/kg DW	< 0.10
4-(2,4-dichlorophenoxy)butanoic acid (2,4-DB)	94-82-6	N	L340	0.1	mg/kg DW	< 0.10
4-chlorophenoxyacetic acid (4-CPA)	122-88-3	N	L340	0.1	mg/kg DW	< 0.10
benazolin	3813-05-6	N	L340	0.1	mg/kg DW	< 0.10
bromoxynil	1689-84-5	N	L340	0.1	mg/kg DW	< 0.10
dicamba	1918-00-9	N	L340	0.1	mg/kg DW	< 0.10
diclofop	40843-25-2	N	L340	0.1	mg/kg DW	< 0.10
2-methyl-4,6-dinitrophenol (DNOC)	534-52-1	N	L340	0.1	mg/kg DW	< 0.10
flamprop	58667-63-3	N	L340	0.1	mg/kg DW	< 0.10
fluroxypyr	69377-81-7	N	L340	0.1	mg/kg DW	< 0.10
ioxynil	1689-83-4	N	L340	0.1	mg/kg DW	< 0.10
MCPB	94-81-5	N	L340	0.1	mg/kg DW	< 0.10
picloram	1918-02-1	N	L340	0.1	mg/kg DW	< 0.10
triclopyr	55335-06-3	N	L340	0.1	mg/kg DW	< 0.10
alachlor	15972-60-8	N	G029	0.02	mg/kg AR	< 0.02
chloroxuron	1982-47-4	N	L025	0.1	mg/kg DW	< 0.10
chlortoluron	15545-48-9	N	L025	0.1	mg/kg DW	< 0.10
diflubenzuron	35367-38-5	N	L025	0.1	mg/kg DW	< 0.10
dimefuron	34205-21-5	N	L025	0.1	mg/kg DW	< 0.10
diuron	330-54-1	N	L025	0.1	mg/kg DW	< 0.10
isoproturon	34123-59-6	N	L025	0.1	mg/kg DW	< 0.10
linuron	330-55-2	N	L025	0.1	mg/kg DW	< 0.10
methabenzthiazuron	18691-97-9	N	L025	0.1	mg/kg DW	< 0.10
metoxuron	19937-59-8	N	L025	0.1	mg/kg DW	< 0.10
monolinuron	1746-81-2	N	L025	0.1	mg/kg DW	< 0.10

Results Summary

Report No.: 23-06472-1

Customer Reference: Not Supplied

Customer Order No: P0752424

Customer Sample No	**23/09376/4**
RPS Sample No	33111
Sample Type	**GEO**
Sample Matrix	SOIL
Sampling Date	20/09/2023

Determinand	CAS No	Codes	SOP	RL	Units	
monuron	150-68-5	N	L025	0.1	mg/kg DW	< 0.10
pencycuron	66063-05-6	N	L025	0.1	mg/kg DW	< 0.10
bifenthrin	82657-04-3	N	G127	0.1	mg/kg DW	< 0.10
cyfluthrin, total	68359-37-5	N	G127	0.1	mg/kg DW	< 0.10
cyhalothrin, total	68085-85-8	N	G127	0.1	mg/kg DW	< 0.10
cypermethrin, total	52315-07-8	N	G127	0.1	mg/kg DW	< 0.10
deltamethrin	52918-63-5	N	G127	0.1	mg/kg DW	< 0.10
fenvalerate	51630-58-1	N	G127	0.1	mg/kg DW	< 0.10
permethrin, total	52645-53-1	N	G127	0.1	mg/kg DW	< 0.10
resmethrin	10453-86-8	N	G127	0.1	mg/kg DW	< 0.10
tetramethrin	7696-12-0	N	G127	0.1	mg/kg DW	< 0.10

Deviating Samples

Report No.: 23-06472-1

Customer Reference: Not Supplied

Customer Order No: P0752424

Our policy on Deviating Samples has been implemented in accordance with UKAS Policy on Deviating Samples (TPS63).
RPS is not responsible for the integrity of samples as received, unless RPS personnel performed the sampling. Samples submitted may be declared to be deviating.
Where applicable the analysis method remains UKAS accredited, however results reported for a deviating sample may be compromised.
Where no sampling date was supplied, samples have been declared to be deviating. If the date can be supplied, results may be reissued if assessed not deviating.
Where the sample container used was unsuitable or broken, the sample is flagged as deviating and re-sampling/re-submisson may be required.

RPS No.	Customer No.	Customer ID	Date Sampled	Containers Received	Deviating	Reason for Deviation
33111	23/09376/4		20/09/2023	250 mL amber glass jar	No	

Report No.: 23-06472-1

Type	Matrix Code	Description
Food	CEREALPROD	Cereals, grains & products
Food	DRIEDFRUIT	Dried fruits
Food	FRIEDBAKED	Fried or baked food
Food	LEGUME	Legumes
Food	MEAT	Meat
Food	POWDERED	Powdered food
Food	PULSE	Pulses (dried legumes)
Food	VEGETABLES	Vegetables
Gas	TDTUBE	TD Tube
Gas	TENAX	Tenax Tube
Gas	TUBE	Tube
Gas	VAPOUR	Gas
Geological	SED_MAR	Marine Sediment
Geological	SED_RIV	River Sediment
Geological	SLUDG_SOL	Sludge (solid only)
Geological	SOIL	Soil
Liquid	BEVERAGE	Beverage
Liquid	BLOOD	Blood
Liquid	CONDENSATE	Condensate
Liquid	FORMULATN	Formula
Liquid	LEACHATE	Leachate
Liquid	OIL/GREASE	Oil or grease
Liquid	SLUDG_LIQ	Sludge (liquid only)
Liquid	SOLVENT	Solvent
Liquid	URINE	Urine
Sludge	SLUDG_WHL	Sludge for bulk route
Solid	BADGE	Badge
Solid	BEDDING	Bedding
Solid	BIOTA	Biota (general)
Solid	BIOTA_F	Biota (fish)
Solid	BIOTA_SF	Biota (shellfish)
Solid	CONSTRCTN	Construction materials
Solid	FABRIC	Fabrics & furnishing materials
Solid	FEED	Animal feed
Solid	FERTILISER	Fertiliser
Solid	FILTER	Filter
Solid	FOAM	Solid foam material
Solid	PACKAGING	Packaging material
Solid	PLANT	Plant (vegetation)
Solid	POWDER	Powder
Solid	SWAB	Swab
Water	BAL	Ballast Water
Water	BIL	Bilge Water
Water	DW	Drinking Water
Water	EFFLUENT	Effluent
Water	GW	Ground Water
Water	INFLUENT	Influent
Water	SALTW	Salt Water
Water	SW	Surface Water
Water	TW	Tap Water
Water	W	Water

Report No.: 23-06472-1

Key Code	Description
N	Not Accredited Test
U	UKAS Accredited Test - UKAS accreditation is only implied if the report carries the UKAS logo
UF	UKAS Flexible Scope Test
M	MCERTS Accredited Test - MCERTS accreditation is only implied if the report carries the MCERTS logo
O	Marine Management Organisation (MMO) Validated
SN	Subcontracted to approved laboratory not accredited for the test
SU	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
SIN	Subcontracted to internal RPS Group laboratory not accredited for the test
SIU	Subcontracted to internal RPS Group laboratory UKAS Accredited for the test
SIM	Subcontracted to internal RPS Group laboratory MCERTS/UKAS Accredited for the test
I/S (in results)	Insufficient Sample
U/S (in results)	Unsuitable Sample
S/C (in results)	See Comments
ND (in results)	Not Detected
L (in results)	Result is outside normal limits
DW (in units)	Results are expressed on a dry weight basis

Sample Type	Sample Retention and Disposal Period
Foodstuff	1 month (if frozen) from the issue date of this report
Waters	2 weeks from the issue date of this report
Other Liquids	1 month from the issue date of this report
Solids / Soils	1 month from the issue date of this report
Sediments	1 month from the issue date of this report

Note: Sample retention may be subject to agreement with the customer for particular projects

Where the dry solids value of a sample is low (<50%), reporting limits are automatically raised for all determinants analysed on an as-received basis.

Soil Typing	Description
Type 1	Clay - Brown
Type 2	Clay - Grey/Black
Type 3	Sand
Type 4	Top Soil (Standard)
Type 5	Top Soil (High Peat)
Type 6	Made Ground (>50% Clay)
Type 7	Made Ground (>50% Sand)
Type 8	Made Ground (>50% Top Soil)
Type X	Other

Dev code	Description
D	No sampling date provided.
T	No sampling time provided.
Z	Temperature of samples exceeded in transit/storage.
V	Excessive headspace for volatile determinands.
P	Sample submitted without required preservative(s).
C	Incorrect container.
H	Holding time exceeded (sampling to extraction).
X	Holding time exceeded (sampling to receipt).

Note: Where the following information is included in this certificate, it has usually been supplied by the customer: Customer Sample ID, Sample Location, Sample Depth, Sampling Date and Sampling Time. The laboratory shall not be responsible for any information that is supplied by the customer that may affect the validity of results.

envirolab
Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 23/09389
Issue Number: 1 **Date:** 12 October, 2023

Client: Structural Soils Limited (Hemel Hempstead)
18 Frogmore Road
Hemel Hempstead
UK
HP3 9RT

Project Manager: [redacted]
Project Name: Sealink Friston
Project Ref: 563835
Order No: N/A
Date Samples Received: 22/09/23
Date Instructions Received: 22/09/23
Date Analysis Completed: 12/10/23

Approved by:

[redacted]
Client Manager

Envirolab Job Number: 23/09389

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09389/2							Units	Limit of Detection	Method ref
Client Sample No	102									
Client Sample ID	F22-TP222A									
Depth to Top	0.50									
Depth To Bottom										
Date Sampled	19-Sep-23									
Sample Type	SOIL - ES									
Sample Matrix Code	1A									
% Moisture at 105C$_A$	19.2							% w/w	0.1	A-T-044
% Stones >10mm$_A$	<0.1							% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	7.85							pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	<0.01							g/l	0.01	A-T-026s
Sulphur (total)$_D$	<50							mg/kg	50	A-T-024s
Cyanide (free)$_A$$^{M\#}$	<1							mg/kg	1	A-T-042sFCN
Phenols - Total by HPLC$_A$	<0.2							mg/kg	0.2	A-T-050s
Organic Matter$_D$$^{M\#}$	0.3							% w/w	0.1	A-T-032s
Total Organic Carbon$_D$$^{M\#}$	0.20							% w/w	0.03	A-T-032s
Fraction of organic carbon$_D$$^{\#}$	0.0020							N/A	0.0003	A-T-032s
Arsenic$_D$$^{M\#}$	2							mg/kg	1	A-T-024s
Barium$_D$	6							mg/kg	1	A-T-024s
Beryllium$_D$	<0.5							mg/kg	0.5	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0							mg/kg	1	A-T-027s
Cadmium$_D$$^{M\#}$	<0.5							mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	2							mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	3							mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1							mg/kg	1	A-T-040s
Chromium (trivalent)	3							mg/kg	1	Calc
Lead$_D$$^{M\#}$	6							mg/kg	1	A-T-024s
Manganese$_D$$^{M\#}$	51							mg/kg	1	A-T-024s
Mercury$_D$	<0.17							mg/kg	0.17	A-T-024s
Molybdenum$_D$$^{M\#}$	<1							mg/kg	1	A-T-024s
Nickel$_D$$^{M\#}$	2							mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1							mg/kg	1	A-T-024s
Vanadium$_D$$^{M\#}$	6							mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	7							mg/kg	5	A-T-024s
Bentazone$_A$	<0.10							mg/kg	0.1	Subcon RPS MH
Cypermethrin$_A$	<0.10							mg/kg	0.1	Subcon RPS MH
Linuron$_A$	<0.10							mg/kg	0.1	Subcon RPS MH
Alachlor$_A$	<0.02							mg/kg	0.02	Subcon RPS MH
Carbaryl$_A$	<0.10							mg/kg	0.1	Subcon RPS MH
Diuron$_A$	<0.10							mg/kg	0.1	Subcon RPS MH

Envirolab Job Number: 23/09389

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09389/2							Units	Limit of Detection	Method ref
Client Sample No	102									
Client Sample ID	F22-TP222A									
Depth to Top	0.50									
Depth To Bottom										
Date Sampled	19-Sep-23									
Sample Type	SOIL - ES									
Sample Matrix Code	1A									
Isoproturon$_A$	<0.10							mg/kg	0.1	Subcon RPS MH
MCPP; (Mecoprop)$_A$	<0.10							mg/kg	0.1	Subcon RPS MH

Lab Sample ID	23/09389/2							Units	Limit of Detection	Method ref
Client Sample No	102									
Client Sample ID	F22-TP222A									
Depth to Top	0.50									
Depth To Bottom										
Date Sampled	19-Sep-23									
Sample Type	SOIL - ES									
Sample Matrix Code	1A									
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD									A-T-045
Asbestos Matrix (visual)$_{D}$	-									A-T-045
Asbestos Matrix (microscope)$_{D}$	-									A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A									A-T-045
OCP+OPP Combined Pest Suite (incl. Atrazine and Simazine)										
Dichlobenil$_{A}$	<0.01							mg/kg	0.01	A-T-056
Tecnazene$_{A}$	<0.01							mg/kg	0.01	A-T-056
Trifluralin$_{A}$	<0.01							mg/kg	0.01	A-T-056
alpha-Hexachlorocyclohexane (HCH)$_{A}$	<0.01							mg/kg	0.01	A-T-056
Hexachlorobenzene (HCB) $_{A}$	<0.01							mg/kg	0.01	A-T-056
Simazine$_{A}$	<0.01							mg/kg	0.01	A-T-056
Atrazine$_{A}$	<0.01							mg/kg	0.01	A-T-056
beta-Hexachlorocyclohexane (HCH)$_{A}$	<0.01							mg/kg	0.01	A-T-056
Quintozene (PCNB)$_{A}$	<0.01							mg/kg	0.01	A-T-056
Chlorothalonil$_{A}$	<0.01							mg/kg	0.01	A-T-056
delta-Hexachlorocyclohexane (HCH)$_{A}$	<0.01							mg/kg	0.01	A-T-056
Triallate$_{A}$	<0.01							mg/kg	0.01	A-T-056
Heptachlor$_{A}$	<0.01							mg/kg	0.01	A-T-056
Aldrin$_{A}$	<0.01							mg/kg	0.01	A-T-056
Triadimefon$_{A}$	<0.01							mg/kg	0.01	A-T-056
Telodrin$_{A}$	<0.01							mg/kg	0.01	A-T-056
Isodrin$_{A}$	<0.01							mg/kg	0.01	A-T-056
Pendimethalin$_{A}$	<0.01							mg/kg	0.01	A-T-056
Heptachlor epoxide$_{A}$	<0.01							mg/kg	0.01	A-T-056
trans-Chlordane (Gamma)$_{A}$	<0.01							mg/kg	0.01	A-T-056
o,p-DDE (2,4)$_{A}$	<0.01							mg/kg	0.01	A-T-056
Endosulphan I (Alpha)$_{A}$	<0.01							mg/kg	0.01	A-T-056
cis-Chlordane (Alpha)$_{A}$	<0.01							mg/kg	0.01	A-T-056
p,p-DDE (4,4)$_{A}$	<0.01							mg/kg	0.01	A-T-056
Dieldrin$_{A}$	<0.01							mg/kg	0.01	A-T-056

Lab Sample ID	23/09389/2							Units	Limit of Detection	Method ref
Client Sample No	102									
Client Sample ID	F22-TP222A									
Depth to Top	0.50									
Depth To Bottom										
Date Sampled	19-Sep-23									
Sample Type	SOIL - ES									
Sample Matrix Code	1A									
o,p-DDD (2,4)$_A$	<0.01							mg/kg	0.01	A-T-056
Endrin$_A$	<0.01							mg/kg	0.01	A-T-056
Endosulphan II (Beta)$_A$	<0.01							mg/kg	0.01	A-T-056
p,p-DDD (4,4)$_A$	<0.01							mg/kg	0.01	A-T-056
o,p-DDT (2,4)$_A$	<0.01							mg/kg	0.01	A-T-056
Endrin Aldehyde$_A$	<0.01							mg/kg	0.01	A-T-056
Endrin Ketone$_A$	<0.01							mg/kg	0.01	A-T-056
Endosulphan Sulphate$_A$	<0.01							mg/kg	0.01	A-T-056
p,p-DDT (4,4)$_A$	<0.01							mg/kg	0.01	A-T-056
o,p-Methoxychlor$_A$	<0.01							mg/kg	0.01	A-T-056
p,p-Methoxychlor$_A$	<0.01							mg/kg	0.01	A-T-056
Permethrin I (cis)$_A$	<0.01							mg/kg	0.01	A-T-056
Permethrin II (trans)$_A$	<0.01							mg/kg	0.01	A-T-056
Dichlorvos$_A$	<0.01							mg/kg	0.01	A-T-056
Mevinphos$_A$	<0.01							mg/kg	0.01	A-T-056
Demeton-S$_A$	<0.50							mg/kg	0.5	A-T-056
Demeton-O$_A$	<0.50							mg/kg	0.5	A-T-056
Phorate$_A$	<0.01							mg/kg	0.01	A-T-056
Dimethoate$_A$	<0.01							mg/kg	0.01	A-T-056
Propetamphos$_A$	<0.01							mg/kg	0.01	A-T-056
Diazinon (Dimpylate)$_A$	<0.01							mg/kg	0.01	A-T-056
Disulfoton$_A$	<0.10							mg/kg	0.1	A-T-056
Chlorpyrifos-methyl$_A$	<0.01							mg/kg	0.01	A-T-056
Parathion (Ethyl Parathion)$_A$	<0.01							mg/kg	0.01	A-T-056
Methyl Parathion$_A$	<0.01							mg/kg	0.01	A-T-056
Pirimiphos-methyl$_A$	<0.01							mg/kg	0.01	A-T-056
Fenitrothion$_A$	<0.01							mg/kg	0.01	A-T-056
Fensulphothion$_A$	<0.01							mg/kg	0.01	A-T-056
Fenthion$_A$	<0.01							mg/kg	0.01	A-T-056
Malathion$_A$	<0.01							mg/kg	0.01	A-T-056
Chlorfenvinphos$_A$	<0.01							mg/kg	0.01	A-T-056
Chlorpyrifos$_A$	<0.01							mg/kg	0.01	A-T-056
Trichloronate$_A$	<0.01							mg/kg	0.01	A-T-056
Prothiofos (Tokuthion)$_A$	<0.01							mg/kg	0.01	A-T-056

Envirolab Job Number: 23/09389

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09389/2							Units	Limit of Detection	Method ref
Client Sample No	102									
Client Sample ID	F22-TP222A									
Depth to Top	0.50									
Depth To Bottom										
Date Sampled	19-Sep-23									
Sample Type	SOIL - ES									
Sample Matrix Code	1A									
Ethion$_A$	<0.01							mg/kg	0.01	A-T-056
Triazophos$_A$	<0.01							mg/kg	0.01	A-T-056
Carbophenothion$_A$	<0.01							mg/kg	0.01	A-T-056
Phosalone$_A$	<0.01							mg/kg	0.01	A-T-056
Azinphos-methyl$_A$	<0.01							mg/kg	0.01	A-T-056
Azinphos-ethyl$_A$	<0.01							mg/kg	0.01	A-T-056
Coumaphos$_A$	<0.01							mg/kg	0.01	A-T-056
gamma-Hexachlorocyclohexane (HCH)$_A$	<0.01							mg/kg	0.01	A-T-056

Envirolab Job Number: 23/09389

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09389/2							Units	Limit of Detection	Method ref
Client Sample No	102									
Client Sample ID	F22-TP222A									
Depth to Top	0.50									
Depth To Bottom										
Date Sampled	19-Sep-23									
Sample Type	SOIL - ES									
Sample Matrix Code	1A									
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02							mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	<0.04							mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	<0.04							mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	<0.05							mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05							mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07							mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	<0.06							mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A$	<0.04							mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	<0.08							mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	<0.03							mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03^U							mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	<0.03							mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	<0.07							mg/kg	0.07	A-T-019s
Total PAH-16MS$_A$	<0.08							mg/kg	0.01	A-T-019s

Report Notes

General
This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **six weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
Analytical results reflect the quality of the sample at the time of analysis only.
Opinions and Interpretations expressed are outside our scope of accreditation.
The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client.
A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

Key

Superscript "#"	Accredited to ISO 17025
Superscript "M"	Accredited to MCertS
Superscript "U"	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript "A"	Analysis performed on as-received Sample
Subscript "D"	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript "^"	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
N/A	Not applicable

Asbestos
Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis
Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing, and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25ºC / 11550µS/cm @ 20ºC fall outside the accreditation range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Structural Soils Limited (Hemel Hempstead), 18 Frogmore Road, Hemel Hempstead, UK, HP3 9RT

Project: Sealink Friston

Clients Project No: 563835

Project No: 23/09389

Date Received: 22/09/2023 (am)

Cool Box Temperatures (°C): 12.1

Lab Sample ID	23/09389/2
Client Sample No	102
Client Sample ID/Depth	F22-TP222A 0.50m
Date Sampled	19/09/23
Deviation Code	
F	✓

Key

F *Maximum holding time exceeded between sampling date and analysis for analytes listed below*

HOLDING TIME EXCEEDANCES

Lab Sample ID	23/09389/2
Client Sample No	102
Client Sample ID/Depth	F22-TP222A 0.50m
Date Sampled	19/09/23
Bentazone	✓
Cypermethrin	✓
Linuron	✓
Alachlor	✓
Carbaryl	✓
Diuron	✓
Isoproturon	✓
MCPP; (Mecoprop)	✓

Note: If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3 (for water samples 5 ± 3°C), ISO 18400-105:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	23/09389/2
Client Sample No	102
Client Sample ID/Depth	F22-TP222A 0.50m
Date Sampled	19/09/23
A-T-019s	26/09/2023
A-T-024s	29/09/2023
A-T-026s	29/09/2023
A-T-027s	29/09/2023
A-T-031s	29/09/2023
A-T-032s	29/09/2023
A-T-040s	29/09/2023
A-T-042sFCN	26/09/2023
A-T-044	02/10/2023
A-T-045	25/09/2023
A-T-050s	27/09/2023
A-T-056	27/09/2023
Calc	29/09/2023

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

Certificate of Analysis

Report No.: **23-06473-1**

Issue No.: **1**
Date of Issue **11/10/2023**

Customer Details:	Envirolab Ltd, 7 - 8 Sandpits Business Park, Mottram Road, Hyde, Greater Manchester, SK14 3AR, United Kingdom
Customer Contact:	[redacted]
Customer Order No.:	P0752426
Customer Reference:	Not Supplied
Quotation Reference:	Q22-00104 (Issue: 36)
Description:	1 geo sample
Date Received:	22/09/2023
Date Started:	27/09/2023
Date Completed:	11/10/2023
Test Methods:	Details available on request (refer to SOP code against relevant result/s)
Notes:	None

[redacted]

Approved By: [redacted], **LIMS Manager**

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service.
This certificate shall not be reproduced except in full without the prior written approval of the laboratory.
Observations and interpretations are outside of the scope of UKAS accreditation.
Results reported herein relate only to the items supplied to the laboratory for testing.
Results on an Interim Report are not dry-weight corrected.
Where the laboratory is not responsible for the sampling, results apply to the sample(s) as they were received.
The laboratory shall not be responsible for any information that is supplied by the customer that may affect the validity of results.

RPS Environmental Management Limited trading as RPS Mountainheath. Registered in England No. 01756175.
13 St Martins Way, Bedford, Bedfordshire, MK42 0LF. T +44 1462 480 400
A member of the RPS Group plc. Terms and conditions apply - copy on request

Results Summary

Report No.: 23-06473-1

Customer Reference: Not Supplied

Customer Order No: P0752426

Customer Sample No	**23/09389/2**
RPS Sample No	33112
Sample Type	**GEO**
Sample Matrix	SOIL
Sampling Date	19/09/2023

Determinand	CAS No	Codes	SOP	RL	Units	
carbaryl	63-25-2	N	L001	0.1	mg/kg DW	< 0.10
2,4,5-trichlorophenoxyacetic acid (2,4,5-T)	93-76-5	N	L340	0.1	mg/kg DW	< 0.10
2,4,5-TP (Fenoprop)	93-72-1	N	L340	0.1	mg/kg DW	< 0.10
2,4-dichlorophenoxyacetic acid (2,4-D)	94-75-7	N	L340	0.1	mg/kg DW	< 0.10
acifluorfen	50594-66-6	N	L340	0.1	mg/kg DW	< 0.10
bentazone	25057-89-0	N	L340	0.1	mg/kg DW	< 0.10
clopyralid	1702-17-6	N	L340	0.1	mg/kg DW	< 0.10
dichlorprop (2,4-DP)	120-36-5	N	L340	0.1	mg/kg DW	< 0.10
dinoseb (DNBP)	88-85-7	N	L340	0.1	mg/kg DW	< 0.10
2-methyl-4-chlorophenoxyacetic acid (MCPA)	94-74-6	N	L340	0.1	mg/kg DW	< 0.10
mecoprop (MCPP)	7085-19-0	N	L340	0.1	mg/kg DW	< 0.10
pentachlorophenol (PCP)	87-86-5	N	L340	0.1	mg/kg DW	< 0.10
2,3,6-trichlorobenzoic acid (2,3,6-TBA)	50-31-7	N	L340	0.1	mg/kg DW	< 0.10
4-(2,4-dichlorophenoxy)butanoic acid (2,4-DB)	94-82-6	N	L340	0.1	mg/kg DW	< 0.10
4-chlorophenoxyacetic acid (4-CPA)	122-88-3	N	L340	0.1	mg/kg DW	< 0.10
benazolin	3813-05-6	N	L340	0.1	mg/kg DW	< 0.10
bromoxynil	1689-84-5	N	L340	0.1	mg/kg DW	< 0.10
dicamba	1918-00-9	N	L340	0.1	mg/kg DW	< 0.10
diclofop	40843-25-2	N	L340	0.1	mg/kg DW	< 0.10
2-methyl-4,6-dinitrophenol (DNOC)	534-52-1	N	L340	0.1	mg/kg DW	< 0.10
flamprop	58667-63-3	N	L340	0.1	mg/kg DW	< 0.10
fluroxypyr	69377-81-7	N	L340	0.1	mg/kg DW	< 0.10
ioxynil	1689-83-4	N	L340	0.1	mg/kg DW	< 0.10
MCPB	94-81-5	N	L340	0.1	mg/kg DW	< 0.10
picloram	1918-02-1	N	L340	0.1	mg/kg DW	< 0.10
triclopyr	55335-06-3	N	L340	0.1	mg/kg DW	< 0.10
alachlor	15972-60-8	N	G029	0.02	mg/kg AR	< 0.02
chloroxuron	1982-47-4	N	L025	0.1	mg/kg DW	< 0.10
chlortoluron	15545-48-9	N	L025	0.1	mg/kg DW	< 0.10
diflubenzuron	35367-38-5	N	L025	0.1	mg/kg DW	< 0.10
dimefuron	34205-21-5	N	L025	0.1	mg/kg DW	< 0.10
diuron	330-54-1	N	L025	0.1	mg/kg DW	< 0.10
isoproturon	34123-59-6	N	L025	0.1	mg/kg DW	< 0.10
linuron	330-55-2	N	L025	0.1	mg/kg DW	< 0.10
methabenzthiazuron	18691-97-9	N	L025	0.1	mg/kg DW	< 0.10
metoxuron	19937-59-8	N	L025	0.1	mg/kg DW	< 0.10
monolinuron	1746-81-2	N	L025	0.1	mg/kg DW	< 0.10

Results Summary

Report No.: 23-06473-1

Customer Reference: Not Supplied

Customer Order No: P0752426

Customer Sample No	**23/09389/2**
RPS Sample No	33112
Sample Type	**GEO**
Sample Matrix	SOIL
Sampling Date	19/09/2023

Determinand	CAS No	Codes	SOP	RL	Units	
monuron	150-68-5	N	L025	0.1	mg/kg DW	< 0.10
pencycuron	66063-05-6	N	L025	0.1	mg/kg DW	< 0.10
bifenthrin	82657-04-3	N	G127	0.1	mg/kg DW	< 0.10
cyfluthrin, total	68359-37-5	N	G127	0.1	mg/kg DW	< 0.10
cyhalothrin, total	68085-85-8	N	G127	0.1	mg/kg DW	< 0.10
cypermethrin, total	52315-07-8	N	G127	0.1	mg/kg DW	< 0.10
deltamethrin	52918-63-5	N	G127	0.1	mg/kg DW	< 0.10
fenvalerate	51630-58-1	N	G127	0.1	mg/kg DW	< 0.10
permethrin, total	52645-53-1	N	G127	0.1	mg/kg DW	< 0.10
resmethrin	10453-86-8	N	G127	0.1	mg/kg DW	< 0.10
tetramethrin	7696-12-0	N	G127	0.1	mg/kg DW	< 0.10

Deviating Samples

Report No.: 23-06473-1

Customer Reference: Not Supplied

Customer Order No: P0752426

Our policy on Deviating Samples has been implemented in accordance with UKAS Policy on Deviating Samples (TPS63).
RPS is not responsible for the integrity of samples as received, unless RPS personnel performed the sampling. Samples submitted may be declared to be deviating.
Where applicable the analysis method remains UKAS accredited, however results reported for a deviating sample may be compromised.
Where no sampling date was supplied, samples have been declared to be deviating. If the date can be supplied, results may be reissued if assessed not deviating.
Where the sample container used was unsuitable or broken, the sample is flagged as deviating and re-sampling/re-submisson may be required.

RPS No.	Customer No.	Customer ID	Date Sampled	Containers Received	Deviating	Reason for Deviation
33112	23/09389/2		19/09/2023	250 mL amber glass jar	No	

Report No.: 23-06473-1

Type	Matrix Code	Description
Food	CEREALPROD	Cereals, grains & products
Food	DRIEDFRUIT	Dried fruits
Food	FRIEDBAKED	Fried or baked food
Food	LEGUME	Legumes
Food	MEAT	Meat
Food	POWDERED	Powdered food
Food	PULSE	Pulses (dried legumes)
Food	VEGETABLES	Vegetables
Gas	TDTUBE	TD Tube
Gas	TENAX	Tenax Tube
Gas	TUBE	Tube
Gas	VAPOUR	Gas
Geological	SED_MAR	Marine Sediment
Geological	SED_RIV	River Sediment
Geological	SLUDG_SOL	Sludge (solid only)
Geological	SOIL	Soil
Liquid	BEVERAGE	Beverage
Liquid	BLOOD	Blood
Liquid	CONDENSATE	Condensate
Liquid	FORMULATN	Formula
Liquid	LEACHATE	Leachate
Liquid	OIL/GREASE	Oil or grease
Liquid	SLUDG_LIQ	Sludge (liquid only)
Liquid	SOLVENT	Solvent
Liquid	URINE	Urine
Sludge	SLUDG_WHL	Sludge for bulk route
Solid	BADGE	Badge
Solid	BEDDING	Bedding
Solid	BIOTA	Biota (general)
Solid	BIOTA_F	Biota (fish)
Solid	BIOTA_SF	Biota (shellfish)
Solid	CONSTRCTN	Construction materials
Solid	FABRIC	Fabrics & furnishing materials
Solid	FEED	Animal feed
Solid	FERTILISER	Fertiliser
Solid	FILTER	Filter
Solid	FOAM	Solid foam material
Solid	PACKAGING	Packaging material
Solid	PLANT	Plant (vegetation)
Solid	POWDER	Powder
Solid	SWAB	Swab
Water	BAL	Ballast Water
Water	BIL	Bilge Water
Water	DW	Drinking Water
Water	EFFLUENT	Effluent
Water	GW	Ground Water
Water	INFLUENT	Influent
Water	SALTW	Salt Water
Water	SW	Surface Water
Water	TW	Tap Water
Water	W	Water

Report No.: 23-06473-1

Key Code	Description
N	Not Accredited Test
U	UKAS Accredited Test - UKAS accreditation is only implied if the report carries the UKAS logo
UF	UKAS Flexible Scope Test
M	MCERTS Accredited Test - MCERTS accreditation is only implied if the report carries the MCERTS logo
O	Marine Management Organisation (MMO) Validated
SN	Subcontracted to approved laboratory not accredited for the test
SU	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
SIN	Subcontracted to internal RPS Group laboratory not accredited for the test
SIU	Subcontracted to internal RPS Group laboratory UKAS Accredited for the test
SIM	Subcontracted to internal RPS Group laboratory MCERTS/UKAS Accredited for the test
I/S (in results)	Insufficient Sample
U/S (in results)	Unsuitable Sample
S/C (in results)	See Comments
ND (in results)	Not Detected
L (in results)	Result is outside normal limits
DW (in units)	Results are expressed on a dry weight basis

Sample Type	Sample Retention and Disposal Period
Foodstuff	1 month (if frozen) from the issue date of this report
Waters	2 weeks from the issue date of this report
Other Liquids	1 month from the issue date of this report
Solids / Soils	1 month from the issue date of this report
Sediments	1 month from the issue date of this report

Note: Sample retention may be subject to agreement with the customer for particular projects

Where the dry solids value of a sample is low (<50%), reporting limits are automatically raised for all determinants analysed on an as-received basis.

Soil Typing	Description
Type 1	Clay - Brown
Type 2	Clay - Grey/Black
Type 3	Sand
Type 4	Top Soil (Standard)
Type 5	Top Soil (High Peat)
Type 6	Made Ground (>50% Clay)
Type 7	Made Ground (>50% Sand)
Type 8	Made Ground (>50% Top Soil)
Type X	Other

Dev code	Description
D	No sampling date provided.
T	No sampling time provided.
Z	Temperature of samples exceeded in transit/storage.
V	Excessive headspace for volatile determinands.
P	Sample submitted without required preservative(s).
C	Incorrect container.
H	Holding time exceeded (sampling to extraction).
X	Holding time exceeded (sampling to receipt).

Note: Where the following information is included in this certificate, it has usually been supplied by the customer: Customer Sample ID, Sample Location, Sample Depth, Sampling Date and Sampling Time. The laboratory shall not be responsible for any information that is supplied by the customer that may affect the validity of results.

Units 7 & 8, Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

Final Test Report

Envirolab Job Number: 23/09535
Issue Number: 1 Date: 19-Oct-23

Client: Structural Soils Limited (Hemel Hempstead)
18 Frogmore Road
Hemel Hempstead
UK
HP3 9RT
UK, WA6 0AR

Project Manager: [redacted]
Project Name: Sealink Friston
Project Ref: 563835
Order No: N/A

Date Samples Received: 26-Sep-23
Date Instructions Received: 26-Sep-23
Date Analysis Completed: 19-Oct-23

Notes - Soil analysis

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones >10mm are removed or excluded from the sample prior to analysis and reported results corrected to a whole sample basis.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis.

Notes - General

This report shall not be reproduced, except in full, without written approval from Envirolab.

Subscript "A" indicates analysis performed on the sample as received. "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve, unless asbestos is found to be present in which case all analysis is performed on the sample as received.

All analysis is performed on the dried and crushed sample for samples with Matrix Code 7 and this supercedes any "A" subscripts.

All analysis is performed on the sample as received for soil samples from outside the European Union and this supercedes any "D" subscripts

For complex, multi-compound analysis, quality control results do not always fall within chart limits for every compound and we have criteria for reporting in these situations.

If results are in italic font they are associated with such quality control failures and may be unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid

Predominant Matrix Codes: 1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample

Secondary Matrix Codes: A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal, E = contains roots/twigs.

IS indicates Insufficient sample for analysis, NDP indicates No Determination Possible and NAD indicates No Asbestos Detected.

Analytical results reflect the quality of the sample at the time of analysis only. Opinions and interpretations expressed are outside the scope of our accreditation.

Please contact us if you need any further information.

HWOL TPH Code: EH_CU_1D_AL: Extractable hydrocarbons - i.e. everything extracted by the solvent(s), Clean-up - e.g. by florisil, silica gel, GC - Single coil gas chromatography, Aliphatics only

Approved by:

[redacted]

Deputy Client Services Supervisor

Landfill WAC analysis must not be used for hazardous waste classification purposes. This analysis is only applicable for landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Sample Details						Landfill Waste Acceptance Criteria Limits		
Lab Sample ID	Method	ISO17025	MCERTS	23/09535/4		Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
Client Sample Number				**102**				
Client Sample ID				F22-TP315				
Depth to Top				0.5				
Depth to Bottom								
Date Sampled				21/09/2023				
Sample Type				Soil - ES				
Sample Matrix Code				5A				
Solid Waste Analysis								
pH (pH Units)$_D$	A-T-031	**N**	**N**	**8.56**		-	>6	-
ANC to pH 4 (mol/kg)$_D$	A-T-ANC	**N**	**N**	**1.61**		-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg)$_D$	A-T-ANC	**N**	**N**	**0.23**		-	to be evaluated	to be evaluated
Loss on Ignition (%)$_D$	A-T-030	**N**	**N**	**2.3**		-	-	10
Total Organic Carbon (%)$_D$	A-T-032	**N**	**N**	**0.32**		3	5	6
PAH Sum of 17 (mg/kg) $_A$	A-T-019	**N**	**N**	**<0.08**		100	-	-
Mineral Oil (mg/kg)$_{A\ EH_CU_1D_AL}$	A-T-007	**N**	**N**	**<10**		500	-	-
Sum of 7 PCBs (mg/kg)$_A$	A-T-004	**N**	**N**	**<0.007**		1	-	-
Sum of BTEX (mg/kg)$_A$	A-T-022	**N**	**N**	**<0.01**		6	-	-
Eluate Analysis				**10:1** mg/l	**10:1** mg/kg	**Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)**		
Arsenic	A-T-025	**N**	**N**	<0.001	**<0.01**	0.5	2	25
Barium	A-T-025	**N**	**N**	0.003	**0.030**	20	100	300
Cadmium	A-T-025	**N**	**N**	<0.001	**<0.01**	0.04	1	5
Chromium	A-T-025	**N**	**N**	<0.001	**<0.01**	0.5	10	70
Copper	A-T-025	**N**	**N**	<0.004	**<0.04**	2	50	100
Mercury	A-T-025	**N**	**N**	<0.0005	**<0.005**	0.01	0.2	2
Molybdenum	A-T-025	**N**	**N**	0.001	**0.010**	0.5	10	30
Nickel	A-T-025	**N**	**N**	<0.002	**<0.02**	0.4	10	40
Lead	A-T-025	**N**	**N**	<0.001	**<0.01**	0.5	10	50
Antimony	A-T-025	**N**	**N**	<0.001	**<0.01**	0.06	0.7	5
Selenium	A-T-025	**N**	**N**	<0.001	**<0.01**	0.1	0.5	7
Zinc	A-T-025	**N**	**N**	0.003	**0.030**	4	50	200
Chloride	A-T-026	**N**	**N**	<1.00	**<10**	800	15000	25000
Fluoride	A-T-026	**N**	**N**	1.0	**10.0**	10	150	500
Sulphate as SO_4	A-T-026	**N**	**N**	<1.00	**<10**	1000	20000	50000
Total Dissolved Solids	A-T-035	**N**	**N**	51	**510**	4000	60000	100000
Phenol Index	A-T-050	**N**	**N**	<0.01	**<0.1**	1	-	-
Dissolved Organic Carbon	A-T-032	**N**	**N**	<2.0	**<200**	500	800	1000
Leach Test Information								
pH (pH Units)	A-T-031	**N**	**N**	6.6				
Conductivity (µS/cm)	A-T-037	**N**	**N**	102				
Mass Sample (kg)				0.199				
Dry Matter (%)	A-T-044	**N**	**N**	88				

Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation

Landfill WAC analysis must not be used for hazardous waste classification purposes. This analysis is only applicable for landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Sample Details						Landfill Waste Acceptance Criteria Limits		
Lab Sample ID	Method	ISO17025	MCERTS	23/09535/7				
Client Sample Number				**103**		Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
Client Sample ID				RedP-BH1				
Depth to Top				1				
Depth to Bottom								
Date Sampled				22/09/2023				
Sample Type				Soil - ES				
Sample Matrix Code				4AB				
Solid Waste Analysis								
pH (pH Units)$_D$	A-T-031	**N**	**N**	**8.89**		-	>6	-
ANC to pH 4 (mol/kg)$_D$	A-T-ANC	**N**	**N**	**0.12**		-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg)$_D$	A-T-ANC	**N**	**N**	**0.04**		-	to be evaluated	to be evaluated
Loss on Ignition (%)$_D$	A-T-030	**N**	**N**	**1.6**		-	-	10
Total Organic Carbon (%)$_D$	A-T-032	**N**	**N**	**0.78**		3	5	6
PAH Sum of 17 (mg/kg) $_A$	A-T-019	**N**	**N**	**1.34**		100	-	-
Mineral Oil (mg/kg)$_{A\ EH_CU_1D_AL}$	A-T-007	**N**	**N**	**<10**		500	-	-
Sum of 7 PCBs (mg/kg)$_A$	A-T-004	**N**	**N**	**<0.007**		1	-	-
Sum of BTEX (mg/kg)$_A$	A-T-022	**N**	**N**	**<0.01**		6	-	-
Eluate Analysis				**10:1** mg/l	**10:1** mg/kg	**Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)**		
Arsenic	A-T-025	**N**	**N**	0.004	**0.040**	0.5	2	25
Barium	A-T-025	**N**	**N**	0.038	**0.380**	20	100	300
Cadmium	A-T-025	**N**	**N**	<0.001	**<0.01**	0.04	1	5
Chromium	A-T-025	**N**	**N**	0.001	**0.010**	0.5	10	70
Copper	A-T-025	**N**	**N**	<0.004	**<0.04**	2	50	100
Mercury	A-T-025	**N**	**N**	<0.0005	**<0.005**	0.01	0.2	2
Molybdenum	A-T-025	**N**	**N**	<0.001	**<0.01**	0.5	10	30
Nickel	A-T-025	**N**	**N**	<0.002	**<0.02**	0.4	10	40
Lead	A-T-025	**N**	**N**	0.015	**0.150**	0.5	10	50
Antimony	A-T-025	**N**	**N**	<0.001	**<0.01**	0.06	0.7	5
Selenium	A-T-025	**N**	**N**	<0.001	**<0.01**	0.1	0.5	7
Zinc	A-T-025	**N**	**N**	0.013	**0.130**	4	50	200
Chloride	A-T-026	**N**	**N**	<1.00	**<10**	800	15000	25000
Fluoride	A-T-026	**N**	**N**	<0.10	**<1**	10	150	500
Sulphate as SO_4	A-T-026	**N**	**N**	2	**17**	1000	20000	50000
Total Dissolved Solids	A-T-035	**N**	**N**	<20	**<200**	4000	60000	100000
Phenol Index	A-T-050	**N**	**N**	<0.01	**<0.1**	1	-	-
Dissolved Organic Carbon	A-T-032	**N**	**N**	<2.0	**<200**	500	800	1000
Leach Test Information								
pH (pH Units)	A-T-031	**N**	**N**	7.1				
Conductivity (µS/cm)	A-T-037	**N**	**N**	38				
Mass Sample (kg)				0.187				
Dry Matter (%)	A-T-044	**N**	**N**	93.5				

Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation

Landfill WAC analysis must not be used for hazardous waste classification purposes. This analysis is only applicable for landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Sample Details						Landfill Waste Acceptance Criteria Limits		
Lab Sample ID	Method	ISO17025	MCERTS	23/09535/10		Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
Client Sample Number				103				
Client Sample ID				F22-BH307				
Depth to Top				1				
Depth to Bottom								
Date Sampled				21/09/2023				
Sample Type				Soil - ES				
Sample Matrix Code				6A				
Solid Waste Analysis								
pH (pH Units)$_D$	A-T-031	N	N	**8.32**		-	>6	-
ANC to pH 4 (mol/kg)$_D$	A-T-ANC	N	N	**6.8**		-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg)$_D$	A-T-ANC	N	N	**0.18**		-	to be evaluated	to be evaluated
Loss on Ignition (%)$_D$	A-T-030	N	N	**4**		-	-	10
Total Organic Carbon (%)$_D$	A-T-032	N	N	**0.6**		3	5	6
PAH Sum of 17 (mg/kg) $_A$	A-T-019	N	N	**<0.08**		100	-	-
Mineral Oil (mg/kg)$_{A\ EH_CU_1D_AL}$	A-T-007	N	N	**<10**		500	-	-
Sum of 7 PCBs (mg/kg)$_A$	A-T-004	N	N	**<0.007**		1	-	-
Sum of BTEX (mg/kg)$_A$	A-T-022	N	N	**<0.01**		6	-	-
Eluate Analysis				**10:1** mg/l	**10:1** mg/kg	**Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)**		
Arsenic	A-T-025	N	N	<0.001	**<0.01**	0.5	2	25
Barium	A-T-025	N	N	0.003	**0.030**	20	100	300
Cadmium	A-T-025	N	N	<0.001	**<0.01**	0.04	1	5
Chromium	A-T-025	N	N	<0.001	**<0.01**	0.5	10	70
Copper	A-T-025	N	N	<0.004	**<0.04**	2	50	100
Mercury	A-T-025	N	N	<0.0005	**<0.005**	0.01	0.2	2
Molybdenum	A-T-025	N	N	0.005	**0.050**	0.5	10	30
Nickel	A-T-025	N	N	<0.002	**<0.02**	0.4	10	40
Lead	A-T-025	N	N	<0.001	**<0.01**	0.5	10	50
Antimony	A-T-025	N	N	<0.001	**<0.01**	0.06	0.7	5
Selenium	A-T-025	N	N	<0.001	**<0.01**	0.1	0.5	7
Zinc	A-T-025	N	N	0.002	**0.020**	4	50	200
Chloride	A-T-026	N	N	<1.00	**<10**	800	15000	25000
Fluoride	A-T-026	N	N	1.2	**12.0**	10	150	500
Sulphate as SO_4	A-T-026	N	N	4	**42**	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	52	**520**	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	**<0.1**	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	<2.0	**<200**	500	800	1000
Leach Test Information								
pH (pH Units)	A-T-031	N	N	7.2				
Conductivity (µS/cm)	A-T-037	N	N	105				
Mass Sample (kg)				0.205				
Dry Matter (%)	A-T-044	N	N	85.2				

Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation

envirolab
Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 23/09535
Issue Number: 1 **Date:** 19 October, 2023

Client: Structural Soils Limited (Hemel Hempstead)
18 Frogmore Road
Hemel Hempstead
UK
HP3 9RT

Project Manager: [redacted]
Project Name: Sealink Friston
Project Ref: 563835
Order No: N/A
Date Samples Received: 26/09/23
Date Instructions Received: 26/09/23
Date Analysis Completed: 19/10/23

Approved by:

[redacted]
Deputy Client Services Supervisor

Envirolab Job Number: 23/09535

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09535/1	23/09535/4	23/09535/6	23/09535/7	23/09535/10			Units	Limit of Detection	Method ref
Client Sample No	101	102	102	103	103					
Client Sample ID	F22-TP314	F22-TP315	RedP-BH1	RedP-BH1	F22-BH307					
Depth to Top	0.20	0.50	0.50	1.00	1.00					
Depth To Bottom										
Date Sampled	20-Sep-23	21-Sep-23	22-Sep-23	22-Sep-23	21-Sep-23					
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES					
Sample Matrix Code	3	5A	4AB	4AB	6A					
% Moisture at 105C$_A$	29.1	26.8	40.0	15.6	25.7			% w/w	0.1	A-T-044
% Stones >10mm$_A$	<0.1	<0.1	6.4	29.2	<0.1			% w/w	0.1	A-T-044
pH$_D$ M#	7.73	8.56	8.19	8.89	8.32			pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$ M#	<0.01	<0.01	0.08	0.01	0.02			g/l	0.01	A-T-026s
Sulphur (total)$_D$	193	67	1730	139	272			mg/kg	50	A-T-024s
Cyanide (free)$_A$ M#	<1	<1	<1	<1	<1			mg/kg	1	A-T-042sFCN
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2	<0.2	<0.2			mg/kg	0.2	A-T-050s
Organic Matter$_D$ M#	2.1	0.5	26.1	1.3	1.0			% w/w	0.1	A-T-032s
Total Organic Carbon$_D$ M#	1.20	0.32	15.1	0.78	0.60			% w/w	0.03	A-T-032s
Fraction of organic carbon$_D$ #	0.0120	0.0032	0.1514	0.0078	0.0060			N/A	0.0003	A-T-032s
Arsenic$_D$ M#	5	7	60	8	6			mg/kg	1	A-T-024s
Barium$_D$	41	33	605	65	68			mg/kg	1	A-T-024s
Beryllium$_D$	0.7	0.7	3.2	<0.5	1.3			mg/kg	0.5	A-T-024s
Boron (water soluble)$_D$ M#	<1.0	<1.0	1.3	<1.0	<1.0			mg/kg	1	A-T-027s
Cadmium$_D$ M#	0.6	0.5	1.5	<0.5	0.7			mg/kg	0.5	A-T-024s
Copper$_D$ M#	11	9	114	13	19			mg/kg	1	A-T-024s
Chromium$_D$ M#	26	26	35	18	44			mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1	<1	<1			mg/kg	1	A-T-040s
Chromium (trivalent)	26	26	35	18	44			mg/kg	1	Calc
Lead$_D$ M#	19	8	429	84	14			mg/kg	1	A-T-024s
Manganese$_D$ M#	157	223	351	84	267			mg/kg	1	A-T-024s
Mercury$_D$	<0.17	0.27	<0.17	<0.17	1.32			mg/kg	0.17	A-T-024s
Molybdenum$_D$ M#	<1	<1	11	<1	1			mg/kg	1	A-T-024s
Nickel$_D$ M#	16	23	60	16	33			mg/kg	1	A-T-024s
Selenium$_D$ M#	<1	<1	<1	<1	<1			mg/kg	1	A-T-024s
Vanadium$_D$ M#	39	37	66	8	60			mg/kg	1	A-T-024s
Zinc$_D$ M#	48	35	323	50	53			mg/kg	5	A-T-024s
Leachate Prep BS EN 12457-1 (2:1) (1 no)$_A$	-	-	*	-	-					A-T-001
pH (leachable)$_A$	-	-	7.48	-	-			pH	0.01	A-T-031w
Ammoniacal nitrogen as N (leachable)$_A$	-	-	<0.05	-	-			mg/l	0.05	A-T-033w
Chloride (leachable)$_A$	-	-	9.71	-	-			mg/l	1	A-T-026w
Fluoride (leachable)$_A$	-	-	0.20	-	-			mg/l	0.1	A-T-026w (F)
Sulphate (leachable)$_A$	-	-	61.14	-	-			mg/l	1	A-T-026w

Envirolab Job Number: 23/09535 **Client Project Name: Sealink Friston**

Client Project Ref: 563835

Lab Sample ID	23/09535/1	23/09535/4	23/09535/6	23/09535/7	23/09535/10			Units	Limit of Detection	Method ref
Client Sample No	101	102	102	103	103					
Client Sample ID	F22-TP314	F22-TP315	RedP-BH1	RedP-BH1	F22-BH307					
Depth to Top	0.20	0.50	0.50	1.00	1.00					
Depth To Bottom										
Date Sampled	20-Sep-23	21-Sep-23	22-Sep-23	22-Sep-23	21-Sep-23					
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES					
Sample Matrix Code	3	5A	4AB	4AB	6A					
Cyanide (free) (leachable)$_A$	-	-	<0.005	-	-			mg/l	0.005	A-T-042wFCN
Cyanide (total) (leachable)$_A$	-	-	0.007	-	-			mg/l	0.005	A-T-042wTCN
Cyanide (complex) (leachable)	-	-	0.007	-	-			mg/l	0.005	Calc
Phenol (leachable)$_A$	-	-	<0.01	-	-			mg/l	0.01	A-T-050w
Cresols (leachable)$_A$	-	-	<0.01	-	-			mg/l	0.01	A-T-050w
Resorcinol (leachable)$_A$	-	-	<0.01	-	-			mg/l	0.01	A-T-050w
Catechol (leachable)$_A$	-	-	<0.01	-	-			mg/l	0.01	A-T-050w
Xylenols & Ethylphenols (leachable)$_A$	-	-	<0.01	-	-			mg/l	0.01	A-T-050w
Naphthols (leachable)$_A$	-	-	<0.01	-	-			mg/l	0.01	A-T-050w
Trimethylphenol (leachable)$_A$	-	-	<0.01	-	-			mg/l	0.01	A-T-050w
Phenols (total by HPLC) (leachable)$_A$	-	-	<0.01	-	-			mg/l	0.01	A-T-050w
Antimony (leachable)$_A$	-	-	12	-	-			µg/l	1	A-T-025w
Arsenic (leachable)$_A$	-	-	6	-	-			µg/l	1	A-T-025w
Boron (leachable)$_A$	-	-	167	-	-			µg/l	10	A-T-025w
Barium (leachable)$_A$	-	-	52	-	-			µg/l	1	A-T-025w
Beryllium (leachable)$_A$	-	-	<1	-	-			µg/l	1	A-T-025w
Cadmium (leachable)$_A$	-	-	<1	-	-			µg/l	1	A-T-025w
Copper (leachable)$_A$	-	-	5	-	-			µg/l	4	A-T-025w
Chromium (leachable)$_A$	-	-	39	-	-			µg/l	1	A-T-025w
Chromium (hexavalent) (leachable)$_A$	-	-	<0.05	-	-			mg/l	0.05	A-T-040w
Chromium (trivalent)	-	-	<0.05	-	-			mg/l	0.05	Calc
Iron (leachable)$_A$	-	-	27	-	-			µg/l	10	A-T-025w
Lead (leachable)$_A$	-	-	17	-	-			µg/l	1	A-T-025w
Manganese (leachable)$_A$	-	-	3	-	-			µg/l	1	A-T-025w
Magnesium (leachable)$_A$	-	-	3	-	-			mg/l	1	A-T-049w
Mercury (leachable)$_A$	-	-	<0.1	-	-			µg/l	0.1	A-T-025w
Molybdenum (leachable)$_A$	-	-	18	-	-			µg/l	1	A-T-025w
Nickel (leachable)$_A$	-	-	<2	-	-			µg/l	2	A-T-025w
Selenium (leachable)$_A$	-	-	1	-	-			µg/l	1	A-T-025w
Vanadium (leachable)$_A$	-	-	3	-	-			µg/l	1	A-T-025w
Zinc (leachable)$_A$	-	-	29	-	-			µg/l	2	A-T-025w
Bentazone$_A$	<0.10	-	<0.10	-	-			mg/kg	0.1	Subcon RPS MH
Cypermethrin$_A$	<0.10	-	<0.10	-	-			mg/kg	0.1	Subcon RPS MH

Envirolab Job Number: 23/09535

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09535/1	23/09535/4	23/09535/6	23/09535/7	23/09535/10			Units	Limit of Detection	Method ref
Client Sample No	101	102	102	103	103					
Client Sample ID	F22-TP314	F22-TP315	RedP-BH1	RedP-BH1	F22-BH307					
Depth to Top	0.20	0.50	0.50	1.00	1.00					
Depth To Bottom										
Date Sampled	20-Sep-23	21-Sep-23	22-Sep-23	22-Sep-23	21-Sep-23					
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES					
Sample Matrix Code	3	5A	4AB	4AB	6A					
Linuron$_A$	<0.10	-	<0.10	-	-			mg/kg	0.1	Subcon RPS MH
Alachlor$_A$	<0.02	-	<0.02	-	-			mg/kg	0.02	Subcon RPS MH
Carbaryl$_A$	<0.10	-	<0.10	-	-			mg/kg	0.1	Subcon RPS MH
Diuron$_A$	<0.10	-	<0.10	-	-			mg/kg	0.1	Subcon RPS MH
Isoproturon$_A$	<0.10	-	<0.10	-	-			mg/kg	0.1	Subcon RPS MH
MCPP; (Mecoprop)$_A$	<0.10	-	<0.10	-	-			mg/kg	0.1	Subcon RPS MH
Calcium (leachable)$_A$	-	-	35	-	-			mg/l	1	A-T-049w

Lab Sample ID	23/09535/1	23/09535/4	23/09535/6	23/09535/7	23/09535/10			Units	Limit of Detection	Method ref
Client Sample No	101	102	102	103	103					
Client Sample ID	F22-TP314	F22-TP315	RedP-BH1	RedP-BH1	F22-BH307					
Depth to Top	0.20	0.50	0.50	1.00	1.00					
Depth To Bottom										
Date Sampled	20-Sep-23	21-Sep-23	22-Sep-23	22-Sep-23	21-Sep-23					
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES					
Sample Matrix Code	3	5A	4AB	4AB	6A					
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD	NAD	NAD	NAD	NAD					A-T-045
Asbestos Matrix (visual)$_{D}$	-	-	-	-	-					A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-	-	-	-					A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A	N/A	N/A	N/A					A-T-045
OCP+OPP Combined Pest Suite (incl. Atrazine and Simazine)										
Dichlobenil$_{A}$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Tecnazene$_{A}$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Trifluralin$_{A}$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
alpha-Hexachlorocyclohexane (HCH)$_{A}$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Hexachlorobenzene (HCB) $_{A}$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Simazine$_{A}$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Atrazine$_{A}$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
beta-Hexachlorocyclohexane (HCH)$_{A}$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Quintozene (PCNB)$_{A}$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Chlorothalonil$_{A}$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
delta-Hexachlorocyclohexane (HCH)$_{A}$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Triallate$_{A}$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Heptachlor$_{A}$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Aldrin$_{A}$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Triadimefon$_{A}$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Telodrin$_{A}$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Isodrin$_{A}$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Pendimethalin$_{A}$	0.04	-	<0.01	-	-			mg/kg	0.01	A-T-056
Heptachlor epoxide$_{A}$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
trans-Chlordane (Gamma)$_{A}$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
o,p-DDE (2,4)$_{A}$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Endosulphan I (Alpha)$_{A}$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
cis-Chlordane (Alpha)$_{A}$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
p,p-DDE (4,4)$_{A}$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Dieldrin$_{A}$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056

Lab Sample ID	23/09535/1	23/09535/4	23/09535/6	23/09535/7	23/09535/10			Units	Limit of Detection	Method ref
Client Sample No	101	102	102	103	103					
Client Sample ID	F22-TP314	F22-TP315	RedP-BH1	RedP-BH1	F22-BH307					
Depth to Top	0.20	0.50	0.50	1.00	1.00					
Depth To Bottom										
Date Sampled	20-Sep-23	21-Sep-23	22-Sep-23	22-Sep-23	21-Sep-23					
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES					
Sample Matrix Code	3	5A	4AB	4AB	6A					
o,p-DDD (2,4)$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Endrin$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Endosulphan II (Beta)$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
p,p-DDD (4,4)$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
o,p-DDT (2,4)$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Endrin Aldehyde$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Endrin Ketone$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Endosulphan Sulphate$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
p,p-DDT (4,4)$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
o,p-Methoxychlor$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
p,p-Methoxychlor$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Permethrin I (cis)$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Permethrin II (trans)$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Dichlorvos$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Mevinphos$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Demeton-S$_A$	<0.50	-	<0.50	-	-			mg/kg	0.5	A-T-056
Demeton-O$_A$	<0.50	-	<0.50	-	-			mg/kg	0.5	A-T-056
Phorate$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Dimethoate$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Propetamphos$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Diazinon (Dimpylate)$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Disulfoton$_A$	<0.10	-	<0.10	-	-			mg/kg	0.1	A-T-056
Chlorpyrifos-methyl$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Parathion (Ethyl Parathion)$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Methyl Parathion$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Pirimiphos-methyl$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Fenitrothion$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Fensulphothion$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Fenthion$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Malathion$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Chlorfenvinphos$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Chlorpyrifos$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Trichloronate$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Prothiofos (Tokuthion)$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056

Envirolab Job Number: 23/09535 **Client Project Name: Sealink Friston**

Client Project Ref: 563835

Lab Sample ID	23/09535/1	23/09535/4	23/09535/6	23/09535/7	23/09535/10			Units	Limit of Detection	Method ref
Client Sample No	101	102	102	103	103					
Client Sample ID	F22-TP314	F22-TP315	RedP-BH1	RedP-BH1	F22-BH307					
Depth to Top	0.20	0.50	0.50	1.00	1.00					
Depth To Bottom										
Date Sampled	20-Sep-23	21-Sep-23	22-Sep-23	22-Sep-23	21-Sep-23					
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES					
Sample Matrix Code	3	5A	4AB	4AB	6A					
Ethion$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Triazophos$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Carbophenothion$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Phosalone$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Azinphos-methyl$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Azinphos-ethyl$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
Coumaphos$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056
gamma-Hexachlorocyclohexane (HCH)$_A$	<0.01	-	<0.01	-	-			mg/kg	0.01	A-T-056

Envirolab Job Number: 23/09535

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09535/1	23/09535/4	23/09535/6	23/09535/7	23/09535/10			Units	Limit of Detection	Method ref
Client Sample No	101	102	102	103	103					
Client Sample ID	F22-TP314	F22-TP315	RedP-BH1	RedP-BH1	F22-BH307					
Depth to Top	0.20	0.50	0.50	1.00	1.00					
Depth To Bottom										
Date Sampled	20-Sep-23	21-Sep-23	22-Sep-23	22-Sep-23	21-Sep-23					
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES					
Sample Matrix Code	3	5A	4AB	4AB	6A					
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01	<0.01	0.17	<0.01	<0.01			mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	0.23	0.02	<0.01			mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	<0.02	0.70	0.03	<0.02			mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	<0.04	<0.04	2.81	0.10	<0.04			mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	<0.04	<0.04	3.29	0.14	<0.04			mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	<0.05	<0.05	3.78	0.15	<0.05			mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	<0.05	2.01	0.11	<0.05			mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	1.48	<0.07	<0.07			mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	<0.06	<0.06	3.37	0.13	<0.06			mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A$	<0.04	<0.04	0.30	<0.04	<0.04			mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	<0.08	<0.08	8.92	0.21	<0.08			mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	<0.01	0.20	<0.01	<0.01			mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	<0.03	<0.03	2.01	0.10	<0.03			mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	0.09	<0.03	<0.03			mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	<0.03	<0.03	4.41	0.10	<0.03			mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	<0.07	<0.07	7.55	0.18	<0.07			mg/kg	0.07	A-T-019s
Total PAH-16MS$_A$	<0.08	<0.08	41.3	1.27	<0.08			mg/kg	0.01	A-T-019s

Envirolab Job Number: 23/09535

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09535/1	23/09535/4	23/09535/6	23/09535/7	23/09535/10			Units	Limit of Detection	Method ref
Client Sample No	101	102	102	103	103					
Client Sample ID	F22-TP314	F22-TP315	RedP-BH1	RedP-BH1	F22-BH307					
Depth to Top	0.20	0.50	0.50	1.00	1.00					
Depth To Bottom										
Date Sampled	20-Sep-23	21-Sep-23	22-Sep-23	22-Sep-23	21-Sep-23					
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES					
Sample Matrix Code	3	5A	4AB	4AB	6A					
Speciated PCB-WHO12										
PCB BZ 81$_{A}^{M\#}$	-	-	<0.005	-	-			mg/kg	0.005	A-T-004s
PCB BZ 105$_{A}^{M\#}$	-	-	<0.005	-	-			mg/kg	0.005	A-T-004s
PCB BZ 114$_{A}^{M\#}$	-	-	<0.005	-	-			mg/kg	0.005	A-T-004s
PCB BZ 118$_{A}^{M\#}$	-	-	<0.007	-	-			mg/kg	0.007	A-T-004s
PCB BZ 123$_{A}^{M\#}$	-	-	<0.005	-	-			mg/kg	0.005	A-T-004s
PCB BZ 126$_{A}^{M\#}$	-	-	<0.005	-	-			mg/kg	0.005	A-T-004s
PCB BZ 156$_{A}^{M\#}$	-	-	<0.005	-	-			mg/kg	0.005	A-T-004s
PCB BZ 157$_{A}^{M\#}$	-	-	<0.005	-	-			mg/kg	0.005	A-T-004s
PCB BZ 167$_{A}^{M\#}$	-	-	<0.005	-	-			mg/kg	0.005	A-T-004s
PCB BZ 169$_{A}^{M\#}$	-	-	<0.005	-	-			mg/kg	0.005	A-T-004s
PCB BZ 189$_{A}^{M\#}$	-	-	<0.005	-	-			mg/kg	0.005	A-T-004s
PCB BZ 77$_{A}^{M\#}$	-	-	<0.005	-	-			mg/kg	0.005	A-T-004s
Total Speciated PCB-WHO12$_{A}^{M\#}$	-	-	<0.007	-	-			mg/kg	0.005	A-T-004s

Envirolab Job Number: 23/09535

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09535/1	23/09535/4	23/09535/6	23/09535/7	23/09535/10			Units	Limit of Detection	Method ref
Client Sample No	101	102	102	103	103					
Client Sample ID	F22-TP314	F22-TP315	RedP-BH1	RedP-BH1	F22-BH307					
Depth to Top	0.20	0.50	0.50	1.00	1.00					
Depth To Bottom										
Date Sampled	20-Sep-23	21-Sep-23	22-Sep-23	22-Sep-23	21-Sep-23					
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES					
Sample Matrix Code	3	5A	4AB	4AB	6A					
TPH CWG with Clean Up										
Ali >C5-C6$_A$	-	-	<0.01	<0.01	-			mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	-	-	<0.01	<0.01	-			mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	-	-	<1	<1	-			mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	-	-	<1	<1	-			mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	-	-	<1	<1	-			mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	-	-	<1	<1	-			mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	-	-	<1	3	-			mg/kg	1	A-T-055s
Total Aliphatics$_A$	-	-	<1	3	-			mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	-	-	<0.01	<0.01	-			mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	-	-	<0.01	<0.01	-			mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	-	-	<1	<1	-			mg/kg	1	A-T-055s
Aro >C10-C12$_A$	-	-	<1	<1	-			mg/kg	1	A-T-055s
Aro >C12-C16$_A^{M\#}$	-	-	<1	<1	-			mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	-	-	<1	2	-			mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	-	-	<1	6	-			mg/kg	1	A-T-055s
Total Aromatics$_A$	-	-	<1	8	-			mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	-	-	<1	11	-			mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	-	-	<0.01	<0.01	-			mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	-	-	<0.01	<0.01	-			mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	-	-	<0.01	<0.01	-			mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	-	-	<0.01	<0.01	-			mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	-	-	<0.01	<0.01	-			mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	-	-	<0.01	<0.01	-			mg/kg	0.01	A-T-022s

Report Notes

General
This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **six weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
Analytical results reflect the quality of the sample at the time of analysis only.
Opinions and Interpretations expressed are outside our scope of accreditation.
The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client.
A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

Key

Superscript "#"	Accredited to ISO 17025
Superscript "M"	Accredited to MCertS
Superscript "U"	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript "A"	Analysis performed on as-received Sample
Subscript "D"	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript "^"	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
N/A	Not applicable

Asbestos
Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis
Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing, and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25ºC / 11550µS/cm @ 20ºC fall outside the accreditation range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Structural Soils Limited (Hemel Hempstead), 18 Frogmore Road, Hemel Hempstead, UK, HP3 9RT

Project: Sealink Friston

Clients Project No: 563835

Project No: 23/09535

Date Received: 26/09/2023 (am)

Cool Box Temperatures (°C): 15.2 - 15.4

Lab Sample ID	23/09535/1
Client Sample No	101
Client Sample ID/Depth	F22-TP314 0.20m
Date Sampled	20/09/23
Deviation Code	
F	✓

Key
F *Maximum holding time exceeded between sampling date and analysis for analytes listed below*

HOLDING TIME EXCEEDANCES

Lab Sample ID	23/09535/1
Client Sample No	101
Client Sample ID/Depth	F22-TP314 0.20m
Date Sampled	20/09/23
Bentazone	✓
Cypermethrin	✓
Linuron	✓
Alachlor	✓
Carbaryl	✓
Diuron	✓
Isoproturon	✓
MCPP; (Mecoprop)	✓

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	23/09535/1	23/09535/4	23/09535/6	23/09535/7	23/09535/10
Client Sample No	101	102	102	103	103
Client Sample ID/Depth	F22-TP314 0.20m	F22-TP315 0.50m	RedP-BH1 0.50m	RedP-BH1 1.00m	F22-BH307 1.00m
Date Sampled	20/09/23	21/09/23	22/09/23	22/09/23	21/09/23
A-T-004s		02/10/2023	02/10/2023	02/10/2023	02/10/2023
A-T-007s		04/10/2023		04/10/2023	04/10/2023
A-T-019s	05/10/2023	02/10/2023	02/10/2023	02/10/2023	02/10/2023
A-T-022s		03/10/2023	03/10/2023	03/10/2023	03/10/2023
A-T-024s	04/10/2023	04/10/2023	04/10/2023	04/10/2023	04/10/2023
A-T-025w		09/10/2023	09/10/2023	09/10/2023	09/10/2023
A-T-026s	04/10/2023	04/10/2023	04/10/2023	04/10/2023	04/10/2023
A-T-026w		09/10/2023	04/10/2023	09/10/2023	09/10/2023
A-T-026w (F)		09/10/2023	02/10/2023	09/10/2023	09/10/2023
A-T-027s	04/10/2023	04/10/2023	04/10/2023	04/10/2023	04/10/2023
A-T-030s		04/10/2023		04/10/2023	04/10/2023
A-T-031s	04/10/2023	04/10/2023	04/10/2023	04/10/2023	04/10/2023
A-T-031w		09/10/2023	02/10/2023	09/10/2023	09/10/2023
A-T-032s	04/10/2023	04/10/2023	04/10/2023	04/10/2023	04/10/2023
A-T-032w		09/10/2023		09/10/2023	09/10/2023
A-T-033w			03/10/2023		
A-T-037w		09/10/2023		09/10/2023	09/10/2023
A-T-040s	04/10/2023	04/10/2023	04/10/2023	04/10/2023	04/10/2023
A-T-040w			04/10/2023		
A-T-042sFCN	29/09/2023	29/09/2023	29/09/2023	29/09/2023	29/09/2023
A-T-042wFCN			19/10/2023		
A-T-042wTCN			04/10/2023		
A-T-044	04/10/2023	04/10/2023	04/10/2023	04/10/2023	04/10/2023
A-T-045	29/09/2023	29/09/2023	29/09/2023	29/09/2023	29/09/2023
A-T-049w			04/10/2023		
A-T-050s	02/10/2023	02/10/2023	02/10/2023	02/10/2023	02/10/2023
A-T-050w		09/10/2023	03/10/2023	09/10/2023	09/10/2023
A-T-055s			02/10/2023	02/10/2023	
A-T-056	04/10/2023		04/10/2023		
A-T-ANCs		04/10/2023		04/10/2023	04/10/2023
Calc	04/10/2023	04/10/2023	19/10/2023	04/10/2023	04/10/2023
Calc-As Recd			03/10/2023	03/10/2023	

Lab Sample ID	23/09535/1	23/09535/4	23/09535/6	23/09535/7	23/09535/10
Client Sample No	101	102	102	103	103
Client Sample ID/Depth	F22-TP314 0.20m	F22-TP315 0.50m	RedP-BH1 0.50m	RedP-BH1 1.00m	F22-BH307 1.00m
Date Sampled	20/09/23	21/09/23	22/09/23	22/09/23	21/09/23
Calc-no stones		09/10/2023		09/10/2023	09/10/2023
Probe (w)		09/10/2023		09/10/2023	09/10/2023

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

Certificate of Analysis

Report No.: **23-06602-1**

Issue No.: **1**
Date of Issue **11/10/2023**

Customer Details:	Envirolab Ltd, 7 - 8 Sandpits Business Park, Mottram Road, Hyde, Greater Manchester, SK14 3AR, United Kingdom
Customer Contact:	[redacted]
Customer Order No.:	PO752444
Customer Reference:	Not Supplied
Quotation Reference:	Q22-00104 (Issue: 36)
Description:	2 geo samples
Date Received:	28/09/2023
Date Started:	28/09/2023
Date Completed:	11/10/2023
Test Methods:	Details available on request (refer to SOP code against relevant result/s)
Notes:	None

[redacted]

Approved By: [redacted], **LIMS Manager**

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service.
This certificate shall not be reproduced except in full without the prior written approval of the laboratory.
Observations and interpretations are outside of the scope of UKAS accreditation.
Results reported herein relate only to the items supplied to the laboratory for testing.
Results on an Interim Report are not dry-weight corrected.
Where the laboratory is not responsible for the sampling, results apply to the sample(s) as they were received.
The laboratory shall not be responsible for any information that is supplied by the customer that may affect the validity of results.

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Results Summary

Report No.: 23-06602-1

Customer Reference: Not Supplied

Customer Order No: PO752444

Customer Sample No	23/09535/1	23/09535/6
Customer Sample ID	F22-TP314	RedP-BH1
RPS Sample No	33410	33411
Sample Type	**GEO**	**GEO**
Sample Matrix	SOIL	SOIL
Sampling Date	20/09/2023	22/09/2023

Determinand	CAS No	Codes	SOP	RL	Units		
carbaryl	63-25-2	N	L001	0.1	mg/kg DW	< 0.10	< 0.10
2,4,5-trichlorophenoxyacetic acid (2,4,5-T)	93-76-5	N	L340	0.1	mg/kg DW	< 0.10	< 0.10
2,4,5-TP (Fenoprop)	93-72-1	N	L340	0.1	mg/kg DW	< 0.10	< 0.10
2,4-dichlorophenoxyacetic acid (2,4-D)	94-75-7	N	L340	0.1	mg/kg DW	< 0.10	< 0.10
acifluorfen	50594-66-6	N	L340	0.1	mg/kg DW	< 0.10	< 0.10
bentazone	25057-89-0	N	L340	0.1	mg/kg DW	< 0.10	< 0.10
clopyralid	1702-17-6	N	L340	0.1	mg/kg DW	< 0.10	< 0.10
dichlorprop (2,4-DP)	120-36-5	N	L340	0.1	mg/kg DW	< 0.10	< 0.10
dinoseb (DNBP)	88-85-7	N	L340	0.1	mg/kg DW	< 0.10	< 0.10
2-methyl-4-chlorophenoxyacetic acid (MCPA)	94-74-6	N	L340	0.1	mg/kg DW	< 0.10	< 0.10
mecoprop (MCPP)	7085-19-0	N	L340	0.1	mg/kg DW	< 0.10	< 0.10
pentachlorophenol (PCP)	87-86-5	N	L340	0.1	mg/kg DW	< 0.10	< 0.10
2,3,6-trichlorobenzoic acid (2,3,6-TBA)	50-31-7	N	L340	0.1	mg/kg DW	< 0.10	< 0.10
4-(2,4-dichlorophenoxy)butanoic acid (2,4-DB)	94-82-6	N	L340	0.1	mg/kg DW	< 0.10	< 0.10
4-chlorophenoxyacetic acid (4-CPA)	122-88-3	N	L340	0.1	mg/kg DW	< 0.10	< 0.10
benazolin	3813-05-6	N	L340	0.1	mg/kg DW	< 0.10	< 0.10
bromoxynil	1689-84-5	N	L340	0.1	mg/kg DW	< 0.10	< 0.10
dicamba	1918-00-9	N	L340	0.1	mg/kg DW	< 0.10	< 0.10
diclofop	40843-25-2	N	L340	0.1	mg/kg DW	< 0.10	< 0.10
2-methyl-4,6-dinitrophenol (DNOC)	534-52-1	N	L340	0.1	mg/kg DW	< 0.10	< 0.10
flamprop	58667-63-3	N	L340	0.1	mg/kg DW	< 0.10	< 0.10
fluroxypyr	69377-81-7	N	L340	0.1	mg/kg DW	< 0.10	< 0.10
ioxynil	1689-83-4	N	L340	0.1	mg/kg DW	< 0.10	< 0.10
MCPB	94-81-5	N	L340	0.1	mg/kg DW	< 0.10	< 0.10
picloram	1918-02-1	N	L340	0.1	mg/kg DW	< 0.10	< 0.10
triclopyr	55335-06-3	N	L340	0.1	mg/kg DW	< 0.10	< 0.10
alachlor	15972-60-8	N	G029	0.02	mg/kg AR	< 0.02	< 0.02
chloroxuron	1982-47-4	N	L025	0.1	mg/kg DW	< 0.10	< 0.10
chlortoluron	15545-48-9	N	L025	0.1	mg/kg DW	< 0.10	< 0.10
diflubenzuron	35367-38-5	N	L025	0.1	mg/kg DW	< 0.10	< 0.10
dimefuron	34205-21-5	N	L025	0.1	mg/kg DW	< 0.10	< 0.10
diuron	330-54-1	N	L025	0.1	mg/kg DW	< 0.10	< 0.10
isoproturon	34123-59-6	N	L025	0.1	mg/kg DW	< 0.10	< 0.10
linuron	330-55-2	N	L025	0.1	mg/kg DW	< 0.10	< 0.10
methabenzthiazuron	18691-97-9	N	L025	0.1	mg/kg DW	< 0.10	< 0.10
metoxuron	19937-59-8	N	L025	0.1	mg/kg DW	< 0.10	< 0.10
monolinuron	1746-81-2	N	L025	0.1	mg/kg DW	< 0.10	< 0.10
monuron	150-68-5	N	L025	0.1	mg/kg DW	< 0.10	< 0.10

Results Summary

Report No.: 23-06602-1

Customer Reference: Not Supplied

Customer Order No: PO752444

Customer Sample No	**23/09535/1**	**23/09535/6**
Customer Sample ID	F22-TP314	RedP-BH1
RPS Sample No	33410	33411
Sample Type	**GEO**	**GEO**
Sample Matrix	SOIL	SOIL
Sampling Date	20/09/2023	22/09/2023

Determinand	CAS No	Codes	SOP	RL	Units		
pencycuron	66063-05-6	N	L025	0.1	mg/kg DW	< 0.10	< 0.10
bifenthrin	82657-04-3	N	G127	0.1	mg/kg DW	< 0.10	< 0.10
cyfluthrin, total	68359-37-5	N	G127	0.1	mg/kg DW	< 0.10	< 0.10
cyhalothrin, total	68085-85-8	N	G127	0.1	mg/kg DW	< 0.10	< 0.10
cypermethrin, total	52315-07-8	N	G127	0.1	mg/kg DW	< 0.10	< 0.10
deltamethrin	52918-63-5	N	G127	0.1	mg/kg DW	< 0.10	< 0.10
fenvalerate	51630-58-1	N	G127	0.1	mg/kg DW	< 0.10	< 0.10
permethrin, total	52645-53-1	N	G127	0.1	mg/kg DW	< 0.10	< 0.10
resmethrin	10453-86-8	N	G127	0.1	mg/kg DW	< 0.10	< 0.10
tetramethrin	7696-12-0	N	G127	0.1	mg/kg DW	< 0.10	< 0.10

Deviating Samples

Report No.: 23-06602-1

Customer Reference: Not Supplied

Customer Order No: PO752444

Our policy on Deviating Samples has been implemented in accordance with UKAS Policy on Deviating Samples (TPS63).
RPS is not responsible for the integrity of samples as received, unless RPS personnel performed the sampling. Samples submitted may be declared to be deviating.
Where applicable the analysis method remains UKAS accredited, however results reported for a deviating sample may be compromised.
Where no sampling date was supplied, samples have been declared to be deviating. If the date can be supplied, results may be reissued if assessed not deviating.
Where the sample container used was unsuitable or broken, the sample is flagged as deviating and re-sampling/re-submisson may be required.

RPS No.	Customer No.	Customer ID	Date Sampled	Containers Received	Deviating	Reason for Deviation
33410	23/09535/1	F22-TP314	20/09/2023	100 mL amber glass jar	No	
33411	23/09535/6	RedP-BH1	22/09/2023	100 mL amber glass jar	No	

Report No.: 23-06602-1

Type	Matrix Code	Description
Food	CEREALPROD	Cereals, grains & products
Food	DRIEDFRUIT	Dried fruits
Food	FRIEDBAKED	Fried or baked food
Food	LEGUME	Legumes
Food	MEAT	Meat
Food	POWDERED	Powdered food
Food	PULSE	Pulses (dried legumes)
Food	VEGETABLES	Vegetables
Gas	TDTUBE	TD Tube
Gas	TENAX	Tenax Tube
Gas	TUBE	Tube
Gas	VAPOUR	Gas
Geological	SED_MAR	Marine Sediment
Geological	SED_RIV	River Sediment
Geological	SLUDG_SOL	Sludge (solid only)
Geological	SOIL	Soil
Liquid	BEVERAGE	Beverage
Liquid	BLOOD	Blood
Liquid	CONDENSATE	Condensate
Liquid	FORMULATN	Formula
Liquid	LEACHATE	Leachate
Liquid	OIL/GREASE	Oil or grease
Liquid	SLUDG_LIQ	Sludge (liquid only)
Liquid	SOLVENT	Solvent
Liquid	URINE	Urine
Sludge	SLUDG_WHL	Sludge for bulk route
Solid	BADGE	Badge
Solid	BEDDING	Bedding
Solid	BIOTA	Biota (general)
Solid	BIOTA_F	Biota (fish)
Solid	BIOTA_SF	Biota (shellfish)
Solid	CONSTRCTN	Construction materials
Solid	FABRIC	Fabrics & furnishing materials
Solid	FEED	Animal feed
Solid	FERTILISER	Fertiliser
Solid	FILTER	Filter
Solid	FOAM	Solid foam material
Solid	PACKAGING	Packaging material
Solid	PLANT	Plant (vegetation)
Solid	POWDER	Powder
Solid	SWAB	Swab
Water	BAL	Ballast Water
Water	BIL	Bilge Water
Water	DW	Drinking Water
Water	EFFLUENT	Effluent
Water	GW	Ground Water
Water	INFLUENT	Influent
Water	SALTW	Salt Water
Water	SW	Surface Water
Water	TW	Tap Water
Water	W	Water

Key Code	Description
N	Not Accredited Test
U	UKAS Accredited Test - UKAS accreditation is only implied if the report carries the UKAS logo
UF	UKAS Flexible Scope Test
M	MCERTS Accredited Test - MCERTS accreditation is only implied if the report carries the MCERTS logo
O	Marine Management Organisation (MMO) Validated
SN	Subcontracted to approved laboratory not accredited for the test
SU	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
SIN	Subcontracted to internal RPS Group laboratory not accredited for the test
SIU	Subcontracted to internal RPS Group laboratory UKAS Accredited for the test
SIM	Subcontracted to internal RPS Group laboratory MCERTS/UKAS Accredited for the test
I/S (in results)	Insufficient Sample
U/S (in results)	Unsuitable Sample
S/C (in results)	See Comments
ND (in results)	Not Detected
L (in results)	Result is outside normal limits
DW (in units)	Results are expressed on a dry weight basis

Sample Type	Sample Retention and Disposal Period
Foodstuff	1 month (if frozen) from the issue date of this report
Waters	2 weeks from the issue date of this report
Other Liquids	1 month from the issue date of this report
Solids / Soils	1 month from the issue date of this report
Sediments	1 month from the issue date of this report

Note: Sample retention may be subject to agreement with the customer for particular projects

Where the dry solids value of a sample is low (<50%), reporting limits are automatically raised for all determinants analysed on an as-received basis.

Soil Typing	Description
Type 1	Clay - Brown
Type 2	Clay - Grey/Black
Type 3	Sand
Type 4	Top Soil (Standard)
Type 5	Top Soil (High Peat)
Type 6	Made Ground (>50% Clay)
Type 7	Made Ground (>50% Sand)
Type 8	Made Ground (>50% Top Soil)
Type X	Other

Dev code	Description
D	No sampling date provided.
T	No sampling time provided.
Z	Temperature of samples exceeded in transit/storage.
V	Excessive headspace for volatile determinands.
P	Sample submitted without required preservative(s).
C	Incorrect container.
H	Holding time exceeded (sampling to extraction).
X	Holding time exceeded (sampling to receipt).

Note: Where the following information is included in this certificate, it has usually been supplied by the customer: Customer Sample ID, Sample Location, Sample Depth, Sampling Date and Sampling Time. The laboratory shall not be responsible for any information that is supplied by the customer that may affect the validity of results.

envirolab
Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 23/09594
Issue Number: 1 **Date:** 11 October, 2023

Client: Structural Soils Limited (Hemel Hempstead)
18 Frogmore Road
Hemel Hempstead
UK
HP3 9RT

Project Manager: [redacted]
Project Name: Sealink Friston
Project Ref: 563835
Order No: N/A
Date Samples Received: 27/09/23
Date Instructions Received: 27/09/23
Date Analysis Completed: 11/10/23

Approved by:

[redacted]
Client Manager

Lab Sample ID	23/09594/1	23/09594/4						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	F22-TP518	F22-TP525								
Depth to Top	0.20	0.50								
Depth To Bottom										
Date Sampled	25-Sep-23	25-Sep-23								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	6AE	6A								
% Moisture at 105C$_A$	27.6	24.5						% w/w	0.1	A-T-044
% Stones >10mm$_A$	<0.1	<0.1						% w/w	0.1	A-T-044
pH$_D^{M\#}$	8.10	7.97						pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D^{M\#}$	0.02	<0.01						g/l	0.01	A-T-026s
Sulphur (total)$_D$	268	144						mg/kg	50	A-T-024s
Cyanide (free)$_A^{M\#}$	<1	<1						mg/kg	1	A-T-042sFCN
Phenols - Total by HPLC$_A$	<0.2	<0.2						mg/kg	0.2	A-T-050s
Organic Matter$_D^{M\#}$	2.8	1.3						% w/w	0.1	A-T-032s
Total Organic Carbon$_D^{M\#}$	1.60	0.78						% w/w	0.03	A-T-032s
Fraction of organic carbon$_D^{\#}$	0.0160	0.0078						N/A	0.0003	A-T-032s
Arsenic$_D^{M\#}$	8	5						mg/kg	1	A-T-024s
Barium$_D$	54	60						mg/kg	1	A-T-024s
Beryllium$_D$	0.8	0.9						mg/kg	0.5	A-T-024s
Boron (water soluble)$_D^{M\#}$	1.4	1.1						mg/kg	1	A-T-027s
Cadmium$_D^{M\#}$	0.7	0.6						mg/kg	0.5	A-T-024s
Copper$_D^{M\#}$	16	12						mg/kg	1	A-T-024s
Chromium$_D^{M\#}$	26	34						mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1						mg/kg	1	A-T-040s
Chromium (trivalent)	26	34						mg/kg	1	Calc
Lead$_D^{M\#}$	52	14						mg/kg	1	A-T-024s
Manganese$_D^{M\#}$	303	388						mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17						mg/kg	0.17	A-T-024s
Molybdenum$_D^{M\#}$	<1	<1						mg/kg	1	A-T-024s
Nickel$_D^{M\#}$	19	20						mg/kg	1	A-T-024s
Selenium$_D^{M\#}$	<1	<1						mg/kg	1	A-T-024s
Vanadium$_D^{M\#}$	40	51						mg/kg	1	A-T-024s
Zinc$_D^{M\#}$	67	82						mg/kg	5	A-T-024s
Bentazone$_A$	<0.10	-						mg/kg	0.1	Subcon RPS MH
Cypermethrin$_A$	<0.10	-						mg/kg	0.1	Subcon RPS MH
Linuron$_A$	<0.10	-						mg/kg	0.1	Subcon RPS MH
Alachlor$_A$	<0.02	-						mg/kg	0.02	Subcon RPS MH
Carbaryl$_A$	<0.10	-						mg/kg	0.1	Subcon RPS MH
Diuron$_A$	<0.10	-						mg/kg	0.1	Subcon RPS MH

Envirolab Job Number: 23/09594

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09594/1	23/09594/4						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	F22-TP518	F22-TP525								
Depth to Top	0.20	0.50								
Depth To Bottom										
Date Sampled	25-Sep-23	25-Sep-23								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	6AE	6A								
Isoproturon$_A$	<0.10	-						mg/kg	0.1	Subcon RPS MH
MCPP; (Mecoprop)$_A$	<0.10	-						mg/kg	0.1	Subcon RPS MH

Lab Sample ID	23/09594/1	23/09594/4						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	F22-TP518	F22-TP525								
Depth to Top	0.20	0.50								
Depth To Bottom										
Date Sampled	25-Sep-23	25-Sep-23								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	6AE	6A								
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_D^{\#}$	NAD	NAD								A-T-045
Asbestos Matrix (visual)$_D$	-	-								A-T-045
Asbestos Matrix (microscope)$_D$	-	-								A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_D$	N/A	N/A								A-T-045
OCP+OPP Combined Pest Suite (incl. Atrazine and Simazine)										
Dichlobenil$_A$	<0.01	-						mg/kg	0.01	A-T-056
Tecnazene$_A$	<0.01	-						mg/kg	0.01	A-T-056
Trifluralin$_A$	<0.01	-						mg/kg	0.01	A-T-056
alpha-Hexachlorocyclohexane (HCH)$_A$	<0.01	-						mg/kg	0.01	A-T-056
Hexachlorobenzene (HCB) $_A$	<0.01	-						mg/kg	0.01	A-T-056
Simazine$_A$	<0.01	-						mg/kg	0.01	A-T-056
Atrazine$_A$	<0.01	-						mg/kg	0.01	A-T-056
beta-Hexachlorocyclohexane (HCH)$_A$	<0.01	-						mg/kg	0.01	A-T-056
Quintozene (PCNB)$_A$	<0.01	-						mg/kg	0.01	A-T-056
Chlorothalonil$_A$	<0.01	-						mg/kg	0.01	A-T-056
delta-Hexachlorocyclohexane (HCH)$_A$	<0.01	-						mg/kg	0.01	A-T-056
Triallate$_A$	<0.01	-						mg/kg	0.01	A-T-056
Heptachlor$_A$	<0.01	-						mg/kg	0.01	A-T-056
Aldrin$_A$	<0.01	-						mg/kg	0.01	A-T-056
Triadimefon$_A$	<0.01	-						mg/kg	0.01	A-T-056
Telodrin$_A$	<0.01	-						mg/kg	0.01	A-T-056
Isodrin$_A$	<0.01	-						mg/kg	0.01	A-T-056
Pendimethalin$_A$	<0.01	-						mg/kg	0.01	A-T-056
Heptachlor epoxide$_A$	<0.01	-						mg/kg	0.01	A-T-056
trans-Chlordane (Gamma)$_A$	<0.01	-						mg/kg	0.01	A-T-056
o,p-DDE (2,4)$_A$	<0.01	-						mg/kg	0.01	A-T-056
Endosulphan I (Alpha)$_A$	<0.01	-						mg/kg	0.01	A-T-056
cis-Chlordane (Alpha)$_A$	<0.01	-						mg/kg	0.01	A-T-056
p,p-DDE (4,4)$_A$	<0.01	-						mg/kg	0.01	A-T-056
Dieldrin$_A$	<0.01	-						mg/kg	0.01	A-T-056

Lab Sample ID	23/09594/1	23/09594/4						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	F22-TP518	F22-TP525								
Depth to Top	0.20	0.50								
Depth To Bottom										
Date Sampled	25-Sep-23	25-Sep-23								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	6AE	6A								
o,p-DDD (2,4)$_A$	<0.01	-						mg/kg	0.01	A-T-056
Endrin$_A$	<0.01	-						mg/kg	0.01	A-T-056
Endosulphan II (Beta)$_A$	<0.01	-						mg/kg	0.01	A-T-056
p,p-DDD (4,4)$_A$	<0.01	-						mg/kg	0.01	A-T-056
o,p-DDT (2,4)$_A$	<0.01	-						mg/kg	0.01	A-T-056
Endrin Aldehyde$_A$	<0.01	-						mg/kg	0.01	A-T-056
Endrin Ketone$_A$	<0.01	-						mg/kg	0.01	A-T-056
Endosulphan Sulphate$_A$	<0.01	-						mg/kg	0.01	A-T-056
p,p-DDT (4,4)$_A$	<0.01	-						mg/kg	0.01	A-T-056
o,p-Methoxychlor$_A$	<0.01	-						mg/kg	0.01	A-T-056
p,p-Methoxychlor$_A$	<0.01	-						mg/kg	0.01	A-T-056
Permethrin I (cis)$_A$	<0.01	-						mg/kg	0.01	A-T-056
Permethrin II (trans)$_A$	<0.01	-						mg/kg	0.01	A-T-056
Dichlorvos$_A$	<0.01	-						mg/kg	0.01	A-T-056
Mevinphos$_A$	<0.01	-						mg/kg	0.01	A-T-056
Demeton-S$_A$	<0.50	-						mg/kg	0.5	A-T-056
Demeton-O$_A$	<0.50	-						mg/kg	0.5	A-T-056
Phorate$_A$	<0.01	-						mg/kg	0.01	A-T-056
Dimethoate$_A$	<0.01	-						mg/kg	0.01	A-T-056
Propetamphos$_A$	<0.01	-						mg/kg	0.01	A-T-056
Diazinon (Dimpylate)$_A$	<0.01	-						mg/kg	0.01	A-T-056
Disulfoton$_A$	<0.10	-						mg/kg	0.1	A-T-056
Chlorpyrifos-methyl$_A$	<0.01	-						mg/kg	0.01	A-T-056
Parathion (Ethyl Parathion)$_A$	<0.01	-						mg/kg	0.01	A-T-056
Methyl Parathion$_A$	<0.01	-						mg/kg	0.01	A-T-056
Pirimiphos-methyl$_A$	<0.01	-						mg/kg	0.01	A-T-056
Fenitrothion$_A$	<0.01	-						mg/kg	0.01	A-T-056
Fensulphothion$_A$	<0.01	-						mg/kg	0.01	A-T-056
Fenthion$_A$	<0.01	-						mg/kg	0.01	A-T-056
Malathion$_A$	<0.01	-						mg/kg	0.01	A-T-056
Chlorfenvinphos$_A$	<0.01	-						mg/kg	0.01	A-T-056
Chlorpyrifos$_A$	<0.01	-						mg/kg	0.01	A-T-056
Trichloronate$_A$	<0.01	-						mg/kg	0.01	A-T-056
Prothiofos (Tokuthion)$_A$	<0.01	-						mg/kg	0.01	A-T-056

Lab Sample ID	23/09594/1	23/09594/4						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	F22-TP518	F22-TP525								
Depth to Top	0.20	0.50								
Depth To Bottom										
Date Sampled	25-Sep-23	25-Sep-23								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	6AE	6A								
Ethion$_A$	<0.01	-						mg/kg	0.01	A-T-056
Triazophos$_A$	<0.01	-						mg/kg	0.01	A-T-056
Carbophenothion$_A$	<0.01	-						mg/kg	0.01	A-T-056
Phosalone$_A$	<0.01	-						mg/kg	0.01	A-T-056
Azinphos-methyl$_A$	<0.01	-						mg/kg	0.01	A-T-056
Azinphos-ethyl$_A$	<0.01	-						mg/kg	0.01	A-T-056
Coumaphos$_A$	<0.01	-						mg/kg	0.01	A-T-056
gamma-Hexachlorocyclohexane (HCH)$_A$	<0.01	-						mg/kg	0.01	A-T-056

Envirolab Job Number: 23/09594

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09594/1	23/09594/4						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	F22-TP518	F22-TP525								
Depth to Top	0.20	0.50								
Depth To Bottom										
Date Sampled	25-Sep-23	25-Sep-23								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	6AE	6A								
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01	<0.01						mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01						mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	<0.02						mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.07	<0.04						mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.07	<0.04						mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.11	<0.05						mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	<0.05						mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07						mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.08	<0.06						mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A$	<0.04	<0.04						mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.15	<0.08						mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	<0.01						mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.04	<0.03						mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03						mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.04	<0.03						mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.14	<0.07						mg/kg	0.07	A-T-019s
Total PAH-16MS$_A$	0.70	<0.08						mg/kg	0.01	A-T-019s

Report Notes

General
This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **six weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
Analytical results reflect the quality of the sample at the time of analysis only.
Opinions and Interpretations expressed are outside our scope of accreditation.
The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client.
A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

Key

Superscript "#"	Accredited to ISO 17025
Superscript "M"	Accredited to MCertS
Superscript "U"	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript "A"	Analysis performed on as-received Sample
Subscript "D"	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript "^"	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
N/A	Not applicable

Asbestos
Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis
Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing, and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25ºC / 11550µS/cm @ 20ºC fall outside the accreditation range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Structural Soils Limited (Hemel Hempstead), 18 Frogmore Road, Hemel Hempstead, UK, HP3 9RT

Project: Sealink Friston

Clients Project No: 563835

Project No: 23/09594

Date Received: 27/09/2023 (am)

Cool Box Temperatures (°C): 14.5, 14.7

NO DEVIATIONS IDENTIFIED

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	23/09594/1	23/09594/4
Client Sample No		
Client Sample ID/Depth	F22-TP518 0.20m	F22-TP525 0.50m
Date Sampled	25/09/23	25/09/23
A-T-019s	05/10/2023	05/10/2023
A-T-024s	05/10/2023	05/10/2023
A-T-026s	05/10/2023	05/10/2023
A-T-027s	05/10/2023	05/10/2023
A-T-031s	04/10/2023	04/10/2023
A-T-032s	05/10/2023	05/10/2023
A-T-040s	05/10/2023	05/10/2023
A-T-042sFCN	04/10/2023	04/10/2023
A-T-044	05/10/2023	05/10/2023
A-T-045	02/10/2023	02/10/2023
A-T-050s	03/10/2023	03/10/2023
A-T-056	04/10/2023	
Calc	05/10/2023	05/10/2023

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

Certificate of Analysis

Report No.: **23-06637-1**

Issue No.: **1**
Date of Issue **11/10/2023**

Customer Details:	Envirolab Ltd, 7 - 8 Sandpits Business Park, Mottram Road, Hyde, Greater Manchester, SK14 3AR, United Kingdom
Customer Contact:	[redacted]
Customer Order No.:	P0752456
Customer Reference:	Not Supplied
Quotation Reference:	Q22-00104 (Issue: 36)
Description:	1 geo sample
Date Received:	29/09/2023
Date Started:	29/09/2023
Date Completed:	11/10/2023
Test Methods:	Details available on request (refer to SOP code against relevant result/s)
Notes:	None



Approved By: [redacted], **LIMS Manager**

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service.
This certificate shall not be reproduced except in full without the prior written approval of the laboratory.
Observations and interpretations are outside of the scope of UKAS accreditation.
Results reported herein relate only to the items supplied to the laboratory for testing.
Results on an Interim Report are not dry-weight corrected.
Where the laboratory is not responsible for the sampling, results apply to the sample(s) as they were received.
The laboratory shall not be responsible for any information that is supplied by the customer that may affect the validity of results.

RPS Environmental Management Limited trading as RPS Mountainheath. Registered in England No. 01756175.
13 St Martins Way, Bedford, Bedfordshire, MK42 0LF. T +44 1462 480 400
A member of the RPS Group plc. Terms and conditions apply - copy on request

Results Summary

Report No.: 23-06637-1

Customer Reference: Not Supplied

Customer Order No: P0752456

Customer Sample No	**23/09594/1**
RPS Sample No	33538
Sample Type	**GEO**
Sample Matrix	SOIL
Sampling Date	25/09/2023

Determinand	CAS No	Codes	SOP	RL	Units	
carbaryl	63-25-2	N	L001	0.1	mg/kg AR	< 0.10
2,4,5-trichlorophenoxyacetic acid (2,4,5-T)	93-76-5	N	L340	0.1	mg/kg DW	< 0.10
2,4,5-TP (Fenoprop)	93-72-1	N	L340	0.1	mg/kg DW	< 0.10
2,4-dichlorophenoxyacetic acid (2,4-D)	94-75-7	N	L340	0.1	mg/kg DW	< 0.10
acifluorfen	50594-66-6	N	L340	0.1	mg/kg DW	< 0.10
bentazone	25057-89-0	N	L340	0.1	mg/kg DW	< 0.10
clopyralid	1702-17-6	N	L340	0.1	mg/kg DW	< 0.10
dichlorprop (2,4-DP)	120-36-5	N	L340	0.1	mg/kg DW	< 0.10
dinoseb (DNBP)	88-85-7	N	L340	0.1	mg/kg DW	< 0.10
2-methyl-4-chlorophenoxyacetic acid (MCPA)	94-74-6	N	L340	0.1	mg/kg DW	< 0.10
mecoprop (MCPP)	7085-19-0	N	L340	0.1	mg/kg DW	< 0.10
pentachlorophenol (PCP)	87-86-5	N	L340	0.1	mg/kg DW	< 0.10
2,3,6-trichlorobenzoic acid (2,3,6-TBA)	50-31-7	N	L340	0.1	mg/kg DW	< 0.10
4-(2,4-dichlorophenoxy)butanoic acid (2,4-DB)	94-82-6	N	L340	0.1	mg/kg DW	< 0.10
4-chlorophenoxyacetic acid (4-CPA)	122-88-3	N	L340	0.1	mg/kg DW	< 0.10
benazolin	3813-05-6	N	L340	0.1	mg/kg DW	< 0.10
bromoxynil	1689-84-5	N	L340	0.1	mg/kg DW	< 0.10
dicamba	1918-00-9	N	L340	0.1	mg/kg DW	< 0.10
diclofop	40843-25-2	N	L340	0.1	mg/kg DW	< 0.10
2-methyl-4,6-dinitrophenol (DNOC)	534-52-1	N	L340	0.1	mg/kg DW	< 0.10
flamprop	58667-63-3	N	L340	0.1	mg/kg DW	< 0.10
fluroxypyr	69377-81-7	N	L340	0.1	mg/kg DW	< 0.10
ioxynil	1689-83-4	N	L340	0.1	mg/kg DW	< 0.10
MCPB	94-81-5	N	L340	0.1	mg/kg DW	< 0.10
picloram	1918-02-1	N	L340	0.1	mg/kg DW	< 0.10
triclopyr	55335-06-3	N	L340	0.1	mg/kg DW	< 0.10
alachlor	15972-60-8	N	G029	0.02	mg/kg AR	< 0.02
chloroxuron	1982-47-4	N	L025	0.1	mg/kg DW	< 0.10
chlortoluron	15545-48-9	N	L025	0.1	mg/kg DW	< 0.10
diflubenzuron	35367-38-5	N	L025	0.1	mg/kg DW	< 0.10
dimefuron	34205-21-5	N	L025	0.1	mg/kg DW	< 0.10
diuron	330-54-1	N	L025	0.1	mg/kg DW	< 0.10
isoproturon	34123-59-6	N	L025	0.1	mg/kg DW	< 0.10
linuron	330-55-2	N	L025	0.1	mg/kg DW	< 0.10
methabenzthiazuron	18691-97-9	N	L025	0.1	mg/kg DW	< 0.10
metoxuron	19937-59-8	N	L025	0.1	mg/kg DW	< 0.10
monolinuron	1746-81-2	N	L025	0.1	mg/kg DW	< 0.10

Results Summary

Report No.: 23-06637-1

Customer Reference: Not Supplied

Customer Order No: P0752456

Customer Sample No	**23/09594/1**
RPS Sample No	33538
Sample Type	**GEO**
Sample Matrix	SOIL
Sampling Date	25/09/2023

Determinand	CAS No	Codes	SOP	RL	Units	
monuron	150-68-5	N	L025	0.1	mg/kg DW	< 0.10
pencycuron	66063-05-6	N	L025	0.1	mg/kg DW	< 0.10
bifenthrin	82657-04-3	N	G127	0.1	mg/kg DW	< 0.10
cyfluthrin, total	68359-37-5	N	G127	0.1	mg/kg DW	< 0.10
cyhalothrin, total	68085-85-8	N	G127	0.1	mg/kg DW	< 0.10
cypermethrin, total	52315-07-8	N	G127	0.1	mg/kg DW	< 0.10
deltamethrin	52918-63-5	N	G127	0.1	mg/kg DW	< 0.10
fenvalerate	51630-58-1	N	G127	0.1	mg/kg DW	< 0.10
permethrin, total	52645-53-1	N	G127	0.1	mg/kg DW	< 0.10
resmethrin	10453-86-8	N	G127	0.1	mg/kg DW	< 0.10
tetramethrin	7696-12-0	N	G127	0.1	mg/kg DW	< 0.10

Deviating Samples

Report No.: 23-06637-1

Customer Reference: Not Supplied

Customer Order No: P0752456

Our policy on Deviating Samples has been implemented in accordance with UKAS Policy on Deviating Samples (TPS63).
RPS is not responsible for the integrity of samples as received, unless RPS personnel performed the sampling. Samples submitted may be declared to be deviating.
Where applicable the analysis method remains UKAS accredited, however results reported for a deviating sample may be compromised.
Where no sampling date was supplied, samples have been declared to be deviating. If the date can be supplied, results may be reissued if assessed not deviating.
Where the sample container used was unsuitable or broken, the sample is flagged as deviating and re-sampling/re-submisson may be required.

RPS No.	Customer No.	Customer ID	Date Sampled	Containers Received	Deviating	Reason for Deviation
33538	23/09594/1		25/09/2023	100 mL amber glass jar	No	

Report No.: 23-06637-1

Type	Matrix Code	Description
Food	CEREALPROD	Cereals, grains & products
Food	DRIEDFRUIT	Dried fruits
Food	FRIEDBAKED	Fried or baked food
Food	LEGUME	Legumes
Food	MEAT	Meat
Food	POWDERED	Powdered food
Food	PULSE	Pulses (dried legumes)
Food	VEGETABLES	Vegetables
Gas	TDTUBE	TD Tube
Gas	TENAX	Tenax Tube
Gas	TUBE	Tube
Gas	VAPOUR	Gas
Geological	SED_MAR	Marine Sediment
Geological	SED_RIV	River Sediment
Geological	SLUDG_SOL	Sludge (solid only)
Geological	SOIL	Soil
Liquid	BEVERAGE	Beverage
Liquid	BLOOD	Blood
Liquid	CONDENSATE	Condensate
Liquid	FORMULATN	Formula
Liquid	LEACHATE	Leachate
Liquid	OIL/GREASE	Oil or grease
Liquid	SLUDG_LIQ	Sludge (liquid only)
Liquid	SOLVENT	Solvent
Liquid	URINE	Urine
Sludge	SLUDG_WHL	Sludge for bulk route
Solid	BADGE	Badge
Solid	BEDDING	Bedding
Solid	BIOTA	Biota (general)
Solid	BIOTA_F	Biota (fish)
Solid	BIOTA_SF	Biota (shellfish)
Solid	CONSTRCTN	Construction materials
Solid	FABRIC	Fabrics & furnishing materials
Solid	FEED	Animal feed
Solid	FERTILISER	Fertiliser
Solid	FILTER	Filter
Solid	FOAM	Solid foam material
Solid	PACKAGING	Packaging material
Solid	PLANT	Plant (vegetation)
Solid	POWDER	Powder
Solid	SWAB	Swab
Water	BAL	Ballast Water
Water	BIL	Bilge Water
Water	DW	Drinking Water
Water	EFFLUENT	Effluent
Water	GW	Ground Water
Water	INFLUENT	Influent
Water	SALTW	Salt Water
Water	SW	Surface Water
Water	TW	Tap Water
Water	W	Water

Report No.: 23-06637-1

Key Code	Description
N	Not Accredited Test
U	UKAS Accredited Test - UKAS accreditation is only implied if the report carries the UKAS logo
UF	UKAS Flexible Scope Test
M	MCERTS Accredited Test - MCERTS accreditation is only implied if the report carries the MCERTS logo
O	Marine Management Organisation (MMO) Validated
SN	Subcontracted to approved laboratory not accredited for the test
SU	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
SIN	Subcontracted to internal RPS Group laboratory not accredited for the test
SIU	Subcontracted to internal RPS Group laboratory UKAS Accredited for the test
SIM	Subcontracted to internal RPS Group laboratory MCERTS/UKAS Accredited for the test
I/S (in results)	Insufficient Sample
U/S (in results)	Unsuitable Sample
S/C (in results)	See Comments
ND (in results)	Not Detected
L (in results)	Result is outside normal limits
DW (in units)	Results are expressed on a dry weight basis

Sample Type	Sample Retention and Disposal Period
Foodstuff	1 month (if frozen) from the issue date of this report
Waters	2 weeks from the issue date of this report
Other Liquids	1 month from the issue date of this report
Solids / Soils	1 month from the issue date of this report
Sediments	1 month from the issue date of this report

Note: Sample retention may be subject to agreement with the customer for particular projects

Where the dry solids value of a sample is low (<50%), reporting limits are automatically raised for all determinants analysed on an as-received basis.

Soil Typing	Description
Type 1	Clay - Brown
Type 2	Clay - Grey/Black
Type 3	Sand
Type 4	Top Soil (Standard)
Type 5	Top Soil (High Peat)
Type 6	Made Ground (>50% Clay)
Type 7	Made Ground (>50% Sand)
Type 8	Made Ground (>50% Top Soil)
Type X	Other

Dev code	Description
D	No sampling date provided.
T	No sampling time provided.
Z	Temperature of samples exceeded in transit/storage.
V	Excessive headspace for volatile determinands.
P	Sample submitted without required preservative(s).
C	Incorrect container.
H	Holding time exceeded (sampling to extraction).
X	Holding time exceeded (sampling to receipt).

Note: Where the following information is included in this certificate, it has usually been supplied by the customer: Customer Sample ID, Sample Location, Sample Depth, Sampling Date and Sampling Time. The laboratory shall not be responsible for any information that is supplied by the customer that may affect the validity of results.

envirolab
Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 23/09673
Issue Number: 1 **Date:** 20 October, 2023

Client: Structural Soils Limited (Hemel Hempstead)
18 Frogmore Road
Hemel Hempstead
UK
HP3 9RT

Project Manager: [redacted]
Project Name: Sealink Friston
Project Ref: 563835
Order No: N/A
Date Samples Received: 29/09/23
Date Instructions Received: 29/09/23
Date Analysis Completed: 20/10/23

Approved by:

[redacted]
Deputy Client Services Supervisor

Lab Sample ID	23/09673/2	23/09673/5						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	F22-TP406	F22-TP204								
Depth to Top	0.50	0.20								
Depth To Bottom										
Date Sampled	27-Sep-23	27-Sep-23								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3	4A								
% Moisture at 105C$_A$	27.9	19.5						% w/w	0.1	A-T-044
% Stones >10mm$_A$	<0.1	<0.1						% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	8.23	7.84						pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	<0.01	0.01						g/l	0.01	A-T-026s
Sulphur (total)$_D$	129	81						mg/kg	50	A-T-024s
Cyanide (free)$_A$$^{M\#}$	<1	<1						mg/kg	1	A-T-042sFCN
Phenols - Total by HPLC$_A$	<0.2	<0.2						mg/kg	0.2	A-T-050s
Organic Matter$_D$$^{M\#}$	0.7	0.6						% w/w	0.1	A-T-032s
Total Organic Carbon$_D$$^{M\#}$	0.38	0.35						% w/w	0.03	A-T-032s
Fraction of organic carbon$_D$$^{\#}$	0.0038	0.0035						N/A	0.0003	A-T-032s
Arsenic$_D$$^{M\#}$	6	4						mg/kg	1	A-T-024s
Barium$_D$	58	22						mg/kg	1	A-T-024s
Beryllium$_D$	1.4	<0.5						mg/kg	0.5	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0						mg/kg	1	A-T-027s
Cadmium$_D$$^{M\#}$	1.0	<0.5						mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	17	6						mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	38	10						mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1						mg/kg	1	A-T-040s
Chromium (trivalent)	38	10						mg/kg	1	Calc
Lead$_D$$^{M\#}$	14	14						mg/kg	1	A-T-024s
Manganese$_D$$^{M\#}$	616	424						mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17						mg/kg	0.17	A-T-024s
Molybdenum$_D$$^{M\#}$	<1	<1						mg/kg	1	A-T-024s
Nickel$_D$$^{M\#}$	45	8						mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1						mg/kg	1	A-T-024s
Vanadium$_D$$^{M\#}$	54	17						mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	68	27						mg/kg	5	A-T-024s
Bentazone$_A$	-	<0.10						mg/kg	0.1	Subcon RPS MH
Cypermethrin$_A$	-	<0.10						mg/kg	0.1	Subcon RPS MH
Linuron$_A$	-	<0.10						mg/kg	0.1	Subcon RPS MH
Alachlor$_A$	-	<0.02						mg/kg	0.02	Subcon RPS MH
Carbaryl$_A$	-	<0.10						mg/kg	0.1	Subcon RPS MH
Diuron$_A$	-	<0.10						mg/kg	0.1	Subcon RPS MH

Envirolab Job Number: 23/09673

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09673/2	23/09673/5						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	F22-TP406	F22-TP204								
Depth to Top	0.50	0.20								
Depth To Bottom										
Date Sampled	27-Sep-23	27-Sep-23								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3	4A								
Isoproturon$_A$	-	<0.10						mg/kg	0.1	Subcon RPS MH
MCPP; (Mecoprop)$_A$	-	<0.10						mg/kg	0.1	Subcon RPS MH

Lab Sample ID	23/09673/2	23/09673/5						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	F22-TP406	F22-TP204								
Depth to Top	0.50	0.20								
Depth To Bottom										
Date Sampled	27-Sep-23	27-Sep-23								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3	4A								
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD	NAD								A-T-045
Asbestos Matrix (visual)$_{D}$	-	-								A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-								A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A								A-T-045
OCP+OPP Combined Pest Suite (incl. Atrazine and Simazine)										
Dichlobenil$_{A}$	-	<0.01						mg/kg	0.01	A-T-056
Tecnazene$_{A}$	-	<0.01						mg/kg	0.01	A-T-056
Trifluralin$_{A}$	-	<0.01						mg/kg	0.01	A-T-056
alpha-Hexachlorocyclohexane (HCH)$_{A}$	-	<0.01						mg/kg	0.01	A-T-056
Hexachlorobenzene (HCB) $_{A}$	-	<0.01						mg/kg	0.01	A-T-056
Simazine$_{A}$	-	<0.01						mg/kg	0.01	A-T-056
Atrazine$_{A}$	-	<0.01						mg/kg	0.01	A-T-056
beta-Hexachlorocyclohexane (HCH)$_{A}$	-	<0.01						mg/kg	0.01	A-T-056
Quintozene (PCNB)$_{A}$	-	<0.01						mg/kg	0.01	A-T-056
Chlorothalonil$_{A}$	-	<0.01						mg/kg	0.01	A-T-056
delta-Hexachlorocyclohexane (HCH)$_{A}$	-	<0.01						mg/kg	0.01	A-T-056
Triallate$_{A}$	-	<0.01						mg/kg	0.01	A-T-056
Heptachlor$_{A}$	-	<0.01						mg/kg	0.01	A-T-056
Aldrin$_{A}$	-	<0.01						mg/kg	0.01	A-T-056
Triadimefon$_{A}$	-	<0.01						mg/kg	0.01	A-T-056
Telodrin$_{A}$	-	<0.01						mg/kg	0.01	A-T-056
Isodrin$_{A}$	-	<0.01						mg/kg	0.01	A-T-056
Pendimethalin$_{A}$	-	<0.01						mg/kg	0.01	A-T-056
Heptachlor epoxide$_{A}$	-	<0.01						mg/kg	0.01	A-T-056
trans-Chlordane (Gamma)$_{A}$	-	<0.01						mg/kg	0.01	A-T-056
o,p-DDE (2,4)$_{A}$	-	<0.01						mg/kg	0.01	A-T-056
Endosulphan I (Alpha)$_{A}$	-	<0.01						mg/kg	0.01	A-T-056
cis-Chlordane (Alpha)$_{A}$	-	<0.01						mg/kg	0.01	A-T-056
p,p-DDE (4,4)$_{A}$	-	<0.01						mg/kg	0.01	A-T-056
Dieldrin$_{A}$	-	<0.01						mg/kg	0.01	A-T-056

Lab Sample ID	23/09673/2	23/09673/5						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	F22-TP406	F22-TP204								
Depth to Top	0.50	0.20								
Depth To Bottom										
Date Sampled	27-Sep-23	27-Sep-23								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3	4A								
o,p-DDD (2,4)$_A$	-	<0.01						mg/kg	0.01	A-T-056
Endrin$_A$	-	<0.01						mg/kg	0.01	A-T-056
Endosulphan II (Beta)$_A$	-	<0.01						mg/kg	0.01	A-T-056
p,p-DDD (4,4)$_A$	-	<0.01						mg/kg	0.01	A-T-056
o,p-DDT (2,4)$_A$	-	<0.01						mg/kg	0.01	A-T-056
Endrin Aldehyde$_A$	-	<0.01						mg/kg	0.01	A-T-056
Endrin Ketone$_A$	-	<0.01						mg/kg	0.01	A-T-056
Endosulphan Sulphate$_A$	-	<0.01						mg/kg	0.01	A-T-056
p,p-DDT (4,4)$_A$	-	<0.01						mg/kg	0.01	A-T-056
o,p-Methoxychlor$_A$	-	<0.01						mg/kg	0.01	A-T-056
p,p-Methoxychlor$_A$	-	<0.01						mg/kg	0.01	A-T-056
Permethrin I (cis)$_A$	-	<0.01						mg/kg	0.01	A-T-056
Permethrin II (trans)$_A$	-	<0.01						mg/kg	0.01	A-T-056
Dichlorvos$_A$	-	<0.01						mg/kg	0.01	A-T-056
Mevinphos$_A$	-	<0.01						mg/kg	0.01	A-T-056
Demeton-S$_A$	-	<0.50						mg/kg	0.5	A-T-056
Demeton-O$_A$	-	<0.50						mg/kg	0.5	A-T-056
Phorate$_A$	-	<0.01						mg/kg	0.01	A-T-056
Dimethoate$_A$	-	<0.01						mg/kg	0.01	A-T-056
Propetamphos$_A$	-	<0.01						mg/kg	0.01	A-T-056
Diazinon (Dimpylate)$_A$	-	<0.01						mg/kg	0.01	A-T-056
Disulfoton$_A$	-	<0.10						mg/kg	0.1	A-T-056
Chlorpyrifos-methyl$_A$	-	<0.01						mg/kg	0.01	A-T-056
Parathion (Ethyl Parathion)$_A$	-	<0.01						mg/kg	0.01	A-T-056
Methyl Parathion$_A$	-	<0.01						mg/kg	0.01	A-T-056
Pirimiphos-methyl$_A$	-	<0.01						mg/kg	0.01	A-T-056
Fenitrothion$_A$	-	<0.01						mg/kg	0.01	A-T-056
Fensulphothion$_A$	-	<0.01						mg/kg	0.01	A-T-056
Fenthion$_A$	-	<0.01						mg/kg	0.01	A-T-056
Malathion$_A$	-	<0.01						mg/kg	0.01	A-T-056
Chlorfenvinphos$_A$	-	<0.01						mg/kg	0.01	A-T-056
Chlorpyrifos$_A$	-	<0.01						mg/kg	0.01	A-T-056
Trichloronate$_A$	-	<0.01						mg/kg	0.01	A-T-056
Prothiofos (Tokuthion)$_A$	-	<0.01						mg/kg	0.01	A-T-056

Lab Sample ID	23/09673/2	23/09673/5						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	F22-TP406	F22-TP204								
Depth to Top	0.50	0.20								
Depth To Bottom										
Date Sampled	27-Sep-23	27-Sep-23								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3	4A								
Ethion$_A$	-	<0.01						mg/kg	0.01	A-T-056
Triazophos$_A$	-	<0.01						mg/kg	0.01	A-T-056
Carbophenothion$_A$	-	<0.01						mg/kg	0.01	A-T-056
Phosalone$_A$	-	<0.01						mg/kg	0.01	A-T-056
Azinphos-methyl$_A$	-	<0.01						mg/kg	0.01	A-T-056
Azinphos-ethyl$_A$	-	<0.01						mg/kg	0.01	A-T-056
Coumaphos$_A$	-	<0.01						mg/kg	0.01	A-T-056
gamma-Hexachlorocyclohexane (HCH)$_A$	-	<0.01						mg/kg	0.01	A-T-056

Envirolab Job Number: 23/09673

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09673/2	23/09673/5						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	F22-TP406	F22-TP204								
Depth to Top	0.50	0.20								
Depth To Bottom										
Date Sampled	27-Sep-23	27-Sep-23								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3	4A								
PAH-16MS										
Acenaphthene$_{A}^{M\#}$	0.03	<0.01						mg/kg	0.01	A-T-019s
Acenaphthylene$_{A}^{M\#}$	<0.01	<0.01						mg/kg	0.01	A-T-019s
Anthracene$_{A}^{M\#}$	<0.02	<0.02						mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_{A}^{M\#}$	<0.04	<0.04						mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_{A}^{M\#}$	<0.04	<0.04						mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_{A}^{M\#}$	<0.05	<0.05						mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_{A}^{M\#}$	<0.05	<0.05						mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_{A}^{M\#}$	<0.07	<0.07						mg/kg	0.07	A-T-019s
Chrysene$_{A}^{M\#}$	<0.06	<0.06						mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_{A}$	<0.04	<0.04						mg/kg	0.04	A-T-019s
Fluoranthene$_{A}^{M\#}$	<0.08	<0.08						mg/kg	0.08	A-T-019s
Fluorene$_{A}^{M\#}$	0.03	<0.01						mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_{A}^{M\#}$	<0.03	<0.03						mg/kg	0.03	A-T-019s
Naphthalene $_{A}^{M\#}$	1.62	<0.03						mg/kg	0.03	A-T-019s
Phenanthrene$_{A}^{M\#}$	<0.03	<0.03						mg/kg	0.03	A-T-019s
Pyrene$_{A}^{M\#}$	<0.07	<0.07						mg/kg	0.07	A-T-019s
Total PAH-16MS$_{A}$	1.68	<0.08						mg/kg	0.01	A-T-019s

Report Notes

General
This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **six weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
Analytical results reflect the quality of the sample at the time of analysis only.
Opinions and Interpretations expressed are outside our scope of accreditation.
The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client.
A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

Key

Superscript "#"	Accredited to ISO 17025
Superscript "M"	Accredited to MCertS
Superscript "U"	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript "A"	Analysis performed on as-received Sample
Subscript "D"	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript "^"	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
N/A	Not applicable

Asbestos
Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis
Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing, and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25ºC / 11550µS/cm @ 20ºC fall outside the accreditation range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Structural Soils Limited (Hemel Hempstead), 18 Frogmore Road, Hemel Hempstead, UK, HP3 9RT

Project: Sealink Friston

Clients Project No: 563835

Project No: 23/09673

Date Received: 29/09/2023 (am)

Cool Box Temperatures (°C): 13.8, 14.0

NO DEVIATIONS IDENTIFIED with respect to sampling dates or containers received.

Note: If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3 (for water samples 5 ± 3°C), ISO 18400-105:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	23/09673/2	23/09673/5
Client Sample No		
Client Sample ID/Depth	F22-TP406 0.50m	F22-TP204 0.20m
Date Sampled	27/09/23	27/09/23
A-T-004s		05/10/2023
A-T-007s		06/10/2023
A-T-019s	06/10/2023	06/10/2023
A-T-022s		09/10/2023
A-T-024s	06/10/2023	06/10/2023
A-T-025w		09/10/2023
A-T-026s	06/10/2023	06/10/2023
A-T-026w		09/10/2023
A-T-026w (F)		09/10/2023
A-T-027s	09/10/2023	09/10/2023
A-T-030s		06/10/2023
A-T-031s	06/10/2023	06/10/2023
A-T-031w		09/10/2023
A-T-032s	06/10/2023	06/10/2023
A-T-032w		09/10/2023
A-T-037w		09/10/2023
A-T-040s	06/10/2023	06/10/2023
A-T-042sFCN	16/10/2023	05/10/2023
A-T-044	09/10/2023	09/10/2023
A-T-045	03/10/2023	03/10/2023
A-T-050s	04/10/2023	05/10/2023
A-T-050w		09/10/2023
A-T-056		09/10/2023
A-T-ANCs		06/10/2023
Calc	06/10/2023	06/10/2023
Calc-no stones		09/10/2023
Probe (w)		09/10/2023

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

Certificate of Analysis

Report No.: **23-06780-1**

Issue No.: **1**
Date of Issue **20/10/2023**

Customer Details:	Envirolab Ltd, 7 - 8 Sandpits Business Park, Mottram Road, Hyde, Greater Manchester, SK14 3AR, United Kingdom
Customer Contact:	[redacted]
Customer Order No.:	P0752476
Customer Reference:	Not Supplied
Quotation Reference:	Q22-00104 (Issue: 36)
Description:	1 geo sample
Date Received:	04/10/2023
Date Started:	05/10/2023
Date Completed:	20/10/2023
Test Methods:	Details available on request (refer to SOP code against relevant result/s)
Notes:	None

[redacted]

Approved By: [redacted], **Study Manager**

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service.
This certificate shall not be reproduced except in full without the prior written approval of the laboratory.
Observations and interpretations are outside of the scope of UKAS accreditation.
Results reported herein relate only to the items supplied to the laboratory for testing.
Results on an Interim Report are not dry-weight corrected.
Where the laboratory is not responsible for the sampling, results apply to the sample(s) as they were received.
The laboratory shall not be responsible for any information that is supplied by the customer that may affect the validity of results.

RPS Environmental Management Limited trading as RPS Mountainheath. Registered in England No. 01756175.
13 St Martins Way, Bedford, Bedfordshire, MK42 0LF. T +44 1462 480 400
A member of the RPS Group plc. Terms and conditions apply - copy on request

Results Summary

Report No.: 23-06780-1

Customer Reference: Not Supplied

Customer Order No: P0752476

Customer Sample No	**23/09673/5**
RPS Sample No	33889
Sample Type	**GEO**
Sample Matrix	SOIL
Sampling Date	27/09/2023

Determinand	CAS No	Codes	SOP	RL	Units	
carbaryl	63-25-2	N	L001	0.1	mg/kg DW	< 0.10 (T)
2,4,5-trichlorophenoxyacetic acid (2,4,5-T)	93-76-5	N	L340	0.1	mg/kg DW	< 0.10 (T)
2,4,5-TP (Fenoprop)	93-72-1	N	L340	0.1	mg/kg DW	< 0.10 (T)
2,4-dichlorophenoxyacetic acid (2,4-D)	94-75-7	N	L340	0.1	mg/kg DW	< 0.10 (T)
acifluorfen	50594-66-6	N	L340	0.1	mg/kg DW	< 0.10 (T)
bentazone	25057-89-0	N	L340	0.1	mg/kg DW	< 0.10 (T)
clopyralid	1702-17-6	N	L340	0.1	mg/kg DW	< 0.10 (T)
dichlorprop (2,4-DP)	120-36-5	N	L340	0.1	mg/kg DW	< 0.10 (T)
dinoseb (DNBP)	88-85-7	N	L340	0.1	mg/kg DW	< 0.10 (T)
2-methyl-4-chlorophenoxyacetic acid (MCPA)	94-74-6	N	L340	0.1	mg/kg DW	< 0.10 (T)
mecoprop (MCPP)	7085-19-0	N	L340	0.1	mg/kg DW	< 0.10 (T)
pentachlorophenol (PCP)	87-86-5	N	L340	0.1	mg/kg DW	< 0.10 (T)
2,3,6-trichlorobenzoic acid (2,3,6-TBA)	50-31-7	N	L340	0.1	mg/kg DW	< 0.10 (T)
4-(2,4-dichlorophenoxy)butanoic acid (2,4-DB)	94-82-6	N	L340	0.1	mg/kg DW	< 0.10 (T)
4-chlorophenoxyacetic acid (4-CPA)	122-88-3	N	L340	0.1	mg/kg DW	< 0.10 (T)
benazolin	3813-05-6	N	L340	0.1	mg/kg DW	< 0.10 (T)
bromoxynil	1689-84-5	N	L340	0.1	mg/kg DW	< 0.10 (T)
dicamba	1918-00-9	N	L340	0.1	mg/kg DW	< 0.10 (T)
diclofop	40843-25-2	N	L340	0.1	mg/kg DW	< 0.10 (T)
2-methyl-4,6-dinitrophenol (DNOC)	534-52-1	N	L340	0.1	mg/kg DW	< 0.10 (T)
flamprop	58667-63-3	N	L340	0.1	mg/kg DW	< 0.10 (T)
fluroxypyr	69377-81-7	N	L340	0.1	mg/kg DW	< 0.10 (T)
ioxynil	1689-83-4	N	L340	0.1	mg/kg DW	< 0.10 (T)
MCPB	94-81-5	N	L340	0.1	mg/kg DW	< 0.10 (T)
picloram	1918-02-1	N	L340	0.1	mg/kg DW	< 0.10 (T)
triclopyr	55335-06-3	N	L340	0.1	mg/kg DW	< 0.10 (T)
alachlor	15972-60-8	N	G029	0.02	mg/kg AR	< 0.02 (T)
chloroxuron	1982-47-4	N	L025	0.1	mg/kg DW	< 0.10 (T)
chlortoluron	15545-48-9	N	L025	0.1	mg/kg DW	< 0.10 (T)
diflubenzuron	35367-38-5	N	L025	0.1	mg/kg DW	< 0.10 (T)
dimefuron	34205-21-5	N	L025	0.1	mg/kg DW	< 0.10 (T)
diuron	330-54-1	N	L025	0.1	mg/kg DW	< 0.10 (T)
isoproturon	34123-59-6	N	L025	0.1	mg/kg DW	< 0.10 (T)
linuron	330-55-2	N	L025	0.1	mg/kg DW	< 0.10 (T)
methabenzthiazuron	18691-97-9	N	L025	0.1	mg/kg DW	< 0.10 (T)
metoxuron	19937-59-8	N	L025	0.1	mg/kg DW	< 0.10 (T)
monolinuron	1746-81-2	N	L025	0.1	mg/kg DW	< 0.10 (T)

Results Summary

Report No.: 23-06780-1

Customer Reference: Not Supplied

Customer Order No: P0752476

Customer Sample No	**23/09673/5**
RPS Sample No	33889
Sample Type	**GEO**
Sample Matrix	SOIL
Sampling Date	27/09/2023

Determinand	CAS No	Codes	SOP	RL	Units	
monuron	150-68-5	N	L025	0.1	mg/kg DW	< 0.10 (T)
pencycuron	66063-05-6	N	L025	0.1	mg/kg DW	< 0.10 (T)
bifenthrin	82657-04-3	N	G127	0.1	mg/kg DW	< 0.10 (T)
cyfluthrin, total	68359-37-5	N	G127	0.1	mg/kg DW	< 0.10 (T)
cyhalothrin, total	68085-85-8	N	G127	0.1	mg/kg DW	< 0.10 (T)
cypermethrin, total	52315-07-8	N	G127	0.1	mg/kg DW	< 0.10 (T)
deltamethrin	52918-63-5	N	G127	0.1	mg/kg DW	< 0.10 (T)
fenvalerate	51630-58-1	N	G127	0.1	mg/kg DW	< 0.10 (T)
permethrin, total	52645-53-1	N	G127	0.1	mg/kg DW	< 0.10 (T)
resmethrin	10453-86-8	N	G127	0.1	mg/kg DW	< 0.10 (T)
tetramethrin	7696-12-0	N	G127	0.1	mg/kg DW	< 0.10 (T)

Deviating Samples

Report No.: 23-06780-1

Customer Reference: Not Supplied

Customer Order No: P0752476

Our policy on Deviating Samples has been implemented in accordance with UKAS Policy on Deviating Samples (TPS63).
RPS is not responsible for the integrity of samples as received, unless RPS personnel performed the sampling. Samples submitted may be declared to be deviating.
Where applicable the analysis method remains UKAS accredited, however results reported for a deviating sample may be compromised.
Where no sampling date was supplied, samples have been declared to be deviating. If the date can be supplied, results may be reissued if assessed not deviating.
Where the sample container used was unsuitable or broken, the sample is flagged as deviating and re-sampling/re-submisson may be required.

RPS No.	Customer No.	Customer ID	Date Sampled	Containers Received	Deviating	Reason for Deviation
33889	23/09673/5		27/09/2023	100 mL amber glass jar	**Yes**	No sampling time provided.

Report No.: 23-06780-1

Type	Matrix Code	Description
Food	CEREALPROD	Cereals, grains & products
Food	DRIEDFRUIT	Dried fruits
Food	FRIEDBAKED	Fried or baked food
Food	LEGUME	Legumes
Food	MEAT	Meat
Food	POWDERED	Powdered food
Food	PULSE	Pulses (dried legumes)
Food	VEGETABLES	Vegetables
Gas	TDTUBE	TD Tube
Gas	TENAX	Tenax Tube
Gas	TUBE	Tube
Gas	VAPOUR	Gas
Geological	SED_MAR	Marine Sediment
Geological	SED_RIV	River Sediment
Geological	SLUDG_SOL	Sludge (solid only)
Geological	SOIL	Soil
Liquid	BEVERAGE	Beverage
Liquid	BLOOD	Blood
Liquid	CONDENSATE	Condensate
Liquid	FORMULATN	Formula
Liquid	LEACHATE	Leachate
Liquid	OIL/GREASE	Oil or grease
Liquid	SLUDG_LIQ	Sludge (liquid only)
Liquid	SOLVENT	Solvent
Liquid	URINE	Urine
Sludge	SLUDG_WHL	Sludge for bulk route
Solid	BADGE	Badge
Solid	BEDDING	Bedding
Solid	BIOTA	Biota (general)
Solid	BIOTA_F	Biota (fish)
Solid	BIOTA_SF	Biota (shellfish)
Solid	CONSTRCTN	Construction materials
Solid	FABRIC	Fabrics & furnishing materials
Solid	FEED	Animal feed
Solid	FERTILISER	Fertiliser
Solid	FILTER	Filter
Solid	FOAM	Solid foam material
Solid	PACKAGING	Packaging material
Solid	PLANT	Plant (vegetation)
Solid	POWDER	Powder
Solid	SWAB	Swab
Water	BAL	Ballast Water
Water	BIL	Bilge Water
Water	DW	Drinking Water
Water	EFFLUENT	Effluent
Water	GW	Ground Water
Water	INFLUENT	Influent
Water	SALTW	Salt Water
Water	SW	Surface Water
Water	TW	Tap Water
Water	W	Water

Report No.: 23-06780-1

Key Code	Description
N	Not Accredited Test
U	UKAS Accredited Test - UKAS accreditation is only implied if the report carries the UKAS logo
UF	UKAS Flexible Scope Test
M	MCERTS Accredited Test - MCERTS accreditation is only implied if the report carries the MCERTS logo
O	Marine Management Organisation (MMO) Validated
SN	Subcontracted to approved laboratory not accredited for the test
SU	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
SIN	Subcontracted to internal RPS Group laboratory not accredited for the test
SIU	Subcontracted to internal RPS Group laboratory UKAS Accredited for the test
SIM	Subcontracted to internal RPS Group laboratory MCERTS/UKAS Accredited for the test
I/S (in results)	Insufficient Sample
U/S (in results)	Unsuitable Sample
S/C (in results)	See Comments
ND (in results)	Not Detected
L (in results)	Result is outside normal limits
DW (in units)	Results are expressed on a dry weight basis

Sample Type	Sample Retention and Disposal Period
Foodstuff	1 month (if frozen) from the issue date of this report
Waters	2 weeks from the issue date of this report
Other Liquids	1 month from the issue date of this report
Solids / Soils	1 month from the issue date of this report
Sediments	1 month from the issue date of this report

Note: Sample retention may be subject to agreement with the customer for particular projects

Where the dry solids value of a sample is low (<50%), reporting limits are automatically raised for all determinants analysed on an as-received basis.

Soil Typing	Description
Type 1	Clay - Brown
Type 2	Clay - Grey/Black
Type 3	Sand
Type 4	Top Soil (Standard)
Type 5	Top Soil (High Peat)
Type 6	Made Ground (>50% Clay)
Type 7	Made Ground (>50% Sand)
Type 8	Made Ground (>50% Top Soil)
Type X	Other

Dev code	Description
D	No sampling date provided.
T	No sampling time provided.
Z	Temperature of samples exceeded in transit/storage.
V	Excessive headspace for volatile determinands.
P	Sample submitted without required preservative(s).
C	Incorrect container.
H	Holding time exceeded (sampling to extraction).
X	Holding time exceeded (sampling to receipt).

Note: Where the following information is included in this certificate, it has usually been supplied by the customer: Customer Sample ID, Sample Location, Sample Depth, Sampling Date and Sampling Time. The laboratory shall not be responsible for any information that is supplied by the customer that may affect the validity of results.

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Units 7 & 8, Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

Final Test Report

Envirolab Job Number:	23/09673
Issue Number:	1
Date:	24-Oct-23

Client: Structural Soils Limited (Hemel Hempstead)
18 Frogmore Road
Hemel Hempstead
UK
HP3 9RT

Project Manager:	[redacted]
Project Name:	Sealink Friston
Project Ref:	563835
Order No:	N/A
Date Samples Received:	29-Sep-23
Date Instructions Received:	29-Sep-23
Date Analysis Completed:	20-Oct-23

Notes - Soil analysis

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones >10mm are removed or excluded from the sample prior to analysis and reported results corrected to a whole sample basis.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis.

Notes - General

This report shall not be reproduced, except in full, without written approval from Envirolab.

Subscript "A" indicates analysis performed on the sample as received. "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve, unless asbestos is found to be present in which case all analysis is performed on the sample as received.

All analysis is performed on the dried and crushed sample for samples with Matrix Code 7 and this supercedes any "A" subscripts.

All analysis is performed on the sample as received for soil samples from outside the European Union and this supercedes any "D" subscripts

For complex, multi-compound analysis, quality control results do not always fall within chart limits for every compound and we have criteria for reporting in these situations.

If results are in italic font they are associated with such quality control failures and may be unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid

Predominant Matrix Codes: 1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample

Secondary Matrix Codes: A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal, E = contains roots/twigs.

IS indicates Insufficient sample for analysis, NDP indicates No Determination Possible and NAD indicates No Asbestos Detected.

Analytical results reflect the quality of the sample at the time of analysis only. Opinions and interpretations expressed are outside the scope of our accreditation.

Please contact us if you need any further information.

HWOL TPH Code: EH_CU_1D_AL: Extractable hydrocarbons - i.e. everything extracted by the solvent(s), Clean-up - e.g. by florisil, silica gel, GC - Single coil gas chromatography, Aliphatics only

Approved by:

[redacted]

Client Manager

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Landfill WAC analysis must not be used for hazardous waste classification purposes. This analysis is only applicable for landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Sample Details						Landfill Waste Acceptance Criteria Limits		
Lab Sample ID	Method	ISO17025	MCERTS	23/09673/5				
Client Sample Number						Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
Client Sample ID				F22-TP204				
Depth to Top				0.2				
Depth to Bottom								
Date Sampled				27/09/2023				
Sample Type				Soil - ES				
Sample Matrix Code				4A				
Solid Waste Analysis								
pH (pH Units)$_D$	A-T-031	N	N	**7.84**		-	>6	-
ANC to pH 4 (mol/kg)$_D$	A-T-ANC	N	N	**0.06**		-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg)$_D$	A-T-ANC	N	N	**0.03**		-	to be evaluated	to be evaluated
Loss on Ignition (%)$_D$	A-T-030	N	N	**1.7**		-	-	10
Total Organic Carbon (%)$_D$	A-T-032	N	N	**0.35**		3	5	6
PAH Sum of 17 (mg/kg) $_A$	A-T-019	N	N	**<0.08**		100	-	-
Mineral Oil (mg/kg)$_{A\ EH_CU_1D_AL}$	A-T-007	N	N	**<10**		500	-	-
Sum of 7 PCBs (mg/kg)$_A$	A-T-004	N	N	**<0.007**		1	-	-
Sum of BTEX (mg/kg)$_A$	A-T-022	N	N	**<0.01**		6	-	-
Eluate Analysis				**10:1**	**10:1**	**Limit values for compliance leaching test using**		
				mg/l	**mg/kg**	**BS EN 12457-2 at L/S 10 l/kg (mg/kg)**		
Arsenic	A-T-025	N	N	0.004	**0.040**	0.5	2	25
Barium	A-T-025	N	N	0.015	**0.150**	20	100	300
Cadmium	A-T-025	N	N	<0.001	**<0.01**	0.04	1	5
Chromium	A-T-025	N	N	<0.001	**<0.01**	0.5	10	70
Copper	A-T-025	N	N	0.004	**0.040**	2	50	100
Mercury	A-T-025	N	N	<0.0005	**<0.005**	0.01	0.2	2
Molybdenum	A-T-025	N	N	<0.001	**<0.01**	0.5	10	30
Nickel	A-T-025	N	N	<0.002	**<0.02**	0.4	10	40
Lead	A-T-025	N	N	0.006	**0.060**	0.5	10	50
Antimony	A-T-025	N	N	<0.001	**<0.01**	0.06	0.7	5
Selenium	A-T-025	N	N	<0.001	**<0.01**	0.1	0.5	7
Zinc	A-T-025	N	N	0.009	**0.090**	4	50	200
Chloride	A-T-026	N	N	9	**93**	800	15000	25000
Fluoride	A-T-026	N	N	0.5	**5.0**	10	150	500
Sulphate as SO_4	A-T-026	N	N	11	**107**	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	56	**560**	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	**<0.1**	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	<2.0	**<200**	500	800	1000
Leach Test Information								
pH (pH Units)	A-T-031	N	N	7.8				
Conductivity (µS/cm)	A-T-037	N	N	112				
Mass Sample (kg)				0.193				
Dry Matter (%)	A-T-044	N	N	90.6				

Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation

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Units 7 & 8, Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

Final Test Report

Envirolab Job Number:	23/09677
Issue Number:	1
Date:	24-Oct-23

Client: Structural Soils Limited (Hemel Hempstead)
18 Frogmore Road
Hemel Hempstead
UK
HP3 9RT

Project Manager:	[redacted]
Project Name:	Sealink Friston
Project Ref:	563835
Order No:	N/A
Date Samples Received:	29-Sep-23
Date Instructions Received:	29-Sep-23
Date Analysis Completed:	20-Oct-23

Notes - Soil analysis

All results are reported as dry weight (<40°C).

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Please contact us if you need any further information.

HWOL TPH Code: EH_CU_1D_AL: Extractable hydrocarbons - i.e. everything extracted by the solvent(s), Clean-up - e.g. by florisil, silica gel, GC - Single coil gas chromatography, Aliphatics only

Approved by:

[redacted]

Client Manager

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Landfill WAC analysis must not be used for hazardous waste classification purposes. This analysis is only applicable for landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Sample Details						Landfill Waste Acceptance Criteria Limits		
Lab Sample ID	Method	ISO17025	MCERTS	23/09677/5				
Client Sample Number				101		Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
Client Sample ID				F22-TP404				
Depth to Top				0.2				
Depth to Bottom								
Date Sampled				26/09/2023				
Sample Type				Soil - ES				
Sample Matrix Code				1A				
Solid Waste Analysis								
pH (pH Units)$_D$	A-T-031	N	N	**7.51**		-	>6	-
ANC to pH 4 (mol/kg)$_D$	A-T-ANC	N	N	**0.04**		-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg)$_D$	A-T-ANC	N	N	**0.03**		-	to be evaluated	to be evaluated
Loss on Ignition (%)$_D$	A-T-030	N	N	**1.5**		-	-	10
Total Organic Carbon (%)$_D$	A-T-032	N	N	**0.5**		3	5	6
PAH Sum of 17 (mg/kg) $_A$	A-T-019	N	N	**<0.08**		100	-	-
Mineral Oil (mg/kg)$_{A\ EH_CU_1D_AL}$	A-T-007	N	N	**<10**		500	-	-
Sum of 7 PCBs (mg/kg)$_A$	A-T-004	N	N	**<0.007**		1	-	-
Sum of BTEX (mg/kg)$_A$	A-T-022	N	N	**<0.01**		6	-	-
Eluate Analysis				**10:1**	**10:1**	**Limit values for compliance leaching test using**		
				mg/l	**mg/kg**	**BS EN 12457-2 at L/S 10 l/kg (mg/kg)**		
Arsenic	A-T-025	N	N	0.003	**0.030**	0.5	2	25
Barium	A-T-025	N	N	0.019	**0.190**	20	100	300
Cadmium	A-T-025	N	N	<0.001	**<0.01**	0.04	1	5
Chromium	A-T-025	N	N	<0.001	**<0.01**	0.5	10	70
Copper	A-T-025	N	N	<0.004	**<0.04**	2	50	100
Mercury	A-T-025	N	N	<0.0005	**<0.005**	0.01	0.2	2
Molybdenum	A-T-025	N	N	<0.001	**<0.01**	0.5	10	30
Nickel	A-T-025	N	N	<0.002	**<0.02**	0.4	10	40
Lead	A-T-025	N	N	0.004	**0.040**	0.5	10	50
Antimony	A-T-025	N	N	<0.001	**<0.01**	0.06	0.7	5
Selenium	A-T-025	N	N	<0.001	**<0.01**	0.1	0.5	7
Zinc	A-T-025	N	N	0.006	**0.060**	4	50	200
Chloride	A-T-026	N	N	9	**86**	800	15000	25000
Fluoride	A-T-026	N	N	0.6	**6.0**	10	150	500
Sulphate as SO_4	A-T-026	N	N	10	**98**	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	34	**340**	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	**<0.1**	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	<2.0	**<200**	500	800	1000
Leach Test Information								
pH (pH Units)	A-T-031	N	N	7.7				
Conductivity (µS/cm)	A-T-037	N	N	68				
Mass Sample (kg)				0.188				
Dry Matter (%)	A-T-044	N	N	92.9				

Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation

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Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 23/09677
Issue Number: 1 **Date:** 20 October, 2023

Client: Structural Soils Limited (Hemel Hempstead)
18 Frogmore Road
Hemel Hempstead
UK
HP3 9RT

Project Manager: [redacted]
Project Name: Sealink Friston
Project Ref: 563835
Order No: N/A
Date Samples Received: 29/09/23
Date Instructions Received: 29/09/23
Date Analysis Completed: 20/10/23

Approved by:

[redacted]
Deputy Client Services Supervisor

Envirolab Job Number: 23/09677

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09677/1	23/09677/3	23/09677/5	23/09677/7	23/09677/10	23/09677/11		Units	Limit of Detection	Method ref
Client Sample No	101	101	101	101	104	105				
Client Sample ID	F22-TP205	F22-TP516	F22-TP404	RedP-BH1A	RedP-BH1A	RedP-BH1A				
Depth to Top	0.20	0.20	0.20	0.20	1.00	1.50				
Depth To Bottom										
Date Sampled	26-Sep-23	26-Sep-23	26-Sep-23	26-Sep-23	26-Sep-23	26-Sep-23				
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOLID	SOLID	SOLID				
Sample Matrix Code	1A	6AE	1A	7	7	7				
% Moisture at 105C$_A$	19.3	30.5	21.7	17.0	-	14.9		% w/w	0.1	A-T-044
% Stones >10mm$_A$	<0.1	6.3	4.3	<0.1	<0.1	<0.1		% w/w	0.1	A-T-044
pH$_D$[M#]	7.21	8.10	7.51	8.41[U]	-	8.79[U]		pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$[M#]	<0.01	<0.01	<0.01	0.03[U]	-	<0.01[U]		g/l	0.01	A-T-026s
Sulphur (total)$_D$	75	315	62	366	-	<50		mg/kg	50	A-T-024s
Cyanide (free)$_A$[M#]	<1	<1	<1	<1[U]	-	<1[U]		mg/kg	1	A-T-042sFCN
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2	<0.2	-	<0.2		mg/kg	0.2	A-T-050s
Organic Matter$_D$[M#]	0.7	3.1	0.9	4.3[U]	-	0.2[U]		% w/w	0.1	A-T-032s
Total Organic Carbon$_D$[M#]	0.40	1.81	0.50	2.48[U]	-	0.10[U]		% w/w	0.03	A-T-032s
Fraction of organic carbon$_D$[#]	0.0040	0.0181	0.0050	0.0248[U]	-	0.0010[U]		N/A	0.0003	A-T-032s
Arsenic$_D$[M#]	4	6	4	17[U]	-	2[U]		mg/kg	1	A-T-024s
Barium$_D$	15	40	11	89	-	14		mg/kg	1	A-T-024s
Beryllium$_D$	<0.5	0.7	<0.5	<0.5	-	<0.5		mg/kg	0.5	A-T-024s
Boron (water soluble)$_D$[M#]	<1.0	<1.0	<1.0	<1.0[U]	-	<1.0[U]		mg/kg	1	A-T-027s
Cadmium$_D$[M#]	<0.5	0.7	<0.5	0.7[U]	-	<0.5[U]		mg/kg	0.5	A-T-024s
Copper$_D$[M#]	6	15	3	38[U]	-	7[U]		mg/kg	1	A-T-024s
Chromium$_D$[M#]	8	26	6	63[U]	-	170[U]		mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1	<1	-	<1		mg/kg	1	A-T-040s
Chromium (trivalent)	8	26	6	63	-	170		mg/kg	1	Calc
Lead$_D$[M#]	11	29	5	101[U]	-	8[U]		mg/kg	1	A-T-024s
Manganese$_D$[M#]	239	229	73	143[U]	-	58[U]		mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17	<0.17	-	<0.17		mg/kg	0.17	A-T-024s
Molybdenum$_D$[M#]	<1	<1	<1	3[U]	-	2[U]		mg/kg	1	A-T-024s
Nickel$_D$[M#]	6	19	5	71[U]	-	154[U]		mg/kg	1	A-T-024s
Selenium$_D$[M#]	<1	<1	<1	<1[U]	-	<1[U]		mg/kg	1	A-T-024s
Vanadium$_D$[M#]	16	37	12	15[U]	-	2[U]		mg/kg	1	A-T-024s
Zinc$_D$[M#]	23	58	12	106[U]	-	<5[U]		mg/kg	5	A-T-024s
Leachate Prep BS EN 12457-1 (2:1) (1 no)$_A$	-	-	-	-	*	-				A-T-001
pH (leachable)$_A$	-	-	-	-	7.96	-		pH	0.01	A-T-031w
Ammoniacal nitrogen as N (leachable)$_A$	-	-	-	-	0.08	-		mg/l	0.05	A-T-033w
Chloride (leachable)$_A$	-	-	-	-	17.08	-		mg/l	1	A-T-026w
Fluoride (leachable)$_A$	-	-	-	-	0.13	-		mg/l	0.1	A-T-026w (F)
Sulphate (leachable)$_A$	-	-	-	-	6.30	-		mg/l	1	A-T-026w

Envirolab Job Number: 23/09677

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09677/1	23/09677/3	23/09677/5	23/09677/7	23/09677/10	23/09677/11		Units	Limit of Detection	Method ref
Client Sample No	101	101	101	101	104	105				
Client Sample ID	F22-TP205	F22-TP516	F22-TP404	RedP-BH1A	RedP-BH1A	RedP-BH1A				
Depth to Top	0.20	0.20	0.20	0.20	1.00	1.50				
Depth To Bottom										
Date Sampled	26-Sep-23	26-Sep-23	26-Sep-23	26-Sep-23	26-Sep-23	26-Sep-23				
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOLID	SOLID	SOLID				
Sample Matrix Code	1A	6AE	1A	7	7	7				
Cyanide (free) (leachable)$_A$	-	-	-	-	<0.005	-		mg/l	0.005	A-T-042wFCN
Cyanide (total) (leachable)$_A$	-	-	-	-	<0.005	-		mg/l	0.005	A-T-042wTCN
Cyanide (complex) (leachable)	-	-	-	-	<0.005	-		mg/l	0.005	Calc
Phenol (leachable)$_A$	-	-	-	-	<0.01	-		mg/l	0.01	A-T-050w
Cresols (leachable)$_A$	-	-	-	-	<0.01	-		mg/l	0.01	A-T-050w
Resorcinol (leachable)$_A$	-	-	-	-	<0.01	-		mg/l	0.01	A-T-050w
Catechol (leachable)$_A$	-	-	-	-	<0.01	-		mg/l	0.01	A-T-050w
Xylenols & Ethylphenols (leachable)$_A$	-	-	-	-	<0.01	-		mg/l	0.01	A-T-050w
Naphthols (leachable)$_A$	-	-	-	-	<0.01	-		mg/l	0.01	A-T-050w
Trimethylphenol (leachable)$_A$	-	-	-	-	<0.01	-		mg/l	0.01	A-T-050w
Phenols (total by HPLC) (leachable)$_A$	-	-	-	-	<0.01	-		mg/l	0.01	A-T-050w
Antimony (leachable)$_A$	-	-	-	-	<1	-		µg/l	1	A-T-025w
Arsenic (leachable)$_A$	-	-	-	-	5	-		µg/l	1	A-T-025w
Boron (leachable)$_A$	-	-	-	-	14	-		µg/l	10	A-T-025w
Barium (leachable)$_A$	-	-	-	-	21	-		µg/l	1	A-T-025w
Beryllium (leachable)$_A$	-	-	-	-	<1	-		µg/l	1	A-T-025w
Cadmium (leachable)$_A$	-	-	-	-	<1	-		µg/l	1	A-T-025w
Copper (leachable)$_A$	-	-	-	-	<4	-		µg/l	4	A-T-025w
Chromium (leachable)$_A$	-	-	-	-	<1	-		µg/l	1	A-T-025w
Chromium (hexavalent) (leachable)$_A$	-	-	-	-	<0.05	-		mg/l	0.05	A-T-040w
Chromium (trivalent)	-	-	-	-	<0.05	-		mg/l	0.05	Calc
Iron (leachable)$_A$	-	-	-	-	109	-		µg/l	10	A-T-025w
Lead (leachable)$_A$	-	-	-	-	17	-		µg/l	1	A-T-025w
Manganese (leachable)$_A$	-	-	-	-	16	-		µg/l	1	A-T-025w
Magnesium (leachable)$_A$	-	-	-	-	1	-		mg/l	1	A-T-049w
Mercury (leachable)$_A$	-	-	-	-	<0.1	-		µg/l	0.1	A-T-025w
Molybdenum (leachable)$_A$	-	-	-	-	<1	-		µg/l	1	A-T-025w
Nickel (leachable)$_A$	-	-	-	-	<2	-		µg/l	2	A-T-025w
Selenium (leachable)$_A$	-	-	-	-	<1	-		µg/l	1	A-T-025w
Vanadium (leachable)$_A$	-	-	-	-	2	-		µg/l	1	A-T-025w
Zinc (leachable)$_A$	-	-	-	-	9	-		µg/l	2	A-T-025w
Bentazone$_A$	<0.10	<0.10	<0.10	<0.10	-	-		mg/kg	0.1	Subcon RPS MH
Cypermethrin$_A$	<0.10	<0.10	<0.10	<0.10	-	-		mg/kg	0.1	Subcon RPS MH

Envirolab Job Number: 23/09677

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09677/1	23/09677/3	23/09677/5	23/09677/7	23/09677/10	23/09677/11		Units	Limit of Detection	Method ref
Client Sample No	101	101	101	101	104	105				
Client Sample ID	F22-TP205	F22-TP516	F22-TP404	RedP-BH1A	RedP-BH1A	RedP-BH1A				
Depth to Top	0.20	0.20	0.20	0.20	1.00	1.50				
Depth To Bottom										
Date Sampled	26-Sep-23	26-Sep-23	26-Sep-23	26-Sep-23	26-Sep-23	26-Sep-23				
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOLID	SOLID	SOLID				
Sample Matrix Code	1A	6AE	1A	7	7	7				
Linuron$_A$	<0.10	<0.10	<0.10	<0.10	-	-		mg/kg	0.1	Subcon RPS MH
Alachlor$_A$	<0.02	<0.02	<0.02	<0.02	-	-		mg/kg	0.02	Subcon RPS MH
Carbaryl$_A$	<0.10	<0.10	<0.10	<0.10	-	-		mg/kg	0.1	Subcon RPS MH
Diuron$_A$	<0.10	<0.10	<0.10	<0.10	-	-		mg/kg	0.1	Subcon RPS MH
Isoproturon$_A$	<0.10	<0.10	<0.10	<0.10	-	-		mg/kg	0.1	Subcon RPS MH
MCPP; (Mecoprop)$_A$	<0.1	<0.1	<0.1	<0.10	-	-		mg/kg	0.1	Subcon RPS MH
Calcium (leachable)$_A$	-	-	-	-	11	-		mg/l	1	A-T-049w

Envirolab Job Number: 23/09677

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09677/1	23/09677/3	23/09677/5	23/09677/7	23/09677/10	23/09677/11		Units	Limit of Detection	Method ref
Client Sample No	101	101	101	101	104	105				
Client Sample ID	F22-TP205	F22-TP516	F22-TP404	RedP-BH1A	RedP-BH1A	RedP-BH1A				
Depth to Top	0.20	0.20	0.20	0.20	1.00	1.50				
Depth To Bottom										
Date Sampled	26-Sep-23	26-Sep-23	26-Sep-23	26-Sep-23	26-Sep-23	26-Sep-23				
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOLID	SOLID	SOLID				
Sample Matrix Code	1A	6AE	1A	7	7	7				
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	NAD	NAD	NAD	NAD^{U}	NAD^{U}	NAD^{U}				A-T-045
Asbestos Matrix (visual)$_{D}$	-	-	-	-	-	-				A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-	-	-	-	-				A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A	N/A	N/A	N/A	N/A				A-T-045

Lab Sample ID	23/09677/1	23/09677/3	23/09677/5	23/09677/7	23/09677/10	23/09677/11		Units	Limit of Detection	Method ref
Client Sample No	101	101	101	101	104	105				
Client Sample ID	F22-TP205	F22-TP516	F22-TP404	RedP-BH1A	RedP-BH1A	RedP-BH1A				
Depth to Top	0.20	0.20	0.20	0.20	1.00	1.50				
Depth To Bottom										
Date Sampled	26-Sep-23	26-Sep-23	26-Sep-23	26-Sep-23	26-Sep-23	26-Sep-23				
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOLID	SOLID	SOLID				
Sample Matrix Code	1A	6AE	1A	7	7	7				
BTEX										
BTEX - Benzene$_A^{\#}$	-	-	-	-	<0.01^U	-		mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	-	-	-	-	<0.01^U	-		mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	-	-	-	-	<0.01^U	-		mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	-	-	-	-	<0.01^U	-		mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	-	-	-	-	<0.01^U	-		mg/kg	0.01	A-T-022s
OCP+OPP Combined Pest Suite (incl. Atrazine and Simazine)										
Dichlobenil$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Tecnazene$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Trifluralin$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
alpha-Hexachlorocyclohexane (HCH)$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Hexachlorobenzene (HCB) $_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Simazine$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Atrazine$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
beta-Hexachlorocyclohexane (HCH)$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Quintozene (PCNB)$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Chlorothalonil$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
delta-Hexachlorocyclohexane (HCH)$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Triallate$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Heptachlor$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Aldrin$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Triadimefon$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Telodrin$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Isodrin$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Pendimethalin$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Heptachlor epoxide$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
trans-Chlordane (Gamma)$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
o,p-DDE (2,4)$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Endosulphan I (Alpha)$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
cis-Chlordane (Alpha)$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
p,p-DDE (4,4)$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Dieldrin$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056

Lab Sample ID	23/09677/1	23/09677/3	23/09677/5	23/09677/7	23/09677/10	23/09677/11		Units	Limit of Detection	Method ref
Client Sample No	101	101	101	101	104	105				
Client Sample ID	F22-TP205	F22-TP516	F22-TP404	RedP-BH1A	RedP-BH1A	RedP-BH1A				
Depth to Top	0.20	0.20	0.20	0.20	1.00	1.50				
Depth To Bottom										
Date Sampled	26-Sep-23	26-Sep-23	26-Sep-23	26-Sep-23	26-Sep-23	26-Sep-23				
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOLID	SOLID	SOLID				
Sample Matrix Code	1A	6AE	1A	7	7	7				
o,p-DDD (2,4)$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Endrin$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Endosulphan II (Beta)$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
p,p-DDD (4,4)$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
o,p-DDT (2,4)$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Endrin Aldehyde$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Endrin Ketone$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Endosulphan Sulphate$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
p,p-DDT (4,4)$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
o,p-Methoxychlor$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
p,p-Methoxychlor$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Permethrin I (cis)$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Permethrin II (trans)$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Dichlorvos$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Mevinphos$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Demeton-S$_A$	<0.50	<0.50	<0.50	<0.50	-	-		mg/kg	0.5	A-T-056
Demeton-O$_A$	<0.50	<0.50	<0.50	<0.50	-	-		mg/kg	0.5	A-T-056
Phorate$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Dimethoate$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Propetamphos$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Diazinon (Dimpylate)$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Disulfoton$_A$	<0.10	<0.10	<0.10	<0.10	-	-		mg/kg	0.1	A-T-056
Chlorpyrifos-methyl$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Parathion (Ethyl Parathion)$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Methyl Parathion$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Pirimiphos-methyl$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Fenitrothion$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Fensulphothion$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Fenthion$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Malathion$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Chlorfenvinphos$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Chlorpyrifos$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Trichloronate$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Prothiofos (Tokuthion)$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056

Envirolab Job Number: 23/09677

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09677/1	23/09677/3	23/09677/5	23/09677/7	23/09677/10	23/09677/11		Units	Limit of Detection	Method ref
Client Sample No	101	101	101	101	104	105				
Client Sample ID	F22-TP205	F22-TP516	F22-TP404	RedP-BH1A	RedP-BH1A	RedP-BH1A				
Depth to Top	0.20	0.20	0.20	0.20	1.00	1.50				
Depth To Bottom										
Date Sampled	26-Sep-23	26-Sep-23	26-Sep-23	26-Sep-23	26-Sep-23	26-Sep-23				
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOLID	SOLID	SOLID				
Sample Matrix Code	1A	6AE	1A	7	7	7				
Ethion$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Triazophos$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Carbophenothion$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Phosalone$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Azinphos-methyl$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Azinphos-ethyl$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
Coumaphos$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056
gamma-Hexachlorocyclohexane (HCH)$_A$	<0.01	<0.01	<0.01	<0.01	-	-		mg/kg	0.01	A-T-056

Envirolab Job Number: 23/09677

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09677/1	23/09677/3	23/09677/5	23/09677/7	23/09677/10	23/09677/11		Units	Limit of Detection	Method ref
Client Sample No	101	101	101	101	104	105				
Client Sample ID	F22-TP205	F22-TP516	F22-TP404	RedP-BH1A	RedP-BH1A	RedP-BH1A				
Depth to Top	0.20	0.20	0.20	0.20	1.00	1.50				
Depth To Bottom										
Date Sampled	26-Sep-23	26-Sep-23	26-Sep-23	26-Sep-23	26-Sep-23	26-Sep-23				
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOLID	SOLID	SOLID				
Sample Matrix Code	1A	6AE	1A	7	7	7				
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01	<0.01	<0.01	0.10^U	-	<0.01^U		mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01	0.23^U	-	<0.01^U		mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	<0.02	<0.02	0.46^U	-	<0.02^U		mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04	3.25^U	-	<0.04^U		mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	<0.04	<0.04	<0.04	3.40^U	-	<0.04^U		mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	<0.05	<0.05	<0.05	4.02^U	-	<0.05^U		mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	<0.05	<0.05	1.89^U	-	<0.05^U		mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07	1.51^U	-	<0.07^U		mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	<0.06	<0.06	<0.06	3.78^U	-	<0.06^U		mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A$	<0.04	<0.04	<0.04	0.45	-	<0.04		mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	<0.08	<0.08	<0.08	7.95^U	-	<0.08^U		mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	<0.01	<0.01	0.14^U	-	<0.01^U		mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	<0.03	<0.03	<0.03	2.34^U	-	<0.03^U		mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03	0.04^U	-	<0.03^U		mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	<0.03	<0.03	<0.03	3.37^U	-	<0.03^U		mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	<0.07	<0.07	<0.07	6.57^U	-	<0.07^U		mg/kg	0.07	A-T-019s
Total PAH-16MS$_A$	<0.08	<0.08	<0.08	39.5^U	-	<0.08^U		mg/kg	0.01	A-T-019s

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Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09677/1	23/09677/3	23/09677/5	23/09677/7	23/09677/10	23/09677/11		Units	Limit of Detection	Method ref
Client Sample No	101	101	101	101	104	105				
Client Sample ID	F22-TP205	F22-TP516	F22-TP404	RedP-BH1A	RedP-BH1A	RedP-BH1A				
Depth to Top	0.20	0.20	0.20	0.20	1.00	1.50				
Depth To Bottom										
Date Sampled	26-Sep-23	26-Sep-23	26-Sep-23	26-Sep-23	26-Sep-23	26-Sep-23				
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOLID	SOLID	SOLID				
Sample Matrix Code	1A	6AE	1A	7	7	7				
Speciated PCB-WHO12										
PCB BZ $81_A^{M\#}$	-	-	-	-	<0.005[U]	-		mg/kg	0.005	A-T-004s
PCB BZ $105_A^{M\#}$	-	-	-	-	<0.005[U]	-		mg/kg	0.005	A-T-004s
PCB BZ $114_A^{M\#}$	-	-	-	-	<0.005[U]	-		mg/kg	0.005	A-T-004s
PCB BZ $118_A^{M\#}$	-	-	-	-	<0.007[U]	-		mg/kg	0.007	A-T-004s
PCB BZ $123_A^{M\#}$	-	-	-	-	<0.005[U]	-		mg/kg	0.005	A-T-004s
PCB BZ $126_A^{M\#}$	-	-	-	-	<0.005[U]	-		mg/kg	0.005	A-T-004s
PCB BZ $156_A^{M\#}$	-	-	-	-	<0.005[U]	-		mg/kg	0.005	A-T-004s
PCB BZ $157_A^{M\#}$	-	-	-	-	<0.005[U]	-		mg/kg	0.005	A-T-004s
PCB BZ $167_A^{M\#}$	-	-	-	-	<0.005[U]	-		mg/kg	0.005	A-T-004s
PCB BZ $169_A^{M\#}$	-	-	-	-	<0.005[U]	-		mg/kg	0.005	A-T-004s
PCB BZ $189_A^{M\#}$	-	-	-	-	<0.005[U]	-		mg/kg	0.005	A-T-004s
PCB BZ $77_A^{M\#}$	-	-	-	-	<0.005[U]	-		mg/kg	0.005	A-T-004s
Total Speciated PCB-WHO12$_A^{M\#}$	-	-	-	-	<0.007[U]	-		mg/kg	0.005	A-T-004s

Report Notes

General
This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **six weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
Analytical results reflect the quality of the sample at the time of analysis only.
Opinions and Interpretations expressed are outside our scope of accreditation.
The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client.
A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

Key

Superscript "#"	Accredited to ISO 17025
Superscript "M"	Accredited to MCertS
Superscript "U"	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript "A"	Analysis performed on as-received Sample
Subscript "D"	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript "^"	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
N/A	Not applicable

Asbestos
Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis
Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing, and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25ºC / 11550µS/cm @ 20ºC fall outside the accreditation range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Structural Soils Limited (Hemel Hempstead), 18 Frogmore Road, Hemel Hempstead, UK, HP3 9RT

Project: Sealink Friston

Clients Project No: 563835

Project No: 23/09677

Date Received: 29/09/2023 (am)

Cool Box Temperatures (°C): 13.8, 14.0, 13.9

NO DEVIATIONS IDENTIFIED with respect to sampling dates or containers received.

Note: If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3 (for water samples 5 ± 3°C), ISO 18400-105:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	23/09677/1	23/09677/3	23/09677/5	23/09677/7	23/09677/10	23/09677/11
Client Sample No	101	101	101	101	104	105
Client Sample ID/Depth	F22-TP205 0.20m	F22-TP516 0.20m	F22-TP404 0.20m	RedP-BH1A 0.20m	RedP-BH1A 1.00m	RedP-BH1A 1.50m
Date Sampled	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23	26/09/23
A-T-004s			05/10/2023		05/10/2023	
A-T-007s			05/10/2023			
A-T-019s	06/10/2023	06/10/2023	06/10/2023	06/10/2023		06/10/2023
A-T-022s			09/10/2023		09/10/2023	
A-T-024s	06/10/2023	06/10/2023	06/10/2023	06/10/2023		06/10/2023
A-T-025w			09/10/2023		09/10/2023	
A-T-026s	06/10/2023	06/10/2023	06/10/2023	06/10/2023		06/10/2023
A-T-026w			09/10/2023		06/10/2023	
A-T-026w (F)			09/10/2023		06/10/2023	
A-T-027s	09/10/2023	09/10/2023	09/10/2023	09/10/2023		09/10/2023
A-T-030s			06/10/2023			
A-T-031s	09/10/2023	09/10/2023	09/10/2023	09/10/2023		09/10/2023
A-T-031w			09/10/2023		09/10/2023	
A-T-032s	06/10/2023	06/10/2023	06/10/2023	06/10/2023		06/10/2023
A-T-032w			09/10/2023			
A-T-033w					09/10/2023	
A-T-037w			09/10/2023			
A-T-040s	06/10/2023	06/10/2023	06/10/2023	06/10/2023		06/10/2023
A-T-040w					06/10/2023	
A-T-042sFCN	04/10/2023	04/10/2023	04/10/2023	04/10/2023		05/10/2023
A-T-042wFCN					06/10/2023	
A-T-042wTCN					06/10/2023	
A-T-044	10/10/2023	10/10/2023	10/10/2023	10/10/2023	09/10/2023	10/10/2023
A-T-045	03/10/2023	03/10/2023	03/10/2023	03/10/2023	03/10/2023	03/10/2023
A-T-049w					06/10/2023	
A-T-050s	04/10/2023	04/10/2023	04/10/2023	04/10/2023		04/10/2023
A-T-050w			09/10/2023		06/10/2023	
A-T-056	04/10/2023	04/10/2023	04/10/2023	04/10/2023		
A-T-ANCs			09/10/2023			
Calc	06/10/2023	06/10/2023	06/10/2023	06/10/2023	09/10/2023	06/10/2023
Calc-no stones			09/10/2023			
Probe (w)			09/10/2023			

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

Certificate of Analysis

Report No.: **23-06708-1**

Issue No.: **1**
Date of Issue **20/10/2023**

Customer Details:	Envirolab Ltd, 7 - 8 Sandpits Business Park, Mottram Road, Hyde, Greater Manchester, SK14 3AR, United Kingdom
Customer Contact:	[redacted]
Customer Order No.:	P0752471
Customer Reference:	Not Supplied
Quotation Reference:	Q22-00104 (Issue: 36)
Description:	3 geo samples
Date Received:	02/10/2023
Date Started:	03/10/2023
Date Completed:	20/10/2023
Test Methods:	Details available on request (refer to SOP code against relevant result/s)
Notes:	None

[redacted]

Approved By: [redacted], **Study Manager**

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Observations and interpretations are outside of the scope of UKAS accreditation.
Results reported herein relate only to the items supplied to the laboratory for testing.
Results on an Interim Report are not dry-weight corrected.
Where the laboratory is not responsible for the sampling, results apply to the sample(s) as they were received.
The laboratory shall not be responsible for any information that is supplied by the customer that may affect the validity of results.

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13 St Martins Way, Bedford, Bedfordshire, MK42 0LF. T +44 1462 480 400
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Results Summary

Report No.: 23-06708-1

Customer Reference: Not Supplied

Customer Order No: P0752471

Customer Sample No	23/09677/1	23/09677/3	23/09677/5
RPS Sample No	33671	33672	33673
Sample Type	**GEO**	**GEO**	**GEO**
Sample Matrix	SOIL	SOIL	SOIL
Sampling Date	26/09/2023	26/09/2023	26/09/2023

Determinand	CAS No	Codes	SOP	RL	Units			
carbaryl	63-25-2	N	L001	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
2,4,5-trichlorophenoxyacetic acid (2,4,5-T)	93-76-5	N	L340	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
2,4,5-TP (Fenoprop)	93-72-1	N	L340	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
2,4-dichlorophenoxyacetic acid (2,4-D)	94-75-7	N	L340	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
acifluorfen	50594-66-6	N	L340	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
bentazone	25057-89-0	N	L340	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
clopyralid	1702-17-6	N	L340	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
dichlorprop (2,4-DP)	120-36-5	N	L340	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
dinoseb (DNBP)	88-85-7	N	L340	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
2-methyl-4-chlorophenoxyacetic acid (MCPA)	94-74-6	N	L340	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
mecoprop (MCPP)	7085-19-0	N	L340	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
pentachlorophenol (PCP)	87-86-5	N	L340	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
2,3,6-trichlorobenzoic acid (2,3,6-TBA)	50-31-7	N	L340	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
4-(2,4-dichlorophenoxy)butanoic acid (2,4-DB)	94-82-6	N	L340	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
4-chlorophenoxyacetic acid (4-CPA)	122-88-3	N	L340	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
benazolin	3813-05-6	N	L340	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
bromoxynil	1689-84-5	N	L340	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
dicamba	1918-00-9	N	L340	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
diclofop	40843-25-2	N	L340	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
2-methyl-4,6-dinitrophenol (DNOC)	534-52-1	N	L340	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
flamprop	58667-63-3	N	L340	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
fluroxypyr	69377-81-7	N	L340	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
ioxynil	1689-83-4	N	L340	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
MCPB	94-81-5	N	L340	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
picloram	1918-02-1	N	L340	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
triclopyr	55335-06-3	N	L340	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
alachlor	15972-60-8	N	G029	0.02	mg/kg AR	< 0.02 (T)	< 0.02 (T)	< 0.02 (T)
chloroxuron	1982-47-4	N	L025	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
chlortoluron	15545-48-9	N	L025	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
diflubenzuron	35367-38-5	N	L025	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
dimefuron	34205-21-5	N	L025	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
diuron	330-54-1	N	L025	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
isoproturon	34123-59-6	N	L025	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
linuron	330-55-2	N	L025	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
methabenzthiazuron	18691-97-9	N	L025	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
metoxuron	19937-59-8	N	L025	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
monolinuron	1746-81-2	N	L025	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)

Results Summary

Report No.: 23-06708-1

Customer Reference: Not Supplied

Customer Order No: P0752471

Customer Sample No	**23/09677/1**	**23/09677/3**	**23/09677/5**
RPS Sample No	33671	33672	33673
Sample Type	**GEO**	**GEO**	**GEO**
Sample Matrix	SOIL	SOIL	SOIL
Sampling Date	26/09/2023	26/09/2023	26/09/2023

Determinand	CAS No	Codes	SOP	RL	Units			
monuron	150-68-5	N	L025	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
pencycuron	66063-05-6	N	L025	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
bifenthrin	82657-04-3	N	G127	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
cyfluthrin, total	68359-37-5	N	G127	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
cyhalothrin, total	68085-85-8	N	G127	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
cypermethrin, total	52315-07-8	N	G127	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
deltamethrin	52918-63-5	N	G127	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
fenvalerate	51630-58-1	N	G127	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
permethrin, total	52645-53-1	N	G127	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
resmethrin	10453-86-8	N	G127	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)
tetramethrin	7696-12-0	N	G127	0.1	mg/kg DW	< 0.10 (T)	< 0.10 (T)	< 0.10 (T)

Deviating Samples

Report No.: 23-06708-1

Customer Reference: Not Supplied

Customer Order No: P0752471

Our policy on Deviating Samples has been implemented in accordance with UKAS Policy on Deviating Samples (TPS63).
RPS is not responsible for the integrity of samples as received, unless RPS personnel performed the sampling. Samples submitted may be declared to be deviating.
Where applicable the analysis method remains UKAS accredited, however results reported for a deviating sample may be compromised.
Where no sampling date was supplied, samples have been declared to be deviating. If the date can be supplied, results may be reissued if assessed not deviating.
Where the sample container used was unsuitable or broken, the sample is flagged as deviating and re-sampling/re-submisson may be required.

RPS No.	Customer No.	Customer ID	Date Sampled	Containers Received	Deviating	Reason for Deviation
33671	23/09677/1		26/09/2023	250 mL amber glass jar	**Yes**	No sampling time provided.
33672	23/09677/3		26/09/2023	250 mL amber glass jar	**Yes**	No sampling time provided.
33673	23/09677/5		26/09/2023	250 mL amber glass jar	**Yes**	No sampling time provided.

Report No.: 23-06708-1

Type	Matrix Code	Description
Food	CEREALPROD	Cereals, grains & products
Food	DRIEDFRUIT	Dried fruits
Food	FRIEDBAKED	Fried or baked food
Food	LEGUME	Legumes
Food	MEAT	Meat
Food	POWDERED	Powdered food
Food	PULSE	Pulses (dried legumes)
Food	VEGETABLES	Vegetables
Gas	TDTUBE	TD Tube
Gas	TENAX	Tenax Tube
Gas	TUBE	Tube
Gas	VAPOUR	Gas
Geological	SED_MAR	Marine Sediment
Geological	SED_RIV	River Sediment
Geological	SLUDG_SOL	Sludge (solid only)
Geological	SOIL	Soil
Liquid	BEVERAGE	Beverage
Liquid	BLOOD	Blood
Liquid	CONDENSATE	Condensate
Liquid	FORMULATN	Formula
Liquid	LEACHATE	Leachate
Liquid	OIL/GREASE	Oil or grease
Liquid	SLUDG_LIQ	Sludge (liquid only)
Liquid	SOLVENT	Solvent
Liquid	URINE	Urine
Sludge	SLUDG_WHL	Sludge for bulk route
Solid	BADGE	Badge
Solid	BEDDING	Bedding
Solid	BIOTA	Biota (general)
Solid	BIOTA_F	Biota (fish)
Solid	BIOTA_SF	Biota (shellfish)
Solid	CONSTRCTN	Construction materials
Solid	FABRIC	Fabrics & furnishing materials
Solid	FEED	Animal feed
Solid	FERTILISER	Fertiliser
Solid	FILTER	Filter
Solid	FOAM	Solid foam material
Solid	PACKAGING	Packaging material
Solid	PLANT	Plant (vegetation)
Solid	POWDER	Powder
Solid	SWAB	Swab
Water	BAL	Ballast Water
Water	BIL	Bilge Water
Water	DW	Drinking Water
Water	EFFLUENT	Effluent
Water	GW	Ground Water
Water	INFLUENT	Influent
Water	SALTW	Salt Water
Water	SW	Surface Water
Water	TW	Tap Water
Water	W	Water

Report No.: 23-06708-1

Key Code	Description
N	Not Accredited Test
U	UKAS Accredited Test - UKAS accreditation is only implied if the report carries the UKAS logo
UF	UKAS Flexible Scope Test
M	MCERTS Accredited Test - MCERTS accreditation is only implied if the report carries the MCERTS logo
O	Marine Management Organisation (MMO) Validated
SN	Subcontracted to approved laboratory not accredited for the test
SU	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
SIN	Subcontracted to internal RPS Group laboratory not accredited for the test
SIU	Subcontracted to internal RPS Group laboratory UKAS Accredited for the test
SIM	Subcontracted to internal RPS Group laboratory MCERTS/UKAS Accredited for the test
I/S (in results)	Insufficient Sample
U/S (in results)	Unsuitable Sample
S/C (in results)	See Comments
ND (in results)	Not Detected
L (in results)	Result is outside normal limits
DW (in units)	Results are expressed on a dry weight basis

Sample Type	Sample Retention and Disposal Period
Foodstuff	1 month (if frozen) from the issue date of this report
Waters	2 weeks from the issue date of this report
Other Liquids	1 month from the issue date of this report
Solids / Soils	1 month from the issue date of this report
Sediments	1 month from the issue date of this report

Note: Sample retention may be subject to agreement with the customer for particular projects

Where the dry solids value of a sample is low (<50%), reporting limits are automatically raised for all determinants analysed on an as-received basis.

Soil Typing	Description
Type 1	Clay - Brown
Type 2	Clay - Grey/Black
Type 3	Sand
Type 4	Top Soil (Standard)
Type 5	Top Soil (High Peat)
Type 6	Made Ground (>50% Clay)
Type 7	Made Ground (>50% Sand)
Type 8	Made Ground (>50% Top Soil)
Type X	Other

Dev code	Description
D	No sampling date provided.
T	No sampling time provided.
Z	Temperature of samples exceeded in transit/storage.
V	Excessive headspace for volatile determinands.
P	Sample submitted without required preservative(s).
C	Incorrect container.
H	Holding time exceeded (sampling to extraction).
X	Holding time exceeded (sampling to receipt).

Note: Where the following information is included in this certificate, it has usually been supplied by the customer: Customer Sample ID, Sample Location, Sample Depth, Sampling Date and Sampling Time. The laboratory shall not be responsible for any information that is supplied by the customer that may affect the validity of results.

Certificate of Analysis

Report No.: **23-06774-1**

Issue No.: **1**
Date of Issue **20/10/2023**

Customer Details:	Envirolab Ltd, 7 - 8 Sandpits Business Park, Mottram Road, Hyde, Greater Manchester, SK14 3AR, United Kingdom
Customer Contact:	[redacted]
Customer Order No.:	P0752477
Customer Reference:	Not Supplied
Quotation Reference:	Q22-00104 (Issue: 36)
Description:	1 geo sample
Date Received:	04/10/2023
Date Started:	05/10/2023
Date Completed:	20/10/2023
Test Methods:	Details available on request (refer to SOP code against relevant result/s)
Notes:	None

[redacted]

Approved By: [redacted], **Study Manager**

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Results on an Interim Report are not dry-weight corrected.
Where the laboratory is not responsible for the sampling, results apply to the sample(s) as they were received.
The laboratory shall not be responsible for any information that is supplied by the customer that may affect the validity of results.

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Results Summary

Report No.: 23-06774-1

Customer Reference: Not Supplied

Customer Order No: P0752477

Customer Sample No	**23/09677/7**
RPS Sample No	33847
Sample Type	**GEO**
Sample Matrix	SOIL
Sampling Date	26/09/2023

Determinand	CAS No	Codes	SOP	RL	Units	
carbaryl	63-25-2	N	L001	0.1	mg/kg DW	< 0.10 (T)
2,4,5-trichlorophenoxyacetic acid (2,4,5-T)	93-76-5	N	L340	0.1	mg/kg DW	< 0.10 (T)
2,4,5-TP (Fenoprop)	93-72-1	N	L340	0.1	mg/kg DW	< 0.10 (T)
2,4-dichlorophenoxyacetic acid (2,4-D)	94-75-7	N	L340	0.1	mg/kg DW	< 0.10 (T)
acifluorfen	50594-66-6	N	L340	0.1	mg/kg DW	< 0.10 (T)
bentazone	25057-89-0	N	L340	0.1	mg/kg DW	< 0.10 (T)
clopyralid	1702-17-6	N	L340	0.1	mg/kg DW	< 0.10 (T)
dichlorprop (2,4-DP)	120-36-5	N	L340	0.1	mg/kg DW	< 0.10 (T)
dinoseb (DNBP)	88-85-7	N	L340	0.1	mg/kg DW	< 0.10 (T)
2-methyl-4-chlorophenoxyacetic acid (MCPA)	94-74-6	N	L340	0.1	mg/kg DW	< 0.10 (T)
mecoprop (MCPP)	7085-19-0	N	L340	0.1	mg/kg DW	< 0.10 (T)
pentachlorophenol (PCP)	87-86-5	N	L340	0.1	mg/kg DW	< 0.10 (T)
2,3,6-trichlorobenzoic acid (2,3,6-TBA)	50-31-7	N	L340	0.1	mg/kg DW	< 0.10 (T)
4-(2,4-dichlorophenoxy)butanoic acid (2,4-DB)	94-82-6	N	L340	0.1	mg/kg DW	< 0.10 (T)
4-chlorophenoxyacetic acid (4-CPA)	122-88-3	N	L340	0.1	mg/kg DW	< 0.10 (T)
benazolin	3813-05-6	N	L340	0.1	mg/kg DW	< 0.10 (T)
bromoxynil	1689-84-5	N	L340	0.1	mg/kg DW	< 0.10 (T)
dicamba	1918-00-9	N	L340	0.1	mg/kg DW	< 0.10 (T)
diclofop	40843-25-2	N	L340	0.1	mg/kg DW	< 0.10 (T)
2-methyl-4,6-dinitrophenol (DNOC)	534-52-1	N	L340	0.1	mg/kg DW	< 0.10 (T)
flamprop	58667-63-3	N	L340	0.1	mg/kg DW	< 0.10 (T)
fluroxypyr	69377-81-7	N	L340	0.1	mg/kg DW	< 0.10 (T)
ioxynil	1689-83-4	N	L340	0.1	mg/kg DW	< 0.10 (T)
MCPB	94-81-5	N	L340	0.1	mg/kg DW	< 0.10 (T)
picloram	1918-02-1	N	L340	0.1	mg/kg DW	< 0.10 (T)
triclopyr	55335-06-3	N	L340	0.1	mg/kg DW	< 0.10 (T)
alachlor	15972-60-8	N	G029	0.02	mg/kg AR	< 0.02 (T)
chloroxuron	1982-47-4	N	L025	0.1	mg/kg DW	< 0.10 (T)
chlortoluron	15545-48-9	N	L025	0.1	mg/kg DW	< 0.10 (T)
diflubenzuron	35367-38-5	N	L025	0.1	mg/kg DW	< 0.10 (T)
dimefuron	34205-21-5	N	L025	0.1	mg/kg DW	< 0.10 (T)
diuron	330-54-1	N	L025	0.1	mg/kg DW	< 0.10 (T)
isoproturon	34123-59-6	N	L025	0.1	mg/kg DW	< 0.10 (T)
linuron	330-55-2	N	L025	0.1	mg/kg DW	< 0.10 (T)
methabenzthiazuron	18691-97-9	N	L025	0.1	mg/kg DW	< 0.10 (T)
metoxuron	19937-59-8	N	L025	0.1	mg/kg DW	< 0.10 (T)
monolinuron	1746-81-2	N	L025	0.1	mg/kg DW	< 0.10 (T)

Results Summary

Report No.: 23-06774-1

Customer Reference: Not Supplied

Customer Order No: P0752477

Customer Sample No	**23/09677/7**
RPS Sample No	33847
Sample Type	**GEO**
Sample Matrix	SOIL
Sampling Date	26/09/2023

Determinand	CAS No	Codes	SOP	RL	Units	
monuron	150-68-5	N	L025	0.1	mg/kg DW	< 0.10 (T)
pencycuron	66063-05-6	N	L025	0.1	mg/kg DW	< 0.10 (T)
bifenthrin	82657-04-3	N	G127	0.1	mg/kg DW	< 0.10 (T)
cyfluthrin, total	68359-37-5	N	G127	0.1	mg/kg DW	< 0.10 (T)
cyhalothrin, total	68085-85-8	N	G127	0.1	mg/kg DW	< 0.10 (T)
cypermethrin, total	52315-07-8	N	G127	0.1	mg/kg DW	< 0.10 (T)
deltamethrin	52918-63-5	N	G127	0.1	mg/kg DW	< 0.10 (T)
fenvalerate	51630-58-1	N	G127	0.1	mg/kg DW	< 0.10 (T)
permethrin, total	52645-53-1	N	G127	0.1	mg/kg DW	< 0.10 (T)
resmethrin	10453-86-8	N	G127	0.1	mg/kg DW	< 0.10 (T)
tetramethrin	7696-12-0	N	G127	0.1	mg/kg DW	< 0.10 (T)

Deviating Samples

Report No.: 23-06774-1

Customer Reference: Not Supplied

Customer Order No: P0752477

Our policy on Deviating Samples has been implemented in accordance with UKAS Policy on Deviating Samples (TPS63).
RPS is not responsible for the integrity of samples as received, unless RPS personnel performed the sampling. Samples submitted may be declared to be deviating.
Where applicable the analysis method remains UKAS accredited, however results reported for a deviating sample may be compromised.
Where no sampling date was supplied, samples have been declared to be deviating. If the date can be supplied, results may be reissued if assessed not deviating.
Where the sample container used was unsuitable or broken, the sample is flagged as deviating and re-sampling/re-submisson may be required.

RPS No.	Customer No.	Customer ID	Date Sampled	Containers Received	Deviating	Reason for Deviation
33847	23/09677/7		26/09/2023	250 mL amber glass jar	**Yes**	No sampling time provided.

Report No.: 23-06774-1

Type	Matrix Code	Description
Food	CEREALPROD	Cereals, grains & products
Food	DRIEDFRUIT	Dried fruits
Food	FRIEDBAKED	Fried or baked food
Food	LEGUME	Legumes
Food	MEAT	Meat
Food	POWDERED	Powdered food
Food	PULSE	Pulses (dried legumes)
Food	VEGETABLES	Vegetables
Gas	TDTUBE	TD Tube
Gas	TENAX	Tenax Tube
Gas	TUBE	Tube
Gas	VAPOUR	Gas
Geological	SED_MAR	Marine Sediment
Geological	SED_RIV	River Sediment
Geological	SLUDG_SOL	Sludge (solid only)
Geological	SOIL	Soil
Liquid	BEVERAGE	Beverage
Liquid	BLOOD	Blood
Liquid	CONDENSATE	Condensate
Liquid	FORMULATN	Formula
Liquid	LEACHATE	Leachate
Liquid	OIL/GREASE	Oil or grease
Liquid	SLUDG_LIQ	Sludge (liquid only)
Liquid	SOLVENT	Solvent
Liquid	URINE	Urine
Sludge	SLUDG_WHL	Sludge for bulk route
Solid	BADGE	Badge
Solid	BEDDING	Bedding
Solid	BIOTA	Biota (general)
Solid	BIOTA_F	Biota (fish)
Solid	BIOTA_SF	Biota (shellfish)
Solid	CONSTRCTN	Construction materials
Solid	FABRIC	Fabrics & furnishing materials
Solid	FEED	Animal feed
Solid	FERTILISER	Fertiliser
Solid	FILTER	Filter
Solid	FOAM	Solid foam material
Solid	PACKAGING	Packaging material
Solid	PLANT	Plant (vegetation)
Solid	POWDER	Powder
Solid	SWAB	Swab
Water	BAL	Ballast Water
Water	BIL	Bilge Water
Water	DW	Drinking Water
Water	EFFLUENT	Effluent
Water	GW	Ground Water
Water	INFLUENT	Influent
Water	SALTW	Salt Water
Water	SW	Surface Water
Water	TW	Tap Water
Water	W	Water

Report No.: 23-06774-1

Key Code	Description
N	Not Accredited Test
U	UKAS Accredited Test - UKAS accreditation is only implied if the report carries the UKAS logo
UF	UKAS Flexible Scope Test
M	MCERTS Accredited Test - MCERTS accreditation is only implied if the report carries the MCERTS logo
O	Marine Management Organisation (MMO) Validated
SN	Subcontracted to approved laboratory not accredited for the test
SU	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
SIN	Subcontracted to internal RPS Group laboratory not accredited for the test
SIU	Subcontracted to internal RPS Group laboratory UKAS Accredited for the test
SIM	Subcontracted to internal RPS Group laboratory MCERTS/UKAS Accredited for the test
I/S (in results)	Insufficient Sample
U/S (in results)	Unsuitable Sample
S/C (in results)	See Comments
ND (in results)	Not Detected
L (in results)	Result is outside normal limits
DW (in units)	Results are expressed on a dry weight basis

Sample Type	Sample Retention and Disposal Period
Foodstuff	1 month (if frozen) from the issue date of this report
Waters	2 weeks from the issue date of this report
Other Liquids	1 month from the issue date of this report
Solids / Soils	1 month from the issue date of this report
Sediments	1 month from the issue date of this report

Note: Sample retention may be subject to agreement with the customer for particular projects

Where the dry solids value of a sample is low (<50%), reporting limits are automatically raised for all determinants analysed on an as-received basis.

Soil Typing	Description
Type 1	Clay - Brown
Type 2	Clay - Grey/Black
Type 3	Sand
Type 4	Top Soil (Standard)
Type 5	Top Soil (High Peat)
Type 6	Made Ground (>50% Clay)
Type 7	Made Ground (>50% Sand)
Type 8	Made Ground (>50% Top Soil)
Type X	Other

Dev code	Description
D	No sampling date provided.
T	No sampling time provided.
Z	Temperature of samples exceeded in transit/storage.
V	Excessive headspace for volatile determinands.
P	Sample submitted without required preservative(s).
C	Incorrect container.
H	Holding time exceeded (sampling to extraction).
X	Holding time exceeded (sampling to receipt).

Note: Where the following information is included in this certificate, it has usually been supplied by the customer: Customer Sample ID, Sample Location, Sample Depth, Sampling Date and Sampling Time. The laboratory shall not be responsible for any information that is supplied by the customer that may affect the validity of results.

envirolab
Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 23/09760
Issue Number: 1 **Date:** 23 October, 2023

Client: Structural Soils Limited (Hemel Hempstead)
18 Frogmore Road
Hemel Hempstead
UK
HP3 9RT

Project Manager: [redacted]
Project Name: Sealink Friston
Project Ref: 563835
Order No: N/A
Date Samples Received: 03/10/23
Date Instructions Received: 03/10/23
Date Analysis Completed: 23/10/23

Approved by:

[redacted]
Client Manager

Envirolab Job Number: 23/09760

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09760/1	23/09760/4	23/09760/5	23/09760/7				Units	Limit of Detection	Method ref
Client Sample No	101	102	101	101						
Client Sample ID	F22-TP514	F22-TP515	F22-TP511	F22-TP203						
Depth to Top	0.20	0.50	0.20	0.20						
Depth To Bottom										
Date Sampled	28-Sep-23	28-Sep-23	28-Sep-23	28-Sep-23						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	4A	6AE	4AE	4AE						
% Moisture at 105C$_A$	21.4	31.5	22.6	20.1				% w/w	0.1	A-T-044
% Stones >10mm$_A$	<0.1	18.5	6.6	<0.1				% w/w	0.1	A-T-044
pH$_D^{M\#}$	7.86	8.08	7.55	7.88				pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D^{M\#}$	<0.01	<0.01	<0.01	<0.01				g/l	0.01	A-T-026s
Sulphur (total)$_D$	144	75	74	82				mg/kg	50	A-T-024s
Cyanide (free)$_A^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-042sFCN
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2	<0.2				mg/kg	0.2	A-T-050s
Organic Matter$_D^{M\#}$	1.9	0.7	0.8	0.8				% w/w	0.1	A-T-032s
Total Organic Carbon$_D^{M\#}$	1.11	0.39	0.49	0.49				% w/w	0.03	A-T-032s
Fraction of organic carbon$_D^{\#}$	0.0111	0.0039	0.0049	0.0049				N/A	0.0003	A-T-032s
Arsenic$_D^{M\#}$	5	6	8	5				mg/kg	1	A-T-024s
Barium$_D$	21	33	19	24				mg/kg	1	A-T-024s
Beryllium$_D$	<0.5	0.7	<0.5	<0.5				mg/kg	0.5	A-T-024s
Boron (water soluble)$_D^{M\#}$	<1.0	<1.0	<1.0	<1.0				mg/kg	1	A-T-027s
Cadmium$_D^{M\#}$	<0.5	1.0	0.6	0.6				mg/kg	0.5	A-T-024s
Copper$_D^{M\#}$	10	19	7	8				mg/kg	1	A-T-024s
Chromium$_D^{M\#}$	10	26	9	13				mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1	<1				mg/kg	1	A-T-040s
Chromium (trivalent)	10	26	9	13				mg/kg	1	Calc
Lead$_D^{M\#}$	22	11	17	12				mg/kg	1	A-T-024s
Manganese$_D^{M\#}$	213	456	315	435				mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17	<0.17				mg/kg	0.17	A-T-024s
Molybdenum$_D^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-024s
Nickel$_D^{M\#}$	8	27	9	11				mg/kg	1	A-T-024s
Selenium$_D^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-024s
Vanadium$_D^{M\#}$	17	33	17	20				mg/kg	1	A-T-024s
Zinc$_D^{M\#}$	33	48	28	33				mg/kg	5	A-T-024s
Leachate Prep BS EN 12457-1 (2:1) (1 no)$_A$	-	-	*	-						A-T-001
pH (leachable)$_A$	-	-	8.27	-				pH	0.01	A-T-031w
Ammoniacal nitrogen as N (leachable)$_A$	-	-	0.44	-				mg/l	0.05	A-T-033w
Chloride (leachable)$_A$	-	-	5.97	-				mg/l	1	A-T-026w
Fluoride (leachable)$_A$	-	-	0.66	-				mg/l	0.1	A-T-026w (F)
Sulphate (leachable)$_A$	-	-	<1.00	-				mg/l	1	A-T-026w

Envirolab Job Number: 23/09760 **Client Project Name: Sealink Friston**

Client Project Ref: 563835

Lab Sample ID	23/09760/1	23/09760/4	23/09760/5	23/09760/7				Units	Limit of Detection	Method ref
Client Sample No	101	102	101	101						
Client Sample ID	F22-TP514	F22-TP515	F22-TP511	F22-TP203						
Depth to Top	0.20	0.50	0.20	0.20						
Depth To Bottom										
Date Sampled	28-Sep-23	28-Sep-23	28-Sep-23	28-Sep-23						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	4A	6AE	4AE	4AE						
Cyanide (free) (leachable)$_A$	-	-	<0.005	-				mg/l	0.005	A-T-042wFCN
Cyanide (total) (leachable)$_A$	-	-	<0.005	-				mg/l	0.005	A-T-042wTCN
Cyanide (complex) (leachable)	-	-	<0.005	-				mg/l	0.005	Calc
Phenol (leachable)$_A$	-	-	<0.01	-				mg/l	0.01	A-T-050w
Cresols (leachable)$_A$	-	-	<0.01	-				mg/l	0.01	A-T-050w
Resorcinol (leachable)$_A$	-	-	<0.01	-				mg/l	0.01	A-T-050w
Catechol (leachable)$_A$	-	-	<0.01	-				mg/l	0.01	A-T-050w
Xylenols & Ethylphenols (leachable)$_A$	-	-	<0.01	-				mg/l	0.01	A-T-050w
Naphthols (leachable)$_A$	-	-	<0.01	-				mg/l	0.01	A-T-050w
Trimethylphenol (leachable)$_A$	-	-	<0.01	-				mg/l	0.01	A-T-050w
Phenols (total by HPLC) (leachable)$_A$	-	-	<0.01	-				mg/l	0.01	A-T-050w
Antimony (leachable)$_A$	-	-	<1	-				µg/l	1	A-T-025w
Arsenic (leachable)$_A$	-	-	12	-				µg/l	1	A-T-025w
Boron (leachable)$_A$	-	-	45	-				µg/l	10	A-T-025w
Barium (leachable)$_A$	-	-	147	-				µg/l	1	A-T-025w
Beryllium (leachable)$_A$	-	-	<1	-				µg/l	1	A-T-025w
Cadmium (leachable)$_A$	-	-	<1	-				µg/l	1	A-T-025w
Copper (leachable)$_A$	-	-	21	-				µg/l	4	A-T-025w
Chromium (leachable)$_A$	-	-	<1	-				µg/l	1	A-T-025w
Chromium (hexavalent) (leachable)$_A$	-	-	<0.10	-				mg/l	0.05	A-T-040w
Chromium (trivalent)	-	-	<0.10	-				mg/l	0.05	Calc
Iron (leachable)$_A$	-	-	445	-				µg/l	10	A-T-025w
Lead (leachable)$_A$	-	-	37	-				µg/l	1	A-T-025w
Manganese (leachable)$_A$	-	-	113	-				µg/l	1	A-T-025w
Magnesium (leachable)$_A$	-	-	<1	-				mg/l	1	A-T-049w
Mercury (leachable)$_A$	-	-	<0.1	-				µg/l	0.1	A-T-025w
Molybdenum (leachable)$_A$	-	-	2	-				µg/l	1	A-T-025w
Nickel (leachable)$_A$	-	-	4	-				µg/l	2	A-T-025w
Selenium (leachable)$_A$	-	-	<1	-				µg/l	1	A-T-025w
Vanadium (leachable)$_A$	-	-	6	-				µg/l	1	A-T-025w
Zinc (leachable)$_A$	-	-	33	-				µg/l	2	A-T-025w
Bentazone$_A$	-	-	<0.10	-				mg/kg	0.1	Subcon RPS MH
Cypermethrin$_A$	-	-	<0.10	-				mg/kg	0.1	Subcon RPS MH

Envirolab Job Number: 23/09760

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09760/1	23/09760/4	23/09760/5	23/09760/7				Units	Limit of Detection	Method ref
Client Sample No	101	102	101	101						
Client Sample ID	F22-TP514	F22-TP515	F22-TP511	F22-TP203						
Depth to Top	0.20	0.50	0.20	0.20						
Depth To Bottom										
Date Sampled	28-Sep-23	28-Sep-23	28-Sep-23	28-Sep-23						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	4A	6AE	4AE	4AE						
Linuron$_A$	-	-	<0.10	-				mg/kg	0.1	Subcon RPS MH
Alachlor$_A$	-	-	<0.02	-				mg/kg	0.02	Subcon RPS MH
Carbaryl$_A$	-	-	<0.10	-				mg/kg	0.1	Subcon RPS MH
Diuron$_A$	-	-	<0.10	-				mg/kg	0.1	Subcon RPS MH
Isoproturon$_A$	-	-	<0.10	-				mg/kg	0.1	Subcon RPS MH
MCPP; (Mecoprop)$_A$	-	-	<0.10	-				mg/kg	0.1	Subcon RPS MH
Calcium (leachable)$_A$	-	-	<1	-				mg/l	1	A-T-049w

Lab Sample ID	23/09760/1	23/09760/4	23/09760/5	23/09760/7				Units	Limit of Detection	Method ref
Client Sample No	101	102	101	101						
Client Sample ID	F22-TP514	F22-TP515	F22-TP511	F22-TP203						
Depth to Top	0.20	0.50	0.20	0.20						
Depth To Bottom										
Date Sampled	28-Sep-23	28-Sep-23	28-Sep-23	28-Sep-23						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	4A	6AE	4AE	4AE						
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD	NAD	NAD	NAD						A-T-045
Asbestos Matrix (visual)$_{D}$	-	-	-	-						A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-	-	-						A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A	N/A	N/A						A-T-045
OCP+OPP Combined Pest Suite (incl. Atrazine and Simazine)										
Dichlobenil$_{A}$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Tecnazene$_{A}$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Trifluralin$_{A}$	-	-	<0.01	-				mg/kg	0.01	A-T-056
alpha-Hexachlorocyclohexane (HCH)$_{A}$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Hexachlorobenzene (HCB) $_{A}$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Simazine$_{A}$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Atrazine$_{A}$	-	-	<0.01	-				mg/kg	0.01	A-T-056
beta-Hexachlorocyclohexane (HCH)$_{A}$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Quintozene (PCNB)$_{A}$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Chlorothalonil$_{A}$	-	-	<0.01	-				mg/kg	0.01	A-T-056
delta-Hexachlorocyclohexane (HCH)$_{A}$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Triallate$_{A}$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Heptachlor$_{A}$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Aldrin$_{A}$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Triadimefon$_{A}$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Telodrin$_{A}$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Isodrin$_{A}$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Pendimethalin$_{A}$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Heptachlor epoxide$_{A}$	-	-	<0.01	-				mg/kg	0.01	A-T-056
trans-Chlordane (Gamma)$_{A}$	-	-	<0.01	-				mg/kg	0.01	A-T-056
o,p-DDE (2,4)$_{A}$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Endosulphan I (Alpha)$_{A}$	-	-	<0.01	-				mg/kg	0.01	A-T-056
cis-Chlordane (Alpha)$_{A}$	-	-	<0.01	-				mg/kg	0.01	A-T-056
p,p-DDE (4,4)$_{A}$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Dieldrin$_{A}$	-	-	<0.01	-				mg/kg	0.01	A-T-056

Lab Sample ID	23/09760/1	23/09760/4	23/09760/5	23/09760/7				Units	Limit of Detection	Method ref
Client Sample No	101	102	101	101						
Client Sample ID	F22-TP514	F22-TP515	F22-TP511	F22-TP203						
Depth to Top	0.20	0.50	0.20	0.20						
Depth To Bottom										
Date Sampled	28-Sep-23	28-Sep-23	28-Sep-23	28-Sep-23						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	4A	6AE	4AE	4AE						
o,p-DDD (2,4)$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Endrin$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Endosulphan II (Beta)$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056
p,p-DDD (4,4)$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056
o,p-DDT (2,4)$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Endrin Aldehyde$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Endrin Ketone$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Endosulphan Sulphate$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056
p,p-DDT (4,4)$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056
o,p-Methoxychlor$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056
p,p-Methoxychlor$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Permethrin I (cis)$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Permethrin II (trans)$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Dichlorvos$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Mevinphos$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Demeton-S$_A$	-	-	<0.50	-				mg/kg	0.5	A-T-056
Demeton-O$_A$	-	-	<0.50	-				mg/kg	0.5	A-T-056
Phorate$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Dimethoate$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Propetamphos$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Diazinon (Dimpylate)$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Disulfoton$_A$	-	-	<0.10	-				mg/kg	0.1	A-T-056
Chlorpyrifos-methyl$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Parathion (Ethyl Parathion)$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Methyl Parathion$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Pirimiphos-methyl$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Fenitrothion$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Fensulphothion$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Fenthion$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Malathion$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Chlorfenvinphos$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Chlorpyrifos$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Trichloronate$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Prothiofos (Tokuthion)$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056

Envirolab Job Number: 23/09760 **Client Project Name: Sealink Friston**

Client Project Ref: 563835

Lab Sample ID	23/09760/1	23/09760/4	23/09760/5	23/09760/7				Units	Limit of Detection	Method ref
Client Sample No	101	102	101	101						
Client Sample ID	F22-TP514	F22-TP515	F22-TP511	F22-TP203						
Depth to Top	0.20	0.50	0.20	0.20						
Depth To Bottom										
Date Sampled	28-Sep-23	28-Sep-23	28-Sep-23	28-Sep-23						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	4A	6AE	4AE	4AE						
Ethion$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Triazophos$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Carbophenothion$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Phosalone$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Azinphos-methyl$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Azinphos-ethyl$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056
Coumaphos$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056
gamma-Hexachlorocyclohexane (HCH)$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-056

Envirolab Job Number: 23/09760

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09760/1	23/09760/4	23/09760/5	23/09760/7				Units	Limit of Detection	Method ref
Client Sample No	101	102	101	101						
Client Sample ID	F22-TP514	F22-TP515	F22-TP511	F22-TP203						
Depth to Top	0.20	0.50	0.20	0.20						
Depth To Bottom										
Date Sampled	28-Sep-23	28-Sep-23	28-Sep-23	28-Sep-23						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	4A	6AE	4AE	4AE						
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	<0.02	<0.02	<0.02				mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.22	<0.04	0.05	<0.04				mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.25	<0.04	0.06	<0.04				mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.37	<0.05	0.10	<0.05				mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.18	<0.05	<0.05	<0.05				mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	0.11	<0.07	<0.07	<0.07				mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.29	<0.06	<0.06	<0.06				mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A$	<0.04	<0.04	<0.04	<0.04				mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.42	<0.08	0.12	<0.08				mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.22	<0.03	0.06	<0.03				mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03	<0.03				mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.11^U	<0.03^U	0.05^U	<0.03^U				mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.38	<0.07	0.11	<0.07				mg/kg	0.07	A-T-019s
Total PAH-16MS$_A$	2.56	<0.08	0.55	<0.08				mg/kg	0.01	A-T-019s

Envirolab Job Number: 23/09760

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09760/1	23/09760/4	23/09760/5	23/09760/7				Units	Limit of Detection	Method ref
Client Sample No	101	102	101	101						
Client Sample ID	F22-TP514	F22-TP515	F22-TP511	F22-TP203						
Depth to Top	0.20	0.50	0.20	0.20						
Depth To Bottom										
Date Sampled	28-Sep-23	28-Sep-23	28-Sep-23	28-Sep-23						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	4A	6AE	4AE	4AE						
Speciated PCB-WHO12										
PCB BZ 81$_{A}^{M\#}$	-	-	<0.005^{U}	-				mg/kg	0.005	A-T-004s
PCB BZ 105$_{A}^{M\#}$	-	-	<0.005^{U}	-				mg/kg	0.005	A-T-004s
PCB BZ 114$_{A}^{M\#}$	-	-	<0.005^{U}	-				mg/kg	0.005	A-T-004s
PCB BZ 118$_{A}^{M\#}$	-	-	<0.007	-				mg/kg	0.007	A-T-004s
PCB BZ 123$_{A}^{M\#}$	-	-	<0.005^{U}	-				mg/kg	0.005	A-T-004s
PCB BZ 126$_{A}^{M\#}$	-	-	<0.005^{U}	-				mg/kg	0.005	A-T-004s
PCB BZ 156$_{A}^{M\#}$	-	-	<0.005^{U}	-				mg/kg	0.005	A-T-004s
PCB BZ 157$_{A}^{M\#}$	-	-	<0.005^{U}	-				mg/kg	0.005	A-T-004s
PCB BZ 167$_{A}^{M\#}$	-	-	<0.005^{U}	-				mg/kg	0.005	A-T-004s
PCB BZ 169$_{A}^{M\#}$	-	-	<0.005^{U}	-				mg/kg	0.005	A-T-004s
PCB BZ 189$_{A}^{M\#}$	-	-	<0.005^{U}	-				mg/kg	0.005	A-T-004s
PCB BZ 77$_{A}^{M\#}$	-	-	<0.005^{U}	-				mg/kg	0.005	A-T-004s
Total Speciated PCB-WHO12$_{A}^{M\#}$	-	-	<0.007	-				mg/kg	0.005	A-T-004s

Envirolab Job Number: 23/09760

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09760/1	23/09760/4	23/09760/5	23/09760/7				Units	Limit of Detection	Method ref
Client Sample No	101	102	101	101						
Client Sample ID	F22-TP514	F22-TP515	F22-TP511	F22-TP203						
Depth to Top	0.20	0.50	0.20	0.20						
Depth To Bottom										
Date Sampled	28-Sep-23	28-Sep-23	28-Sep-23	28-Sep-23						
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES						
Sample Matrix Code	4A	6AE	4AE	4AE						
TPH CWG with Clean Up										
Ali >C5-C6$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	-	-	<0.01	-				mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	-	-	<1	-				mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	-	-	<1	-				mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	-	-	<1	-				mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	-	-	<1	-				mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	-	-	2	-				mg/kg	1	A-T-055s
Total Aliphatics$_A$	-	-	2	-				mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	-	-	<0.01	-				mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	-	-	<0.01	-				mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	-	-	<1	-				mg/kg	1	A-T-055s
Aro >C10-C12$_A$	-	-	<1	-				mg/kg	1	A-T-055s
Aro >C12-C16$_A^{M\#}$	-	-	<1	-				mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	-	-	1	-				mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	-	-	4	-				mg/kg	1	A-T-055s
Total Aromatics$_A$	-	-	5	-				mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	-	-	7	-				mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	-	-	<0.01	-				mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	-	-	<0.01	-				mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	-	-	<0.01	-				mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	-	-	<0.01	-				mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	-	-	<0.01	-				mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	-	-	<0.01	-				mg/kg	0.01	A-T-022s

Report Notes

General
This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **six weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
Analytical results reflect the quality of the sample at the time of analysis only.
Opinions and Interpretations expressed are outside our scope of accreditation.
The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client.
A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

Key

Superscript "#"	Accredited to ISO 17025
Superscript "M"	Accredited to MCertS
Superscript "U"	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript "A"	Analysis performed on as-received Sample
Subscript "D"	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript "^"	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
N/A	Not applicable

Asbestos
Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis
Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing, and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25ºC / 11550µS/cm @ 20ºC fall outside the accreditation range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Structural Soils Limited (Hemel Hempstead), 18 Frogmore Road, Hemel Hempstead, UK, HP3 9RT

Project: Sealink Friston

Clients Project No: 563835

Project No: 23/09760

Date Received: 03/10/2023 (am)

Cool Box Temperatures (°C): 12.6-13.4

NO DEVIATIONS IDENTIFIED

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	23/09760/1	23/09760/4	23/09760/5	23/09760/7
Client Sample No	101	102	101	101
Client Sample ID/Depth	F22-TP514 0.20m	F22-TP515 0.50m	F22-TP511 0.20m	F22-TP203 0.20m
Date Sampled	28/09/23	28/09/23	28/09/23	28/09/23
A-T-004s	10/10/2023		10/10/2023	
A-T-007s	09/10/2023		12/10/2023	
A-T-019s	09/10/2023	09/10/2023	09/10/2023	09/10/2023
A-T-022s	11/10/2023		11/10/2023	
A-T-024s	09/10/2023	09/10/2023	09/10/2023	09/10/2023
A-T-025w	13/10/2023		13/10/2023	
A-T-026s	09/10/2023	09/10/2023	09/10/2023	09/10/2023
A-T-026w	13/10/2023		13/10/2023	
A-T-026w (F)	13/10/2023		13/10/2023	
A-T-027s	09/10/2023	09/10/2023	09/10/2023	09/10/2023
A-T-030s	09/10/2023		09/10/2023	
A-T-031s	09/10/2023	09/10/2023	09/10/2023	09/10/2023
A-T-031w	13/10/2023		13/10/2023	
A-T-032s	10/10/2023	10/10/2023	10/10/2023	10/10/2023
A-T-032w	13/10/2023		13/10/2023	
A-T-033w			11/10/2023	
A-T-037w	13/10/2023		13/10/2023	
A-T-040s	09/10/2023	09/10/2023	09/10/2023	09/10/2023
A-T-040w			10/10/2023	
A-T-042sFCN	16/10/2023	16/10/2023	16/10/2023	16/10/2023
A-T-042wFCN			16/10/2023	
A-T-042wTCN			16/10/2023	
A-T-044	11/10/2023	11/10/2023	11/10/2023	11/10/2023
A-T-045	04/10/2023	04/10/2023	04/10/2023	04/10/2023
A-T-049w			09/10/2023	
A-T-050s	09/10/2023	09/10/2023	09/10/2023	09/10/2023
A-T-050w	13/10/2023		13/10/2023	
A-T-055s			11/10/2023	
A-T-056			09/10/2023	
A-T-ANCs	09/10/2023		09/10/2023	
Calc	09/10/2023	09/10/2023	16/10/2023	09/10/2023
Calc-As Recd			11/10/2023	

Lab Sample ID	23/09760/1	23/09760/4	23/09760/5	23/09760/7
Client Sample No	101	102	101	101
Client Sample ID/Depth	F22-TP514 0.20m	F22-TP515 0.50m	F22-TP511 0.20m	F22-TP203 0.20m
Date Sampled	28/09/23	28/09/23	28/09/23	28/09/23
Calc-no stones	13/10/2023		13/10/2023	
Probe (w)	13/10/2023		13/10/2023	

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

envirolab
Units 7 & 8, Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

Final Test Report

Envirolab Job Number:	23/09760
Issue Number:	1
Date:	23-Oct-23

Client: Structural Soils Limited (Hemel Hempstead)
18 Frogmore Road
Hemel Hempstead
UK
HP3 9RT
NE38 8QJ

Project Manager:	[redacted]
Project Name:	Sealink Friston
Project Ref:	563835
Order No:	N/A
Date Samples Received:	3-Oct-23
Date Instructions Received:	3-Oct-23
Date Analysis Completed:	23-Oct-23

Notes - Soil analysis

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones >10mm are removed or excluded from the sample prior to analysis and reported results corrected to a whole sample basis.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis.

Notes - General

This report shall not be reproduced, except in full, without written approval from Envirolab.

Subscript "A" indicates analysis performed on the sample as received. "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve, unless asbestos is found to be present in which case all analysis is performed on the sample as received.

All analysis is performed on the dried and crushed sample for samples with Matrix Code 7 and this supercedes any "A" subscripts.

All analysis is performed on the sample as received for soil samples from outside the European Union and this supercedes any "D" subscripts

For complex, multi-compound analysis, quality control results do not always fall within chart limits for every compound and we have criteria for reporting in these situations.

If results are in italic font they are associated with such quality control failures and may be unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid

Predominant Matrix Codes: 1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample

Secondary Matrix Codes: A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal, E = contains roots/twigs.

IS indicates Insufficient sample for analysis, NDP indicates No Determination Possible and NAD indicates No Asbestos Detected.

Analytical results reflect the quality of the sample at the time of analysis only. Opinions and interpretations expressed are outside the scope of our accreditation.

Please contact us if you need any further information.

HWOL TPH Code: EH_CU_1D_AL: Extractable hydrocarbons - i.e. everything extracted by the solvent(s), Clean-up - e.g. by florisil, silica gel, GC - Single coil gas chromatography, Aliphatics only

Approved by:

[redacted]

Client Manager

envirolab

Landfill WAC analysis must not be used for hazardous waste classification purposes. This analysis is only applicable for landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Sample Details						Landfill Waste Acceptance Criteria Limits		
Lab Sample ID	Method	ISO17025	MCERTS	23/09760/1				
Client Sample Number				101		Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
Client Sample ID				F22-TP514				
Depth to Top				0.2				
Depth to Bottom								
Date Sampled				28/09/2023				
Sample Type				Soil - ES				
Sample Matrix Code				4A				
Solid Waste Analysis								
pH (pH Units)$_D$	A-T-031	N	N	**7.86**		-	>6	-
ANC to pH 4 (mol/kg)$_D$	A-T-ANC	N	N	**0.13**		-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg)$_D$	A-T-ANC	N	N	**0.03**		-	to be evaluated	to be evaluated
Loss on Ignition (%)$_D$	A-T-030	N	N	**2.8**		-	-	10
Total Organic Carbon (%)$_D$	A-T-032	N	N	**1.11**		3	5	6
PAH Sum of 17 (mg/kg) $_A$	A-T-019	N	N	**2.61**		100	-	-
Mineral Oil (mg/kg)$_{A\ EH_CU_1D_AL}$	A-T-007	N	N	**<10**		500	-	-
Sum of 7 PCBs (mg/kg)$_A$	A-T-004	N	N	**<0.007**		1	-	-
Sum of BTEX (mg/kg)$_A$	A-T-022	N	N	**<0.01**		6	-	-
Eluate Analysis				**10:1 mg/l**	**10:1 mg/kg**	**Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)**		
Arsenic	A-T-025	N	N	0.003	**0.030**	0.5	2	25
Barium	A-T-025	N	N	0.035	**0.350**	20	100	300
Cadmium	A-T-025	N	N	<0.001	**<0.01**	0.04	1	5
Chromium	A-T-025	N	N	<0.001	**<0.01**	0.5	10	70
Copper	A-T-025	N	N	0.008	**0.080**	2	50	100
Mercury	A-T-025	N	N	<0.0005	**<0.005**	0.01	0.2	2
Molybdenum	A-T-025	N	N	<0.001	**<0.01**	0.5	10	30
Nickel	A-T-025	N	N	<0.002	**<0.02**	0.4	10	40
Lead	A-T-025	N	N	0.015	**0.150**	0.5	10	50
Antimony	A-T-025	N	N	<0.001	**<0.01**	0.06	0.7	5
Selenium	A-T-025	N	N	<0.001	**<0.01**	0.1	0.5	7
Zinc	A-T-025	N	N	0.013	**0.130**	4	50	200
Chloride	A-T-026	N	N	4	**42**	800	15000	25000
Fluoride	A-T-026	N	N	0.6	**6.0**	10	150	500
Sulphate as SO_4	A-T-026	N	N	26	**258**	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	30	**300**	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	**<0.1**	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	<2.0	**<200**	500	800	1000
Leach Test Information								
pH (pH Units)	A-T-031	N	N	7.1				
Conductivity (µS/cm)	A-T-037	N	N	60				
Mass Sample (kg)				0.192				
Dry Matter (%)	A-T-044	N	N	91				

Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation

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Landfill WAC analysis must not be used for hazardous waste classification purposes. This analysis is only applicable for landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Sample Details						Landfill Waste Acceptance Criteria Limits		
Lab Sample ID	Method	ISO17025	MCERTS	23/09760/5				
Client Sample Number				101		Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
Client Sample ID				F22-TP511				
Depth to Top				0.2				
Depth to Bottom								
Date Sampled				28/09/2023				
Sample Type				Soil - ES				
Sample Matrix Code				4AE				
Solid Waste Analysis								
pH (pH Units)$_D$	A-T-031	N	N	**7.55**		-	>6	-
ANC to pH 4 (mol/kg)$_D$	A-T-ANC	N	N	**0.02**		-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg)$_D$	A-T-ANC	N	N	**<0.01**		-	to be evaluated	to be evaluated
Loss on Ignition (%)$_D$	A-T-030	N	N	**1.4**		-	-	10
Total Organic Carbon (%)$_D$	A-T-032	N	N	**0.49**		3	5	6
PAH Sum of 17 (mg/kg) $_A$	A-T-019	N	N	**0.54**		100	-	-
Mineral Oil (mg/kg)$_{A\ EH_CU_1D_AL}$	A-T-007	N	N	**<10**		500	-	-
Sum of 7 PCBs (mg/kg)$_A$	A-T-004	N	N	**<0.007**		1	-	-
Sum of BTEX (mg/kg)$_A$	A-T-022	N	N	**<0.01**		6	-	-
Eluate Analysis				**10:1 mg/l**	**10:1 mg/kg**	**Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)**		
Arsenic	A-T-025	N	N	0.007	**0.070**	0.5	2	25
Barium	A-T-025	N	N	0.062	**0.620**	20	100	300
Cadmium	A-T-025	N	N	<0.001	**<0.01**	0.04	1	5
Chromium	A-T-025	N	N	<0.001	**<0.01**	0.5	10	70
Copper	A-T-025	N	N	0.012	**0.120**	2	50	100
Mercury	A-T-025	N	N	<0.0005	**<0.005**	0.01	0.2	2
Molybdenum	A-T-025	N	N	<0.001	**<0.01**	0.5	10	30
Nickel	A-T-025	N	N	0.002	**0.020**	0.4	10	40
Lead	A-T-025	N	N	0.023	**0.230**	0.5	10	50
Antimony	A-T-025	N	N	<0.001	**<0.01**	0.06	0.7	5
Selenium	A-T-025	N	N	<0.001	**<0.01**	0.1	0.5	7
Zinc	A-T-025	N	N	0.022	**0.220**	4	50	200
Chloride	A-T-026	N	N	14	**144**	800	15000	25000
Fluoride	A-T-026	N	N	0.6	**6.0**	10	150	500
Sulphate as SO_4	A-T-026	N	N	41	**407**	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	<20	**<200**	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	**<0.1**	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	<2.0	**<200**	500	800	1000
Leach Test Information								
pH (pH Units)	A-T-031	N	N	7.0				
Conductivity (µS/cm)	A-T-037	N	N	22				
Mass Sample (kg)				0.193				
Dry Matter (%)	A-T-044	N	N	90.5				

Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation

Certificate of Analysis

Report No.: **23-06787-1**

Issue No.: **1**
Date of Issue **23/10/2023**

Customer Details:	Envirolab Ltd, 7 - 8 Sandpits Business Park, Mottram Road, Hyde, Greater Manchester, SK14 3AR, United Kingdom
Customer Contact:	[redacted]
Customer Order No.:	P0752490
Customer Reference:	Not Supplied
Quotation Reference:	Q22-00104 (Issue: 36)
Description:	1 geo sample
Date Received:	05/10/2023
Date Started:	06/10/2023
Date Completed:	20/10/2023
Test Methods:	Details available on request (refer to SOP code against relevant result/s)
Notes:	None

Approved By: [redacted] **Study Manager**

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service.
This certificate shall not be reproduced except in full without the prior written approval of the laboratory.
Observations and interpretations are outside of the scope of UKAS accreditation.
Results reported herein relate only to the items supplied to the laboratory for testing.
Results on an Interim Report are not dry-weight corrected.
Where the laboratory is not responsible for the sampling, results apply to the sample(s) as they were received.
The laboratory shall not be responsible for any information that is supplied by the customer that may affect the validity of results.

RPS Environmental Management Limited trading as RPS Mountainheath. Registered in England No. 01756175.
13 St Martins Way, Bedford, Bedfordshire, MK42 0LF. T +44 1462 480 400
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Results Summary

Report No.: 23-06787-1

Customer Reference: Not Supplied

Customer Order No: P0752490

Customer Sample No	**23/09760/5**
RPS Sample No	33909
Sample Type	**GEO**
Sample Matrix	SOIL
Sampling Date	28/09/2023

Determinand	CAS No	Codes	SOP	RL	Units	
carbaryl	63-25-2	N	L001	0.1	mg/kg DW	< 0.10 (T)
2,4,5-trichlorophenoxyacetic acid (2,4,5-T)	93-76-5	N	L340	0.1	mg/kg DW	< 0.10 (T)
2,4,5-TP (Fenoprop)	93-72-1	N	L340	0.1	mg/kg DW	< 0.10 (T)
2,4-dichlorophenoxyacetic acid (2,4-D)	94-75-7	N	L340	0.1	mg/kg DW	< 0.10 (T)
acifluorfen	50594-66-6	N	L340	0.1	mg/kg DW	< 0.10 (T)
bentazone	25057-89-0	N	L340	0.1	mg/kg DW	< 0.10 (T)
clopyralid	1702-17-6	N	L340	0.1	mg/kg DW	< 0.10 (T)
dichlorprop (2,4-DP)	120-36-5	N	L340	0.1	mg/kg DW	< 0.10 (T)
dinoseb (DNBP)	88-85-7	N	L340	0.1	mg/kg DW	< 0.10 (T)
2-methyl-4-chlorophenoxyacetic acid (MCPA)	94-74-6	N	L340	0.1	mg/kg DW	< 0.10 (T)
mecoprop (MCPP)	7085-19-0	N	L340	0.1	mg/kg DW	< 0.10 (T)
pentachlorophenol (PCP)	87-86-5	N	L340	0.1	mg/kg DW	< 0.10 (T)
2,3,6-trichlorobenzoic acid (2,3,6-TBA)	50-31-7	N	L340	0.1	mg/kg DW	< 0.10 (T)
4-(2,4-dichlorophenoxy)butanoic acid (2,4-DB)	94-82-6	N	L340	0.1	mg/kg DW	< 0.10 (T)
4-chlorophenoxyacetic acid (4-CPA)	122-88-3	N	L340	0.1	mg/kg DW	< 0.10 (T)
benazolin	3813-05-6	N	L340	0.1	mg/kg DW	< 0.10 (T)
bromoxynil	1689-84-5	N	L340	0.1	mg/kg DW	< 0.10 (T)
dicamba	1918-00-9	N	L340	0.1	mg/kg DW	< 0.10 (T)
diclofop	40843-25-2	N	L340	0.1	mg/kg DW	< 0.10 (T)
2-methyl-4,6-dinitrophenol (DNOC)	534-52-1	N	L340	0.1	mg/kg DW	< 0.10 (T)
flamprop	58667-63-3	N	L340	0.1	mg/kg DW	< 0.10 (T)
fluroxypyr	69377-81-7	N	L340	0.1	mg/kg DW	< 0.10 (T)
ioxynil	1689-83-4	N	L340	0.1	mg/kg DW	< 0.10 (T)
MCPB	94-81-5	N	L340	0.1	mg/kg DW	< 0.10 (T)
picloram	1918-02-1	N	L340	0.1	mg/kg DW	< 0.10 (T)
triclopyr	55335-06-3	N	L340	0.1	mg/kg DW	< 0.10 (T)
alachlor	15972-60-8	N	G029	0.02	mg/kg AR	< 0.02 (T)
chloroxuron	1982-47-4	N	L025	0.1	mg/kg DW	< 0.10 (T)
chlortoluron	15545-48-9	N	L025	0.1	mg/kg DW	< 0.10 (T)
diflubenzuron	35367-38-5	N	L025	0.1	mg/kg DW	< 0.10 (T)
dimefuron	34205-21-5	N	L025	0.1	mg/kg DW	< 0.10 (T)
diuron	330-54-1	N	L025	0.1	mg/kg DW	< 0.10 (T)
isoproturon	34123-59-6	N	L025	0.1	mg/kg DW	< 0.10 (T)
linuron	330-55-2	N	L025	0.1	mg/kg DW	< 0.10 (T)
methabenzthiazuron	18691-97-9	N	L025	0.1	mg/kg DW	< 0.10 (T)
metoxuron	19937-59-8	N	L025	0.1	mg/kg DW	< 0.10 (T)
monolinuron	1746-81-2	N	L025	0.1	mg/kg DW	< 0.10 (T)

Results Summary

Report No.: 23-06787-1

Customer Reference: Not Supplied

Customer Order No: P0752490

Customer Sample No	**23/09760/5**
RPS Sample No	33909
Sample Type	**GEO**
Sample Matrix	SOIL
Sampling Date	28/09/2023

Determinand	CAS No	Codes	SOP	RL	Units	
monuron	150-68-5	N	L025	0.1	mg/kg DW	< 0.10 (T)
pencycuron	66063-05-6	N	L025	0.1	mg/kg DW	< 0.10 (T)
bifenthrin	82657-04-3	N	G127	0.1	mg/kg DW	< 0.10 (T)
cyfluthrin, total	68359-37-5	N	G127	0.1	mg/kg DW	< 0.10 (T)
cyhalothrin, total	68085-85-8	N	G127	0.1	mg/kg DW	< 0.10 (T)
cypermethrin, total	52315-07-8	N	G127	0.1	mg/kg DW	< 0.10 (T)
deltamethrin	52918-63-5	N	G127	0.1	mg/kg DW	< 0.10 (T)
fenvalerate	51630-58-1	N	G127	0.1	mg/kg DW	< 0.10 (T)
permethrin, total	52645-53-1	N	G127	0.1	mg/kg DW	< 0.10 (T)
resmethrin	10453-86-8	N	G127	0.1	mg/kg DW	< 0.10 (T)
tetramethrin	7696-12-0	N	G127	0.1	mg/kg DW	< 0.10 (T)

Deviating Samples

Report No.: 23-06787-1

Customer Reference: Not Supplied

Customer Order No: P0752490

Our policy on Deviating Samples has been implemented in accordance with UKAS Policy on Deviating Samples (TPS63).
RPS is not responsible for the integrity of samples as received, unless RPS personnel performed the sampling. Samples submitted may be declared to be deviating.
Where applicable the analysis method remains UKAS accredited, however results reported for a deviating sample may be compromised.
Where no sampling date was supplied, samples have been declared to be deviating. If the date can be supplied, results may be reissued if assessed not deviating.
Where the sample container used was unsuitable or broken, the sample is flagged as deviating and re-sampling/re-submisson may be required.

RPS No.	Customer No.	Customer ID	Date Sampled	Containers Received	Deviating	Reason for Deviation
33909	23/09760/5		28/09/2023	100 mL amber glass jar	**Yes**	No sampling time provided.

Report No.: 23-06787-1

Type	Matrix Code	Description
Food	CEREALPROD	Cereals, grains & products
Food	DRIEDFRUIT	Dried fruits
Food	FRIEDBAKED	Fried or baked food
Food	LEGUME	Legumes
Food	MEAT	Meat
Food	POWDERED	Powdered food
Food	PULSE	Pulses (dried legumes)
Food	VEGETABLES	Vegetables
Gas	TDTUBE	TD Tube
Gas	TENAX	Tenax Tube
Gas	TUBE	Tube
Gas	VAPOUR	Gas
Geological	SED_MAR	Marine Sediment
Geological	SED_RIV	River Sediment
Geological	SLUDG_SOL	Sludge (solid only)
Geological	SOIL	Soil
Liquid	BEVERAGE	Beverage
Liquid	BLOOD	Blood
Liquid	CONDENSATE	Condensate
Liquid	FORMULATN	Formula
Liquid	LEACHATE	Leachate
Liquid	OIL/GREASE	Oil or grease
Liquid	SLUDG_LIQ	Sludge (liquid only)
Liquid	SOLVENT	Solvent
Liquid	URINE	Urine
Sludge	SLUDG_WHL	Sludge for bulk route
Solid	BADGE	Badge
Solid	BEDDING	Bedding
Solid	BIOTA	Biota (general)
Solid	BIOTA_F	Biota (fish)
Solid	BIOTA_SF	Biota (shellfish)
Solid	CONSTRCTN	Construction materials
Solid	FABRIC	Fabrics & furnishing materials
Solid	FEED	Animal feed
Solid	FERTILISER	Fertiliser
Solid	FILTER	Filter
Solid	FOAM	Solid foam material
Solid	PACKAGING	Packaging material
Solid	PLANT	Plant (vegetation)
Solid	POWDER	Powder
Solid	SWAB	Swab
Water	BAL	Ballast Water
Water	BIL	Bilge Water
Water	DW	Drinking Water
Water	EFFLUENT	Effluent
Water	GW	Ground Water
Water	INFLUENT	Influent
Water	SALTW	Salt Water
Water	SW	Surface Water
Water	TW	Tap Water
Water	W	Water

Report No.: 23-06787-1

Key Code	Description
N	Not Accredited Test
U	UKAS Accredited Test - UKAS accreditation is only implied if the report carries the UKAS logo
UF	UKAS Flexible Scope Test
M	MCERTS Accredited Test - MCERTS accreditation is only implied if the report carries the MCERTS logo
O	Marine Management Organisation (MMO) Validated
SN	Subcontracted to approved laboratory not accredited for the test
SU	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
SIN	Subcontracted to internal RPS Group laboratory not accredited for the test
SIU	Subcontracted to internal RPS Group laboratory UKAS Accredited for the test
SIM	Subcontracted to internal RPS Group laboratory MCERTS/UKAS Accredited for the test
I/S (in results)	Insufficient Sample
U/S (in results)	Unsuitable Sample
S/C (in results)	See Comments
ND (in results)	Not Detected
L (in results)	Result is outside normal limits
DW (in units)	Results are expressed on a dry weight basis

Sample Type	Sample Retention and Disposal Period
Foodstuff	1 month (if frozen) from the issue date of this report
Waters	2 weeks from the issue date of this report
Other Liquids	1 month from the issue date of this report
Solids / Soils	1 month from the issue date of this report
Sediments	1 month from the issue date of this report

Note: Sample retention may be subject to agreement with the customer for particular projects

Where the dry solids value of a sample is low (<50%), reporting limits are automatically raised for all determinants analysed on an as-received basis.

Soil Typing	Description
Type 1	Clay - Brown
Type 2	Clay - Grey/Black
Type 3	Sand
Type 4	Top Soil (Standard)
Type 5	Top Soil (High Peat)
Type 6	Made Ground (>50% Clay)
Type 7	Made Ground (>50% Sand)
Type 8	Made Ground (>50% Top Soil)
Type X	Other

Dev code	Description
D	No sampling date provided.
T	No sampling time provided.
Z	Temperature of samples exceeded in transit/storage.
V	Excessive headspace for volatile determinands.
P	Sample submitted without required preservative(s).
C	Incorrect container.
H	Holding time exceeded (sampling to extraction).
X	Holding time exceeded (sampling to receipt).

Note: Where the following information is included in this certificate, it has usually been supplied by the customer: Customer Sample ID, Sample Location, Sample Depth, Sampling Date and Sampling Time. The laboratory shall not be responsible for any information that is supplied by the customer that may affect the validity of results.

envirolab
Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 23/09763
Issue Number: 1 **Date:** 23 October, 2023

Client: Structural Soils Limited (Hemel Hempstead)
18 Frogmore Road
Hemel Hempstead
UK
HP3 9RT

Project Manager: [redacted]
Project Name: Sealink Friston
Project Ref: 563835
Order No: N/A
Date Samples Received: 03/10/23
Date Instructions Received: 03/10/23
Date Analysis Completed: 23/10/23

Approved by:

[redacted]
Client Manager

Envirolab Job Number: 23/09763

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09763/4	23/09763/5						Units	Limit of Detection	Method ref
Client Sample No	104	101								
Client Sample ID	F22-BH308	F22-TP513								
Depth to Top	1.00	0.20								
Depth To Bottom										
Date Sampled	29-Sep-23	29-Sep-23								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	5A	4AE								
% Moisture at 105C$_A$	34.7	19.4						% w/w	0.1	A-T-044
% Stones >10mm$_A$	4.7	<0.1						% w/w	0.1	A-T-044
pH$_D^{M\#}$	8.43	6.66						pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D^{M\#}$	0.08	<0.01						g/l	0.01	A-T-026s
Sulphur (total)$_D$	200	<50						mg/kg	50	A-T-024s
Cyanide (free)$_A^{M\#}$	<1	<1						mg/kg	1	A-T-042sFCN
Phenols - Total by HPLC$_A$	<0.2	<0.2						mg/kg	0.2	A-T-050s
Organic Matter$_D^{M\#}$	0.5	0.6						% w/w	0.1	A-T-032s
Total Organic Carbon$_D^{M\#}$	0.27	0.37						% w/w	0.03	A-T-032s
Fraction of organic carbon$_D^{\#}$	0.0027	0.0037						N/A	0.0003	A-T-032s
Arsenic$_D^{M\#}$	4	5						mg/kg	1	A-T-024s
Barium$_D$	34	10						mg/kg	1	A-T-024s
Beryllium$_D$	0.8	<0.5						mg/kg	0.5	A-T-024s
Boron (water soluble)$_D^{M\#}$	<1.0	<1.0						mg/kg	1	A-T-027s
Cadmium$_D^{M\#}$	0.6	<0.5						mg/kg	0.5	A-T-024s
Copper$_D^{M\#}$	12	6						mg/kg	1	A-T-024s
Chromium$_D^{M\#}$	25	5						mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1						mg/kg	1	A-T-040s
Chromium (trivalent)	25	5						mg/kg	1	Calc
Lead$_D^{M\#}$	7	16						mg/kg	1	A-T-024s
Manganese$_D^{M\#}$	174	180						mg/kg	1	A-T-024s
Mercury$_D$	1.22	<0.17						mg/kg	0.17	A-T-024s
Molybdenum$_D^{M\#}$	<1	<1						mg/kg	1	A-T-024s
Nickel$_D^{M\#}$	20	5						mg/kg	1	A-T-024s
Selenium$_D^{M\#}$	<1	<1						mg/kg	1	A-T-024s
Vanadium$_D^{M\#}$	34	11						mg/kg	1	A-T-024s
Zinc$_D^{M\#}$	34	25						mg/kg	5	A-T-024s
Leachate Prep BS EN 12457-1 (2:1) (1 no)$_A$	*	-								A-T-001
pH (leachable)$_A$	7.81	-						pH	0.01	A-T-031w
Ammoniacal nitrogen as N (leachable)$_A$	<0.05	-						mg/l	0.05	A-T-033w
Chloride (leachable)$_A$	5.80	-						mg/l	1	A-T-026w
Fluoride (leachable)$_A$	1.35	-						mg/l	0.1	A-T-026w (F)
Sulphate (leachable)$_A$	63.36	-						mg/l	1	A-T-026w

Lab Sample ID	23/09763/4	23/09763/5						Units	Limit of Detection	Method ref
Client Sample No	104	101								
Client Sample ID	F22-BH308	F22-TP513								
Depth to Top	1.00	0.20								
Depth To Bottom										
Date Sampled	29-Sep-23	29-Sep-23								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	5A	4AE								
Cyanide (free) (leachable)$_A$	<0.005	-						mg/l	0.005	A-T-042wFCN
Cyanide (total) (leachable)$_A$	<0.005	-						mg/l	0.005	A-T-042wTCN
Cyanide (complex) (leachable)	<0.005	-						mg/l	0.005	Calc
Phenol (leachable)$_A$	<0.01	-						mg/l	0.01	A-T-050w
Cresols (leachable)$_A$	<0.01	-						mg/l	0.01	A-T-050w
Resorcinol (leachable)$_A$	<0.01	-						mg/l	0.01	A-T-050w
Catechol (leachable)$_A$	<0.01	-						mg/l	0.01	A-T-050w
Xylenols & Ethylphenols (leachable)$_A$	<0.01	-						mg/l	0.01	A-T-050w
Naphthols (leachable)$_A$	<0.01	-						mg/l	0.01	A-T-050w
Trimethylphenol (leachable)$_A$	<0.01	-						mg/l	0.01	A-T-050w
Phenols (total by HPLC) (leachable)$_A$	<0.01	-						mg/l	0.01	A-T-050w
Antimony (leachable)$_A$	<1	-						µg/l	1	A-T-025w
Arsenic (leachable)$_A$	2	-						µg/l	1	A-T-025w
Boron (leachable)$_A$	18	-						µg/l	10	A-T-025w
Barium (leachable)$_A$	6	-						µg/l	1	A-T-025w
Beryllium (leachable)$_A$	<1	-						µg/l	1	A-T-025w
Cadmium (leachable)$_A$	<1	-						µg/l	1	A-T-025w
Copper (leachable)$_A$	<4	-						µg/l	4	A-T-025w
Chromium (leachable)$_A$	6	-						µg/l	1	A-T-025w
Chromium (hexavalent) (leachable)$_A$	<0.05	-						mg/l	0.05	A-T-040w
Chromium (trivalent)	<0.05	-						mg/l	0.05	Calc
Iron (leachable)$_A$	408	-						µg/l	10	A-T-025w
Lead (leachable)$_A$	<1	-						µg/l	1	A-T-025w
Manganese (leachable)$_A$	<1	-						µg/l	1	A-T-025w
Magnesium (leachable)$_A$	2	-						mg/l	1	A-T-049w
Mercury (leachable)$_A$	<0.1	-						µg/l	0.1	A-T-025w
Molybdenum (leachable)$_A$	<1	-						µg/l	1	A-T-025w
Nickel (leachable)$_A$	9	-						µg/l	2	A-T-025w
Selenium (leachable)$_A$	<1	-						µg/l	1	A-T-025w
Vanadium (leachable)$_A$	7	-						µg/l	1	A-T-025w
Zinc (leachable)$_A$	5	-						µg/l	2	A-T-025w
Bentazone$_A$	<0.10	-						mg/kg	0.1	Subcon RPS MH
Cypermethrin$_A$	<0.1	-						mg/kg	0.1	Subcon RPS MH

Envirolab Job Number: 23/09763

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09763/4	23/09763/5						Units	Limit of Detection	Method ref
Client Sample No	104	101								
Client Sample ID	F22-BH308	F22-TP513								
Depth to Top	1.00	0.20								
Depth To Bottom										
Date Sampled	29-Sep-23	29-Sep-23								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	5A	4AE								
Linuron$_A$	<0.1	-						mg/kg	0.1	Subcon RPS MH
Alachlor$_A$	<0.02	-						mg/kg	0.02	Subcon RPS MH
Carbaryl$_A$	<0.10	-						mg/kg	0.1	Subcon RPS MH
Diuron$_A$	<0.1	-						mg/kg	0.1	Subcon RPS MH
Isoproturon$_A$	<0.1	-						mg/kg	0.1	Subcon RPS MH
MCPP; (Mecoprop)$_A$	<0.10	-						mg/kg	0.1	Subcon RPS MH
Calcium (leachable)$_A$	32	-						mg/l	1	A-T-049w

Lab Sample ID	23/09763/4	23/09763/5						Units	Limit of Detection	Method ref
Client Sample No	104	101								
Client Sample ID	F22-BH308	F22-TP513								
Depth to Top	1.00	0.20								
Depth To Bottom										
Date Sampled	29-Sep-23	29-Sep-23								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	5A	4AE								
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_D^{\#}$	NAD	NAD								A-T-045
Asbestos Matrix (visual)$_D$	-	-								A-T-045
Asbestos Matrix (microscope)$_D$	-	-								A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_D$	N/A	N/A								A-T-045
OCP+OPP Combined Pest Suite (incl. Atrazine and Simazine)										
Dichlobenil$_A$	<0.01	-						mg/kg	0.01	A-T-056
Tecnazene$_A$	<0.01	-						mg/kg	0.01	A-T-056
Trifluralin$_A$	<0.01	-						mg/kg	0.01	A-T-056
alpha-Hexachlorocyclohexane (HCH)$_A$	<0.01	-						mg/kg	0.01	A-T-056
Hexachlorobenzene (HCB) $_A$	<0.01	-						mg/kg	0.01	A-T-056
Simazine$_A$	<0.01	-						mg/kg	0.01	A-T-056
Atrazine$_A$	<0.01	-						mg/kg	0.01	A-T-056
beta-Hexachlorocyclohexane (HCH)$_A$	<0.01	-						mg/kg	0.01	A-T-056
Quintozene (PCNB)$_A$	<0.01	-						mg/kg	0.01	A-T-056
Chlorothalonil$_A$	<0.01	-						mg/kg	0.01	A-T-056
delta-Hexachlorocyclohexane (HCH)$_A$	<0.01	-						mg/kg	0.01	A-T-056
Triallate$_A$	<0.01	-						mg/kg	0.01	A-T-056
Heptachlor$_A$	<0.01	-						mg/kg	0.01	A-T-056
Aldrin$_A$	<0.01	-						mg/kg	0.01	A-T-056
Triadimefon$_A$	<0.01	-						mg/kg	0.01	A-T-056
Telodrin$_A$	<0.01	-						mg/kg	0.01	A-T-056
Isodrin$_A$	<0.01	-						mg/kg	0.01	A-T-056
Pendimethalin$_A$	<0.01	-						mg/kg	0.01	A-T-056
Heptachlor epoxide$_A$	<0.01	-						mg/kg	0.01	A-T-056
trans-Chlordane (Gamma)$_A$	<0.01	-						mg/kg	0.01	A-T-056
o,p-DDE (2,4)$_A$	<0.01	-						mg/kg	0.01	A-T-056
Endosulphan I (Alpha)$_A$	<0.01	-						mg/kg	0.01	A-T-056
cis-Chlordane (Alpha)$_A$	<0.01	-						mg/kg	0.01	A-T-056
p,p-DDE (4,4)$_A$	<0.01	-						mg/kg	0.01	A-T-056
Dieldrin$_A$	<0.01	-						mg/kg	0.01	A-T-056

Lab Sample ID	23/09763/4	23/09763/5						Units	Limit of Detection	Method ref
Client Sample No	104	101								
Client Sample ID	F22-BH308	F22-TP513								
Depth to Top	1.00	0.20								
Depth To Bottom										
Date Sampled	29-Sep-23	29-Sep-23								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	5A	4AE								
o,p-DDD (2,4)$_A$	<0.01	-						mg/kg	0.01	A-T-056
Endrin$_A$	<0.01	-						mg/kg	0.01	A-T-056
Endosulphan II (Beta)$_A$	<0.01	-						mg/kg	0.01	A-T-056
p,p-DDD (4,4)$_A$	<0.01	-						mg/kg	0.01	A-T-056
o,p-DDT (2,4)$_A$	<0.01	-						mg/kg	0.01	A-T-056
Endrin Aldehyde$_A$	<0.01	-						mg/kg	0.01	A-T-056
Endrin Ketone$_A$	<0.01	-						mg/kg	0.01	A-T-056
Endosulphan Sulphate$_A$	<0.01	-						mg/kg	0.01	A-T-056
p,p-DDT (4,4)$_A$	<0.01	-						mg/kg	0.01	A-T-056
o,p-Methoxychlor$_A$	<0.01	-						mg/kg	0.01	A-T-056
p,p-Methoxychlor$_A$	<0.01	-						mg/kg	0.01	A-T-056
Permethrin I (cis)$_A$	<0.01	-						mg/kg	0.01	A-T-056
Permethrin II (trans)$_A$	<0.01	-						mg/kg	0.01	A-T-056
Dichlorvos$_A$	<0.01	-						mg/kg	0.01	A-T-056
Mevinphos$_A$	<0.01	-						mg/kg	0.01	A-T-056
Demeton-S$_A$	<0.50	-						mg/kg	0.5	A-T-056
Demeton-O$_A$	<0.50	-						mg/kg	0.5	A-T-056
Phorate$_A$	<0.01	-						mg/kg	0.01	A-T-056
Dimethoate$_A$	<0.01	-						mg/kg	0.01	A-T-056
Propetamphos$_A$	<0.01	-						mg/kg	0.01	A-T-056
Diazinon (Dimpylate)$_A$	<0.01	-						mg/kg	0.01	A-T-056
Disulfoton$_A$	<0.10	-						mg/kg	0.1	A-T-056
Chlorpyrifos-methyl$_A$	<0.01	-						mg/kg	0.01	A-T-056
Parathion (Ethyl Parathion)$_A$	<0.01	-						mg/kg	0.01	A-T-056
Methyl Parathion$_A$	<0.01	-						mg/kg	0.01	A-T-056
Pirimiphos-methyl$_A$	<0.01	-						mg/kg	0.01	A-T-056
Fenitrothion$_A$	<0.01	-						mg/kg	0.01	A-T-056
Fensulphothion$_A$	<0.01	-						mg/kg	0.01	A-T-056
Fenthion$_A$	<0.01	-						mg/kg	0.01	A-T-056
Malathion$_A$	<0.01	-						mg/kg	0.01	A-T-056
Chlorfenvinphos$_A$	<0.01	-						mg/kg	0.01	A-T-056
Chlorpyrifos$_A$	<0.01	-						mg/kg	0.01	A-T-056
Trichloronate$_A$	<0.01	-						mg/kg	0.01	A-T-056
Prothiofos (Tokuthion)$_A$	<0.01	-						mg/kg	0.01	A-T-056

Envirolab Job Number: 23/09763

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09763/4	23/09763/5						Units	Limit of Detection	Method ref
Client Sample No	104	101								
Client Sample ID	F22-BH308	F22-TP513								
Depth to Top	1.00	0.20								
Depth To Bottom										
Date Sampled	29-Sep-23	29-Sep-23								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	5A	4AE								
Ethion$_A$	<0.01	-						mg/kg	0.01	A-T-056
Triazophos$_A$	<0.01	-						mg/kg	0.01	A-T-056
Carbophenothion$_A$	<0.01	-						mg/kg	0.01	A-T-056
Phosalone$_A$	<0.01	-						mg/kg	0.01	A-T-056
Azinphos-methyl$_A$	<0.01	-						mg/kg	0.01	A-T-056
Azinphos-ethyl$_A$	<0.01	-						mg/kg	0.01	A-T-056
Coumaphos$_A$	<0.01	-						mg/kg	0.01	A-T-056
gamma-Hexachlorocyclohexane (HCH)$_A$	<0.01	-						mg/kg	0.01	A-T-056

Envirolab Job Number: 23/09763

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09763/4	23/09763/5						Units	Limit of Detection	Method ref
Client Sample No	104	101								
Client Sample ID	F22-BH308	F22-TP513								
Depth to Top	1.00	0.20								
Depth To Bottom										
Date Sampled	29-Sep-23	29-Sep-23								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	5A	4AE								
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01	<0.01						mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01						mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	<0.02						mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	<0.04	0.09						mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	<0.04	0.10						mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	<0.05	0.15						mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	0.07						mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07						mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	<0.06	0.12						mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A$	<0.04	<0.04						mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	<0.08	0.21						mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	<0.01						mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	<0.03	0.09						mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03						mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	<0.03^U	0.10^U						mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	<0.07	0.19						mg/kg	0.07	A-T-019s
Total PAH-16MS$_A$	<0.08	1.12						mg/kg	0.01	A-T-019s

Report Notes

General
This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **six weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
Analytical results reflect the quality of the sample at the time of analysis only.
Opinions and Interpretations expressed are outside our scope of accreditation.
The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client.
A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

Key

Superscript "#"	Accredited to ISO 17025
Superscript "M"	Accredited to MCertS
Superscript "U"	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript "A"	Analysis performed on as-received Sample
Subscript "D"	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript "^"	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
N/A	Not applicable

Asbestos
Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis
Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing, and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25ºC / 11550µS/cm @ 20ºC fall outside the accreditation range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Structural Soils Limited (Hemel Hempstead), 18 Frogmore Road, Hemel Hempstead, UK, HP3 9RT

Project: Sealink Friston

Clients Project No: 563835

Project No: 23/09763

Date Received: 03/10/2023 (am)

Cool Box Temperatures (°C): 12.6,13.1

NO DEVIATIONS IDENTIFIED

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	23/09763/4	23/09763/5
Client Sample No	104	101
Client Sample ID/Depth	F22-BH308 1.00m	F22-TP513 0.20m
Date Sampled	29/09/23	29/09/23
A-T-004s	10/10/2023	
A-T-007s	09/10/2023	
A-T-019s	09/10/2023	09/10/2023
A-T-022s	10/10/2023	
A-T-024s	09/10/2023	09/10/2023
A-T-025w	20/10/2023	
A-T-026s	09/10/2023	09/10/2023
A-T-026w	13/10/2023	
A-T-026w (F)	13/10/2023	
A-T-027s	09/10/2023	09/10/2023
A-T-030s	09/10/2023	
A-T-031s	09/10/2023	09/10/2023
A-T-031w	13/10/2023	
A-T-032s	10/10/2023	10/10/2023
A-T-032w	13/10/2023	
A-T-033w	11/10/2023	
A-T-037w	13/10/2023	
A-T-040s	09/10/2023	09/10/2023
A-T-040w	10/10/2023	
A-T-042sFCN	16/10/2023	16/10/2023
A-T-042wFCN	19/10/2023	
A-T-042wTCN	19/10/2023	
A-T-044	11/10/2023	11/10/2023
A-T-045	04/10/2023	04/10/2023
A-T-049w	10/10/2023	
A-T-050s	09/10/2023	09/10/2023
A-T-050w	13/10/2023	
A-T-056	09/10/2023	
A-T-ANCs	09/10/2023	
Calc	19/10/2023	09/10/2023
Calc-no stones	13/10/2023	
Probe (w)	13/10/2023	

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

envirolab
Units 7 & 8, Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

Final Test Report

Envirolab Job Number:	23/09763
Issue Number:	1
Date:	23-Oct-23

Client: Structural Soils Limited (Hemel Hempstead)
18 Frogmore Road
Hemel Hempstead
UK
HP3 9RT
NE38 8QJ

Project Manager:	[redacted]
Project Name:	Sealink Friston
Project Ref:	563835
Order No:	N/A
Date Samples Received:	3-Oct-23
Date Instructions Received:	3-Oct-23
Date Analysis Completed:	23-Oct-23

Notes - Soil analysis

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones >10mm are removed or excluded from the sample prior to analysis and reported results corrected to a whole sample basis.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis.

Notes - General

This report shall not be reproduced, except in full, without written approval from Envirolab.

Subscript "A" indicates analysis performed on the sample as received. "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve, unless asbestos is found to be present in which case all analysis is performed on the sample as received.

All analysis is performed on the dried and crushed sample for samples with Matrix Code 7 and this supercedes any "A" subscripts.

All analysis is performed on the sample as received for soil samples from outside the European Union and this supercedes any "D" subscripts

For complex, multi-compound analysis, quality control results do not always fall within chart limits for every compound and we have criteria for reporting in these situations.

If results are in italic font they are associated with such quality control failures and may be unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid

Predominant Matrix Codes: 1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample

Secondary Matrix Codes: A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal, E = contains roots/twigs.

IS indicates Insufficient sample for analysis, NDP indicates No Determination Possible and NAD indicates No Asbestos Detected.

Analytical results reflect the quality of the sample at the time of analysis only. Opinions and interpretations expressed are outside the scope of our accreditation.

Please contact us if you need any further information.

HWOL TPH Code: EH_CU_1D_AL: Extractable hydrocarbons - i.e. everything extracted by the solvent(s), Clean-up - e.g. by florisil, silica gel, GC - Single coil gas chromatography, Aliphatics only

Approved by:

[redacted]

Client Manager

envirolab

Landfill WAC analysis must not be used for hazardous waste classification purposes. This analysis is only applicable for landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Sample Details						Landfill Waste Acceptance Criteria Limits		
Lab Sample ID	Method	ISO17025	MCERTS	23/09763/4				
Client Sample Number				104		Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
Client Sample ID				F22-BH308				
Depth to Top				1				
Depth to Bottom								
Date Sampled				29/09/2023				
Sample Type				Soil - ES				
Sample Matrix Code				5A				
Solid Waste Analysis								
pH (pH Units)$_D$	A-T-031	N	N	**8.43**		-	>6	-
ANC to pH 4 (mol/kg)$_D$	A-T-ANC	N	N	**3.8**		-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg)$_D$	A-T-ANC	N	N	**0.19**		-	to be evaluated	to be evaluated
Loss on Ignition (%)$_D$	A-T-030	N	N	**2.7**		-	-	10
Total Organic Carbon (%)$_D$	A-T-032	N	N	**0.27**		3	5	6
PAH Sum of 17 (mg/kg) $_A$	A-T-019	N	N	**<0.08**		100	-	-
Mineral Oil (mg/kg)$_{A\ EH_CU_1D_AL}$	A-T-007	N	N	**<10**		500	-	-
Sum of 7 PCBs (mg/kg)$_A$	A-T-004	N	N	**<0.007**		1	-	-
Sum of BTEX (mg/kg)$_A$	A-T-022	N	N	**<0.01**		6	-	-
Eluate Analysis				**10:1 mg/l**	**10:1 mg/kg**	**Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)**		
Arsenic	A-T-025	N	N	<0.001	**<0.01**	0.5	2	25
Barium	A-T-025	N	N	0.006	**0.060**	20	100	300
Cadmium	A-T-025	N	N	<0.001	**<0.01**	0.04	1	5
Chromium	A-T-025	N	N	<0.001	**<0.01**	0.5	10	70
Copper	A-T-025	N	N	<0.004	**<0.04**	2	50	100
Mercury	A-T-025	N	N	<0.0005	**<0.005**	0.01	0.2	2
Molybdenum	A-T-025	N	N	0.002	**0.020**	0.5	10	30
Nickel	A-T-025	N	N	<0.002	**<0.02**	0.4	10	40
Lead	A-T-025	N	N	<0.001	**<0.01**	0.5	10	50
Antimony	A-T-025	N	N	<0.001	**<0.01**	0.06	0.7	5
Selenium	A-T-025	N	N	<0.001	**<0.01**	0.1	0.5	7
Zinc	A-T-025	N	N	0.004	**0.040**	4	50	200
Chloride	A-T-026	N	N	1	**12**	800	15000	25000
Fluoride	A-T-026	N	N	1.2	**12.0**	10	150	500
Sulphate as SO_4	A-T-026	N	N	18	**177**	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	66	**660**	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	**<0.1**	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	<2.0	**<200**	500	800	1000
Leach Test Information								
pH (pH Units)	A-T-031	N	N	7.0				
Conductivity (µS/cm)	A-T-037	N	N	132				
Mass Sample (kg)				0.206				
Dry Matter (%)	A-T-044	N	N	85.1				

Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation

Certificate of Analysis

Report No.: **23-06788-1**

Issue No.: **1**
Date of Issue **23/10/2023**

Customer Details:	Envirolab Ltd, 7 - 8 Sandpits Business Park, Mottram Road, Hyde, Greater Manchester, SK14 3AR, United Kingdom
Customer Contact:	[redacted]
Customer Order No.:	P0752491
Customer Reference:	Not Supplied
Quotation Reference:	Q22-00104 (Issue: 36)
Description:	1 geo sample
Date Received:	05/10/2023
Date Started:	06/10/2023
Date Completed:	20/10/2023
Test Methods:	Details available on request (refer to SOP code against relevant result/s)
Notes:	None

Approved By: [redacted], **Study Manager**

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service.
This certificate shall not be reproduced except in full without the prior written approval of the laboratory.
Observations and interpretations are outside of the scope of UKAS accreditation.
Results reported herein relate only to the items supplied to the laboratory for testing.
Results on an Interim Report are not dry-weight corrected.
Where the laboratory is not responsible for the sampling, results apply to the sample(s) as they were received.
The laboratory shall not be responsible for any information that is supplied by the customer that may affect the validity of results.

RPS Environmental Management Limited trading as RPS Mountainheath. Registered in England No. 01756175.
13 St Martins Way, Bedford, Bedfordshire, MK42 0LF. T +44 1462 480 400
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Results Summary

Report No.: 23-06788-1

Customer Reference: Not Supplied

Customer Order No: P0752491

Customer Sample No	**23/09763/4**
RPS Sample No	33910
Sample Type	**GEO**
Sample Matrix	SOIL
Sampling Date	29/09/2023

Determinand	CAS No	Codes	SOP	RL	Units	
carbaryl	63-25-2	N	L001	0.1	mg/kg DW	< 0.10 (T)
2,4,5-trichlorophenoxyacetic acid (2,4,5-T)	93-76-5	N	L340	0.1	mg/kg DW	< 0.10 (T)
2,4,5-TP (Fenoprop)	93-72-1	N	L340	0.1	mg/kg DW	< 0.10 (T)
2,4-dichlorophenoxyacetic acid (2,4-D)	94-75-7	N	L340	0.1	mg/kg DW	< 0.10 (T)
acifluorfen	50594-66-6	N	L340	0.1	mg/kg DW	< 0.10 (T)
bentazone	25057-89-0	N	L340	0.1	mg/kg DW	< 0.10 (T)
clopyralid	1702-17-6	N	L340	0.1	mg/kg DW	< 0.10 (T)
dichlorprop (2,4-DP)	120-36-5	N	L340	0.1	mg/kg DW	< 0.10 (T)
dinoseb (DNBP)	88-85-7	N	L340	0.1	mg/kg DW	< 0.10 (T)
2-methyl-4-chlorophenoxyacetic acid (MCPA)	94-74-6	N	L340	0.1	mg/kg DW	< 0.10 (T)
mecoprop (MCPP)	7085-19-0	N	L340	0.1	mg/kg DW	< 0.10 (T)
pentachlorophenol (PCP)	87-86-5	N	L340	0.1	mg/kg DW	< 0.10 (T)
2,3,6-trichlorobenzoic acid (2,3,6-TBA)	50-31-7	N	L340	0.1	mg/kg DW	< 0.10 (T)
4-(2,4-dichlorophenoxy)butanoic acid (2,4-DB)	94-82-6	N	L340	0.1	mg/kg DW	< 0.10 (T)
4-chlorophenoxyacetic acid (4-CPA)	122-88-3	N	L340	0.1	mg/kg DW	< 0.10 (T)
benazolin	3813-05-6	N	L340	0.1	mg/kg DW	< 0.10 (T)
bromoxynil	1689-84-5	N	L340	0.1	mg/kg DW	< 0.10 (T)
dicamba	1918-00-9	N	L340	0.1	mg/kg DW	< 0.10 (T)
diclofop	40843-25-2	N	L340	0.1	mg/kg DW	< 0.10 (T)
2-methyl-4,6-dinitrophenol (DNOC)	534-52-1	N	L340	0.1	mg/kg DW	< 0.10 (T)
flamprop	58667-63-3	N	L340	0.1	mg/kg DW	< 0.10 (T)
fluroxypyr	69377-81-7	N	L340	0.1	mg/kg DW	< 0.10 (T)
ioxynil	1689-83-4	N	L340	0.1	mg/kg DW	< 0.10 (T)
MCPB	94-81-5	N	L340	0.1	mg/kg DW	< 0.10 (T)
picloram	1918-02-1	N	L340	0.1	mg/kg DW	< 0.10 (T)
triclopyr	55335-06-3	N	L340	0.1	mg/kg DW	< 0.10 (T)
alachlor	15972-60-8	N	G029	0.02	mg/kg AR	< 0.02 (T)
chloroxuron	1982-47-4	N	L025	0.1	mg/kg DW	< 0.10 (T)
chlortoluron	15545-48-9	N	L025	0.1	mg/kg DW	< 0.10 (T)
diflubenzuron	35367-38-5	N	L025	0.1	mg/kg DW	< 0.10 (T)
dimefuron	34205-21-5	N	L025	0.1	mg/kg DW	< 0.10 (T)
diuron	330-54-1	N	L025	0.1	mg/kg DW	< 0.10 (T)
isoproturon	34123-59-6	N	L025	0.1	mg/kg DW	< 0.10 (T)
linuron	330-55-2	N	L025	0.1	mg/kg DW	< 0.10 (T)
methabenzthiazuron	18691-97-9	N	L025	0.1	mg/kg DW	< 0.10 (T)
metoxuron	19937-59-8	N	L025	0.1	mg/kg DW	< 0.10 (T)
monolinuron	1746-81-2	N	L025	0.1	mg/kg DW	< 0.10 (T)

Results Summary

Report No.: 23-06788-1

Customer Reference: Not Supplied

Customer Order No: P0752491

Customer Sample No	**23/09763/4**
RPS Sample No	33910
Sample Type	**GEO**
Sample Matrix	SOIL
Sampling Date	29/09/2023

Determinand	CAS No	Codes	SOP	RL	Units	
monuron	150-68-5	N	L025	0.1	mg/kg DW	< 0.10 (T)
pencycuron	66063-05-6	N	L025	0.1	mg/kg DW	< 0.10 (T)
bifenthrin	82657-04-3	N	G127	0.1	mg/kg DW	< 0.10 (T)
cyfluthrin, total	68359-37-5	N	G127	0.1	mg/kg DW	< 0.10 (T)
cyhalothrin, total	68085-85-8	N	G127	0.1	mg/kg DW	< 0.10 (T)
cypermethrin, total	52315-07-8	N	G127	0.1	mg/kg DW	< 0.10 (T)
deltamethrin	52918-63-5	N	G127	0.1	mg/kg DW	< 0.10 (T)
fenvalerate	51630-58-1	N	G127	0.1	mg/kg DW	< 0.10 (T)
permethrin, total	52645-53-1	N	G127	0.1	mg/kg DW	< 0.10 (T)
resmethrin	10453-86-8	N	G127	0.1	mg/kg DW	< 0.10 (T)
tetramethrin	7696-12-0	N	G127	0.1	mg/kg DW	< 0.10 (T)

Deviating Samples

Report No.: 23-06788-1

Customer Reference: Not Supplied

Customer Order No: P0752491

Our policy on Deviating Samples has been implemented in accordance with UKAS Policy on Deviating Samples (TPS63).
RPS is not responsible for the integrity of samples as received, unless RPS personnel performed the sampling. Samples submitted may be declared to be deviating.
Where applicable the analysis method remains UKAS accredited, however results reported for a deviating sample may be compromised.
Where no sampling date was supplied, samples have been declared to be deviating. If the date can be supplied, results may be reissued if assessed not deviating.
Where the sample container used was unsuitable or broken, the sample is flagged as deviating and re-sampling/re-submisson may be required.

RPS No.	Customer No.	Customer ID	Date Sampled	Containers Received	Deviating	Reason for Deviation
33910	23/09763/4		29/09/2023	100 mL amber glass jar	**Yes**	No sampling time provided.

Report No.: 23-06788-1

Type	Matrix Code	Description
Food	CEREALPROD	Cereals, grains & products
Food	DRIEDFRUIT	Dried fruits
Food	FRIEDBAKED	Fried or baked food
Food	LEGUME	Legumes
Food	MEAT	Meat
Food	POWDERED	Powdered food
Food	PULSE	Pulses (dried legumes)
Food	VEGETABLES	Vegetables
Gas	TDTUBE	TD Tube
Gas	TENAX	Tenax Tube
Gas	TUBE	Tube
Gas	VAPOUR	Gas
Geological	SED_MAR	Marine Sediment
Geological	SED_RIV	River Sediment
Geological	SLUDG_SOL	Sludge (solid only)
Geological	SOIL	Soil
Liquid	BEVERAGE	Beverage
Liquid	BLOOD	Blood
Liquid	CONDENSATE	Condensate
Liquid	FORMULATN	Formula
Liquid	LEACHATE	Leachate
Liquid	OIL/GREASE	Oil or grease
Liquid	SLUDG_LIQ	Sludge (liquid only)
Liquid	SOLVENT	Solvent
Liquid	URINE	Urine
Sludge	SLUDG_WHL	Sludge for bulk route
Solid	BADGE	Badge
Solid	BEDDING	Bedding
Solid	BIOTA	Biota (general)
Solid	BIOTA_F	Biota (fish)
Solid	BIOTA_SF	Biota (shellfish)
Solid	CONSTRCTN	Construction materials
Solid	FABRIC	Fabrics & furnishing materials
Solid	FEED	Animal feed
Solid	FERTILISER	Fertiliser
Solid	FILTER	Filter
Solid	FOAM	Solid foam material
Solid	PACKAGING	Packaging material
Solid	PLANT	Plant (vegetation)
Solid	POWDER	Powder
Solid	SWAB	Swab
Water	BAL	Ballast Water
Water	BIL	Bilge Water
Water	DW	Drinking Water
Water	EFFLUENT	Effluent
Water	GW	Ground Water
Water	INFLUENT	Influent
Water	SALTW	Salt Water
Water	SW	Surface Water
Water	TW	Tap Water
Water	W	Water

Report No.: 23-06788-1

Key Code	Description
N	Not Accredited Test
U	UKAS Accredited Test - UKAS accreditation is only implied if the report carries the UKAS logo
UF	UKAS Flexible Scope Test
M	MCERTS Accredited Test - MCERTS accreditation is only implied if the report carries the MCERTS logo
O	Marine Management Organisation (MMO) Validated
SN	Subcontracted to approved laboratory not accredited for the test
SU	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
SIN	Subcontracted to internal RPS Group laboratory not accredited for the test
SIU	Subcontracted to internal RPS Group laboratory UKAS Accredited for the test
SIM	Subcontracted to internal RPS Group laboratory MCERTS/UKAS Accredited for the test
I/S (in results)	Insufficient Sample
U/S (in results)	Unsuitable Sample
S/C (in results)	See Comments
ND (in results)	Not Detected
L (in results)	Result is outside normal limits
DW (in units)	Results are expressed on a dry weight basis

Sample Type	Sample Retention and Disposal Period
Foodstuff	1 month (if frozen) from the issue date of this report
Waters	2 weeks from the issue date of this report
Other Liquids	1 month from the issue date of this report
Solids / Soils	1 month from the issue date of this report
Sediments	1 month from the issue date of this report

Note: Sample retention may be subject to agreement with the customer for particular projects

Where the dry solids value of a sample is low (<50%), reporting limits are automatically raised for all determinants analysed on an as-received basis.

Soil Typing	Description
Type 1	Clay - Brown
Type 2	Clay - Grey/Black
Type 3	Sand
Type 4	Top Soil (Standard)
Type 5	Top Soil (High Peat)
Type 6	Made Ground (>50% Clay)
Type 7	Made Ground (>50% Sand)
Type 8	Made Ground (>50% Top Soil)
Type X	Other

Dev code	Description
D	No sampling date provided.
T	No sampling time provided.
Z	Temperature of samples exceeded in transit/storage.
V	Excessive headspace for volatile determinands.
P	Sample submitted without required preservative(s).
C	Incorrect container.
H	Holding time exceeded (sampling to extraction).
X	Holding time exceeded (sampling to receipt).

Note: Where the following information is included in this certificate, it has usually been supplied by the customer: Customer Sample ID, Sample Location, Sample Depth, Sampling Date and Sampling Time. The laboratory shall not be responsible for any information that is supplied by the customer that may affect the validity of results.

envirolab
Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 23/09902
Issue Number: 1 **Date:** 02 November, 2023

Client: Structural Soils Limited (Hemel Hempstead)
18 Frogmore Road
Hemel Hempstead
UK
HP3 9RT

Project Manager: [redacted]
Project Name: Sealink Friston
Project Ref: 563835
Order No: N/A
Date Samples Received: 06/10/23
Date Instructions Received: 06/10/23
Date Analysis Completed: 02/11/23

Approved by:

[redacted]
Client Manager

Lab Sample ID	23/09902/1							Units	Limit of Detection	Method ref
Client Sample No	101									
Client Sample ID	F22-BH203									
Depth to Top	0.20									
Depth To Bottom										
Date Sampled	04-Oct-23									
Sample Type	SOIL - ES									
Sample Matrix Code	4AE									
% Moisture at 105C$_A$	13.8							% w/w	0.1	A-T-044
% Stones >10mm$_A$	9.7							% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	7.40							pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	<0.01							g/l	0.01	A-T-026s
Sulphur (total)$_D$	71							mg/kg	50	A-T-024s
Cyanide (free)$_A$$^{M\#}$	<1							mg/kg	1	A-T-042sFCN
Phenols - Total by HPLC$_A$	<0.2							mg/kg	0.2	A-T-050s
Organic Matter$_D$$^{M\#}$	0.8							% w/w	0.1	A-T-032s
Total Organic Carbon$_D$$^{M\#}$	0.48							% w/w	0.03	A-T-032s
Fraction of organic carbon$_D$$^{\#}$	0.0048							N/A	0.0003	A-T-032s
Arsenic$_D$$^{M\#}$	6							mg/kg	1	A-T-024s
Barium$_D$	20							mg/kg	1	A-T-024s
Beryllium$_D$	<0.5							mg/kg	0.5	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0							mg/kg	1	A-T-027s
Cadmium$_D$$^{M\#}$	<0.5							mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	7							mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	10							mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1							mg/kg	1	A-T-040s
Chromium (trivalent)	10							mg/kg	1	Calc
Lead$_D$$^{M\#}$	14							mg/kg	1	A-T-024s
Manganese$_D$$^{M\#}$	315							mg/kg	1	A-T-024s
Mercury$_D$	<0.17							mg/kg	0.17	A-T-024s
Molybdenum$_D$$^{M\#}$	<1							mg/kg	1	A-T-024s
Nickel$_D$$^{M\#}$	8							mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1							mg/kg	1	A-T-024s
Vanadium$_D$$^{M\#}$	17							mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	29							mg/kg	5	A-T-024s
Bentazone$_A$	<0.10							mg/kg	0.1	Subcon RPS MH
Cypermethrin$_A$	<0.10							mg/kg	0.1	Subcon RPS MH
Linuron$_A$	<0.10							mg/kg	0.1	Subcon RPS MH
Alachlor$_A$	<0.02							mg/kg	0.02	Subcon RPS MH
Carbaryl$_A$	<0.10							mg/kg	0.1	Subcon RPS MH
Diuron$_A$	<0.10							mg/kg	0.1	Subcon RPS MH

Envirolab Job Number: 23/09902

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09902/1							Units	Limit of Detection	Method ref
Client Sample No	101									
Client Sample ID	F22-BH203									
Depth to Top	0.20									
Depth To Bottom										
Date Sampled	04-Oct-23									
Sample Type	SOIL - ES									
Sample Matrix Code	4AE									
Isoproturon$_A$	<0.10							mg/kg	0.1	Subcon RPS MH
MCPP; (Mecoprop)$_A$	<0.10							mg/kg	0.1	Subcon RPS MH

Lab Sample ID	23/09902/1							Units	Limit of Detection	Method ref
Client Sample No	101									
Client Sample ID	F22-BH203									
Depth to Top	0.20									
Depth To Bottom										
Date Sampled	04-Oct-23									
Sample Type	SOIL - ES									
Sample Matrix Code	4AE									
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD									A-T-045
Asbestos Matrix (visual)$_{D}$	-									A-T-045
Asbestos Matrix (microscope)$_{D}$	-									A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A									A-T-045
BTEX										
BTEX - Benzene$_{A}^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - Toluene$_{A}^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_{A}^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_{A}^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - o Xylene$_{A}^{\#}$	<0.01							mg/kg	0.01	A-T-022s
OCP+OPP Combined Pest Suite (incl. Atrazine and Simazine)										
Dichlobenil$_{A}$	<0.01							mg/kg	0.01	A-T-056
Tecnazene$_{A}$	<0.01							mg/kg	0.01	A-T-056
Trifluralin$_{A}$	<0.01							mg/kg	0.01	A-T-056
alpha-Hexachlorocyclohexane (HCH)$_{A}$	<0.01							mg/kg	0.01	A-T-056
Hexachlorobenzene (HCB) $_{A}$	<0.01							mg/kg	0.01	A-T-056
Simazine$_{A}$	<0.01							mg/kg	0.01	A-T-056
Atrazine$_{A}$	<0.01							mg/kg	0.01	A-T-056
beta-Hexachlorocyclohexane (HCH)$_{A}$	<0.01							mg/kg	0.01	A-T-056
Quintozene (PCNB)$_{A}$	<0.01							mg/kg	0.01	A-T-056
Chlorothalonil$_{A}$	<0.01							mg/kg	0.01	A-T-056
delta-Hexachlorocyclohexane (HCH)$_{A}$	<0.01							mg/kg	0.01	A-T-056
Triallate$_{A}$	<0.01							mg/kg	0.01	A-T-056
Heptachlor$_{A}$	<0.01							mg/kg	0.01	A-T-056
Aldrin$_{A}$	<0.01							mg/kg	0.01	A-T-056
Triadimefon$_{A}$	<0.01							mg/kg	0.01	A-T-056
Telodrin$_{A}$	<0.01							mg/kg	0.01	A-T-056
Isodrin$_{A}$	<0.01							mg/kg	0.01	A-T-056
Pendimethalin$_{A}$	<0.01							mg/kg	0.01	A-T-056

Lab Sample ID	23/09902/1							Units	Limit of Detection	Method ref
Client Sample No	101									
Client Sample ID	F22-BH203									
Depth to Top	0.20									
Depth To Bottom										
Date Sampled	04-Oct-23									
Sample Type	SOIL - ES									
Sample Matrix Code	4AE									
Heptachlor epoxide$_A$	<0.01							mg/kg	0.01	A-T-056
trans-Chlordane (Gamma)$_A$	<0.01							mg/kg	0.01	A-T-056
o,p-DDE (2,4)$_A$	<0.01							mg/kg	0.01	A-T-056
Endosulphan I (Alpha)$_A$	<0.01							mg/kg	0.01	A-T-056
cis-Chlordane (Alpha)$_A$	<0.01							mg/kg	0.01	A-T-056
p,p-DDE (4,4)$_A$	<0.01							mg/kg	0.01	A-T-056
Dieldrin$_A$	<0.01							mg/kg	0.01	A-T-056
o,p-DDD (2,4)$_A$	<0.01							mg/kg	0.01	A-T-056
Endrin$_A$	<0.01							mg/kg	0.01	A-T-056
Endosulphan II (Beta)$_A$	<0.01							mg/kg	0.01	A-T-056
p,p-DDD (4,4)$_A$	<0.01							mg/kg	0.01	A-T-056
o,p-DDT (2,4)$_A$	<0.01							mg/kg	0.01	A-T-056
Endrin Aldehyde$_A$	<0.01							mg/kg	0.01	A-T-056
Endrin Ketone$_A$	<0.01							mg/kg	0.01	A-T-056
Endosulphan Sulphate$_A$	<0.01							mg/kg	0.01	A-T-056
p,p-DDT (4,4)$_A$	<0.01							mg/kg	0.01	A-T-056
o,p-Methoxychlor$_A$	<0.01							mg/kg	0.01	A-T-056
p,p-Methoxychlor$_A$	<0.01							mg/kg	0.01	A-T-056
Permethrin I (cis)$_A$	<0.01							mg/kg	0.01	A-T-056
Permethrin II (trans)$_A$	<0.01							mg/kg	0.01	A-T-056
Dichlorvos$_A$	<0.01							mg/kg	0.01	A-T-056
Mevinphos$_A$	<0.01							mg/kg	0.01	A-T-056
Demeton-S$_A$	<0.50							mg/kg	0.5	A-T-056
Demeton-O$_A$	<0.50							mg/kg	0.5	A-T-056
Phorate$_A$	<0.01							mg/kg	0.01	A-T-056
Dimethoate$_A$	<0.01							mg/kg	0.01	A-T-056
Propetamphos$_A$	<0.01							mg/kg	0.01	A-T-056
Diazinon (Dimpylate)$_A$	<0.01							mg/kg	0.01	A-T-056
Disulfoton$_A$	<0.10							mg/kg	0.1	A-T-056
Chlorpyrifos-methyl$_A$	<0.01							mg/kg	0.01	A-T-056
Parathion (Ethyl Parathion)$_A$	<0.01							mg/kg	0.01	A-T-056
Methyl Parathion$_A$	<0.01							mg/kg	0.01	A-T-056
Pirimiphos-methyl$_A$	<0.01							mg/kg	0.01	A-T-056
Fenitrothion$_A$	<0.01							mg/kg	0.01	A-T-056

Envirolab Job Number: 23/09902 **Client Project Name: Sealink Friston**

Client Project Ref: 563835

Lab Sample ID	23/09902/1							Units	Limit of Detection	Method ref
Client Sample No	101									
Client Sample ID	F22-BH203									
Depth to Top	0.20									
Depth To Bottom										
Date Sampled	04-Oct-23									
Sample Type	SOIL - ES									
Sample Matrix Code	4AE									
Fensulphothion$_A$	<0.01							mg/kg	0.01	A-T-056
Fenthion$_A$	<0.01							mg/kg	0.01	A-T-056
Malathion$_A$	<0.01							mg/kg	0.01	A-T-056
Chlorfenvinphos$_A$	<0.01							mg/kg	0.01	A-T-056
Chlorpyrifos$_A$	<0.01							mg/kg	0.01	A-T-056
Trichloronate$_A$	<0.01							mg/kg	0.01	A-T-056
Prothiofos (Tokuthion)$_A$	<0.01							mg/kg	0.01	A-T-056
Ethion$_A$	<0.01							mg/kg	0.01	A-T-056
Triazophos$_A$	<0.01							mg/kg	0.01	A-T-056
Carbophenothion$_A$	<0.01							mg/kg	0.01	A-T-056
Phosalone$_A$	<0.01							mg/kg	0.01	A-T-056
Azinphos-methyl$_A$	<0.01							mg/kg	0.01	A-T-056
Azinphos-ethyl$_A$	<0.01							mg/kg	0.01	A-T-056
Coumaphos$_A$	<0.01							mg/kg	0.01	A-T-056
gamma-Hexachlorocyclohexane (HCH)$_A$	<0.01							mg/kg	0.01	A-T-056

Envirolab Job Number: 23/09902

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09902/1							Units	Limit of Detection	Method ref
Client Sample No	101									
Client Sample ID	F22-BH203									
Depth to Top	0.20									
Depth To Bottom										
Date Sampled	04-Oct-23									
Sample Type	SOIL - ES									
Sample Matrix Code	4AE									
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02							mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	<0.04							mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	<0.04							mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.05							mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05							mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07							mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	<0.06							mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A$	<0.04							mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	<0.08							mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	<0.03							mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03							mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	<0.03							mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	<0.07							mg/kg	0.07	A-T-019s
Total PAH-16MS$_A$	<0.08							mg/kg	0.01	A-T-019s

Report Notes

General
This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **six weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
Analytical results reflect the quality of the sample at the time of analysis only.
Opinions and Interpretations expressed are outside our scope of accreditation.
The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client.
A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

Key

Superscript "#"	Accredited to ISO 17025
Superscript "M"	Accredited to MCertS
Superscript "U"	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript "A"	Analysis performed on as-received Sample
Subscript "D"	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript "^"	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
N/A	Not applicable

Asbestos
Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis
Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing, and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25ºC / 11550µS/cm @ 20ºC fall outside the accreditation range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Structural Soils Limited (Hemel Hempstead), 18 Frogmore Road, Hemel Hempstead, UK, HP3 9RT

Project: Sealink Friston

Clients Project No: 563835

Project No: 23/09902

Date Received: 06/10/2023 (am)

Cool Box Temperatures (°C): 16.1, 16.2, 16.4

NO DEVIATIONS IDENTIFIED

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	23/09902/1
Client Sample No	101
Client Sample ID/Depth	F22-BH203 0.20m
Date Sampled	04/10/23
A-T-004s	12/10/2023
A-T-007s	12/10/2023
A-T-019s	11/10/2023
A-T-022s	11/10/2023
A-T-024s	12/10/2023
A-T-025w	18/10/2023
A-T-026s	12/10/2023
A-T-026w	18/10/2023
A-T-026w (F)	18/10/2023
A-T-027s	13/10/2023
A-T-030s	12/10/2023
A-T-031s	12/10/2023
A-T-031w	18/10/2023
A-T-032s	12/10/2023
A-T-032w	18/10/2023
A-T-037w	18/10/2023
A-T-040s	12/10/2023
A-T-042sFCN	21/10/2023
A-T-044	14/10/2023
A-T-045	09/10/2023
A-T-050s	11/10/2023
A-T-050w	18/10/2023
A-T-056	19/10/2023
A-T-ANCs	12/10/2023
Calc	12/10/2023
Calc-no stones	18/10/2023
Probe (w)	18/10/2023

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

envirolab
Units 7 & 8, Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

Final Test Report

Envirolab Job Number:	23/09902
Issue Number:	1
Date:	2-Nov-23

Client: Structural Soils Limited (Hemel Hempstead)
18 Frogmore Road
Hemel Hempstead
UK
HP3 9RT

Project Manager:	[redacted]
Project Name:	Sealink Friston
Project Ref:	563835
Order No:	N/A
Date Samples Received:	6-Oct-23
Date Instructions Received:	6-Oct-23
Date Analysis Completed:	2-Nov-23

Notes - Soil analysis

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones >10mm are removed or excluded from the sample prior to analysis and reported results corrected to a whole sample basis.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis.

Notes - General

This report shall not be reproduced, except in full, without written approval from Envirolab.

Subscript "A" indicates analysis performed on the sample as received. "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve, unless asbestos is found to be present in which case all analysis is performed on the sample as received.

All analysis is performed on the dried and crushed sample for samples with Matrix Code 7 and this supercedes any "A" subscripts.

All analysis is performed on the sample as received for soil samples from outside the European Union and this supercedes any "D" subscripts

For complex, multi-compound analysis, quality control results do not always fall within chart limits for every compound and we have criteria for reporting in these situations.

If results are in italic font they are associated with such quality control failures and may be unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid

Predominant Matrix Codes: 1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample

Secondary Matrix Codes: A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal, E = contains roots/twigs.

IS indicates Insufficient sample for analysis, NDP indicates No Determination Possible and NAD indicates No Asbestos Detected.

Analytical results reflect the quality of the sample at the time of analysis only. Opinions and interpretations expressed are outside the scope of our accreditation.

Please contact us if you need any further information.

HWOL TPH Code: EH_CU_1D_AL: Extractable hydrocarbons - i.e. everything extracted by the solvent(s), Clean-up - e.g. by florisil, silica gel, GC - Single coil gas chromatography, Aliphatics only

Approved by:

[redacted]

Client Manager

envirolab

Landfill WAC analysis must not be used for hazardous waste classification purposes. This analysis is only applicable for landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Sample Details						Landfill Waste Acceptance Criteria Limits		
Lab Sample ID	Method	ISO17025	MCERTS	23/09902/1				
Client Sample Number				101		Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
Client Sample ID				F22-BH203				
Depth to Top				0.2				
Depth to Bottom								
Date Sampled				04/10/2023				
Sample Type				Soil - ES				
Sample Matrix Code				4AE				
Solid Waste Analysis								
pH (pH Units)$_D$	A-T-031	N	N	**7.40**		-	>6	-
ANC to pH 4 (mol/kg)$_D$	A-T-ANC	N	N	**0.03**		-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg)$_D$	A-T-ANC	N	N	**<0.01**		-	to be evaluated	to be evaluated
Loss on Ignition (%)$_D$	A-T-030	N	N	**1.9**		-	-	10
Total Organic Carbon (%)$_D$	A-T-032	N	N	**0.48**		3	5	6
PAH Sum of 17 (mg/kg)$_A$	A-T-019	N	N	**<0.08**		100	-	-
Mineral Oil (mg/kg)$_{A\ EH_CU_1D_AL}$	A-T-007	N	N	**<10**		500	-	-
Sum of 7 PCBs (mg/kg)$_A$	A-T-004	N	N	**<0.007**		1	-	-
Sum of BTEX (mg/kg)$_A$	A-T-022	N	N	**<0.01**		6	-	-
Eluate Analysis				**10:1**	**10:1**	**Limit values for compliance leaching test using**		
				mg/l	**mg/kg**	**BS EN 12457-2 at L/S 10 l/kg (mg/kg)**		
Arsenic	A-T-025	N	N	0.007	**0.070**	0.5	2	25
Barium	A-T-025	N	N	0.047	**0.470**	20	100	300
Cadmium	A-T-025	N	N	<0.001	**<0.01**	0.04	1	5
Chromium	A-T-025	N	N	<0.001	**<0.01**	0.5	10	70
Copper	A-T-025	N	N	0.008	**0.080**	2	50	100
Mercury	A-T-025	N	N	<0.0005	**<0.005**	0.01	0.2	2
Molybdenum	A-T-025	N	N	<0.001	**<0.01**	0.5	10	30
Nickel	A-T-025	N	N	0.002	**0.020**	0.4	10	40
Lead	A-T-025	N	N	0.008	**0.080**	0.5	10	50
Antimony	A-T-025	N	N	<0.001	**<0.01**	0.06	0.7	5
Selenium	A-T-025	N	N	<0.001	**<0.01**	0.1	0.5	7
Zinc	A-T-025	N	N	0.009	**0.090**	4	50	200
Chloride	A-T-026	N	N	7	**72**	800	15000	25000
Fluoride	A-T-026	N	N	0.6	**6.0**	10	150	500
Sulphate as SO_4	A-T-026	N	N	21	**214**	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	<20	**<200**	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	**<0.1**	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	<2.0	**<200**	500	800	1000
Leach Test Information								
pH (pH Units)	A-T-031	N	N	7.3				
Conductivity (µS/cm)	A-T-037	N	N	28				
Mass Sample (kg)				0.185				
Dry Matter (%)	A-T-044	N	N	94.7				

Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation

Certificate of Analysis

Report No.: **23-06925-1**

Issue No.: **1**
Date of Issue **27/10/2023**

Customer Details:	Envirolab Ltd, 7 - 8 Sandpits Business Park, Mottram Road, Hyde, Greater Manchester, SK14 3AR, United Kingdom
Customer Contact:	[redacted]
Customer Order No.:	P0752516
Customer Reference:	Not Supplied
Quotation Reference:	Q22-00104 (Issue: 36)
Description:	1 geo sample
Date Received:	10/10/2023
Date Started:	11/10/2023
Date Completed:	27/10/2023
Test Methods:	Details available on request (refer to SOP code against relevant result/s)
Notes:	None

[redacted]

Approved By: [redacted] **LIMS Manager**

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service.
This certificate shall not be reproduced except in full without the prior written approval of the laboratory.
Observations and interpretations are outside of the scope of UKAS accreditation.
Results reported herein relate only to the items supplied to the laboratory for testing.
Results on an Interim Report are not dry-weight corrected.
Where the laboratory is not responsible for the sampling, results apply to the sample(s) as they were received.
The laboratory shall not be responsible for any information that is supplied by the customer that may affect the validity of results.

RPS Environmental Management Limited trading as RPS Mountainheath. Registered in England No. 01756175.
13 St Martins Way, Bedford, Bedfordshire, MK42 0LF. T +44 1462 480 400
A member of the RPS Group plc. Terms and conditions apply - copy on request

Results Summary

Report No.: 23-06925-1

Customer Reference: Not Supplied

Customer Order No: P0752516

Customer Sample No	**23/09902/1**
RPS Sample No	34280
Sample Type	**GEO**
Sample Matrix	SOIL
Sampling Date	04/10/2023

Determinand	CAS No	Codes	SOP	RL	Units	
carbaryl	63-25-2	N	L001	0.1	mg/kg DW	< 0.10
2,4,5-trichlorophenoxyacetic acid (2,4,5-T)	93-76-5	N	L340	0.1	mg/kg DW	< 0.10
2,4,5-TP (Fenoprop)	93-72-1	N	L340	0.1	mg/kg DW	< 0.10
2,4-dichlorophenoxyacetic acid (2,4-D)	94-75-7	N	L340	0.1	mg/kg DW	< 0.10
acifluorfen	50594-66-6	N	L340	0.1	mg/kg DW	< 0.10
bentazone	25057-89-0	N	L340	0.1	mg/kg DW	< 0.10
clopyralid	1702-17-6	N	L340	0.1	mg/kg DW	< 0.10
dichlorprop (2,4-DP)	120-36-5	N	L340	0.1	mg/kg DW	< 0.10
dinoseb (DNBP)	88-85-7	N	L340	0.1	mg/kg DW	< 0.10
2-methyl-4-chlorophenoxyacetic acid (MCPA)	94-74-6	N	L340	0.1	mg/kg DW	< 0.10
mecoprop (MCPP)	7085-19-0	N	L340	0.1	mg/kg DW	< 0.10
pentachlorophenol (PCP)	87-86-5	N	L340	0.1	mg/kg DW	< 0.10
2,3,6-trichlorobenzoic acid (2,3,6-TBA)	50-31-7	N	L340	0.1	mg/kg DW	< 0.10
4-(2,4-dichlorophenoxy)butanoic acid (2,4-DB)	94-82-6	N	L340	0.1	mg/kg DW	< 0.10
4-chlorophenoxyacetic acid (4-CPA)	122-88-3	N	L340	0.1	mg/kg DW	< 0.10
benazolin	3813-05-6	N	L340	0.1	mg/kg DW	< 0.10
bromoxynil	1689-84-5	N	L340	0.1	mg/kg DW	< 0.10
dicamba	1918-00-9	N	L340	0.1	mg/kg DW	< 0.10
diclofop	40843-25-2	N	L340	0.1	mg/kg DW	< 0.10
2-methyl-4,6-dinitrophenol (DNOC)	534-52-1	N	L340	0.1	mg/kg DW	< 0.10
flamprop	58667-63-3	N	L340	0.1	mg/kg DW	< 0.10
fluroxypyr	69377-81-7	N	L340	0.1	mg/kg DW	< 0.10
ioxynil	1689-83-4	N	L340	0.1	mg/kg DW	< 0.10
MCPB	94-81-5	N	L340	0.1	mg/kg DW	< 0.10
picloram	1918-02-1	N	L340	0.1	mg/kg DW	< 0.10
triclopyr	55335-06-3	N	L340	0.1	mg/kg DW	< 0.10
alachlor	15972-60-8	N	G029	0.02	mg/kg AR	< 0.02
chloroxuron	1982-47-4	N	L025	0.1	mg/kg DW	< 0.10
chlortoluron	15545-48-9	N	L025	0.1	mg/kg DW	< 0.10
diflubenzuron	35367-38-5	N	L025	0.1	mg/kg DW	< 0.10
dimefuron	34205-21-5	N	L025	0.1	mg/kg DW	< 0.10
diuron	330-54-1	N	L025	0.1	mg/kg DW	< 0.10
isoproturon	34123-59-6	N	L025	0.1	mg/kg DW	< 0.10
linuron	330-55-2	N	L025	0.1	mg/kg DW	< 0.10
methabenzthiazuron	18691-97-9	N	L025	0.1	mg/kg DW	< 0.10
metoxuron	19937-59-8	N	L025	0.1	mg/kg DW	< 0.10
monolinuron	1746-81-2	N	L025	0.1	mg/kg DW	< 0.10

Results Summary

Report No.: 23-06925-1

Customer Reference: Not Supplied

Customer Order No: P0752516

Customer Sample No	**23/09902/1**
RPS Sample No	34280
Sample Type	**GEO**
Sample Matrix	SOIL
Sampling Date	04/10/2023

Determinand	CAS No	Codes	SOP	RL	Units	
monuron	150-68-5	N	L025	0.1	mg/kg DW	< 0.10
pencycuron	66063-05-6	N	L025	0.1	mg/kg DW	< 0.10
bifenthrin	82657-04-3	N	G127	0.1	mg/kg DW	< 0.10
cyfluthrin, total	68359-37-5	N	G127	0.1	mg/kg DW	< 0.10
cyhalothrin, total	68085-85-8	N	G127	0.1	mg/kg DW	< 0.10
cypermethrin, total	52315-07-8	N	G127	0.1	mg/kg DW	< 0.10
deltamethrin	52918-63-5	N	G127	0.1	mg/kg DW	< 0.10
fenvalerate	51630-58-1	N	G127	0.1	mg/kg DW	< 0.10
permethrin, total	52645-53-1	N	G127	0.1	mg/kg DW	< 0.10
resmethrin	10453-86-8	N	G127	0.1	mg/kg DW	< 0.10
tetramethrin	7696-12-0	N	G127	0.1	mg/kg DW	< 0.10

Deviating Samples

Report No.: 23-06925-1

Customer Reference: Not Supplied

Customer Order No: P0752516

Our policy on Deviating Samples has been implemented in accordance with UKAS Policy on Deviating Samples (TPS63).
RPS is not responsible for the integrity of samples as received, unless RPS personnel performed the sampling. Samples submitted may be declared to be deviating.
Where applicable the analysis method remains UKAS accredited, however results reported for a deviating sample may be compromised.
Where no sampling date was supplied, samples have been declared to be deviating. If the date can be supplied, results may be reissued if assessed not deviating.
Where the sample container used was unsuitable or broken, the sample is flagged as deviating and re-sampling/re-submisson may be required.

RPS No.	Customer No.	Customer ID	Date Sampled	Containers Received	Deviating	Reason for Deviation
34280	23/09902/1		04/10/2023	100 mL amber glass jar	No	

Report No.: 23-06925-1

Type	Matrix Code	Description
Food	CEREALPROD	Cereals, grains & products
Food	DRIEDFRUIT	Dried fruits
Food	FRIEDBAKED	Fried or baked food
Food	LEGUME	Legumes
Food	MEAT	Meat
Food	POWDERED	Powdered food
Food	PULSE	Pulses (dried legumes)
Food	VEGETABLES	Vegetables
Gas	TDTUBE	TD Tube
Gas	TENAX	Tenax Tube
Gas	TUBE	Tube
Gas	VAPOUR	Gas
Geological	SED_MAR	Marine Sediment
Geological	SED_RIV	River Sediment
Geological	SLUDG_SOL	Sludge (solid only)
Geological	SOIL	Soil
Liquid	BEVERAGE	Beverage
Liquid	BLOOD	Blood
Liquid	CONDENSATE	Condensate
Liquid	FORMULATN	Formula
Liquid	LEACHATE	Leachate
Liquid	OIL/GREASE	Oil or grease
Liquid	SLUDG_LIQ	Sludge (liquid only)
Liquid	SOLVENT	Solvent
Liquid	URINE	Urine
Sludge	SLUDG_WHL	Sludge for bulk route
Solid	BADGE	Badge
Solid	BEDDING	Bedding
Solid	BIOTA	Biota (general)
Solid	BIOTA_F	Biota (fish)
Solid	BIOTA_SF	Biota (shellfish)
Solid	CONSTRCTN	Construction materials
Solid	FABRIC	Fabrics & furnishing materials
Solid	FEED	Animal feed
Solid	FERTILISER	Fertiliser
Solid	FILTER	Filter
Solid	FOAM	Solid foam material
Solid	PACKAGING	Packaging material
Solid	PLANT	Plant (vegetation)
Solid	POWDER	Powder
Solid	SWAB	Swab
Water	BAL	Ballast Water
Water	BIL	Bilge Water
Water	DW	Drinking Water
Water	EFFLUENT	Effluent
Water	GW	Ground Water
Water	INFLUENT	Influent
Water	SALTW	Salt Water
Water	SW	Surface Water
Water	TW	Tap Water
Water	W	Water

Report No.: 23-06925-1

Key Code	Description
N	Not Accredited Test
U	UKAS Accredited Test - UKAS accreditation is only implied if the report carries the UKAS logo
UF	UKAS Flexible Scope Test
M	MCERTS Accredited Test - MCERTS accreditation is only implied if the report carries the MCERTS logo
O	Marine Management Organisation (MMO) Validated
SN	Subcontracted to approved laboratory not accredited for the test
SU	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
SIN	Subcontracted to internal RPS Group laboratory not accredited for the test
SIU	Subcontracted to internal RPS Group laboratory UKAS Accredited for the test
SIM	Subcontracted to internal RPS Group laboratory MCERTS/UKAS Accredited for the test
I/S (in results)	Insufficient Sample
U/S (in results)	Unsuitable Sample
S/C (in results)	See Comments
ND (in results)	Not Detected
L (in results)	Result is outside normal limits
DW (in units)	Results are expressed on a dry weight basis

Sample Type	Sample Retention and Disposal Period
Foodstuff	1 month (if frozen) from the issue date of this report
Waters	2 weeks from the issue date of this report
Other Liquids	1 month from the issue date of this report
Solids / Soils	1 month from the issue date of this report
Sediments	1 month from the issue date of this report

Note: Sample retention may be subject to agreement with the customer for particular projects

Where the dry solids value of a sample is low (<50%), reporting limits are automatically raised for all determinants analysed on an as-received basis.

Soil Typing	Description
Type 1	Clay - Brown
Type 2	Clay - Grey/Black
Type 3	Sand
Type 4	Top Soil (Standard)
Type 5	Top Soil (High Peat)
Type 6	Made Ground (>50% Clay)
Type 7	Made Ground (>50% Sand)
Type 8	Made Ground (>50% Top Soil)
Type X	Other

Dev code	Description
D	No sampling date provided.
T	No sampling time provided.
Z	Temperature of samples exceeded in transit/storage.
V	Excessive headspace for volatile determinands.
P	Sample submitted without required preservative(s).
C	Incorrect container.
H	Holding time exceeded (sampling to extraction).
X	Holding time exceeded (sampling to receipt).

Note: Where the following information is included in this certificate, it has usually been supplied by the customer: Customer Sample ID, Sample Location, Sample Depth, Sampling Date and Sampling Time. The laboratory shall not be responsible for any information that is supplied by the customer that may affect the validity of results.

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Units 7 & 8, Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

Final Test Report

Envirolab Job Number:	23/09979
Issue Number:	1
Date:	20-Oct-23

Client: Structural Soils Limited (Hemel Hempstead)
18 Frogmore Road
Hemel Hempstead
UK
HP3 9RT

Project Manager:	[redacted]
Project Name:	Sealink Friston
Project Ref:	563835
Order No:	N/A
Date Samples Received:	10-Oct-23
Date Instructions Received:	10-Oct-23
Date Analysis Completed:	20-Oct-23

Notes - Soil analysis

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones >10mm are removed or excluded from the sample prior to analysis and reported results corrected to a whole sample basis.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis.

Notes - General

This report shall not be reproduced, except in full, without written approval from Envirolab.

Subscript "A" indicates analysis performed on the sample as received. "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve, unless asbestos is found to be present in which case all analysis is performed on the sample as received.

All analysis is performed on the dried and crushed sample for samples with Matrix Code 7 and this supercedes any "A" subscripts.

All analysis is performed on the sample as received for soil samples from outside the European Union and this supercedes any "D" subscripts

For complex, multi-compound analysis, quality control results do not always fall within chart limits for every compound and we have criteria for reporting in these situations.

If results are in italic font they are associated with such quality control failures and may be unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid

Predominant Matrix Codes: 1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample

Secondary Matrix Codes: A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal, E = contains roots/twigs.

IS indicates Insufficient sample for analysis, NDP indicates No Determination Possible and NAD indicates No Asbestos Detected.

Analytical results reflect the quality of the sample at the time of analysis only. Opinions and interpretations expressed are outside the scope of our accreditation.

Please contact us if you need any further information.

HWOL TPH Code: EH_CU_1D_AL: Extractable hydrocarbons - i.e. everything extracted by the solvent(s), Clean-up - e.g. by florisil, silica gel, GC - Single coil gas chromatography, Aliphatics only

Approved by:

[redacted]

Client Manager

Landfill WAC analysis must not be used for hazardous waste classification purposes. This analysis is only applicable for landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Sample Details						Landfill Waste Acceptance Criteria Limits		
Lab Sample ID	Method	ISO17025	MCERTS	23/09979/3				
Client Sample Number				103		Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
Client Sample ID				F22-BH502				
Depth to Top				1				
Depth to Bottom								
Date Sampled				05/10/2023				
Sample Type				Soil - ES				
Sample Matrix Code				1A				
Solid Waste Analysis								
pH (pH Units)$_D$	A-T-031	N	N	**7.66**		-	>6	-
ANC to pH 4 (mol/kg)$_D$	A-T-ANC	N	N	**0.03**		-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg)$_D$	A-T-ANC	N	N	**0.01**		-	to be evaluated	to be evaluated
Loss on Ignition (%)$_D$	A-T-030	N	N	**1.9**		-	-	10
Total Organic Carbon (%)$_D$	A-T-032	N	N	**0.09**		3	5	6
PAH Sum of 17 (mg/kg) $_A$	A-T-019	N	N	**<0.08**		100	-	-
Mineral Oil (mg/kg)$_{A\ EH_CU_1D_AL}$	A-T-007	N	N	**<10**		500	-	-
Sum of 7 PCBs (mg/kg)$_A$	A-T-004	N	N	**<0.007**		1	-	-
Sum of BTEX (mg/kg)$_A$	A-T-022	N	N	**<0.01**		6	-	-
Eluate Analysis				**10:1 mg/l**	**10:1 mg/kg**	**Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)**		
Arsenic	A-T-025	N	N	0.004	**0.040**	0.5	2	25
Barium	A-T-025	N	N	0.166	**1.660**	20	100	300
Cadmium	A-T-025	N	N	<0.001	**<0.01**	0.04	1	5
Chromium	A-T-025	N	N	0.002	**0.020**	0.5	10	70
Copper	A-T-025	N	N	0.017	**0.170**	2	50	100
Mercury	A-T-025	N	N	<0.0005	**<0.005**	0.01	0.2	2
Molybdenum	A-T-025	N	N	<0.001	**<0.01**	0.5	10	30
Nickel	A-T-025	N	N	0.005	**0.050**	0.4	10	40
Lead	A-T-025	N	N	0.015	**0.150**	0.5	10	50
Antimony	A-T-025	N	N	<0.001	**<0.01**	0.06	0.7	5
Selenium	A-T-025	N	N	0.001	**0.010**	0.1	0.5	7
Zinc	A-T-025	N	N	0.016	**0.160**	4	50	200
Chloride	A-T-026	N	N	2	**18**	800	15000	25000
Fluoride	A-T-026	N	N	0.2	**2.0**	10	150	500
Sulphate as SO_4	A-T-026	N	N	16	**155**	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	<20	**<200**	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	**<0.1**	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	<2.0	**<200**	500	800	1000
Leach Test Information								
pH (pH Units)	A-T-031	N	N	7.6				
Conductivity (µS/cm)	A-T-037	N	N	15				
Mass Sample (kg)				0.206				
Dry Matter (%)	A-T-044	N	N	85.1				

Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation

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Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 23/09979
Issue Number: 1 **Date:** 20 October, 2023

Client: Structural Soils Limited (Hemel Hempstead)
18 Frogmore Road
Hemel Hempstead
UK
HP3 9RT

Project Manager: [redacted]
Project Name: Sealink Friston
Project Ref: 563835
Order No: N/A
Date Samples Received: 10/10/23
Date Instructions Received: 10/10/23
Date Analysis Completed: 20/10/23

Approved by:

[redacted]
Client Manager

Envirolab Job Number: 23/09979

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09979/2	23/09979/3						Units	Limit of Detection	Method ref
Client Sample No	102	103								
Client Sample ID	F22-BH502	F22-BH502								
Depth to Top	0.30	1.00								
Depth To Bottom										
Date Sampled	05-Oct-23	05-Oct-23								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	1A	1A								
% Moisture at 105C$_A$	28.9	-						% w/w	0.1	A-T-044
% Stones >10mm$_A$	<0.1	<0.1						% w/w	0.1	A-T-044
pH$_D^{M\#}$	8.14	7.66						pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D^{M\#}$	0.02	-						g/l	0.01	A-T-026s
Sulphur (total)$_D$	<50	-						mg/kg	50	A-T-024s
Cyanide (free)$_A^{M\#}$	<1	-						mg/kg	1	A-T-042sFCN
Phenols - Total by HPLC$_A$	<0.2	-						mg/kg	0.2	A-T-050s
Organic Matter$_D^{M\#}$	<0.1	-						% w/w	0.1	A-T-032s
Total Organic Carbon$_D^{M\#}$	0.03	0.09						% w/w	0.03	A-T-032s
Fraction of organic carbon$_D^{\#}$	0.0003	-						N/A	0.0003	A-T-032s
Arsenic$_D^{M\#}$	1	-						mg/kg	1	A-T-024s
Barium$_D$	13	-						mg/kg	1	A-T-024s
Beryllium$_D$	<0.5	-						mg/kg	0.5	A-T-024s
Boron (water soluble)$_D^{M\#}$	<1.0	-						mg/kg	1	A-T-027s
Cadmium$_D^{M\#}$	<0.5	-						mg/kg	0.5	A-T-024s
Copper$_D^{M\#}$	<1	-						mg/kg	1	A-T-024s
Chromium$_D^{M\#}$	7	-						mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	-						mg/kg	1	A-T-040s
Chromium (trivalent)	7	-						mg/kg	1	Calc
Lead$_D^{M\#}$	3	-						mg/kg	1	A-T-024s
Manganese$_D^{M\#}$	44	-						mg/kg	1	A-T-024s
Mercury$_D$	<0.17	-						mg/kg	0.17	A-T-024s
Molybdenum$_D^{M\#}$	<1	-						mg/kg	1	A-T-024s
Nickel$_D^{M\#}$	4	-						mg/kg	1	A-T-024s
Selenium$_D^{M\#}$	<1	-						mg/kg	1	A-T-024s
Vanadium$_D^{M\#}$	14	-						mg/kg	1	A-T-024s
Zinc$_D^{M\#}$	6	-						mg/kg	5	A-T-024s

Envirolab Job Number: 23/09979

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09979/2	23/09979/3						Units	Limit of Detection	Method ref
Client Sample No	102	103								
Client Sample ID	F22-BH502	F22-BH502								
Depth to Top	0.30	1.00								
Depth To Bottom										
Date Sampled	05-Oct-23	05-Oct-23								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	1A	1A								
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD	-								A-T-045
Asbestos Matrix (visual)$_{D}$	-	-								A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-								A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	-								A-T-045

Envirolab Job Number: 23/09979

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/09979/2	23/09979/3						Units	Limit of Detection	Method ref
Client Sample No	102	103								
Client Sample ID	F22-BH502	F22-BH502								
Depth to Top	0.30	1.00								
Depth To Bottom										
Date Sampled	05-Oct-23	05-Oct-23								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	1A	1A								
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01	-						mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	-						mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	-						mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	<0.04	-						mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	<0.04	-						mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	<0.05	-						mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	-						mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	-						mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	<0.06	-						mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A$	<0.04	-						mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	<0.08	-						mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	-						mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	<0.03	-						mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	-						mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	<0.03	-						mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	<0.07	-						mg/kg	0.07	A-T-019s
Total PAH-16MS$_A$	<0.08	-						mg/kg	0.01	A-T-019s

Report Notes

General
This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **six weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
Analytical results reflect the quality of the sample at the time of analysis only.
Opinions and Interpretations expressed are outside our scope of accreditation.
The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client.
A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

Key

Superscript "#"	Accredited to ISO 17025
Superscript "M"	Accredited to MCertS
Superscript "U"	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript "A"	Analysis performed on as-received Sample
Subscript "D"	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript "^"	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
N/A	Not applicable

Asbestos
Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis
Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing, and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25ºC / 11550µS/cm @ 20ºC fall outside the accreditation range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Structural Soils Limited (Hemel Hempstead), 18 Frogmore Road, Hemel Hempstead, UK, HP3 9RT

Project: Sealink Friston

Clients Project No: 563835

Project No: 23/09979

Date Received: 10/10/2023 (am)

Cool Box Temperatures (°C): 15.7

NO DEVIATIONS IDENTIFIED

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	23/09979/2	23/09979/3
Client Sample No	102	103
Client Sample ID/Depth	F22-BH502 0.30m	F22-BH502 1.00m
Date Sampled	05/10/23	05/10/23
A-T-004s		12/10/2023
A-T-007s		16/10/2023
A-T-019s	18/10/2023	18/10/2023
A-T-022s		13/10/2023
A-T-024s	12/10/2023	
A-T-025w		19/10/2023
A-T-026s	13/10/2023	
A-T-026w		19/10/2023
A-T-026w (F)		19/10/2023
A-T-027s	13/10/2023	
A-T-030s		12/10/2023
A-T-031s	12/10/2023	12/10/2023
A-T-031w		19/10/2023
A-T-032s	12/10/2023	12/10/2023
A-T-032w		19/10/2023
A-T-037w		19/10/2023
A-T-040s	20/10/2023	
A-T-042sFCN	16/10/2023	
A-T-044	14/10/2023	13/10/2023
A-T-045	11/10/2023	
A-T-050s	12/10/2023	
A-T-050w		19/10/2023
A-T-ANCs		12/10/2023
Calc	20/10/2023	
Calc-no stones		19/10/2023
Probe (w)		19/10/2023

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

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Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 23/10036
Issue Number: 1 **Date:** 04 December, 2023

Client: Structural Soils Limited (Hemel Hempstead)
18 Frogmore Road
Hemel Hempstead
UK
HP3 9RT

Project Manager: [redacted]
Project Name: Sealink Friston
Project Ref: 563835
Order No: N/A
Date Samples Received: 11/10/23
Date Instructions Received: 11/10/23
Date Analysis Completed: 04/12/23

Approved by:

[redacted]
Client Manager

Envirolab Job Number: 23/10036

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/10036/1	23/10036/3	23/10036/4					Units	Limit of Detection	Method ref
Client Sample No	101	103	104							
Client Sample ID	F22-BH501	F22-BH501	F22-BH501							
Depth to Top	0.10	0.60	1.00							
Depth To Bottom										
Date Sampled	09-Oct-23	09-Oct-23	09-Oct-23							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	6AE	4AE	5AE							
% Stones >10mm$_A$	<0.1	<0.1	<0.1					% w/w	0.1	A-T-044
Leachate Prep BS EN 12457-1 (2:1) (1 no)$_A$	-	-	*							A-T-001
pH (leachable)$_A$	-	-	6.34					pH	0.01	A-T-031w
Ammoniacal nitrogen as N (leachable)$_A$	-	-	0.65					mg/l	0.05	A-T-033w
Chloride (leachable)$_A$	-	-	1.38					mg/l	1	A-T-026w
Fluoride (leachable)$_A$	-	-	<0.10					mg/l	0.1	A-T-026w (F)
Sulphate (leachable)$_A$	-	-	189.54					mg/l	1	A-T-026w
Cyanide (free) (leachable)$_A$	-	-	<0.005					mg/l	0.005	A-T-042wFCN
Cyanide (total) (leachable)$_A$	-	-	<0.005					mg/l	0.005	A-T-042wTCN
Cyanide (complex) (leachable)	-	-	<0.005					mg/l	0.005	Calc
Phenol (leachable)$_A$	-	-	<0.01					mg/l	0.01	A-T-050w
Cresols (leachable)$_A$	-	-	<0.01					mg/l	0.01	A-T-050w
Resorcinol (leachable)$_A$	-	-	<0.01					mg/l	0.01	A-T-050w
Catechol (leachable)$_A$	-	-	<0.01					mg/l	0.01	A-T-050w
Xylenols & Ethylphenols (leachable)$_A$	-	-	<0.01					mg/l	0.01	A-T-050w
Naphthols (leachable)$_A$	-	-	<0.01					mg/l	0.01	A-T-050w
Trimethylphenol (leachable)$_A$	-	-	<0.01					mg/l	0.01	A-T-050w
Phenols (total by HPLC) (leachable)$_A$	-	-	<0.01					mg/l	0.01	A-T-050w
Antimony (leachable)$_A$	-	-	<1					µg/l	1	A-T-025w
Arsenic (leachable)$_A$	-	-	3					µg/l	1	A-T-025w
Boron (leachable)$_A$	-	-	29					µg/l	10	A-T-025w
Barium (leachable)$_A$	-	-	11					µg/l	1	A-T-025w
Beryllium (leachable)$_A$	-	-	<1					µg/l	1	A-T-025w
Cadmium (leachable)$_A$	-	-	<1					µg/l	1	A-T-025w
Copper (leachable)$_A$	-	-	<4					µg/l	4	A-T-025w
Chromium (leachable)$_A$	-	-	<1					µg/l	1	A-T-025w
Chromium (hexavalent) (leachable)$_A$	-	-	<0.05					mg/l	0.05	A-T-040w
Chromium (trivalent)	-	-	<0.05					mg/l	0.05	Calc
Iron (leachable)$_A$	-	-	24					µg/l	10	A-T-025w
Lead (leachable)$_A$	-	-	<1					µg/l	1	A-T-025w
Manganese (leachable)$_A$	-	-	89					µg/l	1	A-T-025w
Magnesium (leachable)$_A$	-	-	1					mg/l	1	A-T-049w
Mercury (leachable)$_A$	-	-	<0.1					µg/l	0.1	A-T-025w

Lab Sample ID	23/10036/1	23/10036/3	23/10036/4					Units	Limit of Detection	Method ref
Client Sample No	101	103	104							
Client Sample ID	F22-BH501	F22-BH501	F22-BH501							
Depth to Top	0.10	0.60	1.00							
Depth To Bottom										
Date Sampled	09-Oct-23	09-Oct-23	09-Oct-23							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	6AE	4AE	5AE							
Molybdenum (leachable)$_A$	-	-	<1					µg/l	1	A-T-025w
Nickel (leachable)$_A$	-	-	3					µg/l	2	A-T-025w
Selenium (leachable)$_A$	-	-	<1					µg/l	1	A-T-025w
Vanadium (leachable)$_A$	-	-	<1					µg/l	1	A-T-025w
Zinc (leachable)$_A$	-	-	4					µg/l	2	A-T-025w
Bentazone$_A$	<0.10	-	-					mg/kg	0.1	Subcon RPS MH
Cypermethrin$_A$	<0.10	-	-					mg/kg	0.1	Subcon RPS MH
Linuron$_A$	<0.10	-	-					mg/kg	0.1	Subcon RPS MH
Alachlor$_A$	<0.02	-	-					mg/kg	0.02	Subcon RPS MH
Carbaryl$_A$	<0.10	-	-					mg/kg	0.1	Subcon RPS MH
Diuron$_A$	<0.10	-	-					mg/kg	0.1	Subcon RPS MH
Isoproturon$_A$	<0.10	-	-					mg/kg	0.1	Subcon RPS MH
MCPP; (Mecoprop)$_A$	<0.10	-	-					mg/kg	0.1	Subcon RPS MH
Calcium (leachable)$_A$	-	-	58					mg/l	1	A-T-049w

Lab Sample ID	23/10036/1	23/10036/3	23/10036/4					Units	Limit of Detection	Method ref
Client Sample No	101	103	104							
Client Sample ID	F22-BH501	F22-BH501	F22-BH501							
Depth to Top	0.10	0.60	1.00							
Depth To Bottom										
Date Sampled	09-Oct-23	09-Oct-23	09-Oct-23							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	6AE	4AE	5AE							
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	-	NAD	-							A-T-045
Asbestos Matrix (visual)$_{D}$	-	-	-							A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-	-							A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	-	N/A	-							A-T-045
OCP+OPP Combined Pest Suite (incl. Atrazine and Simazine)										
Dichlobenil$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
Tecnazene$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
Trifluralin$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
alpha-Hexachlorocyclohexane (HCH)$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
Hexachlorobenzene (HCB) $_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
Simazine$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
Atrazine$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
beta-Hexachlorocyclohexane (HCH)$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
Quintozene (PCNB)$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
Chlorothalonil$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
delta-Hexachlorocyclohexane (HCH)$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
Triallate$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
Heptachlor$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
Aldrin$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
Triadimefon$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
Telodrin$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
Isodrin$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
Pendimethalin$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
Heptachlor epoxide$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
trans-Chlordane (Gamma)$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
o,p-DDE (2,4)$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
Endosulphan I (Alpha)$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
cis-Chlordane (Alpha)$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
p,p-DDE (4,4)$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056
Dieldrin$_{A}$	<0.01	-	-					mg/kg	0.01	A-T-056

Lab Sample ID	23/10036/1	23/10036/3	23/10036/4					Units	Limit of Detection	Method ref
Client Sample No	101	103	104							
Client Sample ID	F22-BH501	F22-BH501	F22-BH501							
Depth to Top	0.10	0.60	1.00							
Depth To Bottom										
Date Sampled	09-Oct-23	09-Oct-23	09-Oct-23							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	6AE	4AE	5AE							
o,p-DDD (2,4)$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Endrin$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Endosulphan II (Beta)$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
p,p-DDD (4,4)$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
o,p-DDT (2,4)$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Endrin Aldehyde$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Endrin Ketone$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Endosulphan Sulphate$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
p,p-DDT (4,4)$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
o,p-Methoxychlor$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
p,p-Methoxychlor$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Permethrin I (cis)$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Permethrin II (trans)$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Dichlorvos$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Mevinphos$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Demeton-S$_A$	<0.50	-	-					mg/kg	0.5	A-T-056
Demeton-O$_A$	<0.50	-	-					mg/kg	0.5	A-T-056
Phorate$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Dimethoate$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Propetamphos$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Diazinon (Dimpylate)$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Disulfoton$_A$	<0.10	-	-					mg/kg	0.1	A-T-056
Chlorpyrifos-methyl$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Parathion (Ethyl Parathion)$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Methyl Parathion$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Pirimiphos-methyl$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Fenitrothion$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Fensulphothion$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Fenthion$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Malathion$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Chlorfenvinphos$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Chlorpyrifos$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Trichloronate$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Prothiofos (Tokuthion)$_A$	<0.01	-	-					mg/kg	0.01	A-T-056

Lab Sample ID	23/10036/1	23/10036/3	23/10036/4					Units	Limit of Detection	Method ref
Client Sample No	101	103	104							
Client Sample ID	F22-BH501	F22-BH501	F22-BH501							
Depth to Top	0.10	0.60	1.00							
Depth To Bottom										
Date Sampled	09-Oct-23	09-Oct-23	09-Oct-23							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	6AE	4AE	5AE							
Ethion$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Triazophos$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Carbophenothion$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Phosalone$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Azinphos-methyl$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Azinphos-ethyl$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
Coumaphos$_A$	<0.01	-	-					mg/kg	0.01	A-T-056
gamma-Hexachlorocyclohexane (HCH)$_A$	<0.01	-	-					mg/kg	0.01	A-T-056

Envirolab Job Number: 23/10036

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/10036/1	23/10036/3	23/10036/4					Units	Limit of Detection	Method ref
Client Sample No	101	103	104							
Client Sample ID	F22-BH501	F22-BH501	F22-BH501							
Depth to Top	0.10	0.60	1.00							
Depth To Bottom										
Date Sampled	09-Oct-23	09-Oct-23	09-Oct-23							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	6AE	4AE	5AE							
Speciated PCB-WHO12										
PCB BZ 81$_A^{M\#}$	-	<0.005^U	-					mg/kg	0.005	A-T-004s
PCB BZ 105$_A^{M\#}$	-	<0.005^U	-					mg/kg	0.005	A-T-004s
PCB BZ 114$_A^{M\#}$	-	<0.005^U	-					mg/kg	0.005	A-T-004s
PCB BZ 118$_A^{M\#}$	-	<0.007	-					mg/kg	0.007	A-T-004s
PCB BZ 123$_A^{M\#}$	-	<0.005^U	-					mg/kg	0.005	A-T-004s
PCB BZ 126$_A^{M\#}$	-	<0.005^U	-					mg/kg	0.005	A-T-004s
PCB BZ 156$_A^{M\#}$	-	<0.005^U	-					mg/kg	0.005	A-T-004s
PCB BZ 157$_A^{M\#}$	-	<0.005^U	-					mg/kg	0.005	A-T-004s
PCB BZ 167$_A^{M\#}$	-	<0.005^U	-					mg/kg	0.005	A-T-004s
PCB BZ 169$_A^{M\#}$	-	<0.005^U	-					mg/kg	0.005	A-T-004s
PCB BZ 189$_A^{M\#}$	-	<0.005^U	-					mg/kg	0.005	A-T-004s
PCB BZ 77$_A^{M\#}$	-	<0.005^U	-					mg/kg	0.005	A-T-004s
Total Speciated PCB-WHO12$_A^{M\#}$	-	<0.007	-					mg/kg	0.005	A-T-004s

Envirolab Job Number: 23/10036

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/10036/1	23/10036/3	23/10036/4					Units	Limit of Detection	Method ref
Client Sample No	101	103	104							
Client Sample ID	F22-BH501	F22-BH501	F22-BH501							
Depth to Top	0.10	0.60	1.00							
Depth To Bottom										
Date Sampled	09-Oct-23	09-Oct-23	09-Oct-23							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	6AE	4AE	5AE							
TPH CWG with Clean Up										
Ali >C5-C6$_A$	-	<0.01	-					mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	-	<0.01	-					mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	-	<1	-					mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	-	<1	-					mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	-	<1	-					mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	-	<1	-					mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	-	9	-					mg/kg	1	A-T-055s
Total Aliphatics$_A$	-	9	-					mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	-	<0.01	-					mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	-	<0.01	-					mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	-	<1	-					mg/kg	1	A-T-055s
Aro >C10-C12$_A$	-	<1	-					mg/kg	1	A-T-055s
Aro >C12-C16$_A^{M\#}$	-	<1	-					mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	-	<1	-					mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	-	4	-					mg/kg	1	A-T-055s
Total Aromatics$_A$	-	4	-					mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	-	13	-					mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	-	<0.01	-					mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	-	<0.01	-					mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	-	<0.01	-					mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	-	<0.01	-					mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	-	<0.01	-					mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	-	<0.01	-					mg/kg	0.01	A-T-022s

Report Notes

General
This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **six weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
Analytical results reflect the quality of the sample at the time of analysis only.
Opinions and Interpretations expressed are outside our scope of accreditation.
The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client.
A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

Key

Superscript "#"	Accredited to ISO 17025
Superscript "M"	Accredited to MCertS
Superscript "U"	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript "A"	Analysis performed on as-received Sample
Subscript "D"	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript "^"	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
N/A	Not applicable

Asbestos
Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis
Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing, and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25ºC / 11550µS/cm @ 20ºC fall outside the accreditation range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Structural Soils Limited (Hemel Hempstead), 18 Frogmore Road, Hemel Hempstead, UK, HP3 9RT

Project: Sealink Friston

Clients Project No: 563835

Project No: 23/10036

Date Received: 11/10/2023 (am)

Cool Box Temperatures (°C): 17.2 & 17.5

NO DEVIATIONS IDENTIFIED

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	23/10036/1	23/10036/3	23/10036/4
Client Sample No	101	103	104
Client Sample ID/Depth	F22-BH501 0.10m	F22-BH501 0.60m	F22-BH501 1.00m
Date Sampled	09/10/23	09/10/23	09/10/23
A-T-004s		13/10/2023	13/10/2023
A-T-007s		18/10/2023	18/10/2023
A-T-019s		18/10/2023	18/10/2023
A-T-022s		17/10/2023	17/10/2023
A-T-025w		30/10/2023	30/10/2023
A-T-026w		30/10/2023	30/10/2023
A-T-026w (F)		30/10/2023	30/10/2023
A-T-030s		24/10/2023	24/10/2023
A-T-031s		19/10/2023	19/10/2023
A-T-031w		30/10/2023	30/10/2023
A-T-032s		24/10/2023	24/10/2023
A-T-032w		30/10/2023	30/10/2023
A-T-033w			24/10/2023
A-T-037w		30/10/2023	30/10/2023
A-T-040w			19/10/2023
A-T-042wFCN			19/10/2023
A-T-042wTCN			19/10/2023
A-T-044	19/10/2023	19/10/2023	19/10/2023
A-T-045		12/10/2023	
A-T-049w			23/10/2023
A-T-050w		30/10/2023	30/10/2023
A-T-055s		17/10/2023	
A-T-056	23/10/2023		
A-T-ANCs		19/10/2023	19/10/2023
Calc			19/10/2023
Calc-As Recd		17/10/2023	
Calc-no stones		30/10/2023	30/10/2023
Probe (w)		30/10/2023	30/10/2023

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

Units 7 & 8, Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

Final Test Report

Envirolab Job Number: 23/10036
Issue Number: 1 Date: 4-Dec-23

Client: Structural Soils Limited (Hemel Hempstead)
18 Frogmore Road
Hemel Hempstead
UK
HP3 9RT

Project Manager: [redacted]
Project Name: Sealink Friston
Project Ref: 563835
Order No: N/A

Date Samples Received: 11-Oct-23
Date Instructions Received: 11-Oct-23
Date Analysis Completed: 4-Dec-23

Notes - Soil analysis

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones >10mm are removed or excluded from the sample prior to analysis and reported results corrected to a whole sample basis.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis.

Notes - General

This report shall not be reproduced, except in full, without written approval from Envirolab.

Subscript "A" indicates analysis performed on the sample as received. "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve, unless asbestos is found to be present in which case all analysis is performed on the sample as received.

All analysis is performed on the dried and crushed sample for samples with Matrix Code 7 and this supercedes any "A" subscripts.

All analysis is performed on the sample as received for soil samples from outside the European Union and this supercedes any "D" subscripts

For complex, multi-compound analysis, quality control results do not always fall within chart limits for every compound and we have criteria for reporting in these situations.

If results are in italic font they are associated with such quality control failures and may be unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid

Predominant Matrix Codes: 1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample

Secondary Matrix Codes: A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal, E = contains roots/twigs.

IS indicates Insufficient sample for analysis, NDP indicates No Determination Possible and NAD indicates No Asbestos Detected.

Analytical results reflect the quality of the sample at the time of analysis only. Opinions and interpretations expressed are outside the scope of our accreditation.

Please contact us if you need any further information.

HWOL TPH Code: EH_CU_1D_AL: Extractable hydrocarbons - i.e. everything extracted by the solvent(s), Clean-up - e.g. by florisil, silica gel, GC - Single coil gas chromatography, Aliphatics only

Approved by:

[redacted]

Client Manager

Landfill WAC analysis must not be used for hazardous waste classification purposes. This analysis is only applicable for landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Sample Details						Landfill Waste Acceptance Criteria Limits		
Lab Sample ID	Method	ISO17025	MCERTS	23/10036/3		Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
Client Sample Number				**103**				
Client Sample ID				F22-BH501				
Depth to Top				0.6				
Depth to Bottom								
Date Sampled				09/10/2023				
Sample Type				Soil - ES				
Sample Matrix Code				4AE				
Solid Waste Analysis								
pH (pH Units)$_D$	A-T-031	N	N	**6.12**		-	>6	-
ANC to pH 4 (mol/kg)$_D$	A-T-ANC	N	N	**0.04**		-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg)$_D$	A-T-ANC	N	N	**<0.01**		-	to be evaluated	to be evaluated
Loss on Ignition (%)$_D$	A-T-030	N	N	**5.4**		-	-	10
Total Organic Carbon (%)$_D$	A-T-032	N	N	**3.36**		3	5	6
PAH Sum of 17 (mg/kg)$_A$	A-T-019	N	N	**<0.08**		100	-	-
Mineral Oil (mg/kg)$_{A\ EH_CU_1D_AL}$	A-T-007	N	N	**<10**		500	-	-
Sum of 7 PCBs (mg/kg)$_A$	A-T-004	N	N	**<0.007**		1	-	-
Sum of BTEX (mg/kg)$_A$	A-T-022	N	N	**<0.01**		6	-	-
Eluate Analysis				**10:1** mg/l	**10:1** mg/kg	**Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)**		
Arsenic	A-T-025	N	N	0.001	**0.010**	0.5	2	25
Barium	A-T-025	N	N	0.029	**0.290**	20	100	300
Cadmium	A-T-025	N	N	<0.001	**<0.01**	0.04	1	5
Chromium	A-T-025	N	N	<0.001	**<0.01**	0.5	10	70
Copper	A-T-025	N	N	<0.004	**<0.04**	2	50	100
Mercury	A-T-025	N	N	<0.0005	**<0.005**	0.01	0.2	2
Molybdenum	A-T-025	N	N	<0.001	**<0.01**	0.5	10	30
Nickel	A-T-025	N	N	<0.002	**<0.02**	0.4	10	40
Lead	A-T-025	N	N	<0.001	**<0.01**	0.5	10	50
Antimony	A-T-025	N	N	<0.001	**<0.01**	0.06	0.7	5
Selenium	A-T-025	N	N	<0.001	**<0.01**	0.1	0.5	7
Zinc	A-T-025	N	N	0.014	**0.140**	4	50	200
Chloride	A-T-026	N	N	<1.00	**<10**	800	15000	25000
Fluoride	A-T-026	N	N	<0.10	**<1**	10	150	500
Sulphate as SO_4	A-T-026	N	N	554	**5544**	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	531	**5310**	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	**<0.1**	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	<2.0	**<200**	500	800	1000
Leach Test Information								
pH (pH Units)	A-T-031	N	N	6.2				
Conductivity (µS/cm)	A-T-037	N	N	1061				
Mass Sample (kg)				0.261				
Dry Matter (%)	A-T-044	N	N	67.1				

Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation

Landfill WAC analysis must not be used for hazardous waste classification purposes. This analysis is only applicable for landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Sample Details						Landfill Waste Acceptance Criteria Limits		
Lab Sample ID	Method	ISO17025	MCERTS	23/10036/4		Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
Client Sample Number				**104**				
Client Sample ID				F22-BH501				
Depth to Top				1				
Depth to Bottom								
Date Sampled				09/10/2023				
Sample Type				Soil - ES				
Sample Matrix Code				5AE				
Solid Waste Analysis								
pH (pH Units)$_D$	A-T-031	**N**	**N**	**6.31**		-	>6	-
ANC to pH 4 (mol/kg)$_D$	A-T-ANC	**N**	**N**	**0.02**		-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg)$_D$	A-T-ANC	**N**	**N**	**<0.01**		-	to be evaluated	to be evaluated
Loss on Ignition (%)$_D$	A-T-030	**N**	**N**	**2**		-	-	10
Total Organic Carbon (%)$_D$	A-T-032	**N**	**N**	**0.66**		3	5	6
PAH Sum of 17 (mg/kg) $_A$	A-T-019	**N**	**N**	**<0.08**		100	-	-
Mineral Oil (mg/kg)$_{A\ EH_CU_1D_AL}$	A-T-007	**N**	**N**	**<10**		500	-	-
Sum of 7 PCBs (mg/kg)$_A$	A-T-004	**N**	**N**	**<0.007**		1	-	-
Sum of BTEX (mg/kg)$_A$	A-T-022	**N**	**N**	**<0.01**		6	-	-
Eluate Analysis				**10:1** mg/l	**10:1** mg/kg	**Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)**		
Arsenic	A-T-025	**N**	**N**	0.002	**0.020**	0.5	2	25
Barium	A-T-025	**N**	**N**	0.013	**0.130**	20	100	300
Cadmium	A-T-025	**N**	**N**	<0.001	**<0.01**	0.04	1	5
Chromium	A-T-025	**N**	**N**	<0.001	**<0.01**	0.5	10	70
Copper	A-T-025	**N**	**N**	<0.004	**<0.04**	2	50	100
Mercury	A-T-025	**N**	**N**	<0.0005	**<0.005**	0.01	0.2	2
Molybdenum	A-T-025	**N**	**N**	<0.001	**<0.01**	0.5	10	30
Nickel	A-T-025	**N**	**N**	0.002	**0.020**	0.4	10	40
Lead	A-T-025	**N**	**N**	0.001	**0.010**	0.5	10	50
Antimony	A-T-025	**N**	**N**	<0.001	**<0.01**	0.06	0.7	5
Selenium	A-T-025	**N**	**N**	<0.001	**<0.01**	0.1	0.5	7
Zinc	A-T-025	**N**	**N**	0.005	**0.050**	4	50	200
Chloride	A-T-026	**N**	**N**	<1.00	**<10**	800	15000	25000
Fluoride	A-T-026	**N**	**N**	<0.10	**<1**	10	150	500
Sulphate as SO_4	A-T-026	**N**	**N**	58	**581**	1000	20000	50000
Total Dissolved Solids	A-T-035	**N**	**N**	72	**720**	4000	60000	100000
Phenol Index	A-T-050	**N**	**N**	<0.01	**<0.1**	1	-	-
Dissolved Organic Carbon	A-T-032	**N**	**N**	<2.0	**<200**	500	800	1000
Leach Test Information								
pH (pH Units)	A-T-031	**N**	**N**	6.4				
Conductivity (µS/cm)	A-T-037	**N**	**N**	143				
Mass Sample (kg)				0.22				
Dry Matter (%)	A-T-044	**N**	**N**	79.7				

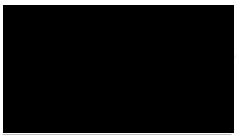
Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation

Certificate of Analysis

Report No.: **23-07973-1**

Issue No.: **1**
Date of Issue **04/12/2023**

Customer Details:	Envirolab Ltd, 7 - 8 Sandpits Business Park, Mottram Road, Hyde, Greater Manchester, SK14 3AR, United Kingdom
Customer Contact:	[redacted]
Customer Order No.:	P0752825
Customer Reference:	Not Supplied
Quotation Reference:	Q22-00104 (Issue: 36)
Description:	1 geo sample
Date Received:	21/11/2023
Date Started:	22/11/2023
Date Completed:	04/12/2023
Test Methods:	Details available on request (refer to SOP code against relevant result/s)
Notes:	None



Approved By: [redacted], **Study Manager**

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service.
This certificate shall not be reproduced except in full without the prior written approval of the laboratory.
Observations and interpretations are outside of the scope of UKAS accreditation.
Results reported herein relate only to the items supplied to the laboratory for testing.
Results on an Interim Report are not dry-weight corrected.
Where the laboratory is not responsible for the sampling, results apply to the sample(s) as they were received.
The laboratory shall not be responsible for any information that is supplied by the customer that may affect the validity of results.

RPS Environmental Management Limited trading as RPS Mountainheath. Registered in England No. 01756175.
13 St Martins Way, Bedford, Bedfordshire, MK42 0LF. T +44 1462 480 400
A member of the RPS Group plc. Terms and conditions apply - copy on request

Results Summary

Report No.: 23-07973-1

Customer Reference: Not Supplied

Customer Order No: P0752825

Customer Sample No	**23/10036/1**
RPS Sample No	37677
Sample Type	**GEO**
Sample Matrix	SOIL
Sampling Date	09/10/2023

Determinand	CAS No	Codes	SOP	RL	Units	
carbaryl	63-25-2	N	L001	0.1	mg/kg AR	< 0.10 (T)
2,4,5-trichlorophenoxyacetic acid (2,4,5-T)	93-76-5	N	L340	0.1	mg/kg DW	< 0.10 (T)
2,4,5-TP (Fenoprop)	93-72-1	N	L340	0.1	mg/kg DW	< 0.10 (T)
2,4-dichlorophenoxyacetic acid (2,4-D)	94-75-7	N	L340	0.1	mg/kg DW	< 0.10 (T)
acifluorfen	50594-66-6	N	L340	0.1	mg/kg DW	< 0.10 (T)
bentazone	25057-89-0	N	L340	0.1	mg/kg DW	< 0.10 (T)
clopyralid	1702-17-6	N	L340	0.1	mg/kg DW	< 0.10 (T)
dichlorprop (2,4-DP)	120-36-5	N	L340	0.1	mg/kg DW	< 0.10 (T)
dinoseb (DNBP)	88-85-7	N	L340	0.1	mg/kg DW	< 0.10 (T)
2-methyl-4-chlorophenoxyacetic acid (MCPA)	94-74-6	N	L340	0.1	mg/kg DW	< 0.10 (T)
mecoprop (MCPP)	7085-19-0	N	L340	0.1	mg/kg DW	< 0.10 (T)
pentachlorophenol (PCP)	87-86-5	N	L340	0.1	mg/kg DW	< 0.10 (T)
2,3,6-trichlorobenzoic acid (2,3,6-TBA)	50-31-7	N	L340	0.1	mg/kg DW	< 0.10 (T)
4-(2,4-dichlorophenoxy)butanoic acid (2,4-DB)	94-82-6	N	L340	0.1	mg/kg DW	< 0.10 (T)
4-chlorophenoxyacetic acid (4-CPA)	122-88-3	N	L340	0.1	mg/kg DW	< 0.10 (T)
benazolin	3813-05-6	N	L340	0.1	mg/kg DW	< 0.10 (T)
bromoxynil	1689-84-5	N	L340	0.1	mg/kg DW	< 0.10 (T)
dicamba	1918-00-9	N	L340	0.1	mg/kg DW	< 0.10 (T)
diclofop	40843-25-2	N	L340	0.1	mg/kg DW	< 0.10 (T)
2-methyl-4,6-dinitrophenol (DNOC)	534-52-1	N	L340	0.1	mg/kg DW	< 0.10 (T)
flamprop	58667-63-3	N	L340	0.1	mg/kg DW	< 0.10 (T)
fluroxypyr	69377-81-7	N	L340	0.1	mg/kg DW	< 0.10 (T)
ioxynil	1689-83-4	N	L340	0.1	mg/kg DW	< 0.10 (T)
MCPB	94-81-5	N	L340	0.1	mg/kg DW	< 0.10 (T)
picloram	1918-02-1	N	L340	0.1	mg/kg DW	< 0.10 (T)
triclopyr	55335-06-3	N	L340	0.1	mg/kg DW	< 0.10 (T)
alachlor	15972-60-8	N	G029	0.02	mg/kg AR	< 0.02 (T)
chloroxuron	1982-47-4	N	L025	0.1	mg/kg DW	< 0.10 (T)
chlortoluron	15545-48-9	N	L025	0.1	mg/kg DW	< 0.10 (T)
diflubenzuron	35367-38-5	N	L025	0.1	mg/kg DW	< 0.10 (T)
dimefuron	34205-21-5	N	L025	0.1	mg/kg DW	< 0.10 (T)
diuron	330-54-1	N	L025	0.1	mg/kg DW	< 0.10 (T)
isoproturon	34123-59-6	N	L025	0.1	mg/kg DW	< 0.10 (T)
linuron	330-55-2	N	L025	0.1	mg/kg DW	< 0.10 (T)
methabenzthiazuron	18691-97-9	N	L025	0.1	mg/kg DW	< 0.10 (T)
metoxuron	19937-59-8	N	L025	0.1	mg/kg DW	< 0.10 (T)
monolinuron	1746-81-2	N	L025	0.1	mg/kg DW	< 0.10 (T)
monuron	150-68-5	N	L025	0.1	mg/kg DW	< 0.10 (T)
pencycuron	66063-05-6	N	L025	0.1	mg/kg DW	< 0.10 (T)

Results Summary

Report No.: 23-07973-1

Customer Reference: Not Supplied

Customer Order No: P0752825

Customer Sample No	**23/10036/1**
RPS Sample No	37677
Sample Type	**GEO**
Sample Matrix	SOIL
Sampling Date	09/10/2023

Determinand	CAS No	Codes	SOP	RL	Units	
bifenthrin	82657-04-3	N	G127	0.1	mg/kg DW	< 0.10 (T)
cyfluthrin, total	68359-37-5	N	G127	0.1	mg/kg DW	< 0.10 (T)
cyhalothrin, total	68085-85-8	N	G127	0.1	mg/kg DW	< 0.10 (T)
cypermethrin, total	52315-07-8	N	G127	0.1	mg/kg DW	< 0.10 (T)
deltamethrin	52918-63-5	N	G127	0.1	mg/kg DW	< 0.10 (T)
fenvalerate	51630-58-1	N	G127	0.1	mg/kg DW	< 0.10 (T)
permethrin, total	52645-53-1	N	G127	0.1	mg/kg DW	< 0.10 (T)
resmethrin	10453-86-8	N	G127	0.1	mg/kg DW	< 0.10 (T)
tetramethrin	7696-12-0	N	G127	0.1	mg/kg DW	< 0.10 (T)

Deviating Samples

Report No.: 23-07973-1

Customer Reference: Not Supplied

Customer Order No: P0752825

Our policy on Deviating Samples has been implemented in accordance with UKAS Policy on Deviating Samples (TPS63).
RPS is not responsible for the integrity of samples as received, unless RPS personnel performed the sampling. Samples submitted may be declared to be deviating.
Where applicable the analysis method remains UKAS accredited, however results reported for a deviating sample may be compromised.
Where no sampling date was supplied, samples have been declared to be deviating. If the date can be supplied, results may be reissued if assessed not deviating.
Where the sample container used was unsuitable or broken, the sample is flagged as deviating and re-sampling/re-submisson may be required.

RPS No.	Customer No.	Customer ID	Date Sampled	Containers Received	Deviating	Reason for Deviation
37677	23/10036/1		09/10/2023	100 mL amber glass jar	**Yes**	No sampling time provided.

Report No.: 23-07973-1

Type	Matrix Code	Description
Food	CEREALPROD	Cereals, grains & products
Food	DRIEDFRUIT	Dried fruits
Food	FRIEDBAKED	Fried or baked food
Food	LEGUME	Legumes
Food	MEAT	Meat
Food	POWDERED	Powdered food
Food	PULSE	Pulses (dried legumes)
Food	VEGETABLES	Vegetables
Gas	TDTUBE	TD Tube
Gas	TENAX	Tenax Tube
Gas	TUBE	Tube
Gas	VAPOUR	Gas
Geological	SED_MAR	Marine Sediment
Geological	SED_RIV	River Sediment
Geological	SLUDG_SOL	Sludge (solid only)
Geological	SOIL	Soil
Liquid	BEVERAGE	Beverage
Liquid	BLOOD	Blood
Liquid	CONDENSATE	Condensate
Liquid	FOAM_LIQ	Liquid foam
Liquid	FORMULATN	Formula
Liquid	LEACHATE	Leachate
Liquid	OIL/GREASE	Oil or grease
Liquid	SLUDG_LIQ	Sludge (liquid only)
Liquid	SOLVENT	Solvent
Liquid	URINE	Urine
Sludge	SLUDG_WHL	Sludge for bulk route
Solid	BADGE	Badge
Solid	BEDDING	Bedding
Solid	BIOTA	Biota (general)
Solid	BIOTA_F	Biota (fish)
Solid	BIOTA_SF	Biota (shellfish)
Solid	CONSTRCTN	Construction materials
Solid	FABRIC	Fabrics & furnishing materials
Solid	FEED	Animal feed
Solid	FERTILISER	Fertiliser
Solid	FILTER	Filter
Solid	FOAM	Solid foam material
Solid	PACKAGING	Packaging material
Solid	PAPER	Paper
Solid	PLANT	Plant (vegetation)
Solid	POWDER	Powder
Solid	SWAB	Swab
Water	BAL	Ballast Water
Water	BIL	Bilge Water
Water	DW	Drinking Water
Water	EFFLUENT	Effluent
Water	GW	Ground Water
Water	INFLUENT	Influent
Water	SALTW	Salt Water
Water	SW	Surface Water
Water	TW	Tap Water
Water	W	Water

Key Code	Description
N	Not Accredited Test
U	UKAS Accredited Test - UKAS accreditation is only implied if the report carries the UKAS logo
UF	UKAS Flexible Scope Test
M	MCERTS Accredited Test - MCERTS accreditation is only implied if the report carries the MCERTS logo
O	Marine Management Organisation (MMO) Validated
SN	Subcontracted to approved laboratory not accredited for the test
SU	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
SIN	Subcontracted to internal RPS Group laboratory not accredited for the test
SIU	Subcontracted to internal RPS Group laboratory UKAS Accredited for the test
SIM	Subcontracted to internal RPS Group laboratory MCERTS/UKAS Accredited for the test
*	Modified standard method
I/S (in results)	Insufficient Sample
U/S (in results)	Unsuitable Sample
S/C (in results)	See Comments
ND (in results)	Not Detected
DW (in units)	Results are expressed on a dry weight basis
L (in results)	Result is outside normal limits

Sample Type	Sample Retention and Disposal Period
Foodstuff	1 month (if frozen) from the issue date of this report
Waters	2 weeks from the issue date of this report
Other Liquids	1 month from the issue date of this report
Solids / Soils	1 month from the issue date of this report
Sediments	1 month from the issue date of this report

Note: Sample retention may be subject to agreement with the customer for particular projects

Where the dry solids value of a sample is low (<50%), reporting limits are automatically raised for all determinants analysed on an as-received basis.

Soil Typing	Description
Type 1	Clay - Brown
Type 2	Clay - Grey/Black
Type 3	Sand
Type 4	Top Soil (Standard)
Type 5	Top Soil (High Peat)
Type 6	Made Ground (>50% Clay)
Type 7	Made Ground (>50% Sand)
Type 8	Made Ground (>50% Top Soil)
Type X	Other

Dev code	Description
D	No sampling date provided.
T	No sampling time provided.
Z	Temperature of samples exceeded in transit/storage.
V	Excessive headspace for volatile determinands.
P	Sample submitted without required preservative(s).
C	Incorrect container.
H	Holding time exceeded (sampling to extraction).
X	Holding time exceeded (sampling to receipt).

Note: Where the following information is included in this certificate, it has usually been supplied by the customer: Customer Sample ID, Sample Location, Sample Depth, Sampling Date and Sampling Time. The laboratory shall not be responsible for any information that is supplied by the customer that may affect the validity of results.

envirolab
Hattersley Science & Technology Park
Stockport Road, Hattersley, SK14 3QU

FINAL ANALYTICAL TEST REPORT
SUPPLEMENT TO TEST REPORT 23/10914/1

Amendments: Request for project/sample information change

Envirolab Job Number: 23/10914
Issue Number: 2 **Date:** 08 March, 2024

Client: Structural Soils Limited (Hemel Hempstead)
18 Frogmore Road
Hemel Hempstead
UK
HP3 9RT

Project Manager: [redacted]
Project Name: Sealink Friston
Project Ref: 563835
Order No: N/A
Date Samples Received: 03/11/23
Date Instructions Received: 06/11/23
Date Analysis Completed: 17/11/23

Approved by:

[redacted]
Deputy Client Services Supervisor

UKAS TESTING 1247

Envirolab Job Number: 23/10914

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/10914/1	23/10914/2	23/10914/3	23/10914/4				Units	Limit of Detection	Method ref
Client Sample No	1	1	1	1						
Client Sample ID	RedP-BH-1A	F22-BH310	F22-BH308	F22-BH502A						
Depth to Top	21.50	26.00	18.33	6.00						
Depth To Bottom										
Date Sampled	01-Nov-23	01-Nov-23	01-Nov-23	01-Nov-23						
Sample Type	WATER - GW	WATER - GW	WATER - GW	WATER - GW						
Sample Matrix Code	N/A	N/A	N/A	N/A						
pH (w)$_A^\#$	7.20	-	7.35	-				pH	0.01	A-T-031w
pH BRE (w)$_A^\#$	7.20	7.39	7.35	7.71				pH	0.01	A-T-031w
Alkalinity by titration (bicarbonate) (w)$_A$	215	-	430	-				mg/l Ca CO3	15	Titration w
Hardness Total$_A^\#$	6550	-	501	-				mg/l Ca CO3	4	A-T-049w
Total Dissolved Solids (w)$_A^\#$	33062	-	1065	-				mg/l	20	A-T-035w
Ammoniacal nitrogen as N (w)$_A^\#$	1.03	-	0.08	-				mg/l	0.05	A-T-033w
Ammonium / Ammoniacal N as NH4 BRE (w)$_A^\#$	1.325	0.106	0.103	0.167				mg/l	0.065	A-T-033w
Chloride (w)$_A^\#$	17800	-	168	-				mg/l	1	A-T-026w
Chloride BRE (w)$_A^\#$	17800	46.34	168	65.81				mg/l	1	A-T-026w
Fluoride (w)$_A^\#$	0.15	-	0.11	-				mg/l	0.1	A-T-026w (F)
Nitrate (w)$_A^\#$	<0.1	-	<0.1	-				mg/l	0.1	A-T-026w (N)
Nitrate BRE (w)$_A^\#$	<0.1	0.3	<0.1	36.5				mg/l	0.1	A-T-026w (N)
Sulphate (w)$_A^\#$	2390	-	251	-				mg/l	1	A-T-026w
Sulphate BRE (w)$_A^\#$	2390	92	251	84				mg/l	1	A-T-026w
Cyanide (free) (w)$_A^\#$	<0.005	-	<0.005	-				mg/l	0.005	A-T-042wFCN
Cyanide (total) (w)$_A^\#$	<0.005	-	<0.005	-				mg/l	0.005	A-T-042wTCN
Antimony (dissolved)$_A$	<20	-	<1	-				µg/l	1	A-T-025w
Arsenic (dissolved)$_A^\#$	<20	-	<1	-				µg/l	1	A-T-025w
Boron (dissolved)$_A^\#$	2870	-	73	-				µg/l	10	A-T-025w
Barium (dissolved)$_A^\#$	143	-	131	-				µg/l	1	A-T-025w
Beryllium (dissolved)$_A^\#$	<20	-	<1	-				µg/l	1	A-T-025w
Cadmium (dissolved)$_A^\#$	<4.0	-	<0.2	-				µg/l	0.2	A-T-025w
Calcium (dissolved)$_A^\#$	634	-	154	-				mg/l	1	A-T-049w
Copper (dissolved)$_A$	<80	-	<4	-				µg/l	4	A-T-025w
Chromium (dissolved)$_A^\#$	<20	-	<1	-				µg/l	1	A-T-025w
Chromium (hexavalent) (w)$_A^\#$	<0.01	-	<0.01	-				mg/l	0.01	A-T-040w
Chromium (trivalent) (w)	<0.02	-	<0.01	-				mg/l	0.01	Calc
Iron (dissolved)$_A^\#$	9790	-	<10	-				µg/l	10	A-T-025w
Lead (dissolved)$_A^\#$	<20	-	<1	-				µg/l	1	A-T-025w
Manganese (dissolved)$_A^\#$	1450	-	853	-				µg/l	1	A-T-025w
Magnesium (dissolved)$_A^\#$	1210	-	28	-				mg/l	1	A-T-049w
Magnesium BRE (dissolved)$_A^\#$	1210	10.0	28.4	17.4				mg/l	1	A-T-049w

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Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/10914/1	23/10914/2	23/10914/3	23/10914/4				Units	Limit of Detection	Method ref
Client Sample No	1	1	1	1						
Client Sample ID	RedP-BH-1A	F22-BH310	F22-BH308	F22-BH502A						
Depth to Top	21.50	26.00	18.33	6.00						
Depth To Bottom										
Date Sampled	01-Nov-23	01-Nov-23	01-Nov-23	01-Nov-23						
Sample Type	WATER - GW	WATER - GW	WATER - GW	WATER - GW						
Sample Matrix Code	N/A	N/A	N/A	N/A						
Mercury (dissolved)$_{A}^{\#}$	<2.0	-	<0.1	-				µg/l	0.1	A-T-025w
Molybdenum (dissolved)$_{A}^{\#}$	<10.0	-	<0.5	-				µg/l	0.5	A-T-025w
Nickel (dissolved)$_{A}^{\#}$	<40	-	4	-				µg/l	2	A-T-025w
Selenium (dissolved)$_{A}^{\#}$	<20	-	<1	-				µg/l	1	A-T-025w
Sodium (dissolved)$_{A}^{\#}$	10200	-	102	-				mg/l	1	A-T-049w
Sulphur, Total (dissolved)$_{A}$	900	-	77	-				mg/l	1	A-T-072w
Vanadium (dissolved)$_{A}^{\#}$	<20	-	<1	-				µg/l	1	A-T-025w
Zinc (dissolved)$_{A}^{\#}$	167	-	3	-				µg/l	2	A-T-025w

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Client Sample No	1	1	1	1						
Client Sample ID	RedP-BH-1A	F22-BH310	F22-BH308	F22-BH502A						
Depth to Top	21.50	26.00	18.33	6.00						
Depth To Bottom										
Date Sampled	01-Nov-23	01-Nov-23	01-Nov-23	01-Nov-23						
Sample Type	WATER - GW	WATER - GW	WATER - GW	WATER - GW						
Sample Matrix Code	N/A	N/A	N/A	N/A						
PAH 16MS (w)										
Acenaphthene (w)$_A^\#$	<0.01	-	<0.01	-				µg/l	0.01	A-T-019w
Acenaphthylene (w)$_A^\#$	<0.01	-	<0.01	-				µg/l	0.01	A-T-019w
Anthracene (w)$_A^\#$	<0.01	-	<0.01	-				µg/l	0.01	A-T-019w
Benzo(a)anthracene (w)$_A^\#$	<0.01	-	<0.01	-				µg/l	0.01	A-T-019w
Benzo(a)pyrene (w)$_A^\#$	<0.01	-	<0.01	-				µg/l	0.01	A-T-019w
Benzo(b)fluoranthene (w)$_A^\#$	<0.01	-	<0.01	-				µg/l	0.01	A-T-019w
Benzo(ghi)perylene (w)$_A^\#$	<0.01	-	<0.01	-				µg/l	0.01	A-T-019w
Benzo(k)fluoranthene (w)$_A^\#$	<0.01	-	<0.01	-				µg/l	0.01	A-T-019w
Chrysene (w)$_A^\#$	<0.01	-	<0.01	-				µg/l	0.01	A-T-019w
Dibenzo(ah)anthracene (w)$_A^\#$	<0.01	-	<0.01	-				µg/l	0.01	A-T-019w
Fluoranthene (w)$_A^\#$	<0.01	-	<0.01	-				µg/l	0.01	A-T-019w
Fluorene (w)$_A^\#$	<0.01	-	<0.01	-				µg/l	0.01	A-T-019w
Indeno(123-cd)pyrene (w)$_A^\#$	<0.01	-	<0.01	-				µg/l	0.01	A-T-019w
Naphthalene (w)$_A^\#$	<0.01	-	<0.01	-				µg/l	0.01	A-T-019w
Phenanthrene (w)$_A^\#$	<0.01	-	<0.01	-				µg/l	0.01	A-T-019w
Pyrene (w)$_A^\#$	<0.01	-	<0.01	-				µg/l	0.01	A-T-019w
Total PAH 16MS (w)$_A^\#$	<0.01	-	<0.01	-				µg/l	0.01	A-T-019w
Phenols NG (speciated HPLC) (w)										
Phenol (w)$_A$	<0.01	-	<0.10	-				mg/l	0.01	A-T-050w
Cresols (w)$_A$	<0.01	-	<0.10	-				mg/l	0.01	A-T-050w
Catechol (w)$_A$	<0.01	-	<0.10	-				mg/l	0.01	A-T-050w
Resorcinol (w) $_A$	<0.01	-	<0.10	-				mg/l	0.01	A-T-050w
Xylenols & Ethylphenols (w)$_A$	<0.01	-	<0.10	-				mg/l	0.01	A-T-050w
Naphthols (w)$_A$	<0.01	-	<0.10	-				mg/l	0.01	A-T-050w
Trimethylphenol (w)$_A$	<0.01	-	<0.10	-				mg/l	0.01	A-T-050w
Phenols - Total by HPLC (w)$_A$	<0.01	-	<0.10	-				mg/l	0.01	A-T-050w

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Client Sample No	1	1	1	1						
Client Sample ID	RedP-BH-1A	F22-BH310	F22-BH308	F22-BH502A						
Depth to Top	21.50	26.00	18.33	6.00						
Depth To Bottom										
Date Sampled	01-Nov-23	01-Nov-23	01-Nov-23	01-Nov-23						
Sample Type	WATER - GW	WATER - GW	WATER - GW	WATER - GW						
Sample Matrix Code	N/A	N/A	N/A	N/A						
VOC (w)										
Dichlorodifluoromethane$_{A}$	<1	-	<1	-				µg/l	1	A-T-006w
Chloromethane$_{A}$	<10	-	<10	-				µg/l	10	A-T-006w
Vinyl Chloride$_{A}^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
Bromomethane$_{A}^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
Chloroethane$_{A}^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
Trichlorofluoromethane$_{A}^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
trans 1,2-Dichloroethene$_{A}^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
Dichloromethane$_{A}$	<5	-	<5	-				µg/l	5	A-T-006w
Carbon Disulphide$_{A}^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
1,1-Dichloroethene$_{A}^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
1,1-Dichloroethane$_{A}^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
cis 1,2-Dichloroethene$_{A}^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
Bromochloromethane$_{A}^{\#}$	<5	-	<5	-				µg/l	5	A-T-006w
Chloroform$_{A}^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
2,2-Dichloropropane$_{A}^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
1,2-Dichloroethane$_{A}^{\#}$	<2	-	<2	-				µg/l	2	A-T-006w
1,1,1-Trichloroethane$_{A}^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
1,1-Dichloropropene$_{A}^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
Benzene$_{A}^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
Carbon Tetrachloride$_{A}^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
Dibromomethane$_{A}^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
1,2-Dichloropropane$_{A}^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
Bromodichloromethane$_{A}^{\#}$	<10	-	<10	-				µg/l	10	A-T-006w
Trichloroethene$_{A}^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
cis 1,3-Dichloropropene$_{A}^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
trans 1,3-Dichloropropene$_{A}^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
1,1,2-Trichloroethane$_{A}^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
Toluene$_{A}^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
1,3-Dichloropropane$_{A}^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
Dibromochloromethane$_{A}^{\#}$	<3	-	<3	-				µg/l	3	A-T-006w
1,2-Dibromoethane$_{A}^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
Tetrachloroethene$_{A}$	<1	-	<1	-				µg/l	1	A-T-006w

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Client Sample No	1	1	1	1						
Client Sample ID	RedP-BH-1A	F22-BH310	F22-BH308	F22-BH502A						
Depth to Top	21.50	26.00	18.33	6.00						
Depth To Bottom										
Date Sampled	01-Nov-23	01-Nov-23	01-Nov-23	01-Nov-23						
Sample Type	WATER - GW	WATER - GW	WATER - GW	WATER - GW						
Sample Matrix Code	N/A	N/A	N/A	N/A						
1,1,1,2-Tetrachloroethane$_A$	<1	-	<1	-				µg/l	1	A-T-006w
Chlorobenzene$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w
Ethylbenzene$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w
m & p Xylene$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w
Bromoform$_A^\#$	<1	-	<1	-				µg/l	3	A-T-006w
Styrene$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w
1,1,2,2-Tetrachloroethane$_A$	<1	-	<1	-				µg/l	1	A-T-006w
o-Xylene$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w
1,2,3-Trichloropropane$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w
Isopropylbenzene$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w
Bromobenzene$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w
2-Chlorotoluene$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w
n-propylbenzene$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w
4-Chlorotoluene$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w
1,2,4-Trimethylbenzene$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w
4-Isopropyltoluene$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w
1,3,5-Trimethylbenzene$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w
1,2-Dichlorobenzene$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w
1,4-Dichlorobenzene$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w
sec-Butylbenzene$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w
tert-Butylbenzene$_A^\#$	<2	-	<2	-				µg/l	2	A-T-006w
1,3-Dichlorobenzene$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w
n-butylbenzene$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w
1,2-Dibromo-3-chloropropane$_A^\#$	<2	-	<2	-				µg/l	2	A-T-006w
1,2,4-Trichlorobenzene$_A^\#$	<3	-	<3	-				µg/l	3	A-T-006w
1,2,3-Trichlorobenzene$_A^\#$	<3	-	<3	-				µg/l	3	A-T-006w
Hexachlorobutadiene$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w

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Client Sample No	1	1	1	1						
Client Sample ID	RedP-BH-1A	F22-BH310	F22-BH308	F22-BH502A						
Depth to Top	21.50	26.00	18.33	6.00						
Depth To Bottom										
Date Sampled	01-Nov-23	01-Nov-23	01-Nov-23	01-Nov-23						
Sample Type	WATER - GW	WATER - GW	WATER - GW	WATER - GW						
Sample Matrix Code	N/A	N/A	N/A	N/A						
TPH CWG (w) with Clean Up										
Ali >C5-C6 $(w)_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-022w
Ali >C6-C8 $(w)_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-022w
Ali >C8-C10 $(w)_A^{\#}$	<5	-	<5	-				µg/l	5	A-T-055w
Ali >C10-C12 $(w)_A^{\#}$	<5	-	<5	-				µg/l	5	A-T-055w
Ali >C12-C16 $(w)_A^{\#}$	<5	-	<5	-				µg/l	5	A-T-055w
Ali >C16-C21 $(w)_A^{\#}$	<5	-	<5	-				µg/l	5	A-T-055w
Ali >C21-C35 $(w)_A^{\#}$	<5	-	<5	-				µg/l	5	A-T-055w
Total Aliphatics $(w)_A^{\#}$	<5	-	<5	-				µg/l	5	Calc-As Recd
Aro >C5-C7 $(w)_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-022w
Aro >C7-C8 $(w)_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-022w
Aro >C8-C10 $(w)_A$	<5	-	<5	-				µg/l	5	A-T-055w
Aro >C10-C12 $(w)_A^{\#}$	<5	-	<5	-				µg/l	5	A-T-055w
Aro >C12-C16 $(w)_A^{\#}$	<5	-	<5	-				µg/l	5	A-T-055w
Aro >C16-C21 $(w)_A^{\#}$	<5	-	<5	-				µg/l	5	A-T-055w
Aro >C21-C35 $(w)_A$	<10	-	<10	-				µg/l	10	A-T-055w
Total Aromatics $(w)_A$	<10	-	<10	-				µg/l	10	Calc-As Recd
TPH (Ali & Aro >C5-C35) $(w)_A$	<10	-	<10	-				µg/l	10	Calc-As Recd
BTEX - Benzene $(w)_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-022w
BTEX - Toluene $(w)_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-022w
BTEX - Ethyl Benzene $(w)_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-022w
BTEX - m & p Xylene $(w)_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-022w
BTEX - o Xylene $(w)_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-022w
MTBE $(w)_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-022w

Report Notes

General
This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **four weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
Analytical results reflect the quality of the sample at the time of analysis only.
Opinions and Interpretations expressed are outside our scope of accreditation.
The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client.
A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

Key

Superscript "#"	Accredited to ISO 17025
Superscript "M"	Accredited to MCertS
Superscript "U"	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript "A"	Analysis performed on as-received Sample
Subscript "D"	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript "^"	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
N/A	Not applicable

Asbestos
Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis
Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing, and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25ºC / 11550µS/cm @ 20ºC fall outside the accreditation range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Hattersley Science & Technology Park, Stockport Road, Hattersley, SK14 3QU
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Structural Soils Limited (Hemel Hempstead), 18 Frogmore Road, Hemel Hempstead, UK, HP3 9RT

Project: Sealink Friston

Clients Project No: 563835

Project No: 23/10914

Date Received: 06/11/2023 (am)

Cool Box Temperatures (°C): 5.5 7 6.0

Lab Sample ID	23/10914/1	23/10914/3
Client Sample No	1	1
Client Sample ID/Depth	RedP-BH-1A 21.50m	F22-BH308 18.33m
Date Sampled	01/11/23	01/11/23
Deviation Code		
F	✓	✓

Key
F *Maximum holding time exceeded between sampling date and analysis for analytes listed below*

HOLDING TIME EXCEEDANCES

Lab Sample ID	23/10914/1	23/10914/3
Client Sample No	1	1
Client Sample ID/Depth	RedP-BH-1A 21.50m	F22-BH308 18.33m
Date Sampled	01/11/23	01/11/23
Chromium (hexavalent) (w)	✓	✓

Note: If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3 (for water samples 5 ± 3°C), ISO 18400-105:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	23/10914/1	23/10914/2	23/10914/3	23/10914/4
Client Sample No	1	1	1	1
Client Sample ID/Depth	RedP-BH-1A 21.50m	F22-BH310 26.00m	F22-BH308 18.33m	F22-BH502A 6.00m
Date Sampled	01/11/23	01/11/23	01/11/23	01/11/23
A-T-006w	10/11/2023		10/11/2023	
A-T-019w	09/11/2023		09/11/2023	
A-T-022w	10/11/2023		10/11/2023	
A-T-025w	13/11/2023		13/11/2023	
A-T-026w	13/11/2023	13/11/2023	13/11/2023	13/11/2023
A-T-026w (F)	17/11/2023		17/11/2023	
A-T-026w (N)	10/11/2023	10/11/2023	10/11/2023	10/11/2023
A-T-031w	08/11/2023	08/11/2023	08/11/2023	08/11/2023
A-T-033w	08/11/2023	08/11/2023	08/11/2023	08/11/2023
A-T-035w	10/11/2023		10/11/2023	
A-T-040w	13/11/2023		13/11/2023	
A-T-042wFCN	10/11/2023		10/11/2023	
A-T-042wTCN	10/11/2023		10/11/2023	
A-T-049w	14/11/2023	14/11/2023	14/11/2023	14/11/2023
A-T-050w	13/11/2023		14/11/2023	
A-T-055w	09/11/2023		09/11/2023	
A-T-072w	08/11/2023		08/11/2023	
Calc	13/11/2023		13/11/2023	
Calc-As Recd	10/11/2023		10/11/2023	
Titration w	15/11/2023		15/11/2023	

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

envirolab
Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 23/11816
Issue Number: 1 **Date:** 13 December, 2023

Client: Structural Soils Limited (Hemel Hempstead)
18 Frogmore Road
Hemel Hempstead
UK
HP3 9RT

Project Manager: [redacted]
Project Name: Sealink Friston
Project Ref: 563835
Order No: N/A
Date Samples Received: 20/11/23
Date Instructions Received: 29/11/23
Date Analysis Completed: 13/12/23

Approved by:

[redacted]
Deputy Client Services Supervisor

UKAS TESTING 1247

Envirolab Job Number: 23/11816

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/11816/1	23/11816/2	23/11816/3	23/11816/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RedP-BH-1A	F22-BH310	F22-BH308	F22-BH502A						
Depth to Top	21.50	26.00	18.29	6.00						
Depth To Bottom										
Date Sampled	16-Nov-23	16-Nov-23	16-Nov-23	16-Nov-23						
Sample Type	WATER - GW	WATER - GW	WATER - GW	WATER - GW						
Sample Matrix Code	N/A	N/A	N/A	N/A						
pH (w)$_{A}^{\#}$	7.12	-	7.30	-				pH	0.01	A-T-031w
pH BRE (w)$_{A}^{\#}$	7.12	7.49	7.30	7.69				pH	0.01	A-T-031w
Alkalinity by titration (bicarbonate) (w)$_{A}$	255	-	510	-				mg/l Ca CO3	15	Titration w
Hardness Total$_{A}^{\#}$	7320	-	578	-				mg/l Ca CO3	4	A-T-049w
Total Dissolved Solids (w)$_{A}^{\#}$	36917	-	895	-				mg/l	20	A-T-035w
Ammoniacal nitrogen as N (w)$_{A}^{\#}$	1.05	-	<0.05	-				mg/l	0.05	A-T-033w
Ammonium / Ammoniacal N as NH4 BRE (w)$_{A}^{\#}$	1.359	0.084	<0.065	0.097				mg/l	0.065	A-T-033w
Chloride (w)$_{A}^{\#}$	18800	-	95	-				mg/l	1	A-T-026w
Chloride BRE (w)$_{A}^{\#}$	18790.01	42.16	94.74	61.24				mg/l	1	A-T-026w
Fluoride (w)$_{A}^{\#}$	<0.10	-	0.54	-				mg/l	0.1	A-T-026w (F)
Nitrate (w)$_{A}^{\#}$	<0.1	-	<0.1	-				mg/l	0.1	A-T-026w (N)
Nitrate BRE (w)$_{A}^{\#}$	<0.1	<0.1	<0.1	30.3				mg/l	0.1	A-T-026w (N)
Sulphate (w)$_{A}^{\#}$	2620	-	256	-				mg/l	1	A-T-026w
Sulphate BRE (w)$_{A}^{\#}$	2622	99	256	80				mg/l	1	A-T-026w
Cyanide (free) (w)$_{A}^{\#}$	<0.005	-	<0.005	-				mg/l	0.005	A-T-042wFCN
Cyanide (total) (w)$_{A}^{\#}$	<0.005	-	<0.005	-				mg/l	0.005	A-T-042wTCN
Antimony (dissolved)$_{A}$	<50	-	<1	-				µg/l	1	A-T-025w
Arsenic (dissolved)$_{A}^{\#}$	<50	-	<1	-				µg/l	1	A-T-025w
Boron (dissolved)$_{A}^{\#}$	2720	-	60	-				µg/l	10	A-T-025w
Barium (dissolved)$_{A}^{\#}$	193	-	124	-				µg/l	1	A-T-025w
Beryllium (dissolved)$_{A}^{\#}$	<50	-	<1	-				µg/l	1	A-T-025w
Cadmium (dissolved)$_{A}^{\#}$	<10.0	-	<0.2	-				µg/l	0.2	A-T-025w
Calcium (dissolved)$_{A}^{\#}$	704	-	180	-				mg/l	1	A-T-049w
Copper (dissolved)$_{A}$	<200	-	<4	-				µg/l	4	A-T-025w
Chromium (dissolved)$_{A}^{\#}$	<50	-	<1	-				µg/l	1	A-T-025w
Chromium (hexavalent) (w)$_{A}^{\#}$	<0.01	-	<0.01	-				mg/l	0.01	A-T-040w
Chromium (trivalent) (w)	<0.05	-	<0.01	-				mg/l	0.01	Calc
Iron (dissolved)$_{A}^{\#}$	10900	-	21	-				µg/l	10	A-T-025w
Lead (dissolved)$_{A}^{\#}$	<50	-	<1	-				µg/l	1	A-T-025w
Manganese (dissolved)$_{A}^{\#}$	2690	-	345	-				µg/l	1	A-T-025w
Magnesium (dissolved)$_{A}^{\#}$	1260	-	31	-				mg/l	1	A-T-049w
Magnesium BRE (dissolved)$_{A}^{\#}$	1260	9.3	31.0	19.1				mg/l	1	A-T-049w

Envirolab Job Number: 23/11816

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/11816/1	23/11816/2	23/11816/3	23/11816/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RedP-BH-1A	F22-BH310	F22-BH308	F22-BH502A						
Depth to Top	21.50	26.00	18.29	6.00						
Depth To Bottom										
Date Sampled	16-Nov-23	16-Nov-23	16-Nov-23	16-Nov-23						
Sample Type	WATER - GW	WATER - GW	WATER - GW	WATER - GW						
Sample Matrix Code	N/A	N/A	N/A	N/A						
Mercury (dissolved)$_{A}^{\#}$	<5.0	-	<0.1	-				µg/l	0.1	A-T-025w
Molybdenum (dissolved)$_{A}^{\#}$	<25.0	-	<0.5	-				µg/l	0.5	A-T-025w
Nickel (dissolved)$_{A}^{\#}$	<100	-	3	-				µg/l	2	A-T-025w
Selenium (dissolved)$_{A}^{\#}$	<50	-	<1	-				µg/l	1	A-T-025w
Sodium (dissolved)$_{A}^{\#}$	10400	-	83	-				mg/l	1	A-T-049w
Sulphur, Total (dissolved)$_{A}$	973	-	81	-				mg/l	1	A-T-072w
Vanadium (dissolved)$_{A}^{\#}$	<50	-	<1	-				µg/l	1	A-T-025w
Zinc (dissolved)$_{A}^{\#}$	100	-	6	-				µg/l	2	A-T-025w

Envirolab Job Number: 23/11816

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/11816/1	23/11816/2	23/11816/3	23/11816/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RedP-BH-1A	F22-BH310	F22-BH308	F22-BH502A						
Depth to Top	21.50	26.00	18.29	6.00						
Depth To Bottom										
Date Sampled	16-Nov-23	16-Nov-23	16-Nov-23	16-Nov-23						
Sample Type	WATER - GW	WATER - GW	WATER - GW	WATER - GW						
Sample Matrix Code	N/A	N/A	N/A	N/A						
PAH 16MS (w)										
Acenaphthene (w)$_A^\#$	<0.01	-	<0.01	-				µg/l	0.01	A-T-019w
Acenaphthylene (w)$_A^\#$	<0.01	-	<0.01	-				µg/l	0.01	A-T-019w
Anthracene (w)$_A^\#$	<0.01	-	<0.01	-				µg/l	0.01	A-T-019w
Benzo(a)anthracene (w)$_A^\#$	<0.01	-	<0.01	-				µg/l	0.01	A-T-019w
Benzo(a)pyrene (w)$_A^\#$	<0.01	-	<0.01	-				µg/l	0.01	A-T-019w
Benzo(b)fluoranthene (w)$_A^\#$	<0.01	-	<0.01	-				µg/l	0.01	A-T-019w
Benzo(ghi)perylene (w)$_A^\#$	<0.01	-	<0.01	-				µg/l	0.01	A-T-019w
Benzo(k)fluoranthene (w)$_A^\#$	<0.01	-	<0.01	-				µg/l	0.01	A-T-019w
Chrysene (w)$_A^\#$	<0.01	-	<0.01	-				µg/l	0.01	A-T-019w
Dibenzo(ah)anthracene (w)$_A^\#$	<0.01	-	<0.01	-				µg/l	0.01	A-T-019w
Fluoranthene (w)$_A^\#$	<0.01	-	<0.01	-				µg/l	0.01	A-T-019w
Fluorene (w)$_A^\#$	<0.01	-	<0.01	-				µg/l	0.01	A-T-019w
Indeno(123-cd)pyrene (w)$_A^\#$	<0.01	-	<0.01	-				µg/l	0.01	A-T-019w
Naphthalene (w)$_A^\#$	<0.01	-	<0.01	-				µg/l	0.01	A-T-019w
Phenanthrene (w)$_A^\#$	<0.01	-	<0.01	-				µg/l	0.01	A-T-019w
Pyrene (w)$_A^\#$	<0.01	-	<0.01	-				µg/l	0.01	A-T-019w
Total PAH 16MS (w)$_A^\#$	<0.01	-	<0.01	-				µg/l	0.01	A-T-019w
Phenols NG (speciated HPLC) (w)										
Phenol (w)$_A$	<0.10	-	<0.10	-				mg/l	0.01	A-T-050w
Cresols (w)$_A$	<0.10	-	<0.10	-				mg/l	0.01	A-T-050w
Catechol (w)$_A$	<0.10	-	<0.10	-				mg/l	0.01	A-T-050w
Resorcinol (w) $_A$	<0.10	-	<0.10	-				mg/l	0.01	A-T-050w
Xylenols & Ethylphenols (w)$_A$	<0.10	-	<0.10	-				mg/l	0.01	A-T-050w
Naphthols (w)$_A$	<0.10	-	<0.10	-				mg/l	0.01	A-T-050w
Trimethylphenol (w)$_A$	<0.10	-	<0.10	-				mg/l	0.01	A-T-050w
Phenols - Total by HPLC (w)$_A$	<0.10	-	<0.10	-				mg/l	0.01	A-T-050w

Envirolab Job Number: 23/11816

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/11816/1	23/11816/2	23/11816/3	23/11816/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RedP-BH-1A	F22-BH310	F22-BH308	F22-BH502A						
Depth to Top	21.50	26.00	18.29	6.00						
Depth To Bottom										
Date Sampled	16-Nov-23	16-Nov-23	16-Nov-23	16-Nov-23						
Sample Type	WATER - GW	WATER - GW	WATER - GW	WATER - GW						
Sample Matrix Code	N/A	N/A	N/A	N/A						
VOC (w)										
Dichlorodifluoromethane$_A$	<1	-	<1	-				µg/l	1	A-T-006w
Chloromethane$_A$	<10	-	<10	-				µg/l	10	A-T-006w
Vinyl Chloride$_A^{\#}$	<1^U	-	<1^U	-				µg/l	1	A-T-006w
Bromomethane$_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
Chloroethane$_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
Trichlorofluoromethane$_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
trans 1,2-Dichloroethene$_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
Dichloromethane$_A$	<5	-	<5	-				µg/l	5	A-T-006w
Carbon Disulphide$_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
1,1-Dichloroethene$_A^{\#}$	<1^U	-	<1^U	-				µg/l	1	A-T-006w
1,1-Dichloroethane$_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
cis 1,2-Dichloroethene$_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
Bromochloromethane$_A^{\#}$	<5	-	<5	-				µg/l	5	A-T-006w
Chloroform$_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
2,2-Dichloropropane$_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
1,2-Dichloroethane$_A^{\#}$	<2	-	<2	-				µg/l	2	A-T-006w
1,1,1-Trichloroethane$_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
1,1-Dichloropropene$_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
Benzene$_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
Carbon Tetrachloride$_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
Dibromomethane$_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
1,2-Dichloropropane$_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
Bromodichloromethane$_A^{\#}$	<10	-	<10	-				µg/l	10	A-T-006w
Trichloroethene$_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
cis 1,3-Dichloropropene$_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
trans 1,3-Dichloropropene$_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
1,1,2-Trichloroethane$_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
Toluene$_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
1,3-Dichloropropane$_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
Dibromochloromethane$_A^{\#}$	<3	-	<3	-				µg/l	3	A-T-006w
1,2-Dibromoethane$_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-006w
Tetrachloroethene$_A$	<1	-	<1	-				µg/l	1	A-T-006w

Envirolab Job Number: 23/11816 **Client Project Name: Sealink Friston**

Client Project Ref: 563835

Lab Sample ID	23/11816/1	23/11816/2	23/11816/3	23/11816/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RedP-BH-1A	F22-BH310	F22-BH308	F22-BH502A						
Depth to Top	21.50	26.00	18.29	6.00						
Depth To Bottom										
Date Sampled	16-Nov-23	16-Nov-23	16-Nov-23	16-Nov-23						
Sample Type	WATER - GW	WATER - GW	WATER - GW	WATER - GW						
Sample Matrix Code	N/A	N/A	N/A	N/A						
1,1,1,2-Tetrachloroethane$_A$	<1	-	<1	-				µg/l	1	A-T-006w
Chlorobenzene$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w
Ethylbenzene$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w
m & p Xylene$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w
Bromoform$_A^\#$	<3	-	<3	-				µg/l	3	A-T-006w
Styrene$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w
1,1,2,2-Tetrachloroethane$_A$	<1	-	<1	-				µg/l	1	A-T-006w
o-Xylene$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w
1,2,3-Trichloropropane$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w
Isopropylbenzene$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w
Bromobenzene$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w
2-Chlorotoluene$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w
n-propylbenzene$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w
4-Chlorotoluene$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w
1,2,4-Trimethylbenzene$_A^\#$	1	-	<1	-				µg/l	1	A-T-006w
4-Isopropyltoluene$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w
1,3,5-Trimethylbenzene$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w
1,2-Dichlorobenzene$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w
1,4-Dichlorobenzene$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w
sec-Butylbenzene$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w
tert-Butylbenzene$_A^\#$	<2	-	<2	-				µg/l	2	A-T-006w
1,3-Dichlorobenzene$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w
n-butylbenzene$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w
1,2-Dibromo-3-chloropropane$_A^\#$	<2	-	<2	-				µg/l	2	A-T-006w
1,2,4-Trichlorobenzene$_A^\#$	<3	-	<3	-				µg/l	3	A-T-006w
1,2,3-Trichlorobenzene$_A^\#$	<3	-	<3	-				µg/l	3	A-T-006w
Hexachlorobutadiene$_A^\#$	<1	-	<1	-				µg/l	1	A-T-006w

Envirolab Job Number: 23/11816

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/11816/1	23/11816/2	23/11816/3	23/11816/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RedP-BH-1A	F22-BH310	F22-BH308	F22-BH502A						
Depth to Top	21.50	26.00	18.29	6.00						
Depth To Bottom										
Date Sampled	16-Nov-23	16-Nov-23	16-Nov-23	16-Nov-23						
Sample Type	WATER - GW	WATER - GW	WATER - GW	WATER - GW						
Sample Matrix Code	N/A	N/A	N/A	N/A						
TPH CWG (w) with Clean Up										
Ali >C5-C6 $(w)_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-022w
Ali >C6-C8 $(w)_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-022w
Ali >C8-C10 $(w)_A^{\#}$	<5	-	<5	-				µg/l	5	A-T-055w
Ali >C10-C12 $(w)_A^{\#}$	<5	-	<5	-				µg/l	5	A-T-055w
Ali >C12-C16 $(w)_A^{\#}$	<5	-	<5	-				µg/l	5	A-T-055w
Ali >C16-C21 $(w)_A^{\#}$	<5	-	<5	-				µg/l	5	A-T-055w
Ali >C21-C35 $(w)_A^{\#}$	<5	-	<5	-				µg/l	5	A-T-055w
Total Aliphatics $(w)_A^{\#}$	<5	-	<5	-				µg/l	5	Calc-As Recd
Aro >C5-C7 $(w)_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-022w
Aro >C7-C8 $(w)_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-022w
Aro >C8-C10 $(w)_A$	6	-	<5	-				µg/l	5	A-T-055w
Aro >C10-C12 $(w)_A^{\#}$	<5	-	<5	-				µg/l	5	A-T-055w
Aro >C12-C16 $(w)_A^{\#}$	<5	-	<5	-				µg/l	5	A-T-055w
Aro >C16-C21 $(w)_A^{\#}$	<5	-	<5	-				µg/l	5	A-T-055w
Aro >C21-C35 $(w)_A$	<10	-	<10	-				µg/l	10	A-T-055w
Total Aromatics $(w)_A$	<10	-	<10	-				µg/l	10	Calc-As Recd
TPH (Ali & Aro >C5-C35) $(w)_A$	<10	-	<10	-				µg/l	10	Calc-As Recd
BTEX - Benzene $(w)_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-022w
BTEX - Toluene $(w)_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-022w
BTEX - Ethyl Benzene $(w)_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-022w
BTEX - m & p Xylene $(w)_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-022w
BTEX - o Xylene $(w)_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-022w
MTBE $(w)_A^{\#}$	<1	-	<1	-				µg/l	1	A-T-022w

Report Notes

General
This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **six weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
Analytical results reflect the quality of the sample at the time of analysis only.
Opinions and Interpretations expressed are outside our scope of accreditation.
The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client.
A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

Key

Superscript "#"	Accredited to ISO 17025
Superscript "M"	Accredited to MCertS
Superscript "U"	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript "A"	Analysis performed on as-received Sample
Subscript "D"	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript "^"	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
N/A	Not applicable

Asbestos
Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis
Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing, and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25ºC / 11550µS/cm @ 20ºC fall outside the accreditation range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Structural Soils Limited (Hemel Hempstead), 18 Frogmore Road, Hemel Hempstead, UK, HP3 9RT

Project: Sealink Friston

Clients Project No: 563835

Project No: 23/11816

Date Received: 29/11/2023 (am)

Cool Box Temperatures (°C): 9.4, 9.6

Lab Sample ID	23/11816/1	23/11816/2	23/11816/3	23/11816/4
Client Sample No				
Client Sample ID/Depth	RedP-BH-1A 21.50m	F22-BH310 26.00m	F22-BH308 18.29m	F22-BH502A 6.00m
Date Sampled	16/11/23	16/11/23	16/11/23	16/11/23
Deviation Code				
F	✓	✓	✓	✓

Key
F *Maximum holding time exceeded between sampling date and analysis for analytes listed below*

HOLDING TIME EXCEEDANCES

Lab Sample ID	23/11816/1	23/11816/2	23/11816/3	23/11816/4
Client Sample No				
Client Sample ID/Depth	RedP-BH-1A 21.50m	F22-BH310 26.00m	F22-BH308 18.29m	F22-BH502A 6.00m
Date Sampled	16/11/23	16/11/23	16/11/23	16/11/23
Chromium (hexavalent) (w)	✓		✓	
Cyanide (free) (w)	✓		✓	
Cyanide (total) (w)	✓		✓	
Nitrate (w)	✓		✓	
Phenols NG (speciated HPLC) (w)	✓		✓	
PAH 16MS (w)	✓		✓	
Nitrate BRE (w)	✓	✓	✓	✓

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	23/11816/1	23/11816/2	23/11816/3	23/11816/4
Client Sample No				
Client Sample ID/Depth	RedP-BH-1A 21.50m	F22-BH310 26.00m	F22-BH308 18.29m	F22-BH502A 6.00m
Date Sampled	16/11/23	16/11/23	16/11/23	16/11/23
A-T-006w	01/12/2023		01/12/2023	
A-T-019w	07/12/2023		07/12/2023	
A-T-022w	04/12/2023		04/12/2023	
A-T-025w	11/12/2023		06/12/2023	
A-T-026w	04/12/2023	08/12/2023	04/12/2023	08/12/2023
A-T-026w (F)	04/12/2023		04/12/2023	
A-T-026w (N)	06/12/2023	06/12/2023	06/12/2023	06/12/2023
A-T-031w	01/12/2023	01/12/2023	01/12/2023	01/12/2023
A-T-033w	04/12/2023	06/12/2023	04/12/2023	06/12/2023
A-T-035w	07/12/2023		07/12/2023	
A-T-040w	04/12/2023		04/12/2023	
A-T-042wFCN	05/12/2023		05/12/2023	
A-T-042wTCN	05/12/2023		05/12/2023	
A-T-049w	07/12/2023	06/12/2023	06/12/2023	06/12/2023
A-T-050w	13/12/2023		13/12/2023	
A-T-055w	01/12/2023		01/12/2023	
A-T-072w	04/12/2023		04/12/2023	
Calc	11/12/2023		06/12/2023	
Calc-As Recd	04/12/2023		04/12/2023	
Titration w	30/11/2023		30/11/2023	

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

envirolab
Hattersley Science & Technology Park
Stockport Road, Hattersley, SK14 3QU

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 23/12398
Issue Number: 1 **Date:** 05 January, 2024

Client: Structural Soils Limited (Hemel Hempstead)
18 Frogmore Road
Hemel Hempstead
UK
HP3 9RT

Project Manager: [redacted]
Project Name: Sealink Friston
Project Ref: 563835
Order No: N/A
Date Samples Received: 14/12/23
Date Instructions Received: 14/12/23
Date Analysis Completed: 05/01/24

Approved by:

[redacted]
Deputy Client Services Supervisor

UKAS TESTING 1247

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Envirolab Job Number: 23/12398

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/12398/1	23/12398/2	23/12398/3	23/12398/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RedP-BH-1A	F22-BH310	F22-BH308	F22-BH502A						
Depth to Top	21.50	26.00	18.50	6.00						
Depth To Bottom										
Date Sampled	13-Dec-23	13-Dec-23	13-Dec-23	13-Dec-23						
Sample Type	WATER - GW	WATER - GW	WATER - GW	WATER - GW						
Sample Matrix Code	N/A	N/A	N/A	N/A						
pH (w)$_{A}^{\#}$	7.75	7.37	7.69	7.87				pH	0.01	A-T-031w
pH BRE (w)$_{A}^{\#}$	7.75	7.37	7.69	7.87				pH	0.01	A-T-031w
Alkalinity by titration (bicarbonate) (w)$_{A}$	60	340	465	365				mg/l Ca CO3	15	Titration w
Hardness Total$_{A}^{\#}$	31	428	580	365				mg/l Ca CO3	4	A-T-049w
Total Dissolved Solids (w)$_{A}^{\#}$	76	578	884	607				mg/l	20	A-T-035w
Ammoniacal nitrogen as N (w)$_{A}^{\#}$	<0.05	0.06	<0.05	<0.05				mg/l	0.05	A-T-033w
Ammonium / Ammoniacal N as NH4 BRE (w)$_{A}^{\#}$	<0.065	0.076	<0.065	<0.065				mg/l	0.065	A-T-033w
Chloride (w)$_{A}^{\#}$	11	42	78	66				mg/l	1	A-T-026w
Chloride BRE (w)$_{A}^{\#}$	11.02	41.56	78.18	66.38				mg/l	1	A-T-026w
Fluoride (w)$_{A}^{\#}$	<0.10	0.15	0.55	0.46				mg/l	0.1	A-T-026w (F)
Nitrate (w)$_{A}^{\#}$	1.0	<0.1	<0.1	21.7				mg/l	0.1	A-T-026w (N)
Nitrate BRE (w)$_{A}^{\#}$	1.0	<0.1	<0.1	21.7				mg/l	0.1	A-T-026w (N)
Sulphate (w)$_{A}^{\#}$	2	91	236	81				mg/l	1	A-T-026w
Sulphate BRE (w)$_{A}^{\#}$	2	91	236	81				mg/l	1	A-T-026w
Cyanide (free) (w)$_{A}^{\#}$	<0.005	<0.005	<0.005	<0.005				mg/l	0.005	A-T-042wFCN
Cyanide (total) (w)$_{A}^{\#}$	<0.005	<0.005	<0.005	<0.005				mg/l	0.005	A-T-042wTCN
Antimony (dissolved)$_{A}$	<1	<1	<1	<1				µg/l	1	A-T-025w
Arsenic (dissolved)$_{A}^{\#}$	<1	2	2	<1				µg/l	1	A-T-025w
Boron (dissolved)$_{A}^{\#}$	<10	31	58	83				µg/l	10	A-T-025w
Barium (dissolved)$_{A}^{\#}$	4	44	99	68				µg/l	1	A-T-025w
Beryllium (dissolved)$_{A}^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-025w
Cadmium (dissolved)$_{A}^{\#}$	<0.2	<0.2	<0.2	<0.2				µg/l	0.2	A-T-025w
Calcium (dissolved)$_{A}^{\#}$	11	157	181	118				mg/l	1	A-T-049w
Copper (dissolved)$_{A}$	<4	<4	<4	<4				µg/l	4	A-T-025w
Chromium (dissolved)$_{A}^{\#}$	1	<1	<1	<1				µg/l	1	A-T-025w
Chromium (hexavalent) (w)$_{A}^{\#}$	<0.01	<0.01	<0.01	<0.01				mg/l	0.01	A-T-040w
Chromium (trivalent) (w)	<0.01	<0.01	<0.01	<0.01				mg/l	0.01	Calc
Iron (dissolved)$_{A}^{\#}$	106	4830	602	16				µg/l	10	A-T-025w
Lead (dissolved)$_{A}^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-025w
Manganese (dissolved)$_{A}^{\#}$	5	729	1500	81				µg/l	1	A-T-025w
Magnesium (dissolved)$_{A}^{\#}$	<1	9	31	17				mg/l	1	A-T-049w
Magnesium BRE (dissolved)$_{A}^{\#}$	<1.0	9.0	30.9	81.3				mg/l	1	A-T-049w

Envirolab Job Number: 23/12398

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/12398/1	23/12398/2	23/12398/3	23/12398/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RedP-BH-1A	F22-BH310	F22-BH308	F22-BH502A						
Depth to Top	21.50	26.00	18.50	6.00						
Depth To Bottom										
Date Sampled	13-Dec-23	13-Dec-23	13-Dec-23	13-Dec-23						
Sample Type	WATER - GW	WATER - GW	WATER - GW	WATER - GW						
Sample Matrix Code	N/A	N/A	N/A	N/A						
Mercury (dissolved)$_{A}^{\#}$	<0.1	<0.1	<0.1	<0.1				µg/l	0.1	A-T-025w
Molybdenum (dissolved)$_{A}^{\#}$	<0.5	<0.5	0.6	1.4				µg/l	0.5	A-T-025w
Nickel (dissolved)$_{A}^{\#}$	<2	<2	5	3				µg/l	2	A-T-025w
Selenium (dissolved)$_{A}^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-025w
Sodium (dissolved)$_{A}^{\#}$	13	20	78	78				mg/l	1	A-T-049w
Sulphur, Total (dissolved)$_{A}$	<1	36	78	28				mg/l	1	A-T-072w
Vanadium (dissolved)$_{A}^{\#}$	2	<1	<1	<1				µg/l	1	A-T-025w
Zinc (dissolved)$_{A}^{\#}$	<2	4	4	3				µg/l	2	A-T-025w

Envirolab Job Number: 23/12398

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/12398/1	23/12398/2	23/12398/3	23/12398/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RedP-BH-1A	F22-BH310	F22-BH308	F22-BH502A						
Depth to Top	21.50	26.00	18.50	6.00						
Depth To Bottom										
Date Sampled	13-Dec-23	13-Dec-23	13-Dec-23	13-Dec-23						
Sample Type	WATER - GW	WATER - GW	WATER - GW	WATER - GW						
Sample Matrix Code	N/A	N/A	N/A	N/A						
PAH 16MS (w)										
Acenaphthene (w)$_A^\#$	<0.01	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Acenaphthylene (w)$_A^\#$	0.01	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Anthracene (w)$_A^\#$	0.02	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Benzo(a)anthracene (w)$_A^\#$	0.06	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Benzo(a)pyrene (w)$_A^\#$	0.10	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Benzo(b)fluoranthene (w)$_A^\#$	0.14	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Benzo(ghi)perylene (w)$_A^\#$	0.10	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Benzo(k)fluoranthene (w)$_A^\#$	0.04	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Chrysene (w)$_A^\#$	0.10	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Dibenzo(ah)anthracene (w)$_A^\#$	0.02	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Fluoranthene (w)$_A^\#$	0.11	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Fluorene (w)$_A^\#$	<0.01	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Indeno(123-cd)pyrene (w)$_A^\#$	0.10	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Naphthalene (w)$_A^\#$	<0.01	0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Phenanthrene (w)$_A^\#$	0.02	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Pyrene (w)$_A^\#$	0.11	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Total PAH 16MS (w)$_A^\#$	0.93	0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Phenols NG (speciated HPLC) (w)										
Phenol (w)$_A$	<0.01	<0.10	<0.01	<0.01				mg/l	0.01	A-T-050w
Cresols (w)$_A$	<0.01	<0.10	<0.01	<0.01				mg/l	0.01	A-T-050w
Catechol (w)$_A$	<0.01	<0.10	<0.01	<0.01				mg/l	0.01	A-T-050w
Resorcinol (w) $_A$	<0.01	<0.10	<0.01	<0.01				mg/l	0.01	A-T-050w
Xylenols & Ethylphenols (w)$_A$	<0.01	<0.10	<0.01	<0.01				mg/l	0.01	A-T-050w
Naphthols (w)$_A$	<0.01	<0.10	<0.01	<0.01				mg/l	0.01	A-T-050w
Trimethylphenol (w)$_A$	<0.01	<0.10	<0.01	<0.01				mg/l	0.01	A-T-050w
Phenols - Total by HPLC (w)$_A$	<0.01	<0.10	<0.01	<0.01				mg/l	0.01	A-T-050w

Envirolab Job Number: 23/12398

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/12398/1	23/12398/2	23/12398/3	23/12398/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RedP-BH-1A	F22-BH310	F22-BH308	F22-BH502A						
Depth to Top	21.50	26.00	18.50	6.00						
Depth To Bottom										
Date Sampled	13-Dec-23	13-Dec-23	13-Dec-23	13-Dec-23						
Sample Type	WATER - GW	WATER - GW	WATER - GW	WATER - GW						
Sample Matrix Code	N/A	N/A	N/A	N/A						
VOC (w)										
Dichlorodifluoromethane$_{A}$	<1	<1	<1	<1				µg/l	1	A-T-006w
Chloromethane$_{A}$	<10	<10	<10	<10				µg/l	10	A-T-006w
Vinyl Chloride$_{A}^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
Bromomethane$_{A}^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
Chloroethane$_{A}^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
Trichlorofluoromethane$_{A}^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
trans 1,2-Dichloroethene$_{A}^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
Dichloromethane$_{A}$	<5	<5	<5	<5				µg/l	5	A-T-006w
Carbon Disulphide$_{A}^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
1,1-Dichloroethene$_{A}^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
1,1-Dichloroethane$_{A}^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
cis 1,2-Dichloroethene$_{A}^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
Bromochloromethane$_{A}^{\#}$	<5	<5	<5	<5				µg/l	5	A-T-006w
Chloroform$_{A}^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
2,2-Dichloropropane$_{A}^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
1,2-Dichloroethane$_{A}^{\#}$	<2	<2	<2	<2				µg/l	2	A-T-006w
1,1,1-Trichloroethane$_{A}^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
1,1-Dichloropropene$_{A}^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
Benzene$_{A}^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
Carbon Tetrachloride$_{A}^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
Dibromomethane$_{A}^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
1,2-Dichloropropane$_{A}^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
Bromodichloromethane$_{A}^{\#}$	<10	<10	<10	<10				µg/l	10	A-T-006w
Trichloroethene$_{A}^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
cis 1,3-Dichloropropene$_{A}^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
trans 1,3-Dichloropropene$_{A}^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
1,1,2-Trichloroethane$_{A}^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
Toluene$_{A}^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
1,3-Dichloropropane$_{A}^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
Dibromochloromethane$_{A}^{\#}$	<3	<3	<3	<3				µg/l	3	A-T-006w
1,2-Dibromoethane$_{A}^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-006w
Tetrachloroethene$_{A}$	<1	<1	<1	<1				µg/l	1	A-T-006w

Envirolab Job Number: 23/12398 **Client Project Name: Sealink Friston**

Client Project Ref: 563835

Lab Sample ID	23/12398/1	23/12398/2	23/12398/3	23/12398/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RedP-BH-1A	F22-BH310	F22-BH308	F22-BH502A						
Depth to Top	21.50	26.00	18.50	6.00						
Depth To Bottom										
Date Sampled	13-Dec-23	13-Dec-23	13-Dec-23	13-Dec-23						
Sample Type	WATER - GW	WATER - GW	WATER - GW	WATER - GW						
Sample Matrix Code	N/A	N/A	N/A	N/A						
1,1,1,2-Tetrachloroethane$_A$	<1	<1	<1	<1				µg/l	1	A-T-006w
Chlorobenzene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
Ethylbenzene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
m & p Xylene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
Bromoform$_A^\#$	<3	<3	<3	<3				µg/l	3	A-T-006w
Styrene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
1,1,2,2-Tetrachloroethane$_A$	<1	<1	<1	<1				µg/l	1	A-T-006w
o-Xylene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
1,2,3-Trichloropropane$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
Isopropylbenzene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
Bromobenzene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
2-Chlorotoluene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
n-propylbenzene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
4-Chlorotoluene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
1,2,4-Trimethylbenzene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
4-Isopropyltoluene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
1,3,5-Trimethylbenzene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
1,2-Dichlorobenzene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
1,4-Dichlorobenzene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
sec-Butylbenzene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
tert-Butylbenzene$_A^\#$	<2	<2	<2	<2				µg/l	2	A-T-006w
1,3-Dichlorobenzene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
n-butylbenzene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w
1,2-Dibromo-3-chloropropane$_A^\#$	<2	<2	<2	<2				µg/l	2	A-T-006w
1,2,4-Trichlorobenzene$_A^\#$	<3	<3	<3	<3				µg/l	3	A-T-006w
1,2,3-Trichlorobenzene$_A^\#$	<3	<3	<3	<3				µg/l	3	A-T-006w
Hexachlorobutadiene$_A^\#$	<1	<1	<1	<1				µg/l	1	A-T-006w

Envirolab Job Number: 23/12398

Client Project Name: Sealink Friston

Client Project Ref: 563835

Lab Sample ID	23/12398/1	23/12398/2	23/12398/3	23/12398/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	RedP-BH-1A	F22-BH310	F22-BH308	F22-BH502A						
Depth to Top	21.50	26.00	18.50	6.00						
Depth To Bottom										
Date Sampled	13-Dec-23	13-Dec-23	13-Dec-23	13-Dec-23						
Sample Type	WATER - GW	WATER - GW	WATER - GW	WATER - GW						
Sample Matrix Code	N/A	N/A	N/A	N/A						
TPH CWG (w) with Clean Up										
Ali >C5-C6 (w)$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-022w
Ali >C6-C8 (w)$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-022w
Ali >C8-C10 (w)$_A^{\#}$	<5	<5	<5	<5				µg/l	5	A-T-055w
Ali >C10-C12 (w)$_A^{\#}$	<5	<5	<5	<5				µg/l	5	A-T-055w
Ali >C12-C16 (w)$_A^{\#}$	<5	<5	<5	<5				µg/l	5	A-T-055w
Ali >C16-C21 (w)$_A^{\#}$	<5	<5	<5	<5				µg/l	5	A-T-055w
Ali >C21-C35 (w)$_A^{\#}$	29	<5	<5	<5				µg/l	5	A-T-055w
Total Aliphatics (w)$_A^{\#}$	29	<5	<5	<5				µg/l	5	Calc-As Recd
Aro >C5-C7 (w)$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-022w
Aro >C7-C8 (w)$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-022w
Aro >C8-C10 (w)$_A$	5	<5	<5	<5				µg/l	5	A-T-055w
Aro >C10-C12 (w)$_A^{\#}$	<5	<5	<5	<5				µg/l	5	A-T-055w
Aro >C12-C16 (w)$_A^{\#}$	<5	<5	<5	<5				µg/l	5	A-T-055w
Aro >C16-C21 (w)$_A^{\#}$	9	<5	<5	<5				µg/l	5	A-T-055w
Aro >C21-C35 (w)$_A$	21	<10	<10	<10				µg/l	10	A-T-055w
Total Aromatics (w)$_A$	35	<10	<10	<10				µg/l	10	Calc-As Recd
TPH (Ali & Aro >C5-C35) (w)$_A$	64	<10	<10	<10				µg/l	10	Calc-As Recd
BTEX - Benzene (w)$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-022w
BTEX - Toluene (w)$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-022w
BTEX - Ethyl Benzene (w)$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-022w
BTEX - m & p Xylene (w)$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-022w
BTEX - o Xylene (w)$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-022w
MTBE (w)$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-022w

Report Notes

General
This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **six weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
Analytical results reflect the quality of the sample at the time of analysis only.
Opinions and Interpretations expressed are outside our scope of accreditation.
The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client.
A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

Key

Superscript "#"	Accredited to ISO 17025
Superscript "M"	Accredited to MCertS
Superscript "U"	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript "A"	Analysis performed on as-received Sample
Subscript "D"	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript "^"	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
N/A	Not applicable

Asbestos
Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis
Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing, and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25ºC / 11550µS/cm @ 20ºC fall outside the accreditation range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Hattersley Science & Technology Park, Stockport Road, Hattersley, SK14 3QU
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Structural Soils Limited (Hemel Hempstead), 18 Frogmore Road, Hemel Hempstead, UK, HP3 9RT

Project: Sealink Friston

Clients Project No: 563835

Project No: 23/12398

Date Received: 14/12/2023 (am)

Cool Box Temperatures (°C): 6.2 & 6.8

Lab Sample ID	23/12398/1	23/12398/2	23/12398/3	23/12398/4
Client Sample No				
Client Sample ID/Depth	RedP-BH-1A 21.50m	F22-BH310 26.00m	F22-BH308 18.50m	F22-BH502A 6.00m
Date Sampled	13/12/23	13/12/23	13/12/23	13/12/23
Deviation Code				
F	✓	✓	✓	✓

Key
F *Maximum holding time exceeded between sampling date and analysis for analytes listed below*

HOLDING TIME EXCEEDANCES

Lab Sample ID	23/12398/1	23/12398/2	23/12398/3	23/12398/4
Client Sample No				
Client Sample ID/Depth	RedP-BH-1A 21.50m	F22-BH310 26.00m	F22-BH308 18.50m	F22-BH502A 6.00m
Date Sampled	13/12/23	13/12/23	13/12/23	13/12/23
Phenols NG (speciated HPLC) (w)	✓	✓	✓	✓

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	23/12398/1	23/12398/2	23/12398/3	23/12398/4
Client Sample No				
Client Sample ID/Depth	RedP-BH-1A 21.50m	F22-BH310 26.00m	F22-BH308 18.50m	F22-BH502A 6.00m
Date Sampled	13/12/23	13/12/23	13/12/23	13/12/23
A-T-006w	18/12/2023	18/12/2023	18/12/2023	18/12/2023
A-T-019w	20/12/2023	20/12/2023	20/12/2023	20/12/2023
A-T-022w	18/12/2023	18/12/2023	18/12/2023	18/12/2023
A-T-025w	18/12/2023	18/12/2023	18/12/2023	18/12/2023
A-T-026w	17/12/2023	17/12/2023	17/12/2023	17/12/2023
A-T-026w (F)	17/12/2023	17/12/2023	17/12/2023	17/12/2023
A-T-026w (N)	16/12/2023	16/12/2023	16/12/2023	16/12/2023
A-T-031w	18/12/2023	18/12/2023	18/12/2023	18/12/2023
A-T-033w	18/12/2023	18/12/2023	18/12/2023	18/12/2023
A-T-035w	20/12/2023	20/12/2023	20/12/2023	20/12/2023
A-T-040w	17/12/2023	17/12/2023	17/12/2023	17/12/2023
A-T-042wFCN	18/12/2023	18/12/2023	18/12/2023	18/12/2023
A-T-042wTCN	18/12/2023	18/12/2023	18/12/2023	18/12/2023
A-T-049w	19/12/2023	19/12/2023	19/12/2023	19/12/2023
A-T-050w	05/01/2024	05/01/2024	05/01/2024	05/01/2024
A-T-055w	20/12/2023	20/12/2023	20/12/2023	20/12/2023
A-T-072w	18/12/2023	18/12/2023	18/12/2023	18/12/2023
Calc	18/12/2023	18/12/2023	18/12/2023	18/12/2023
Calc-As Recd	20/12/2023	20/12/2023	20/12/2023	20/12/2023
Titration w	19/12/2023	19/12/2023	19/12/2023	19/12/2023

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

APPENDIX F - MONITORING RECORDS

(i) Groundwater Monitoring Results – Manual Measurements

(ii) Groundwater Monitoring Results – Water Level Data Logger Measurements

IN-SITU MONITORING ROUNDS SUMMARY

Monitoring Round Reference	Round Description	Start Date	End Date	Atmospheric Pressure Prior to Monitoring (mb)	Atmospheric Pressure During Monitoring (mb)	Atmospheric Pressure at Start of Round (mb)	Atmospheric Pressure at End of Round (mb)	Equipment Used	Weather Conditions	Ground Conditions	Wind Conditions	Air Temp (°C)
F1	Water	28/09/2023	28/09/2023	---	---	---	---	---	---	---	---	---
F2	Water	02/10/2023	02/10/2023	---	---	---	---	---	Cloudy/Sunny	Wet	---	15
F3	Water	09/10/2023	09/10/2023	---	---	---	---	---	Sunny/Light cloud	Dry	Light	15
1	Water	19/10/2023	19/10/2023	---	---	---	---	---	Overcast	Wet	Medium	14
2	Water	01/11/2023	01/11/2023	---	---	---	---	---	Light rain at times	Wet	Medium	11
3	Water	16/11/2023	16/11/2023	---	---	---	---	---	Rain	Wet	Light	9
4	Water	30/11/2023	30/11/2023	---	---	---	---	---	---	Wet	Light	3
5	Water	12/12/2023	13/12/2023	---	---	---	---	---	Overcast	Wet	Light	11

Key: Dates in parenthesis after the equipment name refer to the calibration date

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Checked By		Date	Contract Ref:
[redacted]	[redacted]	13/03/24	563835
Contract: Sealink Friston			Page 1 of 1

IN-SITU WATER MONITORING RESULTS

Exploratory Position ID	Ground Level (m AOD)	Pipe Ref	Pipe Diameter (mm)	Monitoring Round / Test Number	Reported Installation Depth (mbgl)	Measured Installation Depth (mbgl)	Response Zone (m)	Date & Time of Monitoring	Water Depth (mbgl)	Water Elevation (m AOD)	pH	ORP (mV)	Eh (mV)	Conduc-tivity (uS/cm)	Temp-erature (°C)	Dissolved Oxygen (mg/l)
F22-BH306	25.239	1	50	F1 / 1	14.00	14.00	11.00 to 14.00	28/09/2023 15:00	DRY	DRY	---	---	---	---	---	---
F22-BH306	25.239	1	50	F2 / 1	14.00	14.00	11.00 to 14.00	02/10/2023 09:39	DRY	DRY	---	---	---	---	---	---
F22-BH306	25.239	1	50	F3 / 1	14.00	13.99	11.00 to 14.00	09/10/2023 09:25	DRY	DRY	---	---	---	---	---	---
F22-BH306	25.239	1	50	1 / 1	14.00	14.01	11.00 to 14.00	19/10/2023 12:55	DRY	DRY	---	---	---	---	---	---
F22-BH306	25.239	1	50	2 / 1	14.00	14.02	11.00 to 14.00	01/11/2023 11:10	14.02	11.22	---	---	---	---	---	---
	General Remarks: Not sampled as the borehole is dry. Barometric data logger installed within the headworks (15 minute intervals).															
F22-BH306	25.239	1	50	3 / 1	14.00	14.02	11.00 to 14.00	16/11/2023 14:10	DRY	DRY	---	---	---	---	---	---
	General Remarks: No water sample taken - borehole is dry.															
F22-BH306	25.239	1	50	4 / 1	14.00	14.02	11.00 to 14.00	30/11/2023 12:45	DRY	DRY	---	---	---	---	---	---
F22-BH306	25.239	1	50	5 / 1	14.00	14.02	11.00 to 14.00	12/12/2023 11:10	14.02	11.22	---	---	---	---	---	---
	General Remarks: No water sample taken - borehole is dry.															
F22-BH308	24.414	1	50	F3 / 1	21.00	NDA	15.00 to 21.00	09/10/2023 10:03	17.34	7.07	---	---	---	---	---	---
F22-BH308	24.414	1	50	1 / 1	21.00	21.30	15.00 to 21.00	19/10/2023 14:20	17.18	7.23	---	---	---	---	---	---
F22-BH308	24.414	1	50	1 / 2	21.00	21.30	15.00 to 21.00	19/10/2023 14:26	17.18	7.23	7.41	74	315	2423	15.1	2.1
F22-BH308	24.414	1	50	1 / 2	---	21.30	---	19/10/2023 14:33	17.18	7.23	7.24	14	256	1340	14.4	0.9
F22-BH308	24.414	1	50	1 / 2	---	21.30	---	19/10/2023 14:44	17.18	7.23	7.33	8	249	1421	15.2	4.7
F22-BH308	24.414	1	50	2 / 1	21.00	21.24	15.00 to 21.00	01/11/2023 12:16	17.15	7.26	---	---	---	---	---	---
F22-BH308	24.414	1	50	2 / 2	21.00	21.24	15.00 to 21.00	01/11/2023 12:23	17.15	7.26	7.29	34	294	1528	12.2	3.1
F22-BH308	24.414	1	50	2 / 2	---	21.24	---	01/11/2023 12:26	17.15	7.26	7.13	42	303	1536	11.9	3.5
F22-BH308	24.414	1	50	2 / 2	---	21.24	---	01/11/2023 12:29	17.15	7.26	7.06	45	305	1541	11.7	0.4
F22-BH308	24.414	1	50	2 / 2	---	21.24	---	01/11/2023 12:32	17.15	7.26	7.05	46	306	1539	11.5	0.3
F22-BH308	24.414	1	50	2 / 2	---	21.24	---	01/11/2023 12:35	17.15	7.26	7.03	47	308	1545	11.5	0.3
	General Remarks: Standpipe micropurged and water sample taken. Water very silty and orange in colour, no oil, no odour. . Water level data logger installed at 20m depth to start at 18:00 on 01/11/2023 (1 hour intervals).															
F22-BH308	24.414	1	50	3 / 1	21.00	21.24	15.00 to 21.00	16/11/2023 11:15	17.11	7.30	---	---	---	---	---	---

Key: NDA denotes 'no data available'.

IN-SITU WATER MONITORING RESULTS

Exploratory Position ID	Ground Level (m AOD)	Pipe Ref	Pipe Diameter (mm)	Monitoring Round / Test Number	Reported Installation Depth (mbgl)	Measured Installation Depth (mbgl)	Response Zone (m)	Date & Time of Monitoring	Water Depth (mbgl)	Water Elevation (m AOD)	pH	ORP (mV)	Eh (mV)	Conduc-tivity (uS/cm)	Temp-erature (°C)	Dissolved Oxygen (mg/l)
F22-BH308	24.414	1	50	3 / 2	21.00	21.24	15.00 to 21.00	16/11/2023 13:00	17.11	7.30	8.77	72	320	1339	10.3	8.6
F22-BH308	24.414	1	50	3 / 2	---	21.24	---	16/11/2023 13:03	17.11	7.30	7.62	126	374	1347	9.7	3.3
F22-BH308	24.414	1	50	3 / 2	---	21.24	---	16/11/2023 13:06	17.11	7.30	7.44	138	387	1348	9.4	3.0
F22-BH308	24.414	1	50	3 / 2	---	21.24	---	16/11/2023 13:09	17.11	7.30	7.39	143	391	1348	9.2	3.1
	General Remarks: Standpipe micropurged and water sample taken. Water very silty and orange in colour, no oil, no odour. . Water level data logger removed at 11:13, downloaded, reinstalled at 13:26.															
F22-BH308	24.414	1	50	3 / 2	---	21.24	---	16/11/2023 13:12	17.11	7.30	7.37	143	392	1352	9.0	3.4
F22-BH308	24.414	1	50	4 / 1	21.00	21.24	15.00 to 21.00	30/11/2023 12:16	17.02	7.39	---	---	---	---	---	---
F22-BH308	24.414	1	50	5 / 1	21.00	21.24	15.00 to 21.00	12/12/2023 12:16	16.96	7.45	---	---	---	---	---	---
F22-BH308	24.414	1	50	5 / 2	21.00	21.24	15.00 to 21.00	12/12/2023 13:10	16.96	7.45	6.85	-107	-215	1400	11.8	3.3
F22-BH308	24.414	1	50	5 / 2	---	21.24	---	12/12/2023 13:13	16.96	7.45	6.83	-113	-227	1409	11.8	1.0
F22-BH308	24.414	1	50	5 / 2	---	21.24	---	12/12/2023 13:16	16.96	7.45	6.84	-120	-240	1410	11.6	0.6
F22-BH308	24.414	1	50	5 / 2	---	21.24	---	12/12/2023 13:19	16.96	7.45	6.85	-125	-251	1421	11.3	0.5
F22-BH308	24.414	1	50	5 / 2	---	21.24	---	12/12/2023 13:22	16.96	7.45	6.86	-131	-262	1423	11.2	0.4
F22-BH308	24.414	1	50	5 / 2	---	21.24	---	12/12/2023 13:25	16.96	7.45	6.85	-136	-272	1426	11.1	0.4
F22-BH308	24.414	1	50	5 / 2	---	21.24	---	12/12/2023 13:28	16.96	7.45	6.86	-141	-281	1425	11.2	0.4
	General Remarks: Standpipe micropurged and water sample taken. Water translucent and contains sediment.															
F22-BH309	24.584	1	50	F1 / 1	8.00	8.01	4.00 to 8.00	28/09/2023 14:00	7.55	17.03	---	---	---	---	---	---
F22-BH309	24.584	1	50	F2 / 1	8.00	8.00	4.00 to 8.00	02/10/2023 09:30	7.81	16.77	---	---	---	---	---	---
F22-BH309	24.584	1	50	F3 / 1	8.00	8.00	4.00 to 8.00	09/10/2023 10:20	7.82	16.77	---	---	---	---	---	---
F22-BH309	24.584	1	50	1 / 1	8.00	8.07	4.00 to 8.00	19/10/2023 15:07	7.76	16.82	---	---	---	---	---	---
F22-BH309	24.584	1	50	1 / 2	8.00	8.07	4.00 to 8.00	19/10/2023 15:12	7.76	16.82	7.10	50	290	1966	15.5	1.0
F22-BH309	24.584	1	50	2 / 1	8.00	8.07	4.00 to 8.00	01/11/2023 13:08	7.75	16.83	---	---	---	---	---	---
	General Remarks: No water sample taken - insufficient water to obtain a sample.															
F22-BH309	24.584	1	50	3 / 1	8.00	8.05	4.00 to 8.00	16/11/2023 11:07	7.71	16.87	---	---	---	---	---	---

Key: NDA denotes 'no data available'.

IN-SITU WATER MONITORING RESULTS

Exploratory Position ID	Ground Level (m AOD)	Pipe Ref	Pipe Diameter (mm)	Monitoring Round / Test Number	Reported Installation Depth (mbgl)	Measured Installation Depth (mbgl)	Response Zone (m)	Date & Time of Monitoring	Water Depth (mbgl)	Water Elevation (m AOD)	pH	ORP (mV)	Eh (mV)	Conduc-tivity (uS/cm)	Temp-erature (°C)	Dissolved Oxygen (mg/l)
	General Remarks: No water sample taken - insufficient water to obtain a sample.															
F22-BH309	24.584	1	50	4 / 1	8.00	8.05	4.00 to 8.00	30/11/2023 12:06	7.66	16.93	---	---	---	---	---	---
F22-BH309	24.584	1	50	5 / 1	8.00	8.05	4.00 to 8.00	12/12/2023 13:08	7.63	16.96	---	---	---	---	---	---
	General Remarks: No water sample taken - insufficient water to obtain a sample.															
F22-BH310	24.794	1	50	F1 / 1	28.00	27.95	25.00 to 28.00	28/09/2023 14:15	17.55	7.24	---	---	---	---	---	---
F22-BH310	24.794	1	50	F2 / 1	28.00	28.00	25.00 to 28.00	02/10/2023 10:10	17.73	7.06	---	---	---	---	---	---
F22-BH310	24.794	1	50	F3 / 1	28.00	27.85	25.00 to 28.00	09/10/2023 09:45	17.69	7.11	---	---	---	---	---	---
F22-BH310	24.794	1	50	1 / 1	28.00	27.79	25.00 to 28.00	19/10/2023 13:10	17.44	7.36	---	---	---	---	---	---
F22-BH310	24.794	1	50	1 / 2	28.00	27.79	25.00 to 28.00	19/10/2023 13:22	17.44	7.36	7.38	89	330	2469	15.1	2.2
F22-BH310	24.794	1	50	1 / 2	---	27.79	---	19/10/2023 13:34	17.44	7.36	7.19	9	252	1.222.11	13.4	0.9
F22-BH310	24.794	1	50	1 / 2	---	27.79	---	19/10/2023 14:02	17.44	7.36	7.28	4	245	1470	15.4	6.5
F22-BH310	24.794	1	50	2 / 1	28.00	27.77	25.00 to 28.00	01/11/2023 11:18	17.46	7.33	---	---	---	0	---	---
F22-BH310	24.794	1	50	2 / 1	---	27.77	---	01/11/2023 11:24	17.46	7.33	8.11	8	16	1126	13.1	7.8
F22-BH310	24.794	1	50	2 / 1	---	27.77	---	01/11/2023 11:27	17.46	7.33	7.26	7	15	970	12.2	1.0
F22-BH310	24.794	1	50	2 / 1	---	27.77	---	01/11/2023 11:30	17.46	7.33	7.17	7	14	954	12.1	0.5
F22-BH310	24.794	1	50	2 / 1	---	27.77	---	01/11/2023 11:33	17.46	7.33	7.14	7	14	944	12.0	0.3
F22-BH310	24.794	1	50	2 / 1	---	27.77	---	01/11/2023 11:36	17.46	7.33	7.12	7	14	926	12.0	0.3
F22-BH310	24.794	1	50	2 / 1	---	27.77	---	01/11/2023 11:39	17.46	7.33	7.11	7	14	923	12.1	0.2
F22-BH310	24.794	1	50	2 / 1	---	27.77	---	01/11/2023 11:42	---	---	7.10	7	14	914	12.1	0.2
	General Remarks: Standpipe micropurged and water sample taken. Water slightly cloudy, no oil, no odour. Water level data logger installed at 23m depth to start at 18:00 on 01/11/2023 (1 hour intervals).															
F22-BH310	24.794	1	50	3 / 1	28.00	27.77	25.00 to 28.00	16/11/2023 13:44	17.46	7.34	---	---	---	---	---	---
F22-BH310	24.794	1	50	3 / 2	28.00	27.77	25.00 to 28.00	16/11/2023 13:45	17.46	7.34	7.55	103	206	874	9.5	3.8
F22-BH310	24.794	1	50	3 / 2	---	27.77	---	16/11/2023 13:48	17.46	7.34	7.39	98	196	874	9.2	3.3
F22-BH310	24.794	1	50	3 / 2	---	27.77	---	16/11/2023 13:51	17.46	7.34	7.36	87	175	874	9.0	3.3

Key: NDA denotes 'no data available'.

GINT_LIBRARY_V10_01.GLB : E - MONITORING WATER QUAL RESULT - A4L : 563835_SEALINK_FRISTON.GPJ : 13/03/24 16:47 : AML1 :

IN-SITU WATER MONITORING RESULTS

Exploratory Position ID	Ground Level (m AOD)	Pipe Ref	Pipe Diameter (mm)	Monitoring Round / Test Number	Reported Installation Depth (mbgl)	Measured Installation Depth (mbgl)	Response Zone (m)	Date & Time of Monitoring	Water Depth (mbgl)	Water Elevation (m AOD)	pH	ORP (mV)	Eh (mV)	Conduc-tivity (uS/cm)	Temp-erature (°C)	Dissolved Oxygen (mg/l)
F22-BH310	24.794	1	50	3 / 2	---	27.77	---	16/11/2023 13:54	17.46	7.34	7.36	79	159	873	8.9	3.6
F22-BH310	24.794	1	50	3 / 2	---	27.77	---	16/11/2023 13:57	17.46	7.34	7.35	74	147	873	8.8	3.8
	General Remarks: Standpipe micropurged and water sample taken. Water slightly cloudy, no oil, no odour. Water level data logger removed at 13:32, downloaded, and reinstalled at 14:02.															
F22-BH310	24.794	1	50	4 / 1	28.00	27.77	25.00 to 28.00	30/11/2023 12:30	17.35	7.45	---	---	---	---	---	---
F22-BH310	24.794	1	50	5 / 2	28.00	27.67	25.00 to 28.00	12/12/2023 11:05	17.32	7.48	6.70	-102	-204	972	10.9	0.7
F22-BH310	24.794	1	50	5 / 1	28.00	27.67	25.00 to 28.00	12/12/2023 11:08	17.32	7.48	6.76	-145	-291	972	10.9	0.4
F22-BH310	24.794	1	50	5 / 1	---	27.67	---	12/12/2023 11:11	17.32	7.48	6.78	-176	-353	971	10.9	4.7
F22-BH310	24.794	1	50	5 / 1	---	27.67	---	12/12/2023 11:14	17.32	7.48	6.80	-202	-404	971	10.9	0.3
F22-BH310	24.794	1	50	5 / 1	---	27.67	---	12/12/2023 11:17	17.32	7.48	6.81	-222	-445	971	10.9	0.3
F22-BH310	24.794	1	50	5 / 1	---	27.67	---	12/12/2023 11:18	17.32	7.48	---	---	---	---	---	---
F22-BH310	24.794	1	50	5 / 1	---	27.67	---	12/12/2023 11:20	17.32	7.48	6.82	-238	-476	971	11.0	0.3
F22-BH310	24.794	1	50	5 / 1	---	27.67	---	12/12/2023 11:23	17.32	7.48	6.83	-249	-499	971	10.9	0.3
F22-BH310	24.794	1	50	5 / 1	---	27.67	---	12/12/2023 11:26	17.32	7.48	6.83	-258	-516	971	10.9	0.3
F22-BH310	24.794	1	50	5 / 1	---	27.67	---	12/12/2023 11:29	17.32	7.48	6.83	-265	-529	971	10.9	0.2
F22-BH310	24.794	1	50	5 / 1	---	27.67	---	12/12/2023 11:32	17.32	7.48	6.83	-270	-539	970	10.9	0.2
F22-BH310	24.794	1	50	5 / 1	---	27.67	---	12/12/2023 11:35	17.32	7.48	6.82	-273	-546	970	10.9	0.2
	General Remarks: Standpipe micropurged and water sample taken. Water translucent and contains sediment.															
F22-BH502A	7.851	1	50	1 / 1	10.00	9.12	5.00 to 10.00	19/10/2023 16:25	0.73	7.12	---	---	---	---	---	---
F22-BH502A	7.851	1	50	1 / 2	10.00	9.12	5.00 to 10.00	19/10/2023 16:31	0.73	7.12	7.88	120	361	1127	14.6	1.5
F22-BH502A	7.851	1	50	1 / 2	---	9.12	---	19/10/2023 16:36	0.73	7.12	7.51	74	317	932	13.5	0.1
F22-BH502A	7.851	1	50	1 / 2	---	9.12	---	19/10/2023 16:39	0.73	7.12	7.19	69	312	882	13.4	0.2
F22-BH502A	7.851	1	50	1 / 2	---	9.12	---	19/10/2023 16:45	0.73	7.12	7.04	70	314	863	12.7	0.4
F22-BH502A	7.851	1	50	2 / 1	10.00	9.91	5.00 to 10.00	01/11/2023 14:16	0.58	7.27	---	---	---	0	---	---
F22-BH502A	7.851	1	50	2 / 2	10.00	9.91	5.00 to 10.00	01/11/2023 14:22	0.58	7.27	7.67	106	366	932	12.7	2.6

Key: NDA denotes 'no data available'.

IN-SITU WATER MONITORING RESULTS

Exploratory Position ID	Ground Level (m AOD)	Pipe Ref	Pipe Diameter (mm)	Monitoring Round / Test Number	Reported Installation Depth (mbgl)	Measured Installation Depth (mbgl)	Response Zone (m)	Date & Time of Monitoring	Water Depth (mbgl)	Water Elevation (m AOD)	pH	ORP (mV)	Eh (mV)	Conduc-tivity (uS/cm)	Temp-erature (°C)	Dissolved Oxygen (mg/l)
F22-BH502A	7.851	1	50	2 / 1	10.00	9.91	5.00 to 10.00	01/11/2023 14:25	0.58	7.27	7.45	112	372	931	12.6	0.4
F22-BH502A	7.851	1	50	2 / 1	---	9.91	---	01/11/2023 14:28	0.58	7.27	7.41	113	373	932	12.5	0.3
F22-BH502A	7.851	1	50	2 / 1	---	9.91	---	01/11/2023 14:31	0.58	7.27	7.39	113	373	940	12.4	0.2
F22-BH502A	7.851	1	50	2 / 1	---	9.91	---	01/11/2023 14:34	0.58	7.27	7.36	113	373	947	12.4	0.2
	General Remarks: Standpipe micropurged and water sample taken. Water cloudy white colour, no oil, no odour. Water level data logger installed at 7m depth to start at 18:00 on 01/11/2023 (1 hour intervals).															
F22-BH502A	7.851	1	50	3 / 1	10.00	9.91	5.00 to 10.00	16/11/2023 09:55	0.55	7.31	---	---	---	---	---	---
F22-BH502A	7.851	1	50	3 / 2	10.00	9.91	5.00 to 10.00	16/11/2023 10:01	0.55	7.30	8.53	-11	235	1107	11.1	4.8
F22-BH502A	7.851	1	50	3 / 2	---	9.91	---	16/11/2023 10:04	0.55	7.30	7.99	9	255	981	11.6	0.6
F22-BH502A	7.851	1	50	3 / 2	---	9.91	---	16/11/2023 10:07	0.55	7.30	7.83	26	271	958	11.7	0.3
F22-BH502A	7.851	1	50	3 / 2	---	9.91	---	16/11/2023 10:10	0.55	7.30	7.73	30	275	949	11.7	0.2
F22-BH502A	7.851	1	50	3 / 2	---	9.91	---	16/11/2023 10:13	0.55	7.30	7.66	36	282	959	11.7	0.2
F22-BH502A	7.851	1	50	3 / 2	---	9.91	---	16/11/2023 10:16	0.55	7.30	7.62	40	285	953	11.7	0.1
	General Remarks: Standpipe micropurged and water sample taken. Water slightly cloudy, no oil, no odour. Water level data logger removed at 09:55, downloaded, reinstalled at 10:30.															
F22-BH502A	7.851	1	50	4 / 1	10.00	9.91	5.00 to 10.00	30/11/2023 11:20	0.49	7.36	---	---	---	---	---	---
F22-BH502A	7.851	1	50	5 / 1	10.00	9.80	5.00 to 10.00	12/12/2023 14:16	0.36	7.49	---	---	---	---	---	---
F22-BH502A	7.851	1	50	5 / 1	---	9.80	---	12/12/2023 15:29	0.36	7.49	7.41	-123	-245	1076	10.4	1.5
F22-BH502A	7.851	1	50	5 / 1	---	9.80	---	12/12/2023 15:32	0.36	7.49	7.40	-122	-243	1075	10.5	1.2
F22-BH502A	7.851	1	50	5 / 1	---	9.80	---	12/12/2023 15:35	0.36	7.49	7.37	-121	-242	1072	10.5	1.1
F22-BH502A	7.851	1	50	5 / 1	---	9.80	---	12/12/2023 15:38	0.36	7.49	7.37	-121	-243	1073	10.6	1.0
F22-BH502A	7.851	1	50	5 / 1	---	9.80	---	12/12/2023 15:41	0.36	7.49	7.37	-121	-243	1070	10.6	1.0
F22-BH502A	7.851	1	50	5 / 1	---	9.80	---	12/12/2023 15:44	0.36	7.49	7.37	-122	-244	1070	10.5	0.9
	General Remarks: Standpipe micropurged and water sample taken. Water translucent with some sediment.															
RedP-BH-1A	2.699	1	50	F3 / 1	23.50	23.50	20.50 to 23.50	09/10/2023 08:45	1.96	0.74	---	---	---	---	---	---
RedP-BH-1A	2.699	1	50	1 / 1	23.50	22.30	20.50 to 23.50	19/10/2023 11:05	2.19	0.51	---	---	---	---	---	---

Key: NDA denotes 'no data available'.

IN-SITU WATER MONITORING RESULTS

Exploratory Position ID	Ground Level (m AOD)	Pipe Ref	Pipe Diameter (mm)	Monitoring Round / Test Number	Reported Installation Depth (mbgl)	Measured Installation Depth (mbgl)	Response Zone (m)	Date & Time of Monitoring	Water Depth (mbgl)	Water Elevation (m AOD)	pH	ORP (mV)	Eh (mV)	Conduc-tivity (uS/cm)	Temp-erature (°C)	Dissolved Oxygen (mg/l)
RedP-BH-1A	2.699	1	50	1 / 2	23.50	22.30	20.50 to 23.50	19/10/2023 11:13	2.19	0.51	7.31	197	436	39093	15.9	4.5
RedP-BH-1A	2.699	1	50	1 / 2	---	22.30	---	19/10/2023 11:16	2.19	0.51	7.27	195	436	38466	14.5	2.8
RedP-BH-1A	2.699	1	50	1 / 2	---	22.30	---	19/10/2023 11:29	2.19	0.51	7.17	151	393	44002	14.6	0.6
RedP-BH-1A	2.699	1	50	1 / 2	---	22.30	---	19/10/2023 11:36	2.19	0.51	7.21	26	268	45450	14.0	0.7
RedP-BH-1A	2.699	1	50	1 / 2	---	22.30	---	19/10/2023 11:41	2.19	0.51	7.22	-9	234	46244	13.4	0.8
RedP-BH-1A	2.699	1	50	2 / 1	23.50	22.91	20.50 to 23.50	01/11/2023 08:48	2.33	0.37	---	---	---	0	---	---
RedP-BH-1A	2.699	1	50	2 / 1	---	22.91	---	01/11/2023 08:53	2.33	0.37	6.86	231	491	39955	14.4	7.2
RedP-BH-1A	2.699	1	50	2 / 1	---	22.91	---	01/11/2023 08:56	2.33	0.37	7.05	194	454	47567	13.9	0.5
RedP-BH-1A	2.699	1	50	2 / 1	---	22.91	---	01/11/2023 08:59	2.33	0.37	7.10	122	383	47236	13.9	0.3
RedP-BH-1A	2.699	1	50	2 / 1	---	22.91	---	01/11/2023 09:02	2.33	0.37	7.13	56	317	46585	13.9	0.3
RedP-BH-1A	2.699	1	50	2 / 1	---	22.91	---	01/11/2023 09:05	2.33	0.37	7.13	20	281	46620	14.0	0.2
RedP-BH-1A	2.699	1	50	2 / 1	---	22.91	---	01/11/2023 09:08	2.33	0.37	7.14	2	263	46863	13.9	0.2
RedP-BH-1A	2.699	1	50	2 / 1	---	22.91	---	01/11/2023 09:11	2.33	0.37	7.14	-8	252	47116	13.9	0.2
RedP-BH-1A	2.699	1	50	2 / 1	---	22.91	---	01/11/2023 09:14	2.33	0.37	7.14	-16	245	47320	13.8	0.2
RedP-BH-1A	2.699	1	50	2 / 1	---	22.91	---	01/11/2023 09:17	2.33	0.37	7.14	-21	240	47539	13.8	0.2
RedP-BH-1A	2.699	1	50	2 / 1	---	22.91	---	01/11/2023 09:20	2.33	0.37	7.14	-25	236	47709	13.8	0.2
	General Remarks: Standpipe micropurged and water sample taken. Water slightly cloudy white colour, no oil, no odour. Water level data logger installed at 9m depth to start at 18:00 on 01/11/2023 (15 minute intervals).															
RedP-BH-1A	2.699	1	50	3 / 1	23.50	22.91	20.50 to 23.50	16/11/2023 08:50	2.10	0.60	---	---	---	---	---	---
RedP-BH-1A	2.699	1	50	3 / 2	23.50	23.58	20.50 to 23.50	16/11/2023 08:56	2.10	0.60	7.36	195	441	10727	11.2	7.0
RedP-BH-1A	2.699	1	50	3 / 2	---	23.58	---	16/11/2023 08:59	2.10	0.60	7.12	213	458	47974	12.1	0.8
RedP-BH-1A	2.699	1	50	3 / 2	---	23.58	---	16/11/2023 09:02	2.10	0.60	7.27	146	391	48747	12.2	0.4
RedP-BH-1A	2.699	1	50	3 / 2	---	23.58	---	16/11/2023 09:05	2.10	0.60	7.33	58	302	48769	12.2	0.4
RedP-BH-1A	2.699	1	50	3 / 2	---	23.58	---	16/11/2023 09:08	2.10	0.60	7.34	21	266	48746	12.2	0.3
RedP-BH-1A	2.699	1	50	3 / 2	---	23.58	---	16/11/2023 09:11	2.10	0.60	7.33	7	252	48743	12.2	0.3

Key: NDA denotes 'no data available'.

IN-SITU WATER MONITORING RESULTS

Exploratory Position ID	Ground Level (m AOD)	Pipe Ref	Pipe Diameter (mm)	Monitoring Round / Test Number	Reported Installation Depth (mbgl)	Measured Installation Depth (mbgl)	Response Zone (m)	Date & Time of Monitoring	Water Depth (mbgl)	Water Elevation (m AOD)	pH	ORP (mV)	Eh (mV)	Conduc-tivity (uS/cm)	Temp-erature (°C)	Dissolved Oxygen (mg/l)
RedP-BH-1A	2.699	1	50	3 / 2	---	23.58	---	16/11/2023 09:14	2.10	0.60	7.33	1	246	48732	12.2	0.2
RedP-BH-1A	2.699	1	50	3 / 2	---	23.58	---	16/11/2023 09:17	2.10	0.60	7.32	-3	241	48719	12.2	0.2
RedP-BH-1A	2.699	1	50	3 / 2	---	23.58	---	16/11/2023 09:20	2.10	0.60	7.32	-7	238	48733	12.1	0.2
	General Remarks: Standpipe micropurged and water sample taken. Water slightly cloudy with fine sediment, no oil, no odour. Water level data logger removed at 08:44, downloaded, reinstalled at 09:35.															
RedP-BH-1A	2.699	1	50	4 / 1	23.50	22.91	20.50 to 23.50	30/11/2023 10:46	1.67	1.03	---	---	---	---	---	---
RedP-BH-1A	2.699	1	50	5 / 1	23.50	22.79	20.50 to 23.50	13/12/2023 09:56	1.26	1.44	---	---	---	---	---	---
RedP-BH-1A	2.699	1	50	5 / 2	23.50	22.79	20.50 to 23.50	13/12/2023 10:16	1.26	1.44	8.03	-97	-194	139	9.2	10.4
RedP-BH-1A	2.699	1	50	5 / 2	---	22.79	---	13/12/2023 10:19	1.26	1.44	8.10	-96	-192	140	9.2	10.4
RedP-BH-1A	2.699	1	50	5 / 2	---	22.79	---	13/12/2023 10:22	1.26	1.44	8.13	-96	-193	140	9.4	10.4
RedP-BH-1A	2.699	1	50	5 / 2	---	22.79	---	13/12/2023 10:25	1.26	1.44	8.12	-94	-188	140	9.4	10.4
RedP-BH-1A	2.699	1	50	5 / 2	---	22.79	---	13/12/2023 10:28	1.26	1.44	8.17	-96	-192	140	9.4	10.4
	General Remarks: Standpipe micropurged and water sample taken. Water translucent with some sediment.															

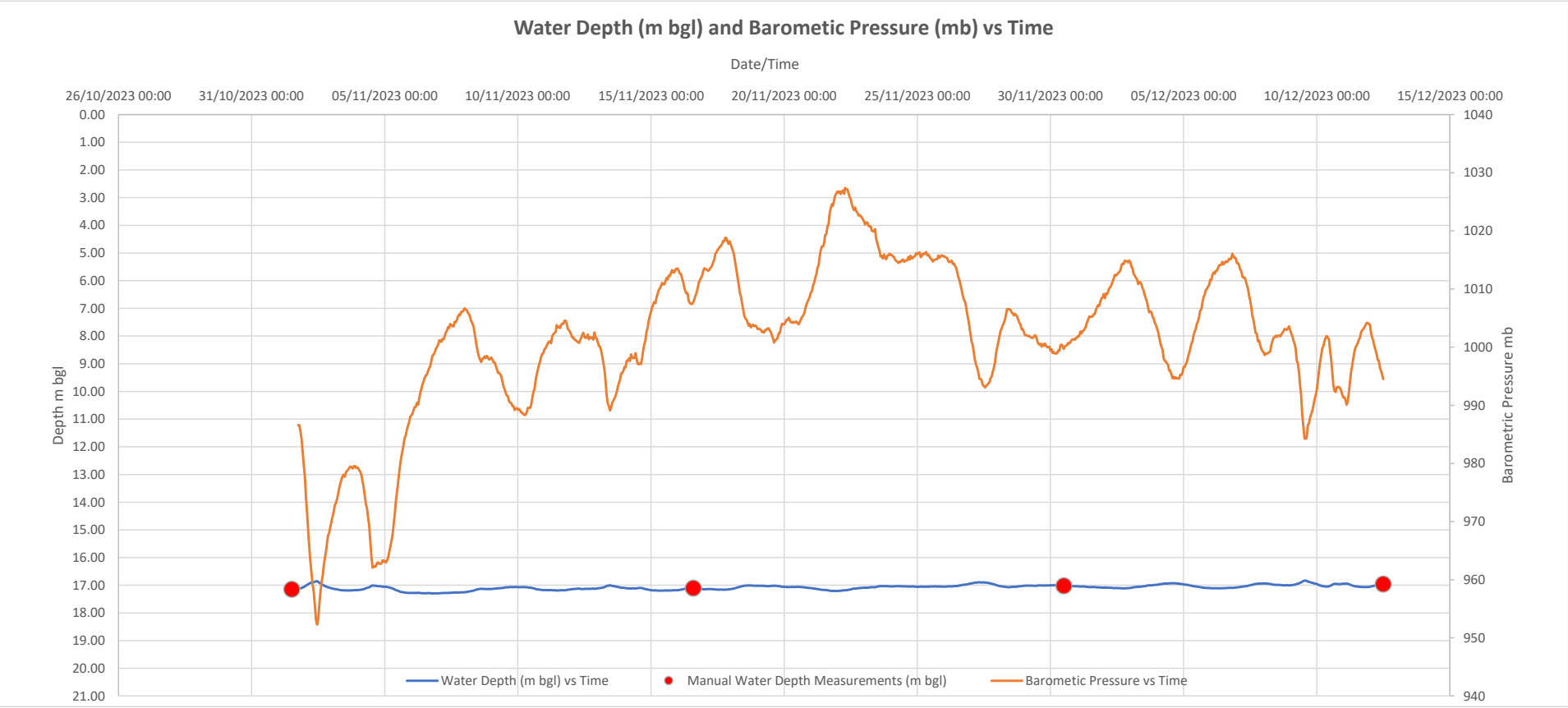
Key: NDA denotes 'no data available'.

'DIVER' WATER LEVEL DATA LOGGER MEASUREMENTS

Plots of Water Depth (m below ground level) and Barometric Pressure vs Time

Borehole No.: F22-BH308 **Pipe No.:** 1 **Pipe Response Zone (m bgl):** 15.00 to 21.00 **Diver Installed Depth (m bgl):** 20.00 **Diver Serial No:** 1040215

Ground Level (m AOD): 24.41 National Grid Coordinates: E: 639831.5 N: 262136.0 **Monitoring Period. Start:** 01/11/2023 18:00 **End:** 12/12/2023 12:00



Notes	
	1. Standpipe micropurged and water samples taken on 16/11/2023, 30/11/2023 and 12/12/2023.
	2
	3
	4

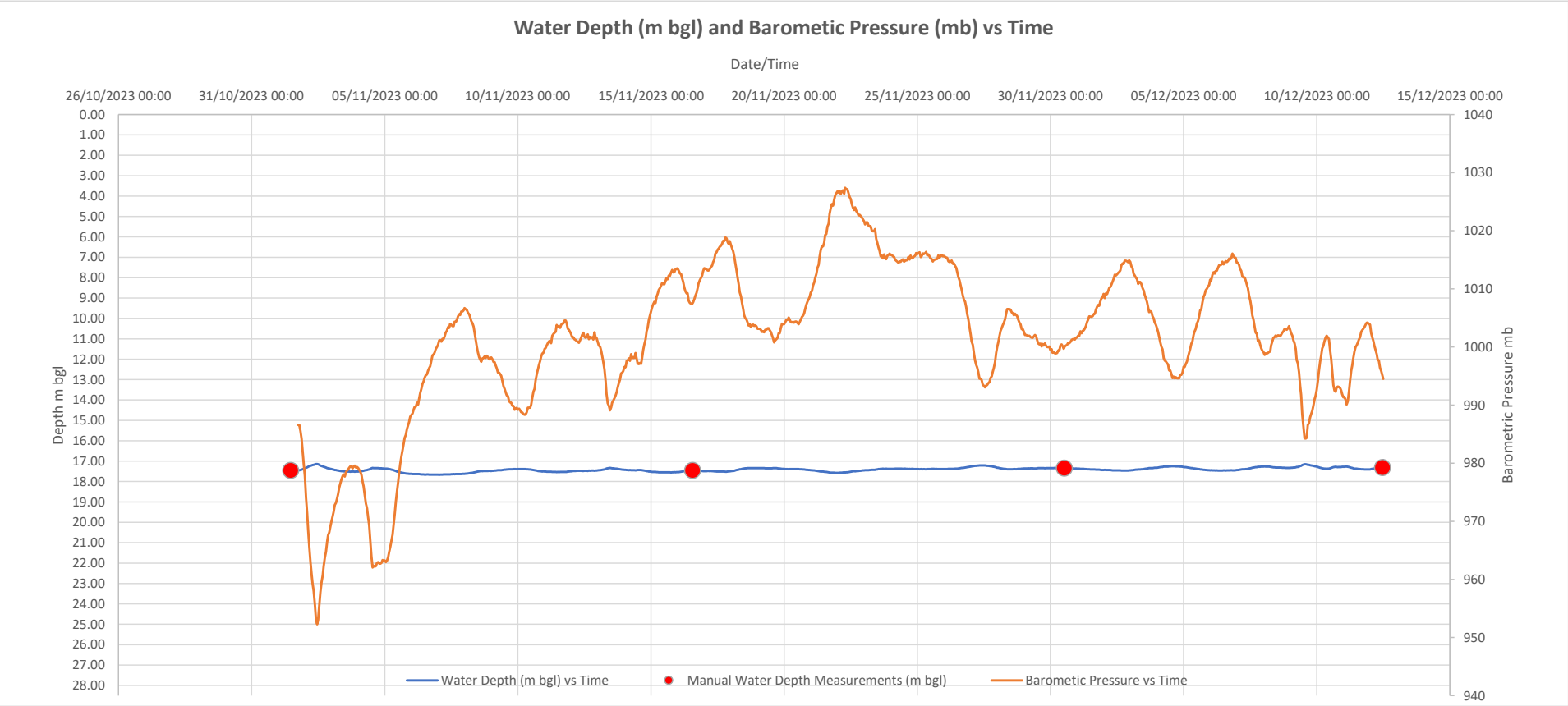
STRUCTURAL SOILS LTD **The Old School** **Stillhouse Lane,** **Bedminster** **BRISTOL, BS3 4EB**	Diver Installed By	[redacted]	01.11.2023	Data Processed By:	[redacted]	12.03.2024	Checked by (the Responsible Expert)	A. Lumber [redacted]	Date 13.03.2024	**Contract Ref:**	**563835**
	Contract:			**Sealink Friston**			**Client**	**National Grid**		**Page**	**1 of 1**

'DIVER' WATER LEVEL DATA LOGGER MEASUREMENTS

Plots of Water Depth (m below ground level) and Barometric Pressure vs Time

Borehole No.: F22-BH310 **Pipe No.:** 1 **Pipe Response Zone (m bgl):** 25.00 to 28.45 **Diver Installed Depth (m bgl):** 23.00 **Diver Serial No:** 1040255

Ground Level (m AOD): 24.79 National Grid Coordinates: E: 639794.2 N: 262277.7 **Monitoring Period. Start:** 01/11/2023 18:00 **End:** 12/12/2023 12:00



Notes	
	1. Standpipe micropurged and water samples taken on 16/11/2023, 30/11/2023 and 12/12/2023.
	2
	3
	4

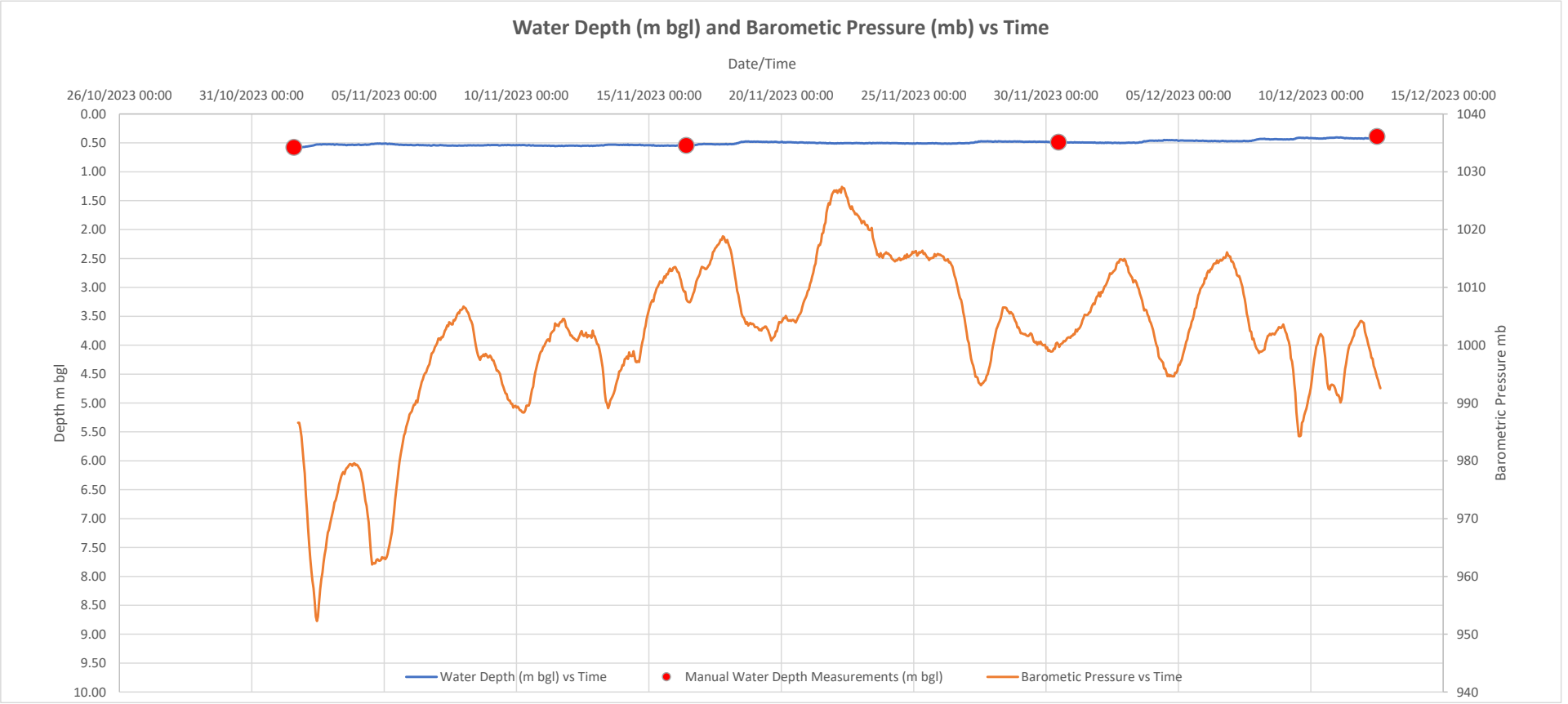
STRUCTURAL SOILS LTD **The Old School** **Stillhouse Lane,** **Bedminster** **BRISTOL, BS3 4EB**	Diver Installed By	[redacted]	01.11.2023	Data Processed By:	[redacted]	12.03.2024	Checked by (the Responsible Expert) [redacted] Date 13.03.2024	**Contract Ref:** **563835**
	Contract:	**Sealink Friston**		**Client**	**National Grid**			**Page** **1 of 1**

'DIVER' WATER LEVEL DATA LOGGER MEASUREMENTS

Plots of Water Depth (m below ground level) and Barometric Pressure vs Time

Borehole No.: F22-BH502A **Pipe No.:** 1 **Pipe Response Zone (m bgl):** 5.00 to 10.00 **Diver Installed Depth (m bgl):** 7.00 **Diver Serial No:** 1042472

Ground Level (m AOD): 7.85 National Grid Coordinates: E: 638736.1 N: 262152.8 **Monitoring Period. Start:** 01/11/2023 18:00 **End:** 12/12/2023 15:00



Notes	
	1. Standpipe micropurged and water samples taken on 16/11/2023, 30/11/2023 and 12/12/2023.
	2
	3
	4

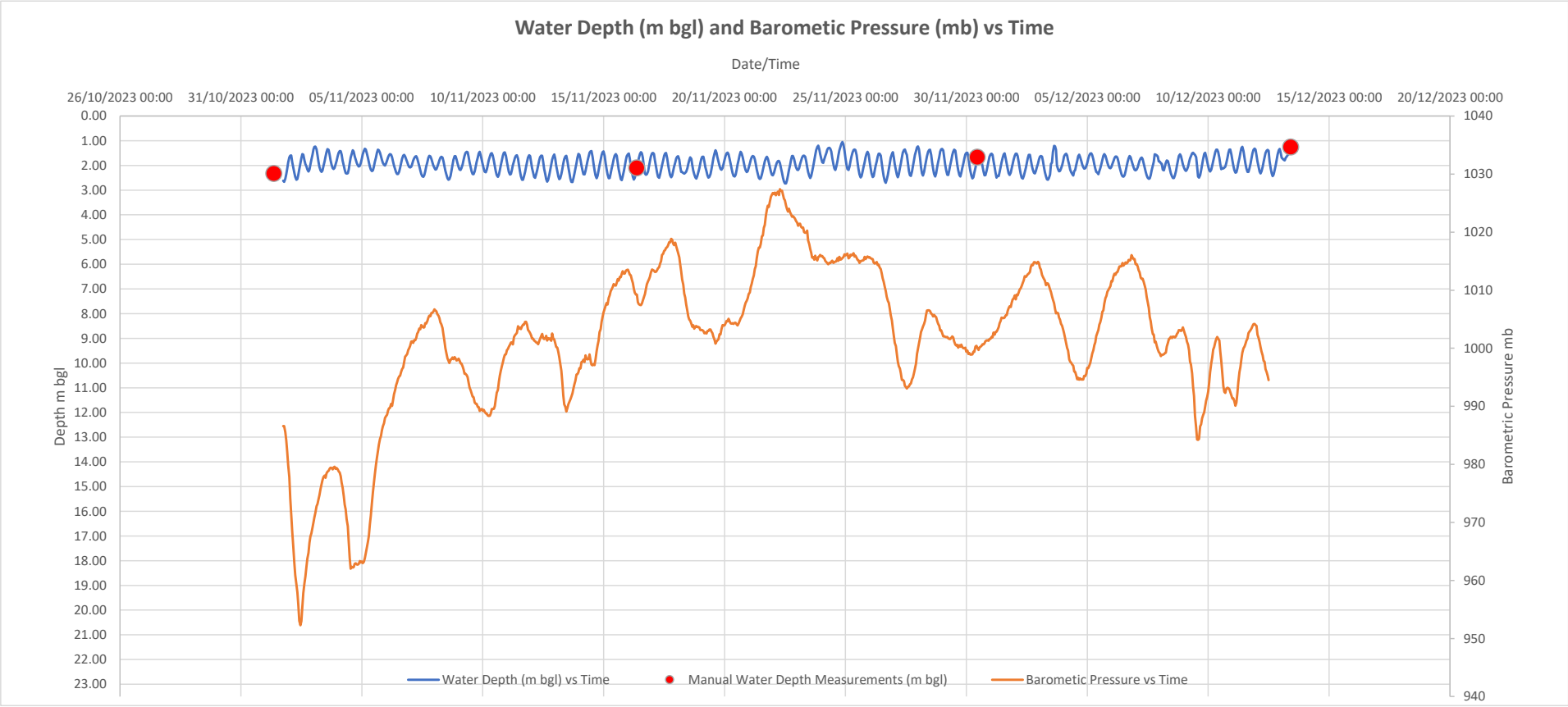
STRUCTURAL SOILS LTD **The Old School** **Stillhouse Lane,** **Bedminster** **BRISTOL, BS3 4EB**	Diver Installed By	[redacted] 01/11/2023	Data Processed By:	[redacted] 12.03.23	Checked by (the Responsible Expert)	[redacted]	Date 13.03.2024	**Contract Ref:**	**563835**
	Contract:		**Sealink Friston**		**Client**	**National Grid**		**Page**	**1 of 1**

'DIVER' WATER LEVEL DATA LOGGER MEASUREMENTS

Plots of Water Depth (m below ground level) and Barometric Pressure vs Time

Borehole No.: RedP-BH-1A **Pipe No.:** 1 **Pipe Response Zone (m bgl):** 20.50 to 23.50 **Diver Installed Depth (m bgl):** 9.00 **Diver Serial No:** 1042443

Ground Level (m AOD): 2.70 National Grid Coordinates: E: 646813.6 N: 258334.2 **Monitoring Period. Start:** 01/11/2023 18:00 **End:** 13/12/2023 09:45



Notes	
	1. Standpipe micropurged and water samples taken on 16/11/2023, 30/11/2023 and 12/12/2023.
	2. Location situated near to the shoreline and is potentially tidal influenced.
	3
	4

STRUCTURAL SOILS LTD **The Old School** **Stillhouse Lane,** **Bedminster** **BRISTOL, BS3 4EB**	Diver Installed By	[redacted]	01.11.2023	Data Processed By:	[redacted]	12.03.24	Checked by (the Responsible Expert) [redacted] Date 13.03.2024	**Contract Ref:** **563835**
	Contract:			**Sealink Friston**			**Client** **National Grid**	**Page** **1 of 1**

APPENDIX G - CALIBRATION CERTIFICATES

(i) SPT Calibration Records

(ii) Hand Vane Calibration Records

(iii) Thermal resistivity Calibration records

ARCHWAY
ENGINEERING (U.K) LTD

SPT Hammer Energy Test Report

in accordance with BSEN ISO 22476-3:2005

ARCHWAY ENGINEERING
AINLEYS INDUSTRIAL ESTATE
ELLAND
WEST YORKSHIRE
HX5 9JP

SPT Hammer Ref:	AR1862
Test Date:	10/03/2023
Report Date:	10/03/2023
File Name:	AR1862.spt
Test Operator:	KM

Instrumented Rod Data

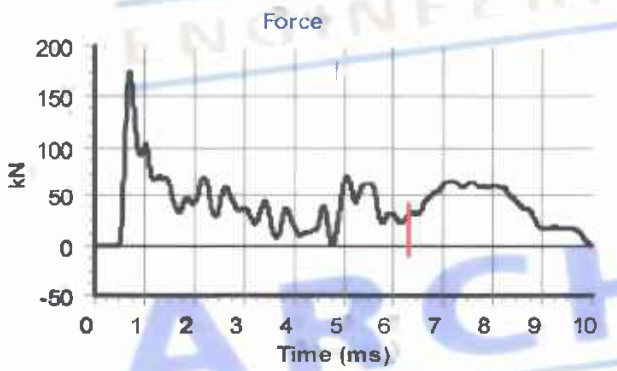
Diameter d_r (mm):	54
Wall Thickness t_r (mm):	6.5
Assumed Modulus E_a (GPa):	208
Accelerometer No.1:	72572
Accelerometer No.2:	72757

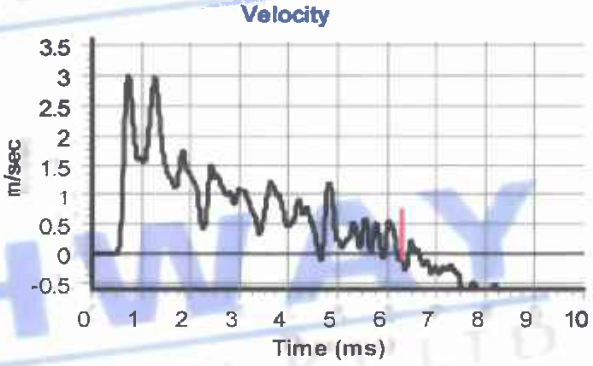
SPT Hammer Information

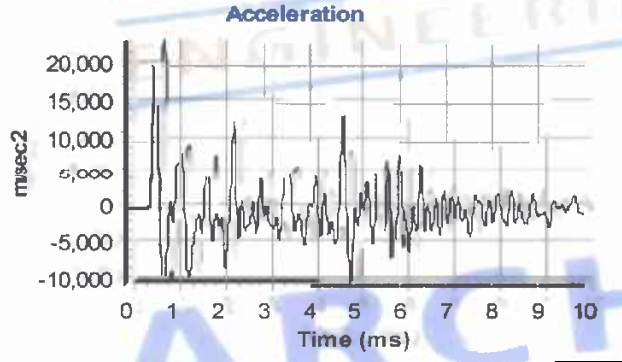
Hammer Mass m (kg):	63.5
Falling Height h (mm):	760
SPT String Length L (m):	10.0

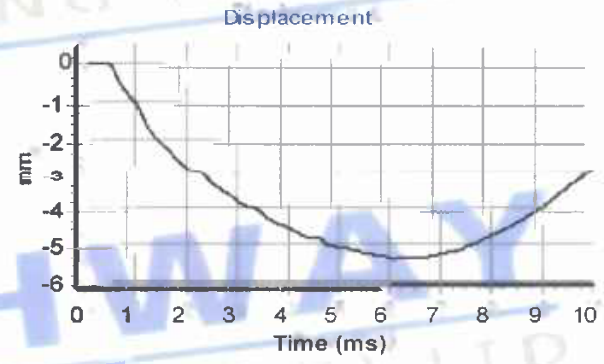
Comments / Location

STRUCTURAL ORDER 84060









Calculations

Area of Rod A (mm2):	970
Theoretical Energy E_{theor} (J):	473
Measured Energy E_{meas} (J):	356

Energy Ratio E_r (%): **75**

[redacted]

Title: SENIOR SALES ENGINEER

The recommended calibration interval is 12 months

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SPT Hammer Energy Test Report

in accordance with BSEN ISO 22476-3:2005

ARCHWAY ENGINEERING (UK) LTD
AINLEYS INDUSTRIAL ESTATE
ELLAND
WEST YORKSHIRE
HX5 9JP

SPT Hammer Ref:	AR3104
Test Date:	21/04/2023
Report Date:	21/04/2023
File Name:	AR3104.spt
Test Operator:	JL

Instrumented Rod Data

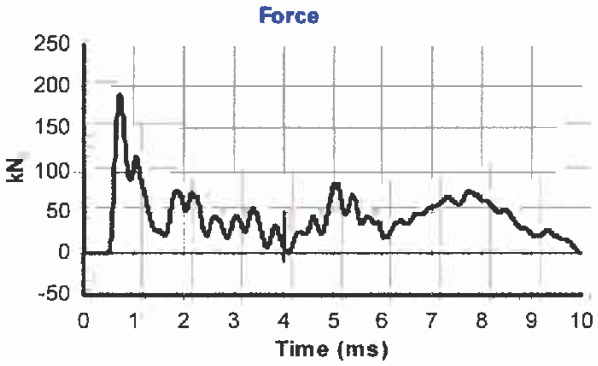
Diameter d_r (mm):	54
Wall Thickness t_r (mm):	6.5
Assumed Modulus E_a (GPa):	208
Accelerometer No.1:	72572
Accelerometer No.2:	72757

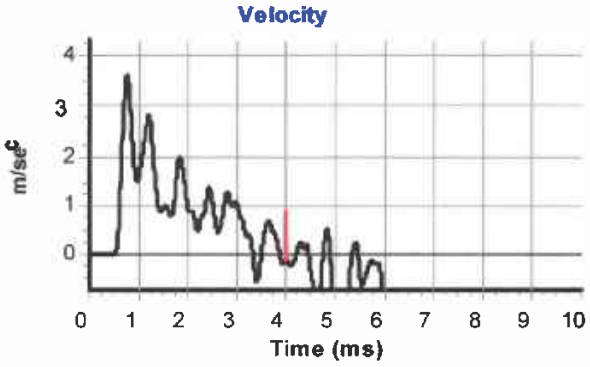
SPT Hammer Information

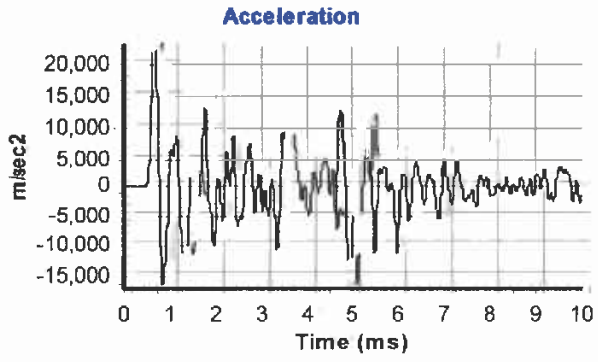
Hammer Mass m (kg):	63.5
Falling Height h (mm):	760
SPT String Length L (m):	10.0

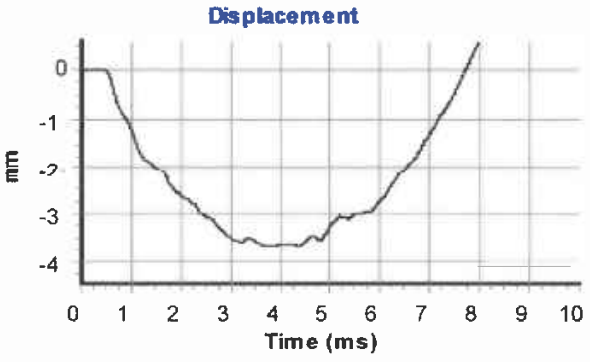
Comments / Location

Structural soils - 84534









Calculations

Area of Rod A (mm2):	970
Theoretical Energy E_{theor} (J):	473
Measured Energy E_{meas} (J):	298

Energy Ratio E_r (%): **63**

[redacted]

Title: FITTER

The recommended calibration interval is 12 months

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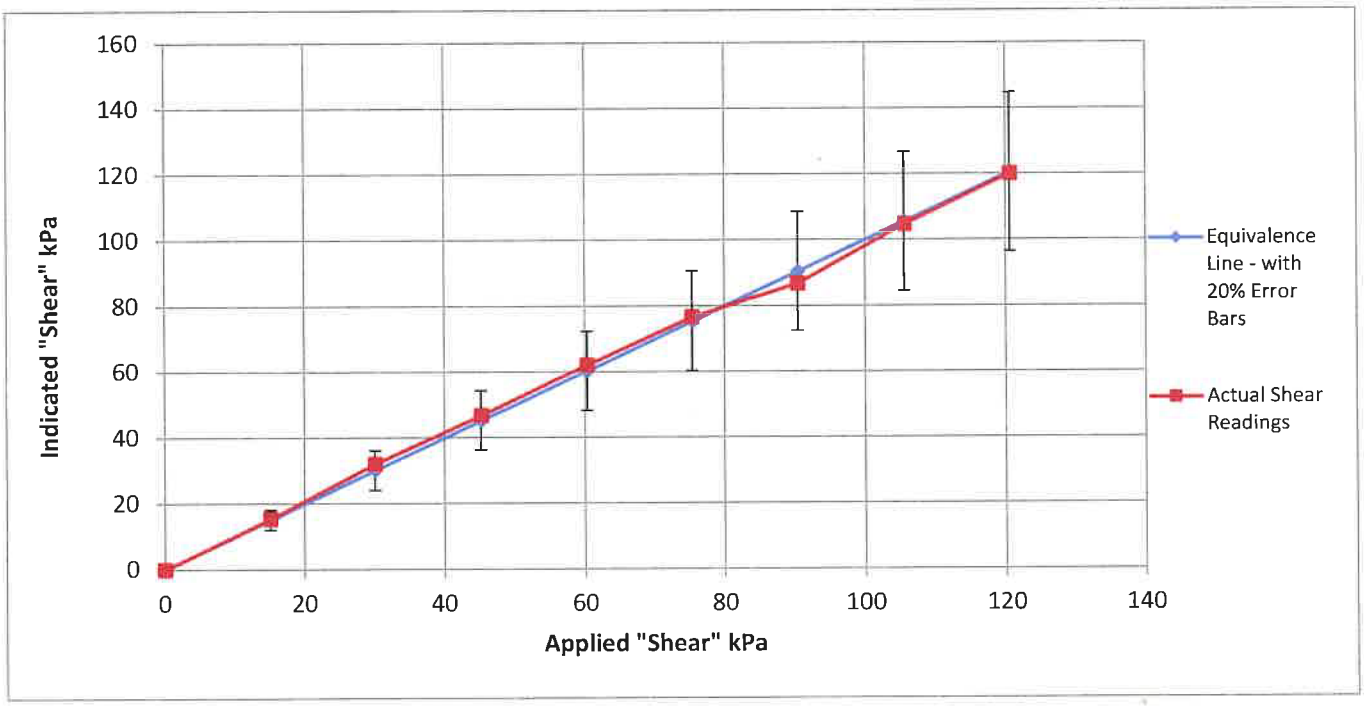
CONTROLS
Testing equipment for the construction industry

VANE TESTER
CALIBRATION CERTIFICATE

Wykeham Farrance
Soil Mechanics Division of CONTROLS

Certificate Number	VT8010	**Date of Issue**	05/09/2023
Vane Ref/S No	501872	**Page**	1 of 2
Manufacturer	Geonor	**Approved Signatory**	[redacted]
Model No	72782		
Date of Calibration	05/09/2023		

Actual "Shear Stress" Applied kPa	Average "Shear Stress" Recorded kPa	Error %	Repeatability %
0.0	0	0.0%	0.0%
15.1	15.3	1.7%	13.0%
30.1	32.0	5.8%	0.0%
45.2	46.7	3.1%	4.3%
60.3	62.0	2.8%	0.0%
75.4	76.7	1.7%	2.6%
90.4	86.7	-4.3%	2.3%
105.5	104.7	-0.8%	1.0%
120.6	120.0	-0.5%	0.0%



CONTROLS
Testing equipment for the construction industry

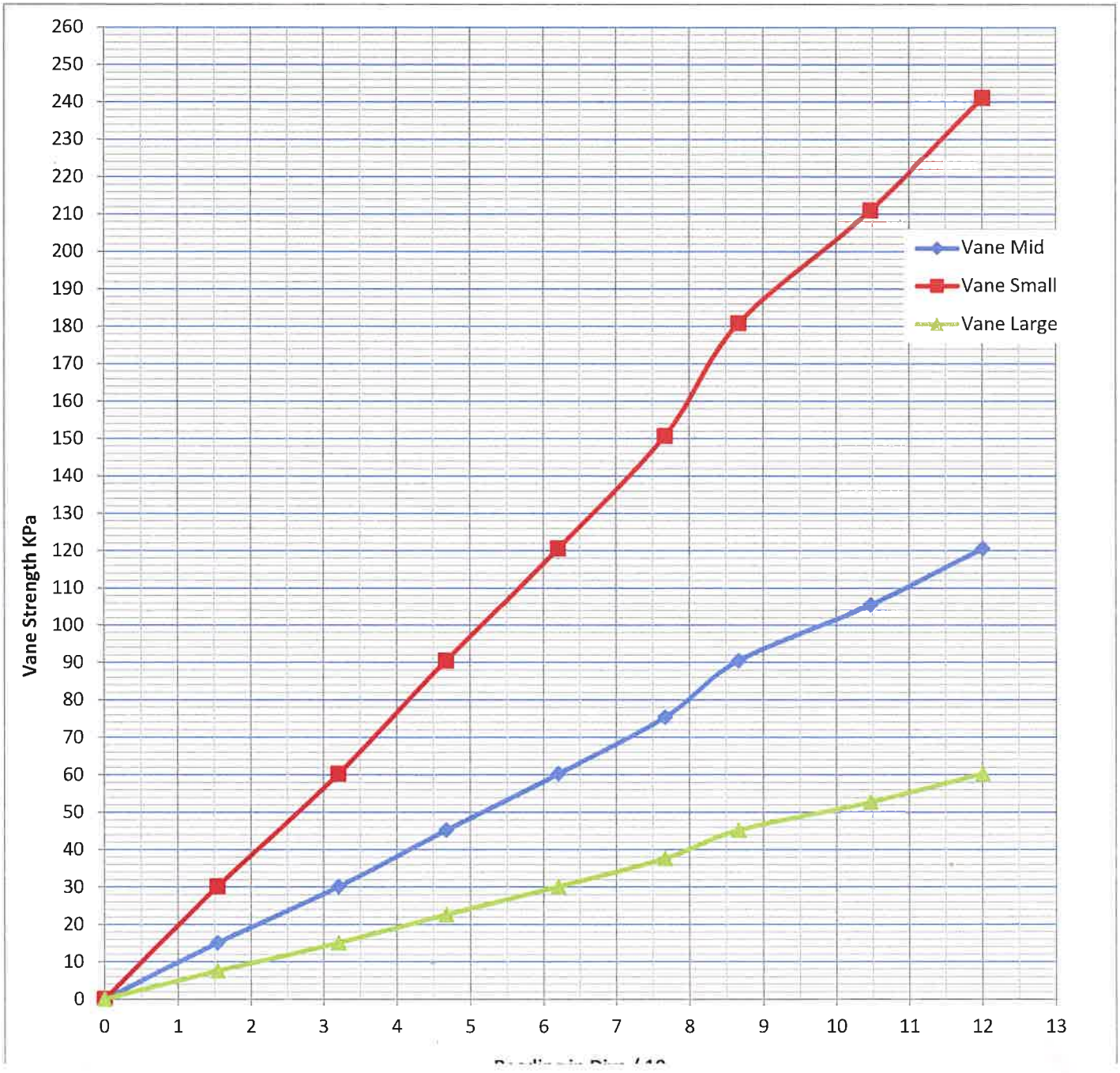
VANE TESTER
CALIBRATION CERTIFICATE

Wykeham Farrance
Soil Mechanics Division of CONTROLS

The above Vane tester was mounted in a "frictionless" rotation lever device and was loaded with traceable weights (Cert No 5120) at fixed centres measured using traceable equipment (Cert No 130040MAH). The shear strength reading recorded was compared back through calculation to BS1377 Part 7 Clause 3.4.2 to the actual torque ("shear strength") applied. The above results were recorded. These apply to the middle size of vane 20mmx40mm. For a simple "lookup" of vane strengths for all 3 sizes of vanes please see over.

Quick Ref Lookup Chart for Certificate Vane Ref/S No 501872

Find Indicted Reading on X Axis and follow up to graph and across to Y Axis to read the "True" Shear Vane Reading



CONTROLS TESTING EQUIPMENT LTD – Controls House, Icknield Way Tring Hertfordshire HP23 4JX
Tel +44 (0)1442 828311 – Fax +44 (0)1442 828466 – sales@controlstesting.co.uk www.controlsgroup.net

Certificate of calibration

Certificate number CRU02-121-20220721

AFTER ADJUSTMENT						
Calibration results zero-scale measurement						
Reference zero scale value	Measured zero scale value	Uncertainty of calibration	Allowed minimum	Allowed maximum	Range	PASS (P) FAIL (F)
909.2	909.2	0.2	908.8	909.6	R (Ohm)	P
96.62	96.62	0.00015	96.12	97.12	I (mA)	P
1.01	1.00	7µV	1.00	1.02	U (V)	P

AFTER ADJUSTMENT						
Calibration results full-scale measurement						
Reference full scale value	Measured full scale value	Uncertainty of calibration	Allowed minimum	Allowed maximum	Range	PASS (P) FAIL (F)
1299.9	1299.9	0.46	1298.9	1300.9	R (Ohm)	P
384.20	384.12	1	383.20	385.20	I (mA)	P
4.00	4.00	0.34mV	3.96	4.04	U (V)	P
1.0000	1.0000	0.00014	0.9994	1.0006	f (Hz)	P

Serial number 0121

Date of calibration 21/07/2022

Certificate of calibration

Certificate number CRU02-121-20220721

Manufacturer Leiderdorp Instruments
Location of calibration Achthovnerweg 19
2351AX Leiderdorp
The Netherlands

Model CRU02

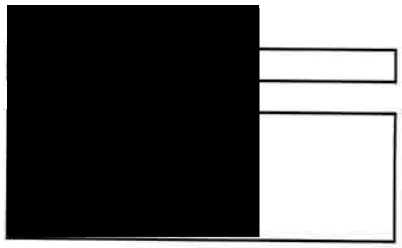
Serial number 0121

Date of calibration 21/07/2022

Temperature (°C) 23+/-5°C

Humidity (% RH) 60+/-30%

Performed by
(calibration technician)
Signature



Hukseflux Thermal Sensors B.V.
www.hukseflux.com
info@hukseflux.com

Product certificate

Pages: 1
Release date: 14 JUN, 2022

Product code	**CRC05**
Product identification	**serial number 22060**
Product type	calibration reference cylinder
Measurand	thermal conductivity

Calibration result

Thermal conductivity	**λ = 0.199 W/(m·K)**
Calibration uncertainty	**± 0.010 x W/(m·K)**
	the number following the ± symbol is the expanded uncertainty with a coverage factor k = 2, and defines an interval estimated to have a level of confidence of 95 percent
Reference conditions	20 ± 5 °C

Product specifications

1: material internal cylinder	**PMMA**

Measurement process

Metrological characteristic	λ in [W/(m·K)]: thermal conductivity of the cylinder
Calibration method	Hukseflux TNC
Uncertainty of the method	the expanded uncertainty is ± 5 %

Metrological traceability

Calibration traceability	traceability of calibration is to the SI units of m, s, K and the derived SI units of Ω, V
Calibration hierarchy	from SI through international standards traceability of temperature is through international standards and NIST ITS90

Evaluation of the uncertainty of the calibration result

Uncertainty calculation	based on nominal values and rectangular distribution, k = 2 [GUM]

Calibration performed by: [redacted]
Date: 13 JUN, 2022

Person authorising acceptance and release of product: [redacted]
Date: 14 JUN, 2022

Hukseflux Thermal Sensors B.V.
www.hukseflux.com
info@hukseflux.com

Product certificate

Pages: 1
Release date: 01 AUG, 2022

Product code	**FTN02**
Product identification	**serial number 22083**
Product type	thermal needle system
Measurand	thermal conductivity
Standard	ASTM D 5334-00 and D 5930-97 IEEE Std 442-1981

Product specifications

1:	functional test	**verified**

Person authorising acceptance and release of product:
M. Rietveld

Date:
01 AUG, 2022

Calibration results

	needle	spare needle	read out unit**
Component	**TP09**	**TP09**	**CRU02**
Serial number	**661**	**662**	**121**
Calibration result	**R_e = 82.9**	**R_e = 82.9**	
Uncertainty*	± 0.8	± 0.8	
Calibration date	30 MAY, 2022	30 MAY, 2022	21 JUL, 2022

With Calibration result R_e in Ω/m, Uncertainty in Ω/m

* the number following the ± symbol is the expanded uncertainty with a coverage factor k = 2, and defines an interval estimated to have a level of confidence of 95 percent
** calibration result see separate certificate

Table 0.1 *connections*

PIN	WIRE	NEEDLE	
4	Yellow	Yellow	heater [+]
2	Brown	Yellow	heater [−]
1	White	Red	signal measure [−]
8	Red	Red	signal current [−]
7	Blue	White	signal measure [+]
3	Green	White	signal current [+]

Needle calibration procedure according to Hukseflux TNC.
CRU calibration according to Hukseflux CRUC.
Traceability of calibration is to SI units.

Please consult the user manual for information on measurement uncertainty during actual use and for product set up, operation and maintenance instructions.

Instrument House
91-92 Shrivenham Hundred Business Park
Watchfield
Oxfordshire
SN6 8TY
Fax: 01793 784466
[redacted]

SERVICE / INSPECTION SHEET

JOB NUMBER: 77650
INSTRUMENT: Tiger XTL VOC W-2B

SERIAL NUMBER: XT-100279
DATE RECEIVED: 13/09/2023

FIRMWARE: 6.06

CUSTOMER: Structural Soils Ltd

ITEMS RECEIVED	Received	RTN?
Instrument		
Rubber Boot		
Battery Charger		
Charging Cradle		
Operation Manual		
Quick Start Guide		
Spares Kit		
Comms Cable		
Probe FLEXI		
Peli Case		
Tubing		
Regulator		
Software (Memory Stick)		
PLASTIC CASE		
silver case		
	SIGNED:	

TESTS	Pre Service	Post Service
Charger Test		OK
Battery charge Test		OK
Lamp Test		OK
Air Flow Test ≥ 220ml/min		265ml/min
Block Flow Test ≤ 15ml/min		0ml/min
Moisture Sensitivity = 0.0ppm		0 ppm
Switch Test		OK
Sensor Test		OK
Alarm Test		OK
PC Comms Test		OK
Datalog Test		OK
Display Test		OK
Physical Inspection		OK
PAT Test		N/A
Firmware Upgrade		N/A
Software Upgrade (usb)		N/A
Function Test		OK
Run time		10:28

Comments:

Please see email chain *

Customer states readings are erroneous. Can not recreate customer issue

However, probe assembly was loose and visible corrosion on main board above the battery pins.
Cleaned off corrosion with no difference to readings or unit function.
We have seen that, with pressure placed on sensor cover edge it can expose the pneumatic circuit. Potential readings issues can occur from this / ingress ect.

Calibrated and bump tested, unit functioning correctly.

Re-calibrated 4/10/23 - Service due 30/03/2024

TECHNICIAN: [redacted]

[redacted]

DATE: 15/09/2023
04/10/2023

CERTIFICATE OF CALIBRATION
Tiger XTL VOC W-2B

CALIBRATION CERTIFICATE NO:

ISSUED BY: SHAWCITY LIMITED
DATE: 04/10/2023

APPROVED SIGNATORY:

NAME: [redacted]

CUSTOMER: Structural Soils Ltd
INSTRUMENT: Tiger XTL VOC W-2B
SERIAL NUMBER: XT-100279

CALIBRATION METHOD: CM03
AMBIENT CONDITIONS: 20°C ± 2°C and 50% (± 20%) RH

Prior to calibration the instrument was allowed to stabilise in the laboratory for at least 30 minutes.
The instrument was calibrated by exposing the sensor to known values of gas concentrations.
All gases were sampled through the complete probe and in line filter, where applicable.
The reference value is that generated by the certified source and the indicated value is that measured by the instrument.

CALIBRATION RESULTS

GAS	LOT No	REF. VALUE	INDICATED VALUE
Isobutylene	WO418359-2	100 ppm	100 ppm
Isobutylene	WO188023-2	5000 ppm	5000 ppm

COMMENTS:
The reported uncertainty is based on a standard uncertainty multiplied by a coverage factor of *k* =2.
This provides a level of confidence of uncertainty of approximately 95%.
The uncertainty of measurement is ±2 %
The results indicate that the instrument conforms to the applicable parts of the published specification.

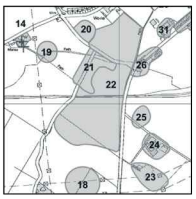
HEALTH & SAFETY, OCCUPATIONAL HYGIENE AND ENVIRONMENTAL MONITORING INSTRUMENTS

Tel: 01793 780622
[redacted]
Instrument House, 91-92 Shrivenham Hundred Business Park
Watchfield, Oxfordshire, SN6 8TY

APPENDIX H - ARCHAEOLOGICAL WATCHING BRIEF

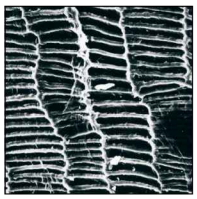
(i) Archaeological Watching Brief on GI Works Report

SLWB23










SEA LINK FEED – FRISTON, SUFFOLK

ARCHAEOLOGICAL WATCHING BRIEF ON GI WORKS

commissioned by Structural Soils
on behalf of Mott Macdonald

March 2024

HEADLAND ARCHAEOLOGY

REGISTERED ORGANISATION CIfA

SEA LINK FEED – FRISTON, SUFFOLK

ARCHAEOLOGICAL WATCHING BRIEF ON GI WORKS

commissioned by Structural Soils
on behalf of Mott Macdonald

March 2024

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This report adheres to the quality standard of ISO 9001:2015

PROJECT INFO:

HA Project Code **SLWB23** / HA Report No **2024-30** / NGR **TM 424 599 / TM 42470 59956** / Parish **Aldeburgh cum Thorpe, Leiston, Knodishall, Friston & Saxmundham** / Local Authority **Suffolk** / Fieldwork Date **September to October 2023** / OASIS Ref. **headland1-521029** / Archive Repository **Suffolk County Council Archaeological Archive**

PROJECT TEAM:

[redacted]

Approved by [redacted] ……..

Headland Archaeology Midlands & West
Unit 1 | Clearview Court | Twyford Rd | Hereford HR2 6JR
t 01432 364 901
e midlandsandwest@headlandarchaeology.com
w www.headlandarchaeology.com

HEADLAND ARCHAEOLOGY

part of the RSK Group

REGISTERED ORGANISATION CIfA

PROJECT SUMMARY

Headland Archaeology (UK) Ltd (Part of the RSK Group) was commissioned by Structural Soils Ltd. to undertake programme of archaeological monitoring and recording in association with Geotechnical site Investigations (GI) as part of the SEA Link project. This document forms the report for the Friston section of the works.

Thirty-four trial pits, located across several fields, within an area of relatively high archaeological potential, between Aldeburgh and Saxmundham in Suffolk were excavated. Only three of the trial pits (TP222, TP204, and TP316) were identified as containing archaeological features. TP222 revealed a group of small pits, one of which contained sherds of pottery and lithics of probable Early Bronze Age date. TP204 and TP316 both contained linear features. All three of these trial pits were re-sited to avoid further interface with the archaeology. The remaining trial pits were observed to be cut into naturally occurring deposits and no further archaeological features or deposits were identified.

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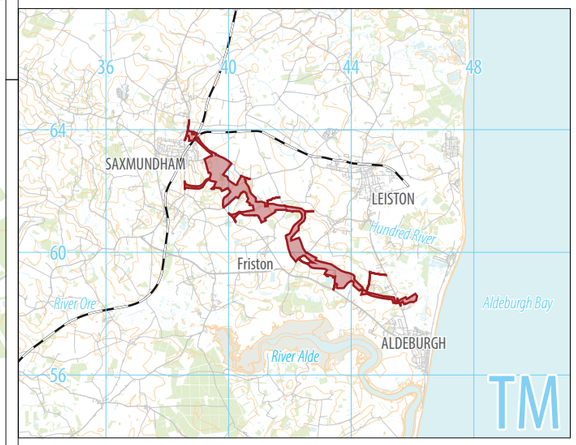
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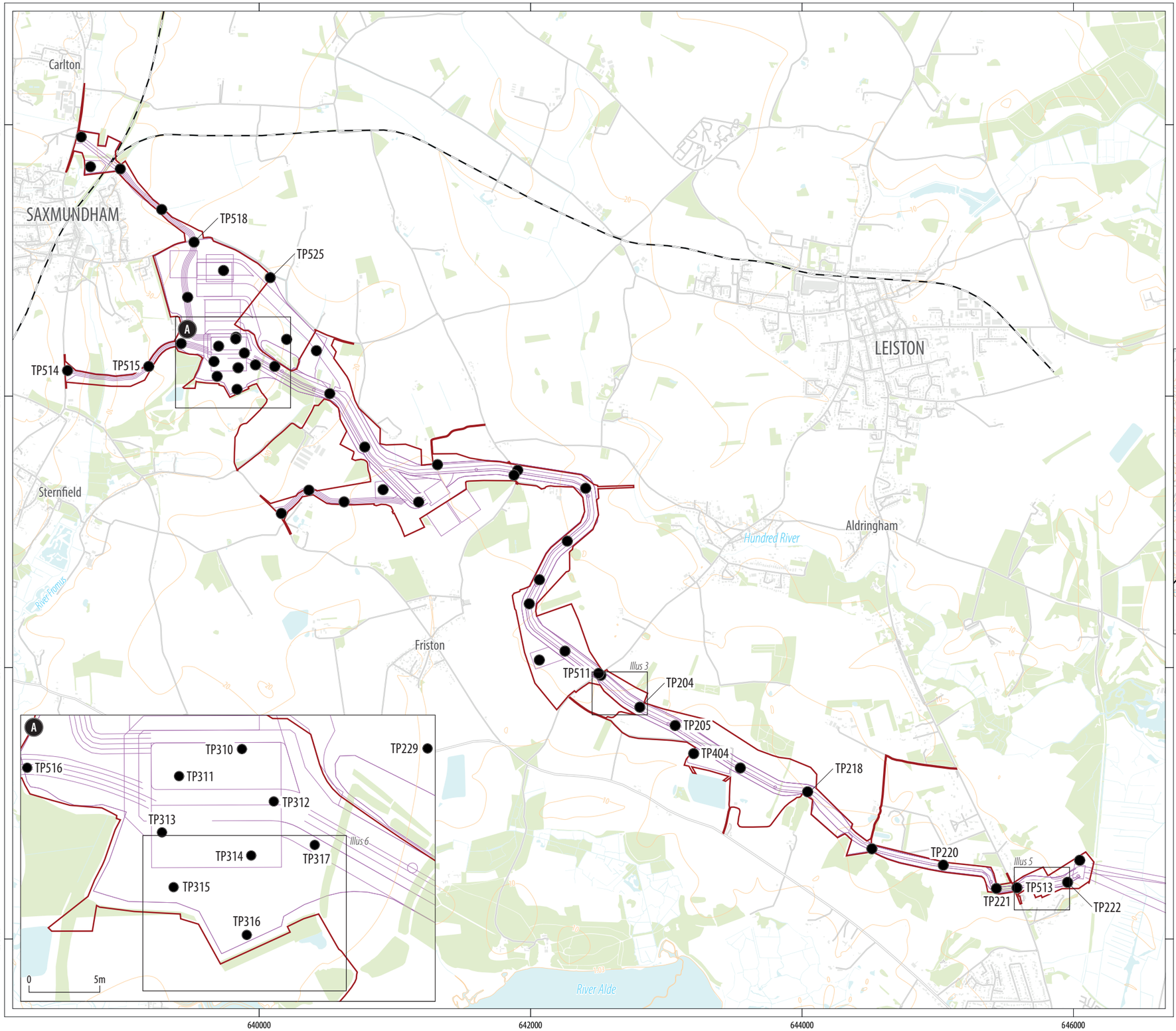
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Sea Link Feed
Friston
Suffolk







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Headland Archaeology Midlands & West
Unit 1 | Clearview Court | Twyford Rd | Hereford HR2 6JR
t 01432 364 901
e midlandsandwest@headlandarchaeology.com
w www.headlandarchaeology.com

0 600m
1:30,000 @ A3

scheme boundary
alignment
trial pit

ILLUS 1 Site location

SEA LINK FEED – FRISTON, SUFFOLK

ARCHAEOLOGICAL WATCHING BRIEF ON GI WORKS

1 INTRODUCTION

This report describes the results of a programme of archaeological monitoring and recording undertaken by Headland Archaeology (UK) Ltd, on behalf of Structural Soils Ltd, in association with Geotechnical site Investigations (GI); as part of the Friston section of the SEA Link project.

The project involves a 2GW HVDC link between Richborough in Kent and Friston in Suffolk. The original scope of the Friston works comprised the monitoring of 51 trial pits across the sites of a Cable Route Corridor, a Convertor Station at Saxmundham and a consented substation at Friston, Suffolk. Twenty five trial pits were removed from the scope of works. Trial pits at 26 locations were excavated, ten of which were re-sited following initial excavation to avoid various constraints.

The scope of the archaeological works followed a review of the trial pit locations. Trial pits located in areas where archaeological remains had been recorded, or where there was high potential for archaeological remains to be uncovered were targeted for monitoring.

The results of the Richborough section of the works are presented as a separate report (HA Report no. 2023-113).

1.1 SITE LOCATION AND DESCRIPTION

The works are spread across a roughly south-east to north-west aligned linear route located between a southern point near Aldeburgh, to Saxmundham at its north-western limit, encompassing parishes including Aldeburgh cum Thorpe, Leiston, Knodishall, Friston, and Saxmundham (Illus 1). The majority of the cable route corridor is located within rural agricultural land and much of the area between the landfall cable route sections has an environmental designation, including designated Special Protection Area (SPA) and Sites of Special Scientific Interest (SSSI). There are several areas of woodland located within the construction swathe and Aldeburgh Golf Course is located within the eastern extent.

The underlying bedrock geology comprises Crag Group Sand. This is overlain across most of the route with superficial deposits of Lowestoft Formation Diamicton, sand, gravel, clay and silt. A small band of alluvium is recorded adjacent to the Hundred River and there are also small areas where there are no recorded superficial deposits (British Geological Survey 2020). The soils are classified in the Soilscape 10 and Soilscape 7 associations which are characterised as freely draining slightly acid sandy soils and freely draining slightly acid but base rich soils respectively (Cranfield University 2023).

1.2 ARCHAEOLOGICAL BACKGROUND

An Environmental Impact Assessment Scoping Report for the project was prepared by National Grid (National Grid 2022) which considered all of the designated and non-designated heritage assets recorded within the onshore Scoping Boundary of the overall scheme.

Designed assets within the Suffolk Scoping Boundary include two Scheduled Monuments and seven Grade II listed buildings. The Scheduled Monuments are recorded as two bowl barrows (1011378), on Aldringham Green and the site of Leiston Abbey. The Grade II listed buildings include Aldringham Court, Billeaford Hall, and Gorsehill. The remaining Grade II listed buildings are farmsteads, or former farms.

The HER (Historic Environment Record) for Suffolk revealed a large number of non-designated assets, demonstrating evidence of human activity in the area from the early prehistoric period through to the modern period.

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ILLUS 2 View north-west of TP313A

Some of the earliest material identified includes microliths dating to the Mesolithic period (10,000 to 4000 BC) recorded near the former Post Office in Aldringham, although other lithic scatters have also been recorded within the Suffolk Scoping Boundary.

While early prehistoric settlement activity is limited, Bronze Age (2200 to 700 BC) activity has been recorded with a number of assets relating to burial practices recorded.

The Iron Age (700 BC to AD 43) is better represented, with numerous cropmarks suggesting extensive field systems and settlement activity dating from the Iron Age. Recent excavations have also demonstrated extensive human activity throughout the Iron Age and Roman periods. It is also possible that some of the undated cropmarks have earlier origins and date to the Bronze Age.

While early medieval (AD410 to 1066) sites are not well represented, it is possible that many of the settlements that survive in the wider area have their origins in the early medieval period. It is, however, also possible that some of the Iron Age/Roman sites could continue in use into the early medieval period, and recent works have noted a number of sites which might date to this period.

Most of the assets dating to the medieval period are represented by find-spots or scatters of pottery. Whilst much of this may have been deposited as a results of later agricultural activity, it is possible that some of the more focused scatters might represent settlement activity potentially associated with abandoned or shrunken settlements.

The majority of activity from the post-medieval period is associated with agricultural land use, although other non-designated assets include banks/flood defences, rabbit warrens, and industrial features.

The modern period is very well represented with a large number of non-designated assets dating to the Second World War recorded near the coast as well as inland. These include pill boxes, anti-glider trenches, and other structures and features on the coast to repel enemy attack and invasion.

1.3 AIMS AND OBJECTIVES

The aims of the monitoring were to identify, investigate, understand, record, and report the extent, nature and significance of any surviving archaeological remains within the invasive GI work areas.

The objectives of the monitoring were to:

- Ensure that the working area is monitored during the contractors' groundworks to ensure any archaeological remains are recorded and recovered with minimal damage.
- Identify and record all archaeological features/deposits present.
- Clean, excavate and record a sufficient sample of any features present to place on record and understand the nature, sequence, date and significance of the archaeological remains present within the excavated area.



ILLUS 3 Trial Pit 204 - ditch [2043]

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ILLUS 4 View south-east of north-west facing section of TP204

› Undertake assessment, analysis, archiving, and reporting as appropriate to the significance of the results, to be disseminated in an appropriate format; and

› Inform research strategies as outlined in the regional research framework (East Anglian Archaeology 1997, 2000, and 2011) and more recent period specific resource assessments (Research Frameworks 2021).

2 METHODOLOGY

2.1 SITE WORKS

In accordance with the Written Scheme of Investigation (Headland 2023, also Appendix 3 this report) which was approved by the archaeological advisors to Suffolk County Council, all ground-breaking works associated with the trial pits were monitored by a suitably qualified archaeologist.

Machine excavation of trial pits was carried out using an excavator fitted with a toothless bucket and the ground level reduced in controlled spits until such a point as the archaeological horizon, geological subsoil or construction limit was reached.

Where archaeological features or deposits of archaeological origin were encountered, these were to be recorded in plan, without excavation, and the trial pit moved to avoid further disturbance.

Where this was not practicable features and deposits were to be hand-cleaned as necessary, recorded in plan with and hand-excavated stratigraphically.

In two cases, environmental soil samples were recovered from the surface of features, but no further intervention was made.

2.2 RECORDING

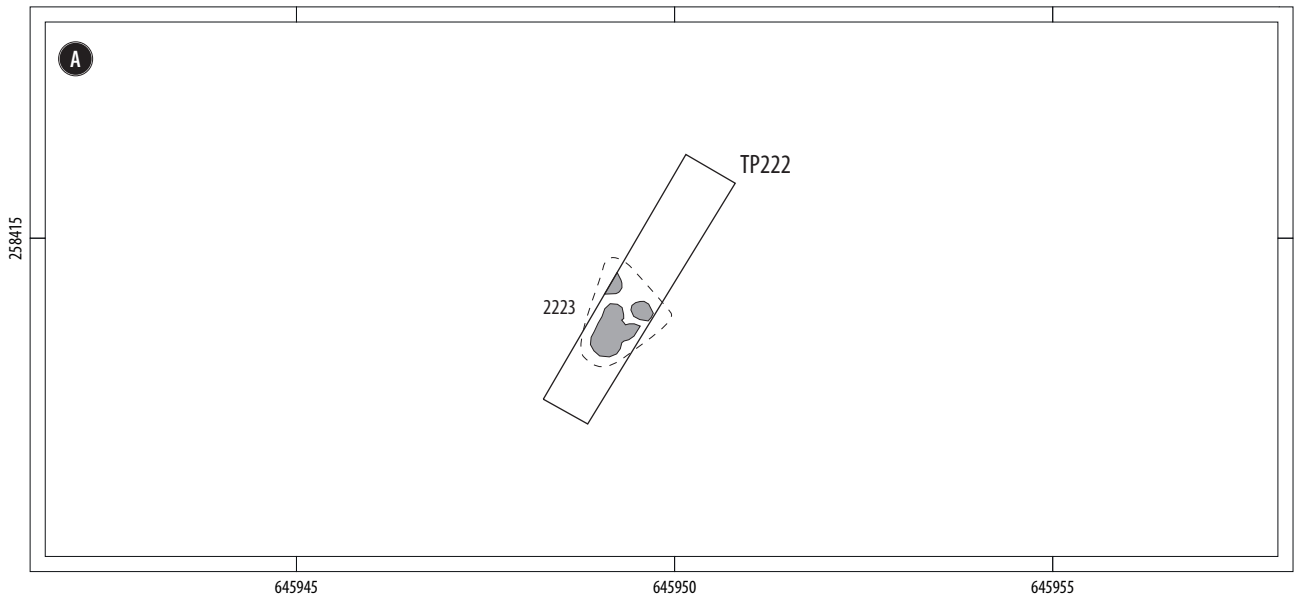
All recording followed CIfA Standard and Guidance for an archaeological Watching Brief (2020). All contexts, small finds and environmental samples were given unique numbers. All excavated contexts were recorded in plan and section with details of location, composition, shape, dimensions, relationships, finds and samples and cross-referenced to other contexts where appropriate. All recording was undertaken on Headland's pro-forma recording forms.

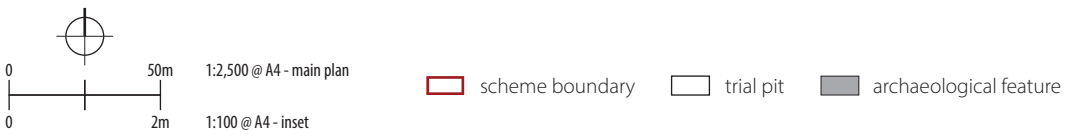
Digital images were taken with a camera with a resolution of at least 10 Megapixels.

Post-excavation plans of areas, including and relevant spot heights were recorded digitally using differential GPS using standard Headland Archaeology methodology.

All 'born digital' data will be archived in accordance with the Chartered Institute for Archaeologists' (CIfA) guidelines for long term storage of digital media (CIfA 2014: Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives).







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ILLUS 5 Trial Pit 222 - group of pits (including [2223])

2.3 REPORTING AND ARCHIVES

All aspects of reporting and archive are undertaken in accordance with guidelines published by the CIfA on behalf of the Archaeological Archives Forum (2014) and with Suffolk County Council Archaeological Service Archive, 2022 Guidelines for Archive Preparation and Deposition. On completion of the works Headland will produce a site archive in line with the MoRPHE specification, including all specialist assessments of excavated material. An online OASIS report will be completed.

3 RESULTS

The GI works comprised the mechanical excavation of 34 trial pits, carried out under archaeological monitoring. The trial pits were located across several fields between Aldeburgh, Thorpeness and Saxmundham.

Of the initial 26 planned trial pits, 10 were re-sited, bringing the total number of monitored interventions to 36 (see Table 1). The re-sited pits were given the original trial pit number, suffixed with a, b, or c respectively. Only trial pits TP204, TP222, and TP316 contained features or deposits of an archaeological nature, the remaining trenches were devoid of archaeology (Illus 2).

TABLE 1 Trial Pits monitored

TRIAL PIT	ARCHAEOLOGY IDENTIFIED
203	No
204	Yes
204a	No
204b	No
205	No
218	No
220	No
221	No
222	Yes
222a	No
229	No
310	No
310a	No
311	No
312	No
312a	No
313	No
313a	No
314	No
315	No
316	Yes
316a	No
317	No
317a	No
404	No
404a	No
406	No
406a	No
511	No
513	No
513a	No
514	No
515	No
516	No
518	No
525	No

Trial pit 204

Trial pit 204 was located to the south-west of Coldfair Green, approximately 0.14 km south-west of Park Farm (Illus 3). The archaeological horizon was encountered at a depth of 0.35m BGL and was represented by a deposit of orange-brown sand, sealed by sandy silt topsoil (Illus 4).

A single, 2m wide linear ditch feature [2043] was observed, crossing the centre of the trial pit from east to west. The upper fill of the feature (2044) was composed of mid-dark brown silty sand. No artefacts or ecofacts were recovered from this feature.

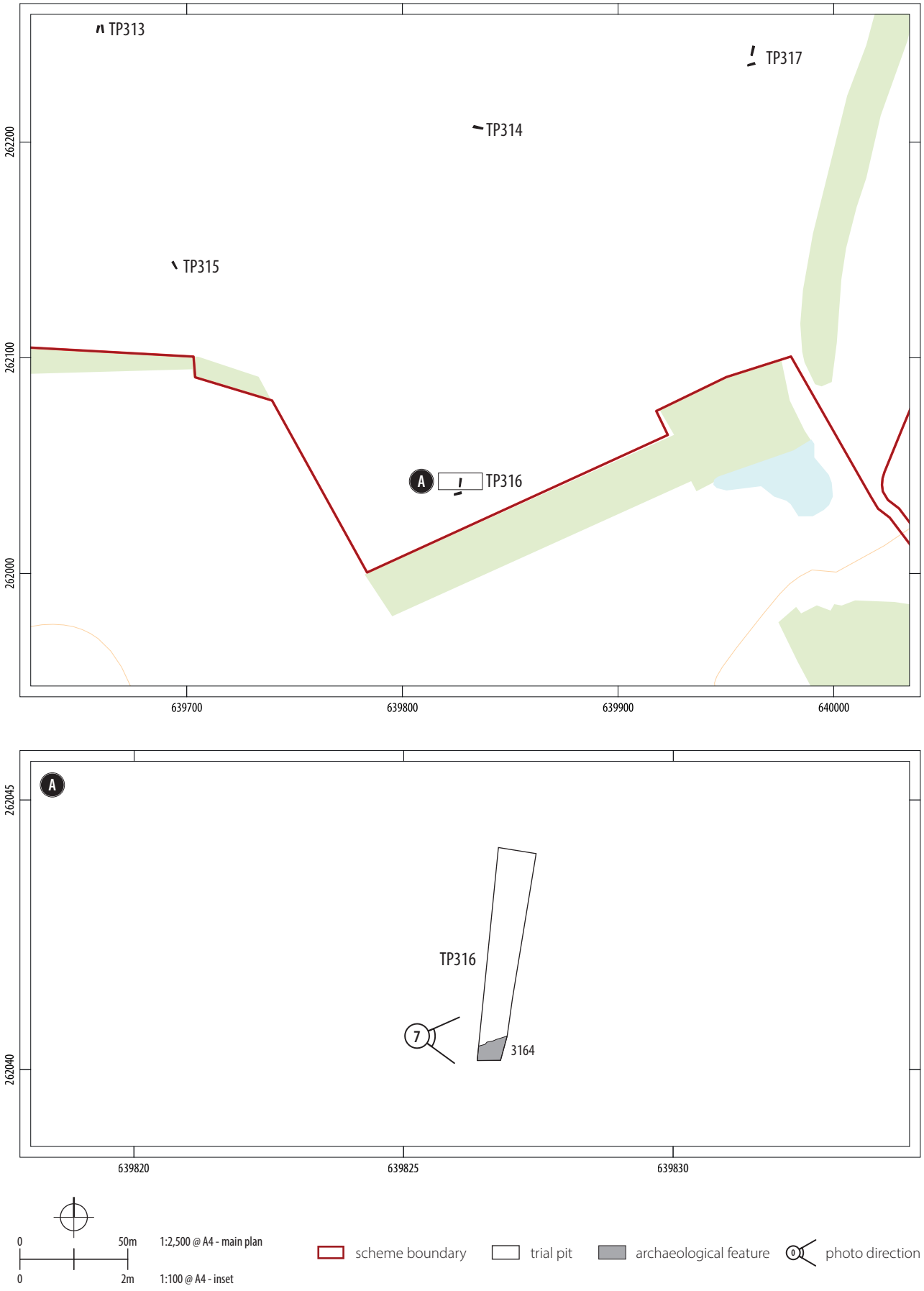
Trial Pit 222

Trial Pit 222 was located to the south-west of Thorpeness, approximately 0.3km east of Leiston Road (Illus 5). The archaeological horizon was encountered at a depth of 0.3m BGL and was represented by a deposit of yellowish sand, sealed by a 0.1m deep layer of disturbed subsoil containing rubble fragments, overlain by 0.2m of topsoil.

The features encountered were interpreted as a group of intercutting probable pits, the largest of which [2223] was 0.65m wide and 0.4m long. The upper fill of the larger feature comprised burnt sand, from which burnt stone, lithics and sherds of Early Bronze Age pottery were recovered. Medieval, Roman and possibly Neolithic artefact scatters have previously been recorded within 200m west of TP222.

Trial Pit 316

Trial Pit 316 was located approximately 0.15km from Hill Farm and 1.6 km southeast of Saxmundham (Illus 6).



ILLUS 6 Trial Pit 316 - ditch [3164]

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ILLUS 7 View east of ditch 3164 at southern end of TP 316

The archaeological horizon was encountered at a depth of 0.35m BGL and was represented by a deposit of yellowish grey clay with white chalky inclusions which was overlain by a mid-brown clay rich topsoil.

At the southerly limit of the trial pit (Illus 7) a possible linear ditch [3164] was partially exposed. The visible part of the feature was 0.35m wide and crossed the trench from east to west. A single flint flake was recovered from the upper fill of this feature; this was regarded to likely be residual.

3.1 FINDS ASSESSMENT

by Ann Bojko, Sarah Percival & Rebecca Sillwood

The finds assemblage numbered ten sherds (33g) of pottery and 45 lithics. These were found in two separate test pits and included only prehistoric finds. The finds are summarised by feature in Table 2 and a complete catalogue is given in Appendix 3.

TABLE 2 Summary of finds assemblage by feature with spot dating (LN = Late Neolithic, BA = Bronze Age, EBA = early Bronze Age)

FEATURE NO	FEATURE TYPE	POTTERY (PH)		LITHICS	SPOT DATE
		QTY	WGT (G)	QTY	
2223	Pit	10	33	44	LN-BA; EBA
3164	Ditch	–	–	1	LN-BA
Total		10	33	45	

Methodology

The report includes both hand-collected finds and those from sample retents. The finds were collected, processed and packaged for long term storage in accordance with professional guidelines (CIfA 2014b; Watkinson and Neal 1998). The finds were each assessed and recorded by appropriate specialists using relevant typologies (CIfA 2021). The resultant data was then drawn together into one MS Excel database. A copy of this data is given at the end of the report.

The prehistoric pottery assemblage was analysed in accordance with the guidelines for analysis and publication recommended by the Prehistoric Ceramic Research Group (PCRG 2010; Barclay et al 2016). The total assemblage was studied, and a full catalogue prepared. The sherds were examined by eye or using a hand lens (x20 magnification) and were divided into fabric groups defined on the basis of inclusion types. Vessel form was recorded, and the sherds were counted and weighed to the nearest whole gram. Decoration, condition, food residues and sooting were also noted.

Lithics were recovered by hand during excavations and environmental sample processing and underwent macroscopic visual assessment. They were catalogued in Microsoft Excel by type, possible raw material, condition, tool form and weight, according to commonly used descriptions (Butler 2005). The dating is for finds in the fills of these features and does not necessarily date the features; small assemblages should be used with particular caution for dating purposes.

Prehistoric pottery

by Sarah Percival

A total of ten sherds weighing 33g were recovered from Pit [2223] in TP222. The pottery is small and abraded, with a low mean sherd weight of 3.3g. The grog, and grog and sand tempered fabrics, suggest an early Bronze Age date for the assemblage, similar to Beaker pottery recovered locally from Saxmundham and Beaker and urn style sherds from Sutton Hoo (Newton 2013, 9: Percival 2015, 20). All the sherds from the Friston site are undecorated but include a slightly stepped base, similar to undiagnostic Bronze Age urn also from Sutton Hoo (Hummler 2005, fig 197, 41/27831).

TABLE 3 Quantity and weight of sherds by fabric (GrMM = grog moderate medium, QGrRM = quartz grog rare medium)

FABRIC	FABRIC DESCRIPTION	QTY	WGT (G)
GrMM voids	Moderate medium sized pale sub-angular grog (0.25-1.00cm) and sub-angular voids in fine clay matrix	2	13
QGrRM	Rare medium sized pale sub-angular grog (0.25-1.00cm) in fine sandy clay matrix	8	20
Total		10	33

Lithics

by Ann Bojko

A total of 45 pieces of flint (total 371.4g) were recovered during excavations and from environmental samples, comprising seven scrapers; 27 flakes, of which 14 were broken; nine chips measuring below 10mm; and two pieces of shatter.

The raw material ranges from light to dark grey-brown or grey vitreous flint. Cortex is present on around a third of the assemblage and most is light to dark brown and thick but not chalky.

Eight of the flints are patinated, although the extent varies between slight (n=5) to strong mottled grey discolouration. Four pieces of worked flint were burnt and had areas of severe cracking and disintegration. Most have some post-depositional damage, ranging from occasional nicks to the edge to extensive chipping that may have obscured retouch or utilisation traces.

The seven scrapers are made on flake blanks with abrupt or semi-abrupt retouch and includes four end scrapers and two end-and-side scrapers. Most have extensive utilisation on both the scraper edge and any sharp edges, including significant nicks and some polish formation. More than half of the scrapers contained cortex or evidence of original natural surfaces. The working appears to be quite expedient, with some large, thick and cortical flakes being retouched. Two were heavily burnt which likely destroyed evidence of further retouch and use.

Over two thirds of the assemblage are flakes (n=27). Hard hammer flakes dominate, and many are wide and short, some with hinge or step terminations (n=7). Seven flakes contain cortex and two were struck from a cortical platform. Two flakes have miscellaneous retouch. Utilisation traces are present on some flakes, including some well-developed polish, and may have been obscured by post-depositional damage on others.

Some small flakes, shatter and chips were found, suggesting possible knapping activity on the site, but there was no evidence of primary flaking.

Dating, distribution & discussion

The presence of grog-tempered fabrics across the small assemblage suggests occupation activity at the site in the early Bronze Age, though the absence of diagnostic form or decoration prohibit exact identification. The pit from which the pottery was recovered is comparable with pit groups excavated at both Saxmundham and Sutton Hoo where similar early Bronze Age material was recovered (Newton 2013, Hummler 2005, Percival 2015).

Most of the worked flint originated from a single context, and they appear to be technologically similar, perhaps suggesting they were deposited in a single episode. The retouched pieces were heavily used, although the frequency of post-depositional damage has made it difficult to distinguish between utilisation and damage, except from on the patinated items where this is clearer. The technological characteristics of the assemblage are not directly dateable, but the dominance of hard-hammer and expedient flaking suggests a broadly late Neolithic to Bronze Age date. Further investigation of the utilisation traces would add more to our understanding of the site and the activities taking place during the prehistoric period.

All of the prehistoric pottery and most of the lithics came from Pit [2223] in TP222. The finds from the pit appear to represent a homogenous assemblage of probable early Bronze Age date. The only other find was a single flint flake from Ditch [3164] in TP316 which is probably residual.

Recommendations for further work

All finds are fully recorded, and no further work is necessary.

Recommendations for archive

The assemblage is small and somewhat abraded and fragmentary but of relatively early date. On balance it is recommended the assemblage be retained for archive though it is of relatively limited further archaeological value and a case might be made for discard. The archive will be prepared in accordance with professional standards (AAF 2011) and the specific requirements of the receiving repository.

TABLE 4 recommendations for archive retention

MATERIAL	TOTAL QTY	TOTAL WGT (G)	RETAIN	DISCARD
Prehistoric pottery	10	33	All	None
Lithics	45	371.5	All	None

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3.2 ENVIRONMENTAL

Three small soil samples were collected for artefact recovery as part of the works. Samples 1 produced both lithics and pottery, Sample 2 produced a single lithic. These artefacts are discussed as part of Section 3.1 of this report.

4 DISCUSSION

The features identified as a result of these works could be used to inform decisions about the location of further ground investigation or ground-breaking works in the future. In particular the group of prehistoric pits identified in TP222 are likely indicative of further Early Bronze Age activity in the vicinity, where the Suffolk HER has records of Roman and medieval artefact scatters. The absence of archaeological features or deposits identified across the remainder of the area subject to the GI works does not necessarily preclude their presence in the wider area.

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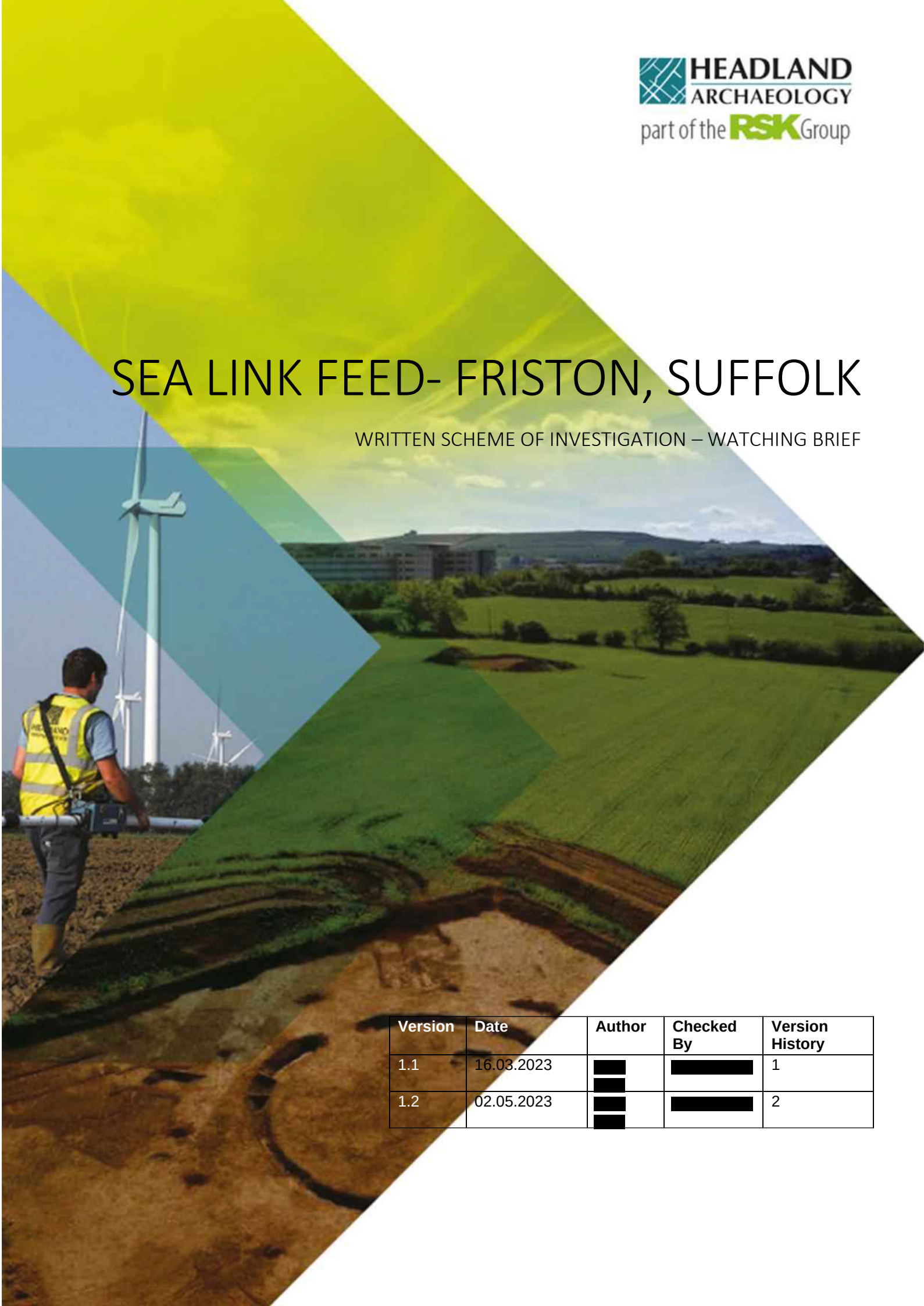
6 APPENDICES

APPENDIX 1 WSI

HEADLAND ARCHAEOLOGY
part of the RSK Group

SEA LINK FEED- FRISTON, SUFFOLK

WRITTEN SCHEME OF INVESTIGATION – WATCHING BRIEF



Version	Date	Author	Checked By	Version History
1.1	16.03.2023	[redacted]	[redacted]	1
1.2	02.05.2023	[redacted]	[redacted]	2

HERITAGE CONSULTANCY
ARCHAEOLOGY CONTRACTING SITE INVESTIGATIONS
SPECIALIST SERVICES

HEADLAND ARCHAEOLOGY
part of the RSK Group

CLIENT
Structural Soils Ltd.
The Old School,
Stillhouse Lane,
Bedminster,
Bristol,
BS3 4EB

HEADLAND ARCHAEOLOGY
Unit 1, Clearview Court, Twyford Road
Hereford, HR2 6JR

0131 467 7705
[redacted]

PROJECT NAME	SEA link Feed - Friston, Suffolk - Archaeological Watching Brief
PLANNING REF	N/A **HEADLAND REF** P23-071
HEADLAND PROJECT CODE	SLWB23
WORK STAGE	Watching brief
PURPOSE OF WORK	To monitor the contractor's site groundworks through a watching brief and to record any archaeological remains exposed. To present the results of the work in a report.
AUTHOR	[redacted]
PROJECT MANAGER	TBC

Name	Reference
Client	Structural Soils
Planning authority	Suffolk
Consultant	N/A
Archaeological advisor	SCASS
Historic environment record (HER)	Suffolk
Portable antiquities officer	[redacted]
Collecting museum	Suffolk County Council Archaeological Archive
Journal for summary publication	N/A

RELEVANT STANDARDS:

NAME	REFERENCE	
Applicable CIfA standards	1.	Code of Conduct (CIfA 2022)
	2.	Standards and guidance for an archaeological watching brief (CIfA 2020)
Regional research framework	3.	East Anglian Archaeology Regional Research Framework
Local standards/guidelines	4.	Standard requirements for Contractors, Suffolk County Council (2023)

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1 INTRODUCTION

1.1 This Written Scheme of Investigation (WSI) has been commissioned on behalf of Structural Soils and prepared by Headland Archaeology (UK) Ltd (Part of the RSK Group).

1.2 The WSI describes a programme of archaeological monitoring and recording work to be undertaken in association with Geotechnical site Investigations (GI) as part of the SEA Link project, which involves a 2GW HVDC link between Richborough in Kent and Friston in Suffolk. The proposed GI works at Friston comprise 51 trial pits and 16 cable percussion boreholes.

1.3 This WSI covers the monitoring, by means of an archaeological Watching Brief, of the 51 trial pits across the sites of a Convertor Station, Cable Route Corridor and substation connection site at Friston, Suffolk.

1.4 This document takes into account relevant CIfA and Suffolk County Standards and Guidance.

2 PROJECT BACKGROUND

2.1 The SEA Link project involves a 2GW HVDC link between Richborough in Kent and Friston in Suffolk. It forms part of the solution to resolve the operational boundary issues in the South Coast, East Coast and London areas to increase transfer capacity between the South Coast and South London and maintain voltage at compliance level. The proposed construction at Friston, which is covered in the scope of this preliminary GI work will comprise the HVDC southern cable route option, a new convertor station, the HVAC cable route between the convertor station and Friston substation and HVAC connections to Friston substation.

SITE LOCATION, TOPOGRAPHY AND GEOLOGY

2.2 The works are spread across a roughly southeast-northwest aligned linear route, from between Aldeburgh and Thorpeness at its southerly end, to Saxmundham at its northern limit, encompassing parishes including, Aldeburgh cum Thorpe, Leiston, Knodishall, Friston and Saxmundham. The majority of the cable route corridor is located within rural agricultural land and much of the area between the landfall cable route sections has an environmental designation, including designated Special Protection Area (SPA) and Sites of Special Scientific Interest (SSSI). There are several areas of woodland located within the construction swathe and Aldeburgh Golf Course is located within the eastern extent.

2.3 The underlying bedrock geology comprises Crag Group Sand. This is overlain across most of the route with superficial deposits of Lowestoft Formation Diamicton, Sand and Gravel and Clay and Silt. A small band of Alluvium is recorded adjacent to the Hundred River and there are also small areas where there are no recorded superficial deposits (British Geological Survey 2020). The soils are classified in the Soilscape 10 and Soilscape 7 associations which are characterised as freely draining slightly acid sandy soils and freely draining slightly acid but base rich soils respectively (Cranfield University 2023).

ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

2.4 An Environmental Impact Assessment Scoping Report for the project was prepared by National Grid (National Grid 2022) which considered all of the designated and non-designated heritage assets recorded within the onshore Scoping Boundary of the overall scheme.

2.5 Designed assets within the Suffolk Scoping Boundary include two Scheduled Monuments and seven Grade II listed buildings. The Scheduled Monuments are recorded as two bowl barrows (1011378), on Aldringham Green and the site of Leiston Abbey. The Grade II listed buildings include Aldringham Court, Billeaford Hall, and Gorsehill. The remaining Grade II listed buildings are farmsteads, or former farms.

2.6 The HER (Historic Environment Record) for Suffolk revealed a large number of non-designated assets, demonstrating evidence of human activity in the area from the early prehistoric period through to the modern period.

2.7 Some of the earliest material identified includes microliths dating to the Mesolithic period (10,000 to 4000 BC) recorded near the former Post Office in Aldringham, although other lithic scatters have also been recorded within the Suffolk Scoping Boundary.

2.8 While early prehistoric settlement activity is limited, Bronze Age (2200 to 700 BC) activity has been recorded with a number of assets relating to burial practices recorded.

2.9 The Iron Age (700 BC to AD 43) is better represented, with numerous cropmarks suggesting extensive field systems and settlement activity dating from the Iron Age. Recent excavations have also demonstrated extensive human activity throughout the Iron Age and Roman periods. It is also possible that some of the undated cropmarks have earlier origins and date to the Bronze Age.

2.10 While early medieval (AD410 to 1066) sites are not well represented, it is possible that many of the settlements that survive in the wider area have their origins in the early medieval period. It is however, also possible that some of the Iron Age/Roman sites could continue in use into the early medieval period, and recent works have noted a number of sites which might date to this period.

2.11 Most of the assets dating to the medieval period are represented by find-spots or scatters of pottery. Whilst much of this may have been deposited as a result of later agricultural activity, it is possible that some of the more focused scatters might represent settlement activity potentially associated with abandoned or shrunken settlements.

2.12 The majority of activity from the post-medieval period is associated with agricultural land use, although other non-designated assets include banks/flood defences, rabbit warrens, and industrial features.

2.13 The modern period is very well represented with a large number of non-designated assets dating to the Second World recorded near the coast as well as inland. These remains include pill boxes, anti-glider trenches, and other structures and features on the coast to repel enemy attack and invasion.

3 AIMS AND OBJECTIVES

AIMS

3.1 The aims of the monitoring are to identify, investigate, understand, record, and report the extent, nature and significance of any surviving archaeological remains within the invasive GI works areas.

OBJECTIVES

3.2 The objectives of the monitoring are to:

- Ensure that the working area is monitored during the contractors' groundworks to ensure any archaeological remains are recorded and recovered with minimal damage;
- Identify and record all archaeological features / deposits present;
- Clean, excavate and record a sufficient sample of any features present to place on record and understand the nature, sequence, date and significance of the archaeological remains present within the excavated area;
- Undertake assessment, analysis, archiving and reporting as appropriate to the significance of the results, to be disseminated in an appropriate format; and
- inform research strategies as outlined in the regional research framework (East Anglian Archaeology 1997, 2000 & 2011) and more recent period specific resource assessments (Research Frameworks 2021).

4 PROJECT TEAM

4.1 Headland Archaeology (UK) Ltd is a Registered Organisation and abides by the Codes of Conduct and Approved Practice and Standards of the Chartered Institute for Archaeologists (CIfA). The company has all the necessary technical and personnel resources for the satisfactory completion of the work.

4.2 Curricula vitae of key personnel can be supplied on request. The project team will familiarise themselves with the background to the site and will be aware of the project's aims and methodologies.

4.3 Specialist artefact analyses will be managed by Julie Franklin who is Headland's Finds Manager. Julie will undertake finds assessment within her areas of competence (medieval and post-medieval ceramics, metalwork, glassware, clay pipes, ceramic building material and other small finds). Further consultation will be sub-contracted to recognised period specialists where appropriate.

4.4 The following lists the specialists that may be used:

- Prehistoric Pottery- [redacted]
- Roman pottery & CBM- [redacted]
- Post-Roman pottery and CBM- [redacted]
- Lithics- Rebecca Devaney

- Coarse Stone – [redacted]
- Metalwork & misc finds – [redacted]
- Clay tobacco pipe- [redacted]
- Prehistoric/Roman Glass – [redacted]
- Post-Roman glass- [redacted]
- Industrial Waste- [redacted]
- Leather- Quite Mould
- Textile- [redacted]
- Conservation- [redacted] Scottish Conservation Studio

4.5 Environmental analysis will be managed by [redacted]. Headland has in-house specialists who can undertake analysis of pollen, plant macrofossils, insect remains and thin sections.

4.6 The results of the fieldwork will be reviewed and incorporated into reporting and an Online Access to the Index of archaeological investigations (OASIS) record will be set up and completed along with the archive.

5 MONITORING

5.1 Monitoring of the works will be carried out by the Suffolk County Council Archaeology Service (SCCAS)

5.2 All archaeological work will be monitored by the planning archaeologist, directly on site and / or through summary reports and telephone / email with Structural Soils and their representatives, as appropriate.

5.3 The planning archaeologist will be updated as the work proceeds and will be invited to visit the site by prior arrangement.

The planning archaeologist's monitoring will potentially include:

- One or more site visits to confirm the fieldwork is being undertaken in accordance with the WSI and discuss the findings;
- Review and discussion of all reports and archives drafts before final submission.

6 STRATEGY

6.1 Prior to the commencement of fieldwork, a HER code will be obtained from the Suffolk HER.

6.2 All ground-breaking works associated with the excavation of the GI trial pits is to be monitored by an archaeologist until the archaeological horizon or the maximum construction depth is reached; whichever is encountered soonest.

6.3 Notification to the archaeological contractor will be required, and sufficient time allowed to mobilise the attending archaeologist to site prior to the commencement of ground-breaking works.

6.4 Regular communication between the attending archaeologist and on-site client contact will be required to discuss intended upcoming works and plan accordingly.

6.5 Works will be monitored to the first archaeological horizon, geological subsoil or the construction limit – whichever is encountered first.

6.6 Provision will be made for the micrositing/relocation of Test Pits should sensitive archaeological remains be encountered that cannot be fully investigated within the test pit (e.g. structural or human remains).

6.7 Upon completion of all stages of fieldwork, an archaeological report will be completed for the findings for the site as a whole.

7 METHODOLOGY

FIELDWORK – MONITORING OF EXCAVATIONS

7.1 It is anticipated that the works will comprise 51 test-pits and 16 cable percussion boreholes.

7.2 All ground-breaking works associated with the trial pits will be monitored by a suitably qualified archaeologist, however, due to the limited potential and disturbed nature of the material recovered from them, the boreholes will not be subject to monitoring.

7.3 Machine excavation of trial pits will proceed under archaeological observation but would not be controlled directly by the nominated on-site archaeologist(s). Reasonable time should be allowed for the monitoring archaeologist(s) to investigate test pits and boreholes once the topsoil/overburden has been removed, and/or if potential archaeological deposits are identified.

7.4 Machine excavation should be carried out using an excavator fitted with a toothless bucket and the ground level reduced in controlled spits until such a point as the archaeological horizon, geological subsoil or construction limit is reached (whichever is encountered soonest). After which, archaeological monitoring will cease.

7.5 One archaeologist will normally monitor a single excavation, if one or more excavations is carried out simultaneously, a corresponding number of monitoring archaeologists will be required.

7.6 All spoil arising from excavations and any features encountered shall be subject to metal detecting with detectors not set to discriminate against Iron.

7.7 If potential archaeological features or deposits of archaeological origin are present, they will be defined by hand-cleaning as necessary, recorded in plan with spot-heights, and a sample of each feature / deposit hand-excavated stratigraphically under archaeological conditions.

7.8 If any archaeological features are found, sample excavation will be sufficient to satisfy the aims and objectives of the work if the feature(s) can be avoided through micro-siting of the trial pit. Provisionally, the sampling policy may be as follows:

- 100% excavation of each sampled stake hole;
- 50% excavation of each sampled post hole or pit up to 1.5m diameter;
- 25% (minimum) excavation of each sampled pit above 1.5m diameter, to include one complete cross section to obtain the feature's profile;
- 20% (minimum) excavation of sampled linear features up to 5m in length;

7.9 Where avoidance is not possible and archaeological deposits are limited (for example, a single small pit or posthole), full excavation and recording of the feature will allow the trial-pit to be continued.

FIELDWORK-RECORDING

7.10 All recording will follow CIfA *Standard and Guidance for archaeological excavation* (2020) or CIfA *Standard and Guidance for an archaeological watching brief (2020).* All contexts, small finds and environmental samples will be given unique numbers. All excavated contexts will be recorded in plan and section with

details of location, composition, shape, dimensions, relationships, finds and samples and cross-referenced to other contexts where appropriate. All recording will be undertaken on Headland's pro-forma digital recording system (HARK!).

7.11 Digital images will be taken with a camera with a resolution of at least 10 Megapixels and will follow Historic England guidance (2015). A graduated metric scale will be clearly visible.

7.12 Post-excavation plans of areas, including and relevant spot heights will be recorded digitally using differential GPS using standard Headland Archaeology methodology (available on request). The site plan will be accurately linked to the National Grid. Additional detailed recording of features and sections will be hand-drawn on permatrace at an appropriate scale (normally 1:20 or 1:50 for plans and 1:10 for sections).

7.13 All 'born digital' data will be archived in accordance with the Chartered Institute for Archaeologists' (CIfA) guidelines for long term storage of digital media (CIfA 2014: Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives).

SAMPLES AND ARTEFACTS

7.14 Finds will be routinely recorded by context and recorded 3-dimensionally where appropriate (i.e. where their position within a context can provide further significant information or the find is of particular significance). Any artefacts retrieved during the evaluation will be cleaned using appropriate techniques and packaged and stored in accordance with First Aid for Finds (Watkinson & Neal 1998). All artefacts recovered during the evaluation will be cleaned, marked and catalogued. Headland's in-house finds specialists will be available to provide advice remotely or on site if necessary. Conservation will be undertaken by Scottish Conservation Studio (for metalwork) and AOC Ltd (for organics).

7.15 Deposits identified as archaeologically significant will be sampled for environmental material and other finds (e.g. bone, pottery etc.). Bulk samples will be taken from selected deposits for wet sieving and floatation in order to recover any environmental material. A bulk sample will typically be 40 litres. However, where large deposits are encountered more than one bulk sample may be taken. Similarly, small deposits such as the fill of postholes may contain less than 10 litres of sediment and will be fully sampled. A representative proportion of samples taken on site will be processed and assessed with the results and recommendations for any further work included in the evaluation report.

7.16 Where waterlogged deposits are encountered (such as peat) appropriate sampling techniques will be employed to maximise the environmental information gained from such deposits. This may include the taking of monolith or core samples for pollen and non-pollen palynomorphs (e.g. testates and fungal spores) and large specialist samples for plant macrofossil, wood (including waterlogged wood) and insect analyses.

PALAEOENVIRONMENTAL SAMPLING

7.17 If encountered, palaeoenvironmental samples will be taken from appropriate representative deposits (such as occupation and midden deposits or ditch and pit fills) and submitted for assessment. Particular attention will be paid to the recovery of samples from any waterlogged deposits present. Recovery and sampling of environmental remains will be in accordance with guidelines prepared by English Heritage (now Historic England) (2011) and the sampling strategy provided by an appropriate specialist and agreed with SCCAS and the Historic England Regional Science Advisor, as required.

7.18 Secure contexts will be sampled for dating purposes as appropriate (whether on site or as sub-samples of processed bulk samples). This will include C14 dating, archaeomagnetic dating and dendrochronological dating. Any concentrations of charcoal or other carbonised material recovered on site will usually be retained. Samples for archaeomagnetic dates will be taken on site by the relevant specialist (English Heritage, now Historic England, 2006a). Samples for dendrochronological dates would be taken either on site or from recovered timbers by the relevant specialist in accordance with published guidelines (English Heritage, now Historic England, 1998). Samples would be processed subsequent to initial post- excavation assessment.

7.19 Headland's Environmental Manager, [redacted], will liaise with site staff to ensure an appropriate strategy for the recovery and sampling of environmental remains develops in tandem with fieldwork results.

TREASURE

7.20 Finds of treasure are governed by the Treasure Act 1996 (and as amended by the Treasure Designation Order 2002 No 2666). This Act replaced the common law of treasure trove in England, Wales and Northern Ireland, which was previously the only legal protection afforded to antiquities. Under the law of treasure trove, finds of gold or silver had to be reported to the coroner and could be declared treasure trove and the property of the Crown if they had been deliberately hidden with the intention of recovery and their owner, or heirs were unknown. The 1996 Act removed the need to establish that objects were hidden with the intention of being recovered, except in a very few cases; it sets out the precious metal content required for a find to qualify as treasure; and it extends the definition of treasure to include other objects found in archaeological association with finds of treasure. Six categories of object are now classed as treasure:

- any object other than a coin which is at least 10% silver or gold by weight and more than 300 years old;
- any coins that are at least 10% silver or gold by weight and come from a single find, provided the find contains at least two coins with a gold or silver content of at least 10%. The coins must be at least 300 years old at the time of discovery. Where finds consist of coins that are less than 10% gold or silver by weight, there must be at least 10 coins in the find and they must be at least 300 years old at the time of discovery for the find to be considered treasure;
- any object, of whatever composition, that is found in the same place as, or that had previously been together with, another object that is treasure;
- any object (other than a coin), any part of which is base metal, which, when found is one of at least two base metal objects in the same find which are of prehistoric date;
- any object, (other than a coin) which is of prehistoric date, and any part of which is gold or silver; and
- any object that would previously have been treasure trove but does not fall within the specific categories given above.

7.21 The Act also introduces a Code of Practice for the voluntary recording of archaeological finds.

7.22 If any objects are recovered that are deemed to potentially qualify as treasure, the Archaeological Sub-Contractor will inform the client and consult with SCCAS to determine the object's status. Objects that

qualify as treasure will be notified to the local coroner and Finds Liaison Officer within fourteen days of discovery, in accordance with The Treasure Act 1996 Code of Practice and its amendment. The Treasure will initially be deposited with the Finds Liaison Officer.

HUMAN REMAINS

7.23 All finds of human remains will be reported to the client, the coroner and the SCCAS Planning Archaeologist. None will be excavated during the course of the present program of work unless circumstances (e.g. security) require their removal. Any reburial of human skeletal remains will be done utilising a protective geotextile mesh If human remains are to be excavated during subsequent work, a license will be gained from the Home Office in accordance with Section 25 of the 1857 Burial Act. All excavation and treatment of cremated and inhumed human remains will be undertaken in cognisance of CIFA Technical Paper Number 13 (Brickley & McKinley & 2004) and relevant Historic England guidelines (2005).

8 REPORTING AND ARCHIVE

REPORTING

8.1 All aspects of reporting and archive will be undertaken in accordance with guidelines published by the CIfA on behalf of the Archaeological Archives Forum (2014). On completion of the evaluation Headland will produce a site archive in line with the MoRPHE specification, including all specialist assessments of excavated material. An online OASIS report will be completed.

8.2 The archaeological contractor will consult the Suffolk HER Officer to obtain a parish code for the work before commencement. These numbers will be unique for each project or site and will be clearly marked on all documentation relating to the work.

8.3 The full report will include:

- a cover page, title page, or introduction containing the site name, the site code, the planning application number, the dates that fieldwork was undertaken, museum accession number, an Ordnance Survey grid reference, the name of the originating body and the report date;
- a list of contents, figures and tables;
- a non-technical summary;
- an introduction;
- a description of the site and its location;
- topography and geology;
- the planning background;
- the archaeological and historical background;
- the methodology;
- a summary of the project's results;
- interpretation of the archaeological features and their wider setting;

- artefact and ecofact reports by suitable specialists, including discussion of character of the assemblage and significance with reference to regional typologies and material;
- a statement of the significance of the results in their local, regional and national context cross referenced to the regional research frameworks and agendas, as appropriate;
- a conclusion / discussion;
- references;
- a site plan showing test pit locations;
- plans and sections of all archaeological features at a recognised scale;
- general photographs of the evaluation in progress and selected photographs of archaeological features investigated;
- a catalogue of finds;
- a catalogue/index and location of the site archive and project archive;
- appendices to include the approved survey-specific WSI; and
- an OASIS reference and accession number.

8.4 A digital copy of the report, clearly marked DRAFT, will be presented to SCCAS for approval within six months of the completion of fieldwork, unless other arrangements are negotiated. Following acceptance, a single hard copy of the report will be presented to the Suffolk HER as well as a digital copy of the approved report.

8.5 Draft report contents and format will be in line with CIfA standards & guidance and curator requirements. Copies of the report will be sent to the client for onward transmission to the local planning authority; copies (paper & electronic) will also be submitted to SCASS, to be deposited in the HER. Draft reports will be submitted within 12 weeks of the completion of fieldwork.

ARCHIVE

8.6 An archive of all records and finds will be prepared, consistent with the principles of Management of Research Projects in the Historic Environment (MoRPHE) (Historic England 2015a) and compliant with SCCAS archaeological archive guidelines (2017). It will be adequate to perform the function of a final archive for deposition in the Archaeological Service's Store or in a suitable museum in Suffolk.

8.7 The project archive will be compiled in accordance with the guidelines published by CIfA on behalf of the Archaeological Archives Forum (2011) and with the SCCAS Guidelines for Archive Preparation and Deposition (2022). The documentary and digital archive will be submitted within twelve months of completion of all work on this project.

8.8 Provision will be made for the supply of a copy of the digital, geo-referenced survey data to the Suffolk HER.

8.9 Every effort will be made to obtain the agreement of the landowners for the deposition of the full site archive, and transfer of title, with the Archaeological Service.

8.10 For deposition with the archive will comply with SCCAS Archive Guidelines (2022).

8.11 It is proposed that the digital archive relating to this project will be lodged with the Archaeology Data Service (ADS 2013).

9 HEALTH AND SAFETY

9.1 All of Headland's work is undertaken in accordance with current Health & Safety legislation. A risk assessment will be prepared prior to the commencement of fieldwork. All staff will wear appropriate PPE and this will include high-visibility clothing, hard hats and safety footwear. Suitable site welfare facilities will be provided by the main contractor.

10 INSURANCE AND COPYRIGHT

10.1 Headland Archaeology (UK) Ltd is fully indemnified and all necessary insurances can be presented on request.

10.2 Copyright will be retained by Headland Archaeology (UK) Ltd. Headland will licence the client, Local Planning Authority and other bodies as necessary for use in matters relating to the project and for use of the project archive by NRHE. This licence will also extend to non-commercial use.

11 REFERENCES

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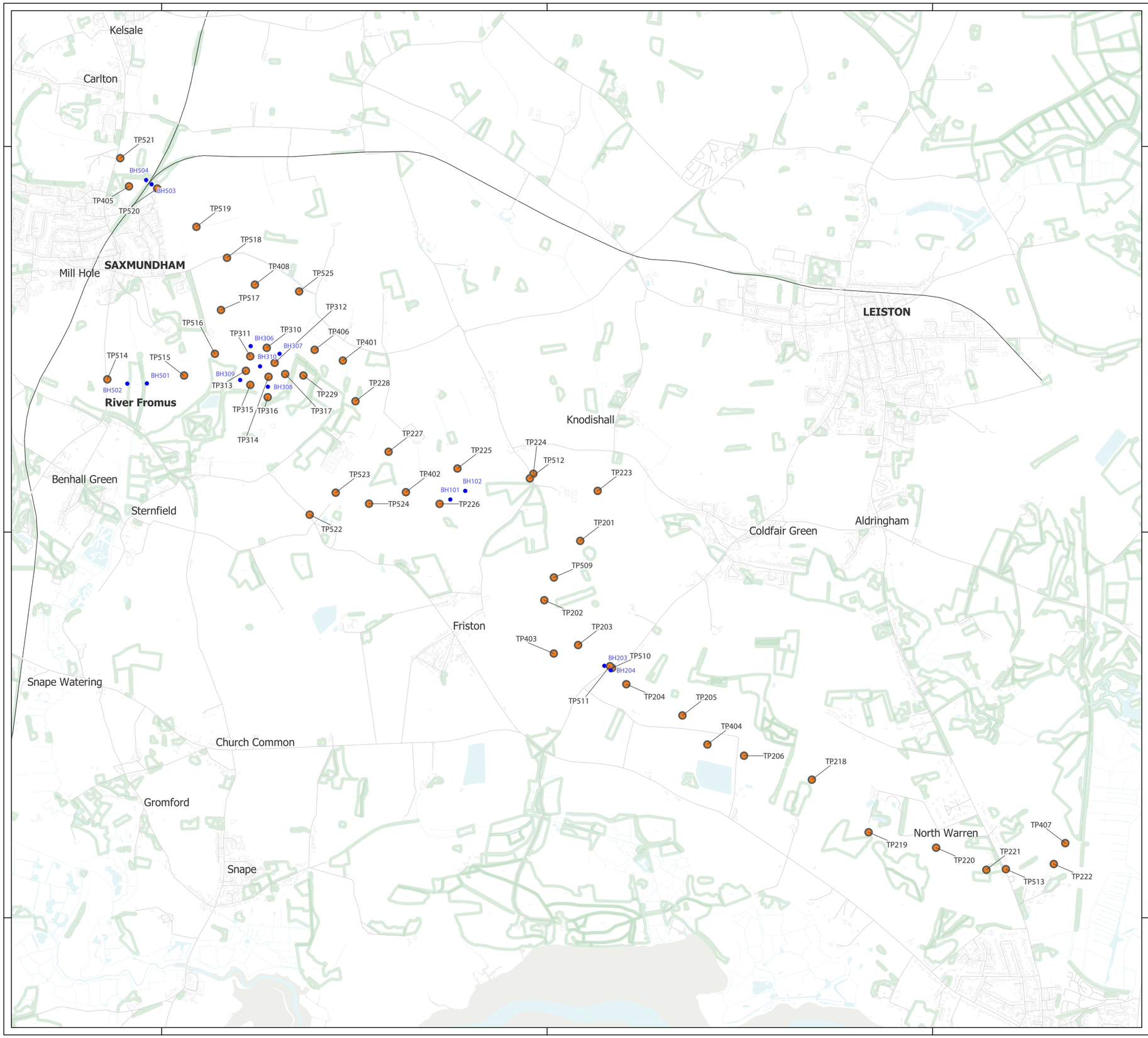
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12 FIGURES





Key

Revised Suffolk GI Locations 09.02.23

- Suffolk Test Pits
- Suffolk Boreholes

0 500 1,000 m

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Site:	SLWB23
Created by:	LD
Checked by:	KH
Version:	v1.0
Date:	21/03/2023
Scale:	1:30,000 @ A3

SLWB23: Revised Suffolk GI Locations 09.02.23

13 APPENDICES

APPENDIX 1- DATA MANAGEMENT PLAN

Yellow fields to be completed during the course of the project.

Project Manager	
Project Code	
Project Name	
Author(s)	[redacted]
Origination date	27/04/2023
Reviser(s)	
Date of Last Revision	27/04/2023
Project stages covered	All
Version	1
Status	DRAFT
Summary of changes	
File Name/Location	
Related policies	EH-undeposited-archive-procedures-v1; ARC-Digital-archive-preparation-(England)-v1.1; ARC-Digital-Housekeeping-v1.1; ARC-Archiving-responsibiliies-v1.2; ARC-Archive-deposition-guidance-(England)-v1.1; ARC-AAF-Supplementary-guidelines-section-5-transfer-v2.1; ARC-AAF-Supplement-guidelines-section3-appendix-t-archaeological-archives-v2.1; HA Report Guidance 2020; ENV-Procedures-for-sample-processing-v1.1; FIN-Finds-processing-and-packaging-v.1.1

~~6.3.2.5.E ES Appendix 2.5.E~~
Generic Quantitative Risk Assessment – Suffolk

9.1 Data Collection/Creation

Data to be collected/created	Method of data collection/creation	Format at source	Approximate number	Relevant source details
Context records	Written onto pro forma sheets or tablets	Hand-written or filemaker database	#####	Original data

Registers	Written onto pro forma sheets or tablets	Hand-written or filemaker database	#####	Original data
Photographs (digital)	Use of camera/tablets on site	JPEG and RW2	#####	Original data
Photographs (analogue)	Use of camera/tablets on site	Film	#####	Original data
Drawings	Drawn onto permatrace	Hand-drawn	#####	Original data
Finds labels	Written onto finds bags	Hand-written	#####	Written archive
Sample labels	Written onto pro forma sample labels	Hand-written	#####	Written archive
Digital survey	Use of dGPS or total station on site	Native Trimble .job file	#####	Original data
Final site plan	Standardised plans of each site	GIS/shape	1	Processed survey/drawings – GIS technician
Site plans	Processing of Geopackages through GIS template	PDF	#####	GIS drawings
Photogrammetry	Processing of photographs through photogrammetry software	JPEG	#####	Photographs
Video	Digital videography	mp4 or avi	#####	Original data; site records; various other references
Skeleton processing logs	Typed into pro forma documents	DOC	#####	Written archive; sample labels; original data
Skeleton processing results	Typed into pro forma documents	DOC	#####	Written archive;

				sample labels; original data
Environmental processing logs	Typed into pro forma documents	DOC	#####	Written archive; sample labels; original data
Environmental sampling flot/retent results	Written onto pro forma sheets	Hand-written	#####	Written archive; sample labels; original data
Environmental sampling feedback form	Typed into pro forma documents	DOC	#####	Written Archive; processing logs; original data
Specialist analyses	Typed into pro forma documents	DOC/XLS	#####	Written archive; finds labels; sample labels
Finds Processing logs	Typed into pro forma documents	Excel	#####	Written archive; finds labels; original data
Database	Input into database	Access database/filemaker database/Excel	1	Written record; environmental processing

				logs; Finds processing logs; specialist analyses
Summary reports	Typed into pro forma documents	DOC	#####	Written archive; site plan; photographs; original data – Section leaders
Daily site diary	Entered through Tablet format through Site Diary Application	Digital Entry in Application	#####	Original data - Supervisor/PO
Weekly reports	Typed into pro forma documents	DOC	#####	Attendance record; allocation sheets; original data – *Team Leader*

9.2 Documentation and Meta data

Required Documentation and metadata for each file type

File type	Documentation	Metadata required	Relevant Guidance

Context records	Registers	Sitecode	Headland Recording Manual
Registers		Sitecode	Headland Recording Manual
Photographs (digital)	Registers	Sitecode; Filename; Original filename; caption; subject keyword; period; period date; creator; copyright holder; location; Grid reference; creation date; device; device/software version	Headland Recording Manual
Drawings	Registers; Context sheets	Sitecode; Drawing Number; Context Number; Scale	Headland Recording Manual
Finds labels	Registers; Context sheets	Sitecode; Finds Number; Context Number	Headland Recording Manual
Sample labels	Registers; Context sheets	Sitecode; Sample Number; Context Number	Headland Recording Manual
Digital survey	Registers; Context sheets	Sitecode; Filename; description; creation date; supporting documentation; software; software version; sheet names; sheet description; no of rows; field names; field description	Headland Recording Manual
Site plans	Registers; Context Sheets; GIS drawings of site	Project title; Hardware; Software; Software version; Date of creation; Location; Creator; Copyright holder; Scale of data capture; Scale of data storage; Assessment of data quality; Method of data capture; Purpose of data creation; filename; description; projection type; file type; source; Table attribute; other supporting documentation	TEC-Guide-QGIS-Layout Guide-Basic to Advanced-v1.0
GIS	Registers; Context Sheets	Project title; Hardware; Software; Software version; Date of creation; Location; Creator; Copyright holder; Scale of data capture; Scale of data storage; Assessment of data quality; Method of data capture; Purpose of data creation; filename; description;	TEC-2.0-Guide-Survey Processing-V1.2 TEC-3.0-Guide-Survey Processing in QGIS-V2.0

		projection type; file type; source; Table attribute; other supporting documentation	TEC-3.4-Guide-Editing in QGIS-V1.0
Photogrammetry	Registers; Context Sheets	Filename; Original filename(s); caption; subject keyword; period; period date; creator; copyright holder; location; Grid reference; creation date; device; device/software version	TEC-5.0-Guide-Processing Photogrammetry
Video		Filename; Original filename(s); caption; subject keyword; period; period date; creator; copyright holder; location; Grid reference; creation date; device; device/software version	ARC-Digital-Housekeeping-v1.1
Environmental processing logs	Registers	Sitecode; Context Number; Sample number	ARC-Digital-Housekeeping-v1.1; ENV-Procedures-for-sample-processing-v1.1
Environmental sampling flot/retent results	Registers, Environmental processing logs	Sitecode; Context Number; Sample number	ARC-Digital-Housekeeping-v1.1; ENV-Procedures-for-sample-processing-v1.1
Specialist analyses	Registers; Context Records	Sitecode; Context Number; Sample number; Finds Number	ARC-Digital-Housekeeping-v1.1
Finds Processing logs	Registers; Context Records	Sitecode; Context Number; Finds Number	ARC-Digital-Housekeeping-v1.1; FIN-Finds-processing-and-packaging-v.1.1
Database	Registers; Context Records	Project title; Hardware; Software; Software version; Date of creation; Location; Creator; Copyright holder; Scale of data capture; Scale of data storage; Assessment of data quality; Method of data capture; Purpose of data creation; filename; description; file	TEC_HARK_Manual_v1.0

		type; source; Table attribute; other supporting documentation	
Reports	Registers; Context sheets; CAD Drawing; Specialist analyses	Sitecode; Context register; Sample register; Finds register; Photo register; Drawing register; Contributors;	ARC-Digital-Housekeeping-v1.1; HA Report Guidance 2020
Daily site diary	WSI; RAMS; Briefs	Sitecode; Date; Contributors	Headland Recording Manual

9.3 Ethical and Legal Compliance

General Project specific requirements

Ownership of Intellectual property rights	**Conditions for change of ownership**	**Relevant Guidance**	**Relevant Documentation**
CLIENT	To be agreed with client	none	none
Ethical issues for the project	**Relevant release documents etc.**	**Relevant Guidance**	**Relevant Documentation**
Project specific – discuss with client	As needed	none	none

File type specific requirements

File Type	**Legal Issues**	**Ethical Issues**	**Relevant Guidance**	**Relevant Documentation**
Videos/photos of members of the public	Children shown in videos/photos;	Permission to use footage/photos	Pending	Pending

9.4 Data Storage

Storage and Backup

File Type	Storage of original	Storage of Backup	Frequency of Backup	Responsible person
Context records	Site file; iPad	Server; Headland sharepoint; database; IPad chain	Daily (if paperless)	Supervisor/Project Officer
Registers	Site file	Server; Headland sharepoint; database	Daily	Supervisor/Project Officer
Photographs (digital)	SD card	Server; Headland sharepoint; database	Weekly	Supervisor/Project Officer
Photographs (film)	Film	Site/Office	Weekly	Supervisor/Project Officer
Drawings	Site file	Server; Headland sharepoint	Weekly	Supervisor/Project Officer
Digital survey	GPS/Total Station	Server; Headland sharepoint	Daily	Supervisor/Project Officer
Site plans	Server	Server; Headland sharepoint	Weekly	Supervisor/Project Officer
GIS	Server	Server; Headland sharepoint	Daily	Technical Services/IT team
Photogrammetry	Server	Server; Headland sharepoint	Weekly	Supervisor/Project Officer
Environmental processing logs	Paper file	Server; database	Weekly	Environmental Supervisor

Environmental sampling flot/retent results	Paper file	Server; database	Weekly	Environmental Supervisor
Environmental sampling feedback form	Server	Server	Weekly	Environmental Supervisor
Specialist analyses	Specialist based	Server	Weekly	Supervisor/Project Officer
Finds Processing logs	Paper file	Server; database	Weekly	Finds Supervisor
Database	Internet/server	Internet/server	Daily	Data Officer/Project Manager
Reports	Server	Internet/server	Daily	Project Officer/Project Manager
Daily site diary	Site file	Internet	Automatic	Supervisor

Specifications of storage media used on the project

Storage Type	**Formats to be stored**	**Stable duration**	**Sensitivity of medium**	**Method of backup**	**Frequency of backup**
USB data stick	Document; pdf; spreadsheet;	10 years	Low	Onto Server	Weekly
SD Card	Photographs	10 years	Low	Onto Server/ portable hard drive	Weekly
Portable hard drive	Document; pdf; spreadsheet; photographs	2-3 years	Low	Onto Server	Weekly
Computer Hard Drive	Document; pdf; spreadsheet; .job; Geopacakages; photographs	2-3 years	Low	Via email onto	Weekly

				Server/ portable hard drive	
Server Hard Drive	Document; pdf; spreadsheet; .job; Geopacakges; photographs	2-3 years	Low	To cloud based file backup	Daily
SSD	Document; pdf; spreadsheet; photographs	10 years	Low	Onto Server	Weekly

Access and Security

File Type	**Roles requiring access**	**Method of Access**	**Method of Security**
Context records	Site Assistants; Supervisors; Project Officers; Project Managers; Data Officer; Specialists	Site file directly; Server; Sharepoint; Database; Datto	Kept in locked building; digital data secured behind Active Directory authentication
Registers	Site Assistants; Supervisors; Project Officers; Project Managers; Data Officer; Specialists	Site file directly; Server; Sharepoint; database; Datto	Kept in locked building; digital data secured behind Active Directory authentication
Photographs (digital)	Site Assistants; Supervisors; Project Officers; Project Managers; Data Officer; Specialists	Server; Sharepoint; Datto	Kept in locked building; digital data secured behind Active Directory authentication
Photographs (film)	Archive Team	After processing	Kept in locked building; digital data secured behind Active Directory authentication
Drawings	Site Assistants; Supervisors; Project Officers; Project Managers; Data Officer; Specialists	Site file directly; Server; Sharepoint; database; Datto	Kept in locked building; digital data secured behind Active Directory authentication
Digital survey	Surveyors; Supervisors; Project Officers; Project Managers; Data Officer; Specialists	Server; Sharepoint; Datto	Kept in locked building; digital data secured behind Active Directory authentication

Site plans	Site Assistants; Surveyors; Supervisors; Project Officers; Project Managers; Data Officer; Specialists	Server; Sharepoint; Datto	Digital data secured behind Active Directory authentication
GIS	Site Assistants; Surveyors; Supervisors; Project Officers; Project Managers; Data Officer; Specialists	Server; Sharepoint; Datto	Digital data secured behind Active Directory authentication
Photogrammetry	Site Assistants; Supervisors; Project Officers; Project Managers; Data Officer; Specialists	Server; Sharepoint; Datto	Digital data secured behind Active Directory authentication
Environmental processing logs	Environmental Supervisor; Project Managers; Data Officer; Specialists	Server; Sharepoint; Datto	Digital data secured behind Active Directory authentication
Environmental sampling flot/retent results	Environmental Supervisor; Supervisors; Project Officers; Project Managers; Data Officer; Specialists	Server; Sharepoint; Datto	Digital data secured behind Active Directory authentication
Specialist analyses	Finds Supervisor; Environmental Supervisor; Supervisors; Project Officers; Project Managers; Data Officer	Server; Sharepoint; Datto	Digital data secured behind Active Directory authentication
Finds Processing logs	Finds Supervisor; Project Managers; Data Officer; Specialists	Server; Sharepoint; Datto	Digital data secured behind Active Directory authentication
Database	Site Assistants; Supervisors; Project Officers; Project Managers; Data Officer; Specialists; Environmental Supervisor; Finds Supervisor	Server; Sharepoint; Datto	Digital data secured behind Active Directory authentication

Reports	Supervisors; Project Officers; Project Managers; Data Officer;	Server; Sharepoint; Datto	Digital data secured behind Active Directory authentication
Daily site diary	Supervisors; Project Officers; Project Managers; Data Officer; Specialists; Environmental Supervisor; Finds Supervisor	Server; Sharepoint; Datto	Digital data secured behind Active Directory authentication

9.5 Selection and Preservation

Preservation Plan

Project specific			

Preservation materials

File Type	Preservation by archive (Y/N)	Preservation format	Selection process
Context records	Y	Database	All
Registers	Y	Database	All
Photographs (digital)	Y	TIFF	The photographic archive should enhance/supplement the existing archive, it should not be used either to replace information in the archive or to simply repeat it. Site photography: excepting key site features: no more than 1 photo per feature; show range of feature types and characteristics; keep numbers low otherwise not useful as a browsable archive. Finds photography: photographs of most of the special finds should be included; consider photogrammetry for some finds
Photographs (film)	Y	Negative	

Drawings	Y	Digitised or stored as original	Any to be included in digital archive to be digitised and integrated into the database
Finds labels	N	n/a	n/a
Sample labels	N	n/a	n/a
Digital survey	Y	.job file	All
Site plans	Y	PDF/TIFF	Final drawings included in reports
GIS	Y	GIS/incorporated into database	All
Photogrammetry	Y	Agreed with receiving archive	Models showing key features or finds
Video	Y	Mp4	
Environmental processing logs	N	n/a	n/a
Environmental sampling flot/retent results	Y	Database	All
Environmental sampling feedback form	N	n/a	n/a
Specialist analyses	Y	pdf/database	Database, included in report
Finds Processing logs	N	n/a	n/a
Database	Y	Database	All
Summary reports	N	n/a	n/a
Daily site diary	N	n/a	n/a
Weekly reports	N	n/a	n/a

9.6 Data Sharing

Data sharing plan

Method of data sharing	**Relevant file types**
Via publicly available online database and linked media	Database; GIS; photographs; photogrammetric models; videos(?)
Online reports – ADS/OASIS	Pdf
Online publication – e.g. internet archaeology	Pdf/html

Data sharing restrictions

List of restricted documents included in sharing plan	**Details of restrictions**
Suffolk HER	GIS; PDF

9.7 Responsibilities and Resources

Responsibilities

Stage of data handling	**Responsible person**	**Primary contact for issues/resolutions**
Data collection on site	Supervisor/Project Officer	Data Officer/Project Manager
Paper archive storage	Supervisor/Project Officer	Project Manager
Digital archive storage	Supervisor/Project Officer	Project Manager
Consolidation of individual site archives	Supervisor/Project Officer	Data Officer/Project Manager
Consolidation of Project archives	Supervisor/Project Officer	Project Manager

Preparation of archive for post-excavation works	Supervisor/Project Officer	Project Manager
Preparation of archive for deposition	Archivist	Archivist

Physical resources

Archive type	**Location(s) to be stored**	**Approximate physical requirements**	**Person responsible**
Written record	Office	#####	Supervisor/Project Officer
Drawn record	Office	#####	Supervisor/Project Officer

Hardware resources

Archive type	**Location(s) to be stored**	**Approximate storage requirements**	**Person responsible**
Server	Office	#####	Data Officer/IT support manager

Software resources

Format of archive	**Use of software**	**Training requirements**	**Person responsible**
Oracle/Filemaker	Database	Demonstration and further training and support	Data Officer
Sharepoint	Storage of files to share	Demonstration and minimal support	Data Officer
GIS	Viewing and manipluation of the site drawings integrated with the database	Demonstration and further training and support	Data Officer
Pdf viewer	Viewing of the reports, certain media, etc. produced	Minimal	IT
Image viewer	Viewing of the photographs and other images produced	Minimal	IT

APPENDIX 2 OASIS DATA COLLECTION FROM: ENGLAND

OASIS ID (UID): headland1-521029

Project Name:	Watching Brief on GI Works of Sea Link Feed- Friston, Suffolk
Activity type:	Watching Brief
Sitecode(s):	SLWB23
Project Identifier(s):	SLWB23 Friston, Suffolk
Planning Id:	[no data]
Reason for Investigation:	Planning requirement
Organisation Responsible for work:	Headland Archaeology (UK) Ltd
Project Dates:	11-Sep-2023–04-Oct-2023
HER:	Suffolk HER
HER:	National Trust HBSMR
HER:	Historic England review
HER Identifiers:	[no data]
Project Methodology:	Monitoring of GI Trial Pits
Project Results:	Thirty-six trial pits, located across several fields, within an area of relatively high archaeological potential, between Aldeburgh and Saxmundham in Suffolk were excavated. Only three of the trial pits (TP-222, TP-204, and TP-316) were identified as containing an archaeological features. TP222 revealed a group of small pits. And TP's-204 and TP-316 both contained linear features. All three of these test pits were re-sited to avoid further interface with the archaeology. The remaining trial pits were observed to be cut into naturally occurring deposits and no further archaeological features or deposits were identified.
Keywords:	[no data]
Archive:	[no data]

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part of the RSK Group

Headland Archaeology Scotland
13 Jane Street
Edinburgh EH6 5HE
t 0131 467 7705
e scotland@headlandarchaeology.com

Headland Archaeology Yorkshire & North
Units 23–25 & 15 | Acorn Business Centre | Balme Road
Cleckheaton BD19 4EZ
t 0127 493 8019
e yorkshireandnorth@headlandarchaeology.com

Headland Archaeology South & East
Building 68C | Wrest Park | Silsoe
Bedfordshire MK45 4HS
t 01525 861 578
e southandeast@headlandarchaeology.com

Headland Archaeology Midlands & West
Unit 1 | Clearview Court | Twyford Rd
Hereford HR2 6JR
t 01432 364 901
e midlandsandwest@headlandarchaeology.com

Headland Archaeology North West
Fourways House | 57 Hilton Street
Manchester M1 2EJ
t 0161 236 2757
e northwest@headlandarchaeology.com

www.headlandarchaeology.com

C. Human Health Assessment Criteria Methodology

Risks to human health from historically contaminated soils have been assessed by comparison of laboratory contamination data with generic screening values established using the UK Contaminated Land Exposure Assessment (CLEA) framework.

Suitable for Use Levels (S4ULs) have been developed by Land Quality Management (LQM)[1] in accordance with the CLEA framework which replace the previously developed 2009 LQM / Chartered Institute of Environmental Health (CIEH) Generic Assessment Criteria (GAC) values. S4ULs are based on the principles of '*minimal*' or '*tolerable*' risk enshrined within SR2[2] and are intended as '*trigger values*' above which further assessment of the risks may be needed. The derivation of S4ULs has adopted modifications to the CLEA exposure assessment parameters proposed by Department for Environment, Food and Rural Affairs (Defra)[3] and used revised toxicological data based on recent research. S4ULs have been calculated for the four standard land use scenarios published within the CLEA model[4] and also include two new land uses for public open space developed by Defra. GACs developed by Contaminated Land: Applications in Real Environments (CL:AIRE), Association of Geotechnical and Geo-environmental Specialist (AGS), and Environmental Industries Commission (EIC) (2010)[5] have been recalculated by Mott MacDonald using the revisions to the CLEA exposure assessment parameters and including the public open space land uses.

LQM states that their GAC are '*broadly equivalent to the SGVs*'. Defra (2012)[6] recognises the use of the LQM and CL:AIRE GAC through statutory guidance thereby providing authoritative backing to their use in appropriate circumstances.

In the absence of SGVs and S4ULs, lead has been assessed by reference to the Category 4 Screening Level (C4SL)[7]; C4SLs have been developed in support of Defra's revision to the Statutory Guidance for Part 2A of the Environmental Protection Act 1990. The revised guidance presents a four-category system for determining land as contaminated land under Part 2A, ranging from Category 4 (the level of risk posed is acceptably low) to Category 1 (the level of risk is clearly unacceptable). The C4SLs provide criteria to determine whether contamination risks are low and definitely do not represent contaminated land (i.e., contaminant concentrations do not present a Significant Possibility of Significant Harm). The published C4SLs and S4ULs are therefore conservative thresholds.

The Environment Agency (EA) withdrew SGVs for nickel due to a report published by the European Food Safety Authority (EFSA) in February 20158 containing new recommendations for nickel. Following the EFSA (2015) opinion and the EA withdrawal of the SGVs for nickel,

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[1] Nathanail, C.P. et al. (2015) *The LQM / CIEH Suitable 4 Use Levels for Human Health Risk Assessment*. Land Quality Press: Nottingham. Document reference: S4UL3389.

[2] Environment Agency. (2009) *Human health toxicological assessment of contaminants in soil (SR2)*.

[3] Defra. (2014) *SP1010 Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination, Final Project Report Revision 2*.

[4] Environment Agency. (2009) *Updated technical background to the CLEA model (SR3)*.

[5] CL:AIRE, AGS, EIC. (2010) *The Soil Generic Assessment Criteria for Human Health Risk Assessment*.

[6] Defra. (2012) *Environmental Protection Act 1990: Part 2A, Contaminated Land Statutory Guidance*.

[7] Defra. (2014) *SP1010 Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination, Final Project Report Revision 2*.

[8] EFSA. (2015) *Scientific Opinion on the risks to public health related to the presence of nickel in food and drinking water*.

LQM published S4ULs for nickel, which have been utilised in this report. The SGV for mercury was withdrawn in 2019 due to EFSA re-evaluating the toxicity of inorganic mercury and methylmercury9; however, the LQM S4ULs use toxicological data from a more recent EFSA publication and are considered current.

[9] EFSA. (2012) *Scientific Opinion on the risk for public health related to the presence of mercury and methylmercury in food*.

D. Controlled Waters Assessment Background

- Defra's guidance[10] on the application of Part 2A defines tests for significant pollution of controlled waters. Key tests are as follows:
- Contaminants are continuing to enter into controlled waters additional to entry which has already occurred, and such entry is likely to occur again
- Contamination on-site has caused and is continuing to cause the following:
  - Pollution equivalent to 'environmental damage' to surface water or groundwater as defined by The Environmental Damage (Prevention and Remediation) Regulations 2009, but which cannot be dealt with under those Regulations
  - Inputs of pollutants resulting in deterioration of the quality of water abstracted, or intended to be used in the future, for use in human consumption such that additional treatment would be required to enable that use
  - A breach of a statutory surface water Environment Quality Standard, either directly or via a groundwater pathway
  - Input of a substance into groundwater resulting in a significant and sustained upward trend in concentration of pollutants [as defined in Article 2(3) of the Groundwater Daughter Directive (2006/118/EC/1)
- If the contamination risks to controlled waters can be ascribed to background soil contamination levels effectively from natural or '*common*' or '*widespread*' human activity the Local Authority should not normally regard the contamination as representing significant possibility of significant risk of pollution to controlled waters.

In-addition, under the Groundwater Daughter Directive (2006/118/EC), entry of hazardous contaminants into groundwater should be prevented ('*prevent objective*'). Entry of non-hazardous substances should not result in pollution of controlled waters ('*limit objective*'). The interpretation of the Groundwater Daughter Directive through the UK contaminated land risk assessment framework is described in EA's '*The Environment Agency's Approach to Groundwater Protection*; (2018)[11].

Hazardous substances are defined in the Water Framework Directive (2000/60/EC) as '*substances or groups of substances that are toxic, persistent and liable to bioaccumulate, and other substances which give rise to an equivalent level of concern*'. An 'equivalent level of concern' refers to a level of protection prescribed for hazardous substances equivalent to the 1980 Groundwater Directive (which has now been repealed). Non-hazardous substances are those substances not defined as hazardous substances. Hazardous substances are defined in accordance with the Groundwater Daughter Directive by the Joint Agencies Groundwater Directive Advisory Group.

The prevent objective is achieved by requiring that hazardous substances must '*not be discernible after the immediate dilution that occurs after the discharge enters groundwater*'. The compliance target used to measure discernibility is the highest of the natural background quality

[10] Defra. (2012) *Environmental Protection Act 1990: Part 2A, Contaminated Land Statutory Guidance*. Report reference: PB13735.

[11] Environment Agency. (2018) *The Environment Agency's Approach to Groundwater Protection, Version 1.2*. Report Reference: LIT 7660.

of groundwater, a Minimum Reporting Value (MRV); (typically the laboratory detection limit for that substance (MDL)) or ‘another value prescribed by legislation’.

E. Contaminated Land Risk Assessment Methodology

The following Contaminated Land Risk Assessment methodology is based on CIRIA C552 (2001) Contaminated Land Risk Assessment – A Guide to Good Practice, in order to quantify potential risk via risk estimation and risk evaluation, which can be adopted at the Phase I (Desk Study) stage. This will then determine an overall risk category which can be used to identify potential investigation or remedial actions. This methodology uses qualitative descriptors and therefore is a qualitative approach based on desk information. The risk assessment should be refined following receipt of ground investigation data. The methodology requires the classification of:

- the magnitude of the **consequence** (severity) of a risk occurring, and
- the magnitude of the **probability** (likelihood) of a risk occurring.

The potential consequences of contamination risks occurring at this Site are classified in accordance with Table E.1 below, which is adapted from the CIRIA guidance.

Table E.1: Classification of Consequence

Classification	Definition of Consequence
Severe	Short-term (acute) risks to human health likely to result in "significant harm" as defined by the Environmental Protection Act 1990, part IIA. Short-term risk of pollution of sensitive water resource. Catastrophic damage to buildings/property. A short-term risk to a particular ecosystem, or organism forming part of such an ecosystem.
Medium	Chronic damage to Human Health (significant harm as defined in DEFRA, 2012). Pollution of sensitive water resources. A significant change in a particular ecosystem, or organism forming part of such an ecosystem.
Mild	Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures, and services ("significant harm" as defined in the DEFRA, 2012). Damage to sensitive buildings/structures/services or the environment.
Minor	Harm, though not necessarily significant harm, which may result in a financial loss, or expenditure to resolve. Non-permanent health effects to human health (easily prevented by means such as personal protective clothing etc.). Easily repairable effects of damage to buildings, structures, and services.

Source: CIRIA C552

The probability of contamination risks occurring at this site will be classified in accordance with Table E.2 below from the CIRIA guidance. Note: A pollution linkage must first be established before probability is classified. If there is no pollution linkage, then there is no potential risk. If there is no pollution linkage, then there is no need to apply tests for probability and consequence.

Table E.2: Classification of Probability

Classification	Definition of Probability
High Likelihood	There is pollutant linkage, and an event would appear very likely in the short-term and almost inevitable over the long-term, or there is evidence at the receptor of harm or pollution.
Likely	There is pollutant linkage, and all the elements are present and in the right place which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short-term and likely over the long-term.
Low Likelihood	There is pollutant linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a long period such an event would take place and is less likely in the shorter term.
Unlikely	There is pollutant linkage, but circumstances are such that it is improbable that an event would occur even in the very long-term.

R&D 66:2008 presents definitions of the risk categories, together with the investigatory and remedial actions that are likely to be necessary in each case. These definitions are reproduced in Table E.4, with the probability/consequence matrix presented in Table E.3. These risk categories apply to each pollutant linkage, not simply to each hazard or receptor.

Table E.3: Overall Contamination Risk Matrix

		Consequence			
		Severe	**Medium**	**Mild**	**Minor**
Probability	**High likelihood**	Very high risk	High risk	Moderate risk	Low risk
	Likely	High risk	Moderate risk	Moderate / Low risk	Low risk
	Low likelihood	Moderate risk	Moderate / Low risk	Low risk	Very low risk
	Unlikely	Moderate / Low risk	Low risk	Very low risk	Very low risk

Based upon this, CIRIA C552 presents definitions of the risk categories, together with the investigatory and remedial actions that are likely to be necessary in each case, as in Table E.4. These risk categories apply to each pollutant linkage, not simply to each hazard or receptor.

Table E.4: Definitions of Risk Categories and Likely Actions Required

Risk Category	Definition and Likely Actions Required
Very High	There is a high probability that severe harm could arise to a designated receptor from an identified hazard, OR, there is evidence that severe harm to a designated receptor is currently happening. This risk, if realised, is likely to result in a substantial liability. Urgent investigation (if not already undertaken) and remediation are likely to be required.
High	Harm is likely to arise to a designated receptor from an identified hazard. Realisation of the risk is likely to present a substantial liability. Urgent investigation (if not undertaken already) is required and remedial works may be necessary in the short term and are likely over the longer term.
Moderate	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild. Investigation (if not already undertaken is normally required to clarify the risk and to determine the potential liability. Some remedial works may be required in the long term.
Low	It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised would at worst be relatively mild.
Very Low	There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe.

F. M-BAT Calculation

ID	Location	Waterbody	Date	Measured Cu Concentration (dissolved) (µg l^{-1})	Measured Zn Concentration (dissolved) (µg l^{-1})	Measured Mn Concentration (dissolved) (µg l^{-1})	Measured Ni Concentration (dissolved) (µg l^{-1})	pH	DOC	Ca	Site-specific PNEC Dissolved Copper (µg l^{-1})	BioF	Bioavailable Copper Concentration (µg l^{-1})	Risk Characterisation Ratio	Site-specific PNEC Dissolved Zinc (µg l^{-1})	BioF	Bioavailable Zinc Concentration (µg l^{-1})	Risk Characterisation Ratio	Site-specific PNEC Dissolved Manganese (µg l^{-1})	BioF	Bioavailable Manganese Concentration (µg l^{-1})	Risk Characterisation Ratio	Site-specific PNEC Dissolved Nickel (µg l^{-1})	BioF	Bioavailable Nickel Concentration (µg l^{-1})	Risk Characterisation Ratio
1	Average for Sea Link Suffolk							7.54	4.757	158	20.67	0.05			27.06	0.40			534.91	0.23			15.13	0.26		

G. Screening results

G.1 Soil Screening

Laboratory Analysis:
Soil Screening Summary

Max of Normalised Results					Location ID	Sample Depth	Geology Code												
		BH ID			F22-BH203	F22-BH306	F22-BH307	F22-BH308	F22-BH309	F22-BH310	F22-BH501	F22-BH501	F22-BH501	F22-BH502	F22-BH502	F22-TP203	F22-TP204	F22-TP205	F22-TP220
		Depth (m)			0.2	1	1	1	0.2	0.5	0.1	0.6	1	0.3	1	0.2	0.2	0.2	0.5
		Strata	Commercial 1% SOM	PoS Park 1% SOM	TOPSOIL	Lowestoft Formation	Lowestoft Formation	Lowestoft Formation	TOPSOIL	Lowestoft Formation	TOPSOIL	Made Ground	Alluvium	Alluvium	Alluvium	TOPSOIL	TOPSOIL	TOPSOIL	Lowestoft Formation
Determinant Name	**Units**	**Laboratory**																	
Arsenic	mg/kg	SOLID	640	170	6	4	6	4	5	4				1		5	4	4	4
Barium	mg/kg	SOLID	22000	5800	20	25	68	34	36	58				13		24	22	15	13
Beryllium	mg/kg	SOLID	12	63	<0.5000	0.5	1.3	0.8	0.6	1.3				<0.5000		<0.5000	<0.5000	<0.5000	<0.5000
Boron	mg/kg	SOLID	240000	46000	<1.0000	<1.0000	<1.0000	<1.0000	1.4	<1.0000				<1.0000		<1.0000	<1.0000	<1.0000	<1.0000
Cadmium	mg/kg	SOLID	190	560	<0.5000	<0.5000	0.7	0.6	0.6	0.9				<0.5000		0.6	<0.5000	<0.5000	<0.5000
Trivalent Chromium	mg/kg	SOLID	8600	33000	10	18	44	25	21	53				7		13	10	8	7
Chromium - Hexavalent	mg/kg	SOLID	33	220	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000				<1.0000		<1.0000	<1.0000	<1.0000	<1.0000
Copper	mg/kg	SOLID	68000	44000	7	10	19	12	10	19				<1.0000		8	6	6	3
Lead	mg/kg	SOLID	2300	1300	14	5	14	7	16	14				3		12	14	11	8
Manganese	mg/kg	SOLID	-	-	315	136	267	174	259	452				44		435	424	239	207
Mercury	mg/kg	SOLID	15	26	<0.1700	0.94	1.32	1.22	<0.1700	1.34				<0.1700		<0.1700	<0.1700	<0.1700	<0.1700
Molybdenum	mg/kg	SOLID	18000	2900	<1.0000	<1.0000	1	<1.0000	<1.0000	<1.0000				<1.0000		<1.0000	<1.0000	<1.0000	<1.0000
Nickel	mg/kg	SOLID	980	800	8	18	33	20	14	40				4		11	8	6	5
Selenium	mg/kg	SOLID	12000	1800	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	1				<1.0000		<1.0000	<1.0000	<1.0000	<1.0000
Vanadium	mg/kg	SOLID	9000	5000	17	26	60	34	32	55				14		20	17	16	13
Zinc	mg/kg	SOLID	730000	170000	29	32	53	34	41	49				6		33	27	23	17
pH	pH	SOLID	-	-	7.4	8.38	8.32	8.43	8.16	8.23		6.12	6.31	8.14	7.66	7.88	7.84	7.21	8.03
Asbestos	-	SOLID	-	-	NAD	NAD	NAD	NAD	NAD	NAD		NAD		NAD		NAD	NAD	NAD	NAD
Benzene	mg/kg	SOLID	27	90	<0.0100							<0.0100							
Toluene	mg/kg	SOLID	56000	87000	<0.0100							<0.0100							
Ethylbenzene	mg/kg	SOLID	5700	17000	<0.0100							<0.0100							
O-Xylene	mg/kg	SOLID	6600	17000	<0.0100							<0.0100							
Methyl tert-butyl ether (MTBE)	mg/kg	SOLID	7500	98000								<0.0100							
Acenaphthylene	mg/kg	SOLID	83000	29000	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100				<0.0100		<0.0100	<0.0100	<0.0100	<0.0100
Acenaphthene	mg/kg	SOLID	84000	29000	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100				<0.0100		<0.0100	<0.0100	<0.0100	<0.0100
Fluorene	mg/kg	SOLID	63000	20000	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100				<0.0100		<0.0100	<0.0100	<0.0100	<0.0100
Phenanthrene	mg/kg	SOLID	22000	6200	<0.0300	<0.0300	<0.0300	<0.0300	<0.0300	<0.0300				<0.0300		<0.0300	<0.0300	<0.0300	<0.0300
Anthracene	mg/kg	SOLID	520000	150000	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200				<0.0200		<0.0200	<0.0200	<0.0200	<0.0200
Fluoranthene	mg/kg	SOLID	23000	6300	<0.0800	<0.0800	<0.0800	<0.0800	<0.0800	<0.0800				<0.0800		<0.0800	<0.0800	<0.0800	<0.0800
Pyrene	mg/kg	SOLID	54000	15000	<0.0700	<0.0700	<0.0700	<0.0700	<0.0700	<0.0700				<0.0700		<0.0700	<0.0700	<0.0700	<0.0700
Benzo(a)anthracene	mg/kg	SOLID	170	49	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400				<0.0400		<0.0400	<0.0400	<0.0400	<0.0400
Chrysene	mg/kg	SOLID	350	93	<0.0600	<0.0600	<0.0600	<0.0600	<0.0600	<0.0600				<0.0600		<0.0600	<0.0600	<0.0600	<0.0600
Benzo(b)fluoranthene	mg/kg	SOLID	44	13	0.05	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500				<0.0500		<0.0500	<0.0500	<0.0500	<0.0500
Benzo(k)fluoranthene	mg/kg	SOLID	1200	370	<0.0700	<0.0700	<0.0700	<0.0700	<0.0700	<0.0700				<0.0700		<0.0700	<0.0700	<0.0700	<0.0700
Benzo(a)pyrene	mg/kg	SOLID	35	11	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400				<0.0400		<0.0400	<0.0400	<0.0400	<0.0400
% Moisture at 105C*	% w/w	SOLID	-	-	13.8	26.7	25.7	34.7	26.6	30.4				28.9		20.1	19.5	19.3	14.6
% Stones >10mm*	% w/w	SOLID	-	-	9.7	12.3	<0.1000	4.7	<0.1000	<0.1000	<0.1000	<0.1000	<0.1000	<0.1000	<0.1000	<0.1000	<0.1000	<0.1000	<0.1000
4,4-DDE	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Acid Neutralisation Capacity at pH 6	mol/kg	SOLID	-	-	<0.0100	0.14	0.18	0.19		0.44		<0.0100	<0.0100		0.01		0.03		
Alachlor	mg/kg	SOLID	-	-	<0.0200			<0.0200			<0.0200						<0.0200	<0.0200	
Aldrin	mg/kg	SOLID	170	30	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Aliphatics & Aromatics >C5-35	mg/kg	SOLID	-	-								13							
Aliphatics >C10-12	mg/kg	SOLID	9700	21000								<1.0000							
Aliphatics >C12-16	mg/kg	SOLID	59000	25000								<1.0000							
Aliphatics >C16-21	mg/kg	SOLID	-	-								<1.0000							
Aliphatics >C21-35	mg/kg	SOLID	-	-								9							
Aliphatics >C5-35	mg/kg	SOLID	-	-								9							
Aliphatics >C5-6	mg/kg	SOLID	3200	95000								<0.0100							
Aliphatics >C6-8	mg/kg	SOLID	7800	150000								<0.0100							
Aliphatics >C8-10	mg/kg	SOLID	2000	14000								<1.0000							
alpha-Hexachlorocyclohexane	mg/kg	SOLID	170	47	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Anc/Bnc At Ph4	mol/kg	SOLID	-	-	0.03	1.68	6.8	3.8		1.71		0.04	0.02		0.03		0.06		
Aromatics >C10-12	mg/kg	SOLID	16000	9200								<1.0000							
Aromatics >C12-16	mg/kg	SOLID	36000	10000								<1.0000							
Aromatics >C16-21	mg/kg	SOLID	28000	7600								<1.0000							
Aromatics >C21-35	mg/kg	SOLID	28000	7800								4							
Aromatics >C5-35	mg/kg	SOLID	-	-								4							
Aromatics >C5-7	mg/kg	SOLID	26000	76000								<0.0100							
Aromatics >C7-8	mg/kg	SOLID	56000	87000								<0.0100							
Aromatics >C8-10	mg/kg	SOLID	3500	7200								<1.0000							
Asbestos Matrix (microscope)	-	SOLID	-	-	-	-	-	-	-	-		-		-		-	-	-	-
Asbestos Matrix (visual)	-	SOLID	-	-	-	-	-	-	-	-		-		-		-	-	-	-
Atrazine	mg/kg	SOLID	9300	2300	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Azinphos-ethyl	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Azinphos-methyl	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Bentazone	mg/kg	SOLID	-	-	<0.1000			<0.1000			<0.1000						<0.1000	<0.1000	
Benzo (g,h,i) perylene	mg/kg	SOLID	3900	1400	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500				<0.0500		<0.0500	<0.0500	<0.0500	<0.0500
beta-Hexachlorocyclohexane	mg/kg	SOLID	65	15	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Carbaryl	mg/kg	SOLID	-	-	<0.1000			<0.1000			<0.1000						<0.1000	<0.1000	
Carbophenothion	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Chlordane - alpha	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Chlorfenvinphos	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Chlorothalonil	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Chlorpyrifos-methyl*	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Chlorpyriphos	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Chromium	mg/kg	SOLID	-	-	10	18	44	25	21	53				7		13	10	8	7
Coumaphos	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Cyanide Free	mg/kg	SOLID	-	-	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000				<1.0000		<1.0000	<1.0000	<1.0000	<1.0000

Max of Normalised Results					Location ID	Sample Depth	Geology Code												
		BH ID			F22-BH203	F22-BH306	F22-BH307	F22-BH308	F22-BH309	F22-BH310	F22-BH501	F22-BH501	F22-BH501	F22-BH502	F22-BH502	F22-TP203	F22-TP204	F22-TP205	F22-TP220
		Depth (m)			0.2	1	1	1	0.2	0.5	0.1	0.6	1	0.3	1	0.2	0.2	0.2	0.5
		Strata	Commercial 1% SOM	PoS Park 1% SOM	TOPSOIL	Lowestoft Formation	Lowestoft Formation	Lowestoft Formation	TOPSOIL	Lowestoft Formation	TOPSOIL	Made Ground	Alluvium	Alluvium	Alluvium	TOPSOIL	TOPSOIL	TOPSOIL	Lowestoft Formation
Determinant Name	**Units**	**Laboratory**																	
Cypermethrin	mg/kg	SOLID	-	-	<0.1000			<0.1000			<0.1000						<0.1000	<0.1000	
Demeton - S	mg/kg	SOLID	-	-	<0.5000			<0.5000			<0.5000						<0.5000	<0.5000	
Demeton-O*	mg/kg	SOLID	-	-	<0.5000			<0.5000			<0.5000						<0.5000	<0.5000	
Deta-Hexachlorocyclohexane	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Diazinon	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Dibenz-a-h-anthracene	mg/kg	SOLID	3.5	1.1	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400				<0.0400		<0.0400	<0.0400	<0.0400	<0.0400
Dichlobenil	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Dichlorvos	mg/kg	SOLID	140	26	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Dieldrin	mg/kg	SOLID	170	30	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Dimethoate	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Disulfoton	mg/kg	SOLID	-	-	<0.1000			<0.1000			<0.1000						<0.1000	<0.1000	
Diuron	mg/kg	SOLID	-	-	<0.1000			<0.1000			<0.1000						<0.1000	<0.1000	
Dry Matter	% w/w	SOLID	-	-	94.7	93.3	85.2	85.1		84.9		67.1	79.7		85.1		90.6		
Endosulfan I	mg/kg	SOLID	5600	2400	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Endosulfan II	mg/kg	SOLID	6300	2400	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Endosulfan Sulfate	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Endrin	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Endrin Aldehyde	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Endrin Ketone	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Ethion	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Ethylparathion	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Fenitrothion	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Fensulfothion	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Fenthion	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Fraction Organic Carbon (FOC)	N/A	SOLID	-	-	0.0048	0.0016	0.006	0.0027	0.0133	0.0045				0.0003		0.0049	0.0035	0.004	0.0027
gamma-hexachlorocyclohexane	mg/kg	SOLID	67	14	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Heptachlor	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Heptachlor Epoxide	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Hexachlorobenzene (HCB)	mg/kg	SOLID	110	30	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Indeno(1,2,3-cd)pyrene	mg/kg	SOLID	500	150	<0.0300	<0.0300	<0.0300	<0.0300	<0.0300	<0.0300				<0.0300		<0.0300	<0.0300	<0.0300	<0.0300
Isodrin	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Isoproturon	mg/kg	SOLID	-	-	<0.1000			<0.1000			<0.1000						<0.1000	<0.1000	
Linuron	mg/kg	SOLID	-	-	<0.1000			<0.1000			<0.1000						<0.1000	<0.1000	
Loss on Ignition	% w/w	SOLID	-	-	1.9	2.6	4	2.7		4.2		5.4	2		1.9		1.7		
m,p xylenes	mg/kg	SOLID	-	-	<0.0100							<0.0100							
Malathion	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Mass of Sample	kg	SOLID	-	-	0.185	0.188	0.205	0.206		0.206		0.261	0.22		0.206		0.193		
Mecoprop (MCPP) (2-(4-chloro-2-methylphenoxy)	mg/kg	SOLID	-	-	<0.1000			<0.1000			<0.1000						<0.1000	<0.1000	
Methylparathion	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Mevinphos	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Min. Oil >C10-40	mg/kg	SOLID	-	-	<10.0000	<30.0000	<10.0000	<10.0000		<10.0000		<10.0000	<10.0000		<10.0000		<10.0000		
Napthalene	mg/kg	SOLID	190	1200	<0.0300	<0.0300	<0.0300	<0.0300	<0.0300	<0.0300				<0.0300		<0.0300	<0.0300	<0.0300	<0.0300
o,p - DDE	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
o,p - DDT	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
o,p - TDE	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
o,p-Methoxychlor*	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
p,p - DDT	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
p,p-DDD (4,4)*	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
p,p-Methoxychlor*	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
PAH 17 Total	mg/kg	SOLID	-	-	<0.0800	<0.0800	<0.0800	<0.0800		<0.0800		<0.0800	<0.0800		<0.0800		<0.0800		
PAH, Total Detected USEPA 16	mg/kg	SOLID	-	-	<0.0800	<0.0800	<0.0800	<0.0800	<0.0800	<0.0800				<0.0800		<0.0800	<0.0800	<0.0800	<0.0800
PCB 105	mg/kg	SOLID	-	-								<0.0050							
PCB 114	mg/kg	SOLID	-	-								<0.0050							
PCB 123	mg/kg	SOLID	-	-								<0.0050							
PCB 126	mg/kg	SOLID	-	-								<0.0050							
PCB 157	mg/kg	SOLID	-	-								<0.0050							
PCB 167	mg/kg	SOLID	-	-								<0.0050							
PCB 169	mg/kg	SOLID	-	-								<0.0050							
PCB 189	mg/kg	SOLID	-	-								<0.0050							
PCB 77	mg/kg	SOLID	-	-								<0.0050							
PCB 81	mg/kg	SOLID	-	-								<0.0050							
PCB Total of 12 WHO	mg/kg	SOLID	-	-								<0.0070							
PCB, Total Of 7 Congeners	mg/kg	SOLID	-	-	<0.0070	<0.0070	<0.0070	<0.0070		<0.0070		<0.0070	<0.0070		<0.0070		<0.0070		
PCB-118 2,3',4,4',5 - Pentachlorobiphenyl	mg/kg	SOLID	-	-								<0.0070							
PCB-156 2,3,3,4,4,5 - Hexachlorobiphenyl	mg/kg	SOLID	-	-								<0.0050							
Pendimethalin	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Pentachloronitrobenzene	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Permethrin I (cis)*	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Permethrin II (trans)*	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Phenol (Monohydric)	mg/kg	SOLID	-	-	<0.2000	<0.2000	<0.2000	<0.2000	<0.2000	<0.2000				<0.2000		<0.2000	<0.2000	<0.2000	<0.2000
Phorate	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Phosalone	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Pirimiphos-methyl	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Propetamphos	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Simazine	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Sulphate	g/l	SOLID	-	-	<0.0100	0.02	0.02	0.08	<0.0100	<0.0100				0.02		<0.0100	0.01	<0.0100	<0.0100
Sulphur	mg/kg	SOLID	-	-	71	86	272	200	195	130				<50.0000		82	81	75	<50.0000
Tecnazene	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Telodrin	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Tokuthion	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Total BTEX	mg/kg	SOLID	-	-	<0.0100	<0.0100	<0.0100	<0.0100		<0.0100		<0.0100	<0.0100		<0.0100		<0.0100		
Total Organic Carbon	% w/w	SOLID	-	-	0.48	0.16	0.6	0.27	1.33	0.45		3.36	0.66	0.03	0.09	0.49	0.35	0.4	0.27

Max of Normalised Results					Location ID	Sample Depth	Geology Code												
		BH ID			**F22-BH203**	**F22-BH306**	**F22-BH307**	**F22-BH308**	**F22-BH309**	**F22-BH310**	**F22-BH501**	**F22-BH501**	**F22-BH501**	**F22-BH502**	**F22-BH502**	**F22-TP203**	**F22-TP204**	**F22-TP205**	**F22-TP220**
		Depth (m)			0.2	1	1	1	0.2	0.5	0.1	0.6	1	0.3	1	0.2	0.2	0.2	0.5
		Strata	**Commercial 1% SOM**	**PoS Park 1% SOM**	TOPSOIL	Lowestoft Formation	Lowestoft Formation	Lowestoft Formation	TOPSOIL	Lowestoft Formation	TOPSOIL	Made Ground	Alluvium	Alluvium	Alluvium	TOPSOIL	TOPSOIL	TOPSOIL	Lowestoft Formation
Determinant Name	**Units**	**Laboratory**																	
Traidimefon	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
trans - Chlordane	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Triallate	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Triazophos	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Trichloronate	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Trifluralin	mg/kg	SOLID	-	-	<0.0100			<0.0100			<0.0100						<0.0100	<0.0100	
Water Absorption Test	-	SOLID	-	-	N/A	N/A	N/A	N/A	N/A	N/A		N/A		N/A		N/A	N/A	N/A	N/A

Laboratory Analysis:
Soil Screening Summary

Max of Normalised Results																			
		BH ID			F22-TP221	F22-TP222A	F22-TP310	F22-TP311	F22-TP312	F22-TP313	F22-TP313	F22-TP314	F22-TP315	F22-TP316	F22-TP317	F22-TP404	F22-TP406	F22-TP511	F22-TP513
		Depth (m)			0.5	0.5	0.5	0.5	0.5	0.2	0.5	0.2	0.5	0.5	0.5	0.2	0.5	0.2	0.2
		Strata	Commercial 1% SOM	PoS Park 1% SOM	Lowestoft Formation	Lowestoft Formation	Lowestoft Formation	Lowestoft Formation	Lowestoft Formation	TOPSOIL	Lowestoft Formation	TOPSOIL	Lowestoft Formation	Lowestoft Formation	Lowestoft Formation	TOPSOIL	Lowestoft Formation	Made Ground	TOPSOIL
Determinant Name	**Units**	**Laboratory**																	
Arsenic	mg/kg	SOLID	640	170	5	2	3	4	4	4	4	5	7	3	3	4	6	8	5
Barium	mg/kg	SOLID	22000	5800	9	6	64	43	50	51	45	41	33	60	44	11	58	19	10
Beryllium	mg/kg	SOLID	12	63	<0.5000	<0.5000	1.2	1	1.1	0.8	1.1	0.7	0.7	1.2	0.8	<0.5000	1.4	<0.5000	<0.5000
Boron	mg/kg	SOLID	240000	46000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	1.3	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000
Cadmium	mg/kg	SOLID	190	560	<0.5000	<0.5000	<0.5000	0.5	0.8	<0.5000	0.5	0.6	0.5	0.8	0.6	<0.5000	1	0.6	<0.5000
Trivalent Chromium	mg/kg	SOLID	8600	33000	6	3	38	31	35	30	32	26	26	42	31	6	38	9	5
Chromium - Hexavalent	mg/kg	SOLID	33	220	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000
Copper	mg/kg	SOLID	68000	44000	4	2	16	16	18	14	16	11	9	17	10	3	17	7	6
Lead	mg/kg	SOLID	2300	1300	11	6	11	11	10	20	12	19	8	12	10	5	14	17	16
Manganese	mg/kg	SOLID	-	-	132	51	590	323	404	313	372	157	223	474	285	73	616	315	180
Mercury	mg/kg	SOLID	15	26	<0.1700	<0.1700	0.41	0.88	0.81	<0.1700	1.16	<0.1700	0.27	<0.1700	<0.1700	<0.1700	<0.1700	<0.1700	<0.1700
Molybdenum	mg/kg	SOLID	18000	2900	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000
Nickel	mg/kg	SOLID	980	800	6	2	37	27	34	21	29	16	23	30	20	5	45	9	5
Selenium	mg/kg	SOLID	12000	1800	<1.0000	<1.0000	<1.0000	<1.0000	1	<1.0000	<1.0000	<1.0000	<1.0000	1	1	<1.0000	<1.0000	<1.0000	<1.0000
Vanadium	mg/kg	SOLID	9000	5000	13	6	55	45	52	45	46	39	37	61	45	12	54	17	11
Zinc	mg/kg	SOLID	730000	170000	21	7	47	45	41	50	48	48	35	61	43	12	68	28	25
pH	pH	SOLID	-	-	7.5	7.85	8.26	8.38	8.34	8.16	8.36	7.73	8.56	7.67	8.4	7.51	8.23	7.55	6.66
Asbestos	-	SOLID	-	-	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD
Benzene	mg/kg	SOLID	27	90				<0.0100							<0.0100			<0.0100	
Toluene	mg/kg	SOLID	56000	87000				<0.0100							<0.0100			<0.0100	
Ethylbenzene	mg/kg	SOLID	5700	17000				<0.0100							<0.0100			<0.0100	
O-Xylene	mg/kg	SOLID	6600	17000				<0.0100							<0.0100			<0.0100	
Methyl tert-butyl ether (MTBE)	mg/kg	SOLID	7500	98000				<0.0100							<0.0100			<0.0100	
Acenaphthylene	mg/kg	SOLID	83000	29000	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Acenaphthene	mg/kg	SOLID	84000	29000	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.03	<0.0100	<0.0100
Fluorene	mg/kg	SOLID	63000	20000	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.03	<0.0100	<0.0100
Phenanthrene	mg/kg	SOLID	22000	6200	<0.0300	<0.0300	<0.0300	<0.0300	<0.0300	<0.0300	<0.0300	<0.0300	<0.0300	<0.0300	<0.0300	<0.0300	<0.0300	0.05	0.1
Anthracene	mg/kg	SOLID	520000	150000	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200
Fluoranthene	mg/kg	SOLID	23000	6300	<0.0800	<0.0800	<0.0800	<0.0800	<0.0800	<0.0800	<0.0800	<0.0800	<0.0800	<0.0800	<0.0800	<0.0800	<0.0800	0.12	0.21
Pyrene	mg/kg	SOLID	54000	15000	<0.0700	<0.0700	<0.0700	<0.0700	<0.0700	<0.0700	<0.0700	<0.0700	<0.0700	<0.0700	<0.0700	<0.0700	<0.0700	0.11	0.19
Benzo(a)anthracene	mg/kg	SOLID	170	49	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	0.05	0.09
Chrysene	mg/kg	SOLID	350	93	<0.0600	<0.0600	<0.0600	<0.0600	<0.0600	<0.0600	<0.0600	<0.0600	<0.0600	<0.0600	<0.0600	<0.0600	<0.0600	<0.0600	0.12
Benzo(b)fluoranthene	mg/kg	SOLID	44	13	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	0.1	0.15
Benzo(k)fluoranthene	mg/kg	SOLID	1200	370	<0.0700	<0.0700	<0.0700	<0.0700	<0.0700	<0.0700	<0.0700	<0.0700	<0.0700	<0.0700	<0.0700	<0.0700	<0.0700	<0.0700	<0.0700
Benzo(a)pyrene	mg/kg	SOLID	35	11	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	0.06	0.1
% Moisture at 105C*	% w/w	SOLID	-	-	27.2	19.2	29	27.6	28.2	29.7	38.1	29.1	26.8	28.7	27.6	21.7	27.9	22.6	19.4
% Stones >10mm*	% w/w	SOLID	-	-	7.2	<0.1000	7.2	10.5	<0.1000	2.2	<0.1000	<0.1000	<0.1000	<0.1000	<0.1000	4.3	<0.1000	6.6	<0.1000
4,4-DDE	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Acid Neutralisation Capacity at pH 6	mol/kg	SOLID	-	-				0.3	0.29				0.23	0.05		0.03		<0.0100	
Alachlor	mg/kg	SOLID	-	-	<0.0200	<0.0200						<0.0200		<0.0200		<0.0200		<0.0200	
Aldrin	mg/kg	SOLID	170	30	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Aliphatics & Aromatics >C5-35	mg/kg	SOLID	-	-				<1.0000							<1.0000			7	
Aliphatics >C10-12	mg/kg	SOLID	9700	21000				<1.0000							<1.0000			<1.0000	
Aliphatics >C12-16	mg/kg	SOLID	59000	25000				<1.0000							<1.0000			<1.0000	
Aliphatics >C16-21	mg/kg	SOLID	-	-				<1.0000							<1.0000			<1.0000	
Aliphatics >C21-35	mg/kg	SOLID	-	-				<1.0000							<1.0000			2	
Aliphatics >C5-35	mg/kg	SOLID	-	-				<1.0000							<1.0000			2	
Aliphatics >C5-6	mg/kg	SOLID	3200	95000				<0.0100							<0.0100			<0.0100	
Aliphatics >C6-8	mg/kg	SOLID	7800	150000				<0.0100							<0.0100			<0.0100	
Aliphatics >C8-10	mg/kg	SOLID	2000	14000				<1.0000							<1.0000			<1.0000	
alpha-Hexachlorocyclohexane	mg/kg	SOLID	170	47	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Anc/Bnc At Ph4	mol/kg	SOLID	-	-				2.12	2.84				1.61	0.1		0.04		0.02	
Aromatics >C10-12	mg/kg	SOLID	16000	9200				<1.0000							<1.0000			<1.0000	
Aromatics >C12-16	mg/kg	SOLID	36000	10000				<1.0000							<1.0000			<1.0000	
Aromatics >C16-21	mg/kg	SOLID	28000	7600				<1.0000							<1.0000			1	
Aromatics >C21-35	mg/kg	SOLID	28000	7800				<1.0000							<1.0000			4	
Aromatics >C5-35	mg/kg	SOLID	-	-				<1.0000							<1.0000			5	
Aromatics >C5-7	mg/kg	SOLID	26000	76000				<0.0100							<0.0100			<0.0100	
Aromatics >C7-8	mg/kg	SOLID	56000	87000				<0.0100							<0.0100			<0.0100	
Aromatics >C8-10	mg/kg	SOLID	3500	7200				<1.0000							<1.0000			<1.0000	
Asbestos Matrix (microscope)	-	SOLID	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Asbestos Matrix (visual)	-	SOLID	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Atrazine	mg/kg	SOLID	9300	2300	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Azinphos-ethyl	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Azinphos-methyl	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Bentazone	mg/kg	SOLID	-	-	<0.1000	<0.1000						<0.1000		<0.1000		<0.1000		<0.1000	
Benzo (g,h,i) perylene	mg/kg	SOLID	3900	1400	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	0.07
beta-Hexachlorocyclohexane	mg/kg	SOLID	65	15	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Carbaryl	mg/kg	SOLID	-	-	<0.1000	<0.1000						<0.1000		<0.1000		<0.1000		<0.1000	
Carbophenothion	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Chlordane - alpha	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Chlorfenvinphos	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Chlorothalonil	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Chlorpyrifos-methyl*	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Chlorpyriphos	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Chromium	mg/kg	SOLID	-	-	6	3	38	31	35	30	32	26	26	42	31	6	38	9	5
Coumaphos	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Cyanide Free	mg/kg	SOLID	-	-	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000

Max of Normalised Results																			
		BH ID			F22-TP221	F22-TP222A	F22-TP310	F22-TP311	F22-TP312	F22-TP313	F22-TP313	F22-TP314	F22-TP315	F22-TP316	F22-TP317	F22-TP404	F22-TP406	F22-TP511	F22-TP513
		Depth (m)			0.5	0.5	0.5	0.5	0.5	0.2	0.5	0.2	0.5	0.5	0.5	0.2	0.5	0.2	0.2
		Strata	Commercial 1% SOM	PoS Park 1% SOM	Lowestoft Formation	Lowestoft Formation	Lowestoft Formation	Lowestoft Formation	Lowestoft Formation	TOPSOIL	Lowestoft Formation	TOPSOIL	Lowestoft Formation	Lowestoft Formation	Lowestoft Formation	TOPSOIL	Lowestoft Formation	Made Ground	TOPSOIL
Determinant Name	**Units**	**Laboratory**																	
Cypermethrin	mg/kg	SOLID	-	-	<0.1000	<0.1000						<0.1000		<0.1000		<0.1000		<0.1000	
Demeton - S	mg/kg	SOLID	-	-	<0.5000	<0.5000						<0.5000		<0.5000		<0.5000		<0.5000	
Demeton-O*	mg/kg	SOLID	-	-	<0.5000	<0.5000						<0.5000		<0.5000		<0.5000		<0.5000	
Deta-Hexachlorocyclohexane	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Diazinon	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Dibenz-a-h-anthracene	mg/kg	SOLID	3.5	1.1	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400
Dichlobenil	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Dichlorvos	mg/kg	SOLID	140	26	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Dieldrin	mg/kg	SOLID	170	30	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Dimethoate	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Disulfoton	mg/kg	SOLID	-	-	<0.1000	<0.1000						<0.1000		<0.1000		<0.1000		<0.1000	
Diuron	mg/kg	SOLID	-	-	<0.1000	<0.1000						<0.1000		<0.1000		<0.1000		<0.1000	
Dry Matter	% w/w	SOLID	-	-				85.7	81.9				88	84.3		92.9		90.5	
Endosulfan I	mg/kg	SOLID	5600	2400	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Endosulfan II	mg/kg	SOLID	6300	2400	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Endosulfan Sulfate	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Endrin	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Endrin Aldehyde	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Endrin Ketone	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Ethion	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Ethylparathion	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Fenitrothion	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Fensulfothion	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Fenthion	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Fraction Organic Carbon (FOC)	N/A	SOLID	-	-	0.0031	0.002	0.005	0.0041	0.0041	0.0124	0.007	0.012	0.0032	0.0034	0.002	0.005	0.0038	0.0049	0.0037
gamma-hexachlorocyclohexane	mg/kg	SOLID	67	14	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Heptachlor	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Heptachlor Epoxide	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Hexachlorobenzene (HCB)	mg/kg	SOLID	110	30	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Indeno(1,2,3-cd)pyrene	mg/kg	SOLID	500	150	<0.0300	<0.0300	<0.0300	<0.0300	<0.0300	<0.0300	<0.0300	<0.0300	<0.0300	<0.0300	<0.0300	<0.0300	<0.0300	0.06	0.09
Isodrin	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Isoproturon	mg/kg	SOLID	-	-	<0.1000	<0.1000						<0.1000		<0.1000		<0.1000		<0.1000	
Linuron	mg/kg	SOLID	-	-	<0.1000	<0.1000						<0.1000		<0.1000		<0.1000		<0.1000	
Loss on Ignition	% w/w	SOLID	-	-				5.1	5.3				2.3	5.2		1.5		1.4	
m,p xylenes	mg/kg	SOLID	-	-				<0.0100							<0.0100			<0.0100	
Malathion	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Mass of Sample	kg	SOLID	-	-				0.204	0.214				0.199	0.208		0.188		0.193	
Mecoprop (MCPP) (2-(4-chloro-2-methylphenoxy)	mg/kg	SOLID	-	-	<0.1000	<0.1000						<0.1000		<0.1000		<0.1000		<0.1000	
Methylparathion	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Mevinphos	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Min. Oil >C10-40	mg/kg	SOLID	-	-				<30.0000	<10.0000				<10.0000	<10.0000		<10.0000		<10.0000	
Napthalene	mg/kg	SOLID	190	1200	<0.0300	<0.0300	<0.0300	<0.0300	<0.0300	<0.0300	<0.0300	<0.0300	<0.0300	<0.0300	<0.0300	<0.0300	1.62	<0.0300	<0.0300
o,p - DDE	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
o,p - DDT	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
o,p - TDE	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
o,p-Methoxychlor*	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
p,p - DDT	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
p,p-DDD (4,4)*	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
p,p-Methoxychlor*	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
PAH 17 Total	mg/kg	SOLID	-	-				<0.0800	<0.0800				<0.0800	<0.0800		<0.0800		0.54	
PAH, Total Detected USEPA 16	mg/kg	SOLID	-	-	<0.0800	<0.0800	<0.0800	<0.0800	<0.0800	<0.0800	<0.0800	<0.0800	<0.0800	<0.0800	<0.0800	<0.0800	1.68	0.55	1.12
PCB 105	mg/kg	SOLID	-	-			<0.0050				<0.0050							<0.0050	
PCB 114	mg/kg	SOLID	-	-			<0.0050				<0.0050							<0.0050	
PCB 123	mg/kg	SOLID	-	-			<0.0050				<0.0050							<0.0050	
PCB 126	mg/kg	SOLID	-	-			<0.0050				<0.0050							<0.0050	
PCB 157	mg/kg	SOLID	-	-			<0.0050				<0.0050							<0.0050	
PCB 167	mg/kg	SOLID	-	-			<0.0050				<0.0050							<0.0050	
PCB 169	mg/kg	SOLID	-	-			<0.0050				<0.0050							<0.0050	
PCB 189	mg/kg	SOLID	-	-			<0.0050				<0.0050							<0.0050	
PCB 77	mg/kg	SOLID	-	-			<0.0050				<0.0050							<0.0050	
PCB 81	mg/kg	SOLID	-	-			<0.0050				<0.0050							<0.0050	
PCB Total of 12 WHO	mg/kg	SOLID	-	-			<0.0070				<0.0070							<0.0070	
PCB, Total Of 7 Congeners	mg/kg	SOLID	-	-				<0.0070	<0.0070				<0.0070	<0.0070		<0.0070		<0.0070	
PCB-118 2,3',4,4',5 - Pentachlorobiphenyl	mg/kg	SOLID	-	-			<0.0070				<0.0070							<0.0070	
PCB-156 2,3,3,4,4,5 - Hexachlorobiphenyl	mg/kg	SOLID	-	-			<0.0050				<0.0050							<0.0050	
Pendimethalin	mg/kg	SOLID	-	-	<0.0100	<0.0100						0.04		0.03		<0.0100		<0.0100	
Pentachloronitrobenzene	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Permethrin I (cis)*	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Permethrin II (trans)*	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Phenol (Monohydric)	mg/kg	SOLID	-	-	<0.2000	<0.2000	<0.2000	<0.2000	<0.2000	<0.2000	<0.2000	<0.2000	<0.2000	<0.2000	<0.2000	<0.2000	<0.2000	<0.2000	<0.2000
Phorate	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Phosalone	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Pirimiphos-methyl	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Propetamphos	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Simazine	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Sulphate	g/l	SOLID	-	-	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Sulphur	mg/kg	SOLID	-	-	<50.0000	<50.0000	71	78	96	200	121	193	67	79	54	62	129	74	<50.0000
Tecnazene	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Telodrin	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Tokuthion	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Total BTEX	mg/kg	SOLID	-	-				<0.0100	<0.0100				<0.0100	<0.0100		<0.0100		<0.0100	
Total Organic Carbon	% w/w	SOLID	-	-	0.31	0.2	0.5	0.41	0.41	1.24	0.7	1.2	0.32	0.34	0.2	0.5	0.38	0.49	0.37

Max of Normalised Results																			
		BH ID			**F22-TP221**	**F22-TP222A**	**F22-TP310**	**F22-TP311**	**F22-TP312**	**F22-TP313**	**F22-TP313**	**F22-TP314**	**F22-TP315**	**F22-TP316**	**F22-TP317**	**F22-TP404**	**F22-TP406**	**F22-TP511**	**F22-TP513**
		Depth (m)			0.5	0.5	0.5	0.5	0.5	0.2	0.5	0.2	0.5	0.5	0.5	0.2	0.5	0.2	0.2
		Strata	**Commercial 1% SOM**	**PoS Park 1% SOM**	Lowestoft Formation	Lowestoft Formation	Lowestoft Formation	Lowestoft Formation	Lowestoft Formation	TOPSOIL	Lowestoft Formation	TOPSOIL	Lowestoft Formation	Lowestoft Formation	Lowestoft Formation	TOPSOIL	Lowestoft Formation	Made Ground	TOPSOIL
Determinant Name	**Units**	**Laboratory**																	
Traidimefon	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
trans - Chlordane	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Triallate	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Triazophos	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Trichloronate	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Trifluralin	mg/kg	SOLID	-	-	<0.0100	<0.0100						<0.0100		<0.0100		<0.0100		<0.0100	
Water Absorption Test	-	SOLID	-	-	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Laboratory Analysis:
Soil Screening Summary

Max of Normalised Results									
		BH ID			F22-TP514	F22-TP515	F22-TP516	F22-TP518	F22-TP525
		Depth (m)			0.2	0.5	0.2	0.2	0.5
		Strata	Commercial 1% SOM	PoS Park 1% SOM	TOPSOIL	Lowestoft Formation	TOPSOIL	TOPSOIL	Lowestoft Formation
Determinant Name	**Units**	**Laboratory**							
Arsenic	mg/kg	SOLID	640	170	5	6	6	8	5
Barium	mg/kg	SOLID	22000	5800	21	33	40	54	60
Beryllium	mg/kg	SOLID	12	63	<0.5000	0.7	0.7	0.8	0.9
Boron	mg/kg	SOLID	240000	46000	<1.0000	<1.0000	<1.0000	1.4	1.1
Cadmium	mg/kg	SOLID	190	560	<0.5000	1	0.7	0.7	0.6
Trivalent Chromium	mg/kg	SOLID	8600	33000	10	26	26	26	34
Chromium - Hexavalent	mg/kg	SOLID	33	220	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000
Copper	mg/kg	SOLID	68000	44000	10	19	15	16	12
Lead	mg/kg	SOLID	2300	1300	22	11	29	52	14
Manganese	mg/kg	SOLID	-	-	213	456	229	303	388
Mercury	mg/kg	SOLID	15	26	<0.1700	<0.1700	<0.1700	<0.1700	<0.1700
Molybdenum	mg/kg	SOLID	18000	2900	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000
Nickel	mg/kg	SOLID	980	800	8	27	19	19	20
Selenium	mg/kg	SOLID	12000	1800	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000
Vanadium	mg/kg	SOLID	9000	5000	17	33	37	40	51
Zinc	mg/kg	SOLID	730000	170000	33	48	58	67	82
pH	pH	SOLID	-	-	7.86	8.08	8.1	8.1	7.97
Asbestos	-	SOLID	-	-	NAD	NAD	NAD	NAD	NAD
Benzene	mg/kg	SOLID	27	90					
Toluene	mg/kg	SOLID	56000	87000					
Ethylbenzene	mg/kg	SOLID	5700	17000					
O-Xylene	mg/kg	SOLID	6600	17000					
Methyl tert-butyl ether (MTBE)	mg/kg	SOLID	7500	98000					
Acenaphthylene	mg/kg	SOLID	83000	29000	0.01	<0.0100	<0.0100	<0.0100	<0.0100
Acenaphthene	mg/kg	SOLID	84000	29000	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Fluorene	mg/kg	SOLID	63000	20000	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Phenanthrene	mg/kg	SOLID	22000	6200	0.11	<0.0300	<0.0300	0.04	<0.0300
Anthracene	mg/kg	SOLID	520000	150000	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200
Fluoranthene	mg/kg	SOLID	23000	6300	0.42	<0.0800	<0.0800	0.15	<0.0800
Pyrene	mg/kg	SOLID	54000	15000	0.38	<0.0700	<0.0700	0.14	<0.0700
Benzo(a)anthracene	mg/kg	SOLID	170	49	0.22	<0.0400	<0.0400	0.07	<0.0400
Chrysene	mg/kg	SOLID	350	93	0.29	<0.0600	<0.0600	0.08	<0.0600
Benzo(b)fluoranthene	mg/kg	SOLID	44	13	0.37	<0.0500	<0.0500	0.11	<0.0500
Benzo(k)fluoranthene	mg/kg	SOLID	1200	370	0.11	<0.0700	<0.0700	<0.0700	<0.0700
Benzo(a)pyrene	mg/kg	SOLID	35	11	0.25	<0.0400	<0.0400	0.07	<0.0400
% Moisture at 105C*	% w/w	SOLID	-	-	21.4	31.5	30.5	27.6	24.5
% Stones >10mm*	% w/w	SOLID	-	-	<0.1000	18.5	6.3	<0.1000	<0.1000
4,4-DDE	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Acid Neutralisation Capacity at pH 6	mol/kg	SOLID	-	-	0.03				
Alachlor	mg/kg	SOLID	-	-			<0.0200	<0.0200	
Aldrin	mg/kg	SOLID	170	30			<0.0100	<0.0100	
Aliphatics & Aromatics >C5-35	mg/kg	SOLID	-	-					
Aliphatics >C10-12	mg/kg	SOLID	9700	21000					
Aliphatics >C12-16	mg/kg	SOLID	59000	25000					
Aliphatics >C16-21	mg/kg	SOLID	-	-					
Aliphatics >C21-35	mg/kg	SOLID	-	-					
Aliphatics >C5-35	mg/kg	SOLID	-	-					
Aliphatics >C5-6	mg/kg	SOLID	3200	95000					
Aliphatics >C6-8	mg/kg	SOLID	7800	150000					
Aliphatics >C8-10	mg/kg	SOLID	2000	14000					
alpha-Hexachlorocyclohexane	mg/kg	SOLID	170	47			<0.0100	<0.0100	
Anc/Bnc At Ph4	mol/kg	SOLID	-	-	0.13				
Aromatics >C10-12	mg/kg	SOLID	16000	9200					
Aromatics >C12-16	mg/kg	SOLID	36000	10000					
Aromatics >C16-21	mg/kg	SOLID	28000	7600					
Aromatics >C21-35	mg/kg	SOLID	28000	7800					
Aromatics >C5-35	mg/kg	SOLID	-	-					
Aromatics >C5-7	mg/kg	SOLID	26000	76000					
Aromatics >C7-8	mg/kg	SOLID	56000	87000					
Aromatics >C8-10	mg/kg	SOLID	3500	7200					
Asbestos Matrix (microscope)	-	SOLID	-	-	-	-	-	-	-
Asbestos Matrix (visual)	-	SOLID	-	-	-	-	-	-	-
Atrazine	mg/kg	SOLID	9300	2300			<0.0100	<0.0100	
Azinphos-ethyl	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Azinphos-methyl	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Bentazone	mg/kg	SOLID	-	-			<0.1000	<0.1000	
Benzo (g,h,i) perylene	mg/kg	SOLID	3900	1400	0.18	<0.0500	<0.0500	<0.0500	<0.0500
beta-Hexachlorocyclohexane	mg/kg	SOLID	65	15			<0.0100	<0.0100	
Carbaryl	mg/kg	SOLID	-	-			<0.1000	<0.1000	
Carbophenothion	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Chlordane - alpha	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Chlorfenvinphos	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Chlorothalonil	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Chlorpyrifos-methyl*	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Chlorpyriphos	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Chromium	mg/kg	SOLID	-	-	10	26	26	26	34
Coumaphos	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Cyanide Free	mg/kg	SOLID	-	-	<1.0000	<1.0000	<1.0000	<1.0000	<1.0000

Max of Normalised Results									
		BH ID			F22-TP514	F22-TP515	F22-TP516	F22-TP518	F22-TP525
		Depth (m)			0.2	0.5	0.2	0.2	0.5
		Strata	Commercial 1% SOM	PoS Park 1% SOM	TOPSOIL	Lowestoft Formation	TOPSOIL	TOPSOIL	Lowestoft Formation
Determinant Name	**Units**	**Laboratory**	**1% SOM**	**1% SOM**					
Cypermethrin	mg/kg	SOLID	-	-			<0.1000	<0.1000	
Demeton - S	mg/kg	SOLID	-	-			<0.5000	<0.5000	
Demeton-O*	mg/kg	SOLID	-	-			<0.5000	<0.5000	
Deta-Hexachlorocyclohexane	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Diazinon	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Dibenz-a-h-anthracene	mg/kg	SOLID	3.5	1.1	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400
Dichlobenil	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Dichlorvos	mg/kg	SOLID	140	26			<0.0100	<0.0100	
Dieldrin	mg/kg	SOLID	170	30			<0.0100	<0.0100	
Dimethoate	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Disulfoton	mg/kg	SOLID	-	-			<0.1000	<0.1000	
Diuron	mg/kg	SOLID	-	-			<0.1000	<0.1000	
Dry Matter	% w/w	SOLID	-	-	91				
Endosulfan I	mg/kg	SOLID	5600	2400			<0.0100	<0.0100	
Endosulfan II	mg/kg	SOLID	6300	2400			<0.0100	<0.0100	
Endosulfan Sulfate	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Endrin	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Endrin Aldehyde	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Endrin Ketone	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Ethion	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Ethylparathion	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Fenitrothion	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Fensulfothion	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Fenthion	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Fraction Organic Carbon (FOC)	N/A	SOLID	-	-	0.0111	0.0039	0.0181	0.016	0.0078
gamma-hexachlorocyclohexane	mg/kg	SOLID	67	14			<0.0100	<0.0100	
Heptachlor	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Heptachlor Epoxide	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Hexachlorobenzene (HCB)	mg/kg	SOLID	110	30			<0.0100	<0.0100	
Indeno(1,2,3-cd)pyrene	mg/kg	SOLID	500	150	0.22	<0.0300	<0.0300	0.04	<0.0300
Isodrin	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Isoproturon	mg/kg	SOLID	-	-			<0.1000	<0.1000	
Linuron	mg/kg	SOLID	-	-			<0.1000	<0.1000	
Loss on Ignition	% w/w	SOLID	-	-	2.8				
m,p xylenes	mg/kg	SOLID	-	-					
Malathion	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Mass of Sample	kg	SOLID	-	-	0.192				
Mecoprop (MCPP) (2-(4-chloro-2-methylphenoxy)	mg/kg	SOLID	-	-			<0.1000	<0.1000	
Methylparathion	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Mevinphos	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Min. Oil >C10-40	mg/kg	SOLID	-	-	<10.0000				
Napthalene	mg/kg	SOLID	190	1200	<0.0300	<0.0300	<0.0300	<0.0300	<0.0300
o,p - DDE	mg/kg	SOLID	-	-			<0.0100	<0.0100	
o,p - DDT	mg/kg	SOLID	-	-			<0.0100	<0.0100	
o,p - TDE	mg/kg	SOLID	-	-			<0.0100	<0.0100	
o,p-Methoxychlor*	mg/kg	SOLID	-	-			<0.0100	<0.0100	
p,p - DDT	mg/kg	SOLID	-	-			<0.0100	<0.0100	
p,p-DDD (4,4)*	mg/kg	SOLID	-	-			<0.0100	<0.0100	
p,p-Methoxychlor*	mg/kg	SOLID	-	-			<0.0100	<0.0100	
PAH 17 Total	mg/kg	SOLID	-	-	2.61				
PAH, Total Detected USEPA 16	mg/kg	SOLID	-	-	2.56	<0.0800	<0.0800	0.7	<0.0800
PCB 105	mg/kg	SOLID	-	-					
PCB 114	mg/kg	SOLID	-	-					
PCB 123	mg/kg	SOLID	-	-					
PCB 126	mg/kg	SOLID	-	-					
PCB 157	mg/kg	SOLID	-	-					
PCB 167	mg/kg	SOLID	-	-					
PCB 169	mg/kg	SOLID	-	-					
PCB 189	mg/kg	SOLID	-	-					
PCB 77	mg/kg	SOLID	-	-					
PCB 81	mg/kg	SOLID	-	-					
PCB Total of 12 WHO	mg/kg	SOLID	-	-					
PCB, Total Of 7 Congeners	mg/kg	SOLID	-	-	<0.0070				
PCB-118 2,3',4,4',5 - Pentachlorobiphenyl	mg/kg	SOLID	-	-					
PCB-156 2,3,3,4,4,5 - Hexachlorobiphenyl	mg/kg	SOLID	-	-					
Pendimethalin	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Pentachloronitrobenzene	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Permethrin I (cis)*	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Permethrin II (trans)*	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Phenol (Monohydric)	mg/kg	SOLID	-	-	<0.2000	<0.2000	<0.2000	<0.2000	<0.2000
Phorate	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Phosalone	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Pirimiphos-methyl	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Propetamphos	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Simazine	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Sulphate	g/l	SOLID	-	-	<0.0100	<0.0100	<0.0100	0.02	<0.0100
Sulphur	mg/kg	SOLID	-	-	144	75	315	268	144
Tecnazene	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Telodrin	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Tokuthion	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Total BTEX	mg/kg	SOLID	-	-	<0.0100				
Total Organic Carbon	% w/w	SOLID	-	-	1.11	0.39	1.81	1.6	0.78

Max of Normalised Results									
		BH ID			**F22-TP514**	**F22-TP515**	**F22-TP516**	**F22-TP518**	**F22-TP525**
		Depth (m)			0.2	0.5	0.2	0.2	0.5
		Strata	**Commercial 1% SOM**	**PoS Park 1% SOM**	TOPSOIL	Lowestoft Formation	TOPSOIL	TOPSOIL	Lowestoft Formation
Determinant Name	**Units**	**Laboratory**							
Traidimefon	mg/kg	SOLID	-	-			<0.0100	<0.0100	
trans - Chlordane	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Triallate	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Triazophos	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Trichloronate	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Trifluralin	mg/kg	SOLID	-	-			<0.0100	<0.0100	
Water Absorption Test	-	SOLID	-	-	N/A	N/A	N/A	N/A	N/A

G.2 Soil Leachate Screening

Laboratory Analysis:
Leachate Screening Summary

Max of Normalised Results				Location ID	Sample Depth	Geology Code	
				F22-BH308	**F22-BH310**	**F22-BH501**	**F22-TP511**
				1	0.5	1	0.2
Determinant Name	Units	UK DW Standards	Environmental Quality Standards (Annual Average, Surface Freshwaters)	Lowestoft Formation	Lowestoft Formation	Alluvium	Made Ground
Antimony	mg/l	0.005	-	<0.0010	<0.0010	<0.0010	<0.0010
Arsenic	mg/l	0.01	0.05	0.00200	<0.0010	0.00300	0.01200
Barium	mg/l	1	-	0.00600	0.00500	0.01100	0.14700
Beryllium	mg/l	-	-	<0.0010	<0.0010	<0.0010	<0.0010
Boron	mg/l	1	2	0.01800	0.02300	0.02900	0.04500
Cadmium	mg/l	0.005	0.00008	<0.0010	<0.0010	<0.0010	<0.0010
Trivalent Chromium	mg/l	-	-	<0.0500	<0.0500	<0.0500	<0.1000
Chromium - Hexavalent	mg/l	-	0.0034	<0.0500	<0.0500	<0.0500	<0.1000
Copper	mg/l	2	0.02067	<0.0040	<0.0040	<0.0040	0.02100
Iron	mg/l	0.2	1	0.40800	<0.0100	0.02400	0.44500
Lead	mg/l	0.01	0.0012	<0.0010	<0.0010	<0.0010	0.03700
Mercury	mg/l	0.001	0.00007	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum	mg/l	-	-	<0.0010	<0.0010	<0.0010	0.00200
Nickel	mg/l	0.02	0.01513	0.00900	<0.0020	0.00300	0.00400
Selenium	mg/l	0.01	-	<0.0010	<0.0010	<0.0010	<0.0010
Vanadium	mg/l	-	0.02	0.00700	<0.0010	<0.0010	0.00600
Zinc	mg/l	5	0.02706	0.00500	0.00300	0.00400	0.03300
Cyanide	mg/l	0.05	0.001	<0.0050	<0.0050	<0.0050	<0.0050
Phenol	mg/l	0.0005	0.0077	<0.0100	<0.0100	<0.0100	<0.0100
Ammoniacal Nitrogen as N	mg/l	0.38	0.2	<0.0500	<0.0500	0.65000	0.44000
Chloride	mg/l	250	250	5.80000	<1.0000	1.38000	5.97000
Chromium	mg/l	0.05	0.005	0.00600	<0.0010	<0.0010	<0.0010
Cyanide Free	mg/l	-	-	<0.0050	<0.0050	<0.0050	<0.0050
Fluoride	mg/l	1.5	-	1.35000	0.53000	<0.1000	0.66000
Manganese (leachable)*	mg/l	-	-	<0.0010	0.00100	0.08900	0.11300
Sulphate as SO4	mg/l	250	400	63.36000	4.37000	189.54000	<1.0000
Xylenols & Ethylphenols	mg/l	-	-	<0.0100	<0.0100	<0.0100	<0.0100

G.3 Groundwater Screening

Laboratory Analysis Groundwater Screening Summary				Sample Depth	Quarters	SampleInformation.DateTimeSampled				
				F22-BH308	**F22-BH308**	**F22-BH308**	**F22-BH310**	**F22-BH310**	**F22-BH502A**	**F22-BH502A**
				18.29	18.33	18.5	26	26	6	6
				2023	2023	2023	2023	2024	2023	2024
Determinant Name	Units	UK DW Standards	Environmental Quality Standards (Annual Average, Surface Freshwaters)							
Antimony	mg/l	0.005	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Arsenic	mg/l	0.01	0.05	<0.0010	<0.0010	0.002	0.002	0.002	<0.0010	<0.0010
Barium	mg/l	1300	-	0.124	0.131	0.099	0.044	0.047	0.068	0.071
Beryllium	mg/l	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron	mg/l	1	2	0.06	0.073	0.058	0.031	0.033	0.083	0.032
Cadmium	mg/l	0.005	0.00008	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Trivalent Chromium	mg/l	-	-	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Chromium - Hexavalent	mg/l	-	0.0034	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Copper	mg/l	2	0.02067	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.007
Iron	mg/l	0.2	1	0.021	<0.0100	0.602	4.83	3.42	0.016	0.021
Lead	mg/l	0.01	0.0012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Mercury	mg/l	0.001	0.00007	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum	mg/l	0.07	-	<0.0005	<0.0005	0.0006	<0.0005	0.0014	0.0014	<0.0005
Nickel	mg/l	0.02	0.01513	0.003	0.004	0.005	<0.0020	<0.0020	0.003	0.006
Selenium	mg/l	0.01	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Vanadium	mg/l	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc	mg/l	5	0.02706	0.006	0.003	0.004	0.004	0.003	0.003	0.022
pH	pH	-	-	7.3	7.35	7.69	7.49	7.07	7.87	7.26
Cyanide	mg/l	0.05	0.001	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzene	mg/l	0.001	0.01	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Toluene	mg/l	0.7	0.074	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Ethylbenzene	mg/l	0.3	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
O-Xylene	mg/l	-	0.01	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Methyl tert-butyl ether (MTBE)	mg/l	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Acenaphthylene	mg/l	-	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000
Acenaphthene	mg/l	-	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000
Fluorene	mg/l	-	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000
Phenanthrene	mg/l	-	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000
Anthracene	mg/l	-	0.0001	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000
Fluoranthene	mg/l	0.000038	0.0000063	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000
Pyrene	mg/l	-	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000
Benzo(a)anthracene	mg/l	-	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000
Chrysene	mg/l	-	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000
Benzo(b)fluoranthene	mg/l	0.001	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000
Benzo(k)fluoranthene	mg/l	0.001	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000
Benzo(a)pyrene	mg/l	0.00001	0.00000017	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000
Phenol	mg/l	0.0005	0.0077	<0.1000	<0.1000	<0.0100	<0.1000	<0.2000	<0.0100	<0.0500
Bromochloromethane	mg/l	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Chloroform	mg/l	0.3	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Trichloroethene	mg/l	0.01	0.01	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dibromomethane	mg/l	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dibromochloromethane	mg/l	0.1	-	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Chlorobenzene	mg/l	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Styrene	mg/l	0.02	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tribromomethane	mg/l	0.1	-	<0.0030	<0.0010	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Bromobenzene	mg/l	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
2-Chlorotoluene	mg/l	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
4-Chlorotoluene	mg/l	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tert-Butylbenzene	mg/l	-	-	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Sec-Butylbenzene	mg/l	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
4-Isopropyltoluene	mg/l	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
n-Butylbenzene	mg/l	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
1,1,1,2-Tetrachloroethane	mg/l	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
1,1,1-Trichloroethane	mg/l	-	0.1	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
1,1,2,2-Tetrachloroethane	mg/l	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
1,1,2-Trichloroethane	mg/l	-	0.4	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
1,1-Dichloroethane	mg/l	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
1,1-Dichloroethene	mg/l	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
1,1-Dichloropropene	mg/l	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
1,2,3 Trichlorobenzene	mg/l	-	-	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
1,2,3-Trichloropropane	mg/l	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
1,2,4-Trichlorobenzene	mg/l	-	-	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
1,2,4-Trimethylbenzene	mg/l	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
1,2-Dibromo-3-Chloropropane	mg/l	0.001	-	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
1,2-Dibromoethane	mg/l	0.0004	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
1,2-Dichlorobenzene	mg/l	1	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

				F22-BH308	F22-BH308	F22-BH308	F22-BH310	F22-BH310	F22-BH502A	F22-BH502A
				18.29	18.33	18.5	26	26	6	6
				2023	2023	2023	2023	2024	2023	2024
Determinant Name	Units	UK DW Standards	Environmental Quality Standards (Annual Average, Surface Freshwaters)							
1,2-Dichloroethane	mg/l	0.003	0.01	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
1,2-Dichloropropane	mg/l	0.04	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
1,3,5-Trimethylbenzene	mg/l	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
1,3-Dichlorobenzene	mg/l	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
1,3-Dichloropropane	mg/l	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
1,4-Dichlorobenzene	mg/l	0.3	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
2,2-Dichloropropane	mg/l	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Aliphatics & Aromatics >C5-35	mg/l	-	-	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Aliphatics >C10-12	mg/l	0.01	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Aliphatics >C12-16	mg/l	0.01	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Aliphatics >C16-21	mg/l	0.01	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Aliphatics >C21-35	mg/l	0.01	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Aliphatics >C5-35	mg/l	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Aliphatics >C5-6	mg/l	0.01	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Aliphatics >C6-8	mg/l	0.01	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Aliphatics >C8-10	mg/l	0.01	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Alkalinity (Bicarbonate)	mg/l CaCO	-	-	510	430	465	340	470	365	380
Ammoniacal Nitrogen as N	mg/l	0.38	0.2	<0.0500	0.08	<0.0500	0.06	0.08	<0.0500	<0.0500
Aromatics >C10-12	mg/l	0.01	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Aromatics >C12-16	mg/l	0.01	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Aromatics >C16-21	mg/l	0.01	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Aromatics >C21-35	mg/l	0.01	-	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Aromatics >C5-35	mg/l	-	-	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Aromatics >C5-7	mg/l	0.01	0.01	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Aromatics >C7-8	mg/l	0.01	0.074	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Aromatics >C8-10	mg/l	0.01	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo (g,h,i) perylene	mg/l	0.001	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000
Bromodichloromethane	mg/l	0.06	-	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Bromomethane	mg/l	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Calcium	mg/l	250	-	180	154	181	157	159	118	156
Carbon Disulphide	mg/l	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Catechol	mg/l	-	-	<0.1000	<0.1000	<0.0100	<0.1000	<0.2000	<0.0100	<0.0500
Chloride	mg/l	250	-	95	168	78	42	<1.0000	66	8
Chloroethane	mg/l	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Chloroethene	mg/l	0.0005	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Chloromethane	mg/l	-	-	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Chromium	mg/l	0.05	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
cis-1,2-Dichloroethene	mg/l	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
cis-1,3-Dichloropropene	mg/l	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cyanide Free	mg/l	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Dibenz-a-h-anthracene	mg/l	-	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000
Dichlorodifluoromethane	mg/l	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dichloromethane	mg/l	0.02	0.02	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fluoride	mg/l	1.5	-	0.54	0.11	0.55	0.15	<0.1000	0.46	<0.1000
Hardness,Total as CaC03	mg/l CaCO	-	-	578	501	580	428	435	365	439
Hexachlorobutadiene (HCBD)	mg/l	0.0006	0.0001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Indeno(1,2,3-cd)pyrene	mg/l	0.0001	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000
Isopropylbenzene	mg/l	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
m,p xylenes	mg/l	-	-	<0.0010	<0.0010	<0.0010	<0.0010	0.001	<0.0010	<0.0010
Magnesium	mg/l	50	-	31	28	31	9	9	17	12
Manganese (dissolved)*	mg/l	-	-	0.345	0.853	1.5	0.729	0.712	0.081	0.291
Methylphenols	mg/l	-	-	<0.1000	<0.1000	<0.0100	<0.1000	<0.2000	<0.0100	<0.0500
Naphthols (w)*	mg/l	-	-	<0.1000	<0.1000	<0.0100	<0.1000	<0.2000	<0.0100	<0.0500
Napthalene	mg/l	-	0.002	<0.0000	<0.0000	<0.0000	0.00001	0.00005	<0.0000	<0.0000
Nitrate as NO3	mg/l	-	-	<0.1000	<0.1000	<0.1000	<0.1000	<0.1000	21.7	<0.1000
n-propylbenzene	mg/l	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
PAH 16 Total	mg/l	-	-	<0.0000	<0.0000	<0.0000	0.00001	0.00005	<0.0000	<0.0000
Resorcinol	mg/l	-	-	<0.1000	<0.1000	<0.0100	<0.1000	<0.2000	<0.0100	<0.0500
Sodium	mg/l	200	-	83	102	78	20	19	78	38
Sulphate as SO4	mg/l	250	-	256	251	236	99	<1.0000	84	2
Sulphur	mg/l	-	-	81	77	78	36	36	28	24
Tetrachloroethene	mg/l	0.01	0.01	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tetrachloromethane (Carbon Tetra Chloride)	mg/l	0.004	0.012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total dissolved solids	mg/l	-	-	895	1065	884	578	578	607	635
trans-1,2-Dichloroethene	mg/l	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
trans-1,3-Dichloropropene	mg/l	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Trichlorofluoromethane	mg/l	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Trimethylphenol	mg/l	-	-	<0.1000	<0.1000	<0.0100	<0.1000	<0.2000	<0.0100	<0.0500
Xylenols & Ethylphenols	mg/l	-	-	<0.1000	<0.1000	<0.0100	<0.1000	<0.2000	<0.0100	<0.0500

H. HazWasteOnline™ Assessment

MOTT MACDONALD

HazWasteOnline™

Waste Classification Report

HazWasteOnline™ classifies waste as either **hazardous** or **non-hazardous** based on its chemical composition, related legislation and the rules and data defined in the current UK or EU technical guidance (Appendix C) (note that HP 9 Infectious is not assessed). It is the responsibility of the classifier named below to:

a) understand the origin of the waste
b) select the correct List of Waste code(s)
c) confirm that the list of determinands, results and sampling plan are fit for purpose
d) select and justify the chosen metal species (Appendix B)
e) correctly apply moisture correction and other available corrections
f) add the meta data for their user-defined substances (Appendix A)
g) check that the classification engine is suitable with respect to the national destination of the waste (Appendix C)

To aid the reviewer, the laboratory results, assumptions and justifications managed by the classifier are highlighted in pale yellow.

[redacted]

Job name

Sea Link - Friston

Description/Comments

Project

Site

Classified by

Name: [redacted]
Company: **Mott MacDonald Limited**
Date: **08 May 2024 14:56 GMT**
Telephone: [redacted]

HazWasteOnline™ provides a two day, hazardous waste classification course that covers the use of the software and both basic and advanced waste classification techniques. Certification has to be renewed every 3 years.

HazWasteOnline™ Certification: **CERTIFIED**

Course	Date
Hazardous Waste Classification	08 Jun 2023

Next 3 year Refresher due by Jun 2026

Purpose of classification

2 - Material Characterisation

Address of the waste

Sea Link – Friston, approximately 5km route from the coast east of Friston, Suffolk, to the northwest of Friston.

Post Code [redacted]

SIC for the process giving rise to the waste

42220 Construction of utility projects for electricity and telecommunications

Description of industry/producer giving rise to the waste

Construction of a converter station and 2GW HVDC cable route

Description of the specific process, sub-process and/or activity that created the waste

Waste created during the excavation of foundations for the converter station and installation of the 2GW HVDC cable route

Description of the waste

Natural soils generally comprising orangish brown mottled brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is angular to sub-angular fine to medium flint and chalk. Made Ground generally comprising dark brown sandy subrounded to rounded fine to coarse GRAVEL of flint with occasional
glass and shell fragments. Sand is fine to coarse.

Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	F22-BH203	0.2	Non Hazardous		3
2	F22-BH306	1	Non Hazardous		6
3	F22-BH307	1	Non Hazardous		8
4	F22-BH308	1	Non Hazardous		10
5	F22-BH309	0.2	Non Hazardous		12
6	F22-BH310	0.5	Non Hazardous		14
7	F22-BH502	0.3	Non Hazardous		16
8	F22-TP203	0.2	Non Hazardous		18
9	F22-TP204	0.2	Non Hazardous		20
10	F22-TP205	0.2	Non Hazardous		22
11	F22-TP220	0.5	Non Hazardous		24
12	F22-TP221	0.5	Non Hazardous		26
13	F22-TP222A	0.5	Non Hazardous		28
14	F22-TP310	0.5	Non Hazardous		30
15	F22-TP311	0.5	Non Hazardous		32
16	F22-TP312	0.5	Non Hazardous		35
17	F22-TP313	0.2	Non Hazardous		37
18	F22-TP313[2]	0.5	Non Hazardous		39
19	F22-TP314	0.2	Non Hazardous		41
20	F22-TP315	0.5	Non Hazardous		43
21	F22-TP316	0.5	Non Hazardous		45
22	F22-TP317	0.5	Non Hazardous		47
23	F22-TP404	0.2	Non Hazardous		50
24	F22-TP406	0.5	Non Hazardous		52
25	F22-TP511	0.2	Non Hazardous		54
26	F22-TP513	0.2	Non Hazardous		57
27	F22-TP514	0.2	Non Hazardous		59
28	F22-TP515	0.5	Non Hazardous		61
29	F22-TP516	0.2	Non Hazardous		63
30	F22-TP518	0.2	Non Hazardous		65
31	F22-TP525	0.5	Non Hazardous		67

Related documents

#	Name	Description
1	MM standard waste stream for soils	waste stream template used to create this Job

Report

Created by: [redacted]

Created date: 08 May 2024 14:56 GMT

Appendices	Page
Appendix A: Classifier defined and non GB MCL determinands	69
Appendix B: Rationale for selection of metal species	70
Appendix C: Version	71

Classification of sample: F22-BH203

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
F22-BH203
Sample Depth:
0.2 m
Moisture content:
13.8%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 13.8% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		6 mg/kg	1.32	7.922 mg/kg	0.000792 %		
2	barium { barium sulphide }	016-002-00-X	244-214-4	21109-95-5		20 mg/kg	1.233	24.67 mg/kg	0.00247 %		
3	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		<0.5 mg/kg	2.775	<1.388 mg/kg	<0.000139 %		<LOD
4	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<1 mg/kg	3.22	<3.22 mg/kg	<0.000322 %		<LOD
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		<0.5 mg/kg	1.142	<0.571 mg/kg	<0.0000571 %		<LOD
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		10 mg/kg	1.462	14.616 mg/kg	0.00146 %		
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		7 mg/kg	1.126	7.881 mg/kg	0.000788 %		
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	14 mg/kg		14 mg/kg	0.0014 %		
10	manganese { manganese sulphate }	025-003-00-4	232-089-9	7785-87-7		315 mg/kg	2.749	865.798 mg/kg	0.0866 %		
11	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
12	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		<1 mg/kg	1.5	<1.5 mg/kg	<0.00015 %		<LOD
13	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		8 mg/kg	2.637	21.093 mg/kg	0.00211 %		
14	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<LOD

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		17	mg/kg	1.785	30.348	mg/kg	0.00303 %		
16		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		29	mg/kg	2.469	71.61	mg/kg	0.00716 %		
17		pH			PH		7.4	pH		7.4	pH	7.4 pH		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
19		confirm TPH has NOT arisen from diesel or petrol					☑							
20		benzene	601-020-00-8	200-753-7	71-43-2		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
21		toluene	601-021-00-3	203-625-9	108-88-3		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
22		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
23		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
24		acenaphthylene		205-917-1	208-96-8		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
25		acenaphthene		201-469-6	83-32-9		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
26		fluorene		201-695-5	86-73-7		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
27		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
28		anthracene		204-371-1	120-12-7		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<**LOD**
29		fluoranthene		205-912-4	206-44-0		<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<**LOD**
30		pyrene		204-927-3	129-00-0		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
31		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
32		chrysene	601-048-00-0	205-923-4	218-01-9		<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<**LOD**
33		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.05	mg/kg		0.05	mg/kg	0.000005 %		
34		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
35		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
36		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
37		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
38		benzo[ghi]perylene		205-883-8	191-24-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
39		phenol	604-001-00-2	203-632-7	108-95-2		<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<**LOD**
40		polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3		<0.007	mg/kg		<0.007	mg/kg	<0.0000007 %		<**LOD**
											Total:	0.107 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: F22-BH306

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
F22-BH306
Sample Depth:
1 m
Moisture content:
26.7%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 26.7% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		4 mg/kg	1.32	5.281 mg/kg	0.000528 %		
2	barium { barium sulphide }	016-002-00-X	244-214-4	21109-95-5		25 mg/kg	1.233	30.837 mg/kg	0.00308 %		
3	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.5 mg/kg	2.775	1.388 mg/kg	0.000139 %		
4	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<1 mg/kg	3.22	<3.22 mg/kg	<0.000322 %		<**LOD**
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		<0.5 mg/kg	1.142	<0.571 mg/kg	<0.0000571 %		<**LOD**
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		18 mg/kg	1.462	26.308 mg/kg	0.00263 %		
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<**LOD**
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		10 mg/kg	1.126	11.259 mg/kg	0.00113 %		
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	5 mg/kg		5 mg/kg	0.0005 %		
10	manganese { manganese sulphate }	025-003-00-4	232-089-9	7785-87-7		136 mg/kg	2.749	373.805 mg/kg	0.0374 %		
11	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.94 mg/kg	1.353	1.272 mg/kg	0.000127 %		
12	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		<1 mg/kg	1.5	<1.5 mg/kg	<0.00015 %		<**LOD**
13	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		18 mg/kg	2.637	47.46 mg/kg	0.00475 %		
14	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<**LOD**

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		26	mg/kg	1.785	46.415	mg/kg	0.00464 %		
16		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		32	mg/kg	2.469	79.017	mg/kg	0.0079 %		
17		pH			PH		8.38	pH		8.38	pH	8.38 pH		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
19		confirm TPH has NOT arisen from diesel or petrol					☑							
20		acenaphthylene		205-917-1	208-96-8		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
21		acenaphthene		201-469-6	83-32-9		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
22		fluorene		201-695-5	86-73-7		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
23		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
24		anthracene		204-371-1	120-12-7		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<**LOD**
25		fluoranthene		205-912-4	206-44-0		<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<**LOD**
26		pyrene		204-927-3	129-00-0		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
27		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
28		chrysene	601-048-00-0	205-923-4	218-01-9		<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<**LOD**
29		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
30		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
31		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
32		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
33		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
34		benzo[ghi]perylene		205-883-8	191-24-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
35		phenol	604-001-00-2	203-632-7	108-95-2		<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<**LOD**
36		polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3		<0.007	mg/kg		<0.007	mg/kg	<0.0000007 %		<**LOD**
											Total:	0.0639 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: F22-BH307

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
F22-BH307
Sample Depth:
1 m
Moisture content:
25.7%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 25.7% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		6 mg/kg	1.32	7.922 mg/kg	0.000792 %		
2	barium { barium sulphide }	016-002-00-X	244-214-4	21109-95-5		68 mg/kg	1.233	83.878 mg/kg	0.00839 %		
3	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1.3 mg/kg	2.775	3.608 mg/kg	0.000361 %		
4	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<1 mg/kg	3.22	<3.22 mg/kg	<0.000322 %		<**LOD**
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.7 mg/kg	1.142	0.8 mg/kg	0.00008 %		
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		44 mg/kg	1.462	64.308 mg/kg	0.00643 %		
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<**LOD**
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		19 mg/kg	1.126	21.392 mg/kg	0.00214 %		
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	14 mg/kg		14 mg/kg	0.0014 %		
10	manganese { manganese sulphate }	025-003-00-4	232-089-9	7785-87-7		267 mg/kg	2.749	733.867 mg/kg	0.0734 %		
11	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		1.32 mg/kg	1.353	1.787 mg/kg	0.000179 %		
12	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		1 mg/kg	1.5	1.5 mg/kg	0.00015 %		
13	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		33 mg/kg	2.637	87.011 mg/kg	0.0087 %		
14	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<**LOD**

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		60	mg/kg	1.785	107.111	mg/kg	0.0107 %		
16		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		53	mg/kg	2.469	130.873	mg/kg	0.0131 %		
17		pH			PH		8.32	pH		8.32	pH	8.32 pH		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
19		confirm TPH has NOT arisen from diesel or petrol					☑							
20		acenaphthylene		205-917-1	208-96-8		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
21		acenaphthene		201-469-6	83-32-9		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
22		fluorene		201-695-5	86-73-7		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
23		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
24		anthracene		204-371-1	120-12-7		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
25		fluoranthene		205-912-4	206-44-0		<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD
26		pyrene		204-927-3	129-00-0		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
27		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
28		chrysene	601-048-00-0	205-923-4	218-01-9		<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
29		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
30		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
31		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
32		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
33		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
34		benzo[ghi]perylene		205-883-8	191-24-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
35		phenol	604-001-00-2	203-632-7	108-95-2		<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<LOD
36		polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3		<0.007	mg/kg		<0.007	mg/kg	<0.0000007 %		<LOD
											Total:	0.127 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: F22-BH308

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
F22-BH308
Sample Depth:
1 m
Moisture content:
34.7%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 34.7% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		4 mg/kg	1.32	5.281 mg/kg	0.000528 %		
2	barium { barium sulphide }	016-002-00-X	244-214-4	21109-95-5		34 mg/kg	1.233	41.939 mg/kg	0.00419 %		
3	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.8 mg/kg	2.775	2.22 mg/kg	0.000222 %		
4	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<1 mg/kg	3.22	<3.22 mg/kg	<0.000322 %		<**LOD**
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.6 mg/kg	1.142	0.685 mg/kg	0.0000685 %		
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		25 mg/kg	1.462	36.539 mg/kg	0.00365 %		
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<**LOD**
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		12 mg/kg	1.126	13.511 mg/kg	0.00135 %		
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	7 mg/kg		7 mg/kg	0.0007 %		
10	manganese { manganese sulphate }	025-003-00-4	232-089-9	7785-87-7		174 mg/kg	2.749	478.25 mg/kg	0.0478 %		
11	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		1.22 mg/kg	1.353	1.651 mg/kg	0.000165 %		
12	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		<1 mg/kg	1.5	<1.5 mg/kg	<0.00015 %		<**LOD**
13	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		20 mg/kg	2.637	52.734 mg/kg	0.00527 %		
14	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<**LOD**

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		34	mg/kg	1.785	60.696	mg/kg	0.00607 %		
16		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		34	mg/kg	2.469	83.956	mg/kg	0.0084 %		
17		pH			PH		8.43	pH		8.43	pH	8.43 pH		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
19		confirm TPH has NOT arisen from diesel or petrol					☑							
20		acenaphthylene		205-917-1	208-96-8		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
21		acenaphthene		201-469-6	83-32-9		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
22		fluorene		201-695-5	86-73-7		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
23		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
24		anthracene		204-371-1	120-12-7		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
25		fluoranthene		205-912-4	206-44-0		<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD
26		pyrene		204-927-3	129-00-0		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
27		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
28		chrysene	601-048-00-0	205-923-4	218-01-9		<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
29		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
30		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
31		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
32		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
33		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
34		benzo[ghi]perylene		205-883-8	191-24-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
35		phenol	604-001-00-2	203-632-7	108-95-2		<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<LOD
36		polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3		<0.007	mg/kg		<0.007	mg/kg	<0.0000007 %		<LOD
											Total:	0.0795 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: F22-BH309

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
F22-BH309
Sample Depth:
0.2 m
Moisture content:
26.6%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 26.6% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		5 mg/kg	1.32	6.602 mg/kg	0.00066 %		
2	barium { barium sulphide }	016-002-00-X	244-214-4	21109-95-5		36 mg/kg	1.233	44.406 mg/kg	0.00444 %		
3	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.6 mg/kg	2.775	1.665 mg/kg	0.000167 %		
4	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		1.4 mg/kg	3.22	4.508 mg/kg	0.000451 %		
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.6 mg/kg	1.142	0.685 mg/kg	0.0000685 %		
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		21 mg/kg	1.462	30.693 mg/kg	0.00307 %		
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		10 mg/kg	1.126	11.259 mg/kg	0.00113 %		
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	16 mg/kg		16 mg/kg	0.0016 %		
10	manganese { manganese sulphate }	025-003-00-4	232-089-9	7785-87-7		259 mg/kg	2.749	711.878 mg/kg	0.0712 %		
11	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
12	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		<1 mg/kg	1.5	<1.5 mg/kg	<0.00015 %		<LOD
13	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		14 mg/kg	2.637	36.914 mg/kg	0.00369 %		
14	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<LOD

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		32	mg/kg	1.785	57.126	mg/kg	0.00571 %		
16		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		41	mg/kg	2.469	101.241	mg/kg	0.0101 %		
17		pH			PH		8.16	pH		8.16	pH	8.16 pH		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
19		confirm TPH has NOT arisen from diesel or petrol					☑							
20		acenaphthylene		205-917-1	208-96-8		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
21		acenaphthene		201-469-6	83-32-9		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
22		fluorene		201-695-5	86-73-7		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
23		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
24		anthracene		204-371-1	120-12-7		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
25		fluoranthene		205-912-4	206-44-0		<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD
26		pyrene		204-927-3	129-00-0		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
27		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
28		chrysene	601-048-00-0	205-923-4	218-01-9		<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
29		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
30		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
31		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
32		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
33		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
34		benzo[ghi]perylene		205-883-8	191-24-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
35		phenol	604-001-00-2	203-632-7	108-95-2		<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<LOD
											Total:	0.103 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: F22-BH310

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
F22-BH310
Sample Depth:
0.5 m
Moisture content:
30.4%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 30.4% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		4 mg/kg	1.32	5.281 mg/kg	0.000528 %		
2	barium { barium sulphide }	016-002-00-X	244-214-4	21109-95-5		58 mg/kg	1.233	71.543 mg/kg	0.00715 %		
3	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1.3 mg/kg	2.775	3.608 mg/kg	0.000361 %		
4	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<1 mg/kg	3.22	<3.22 mg/kg	<0.000322 %		<**LOD**
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.9 mg/kg	1.142	1.028 mg/kg	0.000103 %		
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		53 mg/kg	1.462	77.462 mg/kg	0.00775 %		
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<**LOD**
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		19 mg/kg	1.126	21.392 mg/kg	0.00214 %		
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	14 mg/kg		14 mg/kg	0.0014 %		
10	manganese { manganese sulphate }	025-003-00-4	232-089-9	7785-87-7		452 mg/kg	2.749	1242.351 mg/kg	0.124 %		
11	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		1.34 mg/kg	1.353	1.814 mg/kg	0.000181 %		
12	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		<1 mg/kg	1.5	<1.5 mg/kg	<0.00015 %		<**LOD**
13	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		40 mg/kg	2.637	105.467 mg/kg	0.0105 %		
14	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				1 mg/kg	1.405	1.405 mg/kg	0.000141 %		

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		55	mg/kg	1.785	98.185	mg/kg	0.00982 %		
16		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		49	mg/kg	2.469	120.996	mg/kg	0.0121 %		
17		pH			PH		8.23	pH		8.23	pH	8.23 pH		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
19		confirm TPH has NOT arisen from diesel or petrol					☑							
20		acenaphthylene		205-917-1	208-96-8		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
21		acenaphthene		201-469-6	83-32-9		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
22		fluorene		201-695-5	86-73-7		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
23		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
24		anthracene		204-371-1	120-12-7		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<**LOD**
25		fluoranthene		205-912-4	206-44-0		<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<**LOD**
26		pyrene		204-927-3	129-00-0		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
27		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
28		chrysene	601-048-00-0	205-923-4	218-01-9		<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<**LOD**
29		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
30		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
31		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
32		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
33		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
34		benzo[ghi]perylene		205-883-8	191-24-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
35		phenol	604-001-00-2	203-632-7	108-95-2		<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<**LOD**
36		polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3		<0.007	mg/kg		<0.007	mg/kg	<0.0000007 %		<**LOD**
											Total:	0.177 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: F22-BH502

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
F22-BH502
Sample Depth:
0.3 m
Moisture content:
28.9%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 28.9% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		1 mg/kg	1.32	1.32 mg/kg	0.000132 %		
2	barium { barium sulphide }	016-002-00-X	244-214-4	21109-95-5		13 mg/kg	1.233	16.035 mg/kg	0.0016 %		
3	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		<0.5 mg/kg	2.775	<1.388 mg/kg	<0.000139 %		<LOD
4	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<1 mg/kg	3.22	<3.22 mg/kg	<0.000322 %		<LOD
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		<0.5 mg/kg	1.142	<0.571 mg/kg	<0.0000571 %		<LOD
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		7 mg/kg	1.462	10.231 mg/kg	0.00102 %		
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		<1 mg/kg	1.126	<1.126 mg/kg	<0.000113 %		<LOD
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	3 mg/kg		3 mg/kg	0.0003 %		
10	manganese { manganese sulphate }	025-003-00-4	232-089-9	7785-87-7		44 mg/kg	2.749	120.937 mg/kg	0.0121 %		
11	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
12	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		<1 mg/kg	1.5	<1.5 mg/kg	<0.00015 %		<LOD
13	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		4 mg/kg	2.637	10.547 mg/kg	0.00105 %		
14	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<LOD

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		14	mg/kg	1.785	24.993	mg/kg	0.0025 %		
16		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		6	mg/kg	2.469	14.816	mg/kg	0.00148 %		
17		pH			PH		8.14	pH		8.14	pH	8.14 pH		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
19		acenaphthylene		205-917-1	208-96-8		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
20		acenaphthene		201-469-6	83-32-9		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
21		fluorene		201-695-5	86-73-7		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
22		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
23		anthracene		204-371-1	120-12-7		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<**LOD**
24		fluoranthene		205-912-4	206-44-0		<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<**LOD**
25		pyrene		204-927-3	129-00-0		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
26		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
27		chrysene	601-048-00-0	205-923-4	218-01-9		<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<**LOD**
28		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
29		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
30		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
31		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
32		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
33		benzo[ghi]perylene		205-883-8	191-24-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
34		phenol	604-001-00-2	203-632-7	108-95-2		<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<**LOD**
											Total:	0.0216 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: F22-TP203

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
F22-TP203
Sample Depth:
0.2 m
Moisture content:
20.1%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 20.1% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		5 mg/kg	1.32	6.602 mg/kg	0.00066 %		
2	barium { barium sulphide }	016-002-00-X	244-214-4	21109-95-5		24 mg/kg	1.233	29.604 mg/kg	0.00296 %		
3	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		<0.5 mg/kg	2.775	<1.388 mg/kg	<0.000139 %		<**LOD**
4	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<1 mg/kg	3.22	<3.22 mg/kg	<0.000322 %		<**LOD**
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.6 mg/kg	1.142	0.685 mg/kg	0.0000685 %		
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		13 mg/kg	1.462	19 mg/kg	0.0019 %		
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<**LOD**
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		8 mg/kg	1.126	9.007 mg/kg	0.000901 %		
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	12 mg/kg		12 mg/kg	0.0012 %		
10	manganese { manganese sulphate }	025-003-00-4	232-089-9	7785-87-7		435 mg/kg	2.749	1195.625 mg/kg	0.12 %		
11	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<**LOD**
12	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		<1 mg/kg	1.5	<1.5 mg/kg	<0.00015 %		<**LOD**
13	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		11 mg/kg	2.637	29.004 mg/kg	0.0029 %		
14	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<**LOD**

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		20	mg/kg	1.785	35.704	mg/kg	0.00357 %		
16		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		33	mg/kg	2.469	81.487	mg/kg	0.00815 %		
17		pH			PH		7.88	pH		7.88	pH	7.88 pH		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
19		confirm TPH has NOT arisen from diesel or petrol					☑							
20		acenaphthylene		205-917-1	208-96-8		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
21		acenaphthene		201-469-6	83-32-9		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
22		fluorene		201-695-5	86-73-7		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
23		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
24		anthracene		204-371-1	120-12-7		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<**LOD**
25		fluoranthene		205-912-4	206-44-0		<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<**LOD**
26		pyrene		204-927-3	129-00-0		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
27		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
28		chrysene	601-048-00-0	205-923-4	218-01-9		<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<**LOD**
29		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
30		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
31		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
32		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
33		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
34		benzo[ghi]perylene		205-883-8	191-24-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
35		phenol	604-001-00-2	203-632-7	108-95-2		<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<**LOD**
											Total:	0.143 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: F22-TP204

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
F22-TP204
Sample Depth:
0.2 m
Moisture content:
19.5%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 19.5% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		4 mg/kg	1.32	5.281 mg/kg	0.000528 %		
2	barium { barium sulphide }	016-002-00-X	244-214-4	21109-95-5		22 mg/kg	1.233	27.137 mg/kg	0.00271 %		
3	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		<0.5 mg/kg	2.775	<1.388 mg/kg	<0.000139 %		<LOD
4	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<1 mg/kg	3.22	<3.22 mg/kg	<0.000322 %		<LOD
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		<0.5 mg/kg	1.142	<0.571 mg/kg	<0.0000571 %		<LOD
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		10 mg/kg	1.462	14.616 mg/kg	0.00146 %		
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		6 mg/kg	1.126	6.755 mg/kg	0.000676 %		
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	14 mg/kg		14 mg/kg	0.0014 %		
10	manganese { manganese sulphate }	025-003-00-4	232-089-9	7785-87-7		424 mg/kg	2.749	1165.391 mg/kg	0.117 %		
11	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
12	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		<1 mg/kg	1.5	<1.5 mg/kg	<0.00015 %		<LOD
13	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		8 mg/kg	2.637	21.093 mg/kg	0.00211 %		
14	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<LOD

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		17	mg/kg	1.785	30.348	mg/kg	0.00303 %		
16		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		27	mg/kg	2.469	66.671	mg/kg	0.00667 %		
17		pH			PH		7.84	pH		7.84	pH	7.84 pH		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
19		confirm TPH has NOT arisen from diesel or petrol					☑							
20		acenaphthylene		205-917-1	208-96-8		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
21		acenaphthene		201-469-6	83-32-9		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
22		fluorene		201-695-5	86-73-7		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
23		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
24		anthracene		204-371-1	120-12-7		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<**LOD**
25		fluoranthene		205-912-4	206-44-0		<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<**LOD**
26		pyrene		204-927-3	129-00-0		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
27		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
28		chrysene	601-048-00-0	205-923-4	218-01-9		<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<**LOD**
29		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
30		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
31		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
32		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
33		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
34		benzo[ghi]perylene		205-883-8	191-24-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
35		phenol	604-001-00-2	203-632-7	108-95-2		<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<**LOD**
36		polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3		<0.007	mg/kg		<0.007	mg/kg	<0.0000007 %		<**LOD**
											Total:	0.136 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: F22-TP205

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
F22-TP205
Sample Depth:
0.2 m
Moisture content:
19.3%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 19.3% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		4 mg/kg	1.32	5.281 mg/kg	0.000528 %		
2	barium { barium sulphide }	016-002-00-X	244-214-4	21109-95-5		15 mg/kg	1.233	18.502 mg/kg	0.00185 %		
3	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		<0.5 mg/kg	2.775	<1.388 mg/kg	<0.000139 %		<LOD
4	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<1 mg/kg	3.22	<3.22 mg/kg	<0.000322 %		<LOD
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		<0.5 mg/kg	1.142	<0.571 mg/kg	<0.0000571 %		<LOD
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		8 mg/kg	1.462	11.692 mg/kg	0.00117 %		
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		6 mg/kg	1.126	6.755 mg/kg	0.000676 %		
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	11 mg/kg		11 mg/kg	0.0011 %		
10	manganese { manganese sulphate }	025-003-00-4	232-089-9	7785-87-7		239 mg/kg	2.749	656.907 mg/kg	0.0657 %		
11	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
12	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		<1 mg/kg	1.5	<1.5 mg/kg	<0.00015 %		<LOD
13	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		6 mg/kg	2.637	15.82 mg/kg	0.00158 %		
14	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<LOD

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		16	mg/kg	1.785	28.563	mg/kg	0.00286 %		
16		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		23	mg/kg	2.469	56.794	mg/kg	0.00568 %		
17		pH			PH		7.21	pH		7.21	pH	7.21 pH		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
19		confirm TPH has NOT arisen from diesel or petrol					☑							
20		acenaphthylene		205-917-1	208-96-8		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
21		acenaphthene		201-469-6	83-32-9		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
22		fluorene		201-695-5	86-73-7		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
23		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
24		anthracene		204-371-1	120-12-7		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<**LOD**
25		fluoranthene		205-912-4	206-44-0		<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<**LOD**
26		pyrene		204-927-3	129-00-0		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
27		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
28		chrysene	601-048-00-0	205-923-4	218-01-9		<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<**LOD**
29		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
30		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
31		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
32		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
33		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
34		benzo[ghi]perylene		205-883-8	191-24-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
35		phenol	604-001-00-2	203-632-7	108-95-2		<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<**LOD**
											Total:	0.0824 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: F22-TP220

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
F22-TP220
Sample Depth:
0.5 m
Moisture content:
14.6%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 14.6% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		4 mg/kg	1.32	5.281 mg/kg	0.000528 %		
2	barium { barium sulphide }	016-002-00-X	244-214-4	21109-95-5		13 mg/kg	1.233	16.035 mg/kg	0.0016 %		
3	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		<0.5 mg/kg	2.775	<1.388 mg/kg	<0.000139 %		<LOD
4	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<1 mg/kg	3.22	<3.22 mg/kg	<0.000322 %		<LOD
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		<0.5 mg/kg	1.142	<0.571 mg/kg	<0.0000571 %		<LOD
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		7 mg/kg	1.462	10.231 mg/kg	0.00102 %		
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		3 mg/kg	1.126	3.378 mg/kg	0.000338 %		
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	8 mg/kg		8 mg/kg	0.0008 %		
10	manganese { manganese sulphate }	025-003-00-4	232-089-9	7785-87-7		207 mg/kg	2.749	568.953 mg/kg	0.0569 %		
11	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
12	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		<1 mg/kg	1.5	<1.5 mg/kg	<0.00015 %		<LOD
13	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		5 mg/kg	2.637	13.183 mg/kg	0.00132 %		
14	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<LOD

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		13	mg/kg	1.785	23.207	mg/kg	0.00232 %		
16		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		17	mg/kg	2.469	41.978	mg/kg	0.0042 %		
17		pH			PH		8.03	pH		8.03	pH	8.03 pH		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
19		confirm TPH has NOT arisen from diesel or petrol					☑							
20		acenaphthylene		205-917-1	208-96-8		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
21		acenaphthene		201-469-6	83-32-9		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
22		fluorene		201-695-5	86-73-7		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
23		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
24		anthracene		204-371-1	120-12-7		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<**LOD**
25		fluoranthene		205-912-4	206-44-0		<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<**LOD**
26		pyrene		204-927-3	129-00-0		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
27		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
28		chrysene	601-048-00-0	205-923-4	218-01-9		<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<**LOD**
29		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
30		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
31		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
32		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
33		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
34		benzo[ghi]perylene		205-883-8	191-24-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
35		phenol	604-001-00-2	203-632-7	108-95-2		<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<**LOD**
											Total:	0.0703 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: F22-TP221

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
F22-TP221
Sample Depth:
0.5 m
Moisture content:
27.2%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 27.2% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		5 mg/kg	1.32	6.602 mg/kg	0.00066 %		
2	barium { barium sulphide }	016-002-00-X	244-214-4	21109-95-5		9 mg/kg	1.233	11.101 mg/kg	0.00111 %		
3	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		<0.5 mg/kg	2.775	<1.388 mg/kg	<0.000139 %		<LOD
4	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<1 mg/kg	3.22	<3.22 mg/kg	<0.000322 %		<LOD
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		<0.5 mg/kg	1.142	<0.571 mg/kg	<0.0000571 %		<LOD
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		6 mg/kg	1.462	8.769 mg/kg	0.000877 %		
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		4 mg/kg	1.126	4.504 mg/kg	0.00045 %		
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	11 mg/kg		11 mg/kg	0.0011 %		
10	manganese { manganese sulphate }	025-003-00-4	232-089-9	7785-87-7		132 mg/kg	2.749	362.81 mg/kg	0.0363 %		
11	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
12	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		<1 mg/kg	1.5	<1.5 mg/kg	<0.00015 %		<LOD
13	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		6 mg/kg	2.637	15.82 mg/kg	0.00158 %		
14	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<LOD

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		13	mg/kg	1.785	23.207	mg/kg	0.00232 %		
16		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		21	mg/kg	2.469	51.855	mg/kg	0.00519 %		
17		pH			PH		7.5	pH		7.5	pH	7.5 pH		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
19		confirm TPH has NOT arisen from diesel or petrol					☑							
20		acenaphthylene		205-917-1	208-96-8		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
21		acenaphthene		201-469-6	83-32-9		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
22		fluorene		201-695-5	86-73-7		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
23		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
24		anthracene		204-371-1	120-12-7		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<**LOD**
25		fluoranthene		205-912-4	206-44-0		<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<**LOD**
26		pyrene		204-927-3	129-00-0		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
27		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
28		chrysene	601-048-00-0	205-923-4	218-01-9		<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<**LOD**
29		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
30		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
31		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
32		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
33		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
34		benzo[ghi]perylene		205-883-8	191-24-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
35		phenol	604-001-00-2	203-632-7	108-95-2		<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<**LOD**
											Total:	0.0509 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: F22-TP222A

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
F22-TP222A
Sample Depth:
0.5 m
Moisture content:
19.2%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 19.2% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		2 mg/kg	1.32	2.641 mg/kg	0.000264 %		
2	barium { barium sulphide }	016-002-00-X	244-214-4	21109-95-5		6 mg/kg	1.233	7.401 mg/kg	0.00074 %		
3	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		<0.5 mg/kg	2.775	<1.388 mg/kg	<0.000139 %		<LOD
4	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<1 mg/kg	3.22	<3.22 mg/kg	<0.000322 %		<LOD
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		<0.5 mg/kg	1.142	<0.571 mg/kg	<0.0000571 %		<LOD
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		3 mg/kg	1.462	4.385 mg/kg	0.000438 %		
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		2 mg/kg	1.126	2.252 mg/kg	0.000225 %		
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	6 mg/kg		6 mg/kg	0.0006 %		
10	manganese { manganese sulphate }	025-003-00-4	232-089-9	7785-87-7		51 mg/kg	2.749	140.177 mg/kg	0.014 %		
11	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
12	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		<1 mg/kg	1.5	<1.5 mg/kg	<0.00015 %		<LOD
13	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		2 mg/kg	2.637	5.273 mg/kg	0.000527 %		
14	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<LOD

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		6	mg/kg	1.785	10.711	mg/kg	0.00107 %		
16		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		7	mg/kg	2.469	17.285	mg/kg	0.00173 %		
17		pH			PH		7.85	pH		7.85	pH	7.85 pH		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
19		confirm TPH has NOT arisen from diesel or petrol					☑							
20		acenaphthylene		205-917-1	208-96-8		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
21		acenaphthene		201-469-6	83-32-9		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
22		fluorene		201-695-5	86-73-7		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
23		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
24		anthracene		204-371-1	120-12-7		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<**LOD**
25		fluoranthene		205-912-4	206-44-0		<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<**LOD**
26		pyrene		204-927-3	129-00-0		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
27		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
28		chrysene	601-048-00-0	205-923-4	218-01-9		<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<**LOD**
29		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
30		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
31		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
32		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
33		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
34		benzo[ghi]perylene		205-883-8	191-24-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
35		phenol	604-001-00-2	203-632-7	108-95-2		<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<**LOD**
											Total:	0.0209 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: F22-TP310

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
F22-TP310
Sample Depth:
0.5 m
Moisture content:
29%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 29% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		3 mg/kg	1.32	3.961 mg/kg	0.000396 %		
2	barium { barium sulphide }	016-002-00-X	244-214-4	21109-95-5		64 mg/kg	1.233	78.944 mg/kg	0.00789 %		
3	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1.2 mg/kg	2.775	3.33 mg/kg	0.000333 %		
4	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<1 mg/kg	3.22	<3.22 mg/kg	<0.000322 %		<**LOD**
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		<0.5 mg/kg	1.142	<0.571 mg/kg	<0.0000571 %		<**LOD**
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		38 mg/kg	1.462	55.539 mg/kg	0.00555 %		
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<**LOD**
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		16 mg/kg	1.126	18.014 mg/kg	0.0018 %		
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	11 mg/kg		11 mg/kg	0.0011 %		
10	manganese { manganese sulphate }	025-003-00-4	232-089-9	7785-87-7		590 mg/kg	2.749	1621.653 mg/kg	0.162 %		
11	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.41 mg/kg	1.353	0.555 mg/kg	0.0000555 %		
12	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		<1 mg/kg	1.5	<1.5 mg/kg	<0.00015 %		<**LOD**
13	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		37 mg/kg	2.637	97.557 mg/kg	0.00976 %		
14	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<**LOD**

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		55	mg/kg	1.785	98.185	mg/kg	0.00982 %		
16		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		47	mg/kg	2.469	116.057	mg/kg	0.0116 %		
17		pH			PH		8.26	pH		8.26	pH	8.26 pH		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
19		confirm TPH has NOT arisen from diesel or petrol					☑							
20		acenaphthylene		205-917-1	208-96-8		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
21		acenaphthene		201-469-6	83-32-9		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
22		fluorene		201-695-5	86-73-7		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
23		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
24		anthracene		204-371-1	120-12-7		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
25		fluoranthene		205-912-4	206-44-0		<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD
26		pyrene		204-927-3	129-00-0		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
27		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
28		chrysene	601-048-00-0	205-923-4	218-01-9		<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
29		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
30		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
31		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
32		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
33		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
34		benzo[ghi]perylene		205-883-8	191-24-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
35		phenol	604-001-00-2	203-632-7	108-95-2		<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<LOD
36		polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3		<0.007	mg/kg		<0.007	mg/kg	<0.0000007 %		<LOD
											Total:	0.212 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: F22-TP311

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
F22-TP311
Sample Depth:
0.5 m
Moisture content:
27.6%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 27.6% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		4 mg/kg	1.32	5.281 mg/kg	0.000528 %		
2	barium { barium sulphide }	016-002-00-X	244-214-4	21109-95-5		43 mg/kg	1.233	53.04 mg/kg	0.0053 %		
3	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1 mg/kg	2.775	2.775 mg/kg	0.000278 %		
4	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<1 mg/kg	3.22	<3.22 mg/kg	<0.000322 %		<**LOD**
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.5 mg/kg	1.142	0.571 mg/kg	0.0000571 %		
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		31 mg/kg	1.462	45.308 mg/kg	0.00453 %		
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<**LOD**
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		16 mg/kg	1.126	18.014 mg/kg	0.0018 %		
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	11 mg/kg		11 mg/kg	0.0011 %		
10	manganese { manganese sulphate }	025-003-00-4	232-089-9	7785-87-7		323 mg/kg	2.749	887.786 mg/kg	0.0888 %		
11	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.88 mg/kg	1.353	1.191 mg/kg	0.000119 %		
12	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		<1 mg/kg	1.5	<1.5 mg/kg	<0.00015 %		<**LOD**
13	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		27 mg/kg	2.637	71.19 mg/kg	0.00712 %		
14	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<**LOD**

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		45	mg/kg	1.785	80.333	mg/kg	0.00803 %		
16		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		45	mg/kg	2.469	111.118	mg/kg	0.0111 %		
17		pH			PH		8.38	pH		8.38	pH	8.38 pH		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
19		TPH (C6 to C40) petroleum group			TPH		<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
20		confirm TPH has NOT arisen from diesel or petrol					☑							
21		benzene	601-020-00-8	200-753-7	71-43-2		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
22		toluene	601-021-00-3	203-625-9	108-88-3		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
23		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
24		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
25		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
26		acenaphthylene		205-917-1	208-96-8		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
27		acenaphthene		201-469-6	83-32-9		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
28		fluorene		201-695-5	86-73-7		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
29		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
30		anthracene		204-371-1	120-12-7		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
31		fluoranthene		205-912-4	206-44-0		<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD
32		pyrene		204-927-3	129-00-0		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
33		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
34		chrysene	601-048-00-0	205-923-4	218-01-9		<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
35		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
36		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
37		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
38		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
39		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
40		benzo[ghi]perylene		205-883-8	191-24-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
41		phenol				<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
42		polychlorobiphenyls; PCB				<0.007	mg/kg		<0.007	mg/kg	<0.0000007 %		<**LOD**
		602-039-00-4	215-648-1	1336-36-3									
										Total:	0.13 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: F22-TP312

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
F22-TP312
Sample Depth:
0.5 m
Moisture content:
28.2%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 28.2% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		4 mg/kg	1.32	5.281 mg/kg	0.000528 %		
2	barium { barium sulphide }	016-002-00-X	244-214-4	21109-95-5		50 mg/kg	1.233	61.675 mg/kg	0.00617 %		
3	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1.1 mg/kg	2.775	3.053 mg/kg	0.000305 %		
4	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<1 mg/kg	3.22	<3.22 mg/kg	<0.000322 %		**<LOD**
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.8 mg/kg	1.142	0.914 mg/kg	0.0000914 %		
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		35 mg/kg	1.462	51.154 mg/kg	0.00512 %		
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		**<LOD**
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		18 mg/kg	1.126	20.266 mg/kg	0.00203 %		
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	10 mg/kg		10 mg/kg	0.001 %		
10	manganese { manganese sulphate }	025-003-00-4	232-089-9	7785-87-7		404 mg/kg	2.749	1110.42 mg/kg	0.111 %		
11	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.81 mg/kg	1.353	1.096 mg/kg	0.00011 %		
12	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		<1 mg/kg	1.5	<1.5 mg/kg	<0.00015 %		**<LOD**
13	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		34 mg/kg	2.637	89.647 mg/kg	0.00896 %		
14	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				1 mg/kg	1.405	1.405 mg/kg	0.000141 %		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
15		vanadium { divanadium pentaoxide; vanadium pentoxide }				52	mg/kg	1.785	92.83	mg/kg	0.00928 %		
		023-001-00-8	215-239-8	1314-62-1									
16		zinc { zinc sulphate }				41	mg/kg	2.469	101.241	mg/kg	0.0101 %		
		030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]									
17		pH				8.34	pH		8.34	pH	8.34 pH		
				PH									
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
19		confirm TPH has NOT arisen from diesel or petrol				☑							
20		acenaphthylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
			205-917-1	208-96-8									
21		acenaphthene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
			201-469-6	83-32-9									
22		fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
			201-695-5	86-73-7									
23		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
24		anthracene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
			204-371-1	120-12-7									
25		fluoranthene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD
			205-912-4	206-44-0									
26		pyrene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
			204-927-3	129-00-0									
27		benzo[a]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
28		chrysene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
29		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
30		benzo[k]fluoranthene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
31		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
32		indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-893-2	193-39-5									
33		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
34		benzo[ghi]perylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-883-8	191-24-2									
35		phenol				<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
36		polychlorobiphenyls; PCB				<0.007	mg/kg		<0.007	mg/kg	<0.0000007 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
										Total:	0.156 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: F22-TP313

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
F22-TP313
Sample Depth:
0.2 m
Moisture content:
29.7%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 29.7% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		4 mg/kg	1.32	5.281 mg/kg	0.000528 %		
2	barium { barium sulphide }	016-002-00-X	244-214-4	21109-95-5		51 mg/kg	1.233	62.908 mg/kg	0.00629 %		
3	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.8 mg/kg	2.775	2.22 mg/kg	0.000222 %		
4	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		1.3 mg/kg	3.22	4.186 mg/kg	0.000419 %		
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		<0.5 mg/kg	1.142	<0.571 mg/kg	<0.0000571 %		<**LOD**
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		30 mg/kg	1.462	43.847 mg/kg	0.00438 %		
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<**LOD**
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		14 mg/kg	1.126	15.762 mg/kg	0.00158 %		
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	20 mg/kg		20 mg/kg	0.002 %		
10	manganese { manganese sulphate }	025-003-00-4	232-089-9	7785-87-7		313 mg/kg	2.749	860.3 mg/kg	0.086 %		
11	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<**LOD**
12	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		<1 mg/kg	1.5	<1.5 mg/kg	<0.00015 %		<**LOD**
13	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		21 mg/kg	2.637	55.37 mg/kg	0.00554 %		
14	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<**LOD**

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		45	mg/kg	1.785	80.333	mg/kg	0.00803 %		
16		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		50	mg/kg	2.469	123.465	mg/kg	0.0123 %		
17		pH			PH		8.16	pH		8.16	pH	8.16 pH		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
19		confirm TPH has NOT arisen from diesel or petrol					☑							
20		acenaphthylene		205-917-1	208-96-8		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
21		acenaphthene		201-469-6	83-32-9		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
22		fluorene		201-695-5	86-73-7		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
23		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
24		anthracene		204-371-1	120-12-7		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<**LOD**
25		fluoranthene		205-912-4	206-44-0		<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<**LOD**
26		pyrene		204-927-3	129-00-0		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
27		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
28		chrysene	601-048-00-0	205-923-4	218-01-9		<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<**LOD**
29		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
30		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
31		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
32		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
33		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
34		benzo[ghi]perylene		205-883-8	191-24-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
35		phenol	604-001-00-2	203-632-7	108-95-2		<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<**LOD**
											Total:	0.128 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: F22-TP313[2]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
F22-TP313[2]
Sample Depth:
0.5 m
Moisture content:
38.1%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 38.1% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		4 mg/kg	1.32	5.281 mg/kg	0.000528 %		
2	barium { barium sulphide }	016-002-00-X	244-214-4	21109-95-5		45 mg/kg	1.233	55.507 mg/kg	0.00555 %		
3	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1.1 mg/kg	2.775	3.053 mg/kg	0.000305 %		
4	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<1 mg/kg	3.22	<3.22 mg/kg	<0.000322 %		**<LOD**
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.5 mg/kg	1.142	0.571 mg/kg	0.0000571 %		
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		32 mg/kg	1.462	46.77 mg/kg	0.00468 %		
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		**<LOD**
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		16 mg/kg	1.126	18.014 mg/kg	0.0018 %		
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	12 mg/kg		12 mg/kg	0.0012 %		
10	manganese { manganese sulphate }	025-003-00-4	232-089-9	7785-87-7		372 mg/kg	2.749	1022.466 mg/kg	0.102 %		
11	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		1.16 mg/kg	1.353	1.57 mg/kg	0.000157 %		
12	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		<1 mg/kg	1.5	<1.5 mg/kg	<0.00015 %		**<LOD**
13	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		29 mg/kg	2.637	76.464 mg/kg	0.00765 %		
14	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		**<LOD**

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		46	mg/kg	1.785	82.119	mg/kg	0.00821 %		
16		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		48	mg/kg	2.469	118.526	mg/kg	0.0119 %		
17		pH			PH		8.36	pH		8.36	pH	8.36 pH		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
19		confirm TPH has NOT arisen from diesel or petrol					☑							
20		acenaphthylene		205-917-1	208-96-8		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
21		acenaphthene		201-469-6	83-32-9		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
22		fluorene		201-695-5	86-73-7		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
23		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
24		anthracene		204-371-1	120-12-7		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<**LOD**
25		fluoranthene		205-912-4	206-44-0		<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<**LOD**
26		pyrene		204-927-3	129-00-0		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
27		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
28		chrysene	601-048-00-0	205-923-4	218-01-9		<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<**LOD**
29		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
30		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
31		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
32		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
33		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
34		benzo[ghi]perylene		205-883-8	191-24-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
35		phenol	604-001-00-2	203-632-7	108-95-2		<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<**LOD**
36		polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3		<0.007	mg/kg		<0.007	mg/kg	<0.0000007 %		<**LOD**
											Total:	0.145 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: F22-TP314

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
F22-TP314
Sample Depth:
0.2 m
Moisture content:
29.1%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 29.1% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		5 mg/kg	1.32	6.602 mg/kg	0.00066 %		
2	barium { barium sulphide }	016-002-00-X	244-214-4	21109-95-5		41 mg/kg	1.233	50.573 mg/kg	0.00506 %		
3	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.7 mg/kg	2.775	1.943 mg/kg	0.000194 %		
4	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<1 mg/kg	3.22	<3.22 mg/kg	<0.000322 %		**<LOD**
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.6 mg/kg	1.142	0.685 mg/kg	0.0000685 %		
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		26 mg/kg	1.462	38 mg/kg	0.0038 %		
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		**<LOD**
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		11 mg/kg	1.126	12.385 mg/kg	0.00124 %		
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	19 mg/kg		19 mg/kg	0.0019 %		
10	manganese { manganese sulphate }	025-003-00-4	232-089-9	7785-87-7		157 mg/kg	2.749	431.525 mg/kg	0.0432 %		
11	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		**<LOD**
12	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		<1 mg/kg	1.5	<1.5 mg/kg	<0.00015 %		**<LOD**
13	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		16 mg/kg	2.637	42.187 mg/kg	0.00422 %		
14	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		**<LOD**

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		39	mg/kg	1.785	69.622	mg/kg	0.00696 %		
16		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		48	mg/kg	2.469	118.526	mg/kg	0.0119 %		
17		pH			PH		7.73	pH		7.73	pH	7.73 pH		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
19		confirm TPH has NOT arisen from diesel or petrol					☑							
20		acenaphthylene		205-917-1	208-96-8		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
21		acenaphthene		201-469-6	83-32-9		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
22		fluorene		201-695-5	86-73-7		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
23		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
24		anthracene		204-371-1	120-12-7		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<**LOD**
25		fluoranthene		205-912-4	206-44-0		<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<**LOD**
26		pyrene		204-927-3	129-00-0		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
27		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
28		chrysene	601-048-00-0	205-923-4	218-01-9		<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<**LOD**
29		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
30		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
31		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
32		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
33		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
34		benzo[ghi]perylene		205-883-8	191-24-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
35		phenol	604-001-00-2	203-632-7	108-95-2		<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<**LOD**
											Total:	0.0802 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: F22-TP315

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
F22-TP315
Sample Depth:
0.5 m
Moisture content:
26.8%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 26.8% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		7 mg/kg	1.32	9.242 mg/kg	0.000924 %		
2	barium { barium sulphide }	016-002-00-X	244-214-4	21109-95-5		33 mg/kg	1.233	40.705 mg/kg	0.00407 %		
3	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.7 mg/kg	2.775	1.943 mg/kg	0.000194 %		
4	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<1 mg/kg	3.22	<3.22 mg/kg	<0.000322 %		**<LOD**
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.5 mg/kg	1.142	0.571 mg/kg	0.0000571 %		
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		26 mg/kg	1.462	38 mg/kg	0.0038 %		
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		**<LOD**
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		9 mg/kg	1.126	10.133 mg/kg	0.00101 %		
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	8 mg/kg		8 mg/kg	0.0008 %		
10	manganese { manganese sulphate }	025-003-00-4	232-089-9	7785-87-7		223 mg/kg	2.749	612.93 mg/kg	0.0613 %		
11	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.27 mg/kg	1.353	0.365 mg/kg	0.0000365 %		
12	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		<1 mg/kg	1.5	<1.5 mg/kg	<0.00015 %		**<LOD**
13	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		23 mg/kg	2.637	60.644 mg/kg	0.00606 %		
14	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		**<LOD**

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		37	mg/kg	1.785	66.052	mg/kg	0.00661 %		
16		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		35	mg/kg	2.469	86.425	mg/kg	0.00864 %		
17		pH			PH		8.56	pH		8.56	pH	8.56 pH		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
19		confirm TPH has NOT arisen from diesel or petrol					☑							
20		acenaphthylene		205-917-1	208-96-8		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
21		acenaphthene		201-469-6	83-32-9		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
22		fluorene		201-695-5	86-73-7		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
23		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
24		anthracene		204-371-1	120-12-7		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<**LOD**
25		fluoranthene		205-912-4	206-44-0		<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<**LOD**
26		pyrene		204-927-3	129-00-0		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
27		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
28		chrysene	601-048-00-0	205-923-4	218-01-9		<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<**LOD**
29		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
30		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
31		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
32		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
33		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
34		benzo[ghi]perylene		205-883-8	191-24-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
35		phenol	604-001-00-2	203-632-7	108-95-2		<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<**LOD**
36		polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3		<0.007	mg/kg		<0.007	mg/kg	<0.0000007 %		<**LOD**
											Total:	0.0946 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: F22-TP316

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
F22-TP316
Sample Depth:
0.5 m
Moisture content:
28.7%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 28.7% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		3 mg/kg	1.32	3.961 mg/kg	0.000396 %		
2	barium { barium sulphide }	016-002-00-X	244-214-4	21109-95-5		60 mg/kg	1.233	74.01 mg/kg	0.0074 %		
3	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1.2 mg/kg	2.775	3.33 mg/kg	0.000333 %		
4	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<1 mg/kg	3.22	<3.22 mg/kg	<0.000322 %		**<LOD**
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.8 mg/kg	1.142	0.914 mg/kg	0.0000914 %		
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		42 mg/kg	1.462	61.385 mg/kg	0.00614 %		
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		**<LOD**
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		17 mg/kg	1.126	19.14 mg/kg	0.00191 %		
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	12 mg/kg		12 mg/kg	0.0012 %		
10	manganese { manganese sulphate }	025-003-00-4	232-089-9	7785-87-7		474 mg/kg	2.749	1302.819 mg/kg	0.13 %		
11	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		**<LOD**
12	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		<1 mg/kg	1.5	<1.5 mg/kg	<0.00015 %		**<LOD**
13	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		30 mg/kg	2.637	79.101 mg/kg	0.00791 %		
14	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				1 mg/kg	1.405	1.405 mg/kg	0.000141 %		

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		61	mg/kg	1.785	108.896	mg/kg	0.0109 %		
16		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		61	mg/kg	2.469	150.627	mg/kg	0.0151 %		
17		pH			PH		7.67	pH		7.67	pH	7.67 pH		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
19		confirm TPH has NOT arisen from diesel or petrol					☑							
20		acenaphthylene		205-917-1	208-96-8		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
21		acenaphthene		201-469-6	83-32-9		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
22		fluorene		201-695-5	86-73-7		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
23		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
24		anthracene		204-371-1	120-12-7		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<**LOD**
25		fluoranthene		205-912-4	206-44-0		<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<**LOD**
26		pyrene		204-927-3	129-00-0		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
27		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
28		chrysene	601-048-00-0	205-923-4	218-01-9		<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<**LOD**
29		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
30		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
31		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
32		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
33		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
34		benzo[ghi]perylene		205-883-8	191-24-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
35		phenol	604-001-00-2	203-632-7	108-95-2		<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<**LOD**
36		polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3		<0.007	mg/kg		<0.007	mg/kg	<0.0000007 %		<**LOD**
											Total:	0.183 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: F22-TP317

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
F22-TP317
Sample Depth:
0.5 m
Moisture content:
27.6%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 27.6% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		3 mg/kg	1.32	3.961 mg/kg	0.000396 %		
2	barium { barium sulphide }	016-002-00-X	244-214-4	21109-95-5		44 mg/kg	1.233	54.274 mg/kg	0.00543 %		
3	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.8 mg/kg	2.775	2.22 mg/kg	0.000222 %		
4	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<1 mg/kg	3.22	<3.22 mg/kg	<0.000322 %		**<LOD**
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.6 mg/kg	1.142	0.685 mg/kg	0.0000685 %		
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		31 mg/kg	1.462	45.308 mg/kg	0.00453 %		
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		**<LOD**
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		10 mg/kg	1.126	11.259 mg/kg	0.00113 %		
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	10 mg/kg		10 mg/kg	0.001 %		
10	manganese { manganese sulphate }	025-003-00-4	232-089-9	7785-87-7		285 mg/kg	2.749	783.341 mg/kg	0.0783 %		
11	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		**<LOD**
12	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		<1 mg/kg	1.5	<1.5 mg/kg	<0.00015 %		**<LOD**
13	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		20 mg/kg	2.637	52.734 mg/kg	0.00527 %		
14	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				1 mg/kg	1.405	1.405 mg/kg	0.000141 %		

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		45	mg/kg	1.785	80.333	mg/kg	0.00803 %		
16		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		43	mg/kg	2.469	106.18	mg/kg	0.0106 %		
17		pH			PH		8.4	pH		8.4	pH	8.4 pH		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
19		TPH (C6 to C40) petroleum group			TPH		<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
20		confirm TPH has NOT arisen from diesel or petrol					☑							
21		benzene	601-020-00-8	200-753-7	71-43-2		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
22		toluene	601-021-00-3	203-625-9	108-88-3		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
23		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
24		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
25		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
26		acenaphthylene		205-917-1	208-96-8		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
27		acenaphthene		201-469-6	83-32-9		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
28		fluorene		201-695-5	86-73-7		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
29		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
30		anthracene		204-371-1	120-12-7		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<**LOD**
31		fluoranthene		205-912-4	206-44-0		<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<**LOD**
32		pyrene		204-927-3	129-00-0		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
33		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
34		chrysene	601-048-00-0	205-923-4	218-01-9		<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<**LOD**
35		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
36		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
37		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
38		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
39		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
40		benzo[ghi]perylene		205-883-8	191-24-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
41		phenol				<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.116 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: F22-TP404

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
F22-TP404
Sample Depth:
0.2 m
Moisture content:
21.7%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 21.7% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		4 mg/kg	1.32	5.281 mg/kg	0.000528 %		
2	barium { barium sulphide }	016-002-00-X	244-214-4	21109-95-5		11 mg/kg	1.233	13.568 mg/kg	0.00136 %		
3	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		<0.5 mg/kg	2.775	<1.388 mg/kg	<0.000139 %		<LOD
4	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<1 mg/kg	3.22	<3.22 mg/kg	<0.000322 %		<LOD
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		<0.5 mg/kg	1.142	<0.571 mg/kg	<0.0000571 %		<LOD
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		6 mg/kg	1.462	8.769 mg/kg	0.000877 %		
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		3 mg/kg	1.126	3.378 mg/kg	0.000338 %		
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	5 mg/kg		5 mg/kg	0.0005 %		
10	manganese { manganese sulphate }	025-003-00-4	232-089-9	7785-87-7		73 mg/kg	2.749	200.645 mg/kg	0.0201 %		
11	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
12	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		<1 mg/kg	1.5	<1.5 mg/kg	<0.00015 %		<LOD
13	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		5 mg/kg	2.637	13.183 mg/kg	0.00132 %		
14	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<LOD

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		12	mg/kg	1.785	21.422	mg/kg	0.00214 %		
16		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		12	mg/kg	2.469	29.632	mg/kg	0.00296 %		
17		pH			PH		7.51	pH		7.51	pH	7.51 pH		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
19		confirm TPH has NOT arisen from diesel or petrol					☑							
20		acenaphthylene		205-917-1	208-96-8		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
21		acenaphthene		201-469-6	83-32-9		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
22		fluorene		201-695-5	86-73-7		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
23		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
24		anthracene		204-371-1	120-12-7		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<**LOD**
25		fluoranthene		205-912-4	206-44-0		<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<**LOD**
26		pyrene		204-927-3	129-00-0		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
27		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
28		chrysene	601-048-00-0	205-923-4	218-01-9		<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<**LOD**
29		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
30		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
31		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
32		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
33		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
34		benzo[ghi]perylene		205-883-8	191-24-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
35		phenol	604-001-00-2	203-632-7	108-95-2		<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<**LOD**
36		polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3		<0.007	mg/kg		<0.007	mg/kg	<0.0000007 %		<**LOD**
											Total:	0.0314 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: F22-TP406

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
F22-TP406
Sample Depth:
0.5 m
Moisture content:
27.9%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 27.9% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		6 mg/kg	1.32	7.922 mg/kg	0.000792 %		
2	barium { barium sulphide }	016-002-00-X	244-214-4	21109-95-5		58 mg/kg	1.233	71.543 mg/kg	0.00715 %		
3	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1.4 mg/kg	2.775	3.885 mg/kg	0.000389 %		
4	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<1 mg/kg	3.22	<3.22 mg/kg	<0.000322 %		<**LOD**
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		1 mg/kg	1.142	1.142 mg/kg	0.000114 %		
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		38 mg/kg	1.462	55.539 mg/kg	0.00555 %		
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<**LOD**
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		17 mg/kg	1.126	19.14 mg/kg	0.00191 %		
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	14 mg/kg		14 mg/kg	0.0014 %		
10	manganese { manganese sulphate }	025-003-00-4	232-089-9	7785-87-7		616 mg/kg	2.749	1693.115 mg/kg	0.169 %		
11	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<**LOD**
12	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		<1 mg/kg	1.5	<1.5 mg/kg	<0.00015 %		<**LOD**
13	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		45 mg/kg	2.637	118.651 mg/kg	0.0119 %		
14	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<**LOD**

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		54	mg/kg	1.785	96.4	mg/kg	0.00964 %		
16		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		68	mg/kg	2.469	167.912	mg/kg	0.0168 %		
17		pH			PH		8.23	pH		8.23	pH	8.23 pH		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
19		confirm TPH has NOT arisen from diesel or petrol					☑							
20		acenaphthylene		205-917-1	208-96-8		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
21		acenaphthene		201-469-6	83-32-9		0.03	mg/kg		0.03	mg/kg	0.000003 %		
22		fluorene		201-695-5	86-73-7		0.03	mg/kg		0.03	mg/kg	0.000003 %		
23		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
24		anthracene		204-371-1	120-12-7		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<**LOD**
25		fluoranthene		205-912-4	206-44-0		<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<**LOD**
26		pyrene		204-927-3	129-00-0		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
27		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
28		chrysene	601-048-00-0	205-923-4	218-01-9		<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<**LOD**
29		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
30		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
31		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
32		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
33		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
34		benzo[ghi]perylene		205-883-8	191-24-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
35		phenol	604-001-00-2	203-632-7	108-95-2		<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<**LOD**
											Total:	0.226 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: F22-TP511

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
F22-TP511
Sample Depth:
0.2 m
Moisture content:
22.6%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 22.6% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		8 mg/kg	1.32	10.563 mg/kg	0.00106 %		
2	barium { barium sulphide }	016-002-00-X	244-214-4	21109-95-5		19 mg/kg	1.233	23.436 mg/kg	0.00234 %		
3	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		<0.5 mg/kg	2.775	<1.388 mg/kg	<0.000139 %		<LOD
4	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<1 mg/kg	3.22	<3.22 mg/kg	<0.000322 %		<LOD
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.6 mg/kg	1.142	0.685 mg/kg	0.0000685 %		
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		9 mg/kg	1.462	13.154 mg/kg	0.00132 %		
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		7 mg/kg	1.126	7.881 mg/kg	0.000788 %		
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	17 mg/kg		17 mg/kg	0.0017 %		
10	manganese { manganese sulphate }	025-003-00-4	232-089-9	7785-87-7		315 mg/kg	2.749	865.798 mg/kg	0.0866 %		
11	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
12	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		<1 mg/kg	1.5	<1.5 mg/kg	<0.00015 %		<LOD
13	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		9 mg/kg	2.637	23.73 mg/kg	0.00237 %		
14	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<LOD

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		17	mg/kg	1.785	30.348	mg/kg	0.00303 %		
16		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		28	mg/kg	2.469	69.14	mg/kg	0.00691 %		
17		pH			PH		7.55	pH		7.55	pH	7.55 pH		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
19		TPH (C6 to C40) petroleum group			TPH		7	mg/kg		7	mg/kg	0.0007 %		
20		confirm TPH has NOT arisen from diesel or petrol					☑							
21		benzene	601-020-00-8	200-753-7	71-43-2		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
22		toluene	601-021-00-3	203-625-9	108-88-3		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
23		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
24		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
25		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
26		acenaphthylene		205-917-1	208-96-8		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
27		acenaphthene		201-469-6	83-32-9		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
28		fluorene		201-695-5	86-73-7		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
29		phenanthrene		201-581-5	85-01-8		0.05	mg/kg		0.05	mg/kg	0.000005 %		
30		anthracene		204-371-1	120-12-7		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<**LOD**
31		fluoranthene		205-912-4	206-44-0		0.12	mg/kg		0.12	mg/kg	0.000012 %		
32		pyrene		204-927-3	129-00-0		0.11	mg/kg		0.11	mg/kg	0.000011 %		
33		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		0.05	mg/kg		0.05	mg/kg	0.000005 %		
34		chrysene	601-048-00-0	205-923-4	218-01-9		<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<**LOD**
35		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.1	mg/kg		0.1	mg/kg	0.00001 %		
36		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
37		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		0.06	mg/kg		0.06	mg/kg	0.000006 %		
38		indeno[123-cd]pyrene		205-893-2	193-39-5		0.06	mg/kg		0.06	mg/kg	0.000006 %		
39		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
40		benzo[ghi]perylene		205-883-8	191-24-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
41		phenol				<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
42		polychlorobiphenyls; PCB				<0.007	mg/kg		<0.007	mg/kg	<0.0000007 %		<**LOD**
		602-039-00-4	215-648-1	1336-36-3									
										Total:	0.108 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because HP 3 Flammable (first indent) can be discounted as this is a solid waste without a free draining liquid phase. The waste does not display these hazardous properties.

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0007%)

Classification of sample: F22-TP513

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
F22-TP513
Sample Depth:
0.2 m
Moisture content:
19.4%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 19.4% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		5 mg/kg	1.32	6.602 mg/kg	0.00066 %		
2	barium { barium sulphide }	016-002-00-X	244-214-4	21109-95-5		10 mg/kg	1.233	12.335 mg/kg	0.00123 %		
3	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		<0.5 mg/kg	2.775	<1.388 mg/kg	<0.000139 %		<LOD
4	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<1 mg/kg	3.22	<3.22 mg/kg	<0.000322 %		<LOD
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		<0.5 mg/kg	1.142	<0.571 mg/kg	<0.0000571 %		<LOD
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		5 mg/kg	1.462	7.308 mg/kg	0.000731 %		
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		6 mg/kg	1.126	6.755 mg/kg	0.000676 %		
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	16 mg/kg		16 mg/kg	0.0016 %		
10	manganese { manganese sulphate }	025-003-00-4	232-089-9	7785-87-7		180 mg/kg	2.749	494.741 mg/kg	0.0495 %		
11	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
12	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		<1 mg/kg	1.5	<1.5 mg/kg	<0.00015 %		<LOD
13	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		5 mg/kg	2.637	13.183 mg/kg	0.00132 %		
14	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<LOD

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		11	mg/kg	1.785	19.637	mg/kg	0.00196 %		
16		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		25	mg/kg	2.469	61.732	mg/kg	0.00617 %		
17		pH			PH		6.66	pH		6.66	pH	6.66 pH		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
19		confirm TPH has NOT arisen from diesel or petrol					☑							
20		acenaphthylene		205-917-1	208-96-8		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
21		acenaphthene		201-469-6	83-32-9		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
22		fluorene		201-695-5	86-73-7		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
23		phenanthrene		201-581-5	85-01-8		0.1	mg/kg		0.1	mg/kg	0.00001 %		
24		anthracene		204-371-1	120-12-7		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<**LOD**
25		fluoranthene		205-912-4	206-44-0		0.21	mg/kg		0.21	mg/kg	0.000021 %		
26		pyrene		204-927-3	129-00-0		0.19	mg/kg		0.19	mg/kg	0.000019 %		
27		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		0.09	mg/kg		0.09	mg/kg	0.000009 %		
28		chrysene	601-048-00-0	205-923-4	218-01-9		0.12	mg/kg		0.12	mg/kg	0.000012 %		
29		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.15	mg/kg		0.15	mg/kg	0.000015 %		
30		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
31		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		0.1	mg/kg		0.1	mg/kg	0.00001 %		
32		indeno[123-cd]pyrene		205-893-2	193-39-5		0.09	mg/kg		0.09	mg/kg	0.000009 %		
33		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
34		benzo[ghi]perylene		205-883-8	191-24-2		0.07	mg/kg		0.07	mg/kg	0.000007 %		
35		phenol	604-001-00-2	203-632-7	108-95-2		<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<**LOD**
											Total:	0.0652 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: F22-TP514

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
F22-TP514
Sample Depth:
0.2 m
Moisture content:
21.4%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 21.4% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		5 mg/kg	1.32	6.602 mg/kg	0.00066 %		
2	barium { barium sulphide }	016-002-00-X	244-214-4	21109-95-5		21 mg/kg	1.233	25.903 mg/kg	0.00259 %		
3	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		<0.5 mg/kg	2.775	<1.388 mg/kg	<0.000139 %		<LOD
4	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<1 mg/kg	3.22	<3.22 mg/kg	<0.000322 %		<LOD
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		<0.5 mg/kg	1.142	<0.571 mg/kg	<0.0000571 %		<LOD
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		10 mg/kg	1.462	14.616 mg/kg	0.00146 %		
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		10 mg/kg	1.126	11.259 mg/kg	0.00113 %		
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	22 mg/kg		22 mg/kg	0.0022 %		
10	manganese { manganese sulphate }	025-003-00-4	232-089-9	7785-87-7		213 mg/kg	2.749	585.444 mg/kg	0.0585 %		
11	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
12	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		<1 mg/kg	1.5	<1.5 mg/kg	<0.00015 %		<LOD
13	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		8 mg/kg	2.637	21.093 mg/kg	0.00211 %		
14	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<LOD

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		17	mg/kg	1.785	30.348	mg/kg	0.00303 %		
16		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		33	mg/kg	2.469	81.487	mg/kg	0.00815 %		
17		pH			PH		7.86	pH		7.86	pH	7.86 pH		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
19		confirm TPH has NOT arisen from diesel or petrol					☑							
20		acenaphthylene		205-917-1	208-96-8		0.01	mg/kg		0.01	mg/kg	0.000001 %		
21		acenaphthene		201-469-6	83-32-9		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
22		fluorene		201-695-5	86-73-7		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
23		phenanthrene		201-581-5	85-01-8		0.11	mg/kg		0.11	mg/kg	0.000011 %		
24		anthracene		204-371-1	120-12-7		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<**LOD**
25		fluoranthene		205-912-4	206-44-0		0.42	mg/kg		0.42	mg/kg	0.000042 %		
26		pyrene		204-927-3	129-00-0		0.38	mg/kg		0.38	mg/kg	0.000038 %		
27		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		0.22	mg/kg		0.22	mg/kg	0.000022 %		
28		chrysene	601-048-00-0	205-923-4	218-01-9		0.29	mg/kg		0.29	mg/kg	0.000029 %		
29		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.37	mg/kg		0.37	mg/kg	0.000037 %		
30		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.11	mg/kg		0.11	mg/kg	0.000011 %		
31		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		0.25	mg/kg		0.25	mg/kg	0.000025 %		
32		indeno[123-cd]pyrene		205-893-2	193-39-5		0.22	mg/kg		0.22	mg/kg	0.000022 %		
33		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
34		benzo[ghi]perylene		205-883-8	191-24-2		0.18	mg/kg		0.18	mg/kg	0.000018 %		
35		phenol	604-001-00-2	203-632-7	108-95-2		<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<**LOD**
36		polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3		<0.007	mg/kg		<0.007	mg/kg	<0.0000007 %		<**LOD**
											Total:	0.0814 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: F22-TP515

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
F22-TP515
Sample Depth:
0.5 m
Moisture content:
31.5%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 31.5% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		6 mg/kg	1.32	7.922 mg/kg	0.000792 %		
2	barium { barium sulphide }	016-002-00-X	244-214-4	21109-95-5		33 mg/kg	1.233	40.705 mg/kg	0.00407 %		
3	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.7 mg/kg	2.775	1.943 mg/kg	0.000194 %		
4	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<1 mg/kg	3.22	<3.22 mg/kg	<0.000322 %		<LOD
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		1 mg/kg	1.142	1.142 mg/kg	0.000114 %		
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		26 mg/kg	1.462	38 mg/kg	0.0038 %		
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		19 mg/kg	1.126	21.392 mg/kg	0.00214 %		
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	11 mg/kg		11 mg/kg	0.0011 %		
10	manganese { manganese sulphate }	025-003-00-4	232-089-9	7785-87-7		456 mg/kg	2.749	1253.345 mg/kg	0.125 %		
11	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
12	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		<1 mg/kg	1.5	<1.5 mg/kg	<0.00015 %		<LOD
13	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		27 mg/kg	2.637	71.19 mg/kg	0.00712 %		
14	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<LOD

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		33	mg/kg	1.785	58.911	mg/kg	0.00589 %		
16		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		48	mg/kg	2.469	118.526	mg/kg	0.0119 %		
17		pH			PH		8.08	pH		8.08	pH	8.08 pH		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
19		confirm TPH has NOT arisen from diesel or petrol					☑							
20		acenaphthylene		205-917-1	208-96-8		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
21		acenaphthene		201-469-6	83-32-9		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
22		fluorene		201-695-5	86-73-7		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
23		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
24		anthracene		204-371-1	120-12-7		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<**LOD**
25		fluoranthene		205-912-4	206-44-0		<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<**LOD**
26		pyrene		204-927-3	129-00-0		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
27		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
28		chrysene	601-048-00-0	205-923-4	218-01-9		<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<**LOD**
29		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
30		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
31		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
32		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
33		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
34		benzo[ghi]perylene		205-883-8	191-24-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
35		phenol	604-001-00-2	203-632-7	108-95-2		<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<**LOD**
											Total:	0.164 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: F22-TP516

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
F22-TP516
Sample Depth:
0.2 m
Moisture content:
30.5%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 30.5% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		6 mg/kg	1.32	7.922 mg/kg	0.000792 %		
2	barium { barium sulphide }	016-002-00-X	244-214-4	21109-95-5		40 mg/kg	1.233	49.34 mg/kg	0.00493 %		
3	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.7 mg/kg	2.775	1.943 mg/kg	0.000194 %		
4	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<1 mg/kg	3.22	<3.22 mg/kg	<0.000322 %		<**LOD**
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.7 mg/kg	1.142	0.8 mg/kg	0.00008 %		
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		26 mg/kg	1.462	38 mg/kg	0.0038 %		
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<**LOD**
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		15 mg/kg	1.126	16.888 mg/kg	0.00169 %		
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	29 mg/kg		29 mg/kg	0.0029 %		
10	manganese { manganese sulphate }	025-003-00-4	232-089-9	7785-87-7		229 mg/kg	2.749	629.421 mg/kg	0.0629 %		
11	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<**LOD**
12	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		<1 mg/kg	1.5	<1.5 mg/kg	<0.00015 %		<**LOD**
13	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		19 mg/kg	2.637	50.097 mg/kg	0.00501 %		
14	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<**LOD**

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		37	mg/kg	1.785	66.052	mg/kg	0.00661 %		
16		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		58	mg/kg	2.469	143.219	mg/kg	0.0143 %		
17		pH			PH		8.1	pH		8.1	pH	8.1 pH		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
19		confirm TPH has NOT arisen from diesel or petrol					☑							
20		acenaphthylene		205-917-1	208-96-8		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
21		acenaphthene		201-469-6	83-32-9		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
22		fluorene		201-695-5	86-73-7		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
23		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
24		anthracene		204-371-1	120-12-7		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<**LOD**
25		fluoranthene		205-912-4	206-44-0		<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<**LOD**
26		pyrene		204-927-3	129-00-0		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
27		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
28		chrysene	601-048-00-0	205-923-4	218-01-9		<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<**LOD**
29		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
30		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
31		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
32		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
33		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
34		benzo[ghi]perylene		205-883-8	191-24-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
35		phenol	604-001-00-2	203-632-7	108-95-2		<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<**LOD**
											Total:	0.104 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: F22-TP518

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
F22-TP518
Sample Depth:
0.2 m
Moisture content:
27.6%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 27.6% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		8 mg/kg	1.32	10.563 mg/kg	0.00106 %		
2	barium { barium sulphide }	016-002-00-X	244-214-4	21109-95-5		54 mg/kg	1.233	66.609 mg/kg	0.00666 %		
3	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.8 mg/kg	2.775	2.22 mg/kg	0.000222 %		
4	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		1.4 mg/kg	3.22	4.508 mg/kg	0.000451 %		
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.7 mg/kg	1.142	0.8 mg/kg	0.00008 %		
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		26 mg/kg	1.462	38 mg/kg	0.0038 %		
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		16 mg/kg	1.126	18.014 mg/kg	0.0018 %		
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	52 mg/kg		52 mg/kg	0.0052 %		
10	manganese { manganese sulphate }	025-003-00-4	232-089-9	7785-87-7		303 mg/kg	2.749	832.815 mg/kg	0.0833 %		
11	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
12	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		<1 mg/kg	1.5	<1.5 mg/kg	<0.00015 %		<LOD
13	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		19 mg/kg	2.637	50.097 mg/kg	0.00501 %		
14	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<LOD

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		40	mg/kg	1.785	71.407	mg/kg	0.00714 %		
16		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		67	mg/kg	2.469	165.443	mg/kg	0.0165 %		
17		pH			PH		8.1	pH		8.1	pH	8.1 pH		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
19		confirm TPH has NOT arisen from diesel or petrol					☑							
20		acenaphthylene		205-917-1	208-96-8		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
21		acenaphthene		201-469-6	83-32-9		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
22		fluorene		201-695-5	86-73-7		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
23		phenanthrene		201-581-5	85-01-8		0.04	mg/kg		0.04	mg/kg	0.000004 %		
24		anthracene		204-371-1	120-12-7		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<**LOD**
25		fluoranthene		205-912-4	206-44-0		0.15	mg/kg		0.15	mg/kg	0.000015 %		
26		pyrene		204-927-3	129-00-0		0.14	mg/kg		0.14	mg/kg	0.000014 %		
27		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		0.07	mg/kg		0.07	mg/kg	0.000007 %		
28		chrysene	601-048-00-0	205-923-4	218-01-9		0.08	mg/kg		0.08	mg/kg	0.000008 %		
29		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.11	mg/kg		0.11	mg/kg	0.000011 %		
30		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
31		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		0.07	mg/kg		0.07	mg/kg	0.000007 %		
32		indeno[123-cd]pyrene		205-893-2	193-39-5		0.04	mg/kg		0.04	mg/kg	0.000004 %		
33		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
34		benzo[ghi]perylene		205-883-8	191-24-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
35		phenol	604-001-00-2	203-632-7	108-95-2		<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<**LOD**
											Total:	0.132 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: F22-TP525

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
F22-TP525
Sample Depth:
0.5 m
Moisture content:
24.5%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 24.5% No Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		5 mg/kg	1.32	6.602 mg/kg	0.00066 %		
2	barium { barium sulphide }	016-002-00-X	244-214-4	21109-95-5		60 mg/kg	1.233	74.01 mg/kg	0.0074 %		
3	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.9 mg/kg	2.775	2.498 mg/kg	0.00025 %		
4	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		1.1 mg/kg	3.22	3.542 mg/kg	0.000354 %		
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.6 mg/kg	1.142	0.685 mg/kg	0.0000685 %		
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		34 mg/kg	1.462	49.693 mg/kg	0.00497 %		
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		**<LOD**
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		12 mg/kg	1.126	13.511 mg/kg	0.00135 %		
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	14 mg/kg		14 mg/kg	0.0014 %		
10	manganese { manganese sulphate }	025-003-00-4	232-089-9	7785-87-7		388 mg/kg	2.749	1066.443 mg/kg	0.107 %		
11	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		**<LOD**
12	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		<1 mg/kg	1.5	<1.5 mg/kg	<0.00015 %		**<LOD**
13	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		20 mg/kg	2.637	52.734 mg/kg	0.00527 %		
14	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		**<LOD**

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		51	mg/kg	1.785	91.044	mg/kg	0.0091 %		
16		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		82	mg/kg	2.469	202.482	mg/kg	0.0202 %		
17		pH			PH		7.97	pH		7.97	pH	7.97 pH		
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
19		confirm TPH has NOT arisen from diesel or petrol					☑							
20		acenaphthylene		205-917-1	208-96-8		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
21		acenaphthene		201-469-6	83-32-9		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
22		fluorene		201-695-5	86-73-7		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
23		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
24		anthracene		204-371-1	120-12-7		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<**LOD**
25		fluoranthene		205-912-4	206-44-0		<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<**LOD**
26		pyrene		204-927-3	129-00-0		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
27		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
28		chrysene	601-048-00-0	205-923-4	218-01-9		<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<**LOD**
29		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
30		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<**LOD**
31		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
32		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
33		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
34		benzo[ghi]perylene		205-883-8	191-24-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
35		phenol	604-001-00-2	203-632-7	108-95-2		<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<**LOD**
											Total:	0.158 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Appendix A: Classifier defined and non GB MCL determinands

barium sulphide (EC Number: 244-214-4, CAS Number: 21109-95-5)

GB MCL index number: 016-002-00-X
Description/Comments:
Additional Hazard Statement(s): EUH031 >= 0.8 %
Reason for additional Hazards Statement(s):
20 Nov 2021 - EUH031 >= 0.8 % hazard statement sourced from: WM3, Table C12.2

chromium(III) oxide (worst case) (EC Number: 215-160-9, CAS Number: 1308-38-9)

Description/Comments: Data from C&L Inventory Database
Data source: https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/33806
Data source date: 17 Jul 2015
Hazard Statements: Acute Tox. 4; H332 , Acute Tox. 4; H302 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Resp. Sens. 1; H334 , Skin Sens. 1; H317 , Repr. 1B; H360FD , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

lead compounds with the exception of those specified elsewhere in this Annex (worst case)

GB MCL index number: 082-001-00-6
Description/Comments: Worst Case: IARC considers lead compounds Group 2A; Probably carcinogenic to humans; Lead REACH Consortium, following MCL protocols, considers lead compounds from smelting industries, flue dust and similar to be Carcinogenic category 1A
Additional Hazard Statement(s): Carc. 1A; H350
Reason for additional Hazards Statement(s):
20 Nov 2021 - Carc. 1A; H350 hazard statement sourced from: IARC Group 2A (Sup 7, 87) 2006; Lead REACH Consortium www.reach-lead.eu/substanceinformation.html (worst case lead compounds). Review date 29/09/2015

pH (CAS Number: PH)

Description/Comments: Appendix C4
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: None.

salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex

GB MCL index number: 006-007-00-5
Description/Comments: Conversion factor based on a worst case compound: sodium cyanide
Additional Hazard Statement(s): EUH032 >= 0.2 %
Reason for additional Hazards Statement(s):
20 Nov 2021 - EUH032 >= 0.2 % hazard statement sourced from: WM3, Table C12.2

confirm TPH has NOT arisen from diesel or petrol

Description/Comments: Chapter 3, section 4b requires a positive confirmation for benzo[a]pyrene to be used as a marker in evaluating Carc. 1B; H350 (HP 7) and Muta. 1B; H340 (HP 11)
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: None.

ethylbenzene (EC Number: 202-849-4, CAS Number: 100-41-4)

GB MCL index number: 601-023-00-4
Description/Comments:
Additional Hazard Statement(s): Carc. 2; H351
Reason for additional Hazards Statement(s):
20 Nov 2021 - Carc. 2; H351 hazard statement sourced from: IARC Group 2B (77) 2000

acenaphthylene (EC Number: 205-917-1, CAS Number: 208-96-8)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 17 Jul 2015
Hazard Statements: Acute Tox. 4; H302 , Acute Tox. 1; H330 , Acute Tox. 1; H310 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315

acenaphthene (EC Number: 201-469-6, CAS Number: 83-32-9)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 17 Jul 2015
Hazard Statements: Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , Aquatic Chronic 2; H411

- **fluorene** (EC Number: 201-695-5, CAS Number: 86-73-7)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 06 Aug 2015
Hazard Statements: Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **phenanthrene** (EC Number: 201-581-5, CAS Number: 85-01-8)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 06 Aug 2015
Hazard Statements: Acute Tox. 4; H302 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Carc. 2; H351 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , Skin Irrit. 2; H315

- **anthracene** (EC Number: 204-371-1, CAS Number: 120-12-7)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 17 Jul 2015
Hazard Statements: Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **fluoranthene** (EC Number: 205-912-4, CAS Number: 206-44-0)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 21 Aug 2015
Hazard Statements: Acute Tox. 4; H302 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **pyrene** (EC Number: 204-927-3, CAS Number: 129-00-0)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 2014
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 21 Aug 2015
Hazard Statements: Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **indeno[123-cd]pyrene** (EC Number: 205-893-2, CAS Number: 193-39-5)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 06 Aug 2015
Hazard Statements: Carc. 2; H351

- **benzo[ghi]perylene** (EC Number: 205-883-8, CAS Number: 191-24-2)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 23 Jul 2015
Hazard Statements: Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **polychlorobiphenyls; PCB** (EC Number: 215-648-1, CAS Number: 1336-36-3)

GB MCL index number: 602-039-00-4
Description/Comments: Worst Case: IARC considers PCB Group 1; Carcinogenic to humans;

POP specific threshold from ATP1 (Regulation 756/2010/EU) to POPs Regulation (Regulation 850/2004/EC). Where applicable, the calculation method laid down in European standards EN 12766-1 and EN 12766-2 shall be applied.
Additional Hazard Statement(s): Carc. 1A; H350
Reason for additional Hazards Statement(s):
20 Nov 2021 - Carc. 1A; H350 hazard statement sourced from: IARC Group 1 (23, Sup 7, 100C) 2012

- **TPH (C6 to C40) petroleum group** (CAS Number: TPH)

Description/Comments: Hazard statements taken from WM3 1st Edition 2015; Risk phrases: WM2 3rd Edition 2013
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: Flam. Liq. 3; H226 , Asp. Tox. 1; H304 , STOT RE 2; H373 , Muta. 1B; H340 , Carc. 1B; H350 , Repr. 2; H361d , Aquatic Chronic 2; H411

Appendix B: Rationale for selection of metal species

arsenic {arsenic trioxide}

Reasonable case CLP species based on hazard statements/molecular weight and most common (stable) oxide of arsenic. Industrial sources include: smelting; main precursor to other arsenic compounds

barium {barium sulphide}

No significant quantities of Cr(VI) to form worst case species (barium chromate) therefore second worst case species chosen instead.

beryllium {beryllium oxide}

Reasonable case CLP species based on hazard statements/molecular weight. Industrial sources include: most common (non alloy) form, used in ceramics

boron {diboron trioxide}

Reasonable case CLP species based on hazard statements/ molecular weight, physical form and low solubility. Industrial sources include: fluxing agent for glass/enamels; additive for fibre optics, borosilicate glass

cadmium {cadmium oxide}

Reasonable case CLP species based on hazard statements/molecular weight, very low solubility in water. Industrial sources include: electroplating baths, electrodes for storage batteries, catalysts, ceramic glazes, phosphors, pigments and nematocides. Worst case compounds in CLP: cadmium sulphate, chloride, fluoride & iodide not expected as either very soluble and/or compound's industrial usage not related to site history

chromium in chromium(III) compounds {chromium(III) oxide (worst case)}

Reasonable case species based on hazard statements/molecular weight. Industrial sources include: tanning, pigment in paint, inks and glass

chromium in chromium(VI) compounds {chromium(VI) oxide}

Worst case CLP species based on hazard statements/molecular weight. Industrial sources include: production stainless steel, electroplating, wood preservation, anti-corrosion agents or coatings, pigments

copper {dicopper oxide; copper (I) oxide}

Reasonable case CLP species based on hazard statements/molecular weight and insolubility in water. Industrial sources include: oxidised copper metal, brake pads, pigments, antifouling paints, fungicide. Worse case copper sulphate is very soluble and likely to have been leached away if ever present and/or not enough soluble sulphate detected

lead {lead compounds with the exception of those specified elsewhere in this Annex (worst case)}

No significant quantities of Cr(VI) to form worst case species (lead chromate) therefore second worst case species chosen instead.

manganese {manganese sulphate}

Worst case CLP species based on hazard statements/molecular weight

mercury {mercury dichloride}

Worst case CLP species based on hazard statements/molecular weight

molybdenum {molybdenum(VI) oxide}

Worst case CLP species based on hazard statements/molecular weight

nickel {nickel sulfate}

No significant quantities of Cr(VI) to form worst case species (nickel chromate) therefore second worst case species chosen instead.

selenium {selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex}

Harmonised group entry used as most reasonable case. Pigment cadmium sulphoselenide not likely to be present in this soil. No evidence for the other CLP entries: sodium selenite, nickel II selenite and nickel selenide, to be present in this soil

vanadium {divanadium pentaoxide; vanadium pentoxide}

Worst case CLP species based on hazard statements/molecular weight

zinc {zinc sulphate}

No significant quantities of Cr(VI) to form worst case species (zinc chromate) therefore second worst case species chosen instead.

cyanides {salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex}

Harmonised group entry used as most reasonable case as complex cyanides and those specified elsewhere in the annex are not likely to be present in this soil: [Note conversion factor based on a worst case compound: sodium cyanide]

Appendix C: Version

HazWasteOnline Classification Engine: WM3 1st Edition v1.2.GB - Oct 2021
HazWasteOnline Classification Engine Version: 2024.122.6042.11191 (01 May 2024)
HazWasteOnline Database: 2024.122.6042.11191 (01 May 2024)

This classification utilises the following guidance and legislation:
WM3 v1.2.GB - Waste Classification - 1st Edition v1.2.GB - Oct 2021
CLP Regulation - Regulation 1272/2008/EC of 16 December 2008
1st ATP - Regulation 790/2009/EC of 10 August 2009
2nd ATP - Regulation 286/2011/EC of 10 March 2011
3rd ATP - Regulation 618/2012/EU of 10 July 2012
4th ATP - Regulation 487/2013/EU of 8 May 2013
Correction to 1st ATP - Regulation 758/2013/EU of 7 August 2013
5th ATP - Regulation 944/2013/EU of 2 October 2013
6th ATP - Regulation 605/2014/EU of 5 June 2014
WFD Annex III replacement - Regulation 1357/2014/EU of 18 December 2014
Revised List of Waste 2014 - Decision 2014/955/EU of 18 December 2014
7th ATP - Regulation 2015/1221/EU of 24 July 2015
8th ATP - Regulation (EU) 2016/918 of 19 May 2016
9th ATP - Regulation (EU) 2016/1179 of 19 July 2016
10th ATP - Regulation (EU) 2017/776 of 4 May 2017
HP14 amendment - Regulation (EU) 2017/997 of 8 June 2017
13th ATP - Regulation (EU) 2018/1480 of 4 October 2018
14th ATP - Regulation (EU) 2020/217 of 4 October 2019
15th ATP - Regulation (EU) 2020/1182 of 19 May 2020
The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use)(Amendment etc.) (EU Exit) Regulations 2020 - UK: 2020 No. 1567 of 16th December 2020
The Waste and Environmental Permitting etc. (Legislative Functions and Amendment etc.) (EU Exit) Regulations 2020 - UK: 2020 No. 1540 of 16th December 2020
GB MCL List - version 1.1 of 09 June 2021
GB MCL List v2.0 - version 2.0 of 20th October 2023
GB MCL List v3.0 - version 3.0 of 11th January 2024
GB MCL List v4.0 - version 4.0 of 2nd March 2024



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National Grid plc
National Grid House,
Warwick Technology Park,
Gallows Hill, Warwick.
CV34 6DA United Kingdom

Registered in England and Wales
No. 4031152
nationalgrid.com