The Great Grid Upgrade

Sea Link

Sea Link

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MOTT MACDONALD

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Generic □uantitati□e Ris□ □ssessment □ Rich□orough

March □□□□

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Executive summary

Aspect	Details
Site □ame	Sea Lin□□Rich□orough
Site Location	The site is located southeast of Minster □illage and south□est of Cliffsend in □ent□□ithin an area called the Minster Marshes□The ma□ority of the site comprises of agricultural land □ut is cut □y the □□□□Rich□orough □ ay and a rail□ay line□
Proposed De□elopment	The proposed de□elopment includes□ ● □ ne□ Con□erter Station and su□station near Minster□ ● A transition joint bay c. 800m inshore west of St Augustine's Golf Course and Stonelees Golf Centre□to transition from offshore to onshore HD□C□□efore the H□DC continues c□□□m to the proposed con□erter station□ ● □ series of permanent access routes for construction of the scheme□ ● Remo□al of up to c□□□m of e□isting H□□C o□erhead lines □OHL□□and installation of c□□□□□□m ne□ H□□C o□erhead lines from the Con□erter Station / Su□station near Minster to the e□isting Rich□orough and Canter□ury o□erhead line□ ● Other ancillary □or□s including pylon modification□high□ays impro□ements□and a permanent □ellmouth □unction off the □□□□□ ● □ series of temporary construction compounds located along the length of the scheme in support of construction□ ● Drainage infrastructure including permanent attenuation ponds associated □ith the proposed □or□s□
Report O□□ecti□es	● Summarise a□aila□le geo□en□ironmental information from the pro□ect specific ground in□estigation at Rich□orough□□ent for the H□DC route□Con□erter Station and su□station and o□erhead line□ ● Re□ise the e□isting Conceptual Site Model □CSM□included in the Sea Lin□ Rich□orough□Preliminary Ris□ □ssessment □□□using this ground in□estigation information□ ● Determine the follo□ing de□elopment steps for the Scheme □ith respect to the geo□ en□ironmental setting of the proposed de□elopment□
Ground In□estigation □GI□Summary	□ site□specific ground in□estigation □as underta□en in □□□□ □y Structural Soils Ltd and comprised of□ ● □□Ca□le percussi□e □oreholes ● □Ca□le percussion □oreholes □ith rotary cored follo□ □on□ ● □□Cone Penetration Tests □CPTs□to a ma□imum depth of □□□□□m□ ● Hand dug inspection pits for all of the a□o□e□to □□□m depth□ ● □□Machine dug trial pits underta□en to ma□imum depths of appro□imately □m □gl□ ● Geo□en□ironmental sampling and la□oratory testing on soils and ground□ater□ ● Ground□ater and ground gas monitoring□
Ground and Ground□ater Conditions	The ground encountered □eneath the proposed site generally comprises the follo□ing strata □recorded pro□en thic□ness in □rac□ets□se□uence listed from generally shallo□er to deeper strata□ ● Made Ground □□□□□m – □□□□m□or topsoil □□□□□m □□□□□m□ ● Tidal Flat Deposits □□□□□m □□□□□m□ ● Thanet Formation □□□□□□m – □□□□□m□ ● Margate Chal□Mem□er – □e□ha□en Chal□Formation □□□□□□m□ ● Seaford Chal□Formation □□□□□□m□ Most ground□ater stri□es □ere □ithin the Tidal Flat Deposits□at a le□el close to Ordnance Datum□
Geo□en□ironmental Conclusions	● The ris□ to human health has □een assessed as negligi□le to lo□ ris□□ ● The ris□ from ground gas has □een assessed as lo□ □CS□□for the de□elopment□

Aspect	Details
	● The ris□ to the □uilt en□ironment has □een assessed as moderate ris□□this is to □e mitigated through design□ ● There are no e□ceedances of G□Cs for commercial land use for the proposed site□ □s□estos □as not identified in any of the samples tested during the ground in□estigation□ ● The ris□ to the □ater en□ironment is assessed as moderate ris□□
Geo□en□ironmental Recommendations	● The assessed ris□ to sensiti□e receptors has □een assessed as not significant and no further ground in□estigation or remediation is proposed for the site□ ● □s no intrusi□e ground in□estigation has □een carried out in the area south of the Ri□er Stour□there is potential for further GI to □e underta□en to inform the OHL detailed design□□s this area □as not in□estigated during this phase of ground in□estigation□this in□estigation should include geo□en□ironmental testing□This □ould □e reported separately from the current phase of □or□s□□ ● Construction and maintenance □or□ers should use site specific ris□ assessments and method statements and□□here necessary□the use of personal protecti□e e□uipment □PP□□□ ● Construction dra□ings indicate the relocation e□ca□ated soil to stoc□piles during construction□The re□use of this material may re□uire additional ris□ assessment depending on the □uantity of material to □e reused□□hich may include detailed modelling□further sampling and □alidation testing to ensure suita□ility for re□use of material that □ill ensure ha□ardous su□stances are not introduced to the ground□ater at unaccepta□le concentrations□If the □uantity of soil e□ceeds the e□emption limit□re use of material should □e done under a materials management plan or re□use of □aste en□ironment permit□□hich should □e in place prior to the commencement of e□ca□ated material mo□ement□ ● De□atering during construction □or□s is anticipated due to the shallo□ depths ground□ater is encountered across the site□remo□ed ground□ater is unli□ely to □e suita□le for direct discharge □ac□ to ground or surface □ater due to presence of e□ceedances□□ ater may need to □e treated □efore discharge or ta□en offsite for disposal□discussions should □e held □ith the □n□ironment □gency□ ● Preliminary □ aste classification using Ha□□ asteOnline™ indicates that the site soils □ould □e non□ha□ardous□It is recommended that a □aste contractor is contacted to discuss appropriate options for disposal if construction □or□s re□uire remo□al of soils from site□ ● In the e□ent that une□pected contamination □e found □hen carrying out the proposed de□elopment□□or□s □ill cease and the local planning authority □ill □e ad□ised□The e□tent of any contamination □ill □e in□estigated and a plan to deal □ith this de□eloped□This □ill □e communicated to the local planning authority prior to □or□s commencing□ ● The □□O ris□ across the site has □een assessed as medium to high ris□ □y Safelane Glo□al□they recommended prior to any shallo□ or deep e□ca□ations□ – □□O Safety and a□areness □riefing – Site Specific Safety Instructions Training Course – □on□intrusi□e □□I□magnetometer sur□ey □greenfield areas only□□for shallo□ intrusi□e □or□s□ – Targeted in□estigation □re□uired as a follo□ □on from □I magnetometer sur□ey for shallo□ intrusi□e □or□s□ – Intrusi□e Magnetometer Sur□ey of pile/□orehole positions □for deep intrusi□e acti□ities□ ● Further archaeological in□estigation may □e necessary during construction □or□s su□□ect to consultation □ith the Local □uthority or heritage specialty

1 Introduction

1.1 Description of the project

Mott MacDonald Limited ha□e □een commissioned □y □ational Grid to act as F□□D consultants on the Sea Lin□ pro□ect□This includes supporting the □ational Grid □ith the deli□ery through to the De□elopment Consents Order □DCO□ su□mission□decision□and input to the □ or□s Information for the Main □ or□s Tender to the construction phase of the pro□ect□The pro□ect in□ol□es a □G□ high □oltage direct current □H□DC□lin□ □et□een Rich□orough□in □ent□and Friston□in Suffol□□□hich forms part of the solution to resol□e the operational □oundary issues in the South Coast□□ast Coast and London □reas□

This report represents the Generic □uantitati□e Ris□ □ssessment □G□R□□for the Sea Lin□ connection in Rich□orough□□ent□The scope of the report is defined in Section □□□□□ separate G□R□ □ref□S□□L□MMD□S□□L□□□G□R□P□□□□□□□has □een produced for□Friston□Suffol□□

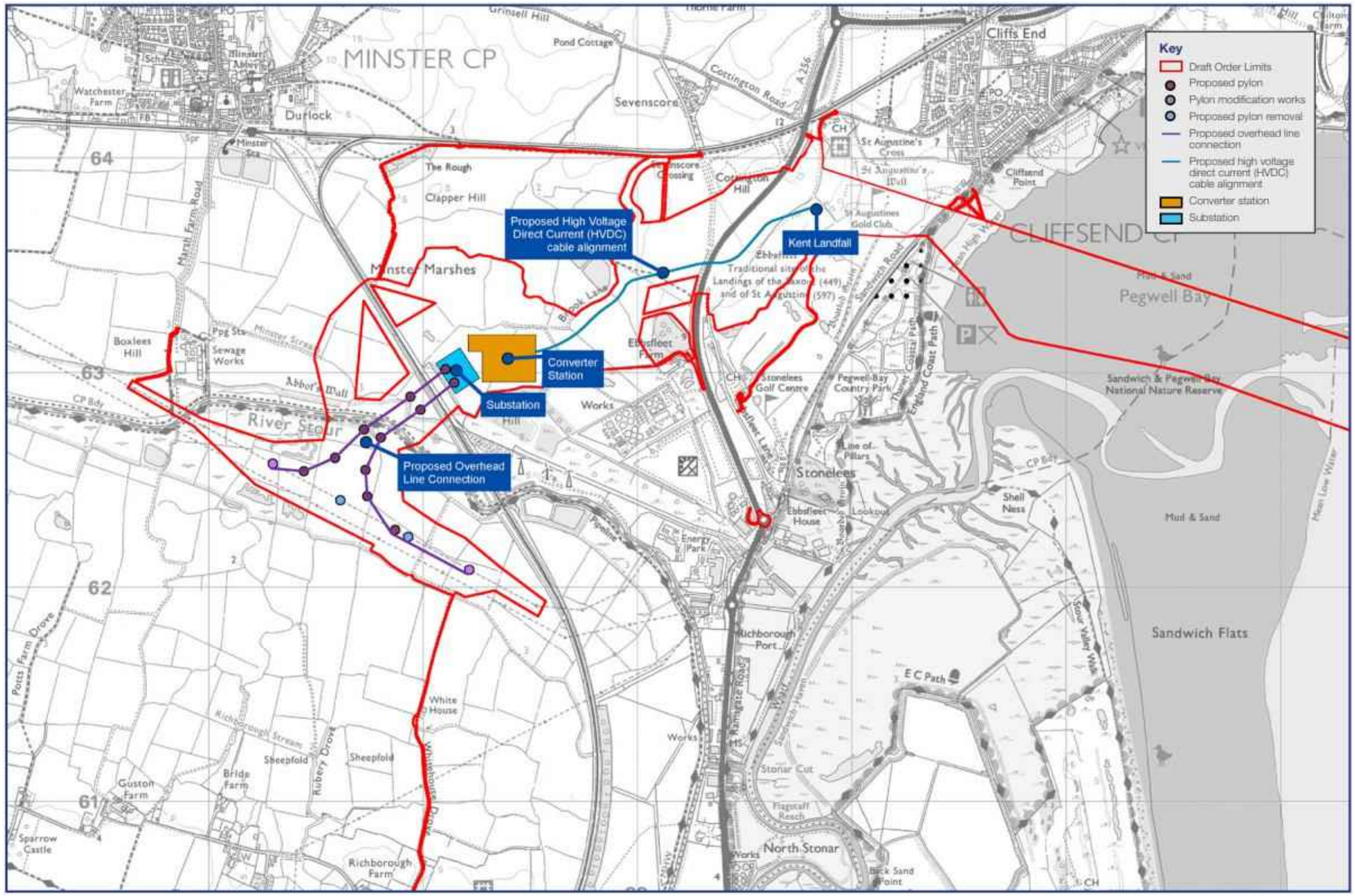
1.2 Development proposals

□ site location plan is presented in Figure □□□ sho□ing the e□tent of the □or□s□The de□elopment proposal at Rich□orough comprises the follo□ing□

- □ Con□erter Station □□G□ □H□DC□up to □□m tall plus e□ternal e□uipment such as lighting protection etc□□□is promised near Minster□
- □ ne□ su□station□located directly ad□acent to the proposed Con□erter Station
- A transition joint bay c. 800m inshore west of St Augustine's Golf Course and Stonelees Golf Centre□to transition from offshore to onshore HD□C□□efore the H□DC continues c□□□m to the proposed con□erter station□
- □ series of permanent access routes for construction of the scheme including the Con□erter Station□as □ell as access routes for construction along the length of the ca□le route□
- Remo□al of up to c□□□m of e□isting H□□C o□erhead lines □OHL□□and installation of c□ □□□□□m ne□ H□□C o□erhead lines from the Con□erter Station / Su□station near Minster to the e□isting Rich□orough and Canter□ury o□erhead line□
- Other ancillary □or□s including pylon modification□high□ays impro□ements□and a permanent □ellmouth □unction off the □□□□□
- □ series of construction compounds located along the length of the scheme in support of construction□It should □e noted that the site □oundary of the Draft Order is □ider in some areas to allo□ for fle□i□ility of the e□act compound locations□
- Drainage infrastructure including permanent attenuation ponds associated □ith the proposed □or□s□

In addition□only on□shore elements of the □or□are co□ered in this report□□ith off□shore elements assessed □y others□

Figure 1.1: Site Location Plan



Source□ Sea Lin□ – Pro□ect Proposal – □ational Grid □□□□□

1.3 Scope and objectives of the report

The report summarises the geo□en□ironmental information e□aluated in a ground in□estigation □et□een □□th of Septem□er □□□□ and □st Decem□er □□□□□conducted □y Structural Soils Limited□ The areas for assessment in□ol□e the H□DC ca□le route□the Con□erter/Su□□Station and the □ational Grid O□erhead Line □OHL□connection□There has □een no ground in□estigation south of the Ri□er Stour□and this report does not assess geo□en□ironmental conditions from □oreholes to the east of the transition □oint bay in the north of St Augustine's golf course – this is assessed separately in the a report □ritten □y Red Penguin Consultants anticipated to □e finalised in □□□□□

This report does not discuss geotechnical ris□s as these are summarised in the Sea Lin□ Rich□orough□Ground In□estigation Report □ref□S□□L□MMD□S□□L□□□G□R□P□□□□□ □□□□□

This report does not assess the geo□en□ironmental conditions at the su□station□nor the boreholes designated as "Red Penguin" at the coastal boundary (refer to Section 2.1). Offshore geo□en□ironmental conditions are not discussed in this report□

The report has the follo□ing o□□ecti□es□

- Summarise a□aila□le geo□en□ironmental information from the ground in□estigation at Rich□orough□□ent for the H□DC route□Con□erter Station and su□station and o□erhead line□
- Re□ise the e□isting Conceptual Site Model □CSM□included in the Sea Lin□Rich□orough□ Preliminary Ris□ □ssessment □□□using this ground in□estigation information□
- Produce a □uantitati□e Ris□ □ssessment□detailing if pollutant lin□ages are present and assess the ris□to receptors
- Produce preliminary recommendations for de□elopment □ith respect to the geo□ en□ironmental setting of the proposed de□elopment□

1.4 Report limitations

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To the e□tent that this document is informed □y information o□tained in pre□ious or recent ground in□estigations□persons using or relying on it should recognise that any such in□estigation can e□amine only a fraction of the su□surface conditions□In any ground investigation there remains a risk that pockets or "hotspots" of contamination or other ground ha□ards may not □e identified□□ecause in□estigations are necessarily □ased on sampling at localised points□Certain indicators or e□idence of ha□ardous su□stances or conditions may ha□e □een outside the portion of the su□surface in□estigated or monitored□and thus may not ha□e □een identified or their full significance appreciated□

Mott MacDonald Limited is not insured for□and therefore □ill not underta□e sur□eys to identify as□estos or pro□ide any guidance on the treatment of as□estos□or similarly for to□ic mould□ Should the presence of as□estos or to□ic mould □e suspected during the course of the study□ Mott MacDonald Limited □ould recommend the appointment of a specialist contractor to address the issue and □ould not pro□ide ad□ice on ris□or remedial measures□

1.5 Sources of information

The follo□ing principal sources of information ha□e □een used in the production of this G□R□□□ complete list of sources used is pro□ided at the end of the document□

- Sea Lin□ Feed□Geotechnical and Geo□en□ironmental Preliminary Ris□ □ssessment □Des□ Study□Report □Rich□orough □Document ref□S□□L□MMD□□□G□R□G□□□□□□□□ritten □y Mott MacDonald □□□
- Factual Report on Ground In□estigation in Rich□orough□□ent□□□ritten □y Structural Soils Limited□ □□□
- Groundsure Insight Report □□□

2 Site Setting

2.1 Site Information

□ summary of the pertinent information rele□ant to the Sea Lin□ Rich□orough□□ent pro□ect area □ased on the Geotechnical and Geo□en□ironmental Preliminary Ris□ □ssessment □Des□ Study□ Report □□□is presented in Ta□le □□□□Ta□le □□□ and Ta□le □□□□

The follo□ing ta□les each co□er a different area of the de□elopment□Ta□le □□□ co□ers the con□erter Station and Su□station area□Ta□le □□□ co□ers the Ca□le Route Corridor and Ta□le □□□ co□ers the connection □et□een the su□station/Con□erter Station and e□isting OHL□

Table 2.1: Site Setting – Converter Station and Substation Area

Aspect	Detail
Site name	Rich□orough – Con□ertor Station □CS□and su□station area
Site location	The site area is located appro□imately □□□□m south□east of Minster □illage and □□□□m south□□est of Cliffsend in □ent □ithin an area called Minster Marshes□The □□□□ road□Rich□orough □ ay□is located appro□imately □□□m east of the site□ Refer to Figure □□□ for the site location plan sho□ing the CS and su□station site area□
Local authority	□ent
Co□ordinates □□ritish □ational Grid□	□□□□□□□ □□□□□□□ □appro□imate centre□
Site area	□□ hectares □appro□imately□
□ccess and Security	The site is accessed □y an unclassified road□□roo□ Lane□from the north□east corner of the site□□roo□ Lane is accessed from □□□sfleet Lane □orth□It is not yet □no□n □here construction access □ill □e gained□The fields are all □ounded □y large drainage ditches□some □ith hedges□
Land □se and Ground Co□er	The site area is located □ithin an area called Minster Marshes□comprising multiple agricultural fields all of □hich are □ound □y drainage ditches□The largest of these is the Minster Stream □hich transects the site in numerous directions □oining the Ri□er Stour □hich is located appro□imately □□□m □est of the site area□the ri□er flo□s to the east and issues into Sand□ich □ay appro□□□□m to the east□T□o reser□oirs are located appro□imately □□□m to the north/north□east of the site□The South □astern Rail□ay line runs roughly north to south appro□imately □□m □est of the site □ith a □ooded strip in □et□een □ounding the □estern perimeter and a further □ooded area to the south of the site□
Topography	The topography across the site is flat and lo□ lying at appro□imately □ to □m □OD□
□tilities and Ser□ices	□□aila□le utility plans indicate that □uried or o□erhead utilities are not present □ithin the site area or the immediate □icinity□
Surrounding □rea	The immediate area surrounding the site predominantly comprises agricultural land□ □ecoming more industrialised to the south □ith the e□isting □ eatherlees Hill □ ater treatment □or□s □□ T□ □located appro□imately □□□m south□a solar farm□ Rich□orough □nergy Par□ □former po□er station□and Rich□orough Su□station located □et□een the □ T□ and the □□□□ Rich□orough □ ay□The □□□□ road runs roughly north to south□located appro□imately □□□m east of the site at its closest point□Stonelees Golf Centre is located □et□een the □□□□ road□Peg□ell □ay Country Par□ and Stonelees □ature Reser□e along the coast to the east□□ rail□ay line runs appro□imately □□m □est of the site□Rich□orough Port is located around □□□□m south of the site□another rail□ay line runs east□□est appro□imately □□□m north of the site□
Historical Land □se	The detailed historical land use is rele□ant to the historical de□elopment of the proposed con□erter station and su□station and the surrounding area □□ithin □□□m□ and is summarised from section □□□□□□the preliminary ris□ assessment □PR□□ □□□□ **On-site**

Aspect	Detail
	● □□□□□The site comprises of agricultural land□□ith foot □ridges and sheep pens recorded on the map□and streams and drains indicated to flo□ in an easterly direction ● □□□□□□□□□□□o significant changes identified onsite during this period ● □□□□□the southern tip of an artificial □ater □ody □reser□oir□is present in the northern section of the site ● □□□□□Present□no significant changes □ere identified□ **Off-site□** ● □□□□□the surrounding area comprised of agricultural land□the South □astern Rail□ay Line present to the □est and north of the site□The line to the south□ □est is on an em□an□ment□□rchaeological sites recorded to the north□□est at Clapper Hill □□□□□□□□□□□□□□□□and □□□sfleet to the east □□□□□□□□□□□□□□□□ ● □□□□□□□□□□a sea □all is present to the south and a pumping station□ ● □□□□□□dditional sidings / line □ranching from the rail□ay line□running south of the site □Mineral Rail□ay□□□□□□□□□□□□□□□□ ● □□□□□Mineral Rail□ay recorded as disused□ ● □□□□□□□□□□additional sidings recorded on the disused Mineral Rail□ay to the south □hich appears to lin□ up to Rich□orough Po□er Station □□□□m south□ east□□there is a to□er associated □ith rail□ay land and an □lectricity su□station and tan□□ ● □□□□/□□□□□T□o lagoons and pipeline recorded to the south□on the other side of the Ri□er Stour ● □□□□/□□□□□□ ind tur□ine at former rail□ay sidings□ ● □□□□□□ eatherless Hill □ aste□ater Treatment □ or□s □appro□imately □□□m to the south□and Pumping House□ ● □□□□□Present□□o significant changes
□□O Ris□ □ssessment	□ Detailed □ne□ploded Ordnance Ris□assessment □as carried out □y Safelane Glo□al □□□for the proposed su□station and con□erter station□The detailed ris□ assessment assessed the ris□from □□O as Medium Ris□for shallo□ and deep intrusi□e □or□s□Recommended ris□mitigation included□ ● □□O Safety and a□areness □riefing ● Site Specific Safety Instructions Training Course ● □on□intrusi□e □□I□magnetometer sur□ey □greenfield areas only□□for shallo□ intrusi□e □or□s□ ● Targeted in□estigation □re□uired as a follo□ □on from □I magnetometer sur□ey for shallo□ intrusi□e □or□s□ ● Intrusi□e Magnetometer Sur□ey of pile/□orehole positions □for deep intrusi□e acti□ities□□

Table 2.2: Site Setting – Cable Route Corridor

Aspect	Detail
Site name	Rich□orough – Ca□le Route Corridor
Site location	The H□DC ca□le route e□tents from the □est of the St Augustine's Golf Club to the su□station/ Con□ertor Station site□this is located to the south of the □shgate to Ramsgate rail□ay line and directly to the □est of the □illage of Cliffsend□
Local authority	□ent
Co□ordinates □□ritish □ational Grid□	□□□□□□□□ □□□□□□□□ start of onshore H□DC ca□le route □□□□□□□□ □□□□□□□□ appro□imate end of H□DC ca□le route at the su□station/ con□ertor station site
Length and □idth of corridor	The ca□le route corridor comprises a standard □□m □ide construction s□athe □ith localised □idening at locations of proposed construction compounds□The length of the H□DC ca□le □ill □e appro□imately □□□ □m□
Land □se and Ground Co□er	The initial length of the H□DC ca□le route options is ad□acent to St Augustine's Golf Clu□ □efore crossing agricultural land to the □□□□Rich□orough □ ay□The remainder of the H□DC ca□le route □et□een the □□□□ and the su□station/ Con□ertor Station site crosses agricultural land□

Aspect	Detail
Topography	The topography across the site rises from appro□imately □m to □m □OD along the coastline and to the □estern e□tent of the alignment to a high of appro□imately □□m □OD around the □□□□ Rich□orough □ ay□
□tilities and Ser□ices	Se□eral utilities pass across the ca□le route alignments including □ut not limited to□ • H□DC ca□le route up to □□□□□ – □□ Po□er □et□or□s – Southern □ ater □clean and □aste□ • H□□C ca□le route □□□□ to su□station/ con□ertor station site□ – □□ Po□er □et□or□s
Historical Land □se	The detailed historical land use is rele□ant to the historical de□elopment of the proposed con□erter station and su□station and the surrounding area □□ithin □□□m□ and is summarised from section □□□□□□the PR□ □□□□ On□site□ • □□□□□□□□□□The site comprises agricultural land□Land drains present□ Cottington Lane runs through the site□orientated south□□est to north□east□ • □□□□□Present□□o significant changes Off□site□ • □□□□□□□□□□The surrounding land comprises agricultural land□□ith sheep pens and foot □ridges□The coast is present to the east□Significant infrastructure includes a rifle range□□rchaeological site□Rail□ay line and associated em□an□ments and □□□sfleet Farm • □□□□□□□□□□St Augustine's Golf Links (golf course) and Club house present • □□□□□□□□□□□o significant changes • □□□□□□□□□□Residential de□elopment in Cliffsend to the north□east • □□□□□Reser□oirs present • □□□□□Motor racing circuit
□□O Ris□ □ssessment	□ Detailed □ne□ploded Ordnance Ris□assessment □as carried out □y Safelane Glo□al □□□for H□DC ca□le route□The detailed ris□assessment assessed the ris□ from □□O as Medium ris□□for shallo□ and deep intrusi□e □or□s□Recommended ris□ mitigation included□ • □□O Safety and a□areness □riefing • Site Specific Safety Instructions Training Course • □on□intrusi□e □□I□magnetometer sur□ey □greenfield areas only□□for shallo□ intrusi□e □or□s□ • Target in□estigation re□uired as a follo□ □on from □I magnetometer sur□ey for shallo□ intrusi□e □or□s□ • Intrusi□e Magnetometer Sur□ey of pile/□orehole positions □for deep intrusi□e acti□ities□□

Table 2.3: Site Setting – Connection Between the Substation/Converter Station and Existing OHL

Aspect	Detail
Site name	Rich□orough – Connection □et□een su□station / Con□erter Station and e□isting OHL
Site location	The □estern half of the connection area e□tends south of the □shford to Ramsgate rail□ay line and to the north of the Ri□er Stour□The eastern half of the site is located to the south of the □shford to Ramsgate rail□ay line□spans across a □ranch line heading south and is □ounded □y the e□isting OHL to the south of the Ri□er Stour□
Local authority	□ent
Co□ordinates □□ritish □ational Grid□	□□□□□□□ □□□□□□□ appro□imate □estern e□tent of the site area □□□□□□□ □□□□□□□ appro□imate eastern e□tent of the site area
Site area	□ppro□imately □□□□ hectares□
Land □se and Ground Co□er	The site area to the north of the River Stour is indicated to be called 'Minster Marshes' on Ordnance Sur□ey □OS□mapping generally comprises ara□le agricultural land□The area to the immediate south and south□□est of the Ri□er Stour appears not

Aspect	Detail
	□e acti□ely culti□ated e□cept for the eastern e□tent□ □ net□or□ of drains/ streams □ounds the fields□named Minster Stream □Drain□and □ estern Mon□ton Stream □Drain□□□hich drain south□ards to the Ri□er Stour□ Similarly□the area to the south of the River Stour is named 'Ash Level' and contains a dense net□or□of drainage ditches□
Topography	The topography is flat and lo□□lying an ele□ation of appro□imately □to □m □OD□
□tilities and Ser□ices	□tilities that ha□e □een identified in the site area □ut are not limited to□ ● Southern □ ater □clean□crosses the south□east corner of the site□ ● □ational Grid and □□ Po□er □et□or□s o□erhead electricity lines run parallel to the southern □oundary of the site□
Surrounding □rea	Much of the area surrounding the site is agricultural farmland□The □illage of Minster lies immediately north of the □shford to Ramsgate rail□ay line□T□o reser□oirs are located appro□imately □□m north of the site area ad□acent to Marsh Farm Road□ south of Minster and the rail□ay line□ Rich□orough □nergy Par□ □former po□er station□is appro□imately □□□m east□ □ strip of □oodland is located along the rail□ay line ad□acent to the su□station/con□ertor station site□Marsh Farm and a Se□age Treatment □ or□s □ST□ □is located immediately north of the Ri□er Stour roughly central □ithin the site area□
Historical Land □se	The detailed historical land use is rele□ant to the historical de□elopment of the proposed con□erter station and su□station and the surrounding area □□ithin □□□m□ and is summarised from section □□□□□□the PR□ □□□□ **On-site□** ● □□□□□□□□□□The site comprises agricultural land□□ith foot □ridges and sheep pens recorded on the map□Land drains / streams are present on□site and in the surrounding area□The area is □ithin Minster Marshes□Marsh Farm and □o□lees Hill □□□□□□□□□□□□□□□□□□ith The Dro□e □road/trac□□leading north across the site□ Southern □astern Rail□ay Crosses the site □□□□□□□□□□□□□□□□Minster Stream and Ri□er Stour run through the site□orientated □est to south□east□Sea □all present alongside Ri□er Stour□ ● □□□□□□□□□□o significant changes□□ater□ays are indicated to flo□ in an easterly direction ● □□□□□□o significant changes **Off-site:** ● □□□□□□□□□□The surrounding area comprises agricultural land□□ith foot □ridges and sheep pens recorded□Rail□ay line and □unction □□shford □ Ramsgate □ranch□□□□□□□□□□□□□□□□□and station □Minster□Clapper Hill □archaeological site□□□□□□□□□□□□□□□□□ ● □□□□□□□□□□Se□age □or□s and septic tan□no□ present ad□acent to Marsh Farm□appro□imately □□□m north of the site□ ● □□□□□□dditional sidings / line □ranching from the rail□ay line□east of the site □Mineral Rail□ay□□□□□□□□□□□□□□□□□ ● □□□□□□□□□□□dditional tan□s recorded at Marsh Farm se□age □or□s and □llotment gardens □□□□□□□□□□□□□□□□□ ● □□□□□Mineral Rail□ay recorded as disused ● □□□□□□□□□□Rich□orough Po□er station and associated tan□s/chimneys □□□□□□□□□□□□□□□□□additional sidings recorded on the mineral rail□ay to the east □hich appears to lin□up to Rich□orough Po□er Station□ ● □□□□□Pumping Station ad□acent to se□age □or□s ● □□□□□□□□□□□llotment gardens de□eloped into housing□T□o lagoons ad□acent to Ri□er Stour □□□□□□□□□□□□□□□□□ith associated pipeline□O□erhead electricity ca□les recorded to the south□□est of the site□connected to Rich□orough Po□er Station□ ● □□□□□□□□□□ ind tur□ine at former rail□ay sidings □□□□□□□□□□□□□□□□ ● □□□□□Reser□oir □□□□□□□□□□□□□□□□and Pumping house present at Marsh Farm Se□age □or□s□ ● □□□□□Reser□oir □□□□□□□□□□□□□□□□

Aspect	Detail
□□O Ris□ □ssessment	□ Detailed □ne□ploded Ordnance Ris□ assessment □as carried out □y Safelane Glo□al □□□for Connection □et□een the Su□station/Con□erter Station and □□isting OHL □The detailed ris□ assessment assessed the ris□ from □□O as High ris□ for shallo□ and deep intrusi□e □or□s□Recommended ris□ mitigation included□ ● □□O Safety and a□areness □riefing ● Site Specific Safety Instructions Training Course ● □on□intrusi□e □□I□magnetometer sur□ey □greenfield areas only□□for shallo□ intrusi□e □or□s□ ● Target in□estigation □re□uired as a follo□ □on from □I magnetometer sur□ey for shallo□ intrusi□e □or□s□ ● Intrusi□e Magnetometer Sur□ey of pile/□orehole positions □for deep intrusi□e acti□ities□

□s stated in Section □□□□this G□R□ does not assess □oreholes to the east of the □oint transition bay in St Augustine's Golf Course□The geo□en□ironmental conditions to the east of the □ay are under the remit of Red Penguin Consultants and □ill □e e□aluated in their report□

2.2 Summary of the Previous Ground Investigations

The follo□ing GI are summarised □elo□ and co□ered in more detail in the Sea Lin□ F□□D Rich□orough – Preliminary Ris□ □ssessment □□□□

- The Contaminated Land / Ground□ater and Controlled □ aters Scheme □y RS□ □n□ironmental Ltd□□□□□ □Section □□□□□□□□□□
- □ orleyParsons Ltd ground in□estigation at the Rich□orough Po□er Station□□□□□ □Section □□□□□□□□ith the report included □ithin the RS□ □n□ironmental Scheme □□□□and
- Murphy □ltel □oint □enture□Piling □ or□s Ris□ □ssessment□□□□□ □Section □□□□□□□□□□□

2.2.1 Contaminated Land / Groundwater and Controlled Waters Scheme

□ Contamination of Land or Ground□ater and Controlled □ aters Scheme □as produced □y RS□ □n□ironment Ltd in □□□□ □□□for the Rich□orough Connection Pro□ect□□hich includes a preliminary ris□ assessment and summary of e□isting contamination information at Rich□orough Compound and □ridge Crossing□

Three e□isting ground in□estigation factual reports □ere re□ie□ed □ithin the document□

- Geotechnical □ngineering Ltd □□□□□□□Ref□□□□□□□□
  - □o geo□en□ironmental analyses underta□en as part of this assessment□
- □ orleyParsons Ltd □□□□□□□Ref□□□□□□□□□□□□□□/□□□□□□□□□□
- □t□ins Ltd □□□□□□□Ref□□□□□□□□□□□not a□aila□le for separate re□ie□ □□ut location not □ithin scope of this site□□

□cross the scheme□there is current and historical potential for contamination related to localised □uarrying and landfills □refer to Section □ and □ of the PR□ □□□□Contamination ris□s in the surrounding area relate to the potential for su□□surface migration of contamination onto the site from off□site historical landfill□possi□le spillages/lea□ages of chemicals associated □ith Rich□orough Po□er Station and se□age □or□s □ithin □□□m of the site□

Specifically□potential sources of contamination at the Rich□orough Compound and □ridge Crossing □□□□□□□□□□□□□□□□□Section D of Figure □□and Figure □ of the RS□ report□□include Rich□orough Po□er Station□Made Ground i□e□fill material□se□age treatment plant □□ eatherlees Hill□and superficial deposits □potential for gas generation□□RS□ identified ris□s to human health □construction □or□ers and site users□for the Rich□orough Compound and □ridge

Crossing as lo□ to moderate□The ris□to site users from ele□ated ground gases □ere considered to □e moderate / lo□ to moderate□

Ris□s to controlled □aters □ground□ater and surface □ater□□ere assessed as moderate / lo□ to moderate due to their pro□imity to the site and shallo□ ground□ater li□ely to □e in hydraulic continuity □ith the surrounding □ater □odies□

Further in□estigation □as recommended□including geo□en□ironmental sampling and analysis□

2.2.2 WorleyParsons Ltd

□□ soil samples □ere ta□en from □oreholes and trial pits at Rich□orough Po□er Station □Rich□orough □nergy Par□□□□□□□□□m south□east□in □□□□ □□□□Sampling depth ranged □et□een □□□m and □□□m□gl□and samples □ere tested for a range of contaminants including□ □anadium□speciated total petroleum hydrocar□ons □TPH C□ G□□□olatile organic compounds □□OC□□semi□□olatile organic compounds □S□OC□□polychlorinated □iphenyls □PC□□□as□estos□ and leachate suite□

□ine ground□ater and four surface □ater samples □ere collected and tested against a generic ground□ater suite □phenols□P□H□metals□inorganics□TPH□plus speciated TPH□

□le□ated concentrations □a□o□e commercial generic assessment criteria at the time□of hea□y metals and hydrocar□ons □ere identified □ithin the Made Ground□in the □icinity of the Rich□orough □ridge crossing □north side□□Trial pit TP□□□□□ □no □orehole plan a□aila□le□□ ad□acent to Ri□erside Road□reported the presence of as□estos □chrysotile□cement□in the shallo□ Made Ground□

Leachate testing of soil samples from the Made Ground□Tidal Deposits and Thanet Sands from □HRC□□ reported slight e□ceedances of Controlled □ aters Fresh□ater □□S □□n□ironmental □uality Standards□for leacha□le copper□lead□nic□el and □inc□Leacha□le copper concentrations □ere sho□n to decrease □ith depth through the three hori□ons□leacha□le lead □as only detected in the Made Ground□leacha□le nic□el □as only detected in the Thanet Sands□and leacha□le □inc □as present in all three hori□ons □ut highest in the Tidal Deposits□

□ery minor e□ceedances of Controlled □ aters Fresh□ater □□S □ere identified for copper□ nic□el and □inc in one of the ground□ater samples □□HRC□□□deeper Thanet Sands hori□on□□

The refined conceptual model for the Rich□orough □ridge crossing north side foundations included the follo□ing potential pollutant lin□age□

Direct contact for construction □or□ers and ad□acent site users □ith Made Ground / fill on□site □hea□y metals□hydrocar□ons and as□estos□□

□ertical and lateral migration □ia leaching of hea□y metals and hydrocar□ons in the Made Ground / fill on□site to controlled □ater receptors □ia leaching and remo□ilisation to the Secondary a□uifers and lateral migration to the Ri□er Stour□

2.2.3 Murphy Eltel Joint Venture: Piling Works Risk Assessment

□ piling □or□s ris□assessment □as produced □y RS□ □n□ironment Ltd □RS□□for a num□er of sites associated □ith the Rich□orough Connection Pro□ect□

Ris□s to the ground□ater from proposed piling □ere considered to □e lo□ to moderate□It □as recommended that ground□ater monitoring □e underta□en at monthly inter□als during piling □or□s at Rich□orough □ridge crossing □north side□□due to potential contamination path□ay creation□

2.3 Summary of Preliminary Contaminated Land Risk Assessment

The PR□ □□□included a preliminary contaminated land ris□ assessment □hich identified potential pollutant lin□ages as the □ith the ris□s to sensiti□e receptors summarised in Ta□le □□□□For further information□refer to the Section □□ of the Preliminary Ris□ □ssessment □□□□

Table 2.4: Summary of the Sea Link Richborough PRA CSM

Receptor	Contaminant sources	Risk (greatest reported)
Construction □or□ers	● Potentially contaminated□	Lo□
Future site users	● On□site soils □from regional agricultural land use and industrial use □rail□ay□se□age treatment □or□s□pumping stations□□	Lo□
Ground□ater in the Thanet Formation □Secondary □□		Lo□
Surface □ater □land drains□Ri□er Stour□estuary□sea□	● Off□site soils □from industrial use □e□g□Rich□orough Po□er Station□ rail□ay land□landfill/□aste sites□□	Lo□
Construction materials and/or the □uilt en□ironment	● Ground□ater from on□and off□site land uses□	□ery lo□
	● Potential ground gas from infilled pits and Made Ground□	

The PR□ concluded that there is not considered to □e a significant source of contamination at the proposed Con□erter Station/Su□station□nor the ma□ority of the ca□le route corridor□

The most nota□le off□site sources of potential contamination include rail□ay lines□roads□ se□age treatment □or□s and associated pumping stations/tan□s□and the off□site Rich□orough Po□er Station and off□site landfills□

This CSM □ill □e refined using site□specific ground in□estigation data in Section □□

3 Environmental Records

3.1 Published geology

The anticipated geology □eneath the site is summarised in Ta□le □□□□from □ritish Geological Sur□ey □□GS□□□□□□□□□ Series Solid and Drift Geological Map□Sheet □□□ □Ramsgate□□□□□and the □GS GeoInde□ □□□□□

Table 3.1: BGS Lexicon of Named Rock Units

Stratum	Age Range	Parent Unit	Description	Approximate Extent
Superficial Deposits				
Tidal Flat Deposits □TFD□– clay and silt	Holocene □poch	Intertidal Deposits □ITD□	Tidal flat deposits□including mud flat and sand flat deposits□are deposited on e□tensi□e generally flat marshy land in the intertidal □one that is co□ered and unco□ered □y the rise and fall of the tide□They consist of unconsolidated sediment□mainly mud and/or sand□ They may form the top surface of a deltaic deposit□ □ormally a consolidated soft silty clay□□ith layers of sand□gra□el and peat□Characteristically lo□ relief□	□nticipated to underlie the ma□ority of the proposed de□elopment□
□each and Tidal Flat Deposits □ndifferen tiated □□TF□□	□uaternary Period	□/□	Composite of 'Beach Deposits': Shingle, sand, silt and clay□may □e □edded or chaotic□□each deposits may □e in the form of dunes, sheets or banks, and 'Tidal Flat Deposits': commonly silt and clay with sand and gravel layers□possi□le peat layers□from the tidal □one□	These deposits are only e□pected □ithin the □icinity of the offshore HDD section at landfall and are not indicated to □e present □ithin the onshore ca□le route corridor□
□edroc□ Deposits				
Thanet Formation □T□□□	Thanetian □ge	Montrose Group □MO□T□	Typically composed of homogenous□□iotur□ated□ glauconitic silty fine□grained sand□□ith sandy silt□silt or sandy□silty clay especially in the lo□er part□forming a coarsening□up□ards se□uence□The deposits are generally pale□yello□ □ro□n in colour□typically □ith a 'peppering' of dark□coloured glauconitic grains□Sparse □hite mica throughout□Generally ranges in thic□ness □et□een □□ to □□m□up to □□m in north □ent□	□nticipated to underlie the □hole site□the □edroc□ outcrops around Marsh Farm to the □est of the su□station/ con□ertor station site and also to the east around the □□□□ Rich□orough □ ay□ suggesting shallo□ □edroc□□
Margate Chal□ Mem□er □M□C□□	Santonian □ge – Campanian □ge	□e□ha□en Chal□ Formation □□C□□	Marl□free smooth □hite chal□ □ith little flint□□ea□ly de□eloped indurated iron□stained sponge □eds□	□nticipated to underlie the Thanet Formation□
Seaford Chal□ Formation □S□C□□	Coniacian □ge – Santonian □ge	□ hite Chal□ Su□group □□ HC□□	Firm □hite chal□ □ith conspicuous semi□continuous nodular and tu□ular flint seams□Hardgrounds and thin marls are □no□n from the lo□est □eds□Some flint nodules are large to □ery large□Generally □□ to □□m thic□in □ent□	□nticipated to underlie the Margate Chal□Mem□er

Made Ground/ □ or□ed Ground/ Landscaped Ground/ Distur□ed Ground □MG□is not sho□n on the □□□□□□□□ scale map□The Groundsure report presents the □GS □□□□□□□□ scale map sho□ing artificial and Made Ground and indicates that artificial and Made Ground has not □een identified □ithin the study area□It is ho□e□er li□ely that Made Ground □ill □e present at discrete locations □ithin the site close to de□eloped areas□in the □icinity of □uildings and infrastructure□Topsoil □TPS□is e□pected across the ma□ority of the site□

3.1.1 Encountered geology

The Sea Lin□ F□□D PR□ summarises the ground profile from □GS GeoInde□ □□□□oreholes and e□isting ground in□estigation reports □□□□□□□□□□□□ in more detail□□ith a summary presented □elo□□

□□□□□□□ Con□erter Station/Su□station

The □GS GeoInde□ identifies □ e□ploratory holes located □ithin □□□□m of the site□Details of the ground conditions encountered are presented in□

Table 3.2: BGS Exploratory Hole Details – Converter Station/Substation

Hole	Distance/ direction from site	Date	Hole Depth m bgl	Top of stratum m bgl	Stratum
TR□□S□ □	□□□m S□	□□□□□	□□□□□	□	TPS
				□□□□□	TFD
				□□□□□	T□□
TR□□S□ □	□□□m S□	□□□□□	□□□□	□	TPS
				□□□□□	TFD
TR□□S□ □	□□□m S□	□□□□□	□□□□	□	TPS
				□□□□□	TFD
TR□□S□ □□	□□□m S□	□□□□□	□□□□	□	TPS
				□□□	TFD
TR□□S□ □□	□□□m S□	□□□□□	□□	□	TPS
				□□□	TFD
				□□□	T□□
				□□□□□	□ HC□
TR□□S□ □□	□□□m S□	□□□□□	□□	□	TPS
				□□□	TFD
				□	T□□
TR□□S□ □□□/ TR□□S□ □□□/ TR□□S□ □□	□□□m □	□□□□□	□□□□□	□	TPS
				□□□	TFD
				□□□□□	T□□
				□□□□□	□ HC□

□ote□TPS – Topsoil□TFD – Tidal Flat Deposits□T□□ – Thanet Formation□□ HC□ – □ hite Chal□Su□group

Ground□ater is e□pected to □e encountered □ithin the top □ to □m □gl □□ithin the Tidal Flat Deposits□□ho□e□er□it is noted that the logs considered are not recent □ith the most recent log from □□ years ago and therefore current ground□ater le□els may □ary from this□□s the Con□erter and su□station site is located more than □□m from the coast the underlying ground□ater is not anticipated to □e tidally influenced□

□□□□□□□ H□DC ca□le route corridor

There are □ no□□GS e□ploratory holes identified in the □icinity of the H□DC ca□le route on the □GS GeoInde□□only three of □hich contained information on ground conditions□Details of the ground conditions encountered are presented in Ta□le □□□□

Table 3.3: Anticipated Ground Profile from BGS Boreholes – HVDC Cable Route

Hole	Distance/ direction from site	Date	Hole Depth m bgl	Top of stratum m bgl	Stratum
TR□□S□ □□□	□□□m □	□o ground profile information			
TR□□S□ □□□	□□□m □	□o ground profile information			
TR□□S□ □□	□□□m □	□□□□	□□□□	□	M□D
				□□□□	T□□
TR□□S□ □□	□□□m □	□□□□	□□□□	□	M□D
				□□□□	T□□
				□□□□	□ HC□
TR□□S□ □□□/ TR□□S□ □□□/ TR□□S□ □□	□□□m S	□□□□	□□□□	□	TPS
				□□□	TFD
				□□□□	T□□
				□□□□	□ HC□

□ote□TPS – Topsoil□TFD – Tidal Flat Deposits□T□□ – Thanet Formation□□ HC□ – □ hite Chal□Su□group

Ground□ater le□els are e□pected to □e encountered □ithin the top fe□ metres □elo□ ground le□el □ithin the Tidal Flat Deposits□It is li□ely ground□ater le□els □ill □e affected □y the tide due to the pro□imity to the coastline□

□□□□□□□□ Con□ertor Station/ Su□station Connection to □□isting OHL

The □GS GeoInde□ identifies □ e□ploratory holes located in close □icinity of the site□T□o of these holes □ere mar□ed confidential therefore a ground profile □as not a□aila□le□□n additional □□ □oreholes □ere carried out on or in close □icinity of the site □y Structural Soils on □ehalf of Carillion □□□□□□HPC□□ to □HPC□□□□HD□□□a and □HD□□□□□for the o□erhead line □et□een Canter□ury and Rich□orough□Details of the ground conditions encountered in these e□ploratory holes are presented in Ta□le □□□□

Table 3.4: BGS and Exploratory Hole Details – Connection between Substation/ Convertor Station and existing OHL

Hole	Distance/ direction from site	Date	Hole Depth m bgl	Top of stratum m bgl	Stratum
TR□□S□ □	□□m □	□□□□	□□□□	□	TPS
				□□□□	TFD
				□□□□	T□□
TR□□S□ □	□□m □	□□□□	□□□□	□	TPS
				□□□□	TFD
TR□□S□ □	□□m □	□□□□	□□□□	□	TPS
				□□□□	TFD
TR□□S□ □□	□□□m □	□n□no□n	□□□□	□	TPS
				□□□	TFD
				□□□	T□□
TR□□S□ □□	□□□m □	□n□no□n	□□□□	□	TPS
				□□□	TFD
				□□□	T□□
TR□□S□ □□	□□□m □	□n□no□n	□□□□	□	TPS
				□□□	TFD
				□□□	T□□

Hole	Distance/ direction from site	Date	Hole Depth m bgl	Top of stratum m bgl	Stratum
TR□□S□ □□	Confidential – no □orehole information a□aila□le				
TR□□S□ □□	Confidential – no □orehole information a□aila□le				
□HPC□□	□□□m □	□□□□	□□	□	TFD
				□	T□□
□HPC□□	On site	□□□□	□□	□	TFD
				□	T□□
□HPC□□	On site	□□□□	□□	□	TFD
				□□□	T□□
□HPC□□	On site	□□□□	□□□	□	TFD
				□□	T□□
□HPC□□	On site	□□□□	□□	□	TFD
				□□	T□□
□HPC□□	On site	□□□□	□□	□	TFD
				□□	T□□
□HPC□□	On site	□□□□	□□□	□	TPS
				□□	TFD
				□□	T□□
□HD□□□a	□□□m S	□□□□	□□	□	TFD
				□	T□□
□HD□□□□	□□□m S	□□□□	□□	□	TPS
				□□	TFD
				□□	T□□
□HPC□□	On site	□□□□	□□□	□	TFD
				□□	T□□
□HPC□□	□□m S	□□□□	□□□	□	TFD
				□□	T□□
□HPC□□	□□m S	□□□□	□□□	□	TFD
				□□	T□□
□HPC□□	□□□m □	□□□□	□□□	□	TPS
				□□	TFD
				□	T□□
□HPC□□	□□□m □	□□□□	□□□	□	TFD
				□	T□□

□ote□TPS – Topsoil□TFD – Tidal Flat Deposits□T□□ – Thanet Formation□□ HC□ – □ hite Chal□ Su□group

Ground□ater □as struc□ in all □ut one of the □□□□ Structural Soils □oreholes at depths ranging □et□een □□□ and □m □gl □□□□ to □□□□m □OD□□ithin the Tidal Flat Deposits□□ second ground□ater stri□e □as encountered in fi□e of the □oreholes □et□een □ and □□m □gl □□□□ and □□□□m □OD□□ithin the Thanet Sand□

3.2 Hydrology

3.2.1 Converter Station/Substation

- Minster Stream passes across the northern e□tent of the con□ertor station/ su□station site in a roughly □est to east direction

- □umerous streams/ drainage ditches feed into Minster Stream from the north and south located along field □oundaries□In a couple of locations these are identified to pass underground for short lengths□The □ater courses are part of the Mon□ton and Minster Marshes □ater □ody catchment□
- There are t□o reser□oirs/la□es located □□□m to the north□east of the site□
- The Ri□er Stour is located appro□imately □□□m to the south□□est□the ri□er flo□s to the east and issues into Sand□ich □ay appro□□□□m to the east□

3.2.2 HVDC Cable Route Corridor

- □ stream □Minster Stream□and se□eral of field drains orientated north□south across the □estern e□tent of the H□DC ca□le route□□ith a general flo□ direction to the east into the Ri□er Stour□
- The sea is located appro□imately □□□m to the east at its closest □from the start of the H□DC alignment□
- There are se□eral surface □atercourses to the north of the proposed of the H□DC ca□le route located in the St Augustine's Golf Course□

3.2.3 Converter Station/Substation Connection to Existing OHL

- Minster Stream passes across the centre of the site in a roughly □est to east direction□ flo□ing to the east to □oin the Ri□er Stour□There are small ditches and drains that connect the minster stream and Ri□er Stour to the □est of the rail□ay line at the eastern e□tent of the site□
- There is a dense net□or□of surface streams/ drainage ditches across the site □oth to the north and south of the Ri□er Stour□In a couple of locations a fe□ of the □atercourses are identified to pass underground for short lengths□
- The Ri□er Stour passes through the south□eastern section of the site area□

3.2.2 Surface Water Flooding

□□□□□□□□ H□DC Ca□le Route

The H□DC ca□le route corridor is not identified to □e at ris□ of ri□er and coastal flooding in the Groundsure Insight report □□□an area appro□imately □□□m to the south of the ca□le route is identified as lo□ flood ris□ □Flood □one □□□ith an area of High ris□ □Flood □one □□ appro□imately □□□m to the east parallel □ith Sand□ich Road□

The ris□ of flooding from ri□ers or sea categories are as follo□s□

- □ery lo□ – □□ in □□□□ chance in any gi□en year
- Lo□ – □□ in □□□ □ut greater than or e□ual to □ in □□□□ chance
- Medium – □□ in □□ □ut greater than or e□ual to □ in □□□ chance
- High – greater than or e□ual to □ in □□ chance□

□□□□□□□□ Con□erter Station/su□station

The Con□erter Station and su□station area is not identified to □e in an area at ris□ of ri□er and coastal flooding □y the Groundsure Report □□□□

□□□□□□□□ Con□erter Station/Su□station Connection to □□isting OHL

The north□east corner of the area proposed for the Con□ertor Station/ Su□station connection to the OHL has not □een identified as at ris□ from ri□er and coastal flooding in the Groundsure report □□□□

□ll of the □est side of the area□□est of Marsh Farm Road□is identified to □e at Lo□ ris□ □ith a fe□ isolated poc□ets of High ris□to□ards the □estern e□tent of the site□This area is identified to lie □ithin Flood □one □ and in an area □enefiting from flood defences□□n area east of Marsh Farm Road to the north of Minster Stream is identified to □e at Lo□ ris□ □Flood □one □□□The site area to the south of the Ri□er Stour is identified to □e at Lo□ ris□from ri□er and coastal flooding and is □ithin an area of historical flood e□ents□The immediate area around the Ri□er Stour is identified as High ris□□The area to the south of the Ri□er Stour is identified to □e in Flood □one □□

3.3 Hydrogeology

The Superficial Deposits □Tidal Flat Deposits□□eneath the site are designated □y the □n□ironment □gency as □nproducti□e strata and are therefore not considered to □e a□uifers□

The Groundsure report □□□indicates the □hole of the site area is underlain □y a Secondary □ □□uifer □Thanet Formation□descri□ed as permea□le layers capa□le of supporting □ater supplies at a local rather than strategic scale□and in some cases forming an important source of □ase flo□ to ri□ers□These are generally a□uifers formerly classified as minor a□uifers□

□□□□□□□□ Source Protection □ones

The Groundsure report □□□presents the SP□s across the area local to the site□The site does not fall □ithin a SP□□The nearest SP□ □Total Catchment□is located appro□imately □□□m north□east of the H□DC ca□le route at Cliffs □nd□

3.4 Coal Mining

A Coal Authority (CA) Consultant's Coal Mining Report □as o□tained during the des□ study stage of the pro□ect for the □hole site as the Con□ertor Station and Su□station area and the area proposed for the connection to the e□isting OHL are located □ithin a Coal Mining Reporting □rea as defined □y the Coal □uthority□The summary of the Coal Mining Report can □e found in the PR□ □□□□

The follo□ing □as re□ie□ed in the Coal Mining Report□

- Mining □cti□ity and Geology - past underground mining□pro□a□le unrecorded shallo□ □or□ings□pine road□ays at shallo□ depth□mine entries□a□andoned mine plan catalogue num□ers□outcrops□geological faults□fissures or □rea□lines□opencast mines□C□ managed tips□
- In□estigati□e or remedial acti□ity - site in□estigations□remediated sites□coal mining su□sidence□mine gas□mine □ater treatment schemes□
- Licensing and future mining acti□ity - future underground mining□coal mining licensing□court orders□Section □□ notices□□ithdra□al of support notices□payments to o□ners of former copyhold land□
- Further information□

□o entries □ere recorded in relation to the a□o□e on site or □ithin the □icinity of the site □oundary□For further information refer to the Mott MacDonald PR□ □

3.5 Radon

The site is in an area □here □□□ of d□ellings e□ceed the 'Radon □ction Le□el' – no radon protection measures are re□uired as reported in the Groundsure report □□□□

4 Ground Investigation

4.1 Programme

□ site□specific ground in□estigation □as underta□en □et□een □□th of Septem□er and □st Decem□er □□□□ □main □or□s□□y Structural Soils Limited□summarised in the follo□ing Factual Report □included as □ppendi□ □□□

- S□□ Lin□ F□□D – Rich□orough On□shore Ca□le Lin□□Factual Report on Ground In□estigation□Report □o□□□□□□□□□□ □□□□□□pril □□□□ □□□□

The location of the e□ploratory holes are presented in Figure □□□□This included□

- □□ Ca□le percussi□e □oreholes to ma□imum depths of appro□imately □□m □gl□
- □ Ca□le percussion □oreholes □ith rotary cored follo□ □on□to a ma□imum depth of □□m□
- □□ Cone Penetration Tests □CPTs□to a ma□imum depth of □□□□□m□
- Hand dug inspection pits for all of the a□o□e□to □□□m depth□
- □□ Machine dug trial pits underta□en to ma□imum depths of appro□imately □m □gl□
- Installations for ground□ater monitoring□including installation of automatic data loggers □di□ers□to monitor long□term ground□ater le□els□
- Geo□en□ironmental sampling and la□oratory testing on soils and ground□ater□
- □sta□lishing ground locations of e□ploratory holes□
- Installation of eight □□mm diameter ground gas/ground□ater monitoring □ells □ere installed□
- Factual reporting to □S □□ □□□□□□□□□□□□ incorporating corrigendum □une □□□□□
- Four ground□ater monitoring □isits underta□en o□er a period of appro□imately three months follo□ing the completion of field□or□□On the fourth monitoring □isit automatic le□el loggers □ere installed□follo□ed □y □ months[1] of monitoring □ith automatic data di□ers in selected e□ploratory holes□Monitoring of data di□ers is in progress at the time of □riting□

□ description of the □or□s completed along □ith e□ploratory hole logs and testing results is presented in the Contractor's factual report "□□□□□□□□□ □□□□" □□ppendi□ □□□□s noted pre□iously□ a e□tract outlining the e□ploratory locations as part of this ground in□estigation is presented in □ppendi□ □□

MM carried out technical super□ision of the ground in□estigation throughout the site□or□s□and su□se□uently scheduled all la□oratory testing□During the ground in□estigation □st Line Defence Ltd pro□ided une□ploded ordnance □□□O□super□ision and scanning at all intrusi□e positions□ and Headland □rchaeology Ltd maintained an archaeological □atching □rief for trial pitting □or□s□

□□ploratory holes □ere assigned to one of four series according to the proposed construction they pro□ide data for and num□ered accordingly□The four series are□

- □□□ series – Con□erter Station and Su□station□
- □□□ series – Ca□le Route□
- □□□ series – Construction Compounds□
- □□□ series – Temporary and Permanent □ccess Roads□

[1] □t the time of □riting□ground□ater monitoring □as ongoing□so the total length of ground□ater monitoring may differ□

For example, a borehole numbered “R22□BH101” provides data for the converter station and substation, while a trial pit numbered “R22□TP201” provides data for the cable route construction.

In addition, six boreholes were numbered “RedP- □H□6” to “RedP- □H- □1”, providing data for the offshore ca□le landing part of the S EA Lin□ pro□ect. □ hile the geological and geotechnical interpretation and analysis of the offshore scheme is □eing underta□en □y others, selected data from these □oreholes □ill □e used in this report to further understanding of the ground model and material properties associated □ith the onshore □or□s.

The Geotechnical information gathered during the GI is presented in a separate Ground in□estigation report □GIR) □eing completed □y Mott MacDonald ([2] and Doc num□er S□□L-MMD□S□□L- □□G□R□P-0691)

4.2 Exploratory works

4.2.1 Geo-environmental Sampling and Laboratory Testing

□s part of the ground in□estigation at the site, targeted geo□en□ironmental testing □as conducted in accordance □ith esta□lished procedures including □S10175 (2011+A2:2017) Code of Practice for the In□estigation of Potentially Contaminated Sites, □S5930 □□015 +A1:2020 and □n□ironment □gency Land Contamination Ris□ Management □LCRM) guidance, to determine the presence and degree of contamination. □on□targeted geo□en□ironmental soil samples □ere generally o□tained at depths of 0.2 m, 0. □m, 1.0 m and 1.5 m, and at 1 m inter□als though any deeper Made Ground.

During the four monitoring □isits, three rounds of ground□ater samples □ere collected from monitoring installations the first round □ere ta□en on 13 and 14 Decem□er 2023, the second round on the □ and 4 □anuary 20□4 and the third round on the 18 □anuary 2024.

Geo□en□ironmental testing for contaminants of concern □CoCs) □ere scheduled □ithin □oth Made Ground and natural materials. Samples □ere collected in appropriate containers and sent to □n□irola□ (UKA S □ccredited La□oratory, □o. 1247). Ta□le 4.1 summarises the geo-en□ironmental analyses as part of the GI. The num□er of analyses, differs from the Section 4.2, Ta□le 5 of the Draft Structural Soils Factual Report as the geo□en□ironmental samples from the Red Penguin locations are not included in the totals in Ta□le 4.1.

Table 4.1: Geo-environmental Testing Suites

Medium	Testing Suite	Analysis	Determinants/Parameters
Soil	Mott MacDonald Comprehensi□e Soil Suite	□□	□rsenic □□s□□as□estos □screen and □uantification□, □arium (□a□□eryllium □□e), □oron □B), □admium □Cd□□ chromium □Cr□tri□alent and he□a□alent□□copper □Cu□, cyanide □free and total□□fraction of organic car□on □FOC), □ead □P□□, manganese □Mn□, mercury □Hg□ elemental, □norganic and methyl□, moly□denum □M□□□ nic□el □□i□, pH□phenols □total□, □olycyclic aromatic hydrocar□ons □P□Hs; □S□P□ □□speciated□, selenium □Se□□sulphate □□ater solu□le□□sulphur □total□□□anadium □□□□□inc (□n□, soil organic matter □SOM□, total organic Car□on (□OC□
	Total Petroleum Hydrocar□ons Criteria □ or□ing Group soil suite (□PH□C□ G□	□	TPH□C□ G□□liphatic and □romatic split
	□en□ene□Toluene□ □thyl□en□ene and □ylenes (□T□□□soil suite	□	□T□□

Medium	Testing Suite	Analysis	Determinants/Parameters
	Polychlorinated □iphenyls □PC□s□	□	Polychlorinated □iphenyls □PC□s□□□ Congeners □□ HO Standard□□□
Soil Leachate	Mott MacDonald Comprehensi□e Leachate Suite	□□	□s□ammoniacal nitrogen as □□ntimony □S□□□□□□a□ □e□Calcium □Ca□□Cd□Cl□Cr □ll and □l□□Cu□cyanide □free and comple□□□fluoride□Fe□P□□Mg□Mn□Hg□M□□ □i□pH□phenols □speciated□□Se□sulphate□□□□n
Ground□ater	Mott MacDonald Comprehensi□e Ground□ater Suite	□□	□s□ammoniacal nitrogen as □□ntimony □S□□□□□□a□ □e□Calcium □Ca□□Cd□Chloride □Cl□□Cr □ll and □l□□Cu□ cyanide □free and comple□□□fluoride□hardness □CaCO□□□ Fe□P□□Mg□Mn□Hg□M□□□i□nitrate as □O□□pH□phenols □speciated□□Se□sodium □□a□□sulphate□Sulphur□TPH□ C□ G □□□n□Total Dissol□ed Solids□P□Hs □□S□P□ □□ speciated□□□OCs□al□alinity
□ aste □cceptance Criteria □□ □C□	Comprehensi□e □ □C	□	Leachate Suite and Solid □ aste Suite□
Pesticide	MM Pesticide Soil Suite	□□	Cypermethrin□Dia□inon□Dimethoate□Linuron□ Mecoprop□Permethrin□□lachlor□□tra□ine□Car□aryl□ Chlorfen□inphos□Chlorpyrifos□ethyl□□ldrin□Dieldrin□ □ndrin□Isodrin□DDT□DD□□DDD□Diuron□□lpha□ □ndosulfan□□eta□□ndosulfan□Isoproturon□Sima□ine□ Trifluralin□□enta□one□Fentitrothion□Malathion□ Dichlor□os□□lpha□He□achlorocyclohe□anes □including Lindane□□□eta□He□achlorocyclohe□anes □including Lindane□□Gamma□He□achlorocyclohe□anes □including Lindane□

4.3 Post Fieldwork Installation Monitoring

□ total of four monitoring □isits □ere completed post□field□or□monitoring □isits □ere completed □et□een □□th □o□em□er □□□□ and □□th □anuary □□□□ to record the ground□ater le□els and ground gas concentrations □ithin installations□On three of the rounds ground□ater samples □ere ta□en□On the final monitoring round automatic le□el loggers □ere installed□The monitoring □ells □ere installed in multiple strata to assess the ground □ater regime across the site□the locations of the monitoring □ells are summarised in Ta□le □□□□

The follo□ing information □as recorded during the each of the monitoring rounds□

- Ground□ater le□el
- □tmospheric pressure
- Gas flo□ rate and gas pressure
- Methane□hydrogen sulphide□car□on dio□ide□car□on mono□ide and o□ygen concentrations
- Lo□er e□plosi□e limit □L□L□

Table 4.2: Groundwater Installation Monitoring Summary

Exploratory Hole	Elevation (m OD)	Top	Base	Top of Response Zone (m OD)	Base of Response Zone (m OD)	Stratum
R□□□□H□□□	□□□□	□□□	□	□□□□	□□□□□	TFD
R□□□□H□□□□□□	□□□□	□□□	□	□□□□	□□□□	TFD
R□□□□H□□□□□	□□□□	□	□	□□□□□	□□□□□	TFD
R□□□□H□□□	□□□□	□	□	□□□□□	□□□□□	TFD/T□□

Exploratory Hole	Elevation (m OD)	Top	Base	Top of Response Zone (m OD)	Base of Response Zone (m OD)	Stratum
R□□□□H□□□	□□□□	□□□	□	□□□□	□□□□	TFD
R□□□□H□□□	□□□□	□□	□□	□□□□	□□□□	□CF
R□□□□H□□□	□□□□	□□	□□	□□□□	□□□□	T□□
R□□□□H□□□	□□□□	□□□□	□□□□	□□□□	□□□□	T□□

□ote□T□□ – Thanet Formation□TFD – Tidal Flat Deposit□□CF – □e□ha□en Chal□Formation
□Primarily installed for gas monitoring□ho□e□er despite the shallo□ depth of installation□this standpipe also detected ground□ater le□els during monitoring□

4.3.1 □isual and/or olfactory e□idence of potential contamination

There □as no □isual or olfactory e□idence of contamination recorded during the ground in□estigation□

5 Ground and Groundwater Conditions

This Section pro□ides a summary of the encountered ground conditions at the Con□erter Station/Su□□station□the ca□le route corridor□and the OHL connection north of the Ri□er Stour□ This is an e□cerpt of the information □hich is co□ered in more detail in the Sea Lin□□Friston Ground In□estigation Report created □y Mott MacDonald □□□□

5.1 Ground Conditions

5.1.1 Converter Station/ Substation Area

Ta□le □□□ □elo□ presents the ground model for the con□erter station area□The site is surfaced □ith topsoil o□ing to its location □ithin agricultural fields□Most of the site is located at a similar le□el□so units are presented as metres □elo□ ground le□el□

Table 5.1: Ground Model – Converter Station/Substation Area

Geological Unit (Code) Typical Description	**Depth to Top (m bgl)**	**Depth to Base (m bgl)**	**Thickness (m)**
Topsoil (TPS) Grass o□er fria□le dar□ □ro□n to □ro□n slightly sandy silty occasionally organic CL□Y□Localised areas slightly gra□elly and rarely □ith lo□ co□□le content□ Sand is □aria□ly fine□fine to medium or fine to coarse□ Gra□el□□here present□is su□angular to su□rounded□ fine to coarse flint□chal□and siltstone□Co□□les □here present are su□angular to su□rounded flint□	□□□□	□□□□□□□□□	□□□□□□□□□
Made Ground (MG) □ery stiff □ro□n slightly gra□elly slightly sandy organic clayey SILT □ith occasional rootlets□Sand is fine□Gra□el is su□angular to su□rounded fine to coarse chal□□clin□er□and ceramic□Present in one location only□li□ely re□or□ed topsoil□	□□□□	□□□□	□□□□
Tidal Flat Deposits (TFD) Stiff to □ery stiff□□ecoming firm□and in turn soft to □ery soft in the first □□□ metres□grey mottled orange or yello□ silty□ occasionally slightly sandy CL□Y□In some locations □ith occasional shells or shell fragments□or rare organic matter□ In one location □ith a□undant semi□rotten organic material□ Sand □here present is typically fine□rarely fine to medium□ OR Soft to □ery soft grey slightly to □ery sandy clayey SILT□ In one location present as soft dar□ □ro□n pseudo□fi□rous P□□T □ith a strong organic odour□	□□□□□□□□□	□□□□□□□□□	□□□□□□□□□
Thanet Formation (TAB) Inter□edded □ands of□ Stiff to □ery stiff grey occasionally □ro□nish or □luish slightly to □ery sandy micaceous SILT □ith occasional shell fragments□In one location slightly gra□elly □ith a lo□ co□□le content□Sand is fine to coarse□ OR □□tremely □ea□to □ea□grey occasionally greyish green mottled □luish grey slightly sandy rarely calcareous micaceous SILTSTO□□ □ith occasional shell fragments□ reco□ered as □ery dense grey silty sandy angular to	□□□□□□□□□	□□□□□□□□	□□□□□□□□

Geological Unit (Code) Typical Description	**Depth to Top (m bgl)**	**Depth to Base (m bgl)**	**Thickness (m)**
su□angular fine to coarse GR□□□L□occasionally □ith medium co□□le content□ OR Medium dense to dense grey mottled □lue□yello□ □green□or □hite silty to □ery silty fine to medium S□□D□□ith occasional shell fragments and □ands of silt□			
Margate Chalk Member – Newhaven Chalk Formation (MECK)**	□	□	□
Seaford Chalk Formation (SECK)**	□	□	□

□□□ase / thic□ness not pro□en
□□□not encountered

5.1.2 HVDC cable route and HDD crossings

Ta□le □□□ □elo□ presents the ground model for the H□DC ca□le route□from the landfall through to the con□erter station□

Table 5.2: Ground Model – HVDC Cable Route and HDD Crossings

Geological Unit (Code) Typical Description	**Depth to Top (m bgl)**	**Depth to Base (m bgl)**	**Thickness (m)**
Made Ground (MG) □ro□n slightly gra□elly silty fine to coarse S□□D□Gra□el is angular to su□rounded fine to coarse chal□□sandstone and □ric□□Present in one location only□li□ely re□or□ed topsoil□	□□□□	□□□□	□□□□
Topsoil (TPS) Stiff fria□le □ro□n to dar□ □ro□n slightly sandy occasionally slightly gra□elly clayey SILT or silty CL□Y □ith fre□uent roots and rarely □ith lo□ co□□le content□Sand is fine to medium□ Gra□el and co□□les are su□angular to su□rounded fine to coarse flint and chal□□ In one location only□present as □ro□n slightly gra□elly □ery silty organic fine to medium S□□D□Gra□el is su□angular to rounded medium to coarse flint□	□□□□	□□□□□□□□□	□□□□□□□□□
Tidal Flat Deposits (TFD) Present only to the □estern portion of the H□DC ca□le route□ Stiff to □ery stiff□□ecoming □ery soft to soft □ro□n mottled light grey □ecoming □luish grey to dar□ □lue slightly sandy or slightly gra□elly CL□Y rarely □ith medium co□□le content□ semi□rotten organic material□or rare rootlets□	□□□□□□□□□	□□□□□□□□□	□□□□□□□□□
Thanet Formation (TAB) Inter□edded □ands of□ Stiff to □ery stiff grey to □luish grey □in upper □ metres□ occasionally orangish or yello□ish□□ro□n mottled grey□ micaceous sandy or clayey SILT or silty CL□Y □ith rare shell fragments□Occasionally slightly gra□elly □ith a lo□ co□□le content□Sand is fine or fine to medium□Gra□el □here present is su□angular to rounded fine to coarse siltstone□ co□□les are su□angular siltstone or su□rounded to rounded flint□ OR □□tremely □ea□to □ea□grey SILTSTO□□ reco□ered as dense to □ery dense grey silty angular to su□angular fine to coarse GR□□□L □ith a lo□ co□□le content and occasional shell fragments□Co□□les are angular siltstone□ OR	□□□□□□□□□	□□□□□□□□□□□	□□□□□□□□□□□

Geological Unit (Code) Typical Description	**Depth to Top (m bgl)**	**Depth to Base (m bgl)**	**Thickness (m)**
Sand□□hich □here present at shallo□ depth is loose yello□ or greenish □ro□n silty fine to medium S□□D□□t greater depths the sand is dense to □ery dense grey □ery silty fine or fine to coarse S□□D□ □□□□□□□m □asal unit of □lac□ su□angular to su□rounded fine to coarse flint GR□□□L □ith a lo□ to medium flint co□□le content□unit □no□n in literature as the □ullhead □eds□			
Margate Chalk Member – Newhaven Chalk Formation (MECK) Structureless chal□ reco□ered as dense to □ery dense □hite slightly sandy silty angular to su□angular fine to coarse GR□□□L□Clasts are e□tremely □ea□ to □ery □ea□ lo□ to medium density □hite □ith occasional □lac□spec□s□Matri□ is off□□hite□	□□□□□	□□□□□□□	□□□□□□
Seaford Chalk Formation (SECK) Structureless chal□ reco□ered as □hite slightly gra□elly slightly sandy SILT □ith fre□uent rinded flint fragments up to □□mm diameter□Gra□el is □ea□lo□□density □hite su□angular□	□□□□□	□□□□	□□□

□□□ase / thic□ness not pro□en

5.1.3 Converter station / substation connection to existing OHL

Ta□le □□□ □elo□ presents the ground model from the su□station to e□isting OHL

Table 5.3: Ground Model – Converter Station/Substation Connection to Existing OHL

Geological Unit (Code) Typical Description	**Depth to Top (m bgl)**	**Depth to Base (m bgl)**	**Thickness (m)**
Made Ground (MG) Firm □ecoming stiff locally fria□le □ro□n mottled orangish □ro□n and dar□ □ro□n slightly sandy gra□elly silty CL□Y □ith occasional rootlets□Sand is fine to coarse□Gra□el is angular to su□angular fine to coarse chal□□flint□□ric□and shell fragments □ith some □ood fragments□Present in one location only□i□ely re□or□ed topsoil/su□soil□	□□□□	□□□□	□□□□
Topsoil (TPS) Stiff to □ery stiff fria□le □ro□n slightly gra□elly slightly sandy to sandy silty CL□Y or clayey SILT □ith rare to fre□uent rootlets□Sand is fine to coarse□Gra□el is su□angular fine to coarse chal□□	□□□□	□□□□□□□□□	□□□□□□□□□
Tidal Flat Deposits (TFD) Description	□□□□□□□□□	□□□□□□□□□□	□□□□□□□□□
Thanet Formation (TAB) Firm □ecoming stiff grey slightly gra□elly slightly sandy clayey SILT□□ ith occasional □ands of e□tremely □ea□ siltstone□Sand is fine to coarse□Gra□el is su□angular fine to coarse of siltstone□ OR □ ith depth□□ecoming e□tremely □ea□to □ea□grey SILTSTO□□ reco□ered as □ery dense grey slightly sandy silty angular to su□angular fine to coarse GR□□□L of e□tremely □ea□to □ea□siltstone □ith rare shell fragments□ Sand is fine to coarse□Inter□edded □ith □ands of □ery stiff slightly sandy clayey SILT□	□□□□□□□□□□	□□□□□□□□	□□□□□□□□□□□□□□

Geological Unit (Code) Typical Description	**Depth to Top (m bgl)**	**Depth to Base (m bgl)**	**Thickness (m)**
Margate Chalk Member – Newhaven Chalk Formation (MECK)**	□	□	□
Seaford Chalk Formation (SECK)**	□	□	□

□□□ase / thic□ness not pro□en
□□□not encountered

5.2 Groundwater

5.2.1 Groundwater Strikes

Details of ground□ater stri□es during field□or□s are presented in Ta□le □□□□Most ground□ater stri□es □ere □ithin the Tidal Flat Deposits□at a le□el close to Ordnance Datum – this li□ely represents saturation □ithin the clays from the near□y Ri□er Stour and from the sea□Gi□en the cohesi□e and lo□ permea□ility nature of the Tidal Flat Deposits□ground□ater stri□es are li□ely associated □ith indi□idual □eds or lenses of marginally higher permea□ility□due to increased silt or sand content□

The ground□ater le□el □as o□ser□ed to slightly rise after some ground□ater stri□es□indicating higher permea□ility lenses of soil are confined □y o□erlying lo□er permea□ility clay and silt□

Table 5.4: Groundwater Strike Details

Exploratory Hole	**Depth (m bgl)**	**Reduced level (m OD)**	**Depth after 20 mins (m bgl)**	**Stratum**
R□□□H□□□	□□□□	□□□□	□	Tidal Flat Deposits
R□□□H□□□	□□□□	□□□□□	□□□□	Thanet Formation
R□□□H□□□	□□□□	□□□□	□	Tidal Flat Deposits
R□□□H□□□	□□□□	□□□□□	□□□□	Tidal Flat Deposits
R□□□H□□□	□□□□	□□□□	□□□□	Tidal Flat Deposits
R□□□H□□□	□□□□	□□□□	□	Tidal Flat Deposits
R□□□H□□□□	□□□□	□□□□	□	Tidal Flat Deposits
R□□□H□□□□	□□□□	□□□□□	□□□□	Tidal Flat Deposits
R□□□H□□□	□□□□	□□□□□	□□□□	Thanet Formation
R□□□H□□□	□□□□□	□□□□□	□□□□	Thanet Formation
R□□□H□□□	□□□□	□□□□□	□□□□	Tidal Flat Deposits
R□□□H□□□	□□□□	□□□□	□	Tidal Flat Deposits
R□□□H□□□	□□□□	□□□□□	□□□□	Tidal Flat Deposits
R□□□H□□□	□□□□	□□□□	□	Tidal Flat Deposits
R□□□CPT□□□	□□□□	□□□□	□	Tidal Flat Deposits
R□□□CPT□□□	□□□□	□□□□	□	Tidal Flat Deposits
R□□□CPT□□□	□□□□	□□□□	□	Tidal Flat Deposits
R□□□CPT□□□	□□□□	□□□□	□	Tidal Flat Deposits
R□□□CPT□□□	□□□□	□□□	□	Tidal Flat Deposits
R□□□CPT□□□	□□□□	□□□□	□	Tidal Flat Deposits
R□□□TP□□□	□□□□	□□□□□	□	Tidal Flat Deposits
R□□□TP□□□	□□□□	□□□□	□	Tidal Flat Deposits
R□□□TP□□□	□□□□	□□□□	□	Thanet Formation
R□□□TP□□□	□□□□	□□□□	□	Tidal Flat Deposits

Exploratory Hole	Depth (m bgl)	Reduced level (m OD)	Depth after 20 mins (m bgl)	Stratum
R□□□TP□□□	□□□□	□□□□	□	Thanet Formation
R□□□TP□□□□	□□□□	□□□□□	□	Tidal Flat Deposits
R□□□TP□□□	□□□□	□□□□	□	Tidal Flat Deposits
RedP□□H□□	□□□□	□□□□	□	Tidal Flat Deposits
RedP□□H□□	□□□□	□□□□□	□□□□	Tidal Flat Deposits

It is possi□le that some ground□ater stri□es/seepage could ha□e occurred □ithout □eing o□ser□ed/detected□due to lo□ permea□ilities and drilling techni□ues□

6 Generic Quantitative Risk Assessment

6.1 Introduction

Contamination associated □ith land that is □eing rede□eloped is managed through the planning system□Contaminated land must □e considered in the conte□t of the de□elopment proposals and remediated such that the land is suita□le for its intended use□Once remediated□land should not □e capa□le of □eing determined as “contaminated land” under the provisions of Part 2A of the □n□ironmental Protection □ct □□□□□

This G□R□ has □een completed □y adopting a strategy for the assessment of potential land contamination □ased on current guidance□Land Contamination□Ris□ Management – LCRM □□□□□

6.2 Planning framework

□e□ de□elopment is regulated under the To□n and Country Planning □ct □□□□ □as amended□□ This regime pro□ides a mechanism for the planning authority to enforce the proper in□estigation of a de□elopment site in order to ensure that once de□elopment has occurred the site is suita□le for its intended use□In □ngland□the □ational Planning Policy Frame□or□ □□PPF□pro□ides guidance on the implementation of contaminated land and pollution management re□uirements to address contamination ris□s associated □ith future site uses through the planning system□ Paragraphs □□□□□□□□□□□□and □□□ of the Decem□er □□□□ □PPF state the follo□ing□

□□□□Planning policies and decisions should contri□ute to and enhance the natural and local en□ironment □y□

- Pre□enting ne□ and e□isting de□elopment from contri□uting to□□eing put at unaccepta□le ris□ from□or □eing ad□ersely affected □y□unaccepta□le le□els of soil□air□□ater or noise pollution or land insta□ility□De□elopment should□□here□er possi□le□help to impro□e local en□ironmental conditions such as air and □ater □uality□ta□ing into account rele□ant information such as ri□er □asin management plans□and
- Remediating and mitigating despoiled□degraded□derelict□contaminated and unsta□le land□ □here appropriate□

□□□□Planning Policies and decisions should ensure that□

- □ site is suita□le for its proposed use ta□ing account of ground conditions and any ris□s arising from land insta□ility and contamination□This includes ris□s arising from natural ha□ards or former acti□ities such as mining□and any proposals for mitigation including land remediation □as □ell as potential threats on the natural en□ironment arising from that remediation□□
- □fter remediation□as a minimum□land should not □e capa□le of □eing determined as contaminated land under Part II□ of the □n□ironmental Protection □ct □□□□□and
- □de□uate site in□estigation information□prepared □y a competent person□is a□aila□le to inform these assessments□

□□□□□ here a site is affected □y contamination or land sta□ility issues□responsi□ility for securing a safe de□elopment rests □ith the de□eloper and/or lando□ner□

□□□□Planning policies and decisions should also ensure that ne□ de□elopment is appropriate for its location ta□ing into account the li□ely effects □including cumulati□e effects□of pollution on health□li□ing conditions and the natural en□ironment□as □ell as the potential sensiti□ity of the site or the □ider area to impacts that could arise from the de□elopment□

6.3 Methodology

The strategy for this G□R□ of potential land contamination adopted in this report is □ased on current □H□C □□ational House□□uilding Council□□□□ □□n□ironment □gency□□and CI□H □Chartered Institute of □n□ironmental Health□□□□□□□guidance□The methodology for assessing ris□s is presented in □ppendi□ F□

This G□R□ in□ol□es the selection of appropriate screening criteria□screening of ground in□estigation data□and su□se□uent interpretation□This interpretation is applied to refine the pre□ious CSM included in the Sea Lin□ Rich□orough□Preliminary Ris□ □ssessment □PR□□□□□□ This refined ris□ assessment is included in Section □□□□□ here the results of this ris□ assessment indicate that areas of land contamination are present □hich constitute unaccepta□le ris□s□consideration may then □e gi□en to the most appropriate means to minimise and manage these ris□s□

6.4 Generic Assessment Criteria

6.4.1 Human Health Criteria

□□aila□le Generic □ssessment Criteria □G□C□for human health ha□e □een deri□ed for specific land uses and soil organic matter □SOM□□These G□C consider SOM contents of □□□□ □most conser□ati□e□□□□□ and □□□□ □least conser□ati□e□□

The first step in the selection of G□C is to determine the most appropriate generic land use scenario of the proposed de□elopment□To do so□the follo□ing characteristics of the proposed de□elopment are considered□

- The site is in open space□although the Con□erter Station □ill not □e accessi□le to the general pu□lic□the site is surrounded □y typically agricultural land□
- The Con□erter Station □ill □e underlain □y hardstanding□
- The ca□le connection □ill □e □uried and therefore inaccessi□le to site end users□
- There are no residential receptors □ithin □□□m of the proposed de□elopment□Residential receptors are □ery unli□ely to □e e□posed to potentially contaminated soils considering the addition of hardstanding and □urying of the ca□le connection□
- Maintenance □or□ers and/or site□end users □ill □e mandated to □ear appropriate personal protecti□e e□uipment □PP□□□

The characteristics of the de□elopment are most reflecti□e of the “Commercial” generic end use□ This is □ecause path□ays to off□site human receptors are □ery unli□ely to □e significant□ Therefore□the G□C deri□ed for a Commercial end□use scenario are applied to soil data to characterise ris□ from soil□□ound contamination□The □alues for a SOM of □□ □ere selected due to the percentage SOM that □as calculated from the total organic car□on□the a□erage SOM □as calculated as □□□□□ □from the a□erage total organic car□on of □□□□ □ □/□□

Soil data □ere screened against a hierarchical frame□or□consisting of □idely used G□C deri□ed □y different organisations□Preferentially□the Suita□le for □se Le□els □S□□ls□de□eloped □y Land □uality Management and the Chartered Institute of □n□ironmental Health □L□M/CI□H□ □ere applied□□ here necessary□□alues □ere supplemented using G□C produced □y CL□□IR□□ □□□□□Further information on screening criteria is included in □ppendi□ C□

6.4.2 Controlled Waters Criteria

Due to the pro□imity of surface □ater features □ithin all three sections of the site □on site □ater □odies include□Minster Stream and Ri□er Stour□detailed further in Section □□□□□the Surface

Fresh□ater □n□ironmental □uality Standards □□nnual □□erage□□□S□□□□ere selected as appropriate screening criteria□

Due to the identification of Thanet Formation□classified as a Secondary □ a□uifer □□□ underneath the site□the □nited □ingdom Drin□ing □ ater Standards □□ D□ S□□ere also selected as appropriate screening criteria□considerate of the potential for the a□uifer to □e used for drin□ing □ater / food production purposes□

Therefore□a non□hierarchical frame□or□ of the Surface Fresh□ater □□S□□□ and □□ D□ S □ere applied to geo□en□ironmental data□Further information on screening criteria is included in □ppendi□ D□

Site specific predicted no effect concentrations □P□□C□□ere deri□ed for the site using Metal □ioa□aila□ility □ssessment Tool □M□□T□□□□□These ha□e □een used as site specific □□S □alues for Copper□□ic□el□□inc and Manganese□The P□□C □alues are displayed in Ta□le □□□□ They □ere calculated from the a□erage □alues of the pH and calcium and dissol□ed organic car□on □DOC□□The pH and calcium □alues □ere ta□en from the □□ □ater samples□

La□oratory testing □as not carried out to □uantify the dissol□ed organic car□on □DOC□in the ground□ater samples□so a pro□y □alue has □een ta□en from a fresh□ater □ody that flo□s into the rece□ing □ater □ody □Ri□er Stour□□Fresh□ater sampling □alues ha□e found on the □n□ironmental □gency □ ater □uality □rchi□e □□□□□The sampling point is identified as RS□□□□□ □ear Pluc□s Gutter □ estern Mon□ton Stream□located appro□imately □□m from the site□due to the lac□ of more pro□imal samples or samples from the rece□ing □ater □ody this dataset has □een used□□ut consideration should □e ta□en □hen considering the calculated P□□C □alues□□ median DOC □alue of □□□□mg/l □as used to calculate the P□□C □alues□

□ similar tool is a□aila□le to generate a site specific P□□C □alue for lead□this □alue has not □een calculated for this site as the only input □alue is the DOC and due to the a□sence of any site specific inputs a calculated lead P□□C □alue is not considered representati□e of the site□

Table 6.1: Calculated PNEC Values

Determinant	PNEC Value (ug/l)
Copper	□□□□□
Manganese	□□□□□□
□ic□el	□□□□□
□inc	□□□□□

The calculation for the P□□C □alues is included in □ppendi□ G□

6.5 Human Health Assessment

6.5.1 Soils screening

Soil la□oratory testing □as underta□en on □□ samples and compared □ith the human health G□Cs descri□ed a□o□e□The complete set of la□oratory chemical test data is included □ithin the Structural Soils Factual GI report□The results of the soil screening are included in □ppendi□ □□□□ The soil tests comprised of □ Made Ground samples□and □□ natural samples □□□ Topsoil□□□ Tidal Flat Deposits□and □ samples from the Thanet Formation□□

There □ere no e□ceedances □hen compared □ith human health G□Cs□□s□estos identification testing □as carried out on □□ samples□none of □hich identified as□estos□

Four samples □ere tested for TPH concentrations □three Made Ground and one natural □tidal flat deposit□□□The natural deposits recorded TPH □elo□ their la□oratory limits of detection

□LOD□□Ho□e□er□the made ground deposits had concentrations a□o□e LOD□□ith a ma□imum total TPH concentration of □□mg/□g in R□□□□H□□□ at □□□□m depth□

□T□□ and PC□ concentrations □ere recorded □elo□ the LOD in all soil samples tested□

□□ soil samples □ere tested for P□Hs□the ma□ority of samples □ere □elo□ the LOD□the ma□imum Total P□H concentration is □□□□mg/□g□

□□ soil samples □ere tested for pesticides□the ma□ority of determinants □ere □elo□ the LOD□ three determinants □ere a□o□e the LOD□these □ere Triallate□p□p□DD□ □□□□□and p□p□DDD □□□□□□ □ith ma□imum concentrations of □□□□mg/□g□□□□□mg/□g and □□□□mg/□g respecti□ely□

6.5.2 Human Health Risk Assessment – Interpretation

There are no e□ceedances of G□Cs for a commercial end use in soils across the proposed de□elopment and as□estos has not □een identified□This confirms that the soils encountered are unli□ely to pose an unaccepta□le ris□ to site end users follo□ing de□elopment□

6.6 Water Environment Risk Assessment

6.6.1 Soil Leachate Screening

Soil leachate la□oratory testing □as underta□en on □□ samples and compared □ith the □□ D□ S and □□S as descri□ed a□o□e□The results of the soil leachate screening are included in □ppendi□ □□□□

The soil leachate tests comprised of t□o Made Ground and □□ natural deposits □si□ Topsoil□ se□en Tidal Flat Deposits and three Thanet Formation□□

There are □□ e□ceedances of □□ D□ S and □□ e□ceedances of □□S□these are displayed in Ta□le □□□□□ote that a direct comparison of soil leachate test results □ith the □ater □uality standards is a conser□ati□e method□as it o□erestimates the a□aila□ility of determinants to dissol□e□

Table 6.2: Leachate Exceedances

Contaminant	Location of Exceedance (Depth m)	Depth (m)	Strata	Concentration measured	DWS	EQS
Fluoride	R□□□H□□□	□□□	Tidal Flat	□□□ mg/l	□□□mg/l	□
Sulphate	R□□□TP□□□	□	Tidal Flat	□□□□□□ mg/l	□□□ mg/l	□□□ mg/l
Cyanide □Total□	R□□□H□□□	□□□	Tidal Flat	□□□□ mg/l	□□□ mg/l	□□□□ mg/l
Iron	R□□□H□□□	□□□	Topsoil	□□□ □g/l	□□□ □g/l	□□□ □g/l
	R□□□H□□□	□□□	Tidal Flat	□□□ □g/l		
	R□□□H□□□	□□□	Made Ground	□□□ □g/l		
	R□□□H□□□	□□□	Thanet Fm	□□□ □g/l		
	R□□□H□□□	□□□	Tidal Flat	□□□ □g/l		
	R□□□H□□□	□□□	Tidal Flat	□□□ □g/l		
	R□□□TP□□□	□□□	Topsoil	□□□ □g/l		
	R□□□TP□□□	□□□	Thanet Fm	□□□ □g/l		
	R□□□TP□□□	□□□	Topsoil	□□□ □g/l		
	R□□□TP□□□	□□□	Topsoil	□□□ □g/l		
	R□□□TP□□□	□	Tidal Flat	□□□ □g/l		
	R□□□TP□□□	□□□	Topsoil	□□□□ □g/l		

Contaminant	Location of Exceedance (Depth m)	Depth (m)	Strata	Concentration measured	DWS	EQS
Lead	R□□□□H□□□	□□□	Tidal Flat	□ □g/l	□□ □g/l	□□□ □g/l
	R□□□□H□□□	□□□	Topsoil	□ □g/l		
	R□□□□H□□□	□□□	Tidal Flat	□ □g/l		
	R□□□□H□□□	□□□	Tidal Flat	□ □g/l		
	R□□□□H□□□	□□□	Made Ground	□ □g/l		
	R□□□□H□□□	□□□	Thanet Fm	□ □g/l		
	R□□□□H□□□	□□□	Tidal Flat	□ □g/l		
	R□□□□H□□□	□□□	Tidal Flat	□ □g/l		
	R□□□TP□□□	□□□	Tidal Flat	□ □g/l		
	R□□□TP□□□	□□□	Topsoil	□ □g/l		
	R□□□TP□□□	□□□	Thanet Fm	□ □g/l		
	R□□□TP□□□	□	Thanet Fm	□ □g/l		
	R□□□TP□□□	□□□	Topsoil	□ □g/l		
	R□□□TP□□□	□□□	Topsoil	□ □g/l		
	R□□□TP□□□	□	Tidal Flat	□ □g/l		
	R□□□TP□□□	□□□	Topsoil	□□ □g/l		
Manganese	R□□□TP□□□	□□□	Thanet Fm	□□ □g/l	□□ □g/l	□□□□□□ □g/l
	R□□□TP□□□	□□□	Topsoil	□□ □g/l		
Magnesium	R□□□TP□□□	□□□	Thanet Fm	□□□ □g/l	□□ □g/l	□
	R□□□TP□□□	□	Thanet Fm	□□□ □g/l		
□anadium	RP□TP□□□	□□□	Thanet Fm	□□ □g/l	□	□□ □g/l
□inc	R□□□□H□□□	□□□	Made Ground	□□ □g/l	□□□□ □g/l	□□□□□ □g/l
	R□□□□H□□□	□□□	Thanet Fm	□□ □g/l		
	R□□□TP□□□	□□□	Thanet Fm	□□ □g/l		
	R□□□TP□□□	□	Thanet Fm	□□ □g/l		

6.6.2 Groundwater Screening

Ground□ater samples □ere ta□en from eight sampling □ells on three monitoring rounds□□□ ground□ater samples under□ent la□oratory testing□The results of the ground□ater screening are included in □ppendi□ □□□□

There are □□□ e□ceedances of □□ D□ S and □□ e□ceedances of □□S□these are summarised in Ta□le □□□□

Table 6.3: Groundwater exceedances

Contaminant	UK DWS	EQS	Number of Exceedances	Ranges of exceedances
□mmoniacal nitrogen as □	□□□□ mg/l	□□□ mg/l	□□	□□□ mg/l □□□□□ mg/l
Chloride	□□□ mg/l	□□□ mg/l	□□	□□□ mg/l – □□□□□ mg/l
□itrate	□□□□ mg/l	□	□	□□□ mg/l – □□□□ mg/l
Sulphate	□□□ mg/l	□□□ mg/l	□□	□□□ mg/l – □□□□ mg/l
□oron	□□□□ □g/l	□□□□ □g/	□	□□□□ □g/l □□□□ □g/l
□arium	□□□□ □g/l	□	□	□□□□□g/l – □□□□ □g/l
Calcium	□	□□□ mg/l	□□	□□□ mg/l – □□□□ mg/l

Contaminant	UK DWS	EQS	Number of Exceedances	Ranges of exceedances
Copper	□□□□ □g/l	□□□□□ □g/l	□	□□□ □g/l
Iron	□□□ □g/l	□□□□ □g/l	□□	□□□ □g/l – □□□□□ □g/l
Manganese	□□ □g/l	□□□□□□ □g/	□□	□□ □g/l – □□□□□ □g/l
Magnesium	□□ mg/l	□	□□	□□mg/l – □□□ mg/l
Mercury	□ □g/l	□□□□ □g/l	□	□□□ □g/l
□ic□el	□□ □g/l	□□□□□ □g/l	□	□□ □g/l
□inc	□□□□ □g/l	□□□□□ □g/l	□	□□ □g/l – □□□ □g/l
□li □C□□C□□	□□ □g/l	□	□	□□ □g/l – □□ □g/l
□li □C□□□C□□	□□ □g/l	□	□	□□ □g/l
□ro □C□□C□□	□□ □g/l	□	□	□□ □g/l – □□□ □g/l
□ro □C□□□C□□	□□ □g/l	□	□	□□ □g/l – □□ □g/l
□ro □C□□□C□□	□□ □g/l	□	□	□□ □g/l – □□ □g/l
□ro □C□□□C□□	□□ □g/l	□	□	□□ □g/l

6.6.3 Water Environment Risk Assessment – Interpretation

□ num□er of minor e□ceedances Fresh□ater □□S and □□ D□ S □ere measured in soil leachate samples□the ma□ority of these relate to hea□y metals and inorganics and typically sho□ marginal e□ceedances of the G□C□The concentrations of metals in ground□ater samples ha□e not detected ele□ated concentrations of the same inorganics□suggesting that potential leaching of those inorganics is unli□ely□The ground□ater samples also sho□ ele□ated hea□y metals □ut at concentrations a□o□e those measured in the soil leachate□suggesting the site soils are not the source□□reas of hardstanding and surface □ater drainage at the su□station and con□erter station □ill reduce the rate of infiltration and leaching of potential contaminants from soil into the ground□ater□

The ground□ater testing has detected e□ceedances of ele□ated hea□y metals□inorganics and TPH concentrations a□o□e Fresh□ater □□S and □□ D□ S□The ma□ority of the ground□ater e□ceedances are minor □ith moderate e□ceedances of ammoniacal nitrogen as □□chloride□ nitrate□sulphate□manganese□magnesium and □inc□The e□ceedances of inorganics and hea□y metals in the ground□ater are li□ely representati□e of natural □ac□ground concentrations in the a□sence of an apparent source and the pre□alence of concentrations across the site□

The highest concentrations of □inc in the ground□ater □ere identified in R□□□□□□□ at depths of □□m □ith all three samples e□ceeding □□S ranging from □□□ □g/l – □□□ □g/l□suggesting high concentrations of □inc in ground□ater are localised and at depth□□ith no apparent source of □□S e□ceedances from soil leachate□The proposed de□elopment is anticipated to e□ca□ate a □olume of material to ena□le construction □or□s□this □ould remo□e a potential source of identified ground□ater e□ceedances□

The □□ e□ceedances of □□ D□ S G□Cs for TPH fractions occurred in □ □oreholes□□□ of the e□ceedances □ere in samples from R□□□□H□□□ at shallo□ depths ranging from □□□m – □□□m□ This suggest that the minor TPH G□C e□ceedances are localised and potentially a result of agricultural use of the land□

The nearest surface □ater receptors are field drains including Minster Stream and the Ri□er Stour□The H□DC ca□le route crosses Minster Stream□and the Proposed Su□station and Con□erter station are located appro□imately □□m from Minster Stream□The Ri□er Stour is located appro□imately □□□m to the □est of the Proposed Su□station and Con□erter Station and is crossed □y the OHL□□ith the closest pylon appro□imately □□m from the ri□er□an access route proposed to cross the ri□er□Ground□ater concentrations e□ceed Fresh□ater □□S□if de□atering

is necessary during site □or□s or e□ca□ations the □ater may need to □e disposed of rather than discharged□

6.7 Ground Gas Monitoring

Ground gas monitoring □as carried out in eight monitoring □ells□Four monitoring □ells had one monitoring □isit on the □□ □o□em□er □R□□□□H□□□□R□□□□H□□□□R□□□□H□□□ and R□□□□H□□□□ and four monitoring □ells had four monitoring □isits carried out on the □□ □o□em□er□□□ Decem□er□□ □anuary and □□ □anuary □R□□□□H□□□□R□□□□H□□□□R□□□□H□□□□

During all of the monitoring □isit□s□the response □ones in the installations □ere recorded to □e flooded□□s discussed in CIRI□ C□□□□rising □ater □ithin the screened section a□o□e the response □one can compress the gas a□o□e the □ater column □hich can result in higher pea□ flo□ readings□The ground gas monitoring results are therefore not considered to □e representati□e of the ground gas conditions at the site and ha□e not □een used to inform a ground gas ris□assessment□The results of the monitoring rounds are included in □ppendi□ □□□□

The proposed de□elopment includes control □uildings at the su□station and con□erter station sites□These structures □ill ha□e concrete floor sla□s □ith minimal ser□ice penetrations □hich □ill □e sealed□Ground gas ris□to these receptors has therefore □een assessed in accordance □ith □S□□□□□□□□□□□□□□□□□□□□□□□□ and CIRI□ C□□□□

The PR□ □□□identified a ground gas ris□from off□site historical landfills □hich at the time of □riting □as □ithin appro□imately □□□m of the site □oundary□□hich follo□ing re□ision of the site □oundary no□ is located appro□imately □□□m south of the site□□s such□this is not considered to represent an apprecia□le source of ele□ated ground gases □hich may pose a ris□ □ithin structures in the proposed de□elopment area□□o o□ertly organic deposits □ere recorded □ithin □icinity of the con□erter station and su□station site □hich □ould □e considered to represent a source of ele□ated ground gases□The made ground encountered near the su□station and con□erter station site is less than □□□m thic□and are anticipated to indicate a lo□ ground gas generation potential□In addition□the recorded tidal flat deposits are primarily cohesi□e in composition and are li□ely to present a significant □arrier to any migration of ele□ated ground gases into the control □uildings□Due to the a□sence of an apprecia□le source of ele□ated ground gas and migratory path□ays□the o□erall ris□posed to the site from ground gas is considered to □e lo□ and is assessed as Characteristic Situation □ □CS□□□□□□□□□□Ground gas protection mitigation measures are not considered necessary for the proposed de□elopment on□ site□

Potential ris□from ground gases to construction and maintenance □or□ers □or□ing in e□ca□ations and other confined spaces □ill □e dealt □ith □y the Contractor□in□accordance □ith current Confined Spaces Regulations□

6.8 Deviating Samples

□ num□er of samples collected □y Structural Soils Ltd during ground in□estigation e□ceeded their la□oratory holding times resulting in de□iating results □hen sent for la□oratory testing at □n□ironla□□□ num□er of samples □ere not supplied □ith a sample date to su□contracting La□oratory RPS□resulting in the samples □een classed as de□iating□□ summary of the de□iating tests and associated determinands is gi□en in Ta□le □□□□Due to the similarities in concentrations □et□een the de□iating and non□de□iating samples and the relati□ely lo□ contamination encountered in the soil samples□all of the results ha□e □een re□ie□ed as part of the assessment□

Table 6.4: Deviating Samples

Test Type	Number of samples affected	Deviating Determinants
R□□□□H□□□ Soil at □□□□m and R□□□TP□□□ Soil at □□□□m	□	Fraction of Organic Car□on □organic matter and Total organic car□on
R□□□□H□□□ Soil at □□□□m□R□□□□H□□□ Soil at □□□□m□R□□□□H□□□ Soil at □□□□m□R□□□TP□□□ Soil at □□□□m□R□□□TP□□□ Soil at □□□□m□R□□□TP□□□ Soil at □□□□m□R□□□TP□□□ Soil at □□□□m□R□□□TP□□□a Soil at □□□□m□R□□□TP□□□ Soil at □□□□m□R□□□TP□□□ Soil at □□□□m□	□□	MM Pesticide Soil Suite
□ ater samples ta□en on the □□/□□/□□□□ R□□□□H□□□ □ ater at □□□□m□R□□□□H□□□ □ ater at □□□□m□R□□□□H□□□ □ ater at □□□□m□R□□□□H□□□ □ ater at □□□□m□R□□□□H□□□ □ ater at □□□□m□R□□□□H□□□ □ ater at □□□□m□R□□□□H□□□ □ ater at □□□□m	□	□mmoniacal nitrogen as □□Phenols □G □speciated HPLC□
□ ater samples ta□en on the □□/□□/□□□□ R□□□□H□□□ □ ater at □□□□m□R□□□□H□□□ □ ater at □□□□m□R□□□□H□□□ □ ater at □□□□m□R□□□□H□□□ □ ater at □□□□m□R□□□□H□□□ □ ater at □□□□m□R□□□□H□□□ □ ater at □□□□m	□	□PHC□ G

6.9 Conceptual Site Model

6.9.1 Introduction

The Sea Lin□ F□□D Rich□orough PR□ □□□includes a CSM de□eloped from preliminary information □ith reference to □□ guidance including the Environment Agency's Land Contamination Ris□ Management □LCRM□□□□□and CIRI□ C□□□ □□□□□Follo□ing the most recent Ground in□estigation□the CSM has □een refined and the potential pollutant lin□ages ha□e □een updated□□ summary of the potential sources□path□ays and receptors and the potential pollutant lin□ages □ased on the information collected to date□is presented □elo□□

Follo□ing the procedures in LCRM □□□□□the e□isting CSM is updated □elo□ as according to site□ specific ground conditions□

Due to the nature of the de□elopment and the distance from a potential ground gas source□the ris□ from ele□ated ground gas concentrations is considered □ery lo□ ris□ and is not included in the ris□ assessment□

The preliminary ris□ assessment in the PR□ □□□identified off□site industrial use of land as a potential source□due to the a□sence of soil e□ceedances of soil commercial G□Cs□the impact of offsite sources on the site is considered to □e lo□ ris□ and off□site sources are not included in the ris□ assessment□

6.9.2 Sources

S1: Presence of hea□y metals and inorganics a□o□e □□S and D□ S in soil leachate in the soils on site

S2: Presence of hea□y metals□inorganics and TPH a□o□e □□S and D□ S in the ground□ater on the site

6.9.3 Pathways

P1: Human upta□e □ingestion□dermal contact□inhalation of dusts/□apours from soils and/or ground□ater□

P2: Leaching or mo□ement of mo□ile contamination through unsaturated strata

P3: Mo□ement of mo□ile contamination through saturated strata

P4: Man□made path□ays e□g□ e□ca□ation□ca□le route □including HDD□and foundations □piles□

P5: Direct contact □ith contaminated or corrosi□e soils/ □ater

P6: Surface run□off

6.9.4 Receptors

R1: Construction and maintenance □or□ers

R2: Future site users□□operational □or□ers□

R3: Construction materials / □uilt en□ironment □foundations and ca□les□

R4: □ ater en□ironment□

R4a: Surface □ater □land drains □e□g□Minster Stream□□Ri□er Stour□

R4b: □edroc□Ground□aters □Secondary □ a□uifer – Thanet Formation□

6.9.5 Assumptions

The follo□ing assumptions ha□e □een made for the geo□en□ironmental ris□assessment of the Sea□Lin□ Rich□orough site area□

- The assessment assumed that no ne□ sources of contamination □ill □e introduced during the de□elopment – i□e□construction materials □ill □e non□ha□ardous and inert□all imported topsoil □ill □e compliant □ith □S □□□□□□□□□□
- It is assumed that a ro□ust Construction □n□ironmental Management Plan □C□MP□□ill □e adopted during the □or□s and□as a result□no contamination □ill occur from lea□s and spills during construction□
- The assessment only applies to the de□elopment proposals detailed □ithin this report□
- The ris□assessment does not consider as□estos or radiological contamination□

Figure 6.1: Updated CSM

Sources

S1: : Presence of heavy metals and inorganics above EQS and DWS in soil leachate in the soils on site

S2: Presence of heavy metals, inorganics and TPH above EQS and DWS in the groundwater on the site

Pathways

P1: Human uptake (ingestion, dermal contact, inhalation of dusts/vapours 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. 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

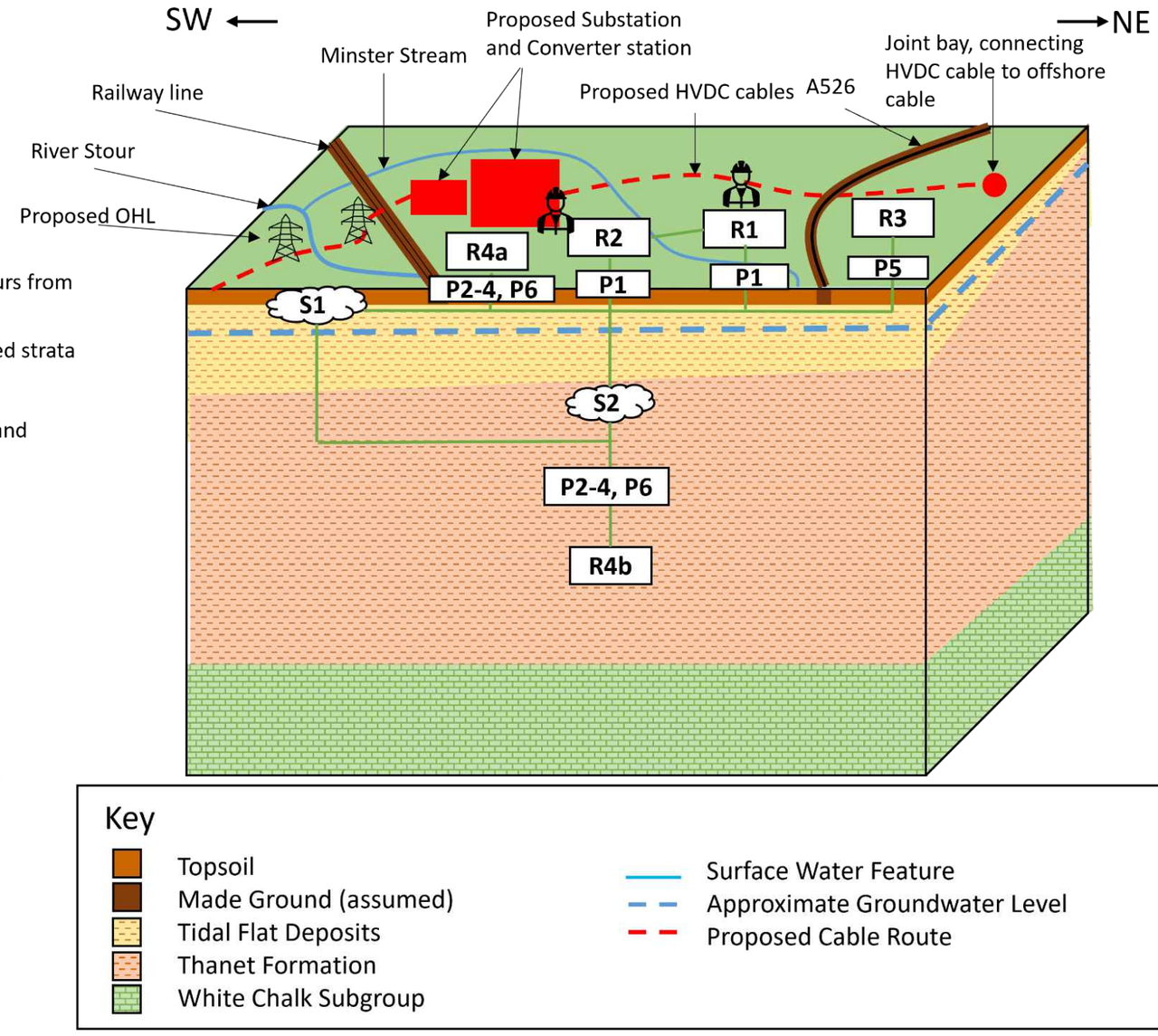
R2: Future site users, (operational workers)

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

R4: Water environment:

R4a: Surface water (land drains (e.g. Minster Stream), River Stour)

R4b: Bedrock Groundwaters (Secondary A aquifer – Thanet Formation)



Source□ Mott MacDonald □□□□

Table 6.5: Quantitative Risk Assessment

Source	Pathway	Receptor	Current Risk	Comments and mitigation measures
On□Site sources				
S□□Presence of hea□y metals and inorganics a□o□e □□S and D□ S in soil leachate in the soils on site S□□Presence of hea□y metals□ inorganics and TPH a□o□e □□S and D□ S in the ground□ater on the site□	P□□Human upta□e □ingestion□dermal contact□inhalation of dusts/□apours from soils and/or ground□ater□	R□□Construction and maintenance □or□ers	Pro□a□ility□Li□ely Conse□uence□Mild Ris□□Lo□	□□□o □isual or olfactory e□idence of contamination □as recorded during GI□The ris□ to construction □or□ers and maintenance □or□ers should □e mitigated □y adopting safe □or□ing practices co□ered under R□MS and a site specific C□MP□such as the use of PP□ and regular hand □ashing□□ ith this mitigation in place□the ris□ should □e reduced to □ery lo□□Ris□ management highlighted through method statements and contractor ris□ assessments□ The ris□ to future site users is considered lo□ as the H□DC ca□les □ill □e □uried and the su□station and con□erter station □ill □e underlain □y hardstanding□□hich □ill li□ely pro□ide protection from contaminant path□ays□
		R□□Future site users□ □operational □or□ers□	Pro□a□ility□□nli□ely Conse□uence□Minor Ris□□□egligi□le	
	P□□Direct contact □ith contaminated or corrosi□e soils/ □ater	R□□Construction materials / □uilt en□ironment □foundations and ca□les□	Pro□a□ility□Li□ely Conse□uence□ Medium Ris□□Moderate Ris□	□□Ris□ to the construction materials/ □uilt en□ironment should □e mitigated through design □y the selection of the appropriate concrete specification for the Site□□n assessment for soil aggressi□ity including indicati□e Design Sulphate and □C□C Classes has □een underta□en as part of a Ground In□estigation Report □ritten □y Mott MacDonald □□□reference should □e made to the Ground In□estigation for design recommendations□
	P□□Leaching or mo□ement of mo□ile contamination through unsaturated strata P□□Mo□ement of mo□ile contamination through saturated strata P□□Man□made path□ays e□g□ e□ca□ation□ca□le route □including HDD□and foundations □piles□ P□□Surface run□off	R□a□Surface □ater □and drains □e□g□Minster Stream□□Ri□er Stour□	Pro□a□ility□Li□ely Conse□uence□ Medium Ris□□Moderate Ris□	□□□□ceedances of □□S and D□ S in soil leachate are primarily from hea□y metals and inorganics□There is potential for contaminants to enter surface □ater features from contaminated ground□ater and soil leachate□The nearest surface □ater receptors are field drains including Minster Stream and the Ri□er Stour□The H□DC ca□le route crosses Minster Stream□and the Proposed Su□station and Con□erter station are located appro□imately □□m from Minster Stream□The Ri□er Stour is located appro□imately □□□m to the □est of the Proposed Su□station and Con□erter station and is crossed □y the OHL□□ith the closest pylon located appro□imately □□m from the ri□er and an access route proposed to cross the ri□er□ The e□ceedances Fresh□ater □□S G□Cs in soil leachate are minor suggesting that the li□elihood of soil leachate contaminants affecting surface □ater □odies is lo□□To mitigate the ris□ to surface □aters a suita□le material reuse policy should □e esta□lished□ If de□atering is re□uired during construction the ground□ater e□tracted should □e considered for disposal as discharging to surface □ater receptors may not □e appropriate□Pre□treatment of any e□tracted ground□ater should □e considered prior to disposal□su□□ect to regulatory appro□al□
		R□□□□edroc□ Ground□aters □Secondary □ a□uifer – Thanet Formation□	Pro□a□ility□Li□ely Conse□uence□ Medium Ris□□Moderate Ris□	□□Contamination is already present in the ground□ater □eneath the site□comprising of D□ S and □□S e□ceedances of hea□y metals□inorganics and TPH□ It is possi□le that trenching and HDD for the de□elopment □ill □e □ithin the Thanet Formation to the □est of the site□□hich may create additional path□ays for contaminants to migrate□due to the e□isting contamination in the ground□ater at shallo□ depths and deeper depths it is unli□ely that additional contamination □ill spread□ The ma□ority of the site is underlain □y tidal flat deposits□other than a localised section to the east□the tidal flat deposits are li□ely to pro□ide a lo□ permea□ility □arrier against soil leachate contaminants migration to the Thanet Formation from shallo□er depths□ The e□ceedances of □□ D□ S of inorganics and hea□y metals are anticipated to □e due to ele□ated □ac□ground concentrations□the e□ceedances of TPH are minor and localised□and remediation is not considered necessary□ If de□atering is re□uired during construction the ground□ater e□tracted should □e considered for disposal as discharging to ground□ater receptors may not □e appropriate□

7 Waste Soil Categorisation

7.1 Waste Categorisation for Soils

□ aste classification is a t□o□stage process□□ith the first step comprising a ha□ard assessment of the soil □uality data in line □ith the guidance set out in the □n□ironment □gency □aste classification technical guidance □ M□ document□Once the ha□ardous properties of the materials are □no□n□the second stage is to assess the potential performance of the materials in a landfill□this is underta□en □y considering the results of □aste acceptance criteria □□ □C□ testing□

Generally□□astes that are classified as ha□ardous □ill need to □e deposited in a ha□ardous □aste landfill or □ithin a sta□le non□reacti□e ha□ardous □aste cell in a non□ha□ardous □aste landfill □depending on the □ □C test results□□□ astes that are sho□n to □e non□ha□ardous may either □e deposited in a non□ha□ardous □aste landfill □for □hich no □ □C tests are re□uired□or as inert □aste □□hich □ould re□uire confirmation of suita□ility for this □aste stream through □ □C testing□□

It is the responsi□ility of the producer to ensure that all □aste created on site undergoes □asic characterisation prior to disposal in an appropriate landfill□and an indication of the li□ely classification is pro□ided here□

7.2 HazWasteOnline™ Summary

Soil □uality data from the in□estigation □as entered into a ha□ard assessment tool□ Ha□□ asteOnline™ □□□□□The tool uses the current □ M□ technical guidance document to determine □hether the su□stances contained in the soils tested e□ceed any ris□phrases that □ould render the materials as ‘hazardous’ waste.

The tool includes a num□er of options for using the different □alences □chemical species□or compounds that may □e present□□ here options □ere a□aila□le these □ere generally set at the default □□orst case assessment□for the model in accordance □ith the guidance set out in □ M□□

It should □e noted that he□a□alent chromium □chromium □I□concentrations □ere found □elo□ la□oratory detection limits □ithin all samples□therefore□for the purposes of this assessment□it has □een assumed that no chromic compounds are present□

The results of soil analyses from the site □ere entered into Ha□□ asteOnline™ soft□are to determine ha□ard assessment in line □ith the □n□ironment □gency □ MC guidance □□□□□The results of the Ha□□ asteOnline™ □ssessment is a□aila□le in □ppendi□ H□

□ll samples □ere assessed as non□ha□ardous□

7.3 WAC Testing

Four □ □C tests □ere underta□en as part of the Structural Soils Ltd ground in□estigation□The results of the □ □C testing are discussed □elo□ in Ta□le □□□□

Table 7.1: WAC Testing Results

Exploratory Hole	Depth (mbgl)	Strata	WAC Result
R□□□TP□□□	□	Thanet Fm	Potentially suita□le for disposal at an inert or □on□ha□ardous Landfill – to □e confirmed □ith a
R□□□TP□□□	□□□	Topsoil	

Exploratory Hole	Depth (mbgl)	Strata	WAC Result
			□aste contractor and landfill
R□□□TP□□□	□	Tidal Flat deposits	Potentially suita□le for □on□Ha□ardous landfill□ □not suita□le for inert due to ele□ated Sulphate as SO□□
R□□□TP□□□a	□□□	Topsoil	Potentially suita□le for disposal at an inert or □on□ha□ardous Landfill – to □e confirmed □ith a □aste contractor and landfill

Please note that it is the responsi□ility of the □aste producer to ensure that all □aste created on□ site undergoes □asic characterisation prior to disposal to an appropriate permitted landfill□It is also recommended that the soil la□oratory test certificates □e discussed □ith a □aste operator□ to confirm potential disposal and pre□treatment options□should e□ca□ation and off□site disposal of soils □e re□uired□

8 Conclusions and Recommendations

Conclusions and recommendations for the site □ased on the findings from information gathered during the ground in□estigation is presented □elo□□

8.1 Geo-environmental Conclusions

The G□R□ has assessed the identified pollutant lin□ages at the site as negligi□le to moderate ris□□

GI □or□s completed to date ha□e not recorded □isual or olfactory e□idence of contamination on site□There are no recorded e□ceedances of G□Cs for commercial land use for the proposed site□□s□estos □as not identified in any of the samples during the ground in□estigation□The ris□ to human health has □een assessed as negligi□le to lo□ ris□□

The ris□ to the □ater en□ironment is assessed as moderate ris□□□ceedances of G□Cs of □□S and □□ D□ S standards □ere measured in □oth soil leachate and ground□ater□The source of ground□ater e□ceedances is suggested to □e due to □ac□ground le□els in the soil for naturally occurring determinants or due to historical source affecting the ground □ater□

The ris□ due to ele□ated ground gases has □een assessed as lo□ for the de□elopment□Ground gas protection measures are not re□uired□

The ris□ to the □uilt en□ironment has □een assessed as moderate ris□□this is to □e mitigated through design□

8.2 Geo-environmental Recommendations

The follo□ing recommendations are pro□ided to conclude this G□R□□

- The assessed ris□ to sensiti□e receptors has □een assessed as not significant and□ remediation is not considered to □e re□uired □
- □s no intrusi□e ground in□estigation has □een carried out in the area south of the Ri□er Stour□there is potential for further GI to □e underta□en to inform the OHL detailed design□□s this area □as not in□estigated during this phase of ground in□estigation□this in□estigation should include geo□en□ironmental testing□This □ould □e reported separately from the current phase of □or□s□
- Construction and maintenance □or□ers should use site specific ris□assessments and method statements and□□here necessary□the use of personal protecti□e e□uipment □PP□□□
- Construction dra□ings indicate the relocation of e□ca□ated soil to stoc□piles during construction□The re□use of this material may re□uire additional ris□assessment depending on the □uantity of material to □e reused□□hich may include detailed modelling□further sampling and □alidation testing to ensure suita□ility for re□use of material that □ill ensure ha□ardous su□stances are not introduced to the ground□ater at unaccepta□le concentrations□If the □uantity of soil e□ceeds the e□emption limit□re use of material should □e done under a materials management plan or re□use of □aste en□ironment permit□□hich should □e in place prior to the commencement of e□ca□ated material mo□ement□
- De□atering during construction □or□s is anticipated due to the shallo□ depths ground□ater is encountered across the site□remo□ed ground□ater is unli□ely to □e suita□le for direct discharge □ac□ to ground or surface □ater due to presence of e□ceedances□□ ater may need to □e treated □efore discharge or ta□en offsite for disposal□discussions should □e held □ith the □n□ironment □gency□

- Preliminary □ aste classification using Ha□□ asteOnline™ indicates that the site soils □ould □e non□ha□ardous□It is recommended that a □aste contractor is contacted to discuss appropriate options for disposal if construction □or□s re□uire remo□al of soils from site□
- In the e□ent that une□pected contamination □e found □hen carrying out the proposed de□elopment□□or□s □ill cease and the local planning authority □ill □e ad□ised□The e□tent of any contamination □ill □e in□estigated and a plan to deal □ith this de□eloped□This □ill □e communicated to the local planning authority prior to □or□s commencing□
- The □□O ris□ across the site has □een assessed as medium to high ris□ □y Safelane Glo□al□ they recommended prior to any shallo□ or deep e□ca□ations during construction and/or further ground in□estigation□
  - □□O Safety and a□areness □riefing
  - Site Specific Safety Instructions Training Course
  - □on□intrusi□e □□I□magnetometer sur□ey □greenfield areas only□□for shallo□ intrusi□e □or□s/e□ca□ations□
  - Targeted in□estigation □re□uired as a follo□ □on from □I magnetometer sur□ey for shallo□ intrusi□e □or□s/e□ca□ations□
  - Intrusi□e Magnetometer Sur□ey of pile/□orehole positions □for deep intrusi□e acti□ities/e□ca□ations□□
- Further archaeological in□estigation may □e necessary during construction □or□s su□□ect to consultation □ith the Local □uthority or heritage specialty

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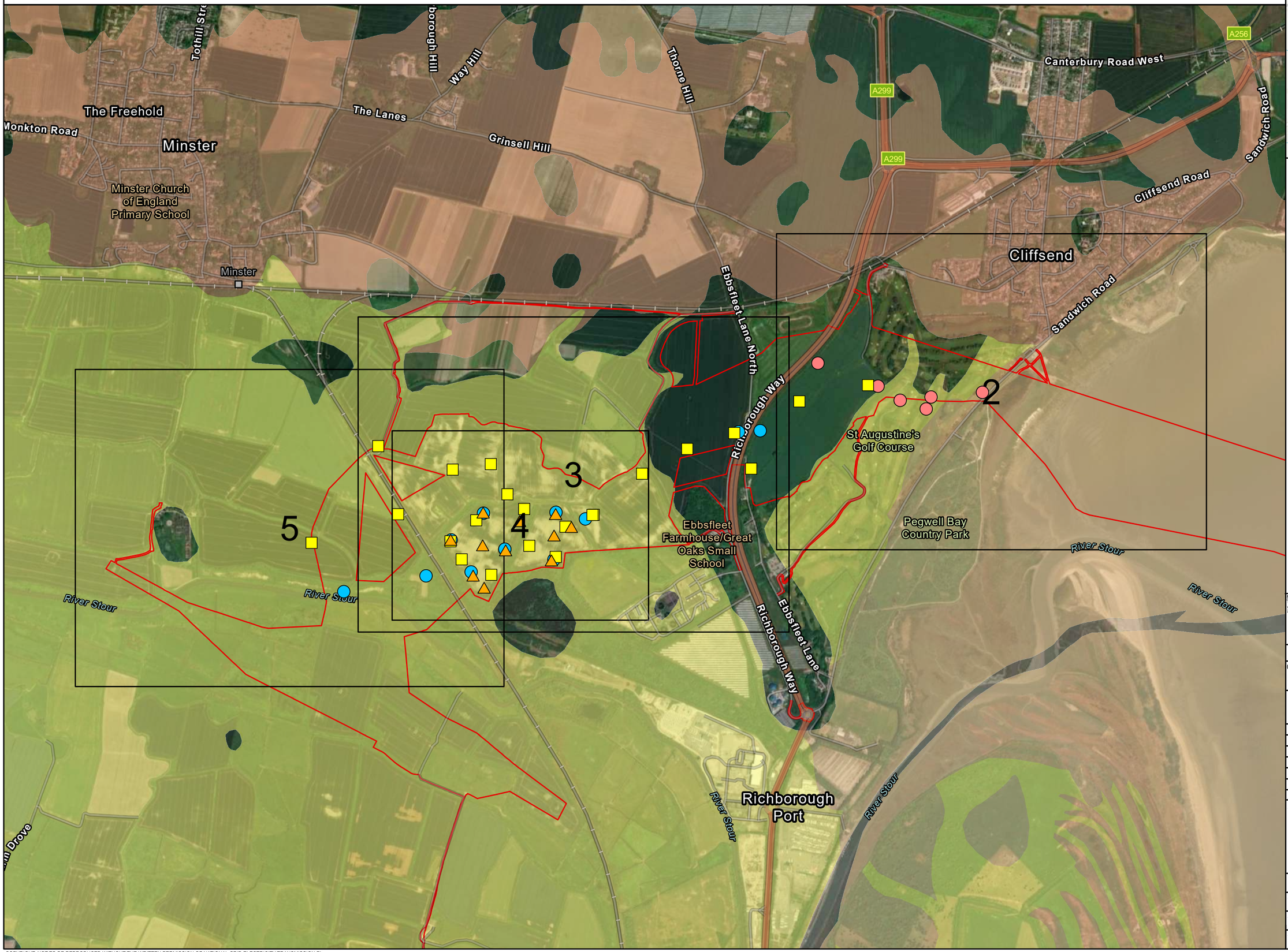
Appendix

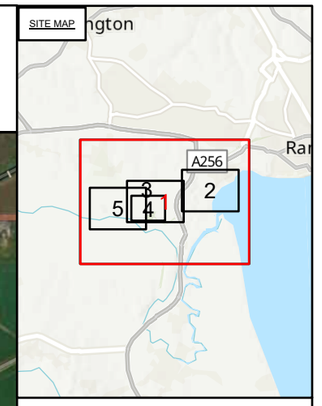
A. Borehole Location Plan

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 5
KENT



SITE MAP



Legend

- Draft Order Limits

Exploratory hole locations (as built)

- Borehole
- Cone Penetration Test
- Red Penguin Borehole
- Trial Pit

Superficial Geology

- Beach and Tidal Flat Deposits - Sand, silt and clay
- Tidal Flat Deposits - Clay and silt
- Head - Clay and silt

Notes
1. This drawing is scaled at paper size A3, therefore any prints taken at smaller sizes will affect accuracy of the measurement units and should not be scaled against
2. Features are not to scale

Coordinate System: British National Grid
Sheet X Centroid Coordinate: 632901.31 Sheet Y Centroid Coordinate: 163316.89

0 145 290 580
Metres

Issue	Date	Remarks	Drawn	Checked	Approved
01	11/04/24	For Information	JF	MH	LG

Title

NATIONAL GRID (SEA LINK) ORDER
GROUND INVESTIGATION -
EXPLORATORY HOLE LOCATION PLAN
SUPERFICIAL GEOLOGY OVERVIEW
SHEET 1 OF 5
KENT

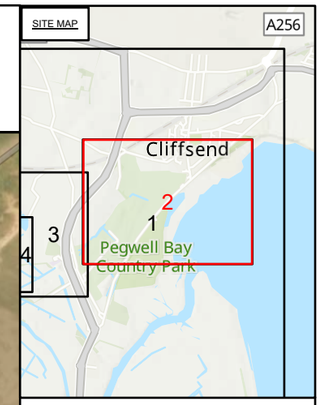
nationalgrid

Application Number
EN020026

National Grid Drawing Reference
SEAL-MMD-SEAL-ENG-DWG-0688

Scale	Sheet Size	Sheet	Issue
1:15,000	A3	SHEET 1 OF 5	01

NATIONAL GRID (SEA LINK) ORDER
GROUND INVESTIGATION -
EXPLORATORY HOLE LOCATION PLAN
INCLUDING SUPERFICIAL GEOLOGY AND HISTORICAL AND CURRENT LAND USES
SHEET 2 OF 5
KENT



Legend

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

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

Key historical features
- Historic landfill sites

Superficial Geology
- Beach and Tidal Flat Deposits - Sand, silt and clay
- Tidal Flat Deposits - Clay and silt
- Head - Clay and silt
- Watercourse

Notes
1. This drawing is scaled at paper size A3, therefore any prints taken at smaller sizes will affect accuracy of the measurement units and should not be scaled against
2. Features are not to scale

Coordinate System: British National Grid
Sheet X Centroid Coordinate: 634369.75 Sheet Y Centroid Coordinate: 163677.52

0 50 100 200 Metres

Issue	Date	Remarks	Drawn	Checked	Approved
01	11/04/24	For Information	JF	MH	LG

Title
NATIONAL GRID (SEA LINK) ORDER
GROUND INVESTIGATION -
EXPLORATORY HOLE LOCATION PLAN
INCLUDING SUPERFICIAL GEOLOGY
AND HISTORICAL AND CURRENT LAND USES
SHEET 2 OF 5
KENT

nationalgrid

Application Number
EN020026

National Grid Drawing Reference
SEAL-MMD-SEAL-ENG-DWG-0688

Scale	Sheet Size	Sheet	Issue
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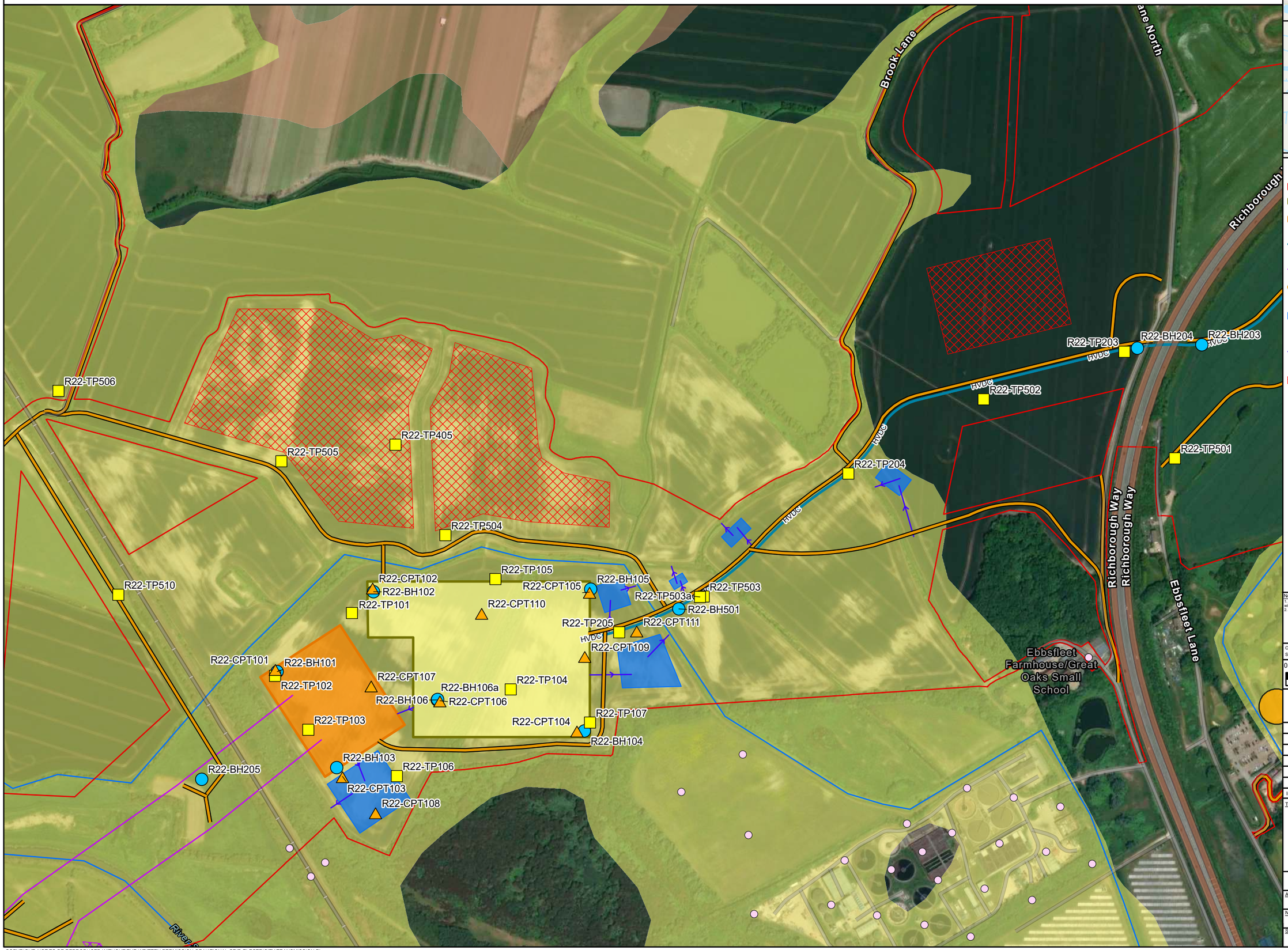
NATIONAL GRID (SEA LINK) ORDER
GROUND INVESTIGATION -
EXPLORATORY HOLE LOCATION PLAN
INCLUDING SUPERFICIAL GEOLOGY AND HISTORICAL AND CURRENT LAND USES
SHEET 3 OF 5
KENT



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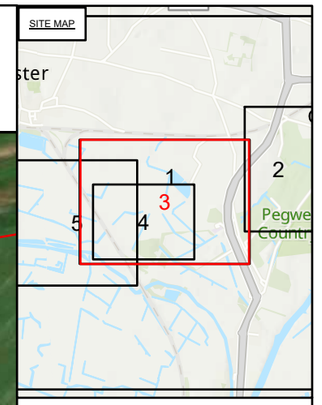

Legend

- Draft Order Limits
- Proposed converter station
- Proposed substation
- Proposed High Voltage Direct Current (HVDC) cable alignment
- Proposed Over Head Line (OHL)
- Proposed access route
- Proposed permanent attenuation pond (includes 5 metre buffer)
- Proposed permanent attenuation outfall pipe
- Proposed construction compound

Exploratory hole locations (as built)

- Borehole
- Cone Penetration Test
- Trial Pit
- BGS borehole

Key historical features

- Historical industrial land uses
- Historic landfill sites

Superficial Geology

- Beach and Tidal Flat Deposits - Sand, silt and clay
- Tidal Flat Deposits - Clay and silt
- Head - Clay and silt
- Watercourse

Notes
1. This drawing is scaled at paper size A3, therefore any prints taken at smaller sizes will affect accuracy of the measurement units and should not be scaled against
2. Features are not to scale

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0 50 100 200 Metres

Issue	Date	Remarks	Drawn	Checked	Approved
01	11/04/24	For Information	JF	MH	LG

Title

NATIONAL GRID (SEA LINK) ORDER
GROUND INVESTIGATION -
EXPLORATORY HOLE LOCATION PLAN
INCLUDING SUPERFICIAL GEOLOGY
AND HISTORICAL AND CURRENT LAND USES
SHEET 3 OF 5
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nationalgrid

Application Number
EN020026

National Grid Drawing Reference
SEAL-MMD-SEAL-ENG-DWG-0688

Scale	Sheet Size	Sheet	Issue
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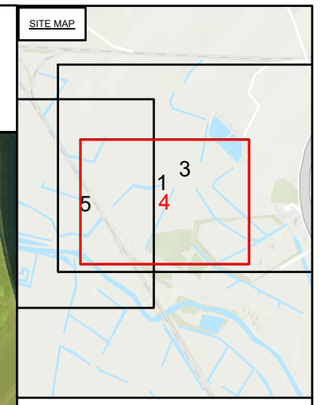
NATIONAL GRID (SEA LINK) ORDER
GROUND INVESTIGATION -
EXPLORATORY HOLE LOCATION PLAN
INCLUDING SUPERFICIAL GEOLOGY AND HISTORICAL AND CURRENT LAND USES
SHEET 4 OF 5
KENT

SITE MAP



Legend

- Draft Order Limits
- Proposed converter station
- Proposed substation
- Proposed High Voltage Direct Current (HVDC) cable alignment
- Proposed Over Head Line (OHL)
- Proposed access route
- Proposed permanent attenuation pond (includes 5 metre buffer)
- Proposed permanent attenuation outfall pipe
- Proposed construction compound

Exploratory hole locations (as built)

- Borehole
- Cone Penetration Test
- Trial Pit
- BGS borehole

Superficial Geology

- Beach and Tidal Flat Deposits - Sand, silt and clay
- Tidal Flat Deposits - Clay and silt
- Head - Clay and silt
- Watercourse

Notes
1. This drawing is scaled at paper size A3, therefore any prints taken at smaller sizes will affect accuracy of the measurement units and should not be scaled against
2. Features are not to scale

Coordinate System: British National Grid
Sheet X Centroid Coordinate: 632374.88 Sheet Y Centroid Coordinate: 163111.16

0 30 60 120 Metres

Issue	Date	Remarks	Drawn	Checked	Approved
01	11/04/24	For Information	JF	MH	LG

Title
NATIONAL GRID (SEA LINK) ORDER
GROUND INVESTIGATION -
EXPLORATORY HOLE LOCATION PLAN
INCLUDING SUPERFICIAL GEOLOGY
AND HISTORICAL AND CURRENT LAND USES
SHEET 4 OF 5
KENT

nationalgrid

Application Number
EN020026

National Grid Drawing Reference
SEAL-MMD-SEAL-ENG-DWG-0688

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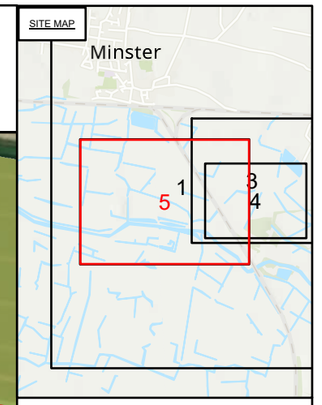
NATIONAL GRID (SEA LINK) ORDER
GROUND INVESTIGATION -
EXPLORATORY HOLE LOCATION PLAN
INCLUDING SUPERFICIAL GEOLOGY AND HISTORICAL AND CURRENT LAND USES
SHEET 5 OF 5
KENT

SITE MAP



Legend

- Draft Order Limits
- Proposed converter station
- Proposed substation
- Proposed Over Head Line (OHL)
- Proposed access route
- Proposed permanent attenuation pond (includes 5 metre buffer)
- Proposed permanent attenuation outfall pipe
- Proposed construction compound

Exploratory hole locations (as built)

- Borehole
- Cone Penetration Test
- Trial Pit
- Structural Soils borehole
- BGS borehole

Key historical features

- Historical industrial land uses

Superficial Geology

- Beach and Tidal Flat Deposits - Sand, silt and clay
- Tidal Flat Deposits - Clay and silt
- Head - Clay and silt
- Watercourse

Notes
1. This drawing is scaled at paper size A3, therefore any prints taken at smaller sizes will affect accuracy of the measurement units and should not be scaled against
2. Features are not to scale

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Issue	Date	Remarks	Drawn	Checked	Approved
01	11/04/24	For Information	JF	MH	LG

Title

NATIONAL GRID (SEA LINK) ORDER
GROUND INVESTIGATION -
EXPLORATORY HOLE LOCATION PLAN
INCLUDING SUPERFICIAL GEOLOGY
AND HISTORICAL AND CURRENT LAND USES
SHEET 5 OF 5
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nationalgrid

Application Number
EN020026

National Grid Drawing Reference
SEAL-MMD-SEAL-ENG-DWG-0688

Scale	Sheet Size	Sheet	Issue
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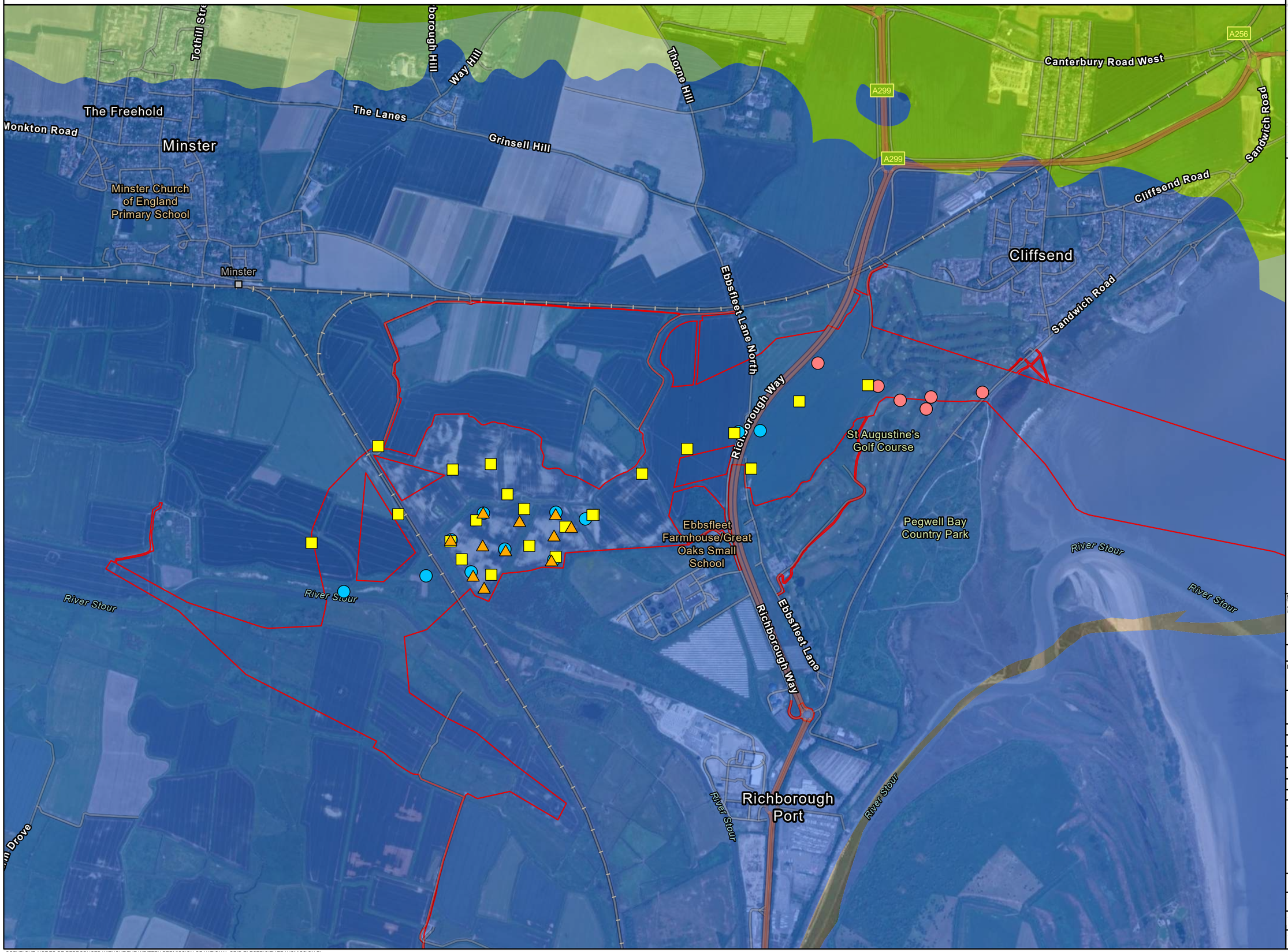
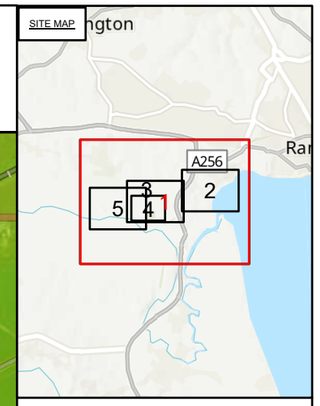
Figure A.2: Exploratory Hole Location Plan (with Bedrock Geology Background)

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





Legend

- Draft Order Limits

Exploratory hole locations (as built)

- Borehole
- Cone Penetration Test
- Red Penguin Borehole
- Trial Pit

Bedrock Geology

- Thanet Formation - Sand, silt and clay
- Margate Chalk Member - Chalk
- Seaford Chalk Formation - Chalk

Notes
1. This drawing is scaled at paper size A3, therefore any prints taken at smaller sizes will affect accuracy of the measurement units and should not be scaled against
2. Features are not to scale

Coordinate System: British National Grid
Sheet X Centroid Coordinate: 632901.31 Sheet Y Centroid Coordinate: 163316.89

0 145 290 580 Metres

Issue	Date	Remarks	Drawn	Checked	Approved
01	11/04/24	For Information	JF	MH	LG

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

nationalgrid

Application Number
EN020026

National Grid Drawing Reference
SEAL-MMD-SEAL-ENG-DWG-0689

Scale	Sheet Size	Sheet	Issue
1:15,000	A3	SHEET 1 OF 1	01

B. Factual Report

SEA Link FEED – Kent Onshore Cable Link

Factual Report on Preliminary Ground Investigation

Report No: 563607-01 (03)

Client: National Grid

APRIL 2024

STRUCTURAL SOILS LTD

DOCUMENT ISSUE RECORD

Project No.:	563607
Report No.:	563607-01 (03)
Project Name:	SEA Link FEED – Kent Onshore Cable Link
Document Title	Factual Report on Preliminary Ground Investigation
Client:	National Grid
Engineer:	Mott MacDonald Limited
Status:	Final

Author	[redacted]	I Warne BSc (Hons) FGS
Technical Reviewer and Approver	[redacted]	A M Lumber BEng (Hons) CEng MICE
Report Issue Date		24 April 2024

ISSUE RECORD

Issue	Date	Description	Prepared by
00	27.02.24	Preliminary Report Text and Logs	IW
01	27.03.24	Draft Factual Report	IW
02	09.04.24	Amended Draft Factual Report	IW
03	24.04.24	Final Factual Report	IW

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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
Tonbridge ☐	Anerley Court, Halfmoon Lane, Hildenborough, TONBRIDGE, TN11 9HU Tel: 01732 833 111	**Wigan** ☐	Unit 1 Forton Road, Wheatlea Industrial Estate, WIGAN, WN3 6YD Tel: 01942 825 052

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CONTENTS

1 INTRODUCTION

This preliminary investigation was carried out by Structural Soils Ltd (SSL) on the instructions of Mott MacDonald Limited (the Engineer) on behalf of National Grid (the Client) at SEA Link FEED - Kent. The purpose of the work was to obtain geotechnical and geoenvironmental information for the proposed 2GW HVDC link between Richborough in Kent and Friston in Suffolk. The Richborough site includes a HVDC cable route, a new convertor station / substation and a HVAC cable route between the convertor station site and the existing overhead line (OHL) to the west.

The scope of the investigation comprised cable percussive boreholes, rotary drilling, mechanical trial pitting, in-situ sampling and testing, laboratory testing, gas and groundwater monitoring 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.

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.

A comprehensive desk study, other than an inspection of geological maps, has not been requested or undertaken as part of this investigation. Nor has a Preliminary Risk Assessment been completed.

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 in Richborough approximately 1.5 km south-east of Minster village and 1.8 km south-west of Cliffsend in Kent within an area called Minster Marshes (see Site Location Map in Appendix A). The British National Grid Reference of the centre of the site is TR 325 631.

The site is approximately 2.8 km by 1.0 km (covering an area of approximately 280 hectares) in size (see Exploratory Hole Location Plans in Appendix A).

The proposed HVDC cable will extend across Pegwell Bay, St Augustine's Golf Club and Stonelees Golf Club by trenchless Horizontal Directional Drilling (HDD) methods. The HVDC cable will then be installed within shallow trench excavations to the Converter Station and Substation which are located within agricultural fields towards the centre of the site. An overhead line connection will extend from the substation to the existing overhead lines located to the south of the River Stour.

The project is located within low lying ground in the alluvial plain / tidal flats of the River Stour estuary. There is very little relief across the whole project area with elevation at the east and west of the scheme lying at approximately +1 m to +2 m above Ordnance Datum (AOD) and a maximum elevation of around +11 m AOD around the A256 Richborough Way.

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 274, scale 1:50,000, published 1980).
- 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 descending sequence of strata:

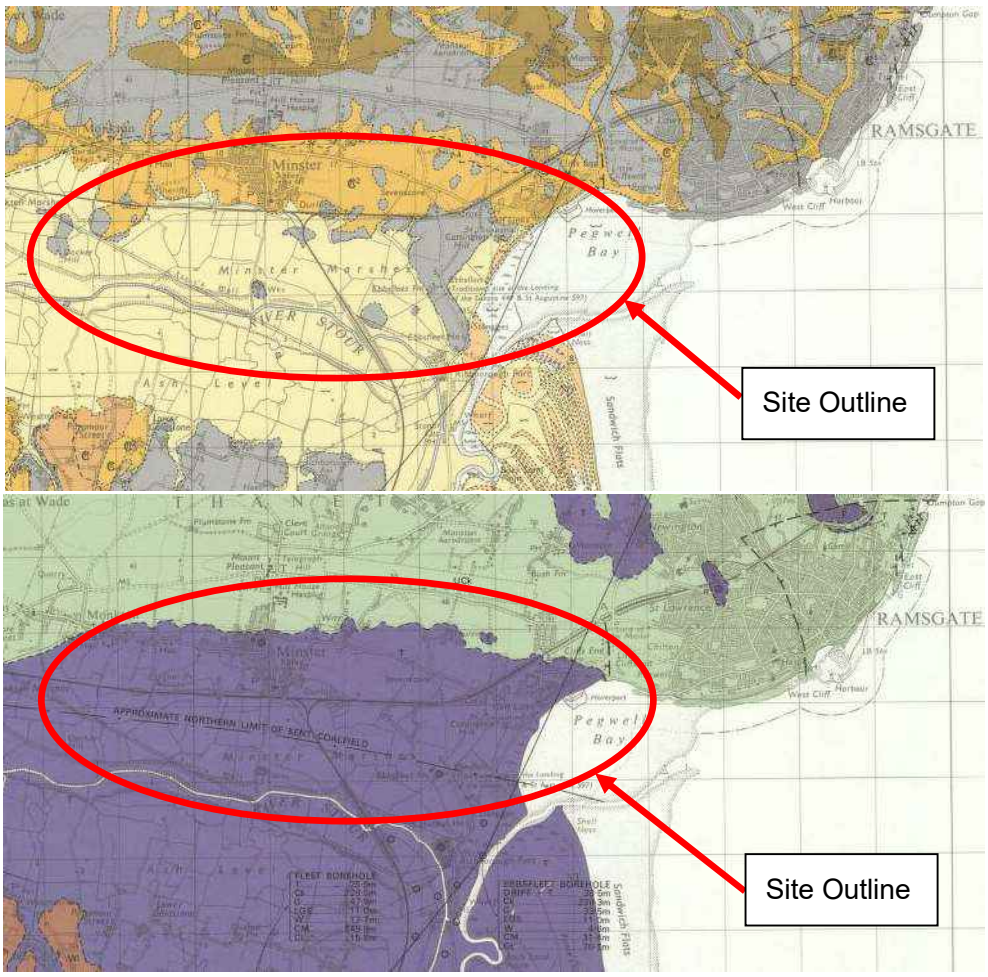
TABLE 1 : SUMMARY OF EXPECTED SITE GEOLOGY	
Geological Unit Name	**Description**
SUPERFICIAL DEPOSITS	
Tidal Flat Deposits (formally Marine and Estuarine Alluvium)	*Tidal flat deposits, including mud flat and sand flat deposits, form extensive nearly horizontal marshy land in the intertidal zone that is alternately covered and uncovered by the rise and fall of the tide. They consist of unconsolidated sediment, mainly mud and/or sand. They may form the top surface of a deltaic deposit.*

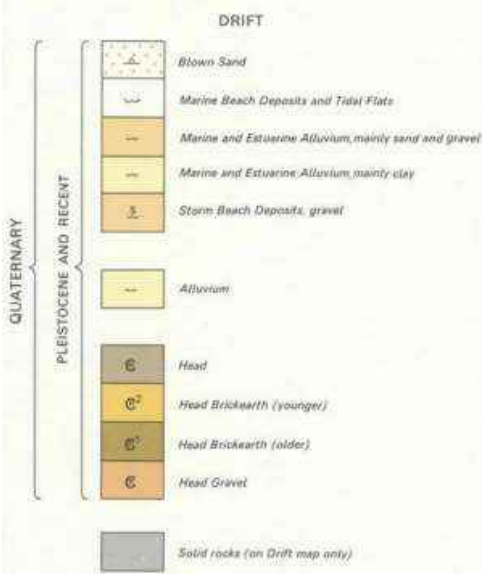
	Mapped as present across most of the site, locally absent towards the eastern end.
Head (formally Head Brickearth)	*Polymict deposit: comprises gravel, sand and clay depending on upslope source and distance from source. Poorly sorted and poorly stratified deposits formed mostly by solifluction and/or hillwash and soil creep. Essentially comprises sand and gravel, locally with lenses of silt, clay or peat and organic material.* No outcrops mapped on site but may possibly underlie the Tidal Flat Deposits in places.
SOLID GEOLOGY	
Thanet Formation	*Typically composed of homogeneous, bioturbated, glauconitic silty fine-grained sand, with sandy silt, silt or sandy, silty clay especially in the lower part, forming a coarsening-upwards sequence. The deposits are generally pale yellow-brown in colour, typically with a 'peppering' of dark-coloured glauconite grains. Sparse white mica occurs throughout.*
Margate Chalk Member - Newhaven Chalk Formation	*Marl-free smooth white chalk with little flint, weakly developed indurated iron-stained sponge beds.*
Seaford Chalk Formation	*Firm white chalk with conspicuous semi-continuous nodular and tabular flint seams. Hardgrounds and thin marls are known from the lowest beds. Some flint nodules are large to very large.*

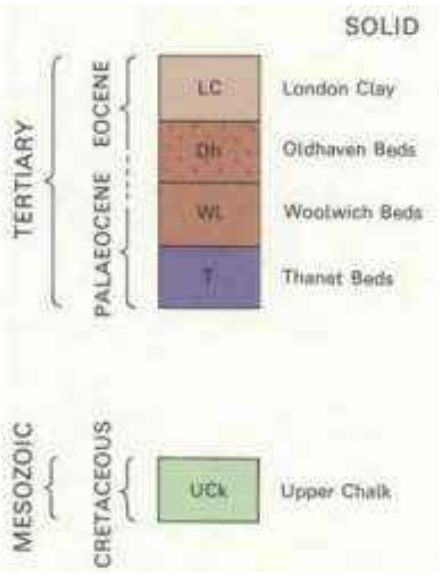
Note: Information obtained from BGS digital records © NERC.

Made Ground is not shown to be present on the geological map, however it is known that Made Ground will be present in the vicinity of Stonelees Golf Club which has been built up with reworked ground as part of the landscaping of the golf course.

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:







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

3 FIELDWORK

3.1 General

The ground investigation was carried out by SSL between 18 September and 1 December 2023. The investigation was supervised by an engineer from SSL. The scope of works and positions were selected by Mott MacDonald Limited, 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**	**Depth Range (m)**	**Hole / Test Numbers**
13	Cable Percussion Boreholes.	1.20 to 32.00	RedP-BH-11. R22-BH101 to R22-BH106 & R22-BH106A. R22-BH203 to R22-BH205. R22-BH501 & R22-BH502.
5	Cable Percussion Boreholes which were extended by rotary drilling.	26.00 to 41.00	RedP-BH-6, RedP-BH-7, RedP-BH-8, RedP-BH-9 & RedP-BH-10.
22	Machine Dug Trial Pits.	0.92 to 4.20	R22-TP101 to R22-TP107. R22-TP201 to R22-TP205. R22-TP405. R22-TP501 to R22-TP506, R22-TP503A, R22-TP508 & R22-TP510.
11	Piezocone Penetrometer Tests (CPT).	6.14 to 10.05	R22-CPT101 to R22-CPT111.

The exploratory hole nomenclature relates to various construction aspects of the project as outlined below.

- Series 100 – the converter station and substation
- Series 200 – the cable route
- Series 400 – the construction compounds
- Series 500 – the access points

- RedP-BHs – carried out for Red Penguin to inform the design of the landfall HDD section.

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 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), and CIRIA Report C574 *Engineering in chalk*. Detailed descriptions, together with relevant comments, are given on the logs.

Photographs of the rotary drilled core and trial pits are presented in Appendix B, alongside the exploratory hole 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 SafeGround.

Inspection pits were hand dug at exploratory locations where 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 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.

An Archaeological watching brief was undertaken during the excavation of the machine dug trial pit locations by Headland Archaeology. The Archaeological Watching Brief on GI Works report is contained in Appendix H.

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.

3.3 Backfill and Instrumentation

On completion 50 mm diameter gas/groundwater monitoring wells were installed in selected exploratory holes the design having been decided by Mott MacDonald Limited. The selection of headwork covers and standpipe protection was agreed with the various landowners. The installation details are shown on the exploratory hole logs and on a summary table presented within Appendix B.

In addition, continuous data logging equipment was placed into R22-BH102, R22-BH103, R22-BH104, R22-BH105, R22-BH204, R22-BH205, R22-BH501, RedP-BH-6 and RedP-BH-8, in order for continuous long-term fluctuations in groundwater levels to be

undertaken over the following 6 to 12 months. A barometric data logging equipment was installed within the headworks in R22-BH104, as a central location for the site to record atmospheric pressure changes. Installation locations, depths and device serial numbers are included on the data logger water monitoring results in Appendix F.

On completion the remaining boreholes were backfilled with bentonite pellets and reinstated with backfill of natural arisings including topsoil. The trial pits were backfilled with arisings, compacted in layers by the excavator with the use of a compactor plate and the bucket.

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
268	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.
114	Hand Vane (HV)*.	Carried out in boreholes; test results included on exploratory hole logs presented in Appendix B. HV calibration certificates included in Appendix G.
22	California Bearing Ratio correlation tests using a TRL Dynamic Cone Penetrometer (DCP).	Test results reported in Appendix C.
2	Soakaway Infiltration Tests in trial pits.	Test results reported in Appendix C.
13	Variable Head Permeability Tests.	Test results reported in Appendix C.
127	Photo-Ionisation Detector (PID) measurement of volatile hydrocarbons.	Measurement carried out on soils samples; results included on logs.
36	Thermal Resistivity Probe Tests.	Carried out in in-situ within selected trial pits and presented in Appendix C.
11	Piezocone Penetrometer Tests (CPT).	Undertaken by In-Situ Site Investigation and presented in Appendix C.

TABLE 3 :SCOPE OF IN-SITU TESTING		
11	Magnetometer Tests.	Carried out with the piezocone penetration tests (CPTu).
23	Dissipation Tests.	Carried out with the piezocone penetration tests (CPTu).
4	Soil Resistivity.	4 no. traverses undertaken by RSK Geosciences and presented 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. Plots showing both N values versus depth and elevation are 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 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 trial pits R22-TP105 and R22-TP501 in general accordance with recommended practice given in BRE Digest 365. Only one filling of each pit was undertaken due to slow infiltration rates, and both tests were halted after three hours. No soil infiltration rates could be calculated from these tests as the test water did not fall to the 25% full level in either test.

The test results are contained in Appendix C.

3.4.4 Soakaway Infiltration Tests in Boreholes.

Permeability tests were instructed in 5 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, however soil infiltration rates calculated in this way should be considered tentative.

Infiltration rates have not been calculated for any of the tests as either there was no fall in test water level, or insufficient fall to justify a calculation of infiltration rate.

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

3.4.5 Variable Head Permeability Tests.

The Variable Head Permeability tests were undertaken in selected boreholes 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. Where only very small changes in head were achieved, or the fall in test water level over the duration of the test very low, the quoted permeability values should be considered tentative estimates.

For most of the tests completed in the chalk no calculation of permeability was possible as the chalk was too permeable to enable the test head to be raised sufficiently high to obtain adequate test data.

3.4.6 Thermal Resistivity

In-situ soil thermal resistivity testing was carried out within 12 trial pits at depths of 0.70 m, 0.90 m and 1.10 m using a KD2 Pro thermal resistivity needle 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. The data is not covered by the standard Groups and Headings in the AGS version 4.0.4 format and will be issued separately in .csv or Microsoft Excel .xlsx format.

3.4.7 Static cone penetrometer piezeocone (CPTu) and dissipation tests

Static piezocone penetration tests (CPTu) were carried out at 11 locations. The tests were completed by In-Situ Site Investigation using a 1.5 tonne tracked CPT rig. 23 dissipation tests were also carried out.

The CPT test report which includes details of the work undertaken, the test results and measured or correlated soil properties and types is included in Appendix C.

Inspection pits were hand dug to 1.20 m depth at the CPT locations prior to testing. The Inspection Pit Logs are included in Appendix B.

3.4.8 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.

At each location, readings of resistivity were generally taken along two orientations, the first with the electrodes orientated on one alignment, and the second normal (at 90^{o}) to the first alignment. The readings were taken at different and equal spacings between the probe in a four electrode 'Wenner style' arrangement.

The tests were carried out by RSK. The results of the resistivity testing are contained in the RSK Vertical Electrical Sounding (VES) report in Appendix C, reported as average values of earth resistivity.

3.5 Monitoring and Post Fieldwork Environmental Sampling

Groundwater levels were recorded in the monitoring wells on 30 and 31 October 2023 by SSL engineers. 4 monitoring visits were undertaken on 29/30 November, 13/14 December 2023, 3/4 and 18/19 January 2024. The results together with the temporal (weather) conditions are tabulated in Appendix F.

Ground gas monitoring was carried out over the monitoring rounds. An infrared gas meter was used to measure concentrations of carbon dioxide (CO2), methane (CH4) and oxygen (O2) in percentage by volume, whilst hydrogen sulphide (H2S) and carbon monoxide (CO) were recorded in parts per million. Initial and steady state concentrations were recorded. An integral flow meter was used to measure borehole flow rates (initial and steady state) in litres per hour (l/hr). In addition the atmospheric pressure before and during monitoring.

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

The wells were developed by being purged of three well volumes of groundwater (unless indicated otherwise on the monitoring results) on the first monitoring visit.

Water samples were taken from the standpipes on the 3 visits following development using Low Flow techniques (also known as micro-purging). The Low-Flow Purging and Sampling method relies on moving groundwater through the well screen at approximately the same rate as it flows through the geological formation. This results in a significant reduction in the volume of water extracted before sampling and significantly reduces the amount of disturbance of the water in the monitoring well during purging and sampling. Where water samples were taken this is recorded on the Water Monitoring Results in Appendix F.

Groundwater levels in the monitoring well and water quality indicator parameters (pH, temperature, electrical conductivity, redox potential and dissolved oxygen) are monitored during low-flow purging, with parameter stabilisation indicating that purging is complete and sampling can begin. As the flow rate used for purging is (in most cases) the same as or only slightly higher than the flow rate used for sampling, purging and sampling are conducted as one continuous operation in the field.

In situ water quality measurements (pH, temperature, electrical conductivity, redox potential and dissolved oxygen) undertaken during the purging or sampling process and are provided in Appendix F.

The water level data loggers were downloaded on each monitoring visit following installation and will be monitored over the next 6 to 12 months.

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.

The measured groundwater levels and corresponding barometric pressures are presented graphically in Appendix F. Manual water level measurements are also presented.

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

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 Limited. 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),
- International Society for Rock Mechanics and Rock Engineering (ISRM) *Suggested Methods for Rock Characterization, Testing and Monitoring*, 1974-2006, 2007-2014 and 2015+
- 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		
236	Water content.	19 standalone tests reported in the Summary of Water Content Tests. Tests associated with Liquid and Plastic Limits tests are reported with those.
217	Liquid and plastic (Atterberg) limits.	5 tests completed using the 1-point method, all other tests completed using the 4-point method.
136	Particle size distribution by sieving.	
136	Particle size distribution by sedimentation.	6 tests completed using hydrometer method and 107 using pipette method.

TABLE 4 :SUMMARY OF GEOTECHNICAL TESTING		
4	Split and describe of UT100 samples.	
Compressibility, Permeability and Durability Tests		
10	One-dimensional consolidation test.	
Performance Tests		
21	Dry density/moisture content relationship – 2.5kg rammer.	
105	Moisture condition value (MCV) at natural moisture content.	
105	California bearing ratio (CBR).	The tests were carried out on undisturbed / remoulded samples which were unsoaked / soaked.
Shear Strength - Total Stress		
4	Shear strength by the laboratory vane method (set of 3).	
3	Undrained shear strength by hand vane (set of 3).	
34	Shear strength of a set of three 60mm x 60mm square specimens by direct shear test.	
54	Single stage unconsolidated undrained triaxial compression tests without the measurement of pore pressure.	
Shear Strength - Effective Stress		
8	Consolidated undrained triaxial compression test with measurement of pore pressure.	
Rock Tests		
52	Porosity/density.	
32	Cerchar abrasivity index.	
52	Natural water content of rock sample.	
29	Uniaxial compressive strength tests.	
49	Point Load Index.	The natural ('as received') moisture content of the samples was determined.
Chemical Tests: Soil		
41	Organic matter content.	
12	Soil Electrical Resistivity.	
15	Thermal conductivity on undisturbed samples.	ASTM DS334-14 test methods used.
22	Thermal conductivity on disturbed samples.	
52	BRE SD1 Suite A and/or BRE SD1 Suite B*.	TRL 447 test methods used.
Chemical Tests: Water		
9	Sulphate content and pH value*.	

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		
37	MML General Soil Suite.	Comprises arsenic, barium, beryllium, boron, cadmium, chromium (total and VI), copper, cyanide (free and total), organic carbon, lead, manganese, mercury, molybdenum, nickel, pH, phenols (total), PAH (USEPA 16 speciated by GCMS), selenium, sulphate (water soluble), sulphur (total), vanadium, zinc, SOM (%), TOC (%) and moisture content.
7	Asbestos Screen.	Asbestos screen & ID (and quantification where asbestos positively identified).
9	TPH Soil Suite.	TPH CWG aro/ali split.
	BTEX Soil Suite.	Benzene, toluene, ethylbenzene and xylene.
8	Polychlorinated biphenyls (PCBs) Soil Suite.	Polychlorinated biphenyls (PCBs 12 WHO congeners).
15	Pesticide Soil Suite.	Comprises 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-hexachlorocyclohexenes (including lindane), beta-hexachlorocyclohexenes (including lindane) and gamma hexachlorocyclohexenes (including lindane.
WATER		
30	MML Comprehensive Groundwater Suite.	Comprises arsenic, barium, beryllium, boron, cadmium, chromium (total and VI), copper, cyanide (free and total), organic carbon, lead, manganese, mercury, molybdenum, nickel, pH, phenols (total), PAH (USEPA 16 speciated by GCMS), selenium, sulphate (water soluble), sulphur (total), vanadium, zinc, SOM (%), TOC (%) and moisture content.
LEACHATE (simulated leachates derived from soil samples)		
27	MML Comprehensive Leachate Suite.	Comprises arsenic, barium, beryllium, boron, calcium, cadmium, chromium (total and VI), copper, iron, mercury, lead, magnesium, manganese, molybdenum, nickel, antimony, selenium, vanadium, zinc, pH, cyanide (free and total), fluoride, ammoniacal nitrogen, chloride and phenols (speciated).
WASTE ACCEPTANCE CRITERIA (WAC)		
17	MML Waste Acceptance Suite.	**Leachate Suite** (Single stage to BS EN 12457-2): Comprises arsenic, barium, cadmium, mercury, molybdenum, nickel, lead, antimony, selenium, zinc, chloride, fluoride, sulphate, total dissolved solids (TDS), phenol index and dissolved organic carbon. **Solid Waste Suite**: Comprises total organic carbon (TOC), loss on ignition, BTEX by GC-FID, pH, acid neutralisation

TABLE 5 : SUMMARY OF GEOENVIRONMENTAL LABORATORY TESTING		
		capacity (CAN), PAH (total), pH, PCBs (7 congeners), mineral soil (C10-C40 compounds).

5 REFERENCES

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

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

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

5.4 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*

5.5 British Geological Survey sheet 274 scale 1:50,000, published 1980

5.6 British Geological Survey, Geoindex (onshore) digital map viewer. Available online: https://www.bgs.ac.uk/map-viewers/geoindex-onshore/

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

5.8 British Geological Survey, BGS maps portal. Available online: https://www.bgs.ac.uk/information-hub/bgs-maps-portal/

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

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

5.11 BS EN ISO 14689:2018 *Geotechnical investigation and testing – Identification, description and classification of rock*

5.12 CIRIA Report C574 (2002), *Engineering in chalk*

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

5.14 BS EN ISO 22476-12:2009 *Geotechnical investigation and testing - Field testing. Part 12: Mechanical cone penetration test (CPTM)*

5.15 ASTM D5334-08 *Standard Test Method for Determination of Thermal Conductivity of Soil and Soft Rock by Thermal Needle Probe Procedure*

5.16 Highways England (2020) *Data for Pavement Assessment*. CS 229. National Highways,Birmingham, UK

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

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

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

5.20 BS 7430 *Code of Practice for Protective Earthing of Electrical Installations*

5.21 IEEE 81-2012 *Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Grounding System*

5.22 BS EN 50522:2010 *Earthing of Power Installations Exceeding 1 kV a.c. (incorporating corrigendum September 2012)*

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

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

5.25 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)

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

5.27 International Society for Rock Mechanics and Rock Engineering (ISRM, 1974-2006, 2007-2014, and 2015+), *The ISRM Suggested Methods for Rock Characterization, Testing and Monitoring*

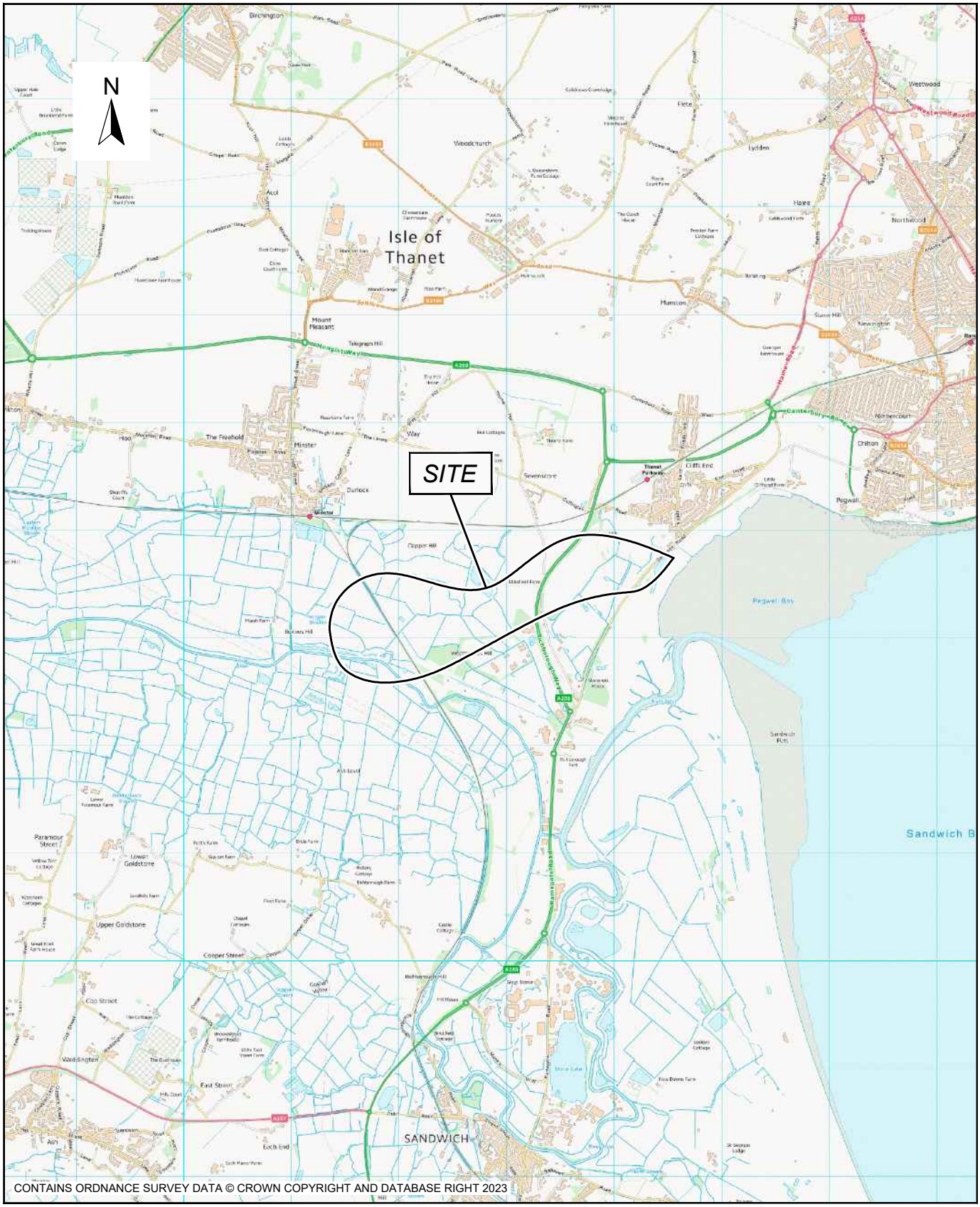
5.28 BRE Special Digest 1:2005 (SD1), *Concrete in aggressive ground. Assessing the aggressive chemical environment. Third Edition*

5.29 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



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00	08.12.2023	FIRST ISSUE	AA	IW	-

DIMENSION	SCALE	DRAWING STATUS
m	1:50,000	-

CLIENT

NATIONAL GRID

PROJECT

SEA LINK FEED - RICHBOROUGH ON-SHORE CABLE LINK

TITLE

SITE LOCATION MAP

JOB NO	GRID REF	SCALE BAR	ORIGIN SIZE	FIGURE
563607	TR 325 631	0 500 1,000 1,500 2,000 2,500m	A4	1

LEGEND

Position ID	Easting	Northing	Elevation
R22-BH101	632082.158	163050.063	1.436
R22-BH102	632218.479	163163.027	1.586
R22-BH103	632166.45	162914.204	1.322
R22-BH104	632516.802	162966.09	1.36
R22-BH105	632525.706	163166.715	1.426
R22-BH106	632308.633	163009.985	1.492
R22-BH106A	632309.192	163010.682	1.443
R22-BH203	633390.266	163512.401	7.955
R22-BH204	633299.139	163507.672	7.288
R22-BH205	631975.49	162897.714	1.578
R22-BH501	632650.38	163138.7821	1.491
R22-BH502	631627.198	162830.828	2.757
R22-CPT101	632079.612	163053.437	1.387
R22-CPT102	632217.227	163168.684	1.58
R22-CPT103	632174.617	162901.757	1.269
R22-CPT104	632506.224	162966.367	1.336
R22-CPT105	632524.103	163162.569	1.417
R22-CPT106	632312.364	163008.869	1.49
R22-CPT107	632215.156	163030.101	1.432
R22-CPT108	632221.308	162850.687	1.302
R22-CPT109	632517.272	163071.806	1.436
R22-CPT110	632371.425	163132.83	1.438
R22-CPT111	632590.801	163107.842	1.393
R22-TP101	632187.976	163132.93	1.382
R22-TP102	632079.24	163043.998	1.481
R22-TP103	632126.29	162967.781	1.362
R22-TP104	632412.649	163024.887	1.35
R22-TP105	632390.977	163180.942	1.495
R22-TP106	632251.575	162902.228	1.291
R22-TP107	632524.754	162977.974	1.393
R22-TP201	633846.702	163705.365	4.349
R22-TP202	633556.182	163636.678	11
R22-TP203	633280.678	163502.554	7.135
R22-TP204	632890.202	163330.267	1.557
R22-TP205	632566.01	163105.613	1.443
R22-TP405	632249.622	163371.008	1.433
R22-TP501	633352.063	163351.775	5.914
R22-TP502	633081.538	163435.275	4.526
R22-TP503	632685.615	163156.319	1.258
R22-TP503A	632680.302	163155.688	1.35
R22-TP504	632320.199	163243.093	1.579
R22-TP505	632088.176	163347.628	1.49
R22-TP506	631772.851	163447.162	1.298
R22-TP508	631490.749	163037.691	1.445
R22-TP510	631857.486	163158.764	1.328
RedP-BH-6	634113.781	163655.104	4.101
RedP-BH-7	634331.439	163675.042	3.301
RedP-BH-8	633889.328	163701.051	3.01
RedP-BH-9	634093.301	163604.447	3.22
RedP-BH-10	633983.092	163641.146	10.579
RedP-BH-11	633634.752	163798.588	14.471

REV	DATE	DESCRIPTION	BY	CHD	APR
00	08.12.2023	FIRST ISSUE	AA	IW	-

DIMENSION	SCALE	ORIGIN SIZE
m	1:10,000	A3

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NATIONAL GRID

PROJECT

SEA LINK FEED - RICHBOROUGH
ON-SHORE CABLE LINK

TITLE

EXPLORATORY HOLE LOCATION PLAN

JOB NUMBER	FIGURE
563607	2.0
DRAWING STATUS	REV
-	00

SCALE BAR

0 100 200 300 400 500m

LEGEND

- CONE PENETRATION TEST
- BOREHOLES
- TRIAL PIT

NOTES

-

REV	DATE	DESCRIPTION	BY	CHD	APR
00	08.12.2023	FIRST ISSUE	AA	IW	-

DIMENSION	SCALE	ORIGIN SIZE
m	1:3,000	A3

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SEA LINK FEED - RICHBOROUGH
ON-SHORE CABLE LINK

TITLE

EXPLORATORY HOLE LOCATION PLAN

JOB NUMBER	FIGURE
563607	2.1
DRAWING STATUS	REV
-	00

SCALE BAR

0 40 80 120 160m

LEGEND

- CONE PENETRATION TEST
- BOREHOLES
- TRIAL PIT

NOTES

-

REV	DATE	DESCRIPTION	BY	CHD	APR
00	08.12.2023	FIRST ISSUE	AA	IW	-

DIMENSION	SCALE	ORIGIN SIZE
m	1:2,500	A3

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PROJECT

SEA LINK FEED - RICHBOROUGH
ON-SHORE CABLE LINK

TITLE

EXPLORATORY HOLE LOCATION PLAN

JOB NUMBER	FIGURE
563607	2.2
DRAWING STATUS	REV
-	00

SCALE BAR

0 20 40 60 80 100m

LEGEND

- BOREHOLES
- TRIAL PIT

NOTES

-

REV	DATE	DESCRIPTION	BY	CHD	APR
00	08.12.2023	FIRST ISSUE	AA	IW	-

DIMENSION	SCALE	ORIGIN SIZE
m	1:4,000	A3

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PROJECT

SEA LINK FEED - RICHBOROUGH
ON-SHORE CABLE LINK

TITLE

EXPLORATORY HOLE LOCATION PLAN

JOB NUMBER	FIGURE
563607	2.3
DRAWING STATUS	REV
-	00

SCALE BAR

0 40 80 120 160 200m

APPENDIX B - EXPLORATORY HOLE RECORDS

(i) Key to Exploratory Hole Logs

(ii) Borehole Logs

(iii) Trial Pit Logs

(iv) Summary of Discontinuities

(v) Standpipe Summary Table

KEY TO EXPLORATORY HOLE LOGS - SUMMARY OF ABBREVIATIONS

SAMPLING

Sample type codes:

B	=	Bulk disturbed sample.
C	=	Core sample.
D	=	Small disturbed sample.
DSPT	=	Small disturbed sample originating from SPT test.
ES	=	Soil 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'.
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.

ROTARY DRILLING INFORMATION

W	=	Water flush returns (%)
TCR	=	Total core recovery (%)
SCR	=	Solid core recovery (%)
RQD	=	Rock quality designations (%)
If	=	Fracture spacing (mm). Where variable the minimum - mode - maximum spacing may be quoted. In fracture column (i) denotes discontinuity is infilled (refer to Fracture Table for details). 'NI' denotes non-intact core. 'NA' denotes not applicable.

- All lengths used to determine rock core mechanical properties taken along the centre line of the core.
- Obvious induced fractures have been ignored.
- The assessment of solid core is based on lengths that show a full diameter and not necessarily a full circumference.

Where used Rotary flushing medium abbreviations:

PM	=	Polymer-Mud
W	=	Water

AZCL	=	Assessed zone of core loss.

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.

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STRUCTURAL SOILS

Contract Reference: **563607**

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


Peaty CLAY


Chalk


GRAVEL


GRAVEL with COBBLES


Gravelly CLAY


Gravelly silty CLAY


Gravelly CLAY with COBBLES


MADE GROUND


PEAT


Sandy CLAY


Sandy silty CLAY


Sandy CLAY with COBBLES


Sandy gravelly CLAY


Sandy gravelly silty CLAY


Sandy gravelly clayey SILT


Sandy gravelly SILT


Siltstone


Sandy clayey SILT


Sandy SILT


Topsoil


Clayey SILT


Silty CLAY


Silty GRAVEL


Gravelly silty SAND


Silty SAND

Zone of core loss


Clayey sandy gravelly SILT


Clayey sandy SILT


Silty peaty CLAY

INSTRUMENTATION SYMBOLS


Backfill


Cement grout


Bentonite seal


Concrete


Gravel filter


Sand filter


Flush cover


Upstanding cover


Plain pipe


Slotted pipe

GINT_LIBRARY_V10_01.GLB|GrfcText G - LEGEND - 2 OF 2 - EXTENDED | 563607_SEA_LINK_FEED_RICHBOROUGH_ON_SHORE_CABLE_RIG_GROUND_INVESTIGATION.GPJ - v10_01 | 07/03/24 - 10:59 | |W1.
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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH101**

Contract Ref:	Start: **05.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **11.10.23**	**1.44**	**E:632082.2 N:163050.1**	**1** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
0.20	1	D				MADE GROUND: Very stiff brown slightly gravelly slightly sandy organic clayey SILT occasional rootlets. Sand is fine. Gravel is subangular to subrounded fine to coarse chalk,clinker and ceramic.			
0.20	101	ES	2xT+1xJ+1xV			Stiff yellowish brown slightly sandy silty CLAY with occasional lenses of fine sand. Sand is fine to coarse. (TIDAL FLAT DEPOSITS)	1.14	0.30	
0.20		PID	0.1ppm						
0.40		V	c_u=190/200/185					(0.60)	
0.50	102	ES	2xT+1xJ+1xV						
0.50	2	D							
0.50-0.70	3	B					0.54	0.90	
0.50		PID	0.0ppm			Stiff grey mottled yellowish brown sandy silty CLAY. Sand is fine to coarse. (TIDAL FLAT DEPOSITS)			
0.80		V	c_u=88/74/80						
1.00	103	ES	2xT+1xJ+1xV				0.24	1.20	
1.00	4	D				Soft grey mottled yellowish brown silty CLAY. (TIDAL FLAT DEPOSITS)			
1.00-1.20	5	B							
1.00		PID	0.0ppm						
1.10		V	c_u=88/74/68					(0.80)	
1.20-1.65	6	SPT	N=0						
1.20-1.80	6	DSPT							
1.50	38	D							
1.80-2.00	7	B							
2.00	8	D					-0.56	2.00	
2.00-2.45	9	$UT_{(UT100)}$	7 blows 100% recovery			Very soft bluish grey slightly sandy silty CLAY with occasional black specks of organic material. Sand is fine to coarse. (TIDAL FLAT DEPOSITS)			
2.45-2.55	10	D							
2.60-3.00	11	B							
3.00-3.45	12	$UT_{(UT100)}$	7 blows 100% recovery						
3.45-3.55	13	D						(3.00)	
3.60-4.00	14	B							
4.00-4.45	15	$UT_{(UT100)}$	7 blows 100% recovery						
4.45-4.55	16	D							
4.60-5.00	17	B							
5.00-5.45	18	$UT_{(UT100)}$	8 blows 100% recovery				-3.56	5.00	
5.45-5.55	19	D				Very soft bluish grey slightly sandy clayey SILT. Sand is fine. (TIDAL FLAT DEPOSITS)			
5.60-6.00	20	B							
6.00-6.45	21	$UT_{(UT100)}$	9 blows 100% recovery			. . . from 6.00m depth, occasional bivalve fossils.			
6.45-6.55	22	D							
6.60-7.00	23	B						(3.30)	
7.00-7.45	24	$UT_{(UT100)}$	15 blows 100% recovery						
7.45-7.55	25	D							
7.60-8.00	26	B				. . . from 7.50m abundant bivalve fossils.			
8.00-8.45	27	$UT_{(UT100)}$	20 blows 100% recovery						
8.45-8.55	28	D				Firm bluish grey slightly sandy clayey SILT. Sand is fine. (THANET FORMATION)	-6.86	8.30	
8.60-9.00	29	B							

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
05/10/23	18:00	8.55	7.90	200	5.60
06/10/23	08:30	8.55	7.90	200	4.10
06/10/23	15:00	14.30	13.00	200	7.00
09/10/23	08:30	14.30	13.00	200	1.20
09/10/23	18:00	21.70	16.00	200	4.00
11/10/23	08:30	21.70	16.00	200	1.15
11/10/23	14:30	25.45	16.00	200	4.00

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. Groundwater seepage at 1.20m depth.
5. Permeability tests undertaken between 1.20-1.70m and 8.40-8.80m depth.
6. Borehole backfilled with bentonite pellets on completion.

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

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 175**	**C.Rainsbury**	**MStorch**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH101**

Contract Ref:	Start: **05.10.23** End: **11.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607		**1.44**	**E:632082.2 N:163050.1**	**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	30	SPT	N=14			Firm bluish grey slightly sandy clayey SILT. Sand is fine. (THANET FORMATION) *(stratum copied from 8.30m from previous sheet)* . . . becoming mottled brownish yellow from 9.00m depth.			
9.00-9.45	30	DSPT							
9.50	31	D						(2.15)	
9.60-10.00	32	B							
10.00	33	D							
10.00-10.45	34	$UT_{(UT100)}$	30 blows 89% recovery						
10.45-10.55	35	D				Stiff brownish grey mottled grey and yellow slightly sandy clayey micaceous SILT with occasional lenses of fine sand and white calcareous flecks. Sand is fine. (THANET FORMATION)	-9.01	10.45	
10.60-11.00	36	B							
11.00-11.45	37	SPT	N=24					(1.55)	
11.00-11.45	37	DSPT							
11.60-12.00	39	B							
12.00	40	D				Extremely weak grey slightly sandy SILTSTONE recovered as grey very silty sandy angular to subangular fine to coarse GRAVEL of extremely weak micaceous siltstone. Sand is fine. (THANET FORMATION)	-10.56	12.00	
12.00-12.45	41	$UT_{(UT100)}$	60 blows 100% recovery						
12.45-12.55	42	D							
12.60-13.00	43	B						(1.50)	
13.00-13.43	44	SPT	4,5/7,11,13,9 for 55mm						
13.00	44	DSPT							
13.50	45	D				Extremely weak grey slightly sandy SILTSTONE recovered as grey silty sandy angular to subangular fine to coarse GRAVEL of extremely weak siltstone. Sand is fine. (THANET FORMATION)	-12.06	13.50	
13.60-14.00	46	B							
14.00-14.20	47	$UT_{(UT100)}$	100 blows 150% recovery						
14.20-14.30	48	D						(1.50)	
14.50-14.90	49	B							
15.00-15.35	50	SPT	6,8/14,16,20 for 50mm			Extremely weak grey sandy slightly micaceous SILTSTONE recovered as grey very silty sandy angular to subangular fine to coarse GRAVEL of extremely weak siltstone. Sand is fine. (THANET FORMATION)	-13.56	15.00	
15.00	50	DSPT							
15.50-16.00	51	B							
16.00-16.35	52	SPT	8,15/15,20,15 for 45mm						
16.00	52	DSPT						(2.50)	
16.50-16.90	53	B							
17.00-17.39	54	SPT	5,10/12,15,19,4 for 10mm						
17.00	54	DSPT							
17.50-17.90	55	B				Extremely weak locally very weak grey sandy slightly micaceous SILTSTONE recovered as grey silty sandy angular to subangular fine to coarse GRAVEL of extremely weak siltstone. Sand is fine. (THANET FORMATION)	-16.06	17.50	

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 BHDS03-2023 (E_r = 68.00%) used.

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

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 175**	**C.Rainsbury**	**MStorch**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH101**

Contract Ref:	Start: **05.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **11.10.23**	**1.44**	**E:632082.2 N:163050.1**	**3** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
18.00-18.17	56	SPT	20,5/35,15 for 10mm			Extremely weak locally very weak grey sandy slightly micaceous SILTSTONE recovered as grey silty sandy angular to subangular fine to coarse GRAVEL of extremely weak siltstone. Sand is fine. (THANET FORMATION) *(stratum copied from 17.50m from previous sheet)*			
18.00	56	DSPT							
18.50-18.90	57	B						(2.50)	
19.00-19.18	58	SPT	18,7/30,20 for 15mm						
19.00	58	DSPT							
19.50-19.90	59	B							
20.00-20.41	60	SPT	4,5/10,14,16,10 for 35mm			Extremely weak grey clayey SILTSTONE recovered as very stiff grey slightly gravelly silty CLAY. Gravel is angular to subrounded fine to coarse extremely weak siltstone. Sand is fine. (THANET FORMATION)	18.56	20.00	
20.00	60	DSPT							
20.50-20.90	61	B							
21.00-21.39	62	SPT	5,9/10,14,20,6 for 10mm						
21.00	62	DSPT							
21.50-21.90	63	B							
22.00-22.33	64	SPT	8,14/19,21,10 for 30mm					(4.00)	
22.00	64	DSPT							
22.50-22.90	65	B							
23.00-23.45	66	SPT	N=36						
23.00-23.45	66	DSPT							
23.50-23.90	67	B							
24.00-24.45	68	SPT	N=41			Very stiff grey slightly sandy clayey SILT with occasional lenses of sand. Sand is fine. (THANET FORMATION)	22.56	24.00	
24.00-24.45	68	DSPT							
24.50-24.90	69	B						(1.45)	
25.00-25.45	70	SPT	N=49						
25.00-25.45	70	DSPT							
						Borehole terminated at 25.45m depth.	24.01	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 175**	**C.Rainsbury**	**MStorch**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH102**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	Start: **05.10.23** / End: **09.10.23**	**1.59**	**E:632218.5 N:163163.0**	**1** of **3**

Samples & Testing

Depth (m)	No	Type	Results
0.20	101	ES	2xT+1xJ+1xV
0.20		V	c_u=152/200/190
0.20		V	c_r=64/56/64
0.20		PID	4.6ppm
0.50	1	D	
0.50	102	ES	2xT+1xJ+1xV
0.50-0.70	2	B	
0.50		V	c_u=90/100/88
0.50		V	c_r=33/38/30
0.50		PID	1.7ppm
0.90		V	c_u=68/70/74
0.90		V	c_r=38/38/42
1.00	103	ES	2xT+1xJ+1xV
1.00	3	D	
1.00-1.20	4	B	
1.00		PID	1.5ppm
1.20-1.65	5	SPT	N=0
1.20-1.65	5	DSPT	
1.50	2	EW	2xG+1xP+Vials
1.50-2.00	6	B	
1.80	1	EW	2xG+1xP+Vials
1.80	3	EW	2xG+1xP+Vials
2.00	7	D	
2.00-2.45	8	$UT_{(UT100)}$	3 blows 100% recovery
2.50-3.00	10	B	
2.50	9	D	
3.00	11	D	
3.00-3.45	12	$UT_{(UT100)}$	3 blows 100% recovery
3.50	13	D	
3.50-4.00	14	B	
4.00	15	D	
4.00-4.45	16	$UT_{(UT100)}$	4 blows 100% recovery
4.50	17	D	
4.50-5.00	18	B	
5.00	19	D	
5.00-5.45	20	$UT_{(UT100)}$	4 blows 100% recovery
5.50	21	D	
5.50-6.00	22	B	
6.00	23	D	
6.00-6.45	24	$UT_{(UT100)}$	6 blows 100% recovery
6.50	25	D	
6.50-7.00	26	B	
7.00	27	D	
7.00-7.45	28	$UT_{(UT100)}$	6 blows 100% recovery
7.50	29	D	
7.50-8.00	30	B	
8.00	31	D	
8.00-8.45	32	$UT_{(UT100)}$	20 blows 100% recovery
8.50	33	D	
8.50-9.00	34	B	

Water: 1 (strike at approx. 8.30m), rising to approx. 6.40m.

Description of Strata

Description of Strata	Reduced Level	Depth (m) (Thickness)
Grass over very stiff, locally friable brown slightly sandy silty CLAY with occasional rootlets. Sand is fine to coarse. (TOPSOIL)	1.19	0.40
Firm to stiff grey mottled orangish brown slightly sandy clayey SILT. Sand is fine to medium. (TIDAL FLAT DEPOSITS)	0.64	(0.55) 0.95
Very soft grey mottled orangish brown silty CLAY. (TIDAL FLAT DEPOSITS)	-0.51	(1.15) 2.10
Very soft to soft grey slightly sandy silty CLAY. Sand is fine to coarse. (TIDAL FLAT DEPOSITS)	-3.41	(2.90) 5.00
Very soft to soft grey slightly sandy clayey SILT with occasional pockets of fine to coarse sand. Sand is fine to coarse. (TIDAL FLAT DEPOSITS)	-6.51	(3.10) 8.10
Stiff bluish grey mottled orangish brown slightly sandy gravelly silty CLAY. Sand is fine to coarse. Gravel is angular to subrounded fine to coarse extremely weak siltstone. (THANET FORMATION)		

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
05/10/23	14:00	10.50	9.00	250	7.50
05/10/23	18:00	11.00	10.90	200	7.00
06/10/23	08:30	11.00	10.90	200	6.50
06/10/23	18:00	19.00	18.00	200	4.00
09/10/23	08:30	19.00	18.00	200	1.80
09/10/23	18:00	25.45	24.00	200	8.00

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. Groundwater strike at 8.30m depth, rising to 6.40m depth after 20 minutes.
5. 50mm diameter standpipe piezometer (complete with upstanding protective cover) installed to 3.00m depth on

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

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

AGS

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH102**

Contract Ref:	Start: **05.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **09.10.23**	**1.59**	**E:632218.5 N:163163.0**	**2** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
9.00	35	D				Stiff bluish grey mottled orangish brown slightly sandy gravelly silty CLAY. Sand is fine to coarse. Gravel is angular to subrounded fine to coarse extremely weak siltstone. (THANET FORMATION) *(stratum copied from 8.10m from previous sheet)*			
9.00-9.45	36	SPT	N=17						
9.00-9.45	36	DSPT							
9.50-10.00	37	B							
10.00	38	D						(4.05)	
10.00-10.45	39	$UT_{(UT100)}$	60 blows 100% recovery						
10.50	40	D							
10.50-11.00	41	B							
11.00	42	D							
11.00-11.45	43	SPT	N=30						
11.00-11.45	43	DSPT							
11.50-12.00	44	B							
12.00	45	D							
12.00-12.45	46	SPT	N=29				-10.56	12.15	
12.00-12.45	46	DSPT				Extremely weak grey SILTSTONE recovered as very stiff slightly sandy slightly gravelly clayey SILT. Sand is fine to coarse. Gravel is angular to subrounded fine to coarse siltstone. (THANET FORMATION)			
12.50-13.00	47	B							
13.00	48	D							
13.00-13.33	49	SPT	7,8/13,25,12 for 30mm						
13.00-13.33	49	DSPT							
13.50-14.00	50	B							
14.00	51	D							
14.00-14.37	52	SPT	3,8/12,18,20 for 70mm						
14.00-14.37	52	DSPT							
14.50-15.00	53	B							
15.00	54	D						(5.85)	
15.00-15.45	55	SPT	N=48						
15.00-15.45	55	DSPT							
15.50-16.00	56	B							
16.00	57	D							
16.00-16.45	58	SPT	N=49						
16.00-16.45	58	DSPT							
16.50-17.00	59	B							
17.00	60	D							
17.00-17.45	61	SPT	N=39						
17.00-17.45	61	DSPT							
17.50-18.00	62	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

completion. Response zone 0.80m to 3.00m depth.
6. Water level data logger installed during post fieldwork monitoring.
7. SPT hammer BHDS04-2023 (E_r = 57.00%) used.

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

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 2500**	**Jason Mills**	**FPrice**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH102**

Contract Ref:	Start: **05.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **09.10.23**	**1.59**	**E:632218.5 N:163163.0**	**3** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
18.00	63	D				Weak grey SILTSTONE recovered as very stiff slightly sandy gravelly silty CLAY with a low cobble content. Sand is fine to coarse. Gravel is angular to subrounded fine to coarse siltstone. Cobbles are angular weak siltstone. (THANET FORMATION)	-16.41	18.00	
18.00-18.45	64	SPT	N=49						
18.00-18.45	64	DSPT							
18.50-19.00	65	B							
19.00	66	D							
19.00-19.30	67	SPT	9,16/20,30 for 75mm						
19.00-19.30	67	DSPT							
19.50-20.00	68	B							
20.00	69	D						(4.00)	
20.00-20.45	70	SPT	N=45						
20.00-20.45	70	DSPT							
20.50-21.00	71	B							
21.00	72	D							
21.00-21.45	73	SPT	4,6/8,13,15,14 for 70mm						
21.00-21.44	73	DSPT							
21.50-22.00	74	B							
22.00	75	D				Weak grey SILTSTONE recovered as stiff slightly sandy gravelly silty CLAY with a low cobble content. Sand is fine to coarse. Gravel is angular to subrounded fine to coarse siltstone. Cobbles are angular weak siltstone. (THANET FORMATION)	-20.41	22.00	
22.00-22.45	76	SPT	N=28						
22.00-22.45	76	DSPT							
22.50-23.00	77	B							
23.00	78	D						(3.45)	
23.00-23.45	79	SPT	N=32						
23.00-23.45	79	DSPT							
23.50-24.00	80	B							
24.00	81	D							
24.00-24.45	82	SPT	N=30						
24.00-24.45	82	DSPT							
24.50-25.00	83	B							
25.00	84	D							
25.00-25.45	85	SPT	N=33						
25.00-25.45	85	DSPT							
						Borehole terminated at 25.45m depth.	-23.86	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 2500**	**Jason Mills**	**FPrice**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH103**

Contract Ref:	Start: **18.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **24.10.23**	**1.32**	**E:632166.5 N:162914.2**	**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	2xT+1xJ+1xV			Very stiff brown slightly gravelly silty organic CLAY. Gravel is subangular fine to coarse chalk. (TOPSOIL)			
0.20		PID	0.5ppm						
							0.97	0.35	
0.50	1	D				Stiff yellowish brown silty CLAY. (TIDAL FLAT DEPOSITS)			
0.50	102	ES	2xT+1xJ+1xV						
0.50-0.70	2	B							
0.50		PID	0.0ppm						
0.55		V	c_u=134/118/120				0.57	0.75	
0.80	1	EW	2xG+1xP+Vials			Firm light brown mottled light grey silty CLAY. (TIDAL FLAT DEPOSITS)			
0.80	2	EW	2xG+1xP+Vials						
0.80	3	EW	2xG+1xP+Vials					(0.75)	
0.90		V	c_u=68/72/74						
1.00	103	ES	2xT+1xJ+1xV				-0.18	1.50	
1.00	3	D				Very soft bluish grey slightly sandy silty CLAY with rare bivalve fragments. Sand is fine to coarse. (TIDAL FLAT DEPOSITS)			
1.00-1.20	4	B							
1.00		PID	0.0ppm						
1.20-1.65	5	SPT	N=3						
1.20-2.30	5	DSPT							
1.20-1.50	6	B							
1.20		V	c_u=55/52/58						
2.00	7	D							
2.00-2.30	8	B							
2.50-2.95	10	$UT_{(UT100)}$	8 blows 100% recovery			. . . from 2.50m depth, no longer any bivalve fragments.			
2.50	9	D							
2.95-3.05	11	D							
3.10-3.40	12	B							
								(4.00)	
3.50-3.95	13	$UT_{(UT100)}$	8 blows 84% recovery						
3.95-4.05	14	D							
4.00	1	EW	2xG+1xP+Vials						
4.00	2	EW	2xG+1xP+Vials						
4.00	3	EW	2xG+1xP+Vials						
4.10-4.40	15	B							
4.50-4.95	15	$UT_{(UT100)}$	6 blows 0% recovery						
4.50-4.80	16	B							
4.90	17	D							
5.00-5.45	18	$UT_{(UT100)}$	8 blows 100% recovery						
5.45-5.55	19	D							
5.60-6.00	20	B							
						Soft greenish grey sandy clayey SILT. Sand is fine to medium. (TIDAL FLAT DEPOSITS)	-4.18	5.50 (0.50)	
6.00-6.45	21	$UT_{(UT100)}$	30 blows 100% recovery			Medium dense bluish grey mottled white very silty calcareous fine to medium SAND with occasional bands of silt. (THANET FORMATION) . . . becomes greenish grey mottled bluish grey from 6.30m depth. . . . horizon of shell fragments at 6.45m depth.	-4.68	6.00	
6.45	22	D							
6.60-7.00	23	B							
								(1.90)	
7.00-7.45	24	SPT	N=28						
7.00-7.45	24	DSPT							
7.50-7.90	25	B							
8.00	26	D				Very stiff greenish grey mottled bluish grey slightly gravelly very sandy silty CLAY with a low cobble content. Sand is fine to medium. Gravel is angular to subangular fine to coarse siltstone. Cobbles are angular extremely weak siltstone. (THANET FORMATION)	-6.58	7.90 (0.60)	
8.00-8.45	27	$UT_{(UT100)}$	100 blows 89% recovery						
8.45-8.55	28	D					-7.18	8.50	
8.60-8.90	29	B				*Description on next sheet*			

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
18/10/23	18:00	6.00	5.00	250	4.01
19/10/23	08:30	6.00	5.00	250	0.90
19/10/23	11:00	9.00	7.50	250	4.00
19/10/23	18:00	15.50	15.50	200	10.00
20/10/23	08:30	15.50	15.50	200	1.00
20/10/23	12:00	18.00	17.90	200	4.00
23/10/23	08:30	18.00	17.90	200	1.00
23/10/23	18:00	25.45	19.00	200	4.00

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. Groundwater seepage at 0.85m depth.
5. Permeability tests undertaken between 3.00-4.00m and 5.00-6.00m depth.
6. Dual 50mm diameter standpipe piezometers (complete with

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

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 175**	**C.Rainsbury**	**MStorch**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH103**

Contract Ref:	Start: **18.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **24.10.23**	**1.32**	**E:632166.5 N:162914.2**	**2** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
9.00-9.45	30	SPT	N=36			Extremely weak greyish green mottled bluish grey slightly sandy SILTSTONE recovered as very stiff greyish green mottled bluish grey slightly sandy gravelly silty CLAY. Gravel is angular to subangular fine to coarse extremely weak siltstone. Sand is fine. (THANET FORMATION) *(stratum copied from 8.50m from previous sheet)* . . . between 9.00m and 9.45m depth, occasional shell fragments. . . . becomes bluish grey from 9.60m depth.			
9.00-9.45	30	DSPT							
9.60	31	D							
9.70-10.00	32	B							
10.00-10.45	33	$UT_{(UT100)}$	100 blows 84% recovery						
10.45-10.55	34	D							
10.60-10.90	35	B							
11.00-11.45	36	SPT	N=43					(5.20)	
11.00-11.45	36	DSPT							
11.50-11.80	37	B							
11.90	38	D							
12.00-12.45	39	$UT_{(UT100)}$	100 blows 100% recovery						
12.45-12.55	40	D							
12.60-12.90	41	B							
13.00-13.39	42	SPT	4,7/11,12,22,5 for 10mm						
13.00	42	DSPT							
13.70	43	D					-12.38	13.70	
13.70-14.00	44	B				Extremely weak locally very weak greenish grey slightly sandy SILTSTONE recovered as greenish grey silty sandy angular to subangular fine to coarse GRAVEL of extremely weak siltstone with occasional shell fragments. Sand is fine. (THANET FORMATION)			
13.70-14.04	45	SPT	8,10/18,18,14 for 40mm						
14.00	45	DSPT							
14.50-14.90	46	B							
15.00-15.33	47	SPT	6,10/16,22,12 for 25mm						
15.00	47	DSPT							
15.50-15.90	48	B							
16.00-16.30	49	SPT	8,10/20,30 for 70mm						
16.00	49	DSPT							
16.50-16.90	50	B							
17.00-17.35	51	SPT	2,4/10,17,23 for 45mm			. . . from 17.00m depth, no longer any shell fragments.			
17.00	51	DSPT							
17.50-17.90	52	B							

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
24/10/23	08:30	25.45	19.00	200	1.00

Chiselling / Slow Progress

From	To	Duration (hh:mm)

General Remarks

upstanding protective cover) installed to 1.00m and 6.00m depth respectively on completion. Response zones between 0.50m to 1.00m and 3.00m to 6.00m depth respectively.
7. Water level data logger installed during post fieldwork monitoring.
8. SPT hammers BHDS03-2023 (E_r = 68.00%) , BHDS07-2023 (E_r = 68.00%) used.

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

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 175**	**C.Rainsbury**	**MStorch**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH103**

Contract Ref:	Start: **18.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **24.10.23**	**1.32**	**E:632166.5 N:162914.2**	**3** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
18.00-18.34	53	SPT	5,7/11,19,20 for 40mm			Extremely weak locally very weak greenish grey slightly sandy SILTSTONE recovered as greenish grey silty sandy angular to subangular fine to coarse GRAVEL of extremely weak siltstone with occasional shell fragments. Sand is fine. (THANET FORMATION) *(stratum copied from 13.70m from previous sheet)*		(9.30)	
18.00	53	DSPT							
18.50-18.90	54	B							
19.00-19.30	55	SPT	3,3/20,30 for 70mm						
19.00	55	DSPT							
19.50-19.90	56	B							
20.00-20.42	57	SPT	10,10/8,12,17,13 for 40mm						
20.00	57	DSPT							
20.50-20.90	58	B							
21.00-21.43	59	SPT	5,7/9,12,15,14 for 50mm						
21.00	59	DSPT							
21.50-21.90	60	B							
22.00-22.33	61	SPT	10,14/19,21,10 for 25mm						
22.00	61	DSPT							
22.50-22.90	62	B							
23.00-23.45	63	SPT	N=37			Very stiff grey slightly gravelly slightly sandy silty CLAY. Sand is fine. Gravel is angular to subrounded fine to coarse siltstone. (THANET FORMATION)	-21.68	23.00	
23.00-23.45	63	DSPT							
23.50-23.90	64	B				. . . between 23.50m and 23.90m depth, occasional bands of SILTSTONE.			
24.00-24.45	65	SPT	N=39					(2.45)	
24.00-24.45	65	DSPT							
24.50-24.90	66	B							
25.00-25.45	67	SPT	N=41						
25.00-25.45	67	DSPT							
						Borehole terminated at 25.45m depth.	-24.13	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 175**	**C.Rainsbury**	**MStorch**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH104**

Contract Ref:	Start: **02.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **05.10.23**	**1.36**	**E:632516.8 N:162966.1**	**1** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
						Firm to stiff, locally friable dark brown sandy micaceous clayey SILT with occasional to frequent shell fragments. Sand is fine to coarse. (TOPSOIL)			
0.30	101	ES	2xT+1xJ+1xV						
0.30		V	c_u=74/76/92						
0.30		PID	0.0ppm						
0.50	1	D							
0.50	102	ES	2xT+1xJ+1xV						
0.50-0.80	2	B							
0.50		V	c_u=72/68/84						
0.50		PID	0.6ppm						
0.70		V	c_u=64/62/71						
1.00	3	D							
1.00-1.20	4	B							
1.10	103	ES	2xT+1xJ+1xV						
1.10		PID	0.0ppm						
1.20-1.65	5	SPT	N=0						
1.20-1.65	5	DSPT							
						Firm greyish brown mottled orangish brown slightly sandy silty CLAY with occasional shell fragments. Sand is fine to medium. (TIDAL FLAT DEPOSITS)	0.96	0.40	
						Soft grey mottled orangish brown slightly sandy silty CLAY with rare to occasional shell fragments. Sand is fine to coarse. (TIDAL FLAT DEPOSITS)	0.56	0.80	
								(0.70)	
						Very soft grey silty CLAY. (TIDAL FLAT DEPOSITS)	-0.14	1.50	
2.00	6	D							
2.00-2.45	7	$UT_{(UT100)}$	4 blows 100% recovery						
2.00-2.50	8	B							
3.00-3.45	10	$UT_{(UT100)}$	6 blows 100% recovery						
3.00	9	D						(3.50)	
3.50	11	D							
3.50-4.00	12	B							
4.00	1	EW	2xG+1xP+Vials			. . . becoming firm from 4.00m depth.			
4.00	13	D							
4.00	2	EW	2xG+1xP+Vials						
4.00	3	EW	2xG+1xP+Vials						
4.00-4.45	14	SPT	N=10						
4.00-4.45	14	DSPT							
4.50-5.00	15	B							
						Stiff greenish grey mottled orangish brown sandy silty CLAY with frequent shell fragments. Sand is fine to medium. (THANET FORMATION)	-3.64	5.00	
5.00	16	D							
5.00-5.45	17	$UT_{(UT100)}$	60 blows 100% recovery						
5.50-6.00	18	B							
5.50	18	D							
5.50-6.00	19	B							
6.00	19	D							
6.00	20	D							
6.00-6.45	21	SPT	N=28					(2.50)	
6.00-6.45	21	DSPT							
6.50-7.00	22	B							
7.00	23	D							
7.00-7.45	24	$UT_{(UT100)}$	90 blows 100% recovery						
						Extremely weak greyish green mottled orangish brown slightly sandy SILTSTONE recovered as greyish green silty sandy angular to subangular fine to coarse GRAVEL of extremely weak siltstone. Sand is fine. (THANET FORMATION)	-6.14	7.50	
7.50	25	D							
7.50-8.00	26	B							
8.00	27	D						(1.00)	
8.00-8.45	28	SPT	N=25						
8.00-8.45	28	DSPT							
						Very weak grey SILTSTONE recovered as very stiff grey slightly sandy slightly gravelly clayey SILT. Sand is fine to coarse. Gravel is angular to subangular fine to coarse very weak siltstone. (THANET FORMATION)	-7.14	8.50	
8.50-9.00	29	B							

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
02/10/23	18:00	7.50	5.90	250	6.00
03/10/23	08:30	7.50	5.90	250	1.25
03/10/23	09:00	8.00	7.50	250	4.00
03/10/23	18:00	17.00	16.50	200	12.00
04/10/23	08:30	17.00	16.50	200	2.20
04/10/23	18:00	25.45	24.00	200	2.20

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. Groundwater strike at 3.00m depth, rising to 2.78m depth after 20 minutes.
5. 50mm diameter standpipe piezometer (complete with protective cover) installed to 6.00m depth on completion.

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

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 2500**	**Jason Mills**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH104**

Contract Ref:	Start: **02.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **05.10.23**	**1.36**	**E:632516.8 N:162966.1**	**2** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
9.00	30	D				Very weak grey SILTSTONE recovered as very stiff grey slightly sandy slightly gravelly clayey SILT. Sand is fine to coarse. Gravel is angular to subangular fine to coarse very weak siltstone. (THANET FORMATION) *(stratum copied from 8.50m from previous sheet)*			
9.00-9.40	31	$UT_{(UT100)}$	10 blows 100% recovery						
9.50	32	D							
9.50-10.00	33	B							
10.00	34	D							
10.00-10.45	35	SPT	N=36						
10.00-10.45	35	DSPT							
10.50-11.00	36	B							
11.00	37	D							
11.00-11.45	38	SPT	N=34						
11.00-11.45	38	DSPT							
11.50-12.00	39	B							
12.00	40	D							
12.00-12.32	41	SPT	5,8/10,15,25 for 20mm						
12.00-12.37	41	DSPT							
12.50-13.00	42	B						(9.00)	
13.00	43	D							
13.00-13.39	44	SPT	6,8/12,16,16,6 for 10mm						
13.00-13.38	44	DSPT							
13.50-14.00	45	B							
14.00	46	D							
14.00-14.42	47	SPT	6,11/12,14,15,9 for 45mm						
14.00-14.42	47	DSPT							
14.50-15.00	48	B							
15.00	49	D							
15.00-15.44	50	SPT	5,9/13,13,13,11 for 65mm						
15.00-15.44	50	DSPT							
15.50-16.00	51	B							
16.00	52	D							
16.00-16.28	53	SPT	12,13/27,23 for 75mm						
16.00-16.28	53	DSPT							
16.50-17.00	54	B							
17.00	55	D							
17.00-17.45	56	SPT	N=38						
17.00-17.45	56	DSPT							
17.50-18.00	57	B					-16.14	17.50	
						Weak grey SILTSTONE recovered as very stiff grey slightly sandy slightly gravelly clayey SILT. Sand is fine. Gravel is angular to subangular fine to coarse weak siltstone. (THANET FORMATION)			

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

Response zone 3.00m to 6.00m depth.
6. Water level data logger installed during post fieldwork monitoring.
7. SPT hammer BHDS04-2023 (E_r = 57.00%) used.

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

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 2500**	**Jason Mills**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH104**

Contract Ref:	Start: **02.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **05.10.23**	**1.36**	**E:632516.8 N:162966.1**	**3** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
18.00	58	D				Weak grey SILTSTONE recovered as very stiff grey slightly sandy slightly gravelly clayey SILT. Sand is fine. Gravel is angular to subangular fine to coarse weak siltstone. (THANET FORMATION) *(stratum copied from 17.50m from previous sheet)*			
18.00-18.36	59	SPT	13,12/19,17,14 for 75mm						
18.00-18.36	59	DSPT							
18.50-19.00	60	B							
19.00	61	D							
19.00-19.44	62	SPT	5,7/10,13,15,12 for 60mm						
19.00-19.43	62	DSPT							
19.50-20.00	63	B							
20.00	64	D							
20.00-20.34	65	SPT	4,8/15,22,13 for 40mm						
20.00-20.34	65	DSPT							
20.50-21.00	66	B							
21.00	67	D							
21.00-21.45	68	SPT	N=42						
21.00-21.45	68	DSPT						(7.95)	
21.50-22.00	69	B							
22.00	70	D							
22.00-22.45	71	SPT	N=34						
22.00-22.45	71	DSPT							
22.50-23.00	72	B							
23.00	73	D							
23.00-23.45	74	SPT	N=43						
23.00-23.45	74	DSPT							
23.50-24.00	75	B							
24.00	76	D							
24.00-24.45	77	SPT	N=41						
24.00-24.45	77	DSPT							
24.50-25.00	78	B							
25.00	79	D							
25.00-25.45	80	SPT	N=37						
25.00-25.45	80	DSPT							
						Borehole terminated at 25.45m depth.	-24.09	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 2500**	**Jason Mills**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH105**

Contract Ref:	Start: **28.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **05.10.23**	**1.43**	**E:632525.7 N:163166.7**	**1** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
						Grass over soft to firm dark brown slightly sandy silty CLAY. Sand is fine to medium. (TOPSOIL)			
0.30-0.50	1	B					1.18	0.25	
0.30	101	ES	2xT+1xJ+1xV			Firm brownish grey mottled orangish grey slightly sandy silty CLAY. Sand is fine to coarse. (TIDAL FLAT DEPOSITS)			
0.30		PID	2.1ppm					(0.75)	
0.40		V	c_u=68/66/73						
0.50	102	ES	2xT+1xJ+1xV						
0.50		PID	1.7ppm						
0.70-1.00	2	B					0.43	1.00	
0.80	103	ES	2xT+1xJ+1xV			Firm to stiff brownish grey to grey slightly sandy silty CLAY with occasional shell fragments. Sand is fine to medium. (TIDAL FLAT DEPOSITS)			
0.80		V	c_u=69/59/64					(0.50)	
0.80		PID	1.5ppm						
1.20-1.65	3	$UT_{(UT100)}$	14 blows 100% recovery						
1.50	2	EW	2xG+1xP+Vials				-0.07	1.50	
1.65-1.75	4	D				Soft grey slightly sandy clayey SILT with occasional shell fragments. Sand is fine to medium. (TIDAL FLAT DEPOSITS)			
1.80	1	EW	2xG+1xP+Vials			. . . occasional pockets of sand between 1.80m and 2.00m depth.			
1.80	3	EW	2xG+1xP+Vials						
1.80	5	D							
1.80-2.00	6	B							
2.00-2.45	7	$UT_{(UT100)}$	8 blows 0% recovery						
2.50	8	D							
2.60-3.00	9	B							
3.00-3.45	10	$UT_{(UT100)}$	12 blows 100% recovery						
3.45-3.55	11	D							
3.60	12	D							
3.70-4.00	13	B							
4.00-4.45	14	$UT_{(UT100)}$	16 blows 100% recovery						
4.45-4.55	15	D						(5.90)	
4.60	16	D							
4.70-5.00	17	B							
5.00-5.45	18	$UT_{(UT100)}$	16 blows 100% recovery						
5.45-5.55	19	D							
5.60	20	D							
5.70-6.00	21	B							
6.00-6.45	22	$UT_{(UT100)}$	16 blows 100% recovery						
6.45-6.55	23	D							
6.60	24	D							
6.70-7.00	25	B							
7.00-7.45	26	$UT_{(UT100)}$	25 blows 100% recovery						
7.45-7.55	27	D					-5.97	7.40	
7.60	28	D				Dense grey mottled greenish brown silty fine to medium SAND with rare lignitic debris. (THANET FORMATION)			
7.70-8.00	29	B							
8.00-8.45	30	$UT_{(UT100)}$	82 blows 100% recovery						
8.45-8.55	31	D						(2.30)	
8.60	32	D							
8.70-9.00	33	B							

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
28/09/23	18:00	4.00	4.00	200	2.00
29/09/23	08:30	4.00	4.00	200	2.00
29/09/23	15:00	7.55	7.00	200	2.00
02/10/23	08:30	7.55	7.00	200	2.00
02/10/23	18:00	13.45	9.60	200	-
03/10/23	08:30	13.45	9.60	200	11.00
03/10/23	18:00	16.60	9.60	200	12.40
04/10/23	08:30	16.30	9.60	200	1.30

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 1.2m depth.
3. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
4. Groundwater strike at 1.00m depth, rising to 0.90m depth after 20 minutes.
5. Permeability tests undertaken between 2.74-3.34m and 4.20-6.50m depth.

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

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 2000 Mark 1**	**Karl Wordsworth**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH105**

Contract Ref:	Start: **28.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **05.10.23**	**1.43**	**E:632525.7 N:163166.7**	**2** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
9.00-9.45	34	$UT_{(UT100)}$	88 blows 100% recovery			Dense grey mottled greenish brown silty fine to medium SAND with rare lignitic debris. (THANET FORMATION) *(stratum copied from 7.40m from previous sheet)*			
9.45-9.55	35	D							
9.60	36	D							
9.70-10.00	37	B				Stiff grey mottled brown slightly sandy slightly gravelly clayey SILT. Sand is fine to coarse. Gravel is angular to subrounded fine to coarse siltstone. (THANET FORMATION)	-8.27	9.70	
10.00-10.45	38	$UT_{(UT100)}$	110 blows 78% recovery			Extremely weak to weak grey micaceous calcareous SILTSTONE recovered as grey silty sandy angular to subangular fine to coarse GRAVEL with a medium cobble content and occasional shell fragments. Cobbles are angular fragmented siltstone. (THANET FORMATION)	-8.57	10.00	
10.45-10.55	39	D							
10.60	40	D							
10.70-11.00	41	B							
11.00-11.27	42	SPT	10,15/18,32 for 45mm						
11.00-11.45	43	DSPT							
11.50	44	D							
11.60-12.00	45	B							
12.00-12.29	46	SPT	10,10/18,32 for 60mm						
12.00-12.45	47	DSPT							
12.50	48	D							
12.60-13.00	49	B							
13.00-13.34	50	SPT	12,12/20,20,10 for 35mm						
13.00-13.45	51	DSPT							
13.50	52	D							
13.60-14.00	53	B							
14.00-14.36	54	SPT	10,15/15,20,15 for 60mm						
14.00-14.45	55	DSPT							
14.50	56	D							
14.60-15.00	57	B							
15.00-15.28	58	SPT	25/27,23 for 55mm						
15.00-15.45	59	DSPT						(11.00)	
15.50	60	D							
15.60-16.00	61	B							
16.00-16.35	62	SPT	10,15/18,23,9 for 50mm						
16.00-16.45	63	DSPT							
16.50	64	D							
16.60-17.00	65	B							
17.00-17.45	66	SPT	N=50						
17.00-17.45	67	DSPT							
17.50	68	D							
17.60-18.00	69	B							

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
04/10/23	10:30	16.50	10.00	200	1.30
04/10/23	18:00	21.50	21.00	150	3.00
05/10/23	08:30	21.50	21.00	150	2.00
05/10/23	18:00	25.45	21.00	150	-

Chiselling / Slow Progress

From	To	Duration (hh:mm)

General Remarks

6. 50mm diameter gas/groundwater monitoring well complete with Upstanding protective cover installed to 3.00m depth on completion. Response zone 0.80m to 3.00m depth.
7. Water level data logger installed during post fieldwork monitoring.
8. SPT hammer AR3508-2023 (E_r = 73.00%) used.

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

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 2000 Mark 1**	**Karl Wordsworth**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH105**

Contract Ref:	Start: **28.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **05.10.23**	**1.43**	**E:632525.7 N:163166.7**	**3** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
18.00-18.35	70	SPT	10,13/15,18,17 for 45mm			Extremely weak to weak grey micaceous calcareous SILTSTONE recovered as grey silty sandy angular to subangular fine to coarse GRAVEL with a medium cobble content and occasional shell fragments. Cobbles are angular fragmented siltstone. (THANET FORMATION) *(stratum copied from 10.00m from previous sheet)*			
18.00-18.45	71	DSPT							
18.50	72	D							
18.60-19.00	73	B							
19.00-19.45	74	SPT	N=49						
19.00-19.45	75	DSPT							
19.50	76	D							
19.60-20.00	77	B							
20.00-20.37	78	SPT	11,13/15,18,17 for 70mm						
20.00-20.45	79	DSPT							
20.50	80	D							
20.60-21.00	81	B							
21.00-21.45	82	SPT	N=37			Very stiff to stiff grey slightly sandy micaceous silty CLAY. Sand is fine to coarse. (THANET FORMATION)	-19.57	21.00	
21.00-21.45	83	DSPT							
21.50	84	D							
21.60-22.00	85	B							
22.00-22.45	86	$UT_{(UT100)}$	100 blows 78% recovery						
22.45-22.55	87	D							
22.60	88	D							
22.70-23.00	89	B						(4.45)	
23.00-23.45	90	SPT	N=44						
23.00-23.45	91	DSPT							
23.50	92	D							
23.60-24.00	93	B							
24.00-24.45	94	$UT_{(UT100)}$	110 blows 78% recovery						
24.45-24.55	95	D							
24.60	96	D							
24.70-25.00	97	B							
25.00-25.45	98	SPT	N=42						
25.00-25.45	99	DSPT							
						Borehole terminated at 25.45m depth.	-24.02	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 2000 Mark 1**	**Karl Wordsworth**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH106**

Contract Ref:	Start: **12.10.23** End: **12.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607		**1.49**	**E:632308.6 N:163010.0**	**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			Very stiff brown silty organic CLAY. (TOPSOIL)			
0.20		PID	1.1ppm				1.19	0.30	
0.50	102	ES	2xT+1xJ+1xV			Stiff yellowish brown silty CLAY. (TIDAL FLAT DEPOSITS)			
0.50		V	c_u=130/85/115						
0.50		PID	0.0ppm				0.74	0.75	
0.80		V	c_u=70/50/58		≈	Firm yellowish brown mottled grey silty CLAY. (TIDAL FLAT DEPOSITS)			
1.00	103	ES	2xT+1xJ+1xV				0.44	1.05	
1.00		PID	0.0ppm			Firm grey mottled yellowish brown CLAY. (TIDAL FLAT DEPOSITS)			
1.10		V	c_u=50/52/55				0.29	1.20	
						Borehole terminated at 1.20m depth.			

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
12/10/23	10:00	1.20	None	250	1.10

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. Groundwater seepage at 1.05m depth.
5. Land drain within inspection pit at 1.10m depth running E-W (281°). Position relocated 0.50m northwards as R22-BH106A.
6. Borehole backfilled with bentonite on completion.

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

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 175**	**C.Rainsbury**	**MStorch**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH106A**

Contract Ref:	Start: **12.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **17.10.23**	**1.44**	**E:632309.2 N:163010.7**	**1** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
						Very stiff brown silty organic CLAY. (TOPSOIL)			
						Stiff yellowish brown silty CLAY. (TIDAL FLAT DEPOSITS)	1.14	0.30	
0.50		V	c_u=124/140/134					(0.50)	
						Firm yellowish brown mottled grey silty CLAY. (TIDAL FLAT DEPOSITS)	0.64	0.80	
0.90		V	c_u=68/70/60				0.44	1.00	
1.00	1	D				Firm grey mottled yellowish brown slightly sandy silty CLAY. Sand is fine to coarse. (TIDAL FLAT DEPOSITS)			
1.00-1.20	2	B							
1.20-1.65	3	SPT	N=0						
1.20-1.80	3	DSPT							
1.20		V	c_u=55/48/50			Soft bluish grey slightly sandy silty CLAY. Sand is fine to coarse. (TIDAL FLAT DEPOSITS)	-0.01	1.45	
1.80-2.00	4	B						(1.15)	
2.00	5	D							
2.00-2.45	6	$UT_{(UT100)}$	5 blows 100% recovery						
2.45-2.55	7	D							
2.60-2.90	8	B				Very soft grey slightly sandy clayey SILT with rare organic material. Sand is fine to coarse. (TIDAL FLAT DEPOSITS)	-1.16	2.60	
3.00-3.45	10	$UT_{(UT100)}$	6 blows 78% recovery						
3.00	9	D						(1.70)	
3.45-3.55	11	D							
3.60-3.90	12	B							
4.00	13	D				. . . from 4.00m depth rare shell fragments.			
4.00-4.45	14	$UT_{(UT100)}$	6 blows 100% recovery						
						Soft bluish grey clayey SILT with abundant semi-rotten organic material and rare shell fragments. (TIDAL FLAT DEPOSITS)	-2.86	4.30	
4.45-4.55	15	D							
4.60-4.90	16	B						(0.80)	
5.00	17	D				. . . from 5.00m depth abundant off-white gastropod shells fragments up to 5mm.	-3.66	5.10	
5.00-5.45	18	$UT_{(UT100)}$	15 blows 100% recovery			Soft greenish grey slightly sandy silty CLAY. Sand is fine to medium. (TIDAL FLAT DEPOSITS)			
5.45-5.55	19	D							
5.60-5.90	20	B						(1.20)	
6.00	21	D				. . . from 6.00m depth white calcareous staining.			
6.00-6.45	22	$UT_{(UT100)}$	40 blows 100% recovery						
						Medium dense bluish grey mottled yellow very silty fine to medium SAND with occasional shell fragments. (THANET FORMATION)	-4.86	6.30	
6.45-6.55	23	D							
6.60-6.90	24	B						(0.70)	
7.00-7.45	25	SPT	N=35			Dense yellow, green and grey very silty fine SAND with frequent bands of silt and rare shell fragments. (THANET FORMATION)	-5.56	7.00	
7.00-7.45	25	DSPT							
7.50-7.90	26	B							
8.00-8.45	27	SPT	N=38						
8.00-8.45	27	DSPT						(2.60)	
8.50-8.90	28	B							

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
12/10/23	18:00	7.00	6.90	250	6.70
13/10/23	08:30	7.00	6.90	250	4.10
13/10/23	11:20	10.00	10.00	250	8.00
13/10/23	18:00	13.00	12.90	200	12.70
16/10/23	08:30	13.00	12.90	200	1.60
16/10/23	18:00	20.50	20.90	200	4.00
17/10/23	08:30	20.50	20.90	200	2.00
17/10/23	16:00	25.45	21.00	200	4.00

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. Groundwater seepage at 1.00m depth.
5. Groundwater strike at 4.80m depth, rising to 4.60m depth after 20 minutes.
6. Borehole backfilled with bentonite pellets on completion.

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

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 175**	**C.Rainsbury**	**MStorch**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH106A**

Contract Ref:	Start: **12.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **17.10.23**	**1.44**	**E:632309.2 N:163010.7**	**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	29	SPT	N=42			Dense yellow, green and grey very silty fine SAND with frequent bands of silt and rare shell fragments. (THANET FORMATION) *(stratum copied from 7.00m from previous sheet)*			
9.00-9.45	29	DSPT							
9.60	30	D				Very stiff blocky grey slightly sandy clayey SILT. Sand is fine. (THANET FORMATION)	-8.16	9.60	
9.60-10.00	31	B							
10.00-10.43	32	SPT	8,9/10,13,13,14 for 50mm					(2.40)	
10.00	32	DSPT							
10.50-10.90	33	B							
11.00-11.45	34	SPT	N=43						
11.00-11.45	34	DSPT							
11.50-11.90	35	B							
12.00-12.41	36	SPT	9,11/12,13,15,10 for 30mm			Very stiff grey slightly sandy clayey SILT with occasional lenses of fine white sand. Sand is fine. (THANET FORMATION)	-10.56	12.00	
12.00	36	DSPT							
12.50-12.90	37	B						(1.50)	
13.00-13.19	38	SPT	13,12/50 for 70mm						
13.00	38	DSPT							
13.50-13.90	39	B				Very stiff grey slightly sandy slightly gravelly clayey SILT with bands of extremely weak siltstone. Sand is fine. Gravel is angular to subrounded fine to coarse siltstone. (THANET FORMATION)	-12.06	13.50	
14.00-14.26	40	SPT	10,15/25,25 for 40mm						
14.00	40	DSPT							
14.50-14.90	41	B							
15.00-15.29	42	SPT	7,13/20,30 for 60mm						
15.00	42	DSPT							
15.50-15.90	43	B							
16.00-16.34	44	SPT	4,8/18,20,12 for 35mm					(6.50)	
16.00	44	DSPT							
16.50-16.90	45	B							
17.00-17.36	46	SPT	2,6/10,17,23 for 60mm						
17.00	46	DSPT							
17.50-17.90	47	B							

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
23/11/23	16:00	25.45	None	N/R	-
23/11/23	16:00	25.45	None	N/R	-

Chiselling / Slow Progress

From	To	Duration (hh:mm)

General Remarks

7. SPT hammer BHDS03-2023 (E_r = 68.00%) used.

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

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 175**	**C.Rainsbury**	**MStorch**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH106A**

Contract Ref:	Start: **12.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **17.10.23**	**1.44**	**E:632309.2 N:163010.7**	**3** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
18.00-18.22	48	SPT	6,10/50 for 70mm			Very stiff grey slightly sandy slightly gravelly clayey SILT with bands of extremely weak siltstone. Sand is fine. Gravel is angular to subrounded fine to coarse siltstone. (THANET FORMATION) *(stratum copied from 13.50m from previous sheet)*			
18.00	48	DSPT							
18.50-18.90	49	B							
19.00-19.20	50	SPT	11,14/40,10 for 10mm						
19.00	50	DSPT							
19.50-19.90	51	B							
20.00-20.45	52	SPT	N=46			Extremely weak to weak grey micaceous calcareous SILTSTONE recovered as grey sandy very clayey angular to subangular fine to coarse GRAVEL of extremely weak siltstone. (THANET FORMATION)	18.56	20.00	
20.00-20.45	52	DSPT							
20.50-20.90	53	B							
21.00-21.40	54	SPT	4,8/10,16,16,8 for 25mm						
21.00	54	DSPT							
21.50-21.90	55	B						(5.45)	
22.00-22.37	56	SPT	7,10/12,18,20 for 70mm						
22.00	56	DSPT							
22.50-22.90	57	B							
23.00-23.45	58	SPT	N=39						
23.00-23.45	58	DSPT							
23.50-23.90	59	B							
24.00-24.45	60	SPT	N=44						
24.00-24.45	60	DSPT							
24.50-24.90	61	B							
25.00-25.45	62	SPT	N=41						
25.00	62	DSPT							
						Borehole terminated at 25.45m depth.	24.01	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 175**	**C.Rainsbury**	**MStorch**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH203**

Contract Ref:	Start: **10.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **11.10.23**	**7.96**	**E:633390.3 N:163512.4**	**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			MADE GROUND: Brown slightly gravelly silty fine to coarse SAND. Gravel is angular to subrounded fine to coarse chalk, sandstone and brick.			
0.20		PID	0.3ppm						
							7.56	0.40	
0.50	1	D				Orangish brown slightly gravelly silty fine to medium SAND. Gravel is angular to subrounded fine to medium chalk. (TIDAL FLAT DEPOSITS)		(0.65)	
0.50	102	ES	2xT+1xJ+1xV						
0.50-0.70	2	B							
0.50		PID	8.0ppm						
							6.91	1.05	
1.00	103	ES	2xT+1xJ+1xV			Firm to stiff orangish brown mottled greyish brown sandy clayey SILT with occasional pockets of silty fine to coarse sand. Sand is fine to coarse. (TIDAL FLAT DEPOSITS)			
1.00	3	D							
1.00-1.20	4	B							
1.00		PID	1.6ppm						
1.20-1.65	5	SPT	N=12					(0.95)	
1.20-1.65	5	DSPT							
1.20		V	c_u=114/118/120						
1.20		V	c_r=54/52/50						
1.50-2.00	6	B							
							5.96	2.00	
2.00	7	D				Very stiff orangish brown mottled greyish brown sandy clayey SILT with occasional pockets of silty fine to coarse sand. Sand is fine to coarse. (THANET FORMATION)			
2.00-2.45	8	$UT_{(UT100)}$	100 blows 100% recovery						
2.50-3.00	10	B							
2.50	9	D							
3.00	11	D							
3.00-3.45	12	SPT	N=39					(2.50)	
3.00-3.45	12	DSPT							
3.50-4.00	13	B							
4.00	14	D							
4.00-4.45	15	$UT_{(UT100)}$	60 blows 100% recovery						
							3.46	4.50	
4.50	16	D				Very stiff grey slightly sandy clayey SILT with rare shell fragments. Sand is fine. (THANET FORMATION)			
4.50-5.00	17	B							
5.00	18	D							
5.00-5.45	19	SPT	N=36						
5.00-5.45	19	DSPT							
5.50-6.00	20	B							
6.00	21	D						(3.00)	
6.00-6.45	22	SPT	N=43						
6.00-6.45	22	DSPT							
6.50-7.00	23	B							
7.00	24	D							
7.00-7.45	25	SPT	N=38		1				
7.00-7.45	25	DSPT							
7.50-8.00	26	B				Extremely weak grey SILTSTONE recovered as grey silty sandy angular to subangular fine to coarse GRAVEL with a low cobble content and occasional shell fragments. Cobbles are angular extremely weak siltstone. (THANET FORMATION)	0.46	7.50	
					1				
8.00	27	D							
8.00-8.32	28	SPT	7,13/16,25,9 for 20mm					(1.50)	
8.00-8.32	28	DSPT							
8.50-9.00	29	B							

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
10/10/23	18:00	6.00	4.50	200	Dry
11/10/23	08:30	6.00	4.50	200	1.50
11/10/23	15:30	15.45	4.50	200	5.50

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. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
4. Groundwater strike at 8.00m depth, rising to 7.50m depth after 20 minutes.
5. Permeability tests undertaken between 3.00-4.00m and 4.50-6.00m depth.

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

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 2500**	**Jason Mills**	**FPrice**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH203**

Contract Ref:	Start: **10.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **11.10.23**	**7.96**	**E:633390.3 N:163512.4**	**2** of **2**

Depth (m)	Samples & Testing: No	Type	Results	Backfill	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
9.00	30	D				Weak grey SILTSTONE recovered as very stiff grey slightly sandy gravelly clayey SILT with a low cobble content and occasional shell fragments. Sand is fine to coarse. Gravel is angular to subrounded fine to coarse weak siltstone. Cobbles are angular weak siltstone. (THANET FORMATION)	-1.05	9.00	
9.00-9.28	31	SPT	6,13/26,24 for 50mm						
9.00-9.27	31	DSPT							
9.50-10.00	32	B							
10.00	33	D							
10.00-10.40	34	SPT	5,7/13,15,16,6 for 20mm						
10.00	34	DSPT							
10.50-11.00	35	B							
11.00	36	D							
11.00-11.43	37	SPT	3,5/8,12,16,14 for 50mm						
11.00-11.42	37	DSPT							
11.50-12.00	38	B							
12.00	39	D							
12.00-12.30	40	SPT	4,9/16,34 for 75mm					(6.45)	
12.00-12.30	40	DSPT							
12.50-13.00	41	B							
13.00	42	D							
13.00-13.20	43	SPT	10,15/40,10 for 10mm						
13.00-13.20	43	DSPT							
13.50-14.00	44	B							
14.00	45	D							
14.00-14.45	46	SPT	N=41						
14.00-14.45	46	DSPT							
14.50-15.00	47	B							
15.00	48	D							
15.00-15.45	49	SPT	N=50						
15.00-15.45	49	DSPT							
						Borehole terminated at 15.45m depth.	-7.50	15.45	

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

6. Borehole backfilled with bentonite pellets on completion.
7. SPT hammer BHDS04-2023 (E_r = 57.00%) used.

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

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 2500**	**Jason Mills**	**FPrice**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH204**

Contract Ref:	Start: **18.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **28.09.23**	**7.29**	**E:633299.1 N:163507.7**	**1** of **4**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
						Stiff dark brown slightly sandy silty CLAY. Sand is fine to medium. (TOPSOIL)			
0.30-0.50	1	B					6.99	0.30	
0.30	101	ES	2xT+1xJ+1xV			Brown silty fine to medium SAND. (THANET FORMATION)		(0.50)	
0.30		V	c_u=105/97/115						
0.30		PID	0.1ppm						
0.50	102	ES	2xT+1xJ+1xV				6.49	0.80	
0.50		PID	0.0ppm			Brown sandy silty CLAY. Sand is fine to coarse. (THANET FORMATION)			
0.60		V	c_u=>120/106/97						
0.80-1.10	2	B					6.19	1.10	
1.00	103	ES	2xT+1xJ+1xV			Loose greenish brown silty fine to medium SAND. (THANET FORMATION)			
1.00		PID	0.0ppm						
1.20-1.65	3	SPT	N=9						
1.20-1.65	4	DSPT					5.79	1.50	
1.50	5	D				Very stiff greenish brown to brown locally mottled light grey sandy silty CLAY with rare to occasional shell fragments. Sand is fine to medium. (THANET FORMATION)			
1.50-2.00	6	B							
2.00-2.45	7	$UT_{(UT100)}$	48 blows 100% recovery						
2.45-2.55	8	D						(2.00)	
2.55-3.00	10	B							
2.55	9	D							
3.00-3.45	11	SPT	N=40						
3.00-3.45	12	DSPT							
3.50	13	D					3.79	3.50	
3.50-4.00	14	B				Very stiff greenish brown mottled light grey slightly sandy clayey SILT with rare to occasional shell fragments. Sand is fine to medium. (THANET FORMATION)			
4.00-4.45	15	$UT_{(UT100)}$	80 blows 100% recovery					(1.00)	
4.45-4.55	16	D					2.79	4.50	
4.55	17	D				Extremely weak to very weak dark grey calcareous SILTSTONE recovered as soft dark grey gravelly clayey SILT with a low cobble content and occasional shell fragments. Gravel is angular to subangular fine to coarse siltstone. (THANET FORMATION)			
4.55-5.00	18	B							
5.00-5.45	19	SPT	N=46						
5.00-5.45	20	DSPT							
5.50	21	D							
5.50-6.00	22	B							
6.00-6.45	23	$UT_{(UT100)}$	110 blows 78% recovery						
6.45-6.55	24	D							
6.55	25	D							
6.55-7.00	26	B							
7.00-7.40	27	SPT	10,14/12,12,13,13 for 25mm						
7.00-7.45	28	DSPT							
7.50	29	D							
7.50-8.00	30	B							
8.00-8.45	31	$UT_{(UT100)}$	130 blows 67% recovery						
8.45-8.55	32	D							
8.60	33	D						(8.30)	
8.60-9.00	34	B							

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
18/09/23	18:00	2.00	2.00	250	Dry
19/09/23	08:30	2.00	2.00	250	Dry
19/09/23	18:00	10.45	5.50	250	8.13
20/09/23	08:30	10.45	5.50	250	3.40
20/09/23	18:00	12.80	10.00	250	4.00
21/09/23	08:30	12.80	10.00	250	4.34
21/09/23	09:35	12.80	10.00	250	4.34
21/09/23	18:00	14.80	14.00	200	10.00

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. Water added to aid drilling between 2.00 and 10.50m depth (volume added approximately 100 litres).
5. Groundwater strike at 10.57m depth, rising to 8.13m depth after 20 minutes.

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

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 2000 Mark 1**	**Karl Wordsworth**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH204**

Contract Ref:	Start: **18.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **28.09.23**	**7.29**	**E:633299.1 N:163507.7**	**2** of **4**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
9.00-9.21	35	SPT	15,10/50 for 73mm			Extremely weak to very weak dark grey calcareous SILTSTONE recovered as soft dark grey gravelly clayey SILT with a low cobble content and occasional shell fragments. Gravel is angular to subangular fine to coarse siltstone. (THANET FORMATION) *(stratum copied from 4.50m from previous sheet)*			
9.00-9.45	36	DSPT							
9.50	37	D							
9.60-10.00	38	B							
10.00-10.45	39	$UT_{(UT100)}$	131 blows 67% recovery		▼1				
10.45-10.55	40	D				. . . becoming micaceous from 10.50m depth.			
10.55	41	D							
10.60-11.00	42	B							
11.00-11.30	43	SPT	9,16/25,25 for 75mm						
11.00-11.45	44	DSPT							
11.50	45	D							
11.50-12.00	46	B							
12.00-12.45	47	$UT_{(UT100)}$	131 blows 67% recovery						
12.45-12.55	48	D							
						Very stiff grey slightly sandy slightly gravelly clayey SILT. Sand is fine to coarse. Gravel is angular to subrounded fine to coarse siltstone. (THANET FORMATION)	-5.51	12.80	
13.00-13.36	49	SPT	6,6/12,24,14 for 60mm						
13.00-13.45	50	DSPT							
13.50	51	D							
13.60-14.00	52	B							
14.00-14.34	53	SPT	8,8/13,26,11 for 40mm						
14.00-14.45	54	DSPT							
14.50	55	D							
14.60-15.00	56	B							
15.00-15.45	57	SPT	N=50						
15.00-15.45	58	DSPT							
15.50	59	D							
15.60-16.00	60	B							
16.00-16.45	61	$UT_{(UT100)}$	88 blows 56% recovery						
16.45-16.55	62	D							
16.60	63	D							
16.70-17.00	64	B							
17.00-17.45	65	SPT	N=48						
17.00-17.45	66	DSPT							
17.50	67	D							
17.60-18.00	68	B							

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
22/09/23	08:30	14.80	14.00	200	4.20
22/09/23	15:00	17.50	16.50	200	12.00
25/09/23	08:30	17.50	16.50	200	3.40
25/09/23	18:00	23.45	18.00	200	20.00
26/09/23	08:30	23.45	18.00	200	3.40
26/09/23	10:00	27.00	27.00	150	-
26/09/23	18:00	28.45	27.00	150	18.00
27/09/23	08:00	28.45	27.00	150	-

Chiselling / Slow Progress

From	To	Duration (hh:mm)

General Remarks

6. 50mm diameter standpipe piezometer (complete with Upstanding protective cover) installed to 29.00m depth on completion. Response zone 26.50m to 29.00m depth.
7. Water level data logger installed during post fieldwork monitoring.
8. SPT hammer AR3508-2023 (E_r = 73.00%) used.

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

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 2000 Mark 1**	**Karl Wordsworth**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH204**

Contract Ref:	Start: **18.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **28.09.23**	**7.29**	**E:633299.1 N:163507.7**	**3** of **4**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
18.00-18.45	69	SPT	N=48			Very stiff grey slightly sandy slightly gravelly clayey SILT. Sand is fine to coarse. Gravel is angular to subrounded fine to coarse siltstone. (THANET FORMATION) *(stratum copied from 12.80m from previous sheet)*		(10.90)	
18.00-18.45	70	DSPT							
18.50	71	D							
18.60-19.00	72	B							
19.00-19.45	73	SPT	N=40						
19.00-19.45	74	DSPT							
19.50	75	D							
19.60-20.00	76	B							
20.00-20.36	77	SPT	7,8/10,20,20 for 60mm						
20.00-20.45	78	DSPT							
20.50	79	D							
20.60-21.00	80	B							
21.00-21.45	81	SPT	N=48						
21.00-21.45	82	DSPT							
21.50	83	D							
21.60-22.00	84	B							
22.00-22.37	85	SPT	12,12/12,20,18 for 70mm						
22.00-22.45	86	DSPT							
22.50	87	D							
22.60-23.00	88	B							
23.00-23.18	89	SPT	12,13/50 for 75mm						
23.00-23.45	90	DSPT							
23.50	91	D							
23.60-24.00	92	B							
						Black subangular to subrounded fine to coarse GRAVEL of flint with a medium cobble content. (THANET FORMATION BASE BED MEMBER BULLHEAD BED)	-16.41	23.70	
24.00-24.45	93	SPT	N=29			White CHALK recovered as white slightly sandy silty angular to subangular fine to coarse GRAVEL. Clasts are extremely weak to very weak low to medium density white with occasional black specks. Matrix is off white. (NEWHAVEN CHALK FORMATION)	-16.71	24.00	
24.00-24.45	94	DSPT							
25.00-25.45	95	SPT	N=13			. . . probably structureless Grade Dc chalk.			
25.00-25.50	96	B							
25.60	97	D							
25.70-26.00	98	B							
26.00-26.34	99	SPT	10,10/16,16,18 for 35mm			. . . probably structured chalk below 26.00m depth.			
26.00-26.45	100	DSPT							
26.50	101	D						(5.45)	
26.60-27.00	102	B							

Boring Progress and Water Observations					
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
27/09/23	09:15	29.45	27.00	150	15.00

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 2000 Mark 1**	**Karl Wordsworth**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH204**

Contract Ref:	Start: **18.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **28.09.23**	**7.29**	**E:633299.1 N:163507.7**	**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	103	SPT	N=36			White CHALK recovered as white slightly sandy silty angular to subangular fine to coarse GRAVEL. Clasts are extremely weak to very weak low to medium density white with occasional black specks. Matrix is off white. (NEWHAVEN CHALK FORMATION) *(stratum copied from 24.00m from previous sheet)*			
27.00-27.45	104	DSPT							
27.30	1	EW	2xG+1xP+Vials						
27.30	2	EW	2xG+1xP+Vials						
27.30	3	EW	2xG+1xP+Vials						
27.50	105	D							
27.60-28.00	106	B							
28.00-28.45	107	SPT	N=33						
28.00-28.45	108	DSPT							
28.50	109	D							
28.60-29.00	110	B							
29.00-29.45	111	SPT	N=34						
29.00-29.45	112	DSPT							
						Borehole terminated at 29.45m depth.	-22.16	29.45	

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 2000 Mark 1**	**Karl Wordsworth**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH205**

Contract Ref:	Start: **12.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **17.10.23**	**1.58**	**E:631975.5 N:162897.7**	**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	1xT+1xJ+1xV			Grass over very stiff brown sandy clayey SILT with frequent roots. Sand is fine to coarse. (TOPSOIL)			
0.20		V	c_u=216/188/196						
0.20		V	c_r=76/64/72						
0.20		PID	0.6ppm						
0.50	1	D							
0.50	102	ES	3xT+1xJ+1xV						
0.50-0.70	2	B							
0.50		V	c_u=204/232/218						
0.50		V	c_r=64/80/74						
0.50		PID	0.5ppm						
1.00	103	ES	4xT+1xJ+1xV						
1.00	3	D							
1.00-1.20	4	B							
1.00		V	c_u=104/84/98						
1.00		V	c_r=70/44/54						
1.00		PID	0.2ppm						
1.20-1.65	5	SPT	N=0						
1.20-1.65	5	DSPT							
1.50-2.00	6	B							
2.00	7	D							
2.00-2.45	8	$UT_{(UT100)}$	3 blows 0% recovery						
2.00-2.50	9	B				Very stiff greyish brown mottled brown slightly sandy silty CLAY. Sand is fine to coarse. (TIDAL FLAT DEPOSITS)	1.23	0.35	
2.50-3.00	9	B						(0.65)	
3.00	10	D				Very soft grey mottled brown slightly sandy silty CLAY with frequent pockets of orange silty fine to coarse sand. Sand is fine to coarse, (TIDAL FLAT DEPOSITS)	0.58	1.00	
3.00-3.45	11	$UT_{(UT100)}$	3 blows 100% recovery						
3.50	12	D						(1.50)	
3.50-4.00	13	B							
4.00	14	D							
4.00-4.45	15	$UT_{(UT100)}$	4 blows 100% recovery						
4.50	16	D							
4.50-5.00	17	B				Very soft grey slightly sandy silty CLAY. Sand is fine to coarse. (TIDAL FLAT DEPOSITS)	-0.92	2.50	
5.00	18	D							
5.00-5.45	19	$UT_{(UT100)}$	4 blows 100% recovery						
5.50	20	D							
5.50-6.00	21	B						(5.70)	
6.00	22	D							
6.00-6.45	23	$UT_{(UT100)}$	3 blows 100% recovery						
6.50	24	D							
6.50-7.00	25	B							
7.00	26	D							
7.00-7.45	27	$UT_{(UT100)}$	3 blows 0% recovery		1				
7.00-7.50	28	B							
8.00	29	D			1				
8.00-8.45	30	$UT_{(UT100)}$	20 blows 100% recovery						
8.50	31	D				Firm light grey clayey SILT. (THANET FORMATION)	-6.62	8.20	
8.50-9.00	32	B						(0.80)	

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
12/10/23	18:00	9.00	8.90	250	8.00
13/10/23	08:30	9.00	8.90	250	1.50
13/10/23	09:30	9.50	9.00	250	-
13/10/23	15:00	17.00	16.00	200	6.50
16/10/23	08:30	17.00	16.00	200	7.00
16/10/23	18:00	25.45	16.00	200	6.50
17/10/23	08:30	25.45	16.00	200	1.30

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. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
4. Water strike at 7.00m depth, rising to 6.50m depth after 20 minutes.
5. 50mm diameter standpipe piezometer (complete with upstanding protective cover) installed to 25.00m depth on

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

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 2500**	**Jason Mills**	**FPrice**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH205**

Contract Ref:	Start: **12.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **17.10.23**	**1.58**	**E:631975.5 N:162897.7**	**2** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
9.00	33	D				Firm grey mottled greenish brown and orange slightly sandy clayey SILT with occasional lithorelicts of extremely weak grey mottled greenish brown and orange siltstone. Sand is fine to coarse. (THANET FORMATION)	-7.42	9.00	
9.00-9.45	34	SPT	N=15						
9.00-9.45	34	DSPT							
9.50-10.00	35	B							
10.00	36	D						(2.00)	
10.00-10.45	37	SPT	N=14						
10.00-10.45	37	DSPT							
10.50-11.00	38	B							
11.00	39	D				Stiff grey slightly sandy clayey SILT with bands of extremely weak siltstone and occasional brown staining. Sand is fine to coarse. (THANET FORMATION)	-9.42	11.00	
11.00-11.45	40	SPT	N=24						
11.00-11.45	40	DSPT							
11.50-12.00	41	B							
12.00	42	D				. . . becoming very stiff from 12.00m depth.		(2.50)	
12.00-12.45	43	SPT	N=44						
12.00-12.45	43	DSPT							
12.50-13.00	44	B							
13.00	45	D							
13.00-13.42	46	SPT	4,7/10,16,15,9 for 40mm						
13.00-13.41	46	DSPT							
13.50-14.00	47	B				Weak dark grey SILTSTONE recovered as grey slightly sandy angular to subangular fine to coarse GRAVEL with rare shell fragments. Gravel is weak siltstone. Sand is fine. (THANET FORMATION)	-11.92	13.50 (0.50)	
14.00	48	D				Very stiff grey slightly sandy clayey SILT with bands of extremely weak siltstone. (THANET FORMATION)	-12.42	14.00	
14.00-14.45	49	SPT	N=38						
14.00-14.45	49	DSPT							
14.50-15.00	50	B							
15.00	51	D						(3.50)	
15.00-15.38	52	SPT	3,9/13,16,21 for 75mm						
15.00-15.37	52	DSPT							
15.50-16.00	53	B							
16.00	54	D							
16.00-16.35	55	SPT	9,14/19,19,12 for 50mm						
16.00-16.35	55	DSPT							
16.50-17.00	56	B							
17.00	57	D							
17.00-17.34	58	SPT	6,9/12,20,18 for 40mm						
17.00-17.34	58	DSPT							
17.50-18.00	59	B				Very stiff grey mottled black and light grey silty CLAY with occasional shell fragments and bands of extremely weak to weak siltstone. (THANET FORMATION)	-15.92	17.50	

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

completion. Response zone 20.00m to 25.00m depth.
6. Water level data logger installed during post fieldwork monitoring.
7. SPT hammer BHDS04-2023 (E_r = 57.00%) used.

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

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 2500**	**Jason Mills**	**FPrice**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH205**

Contract Ref:	Start: **12.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **17.10.23**	**1.58**	**E:631975.5 N:162897.7**	**3** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
18.00	60	D				Very stiff grey mottled black and light grey silty CLAY with occasional shell fragments and bands of extremely weak to weak siltstone. (THANET FORMATION) *(stratum copied from 17.50m from previous sheet)*			
18.00-18.24	61	SPT	5,11/30,20 for 10mm						
18.00-18.25	61	DSPT							
18.50-19.00	62	B							
19.00	63	D						(3.00)	
19.00-19.24	64	SPT	5,20/40,10 for 10mm						
19.00-19.23	64	DSPT							
19.50-20.00	65	B							
20.00	66	D							
20.00-20.45	67	SPT	N=49						
20.00-20.45	67	DSPT							
20.50-21.00	68	B				Very stiff grey mottled light grey slightly sandy slightly gravelly clayey SILT with bands of extremely weak to weak siltstone. Sand is fine to coarse. Gravel is angular to subrounded fine to coarse siltstone. (THANET FORMATION)	-18.92	20.50	
21.00	1	EW	2xG+1xP+Vials						
21.00	2	EW	2xG+1xP+Vials						
21.00	3	EW	2xG+1xP+Vials						
21.00	69	D							
21.00-21.45	70	SPT	5,7/8,14,15,13 for 70mm						
21.00-21.45	70	DSPT							
21.50-22.00	71	B							
22.00	72	D							
22.00-22.43	73	SPT	7,13/13,12,13,12 for 50mm						
22.00-22.42	73	DSPT							
22.50-23.00	74	B							
23.00	75	D						(4.95)	
23.00-23.45	76	SPT	N=33						
23.00-23.45	76	DSPT							
23.50-24.00	77	B							
24.00	78	D							
24.00-24.45	79	SPT	N=35						
24.00-24.45	79	DSPT							
24.50-25.00	80	B							
25.00	81	D							
25.00-25.45	82	SPT	N=40						
25.00-25.45	82	DSPT							
						Borehole terminated at 25.45m depth.	-23.87	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 2500**	**Jason Mills**	**FPrice**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH501**

Contract Ref:	Start: **27.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **04.10.23**	**1.49**	**E:632650.4 N:163138.8**	**1** of **4**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
0.00	1	D				Stiff brown slightly sandy organic clayey SILT. Sand is fine. (TOPSOIL)			
0.20	101	ES	2xT+1xJ+1xV						
0.20		PID	0.5ppm						
0.50	1	D					1.09	0.40	
0.50	102	ES	2xT+1xJ+1xV			Very stiff light brown mottled light grey slightly sandy silty CLAY. Sand is fine. (TIDAL FLAT DEPOSITS)			
0.50-0.70	2	B							
0.50		PID	0.0ppm				0.64	0.85	
0.60		V	c_u=>230/>230/>230			Stiff light brown mottled light grey slightly micaceous silty CLAY. (TIDAL FLAT DEPOSITS)			
0.90		V	c_u=130/120/150					(0.65)	
1.00	103	ES	2xT+1xJ+1xV						
1.00	3	D							
1.00-1.20	4	B							
1.00		PID	0.0ppm				-0.01	1.50	
1.20-1.65	5	SPT	N=2			Firm light brown mottled grey slightly sandy silty CLAY with rare medium gravel sized siltstone concretions. Sand is fine to coarse. (TIDAL FLAT DEPOSITS)			
1.20-1.65	5	DSPT							
1.20		V	c_u=102/89/72					(0.60)	
1.50-1.65	6	B							
2.00	7	D					-0.61	2.10	
2.00-2.45	8	$UT_{(UT100)}$	7 blows 100% recovery			Very soft bluish grey slightly sandy silty CLAY. Sand is fine to coarse. (TIDAL FLAT DEPOSITS)			
2.45-2.55	9	D							
2.60-3.00	10	B							
3.00-3.45	11	SPT	N=2						
3.00-4.30	11	DSPT							
3.50-4.00	12	B							
3.60-4.30	11	DSPT							
4.00-4.50	13	B							
4.50-4.95	14	$UT_{(UT100)}$	7 blows 100% recovery					(4.90)	
4.95-5.10	15	D							
5.10-5.50	16	B							
5.50-5.95	17	$UT_{(UT100)}$	6 blows 100% recovery						
5.95-6.10	18	D							
6.10-6.50	19	B			1				
6.50-6.95	20	$UT_{(UT100)}$	10 blows 100% recovery						
6.95-7.10	21	D					-5.51	7.00	
7.10-7.50	22	B				Firm locally soft light bluish grey mottled brownish yellow slightly sandy silty CLAY with rare semi-rotten organic remains. Sand is fine. (TIDAL FLAT DEPOSITS)			
7.50-7.95	23	SPT	N=10						
7.50-7.95	23	DSPT							
8.00-8.40	24	B						(2.50)	
8.50	25	D							
8.50-8.95	26	$UT_{(UT100)}$	40 blows 100% recovery						

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
27/09/23	18:00	2.00	1.70	250	Dry
28/09/23	08:30	2.00	1.70	250	Dry
28/09/23	13:00	7.50	7.50	250	-
28/09/23	18:00	11.00	8.40	200	7.40
29/09/23	08:30	11.00	8.40	200	1.20
29/09/23	15:00	18.00	18.00	200	4.50
02/10/23	08:30	18.00	18.00	200	1.00
02/10/23	18:00	24.50	24.40	200	4.00

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. Groundwater seepage at 1.00m depth.
5. Groundwater strike at 7.00m depth, rising to 6.40m depth after 20 minutes.
6. 50mm diameter standpipe piezometer (complete with

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

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 175**	**C.Rainsbury**	**MStorch**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH501**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	**27.09.23** End: **04.10.23**	**1.49**	**E:632650.4 N:163138.8**	**2** of **4**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
8.95-9.05	27	D				Firm locally soft light bluish grey mottled brownish yellow slightly sandy silty CLAY with rare semi-rotten organic remains. Sand is fine. (TIDAL FLAT DEPOSITS) *(stratum copied from 7.00m from previous sheet)*			
9.10-9.50	28	B							
9.50-9.95	29	SPT	N=26			Stiff grey with bands of brownish yellow blocky slightly sandy silty CLAY. Sand is fine. (THANET FORMATION)	-8.01	9.50 (0.50)	
9.50-9.95	29	DSPT							
10.00-10.40	30	B				Extremely weak bluish grey slightly sandy SILTSTONE recovered as bluish grey slightly gravelly sandy clayey SILT. Gravel is angular to subangular fine to coarse siltstone. Sand is fine. (THANET FORMATION)	-8.51	10.00 (1.50)	
10.50	31	D							
10.50-10.77	32	$UT_{(UT100)}$	100 blows 137% recovery						
10.77-10.87	33	D							
11.00	34	D							
11.50-11.83	35	SPT	3,7/10,25,15 for 30mm			Very stiff, locally friable bluish grey very sandy clayey SILT with rare shell fragments. Sand is fine. (THANET FORMATION)	-10.01	11.50 (2.50)	
11.50	35	DSPT							
11.50-12.00	36	B							
12.00	37	D							
12.50-12.90	38	SPT	3,5/9,11,20,10 for 20mm						
12.50	38	DSPT							
12.50-13.00	39	B							
13.00	40	D							
13.50-13.85	41	SPT	5,12/15,17,18 for 45mm						
13.50	41	DSPT							
13.50-14.00	42	B							
14.00	43	D				Very stiff bluish grey slightly gravelly slightly sandy clayey SILT with frequent lenses of fine sand. Sand is fine. Gravel is angular to subrounded fine to coarse siltstone. (THANET FORMATION)	-12.51	14.00 (1.50)	
14.50-14.91	44	SPT	3,7/10,15,16,9 for 30mm						
14.50	44	DSPT							
14.50-15.00	45	B							
15.00	46	D							
15.50-15.79	47	SPT	3,5/10,40 for 60mm			Very stiff grey slightly sandy slightly gravelly slightly micaceous clayey SILT. Sand is fine. Gravel is angular to subrounded fine to coarse siltstone. (THANET FORMATION)	-14.01	15.50 (4.50)	
15.50	47	DSPT							
15.50-16.00	48	B							
16.00	49	D							
16.50-16.91	50	SPT	3,7/10,12,18,10 for 30mm						
16.50	50	DSPT							
16.50-17.00	51	B							
17.00	52	D							
17.50	53	DSPT							
17.50-18.00	54	B							
17.50-17.89	55	SPT	7,8/9,15,20,6 for 12mm						

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
03/10/23	08:30	24.50	24.40	200	3.20
03/10/23	18:00	32.00	30.00	200	4.00
04/10/23	08:30	32.00	30.00	200	-
23/11/23	08:00	31.95	None	N/R	
23/11/23	17:00	32.00	None	N/R	-

Chiselling / Slow Progress

From	To	Duration (hh:mm)

General Remarks

upstanding protective cover) installed to 26.50m depth. Response zone 24.50m to 26.50m depth.
7. Water level data logger installed during post fieldwork monitoring.
8. SPT hammer BHDS03-2023 (E_r = 68.00%) used.

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

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 175**	**C.Rainsbury**	**MStorch**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH501**

Contract Ref:	Start: **27.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **04.10.23**	**1.49**	**E:632650.4 N:163138.8**	**3** of **4**

Depth (m)	Samples & Testing No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
18.00	55	D				Very stiff grey slightly sandy slightly gravelly slightly micaceous clayey SILT. Sand is fine. Gravel is angular to subrounded fine to coarse siltstone. (THANET FORMATION) *(stratum copied from 15.50m from previous sheet)*			
18.50-18.92	56	SPT	5,7/11,11,15,13 for 40mm						
18.50	56	DSPT							
18.50-19.00	57	B							
19.00	58	D							
19.50-19.95	59	SPT	N=36						
19.50-19.95	59	DSPT							
19.50-20.00	60	B							
20.00	61	D				Very stiff slightly sandy silty CLAY with frequent bands of very sandy clayey silt. Sand is fine. (THANET FORMATION)	-18.51	20.00	
20.50-20.95	62	SPT	N=37						
20.50-20.95	62	DSPT							
20.50-21.00	63	B							
21.00	64	D							
21.50-21.95	65	SPT	N=44					(3.00)	
21.50-21.95	65	DSPT							
21.50-22.00	66	B							
22.00	67	D							
22.50-22.95	68	SPT	N=42						
22.50-22.95	68	DSPT							
22.50-23.00	69	B							
23.00	70	D				Very stiff grey slightly sandy locally sandy clayey SILT. Sand is fine. (THANET FORMATION)	-21.51	23.00	
23.50-23.93	71	SPT	6,8/10,13,14,13 for 50mm						
23.50	71	DSPT							
23.50-24.00	72	B							
24.00	73	D							
24.50	1	EW	2xG+1xP+Vials					(3.00)	
24.50-24.95	74	SPT	N=36						
24.50-24.95	74	DSPT							
24.50-25.00	75	B							
24.65	2	EW	2xG+1xP+Vials						
24.65	3	EW	2xG+1xP+Vials						
25.00	76	D							
25.50-25.95	77	SPT	N=46						
25.50-25.95	77	DSPT							
25.50-26.00	78	B							
26.00	79	D				Very dense grey very silty fine SAND. (THANET FORMATION)	-24.51	26.00	
26.50-26.88	80	SPT	5,7/10,18,20,2 for 5mm					(0.80)	
26.50	80	D							
26.50-26.80	81	B				*Description on next sheet*	-25.31	26.80	

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 175**	**C.Rainsbury**	**MStorch**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH501**

Contract Ref:	Start: **27.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **04.10.23**	**1.49**	**E:632650.4 N:163138.8**	**4** of **4**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
26.80	82	D				Black angular to rounded fine to coarse GRAVEL of flint with a low cobble content. (THANET FORMATION BASE BED MEMBER BULLHEAD BED)	-25.51	27.00	
27.00	83	D				White CHALK recovered as slightly gravelly slightly sandy SILT with frequent rinded flint fragments up to 50mm diameter. Gravel is very weak, low-density, white and subangular. Unable to assess structure (or lack of) from inspection of disturbed; based on SPT test results chalk is probably structured in-situ. (NEWHAVEN CHALK FORMATION)			
27.50-27.95	84	SPT	N=22						
27.50-27.95	84	DSPT							
27.50-28.00	85	B							
28.00	86	D							
28.50-28.95	87	SPT	N=21						
28.50-28.95	87	DSPT							
28.50-29.00	88	B							
29.00	89	D						(5.00)	
29.50-29.95	90	SPT	N=30						
29.50-29.95	90	DSPT							
30.00	91	D							
30.50-30.95	92	SPT	N=30						
30.50-30.95	92	DSPT							
31.00	93	D							
31.50-31.95	94	SPT	N=30						
31.50-31.95	94	DSPT							
						Borehole terminated at 32.00m depth.	-30.51	32.00	

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 175**	**C.Rainsbury**	**MStorch**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH502**

Contract Ref:	Start: **17.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **24.11.23**	**2.76**	**E:631627.2 N:162830.8**	**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	1xT+1xJ+1xV			MADE GROUND: Grass over firm, locally friable brown mottled orangish brown and dark brown slightly sandy gravelly silty CLAY with occasional rootlets. Sand is fine to coarse. Gravel is angular to subangular fine to medium flint, wood and shell fragments.		(0.50)	
0.20		PID	0.0ppm						
0.50	1	D					2.26	0.50	
0.50	102	ES	1xT+1xJ+1xV			MADE GROUND: Stiff brown mottled orangish brown and dark brown slightly sandy slightly gravelly silty CLAY with occasional rootlets. Gravel is angular to subangular fine to coarse chalk, brick and flint. Sand is fine to coarse.			
0.50-0.70	2	B				. . . becoming gravelly from 0.70m depth.	1.86	0.90	
0.50		V	c_u=>130/>130/>130			Very soft multicoloured (brown, grey, orangish brown and black) slightly sandy silty CLAY with occasional rootlets and rare shell fragments. Sand is fine. (TIDAL FLAT DEPOSITS)			
0.50		PID	0.0ppm						
0.80		V	c_u=116/72/>130						
1.00	3	D						(1.10)	
1.00-1.20	4	B							
1.00		PID	0.0ppm						
1.20-1.65	5	SPT	N=2						
1.20-1.65	5	DSPT							
1.20		V	c_u=116/>130/130						
1.20		V	c_r=23/30/28						
1.50-2.00	6	B							
2.00	7	D				Very soft bluish grey mottled black slightly sandy clayey SILT with occasional fragments of wood and rare rootlets. Sand is fine. (TIDAL FLAT DEPOSITS)	0.76	2.00	
2.00-2.45	8	$UT_{(UT100)}$	3 blows 100% recovery						
2.00-2.50	9	B							
3.00	10	D							
3.00-3.45	11	$UT_{(UT100)}$	2 blows 100% recovery						
3.50	12	D							
3.50-4.00	13	B						(3.50)	
4.00	14	D				. . . from 4.00m depth slight organic odour encountered.			
4.00-4.45	15	$UT_{(UT100)}$	6 blows 100% recovery						
4.00-4.50	16	B							
5.00	17	D							
5.00-5.45	18	$UT_{(UT100)}$	7 blows 100% recovery						
5.50	19	D				Very soft grey slightly sandy clayey SILT with fine to coarse gravel sized pockets of black peat and occasional rootlets. Sand is fine. (TIDAL FLAT DEPOSITS)	-2.74	5.50	
5.50-6.00	20	B							
6.00	21	D							
6.00-6.45	22	$UT_{(UT100)}$	8 blows 100% recovery						
6.50	23	D							
6.50-7.00	24	B							
7.00	25	D							
7.00-7.45	26	$UT_{(UT100)}$	8 blows 100% recovery						
7.50	27	D				. . . from 7.50m depth occasional shell (bivalve) and wood fragments.		(4.00)	
7.50-8.00	28	B							
8.00	29	D							
8.00-8.45	30	$UT_{(UT100)}$	9 blows 100% recovery						
8.50	31	D							
8.50-9.00	32	B							

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
17/10/23	18:00	4.50	4.50	250	Dry
18/10/23	08:30	4.50	4.50	250	2.30
18/10/23	18:00	13.00	12.00	250	7.00
19/10/23	08:45	13.00	12.00	250	2.20
19/10/23	09:30	13.00	12.00	250	2.20
19/10/23	18:00	20.45	19.50	200	7.00
20/10/23	08:30	20.45	19.50	200	2.30
20/10/23	15:00	25.45	21.00	200	7.50

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. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
4. Groundwater seepage at 1.20m depth.
5. Borehole backfilled with bentonite pellets on completion.
6. SPT hammer BHDS04-2023 (E_r = 57.00%) used.

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

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 2500**	**Jason Mills**	**RAlbertos**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH502**

Contract Ref:	Start: **17.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **24.11.23**	**2.76**	**E:631627.2 N:162830.8**	**2** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
9.00	33	D				Very soft grey slightly sandy clayey SILT with fine to coarse gravel sized pockets of black peat and occasional rootlets. Sand is fine. (TIDAL FLAT DEPOSITS) *(stratum copied from 5.50m from previous sheet)*			
9.00-9.45	34	$UT_{(UT100)}$	6 blows 100% recovery						
							-6.74	9.50	
9.50	35	D				Soft grey sandy silty CLAY with frequent fine to coarse gravel sized pockets of black peat and occasional shell and wood fragments and rootlets. Sand is fine. Slight organic odour. (TIDAL FLAT DEPOSITS)		(0.80)	
9.50-10.00	36	B							
10.00	37	D							
10.00-10.45	38	$UT_{(UT100)}$	20 blows 100% recovery						
							-7.54	10.30	
10.50	39	D				Soft to firm grey mottled light grey slightly gravelly slightly sandy silty CLAY with frequent fine to medium pockets of brown fine sand and frequent shell fragments. Sand is fine to medium. Gravel is subangular to subrounded fine to medium flint. (THANET FORMATION)		(1.00)	
10.50-11.00	40	B							
11.00	41	D							
11.00-11.45	42	$UT_{(UT100)}$	40 blows 100% recovery						
							-8.54	11.30	
11.50	43	D				Firm grey slightly sandy slightly gravelly clayey SILT with frequent fine to coarse gravel sized pockets of brown silty fine to medium sand and rare rootlets Sand is fine to medium. Gravel is angular to subangular fine to coarse shell fragments and siltstone. (THANET FORMATION)			
11.50-12.00	44	B							
12.00	45	D							
12.00-12.45	46	SPT	N=15					(2.20)	
12.00-12.45	46	DSPT							
12.50-13.00	47	B							
13.00	48	D				. . . becoming stiff from 13.00m depth.			
13.00-13.45	49	SPT	N=18						
13.00-13.45	49	DSPT							
							-10.74	13.50	
13.50-14.00	50	B				Very stiff grey slightly sandy slightly gravelly clayey SILT with occasional shell fragments and rare rootlets and bands of extremely weak grey siltstone. Sand is fine to coarse. Gravel is angular to subrounded fine to coarse siltstone. (THANET FORMATION)			
14.00	51	D							
14.00-14.31	52	SPT	7,12/17,25,8 for 10mm						
14.00-14.31	52	DSPT							
14.50-15.00	53	B							
15.00	54	D							
15.00-15.41	55	SPT	5,10/10,13,16,11 for 35mm						
15.00-15.41	55	DSPT							
15.50	55	DSPT							
15.50-16.00	56	B							
16.00	57	D							
16.00-16.37	58	SPT	6,12/17,18,15 for 70mm					(5.50)	
16.00-17.43	58	DSPT							
16.50-17.00	59	B							
17.00	60	D							
17.00-17.44	61	SPT	5,9/10,11,15,14 for 60mm						
17.00-17.43	61	DSPT							
17.50-18.00	62	B							

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
23/10/23	08:30	25.45	21.00	200	1.80

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**	**Jason Mills**	**RAlbertos**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH502**

Contract Ref:	Start: **17.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **24.11.23**	**2.76**	**E:631627.2 N:162830.8**	**3** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
18.00	63	D				Very stiff grey slightly sandy slightly gravelly clayey SILT with occasional shell fragments and rare rootlets and bands of extremely weak grey siltstone. Sand is fine to coarse. Gravel is angular to subrounded fine to coarse siltstone. (THANET FORMATION) *(stratum copied from 13.50m from previous sheet)*			
18.00-18.18	64	SPT	7,18/50 for 50mm						
18.00-18.17	64	DSPT							
18.50-19.00	65	B							
19.00	66	D				Extremely weak to weak grey SILTSTONE recovered as grey slightly sandy silty angular to subangular fine to coarse GRAVEL of extremely weak to weak siltstone. Sand is fine to coarse. (THANET FORMATION)	-16.24	19.00 (1.50)	
19.00-19.39	67	SPT	12,13/16,15,15,4 for 10mm						
19.00-19.38	67	DSPT							
19.50-20.00	68	B							
20.00	69	D							
20.00-20.45	70	SPT	N=50						
20.00-20.45	70	DSPT							
20.50-21.00	71	B				Very stiff grey mottled light grey slightly sandy slightly gravelly clayey SILT with bands of extremely weak to weak grey siltstone with rare shell fragments. Sand is fine to coarse. Gravel is angular to subrounded fine to coarse siltstone. (THANET FORMATION)	-17.74	20.50 (4.00)	
21.00	72	D							
21.00-21.45	73	SPT	N=43						
21.00-21.45	73	DSPT							
21.50-22.00	74	B							
22.00	75	D							
22.00-22.45	76	SPT	5,8/8,11,16,15 for 70mm						
22.00-22.45	76	DSPT							
22.50-23.00	77	B							
23.00	78	D							
23.00-23.45	79	SPT	N=35						
23.00-23.45	79	DSPT							
23.50-24.00	80	B							
24.00	81	D							
24.00-24.45	82	SPT	N=34						
24.00-24.45	82	DSPT							
24.50-25.00	83	B				Extremely weak to weak grey SILTSTONE recovered as grey slightly sandy silty angular to subangular fine to coarse GRAVEL of extremely weak to weak siltstone. Sand is fine to coarse. (THANET FORMATION)	-21.74	24.50 (0.95)	
25.00	84	D							
25.00-25.45	85	SPT	N=33						
25.00-25.45	85	DSPT							
						Borehole terminated at 25.45m depth.	-22.69	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 2500**	**Jason Mills**	**RAlbertos**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-6**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **23.10.23** – **27.10.23**	**4.10**	**E:634113.8 N:163655.1**	**1** of **13**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
									MADE GROUND: Grass over soft dark brown slightly sandy clayey SILT with numerous rootlets. Sand is fine to coarse.				
									MADE GROUND: Firm brown slightly sandy silty CLAY with occasional to frequent rootlets. Sand is fine to coarse.		3.98	0.12	
0.20	101	ES	2xT+1xJ+1xV										
0.20		PID	0.6ppm										
0.30-0.50	1	B							MADE GROUND: Loose brown gravelly silty medium to coarse SAND with a low cobble content. Gravel is angular to subrounded fine to coarse chalk, flint, brick, concrete, clinker, plastic and glass. Cobbles are angular concrete and brick.		3.80	0.30	
0.50	102	ES	2xT+1xJ+1xV										
0.50		PID	0.2ppm						. . . becoming chalky below 0.60m depth.				
0.70-1.00	2	B											
1.00	103	ES	2xT+1xJ+1xV									(1.40)	
1.00		PID	0.6ppm										
1.20-1.65	3	SPT	N=6										
1.20-1.65	4	DSPT											
1.70-2.00	5	B							MADE GROUND: Very soft black slightly sandy slightly gravelly pseudo-fibrous peaty CLAY. Sand is medium to coarse. Gravel is subangular to subrounded fine to coarse brick, chalk, timber and glass.		2.40	1.70	
2.00	104	ES	2xT+1xJ+1xV										
2.00	6	D											
2.00-2.45	7	$UT_{(UT100)}$	50 blows 67% recovery										
2.00		PID	2.0ppm										
2.45-2.55	8	D											
2.60-3.00	9	B						1				(2.00)	
3.00	10	D						1					
3.00-3.45	11	SPT	N=3										
3.00-3.45	12	DSPT											
3.50-4.00	13	B											

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
23/10/23	15:30	1.20	None	250	Dry
23/10/23	18:00	2.00	1.50	200	Dry
24/10/23	08:30	2.00	1.50	200	Dry
24/10/23	14:15	8.45	7.50	200	7.50
25/10/23	08:30	8.45	7.50	200	2.75
25/10/23	18:00	14.00	14.00	146	2.26
26/10/23	08:30	14.00	14.00	146	2.18
26/10/23	18:00	30.50	30.00	146	2.19

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. Groundwater struck at 3.00m and 6.80m depth, rising to 2.80m and 6.70m depth respectively after 20 minutes.
5. Borehole drilled using cable percussion techniques to 8.00m depth then extended using rotary coring techniques to 30.50m

All dimensions in metres | Scale: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 Mark 1 + Comacchio MC405**	**Karl Wordsworth + Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-6**

Contract Ref:	Start: **23.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **27.10.23**	**4.10**	**E:634113.8 N:163655.1**	**2** of **13**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
									Soft grey mottled greenish grey and orangish brown silty CLAY with occasional shell fragments. (TIDAL FLAT DEPOSITS)		0.40	3.70	
4.00	105	ES	2xT+1xJ+1xV										
4.00	14	D											
4.00-4.45	15	$UT_{(UT100)}$	51 blows 100% recovery									(0.90)	
4.00		PID	1.2ppm										
4.45-4.55	16	D											
4.60-5.00	17	B							Firm light grey slightly sandy clayey SILT with pockets and laminations of orangish brown fine to medium sand. Sand is fine to medium. (TIDAL FLAT DEPOSITS)		-0.50	4.60	
5.00	18	D											
5.00-5.45	19	SPT	N=12										
5.00-5.45	20	DSPT										(1.40)	
5.50-6.00	21	B											
6.00	22	D									-1.90	6.00	
6.00-6.45	23	$UT_{(UT100)}$	71 blows 100% recovery						Stiff light grey mottled orangish brown slightly sandy clayey SILT. Sand is fine to medium. (THANET FORMATION)				
6.45-6.55	24	D											
6.60-7.00	25	B						2					
7.00	26	D						2					
7.00-7.45	27	SPT	N=29									(2.00)	
7.00-7.45	28	DSPT											

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
27/10/23	08:30	30.50	30.00	146	2.50

Chiselling / Slow Progress

From	To	Duration (hh:mm)

General Remarks

depth.
6. Permeability tests undertaken between 9.50-11.00m and 29.00-30.50m depth.
7. 50mm diameter standpipe piezometer (complete with flush protective cover) installed to 15.00m depth on completion. Response zone 10.00m to 15.00m depth.
8. Water level data logger installed during post fieldwork monitoring.
9. SPT hammers AR1321-2022 (E_r = 62.00%) , AR2670-2023 (E_r = 64.00%) used.

All dimensions in metres | Scale: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 Mark 1 + Comacchio MC405**	**Karl Wordsworth + Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-6**

Contract Ref:	Start: **23.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **27.10.23**	**4.10**	**E:634113.8 N:163655.1**	**3** of **13**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
7.50-8.00	29	B							Stiff light grey mottled orangish brown slightly sandy clayey SILT. Sand is fine to medium. (THANET FORMATION) *(stratum copied from 6.00m from previous sheet)*				
8.00-9.50 (0:07) 8.00 8.00-8.45 8.00-8.45 8.20	30 31 32 201	D SPT DSPT C	N=50	100 0 0		90% return W (Grey)			Firm brown mottled orangish brown sandy SILT. Sand is fine to medium. (THANET FORMATION)		-3.90	8.00 (0.42)	
									Grey mottled greenish brown and orangish brown silty fine to coarse SAND. (THANET FORMATION)		-4.32	8.42 (0.32)	
									Dark grey to black angular to subangular fine to coarse GRAVEL of nodular flint. (THANET FORMATION BASE BED MEMBER BULLHEAD BED)		-4.64	8.74	
9.50-11.00 (0:03)					0 119 550				Very weak medium density yellowish white CHALK with rate to occasional black specks. Discontinuities where measured as closely spaced (0/119/550) frequent to abundant black specks with grey and orange staining becoming unstained with depth rare clay infill (<1mm). (NEWHAVEN CHALK FORMATION Grade B3)		-4.77	8.87	
									. . . 9.72-9.74m: Shell fragments.				
									. . . 9.92-10.01m: Orange stained sponge bed.				
10.00	202	C		92 45 15		90% return W (Light Grey)							
10.20	203	C							. . . 10.17-10.20m: Shell fragments.				
									. . . 10.29-10.33m: Orange stained sponge bed.				
									. . . 10.62-10.65m: Shell fragments.				

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: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 Mark 1 + Comacchio MC405**	**Karl Wordsworth + Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-6**

Contract Ref:	Start: **23.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **27.10.23**	**4.10**	**E:634113.8 N:163655.1**	**4** of **13**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
				92 45 15		90% return W (Light Grey)			. . . 10.78-10.82m: Orange stained sponge bed. Very weak medium density yellowish white CHALK with rate to occasional black specks. Discontinuities where measured as closely spaced (0/119/550) frequent to abundant black specks with grey and orange staining becoming unstained with depth rare clay infill (<1mm). (NEWHAVEN CHALK FORMATION Grade B3)	35 36 37 39 38 40			
11.00-12.50 (0:04) 11.00-11.45 11.00 11.00 11.00	1 1 2 3	SPT(c) EW EW EW	N=34 2xG+1xP+Vials 2xG+1xP+Vials 2xG+1xP+Vials						*(stratum copied from 8.87m from previous sheet)* . . . 10.88-11.00m: AZCL. . . . 11.00-11.45m: Recovered non-intact due to SPT cone as slightly gravelly sandy SILT. Impression of cone can be seen down to 11.45m suggesting loss is from bottom of run.	41 42 43			
				90 47 31		80% return W (Light Grey)			. . . 11.48-11.55m: Orange stained sponge bed. . . . 11.74-11.77m: Shell fragments.				
12.20-12.35	101	C							. . . 12.22-12.23m: Shell fragments. . . . 12.35-12.50m: AZCL.	44 45 46 47 48			
12.50-14.00 (0:03) 12.50 12.63-12.84	204 102	C C			0 119 550					49			
				100 95 76		80% return W (Light Grey)			. . . 12.78-12.80m: Shell fragments. . . . 12.81-12.84m: Orange stained sponge bed. . . . 12.95-12.92m: Orange stained sponge bed. . . . 13.35-13.44m: Orange stained sponge bed. . . . 13.43-13.49m: Shell fragments.	50 51 52 53 54 55 56 57 58		(9.05)	
									. . . 13.67-13.68m: Shell fragments. . . . 13.93-13.94m: Shell fragments.	59 60			
14.00-15.50 (0:02) 14.00-14.45	2	SPT(c)	N=36	100 70 67		90% return W (Light Grey)			. . . 14.00-14.45m: Recovered non-intact due to SPT cone as slightly gravelly sandy silt. . . . 14.19-14.22m: Orange stained sponge bed.				

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: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 Mark 1 + Comacchio MC405**	**Karl Wordsworth + Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-6**

Contract Ref:	Start: **23.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **27.10.23**	**4.10**	**E:634113.8 N:163655.1**	**5** of **13**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
14.53-14.68	103	C							Very weak medium density yellowish white CHALK with rate to occasional black specks. Discontinuities where measured as closely spaced (0/119/550) frequent to abundant black specks with grey and orange staining becoming unstained with depth rare clay infill (<1mm). (NEWHAVEN CHALK FORMATION Grade B3) *(stratum copied from 8.87m from previous sheet)*	61			
									. . . 14.66-14.96m: Shell fragments				
14.85	205	C		100 70 67		90% return W (Light Grey)				63 64 65			
									. . . 15.03-15.08m: Orange stained sponge bed.,	62 66			
									. . . 15.23-15.26m: Shell fragments.	67			
									. . . 15.39-15.42m: Shell fragments.	68			
15.50-17.00 (0:04)										69 70			
									. . . 15.77-15.78m: Shell fragments.	71			
16.01-16.23	104	C		82 79 75	0 119 550	90% return W (Light Grey)				72			
									. . . 16.36-16.41m: Shell fragments.	73			
16.50	206	C											
									. . . 16.73-17.00m: AZCL.	74			
17.00-18.50 (0:04)									. . . 17.00-17.13m: AZCL due to SPT.				
17.00-17.45	3	SPT(c)	N=53						. . . Recovered non-intact due to SPT cone as slightly sandy gravelly silt. Can see impression of SPT cone down to 17.45m indicating loss was from lower part of run.				
				79 60 55		90% return W (Light Grey)							
17.68-17.88	105	C								75			
									. . . 17.78-17.89m: Orange stained sponge bed with shell fragments.	76			
									Description on next sheet		-13.82	17.92	

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: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 Mark 1 + Comacchio MC405**	**Karl Wordsworth + Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-6**

Contract Ref:	Start: **23.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **27.10.23**	**4.10**	**E:634113.8 N:163655.1**	**6** of **13**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
				79 60 55		90% return W (Light Grey)			Very weak to weak medium to high density yellowish white mottled light grey CHALK. Discontinuities where measured as closely spaced (0/177/740) rare black specks or clean, unstained no infill. (NEWHAVEN CHALK FORMATION Grade A3) *(stratum copied from 17.92m from previous sheet)*	77			
										78			
18.40	207	C							. . . 18.34-18.50m: AZCL.				
18.50-20.00 (0:02)										79			
										80			
										81			
									. . . 18.69-18.71m: Possible black stained sponge bed. . . . 18.72-18.75m: Shell fragments.				
										82			
										83			
									. . . 18.89-18.92m: Shell fragments.	84			
19.01-19.31	106	C								85			
				96 90 73		90% return W (Light Grey)			. . . 19.14-19.17m: Shell fragments.				
									. . . 19.31-19.33m: Black stained sponge bed.				
									. . . 19.40-19.43m: Shell fragments.				
										86			
									. . . 19.54-19.59m: Shell fragments.				
										87			
									. . . 19.68-19.74m: Shell fragments.				
					0 177 740					88			
										89			
										90			
									. . . 19.91-19.94m: Shell fragments. . . . 19.94-20.00m: AZCL.				
20.00-21.50 (0:09)													
20.00-20.45	4	SPT(c)	N=51						. . . 20.00-20.45m: Recovered non-intact due to SPT cone as slightly sandy gravelly silt. Can see impression of SPT cone down to 20.45m indicating loss was from lower part of run.				
20.47-20.70	107	C											
									. . . 20.55-20.57m: Black stained sponge bed.				
				81 49 49		90% return W (Light Grey)				91		(5.85)	
									. . . 21.12-21.21m: Orange stained sponge bed.	92			
									. . . 21.21-21.50m: AZCL.				
21.50-23.00 (0:05)										93			

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: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 Mark 1 + Comacchio MC405**	**Karl Wordsworth + Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-6**

Contract Ref:	Start: **23.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **27.10.23**	**4.10**	**E:634113.8 N:163655.1**	**7** of **13**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
21.50	208	C							. . . 21.58-21.59m: Shell fragments. Very weak to weak medium to high density yellowish white mottled light grey CHALK. Discontinuities where measured as closely spaced (0/177/740) rare black specks or clean, unstained no infill. (NEWHAVEN CHALK FORMATION Grade A3) *(stratum copied from 17.92m from previous sheet)* . . . 21.84-21.88m: Shell fragments.	94 95 97 96 98 99			
21.70	209	C							. . . 22.03-22.08m: Orange stained sponge bed.	100			
22.19-22.48	108	C		100 72 59	0 177 740	90% return W (Light Grey)			. . . 22.44-22.48m: Orange stained sponge bed. . . . 22.54-22.56m: Shell fragments.	102 101 103 104 105 106 107 108			
23.00-24.50 (0:03)									. . . 22.87-22.90m: Shell fragments. . . . 22.54-22.56m: Recovered non-intact. . . . 23.00-23.45m: Recovered non-intact due to SPT cone as slightly sandy gravelly silt. Can see impression of SPT cone down to 23.45m indicating loss was from lower part of run.				
23.00-23.45	5	SPT(c)	N=8										
				81 61 59		0% return W			. . . 23.41-23.53m: Orange stained sponge bed.	109			
									Weak high density off-white mottled light grey CHALK with medium to widely spaced flint bands and abundant shell fragments. Discontinuities where measured as medium spaced (0/240/590) rare black specks or clean, unstained and no infill. (SEAFORD CHALK FORMATION Grade A2) . . . 23.84-23.90m: Shell fragments.		19.67	23.77	
									. . . 24.23-24.26m: Orange stained sponge bed. . . . 24.27-24.30m: Possible echinoid shell fragment.	110			
									. . . 24.39-24.50m: AZCL.	111			
24.50-26.00 (0:05)				96 87 87	0 240 590	0% return W				112 113 114			
									. . . 24.95-25.00m: Orange stained sponge bed.				

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: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 Mark 1 + Comacchio MC405**	**Karl Wordsworth + Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-6**

Contract Ref:	Start: **23.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **27.10.23**	**4.10**	**E:634113.8 N:163655.1**	**8** of **13**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
25.50	210	C							Weak high density off-white mottled light grey CHALK with medium to widely spaced flint bands and abundant shell fragments. Discontinuities where measured as medium spaced (0/240/590) rare black specks or clean, unstained and no infill. (SEAFORD CHALK FORMATION Grade A2) *(stratum copied from 23.77m from previous sheet)*	115			
25.54-25.83	109	C		96 87 87		0% return W			. . . 25.46-25.51m: Flint band. Small fragments of nodular flint with thick cortexes (<5mm).	116 117 118			
									. . . 25.73-25.81m: Orange stained sponge bed.				
									. . . 25.83-25.89m: Flint band. Very small to medium fragments of nodular flint with thick cortexes (<4mm).	119			
26.00-27.50 (0:07)									. . . 25.95-26.00m: Flint band. Very small to medium fragments of nodular flint with thick cortexes (<4mm).				
26.00-26.45	6	SPT(c)	N=89						. . . 26.00-26.21m: AZCL due to SPT.				
									. . . 26.21-26.45m: Recovered non-intact due to SPT cone as slightly gravelly sandy silt.				
									. . . 26.28-26.43m: Flint band. Very small to small fragments of nodular flint with thin cortexes (~2mm).				
										120			
26.71-26.96	110	C		85 53 47	0 240 590	0% return W			. . . 26.73-26.80m: Black stained sponge bed.	121			
									. . . 26.96-27.00m: Black stained sponge bed.	122 123 124		(6.73)	
									. . . 27.10-27.16m: Possible black stained sponge bed with shell fragments.				
									. . . 27.19-27.30m: Flint band. Very small to medium fragments of nodular flint with thin cortexes (<2mm).				
27.50-29.00 (0:05)									. . . 27.50-27.62m: Flint band. Very small to small fragments of spiky nodular flint with thin cortexes (~1mm).				
27.62-27.85	111	C								125			
										126			
27.95	211	C											
				69 65 46		0% return W			. . . 28.01-28.04m: Flint band. Very small to small fragments of spiky nodular flint with thin cortexes (<2mm).	127 128			
									. . . 28.19-28.24m: Black stained sponge bed.				
										130 129 131			
									. . . 28.55-29.00m: AZCL due to flint picked up at top of following run.				

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: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 Mark 1 + Comacchio MC405**	**Karl Wordsworth + Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-6**

Contract Ref:	Start: **23.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **27.10.23**	**4.10**	**E:634113.8 N:163655.1**	**9** of **13**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
				69 65 46		0% return W			Weak high density off-white mottled light grey CHALK with medium to widely spaced flint bands and abundant shell fragments. Discontinuities where measured as medium spaced (0/240/590) rare black specks or clean, unstained and no infill. (SEAFORD CHALK FORMATION Grade A2) *(stratum copied from 23.77m from previous sheet)* . . . 29.00-29.09m: Flint band. Very small to medium fragments of nodular flint with thin cortexes (<1mm). . . . 29.00-29.45m: Recovered non-intact due to SPT cone as slightly gravelly sandy silt.				
29.00-30.50 (0:06) 29.00-29.45	7	SPT(c)	6,12/20,22,23,35 for 70mm										
29.51-29.76	112	C		97 61 43	0 240 590	0% return W				132 133 134 135 136 137			
									. . . 29.79-29.84m: Black stained sponge bed. . . . 29.85-29.89m: Flint band. Very small to small fragments of nodular flint with thin cortexes (<1mm). . . . 29.96-30.09m and 30.23-30.33m: Shell fragments. . . . 30.00-30.06m and 30.25-30.32m: Black stained sponge bed.				
									Borehole terminated at 30.50m depth.		-26.40	30.50	

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: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 Mark 1 + Comacchio MC405**	**Karl Wordsworth + Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
SEA Link FEED - Kent Onshore Cable Link		**National Grid**		**RedP-BH-6**
Contract Ref:	Start: **23.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **27.10.23**	**4.10**	**E:634113.8 N:163655.1**	**10** of **13**

Method Used:	Inspection pit + Cable Percussion + Rotary Cored	Plant Used:	Dando 2000 Mark 1 + Comacchio MC405	Drilled By:	Karl Wordsworth + Maris Veckagans	Logged By:	CMathias	Checked By:	

STRUCTURAL SOILS

BOREHOLE LOG

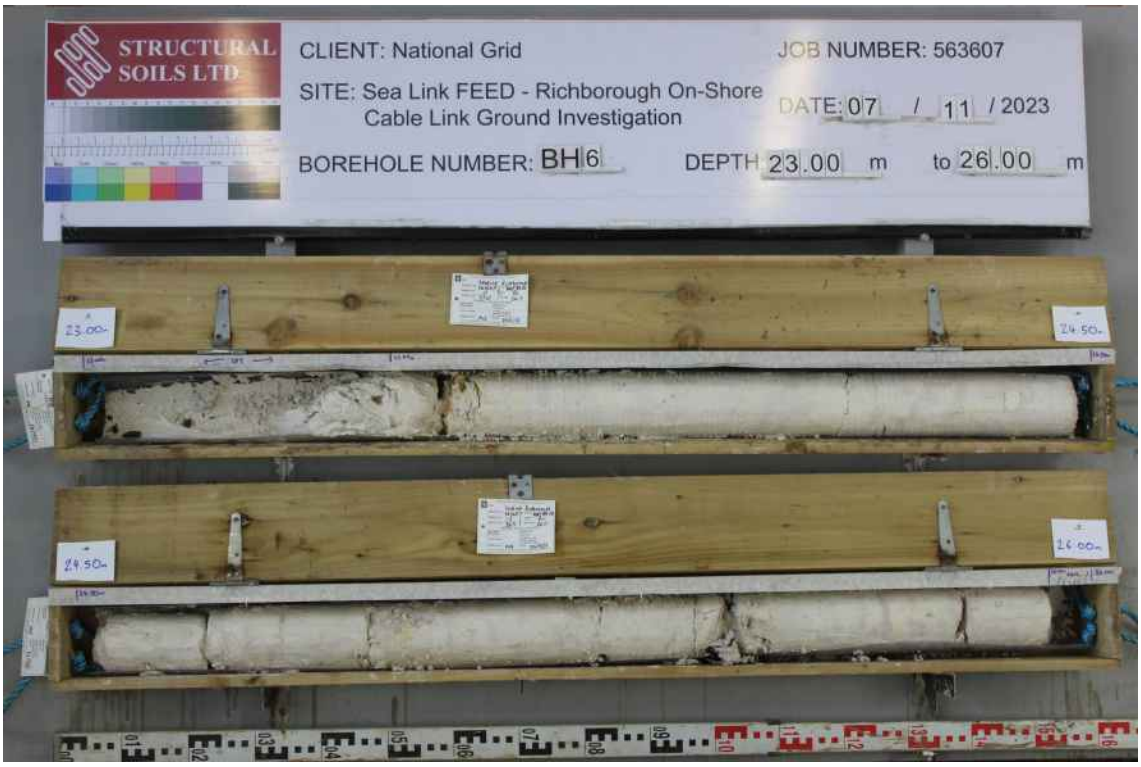
Contract:		Client:		Borehole:
SEA Link FEED - Kent Onshore Cable Link		**National Grid**		**RedP-BH-6**
Contract Ref:	Start: **23.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **27.10.23**	**4.10**	**E:634113.8 N:163655.1**	**11** of **13**

Method Used:	Inspection pit + Cable Percussion + Rotary Cored	Plant Used:	Dando 2000 Mark 1 + Comacchio MC405	Drilled By:	Karl Wordsworth + Maris Veckagans	Logged By:	CMathias	Checked By:	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
SEA Link FEED - Kent Onshore Cable Link		**National Grid**		**RedP-BH-6**
Contract Ref:	Start: **23.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **27.10.23**	**4.10**	**E:634113.8 N:163655.1**	**12** of **13**



Method Used:	Inspection pit + Cable Percussion + Rotary Cored	Plant Used:	Dando 2000 Mark 1 + Comacchio MC405	Drilled By:	Karl Wordsworth + Maris Veckagans	Logged By:	CMathias	Checked By:	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
SEA Link FEED - Kent Onshore Cable Link		**National Grid**		**RedP-BH-6**
Contract Ref:	Start: **23.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **27.10.23**	**4.10**	**E:634113.8 N:163655.1**	**13** of **13**

Method Used:	Inspection pit + Cable Percussion + Rotary Cored	Plant Used:	Dando 2000 Mark 1 + Comacchio MC405	Drilled By:	Karl Wordsworth + Maris Veckagans	Logged By:	CMathias	Checked By:	

SUMMARY OF DISCONTINUITIES - RedP-BH-6

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
1	8.95-9.04	J	71	P-R	-	-	Abundant black specks, pinkish/orange staining,	NCF	
							grey clay infill (<1mm)		
2	8.97-9.04	J	77	S-R	-	-	Clean.	NCF	
3	9.02-9.05	J	27	P-SM	-	-	Abundant black specks, orange staining, grey	NCF	
							clay infill <1mm)		
4	9.04-9.09	J	79	U-R	-	-	Clean.	NCF	
5	9.05-9.09	J	3	P-R	-	-	Numerous to abundant black specks, orange	NCF	
							stained, no infill.		
6	9.07-9.41	J	81	U-SM	-	-	Abundant black specks, black staining, grey infill	NCF	
							(1mm)		
7	9.09-9.12	J	17	P-SM	-	-	Numerous black specks, orange staining, no infill.	NCF	
8	9.14-9.16	J	16	S-SM	-	-	Clean.	NCF	
9	9.31-9.32	J	12	S-R	-	-	Frequent black specks, grey staining, no infill.	NCF	
10	9.34-9.35	J	2	P-R	-	-	Frequent black specks, orange staining, no infill.	NCF	
11	9.40-9.42	J	12	P-SM	-	-	Abundant black specks, orangish staining, grey	NCF	
							infill (<1mm).		

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STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By: [redacted]

Date: 27.03.24

Contract Ref: 563607

Contract: SEA Link FEED - Kent Onshore Cable Link

SUMMARY OF DISCONTINUITIES - RedP-BH-6

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
12	9.43-9.50	J	78	U-R	-	-	Occasional to frequent black specks, lightly	NCF	
							stained grey, no infill.		
13	9.57-9.58	J	6	P-R	-	-	Locally numerous black specks, unstained, no	NCF	
							infill.		
14	9.58-9.60	J	42	P-SM	-	-	Abundant black specks, heavily stained grey, no	NCF	
							infill.		
15	9.60-9.64	J	37	U-R	-	-	Frequent to numerous black specks, unstained,	NCF	
							no infill.		
16	9.61-9.65	J	39	U-SM	-	-	Abundant black specks, unstained, no infill.	NCF	
17	9.64-9.69	J	55	S-R	-	-	Abundant black specks, unstained no infill.	NCF	
18	9.70-9.71	J	4	P-SM	-	-	Locally numerous to abundant black specks,	NCF	
							unstained, no infill.		
19	9.80-9.80	J	5	U-SM	-	-	Locally numerous black specks, unstained, no	NCF	
							infill.		
20	9.85-9.86	J	7	U-SM	-	-	Locally frequent to numerous black specks,	NCF	
							unstained, no infill.		

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SUMMARY OF DISCONTINUITIES - RedP-BH-6

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
21	9.92-9.97	J	23	P-R	-	-	Abundant black specks, heavily stained grey, grey	NCF	
							clay infill (<1mm)		
22	9.93-9.95	J	10	P-R	-	-	Clean.	NCF	
23	10.00-10.02	J	4	U-R	-	-	Clean.	NCF	
24	10.23-10.29	J	18	S-R	-	-	Frequent black specks, grey staining, no infill.	NCF	
25	10.32-10.33	J	6	P-R	-	-	Frequent black specks, grey staining, no infill.	NCF	
26	10.33-10.41	J	61	U-SM	-	-	Numerous to abundant black specks, unstained,	NCF	
							no infill.		
27	10.36-10.37	J	11	P-SM	-	-	Frequent to numerous black specks, unstained,	NCF	
							no infill.		
28	10.40-10.42	J	8	S-R	-	-	Frequent to numerous black specks, unstained,	NCF	
							no infill.		
29	10.42-10.45	J	34	P-R	-	-	Frequent black specks, unstained, no infill.	NCF	
30	10.45-10.52	J	71	P-R	-	-	Frequent to numerous black specks, unstained,	NCF	
							no infill.		
31	10.49-10.53	J	70	U-R	-	-	Numerous black specks, unstained, no infill.	NCF	

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32	10.55-10.59	J	69	S-R	-	-	Clean.	NCF	
33	10.58-10.59	J	3	P-R	-	-	Frequent o numerous black specks, unstained, no	NCF	
							infill.		
34	10.63-10.67	J	15	P-R	-	-	Occasional black specks, unstained, no infill.	NCF	
35	10.69-10.70	J	4	P-R	-	-	Clean.	NCF	
36	10.70-10.74	J	77	S-R	-	-	Numerous black specks, lightly stained grey, no	NCF	
							infill.		
37	10.70-10.77	J	78	P-R	-	-	Occasional to frequent black specks, unstained,	NCF	
							no infill.		
38	10.76-10.80	J	16	U-R	-	-	Numerous to abundant black specks, unstained,	NCF	
							no infill.		
39	10.77-10.78	J	4	P-R	-	-	Abundant black specks, grey stained, no infill.	NCF	
40	10.78-10.85	J	78	P-SM	-	-	Numerous black specks, orange stained, no infill.	NCF	
41	10.83-10.84	J	4	P-SM	-	-	Occasional black specks, unstained, no infill.	NCF	
42	10.85-10.88	J	53	P-R	-	-	Frequent to numerous black specks, orange	NCF	
							stained, no infill.		

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SUMMARY OF DISCONTINUITIES - RedP-BH-6

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
43	10.87-10.88	J	31	U-SM	-	-	Frequent black specks, orange stained, no infill.	NCF	
44	12.08-12.10	J	6	S-R	-	-	Locally occasional black specks, unstained, no	NCF	
							infill.		
45	12.13-12.15	J	4	P-R	-	-	Clean.	NCF	
46	12.16-12.20	J	86	P-R	-	-	Occasional to frequent black specks, unstained,	NCF	
							no infill.		
47	12.19-12.21	J	4	U-SM	-	-	Occasional black specks, light grey stained, no	NCF	
							infill.		
48	12.23-12.30	J	42	P-SM	-	-	Abundant black specks, unstained, no infill.	NCF	
49	12.62-12.65	J	18	P-SM	-	-	Occasional to frequent black specks, unstained,	NCF	
							no infill.		
50	12.84-12.84	J	5	P-SM	-	-	Occasional lack specks, unstained, no infill.	NCF	
51	13.13-13.15	J	7	P-R	-	-	Clean.	NCF	
52	13.15-13.19	J	81	P-SM	-	-	Frequent to numerous black specks, unstained,	NCF	
							no infill.		
53	13.16-13.19	J	24	U-SM	-	-	Occasional black specks, unstained, no infill.	NCF	

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SUMMARY OF DISCONTINUITIES - RedP-BH-6

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
54	13.29-13.33	J	16	S-SM	-	-	Numerous black specks, unstained, no infill.	NCF	
55	13.33-13.44	J	86	S-SM	-	-	Frequent black specks, unstained, no infill.	NCF	
56	13.50-13.51	J	4	U-R	-	-	Clean.	NCF	
57	13.51-13.67	J	78	P-SM	-	-	Rare to occasional black specks, unstained, no	NCF	
							infill.		
58	13.58-13.69	J	42	P-SM	-	-	Frequent to numerous black specks, unstained,	NCF	
							no infill.		
59	13.72-13.74	J	16	P-R	-	-	Rare to occasional black specks, unstained, no	NCF	
							infill.		
60	13.89-13.93	J	22	U-SM	-	-	Frequent to numerous black specks, unstained,	NCF	
							no infill.		
61	14.48-14.75	J	41	P-SM	-	-	Occasional to frequent black specks, unstained,	NCF	
							no infill.		
62	14.48-15.56	J	42	P-R	-	-	Rare black specks, unstained, no infill.	NCF	
63	14.86-14.87	J	2	P-R	-	-	Rare to occasional black specks, unstained, no	NCF	
							infill.		

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SUMMARY OF DISCONTINUITIES - RedP-BH-6

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
64	14.97-14.98	J	3	P-R	-	-	Occasional to frequent black specks, unstained,	NCF	
							no infill.		
65	14.97-15.02	J	80	U-R	-	-	Rare black specks, unstained, no infill.	NCF	
66	15.02-15.03	J	7	P-R	-	-	Rare black specks, unstained, no infill.	NCF	
67	15.21-15.22	J	5	U-R	-	-	Rare to occasional black specks, unstained, no	NCF	
							infill.		
68	15.35-15.50	J	65	P-R	-	-	Rare black specks, unstained, no infill.	NCF	
69	15.50-15.65	J	67	P-SM	-	-	Rare black specks , unstained, no infill.	NCF	
70	15.55-15.62	J	41	P-SM	-	-	Rare black specks, unstained, no infill.	NCF	
71	15.83-15.85	J	7	S-SM	-	-	Rare to occasional black specks, unstained, no	NCF	
							infill.		
72	15.95-16.02	J	37	S-R	-	-	Clean.	NCF	
73	16.25-16.25	J	2	P-SM	-	-	Clean.	NCF	
74	16.72-16.73	J	4	P-SM	-	-	Rare black specks, unstained, no infill.	NCF	
75	17.62-17.66	J	25	U-R	-	-	Clean.	NCF	
76	17.81-17.85	J	31	U-R	-	-	Rare to occasional black specks, unstained no	NCF	

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SUMMARY OF DISCONTINUITIES - RedP-BH-6

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
							infill.		
77	18.04-18.10	J	36	U-SM	-	-	rarer to occasional black specks, unstained, no	NCF	
							infill.		
78	18.29-18.30	J	5	U-R	-	-	Rare black specks, unstained, no infill, locally	NCF	
							polished.		
79	18.45-18.49	J	27	P-R	-	-	Rare black specks, unstained, no infill.	NCF	
80	18.56-18.62	J	59	S-R	-	-	Rare black specks, unstained, no infill.	NCF	
81	18.63-18.63	J	2	P-R	-	-	Clean.	NCF	
82	18.79-18.80	J	3	S-SM	-	-	Clean.	NCF	
83	18.81-18.94	J	85	S-R	-	-	Rare black specks, unstained, no infill.	NCF	
84	18.93-18.94	J	3	P-R	-	-	Clean.	NCF	
85	19.03-19.04	J	2	P-R	-	-	Clean.	NCF	
86	19.48-19.49	J	6	P-R	-	-	Clean.	NCF	
87	19.62-19.64	J	7	S-R	-	-	Clean.	NCF	
88	19.79-19.81	J	8	P-SM	-	-	Rare to occasional back specks, unstained, no	NCF	
							infill.		

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18 Frogmore Road
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Hertfordshire
HP3 9RT

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Contract: SEA Link FEED - Kent Onshore Cable Link

SUMMARY OF DISCONTINUITIES - RedP-BH-6

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
89	19.85-19.89	J	36	P-R	-	-	Rare black specks, unstained, no infill.	NCF	
90	19.91-19.94	J	17	P-SM	-	-	Rare to occasional black specks, unstained, no	NCF	
							infill.		
91	20.68-20.70	J	6	P-R	-	-	Occasional to frequent black specks, unstained,	NCF	
							no infill.		
92	21.17-21.19	J	11	U-SM	-	-	Rare to occasional black specks, unstained, no	NCF	
							infill, locally polished.		
93	21.50-21.58	J	86	P-SM	-	-	Clean.	NCF	
94	21.50-21.65	J	82	P-SM	-	-	Clean.	NCF	
95	21.50-21.66	J	85	P-SM	-	-	Clean.	NCF	
96	21.83-21.95	J	89	U-SM	-	-	Clean.	NCF	
97	21.88-21.89	J	3	U-SM	-	-	Clean.	NCF	
98	21.88-21.96	J	84	P-SM	-	-	Clean.	NCF	
99	21.88-22.20	J	74	U-R	-	-	Clean.	NCF	
100	22.20-22.21	J	4	U-SM	-	-	Clean.	NCF	
101	22.42-22.63	J	87	P-SM	-	-	Clean.	NCF	

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Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
102	22.47-22.50	J	18	S-SM	-	-	Clean.	NCF	
103	22.60-22.64	J	83	U-R	-	-	Clean.	NCF	
104	22.64-22.71	J	85	U-R	-	-	Clean.	NCF	
105	22.64-22.81	J	84	P-R	-	-	Clean.	NCF	
106	22.75-22.81	J	72	P-SM	-	-	Clean.	NCF	
107	22.77-22.81	J	81	P-R	-	-	Clean.	NCF	
108	22.81-22.85	J	28	P-SM	-	-	Clean.	NCF	
109	23.50-23.51	J	3	U-SM	-	-	Clean.	NCF	
110	24.01-24.03	J	6	S-SM	-	-	Clean.	SCF	
111	24.38-24.39	J	2	U-SM	-	-	Rare black specks, unstained, no infill.	SCF	
112	24.68-24.68	J	1	P-SM	-	-	Clean.	SCF	
113	24.90-24.92	J	5	S-R	-	-	Clean.	SCF	
114	24.92-24.96	J	77	U-SM	-	-	Clean.	SCF	
115	25.25-25.26	J	3	S-R	-	-	Clean.	SCF	
116	25.31-25.36	J	78	P-R	-	-	Clean.	SCF	
117	25.41-25.42	J	7	S-SM	-	-	Clean.	SCF	

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Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
118	25.43-25.47	J	81	S-R	-	-	Rare black specks, unstained, no infill.	SCF	
119	25.80-25.98	J	88	P-SM	-	-	Rare black specks, unstained, no infill.	SCF	
120	26.57-26.60	J	12	U-R	-	-	Clean.	SCF	
121	26.69-26.72	J	19	S-SM	-	-	Clean.	SCF	
122	26.97-26.98	J	5	U-SM	-	-	Clean.	SCF	
123	26.98-27.06	J	8	P-SM	-	-	Clean.	SCF	
124	27.06-27.07	J	3	U-SM	-	-	Clean.	SCF	
125	27.56-27.60	J	5	U-R	-	-	Clean.	SCF	
126	27.87-27.88	J	4	U-SM	-	-	Clean.	SCF	
127	28.07-28.10	J	3	U-SM	-	-	Clean.	SCF	
128	28.16-28.17	J	8	U-SM	-	-	Locally rare black specks, unstained, no infill	SCF	
129	28.23-28.53	J	84	P-SM	-	-	Clean.	SCF	
130	28.35-28.36	J	2	U-SM	-	-	Clean.	SCF	
131	28.47-28.47	J	1	U-R	-	-	Clean.	SCF	
132	29.46-29.49	J	19	U-SM	-	-	Clean.	SCF	
133	29.77-29.78	J	4	P-R	-	-	Clean.	SCF	

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134	29.88-29.93	J	46	U-SM	-	-	Clean.	SCF	
135	29.95-29.99	J	19	P-R	-	-	Clean.	SCF	
136	30.34-30.35	J	3	P-R	-	-	Clean.	SCF	
137	30.39-30.45	J	68	P-SM	-	-	Clean.	SCF	

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-7**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	**22.11.23** End: **29.11.23**	**3.30**	**E:634331.4 N:163675.0**	**1** of **15**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
									MADE GROUND: Grass over firm dark brown slightly sandy gravelly CLAY with frequent to numerous rootlets and a low cobble content . Sand is fine to coarse. Gravel is angular to subangular fine to coarse concrete, brick, ceramics and flint. Cobbles are subangular concrete.				
0.25	101	ES	2xT+1xJ+1xV										
0.25		PID	0.0ppm										
0.40-0.70	1	B										(0.80)	
0.50	2	D											
0.60	102	ES	2xT+1xJ+1xV										
0.60		PID	0.2ppm										
0.80-1.10	3	B							MADE GROUND: Firm grey to dark gravelly CLAY. Gravel is subangular to subrounded fine to medium chalk, flint and brick.		2.50	0.80	
												(0.30)	
1.00	103	ES	2xT+1xJ+1xV										
1.00	4	D											
1.00		PID	0.1ppm										
1.10-1.50	5	B							Very soft to soft slightly sandy clayey SILT with occasional to frequent pockets of amorphous peat (up to 100mm). Sand is fine to coarse. (TIDAL FLAT DEPOSITS)		2.20	1.10	
												(0.65)	
1.50	104	ES	2xT+1xJ+1xV										
1.50-1.95	6	$UT_{(UT100)}$	15 blows 100% recovery										
1.50		PID	0.1ppm										
1.95-2.10	7	D							Soft grey to dark grey slightly sandy silty CLAY. Sand is fine to medium. (TIDAL FLAT DEPOSITS)		1.55	1.75	
2.50-2.95	8	SPT	N=0										
2.50-2.95	10	B											
2.50-2.95	9	DSPT											
3.00	11	D											
3.50-3.95	12	$UT_{(UT100)}$	25 blows 100% recovery										

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
23/11/23	11:30	1.20	None	250	Dry
23/11/23	16:30	6.10	6.00	200	Dry
24/11/23	08:30	6.10	6.00	200	5.70
24/11/23	16:30	6.10	6.00	200	-
28/11/23	08:30	6.10	6.00	200	0.30
28/11/23	16:30	23.50	23.00	146	1.37
29/11/23	08:30	23.50	23.00	146	1.23
29/11/23	17:00	31.00	30.50	146	1.22

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. Between 0.20m and 1.10m depth material too gravelly for hand vane tests.
5. Groundwater strike at 6.00m depth, rising to 4.30m depth after 20 minutes.

All dimensions in metres | Scale: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2500 + Comacchio MC405**	**Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-7**

Contract Ref:	Start: **22.11.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **29.11.23**	**3.30**	**E:634331.4 N:163675.0**	**2** of **15**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
3.50-3.95	13	B							Soft grey to dark grey slightly sandy silty CLAY. Sand is fine to medium. (TIDAL FLAT DEPOSITS) *(stratum copied from 1.75m from previous sheet)*			(4.15)	
4.00	14	D						1					
4.50-4.95	15	SPT	N=4										
4.50-4.95	16	DSPT											
4.50-4.95	17	B											
5.00	18	D											
5.50-5.95	19	$UT_{(UT100)}$	30 blows 100% recovery										
5.95-6.10	20	D						1	Dark grey subangular to subrounded fine to coarse GRAVEL of flint. (THANET FORMATION BASE BED MEMBER BULLHEAD BED)		-2.60	5.90	
6.10-7.00 (0:02)				0 0 0		90% return W (Light Grey)			AZCL due to Bullhead beds.		-2.80	6.10	AZCL
7.00-7.75 (0:02)				0 0 0		90% return W (Light Grey)						(1.95)	

Boring Progress and Water Observations					
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
29/11/23	08:51	23.50	23.00	146	1.23
29/11/23	17:00	31.00	None	N/R	-

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

General Remarks

6. Borehole drilled using cable percussion techniques to 6.10m depth then extended using rotary coring techniques to 31.00m depth.
7. On completion borehole backfilled with bentonite pellets and surfaced with arisings.
8. SPT hammers AR1862-2023 (E_r = 75.00%) , AR3508-2023 (E_r = 73.00%) used.

All dimensions in metres | Scale: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2500 + Comacchio MC405**	**Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-7**

Contract Ref:	Start: **22.11.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **29.11.23**	**3.30**	**E:634331.4 N:163675.0**	**3** of **15**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
				0 0 0		90% return W (Light Grey)			AZCL due to Bullhead beds. *(stratum copied from 6.10m from previous sheet)*				AZCL
7.75-8.50 (0:03)				60 0 0		90% return W (Light Grey)			Dark grey angular to subangular fine to coarse GRAVEL of flint. (Collapsed Bullhead beds)		-4.75	8.05	
									Structureless CHALK composed of slightly sandy silty angular to subangular GRAVEL. Clasts are very weak low to medium density off-white. Recovered non-intact. (NEWHAVEN CHALK FORMATION Grade Dc)		-4.88	8.18 (0.32)	
8.50-9.25 (0:01)									AZCL.		-5.20	8.50	
8.50-8.95	1	SPT(c)	N=7	0 0 0		W (Light Grey)							
9.25-10.00 (0:01)				0 0 0		W (Light Grey)						(2.61)	AZCL
10.00-10.75 (0:01)				0 0 0		W (Light Grey)							
10.75-11.50													

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: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2500 + Comacchio MC405**	**Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-7**

Contract Ref:	Start: **22.11.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **29.11.23**	**3.30**	**E:634331.4 N:163675.0**	**4** of **15**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
(0:01)									AZCL. *(stratum copied from 8.50m from previous sheet)*				AZCL
				89 0 0		90% return W (Light Grey)			Structureless CHALK composed of slightly sandy silty angular to subangular GRAVEL and COBBLES. Clasts are very weak low to medium density off-white. (NEWHAVEN CHALK FORMATION Grade Dc) . . . 11.11-11.50m: Recovered non-intact.		-7.81	11.11	
11.50-12.25 (0:01) 11.50-11.95	2	SPT(c)	N=11						. . . 11.50-11.95m: AZCL due to SPT.				
				40 0 0		90% return W (Light Grey)						(1.37)	
12.00	201	C							. . . 11.95-12.25m: Recovered non-intact with occasional Bullhead bed flints.				
12.25-13.00 (0:02)									. . . 12.37-12.48m & 12.61-12.69m: Recovered non-intact.				
				100 15 0		90% return W (Light Grey)			Very weak to weak medium to high density yellowish white with rare to occasional black specks CHALK. Fractures are closely spaced (0/91/820) with occasional to abundant black specks occasionally grey or orange stained rare orange clay infill. (NEWHAVEN CHALK FORMATION Grade B3)	1 2 3 4 6 5 7 8 9 10 11 12 14 13 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35	-9.18	12.48	
									. . . 12.79-12.83m: Orange stained sponge bed.				
									. . . 12.92-12.94m & 13.05-13.07m: Shell fragments.				
13.00-14.50 (0:03)					0 91 820								
									. . . 13.28-13.37m: Orange stained sponge bed.				
				100 61 18		90% return W (Light Grey)							
13.70	202	C							. . . 13.68-13.71m: Orange stained sponge bed.				
									. . . 13.90-13.92m: Shell fragments.				
									. . . 14.26-14.29m: Shell fragments.				

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: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2500 + Comacchio MC405**	**Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-7**

Contract Ref:	Start: **22.11.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **29.11.23**	**3.30**	**E:634331.4 N:163675.0**	**5** of **15**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
14.50-16.00 (0:03)									Very weak to weak medium to high density yellowish white with rare to occasional black specks CHALK. Fractures are closely spaced (0/91/820) with occasional to abundant black specks occasionally grey or orange stained rare orange clay infill. (NEWHAVEN CHALK FORMATION Grade B3) *(stratum copied from 12.48m from previous sheet)* . . . 14.43-14.50m: Recovered non-intact. . . . 14.50-14.95m: Recovered non-intact due to SPT cone as slightly gravelly sandy silt. Impression of SPT cone down to 14.95m indicating loss is from base of run.	36 37 38			
14.50-14.95	3	SPT(c)	N=45									(5.02)	
									. . . 15.05-15.12m, 15.25-15.31m & 15.35-15.39m: Shell fragments.				
15.27-15.56	101	C		97 61 61		90% return W (Light Grey)				39			
									. . . 15.36-15.51m & 15.68-15.75m: Orange stained sponge bed.	40 41 42 43			
16.00-17.50 (0:04)					0 91 820				. . . 15.96-16.00m: AZCL.				
16.00	203	C							. . . 16.08-16.21m: Shell fragments.	44			
									. . . 16.47-16.49m: Orange stained sponge bed.	45 46 47			
16.56-16.75	102	C		100 93 76		90% return W (Light Grey)				48 49			
17.00	204	C								50			
17.30	205	C								51 52 53 54			
17.50-19.00 (0:04)									Very weak to weak medium to high density off-white white mottled light grey CHALK. Fractures are medium spaced (10/240/580) rare to occasional black specks rarely stained, rare chalk infill. (NEWHAVEN CHALK FORMATION Grade B2) . . . 17.50-17.95m: Recovered non-intact due to SPT cone as slightly gravelly sandy silt. Impression of SPT cone can be seen to 17.95m, indicating loss from bottom of run.		-14.20	17.50	
17.50-17.95	4	SPT(c)	N=42	92 58 58	10 240 580	90% return W (Light Grey)				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: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2500 + Comacchio MC405**	**Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-7**

Contract Ref:	Start: **22.11.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **29.11.23**	**3.30**	**E:634331.4 N:163675.0**	**6** of **15**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
									Very weak to weak medium to high density off-white white mottled light grey CHALK. Fractures are medium spaced (10/240/580) rare to occasional black specks rarely stained, rare chalk infill. (NEWHAVEN CHALK FORMATION Grade B2)				
									. . . 17.50-17.95m: Recovered non-intact due to SPT cone as slightly gravelly sandy silt. Impression of SPT cone can be seen to 17.95m, indicating loss from bottom of run. *(stratum copied from 17.50m from previous sheet)*	56			
									. . . 18.11-18.22m: Shell fragments.				
									. . . 18.25-18.29m: Black stained sponge bed.	57			
									. . . 18.33-18.39m: Orange stained sponge bed.				
18.50-18.70	103	C		92 58 58		90% return W (Light Grey)			. . . 18.56-18.63m: Shell fragments.	58			
										59			
									. . . 18.88-19.00m: AZCL.				
19.00-20.50 (0:04)									. . . 19.00-19.08m & 19.35-19.40m: Orange stained sponge bed.				
										60			
										61			
									. . . 19.53-19.63m: Shell fragments.				
				100 95 95	10 240 580	90% return W (Light Grey)				62 63 64			
										65			
									. . . 20.02-20.06m, 20.08-28.10m & 20.22-20.25m: Shell fragments.	66 67			
20.20	206	C											
20.29-20.50	104	C								68		(5.70)	
									. . . 20.39-20.50m: Orange stained sponge bed.				
20.50-22.00 (0:05)													
20.50-20.95	5	SPT(c)	N=29						. . . 20.50-20.95m: Recovered non-intact due to SPT cone as slightly sandy gravelly silt. Impression of SPT cone can be seen down to 20.95m, indicating loss is from base of run.				
				93 61 53		0% return W			. . . 21.00-21.02m: Shell fragments.	69 70			
21.10-21.35	105	C											
									. . . 21.39-22.00m: AZCL.	71			
									. . . 21.41-21.43m & 21.67-21.68m: Orange stained sponge bed.				

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: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2500 + Comacchio MC405**	**Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-7**

Contract Ref:	Start: **22.11.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **29.11.23**	**3.30**	**E:634331.4 N:163675.0**	**7** of **15**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
				93 61 53		0% return W			Very weak to weak medium to high density off-white white mottled light grey CHALK. Fractures are medium spaced (10/240/580) rare to occasional black specks rarely stained, rare chalk infill. (NEWHAVEN CHALK FORMATION Grade B2) . . . 17.50-17.95m: Recovered non-intact due to SPT cone as slightly gravelly sandy silt. Impression of SPT cone can be seen to 17.95m, indicating loss from bottom of run.*(stratum copied from 17.50m from previous sheet)* . . . 21.76-21.87m: Shell fragments.	72			
22.00-23.50 (0:05) 22.00	207	C											
					10 240 580				. . . 22.17-22.22m: Shell fragments. . . . 22.30-22.32m: Orange stained sponge bed. . . . 22.32-22.41m & 22.65-22.69m: Shell fragments.	73			
22.54-22.90	106	C								74			
				100 86 75		0% return W				75			
23.00	208	C							. . . 22.99-23.04m: Orange stained sponge bed. . . . 23.07-23.04m: Very small fragment of nodular flint with thin cortex (<1mm). . . . 23.16-23.20m: Small fragment of nodular flint with thin cortex (<1mm).	76	-19.90	23.20	
									Weak medium to high density off-white mottled light grey CHALK with medium to widely spaced nodular flint. Fractures are medium spaced (0/236/1390) clean no staining and no infill. (SEAFORD CHALK FORMATION Grade A2) . . . 23.37-23.39m & 23.47-23.48m: Shell fragment.	77 78 79 80			
23.50-25.00 (0:04) 23.50-23.95	6	SPT(c)	N=50						. . . 23.50-23.64m: AZCL due to SPT cone. . . . 23.64-23.95m: Recovered non-intact due to SPT cone as slightly gravelly sandy SILT with very small to small fragments of nodular flint with thin cortexes (2-3mm).				
					0 236 1390				. . . 24.09-24.11m: Shell fragments.				
				91 53 53		0% return W			. . . 24.18-24.21m: Very small fragments of nodular flint with thin cortexes (1-2mm).	81 82 83			
										84			
24.71-24.85	107	C							. . . 24.63-24.65m & 24.75-24.79m: Shell fragments.	85			
										86			
25.00-26.50 (0:04)				100 72 50		0% return W				87 88			

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: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2500 + Comacchio MC405**	**Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-7**

Contract Ref:	Start: **22.11.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **29.11.23**	**3.30**	**E:634331.4 N:163675.0**	**8** of **15**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
									. . . 25.15-25.18m & 25.29-25.31m: Shell fragments. Weak medium to high density off-white mottled light grey CHALK with medium to widely spaced nodular flint. Fractures are medium spaced (0/236/1390) clean no staining and no infill. (SEAFORD CHALK FORMATION Grade A2) *(stratum copied from 23.20m from previous sheet)*	89 90			
25.52	209	C		100 72 50		0% return W			. . . 25.52-25.72m: Very small to medium fragments of nodular and finger flint with thin cortexes (1-2mm).	91			
									. . . 25.88-25.92m & 25.99-26.03m: Small fragment of nodular flint with thin cortexes (<1mm).	92			
26.20-26.50	108	C							. . . 26.35-26.39m: Black stained sponge bed.				
26.50-28.00 (0:04)													
26.50-26.95	7	SPT(c)	N=56						. . . 26.50-27.03m: Recovered non-intact due to SPT cone as slightly gravelly sandy SILT. Impression can be seen down to 27.03m, test possibly started slightly below 26.50m.				
					0 236 1390								
27.05-27.35	109	C		100 51 51		0% return W						(7.80)	
									. . . 27.41-27.42m: Black stained sponge bed. . . . 27.45-27.55m: Very small to small fragments of nodular flint with thin cortexes (<1mm).	93			
									. . . 27.58-27.70m: Shell fragments.	94 95			
28.00-29.50 (0:04)													
28.10	210	C								96 97			
28.30	211	C		100 95 92		0% return W			. . . 28.25m, 28.40-28.43m & 28.52-28.62m: Shell fragments.	98			
										99			

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: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2500 + Comacchio MC405**	**Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-7**

Contract Ref:	Start: **22.11.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **29.11.23**	**3.30**	**E:634331.4 N:163675.0**	**9** of **15**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
28.78-29.04	110	C		100 95 92		0% return W			Weak medium to high density off-white mottled light grey CHALK with medium to widely spaced nodular flint. Fractures are medium spaced (0/236/1390) clean no staining and no infill. (SEAFORD CHALK FORMATION Grade A2) *(stratum copied from 23.20m from previous sheet)* . . . 28.86-29.00m: Shell fragments. . . . 28.90-28.92m & 29.01-29.03m: Black stained sponge bed. . . . 28.86-29.00m: Shell fragments.	100			
									. . . 29.31-29.39m: Very small to medium nodular flint with thin cortexes (1mm).				
29.40	212	C							. . . 29.40-29.42m: Black stained sponge bed.				
29.50-31.00 (0:03)									. . . 29.50-29.69m: AZCL due to SPT.				
29.50-29.95	8	SPT(c)	N=42						. . . 26.69-30.10m: Recovered non-intact due to SPT cone as slightly gravelly sandy silt.				
					0 236 1390								
									. . . 30.02-30.10m & 30.19-30.26m: Very small to small fragments of nodular flint with thin cortexes (<1mm).				
				87 49 42		0% return W				101 102			
									. . . 30.44-30.48m & 30.60-30.62m: Black stained sponge bed.				
									. . . 30.61-30.63m: Shell fragments.	103 104			
30.72-30.92	111	C											
										105 106			
									. . . 30.96-31.00m: Very small to small fragments of nodular flint with thin cortexes (<1mm).		-27.70	31.00	
									Borehole terminated at 31.00m 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: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2500 + Comacchio MC405**	**Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
SEA Link FEED - Kent Onshore Cable Link		**National Grid**		**RedP-BH-7**
Contract Ref:	Start: **22.11.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **29.11.23**	**3.30**	**E:634331.4 N:163675.0**	**10** of **15**

Method Used:	Inspection pit + Cable Percussion + Rotary Cored	Plant Used:	Dando 2500 + Comacchio MC405	Drilled By:	Maris Veckagans	Logged By:	CMathias	Checked By:	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
SEA Link FEED - Kent Onshore Cable Link		**National Grid**		**RedP-BH-7**
Contract Ref:	Start: **22.11.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **29.11.23**	**3.30**	**E:634331.4 N:163675.0**	**11** of **15**

Method Used:	Inspection pit + Cable Percussion + Rotary Cored	Plant Used:	Dando 2500 + Comacchio MC405	Drilled By:	Maris Veckagans	Logged By:	CMathias	Checked By:	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
SEA Link FEED - Kent Onshore Cable Link		**National Grid**		**RedP-BH-7**
Contract Ref:	Start: **22.11.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **29.11.23**	**3.30**	**E:634331.4 N:163675.0**	**12** of **15**

Method Used:	Inspection pit + Cable Percussion + Rotary Cored	Plant Used:	Dando 2500 + Comacchio MC405	Drilled By:	Maris Veckagans	Logged By:	CMathias	Checked By:	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
SEA Link FEED - Kent Onshore Cable Link		**National Grid**		**RedP-BH-7**
Contract Ref:	Start: **22.11.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **29.11.23**	**3.30**	**E:634331.4 N:163675.0**	**13** of **15**

Method Used:	Inspection pit + Cable Percussion + Rotary Cored	Plant Used:	Dando 2500 + Comacchio MC405	Drilled By:	Maris Veckagans	Logged By:	CMathias	Checked By:	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
SEA Link FEED - Kent Onshore Cable Link		National Grid		RedP-BH-7
Contract Ref:	Start: 22.11.23	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: 29.11.23	3.30	E:634331.4 N:163675.0	14 of 15

Method Used:	Inspection pit + Cable Percussion + Rotary Cored	Plant Used:	Dando 2500 + Comacchio MC405	Drilled By:	Maris Veckagans	Logged By:	CMathias	Checked By:	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
SEA Link FEED - Kent Onshore Cable Link		**National Grid**		**RedP-BH-7**
Contract Ref:	Start: **22.11.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **29.11.23**	**3.30**	**E:634331.4 N:163675.0**	**15** of **15**

Method Used:	Inspection pit + Cable Percussion + Rotary Cored	Plant Used:	Dando 2500 + Comacchio MC405	Drilled By:	Maris Veckagans	Logged By:	CMathias	Checked By:	

SUMMARY OF DISCONTINUITIES - RedP-BH-7

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
1	12.48-12.54	J	54	P-R	-	-	Occasional to frequent black specks, lightly	NCF	
							stained orangish grey, no infill.		
2	12.54-12.58	J	76	P-R	-	-	Frequent black specks, stained brownish grey, no	NCF	
							infill.		
3	12.54-12.60	J	81	P-SM	-	-	Frequent black specks, stained brownish grey, no	NCF	
							infill.		
4	12.71-12.71	J	81	P-SM	-	-	Occasional black specks, lightly stained grey, no	NCF	
							infill.		
5	12.71-12.82	J	4	U-R	-	-	Occasional to frequent black specks, moderately	NCF	
							orange stained, no infill.		
6	12.75-12.76	J	3	S-SM	-	-	Abundant black specks, moderately stained	NCF	
							orange, no infill.		
7	12.76-12.80	J	28	S-SM	-	-	Occasional to frequent black specks, moderately	NCF	
							stained orange, no infill.		
8	12.87-12.88	J	17	S-SM	-	-	Abundant black specks, moderately stained	NCF	
							orang, no infill.		

Key:
Type codes: J = Joint.
Small-scale roughness codes: P-R = Planar - rough, P-SM = Planar - smooth, S-R = Stepped - rough, S-SM = Stepped - smooth, U-R = Undulating - rough, U-SM = Undulating - smooth.

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By: [redacted]

Date: 27.03.24

Contract Ref: 563607

Contract: SEA Link FEED - Kent Onshore Cable Link

SUMMARY OF DISCONTINUITIES - RedP-BH-7

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
9	12.90-12.94	J	78	U-SM	-	-	Abundant black specks, moderately stained grey,	NCF	
							no infill.		
10	12.90-12.94	J	83	U-R	-	-	Abundant black specks, moderately stained, no	NCF	
							infill.		
11	12.90-12.94	J	80	U-R	-	-	Abundant black specks, moderately stained grey,	NCF	
							no infill.		
12	12.95-12.96	J	66	U-SM	-	-	Numerous black specks, unstained, no infill.	NCF	
13	13.00-13.10	J	43	P-SM	-	-	Abundant black specks, unstained, no infill.	NCF	
14	13.01-13.08	J	61	P-R	-	-	Abundant black specks, unstained, no infill.	NCF	
15	13.01-13.10	J	72	P-SM	-	-	Abundant black specks, unstained, no infill.	NCF	
16	13.14-13.15	J	8	S-SM	-	-	Abundant black specks, unstained, no infill.	NCF	
17	13.34-13.35	J	5	U-SM	-	-	Occasional black specks, heavily orange stained,	NCF	
							no infill.		
18	13.36-13.49	J	82	P-R	-	-	Abundant black specks, unstained, no infill.	NCF	
19	13.51-13.51	J	8	P-R	-	-	Frequent black specks, unstained, orange clay	NCF	
							infill (clean) (<1mm)		

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SUMMARY OF DISCONTINUITIES - RedP-BH-7

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
20	13.51-13.57	J	78	P-SM	-	-	Occasional black specks, unstained, no infill.	NCF	
21	13.57-13.58	J	10	P-R	-	-	Occasional black specks, unstained, no infill.	NCF	
22	13.65-13.66	J	4	U-SM	-	-	Abundant black specks, unstained, no infill.	NCF	
23	13.67-13.69	J	9	S-R	-	-	Abundant black specks, moderately stained	NCF	
							yellow, no infill.		
24	13.72-13.72	J	5	P-R	-	-	Numerous to abundant black specks, unstained,	NCF	
							no infill.		
25	13.79-13.82	J	19	P-SM	-	-	Occasional black specks, moderately stained	NCF	
							brown, no infill.		
26	13.79-14.01	J	70	S-R	-	-	Numerous black specks, unstained, no infill.	NCF	
27	13.91-14.01	J	88	P-R	-	-	Numerous to abundant black specks, lightly	NCF	
							orange stained, no infill.		
28	14.01-14.03	J	8	S-R	-	-	Occasional black specks, moderately stained	NCF	
							orange, no infill.		
29	14.02-14.10	J	87	U-R	-	-	Frequent black specks, unstained, no infill.	NCF	
30	14.02-14.11	J	83	S-R	-	-	Frequent black specks, moderately stained orage,	NCF	

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STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By: [redacted]

Date: 27.03.24

Contract Ref: 563607

Contract: SEA Link FEED - Kent Onshore Cable Link

SUMMARY OF DISCONTINUITIES - RedP-BH-7

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
							no infill.		
31	14.10-14.12	J	10	P-R	-	-	Abundant black specks, unstained, no infill.	NCF	
32	14.11-14.24	J	74	S-SM	-	-	Numerous to abundant black specks, lightly	NCF	
							stained yellow, no infill.		
33	14.17-14.18	J	4	U-SM	-	-	Abundant black specks, unstained, no infill.	NCF	
34	14.21-14.25	J	47	P-R	-	-	Abundant black specks, unstained, no infill.	NCF	
35	14.24-14.26	J	9	S-R	-	-	Abundant black specks, unstained, no infill.	NCF	
36	14.25-14.42	J	81	P-SM	-	-	Abundant black specks, unstained, no infill.	NCF	
37	14.33-14.34	J	8	P-R	-	-	Occasional black specks, heavily stained orange,	NCF	
							no infill.		
38	14.37-14.38	J	5	P-R	-	-	Abundant black specks, unstained, no infill.	NCF	
39	15.20-15.26	J	32	U-SM	-	-	Numerous to abundant black specks, unstained,	NCF	
							no infill.		
40	15.53-15.54	J	2	U-SM	-	-	Occasional black specks, unstained, no infill.	NCF	
41	15.56-15.60	J	81	U-R	-	-	Locally frequent black specks, unstained, no infill.	NCF	
42	15.56-15.60	J	83	U-SM	-	-	frequent black specks, unstained, no infill.	NCF	

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SUMMARY OF DISCONTINUITIES - RedP-BH-7

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
43	15.60-15.61	J	5	P-R	-	-	Abundant black specks, unstained, no infill.	NCF	
44	16.13-16.18	J	35	S-SM	-	-	Locally abundant black specks, unstained, no	NCF	
							infill.		
45	16.40-16.42	J	4	S-R	-	-	Frequent black specks, unstained, no infill.	NCF	
46	16.42-16.43	J	16	P-R	-	-	rare to occasional black specks, unstained,	NCF	
							orange black specks, unstained, orange clay infill		
							(<1mm)		
47	16.52-16.54	J	14	U-SM	-	-	Locally numerous black specks, unstained, no	NCF	
							infill.		
48	16.78-16.79	J	7	S-R	-	-	Occasional black specks, unstained, no infill.	NCF	
49	16.82-16.83	J	9	U-SM	-	-	Rare to occasional black specks, unstained, no	NCF	
							infill.		
50	16.94-16.95	J	2	U-SM	-	-	Abundant black specks, unstained, no infill.	NCF	
51	17.20-17.21	J	6	S-R	-	-	Rare black specks, unstained, no infill.	NCF	
52	17.36-17.37	J	7	U-SM	-	-	Occasional black specks, grey staining, no infill.	NCF	
53	17.37-17.42	J	79	S-SM	-	-	Abundant black specks, unstained, no infill.	NCF	

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SUMMARY OF DISCONTINUITIES - RedP-BH-7

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
54	17.42-17.43	J	5	U-SM	-	-	Occasional to frequent black specks, grey	NCF	
							staining, no infill.		
55	17.97-17.98	J	3	U-R	-	-	Clean.	NCF	
56	18.09-18.10	J	2	U-SM	-	-	Occasional to frequent black specks, light yellow	NCF	
							staining, no infill.		
57	18.34-18.35	J	4	U-R	-	-	Occasional black specks, unstained, no infill.	NCF	
58	18.52-18.53	J	3	U-SM	-	-	Occasional to frequent black specks, unstained,	NCF	
							no infill.		
59	18.71-18.71	J	2	P-R	-	-	Clean.	NCF	
60	19.29-19.30	J	1	P-R	-	-	Rare black specks, unstained, no infill.	NCF	
61	19.44-19.46	J	18	U-SM	-	-	Locally occasional black specks, locally lightly	NCF	
							stained grey, no infill.		
62	19.69-19.79	J	86	P-R	-	-	Occasional black specks, moderately stained	NCF	
							grey, no infill.		
63	19.78-19.79	J	4	S-R	-	-	Rare to occasional black specks, unstained, no	NCF	
							infill.		

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SUMMARY OF DISCONTINUITIES - RedP-BH-7

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
64	19.82-19.83	J	9	U-R	-	-	Occasional to frequent black specks, no staining,	NCF	
							comminuted chalk infill (2-3mm)		
65	19.97-19.99	J	6	U-R	-	-	Occasional to frequent black specks, unstained,	NCF	
							no infill.		
66	20.10-20.12	J	5	S-SM	-	-	Rare to occasional black specks, unstained, no	NCF	
							infill.		
67	20.12-20.13	J	6	P-R	-	-	Rare to occasional black specks, lightly stained	NCF	
							yellow, no infill.		
68	20.29-20.30	J	4	P-R	-	-	Occasional black specks, unstained, no infill.	NCF	
69	20.98-21.00	J	7	P-R	-	-	Abundant black specks, unstained, no infill.	NCF	
70	21.08-21.09	J	5	P-R	-	-	Abundant black specks, unstained, no infill.	NCF	
71	21.36-21.40	J	6	S-SM	-	-	Rare black specks, unstained, comminuted chalk	NCF	
							(2mm)		
72	21.74-21.75	J	6	S-SM	-	-	Frequent black specks, unstained, no infill.	NCF	
73	22.29-22.30	J	7	P-R	-	-	Clean.	NCF	
74	22.52-22.54	J	9	U-SM	-	-	Clean.	NCF	

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SUMMARY OF DISCONTINUITIES - RedP-BH-7

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
75	22.92-22.93	J	5	P-R	-	-	Rare to occasional black specks, unstained, no	NCF	
							infill.		
76	23.16-23.17	J	4	U-SM	-	-	Clean.	NCF	
77	23.23-23.25	J	39	P-SM	-	-	Occasional black specks, unstained, no infill.	SCF	
78	23.27-23.28	J	5	P-R	-	-	Clean.	SCF	
79	23.29-23.50	J	83	U-R	-	-	Numerous black specks, unstained, no infill.	SCF	
80	23.44-23.45	J	4	U-SM	-	-	Occasional black specks, unstained, no infill.	SCF	
81	24.23-24.25	J	11	P-R	-	-	Clean.	SCF	
82	24.25-24.32	J	80	S-SM	-	-	Clean.	SCF	
83	24.34-24.35	J	6	S-R	-	-	Clean.	SCF	
84	24.47-24.48	J	4	S-R	-	-	Clean.	SCF	
85	24.65-24.69	J	4	P-R	-	-	Clean.	SCF	
86	24.83-24.86	J	12	U-SM	-	-	Clean.	SCF	
87	25.04-25.05	J	17	U-SM	-	-	Clean.	SCF	
88	25.10-25.13	J	4	U-SM	-	-	Clean.	SCF	
89	25.35-25.36	J	5	U-SM	-	-	Clean.	SCF	

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SUMMARY OF DISCONTINUITIES - RedP-BH-7

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
90	25.41-25.42	J	2	P-R	-	-	Clean.	SCF	
91	25.80-25.81	J	3	P-SM	-	-	Clean.	SCF	
92	26.05-26.06	J	4	S-SM	-	-	Clean.	SCF	
93	27.45-27.46	J	8	U-R	-	-	Clean.	SCF	
94	27.57-27.58	J	6	P-R	-	-	Clean.	SCF	
95	27.76-27.78	J	5	P-SM	-	-	Clean.	SCF	
96	28.13-28.14	J	3	P-R	-	-	Clean.	SCF	
97	28.18-28.18	J	2	P-SM	-	-	Clean.	SCF	
98	28.45-28.46	J	5	U-SM	-	-	Clean.	SCF	
99	28.76-28.78	J	7	P-SM	-	-	Clean.	SCF	
100	29.06-29.09	J	16	U-R	-	-	Clean.	SCF	
101	30.18-30.19	J	7	U-SM	-	-	Clean.	SCF	
102	30.28-30.28	J	2	U-SM	-	-	Clean.	SCF	
103	30.58-30.62	J	10	U-SM	-	-	Clean.	SCF	
104	30.72-30.73	J	6	U-SM	-	-	Clean.	SCF	
105	30.92-30.93	J	4	P-R	-	-	Clean.	SCF	

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SUMMARY OF DISCONTINUITIES - RedP-BH-7

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
106	30.95-30.97	J	16	P-R	-	-	Clean.	SCF	

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STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By		Date	Contract Ref:
[redacted]	[redacted]	27.03.24	563607
Contract: SEA Link FEED - Kent Onshore Cable Link			Page: 10 of 10

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-8**

Contract Ref:	Start: **04.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **11.10.23**	**3.01**	**E:633889.3 N:163701.1**	**1** of **12**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
									Stiff brown slightly gravelly slightly sandy organic clayey SILT with occasional rootlets. Sand is fine. Gravel is fine to coarse flint and chalk. (TOPSOIL)			(0.25)	
0.20	101	ES	2xT+1xJ+1xV										
0.20		PID	0.0ppm								2.76	0.25	
0.30		V	c_u=74/98/84						Stiff greyish brown mottled dark brown slightly sandy clayey SILT. Sand is fine. (TIDAL FLAT DEPOSITS)				
0.50	1	D											
0.50	102	ES	2xT+1xJ+1xV									(0.70)	
0.50-0.70	2	B											
0.50		PID	0.0ppm										
0.60		V	c_u=140/94/120										
											2.06	0.95	
1.00	3	D							Stiff locally firm grey mottled yellow silty CLAY with occasional white calcareous staining. (TIDAL FLAT DEPOSITS)				
1.00-1.20	4	B											
1.00-1.45	5	SPT	N=8										
1.00	103	ES	2xT+1xJ+1xV										
1.00		PID	0.0ppm										
1.10		V	c_u=112/118/116										
1.20-1.65	5	DSPT										(1.05)	
1.50-2.00	6	B											
											1.01	2.00	
2.00	7	D							Very stiff brownish yellow mottled grey silty CLAY. (TIDAL FLAT DEPOSITS)				
2.00-2.45	8	$UT_{(UT100)}$	35 blows 78% recovery										
2.45-2.55	9	D											
2.60-3.00	10	B										(1.50)	
3.00-3.45	11	SPT	N=14						. . . becoming firm from 3.00m depth.				
3.00-3.45	11	DSPT											
3.50-4.00	12	B							*Description on next sheet*		-0.49	3.50	

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
04/10/23	18:00	6.55	2.70	200	6.20
05/10/23	08:30	6.55	2.70	200	4.20
05/10/23	10:30	7.50	7.40	200	6.50
10/10/23	08:30	7.50	7.40	200	1.90
10/10/23	18:00	20.00	19.00	146	1.73
11/10/23	08:30	20.00	19.00	146	1.43
11/10/23	16:30	26.00	15.00	146	3.60

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. Checks for buried ferrous objects carried out during excavation by specialist unexploded ordnance (UXO) officer using magnetometer.
4. Groundwater seepage at 1.10m depth.
5. Groundwater strike at 6.50m depth, rising to 6.20m depth after 20 minutes.
6. Borehole drilled using cable percussion techniques to 7.50m

All dimensions in metres | Scale: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 175 + Comacchio MC405**	**Maris Veckagans**	**CMathias + MStorch**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-8**

Contract Ref:	Start: **04.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **11.10.23**	**3.01**	**E:633889.3 N:163701.1**	**2** of **12**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
									Very stiff grey mottled brownish yellow slightly sandy silty CLAY. Sand is fine. (TIDAL FLAT DEPOSITS) *(stratum copied from 3.50m from previous sheet)*			(0.80)	
4.00 4.00-4.45	13 14	D $UT_{(UT100)}$	60 blows 100% recovery										
									Stiff grey slightly sandy clayey SILT with frequent fine sand lenses (<1 mm thick). Sand is fine. (TIDAL FLAT DEPOSITS)		-1.29	4.30	
4.45-4.55	15	D											
4.60-5.00	16	B											
5.00-5.45 5.00-5.45	17 17	SPT DSPT	N=29										
5.50-6.00	18	B											
												(3.20)	
6.00-6.45	19	$UT_{(UT100)}$	60 blows 100% recovery					1					
6.45-6.55	20	D						1					
6.60-7.00	21	B											
7.00-7.45 7.00-7.45	22 22	SPT DSPT	N=36						. . . becoming very stiff from 7.00m 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

depth then extended using rotary coring techniques to 26.00m depth.
7. Permeability tests undertaken between 14.00-15.50m and 24.50-26.00m depth.
8. 50mm diameter standpipe piezometer (complete with upstanding protective cover) installed to 16.00m depth on completion. Response zone 11.00m to 16.00m depth.
9. Water level data logger installed during post fieldwork monitoring.
10. SPT hammers AR1321-2022 (E_r = 62.00%) , BHDS03-2023

All dimensions in metres | Scale: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 175 + Comacchio MC405**	**Maris Veckagans**	**CMathias + MStorch**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-8**

Contract Ref:	Start: **04.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **11.10.23**	**3.01**	**E:633889.3 N:163701.1**	**3** of **12**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
									Stiff grey slightly sandy clayey SILT with frequent fine sand lenses (<1 mm thick). Sand is fine. (TIDAL FLAT DEPOSITS) *(stratum copied from 4.30m from previous sheet)*				
7.50-8.00 (0:05) 7.50	23	D		74 - -		90% return W (Dark Grey)			AZCL.		-4.49	7.50	AZCL
									Stiff to very stiff grey locally micaceous silty CLAY with occasional shell fragments. (THANET FORMATION)		-4.61	7.62 (0.26)	
8.00-9.50 (0:08)				100 20 20		90% return W (Dark Grey)			Dark grey silty fine SAND. (THANET FORMATION)		-4.87	7.88 (1.62)	
8.90-9.20	101	C							. . . cemented sand between 8.90-9.20m depth.				
9.50-11.00 (0:03) 9.50	201	C		100 82 81	0 260 1010	90% return W (Light Grey)			Extremely weak to very weak dark grey mottled brownish grey fine to medium sandy SILTSTONE recovered as slightly gravelly sandy SILT. Gravel is angular to subangular fine to coarse extremely weak to very weak siltstone. Sand is fine. (THANET FORMATION) . . . 9.66-9.71m: Orange streaks horizontal to sub horizontal up to 4mm wide (possible iron staining).		-6.49	9.50 (0.30)	
									Dark grey mottled orange silty angular to very angular fine to coarse GRAVEL of flint. (THANET FORMATION BASE BED MEMBER BULLHEAD BED)		-6.79	9.80	
10.30	202	C							Very weak, medium density yellowish white CHALK. Fractures are medium spaced (0/260/1010), clean or infilled (0/1/1) with black to brown clay or white comminuted chalk with frequent orange staining and occasional to frequent black specks. (NEWHAVEN CHALK FORMATION Grade B2) . . . 10.10-10.11m: Shell fragment.	1	-6.96	9.97	
10.44-10.62	102	C							. . . 10.69-10.75m: Black and orange stained sponge bed.	2 3 4			

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

(E_r = 68.00%) used.

All dimensions in metres | Scale: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 175 + Comacchio MC405**	**Maris Veckagans**	**CMathias + MStorch**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-8**

Contract Ref:	Start: **04.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **11.10.23**	**3.01**	**E:633889.3 N:163701.1**	**4** of **12**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
				100 82 81		90% return W (Light Grey)			Very weak, medium density yellowish white CHALK. Fractures are medium spaced (0/260/1010), clean or infilled (0/1/1) with black to brown clay or white comminuted chalk with frequent orange staining and occasional to frequent black specks. (NEWHAVEN CHALK FORMATION Grade B2) *(stratum copied from 9.97m from previous sheet)* . . . 10.82-10.90m: Recovered non-intact possibly due to steeply dipping discontinuities as slightly sandy angular to subangular fine to coarse gravel and cobbles. . . . Recovered non-intact due to SPT as slightly sandy gravelly silt. Can see impression of SPT cone down to 11.45m.	5 6 7 8 9			
11.00-12.50 (0:04) 11.00-11.45	1	SPT(c)	N=39										
				97 69 57		90% return W (Light Grey)			. . . 11.46-11.57m: Shell fragments. . . . 11.85-11.90m: Black stained sponge bed.	10			
12.00 12.00 12.00	1 2 3	EW EW EW	2xG+1xP+Vials 2xG+1xP+Vials 2xG+1xP+Vials							11 12 13			
12.40	203	C							. . . 12.35m: Orange stained sponge bed.	14			
12.50-14.00 (0:02)					0 260 1010				. . . 12.50-12.59m: AZCL.	15 17 16			
										18 19 20			
13.20	204	C		94 90 85		90% return W (Light Grey)			. . . 13.22-13.24m: Yellowish orange stained sponge bed.	21			
13.80-14.00	103	C											
14.00-15.50 (0:02) 14.00-14.45	2	SPT(c)	N=44	100 68 63		90% return W (Light Grey)			. . . Recovered non-intact due to SPT as slightly sandy gravelly silt. Can see impression of SPT cone down to 14.45m.				

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: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 175 + Comacchio MC405**	**Maris Veckagans**	**CMathias + MStorch**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-8**

Contract Ref:	Start: **04.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **11.10.23**	**3.01**	**E:633889.3 N:163701.1**	**5** of **12**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
14.70	205	C							Very weak, medium density yellowish white CHALK. Fractures are medium spaced (0/260/1010), clean or infilled (0/1/1) with black to brown clay or white comminuted chalk with frequent orange staining and occasional to frequent black specks. (NEWHAVEN CHALK FORMATION Grade B2) *(stratum copied from 9.97m from previous sheet)* . . . 14.63-14.65m: Shell fragments.	22 23			
14.84-15.10	104	C		100 68 63		90% return W (Light Grey)			. . . 14.76-14.79m: Recovered non-intact.	24			
										25			
									. . . 15.23-15.25m: Shell fragments.				
									. . . 15.41-15.50m: Orange stained sponge bed.				
15.50-17.00 (0:04)									. . . 15.50-15.56m: AZCL.				
									. . . 15.60-15.81m: Light grey marl seams.				
15.82-16.04	105	C								26			
				96 96 96	0 260 1010	90% return W (Light Grey)			. . . 16.04-16.06m: Shell fragments.	27		(12.36)	
										28			
									. . . 16.43-16.46m: Shell fragments.	29			
									. . . 16.71-16.74m: Shell fragments.				
17.00-18.50 (0:02)									. . . Recovered non-intact due to SPT as slightly sandy gravelly silt. Can see impression of SPT cone down to 17.45m confirming loss must be from lower part of run.				
17.00-17.45	3	SPT(c)	N=33	90 55 47		90% return W (Light Grey)							
									. . . 17.65-17.68m: Orange stained sponge bed.	30			
									. . . 17.73-17.76m: Wispy marl.	31			
										32			
									. . . 17.90-17.95m: Recovered non-intact.	33			

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: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 175 + Comacchio MC405**	**Maris Veckagans**	**CMathias + MStorch**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-8**

Contract Ref:	Start: **04.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **11.10.23**	**3.01**	**E:633889.3 N:163701.1**	**6** of **12**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill & Instru-mentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
18.00	206	C							Very weak, medium density yellowish white CHALK. Fractures are medium spaced (0/260/1010), clean or infilled (0/1/1) with black to brown clay or white comminuted chalk with frequent orange staining and occasional to frequent black specks. (NEWHAVEN CHALK FORMATION Grade B2) *(stratum copied from 9.97m from previous sheet)*				
18.20	207	C		90 55 47		90% return W (Light Grey)			. . . 18.25-18.32m: Orange stained sponge bed.				
18.40	208	C							. . . 18.35-18.50m: AZCL due to SPT disturbance.				
18.50-20.00 (0:02)									. . . 18.50-18.60m: AZCL.				
									. . . 18.62-18.67m: Orange stained sponge bed.	34			
									. . . 19.01-19.03m: Shell fragments.				
19.18-19.40	106	C		93 93 91		90% return W (Light Grey)				35			
									. . . 19.40-19.42m: Orange stained sponge bed.	36			
										37			
									. . . 19.62-19.76m: Shell fragments.				
					0 260 1010								
20.00-21.50 (0:02)									. . . Recovered non-intact due to SPT as slightly sandy gravelly silt. Can see impression of SPT cone down to 20.45m.	38			
20.00-20.45	4	SPT(c)	N=29										
				100 65 65		90% return W (Light Grey)				39			
20.90-21.15	107	C								40			
										41			
									. . . 21.21-21.24m: Shell fragments.	42			
21.40	209	C											
21.50-23.00 (0:03)													

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: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 175 + Comacchio MC405**	**Maris Veckagans**	**CMathias + MStorch**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-8**

Contract Ref:	Start: **04.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **11.10.23**	**3.01**	**E:633889.3 N:163701.1**	**7** of **12**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
					0 260 1010				. . . 21.57-21.58m: Orange stained sponge bed. Very weak, medium density yellowish white CHALK. Fractures are medium spaced (0/260/1010), clean or infilled (0/1/1) with black to brown clay or white comminuted chalk with frequent orange staining and occasional to frequent black specks. (NEWHAVEN CHALK FORMATION Grade B2) *(stratum copied from 9.97m from previous sheet)* . . . 21.74-21.76m: Shell fragments.	43 44 45			
22.06-22.24	108	C		100 91 77		90% return W (Light Grey)				46 47	-19.32	22.33	
22.40-22.45 22.40	210 22.45	C C							Weak, high density white mottled light grey CHALK with widely spaced sponge beds. Fractures are medium spaced (40/370/1060), clean of infilled (0/2.5/5) with white comminuted chalk with rare black specks and unstained. (SEAFORD CHALK FORMATION Grade C2) . . . 22.34-22.37m: Shell fragments. . . . 22.34-22.49m: Orange stained sponge bed. . . . 22.40-22.45m: Flint band. Small fragments of nodular flint with cortexes <1mm thick. . . . 22.54-22.59m: Recovered non-intact due to shell fragments. . . . 22.59-22.71m: Shell fragments. . . . 22.71-22.91m: Orange stained sponge bed.	48 49 50 51			
23.00-23.70 (0:02) 23.00-23.45	5	SPT(c)	N=44	50 0 0		90% return W (Light Grey)			. . . 22.59-22.71m: AZCL due to SPT and flint. . . . 23.45-23.70m: Recovered non-intact due to flint caught in catcher.				
23.70-24.50 (0:03) 23.80	211	C			40 370 1060					52		(3.67)	
24.00-24.20	109	C		100 89 80		90% return W (Light Grey)			. . . 24.30-24.32m: Orange stained sponge bed. . . . 24.36-24.41m: Recovered non-intact.	53 54			
24.50-26.00 (0:03)				100 100 95		90% return W (Light Grey)			. . . 24.46-24.50m: Orange stained sponge bed. . . . 24.53-24.55m: Orange stained sponge bed. . . . 24.60-24.65m: Orange stained sponge bed. . . . 24.87-25.02m: Orange stained sponge bed.	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: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 175 + Comacchio MC405**	**Maris Veckagans**	**CMathias + MStorch**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-8**

Contract Ref:	Start: **04.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **11.10.23**	**3.01**	**E:633889.3 N:163701.1**	**8** of **12**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	Mechanical Log: If (mm)	Flush Returns & Details	Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
25.80-26.00	110	C		100 100 95	40 370 1060	90% return W (Light Grey)			Weak, high density white mottled light grey CHALK with widely spaced sponge beds. Fractures are medium spaced (40/370/1060), clean of infilled (0/2.5/5) with white comminuted chalk with rare black specks and unstained. (SEAFORD CHALK FORMATION Grade C2) *(stratum copied from 22.33m from previous sheet)* . . . 25.20-25.56m: Shell fragments.	56 57			
									Borehole terminated at 26.00m depth.		22.99	26.00	

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: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 175 + Comacchio MC405**	**Maris Veckagans**	**CMathias + MStorch**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
SEA Link FEED - Kent Onshore Cable Link		**National Grid**		**RedP-BH-8**
Contract Ref:	Start: **04.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **11.10.23**	**3.01**	**E:633889.3 N:163701.1**	**9** of **12**

Method Used:	Inspection pit + Cable Percussion + Rotary Cored	Plant Used:	Dando 175 + Comacchio MC405	Drilled By:	Maris Veckagans	Logged By:	CMathias + MStorch	Checked By:	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
SEA Link FEED - Kent Onshore Cable Link		**National Grid**		**RedP-BH-8**
Contract Ref:	Start: **04.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **11.10.23**	**3.01**	**E:633889.3 N:163701.1**	**10** of **12**

Method Used:	Inspection pit + Cable Percussion + Rotary Cored	Plant Used:	Dando 175 + Comacchio MC405	Drilled By:	Maris Veckagans	Logged By:	CMathias + MStorch	Checked By:	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
SEA Link FEED - Kent Onshore Cable Link		**National Grid**		**RedP-BH-8**
Contract Ref:	Start: **04.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **11.10.23**	**3.01**	**E:633889.3 N:163701.1**	**11** of **12**

Method Used:	Inspection pit + Cable Percussion + Rotary Cored	Plant Used:	Dando 175 + Comacchio MC405	Drilled By:	Maris Veckagans	Logged By:	CMathias + MStorch	Checked By:	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
SEA Link FEED - Kent Onshore Cable Link		**National Grid**		**RedP-BH-8**
Contract Ref:	Start: **04.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **11.10.23**	**3.01**	**E:633889.3 N:163701.1**	**12** of **12**

Method Used:	Inspection pit + Cable Percussion + Rotary Cored	Plant Used:	Dando 175 + Comacchio MC405	Drilled By:	Maris Veckagans	Logged By:	CMathias + MStorch	Checked By:	

SUMMARY OF DISCONTINUITIES - RedP-BH-8

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
1	10.22-10.24	J	6	U-SM	-	-	No black specks, moderately stained orange,	NCF	
							locally heavily stained, no infill.		
2	10.37-10.42	J	84	P-SM	-	-	Rare to occasional black specks, unstained no	NCF	
							infill.		
3	10.42-10.43	J	4	P-R	-	-	Clean.	NCF	
4	10.62-10.62	J	7	P-R	-	-	Clean.	NCF	
5	10.80-10.83	J	46	U-R	-	-	No black specks, locally lightly stained orange, no	NCF	
							infill.		
6	10.83-10.83	J	2	U-SM	-	-	No black specks, lightly stained orange, no infill.	NCF	
7	10.84-10.88	J	82	U-R	-	-	No black specks, locally lightly stained orange, no	NCF	
							infill.		
8	10.84-10.89	J	87	S-ST	-	-	Abundant black specks, moderately stained	NCF	
							black, no infill.		
9	10.90-10.92	J	36	U-SM	-	-	Rare to frequent black specks, locally lightly	NCF	
							stained black, black clay infill (<1mm).		
10	11.93-11.93	J	3	U-SM	-	-	Abundant black specks, no staining, black dark	NCF	

Key:
Type codes: J = Joint.
Small-scale roughness codes: P-R = Planar - rough, P-SM = Planar - smooth, S-R = Stepped - rough, S-SM = Stepped - smooth, S-ST = Stepped - striated, U-R = Undulating - rough, U-SM = Undulating - smooth.

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By: [redacted]

Date: 27.03.24

Contract Ref: 563607

Contract: SEA Link FEED - Kent Onshore Cable Link

SUMMARY OF DISCONTINUITIES - RedP-BH-8

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
							brown infill (<1mm).		
11	12.03-12.04	J	11	P-SM	-	-	Numerous to abundant black specks, no staining,	NCF	
							no infill.		
12	12.21-12.22	J	2	P-SM	-	-	Rare occasional black specks, lightly stained	NCF	
							orange, chalk infill (~1mm).		
13	12.29-12.30	J	10	P-SM	-	-	Locally rare to occasional black specks. not	NCF	
							stained, no infill.		
14	12.40-12.41	J	2	P-SM	-	-	Clean.	NCF	
15	12.59-12.59	J	1	P-R	-	-	Rare to occasional, not stained no infill.	NCF	
16	12.59-12.71	J	60	P-R	-	-	Occasional black specks, heavily stained grey, no	NCF	
							infill.		
17	12.60-12.67	J	59	P-SM	-	-	Numerous black specks, moderately stained	NCF	
							orange and grey, no infill.		
18	12.80-13.00	J	75	P-SM	-	-	Abundant black specks, moderately stained grey,	NCF	
							no infill.		
19	12.91-12.92	J	16	U-R	-	-	Rare occasional black specks, lightly stained	NCF	

Key:
Type codes: J = Joint.
Small-scale roughness codes: P-R = Planar - rough, P-SM = Planar - smooth, S-R = Stepped - rough, S-SM = Stepped - smooth, S-ST = Stepped - striated, U-R = Undulating - rough, U-SM = Undulating - smooth.

SUMMARY OF DISCONTINUITIES - RedP-BH-8

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
							grey, no infill.		
20	12.98-13.01	J	57	P-SM	-	-	Numerous to abundant black specks, not stained,	NCF	
							no infill.		
21	13.71-13.74	J	16	U-SM	-	-	Clean.	NCF	
22	14.53-14.61	J	67	P-SM	-	-	Frequent to numerous black specks, not stained ,	NCF	
							no infill.		
23	14.59-14.60	J	12	U-SM	-	-	Rare black specks, lightly stained grey, no infill.	NCF	
24	14.86-14.89	J	17	P-SM	-	-	Clean.	NCF	
25	15.11-15.16	J	30	U-SM	-	-	Clean.	NCF	
26	15.81-15.82	J	9	P-R	-	-	Clean.	NCF	
27	16.04-16.04	J	2	S-ST	-	-	Clean, light infill of chalk (~1mm).	NCF	
28	16.27-16.28	J	3	U-SM	-	-	Clean.	NCF	
29	16.50-16.51	J	6	S-ST	-	-	No black specks, not stained, brown clay (>1mm).	NCF	
30	17.70-17.71	J	8	P-SM	-	-	Rare black specks, not stained, no infill.	NCF	
31	17.80-17.81	J	3	U-SM	-	-	Frequent black specks, not stained, no infill.	NCF	
32	17.86-17.91	J	28	S-SM	-	-	Clean.	NCF	

Key:
Type codes: J = Joint.
Small-scale roughness codes: P-R = Planar - rough, P-SM = Planar - smooth, S-R = Stepped - rough, S-SM = Stepped - smooth, S-ST = Stepped - striated, U-R = Undulating - rough, U-SM = Undulating - smooth.

SUMMARY OF DISCONTINUITIES - RedP-BH-8

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
33	17.95-17.96	J	4	P-R	-	-	Occasional to frequent black specks, not stained,	NCF	
							chalk infill (~1mm).		
34	18.61-18.62	J	4	S-ST	-	-	Rare to occasional black specks, not stained, no	NCF	
							infill.		
35	19.17-19.18	J	3	P-R	-	-	Rare black specks, not stained, no infill.	NCF	
36	19.40-19.41	J	2	P-SM	-	-	Rare black specks, locally lightly stained orange,	NCF	
							no infill.		
37	19.52-19.53	J	1	P-R	-	-	Rare black specks, no infill, not stained.	NCF	
38	19.98-19.98	J	4	U-SM	-	-	Rare to occasional black specks, no infill, not	NCF	
							stained.		
39	20.75-20.88	J	49	U-R	-	-	Locally frequent black specks, not stained, no	NCF	
							infill.		
40	20.89-20.90	J	7	P-SM	-	-	Rare black specks, not stained, no infill.	NCF	
41	21.15-21.17	J	14	S-ST	-	-	Rare black specks, not stained, no infill.	NCF	
42	21.27-21.28	J	3	P-R	-	-	Clean.	NCF	
43	21.70-21.71	J	6	U-SM	-	-	Clean.	NCF	

Key:
Type codes: J = Joint.
Small-scale roughness codes: P-R = Planar - rough, P-SM = Planar - smooth, S-R = Stepped - rough, S-SM = Stepped - smooth, S-ST = Stepped - striated, U-R = Undulating - rough, U-SM = Undulating - smooth.

SUMMARY OF DISCONTINUITIES - RedP-BH-8

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
44	21.84-21.86	J	3	U-R	-	-	Clean.	NCF	
45	22.00-22.01	J	3	P-SM	-	-	Clean.	NCF	
46	22.24-22.25	J	2	P-SM	-	-	Rare black specks, not stained, no infill.	NCF	
47	22.30-22.31	J	13	P-SM	-	-	Rare to frequent black specks, not stained, no	NCF	
							infill.		
48	22.42-22.45	J	6	U-R	-	-	Clean.	SCF	
49	22.75-22.76	J	3	P-R	-	-	Rare black specks, not stained, no infill.	SCF	
50	22.81-22.83	J	6	U-SM	-	-	Clean.	SCF	
51	22.92-22.93	J	5	U-R	-	-	Clean.	SCF	
52	23.99-24.00	J	5	P-R	-	-	Clean.	SCF	
53	24.19-24.20	J	3	P-R	-	-	Clean.	SCF	
54	24.42-24.43	J	6	P-R	-	-	No black specks, not stained, chalk infill (5mm).	SCF	
55	24.71-24.72	J	2	U-SM	-	-	Clean.	SCF	
56	25.33-25.34	J	5	U-R	-	-	Clean.	SCF	
57	25.38-25.42	J	21	S-R	-	-	Clean.	SCF	

Key:
Type codes: J = Joint.
Small-scale roughness codes: P-R = Planar - rough, P-SM = Planar - smooth, S-R = Stepped - rough, S-SM = Stepped - smooth, S-ST = Stepped - striated, U-R = Undulating - rough, U-SM = Undulating - smooth.

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By: [redacted]

Date: 27.03.24

Contract Ref: 563607

Contract: SEA Link FEED - Kent Onshore Cable Link

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-9**

Contract Ref:	Start: **19.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **25.10.23**	**3.22**	**E:634093.3 N:163604.4**	**1** of **13**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
									MADE GROUND: Grass over stiff, locally friable dark brown slightly gravelly silty CLAY with numerous to abundant rootlets. Gravel is subangular to subrounded fine to coarse chalk and flint.			(0.35)	
0.20	101	ES	2xT+1xJ+1xV										
0.20		PID	0.0ppm										
0.30-0.50	1	B											
0.30		V	c_u=140/140/120								2.87	0.35	
									MADE GROUND: Stiff dark brown gravelly SILT. Gravel is angular to subangular fine to coarse flint, brick, concrete and chalk				
0.50	102	ES	2xT+1xJ+1xV										
0.50		PID	0.0ppm									(0.45)	
0.60	2	D											
0.70	103	ES	2xT+1xJ+1xV										
0.70-1.00	3	B											
0.70		PID	0.1ppm								2.42	0.80	
									MADE GROUND: Light grey CONCRETE.		2.32	0.90	
									MADE GROUND: Soft to firm reddish brown locally greyish brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse flint, brick, metal and concrete.				
1.00	104	ES	2xT+1xJ+1xV										
1.00		PID	0.0ppm										
1.20	4	D											
1.20-1.65	5	SPT	N=6									(0.80)	
1.20-1.65	6	DSPT											
1.70-2.00	7	B							Very soft to soft black amorphous peaty CLAY. (TIDAL FLAT DEPOSITS)		1.52	1.70	
2.00	8	D											
2.00-2.45	9	SPT	N=6									(0.70)	
2.00-2.45	10	DSPT											
2.00	105	ES	2xT+1xJ+1xV										
2.00		PID	0.2ppm										
									Very soft grey mottled brown silty CLAY. (TIDAL FLAT DEPOSITS)		0.82	2.40	
2.50	106	ES	2xT+1xJ+1xV										
2.50-3.00	11	B											
2.50		PID	0.1ppm										
3.00	12	D										(1.30)	
3.00-3.45	13	$UT_{(UT100)}$	52 blows 0% recovery										
3.45-3.55	14	D											

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
19/10/23	11:00	1.20	None	250	Dry
19/10/23	18:00	6.45	3.00	200	0.50
20/10/23	08:30	6.45	3.00	200	0.50
20/10/23	11:30	8.45	7.50	200	4.50
24/10/23	11:00	8.45	7.50	200	2.17
24/10/23	18:00	26.00	25.50	146	1.55
25/10/23	08:30	26.00	25.50	146	1.50
25/10/23	12:00	30.50	30.00	146	-

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. Couldn't take any further hand vanes past 0.50m, due to gravelly nature of material.
5. Groundwater strike at 5.50m depth, rising to 5.40m depth after 20 minutes.

All dimensions in metres | Scale: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 Mark 1 + Comacchio MC405**	**Karl Wordsworth + Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-9**

Contract Ref:	Start: **19.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **25.10.23**	**3.22**	**E:634093.3 N:163604.4**	**2** of **13**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
3.60-4.00	15	B											
									Soft dark grey amorphous peat and black to dark grey silty CLAY. (TIDAL FLAT DEPOSITS)		-0.48	3.70	
4.00	16	D											
4.00-4.45	17	SPT	N=5									(0.70)	
4.00-4.45	18	DSPT											
									Firm grey mottled greenish brown slightly sandy clayey SILT. Sand is fine to medium. (TIDAL FLAT DEPOSITS)		-1.18	4.40	
4.50-5.00	19	B											
5.00	20	D										(1.00)	
5.00-5.45	21	$UT_{(UT100)}$	40 blows 100% recovery										
								1					
								1	Firm grey mottled orangish brown and reddish brown slightly sandy clayey SILT. Sand is fine to medium. (TIDAL FLAT DEPOSITS)		-2.18	5.40	
5.45-5.55	22	D											
5.60-6.00	23	B											
6.00	24	D											
6.00-6.45	25	SPT	N=11									(2.60)	
6.00-6.45	26	DSPT											
6.50-7.00	27	B											
7.00	28	D											
7.00-7.45	29	$UT_{(UT100)}$	60 blows 100% recovery										

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
24/10/23	04:29	8.00	7.50	200	2.17
24/10/23	08:18	26.00	25.50	146	1.55
25/10/23	08:35	26.00	26.00	146	1.50
25/10/23	17:00	30.50	30.50	146	-

Chiselling / Slow Progress

From	To	Duration (hh:mm)

General Remarks

6. No visual or olfactory evidence of contamination were observed during the fieldwork, however a positive result for asbestos at 0.70m depth was picked up during subsequent contamination testing.
7. Borehole drilled using cable percussion techniques to 8.45m depth then extended using rotary coring techniques to 30.50m depth.
8. On completion borehole backfilled with bentonite pellets and surfaced with arisings.
9. SPT hammers AR1321-2022 (E_r = 62.00%) , AR2670-2023 (E_r

All dimensions in metres | Scale: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 Mark 1 + Comacchio MC405**	**Karl Wordsworth + Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-9**

Contract Ref:	Start: **19.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **25.10.23**	**3.22**	**E:634093.3 N:163604.4**	**3** of **13**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
									Firm grey mottled orangish brown and reddish brown slightly sandy clayey SILT. Sand is fine to medium. (TIDAL FLAT DEPOSITS) *(stratum copied from 5.40m from previous sheet)*				
7.45-7.55	30	D											
7.60-8.00	31	B											
8.00-9.50 (0:05)									Very stiff grey mottled orangish brown sandy clayey SILT. Sand is fine to medium. (THANET FORMATION)		-4.78	8.00	
8.00	32	D											
8.00-8.45	33	SPT	N=50										
8.00	201	C											
8.00-8.45	34	DSPT										(0.38)	
				75 20 20		60% return W (Grey)			Dark grey mottled orangish brown silty fine to medium SAND with occasional shell fragments. (THANET FORMATION)		-5.16	8.38	
												(0.42)	
									Structureless CHALK composed of slightly sandy angular to subangular GRAVEL and COBBLES. Clasts are extremely weak and very weak low to medium density brownish white CHALK with medium to large nodular flints with thick cortexes (<5mm). (NEWHAVEN CHALK FORMATION)		-5.58	8.80	
9.00	202	C								1	-5.78	9.00	
									Extremely weak to very weak low to medium density yellowish white CHALK with occasional to frequent black specks. Discontinuities where measured as closely spaced (10/80/240) numerous to abundant black specks with brown and grey staining on surfaces. (NEWHAVEN CHALK FORMATION Grade B3) . . . 9.16-9.24m: Recovered non-intact. . . . 9.27-9.29m: Orange stained sponge bed. . . . 9.38-9.50m: Recovered non-intact.	2 3 4 5 6 7		(0.70)	
					10 80 240								
9.50-11.00 (0:03)										8 9	-6.48	9.70	
									Very weak medium density yellowish white CHALK with occasional black specks. Discontinuities where measured as closely spaced (0/130/720) rare to abundant with occasional yellow and grey staining and rare to occasional infill (<1-1mm). (NEWHAVEN CHALK FORMATION Grade B3) . . . 9.79-9.83m: Possible orange stained sponge bed. . . . 9.91-9.97m: Orange stained sponge bed. . . . 9.98-10.01m: Shell fragments.	10 11 12			
9.91-10.11	101	C											
				100 79 65		90% return W (Light Grey)				13			
					0 130 720					14 15			
									. . . 10.34-10.37m: Shell fragments.	16 17			
									. . . 10.43-10.46m: Shell fragments.	18			
									. . . 10.57-10.59m: Shell fragments. . . . 10.43-10.46m: Orange stained sponge bed.	19			
										20			
										22			

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

= 64.00%) used.

All dimensions in metres | Scale: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 Mark 1 + Comacchio MC405**	**Karl Wordsworth + Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-9**

Contract Ref:	Start: **19.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **25.10.23**	**3.22**	**E:634093.3 N:163604.4**	**4** of **13**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
				100 79 65		90% return W (Light Grey)			Very weak medium density yellowish white CHALK with occasional black specks. Discontinuities where measured as closely spaced (0/130/720) rare to abundant with occasional yellow and grey staining and rare to occasional infill (<1-1mm). (NEWHAVEN CHALK FORMATION Grade B3) *(stratum copied from 9.70m from previous sheet)* . . . 10.87-10.89m: Shell fragments. . . . 11.00-11.11m: AZCL due to SPT. . . . Recovered non-intact due to SPT cone as slightly gravelly sandy clay. Can see impression of SPT cone down to 11.45m.	21 23			
11.00-12.50 (0:03) 11.00-11.45	1	SPT(c)	N=24										
									. . . 11.45-11.58m: Recovered non-intact due to SPT disturbance.				
									. . . 11.58-11.65m: Orange stained sponge bed.	24 25			
				93 51 31		90% return W (Light Grey)			. . . 11.67-11.69m: Shell fragments.	26 27 28 29 31 30 32 33 34 35 36 37 38 39 40			
12.40	203	C							. . . 12.42-12.44m: Shell fragments.				
12.50-14.00 (0:03)					0 130 720				. . . 12.50-12.64m: AZCL.				
12.70	204	C							. . . 12.73-12.77m: Recovered non-intact.	41 42 43 44			
										45			
13.14-13.40	102	C		91 81 63		90% return W (Light Grey)			. . . 13.33-13.45m: Shell fragments.	46 47			
									. . . 13.45-13.47m: Orange stained sponge bed.	48			
									. . . 13.56-13.61m: Shell fragments.	49 50			
										51			
									. . . 13.86-13.93m: Shell fragments.				
14.00-15.50 (0:04) 14.00-14.45	2	SPT(c)	N=53	98 64 29		90% return W (Light Grey)			. . . Recovered non-intact due to SPT cone as slightly gravelly sandy clay. Can see impression of SPT cone down to 14.45m. Conforming loss must be from lower part of run.			(9.10)	

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: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 Mark 1 + Comacchio MC405**	**Karl Wordsworth + Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-9**

Contract Ref:	Start: **19.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **25.10.23**	**3.22**	**E:634093.3 N:163604.4**	**5** of **13**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
14.60-14.77	103	C		98 64 29		90% return W (Light Grey)			Very weak medium density yellowish white CHALK with occasional black specks. Discontinuities where measured as closely spaced (0/130/720) rare to abundant with occasional yellow and grey staining and rare to occasional infill (<1-1mm). (NEWHAVEN CHALK FORMATION Grade B3) *(stratum copied from 9.70m from previous sheet)*	52 53 54 55 56			
15.00	205	C							. . . 14.98-15.03m: Shell fragments.	57 58 59 60			
15.50-17.00 (0:02)				100 93 71	0 130 720	90% return W (Light Grey)			. . . 15.59-15.64m: Orange stained sponge bed. . . . 16.04-16.14m: Shell fragments. . . . 16.42-16.47m: Shell fragments. . . . 16.64-16.69m: Shell fragments.	61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76			
17.00-18.50 (0:04) 17.00-17.45	3	SPT(c)	N=66						. . . 17.00-17.23m: AZCL due to SPT. . . . 17.23-17.45m: Recovered non-intact due to SPT cone as slightly gravelly sandy silt.				
17.57-17.79	104	C		87 70 70		90% return W (Light Grey)			. . . 17.53-17.60m: Orange stained sponge bed.	77 78			

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: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 Mark 1 + Comacchio MC405**	**Karl Wordsworth + Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-9**

Contract Ref:	Start: **19.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **25.10.23**	**3.22**	**E:634093.3 N:163604.4**	**6** of **13**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
				87 70 70	0 130 720	90% return W (Light Grey)			Very weak medium density yellowish white CHALK with occasional black specks. Discontinuities where measured as closely spaced (0/130/720) rare to abundant with occasional yellow and grey staining and rare to occasional infill (<1-1mm). (NEWHAVEN CHALK FORMATION Grade B3) *(stratum copied from 9.70m from previous sheet)*	79			
18.50-20.00 (0:03)									. . . 18.43-18.50m: Orange stained sponge bed. . . . 18.50-18.54m: AZCL. . . . 18.54-18.67m: Orange stained sponge bed.	80 81			
									. . . 18.74-18.76m: Shell fragments.		15.58	18.80	
									Very weak to weak medium to high density yellowish white mottled light grey CHALK. Discontinuities where measured as medium spaced (0/340/1080) clean with rare to occasional black specks. (NEWHAVEN CHALK FORMATION Grade B2)				
19.00-19.25	105	C							. . . 18.83-18.86m: Orange stained sponge bed.	82			
									. . . 19.10-19.12m: Shell fragments.				
				97 97 97		90% return W (Light Grey)				83			
										84			
									. . . 19.47-19.50m: Orange stained sponge bed.	85			
										86			
19.90	206	C								87			
20.00-21.50 (0:03)									. . . 20.00-20.09m: AZCL due to SPT.				
20.00-20.45	4	SPT(c)	N=47		0 340 1080				. . . 20.09-20.45m: Recovered non-intact due to SPT cone as slightly sandy gravelly silt.				
									. . . 20.37-20.55m: Orange stained sponge bed.				
										88			
									. . . 20.52-20.54m: Shell fragments.				
									. . . 20.66-20.68m: Shell fragments.	89			
				94 69 59		90% return W (Light Grey)				90			
										91			
									. . . 21.11-21.21m: Orange stained sponge bed.				
									. . . 21.37-21.40m: Orange stained sponge bed.				
21.50-23.00 (0:04)									. . . 21.48-21.50m: Orange stained sponge bed.				

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: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 Mark 1 + Comacchio MC405**	**Karl Wordsworth + Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-9**

Contract Ref:	Start: **19.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **25.10.23**	**3.22**	**E:634093.3 N:163604.4**	**7** of **13**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
21.66-21.90	106	C							Very weak to weak medium to high density yellowish white mottled light grey CHALK. Discontinuities where measured as medium spaced (0/340/1080) clean with rare to occasional black specks. (NEWHAVEN CHALK FORMATION Grade B2) *(stratum copied from 18.80m from previous sheet)*	92		(5.70)	
									. . . 21.67-21.85m: Shell fragments.				
									. . . 21.75-21.87m: Orange stained sponge bed.	93			
22.00	207	C		100 100 100		90% return W (Light Grey)			. . . 22.29-22.39m: Shell fragments.				
									. . . 22.33-22.45m: Orange stained sponge bed.	94			
									. . . 22.46-22.57m: Shell fragments.	95 96			
									. . . 22.62-22.73m: Orange stained sponge bed.				
									. . . 22.72-22.75m: Shell fragments.				
22.90	208	C								97			
23.00-24.50 (0:05)					0 340 1080				. . . 23.00-23.14m: AZCL due to SPT.				
23.00-23.45	5	SPT(c)	N=26						. . . 23.14-23.45m: Recovered non-intact due to SPT cone as slightly sandy gravelly silt.				
									. . . 23.52-23.59m: Orange stained sponge bed.				
				87 69 69		0% return W			. . . 23.63-23.67m: Shell fragments.				
									. . . 23.89-24.07m: Orange stained sponge bed.				
									. . . 23.91-23.98m: Shell fragments.	98			
									. . . 24.23-24.26m: Shell fragments.				
24.50-26.00 (0:04)									Weak high density off-white mottled light grey CHALK with widely spaced flint bands. Discontinuities where measured as medium spaced (40/270/860) rare to occasional black specks or clean. (SEAFORD CHALK FORMATION Grade A2)	99	-21.28	24.50	
									. . . 24.50-24.54m: Flint band. Very small to medium fragments of nodular flint with thin cortexes (<1mm).	100 101			
24.81-25.01	107	C		100 88 74	40 270 860	0% return W			. . . 24.72-24.78m: Flint band. Small to medium fragments of nodular flint with thin cortexes (<1mm).				
									. . . 24.95-24.98m: Orange stained sponge bed.	102			
25.00	209	C								103			
									. . . 25.10-25.17m: Flint band. Very small to small fragments of nodular flint with thick cortexes (<4mm).	104			

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: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 Mark 1 + Comacchio MC405**	**Karl Wordsworth + Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-9**

Contract Ref:	Start: **19.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **25.10.23**	**3.22**	**E:634093.3 N:163604.4**	**8** of **13**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
									Weak high density off-white mottled light grey CHALK with widely spaced flint bands. Discontinuities where measured as medium spaced (40/270/860) rare to occasional black specks or clean. (SEAFORD CHALK FORMATION Grade A2)	105			
									. . . 24.50-24.54m: Flint band. Very small to medium fragments of nodular flint with thin cortexes (<1mm).*(stratum copied from 24.50m from previous sheet)*	106			
									. . . 25.24-25.28m: Orange stained sponge bed.				
				100 88 74		0% return W			. . . 25.29-25.33m: Shell fragments.				
									. . . 25.76-25.91m: Shell fragments.	107			
26.00-27.50 (0:05)													
26.00-26.45	6	SPT(c)	N=65						. . . 26.00-26.16m: AZCL due to SPT.				
									. . . 26.16-26.45m: Recovered non-intact due to SPT cone as slightly sandy gravelly silt.				
26.40	210	C							. . . 26.39-26.51m: Flint band. Very small to medium fragments of nodular flint with thin cortexes (<3mm).				
									. . . 26.57m: Shell fragments.				
				86 56 56		0% return W				108			
					40 270 860					109			
									. . . 27.06-27.11m: Black stained sponge bed.	110			
									. . . 27.21-27.36m: Recovered non-intact due to flint band of very small to small fragments of nodular flint with thin cortexes (<1mm).				
									. . . 27.39-27.41m: Shell fragments.				
									. . . 27.43-27.50m: Black stained sponge bed.			(6.00)	
27.50-29.00 (0:07)										111			
									. . . 27.56-27.59m: Light grey stained sponge bed.				
									. . . 27.72-27.75m: Echinoid shell fragment.				
									. . . 27.79-27.90m: Black stained sponge bed.				
										112			
				97 93 89		0% return W			. . . 28.08-28.11m: Shell fragments.	113			
									. . . 28.30-28.34m: Recovered non-intact.				
										114			
28.67-29.00	108	C								115			

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: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 Mark 1 + Comacchio MC405**	**Karl Wordsworth + Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-9**

Contract Ref:	Start: **19.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **25.10.23**	**3.22**	**E:634093.3 N:163604.4**	**9** of **13**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
				97 93 89		0% return W			. . . 28.76-28.96m: Black stained sponge bed. Weak high density off-white mottled light grey CHALK with widely spaced flint bands. Discontinuities where measured as medium spaced (40/270/860) rare to occasional black specks or clean. (SEAFORD CHALK FORMATION Grade A2) . . . 24.50-24.54m: Flint band. Very small to medium fragments of nodular flint with thin cortexes (<1mm).*(stratum copied from 24.50m from previous sheet)* . . . 29.00-29.16m: Recovered non-intact due to SPT cone and flint band in as slightly sandy silty gravel. . . . 29.01-29.20m: Flint band. Small to large fragments of nodular flint with thin cortexes (<2mm). . . . 29.21-29.32m: Shell fragments.				
29.00-30.50 (0:07) 29.00-29.16	7	SPT(c)	8,8/100 for 5mm										
				100 95 89	40 270 860	0% return W			. . . 29.53-29.56m: Black stained sponge bed.	116 117 118 119 120			
29.96-30.26 30.00	109 211	C C							. . . 30.39-30.43m: Shell fragments.				
									Borehole terminated 30.50m depth.		-27.28	30.50	

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: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 Mark 1 + Comacchio MC405**	**Karl Wordsworth + Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
SEA Link FEED - Kent Onshore Cable Link		**National Grid**		**RedP-BH-9**
Contract Ref:	Start: **19.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **25.10.23**	**3.22**	**E:634093.3 N:163604.4**	**10** of **13**

Method Used:	Inspection pit + Cable Percussion + Rotary Cored	Plant Used:	Dando 2000 Mark 1 + Comacchio MC405	Drilled By:	Karl Wordsworth + Maris Veckagans	Logged By:	CMathias	Checked By:	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
SEA Link FEED - Kent Onshore Cable Link		**National Grid**		**RedP-BH-9**
Contract Ref:	Start: **19.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **25.10.23**	**3.22**	**E:634093.3 N:163604.4**	**11** of **13**

Method Used:	Inspection pit + Cable Percussion + Rotary Cored	Plant Used:	Dando 2000 Mark 1 + Comacchio MC405	Drilled By:	Karl Wordsworth + Maris Veckagans	Logged By:	CMathias	Checked By:	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
SEA Link FEED - Kent Onshore Cable Link		**National Grid**		**RedP-BH-9**
Contract Ref:	Start: **19.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **25.10.23**	**3.22**	**E:634093.3 N:163604.4**	**12** of **13**

Method Used:	Inspection pit + Cable Percussion + Rotary Cored	Plant Used:	Dando 2000 Mark 1 + Comacchio MC405	Drilled By:	Karl Wordsworth + Maris Veckagans	Logged By:	CMathias	Checked By:	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
SEA Link FEED - Kent Onshore Cable Link		**National Grid**		**RedP-BH-9**
Contract Ref:	Start: **19.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **25.10.23**	**3.22**	**E:634093.3 N:163604.4**	**13** of **13**

Method Used:	Inspection pit + Cable Percussion + Rotary Cored	Plant Used:	Dando 2000 Mark 1 + Comacchio MC405	Drilled By:	Karl Wordsworth + Maris Veckagans	Logged By:	CMathias	Checked By:	

SUMMARY OF DISCONTINUITIES - RedP-BH-9

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
1	9.00-9.02	J	21	U-SM	-	-	Occasional to numerous black specks,	NCF	
							moderately stained light brown, no infill.		
2	9.03-9.07	J	48	P-R	-	-	Numerous to abundant black specks, moderately	NCF	
							stained yellowish brown, no infill.		
3	9.06-9.07	J	15	S-R	-	-	Numerous to abundant black specks, moderately	NCF	
							sainted yellowish brown, no infill.		
4	9.14-9.20	J	52	S-R	-	-	Abundant black specks, heavily stained brownish	NCF	
							grey, no infill.		
5	9.23-9.26	J	21	S-SM	-	-	Occasional black specks, lightly stained brownish	NCF	
							grey, no infill.		
6	9.33-9.39	J	34	P-R	-	-	Abundant black specks, heavily stained orangish	NCF	
							brown, no infill.		
7	9.37-9.40	J	76	P-R	-	-	Abundant black specks, moderately stained light	NCF	
							brown, no infill.		
8	9.64-9.70	J	66	U-R	-	-	Abundant black specks, heavily stained grey, no	NCF	
							infill.		

Key:
Type codes: J = Joint.
Small-scale roughness codes: P-R = Planar - rough, P-SM = Planar - smooth, S-R = Stepped - rough, S-SM = Stepped - smooth, U-R = Undulating - rough, U-SM = Undulating - smooth.

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By: [redacted]

Date: 27.03.24

Contract Ref: 563607

Contract: SEA Link FEED - Kent Onshore Cable Link

SUMMARY OF DISCONTINUITIES - RedP-BH-9

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
9	9.67-9.72	J	65	P-R	-	-	Rare black specks, no staining, no infill.	NCF	
10	9.67-9.72	J	73	S-SM	-	-	Abundant black specks, moderately stained	NCF	
							brownish grey, no infill.		
11	9.72-9.78	J	39	P-R	-	-	Abundant black specks, heavily stained grey,	NCF	
							comminuted chalk (1-2mm)		
12	9.93-9.95	J	5	U-R	-	-	Locally numerous to abundant black specks,	NCF	
							moderately stained grey, no infill.		
13	10.14-10.16	J	9	P-R	-	-	Occasional to frequent black specks, lightly	NCF	
							stained yellow, no infill./		
14	10.24-10.26	J	5	P-R	-	-	Numerous to abundant black specks, lightly	NCF	
							stained grey, comminuted chalk (<1mm)		
15	10.29-10.30	J	6	S-R	-	-	frequent to numerous black specks, lightly stained	NCF	
							yellow, no infill.		
16	10.29-10.33	J	81	P-SM	-	-	Numerous black specks, lightly stained grey, no	NCF	
							infill.		
17	10.38-10.39	J	5	U-R	-	-	Locally frequent to numerous black specks, no	NCF	

Key:
Type codes: J = Joint.
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SUMMARY OF DISCONTINUITIES - RedP-BH-9

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
							staining, no infill.		
18	10.42-10.43	J	6	P-R	-	-	Numerous to abundant black specks, moderately	NCF	
							stained brown, comminuted chalk (<1mm)		
19	10.51-10.54	J	9	S-R	-	-	Frequent to numerous black specks, lightly	NCF	
							stained yellow, no infill.		
20	10.68-10.70	J	8	P-R	-	-	Frequent to numerous black specks, lightly	NCF	
							stained yellow, no infill.		
21	10.70-11.00	J	72	U-SM	-	-	Abundant black specks, heavily stained grey, no	NCF	
							infill.		
22	10.74-10.78	J	18	P-R	-	-	Numerous black specks, lightly stained grey, no	NCF	
							infill.		
23	10.93-10.95	J	12	S-SM	-	-	frequent to numerous black specks no staining,	NCF	
							no infill.		
24	11.53-11.57	J	30	P-R	-	-	Frequent black specks, no staining, no infill.	NCF	
25	11.58-11.60	J	13	P-SM	-	-	Occasional to frequent black specks, no staining,	NCF	
							no infill.		

Key:
Type codes: J = Joint.
Small-scale roughness codes: P-R = Planar - rough, P-SM = Planar - smooth, S-R = Stepped - rough, S-SM = Stepped - smooth, U-R = Undulating - rough, U-SM = Undulating - smooth.

SUMMARY OF DISCONTINUITIES - RedP-BH-9

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
26	11.65-11.71	J	61	P-SM	-	-	Abundant black specks, moderately stained grey,	NCF	
							no infill.		
27	11.66-11.70	J	57	U-SM	-	-	Frequent to numerous black specks, lightly	NCF	
							stained grey, no infill.		
28	11.71-11.72	J	7	U-SM	-	-	Occasional black specks, no staining, no infill.	NCF	
29	11.72-11.81	J	62	P-R	-	-	Occasional to frequent black specks, moderately	NCF	
							yellow staining, no infill.		
30	11.82-11.92	J	67	P-R	-	-	Abundant black specks, no staining, brown clay	NCF	
							infill (1mm).		
31	11.85-11.86	J	8	P-SM	-	-	Occasional black specks, no staining, no infill.	NCF	
32	11.92-11.95	J	15	U-SM	-	-	Occasional black specks, no staining, no infill.	NCF	
33	11.97-11.98	J	3	U-SM	-	-	Occasional to frequent black specks, no staining,	NCF	
							no infill.		
34	11.98-12.05	J	59	U-SM	-	-	Numerous to abundant black specks. No staining,	NCF	
							no infill.		
35	12.01-12.12	J	87	P-SM	-	-	Abundant black specks, moderately stained grey,	NCF	

Key:
Type codes: J = Joint.
Small-scale roughness codes: P-R = Planar - rough, P-SM = Planar - smooth, S-R = Stepped - rough, S-SM = Stepped - smooth, U-R = Undulating - rough, U-SM = Undulating - smooth.

SUMMARY OF DISCONTINUITIES - RedP-BH-9

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
							no infill.		
36	12.07-12.13	J	86	U-SM	-	-	Rare black specks, no staining, no infill.	NCF	
37	12.12-12.14	J	6	U-SM	-	-	Abundant black specks, lightly stained grey, no	NCF	
							infill.		
38	12.25-12.26	J	5	U-R	-	-	Frequent black specks, lightly yellowish grey	NCF	
							staining, no infill.		
39	12.26-12.31	J	73	S-R	-	-	Rare to occasional black specks, no staining, no	NCF	
							infill.		
40	12.31-12.38	J	34	P-SM	-	-	rare to occasional black specks, locally yellow	NCF	
							staining, no infill.		
41	12.65-12.67	J	5	P-R	-	-	Rare to occasional black specks, no staining, no	NCF	
							infill.		
42	12.67-12.75	J	47	P-SM	-	-	Numerous to abundant black specks, no staining,	NCF	
							brown clay infill (<1mm)		
43	12.74-12.75	J	9	U-SM	-	-	Clean.	NCF	
44	12.81-12.83	J	8	P-R	-	-	Occasional black specks, lightly stained yellow,	NCF	

Key:
Type codes: J = Joint.
Small-scale roughness codes: P-R = Planar - rough, P-SM = Planar - smooth, S-R = Stepped - rough, S-SM = Stepped - smooth, U-R = Undulating - rough, U-SM = Undulating - smooth.

SUMMARY OF DISCONTINUITIES - RedP-BH-9

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
							no infill.		
45	13.00-13.02	J	10	U-SM	-	-	Occasional black specks, no staining, no infill.	NCF	
46	13.13-13.14	J	7	P-R	-	-	Rare black specks, no staining, no infill.	NCF	
47	13.19-13.19	J	9	U-SM	-	-	Rare black specks, no staining, no infill.	NCF	
48	13.42-13.44	J	28	S-SM	-	-	Rare to occasional black specks, no staining, no	NCF	
							infill.		
49	13.54-13.54	J	10	U-SM	-	-	Occasional black specks, no staining, localised	NCF	
							brown clay (<1mm)		
50	13.65-13.69	J	26	P-SM	-	-	Frequent to numerous black specks, no staining,	NCF	
							no infill.		
51	13.78-13.79	J	5	P-R	-	-	Occasional black specks, no staining, no infill.	NCF	
52	14.51-14.53	J	16	S-R	-	-	Clean.	NCF	
53	14.58-14.61	J	10	P-R	-	-	Clean.	NCF	
54	14.77-14.78	J	2	P-R	-	-	Rare to occasional black specks, no staining, no	NCF	
							infill.		
55	14.86-14.87	J	4	P-R	-	-	Clean.	NCF	

Key:
Type codes: J = Joint.
Small-scale roughness codes: P-R = Planar - rough, P-SM = Planar - smooth, S-R = Stepped - rough, S-SM = Stepped - smooth, U-R = Undulating - rough, U-SM = Undulating - smooth.

SUMMARY OF DISCONTINUITIES - RedP-BH-9

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
56	14.93-14.98	J	28	U-SM	-	-	Rare to occasional black specks, no staining, no	NCF	
							infill.		
57	15.09-15.11	J	5	P-R	-	-	Clean.	NCF	
58	15.21-15.23	J	17	P-R	-	-	Rare black specks, no staining, no infill.	NCF	
59	15.32-15.34	J	14	U-SM	-	-	Rare black specks, no staining, no infill.	NCF	
60	15.32-15.46	J	82	U-SM	-	-	Rare to occasional black specks, no staining, no	NCF	
							infill.		
61	15.62-15.63	J	3	P-R	-	-	Clean.	NCF	
62	15.72-15.74	J	15	U-SM	-	-	Rare black specks, no staining, no infill.	NCF	
63	15.74-15.78	J	36	P-SM	-	-	Rare black specks, no staining, no infill.	NCF	
64	15.90-15.91	J	2	P-R	-	-	Clean.	NCF	
65	16.07-16.09	J	9	U-R	-	-	Clean.	NCF	
66	16.10-16.12	J	18	U-R	-	-	Clean.	NCF	
67	16.12-16.26	J	85	P-SM	-	-	Clean.	NCF	
68	16.24-16.29	J	28	U-SM	-	-	Clean.	NCF	
69	16.37-16.39	J	19	S-R	-	-	Clean.	NCF	

Key:
Type codes: J = Joint.
Small-scale roughness codes: P-R = Planar - rough, P-SM = Planar - smooth, S-R = Stepped - rough, S-SM = Stepped - smooth, U-R = Undulating - rough, U-SM = Undulating - smooth.

SUMMARY OF DISCONTINUITIES - RedP-BH-9

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
70	16.39-16.43	J	56	P-SM	-	-	Clean.	NCF	
71	16.41-16.43	J	71	S-R	-	-	Clean.	NCF	
72	16.46-16.49	J	17	P-R	-	-	Clean.	NCF	
73	16.59-16.65	J	30	P-SM	-	-	Clean.	NCF	
74	16.79-16.82	J	11	S-R	-	-	Clean.	NCF	
75	16.81-16.86	J	59	U-SM	-	-	Clean.	NCF	
76	16.90-16.92	J	7	P-SM	-	-	Clean.	NCF	
77	17.56-17.58	J	3	U-R	-	-	Occasional to frequent black specks, no staining,	NCF	
							no infill.		
78	17.79-17.80	J	2	P-R	-	-	Clean.	NCF	
79	18.34-18.36	J	11	P-R	-	-	Clean.	NCF	
80	18.54-18.55	J	1	P-R	-	-	Occasional black specks, no staining, no infill.	NCF	
81	18.55-18.58	J	65	P-R	-	-	Rare to occasional black specks, no staining, no	NCF	
							infill.		
82	19.00-19.01	J	7	U-R	-	-	Clean.	NCF	
83	19.25-19.26	J	3	P-R	-	-	Clean.	NCF	

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SUMMARY OF DISCONTINUITIES - RedP-BH-9

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
84	19.40-19.44	J	35	P-SM	-	-	Clean.	NCF	
85	19.50-19.52	J	8	P-SM	-	-	Clean.	NCF	
86	19.63-19.65	J	6	P-R	-	-	Clean.	NCF	
87	19.75-19.78	J	17	P-SM	-	-	Clean.	NCF	
88	20.48-20.50	J	18	U-R	-	-	Clean.	NCF	
89	20.66-20.68	J	12	U-R	-	-	Clean.	NCF	
90	20.74-20.75	J	7	U-SM	-	-	Frequent black specks, no staining, no infill.	NCF	
91	20.84-20.85	J	5	P-R	-	-	Rare black specks, no staining, no infill.	NCF	
92	21.65-21.66	J	6	P-R	-	-	Clean.	NCF	
93	21.90-21.92	J	8	U-SM	-	-	Rare to occasional black specks, no staining, no	NCF	
							infill.		
94	22.40-22.42	J	26	U-SM	-	-	Frequent to numerous black specks, no staining,	NCF	
							no infill.		
95	22.42-22.43	J	9	U-R	-	-	Occasional to frequent black specks, no staining,	NCF	
							no infill.		
96	22.51-22.52	J	12	P-R	-	-	Occasional black specks, no staining, no infill.	NCF	

Key:
Type codes: J = Joint.
Small-scale roughness codes: P-R = Planar - rough, P-SM = Planar - smooth, S-R = Stepped - rough, S-SM = Stepped - smooth, U-R = Undulating - rough, U-SM = Undulating - smooth.

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By: [redacted]

Date: 27.03.24

Contract Ref: 563607

Contract: SEA Link FEED - Kent Onshore Cable Link

SUMMARY OF DISCONTINUITIES - RedP-BH-9

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
97	22.80-23.00	J	66	P-SM	-	-	Rare to occasional black specks, no staining, no	NCF	
							infill.		
98	24.08-24.08	J	2	P-SM	-	-	Clean.	NCF	
99	24.54-24.55	J	1	U-R	-	-	Clean.	SCF	
100	24.68-24.69	J	3	U-R	-	-	Clean.	SCF	
101	24.72-24.76	J	70	S-R	-	-	Rare black specks, no staining, no infill.	SCF	
102	25.01-25.02	J	1	P-SM	-	-	Occasional black specks, no staining, no infill.	SCF	
103	25.07-25.09	J	9	P-R	-	-	Rare black specks, no staining, no infill.	SCF	
104	25.11-25.14	J	14	P-R	-	-	Clean.	SCF	
105	25.23-25.24	J	9	P-SM	-	-	Occasional black specks, no staining, no infill.	SCF	
							Slightly polished.		
106	25.38-25.40	J	10	S-R	-	-	Rare black specks, no staining, no infill.	SCF	
107	25.83-25.85	J	5	U-R	-	-	Clean.	SCF	
108	26.71-26.73	J	22	S-SM	-	-	Clean.	SCF	
109	26.84-26.85	J	5	P-R	-	-	Rare black specks, no staining, no infill.	SCF	
110	27.04-27.06	J	10	S-R	-	-	Clean.	SCF	

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Type codes: J = Joint.
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SUMMARY OF DISCONTINUITIES - RedP-BH-9

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
111	27.54-27.55	J	3	U-SM	-	-	Frequent to numerous black specks, no staining,	SCF	
							no infill.		
112	28.04-28.05	J	6	U-R	-	-	Clean.	SCF	
113	28.14-28.16	J	7	U-SM	-	-	Clean.	SCF	
114	28.60-28.61	J	6	U-SM	-	-	Clean.	SCF	
115	28.66-28.68	J	6	S-SM	-	-	Clean.	SCF	
116	29.24-29.25	J	1	U-SM	-	-	Clean.	SCF	
117	29.33-29.34	J	3	U-SM	-	-	Clean.	SCF	
118	29.61-29.64	J	16	S-R	-	-	Clean.	SCF	
119	29.94-29.95	J	2	U-SM	-	-	Clean.	SCF	
120	30.26-30.27	J	4	S-SM	-	-	Clean.	SCF	

Key:
Type codes: J = Joint.
Small-scale roughness codes: P-R = Planar - rough, P-SM = Planar - smooth, S-R = Stepped - rough, S-SM = Stepped - smooth, U-R = Undulating - rough, U-SM = Undulating - smooth.

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By: [redacted]

Date: 27.03.24

Contract Ref: 563607

Contract: SEA Link FEED - Kent Onshore Cable Link

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-10**

Contract Ref:	Start: **11.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **23.10.23**	**10.58**	**E:633983.1 N:163641.1**	**1** of **17**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
0.20-0.30	1	B							MADE GROUND: Grass over very stiff brownish grey slightly gravelly clayey SILT with abundant rootlets. Gravel is subangular to subrounded fine to medium chalk and flint.			(0.30)	
0.20	101	ES	2xT+1xJ+1xV								10.28	0.30	
0.20		PID	0.0ppm						MADE GROUND: Brownish grey gravelly silty fine to coarse SAND with a low cobble content. Gravel is angular to subrounded fine to coarse flint, chalk, brick, tile, glass, ceramics metal and concrete. Cobbles are angular concrete and brick.				
0.50	102	ES	2xT+1xJ+1xV										
0.50-0.70	2	B										(0.80)	
0.50		PID	0.0ppm										
1.00	103	ES	2xT+1xJ+1xV										
1.00-1.20	3	B											
1.00		PID	0.3ppm								9.48	1.10	
1.20-1.50	4	SPT	N=8						MADE GROUND: Soft greenish brown to dark brown and black slightly sandy slightly gravelly silty CLAY with a low cobble content. Sand is medium to coarse. Gravel is angular to subrounded fine to coarse chalk, brick, concrete, metal and clinker. Cobbles are angular concrete and brick.				
1.20-1.65	5	DSPT											
1.20-1.70	6	B											
1.50	104	ES	2xT+1xJ+1xV										
1.50		PID	1.1ppm										
1.70	7	D											
2.00-2.45	8	$UT_{(UT100)}$	30 blows 89% recovery									(1.80)	
2.45-2.50	9	D											
2.50-3.00	10	B											
2.50	105	ES	2xT+1xJ+1xV										
2.50		PID	0.4ppm										
											7.68	2.90	
3.00-3.45	11	SPT	N=3						MADE GROUND: Very soft black and white gravelly silty CLAY with a low cobble content. Gravel is subangular to angular fine to coarse chalk, brick, wood. Cobbles are angular chalk.				
3.00-3.45	12	DSPT											
3.00-3.50	13	B											
3.50	106	ES	2xT+1xJ+1xV										
3.50	14	D											

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
12/10/23	11:00	1.20	None	300	Dry
12/10/23	17:00	5.45	5.00	250	Dry
13/10/23	08:30	5.45	5.00	250	5.00
13/10/23	15:00	8.55	8.00	250	Dry
16/10/23	08:30	8.55	8.00	250	7.00
16/10/23	17:00	9.45	9.00	250	8.00
17/10/23	08:30	9.45	9.00	250	8.00
17/10/23	18:00	11.45	10.00	250	8.00

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. Hand vanes not possible due to density, and cobbles in ground.
5. Groundwater seepage at 5.35m depth.
6. Borehole drilled using cable percussion techniques to 15.45m

All dimensions in metres | Scale: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 Mark 1 + Comacchio MC405**	**Sam Oxley + Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-10**

Contract Ref:	Start: **11.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **23.10.23**	**10.58**	**E:633983.1 N:163641.1**	**2** of **17**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
3.50		PID	1.1ppm						MADE GROUND: Very soft black and white gravelly silty CLAY with a low cobble content. Gravel is subangular to angular fine to coarse chalk, brick, wood. Cobbles are angular chalk. *(stratum copied from 2.90m from previous sheet)*			(2.00)	
4.00-4.45	15	$UT_{(UT100)}$	69 blows 100% recovery										
4.45-4.50	16	D											
4.50	107	ES	4xT+1xJ+1xV										
4.50-5.00	17	B											
4.50		PID	1.1ppm										
											5.68	4.90	
5.00	18	D							MADE GROUND: Stiff black and greenish brown gravelly silty CLAY with a low cobble content. Gravel is angular to subangular fine to coarse flint, chalk, brick and wood. Cobbles are angular flint.				
5.00-5.45	19	SPT	N=19										
5.00-5.45	20	DSPT											
5.50	108	ES	4xT+1xJ+1xV										
5.50-6.00	21	B											
5.50		PID	0.0ppm										
6.00	22	D											
6.00-6.45	23	$UT_{(UT100)}$	46 blows 100% recovery										
6.45-6.55	24	D											
6.50	109	ES	4xT+1xJ+1xV										
6.50		PID	0.0ppm										
6.60-7.00	25	B											
7.00	26	D							. . . becoming firm from 7.00m depth.				
7.00-7.45	27	SPT	N=14										
7.00-7.45	28	DSPT										(4.50)	

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
18/10/23	08:30	11.45	10.00	200	9.00
18/10/23	14:00	16.00	15.50	200	1.00
19/10/23	08:30	16.00	15.50	200	11.30
19/10/23	18:00	30.50	30.00	146	9.04
20/10/23	08:30	30.50	30.00	146	8.80
20/10/23	15:00	36.50	36.00	146	8.87
23/10/23	08:30	36.50	36.00	146	8.73
23/10/23	16:06	41.00	40.50	146	9.07

Chiselling / Slow Progress

From	To	Duration (hh:mm)

General Remarks

depth then extended using rotary coring techniques to 41.00m depth.
7. On completion borehole backfilled with bentonite pellets and surfaced with arisings.
8. SPT hammers AR1321-2022 (E_r = 62.00%) , AR3508-2023 (E_r = 73.00%) used.

All dimensions in metres | Scale: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 Mark 1 + Comacchio MC405**	**Sam Oxley + Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-10**

Contract Ref:	Start: **11.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **23.10.23**	**10.58**	**E:633983.1 N:163641.1**	**3** of **17**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
									MADE GROUND: Stiff black and greenish brown gravelly silty CLAY with a low cobble content. Gravel is angular to subangular fine to coarse flint, chalk, brick and wood. Cobbles are angular flint. *(stratum copied from 4.90m from previous sheet)*				
7.50	110	ES	3xT+1xJ+1xV										
7.50-8.00	29	B											
7.50		PID	0.0ppm										
8.00	30	D											
8.00-8.45	31	$UT_{(UT100)}$	42 blows 100% recovery										
8.45-8.55	32	D											
8.50	111	ES	4xT+1xJ+1xV										
8.50		PID	0.2ppm										
8.60-9.00	33	B											
9.00	34	D											
9.00-9.19	35	SPT	6,6/50 for 35mm										
9.00-9.45	36	DSPT											
									MADE GROUND: Probably BOULDER of light grey concrete.		1.18	9.40 (0.40)	
9.70-10.00	37	B											
9.80	115	ES	4xT+1xJ+1xV						MADE GROUND: Grey slightly sandy slightly gravelly silty CLAY with a low cobble content. Sand is medium to coarse. Gravel is angular to subangular fine to medium concrete, chalk and flint. Cobbles are angular concrete.		0.78	9.80	
9.80		PID	0.0ppm										
10.00	38	D							Very soft to soft dark grey slightly sandy slightly gravelly silty CLAY with occasional pockets of pseudo-fibrous Peat. Sand is fine to coarse. Gravel is angular to subangular fine to coarse flint and chalk. (TIDAL FLAT DEPOSITS)		0.58	10.00 (0.40)	
10.00-10.45	39	$UT_{(UT100)}$	52 blows 100% recovery										
10.45-10.55	40	D							Firm brownish grey mottled brown slightly sandy clayey SILT. Sand is fine. (TIDAL FLAT DEPOSITS) . . . 10.40m: Fossilised wood/lignitic debris.		0.18	10.40	
10.60	113	ES	4xT+1xJ+1xV										
10.60-11.00	41	B											
10.60		PID	0.0ppm										

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
19/10/23	08:20	16.00	15.50	200	11.30
19/10/23	16:20	30.50	30.00	146	9.04
20/10/23	08:40	30.50	30.00	146	8.80
20/10/23	12:00	36.50	36.00	146	8.87
23/10/23	09:42	36.50	36.00	146	8.73

Chiselling / Slow Progress

From	To	Duration (hh:mm)

General Remarks

All dimensions in metres | Scale: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 Mark 1 + Comacchio MC405**	**Sam Oxley + Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-10**

Contract Ref:	Start: **11.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **23.10.23**	**10.58**	**E:633983.1 N:163641.1**	**4** of **17**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
									Firm brownish grey mottled brown slightly sandy clayey SILT. Sand is fine. (TIDAL FLAT DEPOSITS)				
11.00	42	D							. . . 10.40m: Fossilised wood/lignitic debris. *(stratum copied from 10.40m from previous sheet)*				
11.00-11.45	43	SPT	N=11										
11.00-11.45	44	DSPT											
11.50-12.00	45	B										(2.80)	
12.00	46	D											
12.00-12.45	47	$UT_{(UT100)}$	47 blows 100% recovery										
12.45-12.55	48	D											
12.60-13.00	49	B											
13.00	50	D											
13.00-13.45	51	SPT	N=20										
13.00-13.45	52	DSPT									-2.62	13.20	
									Firm grey silty CLAY. (TIDAL FLAT DEPOSITS)				
13.50-14.00	53	B										(1.20)	
14.00	54	D											
14.00-14.45	55	$UT_{(UT100)}$	72 blows 100% recovery										
14.00-14.45	56	D											

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: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 Mark 1 + Comacchio MC405**	**Sam Oxley + Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-10**

Contract Ref:	Start: **11.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **23.10.23**	**10.58**	**E:633983.1 N:163641.1**	**5** of **17**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
14.50-15.00	57	B							Stiff greenish grey slightly sandy clayey SILT. Sand is fine. (THANET FORMATION)		-3.82	14.40 (0.60)	
15.00	58	D									-4.42	15.00	
15.00-15.41	59	SPT	10,12/12,19,12,7 for 35mm						Very stiff grey mottled orangish brown slightly sandy clayey SILT. Sand is fine. (THANET FORMATION)			(1.00)	
15.00-15.45	60	DSPT											
16.00-17.00 (0:05)									AZCL.		-5.42	16.00 (0.38)	AZCL
16.50	201	C		62 - -		60% return PM (Brown)			Very stiff greyish brown streaked brown and orangish brown sandy clayey SILT. Sand is fine. (THANET FORMATION)		-5.80	16.38 (0.62)	
17.00-18.50 (0:02)									AZCL.		-6.42	17.00	AZCL
									Dark grey to black angular to subangular fine to medium GRAVEL of flint. (THANET FORMATION BASE BED MEMBER BULLHEAD BED)		-6.59	17.17	
				89 40 15	10 76 940	60% return PM (Brown)			Very weak to weak medium density yellowish white CHALK with light grey mottling. Discontinuities where measured are closely spaced (10/76/940) frequently black speckled, frequent orange and grey staining occasional clay infill. (NEWHAVEN CHALK FORMATION Grade B4) . . . 17.62-17.68m: Recovered non-intact. . . . 17.73-17.82m: Orange stained sponge bed. . . . 17.83-17.98m: Recovered non-intact.	2 3 5 4 6 7 8 9	-6.75	17.33	

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: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 Mark 1 + Comacchio MC405**	**Sam Oxley + Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-10**

Contract Ref:	Start: **11.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **23.10.23**	**10.58**	**E:633983.1 N:163641.1**	**6** of **17**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
				89 40 15		60% return PM (Brown)			. . . 17.98-18.00m: Shell fragments. Very weak to weak medium density yellowish white CHALK with light grey mottling. Discontinuities where measured are closely spaced (10/76/940) frequently black speckled, frequent orange and grey staining occasional clay infill. (NEWHAVEN CHALK FORMATION Grade B4) *(stratum copied from 17.33m from previous sheet)* . . . 18.14-18.17m: Orange stained sponge bed. . . . 18.16-18.19m: Shell fragments. . . . 18.34-18.36m: Shell fragments.	10 11 12 13 14 15 16 17 18 19 20 23 21 22			
18.40	202	C											
18.50-20.00 (0:05)									. . . Recovered non-intact due to SPT as slightly sandy gravelly silt. Can see impression of SPT cone down to 18.95m.				
18.50-18.95	1	SPT(c)	N=26										
				100 13 0	10 76 940	20% return PM (Brown)			. . . 19.15-19.29m: Recovered non-intact.	24 25 26 27 31 28 29 30 32 33 34 35 36 37		(3.25)	
19.42-19.53	101	C							. . . 19.60-19.76m: Recovered non-intact. . . . 19.88-19.92m: Shell fragments.				
20.00-21.50 (0:07)									. . . 20.00-20.08m: AZCL.				
									. . . 20.30-20.36m: Shell fragments.	38 39 40 41 42 43 44			
20.58-20.74	102	C							Very weak to weak medium density yellowish white CHALK with light grey mottling. Discontinuities where measured are closely spaced (0/170/1120) frequently black speckled, frequent orange and grey staining occasional clay infill. (NEWHAVEN CHALK FORMATION Grade B3)		-10.00	20.58	
				95 80 55	0 170 1120	20% return PM (Brown)			. . . 20.85-20.88m: Shell fragments.	45 46 47 48 49 50 51 52 1			
21.50-23.00 (0:06)						0% return			. . . 21.50-21.95m: Recovered non-intact due to SPT as slightly sandy gravelly silt.				

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: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 Mark 1 + Comacchio MC405**	**Sam Oxley + Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-10**

Contract Ref:	Start: **11.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **23.10.23**	**10.58**	**E:633983.1 N:163641.1**	**7** of **17**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
21.50-21.95	2	SPT(c)	N=44			PM			Very weak to weak medium density yellowish white CHALK with light grey mottling. Discontinuities where measured are closely spaced (0/170/1120) frequently black speckled, frequent orange and grey staining occasional clay infill. (NEWHAVEN CHALK FORMATION Grade B3) *(stratum copied from 20.58m from previous sheet)* . . . 21.73-21.84m: Possible orange stained sponge bed.				
									. . . 22.00-22.05m: Shell fragments.				
22.23-22.44	103	C		100 67 61		0% return PM				53			
									. . . 22.45-22.54m: Shell fragments.	54			
										55			
										56			
23.00-24.50 (0:02)									. . . 23.00-23.14m: AZCL.				
									. . . 23.16-23.23m: Shell fragments.	57			
									. . . 23.29-23.33m: Orange stained sponge bed. . . . 23.34-23.38m: Shell fragments.	58			
23.40	203	C			0 170 1120				. . . 23.42-23.44m: Orange stained sponge bed.	59			
23.53-23.73	104	C											
				91 89 85		0% return PM			. . . 23.74-23.80m: Shell fragments.	60			
23.85	204	C								61			
									. . . 24.22-24.31m: Shell fragments.				
									. . . 24.30-24.34m: Orange stained sponge bed.	62			
24.50-26.00 (0:04)									. . . Recovered non-intact due to SPT as slightly sandy gravelly silt. Can see impression of SPT cone down to 24.95m.				
24.50-24.95	3	SPT(c)	N=39	100 55 55		0% return PM							

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: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 Mark 1 + Comacchio MC405**	**Sam Oxley + Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-10**

Contract Ref:	Start: **11.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **23.10.23**	**10.58**	**E:633983.1 N:163641.1**	**8** of **17**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
				100 55 55		0% return PM			Very weak to weak medium density yellowish white CHALK with light grey mottling. Discontinuities where measured are closely spaced (0/170/1120) frequently black speckled, frequent orange and grey staining occasional clay infill. (NEWHAVEN CHALK FORMATION Grade B3) *(stratum copied from 20.58m from previous sheet)* . . . 25.25-25.33m: Shell fragments. . . . 25.41-25.47m: Orange stained sponge bed.	63 64 65 66			
									. . . 25.89-25.90m: Shell fragments.				
26.00-27.50 (0:03) 26.10	205	C											
									. . . 26.19-26.22m: Shell fragments. . . . 26.30-26.36m: Shell fragments. . . . 26.36-26.38m: Orange stained sponge bed.	67		(11.62)	
				100 100 97	0 170 1120	0% return PM			. . . 26.64-26.68m: Orange stained sponge bed . . . 26.65-26.67m: Shell fragments.	68			
									. . . 27.01-27.18m: Orange and grey stained sponge bed.				
27.21-27.50	105	C								69			
27.50-29.00 (0:04) 27.50-27.95	4	SPT(c)	N=51						. . . 27.50-27.98m: Recovered non-intact due to SPT as slightly sandy gravelly silt.				
				100 67 65		0% return PM			. . . 28.02-28.07m: Shell fragments. . . . 28.24-28.26m: Shell fragments.	70			
									. . . 28.39-28.41m: Orange stained sponge bed. . . . 28.42-28.51m: Shell fragments.	71 72 73			

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: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 Mark 1 + Comacchio MC405**	**Sam Oxley + Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-10**

Contract Ref:	Start: **11.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **23.10.23**	**10.58**	**E:633983.1 N:163641.1**	**9** of **17**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
28.90	206	C		100 67 65		0% return PM			Very weak to weak medium density yellowish white CHALK with light grey mottling. Discontinuities where measured are closely spaced (0/170/1120) frequently black speckled, frequent orange and grey staining occasional clay infill. (NEWHAVEN CHALK FORMATION Grade B3) *(stratum copied from 20.58m from previous sheet)* . . . 29.08-29.14m: Shell fragments.	74			
29.00-30.50 (0:05)													
29.10	207	C							. . . 29.20-29.26m: Orange stained sponge bed.	75			
29.37-29.64	106	C								76			
				73 63 63		0% return PM			. . . 29.73-29.76m: Orange stained sponge bed. . . . 29.92-29.96m: Shell fragments.				
									. . . 30.08-30.13m: Shell fragments. . . . 30.10-30.50m: AZCL due to core dropped from run, recovered in next box.	77 78 79			
					0 170 1120				. . . 30.36-30.40m: Orange and grey stained sponge bed.				
30.50-32.00 (0:05)													
30.50-30.95	5	SPT(c)	N=63						. . . Recovered non-intact due to SPT as slightly sandy gravelly silt. Can see impression of SPT cone down to 30.95m.				
									. . . 31.02-31.05m: Shell fragments. . . . 31.13-31.29m: Orange stained sponge bed.	80 81			
				98 67 67		0% return W							
31.33-31.69	107	C							. . . 31.30-31.31m: Shell fragments.	82			
										83			
									. . . 31.87-31.90m: Shell fragments.				
32.00-33.50 (0:04)									. . . 32.02-32.03m: Shell fragments.				
										84 85			
				99 73 69		0% return W			*Description on next sheet*		-21.62	32.20	
					0 200 780								

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: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 Mark 1 + Comacchio MC405**	**Sam Oxley + Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-10**

Contract Ref:	Start: **11.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **23.10.23**	**10.58**	**E:633983.1 N:163641.1**	**10** of **17**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
									Weak high density off-white mottled light grey CHALK with widely spaced flint bands. Discontinuities where measured are closely to medium spaced (0/200/780) rare black specks or clean. (SEAFORD CHALK FORMATION Grade A3)	86			
									. . . 32.20-32.32m: Flint band. Very small to medium fragments of nodular flint with thin cortexes (<1mm).*(stratum copied from 32.20m from previous sheet)*	87 88			
32.71-32.85	108	C								89			
				99 73 69		0% return W				90			
									. . . 32.98-33.10m: Flint band. Very small to medium fragments of nodular flint with thick cortexes (<3mm).	91			
										92			
									. . . 33.20-33.21m: Orange stained sponge bed.	93			
									. . . 33.37-33.39m: Shell fragments.				
33.50-35.00 (0:04)									. . . 33.50-33.57m: Flint band. Very small to medium fragments of nodular flint with thick cortexes (<3mm).				
33.50-33.95	6	SPT(c)	N=96						. . . 33.50-33.95m: Recovered non-intact due to SPT as slightly gravelly sandy SILT.				
33.50	208	C											
33.80	209	C											
										94			
									. . . 34.03-34.16m: Flint band. Small fragments of nodular flint with thin cortexes (<1mm).				
				89 32 21	0 200 780	0% return W			. . . 34.17-34.72m: Recovered non-intact due to catcher breaking and getting caught in run.	95 96 97 98			
										99 100 101			
35.00-36.50 (0:02)									. . . 34.95-35.00m: Shell fragments. . . . 35.00-35.11m: AZCL probably due to flint nodules.				
35.15	210	C							. . . 35.11-35.21m: Flint band. Very small to medium fragments of spiky nodular flint with thin cortexes (2mm).				
									. . . 35.30-35.34m: Flint band. Small fragments of nodular flint with thin cortexes (<1mm).	102 103			
				93 76 66		0% return W				104 105 106 107			
									. . . 35.82-35.85m: Flint band. Small fragments of nodular flint with thin cortexes (<1mm). . . . 35.90-35.93m: Possible black stained sponge bed.	108			

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: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 Mark 1 + Comacchio MC405**	**Sam Oxley + Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-10**

Contract Ref:	Start: **11.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **23.10.23**	**10.58**	**E:633983.1 N:163641.1**	**11** of **17**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
				93 76 66		0% return W			. . . 35.94-35.96m: Possible fault. Abundant black stained with locally striated and polished surfaces. Weak high density off-white mottled light grey CHALK with widely spaced flint bands. Discontinuities where measured are closely to medium spaced (0/200/780) rare black specks or clean. (SEAFORD CHALK FORMATION Grade A3) . . . 32.20-32.32m: Flint band. Very small to medium fragments of nodular flint with thin cortexes (<1mm).*(stratum copied from 32.20m from previous sheet)* . . . 36.28-36.31m: Flint band. Very small to small finger flint with thin cortex (<1mm).	109			
36.40	211	C											
36.50-38.00 (0:05)									. . . 36.50-36.57m: AZCL probably due to SPT.				
36.50-36.92	7	SPT(c)	7,10/16,24,39,21 for 40mm						. . . 36.50-36.92m: Recovered non-intact due to SPT as slightly sandy gravelly silt. Refusal on flint. . . . 36.57m: Possible pseudo flints (flint nodule).			(8.80)	
									. . . 36.91-36.95m: Flint band. Very small to medium fragments of nodular flint with thin cortexes (<1mm). . . . 36.99-37.02m: Shell fragments.	110			
				95 67 67		0% return W			. . . 37.26-37.29m: Shell fragments.	111			
									. . . 37.53-37.65m: Black stained sponge bed.				
					0 200 780					112			
37.82-38.00	109	C											
38.00-39.50 (0:04)													
38.00	212	C								113			
									. . . 38.19-38.22m: Shell fragments. . . . 38.25-38.37m: Recovered non-intact.	115 114 116			
38.40	213	C								117 118			
				99 82 70		0% return W			. . . 38.72-38.83m: Flint band. Very small to small fragments of nodular flint with thin cortexes (2mm).	119 120			
									. . . 39.07m: Wispy marl.	121			
39.40	214	C							. . . 39.39-39.50m: Flint band. Large fragment of nodular flint with thick cortex (<5mm).				
39.50-41.00 (0:05)						0% return				122			

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: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 Mark 1 + Comacchio MC405**	**Sam Oxley + Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-10**

Contract Ref:	Start: **11.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **23.10.23**	**10.58**	**E:633983.1 N:163641.1**	**12** of **17**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR SCR RQD (%)	If (mm)	Flush Returns & Details	Backfill	Water	Description of Strata	Fracture Log	Reduced Level	Depth (m) (Thickness)	Legend
40.50-40.80	110	C		100 95 71	0 200 780	0% return W			Weak high density off-white mottled light grey CHALK with widely spaced flint bands. Discontinuities where measured are closely to medium spaced (0/200/780) rare black specks or clean. (SEAFORD CHALK FORMATION Grade A3) . . . 32.20-32.32m: Flint band. Very small to medium fragments of nodular flint with thin cortexes (<1mm).*(stratum copied from 32.20m from previous sheet)* . . . 39.86-39.95m: Flint band. Very small fragments of nodular flint with thin cortexes (<1mm). . . . 40.19-40.23m: Shell fragments. . . . 40.40-40.44m: Shell fragments. . . . 40.80-40.82m: Shell fragments. . . . 40.84-40.86m: Black stained sponge bed. . . . 40.98-41.00m: Flint band. Small fragment of spiky nodular flint with thin cortex (<1mm). Borehole terminated at 41.00m depth.	123 124 125 126 127 128 129 130	-30.42	-41.00	

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: **1:20**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 Mark 1 + Comacchio MC405**	**Sam Oxley + Maris Veckagans**	**CMathias**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
SEA Link FEED - Kent Onshore Cable Link		**National Grid**		**RedP-BH-10**
Contract Ref:	Start: **11.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **23.10.23**	**10.58**	**E:633983.1 N:163641.1**	**13** of **17**

Method Used:	Inspection pit + Cable Percussion + Rotary Cored	Plant Used:	Dando 2000 Mark 1 + Comacchio MC405	Drilled By:	Sam Oxley + Maris Veckagans	Logged By:	CMathias	Checked By:	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
SEA Link FEED - Kent Onshore Cable Link		**National Grid**		**RedP-BH-10**
Contract Ref:	Start: **11.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **23.10.23**	**10.58**	**E:633983.1 N:163641.1**	**14** of **17**

Method Used:	Inspection pit + Cable Percussion + Rotary Cored	Plant Used:	Dando 2000 Mark 1 + Comacchio MC405	Drilled By:	Sam Oxley + Maris Veckagans	Logged By:	CMathias	Checked By:	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
SEA Link FEED - Kent Onshore Cable Link		**National Grid**		**RedP-BH-10**
Contract Ref:	Start: **11.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **23.10.23**	**10.58**	**E:633983.1 N:163641.1**	**15** of **17**

Method Used:	Inspection pit + Cable Percussion + Rotary Cored	Plant Used:	Dando 2000 Mark 1 + Comacchio MC405	Drilled By:	Sam Oxley + Maris Veckagans	Logged By:	CMathias	Checked By:	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
SEA Link FEED - Kent Onshore Cable Link		**National Grid**		**RedP-BH-10**
Contract Ref:	Start: **11.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **23.10.23**	**10.58**	**E:633983.1 N:163641.1**	**16** of **17**

Method Used:	Inspection pit + Cable Percussion + Rotary Cored	Plant Used:	Dando 2000 Mark 1 + Comacchio MC405	Drilled By:	Sam Oxley + Maris Veckagans	Logged By:	CMathias	Checked By:	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
SEA Link FEED - Kent Onshore Cable Link		**National Grid**		**RedP-BH-10**
Contract Ref:	Start: **11.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **23.10.23**	**10.58**	**E:633983.1 N:163641.1**	**17** of **17**

Method Used:	Inspection pit + Cable Percussion + Rotary Cored	Plant Used:	Dando 2000 Mark 1 + Comacchio MC405	Drilled By:	Sam Oxley + Maris Veckagans	Logged By:	CMathias	Checked By:	

SUMMARY OF DISCONTINUITIES - RedP-BH-10

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
1	16.35-26.36	J	3	S-SM	-	-	Occasional black specks, no staining, no infill		
2	17.51-17.55	J	41	P-SM	-	-	Frequent black staining, moderately stained grey,	NCF	
							no infill		
3	17.57-17.61	J	22	P-R	-	-	Occasional to frequent black specks, moderately	NCF	
							stained grey, no infill		
4	17.69-17.77	J	80	U-R	-	-	Rare to occasional black specks, locally lightly	NCF	
							stained orange, no infill		
5	17.70-17.71	J	8	S-SM	-	-	Occasional to frequent black specks heavily	NCF	
							stained grey, comminuted chalk (2mm)		
6	17.71-17.75	J	69	U-SM	-	-	Numerous to abundant black specks, heavily	NCF	
							stained grey, no infill		
7	17.75-17.75	J	8	U-SM	-	-	Frequent black specks, moderately stained grey,	NCF	
							no infill		
8	17.77-17.82	J	73	U-R	-	-	Numerous black specks, heavily stained orange,	NCF	
							orange clay infill (<1mm)		
9	17.81-17.83	J	24	P-SM	-	-	Rare to occasional black specks, highly stained	NCF	

Key:
Type codes: J = Joint.
Small-scale roughness codes: P-R = Planar - rough, P-SM = Planar - smooth, S-R = Stepped - rough, S-SM = Stepped - smooth, U-R = Undulating - rough, U-SM = Undulating - smooth, U-ST = Undulating - striated.

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By: [redacted]

Date: 27.03.24

Contract Ref: 563607

Contract: SEA Link FEED - Kent Onshore Cable Link

AGS

SUMMARY OF DISCONTINUITIES - RedP-BH-10

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
							grey, comminuted chalk (~1mm)		
10	17.88-17.90	J	23	U-SM	-	-	Rare black specks, no staining, no infill	NCF	
11	17.91-17.96	J	76	U-SM	-	-	Rare to occasional black specks, no infill, no SE	NCF	
12	17.97-17.99	J	7	P-R	-	-	Frequent black specks, heavily stained orange,	NCF	
							no infill		
13	17.98-18.07	J	79	U-SM	-	-	Abundant black specks, heavily stained grey,	NCF	
							comminuted chalk (<1mm)		
14	18.05-18.15	J	58	U-SM	-	-	Rare to occasional black specks, no staining, no	NCF	
							infill		
15	18.11-18.16	J	82	S-SM	-	-	Occasional black specks, lightly stained orange,	NCF	
							comminuted chalk (<1mm)		
16	18.19-18.23	J	44	S-SM	-	-	Rare black specks, no staining, no infill	NCF	
17	18.20-18.29	J	80	U-R	-	-	Occasional black specks to frequent black	NCF	
							specks, heavily stained orange, no infill		
18	18.22-18.29	J	81	P-R	-	-	Numerous black specks, moderately stained grey,	NCF	
							no infill		

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SUMMARY OF DISCONTINUITIES - RedP-BH-10

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
19	18.30-18.31	J	15	P-R	-	-	Abundant black specks, heavily stained grey,	NCF	
							comminuted chalk (2mm)		
20	18.31-18.35	J	57	P-SM	-	-	Frequent to numerous black specks, heavily	NCF	
							stained grey, no infill		
21	18.33-18.50	J	86	P-R	-	-	Abundant black specks, lightly stained orange,	NCF	
							chalk (<1mm)		
22	18.35-18.50	J	76	U-SM	-	-	Frequent black specks, moderately stained	NCF	
							orange, no infill		
23	18.38-18.41	J	12	P-R	-	-	Rare to occasional black specks, no staining, no	NCF	
							infill		
24	19.08-19.10	J	22	P-R	-	-	Abundant black specks, no staining, no infill	NCF	
25	19.10-19.16	J	73	S-R	-	-	Rare black specks, no staining, no infill	NCF	
26	19.14-19.15	J	7	S-R	-	-	Numerous to frequent black specks, light stained	NCF	
							yellow, no infill		
27	19.30-19.33	J	73	P-R	-	-	Frequent to numerous black specks, light stained	NCF	
							yellow, no infill		

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SUMMARY OF DISCONTINUITIES - RedP-BH-10

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
28	19.34-19.42	J	80	U-R	-	-	Numerous black specks, lightly stained yellow, no	NCF	
							infill		
29	19.34-19.42	J	74	U-SM	-	-	Abundant black specks lightly stained grey, no	NCF	
							infill		
30	19.34-19.42	J	2	P-SM	-	-	Abundant black specks, lightly stained grey, no	NCF	
							infill		
31	19.36-19.36	J	4	P-SM	-	-	Frequent black specks, moderately stained	NCF	
							yellow, no infill		
32	19.42-19.42	J	4	U-R	-	-	Abundant black specks, locally stained yellow and	NCF	
							gey comminuted chalk (~1mm)		
33	19.56-19.60	J	71	P-R	-	-	Rare to occasional black specks, lightly stained	NCF	
							yellow, no infill		
34	19.63-19.83	J	69	S-SM	-	-	Occasional to frequent black specks, no staining,	NCF	
							no infill		
35	19.78-19.84	J	74	U-SM	-	-	Rare to occasional black specks, no staining, no	NCF	
							infill		

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SUMMARY OF DISCONTINUITIES - RedP-BH-10

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
36	19.89-19.90	J	8	P-SM	-	-	Abundant black specks, heavily stained grey, no	NCF	
							infill		
37	19.89-19.92	J	42	S-SM	-	-	Abundant black specks, heavily stained grey,	NCF	
							comminuted chalk (~1mm)		
38	20.08-20.09	J	6	P-R	-	-	Rare black specks, no staining, no infill	NCF	
39	20.14-20.14	J	1	S-SM	-	-	Locally abundant black specks, no staining, no	NCF	
							infill		
40	20.18-20.25	J	40	U-SM	-	-	Abundant black specks, lightly stained yellow, no	NCF	
							infill		
41	20.31-20.35	J	47	U-SM	-	-	Abundant black specks lightly stained grey,	NCF	
							comminuted chalk (~1mm)		
42	20.40-20.41	J	2	S-R	-	-	Frequent black specks, locally lightly stained	NCF	
							yellow, no infill		
43	20.46-20.47	J	3	P-R	-	-	Abundant black specks, no staining, no infill	NCF	
44	20.55-20.58	J	67	U-SM	-	-	Numerous black specks, lightly stained yellow, no	NCF	
							infill		

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SUMMARY OF DISCONTINUITIES - RedP-BH-10

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
45	20.75-20.76	J	8	P-SM	-	-	Abundant black specks, heavily stained orange,	NCF	
							no infill		
46	20.82-20.83	J	6	P-SM	-	-	Numerous black specks brown clay infill (<1mm)	NCF	
47	20.87-20.87	J	3	P-SM	-	-	Rare black specks, no staining, no infill	NCF	
48	21.04-21.04	J	1	P-SM	-	-	Abundant black specks, no staining, chalk infill	NCF	
							(<1mm)		
49	21.13-21.16	J	21	U-SM	-	-	Frequent black specks, no staining, comminuted	NCF	
							chalk (~1mm)		
50	21.24-21.24	J	2	S-R	-	-	Occasional black specks, heavily stained grey, no	NCF	
							infill		
51	21.25-21.34	J	78	U-SM	-	-	Abundant black specks, heavily stained orange,	NCF	
							no infill		
52	21.32-21.35	J	5	U-R	-	-	Clean	NCF	
53	22.21-22.22	J	6	P-SM	-	-	Rare to occasional black specks, no staining, no	NCF	
							infill		
54	22.44-22.46	J	8	P-SM	-	-	Frequent to numerous black specks, no staining,	NCF	

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SUMMARY OF DISCONTINUITIES - RedP-BH-10

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
							no infill		
55	22.58-22.59	J	5	S-SM	-	-	Rare black specks, no staining, no infill	NCF	
56	22.67-22.68	J	4	P-SM	-	-	Rare black specks, no staining, no infill	NCF	
57	23.14-23.15	J	15	P-R	-	-	Occasional to frequent black specks, no staining,	NCF	
							no infill		
58	23.32-23.34	J	9	S-R	-	-	Rare black specks, no staining, no infill	NCF	
59	23.46-23.47	J	7	S-SM	-	-	Clean	NCF	
60	23.73-23.74	J	6	P-SM	-	-	Occasional black specks, no staining, no infill	NCF	
61	23.92-23.93	J	3	P-R	-	-	Rare black specks, no staining, no infill	NCF	
62	24.37-24.39	J	6	P-SM	-	-	Occasional to frequent black specks, no staining,	NCF	
							no infill		
63	25.23-25.24	J	2	U-SM	-	-	Rare to occasional black specks, locally lightly	NCF	
							stained grey, no infill		
64	25.27-25.28	J	4	U-SM	-	-	Rare to occasional black specks, locally lightly	NCF	
							stained grey, comminuted chalk (3mm)		
65	25.52-25.53	J	13	S-R	-	-	Clean	NCF	

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SUMMARY OF DISCONTINUITIES - RedP-BH-10

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
66	25.65-25.66	J	6	P-R	-	-	Clean	NCF	
67	26.26-26.28	J	10	U-SM	-	-	Frequent black specks, locally heavily stained	NCF	
							orange, black clay infill (<1mm)		
68	26.72-26.72	J	2	P-SM	-	-	Clean	NCF	
69	27.19-27.21	J	8	P-R	-	-	Clean	NCF	
70	28.33-28.35	J	12	P-R	-	-	Clean	NCF	
71	28.37-28.39	J	78	U-SM	-	-	Rare black specks, no infill, no staining.	NCF	
72	28.52-28.53	J	4	P-R	-	-	Rare to occasional black specks, no infill, no	NCF	
							staining.		
73	28.63-28.66	J	13	S-SM	-	-	Rare black specks, no staining, no infill.	NCF	
74	28.84-28.85	J	4	P-R	-	-	Rare black specks, no staining, no infill.	NCF	
75	29.29-29.32	J	23	U-SM	-	-	Rare black specks, no staining, no infill.	NCF	
76	29.32-29.63	J	7	P-SM	-	-	Rare black specks, no staining, no infill.	NCF	
77	30.09-30.10	J	7	P-SM	-	-	Rare black specks, no staining, light brown clay	NCF	
							infill (<1mm)		
78	30.24-30.29	J	53	U-SM	-	-	Rare black specks, no staining, no infill.	NCF	

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SUMMARY OF DISCONTINUITIES - RedP-BH-10

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
79	30.29-30.30	J	3	P-SM	-	-	Clean.	NCF	
80	31.17-31.19	J	6	P-SM	-	-	Abundant black staining, no staining, no infill.	NCF	
81	31.18-31.23	J	67	U-SM	-	-	Clean.	NCF	
82	31.33-31.33	J	5	U-R	-	-	Clean.	NCF	
83	31.69-31.71	J	11	U-SM	-	-	Clean.	NCF	
84	32.12-32.13	J	6	P-R	-	-	Rare to occasional black specks, no staining, no	NCF	
							infill.		
85	32.15-32.16	J	5	P-R	-	-	Rare to occasional black specks, no staining, no	NCF	
							infill.		
86	32.39-32.40	J	7	U-SM	-	-	Clean.	SCF	
87	32.54-32.56	J	25	P-R	-	-	Clean.	SCF	
88	32.56-32.61	J	82	P-R	-	-	Clean.	SCF	
89	32.70-32.71	J	4	P-SM	-	-	Clean.	SCF	
90	32.85-32.86	J	6	P-SM	-	-	Clean.	SCF	
91	32.97-32.99	J	12	U-R	-	-	Rare black specks, no staining, no infill.	SCF	
92	33.11-33.12	J	8	P-SM	-	-	Rare black specks, no staining, ni infill.	SCF	

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SUMMARY OF DISCONTINUITIES - RedP-BH-10

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
93	33.25-33.27	J	3	P-R	-	-	Clean.	SCF	
94	34.00-34.03	J	14	S-R	-	-	Clean.	SCF	
95	34.15-34.20	J	48	P-R	-	-	Clean.	SCF	
96	34.17-34.20	J	20	U-SM	-	-	Clean.	SCF	
97	34.18-34.23	J	63	P-R	-	-	Clean.	SCF	
98	34.23-34.24	J	18	U-SM	-	-	Clean.	SCF	
99	34.73-34.79	J	72	S-SM	-	-	Clean.	SCF	
100	34.73-34.86	J	75	S-SM	-	-	Rare black specks, no staining, no infill.	SCF	
101	34.86-34.87	J	3	P-R	-	-	Rare black specks, no staining, no infill.	SCF	
102	35.30-35.31	J	5	P-R	-	-	Clean.	SCF	
103	35.39-35.40	J	29	S-R	-	-	Clean.	SCF	
104	35.56-35.58	J	10	P-R	-	-	Clean.	SCF	
105	35.60-35.61	J	64	P-R	-	-	Clean.	SCF	
106	35.69-35.71	J	17	S-R	-	-	Clean.	SCF	
107	35.76-35.78	J	13	U-SM	-	-	Clean.	SCF	
108	35.94-35.96	J	6	U-ST	-	-	Locally abundant black staining, locally stained	SCF	

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SUMMARY OF DISCONTINUITIES - RedP-BH-10

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
							and polished. No staining, no infill.		
109	36.30-36.31	J	6	U-R	-	-	Clean.	SCF	
110	37.09-37.12	J	15	S-SM	-	-	Clean.	SCF	
111	37.37-37.39	J	11	S-SM	-	-	Clean.	SCF	
112	37.79-37.80	J	3	P-R	-	-	Clean.	SCF	
113	38.18-38.20	J	20	S-SM	-	-	Rare black specks, no staining, no infill.	SCF	
114	38.23-38.33	J	87	S-R	-	-	Clean.	SCF	
115	38.27-38.28	J	3	P-SM	-	-	Clean.	SCF	
116	38.28-38.38	J	88	S-R	-	-	Clean.	SCF	
117	38.37-38.48	J	2	P-SM	-	-	Clean.	SCF	
118	38.47-38.48	J	5	P-R	-	-	Occasional black specks, no staining, no infill.	SCF	
119	38.76-38.79	J	15	P-R	-	-	Rare to occasional black specks, no infill, no	SCF	
							staining.		
120	38.85-38.87	J	9	S-SM	-	-	Clean.	SCF	
121	39.13-39.15	J	17	P-R	-	-	Clean.	SCF	
122	39.55-39.56	J	35	S-SM	-	-	Clean.	SCF	

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SUMMARY OF DISCONTINUITIES - RedP-BH-10

Fracture Number	Depth (m)	Fracture Type	Dip (deg)	Small Scale Roughness	Aperture Description	Infill Material Description	Remarks	Stratigraphic Layer	Lithological Facies
123	39.61-39.62	J	17	S-SM	-	-	Clean.	SCF	
124	39.70-39.72	J	26	S-SM	-	-	Clean.	SCF	
125	39.84-39.86	J	6	U-R	-	-	Clean.	SCF	
126	39.92-39.93	J	14	S-R	-	-	Clean.	SCF	
127	40.04-40.07	J	7	U-R	-	-	Clean.	SCF	
128	40.48-40.50	J	2	U-SM	-	-	Clean.	SCF	
129	40.80-40.81	J	9	U-R	-	-	Clean.	SCF	
130	40.91-40.93	J	11	P-SM	-	-	Clean.	SCF	

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STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By: [redacted]

Date: 27.03.24

Contract Ref: 563607

Contract: SEA Link FEED - Kent Onshore Cable Link

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-11**

Contract Ref:	Start: **06.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **11.10.23**	**14.47**	**E:633634.8 N:163798.6**	**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	Tubx2+1VL+1J			Brown slightly gravelly very silty organic fine to medium SAND. Gravel is subangular to rounded medium to coarse flint. (TOPSOIL)	14.17	0.30	
0.30-0.50	1	B							
0.50	102	ES	Tubx2+1VL+1J			Very stiff brownish yellow sandy clayey SILT. Sand is fine. (THANET FORMATION)		(0.70)	
0.70-1.00	2	B							
1.00	103	ES	Tubx2+1VL+1J			Loose yellow silty locally very silty fine SAND. (THANET FORMATION)	13.47	1.00	
1.20-1.65	3	SPT	N=8						
1.20-1.65	4	DSPT							
1.70	5	D							
1.70-2.00	6	B							
2.00-2.45	7	SPT	N=30			. . . becoming medium dense from 2.00m depth.		(2.40)	
2.00-2.45	8	DSPT							
2.50	9	D							
2.60-3.00	10	B							
3.00-3.45	11	$UT_{(UT100)}$	88 blows 100% recovery						
3.45-3.55	12	D				Very stiff yellowish grey mottled yellowish brown slightly micaceous slightly sandy clayey SILT with occasional to frequent bands of very weak siltstone and rare to occasional shell fragments. Sand is fine. (THANET FORMATION)	11.07	3.40	
3.60	13	D							
3.70-4.00	14	B							
4.00-4.45	15	SPT	N=43						
4.00-4.45	16	DSPT							
4.50	17	D							
4.60-5.00	18	B							
5.00-5.45	19	$UT_{(UT100)}$	90 blows 100% recovery					(3.00)	
5.45-5.55	20	D							
5.60	21	D							
5.70-6.00	22	B							
6.00-6.45	23	SPT	N=21			. . . becoming stiff from 6.00m depth.			
6.00-6.45	24	DSPT							
6.50	25	D				Very weak to weak grey micaceous slightly sandy SILTSTONE recovered as grey slightly gravelly slightly sandy silty CLAY. Gravel is angular fine to coarse very weak to weak siltstone. Sand is fine to medium. (THANET FORMATION)	8.07	6.40	
6.60-7.00	26	B							
7.00-7.45	27	$UT_{(UT100)}$	90 blows 100% recovery						
7.45-7.55	28	D							
7.60	29	D							
7.70-8.00	30	B							
8.00-8.45	31	$UT_{(UT100)}$	84 blows 67% recovery						
8.45-8.55	32	D							
8.60	33	D							
8.70-9.00	34	B							

Boring Progress and Water Observations

Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)
06/10/23	15:00	2.00	1.50	200	Dry
09/10/23	08:30	2.00	1.50	200	Dry
09/10/23	18:00	10.45	7.50	200	6.00
10/10/23	08:30	10.45	7.50	200	5.80
10/10/23	18:00	18.45	7.50	200	11.00
11/10/23	08:30	18.45	7.50	200	10.00
11/10/23	10:45	20.45	7.50	200	11.00

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. Permeability test undertaken between 7.78-9.27m depth.
5. Borehole backfilled with bentonite pellets on completion.
6. SPT hammer AR3508-2023 (E_r = 73.00%) used.

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

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 2000 Mark 1**	**Karl Wordsworth**	**MStorch**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-11**

Contract Ref:	Start: **06.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **11.10.23**	**14.47**	**E:633634.8 N:163798.6**	**2** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
						Very weak to weak grey micaceous slightly sandy SILTSTONE recovered as grey slightly gravelly slightly sandy silty CLAY. Gravel is angular fine to coarse very weak to weak siltstone. Sand is fine to medium. (THANET FORMATION) *(stratum copied from 6.40m from previous sheet)*			
9.50	35	D							
9.60-10.00	36	B							
10.00-10.32	37	SPT	11,14/16,26,8 for 20mm						
10.00-10.45	38	DSPT							
10.50	39	D							
10.60-11.00	40	B							
11.00-11.40	41	SPT	12,13/14,16,11,9 for 25mm						
11.00-11.45	42	DSPT						(9.60)	
11.50	43	D							
11.60-12.00	44	B							
12.00-12.41	45	SPT	12,12/12,14,16,8 for 30mm						
12.00-12.45	46	DSPT							
12.50	47	D							
12.60-13.00	48	B							
13.00-13.10	49	SPT	25/50 for 30mm						
13.00-13.45	50	DSPT							
13.50	51	D							
13.60-14.00	52	B							
14.00-14.23	53	SPT	25/50 for 75mm						
14.00-14.45	54	DSPT							
14.50	55	D							
14.60-15.00	56	B							
15.00-15.39	57	SPT	7,8/15,15,16,4 for 10mm						
15.00-15.45	58	DSPT							
15.50	59	D							
15.60-16.00	60	B							
16.00-16.45	61	SPT	N=49			Very stiff grey micaceous slightly gravelly slightly sandy silty CLAY. Sand is fine. Gravel is angular to subrounded fine to coarse siltstone. (THANET FORMATION)	-1.53	16.00	
16.00-16.45	62	DSPT							
16.50	63	D							
16.60-17.00	64	B							
17.00-17.45	65	SPT	N=48						
17.00-17.45	66	DSPT							
17.50	67	D							
17.60-18.00	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

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

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Inspection pit + Cable Percussion	**Dando 2000 Mark 1**	**Karl Wordsworth**	**MStorch**	

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**RedP-BH-11**

Contract Ref:	Start: **06.10.23** End: **11.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607		**14.47**	**E:633634.8 N:163798.6**	**3** of **3**

Depth (m)	Samples & Testing No	Type	Results	Backfill	Water	Description of Strata	Reduced Level	Depth (m) (Thickness)	Legend
18.00-18.45	69	SPT	N=29			Very stiff grey micaceous slightly gravelly slightly sandy silty CLAY. Sand is fine. Gravel is angular to subrounded fine to coarse siltstone. (THANET FORMATION) *(stratum copied from 16.00m from previous sheet)* . . . becoming stiff from 18.00m depth.		(4.45)	
18.45	70	DSPT							
18.50	71	D							
18.60-19.00	72	B							
19.00-19.45	73	SPT	N=35						
19.00-19.45	74	DSPT							
19.50	75	D							
19.60-20.00	76	B							
20.00-20.45	77	SPT	N=35						
20.00-20.45	78	DSPT							
						Borehole terminated at 20.45m depth.	-5.98	20.45	

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 2000 Mark 1**	**Karl Wordsworth**	**MStorch**	

STRUCTURAL SOILS

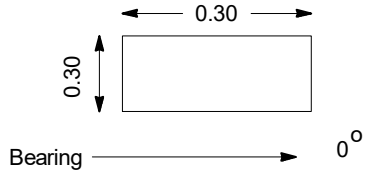
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-CPT101**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	**11.10.23**	**1.39**	**E:632079.6 N:163053.4**	**1** of **1**
	End: **11.10.23**			

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						MADE GROUND: Very stiff brown slightly gravelly slightly sandy organic SILT with occasional rootlets. Sand is fine. Gravel is subangular to subrounded fine to coarse chalk and ceramics.	1.09	(0.30) 0.30	
0.30-0.75	1	B				Stiff yellowish brown silty CLAY. (TIDAL FLAT DEPOSITS)			
0.40		V	c_u=138/130/141					(0.45)	
0.70		V	c_u=105/110/100				0.64	0.75	
0.75-1.20	2	B				Stiff grey mottled yellowish brown silty CLAY. (TIDAL FLAT DEPOSITS)			
1.00		V	c_u=82/85/82	≈				(0.45)	
							0.19	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. Trial pit remained stable during excavation.
3. Water seepage at 1.10m depth.
4. Trial pit backfilled with arisings on completion.
5. Cone Penetration Test (CPT) carried out on completion.

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

Method Used:	Plant Used:	Logged By:	Checked By:
Inspection pit + Hand dug	**Hand tools**	**MStorch**	

STRUCTURAL SOILS

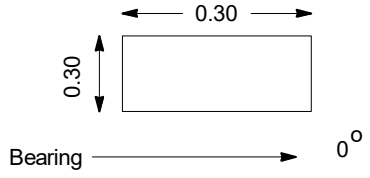
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-CPT102**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	**11.10.23** End: **11.10.23**	**1.58**	**E:632217.2 N:163168.7**	**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 over stiff dark brown slightly sandy clayey SILT with occasional shells fragments and frequent rootlets. Sand is fine to medium. (TOPSOIL)	1.28	(0.30) 0.30	
0.30-0.50	1	B				Stiff to very stiff slightly sandy clayey SILT with rare shell fragments. Sand is fine. (TIDAL FLAT DEPOSITS)	0.98	(0.30) 0.60	
0.30		V	c_u=180/178/146						
0.50		V	c_u=184/182/184						
0.70-0.90	2	B				Stiff to very stiff brownish grey mottled orangish brown clayey SILT. (TIDAL FLAT DEPOSITS)	0.38	(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. Trial pit remained dry and stable during excavation.
3. Trial pit backfilled with arisings on completion.
4. Cone Penetration Test (CPT) carried out on completion.

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

Method Used:	Plant Used:	Logged By:	Checked By:
Inspection pit + Hand dug	**Hand tools**	**CMathias**	

STRUCTURAL SOILS

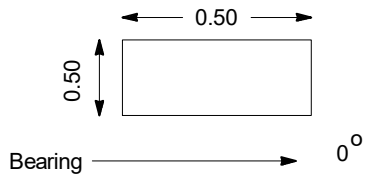
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-CPT103**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	**12.10.23**	**1.27**	**E:632174.6 N:162901.8**	**1** of **1**
	End: **12.10.23**			

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 over stiff brown slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse chalk. (TOPSOIL)	0.97	(0.30) 0.30	
0.40-0.90	2	B				Very stiff greenish brown mottled light grey slightly gravelly CLAY with frequent pockets of soft orangish brown silt. Gravel is angular fine to medium siltstone. (TIDAL FLAT DEPOSITS)	0.37	(0.60) 0.90	
0.50		V	c_u=210/204/208						
0.70		V	c_u=220/214/222						
1.00-1.20	3	B				Soft to firm greenish brown mottled bluish grey silty CLAY with frequent pockets of soft orangish brown silt. (TIDAL FLAT DEPOSITS)	0.07	(0.30) 1.20	
1.00		V	c_u=38/40/36						
1.00		V	c_r=18/22/18						
						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. Trial pit remained dry and stable during excavation.
3. Trial pit backfilled with arisings on completion.
4. Cone Penetration Test (CPT) carried out on completion.

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

Method Used:	Plant Used:	Logged By:	Checked By:
Inspection pit + Hand dug	**Hand tools**	**MCapitani**	

STRUCTURAL SOILS

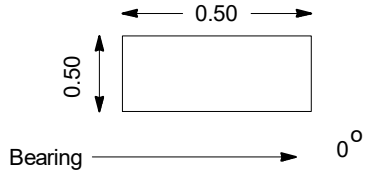
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-CPT104**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	**12.10.23**	**1.34**	**E:632506.2 N:162966.4**	**1** of **1**
	End: **12.10.23**			

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 over stiff brown slightly gravelly CLAY. Gravel is subangular fine to medium chalk. (TOPSOIL)	1.04	(0.30) 0.30	
0.40-0.80	2	B				Very stiff light grey mottled greenish brown silty CLAY with frequent pockets of soft orangish brown silt. (TIDAL FLAT DEPOSITS)			
0.50		V	c_u=216/212/214					(0.50)	
0.70		V	c_u=240/236/244				0.54	0.80	
0.90-1.20	3	B				Firm bluish grey silty CLAY with occasional pockets of soft orangish brown silt. (TIDAL FLAT DEPOSITS)			
1.00		V	c_u=50/68/60					(0.40)	
1.00		V	c_r=24/40/32				0.14	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. Trial pit remained dry and stable during excavation.
3. Trial pit backfilled with arisings on completion.
4. Cone Penetration Test (CPT) carried out on completion.

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

Method Used:	Plant Used:	Logged By:	Checked By:
Inspection pit + Hand dug	**Hand tools**	**MCapitani**	

STRUCTURAL SOILS

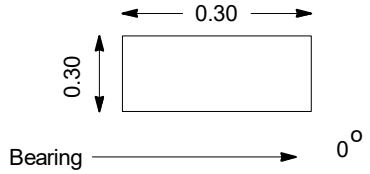
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-CPT105**

Contract Ref:	Start: **10.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **10.10.23**	**1.42**	**E:632524.1 N:163162.6**	**1** of **1**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Very stiff dark brown silty organic CLAY. (TOPSOIL)		(0.35)	
							1.07	0.35	
0.40-0.90	1	B				Stiff light brown mottled grey silty CLAY. (TIDAL FLAT DEPOSITS)			
0.50		V	c_u=120/135/128					(0.55)	
0.80		V	c_u=110/120/115	≈			0.52	0.90	
0.90-1.20	2	B				Firm light grey mottled yellowish brown silty CLAY. (TIDAL FLAT DEPOSITS)		(0.30)	
1.10		V	c_u=56/60/50				0.22	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. Trial pit remained stable during excavation.
3. Water seepage at 0.90m depth.
4. Trial pit backfilled with arisings on completion.
5. Cone Penetration Test (CPT) carried out on completion.

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

Method Used:	Plant Used:	Logged By:	Checked By:
Inspection pit + Hand dug	**Hand tools**	**MStorch**	

STRUCTURAL SOILS

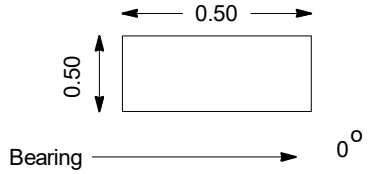
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-CPT106**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	**12.10.23** End: **12.10.23**	**1.49**	**E:632312.4 N:163008.9**	**1** of **1**

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 over stiff brown slightly gravelly CLAY. Gravel is subangular fine to medium chalk. (TOPSOIL)	1.19	(0.30) 0.30	
0.40-0.70	2	B				Very stiff greenish brown silty CLAY with occasional pockets of black organic material. Slight organic odour. (TIDAL FLAT DEPOSITS)	0.79	(0.40) 0.70	
0.50		V	c_u=140/150/135						
0.50		V	c_r=40/50/40						
0.70		V	c_u=100/88/80						
0.70		V	c_r=46/46/30						
0.80-1.20	3	B		≈		Stiff to firm light brown mottled light grey and bluish grey silty CLAY with frequent pockets of soft orangish brown silt. (TIDAL FLAT DEPOSITS)	0.29	(0.50) 1.20	
1.00		V	c_u=60/48/80						
1.00		V	c_r=38/30/38						
						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. Trial pit remained stable during excavation.
3. Water seepage at 1.00m depth.
4. Trial pit backfilled with arisings on completion.
5. Cone Penetration Test (CPT) carried out on completion.

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

Method Used:	Plant Used:	Logged By:	Checked By:
Inspection pit + Hand dug	**Hand tools**	**MCapitani**	

STRUCTURAL SOILS

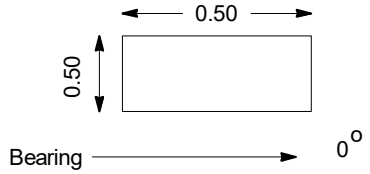
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-CPT107**

Contract Ref:	Start: **12.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **12.10.23**	**1.43**	**E:632215.2 N:163030.1**	**1** of **1**

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 over stiff brown slightly gravelly CLAY. Gravel is angular fine to coarse flint. (TOPSOIL)	1.13	(0.30) 0.30	
0.40-0.90	2	B				Very stiff greenish brown mottled light grey silty CLAY with occasional pockets of soft orangish brown silt. (TIDAL FLAT DEPOSITS)	0.43	(0.70) 1.00	
0.50		V	c_u=214/242/234						
0.50		V	c_r=74/42/50						
0.70		V	c_u=200/220/212						
0.70		V	c_r=60/72/68						
1.10-1.20	3	B		≈		Firm light greenish brown mottled light grey and bluish grey silty CLAY with frequent pockets of soft orangish brown silt. (TIDAL FLAT DEPOSITS)	0.23	1.20	
1.10		V	c_u=90/92/88						
1.10		V	c_r=34/38/32						
						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. Trial pit remained stable during excavation.
3. Water seepage at 1.20m depth.
4. Trial pit backfilled with arisings on completion.
5. Cone Penetration Test (CPT) carried out on completion.

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

Method Used:	Plant Used:	Logged By:	Checked By:
Inspection pit + Hand dug	**Hand tools**	**MCapitani**	

STRUCTURAL SOILS

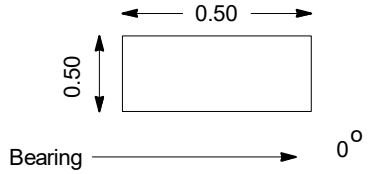
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-CPT108**

Contract Ref:	Start: **12.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **12.10.23**	**1.30**	**E:632221.3 N:162850.7**	**1** of **1**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
0.10-0.25	1	B				Crops over stiff brown slightly gravelly CLAY. Gravel is angular fine to coarse chalk. (TOPSOIL)	1.05	0.25	
0.35-0.70	2	B				Very stiff greenish brown mottled light grey and orangish brown silty CLAY. (TIDAL FLAT DEPOSITS)		(0.45)	
0.50		V	c_u=170/165/172						
0.50		V	c_r=70/68/72				0.60	0.70	
0.80-1.20	3	B				Firm to stiff greenish brown mottled light grey and bluish grey silty CLAY with occasional pockets of soft orangish brown silt and black organic material. Slight organic odour. (TIDAL FLAT DEPOSITS)		(0.50)	
0.80		V	c_u=78/74/72						
0.80		V	c_r=40/36/32						
1.00		V	c_u=70/74/72						
1.00		V	c_r=42/38/36	≈			0.10	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. Trial pit remained stable during excavation.
3. Water seepage at 1.20m depth.
4. Trial pit backfilled with arisings on completion.
5. Cone Penetration Test (CPT) carried out on completion.

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

Method Used:	Plant Used:	Logged By:	Checked By:
Inspection pit + Hand dug	**Hand tools**	**MCapitani**	

STRUCTURAL SOILS

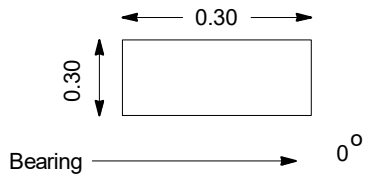
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-CPT109**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	**10.10.23**	**1.44**	**E:632517.3 N:163071.8**	**1** of **1**
	End: **10.10.23**			

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Very stiff dark brown slightly sandy silty organic CLAY. Sand is fine. (TOPSOIL)	1.19	0.25	
0.30-0.80	1	B				Stiff light brown mottled grey silty CLAY with occasional pockets of black organic matter. (TIDAL FLAT DEPOSITS)			
0.40		V	c_u=150/140/138					(0.55)	
0.70		V	c_u=116/110/122				0.64	0.80	
0.80-1.20	2	B				Firm light grey mottled yellowish brown silty CLAY. (TIDAL FLAT DEPOSITS)			
1.00		V	c_u=54/66/59					(0.40)	
							0.24	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. Trial pit remained dry and stable during excavation.
3. Trial pit backfilled with arisings on completion.
4. Cone Penetration Test (CPT) carried out on completion.

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

Method Used:	Plant Used:	Logged By:	Checked By:
Inspection pit + Hand dug	**Hand tools**	**MStorch**	

STRUCTURAL SOILS

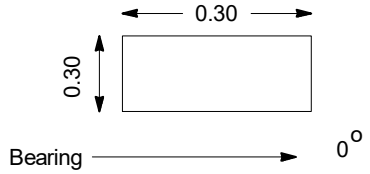
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-CPT110**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	**11.10.23**	**1.44**	**E:632371.4 N:163132.8**	**1** of **1**
	End: **11.10.23**			

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Friable becoming stiff brown slightly sandy slightly gravelly organic CLAY with occasional rootlets up to 3mm diameter. Sand is fine to coarse. Gravel is angular to rounded fine to coarse flint.		(0.30)	
0.30-0.50	1	B				(TOPSOIL)	1.14	0.30	
0.50		V	c_u=62/70/80			Firm to stiff brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular to subangular fine to medium flint.		(0.40)	
0.70-1.00	2	B				(TIDAL FLAT DEPOSITS)	0.74	0.70	
0.80		V	c_u=80/86/86			Stiff orangish brown mottled grey slightly sandy silty CLAY. (TIDAL FLAT DEPOSITS)		(0.30)	
1.00-1.20	3	B					0.44	1.00	
1.00		V	c_u=50/54/56			Firm grey mottled orangish brown slightly sandy silty CLAY. Sand is fine to coarse. (TIDAL FLAT DEPOSITS)	0.24	1.20	
						Trial pit completed at 1.20m depth			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Trial pit remained dry and stable during excavation.
3. Trial pit backfilled with arisings on completion.
4. Cone Penetration Test (CPT) carried out on completion.

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

Method Used:	Plant Used:	Logged By:	Checked By:
Inspection pit + Hand dug	**Hand tools**	**IWarne**	

STRUCTURAL SOILS

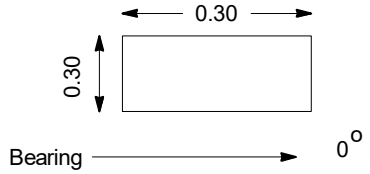
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-CPT111**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	**10.10.23**	**1.39**	**E:632590.8 N:163107.8**	**1** of **1**
	End: **10.10.23**			

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Very stiff dark brown slightly sandy silty CLAY. Sand is fine. (TOPSOIL)	1.09	(0.30) 0.30	
0.30-0.80	1	B				Stiff light brown mottled grey silty CLAY. (TIDAL FLAT DEPOSITS)			
0.60		V	c_u=136/140/130				0.59	(0.50) 0.80	
0.80-1.20	2	B				Firm light grey mottled yellowish brown silty CLAY. (TIDAL FLAT DEPOSITS)			
0.90		V	c_u=66/70/64					(0.40)	
1.20		V	c_u=54/52/48			Trial pit terminated at 1.20m depth.	0.19	1.20	

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. Trial pit remained stable during excavation.
3. Water seepage at 0.85m depth.
4. Trial pit backfilled with arisings on completion.
5. Cone Penetration Test (CPT) carried out on completion.

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

Method Used:	Plant Used:	Logged By:	Checked By:
Inspection pit + Hand dug	**Hand tools**	**MStorch**	

STRUCTURAL SOILS

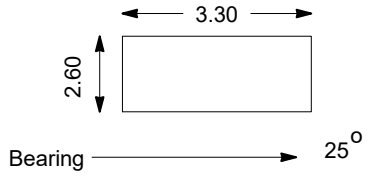
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-TP101**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	**11.10.23** End: **11.10.23**	**1.38**	**E:632188.0 N:163132.9**	**1** of **2**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Friable dark brown slightly sandy silty CLAY with occasional rootlets. Sand is fine. (TOPSOIL)		(0.30)	
0.20	101	ES	4xT+1xJ+1xV				1.08	0.30	
0.20		PID	0.0ppm			Stiff grey mottled orange slightly sandy silty CLAY. Sand is fine. (TIDAL FLAT DEPOSITS)			
0.40		V	c_u=120/120/120						
0.40		V	c_r=32/22/22						
0.50	1	D							
0.50	102	ES	4xT+1xJ+1xV						
0.50-0.70	2	B							
0.50		PID	0.1ppm						
0.70	3	D				. . . becoming firm from 0.80m depth.		(1.20)	
0.70-0.80	4	B							
0.80		V	c_u=50/48/50						
0.80		V	c_r=14/15/12						
0.90	5	D							
0.90-1.00	7	B							
1.00	103	ES	4xT+1xJ+1xV						
1.00	8	D							
1.00-1.20	9	B					-0.12	1.50	
1.00		PID	0.1ppm			Firm grey mottled dark grey slightly sandy silty CLAY. Sand is fine. (TIDAL FLAT DEPOSITS)			
1.10	10	D							
1.10-1.20	11	B							
1.30-1.50	12	LB							
1.50	13	D							
2.00-2.20	14	B							
2.50	15	D						(2.10)	
3.00-3.20	16	B							
3.50	17	D					-2.22	3.60	
						Trial pit terminated at 3.60m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. TRL-DCP undertaken prior to excavation.
3. Archaeological and UXO watching brief present.
4. Thermal Resistivity testing undertaken at 0.70, 0.90 and 1.10m depth.
5. Trial pit remained dry and stable during excavation.
6. Trial pit backfilled with arisings in reverse order, compacted in layers by the excavator with the use of a compactor plate and the bucket.

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

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Tracked excavator**	**BDrayson**	

STRUCTURAL SOILS

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
SEA Link FEED - Kent Onshore Cable Link		**National Grid**		**R22-TP101**
Contract Ref:	Start: **11.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **11.10.23**	**1.38**	**E:632188.0 N:163132.9**	**2** of **2**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Tracked excavator**	**BDrayson**	

STRUCTURAL SOILS

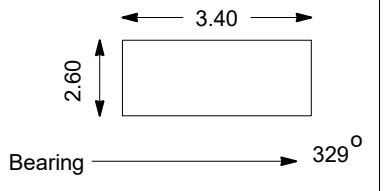
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-TP102**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	**12.10.23** End: **12.10.23**	**1.48**	**E:632079.2 N:163044.0**	**1** of **2**

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	4xT+1xJ+1xV			Friable dark brown slightly sandy slightly gravelly silty CLAY with a low cobble content. Sand is fine to coarse. Gravel is subangular to subrounded flint and chalk. Cobbles are subangular to subrounded flint. (TOPSOIL)	1.13	(0.35) 0.35	
0.20		PID	0.0ppm						
0.50	1	D				Stiff brownish grey mottled orange slightly sandy slightly gravelly silty CLAY. Sand is fine. Gravel is subangular to subrounded fine to coarse flint and chalk. (TIDAL FLAT DEPOSITS)	0.88	0.60	
0.50	102	ES	4xT+1xJ+1xV						
0.50-0.70	2	B							
0.50		PID	0.0ppm						
0.70	3	D							
0.70-0.80	4	B							
0.70		V	c_u=52/50/54			Firm grey mottled orange slightly sandy silty CLAY. Sand is fine. (TIDAL FLAT DEPOSITS)			
0.70		V	c_r=16/12/20						
0.90	5	D							
0.90-1.00	6	B						(1.30)	
1.00	103	ES	4xT+1xJ+1xV						
1.00	7	D							
1.00-1.20	8	B							
1.00		V	c_u=34/32/40	≈					
1.00		V	c_r=12/10/12						
1.00		PID	0.1ppm				-0.42	1.90	
1.10-1.20	10	B							
1.10	9	D							
1.50	11	D							
1.50-1.80	12	LB							
2.00-2.20	13	B				Firm grey mottled dark grey slightly sandy silty CLAY. Sand is fine. (TIDAL FLAT DEPOSITS)			
2.50	14	D				. . . at 2.80m depth contains rare rootlets.		(1.60)	
3.00-3.20	15	B							
3.50	16	D					-2.02	3.50	
						Trial pit terminated at 3.50m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. TRL-DCP undertaken prior to excavation.
3. Archaeological and UXO watching brief present.
4. Thermal Resistivity testing undertaken at 0.70, 0.90 and 1.10m depth.
5. Water seepage at 1.50m depth.
6. Trial pit remained stable during excavation.
7. Trial pit backfilled with arisings in reverse order, compacted in layers by the excavator with the use of a compactor plate and the bucket.

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

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Tracked excavator**	**BDrayson**	

STRUCTURAL SOILS

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
SEA Link FEED - Kent Onshore Cable Link		**National Grid**		**R22-TP102**
Contract Ref:	Start: **12.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **12.10.23**	**1.48**	**E:632079.2 N:163044.0**	**2** of **2**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Tracked excavator**	**BDrayson**	

STRUCTURAL SOILS

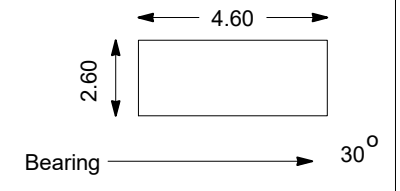
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-TP103**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	**09.10.23**	**1.36**	**E:632126.3 N:162967.8**	**1** of **2**
	End: **09.10.23**			

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Friable dark brown slightly sandy slightly gravelly CLAY with a low cobble content and rare rootlets. Sand is fine to medium. Gravel is subangular to subrounded fine to coarse flint and siltstone. Cobbles are subangular flint.		(0.30)	
0.20	101	ES	2xT+1xJ+1xV				1.06	0.30	
0.20		PID	0.0ppm			(TOPSOIL)			
						Stiff grey mottled orange slightly sandy silty CLAY. Sand is fine.			
0.50	1	D				(TIDAL FLAT DEPOSITS)			
0.50	102	ES	2xT+1xJ+1xV			. . . becoming firm from 0.50m depth.			
0.50-0.70	2	B							
0.50		V	c_u=58/54/52						
0.50		V	c_r=20/22/18						
0.50		PID	0.0ppm						
0.70	3	D							
0.70-0.80	4	B						(1.50)	
0.80		V	c_u=32/42/42	≈					
0.80		V	c_r=10/12/14						
0.90	5	D							
0.90-1.00	6	B							
0.90-1.10	7	LB							
1.00	103	ES	2xT+1xJ+1xV						
1.00	8	D							
1.00-1.20	9	B							
1.00		PID	0.1ppm						
1.10	10	D					-0.44	1.80	
1.10-1.20	11	B				Firm grey mottled dark grey slightly sandy silty CLAY with rare rootlets. Sand is fine.			
1.50	12	D				(TIDAL FLAT DEPOSITS)			
2.00-2.20	13	B							
2.50	14	D						(1.80)	
3.00-3.20	15	B							
3.50	16	D				. . . at 3.50m shell fragments are present.	-2.24	3.60	
						Trial pit terminated at 3.60m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. TRL-DCP undertaken prior to excavation.
3. Archaeological and UXO watching brief present.
4. Land drain encountered within the step of the pit at 0.70m depth, pit extended to avoid the drain.
5. Thermal Resistivity testing undertaken at 0.70, 0.90 and 1.10m depth.
6. Water seepage at 1.20m depth.
7. Trial pit remained stable during excavation.
8. Trial pit backfilled with arisings in reverse order, compacted in layers by the excavator with the use of a compactor plate and the bucket.

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

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Tracked excavator**	**BDrayson**	

STRUCTURAL SOILS

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
SEA Link FEED - Kent Onshore Cable Link		**National Grid**		**R22-TP103**
Contract Ref:	Start: **09.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **09.10.23**	**1.36**	**E:632126.3 N:162967.8**	**2** of **2**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Tracked excavator**	**BDrayson**	

STRUCTURAL SOILS

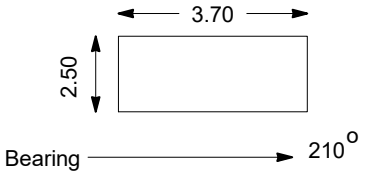
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-TP104**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	**04.10.23** End: **04.10.23**	**1.35**	**E:632412.6 N:163024.9**	**1** of **2**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Friable dark brown slightly sandy CLAY with rare rootlets. Sand is fine. (TOPSOIL)		(0.35)	
0.20	101	ES	2xT+1xJ+1xV						
0.20		PID	0.0ppm				1.00	0.35	
						Stiff to very stiff grey mottled orange slightly sandy CLAY. Sand is fine. (TIDAL FLAT DEPOSITS)	0.85	0.50	
0.50	1	D							
0.50	102	ES	2xT+1xJ+1xV						
0.50-0.70	2	B				Firm grey mottled orange slightly sandy silty CLAY with rare shell fragments. Sand is fine. (TIDAL FLAT DEPOSITS)		(0.60)	
0.50		V	c_u=60/60/62						
0.50		V	c_r=20/20/20						
0.50		PID	0.0ppm						
0.70	3	D				. . . becoming soft from 0.90m depth.			
0.70-0.80	4	B					0.25	1.10	
0.90	5	D							
0.90-1.00	6	B				Firm grey mottled orange silty CLAY. (TIDAL FLAT DEPOSITS)		(0.30)	
0.90		V	c_u=22/30/30						
0.90		V	c_r=10/10/12				-0.05	1.40	
1.00	103	ES	2xT+1xJ+1xV						
1.00	7	D							
1.00-1.20	8	B				Soft dark grey slightly organic slightly sandy clayey SILT with rare rootlets. Sand is fine. (TIDAL FLAT DEPOSITS)			
1.00		PID	0.1ppm						
1.10-1.20	10	B							
1.10	9	D						(1.60)	
1.50	11	D							
1.50-1.60	12	B							
1.80-2.00	13	LB							
2.00	14	D							
2.50-2.70	15	B							
							-1.65	3.00	
3.00	16	D				Trial pit terminated at 3.00m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. TRL-DCP undertaken prior to excavation.
3. Archaeological and UXO watching brief present.
4. Thermal Resistivity testing undertaken at 0.70, 0.90 and 1.10m depth.
5. Trial pit remained dry and stable during excavation.
6. Trial pit backfilled with arisings in reverse order, compacted in layers by the excavator with the use of a compactor plate and the bucket.

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

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Tracked excavator**	**BDrayson**	

STRUCTURAL SOILS

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
SEA Link FEED - Kent Onshore Cable Link		**National Grid**		**R22-TP104**
Contract Ref:	Start: **04.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **04.10.23**	**1.35**	**E:632412.6 N:163024.9**	**2** of **2**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Tracked excavator**	**BDrayson**	

STRUCTURAL SOILS

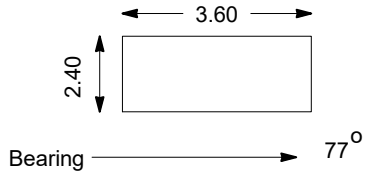
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-TP105**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	**10.10.23**	**1.50**	**E:632391.0 N:163180.9**	**1** of **2**
	End: **10.10.23**			

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			Friable dark brown slightly sandy CLAY with occasional rootlets. Sand is fine. (TOPSOIL)		(0.50)	
0.20		PID	0.1ppm				1.00	0.50	
0.50	1	D				Stiff grey mottled orange slightly sandy silty CLAY. Sand is fine. (TIDAL FLAT DEPOSITS)			
0.50	102	ES	2xT+1xJ+1xV						
0.50-0.70	2	B							
0.50		PID	0.1ppm						
0.70	3	D							
0.70-0.80	4	B							
0.80		V	c_u=88/62/74						
0.80		V	c_r=24/18/20			. . . becoming firm from 1.00m depth.			
0.90	5	D						(1.30)	
0.90-1.00	6	B							
1.00	103	ES	2xT+1xJ+1xV						
1.00	7	D							
1.00-1.20	8	B							
1.00		V	c_u=52/60/43						
1.00		V	c_r=16/14/12						
1.00		PID	0.0ppm						
1.10-1.20	10	B							
1.10-1.30	11	LB					-0.31	1.80	
1.10	9	D				Firm grey mottled dark grey slightly sandy silty CLAY. Sand is fine. (TIDAL FLAT DEPOSITS)			
1.50	12	D							
2.00-2.20	13	B							
2.50	14	D						(1.70)	
3.00-3.20	15	B							
							-2.01	3.50	
3.50	16	D				Trial pit terminated at 3.50m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. TRL-DCP undertaken prior to excavation.
3. Archaeological and UXO watching brief present.
4. Thermal Resistivity testing undertaken at 0.70, 0.90 and 1.10m depth.
5. Trial pit remained dry and stable during excavation.
6. Soakaway test undertaken at 1.60m depth.
7. Trial pit backfilled with arisings in reverse order, compacted in layers by the excavator with the use of a compactor plate and the bucket.

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

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Tracked excavator**	**BDrayson**	

STRUCTURAL SOILS

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
SEA Link FEED - Kent Onshore Cable Link		**National Grid**		**R22-TP105**
Contract Ref:	Start: **10.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **10.10.23**	**1.50**	**E:632391.0 N:163180.9**	**2** of **2**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Tracked excavator**	**BDrayson**	

STRUCTURAL SOILS

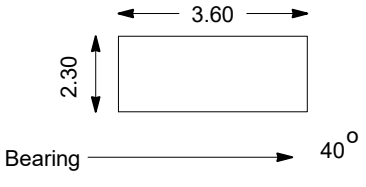
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-TP106**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	**13.10.23** End: **13.10.23**	**1.29**	**E:632251.6 N:162902.2**	**1** of **2**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Friable dark brown slightly sandy silty CLAY with rare rootlets. Sand is fine. (TOPSOIL)		(0.30)	
0.20	101	ES	4xT+J+VL				0.99	0.30	
0.20		PID	0.2ppm			Stiff grey mottled orange slightly sandy clayey SILT. Sand is fine. (TIDAL FLAT DEPOSITS)			
0.40		V	c_u=80/82/64						
0.40		V	c_r=42/20/20					(0.50)	
0.50	1	D							
0.50	102	ES	4xT+J+VL						
0.50-0.70	2	B					0.49	0.80	
0.50-0.70	3	LB							
0.50		PID	0.5ppm			Soft grey mottled orange slightly sandy silty CLAY. Sand is fine. (TIDAL FLAT DEPOSITS)			
0.70	4	D							
0.70-0.80	5	B							
0.80		V	c_u=32/34/32						
0.80		V	c_r=12/12/12					(0.70)	
0.90	6	D							
0.90-1.00	7	B							
1.00	103	ES	4xT+J+VL						
1.00	8	D					-0.21	1.50	
1.00-1.20	9	B				Soft grey mottled dark grey slightly sandy silty CLAY. Sand is fine. (TIDAL FLAT DEPOSITS)			
1.00		PID	1.0ppm						
1.10	10	D							
1.10-1.20	11	B							
1.50	12	D							
2.00-2.20	13	B						(1.90)	
2.50	14	D							
3.00-3.20	15	B					-2.11	3.40	
						Soft dark brown pseudo-fibrous PEAT. (Strong organic odour) (TIDAL FLAT DEPOSITS)	-2.21	3.50	
3.50	16	D				Trial pit terminated at 3.50m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. TRL-DCP undertaken prior to excavation.
3. Archaeological and UXO watching brief present.
4. Thermal Resistivity testing undertaken at 0.70, 0.90 and 1.10m depth.
5. Trial pit remained dry and stable during excavation.
6. Trial pit backfilled with arisings in reverse order, compacted in layers by the excavator with the use of a compactor plate and the bucket.

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

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Tracked excavator**	**BDrayson**	

STRUCTURAL SOILS

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
SEA Link FEED - Kent Onshore Cable Link		**National Grid**		**R22-TP106**
Contract Ref:	Start: **13.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **13.10.23**	**1.29**	**E:632251.6 N:162902.2**	**2** of **2**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Tracked excavator**	**BDrayson**	

STRUCTURAL SOILS

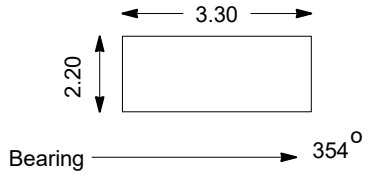
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-TP107**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	**05.10.23** End: **05.10.23**	**1.39**	**E:632524.8 N:162978.0**	**1** of **2**

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			Friable dark brown slightly sandy CLAY with rare rootlets. Sand is fine. (TOPSOIL)		(0.35)	
0.20		PID	0.0ppm				1.04	0.35	
0.50	1	D				Firm grey mottled orange slightly sandy silty CLAY. Sand is fine. (TIDAL FLAT DEPOSITS)			
0.50	102	ES	2xT+1xJ+1xV						
0.50-0.70	2	B							
0.50-0.70	3	LB							
0.50		PID	0.1ppm						
0.70	4	D							
0.70-0.80	5	B						(1.35)	
0.80		V	c_u=58/48/64						
0.80		V	c_r=22/18/20						
0.90	6	D							
0.90-1.00	7	B							
1.00	103	ES	2xT+1xJ+1xV						
1.00	8	D							
1.00-1.20	9	B							
1.00		V	c_u=36/40/40						
1.00		V	c_r=12/12/12						
1.00		PID	0.1ppm				-0.31	1.70	
1.10	10	D				Soft dark grey slightly sandy silty CLAY with rare rootlets and shell fragments. Sand is fine. (TIDAL FLAT DEPOSITS)			
1.10-1.20	11	B							
1.50	12	D							
1.80	13	D							
1.80-2.00	14	B							
2.50	15	D						(1.80)	
3.00-3.20	16	B							
						. . . at 3.40m contains highly degraded fibrous material.	-2.11	3.50	
3.50	17	D				Trial pit terminated at 3.50m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. TRL-DCP undertaken prior to excavation.
3. Archaeological and UXO watching brief present.
4. Thermal Resistivity testing undertaken at 0.70, 0.90 and 1.10m depth.
5. Trial pit remained dry and stable during excavation.
6. Trial pit backfilled with arisings in reverse order, compacted in layers by the excavator with the use of a compactor plate and the bucket.

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

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Tracked excavator**	**BDrayson**	

STRUCTURAL SOILS

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
SEA Link FEED - Kent Onshore Cable Link		**National Grid**		**R22-TP107**
Contract Ref:	Start: **05.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **05.10.23**	**1.39**	**E:632524.8 N:162978.0**	**2** of **2**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Tracked excavator**	**BDrayson**	

STRUCTURAL SOILS

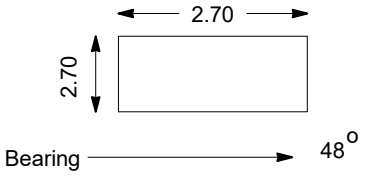
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-TP201**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	**19.10.23** End: **19.10.23**	**4.35**	**E:633846.7 N:163705.4**	**1** of **2**

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			Friable dark brown slightly sandy slightly gravelly SILT with a low cobble content and rare rootlets. Sand is fine to medium. Gravel is subangular to subrounded fine to coarse flint. Cobbles are subrounded flint. (TOPSOIL)		(0.40)	
0.20		PID	0.0ppm				3.95	0.40	
0.50	1	D				Stiff yellowish brown slightly sandy slightly gravelly silty CLAY. Sand is fine to medium. Gravel is angular to subrounded fine to coarse siltstone. (THANET FORMATION)			
0.50	102	ES	2xT+1xJ+1xV						
0.50-0.70	2	B							
0.50		V	c_u=120/140/110					(0.70)	
0.50		V	c_r=32/42/38						
0.50		PID	0.1ppm						
0.70	3	D							
0.70-0.80	4	B							
0.80		V	c_u=140/130/140						
0.80		V	c_r=58/50/54				3.25	1.10	
0.90	5	D				Stiff greyish brown mottled yellow and orange sandy clayey SILT with rare rootlets up to 5mm diameter. Sand is fine to medium. (THANET FORMATION)			
0.90-1.00	6	B							
1.00	103	ES	2xT+1xJ+1xV					(0.60)	
1.00	7	D							
1.00-1.20	8	B							
1.00		PID	0.0ppm				2.65	1.70	
1.10-1.20	10	B				Stiff yellowish brown mottled orange slightly sandy clayey SILT. Sand is fine. (THANET FORMATION)			
1.10	9	D							
1.40-1.70	11	LB							
1.50	12	D							
2.00	13	D							
2.00-2.20	14	B							
2.50	15	D						(2.30)	
3.00-3.20	16	B							
3.50	17	D							
3.80-4.00	18	B					0.35	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. TRL-DCP undertaken prior to excavation.
3. Archaeological and UXO watching brief present.
4. Thermal Resistivity testing undertaken at 0.70, 0.90 and 1.10m depth.
5. Trial pit remained dry and stable during excavation.
6. Trial pit backfilled with arisings in reverse order, compacted in layers by the excavator with the use of a compactor plate and the bucket.

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

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	**BDrayson**	

STRUCTURAL SOILS

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
SEA Link FEED - Kent Onshore Cable Link		National Grid		R22-TP201
Contract Ref:	Start: 19.10.23	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: 19.10.23	4.35	E:633846.7 N:163705.4	2 of 2

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	JCB-3CX	BDrayson	

STRUCTURAL SOILS

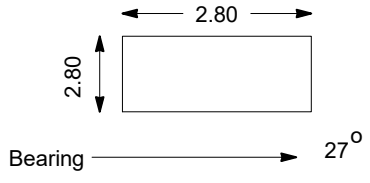
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-TP202**

Contract Ref:	Start: **18.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **18.10.23**	**11.00**	**E:633556.2 N:163636.7**	**1** of **2**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Friable dark brown sandy clayey SILT with occasional rootlets. Sand is fine to medium. (TOPSOIL)		(0.30)	
0.20	101	ES	2xT+1xJ+1xV				10.70	0.30	
0.20		PID	0.0ppm			Stiff orangish brown mottled grey sandy silty CLAY. Sand is fine to medium. (THANET FORMATION)			
0.50	1	D							
0.50	102	ES	2xT+1xJ+1xV						
0.50-0.70	2	B							
0.50		PID	0.0ppm						
0.70	3	D						(1.10)	
0.70-0.80	4	B							
0.80		V	c_u=90/114/130						
0.80		V	c_r=24/24/52						
0.90	5	D							
0.90-1.00	6	B							
1.00	103	ES	2xT+1xJ+1xV						
1.00		V	c_u=140/72/140						
1.00		V	c_r=56/20/22				9.60	1.40	
1.00		PID	0.0ppm			Stiff yellowish brown mottled orange and grey sandy silty CLAY. Sand is fine to medium. (THANET FORMATION)			
1.10	7	D							
1.10-1.20	8	B							
1.10-1.30	9	LB							
1.50	10	D							
2.00-2.20	11	B						(1.40)	
2.50	12	D					8.20	2.80	
						Stiff yellowish brown mottled orange and grey slightly gravelly sandy clayey SILT with a low cobble content. Sand is fine to medium. Gravel is subangular to rounded fine to coarse siltstone. Cobbles are subangular siltstone. (THANET FORMATION)			
3.00-3.20	13	B				. . . from 3.30m depth excavation becomes difficult.		(1.20)	
3.50	14	D							
3.80-4.00	15	B					7.00	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. TRL-DCP undertaken prior to excavation.
3. Archaeological and UXO watching brief present.
4. Thermal Resistivity testing undertaken at 0.70, 0.90 and 1.10m depth.
5. Trial pit remained dry and stable during excavation.
6. Trial pit backfilled with arisings in reverse order, compacted in layers by the excavator with the use of a compactor plate and the bucket.

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

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	**BDrayson**	

STRUCTURAL SOILS

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
SEA Link FEED - Kent Onshore Cable Link		National Grid		R22-TP202
Contract Ref:	Start: 18.10.23	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: 18.10.23	11.00	E:633556.2 N:163636.7	2 of 2

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	JCB-3CX	BDrayson	

STRUCTURAL SOILS

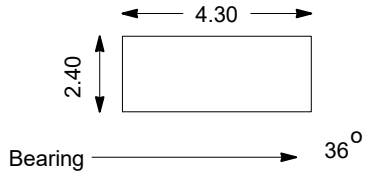
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-TP203**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	**26.09.23** End: **26.09.23**	**7.14**	**E:633280.7 N:163502.6**	**1** of **2**

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			Friable dark brown slightly sandy slightly gravelly SILT with a low cobble content. Sand is fine to medium Gravel is angular to subrounded fine to coarse flint. Cobbles are subrounded flint.		(0.35)	
0.20		PID	0.1ppm			(TOPSOIL)	6.79	0.35	
0.50	1	D				Very stiff light greyish brown sandy slightly gravelly silty CLAY with a low cobble content. Sand is fine to medium. Gravel is subangular to subrounded fine to coarse flint. Cobbles are subrounded flint. (THANET FORMATION)			
0.50	102	ES	2xT+1xJ+1xV						
0.50-0.70	2	B						(0.65)	
0.50		V	c_u=135/200						
0.50		V	c_r=38/40						
0.50		PID	0.0ppm						
0.70-0.90	3	LB					6.14	1.00	
0.70	4	D				Stiff orangish brown mottled grey and red slightly sandy slightly gravelly sandy silty CLAY with a low cobble content. Sand is fine to medium. Gravel is subangular to subrounded fine to coarse flint. Cobbles are subrounded flint. (THANET FORMATION)			
0.70-0.80	5	B							
0.70		V	c_u=140/84						
0.70		V	c_r=50/38						
0.90	6	D							
0.90-1.00	7	B						(0.80)	
0.90		V	c_u=132/104						
0.90		V	c_r=30/40						
1.00	103	ES	2xT+1xJ+1xV						
1.00	8	D							
1.00-1.20	9	B					5.34	1.80	
1.00		PID	0.1ppm			Stiff orangish brown mottled grey and red sandy CLAY with rare shell fragments. Sand is fine to medium. (THANET FORMATION)			
1.10	10	D							
1.10-1.20	11	B							
1.50	12	D							
2.00-2.20	13	B							
2.50	14	D						(1.40)	
3.00-3.20	15	B		≈			3.94	3.20	
						Trial pit terminated at 3.20m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. TRL-DCP undertaken prior to excavation.
3. Archaeological and UXO watching brief present.
4. Thermal Resistivity testing undertaken at 0.70, 0.90 and 1.10m depth.
5. Water seepage at 3.20m depth.
6. Trial pit remained stable during excavation.
7. Trial pit backfilled with arisings in reverse order, compacted in layers by the excavator with the use of a compactor plate and the bucket.

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

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Tracked excavator**	**BDrayson**	

STRUCTURAL SOILS

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
SEA Link FEED - Kent Onshore Cable Link		National Grid		R22-TP203
Contract Ref:	Start: 26.09.23	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: 26.09.23	7.14	E:633280.7 N:163502.6	2 of 2

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	Tracked excavator	BDrayson	

STRUCTURAL SOILS

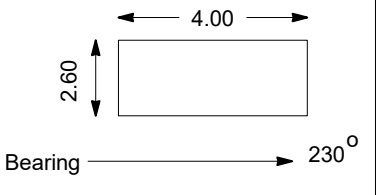
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-TP204**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	**27.09.23** End: **27.09.23**	**1.56**	**E:632890.2 N:163330.3**	**1** of **2**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Friable dark greyish brown CLAY with occasional rootlets up to 5mm. (TOPSOIL)		(0.35)	
0.20	101	ES	2xT+1xJ+1xV						
0.20		PID	0.0ppm				1.21	0.35	
						Stiff to very stiff grey mottled orange slightly sandy silty CLAY. Sand is fine to medium. (TIDAL FLAT DEPOSITS)		(0.45)	
0.50	1	D							
0.50	102	ES	2xT+1xJ+1xV						
0.50-0.70	2	B							
0.50		V	c_u=174/182/132				0.76	0.80	
0.50		V	c_r=78/60/76						
0.50		PID	0.0ppm			Firm grey mottled orange slightly sandy silty CLAY with rare shell fragments. Sand is fine to medium. (TIDAL FLAT DEPOSITS)			
0.70	3	D							
0.70-0.80	4	B							
0.80		V	c_u=46/40/48						
0.80		V	c_r=22/20/30					(0.85)	
0.90	5	D							
0.90-1.00	6	B							
0.90-1.10	7	LB							
1.00	103	ES	2xT+1xJ+1xV						
1.00	8	D							
1.00-1.10	9	B					-0.09	1.65	
1.00		PID	0.0ppm			Soft grey mottled dark blue slightly sandy clayey SILT. Sand is fine. (TIDAL FLAT DEPOSITS)			
1.10	10	D							
1.10-1.20	11	B							
1.50	12	D							
1.70	13	D						(0.95)	
1.70-1.90	14	B							
2.40	15	D				. . . from 2.40m depth frequent organic wood fibres and rootlets present.	-1.04	2.60	
2.70	16	D				Firm bluish grey mottled green slightly sandy slightly gravelly clayey SILT with a low cobble content and rare rootlets. Sand is fine to medium. Gravel is subangular to subrounded fine to coarse flint. Cobbles are subrounded flint. (TIDAL FLAT DEPOSITS)			
2.70-2.90	17	B						(0.60)	
							-1.64	3.20	
3.20	18	D				Trial pit terminated at 3.20m depth. Archaeologist terminated location due to presence of charcoal.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. TRL-DCP undertaken prior to excavation.
3. Archaeological and UXO watching brief present.
4. Thermal Resistivity testing undertaken at 0.70, 0.90 and 1.10m depth.
5. Water seepage at 1.20m depth.
6. Trial pit remained stable during excavation.
7. Trial pit backfilled with arisings in reverse order, compacted in layers by the excavator with the use of a compactor plate and the bucket.

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

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Tracked excavator**	**BDrayson**	

STRUCTURAL SOILS

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
SEA Link FEED - Kent Onshore Cable Link		**National Grid**		**R22-TP204**
Contract Ref:	Start: **27.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **27.09.23**	**1.56**	**E:632890.2 N:163330.3**	**2** of **2**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Tracked excavator**	**BDrayson**	

STRUCTURAL SOILS

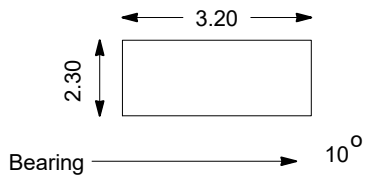
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-TP205**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	**06.10.23** End: **06.10.23**	**1.44**	**E:632566.0 N:163105.6**	**1** of **2**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Friable dark brown slightly sandy silty CLAY with rare rootlets. Sand is fine. (TOPSOIL)		(0.30)	
0.20	101	ES	2xT+1xJ+1xV				1.14	0.30	
0.20		PID	0.0ppm			Stiff grey mottled orange slightly sandy silty CLAY. Sand is fine. (TIDAL FLAT DEPOSITS)			
0.50	1	D							
0.50	102	ES	2xT+1xJ+1xV						
0.50-0.70	2	B							
0.50		V	c_u=78/130/80						
0.50		V	c_r=12/40/12						
0.50		PID	0.0ppm			. . . becoming firm from 0.80m depth.			
0.70	3	D							
0.70-0.80	4	B						(1.50)	
0.70-0.90	5	LB							
0.80		V	c_u=62/52/52						
0.80		V	c_r=18/14/12						
0.90	6	D							
0.90-1.00	7	B							
1.00	103	ES	2xT+1xJ+1xV						
1.00	8	D							
1.00-1.20	9	B							
1.00		PID	0.0ppm						
1.10	10	D					-0.36	1.80	
1.10-1.20	11	B				Soft grey mottled dark grey slightly sandy silty organic CLAY with occasional rootlets up to 10mm diameter. Sand is fine. (TIDAL FLAT DEPOSITS)			
1.50	12	D							
2.00	13	D							
2.00-2.20	14	B							
								(1.70)	
2.70	15	D							
3.20-3.40	16	B					-2.06	3.50	
						Trial pit terminated at 3.50m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. TRL-DCP undertaken prior to excavation.
3. Archaeological and UXO watching brief present.
4. Thermal Resistivity testing undertaken at 0.70, 0.90 and 1.10m depth.
5. Trial pit remained dry and stable during excavation.
6. Trial pit backfilled with arisings in reverse order, compacted in layers by the excavator with the use of a compactor plate and the bucket.

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

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Tracked excavator**	**BDrayson**	

STRUCTURAL SOILS

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
SEA Link FEED - Kent Onshore Cable Link		**National Grid**		**R22-TP205**
Contract Ref:	Start: **06.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **06.10.23**	**1.44**	**E:632566.0 N:163105.6**	**2** of **2**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Tracked excavator**	**BDrayson**	

STRUCTURAL SOILS

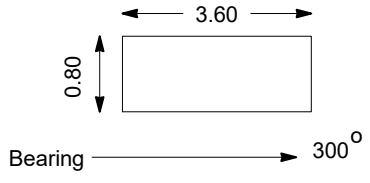
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-TP405**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	**02.10.23** End: **02.10.23**	**1.43**	**E:632249.6 N:163371.0**	**1** of **2**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Friable dark brown slightly sandy CLAY with occasional rootlets up to 5mm diameter. (TOPSOIL)		(0.30)	
0.20	101	ES	2xT+1xJ+1xV				1.13	0.30	
0.20		PID	0.0ppm			Firm to stiff grey mottled orange slightly sandy slightly gravelly silty CLAY. Gravel is subangular fine to medium chalk. Sand is fine to medium. (TIDAL FLAT DEPOSITS)			
0.50	1	D							
0.50	102	ES	2xT+1xJ+1xV						
0.50-0.70	2	B							
0.50		V	c_u=78/70/62					(0.90)	
0.50		V	c_r=26/20/24						
0.50		PID	0.0ppm						
1.00	103	ES	2xT+1xJ+1xV						
1.00	3	D							
1.00-1.20	4	B					0.23	1.20	
1.00		PID	0.0ppm			Soft to very soft grey mottled orange slightly gravelly CLAY. Gravel is subangular fine to medium chalk. (TIDAL FLAT DEPOSITS)			
1.20		V	c_u=12/26/16						
1.20		V	c_r=4/10/8					(0.50)	
1.30-1.50	5	LB							
1.50	6	D					-0.27	1.70	
						Soft to very soft grey mottled dark grey slightly sandy slightly gravelly silty CLAY. Gravel is subangular fine to medium chalk. Sand is fine. (TIDAL FLAT DEPOSITS)			
2.00-2.20	7	B							
2.50	8	D						(1.80)	
3.00-3.20	9	B							
						. . . from 3.30m depth contains rare organic material.	-2.07	3.50	
3.50	10	D				Trial pit terminated at 3.50m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. TRL-DCP undertaken prior to excavation.
3. Archaeological and UXO watching brief present.
4. Trial pit remained dry and stable during excavation.
5. Trial pit backfilled with arisings in reverse order, compacted in layers by the excavator with the use of a compactor plate and the bucket.

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

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Tracked excavator**	**BDrayson**	

STRUCTURAL SOILS

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
SEA Link FEED - Kent Onshore Cable Link		**National Grid**		**R22-TP405**
Contract Ref:	Start: **02.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **02.10.23**	**1.43**	**E:632249.6 N:163371.0**	**2** of **2**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Tracked excavator**	**BDrayson**	

STRUCTURAL SOILS

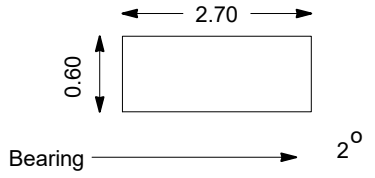
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-TP501**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	**17.10.23** End: **17.10.23**	**5.91**	**E:633352.1 N:163351.8**	**1** of **2**

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			Friable dark brown slightly sandy slightly gravelly clayey SILT with a low cobble content. Sand is fine to medium. Gravel is subangular to subrounded fine to coarse flint with rare shell fragments. Cobbles are subrounded flint. (TOPSOIL)			
0.20		PID	0.0ppm				5.41	(0.50)	
0.50	1	D						0.50	
0.50	102	ES	2xT+1xJ+1xV			Firm light brown sandy clayey SILT. Sand is fine to medium. (THANET FORMATION)			
0.50-0.70	2	B							
0.50		PID	0.0ppm			. . . from 0.70m depth orange and grey mottling present.		(0.50)	
0.90-1.10	3	LB					4.91	1.00	
1.00	103	ES	2xT+1xJ+1xV			Soft light brown mottled orange and grey sandy silty CLAY with rare shell fragments. Sand is fine to medium. (THANET FORMATION)			
1.00	4	D							
1.00-1.20	5	B							
1.00		V	c_u=30/32/32						
1.00		V	c_r=12/14/18						
1.00		PID	0.0ppm					(1.00)	
1.50	6	D							
1.50		V	c_u=38/34/34						
1.50		V	c_r=20/14/18						
							3.91	2.00	
2.00-2.20	7	B				Stiff grey mottled orange sandy silty CLAY with rare shell fragments. Sand is fine to medium. (THANET FORMATION)			
2.50	8	D							
3.00-3.20	9	B						(2.00)	
3.50	10	D		≈		. . . from 3.50m depth becomes difficult to excavate.			
3.80-4.00	11	B							
							1.91	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. TRL-DCP undertaken prior to excavation.
3. Archaeological and UXO watching brief present.
4. Water seepage at 3.50m depth.
5. Trial pit remained stable during excavation.
6. Soakaway test undertaken at 1.50m depth.
7. Trial pit backfilled with arisings in reverse order, compacted in layers by the excavator with the use of a compactor plate and the bucket.

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

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	**BDrayson**	

STRUCTURAL SOILS

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
SEA Link FEED - Kent Onshore Cable Link		National Grid		R22-TP501
Contract Ref:	Start: 17.10.23	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: 17.10.23	5.91	E:633352.1 N:163351.8	2 of 2

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	JCB-3CX	BDrayson	

STRUCTURAL SOILS

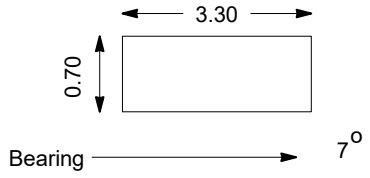
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-TP502**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	**25.09.23** End: **25.09.23**	**4.53**	**E:633081.5 N:163435.3**	**1** of **2**

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			Friable brown slightly sandy slightly gravelly SILT with occasional rootlets. Sand is fine. Gravel is subangular fine to coarse chalk and flint. (TOPSOIL)		(0.45)	
0.20		PID	0.1ppm				4.08	0.45	
0.45		V	c_u=126/130/130			Stiff light brown sandy slightly gravelly clayey SILT with a low cobble content. Sand is fine to medium. Gravel is subangular to subrounded fine to coarse flint. Cobbles are subrounded flint. (THANET FORMATION)			
0.45		V	c_r=18/28/28						
0.50	1	D							
0.50	102	ES	2xT+1xJ+1xV						
0.50-0.70	2	B							
0.50-0.70	3	LB						(0.85)	
0.50		PID	0.0ppm						
1.00	103	ES	2xT+1xJ+1xV			. . . from 0.90m depth becomes mottled grey and orangish brown.			
1.00	4	D							
1.00-1.20	5	B							
1.00		V	c_u=104/96				3.23	1.30	
1.00		V	c_r=30/22			Firm orangish brown mottled grey sandy silty CLAY. Sand is fine to medium. (THANET FORMATION)			
1.00		PID	0.2ppm						
1.40	6	D							
1.40-1.60	7	B							
1.40-1.60	8	LB						(1.30)	
2.40-2.60	10	B				. . . from 2.40m depth rare shell fragments.			
2.40	9	D					1.93	2.60	
						Trial pit terminated at 2.60m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. TRL-DCP undertaken prior to excavation.
3. Archaeological and UXO watching brief present.
4. Trial pit remained dry and stable during excavation.
5. Trial pit backfilled with arisings in reverse order, compacted in layers by the excavator with the use of a compactor plate and the bucket.

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

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Tracked excavator**	**BDrayson**	

STRUCTURAL SOILS

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
SEA Link FEED - Kent Onshore Cable Link		**National Grid**		**R22-TP502**
Contract Ref:	Start: **25.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **25.09.23**	**4.53**	**E:633081.5 N:163435.3**	**2** of **2**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Tracked excavator**	**BDrayson**	

STRUCTURAL SOILS

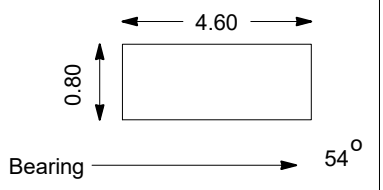
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-TP503**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	**28.09.23**	**1.26**	**E:632685.6 N:163156.3**	**1** of **2**
	End: **28.09.23**			

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Friable brown slightly gravelly CLAY with a low cobble content. Gravel is subangular to subrounded fine to coarse chalk. Cobbles are subangular chalk. (TOPSOIL)	1.06	0.20	
						Firm to stiff brown mottled orangish brown slightly gravelly CLAY with a medium cobble content. Gravel is subangular to subrounded fine to coarse chalk and flint. Cobbles are subangular to subrounded chalk and flint. (TIDAL FLAT DEPOSITS)	0.34	(0.72)	
						Trial pit terminated at 0.92m depth. Archaeologist terminated location due to presence of bones.		0.92	

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. TRL-DCP undertaken prior to excavation.
3. Archaeological and UXO watching brief present.
4. Trial pit remained dry and stable during excavation.
5. Trial pit terminated at 0.92m depth due to the presence of a bone, location moved and renamed R22-TP503A.
6. Trial pit backfilled with arisings in reverse order, compacted in layers by the excavator with the use of a compactor plate and the bucket.

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

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Tracked excavator**	**BDrayson**	

STRUCTURAL SOILS

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
SEA Link FEED - Kent Onshore Cable Link		**National Grid**		**R22-TP503**
Contract Ref:	Start: **28.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **28.09.23**	**1.26**	**E:632685.6 N:163156.3**	**2** of **2**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Tracked excavator**	**BDrayson**	

STRUCTURAL SOILS

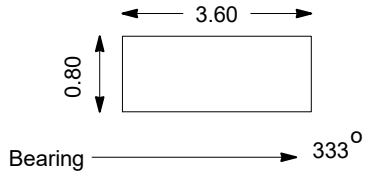
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-TP503A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	**28.09.23** End: **28.09.23**	**1.35**	**E:632680.3 N:163155.7**	**1** of **2**

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			Friable dark brown slightly gravelly CLAY with a low cobble content. Gravel is subangular to subrounded fine to coarse chalk. Cobbles are subangular chalk. (TOPSOIL)		(0.40)	
0.20		PID	0.1ppm				0.95	0.40	
0.50	1	D				Stiff to very stiff grey mottled orangish brown slightly gravelly CLAY with rare shell fragments. Gravel is subangular fine to medium chalk. (TIDAL FLAT DEPOSITS)			
0.50	102	ES	2xT+1xJ+1xV					(0.50)	
0.50-0.70	2	B							
0.50		V	c_u=160/156/196						
0.50		V	c_r=72/56/80						
0.50		PID	0.1ppm				0.45	0.90	
1.00	103	ES	2xT+1xJ+1xV			Firm grey mottled orangish brown slightly sandy silty CLAY with rare shell fragments. Sand is fine. (TIDAL FLAT DEPOSITS)			
1.00	3	D							
1.00-1.20	4	B							
1.00-1.20	5	LB							
1.00		PID	0.0ppm					(0.90)	
1.20		V	c_u=31/51/51	≈					
1.20		V	c_r=15/23/26						
1.50	6	D					-0.45	1.80	
2.00	7	D				Soft grey mottled blue slightly sandy silty CLAY. Sand is fine. (TIDAL FLAT DEPOSITS)			
2.00-2.20	8	B				. . . from 2.20m depth thin laminations up to 6mm diameter are present.			
2.50	9	D						(1.80)	
3.00-3.20	10	B							
3.50	11	D					-2.25	3.60	
						Trial pit terminated at 3.60m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. TRL-DCP undertaken prior to excavation.
3. Archaeological and UXO watching brief present.
4. Water seepage at 1.50m depth.
5. Trial pit remained stable during excavation.
6. Trial pit backfilled with arisings in reverse order, compacted in layers by the excavator with the use of a compactor plate and the bucket.

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

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Tracked excavator**	**BDrayson**	

STRUCTURAL SOILS

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
SEA Link FEED - Kent Onshore Cable Link		**National Grid**		**R22-TP503A**
Contract Ref:	Start: **28.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **28.09.23**	**1.35**	**E:632680.3 N:163155.7**	**2** of **2**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Tracked excavator**	**BDrayson**	

STRUCTURAL SOILS

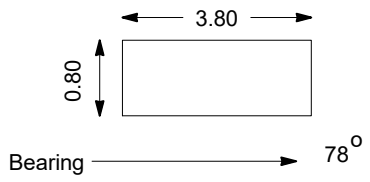
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-TP504**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	**29.09.23**	**1.58**	**E:632320.2 N:163243.1**	**1** of **2**
	End: **29.09.23**			

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Friable dark brown slightly sandy CLAY with rare rootlets up to 5mm diameter. Sand is fine. (TOPSOIL)		(0.30)	
0.20	101	ES	2xT+1xJ+1xV				1.28	0.30	
0.20		PID	0.0ppm			Stiff to very stiff greyish brown mottled orange slightly sandy silty CLAY. Sand is fine. (TIDAL FLAT DEPOSITS)			
0.50	1	D							
0.50	102	ES	2xT+1xJ+1xV						
0.50-0.70	2	B						(0.80)	
0.50		V	c_u=134/150/240						
0.50		V	c_r=70/74/84						
0.50		PID	0.1ppm			. . . from 0.90m depth becomes grey mottled orange.			
1.00	103	ES	2xT+1xJ+1xV				0.48	1.10	
1.00	3	D				Firm grey mottled orange slightly sandy CLAY. Sand is fine. (TIDAL FLAT DEPOSITS)			
1.00-1.20	4	B							
1.00		PID	0.0ppm					(0.80)	
1.10-1.30	5	LB							
1.10		V	c_u=46/42/41						
1.10		V	c_r=18/26/21						
1.50	6	D					-0.32	1.90	
2.00-2.20	7	B				Firm grey mottled dark grey slightly sandy organic CLAY with rare shell fragments. Sand is fine. (TIDAL FLAT DEPOSITS)			
2.50	8	D						(1.60)	
3.00-3.20	9	B							
3.50	10	D					-1.92	3.50	
						Trial pit terminated at 3.50m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. TRL-DCP undertaken prior to excavation.
3. Archaeological and UXO watching brief present.
4. Trial pit remained dry and stable during excavation.
5. Trial pit backfilled with arisings in reverse order, compacted in layers by the excavator with the use of a compactor plate and the bucket.

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

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Tracked excavator+ Dynamic cone penetrometer**	**BDrayson**	

STRUCTURAL SOILS

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
SEA Link FEED - Kent Onshore Cable Link		**National Grid**		**R22-TP504**
Contract Ref:	Start: **29.09.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **29.09.23**	**1.58**	**E:632320.2 N:163243.1**	**2** of **2**

Method Used:	**Machine dug**	Plant Used:	**Tracked excavator+ Dynamic cone penetrometer**	Logged By:	**BDrayson**	Checked By:	

STRUCTURAL SOILS

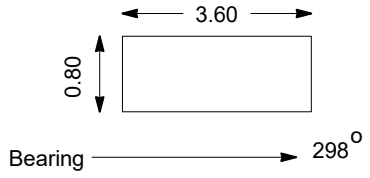
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-TP505**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	**03.10.23** End: **03.10.23**	**1.49**	**E:632088.2 N:163347.6**	**1** of **2**

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			Friable dark brown slightly sandy CLAY with rare rootlets. Sand is fine. (TOPSOIL)		(0.40)	
0.20		PID	0.1ppm				1.09	0.40	
0.50	1	D				Stiff grey mottled orange slightly sandy silty CLAY. Sand is fine. (TIDAL FLAT DEPOSITS)			
0.50	102	ES	2xT+1xJ+1xV						
0.50-0.70	2	B							
0.50		V	c_u=120/100/102						
0.50		V	c_r=58/32/20						
0.50		PID	0.0ppm						
1.00	103	ES	2xT+1xJ+1xV						
1.00	3	D							
1.00-1.20	4	B							
1.00		PID	0.0ppm			. . . becoming firm from 1.20m depth.		(1.80)	
1.20		V	c_u=42/38/38						
1.20		V	c_r=16/12/12						
1.50-1.70	5	LB							
1.50	6	D							
2.00-2.20	7	B					-0.71	2.20	
2.50	8	D				Firm grey slightly sandy organic CLAY. Sand is fine. (TIDAL FLAT DEPOSITS)		(1.30)	
3.00-3.20	9	B					-2.01	3.50	
3.50	10	D				Trial pit terminated at 3.50m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. TRL-DCP undertaken prior to excavation.
3. Archaeological and UXO watching brief present.
4. Trial pit remained dry and stable during excavation.
5. Trial pit backfilled with arisings in reverse order, compacted in layers by the excavator with the use of a compactor plate and the bucket.

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

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Tracked excavator**	**BDrayson**	

STRUCTURAL SOILS

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
SEA Link FEED - Kent Onshore Cable Link		**National Grid**		**R22-TP505**
Contract Ref:	Start: **03.10.23**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: **03.10.23**	**1.49**	**E:632088.2 N:163347.6**	**2** of **2**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**Tracked excavator**	**BDrayson**	

STRUCTURAL SOILS

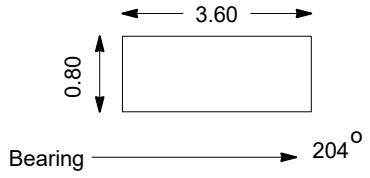
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-TP506**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	**23.10.23** End: **23.10.23**	**1.30**	**E:631772.9 N:163447.2**	**1** of **2**

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			Friable dark brown slightly sandy silty CLAY with rare rootlets. Sand is fine. (TOPSOIL)		(0.40)	
0.20		PID	0.0ppm				0.90	0.40	
0.50	1	D				Stiff grey mottled orange slightly sandy silty CLAY. Sand is fine. (TIDAL FLAT DEPOSITS)			
0.50	102	ES	2xT+1xJ+1xV						
0.50-0.70	2	B							
0.50		V	c_u=88/110/84						
0.50		V	c_r=22/22/14						
0.50		PID	0.1ppm						
1.00	103	ES	2xT+1xJ+1xV					(1.40)	
1.00	3	D							
1.00-1.20	4	B							
1.00-1.20	5	LB		≈		. . . becoming firm from 1.20m depth.			
1.00		PID	0.1ppm						
1.20		V	c_u=38/14/18						
1.20		V	c_r=12/6/8						
1.50	6	D					-0.50	1.80	
2.00	7	D				Soft grey mottled dark grey slightly sandy silty CLAY. Sand is fine. (TIDAL FLAT DEPOSITS)			
2.00-2.20	8	B							
2.50	9	D						(1.20)	
							-1.70	3.00	
3.00-3.20	10	B				Soft grey mottled dark grey slightly sandy slightly gravelly silty CLAY with a low cobble content and rare shell fragments. Sand is fine. Gravel is subangular to subrounded fine to coarse flint. Cobbles are subrounded flint. (TIDAL FLAT DEPOSITS)		(0.60)	
3.50	11	D				. . . from 3.50m depth rare pockets of bluish green fine to medium sand.	-2.30	3.60	
						Trial pit terminated at 3.60m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. TRL-DCP undertaken prior to excavation.
3. Archaeological and UXO watching brief present.
4. Water seepage at 1.30m depth.
5. Trial pit was unstable at 3.60m depth.
6. Trial pit backfilled with arisings in reverse order, compacted in layers by the excavator with the use of a compactor plate and the bucket.

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

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	**BDrayson**	

STRUCTURAL SOILS

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
SEA Link FEED - Kent Onshore Cable Link		National Grid		R22-TP506
Contract Ref:	Start: 23.10.23	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: 23.10.23	1.30	E:631772.9 N:163447.2	2 of 2

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	JCB-3CX	BDrayson	

STRUCTURAL SOILS

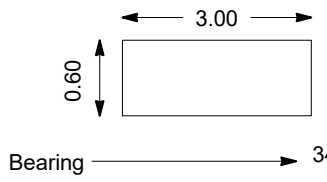
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-TP508**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	**16.10.23** End: **16.10.23**	**1.45**	**E:631490.7 N:163037.7**	**1** of **2**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Crops over stiff brown slightly gravelly silty CLAY with occasional rootlets. Gravel is subangular fine to coarse chalk. (TOPSOIL)		(0.30)	
0.20-0.20	101	ES	2xT+1xJ+1xV				1.15	0.30	
0.20		PID	0.3ppm						
						Stiff, locally friable light brown slightly gravelly clayey SILT with occasional shell fragments. Gravel is angular to subangular fine to coarse chalk. (TIDAL FLAT DEPOSITS)		(0.30)	
0.50-0.50	1	D					0.85	0.60	
0.50-0.50	102	ES	2xT+1xJ+1xV						
0.50-0.60	2	B				Firm light brown mottled light bluish grey slightly gravelly silty CLAY with occasional shell fragments and frequent pockets of orangish brown silt. Gravel is subangular fine to coarse chalk. (TIDAL FLAT DEPOSITS)		(1.30)	
0.50		V	c_u=120/124/122						
0.50		V	c_r=14/44/38						
0.50		PID	0.2ppm						
0.80		V	c_u=68/64/66						
0.80		V	c_r=34/34/32						
1.00-1.00	103	ES	2xT+1xJ+1xV						
1.00-1.00	3	D							
1.00-1.50	4	B							
1.00-1.50	5	LB							
1.00		PID	0.4ppm				-0.46	1.90	
1.20		V	c_u=74/78/76			Very soft light brown mottled light grey and black clayey SILT. Slight organic odour. (TIDAL FLAT DEPOSITS)			
1.20		V	c_r=36/42/40						
1.50-1.50	6	D						(0.60)	
2.00-2.50	7	B							
2.00		V	c_u=18/16/12						
2.00		V	c_r=10/12/10				-1.06	2.50	
2.50-2.50	8	D				Very soft light bluish grey mottled black clayey SILT. Moderate organic odour. (TIDAL FLAT DEPOSITS)			
2.50		V	c_u=12/20/18						
2.50		V	c_r=10/12/10					(0.90)	
3.00-3.50	9	B					-1.96	3.40	
						Very soft light bluish grey mottled black clayey SILT with frequent organic remains and rare pockets of spongy brown fibrous peat. Strong organic odour. (TIDAL FLAT DEPOSITS)	-2.06	3.50	
3.50-3.50	10	D				Trial pit terminated at 3.50m depth.			

Plan (Not to Scale)



General Remarks

1. Position checked with Ground Penetrating Radar, CAT and Genny prior to excavation.
2. TRL-DCP undertaken prior to excavation.
3. Archaeological and UXO watching brief present.
4. Trial pit remained dry and stable during excavation.
5. Trial pit backfilled with arisings in reverse order, compacted in layers by the excavator with the use of a compactor plate and the bucket.

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

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX+ Dynamic cone penetrometer**	**MCapitani**	

STRUCTURAL SOILS

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
SEA Link FEED - Kent Onshore Cable Link		National Grid		R22-TP508
Contract Ref:	Start: 16.10.23	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: 16.10.23	1.45	E:631490.7 N:163037.7	2 of 2

Method Used:	Machine dug	Plant Used:	JCB-3CX+ Dynamic cone penetrometer	Logged By:	MCapitani	Checked By:	

STRUCTURAL SOILS

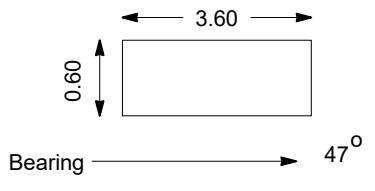
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-TP510**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	**20.10.23** End: **20.10.23**	**1.33**	**E:631857.5 N:163158.8**	**1** of **2**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results						
						Friable dark brown slightly sandy silty CLAY with frequent rootlets. Sand is fine to medium. (TOPSOIL)		(0.40)	
0.20	101	ES	2xT+1xJ+1xV						
0.20		PID	0.0ppm				0.93	0.40	
						Stiff greyish brown mottled orange and grey slightly sandy silty CLAY. Sand is fine. (TIDAL FLAT DEPOSITS)			
0.50	1	D							
0.50	102	ES	2xT+1xJ+1xV						
0.50-0.70	2	B							
0.50		PID	0.0ppm						
1.00	103	ES	2xT+1xJ+1xV					(1.30)	
1.00	3	D							
1.00-1.20	4	B							
1.00-1.20	5	LB							
1.00		V	c_u=70/130/94						
1.00		V	c_r=30/42/30						
1.00		PID	0.0ppm						
1.50	6	D							
1.50		V	c_u=18/28/38						
1.50		V	c_r=6/12/20				-0.37	1.70	
						Soft grey mottled dark grey slightly sandy clayey SILT with rare shell fragments. Sand is fine. (TIDAL FLAT DEPOSITS)			
2.00-2.20	7	B							
2.00	8	D							
2.50	9	D							
								(2.50)	
3.00-3.20	10	B							
3.50	11	D							
3.80-4.00	12	B							
							-2.87	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. TRL-DCP undertaken prior to excavation.
3. Archaeological and UXO watching brief present.
4. Trial pit remained dry and stable during excavation.
5. Trial pit backfilled with arisings in reverse order, compacted in layers by the excavator with the use of a compactor plate and the bucket.

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

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	**BDrayson**	

STRUCTURAL SOILS

TRIAL PIT LOG

Contract:		Client:		Trial Pit:
SEA Link FEED - Kent Onshore Cable Link		National Grid		R22-TP510
Contract Ref:	Start: 20.10.23	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
563607	End: 20.10.23	1.33	E:631857.5 N:163158.8	2 of 2

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	JCB-3CX	BDrayson	

STANDPIPE SUMMARY TABLE

Exploratory Position ID	Pipe ref/ Caption	Installation Date (dd/mm/yyyy)	Ground Level	Length of Pipe (m)	Response Zone Top (m)	Response Zone Base (m)	Slotted Pipe Top (m)	Slotted Pipe Base (m)	Pipe Internal Diameter (mm)	Remarks
R22-BH102	1	09/10/2023	1.59	3.00	0.80	3.00	0.80	3.00	50	
R22-BH103	Shallow	24/10/2023	1.32	1.00	0.50	1.00	0.50	1.00	50	
R22-BH103	Deep	24/10/2023	1.32	6.00	3.00	6.00	3.00	6.00	50	
R22-BH104	1	05/10/2023	1.36	6.00	3.00	6.00	3.00	6.00	50	
R22-BH105	1	05/10/2023	1.43	3.00	0.80	3.00	0.80	3.00	50	
R22-BH204	1	27/09/2023	7.29	29.00	27.00	29.00	27.00	29.00	50	
R22-BH205	1	17/10/2023	1.58	25.00	20.00	25.00	20.00	25.00	50	
R22-BH501	1	04/10/2023	1.49	26.50	24.50	26.50	24.50	26.50	50	
RedP-BH-6	1	27/10/2023	4.10	15.00	10.00	15.00	10.00	15.00	50	

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By: [redacted]

Date: **09.01.24**

Contract Ref: **563607**

Contract: **Sea Link - Richborough**

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STANDPIPE SUMMARY TABLE

Exploratory Position ID	Pipe ref/ Caption	Installation Date (dd/mm/yyyy)	Ground Level	Length of Pipe (m)	Response Zone Top (m)	Response Zone Base (m)	Slotted Pipe Top (m)	Slotted Pipe Base (m)	Pipe Internal Diameter (mm)	Remarks
RedP-BH-8	1	11/10/2023	3.01	16.00	11.00	16.00	11.00	16.00	50	

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18 Frogmore Road
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Hertfordshire
HP3 9RT

Compiled By: [redacted]

Date: **09.01.24**

Contract Ref: **563607**

Contract: **Sea Link - Richborough**

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APPENDIX C -
IN-SITU TESTING

(i) Standard Penetration Test (SPT) Summary Sheet

(ii) SPT N value versus Depth

(iii) SPT N value versus Elevation

(iv) TRL Dynamic Cone Penetrometer Test Results

(v) Trial Pit Soakaway Test Results

(vi) Borehole Soakaway and Permeability Test Results

(vii) Field Soil Thermal Resistivity / Conductivity Test Results

(viii) In-Situ Site Investigation Static Cone Penetration Test Report

(ix) RSK Geosciences Soil Electrical Resistivity Test (VES) 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					
R22-BH101	1.20	200	0.00	Wet	0	>450			N=0	BHDS03-2023	12/08/2023	68		Sunk under own weight
														Initial penetration after lowering of
														drive assembly to base of hole
														was recorded as > 450mm. In this
														situation N=0.
	9.00	200	8.90	2.00	1,1	150	3,3,4,4		N=14	BHDS03-2023	12/08/2023	68	16	
	11.00	200	10.90	5.00	4,5	150	6,5,6,7		N=24	BHDS03-2023	12/08/2023	68	27	
	13.00	200	12.30	6.00	4,5	150	7,11,13,9+	280	4,5/7,11,13,9	BHDS03-2023	12/08/2023	68		
									for 55mm					
	15.00	200	13.00	2.20	6,8	150	14,16,20+	200	6,8/14,16,20	BHDS03-2023	12/08/2023	68		
									for 50mm					
	16.00	200	13.00	4.00	8,15	150	15,20,15+	195	8,15/15,20,15	BHDS03-2023	12/08/2023	68		
									for 45mm					
	17.00	200	16.00	4.00	5,10	150	12,15,19,4+	235	5,10/12,15,19,4	BHDS03-2023	12/08/2023	68		
									for 10mm					
	18.00	200	16.00	4.00	20,5	80	35,15+	85	20,5/35,15	BHDS03-2023	12/08/2023	68		
									for 10mm					
	19.00	200	16.00	4.00	18,7	85	30,20+	90	18,7/30,20	BHDS03-2023	12/08/2023	68		

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:
[redacted]	[redacted]	**08.12.23**	**563607**
Contract: **Sea Link - Richborough**			Page: **1** of **23**

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					
	20.00	200	16.00	4.00	4,5	150	10,14,16,10+	260	4,5/10,14,16,10	BHDS03-2023	12/08/2023	68		
									for 35mm					
	21.00	200	16.00	4.00	5,9	150	10,14,20,6+	235	5,9/10,14,20,6	BHDS03-2023	12/08/2023	68		
									for 10mm					
	22.00	200	16.00	2.50	8,14	150	19,21,10+	180	8,14/19,21,10	BHDS03-2023	12/08/2023	68		
									for 30mm					
	23.00	200	16.00	3.70	6,6	150	8,8,9,11		N=36	BHDS03-2023	12/08/2023	68	41	
	24.00	200	16.00	4.00	5,7	150	10,10,10,11		N=41	BHDS03-2023	12/08/2023	68	46	
	25.00	200	16.00	4.00	7,7	150	10,11,13,15		N=49	BHDS03-2023	12/08/2023	68	56	
R22-BH102	1.20	250	0.00	Dry	0	>450			N=0	BHDS04-2023	12/08/2023	57	0	Sunk under own weight
														Initial penetration after lowering of
														drive assembly to base of hole
														was recorded as > 450mm. In this
														situation N=0.
	9.00	250	8.90	8.70	1,2	150	2,4,4,7		N=17	BHDS04-2023	12/08/2023	57	16	
	11.00	200	10.90	7.00	3,3	150	4,7,9,10		N=30	BHDS04-2023	12/08/2023	57	28	

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
HP3 9RT

Compiled By: [redacted] [redacted]

Date: **08.12.23**

Contract Ref: **563607**

Contract: **Sea Link - Richborough**

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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					
R22-BH102	12.00	200	11.90	11.00	2,5	150	6,6,9,8		N=29	BHDS04-2023	12/08/2023	57	28	
	13.00	200	11.90	5.00	7,8	150	13,25,12+	180	7,8/13,25,12	BHDS04-2023	12/08/2023	57		
									for 30mm					
	14.00	200	13.50	5.00	3,8	150	12,18,20+	220	3,8/12,18,20	BHDS04-2023	12/08/2023	57		
									for 70mm					
	15.00	200	14.90	5.00	5,7	150	10,10,12,16		N=48	BHDS04-2023	12/08/2023	57	46	
	16.00	200	14.90	4.00	3,3	150	10,12,11,16		N=49	BHDS04-2023	12/08/2023	57	47	
	17.00	200	16.50	4.00	7,6	150	8,10,11,10		N=39	BHDS04-2023	12/08/2023	57	37	
	18.00	200	17.90	4.00	7,11	150	10,12,13,14		N=49	BHDS04-2023	12/08/2023	57	47	
	19.00	200	19.00	19.30	9,16	150	20,30	150	9,16/20,30	BHDS04-2023	12/08/2023	57		
									for 75mm					
	20.00	200	19.50	6.00	7,8	150	9,11,12,13		N=45	BHDS04-2023	12/08/2023	57	43	
	21.00	200	20.90	7.00	4,6	150	8,13,15,14+	295	4,6/8,13,15,14	BHDS04-2023	12/08/2023	57		
									for 70mm					
	22.00	200	20.90	7.50	3,4	150	6,6,8,8		N=28	BHDS04-2023	12/08/2023	57	27	
	23.00	200	22.50	11.00	4,5	150	7,7,9,9		N=32	BHDS04-2023	12/08/2023	57	30	
	24.00	200	22.50	7.00	4,5	150	7,8,8,7		N=30	BHDS04-2023	12/08/2023	57	28	
R22-BH102	25.00	200	24.00	8.00	4,5	150	7,8,8,10		N=33	BHDS04-2023	12/08/2023	57	31	

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					
R22-BH103	1.20	250	0.00	Wet	1,0	150	1,0,1,1		N=3	BHDS03-2023	12/08/2023	68	3	
	7.00	250	6.90	3.00	3,4	150	4,6,8,10		N=28	BHDS03-2023	12/08/2023	68	32	
	9.00	250	7.50	4.00	3,5	150	7,8,9,12		N=36	BHDS03-2023	12/08/2023	68	41	
	11.00	200	10.90	5.00	5,6	150	9,11,11,12		N=43	BHDS03-2023	12/08/2023	68	49	
	13.00	200	12.90	12.00	4,7	150	11,12,22,5+	235	4,7/11,12,22,5	BHDS03-2023	12/08/2023	68		
									for 10mm					
	13.70	200	13.90	10.00	8,10	150	18,18,14+	190	8,10/18,18,14	BHDS03-2023	12/08/2023	68		
									for 40mm					
	15.00	200	14.90	10.00	6,10	150	16,22,12+	175	6,10/16,22,12	BHDS03-2023	12/08/2023	68		
									for 25mm					
	16.00	200	15.90	2.50	8,10	150	20,30+	145	8,10/20,30	BHDS03-2023	12/08/2023	68		
									for 70mm					
	17.00	200	16.90	4.00	2,4	150	10,17,23+	195	2,4/10,17,23	BHDS03-2023	12/08/2023	68		
									for 45mm					
	18.00	200	17.90	4.00	5,7	150	11,19,20+	190	5,7/11,19,20	BHDS03-2023	12/08/2023	68		
									for 40mm					
	19.00	200	18.90	2.50	3,3	150	20,30+	145	3,3/20,30	BHDS07-2023	21/02/2023	68		

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					
									for 70mm					
	20.00	200	19.00	4.00	10,10	150	8,12,17,13+	265	10,10/8,12,17,13	BHDS07-2023	21/02/2023	68		
									for 40mm					
	21.00	200	19.00	4.00	5,7	150	9,12,15,14+	275	5,7/9,12,15,14	BHDS07-2023	21/02/2023	68		
									for 50mm					
	22.00	200	19.00	4.00	10,14	150	19,21,10+	175	10,14/19,21,10	BHDS07-2023	21/02/2023	68		
									for 25mm					
	23.00	200	19.00	4.00	4,7	150	8,8,8,13		N=37	BHDS07-2023	21/02/2023	68	42	
	24.00	200	19.00	4.00	3,5	150	8,8,11,12		N=39	BHDS07-2023	21/02/2023	68	44	
	25.00	200	19.00	4.00	5,7	150	8,9,11,13		N=41	BHDS07-2023	21/02/2023	68	46	
R22-BH104	1.20	250	1.00	Dry	0	>450			N=0	BHDS04-2023	12/08/2023	57	0	Sunk under own weight
														Initial penetration after lowering of
														drive assembly to base of hole
														was recorded as > 450mm. In this
														situation N=0.
	4.00	250	3.90	3.50	1,1	150	2,3,3,2		N=10	BHDS04-2023	12/08/2023	57	10	
	6.00	250	5.90	5.70	1,3	150	6,7,7,8		N=28	BHDS04-2023	12/08/2023	57	27	

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					
R22-BH104	8.00	250	7.00	4.00	3,6	150	4,6,7,8		N=25	BHDS04-2023	12/08/2023	57	24	
	10.00	200	9.90	7.00	4,6	150	8,8,10,10		N=36	BHDS04-2023	12/08/2023	57	34	
	11.00	200	10.50	8.00	3,5	150	6,8,10,10		N=34	BHDS04-2023	12/08/2023	57	32	
	12.00	200	11.90	5.00	5,8	150	10,15,25+	170	5,8/10,15,25	BHDS04-2023	12/08/2023	57		
									for 20mm					
	13.00	200	12.40	5.00	6,8	150	12,16,16,6+	235	6,8/12,16,16,6	BHDS04-2023	12/08/2023	57		
									for 10mm					
	14.00	200	13.50	5.50	6,11	150	12,14,15,9+	270	6,11/12,14,15,9	BHDS04-2023	12/08/2023	57		
									for 45mm					
	15.00	200	14.90	8.00	5,9	150	13,13,13,11+	290	5,9/13,13,13,11	BHDS04-2023	12/08/2023	57		
									for 65mm					
	16.00	200	15.90	9.50	12,13	130	27,23	150	12,13/27,23	BHDS04-2023	12/08/2023	57		
									for 75mm					
	17.00	200	16.50	12.00	5,6	150	7,8,10,13		N=38	BHDS04-2023	12/08/2023	57	36	
	18.00	200	17.90	4.00	13,12	135	19,17,14	225	13,12/19,17,14	BHDS04-2023	12/08/2023	57		
									for 75mm					
	19.00	200	18.00	5.50	5,7	150	10,13,15,12+	285	5,7/10,13,15,12	BHDS04-2023	12/08/2023	57		
									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					
R22-BH104	20.00	200	19.50	9.50	4,8	150	15,22,13+	190	4,8/15,22,13	BHDS04-2023	12/08/2023	57		
									for 40mm					
	21.00	200	20.90	12.00	4,6	150	9,11,11,11		N=42	BHDS04-2023	12/08/2023	57	40	
	22.00	200	20.90	13.50	5,6	150	6,8,10,10		N=34	BHDS04-2023	12/08/2023	57	32	
	23.00	200	22.90	14.00	4,5	150	8,9,12,14		N=43	BHDS04-2023	12/08/2023	57	41	
	24.00	200	23.90	14.50	6,7	150	9,10,10,12		N=41	BHDS04-2023	12/08/2023	57	39	
	25.00	200	24.00	14.50	4,5	150	8,9,9,11		N=37	BHDS04-2023	12/08/2023	57	35	
R22-BH105	11.00	200	9.60	2.00	10,15	150	18,32+	120	10,15/18,32	AR3508-2023	06/04/2023	73		
									for 45mm					
	12.00	200	9.60	6.00	10,10	150	18,32+	135	10,10/18,32	AR3508-2023	06/04/2023	73		
									for 60mm					
	13.00	200	9.60	10.00	12,12	150	20,20,10+	185	12,12/20,20,10	AR3508-2023	06/04/2023	73		
									for 35mm					
	14.00	200	9.60	12.00	10,15	150	15,20,15+	210	10,15/15,20,15	AR3508-2023	06/04/2023	73		
									for 60mm					
	15.00	200	9.60	12.50	25,0	150	27,23+	130	25/27,23	AR3508-2023	06/04/2023	73		
									for 55mm					

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					
R22-BH105	16.00	200	9.80	14.00	10,15	145	18,23,9+	200	10,15/18,23,9	AR3508-2023	06/04/2023	73		
									for 50mm					
	17.00	200	9.80	14.00	12,13	145	28,22,0,0		N=50	AR3508-2023	06/04/2023	73	61	
	18.00	150	18.00	16.00	10,13	150	15,18,17+	195	10,13/15,18,17	AR3508-2023	06/04/2023	73		
									for 45mm					
	19.00	150	18.00	17.00	12,12	150	12,12,12,13		N=49	AR3508-2023	06/04/2023	73	60	
	20.00	150	18.00	17.00	11,13	150	15,18,17+	220	11,13/15,18,17	AR3508-2023	06/04/2023	73		
									for 70mm					
	21.00	150	21.00	19.00	9,9	150	9,9,10,9		N=37	AR3508-2023	06/04/2023	73	45	
	23.00	150	22.50	21.00	10,10	150	11,11,11,11		N=44	AR3508-2023	06/04/2023	73	54	
	25.00	150	25.00	21.00	6,10	150	10,10,11,11		N=42	AR3508-2023	06/04/2023	73	51	
R22-BH106A	1.20	250	6.90	0.00	0	>450			N=0	BHDS03-2023	12/08/2023	68		Sunk under own weight
														Initial penetration after lowering of
														drive assembly to base of hole
														was recorded as > 450mm. In this
														situation N=0.
	7.00	250	6.90	6.50	3,5	150	7,8,10,10		N=35	BHDS03-2023	12/08/2023	68	40	

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 Ref: **563607**

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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					
R22-BH106A	8.00	250	7.90	6.00	7,8	150	10,9,9,10		N=38	BHDS03-2023	12/08/2023	68	43	
	9.00	250	8.90	6.50	5,8	150	10,10,11,11		N=42	BHDS03-2023	12/08/2023	68	48	
	10.00	200	9.00	8.00	8,9	150	10,13,13,14+	275	8,9/10,13,13,14	BHDS03-2023	12/08/2023	68		
									for 50mm					
	11.00	200	10.90	10.50	4,7	150	11,10,10,12		N=43	BHDS03-2023	12/08/2023	68	49	
	12.00	200	11.90	11.50	9,11	150	12,13,15,10+	255	9,11/12,13,15,10	BHDS03-2023	12/08/2023	68		
									for 30mm					
	13.00	200	12.90	12.70	13,12	115	50+	70	13,12/50	BHDS03-2023	12/08/2023	68		
									for 70mm					
	14.00	200	13.90	2.50	10,15	145	25,25+	115	10,15/25,25	BHDS03-2023	12/08/2023	68		
									for 40mm					
	15.00	200	14.90	3.00	7,13	150	20,30+	135	7,13/20,30	BHDS03-2023	12/08/2023	68		
									for 60mm					
	16.00	200	15.90	4.00	4,8	150	18,20,12+	185	4,8/18,20,12	BHDS03-2023	12/08/2023	68		
									for 35mm					
	17.00	200	16.90	4.00	2,6	150	10,17,23+	210	2,6/10,17,23	BHDS03-2023	12/08/2023	68		
									for 60mm					
	18.00	200	17.90	4.00	6,10	150	50+	70	6,10/50	BHDS03-2023	12/08/2023	68		

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					
									for 70mm					
	19.00	200	18.90	4.00	11,14	110	40,10+	85	11,14/40,10	BHDS03-2023	12/08/2023	68		
									for 10mm					
	20.00	200	19.90	4.00	4,6	150	8,10,13,15		N=46	BHDS03-2023	12/08/2023	68	52	
	21.00	200	20.90	3.00	4,8	150	10,16,16,8+	250	4,8/10,16,16,8	BHDS03-2023	12/08/2023	68		
									for 25mm					
	22.00	200	21.00	4.00	7,10	150	12,18,20+	220	7,10/12,18,20	BHDS03-2023	12/08/2023	68		
									for 70mm					
	23.00	200	21.00	4.00	4,6	150	9,10,10,10		N=39	BHDS03-2023	12/08/2023	68	44	
	24.00	200	21.00	4.00	5,7	150	11,11,11,11		N=44	BHDS03-2023	12/08/2023	68	50	
	25.00	200	21.00	4.00	4,2	150	9,10,10,12		N=41	BHDS03-2023	12/08/2023	68	46	
R22-BH203	1.20	200	0.00	Dry	1,1	150	2,3,4,3		N=12	BHDS04-2023	12/08/2023	57	11	
	3.00	200	1.50	Dry	3,5	150	7,10,10,12		N=39	BHDS04-2023	12/08/2023	57	37	
	5.00	200	3.00	Dry	3,5	150	7,8,10,11		N=36	BHDS04-2023	12/08/2023	57	34	
	6.00	200	4.50	Damp	3,4	150	7,8,11,17		N=43	BHDS04-2023	12/08/2023	57	41	
	7.00	200	4.50	Dry	4,5	150	8,9,11,10		N=38	BHDS04-2023	12/08/2023	57	36	
	8.00	200	4.50	Dry	7,13	150	16,25,9+	170	7,13/16,25,9	BHDS04-2023	12/08/2023	57		

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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Contract Ref: **563607**

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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 20mm					
	9.00	200	4.50	8.70	6,13	150	26,24+	125	6,13/26,24	BHDS04-2023	12/08/2023	57		
									for 50mm					
	10.00	200	4.50	9.50	5,7	150	13,15,16,6+	245	5,7/13,15,16,6	BHDS04-2023	12/08/2023	57		
									for 20mm					
	11.00	200	4.50	10.00	3,5	150	8,12,16,14+	275	3,5/8,12,16,14	BHDS04-2023	12/08/2023	57		
									for 50mm					
	12.00	200	4.50	8.00	4,9	150	16,34	150	4,9/16,34	BHDS04-2023	12/08/2023	57		
									for 75mm					
	13.00	200	4.50	7.00	10,15	115	40,10+	85	10,15/40,10	BHDS04-2023	12/08/2023	57		
									for 10mm					
	14.00	200	4.50	5.00	4,7	150	8,9,10,14		N=41	BHDS04-2023	12/08/2023	57	39	
	15.00	200	4.50	5.50	7,10	150	11,12,13,14		N=50	BHDS04-2023	12/08/2023	57	48	
R22-BH204	1.20	250	1.00	Dry	1,2	150	2,2,2,3		N=9	AR3508-2023	06/04/2023	73	11	
	3.00	250	2.80	Dry	6,7	150	9,9,10,12		N=40	AR3508-2023	06/04/2023	73	49	
	5.00	250	4.00	Dry	8,9	150	10,11,11,14		N=46	AR3508-2023	06/04/2023	73	56	
	7.00	250	5.50	Dry	10,14	150	12,12,13,13+	250	10,14/12,12,13,13	AR3508-2023	06/04/2023	73		

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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Date: **08.12.23**

Contract Ref: **563607**

Contract: **Sea Link - Richborough**

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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 25mm					
	9.00	250	5.50	Dry	15,10	135	50+	73	15,10/50	AR3508-2023	06/04/2023	73		
									for 73mm					
	11.00	250	10.00	3.40	9,16	150	25,25	150	9,16/25,25	AR3508-2023	06/04/2023	73		
									for 75mm					
	13.00	250	13.00	9.00	6,6	150	12,24,14+	210	6,6/12,24,14	AR3508-2023	06/04/2023	73		
									for 60mm					
	14.00	250	14.00	10.00	8,8	150	13,26,11+	190	8,8/13,26,11	AR3508-2023	06/04/2023	73		
									for 40mm					
	15.00	250	15.00	4.20	10,10	150	12,12,12,14		N=50	AR3508-2023	06/04/2023	73	61	
	17.00	250	16.50	12.00	10,11	150	11,12,12,13		N=48	AR3508-2023	06/04/2023	73	58	
	18.00	250	17.80	15.20	7,9	150	11,12,12,13		N=48	AR3508-2023	06/04/2023	73	58	
	19.00	250	17.80	15.00	6,8	150	9,10,10,11		N=40	AR3508-2023	06/04/2023	73	49	
	20.00	250	18.00	18.00	7,8	150	10,20,20+	210	7,8/10,20,20	AR3508-2023	06/04/2023	73		
									for 60mm					
	21.00	250	18.00	18.00	9,9	150	11,11,12,14		N=48	AR3508-2023	06/04/2023	73	58	
	22.00	250	18.00	18.00	12,12	150	12,20,18+	220	12,12/12,20,18	AR3508-2023	06/04/2023	73		
									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

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

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[redacted]	[redacted]	**08.12.23**	**563607**
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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					
R22-BH204	23.00	250	18.00	20.00	12,13	100	50	75	12,13/50	AR3508-2023	06/04/2023	73		
									for 75mm					
	24.00	250	24.00	18.00	6,6	150	6,6,8,9		N=29	AR3508-2023	06/04/2023	73	35	
	25.00	250	24.00	18.00	2,3	150	3,3,3,4		N=13	AR3508-2023	06/04/2023	73	16	
	26.00	250	25.50	18.00	10,10	150	16,16,18+	185	10,10/16,16,18	AR3508-2023	06/04/2023	73		
									for 35mm					
	27.00	250	27.00	18.00	8,8	150	9,9,9,9		N=36	AR3508-2023	06/04/2023	73	44	
	28.00	250	27.00	18.00	7,8	150	9,8,8,8		N=33	AR3508-2023	06/04/2023	73	40	
	29.00	250	27.00	15.00	5,6	150	8,8,9,9		N=34	AR3508-2023	06/04/2023	73	41	
R22-BH205	1.20	250	0.00	0.00	0	>450			N=0	BHDS04-2023	12/08/2023	57		Sunk under own weight
														Initial penetration after lowering of
														drive assembly to base of hole
														was recorded as > 450mm. In this
														situation N=0.
	9.00	250	8.90	8.00	1,2	150	2,3,4,6		N=15	BHDS04-2023	12/08/2023	57	14	
	10.00	200	9.90	3.00	1,1	150	2,3,4,5		N=14	BHDS04-2023	12/08/2023	57	13	
	11.00	200	10.50	5.00	2,2	150	4,6,7,7		N=24	BHDS04-2023	12/08/2023	57	23	

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: [redacted] [redacted]

Date: **08.12.23**

Contract Ref: **563607**

Contract: **Sea Link - Richborough**

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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					
R22-BH205	12.00	200	11.90	7.00	6,8	150	9,11,11,13		N=44	BHDS04-2023	12/08/2023	57	42	
	13.00	200	12.90	7.00	4,7	150	10,16,15,9+	265	4,7/10,16,15,9	BHDS04-2023	12/08/2023	57		
									for 40mm					
	14.00	200	13.50	6.00	5,5	150	5,9,9,15		N=38	BHDS04-2023	12/08/2023	57	36	
	15.00	200	14.90	4.00	3,9	150	13,16,21	225	3,9/13,16,21	BHDS04-2023	12/08/2023	57		
									for 75mm					
	16.00	200	15.90	6.50	9,14	150	19,19,12+	200	9,14/19,19,12	BHDS04-2023	12/08/2023	57		
									for 50mm					
	17.00	200	16.00	6.50	6,9	150	12,20,18+	190	6,9/12,20,18	BHDS04-2023	12/08/2023	57		
									for 40mm					
	18.00	200	16.00	8.00	5,11	150	30,20+	85	5,11/30,20	BHDS04-2023	12/08/2023	57		
									for 10mm					
	19.00	200	16.00	6.50	5,20	150	40,10+	85	5,20/40,10	BHDS04-2023	12/08/2023	57		
									for 10mm					
	20.00	200	16.00	6.00	7,10	150	10,10,12,17		N=49	BHDS04-2023	12/08/2023	57	47	
	21.00	200	16.00	6.00	5,7	150	8,14,15,13+	295	5,7/8,14,15,13	BHDS04-2023	12/08/2023	57		
									for 70mm					
	22.00	200	16.00	3.50	7,13	150	13,12,13,12+	275	7,13/13,12,13,12	BHDS04-2023	12/08/2023	57		

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: [redacted] [redacted]

Date: **08.12.23**

Contract Ref: **563607**

Contract: **Sea Link - Richborough**

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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					
	23.00	200	16.00	4.00	4,6	150	7,8,9,9		N=33	BHDS04-2023	12/08/2023	57	31	
	24.00	200	16.00	3.00	4,5	150	8,8,9,10		N=35	BHDS04-2023	12/08/2023	57	33	
	25.00	200	16.00	6.50	5,6	150	8,9,12,11		N=40	BHDS04-2023	12/08/2023	57	38	
R22-BH501	1.20	250	0.00	1.20	1,0	150	0,1,0,1		N=2	BHDS03-2023	12/08/2023	68	2	
	3.00	250	3.00	Dry	1,0	150	0,1,0,1		N=2	BHDS03-2023	12/08/2023	68	2	
	7.50	250	7.30	6.40	1,1	150	2,2,3,3		N=10	BHDS03-2023	12/08/2023	68	11	
	9.50	200	8.40	Dry	3,3	150	6,6,7,7		N=26	BHDS03-2023	12/08/2023	68	29	
	11.50	200	11.40	2.00	3,7	150	10,25,15+	180	3,7/10,25,15	BHDS03-2023	12/08/2023	68		
									for 30mm					
	12.50	200	12.40	3.00	3,5	150	9,11,20,10+	245	3,5/9,11,20,10	BHDS03-2023	12/08/2023	68		
									for 20mm					
	13.50	200	13.40	13.20	5,12	150	15,17,18+	195	5,12/15,17,18	BHDS03-2023	12/08/2023	68		
									for 45mm					
	14.50	200	14.40	14.00	3,7	150	10,15,16,9+	255	3,7/10,15,16,9	BHDS03-2023	12/08/2023	68		
									for 30mm					
	15.50	200	15.40	4.00	3,5	150	10,40+	135	3,5/10,40	BHDS03-2023	12/08/2023	68		

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: [redacted]

Date: **08.12.23**

Contract Ref: **563607**

Contract: **Sea Link - Richborough**

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 60mm					
	16.50	200	16.40	4.00	3,7	150	10,12,18,10+	255	3,7/10,12,18,10	BHDS03-2023	12/08/2023	68		
									for 30mm					
	17.50	200	17.40	4.00	7,8	150	9,15,20,6+	237	7,8/9,15,20,6	BHDS03-2023	12/08/2023	68		
									for 12mm					
	18.50	200	18.40	2.00	5,7	150	11,11,15,13+	265	5,7/11,11,15,13	BHDS03-2023	12/08/2023	68		
									for 40mm					
	19.50	200	19.40	4.00	6,7	150	8,8,10,10		N=36	BHDS03-2023	12/08/2023	68	41	
	20.50	200	20.40	4.00	5,6	150	7,8,10,12		N=37	BHDS03-2023	12/08/2023	68	42	
	21.50	200	21.40	4.00	6,6	150	9,9,13,13		N=44	BHDS03-2023	12/08/2023	68	50	
	22.50	200	22.40	3.50	5,7	150	10,10,10,12		N=42	BHDS03-2023	12/08/2023	68	48	
	23.50	200	23.40	3.70	6,8	150	10,13,14,13+	275	6,8/10,13,14,13	BHDS03-2023	12/08/2023	68		
									for 50mm					
	24.50	200	24.40	4.00	5,6	150	8,8,10,10		N=36	BHDS03-2023	12/08/2023	68	41	
	25.50	200	25.40	4.00	4,4	150	7,11,13,15		N=46	BHDS03-2023	12/08/2023	68	52	
	26.50	200	26.40	4.00	5,7	150	10,18,20,2+	230	5,7/10,18,20,2	BHDS03-2023	12/08/2023	68		
									for 5mm					
	27.50	200	27.40	4.00	2,2	150	4,5,6,7		N=22	BHDS03-2023	12/08/2023	68	25	

Notes:
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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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[redacted]	[redacted]	**08.12.23**	**563607**
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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					
R22-BH501	28.50	200	28.40	4.00	5,5	150	5,5,5,6		N=21	BHDS03-2023	12/08/2023	68	24	
	29.50	200	29.40	4.00	3,6	150	5,6,9,10		N=30	BHDS03-2023	12/08/2023	68	34	
	30.50	200	30.00	4.00	3,5	150	6,6,8,10		N=30	BHDS03-2023	12/08/2023	68	34	
	31.50	200	30.00	4.00	3,5	150	6,6,9,9		N=30	BHDS03-2023	12/08/2023	68	34	
R22-BH502	1.20	250	0.00	Damp	1,1	150	0,1,0,1		N=2	BHDS04-2023	12/08/2023	57	2	
	12.00	250	11.50	6.50	1,2	150	3,3,4,5		N=15	BHDS04-2023	12/08/2023	57	14	
	13.00	250	12.00	7.00	2,2	150	2,3,6,7		N=18	BHDS04-2023	12/08/2023	57	17	
	14.00	200	13.50	4.70	7,12	150	17,25,8+	160	7,12/17,25,8	BHDS04-2023	12/08/2023	57		
									for 10mm					
	15.00	200	14.90	6.00	5,10	150	10,13,16,11+	260	5,10/10,13,16,11	BHDS04-2023	12/08/2023	57		
									for 35mm					
	16.00	200	14.90	5.00	6,12	150	17,18,15+	220	6,12/17,18,15	BHDS04-2023	12/08/2023	57		
									for 70mm					
	17.00	200	16.50	5.00	5,9	150	10,11,15,14+	285	5,9/10,11,15,14	BHDS04-2023	12/08/2023	57		
									for 60mm					
	18.00	200	17.50	6.50	7,18	125	50+	50	7,18/50	BHDS04-2023	12/08/2023	57		
									for 50mm					

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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Compiled By: [redacted] [redacted]

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Contract: **Sea Link - Richborough**

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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					
R22-BH502	19.00	200	17.50	7.00	12,13	150	16,15,15,4+	235	12,13/16,15,15,4	BHDS04-2023	12/08/2023	57		
									for 10mm					
	20.00	200	19.50		8,11	150	12,12,11,15		N=50	BHDS04-2023	12/08/2023	57	48	
	21.00	200	19.50	4.50	5,6	150	8,10,12,13		N=43	BHDS04-2023	12/08/2023	57	41	
	22.00	200	21.00	5.00	5,8	150	8,11,16,15+	295	5,8/8,11,16,15	BHDS04-2023	12/08/2023	57		
									for 70mm					
	23.00	200	21.00	5.00	4,5	150	8,8,9,10		N=35	BHDS04-2023	12/08/2023	57	33	
	24.00	200	21.00	2.00	4,5	150	7,8,8,11		N=34	BHDS04-2023	12/08/2023	57	32	
	25.00	200	21.00	7.50	4,6	150	7,8,9,9		N=33	BHDS04-2023	12/08/2023	57	31	
RedP-BH-6	1.20	200	1.20	Dry	1,0	150	1,1,2,2		N=6	AR2670-2023	27/03/2023	64	6	
	3.00	200	1.50	Dry	1,0	150	1,0,1,1		N=3	AR2670-2023	27/03/2023	64	3	
	5.00	200	3.00	Dry	1,2	150	3,3,3,3		N=12	AR2670-2023	27/03/2023	64	13	
	7.00	200	4.50	6.70	4,4	150	6,7,8,8		N=29	AR2670-2023	27/03/2023	64	31	
	8.00	200	6.00	0.50	10,12	150	12,12,12,14		N=50	AR2670-2023	27/03/2023	64	53	
	11.00	146	11.00	2.33	3,4	150	6,7,10,11		N=34	AR1321-2022	13/12/2022	62	35	SPT(c)
	14.00	146	14.00	2.26	2,3	150	5,6,13,12		N=36	AR1321-2022	13/12/2022	62	37	SPT(c)
	17.00	146	17.00	2.50	4,6	150	10,11,13,19		N=53	AR1321-2022	13/12/2022	62	55	SPT(c)

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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Compiled By: [redacted] [redacted]

Date: **08.12.23**

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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-6	20.00	146	20.00	2.40	7,10	150	12,10,13,16		N=51	AR1321-2022	13/12/2022	62	53	SPT(c)
	23.00	146	23.00	2.35	4,4	150	4,0,0,4		N=8	AR1321-2022	13/12/2022	62	8	SPT(c)
	26.00	146	26.00	2.45	6,9	150	10,16,17,46		N=89	AR1321-2022	13/12/2022	62	92	SPT(c)
	29.00	146	29.00	2.50	6,12	150	20,22,23,35+	295	6,12/20,22,23,35 for 70mm	AR1321-2022	13/12/2022	62		SPT(c)
RedP-BH-7	2.50	200	2.50	Dry	0	>450			N=0	AR1862-2023	10/03/2023	75		Sunk under own weight
														Initial penetration after lowering of drive assembly to base of hole was recorded as > 450mm. In this situation N=0.
	4.50	200	4.50	Dry	1,1	150	1,1,1,1		N=4	AR1862-2023	10/03/2023	75	5	
	8.50	146	8.50	0.83	1,1	150	1,2,2,2		N=7	AR3508-2023	06/04/2023	73	9	SPT(c)
	11.50	146	11.50	1.30	2,2	150	3,2,3,3		N=11	AR3508-2023	06/04/2023	73	13	SPT(c)
	14.50	146	14.00	1.34	3,5	150	8,10,12,15		N=45	AR3508-2023	06/04/2023	73	55	SPT(c)
	17.50	146	17.50	1.20	4,3	150	7,10,12,13		N=42	AR3508-2023	06/04/2023	73	51	SPT(c)
	20.50	146	20.50	1.21	2,4	150	7,7,8,7		N=29	AR3508-2023	06/04/2023	73	35	SPT(c)
	23.50	146	23.00	1.38	3,6	150	7,9,13,21		N=50	AR3508-2023	06/04/2023	73	61	SPT(c)
	26.50	146	26.00	4.14	4,6	150	11,15,13,17		N=56	AR3508-2023	06/04/2023	73	68	SPT(c)

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: [redacted] [redacted]

Date: **08.12.23**

Contract Ref: **563607**

Contract: **Sea Link - Richborough**

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-7	29.50	146	29.00	1.22	5,7	150	9,8,10,15		N=42	AR3508-2023	06/04/2023	73	51	SPT(c)
RedP-BH-8	1.00	200	0.00	Wet	1,1	150	2,2,1,3		N=8	BHDS03-2023	12/08/2023	68	9	
	3.00	200	2.70	Dry	1,2	150	3,3,4,4		N=14	BHDS03-2023	12/08/2023	68	16	
	5.00	200	2.70	Dry	4,5	150	6,7,8,8		N=29	BHDS03-2023	12/08/2023	68	33	
	7.00	200	6.90	6.50	5,5	150	7,9,10,10		N=36	BHDS03-2023	12/08/2023	68	41	
	11.00	146	10.50	1.20	5,6	150	9,7,10,13		N=39	AR1321-2022	13/12/2022	62	40	SPT(c)
	14.00	146	13.50	1.08	3,6	150	9,9,14,12		N=44	AR1321-2022	13/12/2022	62	45	SPT(c)
	17.00	146	16.50	1.19	5,6	150	8,7,8,10		N=33	AR1321-2022	13/12/2022	62	34	SPT(c)
	20.00	146	19.50	1.95	4,4	150	6,7,8,8		N=29	AR1321-2022	13/12/2022	62	30	SPT(c)
	23.00	146	22.50	3.60	6,7	150	10,10,11,13		N=44	AR1321-2022	13/12/2022	62	45	SPT(c)
RedP-BH-9	1.20	200	1.30	Dry	2,2	150	2,1,1,2		N=6	AR2670-2023	27/03/2023	64	6	
	2.00	200	1.50	Dry	3,2	150	2,2,1,1		N=6	AR2670-2023	27/03/2023	64	6	
	4.00	200	3.00	Dry	1,0	150	1,1,2,1		N=5	AR2670-2023	27/03/2023	64	5	
	6.00	200	3.00	0.50	3,3	150	2,3,3,3		N=11	AR2670-2023	27/03/2023	64	12	
	8.00	200	5.50	1.50	7,10	150	10,12,13,15		N=50	AR2670-2023	27/03/2023	64	53	
	11.00	146	11.00	1.43	4,5	150	5,6,7,6		N=24	AR1321-2022	13/12/2022	62	25	SPT(c)

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: [redacted] [redacted]

Date: **08.12.23**

Contract Ref: **563607**

Contract: **Sea Link - Richborough**

AGS

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-9	14.00	146	14.00	4.13	5,8	150	9,12,13,19		N=53	AR1321-2022	13/12/2022	62	55	SPT(c)
	17.00	146	17.00	1.36	5,7	150	9,17,20,20		N=66	AR1321-2022	13/12/2022	62	68	SPT(c)
	20.00	146	20.00	1.86	5,8	150	9,10,11,17		N=47	AR1321-2022	13/12/2022	62	49	SPT(c)
	23.00	146	23.00	1.40	4,8	150	11,7,4,4		N=26	AR1321-2022	13/12/2022	62	27	SPT(c)
	26.00	146	26.00	1.55	4,6	150	12,13,16,24		N=65	AR1321-2022	13/12/2022	62	67	SPT(c)
	29.00	146	29.00	2.00	8,8	150	100+	5	8,8/100 for 5mm	AR1321-2022	13/12/2022	62		SPT(c)
RedP-BH-10	1.20	250	0.00	Dry		0	2,2,2,2		N=8	AR3508-2023	06/04/2023	73	10	
	3.00	250	0.00	Dry	1,0	150	1,1,0,1		N=3	AR3508-2023	06/04/2023	73	4	
	5.00	250	0.00	Dry	4,6	150	5,4,5,5		N=19	AR3508-2023	06/04/2023	73	23	
	7.00	250	0.00	Dry	1,2	150	3,3,4,4		N=14	AR3508-2023	06/04/2023	73	17	
	9.00	250	9.00	8.00	6,6	150	50+	35	6,6/50 for 35mm	AR3508-2023	06/04/2023	73		
	11.00	250	10.00	Dry	4,2	150	2,2,3,4		N=11	AR3508-2023	06/04/2023	73	13	
	13.00	250	12.80	2.50	3,5	150	5,5,5,5		N=20	AR3508-2023	06/04/2023	73	24	
	15.00	200	15.00	1.00	10,12	150	12,19,12,7+	260	10,12/12,19,12,7 for 35mm	AR3508-2023	06/04/2023	73		
	18.50	146	18.00	7.32	5,5	150	6,6,8,6		N=26	AR1321-2022	13/12/2022	62	27	SPT(c)

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: [redacted] [redacted]

Date: **08.12.23**

Contract Ref: **563607**

Contract: **Sea Link - Richborough**

AGS

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-10	21.50	146	21.00	9.10	6,5	150	7,9,12,16		N=44	AR1321-2022	13/12/2022	62	45	SPT(c)
	24.50	146	24.00	9.04	6,6	150	6,7,11,15		N=39	AR1321-2022	13/12/2022	62	40	SPT(c)
	27.50	146	27.00	9.07	4,5	150	8,10,15,18		N=51	AR1321-2022	13/12/2022	62	53	SPT(c)
	30.50	146	30.00	9.10	4,5	150	9,16,23,15		N=63	AR1321-2022	13/12/2022	62	65	SPT(c)
	33.50	146	33.00	8.80	7,10	150	15,16,31,34		N=96	AR1321-2022	13/12/2022	62	99	SPT(c)
	36.50	146	36.00	9.07	7,10	150	16,24,39,21+	265	7,10/16,24,39,21	AR1321-2022	13/12/2022	62		SPT(c)
									for 40mm					
RedP-BH-11	1.20	200	0.00	Dry	1,3	150	2,2,2,2		N=8	AR3508-2023	06/04/2023	73	10	
	2.00	200	1.50	Dry	5,8	150	8,8,6,8		N=30	AR3508-2023	06/04/2023	73	36	
	4.00	200	3.00	Dry	3,5	150	8,10,10,15		N=43	AR3508-2023	06/04/2023	73	52	
	6.00	200	4.50	Dry	3,3	150	4,6,5,6		N=21	AR3508-2023	06/04/2023	73	26	
	10.00	200	7.50	5.00	11,14	145	16,26,8+	170	11,14/16,26,8	AR3508-2023	06/04/2023	73		
									for 20mm					
	11.00	200	7.50	5.80	12,13	150	14,16,11,9+	250	12,13/14,16,11,9	AR3508-2023	06/04/2023	73		
									for 25mm					
	12.00	200	7.50	6.00	12,12	150	12,14,16,8+	255	12,12/12,14,16,8	AR3508-2023	06/04/2023	73		
									for 30mm					
	13.00	200	7.50	6.00	25	70	50+	30	25/50	AR3508-2023	06/04/2023	73		

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: [redacted] [redacted]

Date: **08.12.23**

Contract Ref: **563607**

Contract: **Sea Link - Richborough**

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					
	14.00	200	7.50	7.00	25,0	150	50	75	25/50	AR3508-2023	06/04/2023	73		
									for 75mm					
	15.00	200	7.50	7.30	7,8	150	15,15,16,4+	235	7,8/15,15,16,4	AR3508-2023	06/04/2023	73		
									for 10mm					
	16.00	200	7.50	8.00	9,12	150	12,13,12,12		N=49	AR3508-2023	06/04/2023	73	60	
	17.00	200	7.50	10.00	7,11	150	12,12,12,12		N=48	AR3508-2023	06/04/2023	73	58	
	18.00	200	7.50	10.50	4,5	150	6,7,8,8		N=29	AR3508-2023	06/04/2023	73	35	
	19.00	200	7.50	10.00	7,8	150	8,9,9,9		N=35	AR3508-2023	06/04/2023	73	43	
	20.00	200	7.50	11.00	8,9	150	9,9,8,9		N=35	AR3508-2023	06/04/2023	73	43	

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: [redacted] [redacted]

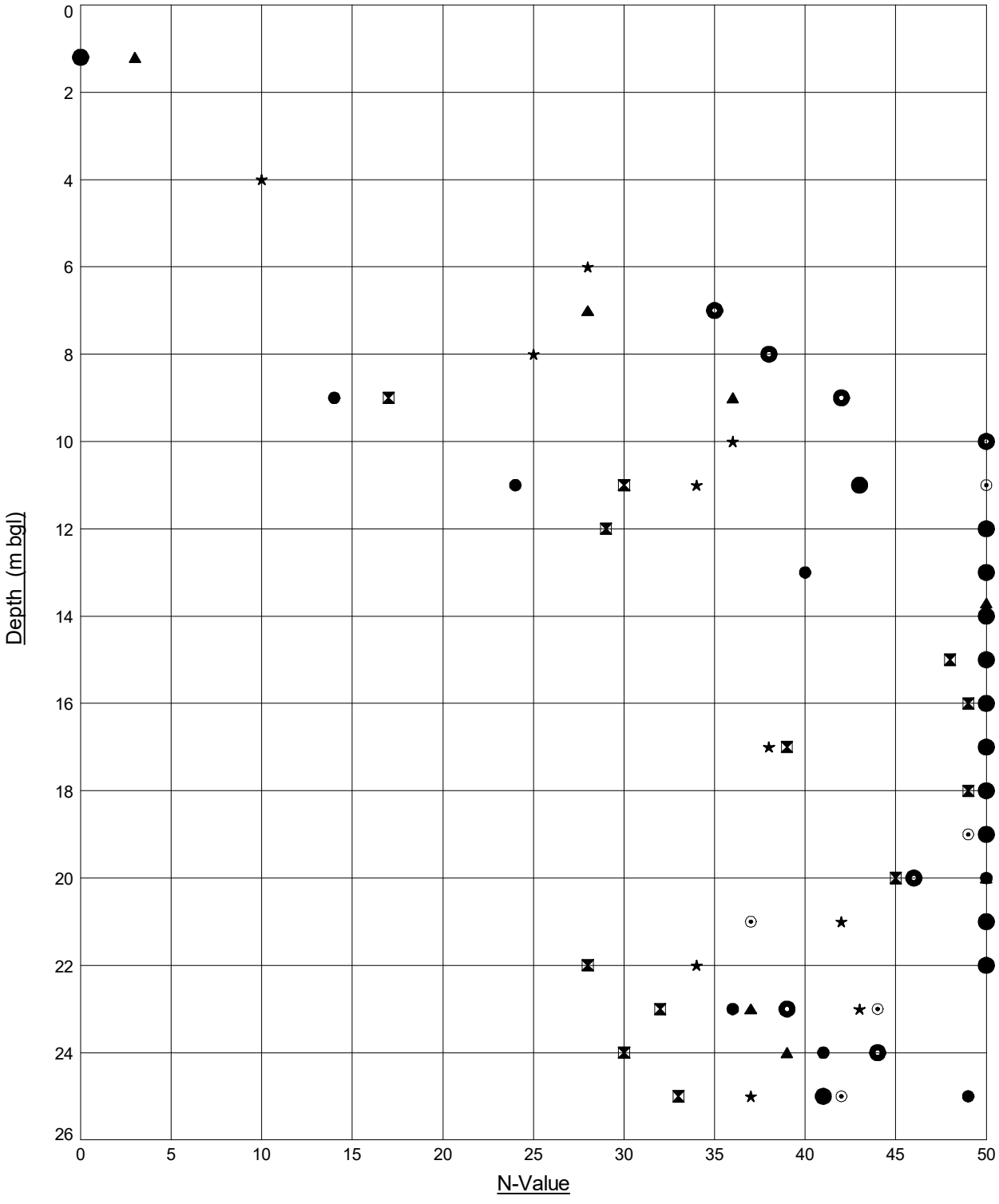
Date: **08.12.23**

Contract Ref: **563607**

Contract: **Sea Link - Richborough**

AGS

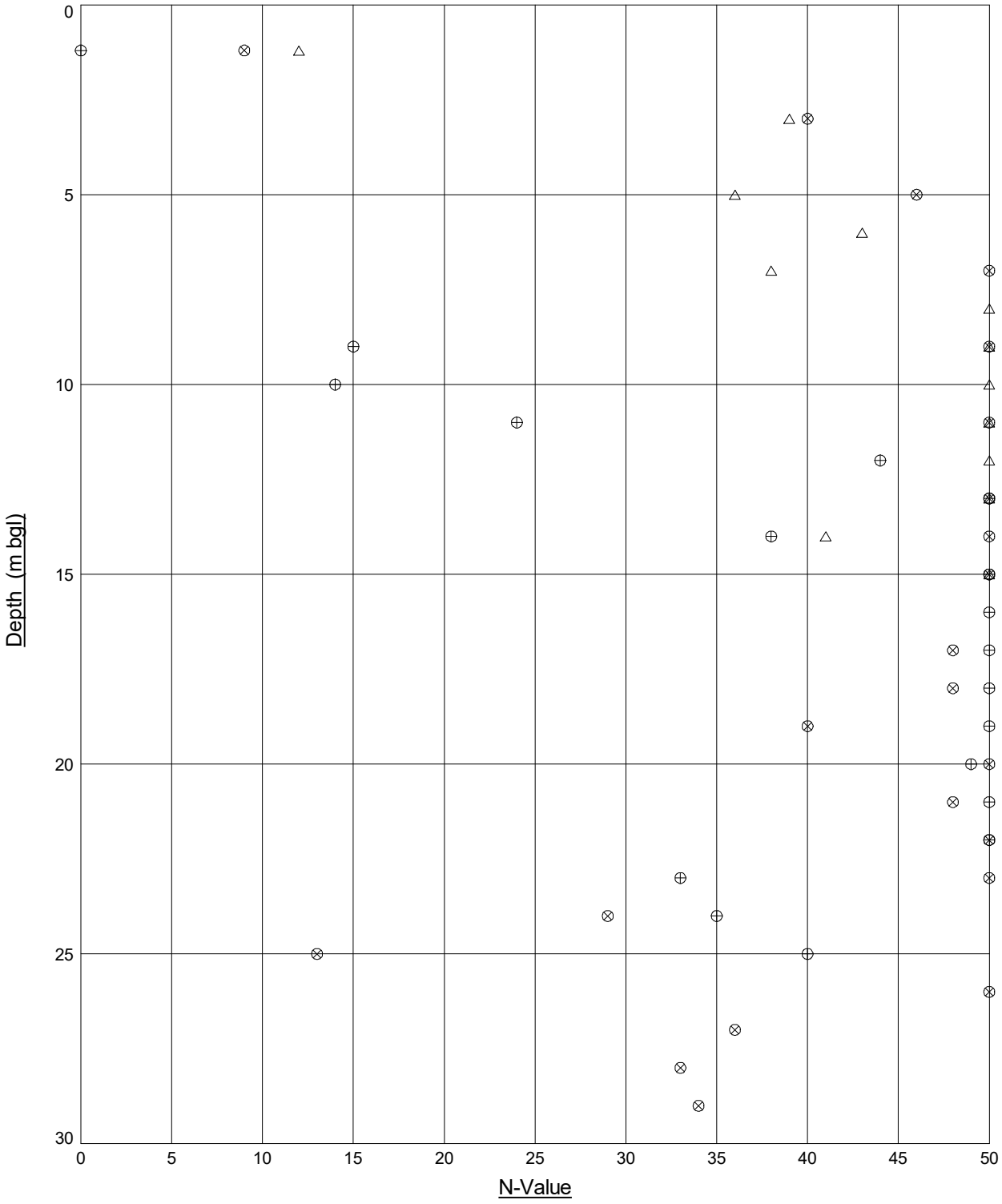
STANDARD PENETRATION TEST (SPT N-Value) vs DEPTH



Key: ● = R22-BH101, ⧓ = R22-BH102, ▲ = R22-BH103, ★ = R22-BH104, ⊙ = R22-BH105, ◉ = R22-BH106A

STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Contract **Sea Link - Richborough**	Date **06.12.23**	Compiled By [redacted]
	Client **National Grid**	Contract Ref: **563607**	AGS

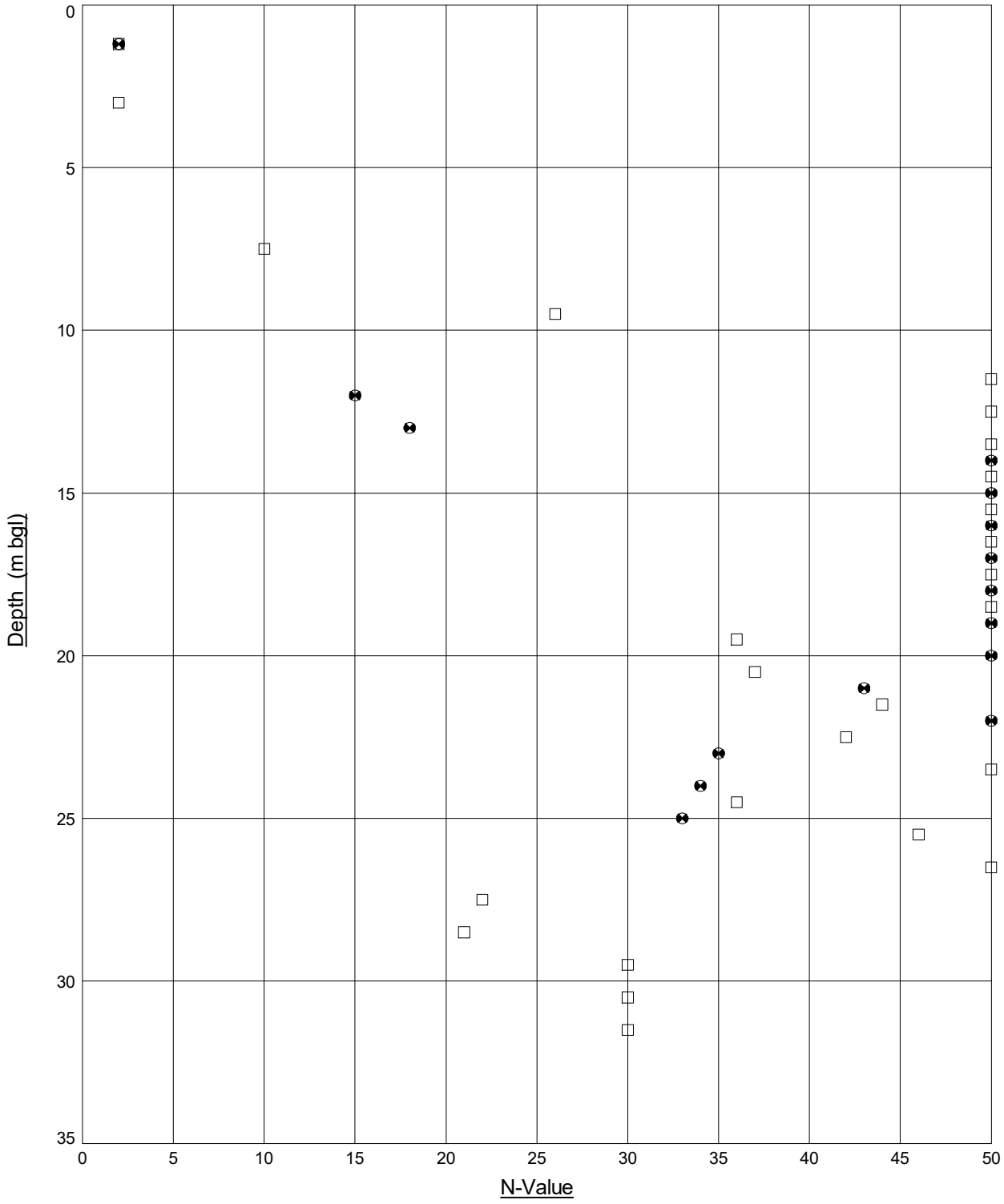
STANDARD PENETRATION TEST (SPT N-Value) vs DEPTH



Key: △ = R22-BH203, ⊗ = R22-BH204, ⊕ = R22-BH205

STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Contract **Sea Link - Richborough**	Date **06.12.23**	Compiled By [redacted]
	Client **National Grid**	Contract Ref: **563607**	AGS

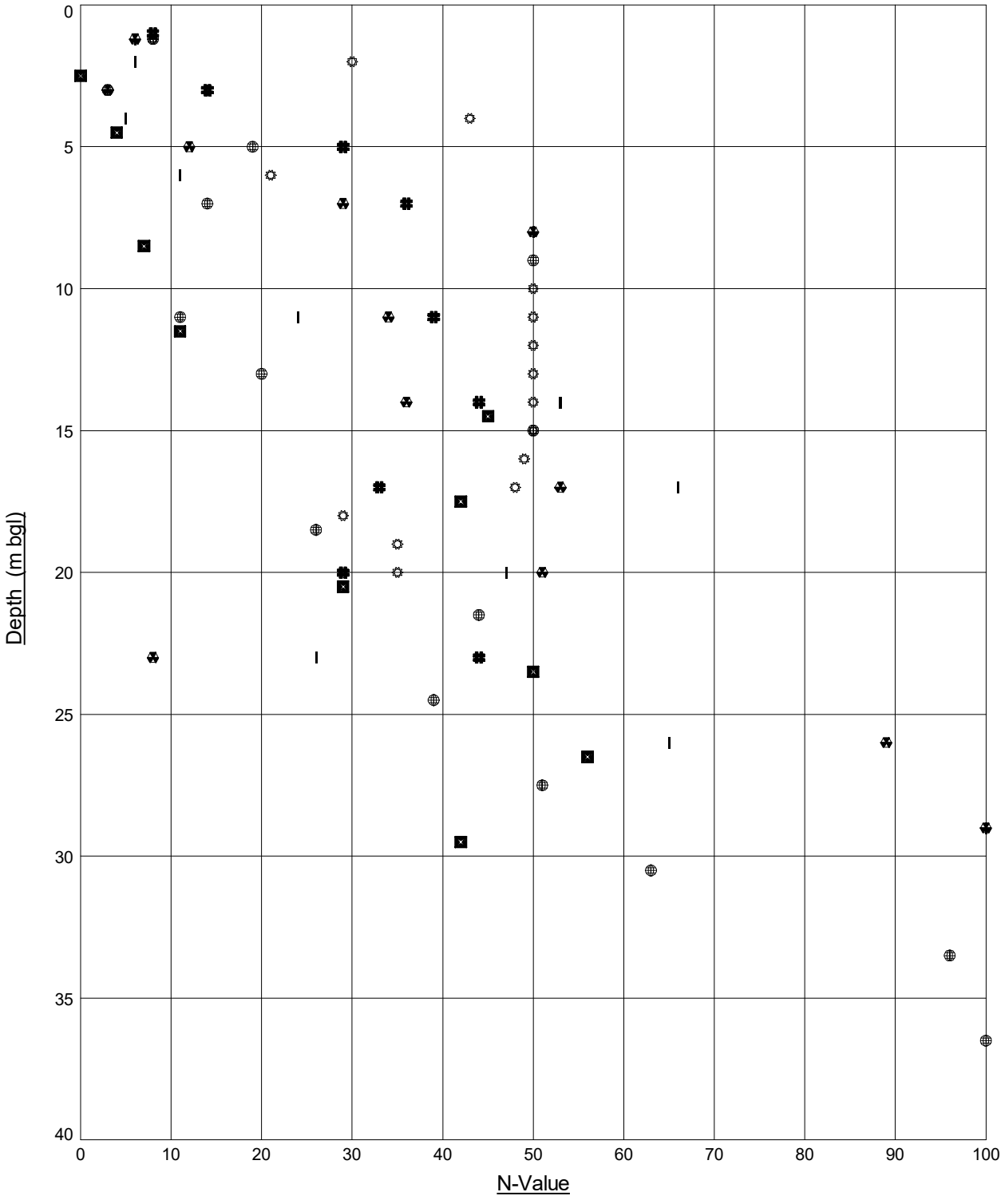
STANDARD PENETRATION TEST (SPT N-Value) vs DEPTH



Key: □ = R22-BH501, ⊠ = R22-BH502

STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Contract **Sea Link - Richborough**	Date **06.12.23**	Compiled By [redacted]
	Client **National Grid**	Contract Ref: **563607**	AGS

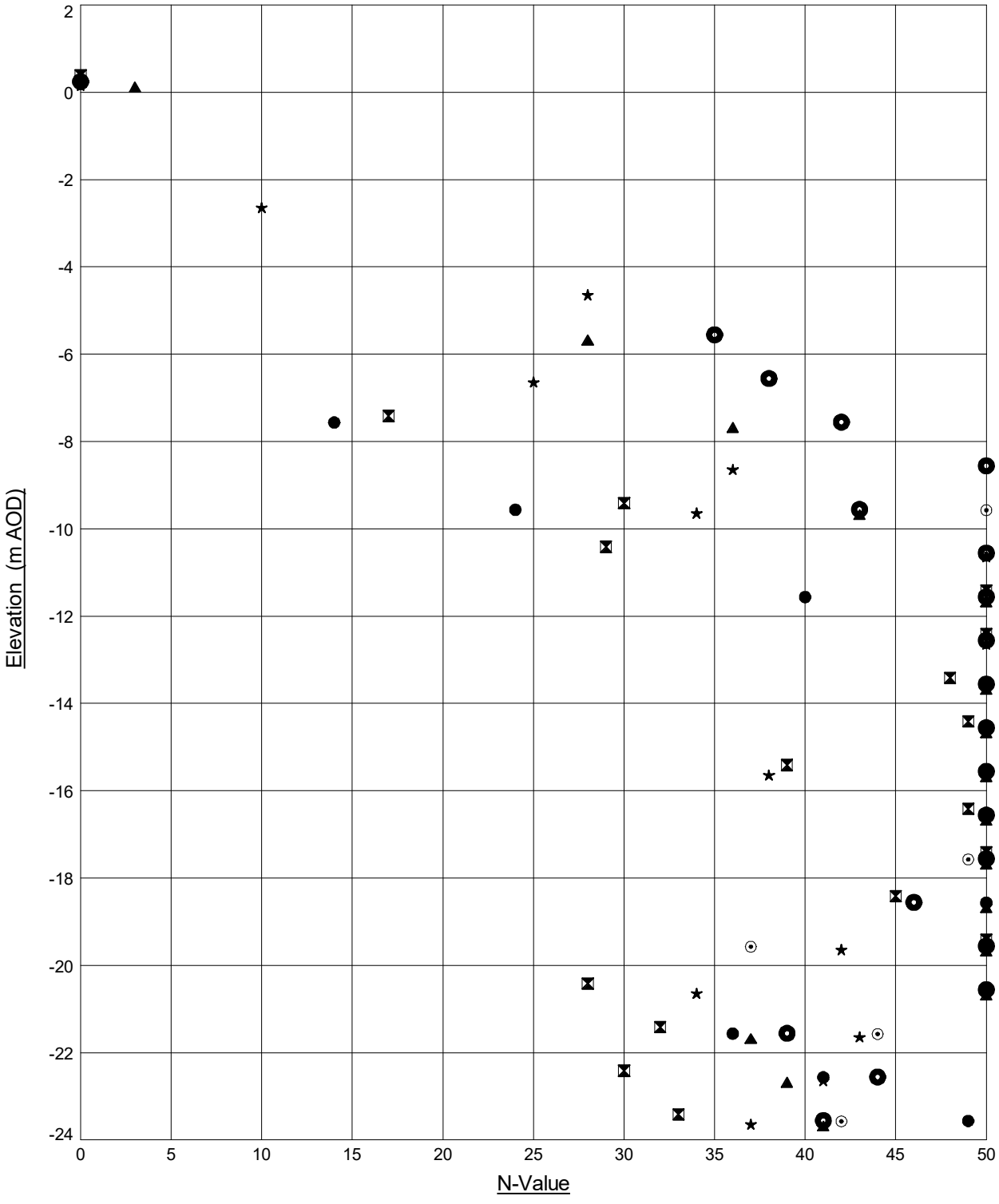
STANDARD PENETRATION TEST (SPT N-Value) vs DEPTH



Key: ⊕ = RedP-BH-10, ☼ = RedP-BH-11, ☘ = RedP-BH-6, ■ = RedP-BH-7, ✱ = RedP-BH-8, | = RedP-BH-9

STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Contract **Sea Link - Richborough**	Date **06.12.23**	Compiled By [redacted]
	Client **National Grid**	Contract Ref: **563607**	AGS

STANDARD PENETRATION TEST (SPT N-Value) vs ELEVATION



Key: ● = R22-BH101, ⊠ = R22-BH102, ▲ = R22-BH103, ★ = R22-BH104, ⊙ = R22-BH105, ◉ = R22-BH106A

STRUCTURAL SOILS
18 Frogmore Road
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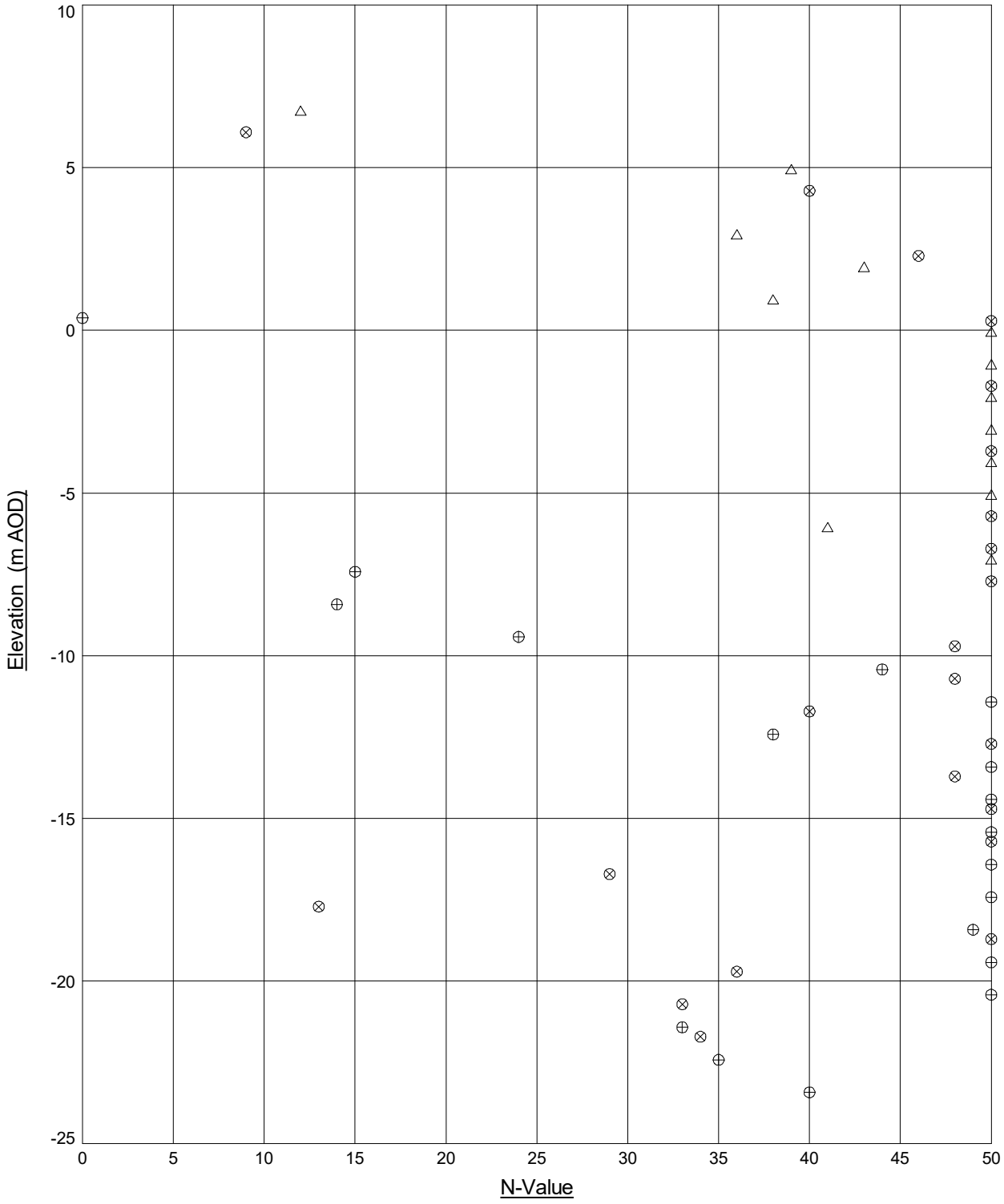
Hertfordshire
HP3 9RT

Contract	Date	Compiled By
Sea Link - Richborough	**06.12.23**	[redacted]
Client	Contract Ref:	
National Grid	**563607**	AGS

STANDARD PENETRATION TEST (SPT N-Value) vs ELEVATION



Key: △ = R22-BH203, ⊗ = R22-BH204, ⊕ = R22-BH205

STRUCTURAL SOILS
18 Frogmore Road
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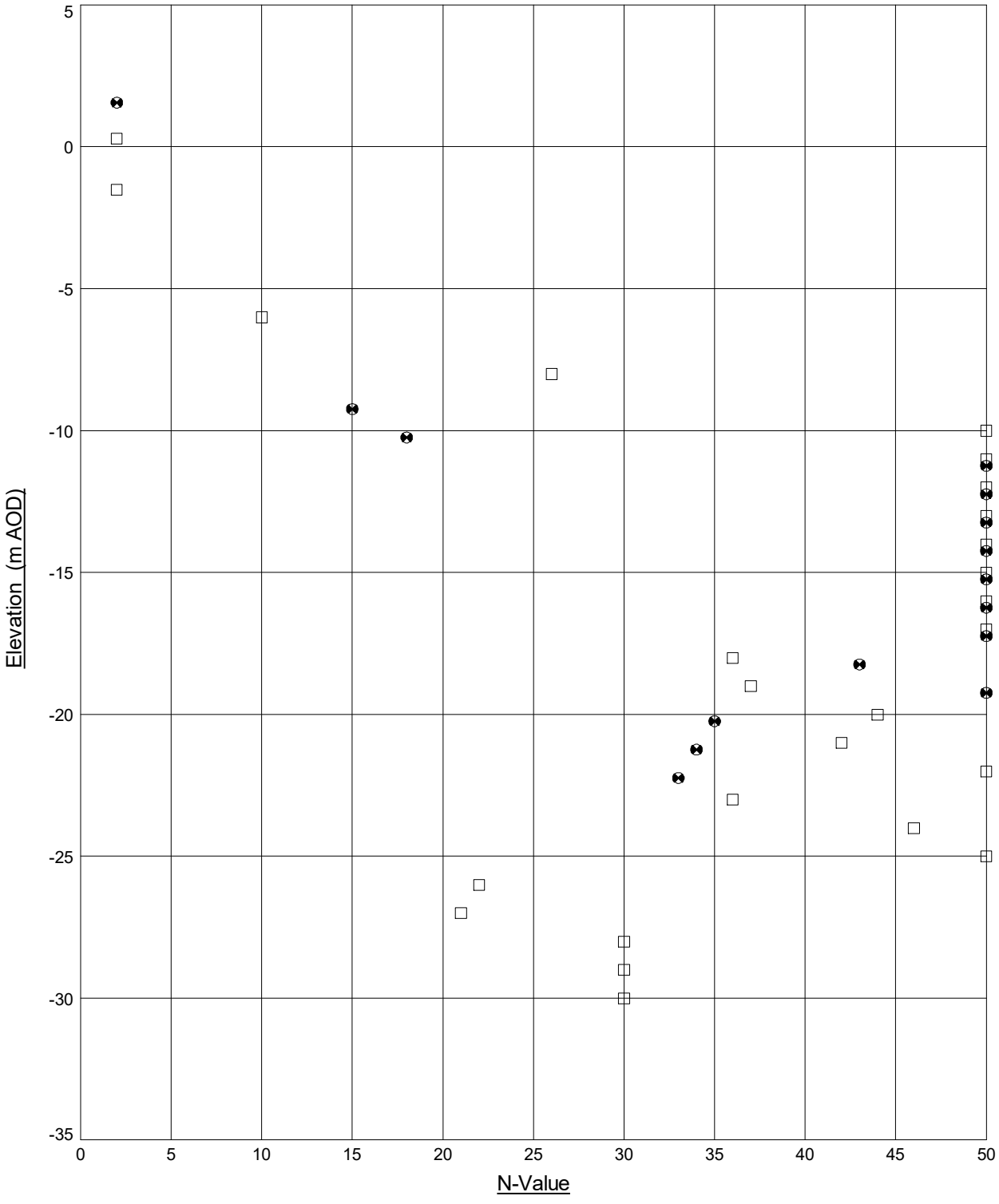
Hertfordshire
HP3 9RT

Contract	Date	Compiled By
Sea Link - Richborough	**06.12.23**	[redacted]
Client: **National Grid**	Contract Ref: **563607**	

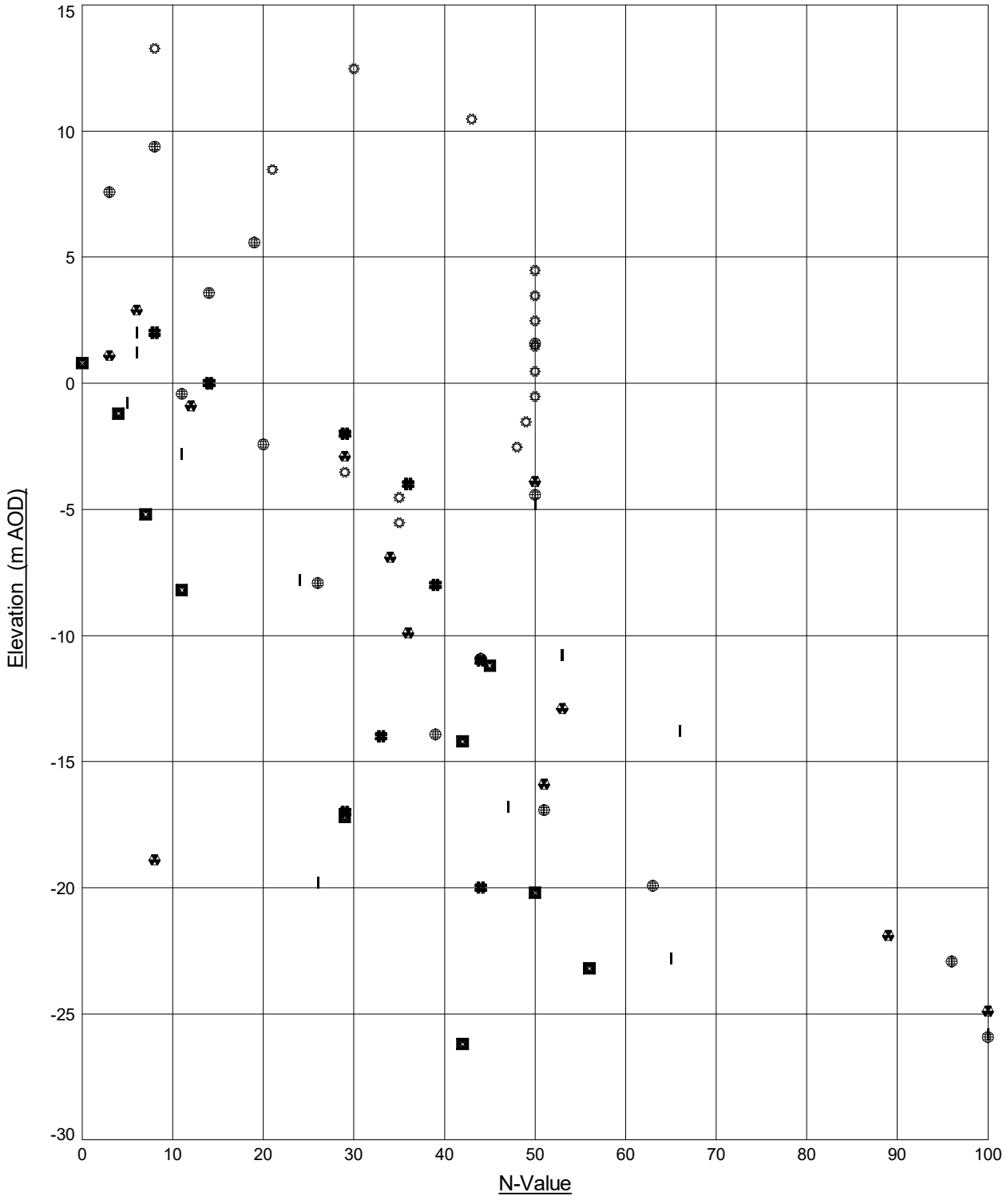
STANDARD PENETRATION TEST (SPT N-Value) vs ELEVATION



Key: □ = R22-BH501, ⊗ = R22-BH502

STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Contract **Sea Link - Richborough**	Date **06.12.23**	Compiled By [redacted]
	Client **National Grid**	Contract Ref: **563607**	AGS

STANDARD PENETRATION TEST (SPT N-Value) vs ELEVATION



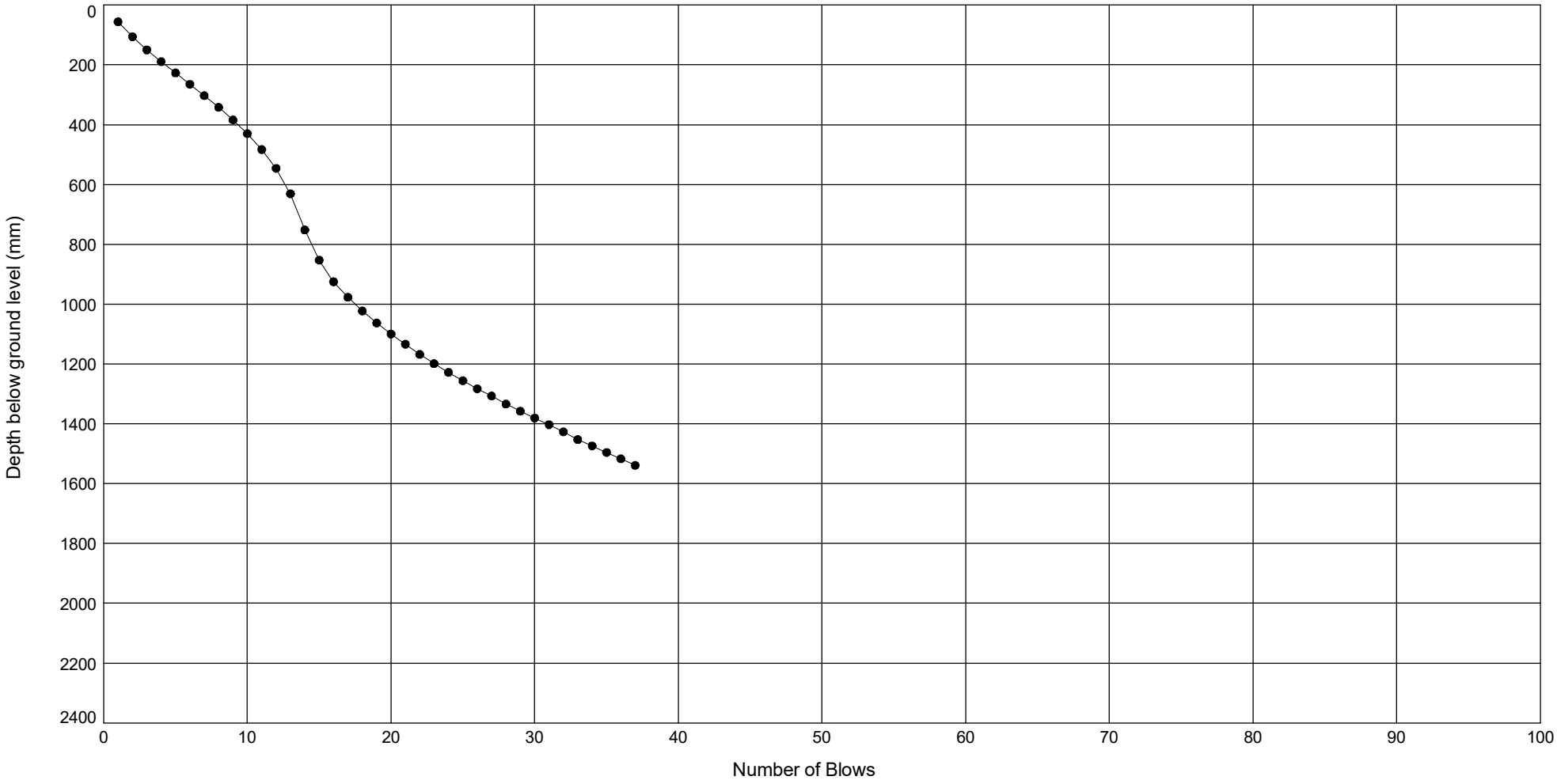
Key: ⊕ = RedP-BH-10, ☼ = RedP-BH-11, ☘ = RedP-BH-6, ▣ = RedP-BH-7, ✽ = RedP-BH-8, ❙ = RedP-BH-9

STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Contract **Sea Link - Richborough**	Date **06.12.23**	Compiled By [redacted]
	Client **National Grid**	Contract Ref: **563607**	AGS

DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **R22-TP101** Test Date : **11.10.23** Test Number : **1**

Ground Level (m AOD): **1.38** National Grid Co-ordinates: **E:632188.0 N:163132.9**



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18 Frogmore Road
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Test Supervisor	Date	Checked By	Date
[redacted]	**11/10/23**	[redacted]	**14/03/24**

Contract

SEA Link FEED - Kent Onshore Cable Link

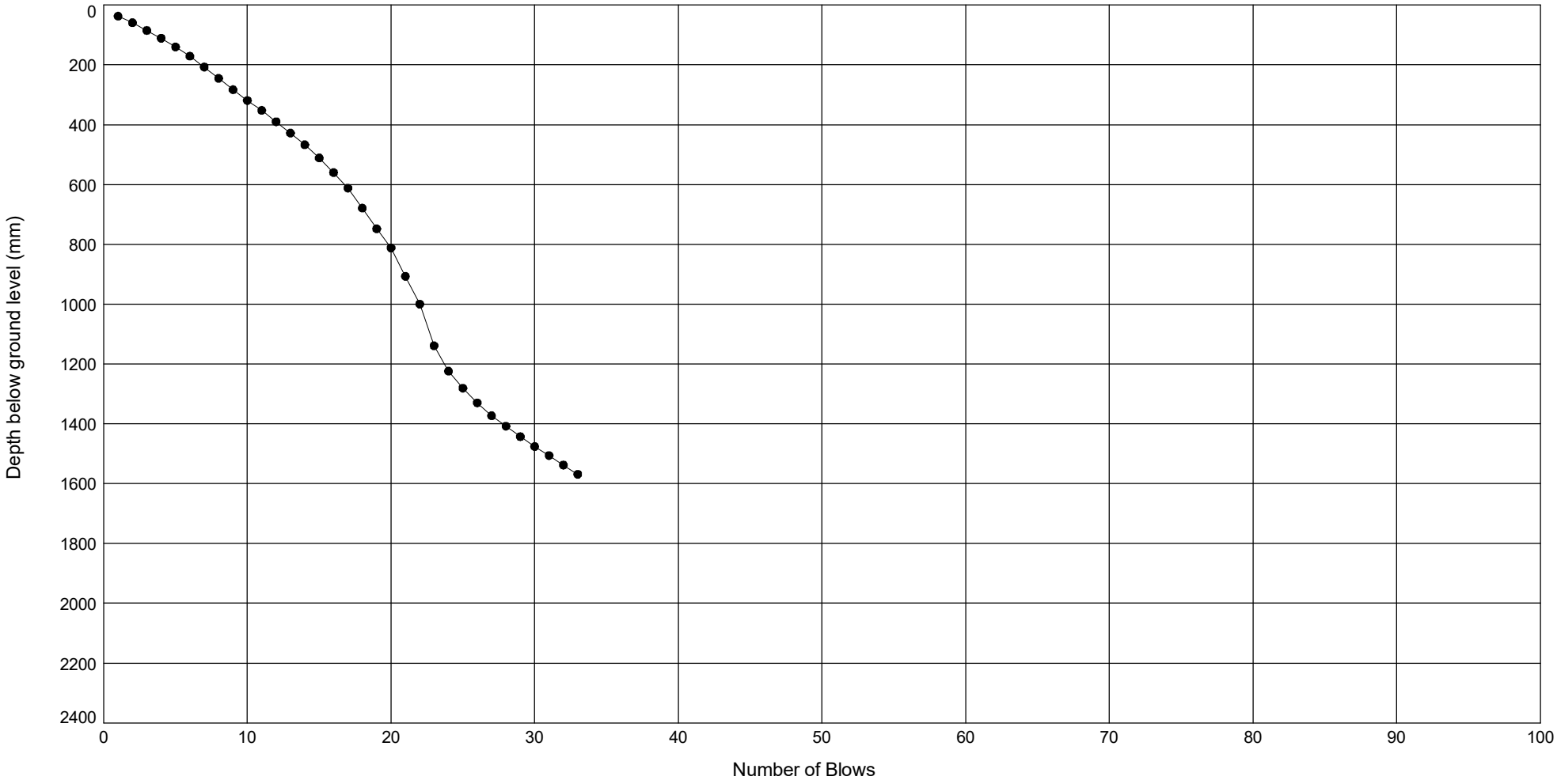
Contract Ref:

563607

DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **R22-TP102** Test Date : **12.10.23** Test Number : **1**

Ground Level (m AOD): **1.48** National Grid Co-ordinates: **E:632079.2 N:163044.0**



STRUCTURAL SOILS
18 Frogmore Road
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Hertfordshire
HP3 9RT

Test Supervisor	Date	Checked By	Date
[redacted]	**12/10/23**	[redacted]	**14/03/24**

Contract

SEA Link FEED - Kent Onshore Cable Link

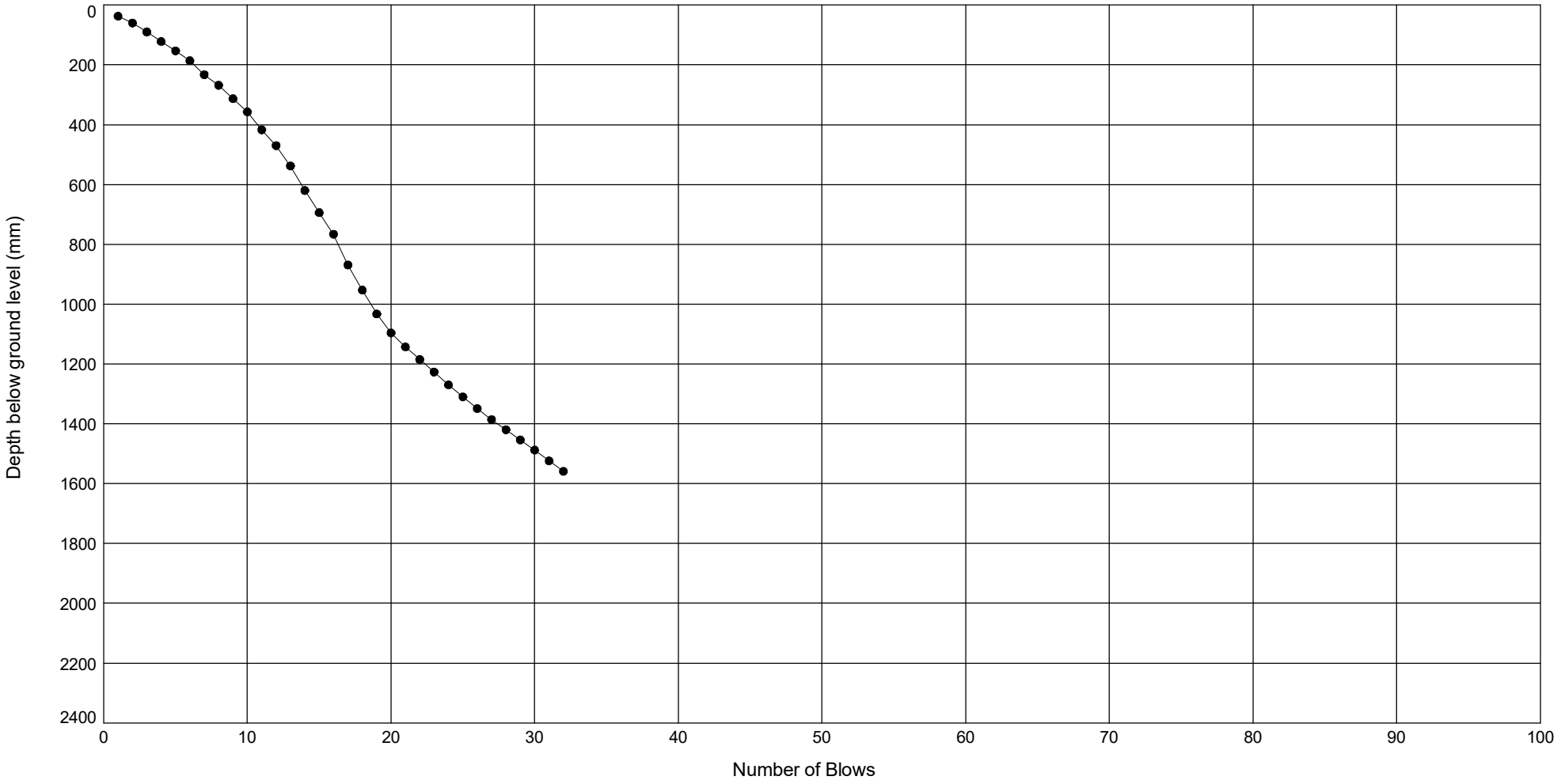
Contract Ref:

563607

DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **R22-TP103** Test Date : **09.10.23** Test Number : **1**

Ground Level (m AOD): **1.36** National Grid Co-ordinates: **E:632126.3 N:162967.8**



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Supervisor	Date	Checked By	Date
[redacted]	**09/10/23**	[redacted]	**14/03/24**

Contract

SEA Link FEED - Kent Onshore Cable Link

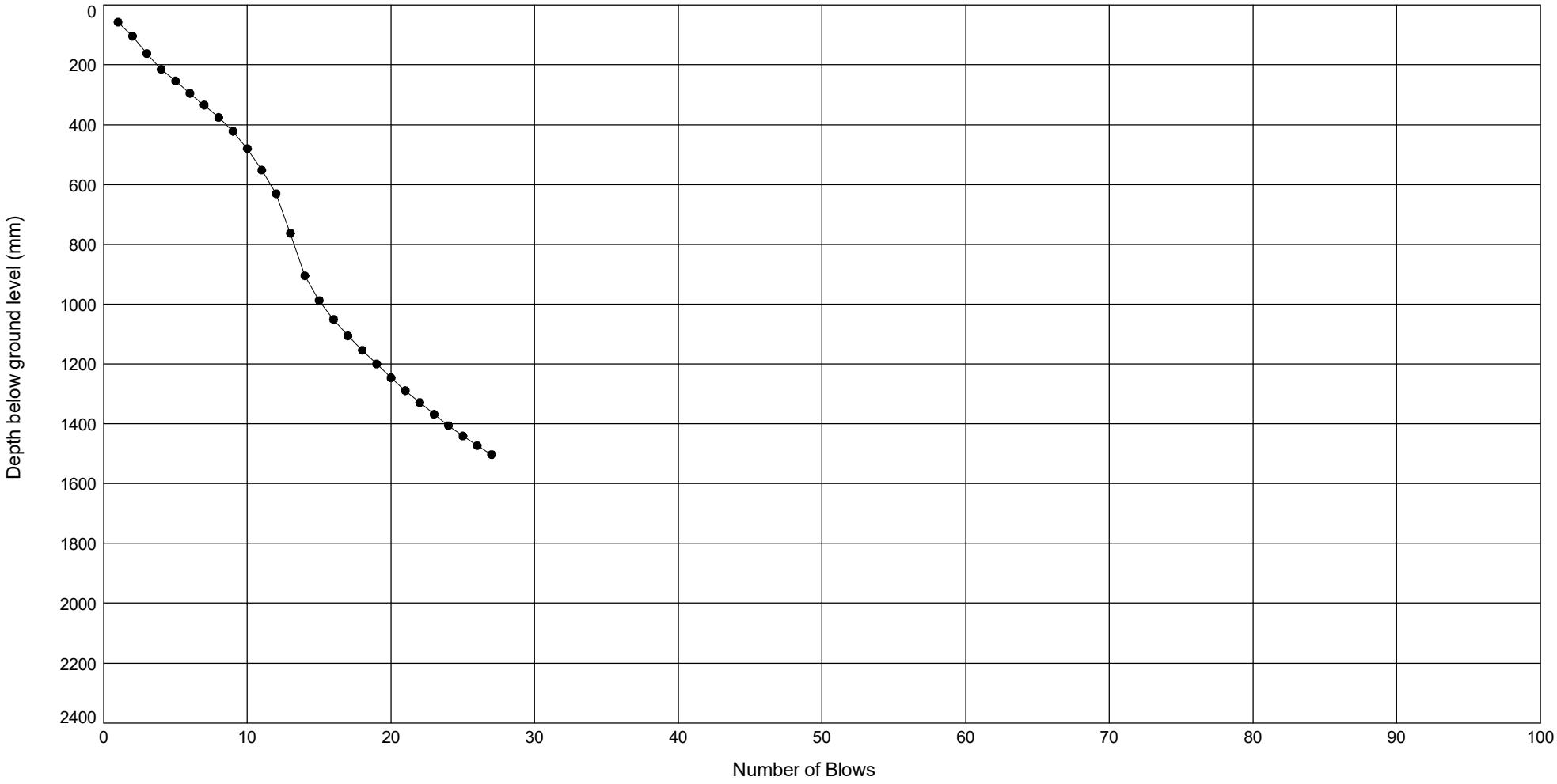
Contract Ref:

563607

DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **R22-TP104** Test Date : **03.10.23** Test Number : **1**

Ground Level (m AOD): **1.35** National Grid Co-ordinates: **E:632412.6 N:163024.9**



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Supervisor	Date	Checked By	Date
[redacted]	**03/10/23**	[redacted]	**14/03/24**

Contract

SEA Link FEED - Kent Onshore Cable Link

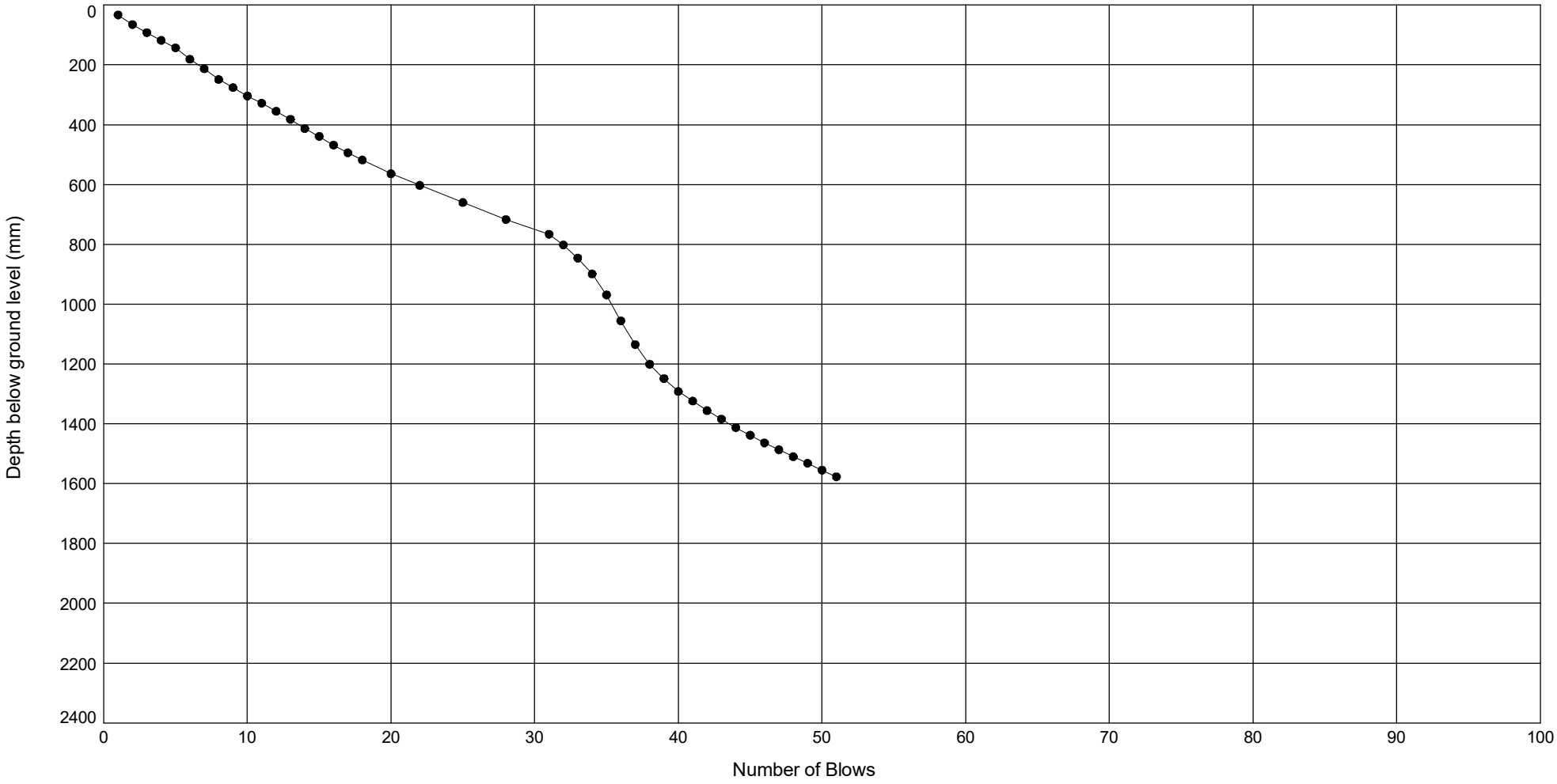
Contract Ref:

563607

DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **R22-TP105** Test Date : **10.10.23** Test Number : **1**

Ground Level (m AOD): **1.50** National Grid Co-ordinates: **E:632391.0 N:163180.9**



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Supervisor	Date	Checked By	Date
[redacted]	**10/10/23**	[redacted]	**14/03/24**

Contract

SEA Link FEED - Kent Onshore Cable Link

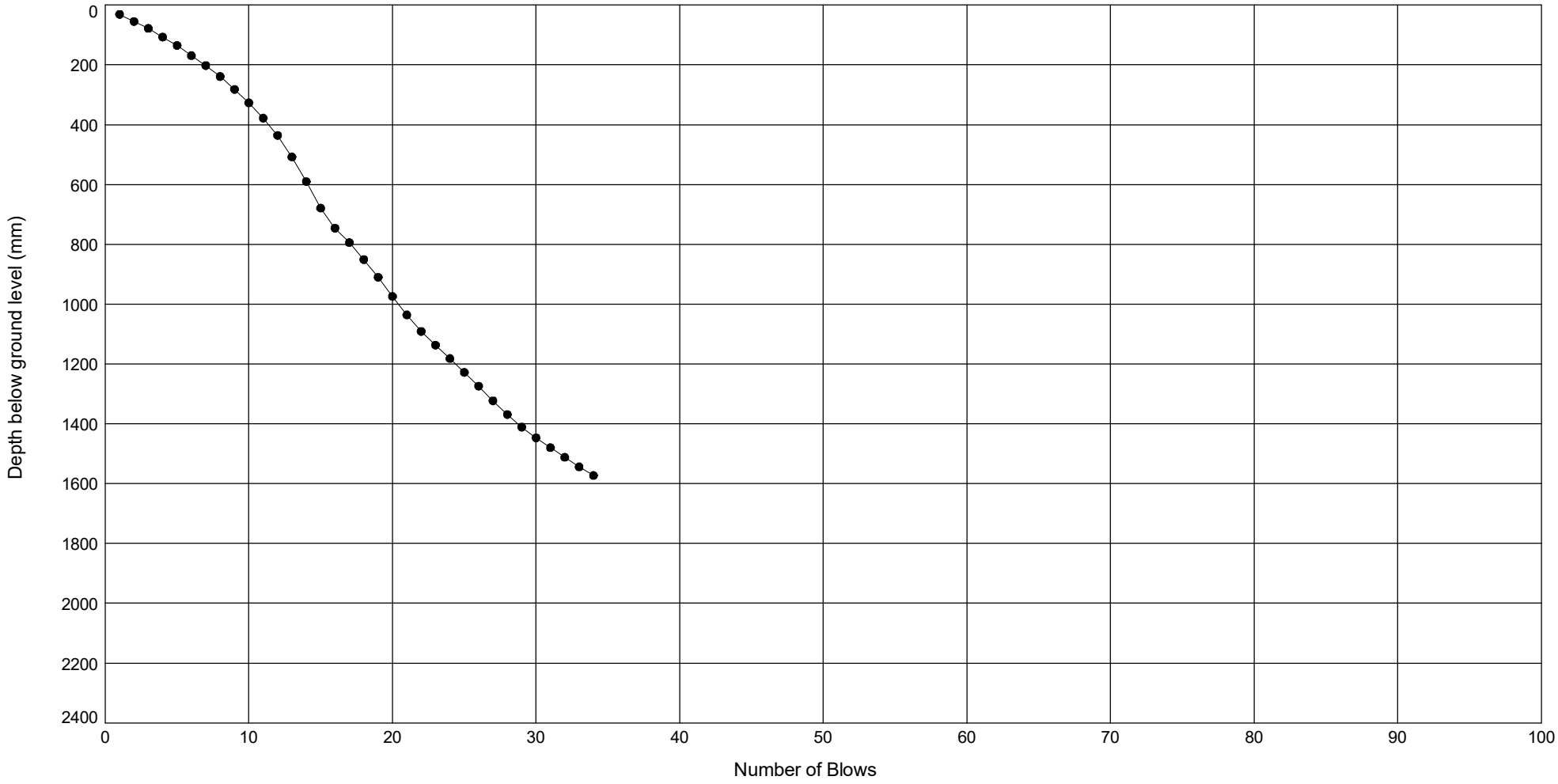
Contract Ref:

563607

DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **R22-TP106** Test Date : **12.10.23** Test Number : **1**

Ground Level (m AOD): **1.29** National Grid Co-ordinates: **E:632251.6 N:162902.2**



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Supervisor	Date	Checked By	Date
[redacted]	**12/10/23**	[redacted]	**14/03/24**

Contract

SEA Link FEED - Kent Onshore Cable Link

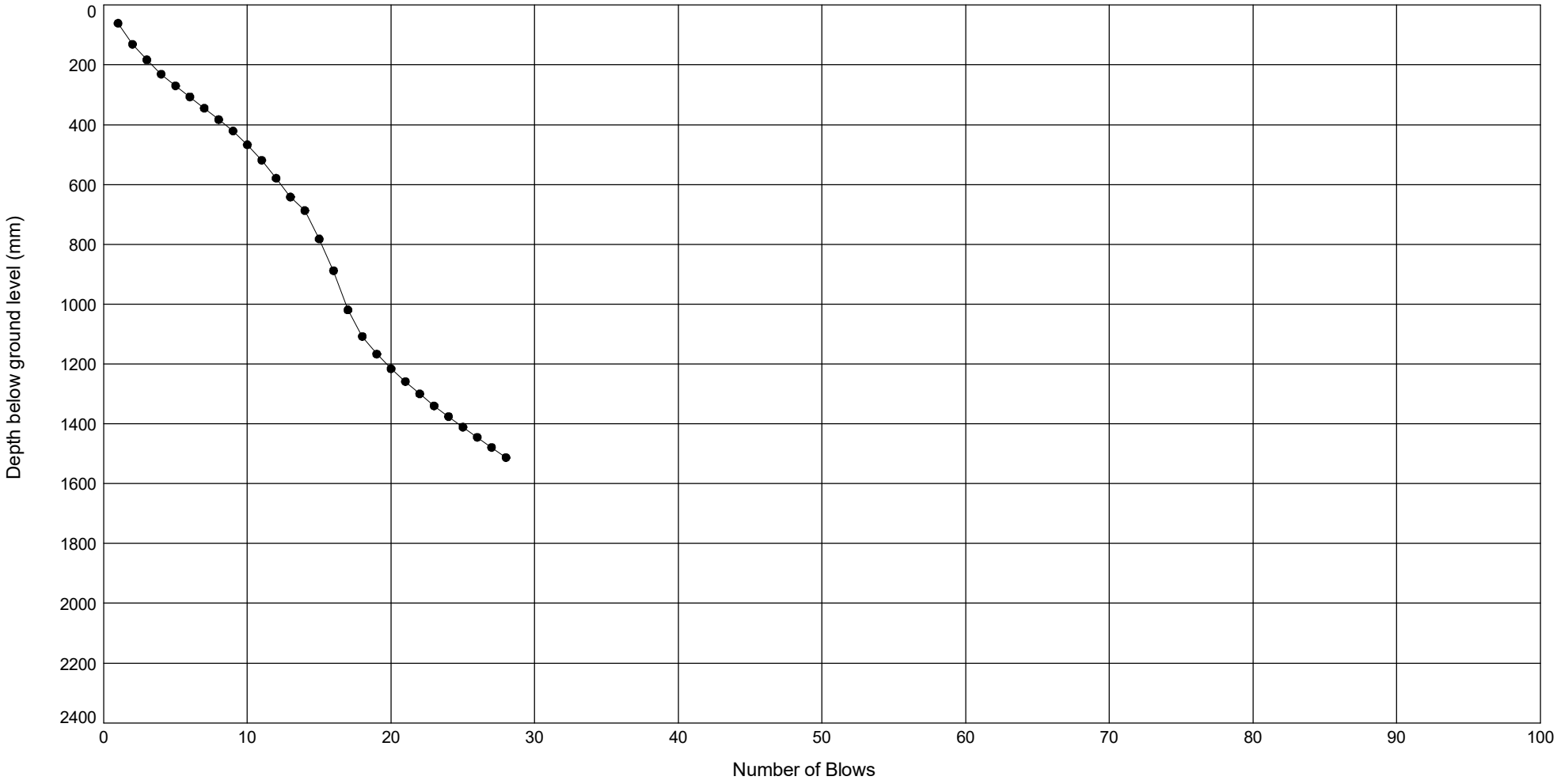
Contract Ref:

563607

DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **R22-TP107** Test Date : **04.10.23** Test Number : **1**

Ground Level (m AOD): **1.39** National Grid Co-ordinates: **E:632524.8 N:162978.0**



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Supervisor	Date	Checked By	Date
[redacted]	**04/10/23**	[redacted]	**14/03/24**

Contract

SEA Link FEED - Kent Onshore Cable Link

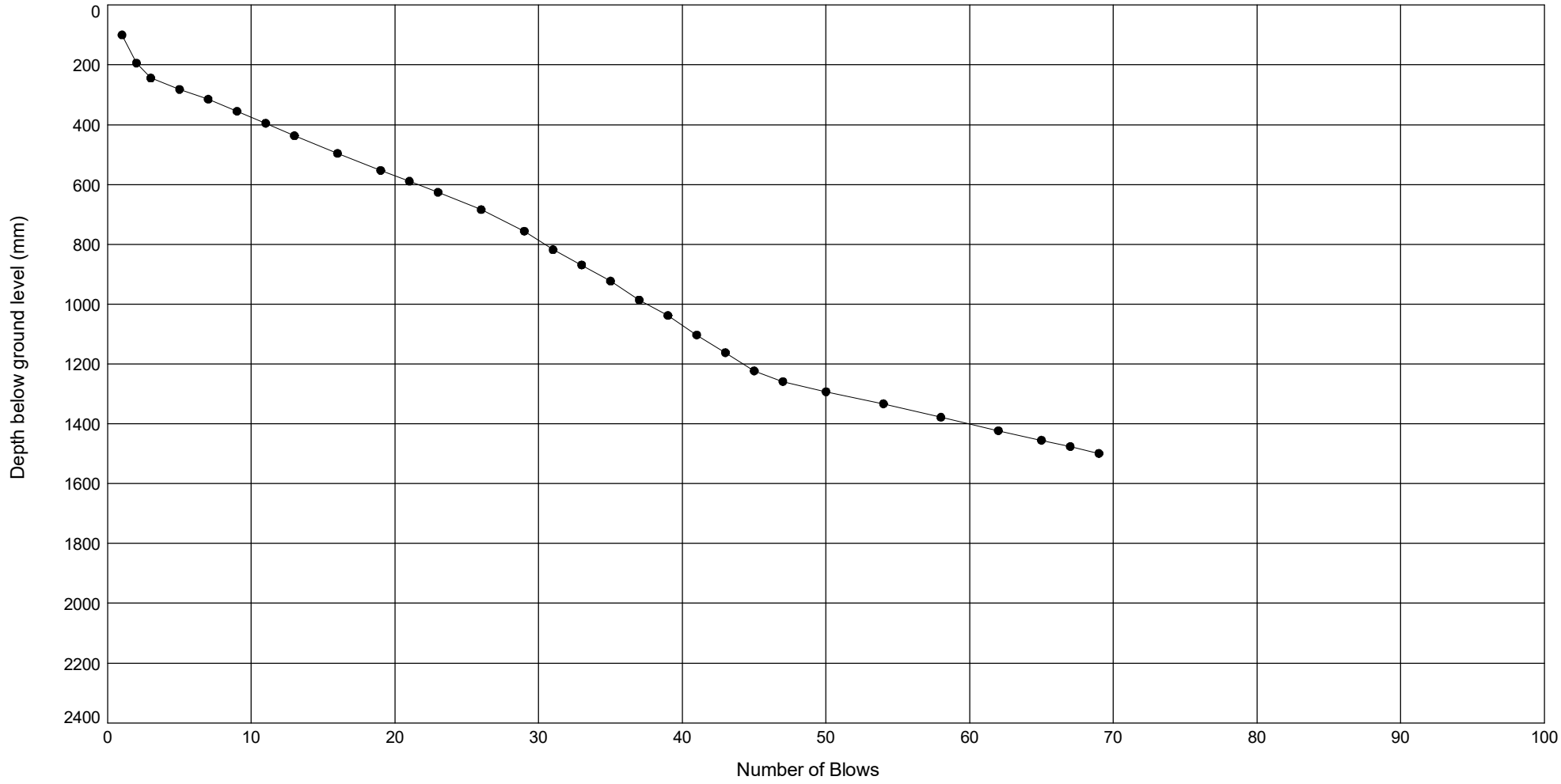
Contract Ref:

563607

DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **R22-TP201** Test Date : **19.10.23** Test Number : **1**

Ground Level (m AOD): **4.35** National Grid Co-ordinates: **E:633846.7 N:163705.4**



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Supervisor	Date	Checked By	Date
[redacted]	**19/10/23**	[redacted]	**14/03/24**

Contract

SEA Link FEED - Kent Onshore Cable Link

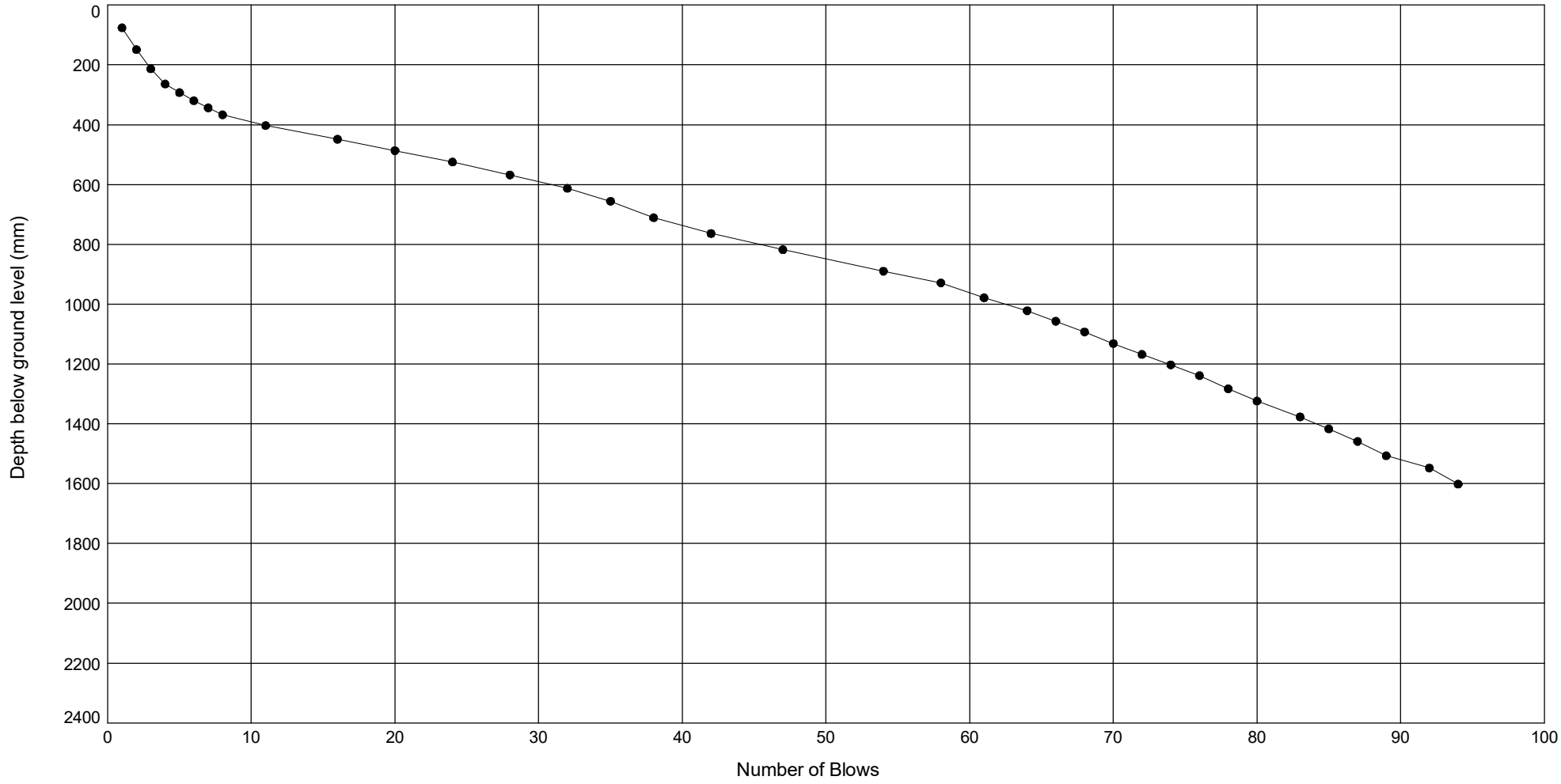
Contract Ref:

563607

DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **R22-TP202** Test Date : **18.10.23** Test Number : **1**

Ground Level (m AOD): **11.00** National Grid Co-ordinates: **E:633556.2 N:163636.7**



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Supervisor	Date	Checked By	Date
[redacted]	**18/10/23**	[redacted]	**14/03/24**

Contract

SEA Link FEED - Kent Onshore Cable Link

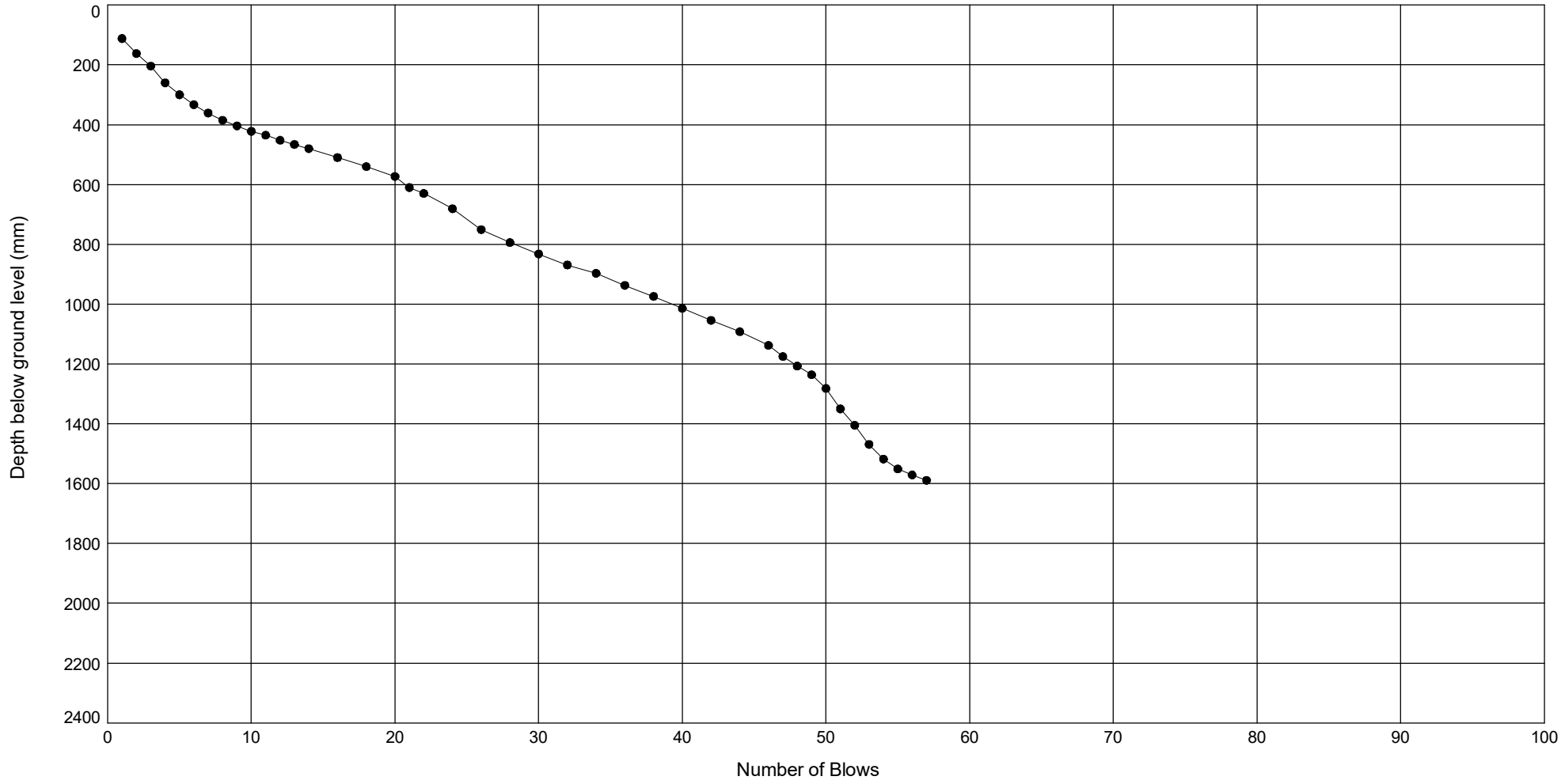
Contract Ref:

563607

DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **R22-TP203** Test Date : **26.09.23** Test Number : **1**

Ground Level (m AOD): **7.14** National Grid Co-ordinates: **E:633280.7 N:163502.6**



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Supervisor	Date	Checked By	Date
[redacted]	**26/09/23**	[redacted]	**14/03/24**

Contract

SEA Link FEED - Kent Onshore Cable Link

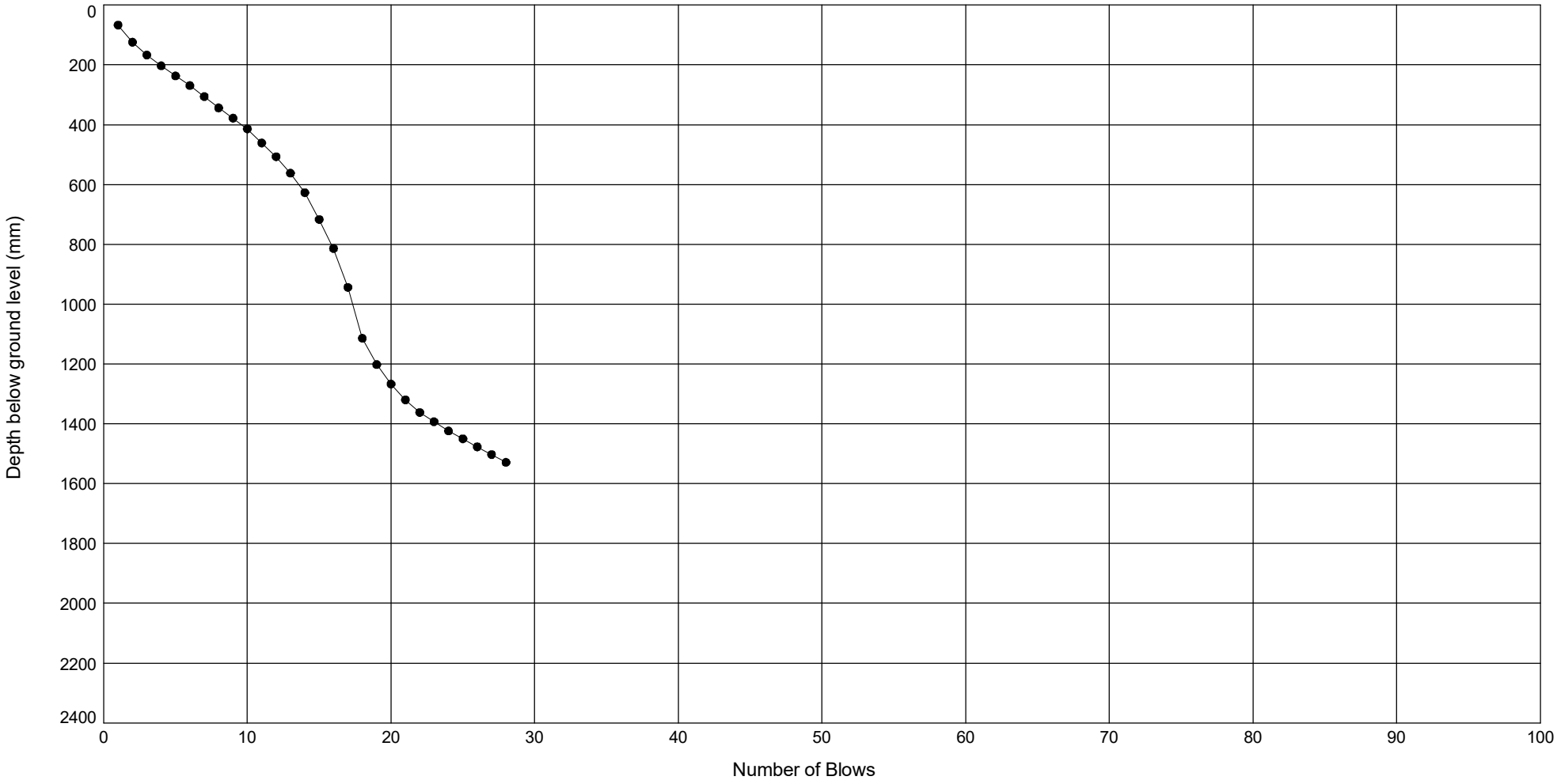
Contract Ref:

563607

DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **R22-TP204** Test Date : **27.09.23** Test Number : **1**

Ground Level (m AOD): **1.56** National Grid Co-ordinates: **E:632890.2 N:163330.3**



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Supervisor	Date	Checked By	Date
[redacted]	**27/09/23**	[redacted]	**14/03/24**

Contract

SEA Link FEED - Kent Onshore Cable Link

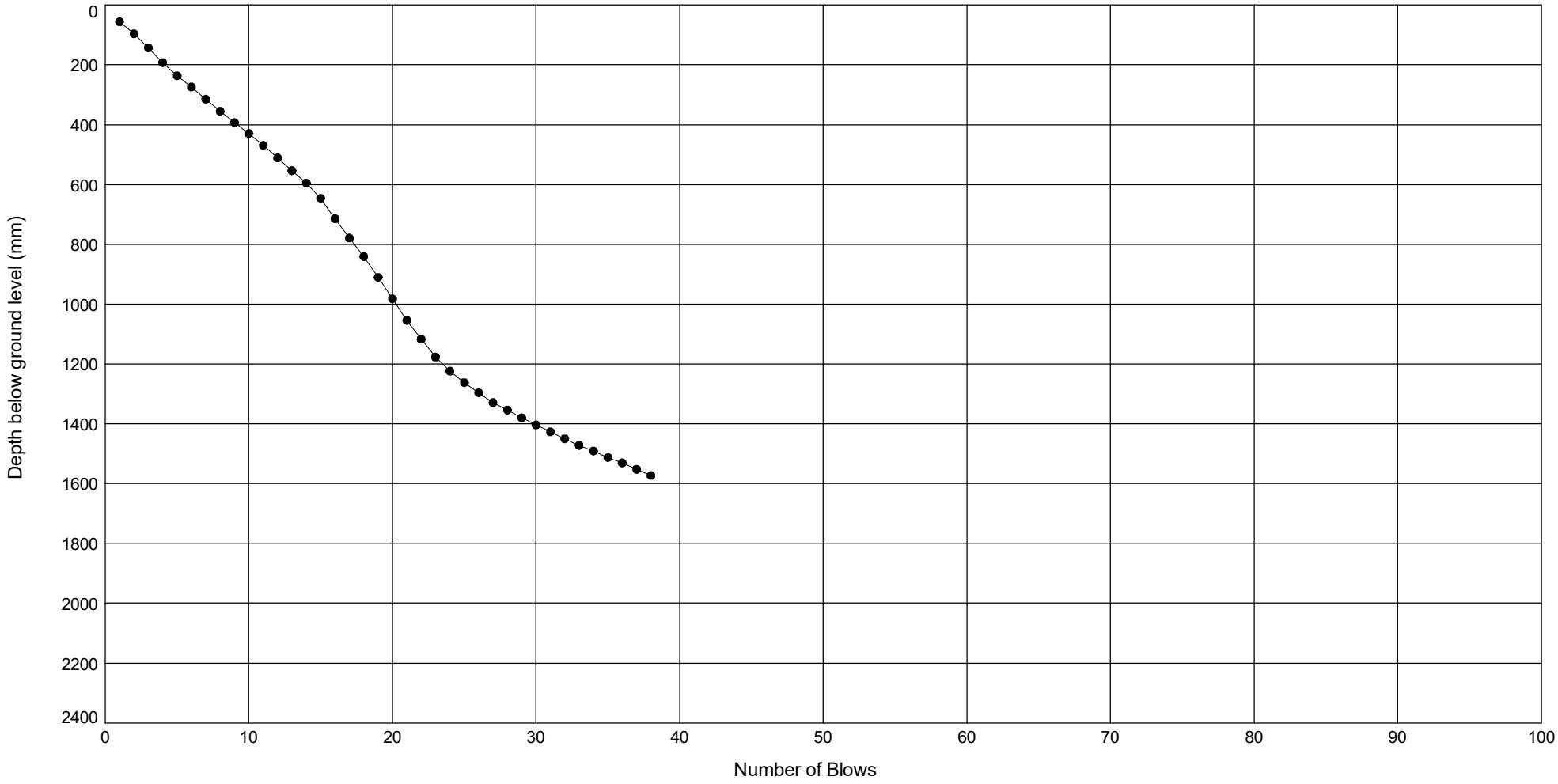
Contract Ref:

563607

DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **R22-TP205** Test Date : **06.10.23** Test Number : **1**

Ground Level (m AOD): **1.44** National Grid Co-ordinates: **E:632566.0 N:163105.6**



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Supervisor	Date	Checked By	Date
[redacted]	**06/10/23**	[redacted]	**14/03/24**

Contract

SEA Link FEED - Kent Onshore Cable Link

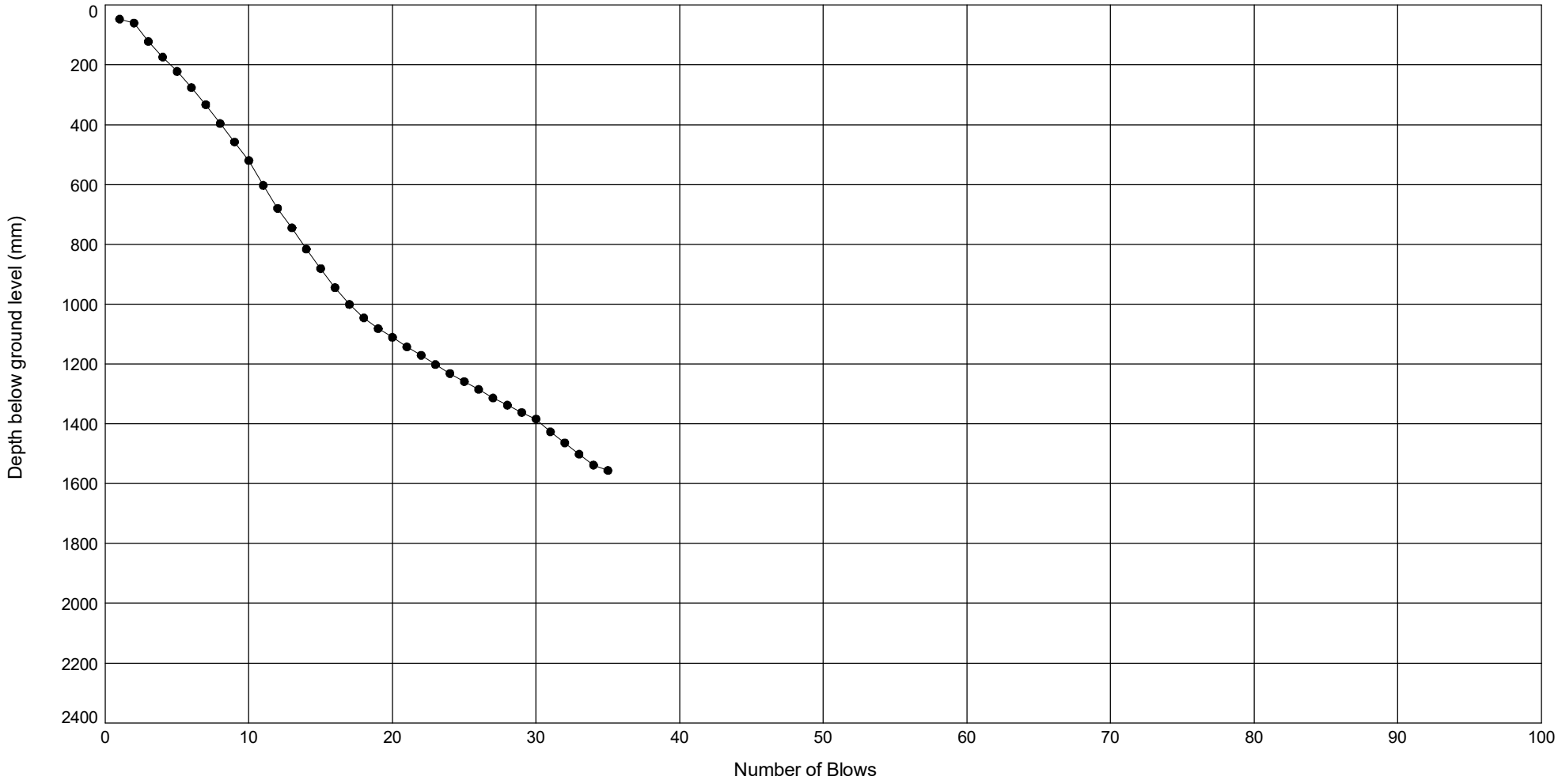
Contract Ref:

563607

DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **R22-TP405** Test Date : **02.10.23** Test Number : **1**

Ground Level (m AOD): **1.43** National Grid Co-ordinates: **E:632249.6 N:163371.0**



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Supervisor	Date	Checked By	Date
[redacted]	02/10/23	[redacted]	14/03/24

Contract

SEA Link FEED - Kent Onshore Cable Link

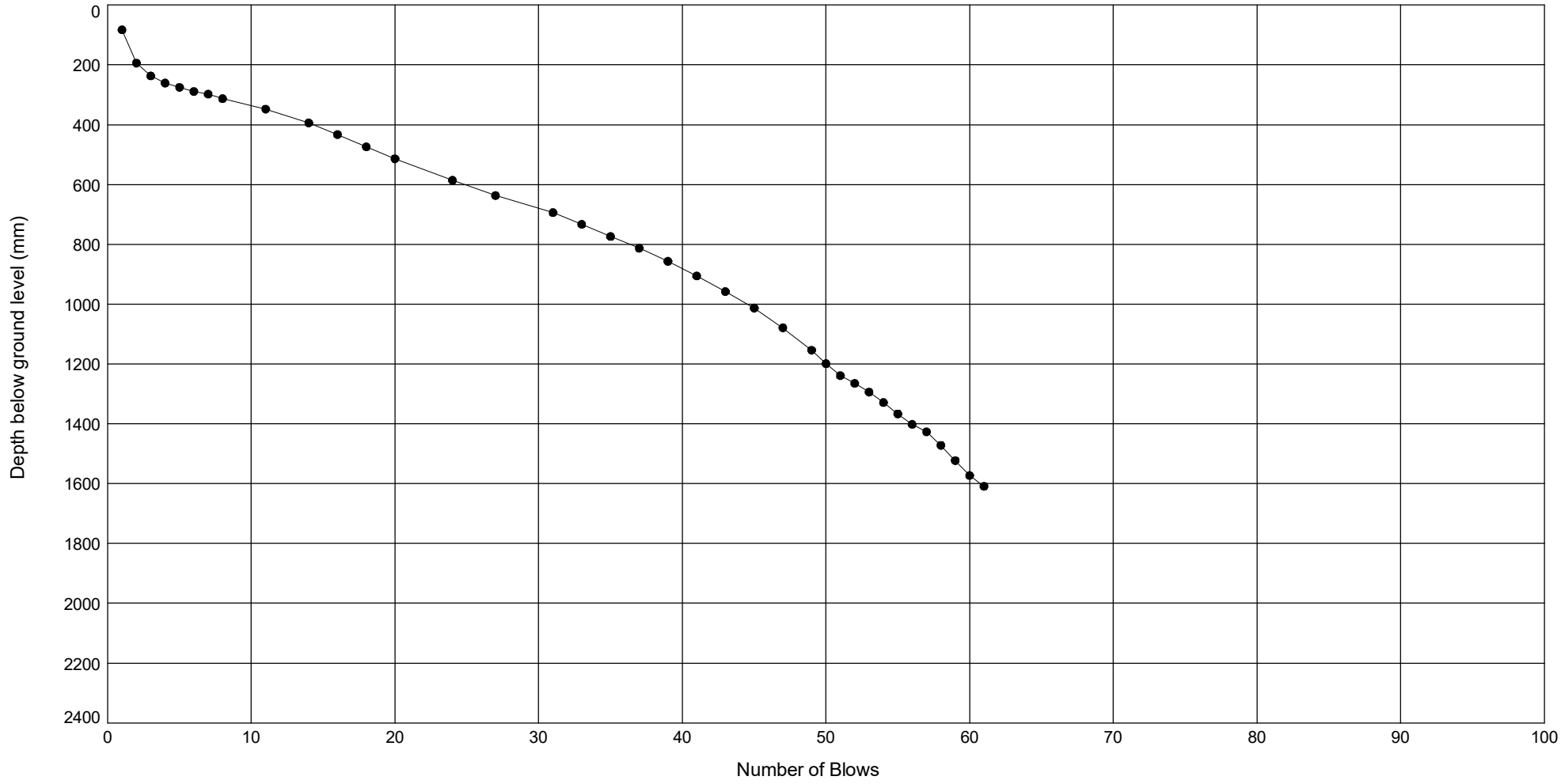
Contract Ref:

563607

DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **R22-TP501** Test Date : **17.10.23** Test Number : **1**

Ground Level (m AOD): **5.91** National Grid Co-ordinates: **E:633352.1 N:163351.8**



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Supervisor	Date	Checked By	Date
[redacted]	**17/10/23**	[redacted]	**14/03/24**

Contract

SEA Link FEED - Kent Onshore Cable Link

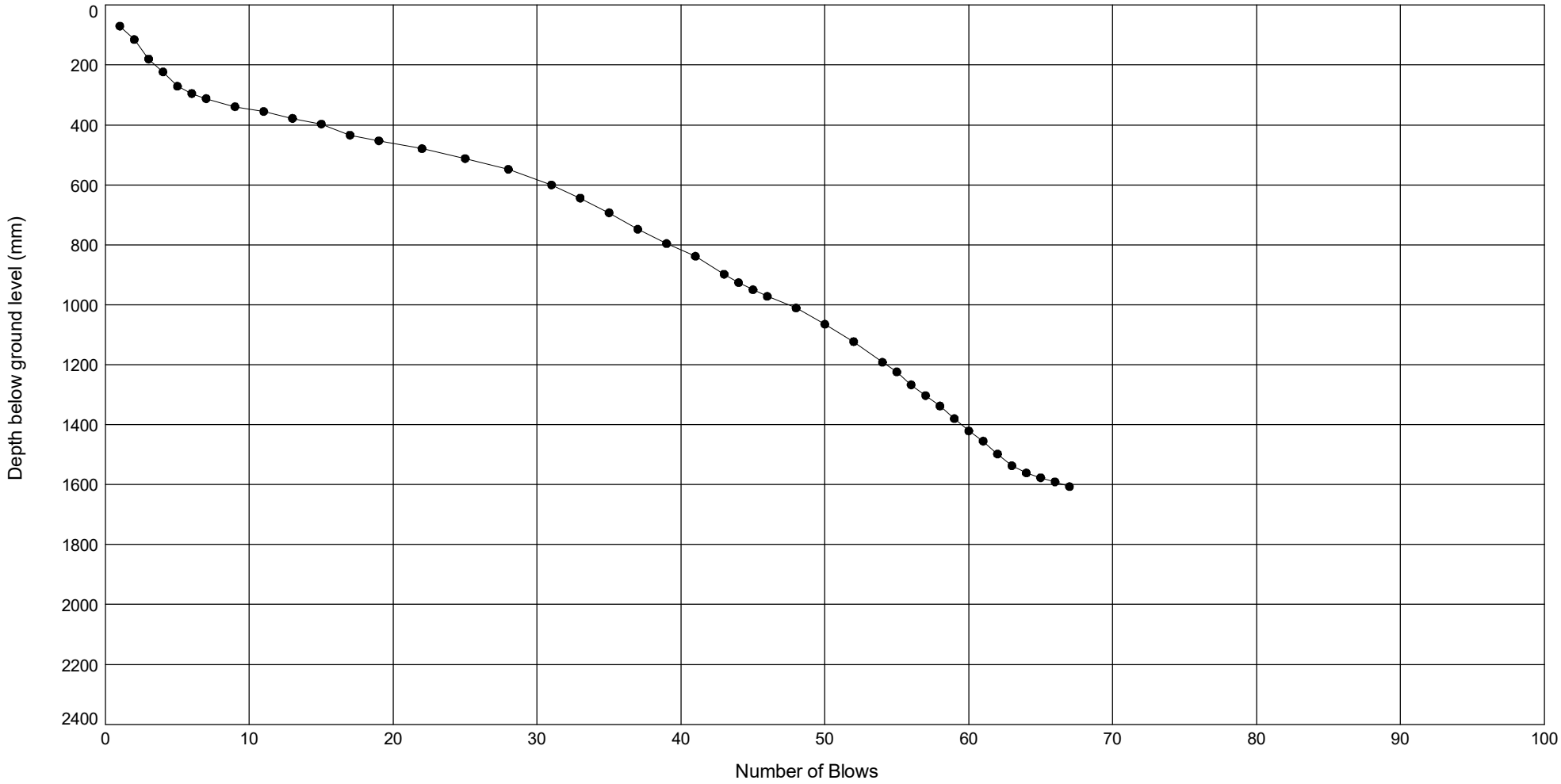
Contract Ref:

563607

DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **R22-TP502** Test Date : **26.09.23** Test Number : **1**

Ground Level (m AOD): **4.53** National Grid Co-ordinates: **E:633081.5 N:163435.3**



Notes: **Finlay Price.**

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Supervisor	Date	Checked By	Date	Contract Ref:
[redacted]	**26/09/23**	[redacted]	**14/03/24**	**563607**

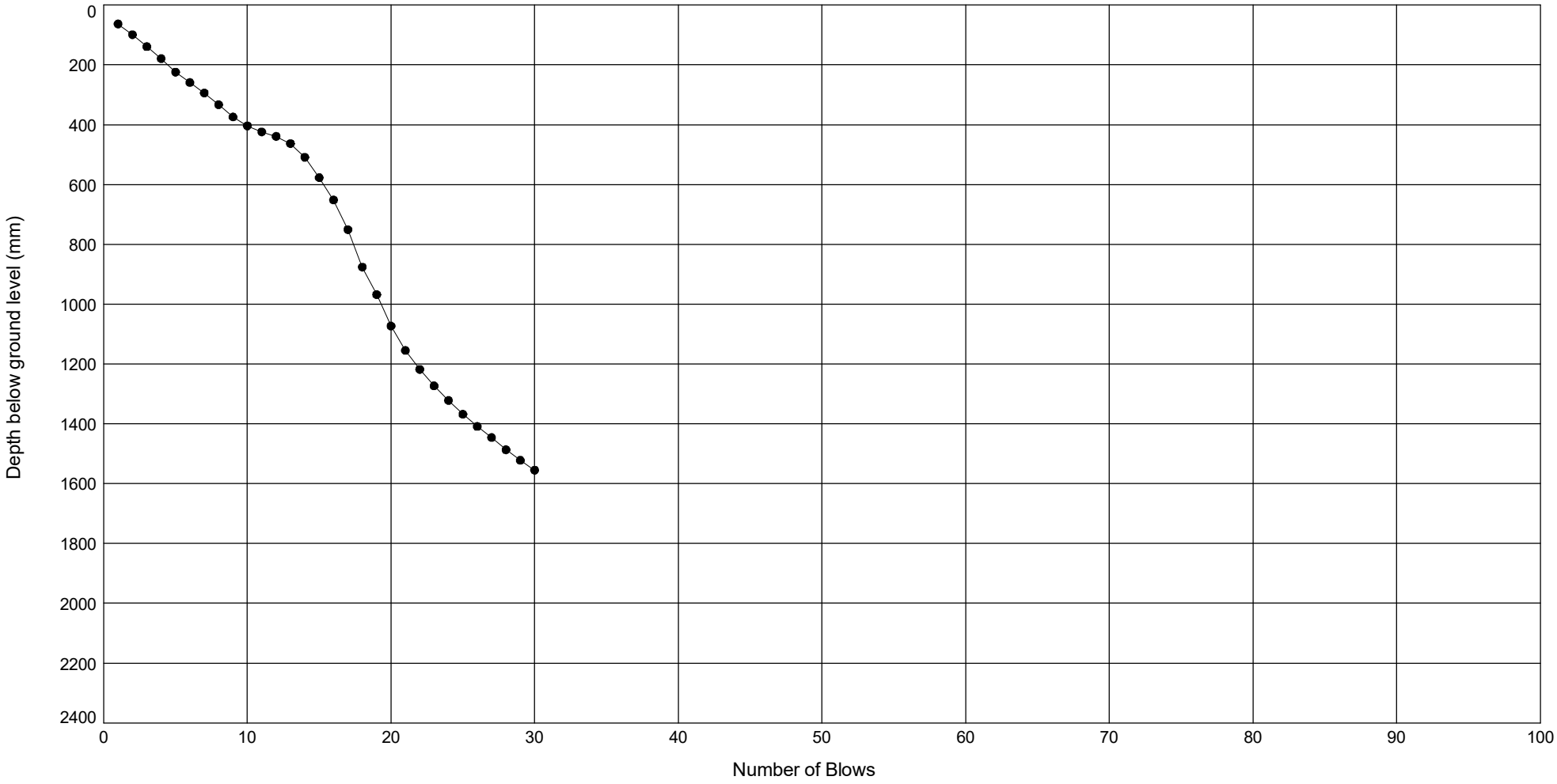
Contract

SEA Link FEED - Kent Onshore Cable Link

DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **R22-TP503** Test Date : **28.09.23** Test Number : **1**

Ground Level (m AOD): **1.26** National Grid Co-ordinates: **E:632685.6 N:163156.3**



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Supervisor	Date	Checked By	Date
[redacted]	**28/09/23**	[redacted]	**14/03/24**

Contract

SEA Link FEED - Kent Onshore Cable Link

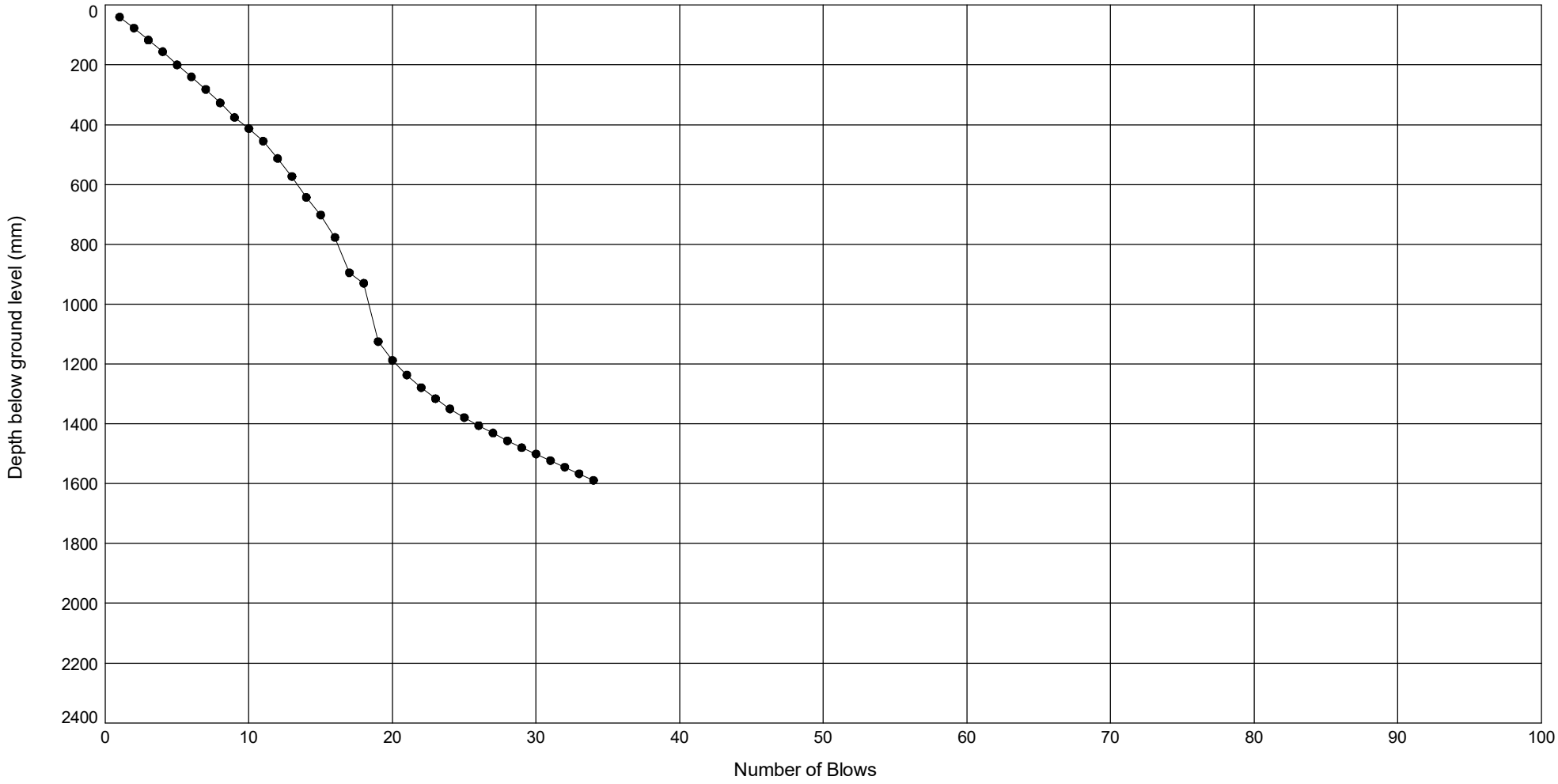
Contract Ref:

563607

DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **R22-TP503A** Test Date : **28.09.23** Test Number : **1**

Ground Level (m AOD): **1.35** National Grid Co-ordinates: **E:632680.3 N:163155.7**



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Supervisor	Date	Checked By	Date
[redacted]	**28/09/23**	[redacted]	**14/03/24**

Contract

SEA Link FEED - Kent Onshore Cable Link

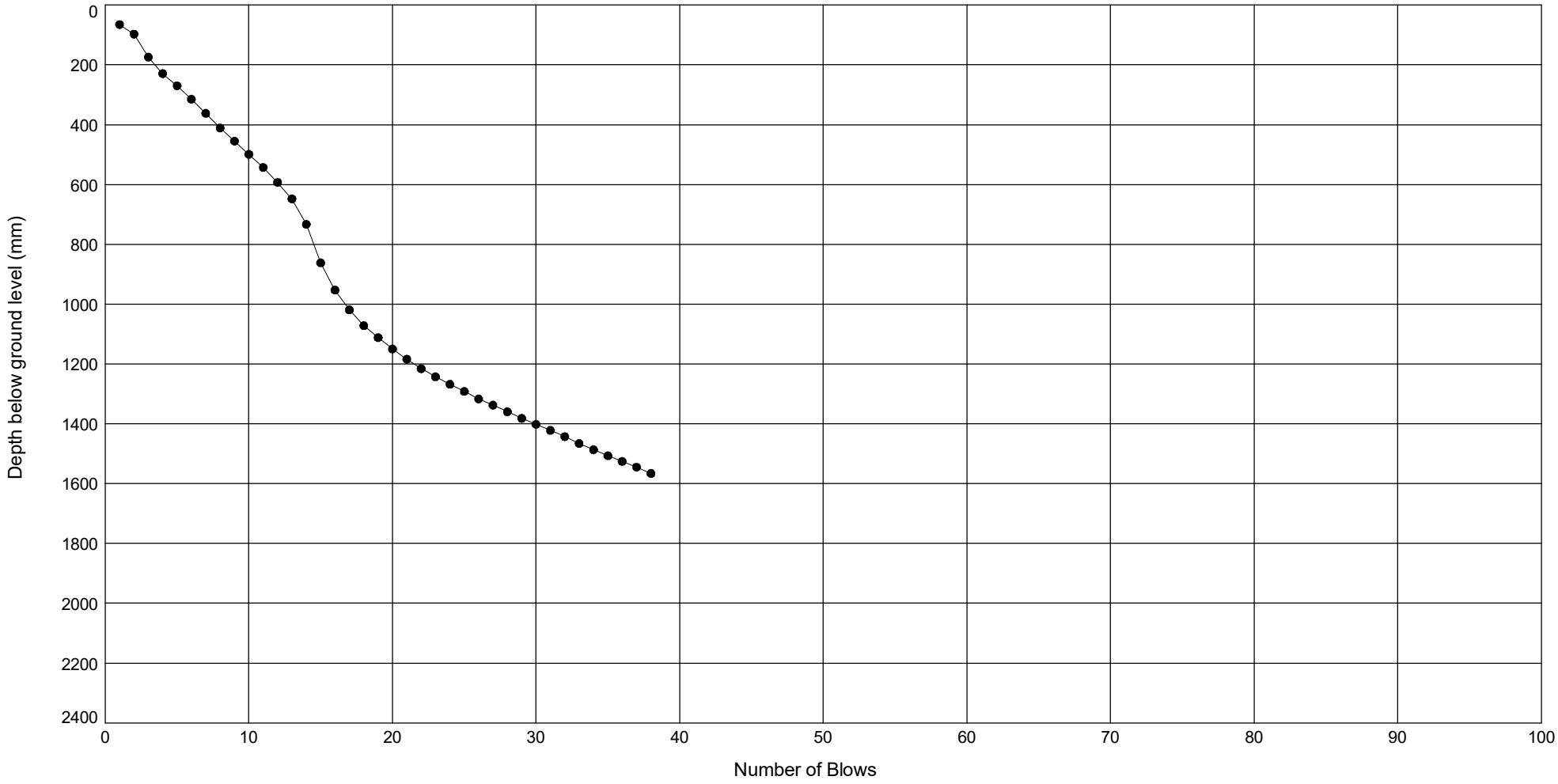
Contract Ref:

563607

DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **R22-TP504** Test Date : **28.09.23** Test Number : **1**

Ground Level (m AOD): **1.58** National Grid Co-ordinates: **E:632320.2 N:163243.1**



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Supervisor	Date	Checked By	Date
[redacted]	**28/09/23**	[redacted]	**14/03/24**

Contract

SEA Link FEED - Kent Onshore Cable Link

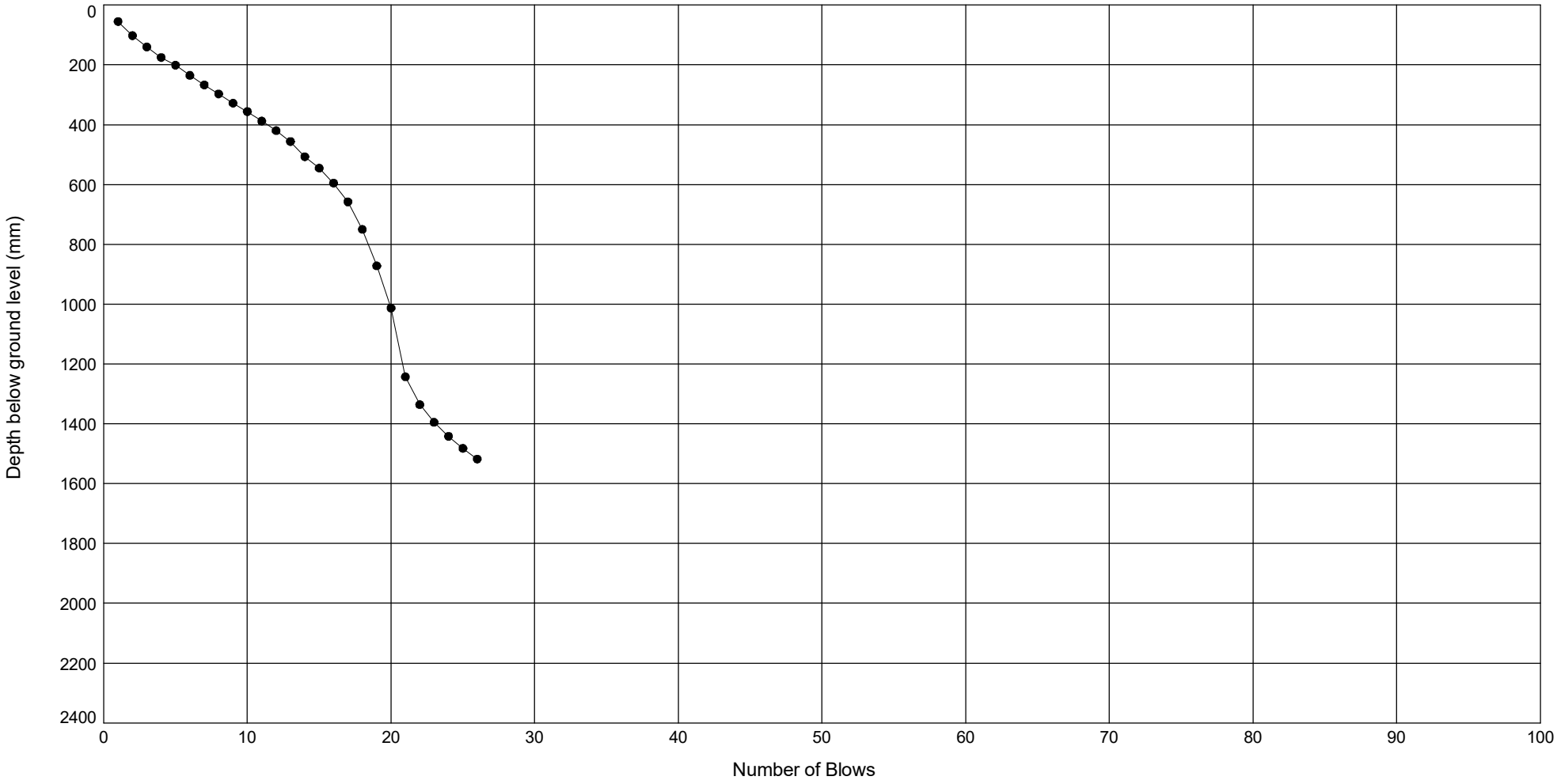
Contract Ref:

563607

DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **R22-TP505** Test Date : **03.10.23** Test Number : **1**

Ground Level (m AOD): **1.49** National Grid Co-ordinates: **E:632088.2 N:163347.6**



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Supervisor	Date	Checked By	Date
[redacted]	**03/10/23**	[redacted]	**14/03/24**

Contract

SEA Link FEED - Kent Onshore Cable Link

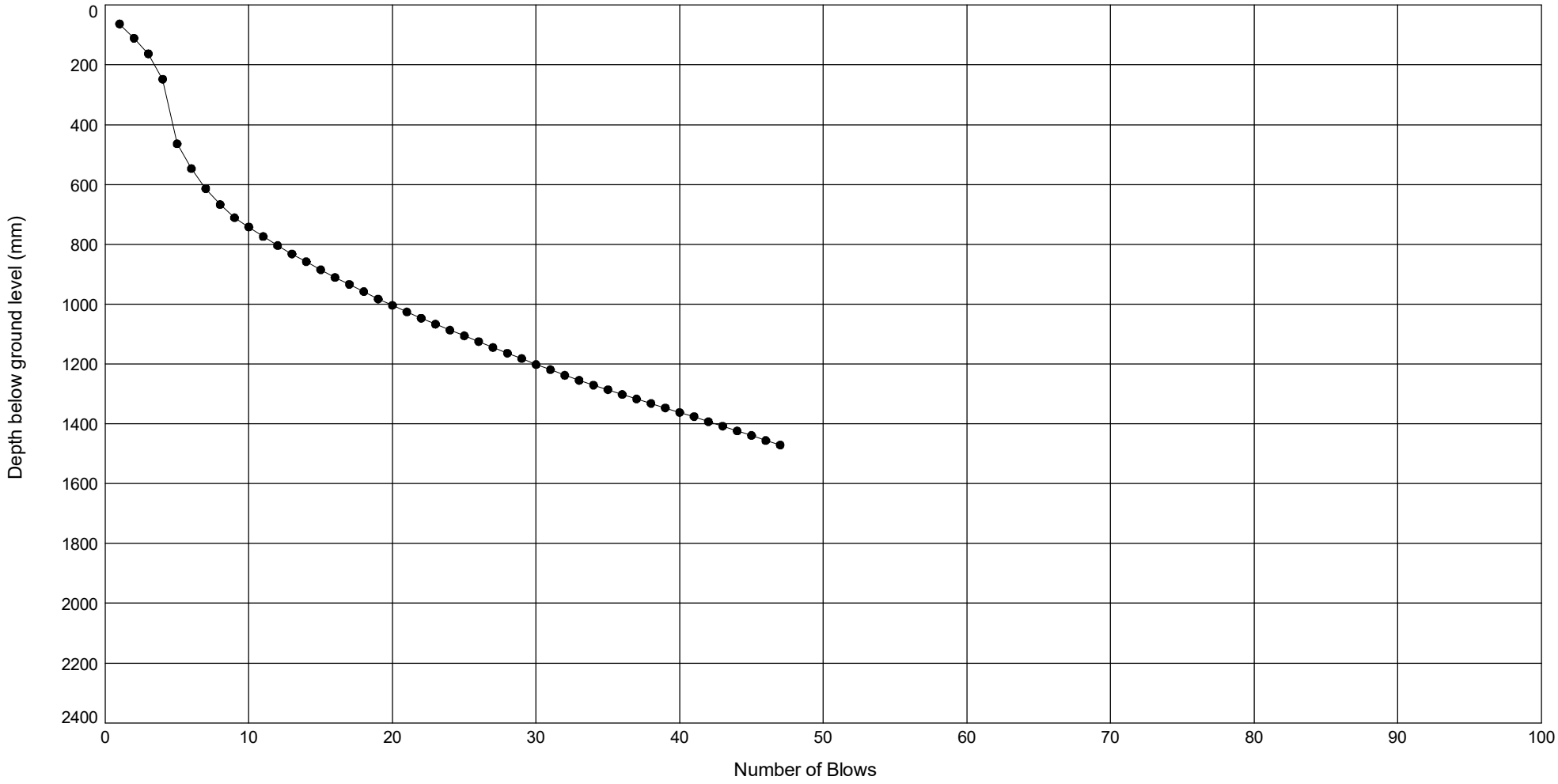
Contract Ref:

563607

DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **R22-TP506** Test Date : **23.10.23** Test Number : **1**

Ground Level (m AOD): **1.30** National Grid Co-ordinates: **E:631772.9 N:163447.2**



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Supervisor	Date	Checked By	Date
[redacted]	**23/10/23**	[redacted]	**14/03/24**

Contract

SEA Link FEED - Kent Onshore Cable Link

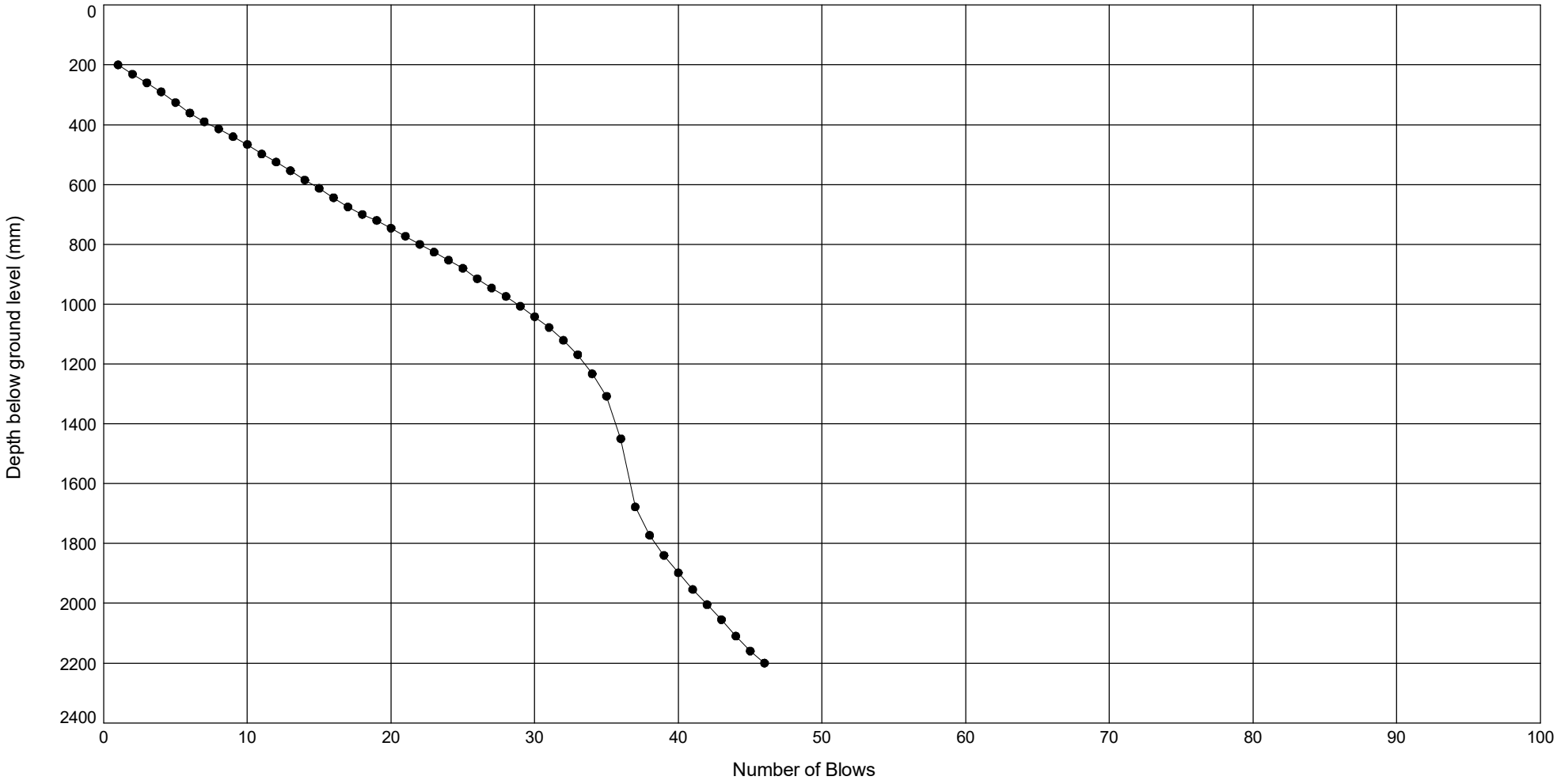
Contract Ref:

563607

DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **R22-TP508** Test Date : **16.10.23** Test Number : **1**

Ground Level (m AOD): **1.45** National Grid Co-ordinates: **E:631490.7 N:163037.7**



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Supervisor	Date	Checked By	Date
[redacted]	**16/10/23**	[redacted]	**14/03/24**

Contract

SEA Link FEED - Kent Onshore Cable Link

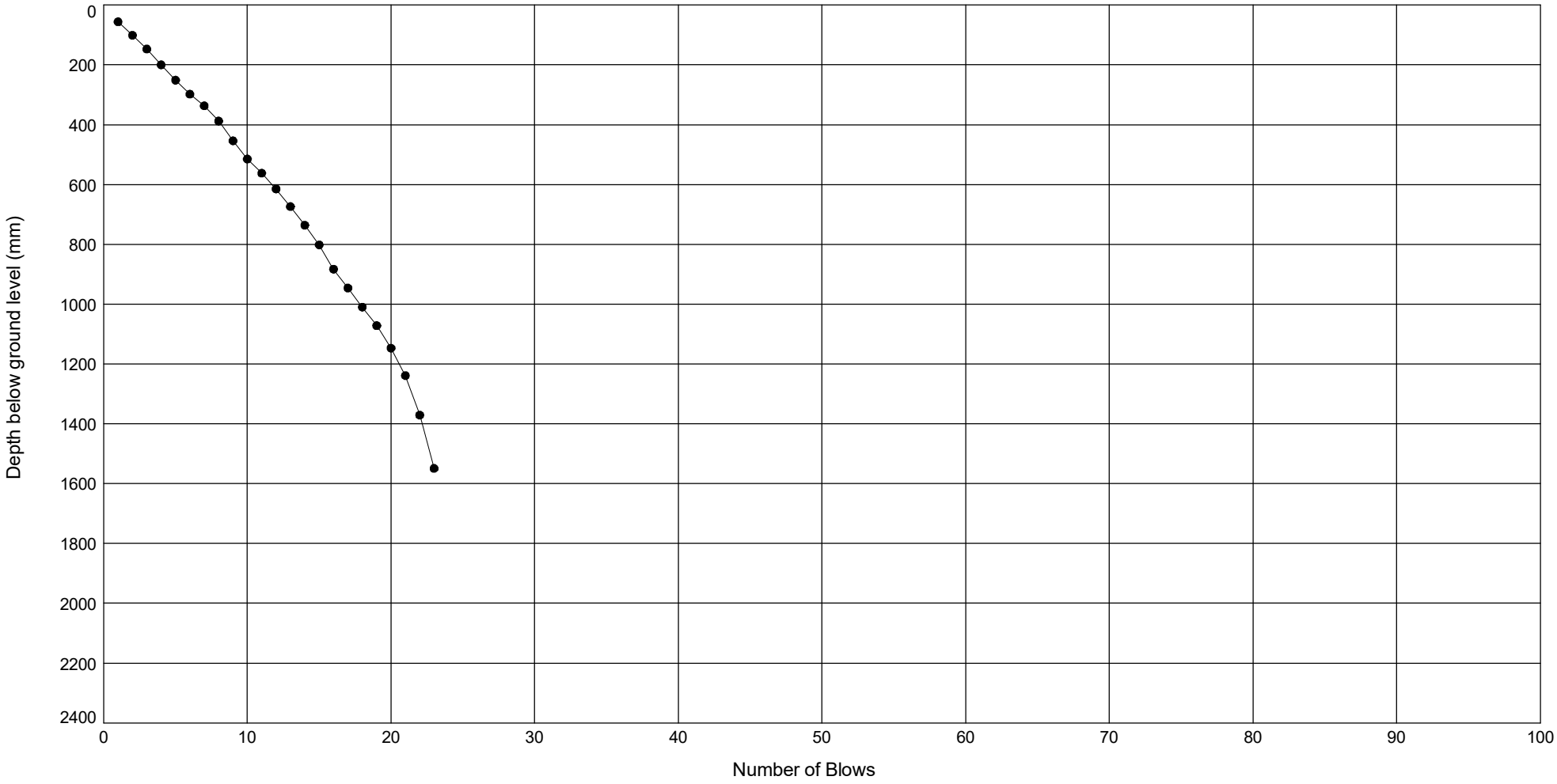
Contract Ref:

563607

DCP TEST RESULTS - DEPTH vs NUMBER OF BLOWS

Position Ref : **R22-TP510** Test Date : **20.10.23** Test Number : **1**

Ground Level (m AOD): **1.33** National Grid Co-ordinates: **E:631857.5 N:163158.8**



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Supervisor	Date	Checked By	Date
[redacted]	**20/10/23**	[redacted]	**14/03/24**

Contract

SEA Link FEED - Kent Onshore Cable Link

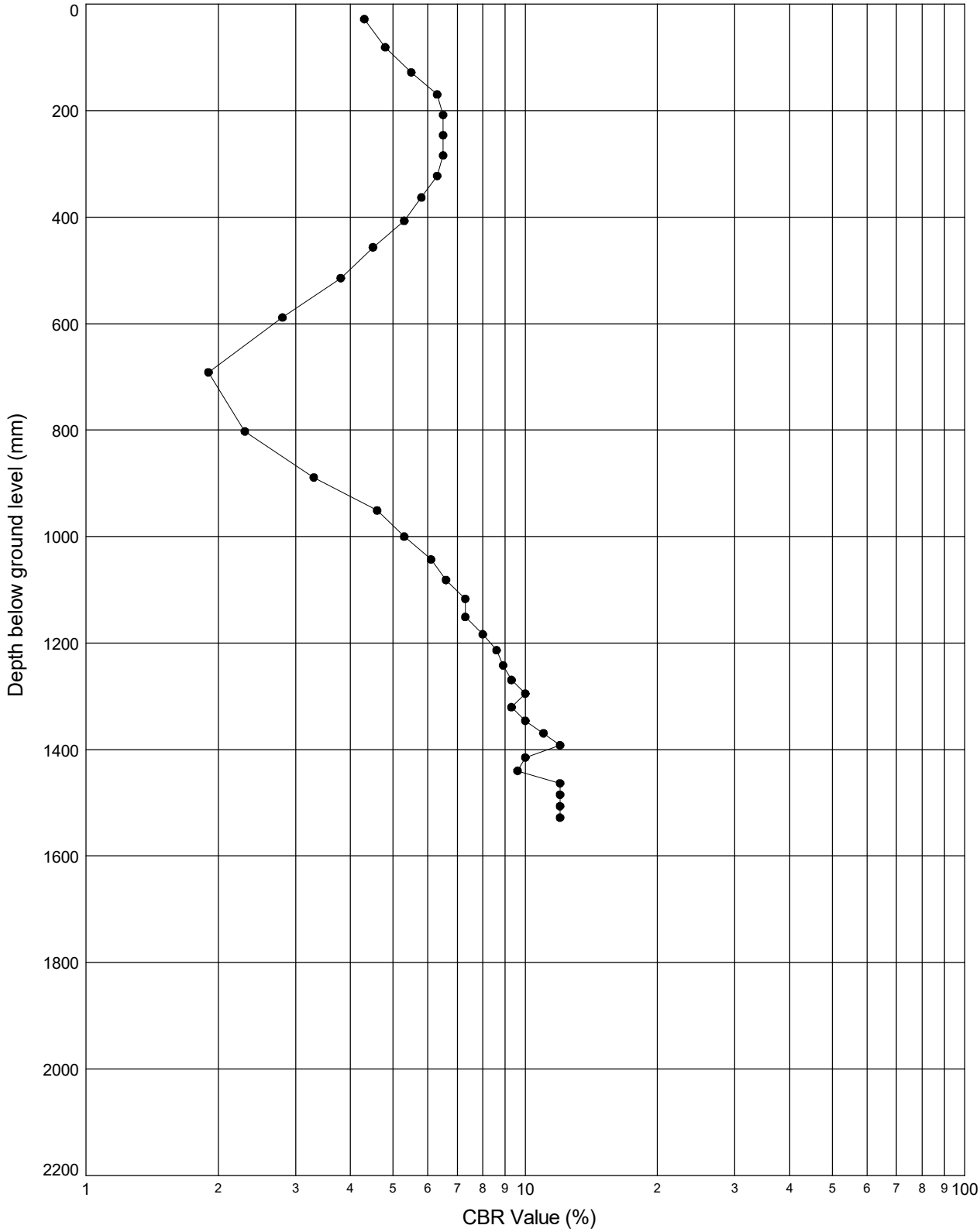
Contract Ref:

563607

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **R22-TP101** Test Date : **11.10.23** Test Number : **1**

Ground Level (m AOD): **1.38** National Grid Co-ordinates: **E:632188.0 N:163132.9**



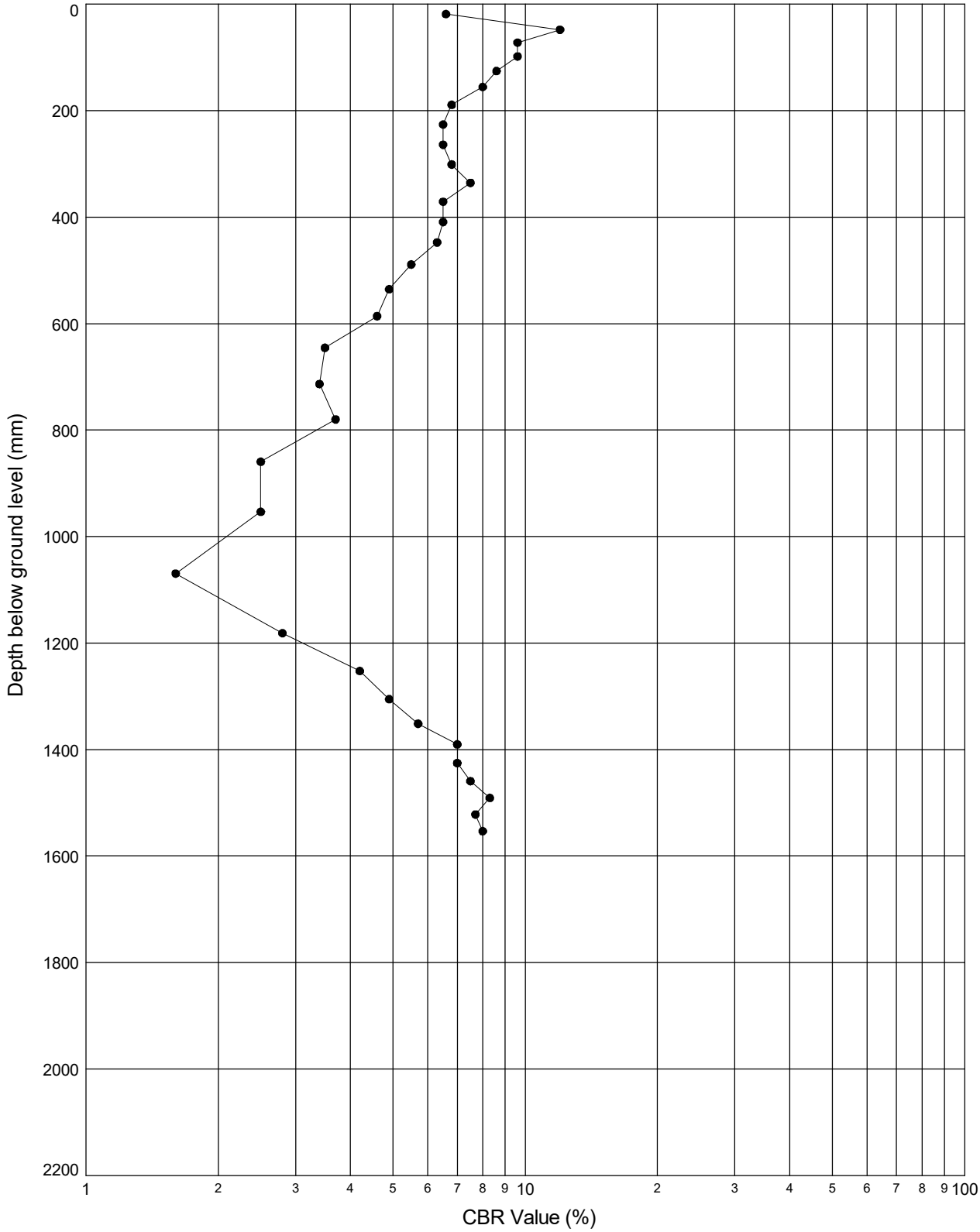
Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**11/10/23**	[redacted]	**14/03/24**
	Contract **SEA Link FEED - Kent Onshore Cable Link**		Contract Ref: **563607**	

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **R22-TP102** Test Date : **12.10.23** Test Number : **1**

Ground Level (m AOD): **1.48** National Grid Co-ordinates: **E:632079.2 N:163044.0**



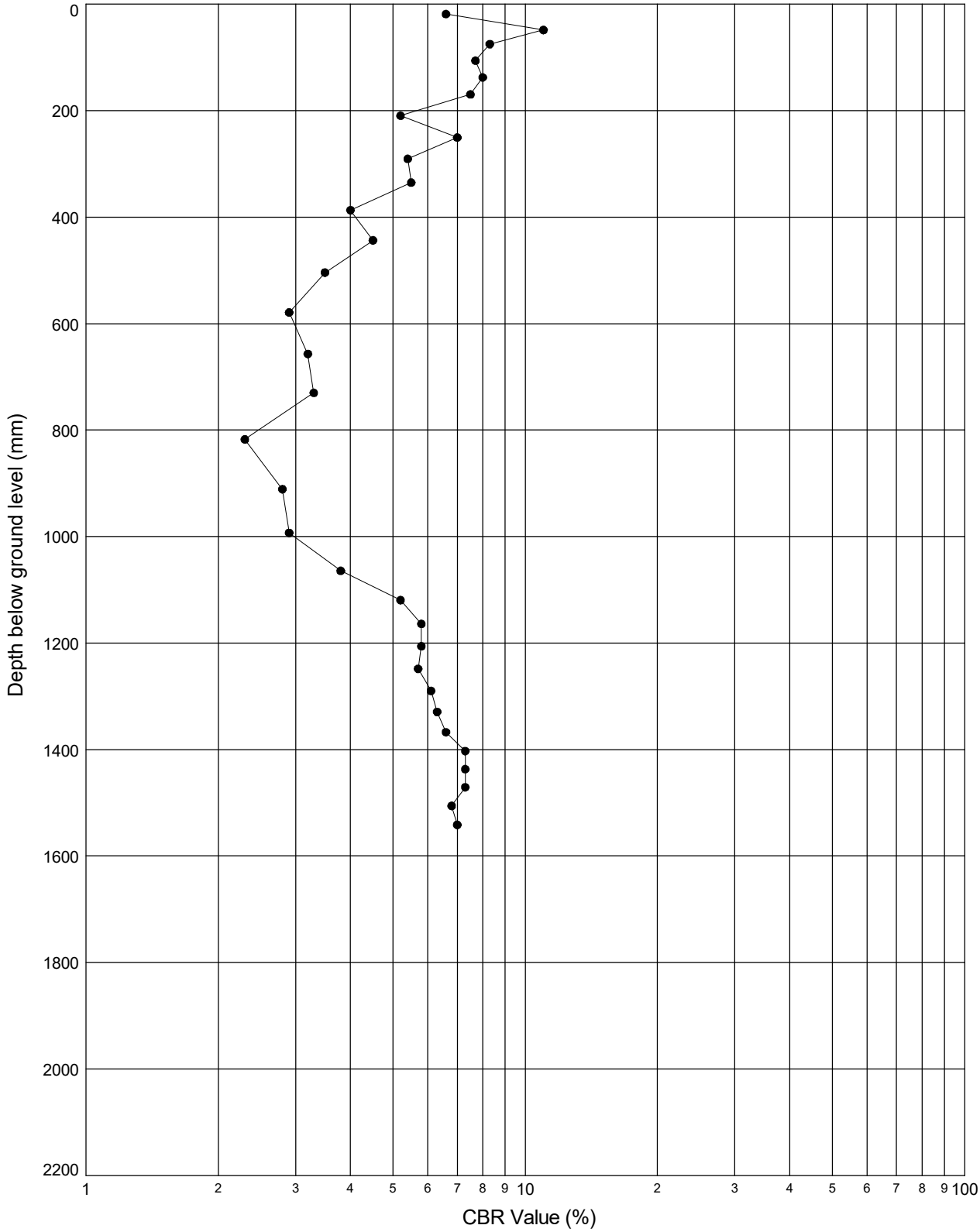
Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	12/10/23	[redacted]	14/03/24
	Contract **SEA Link FEED - Kent Onshore Cable Link**		Contract Ref: **563607**	

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **R22-TP103** Test Date : **09.10.23** Test Number : **1**

Ground Level (m AOD): **1.36** National Grid Co-ordinates: **E:632126.3 N:162967.8**



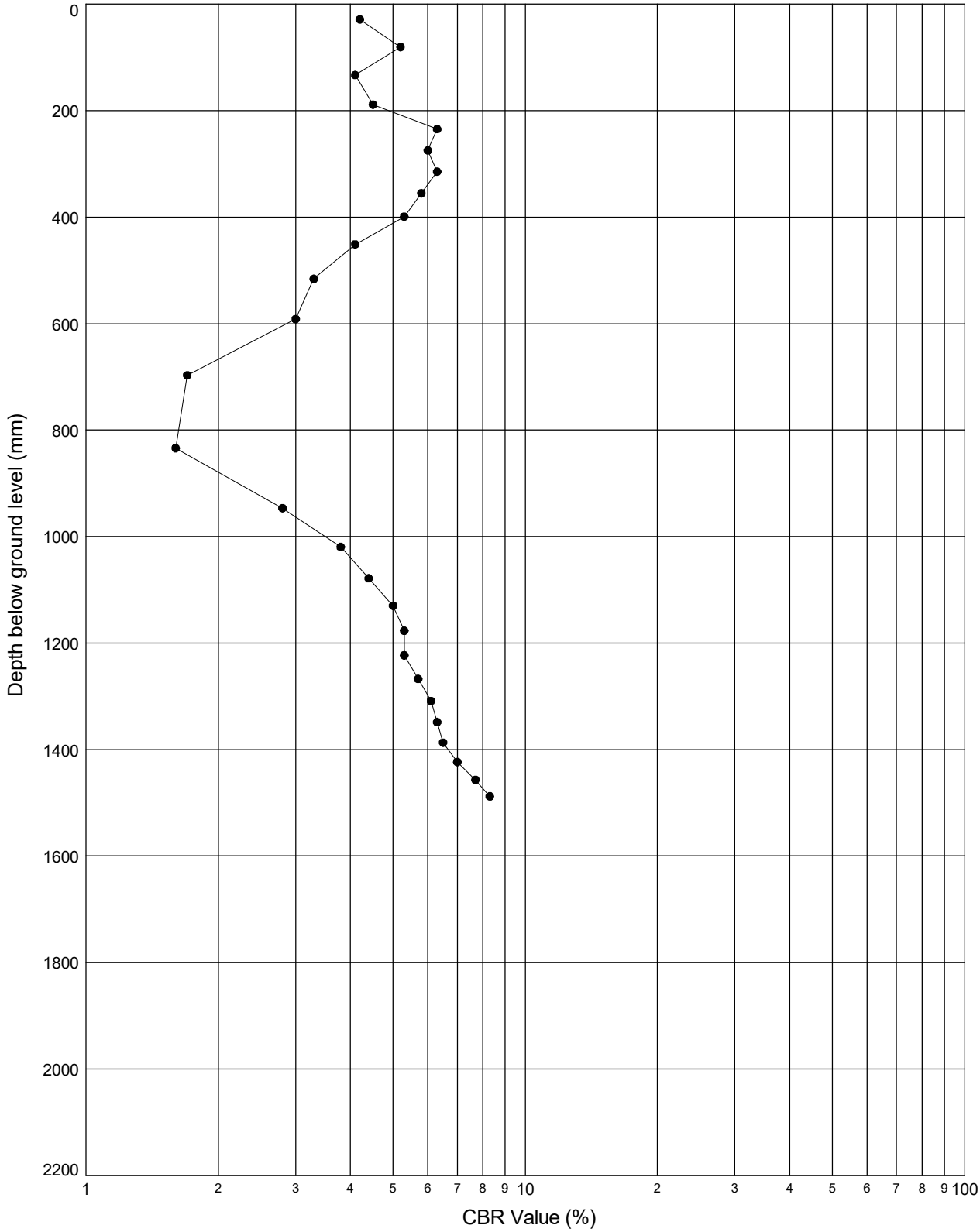
Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**09/10/23**	[redacted]	**14/03/24**
	Contract **SEA Link FEED - Kent Onshore Cable Link**		Contract Ref: **563607**	

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **R22-TP104** Test Date : **03.10.23** Test Number : **1**

Ground Level (m AOD): **1.35** National Grid Co-ordinates: **E:632412.6 N:163024.9**



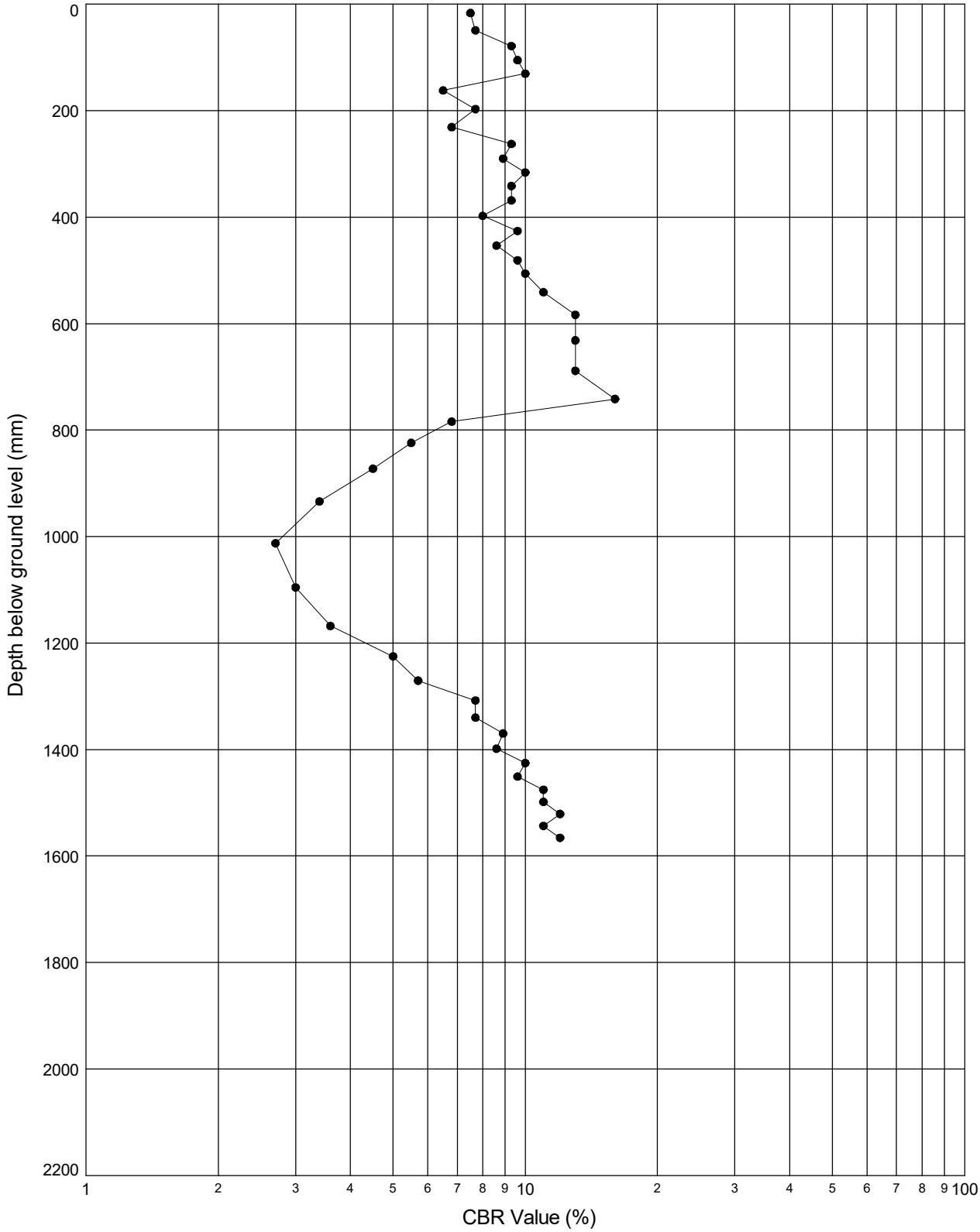
Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**03/10/23**	[redacted]	**14/03/24**
	Contract **SEA Link FEED - Kent Onshore Cable Link**		Contract Ref: **563607**	

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **R22-TP105** Test Date : **10.10.23** Test Number : **1**

Ground Level (m AOD): **1.50** National Grid Co-ordinates: **E:632391.0 N:163180.9**



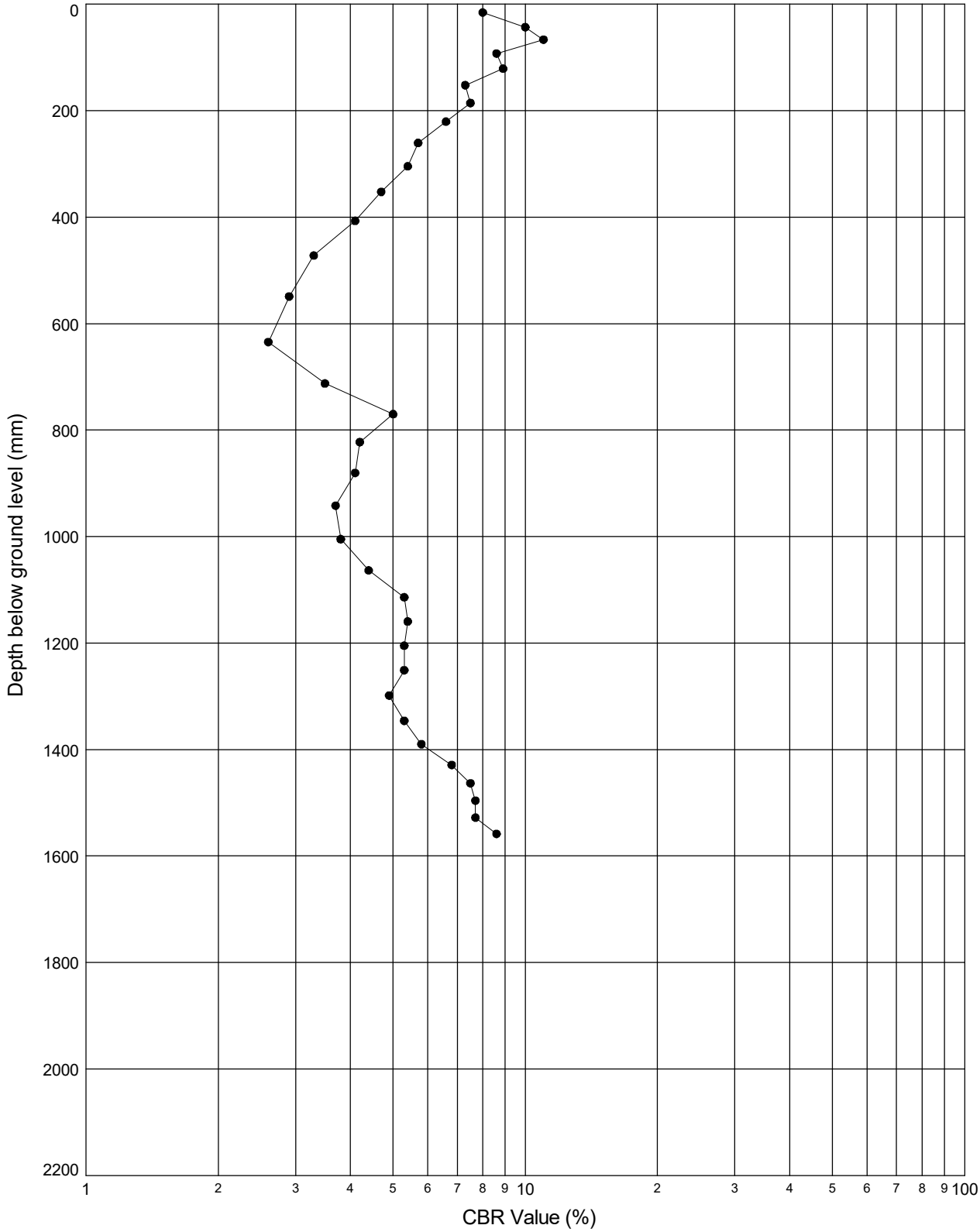
Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**10/10/23**	[redacted]	**14/03/24**
	Contract **SEA Link FEED - Kent Onshore Cable Link**		Contract Ref: **563607**	

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **R22-TP106** Test Date : **12.10.23** Test Number : **1**

Ground Level (m AOD): **1.29** National Grid Co-ordinates: **E:632251.6 N:162902.2**



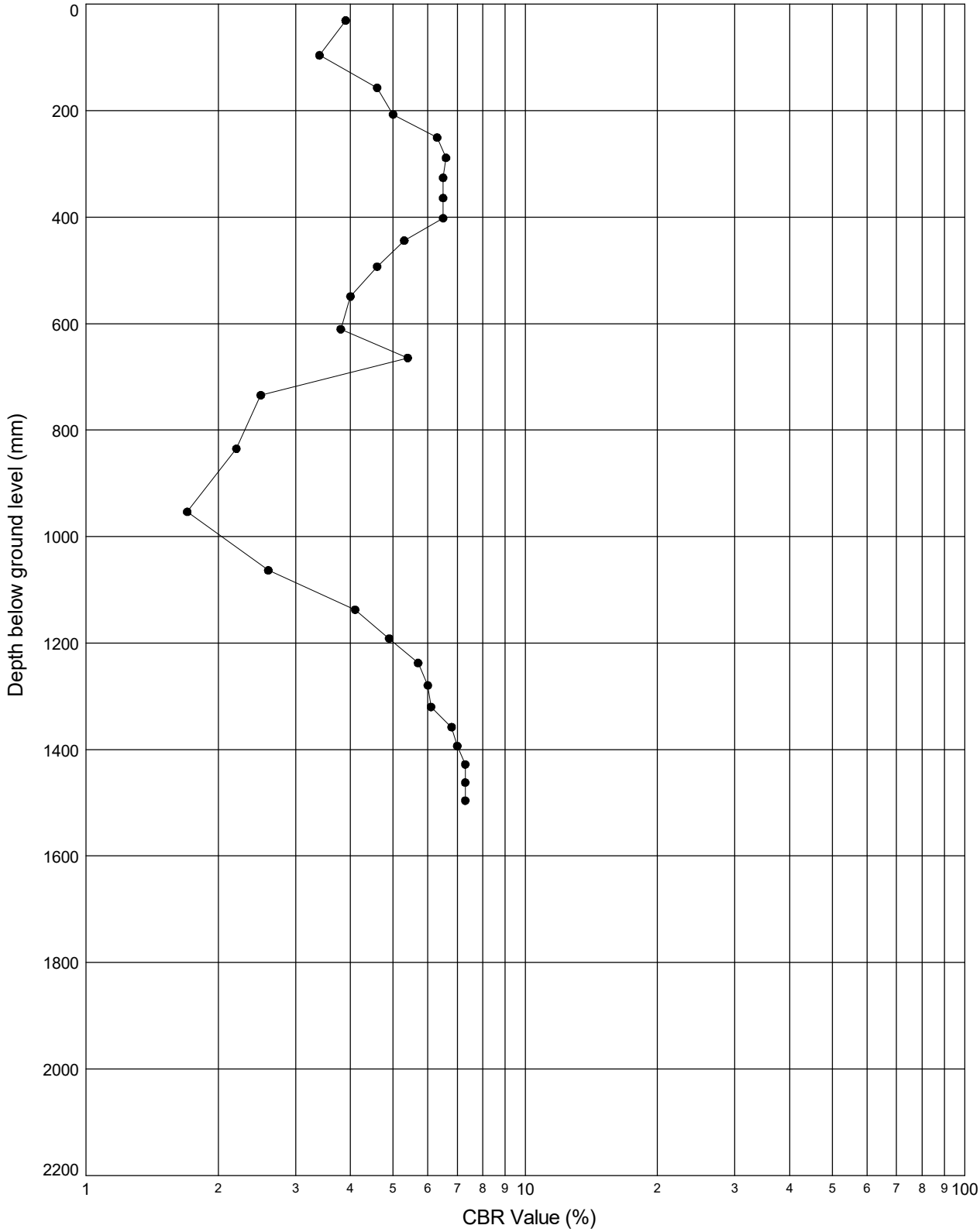
Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**12/10/23**	[redacted]	**14/03/24**
	Contract **SEA Link FEED - Kent Onshore Cable Link**		Contract Ref: **563607**	

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **R22-TP107** Test Date : **04.10.23** Test Number : **1**

Ground Level (m AOD): **1.39** National Grid Co-ordinates: **E:632524.8 N:162978.0**



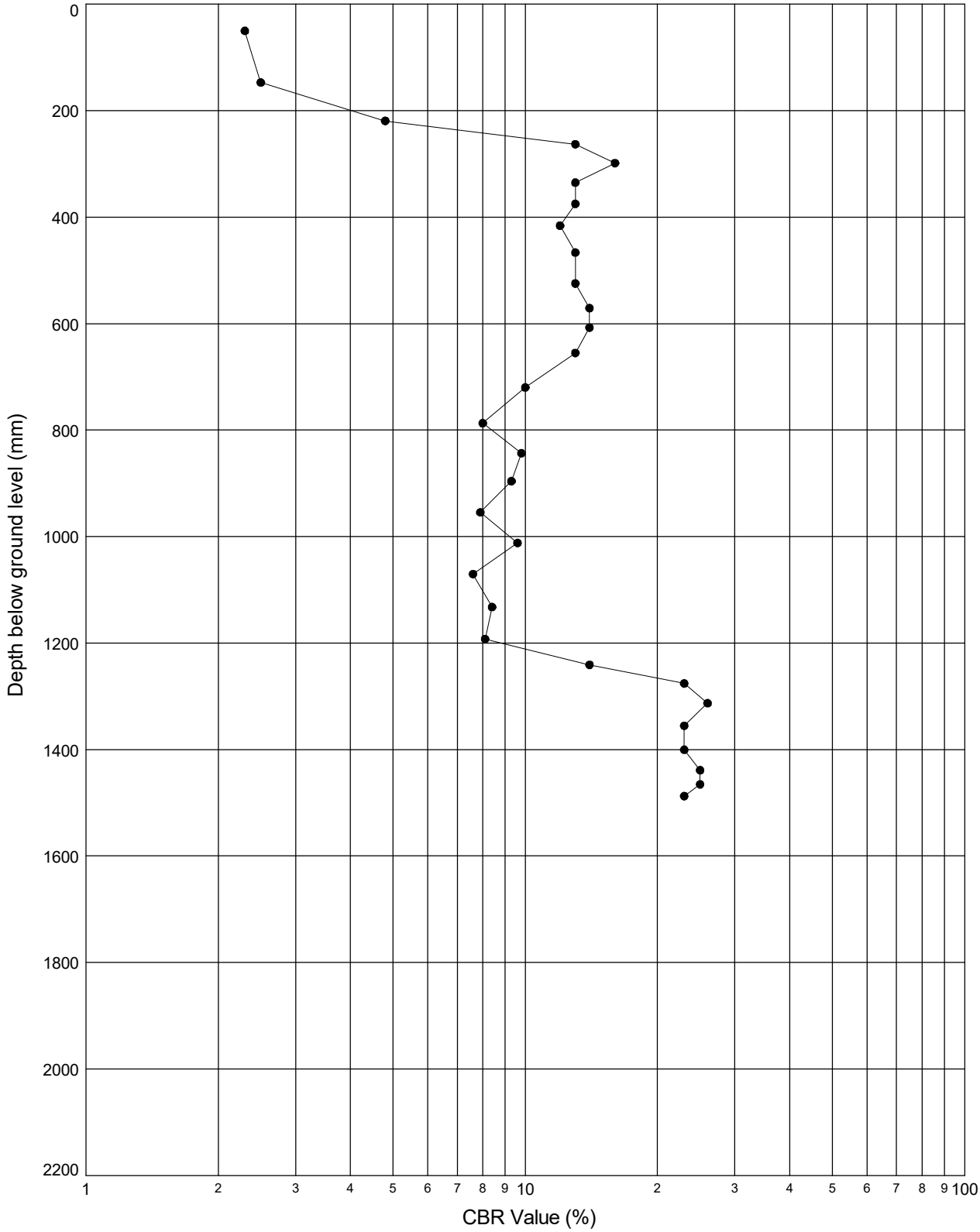
Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**04/10/23**	[redacted]	**14/03/24**
	Contract **SEA Link FEED - Kent Onshore Cable Link**		Contract Ref: **563607**	

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **R22-TP201** Test Date : **19.10.23** Test Number : **1**

Ground Level (m AOD): **4.35** National Grid Co-ordinates: **E:633846.7 N:163705.4**



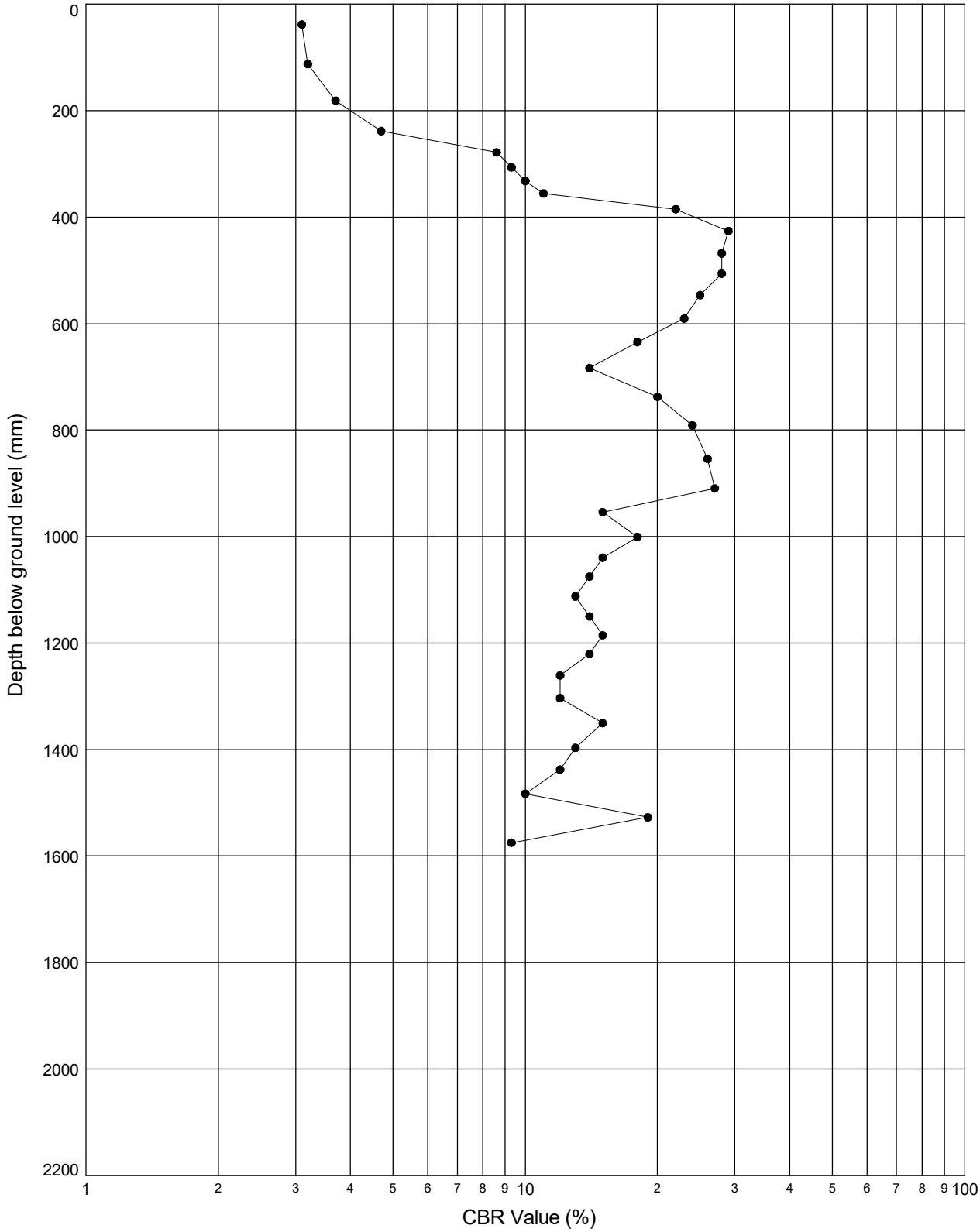
Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**19/10/23**	[redacted]	**14/03/24**
	Contract **SEA Link FEED - Kent Onshore Cable Link**		Contract Ref: **563607**	

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **R22-TP202** Test Date : **18.10.23** Test Number : **1**

Ground Level (m AOD): **11.00** National Grid Co-ordinates: **E:633556.2 N:163636.7**



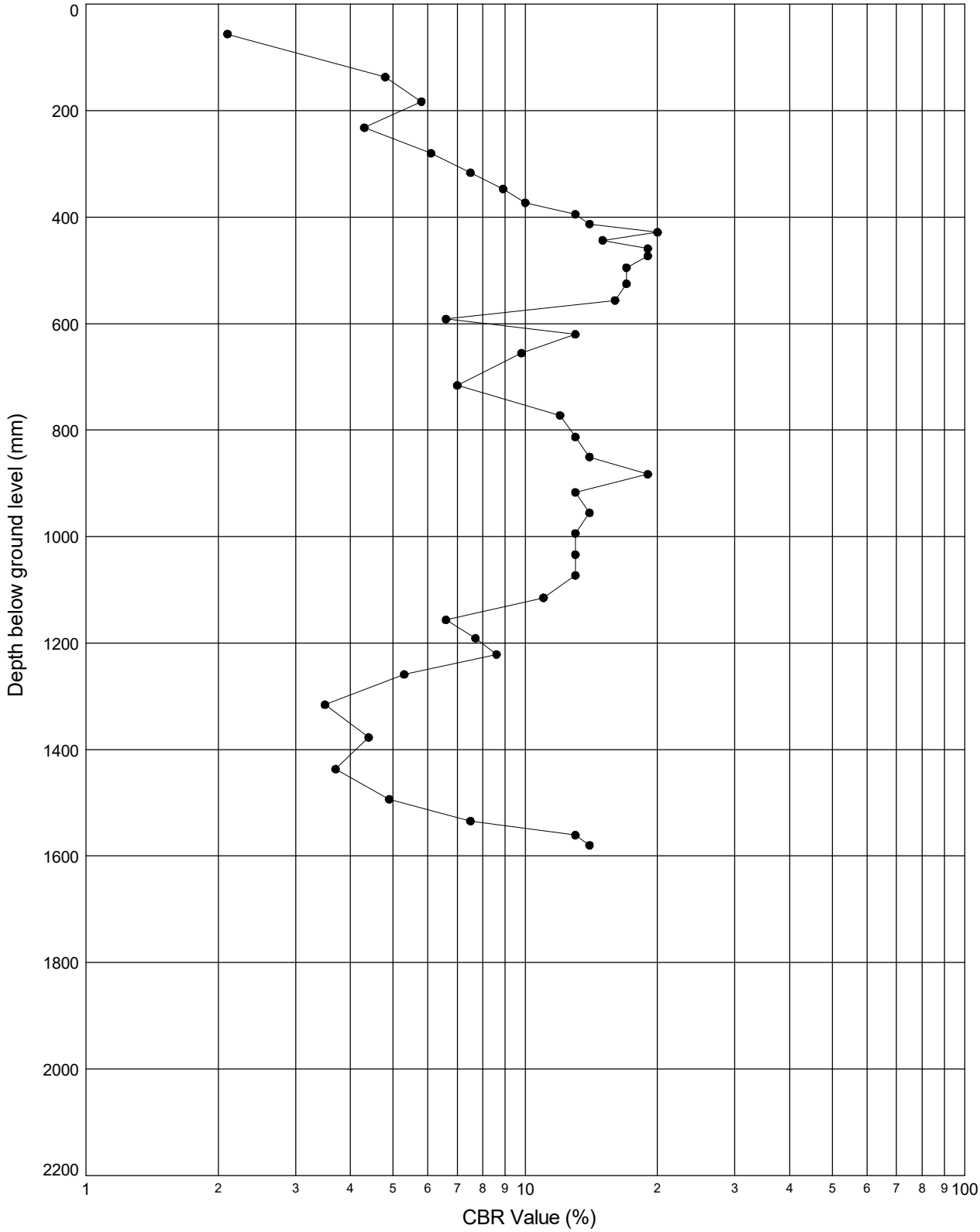
Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**18/10/23**	[redacted]	**14/03/24**
	Contract **SEA Link FEED - Kent Onshore Cable Link**		Contract Ref: **563607**	

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **R22-TP203** Test Date : **26.09.23** Test Number : **1**

Ground Level (m AOD): **7.14** National Grid Co-ordinates: **E:633280.7 N:163502.6**



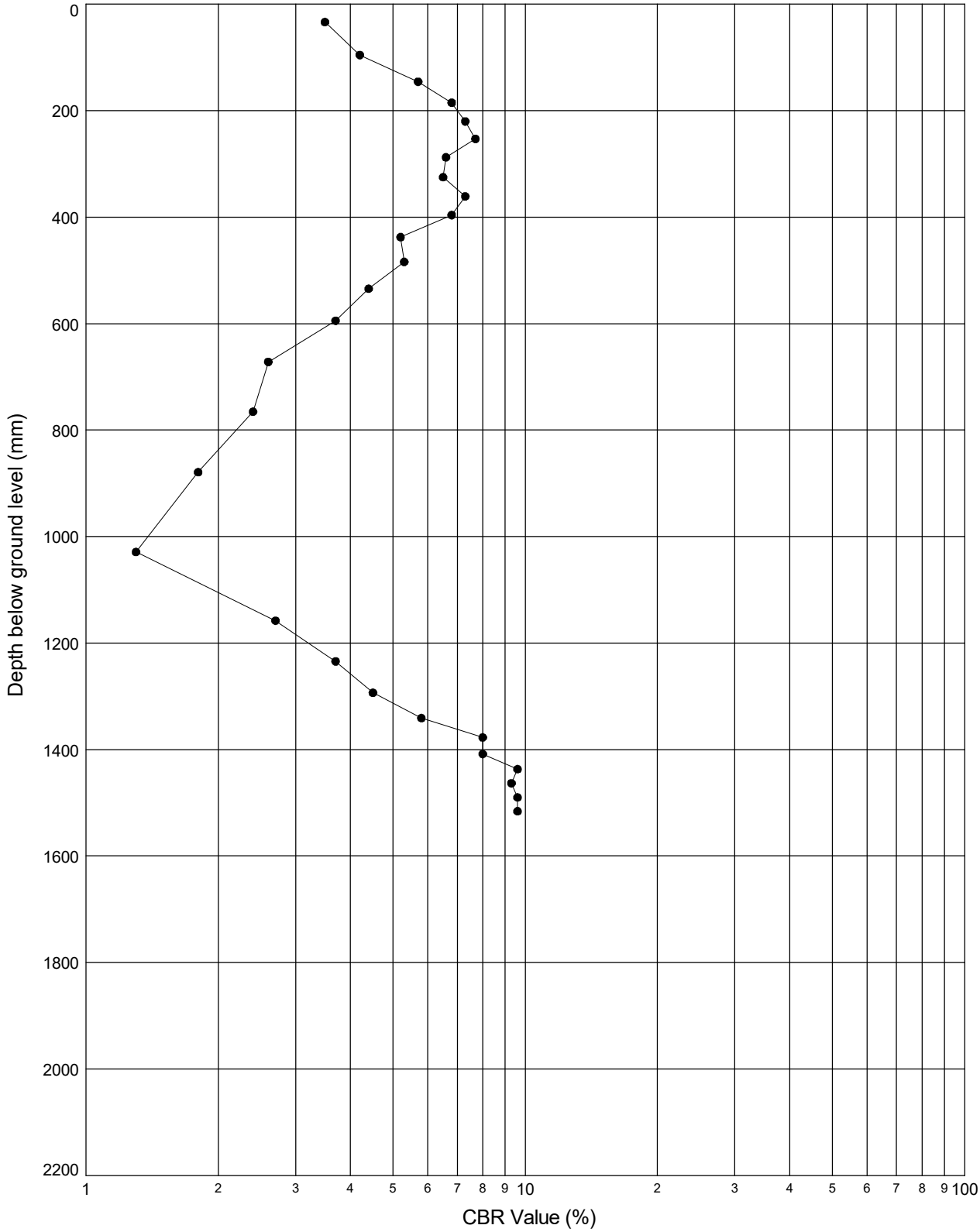
Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**26/09/23**	[redacted]	**14/03/24**
	Contract **SEA Link FEED - Kent Onshore Cable Link**		Contract Ref: **563607**	

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **R22-TP204** Test Date : **27.09.23** Test Number : **1**

Ground Level (m AOD): **1.56** National Grid Co-ordinates: **E:632890.2 N:163330.3**



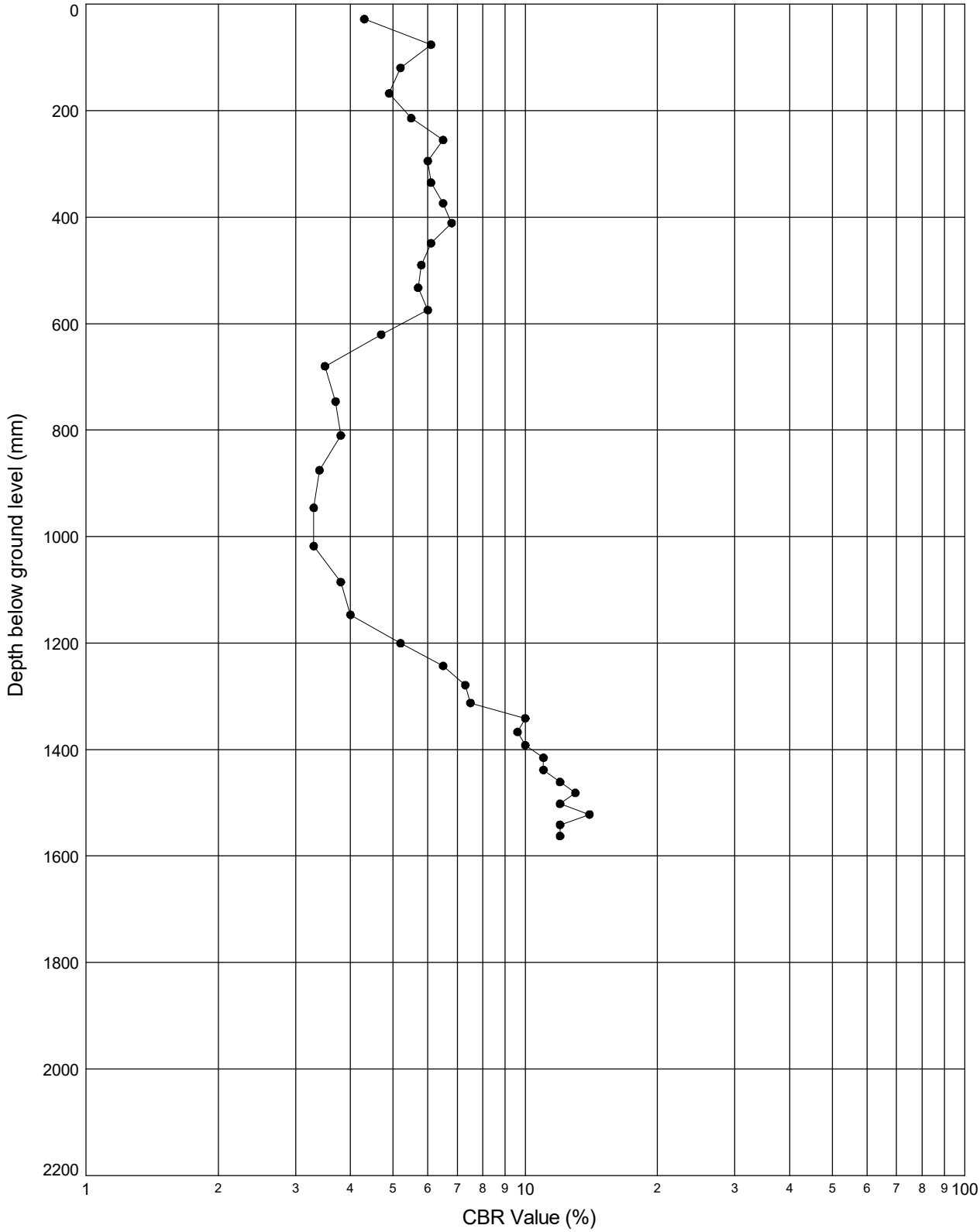
Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**27/09/23**	[redacted]	**14/03/24**
	Contract **SEA Link FEED - Kent Onshore Cable Link**		Contract Ref: **563607**	

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **R22-TP205** Test Date : **06.10.23** Test Number : **1**

Ground Level (m AOD): **1.44** National Grid Co-ordinates: **E:632566.0 N:163105.6**



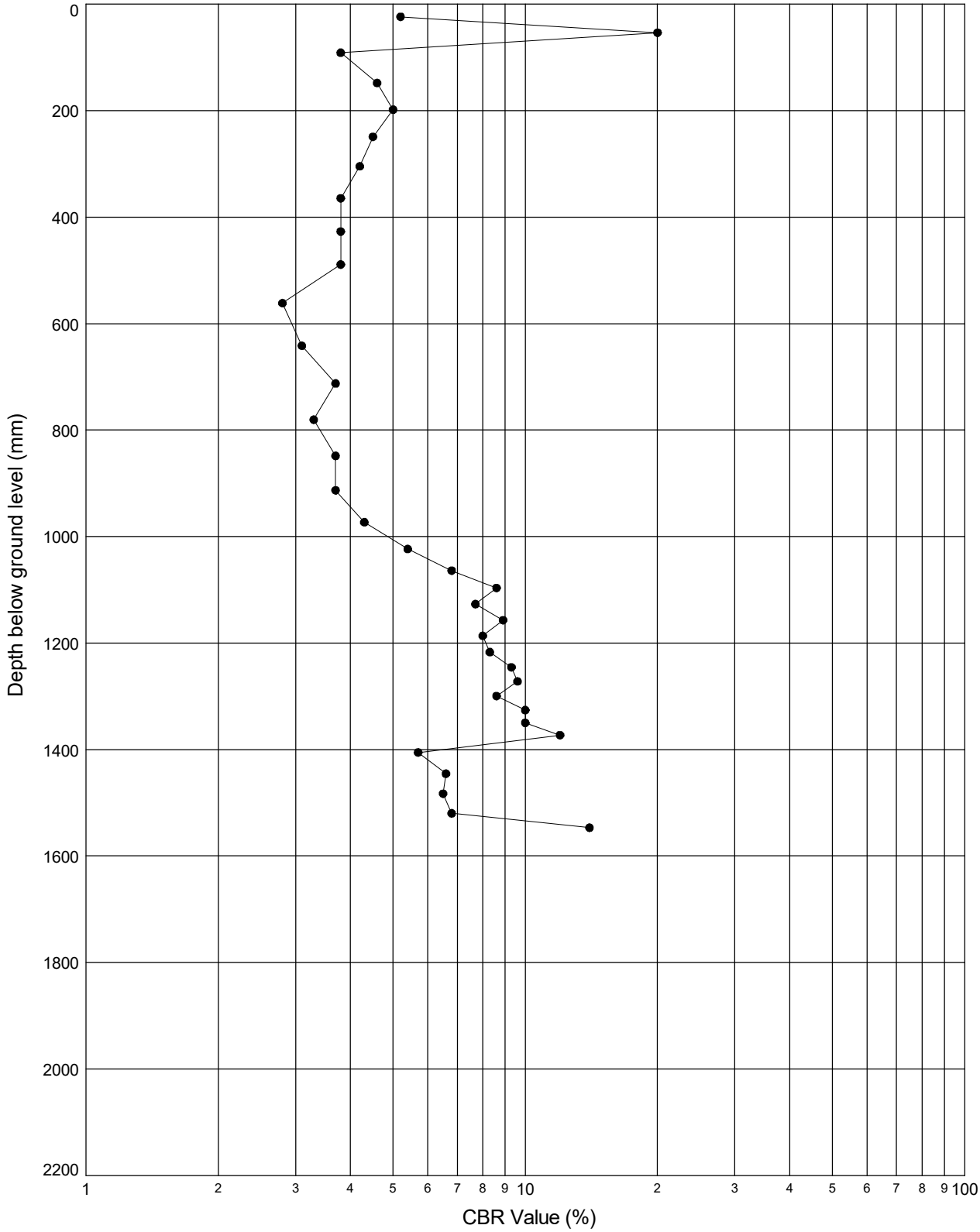
Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**06/10/23**	[redacted]	**14/03/24**
	Contract **SEA Link FEED - Kent Onshore Cable Link**		Contract Ref: **563607**	

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **R22-TP405** Test Date : **02.10.23** Test Number : **1**

Ground Level (m AOD): **1.43** National Grid Co-ordinates: **E:632249.6 N:163371.0**



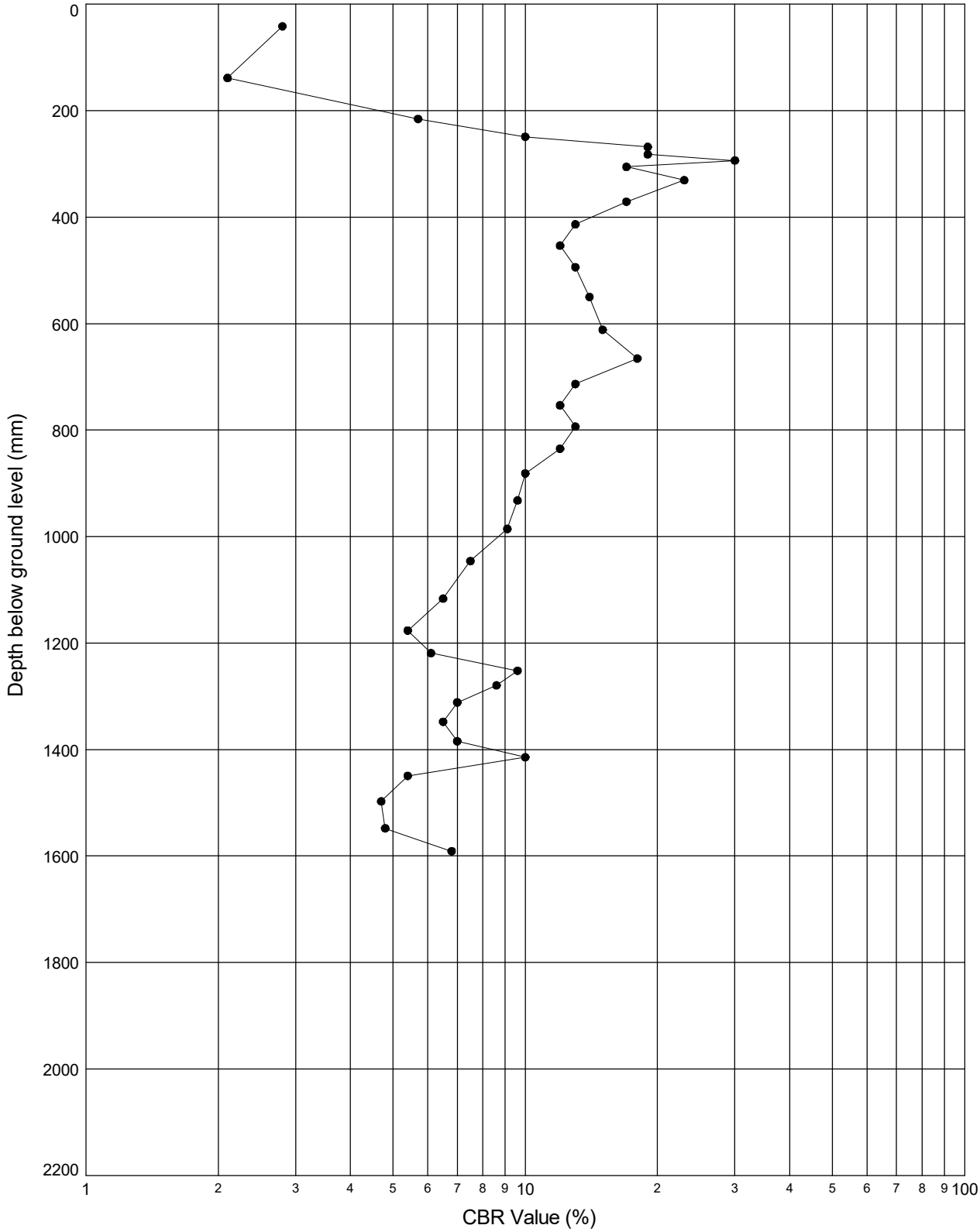
Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	02/10/23	[redacted]	14/03/24
	Contract **SEA Link FEED - Kent Onshore Cable Link**		Contract Ref: **563607**	

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **R22-TP501** Test Date : **17.10.23** Test Number : **1**

Ground Level (m AOD): **5.91** National Grid Co-ordinates: **E:633352.1 N:163351.8**



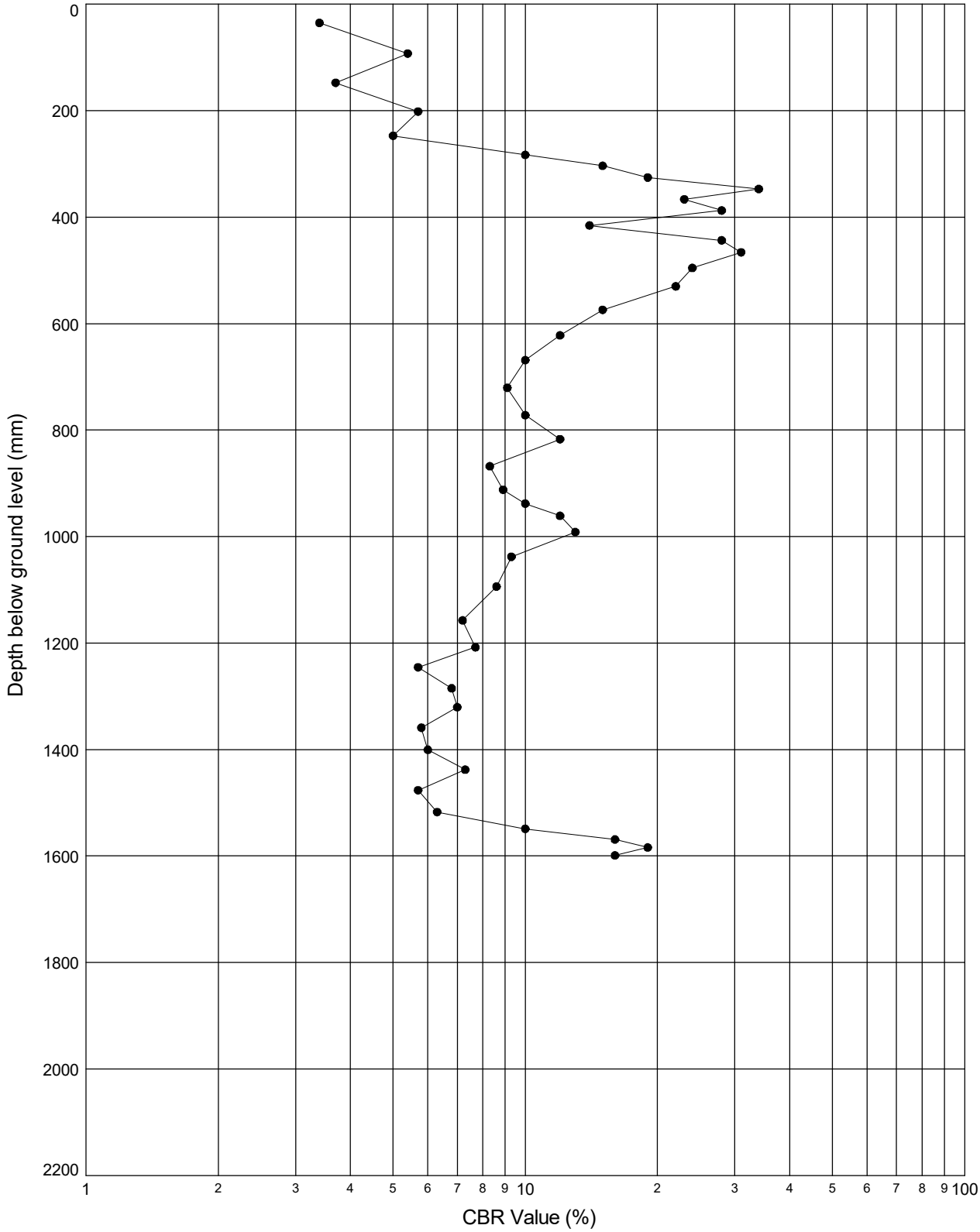
Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	17/10/23	[redacted]	14/03/24
	Contract **SEA Link FEED - Kent Onshore Cable Link**		Contract Ref: **563607**	

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **R22-TP502** Test Date : **26.09.23** Test Number : **1**

Ground Level (m AOD): **4.53** National Grid Co-ordinates: **E:633081.5 N:163435.3**



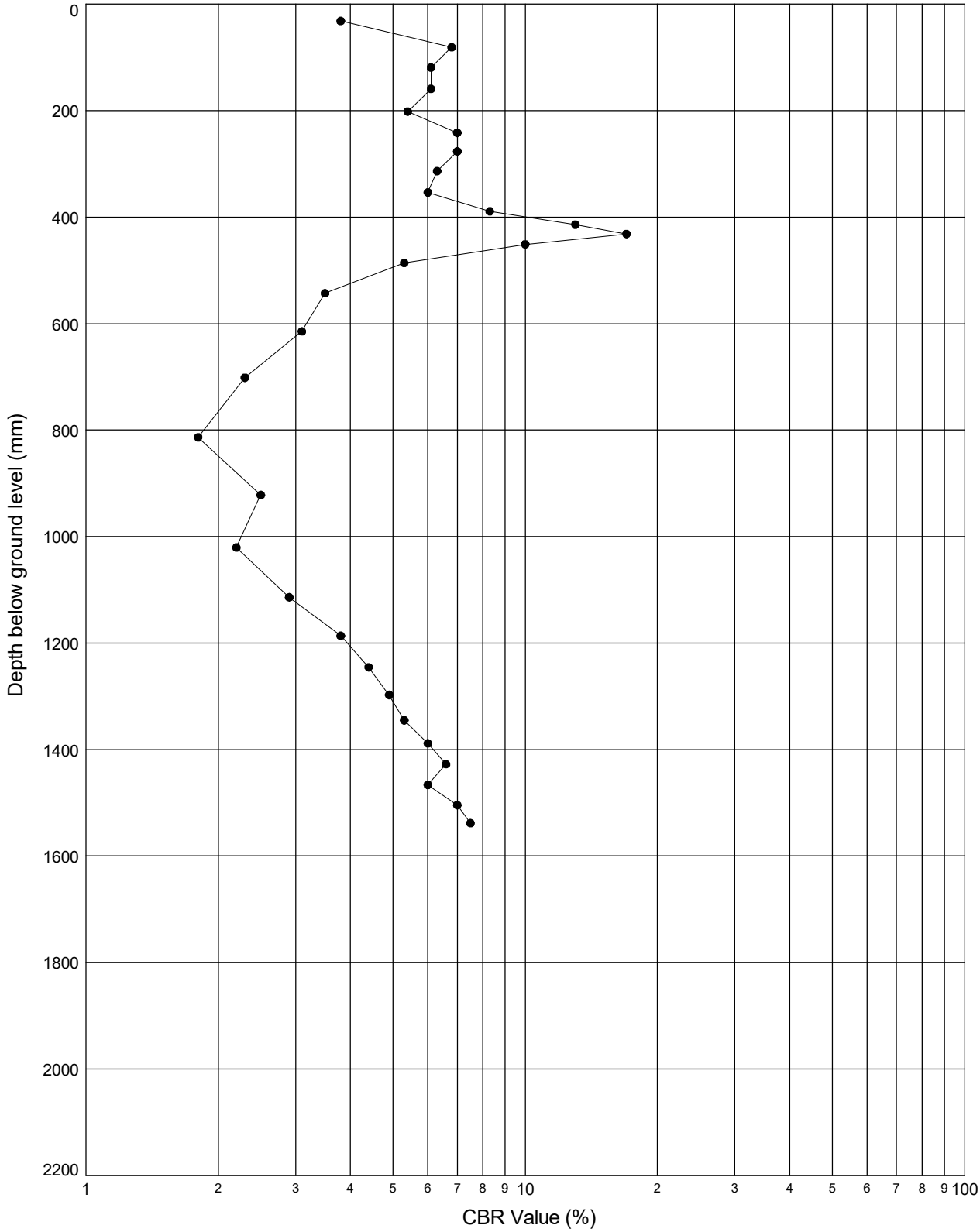
Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line. Finlay Price.**

STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**26/09/23**	[redacted]	**14/03/24**
	Contract **SEA Link FEED - Kent Onshore Cable Link**		Contract Ref: **563607**	

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **R22-TP503** Test Date : **28.09.23** Test Number : **1**

Ground Level (m AOD): **1.26** National Grid Co-ordinates: **E:632685.6 N:163156.3**



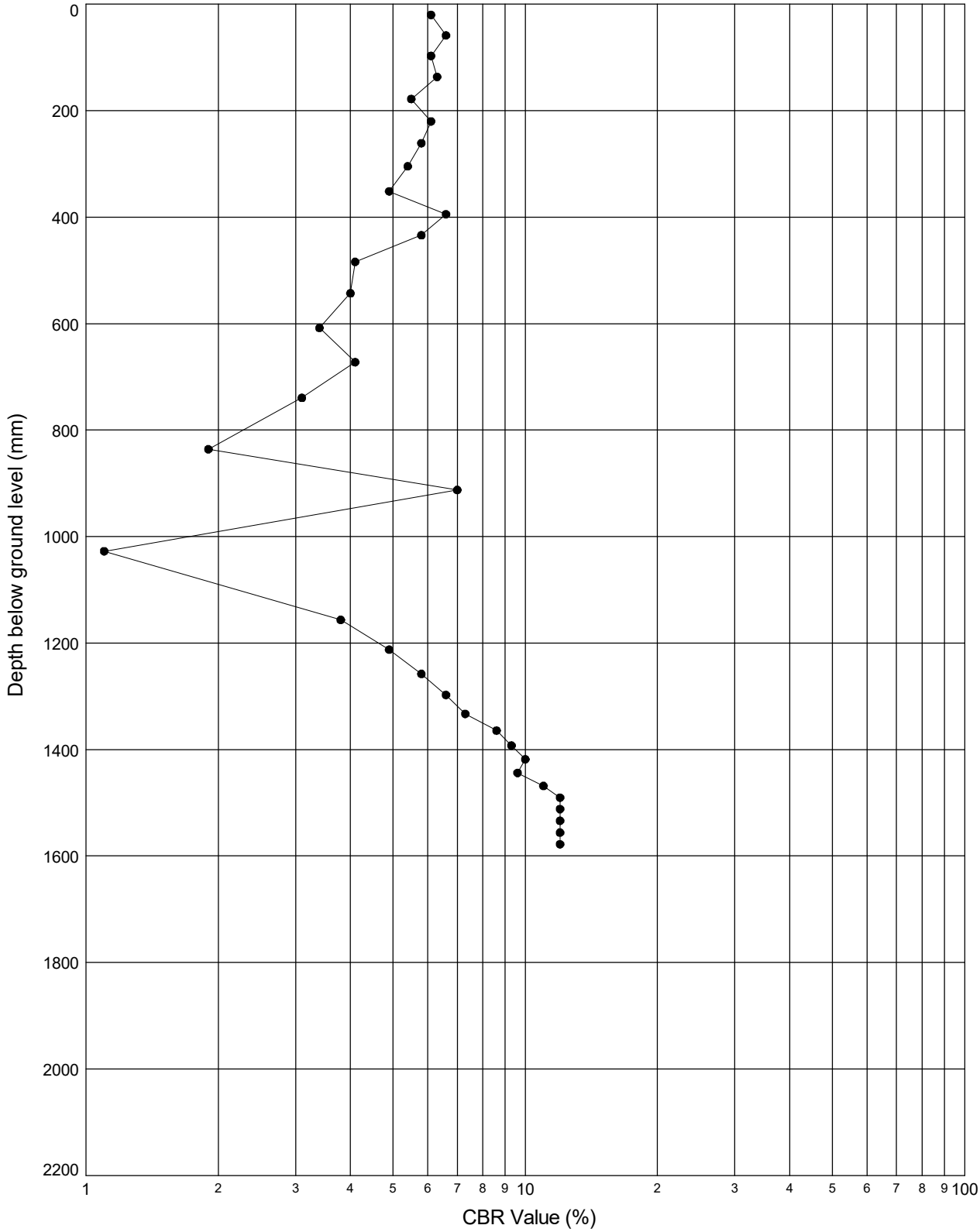
Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**28/09/23**	[redacted]	**14/03/24**
	Contract **SEA Link FEED - Kent Onshore Cable Link**		Contract Ref: **563607**	

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **R22-TP503A** Test Date : **28.09.23** Test Number : **1**

Ground Level (m AOD): **1.35** National Grid Co-ordinates: **E:632680.3 N:163155.7**



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

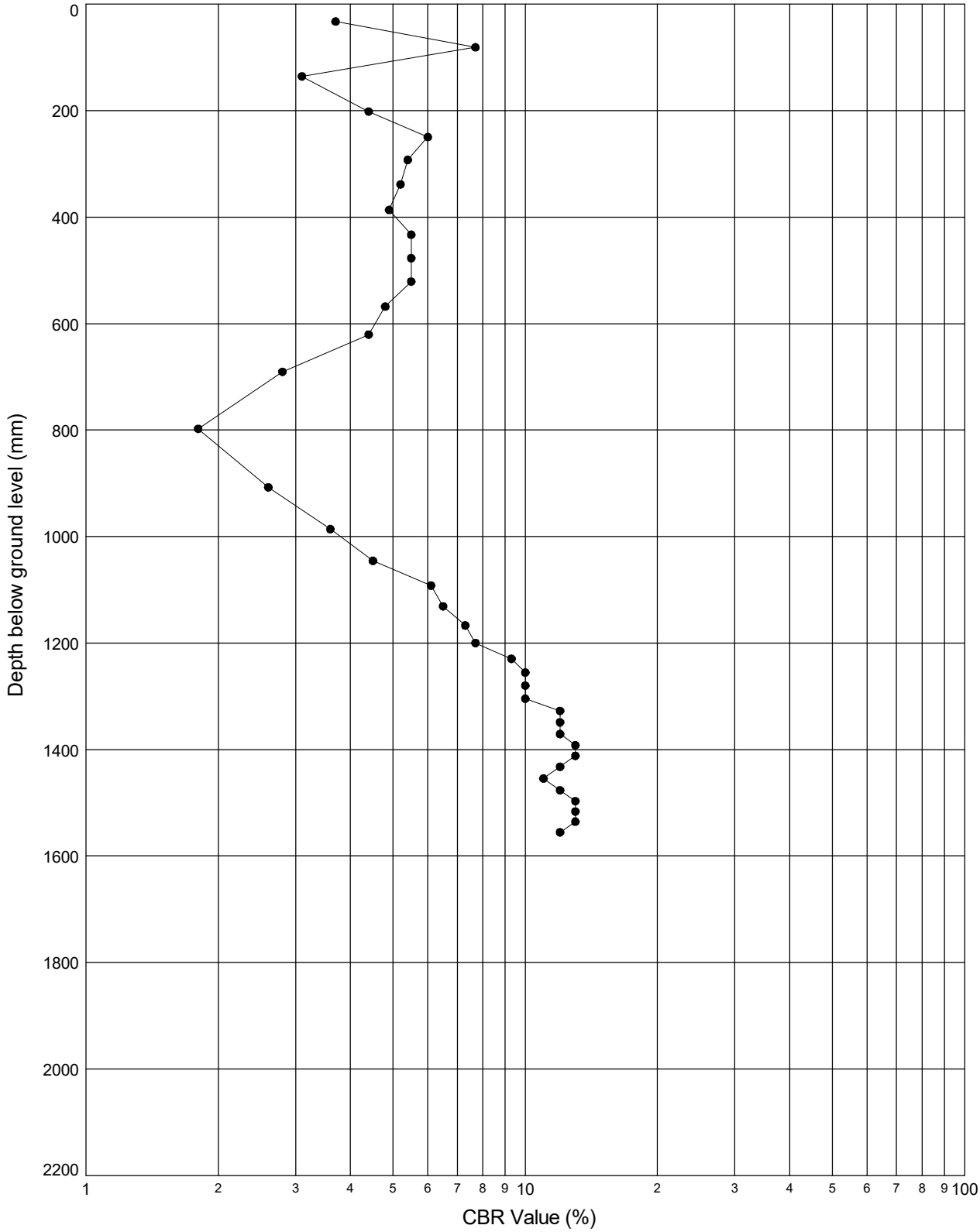
Test Supervisor	Date	Checked By	Date
[redacted]	28/09/23	[redacted]	14/03/24

Contract	Contract Ref:
SEA Link FEED - Kent Onshore Cable Link	**563607**

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **R22-TP504** Test Date : **28.09.23** Test Number : **1**

Ground Level (m AOD): **1.58** National Grid Co-ordinates: **E:632320.2 N:163243.1**



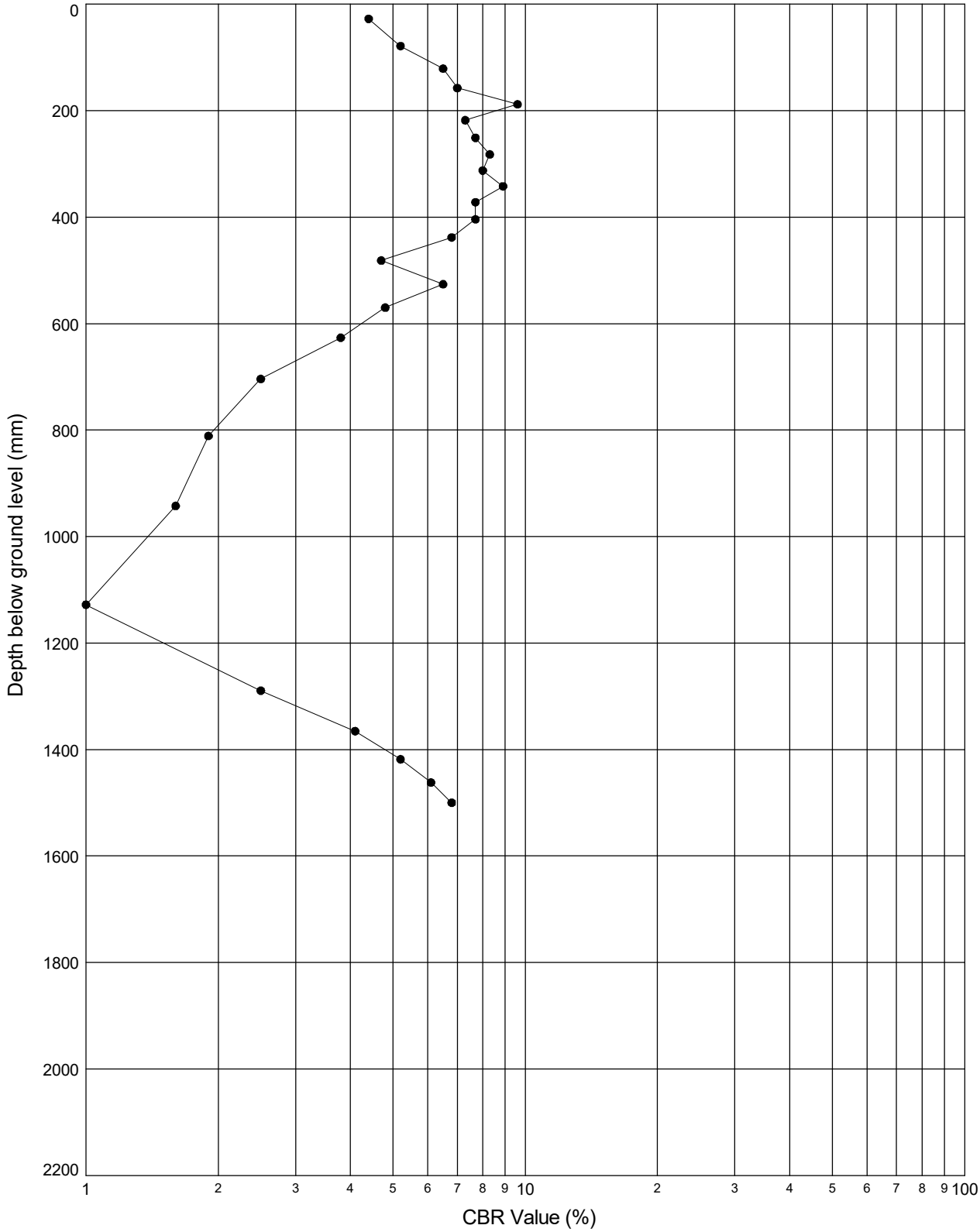
Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**28/09/23**	[redacted]	**14/03/24**
	Contract **SEA Link FEED - Kent Onshore Cable Link**		Contract Ref: **563607**	

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **R22-TP505** Test Date : **03.10.23** Test Number : **1**

Ground Level (m AOD): **1.49** National Grid Co-ordinates: **E:632088.2 N:163347.6**



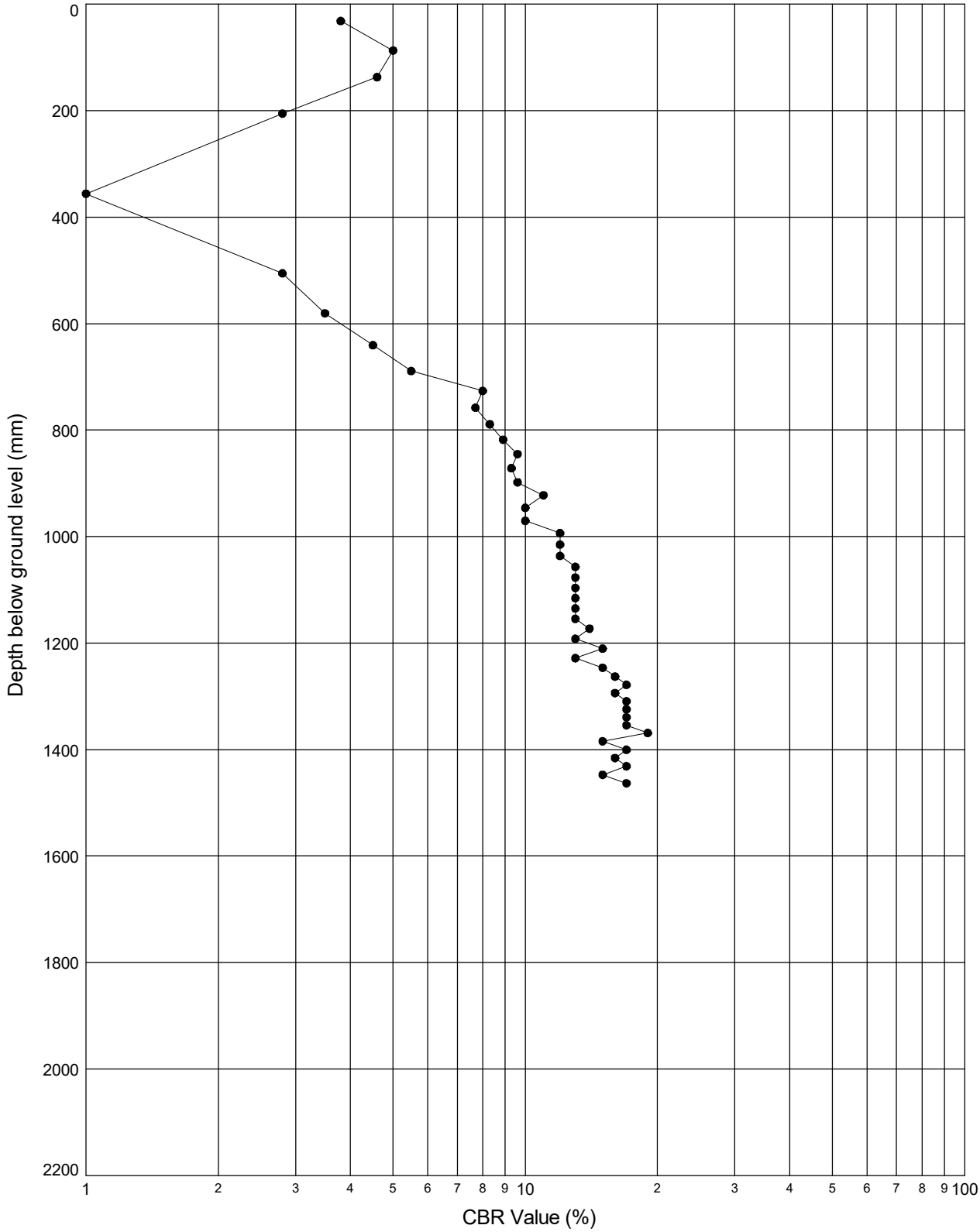
Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**03/10/23**	[redacted]	**14/03/24**
	Contract **SEA Link FEED - Kent Onshore Cable Link**		Contract Ref: **563607**	

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **R22-TP506** Test Date : **23.10.23** Test Number : **1**

Ground Level (m AOD): **1.30** National Grid Co-ordinates: **E:631772.9 N:163447.2**



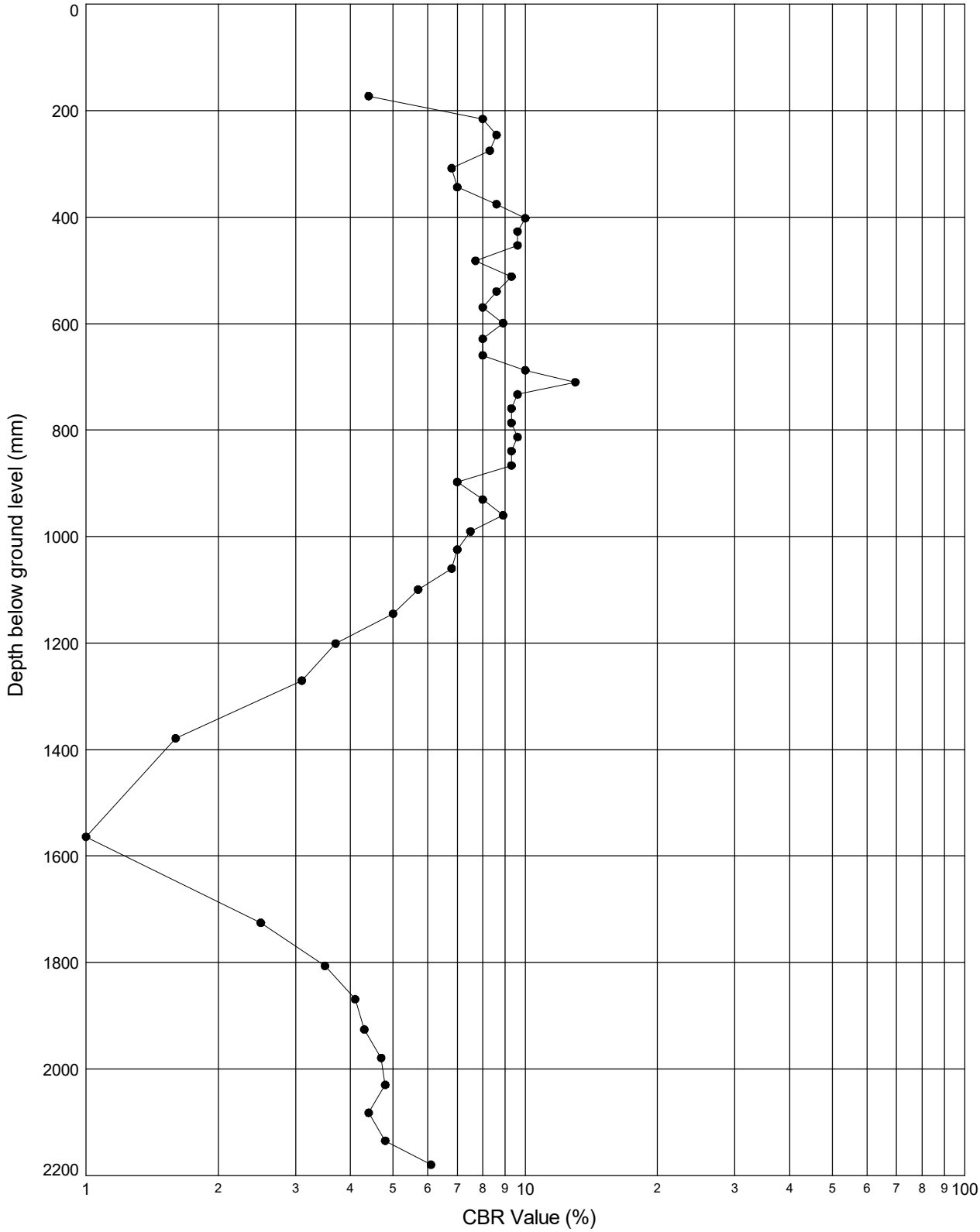
Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**23/10/23**	[redacted]	**14/03/24**
	Contract **SEA Link FEED - Kent Onshore Cable Link**		Contract Ref: **563607**	

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **R22-TP508** Test Date : **16.10.23** Test Number : **1**

Ground Level (m AOD): **1.45** National Grid Co-ordinates: **E:631490.7 N:163037.7**



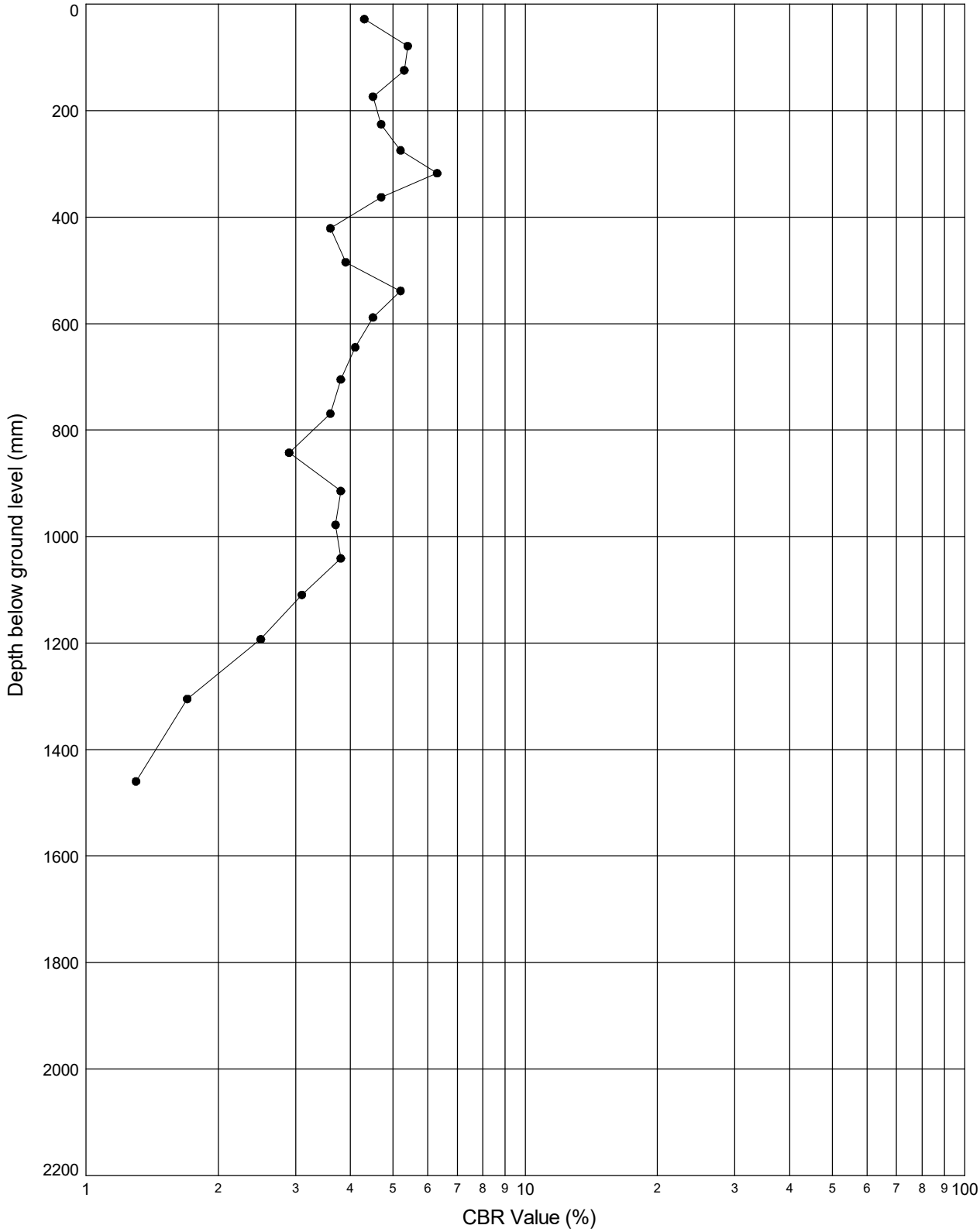
Notes: **CBR values calculated after TRRL Road Note 8 method. Values over 100% are plotted on the 100% line.**

STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Supervisor	Date	Checked By	Date
	[redacted]	**16/10/23**	[redacted]	**14/03/24**
	Contract **SEA Link FEED - Kent Onshore Cable Link**		Contract Ref: **563607**	

DCP TEST RESULTS - DEPTH vs CBR VALUE

Position Ref : **R22-TP510** Test Date : **20.10.23** Test Number : **1**

Ground Level (m AOD): **1.33** National Grid Co-ordinates: **E:631857.5 N:163158.8**



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]	**20/10/23**	[redacted]	**14/03/24**
	Contract **SEA Link FEED - Kent Onshore Cable Link**		Contract Ref: **563607**	

FULL SCALE SOAKAWAY TEST

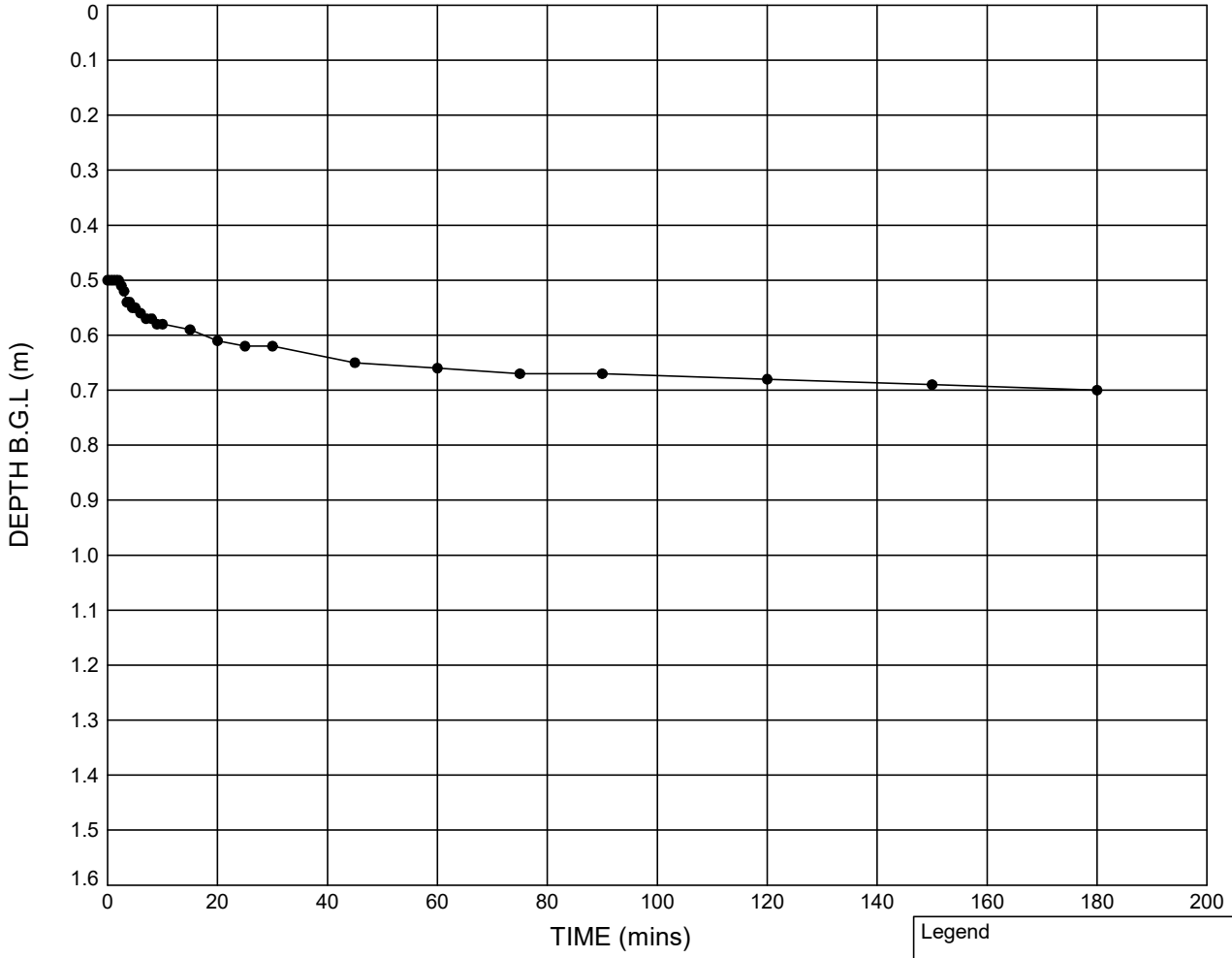
In accordance with BRE Digest 365

Soakaway Test - Position ID : **R22-TP105**

Test Supervisor : **SOxley**

Ground Level (m AOD): **1.50** National Grid Co-ordinates: **E:632391.0 N:163180.9**

PLOT OF DEPTH OF WATER BELOW GROUND LEVEL AGAINST TIME



Test 1

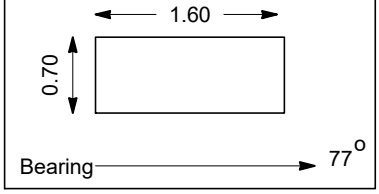
Pit start depth:	=	*1.60*	m
Pit final depth:	=	*1.60*	m
Effective depth, De	=	*1.10*	m
Effective storage volume, V_{p75-25}	=	*NA*	m^3
Surface area, a_{s50}	=	*NA*	m^2
Time, t_{p75-25}	=	*NA*	secs
Infiltration rate, f	=	*NA*	m/s

Notes: Test 1 - Unable to calculate soil infiltratoin rate, test water did not fall to either the 75% full or 25% full level after 3 hours.

Legend

● Test 1 (11.10.23)

Plan (Not to scale)



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By	Date	Checked By	Date
[redacted]	01/03/24	[redacted]	01/03/24

Contract: **Sea Link - Richborough**

Contract Ref: **563607**

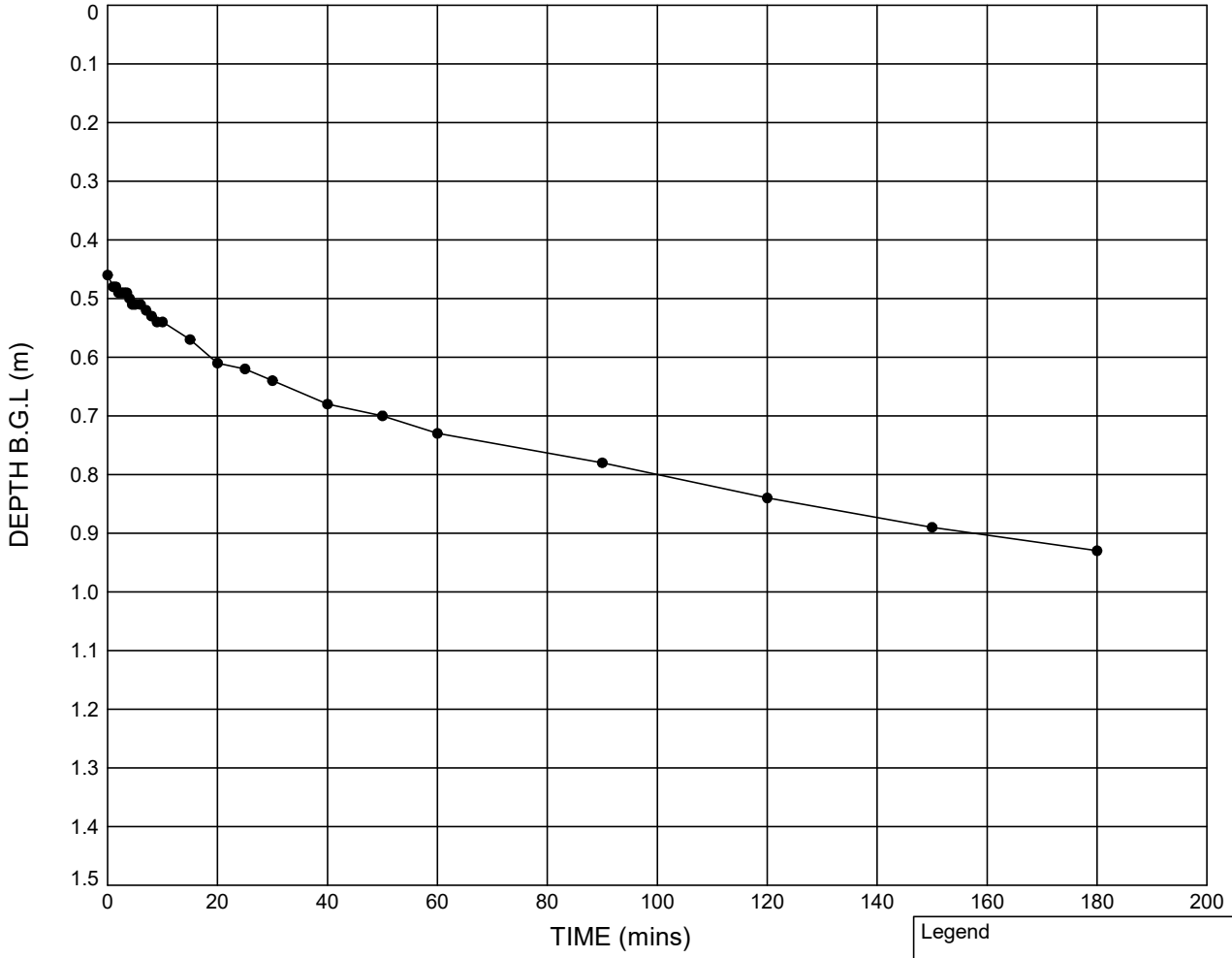
FULL SCALE SOAKAWAY TEST

In accordance with BRE Digest 365

Soakaway Test - Position ID : **R22-TP501**

Ground Level (m AOD): **5.91** National Grid Co-ordinates: **E:633352.1 N:163351.8**

PLOT OF DEPTH OF WATER BELOW GROUND LEVEL AGAINST TIME



Test 1

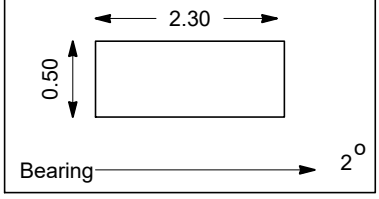
Pit start depth:	=	*1.50*	m
Pit final depth:	=	*1.50*	m
Effective depth, De	=	*1.04*	m
Effective storage volume, V_{p75-25}	=	*NA*	m^3
Surface area, a_{s50}	=	*NA*	m^2
Time, t_{p75-25}	=	*NA*	secs
Infiltration rate, f	=	*NA*	m/s

Notes: Test 1 - Unable to calculate soil infiltratoin rate, test water did not fall to the 25% full level after 3 hours.

Legend

● Test 1 (18.10.23)

Plan (Not to scale)



	Compiled By	Date	Checked By	Date
	[redacted]	**01/03/24**	[redacted]	**01/03/24**

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Contract: **Sea Link - Richborough**

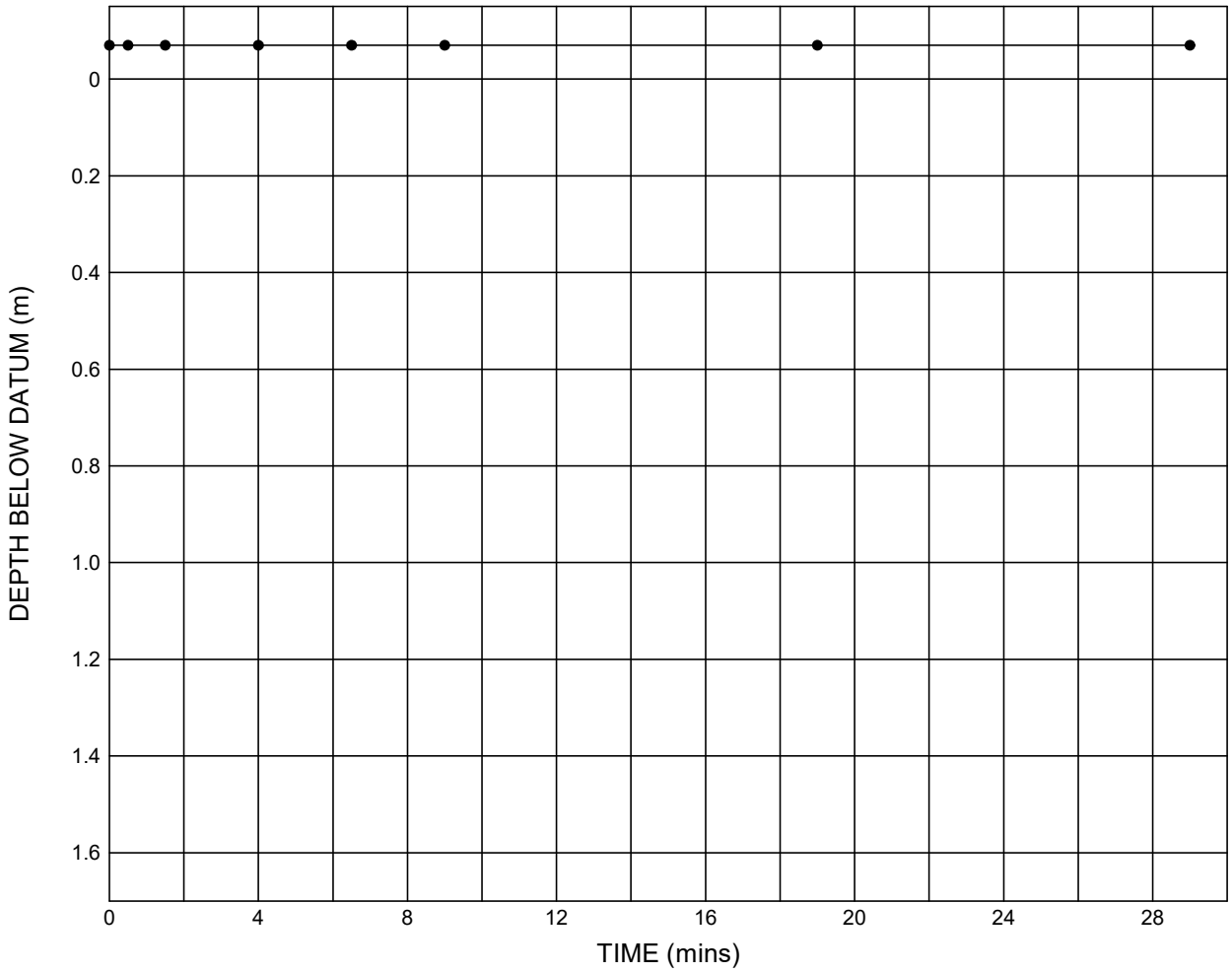
Contract Ref: **563607**

BOREHOLE SOAKAWAY TEST
NON STANDARD TEST

Test position: R22-BH101

Ground Level (m AOD): **1.44** British National Grid Co-ordinates:E:632082.2 N:163050.1

PLOT OF DEPTH OF WATER BELOW DATUM AGAINST TIME



Notes : Test section in Tidal Flat Deposits silty CLAY. Test carried out with casing raised above ground level.

Notes : No drop in water level recorded during test therefore no calculation of infiltration possible.

Test hole details:

Measurement datum was **CASING**
Hole depth at start of test: **1.70**mBGL
Borehole diameter: **200**mm
Depth to base of casing: **1.20**mBGL
Depth of datum below GL: **0.00**m

Legend:

● Test 1 (05/10/2023)

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Operator	Checked By	Date
[redacted]	[redacted]	**01/03/24**

Contract: **Sea Link - Richborough**

Contract Ref: **563607**

Client: **National Grid**

IN-SITU PERMEABILITY TEST - FALLING HEAD
In accordance with BS EN ISO 22282-2:2012

Position ID : **R22-BH101** Depth (m below GL): **8.40-8.80** Test Number: **2**

Test Date: **06/10/2023** Test Supervisor: **MStorch**

Ground Level (m AOD): **1.44** National Grid Co-ordinates: **E:632082.2 N:163050.1**

TEST SETUP DETAILS

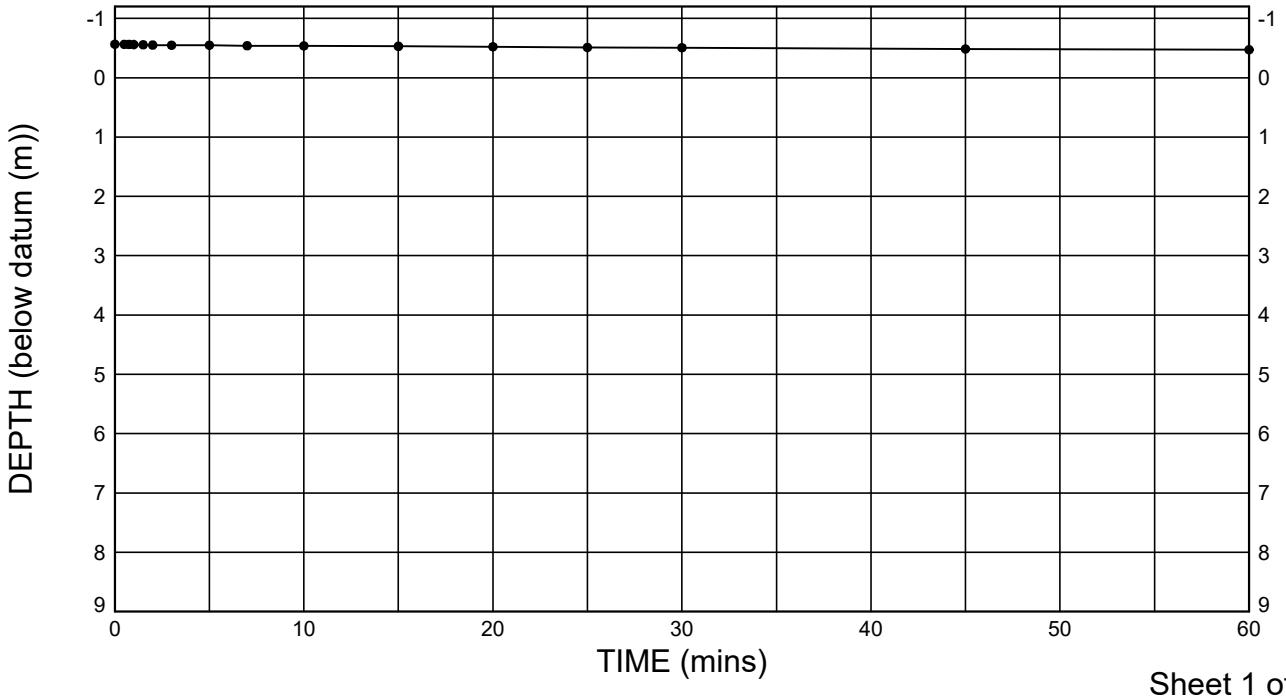
Depth measurements recorded from ground level.

Depth to top of response zone:	**8.40** m	Borehole diameter:	**200** mm
Depth to base of response zone:	**8.80** m	Depth to base of casing:	**8.40** m
Length of response zone:	**0.40** m	Casing diameter:	**200** mm
Initial groundwater level prior to test:	**4.00** m	Soil/Rock Description:	**Grey sandy SILT**
Depth to base of borehole at start of test:	**8.80** m	Hydrogeological conditions:	**Entire test section below GW**
Depth to base of borehole at completion of test:	**8.40** m	Weather:	**Overcast**

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
09:00:00	-0.57	4.56	1.00	09:15:00	-0.53	4.53	0.99								
09:00:30	-0.56	4.56	1.00	09:20:00	-0.52	4.52	0.99								
09:00:45	-0.56	4.56	1.00	09:25:00	-0.51	4.51	0.99								
09:01:00	-0.56	4.56	1.00	09:30:00	-0.51	4.51	0.99								
09:01:30	-0.56	4.56	1.00	09:45:00	-0.49	4.49	0.98								
09:02:00	-0.55	4.55	1.00	10:00:00	-0.47	4.47	0.98								
09:03:00	-0.55	4.55	1.00												
09:05:00	-0.55	4.55	1.00												
09:07:00	-0.54	4.54	1.00												
09:10:00	-0.54	4.54	0.99												

PLOT OF WATER DEPTH AGAINST TIME



STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Operator	Checked By	Date
	[redacted]	[redacted]	**01/03/24**
	Contract **Sea Link - Richborough**	Contract Ref: **563607**	
		Client: **National Grid**	AGS

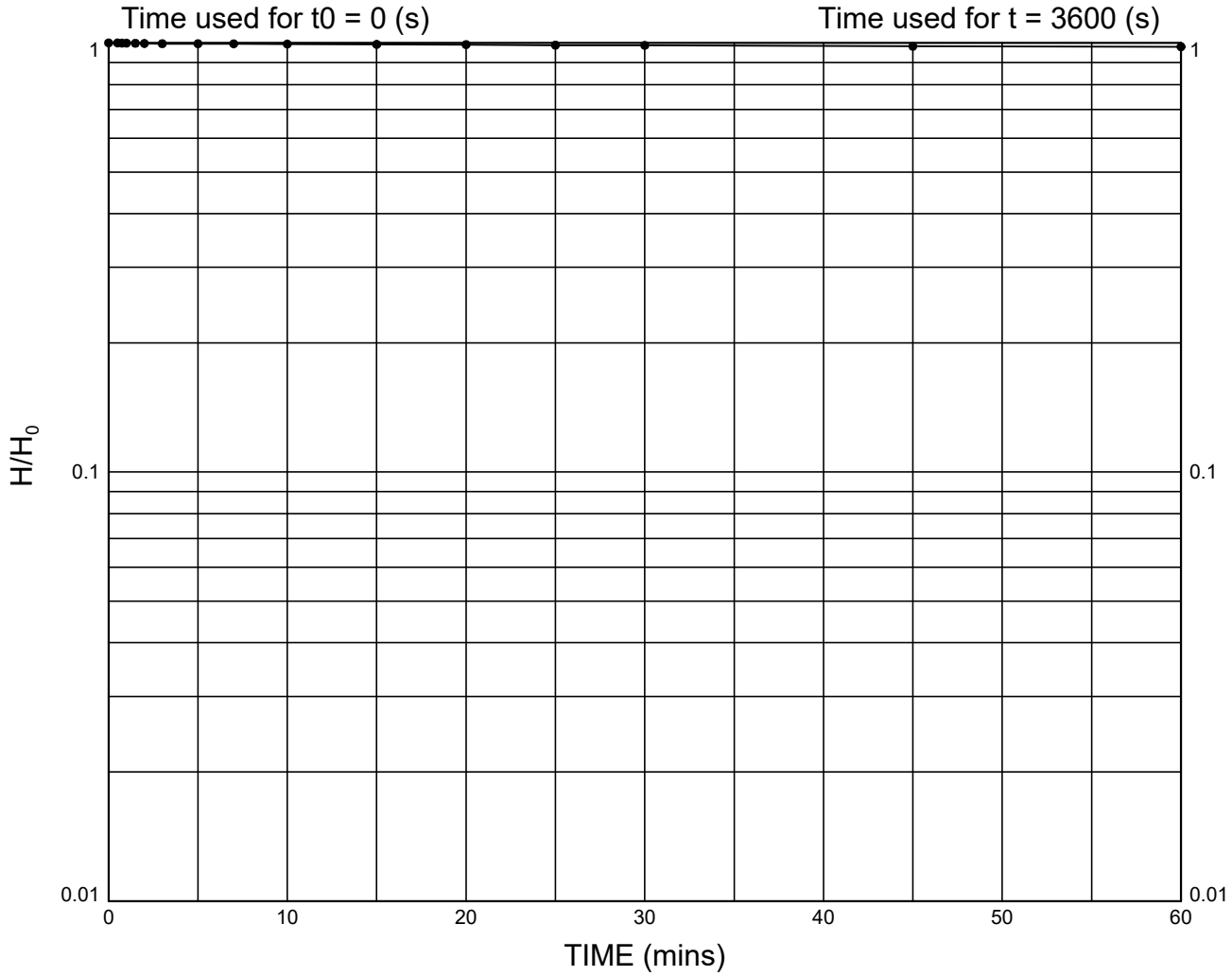
IN-SITU PERMEABILITY TEST - FALLING HEAD
In accordance with BS EN ISO 22282-2:2012

Position ID : **R22-BH101** Depth (m below GL): **8.40-8.80** Test Number: **2**

Test Date: **06/10/2023** Test Supervisor: **MStorch**

Ground Level (m AOD): **1.44** British National Grid Co-ordinates: E:632082.2 N:163050.1

PLOT OF H/Ho AGAINST TIME



Diameter of Test Section, D	=	**0.2**	m
Cross Sectional Area of Liaison Tube, A	=	**0.03142**	m^2
Test Section Length, L	=	**0.40**	m
Shape Factor, F	=	**1.74**	m
Time, t - t_0	=	**3600**	sec
In-situ Permeability, k	=	**$9.99x10^{-8}$**	m/sec

Notes : **Permeability calculated using velocity graph method in accordance with BS EN ISO 22282-2 (2012). To enable calculation of permeability a measured standing water level of 4m below datum prior to the test was used to determine head, H. Negligible fall in test water level (93 mm in 1 hour). Calculated permeabilty value is a tentative estimate.**

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Operator	Checked By	Date
[redacted]	[redacted]	**01/03/24**

Contract: **Sea Link - Richborough**

Contract Ref: **563607**

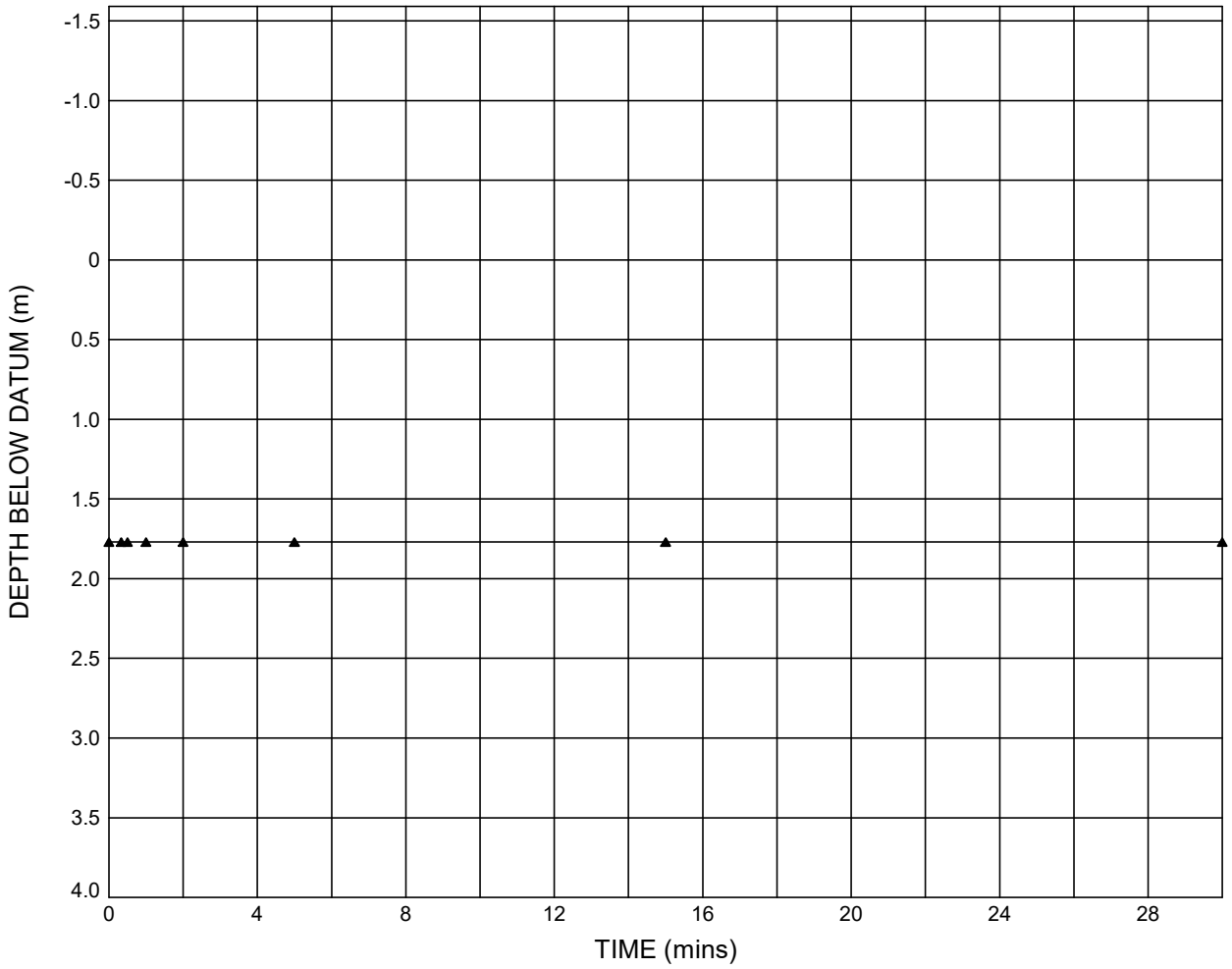
Client: **National Grid**

BOREHOLE SOAKAWAY TEST
NON STANDARD TEST

Test position: R22-BH103

Ground Level (m AOD): **1.32** British National Grid Co-ordinates:E:632166.5 N:162914.2

PLOT OF DEPTH OF WATER BELOW DATUM AGAINST TIME



Notes : Test section in Tidal Flat Deposits silty CLAY. Test carried out with casing raised above ground level.

Notes : No drop in water level recorded during test therefore no calculation of infiltration possible.

Test hole details:

Measurement datum was **CASING**
Hole depth at start of test: **4.00**mBGL
Borehole diameter: **250**mm
Depth to base of casing: **3.00**mBGL
Depth of datum below GL: **0.00**m

Legend:

▲ Test 1 (18/10/2023)

STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Operator	Checked By	Date
	[redacted]	[redacted]	**01/03/24**
	Contract **Sea Link - Richborough**	Contract Ref: **563607**	
		Client: **National Grid**	

IN-SITU PERMEABILITY TEST - RISING HEAD
In accordance with BS EN ISO 22282-2:2012

Position ID : **R22-BH103** Depth (m below GL): **5.00-6.00** Test Number: **2**

Test Date: **18/10/2023** Test Supervisor: **IWarne**

Ground Level (m AOD): **1.32** National Grid Co-ordinates: **E:632166.5 N:162914.2**

TEST SETUP DETAILS

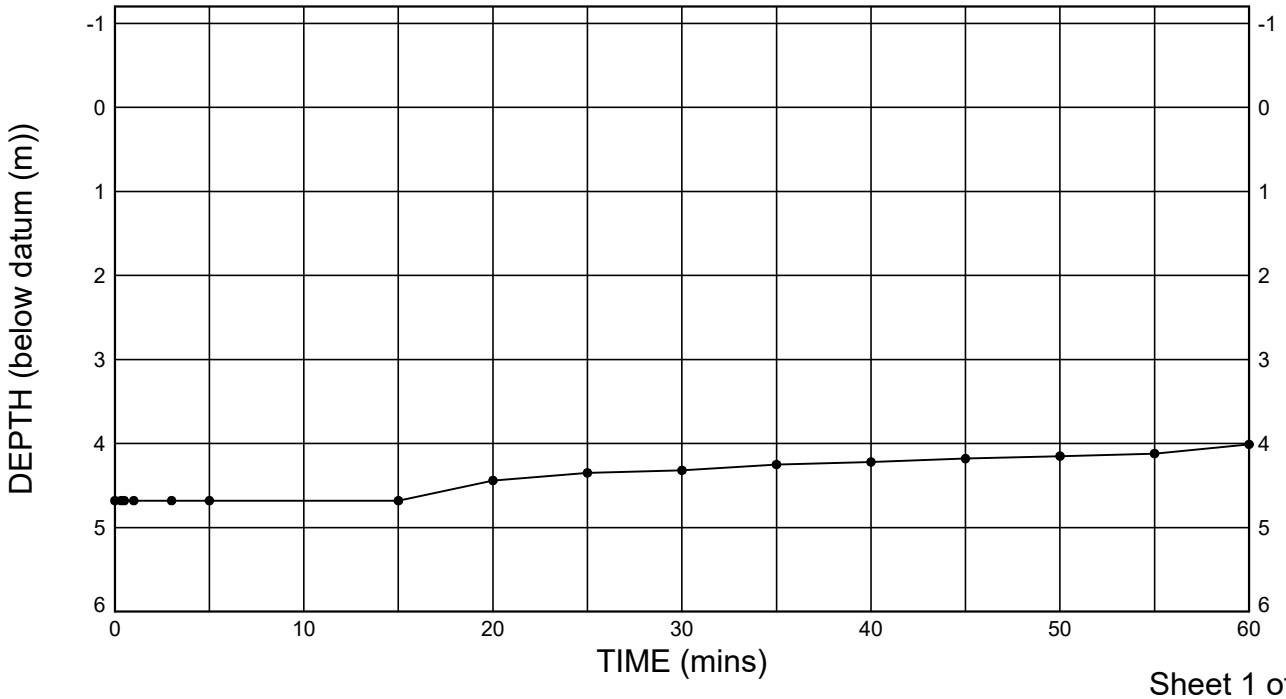
Depth measurements recorded from ground level.

Depth to top of response zone:	**5.00** m	Borehole diameter:	**250** mm
Depth to base of response zone:	**6.00** m	Depth to base of casing:	**5.00** m
Length of response zone:	**1.00** m	Casing diameter:	**250** mm
Initial groundwater level prior to test:	**4.33** m	Soil/Rock Description:	**Silty clay, silt**
Depth to base of borehole at start of test:	**6.00** m	Hydrogeological conditions:	**Part of test section below GW**
Depth to base of borehole at completion of test:	**6.00** m	Weather:	**Rainy, Windy**

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
15:30:00	4.68	-0.67	1.00	16:05:00	4.25	-0.24	0.36								
15:30:20	4.68	-0.67	1.00	16:10:00	4.22	-0.21	0.31								
15:30:30	4.68	-0.67	1.00	16:15:00	4.18	-0.17	0.25								
15:31:00	4.68	-0.67	1.00	16:20:00	4.15	-0.14	0.21								
15:33:00	4.68	-0.67	1.00	16:25:00	4.12	-0.11	0.16								
15:35:00	4.68	-0.67	1.00	16:30:00	4.01	0.00	0.00								
15:45:00	4.68	-0.67	1.00												
15:50:00	4.44	-0.43	0.64												
15:55:00	4.35	-0.34	0.51												
16:00:00	4.32	-0.31	0.46												

PLOT OF WATER DEPTH AGAINST TIME



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Operator	Checked By	Date
[redacted]	[redacted]	**01/03/24**

Contract: **Sea Link - Richborough**

Contract Ref: **563607**

Client: **National Grid**

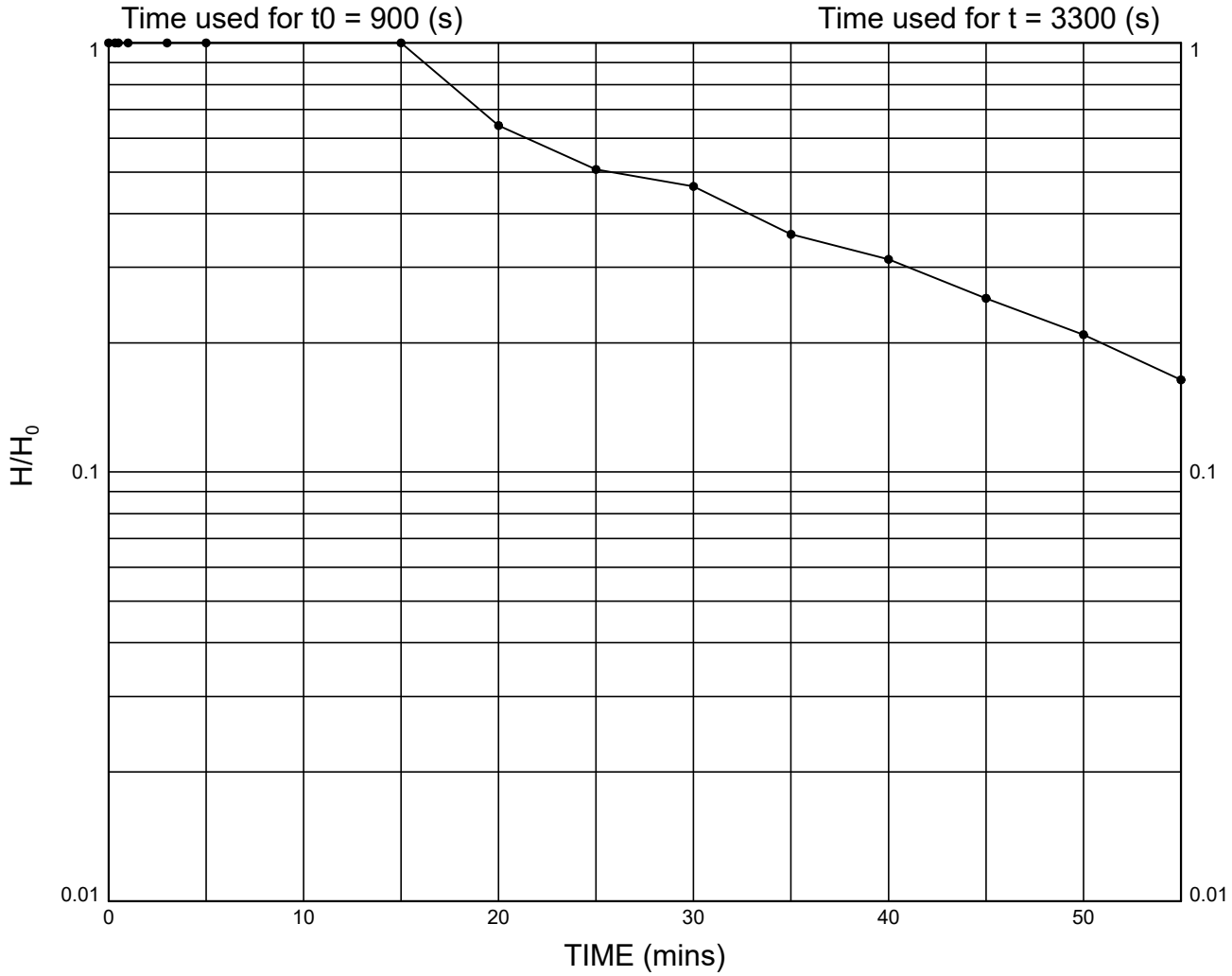
IN-SITU PERMEABILITY TEST - RISING HEAD
In accordance with BS EN ISO 22282-2:2012

Position ID : **R22-BH103** Depth (m below GL): **5.00-6.00** Test Number: **2**

Test Date: **18/10/2023** Test Supervisor: **IWarne**

Ground Level (m AOD): **1.32** British National Grid Co-ordinates: E:632166.5 N:162914.2

PLOT OF H/Ho AGAINST TIME



Diameter of Test Section, D	=	**0.25**	m
Cross Sectional Area of Liaison Tube, A	=	**0.04909**	m^2
Test Section Length, L	=	**1.00**	m
Shape Factor, F	=	**3.00**	m
Time, $t - t_0$	=	**2400**	sec
In-situ Permeability, k	=	**$1.23x10^{-5}$**	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 4.01m 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 4.33m below datum. Test operator reported no rise for first 15 minutes, then rise of 670mm over 45 minutes, suggesting water level may be tidal and test is invalid.**

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Operator	Checked By	Date
[redacted]	[redacted]	**01/03/24**

Contract: **Sea Link - Richborough**

Contract Ref: **563607**

Client: **National Grid**

IN-SITU PERMEABILITY TEST - FALLING HEAD
In accordance with BS EN ISO 22282-2:2012

Position ID : **R22-BH105** Depth (m below GL): **2.00-2.60** Test Number: **1**

Test Date: **28/09/2023** Test Supervisor: **CMathias**

Ground Level (m AOD): **1.43** National Grid Co-ordinates: **E:632525.7 N:163166.7**

TEST SETUP DETAILS

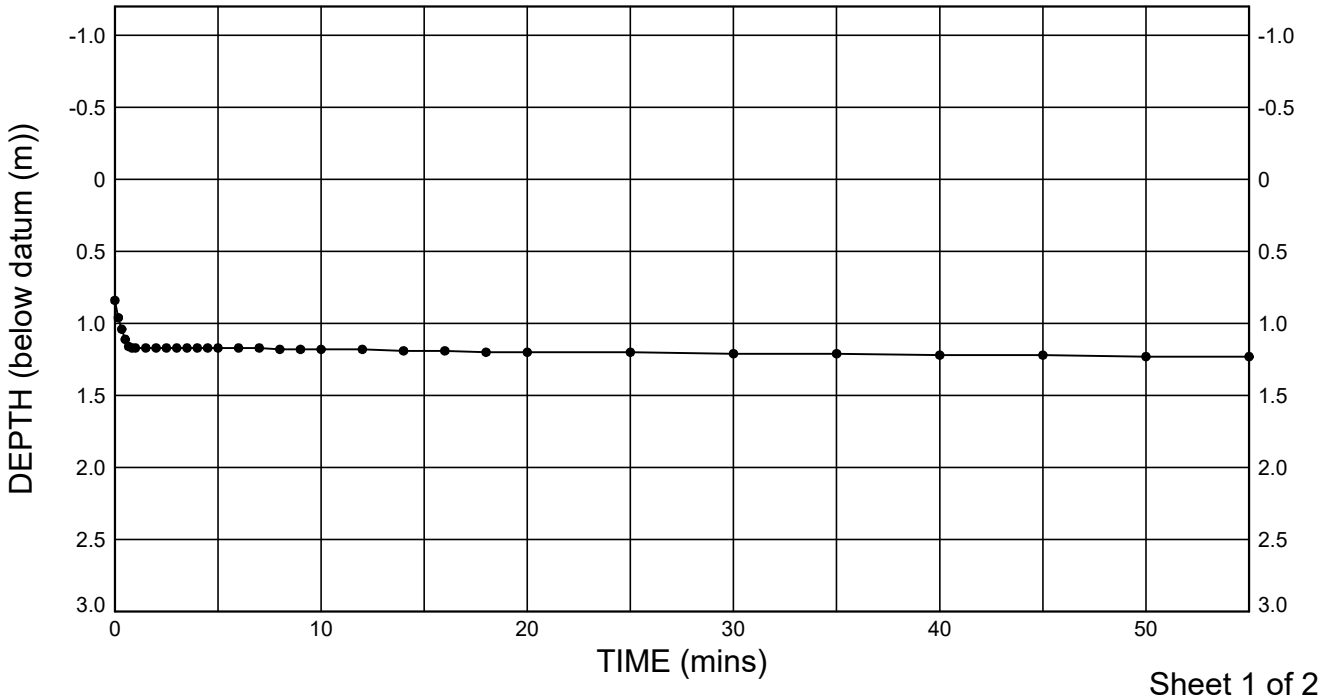
Depth measurements recorded from ground level.

Depth to top of response zone:	**2.00** m	Borehole diameter:	**200** mm
Depth to base of response zone:	**2.60** m	Depth to base of casing:	**2.00** m
Length of response zone:	**0.60** m	Casing diameter:	**200** mm
Initial groundwater level prior to test:	**2.00** m	Soil/Rock Description:	**Clay**
Depth to base of borehole at start of test:	**2.60** m	Hydrogeological conditions:	**Entire test section below GW**
Depth to base of borehole at completion of test:	**2.60** 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
15:00:00	0.84	0.46	1.00	15:03:00	1.17	0.13	0.28	15:12:00	1.18	0.12	0.26	15:50:00	1.23	0.07	0.15
15:00:10	0.96	0.34	0.74	15:03:30	1.17	0.13	0.28	15:14:00	1.19	0.11	0.24	15:55:00	1.23	0.07	0.15
15:00:20	1.04	0.26	0.57	15:04:00	1.17	0.13	0.28	15:16:00	1.19	0.11	0.24				
15:00:30	1.11	0.19	0.41	15:04:30	1.17	0.13	0.28	15:18:00	1.20	0.10	0.22				
15:00:40	1.16	0.14	0.30	15:05:00	1.17	0.13	0.28	15:20:00	1.20	0.10	0.22				
15:00:50	1.17	0.13	0.28	15:06:00	1.17	0.13	0.28	15:25:00	1.20	0.10	0.22				
15:01:00	1.17	0.13	0.28	15:07:00	1.17	0.13	0.28	15:30:00	1.21	0.09	0.20				
15:01:30	1.17	0.13	0.28	15:08:00	1.18	0.12	0.26	15:35:00	1.21	0.09	0.20				
15:02:00	1.17	0.13	0.28	15:09:00	1.18	0.12	0.26	15:40:00	1.22	0.08	0.17				
15:02:30	1.17	0.13	0.28	15:10:00	1.18	0.12	0.26	15:45:00	1.22	0.08	0.17				

PLOT OF WATER DEPTH AGAINST TIME



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Operator	Checked By	Date
[redacted]	[redacted]	**01/03/24**

Contract: **Sea Link - Richborough**

Contract Ref: **563607**

Client: **National Grid**

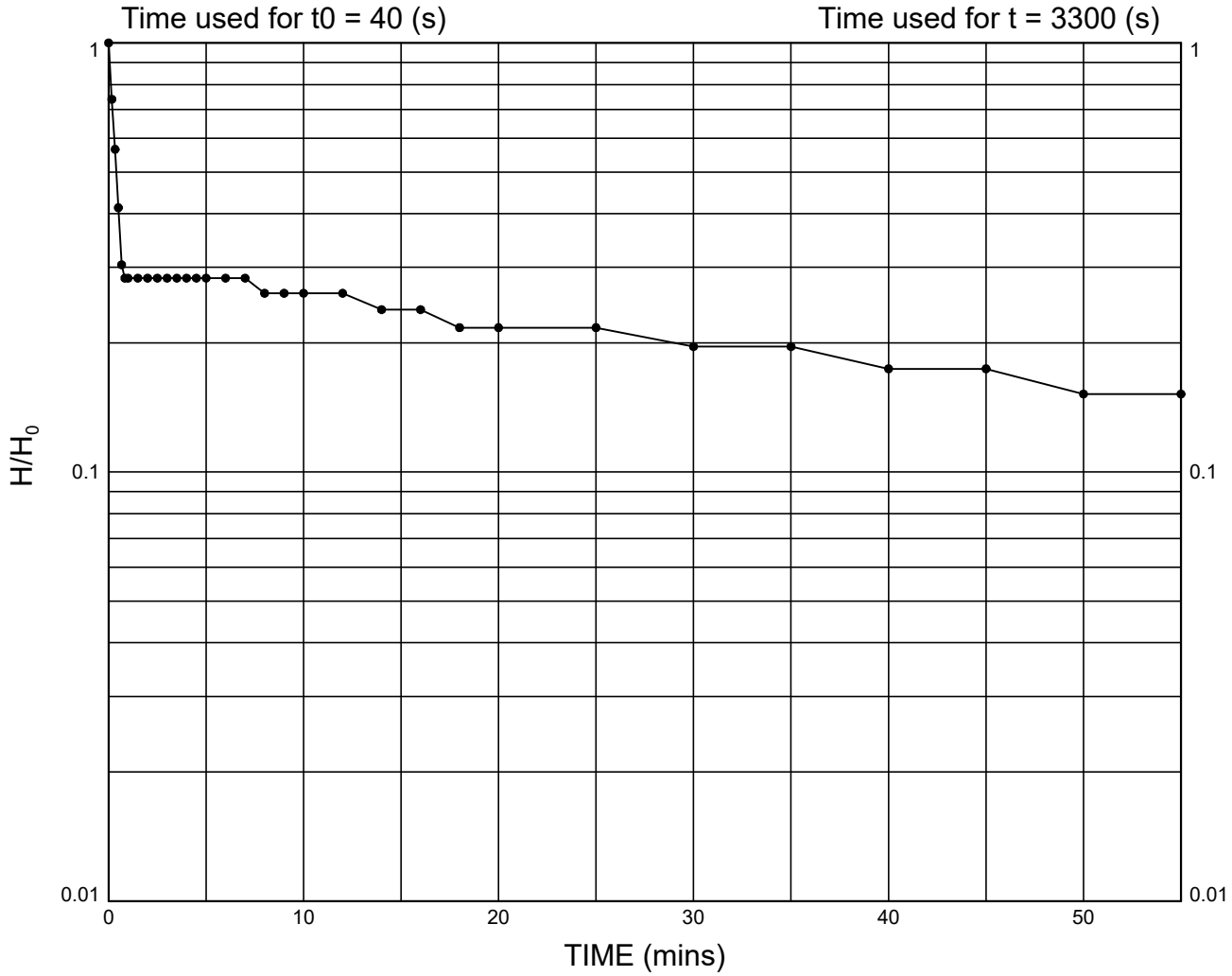
IN-SITU PERMEABILITY TEST - FALLING HEAD
In accordance with BS EN ISO 22282-2:2012

Position ID : **R22-BH105** Depth (m below GL): **2.00-2.60** Test Number: **1**

Test Date: **28/09/2023** Test Supervisor: **CMathias**

Ground Level (m AOD): **1.43** British National Grid Co-ordinates: E:632525.7 N:163166.7

PLOT OF H/Ho AGAINST TIME



Diameter of Test Section, D	=	**0.2**	m
Cross Sectional Area of Liaison Tube, A	=	**0.03142**	m^2
Test Section Length, L	=	**0.60**	m
Shape Factor, F	=	**2.07**	m
Time, $t - t_0$	=	**3260**	sec
In-situ Permeability, k	=	**$3.22x10^{-6}$**	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 1.3m 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 above test section and is higher than that measured at start of test (part of test section was initially dry) but is more consistent with drilling observations and final test water level.**

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Operator	Checked By	Date
[redacted]	[redacted]	**01/03/24**

Contract: **Sea Link - Richborough**

Contract Ref: **563607**

Client: **National Grid**

IN-SITU PERMEABILITY TEST - FALLING HEAD
In accordance with BS EN ISO 22282-2:2012

Position ID : **R22-BH105** Depth (m below GL): **3.80-6.10** Test Number: **2**

Test Date: **28/09/2023** Test Supervisor: **CMathias**

Ground Level (m AOD): **1.43** National Grid Co-ordinates: **E:632525.7 N:163166.7**

TEST SETUP DETAILS

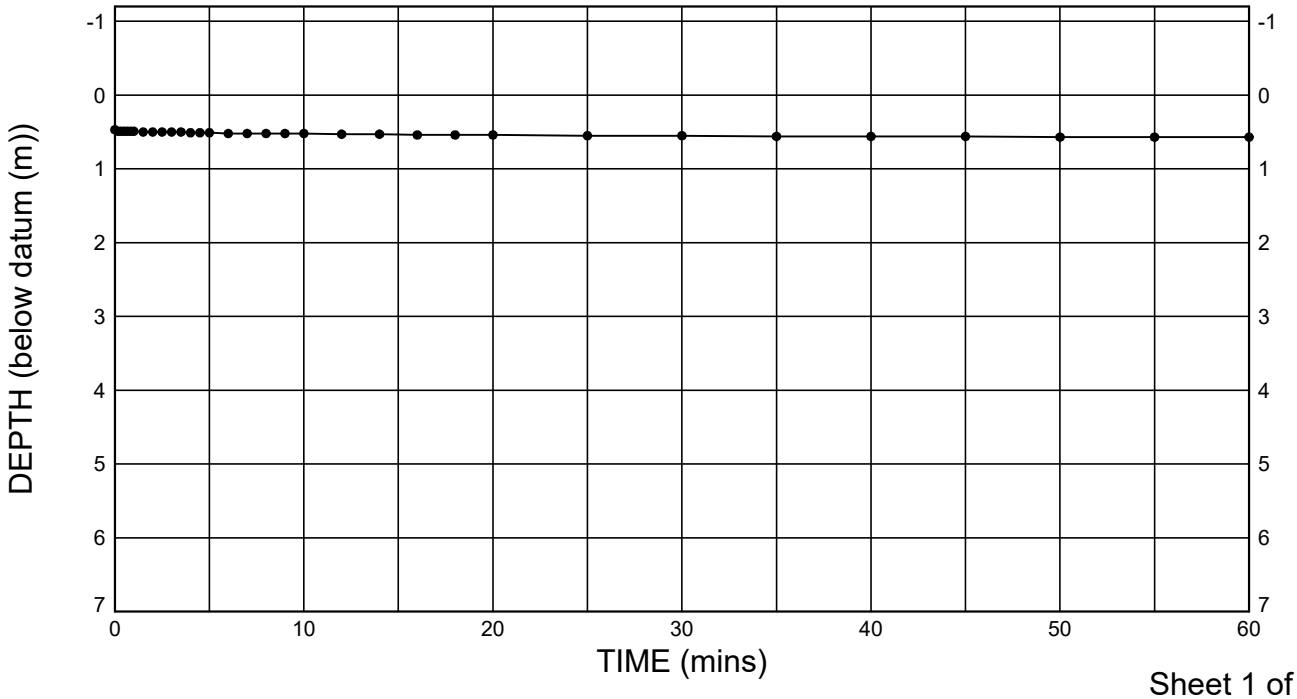
Depth measurements recorded from ground level.

Depth to top of response zone:	**3.80** m	Borehole diameter:	**200** mm
Depth to base of response zone:	**6.10** m	Depth to base of casing:	**3.80** m
Length of response zone:	**2.30** m	Casing diameter:	**200** mm
Initial groundwater level prior to test:	**3.60** m	Soil/Rock Description:	**Clay**
Depth to base of borehole at start of test:	**6.10** m	Hydrogeological conditions:	**Entire test section below GW**
Depth to base of borehole at completion of test:	**6.10** 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
11:00:00	0.47	0.83	1.00	11:03:00	0.50	0.80	0.96	11:12:00	0.53	0.77	0.93	11:50:00	0.57	0.73	0.88
11:00:10	0.49	0.81	0.98	11:03:30	0.50	0.80	0.96	11:14:00	0.53	0.77	0.93	11:55:00	0.57	0.73	0.88
11:00:20	0.49	0.81	0.98	11:04:00	0.51	0.79	0.95	11:16:00	0.54	0.76	0.92	12:00:00	0.57	0.73	0.88
11:00:30	0.49	0.81	0.98	11:04:30	0.51	0.79	0.95	11:18:00	0.54	0.76	0.92				
11:00:40	0.49	0.81	0.98	11:05:00	0.51	0.79	0.95	11:20:00	0.54	0.76	0.92				
11:00:50	0.49	0.81	0.98	11:06:00	0.52	0.78	0.94	11:25:00	0.55	0.75	0.90				
11:01:00	0.49	0.81	0.98	11:07:00	0.52	0.78	0.94	11:30:00	0.55	0.75	0.90				
11:01:30	0.50	0.80	0.96	11:08:00	0.52	0.78	0.94	11:35:00	0.56	0.74	0.89				
11:02:00	0.50	0.80	0.96	11:09:00	0.52	0.78	0.94	11:40:00	0.56	0.74	0.89				
11:02:30	0.50	0.80	0.96	11:10:00	0.52	0.78	0.94	11:45:00	0.56	0.74	0.89				

PLOT OF WATER DEPTH AGAINST TIME



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Operator	Checked By	Date
[redacted]	[redacted]	**01/03/24**

Contract: **Sea Link - Richborough**

Contract Ref: **563607**

Client: **National Grid**

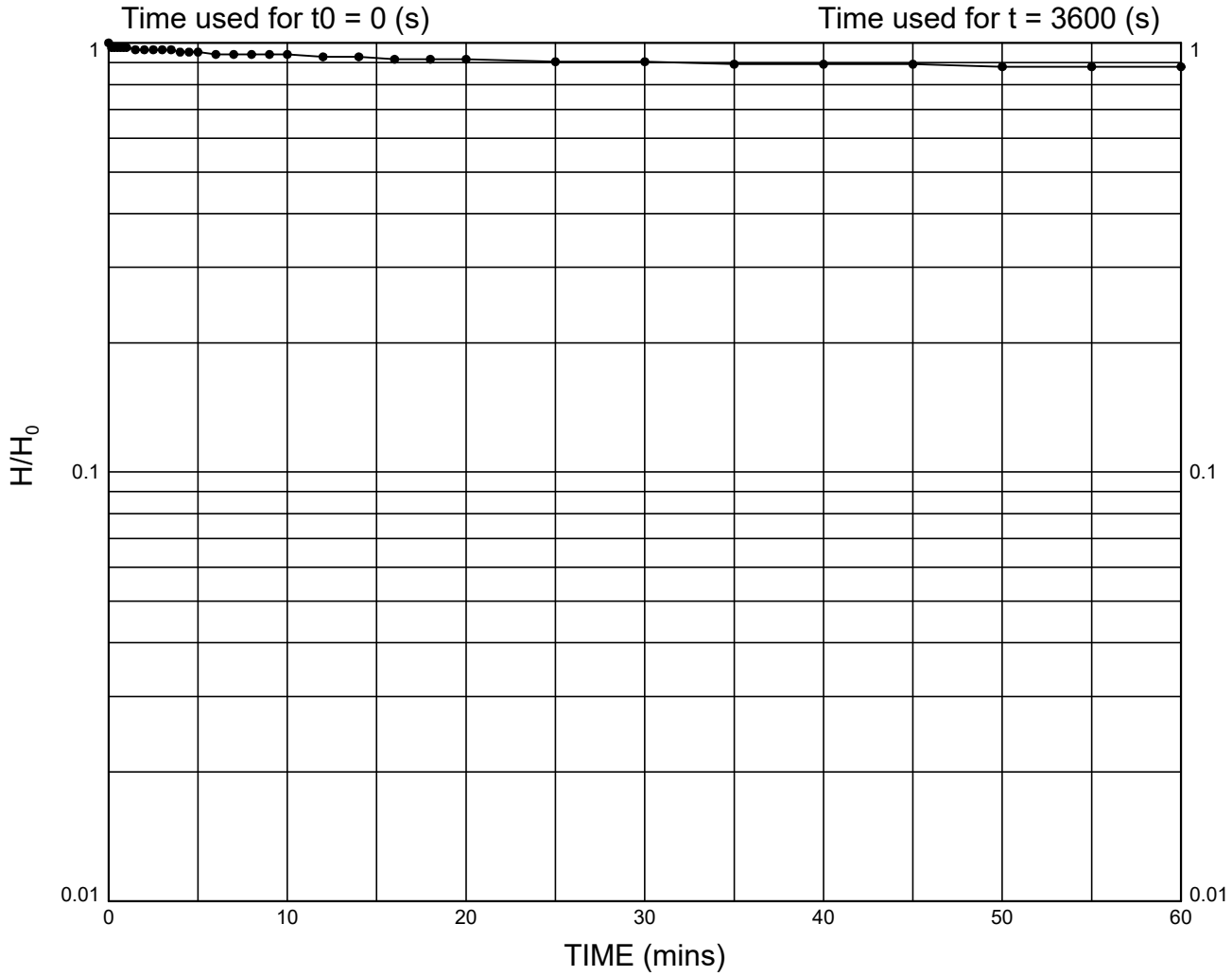
IN-SITU PERMEABILITY TEST - FALLING HEAD
In accordance with BS EN ISO 22282-2:2012

Position ID : **R22-BH105** Depth (m below GL): **3.80-6.10** Test Number: **2**

Test Date: **28/09/2023** Test Supervisor: **CMathias**

Ground Level (m AOD): **1.43** British National Grid Co-ordinates: E:632525.7 N:163166.7

PLOT OF H/Ho AGAINST TIME



Diameter of Test Section, D	=	**0.2**	m
Cross Sectional Area of Liaison Tube, A	=	**0.03142**	m^2
Test Section Length, L	=	**2.30**	m
Shape Factor, F	=	**4.61**	m
Time, $t - t_0$	=	**3600**	sec
In-situ Permeability, k	=	**$2.43x10^{-7}$**	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 1.3m 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 3.6m below datum. Assumed standing water level based on drilling observations. Negligible fall in test water level (100mm over 1 hour), calculated permeabliity value is tentative estimate.**

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Operator	Checked By	Date
[redacted]	[redacted]	**01/03/24**

Contract: **Sea Link - Richborough**

Contract Ref: **563607**

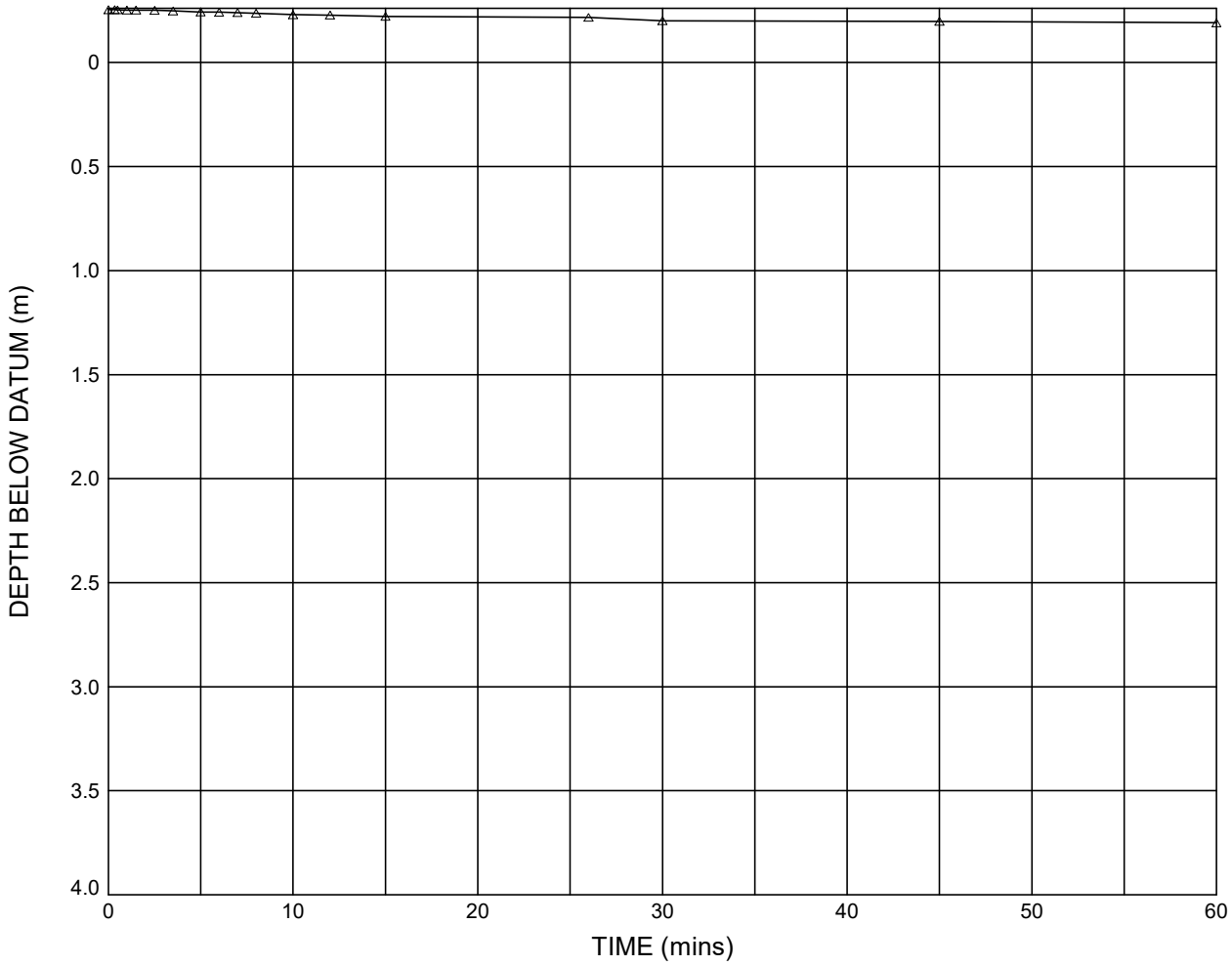
Client: **National Grid**

BOREHOLE SOAKAWAY TEST
NON STANDARD TEST

Test position: R22-BH203

Ground Level (m AOD): **7.96** British National Grid Co-ordinates:E:633390.3 N:163512.4

PLOT OF DEPTH OF WATER BELOW DATUM AGAINST TIME



Notes : Test section in sandy clayey SILT of the Thanet Formation. Test carried out with casing raised above ground level. Water level fell by only 63mm over one hour.

Test hole details:

Measurement datum was **CASING**
Hole depth at start of test: **4.00**mBGL
Borehole diameter: **200**mm
Depth to base of casing: **3.00**mBGL
Depth of datum below GL: **0.00**m

Legend:

△ Test 1 (10/10/2023)

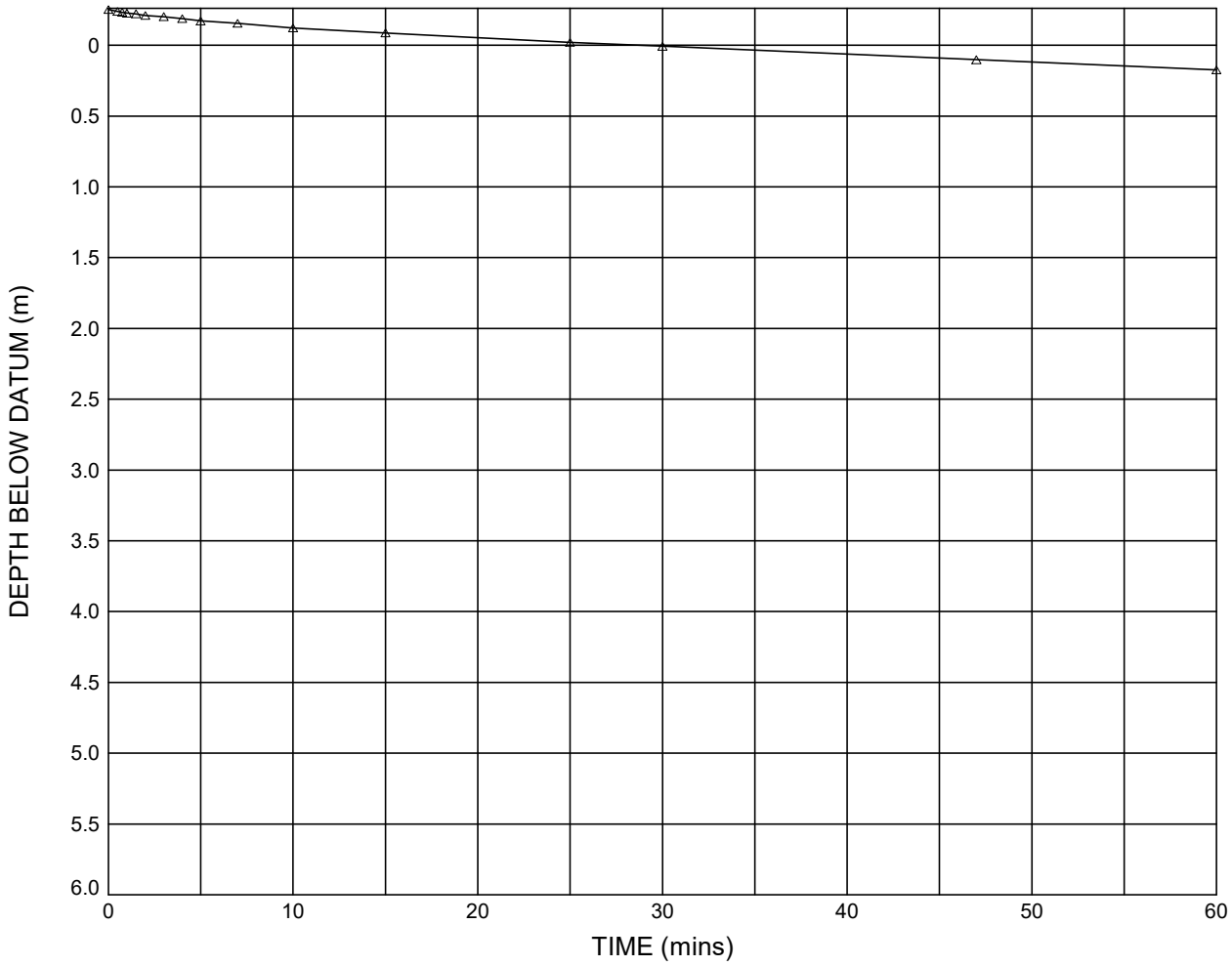
STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Operator	Checked By	Date
	[redacted]	[redacted]	**01/03/24**
	Contract **Sea Link - Richborough**	Contract Ref: **563607**	
		Client: **National Grid**	

BOREHOLE SOAKAWAY TEST
NON STANDARD TEST

Test position: R22-BH203

Ground Level (m AOD): **7.96** British National Grid Co-ordinates:E:633390.3 N:163512.4

PLOT OF DEPTH OF WATER BELOW DATUM AGAINST TIME



Volume of water soaking away,	**0.013383**	m^3
Surface area,	**n/a**	m^2
Time to drain,	**n/a**	secs
Infiltration rate,	**n/a**	m/sec

Test water depth remains above casing base depth throughout soakaway test. Test section in clayey SILT of the Thanet Formation. Test carried out with casing raised above ground level. No estimate of soil infiltration rate made as water level did not fall to either the 75% or 25% full level; water level fell by only 0.43m in one hour.

Test hole details:

Measurement datum was **CASING**
Hole depth at start of test: **6.00**mBGL
Borehole diameter: **200**mm
Depth to base of casing: **4.50**mBGL
Depth of datum below GL: **0.00**m

Legend:

△ Test 2 (10/10/2023)

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Operator	Checked By	Date
[redacted]	[redacted]	**01/03/24**

Contract: **Sea Link - Richborough**

Contract Ref: **563607**

Client: **National Grid**

IN-SITU PERMEABILITY TEST - FALLING HEAD
In accordance with BS EN ISO 22282-2:2012

Position ID : **RedP-BH-6** Depth (m below GL): **9.50-11.00** Test Number: **1**

Test Date: **25/10/2023** Test Supervisor: **IWarne**

Ground Level (m AOD): **4.10** National Grid Co-ordinates: **E:634113.8 N:163655.1**

TEST SETUP DETAILS

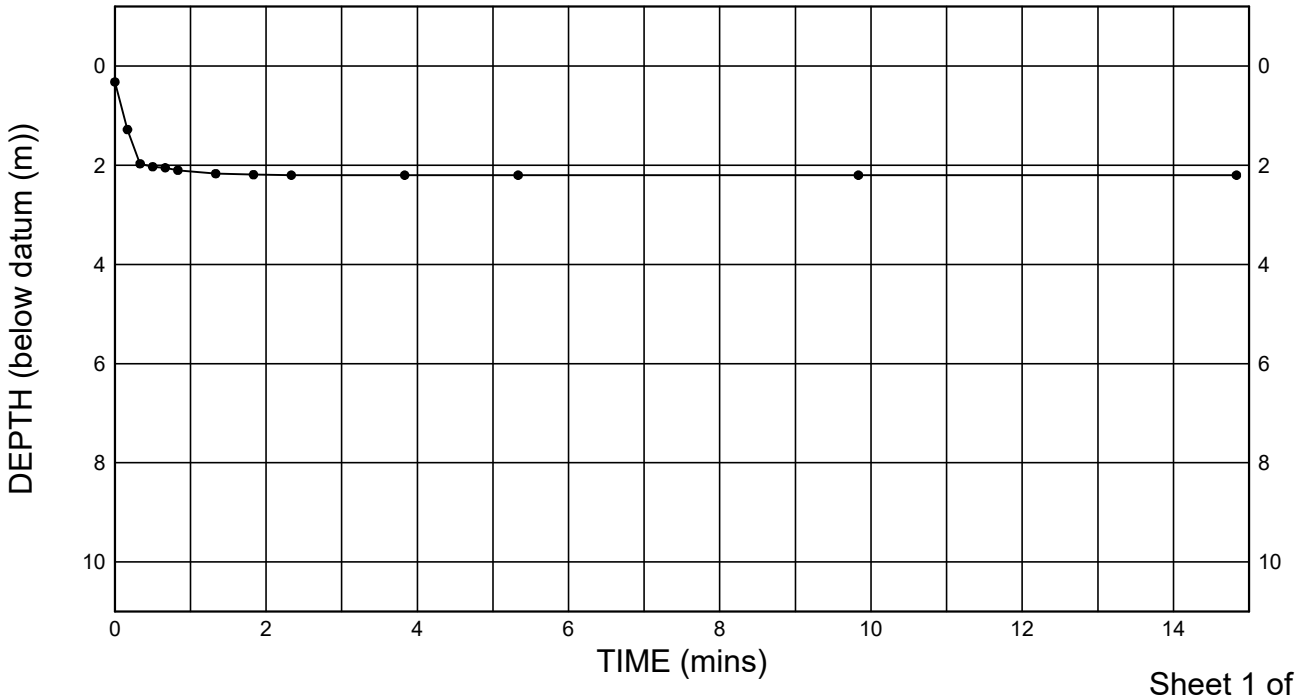
Depth measurements recorded from ground level.

Depth to top of response zone:	**9.50** m	Borehole diameter:	**146** mm
Depth to base of response zone:	**11.00** m	Depth to base of casing:	**9.50** m
Length of response zone:	**1.50** m	Casing diameter:	**146** mm
Initial groundwater level prior to test:	**2.21** m	Soil/Rock Description:	**Chalk**
Depth to base of borehole at start of test:	**11.00** m	Hydrogeological conditions:	**Entire test section below GW**
Depth to base of borehole at completion of test:	**11.00** m	Weather:	**Sunny, 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
15:15:21	0.32	1.89	1.00	15:20:41	2.20	0.01	0.01								
15:15:31	1.28	0.93	0.49	15:25:11	2.20	0.01	0.01								
15:15:41	1.97	0.24	0.13	15:30:11	2.20	0.01	0.01								
15:15:51	2.03	0.18	0.10												
15:16:01	2.05	0.16	0.09												
15:16:11	2.10	0.11	0.06												
15:16:41	2.17	0.04	0.02												
15:17:11	2.19	0.02	0.01												
15:17:41	2.20	0.01	0.01												
15:19:11	2.20	0.01	0.01												

PLOT OF WATER DEPTH AGAINST TIME



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Operator	Checked By	Date
[redacted]	[redacted]	**01/03/24**

Contract: **Sea Link - Richborough**

Contract Ref: **563607**

Client: **National Grid**

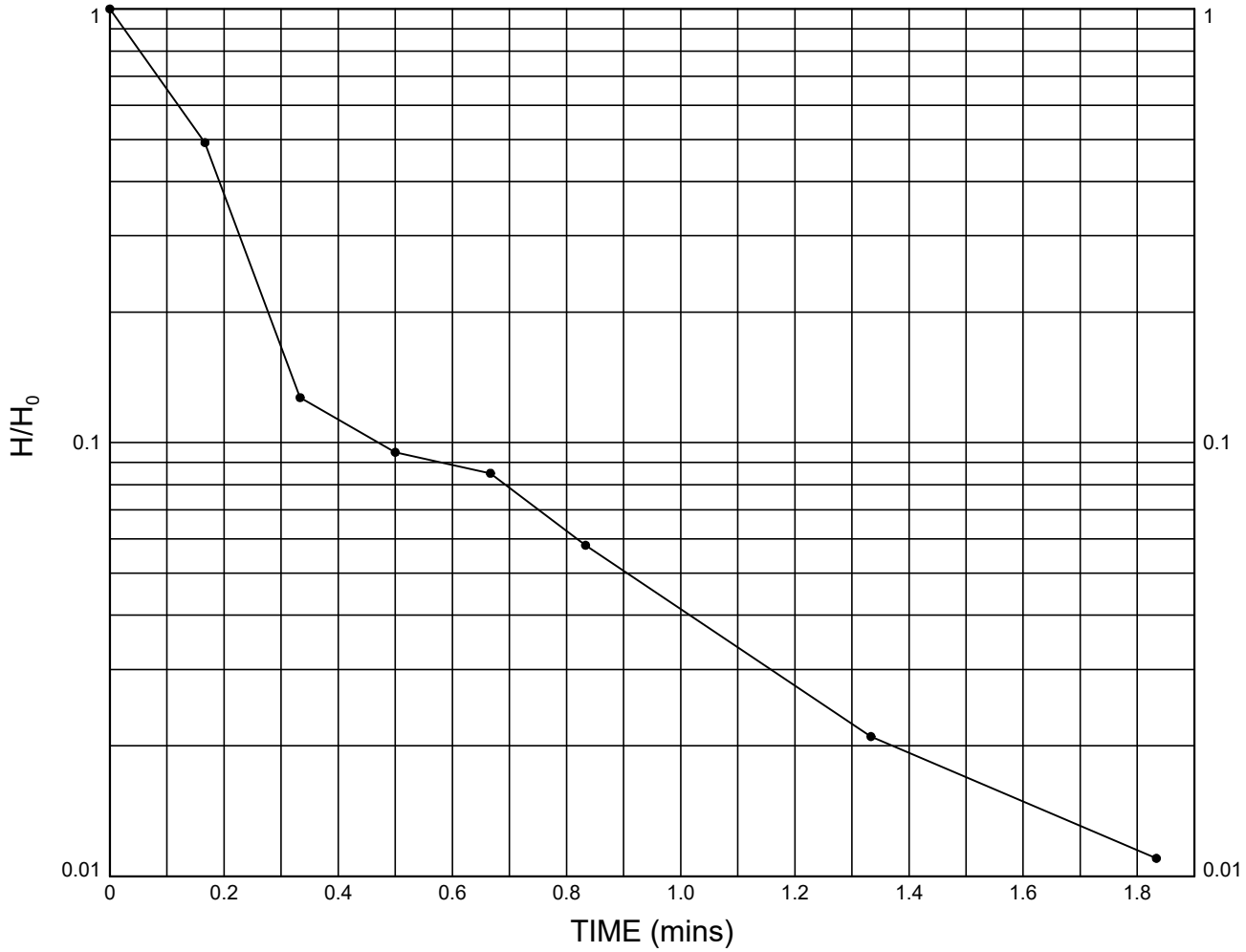
IN-SITU PERMEABILITY TEST - FALLING HEAD
In accordance with BS EN ISO 22282-2:2012

Position ID : **RedP-BH-6** Depth (m below GL): **9.50-11.00** Test Number: **1**

Test Date: **25/10/2023** Test Supervisor: **IWarne**

Ground Level (m AOD): **4.10** British National Grid Co-ordinates: E:634113.8 N:163655.1

PLOT OF H/Ho AGAINST TIME



Cross Sectional Area, A	=	**0.01674**	m^2
Intake Factor, F	=	**NA**	m
Basic Time Lag, T (from plot)	=	**12**	sec
In-situ Permeability, k	=	**$4.47x10^{-4}$**	m/sec

Notes : **Permeability calculated using Hvorslev method in accordance with BS EN ISO 22282-2 (2012). To enable calculation of permeability a measured standing water level of 2.21m below datum prior to the test was used to determine head, H. Water fell too quickly to bring test water level to top of casing.**

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Operator	Checked By	Date
[redacted]	[redacted]	**01/03/24**

Contract: **Sea Link - Richborough**

Contract Ref: **563607**

Client: **National Grid**

IN-SITU PERMEABILITY TEST - FALLING HEAD
In accordance with BS EN ISO 22282-2:2012

Position ID : **RedP-BH-6** Depth (m below GL): **29.00-30.50** Test Number: **2**

Test Date: **26/10/2023** Test Supervisor: **CMathias**

Ground Level (m AOD): **4.10** National Grid Co-ordinates: **E:634113.8 N:163655.1**

TEST SETUP DETAILS

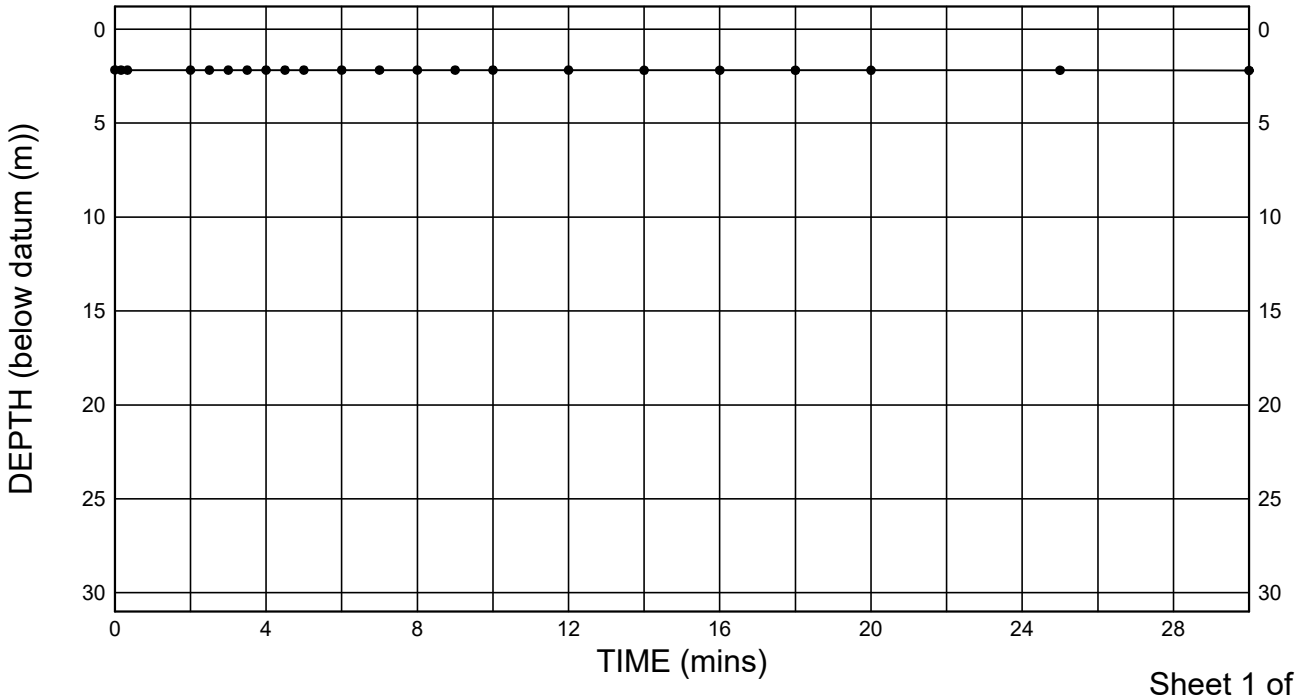
Depth measurements recorded from ground level.

Depth to top of response zone:	**29.00** m	Borehole diameter:	**146** mm
Depth to base of response zone:	**30.50** m	Depth to base of casing:	**29.00** m
Length of response zone:	**1.50** m	Casing diameter:	**146** mm
Initial groundwater level prior to test:	**2.22** m	Soil/Rock Description:	**Chalk**
Depth to base of borehole at start of test:	**30.50** m	Hydrogeological conditions:	**Entire test section below GW**
Depth to base of borehole at completion of test:	**30.50** m	Weather:	**Sunny, 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
15:00:00	2.17	0.05	1.00	15:06:00	2.18	0.04	0.80	15:25:00	2.19	0.03	0.60				
15:00:10	2.18	0.04	0.80	15:07:00	2.18	0.04	0.80	15:30:00	2.20	0.02	0.40				
15:00:20	2.18	0.04	0.80	15:08:00	2.18	0.04	0.80								
15:02:00	2.18	0.04	0.80	15:09:00	2.18	0.04	0.80								
15:02:30	2.18	0.04	0.80	15:10:00	2.18	0.04	0.80								
15:03:00	2.18	0.04	0.80	15:12:00	2.18	0.04	0.80								
15:03:30	2.18	0.04	0.80	15:14:00	2.19	0.03	0.60								
15:04:00	2.18	0.04	0.80	15:16:00	2.19	0.03	0.60								
15:04:30	2.18	0.04	0.80	15:18:00	2.19	0.03	0.60								
15:05:00	2.18	0.04	0.80	15:20:00	2.19	0.03	0.60								

PLOT OF WATER DEPTH AGAINST TIME



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Operator	Checked By	Date
[redacted]	[redacted]	**01/03/24**

Contract: **Sea Link - Richborough**

Contract Ref: **563607**

Client: **National Grid**

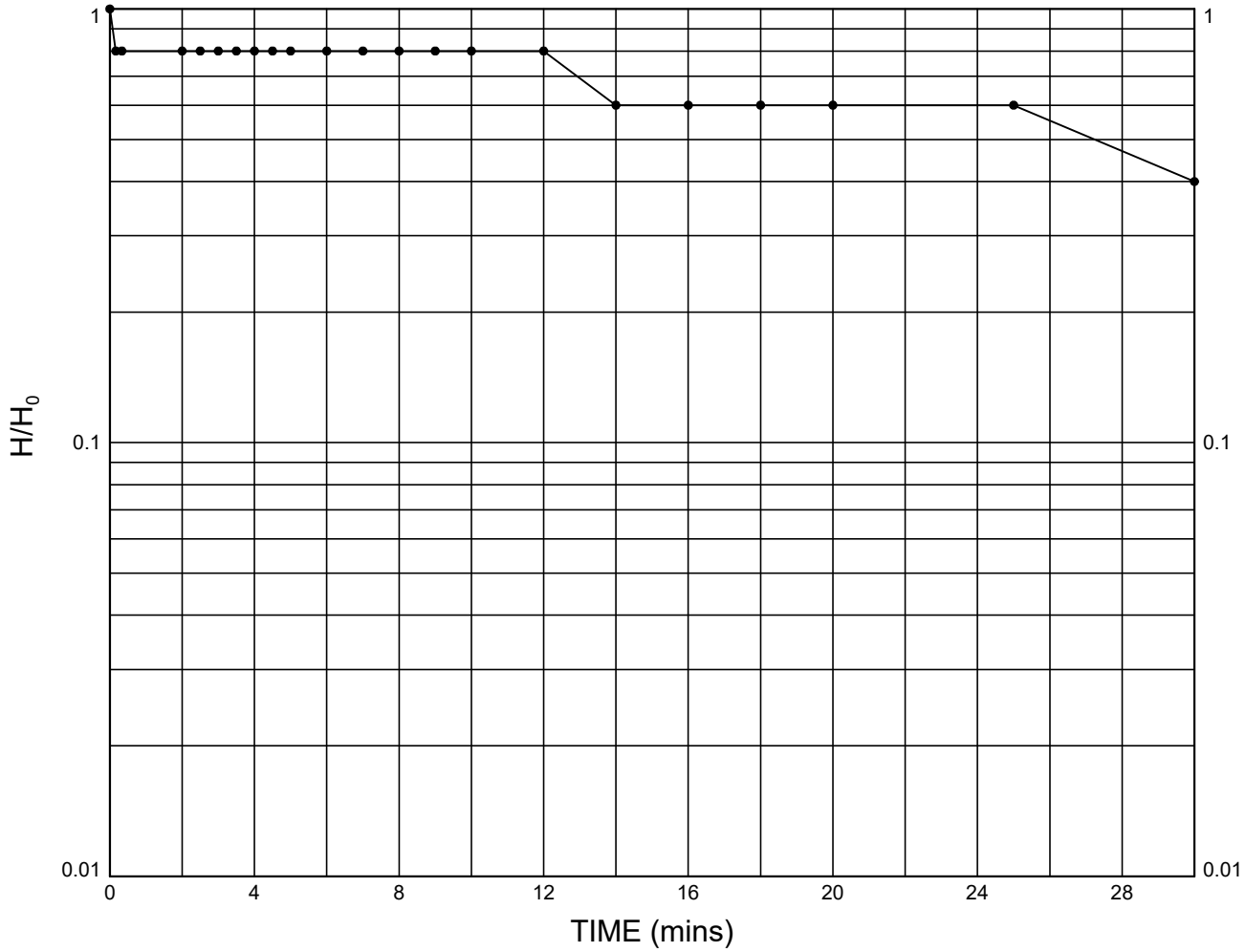
IN-SITU PERMEABILITY TEST - FALLING HEAD
In accordance with BS EN ISO 22282-2:2012

Position ID : **RedP-BH-6** Depth (m below GL): **29.00-30.50** Test Number: **2**

Test Date: **26/10/2023** Test Supervisor: **CMathias**

Ground Level (m AOD): **4.10** British National Grid Co-ordinates: E:634113.8 N:163655.1

PLOT OF H/Ho AGAINST TIME



Diameter of Test Section, D	=	**0.146**	m
Cross Sectional Area of Liaison Tube, A	=	**0.01674**	m^2
Test Section Length, L	=	**1.50**	m

Notes : **No calculation of permeability required. Unable to raise test water level sufficiently to justify calculation of permeability from test data.**

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Operator	Checked By	Date
[redacted]	[redacted]	**01/03/24**

Contract: **Sea Link - Richborough**

Contract Ref: **563607**

Client: **National Grid**

IN-SITU PERMEABILITY TEST - FALLING HEAD
In accordance with BS EN ISO 22282-2:2012

Position ID : **RedP-BH-8** Depth (m below GL): **14.00-15.50** Test Number: **1**

Test Date: **10/10/2023** Test Supervisor: **MStorch**

Ground Level (m AOD): **3.01** National Grid Co-ordinates: **E:633889.3 N:163701.1**

TEST SETUP DETAILS

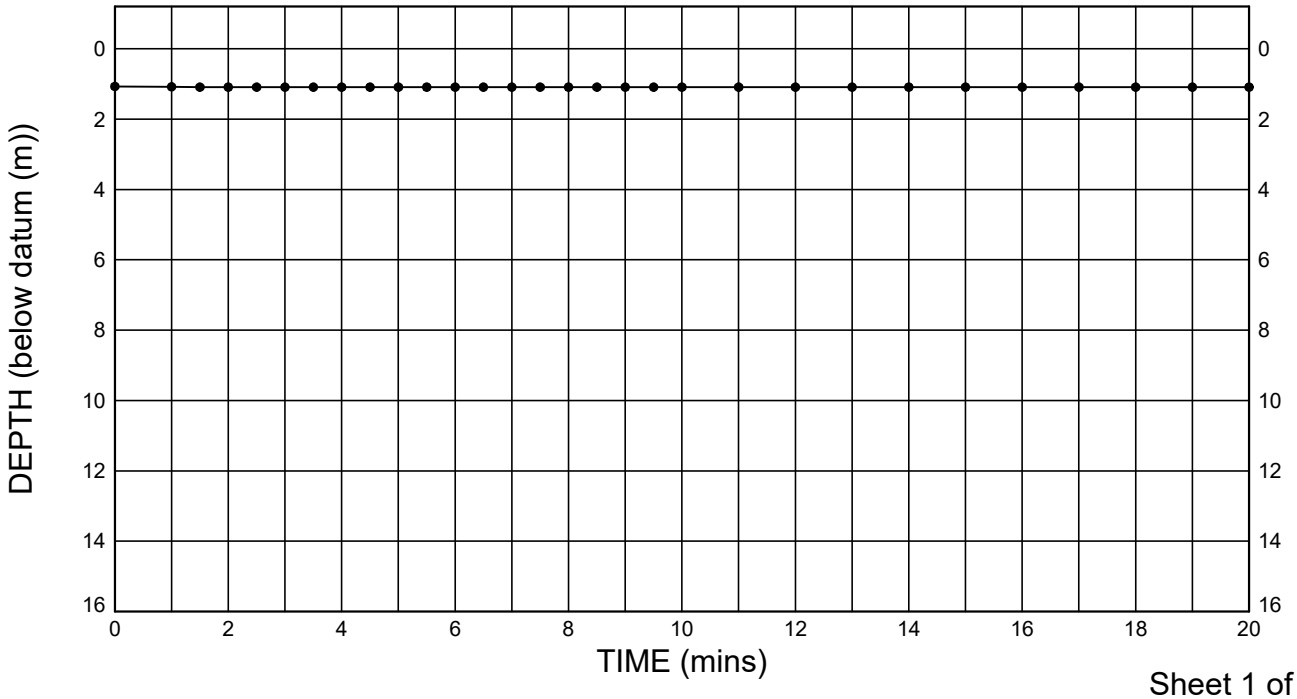
Depth measurements recorded from ground level.

Depth to top of response zone:	**14.00** m	Borehole diameter:	**146** mm
Depth to base of response zone:	**15.50** m	Depth to base of casing:	**14.00** m
Length of response zone:	**1.50** m	Casing diameter:	**146** mm
Initial groundwater level prior to test:	**1.09** m	Soil/Rock Description:	**Chalk**
Depth to base of borehole at start of test:	**15.50** m	Hydrogeological conditions:	**Entire test section below GW**
Depth to base of borehole at completion of test:	**15.50** m	Weather:	**Clear**

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
10:47:00	1.07	0.02	1.00	10:52:30	1.09	0.00	0.00	10:58:00	1.09	0.00	0.00				
10:48:00	1.08	0.01	0.50	10:53:00	1.09	0.00	0.00	10:59:00	1.09	0.00	0.00				
10:48:30	1.09	0.00	0.00	10:53:30	1.09	0.00	0.00	11:00:00	1.09	0.00	0.00				
10:49:00	1.09	0.00	0.00	10:54:00	1.09	0.00	0.00	11:01:00	1.09	0.00	0.00				
10:49:30	1.09	0.00	0.00	10:54:30	1.09	0.00	0.00	11:02:00	1.09	0.00	0.00				
10:50:00	1.09	0.00	0.00	10:55:00	1.09	0.00	0.00	11:03:00	1.09	0.00	0.00				
10:50:30	1.09	0.00	0.00	10:55:30	1.09	0.00	0.00	11:04:00	1.09	0.00	0.00				
10:51:00	1.09	0.00	0.00	10:56:00	1.09	0.00	0.00	11:05:00	1.09	0.00	0.00				
10:51:30	1.09	0.00	0.00	10:56:30	1.09	0.00	0.00	11:06:00	1.09	0.00	0.00				
10:52:00	1.09	0.00	0.00	10:57:00	1.09	0.00	0.00	11:07:00	1.09	0.00	0.00				

PLOT OF WATER DEPTH AGAINST TIME



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Operator	Checked By	Date
[redacted]	[redacted]	**01/03/24**

Contract: **Sea Link - Richborough**

Contract Ref: **563607**

Client: **National Grid**

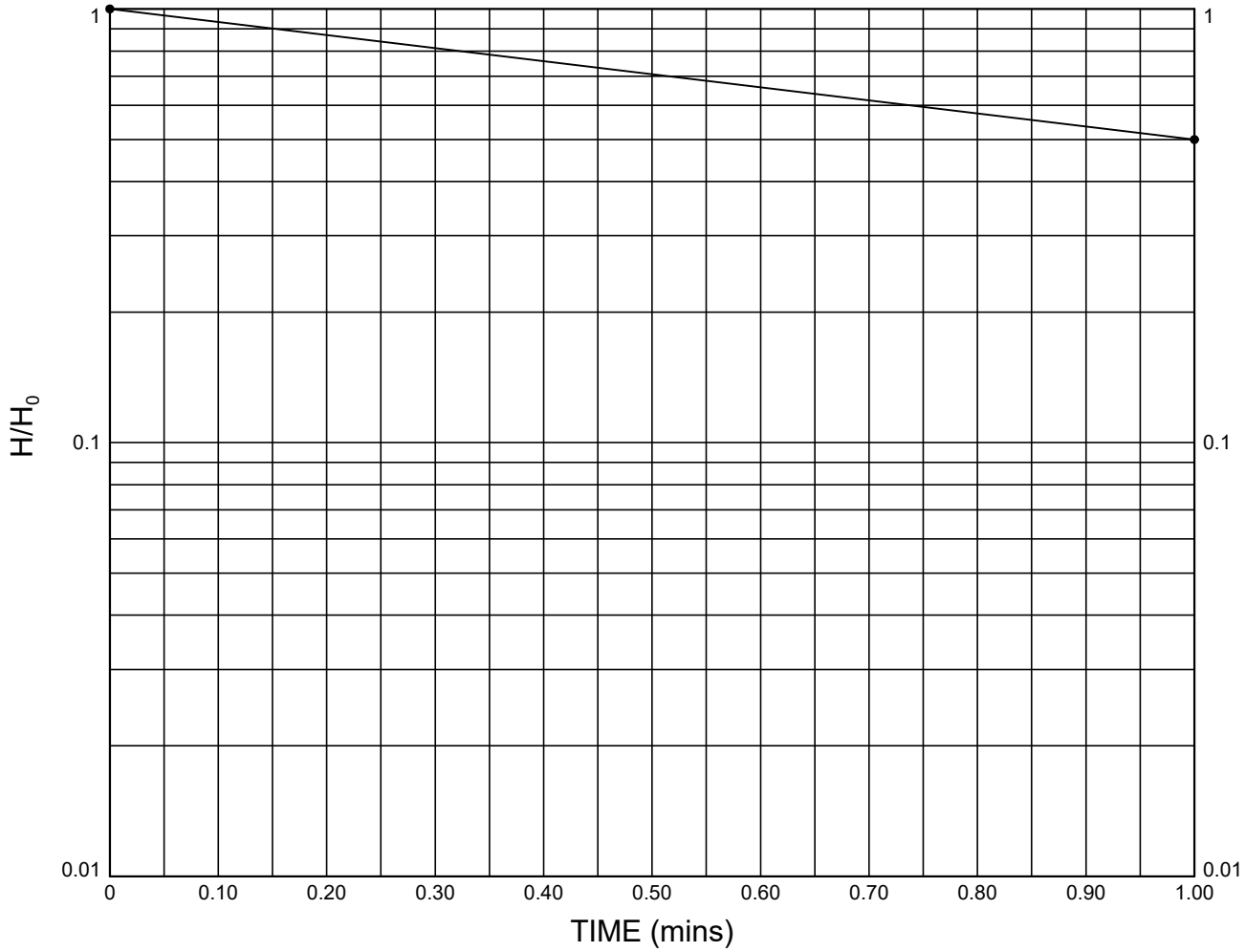
IN-SITU PERMEABILITY TEST - FALLING HEAD
In accordance with BS EN ISO 22282-2:2012

Position ID : **RedP-BH-8** Depth (m below GL): **14.00-15.50** Test Number: **1**

Test Date: **10/10/2023** Test Supervisor: **MStorch**

Ground Level (m AOD): **3.01** British National Grid Co-ordinates: E:633889.3 N:163701.1

PLOT OF H/Ho AGAINST TIME



Diameter of Test Section, D	=	**0.146**	m
Cross Sectional Area of Liaison Tube, A	=	**0.01674**	m^2
Test Section Length, L	=	**1.50**	m

Notes : **No calculation of permeability required. Insufficient head change achievable to enable permeability to be measured.**

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Operator	Checked By	Date
[redacted]	[redacted]	**01/03/24**

Contract: **Sea Link - Richborough**

Contract Ref: **563607**

Client: **National Grid**

IN-SITU PERMEABILITY TEST - FALLING HEAD
In accordance with BS EN ISO 22282-2:2012

Position ID : **RedP-BH-8** Depth (m below GL): **14.00-15.50** Test Number: **2**

Test Date: **10/10/2023** Test Supervisor: **MStorch**

Ground Level (m AOD): **3.01** National Grid Co-ordinates: **E:633889.3 N:163701.1**

TEST SETUP DETAILS

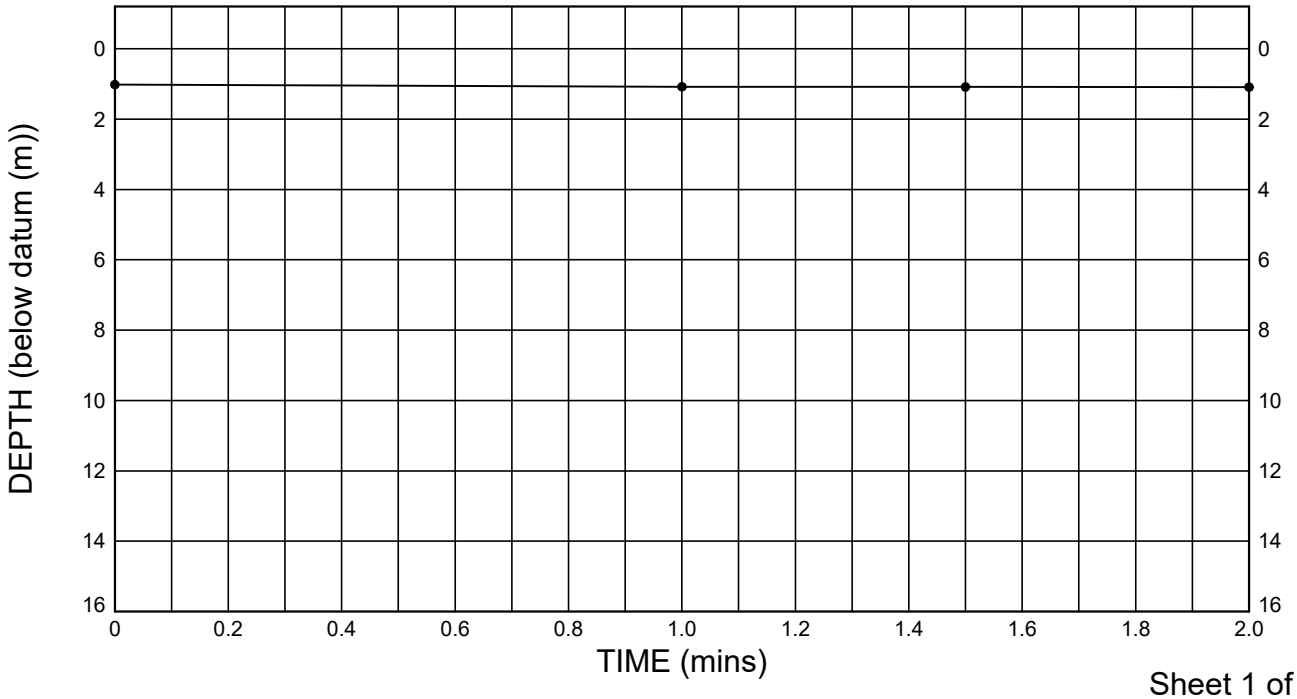
Depth measurements recorded from ground level.

Depth to top of response zone:	**14.00** m	Borehole diameter:	**146** mm
Depth to base of response zone:	**15.50** m	Depth to base of casing:	**14.00** m
Length of response zone:	**1.50** m	Casing diameter:	**146** mm
Initial groundwater level prior to test:	**1.09** m	Soil/Rock Description:	**Chalk**
Depth to base of borehole at start of test:	**15.50** m	Hydrogeological conditions:	**Entire test section below GW**
Depth to base of borehole at completion of test:	**15.50** m	Weather:	**Clear**

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
15:01:00	1.02	0.07	1.00												
15:02:00	1.08	0.01	0.14												
15:02:30	1.09	0.01	0.07												
15:03:00	1.09	0.00	0.00												

PLOT OF WATER DEPTH AGAINST TIME



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Operator	Checked By	Date
[redacted]	[redacted]	**01/03/24**

Contract: **Sea Link - Richborough**

Contract Ref: **563607**

Client: **National Grid**

AGS

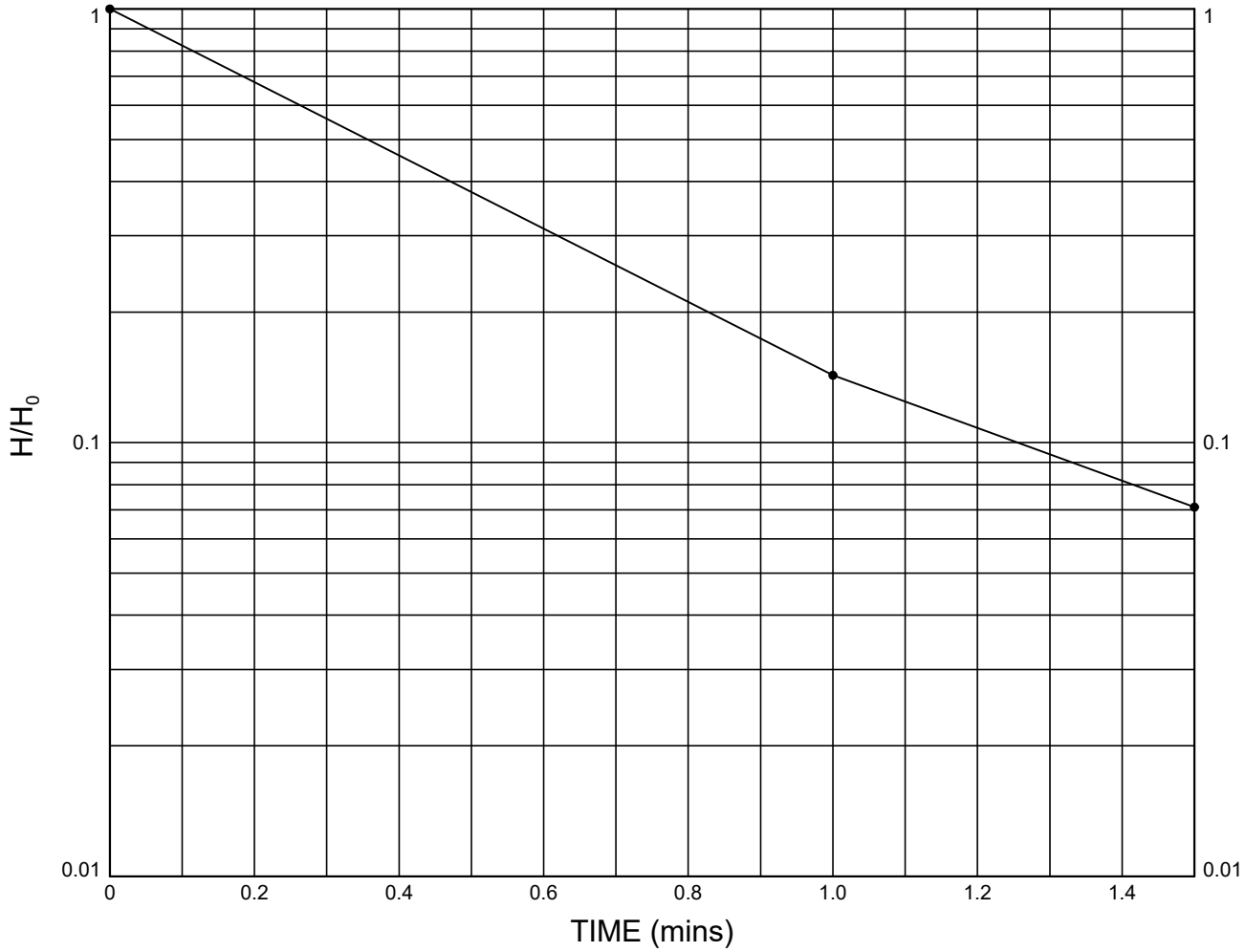
IN-SITU PERMEABILITY TEST - FALLING HEAD
In accordance with BS EN ISO 22282-2:2012

Position ID : **RedP-BH-8** Depth (m below GL): **14.00-15.50** Test Number: **2**

Test Date: **10/10/2023** Test Supervisor: **MStorch**

Ground Level (m AOD): **3.01** British National Grid Co-ordinates: E:633889.3 N:163701.1

PLOT OF H/Ho AGAINST TIME



Diameter of Test Section, D	=	**0.146**	m
Cross Sectional Area of Liaison Tube, A	=	**0.01674**	m^2
Test Section Length, L	=	**1.50**	m

Notes : **No calculation of permeability required. Insufficient head change achievable to enable permeability to be measured.**

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Operator	Checked By	Date
[redacted]	[redacted]	**01/03/24**

Contract: **Sea Link - Richborough**

Contract Ref: **563607**

Client: **National Grid**

IN-SITU PERMEABILITY TEST - FALLING HEAD
In accordance with BS EN ISO 22282-2:2012

Position ID : **RedP-BH-8** Depth (m below GL): **14.00-15.50** Test Number: **3**

Test Date: **10/10/2023** Test Supervisor: **MStorch**

Ground Level (m AOD): **3.01** National Grid Co-ordinates: **E:633889.3 N:163701.1**

TEST SETUP DETAILS

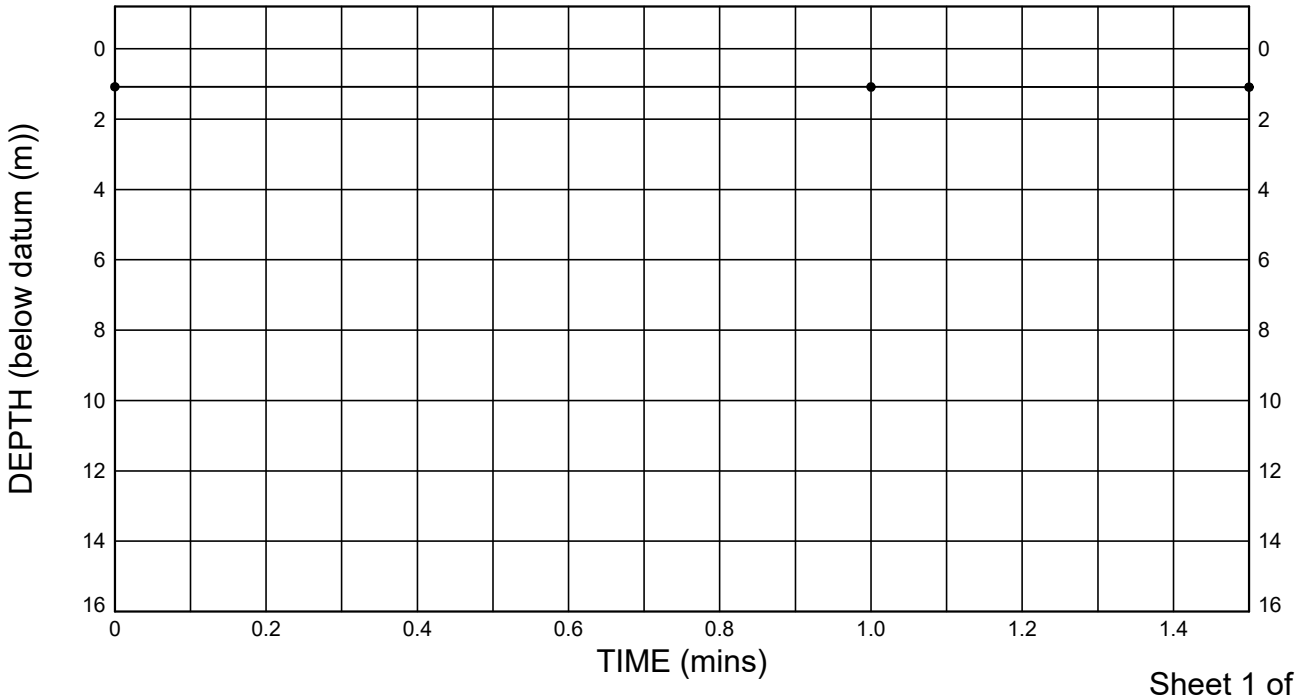
Depth measurements recorded from ground level.

Depth to top of response zone:	**14.00** m	Borehole diameter:	**146** mm
Depth to base of response zone:	**15.50** m	Depth to base of casing:	**14.00** m
Length of response zone:	**1.50** m	Casing diameter:	**146** mm
Initial groundwater level prior to test:	**1.09** m	Soil/Rock Description:	**Chalk**
Depth to base of borehole at start of test:	**15.50** m	Hydrogeological conditions:	**Entire test section below GW**
Depth to base of borehole at completion of test:	**15.50** m	Weather:	**Clear**

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
15:10:00	1.08	0.01	1.00												
15:11:00	1.09	0.01	0.50												
15:11:30	1.09	0.00	0.00												

PLOT OF WATER DEPTH AGAINST TIME



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Operator	Checked By	Date
[redacted]	[redacted]	**01/03/24**

Contract: **Sea Link - Richborough**

Contract Ref: **563607**

Client: **National Grid**

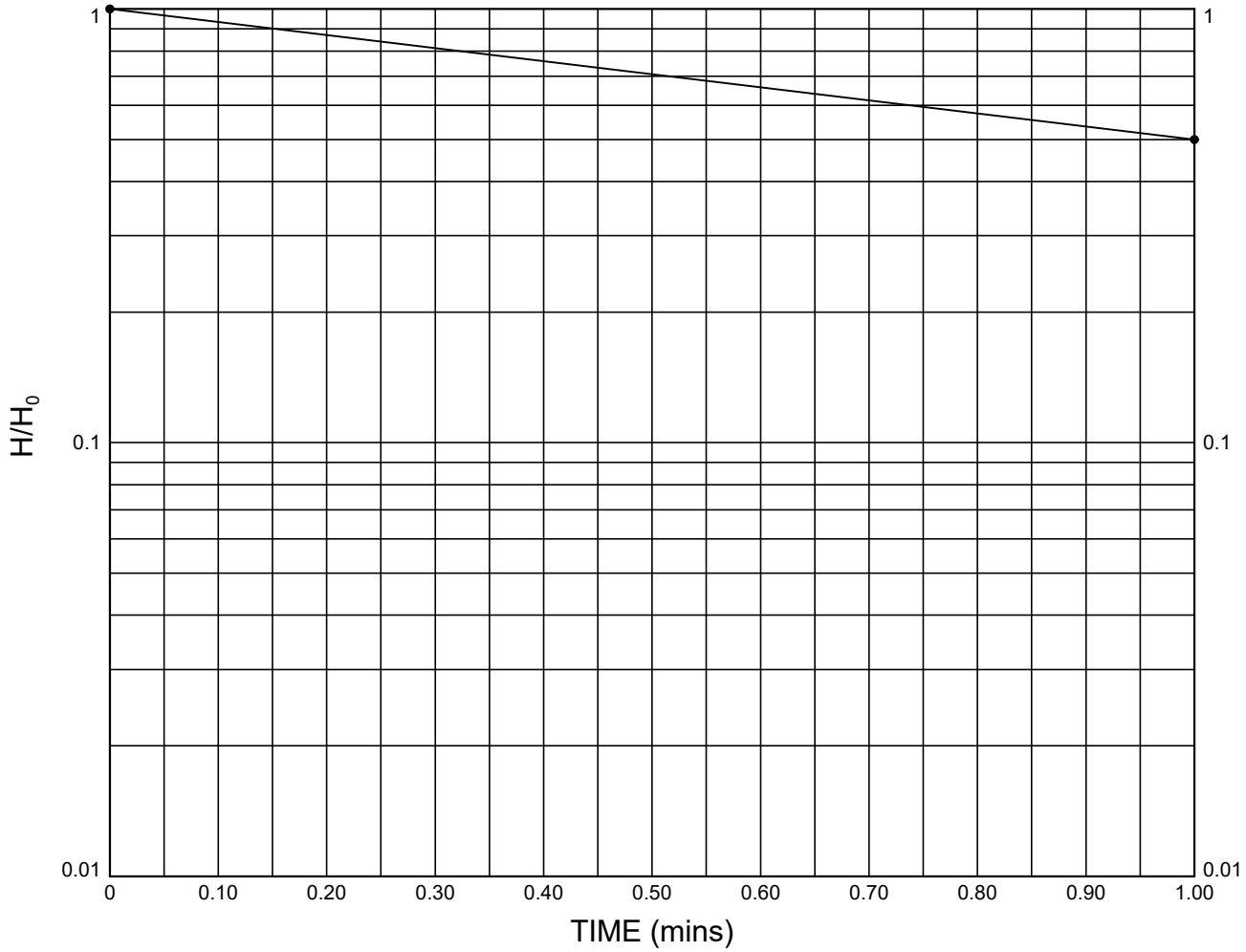
IN-SITU PERMEABILITY TEST - FALLING HEAD
In accordance with BS EN ISO 22282-2:2012

Position ID : **RedP-BH-8** Depth (m below GL): **14.00-15.50** Test Number: **3**

Test Date: **10/10/2023** Test Supervisor: **MStorch**

Ground Level (m AOD): **3.01** British National Grid Co-ordinates: E:633889.3 N:163701.1

PLOT OF H/Ho AGAINST TIME



Diameter of Test Section, D	=	**0.146**	m
Cross Sectional Area of Liaison Tube, A	=	**0.01674**	m^2
Test Section Length, L	=	**1.50**	m

Notes : **No calculation of permeability required. Insufficient head change achievable to enable permeability to be measured.**

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Operator	Checked By	Date
[redacted]	[redacted]	**01/03/24**

Contract: **Sea Link - Richborough**

Contract Ref: **563607**

Client: **National Grid**

IN-SITU PERMEABILITY TEST - FALLING HEAD
In accordance with BS EN ISO 22282-2:2012

Position ID : **RedP-BH-8** Depth (m below GL): **24.50-26.00** Test Number: **4**

Test Date: **11/10/2023** Test Supervisor: **MStorch**

Ground Level (m AOD): **3.01** National Grid Co-ordinates: **E:633889.3 N:163701.1**

TEST SETUP DETAILS

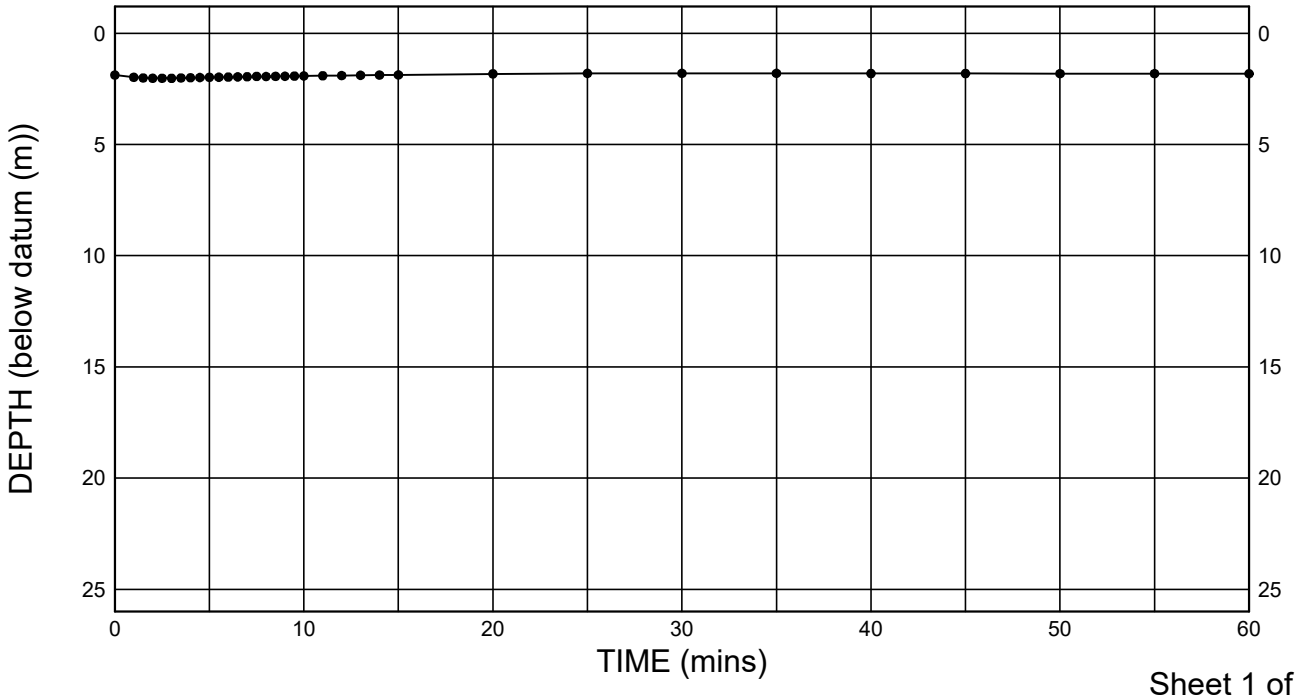
Depth measurements recorded from ground level.

Depth to top of response zone:	**24.50** m	Borehole diameter:	**146** mm
Depth to base of response zone:	**26.00** m	Depth to base of casing:	**24.50** m
Length of response zone:	**1.50** m	Casing diameter:	**146** mm
Initial groundwater level prior to test:	**2.58** m	Soil/Rock Description:	**Chalk**
Depth to base of borehole at start of test:	**26.00** m	Hydrogeological conditions:	**Entire test section below GW**
Depth to base of borehole at completion of test:	**26.00** m	Weather:	**Overcast**

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
11:23:00	1.88	0.70	1.00	11:28:30	1.98	0.60	0.86	11:34:00	1.91	0.67	0.96	12:08:00	1.81	0.77	1.10
11:24:00	1.98	0.60	0.86	11:29:00	1.97	0.61	0.87	11:35:00	1.90	0.68	0.97	12:13:00	1.82	0.77	1.09
11:24:30	2.01	0.57	0.81	11:29:30	1.96	0.62	0.89	11:36:00	1.89	0.69	0.99	12:18:00	1.82	0.77	1.09
11:25:00	2.02	0.56	0.80	11:30:00	1.96	0.62	0.89	11:37:00	1.88	0.70	1.00	12:23:00	1.82	0.76	1.09
11:25:30	2.02	0.56	0.79	11:30:30	1.94	0.64	0.91	11:38:00	1.87	0.71	1.01				
11:26:00	2.03	0.56	0.79	11:31:00	1.95	0.64	0.91	11:43:00	1.83	0.76	1.08				
11:26:30	2.01	0.57	0.81	11:31:30	1.94	0.64	0.92	11:48:00	1.81	0.78	1.11				
11:27:00	2.00	0.58	0.83	11:32:00	1.93	0.65	0.93	11:53:00	1.80	0.78	1.11				
11:27:30	1.99	0.59	0.84	11:32:30	1.93	0.65	0.93	11:58:00	1.80	0.78	1.11				
11:28:00	1.98	0.60	0.86	11:33:00	1.92	0.66	0.95	12:03:00	1.81	0.77	1.10				

PLOT OF WATER DEPTH AGAINST TIME



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Operator	Checked By	Date
[redacted]	[redacted]	**01/03/24**

Contract: **Sea Link - Richborough**

Contract Ref: **563607**

Client: **National Grid**

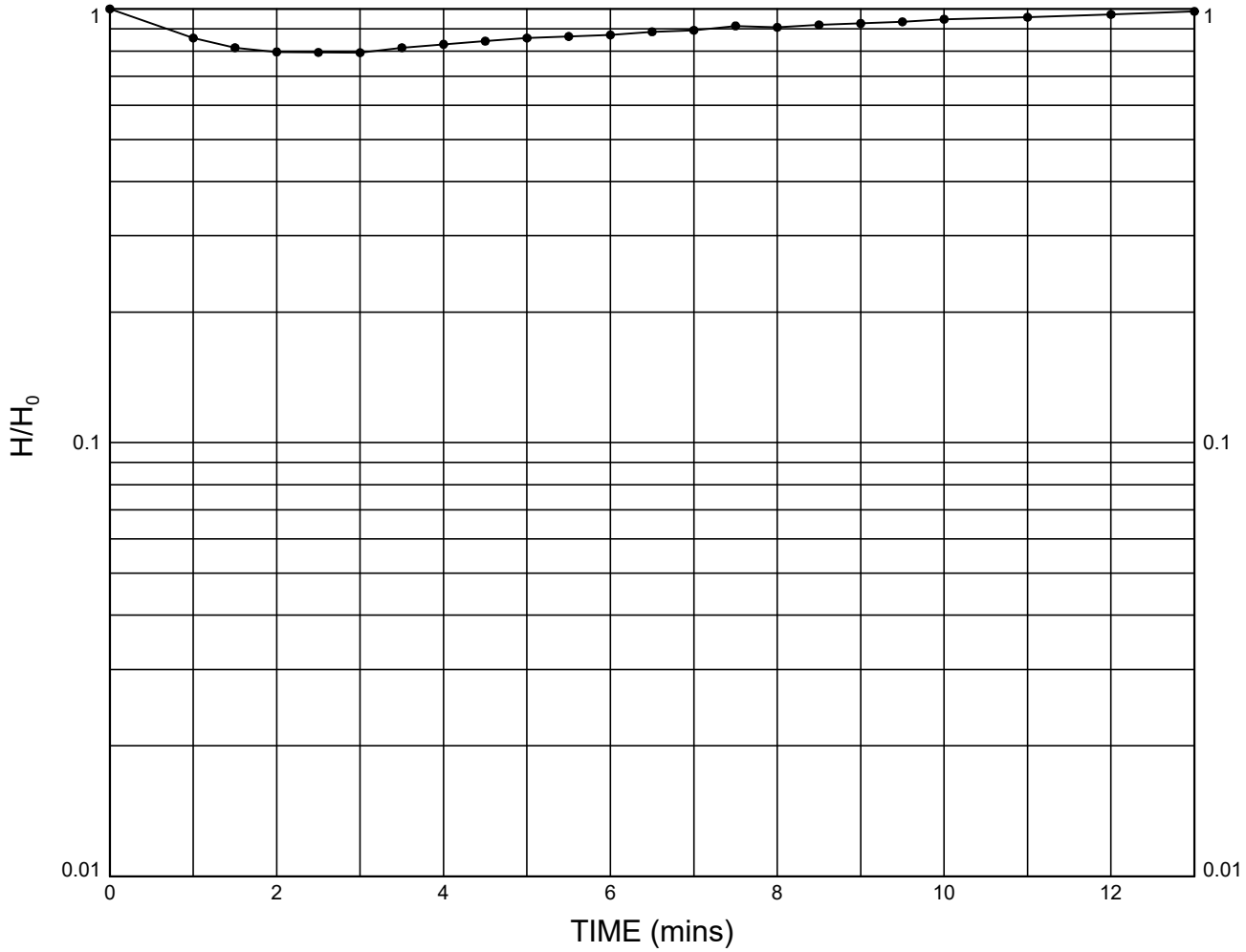
IN-SITU PERMEABILITY TEST - FALLING HEAD
In accordance with BS EN ISO 22282-2:2012

Position ID : **RedP-BH-8** Depth (m below GL): **24.50-26.00** Test Number: **4**

Test Date: **11/10/2023** Test Supervisor: **MStorch**

Ground Level (m AOD): **3.01** British National Grid Co-ordinates: E:633889.3 N:163701.1

PLOT OF H/Ho AGAINST TIME



Diameter of Test Section, D	=	**0.146**	m
Cross Sectional Area of Liaison Tube, A	=	**0.01674**	m^2
Test Section Length, L	=	**1.50**	m

Notes : **No calculation of permeability required. Unable to raise head sufficiently for test. Water level fell by 143mm in 2 minutes then rose to then 60mm above initial level over following 58 minutes.**

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Test Operator	Checked By	Date
[redacted]	[redacted]	**01/03/24**

Contract: **Sea Link - Richborough**

Contract Ref: **563607**

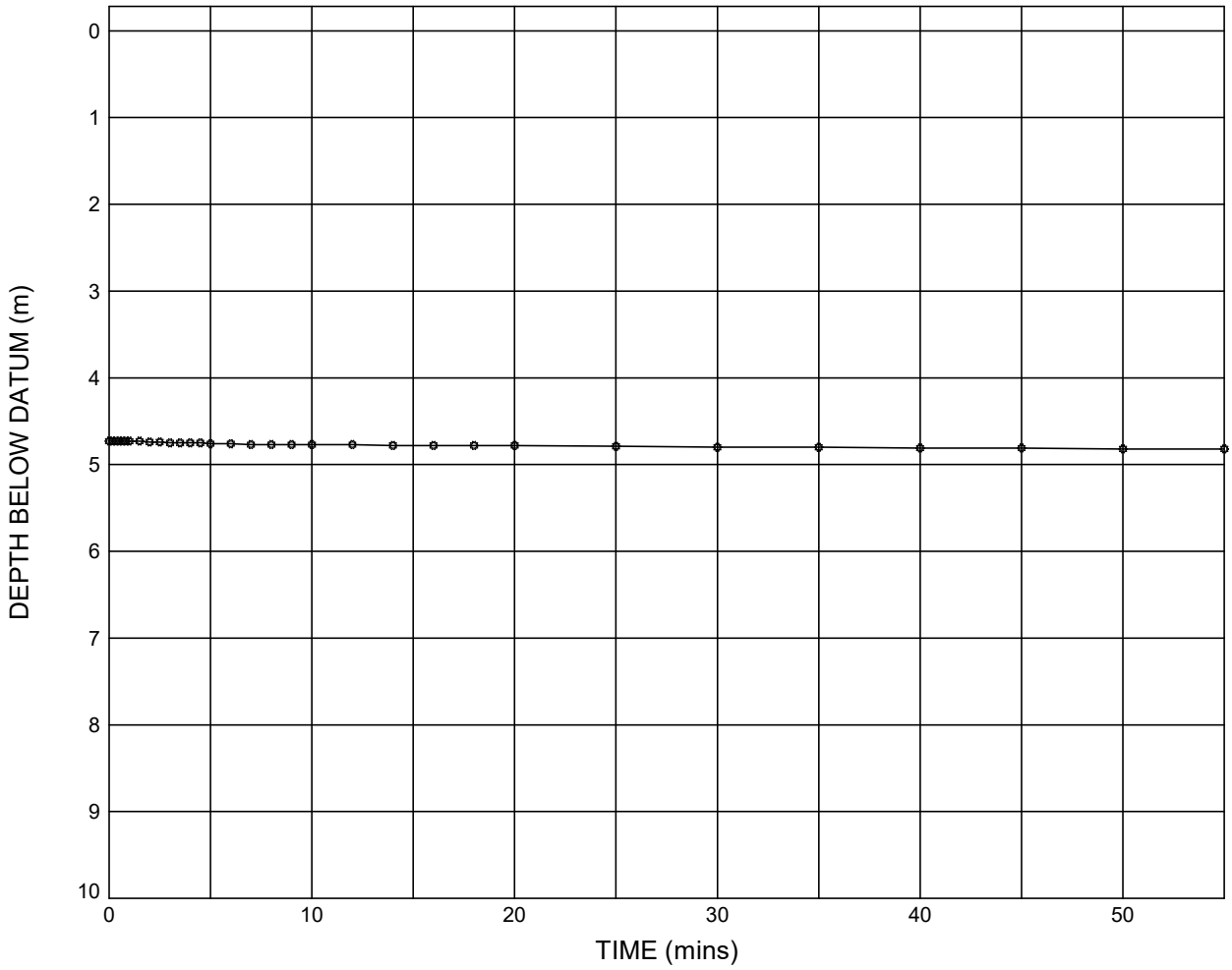
Client: **National Grid**

BOREHOLE SOAKAWAY TEST
NON STANDARD TEST

Test position: RedP-BH-11

Ground Level (m AOD): **14.47** British National Grid Co-ordinates:E:633634.8 N:163798.6

PLOT OF DEPTH OF WATER BELOW DATUM AGAINST TIME



Notes : Test section was SILTSTONE of the Thanet Formation. 150 litres of water added over 20 minutes. No calculation of soil infiltration rate made as test water only fell 80mm in almost 1 hour.

Test hole details:

Measurement datum was **CASING**
Hole depth at start of test: **8.99**mBGL
Borehole diameter: **200**mm
Depth to base of casing: **8.06**mBGL
Depth of datum below GL: **0.00**m

Legend:

☼ Test 1 (09/10/2023)

STRUCTURAL SOILS 18 Frogmore Road Hemel Hempstead Hertfordshire HP3 9RT	Test Operator	Checked By	Date
	[redacted]	[redacted]	**01/03/24**
	Contract **Sea Link - Richborough**	Contract Ref: **563607**	
		Client: **National Grid**	

SUMMARY OF SOIL CONDUCTIVITY - R22-TP101
In accordance with ASTM D5334-08

Test Number	Test Date/Time	Test Depth (m)	Probe ID	Probe Diameter (mm)	Total Test Time (s)	Sample Condition	Test Temperature (°C)	Thermal Conductivity (W/m.K)	Thermal Resistivity (cm.°C/W)	Sample Description
1	10/10/2023	0.7	KD2 Pro	2.4	300	Insitu	16.32	0.781	1.2804	Clay
2	10/10/2023	0.7	KD2 Pro	2.4	300	Insitu	16.33	0.681	1.4684	Clay
3	10/10/2023	0.7	KD2 Pro	2.4	300	Insitu	16.41	0.637	1.5699	Clay
4	10/10/2023	0.9	KD2 Pro	2.4	300	Insitu	16.22	0.665	1.5038	Clay
5	10/10/2023	0.9	KD2 Pro	2.4	300	Insitu	16.32	0.652	1.5337	Clay
6	10/10/2023	0.9	KD2 Pro	2.4	300	Insitu	16.49	0.658	1.5198	Clay
7	10/10/2023	1.1	KD2 Pro	2.4	300	Insitu	16.14	0.664	1.506	Clay
8	10/10/2023	1.1	KD2 Pro	2.4	300	Insitu	16.17	0.701	1.4265	Clay
9	10/10/2023	1.1	KD2 Pro	2.4	300	Insitu	16.25	0.738	1.355	Clay

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SUMMARY OF SOIL CONDUCTIVITY - R22-TP102
In accordance with ASTM D5334-08

Test Number	Test Date/Time	Test Depth (m)	Probe ID	Probe Diameter (mm)	Total Test Time (s)	Sample Condition	Test Temperature (°C)	Thermal Conductivity (W/m.K)	Thermal Resistivity (cm.°C/W)	Sample Description
1	11/10/2023	0.7	KD2 Pro	2.4	300	Insitu	16.61	0.632	1.5823	Clay
2	11/10/2023	0.7	KD2 Pro	2.4	300	Insitu	16.51	0.602	1.6611	Clay
3	11/10/2023	0.7	KD2 Pro	2.4	300	Insitu	16.43	0.635	1.5748	Clay
4	11/10/2023	0.9	KD2 Pro	2.4	300	Insitu	16.46	0.624	1.6026	Clay
5	11/10/2023	0.9	KD2 Pro	2.4	300	Insitu	16.36	0.635	1.5748	Clay
6	11/10/2023	0.9	KD2 Pro	2.4	300	Insitu	16.41	0.69	1.4493	Clay
7	11/10/2023	1.1	KD2 Pro	2.4	300	Insitu	16.4	0.662	1.5106	Clay
8	11/10/2023	1.1	KD2 Pro	2.4	300	Insitu	16.37	0.703	1.4225	Clay
9	11/10/2023	1.1	KD2 Pro	2.4	300	Insitu	16.4	0.68	1.4706	Clay

SUMMARY OF SOIL CONDUCTIVITY - R22-TP103
In accordance with ASTM D5334-08

Test Number	Test Date/Time	Test Depth (m)	Probe ID	Probe Diameter (mm)	Total Test Time (s)	Sample Condition	Test Temperature (°C)	Thermal Conductivity (W/m.K)	Thermal Resistivity (cm.°C/W)	Sample Description
1	09/10/2023	0.7	KD2 Pro	2.4	300	Insitu	16.97	0.608	1.6447	Clay
2	09/10/2023	0.7	KD2 Pro	2.4	300	Insitu	16.88	0.601	1.6639	Clay
3	09/10/2023	0.7	KD2 Pro	2.4	300	Insitu	16.75	0.657	1.5221	Clay
4	09/10/2023	0.9	KD2 Pro	2.4	300	Insitu	16.71	0.638	1.5674	Clay
5	09/10/2023	0.9	KD2 Pro	2.4	300	Insitu	16.63	0.669	1.4948	Clay
6	09/10/2023	0.9	KD2 Pro	2.4	300	Insitu	16.73	0.755	1.3245	Clay
7	09/10/2023	1.1	KD2 Pro	2.4	300	Insitu	16.55	0.749	1.3351	Clay
8	09/10/2023	1.1	KD2 Pro	2.4	300	Insitu	16.46	0.842	1.1876	Clay
9	09/10/2023	1.1	KD2 Pro	2.4	300	Insitu	16.4	0.821	1.218	Clay

SUMMARY OF SOIL CONDUCTIVITY - R22-TP104
In accordance with ASTM D5334-08

Test Number	Test Date/Time	Test Depth (m)	Probe ID	Probe Diameter (mm)	Total Test Time (s)	Sample Condition	Test Temperature (°C)	Thermal Conductivity (W/m.K)	Thermal Resistivity (cm.°C/W)	Sample Description
1	04/10/2023	0.7	KD2 Pro	2.4	300	Insitu	17.06	0.7018	1.425	Clay
2	04/10/2023	0.7	KD2 Pro	2.4	300	Insitu	17.2	0.6959	1.437	Clay
3	04/10/2023	0.7	KD2 Pro	2.4	300	Insitu	17.21	0.7513	1.331	Clay
4	04/10/2023	0.9	KD2 Pro	2.4	300	Insitu	16.9	0.7262	1.377	Clay
5	04/10/2023	0.9	KD2 Pro	2.4	300	Insitu	16.99	0.7337	1.363	Clay
6	04/10/2023	0.9	KD2 Pro	2.4	300	Insitu	17.03	0.6993	1.43	Clay
7	04/10/2023	1.1	KD2 Pro	2.4	300	Insitu	16.79	0.7788	1.284	Clay
8	04/10/2023	1.1	KD2 Pro	2.4	300	Insitu	16.77	0.8292	1.206	Clay
9	04/10/2023	1.1	KD2 Pro	2.4	300	Insitu	16.75	0.821	1.218	Clay

SUMMARY OF SOIL CONDUCTIVITY - R22-TP105
In accordance with ASTM D5334-08

Test Number	Test Date/Time	Test Depth (m)	Probe ID	Probe Diameter (mm)	Total Test Time (s)	Sample Condition	Test Temperature (°C)	Thermal Conductivity (W/m.K)	Thermal Resistivity (cm.°C/W)	Sample Description
1	10/10/2023	0.7	KD2 Pro	2.4	300	Insitu	18.25	0.591	1.692	Clay
2	10/10/2023	0.7	KD2 Pro	2.4	300	Insitu	20.7	0.723	1.3831	Clay
3	10/10/2023	0.7	KD2 Pro	2.4	300	Insitu	19.58	0.703	1.4225	Clay
4	10/10/2023	0.9	KD2 Pro	2.4	300	Insitu	15.7	0.683	1.4641	Clay
5	10/10/2023	0.9	KD2 Pro	2.4	300	Insitu	16.18	0.676	1.4793	Clay
6	10/10/2023	0.9	KD2 Pro	2.4	300	Insitu	16.31	0.753	1.328	Clay
7	10/10/2023	1.1	KD2 Pro	2.4	300	Insitu	15.43	0.599	1.6694	Clay
8	10/10/2023	1.1	KD2 Pro	2.4	300	Insitu	15.4	0.646	1.548	Clay
9	10/10/2023	1.1	KD2 Pro	2.4	300	Insitu	16	0.688	1.4535	Clay

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SUMMARY OF SOIL CONDUCTIVITY - R22-TP106
In accordance with ASTM D5334-08

Test Number	Test Date/Time	Test Depth (m)	Probe ID	Probe Diameter (mm)	Total Test Time (s)	Sample Condition	Test Temperature (°C)	Thermal Conductivity (W/m.K)	Thermal Resistivity (cm.°C/W)	Sample Description
1	12/10/2023	0.7	KD2 Pro	2.4	300	Insitu	16.53	0.729	1.3717	Clay
2	12/10/2023	0.7	KD2 Pro	2.4	300	Insitu	16.49	0.737	1.3569	Clay
3	12/10/2023	0.7	KD2 Pro	2.4	300	Insitu	16.64	0.723	1.3831	Clay
4	12/10/2023	0.9	KD2 Pro	2.4	300	Insitu	16.53	0.685	1.4599	Clay
5	12/10/2023	0.9	KD2 Pro	2.4	300	Insitu	16.42	0.752	1.3298	Clay
6	12/10/2023	0.9	KD2 Pro	2.4	300	Insitu	16.46	0.838	1.1933	Clay
7	12/10/2023	1.1	KD2 Pro	2.4	300	Insitu	16.33	0.786	1.2723	Clay
8	12/10/2023	1.1	KD2 Pro	2.4	300	Insitu	16.26	0.797	1.2547	Clay
9	12/10/2023	1.1	KD2 Pro	2.4	300	Insitu	16.35	0.785	1.2739	Clay

SUMMARY OF SOIL CONDUCTIVITY - R22-TP107
In accordance with ASTM D5334-08

Test Number	Test Date/Time	Test Depth (m)	Probe ID	Probe Diameter (mm)	Total Test Time (s)	Sample Condition	Test Temperature (°C)	Thermal Conductivity (W/m.K)	Thermal Resistivity (cm.°C/W)	Sample Description
1	05/10/2023	0.7	KD2 Pro	2.4	300	Insitu	17	0.62	1.6129	Clay
2	05/10/2023	0.7	KD2 Pro	2.4	300	Insitu	17.11	0.691	1.4472	Clay
3	05/10/2023	0.7	KD2 Pro	2.4	300	Insitu	16.89	0.714	1.4006	Clay
4	05/10/2023	0.9	KD2 Pro	2.4	300	Insitu	17	0.663	1.5083	Clay
5	05/10/2023	0.9	KD2 Pro	2.4	300	Insitu	16.95	0.72	1.3889	Clay
6	05/10/2023	0.9	KD2 Pro	2.4	300	Insitu	16.93	0.745	1.3423	Clay
7	05/10/2023	1.1	KD2 Pro	2.4	300	Insitu	16.73	0.792	1.261	Clay
8	05/10/2023	1.1	KD2 Pro	2.4	300	Insitu	16.68	0.793	1.261	Clay
9	05/10/2023	1.1	KD2 Pro	2.4	300	Insitu	16.74	0.823	1.2151	Clay

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SUMMARY OF SOIL CONDUCTIVITY - R22-TP201
In accordance with ASTM D5334-08

Test Number	Test Date/Time	Test Depth (m)	Probe ID	Probe Diameter (mm)	Total Test Time (s)	Sample Condition	Test Temperature (°C)	Thermal Conductivity (W/m.K)	Thermal Resistivity (cm.°C/W)	Sample Description
1	18/10/2023	0.7	KD2 Pro	2.4	300	Insitu	14.12	0.601	1.6639	Silt
2	18/10/2023	0.7	KD2 Pro	2.4	300	Insitu	14.19	0.623	1.6051	Silt
3	18/10/2023	0.7	KD2 Pro	2.4	300	Insitu	14.4	0.662	1.5106	Silt
4	18/10/2023	0.9	KD2 Pro	2.4	300	Insitu	14.71	0.556	1.7986	Silt
5	18/10/2023	0.9	KD2 Pro	2.4	300	Insitu	14.8	0.64	1.5625	Silt
6	18/10/2023	0.9	KD2 Pro	2.4	300	Insitu	15.01	0.597	1.675	Silt
7	18/10/2023	1.1	KD2 Pro	2.4	300	Insitu	15.24	0.611	1.6367	Silt
8	18/10/2023	1.1	KD2 Pro	2.4	300	Insitu	15.41	0.767	1.3038	Silt
9	18/10/2023	1.1	KD2 Pro	2.4	300	Insitu	15.51	0.698	1.4327	Silt

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Contract Ref: 563607

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SUMMARY OF SOIL CONDUCTIVITY - R22-TP202
In accordance with ASTM D5334-08

Test Number	Test Date/Time	Test Depth (m)	Probe ID	Probe Diameter (mm)	Total Test Time (s)	Sample Condition	Test Temperature (°C)	Thermal Conductivity (W/m.K)	Thermal Resistivity (cm.°C/W)	Sample Description
1	17/10/2023	0.7	KD2 Pro	2.4	300	Insitu	13.35	0.615	1.626	Silt
2	17/10/2023	0.7	KD2 Pro	2.4	300	Insitu	13.77	0.64	1.5625	Silt
3	17/10/2023	0.7	KD2 Pro	2.4	300	Insitu	13.75	0.619	1.6155	Silt
4	17/10/2023	0.9	KD2 Pro	2.4	300	Insitu	14.82	0.651	1.5361	Silt
5	17/10/2023	0.9	KD2 Pro	2.4	300	Insitu	14.74	0.732	1.3661	Silt
6	17/10/2023	0.9	KD2 Pro	2.4	300	Insitu	14.78	0.625	1.601	Silt
7	17/10/2023	1.1	KD2 Pro	2.4	300	Insitu	15.07	0.577	1.7331	Silt
8	17/10/2023	1.1	KD2 Pro	2.4	300	Insitu	15.06	0.945	1.0582	Silt
9	17/10/2023	1.1	KD2 Pro	2.4	300	Insitu	15.07	0.608	1.6447	Silt

SUMMARY OF SOIL CONDUCTIVITY - R22-TP203
In accordance with ASTM D5334-08

Test Number	Test Date/Time	Test Depth (m)	Probe ID	Probe Diameter (mm)	Total Test Time (s)	Sample Condition	Test Temperature (°C)	Thermal Conductivity (W/m.K)	Thermal Resistivity (cm.°C/W)	Sample Description
1	26/09/2023	0.7	KD2 Pro	2.4	300	Insitu	16.71	0.656	1.524	Silt
2	26/09/2023	0.7	KD2 Pro	2.4	300	Insitu	17.02	0.698	1.433	Silt
3	26/09/2023	0.7	KD2 Pro	2.4	300	Insitu	16.71	0.655	1.526	Silt
4	26/09/2023	0.9	KD2 Pro	2.4	300	Insitu	16.13	0.557	1.797	Silt
5	26/09/2023	0.9	KD2 Pro	2.4	300	Insitu	16.29	0.56	1.787	Silt
6	26/09/2023	0.9	KD2 Pro	2.4	300	Insitu	16.33	0.632	1.583	Silt
7	26/09/2023	1.1	KD2 Pro	2.4	300	Insitu	15.71	0.458	2.183	Clay
8	26/09/2023	1.1	KD2 Pro	2.4	300	Insitu	15.71	0.646	1.549	Clay
9	26/09/2023	1.1	KD2 Pro	2.4	300	Insitu	16.02	0.541	1.847	Clay

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SUMMARY OF SOIL CONDUCTIVITY - R22-TP204
In accordance with ASTM D5334-08

Test Number	Test Date/Time	Test Depth (m)	Probe ID	Probe Diameter (mm)	Total Test Time (s)	Sample Condition	Test Temperature (°C)	Thermal Conductivity (W/m.K)	Thermal Resistivity (cm.°C/W)	Sample Description
1	27/09/2023	0.7	KD2 Pro	2.4	300	Insitu	16.52	0.664	1.506	Clay
2	27/09/2023	0.7	KD2 Pro	2.4	300	Insitu	16.47	0.703	1.423	Clay
3	27/09/2023	0.7	KD2 Pro	2.4	300	Insitu	16.65	0.656	1.525	Clay
4	27/09/2023	0.9	KD2 Pro	2.4	300	Insitu	16.39	0.667	1.5	Clay
5	27/09/2023	0.9	KD2 Pro	2.4	300	Insitu	16.57	0.724	1.381	Clay
6	27/09/2023	0.9	KD2 Pro	2.4	300	Insitu	16.5	0.699	1.431	Clay
7	27/09/2023	1.1	KD2 Pro	2.4	300	Insitu	16.26	0.686	1.458	Clay
8	27/09/2023	1.1	KD2 Pro	2.4	300	Insitu	16.42	0.659	1.518	Clay
9	27/09/2023	1.1	KD2 Pro	2.4	300	Insitu	16.39	0.723	1.383	Clay

SUMMARY OF SOIL CONDUCTIVITY - R22-TP205
In accordance with ASTM D5334-08

Test Number	Test Date/Time	Test Depth (m)	Probe ID	Probe Diameter (mm)	Total Test Time (s)	Sample Condition	Test Temperature (°C)	Thermal Conductivity (W/m.K)	Thermal Resistivity (cm.°C/W)	Sample Description
1	06/10/2023	0.7	KD2 Pro	2.4	300	Insitu	16.7	0.677	1.4771	Clay
2	06/10/2023	0.7	KD2 Pro	2.4	300	Insitu	16.69	0.662	1.5106	Clay
3	06/10/2023	0.7	KD2 Pro	2.4	300	Insitu	16.66	0.69	1.4493	Clay
4	06/10/2023	0.9	KD2 Pro	2.4	300	Insitu	16.72	0.61	1.6393	Clay
5	06/10/2023	0.9	KD2 Pro	2.4	300	Insitu	16.76	0.634	1.5773	Clay
6	06/10/2023	0.9	KD2 Pro	2.4	300	Insitu	16.81	0.712	1.4045	Clay
7	06/10/2023	1.1	KD2 Pro	2.4	300	Insitu	16.76	0.517	1.9342	Clay
8	06/10/2023	1.1	KD2 Pro	2.4	300	Insitu	16.82	0.61	1.6393	Clay
9	06/10/2023	1.1	KD2 Pro	2.4	300	Insitu	16.78	0.574	1.7422	Clay

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IN SITU
SITE INVESTIGATION

STATIC CONE PENETRATION TEST

FACTUAL REPORT

CLIENT: Structural Soils

PROJECT: Sealink - Richborough

Project	**Sealink – Kent**
Project No.	**1230335**
Client	**Structural Soils Ltd**
Address	**Spring Lodge, 172 Chester Road, Helsby, Cheshire, WA6 0AR**

Attention: [redacted]

Dear [redacted],

We have pleasure in providing a digital copy of our report and data in AGS format for the above project.

We hope that you are satisfied with the performance of our staff, equipment and reporting on this project. If you should have any queries about any aspect of the works carried out, please do not hesitate to contact us. We look forward to being of service to you in the future.

Yours faithfully,

In Situ Site Investigation Limited

[redacted]

[redacted]

Director

Report Issue

Issue	Date	Prepared	Sign	Checked	Sign	Approved	Sign
03	08/03/2024	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Table of Contents

1.0 INTRODUCTION

In Situ Site Investigation Limited (In Situ) was engaged in a geotechnical site investigation at Sealink – Kent at the request of Structural Soils Ltd. The site investigation consisted of completing 11 Static Piezocone Penetration Tests (CPTU), 23 Dissipation Tests, and 11 Magnetometer Tests to provide information on the soil conditions and derived geotechnical parameters at:

J N Bentley Compound
Richborough Energy Park
Off Ramsgate Road
Richborough
Kent
CT13 9NL

All test locations were provided by the client. A site map is included in the end of Appendix A of this report (if provided by the client). The tests were stopped when they reached the target depth as per the client's technical specifications or for other technical reasons, as detailed in the *Project Summary Table* in *Appendix A.1* and on each CPTU log included in Appendix B of this report.

The fieldwork was carried out from 17th October 2023 to 23rd October 2023 as per the client's request.

The work on site and the final factual reporting have been undertaken in accordance with the international technical standard *ISO 22476-1:2022(E)*.

2.0 FIELDWORK

2.1 CONE PENETRATION TESTS

The fieldwork activity is summarised in Table 2.1.

Table 2.1 Fieldwork Summary	
CPT Operator/s	[redacted]
Date Started	17th October 2023
Date Finished	23rd October 2023
In Situ S.I. Project Manager	[redacted]
Main Contractor's Site Manager	[redacted]

2.1.1 Rig Information

Details of CPTU rig used in this project are shown in Table 2.2. Full data sheet for the rig is presented in *Appendix A.2*.

Table 2.2 Rig Summary	
Rig Name	**Rig Description**
CPT020	1.5 Tonne Track Mounted CPT Rig

2.1.2 CPTU Cone

Details of electric CPTU cone (Type TE2) used in this project conforming to the requirements of Application Class 2 of *ISO 22476-1:2022*, are shown in Table 2.3.

Table 2.3 Cone Summary		
Number	**Cross-section area**	**Filter position**
S15-CFIP.2145	15cm^2	u_2

A full datasheet of the cone used is shown in *Appendix A.3*.

The cone's measured parameters are shown in Table 2.4.

Table 2.4 Completed Fieldwork Summary
11 CPTU to a maximum depth of 10.05m. Each test measured Cone Resistance, q_c, Sleeve Friction, f_s, Porewater Pressure in the shoulder position, u_2, Inclination in X and Y axes. 23 Dissipation tests to the required depths. Each Dissipation test measured the decay of excess porewater pressure (kPa) with time (s). 11 MAG tests to a maximum depth of 10.05m. Each MAG test measured Magnetic Field X (nT), Magnetic Field Y (nT) and Magnetic Field Z (nT).
Provision of factual report with estimated soil type, derived geotechnical parameters & AGS data file.

2.1.3 CPTU Cone Calibration

The cone resistance and sleeve friction are recorded by calibrated load cells in the cone. The CPTU load cells and pressure transducers are regularly calibrated in line with *ISO 22476-1:2022(E)* standard by the cone manufacturer. The cone calibration certificate for the cone used at this site are presented in *Appendix A.4*.

2.1.4 CPTU Cone Saturation

The pore water pressure is recorded using a calibrated pressure transducer located in the piezocone. To ensure pore water pressure measurements are not affected by the presence of air in the measuring transducer, a de-airing procedure is carried out prior to each test. The cone and filter are saturated using a glycerine fluid with a viscosity of 10,000 CST.

2.1.5 Test Procedure

The tests are carried out in accordance with the *International Standard for Electrical Cone and Piezocone Penetration Test ISO 22476-1:2022(E)*.

The final depths of the tests were determined by either completion to the specified test depth or when the maximal safe capacity of the equipment was reached. A schedule of the tests performed is shown in *Appendix A.1*, which has been compiled from the operators' daily progress reports.

The data is transmitted from the digital CPTU through an umbilical cable that runs through the push rods to the data acquisition system. Results are displayed instantaneously on the computer logging screen. The results are recorded on the computer hard disc.

The rate of penetration is kept constant at 20 mm/s ± 5 mm/s except when penetrating very dense or hard strata. Before each test is carried out zero values are taken of the cone to check if it is within calibration. At the end of each test, zero values are taken again to see if there has been any drift during the test. These values are inspected during the post

processing stage. This is a quality check on the data and the testing procedure. Individual test zero values are shown on their corresponding test results in *Appendix B*.

2.1.6 In Situ Pore Pressure (u_0)

The in situ or hydrostatic pore pressure is required for the calculation of several derived parameters included in this report. For this report, the groundwater level is assumed at 0.5m below ground surface, for calculation purposes. The in situ pore pressure, u_0 values are presented on the pore pressure plot, on *CPT Log 01,* which is included in *Appendix B*.

2.2 POSITIONING

Positioning and surveying of all investigated locations was the responsibility of the client. The site map and position of the tests are presented in Appendix A.9.All tests coordinates are included in the summary sheet in Appendix A.1.

2.3 DISSIPATION TESTS

As per the client's request 23 dissipation tests were performed at the required depth.
A summary table of the dissipation tests is presented in *Appendix A1*.

The dissipation test is carried out by pausing the penetration at a point when there is excess porewater pressure. This excess pore pressure generated around the cone will then start to dissipate, and the decay of pore pressure with time is recorded. The rate of dissipation depends upon the coefficient of consolidation, which in turn depends on the compressibility and permeability of the soil and on the diameter of the probe. It is common to record the time to reach 50% dissipation, t_{50}. If the equilibrium pore pressure is required, the dissipation test is continued until no further dissipation is observed. This can occur rapidly in sands, but may take many hours in plastic clays. If t_{50} is not reached, due to soils' conditions, $t_{40,}$ t_{30} or t_{20} are calculated. The calculation procedures for dissipation tests are explained in Section 4.16 of this report.

The data recorded from the dissipation tests on site is used to calculate the consolidation characteristics, as shown in Dissipation Test Graphs, *Appendix B*.

3.0 CONE PENETRATION MEASURED PARAMETERS

All measured parameters of tests carried with the CPTU cone are shown in *Appendix B* and all the information about data processing and results are given in sections *3.1*, *3.2* and *3.3*.

3.1 DATA PROCESSING

The measured parameters, cone end resistance, q_c, sleeve friction, f_s, porewater pressure measurements with filter in shoulder position, u_2 and inclination for *x* and *y* axis, I_x, I_y, were recorded for every *10 mm* of penetration keeping a constant speed of *20 mm/s ± 5 mm/s*, which may slightly change when the cone is penetrating hard strata.

The measured data from the site works is processed and presented using specialised CPT software. The interpretations on the CPTU results were carried out following the recommendations of *ISO 22476-1:2022(E)*, *Lunne et al. (1997)* and *Robertson (2015)*. Measured parameters, mentioned in *Sections 3.2* and *3.3*, were used to derive all the geotechnical parameters, which are presented in *Chapter 4.0*. The soil behaviour type method used on this report is *Robertson et al. (1986)*, shown in *Figure 3.2*.

3.1.1 Zero Measurements

Before and after each CPTU test, zero measurements are recorded for each channel of the cone. The zero measurements are presented on the logs in *Appendix B*. This is a routine quality check carried out on site.

3.2 MEASURED PARAMETERS

3.2.1 Cone Resistance (q_c)

Cone resistance, q_c, is measured as the total force acting on the cone, divided by the projected area of the cone. The results are presented in *MPa*, on *CPT Log 01*, in *Appendix B*, scale *0-20 MPa* with a minor scale printing on the same graph at *0-4 MPa*.

3.2.2 Sleeve Friction (f_s)

Sleeve friction, f_s, is measured as the total frictional force acting on the friction sleeve divided by its surface area. The results are presented in *kPa*, on *CPT Log 01*, in *Appendix B*, using a scale of *0-500 kPa*.

3.2.3 Porewater pressure (u_2)

The pore pressure, u_2, is measured during the test. If the material is free draining and saturation is maintained it will normally measure hydrostatic pore pressure. In materials that are not free draining, it will record the total pore pressure (hydrostatic plus any excess pore pressures generated) created by the cone penetration through this material.

The filter element can be mounted in one of three positions. For all tests carried out in this project the filter was mounted in the u_2 position (see *Figure 3.1*).

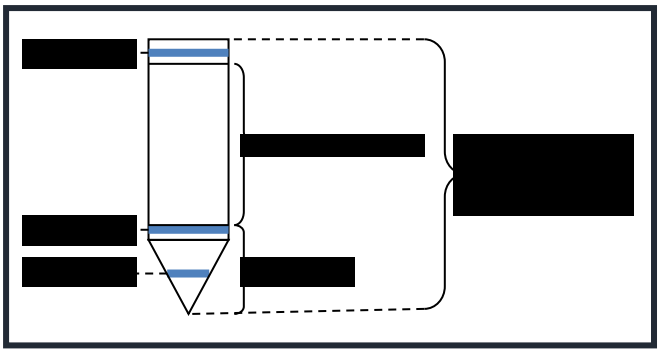

Figure 3.1: *Diagram showing pore pressure filter locations (after Lunne et al., 1997)*

3.2.4 Inclination (I_x, I_y)

The CPT rig was set up to obtain a thrust direction as near as possible to vertical. The CPTU cones have inclinometers incorporated to measure the non-verticality of the test. For test depths less than *15 m*, significant non-verticality is unusual, provided the initial thrust direction is vertical.

3.3 ESTIMATED SOIL BEHAVIOUR TYPE

3.3.1 Friction Ratio (R_f)

The friction ratio, R_f is the ratio between the sleeve friction and the cone resistance (Lunne *et al.,* 1997).

$$Fricton\ Ratio\ (R_f) = \left(\frac{Sleeve\ Friction\ (f_s)}{Cone\ Resistance\ (q_c)}\right) \times 100$$

3.3.2 Estimated Soil Behaviour Type (SBT)

The estimation of soil behaviour type, *SBT*, using measurements of cone resistance and sleeve friction is based upon the variations of the friction ratio and cone resistance. The friction

ratio varies depending upon whether the soil is cohesive or granular. The cone resistance varies depending on the strength and densities of the soil.

The interpretation used in this report is *Robertson et al. (1986)*, which is shown in Figure 3.2. The results are presented on *CPT Log 01*, in *Appendix B*.

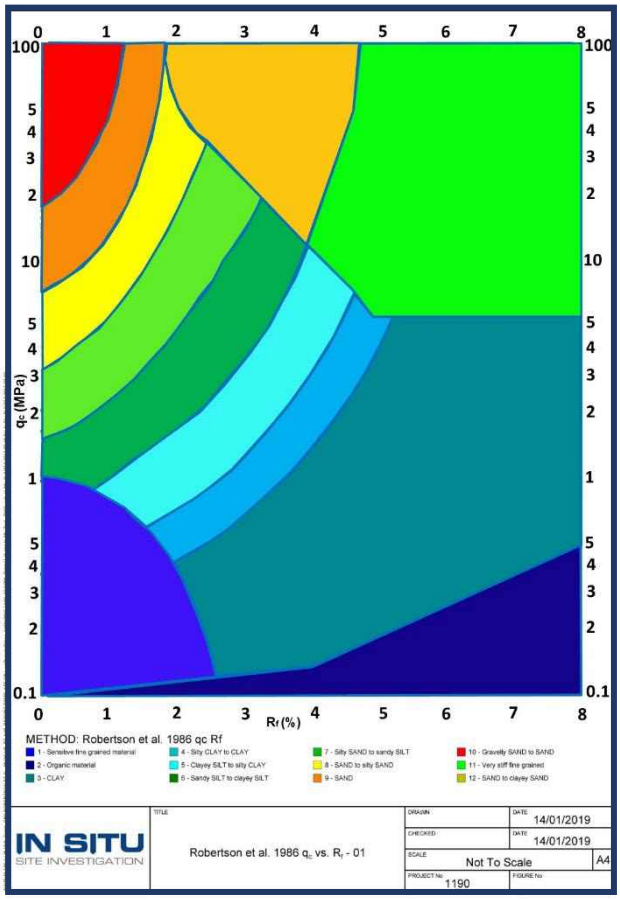

Figure 3.2: *Robertson et al., 1986 soil behaviour type chart.*

3.3.3 Pore Pressure Ratio (B_q)

Pore pressure ratio, B_q is the ratio between the measured pore pressure generated during penetration and the corrected cone resistance minus the total overburden stress.

Pore pressure ratio as defined by *Senneset and Janbu (1985)* is defined as:

$$B_q = \frac{u_2 - u_0}{q_t - \sigma_{vo}}$$

where

u_2	is pore pressure measured between the cone and the friction sleeve
u_0	is equilibrium pore pressure
σ_{vo}	is total overburden stress
q_t	is cone resistance corrected for unequal end area effects

3.4 APPLIED CORRECTIONS

3.4.1 Corrected Cone Resistance (q_t)

For each penetration test, the measured cone resistance, q_c, can be corrected for the ‘‘unequal area effect’’ due to the influence of the ambient pore water pressure acting on the cone.

The correction has been applied using the following equation by Lunne et *al.,* 1997:

$$q_t = q_c + [u_2.(1 - \alpha)]$$

where

α is the cone area ratio

The cone area ratio used for this project is stated on both the cone calibration certificate and the data footer. This value is geometrically measured.

3.4.2 Depth Correction

All tests in the report have been corrected for depth difference caused by inclination. This has been calculated using the method described in *ISO 22476-1:2022*.

To calculate the corrected depth the following formula is used:

$$z = \int_0^l C_{inc} \cdot dl$$

where

z is penetration depth, in *m*

l is penetration length, in *m*

C_{inc} is correction factor for the effect of the inclination of the CPTU relative to the vertical axis.

The equation for calculating the correction factor for the influence of the inclination for a bi-axial inclinometer is:

$$C_{inc} = \frac{1}{\sqrt{(1 + tan^2\beta_1 + tan^2\beta_2}}$$

where

β_1 is the angle between the vertical axis and the projection of the axis of the CPTU on a vertical plane, in degrees

β_2 is the angle between the vertical axis and the projection of the axis of the CPTU on a vertical plane that is perpendicular to the plane of angle β_1, in degrees

4.0 GEOTECHNICAL DERIVED PARAMETERS

A number of empirical correlations can be used to derive geotechnical parameters from CPTU data. This report includes only the parameters which are described in this chapter. The results of all correlations used to obtain the geotechnical derived parameters are presented on *CPT Log 02* and *CPT Log 03* in *Appendix B*.

Please, note that each empirical correlation is derived for a certain type of soil, and may not be appropriate for all the soil types encountered on this project.

4.1 SOIL BEHAVIOUR TYPE INDEX (I_c)

The soil behaviour type index, I_c, was derived by *Jefferies and Davies (1991)*, and was created to simplify the application of CPTU SBT chart shown in *Chapter 3*, *Figure 3.2*. This approach has been modified for use with the *Robertson (1990)* normalised CPT soil classification chart, *Figure 4.1*. The normalised cone parameters Q_t and F_r (for definitions see *Appendix A5* Symbol List) can be combined into one Soil Behaviour Type Index, I_c, *(Lunne et al., 1997)*.

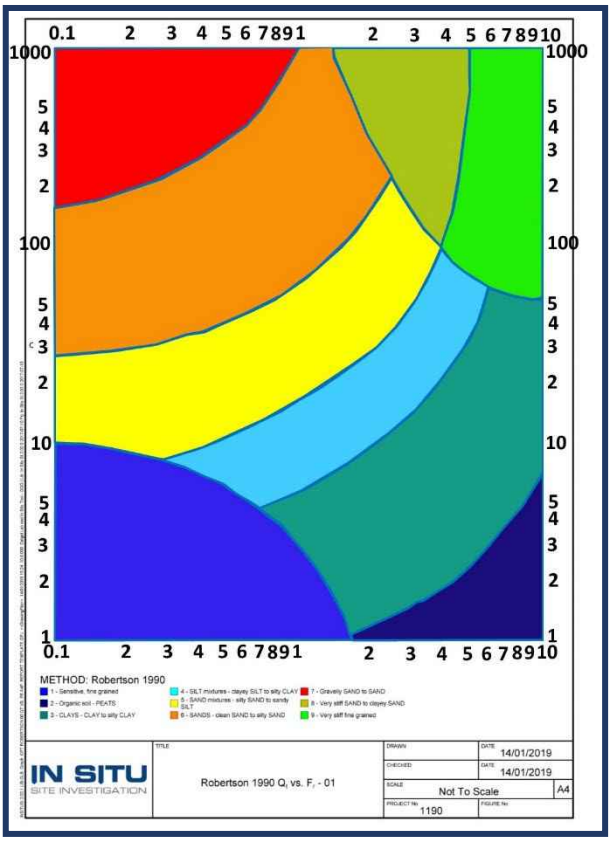

Figure 4.1: *Robertson 1990 soil behaviour type chart.*

The soil behaviour type index, I_c, can then be defined using *Robertson (2010)* formula, given below:

$$I_c = ((3.47 - logQ_t)^2 + (logF_r + 1.22)^2)^{0.5}$$

where

Q_t is the normalized cone resistance which represents the simple normalization with a stress exponent (n) of *1.0*, which applies well to clay-like soils

F_R is the normalized friction ratio, in *%*

The boundaries of soil behaviour type are then given in terms of the index, I_c, presented in *Table 4.1* below.

The soils behaviour type index does not apply to zones *1*, *8* and *9*. The profiles of I_c provide a simple guide to the continuous variation of soil behaviour type in a given soil profile based on CPTU results, with a reliability greater than *80%* compared with soil samples *(Robertson, 2015).*

Zone	Soil Behaviour Type	I_c
1	Sensitive fine grained	N/A
2	Organic Soils – clay	>3.6
3	Clays – silty clay to clay	2.95 – 3.6
4	Silt mixtures – clayey silt to silty clay	2.60 – 2.95
5	Sand mixtures – silty sand to sandy silt	2.05 – 2.6
6	Sands – clean sand to silty sand	1.31 – 2.05
7	Gravelly sand to dense sand	<1.31
8	Very stiff sand to clayey sand*	N/A
9	Very stiff fine grained *	N/A

** Heavily over consolidated or cemented*

Table 4.1: *Normalized CPTU Soil Behaviour Type (SBT_n) Index values, I_c.(Robertson, 2010)*

4.2 N VALUE OF STANDARD PENETRATION TEST (SPT) (N_{60})

The derived *N* value of *SPT,* N_{60}, is strongly and directly related to the cone resistance, q_c.

In this report the N_{60} value is derived using the following correlations, developed by *Robertson and Wride (1998)*, *Jefferies and Davies (1998)* and Robertson (2012):

1) *Robertson & Wride (1998)*

$$N_{60} = \frac{q_c}{8.5 \cdot p_a \left(1 - \frac{I_C}{4.6}\right)}$$

2) *Jefferies and Davies (1993)*

$$N_{60} = \frac{q_c}{0.85 \cdot \left(1 - \frac{I_C}{4.75}\right)}$$

3) *Robertson (2012)*

$$N_{60} = \frac{\frac{q_c}{p_a}}{10^{1.1268 - 0.2817 I_C}}$$

where

q_c	is the cone resistance
p_a	is the atmospheric pressure equal to *100 kPa*
I_c	is the soil behaviour type index calculated as given in *section 4.1*

It is suggested that these methods provide a better estimation of the N_{60} value than the actual measured *N*, due to the poor repeatability of SPT test. However, in fine grained soil with high sensitivity these methods may overestimate N_{60} *(Jefferies and Davies, 1991).* The third method suggested by *Robertson (2012)* provides improved estimates of N_{60} for insensitive clays.

4.3 RELATIVE DENSITY (D_r)

Relative density, D_r, is an intermediate parameter for coarse grained soils, widely used to describe sand deposits. All the research on deriving the relative density from CPTU tests results are carried out for ***clean predominantly quartz sands***. The studies have shown that CPTU resistance in granular soils is controlled by sand relative density, in situ effective stresses and compressibility. The more compressible sands tend to give lower penetration resistance for a given relative density then less compressible sands.

In this report relative density is calculated using the methods suggested by *Baldi et al., (1986)*, *Jamiolkowski et al., (2001)* and *Kulhawy and Mayne (1990)* as shown in the equations below:

1) Baldi et al., (1986)

$$D_r = \frac{1}{C_2} \cdot ln\left(\frac{q_c \cdot Wehr}{C_1 \cdot (\sigma'_{v0})^{0.55}}\right) \cdot 100$$

where

C_1 is a consolidation coefficient which is *157* for normally consolidated soils and *181* for over consolidated soils

C_2 is a consolidation coefficient which is *2.41* for normally consolidated soils and *2.46* for over consolidated soils

Wehr is a correction coefficient for calcareous soils

2) Jamiolkowski et al., (2001)

$$D_r = 100 \cdot \left[0.268 \cdot ln\left(\frac{q_t/\sigma_{atm}}{\sqrt{\sigma'_{v0}/\sigma_{atm}}}\right) + C_1\right]$$

where

C_1 is a compressibility coefficient which is *-0.675* for average compressible soils, ≤*1.0* for high compressible soils and carbonate or calcareous sands and ≥*-2.0* for low compressible soils

q_t is corrected cone resistance

σ_{atm} is the atmospheric pressure

3) Kulhawy and Mayne, (1990)

$$D_r = \left[\frac{q_{c1}}{305 \cdot C_1 \cdot OCR^{0.18} \cdot \left(1.2 + 0.05 \cdot log(t/100)\right)}\right]^{0.5} \cdot 100$$

where

q_{c1} is the cone resistance corrected for initial vertical effective stress and atmospheric pressure, calculated by the following formula

$$q_{c1} = \frac{q_c}{\sqrt{\sigma'_{v0} \cdot \sigma_{atm}}}$$

where

q_c is the cone resistance in *kPa*

σ'_{v0} is the initial vertical effective stress in *kPa*

C_1 is a compressibility coefficient which is *-0.91* for low compressible sands, *1.0* for medium compressible sands and *1.09* for high compressible sands

t is time in years

4.4 FRICTION ANGLE (φ')

Friction angle, *φ*', is used to express the shear strength of uncemented, coarse grained soils. In this report friction angle is derived by the correlations of *Mayne and Campanella (2005)*, *Robertson and Campanella (1983)* and *Kulhawy and Mayne (1990)*.

1) Mayne and Campanella, (2005)

$$\varphi' = 29.5^0 \cdot B_q^{0.121} \cdot \left[0.256 + 0.336 \cdot B_q + logQ_t\right]$$

where

B_q is the pore pressure ratio, calculated as in Session 3.3

Q_t is the normalized cone resistance

2) Robertson and Campanella, (1983)

$$\varphi' = \tan^{-1}\left(0.1 + 0.38 \cdot log\left(\frac{q_t}{\sigma'_{v0}}\right)\right)$$

where

q_c is the cone resistance in *kPa*

σ'_{v0} is the initial vertical effective stress in *kPa*

3) Kulhawy and Mayne, (1990)

$$\varphi' = 17.6^0 + 11.0^0 \cdot log(q_{t1})$$

where

q_{t1} is the corrected cone resistance corrected for initial vertical effective stress and atmospheric pressure, calculated by the following formula

$$q_{t1} = \frac{q_t}{\sqrt{\sigma'_{v0} \cdot \sigma_{atm}}}$$

The method suggested by *Mayne and Campanella (2005)* will not provide reliable results for heavily over consolidated soils, fissured geomaterials and highly cemented or structures clays. This approach gives reliable results when pore pressure is positive and varies $0.1 < B_q < 1.0$. The correlation suggested by *Robertson and Campanella (1983)* estimates the peak friction angle for uncemented, unaged, moderately compressible, predominately quartz sands. For sands of higher compressibility, the method will tend to predict low friction angles. The method suggested by *Kulhawy and Mayne (1990)* is an alternate relationship for clean, rounded, uncemented, quartz sands.

4.5 FINES CONTENT (*FC*)

The fines content, *FC*, in this report is estimated using two different methods, one from *Robertson and Wride (1998)* and the other, *Suzuki et al. (1998)* as presented below:

1) Robertson and Wride (1998)

$$I_C < 1.26: FC = 0$$
$$1.26 \leq I_C \leq 3.5: FC(\%) = 1.75I_C^{3.25} - 3.7$$
$$3.5 < I_C: \ FC = 100\%$$

2) Suzuki et al. (1998)

$$FC(\%) = 2.8I_C^{2.6}$$

where

I_c is the soil behaviour type index, calculated as in section 4.1

4.6 UNDRAINED SHEAR STRENGTH (s_u)

Estimation of undrained shear strength, s_u, from CPTU tests using corrected cone resistance is carried out using the following correlation from *Lunne et al. (1981)*:

$$S_u = \frac{(q_t - \sigma_{v0})}{N_{kt}}$$

where

N_{kt} is the empirical cone factor, which varies from *10* (*6* for very soft sensitive fine grained soils) to *20*. In this report 3 values are considered: *15*, *17.5* and *20*. N_{kt} tends to increase with increasing plasticity and decrease with increasing soil sensitivity. It decreases as B_q increases. (*Lunne et al., 1997*)
σ_{vo} = total overburden stress.

This report only presents the undrained shear strength data on soils with soil behaviour type index, I_c values greater than *2.60*.

The value of undrained shear strength, s_u to be used in analysis depends on the design problem. In general, the simple shear in the direction of loading often represents the average undrained strength. For larger, moderate to high risk projects, where high quality field and laboratory data may be available, site specific correlations should be developed based on appropriate and reliable values of s_u.

4.7 SENSITIVITY (S_t)

The sensitivity, S_t of clays is defined as the ratio of undisturbed peak undrained shear strength to totally remoulded undrained shear strength.

In this report S_t is calculated using two correlations developed by *Schmertmann (1978)* and *Mayne (2007)*.

1) Schmertmann (1978)

$$S_t = \frac{s_u}{s_{u(rem)}} = \frac{q_t - \sigma_v}{N_{kt}} \left(\frac{1}{f_s}\right)$$

where

$s_{u(rem)}$ is the remoulded undrained shear strength. It can be assumed equal to the sleeve resistance, f_s.

2) Mayne (2007)

$$S_t = \frac{0.073 \cdot (q_t - \sigma_{v0})}{f_s}$$

For relatively sensitive clays, $S_t > 10$, the value of f_s can be very low and not very accurate, hence the estimate of sensitivity should be used as a guide only.

4.8 SOIL UNIT WEIGHT (γ)

Soil unit weight, γ in this report is calculated by using one method for sands, considered under dry conditions and two methods for clays, considered under saturated conditions. These relationships are developed by *Mayne (2007)* and the equations are presented below:

Dry unit weight for sands:

$$\gamma_{dry} = 1.89 \cdot log(q_{t1}) + 11.82$$

Saturated unit weight for clays method 1

$$\gamma_{sat} = 8.32 \cdot log(V_S) - 1.61 \cdot log(z)$$

Saturated unit for clays method 2

$$\gamma_{sat} = 2.60 \cdot log(f_s) + 15 \cdot G_s - 26.5$$

where

q_{t1} is the corrected cone resistance corrected for initial vertical effective stress and atmospheric pressure, calculated by the following formula:

$$q_{t1} = \frac{q_t}{\sqrt{\sigma'_{v0} \cdot \sigma_{atm}}}$$

z is the depth

V_s is the shear wave velocity, calculated as $V_S = 118.8 \cdot log(f_s) + 18.5$
G_s is the specific gravity of solids, typically between *2.40* and *2.90*

4.9 STATE PARAMETER (ψ)

The state parameter, *ψ* is defined as the difference between the current void ratio, *e* and the void ratio at critical state e_{cs}, at the same mean effective stress for granular soils.
The problem of evaluating the state parameter from CPTU response is complex and depends on several soil parameters, including shear stiffness, shear strength, compressibility and plastic hardening. (*Jefferies and Been, 2006*)

In this report, the state parameter is calculated based on five methods as follows:

1) Been et al. (1987)

$$\psi = -\frac{ln\left(\frac{Q_p}{k}\right)}{m}$$

$$Q_p = \left(\frac{3Q_t}{1+2K_0}\right)$$

where
Q_t is the normalized cone resistance
K_0 is the coefficient of lateral earth pressure

2) Shuttle and Jefferies (1998)

$$\psi = -\frac{ln\left(\frac{Q_p}{k}\right)}{m}$$

where

$$k = \left((3.79 + 1.12ln(I_r))(1 + 1.06(M - 1.25))(1 - 0.30(N - 0.2))(H/1000)^{0.326}(-1.55(\lambda - 0.01))\right)^{1.45}$$

$$m = 1.45(1.04 + 0.46ln(I_r))(1 - 0.4(M - 1.25))(1 - 0.30(N - 0.2))(H/100)^{0.15}(1 - 2.21(\lambda - 0.01))$$

where
Q_t is the normalised cone resistance
I_r is rigidity index
K_0 is the coefficient of lateral earth pressure
M is critical state ratio
N is dilation parameter
H is plastic hardening modulus;
λ is slope *CSL* line

3) Shuttle and Jefferies (1998)

The state parameter calculated according this third method is similar to state parameter calculated as presented in the second method, except for the rigidity index that is calculated as follows:

$$I_r = I_{r100}\left(\frac{P_a}{\sigma'_{v0}}\right)^{0.5}$$

where

I_{r100} is rigidity index in reference pressure
P_a is the reference pressure equal to 100 kPa
σ'_{v0} is effective vertical overburden stress

4) Plewes (1992)

$$\psi = -\frac{ln\left(\frac{Q_p/(1-B_q)}{k'}\right)}{m'}$$

where

$$k' = M\left(3 + \frac{0.85}{\lambda}\right)$$
$$m' = 11.9 - 13.3\lambda$$
$$\lambda = \frac{F_r}{10}$$

where

Q_t is the normalised cone resistance
B_q is pore pressure ratio
K_0 is the coefficient of lateral earth pressure
F_R is normalised friction ratio
M is critical state ration

5) Been and Jefferies (1992)

$$\psi = -\frac{ln\left(\frac{Q_p/(1-B_q)}{k'}\right)}{m'}$$

where

$$k' = M\left(3 + \frac{0.85}{\lambda}\right)$$
$$m' = 11.9 - 13.3\lambda$$
$$\lambda = \frac{1}{34 - 10I_C}$$

For high-risk projects a detailed interpretation of CPTU results using laboratory results and numerical modelling can be appropriate (e.g. *Shuttle* and *Cunning*, *2007*), although soil

variability can complicate the interpretation procedure. For low risk projects and in the initial screening for high-risk projects there is a need for a simple estimate of soil state.

Plewes et al (1991) provided a mean to estimate soil state using the normalised soil behaviour type, *SBTn* chart suggested by *Jefferies and Davies (1991)*. *Jefferies and Been (2006)* suggested that soils with a state parameter less than *-0.05* are dilative at large strains.

4.10 IN SITU STRESS RATIO (K_0)

There are various estimations to determine in situ stress ratio, K_0, from CPTU in fine grained soils. In this report the methods suggested by *Mayne (2007)* and *Kulhawy and Mayne (1990)* are used, as given below:

1) Mayne (2007)

$$K_0 = (1 - sin\varphi')OCR^{sin\varphi'}$$

$$Max\ K_0 = K_p = \frac{(1 + sin\varphi')}{(1 - sin\varphi')}$$

$$K_0 = 0.192\left(\frac{q_t}{\sigma_{atm}}\right)^{0.22}\left(\frac{\sigma_{atm}}{\sigma_{v0}}\right)^{0.22}OCR^{0.27}$$

where

OCR is the overconsolidation ratio, calculated as presented in session *4.12*

2) Kulhawy and Mayne (1990)

$$K_0 = 0.1\left(\frac{q_t - \sigma_{v0}}{\sigma_{v0}'}\right)$$

These approaches are generally limited to mechanically overconsolidated, fine grained soils. As considerable scatter exits in the database used for these correlations, in moderate to high risk projects further tests should be performed and these correlations must be considered only as a guide.

4.11 OVERCONSOLIDATION RATIO (OCR)

Overconsolidation ratio, *OCR* is defined as the ratio of the maximum past effective consolidation stress and the present effective overburden stress:

$$OCR = \frac{\sigma'_p}{\sigma'_{v0}}$$

This definition is appropriate for mechanically overconsolidated soils, where the only change has been the removal of overburden stress. For cemented and aged soils, the *OCR* may represent the ratio of the yield stress and the present effective overburden stress.

In this report σ'_p is calculated based on six methods as presented below:

1) Mayne (1995)

$$\sigma'_p = 0.33(q_t - \sigma_{v0})$$

2) Chen and Mayne (1996)

$$\sigma'_p = 0.53\Delta u$$

3) Mayne (2005)

$$\sigma'_p = 0.6(q_t - u_2)$$

4) Robertson (2009)

$$\sigma'_p = 0.25(Q_t^{1.25} - \sigma'_{v0})$$

5) Mayne (2005)

$$\sigma'_p = \left[\frac{0.192\left(\frac{q_t}{\sigma_{atm}}\right)^{0.125}}{(1 - sin\varphi')\left(\frac{\sigma'_{v0}}{\sigma_{atm}}\right)^{0.31}}\right]^{\left(\frac{1}{sin\varphi' - 0.27}\right)} \sigma'_{v0}$$

6) Mayne (2007)

$$\sigma'_p = 0.101\sigma_{atm}^{0.102}(G_0)^{0.478}\sigma'^{0.420}_{v0}$$

For larger, moderate to high risk projects, where additional high-quality field and laboratory data may be available, site specific correlations should be developed based in consistent and relevant values of *OCR*.

4.12 SMALL STRAIN YOUNG'S MODULUS (E_0)

Deriving small strain undrained Young's modulus, E_0, from CPTU is difficult. There is insufficient data available to make a direct correlation and it is recommended that c_u should be derived, then E_U estimated as a rough order of value from one of the available correlations between E_U and c_u (*Meigh, 1987*).

In this report the small strain Young's modulus is derived as follows:

1) Defined from elastic theory:

$$E_0 = 2(1+\nu)G_0$$

where

v is the Poisson ratio, equal to *0.2*

G_0 is the small strain shear modulus calculated by the formula given below:

$$G_0 = 1634\left(\frac{q_c}{\sqrt{\sigma'_{v0}}}\right)^{-0.75} q_c$$

2) Calculated based on the degree of loading, q_c, effective stress and reduction factor

$$E_0 = \alpha q_c$$

where

α is calculated from degree of loading, q_c, effective stress and reduction factor, given in *Figure 4.2*

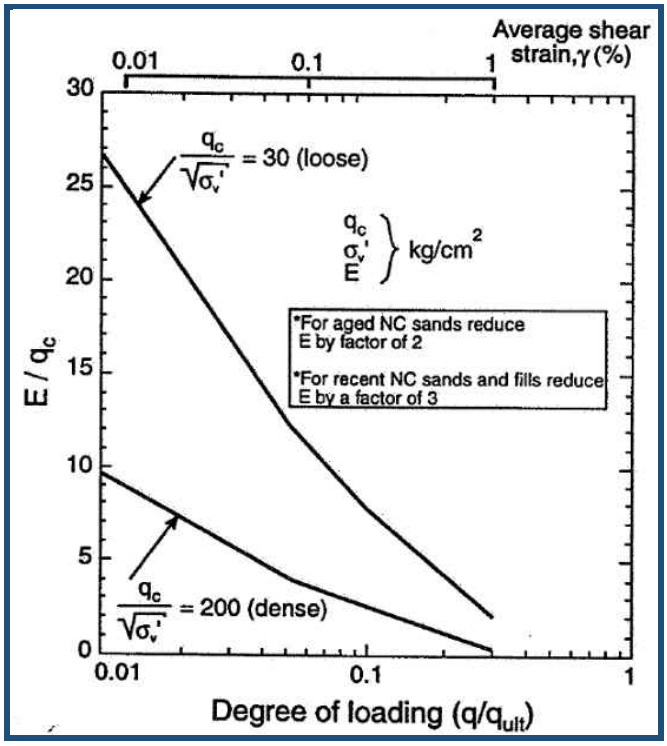

Figure 4.2: *Estimation of equivalent Young's modulus for sand based on degree of loading (Robertson, 1990)*

4.13 CONSTRAINED MODULUS (M)

Constrained Modulus, *M*, can be estimated by CPTU using the following empirical relationship:

$$M = \alpha_M(q_t - \sigma_{v0})$$

where

α_M varies with soil plasticity and natural water content for a wide range of fine-grained soils and organic soils. *Meigh (1987)* suggested that α_M lies in the range of *2 to 8*, whereas *Mayne (2001)* suggested the value of *5*.

Robertson (2001) suggested that α_M varies with Q_t, such that:

When $I_c > 2.2$ (fine grained soils) use: $\alpha_M = Q_t$ when $Q_t < 14$

$\alpha_M = 14$ when $Q_t > 14$

When $I_c < 2.2$ (coarse grained soils) use: $\alpha_M = 0.0188[10^{(0.55I_c+1.68)}]$

In this report the Constrained Modulus, *M*, is calculated after *Kulhawy and Mayne (1990)* using the equation below:

$$M = 8.25(q_t - \sigma_{v0})$$

Also, an alternative method is included in the results, developed by *Burns and Mayne (2002)* using the following relationship:

$$M = 0.02G_0$$

4.13.1 Equivalent Oedometer Coefficient of Compressibility (mv)

Equivalent oedometer coefficient of compressibility, m_v can be calculated directly by the Constrained Modulus, *M*, as follows:

$$m_v = \frac{1}{M}$$

4.14 SMALL STRAIN SHEAR MODULUS (G_0)

In this report the small strain shear modulus, G_0, is calculated from the measured V_s on site as explained in *Section 2.4* (or Elastic Theory) and also derived using the correlation developed by *Rix and Stoke (1992)*.

1) Rix and Stoke (1992)

$$G_0 = 1634\left(\frac{q_c}{\sqrt{\sigma'_{v0}}}\right)^{-0.75} q_c$$

where

q_c is the net cone tip resistance in kPa
σ'_{v0} is the effective initial vertical stress in kPa
γ_{bulk} is the bulk density of the soil
v_s is the shear wave velocity

This correlation of G_0 is applicable to all soil types.

4.15 RIGIDITY INDEX (I_R)

The rigidity index, I_R, for fine grained soils is defined using the following formula, developed by *Mayne (2001)*:

$$I_R = \exp\left[\left(\frac{1.5}{M} + 2.925\right)\left(\frac{q_t - \sigma_{v0}}{q_t - u_2}\right) - 2.925\right.$$

where

M is the Cam-Clay constant, slope of the critical state line defined as:

$$M = \frac{6sin\varphi'}{3 - sin\varphi'}$$

where

φ' is the internal friction angle.

The second method used to define the rigidity index, I_R, for fine grained soils is based on plasticity index and overconsolidation ratio, *OCR* and calculated after the relationship developed by *Keaveny and Mitchell (1986)* as follows:

$$I_R = \frac{\exp\left(0.0435(137 - PI)\right.}{[1 + \ln\{1 + 0.385(OCR - 1)^{3.2}\}]^{0.8}}$$

where

PI is the plasticity index of the soil, equal to 20.
OCR is the overconsolidation ratio of the soil

A third method to estimate the Rigidity Index is by using the Small Shear Strain Modulus, G_0 from seismic tests and the Undrained Shear Strength, s_u derived from *Lunne et al. (1997)* as explained in *Section 4.6* for cone factor N_k = *15*, using the correlation below:

$$I_R = \frac{G_0}{s_u}$$

4.16 CONSOLIDATION CHARACTERISTICS (ch and cv)

All results for consolidation characteristics calculated from dissipation tests measurements using the formulas below are presented in *Dissipation Graphs in Appendix B*.

The coefficient of consolidation is interlinked with the hydraulic conductivity through the formula below:

$$c = \frac{kM}{\gamma_w}$$

where

M	is the 1-D constrained modulus relevant to the problem (i.e. unloading, reloading, virgin loading, etc)
γ_w	is the unit weight of water
k	is the hydraulic conductivity

In geotechnical practice it is very difficult to measure *coefficient of consolidation* and *permeability of soils*. Due to soil anisotropy *c* and *k* have different values in the horizontal, c_h and k_h and vertical c_v and k_v directions. The relevant design values depend on drainage and loading direction.

The coefficient of consolidation can be estimated from dissipations data and should be interpreted at *50%* degree of dissipation, using the following formula below:

$$c = (\frac{T_{50}}{t_{50}})r_0^2$$

where

T_{50}	is theoretical time factor
t_{50}	is measured time for *50%* degree of dissipation
r_0	is penetrometer radius

In soils of very low permeability the time for dissipation can be decreased by using smaller diameter probes. A theoretical solution for these cases is given by *Teh and Houlsby (1991)* and it is compared with data from around the world by *Robertson et al. (1992)*, as shown in *Figure 4.3*.

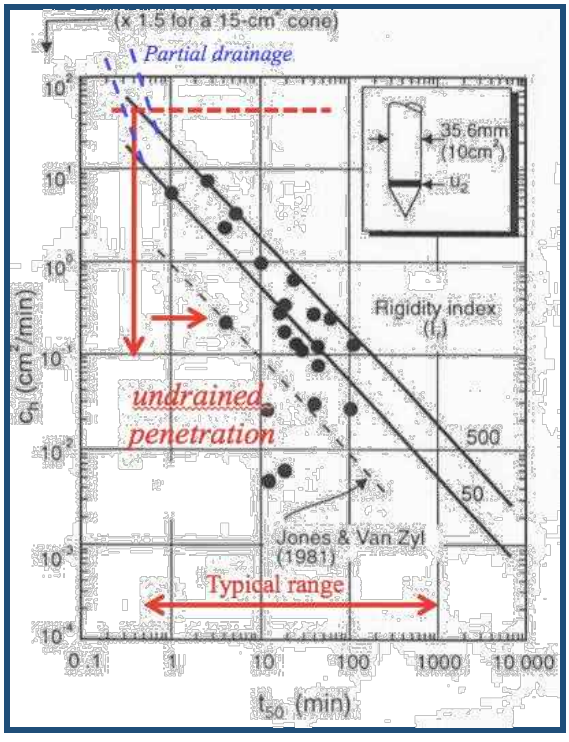

Figure 4.3: *Average laboratory c_h values and CPTU results (after Robertson et al. 1992, Teh and Houlsby theory shown as solid lines for I_R = 50 and I_R = 500).*

c_h estimation is controlled by soil stress history, sensitivity, anisotropy, rigidity index (relative stiffness), fabric and history. In overconsolidated soils, the pore pressure behind the cone tip can be low or negative, results in dissipation data that can initially rise before decreasing to the equilibrium values. Care is required to ensure the dissipation test to end at the right moment of time, not stopped prematurely after the initial rise.

An approximate estimate of the coefficient of consolidation in the vertical direction can be obtained using the ratios of permeability in the horizontal and vertical directions as follows:

$$c_v = c_h(\frac{k_v}{k_h})$$

Jamiolkowski et al. (1985) presented the range of field values (Table 4.4), which can be used to estimate k_v from k_h.

Based on the table below, the nature of clay for this site is considered no macrofabric, or only slightly developed macrofabric, essentially homogenous deposits, so the ratio use is k_h/k_v equal to 1.25 and the ratio c_h/c_v used for calculation purposes in this report is equal to 1.25.

Nature of clay	k_h/k_v
No macrofabric, or only slightly developed macrofabric, essentially homogeneous deposits	1 to 1.5
From fairly well to well-developed macrofabric, e.g. sedimentary clays with discontinuous lenses and layers of more permeable material	2 to 4
Varved clays and other deposits containing embedded and more or less continuous permeable layers	3 to 15

Table 4.4: *Range of field values of k_h/k_v for soft clays (from Jamiolkowski et al., 1985).*

Estimation of soil permeability from CPTU and dissipation data is subject to much uncertainty and should be used as a guide only.

4.17 HYDRAULIC CONDUCTIVITY (k)

Hydraulic conductivity or coefficient of permeability, *k*, based on Soil Behaviour Typre Index, I_c, can be estimated from the following relationships:

When $1.0 < I_c \leq 3.27$ $\quad k = 10^{(0.952-3.04I_c)}$

When $3.27 < I_c \leq 4.0$ $\quad k = 10^{(-4.52-1.37I_c)}$

However, in this report the hydraulic conductivity is estimated from 2 soil behaviour classification charts, *Robertson et al. (1986)* and *Robertson et al. (1990) presented in Table 4.3 and 4.4, respectively*.

SBT Zone	Soil Behaviour Type (SBT)	Range of hydraulic conductivity, *k (m/s)*
1	Sensitive fine grained	$3x10^{-9}$ to $3x10^{-8}$
2	Organic soils	$1x10^{-8}$ to $1x10^{-6}$
3	Clay	$1x10^{-10}$ to $1x10^{-9}$
4	Silty CLAY to CLAY	$3x10^{-9}$ to $1x10^{-8}$
5	Clayey SILT to silty CLAY	$1x10^{-8}$ to $1x10^{-7}$
6	Sandy SILT to clayey SILT	$1x10^{-7}$ to $1x10^{-6}$
7	Silty SAND to sandy SILT	$1x10^{-5}$ to $1x10^{-6}$
8	SAND to silty SAND	$1x10^{-5}$ to $1x10^{-4}$
9	SAND	$1x10^{-4}$ to $1x10^{-3}$
10	Gravelly SAND to SAND	$1x10^{-3}$ to 1
11	Very stiff fine grained	$1x10^{-8}$ to $1x10^{-6}$
12	SAND to clayey SAND	$3x10^{-7}$ to $3x10^{-4}$

Table 4.3: *Estimated soil permeability (k) based on SBT chart by Robertson et al. (1986)*

SBT Zone	Soil Behaviour Type (SBT)	Range of hydraulic conductivity, *k (m/s)*
1	Sensitive fine grained	$3x10^{-9}$ to $3x10^{-8}$
2	Organic soils	$1x10^{-8}$ to $1x10^{-6}$
3	Clay	$1x10^{-10}$ to $1x10^{-9}$
4	Silt Mixture	$3x10^{-9}$ to $1x10^{-7}$
5	Sand Mixture	$1x10^{-7}$ to $1x10^{-5}$
6	Sand	$1x10^{-5}$ to $1x10^{-3}$
7	Gravelly sands to dense sands	$1x10^{-3}$ to 1
8	Very stiff sand to clayey sand	$1x10^{-8}$ to $1x10^{-6}$
9	Very stiff fine grained	$1x10^{-8}$ to $1x10^{-6}$

Table 4.4: *Estimated soils' permeability (k) based on SBT chart by Robertson et al. (1990).*

4.18 DERIVED SHEAR WAVE VELOCITY (V_S)

For the purpose of this project the Shear Wave Velocity is measured as explained in Section 2.4. However, by using various correlations from the literature it is possible to also derive the Shear Wave Velocity, V_s. In this report the derived V_s results generated using Mayne (2006), Hegazy and Mayne (1995), Mayne and Rix (1995) and Baldi et al. (1989) correlations.

1) Mayne (2006)

$$V_s = 118.8 log f_s + 18.5$$

where

f_s is the measured sleeve friction *in kPa*

2) Hegazy and Mayne (1995)

$$V_s = (10.1 log q_t - 11.4)^{1.67} (\frac{f_s}{q_t} \cdot 100)^{0.3}$$

where

q_t, f_s are corrected cone resistance and measured sleeve friction, respectively *in kPa*

3) Mayne and Rix (1995)

$$V_s = 1.75 (q_t)^{0.627}$$

where

q_t is the corrected cone resistance *in kPa*

4) Baldi et al. (1989)

$$V_s = 277 (q_t)^{0.13} (\sigma'_{v0})^{0.13}$$

where

q_t, σ'_{v0} are corrected cone resistance and effective vertical stress, respectively *in kPa*

5.0 CPTU RESULTS APPLICATIONS

5.1 SOIL PROFILING AND APPLICATIONS IN GEOTECHNICAL DESIGN

5.1.1 Soil Behaviour Type

The major applications of CPTU are on *soil behaviour type and soil profiling*. Typically, the cone resistance, q_c is high in sands and low in clays, and the friction ratio, $R_f = f_s/q_t$ is low in sands and high in clays. The CPTU cannot be expected to provide accurate predictions of soil type based on *physical characteristics,* e.g. *grain size distribution*, but provides a guide to the *mechanical characteristics*, including: *strength*, *stiffness*, and *compressibility* of the soils, or the *soil behaviour type*, *SBT*.

The most commonly used CPTU soil behaviour type chart, suggested by *Robertson et al. (1986)* uses the basic CPTU measured parameters of cone resistance, q_c and friction ratio, R_f. The chart is global in nature and can provide reasonable predictions of soil behaviour type for CPTU testing. The expected overlap in some zones is modified in the interpretations of this report somewhat based on previous experience or local knowledge of the site.

Since both the penetration resistance and sleeve resistance increase with depth due to the increase in effective overburden stress, the CPTU data requires normalization for overburden stress for very shallow and/or very deep tests. A popular CPTU soil behaviour chart based on normalized CPTU data is firstly proposed by *Robertson (1990)*. The chart identifies general trends in ground response, such as: *increasing soil density*, *OCR*, *age* and *cementation* for granular soils, and *increasing stress history*, *OCR* and *soil sensitivity* for cohesive soils.

A more general normalized CPTU *SBT* chart, using large strain *soil behaviour* descriptions, proposed by *Robertson (2012)* is shown in *Figure 5.1*.

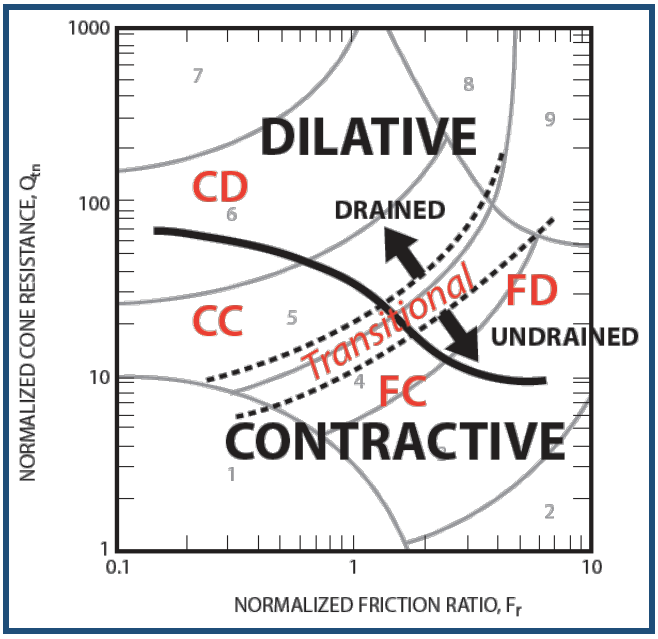

Figure 5.1: Normalized CPTU Soil Behaviour Type (SBT_n) chart, Q_{tn}-F_R using general large strain soil behaviour description (Robertson, 2012).

*

CD	is coarse grained dilative soil-predominately drained CPTU
CC	is coarse grained contractive soil-predominately drained CPTU
FD	is fine grained dilative soil-predominately undrained CPTU
FC	is fine grained contractive soil-predominately undrained CPTU

5.1.2 Soil Profiling

CPTU is an excellent test for soil profiling. The continuous monitoring of pore pressure during the cone penetration improves the soil stratigraphy descriptions. The pore pressure develops in response to the soil type being penetrated in the area where the pore pressure element is located. Soft, firm or stiff clays and contractive silts can show very high pore pressure. Very stiff overconsolidated clays and dilative silts can give very low or negative pore pressures same as very dense silty sands.

The thin layers of sand, or silt in a thick layer of clay, or thin layers of clay or silt in a thick layer of sand are easily distinguished during a CPTU test, which will give a response time sufficiently fast to observe pore pressure changes even in the very thin layers of soils (< *5mm*), depending on the response of soil to the advancing of cone.

The sandy soils tend to produce high cone resistance and low friction ratio, whereas soft clayey soils tend to produce low cone resistance and high friction ratio. Organic soils such as peat tend to have very low cone resistance and very high friction ratio. Soils with high horizontal stresses (*high OCR*) tend to have higher cone resistance and friction ratio.

CPTU is an excellent tool to classify the soils based on their behaviour type, and not based on grain size distribution.

The measurement of sleeve friction, f_s is often less reliable than the measurement of cone resistance, q_c (*Lunne et al., 1986*), but to overpass these problems pore pressure parameter ratio, B_q, and the classification charts based on it.

For more reliability in soil profiling, the soil interpretations in this report are carried out based on three parameters measured on site, cone resistance, sleeve friction and pore pressure and three derived geotechnical parameters soil behaviour type index for all soils, undrained shear strength for cohesive soils and relative density for granular soils.

Generally, soils that fall in zones *8*, *9* and *10* of *Robertson et al. (1986)* chart (*6* and *7* of *Robertson (1990)* chart) represent approximately drained penetration, whereas, soils in zones 1, 2, 3, 4, 5 and 6 of *Robertson et al. (1986)* chart (1, 2, 3 and 4 of *Robertson (1990)* chart) represent approximately undrained penetration. Soils in zones 7, 11 and 12 of *Robertson et al. (1986)* (5, 8 and 9 of *Robertson (1990)* chart) may represent partially drained penetration. The classification is often influenced by changes in *stress history*, *in situ stresses*, *sensitivity*, *stiffness*, *mineralogy*, etc. An advantage of pore pressure measurements during cone penetration is the ability to evaluate drainage conditions more directly. (*Lunne et al., 1997*)

The information about the rate and manner of excess pore pressures during the dissipations significantly helps the accurate classification in the corresponding depths of dissipation tests. In very stiff, overconsolidated clayey soils, the pore pressure behind the cone is very low and sometimes negative of the equilibrium pore pressure, u_0, whereas the pore pressure on the face of the cone is very large due to the large increase in normal stresses created by the cone penetration. When penetration is stopped in overconsolidated clays, pore pressure recorded behind the cone may initially increase before decreasing to the equilibrium pore pressure. The rise is caused by local equalization of the high pore pressure gradient around the cone.

Cone penetration in fine grained soils, such as clays and silts, is generally undrained. Cone penetration tests under undrained conditions generate high pore pressure and this reading is extremely useful, because it affects both cone resistance and sleeve friction measurements. These parameters should be corrected using the measured pore pressure.

CPTU in coarse gained soils, such as sandy or gravelly soils is generally drained. In these conditions there is no excess pore pressure generated as a result of cone penetration. Relative density has been used as the main parameter for description of sandy deposits.

5.1.3 Applications in geotechnical design

CPTU measured parameters are used to derive geotechnical parameters, which are the input in several geotechnical analyses. An alternate approach is to directly apply CPTU results to the geotechnical calculations.

As a guide, *Table 5.1* shows a summary of the applicability of CPTU results for direct design applications. The ratings shown in the table have been assigned based on current experience and represent a qualitative evaluation of the confidence level assessed to each design problem and general soil type. Details of ground conditions and project requirements can influence these ratings.

Type of soil	Pile Design	Bearing Capacity	Settlement	Compaction Control	Liquefaction
Sand	A-B	A-B	B-C	A-B	A-B
Clay	A-B	A-B	B-C	C-D	A-B
Intermediate Soils	A-B	B-C	B-C	B-C	A-B

Table 5.1: *Perceived applicability of CPTU for various direct design problems.*

A is high
B is high to moderate
C is moderate
D is moderate to low

6.0 MAGNETOMETER TESTS MEASUREMENTS

All measured parameters of MAG tests carried with the combined CPTU and MAG cone are shown in *Appendix B*.

6.1 DATA PROCESSING

The measured parameters, Magnetic Field X (nT), Magnetic Field Y (nT) and Magnetic Field Z (nT) were recorded for every *10 mm* of penetration.

The measured magnetometer data from the site works is processed and presented using specialised CPT software. During processing the three measured components are combined to give the total magnetic field strength.

6.1.1 Zero Measurements and Data quality

Before and after each MAG test, zero measurements are recorded for each magnetic channel of the cone. The zero measurements are presented on the logs in *Appendix B*. This is a routine quality check carried out on site.

The quality of the data was typically good. The summary of MAG tests is presented in *Appendix A.1*

6.2 MEASURED AND DERIVED PARAMETERS

6.2.1 Magnetic Field X, Magnetic Field Y and Magnetic Field Z

The measured parameters, Magnetic Field X, Magnetic Field Y and Magnetic Field Z are measured on site. The results are presented in *nT*, on *MAG Log*, in *Appendix B*, scale *-100000 to 100000 nT*.

6.2.2 Total Magnetic Field

Total Magnetic Field is calculated based on each measured Magnetic Field, using the formula below:

$$Magnetic\ Field\ Total = \sqrt{MAGX^2 + MAGY^2 + MAGZ^2}$$

where

MAGX	is the Magnetic Field measured in X direction
MAGY	is the Magnetic Field measured in Y direction
MAGZ	is the Magnetic Field measured in Z direction

The results are presented in *nT*, on *MAG Log*, in *Appendix B*, using a scale of *0-100000 nT*.

6.2.3 Magnetic Field Gradient

Magnetic Field Gradient is calculated as the difference between two consecutive values of Total Magnetic Field.

The results are presented in *nT/cm*, on *MAG Log*, in *Appendix B*, using a scale of *-500 to 500 nT/cm*.

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APPENDIX A

APPENDIX A1 – Project Summary Sheet

Piezocone Tests Summary Sheet

HOLE ID	Final Depth (m)	Date of Test	Cone Used	Test Remarks
R22-CPT101	9.44	18/10/2023	S15-CFIP.2145	Test refused on total pressure.
R22-CPT102	9.15	18/10/2023	S15-CFIP.2145	Test refused on total pressure.
R22-CPT103	7.18	16/10/2023	S15-CFIP.2145	Test refused on total pressure.
R22-CPT104	9.99	23/10/2023	S15-CFIP.2145	Test completed at target depth.
R22-CPT105	10.01	19/10/2023	S15-CFIP.2145	Test completed at target depth.
R22-CPT106	7.11	19/10/2023	S15-CFIP.2145	Test refused on total pressure.
R22-CPT107	10.00	17/10/2023	S15-CFIP.2145	Test completed at target depth.
R22-CPT108	6.14	17/10/2023	S15-CFIP.2145	Test refused on total pressure.
R22-CPT109	10.05	23/10/2023	S15-CFIP.2145	Test completed at target depth.
R22-CPT110	8.91	18/10/2023	S15-CFIP.2145	Test completed at target depth.
R22-CPT111	7.86	20/10/2023	S15-CFIP.2145	Test refused on total pressure.

Dissipation Tests Summary Sheet

HOLE ID	Final Depth (m)	Date of Test	Cone Used	Test Remarks
R22-CPT101	2.54	18/10/2023	S15-CFIP.2145	T30 reached. Test OK.
R22-CPT101	7.28	18/10/2023	S15-CFIP.2145	T50 reached. Test OK.
R22-CPT102	1.90	18/10/2023	S15-CFIP.2145	T50 reached. Test OK.
R22-CPT102	6.30	18/10/2023	S15-CFIP.2145	T50 reached. Test OK.
R22-CPT103	2.85	16/10/2023	S15-CFIP.2145	T50 reached. Test OK.
R22-CPT103	6.05	16/10/2023	S15-CFIP.2145	T50 reached. Quick dissipation t50=9.9s. Test OK.
R22-CPT104	3.92	23/10/2023	S15-CFIP.2145	T50 reached. Quick dissipation t50=5s. Test OK.
R22-CPT104	5.54	23/10/2023	S15-CFIP.2145	T50 reached. Quick dissipation t50=15.2s. Test OK.
R22-CPT105	2.96	19/10/2023	S15-CFIP.2145	T30 reached. Test OK.
R22-CPT105	8.97	19/10/2023	S15-CFIP.2145	T50 reached. Test OK.
R22-CPT106	2.48	19/10/2023	S15-CFIP.2145	T40 reached. Test OK.

R22-CPT106	6.56	19/10/2023	S15-CFIP.2145	T50 reached. Quick dissipation t50=23.3s. Test OK.
R22-CPT106	7.10	19/10/2023	S15-CFIP.2145	T50 reached. Quick dissipation t50=42.8s. Test OK.
R22-CPT107	4.39	17/10/2023	S15-CFIP.2145	T50 not reached.
R22-CPT107	6.63	17/10/2023	S15-CFIP.2145	T50 reached. Quick dissipation t50=30.9s. Test OK.
R22-CPT108	2.94	17/10/2023	S15-CFIP.2145	T50 reached. Test OK.
R22-CPT108	5.29	17/10/2023	S15-CFIP.2145	T50 not reached.
R22-CPT109	3.40	23/10/2023	S15-CFIP.2145	T50 reached. Test OK.
R22-CPT109	9.61	23/10/2023	S15-CFIP.2145	T50 reached. Test OK.
R22-CPT110	4.30	18/10/2023	S15-CFIP.2145	T50 reached. Test OK.
R22-CPT110	6.22	18/10/2023	S15-CFIP.2145	T50 reached. Quick dissipation t50=29.3s. Test OK.
R22-CPT111	2.32	20/10/2023	S15-CFIP.2145	T50 reached. Test OK.
R22-CPT111	6.10	20/10/2023	S15-CFIP.2145	T50 reached. Test OK.

Piezocone Test Coordinates

HOLE ID	Eastings	Northings	Elevation
R22-CPT101	632079.61	163053.44	1.39
R22-CPT102	632217.23	163168.68	1.58
R22-CPT103	632174.62	162901.76	1.27
R22-CPT104	632506.22	162966.37	1.34
R22-CPT105	632524.10	163162.57	1.42
R22-CPT106	632312.36	163008.87	1.49
R22-CPT107	632215.16	163030.10	1.43
R22-CPT108	632221.31	162850.69	1.30
R22-CPT109	632517.27	163071.81	1.44
R22-CPT110	632371.43	163132.83	1.44
R22-CPT111	632590.80	163107.84	1.39

MAG Tests Summary Sheet

HOLE ID	Final Depth (m)	Date of Test	MAG Status	Test Remarks
R22-CPT101	9.44	18/10/2023	Clear 1.4m onwards	Test refused on total pressure.
R22-CPT102	9.15	18/10/2023	Clear 1.0m onwards	Test refused on total pressure.
R22-CPT103	7.18	16/10/2023	Clear 2.4m onwards	Test refused on total pressure.
R22-CPT104	9.99	23/10/2023	Clear 2.4m onwards	Test completed at target depth.
R22-CPT105	10.01	19/10/2023	Clear 1.0m onwards	Test completed at target depth.
R22-CPT106	7.11	19/10/2023	Clear 1.4m onwards	Test refused on total pressure.
R22-CPT107	10.00	17/10/2023	Clear 1.0m onwards	Test completed at target depth.
R22-CPT108	6.14	17/10/2023	Clear 1.2m onwards	Test refused on total pressure.
R22-CPT109	10.05	23/10/2023	Clear 2.4m onwards	Test completed at target depth.
R22-CPT110	8.91	18/10/2023	Clear 1.2m onwards	Test completed at target depth.
R22-CPT111	7.86	20/10/2023	Clear 2.2m onwards	Test refused on total pressure.

KEY for MAG Status	
Clear	Clear of UXO.
Clear 1.0m onwards	Disturbance of magnetic field to depth shown due to artificial ground but otherwise clear.
Obstruction	Buried obstruction or refused test due to geology. Change location, then re-test.
Low risk 2.3m	Low risk anomaly at depth shown. Unlikely to be UXB, and clear below.
Suspected existing pile	Disturbance of magnetic field at depth of 0-7.0m, clear below.
Anomaly x metres	Significant magnetic anomaly at depth shown.

APPENDIX A2 – CPT Rig Datasheet

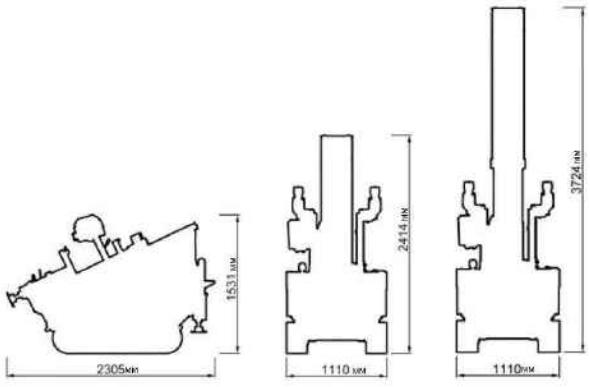
RIGS

1.5 TONNE TRACK MOUNTED RIG (CPT 020)

This 1.5 tonne mini CPT track mounted rig is a fully hydraulic machine which runs on a petrol engine. The compact size and lightweight nature of the rig make it extremely manoeuvrable and able to access sites of a restricted nature. The rig is equipped with an automatic self-anchoring system, which quickly anchors the rig to the ground using 100 mm diameter continuous spiral screw anchors or larger diameter single spiral anchors. The rig is transported to and from site in the back of a transit van or light truck.

CPT RIG DETAILS	
DRIVE SYSTEM	RUBBER TRACKS
TOTAL WEIGHT	1.5 TONNES
GROUND BEARING PRESSURE	21kPA
CPT RAM THRUST CAPACITY	16 TONNES
MAXIMUM PENETRATION	30-40M DEPENDING ON THE GROUND CONDITIONS
PERFORMANCE RATES	60-80M OF TESTING A DAY DEPENDING ON ACCESS TO POSITIONS
TYPICAL SITES FOR THIS RIG	SITES WITH RESTRICTED ACCESS, BOTH INDOORS AND OUTDOORS

CPT RIG DIMENSIONS



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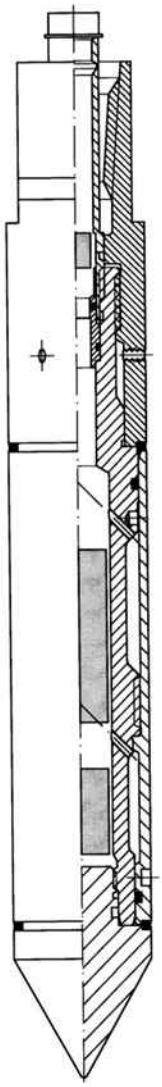
APPENDIX A3 – Cone Datasheet

GeoPoint Systems bv
Rijksstraatweg 22F
2171 AL Sassenheim
Tel. : +31 71 301 92 51
Fax : +31 71 301 92 52
E-mail : info@geopoint.nl
ING bank : 68.23.01.396
Postbank : 5226758
BTW nr. : NL806331677801



SPECIFICATIONS S15 SERIES ELECTRICAL CONES

The electronic subtraction cones have been developed to address the durability problems inherent in other cone designs. The unit consists of a single element temperature compensated strain gauge transducer for measuring both cone resistance and local sleeve friction. This design is therefore more robust than a compression type cone. The cone support electronics package is located directly behind the transducer. The precision strain gauge amplifiers and power supply eliminate the effects of cable resistance on the measurements. A standard subtraction cone is capable of measuring simultaneously the following channels: Tip, Local friction, Pore pressure, Temperature and Inclination.

GENERAL SPECIFICATIONS

Cone Tip Section Area	1,500 mm2
Friction Sleeve Surface	22,500 mm2
Total Length	325 mm
Weight	4200 g
Power Supply	± 15 VDC, 100 mA.
Output	0 – 10 VDC*
Working Temperature	0 - 60˚C
Storage Temperature	- 40 to + 85˚C
Connector	Lemo 10 pins (others on request)

TIP RESISTANCE

Range	100/150* kN
Accuracy	0.25 % FS
Maximum Load	150 % of range
Cone Area Ratio	0.75

LOCAL SLEEVE FRICTION

Range	100/150* kN
Accuracy	0.50 % FS
Maximum Load	150 %
Sleeve Area Ratio	1.0 (EA)

PORE PRESSURE

Range	1/2/5/10* MPa
Accuracy	0.5 % FS
Maximum Load	150 % of range

INCLINATION

Range	25 ˚ (biaxial)
Accuracy	< 2 ˚

All our equipment complies with the ISSMGE, ASTM, DIN and NEN Standards.

**Other output and voltage ranges available on request. Loadcells may be calibrated for lower ranges.*

APPENDIX A4 – Cone Calibration Certificate

Eijkelkamp GeoPoint
SoilSolutions

Rijkstraatweg 22F
2171 AL Sassenheim
The Netherlands

T +31 71 301 9251
E info@eijkelkamp-geopoint.com
I eijkelkamp-geopoint.com

Cone Calibration Certificate

Certificate:	**GS-2145-003**	
Instrument Type:	Magnetometer 250 µT(analog)	
Model:	S15-CFIIPM	
Serial number:	2145	
Calibration date:	12-07-2023	
Client:	In Situ	
Calibrated by:	R.Wesselink	
Calibration instruments		
Manufacturer:	Hottinger Baldwin Messtechnik GmbH	
NMi certificate	2461165.00501	
Calibration conditions		
Ambient temperature:	25.5	°C
Atmospheric pressure:	1013	mBar
Cone specifications		
Cone base area:	1500	mm2
Load tip resistance (nom.):	50	kN
Friction sleeve area:	22500	mm2
Load tip + local friction (nom.):	50	kN
Load friction sleeve (nom.):	22.5	kN
Load pore pressure (nom.):	2	MPa
Inclination (nom.):	+/- 20	°
Temperature compensation (all channels):	0...+40	°C
Maximum overload capacity (all channels):	50	%
Cone area ratio (a):	0.79	
Max. Inaccuracy, relative to measurement value:	1.0	%

	Tip:		Sleeve:		Pore Pressure:		Inclinometer:		
	qc in kN	mV	fs in kN	mV	MPa	mV	Degrees	X (mV)	Y (mV)
Zero points:		0253		0267		0269			
	0	0	0	0	0	0	0	2487	2446
	5	0306	5	0315	0.4	1712	-20	0476	0443
	10	0613	10	0627	0.8	3429	20	4450	4505
	15	0918	15	0944	1.2	5147			
	20	1225	20	1261	1.6	6863			
	25	1531	25	1579	2.0	8573			
	30	1838	30	1897					
	35	2143	35	2213					
	40	2451	40	2529					
	45	2757	45	2848					
	50	3065	50	3164					

Max. error, abs. qc:	35 kPa
Max. error, abs. fs:	5 kPa
Max. error, abs. u2:	10 kPa
Max. error, abs. I:	1 °

This calibration is compliant with Eijkelkamp GeoPoint SoilSolutions internal quality system, internal calibration procedures and meets the requirements of NEN2649, NEN-EN-ISO 22476-1, NORSOK G-001, ISSMFE and ASTM using calibration equipment traceable to (Inter-)National Standards.

Approved by: [redacted]
Date:

Eijkelkamp GeoPoint SoilSolutions
V.A.T. NO. NL 8584.21.422.B01
Trade Reg. Arnhem no. 70686149

IBAN NL43 RABO 0326 7904 38
BIC: RABONL2U

APPENDIX A5 – Symbol List

English

a	is area ratio of the cone ($= {}^{A_n}/_{A_c}$)
A	is area
A_c	is projected area of the cone
A_n	is cross sectional area of load cell or shaft
A_s	is area of friction sleeve
A_{sb}	is bottom end area of friction sleeve
A_{st}	is top end area of friction sleeve
B_q	is pore pressure parameter ($= {}^{(u_2 - u_0)}/_{(q_t - \sigma_{v0})}$)
c_h	is horizontal coefficient of consolidation
c_v	is vertical coefficient of consolidation
D	is diameter
D_r	is relative density ($= \frac{e_{max} - e}{e_{max} - e_{min}} x100\%$)
e	is void ratio
e_{max}	is maximum void ratio
e_{min}	is minimum void ratio
E	is Young's modulus
f_s	is unit sleeve friction resistance
f_t	is sleeve friction corrected for pore pressure effects
F_s	is total force acting on friction sleeve
F_R	is normalized friction ratio ($= {}^{f_s}/_{(q_t - \sigma_{v0})}$)
FoS	is factor of safety
FC	is fines content
g	is acceleration due to gravity
G_0	is initial or maximum shear modulus, shear stiffness
I_c	is soil behavior type index
I_r	is rigidity index ($= {}^{G}/_{s_u}$)
I_p	is plasticity index
k	is coefficient of permeability
k_h	is coefficient of permeability in horizontal direction
k_v	is coefficient of permeability in vertical direction
K_0	is coefficient of earth pressure at rest ($= {}^{\sigma'_{h0}}/_{\sigma'_{v0}}$)
L	is length
m_v	is coefficient of volume change
M	is constrained deformation modulus
M7.5	is earthquake magnitude of 7.5 Richter scale
N	is number of blows of SPT
N_{60}	is SPT energy ratio
N_k	is cone factor
N_{ke}	is cone factor
N_{kt}	is cone factor
$N_{\Delta u}$	is cone factor
p_a	is reference stress ($= 100\ kPa$)
q_c	is measured cone resistance
q_e	is effective cone resistance ($= q_t - u_2$)
q_n	is net cone resistance ($= q_t - \sigma_{v0}$)
q_t	is corrected cone resistance ($= q_c - (1 - a)u_2$)
Q_c	is total force acting on the cone
Q_t	is normalized cone resistance ($= {}^{q_t - \sigma_{v0}}/_{\sigma'_{v0}}$)

R_f	is friction ratio ($= \left({}^{f_t}/_{q_t}\right) x100\%$ or alternatively $= \left({}^{f_t}/_{q_t}\right) x100\%$)
s_u	is undrained shear strength
s_{ur}	is remoulded undrained shear strength
S_t	is sensitivity
t	is time
t_{50}	is time for 50% dissipation of excess pore water pressure
T_{50}	is time factor at $U = 50\ \%$
u	is pore water pressure
u_0	is in situ pore pressure
u_1	is pore pressure measured on the cone
u_2	is pore pressure measured behind the cone
u_3	is pore pressure measured behind sleeve friction
Δu	is excess pore water pressure
U	is normalized excess pore pressure
V_s	is shear wave velocity
z	is depth

Greek

α	is constant
α	is cone roughness
β	is constant
β_1	is the angle between the vertical axis and the projection of the axis of the CPTU on a vertical plane, in degrees
β_2	is the angle between the vertical axis and the projection of the axis of the CPTU on a vertical plane that is perpendicular to the plane of angle β_1, in degrees
γ	is unit weight of soil
γ_w	unit weight of water
Δ	is change
Δu	is excess pore pressure ($= u - u_0$)
μ	is Poisson's ratio
ρ	is density
ψ	is state parameter
σ, σ'	is normal stress (total, effective)
σ_h, σ_h'	is horizontal stress (total, effective)
σ_v, σ_v'	is horizontal stress (total, effective)
σ_{v0},σ_{v0}'	is overburden stress (total, effective)
τ_{av}	is average cyclic shear stress
τ_{cy}	is cyclic shear stress
φ'	is effective friction angle

APPENDIX A6 – Abbreviations

ASTM	American Society for Testing and Materials
CPTU	Cone Penetration Test with Pore Pressure Measurement (Piezocone Test)
CRR	Cyclic Resistance Ratio
CSR	Cyclic Stress Ratio
GWT	Ground Water Table
NC	Normally Consolidated
OC	Over consolidated
OCR	Over consolidation Ratio
PL	Limit Pressure
SCPT	Seismic Cone Penetration
SDMT	Seismic Dilatometer Marchetti
SPT	Standard Penetration Test
TC	Technical Committee

APPENDIX A7 – Glossary

CPT
Cone Penetration Test.

Cone
The part of the cone penetrometer on which the end bearing is developed.

Cone Penetrometer
The assembly containing the *cone*, *friction sleeve*, any other sensors and measuring systems, as well as the connections to the *push-rods.*

Cone resistance, q_c
The total force acting on the cone, Q_c, divided by the projected area of the cone, A_c. $q_c = {Q_c}/{A_c}$

Corrected cone resistance, q_t
The *cone resistance*, q_c corrected for pore water pressure effects.

Corrected sleeve friction, f_t
The *sleeve friction* corrected for pore water pressure effects on the ends of the *friction sleeve*.

Data acquisition system
The system used to measure and record the measurements made by the *cone penetrometer*.

Dissipation Test
A test when the decay of the pore water pressure is monitored during a pause in penetration.

Filter element
The porous element inserted into the cone penetrometer to allow transmission of the pore water pressure to the pore pressure sensor, while maintaining the correct profile of the *cone penetrometer*.

Friction ratio, R_f
The ratio, expressed as a percentage of the *sleeve friction*, f_s, to the *cone resistance*, q_c, both measured at the same depth.

Friction reducer
A local enlargement on the push-rod surface, placed at a distance above the cone penetrometer, and provided to reduce the friction on the *push-rods*.

Friction sleeve
The section of the *cone penetrometer* upon which the *sleeve friction* is measured.

Normalized cone resistance, Q_c or Q_t
The *cone resistance* expressed in a non-dimensional form and taking account of stress changes *in situ*, $Q_c = {(q_c - \sigma_{v0})}/{\sigma'_{v0}}$, or when the *corrected cone resistance* is used $Q_t = {(q_t - \sigma_{v0})}/{\sigma'_{v0}}$. where σ_{v0} and σ'_{v0} are the total and effective vertical stress respectively.

Net cone resistance, q_n
The *corrected cone resistance* minus the vertical total stress. $q_n = q_t - \sigma_{v0}$

Normalized friction ratio, F_r
The *sleeve friction* normalized by the *net cone resistance*.

Piezocone
A *cone penetrometer* containing a pore pressure sensor.

Pore pressure, *u*
The pore pressure generated during penetration and measured by a pore pressure sensor, u_1 when measured on the cone, u_2 when measured just behind the cone and u_3 when measured just behind the friction sleeve.

Pore pressure ratio, B_q
The *net pore pressure* normalized with respect to the *net cone resistance*.

Push-rods
The thick-walled tubes or rods used for advancing the cone penetrometer.

Rig machine
The equipment which pushes the cone penetrometer and rods into the ground.

Sleeve friction, f_s
The total frictional force acting on the *friction sleeve*, F_s, divided by its *surface area*, A_s. $f_s = {F_s}/{A_s}$

APPENDIX A8 – Soils Description Tables

GRANULAR SOILS (Sands and Gravels)

Description	Relative Density D_r (%)	SPT N value, N_{SPT}
Very Loose	0 – 15	0 - 4
Loose	15 – 35	4 - 10
Medium Dense	35 – 65	10 - 30
Dense	65 – 85	30 - 50
Very Dense	>85	>50

COHESIVE SOILS (Clays and Silts)

Term based on measurement	Undrained Shear Strength Classification, s_u (kPa)
Extremely low	<10
Very low	10 - 20
Low	20 - 40
Medium	40 - 75
High	75 - 150
Very high	150 - 300
Extremely high	>300

APPENDIX B

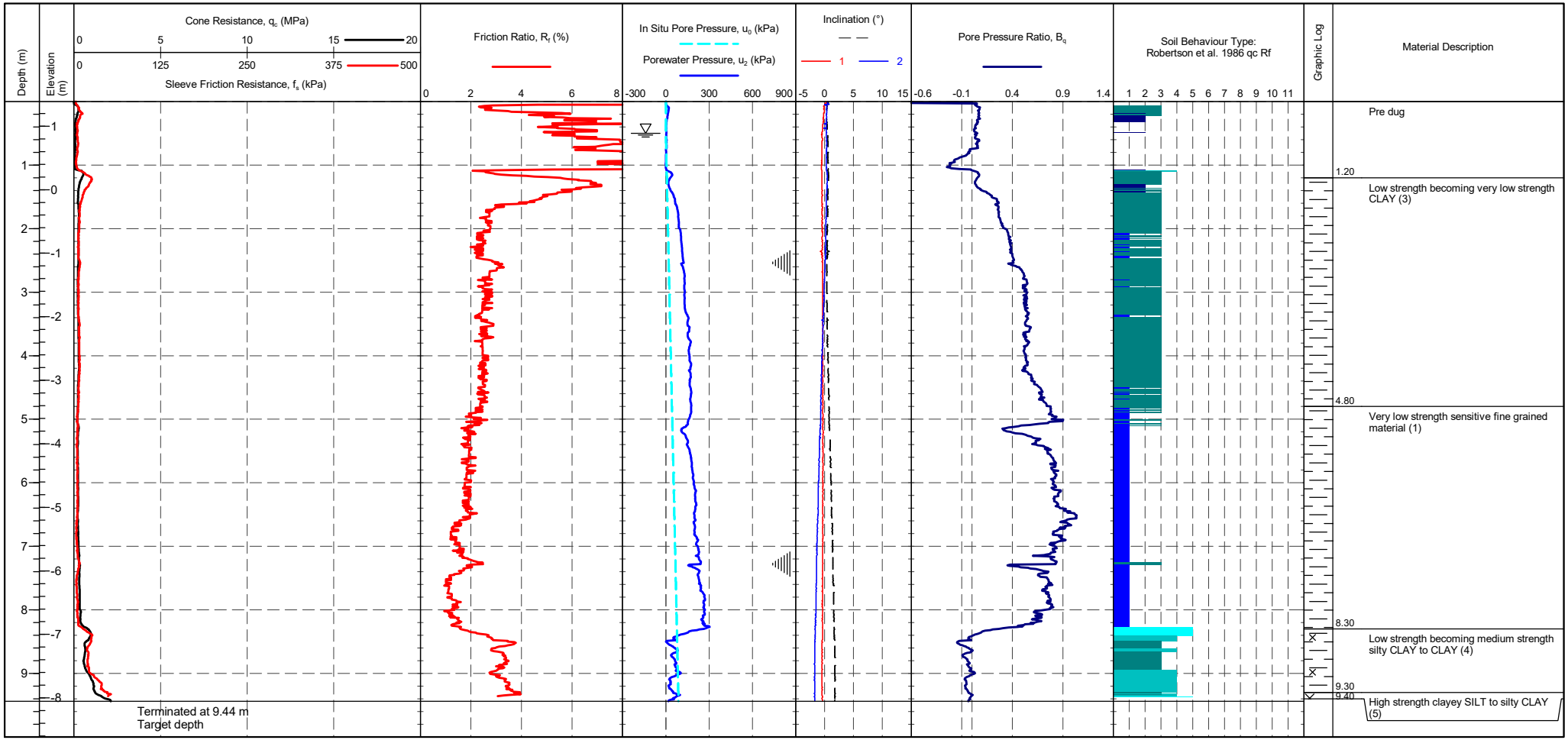
Cone Penetration Measured Parameters and Geotechnical Derived Parameters

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 01

PointID: **R22-CPT101**

CLIENT : Structural Soils	EASTING : 632079.612 m	Remark:	SHEET : 1 OF 1
PROJECT : Sealink	NORTHING : 163053.437 m	Test refused on total pressure.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.387 m OD		TEST DATE : 18/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2
CALIBRATION DATE	: 12/07/2023	APPLICATION CLASS	: 2
CONE MODEL	: Subtraction	RIG	: CPT 020 - Pagani
CONE AREA	: 15cm^2	OPERATOR	: AC/CH
CONE AREA RATIO	: 0.79	FRICTION REDUCER	: None
FILTER POSITION	: u2	WEATHER	: Sunny & Hot
FILTER TYPE	: HDPE	GROUNDWATER DEPTH	: Assumed for calculation purposes

CPTU ZERO VALUES

	Pre	Post	Difference
Transducer			
Tip	293 mV	295 mV	0.022 MPa
Sleeve	315 mV	316 mV	0.001 kPa
Pore Pressure 2	313 mV	304 mV	-0.002 kPa
X-Y Inclinometer	2504 mV	2493 mV	

METHOD: Robertson et al. 1986 qc Rf

1 - Sensitive fine grained material
2 - Organic material
3 - CLAY
4 - Silty CLAY to CLAY
5 - Clayey SILT to silty CLAY
6 - Sandy SILT to clayey SILT
7 - Silty SAND to sandy SILT
8 - SAND to silty SAND
9 - SAND
10 - Gravelly SAND to SAND
11 - Very stiff fine grained
12 - SAND to clayey SAND

Groundwater Level

Dissipation Test

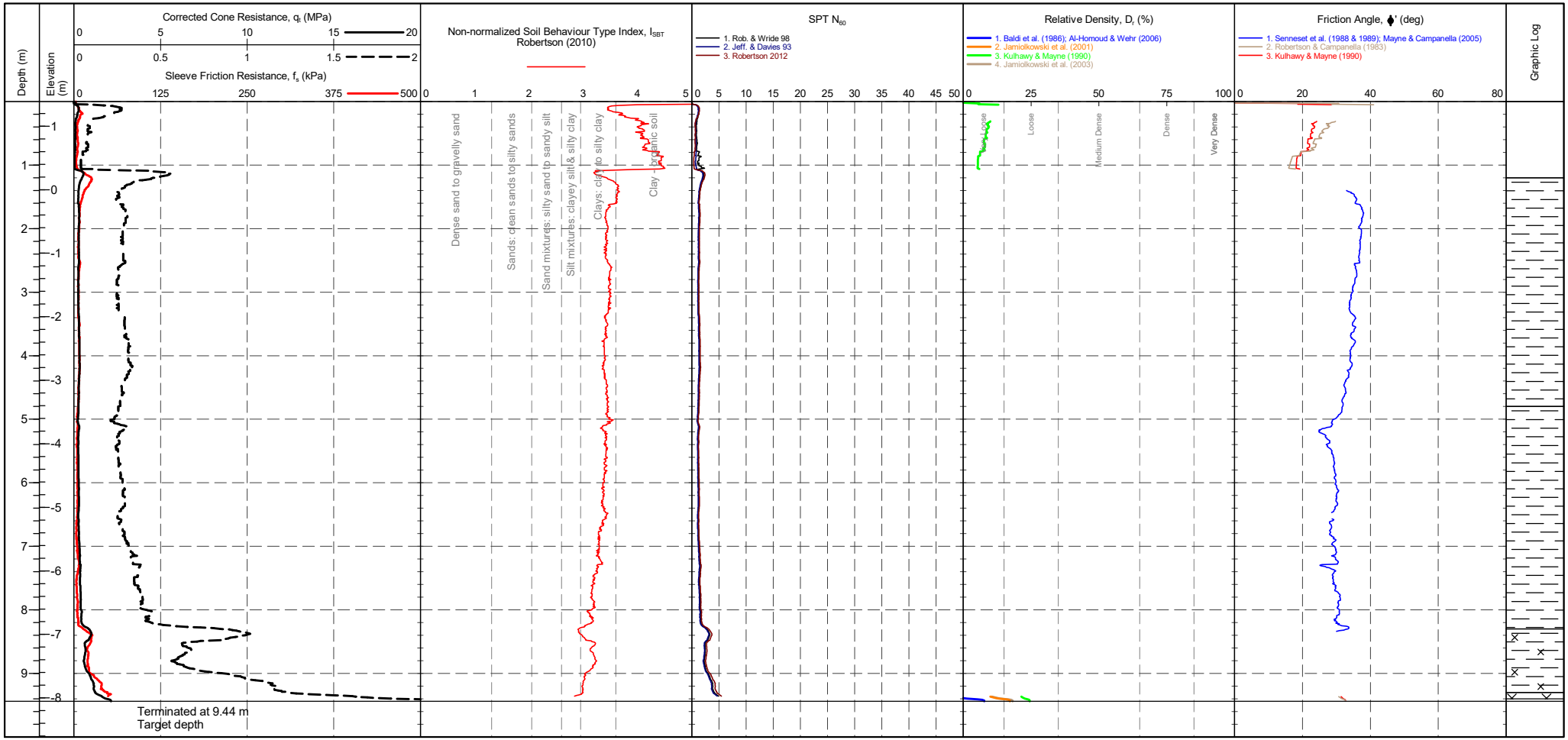
IN SITU SITE INVESTIGATION

Working with: STRUCTURAL SOILS LTD

CPT LOG 02

PointID: **R22-CPT101**

CLIENT : Structural Soils	EASTING : 632079.612 m	Remark:	SHEET : 1 OF 1
PROJECT : Sealink	NORTHING : 163053.437 m	Test refused on total pressure.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.387 m OD		TEST DATE : 18/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2		
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2		
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani		
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH		
FILTER POSITION	: u2	FRICTION REDUCER	: None		
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot		

CPTU ZERO VALUES

Transducer	Pre	Post	Difference
Tip	293 mV	295 mV	0.022 MPa
Sleeve	315 mV	316 mV	0.001 kPa
Pore Pressure 2	313 mV	304 mV	-0.002 kPa
X-Y Inclinometer	2504 mV	2493 mV	

GRANULAR SOILS (Sands & Gravels) Robertson et al. 1986 Zones 7-10 and Zone 12

Description	SBT Index, Ic	Description	SPT N value, NSPT	Description	Relative Density Dr (%)
Clays	2.95-3.60	Very Loose	0 - 4	Very Loose	0 - 15
Silt mixtures	2.60-2.95	Loose	4 - 10	Loose	15 - 35
Sand mixtures	2.05-2.60	Medium Dense	10 - 30	Medium Dense	35 - 65
Sands	1.31-2.05	Dense	30 - 50	Dense	65 - 85
Gravelly sand	<1.31	Very Dense	>50	Very Dense	>85

Groundwater Level

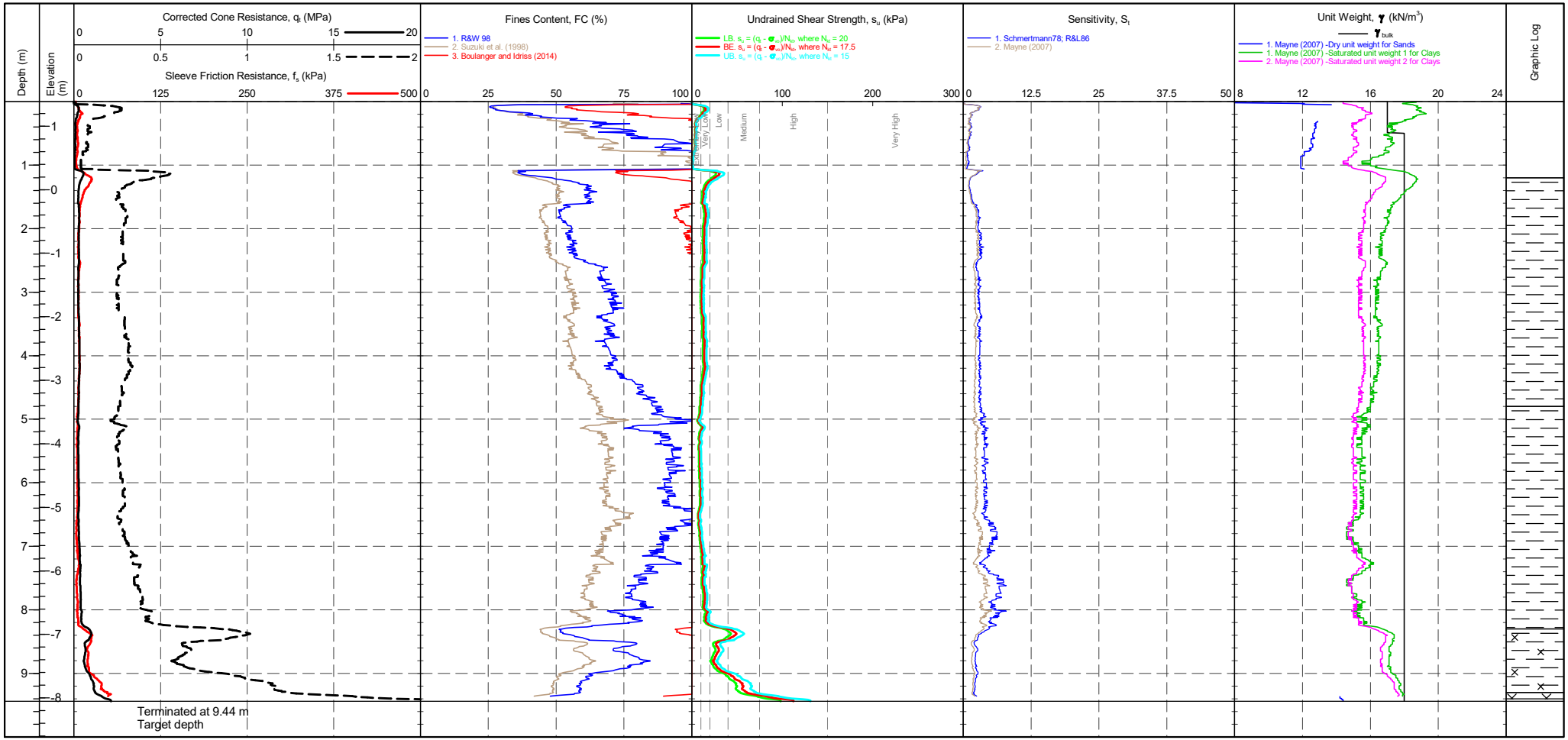
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 03

PointID: **R22-CPT101**

CLIENT : Structural Soils	EASTING : 632079.612 m	Remark:	SHEET : 1 OF 1
PROJECT : Sealink	NORTHING : 163053.437 m	Test refused on total pressure.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.387 m OD		TEST DATE : 18/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES			
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post	Difference
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	293 mV	295 mV	0.022 MPa
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Sleeve	315 mV	316 mV	0.001 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	313 mV	304 mV	-0.002 kPa
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot	X-Y Inclinometer	2504 mV	2493 mV	

COHESIVE SOILS (Clays & Silts) Robertson et al. 1986 Zones 1-6 and Zone 11

Term based on measurement	su (kPa)	Term based on measurement	su (kPa)
Extremely low strength	<10	Medium strength	40-75
Very low strength	10-20	High strength	75-150
Low strength	20-40	Very high strength	150-300
		Extremely high strength	>300

Groundwater Level

Dissipation Test

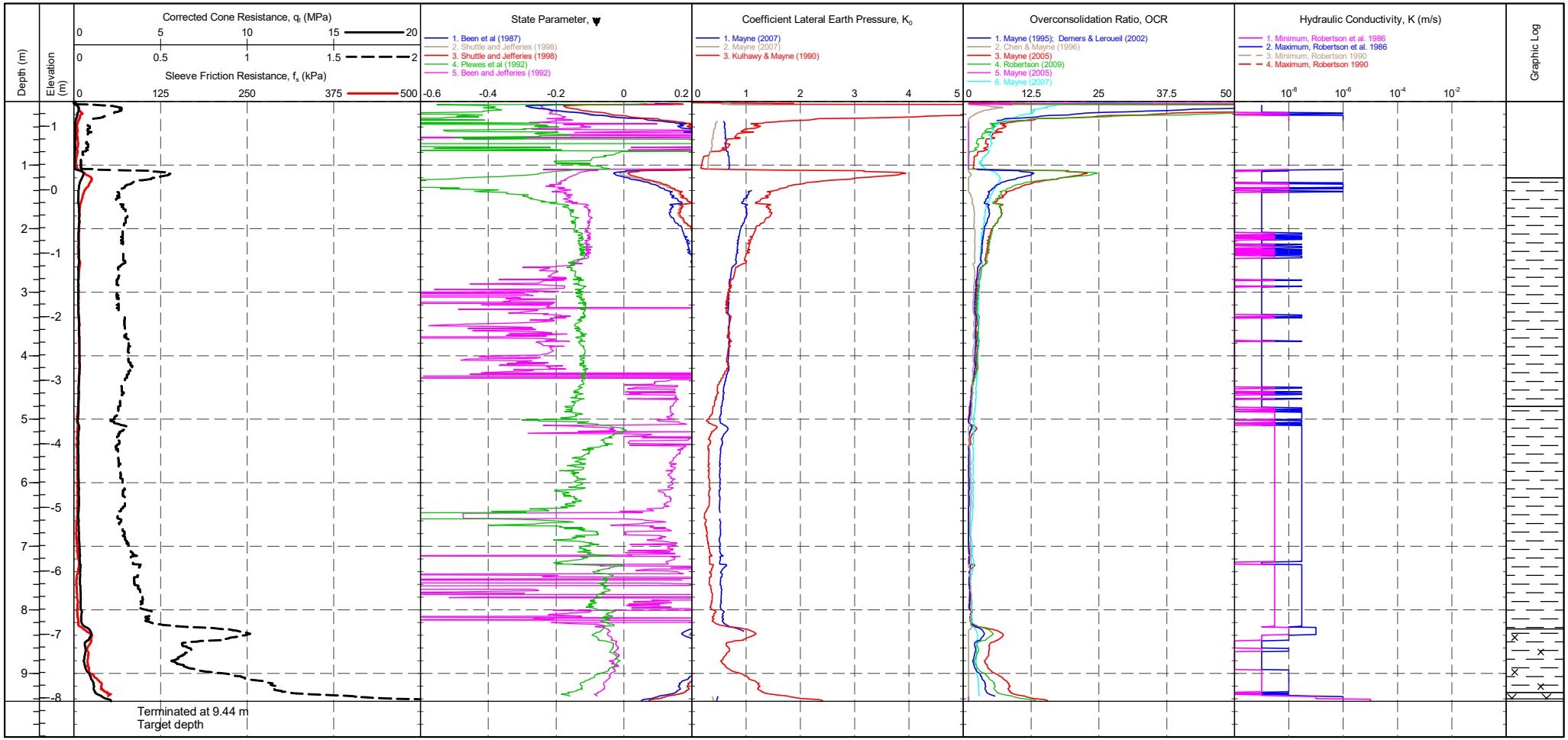
IN SITU SITE INVESTIGATION

Working with: STRUCTURAL SOILS LTD

CPT LOG 04

PointID: **R22-CPT101**

CLIENT : Structural Soils	EASTING : 632079.612 m	Remark:	SHEET : 1 OF 1
PROJECT : Sealink	NORTHING : 163053.437 m	Test refused on total pressure.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.387 m OD		TEST DATE : 18/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



				CPTU ZERO VALUES			
CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	Transducer	Pre	Post	Difference
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Tip	293 mV	295 mV	0.022 MPa
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Sleeve	315 mV	316 mV	0.001 kPa
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Pore Pressure 2	313 mV	304 mV	-0.002 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	X-Y Inclinometer	2504 mV	2493 mV	
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot				

Groundwater Level

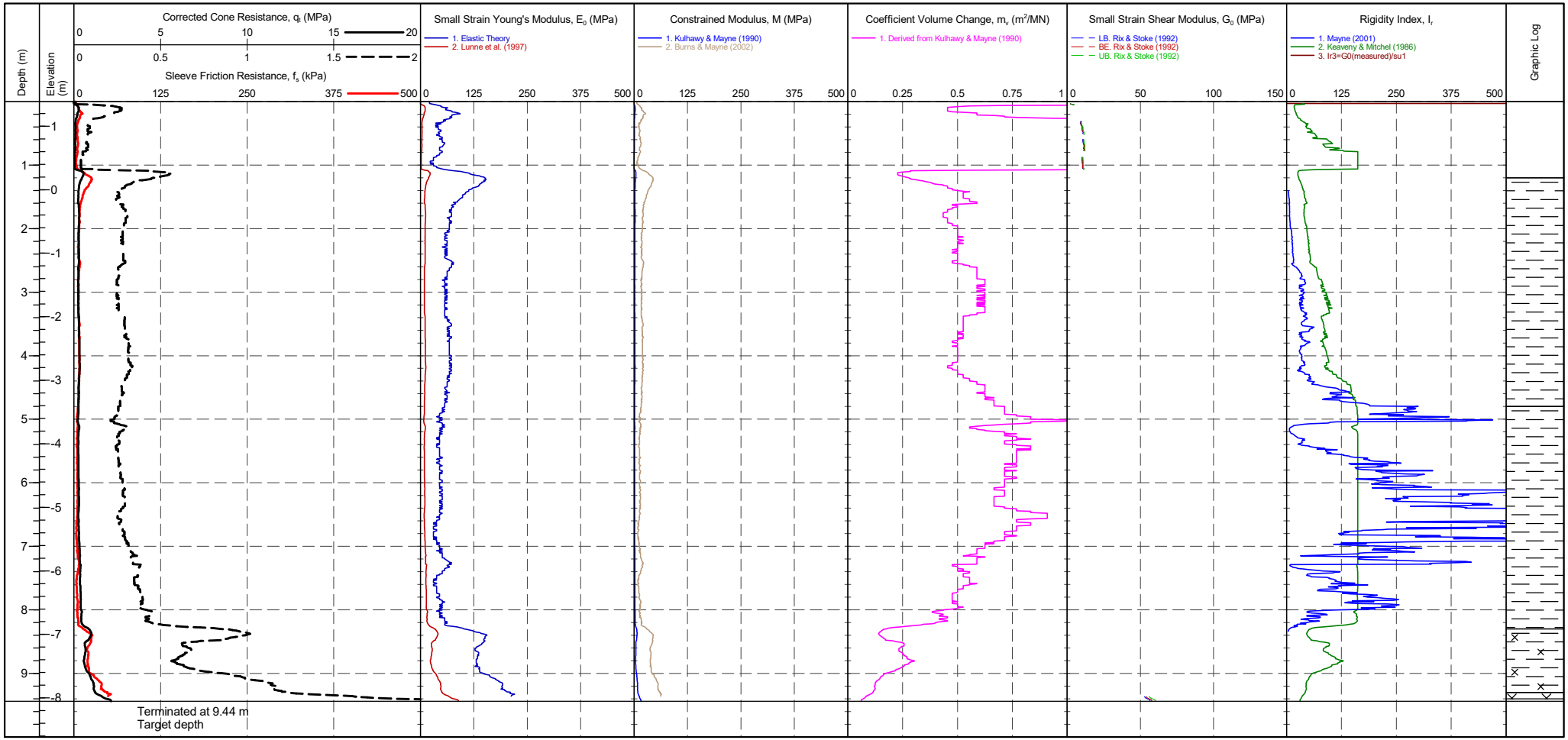
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 05

PointID: **R22-CPT101**

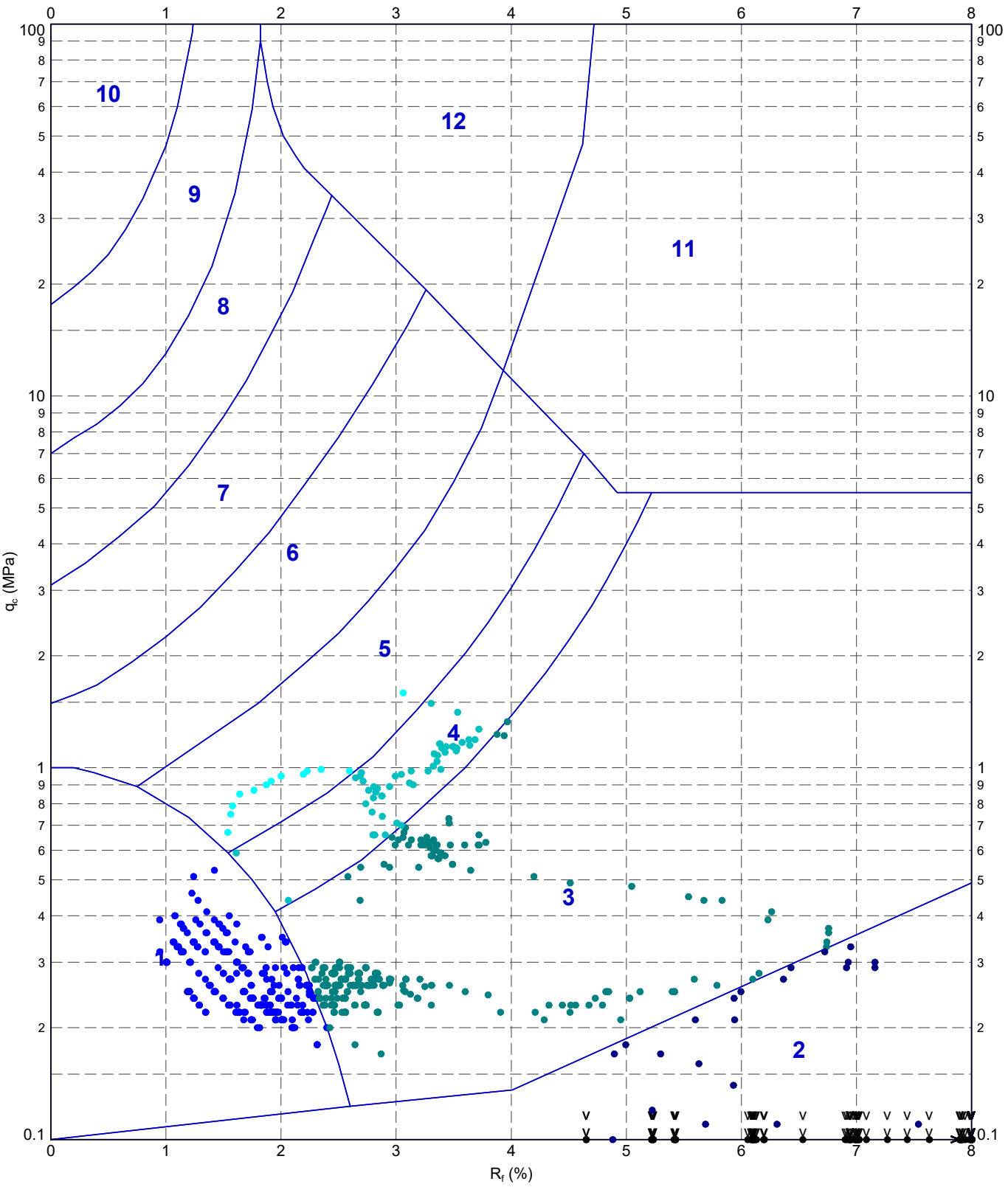
CLIENT : Structural Soils PROJECT : Sealink LOCATION : Kent PROJECT No. : 1230335	EASTING : 632079.612 m NORTHING : 163053.437 m ELEVATION : 1.387 m OD CHECKED BY : DW TERMINATION REASON : Target depth	Remark: Test refused on total pressure.	SHEET : 1 OF 1 STATUS : Final TEST DATE : 18/10/2023 PLOT DATE : 12/03/2024 METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES			
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post	Difference
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	293 mV	295 mV	0.022 MPa
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Sleeve	315 mV	316 mV	0.001 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	313 mV	304 mV	-0.002 kPa
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot	X-Y Inclinometer	2504 mV	2493 mV	

Groundwater Level

Dissipation Test



METHOD: Robertson et al. 1986 qc Rf

1 - Sensitive fine grained material	4 - Silty CLAY to CLAY	7 - Silty SAND to sandy SILT	10 - Gravelly SAND to SAND
2 - Organic material	5 - Clayey SILT to silty CLAY	8 - SAND to silty SAND	11 - Very stiff fine grained
3 - CLAY	6 - Sandy SILT to clayey SILT	9 - SAND	12 - SAND to clayey SAND

IN SITU SITE INVESTIGATION

TITLE

Structural Soils
Ian Warne
Kent
Sealink
Robertson et al. 1986 q_c vs. R_f - R22-CPT101

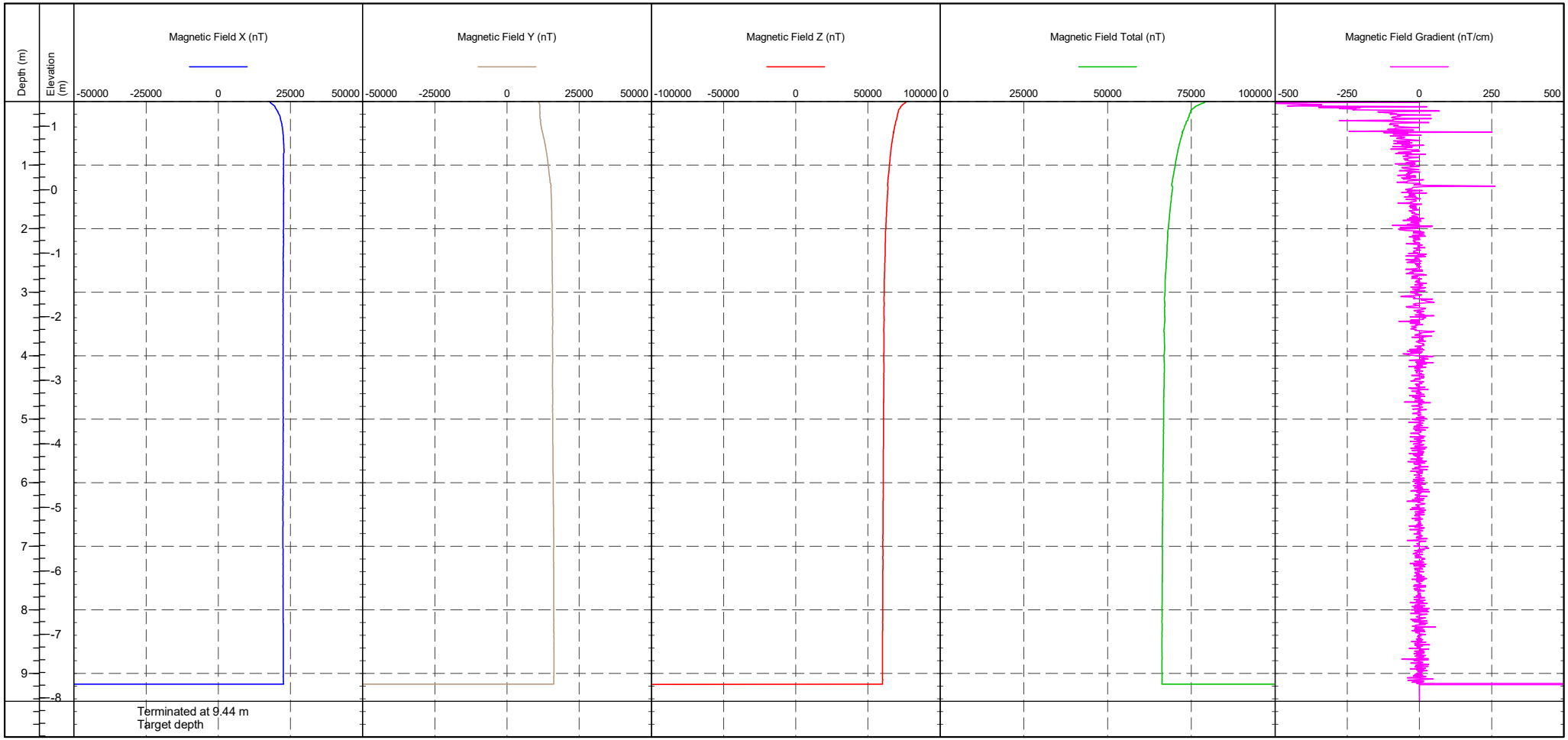
DRAWN	DATE 12/03/2024
CHECKED	DATE 12/03/2024
SCALE Not To Scale	A4
PROJECT No 1230335	FIGURE No

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

MAG LOG

PointID **R22-CPT101**

CLIENT : Structural Soils	EASTING : 632079.612 m	Remark:	SHEET : 1 OF 1
PROJECT : Sealink	NORTHING : 163053.437 m	Test refused on total pressure.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.387 m OD		TEST DATE : 18/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



				CPTU ZERO VALUES			
CONE ID	: S15-CFIP.2145	RIG	: CPT 020 - Pagani	Transducer	Pre	Post	Difference
CONE MODEL	: Subtraction	OPERATOR	: AC/CH	Tip	293 mV	295 mV	0.022 MPa
				Sleeve	315 mV	316 mV	0.001 kPa
				Pore Pressure 2	313 mV	304 mV	-0.002 kPa
				X-Y Inclinometer	2504 mV	2493 mV	

DISSIPATION TEST

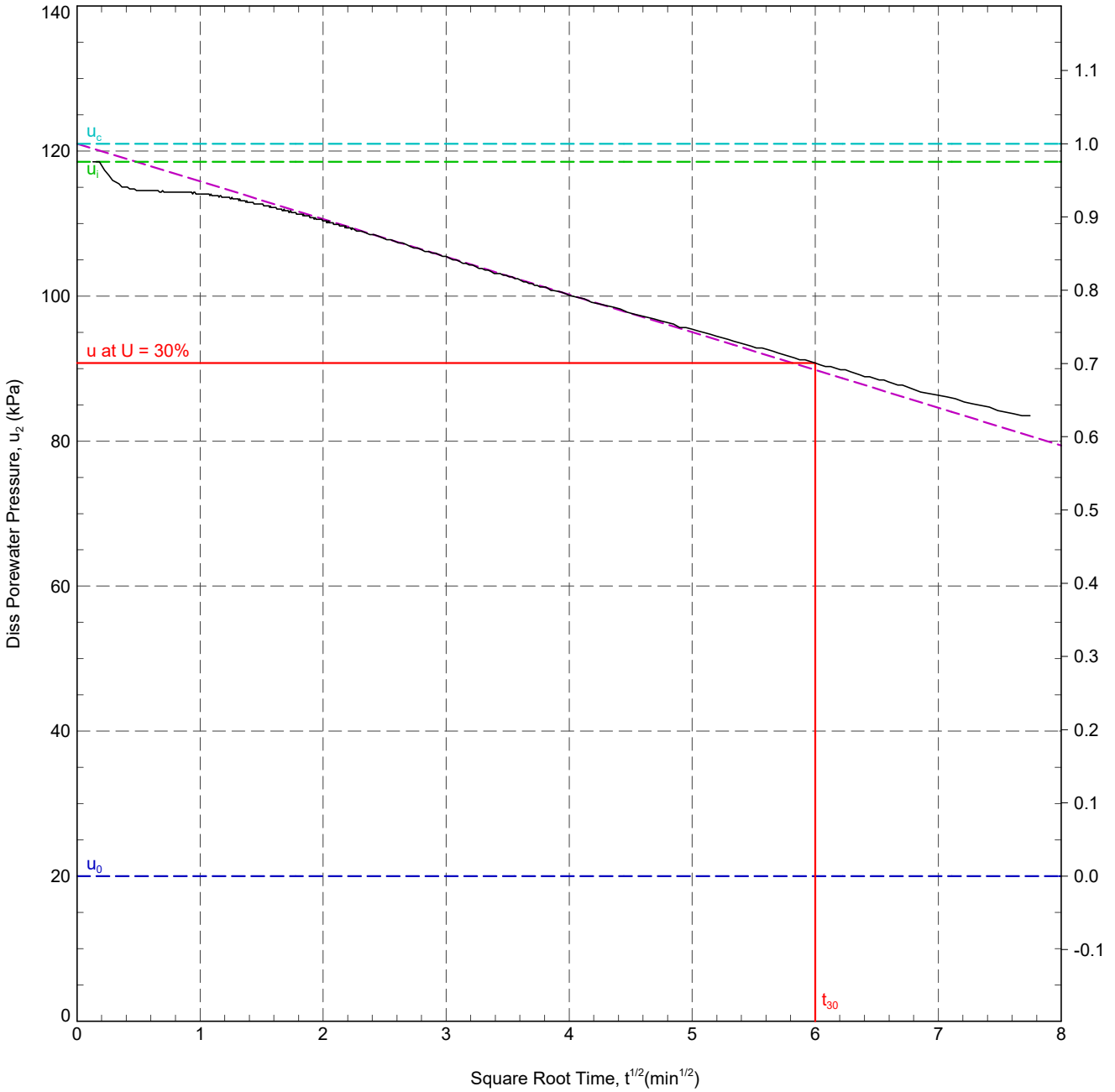
IN SITU SITE INVESTIGATION

Working with: STRUCTURAL SOILS LTD

Test ID

R22-CPT101 - 2.54 m

CLIENT	: Structural Soils	AREA	: Sealink Richborough	SHEET	: 1 OF 1
ENGINEER	: Ian Warne	EASTING	: 632079.6 m	STATUS	: Final
PROJECT	: Sealink	NORTHING	: 163053.4 m	DATE	: 18/10/23
LOCATION	: Kent	COORD. SYS.	:		
PROJECT No.	: 1230335	ELEVATION	: 1.39 m		



In Situ Pore Pressure, u_0:	20.0 kPa	Rigidity Index, I_r:	16.1
Initial Pore Pressure, u_i:	118.5 kPa	Horizontal Coefficient of Consolidation, c_h:	2.42x10^0 m^2/yr
Final Pore Pressure:	83.5 kPa	Ratio c_h/c_v:	1.25
Back Extrapolated Pore Pressure, u_c:	121 kPa	Vertical Coefficient of Consolidation, c_v:	1.93x10^0 m^2/yr
Degree of Dissipation:	30%		
Dissipation Pressure:	90.8 kPa		
Time for 30% Dissipation, t_{30}:	36.00 min		

RIG	: CPT 020 - Pagani	ANALYSED BY	: ZJ	DATE:	19/10/2023
CONE TYPE	: Subtraction	CHECKED BY	: DW	DATE:	19/10/2023
CONE ID	: S15-CFIP.2145	APPROVED BY	: DW	DATE:	19/10/2023
OPERATOR	: AC				

REMARK

T30 reached. Test OK.

DISSIPATION TEST

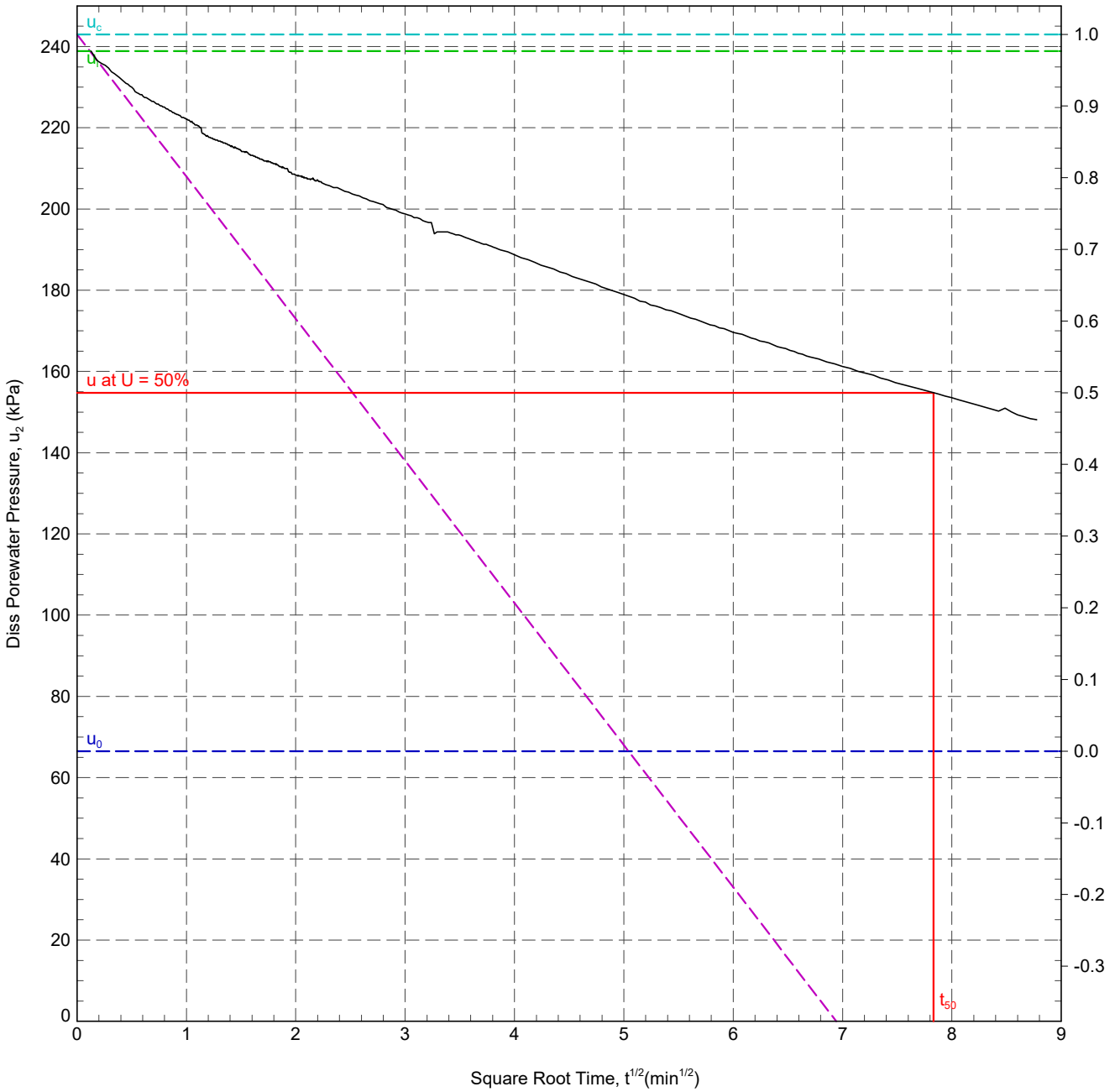
IN SITU SITE INVESTIGATION

Working with: STRUCTURAL SOILS LTD

Test ID

R22-CPT101 - 7.28 m

CLIENT	: Structural Soils	AREA	: Sealink Richborough	SHEET	: 1 OF 1
ENGINEER	: Ian Warne	EASTING	: 632079.6 m	STATUS	: Final
PROJECT	: Sealink	NORTHING	: 163053.4 m	DATE	: 18/10/23
LOCATION	: Kent	COORD. SYS.	:		
PROJECT No.	: 1230335	ELEVATION	: 1.39 m		



In Situ Pore Pressure, u_0:	66.5 kPa	Rigidity Index, I_r:	329.2
Initial Pore Pressure, u_i:	238.9 kPa	Horizontal Coefficient of Consolidation, c_h:	2.02×10^1 m^2/yr
Final Pore Pressure:	148.1 kPa	Ratio c_h/c_v:	1.25
Back Extrapolated Pore Pressure, u_c:	243 kPa	Vertical Coefficient of Consolidation, c_v:	1.61×10^1 m^2/yr
Degree of Dissipation:	50%		
Dissipation Pressure:	154.8 kPa		
Time for 50% Dissipation, t_{50}:	61.33 min		

RIG	: CPT 020 - Pagani	ANALYSED BY	: ZJ	DATE:	19/10/2023
CONE TYPE	: Subtraction	CHECKED BY	: DW	DATE:	19/10/2023
CONE ID	: S15-CFIP.2145	APPROVED BY	: DW	DATE:	19/10/2023
OPERATOR	: AC				

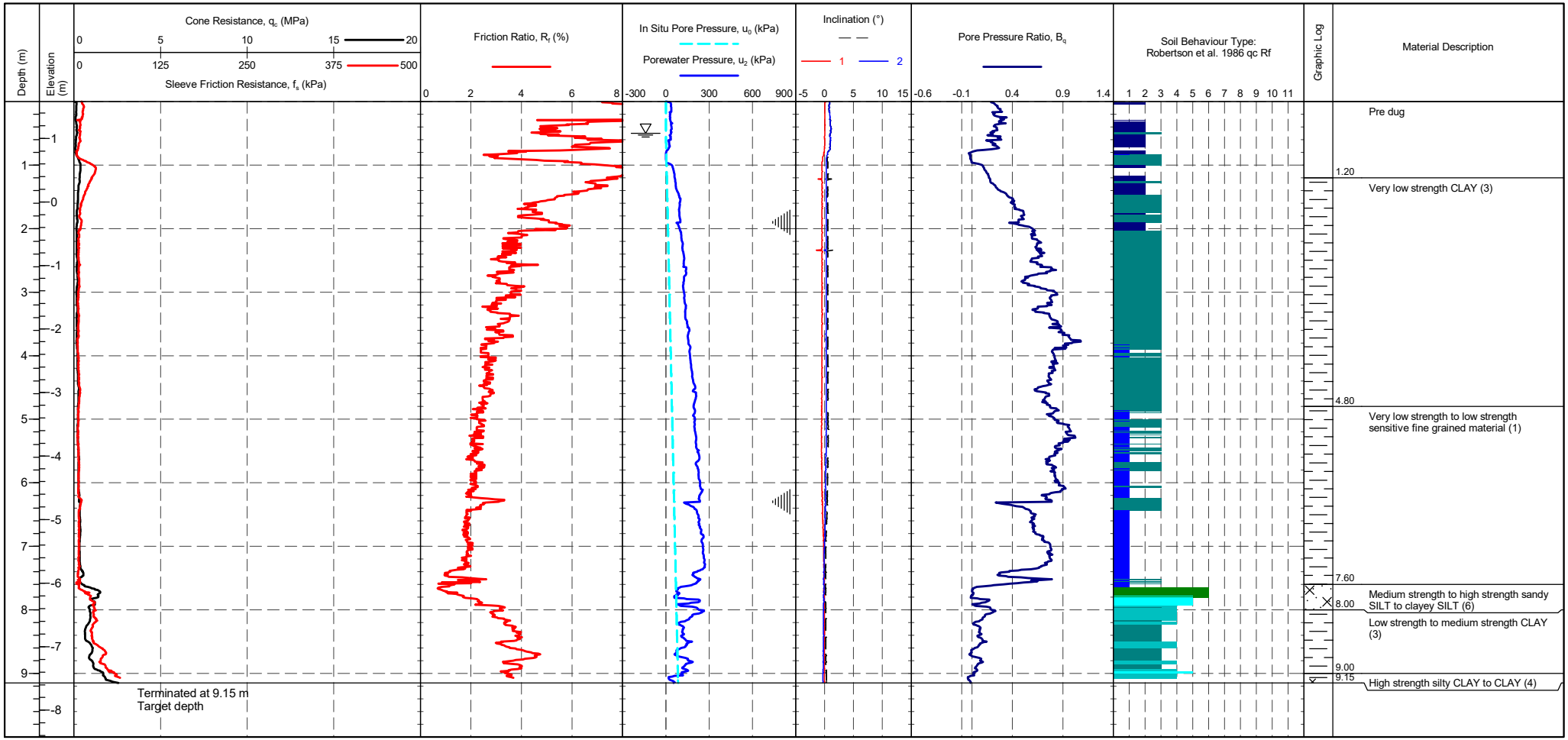
REMARK
T50 reached. Test OK.

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 01

PointID: **R22-CPT102**

CLIENT : Structural Soils	EASTING : 632217.227 m	Remark:	SHEET : 1 OF 1
PROJECT : Sealink	NORTHING : 163168.684 m	Test refused on total pressure.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.580 m OD		TEST DATE : 18/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2
CALIBRATION DATE	: 12/07/2023	APPLICATION CLASS	: 2
CONE MODEL	: Subtraction	RIG	: CPT 020 - Pagani
CONE AREA	: 15cm^2	OPERATOR	: AC/CH
CONE AREA RATIO	: 0.79	FRICTION REDUCER	: None
FILTER POSITION	: u2	WEATHER	: Sunny & Hot
FILTER TYPE	: HDPE	GROUNDWATER DEPTH	: Assumed for calculation purposes

CPTU ZERO VALUES

Transducer	Pre	Post	Difference
Tip	294 mV	296 mV	0.022 MPa
Sleeve	316 mV	317 mV	0.001 kPa
Pore Pressure 2	309 mV	305 mV	-0.001 kPa
X-Y Inclinometer	2529 mV	2478 mV	

METHOD: Robertson et al. 1986 qc Rf

1 - Sensitive fine grained material
2 - Organic material
3 - CLAY
4 - Silty CLAY to CLAY
5 - Clayey SILT to silty CLAY
6 - Sandy SILT to clayey SILT
7 - Silty SAND to sandy SILT
8 - SAND to silty SAND
9 - SAND
10 - Gravelly SAND to SAND
11 - Very stiff fine grained
12 - SAND to clayey SAND

Groundwater Level

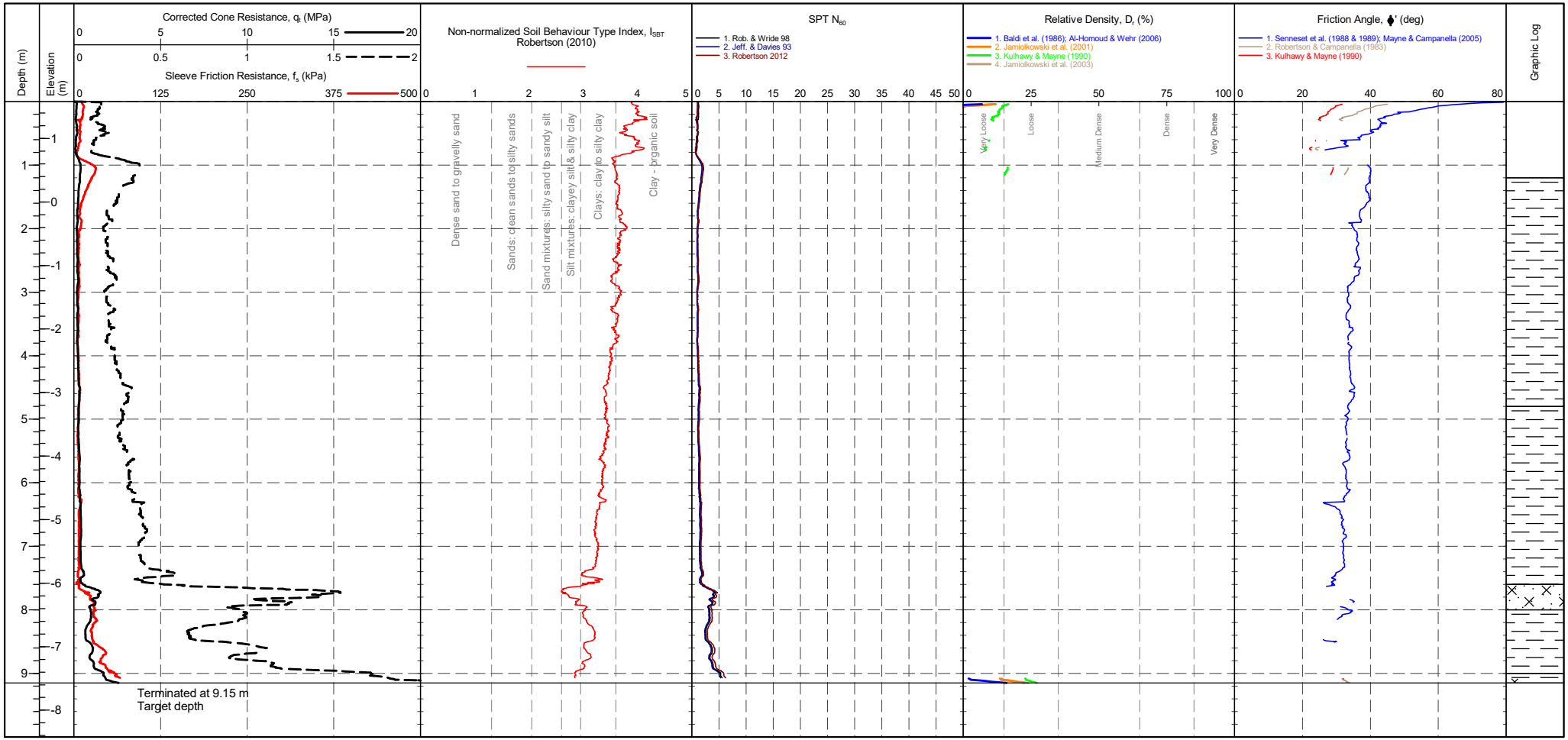
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 02

PointID: **R22-CPT102**

CLIENT : Structural Soils	EASTING : 632217.227 m	Remark:	SHEET : 1 OF 1
PROJECT : Sealink	NORTHING : 163168.684 m	Test refused on total pressure.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.580 m OD		TEST DATE : 18/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES		
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post
CONE AREA	: 15cm²	RIG	: CPT 020 - Pagani	Tip	294 mV	296 mV
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Sleeve	316 mV	317 mV
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	309 mV	305 mV
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot	X-Y Inclinometer	2529 mV	2478 mV

Difference
0.022 MPa
0.001 kPa
-0.001 kPa

GRANULAR SOILS (Sands & Gravels) Robertson et al. 1986 Zones 7-10 and Zone 12

Description	SBT Index, Ic
Clays	2.95-3.60
Silt mixtures	2.60-2.95
Sand mixtures	2.05-2.60
Sands	1.31-2.05
Gravelly sand	<1.31

Description	SPT N value, NSPT
Very Loose	0 - 4
Loose	4 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	>50

Description	Relative Density Dr (%)
Very Loose	0 - 15
Loose	15 - 35
Medium Dense	35 - 65
Dense	65 - 85
Very Dense	>85

Groundwater Level

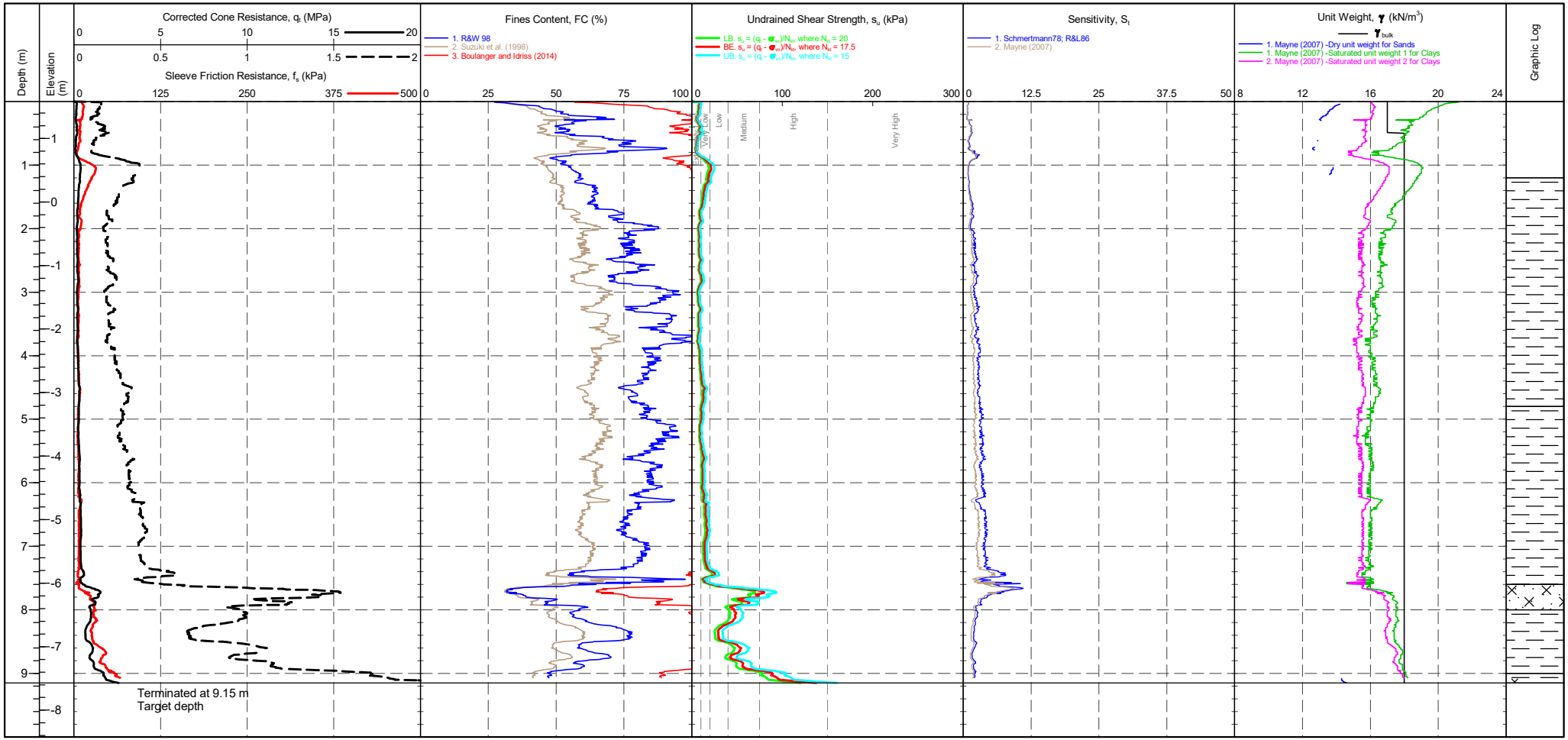
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 03

PointID: **R22-CPT102**

CLIENT : Structural Soils	EASTING : 632217.227 m	Remark:	SHEET : 1 OF 1
PROJECT : Sealink	NORTHING : 163168.684 m	Test refused on total pressure.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.580 m OD		TEST DATE : 18/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2			
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2			
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani			
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH			
FILTER POSITION	: u2	FRICTION REDUCER	: None			
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot			

CPTU ZERO VALUES

Transducer	Pre	Post	Difference
Tip	294 mV	296 mV	0.022 MPa
Sleeve	316 mV	317 mV	0.001 kPa
Pore Pressure 2	309 mV	305 mV	-0.001 kPa
X-Y Inclinometer	2529 mV	2478 mV	

COHESIVE SOILS (Clays & Silts) Robertson et al. 1986 Zones 1-6 and Zone 11

Term based on measurement	su (kPa)	Term based on measurement	su (kPa)
Extremely low strength	<10	Medium strength	40-75
Very low strength	10-20	High strength	75-150
Low strength	20-40	Very high strength	150-300
		Extremely high strength	>300

Groundwater Level

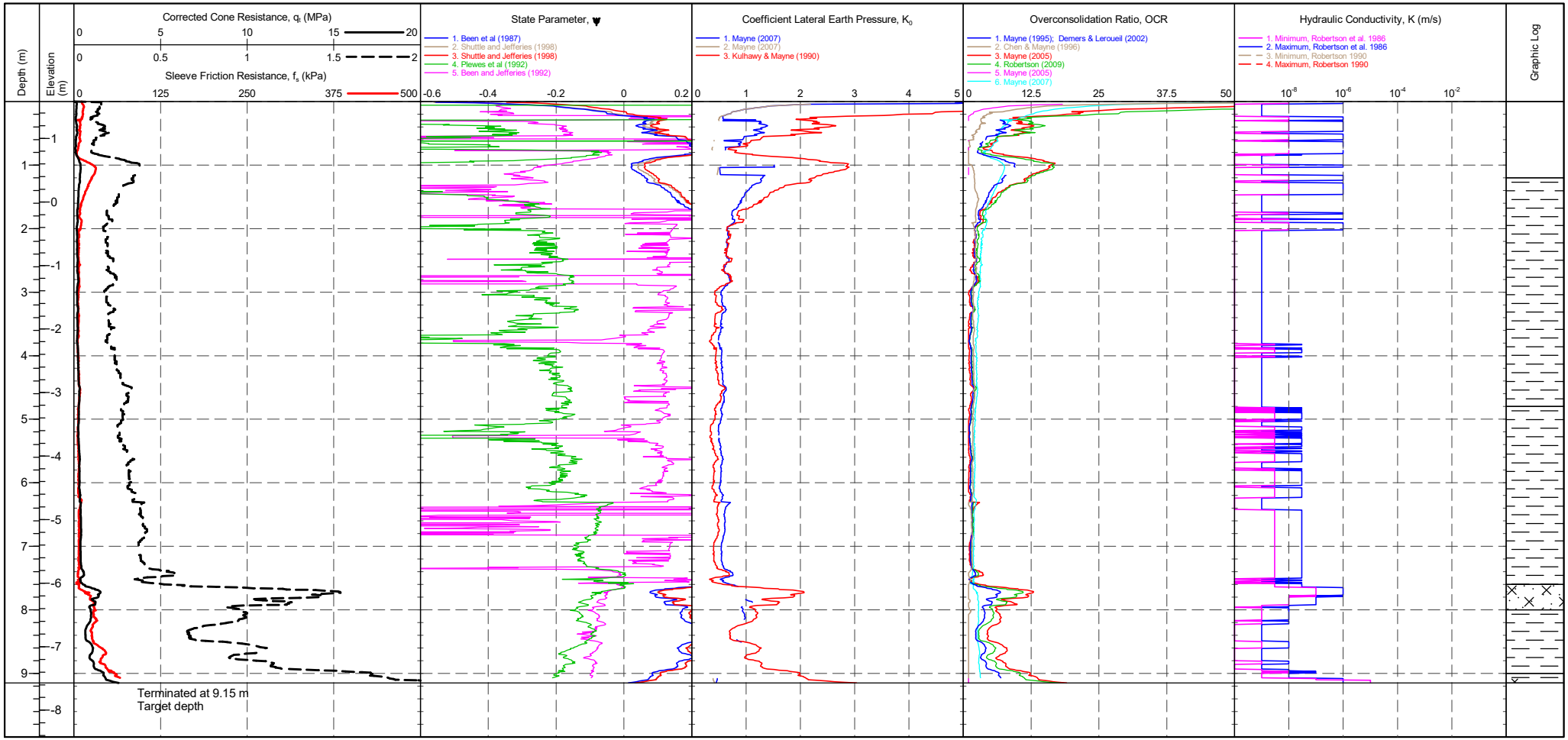
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 04

PointID: **R22-CPT102**

CLIENT : Structural Soils	EASTING : 632217.227 m	Remark:	SHEET : 1 OF 1
PROJECT : Sealink	NORTHING : 163168.684 m	Test refused on total pressure.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.580 m OD		TEST DATE : 18/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



				CPTU ZERO VALUES			
CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	Transducer	Pre	Post	Difference
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Tip	294 mV	296 mV	0.022 MPa
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Sleeve	316 mV	317 mV	0.001 kPa
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Pore Pressure 2	309 mV	305 mV	-0.001 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	X-Y Inclinometer	2529 mV	2478 mV	
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot				

Groundwater Level

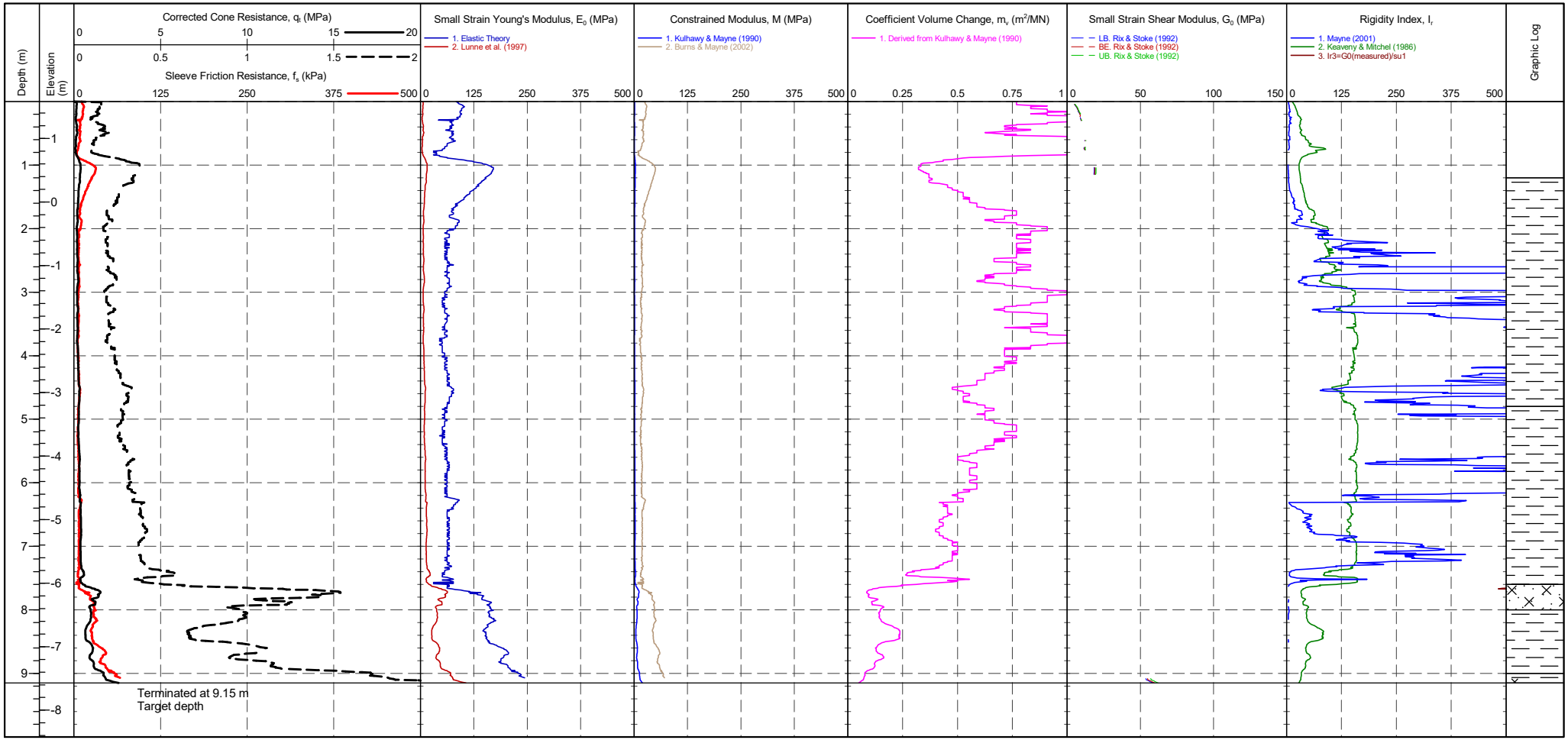
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 05

PointID **R22-CPT102**

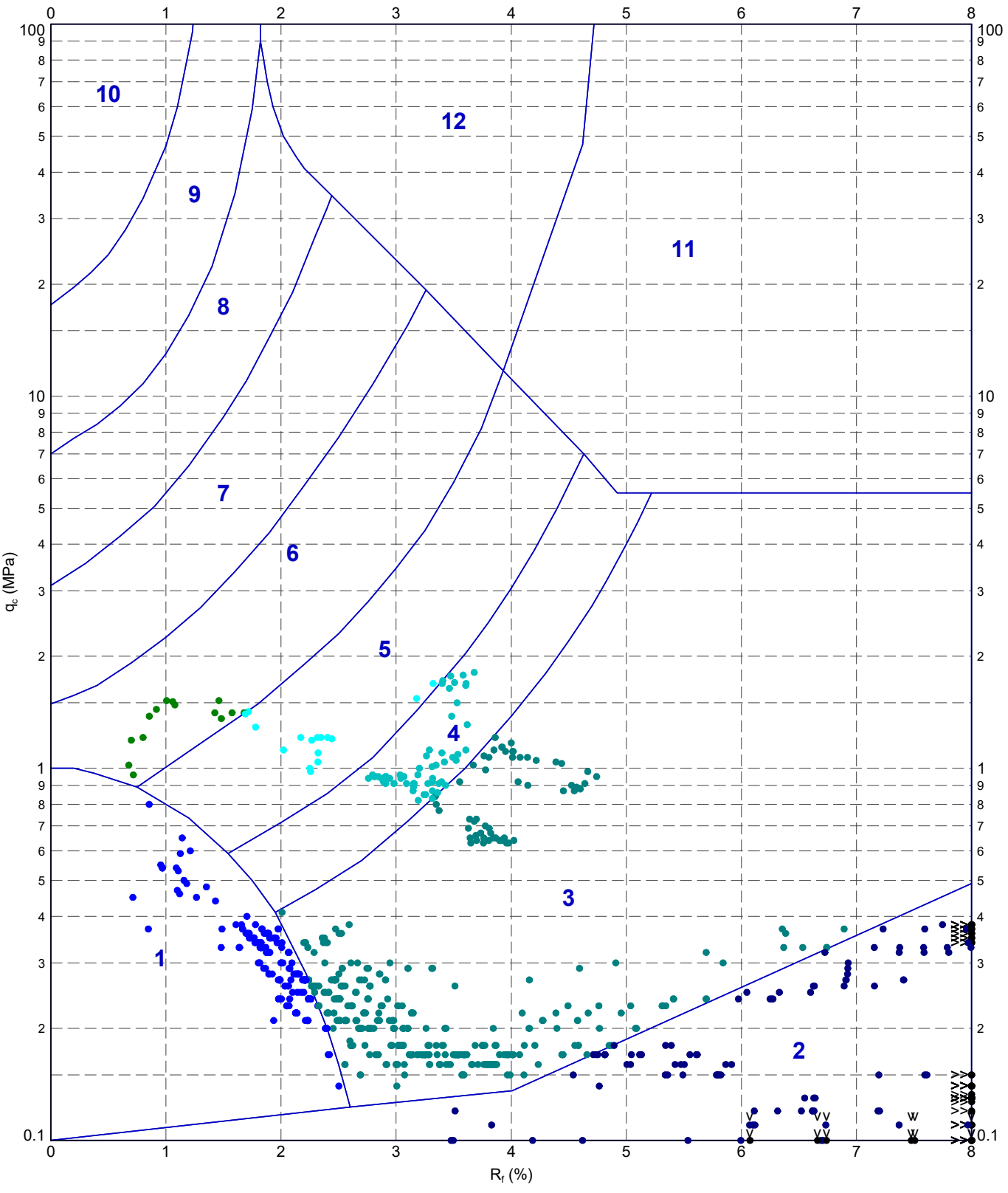
CLIENT : Structural Soils	EASTING : 632217.227 m	Remark:	SHEET : 1 OF 1
PROJECT : Sealink	NORTHING : 163168.684 m	Test refused on total pressure.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.580 m OD		TEST DATE : 18/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES			
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post	Difference
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	294 mV	296 mV	0.022 MPa
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Sleeve	316 mV	317 mV	0.001 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	309 mV	305 mV	-0.001 kPa
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot	X-Y Inclinometer	2529 mV	2478 mV	

Groundwater Level

Dissipation Test



METHOD: Robertson et al. 1986 qc Rf

- 1 - Sensitive fine grained material
- 2 - Organic material
- 3 - CLAY
- 4 - Silty CLAY to CLAY
- 5 - Clayey SILT to silty CLAY
- 6 - Sandy SILT to clayey SILT
- 7 - Silty SAND to sandy SILT
- 8 - SAND to silty SAND
- 9 - SAND
- 10 - Gravelly SAND to SAND
- 11 - Very stiff fine grained
- 12 - SAND to clayey SAND

IN SITU SITE INVESTIGATION

TITLE

Structural Soils
Ian Warne
Kent
Sealink
Robertson et al. 1986 q_c vs. R_f - R22-CPT102

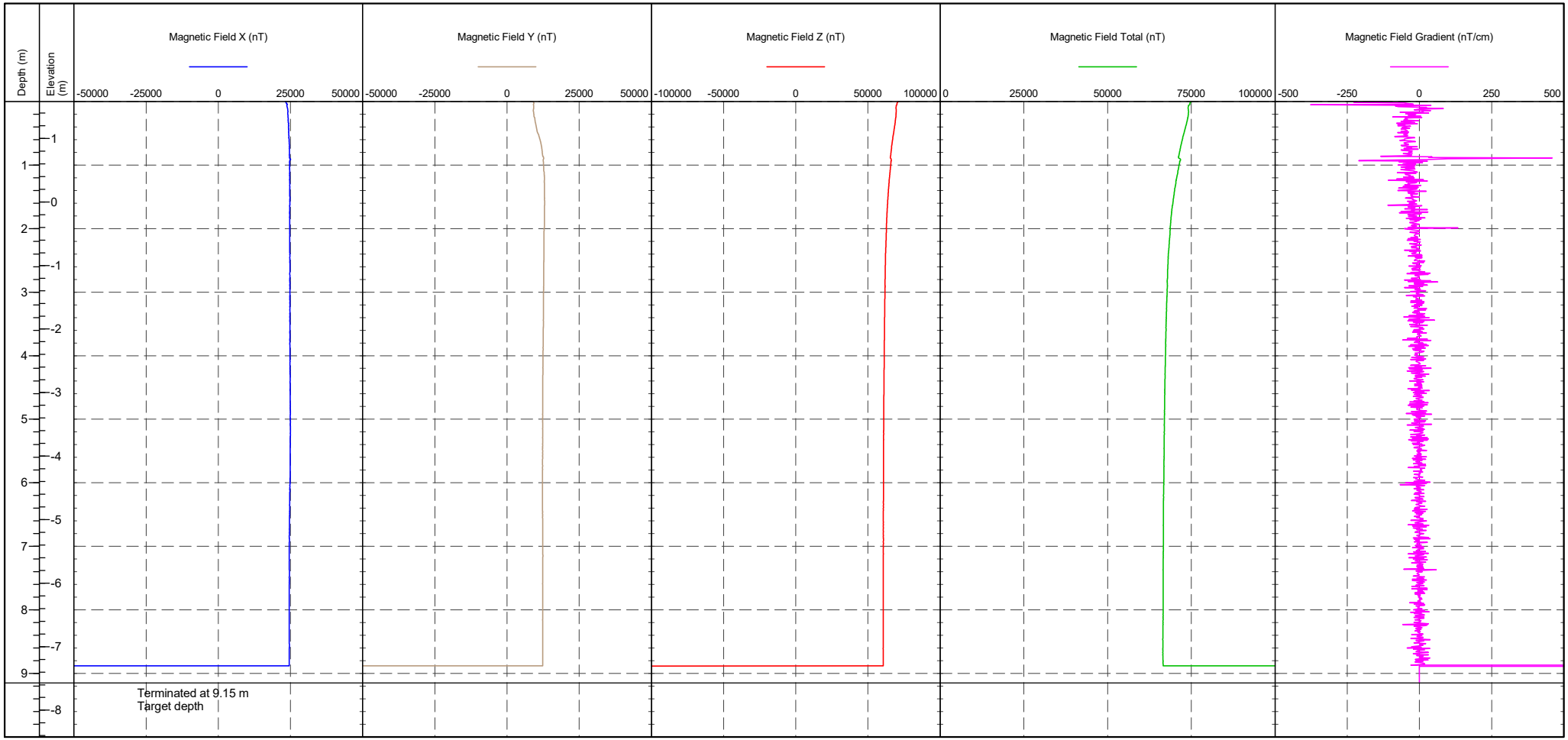
DRAWN	DATE 12/03/2024
CHECKED	DATE 12/03/2024
SCALE Not To Scale	A4
PROJECT No 1230335	FIGURE No

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

MAG LOG

PointID **R22-CPT102**

CLIENT : Structural Soils	EASTING : 632217.227 m	Remark:	SHEET : 1 OF 1
PROJECT : Sealink	NORTHING : 163168.684 m	Test refused on total pressure.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.580 m OD		TEST DATE : 18/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



				CPTU ZERO VALUES			
CONE ID	: S15-CFIP.2145	RIG	: CPT 020 - Pagani	Transducer	Pre	Post	Difference
CONE MODEL	: Subtraction	OPERATOR	: AC/CH	Tip	294 mV	296 mV	0.022 MPa
				Sleeve	316 mV	317 mV	0.001 kPa
				Pore Pressure 2	309 mV	305 mV	-0.001 kPa
				X-Y Inclinometer	2529 mV	2478 mV	

DISSIPATION TEST

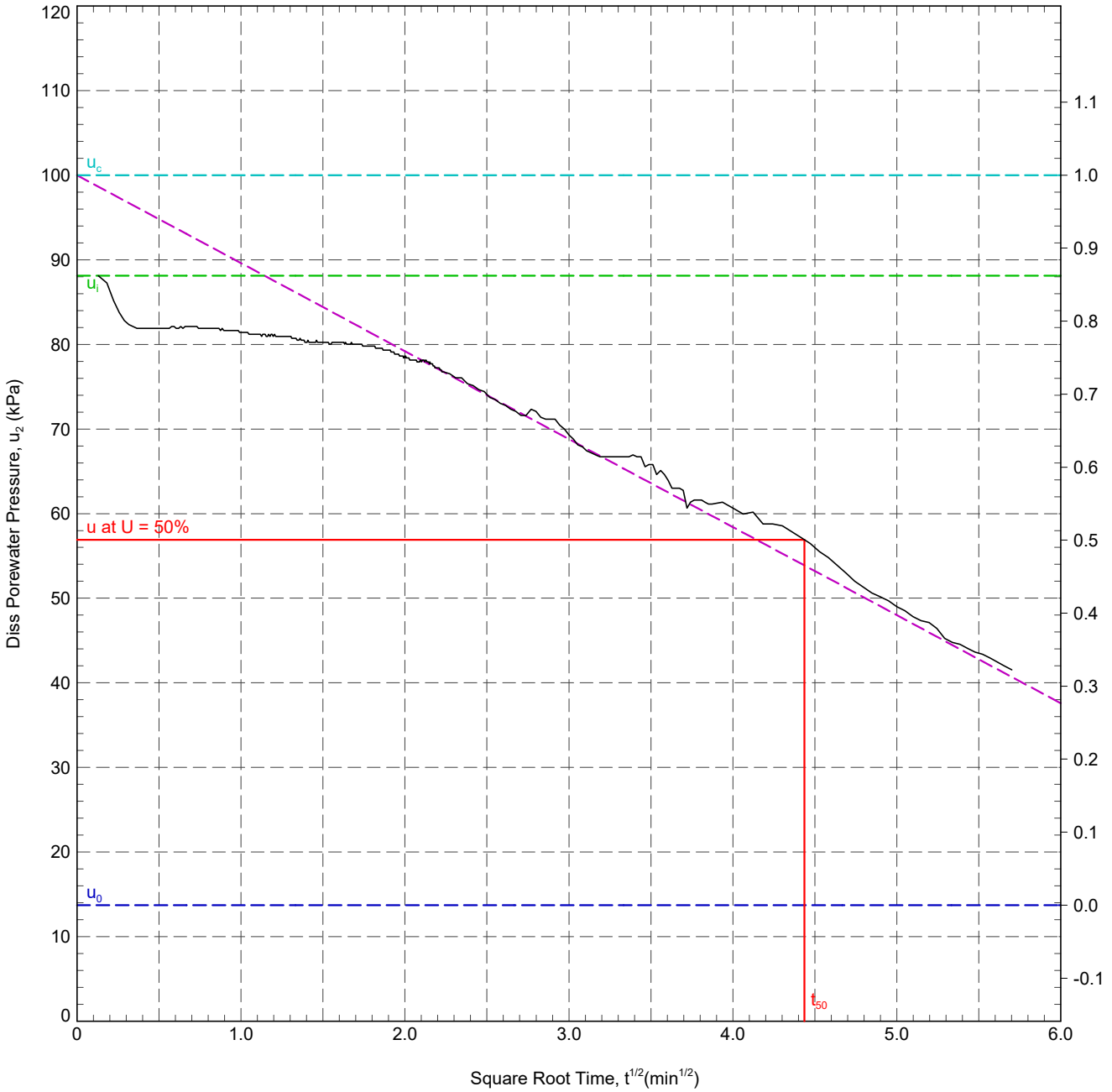
IN SITU SITE INVESTIGATION

Working with: STRUCTURAL SOILS LTD

Test ID

R22-CPT102 - 1.90 m

CLIENT	: Structural Soils	AREA	: Sealink Richborough	SHEET	: 1 OF 1
ENGINEER	: Ian Warne	EASTING	: 632217.2 m	STATUS	: Final
PROJECT	: Sealink	NORTHING	: 163168.7 m	DATE	: 18/10/23
LOCATION	: Kent	COORD. SYS.	:		
PROJECT No.	: 1230335	ELEVATION	: 1.58 m		



In Situ Pore Pressure, u_0:	13.7 kPa	Rigidity Index, I_r:	24.1
Initial Pore Pressure, u_i:	88.1 kPa	Horizontal Coefficient of Consolidation, c_h:	1.70×10^1 m²/yr
Final Pore Pressure:	41.5 kPa	Ratio c_h/c_v:	1.25
Back Extrapolated Pore Pressure, u_c:	100 kPa	Vertical Coefficient of Consolidation, c_v:	1.36×10^1 m²/yr
Degree of Dissipation:	50%		
Dissipation Pressure:	56.9 kPa		
Time for 50% Dissipation, t_{50}:	19.69 min		

RIG	: CPT 020 - Pagani	ANALYSED BY	: ZJ	DATE:	19/10/2023
CONE TYPE	: Subtraction	CHECKED BY	: DW	DATE:	19/10/2023
CONE ID	: S15-CFIP.2145	APPROVED BY	: DW	DATE:	19/10/2023
OPERATOR	: AC				

REMARK
T50 reached. Test OK.

DISSIPATION TEST

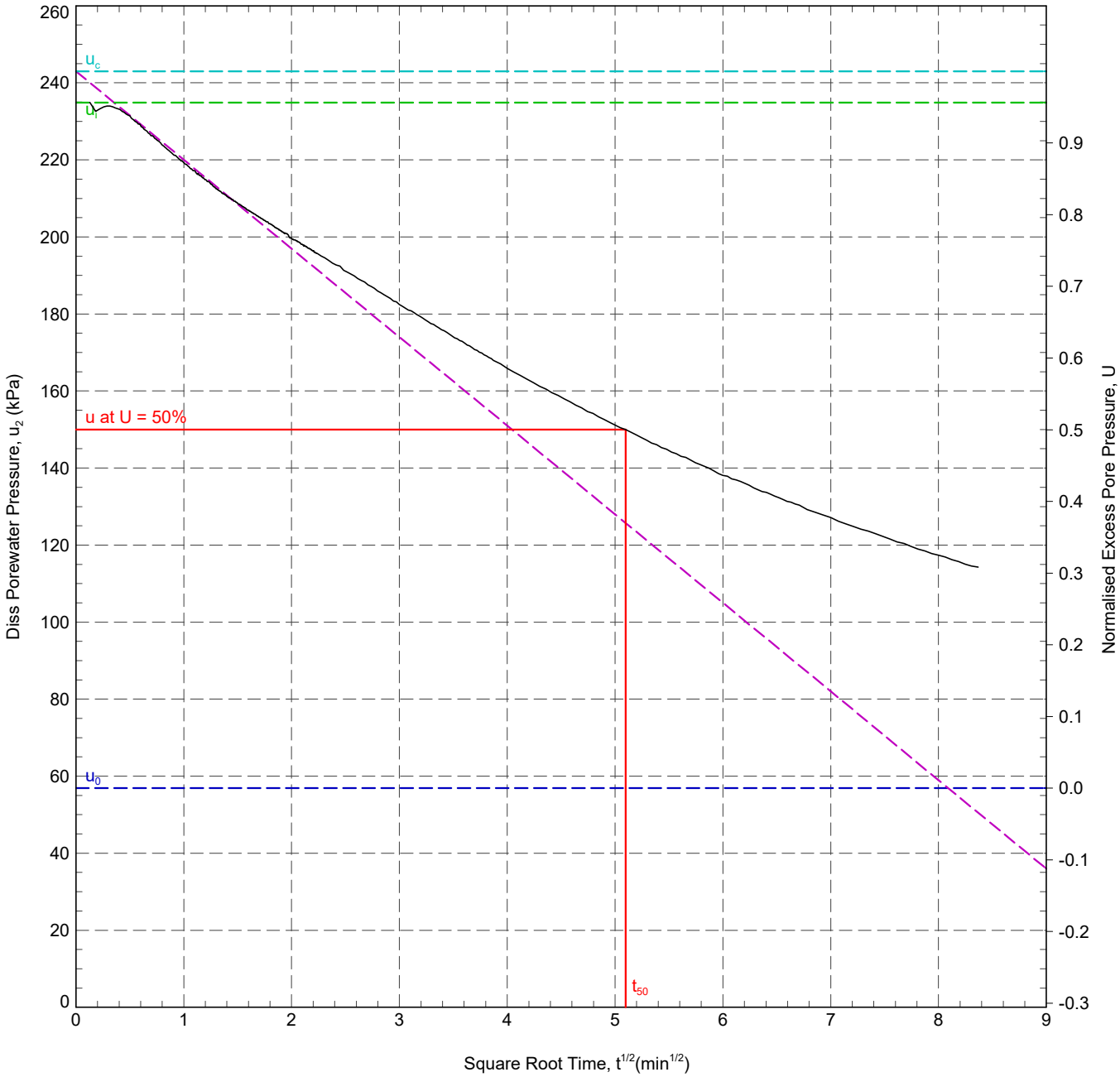
IN SITU SITE INVESTIGATION

Working with: STRUCTURAL SOILS LTD

Test ID

R22-CPT102 - 6.30 m

CLIENT	: Structural Soils	AREA	: Sealink Richborough	SHEET	: 1 OF 1
ENGINEER	: Ian Warne	EASTING	: 632217.2 m	STATUS	: Final
PROJECT	: Sealink	NORTHING	: 163168.7 m	DATE	: 18/10/23
LOCATION	: Kent	COORD. SYS.	:		
PROJECT No.	: 1230335	ELEVATION	: 1.58 m		



In Situ Pore Pressure, u_0:	56.9 kPa	Rigidity Index, I_r:	392.6
Initial Pore Pressure, u_i:	234.9 kPa	Horizontal Coefficient of Consolidation, c_h:	5.19×10^1 m²/yr
Final Pore Pressure:	114.3 kPa	Ratio c_h/c_v:	1.25
Back Extrapolated Pore Pressure, u_c:	243 kPa	Vertical Coefficient of Consolidation, c_v:	4.15×10^1 m²/yr
Degree of Dissipation:	50%		
Dissipation Pressure:	150.0 kPa		
Time for 50% Dissipation, t_{50}:	26.00 min		

RIG	: CPT 020 - Pagani	ANALYSED BY	: ZJ	DATE:	19/10/2023
CONE TYPE	: Subtraction	CHECKED BY	: DW	DATE:	19/10/2023
CONE ID	: S15-CFIP.2145	APPROVED BY	: DW	DATE:	19/10/2023
OPERATOR	: AC				

REMARK

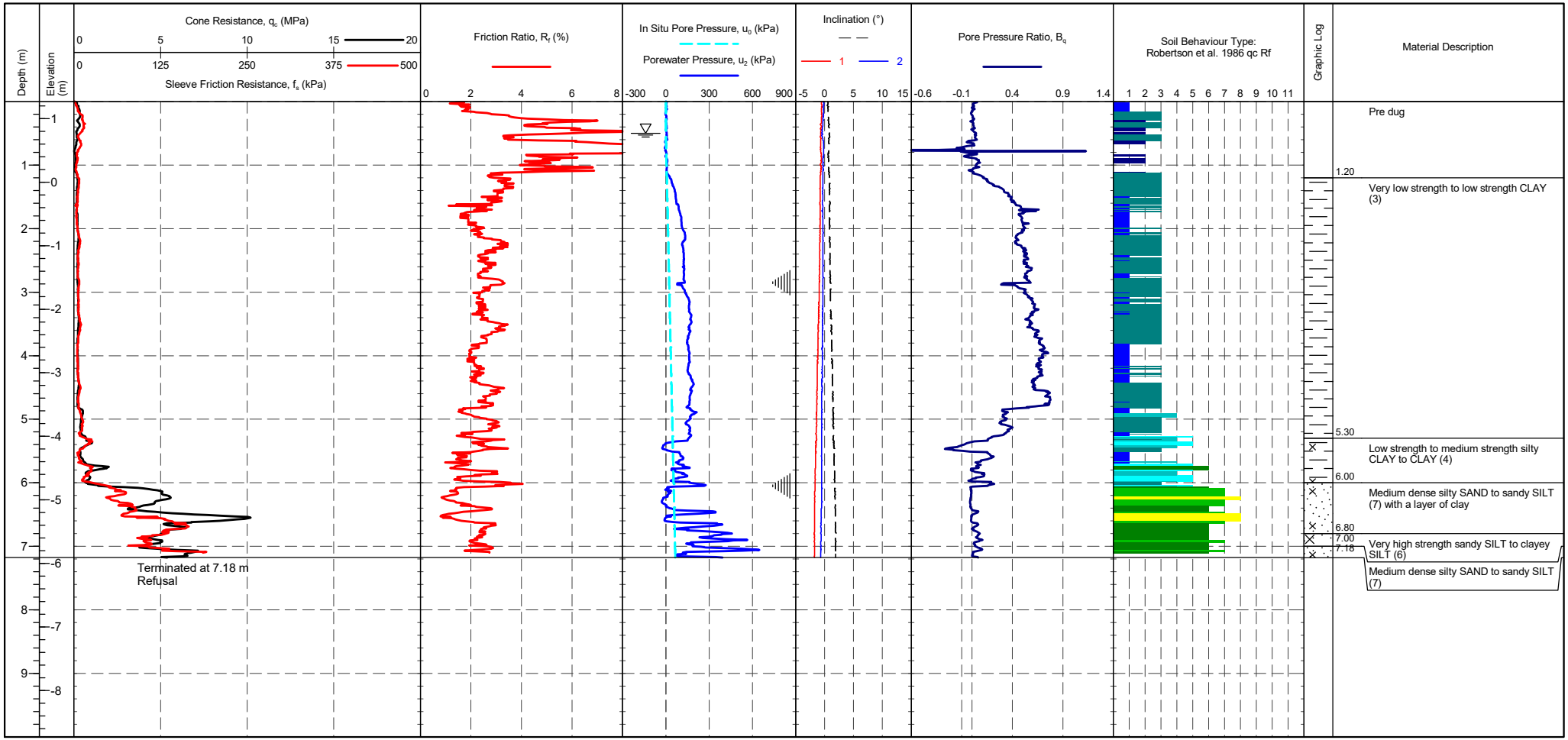
T50 reached. Test OK.

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 01

PointID: **R22-CPT103**

CLIENT : Structural Soils	EASTING : 632174.617 m	Remark:	SHEET : 1 OF 1
PROJECT : Sealink	NORTHING : 162901.757 m	Test refused on total pressure.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.269 m OD		TEST DATE : 16/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Refusal		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2
CALIBRATION DATE	: 12/07/2023	APPLICATION CLASS	: 2
CONE MODEL	: Subtraction	RIG	: CPT 020 - Pagani
CONE AREA	: 15cm^2	OPERATOR	: AC/CH
CONE AREA RATIO	: 0.79	FRICTION REDUCER	: None
FILTER POSITION	: u2	WEATHER	: Sunny & Hot
FILTER TYPE	: HDPE	GROUNDWATER DEPTH	: Assumed for calculation purposes

CPTU ZERO VALUES

Transducer	Pre	Post	Difference
Tip	295 mV	296 mV	0.011 MPa
Sleeve	318 mV	317 mV	-0.001 kPa
Pore Pressure 2	311 mV	312 mV	0 kPa
X-Y Inclinometer	2434 mV	2381 mV	

METHOD: Robertson et al. 1986 qc Rf

1 - Sensitive fine grained material
2 - Organic material
3 - CLAY
4 - Silty CLAY to CLAY
5 - Clayey SILT to silty CLAY
6 - Sandy SILT to clayey SILT
7 - Silty SAND to sandy SILT
8 - SAND to silty SAND
9 - SAND
10 - Gravelly SAND to SAND
11 - Very stiff fine grained
12 - SAND to clayey SAND

Groundwater Level

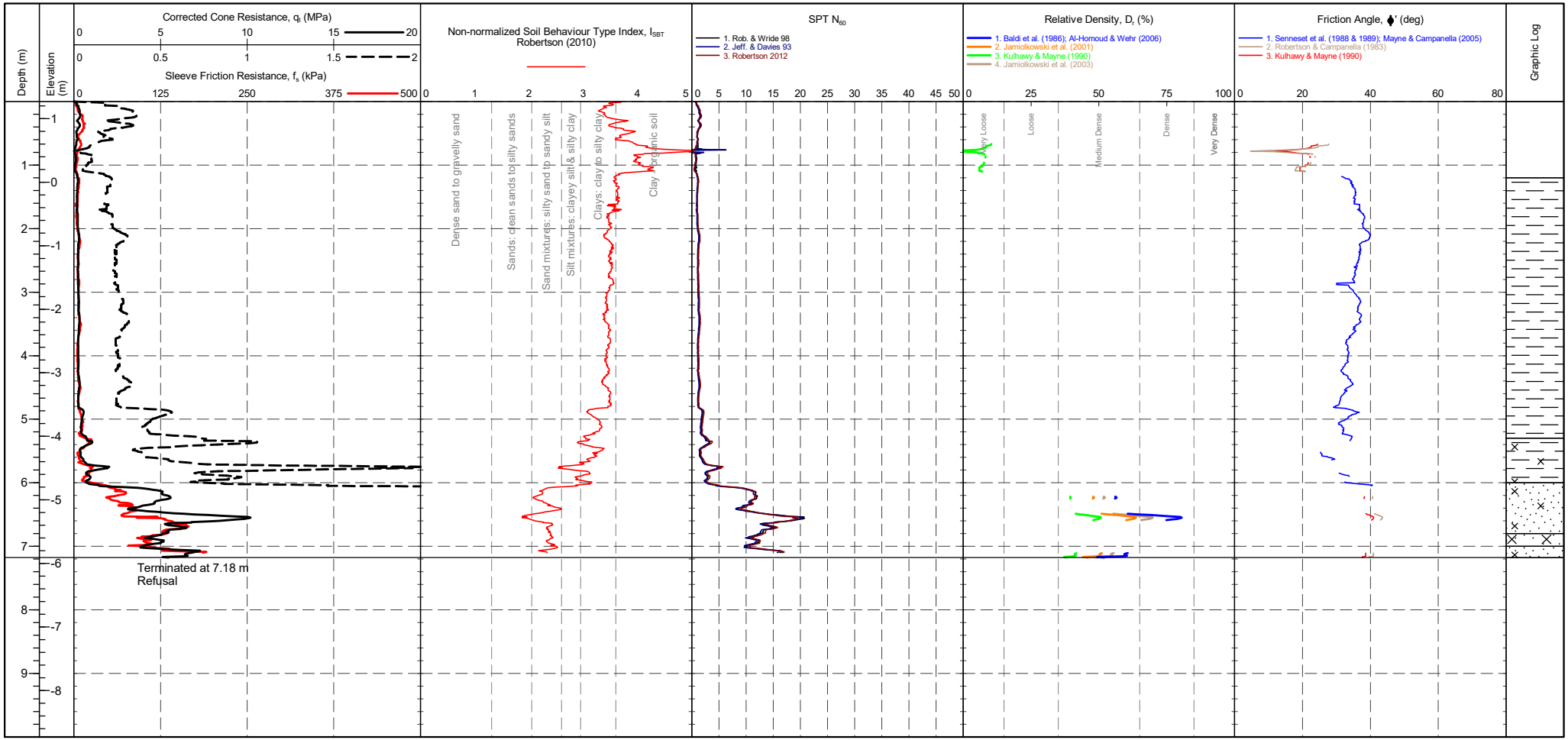
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 02

PointID: **R22-CPT103**

CLIENT : Structural Soils	EASTING : 632174.617 m	Remark:	SHEET : 1 OF 1
PROJECT : Sealink	NORTHING : 162901.757 m	Test refused on total pressure.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.269 m OD		TEST DATE : 16/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Refusal		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES		
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	295 mV	296 mV
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Sleeve	318 mV	317 mV
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	311 mV	312 mV
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot	X-Y Inclinometer	2434 mV	2381 mV

Transducer	Difference
Tip	0.011 MPa
Sleeve	-0.001 kPa
Pore Pressure 2	0 kPa

GRANULAR SOILS (Sands & Gravels) Robertson et al. 1986 Zones 7-10 and Zone 12

Description	SBT Index, Ic	Description	SPT N value, NSPT	Description	Relative Density Dr (%)
Clays	2.95-3.60	Very Loose	0 - 4	Very Loose	0 - 15
Silt mixtures	2.60-2.95	Loose	4 - 10	Loose	15 - 35
Sand mixtures	2.05-2.60	Medium Dense	10 - 30	Medium Dense	35 - 65
Sands	1.31-2.05	Dense	30 - 50	Dense	65 - 85
Gravelly sand	<1.31	Very Dense	>50	Very Dense	>85

Groundwater Level

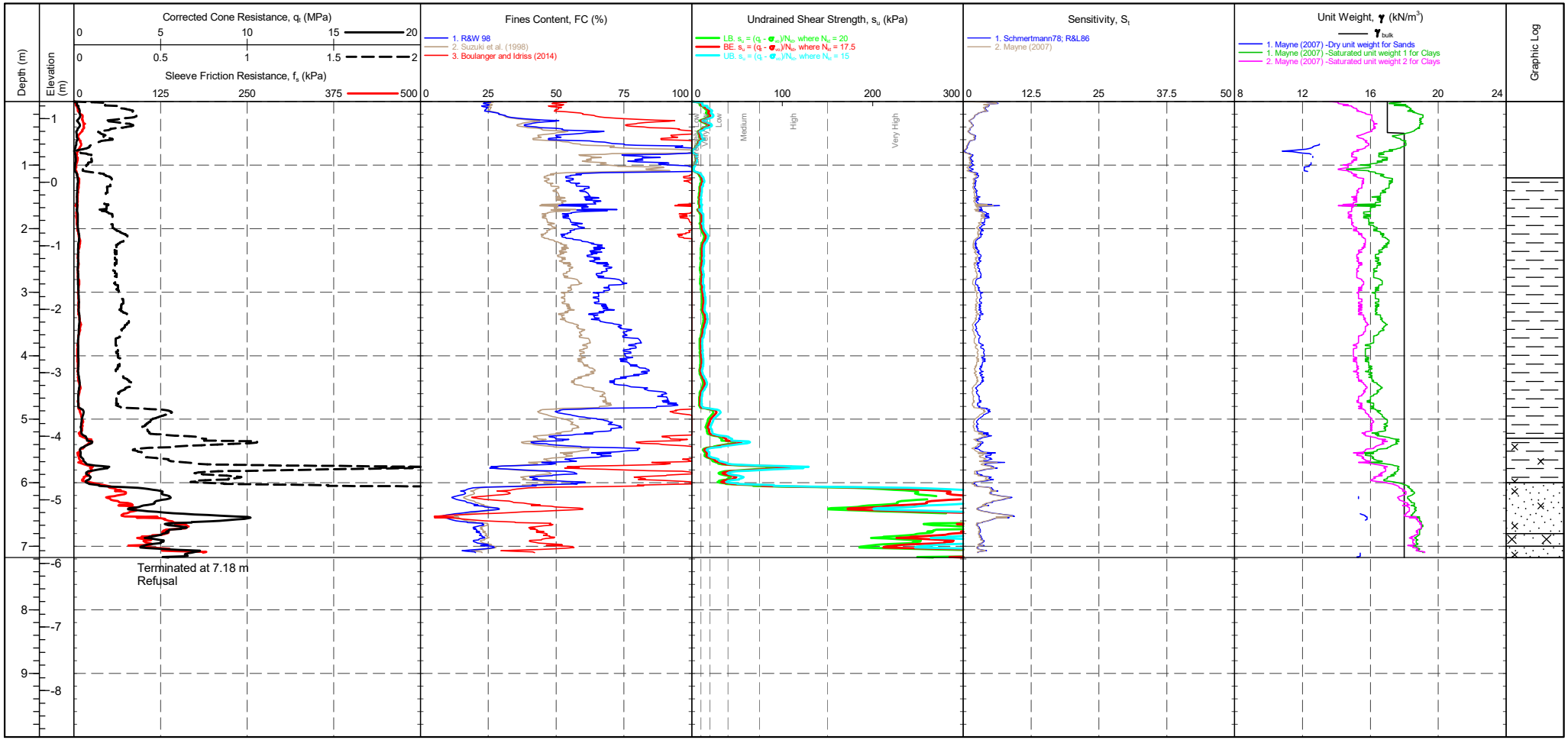
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 03

PointID: **R22-CPT103**

CLIENT : Structural Soils	EASTING : 632174.617 m	Remark: Test refused on total pressure.	SHEET : 1 OF 1
PROJECT : Sealink	NORTHING : 162901.757 m		STATUS : Final
LOCATION : Kent	ELEVATION : 1.269 m OD		TEST DATE : 16/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Refusal		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES			
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post	Difference
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	295 mV	296 mV	0.011 MPa
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Sleeve	318 mV	317 mV	-0.001 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	311 mV	312 mV	0 kPa
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot	X-Y Inclinometer	2434 mV	2381 mV	

COHESIVE SOILS (Clays & Silts) Robertson et al. 1986 Zones 1-6 and Zone 11

Term based on measurement	su (kPa)	Term based on measurement	su (kPa)
Extremely low strength	<10	Medium strength	40-75
Very low strength	10-20	High strength	75-150
Low strength	20-40	Very high strength	150-300
		Extremely high strength	>300

Groundwater Level

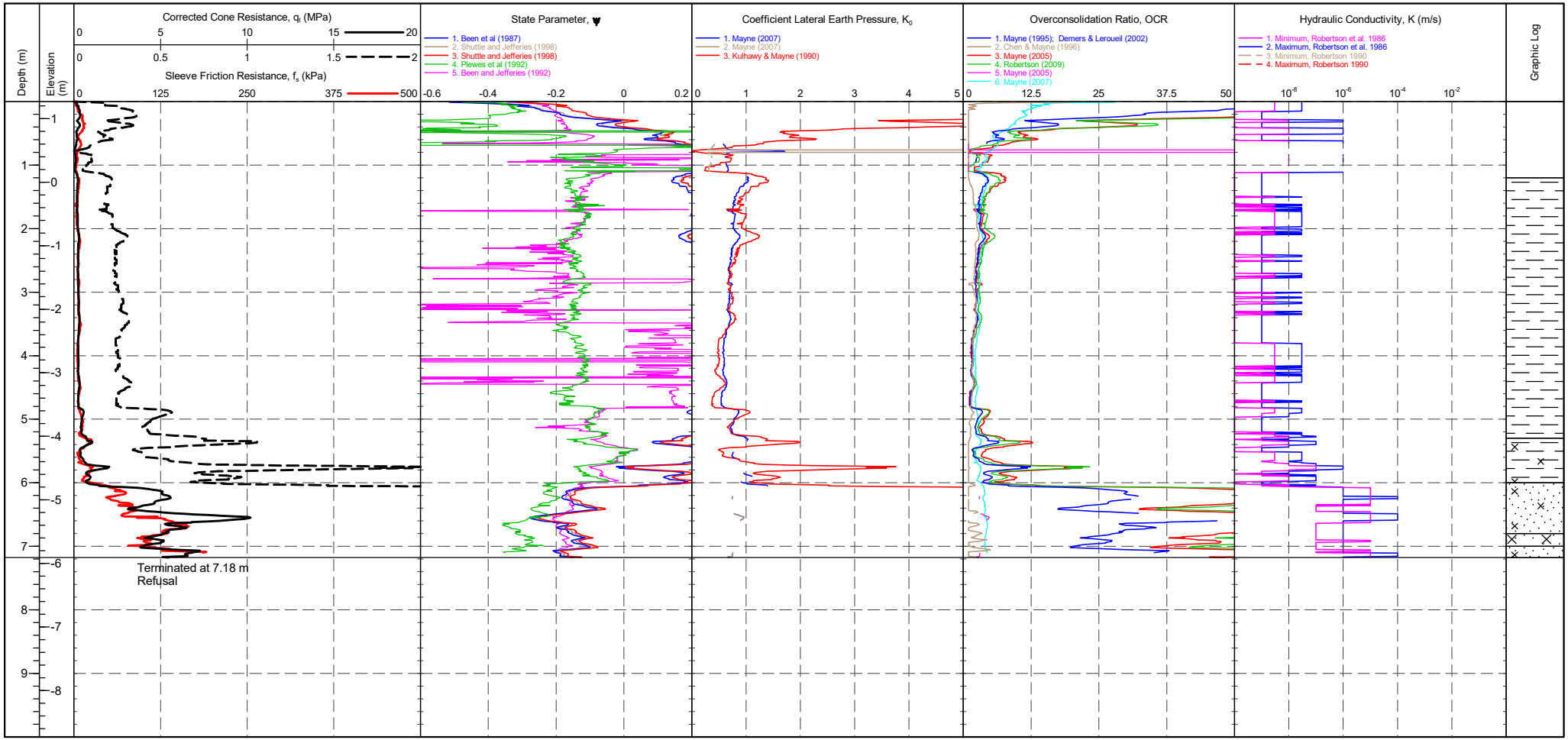
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 04

PointID: **R22-CPT103**

CLIENT : Structural Soils	EASTING : 632174.617 m	Remark:	SHEET : 1 OF 1
PROJECT : Sealink	NORTHING : 162901.757 m	Test refused on total pressure.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.269 m OD		TEST DATE : 16/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Refusal		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES			
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post	Difference
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	295 mV	296 mV	0.011 MPa
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Sleeve	318 mV	317 mV	-0.001 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	311 mV	312 mV	0 kPa
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot	X-Y Inclinometer	2434 mV	2381 mV	

Groundwater Level

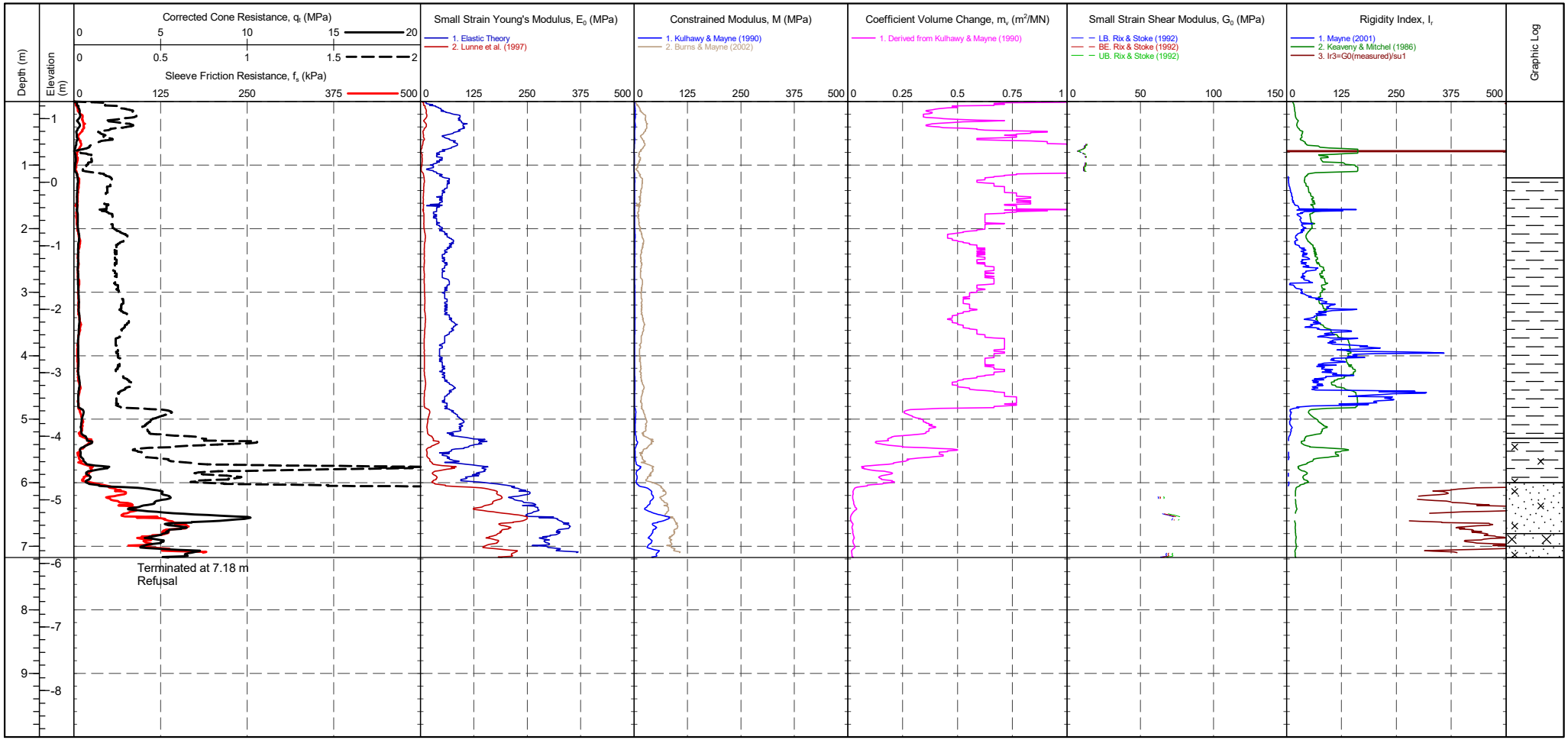
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 05

PointID **R22-CPT103**

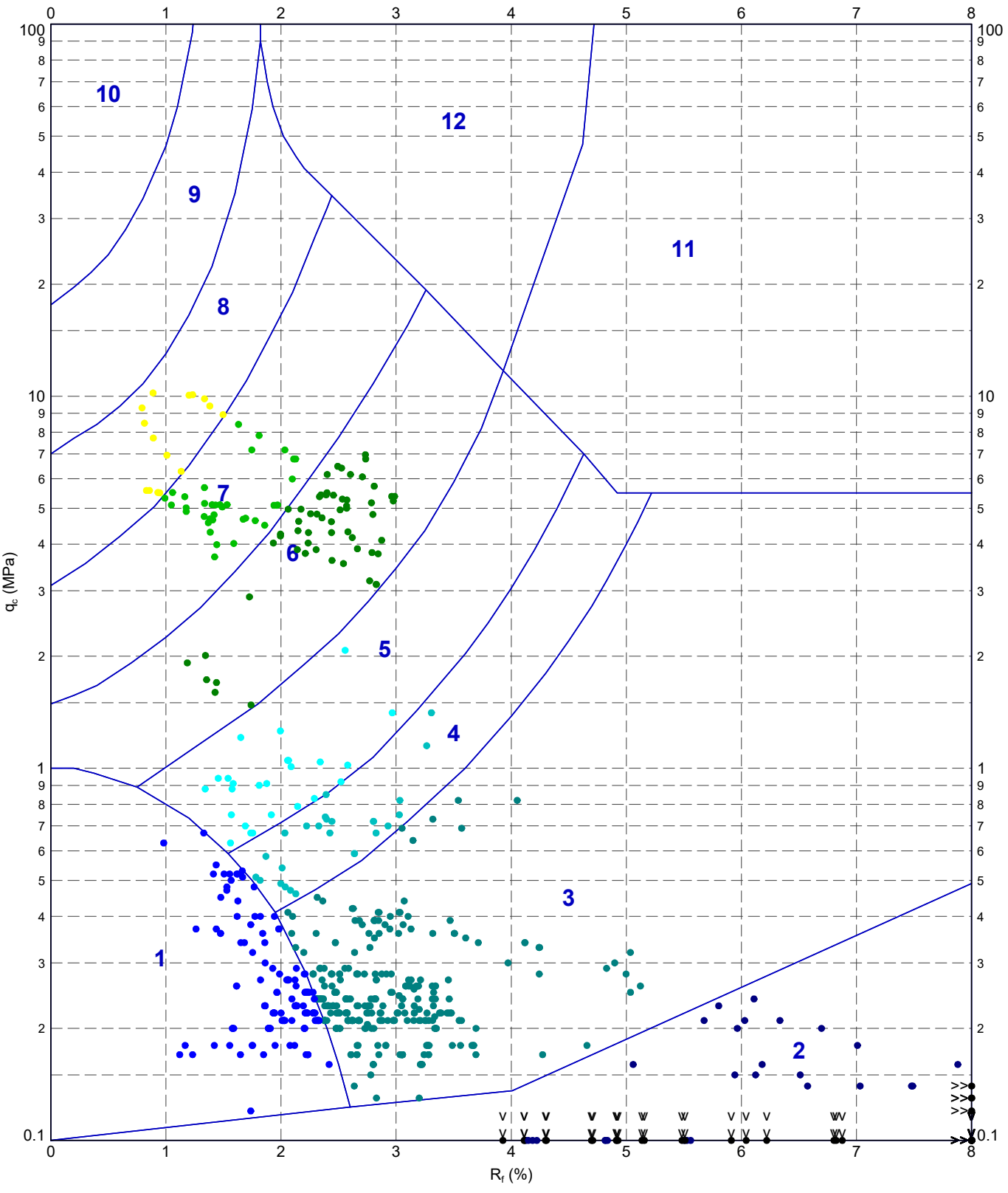
CLIENT : Structural Soils	EASTING : 632174.617 m	Remark:	SHEET : 1 OF 1
PROJECT : Sealink	NORTHING : 162901.757 m	Test refused on total pressure.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.269 m OD		TEST DATE : 16/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Refusal		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES			
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post	Difference
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	295 mV	296 mV	0.011 MPa
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Sleeve	318 mV	317 mV	-0.001 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	311 mV	312 mV	0 kPa
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot	X-Y Inclinometer	2434 mV	2381 mV	

Groundwater Level

Dissipation Test



METHOD: Robertson et al. 1986 qc Rf

- 1 - Sensitive fine grained material
- 2 - Organic material
- 3 - CLAY
- 4 - Silty CLAY to CLAY
- 5 - Clayey SILT to silty CLAY
- 6 - Sandy SILT to clayey SILT
- 7 - Silty SAND to sandy SILT
- 8 - SAND to silty SAND
- 9 - SAND
- 10 - Gravelly SAND to SAND
- 11 - Very stiff fine grained
- 12 - SAND to clayey SAND

IN SITU SITE INVESTIGATION

TITLE

Structural Soils
Ian Warne
Kent
Sealink
Robertson et al. 1986 q_c vs. R_f - R22-CPT103

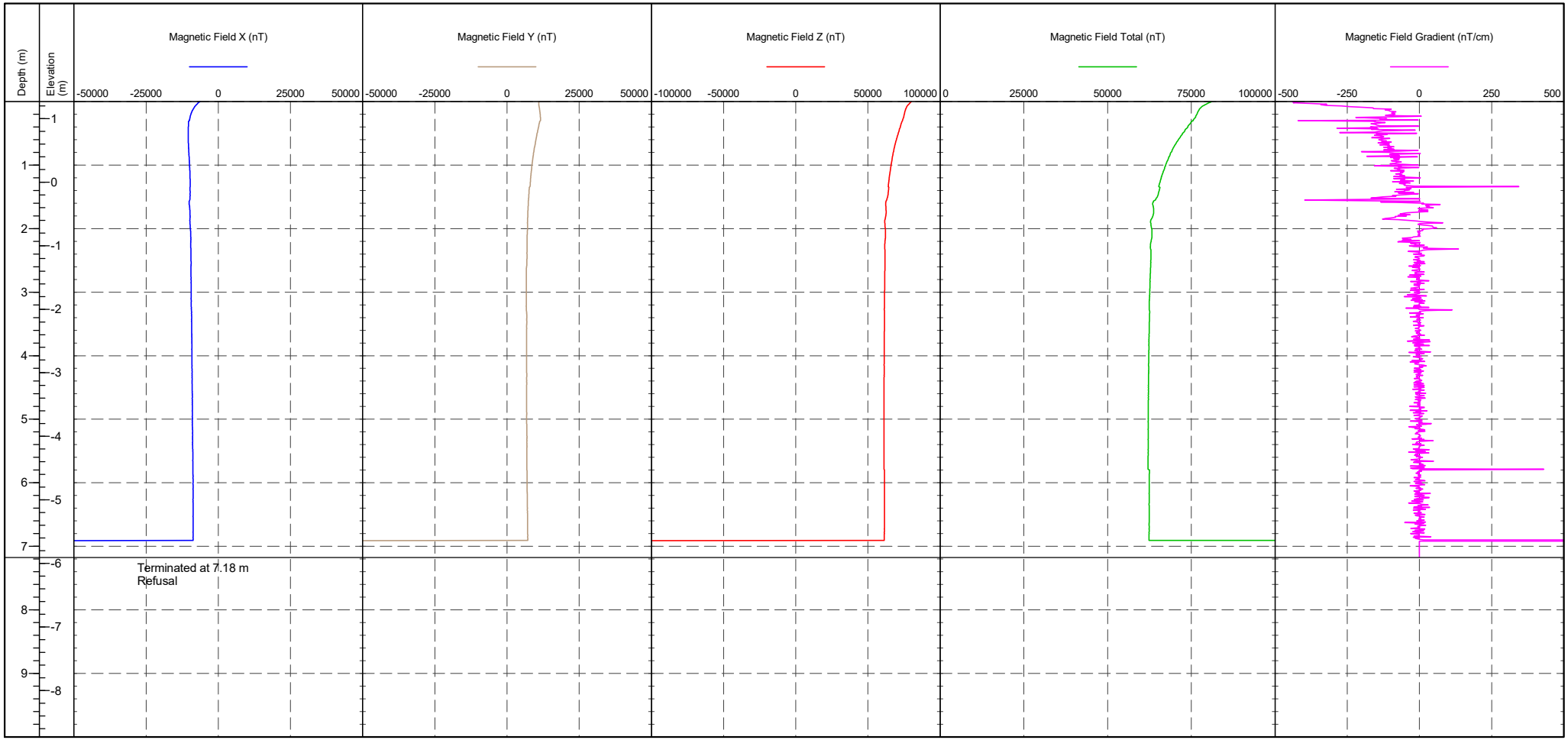
DRAWN	DATE 12/03/2024
CHECKED	DATE 12/03/2024
SCALE Not To Scale	A4
PROJECT No 1230335	FIGURE No

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

MAG LOG

PointID **R22-CPT103**

CLIENT : Structural Soils	EASTING : 632174.617 m	Remark:	SHEET : 1 OF 1
PROJECT : Sealink	NORTHING : 162901.757 m	Test refused on total pressure.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.269 m OD		TEST DATE : 16/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Refusal		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	RIG	: CPT 020 - Pagani	CPTU ZERO VALUES		
CONE MODEL	: Subtraction	OPERATOR	: AC/CH	Transducer	Pre	Post	Difference
				Tip	295 mV	296 mV	0.011 MPa
				Sleeve	318 mV	317 mV	-0.001 kPa
				Pore Pressure 2	311 mV	312 mV	0 kPa
				X-Y Inclinometer	2434 mV	2381 mV	

DISSIPATION TEST

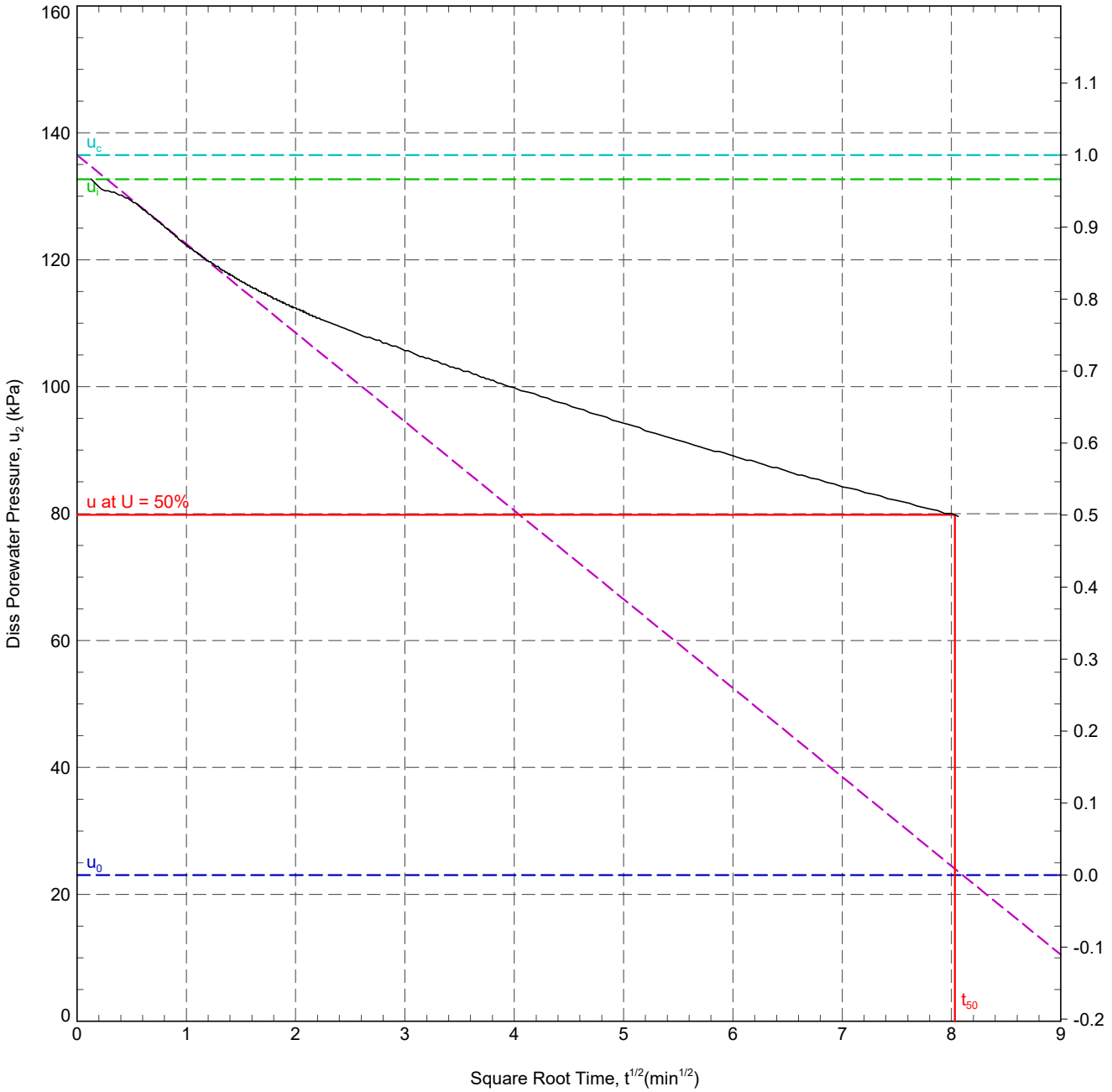
IN SITU SITE INVESTIGATION

Working with: STRUCTURAL SOILS LTD

Test ID

R22-CPT103 - 2.85 m

CLIENT	: Structural Soils	AREA	: Sealink Richborough	SHEET	: 1 OF 1
ENGINEER	: Ian Warne	EASTING	: 632174.6 m	STATUS	: Final
PROJECT	: Sealink	NORTHING	: 162901.8 m	DATE	: 16/10/23
LOCATION	: Kent	COORD. SYS.	:		
PROJECT No.	: 1230335	ELEVATION	: 1.27 m		



In Situ Pore Pressure, u_0:	23.1 kPa	Rigidity Index, I_r:	59.3
Initial Pore Pressure, u_i:	132.7 kPa	Horizontal Coefficient of Consolidation, c_h:	8.13x10^0 m^2/yr
Final Pore Pressure:	79.6 kPa	Ratio c_h/c_v:	1.25
Back Extrapolated Pore Pressure, u_c:	136.5 kPa	Vertical Coefficient of Consolidation, c_v:	6.51x10^0 m^2/yr
Degree of Dissipation:	50%		
Dissipation Pressure:	79.8 kPa		
Time for 50% Dissipation, t_{50}:	64.50 min		

RIG	: CPT 020 - Pagani	ANALYSED BY	: ZJ	DATE:	17/10/2023
CONE TYPE	: Subtraction	CHECKED BY	: DW	DATE:	17/10/2023
CONE ID	: S15-CFIP.2145	APPROVED BY	: DW	DATE:	17/10/2023
OPERATOR	: AC				

REMARK

T50 reached. Test OK.

DISSIPATION TEST

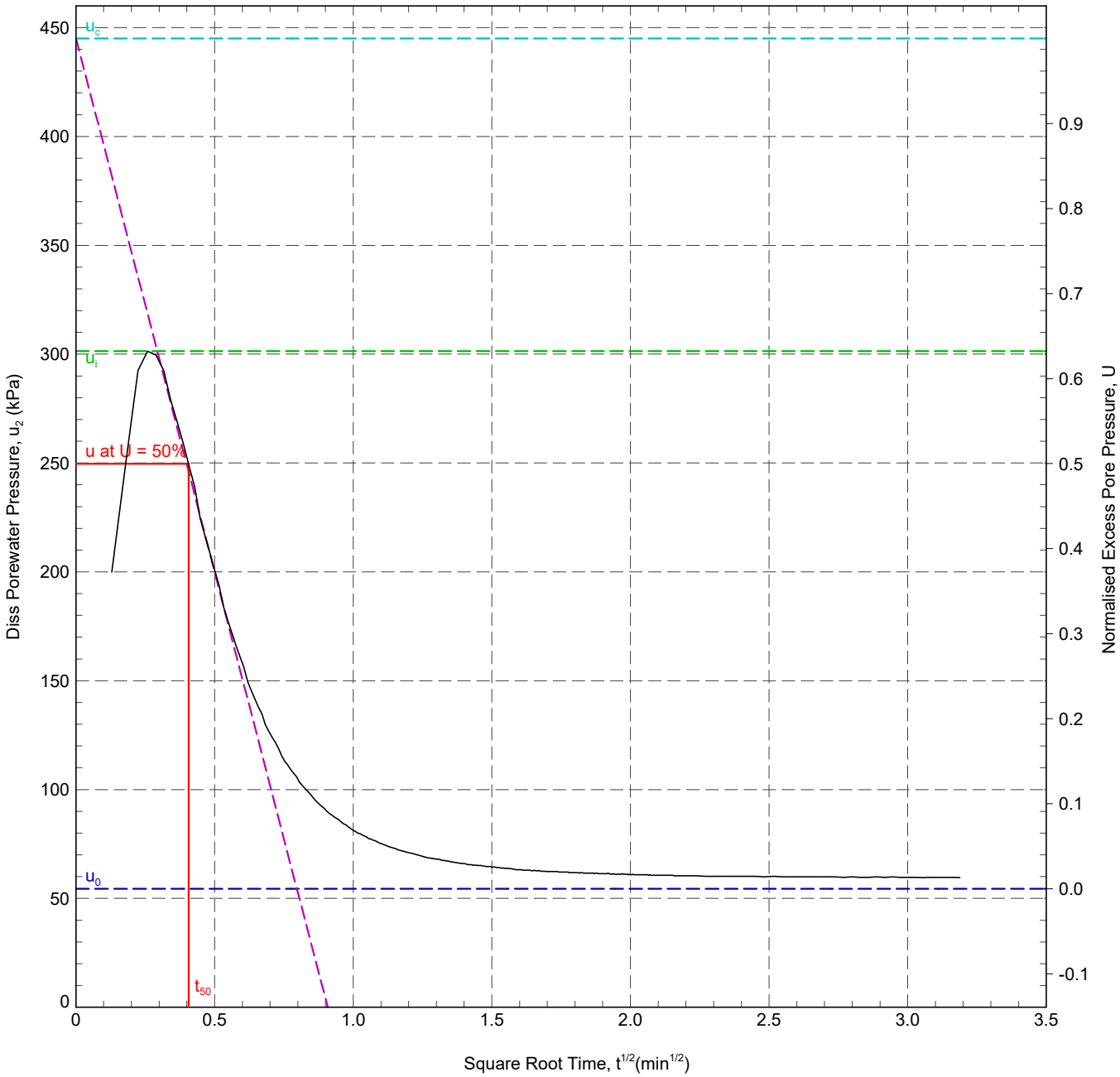
IN SITU SITE INVESTIGATION

Working with: STRUCTURAL SOILS LTD

Test ID

R22-CPT103 - 6.05 m

CLIENT	: Structural Soils	AREA	: Sealink Richborough	SHEET	: 1 OF 1
ENGINEER	: Ian Warne	EASTING	: 632174.6 m	STATUS	: Final
PROJECT	: Sealink	NORTHING	: 162901.8 m	DATE	: 16/10/23
LOCATION	: Kent	COORD. SYS.	:		
PROJECT No.	: 1230335	ELEVATION	: 1.27 m		



In Situ Pore Pressure, u_0:	54.5 kPa	Rigidity Index, I_r:	4.1
Initial Pore Pressure, u_i:	301.4 kPa	Horizontal Coefficient of Consolidation, c_h:	8.37×10^2 m^2/yr
Final Pore Pressure:	59.5 kPa		
Back Extrapolated Pore Pressure, u_c:	445 kPa		
Degree of Dissipation:	50%		
Dissipation Pressure:	249.6 kPa		
Time for 50% Dissipation, t_{50}:	0.17 min		

RIG	: CPT 020 - Pagani	ANALYSED BY	: ZJ	DATE:	17/10/2023
CONE TYPE	: Subtraction	CHECKED BY	: DW	DATE:	17/10/2023
CONE ID	: S15-CFIP.2145	APPROVED BY	: DW	DATE:	17/10/2023
OPERATOR	: AC				

REMARK

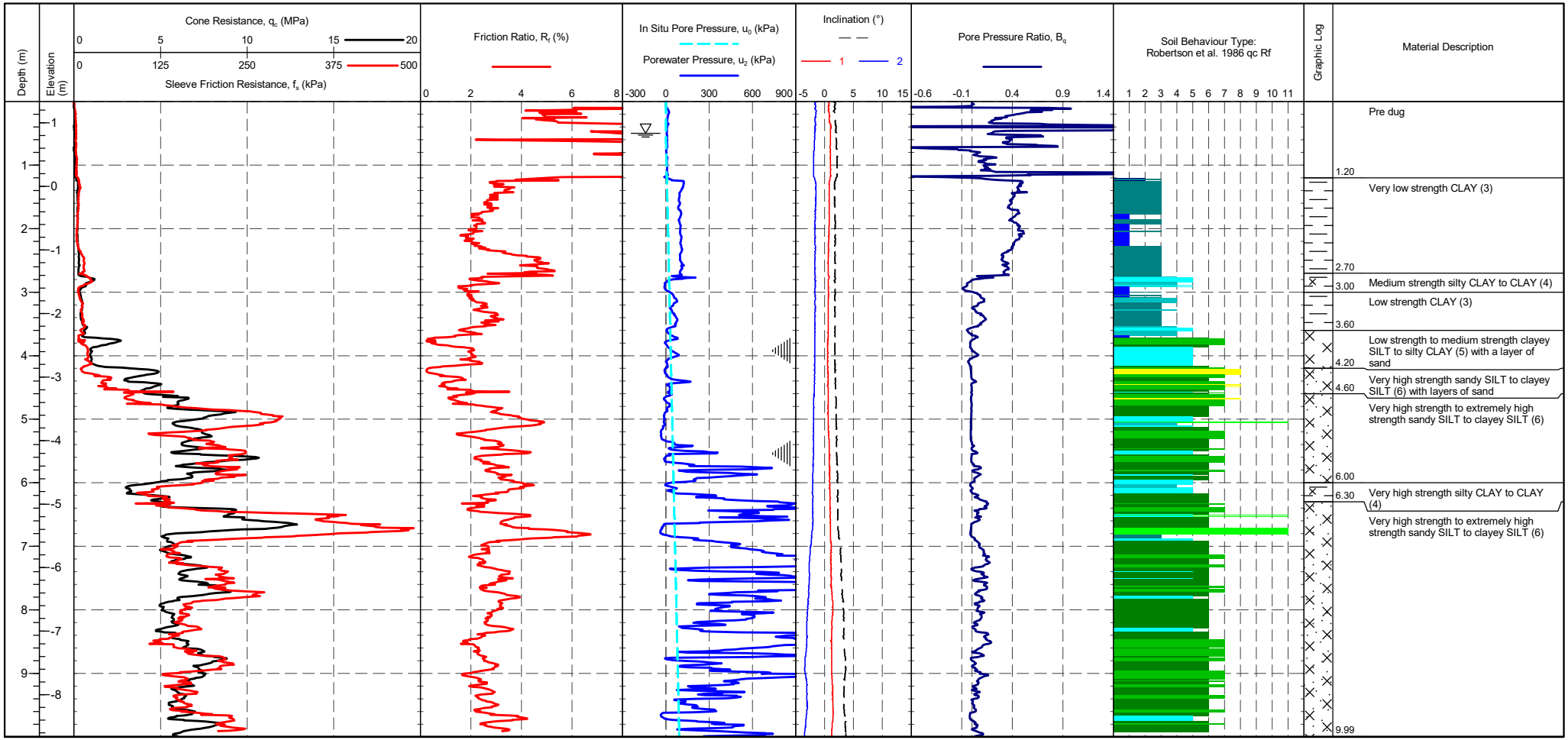
T50 reached. Quick dissipation t50=9.9s. Test OK.

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 01

PointID: **R22-CPT104**

CLIENT : Structural Soils	EASTING : 632506.224 m	Remark:	SHEET : 1 OF 2
PROJECT : Sealink	NORTHING : 162966.367 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.336 m OD		TEST DATE : 23/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2
CALIBRATION DATE	: 12/07/2023	APPLICATION CLASS	: 2
CONE MODEL	: Subtraction	RIG	: CPT 020 - Pagani
CONE AREA	: 15cm^2	OPERATOR	: DG
CONE AREA RATIO	: 0.79	FRICTION REDUCER	: None
FILTER POSITION	: u2	WEATHER	: Overcast & Cold
FILTER TYPE	: HDPE	GROUNDWATER DEPTH	: Assumed for calculation purposes

CPTU ZERO VALUES

Transducer	Pre	Post	Difference
Tip	298 mV	295 mV	-0.033 MPa
Sleeve	320 mV	317 mV	-0.002 kPa
Pore Pressure 2	319 mV	307 mV	-0.003 kPa
X-Y Inclinometer	2578 mV	2578 mV	

METHOD: Robertson et al. 1986 qc Rf

1 - Sensitive fine grained material
2 - Organic material
3 - CLAY
4 - Silty CLAY to CLAY
5 - Clayey SILT to silty CLAY
6 - Sandy SILT to clayey SILT
7 - Silty SAND to sandy SILT
8 - SAND to silty SAND
9 - SAND
10 - Gravelly SAND to SAND
11 - Very stiff fine grained
12 - SAND to clayey SAND

Groundwater Level

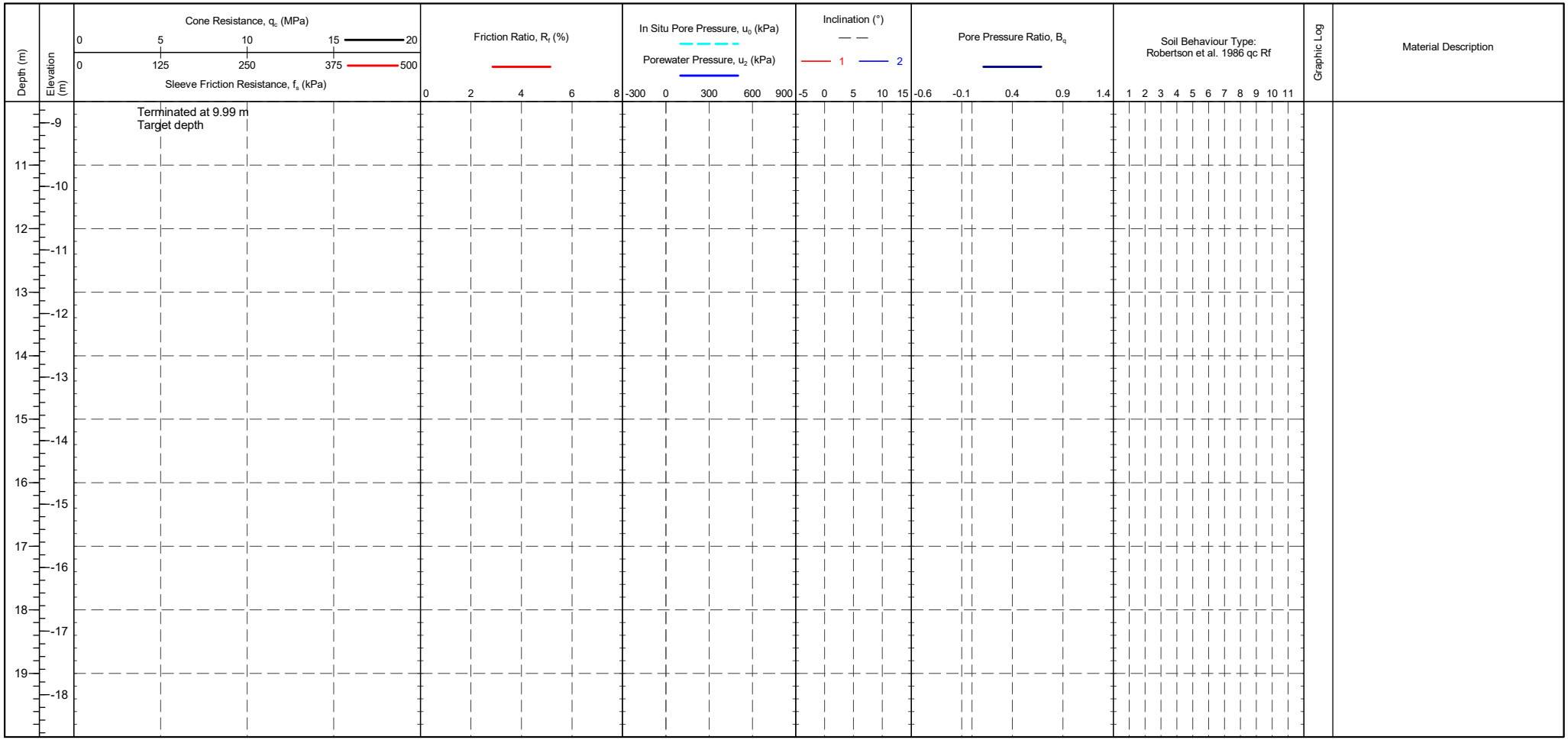
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 01

PointID: **R22-CPT104**

CLIENT : Structural Soils	EASTING : 632506.224 m	Remark:	SHEET : 2 OF 2
PROJECT : Sealink	NORTHING : 162966.367 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.336 m OD		TEST DATE : 23/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2			
CALIBRATION DATE	: 12/07/2023	APPLICATION CLASS	: 2			
CONE MODEL	: Subtraction	RIG	: CPT 020 - Pagani			
CONE AREA	: 15cm^2	OPERATOR	: DG			
CONE AREA RATIO	: 0.79	FRICTION REDUCER	: None			
FILTER POSITION	: u2	WEATHER	: Overcast & Cold			
FILTER TYPE	: HDPE	GROUNDWATER DEPTH	: Assumed for calculation purposes.			

CPTU ZERO VALUES

Transducer	Pre	Post	Difference
Tip	298 mV	295 mV	-0.033 MPa
Sleeve	320 mV	317 mV	-0.002 kPa
Pore Pressure 2	319 mV	307 mV	-0.003 kPa
X-Y Inclinometer	2578 mV	2578 mV	

METHOD: Robertson et al. 1986 qc Rf

1 - Sensitive fine grained material
2 - Organic material
3 - CLAY
4 - Silty CLAY to CLAY
5 - Clayey SILT to silty CLAY
6 - Sandy SILT to clayey SILT
7 - Silty SAND to sandy SILT
8 - SAND to silty SAND
9 - SAND
10 - Gravelly SAND to SAND
11 - Very stiff fine grained
12 - SAND to clayey SAND

Groundwater Level

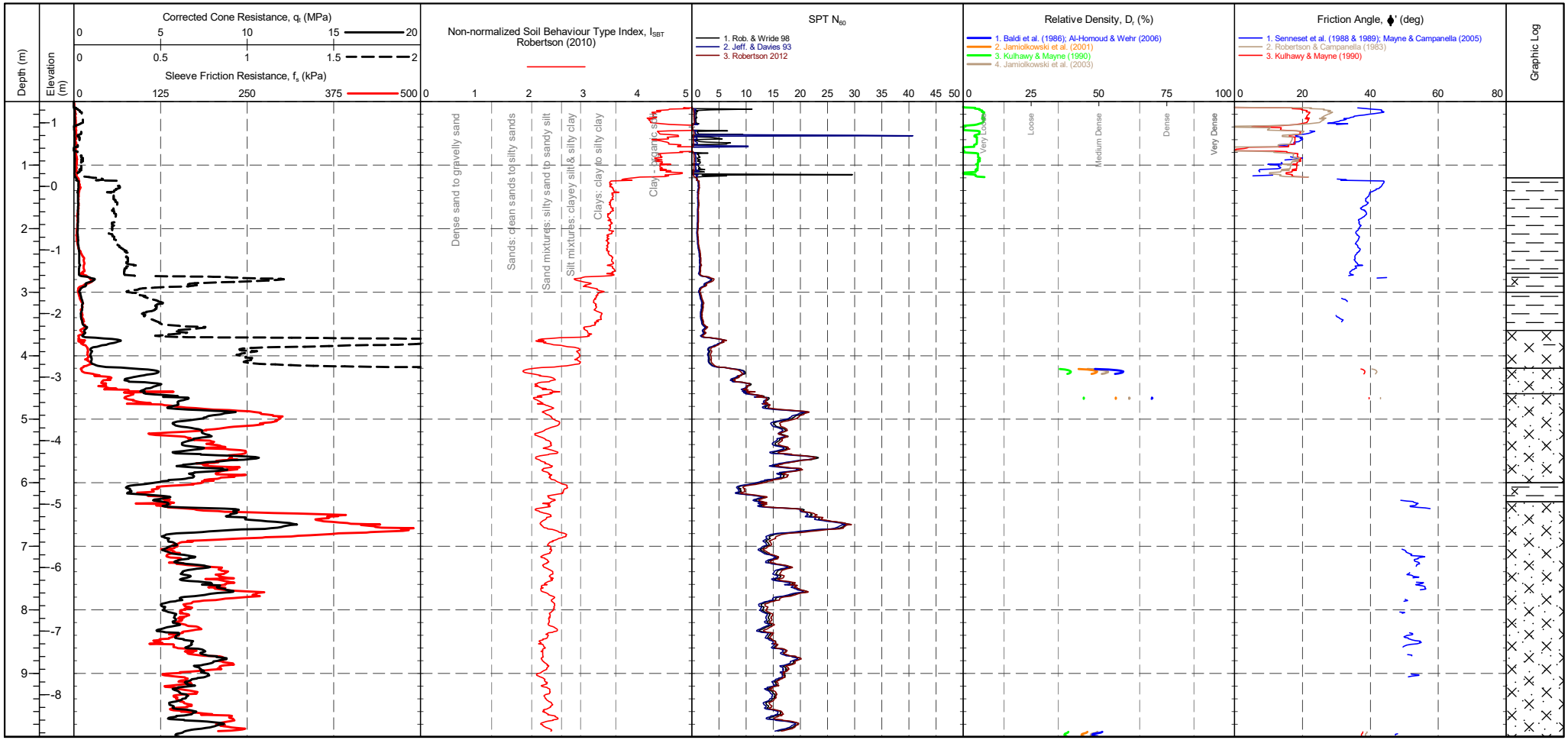
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 02

PointID: **R22-CPT104**

CLIENT : Structural Soils	EASTING : 632506.224 m	Remark:	SHEET : 1 OF 2
PROJECT : Sealink	NORTHING : 162966.367 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.336 m OD		TEST DATE : 23/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2		
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2		
CONE AREA	: 15cm²	RIG	: CPT 020 - Pagani		
CONE AREA RATIO	: 0.79	OPERATOR	: DG		
FILTER POSITION	: u2	FRICTION REDUCER	: None		
FILTER TYPE	: HDPE	WEATHER	: Overcast & Cold		

CPTU ZERO VALUES

Transducer	Pre	Post	Difference
Tip	298 mV	295 mV	-0.033 MPa
Sleeve	320 mV	317 mV	-0.002 kPa
Pore Pressure 2	319 mV	307 mV	-0.003 kPa
X-Y Inclinometer	2578 mV	2578 mV	

GRANULAR SOILS (Sands & Gravels) Robertson et al. 1986 Zones 7-10 and Zone 12

Description	SBT Index, Ic	Description	SPT N value, NSPT	Description	Relative Density Dr (%)
Clays	2.95-3.60	Very Loose	0 - 4	Very Loose	0 - 15
Silt mixtures	2.60-2.95	Loose	4 - 10	Loose	15 - 35
Sand mixtures	2.05-2.60	Medium Dense	10 - 30	Medium Dense	35 - 65
Sands	1.31-2.05	Dense	30 - 50	Dense	65 - 85
Gravelly sand	<1.31	Very Dense	>50	Very Dense	>85

Groundwater Level

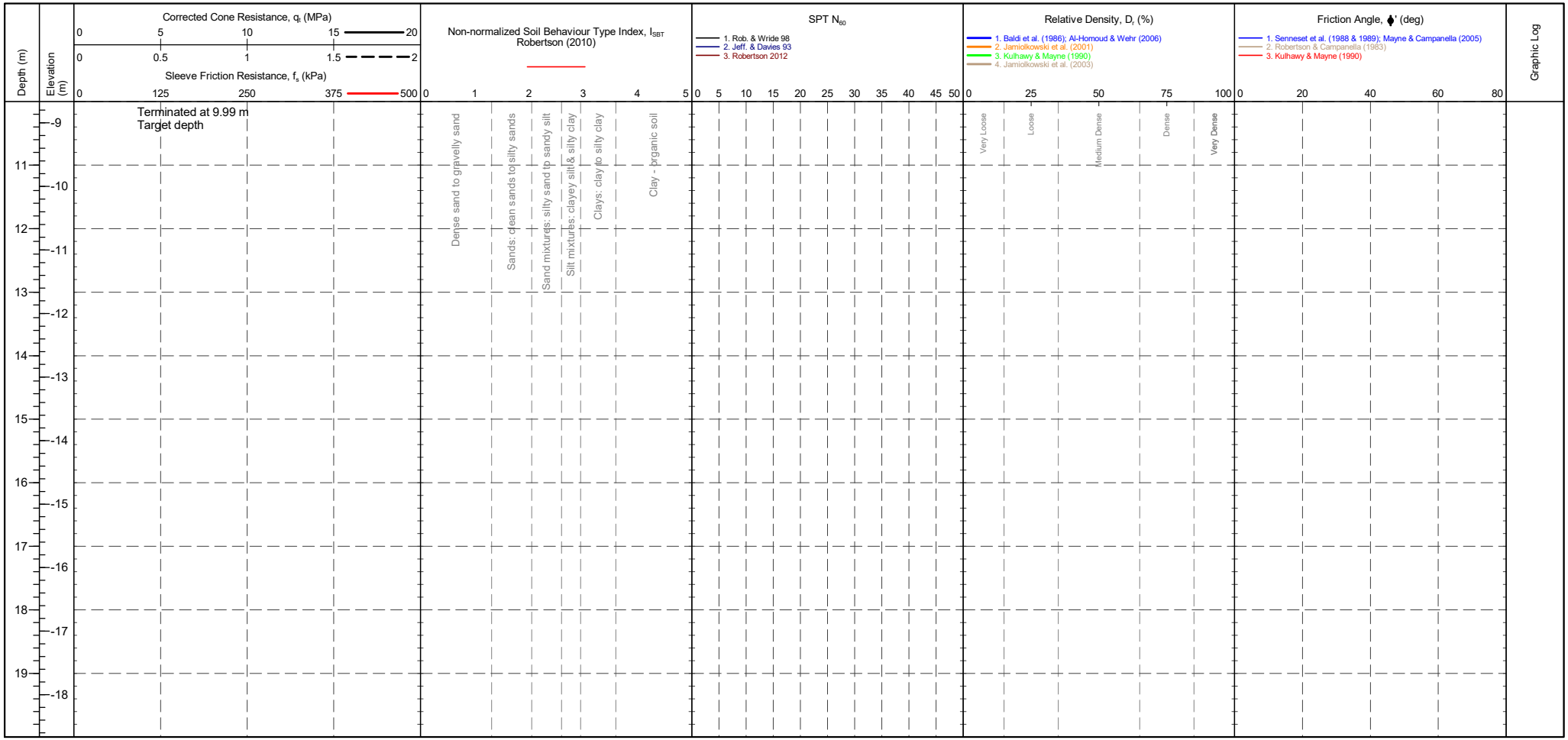
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 02

PointID: **R22-CPT104**

CLIENT : Structural Soils	EASTING : 632506.224 m	Remark:	SHEET : 2 OF 2
PROJECT : Sealink	NORTHING : 162966.367 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.336 m OD		TEST DATE : 23/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES		
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	298 mV	295 mV
CONE AREA RATIO	: 0.79	OPERATOR	: DG	Sleeve	320 mV	317 mV
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	319 mV	307 mV
FILTER TYPE	: HDPE	WEATHER	: Overcast & Cold	X-Y Inclinometer	2578 mV	2578 mV

Transducer	Difference
Tip	-0.033 MPa
Sleeve	-0.002 kPa
Pore Pressure 2	-0.003 kPa
X-Y Inclinometer	

GRANULAR SOILS (Sands & Gravels) Robertson et al. 1986 Zones 7-10 and Zone 12

Description	SBT Index, Ic
Clays	2.95-3.60
Silt mixtures	2.60-2.95
Sand mixtures	2.05-2.60
Sands	1.31-2.05
Gravelly sand	<1.31

Description	SPT N value, NSPT
Very Loose	0 - 4
Loose	4 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	>50

Description	Relative Density Dr (%)
Very Loose	0 - 15
Loose	15 - 35
Medium Dense	35 - 65
Dense	65 - 85
Very Dense	>85

Groundwater Level

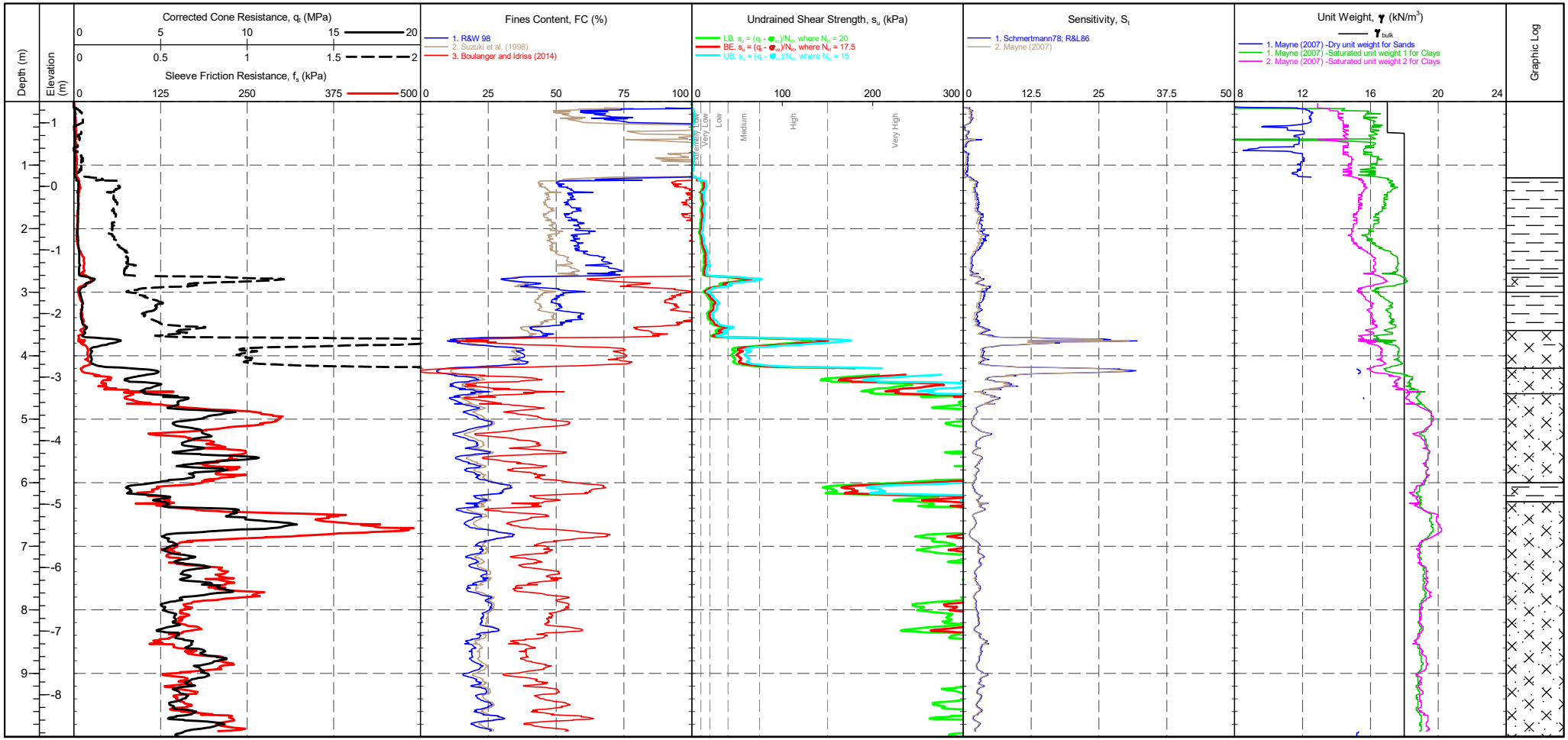
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 03

PointID: **R22-CPT104**

CLIENT : Structural Soils	EASTING : 632506.224 m	Remark:	SHEET : 1 OF 2
PROJECT : Sealink	NORTHING : 162966.367 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.336 m OD		TEST DATE : 23/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES			
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post	Difference
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	298 mV	295 mV	-0.033 MPa
CONE AREA RATIO	: 0.79	OPERATOR	: DG	Sleeve	320 mV	317 mV	-0.002 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	319 mV	307 mV	-0.003 kPa
FILTER TYPE	: HDPE	WEATHER	: Overcast & Cold	X-Y Inclinometer	2578 mV	2578 mV	

COHESIVE SOILS (Clays & Silts) Robertson et al. 1986 Zones 1-6 and Zone 11

Term based on measurement	su (kPa)	Term based on measurement	su (kPa)
Extremely low strength	<10	Medium strength	40-75
Very low strength	10-20	High strength	75-150
Low strength	20-40	Very high strength	150-300
		Extremely high strength	>300

Groundwater Level

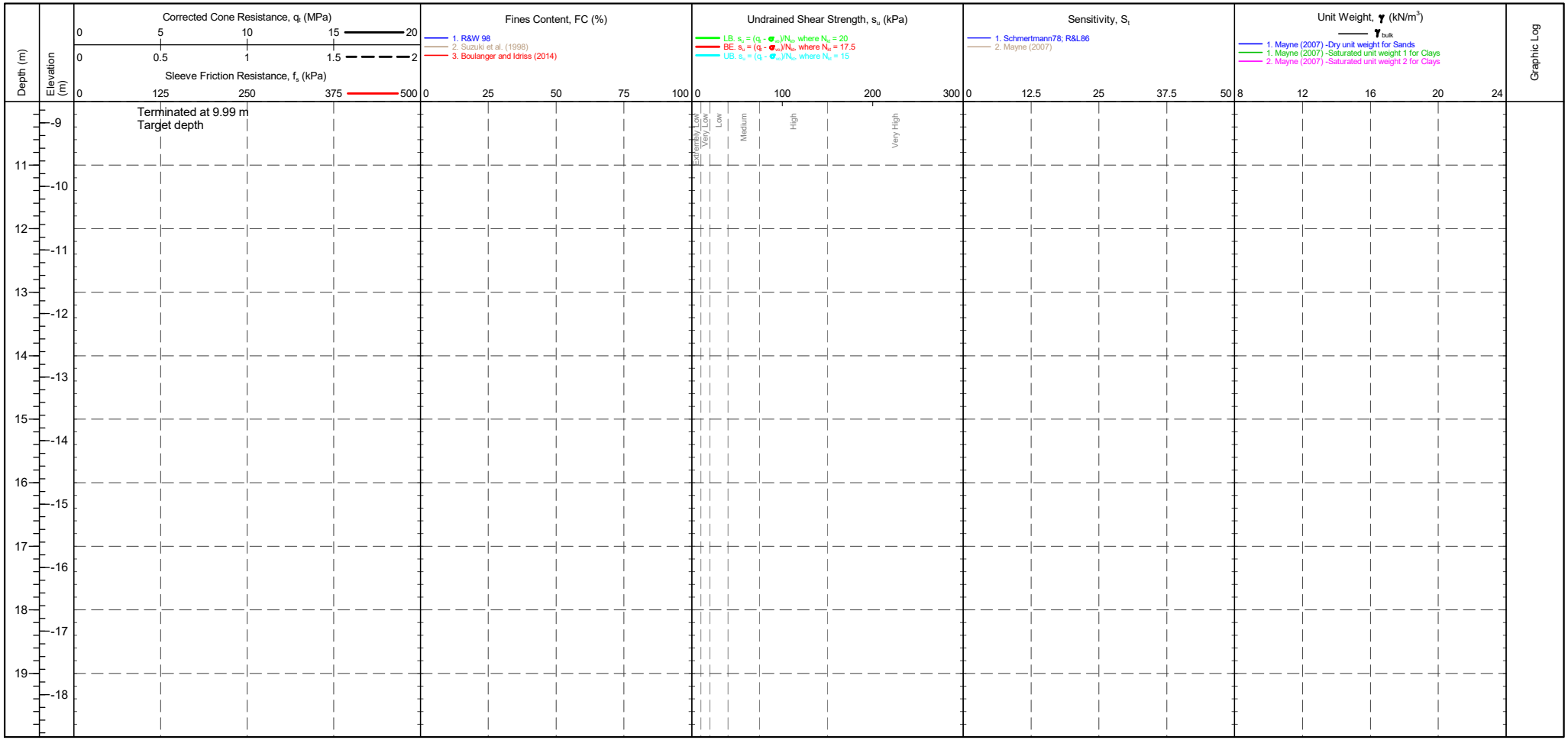
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 03

PointID: **R22-CPT104**

CLIENT : Structural Soils	EASTING : 632506.224 m	Remark:	SHEET : 2 OF 2
PROJECT : Sealink	NORTHING : 162966.367 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.336 m OD		TEST DATE : 23/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2			
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2			
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani			
CONE AREA RATIO	: 0.79	OPERATOR	: DG			
FILTER POSITION	: u2	FRICTION REDUCER	: None			
FILTER TYPE	: HDPE	WEATHER	: Overcast & Cold			

CPTU ZERO VALUES

Transducer	Pre	Post	Difference
Tip	298 mV	295 mV	-0.033 MPa
Sleeve	320 mV	317 mV	-0.002 kPa
Pore Pressure 2	319 mV	307 mV	-0.003 kPa
X-Y Inclinometer	2578 mV	2578 mV	

COHESIVE SOILS (Clays & Silts) Robertson et al. 1986 Zones 1-6 and Zone 11

Term based on measurement	su (kPa)	Term based on measurement	su (kPa)
Extremely low strength	<10	Medium strength	40-75
Very low strength	10-20	High strength	75-150
Low strength	20-40	Very high strength	150-300
		Extremely high strength	>300

Groundwater Level

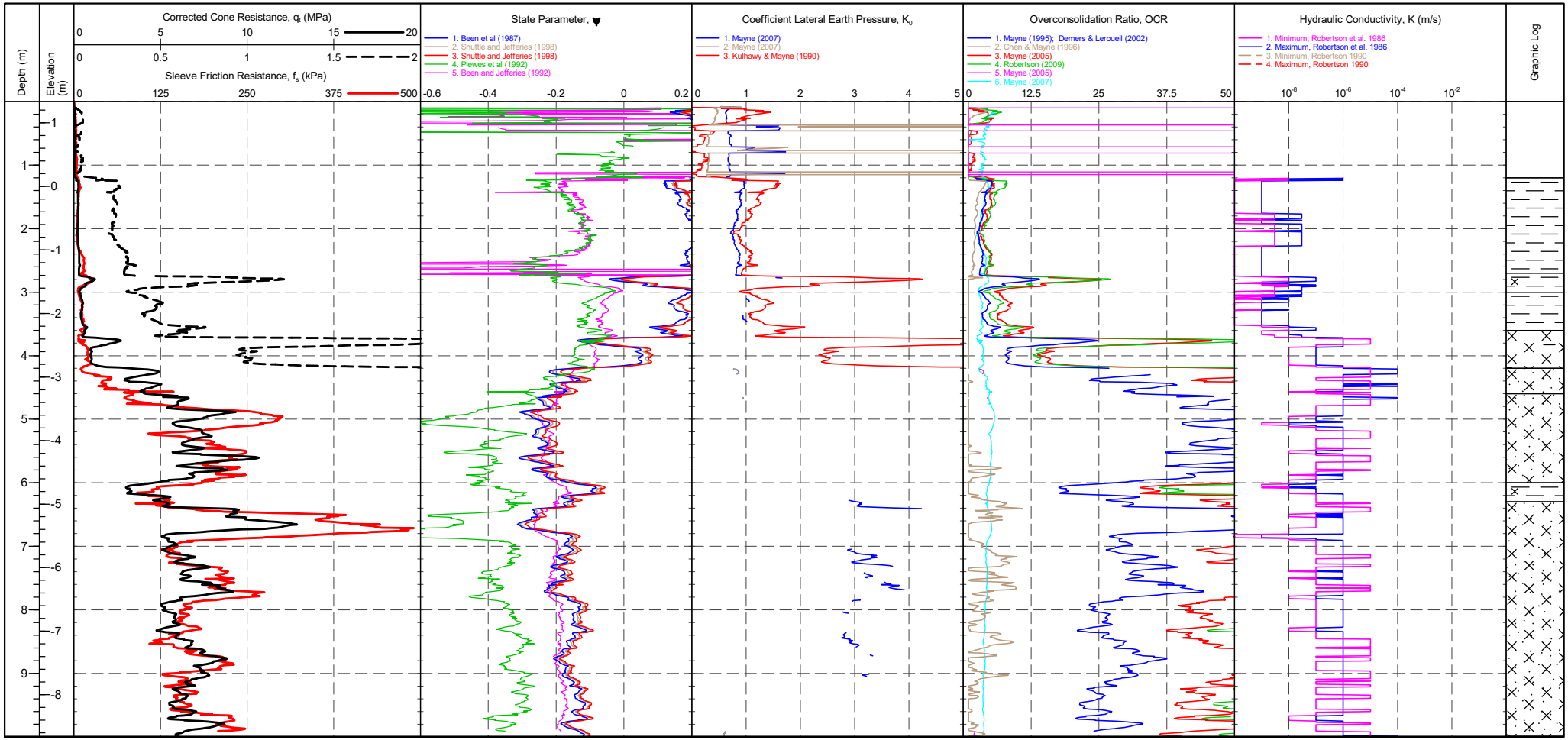
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 04

PointID: **R22-CPT104**

CLIENT : Structural Soils	EASTING : 632506.224 m	Remark:	SHEET : 1 OF 2
PROJECT : Sealink	NORTHING : 162966.367 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.336 m OD		TEST DATE : 23/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



				CPTU ZERO VALUES			
CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	Transducer	Pre	Post	Difference
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Tip	298 mV	295 mV	-0.033 MPa
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Sleeve	320 mV	317 mV	-0.002 kPa
CONE AREA RATIO	: 0.79	OPERATOR	: DG	Pore Pressure 2	319 mV	307 mV	-0.003 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	X-Y Inclinometer	2578 mV	2578 mV	
FILTER TYPE	: HDPE	WEATHER	: Overcast & Cold				

Groundwater Level

Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 04

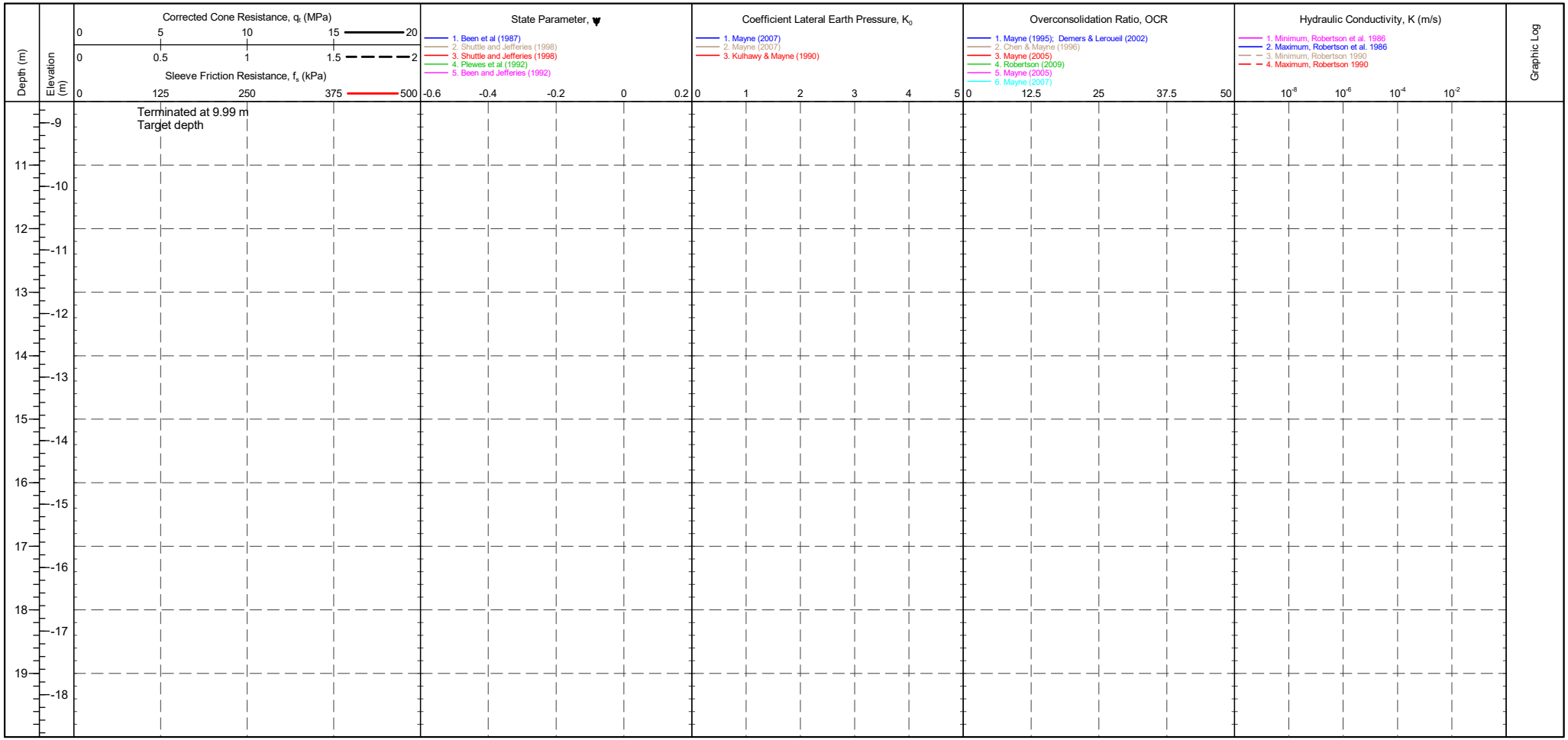
PointID: **R22-CPT104**

CLIENT : Structural Soils
PROJECT : Sealink
LOCATION : Kent
PROJECT No. : 1230335

EASTING : 632506.224 m
NORTHING : 162966.367 m
ELEVATION : 1.336 m OD
CHECKED BY : DW
TERMINATION REASON : Target depth

Remark:
Test completed at target depth.

SHEET : 2 OF 2
STATUS : Final
TEST DATE : 23/10/2023
PLOT DATE : 12/03/2024
METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES			
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post	Difference
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	298 mV	295 mV	-0.033 MPa
CONE AREA RATIO	: 0.79	OPERATOR	: DG	Sleeve	320 mV	317 mV	-0.002 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	319 mV	307 mV	-0.003 kPa
FILTER TYPE	: HDPE	WEATHER	: Overcast & Cold	X-Y Inclinometer	2578 mV	2578 mV	

Groundwater Level

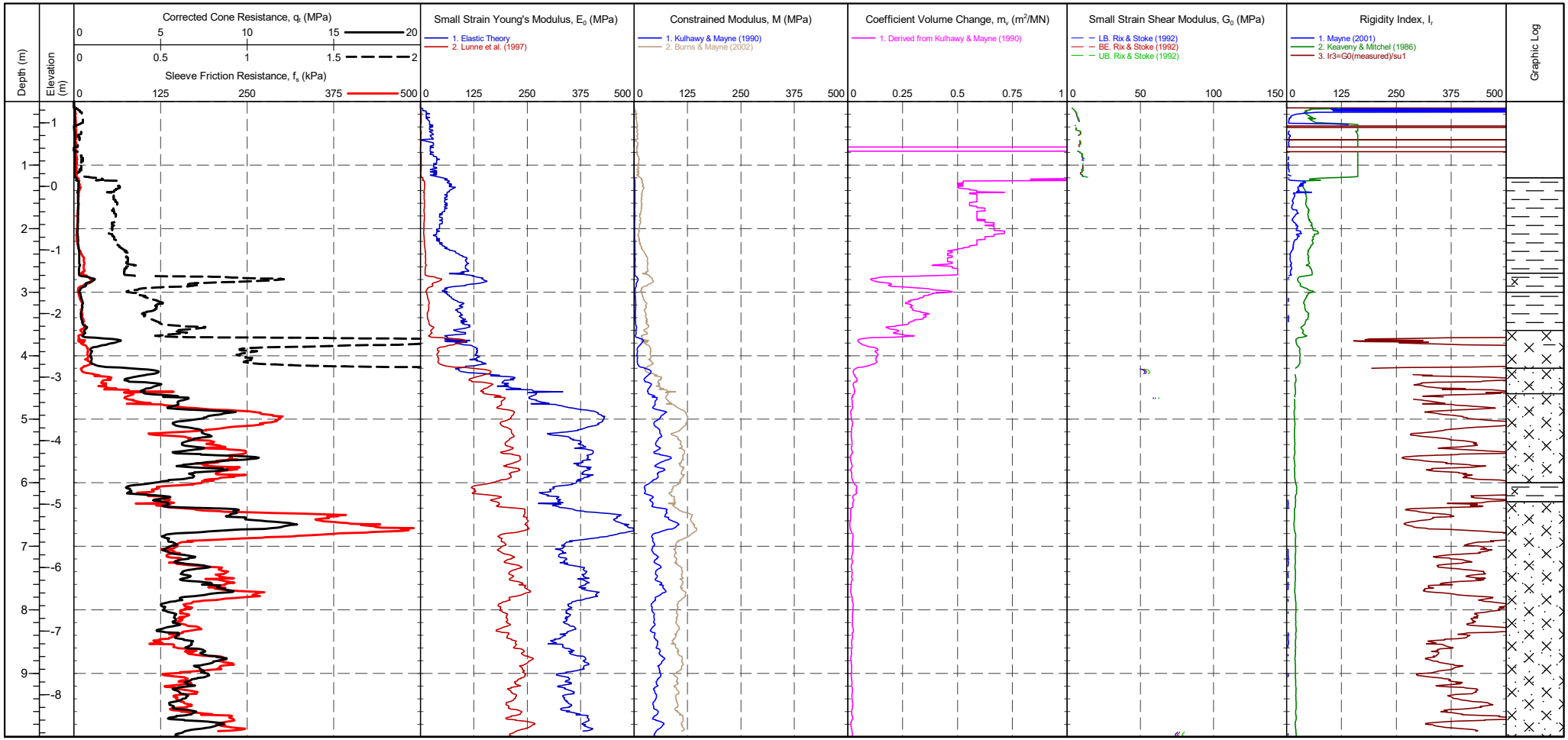
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 05

PointID **R22-CPT104**

CLIENT : Structural Soils	EASTING : 632506.224 m	Remark:	SHEET : 1 OF 2
PROJECT : Sealink	NORTHING : 162966.367 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.336 m OD		TEST DATE : 23/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES			
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post	Difference
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	298 mV	295 mV	-0.033 MPa
CONE AREA RATIO	: 0.79	OPERATOR	: DG	Sleeve	320 mV	317 mV	-0.002 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	319 mV	307 mV	-0.003 kPa
FILTER TYPE	: HDPE	WEATHER	: Overcast & Cold	X-Y Inclinometer	2578 mV	2578 mV	

Groundwater Level

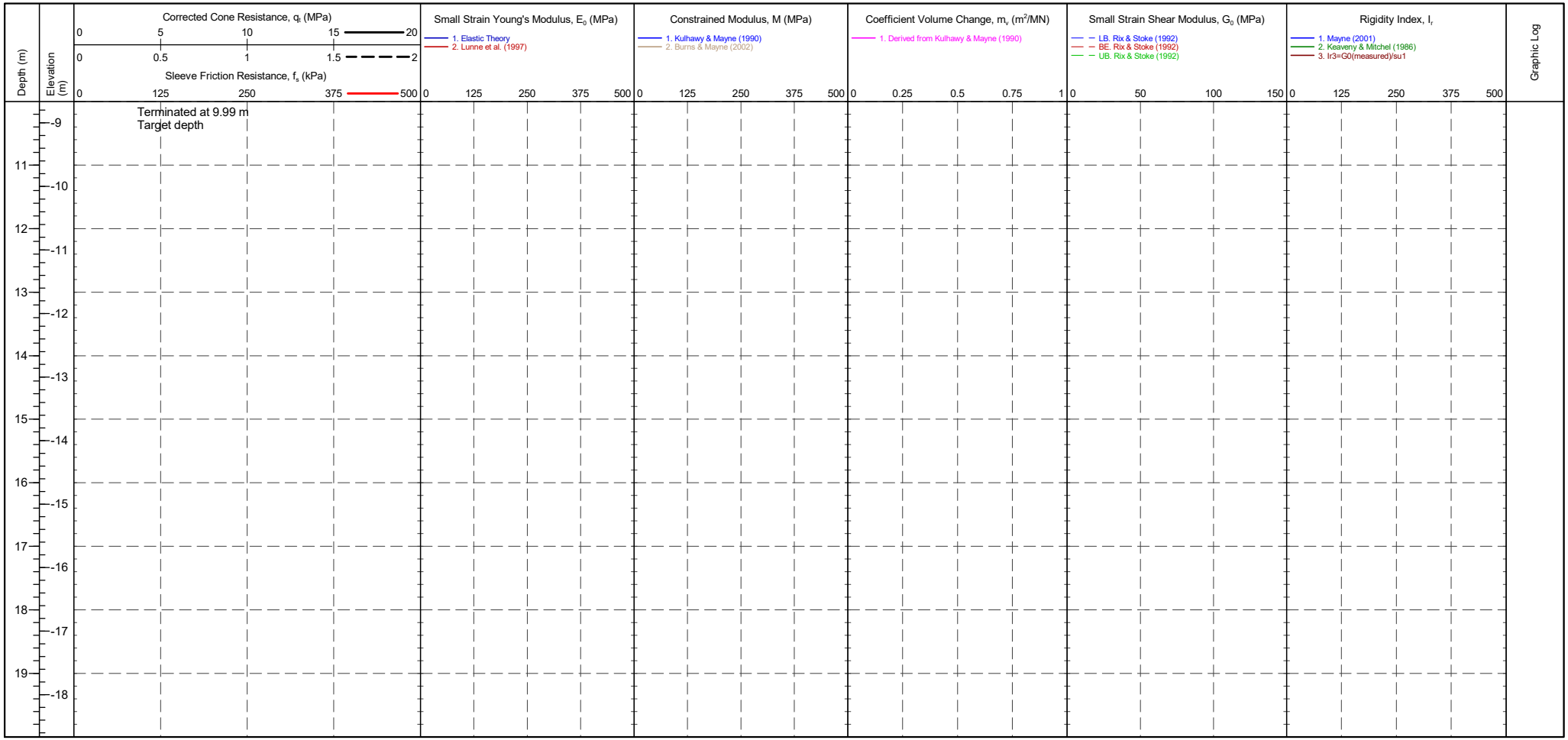
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 05

PointID: **R22-CPT104**

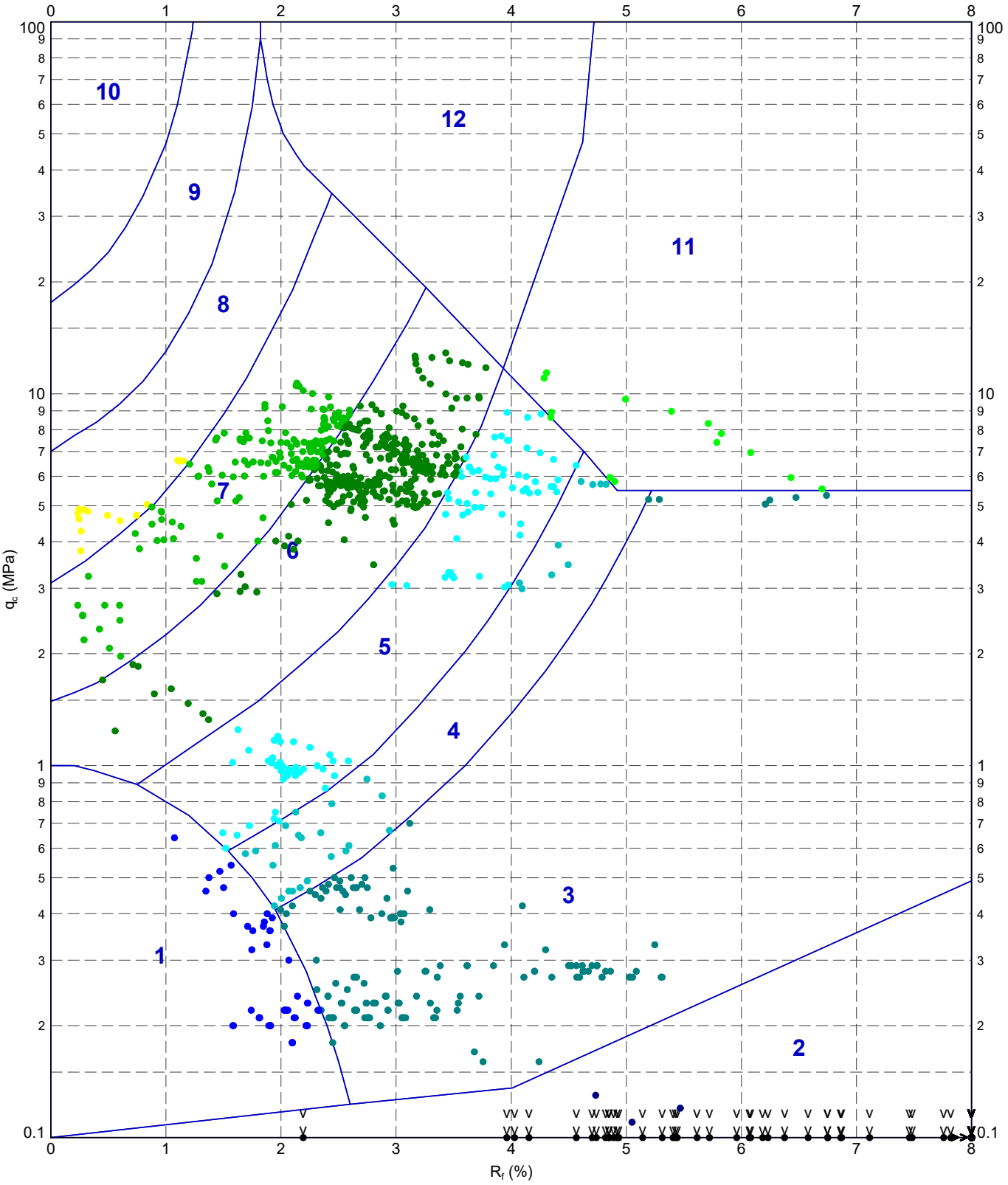
CLIENT : Structural Soils	EASTING : 632506.224 m	Remark:	SHEET : 2 OF 2
PROJECT : Sealink	NORTHING : 162966.367 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.336 m OD		TEST DATE : 23/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES			
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post	Difference
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	298 mV	295 mV	-0.033 MPa
CONE AREA RATIO	: 0.79	OPERATOR	: DG	Sleeve	320 mV	317 mV	-0.002 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	319 mV	307 mV	-0.003 kPa
FILTER TYPE	: HDPE	WEATHER	: Overcast & Cold	X-Y Inclinometer	2578 mV	2578 mV	

Groundwater Level

Dissipation Test



METHOD: Robertson et al. 1986 qc Rf

- 1 - Sensitive fine grained material
- 2 - Organic material
- 3 - CLAY
- 4 - Silty CLAY to CLAY
- 5 - Clayey SILT to silty CLAY
- 6 - Sandy SILT to clayey SILT
- 7 - Silty SAND to sandy SILT
- 8 - SAND to silty SAND
- 9 - SAND
- 10 - Gravelly SAND to SAND
- 11 - Very stiff fine grained
- 12 - SAND to clayey SAND

IN SITU SITE INVESTIGATION

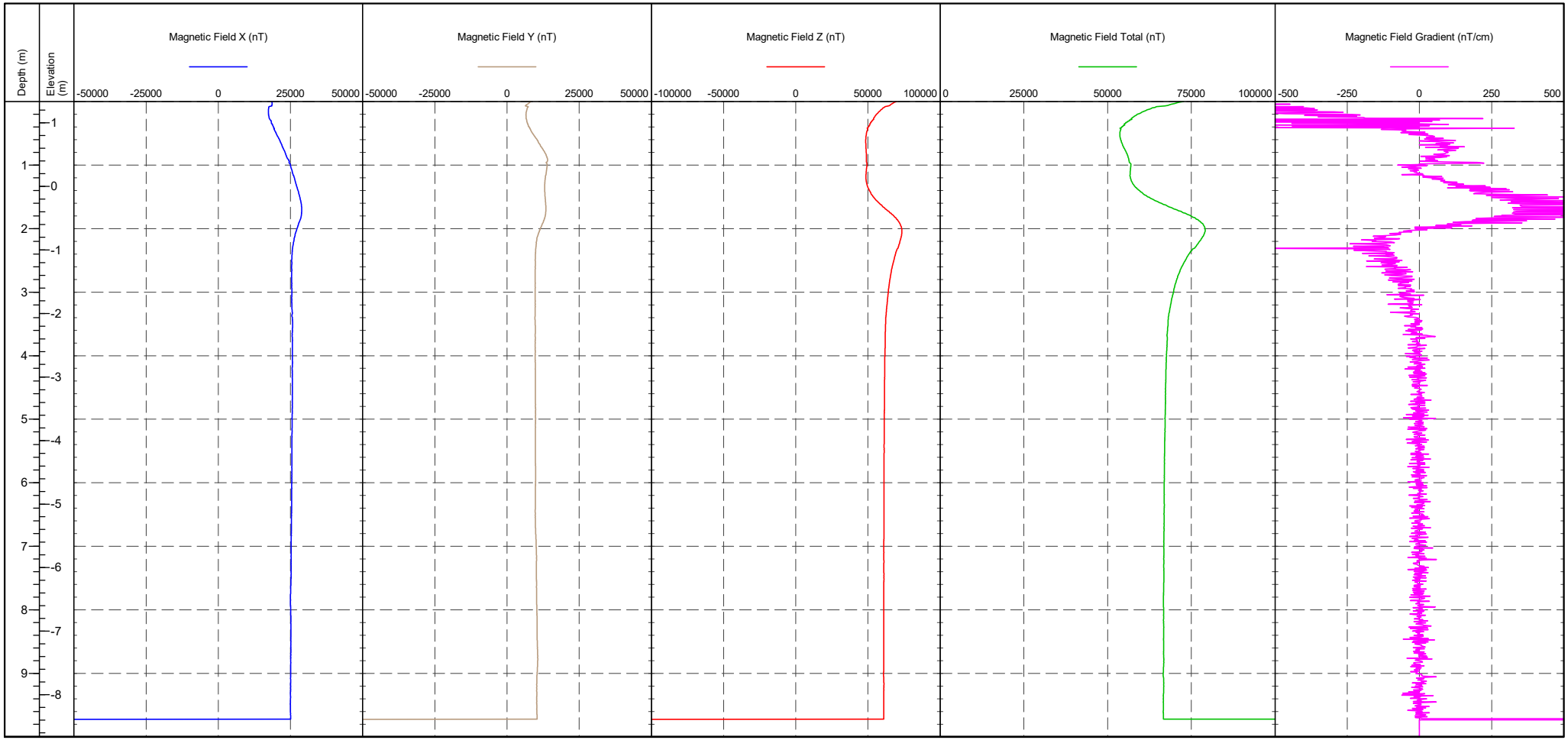
TITLE: Structural Soils Ian Warne Kent Sealink Robertson et al. 1986 q_c vs. R_f - R22-CPT104	DRAWN	DATE 12/03/2024	
	CHECKED	DATE 12/03/2024	
	SCALE Not To Scale		A4
	PROJECT No 1230335	FIGURE No	

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

MAG LOG

PointID **R22-CPT104**

CLIENT : Structural Soils	EASTING : 632506.224 m	Remark:	SHEET : 1 OF 2
PROJECT : Sealink	NORTHING : 162966.367 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.336 m OD		TEST DATE : 23/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	RIG	: CPT 020 - Pagani	
CONE MODEL	: Subtraction	OPERATOR	: DG	

CPTU ZERO VALUES

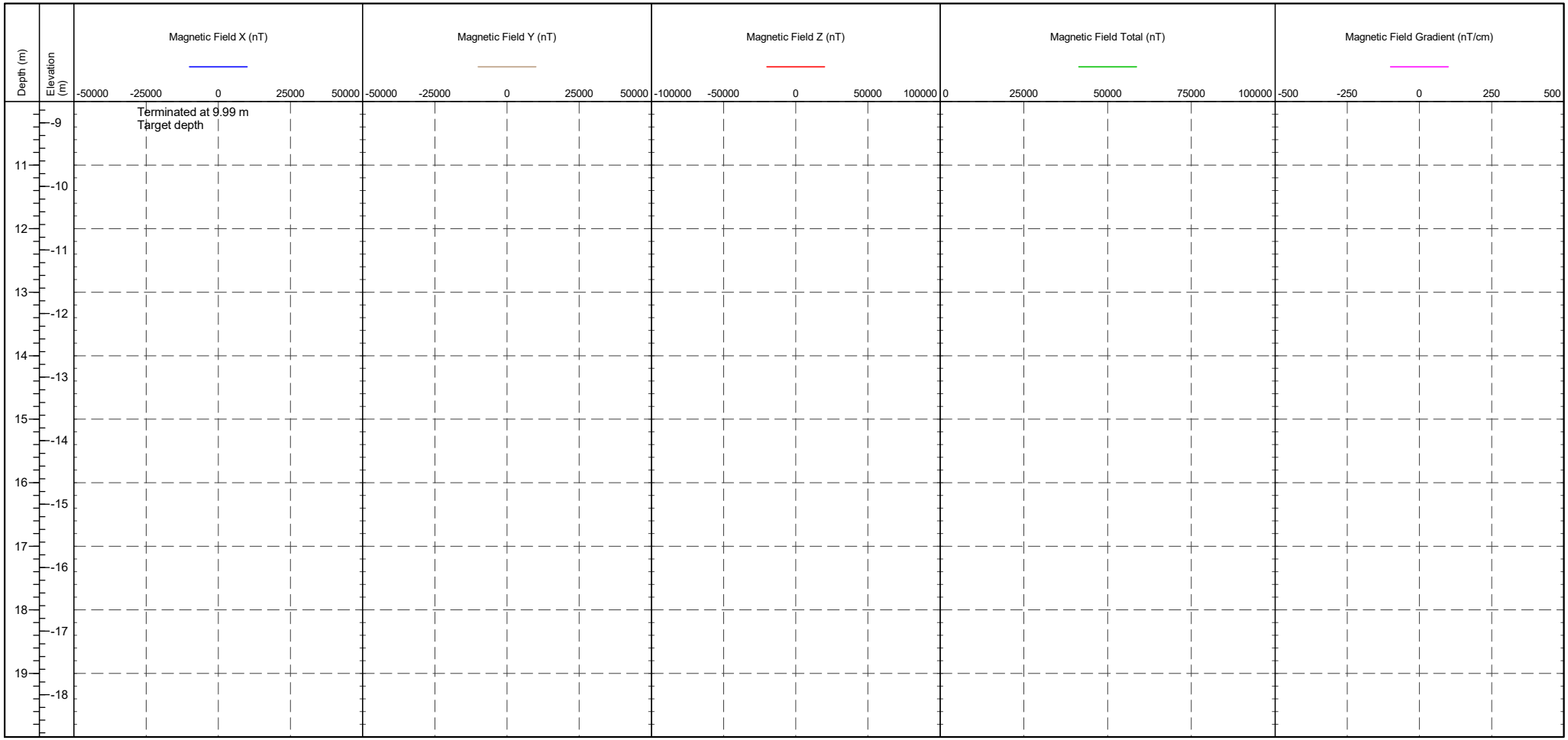
Transducer	Pre	Post	Difference
Tip	298 mV	295 mV	-0.033 MPa
Sleeve	320 mV	317 mV	-0.002 kPa
Pore Pressure 2	319 mV	307 mV	-0.003 kPa
X-Y Inclinometer	2578 mV	2578 mV	

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

MAG LOG

PointID **R22-CPT104**

CLIENT : Structural Soils PROJECT : Sealink LOCATION : Kent PROJECT No. : 1230335	EASTING : 632506.224 m NORTHING : 162966.367 m ELEVATION : 1.336 m OD CHECKED BY : DW TERMINATION REASON : Target depth	Remark: Test completed at target depth.	SHEET : 2 OF 2 STATUS : Final TEST DATE : 23/10/2023 PLOT DATE : 12/03/2024 METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	RIG	: CPT 020 - Pagani	
CONE MODEL	: Subtraction	OPERATOR	: DG	

CPTU ZERO VALUES

Transducer	Pre	Post	Difference
Tip	298 mV	295 mV	-0.033 MPa
Sleeve	320 mV	317 mV	-0.002 kPa
Pore Pressure 2	319 mV	307 mV	-0.003 kPa
X-Y Inclinometer	2578 mV	2578 mV	

DISSIPATION TEST

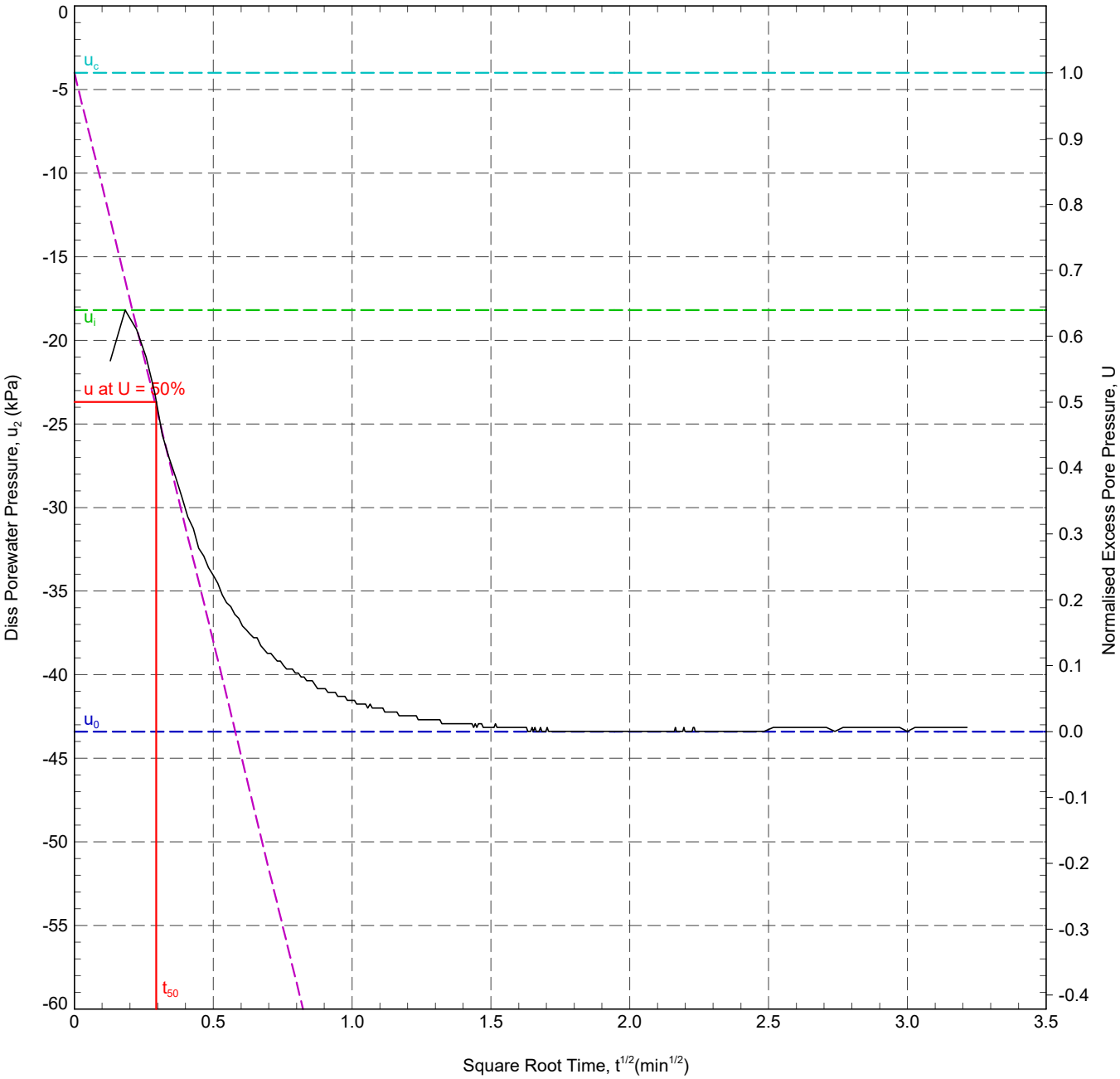
IN SITU SITE INVESTIGATION

Working with: STRUCTURAL SOILS LTD

Test ID

R22-CPT104 - 3.92 m

CLIENT	: Structural Soils	AREA	: Sealink Richborough	SHEET	: 1 OF 1
ENGINEER	: Ian Warne	EASTING	: 632506.2 m	STATUS	: Final
PROJECT	: Sealink	NORTHING	: 162966.4 m	DATE	: 23/10/23
LOCATION	: Kent	COORD. SYS.	:		
PROJECT No.	: 1230335	ELEVATION	: 1.34 m		



In Situ Pore Pressure, u_0:	-43.4 kPa	Rigidity Index, I_r:	29.1
Initial Pore Pressure, u_i:	-18.2 kPa	Horizontal Coefficient of Consolidation, c_h:	4.22×10^3 m²/yr
Final Pore Pressure:	-43.2 kPa		
Back Extrapolated Pore Pressure, u_c:	-4 kPa		
Degree of Dissipation:	50%		
Dissipation Pressure:	-23.7 kPa		
Time for 50% Dissipation, t_{50}:	0.09 min		

RIG	: CPT 020 - Pagani	ANALYSED BY	: ZJ	DATE:	24/10/2023
CONE TYPE	: Subtraction	CHECKED BY	: DW	DATE:	24/10/2023
CONE ID	: S15-CFIP.2145	APPROVED BY	: DW	DATE:	24/10/2023
OPERATOR	: DG				

REMARK

T50 reached. Quick dissipation t50=5s. Test OK.

DISSIPATION TEST

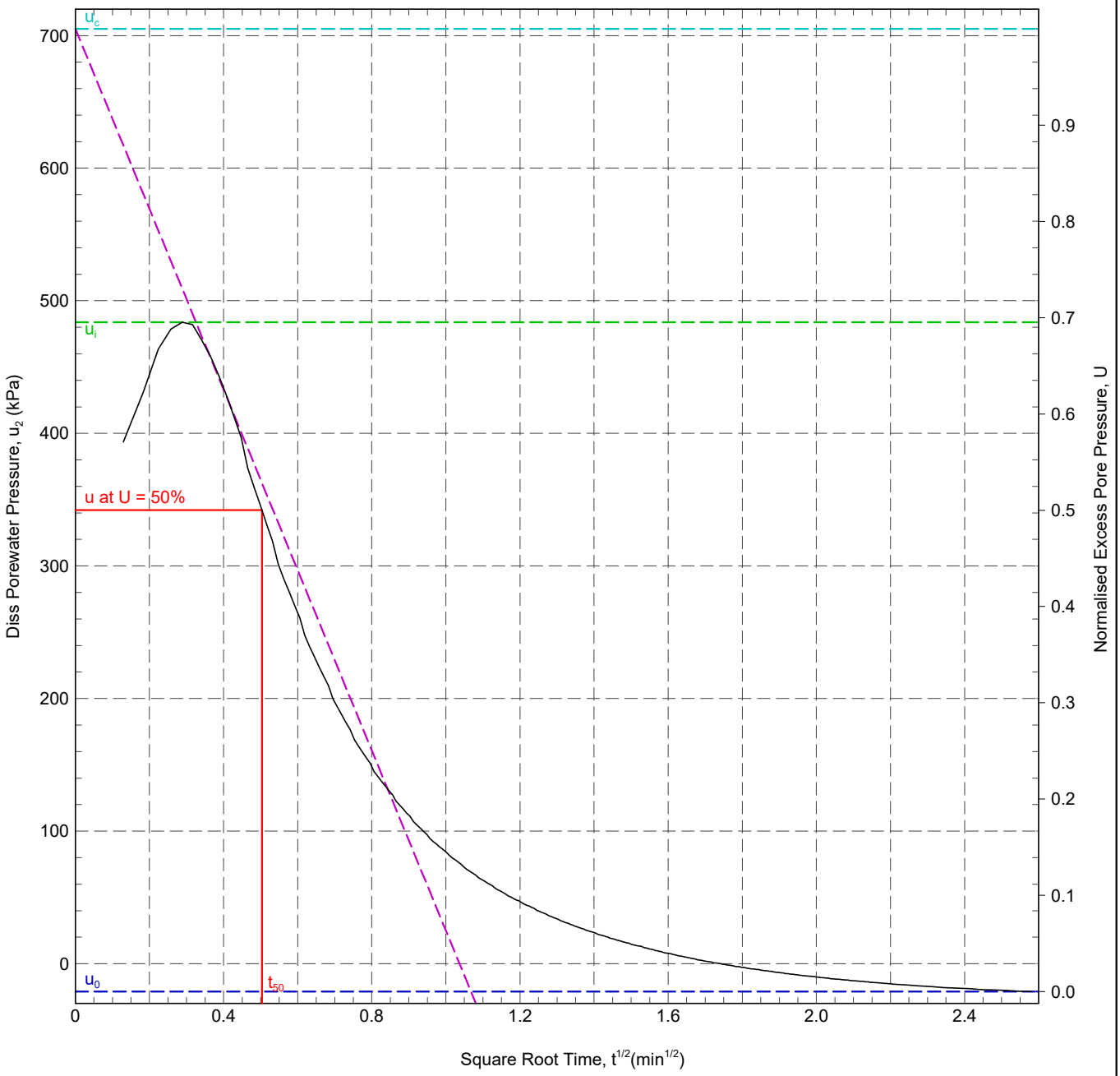
IN SITU SITE INVESTIGATION

Working with: STRUCTURAL SOILS LTD

Test ID

R22-CPT104 - 5.54 m

CLIENT	: Structural Soils	AREA	: Sealink Richborough	SHEET	: 1 OF 1
ENGINEER	: Ian Warne	EASTING	: 632506.2 m	STATUS	: Final
PROJECT	: Sealink	NORTHING	: 162966.4 m	DATE	: 23/10/23
LOCATION	: Kent	COORD. SYS.	:		
PROJECT No.	: 1230335	ELEVATION	: 1.34 m		



In Situ Pore Pressure, u_0:	-21.0 kPa	Rigidity Index, I_r:	18.6
Initial Pore Pressure, u_i:	483.8 kPa	Horizontal Coefficient of Consolidation, c_h:	1.16×10^3 m^2/yr
Final Pore Pressure:	-21.0 kPa		
Back Extrapolated Pore Pressure, u_c:	705 kPa		
Degree of Dissipation:	50%		
Dissipation Pressure:	342.1 kPa		
Time for 50% Dissipation, t_{50}:	0.25 min		

RIG	: CPT 020 - Pagani	ANALYSED BY	: ZJ	DATE:	24/10/2023
CONE TYPE	: Subtraction	CHECKED BY	: DW	DATE:	24/10/2023
CONE ID	: S15-CFIP.2145	APPROVED BY	: DW	DATE:	24/10/2023
OPERATOR	: DG				

REMARK

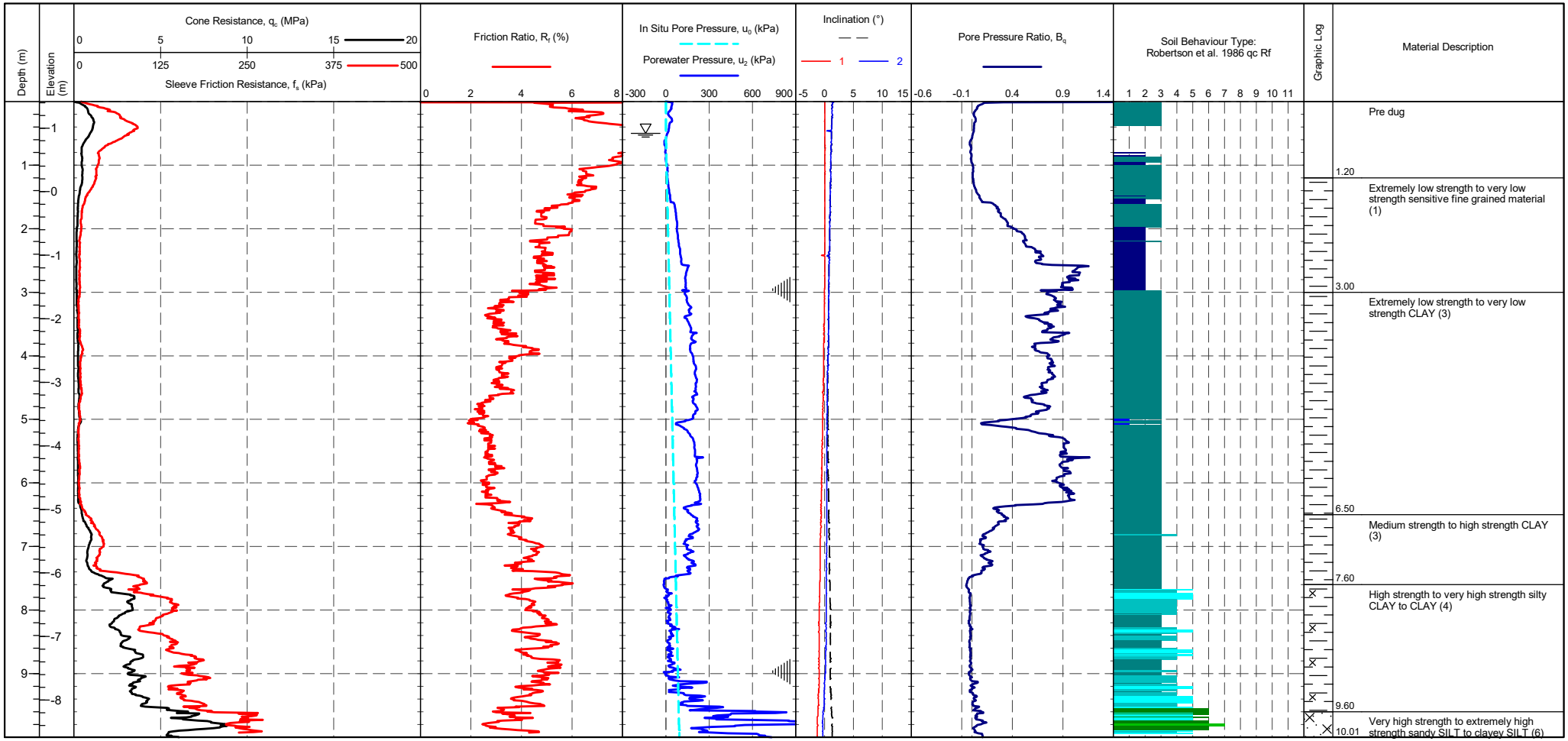
T50 reached. Quick dissipation t50=15.2s. Test OK.

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 01

PointID: **R22-CPT105**

CLIENT : Structural Soils	EASTING : 632524.103 m	Remark:	SHEET : 1 OF 2
PROJECT : Sealink	NORTHING : 163162.569 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.417 m OD		TEST DATE : 19/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID : S15-CFIP.2145	TEST TYPE : TE2		
CALIBRATION DATE : 12/07/2023	APPLICATION CLASS : 2		
CONE MODEL : Subtraction	RIG : CPT 020 - Pagani		
CONE AREA : 15cm²	OPERATOR : AC/CH		
CONE AREA RATIO : 0.79	FRICTION REDUCER : None		
FILTER POSITION : u2	WEATHER : Sunny & Hot		
FILTER TYPE : HDPE	GROUNDWATER DEPTH : Assumed for calculation purposes		

CPTU ZERO VALUES

Transducer	Pre	Post	Difference
Tip	292 mV	291 mV	-0.011 MPa
Sleeve	316 mV	315 mV	-0.001 kPa
Pore Pressure 2	297 mV	296 mV	0 kPa
X-Y Inclinometer	2490 mV	2547 mV	

METHOD: Robertson et al. 1986 qc Rf

1 - Sensitive fine grained material
2 - Organic material
3 - CLAY
4 - Silty CLAY to CLAY
5 - Clayey SILT to silty CLAY
6 - Sandy SILT to clayey SILT
7 - Silty SAND to sandy SILT
8 - SAND to silty SAND
9 - SAND
10 - Gravelly SAND to SAND
11 - Very stiff fine grained
12 - SAND to clayey SAND

Groundwater Level

Dissipation Test

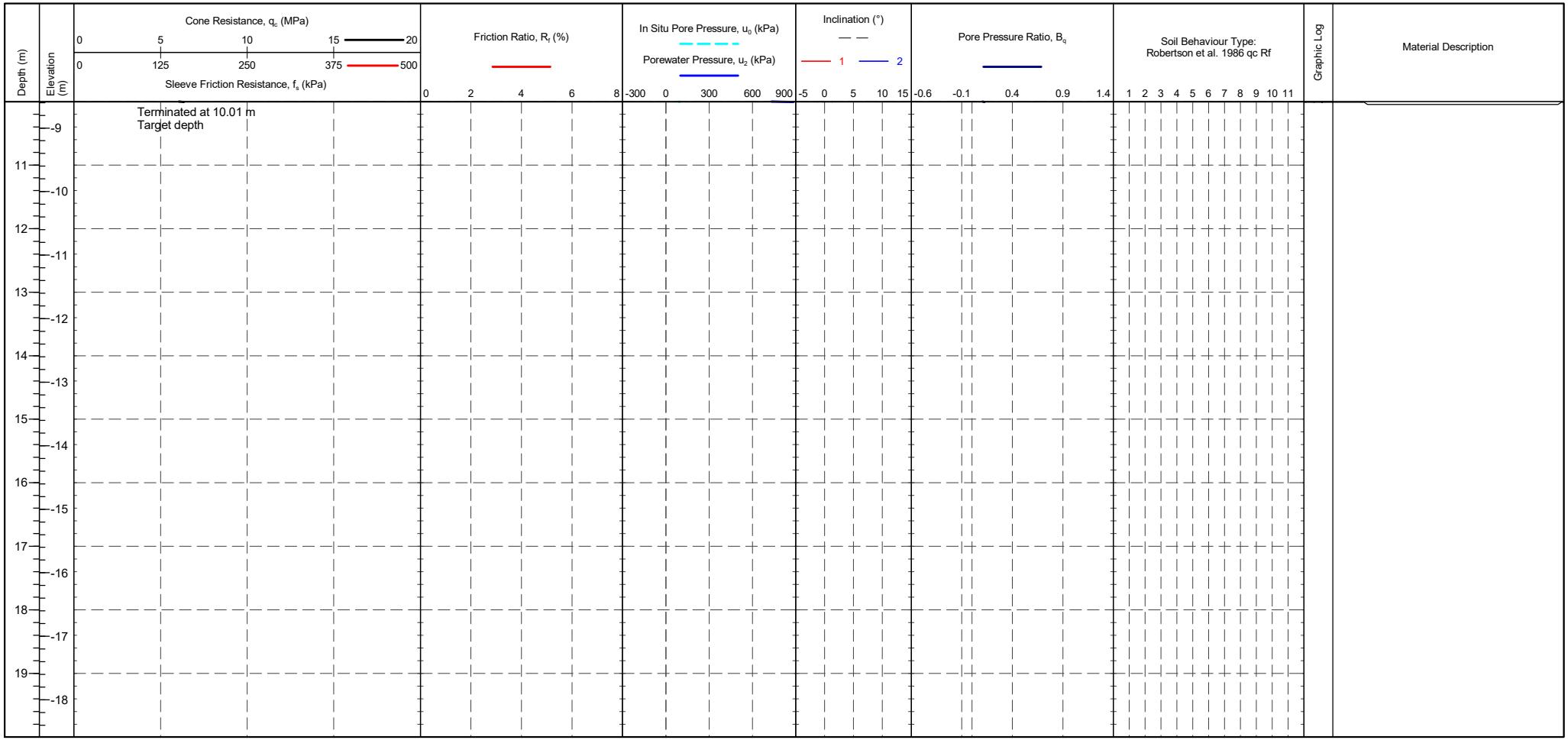
IN SITU SITE INVESTIGATION

Working with: STRUCTURAL SOILS LTD

CPT LOG 01

PointID: **R22-CPT105**

CLIENT : Structural Soils	EASTING : 632524.103 m	Remark:	SHEET : 2 OF 2
PROJECT : Sealink	NORTHING : 163162.569 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.417 m OD		TEST DATE : 19/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2				
CALIBRATION DATE	: 12/07/2023	APPLICATION CLASS	: 2				
CONE MODEL	: Subtraction	RIG	: CPT 020 - Pagani				
CONE AREA	: 15cm^2	OPERATOR	: AC/CH				
CONE AREA RATIO	: 0.79	FRICTION REDUCER	: None				
FILTER POSITION	: u2	WEATHER	: Sunny & Hot				
FILTER TYPE	: HDPE	GROUNDWATER DEPTH	: Assumed for calculation purposes				

CPTU ZERO VALUES

Transducer	Pre	Post	Difference
Tip	292 mV	291 mV	-0.011 MPa
Sleeve	316 mV	315 mV	-0.001 kPa
Pore Pressure 2	297 mV	296 mV	0 kPa
X-Y Inclinometer	2490 mV	2547 mV	

METHOD: Robertson et al. 1986 qc Rf

1 - Sensitive fine grained material
2 - Organic material
3 - CLAY
4 - Silty CLAY to CLAY
5 - Clayey SILT to silty CLAY
6 - Sandy SILT to clayey SILT
7 - Silty SAND to sandy SILT
8 - SAND to silty SAND
9 - SAND
10 - Gravelly SAND to SAND
11 - Very stiff fine grained
12 - SAND to clayey SAND

Groundwater Level

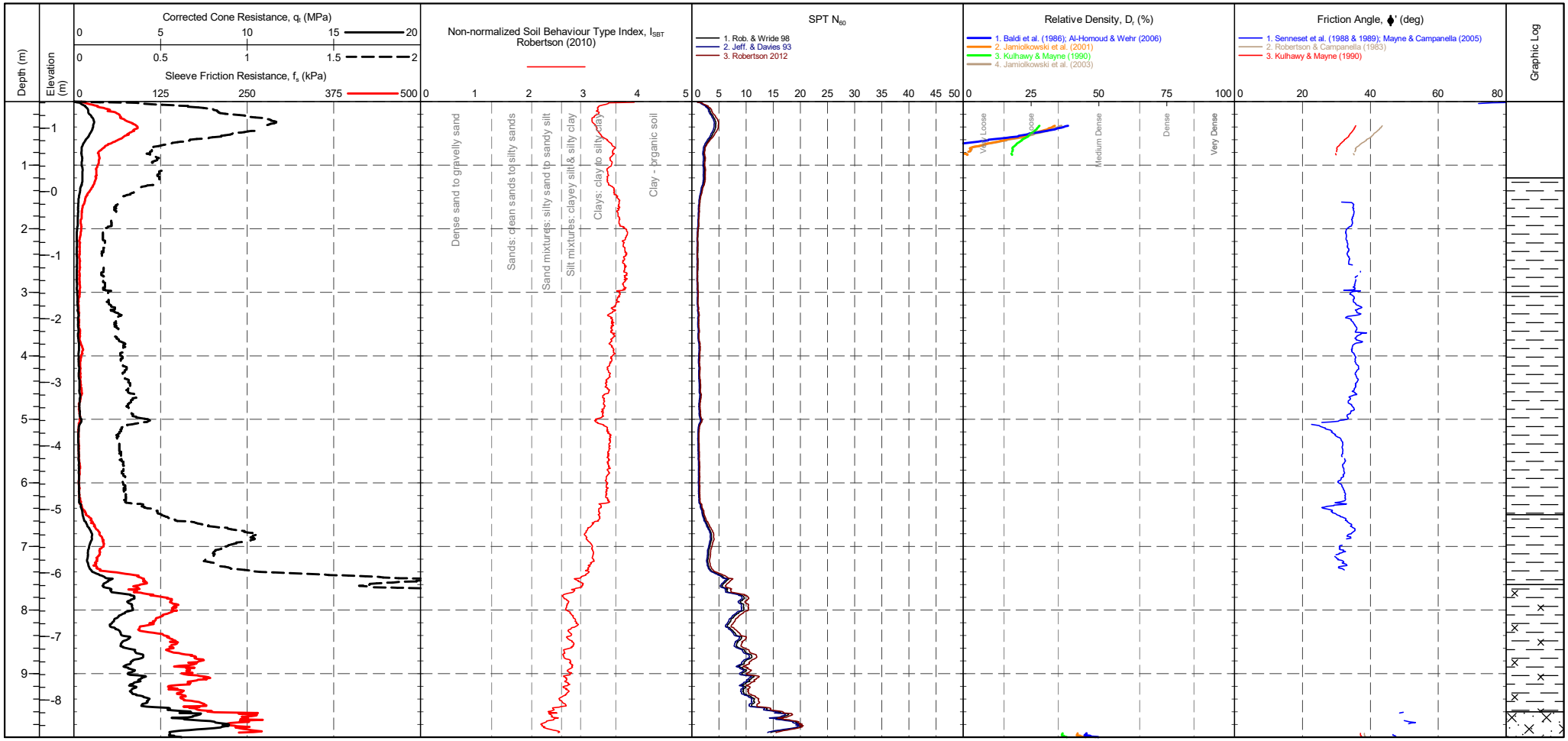
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 02

PointID: **R22-CPT105**

CLIENT : Structural Soils	EASTING : 632524.103 m	Remark:	SHEET : 1 OF 2
PROJECT : Sealink	NORTHING : 163162.569 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.417 m OD		TEST DATE : 19/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2		
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2		
CONE AREA	: 15cm²	RIG	: CPT 020 - Pagani		
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH		
FILTER POSITION	: u2	FRICTION REDUCER	: None		
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot		

CPTU ZERO VALUES

Transducer	Pre	Post	Difference
Tip	292 mV	291 mV	-0.011 MPa
Sleeve	316 mV	315 mV	-0.001 kPa
Pore Pressure 2	297 mV	296 mV	0 kPa
X-Y Inclinometer	2490 mV	2547 mV	

GRANULAR SOILS (Sands & Gravels) Robertson et al. 1986 Zones 7-10 and Zone 12

Description	SBT Index, Ic	Description	SPT N value, NSPT	Description	Relative Density Dr (%)
Clays	2.95-3.60	Very Loose	0 - 4	Very Loose	0 - 15
Silt mixtures	2.60-2.95	Loose	4 - 10	Loose	15 - 35
Sand mixtures	2.05-2.60	Medium Dense	10 - 30	Medium Dense	35 - 65
Sands	1.31-2.05	Dense	30 - 50	Dense	65 - 85
Gravelly sand	<1.31	Very Dense	>50	Very Dense	>85

Groundwater Level

Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 02

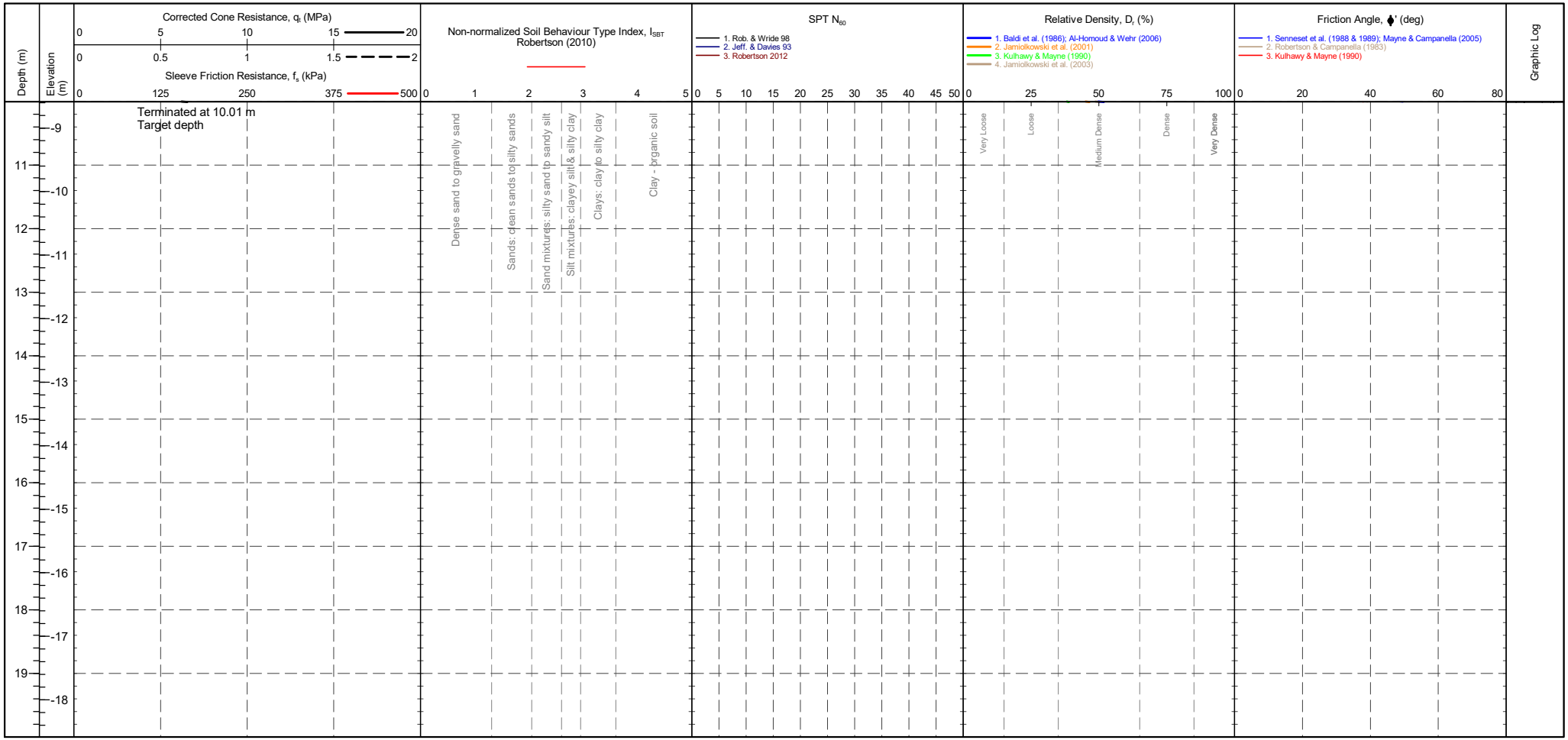
PointID: **R22-CPT105**

CLIENT : Structural Soils
PROJECT : Sealink
LOCATION : Kent
PROJECT No. : 1230335

EASTING : 632524.103 m
NORTHING : 163162.569 m
ELEVATION : 1.417 m OD
CHECKED BY : DW
TERMINATION REASON : Target depth

Remark:
Test completed at target depth.

SHEET : 2 OF 2
STATUS : Final
TEST DATE : 19/10/2023
PLOT DATE : 12/03/2024
METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145
CONE MODEL	: Subtraction
CONE AREA	: 15cm^2
CONE AREA RATIO	: 0.79
FILTER POSITION	: u2
FILTER TYPE	: HDPE

TEST TYPE	: TE2
APPLICATION CLASS	: 2
RIG	: CPT 020 - Pagani
OPERATOR	: AC/CH
FRICTION REDUCER	: None
WEATHER	: Sunny & Hot

CPTU ZERO VALUES

Transducer	Pre	Post	Difference
Tip	292 mV	291 mV	-0.011 MPa
Sleeve	316 mV	315 mV	-0.001 kPa
Pore Pressure 2	297 mV	296 mV	0 kPa
X-Y Inclinometer	2490 mV	2547 mV	

GRANULAR SOILS (Sands & Gravels) Robertson et al. 1986 Zones 7-10 and Zone 12

Description	SBT Index, Ic	Description	SPT N value, NSPT	Description	Relative Density Dr (%)
Clays	2.95-3.60	Very Loose	0 - 4	Very Loose	0 - 15
Silt mixtures	2.60-2.95	Loose	4 - 10	Loose	15 - 35
Sand mixtures	2.05-2.60	Medium Dense	10 - 30	Medium Dense	35 - 65
Sands	1.31-2.05	Dense	30 - 50	Dense	65 - 85
Gravelly sand	<1.31	Very Dense	>50	Very Dense	>85

Groundwater Level

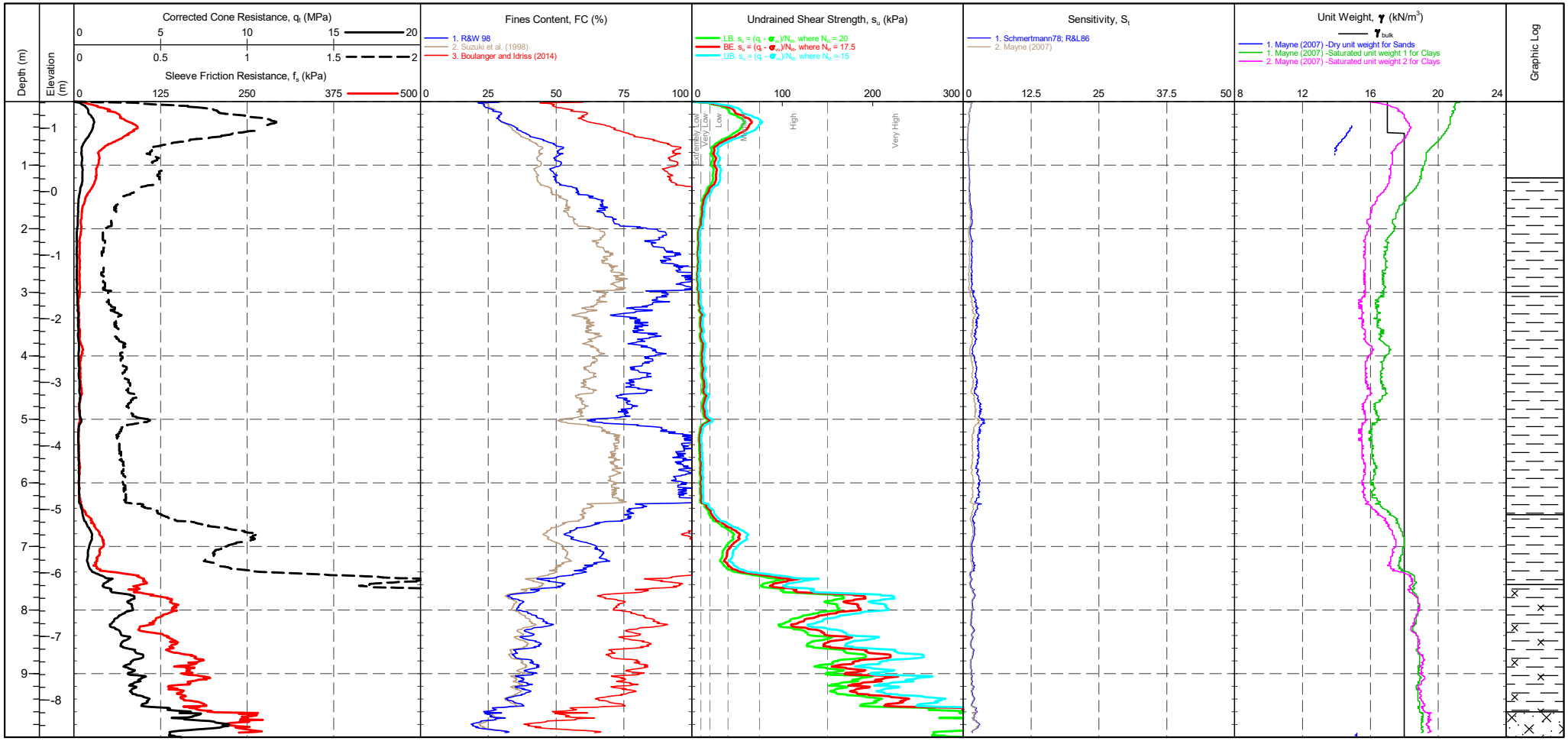
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 03

PointID **R22-CPT105**

CLIENT : Structural Soils	EASTING : 632524.103 m	Remark:	SHEET : 1 OF 2
PROJECT : Sealink	NORTHING : 163162.569 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.417 m OD		TEST DATE : 19/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES			
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post	Difference
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	292 mV	291 mV	-0.011 MPa
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Sleeve	316 mV	315 mV	-0.001 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	297 mV	296 mV	0 kPa
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot	X-Y Inclinometer	2490 mV	2547 mV	

COHESIVE SOILS (Clays & Silts) Robertson et al. 1986 Zones 1-6 and Zone 11

Term based on measurement	su (kPa)	Term based on measurement	su (kPa)
Extremely low strength	<10	Medium strength	40-75
Very low strength	10-20	High strength	75-150
Low strength	20-40	Very high strength	150-300
		Extremely high strength	>300

Groundwater Level

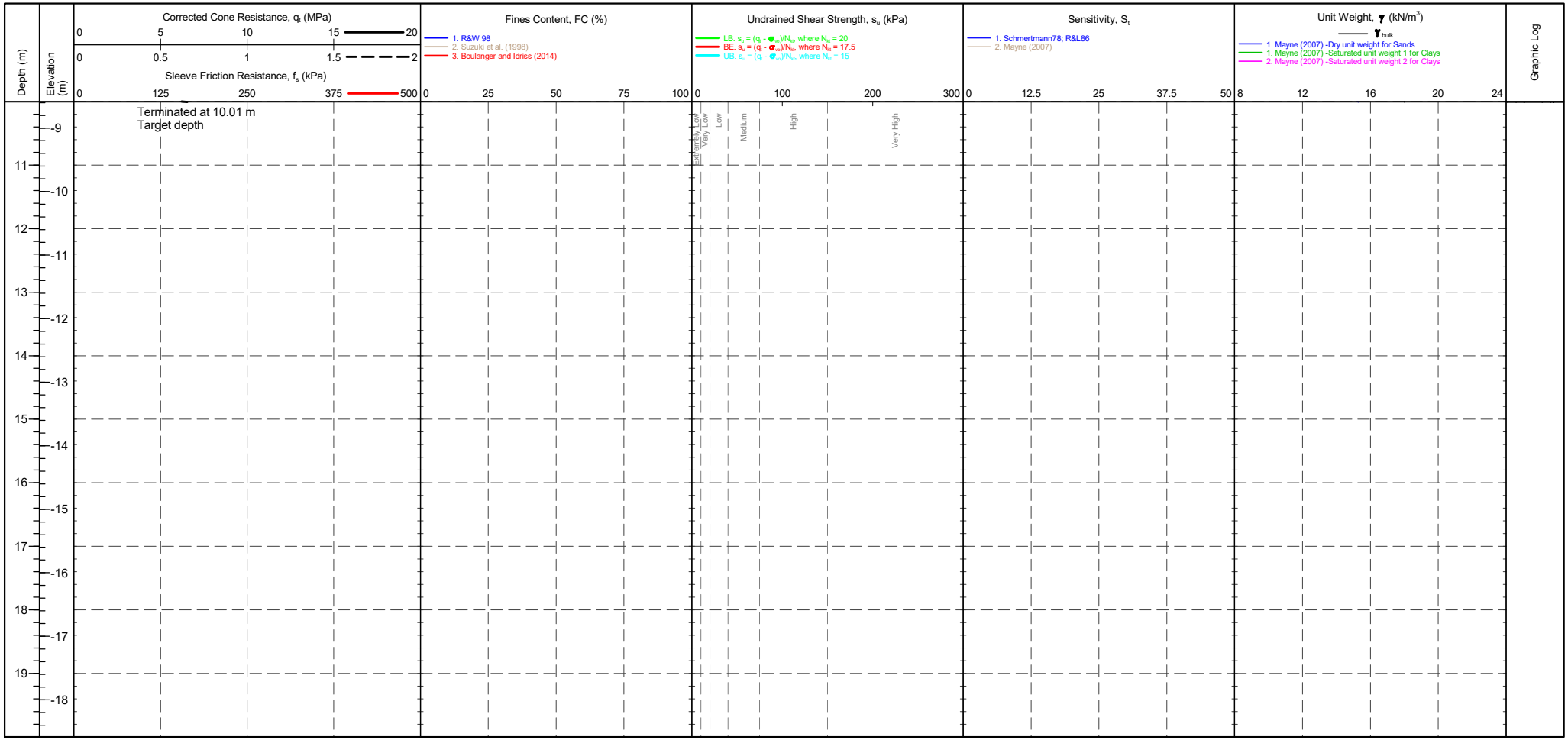
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 03

PointID: **R22-CPT105**

CLIENT : Structural Soils	EASTING : 632524.103 m	Remark: Test completed at target depth.	SHEET : 2 OF 2
PROJECT : Sealink	NORTHING : 163162.569 m		STATUS : Final
LOCATION : Kent	ELEVATION : 1.417 m OD		TEST DATE : 19/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES			
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post	Difference
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	292 mV	291 mV	-0.011 MPa
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Sleeve	316 mV	315 mV	-0.001 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	297 mV	296 mV	0 kPa
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot	X-Y Inclinometer	2490 mV	2547 mV	

COHESIVE SOILS (Clays & Silts) Robertson et al. 1986 Zones 1-6 and Zone 11

Term based on measurement	su (kPa)	Term based on measurement	su (kPa)
Extremely low strength	<10	Medium strength	40-75
Very low strength	10-20	High strength	75-150
Low strength	20-40	Very high strength	150-300
		Extremely high strength	>300

Groundwater Level

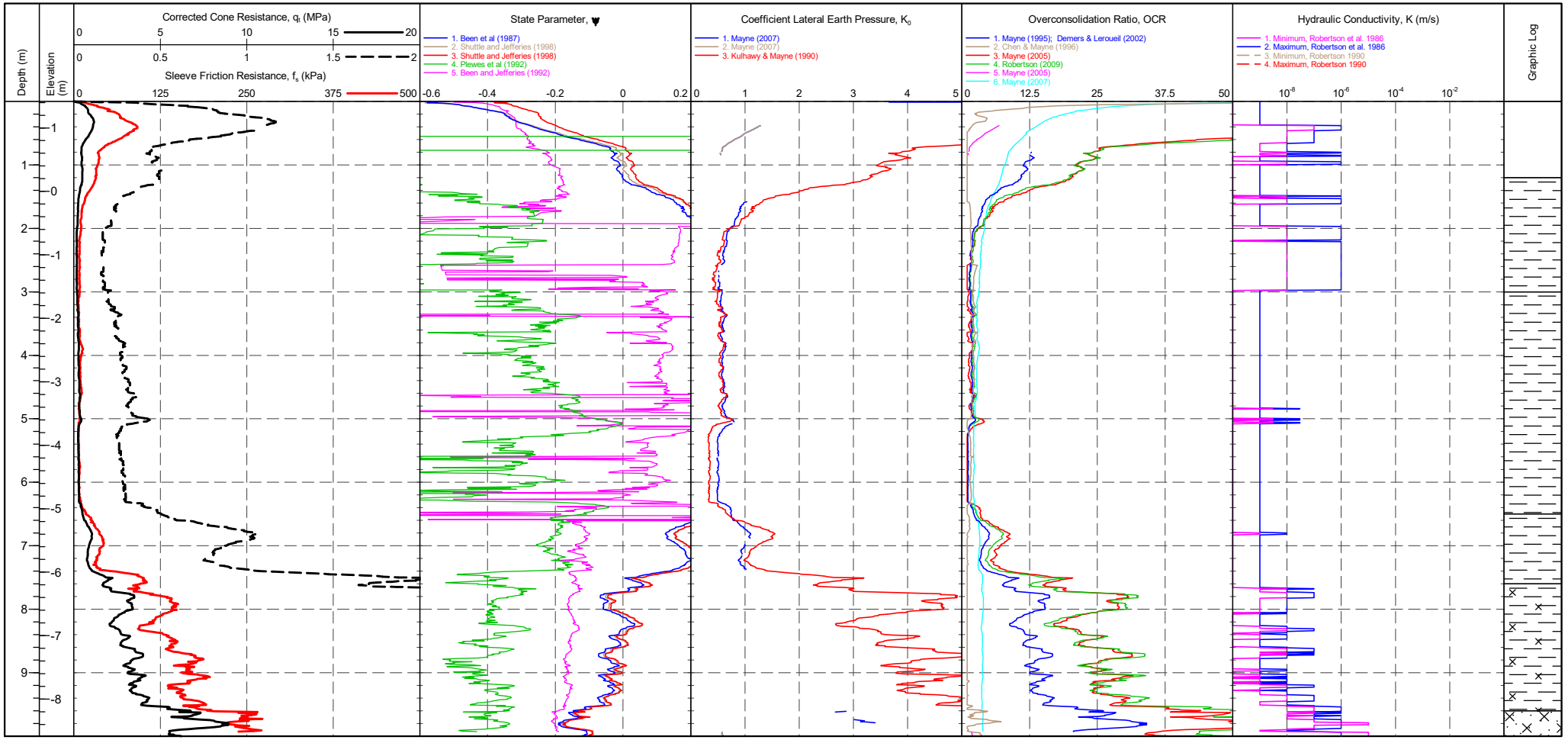
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 04

PointID: **R22-CPT105**

CLIENT : Structural Soils	EASTING : 632524.103 m	Remark:	SHEET : 1 OF 2
PROJECT : Sealink	NORTHING : 163162.569 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.417 m OD		TEST DATE : 19/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



				CPTU ZERO VALUES			
CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	Transducer	Pre	Post	Difference
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Tip	292 mV	291 mV	-0.011 MPa
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Sleeve	316 mV	315 mV	-0.001 kPa
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Pore Pressure 2	297 mV	296 mV	0 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	X-Y Inclinometer	2490 mV	2547 mV	
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot				

Groundwater Level

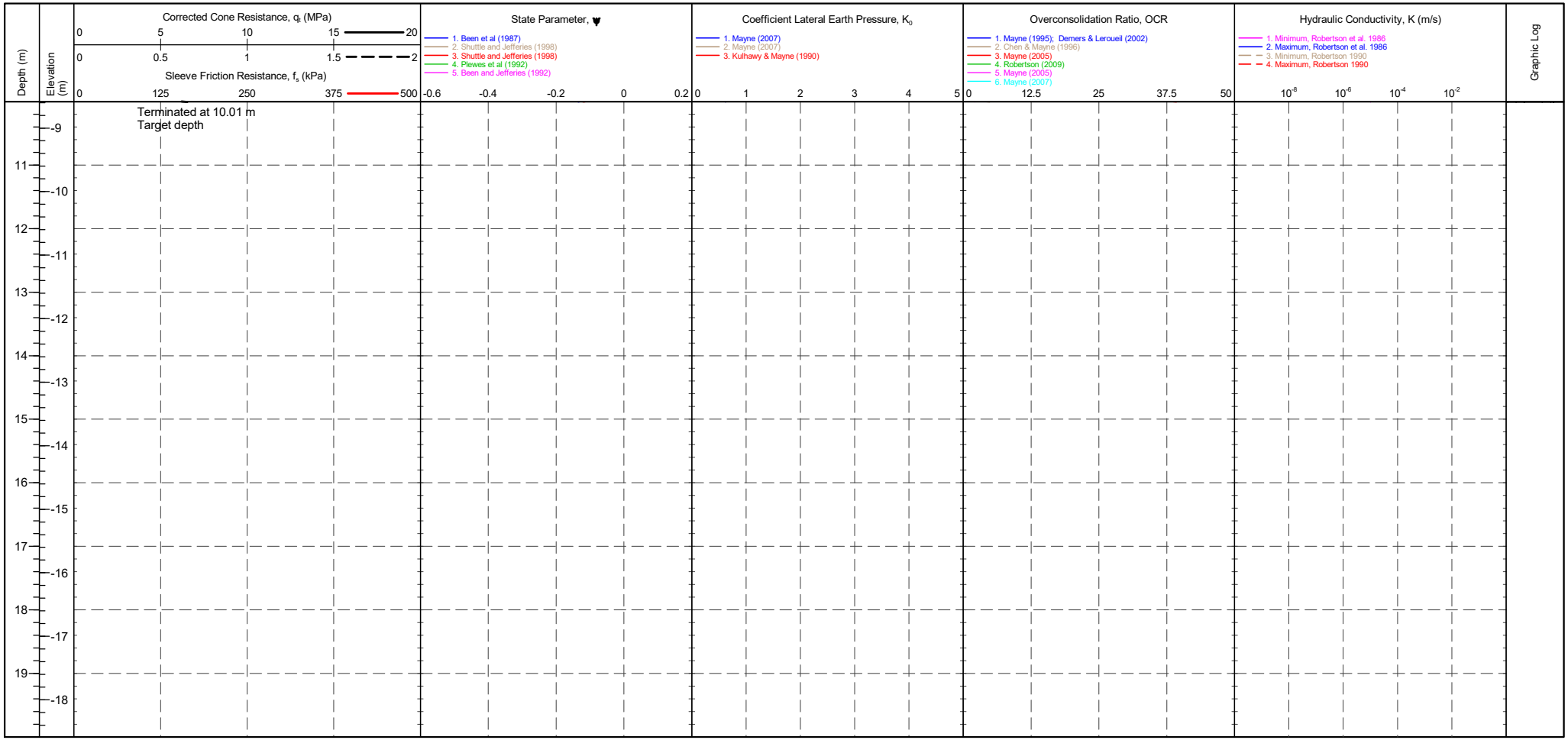
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 04

PointID: **R22-CPT105**

CLIENT : Structural Soils	EASTING : 632524.103 m	Remark:	SHEET : 2 OF 2
PROJECT : Sealink	NORTHING : 163162.569 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.417 m OD		TEST DATE : 19/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES			
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post	Difference
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	292 mV	291 mV	-0.011 MPa
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Sleeve	316 mV	315 mV	-0.001 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	297 mV	296 mV	0 kPa
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot	X-Y Inclinometer	2490 mV	2547 mV	

Groundwater Level

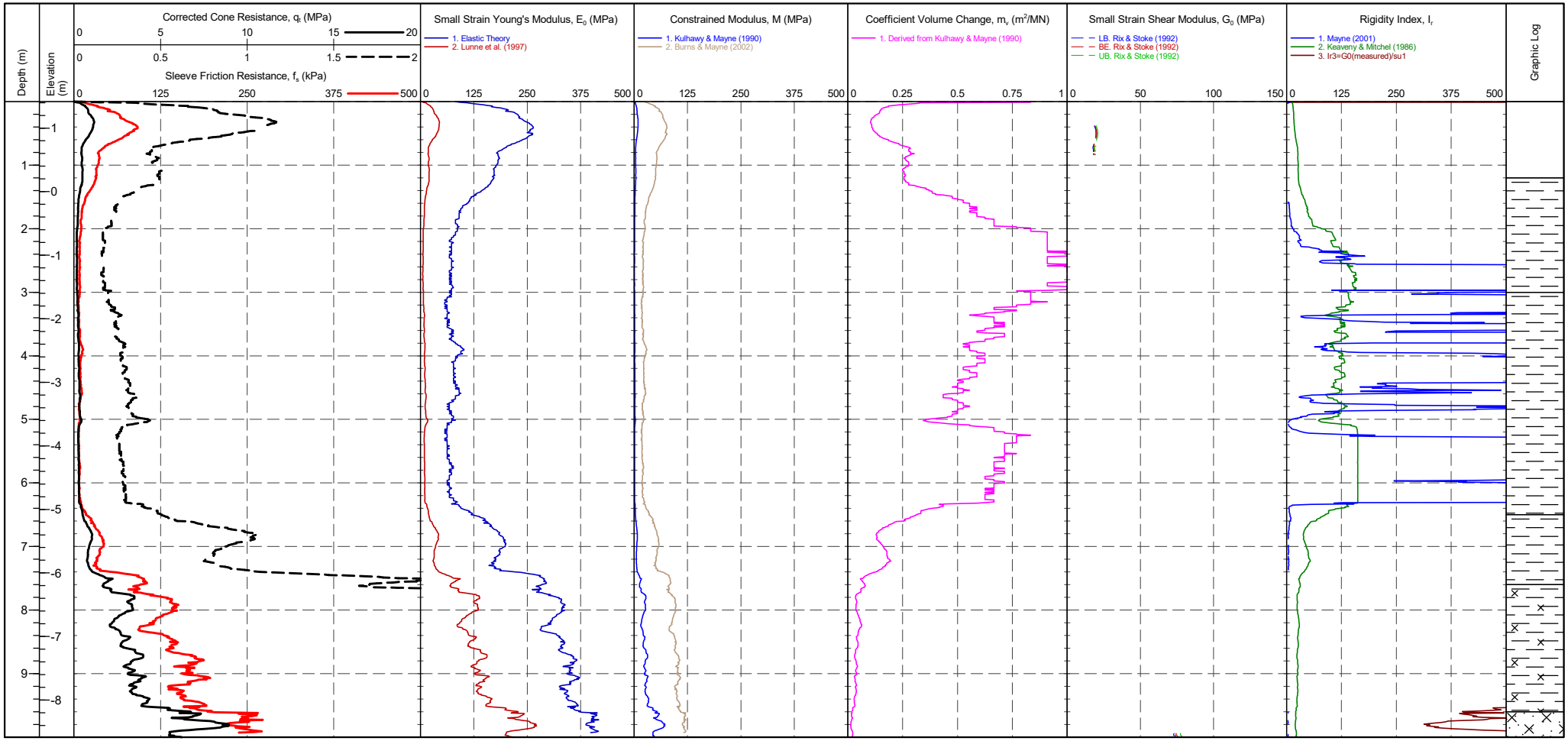
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 05

PointID **R22-CPT105**

CLIENT : Structural Soils PROJECT : Sealink LOCATION : Kent PROJECT No. : 1230335	EASTING : 632524.103 m NORTHING : 163162.569 m ELEVATION : 1.417 m OD CHECKED BY : DW TERMINATION REASON : Target depth	Remark: Test completed at target depth.	SHEET : 1 OF 2 STATUS : Final TEST DATE : 19/10/2023 PLOT DATE : 12/03/2024 METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES			
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post	Difference
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	292 mV	291 mV	-0.011 MPa
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Sleeve	316 mV	315 mV	-0.001 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	297 mV	296 mV	0 kPa
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot	X-Y Inclinometer	2490 mV	2547 mV	

Groundwater Level

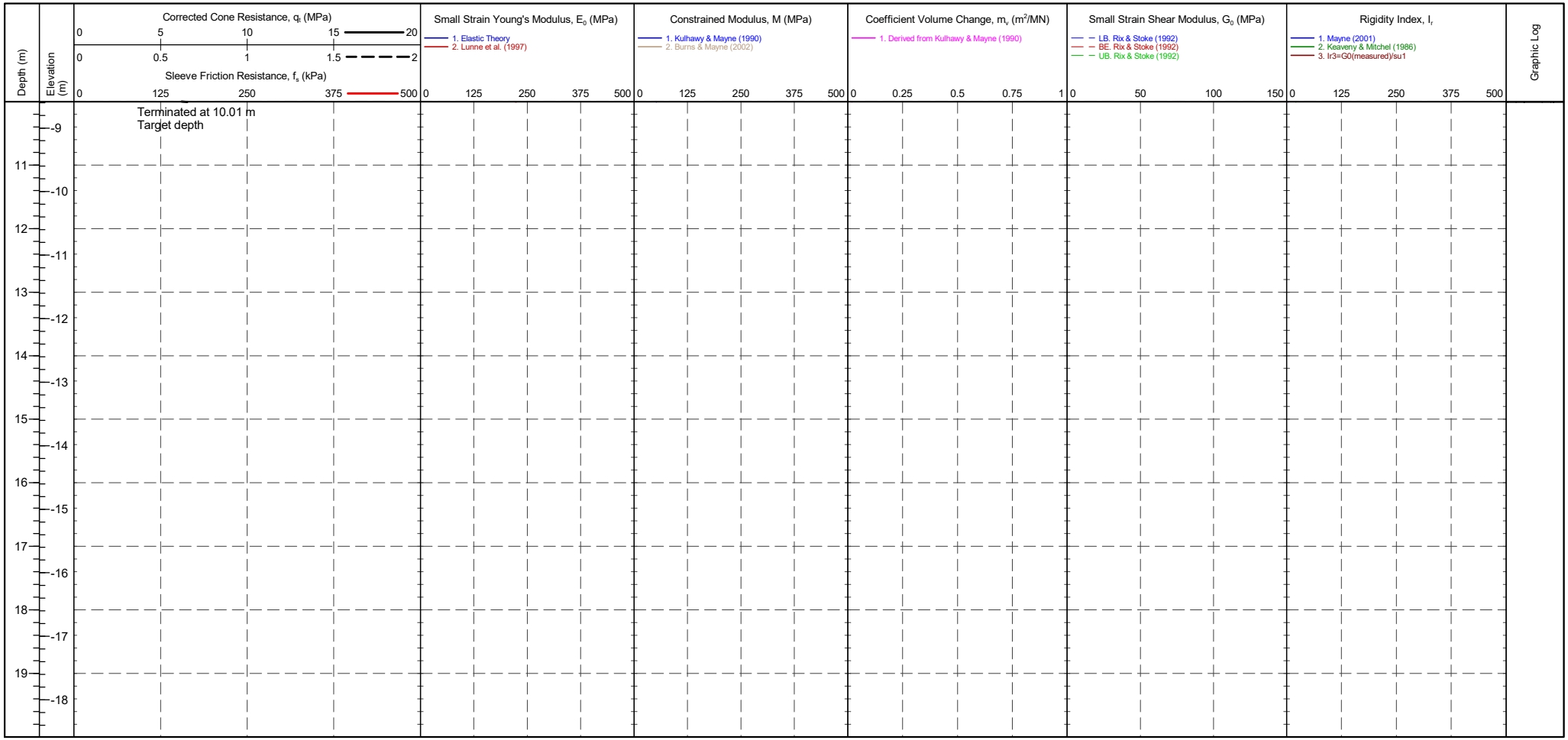
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 05

PointID **R22-CPT105**

CLIENT : Structural Soils	EASTING : 632524.103 m	Remark:	SHEET : 2 OF 2
PROJECT : Sealink	NORTHING : 163162.569 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.417 m OD		TEST DATE : 19/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022

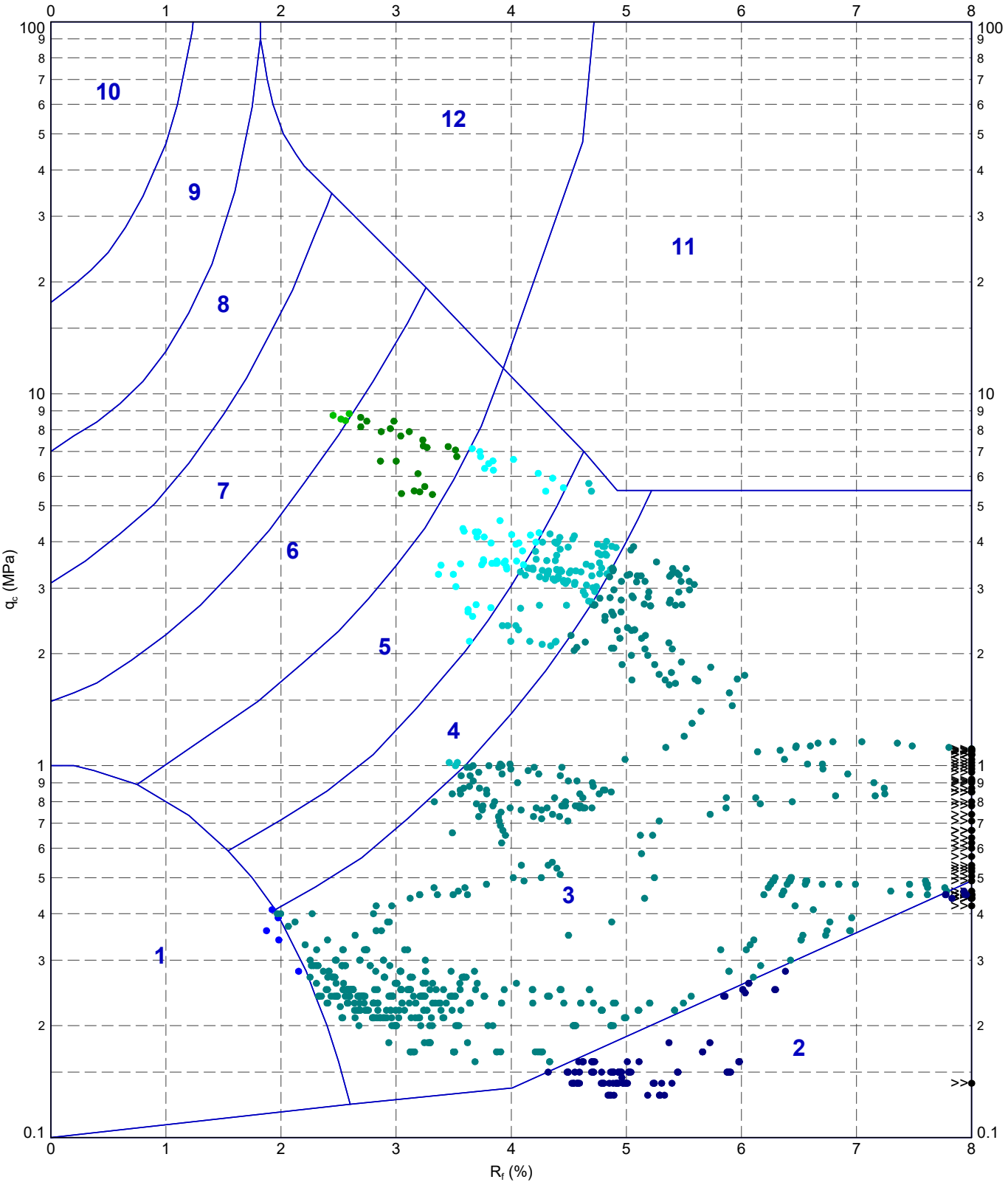


CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES		
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	292 mV	291 mV
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Sleeve	316 mV	315 mV
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	297 mV	296 mV
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot	X-Y Inclinometer	2490 mV	2547 mV

Difference
-0.011 MPa
-0.001 kPa
0 kPa

Groundwater Level

Dissipation Test



METHOD: Robertson et al. 1986 qc Rf

- 1 - Sensitive fine grained material
- 2 - Organic material
- 3 - CLAY
- 4 - Silty CLAY to CLAY
- 5 - Clayey SILT to silty CLAY
- 6 - Sandy SILT to clayey SILT
- 7 - Silty SAND to sandy SILT
- 8 - SAND to silty SAND
- 9 - SAND
- 10 - Gravelly SAND to SAND
- 11 - Very stiff fine grained
- 12 - SAND to clayey SAND

IN SITU SITE INVESTIGATION

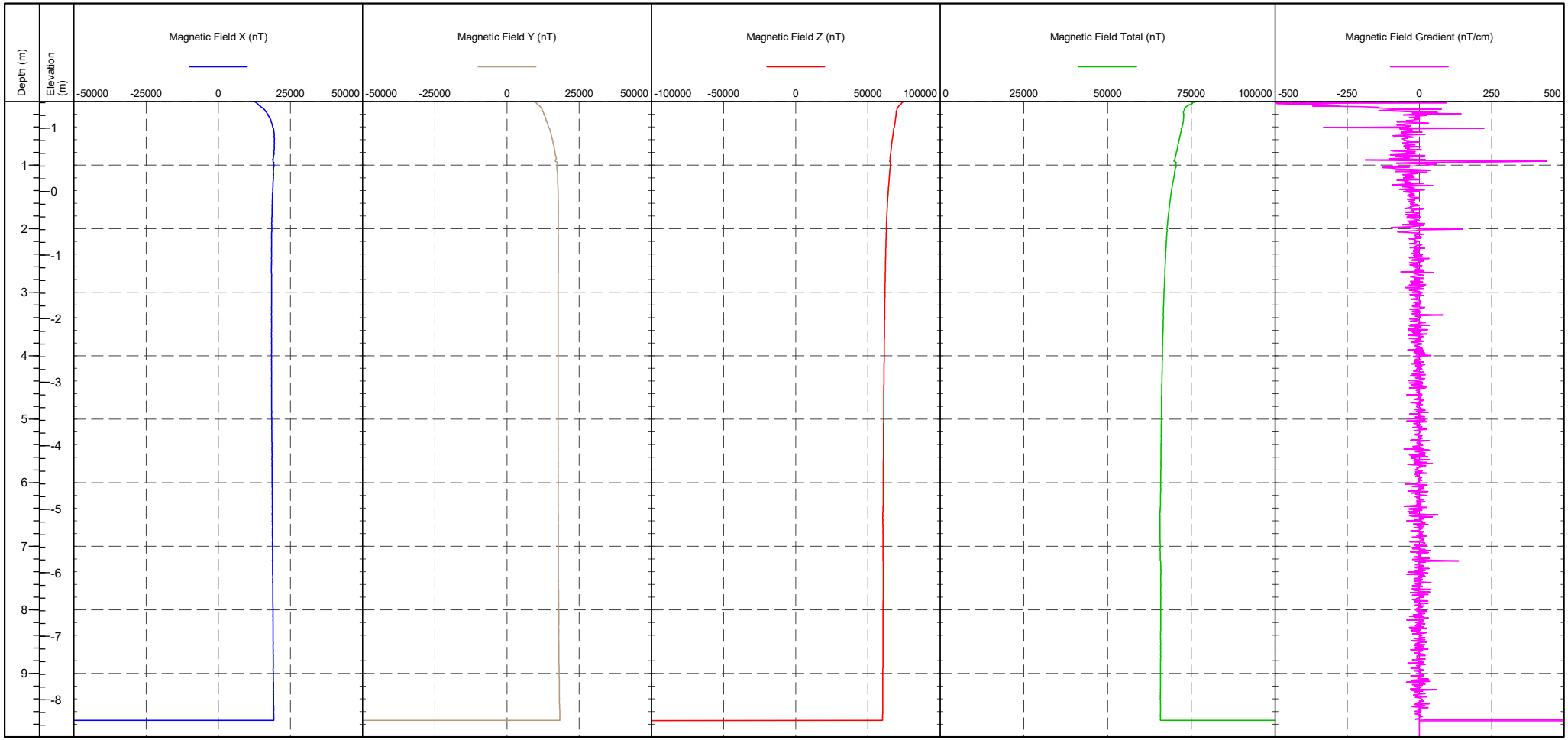
TITLE: Structural Soils Ian Warne Kent Sealink Robertson et al. 1986 q_c vs. R_f - R22-CPT105	DRAWN	DATE 12/03/2024	
	CHECKED	DATE 12/03/2024	
	SCALE Not To Scale		A4
	PROJECT No 1230335	FIGURE No	

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

MAG LOG

PointID **R22-CPT105**

CLIENT : Structural Soils PROJECT : Sealink LOCATION : Kent PROJECT No. : 1230335	EASTING : 632524.103 m NORTHING : 163162.569 m ELEVATION : 1.417 m OD CHECKED BY : DW TERMINATION REASON : Target depth	Remark: Test completed at target depth.	SHEET : 1 OF 2 STATUS : Final TEST DATE : 19/10/2023 PLOT DATE : 12/03/2024 METHOD : ISO 22476-1:2022



CONE ID : S15-CFIP.2145 CONE MODEL : Subtraction	RIG : CPT 020 - Pagani OPERATOR : AC/CH		

CPTU ZERO VALUES

Transducer	Pre	Post	Difference
Tip	292 mV	291 mV	-0.011 MPa
Sleeve	316 mV	315 mV	-0.001 kPa
Pore Pressure 2	297 mV	296 mV	0 kPa
X-Y Inclinometer	2490 mV	2547 mV	

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

MAG LOG

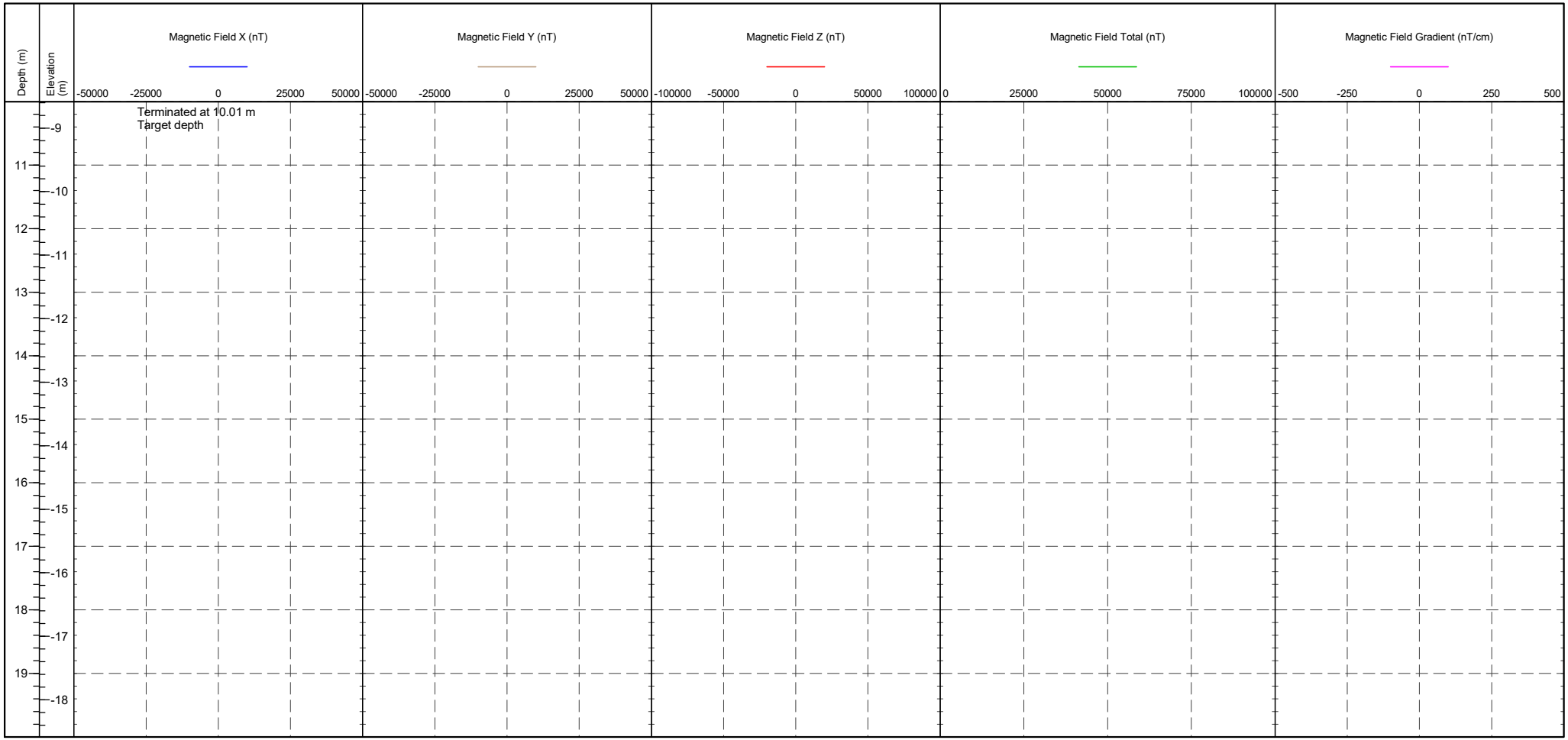
PointID **R22-CPT105**

CLIENT : Structural Soils
PROJECT : Sealink
LOCATION : Kent
PROJECT No. : 1230335

EASTING : 632524.103 m
NORTHING : 163162.569 m
ELEVATION : 1.417 m OD
CHECKED BY : DW
TERMINATION REASON : Target depth

Remark:
Test completed at target depth.

SHEET : 2 OF 2
STATUS : Final
TEST DATE : 19/10/2023
PLOT DATE : 12/03/2024
METHOD : ISO 22476-1:2022



CONE ID : S15-CFIP.2145
CONE MODEL : Subtraction

RIG : CPT 020 - Pagani
OPERATOR : AC/CH

CPTU ZERO VALUES

Transducer	Pre	Post	Difference
Tip	292 mV	291 mV	-0.011 MPa
Sleeve	316 mV	315 mV	-0.001 kPa
Pore Pressure 2	297 mV	296 mV	0 kPa
X-Y Inclinometer	2490 mV	2547 mV	

DISSIPATION TEST

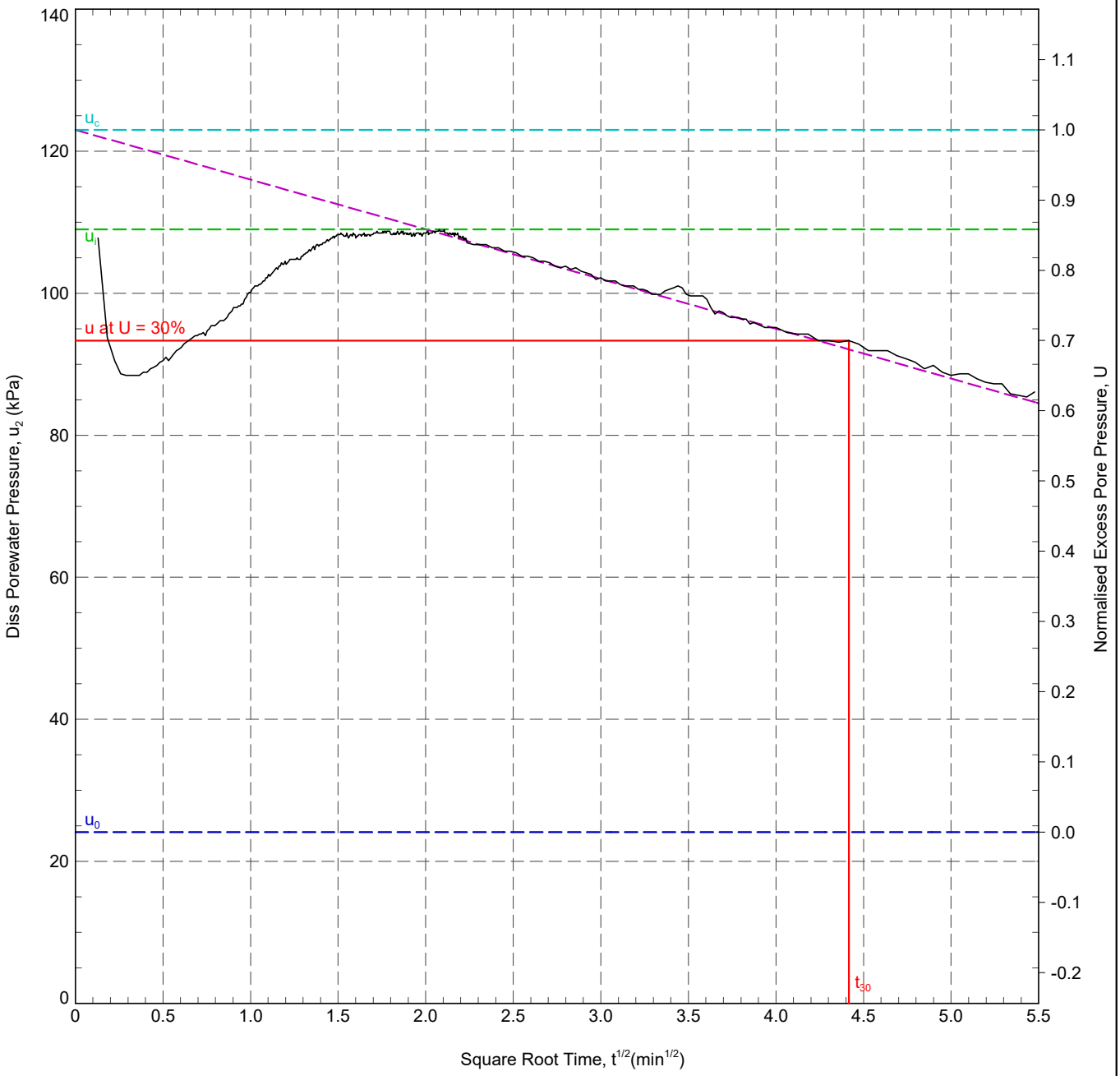
IN SITU SITE INVESTIGATION

Working with: STRUCTURAL SOILS LTD

Test ID

R22-CPT105 - 2.96 m

CLIENT	: Structural Soils	AREA	: Sealink, Richborough	SHEET	: 1 OF 1
ENGINEER	: Ian Warne	EASTING	: 632524.1 m	STATUS	: Final
PROJECT	: Sealink	NORTHING	: 163162.6 m	DATE	: 19/10/23
LOCATION	: Kent	COORD. SYS.	:		
PROJECT No.	: 1230335	ELEVATION	: 1.42 m		



In Situ Pore Pressure, u_0:	24.1 kPa	Rigidity Index, I_r:	19006.8
Initial Pore Pressure, u_i:	109.0 kPa	Horizontal Coefficient of Consolidation, c_h:	1.53x10^2 m^2/yr
Final Pore Pressure:	86.1 kPa	Ratio c_h/c_v:	1.25
Back Extrapolated Pore Pressure, u_c:	123 kPa	Vertical Coefficient of Consolidation, c_v:	1.23x10^2 m^2/yr
Degree of Dissipation:	30%		
Dissipation Pressure:	93.3 kPa		
Time for 30% Dissipation, t_{30}:	19.50 min		

RIG	: CPT 020 - Pagani	ANALYSED BY	: ZJ	DATE:	20/10/2023
CONE TYPE	: Subtraction	CHECKED BY	: DW	DATE:	20/10/2023
CONE ID	: S15-CFIP.2145	APPROVED BY	: DW	DATE:	20/10/2023
OPERATOR	: AC				

REMARK
T30 reached. Test OK.

DISSIPATION TEST

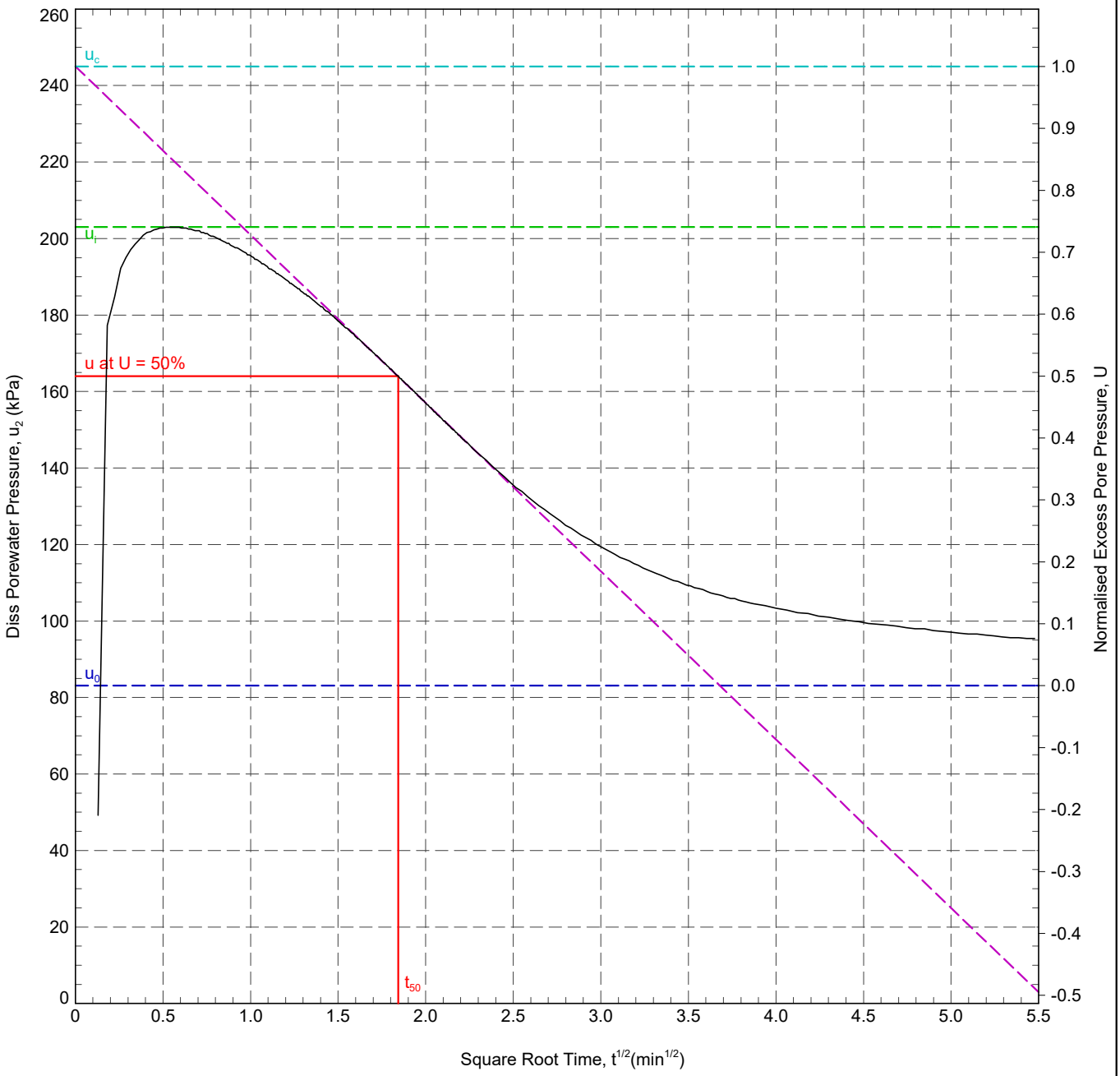
IN SITU SITE INVESTIGATION

Working with: STRUCTURAL SOILS LTD

Test ID

R22-CPT105 - 8.97 m

CLIENT	: Structural Soils	AREA	: Sealink, Richborough	SHEET	: 1 OF 1
ENGINEER	: Ian Warne	EASTING	: 632524.1 m	STATUS	: Final
PROJECT	: Sealink	NORTHING	: 163162.6 m	DATE	: 19/10/23
LOCATION	: Kent	COORD. SYS.	:		
PROJECT No.	: 1230335	ELEVATION	: 1.42 m		



In Situ Pore Pressure, u_0:	83.1 kPa	Rigidity Index, I_r:	25
Initial Pore Pressure, u_i:	203.0 kPa	Horizontal Coefficient of Consolidation, c_h:	1.00×10^2 m²/yr
Final Pore Pressure:	95.4 kPa	Ratio c_h/c_v:	1.25
Back Extrapolated Pore Pressure, u_c:	245 kPa	Vertical Coefficient of Consolidation, c_v:	8.01×10^1 m²/yr
Degree of Dissipation:	50%		
Dissipation Pressure:	164.0 kPa		
Time for 50% Dissipation, t_{50}:	3.40 min		

RIG	: CPT 020 - Pagani	ANALYSED BY	: ZJ	DATE:	20/10/2023
CONE TYPE	: Subtraction	CHECKED BY	: DW	DATE:	20/10/2023
CONE ID	: S15-CFIP.2145	APPROVED BY	: DW	DATE:	20/10/2023
OPERATOR	: AC				

REMARK

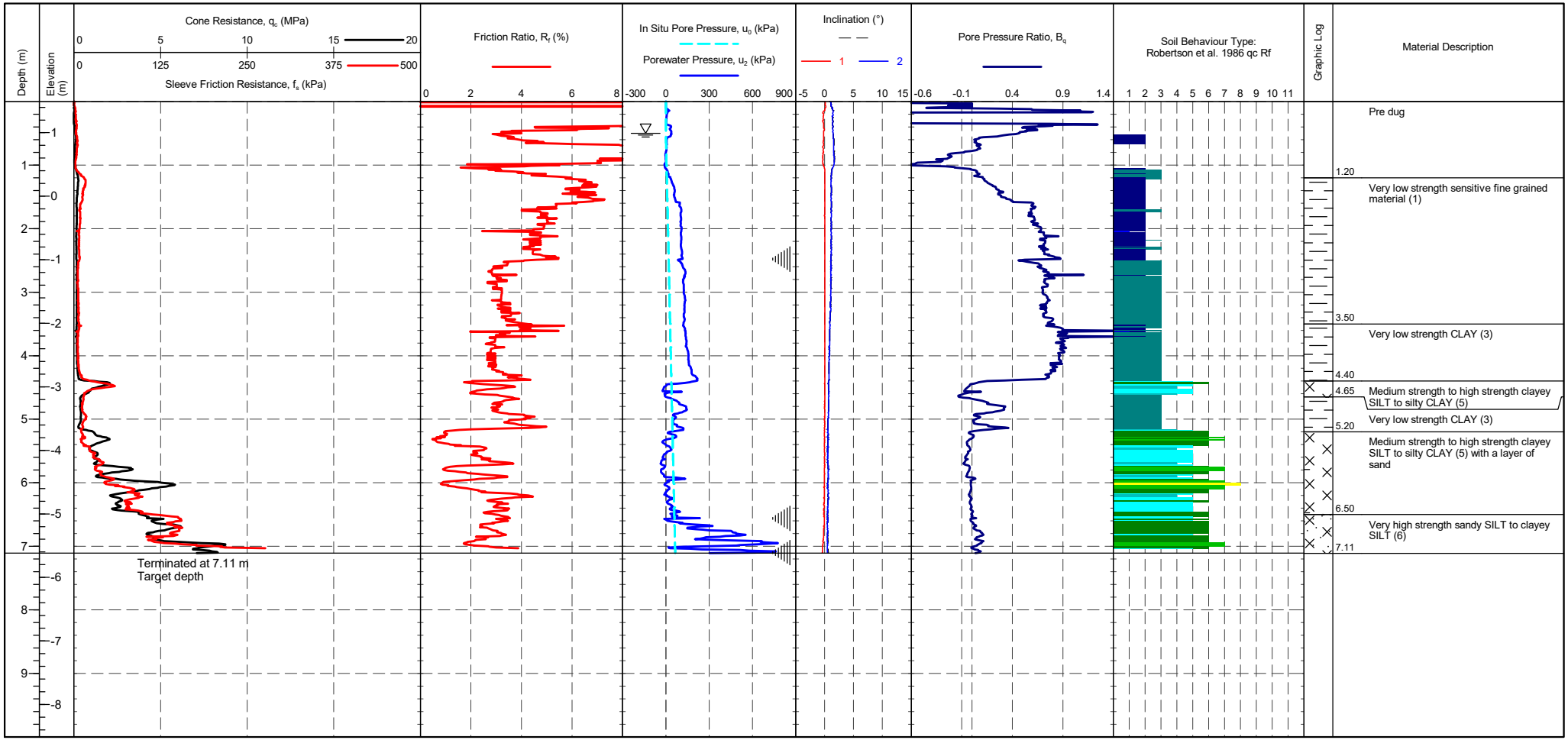
T50 reached. Test OK.

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 01

PointID: **R22-CPT106**

CLIENT : Structural Soils	EASTING : 632312.364 m	Remark:	SHEET : 1 OF 1
PROJECT : Sealink	NORTHING : 163008.869 m	Test refused on total pressure.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.490 m OD		TEST DATE : 19/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2
CALIBRATION DATE	: 12/07/2023	APPLICATION CLASS	: 2
CONE MODEL	: Subtraction	RIG	: CPT 020 - Pagani
CONE AREA	: 15cm^2	OPERATOR	: AC/CH
CONE AREA RATIO	: 0.79	FRICTION REDUCER	: None
FILTER POSITION	: u2	WEATHER	: Sunny & Hot
FILTER TYPE	: HDPE	GROUNDWATER DEPTH	: Assumed for calculation purposes

CPTU ZERO VALUES

Transducer	Pre	Post	Difference
Tip	296 mV	291 mV	-0.054 MPa
Sleeve	317 mV	314 mV	-0.002 kPa
Pore Pressure 2	296 mV	311 mV	0.003 kPa
X-Y Inclinometer	2504 mV	2538 mV	

METHOD: Robertson et al. 1986 qc Rf

1 - Sensitive fine grained material
2 - Organic material
3 - CLAY
4 - Silty CLAY to CLAY
5 - Clayey SILT to silty CLAY
6 - Sandy SILT to clayey SILT
7 - Silty SAND to sandy SILT
8 - SAND to silty SAND
9 - SAND
10 - Gravelly SAND to SAND
11 - Very stiff fine grained
12 - SAND to clayey SAND

Groundwater Level

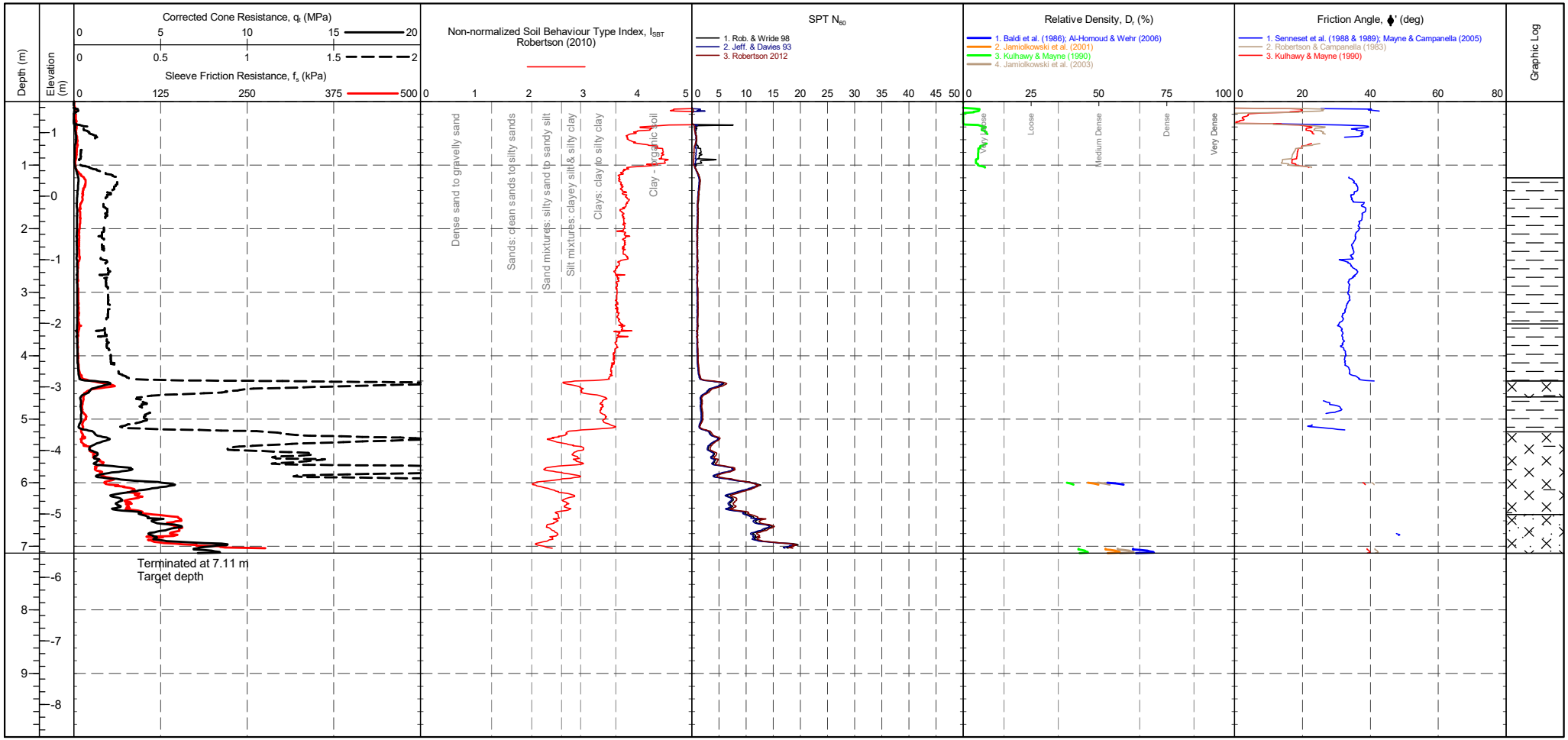
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 02

PointID: **R22-CPT106**

CLIENT : Structural Soils	EASTING : 632312.364 m	Remark:	SHEET : 1 OF 1
PROJECT : Sealink	NORTHING : 163008.869 m	Test refused on total pressure.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.490 m OD		TEST DATE : 19/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES		
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post	Difference
CONE AREA	: 15cm²	RIG	: CPT 020 - Pagani	Tip	296 mV	291 mV	-0.054 MPa
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Sleeve	317 mV	314 mV	-0.002 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	296 mV	311 mV	0.003 kPa
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot	X-Y Inclinometer	2504 mV	2538 mV	

GRANULAR SOILS (Sands & Gravels) Robertson et al. 1986 Zones 7-10 and Zone 12

Description	SBT Index, Ic	Description	SPT N value, NSPT	Description	Relative Density Dr (%)
Clays	2.95-3.60	Very Loose	0 - 4	Very Loose	0 - 15
Silt mixtures	2.60-2.95	Loose	4 - 10	Loose	15 - 35
Sand mixtures	2.05-2.60	Medium Dense	10 - 30	Medium Dense	35 - 65
Sands	1.31-2.05	Dense	30 - 50	Dense	65 - 85
Gravelly sand	<1.31	Very Dense	>50	Very Dense	>85

Groundwater Level

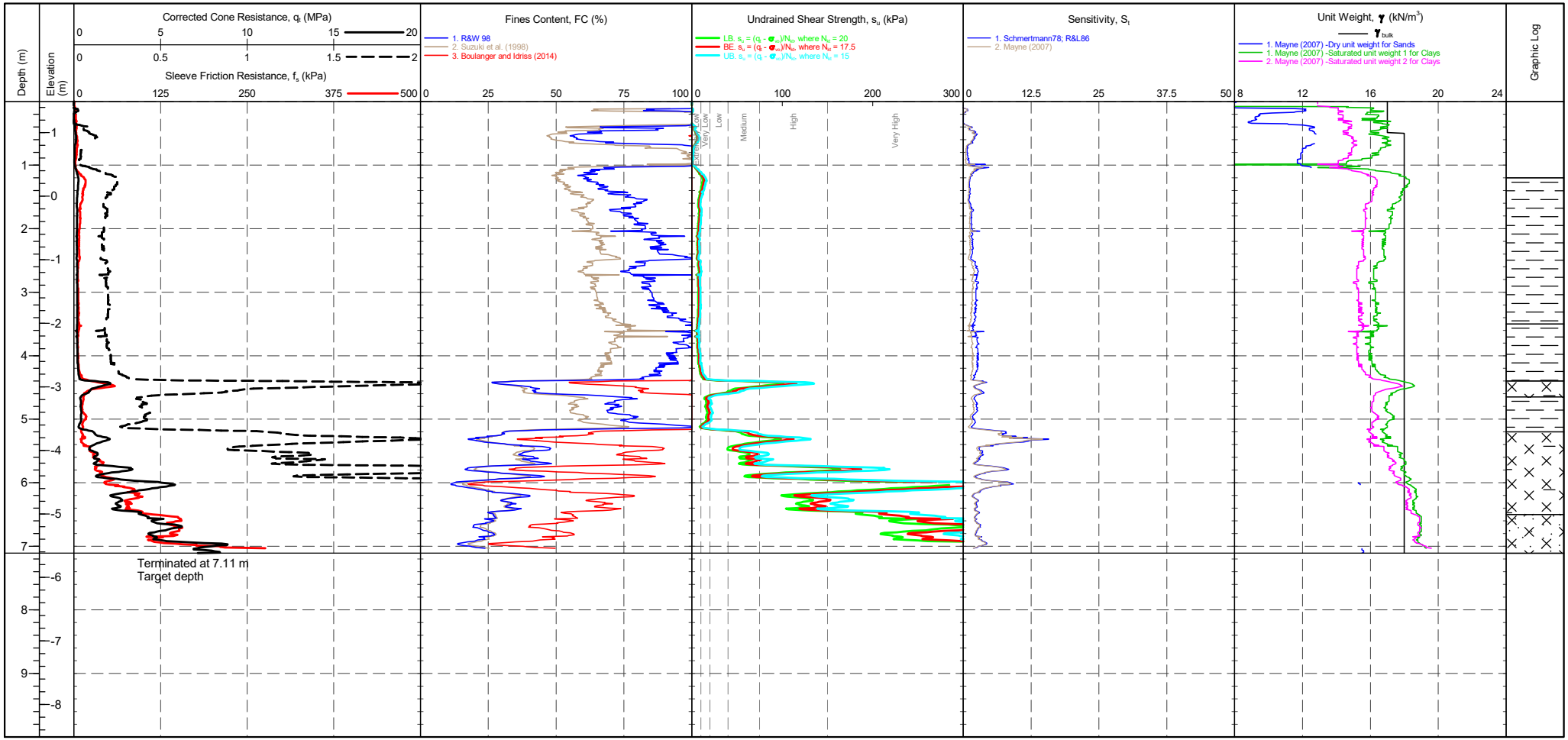
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 03

PointID: **R22-CPT106**

CLIENT : Structural Soils	EASTING : 632312.364 m	Remark:	SHEET : 1 OF 1
PROJECT : Sealink	NORTHING : 163008.869 m	Test refused on total pressure.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.490 m OD		TEST DATE : 19/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES			
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post	Difference
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	296 mV	291 mV	-0.054 MPa
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Sleeve	317 mV	314 mV	-0.002 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	296 mV	311 mV	0.003 kPa
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot	X-Y Inclinometer	2504 mV	2538 mV	

COHESIVE SOILS (Clays & Silts) Robertson et al. 1986 Zones 1-6 and Zone 11

Term based on measurement	su (kPa)	Term based on measurement	su (kPa)
Extremely low strength	<10	Medium strength	40-75
Very low strength	10-20	High strength	75-150
Low strength	20-40	Very high strength	150-300
		Extremely high strength	>300

Groundwater Level

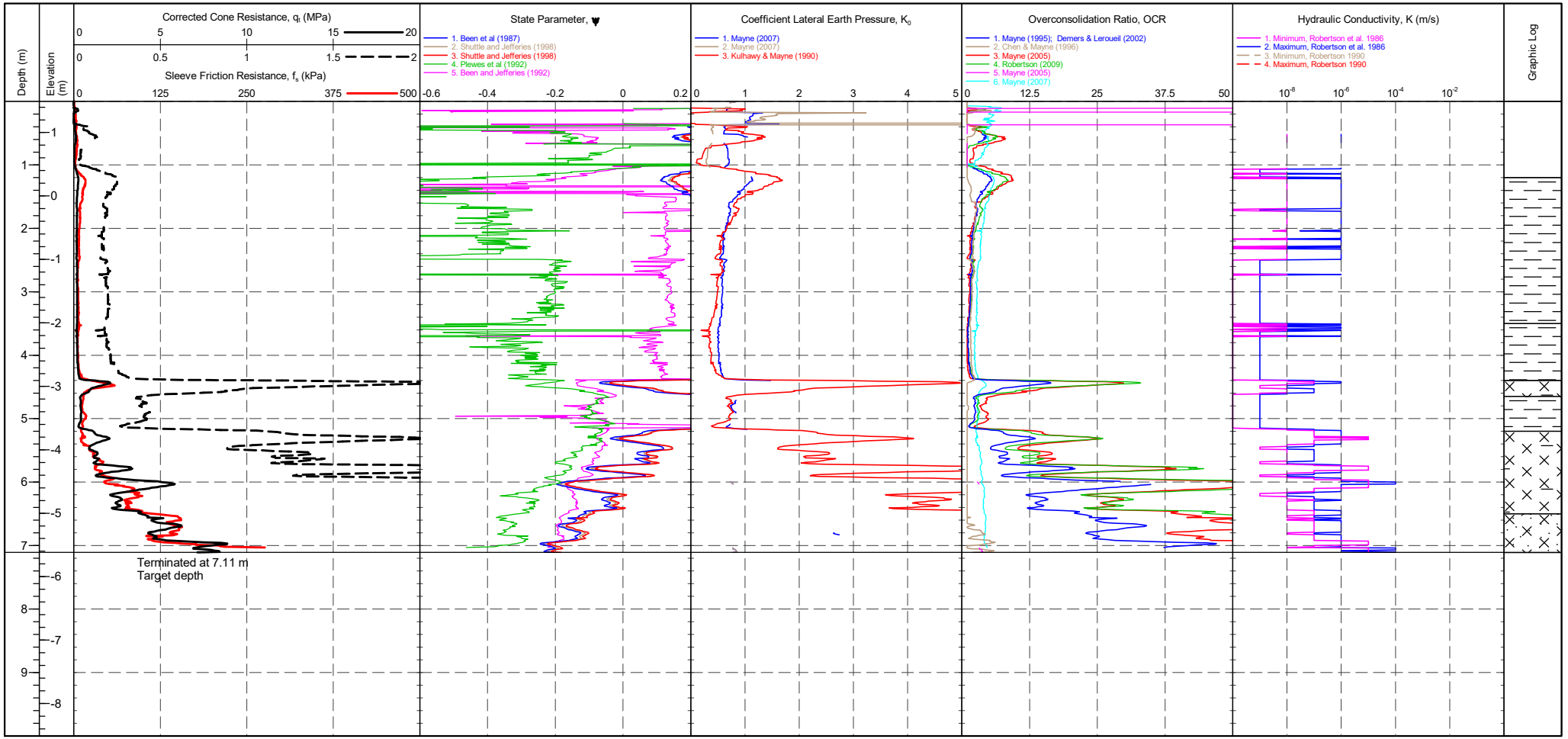
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 04

PointID: **R22-CPT106**

CLIENT : Structural Soils	EASTING : 632312.364 m	Remark:	SHEET : 1 OF 1
PROJECT : Sealink	NORTHING : 163008.869 m	Test refused on total pressure.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.490 m OD		TEST DATE : 19/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



				CPTU ZERO VALUES			
CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	Transducer	Pre	Post	Difference
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Tip	296 mV	291 mV	-0.054 MPa
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Sleeve	317 mV	314 mV	-0.002 kPa
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Pore Pressure 2	296 mV	311 mV	0.003 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	X-Y Inclinometer	2504 mV	2538 mV	
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot				

Groundwater Level

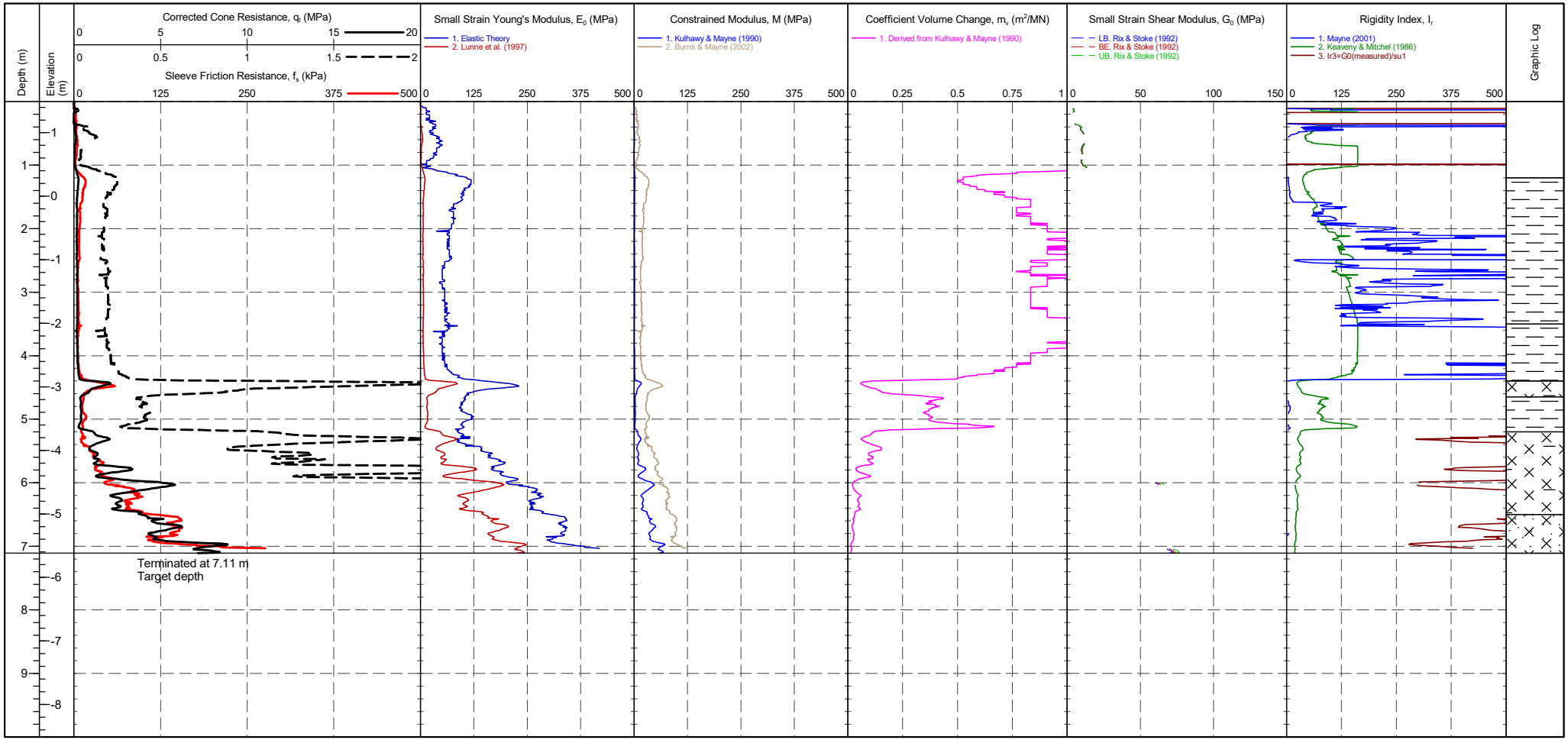
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 05

PointID **R22-CPT106**

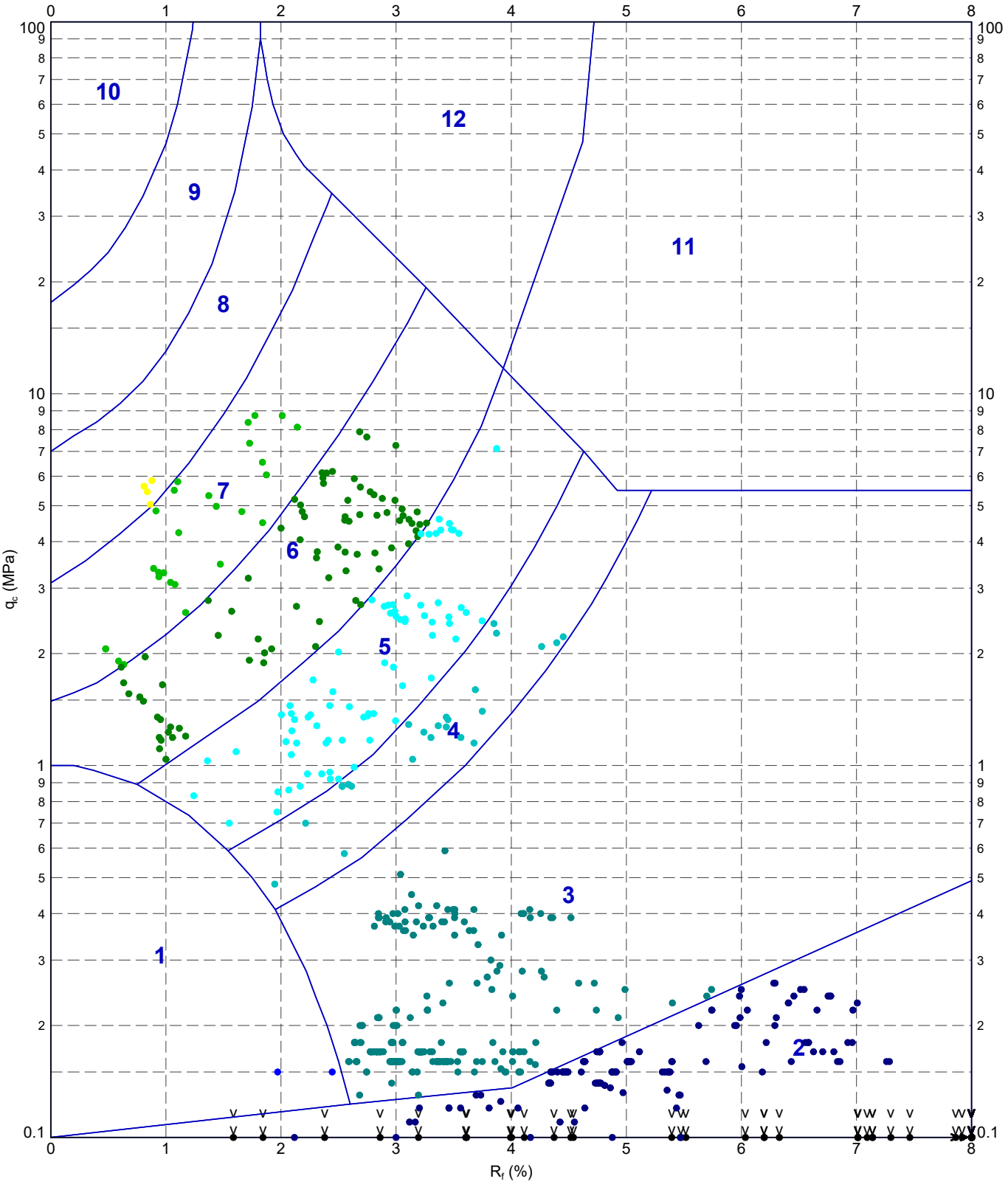
CLIENT : Structural Soils	EASTING : 632312.364 m	Remark:	SHEET : 1 OF 1
PROJECT : Sealink	NORTHING : 163008.869 m	Test refused on total pressure.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.490 m OD		TEST DATE : 19/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES			
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post	Difference
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	296 mV	291 mV	-0.054 MPa
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Sleeve	317 mV	314 mV	-0.002 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	296 mV	311 mV	0.003 kPa
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot	X-Y Inclinometer	2504 mV	2538 mV	

Groundwater Level

Dissipation Test



METHOD: Robertson et al. 1986 qc Rf

1 - Sensitive fine grained material	4 - Silty CLAY to CLAY	7 - Silty SAND to sandy SILT	10 - Gravelly SAND to SAND
2 - Organic material	5 - Clayey SILT to silty CLAY	8 - SAND to silty SAND	11 - Very stiff fine grained
3 - CLAY	6 - Sandy SILT to clayey SILT	9 - SAND	12 - SAND to clayey SAND

IN SITU SITE INVESTIGATION

TITLE

Structural Soils
Ian Warne
Kent
Sealink
Robertson et al. 1986 q_c vs. R_f - R22-CPT106

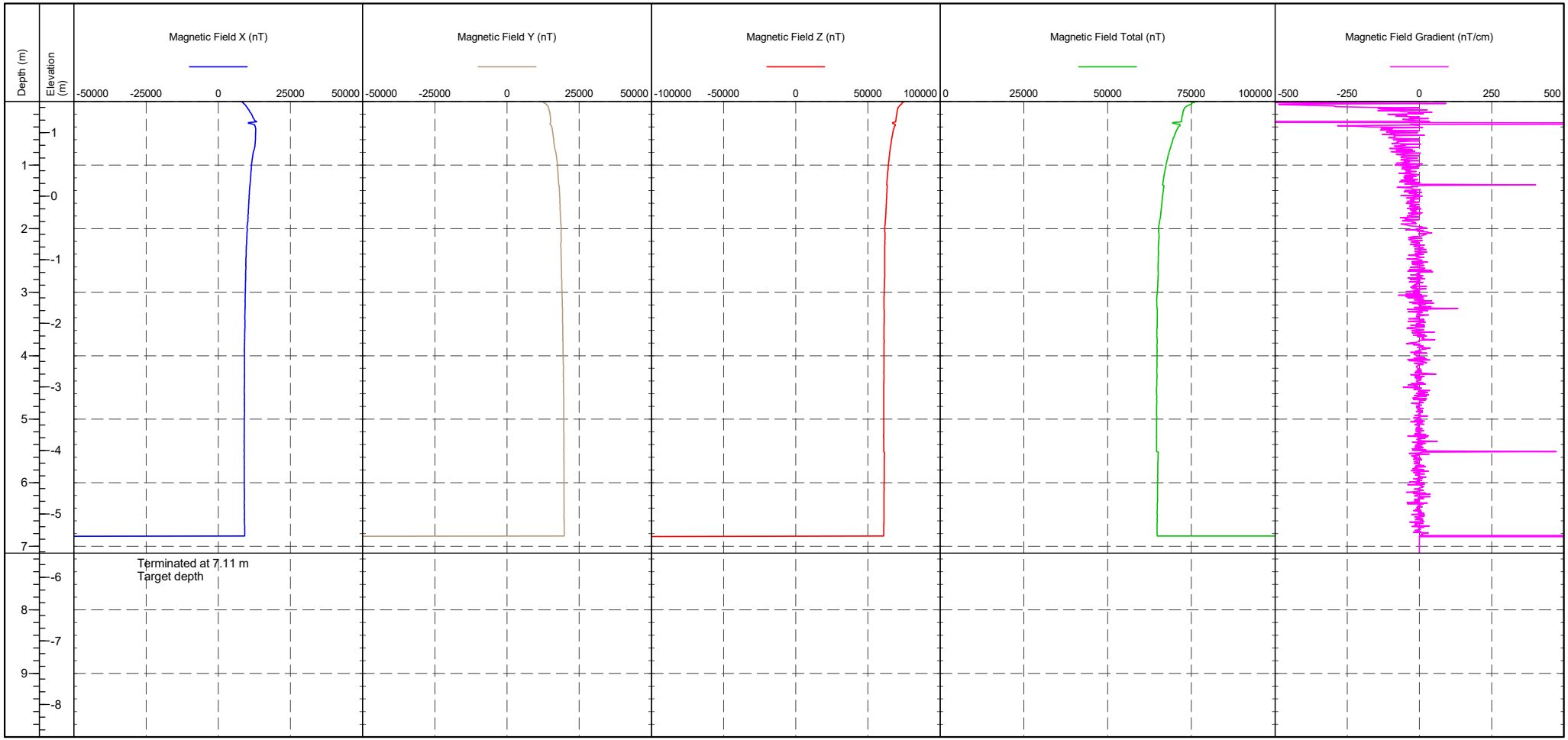
DRAWN	DATE 12/03/2024
CHECKED	DATE 12/03/2024
SCALE Not To Scale	A4
PROJECT No 1230335	FIGURE No

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

MAG LOG

PointID **R22-CPT106**

CLIENT : Structural Soils	EASTING : 632312.364 m	Remark:	SHEET : 1 OF 1
PROJECT : Sealink	NORTHING : 163008.869 m	Test refused on total pressure.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.490 m OD		TEST DATE : 19/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	RIG	: CPT 020 - Pagani	CPTU ZERO VALUES		
CONE MODEL	: Subtraction	OPERATOR	: AC/CH	Transducer	Pre	Post	Difference
				Tip	296 mV	291 mV	-0.054 MPa
				Sleeve	317 mV	314 mV	-0.002 kPa
				Pore Pressure 2	296 mV	311 mV	0.003 kPa
				X-Y Inclinometer	2504 mV	2538 mV	

DISSIPATION TEST

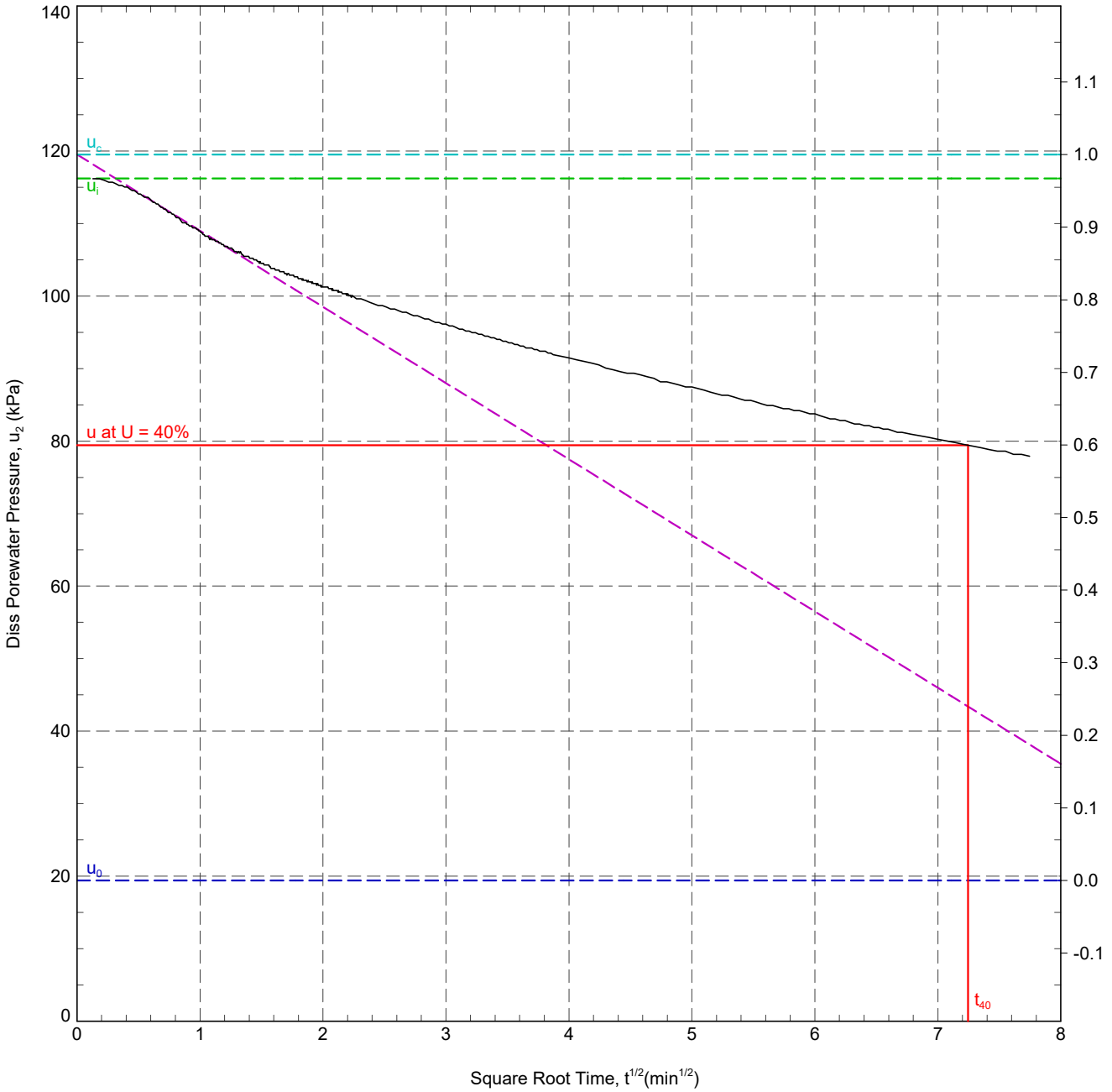
IN SITU SITE INVESTIGATION

Working with: STRUCTURAL SOILS LTD

Test ID

R22-CPT106 - 2.48 m

CLIENT	: Structural Soils	AREA	: Sealink, Richborough	SHEET	: 1 OF 1
ENGINEER	: Ian Warne	EASTING	: 632312.4 m	STATUS	: Final
PROJECT	: Sealink	NORTHING	: 163008.9 m	DATE	: 19/10/23
LOCATION	: Kent	COORD. SYS.	:		
PROJECT No.	: 1230335	ELEVATION	: 1.49 m		



In Situ Pore Pressure, u_0:	19.4 kPa	Rigidity Index, I_r:	24
Initial Pore Pressure, u_i:	116.2 kPa	Horizontal Coefficient of Consolidation, c_h:	3.68x10^0 m^2/yr
Final Pore Pressure:	77.9 kPa	Ratio c_h/c_v:	1.25
Back Extrapolated Pore Pressure, u_c:	119.5 kPa	Vertical Coefficient of Consolidation, c_v:	2.95x10^0 m^2/yr
Degree of Dissipation:	40%		
Dissipation Pressure:	79.4 kPa		
Time for 40% Dissipation, t_{40}:	52.50 min		

RIG	: CPT 020 - Pagani	ANALYSED BY	: ZJ	DATE:	20/10/2023
CONE TYPE	: Subtraction	CHECKED BY	: DW	DATE:	20/10/2023
CONE ID	: S15-CFIP.2145	APPROVED BY	: DW	DATE:	20/10/2023
OPERATOR	: AC				

REMARK
T40 reached. Test OK.

DISSIPATION TEST

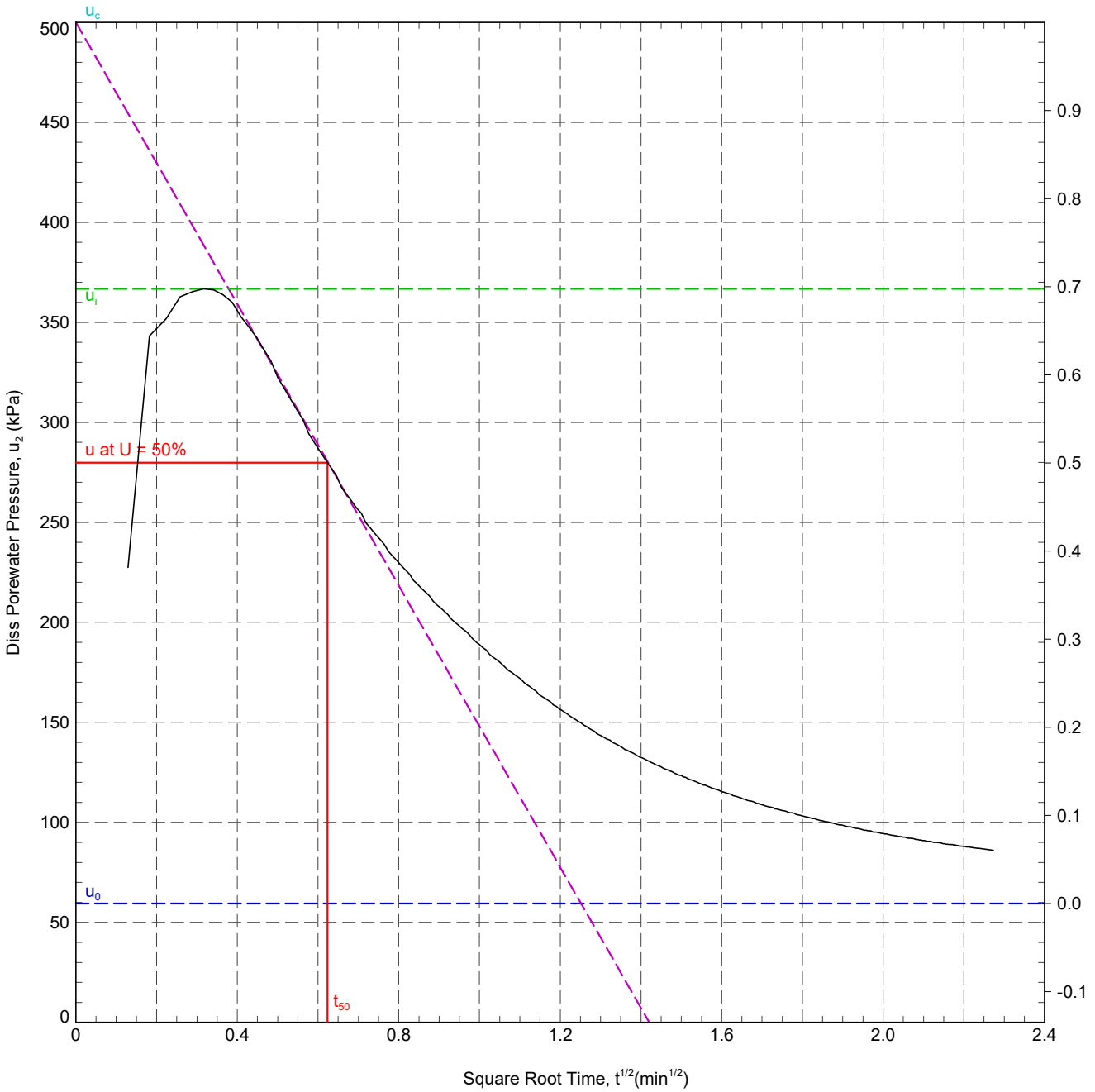
IN SITU SITE INVESTIGATION

Working with: STRUCTURAL SOILS LTD

Test ID

R22-CPT106 - 6.56 m

CLIENT	: Structural Soils	AREA	: Sealink, Richborough	SHEET	: 1 OF 1
ENGINEER	: Ian Warne	EASTING	: 632312.4 m	STATUS	: Final
PROJECT	: Sealink	NORTHING	: 163008.9 m	DATE	: 19/10/23
LOCATION	: Kent	COORD. SYS.	:		
PROJECT No.	: 1230335	ELEVATION	: 1.49 m		



In Situ Pore Pressure, u_0:	59.5 kPa	Rigidity Index, I_r:	20.3
Initial Pore Pressure, u_i:	366.7 kPa	Horizontal Coefficient of Consolidation, c_h:	$7.89x10^2$ m^2/yr
Final Pore Pressure:	86.1 kPa		
Back Extrapolated Pore Pressure, u_c:	500 kPa		
Degree of Dissipation:	50%		
Dissipation Pressure:	279.8 kPa		
Time for 50% Dissipation, t_{50}:	0.39 min		

RIG	: CPT 020 - Pagani	ANALYSED BY	: ZJ	DATE:	20/10/2023
CONE TYPE	: Subtraction	CHECKED BY	: DW	DATE:	20/10/2023
CONE ID	: S15-CFIP.2145	APPROVED BY	: DW	DATE:	20/10/2023
OPERATOR	: AC				

REMARK

T50 reached. Quick dissipation t50=23.3s. Test OK.

DISSIPATION TEST

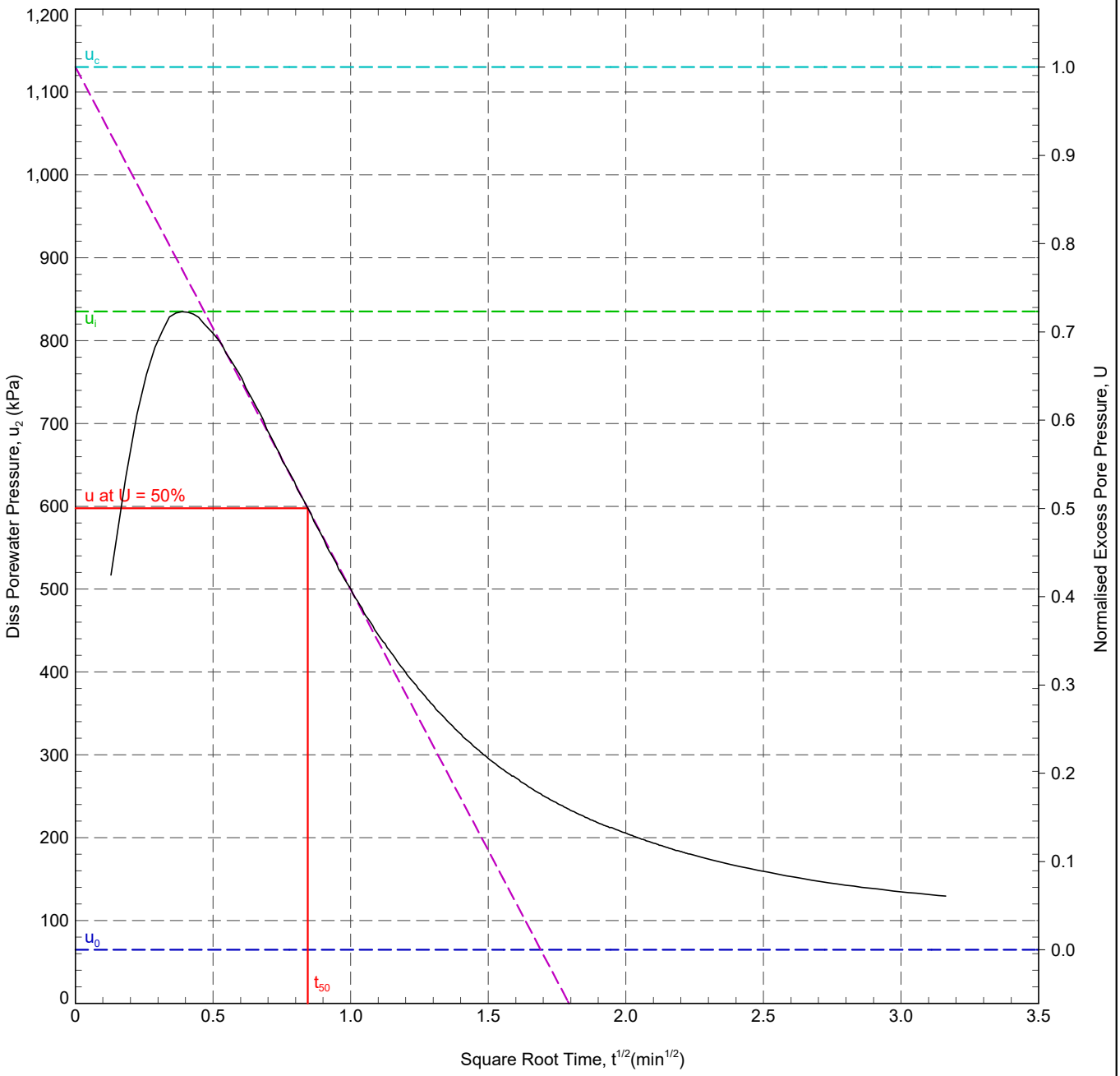
IN SITU SITE INVESTIGATION

Working with: STRUCTURAL SOILS LTD

Test ID

R22-CPT106 - 7.10 m

CLIENT	: Structural Soils	AREA	: Sealink, Richborough	SHEET	: 1 OF 1
ENGINEER	: Ian Warne	EASTING	: 632312.4 m	STATUS	: Final
PROJECT	: Sealink	NORTHING	: 163008.9 m	DATE	: 19/10/23
LOCATION	: Kent	COORD. SYS.	:		
PROJECT No.	: 1230335	ELEVATION	: 1.49 m		



In Situ Pore Pressure, u_0:	64.8 kPa	Rigidity Index, I_r:	19.2
Initial Pore Pressure, u_i:	835.0 kPa	Horizontal Coefficient of Consolidation, c_h:	4.18×10^2 m²/yr
Final Pore Pressure:	129.7 kPa		
Back Extrapolated Pore Pressure, u_c:	1130 kPa		
Degree of Dissipation:	50%		
Dissipation Pressure:	597.5 kPa		
Time for 50% Dissipation, t_{50}:	0.71 min		

RIG	: CPT 020 - Pagani	ANALYSED BY	: ZJ	DATE:	20/10/2023
CONE TYPE	: Subtraction	CHECKED BY	: DW	DATE:	20/10/2023
CONE ID	: S15-CFIP.2145	APPROVED BY	: DW	DATE:	20/10/2023
OPERATOR	: AC				

REMARK

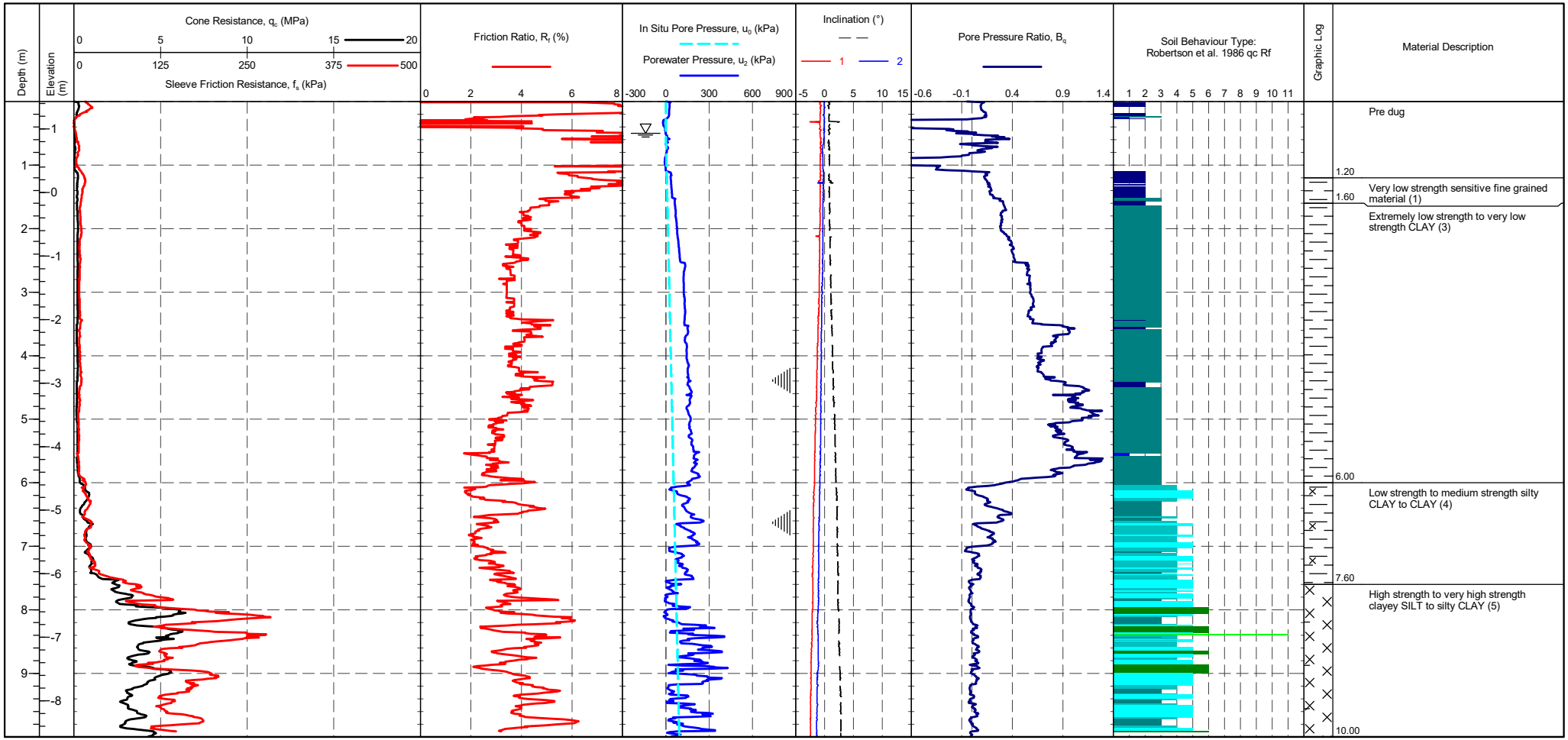
T50 reached. Quick dissipation t50=42.8s. Test OK.

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 01

PointID: **R22-CPT107**

CLIENT : Structural Soils	EASTING : 632215.156 m	Remark:	SHEET : 1 OF 2
PROJECT : Sealink	NORTHING : 163030.101 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.432 m OD		TEST DATE : 17/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2
CALIBRATION DATE	: 12/07/2023	APPLICATION CLASS	: 2
CONE MODEL	: Subtraction	RIG	: CPT 020 - Pagani
CONE AREA	: 15cm^2	OPERATOR	: AC/CH
CONE AREA RATIO	: 0.79	FRICTION REDUCER	: None
FILTER POSITION	: u2	WEATHER	: Sunny & Hot
FILTER TYPE	: HDPE	GROUNDWATER DEPTH	: Assumed for calculation purposes

CPTU ZERO VALUES

Transducer	Pre	Post	Difference
Tip	293 mV	291 mV	-0.022 MPa
Sleeve	315 mV	314 mV	-0.001 kPa
Pore Pressure 2	311 mV	318 mV	0.002 kPa
X-Y Inclinometer	2387 mV	2420 mV	

METHOD: Robertson et al. 1986 qc Rf

1 - Sensitive fine grained material
2 - Organic material
3 - CLAY
4 - Silty CLAY to CLAY
5 - Clayey SILT to silty CLAY
6 - Sandy SILT to clayey SILT
7 - Silty SAND to sandy SILT
8 - SAND to silty SAND
9 - SAND
10 - Gravelly SAND to SAND
11 - Very stiff fine grained
12 - SAND to clayey SAND

Groundwater Level

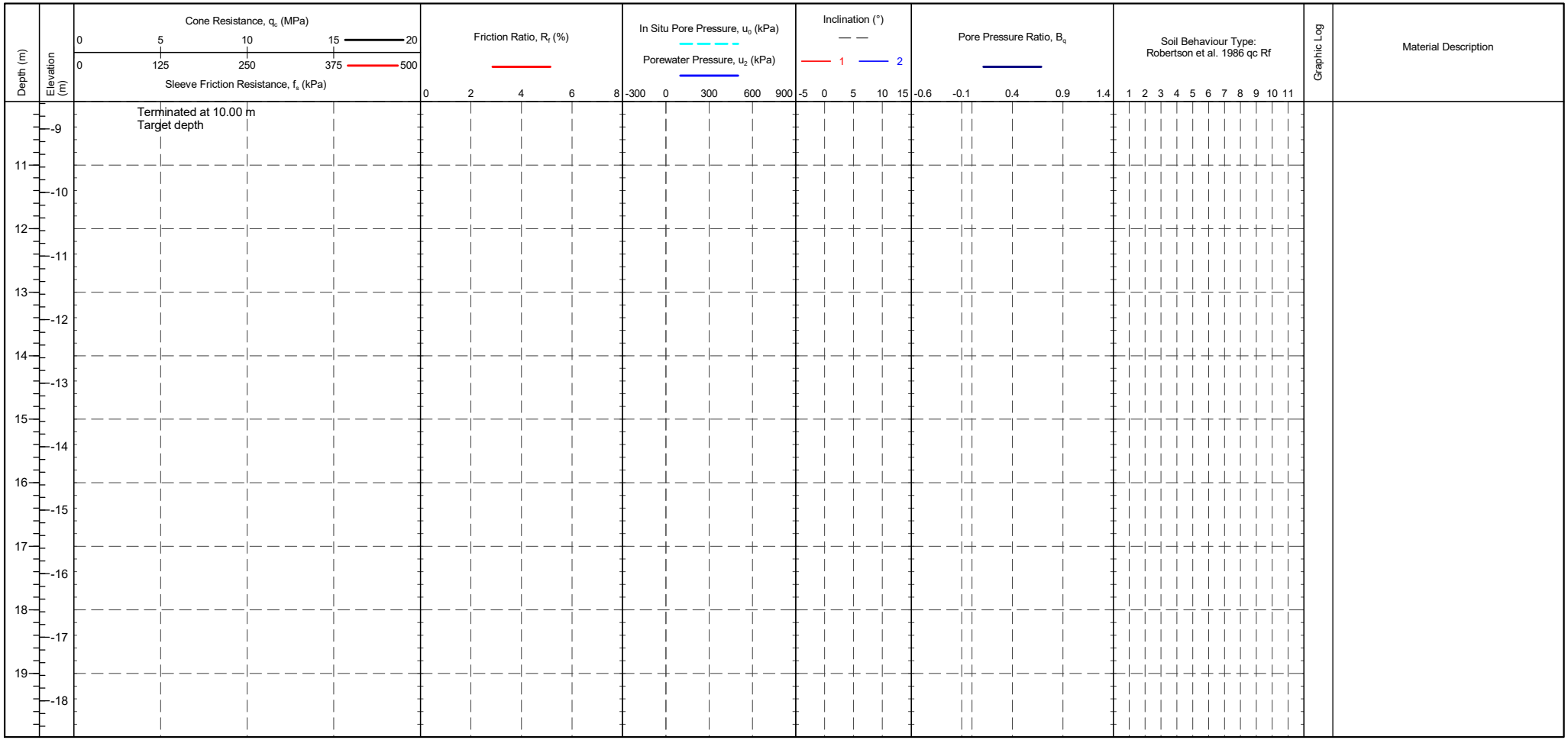
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 01

PointID: **R22-CPT107**

CLIENT : Structural Soils	EASTING : 632215.156 m	Remark:	SHEET : 2 OF 2
PROJECT : Sealink	NORTHING : 163030.101 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.432 m OD		TEST DATE : 17/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2
CALIBRATION DATE	: 12/07/2023	APPLICATION CLASS	: 2
CONE MODEL	: Subtraction	RIG	: CPT 020 - Pagani
CONE AREA	: 15cm^2	OPERATOR	: AC/CH
CONE AREA RATIO	: 0.79	FRICTION REDUCER	: None
FILTER POSITION	: u2	WEATHER	: Sunny & Hot
FILTER TYPE	: HDPE	GROUNDWATER DEPTH	: Assumed for calculation purposes

CPTU ZERO VALUES

Transducer	Pre	Post	Difference
Tip	293 mV	291 mV	-0.022 MPa
Sleeve	315 mV	314 mV	-0.001 kPa
Pore Pressure 2	311 mV	318 mV	0.002 kPa
X-Y Inclinometer	2387 mV	2420 mV	

METHOD: Robertson et al. 1986 qc Rf

1 - Sensitive fine grained material
2 - Organic material
3 - CLAY
4 - Silty CLAY to CLAY
5 - Clayey SILT to silty CLAY
6 - Sandy SILT to clayey SILT
7 - Silty SAND to sandy SILT
8 - SAND to silty SAND
9 - SAND
10 - Gravelly SAND to SAND
11 - Very stiff fine grained
12 - SAND to clayey SAND

Groundwater Level

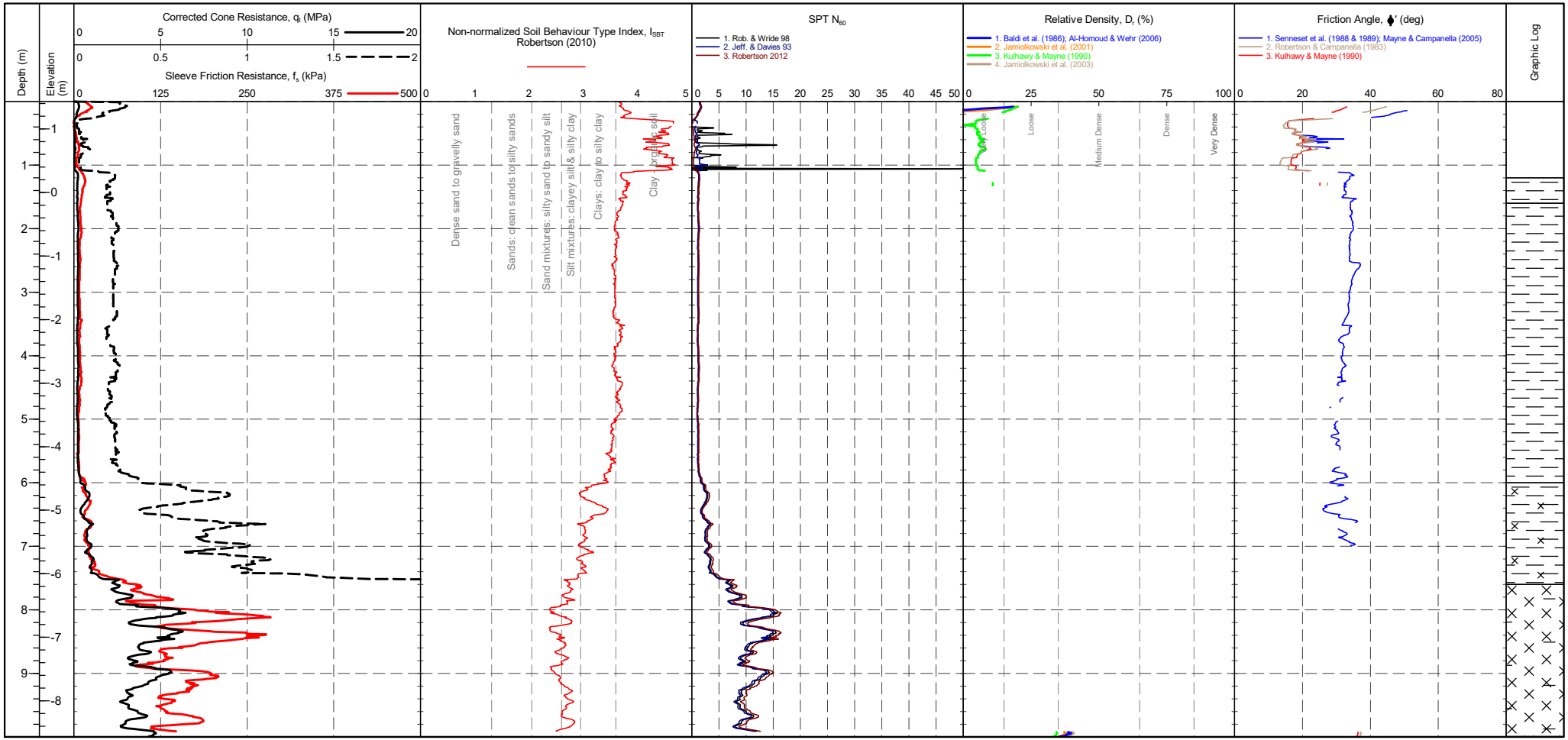
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 02

PointID: **R22-CPT107**

CLIENT : Structural Soils	EASTING : 632215.156 m	Remark:	SHEET : 1 OF 2
PROJECT : Sealink	NORTHING : 163030.101 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.432 m OD		TEST DATE : 17/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES		
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post
CONE AREA	: 15cm²	RIG	: CPT 020 - Pagani	Tip	293 mV	291 mV
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Sleeve	315 mV	314 mV
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	311 mV	318 mV
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot	X-Y Inclinometer	2387 mV	2420 mV

Transducer	Difference
Tip	-0.022 MPa
Sleeve	-0.001 kPa
Pore Pressure 2	0.002 kPa

GRANULAR SOILS (Sands & Gravels) Robertson et al. 1986 Zones 7-10 and Zone 12

Description	SBT Index, Ic
Clays	2.95-3.60
Silt mixtures	2.60-2.95
Sand mixtures	2.05-2.60
Sands	1.31-2.05
Gravelly sand	<1.31

Description	SPT N value, NSPT
Very Loose	0 - 4
Loose	4 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	>50

Description	Relative Density Dr (%)
Very Loose	0 - 15
Loose	15 - 35
Medium Dense	35 - 65
Dense	65 - 85
Very Dense	>85

Groundwater Level

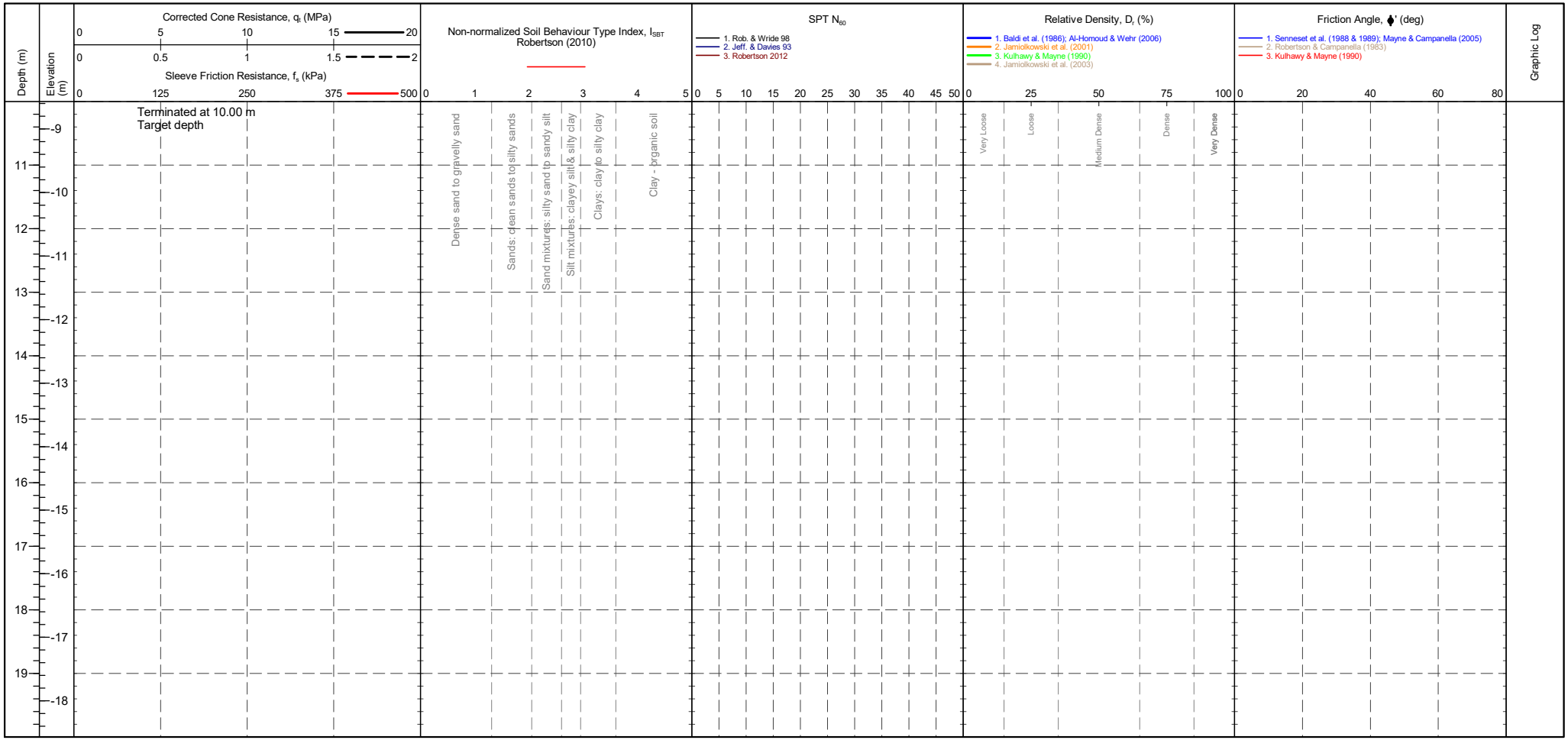
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 02

PointID: **R22-CPT107**

CLIENT : Structural Soils	EASTING : 632215.156 m	Remark:	SHEET : 2 OF 2
PROJECT : Sealink	NORTHING : 163030.101 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.432 m OD		TEST DATE : 17/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2		
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2		
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani		
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH		
FILTER POSITION	: u2	FRICTION REDUCER	: None		
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot		

CPTU ZERO VALUES

Transducer	Pre	Post	Difference
Tip	293 mV	291 mV	-0.022 MPa
Sleeve	315 mV	314 mV	-0.001 kPa
Pore Pressure 2	311 mV	318 mV	0.002 kPa
X-Y Inclinometer	2387 mV	2420 mV	

GRANULAR SOILS (Sands & Gravels) Robertson et al. 1986 Zones 7-10 and Zone 12

Description	SBT Index, Ic	Description	SPT N value, NSPT	Description	Relative Density Dr (%)
Clays	2.95-3.60	Very Loose	0 - 4	Very Loose	0 - 15
Silt mixtures	2.60-2.95	Loose	4 - 10	Loose	15 - 35
Sand mixtures	2.05-2.60	Medium Dense	10 - 30	Medium Dense	35 - 65
Sands	1.31-2.05	Dense	30 - 50	Dense	65 - 85
Gravelly sand	<1.31	Very Dense	>50	Very Dense	>85

Groundwater Level

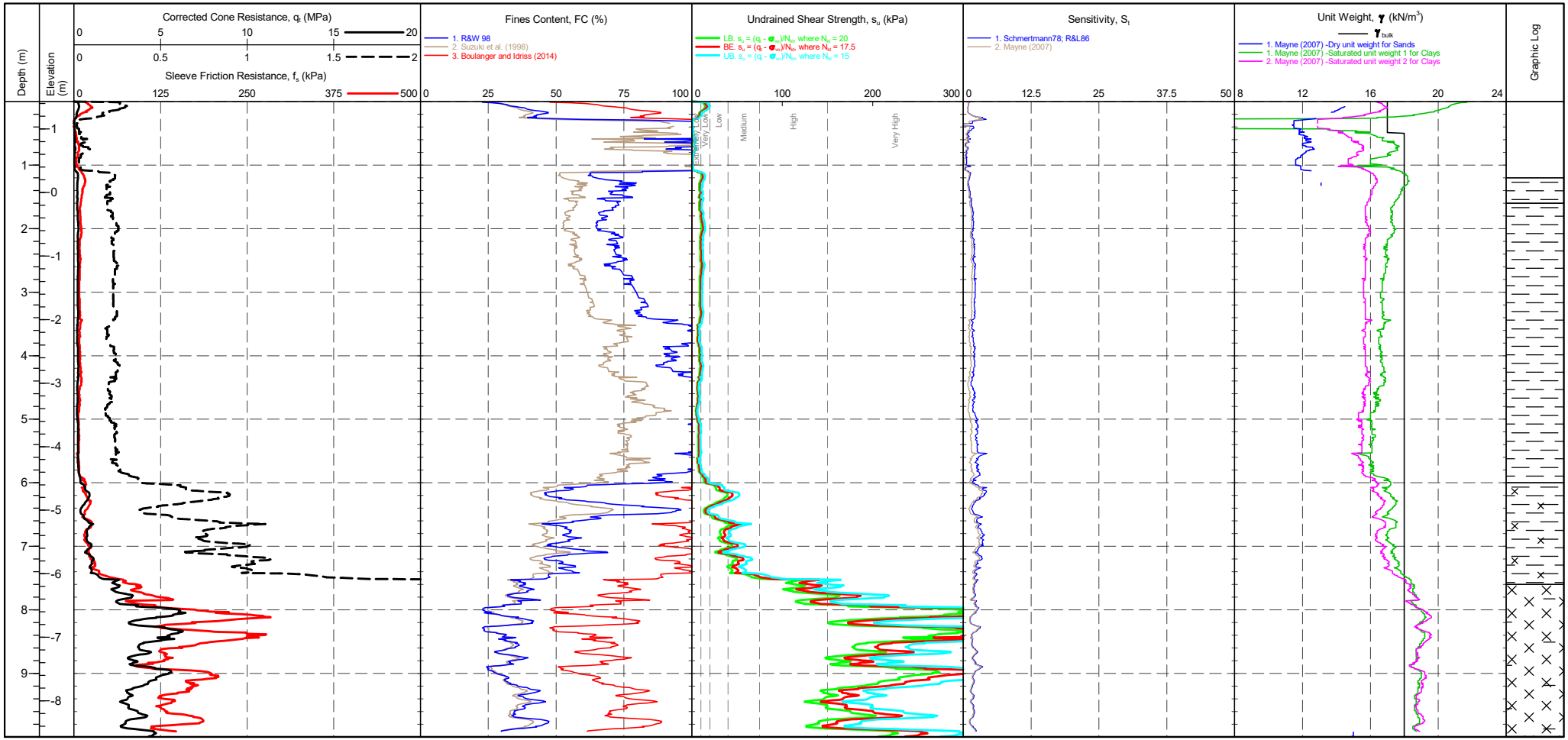
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 03

PointID: **R22-CPT107**

CLIENT : Structural Soils	EASTING : 632215.156 m	Remark:	SHEET : 1 OF 2
PROJECT : Sealink	NORTHING : 163030.101 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.432 m OD		TEST DATE : 17/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES			
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post	Difference
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	293 mV	291 mV	-0.022 MPa
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Sleeve	315 mV	314 mV	-0.001 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	311 mV	318 mV	0.002 kPa
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot	X-Y Inclinometer	2387 mV	2420 mV	

COHESIVE SOILS (Clays & Silts) Robertson et al. 1986 Zones 1-6 and Zone 11

Term based on measurement	su (kPa)	Term based on measurement	su (kPa)
Extremely low strength	<10	Medium strength	40-75
Very low strength	10-20	High strength	75-150
Low strength	20-40	Very high strength	150-300
		Extremely high strength	>300

Groundwater Level

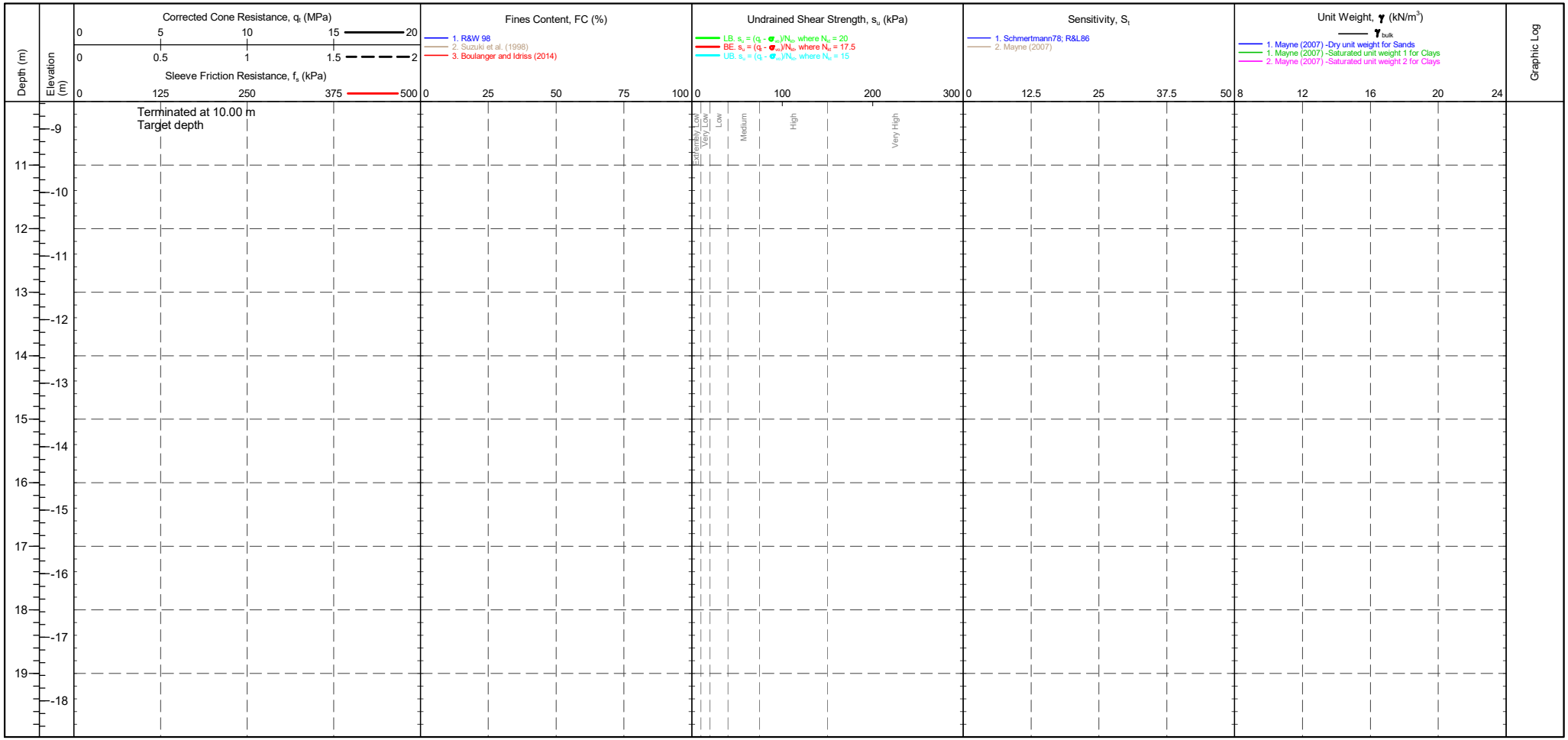
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 03

PointID: **R22-CPT107**

CLIENT : Structural Soils	EASTING : 632215.156 m	Remark:	SHEET : 2 OF 2
PROJECT : Sealink	NORTHING : 163030.101 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.432 m OD		TEST DATE : 17/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES			
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post	Difference
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	293 mV	291 mV	-0.022 MPa
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Sleeve	315 mV	314 mV	-0.001 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	311 mV	318 mV	0.002 kPa
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot	X-Y Inclinometer	2387 mV	2420 mV	

COHESIVE SOILS (Clays & Silts) Robertson et al. 1986 Zones 1-6 and Zone 11

Term based on measurement	su (kPa)	Term based on measurement	su (kPa)
Extremely low strength	<10	Medium strength	40-75
Very low strength	10-20	High strength	75-150
Low strength	20-40	Very high strength	150-300
		Extremely high strength	>300

Groundwater Level

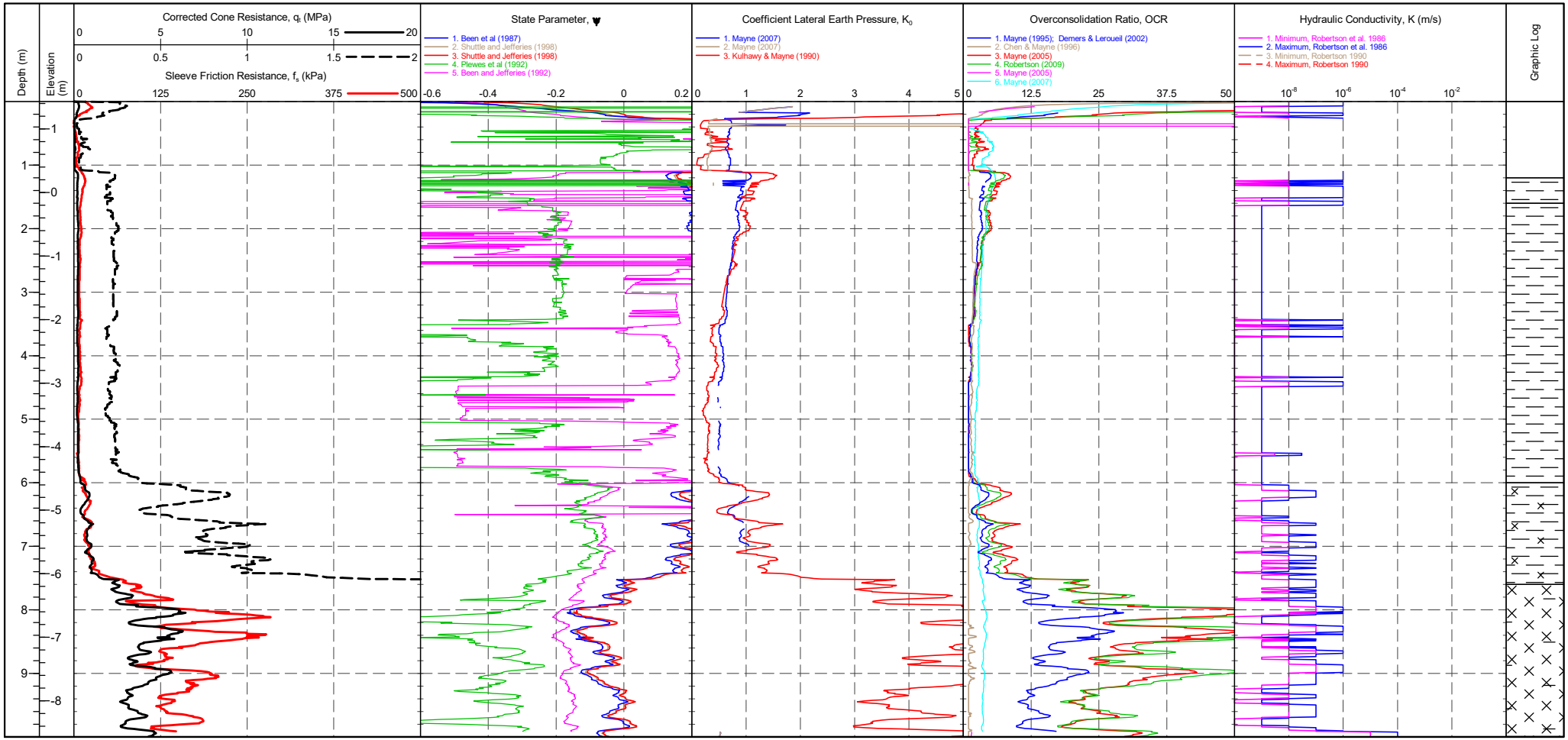
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 04

PointID: **R22-CPT107**

CLIENT : Structural Soils	EASTING : 632215.156 m	Remark:	SHEET : 1 OF 2
PROJECT : Sealink	NORTHING : 163030.101 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.432 m OD		TEST DATE : 17/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES			
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post	Difference
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	293 mV	291 mV	-0.022 MPa
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Sleeve	315 mV	314 mV	-0.001 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	311 mV	318 mV	0.002 kPa
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot	X-Y Inclinometer	2387 mV	2420 mV	

Groundwater Level

Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 04

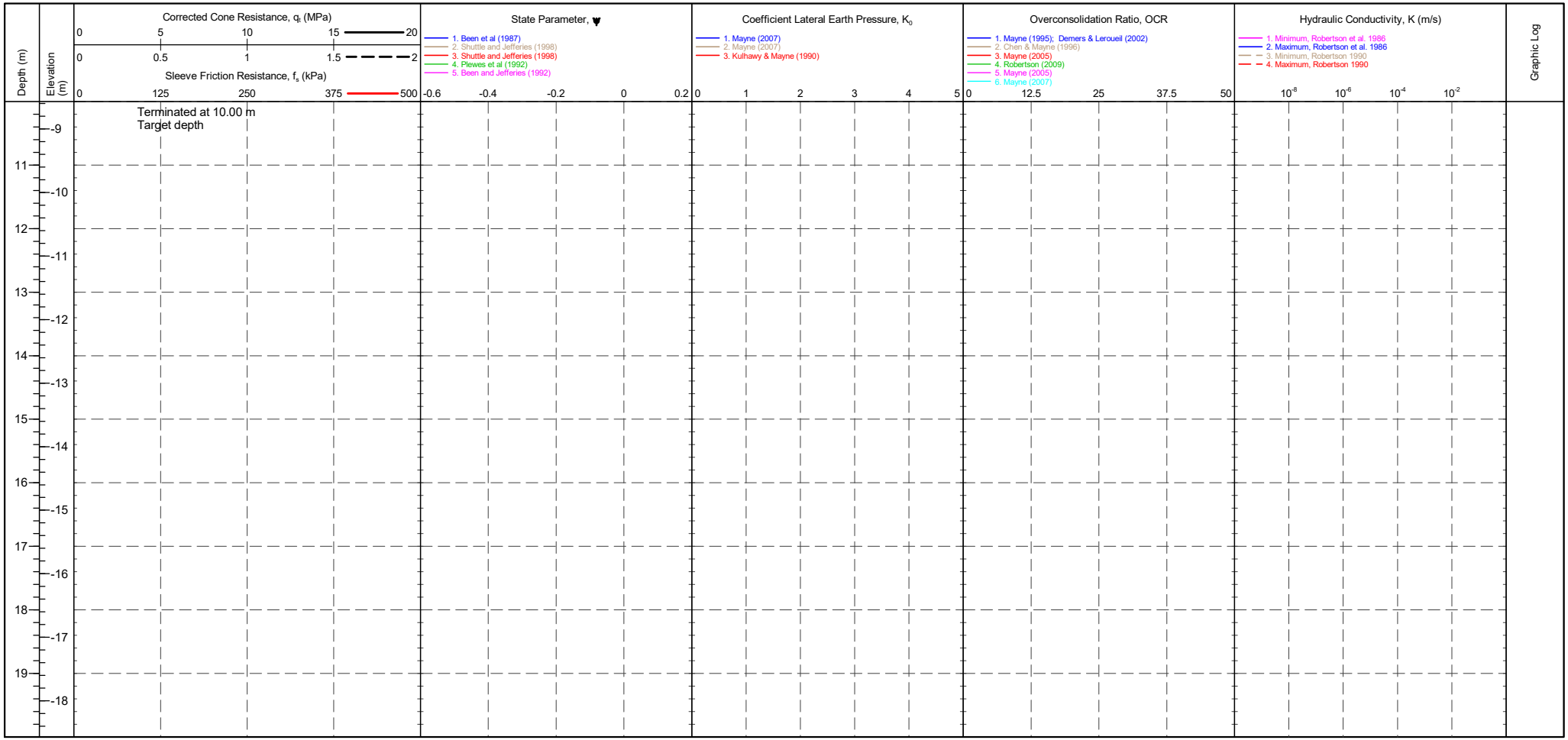
PointID: **R22-CPT107**

CLIENT : Structural Soils
PROJECT : Sealink
LOCATION : Kent
PROJECT No. : 1230335

EASTING : 632215.156 m
NORTHING : 163030.101 m
ELEVATION : 1.432 m OD
CHECKED BY : DW
TERMINATION REASON : Target depth

Remark:
Test completed at target depth.

SHEET : 2 OF 2
STATUS : Final
TEST DATE : 17/10/2023
PLOT DATE : 12/03/2024
METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES			
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post	Difference
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	293 mV	291 mV	-0.022 MPa
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Sleeve	315 mV	314 mV	-0.001 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	311 mV	318 mV	0.002 kPa
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot	X-Y Inclinometer	2387 mV	2420 mV	

Groundwater Level

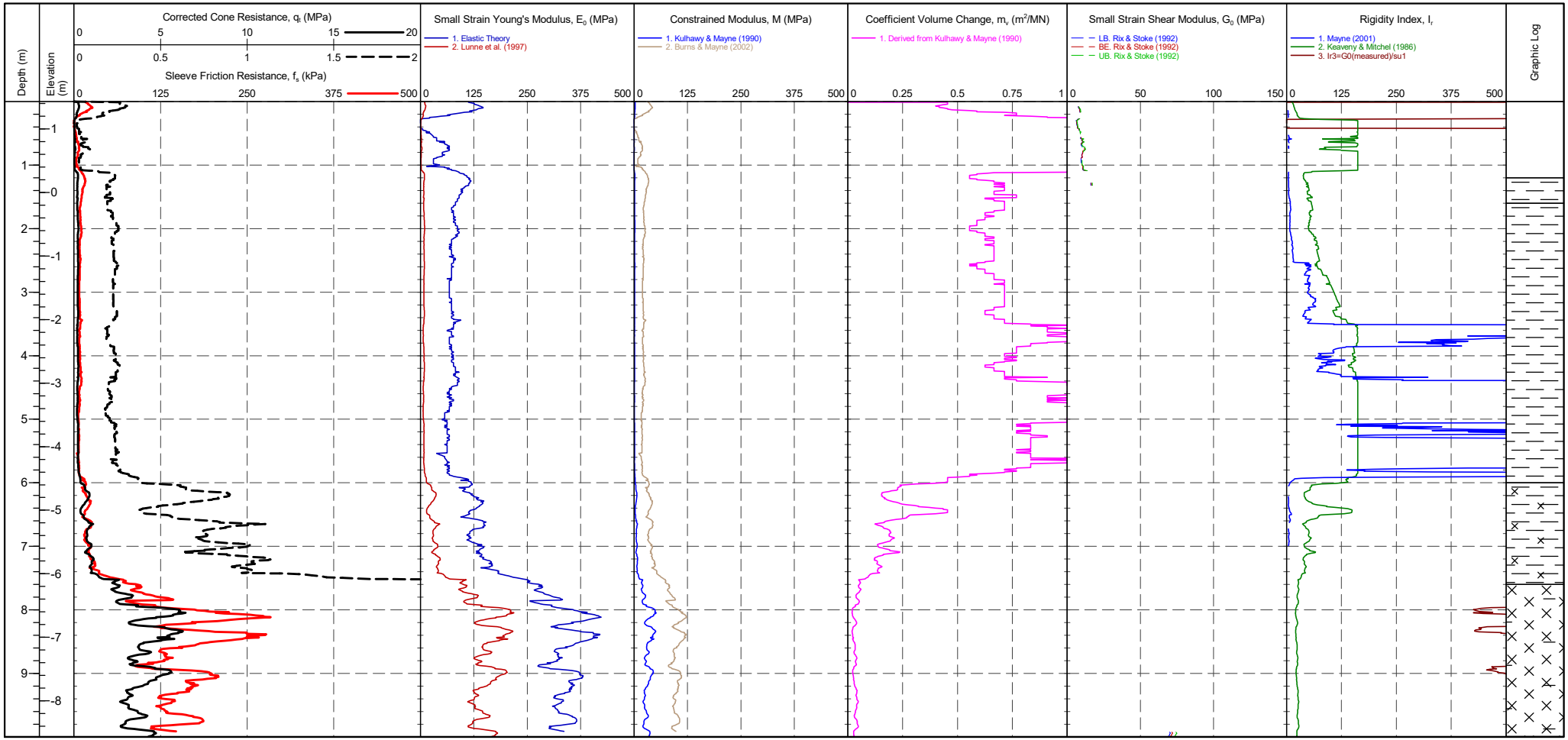
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 05

PointID **R22-CPT107**

CLIENT : Structural Soils	EASTING : 632215.156 m	Remark:	SHEET : 1 OF 2
PROJECT : Sealink	NORTHING : 163030.101 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.432 m OD		TEST DATE : 17/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES			
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post	Difference
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	293 mV	291 mV	-0.022 MPa
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Sleeve	315 mV	314 mV	-0.001 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	311 mV	318 mV	0.002 kPa
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot	X-Y Inclinometer	2387 mV	2420 mV	

Groundwater Level

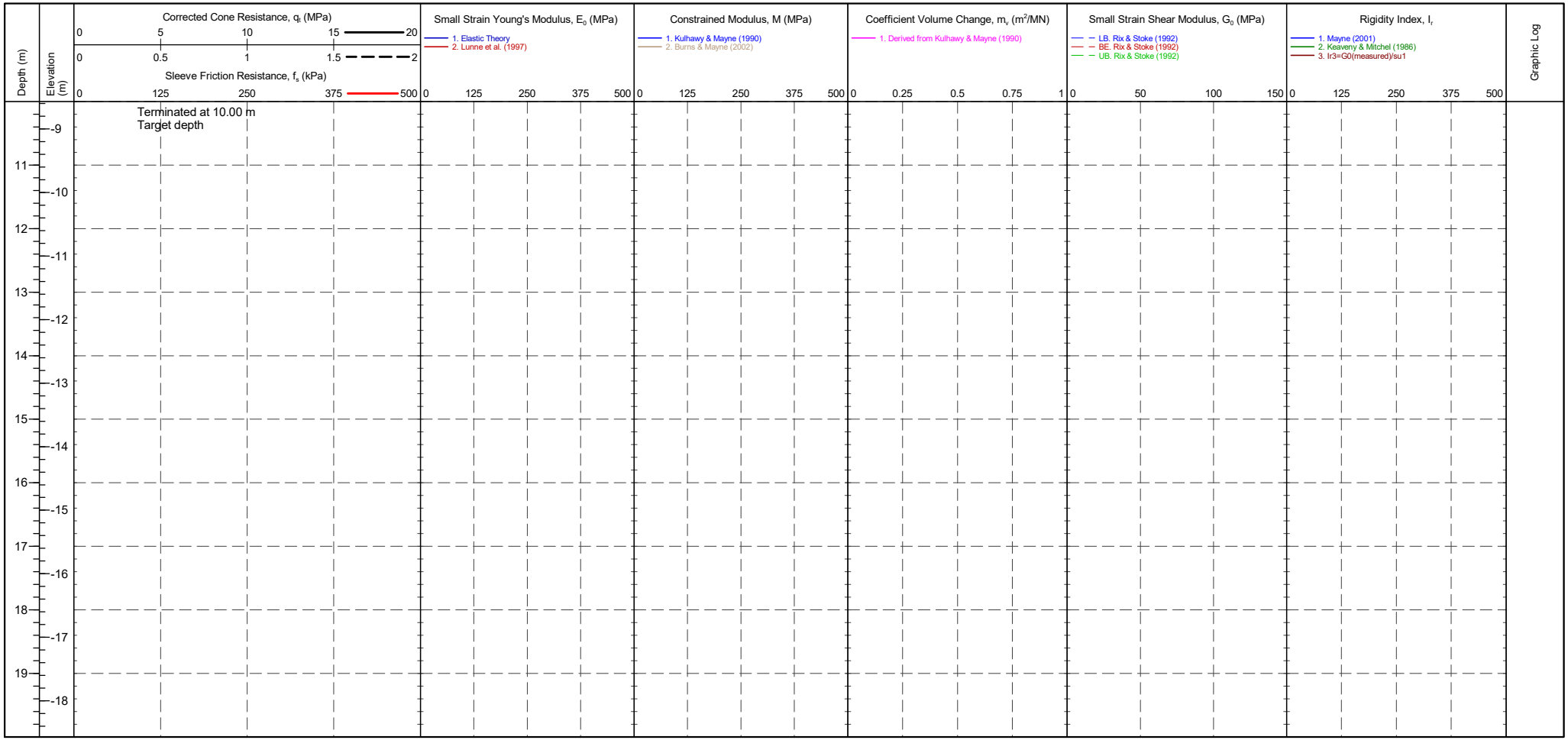
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 05

PointID **R22-CPT107**

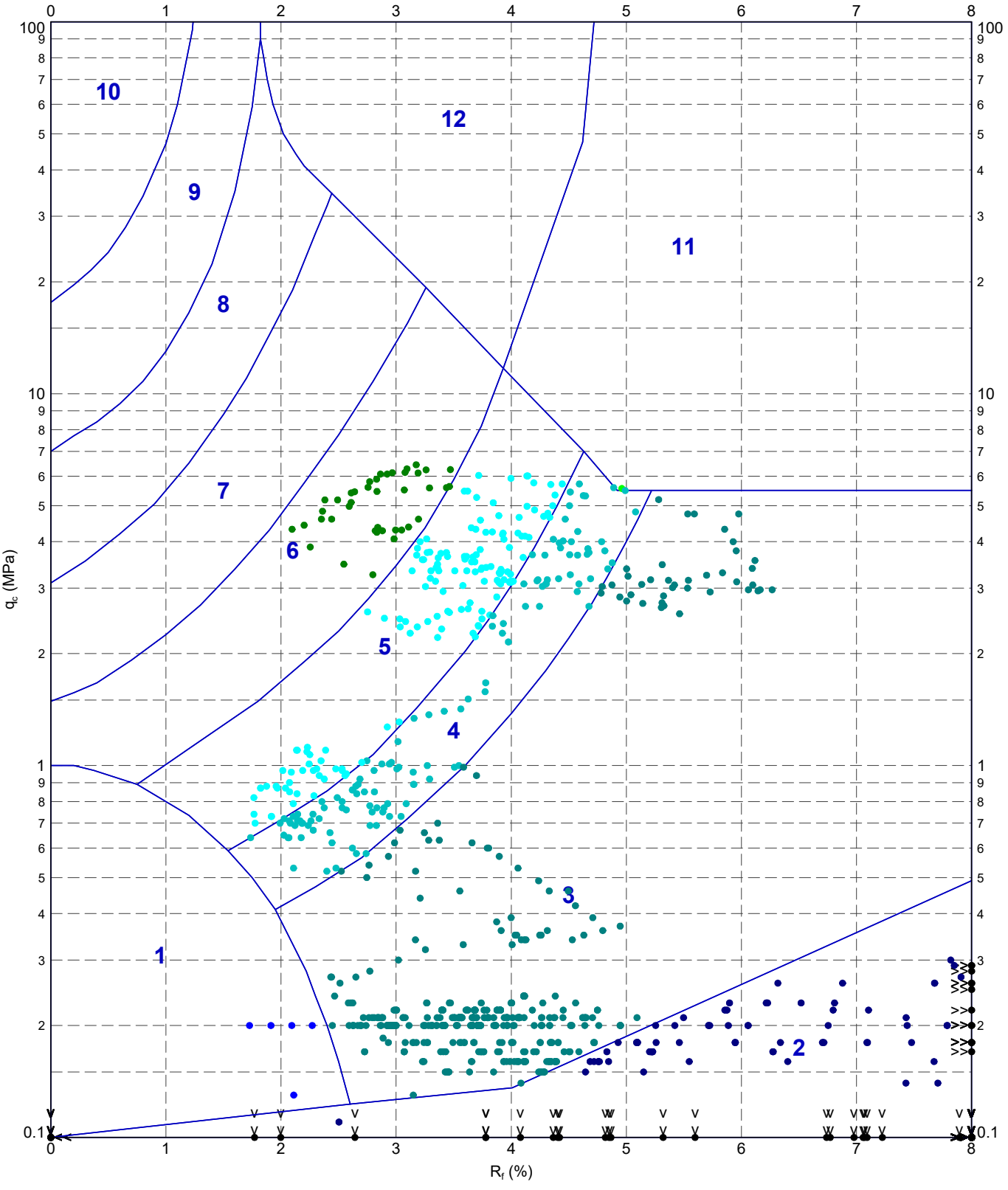
CLIENT : Structural Soils PROJECT : Sealink LOCATION : Kent PROJECT No. : 1230335	EASTING : 632215.156 m NORTHING : 163030.101 m ELEVATION : 1.432 m OD CHECKED BY : DW TERMINATION REASON : Target depth	Remark: Test completed at target depth.	SHEET : 2 OF 2 STATUS : Final TEST DATE : 17/10/2023 PLOT DATE : 12/03/2024 METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES			
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post	Difference
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	293 mV	291 mV	-0.022 MPa
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Sleeve	315 mV	314 mV	-0.001 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	311 mV	318 mV	0.002 kPa
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot	X-Y Inclinometer	2387 mV	2420 mV	

Groundwater Level

Dissipation Test



METHOD: Robertson et al. 1986 qc Rf

- 1 - Sensitive fine grained material
- 2 - Organic material
- 3 - CLAY
- 4 - Silty CLAY to CLAY
- 5 - Clayey SILT to silty CLAY
- 6 - Sandy SILT to clayey SILT
- 7 - Silty SAND to sandy SILT
- 8 - SAND to silty SAND
- 9 - SAND
- 10 - Gravelly SAND to SAND
- 11 - Very stiff fine grained
- 12 - SAND to clayey SAND

IN SITU SITE INVESTIGATION

TITLE

Structural Soils
Ian Warne
Kent
Sealink
Robertson et al. 1986 q_c vs. R_f - R22-CPT107

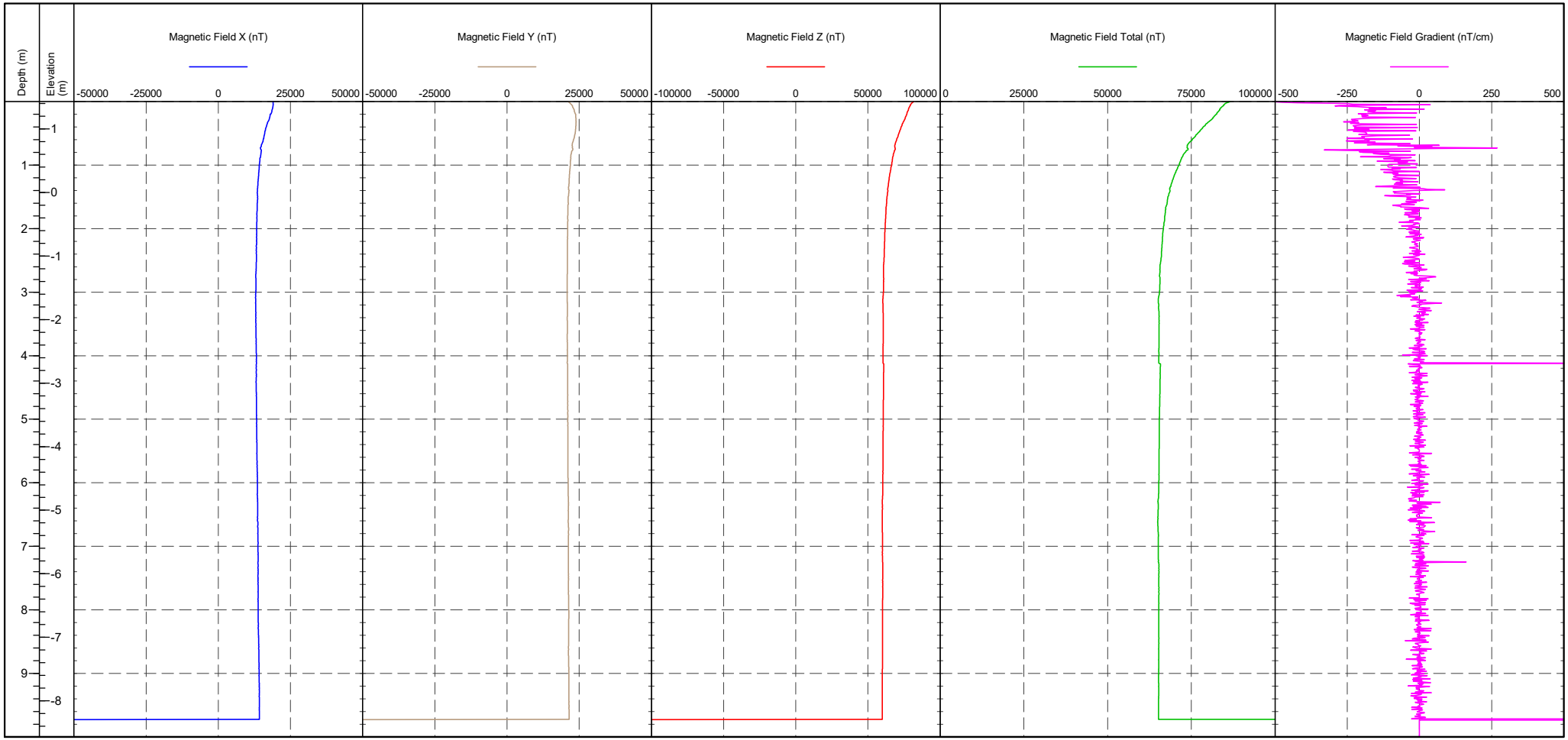
DRAWN	DATE 12/03/2024
CHECKED	DATE 12/03/2024
SCALE Not To Scale	A4
PROJECT No 1230335	FIGURE No

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

MAG LOG

PointID **R22-CPT107**

CLIENT : Structural Soils PROJECT : Sealink LOCATION : Kent PROJECT No. : 1230335	EASTING : 632215.156 m NORTHING : 163030.101 m ELEVATION : 1.432 m OD CHECKED BY : DW TERMINATION REASON : Target depth	Remark: Test completed at target depth.	SHEET : 1 OF 2 STATUS : Final TEST DATE : 17/10/2023 PLOT DATE : 12/03/2024 METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	RIG	: CPT 020 - Pagani
CONE MODEL	: Subtraction	OPERATOR	: AC/CH

CPTU ZERO VALUES

Transducer	Pre	Post	Difference
Tip	293 mV	291 mV	-0.022 MPa
Sleeve	315 mV	314 mV	-0.001 kPa
Pore Pressure 2	311 mV	318 mV	0.002 kPa
X-Y Inclinometer	2387 mV	2420 mV	

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

MAG LOG

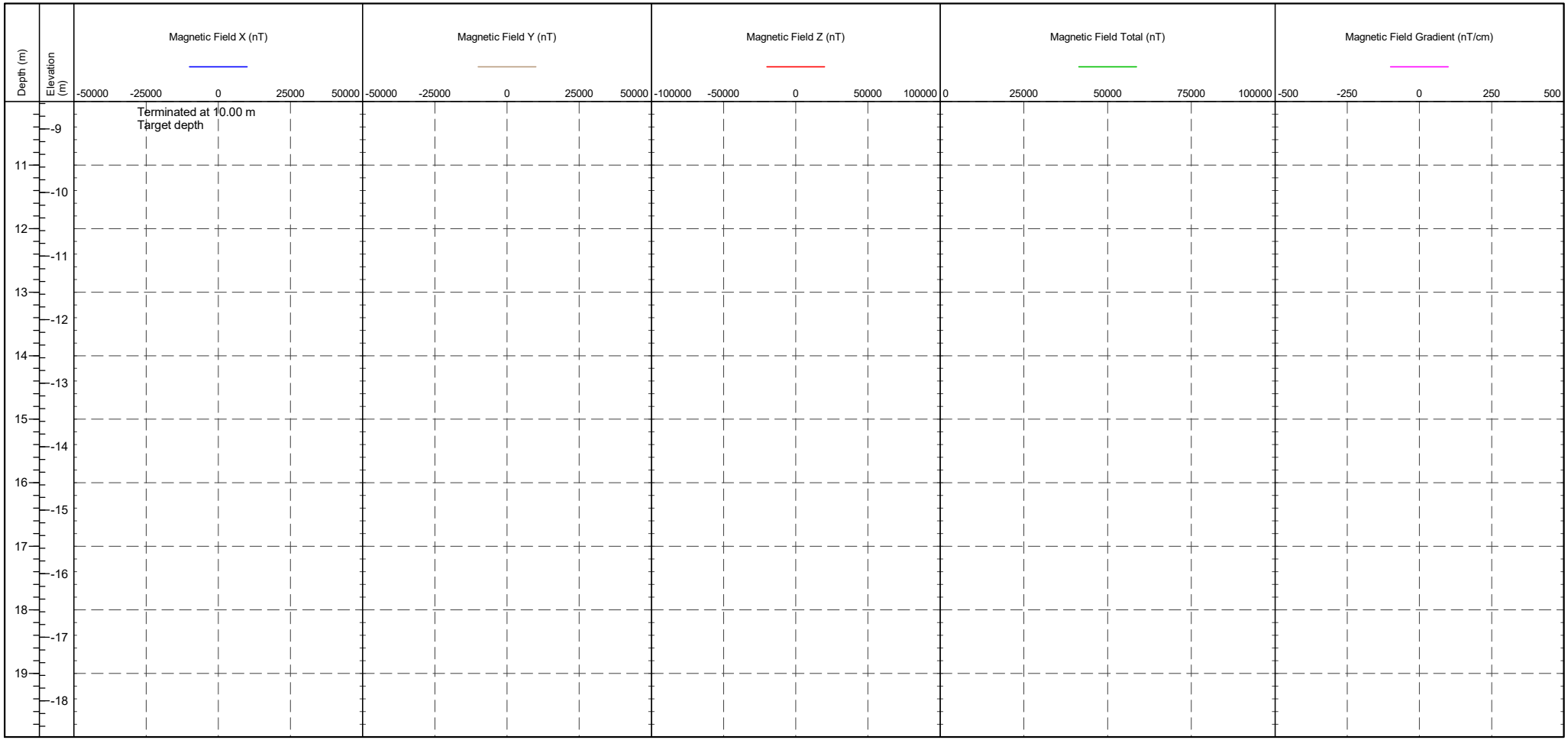
PointID: **R22-CPT107**

CLIENT : Structural Soils
PROJECT : Sealink
LOCATION : Kent
PROJECT No. : 1230335

EASTING : 632215.156 m
NORTHING : 163030.101 m
ELEVATION : 1.432 m OD
CHECKED BY : DW
TERMINATION REASON : Target depth

Remark:
Test completed at target depth.

SHEET : 2 OF 2
STATUS : Final
TEST DATE : 17/10/2023
PLOT DATE : 12/03/2024
METHOD : ISO 22476-1:2022



CONE ID : S15-CFIP.2145
CONE MODEL : Subtraction

RIG : CPT 020 - Pagani
OPERATOR : AC/CH

CPTU ZERO VALUES

Transducer	Pre	Post	Difference
Tip	293 mV	291 mV	-0.022 MPa
Sleeve	315 mV	314 mV	-0.001 kPa
Pore Pressure 2	311 mV	318 mV	0.002 kPa
X-Y Inclinometer	2387 mV	2420 mV	

DISSIPATION TEST

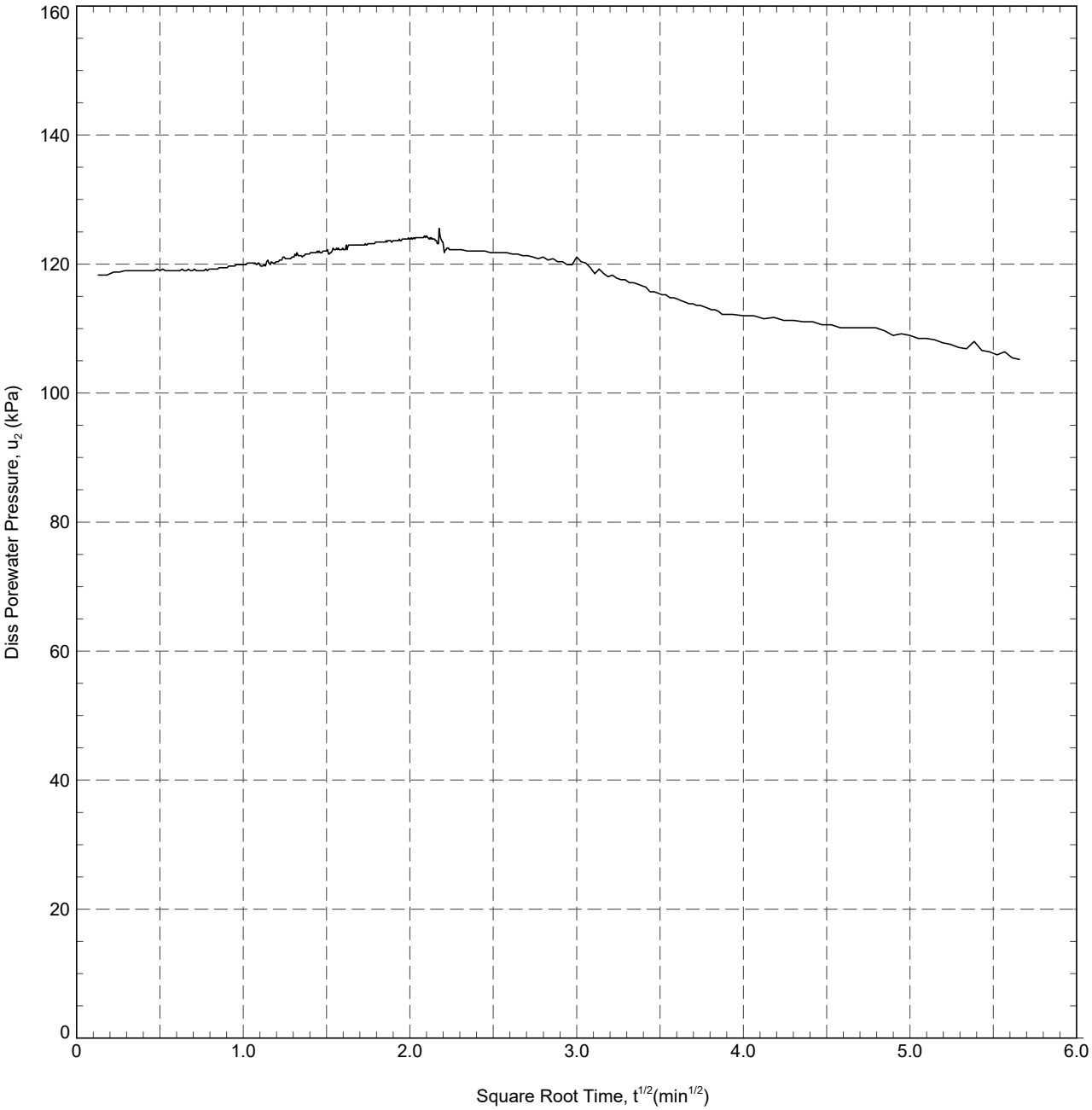
IN SITU SITE INVESTIGATION

Working with: STRUCTURAL SOILS LTD

Test ID

R22-CPT107 - 4.39 m

CLIENT	: Structural Soils	AREA	: Sealink Richborough	SHEET	: 1 OF 1
ENGINEER	: Ian Warne	EASTING	: 632215.2 m	STATUS	: Final
PROJECT	: Sealink	NORTHING	: 163030.1 m	DATE	: 17/10/23
LOCATION	: Kent	COORD. SYS.:			
PROJECT No.	: 1230335	ELEVATION	: 1.43 m		



Final Pore Pressure: 105.2 kPa

RIG	: CPT 020 - Pagani	ANALYSED BY	: ZJ	DATE:	18/10/2023
CONE TYPE	: Subtraction	CHECKED BY	: DW	DATE:	18/10/2023
CONE ID	: S15-CFIP.2145	APPROVED BY	: DW	DATE:	18/10/2023
OPERATOR	: AC				

REMARK
T50 not reached.

DISSIPATION TEST

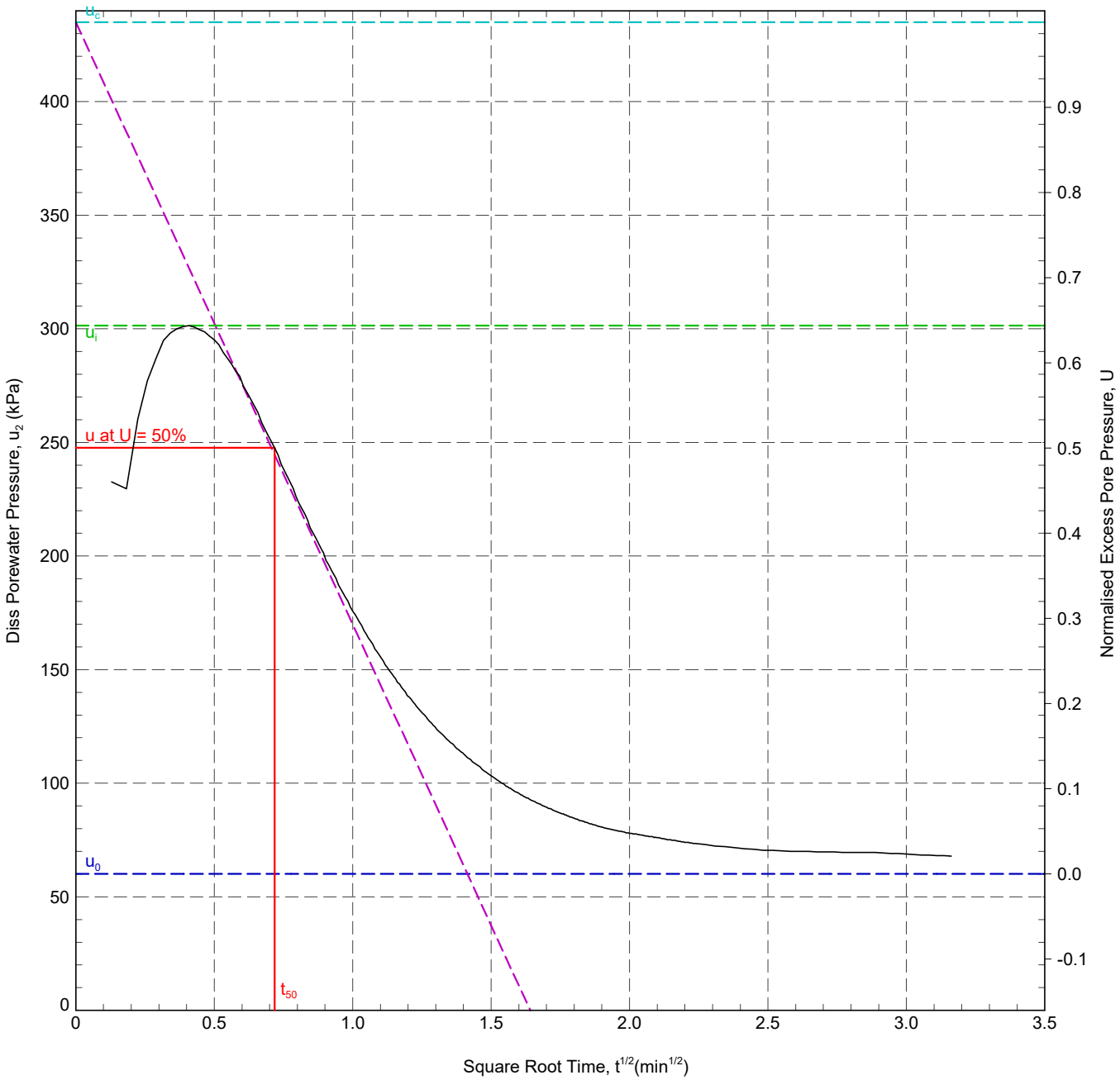
IN SITU SITE INVESTIGATION

Working with: STRUCTURAL SOILS LTD

Test ID

R22-CPT107 - 6.63 m

CLIENT	: Structural Soils	AREA	: Sealink Richborough	SHEET	: 1 OF 1
ENGINEER	: Ian Warne	EASTING	: 632215.2 m	STATUS	: Final
PROJECT	: Sealink	NORTHING	: 163030.1 m	DATE	: 17/10/23
LOCATION	: Kent	COORD. SYS.	:		
PROJECT No.	: 1230335	ELEVATION	: 1.43 m		



In Situ Pore Pressure, u_0:	60.1 kPa	Rigidity Index, I_r:	6.2
Initial Pore Pressure, u_i:	301.4 kPa	Horizontal Coefficient of Consolidation, c_h:	3.30x10^2 m^2/yr
Final Pore Pressure:	67.9 kPa		
Back Extrapolated Pore Pressure, u_c:	435 kPa		
Degree of Dissipation:	50%		
Dissipation Pressure:	247.6 kPa		
Time for 50% Dissipation, t_{50}:	0.52 min		

RIG	: CPT 020 - Pagani	ANALYSED BY	: ZJ	DATE:	18/10/2023
CONE TYPE	: Subtraction	CHECKED BY	: DW	DATE:	18/10/2023
CONE ID	: S15-CFIP.2145	APPROVED BY	: DW	DATE:	18/10/2023
OPERATOR	: AC				

REMARK

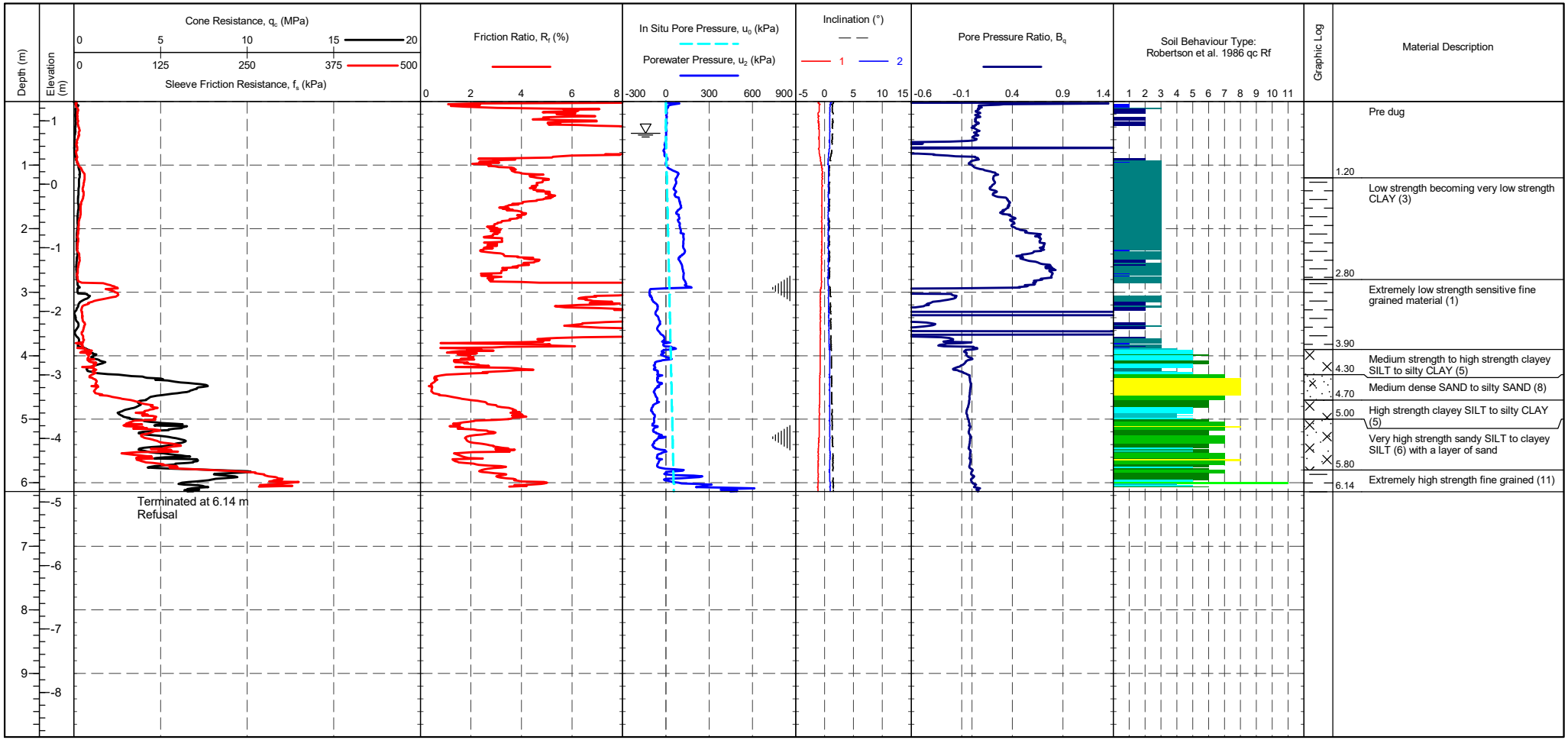
T50 reached. Quick dissipation t50=30.9s. Test OK.

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 01

PointID: **R22-CPT108**

CLIENT : Structural Soils	EASTING : 632221.308 m	Remark:	SHEET : 1 OF 1
PROJECT : Sealink	NORTHING : 162850.687 m	Test refused on total pressure.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.302 m OD		TEST DATE : 17/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Refusal		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2
CALIBRATION DATE	: 12/07/2023	APPLICATION CLASS	: 2
CONE MODEL	: Subtraction	RIG	: CPT 020 - Pagani
CONE AREA	: 15cm^2	OPERATOR	: AC/CH
CONE AREA RATIO	: 0.79	FRICTION REDUCER	: None
FILTER POSITION	: u2	WEATHER	: Sunny & Hot
FILTER TYPE	: HDPE	GROUNDWATER DEPTH	: Assumed for calculation purposes

CPTU ZERO VALUES

Transducer	Pre	Post	Difference
Tip	295 mV	297 mV	-0.038 MPa
Sleeve	317 mV	315 mV	-0.02 kPa
Pore Pressure 2	304 mV	314 mV	-0.049 kPa
X-Y Inclinometer	2367 mV	2347 mV	

METHOD: Robertson et al. 1986 qc Rf

1 - Sensitive fine grained material
2 - Organic material
3 - CLAY
4 - Silty CLAY to CLAY
5 - Clayey SILT to silty CLAY
6 - Sandy SILT to clayey SILT
7 - Silty SAND to sandy SILT
8 - SAND to silty SAND
9 - SAND
10 - Gravelly SAND to SAND
11 - Very stiff fine grained
12 - SAND to clayey SAND

Groundwater Level

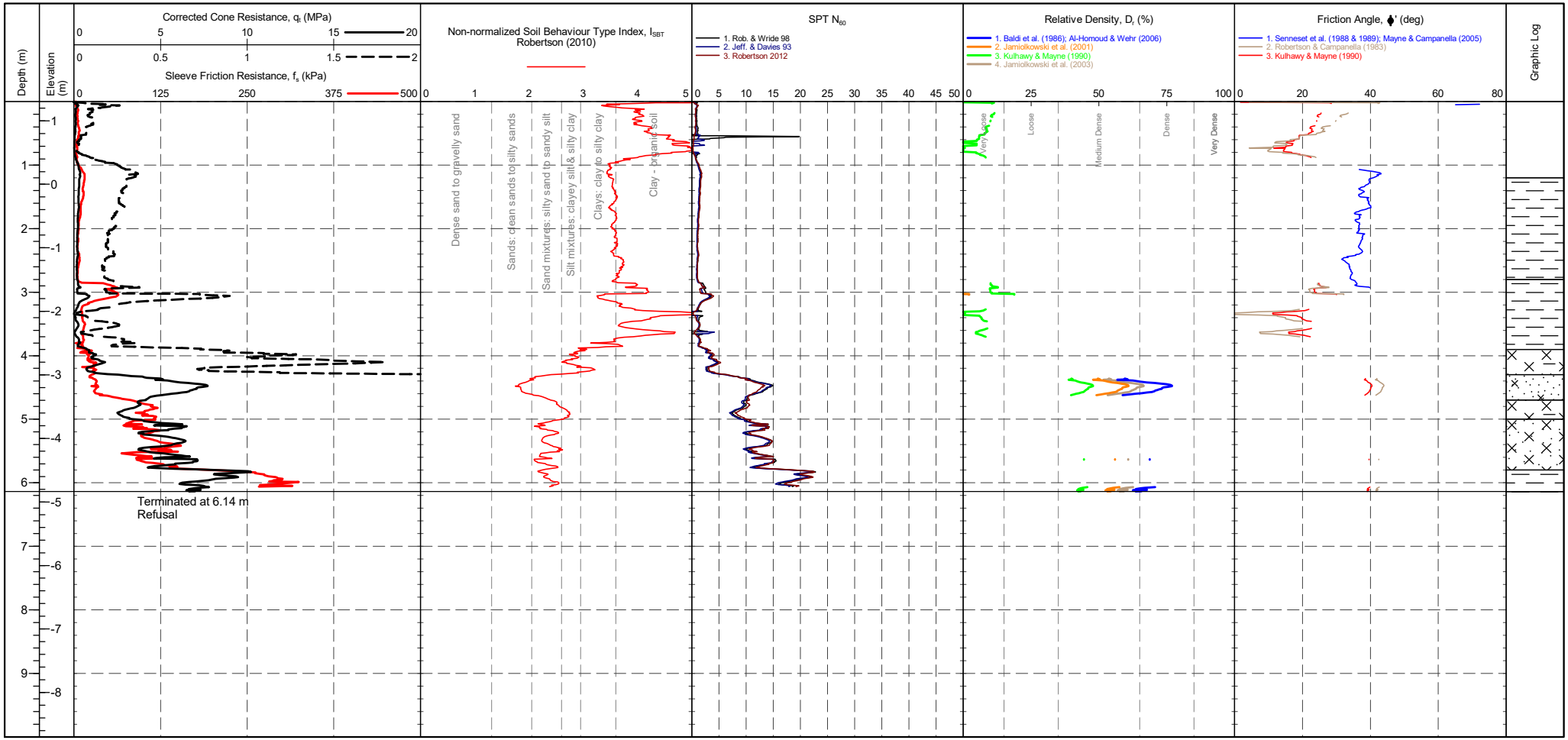
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 02

PointID: **R22-CPT108**

CLIENT : Structural Soils	EASTING : 632221.308 m	Remark:	SHEET : 1 OF 1
PROJECT : Sealink	NORTHING : 162850.687 m	Test refused on total pressure.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.302 m OD		TEST DATE : 17/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Refusal		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES		
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	295 mV	297 mV
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Sleeve	317 mV	315 mV
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	304 mV	314 mV
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot	X-Y Inclinometer	2367 mV	2347 mV

Difference
-0.038 MPa
-0.02 kPa
-0.049 kPa

GRANULAR SOILS (Sands & Gravels) Robertson et al. 1986 Zones 7-10 and Zone 12

Description	SBT Index, Ic
Clays	2.95-3.60
Silt mixtures	2.60-2.95
Sand mixtures	2.05-2.60
Sands	1.31-2.05
Gravelly sand	<1.31

Description	SPT N value, NSPT
Very Loose	0 - 4
Loose	4 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	>50

Description	Relative Density Dr (%)
Very Loose	0 - 15
Loose	15 - 35
Medium Dense	35 - 65
Dense	65 - 85
Very Dense	>85

Groundwater Level

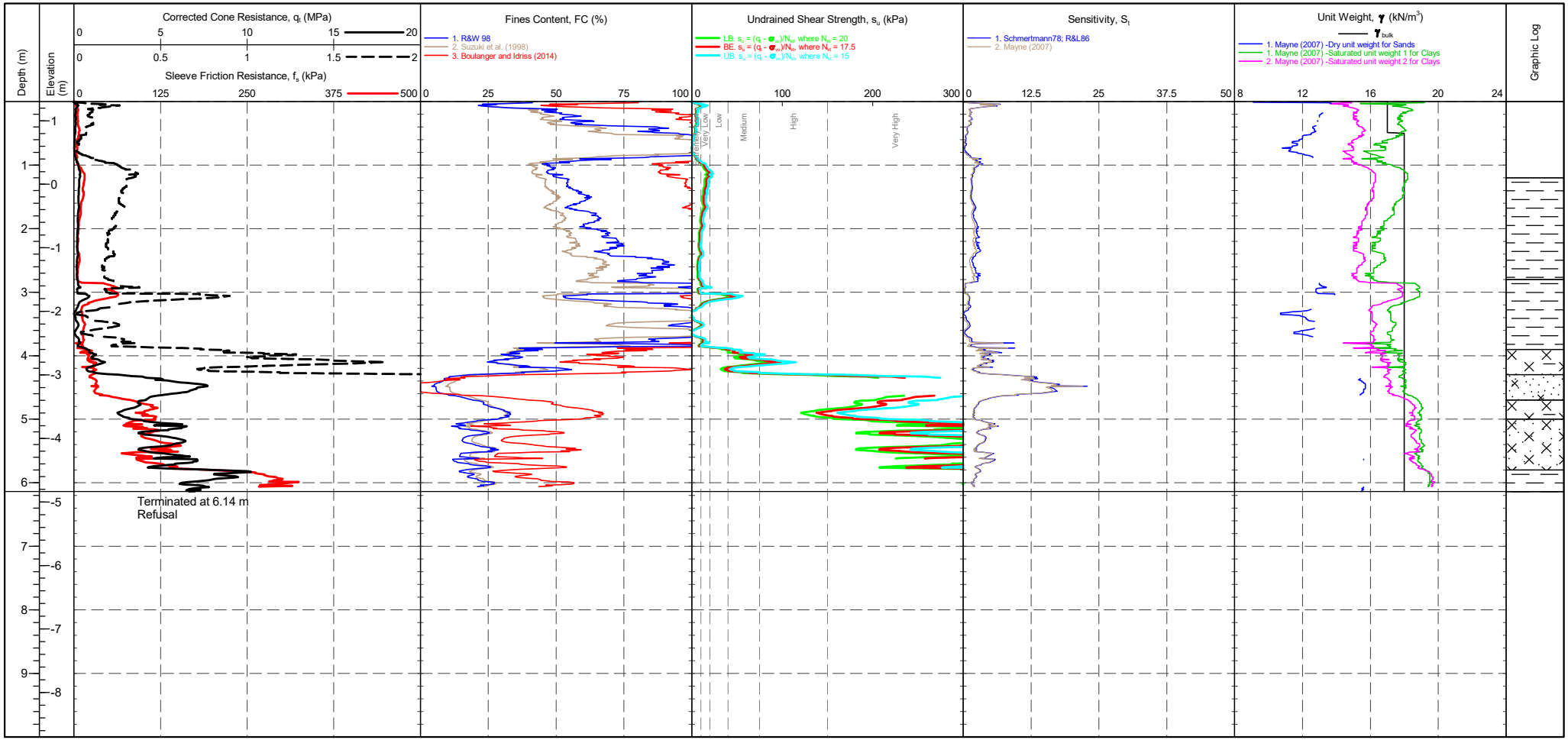
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 03

PointID: **R22-CPT108**

CLIENT : Structural Soils	EASTING : 632221.308 m	Remark:	SHEET : 1 OF 1
PROJECT : Sealink	NORTHING : 162850.687 m	Test refused on total pressure.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.302 m OD		TEST DATE : 17/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Refusal		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES			
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post	Difference
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	295 mV	297 mV	-0.038 MPa
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Sleeve	317 mV	315 mV	-0.02 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	304 mV	314 mV	-0.049 kPa
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot	X-Y Inclinometer	2367 mV	2347 mV	

COHESIVE SOILS (Clays & Silts) Robertson et al. 1986 Zones 1-6 and Zone 11

Term based on measurement	su (kPa)	Term based on measurement	su (kPa)
Extremely low strength	<10	Medium strength	40-75
Very low strength	10-20	High strength	75-150
Low strength	20-40	Very high strength	150-300
		Extremely high strength	>300

Groundwater Level

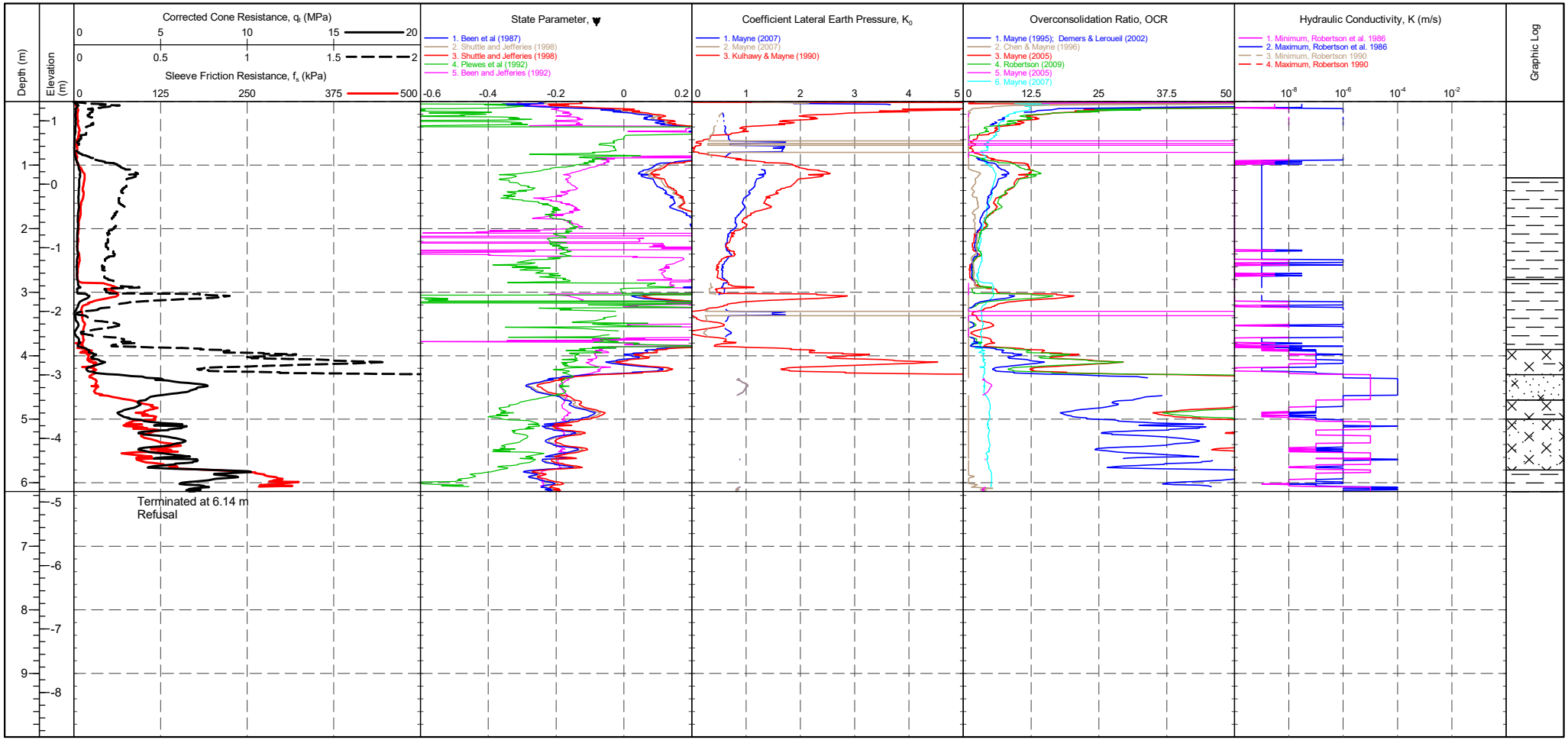
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 04

PointID: **R22-CPT108**

CLIENT : Structural Soils	EASTING : 632221.308 m	Remark:	SHEET : 1 OF 1
PROJECT : Sealink	NORTHING : 162850.687 m	Test refused on total pressure.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.302 m OD		TEST DATE : 17/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Refusal		METHOD : ISO 22476-1:2022



				CPTU ZERO VALUES			
CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	Transducer	Pre	Post	Difference
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Tip	295 mV	297 mV	-0.038 MPa
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Sleeve	317 mV	315 mV	-0.02 kPa
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Pore Pressure 2	304 mV	314 mV	-0.049 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	X-Y Inclinometer	2367 mV	2347 mV	
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot				

Groundwater Level

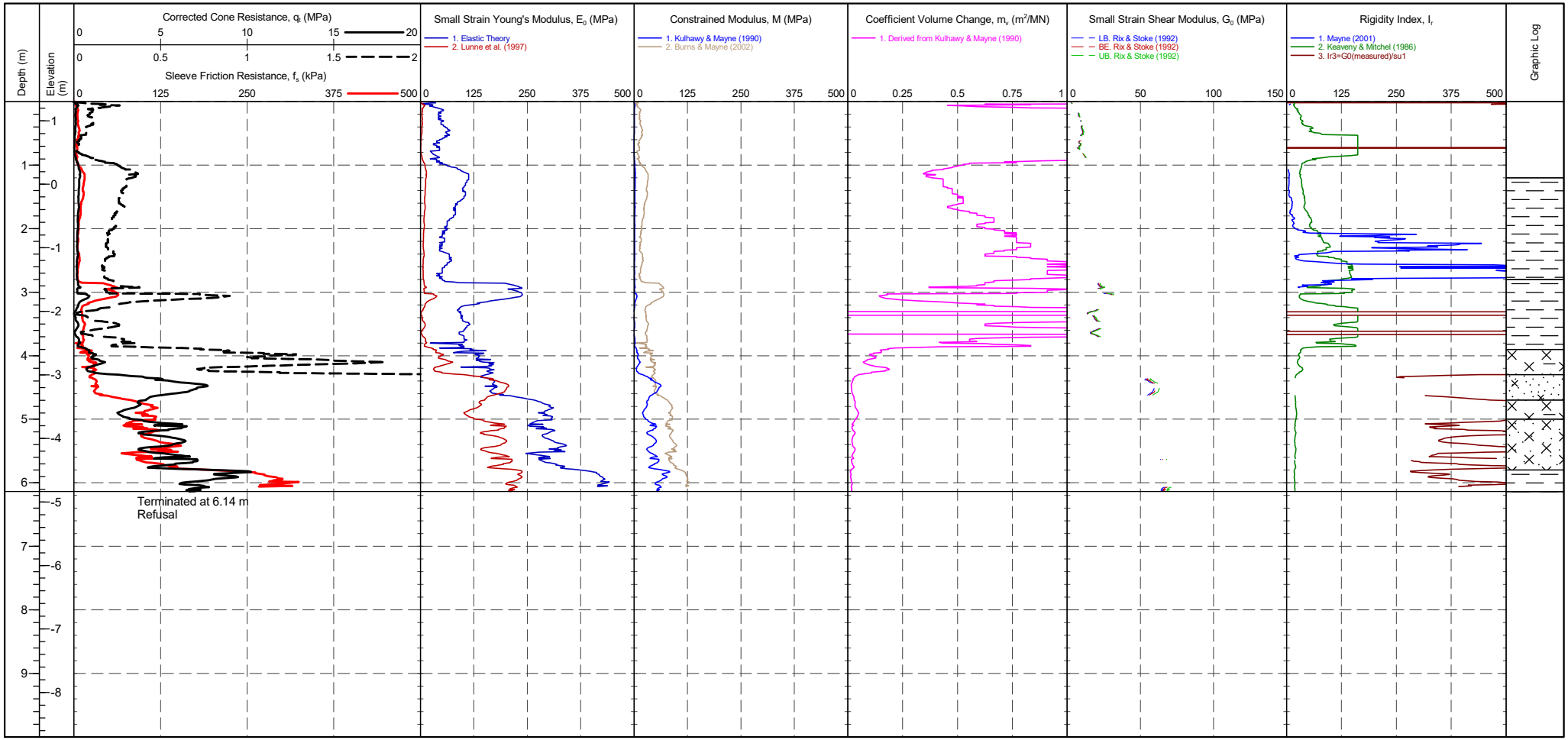
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 05

PointID: **R22-CPT108**

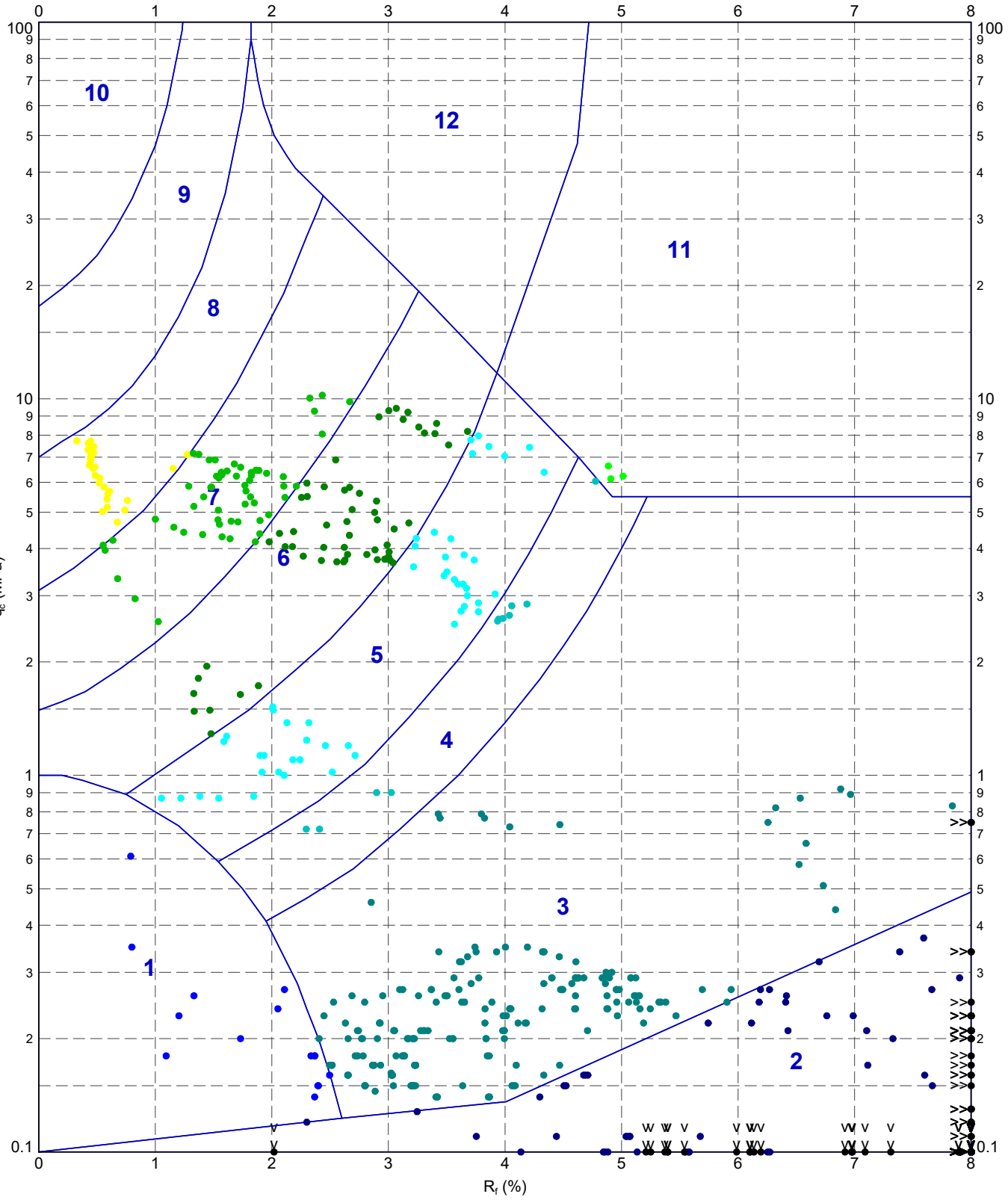
CLIENT : Structural Soils	EASTING : 632221.308 m	Remark:	SHEET : 1 OF 1
PROJECT : Sealink	NORTHING : 162850.687 m	Test refused on total pressure.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.302 m OD		TEST DATE : 17/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Refusal		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES			
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post	Difference
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	295 mV	297 mV	-0.038 MPa
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Sleeve	317 mV	315 mV	-0.02 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	304 mV	314 mV	-0.049 kPa
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot	X-Y Inclinometer	2367 mV	2347 mV	

Groundwater Level

Dissipation Test



METHOD: Robertson et al. 1986 qc Rf

- 1 - Sensitive fine grained material
- 2 - Organic material
- 3 - CLAY
- 4 - Silty CLAY to CLAY
- 5 - Clayey SILT to silty CLAY
- 6 - Sandy SILT to clayey SILT
- 7 - Silty SAND to sandy SILT
- 8 - SAND to silty SAND
- 9 - SAND
- 10 - Gravelly SAND to SAND
- 11 - Very stiff fine grained
- 12 - SAND to clayey SAND

IN SITU SITE INVESTIGATION

TITLE

Structural Soils
Ian Warne
Kent
Sealink
Robertson et al. 1986 q_c vs. R_f - R22-CPT108

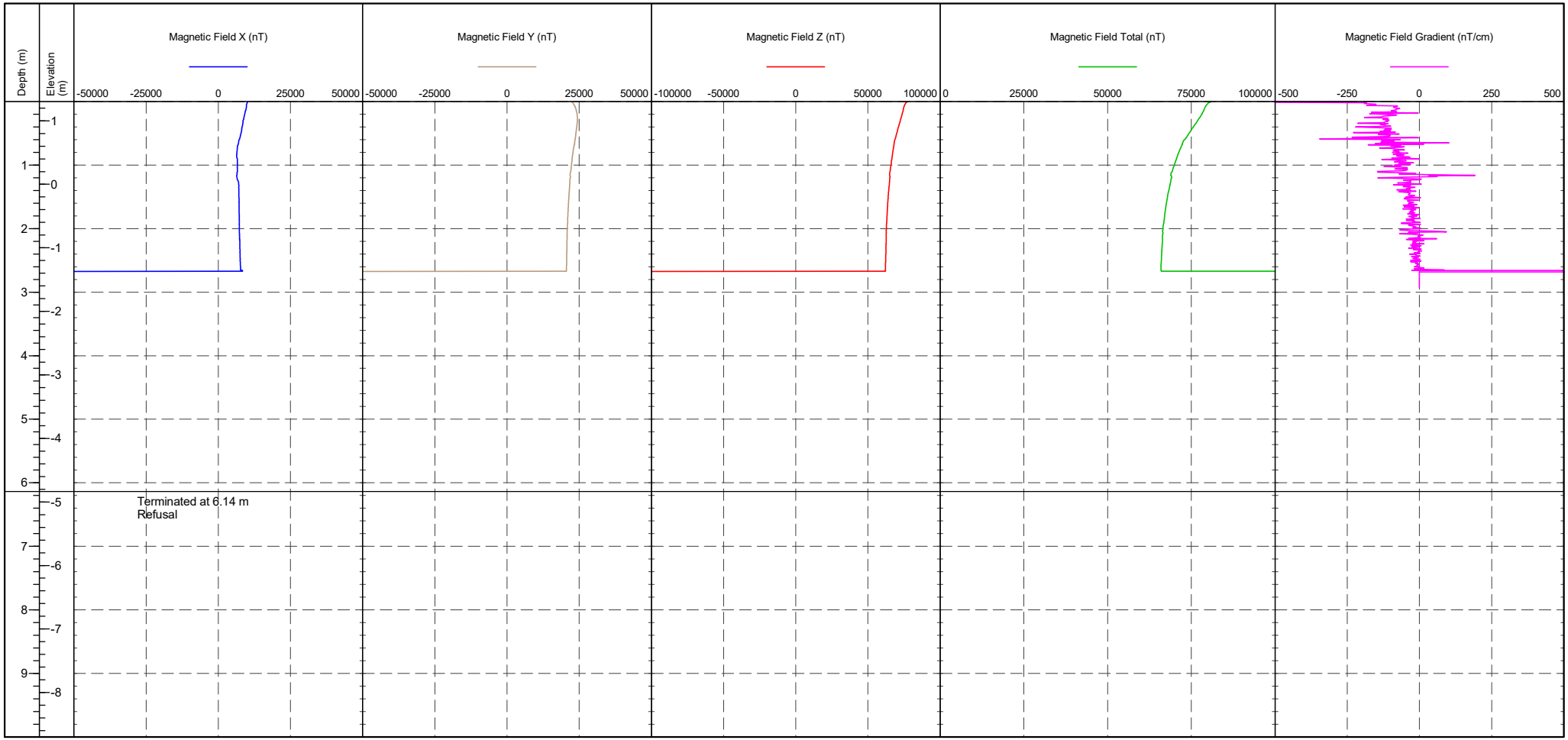
DRAWN	DATE 12/03/2024
CHECKED	DATE 12/03/2024
SCALE Not To Scale	A4
PROJECT No 1230335	FIGURE No

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

MAG LOG

PointID **R22-CPT108**

CLIENT : Structural Soils	EASTING : 632221.308 m	Remark:	SHEET : 1 OF 1
PROJECT : Sealink	NORTHING : 162850.687 m	Test refused on total pressure.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.302 m OD		TEST DATE : 17/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Refusal		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	RIG	: CPT 020 - Pagani	CPTU ZERO VALUES		
CONE MODEL	: Subtraction	OPERATOR	: AC/CH	Transducer	Pre	Post	Difference
				Tip	295 mV	297 mV	-0.038 MPa
				Sleeve	317 mV	315 mV	-0.02 kPa
				Pore Pressure 2	304 mV	314 mV	-0.049 kPa
				X-Y Inclinometer	2367 mV	2347 mV	

DISSIPATION TEST

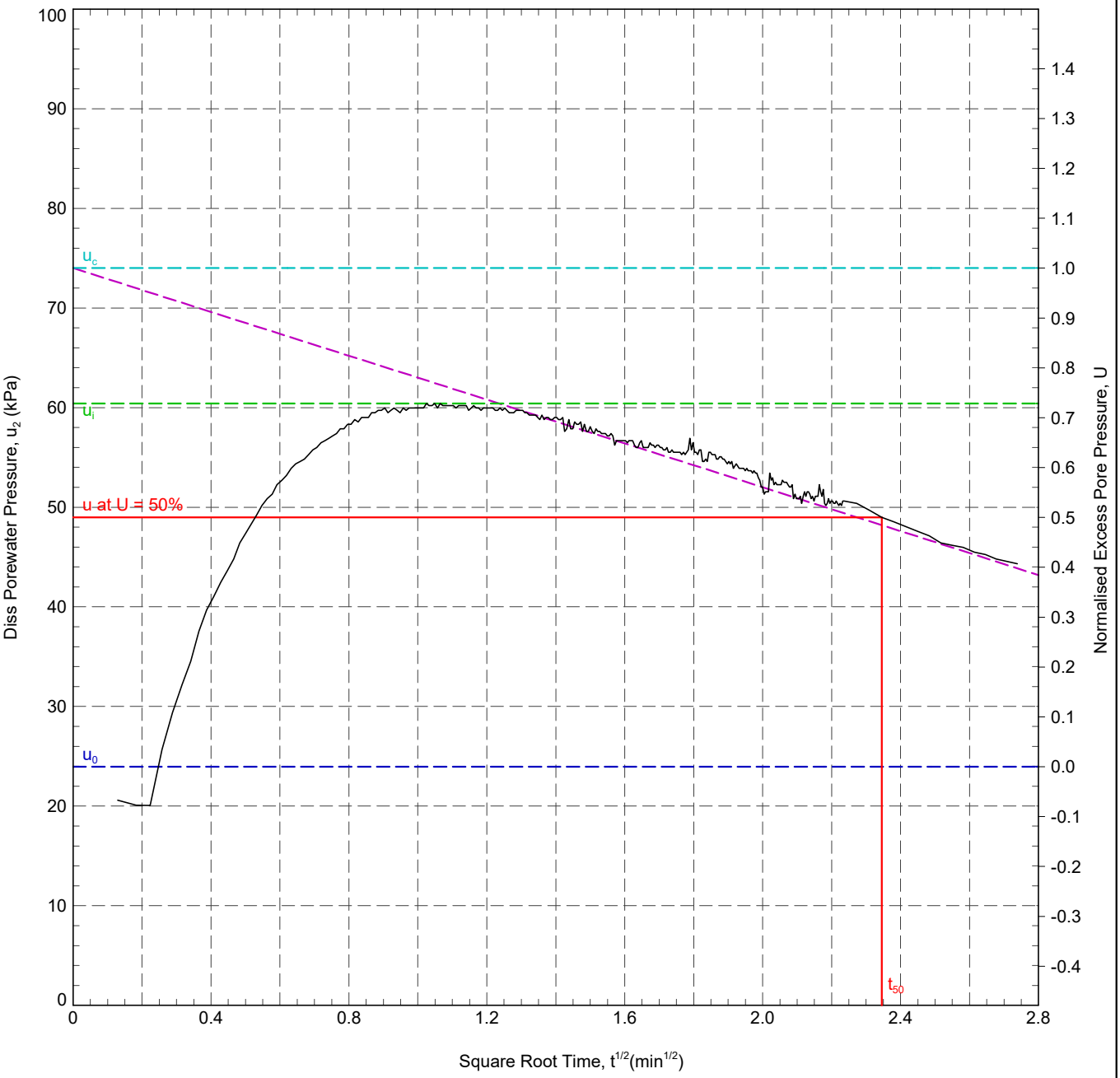
IN SITU SITE INVESTIGATION

Working with: STRUCTURAL SOILS LTD

Test ID

R22-CPT108 - 2.94 m

CLIENT	: Structural Soils	AREA	: Sealink Richborough	SHEET	: 1 OF 1
ENGINEER	: Ian Warne	EASTING	: 632221.3 m	STATUS	: Final
PROJECT	: Sealink	NORTHING	: 162850.7 m	DATE	: 17/10/23
LOCATION	: Kent	COORD. SYS.	:		
PROJECT No.	: 1230335	ELEVATION	: 1.30 m		



In Situ Pore Pressure, u_0:	24.0 kPa	Rigidity Index, I_r:	29
Initial Pore Pressure, u_i:	60.4 kPa	Horizontal Coefficient of Consolidation, c_h:	6.67x10^1 m^2/yr
Final Pore Pressure:	44.3 kPa	Ratio c_h/c_v:	1.25
Back Extrapolated Pore Pressure, u_c:	74 kPa	Vertical Coefficient of Consolidation, c_v:	5.34x10^1 m^2/yr
Degree of Dissipation:	50%		
Dissipation Pressure:	49.0 kPa		
Time for 50% Dissipation, t_{50}:	5.50 min		

RIG	: CPT 020 - Pagani	ANALYSED BY	: ZJ	DATE:	18/10/2023
CONE TYPE	: Subtraction	CHECKED BY	: DW	DATE:	18/10/2023
CONE ID	: S15-CFIP.2145	APPROVED BY	: DW	DATE:	18/10/2023
OPERATOR	: AC				

REMARK

T50 reached. Test OK.

DISSIPATION TEST

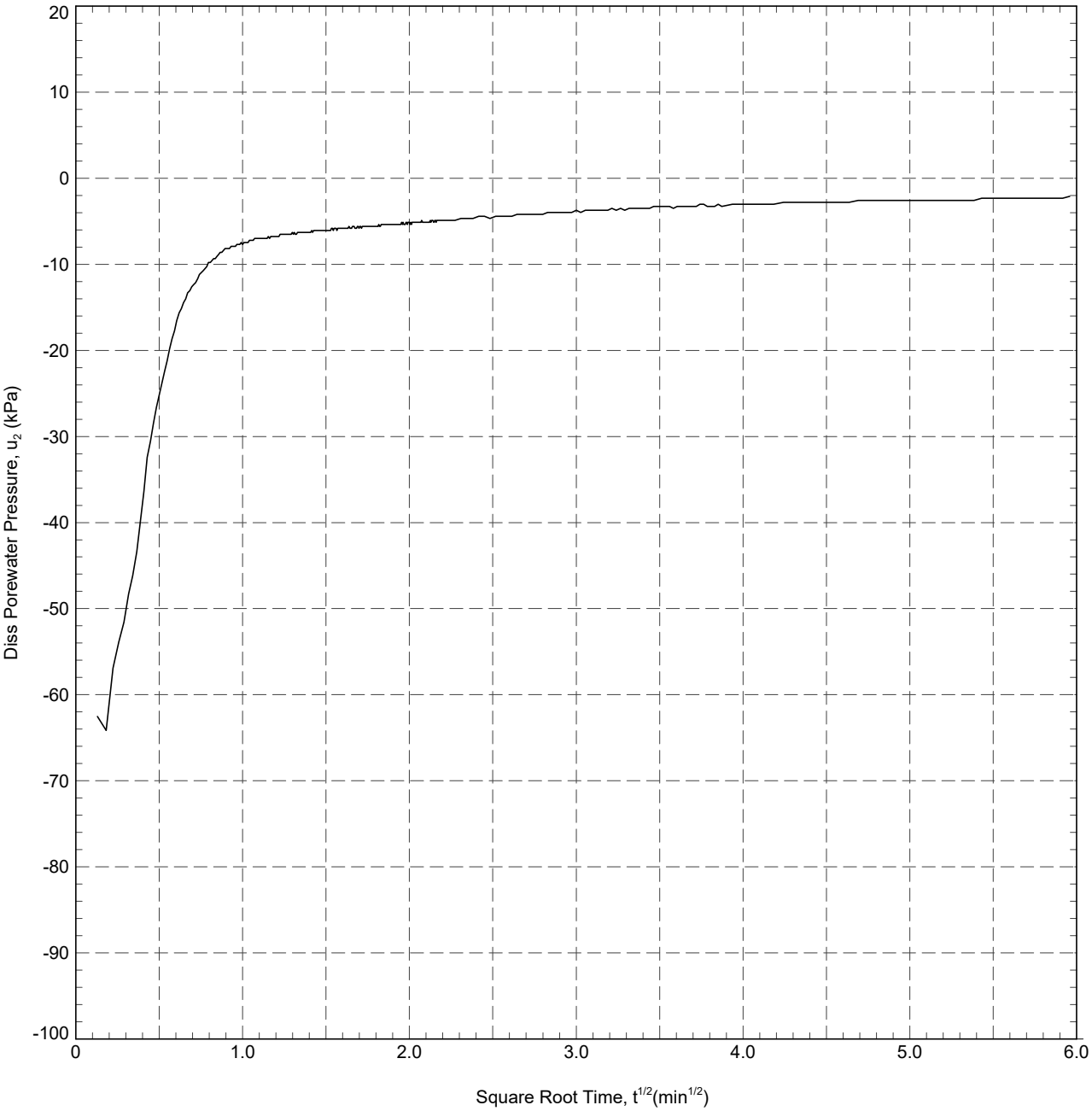
IN SITU SITE INVESTIGATION

Working with: STRUCTURAL SOILS LTD

Test ID

R22-CPT108 - 5.29 m

CLIENT	: Structural Soils	AREA	: Sealink Richborough	SHEET	: 1 OF 1
ENGINEER	: Ian Warne	EASTING	: 632221.3 m	STATUS	: Final
PROJECT	: Sealink	NORTHING	: 162850.7 m	DATE	: 17/10/23
LOCATION	: Kent	COORD. SYS.:			
PROJECT No.	: 1230335	ELEVATION	: 1.30 m		



Final Pore Pressure: -2.1 kPa

RIG	: CPT 020 - Pagani	ANALYSED BY	: ZJ	DATE:	18/10/2023
CONE TYPE	: Subtraction	CHECKED BY	: DW	DATE:	18/10/2023
CONE ID	: S15-CFIP.2145	APPROVED BY	: DW	DATE:	18/10/2023
OPERATOR	: AC				

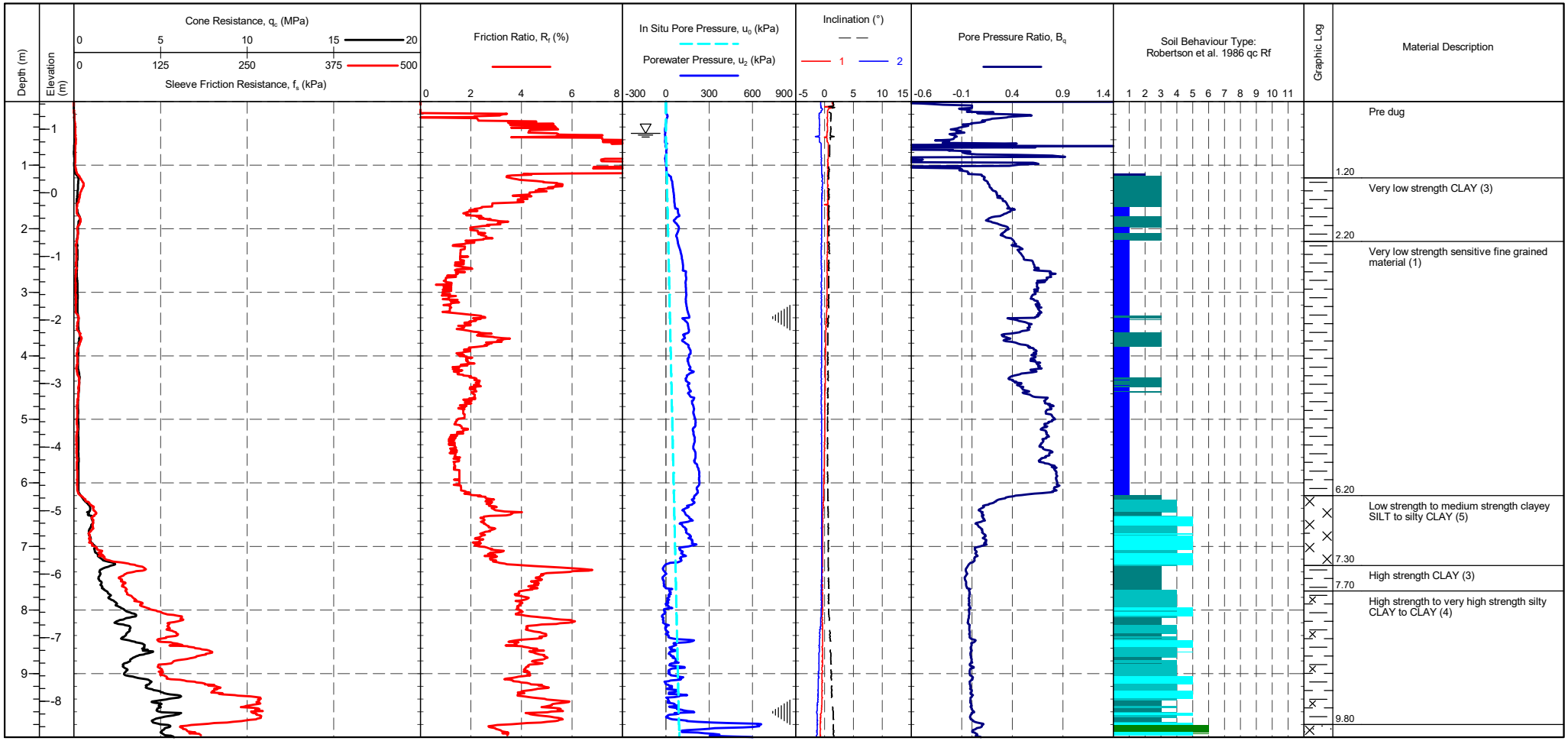
REMARK
T50 not reached.

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 01

PointID: **R22-CPT109**

CLIENT : Structural Soils	EASTING : 632517.272 m	Remark:	SHEET : 1 OF 2
PROJECT : Sealink	NORTHING : 163071.806 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.436 m OD		TEST DATE : 23/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2
CALIBRATION DATE	: 12/07/2023	APPLICATION CLASS	: 2
CONE MODEL	: Subtraction	RIG	: CPT 020 - Pagani
CONE AREA	: 15cm²	OPERATOR	: DG
CONE AREA RATIO	: 0.79	FRICTION REDUCER	: None
FILTER POSITION	: u2	WEATHER	: Overcast & Cold
FILTER TYPE	: HDPE	GROUNDWATER DEPTH	: Assumed for calculation purposes

CPTU ZERO VALUES

Transducer	Pre	Post	Difference
Tip	296 mV	298 mV	0.022 MPa
Sleeve	320 mV	320 mV	0 kPa
Pore Pressure 2	305 mV	316 mV	0.003 kPa
X-Y Inclinometer	2628 mV	2608 mV	

METHOD: Robertson et al. 1986 qc Rf

1 - Sensitive fine grained material
2 - Organic material
3 - CLAY
4 - Silty CLAY to CLAY
5 - Clayey SILT to silty CLAY
6 - Sandy SILT to clayey SILT
7 - Silty SAND to sandy SILT
8 - SAND to silty SAND
9 - SAND
10 - Gravelly SAND to SAND
11 - Very stiff fine grained
12 - SAND to clayey SAND

Groundwater Level

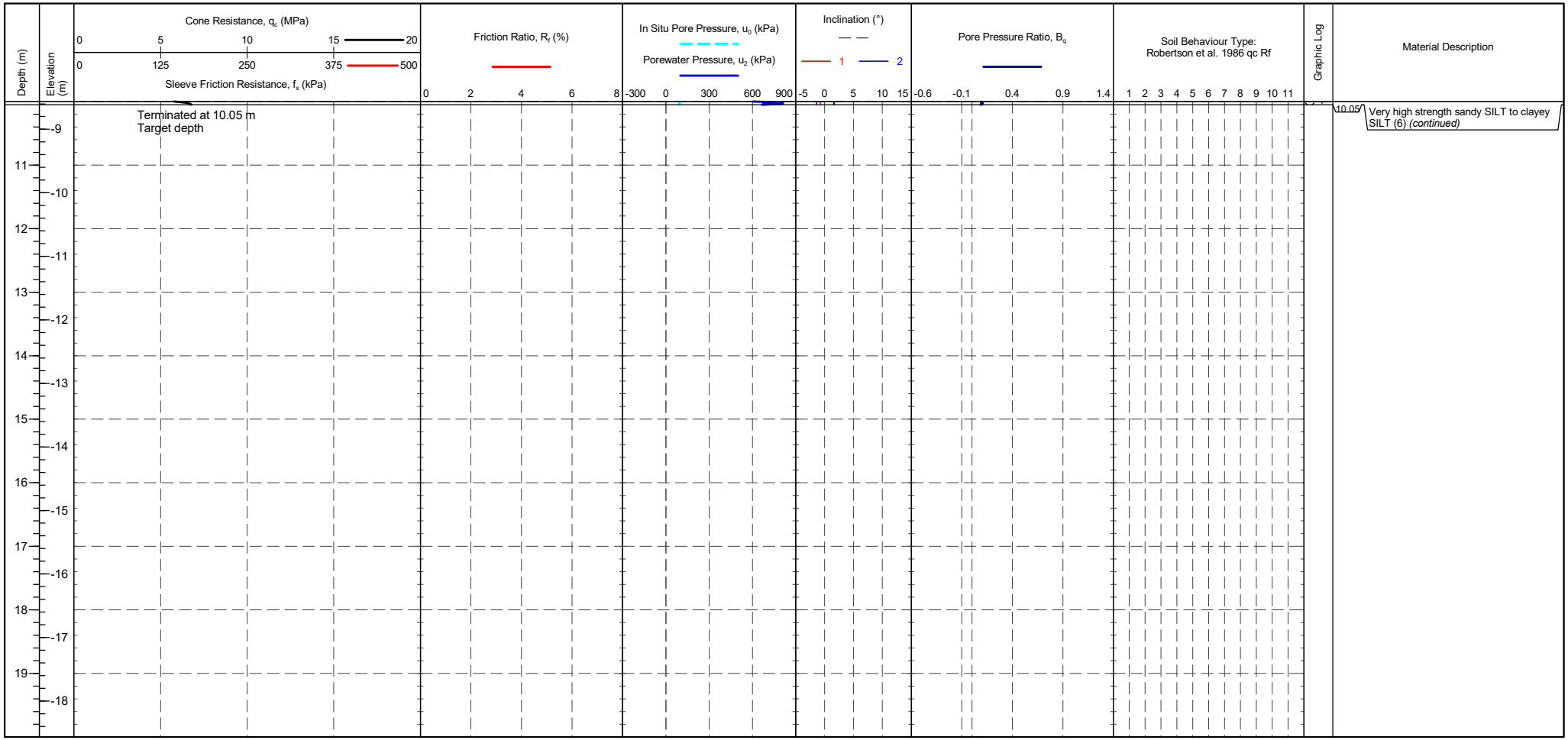
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 01

PointID: **R22-CPT109**

CLIENT : Structural Soils	EASTING : 632517.272 m	Remark:	SHEET : 2 OF 2
PROJECT : Sealink	NORTHING : 163071.806 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.436 m OD		TEST DATE : 23/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2
CALIBRATION DATE	: 12/07/2023	APPLICATION CLASS	: 2
CONE MODEL	: Subtraction	RIG	: CPT 020 - Pagani
CONE AREA	: 15cm^2	OPERATOR	: DG
CONE AREA RATIO	: 0.79	FRICTION REDUCER	: None
FILTER POSITION	: u2	WEATHER	: Overcast & Cold
FILTER TYPE	: HDPE	GROUNDWATER DEPTH	: Assumed for calculation purposes

CPTU ZERO VALUES

Transducer	Pre	Post	Difference
Tip	296 mV	298 mV	0.022 MPa
Sleeve	320 mV	320 mV	0 kPa
Pore Pressure 2	305 mV	316 mV	0.003 kPa
X-Y Inclinometer	2628 mV	2608 mV	

METHOD: Robertson et al. 1986 qc Rf

- 1 - Sensitive fine grained material
- 2 - Organic material
- 3 - CLAY
- 4 - Silty CLAY to CLAY
- 5 - Clayey SILT to silty CLAY
- 6 - Sandy SILT to clayey SILT
- 7 - Silty SAND to sandy SILT
- 8 - SAND to silty SAND
- 9 - SAND
- 10 - Gravelly SAND to SAND
- 11 - Very stiff fine grained
- 12 - SAND to clayey SAND

Groundwater Level

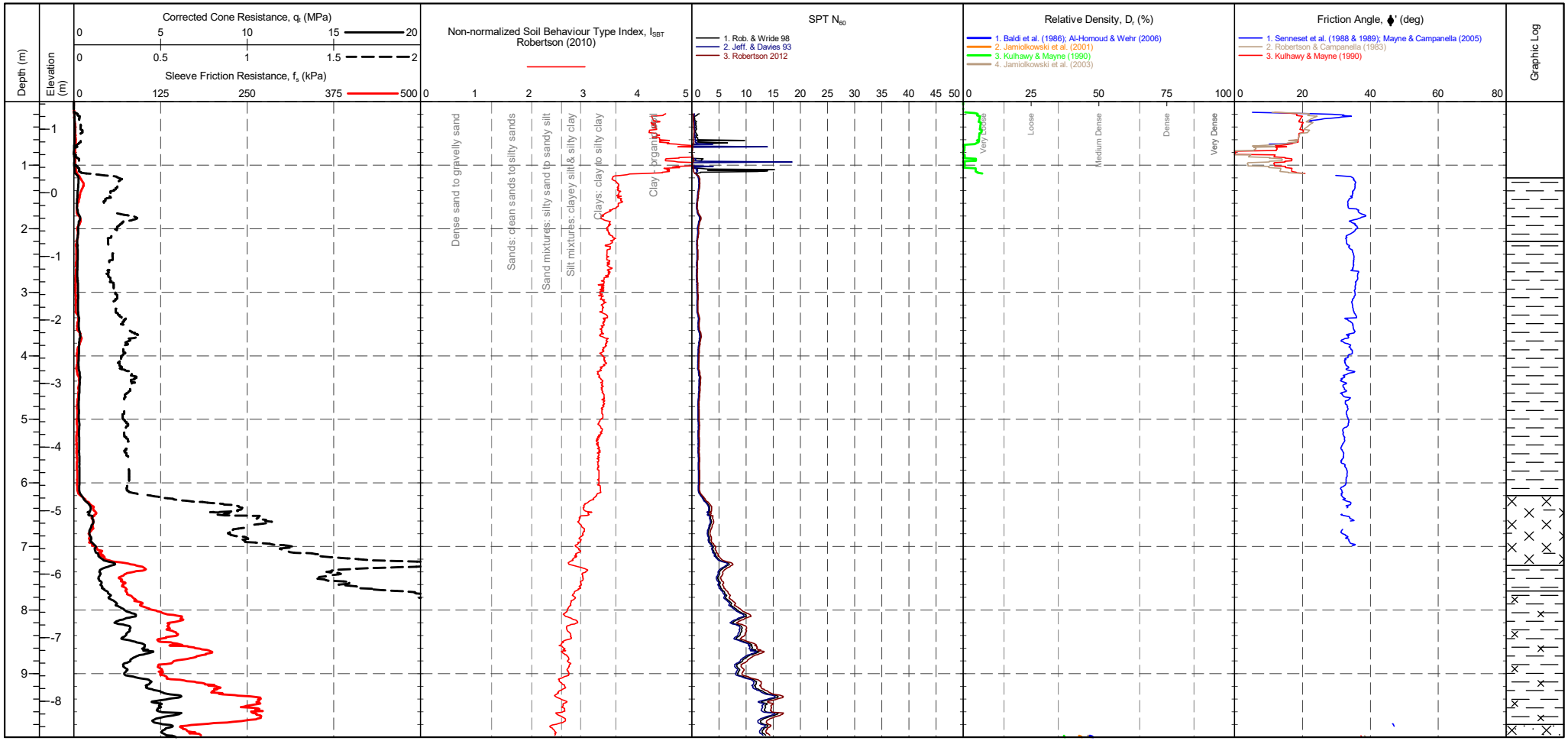
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 02

PointID: **R22-CPT109**

CLIENT : Structural Soils	EASTING : 632517.272 m	Remark:	SHEET : 1 OF 2
PROJECT : Sealink	NORTHING : 163071.806 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.436 m OD		TEST DATE : 23/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2		
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2		
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani		
CONE AREA RATIO	: 0.79	OPERATOR	: DG		
FILTER POSITION	: u2	FRICTION REDUCER	: None		
FILTER TYPE	: HDPE	WEATHER	: Overcast & Cold		

CPTU ZERO VALUES

Transducer	Pre	Post	Difference
Tip	296 mV	298 mV	0.022 MPa
Sleeve	320 mV	320 mV	0 kPa
Pore Pressure 2	305 mV	316 mV	0.003 kPa
X-Y Inclinometer	2628 mV	2608 mV	

GRANULAR SOILS (Sands & Gravels) Robertson et al. 1986 Zones 7-10 and Zone 12

Description	SBT Index, Ic	Description	SPT N value, NSPT	Description	Relative Density Dr (%)
Clays	2.95-3.60	Very Loose	0 - 4	Very Loose	0 - 15
Silt mixtures	2.60-2.95	Loose	4 - 10	Loose	15 - 35
Sand mixtures	2.05-2.60	Medium Dense	10 - 30	Medium Dense	35 - 65
Sands	1.31-2.05	Dense	30 - 50	Dense	65 - 85
Gravelly sand	<1.31	Very Dense	>50	Very Dense	>85

Groundwater Level

Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 02

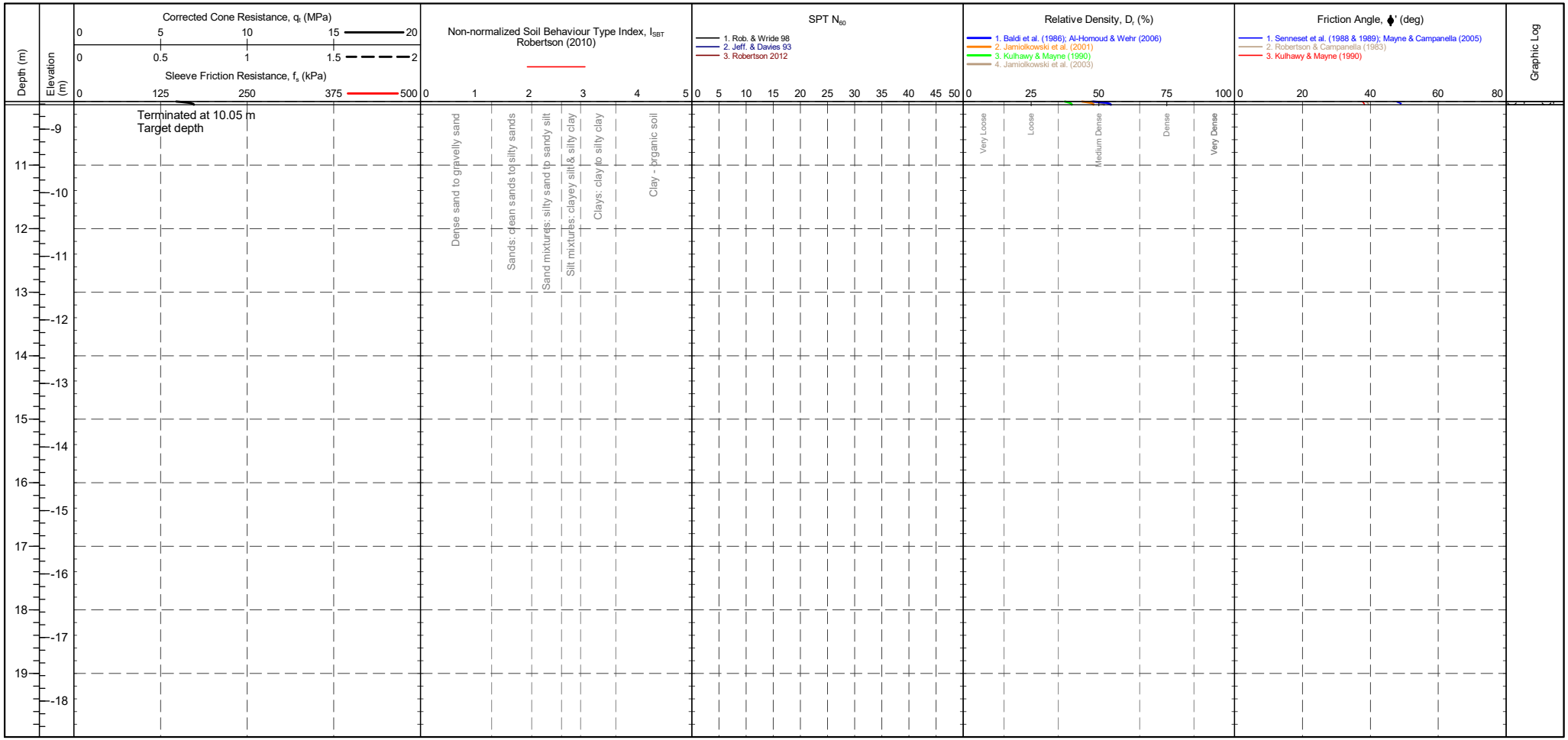
PointID: **R22-CPT109**

CLIENT : Structural Soils
PROJECT : Sealink
LOCATION : Kent
PROJECT No. : 1230335

EASTING : 632517.272 m
NORTHING : 163071.806 m
ELEVATION : 1.436 m OD
CHECKED BY : DW
TERMINATION REASON : Target depth

Remark:
Test completed at target depth.

SHEET : 2 OF 2
STATUS : Final
TEST DATE : 23/10/2023
PLOT DATE : 12/03/2024
METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES			
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post	Difference
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	296 mV	298 mV	0.022 MPa
CONE AREA RATIO	: 0.79	OPERATOR	: DG	Sleeve	320 mV	320 mV	0 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	305 mV	316 mV	0.003 kPa
FILTER TYPE	: HDPE	WEATHER	: Overcast & Cold	X-Y Inclinometer	2628 mV	2608 mV	

GRANULAR SOILS (Sands & Gravels) Robertson et al. 1986 Zones 7-10 and Zone 12

Description	SBT Index, Ic	Description	SPT N value, NSPT	Description	Relative Density Dr (%)
Clays	2.95-3.60	Very Loose	0 - 4	Very Loose	0 - 15
Silt mixtures	2.60-2.95	Loose	4 - 10	Loose	15 - 35
Sand mixtures	2.05-2.60	Medium Dense	10 - 30	Medium Dense	35 - 65
Sands	1.31-2.05	Dense	30 - 50	Dense	65 - 85
Gravelly sand	<1.31	Very Dense	>50	Very Dense	>85

Groundwater Level

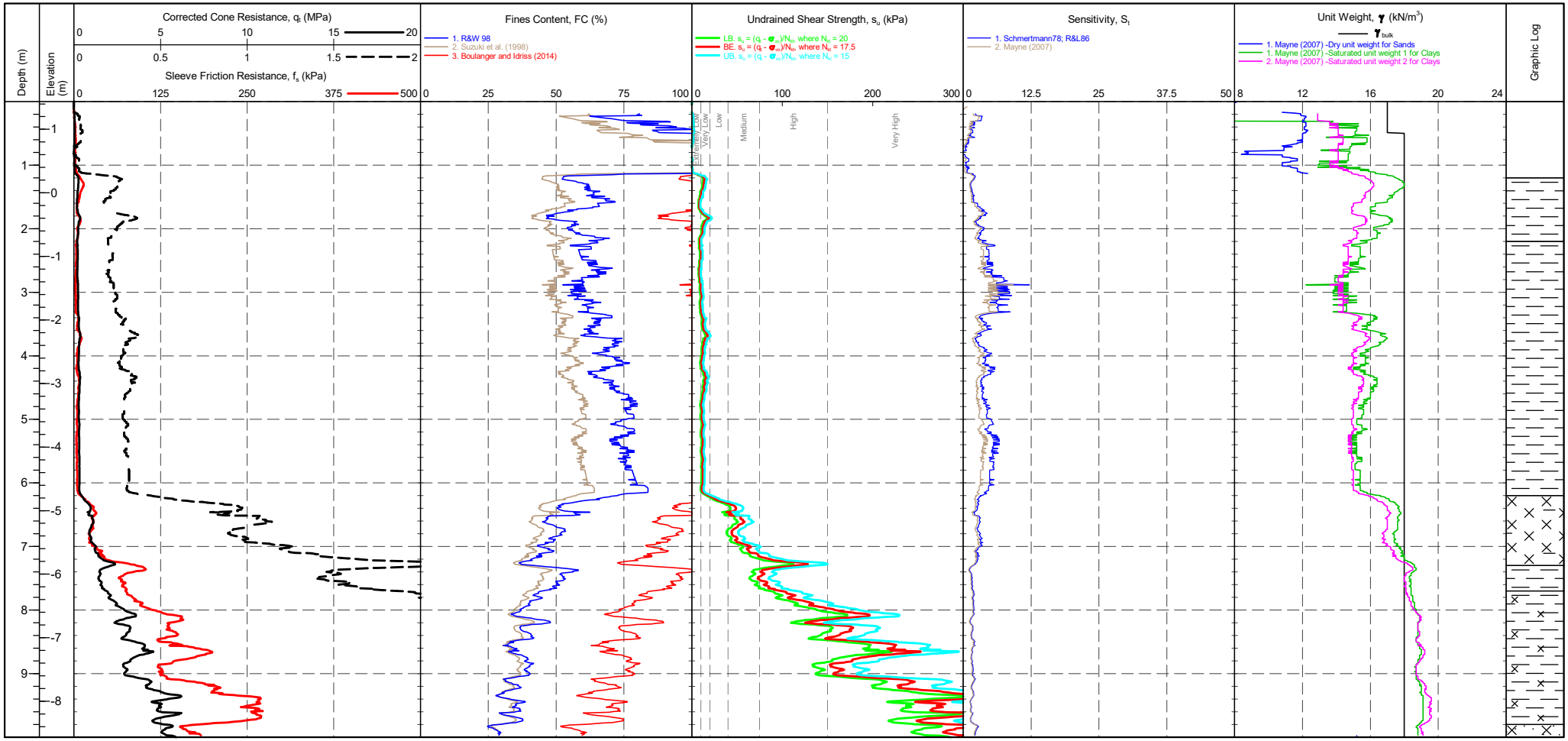
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 03

PointID **R22-CPT109**

CLIENT : Structural Soils	EASTING : 632517.272 m	Remark:	SHEET : 1 OF 2
PROJECT : Sealink	NORTHING : 163071.806 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.436 m OD		TEST DATE : 23/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES			
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post	Difference
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	296 mV	298 mV	0.022 MPa
CONE AREA RATIO	: 0.79	OPERATOR	: DG	Sleeve	320 mV	320 mV	0 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	305 mV	316 mV	0.003 kPa
FILTER TYPE	: HDPE	WEATHER	: Overcast & Cold	X-Y Inclinometer	2628 mV	2608 mV	

COHESIVE SOILS (Clays & Silts) Robertson et al. 1986 Zones 1-6 and Zone 11

Term based on measurement	su (kPa)	Term based on measurement	su (kPa)
Extremely low strength	<10	Medium strength	40-75
Very low strength	10-20	High strength	75-150
Low strength	20-40	Very high strength	150-300
		Extremely high strength	>300

Groundwater Level

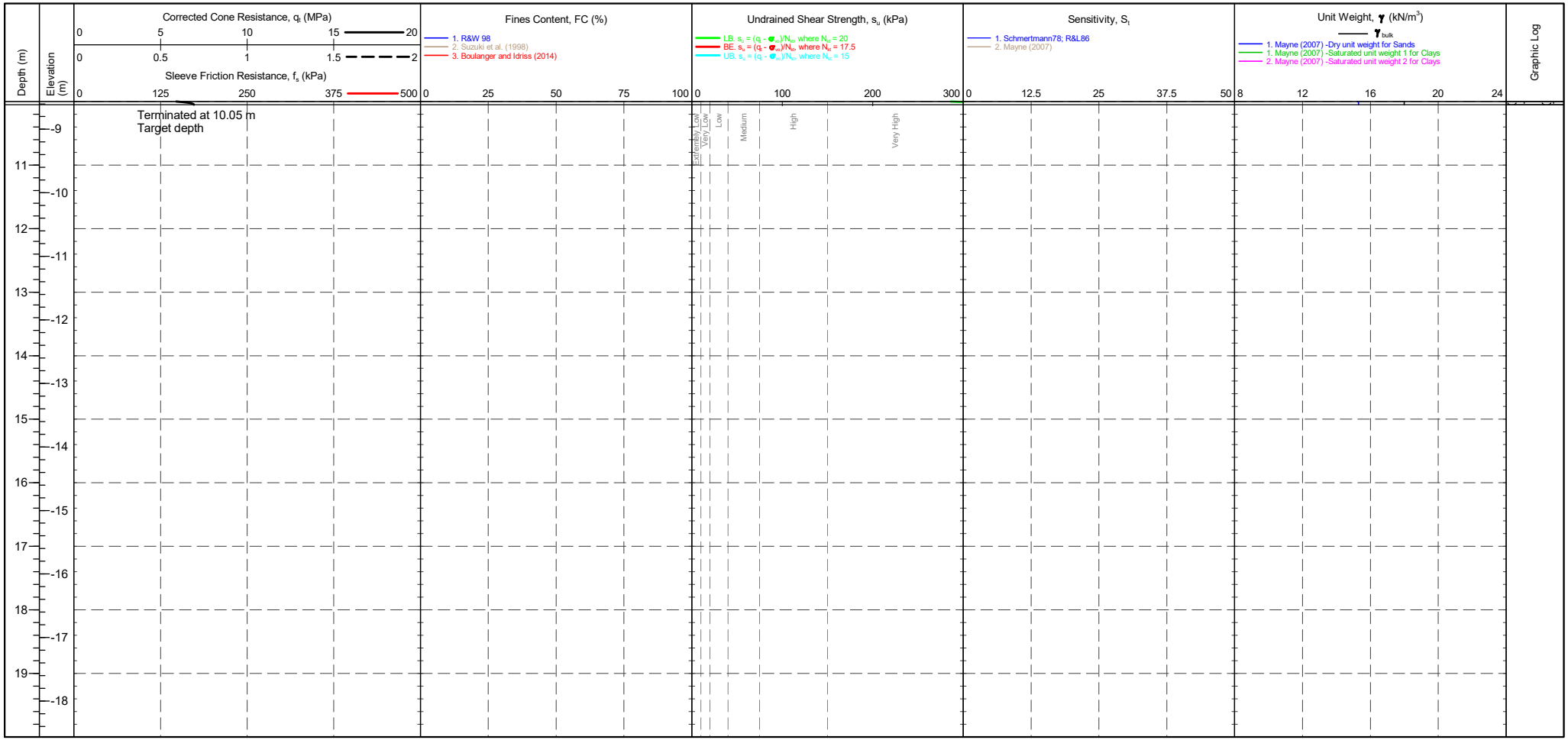
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 03

PointID: **R22-CPT109**

CLIENT : Structural Soils	EASTING : 632517.272 m	Remark: Test completed at target depth.	SHEET : 2 OF 2
PROJECT : Sealink	NORTHING : 163071.806 m		STATUS : Final
LOCATION : Kent	ELEVATION : 1.436 m OD		TEST DATE : 23/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES			
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post	Difference
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	296 mV	298 mV	0.022 MPa
CONE AREA RATIO	: 0.79	OPERATOR	: DG	Sleeve	320 mV	320 mV	0 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	305 mV	316 mV	0.003 kPa
FILTER TYPE	: HDPE	WEATHER	: Overcast & Cold	X-Y Inclinometer	2628 mV	2608 mV	

COHESIVE SOILS (Clays & Silts) Robertson et al. 1986 Zones 1-6 and Zone 11

Term based on measurement	su (kPa)	Term based on measurement	su (kPa)
Extremely low strength	<10	Medium strength	40-75
Very low strength	10-20	High strength	75-150
Low strength	20-40	Very high strength	150-300
		Extremely high strength	>300

Groundwater Level

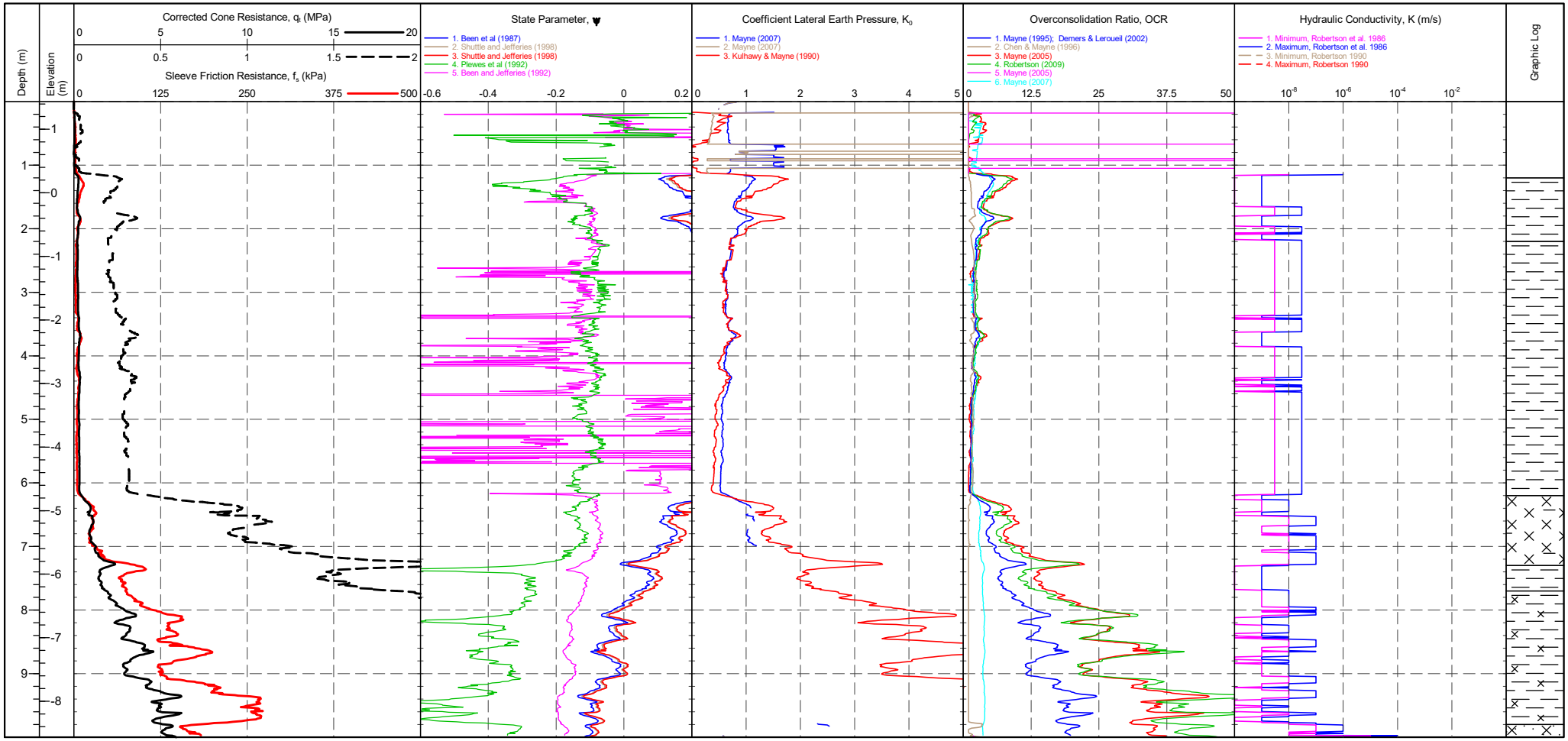
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 04

PointID **R22-CPT109**

CLIENT : Structural Soils	EASTING : 632517.272 m	Remark:	SHEET : 1 OF 2
PROJECT : Sealink	NORTHING : 163071.806 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.436 m OD		TEST DATE : 23/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



				CPTU ZERO VALUES			
CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	Transducer	Pre	Post	Difference
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Tip	296 mV	298 mV	0.022 MPa
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Sleeve	320 mV	320 mV	0 kPa
CONE AREA RATIO	: 0.79	OPERATOR	: DG	Pore Pressure 2	305 mV	316 mV	0.003 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	X-Y Inclinometer	2628 mV	2608 mV	
FILTER TYPE	: HDPE	WEATHER	: Overcast & Cold				

Groundwater Level

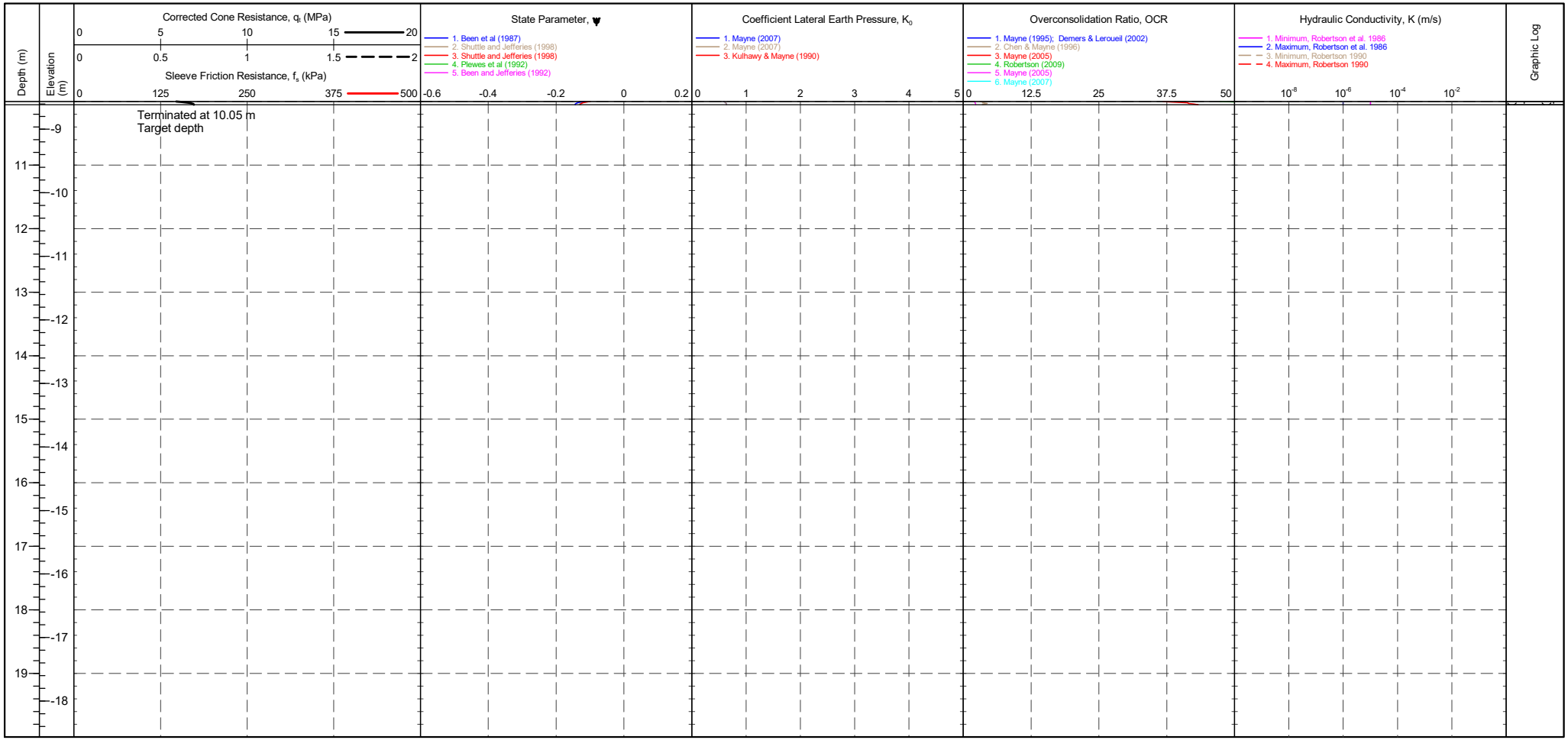
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 04

PointID **R22-CPT109**

CLIENT : Structural Soils	EASTING : 632517.272 m	Remark:	SHEET : 2 OF 2
PROJECT : Sealink	NORTHING : 163071.806 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.436 m OD		TEST DATE : 23/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES			
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post	Difference
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	296 mV	298 mV	0.022 MPa
CONE AREA RATIO	: 0.79	OPERATOR	: DG	Sleeve	320 mV	320 mV	0 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	305 mV	316 mV	0.003 kPa
FILTER TYPE	: HDPE	WEATHER	: Overcast & Cold	X-Y Inclinometer	2628 mV	2608 mV	

Groundwater Level

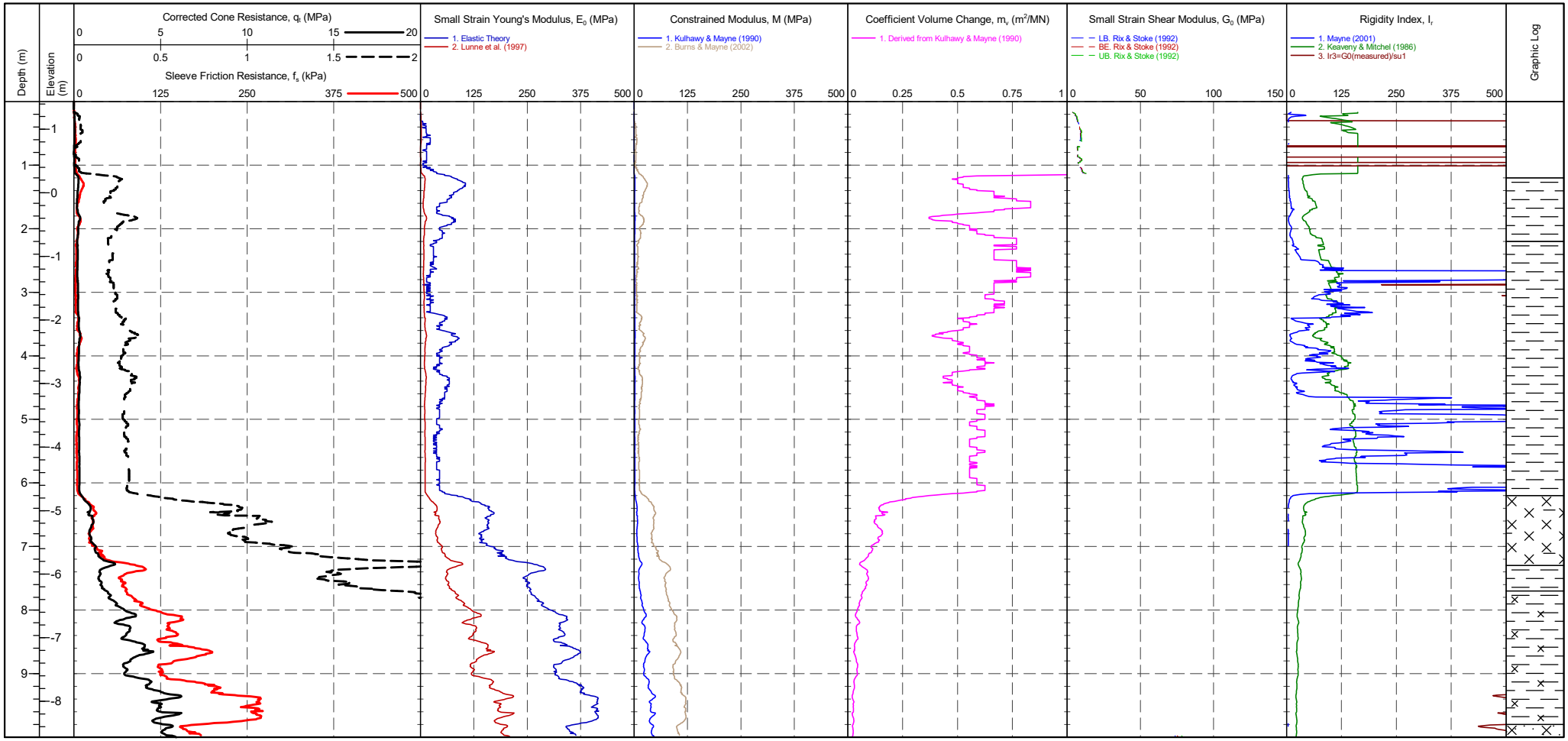
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 05

PointID: **R22-CPT109**

CLIENT : Structural Soils	EASTING : 632517.272 m	Remark:	SHEET : 1 OF 2
PROJECT : Sealink	NORTHING : 163071.806 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.436 m OD		TEST DATE : 23/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES			
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post	Difference
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	296 mV	298 mV	0.022 MPa
CONE AREA RATIO	: 0.79	OPERATOR	: DG	Sleeve	320 mV	320 mV	0 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	305 mV	316 mV	0.003 kPa
FILTER TYPE	: HDPE	WEATHER	: Overcast & Cold	X-Y Inclinometer	2628 mV	2608 mV	

Groundwater Level

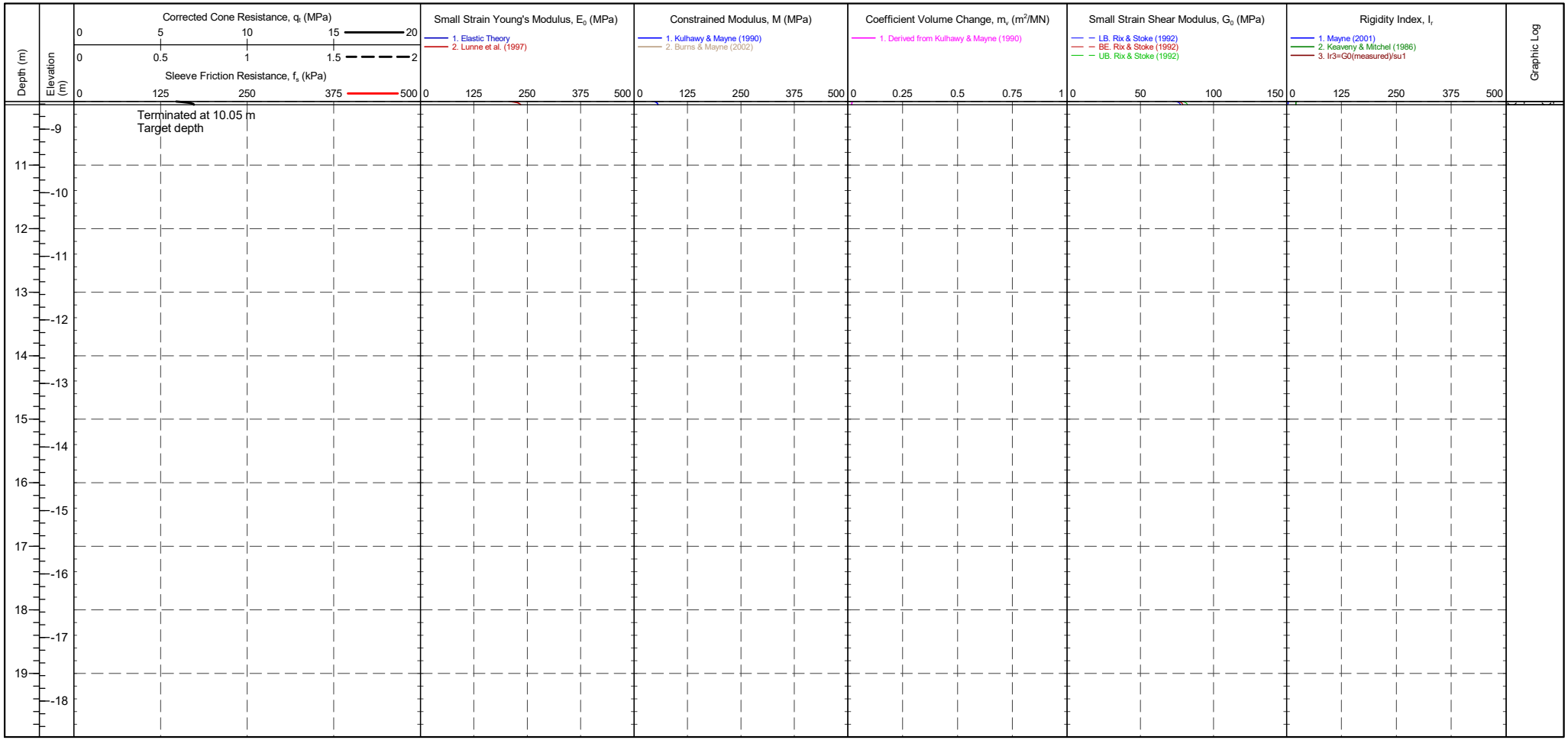
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 05

PointID **R22-CPT109**

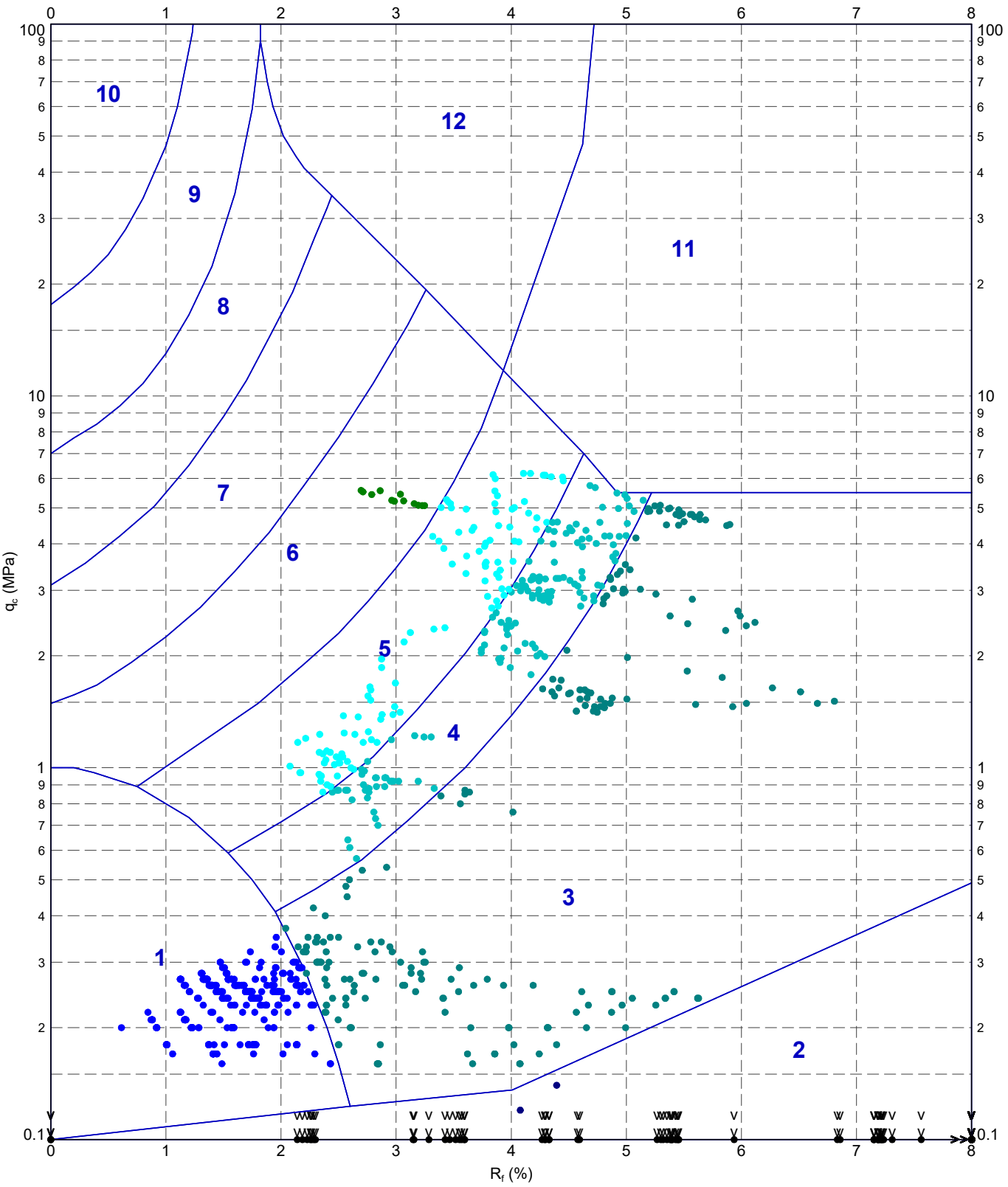
CLIENT : Structural Soils PROJECT : Sealink LOCATION : Kent PROJECT No. : 1230335	EASTING : 632517.272 m NORTHING : 163071.806 m ELEVATION : 1.436 m OD CHECKED BY : DW TERMINATION REASON : Target depth	Remark: Test completed at target depth.	SHEET : 2 OF 2 STATUS : Final TEST DATE : 23/10/2023 PLOT DATE : 12/03/2024 METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES			
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post	Difference
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	296 mV	298 mV	0.022 MPa
CONE AREA RATIO	: 0.79	OPERATOR	: DG	Sleeve	320 mV	320 mV	0 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	305 mV	316 mV	0.003 kPa
FILTER TYPE	: HDPE	WEATHER	: Overcast & Cold	X-Y Inclinometer	2628 mV	2608 mV	

Groundwater Level

Dissipation Test



METHOD: Robertson et al. 1986 qc Rf

1 - Sensitive fine grained material	4 - Silty CLAY to CLAY	7 - Silty SAND to sandy SILT	10 - Gravelly SAND to SAND
2 - Organic material	5 - Clayey SILT to silty CLAY	8 - SAND to silty SAND	11 - Very stiff fine grained
3 - CLAY	6 - Sandy SILT to clayey SILT	9 - SAND	12 - SAND to clayey SAND

IN SITU SITE INVESTIGATION

TITLE

Structural Soils
Ian Warne
Kent
Sealink
Robertson et al. 1986 q_c vs. R_f - R22-CPT109

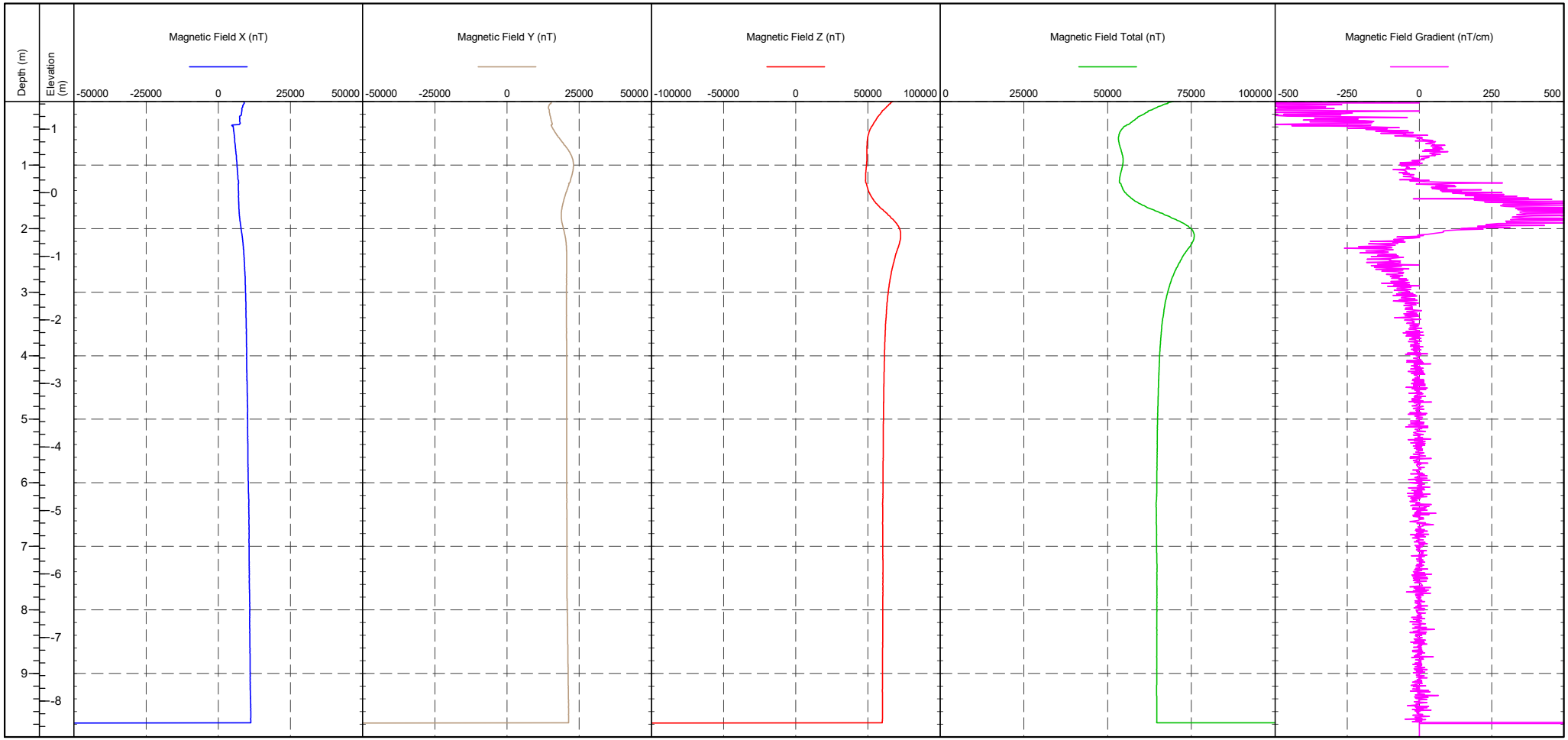
DRAWN		DATE	12/03/2024
CHECKED		DATE	12/03/2024
SCALE	Not To Scale		A4
PROJECT No	1230335	FIGURE No	

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

MAG LOG

PointID **R22-CPT109**

CLIENT : Structural Soils	EASTING : 632517.272 m	Remark:	SHEET : 1 OF 2
PROJECT : Sealink	NORTHING : 163071.806 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.436 m OD		TEST DATE : 23/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	RIG	: CPT 020 - Pagani	
CONE MODEL	: Subtraction	OPERATOR	: DG	

CPTU ZERO VALUES

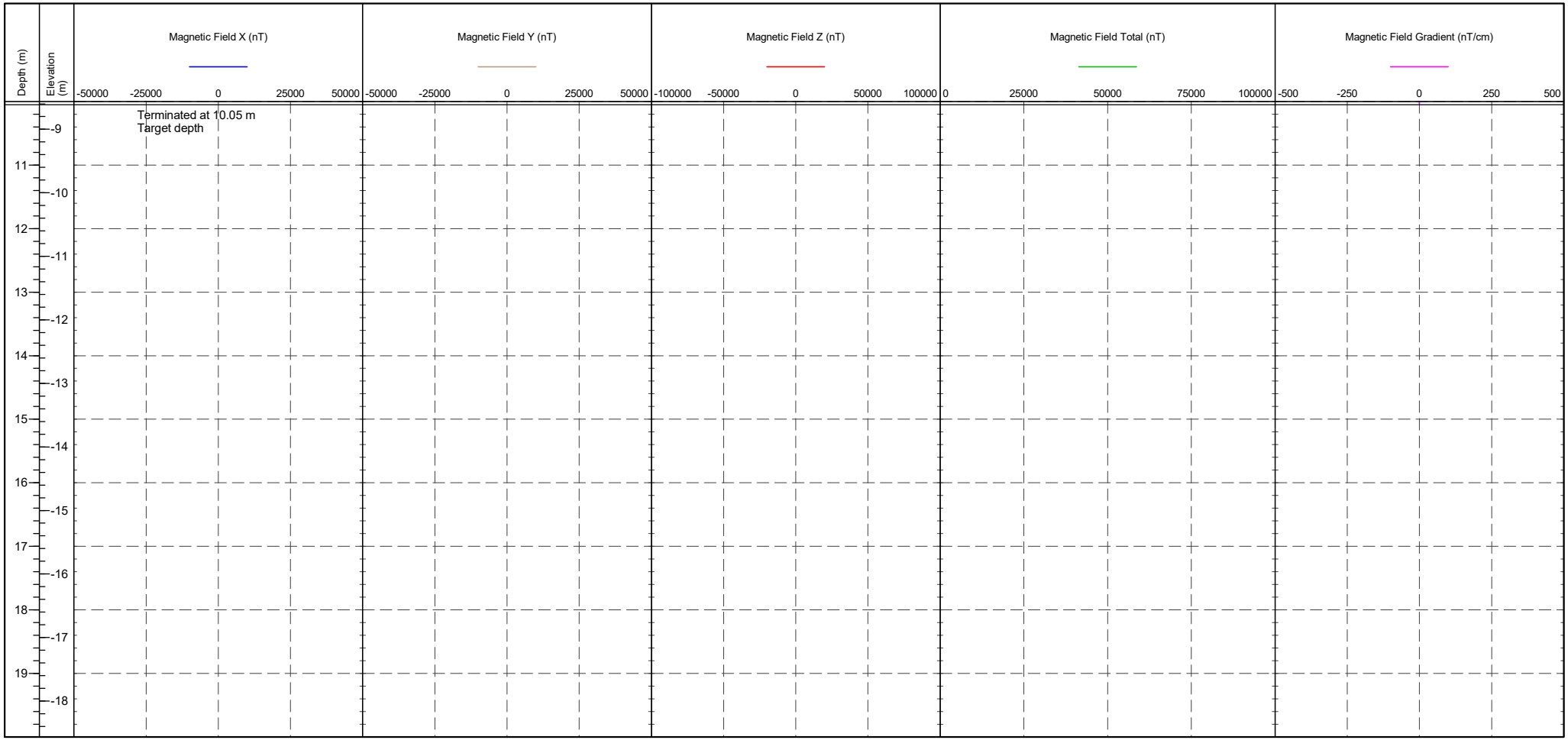
Transducer	Pre	Post	Difference
Tip	296 mV	298 mV	0.022 MPa
Sleeve	320 mV	320 mV	0 kPa
Pore Pressure 2	305 mV	316 mV	0.003 kPa
X-Y Inclinometer	2628 mV	2608 mV	

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

MAG LOG

PointID **R22-CPT109**

CLIENT : Structural Soils PROJECT : Sealink LOCATION : Kent PROJECT No. : 1230335	EASTING : 632517.272 m NORTHING : 163071.806 m ELEVATION : 1.436 m OD CHECKED BY : DW TERMINATION REASON : Target depth	Remark: Test completed at target depth.	SHEET : 2 OF 2 STATUS : Final TEST DATE : 23/10/2023 PLOT DATE : 12/03/2024 METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	RIG	: CPT 020 - Pagani	
CONE MODEL	: Subtraction	OPERATOR	: DG	

CPTU ZERO VALUES

Transducer	Pre	Post	Difference
Tip	296 mV	298 mV	0.022 MPa
Sleeve	320 mV	320 mV	0 kPa
Pore Pressure 2	305 mV	316 mV	0.003 kPa
X-Y Inclinometer	2628 mV	2608 mV	

DISSIPATION TEST

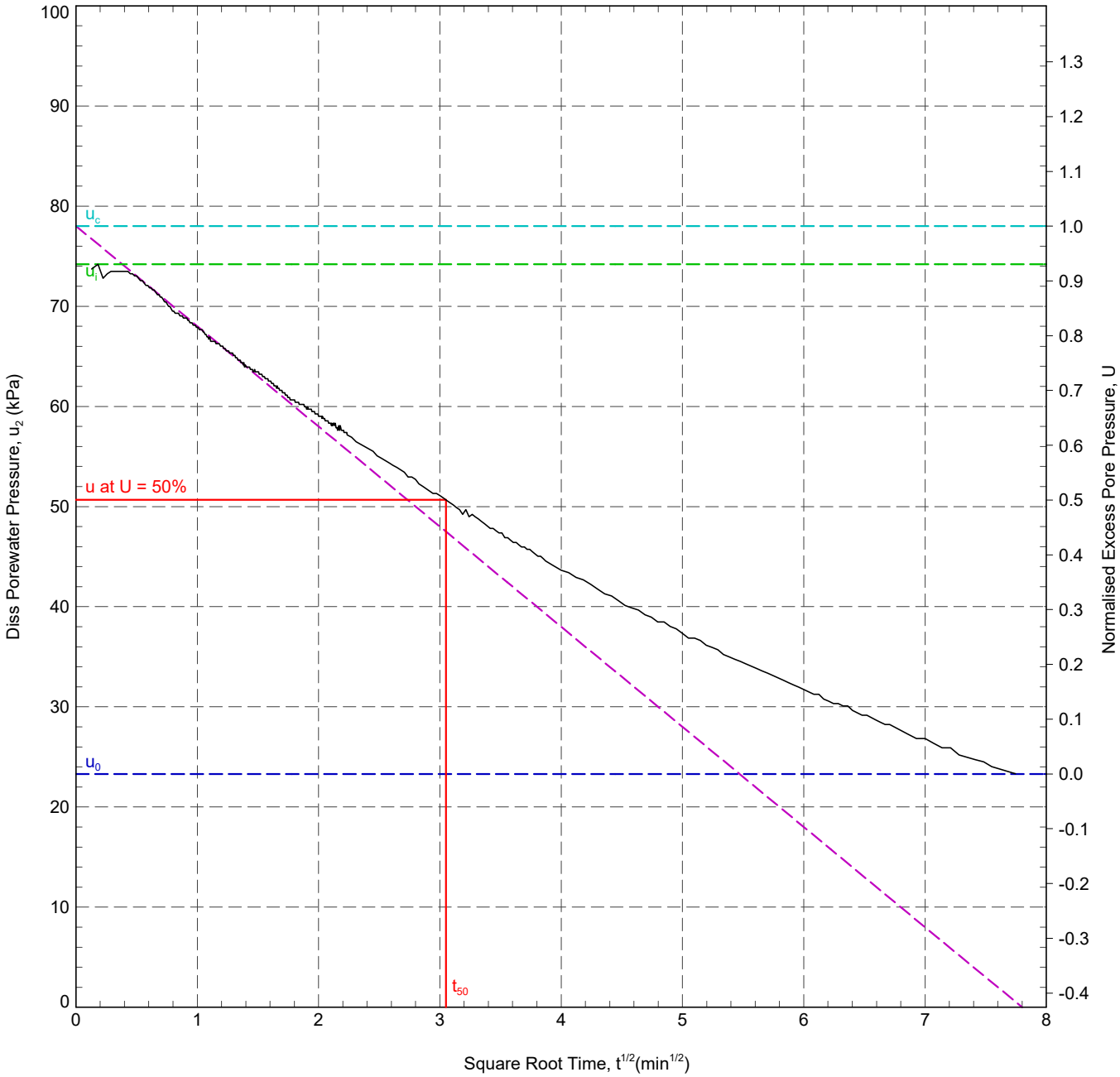
IN SITU SITE INVESTIGATION

Working with: STRUCTURAL SOILS LTD

Test ID

R22-CPT109 - 3.40 m

CLIENT	: Structural Soils	AREA	: Sealink Richborough	SHEET	: 1 OF 1
ENGINEER	: Ian Warne	EASTING	: 632517.3 m	STATUS	: Final
PROJECT	: Sealink	NORTHING	: 163071.8 m	DATE	: 23/10/23
LOCATION	: Kent	COORD. SYS.	:		
PROJECT No.	: 1230335	ELEVATION	: 1.44 m		



In Situ Pore Pressure, u_0:	23.3 kPa	Rigidity Index, I_r:	99.4
Initial Pore Pressure, u_i:	74.2 kPa	Horizontal Coefficient of Consolidation, c_h:	7.30x10^1 m^2/yr
Final Pore Pressure:	23.3 kPa	Ratio c_h/c_v:	1.25
Back Extrapolated Pore Pressure, u_c:	78 kPa	Vertical Coefficient of Consolidation, c_v:	5.84x10^1 m^2/yr
Degree of Dissipation:	50%		
Dissipation Pressure:	50.7 kPa		
Time for 50% Dissipation, t_{50}:	9.30 min		

RIG	: CPT 020 - Pagani	ANALYSED BY	: ZJ	DATE:	24/10/2023
CONE TYPE	: Subtraction	CHECKED BY	: DW	DATE:	24/10/2023
CONE ID	: S15-CFIP.2145	APPROVED BY	: DW	DATE:	24/10/2023
OPERATOR	: DG				

REMARK
T50 reached. Test OK.

DISSIPATION TEST

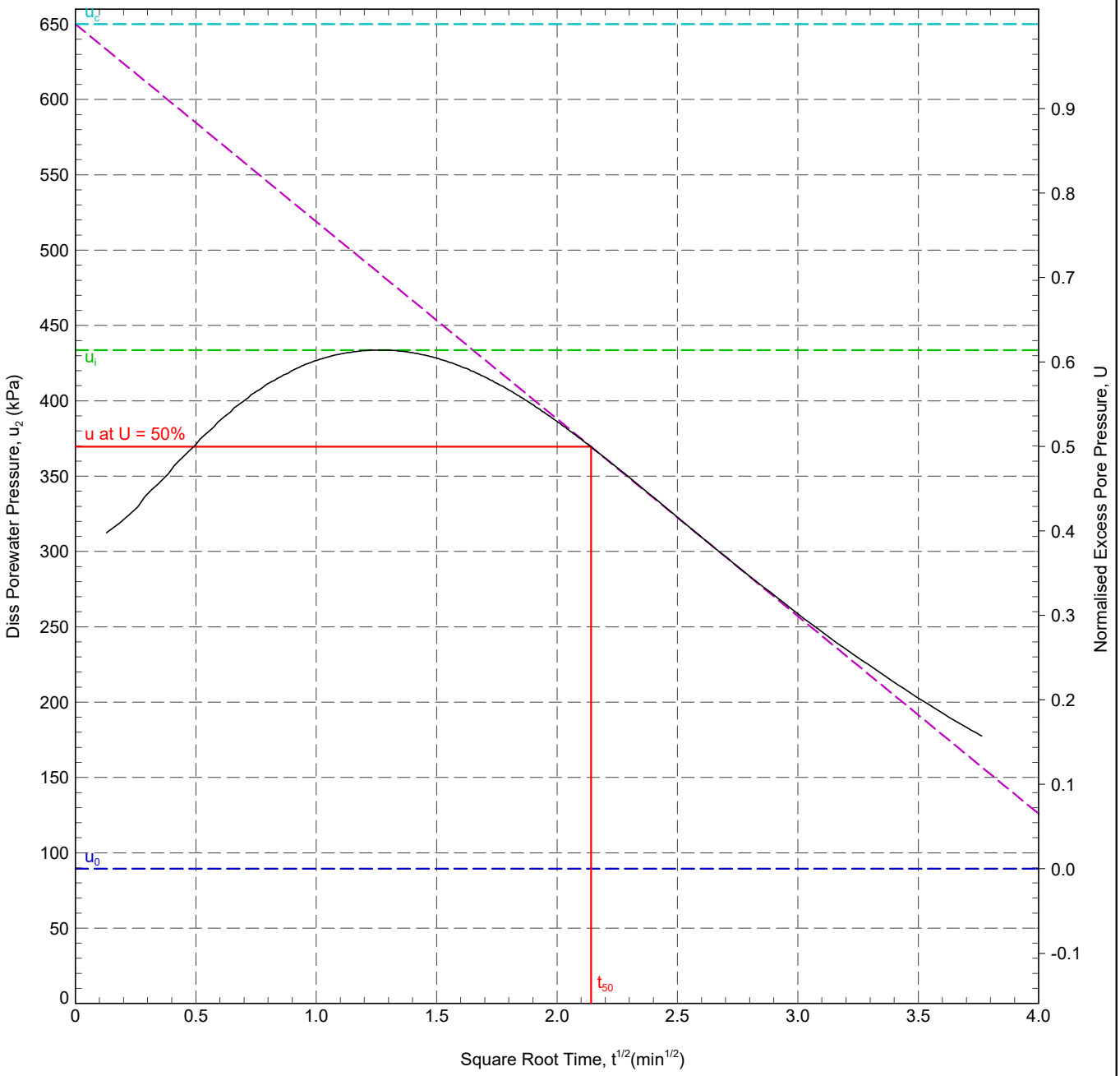
IN SITU SITE INVESTIGATION

Working with: STRUCTURAL SOILS LTD

Test ID

R22-CPT109 - 9.61 m

CLIENT	: Structural Soils	AREA	: Sealink Richborough	SHEET	: 1 OF 1
ENGINEER	: Ian Warne	EASTING	: 632517.3 m	STATUS	: Final
PROJECT	: Sealink	NORTHING	: 163071.8 m	DATE	: 23/10/23
LOCATION	: Kent	COORD. SYS.	:		
PROJECT No.	: 1230335	ELEVATION	: 1.44 m		



In Situ Pore Pressure, u_0:	89.4 kPa	Rigidity Index, I_r:	21.3
Initial Pore Pressure, u_i:	433.7 kPa	Horizontal Coefficient of Consolidation, c_h:	6.86x10^1 m^2/yr
Final Pore Pressure:	177.5 kPa	Ratio c_h/c_v:	1.25
Back Extrapolated Pore Pressure, u_c:	650 kPa	Vertical Coefficient of Consolidation, c_v:	5.49x10^1 m^2/yr
Degree of Dissipation:	50%		
Dissipation Pressure:	369.5 kPa		
Time for 50% Dissipation, t_{50}:	4.58 min		

RIG	: CPT 020 - Pagani	ANALYSED BY	: ZJ	DATE:	24/10/2023
CONE TYPE	: Subtraction	CHECKED BY	: DW	DATE:	24/10/2023
CONE ID	: S15-CFIP.2145	APPROVED BY	: DW	DATE:	24/10/2023
OPERATOR	: DG				

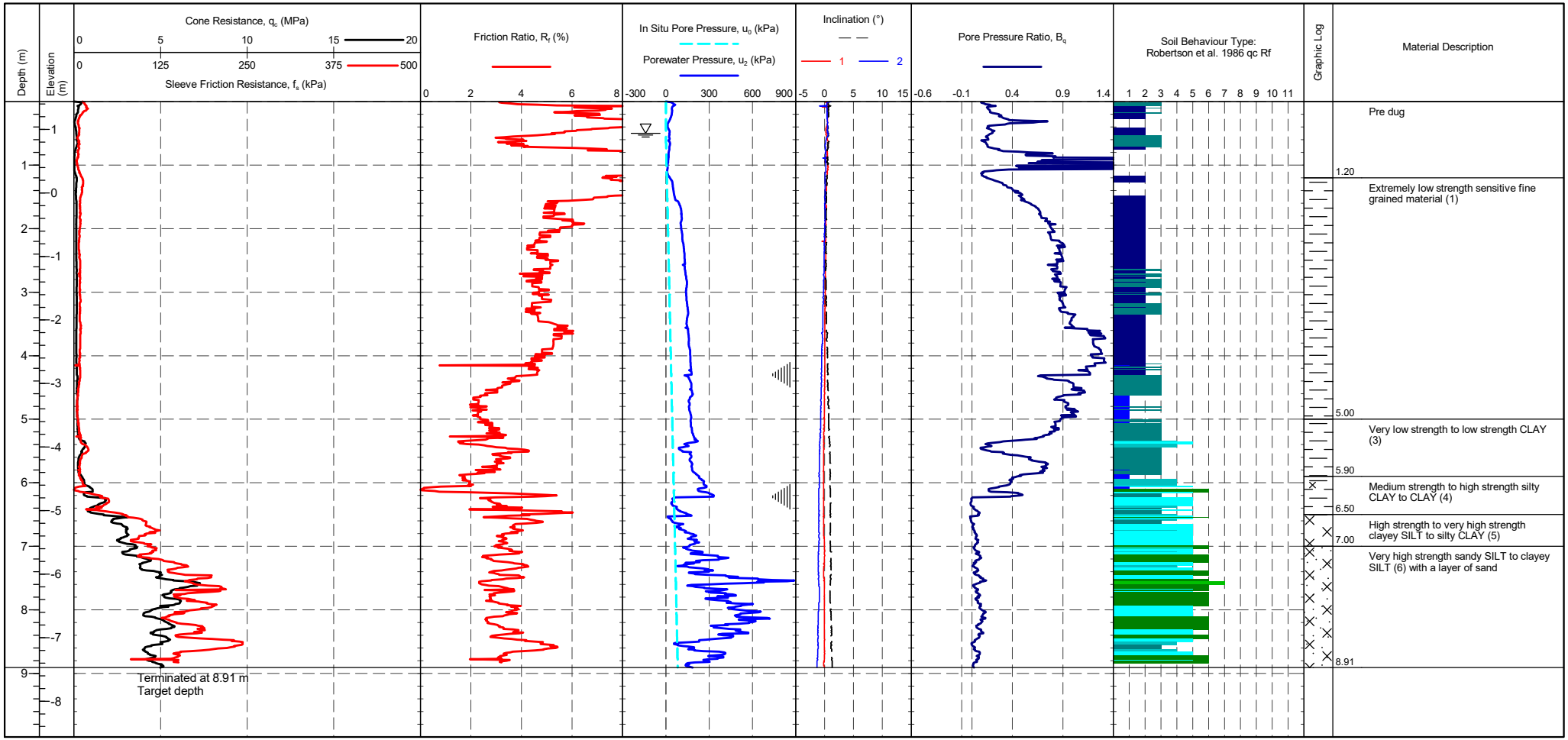
REMARK
T50 reached. Test OK.

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 01

PointID: **R22-CPT110**

CLIENT : Structural Soils	EASTING : 632371.425 m	Remark:	SHEET : 1 OF 1
PROJECT : Sealink	NORTHING : 163132.830 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.438 m OD		TEST DATE : 18/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2
CALIBRATION DATE	: 12/07/2023	APPLICATION CLASS	: 2
CONE MODEL	: Subtraction	RIG	: CPT 020 - Pagani
CONE AREA	: 15cm²	OPERATOR	: AC/CH
CONE AREA RATIO	: 0.79	FRICTION REDUCER	: None
FILTER POSITION	: u2	WEATHER	: Sunny & Hot
FILTER TYPE	: HDPE	GROUNDWATER DEPTH	: Assumed for calculation purposes

CPTU ZERO VALUES

Transducer	Pre	Post	Difference
Tip	295 mV	292 mV	-0.033 MPa
Sleeve	317 mV	314 mV	-0.002 kPa
Pore Pressure 2	302 mV	302 mV	0 kPa
X-Y Inclinometer	2527 mV	2663 mV	

METHOD: Robertson et al. 1986 qc Rf

1 - Sensitive fine grained material
2 - Organic material
3 - CLAY
4 - Silty CLAY to CLAY
5 - Clayey SILT to silty CLAY
6 - Sandy SILT to clayey SILT
7 - Silty SAND to sandy SILT
8 - SAND to silty SAND
9 - SAND
10 - Gravelly SAND to SAND
11 - Very stiff fine grained
12 - SAND to clayey SAND

Groundwater Level

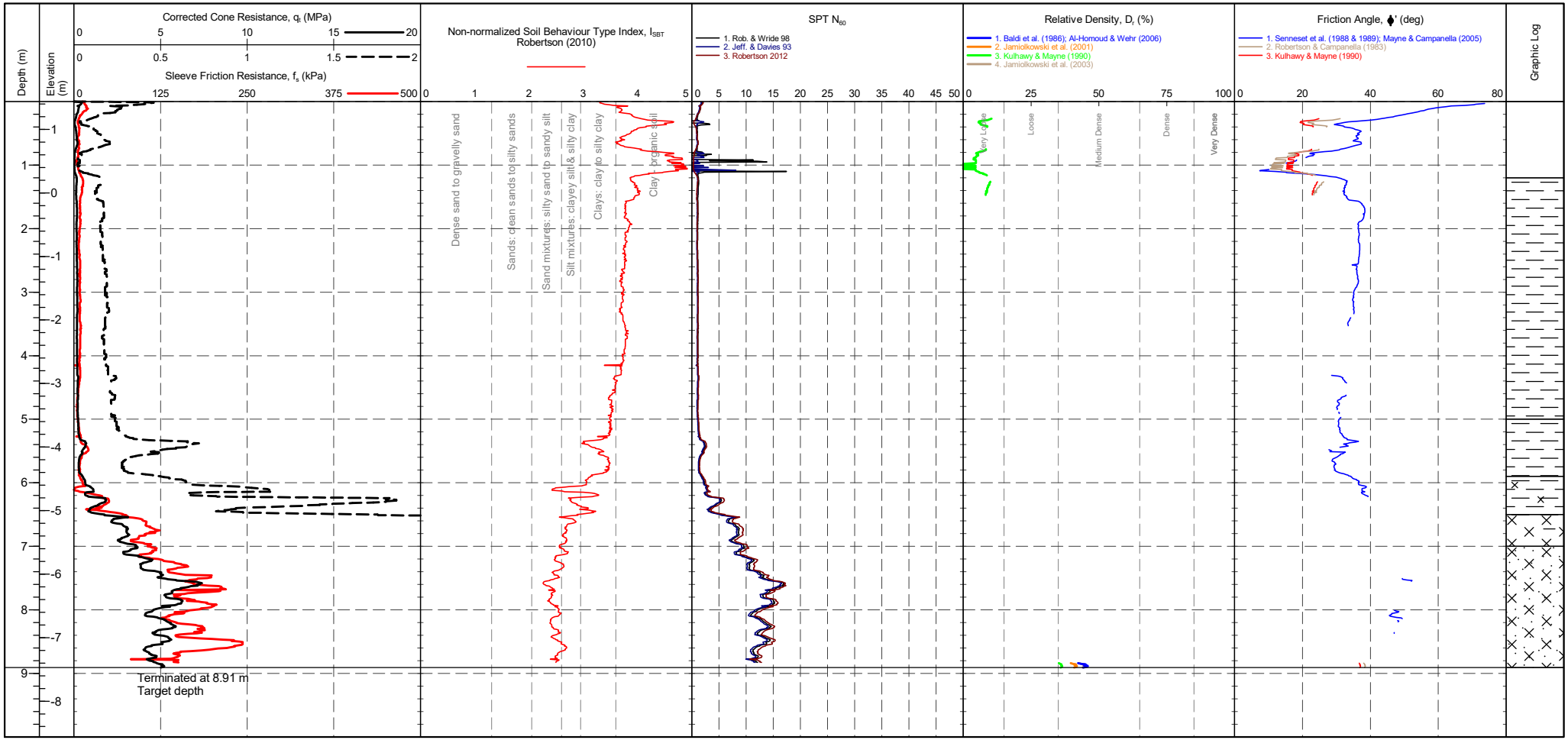
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 02

PointID: **R22-CPT110**

CLIENT : Structural Soils	EASTING : 632371.425 m	Remark:	SHEET : 1 OF 1
PROJECT : Sealink	NORTHING : 163132.830 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.438 m OD		TEST DATE : 18/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES		
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	295 mV	292 mV
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Sleeve	317 mV	314 mV
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	302 mV	302 mV
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot	X-Y Inclinometer	2527 mV	2663 mV

Transducer	Difference
Tip	-0.033 MPa
Sleeve	-0.002 kPa
Pore Pressure 2	0 kPa

GRANULAR SOILS (Sands & Gravels) Robertson et al. 1986 Zones 7-10 and Zone 12

Description	SBT Index, Ic
Clays	2.95-3.60
Silt mixtures	2.60-2.95
Sand mixtures	2.05-2.60
Sands	1.31-2.05
Gravelly sand	<1.31

Description	SPT N value, NSPT
Very Loose	0 - 4
Loose	4 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	>50

Description	Relative Density Dr (%)
Very Loose	0 - 15
Loose	15 - 35
Medium Dense	35 - 65
Dense	65 - 85
Very Dense	>85

Groundwater Level

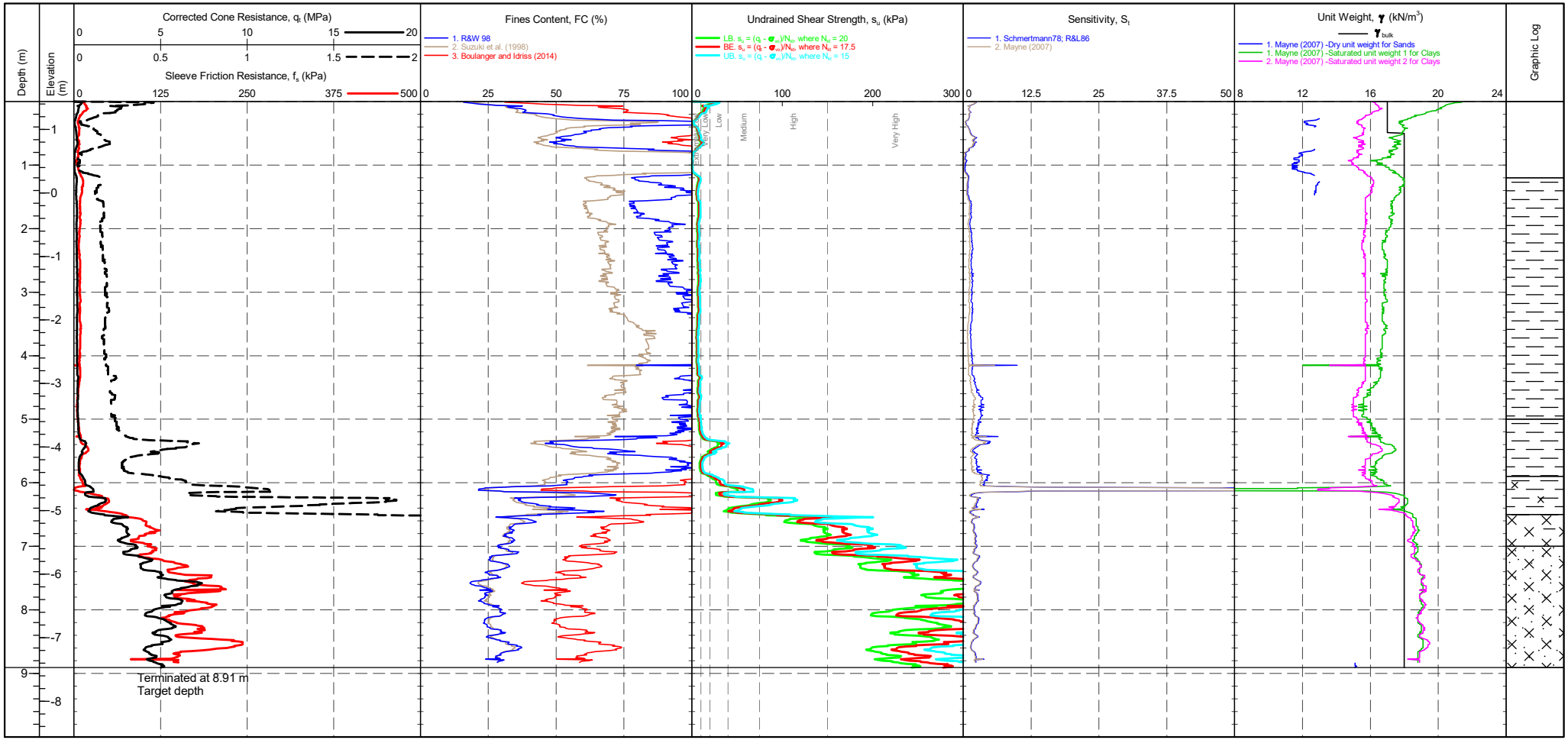
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 03

PointID: **R22-CPT110**

CLIENT : Structural Soils	EASTING : 632371.425 m	Remark:	SHEET : 1 OF 1
PROJECT : Sealink	NORTHING : 163132.830 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.438 m OD		TEST DATE : 18/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES			
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post	Difference
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	295 mV	292 mV	-0.033 MPa
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Sleeve	317 mV	314 mV	-0.002 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	302 mV	302 mV	0 kPa
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot	X-Y Inclinometer	2527 mV	2663 mV	

COHESIVE SOILS (Clays & Silts) Robertson et al. 1986 Zones 1-6 and Zone 11

Term based on measurement	su (kPa)	Term based on measurement	su (kPa)
Extremely low strength	<10	Medium strength	40-75
Very low strength	10-20	High strength	75-150
Low strength	20-40	Very high strength	150-300
		Extremely high strength	>300

Groundwater Level

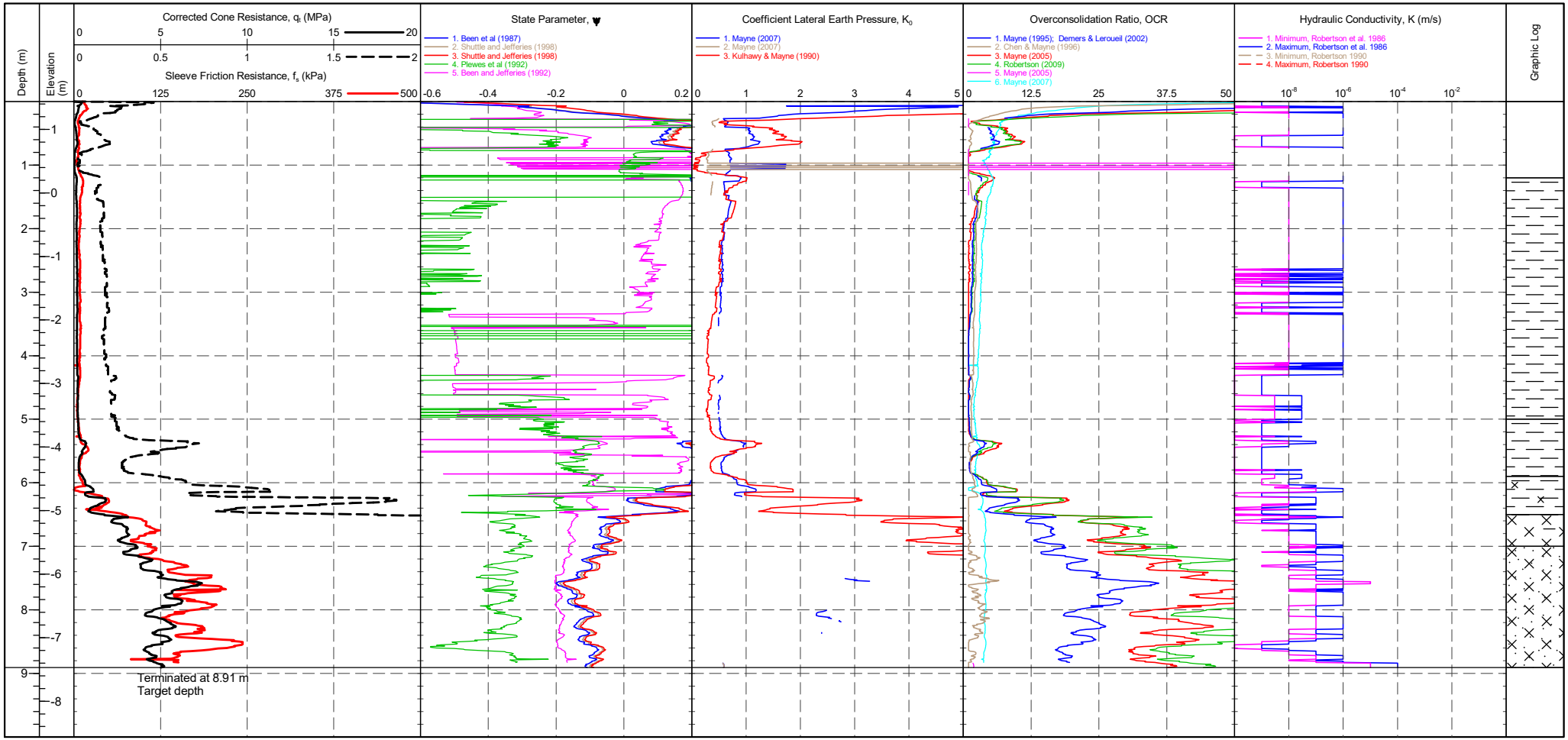
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 04

PointID: **R22-CPT110**

CLIENT : Structural Soils	EASTING : 632371.425 m	Remark:	SHEET : 1 OF 1
PROJECT : Sealink	NORTHING : 163132.830 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.438 m OD		TEST DATE : 18/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



				CPTU ZERO VALUES			
CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	Transducer	Pre	Post	Difference
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Tip	295 mV	292 mV	-0.033 MPa
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Sleeve	317 mV	314 mV	-0.002 kPa
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Pore Pressure 2	302 mV	302 mV	0 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	X-Y Inclinometer	2527 mV	2663 mV	
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot				

Groundwater Level

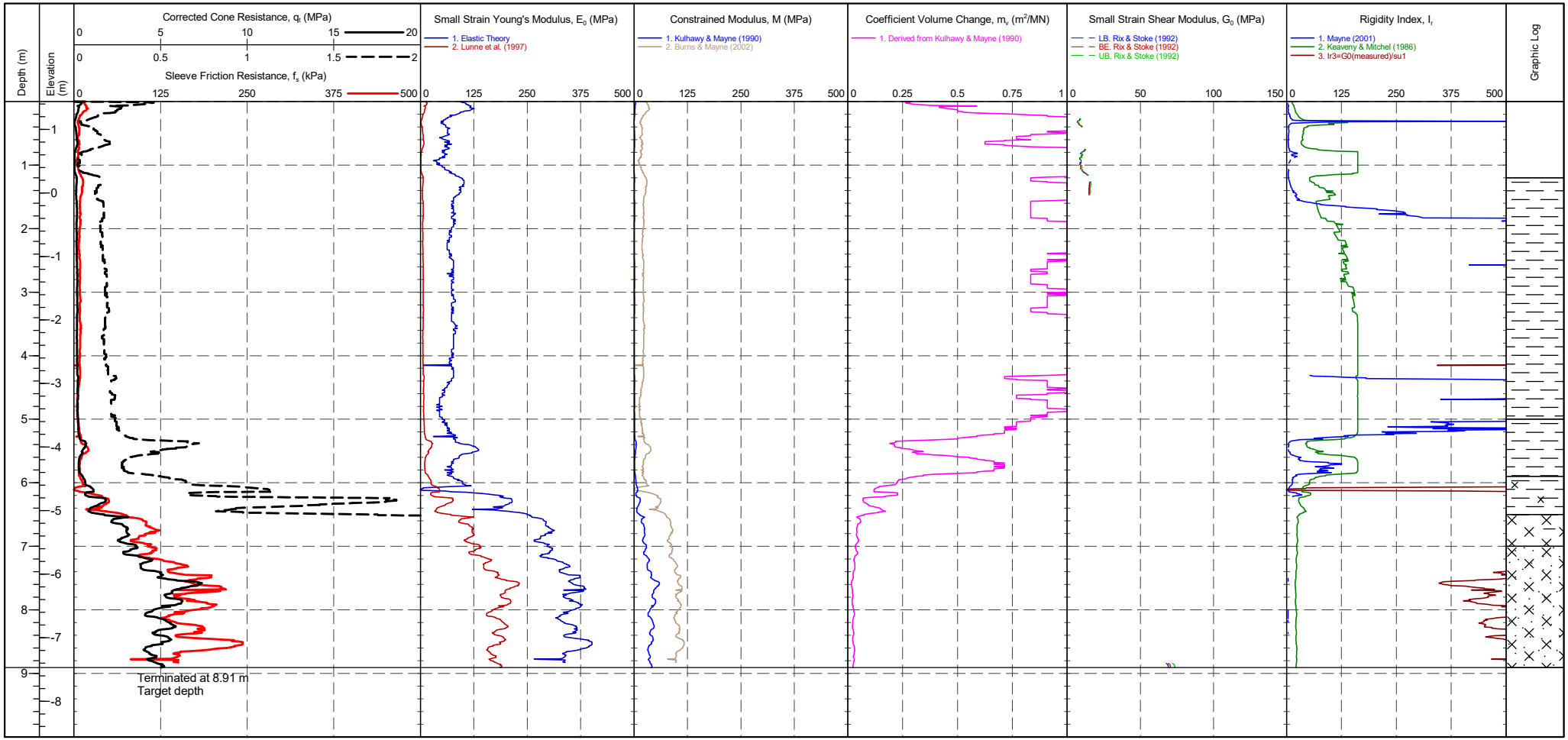
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 05

PointID **R22-CPT110**

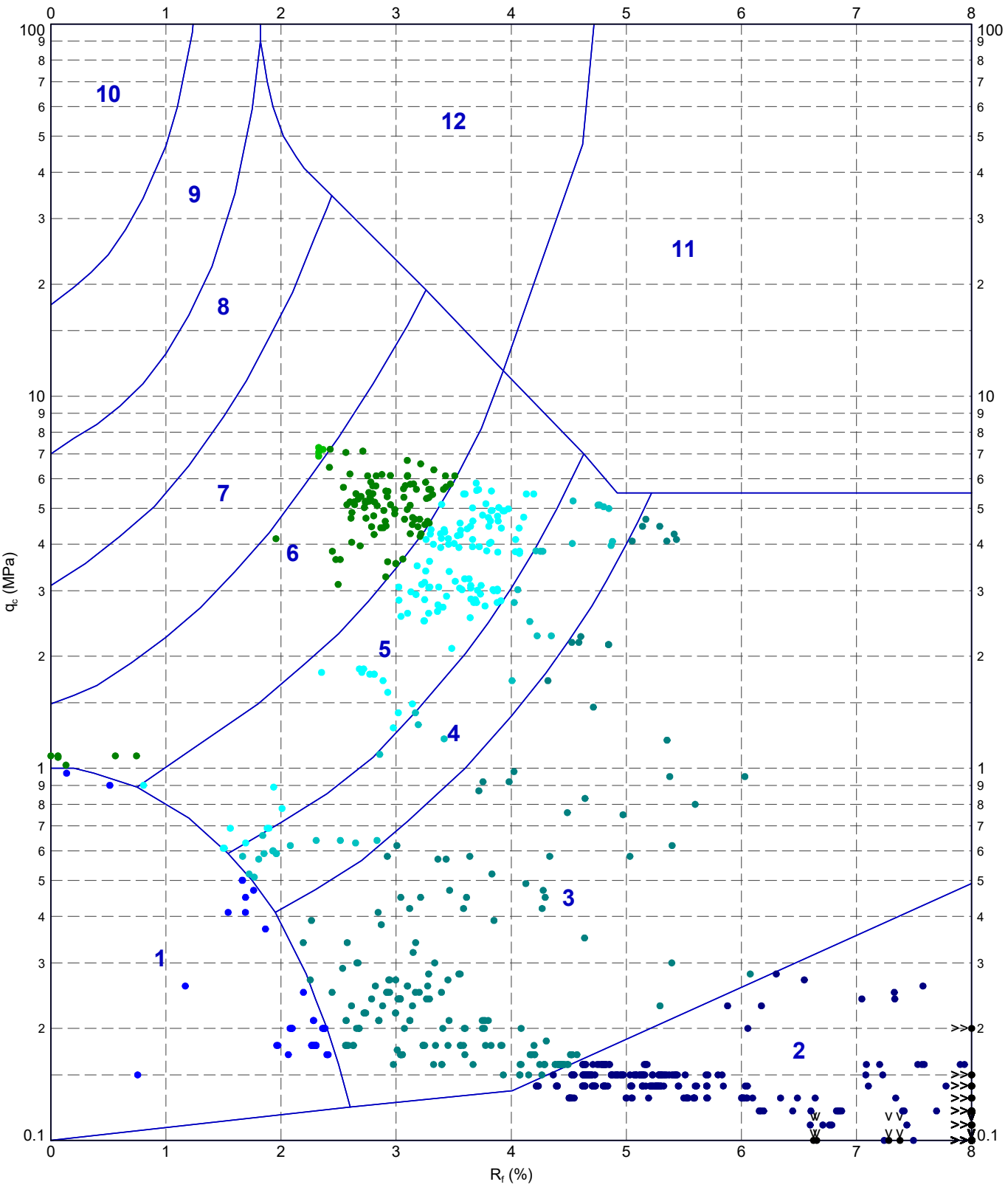
CLIENT : Structural Soils	EASTING : 632371.425 m	Remark:	SHEET : 1 OF 1
PROJECT : Sealink	NORTHING : 163132.830 m	Test completed at target depth.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.438 m OD		TEST DATE : 18/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Target depth		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES			
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post	Difference
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	295 mV	292 mV	-0.033 MPa
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Sleeve	317 mV	314 mV	-0.002 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	302 mV	302 mV	0 kPa
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot	X-Y Inclinometer	2527 mV	2663 mV	

Groundwater Level

Dissipation Test



METHOD: Robertson et al. 1986 qc Rf

1 - Sensitive fine grained material	4 - Silty CLAY to CLAY	7 - Silty SAND to sandy SILT	10 - Gravelly SAND to SAND
2 - Organic material	5 - Clayey SILT to silty CLAY	8 - SAND to silty SAND	11 - Very stiff fine grained
3 - CLAY	6 - Sandy SILT to clayey SILT	9 - SAND	12 - SAND to clayey SAND

IN SITU SITE INVESTIGATION

TITLE

Structural Soils
Ian Warne
Kent
Sealink
Robertson et al. 1986 q_c vs. R_f - R22-CPT110

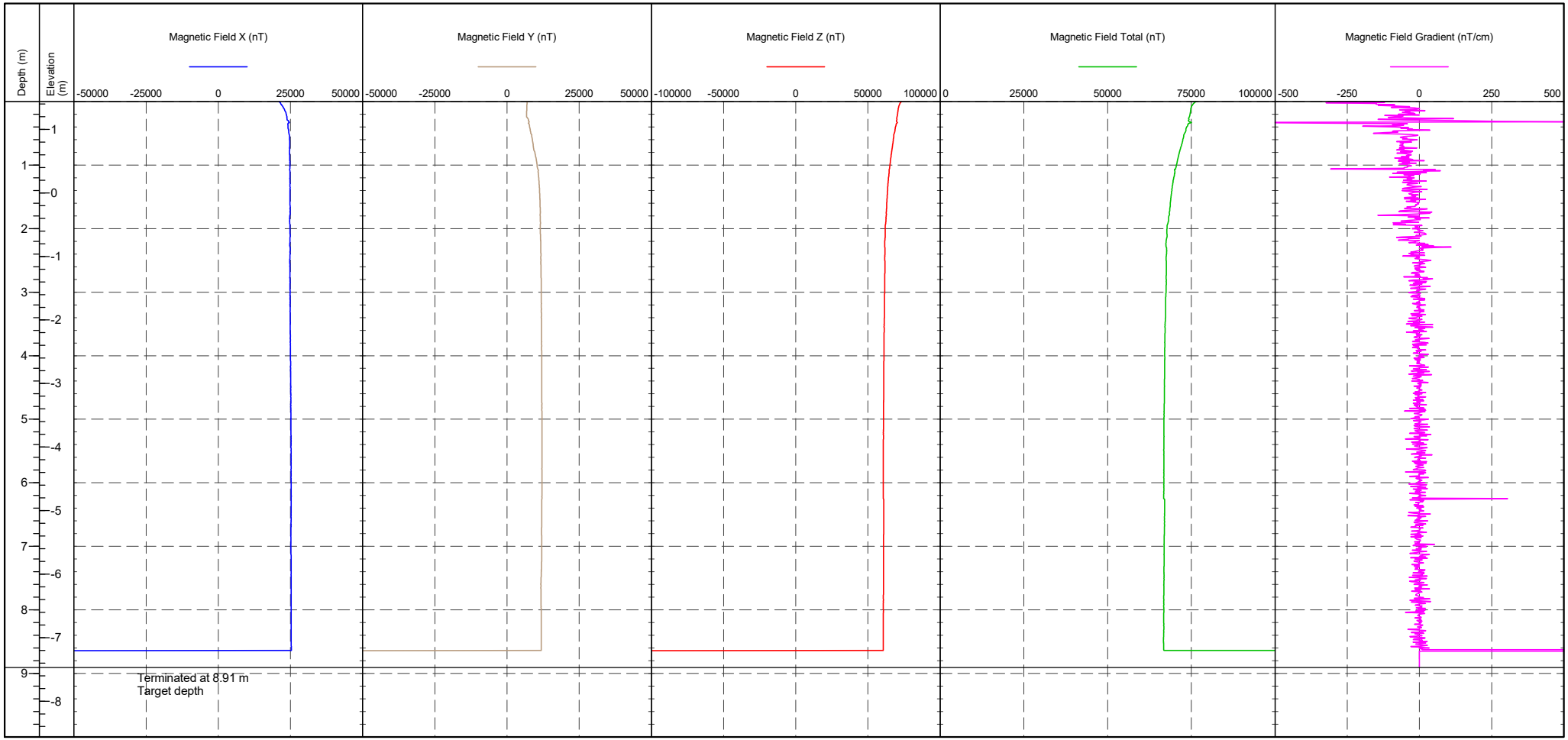
DRAWN	DATE 12/03/2024	
CHECKED	DATE 12/03/2024	
SCALE Not To Scale		A4
PROJECT No 1230335	FIGURE No	

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

MAG LOG

PointID **R22-CPT110**

CLIENT : Structural Soils PROJECT : Sealink LOCATION : Kent PROJECT No. : 1230335	EASTING : 632371.425 m NORTHING : 163132.830 m ELEVATION : 1.438 m OD CHECKED BY : DW TERMINATION REASON : Target depth	Remark: Test completed at target depth.	SHEET : 1 OF 1 STATUS : Final TEST DATE : 18/10/2023 PLOT DATE : 12/03/2024 METHOD : ISO 22476-1:2022



CONE ID : S15-CFIP.2145 CONE MODEL : Subtraction	RIG : CPT 020 - Pagani OPERATOR : AC/CH	CPTU ZERO VALUES		
		Transducer	Pre	Post	Difference
		Tip	295 mV	292 mV	-0.033 MPa
		Sleeve	317 mV	314 mV	-0.002 kPa
		Pore Pressure 2	302 mV	302 mV	0 kPa
		X-Y Inclinometer	2527 mV	2663 mV	

DISSIPATION TEST

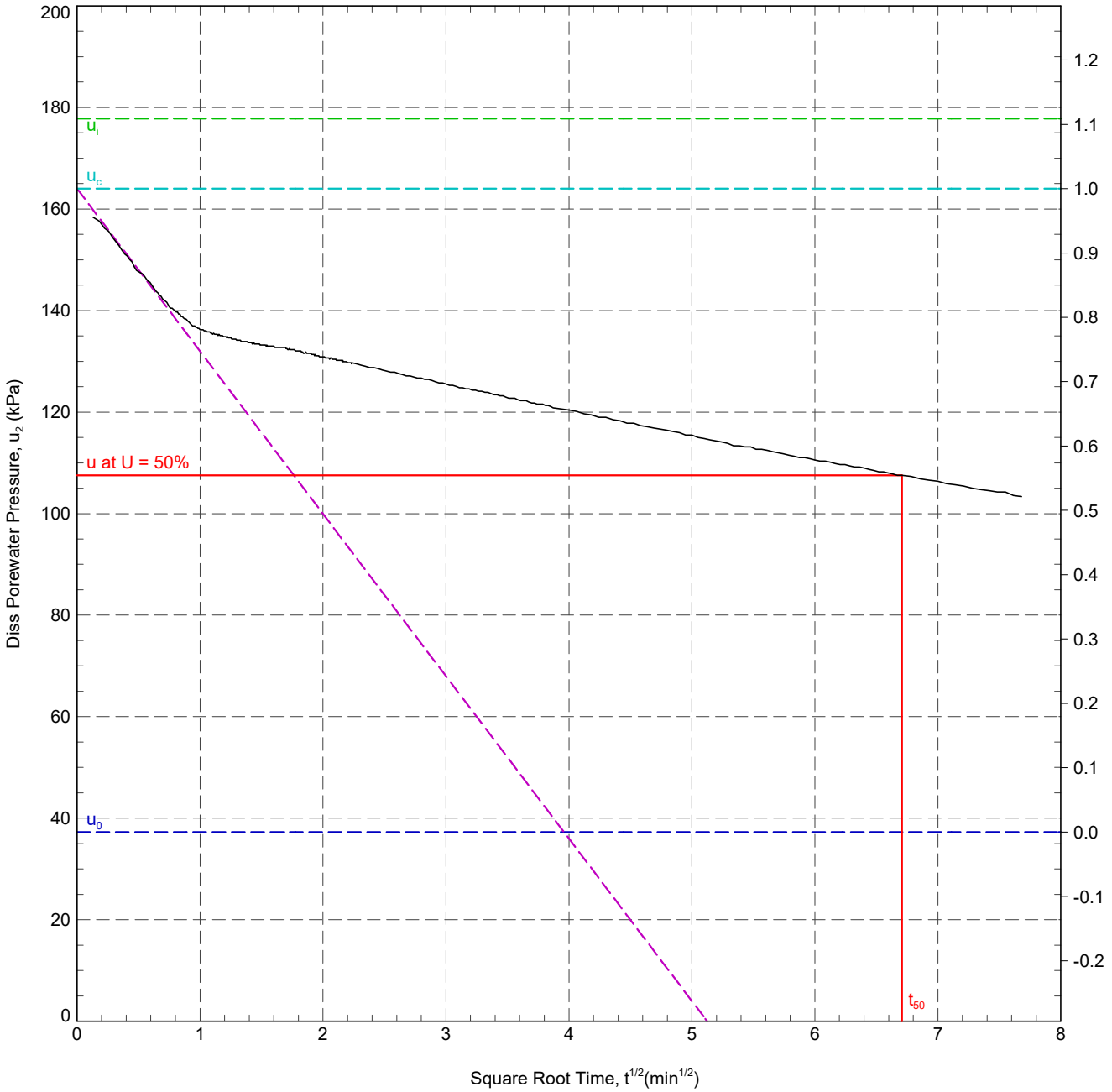
IN SITU SITE INVESTIGATION

Working with: STRUCTURAL SOILS LTD

Test ID

R22-CPT110 - 4.30 m

CLIENT	: Structural Soils	AREA	: Sealink Richborough	SHEET	: 1 OF 1
ENGINEER	: Ian Warne	EASTING	: 632371.4 m	STATUS	: Final
PROJECT	: Sealink	NORTHING	: 163132.8 m	DATE	: 18/10/23
LOCATION	: Kent	COORD. SYS.	:		
PROJECT No.	: 1230335	ELEVATION	: 1.44 m		



In Situ Pore Pressure, u_0:	37.3 kPa	Rigidity Index, I_r:	52.9
Initial Pore Pressure, u_i:	177.8 kPa	Ratio c_h/c_v:	1.25
Final Pore Pressure:	103.4 kPa		
Back Extrapolated Pore Pressure, u_c:	164 kPa		
Degree of Dissipation:	50%		
Dissipation Pressure:	107.6 kPa		
Time for 50% Dissipation, t_{50}:	45.00 min		

RIG	: CPT 020 - Pagani	ANALYSED BY	: ZJ	DATE:	19/10/2023
CONE TYPE	: Subtraction	CHECKED BY	: DW	DATE:	19/10/2023
CONE ID	: S15-CFIP.2145	APPROVED BY	: DW	DATE:	19/10/2023
OPERATOR	: AC				

REMARK

T50 reached. Test OK.

DISSIPATION TEST

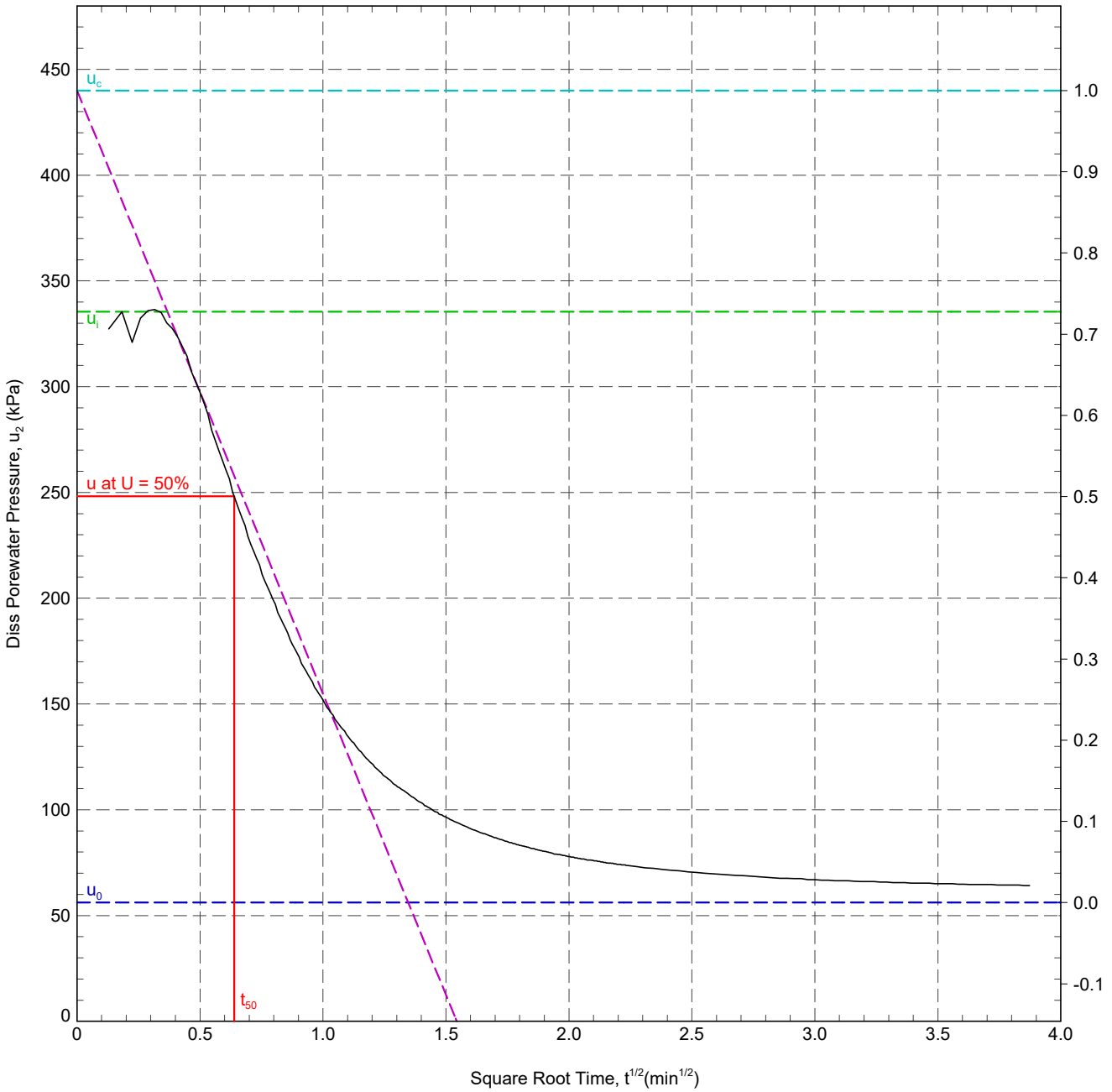
IN SITU SITE INVESTIGATION

Working with: STRUCTURAL SOILS LTD

Test ID

R22-CPT110 - 6.22 m

CLIENT	: Structural Soils	AREA	: Sealink Richborough	SHEET	: 1 OF 1
ENGINEER	: Ian Warne	EASTING	: 632371.4 m	STATUS	: Final
PROJECT	: Sealink	NORTHING	: 163132.8 m	DATE	: 18/10/23
LOCATION	: Kent	COORD. SYS.	:		
PROJECT No.	: 1230335	ELEVATION	: 1.44 m		



In Situ Pore Pressure, u_0:	56.1 kPa	Rigidity Index, I_r:	13.9
Initial Pore Pressure, u_i:	335.5 kPa	Horizontal Coefficient of Consolidation, c_h:	6.23x10^2 m^2/yr
Final Pore Pressure:	64.2 kPa		
Back Extrapolated Pore Pressure, u_c:	440 kPa		
Degree of Dissipation:	50%		
Dissipation Pressure:	248.2 kPa		
Time for 50% Dissipation, t_{50}:	0.41 min		

RIG	: CPT 020 - Pagani	ANALYSED BY	: ZJ	DATE:	19/10/2023
CONE TYPE	: Subtraction	CHECKED BY	: DW	DATE:	19/10/2023
CONE ID	: S15-CFIP.2145	APPROVED BY	: DW	DATE:	19/10/2023
OPERATOR	: AC				

REMARK

T50 reached. Quick dissipation t50=29.3s. Test OK.

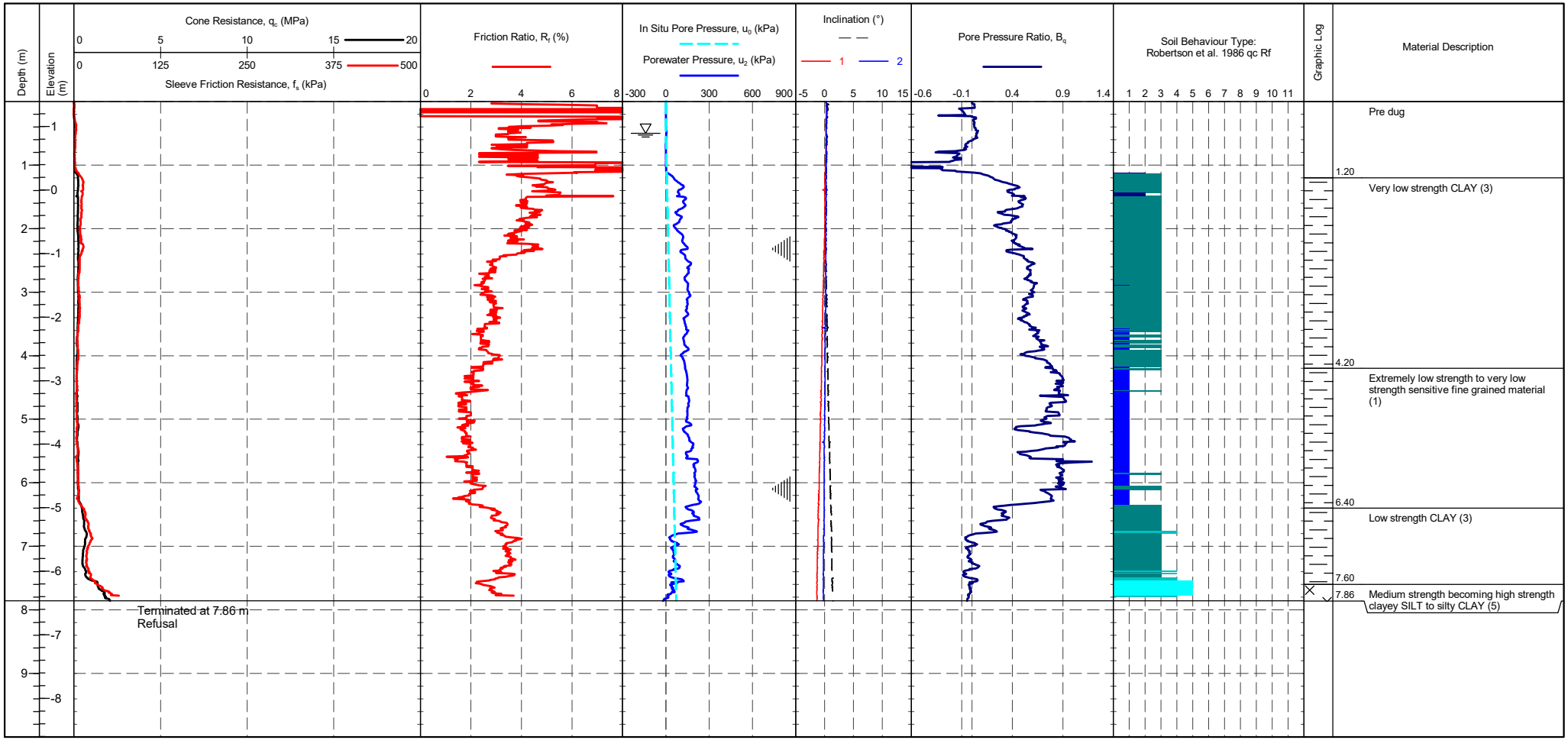
IN SITU SITE INVESTIGATION

Working with: STRUCTURAL SOILS LTD

CPT LOG 01

PointID: **R22-CPT111**

CLIENT : Structural Soils	EASTING : 632590.801 m	Remark:	SHEET : 1 OF 1
PROJECT : Sealink	NORTHING : 163107.842 m	Test refused on total pressure.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.393 m OD		TEST DATE : 20/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Refusal		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2
CALIBRATION DATE	: 12/07/2023	APPLICATION CLASS	: 2
CONE MODEL	: Subtraction	RIG	: CPT 020 - Pagani
CONE AREA	: 15cm^2	OPERATOR	: AC/CH
CONE AREA RATIO	: 0.79	FRICTION REDUCER	: None
FILTER POSITION	: u2	WEATHER	: Sunny & Hot
FILTER TYPE	: HDPE	GROUNDWATER DEPTH	: Assumed for calculation purposes

CPTU ZERO VALUES

Transducer	Pre	Post	Difference
Tip	284 mV	289 mV	0.054 MPa
Sleeve	314 mV	315 mV	0.001 kPa
Pore Pressure 2	294 mV	299 mV	0.001 kPa
X-Y Inclinometer	2499 mV	2495 mV	

METHOD: Robertson et al. 1986 qc Rf

1 - Sensitive fine grained material
2 - Organic material
3 - CLAY
4 - Silty CLAY to CLAY
5 - Clayey SILT to silty CLAY
6 - Sandy SILT to clayey SILT
7 - Silty SAND to sandy SILT
8 - SAND to silty SAND
9 - SAND
10 - Gravelly SAND to SAND
11 - Very stiff fine grained
12 - SAND to clayey SAND

Groundwater Level

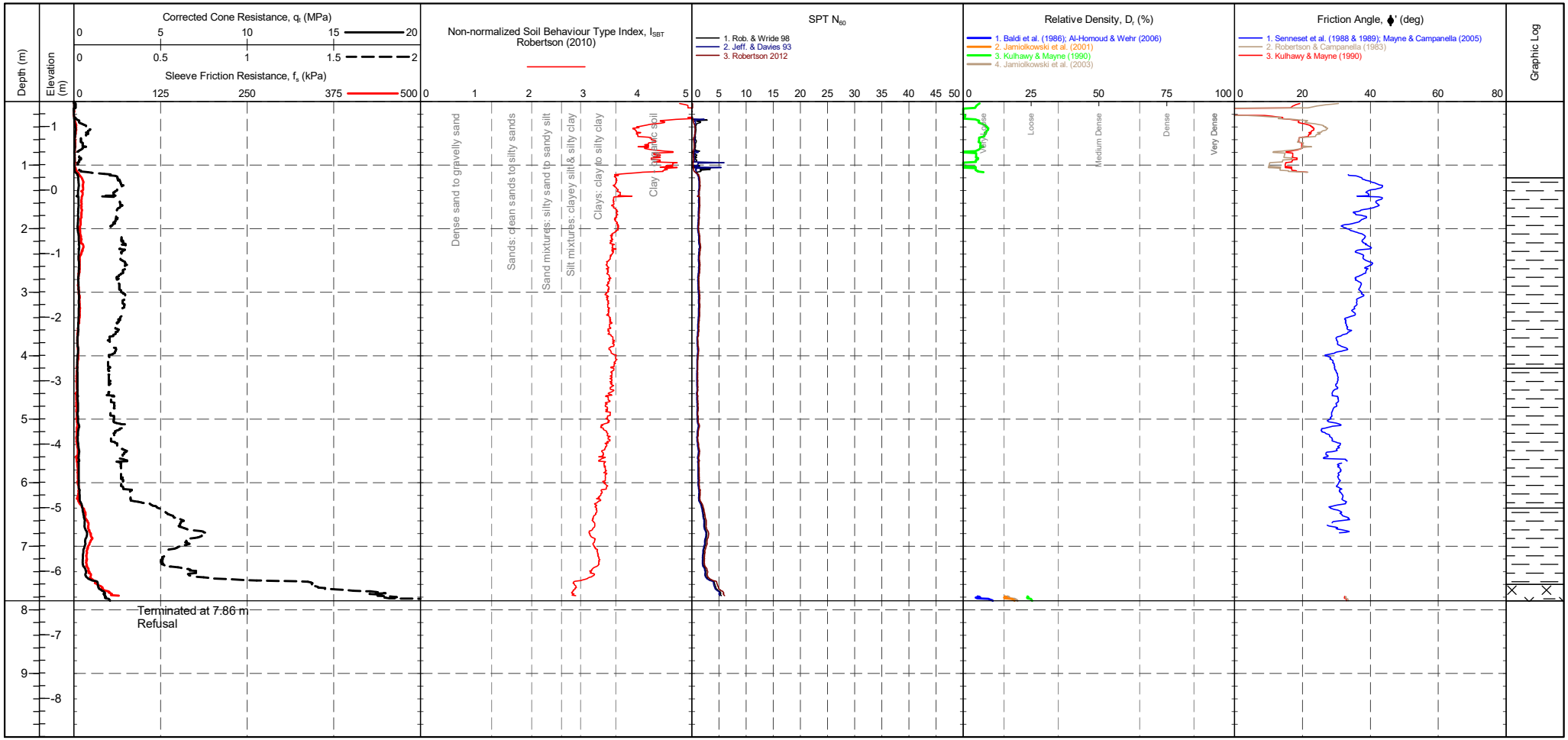
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 02

PointID: **R22-CPT111**

CLIENT : Structural Soils	EASTING : 632590.801 m	Remark:	SHEET : 1 OF 1
PROJECT : Sealink	NORTHING : 163107.842 m	Test refused on total pressure.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.393 m OD		TEST DATE : 20/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Refusal		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES		
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post
CONE AREA	: 15cm²	RIG	: CPT 020 - Pagani	Tip	284 mV	289 mV
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Sleeve	314 mV	315 mV
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	294 mV	299 mV
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot	X-Y Inclinometer	2499 mV	2495 mV

Difference
0.054 MPa
0.001 kPa
0.001 kPa

GRANULAR SOILS (Sands & Gravels) Robertson et al. 1986 Zones 7-10 and Zone 12

Description	SBT Index, Ic
Clays	2.95-3.60
Silt mixtures	2.60-2.95
Sand mixtures	2.05-2.60
Sands	1.31-2.05
Gravelly sand	<1.31

Description	SPT N value, NSPT
Very Loose	0 - 4
Loose	4 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	>50

Description	Relative Density Dr (%)
Very Loose	0 - 15
Loose	15 - 35
Medium Dense	35 - 65
Dense	65 - 85
Very Dense	>85

Groundwater Level

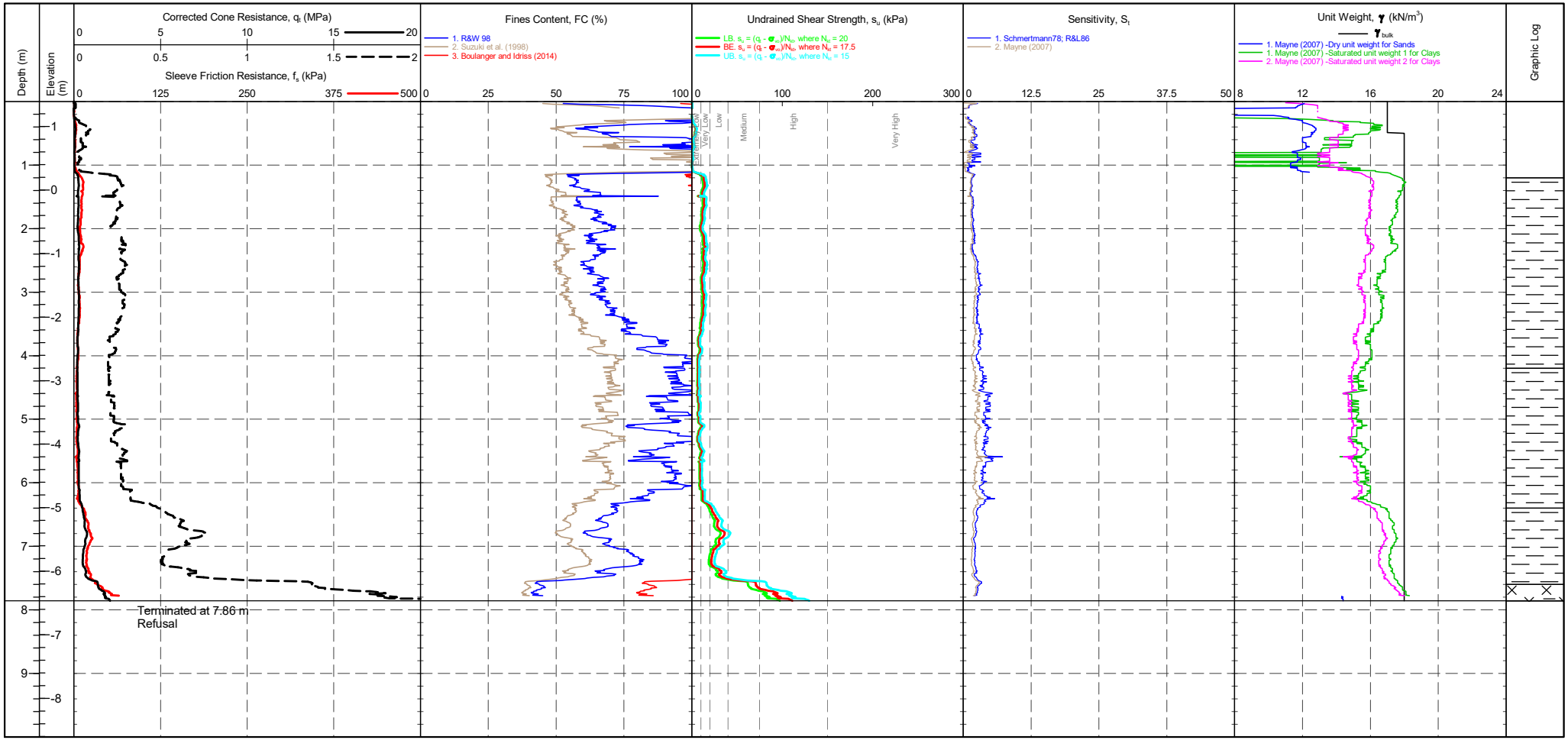
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 03

PointID: **R22-CPT111**

CLIENT : Structural Soils	EASTING : 632590.801 m	Remark:	SHEET : 1 OF 1
PROJECT : Sealink	NORTHING : 163107.842 m	Test refused on total pressure.	STATUS : Final
LOCATION : Kent	ELEVATION : 1.393 m OD		TEST DATE : 20/10/2023
PROJECT No. : 1230335	CHECKED BY : DW		PLOT DATE : 12/03/2024
	TERMINATION REASON : Refusal		METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES			
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post	Difference
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	284 mV	289 mV	0.054 MPa
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Sleeve	314 mV	315 mV	0.001 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	294 mV	299 mV	0.001 kPa
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot	X-Y Inclinometer	2499 mV	2495 mV	

COHESIVE SOILS (Clays & Silts) Robertson et al. 1986 Zones 1-6 and Zone 11

Term based on measurement	su (kPa)	Term based on measurement	su (kPa)
Extremely low strength	<10	Medium strength	40-75
Very low strength	10-20	High strength	75-150
Low strength	20-40	Very high strength	150-300
		Extremely high strength	>300

Groundwater Level

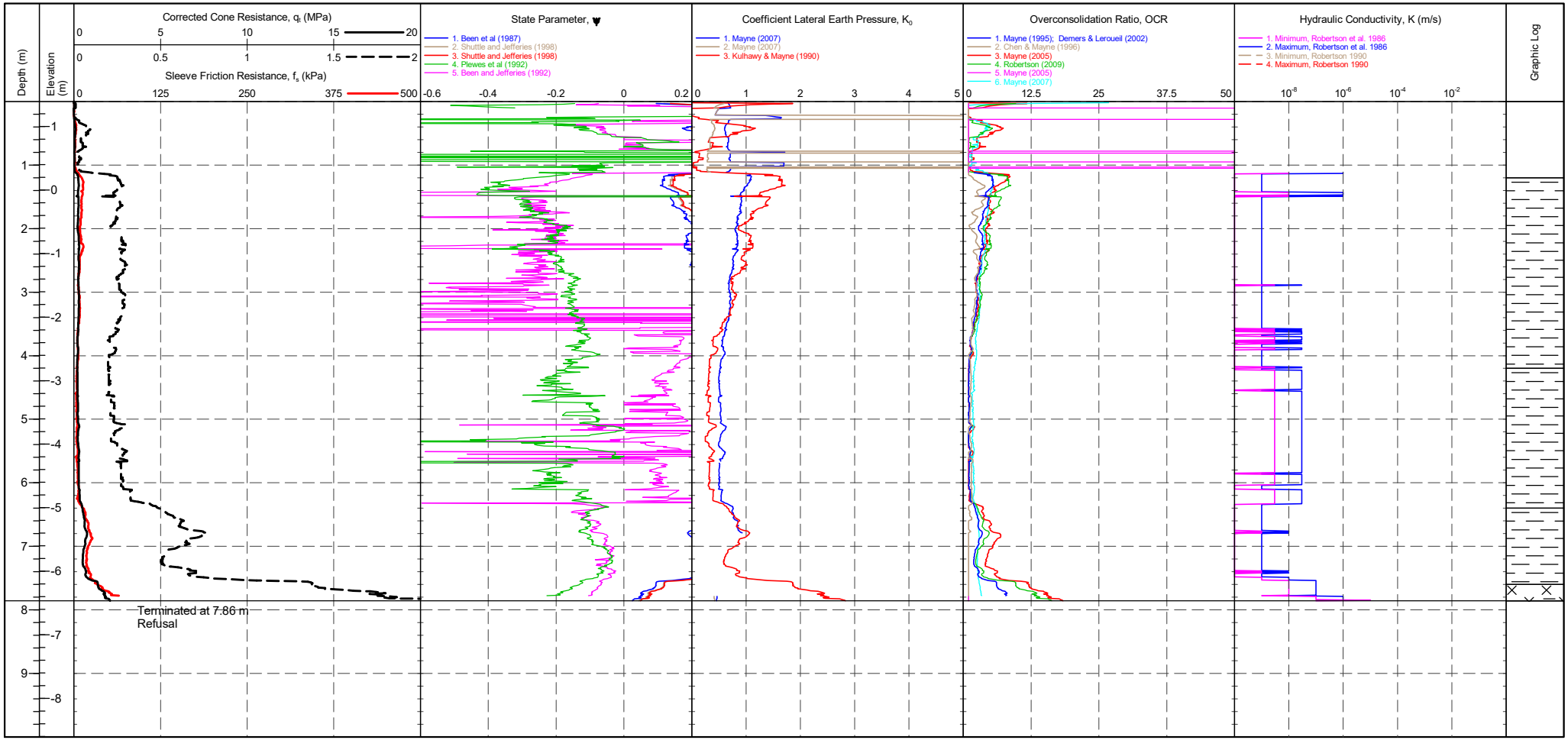
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 04

PointID: **R22-CPT111**

CLIENT : Structural Soils PROJECT : Sealink LOCATION : Kent PROJECT No. : 1230335	EASTING : 632590.801 m NORTHING : 163107.842 m ELEVATION : 1.393 m OD CHECKED BY : DW TERMINATION REASON : Refusal	Remark: Test refused on total pressure.	SHEET : 1 OF 1 STATUS : Final TEST DATE : 20/10/2023 PLOT DATE : 12/03/2024 METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES			
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post	Difference
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	284 mV	289 mV	0.054 MPa
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Sleeve	314 mV	315 mV	0.001 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	294 mV	299 mV	0.001 kPa
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot	X-Y Inclinometer	2499 mV	2495 mV	

Groundwater Level

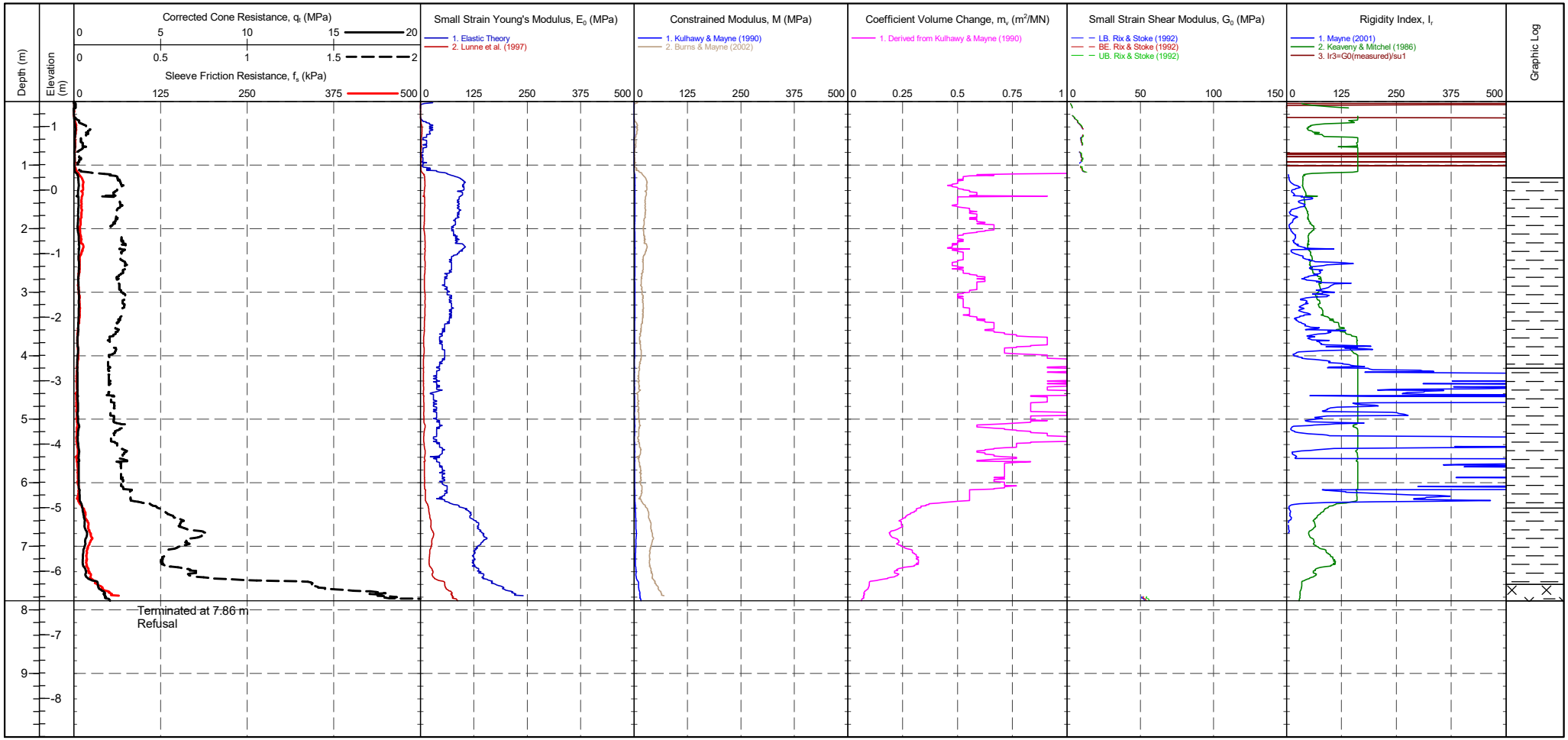
Dissipation Test

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

CPT LOG 05

PointID **R22-CPT111**

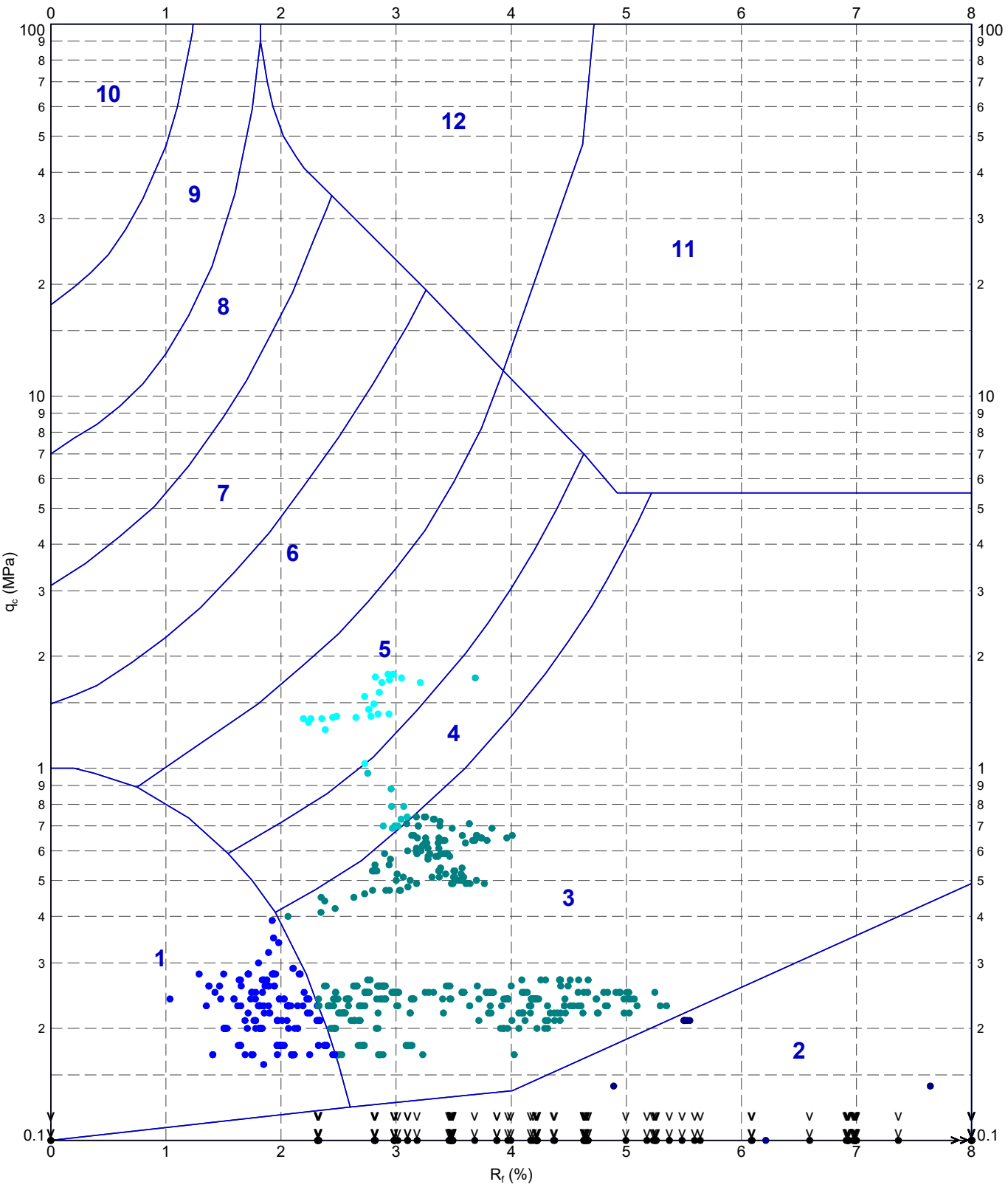
CLIENT : Structural Soils PROJECT : Sealink LOCATION : Kent PROJECT No. : 1230335	EASTING : 632590.801 m NORTHING : 163107.842 m ELEVATION : 1.393 m OD CHECKED BY : DW TERMINATION REASON : Refusal	Remark: Test refused on total pressure.	SHEET : 1 OF 1 STATUS : Final TEST DATE : 20/10/2023 PLOT DATE : 12/03/2024 METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	TEST TYPE	: TE2	CPTU ZERO VALUES			
CONE MODEL	: Subtraction	APPLICATION CLASS	: 2	Transducer	Pre	Post	Difference
CONE AREA	: 15cm^2	RIG	: CPT 020 - Pagani	Tip	284 mV	289 mV	0.054 MPa
CONE AREA RATIO	: 0.79	OPERATOR	: AC/CH	Sleeve	314 mV	315 mV	0.001 kPa
FILTER POSITION	: u2	FRICTION REDUCER	: None	Pore Pressure 2	294 mV	299 mV	0.001 kPa
FILTER TYPE	: HDPE	WEATHER	: Sunny & Hot	X-Y Inclinometer	2499 mV	2495 mV	

Groundwater Level

Dissipation Test



METHOD: Robertson et al. 1986 qc Rf

1 - Sensitive fine grained material	4 - Silty CLAY to CLAY	7 - Silty SAND to sandy SILT	10 - Gravelly SAND to SAND
2 - Organic material	5 - Clayey SILT to silty CLAY	8 - SAND to silty SAND	11 - Very stiff fine grained
3 - CLAY	6 - Sandy SILT to clayey SILT	9 - SAND	12 - SAND to clayey SAND

IN SITU SITE INVESTIGATION

TITLE

Structural Soils
Ian Warne
Kent
Sealink
Robertson et al. 1986 q_c vs. R_f - R22-CPT111

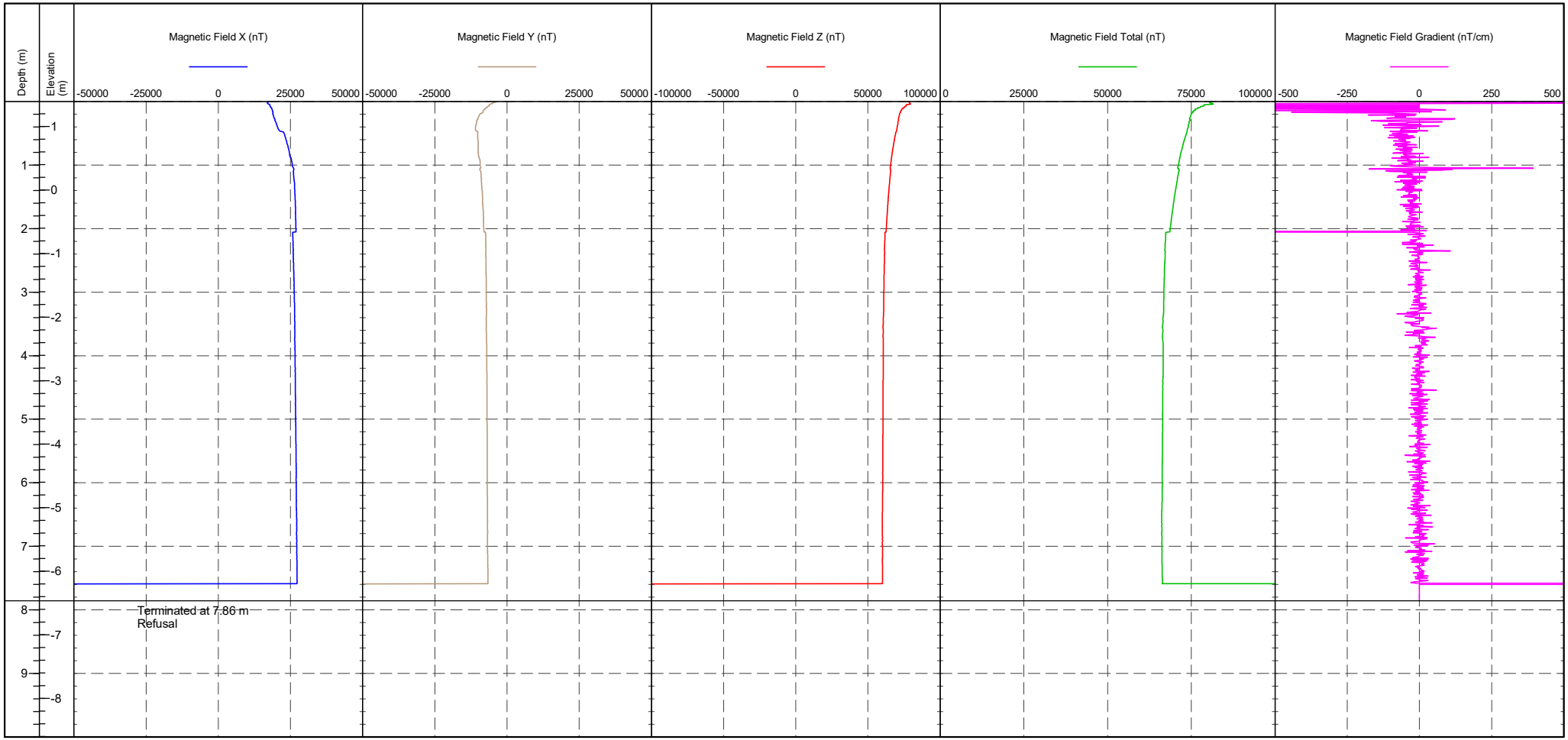
DRAWN		DATE	12/03/2024
CHECKED		DATE	12/03/2024
SCALE	Not To Scale		A4
PROJECT No	1230335	FIGURE No	

IN SITU SITE INVESTIGATION Working with: STRUCTURAL SOILS LTD

MAG LOG

PointID **R22-CPT111**

CLIENT : Structural Soils PROJECT : Sealink LOCATION : Kent PROJECT No. : 1230335	EASTING : 632590.801 m NORTHING : 163107.842 m ELEVATION : 1.393 m OD CHECKED BY : DW TERMINATION REASON : Refusal	Remark: Test refused on total pressure.	SHEET : 1 OF 1 STATUS : Final TEST DATE : 20/10/2023 PLOT DATE : 12/03/2024 METHOD : ISO 22476-1:2022



CONE ID	: S15-CFIP.2145	RIG	: CPT 020 - Pagani	
CONE MODEL	: Subtraction	OPERATOR	: AC/CH	

CPTU ZERO VALUES

Transducer	Pre	Post	Difference
Tip	284 mV	289 mV	0.054 MPa
Sleeve	314 mV	315 mV	0.001 kPa
Pore Pressure 2	294 mV	299 mV	0.001 kPa
X-Y Inclinometer	2499 mV	2495 mV	

DISSIPATION TEST

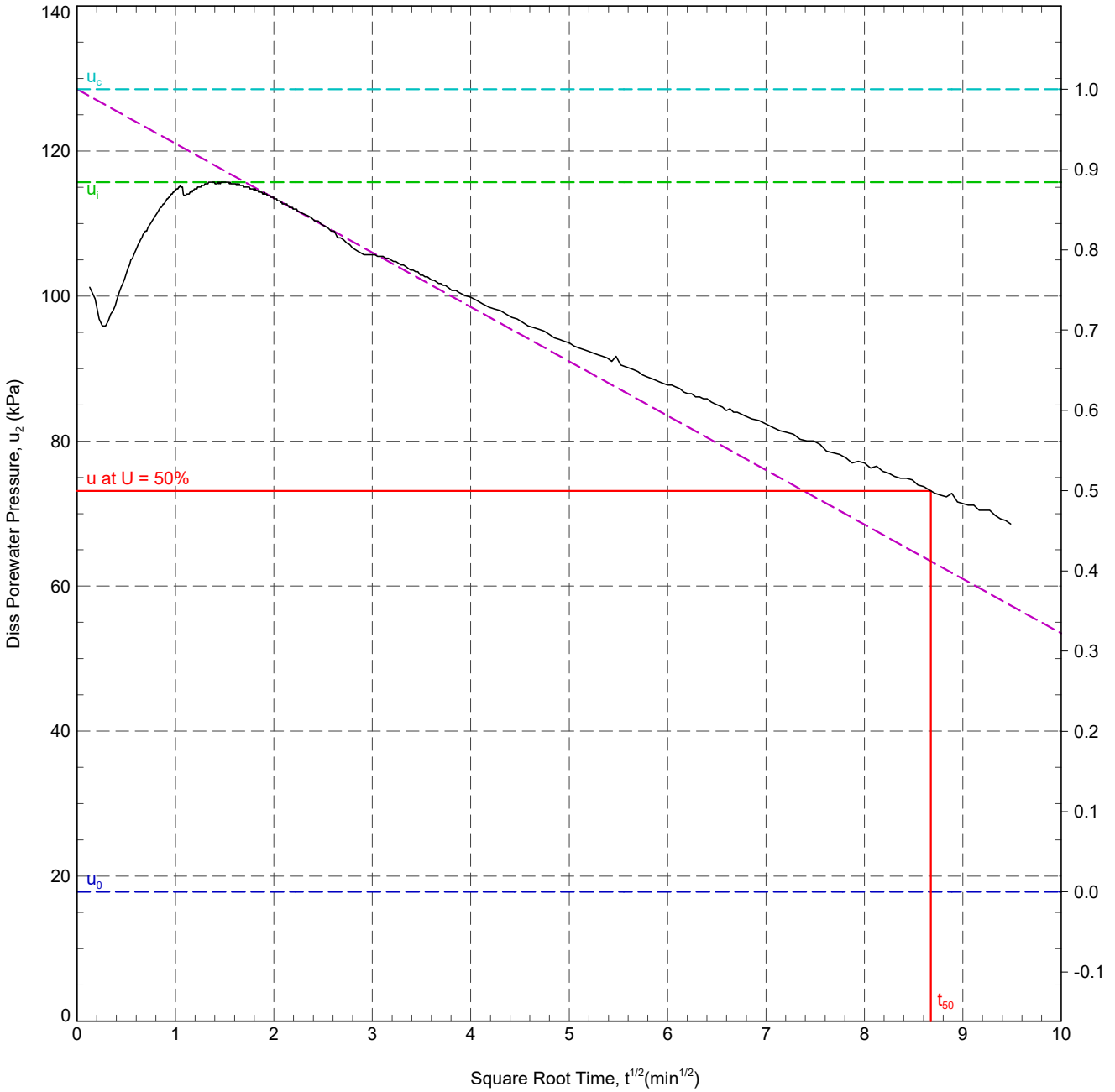
IN SITU SITE INVESTIGATION

Working with: STRUCTURAL SOILS LTD

Test ID

R22-CPT111 - 2.32 m

CLIENT	: Structural Soils	AREA	: Sealink Richborough	SHEET	: 1 OF 1
ENGINEER	: Ian Warne	EASTING	: 632590.8 m	STATUS	: Final
PROJECT	: Sealink	NORTHING	: 163107.8 m	DATE	: 20/10/23
LOCATION	: Kent	COORD. SYS.	:		
PROJECT No.	: 1230335	ELEVATION	: 1.39 m		



In Situ Pore Pressure, u_0:	17.9 kPa	Rigidity Index, I_r:	107.6
Initial Pore Pressure, u_i:	115.7 kPa	Horizontal Coefficient of Consolidation, c_h:	9.39x10^0 m^2/yr
Final Pore Pressure:	68.6 kPa	Ratio c_h/c_v:	1.25
Back Extrapolated Pore Pressure, u_c:	128.5 kPa	Vertical Coefficient of Consolidation, c_v:	7.51x10^0 m^2/yr
Degree of Dissipation:	50%		
Dissipation Pressure:	73.1 kPa		
Time for 50% Dissipation, t_{50}:	75.25 min		

RIG	: CPT 020 - Pagani	ANALYSED BY	: ZJ	DATE:	23/10/2023
CONE TYPE	: Subtraction	CHECKED BY	: DW	DATE:	23/10/2023
CONE ID	: S15-CFIP.2145	APPROVED BY	: DW	DATE:	23/10/2023
OPERATOR	: AC				

REMARK

T50 reached. Test OK.

DISSIPATION TEST

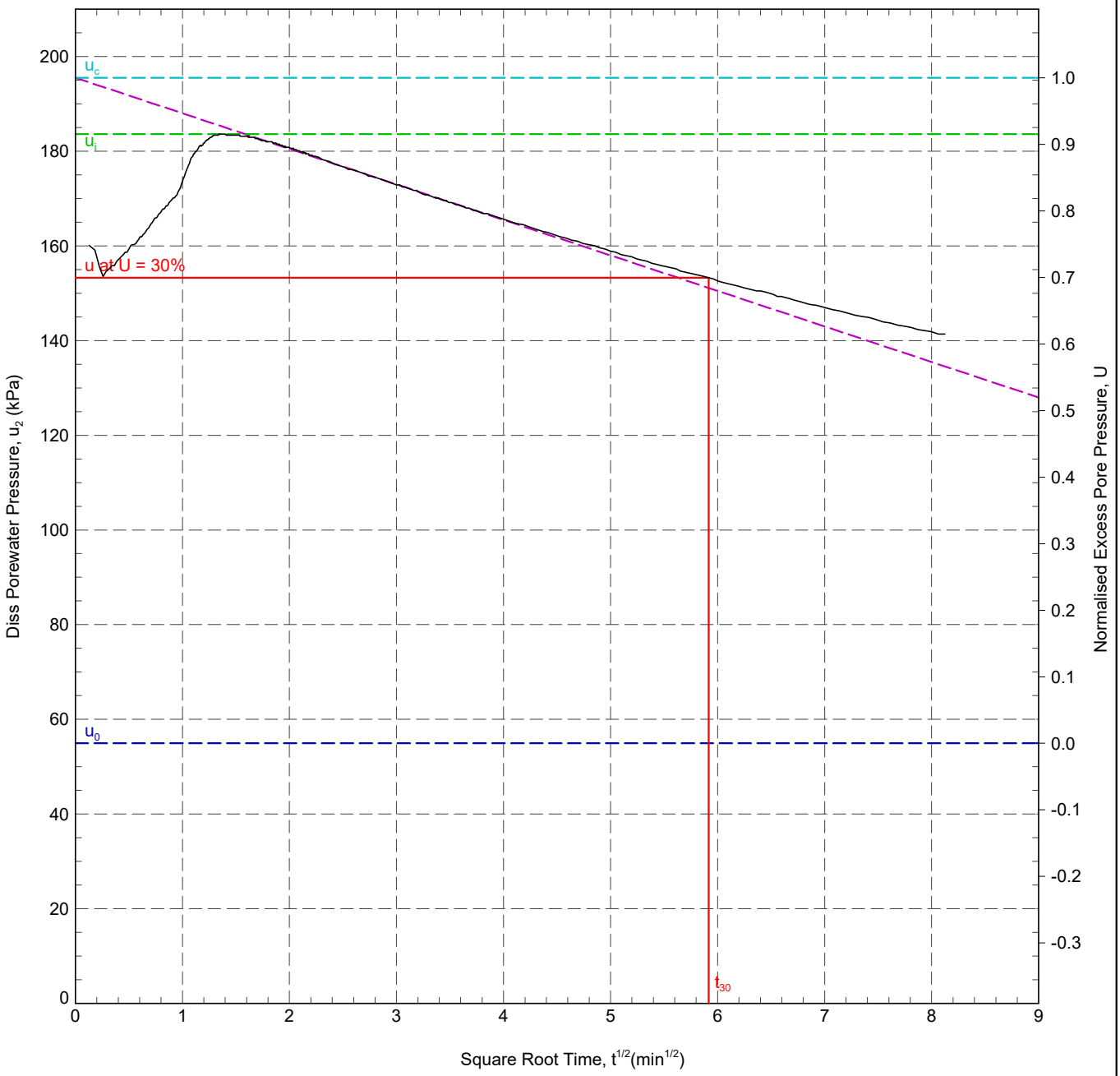
IN SITU SITE INVESTIGATION

Working with: STRUCTURAL SOILS LTD

Test ID

R22-CPT111 - 6.10 m

CLIENT	: Structural Soils	AREA	: Sealink Richborough	SHEET	: 1 OF 1
ENGINEER	: Ian Warne	EASTING	: 632590.8 m	STATUS	: Final
PROJECT	: Sealink	NORTHING	: 163107.8 m	DATE	: 20/10/23
LOCATION	: Kent	COORD. SYS.	:		
PROJECT No.	: 1230335	ELEVATION	: 1.39 m		



In Situ Pore Pressure, u_0:	54.9 kPa	Rigidity Index, I_r:	81.1
Initial Pore Pressure, u_i:	183.6 kPa	Horizontal Coefficient of Consolidation, c_h:	5.58x10^0 m^2/yr
Final Pore Pressure:	141.4 kPa	Ratio c_h/c_v:	1.25
Back Extrapolated Pore Pressure, u_c:	195.5 kPa	Vertical Coefficient of Consolidation, c_v:	4.46x10^0 m^2/yr
Degree of Dissipation:	30%		
Dissipation Pressure:	153.3 kPa		
Time for 30% Dissipation, t_{30}:	35.00 min		

RIG	: CPT 020 - Pagani	ANALYSED BY	: ZJ	DATE:	23/10/2023
CONE TYPE	: Subtraction	CHECKED BY	: DW	DATE:	23/10/2023
CONE ID	: S15-CFIP.2145	APPROVED BY	: DW	DATE:	23/10/2023
OPERATOR	: AC				

REMARK
T50 reached. Test OK.

IN SITU SITE INVESTIGATION

Unit 23 Hastings Innovation
Centre,
Highfield Drive
St. Leonards on Sea, East Sussex,
TN38 9UH, U.K.

Company No.: 6339489
VAT No.: 922 3561 41

National Grid

Sea Link – Richborough

□□S Report

Pro□ect no□□□□□□□□

RSK GEOSCIENCES

October 2023

RSK GENERAL NOTES

Project No.: □□□□□□□ □R□□ □□□□

Title: □□S Report□Sea Lin□ – Rich□orough

Client: □ational Grid

Date: □□th Octo□er □□□□

Status: FI□□L

Office: □□ Frogmore Road□Hemel Hempstead□Hertfordshire□HP□ □RT□□ □

Author	[redacted] *BSc MSc FGS* Consultant Geophysicist	**Technical reviewer**	[redacted] *CGeol* □ssociate Director
Signature	[redacted]	Signature	[redacted]
Project manager	[redacted] *CGeol* □ssociate Director	**Quality reviewer**	[redacted] CGeol □ssociate Director
Signature	[redacted]	Signature	[redacted]

Revision control sheet				
Revision ref.	**Date**	**Reason for revision**	**Amended by:**	**Approved by:**
Re□ □□	□□/□□/□□	First issue	n/a	see a□o□e

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This □or□has □een underta□en in accordance □ith the □uality management system of RS□ □n□ironment□

CONTENTS

FIGURES

APPENDICES

EXECUTIVE SUMMARY

On the instructions of □ic□Harper of Structural Soils□on □ehalf of □ational Grid□RS□ □n□ironment Ltd has carried out a geophysical sur□ey to in□estigate the soil resisti□ity □alues at □ no□locations □ithin the footprint of a proposed con□erter station for the Sea Lin□ pro□ect near Rich□orough □nergy Par□□□ent□

Project Findings

Site Setting and Current Usage	The site is located close to Rich□orough □nergy Par□□□ent and is currently used as farmland□
Survey Objectives	To determine the soil resisti□ity at □ no□locations in the area of interest□
Geophysical Techniques Employed	The geophysical techni□ues employed □ere that of □ertical □lectrical Sounding □□□S□method□The e□uipment used □as the □llied Campus Ohmega resisti□ity meter□The penetration depth of the sur□ey □as appro□imately □□ m□gl □here access allo□ed□
Geophysical Investigation Findings	□alues of soil electrical resisti□ity ha□e □een collected across the site at □ no□ locations□The □□S data are presented in **Appendix B** and the model in□ersions presented in **Plates 1-4**□Modelling the resisti□ity data indicates four layers□these are interpreted as a layer of topsoil o□erlying silty clay□stiff clay and □edroc□□

1 INTRODUCTION

1.1 Introductions

On the instructions of □ic□ Harper of Structural Soils on □ehalf of □ational Grid□RS□ □n□ironment Ltd has carried out a geophysical sur□ey to in□estigate the soil resisti□ity □alues at □ no□locations □ithin the footprint of a proposed con□erter station for the Sea Lin□ pro□ect near Rich□orough □nergy Par□□□ent□

1.2 Details of the Project

The pro□ect □as carried out to an agreed □rief□and included the follo□ing□

- □ soil resisti□ity sur□ey comprising the □ertical electric sounding □□S□method at □ no□locations□
- □n Interpretati□e report□

1.3 Limitations

□on□intrusi□e geophysical techni□ues see□ to locate □oundaries across □hich there is a mar□ed contrast in physical properties□ Such a contrast may □e detected remotely □ecause it gi□es rise to a geophysical anomaly□□hich is indicati□e of □ariation in a physical property relati□e to some □ac□ground □alue□Insufficient contrast □including high le□els of cultural noise□can result in mas□ing of the sought anomaly□ Therefore□there may □e other conditions pre□ailing at the site □hich ha□e not □een re□ealed □y this in□estigation and □hich ha□e therefore not □een ta□en into account in this report□

The response of the ground to different physical forces can □e highly □aria□le□ Interpretation of the responses contained in this report is □ased on e□perience in similar en□ironments and site conditions□

The materials encountered and samples o□tained during on□site intrusi□e in□estigations represent only a small proportion of the materials present on□site□It should □e accepted□ therefore□ that the interpretation from remotely sensed geophysical data may □e inconsistent □ith that arising from direct methods of in□estigation□

The follo□ing limitations and assumptions apply to □□S sur□eys□

- Interpretation methods assume hori□ontal □or parallel□layered conditions □here each layer has a uniform electrical resisti□ity□If su□surface conditions cannot □e reasona□ly appro□imated □y this assumption□then results □ill □e in error□

- Thin layers or multiple layers □ith similar resisti□ities may not □e detected□
- □m□iguities in interpretation can arise from e□ui□alence □□here t□o resisti□e layers carry nearly the same electric current if the products of their resisti□ity and thic□ness are e□ual□□
- □m□iguities in interpretation arising from suppression □□here resistant layers are sand□iched □et□een more conducti□e layers□□
- □□tremely resisti□e materials □ill pre□ent current in□ection into the ground□
- The resisti□ity method is sensiti□e to electrical interference from a □ariety of sources□ It is inherently sensiti□e to electrical interference□ Spatial □aria□les caused □y geologic factors and cultural factors can also produce electrical noise□
- □atural □am□ient□sources of noise include lightning or natural earth currents may induce a □oltage in resisti□ity ca□les□
- Geologic sources of noise include local in□homogeneities near electrodes that may result in measurement error and □ariations in the su□surface that are not the o□□ect of the sur□ey□
- Resisti□ity measurements may □e influenced □y near□y cultural features □such as po□er lines□radio stations□cathodic pipeline protection□and other geophysical e□uipment□that generate electrical or electromagnetic fields□Pipelines□fences□ and metal □uildings may also affect them□

2 THE SITE

2.1 Site Location

Site location details are presented in **Table 1** and an e□tract of the □□□□□□□□ Ordnance Sur□ey map sho□ing the location of the site is gi□en in **Figure 1**□

Table 1. Site location details

Site name	Sea Lin□ – Rich□orough
Full site address and postcode	Rich□orough□□ent
National Grid reference (centre of site)	TR □□□ □□□

2.2 Site Description

The site □oundary and current site layout are sho□n on **Figure 2**□The are of interest comprises a single field / and co□ers an area of c□□□□ hectares□It is currently occupied □y an open field used for crop□

2.3 Geology and Ground Conditions

The □GS online geological map indicates the site is underlain □y superficial deposit comprising of silt and clay from Tidal flat deposits□□elo□ □hich lies the Thanet Formation □sand□silt and clay□□□GS □orehole records from near the site suggest chal□is present at depth □c□□□m□gl□□□orehole records pro□ided □y Structural Soils from locations □ithin the field confirm topsoil and silty clay to a depth of □□□□m depth□□elo□ this clay □as encountered to □□□m depth□ □elo□ □hich lies sand to appro□imately □□m□ and predominately siltstone to c□□□m□

3 THE SURVEY

3.1 Objective and Geophysical Approach

□ geophysical sur□ey □as commissioned to see□ to determine the soil resisti□ity across Field R□□ at the location of the proposed con□erter station for the Sea Lin□ pro□ect in □ent□

The geophysical techni□ue employed □as that an electrical resisti□ity sur□ey comprising the □ertical electrical sounding □□S□method□The geophysical field□or□ □as conducted □et□een the □□th and □□nd Octo□er □□□□□

□□S sur□eys □ere carried out at □ no□locations□distri□uted across the □hole field of interest at the site□

3.2 The Electrical Resistivity Sounding Technique

□n electrical resisti□ity sounding e□amines the electrical properties of the ground as a function of depth and/or hori□ontal distance□Different roc□s often e□hi□it different □alues of electrical resisti□ity□ □ariations in su□surface resisti□ity can □e measured at the surface□and layer thic□nesses and resisti□ities calculated□

3.2.1 Theory

□n electrical resisti□ity sounding in□estigates the ground resisti□ity as a function of depth□ For any single measurement of ground resistance□an alternating electric current is in□ected into the su□surface □ia t□o metal sta□es □electrodes□planted into the ground□ One electrode □eha□es as the current source□□hilst 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 distri□ution of potential in the su□surface □hich is sampled □y t□o additional electrodes □potential electrodes□across □hich a □oltage is measured□The ratio of □oltage to current is the resistance□R□of the ground through □hich the current has passed □**Figure 3A**□□

To perform a □ enner resisti□ity sounding□the electrode spacing□a□is progressi□ely increased □et□een measurements □hile □eeping the centre of the electrode arrangement fi□ed □**Figure 3B**□□This introduces the current into the earth at greater and greater depths so permitting an e□amination of ground resistance □ith increasing depth□The resulting resistances are then con□erted to □alues of apparent resisti□ity□ρ_a□using the e□uation 2*π*a*RA, where a is the spacing in metres and RA is the average resistivity in Ω. This e□uation can □e used □here the depth that the electrodes are inserted in to the ground

is small compared to the distance □et□een electrodes□Generally□the □urying depth must □e less than □□ of the electrode separation □a□□

The □alues calculated □plotted on a sounding cur□e□are intimately related to the geometry of the electrodes used to o□tain them and hence are termed *apparent*□not true□ resisti□ities□ In order to produce one□dimensional models of the true ground resisti□ities and thic□nesses□the data set is interpreted using a modern computer soft□are pac□age □**Figure 3C**□□

3.2.2 Application to Site

The □ enner array □as deployed at site for the measurement of the ground resisti□ity□ The □ enner array maintains an e□ual separation □et□een each of the four electrodes such that the total length of the array is three times the electrode separation□

The location of the sur□ey lines □ere pre□defined □y the client□The resisti□ity soundings were recorded at the following ‘a’ spacing□□□□ m□□□□ m□□ m□□ m□□ m□□ m□□ m□□ m□ □□ m□□□ m□□□ m□□□ m□□□ m□□□ m□□□ m□□□□ m□□□□ m and □□□ m□□ here access allo□ed□longer lines also included spacings of □□□ m to co□er the full line length□

3.2.3 Equipment

The instrument used to complete the resisti□ity sounding □as the Campus Ohmega resisti□ity meter manufactured □y □llied □ssociates Ltd□The serial no□of the e□uipment used □as □□□□See e□uipment specifications and conformance sheet in **Appendix A**□

3.3 Survey Design

Resisti□ity testing □as underta□en at □ no□locations□The locations and ‘a’ spacings □ere predetermined □y the client□For line □□an additional spacing of □□□m □as added to increase the ma□imum spacing as □as allo□ed for on site□Lines □ and □ ha□e reduced spacings due to access and field □oundary limitations□□n additional spacing of □□□m □as applied to line □ to co□er the full length of the sur□ey line□

The sur□ey lines □ere located using a Smart Ro□er GPS□pro□iding accurate location data referenced to the Ordnance Sur□ey OSG□□□ □ational Grid system□The layout of the resisti□ity lines are sho□n in **Figure 2.** The locations of the tests are presented in **Table 2** □elo□□

Table 2. Location of the resistivity tests

Test Location	Total Length	Max ‘a’ spacing	Centre Easting	Centre Northing
□	□□□ m	□□□ m	□□□□□□□□□□□	□□□□□□□□□□□
□	□□□ m	□□□ m	□□□□□□□□□□□	□□□□□□□□□□□
□	□□□ m	□□□ m	□□□□□□□□□□□	□□□□□□□□□□□
□	□□□ m	□□□ m	□□□□□□□□□□□	□□□□□□□□□□□

□s per accepted standards for such tests □□S□□□□□□ section □□□ and □S□□□□ section □□□□ the electrodes □ere inserted into the ground no greater than □□ of the electrode spacing □‘a’ spacing□□□ □t shorter electrode spacings □up to □ m□the current electrodes □ere inserted to a ma□imum depth of □□□ mm and the potential electrodes to a ma□imum depth of □□ mm□For each measurement □□ indi□idual readings □ere ac□uired□□y collecting □ sets of □ cycles at each measurement inter□al□The readings □ere monitored during ac□uisition □ith readings □eing accepted if the error □et□een su□se□uent cycles □as less than □□ □

4 DATA INTERPRETATION

4.1 Data Quality

The electrical resisti□ity data □ere generally of good □uality□□oisy and spurious data points ha□e □een remo□ed from the resisti□ity dataset □efore in□ersion□ Contact resistances □ere □ithin accepted □uality chec□ limits for all lines□

Generally the soil allo□ed for a good electrode contact □ith the ground□□fter in□ersion through □arhus SPI□ DC□nearly all of the model residuals □ere under □□ □□hich are considered to □e a good fit to the recorded data□Location □has a residual error of □□□□□ □ **Table 3** sho□s RMS □alues across o□tained for all test locations□

Table 3. Summary of Resistivity Inversion RMS values

TEST LOCATION	RESIDUAL ERROR (%)
□	□□□□□
□	□□□□□
□	□□□□□
□	□□□□□

4.2 Results and Discussion

The a□erage soil resistivity in Ω and Ωm for each spacing at each test location is sho□n □elo□ in Ta□le □□

Table 4. Summary of Resistivity Sounding results for each location

`

	Site Location							
Spacing	Test Line □		Test Line □		Test Line □		Test Line □	
C□□P□ / P□□ P□ / P□□C□	**Ω**	Ω.m	**Ω**	Ω.m	**Ω**	Ω.m	**Ω**	Ω.m
□□□	□□□□□	□□□□□□	□□□□□	□□□□□□	□□□□□	□□□□□□	□□□□□	□□□□□□
□□□	□□□□□	□□□□□□	□□□□□	□□□□□□	□□□□□	□□□□□□	□□□□□	□□□□□□
□□□	□□□□□	□□□□□□	□□□□□	□□□□□	□□□□□	□□□□□	□□□□□	□□□□□□
□	□□□□□	□□□□□	□□□□□	□□□□□	□□□□□	□□□□□	□□□□□	□□□□□
□	□□□□□	□□□□□	□□□□□	□□□□□	□□□□□	□□□□□	□□□□□	□□□□□
□	□□□□□	□□□□□	□□□□□	□□□□□	□□□□□	□□□□□	□□□□□	□□□□□
□	□□□□□	□□□□□	□□□□□	□□□□□	□□□□□	□□□□□	□□□□□	□□□□□

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Notes[illegible]

[illegible]m spacing used only for Line [illegible] to allow the collection to full line coverage[illegible]

[illegible]o data due as maximum survey line length reached[illegible]

The full resistivity sounding data has been presented in a standard format in **Appendix B.** Details of the survey location[illegible] site details[illegible] meteorological and ground conditions are also provided[illegible] Resistance and calculated resistivity data are presented[illegible] Data are presented in both tabular and graphical format and the apparent resistivity curve is presented[illegible]

The soil parameters were estimated from inspection of the plotted curves and optimised to achieve “best fit”. This was undertaken using [illegible]arhus SPI[illegible] DC inversion software[illegible] This inverts from an initial model to find the optimum fit through the measured data[illegible] This model has been used as a basis for inversions[illegible] The inverted models are displayed in **Plates 1-4** and model values in **Tables 5-8**[illegible] The models have been compared against a borehole log from [illegible]GS records [illegible]nearest [illegible]GS record reference TM[illegible]S[illegible] together with a number of Structural Soils boreholes recorded within the field[illegible] The models produced are in broad agreement with the borehole logs[illegible]

4.2.1 Location 1

The □est fit model for location □ is presented □elo□ in **Plate 2** and the accompanying details of the model are displayed in **Table 5**□

The left□hand image presents the o□ser□ed data points on a graph□The □est fit cur□e is shown as a line through the points. The graph shows “a” spacing on the x□a□is □s apparent resisti□ity on the y□a□is□□oth using a logarithmic scale□The right□hand image displays the resisti□ity□depth model that is deri□ed from the □est fit cur□e□□ith resisti□ity on the □□a□is □s depth on the y□a□is□displayed on a logarithmic and linear scale respecti□ely□

Plate 1: VES model for location 1

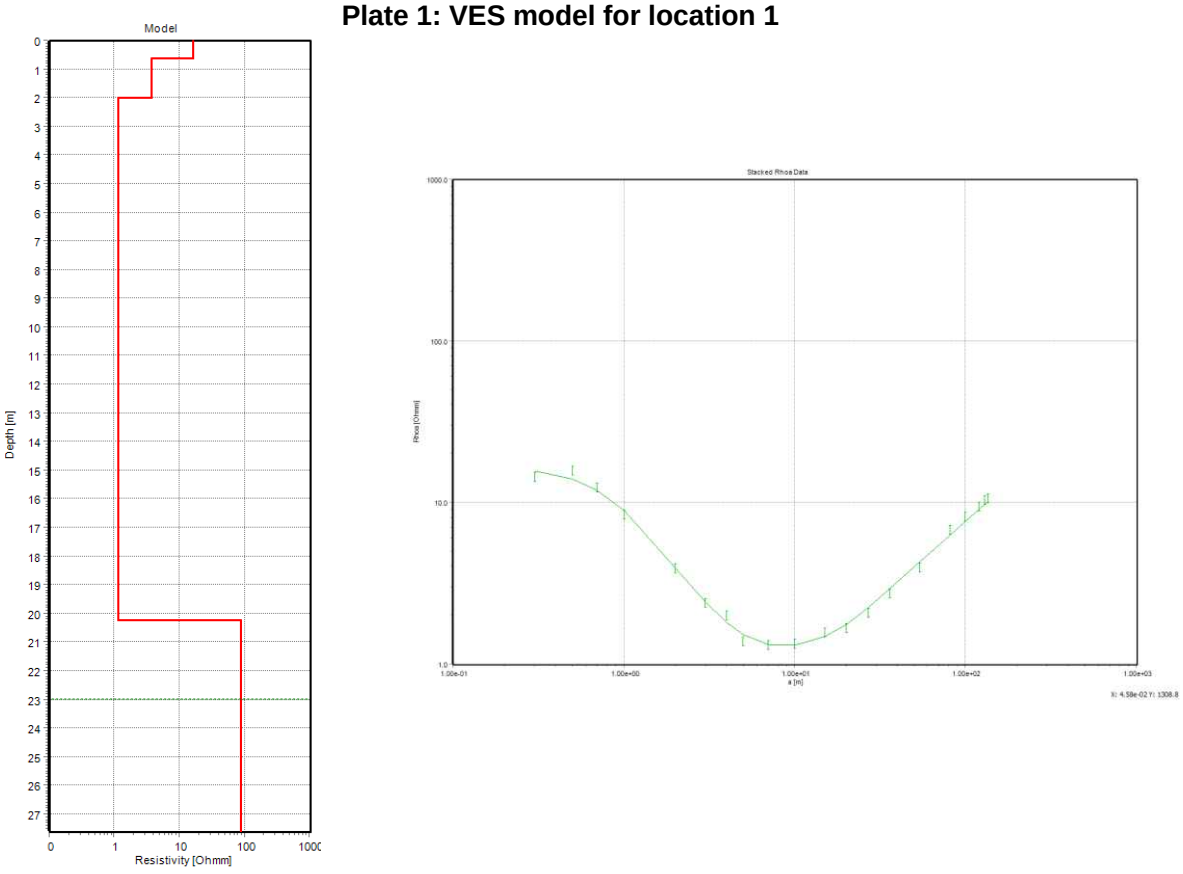


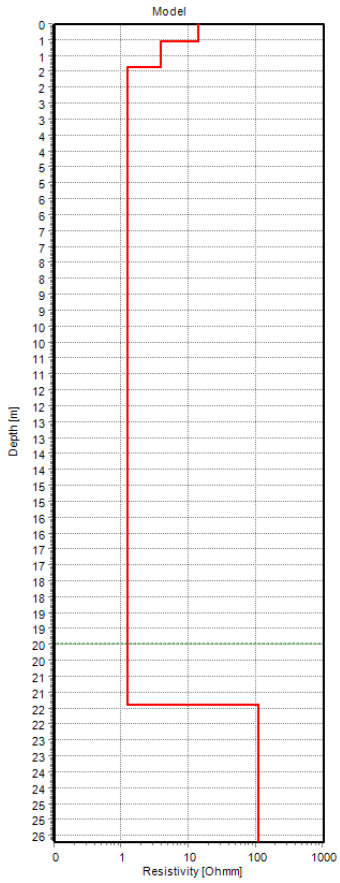
Table 5: VES model data for location 1

Layer	Rho	Thickness of layer (m)	Cumulative depth (m)	Inferred geological scenario (Predominant strata type)
□	□□□□	□□□□□	□□□□□	Topsoil
□	□□□□□	□□□□	□□□□	Silty Clay
□	□□□□□	□□□□	□□□□	Clay
□	□□□□		□□□□□	Chal□/ more granular material

4.2.2 Location 2

The □est fit model for location □ is presented □elo□ in **Plate 3** and the accompanying details of the model are displayed in **Table 6**□

Plate 2: VES model for location 2



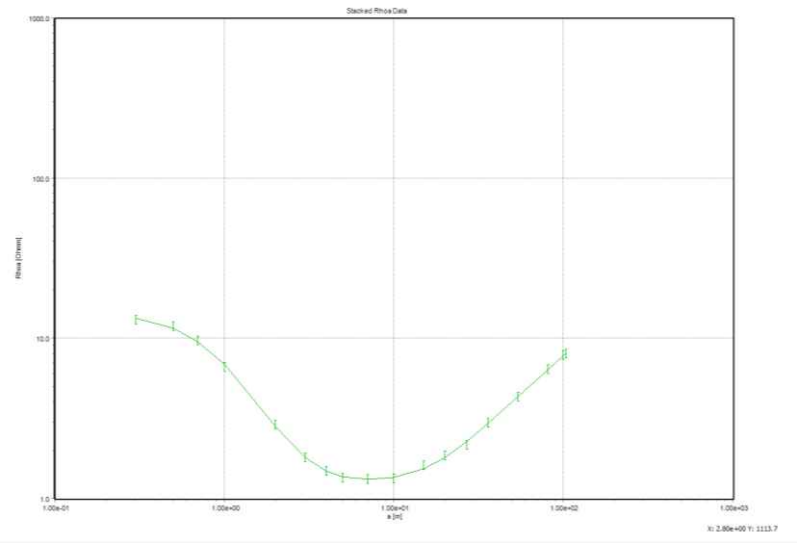


Table 6: VES model data for location 2

Layer	Rho	Thickness of layer (m)	Cumulative depth (m)	Inferred geological scenario (Predominant strata type)
□	□□□□	□□□□□	□□□□□	Topsoil
□	□□□	□□□□□	□□□□	Silty Clay
□	□□□□	□□□□	□□□□	Clay
□	□□□		□□□□□	Chal□/ more granular material

4.2.3 Location 3

The □est fit model for location □ is presented □elo□ in **Plate 4** and the accompanying details of the model are displayed in **Table 7**□

Plate 3: VES model for location 3

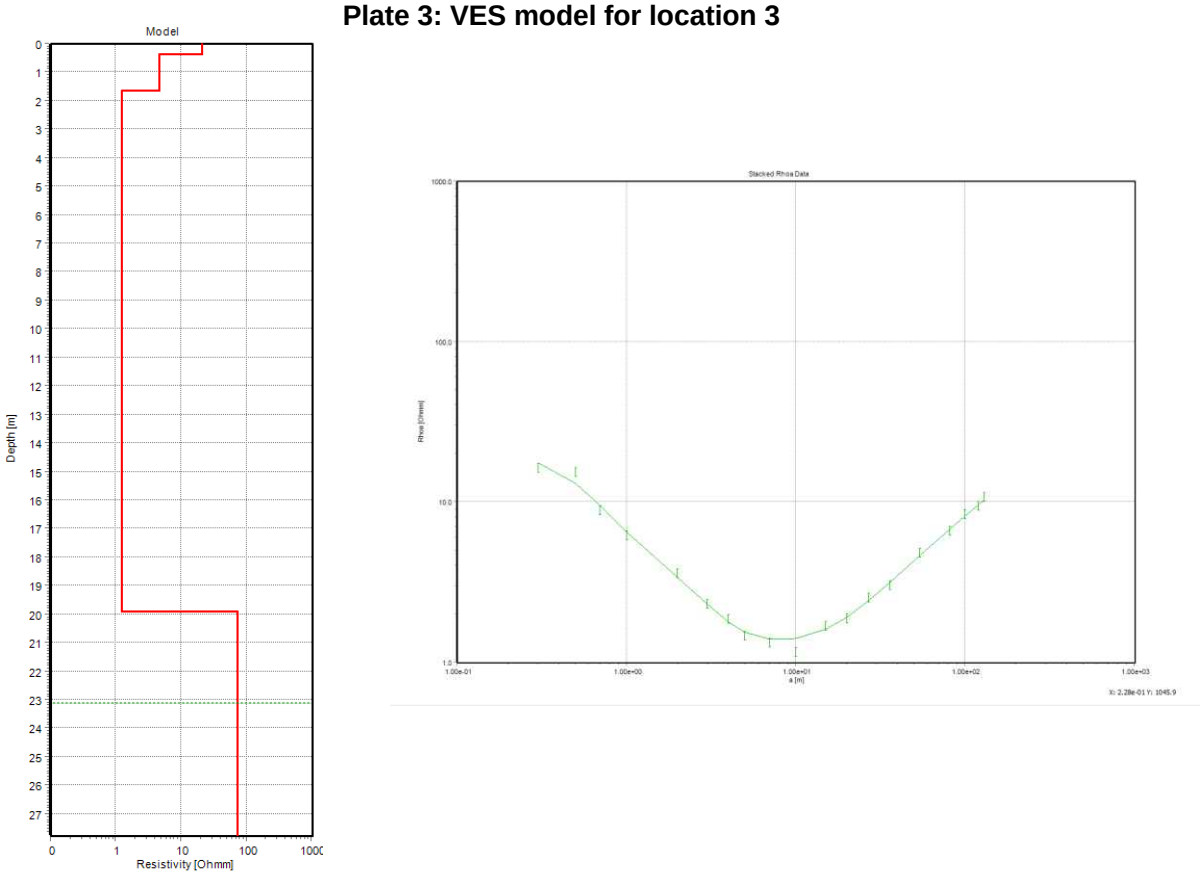


Table 7: VES model data for location 3

Layer	Rho	Thickness of layer (m)	Cumulative depth (m)	Inferred geological scenario (Predominant strata type)
□	□□□□	□□□□□	□□□□□	Topsoil
□	□□□□□	□□□□	□□□□□	Silty Clay
□	□□□□□	□□□□	□□□□□	Clay
□	□□□□□		□□□□□□	Chal□/ more granular material

4.2.4 Location 4

The □est fit model for location □ is presented □elo□ in **Plate 5** and the accompanying details of the model are displayed in **Table 8**□

Plate 4: VES model for location 4

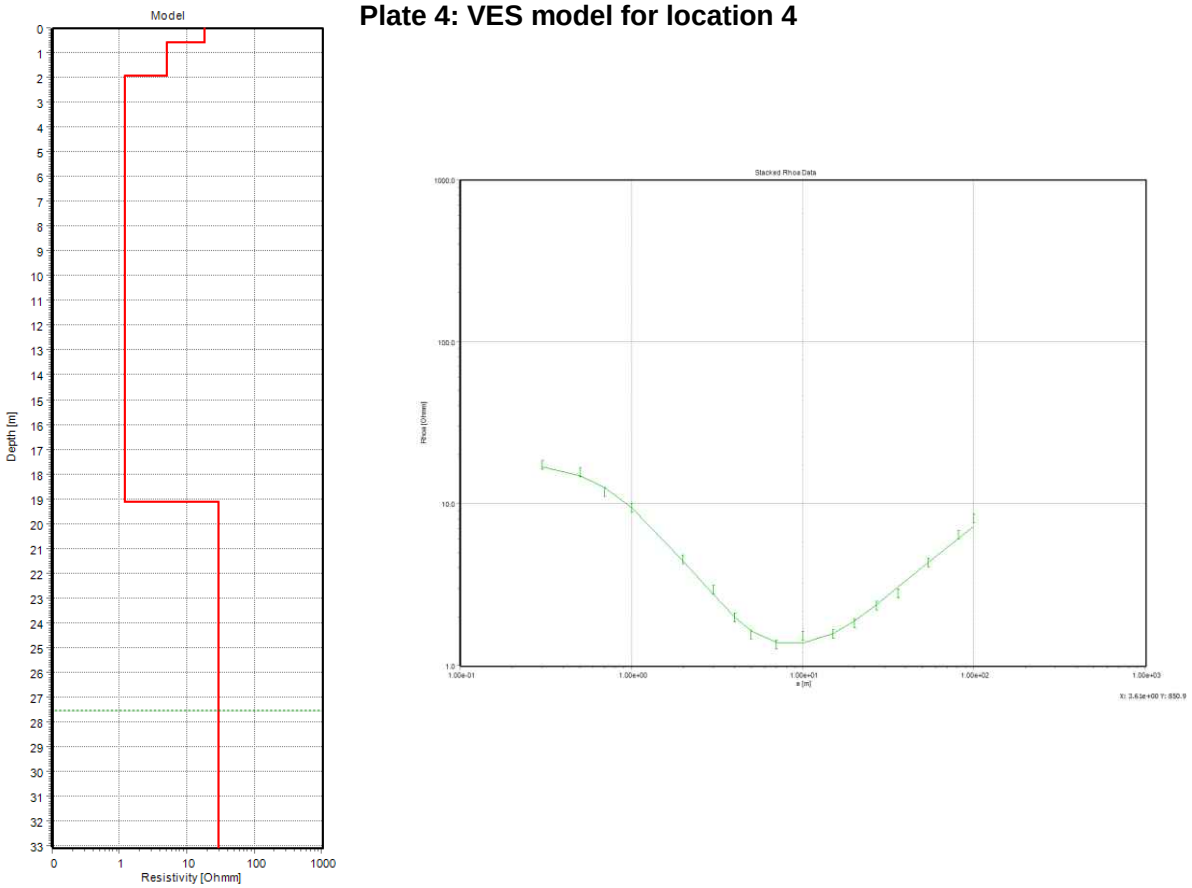


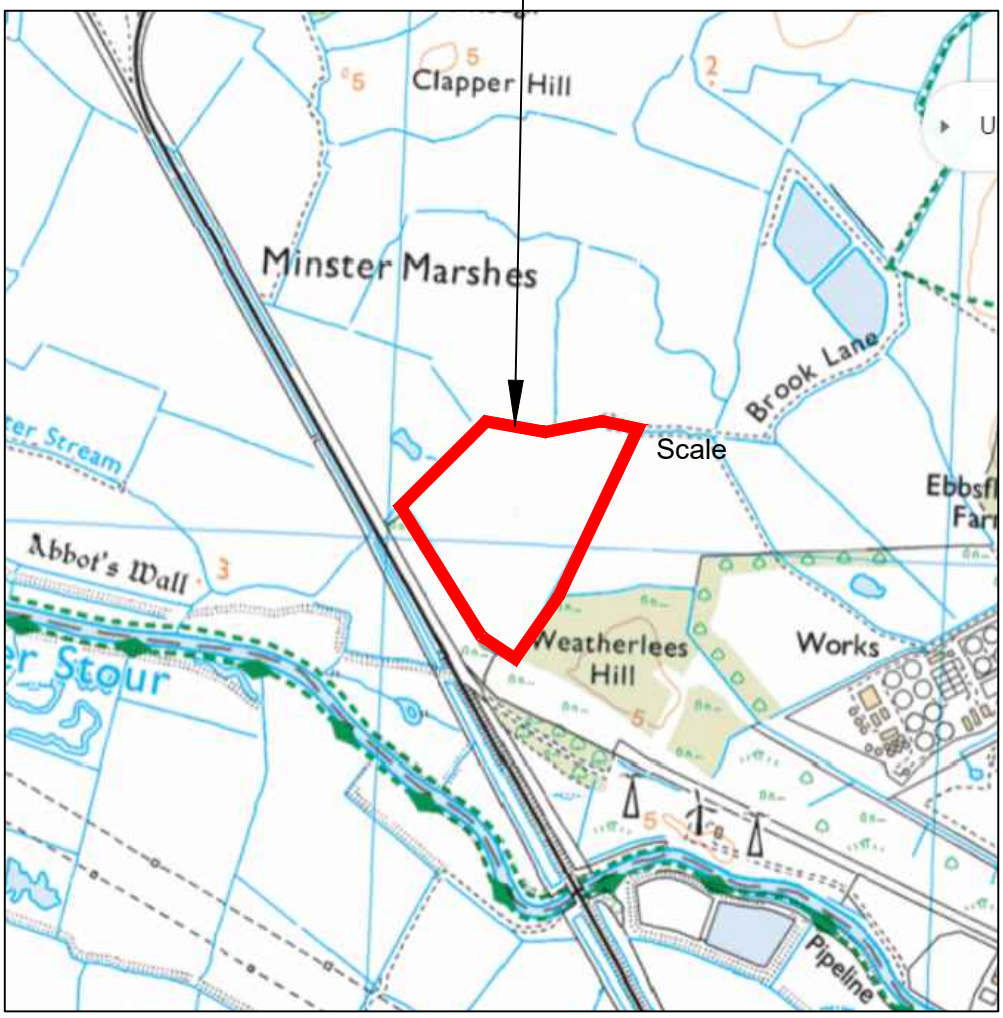
Table 8: VES model data for location 4

Layer	Rho	Thickness of layer (m)	Cumulative depth (m)	Inferred geological scenario (Predominant strata type)
□	□□□□	□□□□□	□□□□□	Topsoil
□	□□□□	□□□□	□□□□	Silty Clay
□	□□□□	□□□□	□□□□	Clay
□	□□□□		□□□□□	Chal□/ more granular material

5 SUMMARY AND CONCLUSIONS

- On the instructions of □ic□Harper of Structural Soils□on □ehalf of □ational Grid □the Client□□RS□ Geophysics carried out a geophysical sur□ey to in□estigate the soil resisti□ity □alues at □no□locations in a single field of interest for the Sea Lin□pro□ect in Rich□orough□
- The geophysical techni□ue employed □as that of □ertical electrical sounding □□□S□□
- The site □or□ □as underta□en □et□een □□th and □□nd Septem□er □□□□□
- □alues of soil electrical resisti□ity ha□e □een collected across the area of interest at □no□ locations□Modelling the resisti□ity data generally indicates four layers□a layer of topsoil o□erlying silty clay□stiff clay and chal□/more granular material□The □□S data are presented in □ppendi□ □ and the model in□ersions presented in Plates □□□□

FIGURES



Scale

0 0.2 0.4 0.6 0.8 1.0km

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: TR 32 26 30

Client: NATIONAL GRID

Drawn	Date	Checked	Date	Approved	Date
JM	17/10/23	MJS	17/10/23	MJS	17/10/23

Scale	Orig Size	Dimensions
1:25,000	A4	

Project Title: SEALINK - RICHBOROUGH

Project No.	Drawing File
2191228	2191228 Figure 1

Drawing No.	Rev.
2191228 Figure 1 Sheet 1 of 1	

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
RICHBOROUGH

Drawing Title
SITE LAYOUT
AND VES TEST LOCATIONS

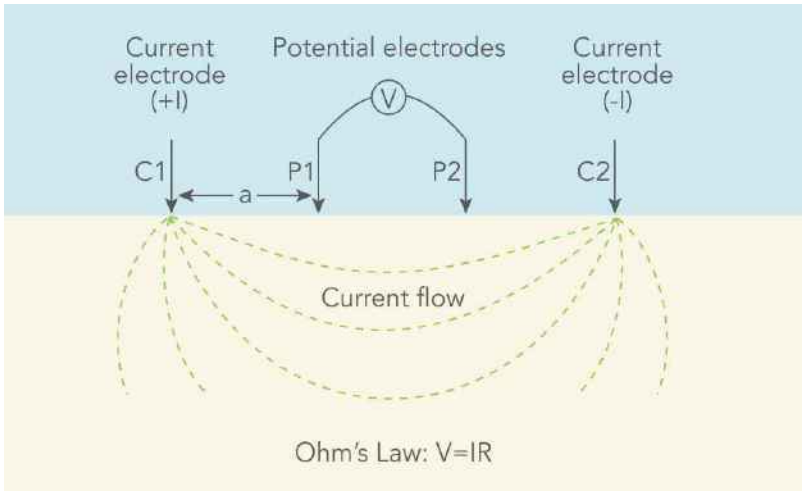
Drawn	Date	Checked	Date	Approved	Date
JM	17/10/23	MJS	17/10/23	MJS	17/10/23

Scale	Orig Size	Dimensions
1:1000	A2	

Project No.	Drawing File
2191228 R02	2191228 R02 Figure 2

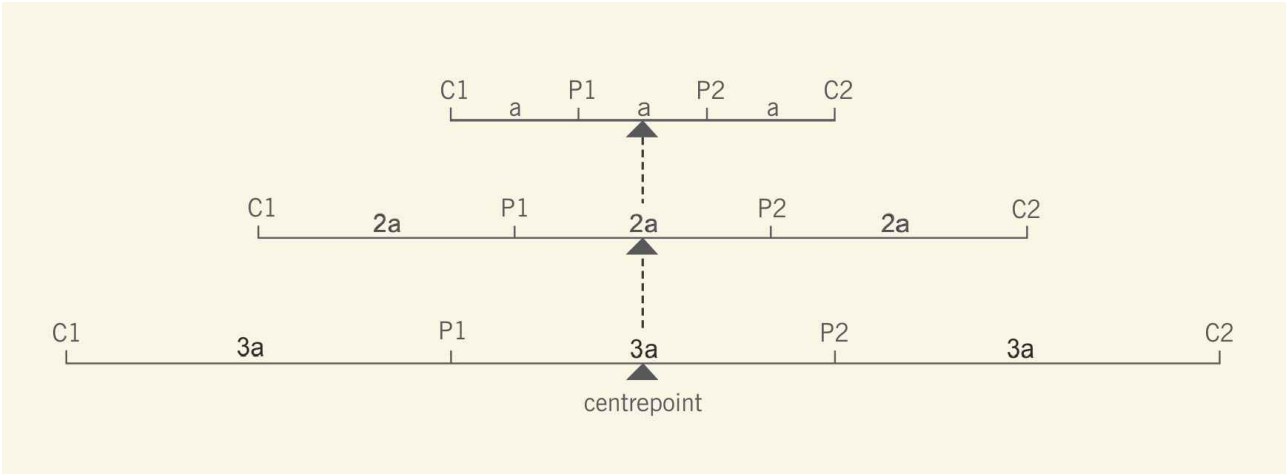
Drawing No.	Rev.
2191228 R02 Figure 2 Sheet 1 of 1	

Scale
0 20 40 60 80 100m

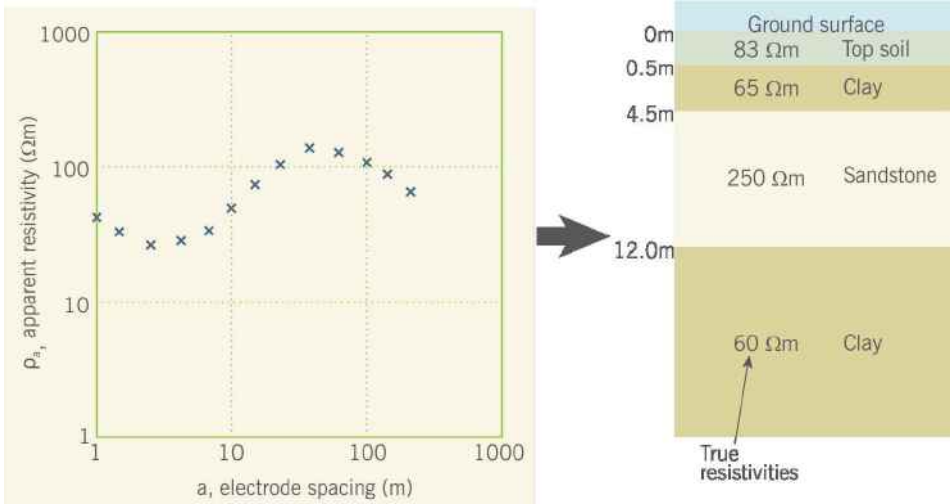


A Obtaining a measurement of ground resistance

B Conducting a sounding using the Wenner electrode array



C A 4-layer sounding and interpreted model of the subsurface



RSK GEOSCIENCES
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Twitter: follow @RSK_Geophysics
Email: RSKGeophysicsEnquiries@rsk.co.uk
Web: www.rsk.co.uk
www.environmental-geophysics.co.uk

Client: NATIONAL GRID

Project Title: SEALINK - RICHBOROUGH

Drawing Title: THE ELECTRICAL RESISTIVITY SOUNDING TECHNIQUE

Drawn	Date	Checked	Date	Approved	Date
JM	17/10/23	MJS	17/10/23	MJS	17/10/23

Scale	Orig Size	Dimensions
As shown	A4	

Project No.	Drawing File
2191228 R02	2191228 R02 Fig. 3

Drawing No.	Rev.
2191228 R02 Fig.3 Sheet 1 of 1	

APPENDIX A

□□uipment 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 :	29th September 2023	**Manufacturer:**	Allied Associates
S/N :	259	**Tested by:**	C. ELDIN
Temperature :	21 ° C		
Visual Inspection :	OK		
Cable(s) Condition :	OK		
Accessories Complete :	YES		
Battery condition :	OK		

Current Setting :	**Resistors 10 Ω :**	**1 kΩ :**	**10 kΩ :**	**100 kΩ :**
0.5 mA	10.01	1.000k	10.01k	99.57k
1 mA	10.00	1.000k	10.00k	100.0k
2 mA	9.98	0.999k	9.96k	NA
5 mA	10.00	1.000k	9.99k	NA
10 mA	9.96	0.997k	9.95k	NA
20mA	10.00	0.997k	NA	NA
50 mA	10.00	1.006k	NA	NA
100 mA	NA	NA	NA	NA
200 mA	10.07	NA	NA	NA

ENGINEER'S SIGNATURE:

[redacted]

APPENDIX B

Resisti□ity Data

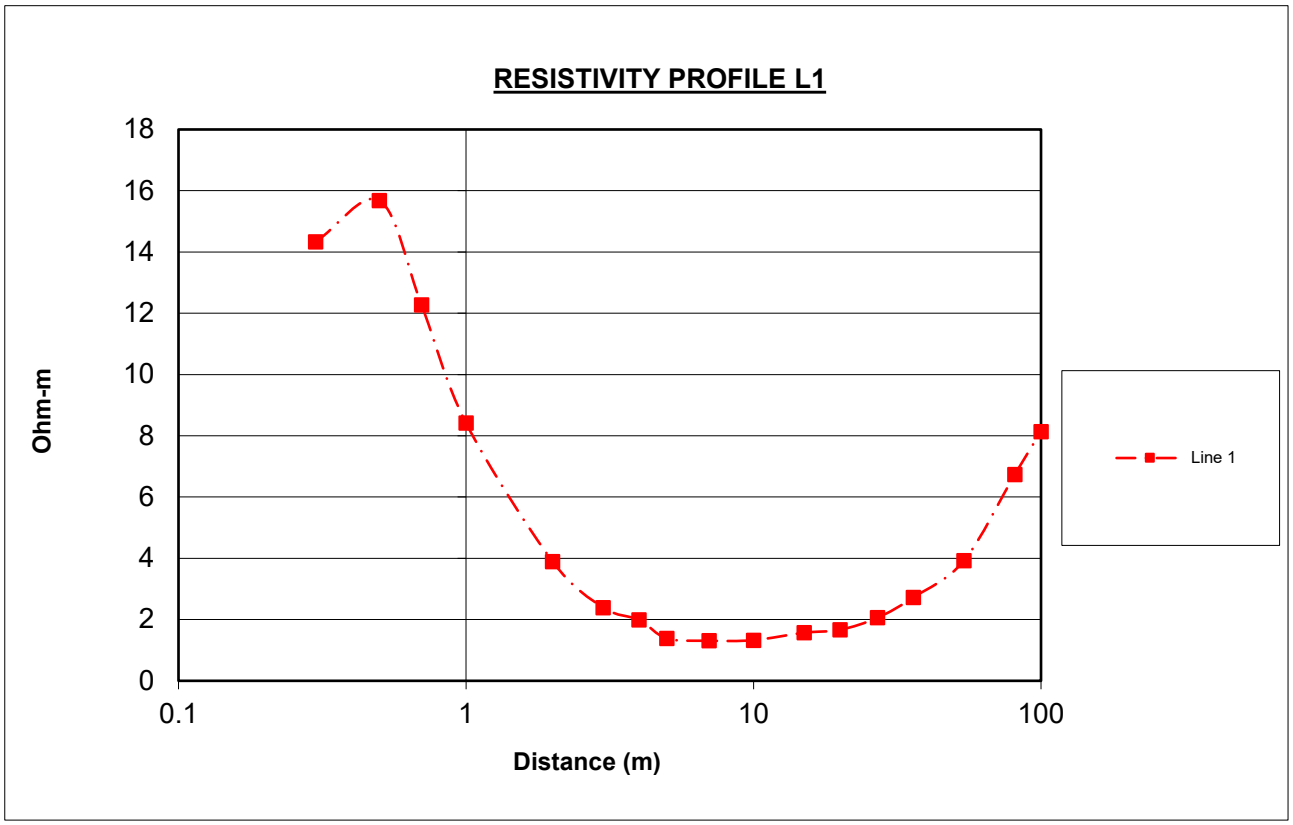
VES Data **Location 1 - APPENDIX B**

Date:	11-Oct-23
Centre OS Co-Ordinates:	632274.493E, 163058.508N, 1.434mAOD
Start OS Co-Ordinates:	632420.523E, 163198.421N, 1.560mAOD
End OS Co-Ordinates:	632415.173E, 163193.188N, 1.568mAOD
Weather Conditions:	Overcast, dry
Ground Condtions:	Dry
Air Temperature:	17°C
Humidity:	75%
Soil type:	Cohesive; Stiff Clay
Equipment:	Ohmega Resistivity Meter - serial no. 259
Operators:	JM, JBB

Line 1

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	7.603	7.603	7.603	7.603	14.33	0.5
2	0.5	4.971	5.001	5.001	4.991	15.68	0.5
3	0.7	2.784	2.794	2.794	2.791	12.27	0.5
4	1	1.336	1.346	1.336	1.339	8.42	0.5
5	2	0.3138	0.3108	0.3057	0.310	3.90	0.5
6	3	0.1285	0.1275	0.1245	0.127	2.39	1
7	4	0.07776	0.0818	0.07765	0.079	1.99	1
8	5	0.04303	0.04475	0.04414	0.044	1.38	2
9	7	0.02885	0.03108	0.02936	0.030	1.31	2
10	10	0.02045	0.02106	0.02187	0.021	1.33	5
11	15	0.01670	0.01711	0.01620	0.017	1.57	2
12	20	0.01326	0.01346	0.01306	0.013	1.67	5
13	27	0.01235	0.01225	0.01184	0.012	2.06	10
14	36	0.01235	0.01204	0.01174	0.012	2.72	10
15	54	0.01093	0.01225	0.01154	0.012	3.93	20
16	81	0.01336	0.01336	0.01296	0.013	6.73	50
17	100	0.01306	0.01275	0.01306	0.013	8.14	50
18	120	0.01296	0.01235	0.01204	0.012	9.39	50
19	130	0.01225	0.01255	0.01285	0.013	10.25	50
20	135	0.01235	0.01255	0.01275	0.013	10.65	200

Notes
[1] 4 no. cycles were taken per reading
[2] Average of 3 sets of readings
[3] Depth of all electrodes was 100mm


RESISTIVITY PROFILE L1
Ohm-m
18
16
14
12
10
8
6
4
2
0
0.1
1
10
100
Distance (m)
Line 1

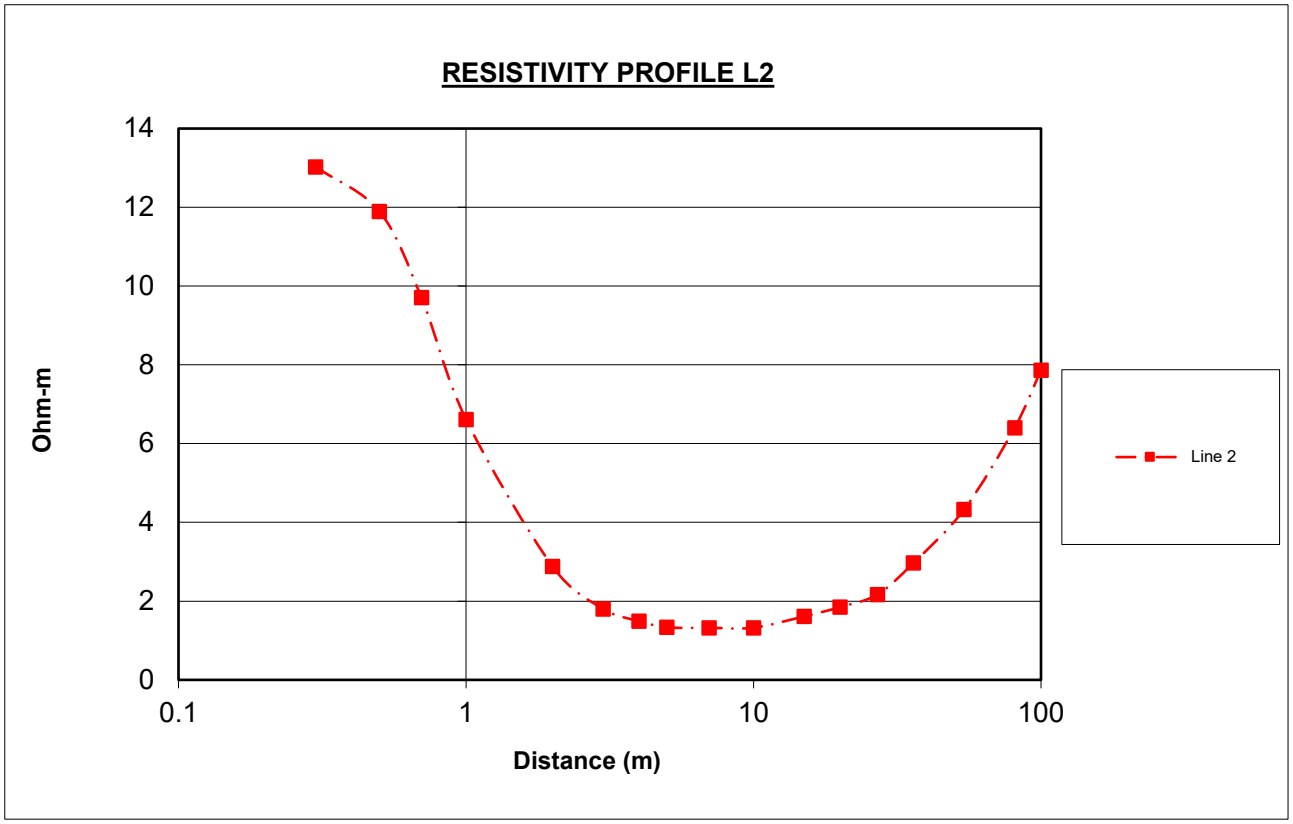
VES Data **Location 2 - APPENDIX B**

Date:	12-Oct-23
Centre OS Co-Ordinates:	632231.003E, 163137.486N, 1.408mAOD
Start OS Co-Ordinates:	632083.010E, 163089.742N, 1.337mAOD
End OS Co-Ordinates:	632379.123E, 163185.389N, 1.566mAOD
Weather Conditions:	Overcast, dry
Ground Condtions:	Wet
Air Temperature:	17°C
Humidity:	95%
Soil type:	Cohesive; stiff clay
Equipment:	Ohmega Resistivity Meter - serial no. 259
Operators:	JM, JBB

Line 2

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	6.915	6.915	6.905	6.912	13.03	0.5
2	0.5	3.796	3.776	3.786	3.786	11.89	0.5
3	0.7	2.197	2.217	2.207	2.207	9.71	0.5
4	1	1.053	1.053	1.053	1.053	6.62	0.5
5	2	0.2308	0.2257	0.2308	0.229	2.88	1
6	3	0.09477	0.09608	0.09628	0.096	1.80	1
7	4	0.06085	0.05649	0.06075	0.059	1.49	1
8	5	0.04232	0.04293	0.04232	0.043	1.34	2
9	7	0.03078	0.02966	0.02976	0.030	1.32	5
10	10	0.02035	0.02136	0.02156	0.021	1.33	5
11	15	0.01731	0.01680	0.01721	0.017	1.61	5
12	20	0.01488	0.01437	0.01488	0.015	1.85	10
13	27	0.01275	0.01245	0.01316	0.013	2.17	20
14	36	0.01326	0.01296	0.01316	0.013	2.97	50
15	54	0.01275	0.01265	0.01285	0.013	4.33	50
16	81	0.01235	0.01285	0.01255	0.013	6.40	200
17	100	0.01235	0.01245	0.01275	0.013	7.86	200
18	104	0.01215	0.01245	0.01235	0.012	8.05	200

Notes
[1] 4 no. cycles were taken per reading
[2] Average of 3 sets of readings
[3] Depth of all electrodes was 100mm


RESISTIVITY PROFILE L2
Ohm-m
14
12
10
8
6
4
2
0
0.1
1
10
100
Distance (m)
Line 2

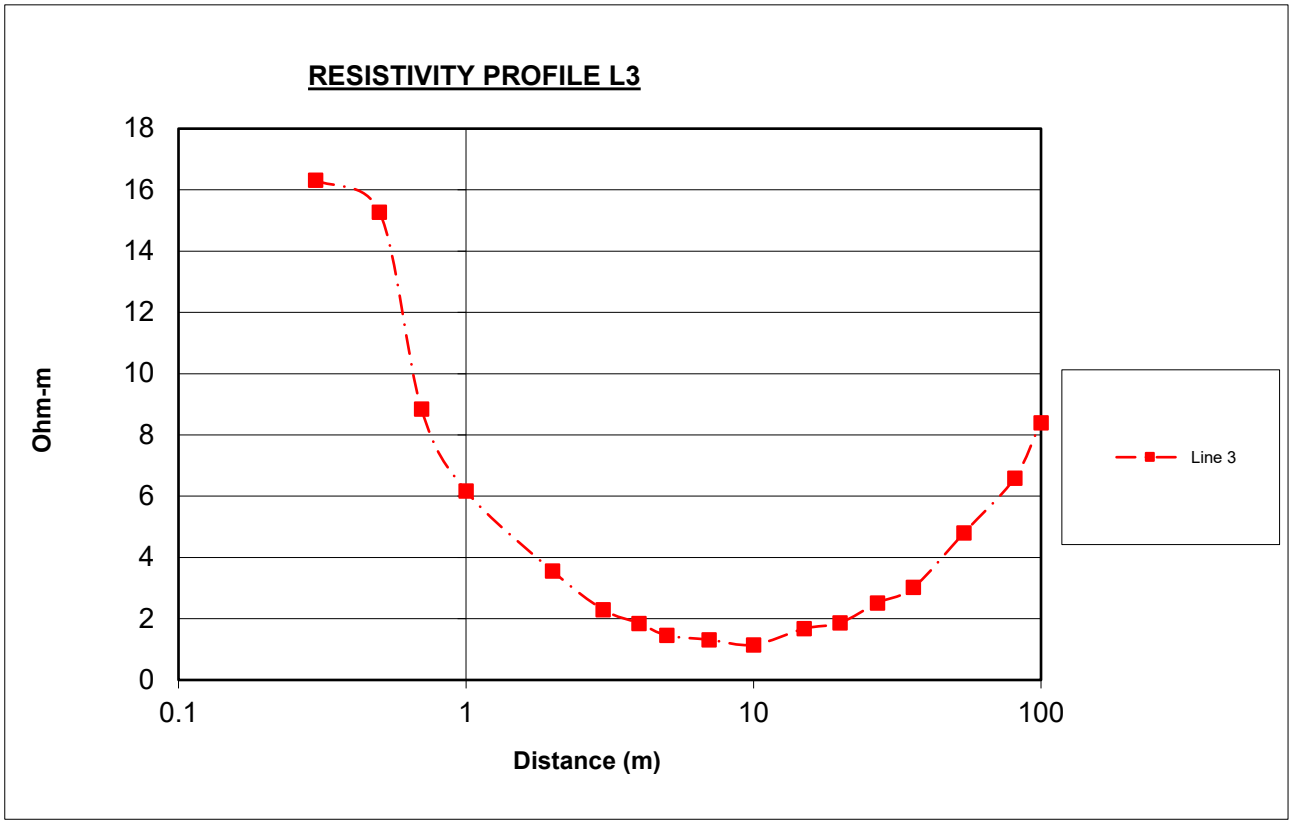
VES Data **Location 3 - APPENDIX B**

Date:	12-Oct-23
Centre OS Co-Ordinates:	632227.984E, 163002.482N, 1.440mAOD
Start OS Co-Ordinates:	632236.840E, 162807.964N, 1.700mAOD
End OS Co-Ordinates:	632219.149E, 163197.087N, 1.772mAOD
Weather Conditions:	Overcast, dry
Ground Condtions:	Wet
Air Temperature:	18°C
Humidity:	90%
Soil type:	Cohesive; stiff clay
Equipment:	Ohmega Resistivity Meter - serial no. 259
Operators:	JM, JBB

Line 3

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	8.722	8.469	8.782	8.658	16.32	0.5
2	0.5	4.849	4.87	4.87	4.863	15.28	0.5
3	0.7	2.055	1.984	1.994	2.011	8.84	0.5
4	1	1.000	0.9679	0.979	0.982	6.17	0.5
5	2	0.2804	0.2814	0.2875	0.283	3.56	1
6	3	0.1212	0.1243	0.1202	0.122	2.30	5
7	4	0.07391	0.07148	0.07533	0.074	1.85	1
8	5	0.04538	0.04871	0.04487	0.046	1.46	2
9	7	0.03047	0.03088	0.02845	0.030	1.32	5
10	10	0.01751	0.01873	0.01863	0.018	1.15	5
11	15	0.01771	0.01721	0.01842	0.018	1.68	10
12	20	0.01498	0.01488	0.01468	0.015	1.87	10
13	27	0.01418	0.01569	0.01468	0.015	2.52	10
14	36	0.01346	0.01275	0.01387	0.013	3.02	10
15	54	0.01417	0.01447	0.01387	0.014	4.81	20
16	81	0.01296	0.01326	0.01265	0.013	6.59	50
17	100	0.01387	0.01285	0.01336	0.013	8.39	100
18	120	0.01275	0.01225	0.01265	0.013	9.46	200
19	130	0.01285	0.01326	0.01316	0.013	10.69	200

Notes
[1] 4 no. cycles were taken per reading
[2] Average of 3 sets of readings
[3] Depth of all electrodes was 100mm
[4] Data collected over two days, data from A spacing 100m+ collected on second day (same conditions)


RESISTIVITY PROFILE L3
Ohm-m
18
16
14
12
10
8
6
4
2
0
0.1
1
10
100
Distance (m)
Line 3

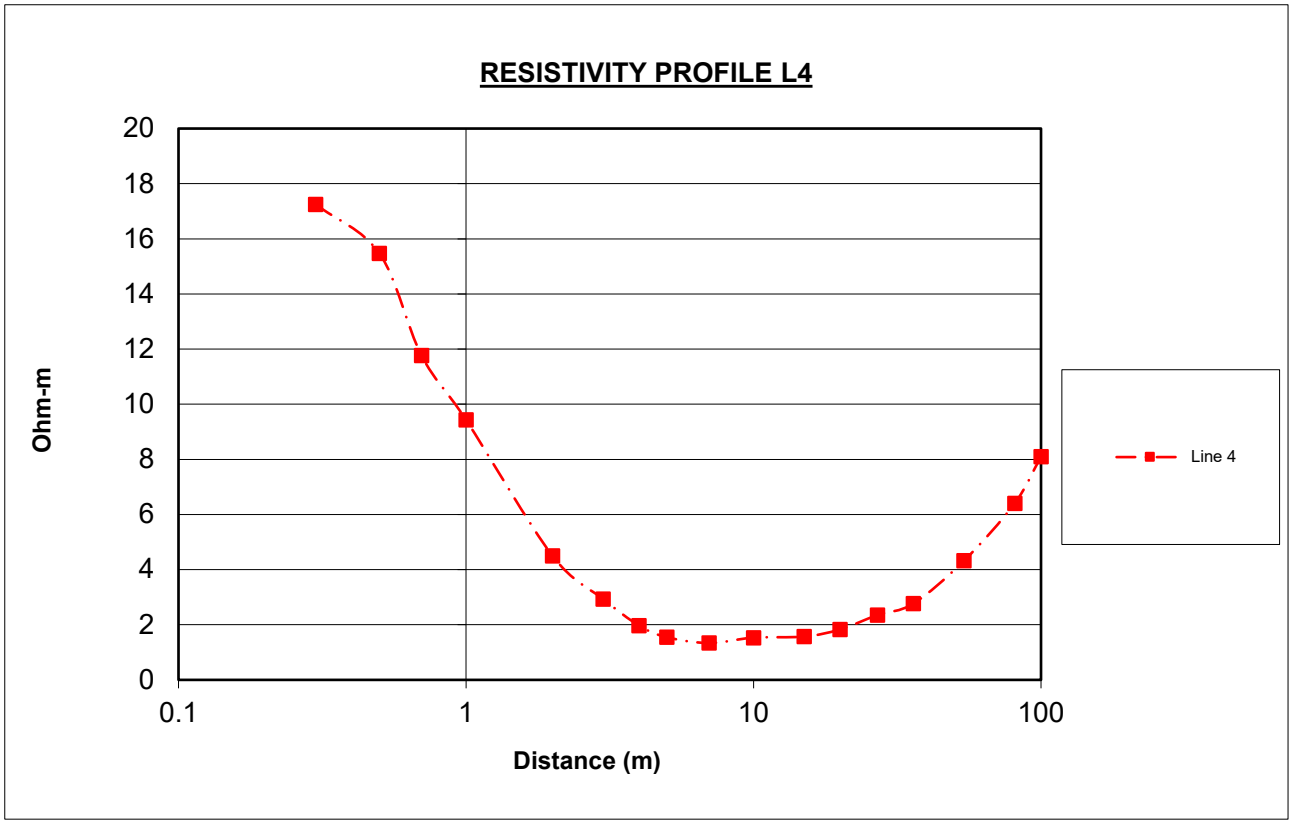
VES Data **Location 4 - APPENDIX B**

Date:	13-Oct-23
Centre OS Co-Ordinates:	632206.975E, 163042.994N, 22.943mAOD
Start OS Co-Ordinates:	632057.362E, 163044.710N, 1.604mAOD
End OS Co-Ordinates:	632356.680E, 163041.097N, 1.445mAOD
Weather Conditions:	Overcast, dry
Ground Condtions:	Wet
Air Temperature:	20°C
Humidity:	75%
Soil type:	Cohesive; stiff clay
Equipment:	Ohmega Resistivity Meter - serial no. 259
Operators:	JM, JBB

Line 4

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	9.096	9.136	9.223	9.152	17.25	0.5
2	0.5	4.981	4.93	4.86	4.924	15.47	0.5
3	0.7	2.662	2.693	2.673	2.676	11.77	0.5
4	1	1.498	1.498	1.508	1.501	9.43	0.5
5	2	0.3584	0.3543	0.3604	0.358	4.49	0.5
6	3	0.1596	0.1576	0.1495	0.156	2.93	2
7	4	0.0768	0.0784	0.0798	0.078	1.97	5
8	5	0.0491	0.0487	0.04991	0.049	1.55	10
9	7	0.0306	0.0300	0.03067	0.030	1.34	10
10	10	0.0252	0.0242	0.02379	0.024	1.53	10
11	15	0.01701	0.01609	0.01690	0.017	1.57	10
12	20	0.01458	0.01508	0.01407	0.015	1.83	20
13	27	0.01346	0.01417	0.01397	0.014	2.35	20
14	36	0.01235	0.01174	0.01265	0.012	2.77	50
15	54	0.01275	0.01265	0.01285	0.013	4.33	50
16	81	0.01225	0.01275	0.01275	0.013	6.40	200
17	100	0.01296	0.01265	0.01306	0.013	8.10	200

Notes
[1] 4 no. cycles were taken per reading
[2] Average of 3 sets of readings
[3] Depth of all electrodes was 100mm


RESISTIVITY PROFILE L4
Ohm-m
20
18
16
14
12
10
8
6
4
2
0
0.1
1
10
100
Distance (m)
Line 4

APPENDIX D - GEOTECHNICAL LABORATORY TESTING

(i) Laboratory Test Verification Sheet

(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: **26/03/2024 12:29:46**.

Testing reported after this date is not covered by this Verification Certificate.

[redacted]

Approved Signatory
Sharon Cairns (Laboratory 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: **SEA Link FEED - Kent Onshore Cable Link**	Job No: **563607**

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
R22-BH101	48	D	14.20	20.5	105	Dark brown slightly sandy clayey GRAVEL. Non-standard	H
R22-BH101	56	DSPT	18.00	27.8	105	Dark brown sandy CLAY	H
R22-BH104	58	D	18.00	36.4	105	Dark grey slightly gravelly CLAY	H
R22-BH106A	27	DSPT	8.00	31.5	105	Greenish brown slightly sandy CLAY	H
R22-BH204	5	D	1.50	25.6	105	Brown mottled dark brown and orangish brown slightly gravelly slightly sandy CLAY	H
R22-BH204	51	D	13.50	102	105	Grey sandy CLAY	H
R22-BH204	59	D	15.50	82.8	105	Grey slightly sandy slightly gravelly CLAY	H
R22-BH204	67	D	17.50	51.2	105	Dark grey slightly gravelly slightly sandy CLAY	H
R22-BH204	75	D	19.50	36.2	105	Dark brown slightly sandy CLAY	H
R22-BH204	83	D	21.50	45.9	105	Dark brown slightly gravelly slightly sandy CLAY	H
R22-BH204	91	D	23.50	31.6	50	White CLAY with chalk and organic matter	H
R22-BH501	34	D	11.00	33.2	105	Dark brown mottled grey slightly clayey GRAVEL	H
R22-BH501	79	D	26.00	31.3	105	Dark grey sandy CLAY	H
R22-BH502	12	D	3.50	115	50	Grey CLAY with wood. Non-standard	H
R22-BH502	60	D	17.00	20.9	105	Dark grey mottled dark grey slightly clayey GRAVEL	H
R22-BH502	66	D	19.00	24.5	105	Dark grey slightly clayey GRAVEL	H
R22-BH502	84	D	25.00	42.5	105	Dark brown slightly sandy CLAY	H
RedP-BH-11	5	D	1.70	22.5	105	Light brown mottled dark brown slightly sandy CLAY	H

Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By: [redacted]

Date: **17.03.24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

AGS

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-11	9	D	2.50	31.9	105	Light brown mottled orangish brown slightly gravelly slightly sandy CLAY	**H**

Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

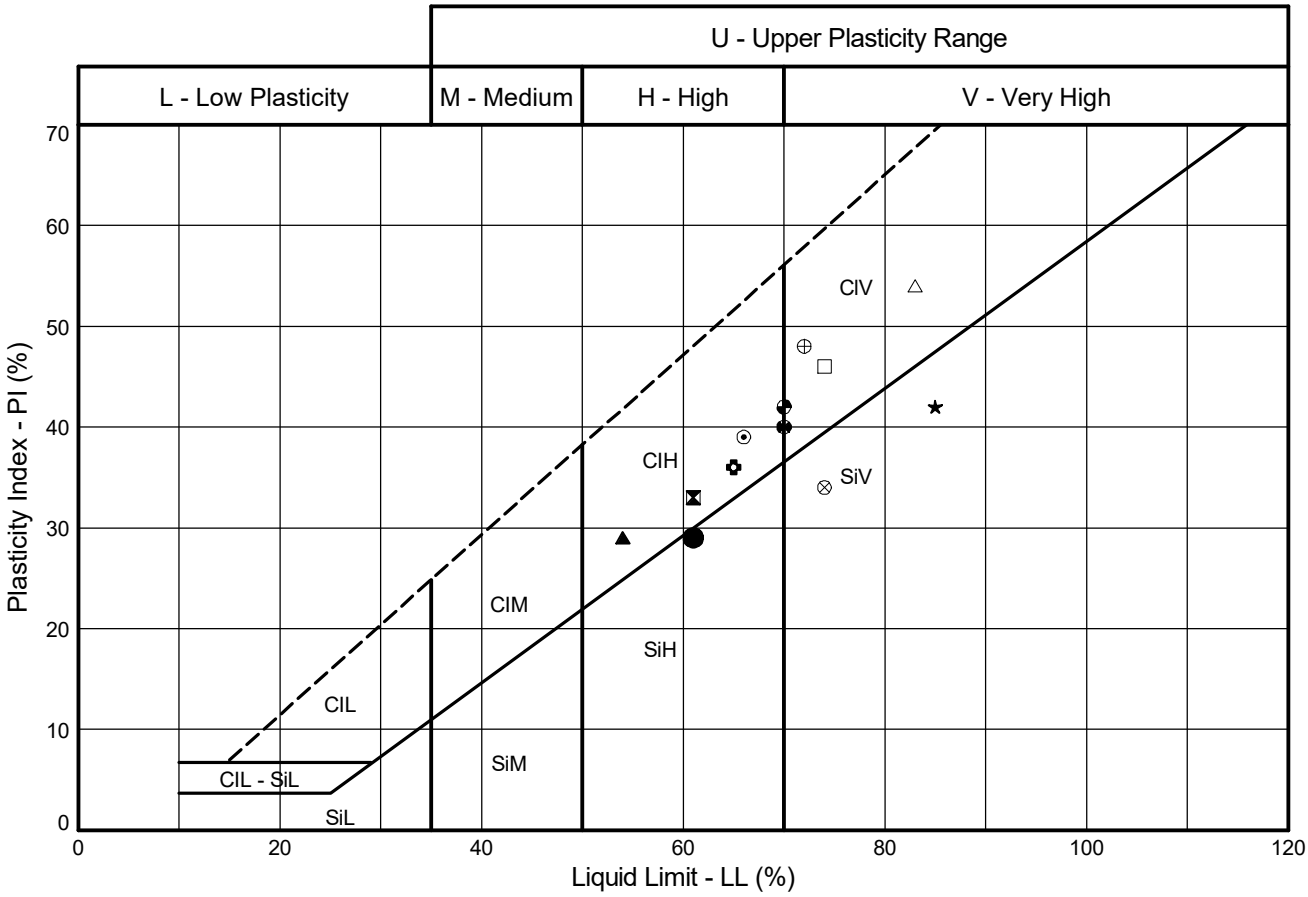
Compiled By	Date	Contract Ref:
[redacted] [redacted]	**17.03.24**	**563607**

Contract:

SEA Link FEED - Kent Onshore Cable Link

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)			%	%	%	%	%		
●	R22-BH101	2D	0.50	5.3/5.5/6.5	5.2.7	25.0	61	32	29	99	H	I
⊠	R22-BH101	4D	1.00	5.3/5.5/6.5	5.2.7	32.5	61	28	33	100	H	I
▲	R22-BH101	38D	1.50	5.3/5.5/6.5	5.2.1	56.7	54	25	29	100	H	I
★	R22-BH101	13D	3.45	5.3/5.5/6.5	5.2.7	80.5	85	43	42	100	H	I
⊙	R22-BH101	19D	5.45	5.3/5.5/6.5	5.2.7	55.1	66	27	39	99	H	I
✿	R22-BH101	25D	7.45	5.3/5.5/6.5	5.2.7	47.2	65	29	36	98	H	I
●	R22-BH101	31D	9.50	5.3/5.5/6.5	5.2.7	52.8	61	32	29	96	H	I
△	R22-BH101	35D	10.45	5.3/5.5/6.5	5.2.7	42.6	83	29	54	100	H	I
⊗	R22-BH101	42D	12.45	5.3/5.5/6.5	5.2.7	33.6	74	40	34	43	H	I
⊕	R22-BH101	52DSPT	16.00	5.3/5.5/6.5	5.2.7	34.0	72	24	48	49	H	I
□	R22-BH101	62DSPT	21.00	5.3/5.5/6.5	5.2.7	34.8	74	28	46	99	H	I
⊠	R22-BH101	68DSPT	24.00	5.3/5.5/6.5	5.2.7	28.9	70	30	40	99	H	I
◒	R22-BH102	3D	1.00	5.3/5.5/6.5	5.2.1	43.9	70	28	42	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)

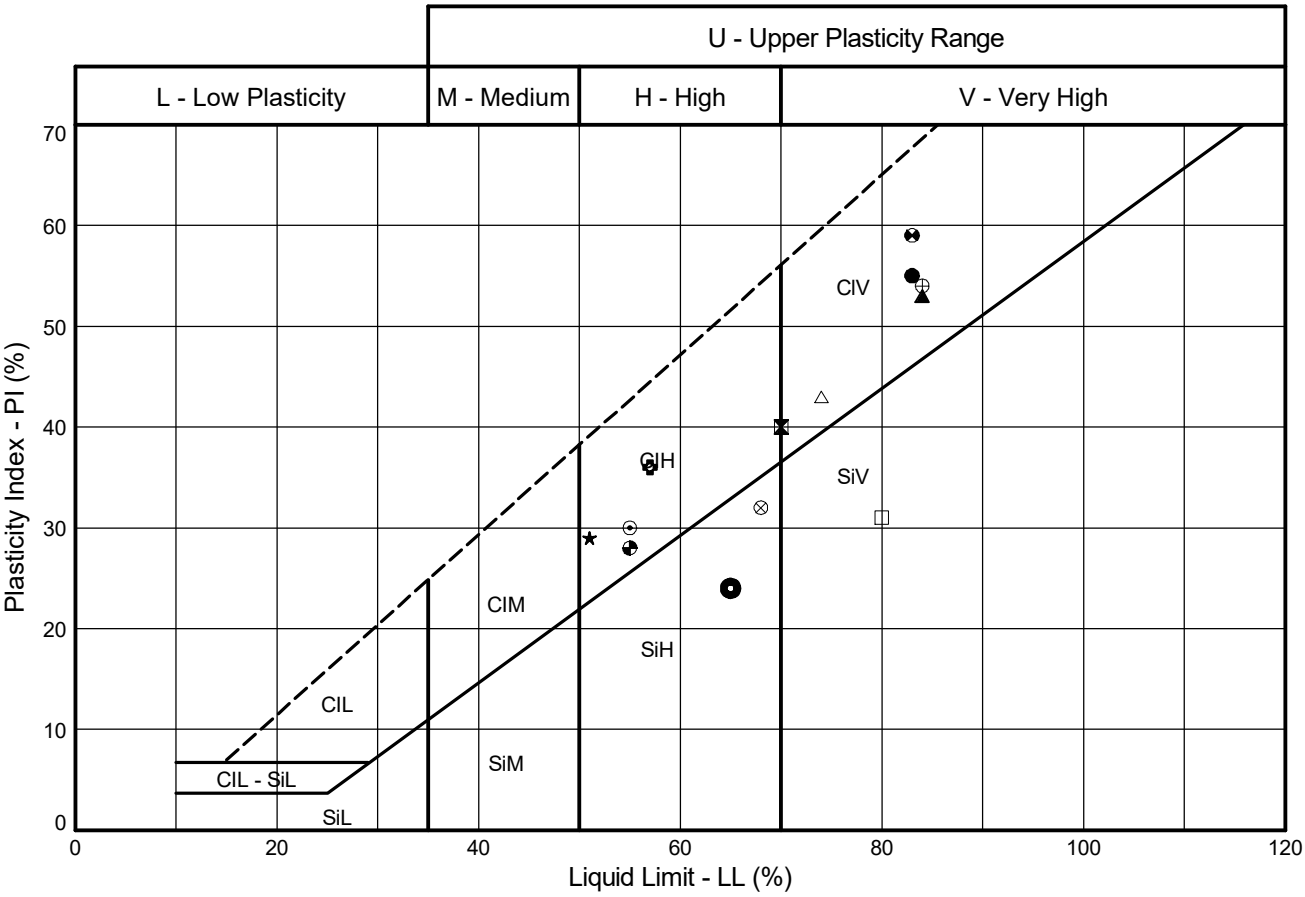
STRUCTURAL SOILS LTD

Compiled By		Date
[redacted]	[redacted]	**03/04/24**

Contract	Contract Ref:
SEA Link FEED - Kent Onshore Cable Link	**563607**

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)			%	%	%	%	%		
●	R22-BH102	7D	2.00	5.3/5.5/6.5	5.2.7	41.4	83	28	55	100	H	I
⊠	R22-BH102	11D	3.00	5.3/5.5/6.5	5.2.1	43.4	70	30	40	100	H	I
▲	R22-BH102	17D	4.50	5.3/5.5/6.5	5.2.7	50.4	84	31	53	100	H	I
★	R22-BH102	21D	5.50	5.3/5.5/6.5	5.2.7	47.4	51	22	29	100	H	I
⊙	R22-BH102	29D	7.50	5.3/5.5/6.5	5.2.7	48.8	55	25	30	100	H	I
✿	R22-BH102	35D	9.00	5.3/5.5/6.5	5.2.7	45.2	57	21	36	80	H	I
◉	R22-BH102	42D	11.00	5.3/5.5/6.5	5.2.7	49.1	65	41	24	65	H	I
△	R22-BH102	48D	13.00	5.3/5.5/6.5	5.2.7	46.2	74	31	43	92	H	I
⊗	R22-BH102	57D	16.00	5.3/5.5/6.5	5.2.7	46.9	68	36	32	69	H	I
⊕	R22-BH102	66D	19.00	5.3/5.5/6.5	5.2.7	42.1	84	30	54	94	H	I
□	R22-BH102	75D	22.00	5.3/5.5/6.5	5.2.7	48.2	80	49	31	72	H	I
⊠	R22-BH102	84D	25.00	5.3/5.5/6.5	5.2.7	30.7	83	24	59	99	H	I
◒	R22-BH103	1D	0.50	5.3/5.5/6.5	5.2.1	51.6	55	27	28	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)

STRUCTURAL SOILS LTD

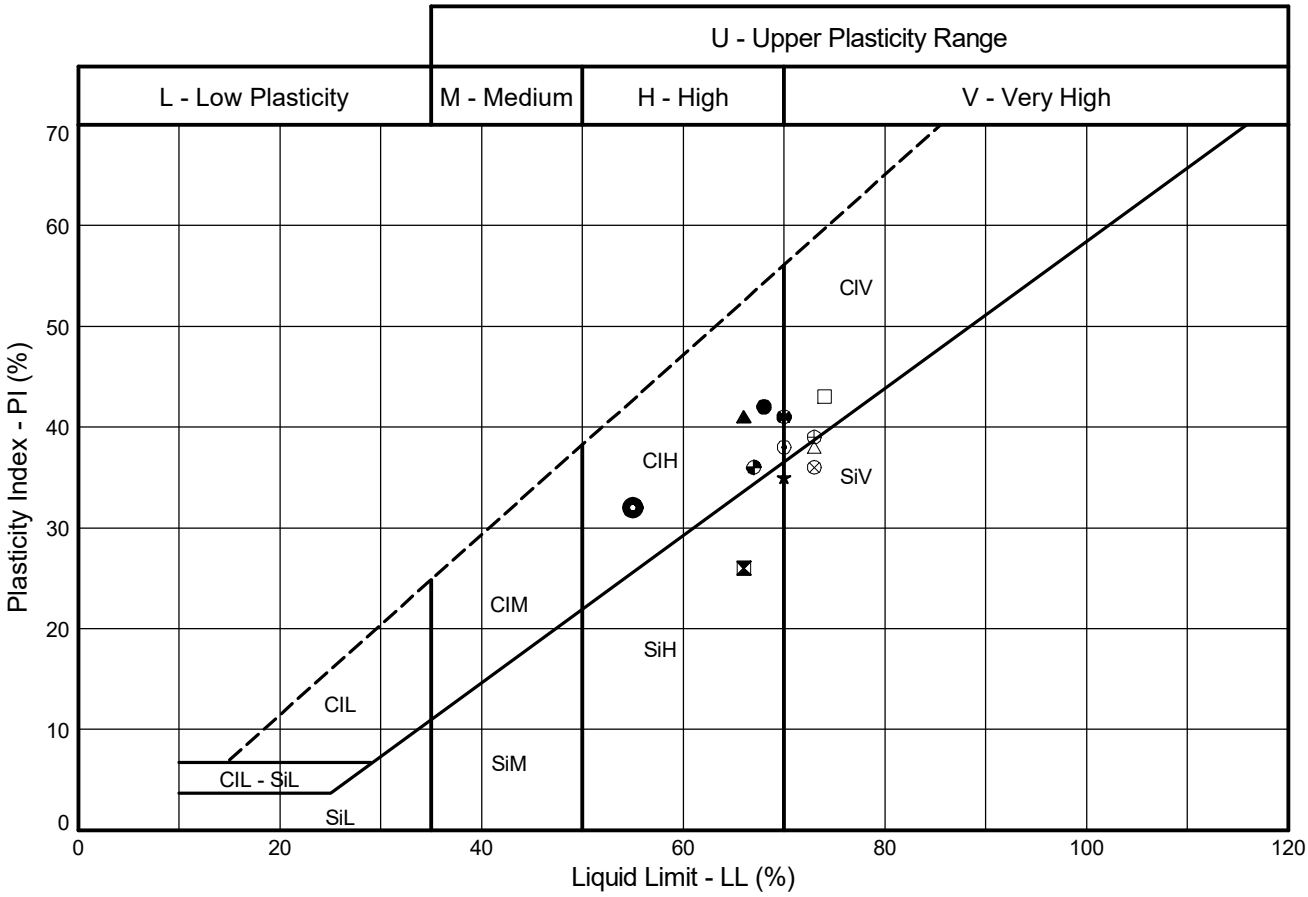
Compiled By		Date
[redacted]	[redacted]	03/04/24

Contract	Contract Ref:
SEA Link FEED - Kent Onshore Cable Link	**563607**

AGS

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)			%	%	%	%	%		
●	R22-BH103	3D	1.00	5.3/5.5/6.5	5.2.1	39.2	68	26	42	100	H	I
⊠	R22-BH103	7D	2.00	5.3/5.5/6.5	5.2.1	55.8	66	40	26	100	H	I
▲	R22-BH103	11D	2.95	5.3/5.5/6.5	5.2.7	50.3	66	25	41	100	H	I
★	R22-BH103	14D	3.95	5.3/5.5/6.5	5.2.1	82.7	70	35	35	100	H	I
⊙	R22-BH103	17D	4.90	5.3/5.5/6.5	5.2.7	59.9	70	32	38	100	H	I
	R22-BH103	22D	6.45	5.3/5.5/6.5	5.2.7	30.7	NP	NP	NP	99	H	
◉	R22-BH103	26D	8.00	5.3/5.5/6.5	5.2.7	43.8	55	23	32	98	T	I
△	R22-BH103	31D	9.60	5.3/5.5/6.5	5.2.7	48.5	73	35	38	100	H	I
⊗	R22-BH103	40D	12.45	5.3/5.5/6.5	5.2.1	29.9	73	37	36	100	H	I
⊕	R22-BH103	49DSPT	16.00	5.3/5.5/6.5	5.2.1	32.7	73	34	39	100	H	I
□	R22-BH103	57DSPT	20.00	5.3/5.5/6.5	5.2.7	29.3	74	31	43	97	H	I
⊗	R22-BH103	65DSPT	24.00	5.3/5.5/6.5	5.2.1	29.6	70	29	41	100	H	I
◕	R22-BH104	1D	0.50	5.3/5.5/6.5	5.2.7	31.4	67	31	36	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)

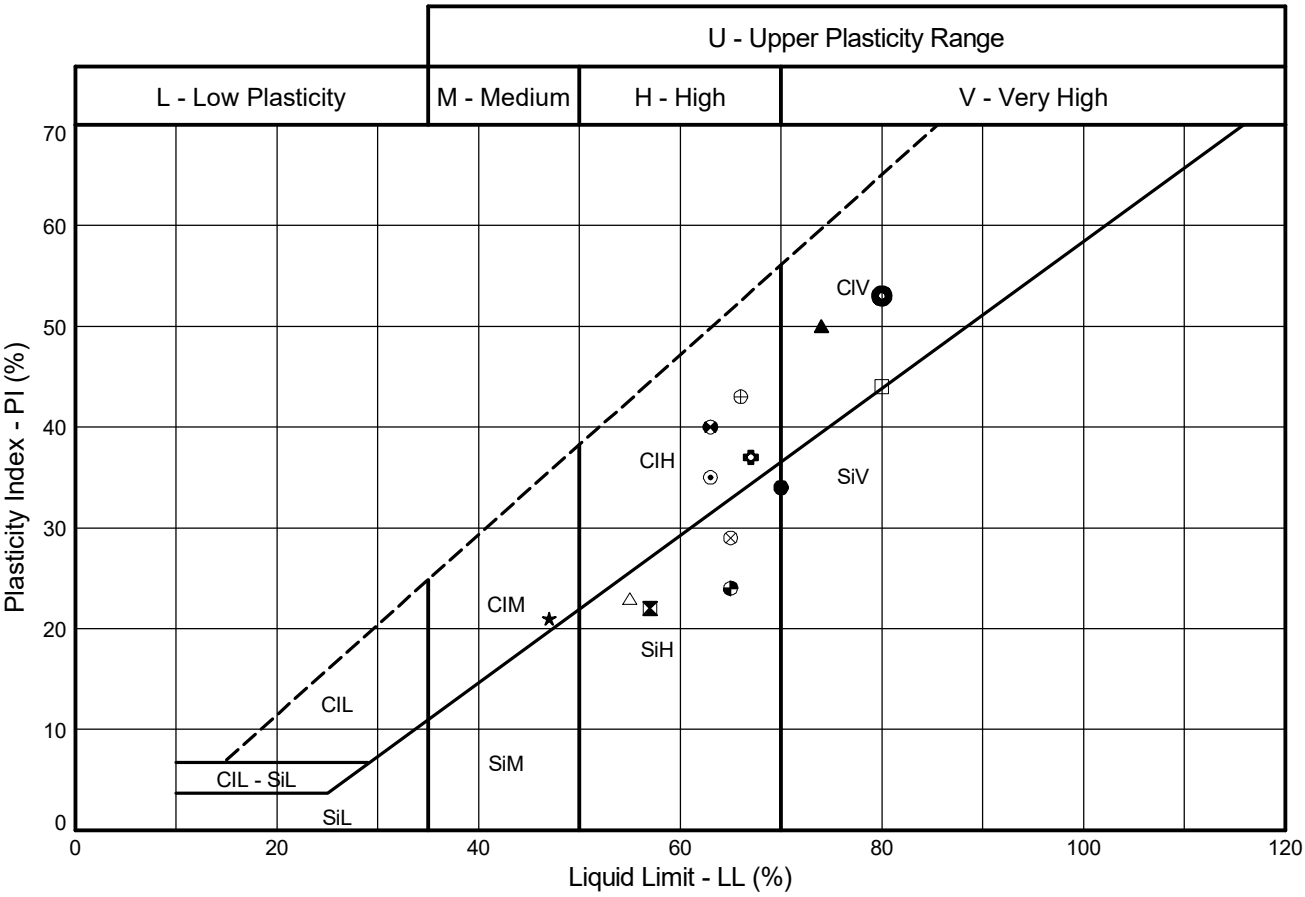
STRUCTURAL SOILS LTD

Compiled By		Date
[redacted]	[redacted]	**03/04/24**

Contract	Contract Ref:
SEA Link FEED - Kent Onshore Cable Link	**563607**

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)			%	%	%	%	%		
●	R22-BH104	3D	1.00	5.3/5.5/6.5	5.2.7	48.2	70	36	34	100	H	I
⊠	R22-BH104	6D	2.00	5.3/5.5/6.5	5.2.7	52.6	57	35	22	99	H	
▲	R22-BH104	11D	3.50	5.3/5.5/6.5	5.2.7	25.1	74	24	50	99	H	I
★	R22-BH104	16D	5.00	5.3/5.5/6.5	5.2.7	39.4	47	26	21	96	H	I
⊙	R22-BH104	23D	7.00	5.3/5.5/6.5	5.2.7	36.5	63	28	35	99	H	I
✿	R22-BH104	27D	8.00	5.3/5.5/6.5	5.2.7	35.3	67	30	37	70	H	I
◉	R22-BH104	30D	9.00	5.3/5.5/6.5	5.2.7	33.3	80	27	53	39	H	I
△	R22-BH104	40D	12.00	5.3/5.5/6.5	5.2.7	40.0	55	32	23	93	H	I
⊗	R22-BH104	49D	15.00	5.3/5.5/6.5	5.2.7	44.8	65	36	29	58	H	I
⊕	R22-BH104	67D	21.00	5.3/5.5/6.5	5.2.7	55.4	66	23	43	23	H	I
□	R22-BH104	76D	24.00	5.3/5.5/6.5	5.2.7	50.0	80	36	44	100	H	I
⊠	R22-BH105	4D	1.65	5.3/5.5/6.5	5.2.7	51.6	63	23	40	100	H	I
◕	R22-BH105	8D	2.50	5.3/5.5/6.5	5.2.1	52.5	65	41	24	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)

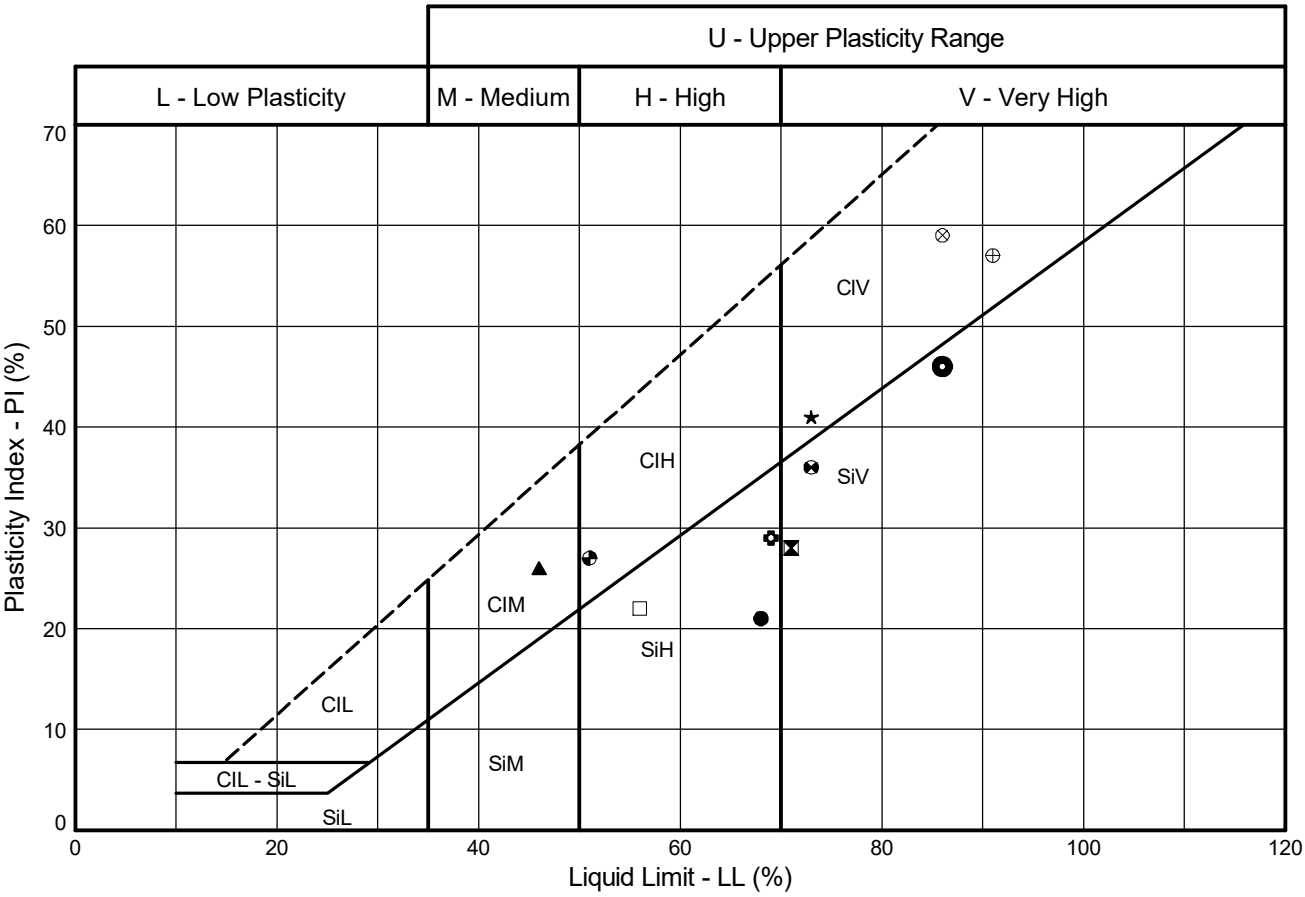
STRUCTURAL SOILS LTD

Compiled By		Date
[redacted]	[redacted]	03/04/24

Contract	Contract Ref:
SEA Link FEED - Kent Onshore Cable Link	**563607**

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)			%	%	%	%	%		
●	R22-BH105	11D	3.45	5.3/5.5/6.5	5.2.7	48.9	68	47	21	100	H	I
⊠	R22-BH105	15D	4.45	5.3/5.5/6.5	5.2.7	31.5	71	43	28	97	H	I
▲	R22-BH105	19D	5.45	5.3/5.5/6.5	5.2.7	41.8	46	20	26	100	T	I
★	R22-BH105	23D	6.45	5.3/5.5/6.5	5.2.7	37.4	73	32	41	98	H	I
	R22-BH105	31D	8.45	5.3/5.5/6.5	5.2.7	39.7	NP	NP	NP	38	H	
✿	R22-BH105	40D	10.60	5.3/5.5/6.5	5.2.7	51.7	69	40	29	74	H	I
◉	R22-BH105	52D	13.50	5.3/5.5/6.5	5.2.7	38.3	86	40	46	63	H	I
	R22-BH105	64D	16.50	5.3/5.5/6.5	5.2.7	38.6	NP	NP	NP	66	H	
⊗	R22-BH105	72D	18.50	5.3/5.5/6.5	5.2.7	55.6	86	27	59	73	H	I
⊕	R22-BH105	80D	20.50	5.3/5.5/6.5	5.2.7	62.1	91	34	57	92	T	I
□	R22-BH105	88D	22.60	5.3/5.5/6.5	5.2.7	45.6	56	34	22	97	H	I
⊠	R22-BH105	96D	24.60	5.3/5.5/6.5	5.2.1	41.3	73	37	36	100	H	I
◒	R22-BH106A	1D	1.00	5.3/5.5/6.5	5.2.7	41.2	51	24	27	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)

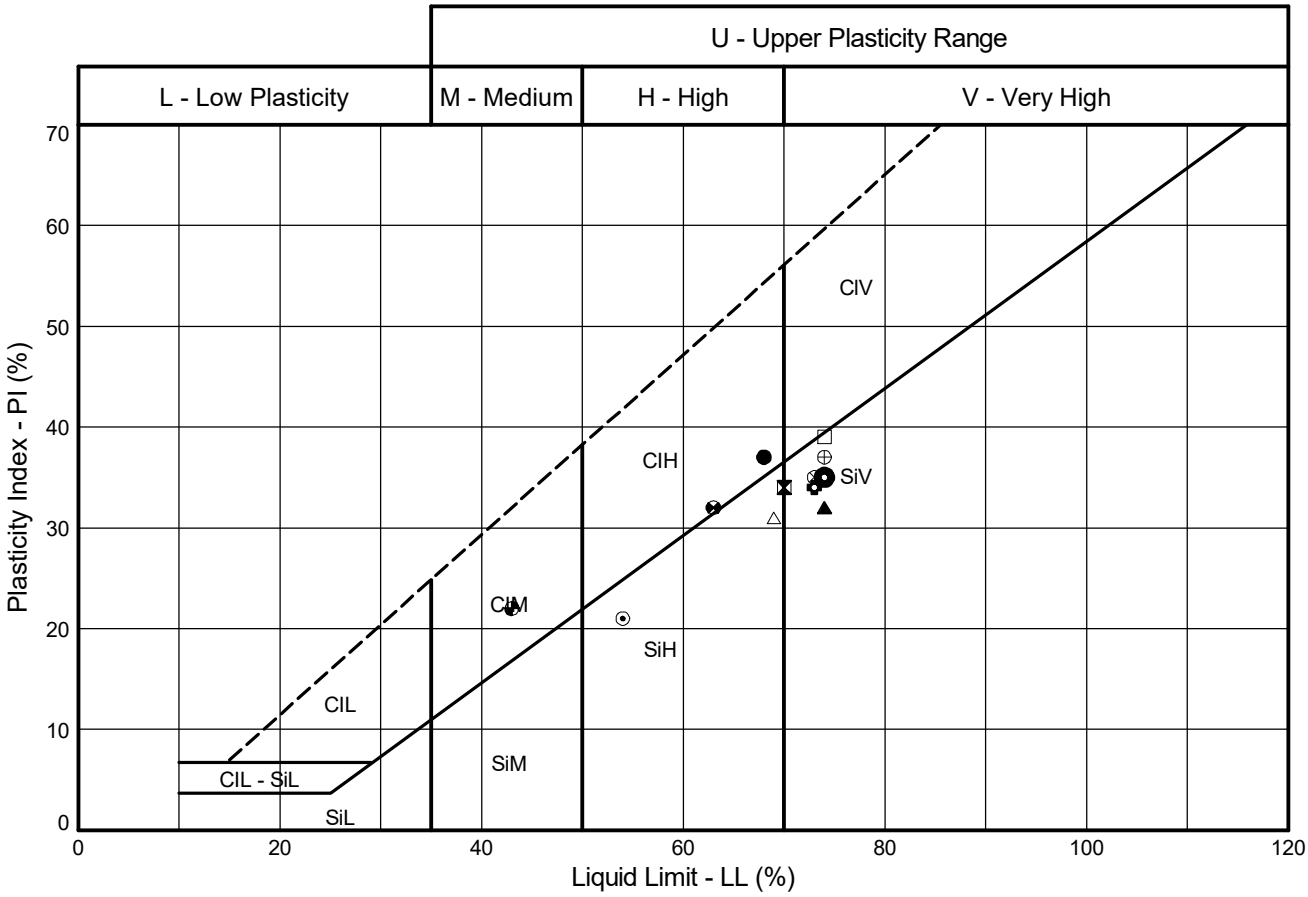
STRUCTURAL SOILS LTD

Compiled By		Date
[redacted]	[redacted]	**03/04/24**

Contract	Contract Ref:
SEA Link FEED - Kent Onshore Cable Link	**563607**

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)			%	%	%	%	%		
●	R22-BH106A	5D	2.00	5.3/5.5/6.5	5.2.7	50.6	68	31	37	100	H	I
⊠	R22-BH106A	11D	3.45	5.3/5.5/6.5	5.2.1	56.7	70	36	34	100	H	I
▲	R22-BH106A	15D	4.45	5.3/5.5/6.5	5.2.7	69.8	74	42	32	97	H	I
	R22-BH106A	19D	5.45	5.3/5.5/6.5	5.2.1	34.8	NP	NP	NP	100	H	
⊙	R22-BH106A	23D	6.45	5.3/5.5/6.5	5.2.7	33.6	54	33	21	100	H	I
✿	R22-BH106A	32DSPT	10.00	5.3/5.5/6.5	5.2.7	28.5	73	39	34	74	H	I
◉	R22-BH106A	36DSPT	12.00	5.3/5.5/6.5	5.2.7	31.4	74	39	35	84	H	I
△	R22-BH106A	40DSPT	14.00	5.3.14/5.5/6.5	5.2.7	28.3	69	38	31	73	T	
⊗	R22-BH106A	46DSPT	17.00	5.3.14/5.5/6.5	5.2.7	34.3	73	38	35	57	T	
⊕	R22-BH106A	50DSPT	19.00	5.3/5.5/6.5	5.2.7	46.1	74	37	37	60	H	I
□	R22-BH106A	54DSPT	21.00	5.3/5.5/6.5	5.2.7	33.4	74	35	39	89	H	I
⊠	R22-BH106A	60DSPT	24.00	5.3/5.5/6.5	5.2.7	28.2	63	31	32	100	H	I
◓	R22-BH203	3D	1.00	5.3/5.5/6.5	5.2.7	20.0	43	21	22	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)

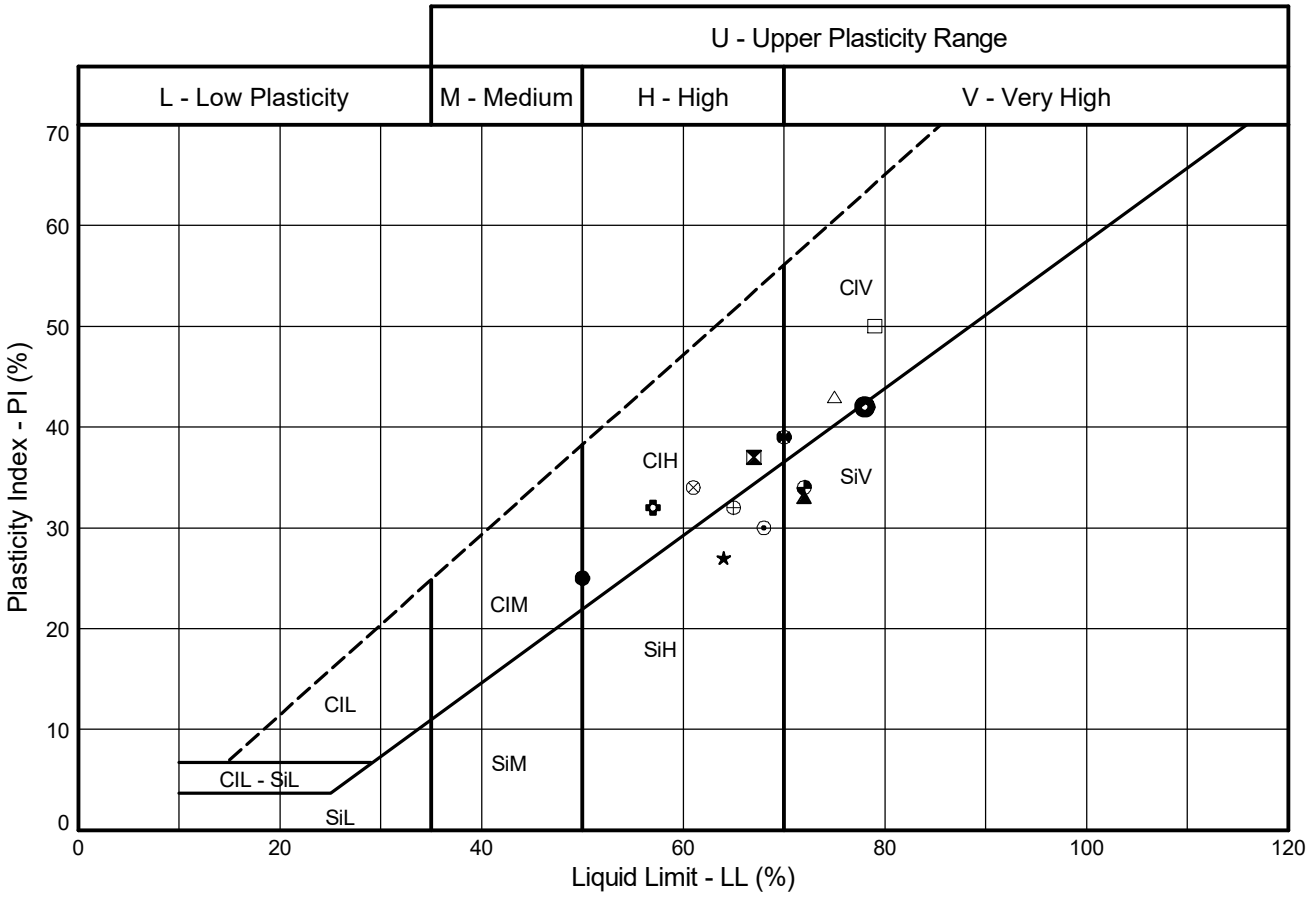
STRUCTURAL SOILS LTD

Compiled By		Date
[redacted]	[redacted]	03/04/24

Contract	Contract Ref:
SEA Link FEED - Kent Onshore Cable Link	**563607**

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)			%	%	%	%	%		
●	R22-BH203	7D	2.00	5.3/5.5/6.5	5.2.7	29.3	50	25	25	100	H	I
⊠	R22-BH203	14D	4.00	5.3/5.5/6.5	5.2.7	31.3	67	30	37	92	H	I
▲	R22-BH203	21D	6.00	5.3/5.5/6.5	5.2.7	32.5	72	39	33	61	H	I
★	R22-BH203	27D	8.00	5.3/5.5/6.5	5.2.7	41.5	64	37	27	90	H	I
⊙	R22-BH203	33D	10.00	5.3/5.5/6.5	5.2.7	39.2	68	38	30	84	H	I
✿	R22-BH203	39D	12.00	5.3/5.5/6.5	5.2.7	39.0	57	25	32	98	H	I
◉	R22-BH203	48D	15.00	5.3/5.5/6.5	5.2.7	49.0	78	36	42	76	H	I
△	R22-BH204	8D	2.45	5.3/5.5/6.5	5.2.1	29.8	75	32	43	100	H	I
⊗	R22-BH204	13D	3.50	5.3/5.5/6.5	5.2.7	42.1	61	27	34	68	H	I
⊕	R22-BH204	17D	4.55	5.3/5.5/6.5	5.2.7	43.3	65	33	32	66	H	I
□	R22-BH204	21D	5.50	5.3/5.5/6.5	5.2.7	40.9	79	29	50	92	T	I
⊠	R22-BH204	29D	7.50	5.3/5.5/6.5	5.2.7	39.8	70	31	39	89	H	I
◒	R22-BH204	37D	9.50	5.3/5.5/6.5	5.2.7	44.0	72	38	34	93	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

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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)

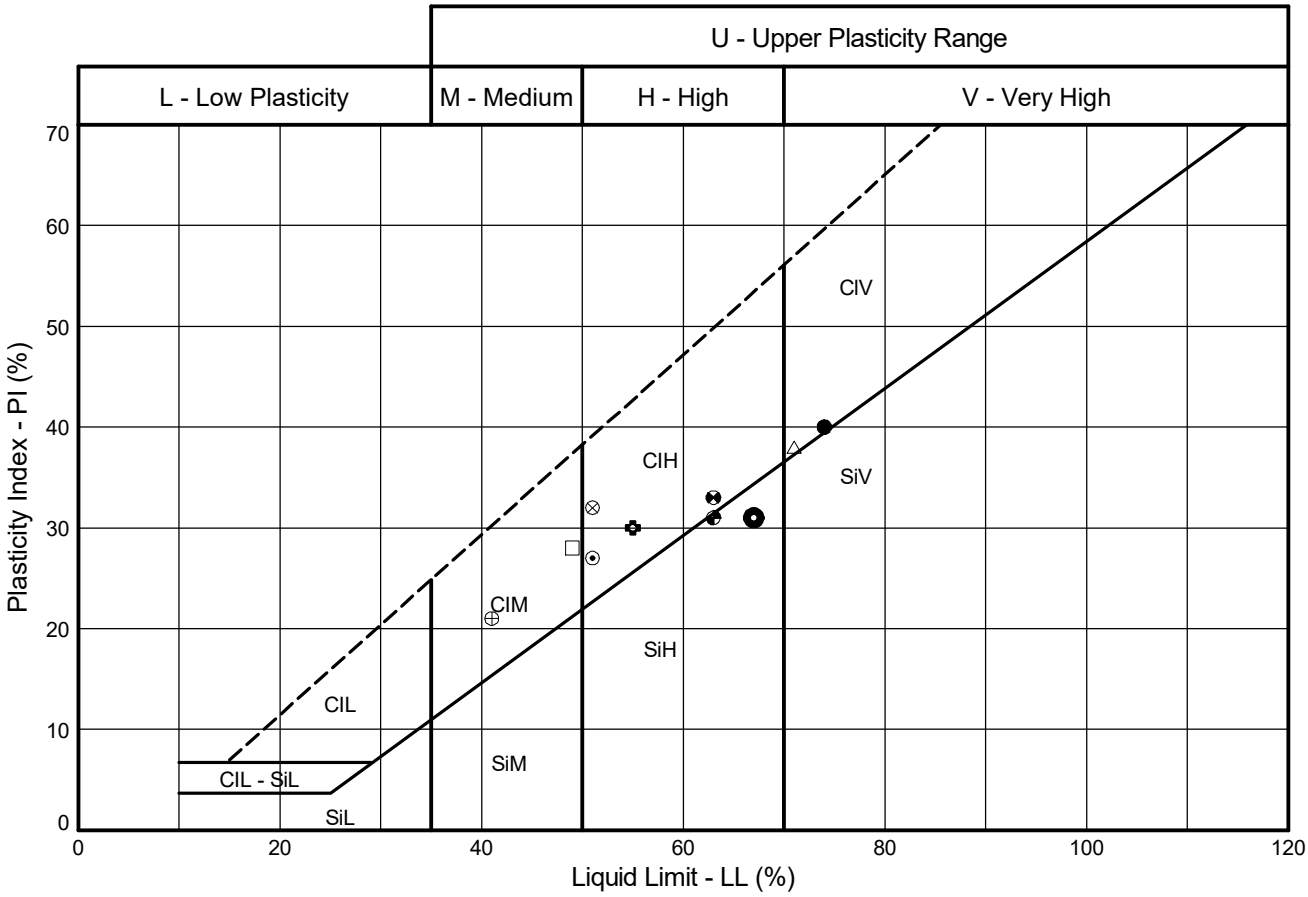
STRUCTURAL SOILS LTD

Compiled By		Date
[redacted]	[redacted]	03/04/24

Contract	Contract Ref:
SEA Link FEED - Kent Onshore Cable Link	**563607**

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)			%	%	%	%	%		
●	R22-BH204	45D	11.50	5.3/5.5/6.5	5.2.7	39.5	74	34	40	78	H	I
	R22-BH204	97D	25.60	5.3/5.5/6.5	5.2.7	50.7	NP	NP	NP	96	H	
	R22-BH204	105D	27.50	5.3/5.5/6.5	5.2.7	44.0	NP	NP	NP	98	H	
	R22-BH204	109D	28.50	5.3/5.5/6.5	5.2.7	51.1	NP	NP	NP	99	H	
⊙	R22-BH205	3D	1.00	5.3/5.5/6.5	5.2.7	36.2	51	24	27	100	H	I
✿	R22-BH205	7D	2.00	5.3/5.5/6.5	5.2.7	47.0	55	25	30	100	H	I
●	R22-BH205	10D	3.00	5.3/5.5/6.5	5.2.1	40.7	67	36	31	100	H	I
△	R22-BH205	14D	4.00	5.3/5.5/6.5	5.2.1	48.0	71	33	38	100	H	I
⊗	R22-BH205	18D	5.00	5.3/5.5/6.5	5.2.1	48.8	51	19	32	100	H	I
⊕	R22-BH205	22D	6.00	5.3/5.5/6.5	5.2.1	40.4	41	20	21	100	T	I
□	R22-BH205	26D	7.00	5.3/5.5/6.5	5.2.1	47.0	49	21	28	100	T	I
⊠	R22-BH205	29D	8.00	5.3/5.5/6.5	5.2.7	46.5	63	30	33	97	H	I
◓	R22-BH205	33D	9.00	5.3/5.5/6.5	5.2.7	34.8	63	32	31	96	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

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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)

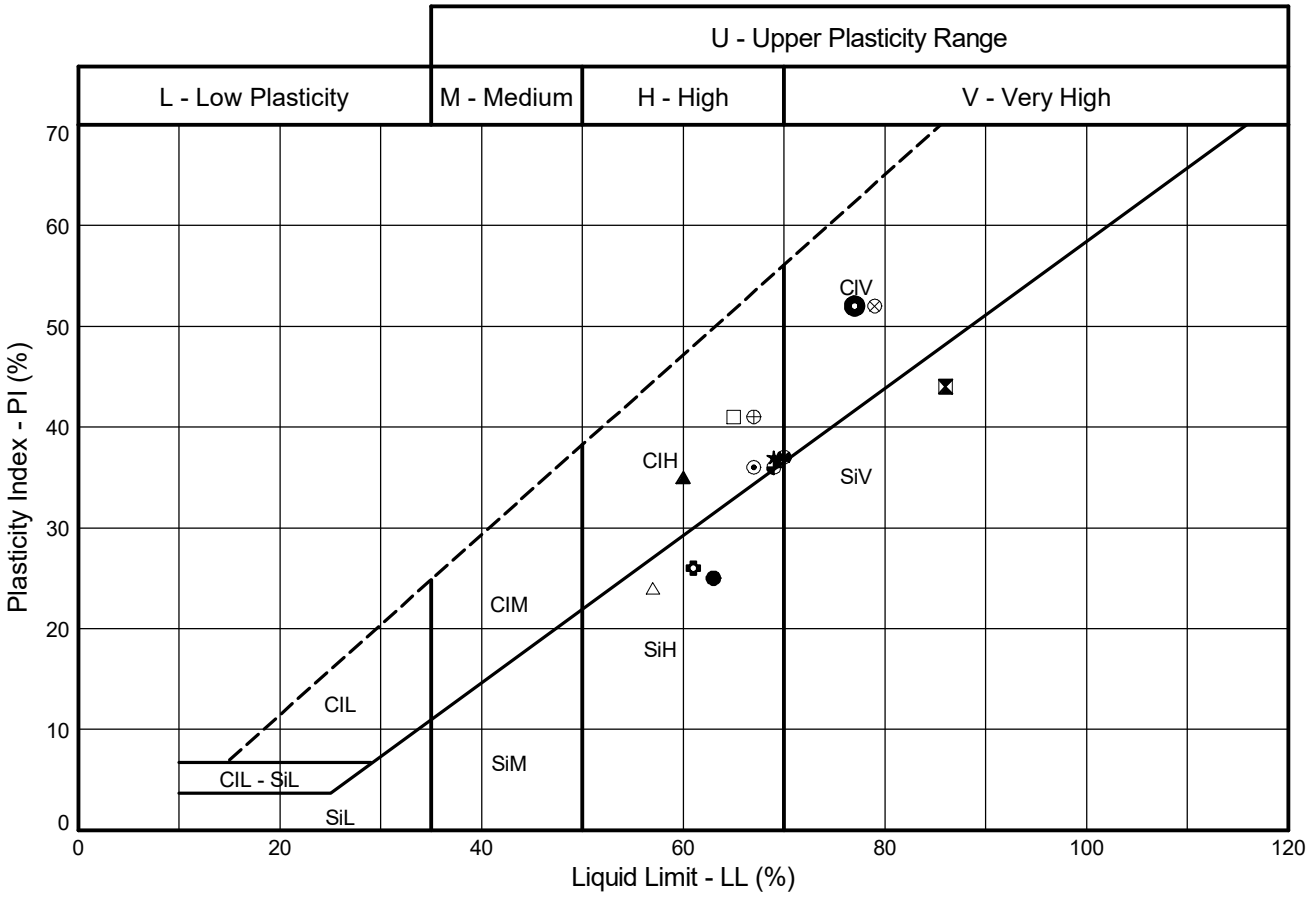
STRUCTURAL SOILS LTD

Compiled By		Date
[redacted]	[redacted]	03/04/24

Contract	Contract Ref:
SEA Link FEED - Kent Onshore Cable Link	**563607**

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)			%	%	%	%	%		
●	R22-BH205	39D	11.00	5.3/5.5/6.5	5.2.7	55.7	63	38	25	74	H	I
⊠	R22-BH205	51D	15.00	5.3/5.5/6.5	5.2.7	43.0	86	42	44	66	H	I
▲	R22-BH205	63D	19.00	5.3/5.5/6.5	5.2.7	42.3	60	25	35	93	T	I
★	R22-BH205	75D	23.00	5.3/5.5/6.5	5.2.1	41.2	69	32	37	100	H	I
⊙	R22-BH501	3D	1.00	5.3/5.5/6.5	5.2.7	30.1	67	31	36	100	H	I
✿	R22-BH501	7D	2.00	5.3/5.5/6.5	5.2.7	32.3	61	35	26	100	H	I
◉	R22-BH501	11DSPT	3.00	5.3/5.5/6.5	5.2.7	57.0	77	25	52	99	H	I
△	R22-BH501	15D	4.95	5.3/5.5/6.5	5.2.7	49.2	57	33	24	100	H	I
⊗	R22-BH501	18D	5.95	5.3/5.5/6.5	5.2.7	40.5	79	27	52	100	H	I
⊕	R22-BH501	23DSPT	7.50	5.3/5.5/6.5	5.2.7	50.1	67	26	41	100	H	I
□	R22-BH501	27D	8.95	5.3/5.5/6.5	5.2.7	37.6	65	24	41	100	H	I
⊠	R22-BH501	29DSPT	9.50	5.3/5.5/6.5	5.2.7	35.3	70	33	37	100	H	I
◓	R22-BH501	37D	12.00	5.3/5.5/6.5	5.2.7	40.5	69	33	36	32	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

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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
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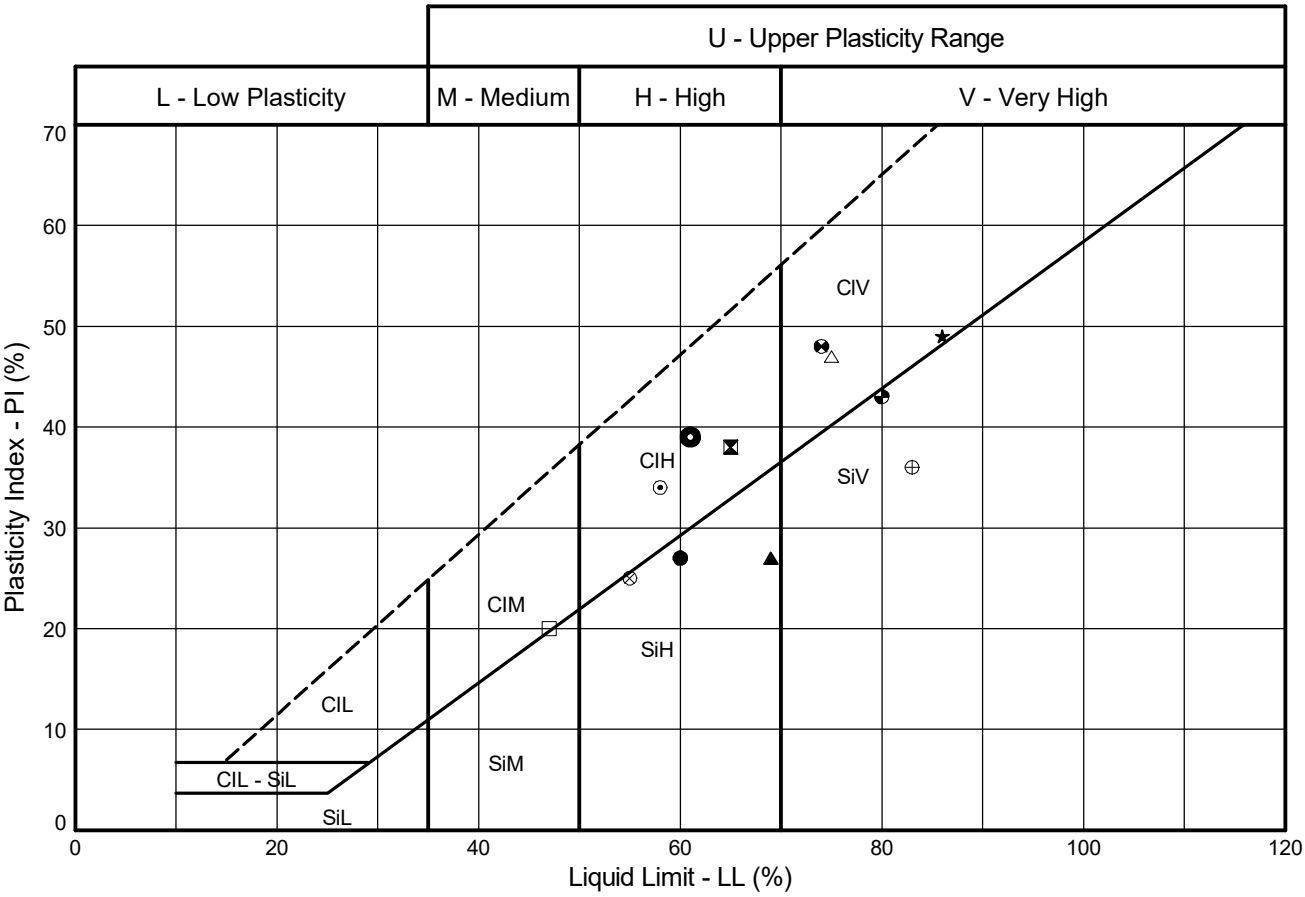
Contract	Contract Ref:
SEA Link FEED - Kent Onshore Cable Link	**563607**

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)			%	%	%	%	%		
●	R22-BH501	43D	14.00	5.3/5.5/6.5	5.2.7	36.0	60	33	27	61	H	I
⊠	R22-BH501	46D	15.00	5.3/5.5/6.5	5.2.7	23.2	65	27	38	51	T	I
▲	R22-BH501	55D	18.00	5.3/5.5/6.5	5.2.1	35.8	69	42	27	100	H	I
★	R22-BH501	64D	21.00	5.3/5.5/6.5	5.2.1	45.5	86	37	49	100	H	I
⊙	R22-BH501	73D	24.00	5.3/5.5/6.5	5.2.1	32.7	58	24	34	100	T	I
	R22-BH501	89D	29.00	5.3/5.5/6.5	5.2.7	34.0	NP	NP	NP	93	H	
◉	R22-BH502	5DSPT	1.20	5.3/5.5/6.5	5.2.1	32.8	61	22	39	100	H	I
△	R22-BH502	7D	2.00	5.3/5.5/6.5	5.2.7	56.6	75	28	47	100	H	I
⊗	R22-BH502	17D	5.00	5.3/5.5/6.5	5.2.7	58.2	55	30	25	100	H	I
⊕	R22-BH502	21D	6.00	5.3/5.5/6.5	5.2.7	79.8	83	47	36	99	H	I
□	R22-BH502	25D	7.00	5.3/5.5/6.5	5.2.7	62.7	47	27	20	99	H	I
⊠	R22-BH502	29D	8.00	5.3/5.5/6.5	5.2.7	42.4	74	26	48	99	H	I
◓	R22-BH502	33D	9.00	5.3/5.5/6.5	5.2.7	51.3	80	37	43	95	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)

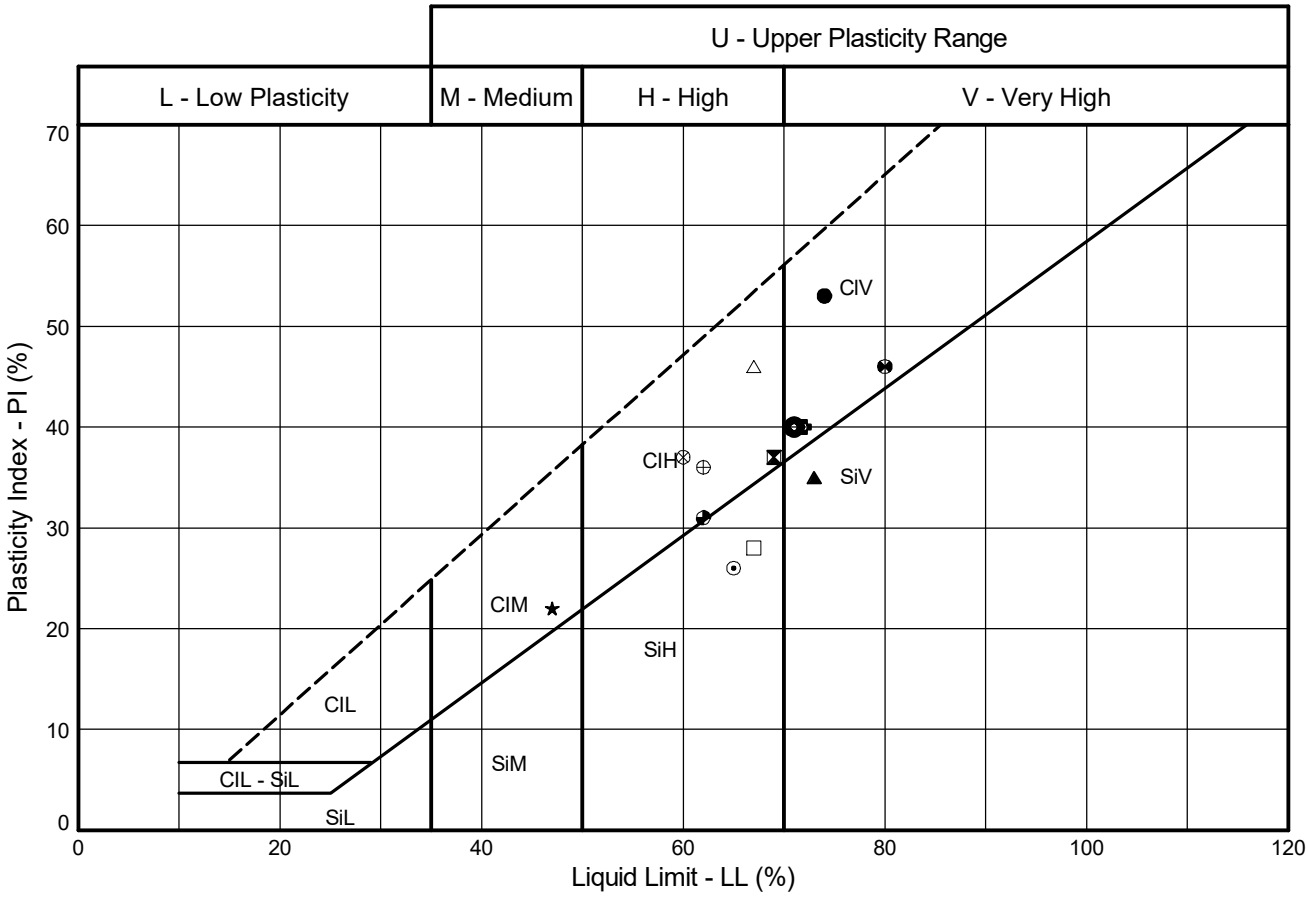
STRUCTURAL SOILS LTD

Compiled By		Date
[redacted]	[redacted]	03/04/24

Contract	Contract Ref:
SEA Link FEED - Kent Onshore Cable Link	**563607**

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)			%	%	%	%	%		
●	R22-BH502	37D	10.00	5.3/5.5/6.5	5.2.7	47.2	74	21	53	99	H	I
⊠	R22-BH502	41D	11.00	5.3/5.5/6.5	5.2.7	41.9	69	32	37	97	H	I
▲	R22-BH502	48D	13.00	5.3/5.5/6.5	5.2.7	54.0	73	38	35	48	H	I
★	R22-BH502	54D	15.00	5.3/5.5/6.5	5.2.7	21.4	47	25	22	25	H	I
⊙	R22-BH502	75D	22.00	5.3.14/5.5/6.5	5.2.7	41.4	65	39	26	95	H	
✿	R22-TP101	1D	0.50	5.3/5.5/6.5	5.2.1	27.2	72	32	40	100	H	I
◉	R22-TP101	5D	0.90	5.3/5.5/6.5	5.2.7	37.6	71	31	40	100	H	I
△	R22-TP101	13D	1.50	5.3/5.5/6.5	5.2.7	61.6	67	21	46	100	H	I
⊗	R22-TP102	1D	0.50	5.3/5.5/6.5	5.2.7	23.7	60	23	37	99	H	I
⊕	R22-TP102	7D	1.00	5.3/5.5/6.5	5.2.7	43.0	62	26	36	100	H	I
□	R22-TP102	11D	1.50	5.3/5.5/6.5	5.2.7	49.4	67	39	28	100	H	I
⊠	R22-TP102	14D	2.50	5.3/5.5/6.5	5.2.1	64.5	80	34	46	100	H	I
◓	R22-TP103	1D	0.50	5.3/5.5/6.5	5.2.7	39.1	62	31	31	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)

STRUCTURAL SOILS LTD

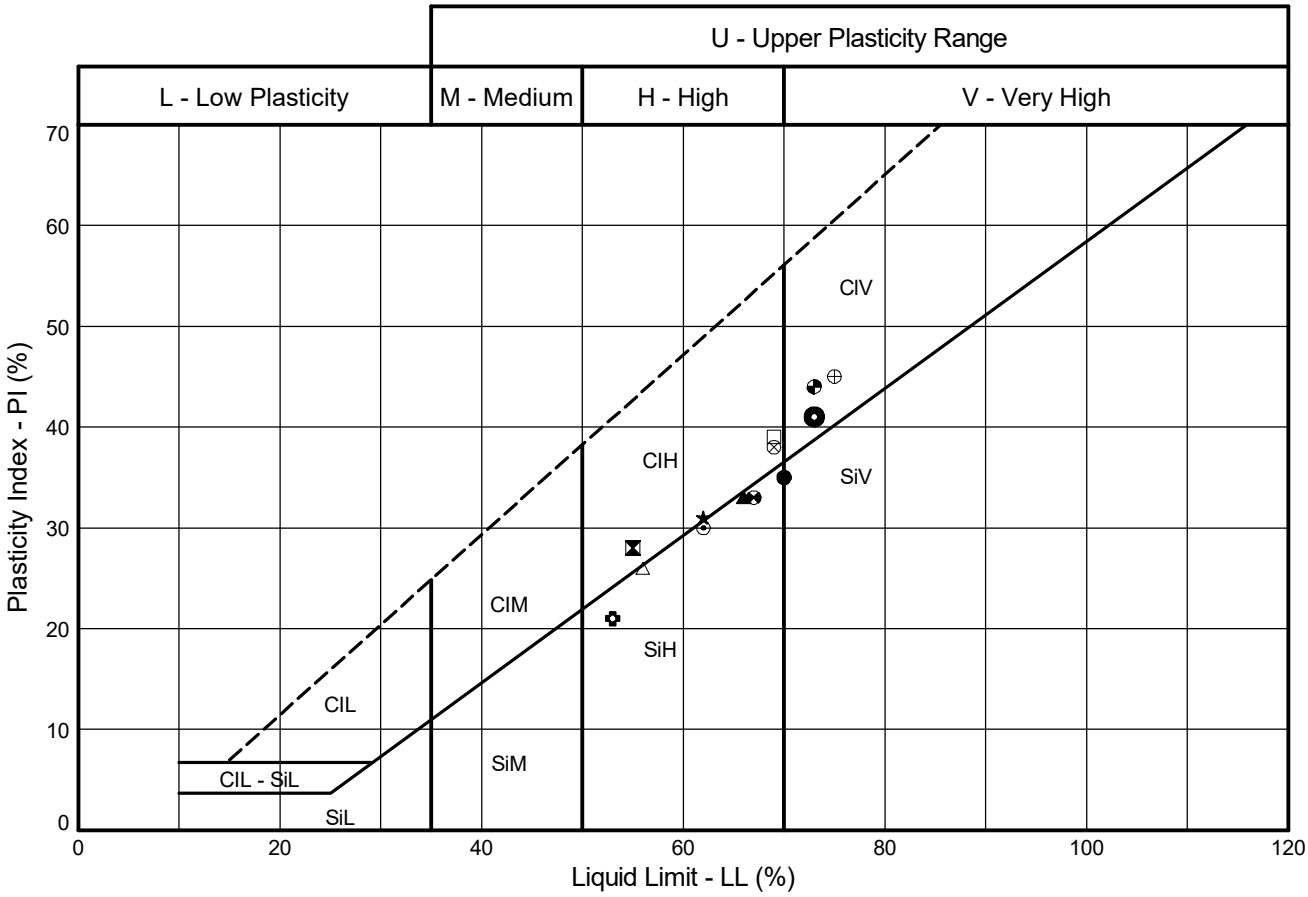
Compiled By		Date
[redacted]	[redacted]	**03/04/24**

Contract	Contract Ref:
SEA Link FEED - Kent Onshore Cable Link	**563607**

AGS

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)			%	%	%	%	%		
●	R22-TP103	12D	1.50	5.3/5.5/6.5	5.2.1	69.4	70	35	35	100	H	I
⊠	R22-TP103	16D	3.50	5.3/5.5/6.5	5.2.7	66.4	55	27	28	98	H	I
▲	R22-TP104	1D	0.50	5.3/5.5/6.5	5.2.7	28.3	66	33	33	100	H	I
★	R22-TP104	5D	0.90	5.3/5.5/6.5	5.2.7	38.6	62	31	31	99	H	I
⊙	R22-TP104	10B	1.10	5.3/5.5/6.5	5.2.7	50.4	62	32	30	100	H	I
✿	R22-TP105	3D	0.70	5.3/5.5/6.5	5.2.7	25.2	53	32	21	100	H	I
◉	R22-TP105	12D	1.50	5.3/5.5/6.5	5.2.1	30.1	73	32	41	100	H	I
△	R22-TP105	14D	2.50	5.3/5.5/6.5	5.2.1	65.7	56	30	26	100	H	I
⊗	R22-TP106	1D	0.50	5.3/5.5/6.5	5.2.1	32.7	69	31	38	100	H	I
⊕	R22-TP106	8D	1.00	5.3/5.5/6.5	5.2.1	45.9	75	30	45	100	H	I
□	R22-TP106	12D	1.50	5.3/5.5/6.5	5.2.1	74.2	69	30	39	100	H	I
⊠	R22-TP107	1D	0.50	5.3/5.5/6.5	5.2.7	29.8	67	34	33	99	H	I
◕	R22-TP107	10D	1.10	5.3/5.5/6.5	5.2.1	48.5	73	29	44	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)

STRUCTURAL SOILS LTD

Compiled By		Date
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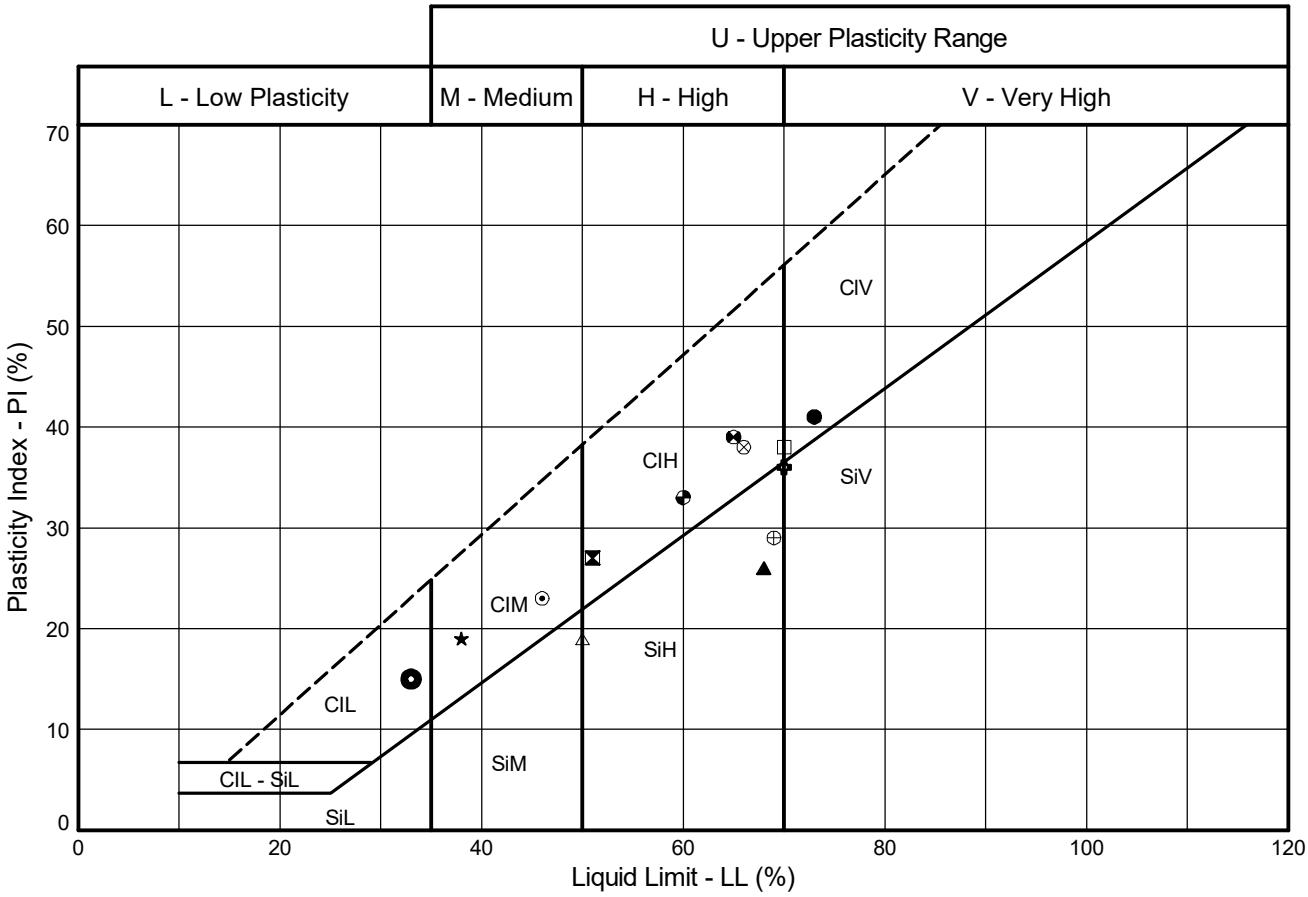
Contract	Contract Ref:
SEA Link FEED - Kent Onshore Cable Link	**563607**

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)			%	%	%	%	%		
●	R22-TP107	15D	2.50	5.3/5.5/6.5	5.2.1	75.4	73	32	41	100	H	I
⊠	R22-TP201	3D	0.70	5.3/5.5/6.5	5.2.7	14.1	51	24	27	97	H	I
▲	R22-TP201	13D	2.00	5.3/5.5/6.5	5.2.7	45.1	68	42	26	96	H	I
★	R22-TP202	3D	0.70	5.3/5.5/6.5	5.2.7	12.0	38	19	19	99	H	I
⊙	R22-TP202	10D	1.50	5.3/5.5/6.5	5.2.7	29.8	46	23	23	98	T	I
✿	R22-TP203	1D	0.50	5.3/5.5/6.5	5.2.7	12.6	70	34	36	91	H	I
◉	R22-TP203	6D	0.90	5.3/5.5/6.5	5.2.7	13.4	33	18	15	94	T	I
△	R22-TP203	12D	1.50	5.3/5.5/6.5	5.2.7	27.8	50	31	19	100	H	I
⊗	R22-TP204	3D	0.70	5.3/5.5/6.5	5.2.7	33.3	66	28	38	100	H	I
⊕	R22-TP204	13D	1.70	5.3/5.5/6.5	5.2.7	63.3	69	40	29	100	H	I
□	R22-TP204	16D	2.70	5.3/5.5/6.5	5.2.7	40.6	70	32	38	100	H	I
⊠	R22-TP205	1D	0.50	5.3/5.5/6.5	5.2.1	6.4	65	26	39	100	H	I
◕	R22-TP205	10D	1.10	5.3/5.5/6.5	5.2.1	31.7	60	27	33	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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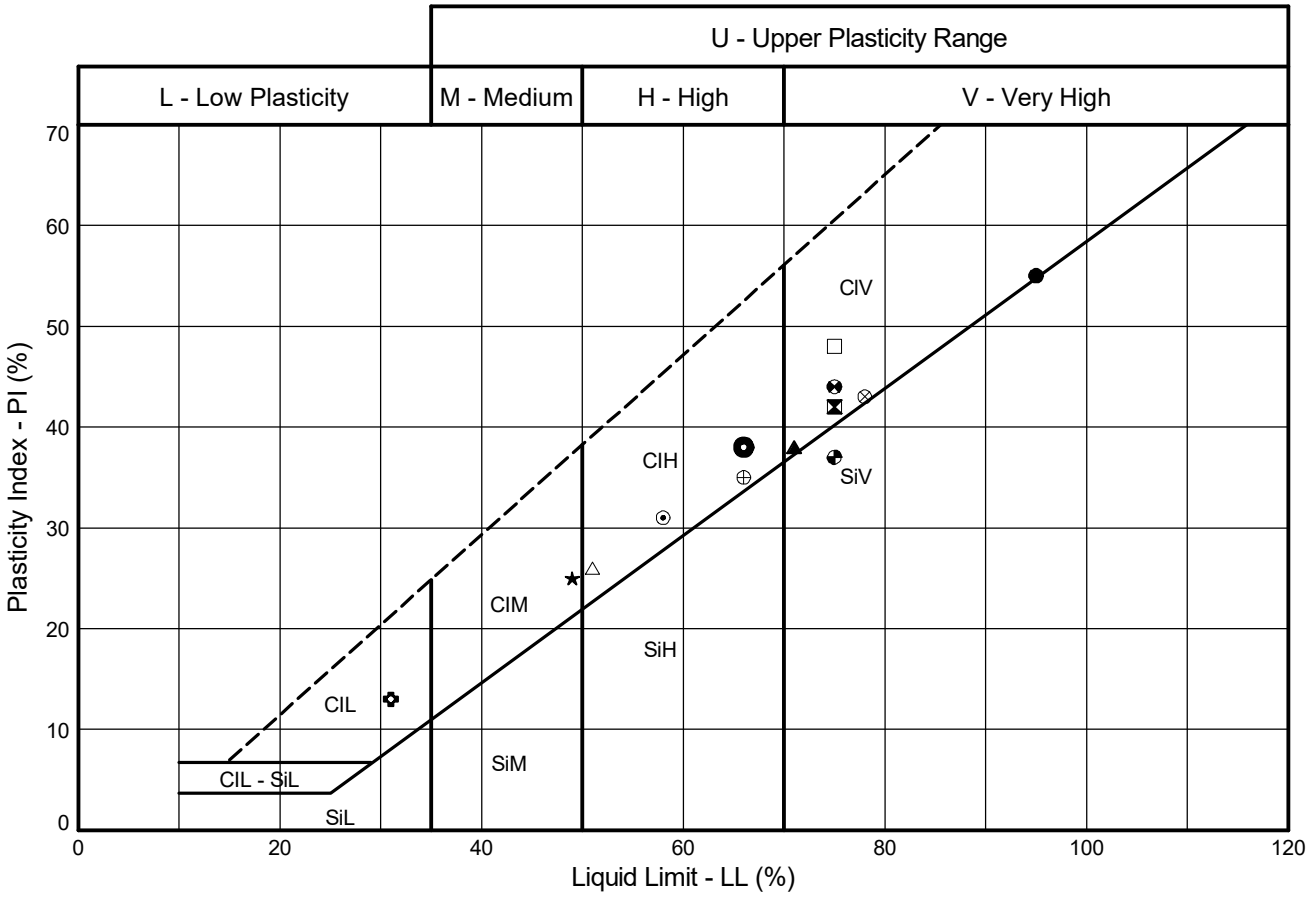
Compiled By		Date
[redacted]	[redacted]	03/04/24

Contract	Contract Ref:
SEA Link FEED - Kent Onshore Cable Link	**563607**

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)			%	%	%	%	%		
●	R22-TP205	15D	2.70	5.3/5.5/6.5	5.2.1	80.0	95	40	55	100	H	I
⊠	R22-TP405	1D	0.50	5.3/5.5/6.5	5.2.7	34.8	75	33	42	100	H	I
▲	R22-TP405	6D	1.50	5.3/5.5/6.5	5.2.7	62.9	71	33	38	100	H	I
★	R22-TP501	6D	1.50	5.3/5.5/6.5	5.2.7	38.0	49	24	25	98	H	I
⊙	R22-TP501	8D	2.50	5.3/5.5/6.5	5.2.7	32.8	58	27	31	97	T	I
✿	R22-TP502	1D	0.50	5.3/5.5/6.5	5.2.7	9.8	31	18	13	98	T	I
◉	R22-TP502	6D	1.40	5.3/5.5/6.5	5.2.7	32.8	66	28	38	100	H	I
△	R22-TP503A	1D	0.50	5.3/5.5/6.5	5.2.7	28.4	51	25	26	100	H	I
⊗	R22-TP503A	9D	2.50	5.3/5.5/6.5	5.2.1	45.4	78	35	43	100	H	I
⊕	R22-TP504	1D	0.50	5.3/5.5/6.5	5.2.7	24.1	66	31	35	99	H	I
□	R22-TP504	6D	1.50	5.3/5.5/6.5	5.2.1	41.5	75	27	48	100	H	I
⊠	R22-TP505	1D	0.50	5.3/5.5/6.5	5.2.7	24.1	75	31	44	100	H	I
◕	R22-TP505	3D	1.00	5.3/5.5/6.5	5.2.1	47.1	75	38	37	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)

STRUCTURAL SOILS LTD

Compiled By		Date
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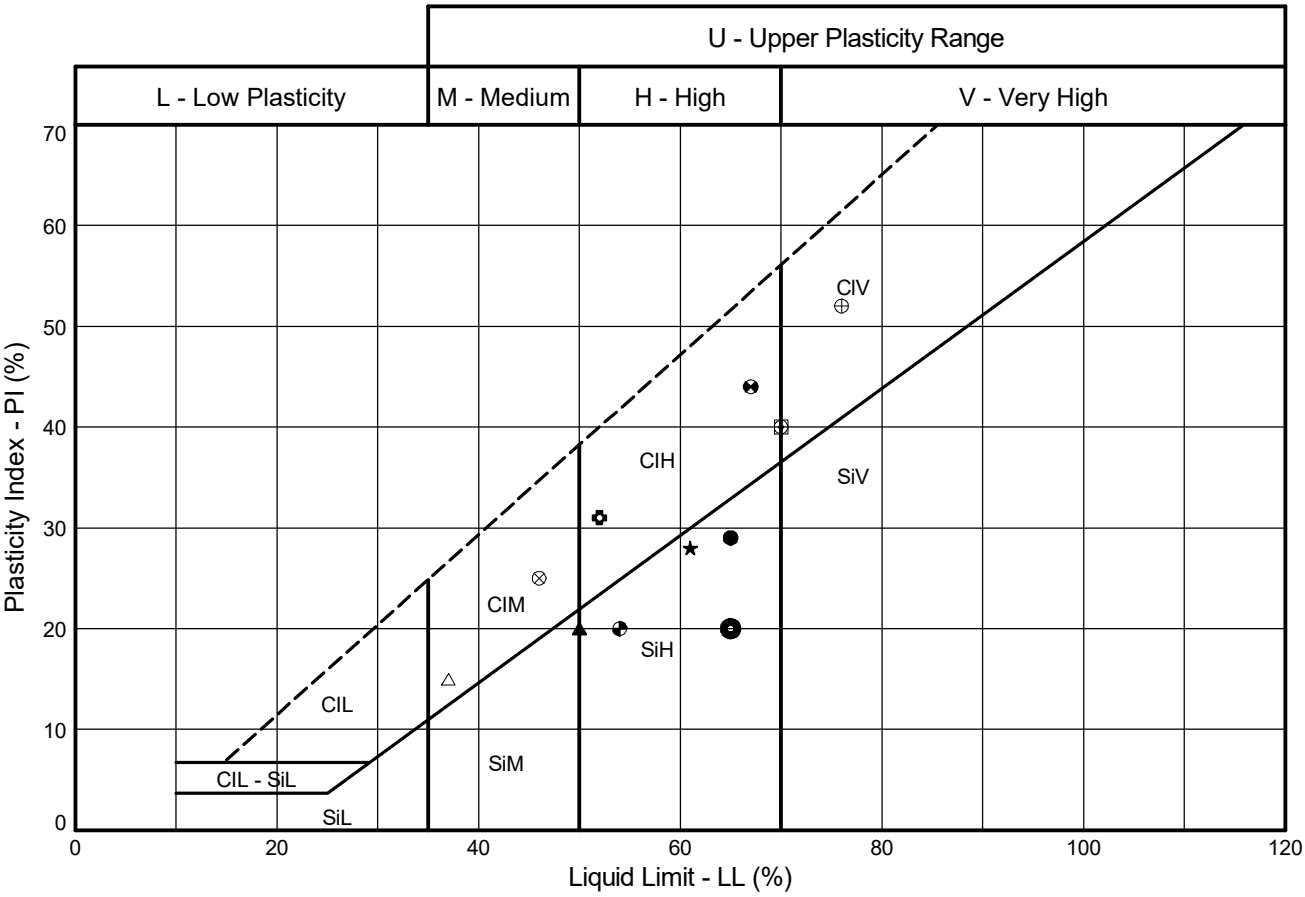
Contract	Contract Ref:
SEA Link FEED - Kent Onshore Cable Link	**563607**

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)			%	%	%	%	%		
●	R22-TP506	3D	1.00	5.3/5.5/6.5	5.2.7	55.6	65	36	29	100	H	I
	R22-TP506	9D	2.50	5.3/5.5/6.5	5.2.1	31.3	NP	NP	NP	100	H	
▲	R22-TP508	1D	0.50	5.3/5.5/6.5	5.2.7	32.8	50	30	20	99	H	I
★	R22-TP508	3D	1.00	5.3/5.5/6.5	5.2.7	33.7	61	33	28	100	H	I
⊙	R22-TP508	8D	2.50	5.3/5.5/6.5	5.2.7	54.3	70	30	40	100	H	I
✿	R22-TP510	3D	1.00	5.3/5.5/6.5	5.2.7	28.0	52	21	31	100	T	I
◉	R22-TP510	9D	2.50	5.3/5.5/6.5	5.2.7	56.6	65	45	20	99	H	I
△	RedP-BH-6	6D	2.00	5.3/5.5/6.5	5.2.7	12.8	37	22	15	63	C	I
⊗	RedP-BH-6	10D	3.00	5.3/5.5/6.5	5.2.7	30.9	46	21	25	51	C	I
⊕	RedP-BH-6	14D	4.00	5.3/5.5/6.5	5.2.7	43.7	76	24	52	97	T	I
□	RedP-BH-6	18D	5.00	5.3/5.5/6.5	5.2.7	34.6	70	30	40	99	H	I
⊠	RedP-BH-6	22D	6.00	5.3/5.5/6.5	5.2.1	33.8	67	23	44	100	T	I
◒	RedP-BH-6	26D	7.00	5.3/5.5/6.5	5.2.7	39.6	54	34	20	93	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)

STRUCTURAL SOILS LTD

Compiled By		Date
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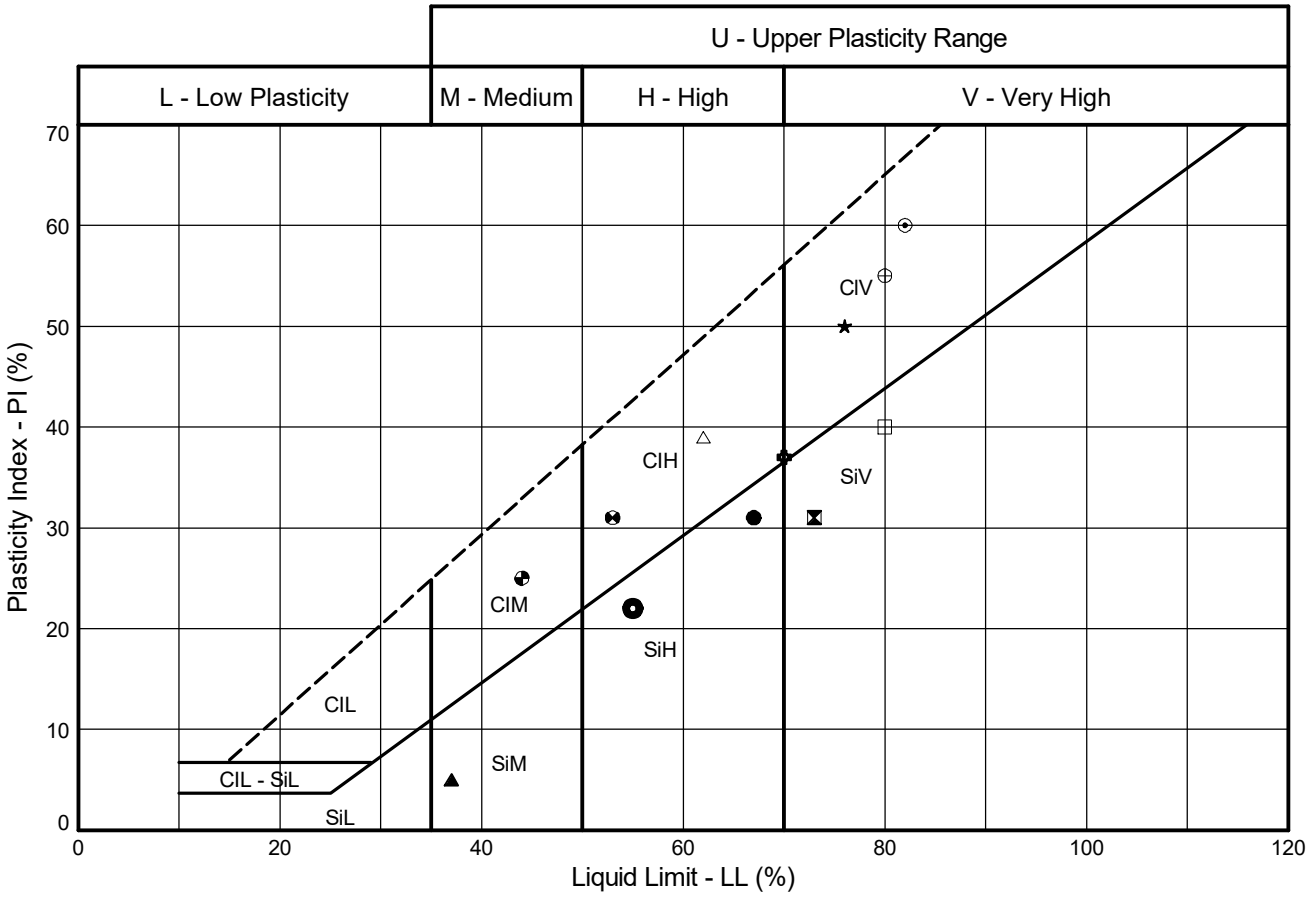
SEA Link FEED - Kent Onshore Cable Link	**563607**

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)			%	%	%	%	%		
●	RedP-BH-7	6UT	1.50	5.3/5.5/6.5	5.2.7	46.3	67	36	31	98	H	I
⊠	RedP-BH-7	14D	4.00	5.3/5.5/6.5	5.2.7	63.6	73	42	31	100	T	I
▲	RedP-BH-7	18D	5.00	5.3.14/5.5/6.5	5.2.7	26.5	37	32	5	87	H	I
★	RedP-BH-8	3D	1.00	5.3/5.5/6.5	5.2.1	42.0	76	26	50	100	T	I
⊙	RedP-BH-8	7D	2.00	5.3/5.5/6.5	5.2.1	44.3	82	22	60	100	T	I
✿	RedP-BH-8	13D	4.00	5.3/5.5/6.5	5.2.1	34.0	70	33	37	100	H	I
◉	RedP-BH-8	20D	6.45	5.3/5.5/6.5	5.2.1	27.1	55	33	22	100	T	I
△	RedP-BH-9	12D	3.00	5.3/5.5/6.5	5.2.7	42.2	62	23	39	95	T	I
	RedP-BH-9	18DSPT	4.00	5.3/5.5/6.5	5.2.7	52.8	108	27	81	100	H	I
⊕	RedP-BH-9	20D	5.00	5.3/5.5/6.5	5.2.7	46.4	80	25	55	98	T	I
□	RedP-BH-9	28D	7.00	5.3/5.5/6.5	5.2.7	46.6	80	40	40	99	H	I
⊗	RedP-BH-10	38D	10.00	5.3/5.5/6.5	5.2.7	26.0	53	22	31	71	H	I
◕	RedP-BH-10	46D	12.00	5.3/5.5/6.5	5.2.7	30.9	44	19	25	100	T	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

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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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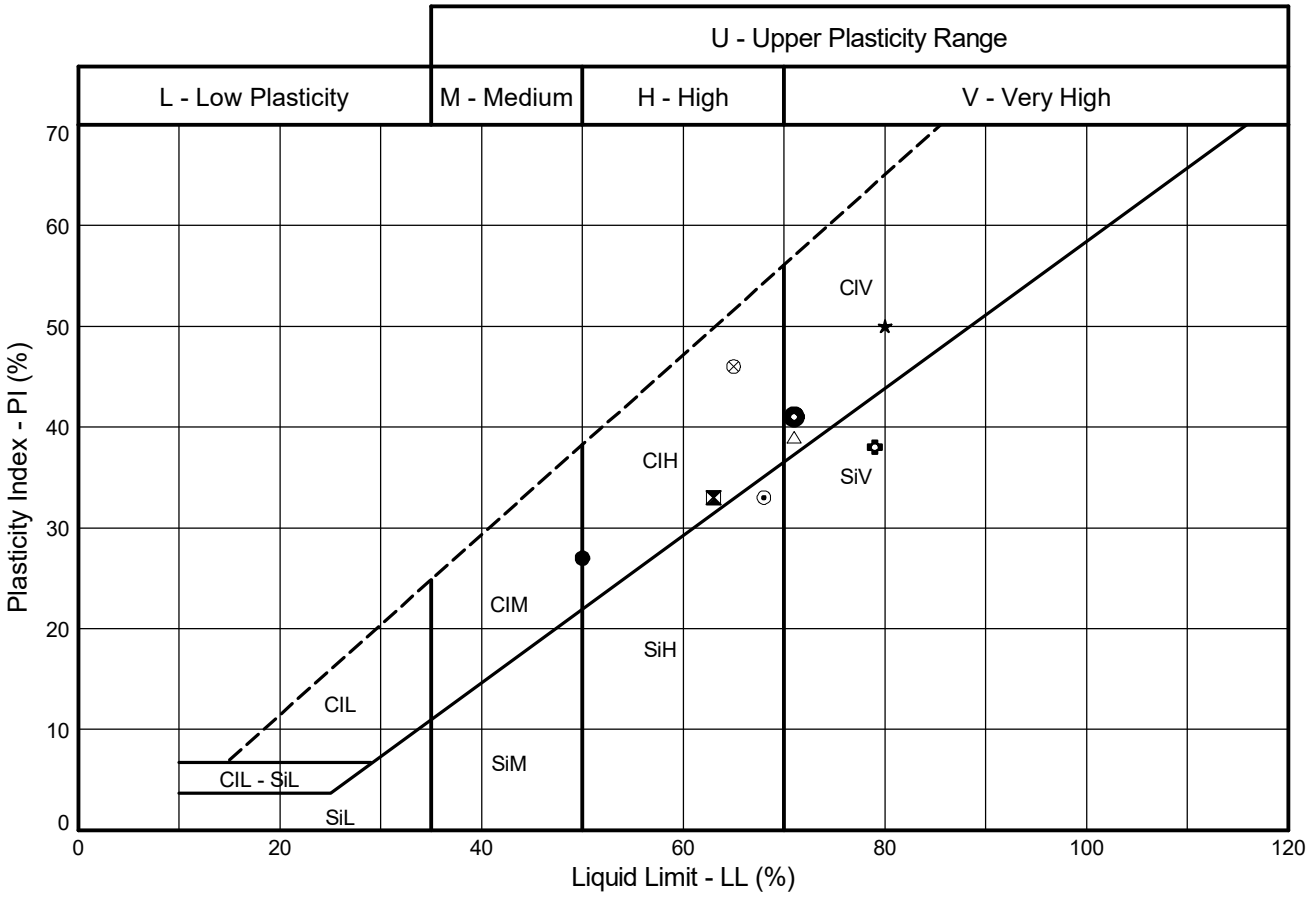
SEA Link FEED - Kent Onshore Cable Link	**563607**

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)			%	%	%	%	%		
●	RedP-BH-10	54D	14.00	5.3/5.5/6.5	5.2.7	69.2	50	23	27	97	T	I
⊠	RedP-BH-11	17D	4.50	5.3/5.5/6.5	5.2.7	42.0	63	30	33	81	T	I
	RedP-BH-11	20D	5.45	5.3/5.5/6.5	5.2.7	34.2	NP	NP	NP	29	H	
★	RedP-BH-11	25D	6.50	5.3/5.5/6.5	5.2.7	38.7	80	30	50	98	H	I
⊙	RedP-BH-11	34B	8.70	5.3/5.5/6.5	5.2.7	40.7	68	35	33	57	H	I
✿	RedP-BH-11	39D	10.50	5.3/5.5/6.5	5.2.7	45.7	79	41	38	79	H	I
◉	RedP-BH-11	43D	11.50	5.3/5.5/6.5	5.2.7	45.7	71	30	41	62	T	I
△	RedP-BH-11	55D	14.50	5.3.14/5.5/6.5	5.2.7	48.4	71	32	39	47	T	
⊗	RedP-BH-11	67D	17.50	5.3/5.5/6.5	5.2.7	55.3	65	19	46	95	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)

STRUCTURAL SOILS LTD

Compiled By		Date
[redacted]	[redacted]	03/04/24

Contract	Contract Ref:
SEA Link FEED - Kent Onshore Cable Link	**563607**

AGS

SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
R22-BH101	2	D	0.50	25.0	61	32	29	99	Brown slightly sandy clayey SILT
R22-BH101	4	D	1.00	32.5	61	28	33	100	Brown sandy silty CLAY
R22-BH101	38	D	1.50	56.7	54	25	29	100	Greyish brown mottled brown CLAY
R22-BH101	13	D	3.45	80.5	85	43	42	100	Dark brown mottled black claye SILT
R22-BH101	19	D	5.45	55.1	66	27	39	99	Brown mottled greyish brown CLAY with organic matter
R22-BH101	25	D	7.45	47.2	65	29	36	98	Brown mottled grey slightly gravelly CLAY
R22-BH101	31	D	9.50	52.8	61	32	29	96	Greenish brown mottled grey sandy clayey SILT
R22-BH101	35	D	10.45	42.6	83	29	54	100	Brown mottled light grey slightly sandy silty CLAY

SYMBOLS: * denotes BS 1377

SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
R22-BH101	42	D	12.45	33.6	74	40	34	43	Dark brown sandy CLAY
R22-BH101	52	DSPT	16.00	34.0	72	24	48	49	Dark brown sandy CLAY
R22-BH101	62	DSPT	21.00	34.8	74	28	46	99	Grey mottled dark brown sandy CLAY
R22-BH101	68	DSPT	24.00	28.9	70	30	40	99	Greyish brown sandy CLAY
R22-BH102	3	D	1.00	43.9	70	28	42	100	Brown mottled grey and orangish brown slightly sandy CLAY
R22-BH102	7	D	2.00	41.4	83	28	55	100	Brown mottled grey slightly gravelly slightly sandy CLAY
R22-BH102	11	D	3.00	43.4	70	30	40	100	Light brown mottled grey slightly sandy CLAY
R22-BH102	17	D	4.50	50.4	84	31	53	100	Brown mottled grey slightly gravelly slightly sandy CLAY

SYMBOLS: * denotes BS 1377

STRUCTURAL SOILS LTD

Contract:

SEA Link FEED - Kent Onshore Cable Link

Contract Ref:

563607

AGS

SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
R22-BH102	21	D	5.50	47.4	51	22	29	100	Brown slightly sandy CLAY
R22-BH102	29	D	7.50	48.8	55	25	30	100	Brown sandy CLAY
R22-BH102	35	D	9.00	45.2	57	21	36	80	Brown mottled grey and green slightly sandy CLAY with shell fragments
R22-BH102	42	D	11.00	49.1	65	41	24	65	Brown gravelly clayey SILT
R22-BH102	48	D	13.00	46.2	74	31	43	92	Dark grey gravelly slightly sandy CLAY with claystone
R22-BH102	57	D	16.00	46.9	68	36	32	69	Dark grey slightly gravelly slightly sandy clayey SILT with claystone
R22-BH102	66	D	19.00	42.1	84	30	54	94	Dark grey slightly gravelly slightly sandy silty CLAY with claystone
R22-BH102	75	D	22.00	48.2	80	49	31	72	Dark brown slightly gravelly slightly sandy clayey SILT

SYMBOLS: * denotes BS 1377

SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
R22-BH102	84	D	25.00	30.7	83	24	59	99	Dark greyish brown slightly gravelly slightly sandy CLAY
R22-BH103	1	D	0.50	51.6	55	27	28	100	Brown mottled grey CLAY
R22-BH103	3	D	1.00	39.2	68	26	42	100	Brown mottled orangish brown and grey slightly sandy CLAY
R22-BH103	7	D	2.00	55.8	66	40	26	100	Brown mottled grey slightly sandy clayey SILT
R22-BH103	11	D	2.95	50.3	66	25	41	100	Grey mottled brown CLAY
R22-BH103	14	D	3.95	82.7	70	35	35	100	Brown mottled dark grey slightly sandy clayey SILT
R22-BH103	17	D	4.90	59.9	70	32	38	100	Brown mottled grey slightly sandy CLAY
R22-BH103	22	D	6.45	30.7	NP	NP	NP	99	Brown mottled grey sandy CLAY with chalk

SYMBOLS: * denotes BS 1377

STRUCTURAL SOILS LTD

Contract:

SEA Link FEED - Kent Onshore Cable Link

Contract Ref:

563607

AGS

SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
R22-BH103	26	D	8.00	43.8	55	23	32	98	Light brown mottled orangish brown and grey slightly gravelly slightly sandy CLAY
R22-BH103	31	D	9.60	48.5	73	35	38	100	Grey mottled orangish brown slightly sandy clayey SILT
R22-BH103	40	D	12.45	29.9	73	37	36	100	Greyish brown slightly sandy clayey SILT
R22-BH103	49	DSPT	16.00	32.7	73	34	39	100	Dark brown slightly sandy CLAY
R22-BH103	57	DSPT	20.00	29.3	74	31	43	97	Dark brown and grey slightly sandy CLAY
R22-BH103	65	DSPT	24.00	29.6	70	29	41	100	Dark brown slightly sandy CLAY
R22-BH104	1	D	0.50	31.4	67	31	36	99	Brown slightly sandy CLAY
R22-BH104	3	D	1.00	48.2	70	36	34	100	Brown slightly sandy clayey SILT

SYMBOLS: * denotes BS 1377

SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
R22-BH104	6	D	2.00	52.6	57	35	22	99	Brown slightly sandy clayey SILT
R22-BH104	11	D	3.50	25.1	74	24	50	99	Brown mottled light grey slightly sandy CLAY
R22-BH104	16	D	5.00	39.4	47	26	21	96	Light brown mottled light grey and white sandy CLAY with shell fragments
R22-BH104	23	D	7.00	36.5	63	28	35	99	Light brown mottled white slightly gravelly sandy CLAY with chalk
R22-BH104	27	D	8.00	35.3	67	30	37	70	Brown slightly gravelly CLAY with chalk
R22-BH104	30	D	9.00	33.3	80	27	53	39	Brown gravelly sandy CLAY
R22-BH104	40	D	12.00	40.0	55	32	23	93	Dark brown slightly sandy clayey SILT
R22-BH104	49	D	15.00	44.8	65	36	29	58	Dark grey gravelly sandy clayey SILT

SYMBOLS: * denotes BS 1377

SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
R22-BH104	67	D	21.00	55.4	66	23	43	23	Grey gravelly CLAY
R22-BH104	76	D	24.00	50.0	80	36	44	100	Dark brown CLAY
R22-BH105	4	D	1.65	51.6	63	23	40	100	Light brown mottled grey slightly gravelly slightly sandy CLAY
R22-BH105	8	D	2.50	52.5	65	41	24	100	Brown mottled grey slightly sandy clayey SILT
R22-BH105	11	D	3.45	48.9	68	47	21	100	Dark brown mottled grey sandy clayey SILT
R22-BH105	15	D	4.45	31.5	71	43	28	97	Brown mottled dark grey slightly sandy clayey SILT
R22-BH105	19	D	5.45	41.8	46	20	26	100	Grey mottled brown sandy CLAY
R22-BH105	23	D	6.45	37.4	73	32	41	98	Brown mottled greenish brown and black slightly gravelly slightly sandy CLAY with peat

SYMBOLS: * denotes BS 1377

SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
R22-BH105	31	D	8.45	39.7	NP	NP	NP	38	Brown mottled grey sandy CLAY
R22-BH105	40	D	10.60	51.7	69	40	29	74	Grey slightly sandy gravelly CLAY
R22-BH105	52	D	13.50	38.3	86	40	46	63	Dark grey slightly sandy gravelly clayey SILT
R22-BH105	64	D	16.50	38.6	NP	NP	NP	66	Dark brown slightly clayey GRAVEL
R22-BH105	72	D	18.50	55.6	86	27	59	73	Dark grey slgihtly sandy slightly gravelly CLAY
R22-BH105	80	D	20.50	62.1	91	34	57	92	Dark grey slightly gravelly slightly sandy CLAY
R22-BH105	88	D	22.60	45.6	56	34	22	97	Dark grey slightly gravelly slightly sandy CLAY
R22-BH105	96	D	24.60	41.3	73	37	36	100	Dark grey clayey SILT

SYMBOLS: * denotes BS 1377

SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
R22-BH106A	1	D	1.00	41.2	51	24	27	100	Brown mottled orangish brown and grey slightly sandy CLAY
R22-BH106A	5	D	2.00	50.6	68	31	37	100	Brown mottled grey slightly sandy CLAY
R22-BH106A	11	D	3.45	56.7	70	36	34	100	Brown mottled dark grey slightly sandy CLAY
R22-BH106A	15	D	4.45	69.8	74	42	32	97	Brown mottled dark grey slightly gravelly slightly sandy CLAY with peat
R22-BH106A	19	D	5.45	34.8	NP	NP	NP	100	Greenish brown sandy CLAY
R22-BH106A	23	D	6.45	33.6	54	33	21	100	Light brown mottled grey slightly gravelly sandy clayey SILT
R22-BH106A	32	DSPT	10.00	28.5	73	39	34	74	Dark grey slightly sandy clayey SILT
R22-BH106A	36	DSPT	12.00	31.4	74	39	35	84	Dark brown mottled grey sandy clayey SILT

SYMBOLS: * denotes BS 1377

SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
R22-BH106A	40	DSPT	14.00	28.3	69	38	31	73	Grey slightly sandy clayey SILT
R22-BH106A	46	DSPT	17.00	34.3	73	38	35	57	Dark brown mottled grey sandy clayey SILT
R22-BH106A	50	DSPT	19.00	46.1	74	37	37	60	Dark grey slightly gravelly slightly sandy clayey SILT with claystone
R22-BH106A	54	DSPT	21.00	33.4	74	35	39	89	Grey sandy clayey SILT
R22-BH106A	60	DSPT	24.00	28.2	63	31	32	100	Grey slightly sandy clayey SILT
R22-BH203	3	D	1.00	20.0	43	21	22	98	Brown slightly gravelly very sandy CLAY
R22-BH203	7	D	2.00	29.3	50	25	25	100	Light orangish brown mottled grey slightly gravelly very sandy CLAY
R22-BH203	14	D	4.00	31.3	67	30	37	92	Brown mottled grey slightly sandy slightly gravelly CLAY

SYMBOLS: * denotes BS 1377

SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
R22-BH203	21	D	6.00	32.5	72	39	33	61	Greyish brown slightly gravelly sandy clayey SILT
R22-BH203	27	D	8.00	41.5	64	37	27	90	Dark grey sandy gravelly clayey SILT
R22-BH203	33	D	10.00	39.2	68	38	30	84	Grey slightly gravelly SILTSTONE
R22-BH203	39	D	12.00	39.0	57	25	32	98	Dark grey slightly sandy gravelly clayey SILT
R22-BH203	48	D	15.00	49.0	78	36	42	76	Dark grey sandy gravelly clayey SILT
R22-BH204	8	D	2.45	29.8	75	32	43	100	Light brown slightly sandy CLAY
R22-BH204	13	D	3.50	42.1	61	27	34	68	Light brown slightly gravelly slightly sandy CLAY
R22-BH204	17	D	4.55	43.3	65	33	32	66	Brown mottled dark grey slightly gravelly slightly sandy clayey SILT

SYMBOLS: * denotes BS 1377

SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
R22-BH204	21	D	5.50	40.9	79	29	50	92	Dark grey slightly gravelly slightly sandy CLAY
R22-BH204	29	D	7.50	39.8	70	31	39	89	Dark brown slightly gravelly slightly sandy CLAY
R22-BH204	37	D	9.50	44.0	72	38	34	93	Dark grey slightly gravelly slightly sandy clayey SILT
R22-BH204	45	D	11.50	39.5	74	34	40	78	Dark grey slightly gravelly slightly sandy CLAY
R22-BH204	97	D	25.60	50.7	NP	NP	NP	96	Light grey mottled off white sandy CLAY with chalk
R22-BH204	105	D	27.50	44.0	NP	NP	NP	98	White mottled light grey CLAY with chalk
R22-BH204	109	D	28.50	51.1	NP	NP	NP	99	White slightly gravelly CHALK
R22-BH205	3	D	1.00	36.2	51	24	27	100	Brown slightly sandy CLAY

SYMBOLS: * denotes BS 1377

SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
R22-BH205	7	D	2.00	47.0	55	25	30	100	Light brown slightly gravelly slightly sandy CLAY
R22-BH205	10	D	3.00	40.7	67	36	31	100	Light brown mottled grey slightly sandy clayey SILT
R22-BH205	14	D	4.00	48.0	71	33	38	100	Light brown mottled grey slightly sandy CLAY
R22-BH205	18	D	5.00	48.8	51	19	32	100	Grey mottled light brown slightly sandy CLAY
R22-BH205	22	D	6.00	40.4	41	20	21	100	Grey mottled light brown slightly sandy CLAY
R22-BH205	26	D	7.00	47.0	49	21	28	100	Grey mottled light brown slightly sandy CLAY
R22-BH205	29	D	8.00	46.5	63	30	33	97	Dark brown slightly gravelly CLAY
R22-BH205	33	D	9.00	34.8	63	32	31	96	Brown mottled grey slightly gravelly clayey SILT

SYMBOLS: * denotes BS 1377

SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
R22-BH205	39	D	11.00	55.7	63	38	25	74	Brown mottled greyish brown slightly gravelly slightly sandy clayey SILT
R22-BH205	51	D	15.00	43.0	86	42	44	66	Brown mottled dark grey slightly gravelly slightly sandy clayey SILT
R22-BH205	63	D	19.00	42.3	60	25	35	93	Dark grey mottled brown slightly gravelly slightly sandy CLAY
R22-BH205	75	D	23.00	41.2	69	32	37	100	Dark grey sandy CLAY
R22-BH501	3	D	1.00	30.1	67	31	36	100	Brown sandy CLAY
R22-BH501	7	D	2.00	32.3	61	35	26	100	Brown slightly sandy clayey SILT
R22-BH501	11	DSPT	3.00	57.0	77	25	52	99	Brown mottled black CLAY with peat
R22-BH501	15	D	4.95	49.2	57	33	24	100	Brown mottled dark brown slightly sandy clayey SILT

SYMBOLS: * denotes BS 1377

SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
R22-BH501	18	D	5.95	40.5	79	27	52	100	Brown slightly sandy CLAY
R22-BH501	23	DSPT	7.50	50.1	67	26	41	100	Light brown sandy CLAY
R22-BH501	27	D	8.95	37.6	65	24	41	100	Brown sandy CLAY
R22-BH501	29	DSPT	9.50	35.3	70	33	37	100	Brown mottled grey slightly sandy CLAY
R22-BH501	37	D	12.00	40.5	69	33	36	32	Dark brown gravelly CLAY
R22-BH501	43	D	14.00	36.0	60	33	27	61	Dark brown gravelly clayey SILT
R22-BH501	46	D	15.00	23.2	65	27	38	51	Dark grey gravelly CLAY
R22-BH501	55	D	18.00	35.8	69	42	27	100	Grey slightly sandy clayey SILT

SYMBOLS: * denotes BS 1377

SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
R22-BH501	64	D	21.00	45.5	86	37	49	100	Grey CLAY
R22-BH501	73	D	24.00	32.7	58	24	34	100	Dark grey sandy CLAY
R22-BH501	89	D	29.00	34.0	NP	NP	NP	93	White very gravelly CLAY with chalk
R22-BH502	5	DSPT	1.20	32.8	61	22	39	100	Brown slightly sandy CLAY
R22-BH502	7	D	2.00	56.6	75	28	47	100	Brown slightly sandy CLAY
R22-BH502	17	D	5.00	58.2	55	30	25	100	Greyish brown clayey SILT
R22-BH502	21	D	6.00	79.8	83	47	36	99	Grey clayey SILT
R22-BH502	25	D	7.00	62.7	47	27	20	99	Grey mottled brown CLAY

SYMBOLS: * denotes BS 1377

SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
R22-BH502	29	D	8.00	42.4	74	26	48	99	Brown mottled dark grey slightly gravelly slightly sandy CLAY
R22-BH502	33	D	9.00	51.3	80	37	43	95	Greyish brown clayey SILT
R22-BH502	37	D	10.00	47.2	74	21	53	99	Greyish brown slightly sandy CLAY
R22-BH502	41	D	11.00	41.9	69	32	37	97	Brown mottled greyish brown slightly gravelly CLAY with chalk
R22-BH502	48	D	13.00	54.0	73	38	35	48	Brown gravelly clayey SILT with claystone
R22-BH502	54	D	15.00	21.4	47	25	22	25	Grey gravelly CLAY
R22-BH502	75	D	22.00	41.4	65	39	26	95	Grey gravelly clayey SILT
R22-TP101	1	D	0.50	27.2	72	32	40	100	Brown slightly sandy CLAY

SYMBOLS: * denotes BS 1377

STRUCTURAL SOILS LTD

Contract:

SEA Link FEED - Kent Onshore Cable Link

Contract Ref:

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SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
R22-TP101	5	D	0.90	37.6	71	31	40	100	Greyish brown mottled orangish brown slightly gravelly slightly sandy CLAY
R22-TP101	13	D	1.50	61.6	67	21	46	100	Greyish brown mottled orangish brown slightly gravelly slightly sandy CLAY
R22-TP102	1	D	0.50	23.7	60	23	37	99	Brown slightly gravelly slightly sandy CLAY
R22-TP102	7	D	1.00	43.0	62	26	36	100	Light brown mottled orangish brown slightly gravelly slightly sandy CLAY
R22-TP102	11	D	1.50	49.4	67	39	28	100	Orangish brown slightly gravelly slightly sandy clayey SILT
R22-TP102	14	D	2.50	64.5	80	34	46	100	Brown mottled orangish brown and dark grey slightly sandy CLAY
R22-TP103	1	D	0.50	39.1	62	31	31	100	Brown mottled orangish brown slightly gravelly slightly sandy CLAY
R22-TP103	12	D	1.50	69.4	70	35	35	100	Light brown mottled orangish brown and grey slightly sandy clayey SILT

SYMBOLS: * denotes BS 1377

SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
R22-TP103	16	D	3.50	66.4	55	27	28	98	Brown mottled light brown and grey slightly sandy slightly gravelly CLAY
R22-TP104	1	D	0.50	28.3	66	33	33	100	Brown slightly sanyd clayey SILT
R22-TP104	5	D	0.90	38.6	62	31	31	99	Brown slightly sandy silty CLAY
R22-TP104	10	B	1.10	50.4	62	32	30	100	Light brown mottled orangish brown clayey SILT
R22-TP105	3	D	0.70	25.2	53	32	21	100	Brown mottled white slightly gravelly slightly sandy clayey SILT
R22-TP105	12	D	1.50	30.1	73	32	41	100	Greyish brown mottled orangish brown slightly sandy CLAY
R22-TP105	14	D	2.50	65.7	56	30	26	100	Brown mottled grey slightly sandy clayey SILT
R22-TP106	1	D	0.50	32.7	69	31	38	100	Brown slightly sandy clayey SILT

SYMBOLS: * denotes BS 1377

SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
R22-TP106	8	D	1.00	45.9	75	30	45	100	Brown CLAY
R22-TP106	12	D	1.50	74.2	69	30	39	100	Brown mottled greyish brown CLAY
R22-TP107	1	D	0.50	29.8	67	34	33	99	Dark brown and light brown slightly gravelly slightly sandy clayey SILT
R22-TP107	10	D	1.10	48.5	73	29	44	100	Light brown mottled orangish brown slightly sandy CLAY
R22-TP107	15	D	2.50	75.4	73	32	41	100	Dark brown mottled dark grey CLAY
R22-TP201	3	D	0.70	14.1	51	24	27	97	Brown slightly gravelly silty CLAY
R22-TP201	13	D	2.00	45.1	68	42	26	96	Brown slightly sandy clayey SILT
R22-TP202	3	D	0.70	12.0	38	19	19	99	Light brown sandy CLAY

SYMBOLS: * denotes BS 1377

SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
R22-TP202	10	D	1.50	29.8	46	23	23	98	Light brown sandy CLAY
R22-TP203	1	D	0.50	12.6	70	34	36	91	Brown slightly gravelly sandy clayey SILT
R22-TP203	6	D	0.90	13.4	33	18	15	94	Light brown slightly gravelly sandy silty CLAY
R22-TP203	12	D	1.50	27.8	50	31	19	100	Light brown sandy clayey SILT
R22-TP204	3	D	0.70	33.3	66	28	38	100	Brown slightly sandy CLAY
R22-TP204	13	D	1.70	63.3	69	40	29	100	Grey CLAY
R22-TP204	16	D	2.70	40.6	70	32	38	100	Brown mottled greenish grey sandy CLAY
R22-TP205	1	D	0.50	6.4	65	26	39	100	Light borwn slightly sandy CLAY

SYMBOLS: * denotes BS 1377

SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
R22-TP205	10	D	1.10	31.7	60	27	33	100	Light brown mottled orangish brown slightly sandy CLAY
R22-TP205	15	D	2.70	80.0	95	40	55	100	Light brown mottled orangish brown and dark grey slightly sandy CLAY
R22-TP405	1	D	0.50	34.8	75	33	42	100	Brown mottled light grey slightly gravelly CLAY with chalk
R22-TP405	6	D	1.50	62.9	71	33	38	100	Brown CLAY
R22-TP501	6	D	1.50	38.0	49	24	25	98	Light brown slightly gravelly sandy silty CLAY with chalk
R22-TP501	8	D	2.50	32.8	58	27	31	97	Light brown sandy clayey SILT with sandstone
R22-TP502	1	D	0.50	9.8	31	18	13	98	Brown slightly sandy CLAY
R22-TP502	6	D	1.40	32.8	66	28	38	100	Light brown sandy CLAY

SYMBOLS: * denotes BS 1377

SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
R22-TP503A	1	D	0.50	28.4	51	25	26	100	Brown mottled greenish brown slightly sandy CLAY
R22-TP503A	9	D	2.50	45.4	78	35	43	100	Grey CLAY with peat
R22-TP504	1	D	0.50	24.1	66	31	35	99	Brown slightly sandy silty CLAY
R22-TP504	6	D	1.50	41.5	75	27	48	100	Brown slightly sandy CLAY
R22-TP505	1	D	0.50	24.1	75	31	44	100	Brown slightly sandy CLAY
R22-TP505	3	D	1.00	47.1	75	38	37	100	Brown slightly sandy clayey SILT
R22-TP506	3	D	1.00	55.6	65	36	29	100	Brown slightly sandy clayey SILT
R22-TP506	9	D	2.50	31.3	NP	NP	NP	100	Green mottled dark green sandy CLAY

SYMBOLS: * denotes BS 1377

SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
R22-TP508	1	D	0.50	32.8	50	30	20	99	Brown slightly gravelly silty CLAY
R22-TP508	3	D	1.00	33.7	61	33	28	100	Brown slightly gravelly clayey SILT with chalk
R22-TP508	8	D	2.50	54.3	70	30	40	100	Black mottled brown CLAY
R22-TP510	3	D	1.00	28.0	52	21	31	100	Brown mottled orangish brown slightly gravelly slightly sandy CLAY
R22-TP510	9	D	2.50	56.6	65	45	20	99	Grey clayey SILT with peat
RedP-BH-6	6	D	2.00	12.8	37	22	15	63	Brown gravelly slightly sandy chalky CLAY
RedP-BH-6	10	D	3.00	30.9	46	21	25	51	Brown gravelly sandy CLAY
RedP-BH-6	14	D	4.00	43.7	76	24	52	97	Brown mottled orangish brown slightly gravelly slightly sandy CLAY

SYMBOLS: * denotes BS 1377

STRUCTURAL SOILS LTD

Contract:

SEA Link FEED - Kent Onshore Cable Link

Contract Ref:

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SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
RedP-BH-6	18	D	5.00	34.6	70	30	40	99	Brown mottled orangish brown and grey slightly gravelly slightly sandy CLAY
RedP-BH-6	22	D	6.00	33.8	67	23	44	100	Brown mottled orangish brown and grey slightly sandy CLAY
RedP-BH-6	26	D	7.00	39.6	54	34	20	93	Brown mottled grey slightly gravelly slightly sandy clayey SILT
RedP-BH-7	6	UT	1.50	46.3	67	36	31	98	Dark brown mottled black and greenish grey slightly sandy clayey SILT with peat
RedP-BH-7	14	D	4.00	63.6	73	42	31	100	Grey clayey SILT
RedP-BH-7	18	D	5.00	26.5	37	32	5	87	Grey gravelly clayey SILT with peat
RedP-BH-8	3	D	1.00	42.0	76	26	50	100	Greyish brown CLAY
RedP-BH-8	7	D	2.00	44.3	82	22	60	100	Greyish brown CLAY

SYMBOLS: * denotes BS 1377

STRUCTURAL SOILS LTD

Contract:

SEA Link FEED - Kent Onshore Cable Link

Contract Ref:

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SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
RedP-BH-8	13	D	4.00	34.0	70	33	37	100	Grey CLAY
RedP-BH-8	20	D	6.45	27.1	55	33	22	100	Dark grey clayey SILT
RedP-BH-9	12	D	3.00	42.2	62	23	39	95	Greyish brown mottled orangish brown slightly gravelly slightly sandy CLAY
RedP-BH-9	18	DSPT	4.00	52.8	108	27	81	100	Dark grey mottled orangish brown and grey slightly gravelly slightly sandy CLAY
RedP-BH-9	20	D	5.00	46.4	80	25	55	98	Brown mottled orangish brown and grey slightly gravelly slightly sandy CLAY
RedP-BH-9	28	D	7.00	46.6	80	40	40	99	Light brown mottled orangish brown slightly gravelly slightly sandy clayey SILT
RedP-BH-10	38	D	10.00	26.0	53	22	31	71	Brown mottled dark slightly gravelly slightly sandy CLAY
RedP-BH-10	46	D	12.00	30.9	44	19	25	100	Brown mottled dark grey slightly gravelly slightly sandy CLAY

SYMBOLS: * denotes BS 1377

SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
RedP-BH-10	54	D	14.00	69.2	50	23	27	97	Greyish brown slightly gravelly slightly sandy CLAY
RedP-BH-11	17	D	4.50	42.0	63	30	33	81	Light brown slightly gravelly slightly sandy CLAY
RedP-BH-11	20	D	5.45	34.2	NP	NP	NP	29	Brown mottled orangish brown slightly gravelly slightly sandy CLAY
RedP-BH-11	25	D	6.50	38.7	80	30	50	98	Greyish brown slightly gravelly slightly sandy CLAY
RedP-BH-11	34	B	8.70	40.7	68	35	33	57	Dark grey sandy clayey SILT
RedP-BH-11	39	D	10.50	45.7	79	41	38	79	Dark brown slightly gravelly slightly sandy clayey SILT
RedP-BH-11	43	D	11.50	45.7	71	30	41	62	Dark grey mottled light brown slightly gravelly slightly sandy CLAY
RedP-BH-11	55	D	14.50	48.4	71	32	39	47	Dark grey slightly gravelly slightly sandy CLAY

SYMBOLS: * denotes BS 1377

SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with Part 1,Part 12 of BS EN ISO 17892

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Water Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	% <425um	Description of Sample
RedP-BH-11	67	D	17.50	55.3	65	19	46	95	Dark grey slightly gravelly slightly sandy CLAY

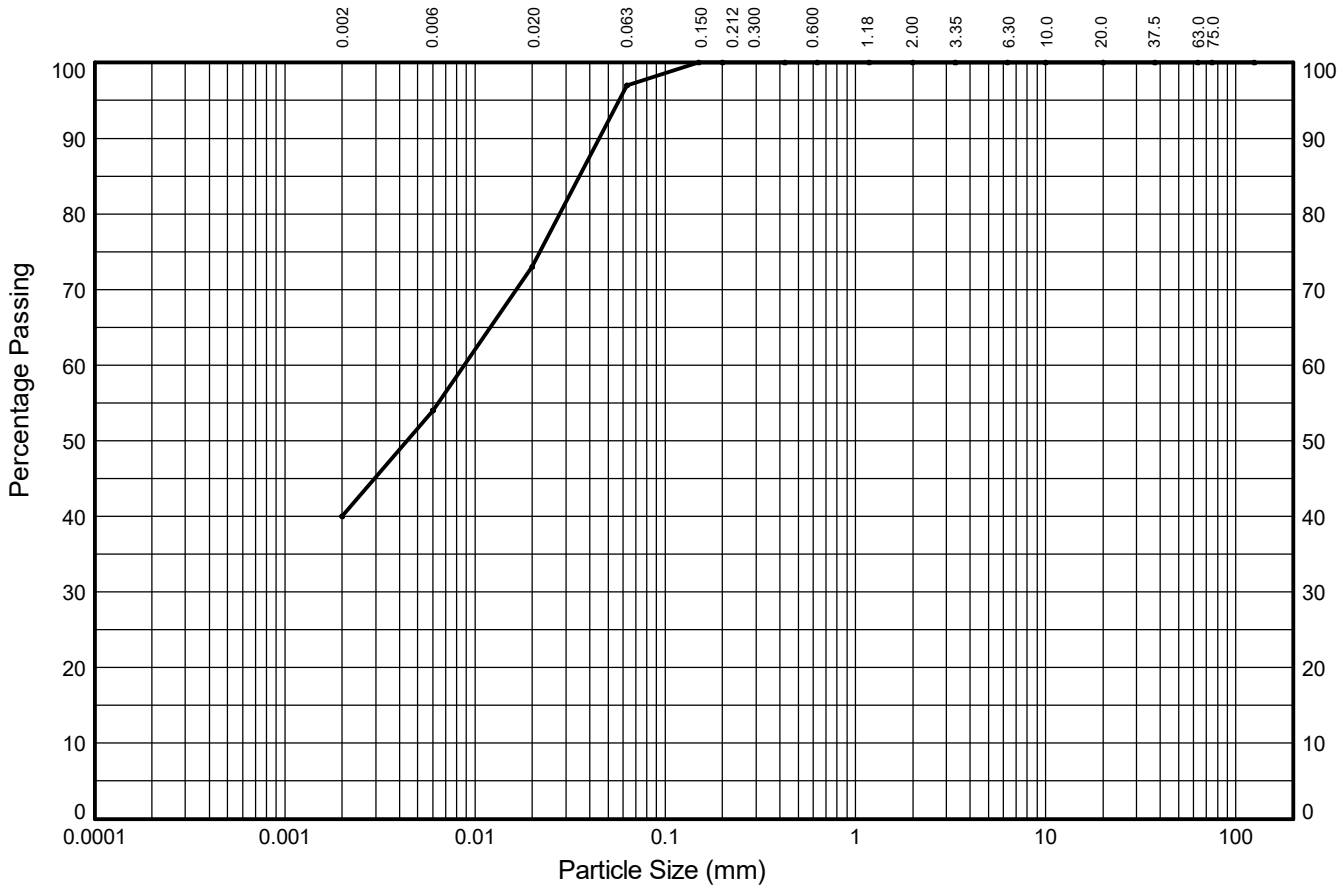
SYMBOLS: * denotes BS 1377

STRUCTURAL SOILS LTD	Contract: **SEA Link FEED - Kent Onshore Cable Link**	Contract Ref: **563607**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH101** Sample Ref: **3** Sample Type: **B** Depth (m): **0.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	14%	19%	24%	3%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
40%	57%			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	**100**
0.425	**100**
0.200	**100**
0.150	**100**
0.063	**97**

Particle Diameter (mm)	Percent Passing (%)
0.02	**73**
0.006	**54**
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)	**0.035**
D_{90} (mm)	**0.045**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown slightly sandy clayey SILT

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

Compiled By: [redacted]

Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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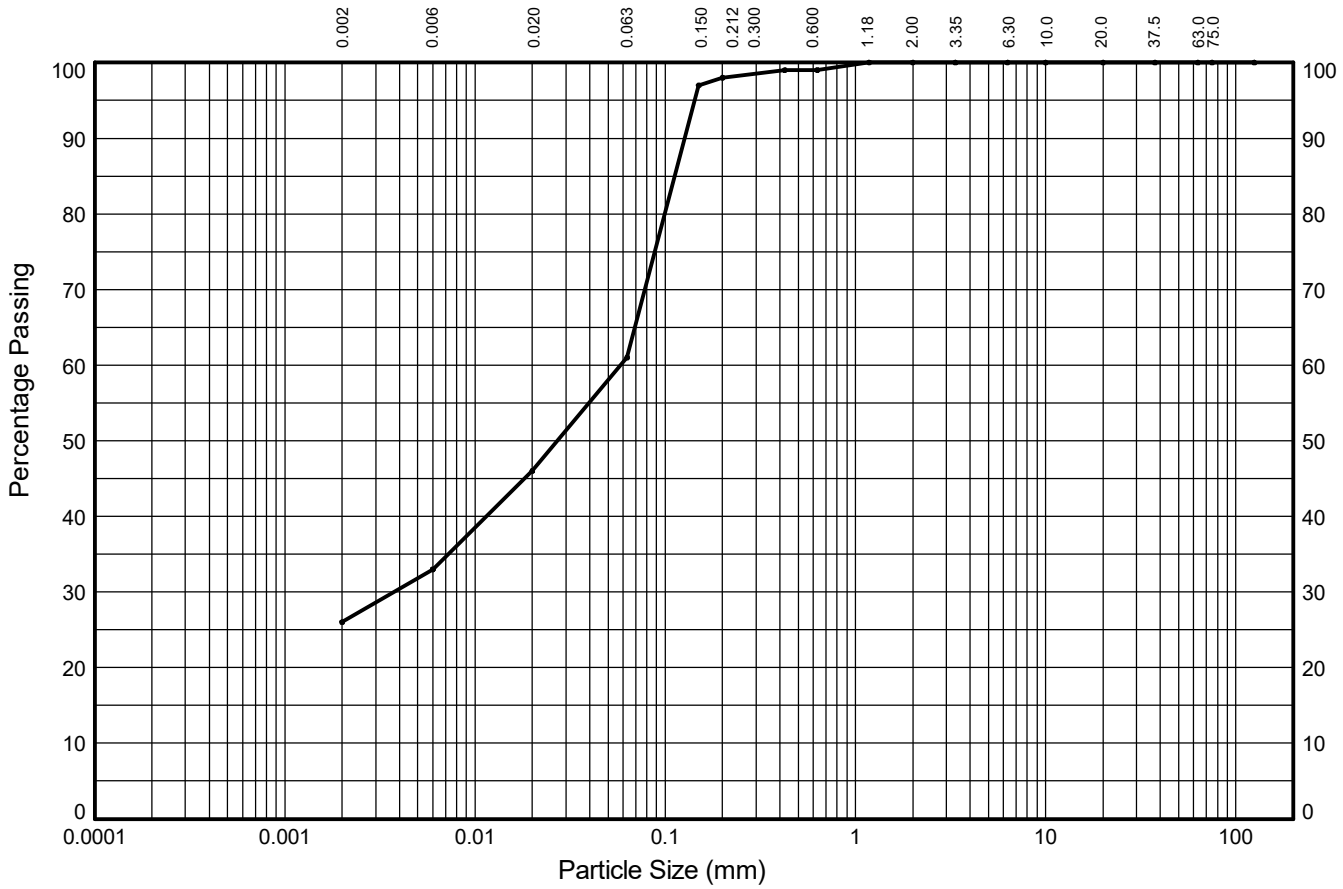
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH101** Sample Ref: **5** Sample Type: **B** Depth (m): **1.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	7%	13%	15%	37%	1%	1%	0%	0%	0%	
	SILT			SAND			GRAVEL			
26%	35%			39%			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	**98**
0.150	**97**
0.063	**61**

Particle Diameter (mm)	Percent Passing (%)
0.02	**46**
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)	**0.027**
D_{60} (mm)	**0.058**
D_{85} (mm)	**0.112**
D_{90} (mm)	**0.127**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown sandy silty 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

Compiled By: [redacted] [redacted] Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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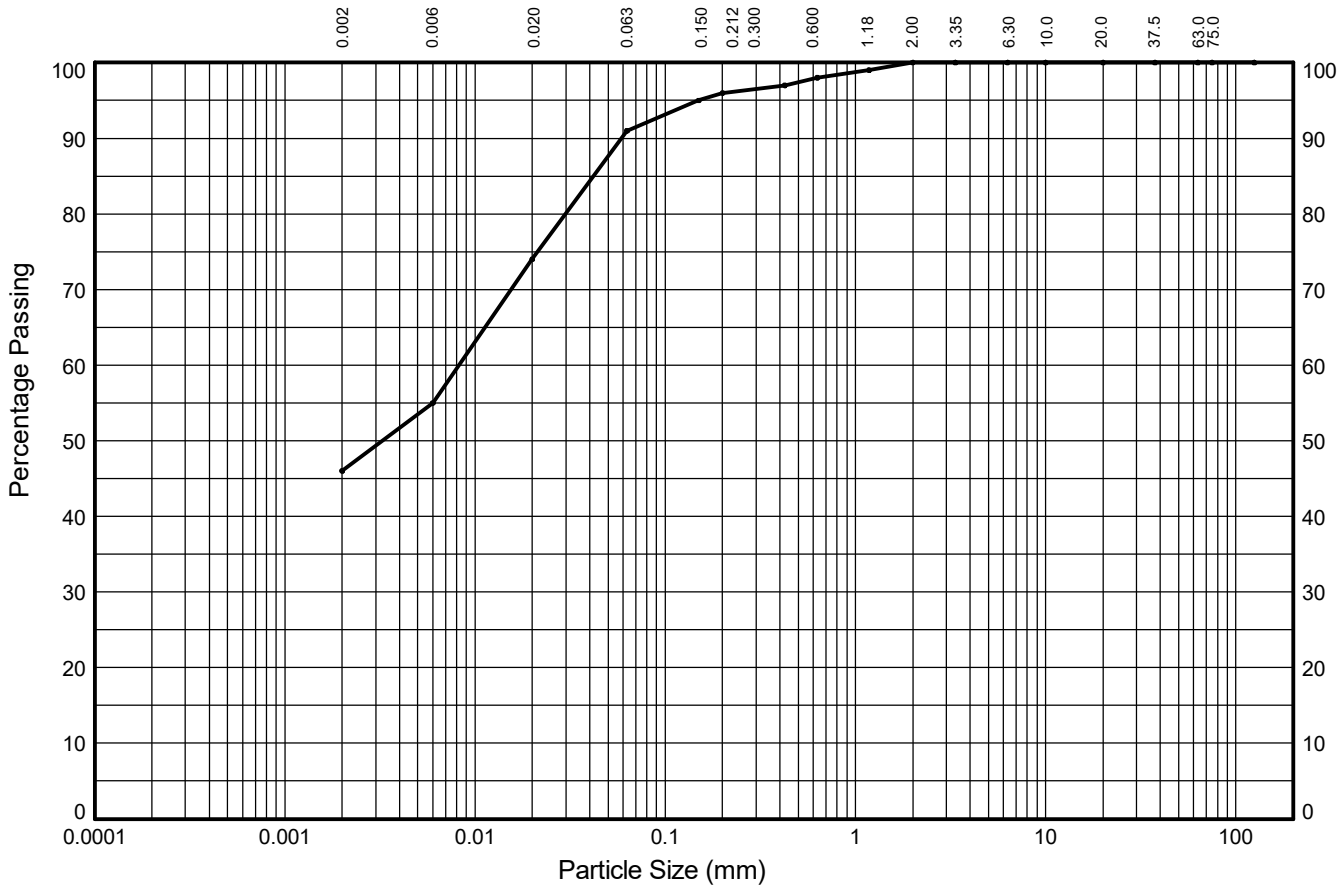
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH101** Sample Ref: **11** Sample Type: **B** Depth (m): **2.60**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	9%	19%	17%	5%	2%	2%	0%	0%	0%	
	SILT			SAND			GRAVEL			
46%	45%			9%			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	**98**
0.425	**97**
0.200	**96**
0.150	**95**
0.063	**91**

Particle Diameter (mm)	Percent Passing (%)
0.02	**74**
0.006	**55**
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)	**0.042**
D_{90} (mm)	**0.059**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark grey slightly sandy silty 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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HP3 9RT

Compiled By: [redacted] [redacted]

Date: **26/03/24**

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Contract Ref: **563607**

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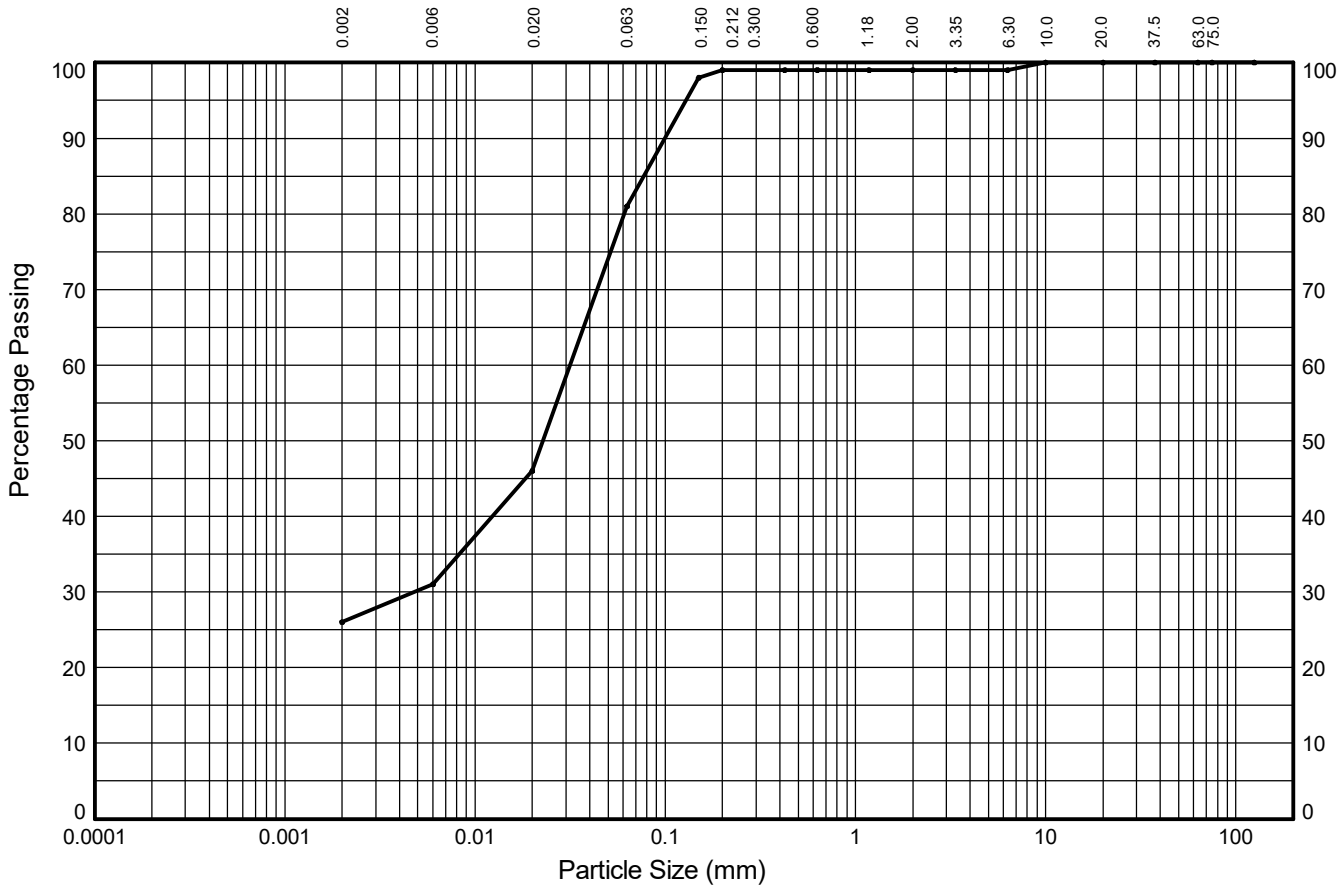
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH101** Sample Ref: **23** Sample Type: **B** Depth (m): **6.60**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	5%	15%	35%	18%	0%	0%	0%	1%	0%	
	SILT			SAND			GRAVEL			
26%	55%			18%			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	**99**
3.35	**99**
2.00	**99**
1.18	**99**
0.630	**99**
0.425	**99**
0.200	**99**
0.150	**98**
0.063	**81**

Particle Diameter (mm)	Percent Passing (%)
0.02	**46**
0.006	**31**
0.002	**26**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.005**
D_{50} (mm)	**0.023**
D_{60} (mm)	**0.032**
D_{85} (mm)	**0.077**
D_{90} (mm)	**0.100**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark grey 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

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
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Compiled By: [redacted]

Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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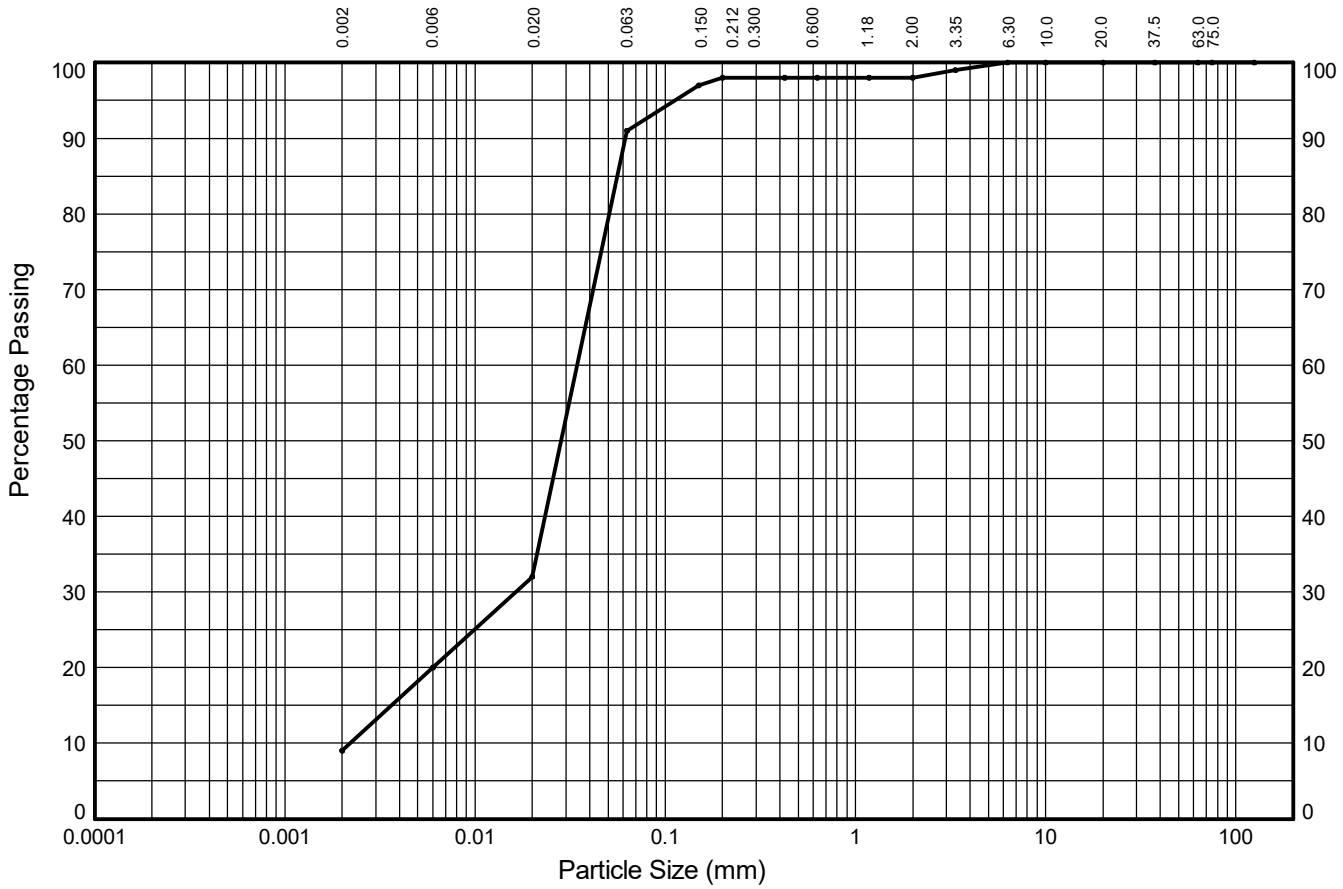
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH101** Sample Ref: **32** Sample Type: **B** Depth (m): **9.60**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	11%	12%	59%	7%	0%	0%	2%	0%	0%	
	SILT			SAND			GRAVEL			
9%	82%			7%			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	**98**
0.630	**98**
0.425	**98**
0.200	**98**
0.150	**97**
0.063	**91**

Particle Diameter (mm)	Percent Passing (%)
0.02	**32**
0.006	**20**
0.002	**9**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.002**
D_{15} (mm)	**0.004**
D_{30} (mm)	**0.016**
D_{50} (mm)	**0.028**
D_{60} (mm)	**0.034**
D_{85} (mm)	**0.056**
D_{90} (mm)	**0.062**
C_U	**16**
C_C	**4**

Soil Description:

Grey mottled brown 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

STRUCTURAL SOILS
Anerley Court
Half Moon Lane
Hildenborough
Tonbridge TN11 9HU

Compiled By: [redacted] [redacted] Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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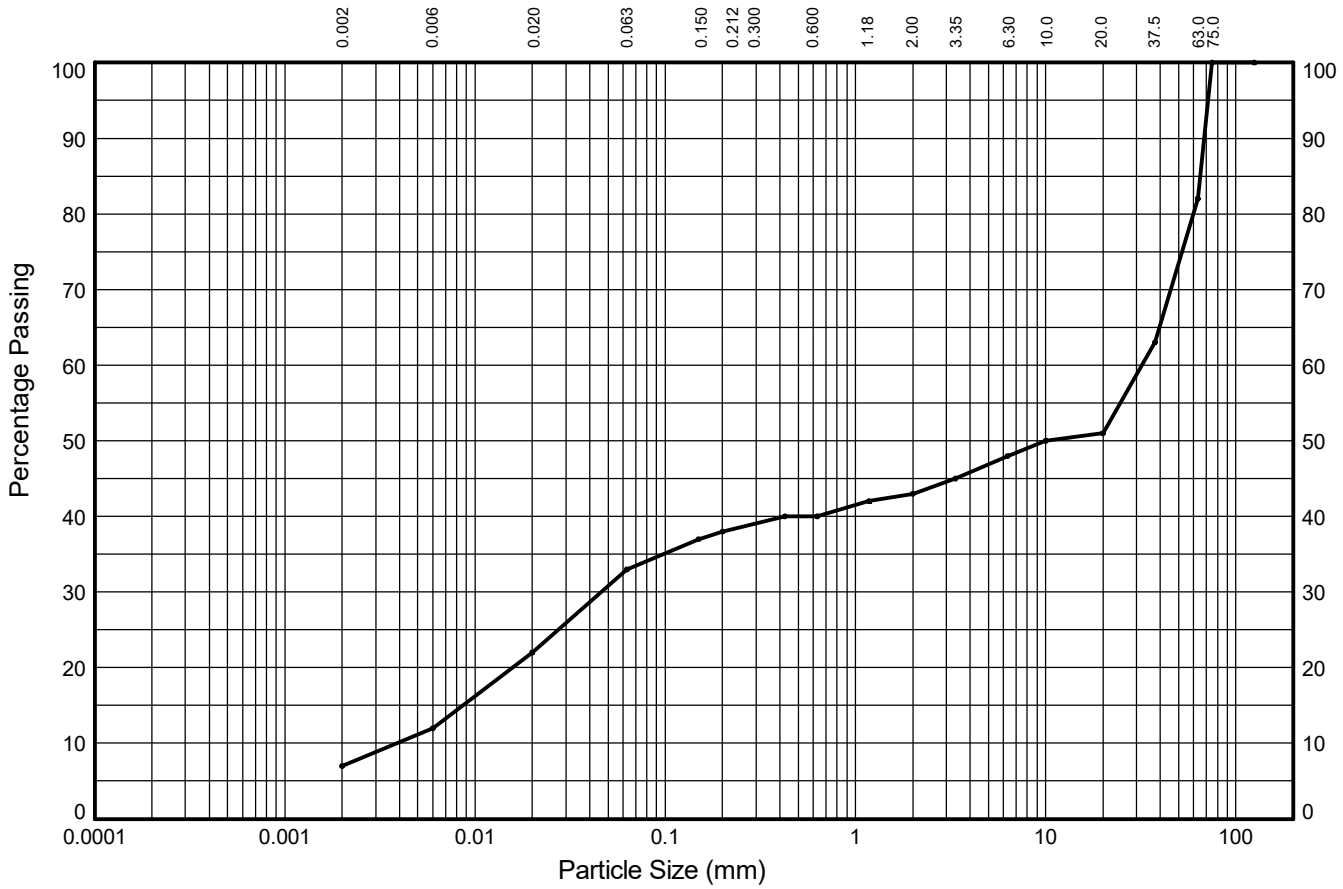
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH101** Sample Ref: **43** Sample Type: **B** Depth (m): **12.60**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	5%	10%	11%	5%	2%	3%	5%	3%	31%	
	SILT			SAND			GRAVEL			
7%	26%			10%			39%			18%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**82**
37.5	**63**
20.0	**51**
10.0	**50**
6.30	**48**
3.35	**45**
2.00	**43**
1.18	**42**
0.630	**40**
0.425	**40**
0.200	**38**
0.150	**37**
0.063	**33**

Particle Diameter (mm)	Percent Passing (%)
0.02	**22**
0.006	**12**
0.002	**7**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.004**
D_{15} (mm)	**0.009**
D_{30} (mm)	**0.046**
D_{50} (mm)	**10.000**
D_{60} (mm)	**32.047**
D_{85} (mm)	**64.858**
D_{90} (mm)	**68.076**
C_U	**8289**
C_C	**0.02**

Soil Description:

Dark grey sandy very silty GRAVEL with medium cobble content

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

STRUCTURAL SOILS
18 Frogmore Road
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HP3 9RT

Compiled By: [redacted] [redacted] Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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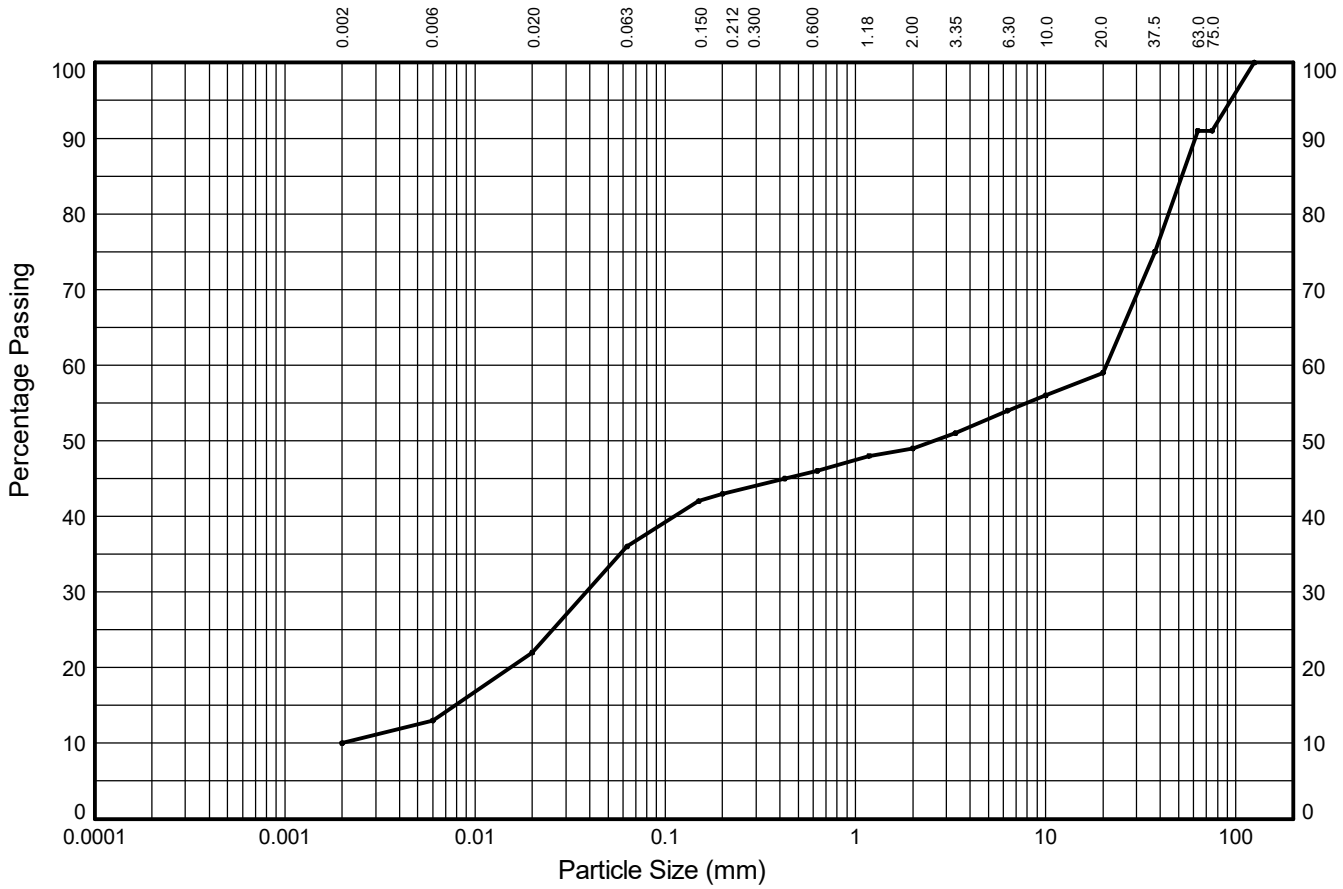
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH101** Sample Ref: **53** Sample Type: **B** Depth (m): **16.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	3%	9%	14%	7%	3%	3%	5%	5%	32%	
	SILT			SAND			GRAVEL			
10%	26%			13%			42%			9%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**91**
63.0	**91**
37.5	**75**
20.0	**59**
10.0	**56**
6.30	**54**
3.35	**51**
2.00	**49**
1.18	**48**
0.630	**46**
0.425	**45**
0.200	**43**
0.150	**42**
0.063	**36**

Particle Diameter (mm)	Percent Passing (%)
0.02	**22**
0.006	**13**
0.002	**10**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.002**
D_{15} (mm)	**0.008**
D_{30} (mm)	**0.039**
D_{50} (mm)	**2.588**
D_{60} (mm)	**20.801**
D_{85} (mm)	**51.862**
D_{90} (mm)	**60.990**
C_U	**10401**
C_C	**0.04**

Soil Description:

Dark grey sandy very silty GRAVEL with low cobble content.

Non-standard

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

Compiled By: [redacted]

Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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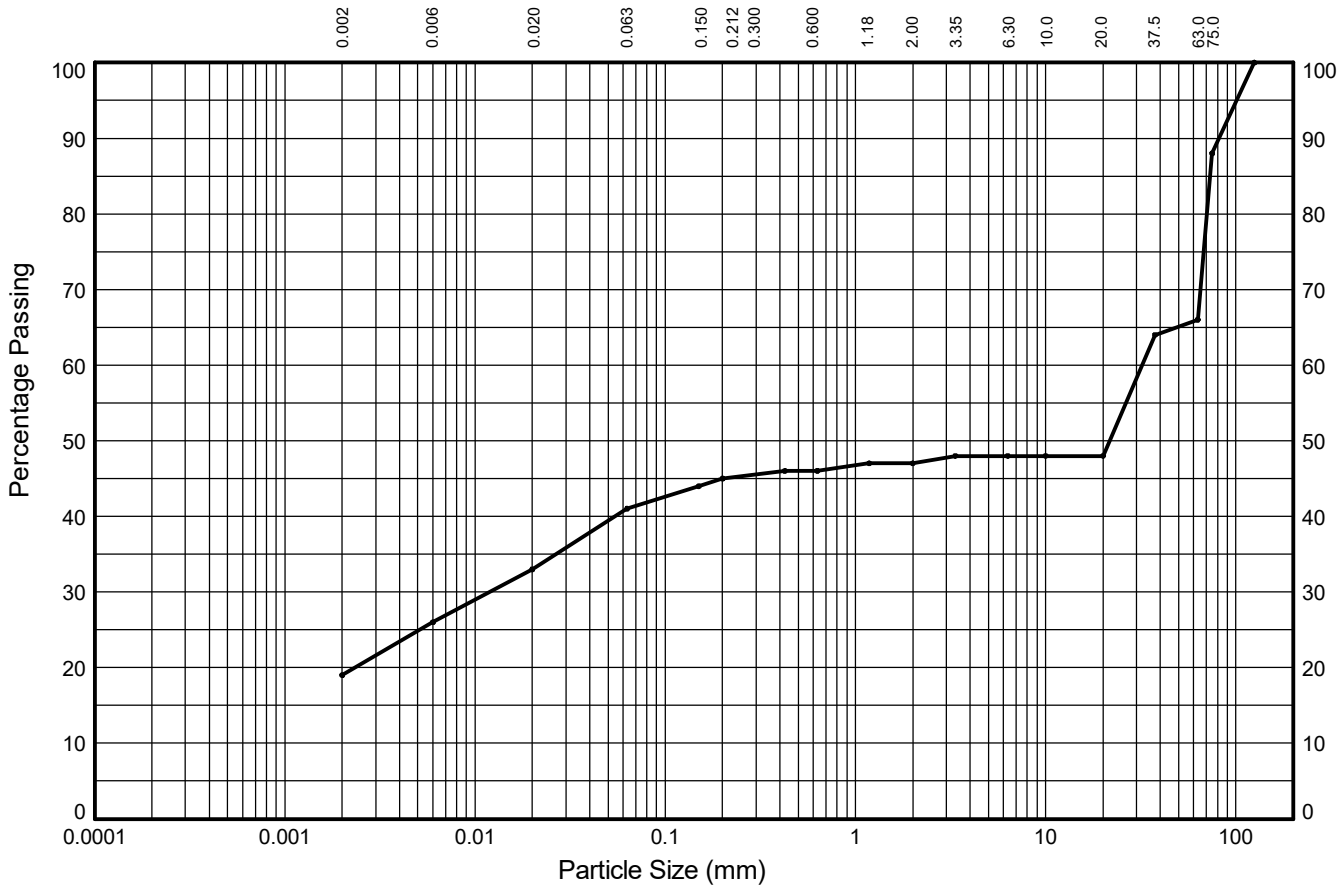
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.3 of BS EN ISO 17892:Part 4:2016
NON-STANDARD TEST

Position ID: **R22-BH101** Sample Ref: **65** Sample Type: **B** Depth (m): **22.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	7%	7%	8%	4%	1%	1%	1%	0%	18%	
	SILT			SAND			GRAVEL			
19%	22%			6%			19%			34%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**88**
63.0	**66**
37.5	**64**
20.0	**48**
10.0	**48**
6.30	**48**
3.35	**48**
2.00	**47**
1.18	**47**
0.630	**46**
0.425	**46**
0.200	**45**
0.150	**44**
0.063	**41**

Particle Diameter (mm)	Percent Passing (%)
0.02	**33**
0.006	**26**
0.002	**19**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.012**
D_{50} (mm)	**21.635**
D_{60} (mm)	**32.047**
D_{85} (mm)	**73.238**
D_{90} (mm)	**81.665**
C_U	**NA**
C_C	**NA**

Soil Description:

Grey mottled orangish brown slightly sandy slightly gravelly silty CLAY with high cobble content

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

STRUCTURAL SOILS
1a Princess Street
Bedminster
Bristol
BS3 4AG

Compiled By: [redacted] [redacted]

Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

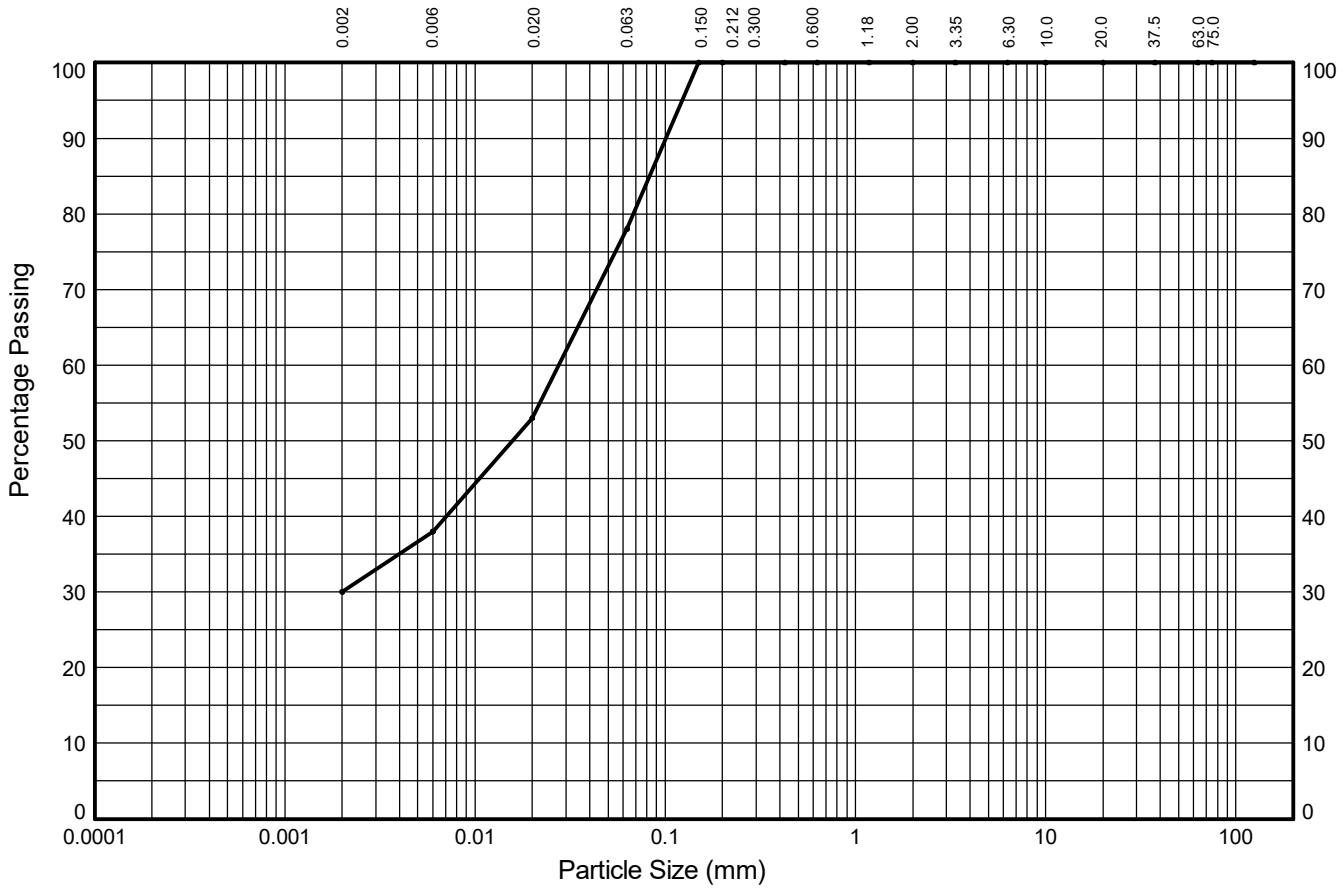
Contract Ref: **563607**

AGS

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH102** Sample Ref: **10** Sample Type: **B** Depth (m): **2.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	8%	15%	25%	22%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
30%	48%			22%			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	**100**
0.150	**100**
0.063	**78**

Particle Diameter (mm)	Percent Passing (%)
0.02	**53**
0.006	**38**
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)	**0.016**
D_{60} (mm)	**0.028**
D_{85} (mm)	**0.083**
D_{90} (mm)	**0.101**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark greyish brown slightly sandy silty 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

Compiled By: [redacted] [redacted] Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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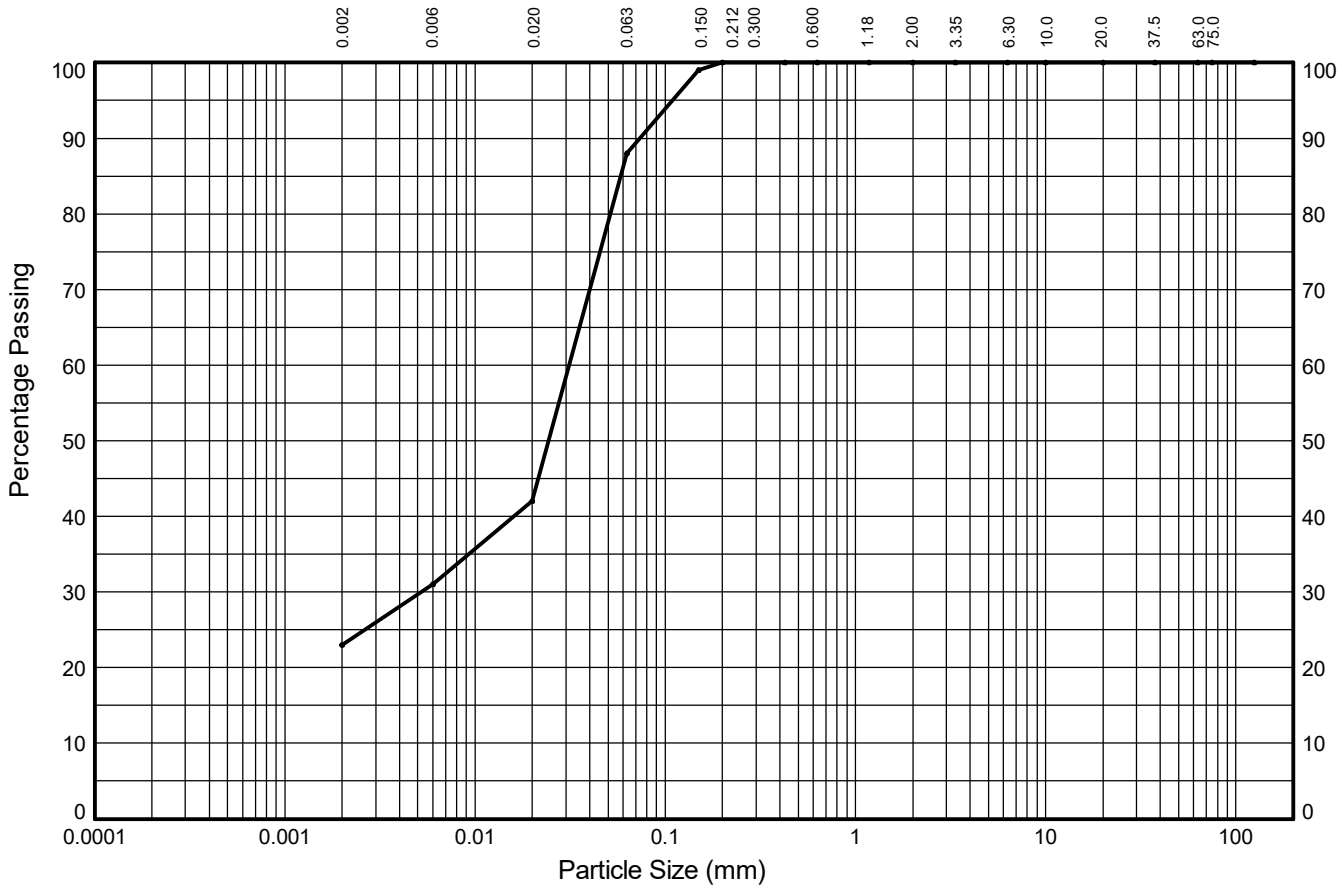
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH102** Sample Ref: **22** Sample Type: **B** Depth (m): **5.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	8%	11%	46%	12%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
23%	65%			12%			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	**100**
0.150	**99**
0.063	**88**

Particle Diameter (mm)	Percent Passing (%)
0.02	**42**
0.006	**31**
0.002	**23**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.005**
D_{50} (mm)	**0.024**
D_{60} (mm)	**0.031**
D_{85} (mm)	**0.058**
D_{90} (mm)	**0.074**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark greyish brown slightly sandy clayey SILT

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

Compiled By: [redacted] [redacted] Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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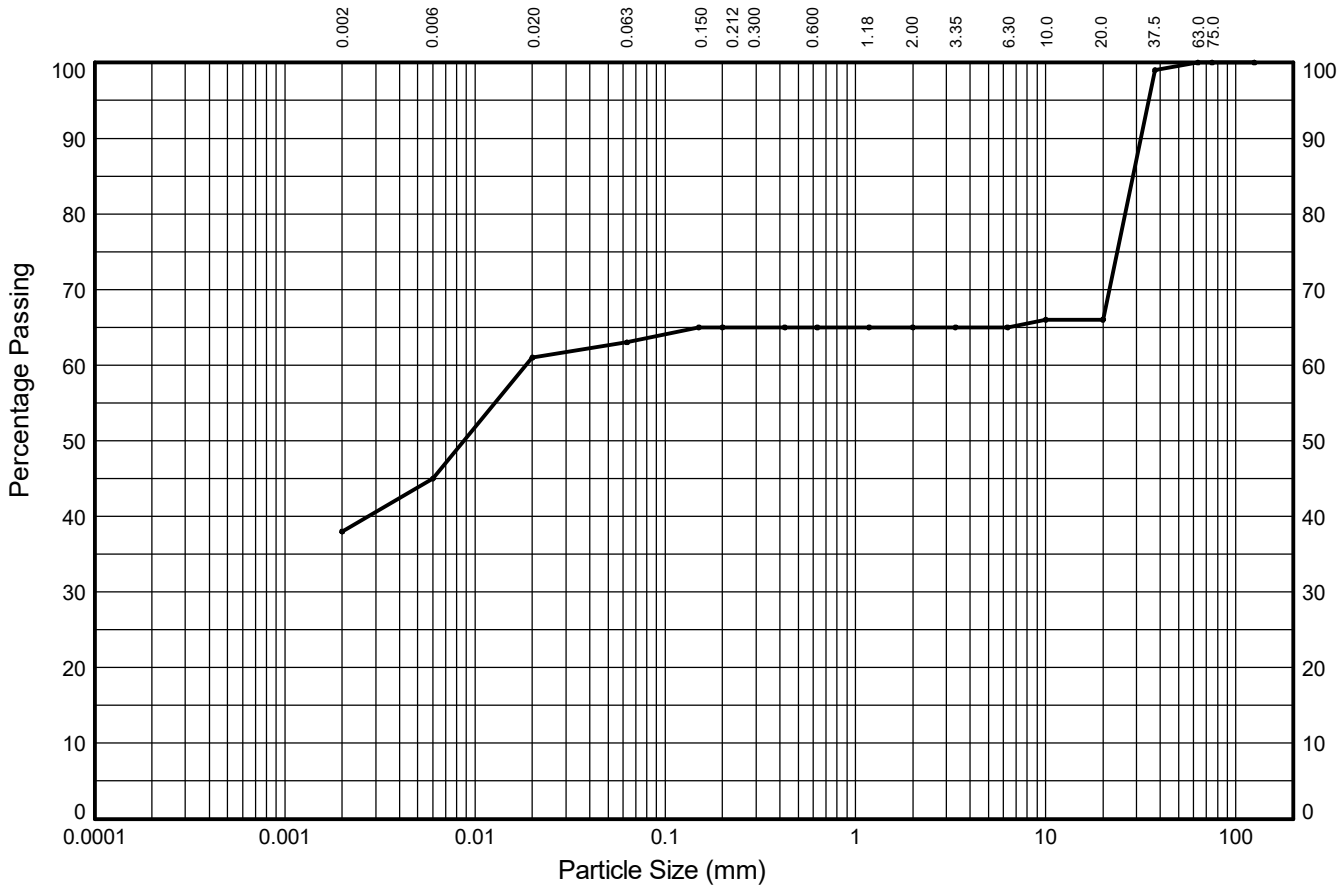
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH102** Sample Ref: **37** Sample Type: **B** Depth (m): **9.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	7%	16%	2%	2%	0%	0%	0%	1%	34%	
	SILT			SAND			GRAVEL			
38%	25%			2%			35%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**99**
20.0	**66**
10.0	**66**
6.30	**65**
3.35	**65**
2.00	**65**
1.18	**65**
0.630	**65**
0.425	**65**
0.200	**65**
0.150	**65**
0.063	**63**

Particle Diameter (mm)	Percent Passing (%)
0.02	**61**
0.006	**45**
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)	**0.009**
D_{60} (mm)	**0.019**
D_{85} (mm)	**28.722**
D_{90} (mm)	**31.592**
C_U	**NA**
C_C	**NA**

Soil Description:

Green slightly sandy gravelly silty 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

Compiled By: [redacted] [redacted]

Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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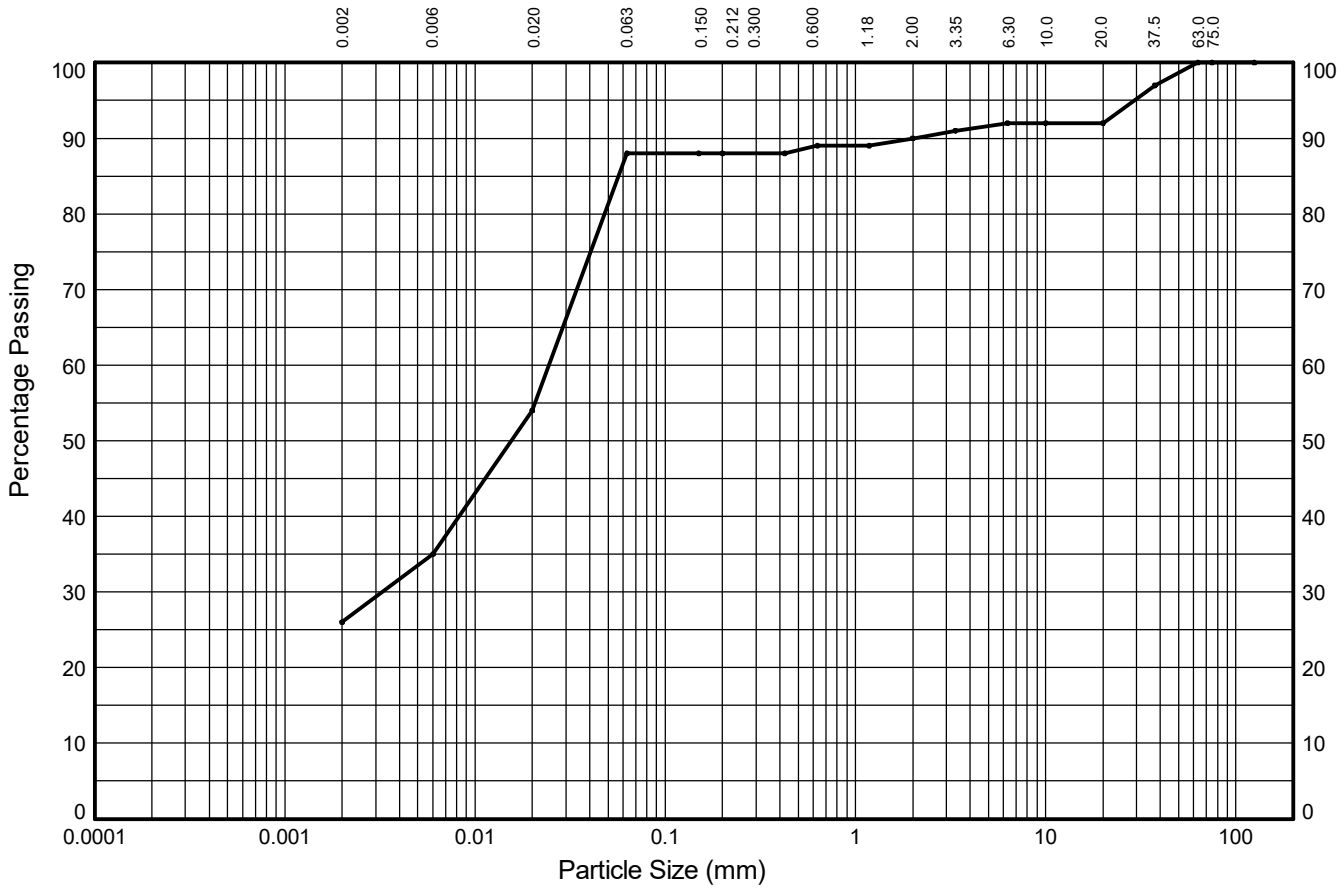
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH102** Sample Ref: **53** Sample Type: **B** Depth (m): **14.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	9%	19%	34%	0%	1%	1%	2%	0%	8%	
	SILT			SAND			GRAVEL			
26%	62%			2%			10%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**97**
20.0	**92**
10.0	**92**
6.30	**92**
3.35	**91**
2.00	**90**
1.18	**89**
0.630	**89**
0.425	**88**
0.200	**88**
0.150	**88**
0.063	**88**

Particle Diameter (mm)	Percent Passing (%)
0.02	**54**
0.006	**35**
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)	**0.016**
D_{60} (mm)	**0.024**
D_{85} (mm)	**0.057**
D_{90} (mm)	**2.000**
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

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By: [redacted] [redacted] Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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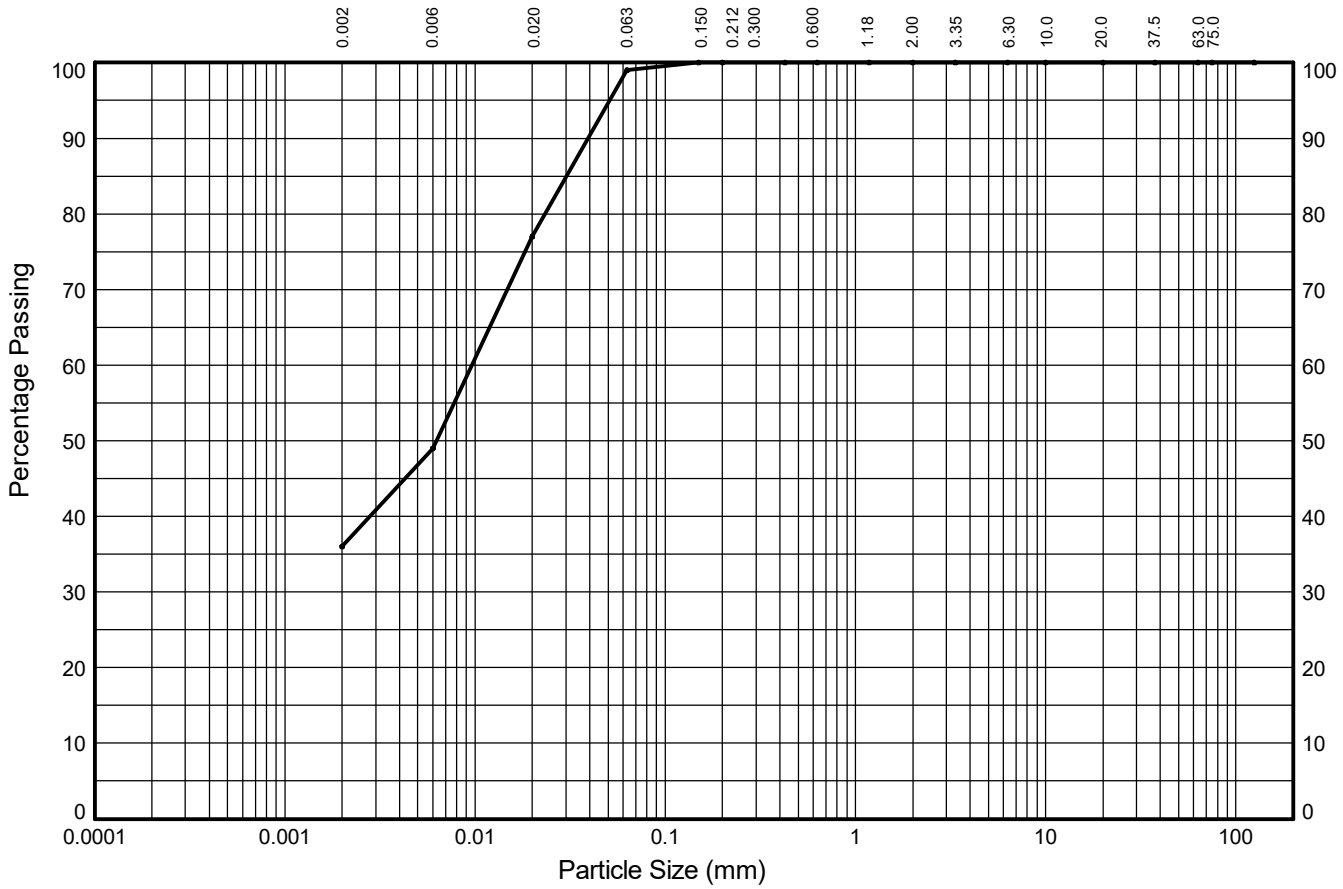
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH102** Sample Ref: **71** Sample Type: **B** Depth (m): **20.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	14%	27%	22%	1%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
36%	63%			1%			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	**100**
0.150	**100**
0.063	**99**

Particle Diameter (mm)	Percent Passing (%)
0.02	**77**
0.006	**49**
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)	**0.010**
D_{85} (mm)	**0.030**
D_{90} (mm)	**0.039**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark greyish brown slightly sandy silty 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

Compiled By: [redacted] [redacted] Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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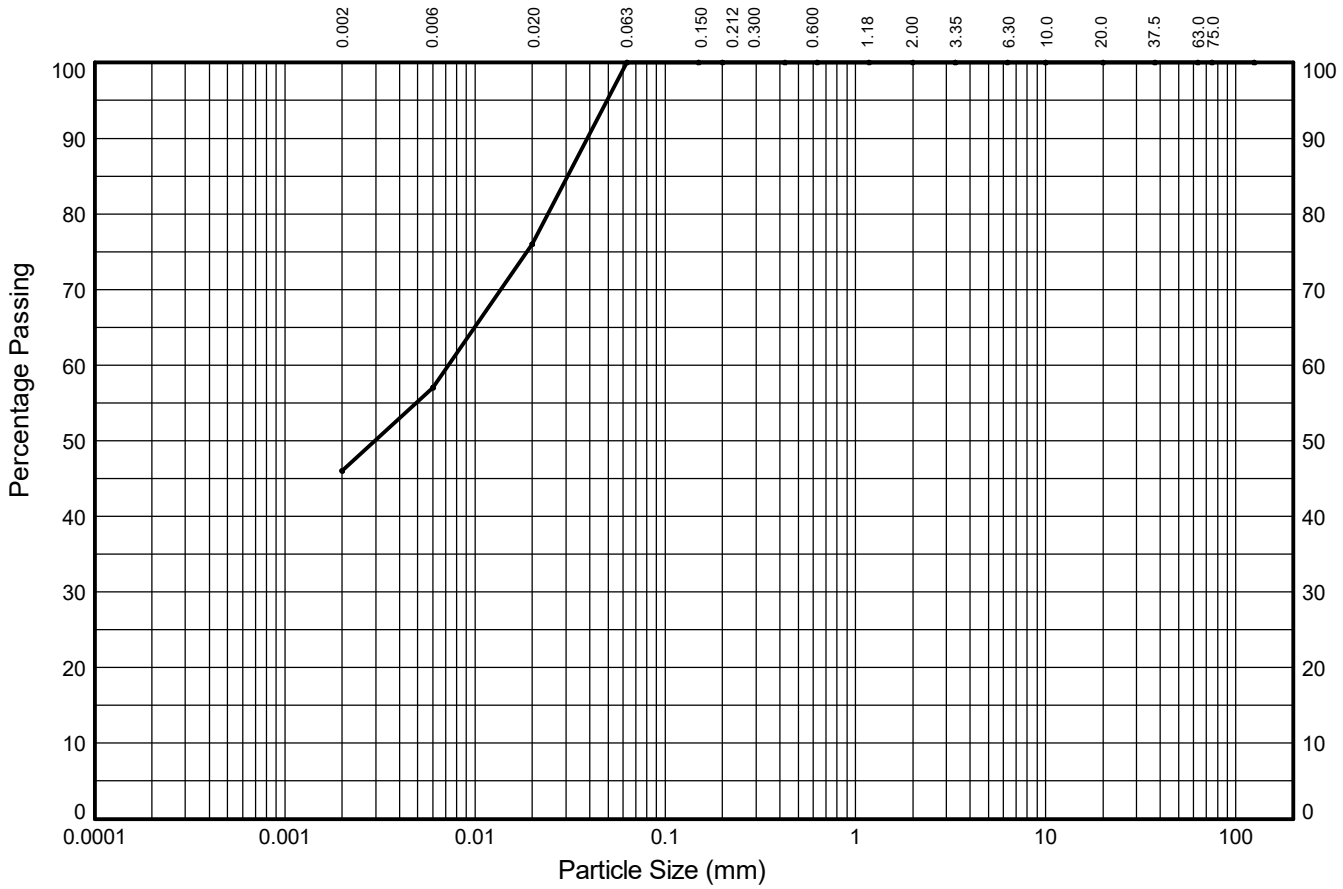
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH103** Sample Ref: **4** Sample Type: **B** Depth (m): **1.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	11%	19%	24%	0%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
46%	54%			0%			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	**100**
0.150	**100**
0.063	**100**

Particle Diameter (mm)	Percent Passing (%)
0.02	**76**
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)	**0.007**
D_{85} (mm)	**0.031**
D_{90} (mm)	**0.039**
C_U	**NA**
C_C	**NA**

Soil Description:

Light brown mottled grey silty CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

STRUCTURAL SOILS
Anerley Court
Half Moon Lane
Hildenborough
Tonbridge TN11 9HU

Compiled By: [redacted] [redacted] Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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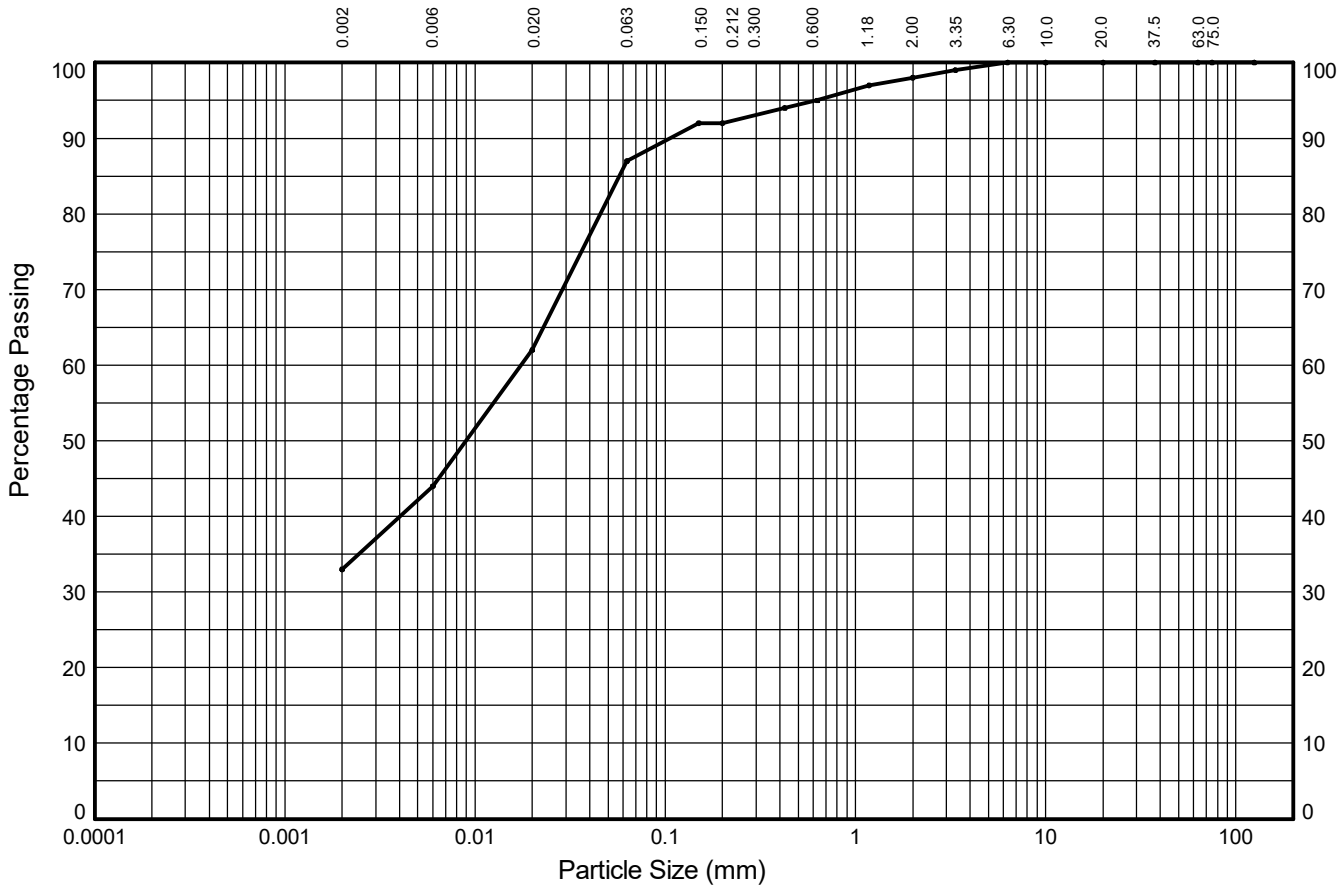
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH103** Sample Ref: **8** Sample Type: **B** Depth (m): **2.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	11%	18%	25%	5%	3%	3%	2%	0%	0%	
	SILT			SAND			GRAVEL			
33%	54%			11%			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	**95**
0.425	**94**
0.200	**92**
0.150	**92**
0.063	**87**

Particle Diameter (mm)	Percent Passing (%)
0.02	**62**
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)	**0.009**
D_{60} (mm)	**0.017**
D_{85} (mm)	**0.057**
D_{90} (mm)	**0.106**
C_U	**NA**
C_C	**NA**

Soil Description:

Light brown mottled grey slightly graelly slightly sandy silty 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

Compiled By: [redacted]

Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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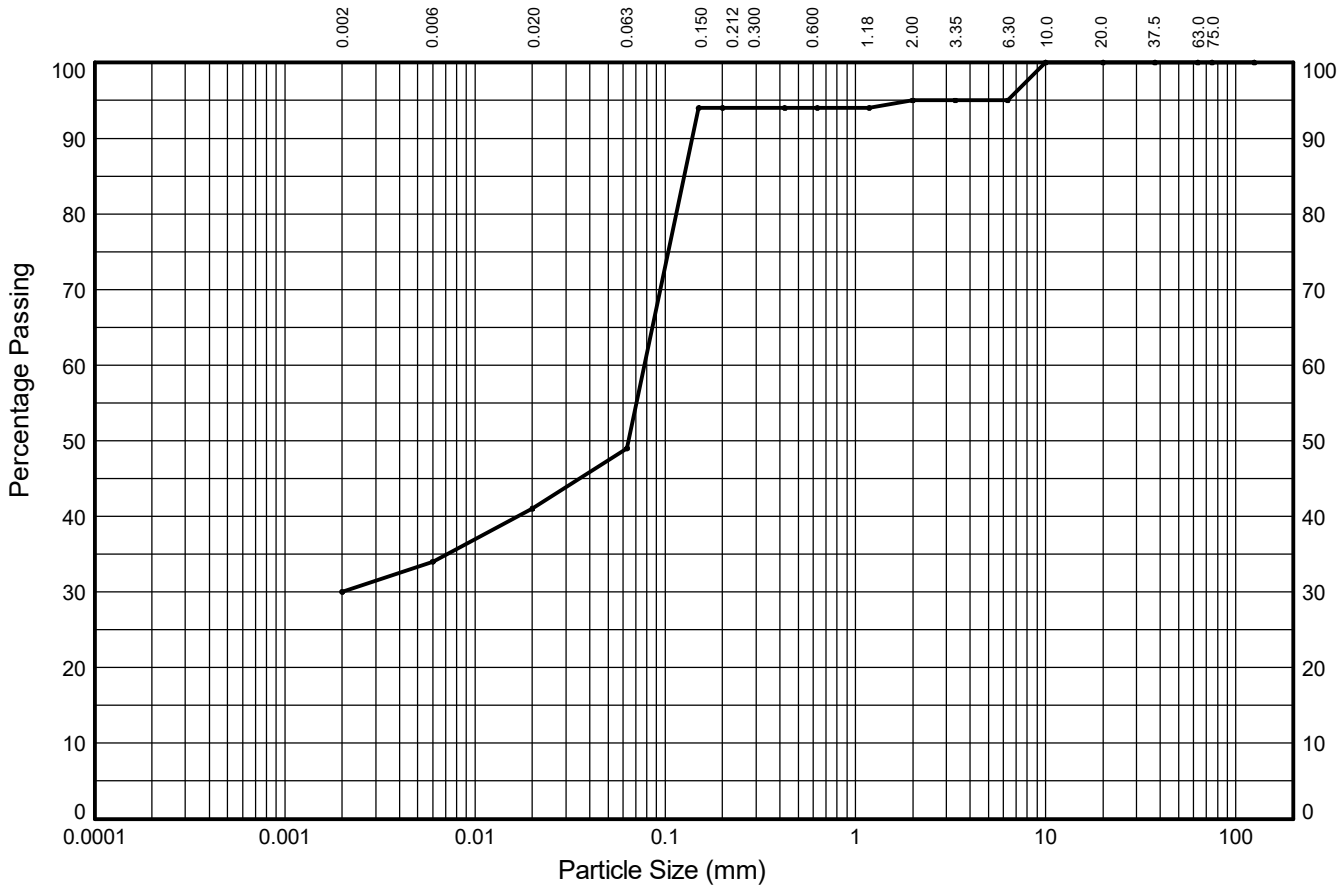
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH103** Sample Ref: **23** Sample Type: **B** Depth (m): **6.60**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	4%	7%	8%	45%	0%	1%	0%	5%	0%	
	SILT			SAND			GRAVEL			
30%	19%			46%			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	**95**
3.35	**95**
2.00	**95**
1.18	**94**
0.630	**94**
0.425	**94**
0.200	**94**
0.150	**94**
0.063	**49**

Particle Diameter (mm)	Percent Passing (%)
0.02	**41**
0.006	**34**
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)	**0.064**
D_{60} (mm)	**0.078**
D_{85} (mm)	**0.126**
D_{90} (mm)	**0.139**
C_U	**NA**
C_C	**NA**

Soil Description:

Grey mottled light 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

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By: [redacted]

Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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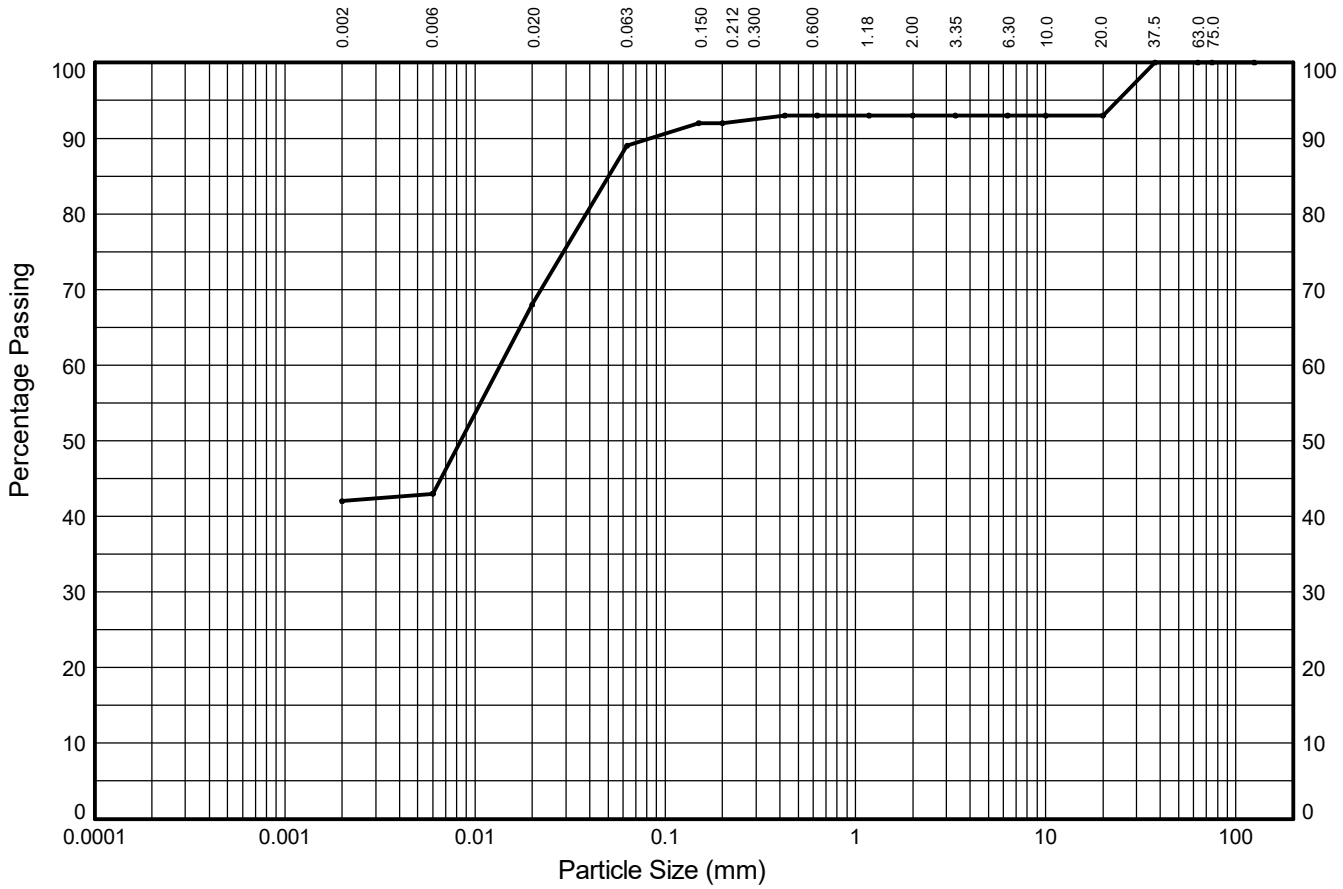
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH103** Sample Ref: **37** Sample Type: **B** Depth (m): **11.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	2%	24%	21%	3%	1%	0%	0%	0%	7%	
	SILT			SAND			GRAVEL			
42%	47%			4%			7%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**93**
10.0	**93**
6.30	**93**
3.35	**93**
2.00	**93**
1.18	**93**
0.630	**93**
0.425	**93**
0.200	**92**
0.150	**92**
0.063	**89**

Particle Diameter (mm)	Percent Passing (%)
0.02	**68**
0.006	**43**
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)	**0.008**
D_{60} (mm)	**0.014**
D_{85} (mm)	**0.051**
D_{90} (mm)	**0.084**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark grey 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

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By: [redacted] [redacted] Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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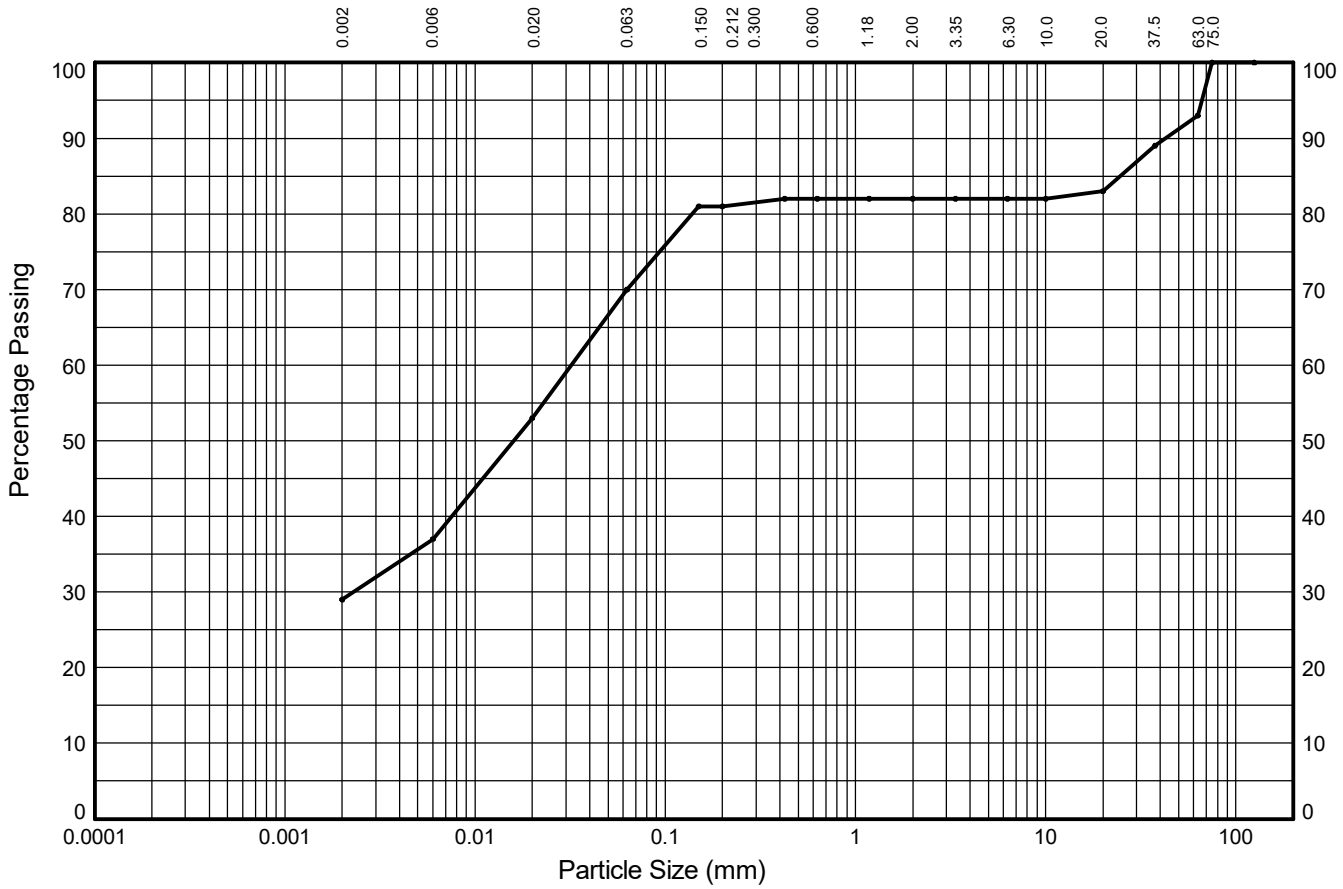
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH103** Sample Ref: **66** Sample Type: **B** Depth (m): **24.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	8%	16%	17%	11%	1%	0%	0%	1%	10%	
	SILT			SAND			GRAVEL			
29%	41%			12%			11%			7%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**93**
37.5	**89**
20.0	**83**
10.0	**82**
6.30	**82**
3.35	**82**
2.00	**82**
1.18	**82**
0.630	**82**
0.425	**82**
0.200	**81**
0.150	**81**
0.063	**70**

Particle Diameter (mm)	Percent Passing (%)
0.02	**53**
0.006	**37**
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)	**0.016**
D_{60} (mm)	**0.032**
D_{85} (mm)	**24.662**
D_{90} (mm)	**42.693**
C_U	**NA**
C_C	**NA**

Soil Description:

Greyish brown slightly gravelly slightly sandy silty 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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Contract Ref: **563607**

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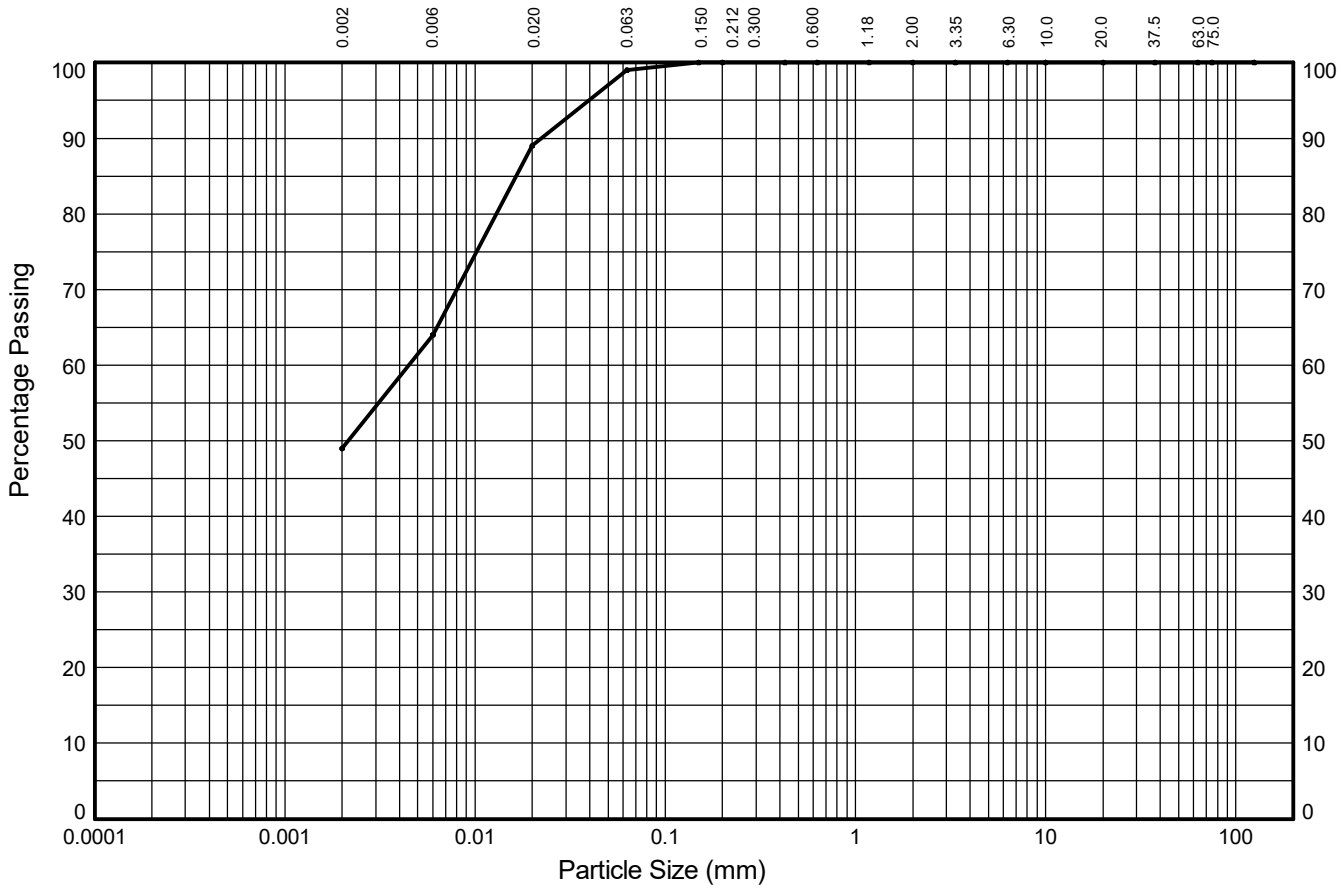
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH104** Sample Ref: **4** Sample Type: **B** Depth (m): **1.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	16%	24%	10%	1%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
49%	50%			1%			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	**100**
0.150	**100**
0.063	**99**

Particle Diameter (mm)	Percent Passing (%)
0.02	**89**
0.006	**64**
0.002	**49**

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)	**0.016**
D_{90} (mm)	**0.022**
C_U	**NA**
C_C	**NA**

Soil Description:

Greyish brown mottled brown 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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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH104** Sample Ref: **12** Sample Type: **B** Depth (m): **3.50**

CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	2%	6%	4%	65%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
23%	12%			65%			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	**100**
0.150	**99**
0.063	**35**

Particle Diameter (mm)	Percent Passing (%)
0.02	**31**
0.006	**25**
0.002	**23**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.016**
D_{50} (mm)	**0.077**
D_{60} (mm)	**0.088**
D_{85} (mm)	**0.124**
D_{90} (mm)	**0.133**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark bluish grey 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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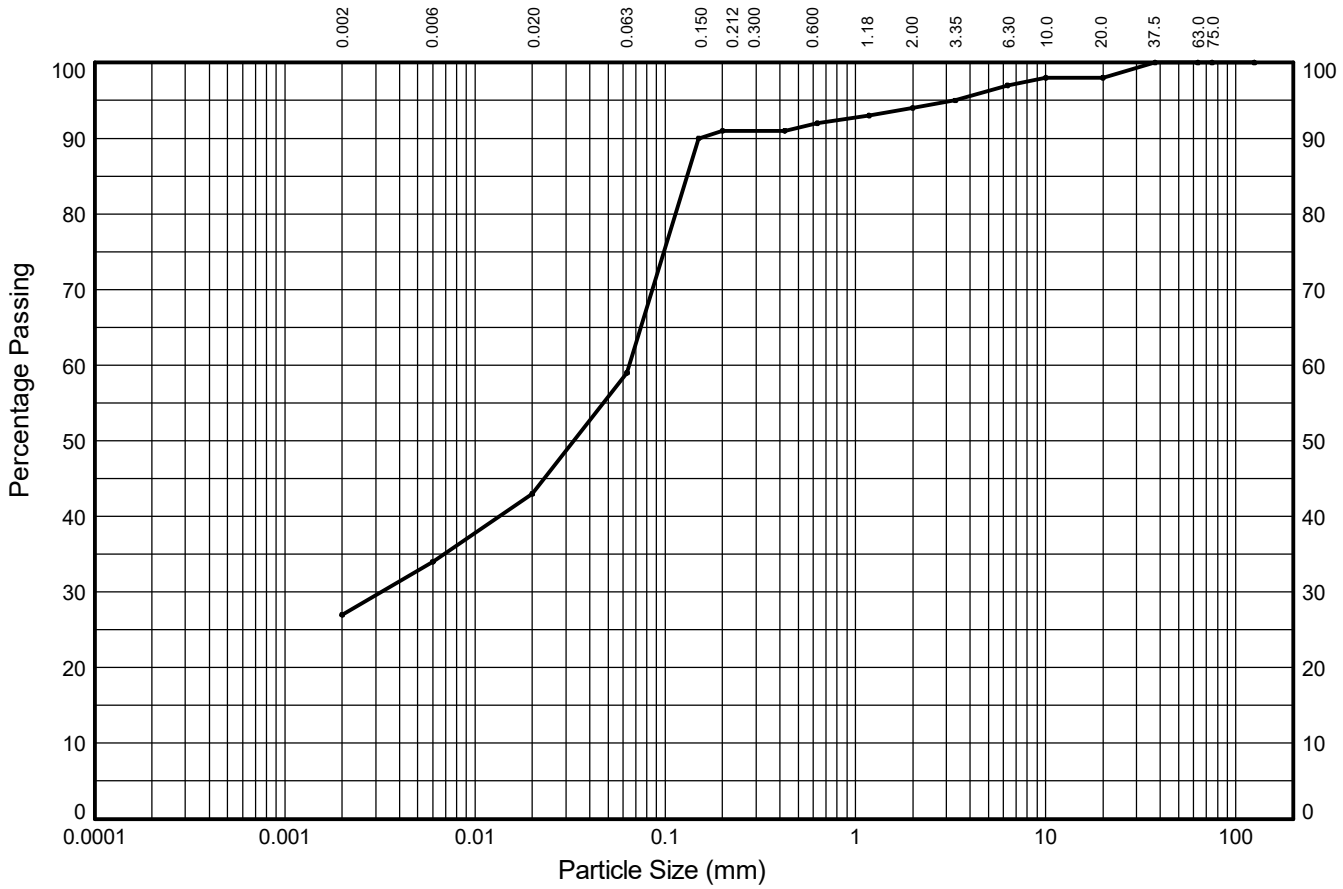
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH104** Sample Ref: **22** Sample Type: **B** Depth (m): **6.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	7%	9%	16%	32%	1%	2%	3%	1%	2%	
	SILT			SAND			GRAVEL			
27%	32%			35%			6%			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	**95**
2.00	**94**
1.18	**93**
0.630	**92**
0.425	**91**
0.200	**91**
0.150	**90**
0.063	**59**

Particle Diameter (mm)	Percent Passing (%)
0.02	**43**
0.006	**34**
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)	**0.033**
D_{60} (mm)	**0.065**
D_{85} (mm)	**0.130**
D_{90} (mm)	**0.150**
C_U	**NA**
C_C	**NA**

Soil Description:

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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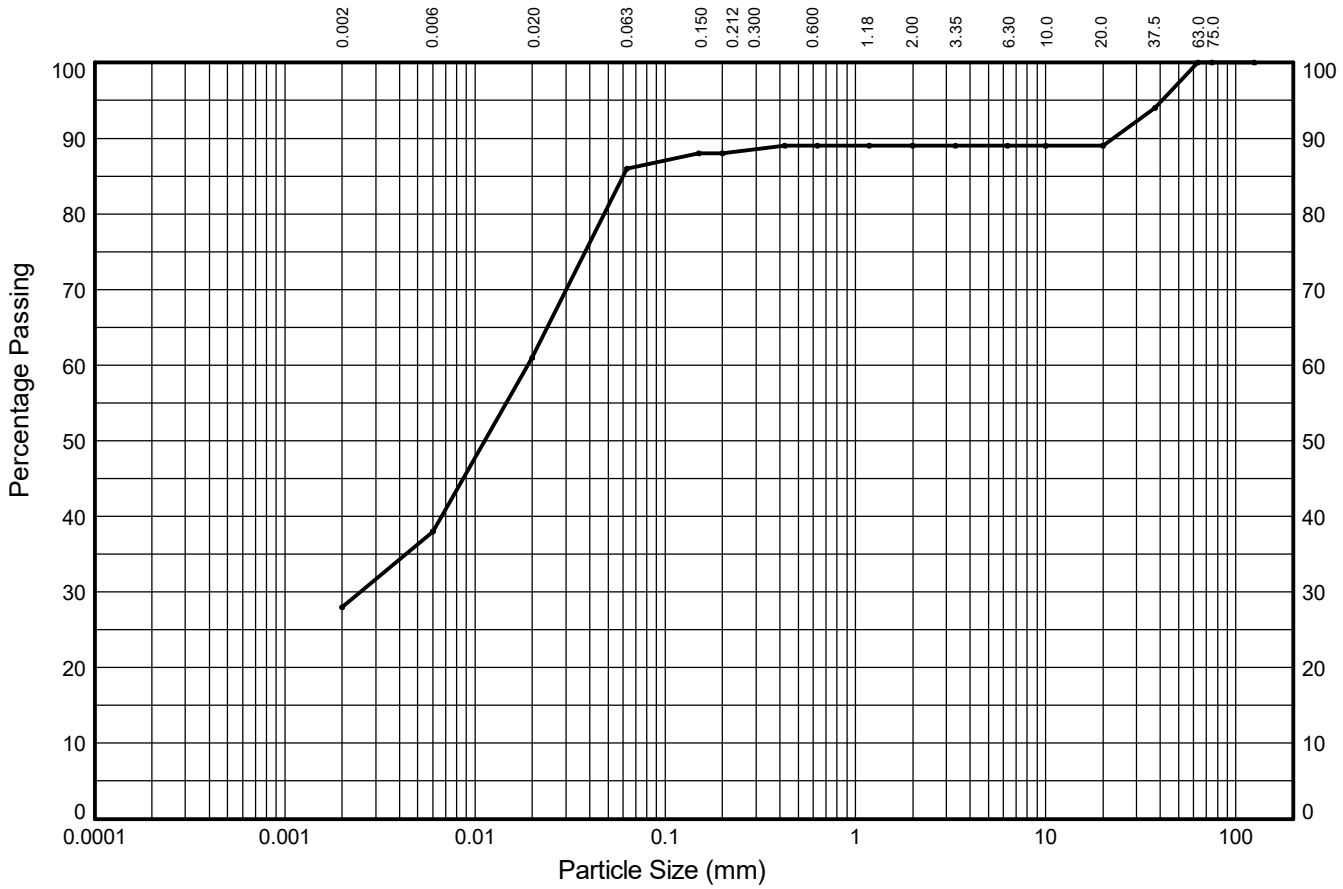
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH104** Sample Ref: **33** Sample Type: **B** Depth (m): **9.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	10%	23%	25%	2%	1%	0%	0%	0%	11%	
	SILT			SAND			GRAVEL			
28%	58%			3%			11%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**94**
20.0	**89**
10.0	**89**
6.30	**89**
3.35	**89**
2.00	**89**
1.18	**89**
0.630	**89**
0.425	**89**
0.200	**88**
0.150	**88**
0.063	**86**

Particle Diameter (mm)	Percent Passing (%)
0.02	**61**
0.006	**38**
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)	**0.011**
D_{60} (mm)	**0.019**
D_{85} (mm)	**0.060**
D_{90} (mm)	**22.679**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark greyish brown 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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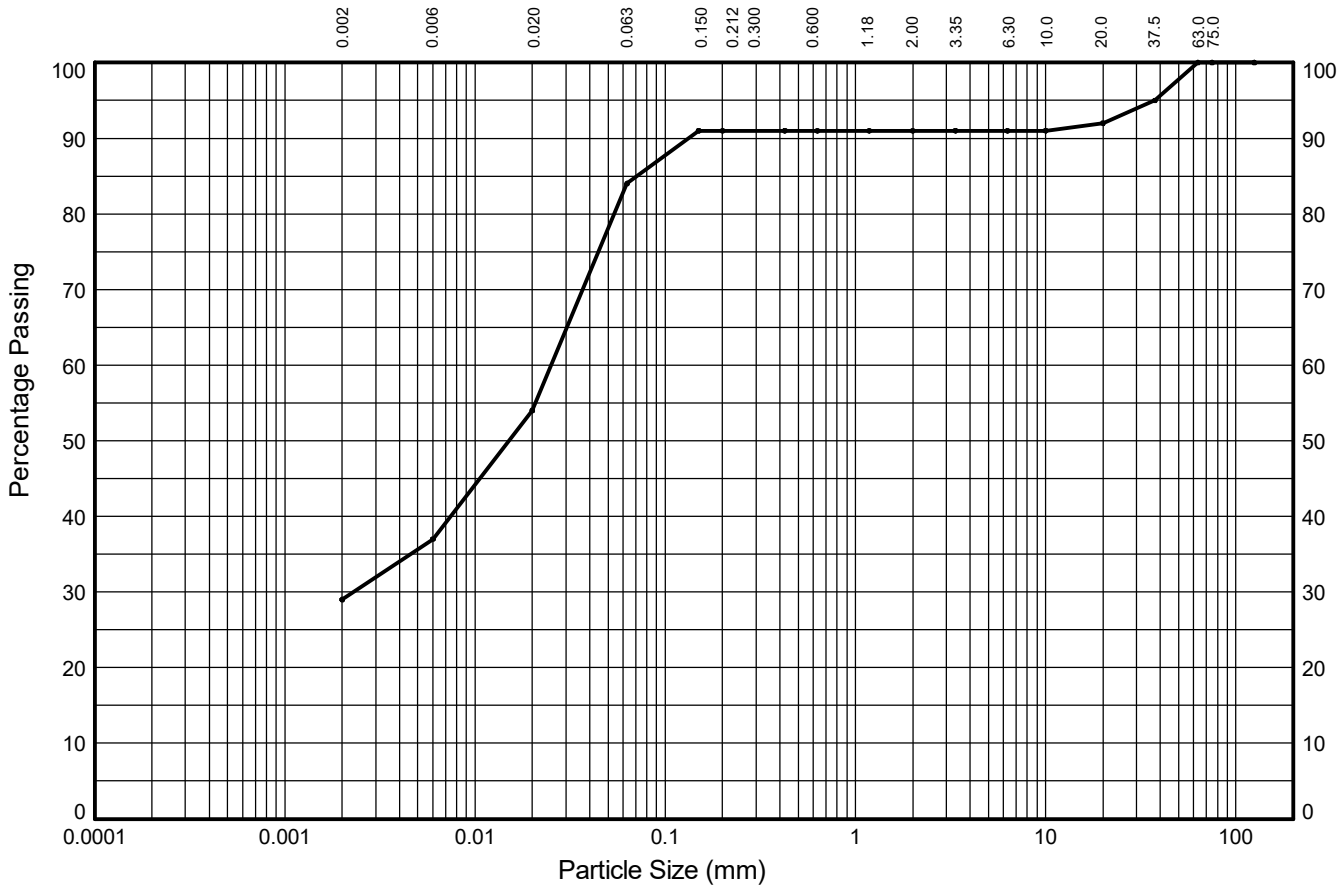
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH104** Sample Ref: **51** Sample Type: **B** Depth (m): **15.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	8%	17%	30%	7%	0%	0%	0%	1%	8%	
	SILT			SAND			GRAVEL			
29%	55%			7%			9%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**95**
20.0	**92**
10.0	**91**
6.30	**91**
3.35	**91**
2.00	**91**
1.18	**91**
0.630	**91**
0.425	**91**
0.200	**91**
0.150	**91**
0.063	**84**

Particle Diameter (mm)	Percent Passing (%)
0.02	**54**
0.006	**37**
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)	**0.015**
D_{60} (mm)	**0.025**
D_{85} (mm)	**0.071**
D_{90} (mm)	**0.133**
C_U	**NA**
C_C	**NA**

Soil Description:

Black 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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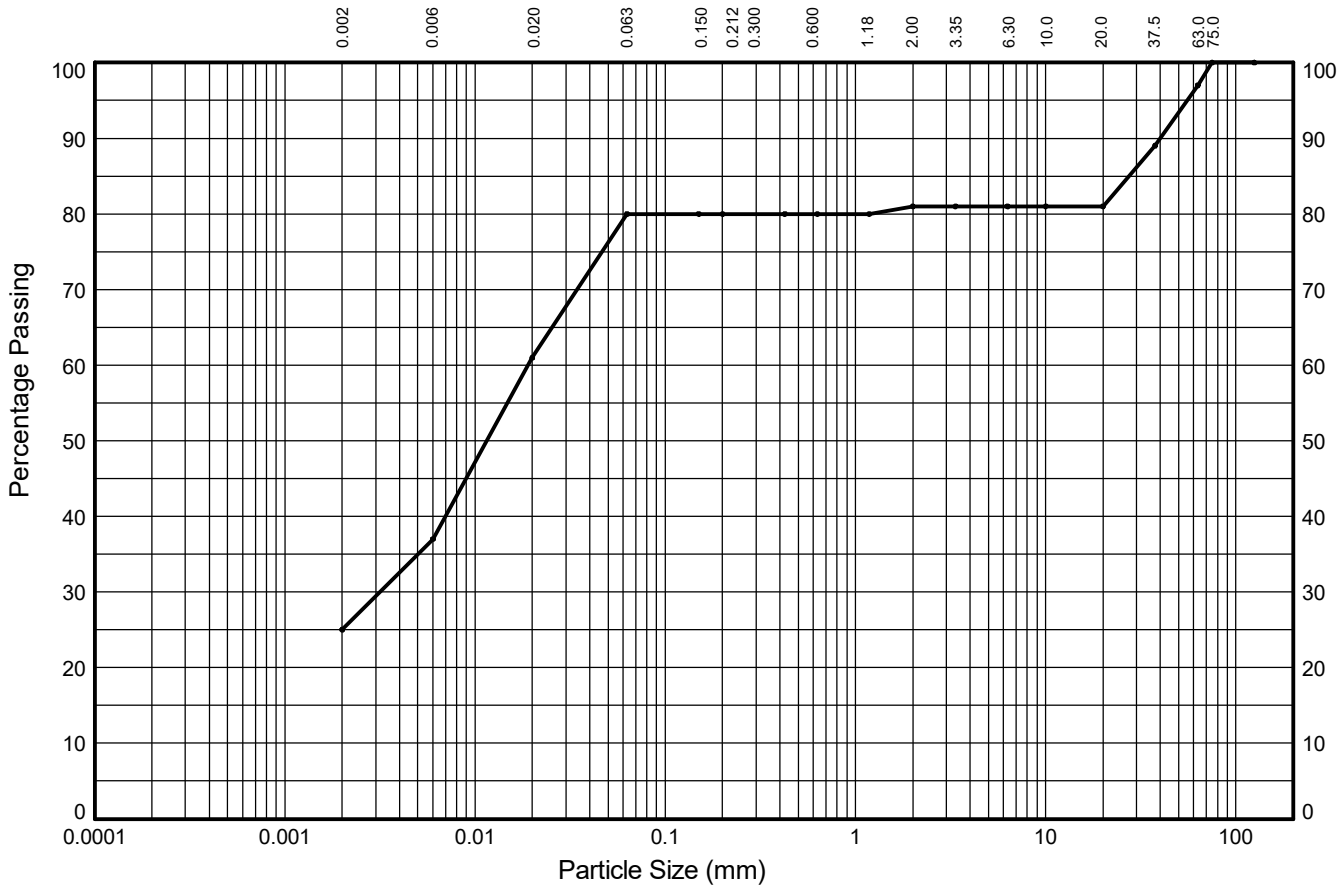
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH104** Sample Ref: **63** Sample Type: **B** Depth (m): **19.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	13%	23%	19%	0%	0%	1%	0%	0%	16%	
	SILT			SAND			GRAVEL			
25%	55%			1%			16%			3%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**97**
37.5	**89**
20.0	**81**
10.0	**81**
6.30	**81**
3.35	**81**
2.00	**81**
1.18	**80**
0.630	**80**
0.425	**80**
0.200	**80**
0.150	**80**
0.063	**80**

Particle Diameter (mm)	Percent Passing (%)
0.02	**61**
0.006	**37**
0.002	**25**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.003**
D_{50} (mm)	**0.012**
D_{60} (mm)	**0.019**
D_{85} (mm)	**27.386**
D_{90} (mm)	**40.012**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark greyish brown slightly sandy slightly gravelly clayey SILT 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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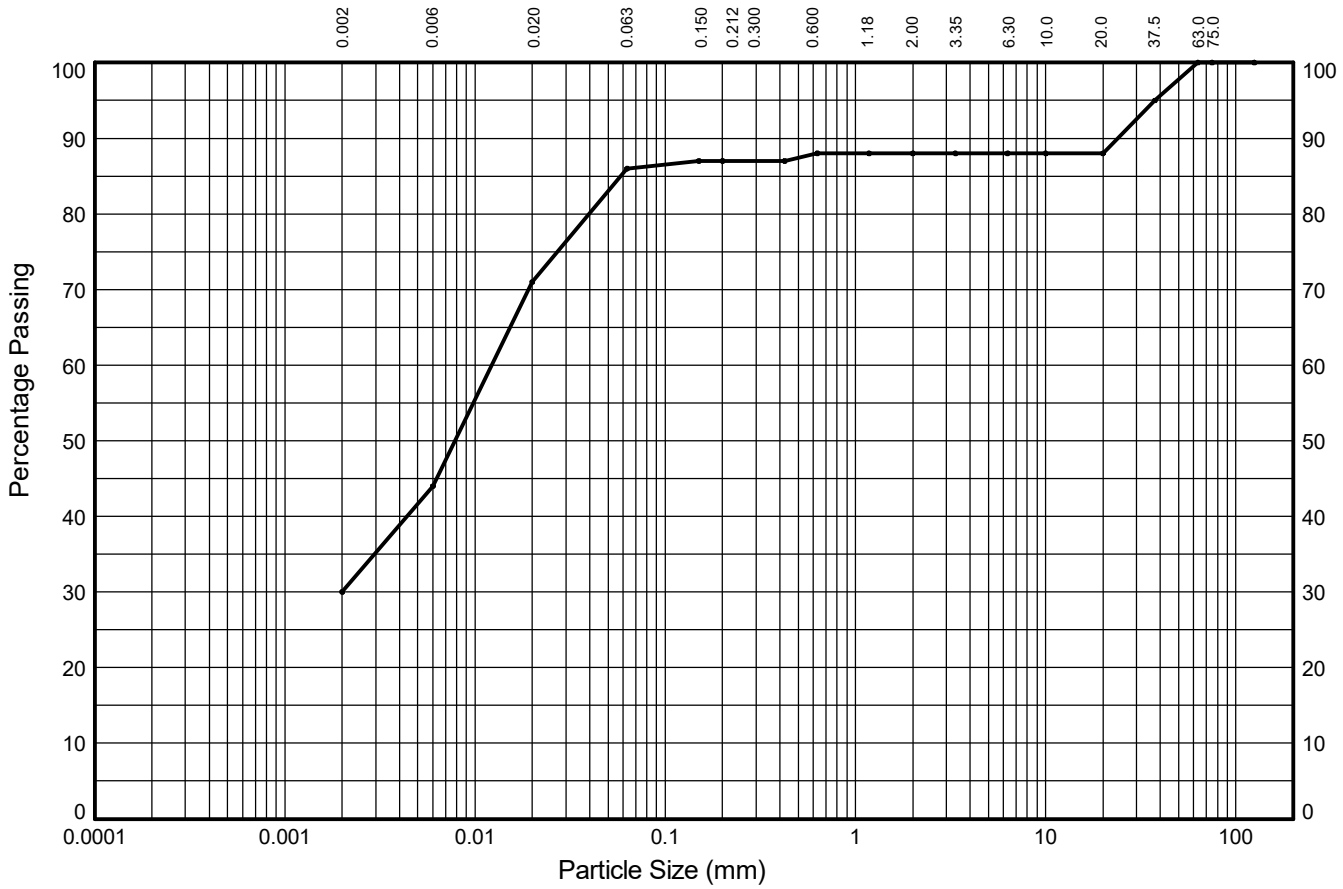
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH104** Sample Ref: **75** Sample Type: **B** Depth (m): **23.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	15%	26%	15%	1%	1%	0%	0%	0%	12%	
	SILT			SAND			GRAVEL			
30%	56%			2%			12%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**95**
20.0	**88**
10.0	**88**
6.30	**88**
3.35	**88**
2.00	**88**
1.18	**88**
0.630	**88**
0.425	**87**
0.200	**87**
0.150	**87**
0.063	**86**

Particle Diameter (mm)	Percent Passing (%)
0.02	**71**
0.006	**44**
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)	**0.008**
D_{60} (mm)	**0.012**
D_{85} (mm)	**0.058**
D_{90} (mm)	**23.935**
C_U	**NA**
C_C	**NA**

Soil Description:

Black 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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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH105** Sample Ref: **2** Sample Type: **B** Depth (m): **0.70**

CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	14%	20%	25%	4%	1%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
36%	59%			5%			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	**95**

Particle Diameter (mm)	Percent Passing (%)
0.02	**70**
0.006	**50**
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)	**0.011**
D_{85} (mm)	**0.040**
D_{90} (mm)	**0.050**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown mottled dark bluish grey 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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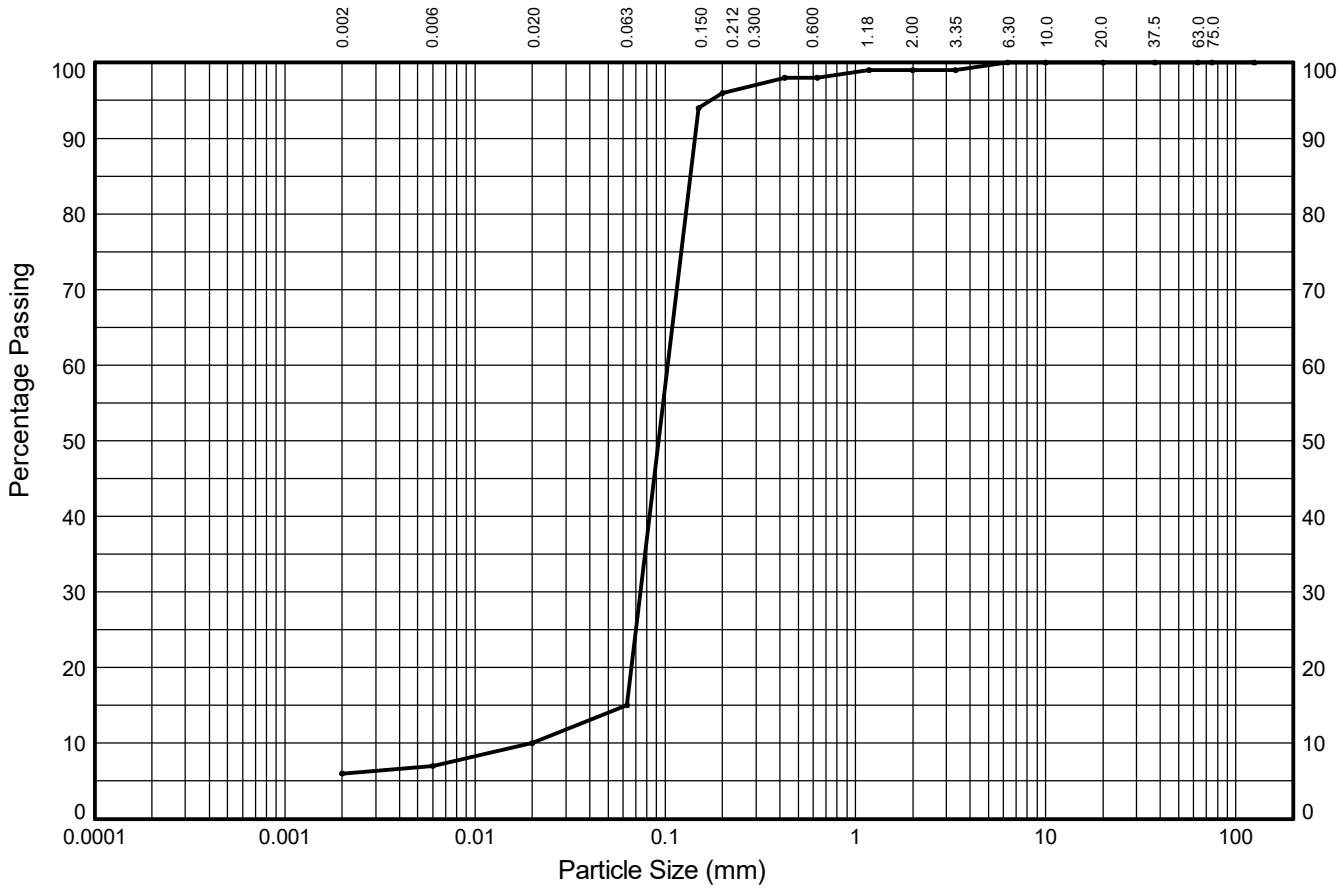
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH105** Sample Ref: **6** Sample Type: **B** Depth (m): **1.80**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	1%	3%	5%	81%	2%	1%	1%	0%	0%	
	SILT			SAND			GRAVEL			
6%	9%			84%			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	**98**
0.200	**96**
0.150	**94**
0.063	**15**

Particle Diameter (mm)	Percent Passing (%)
0.02	**10**
0.006	**7**
0.002	**6**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.020**
D_{15} (mm)	**0.063**
D_{30} (mm)	**0.074**
D_{50} (mm)	**0.093**
D_{60} (mm)	**0.103**
D_{85} (mm)	**0.136**
D_{90} (mm)	**0.144**
C_U	**5.2**
C_C	**2.7**

Soil Description:

Brown mottled grey 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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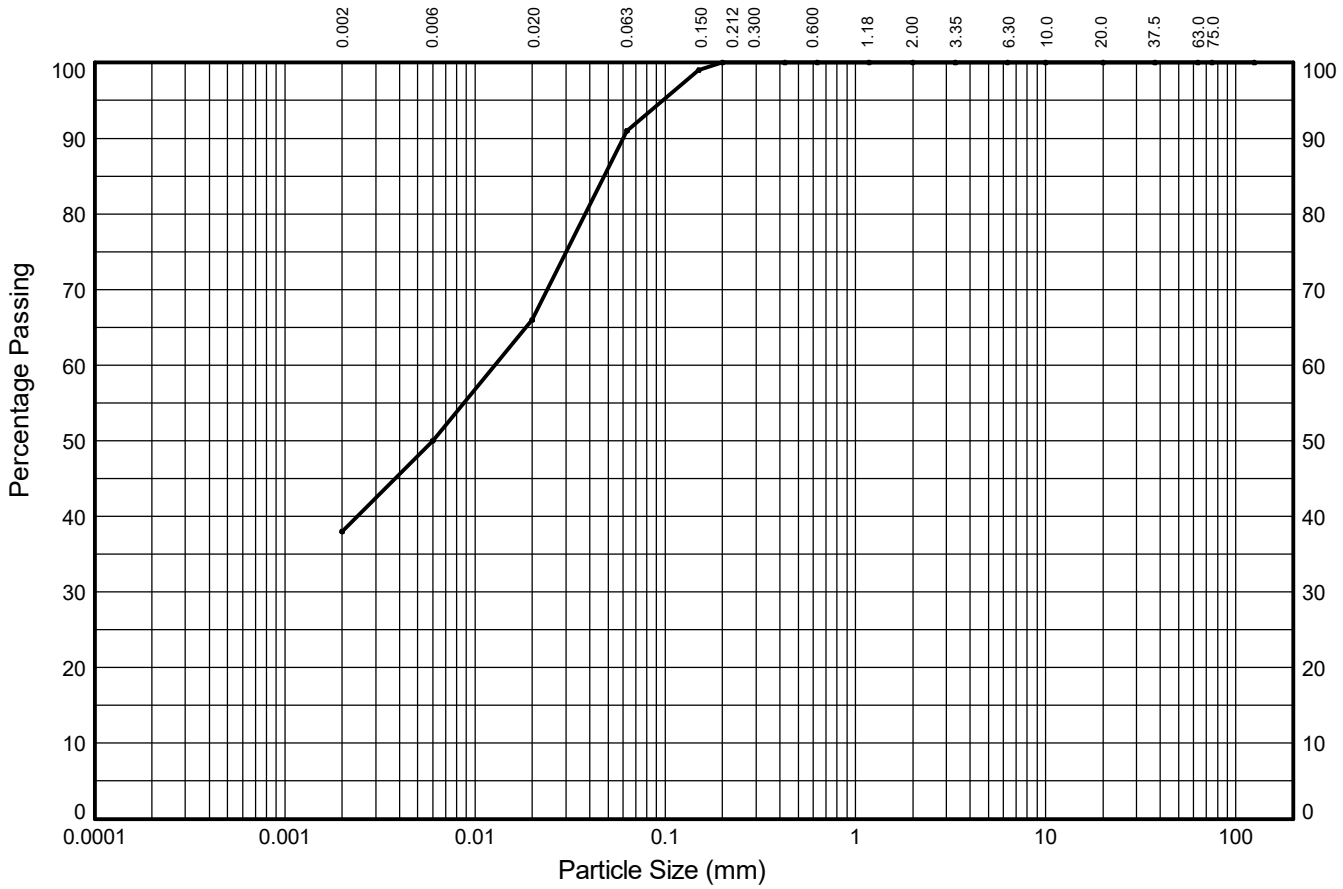
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH105** Sample Ref: **13** Sample Type: **B** Depth (m): **3.70**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	12%	16%	25%	9%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
38%	53%			9%			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	**100**
0.150	**99**
0.063	**91**

Particle Diameter (mm)	Percent Passing (%)
0.02	**66**
0.006	**50**
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)	**0.006**
D_{60} (mm)	**0.013**
D_{85} (mm)	**0.048**
D_{90} (mm)	**0.060**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark brown 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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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH105** Sample Ref: **21** Sample Type: **B** Depth (m): **5.70**

CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	15%	25%	27%	2%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
31%	67%			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	**100**
0.150	**100**
0.063	**98**

Particle Diameter (mm)	Percent Passing (%)
0.02	**71**
0.006	**45**
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)	**0.008**
D_{60} (mm)	**0.012**
D_{85} (mm)	**0.036**
D_{90} (mm)	**0.045**
C_U	**NA**
C_C	**NA**

Soil Description:

Greenish brown mottled dark grey slightly sandy clayey SILT

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

STRUCTURAL SOILS
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Hertfordshire
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Contract Ref: **563607**

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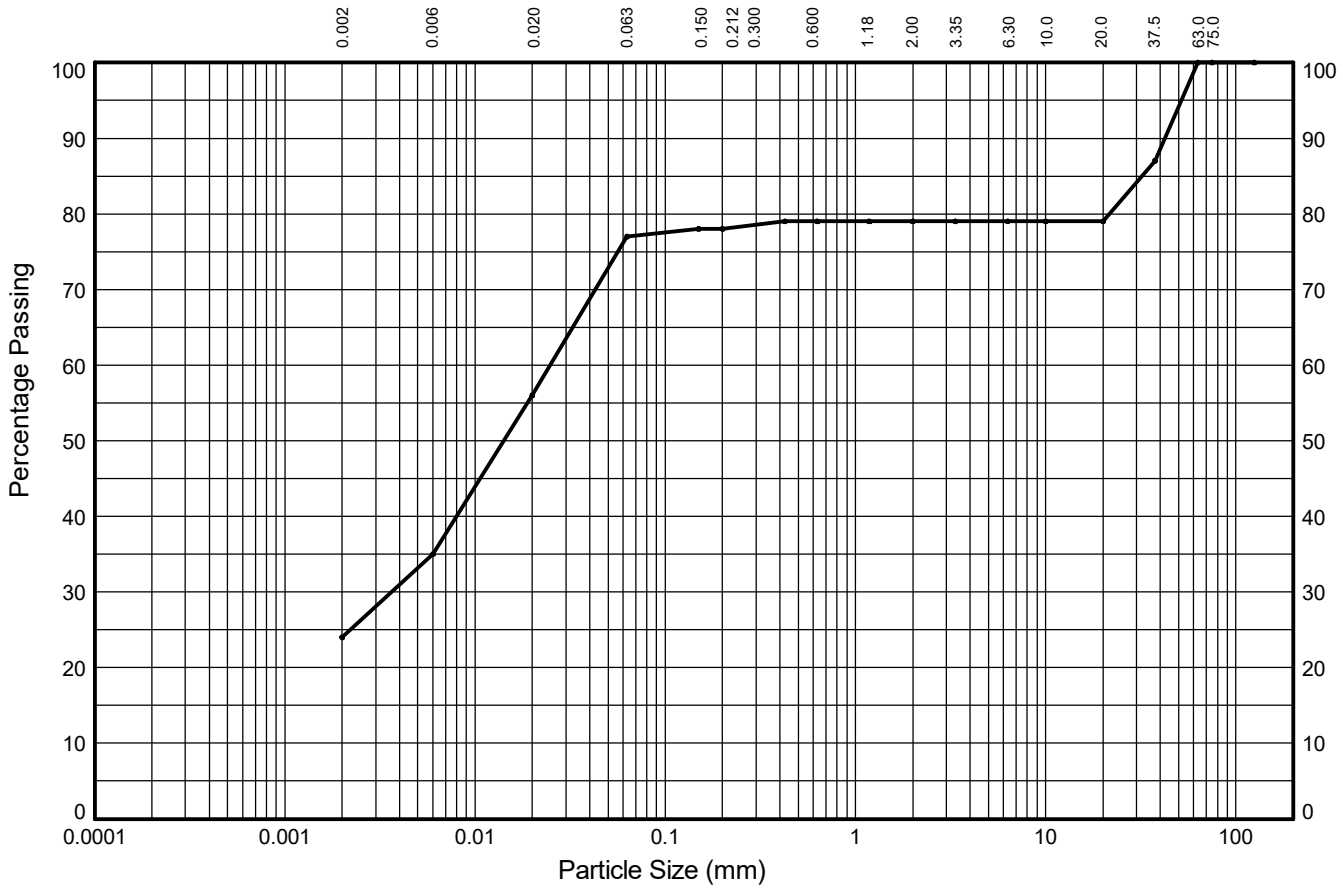
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH105** Sample Ref: **37** Sample Type: **B** Depth (m): **9.70**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	11%	21%	21%	1%	1%	0%	0%	0%	21%	
	SILT			SAND			GRAVEL			
24%	53%			2%			21%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**87**
20.0	**79**
10.0	**79**
6.30	**79**
3.35	**79**
2.00	**79**
1.18	**79**
0.630	**79**
0.425	**79**
0.200	**78**
0.150	**78**
0.063	**77**

Particle Diameter (mm)	Percent Passing (%)
0.02	**56**
0.006	**35**
0.002	**24**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.004**
D_{50} (mm)	**0.014**
D_{60} (mm)	**0.025**
D_{85} (mm)	**32.047**
D_{90} (mm)	**42.269**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark brown mottled 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

STRUCTURAL SOILS
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Contract Ref: **563607**

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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: **R22-BH105** Sample Ref: **85** Sample Type: **B** Depth (m): **21.60**

CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	10%	22%	22%	12%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
34%	54%			12%			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	**100**
0.150	**100**
0.063	**88**

Particle Diameter (mm)	Percent Passing (%)
0.02	**66**
0.006	**44**
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)	**0.008**
D_{60} (mm)	**0.014**
D_{85} (mm)	**0.054**
D_{90} (mm)	**0.073**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark brown 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 Ref: **563607**

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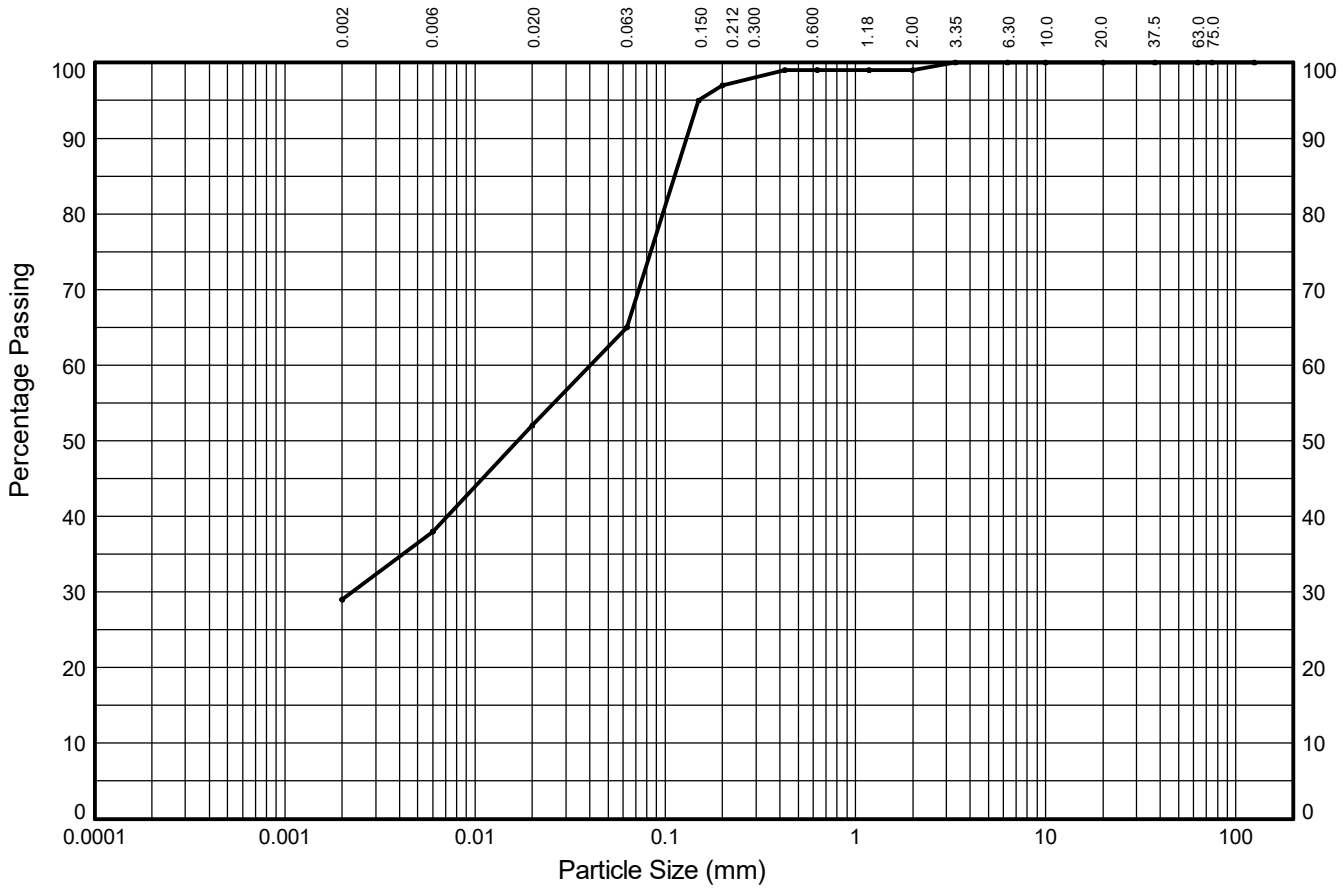
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH106A** Sample Ref: **2** Sample Type: **B** Depth (m): **1.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	9%	14%	13%	32%	2%	0%	1%	0%	0%	
	SILT			SAND			GRAVEL			
29%	36%			34%			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	**97**
0.150	**95**
0.063	**65**

Particle Diameter (mm)	Percent Passing (%)
0.02	**52**
0.006	**38**
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)	**0.017**
D_{60} (mm)	**0.041**
D_{85} (mm)	**0.112**
D_{90} (mm)	**0.130**
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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Date: **26/03/24**

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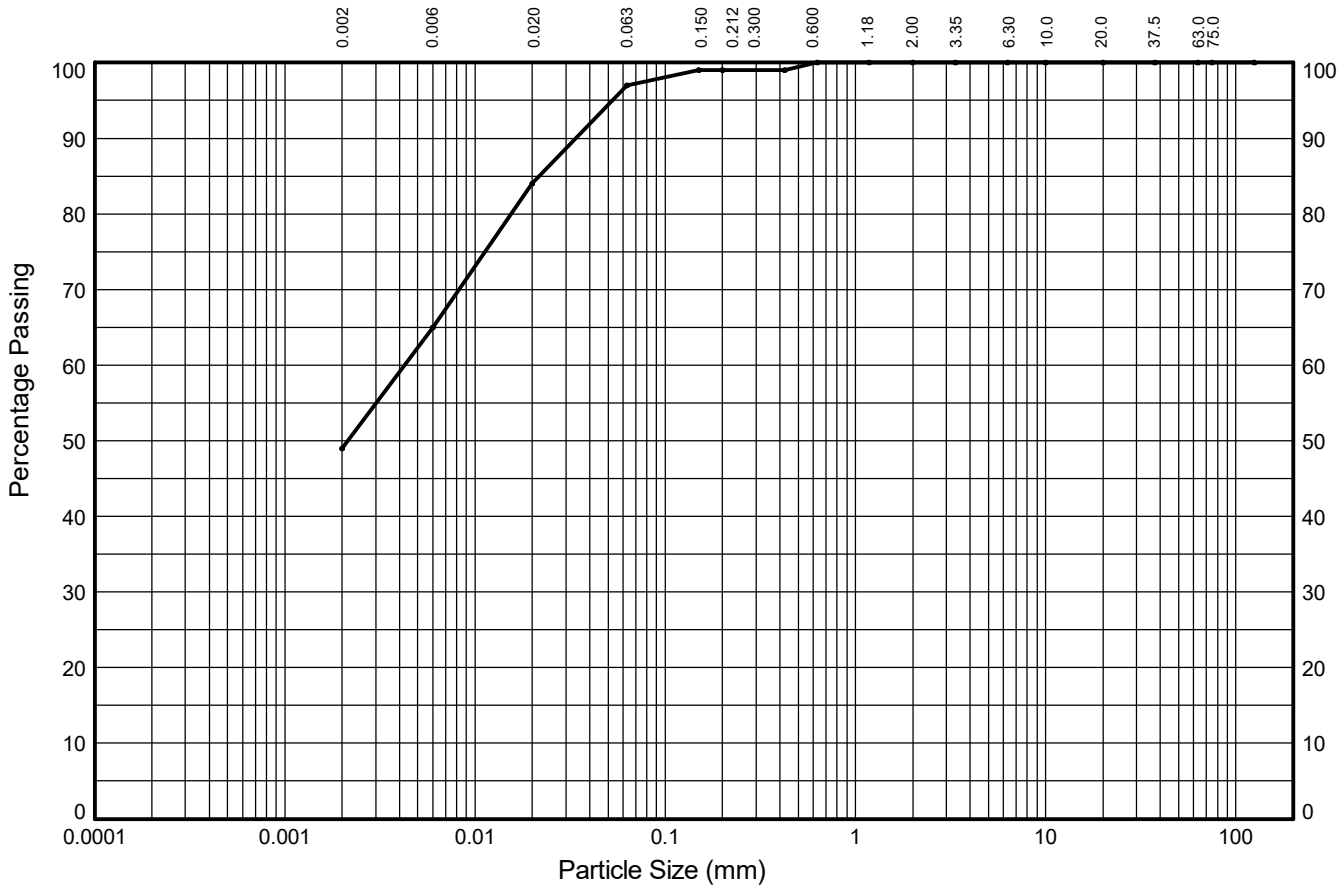
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.3 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH106A** Sample Ref: **4** Sample Type: **B** Depth (m): **1.80**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	16%	19%	13%	2%	1%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
49%	48%			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	**100**
0.425	**99**
0.200	**99**
0.150	**99**
0.063	**97**

Particle Diameter (mm)	Percent Passing (%)
0.02	**84**
0.006	**65**
0.002	**49**

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)	**0.022**
D_{90} (mm)	**0.034**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark brown slightly sandy silty CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

STRUCTURAL SOILS
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Bristol
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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: **R22-BH106A** Sample Ref: **8** Sample Type: **B** Depth (m): **2.60**

CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	12%	22%	25%	1%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
40%	59%			1%			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	**100**
0.150	**100**
0.063	**99**

Particle Diameter (mm)	Percent Passing (%)
0.02	**74**
0.006	**52**
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)	**0.009**
D_{85} (mm)	**0.033**
D_{90} (mm)	**0.042**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark brown slightly sandy silty 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
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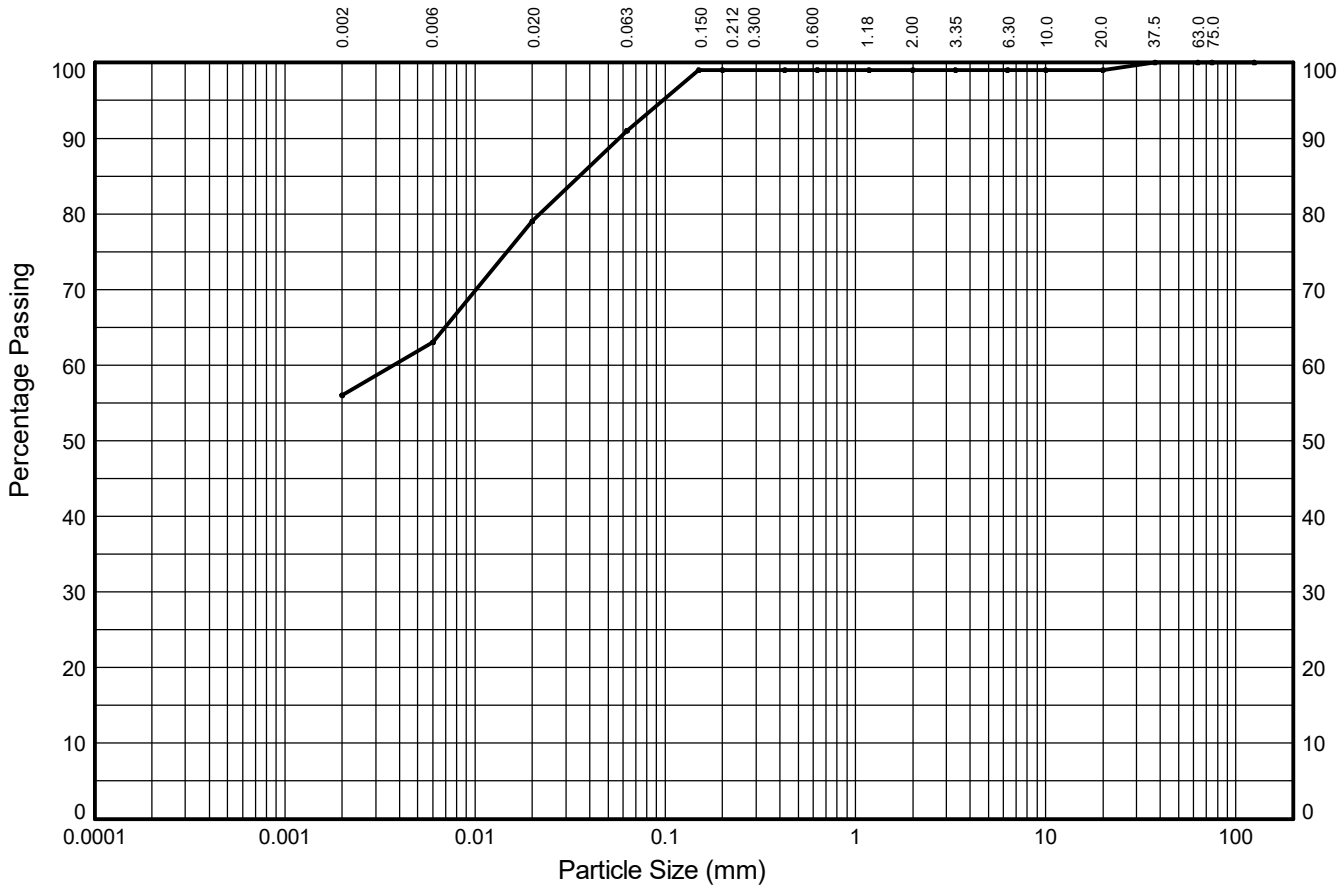
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.3 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH106A** Sample Ref: **20** Sample Type: **B** Depth (m): **5.60**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	7%	16%	12%	8%	0%	0%	0%	0%	1%	
	SILT			SAND			GRAVEL			
56%	35%			8%			1%			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	**99**
2.00	**99**
1.18	**99**
0.630	**99**
0.425	**99**
0.200	**99**
0.150	**99**
0.063	**91**

Particle Diameter (mm)	Percent Passing (%)
0.02	**79**
0.006	**63**
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)	**0.004**
D_{85} (mm)	**0.035**
D_{90} (mm)	**0.057**
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

STRUCTURAL SOILS
1a Princess Street
Bedminster
Bristol
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Compiled By: [redacted]

Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH106A** Sample Ref: **24** Sample Type: **B** Depth (m): **6.60**

CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	7%	11%	13%	42%	1%	0%	1%	0%	0%	
	SILT			SAND			GRAVEL			
25%	31%			43%			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	**98**
0.150	**98**
0.063	**56**

Particle Diameter (mm)	Percent Passing (%)
0.02	**43**
0.006	**32**
0.002	**25**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.004**
D_{50} (mm)	**0.037**
D_{60} (mm)	**0.068**
D_{85} (mm)	**0.115**
D_{90} (mm)	**0.127**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown mottled light grey slightly gravelly sandy silty CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

STRUCTURAL SOILS
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Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By: [redacted]

Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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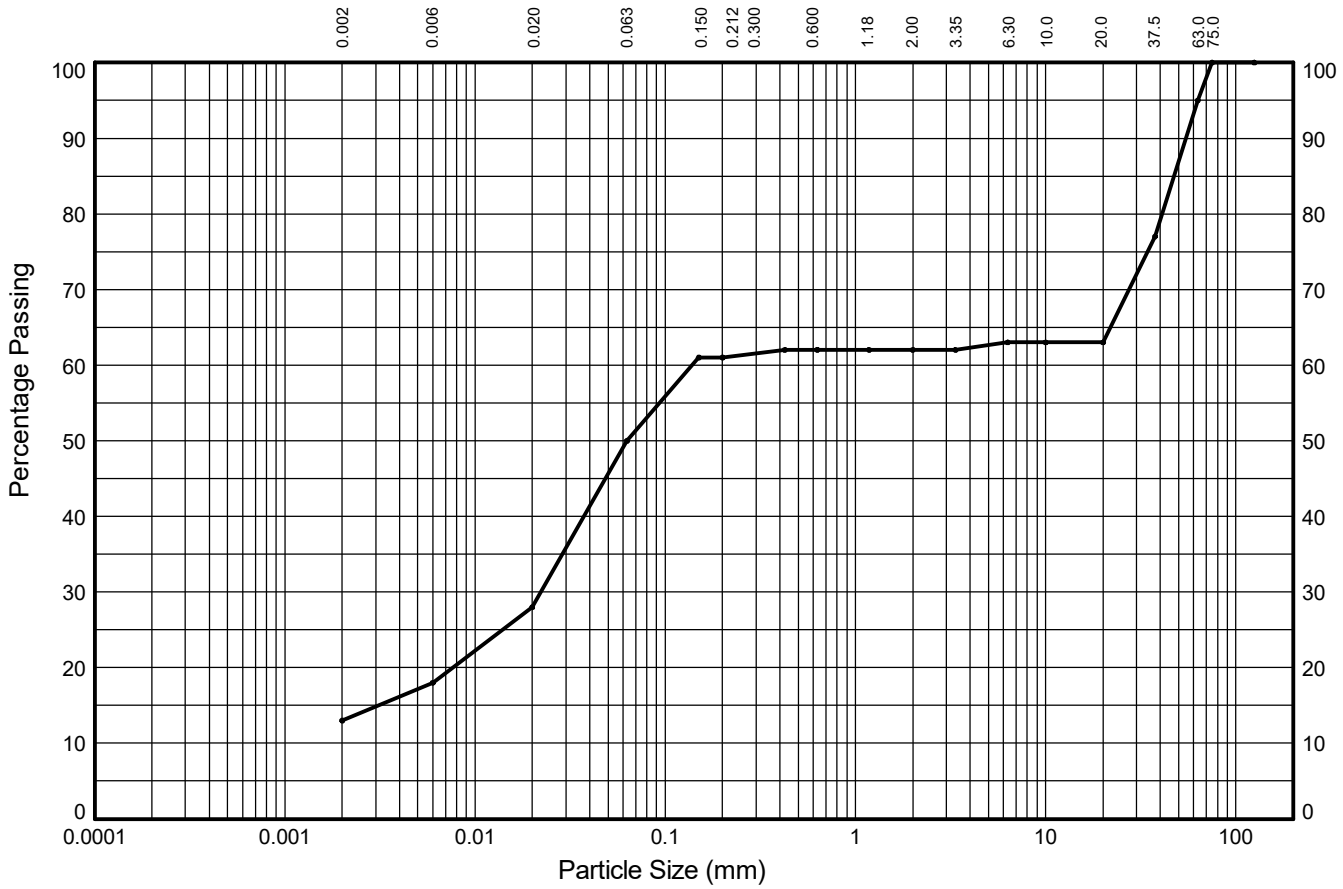
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH106A** Sample Ref: **28** Sample Type: **B** Depth (m): **8.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	5%	10%	22%	11%	1%	0%	1%	0%	32%	
	SILT			SAND			GRAVEL			
13%	37%			12%			33%			5%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**95**
37.5	**77**
20.0	**63**
10.0	**63**
6.30	**63**
3.35	**62**
2.00	**62**
1.18	**62**
0.630	**62**
0.425	**62**
0.200	**61**
0.150	**61**
0.063	**50**

Particle Diameter (mm)	Percent Passing (%)
0.02	**28**
0.006	**18**
0.002	**13**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**0.003**
D_{30} (mm)	**0.022**
D_{50} (mm)	**0.063**
D_{60} (mm)	**0.139**
D_{85} (mm)	**47.225**
D_{90} (mm)	**54.545**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown mottled greenish brown slightly sandy slightly gravelly clayey SILT with medium cobble content

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

STRUCTURAL SOILS
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Date: **26/03/24**

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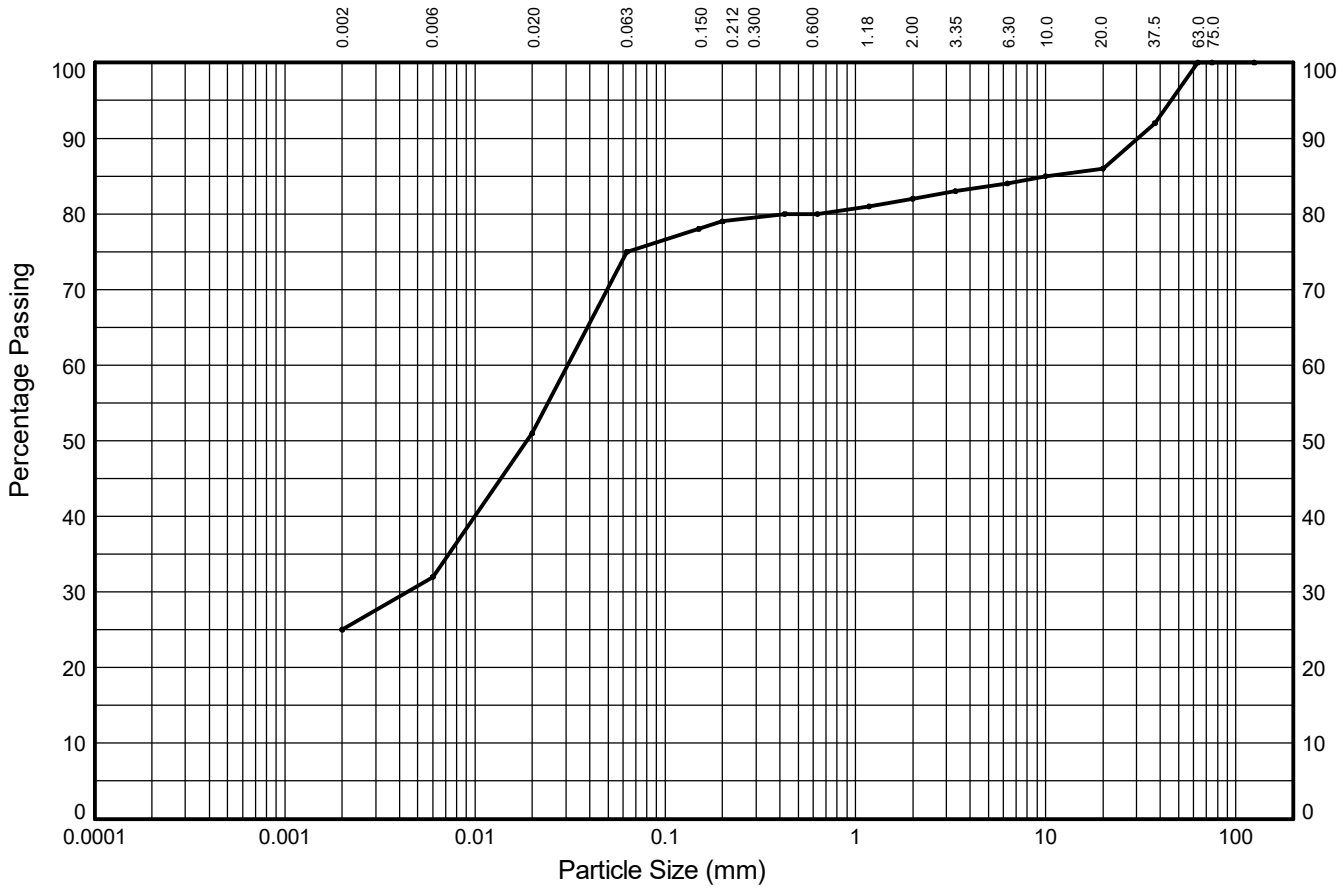
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH106A** Sample Ref: **43** Sample Type: **B** Depth (m): **15.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	7%	19%	24%	4%	1%	2%	2%	2%	14%	
	SILT			SAND			GRAVEL			
25%	50%			7%			18%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**92**
20.0	**86**
10.0	**85**
6.30	**84**
3.35	**83**
2.00	**82**
1.18	**81**
0.630	**80**
0.425	**80**
0.200	**79**
0.150	**78**
0.063	**75**

Particle Diameter (mm)	Percent Passing (%)
0.02	**51**
0.006	**32**
0.002	**25**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.004**
D_{50} (mm)	**0.019**
D_{60} (mm)	**0.031**
D_{85} (mm)	**10.000**
D_{90} (mm)	**30.411**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark brown mottled 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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Hertfordshire
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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: **R22-BH106A** Sample Ref: **57** Sample Type: **B** Depth (m): **22.50**

CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	5%	12%	4%	3%	4%	8%	15%	2%	36%	
	SILT			SAND			GRAVEL			
11%	21%			15%			53%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**85**
20.0	**64**
10.0	**64**
6.30	**62**
3.35	**55**
2.00	**47**
1.18	**42**
0.630	**39**
0.425	**37**
0.200	**35**
0.150	**34**
0.063	**32**

Particle Diameter (mm)	Percent Passing (%)
0.02	**28**
0.006	**16**
0.002	**11**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**0.005**
D_{30} (mm)	**0.035**
D_{50} (mm)	**2.427**
D_{60} (mm)	**5.260**
D_{85} (mm)	**37.500**
D_{90} (mm)	**44.579**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark grey sandy very 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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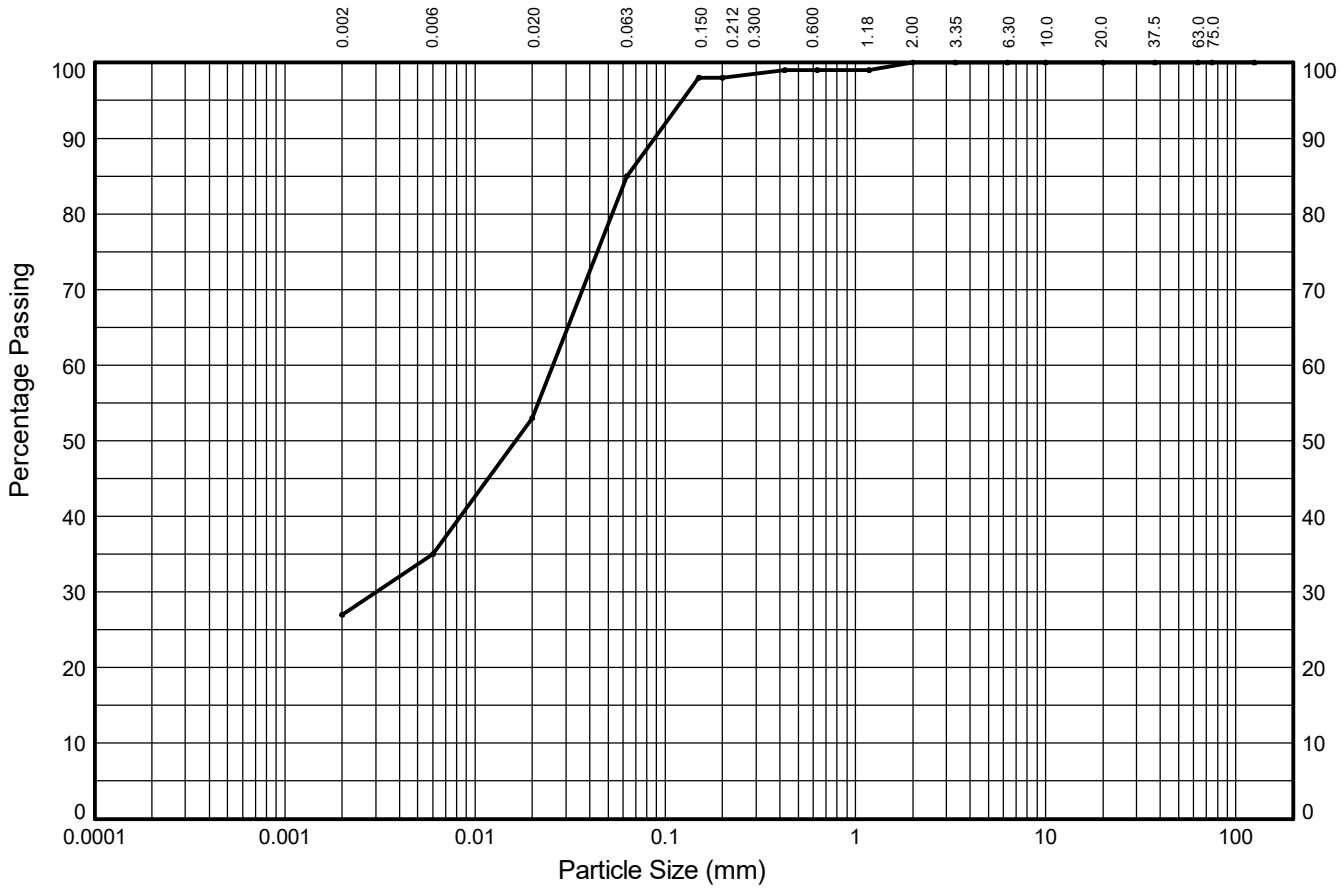
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH203** Sample Ref: **10** Sample Type: **B** Depth (m): **2.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	8%	18%	32%	13%	1%	1%	0%	0%	0%	
	SILT			SAND			GRAVEL			
27%	58%			15%			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	**99**
0.200	**98**
0.150	**98**
0.063	**85**

Particle Diameter (mm)	Percent Passing (%)
0.02	**53**
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)	**0.016**
D_{60} (mm)	**0.026**
D_{85} (mm)	**0.063**
D_{90} (mm)	**0.088**
C_U	**NA**
C_C	**NA**

Soil Description:

Light brown slightly sandy clayey SILT

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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HP3 9RT

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Contract Ref: **563607**

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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: **R22-BH203** Sample Ref: **17** Sample Type: **B** Depth (m): **4.50**

CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	12%	27%	25%	2%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
34%	64%			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	**100**
0.150	**100**
0.063	**98**

Particle Diameter (mm)	Percent Passing (%)
0.02	**73**
0.006	**45**
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)	**0.007**
D_{60} (mm)	**0.011**
D_{85} (mm)	**0.035**
D_{90} (mm)	**0.044**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark brown mottled grey 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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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH203** Sample Ref: **23** Sample Type: **B** Depth (m): **6.50**

CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	12%	25%	29%	1%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
33%	66%			1%			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	**100**
0.150	**100**
0.063	**99**

Particle Diameter (mm)	Percent Passing (%)
0.02	**70**
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)	**0.008**
D_{60} (mm)	**0.013**
D_{85} (mm)	**0.036**
D_{90} (mm)	**0.044**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark grey 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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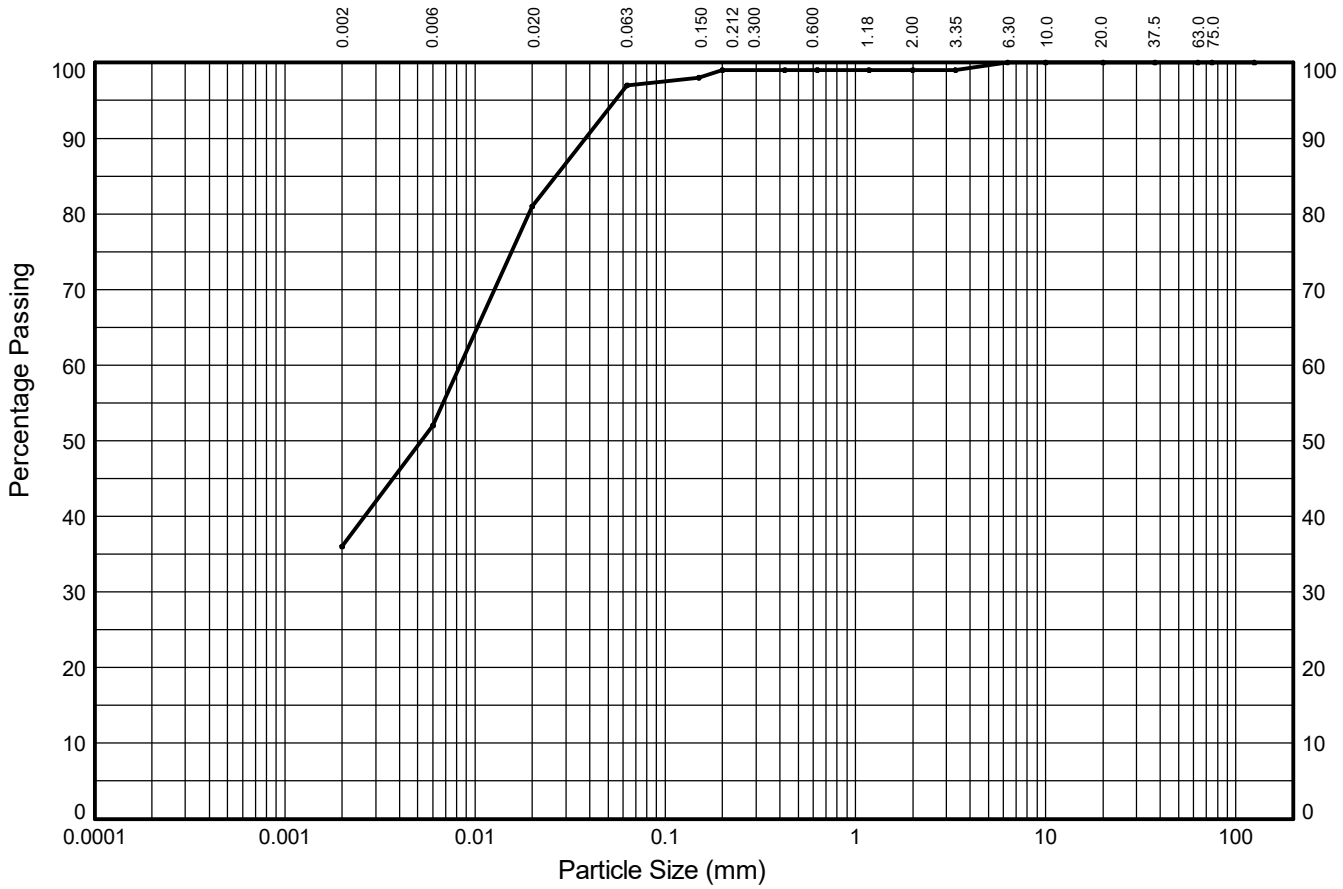
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH203** Sample Ref: **47** Sample Type: **B** Depth (m): **14.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	17%	28%	16%	2%	0%	0%	1%	0%	0%	
	SILT			SAND			GRAVEL			
36%	61%			2%			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	**99**
0.425	**99**
0.200	**99**
0.150	**98**
0.063	**97**

Particle Diameter (mm)	Percent Passing (%)
0.02	**81**
0.006	**52**
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)	**0.005**
D_{60} (mm)	**0.008**
D_{85} (mm)	**0.027**
D_{90} (mm)	**0.038**
C_U	**NA**
C_C	**NA**

Soil Description:

Grey 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: **SEA Link FEED - Kent Onshore Cable Link**

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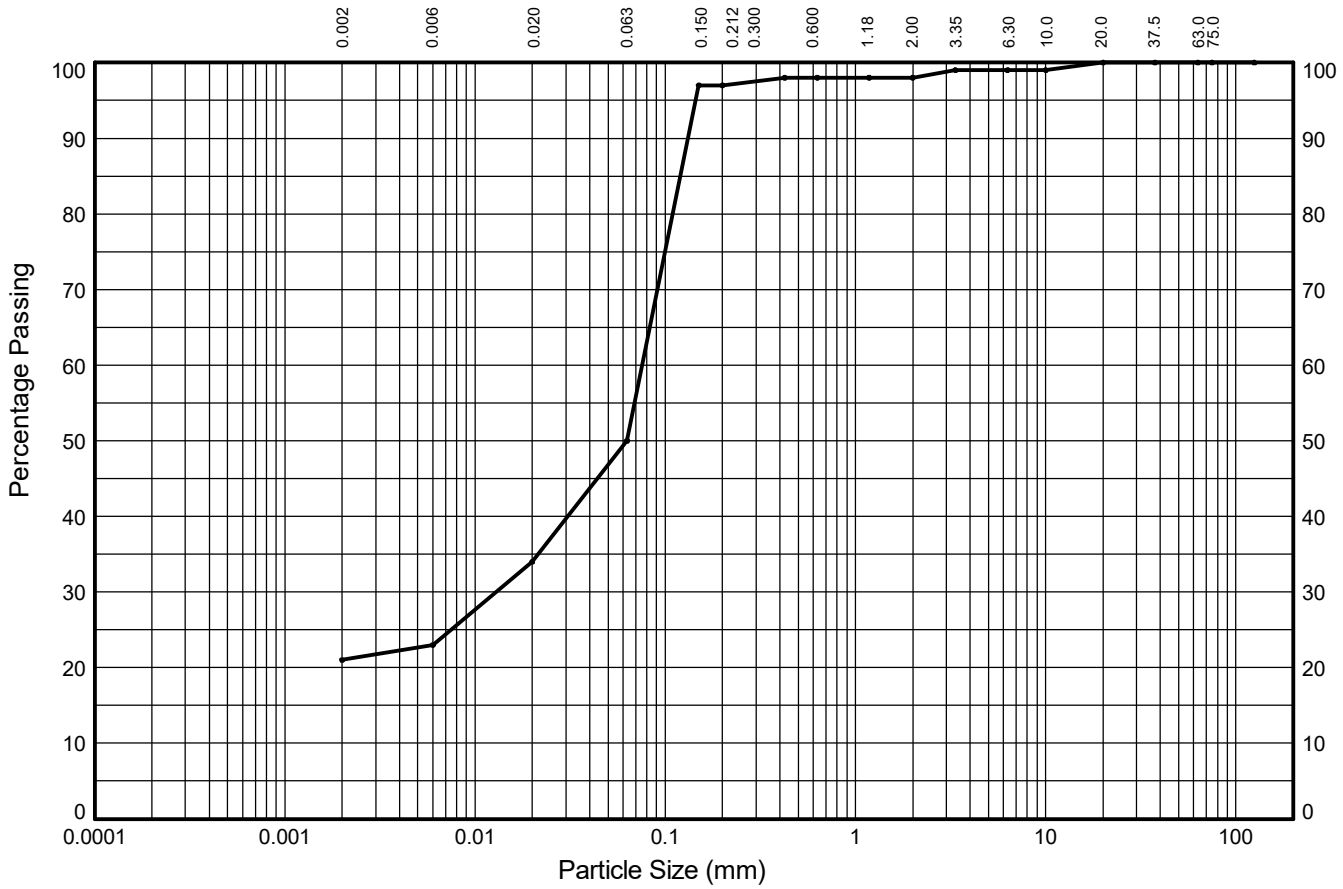
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH204** Sample Ref: **2** Sample Type: **B** Depth (m): **0.80**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	2%	11%	16%	47%	1%	0%	1%	1%	0%	
	SILT			SAND			GRAVEL			
21%	29%			48%			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	**98**
0.425	**98**
0.200	**97**
0.150	**97**
0.063	**50**

Particle Diameter (mm)	Percent Passing (%)
0.02	**34**
0.006	**23**
0.002	**21**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.013**
D_{50} (mm)	**0.063**
D_{60} (mm)	**0.076**
D_{85} (mm)	**0.120**
D_{90} (mm)	**0.132**
C_U	**NA**
C_C	**NA**

Soil Description:

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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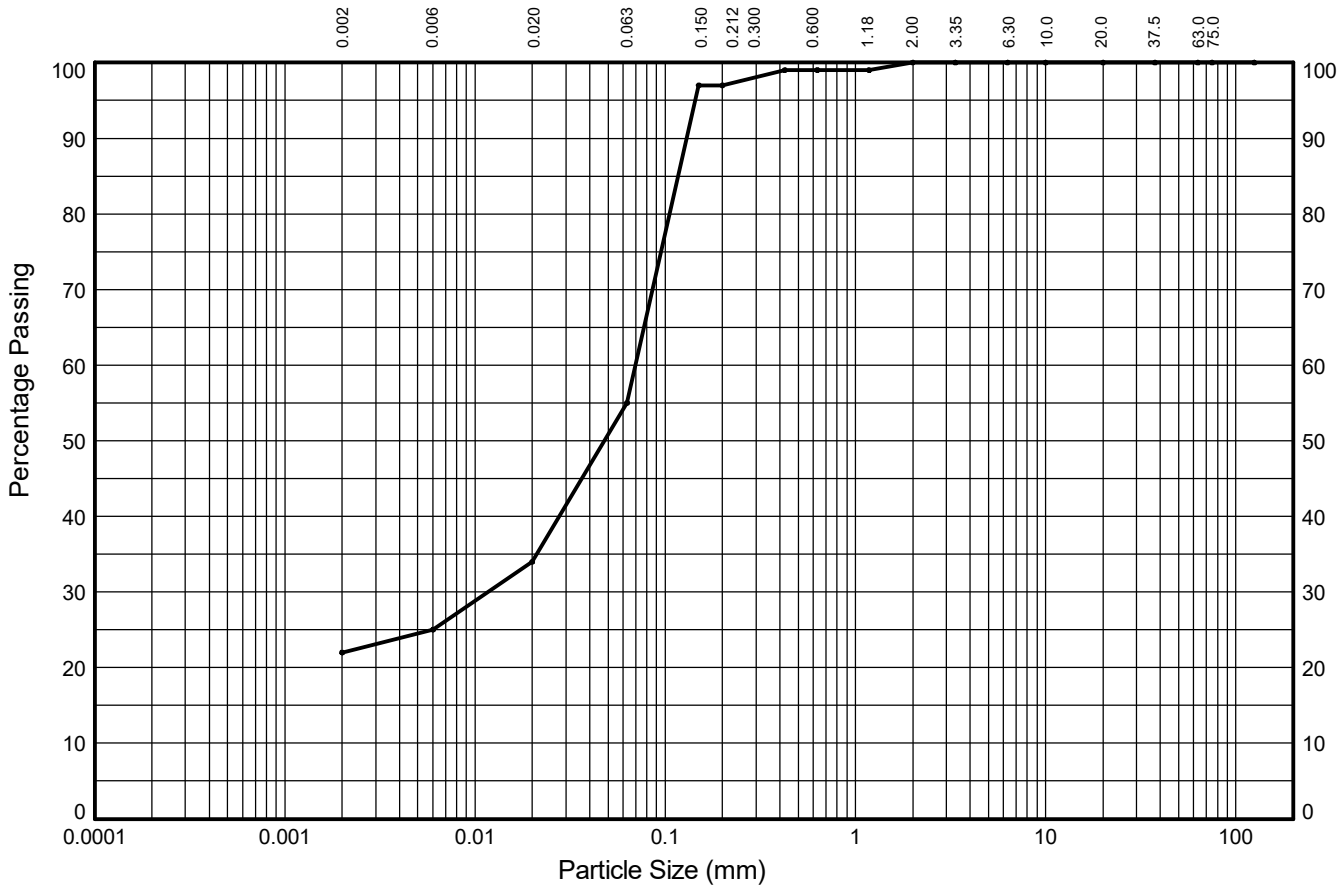
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH204** Sample Ref: **6** Sample Type: **B** Depth (m): **1.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	3%	9%	21%	42%	2%	1%	0%	0%	0%	
	SILT			SAND			GRAVEL			
22%	33%			45%			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	**99**
0.200	**97**
0.150	**97**
0.063	**55**

Particle Diameter (mm)	Percent Passing (%)
0.02	**34**
0.006	**25**
0.002	**22**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.012**
D_{50} (mm)	**0.048**
D_{60} (mm)	**0.070**
D_{85} (mm)	**0.117**
D_{90} (mm)	**0.130**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown mottled dark brown 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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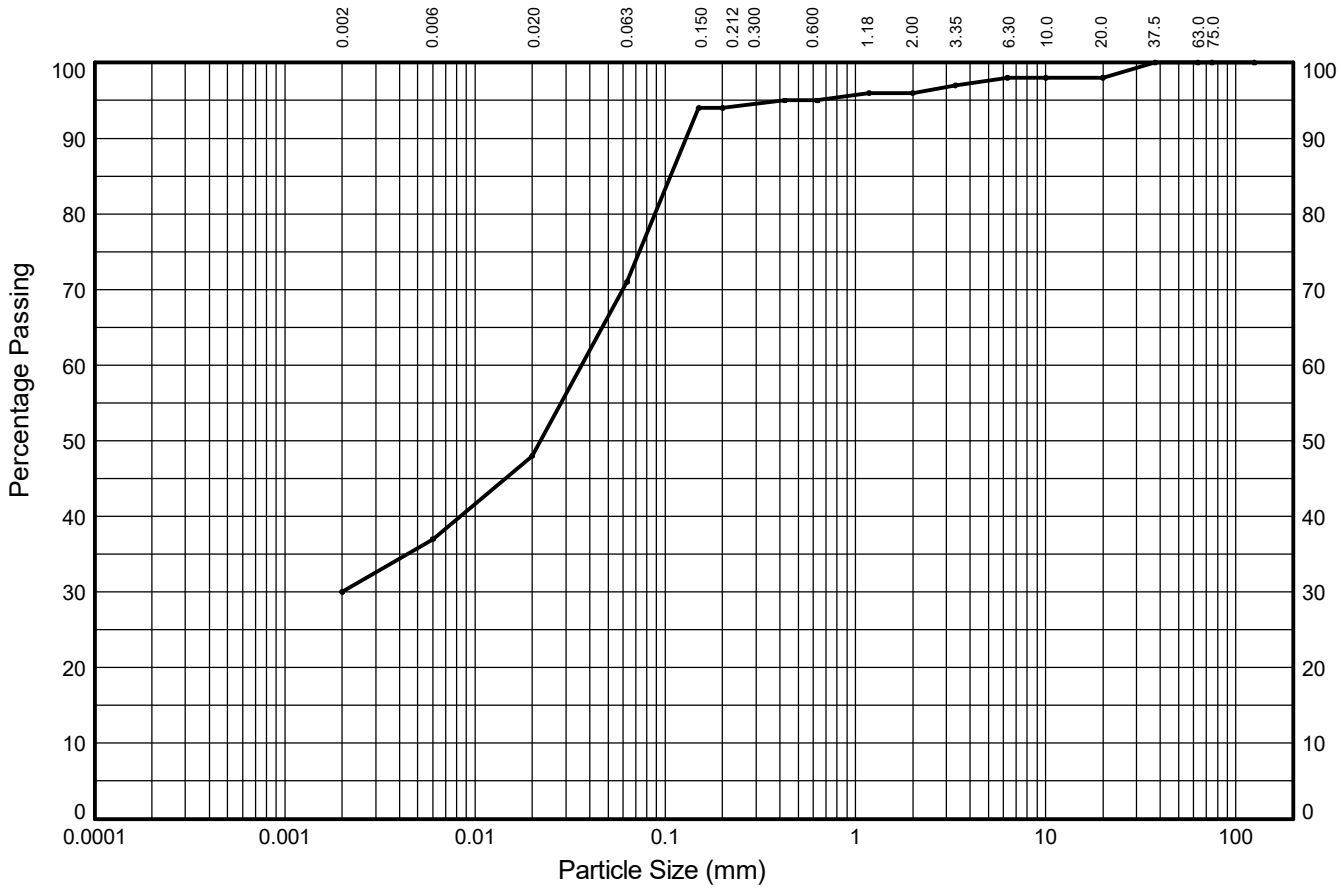
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH204** Sample Ref: **10** Sample Type: **B** Depth (m): **2.55**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	7%	11%	23%	23%	1%	1%	2%	0%	2%	
	SILT			SAND			GRAVEL			
30%	41%			25%			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	**98**
3.35	**97**
2.00	**96**
1.18	**96**
0.630	**95**
0.425	**95**
0.200	**94**
0.150	**94**
0.063	**71**

Particle Diameter (mm)	Percent Passing (%)
0.02	**48**
0.006	**37**
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)	**0.022**
D_{60} (mm)	**0.036**
D_{85} (mm)	**0.107**
D_{90} (mm)	**0.129**
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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HP3 9RT

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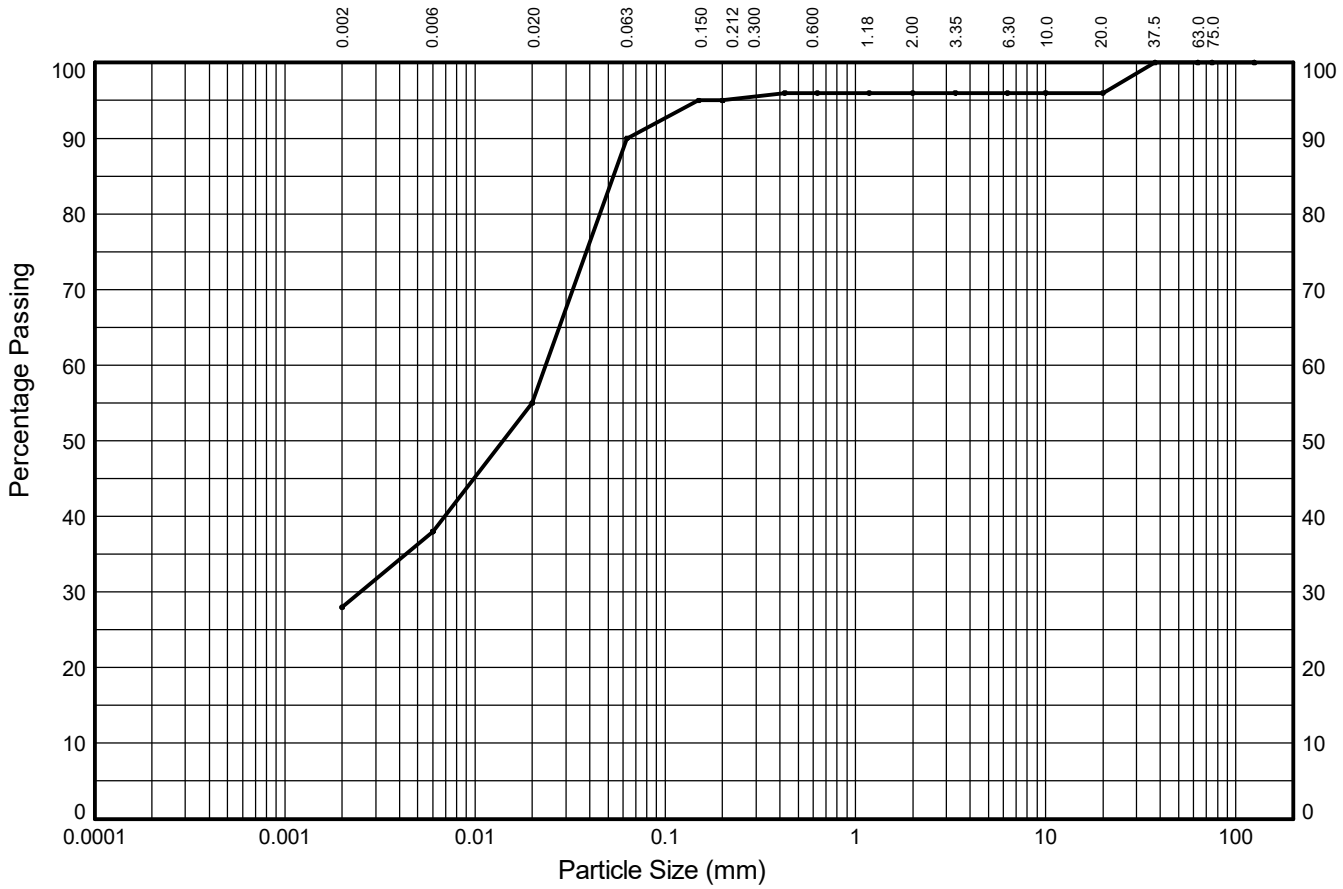
SEA Link FEED - Kent Onshore Cable Link	**563607**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH204** Sample Ref: **14** Sample Type: **B** Depth (m): **3.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	10%	17%	35%	5%	1%	0%	0%	0%	4%	
	SILT			SAND			GRAVEL			
28%	62%			6%			4%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**96**
10.0	**96**
6.30	**96**
3.35	**96**
2.00	**96**
1.18	**96**
0.630	**96**
0.425	**96**
0.200	**95**
0.150	**95**
0.063	**90**

Particle Diameter (mm)	Percent Passing (%)
0.02	**55**
0.006	**38**
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)	**0.024**
D_{85} (mm)	**0.053**
D_{90} (mm)	**0.063**
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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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH204** Sample Ref: **26** Sample Type: **B** Depth (m): **6.55**

CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	13%	23%	26%	2%	1%	0%	0%	0%	3%	
	SILT			SAND			GRAVEL			
32%	62%			3%			3%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**97**
20.0	**97**
10.0	**97**
6.30	**97**
3.35	**97**
2.00	**97**
1.18	**97**
0.630	**97**
0.425	**97**
0.200	**96**
0.150	**96**
0.063	**94**

Particle Diameter (mm)	Percent Passing (%)
0.02	**68**
0.006	**45**
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)	**0.013**
D_{85} (mm)	**0.042**
D_{90} (mm)	**0.053**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark greyish 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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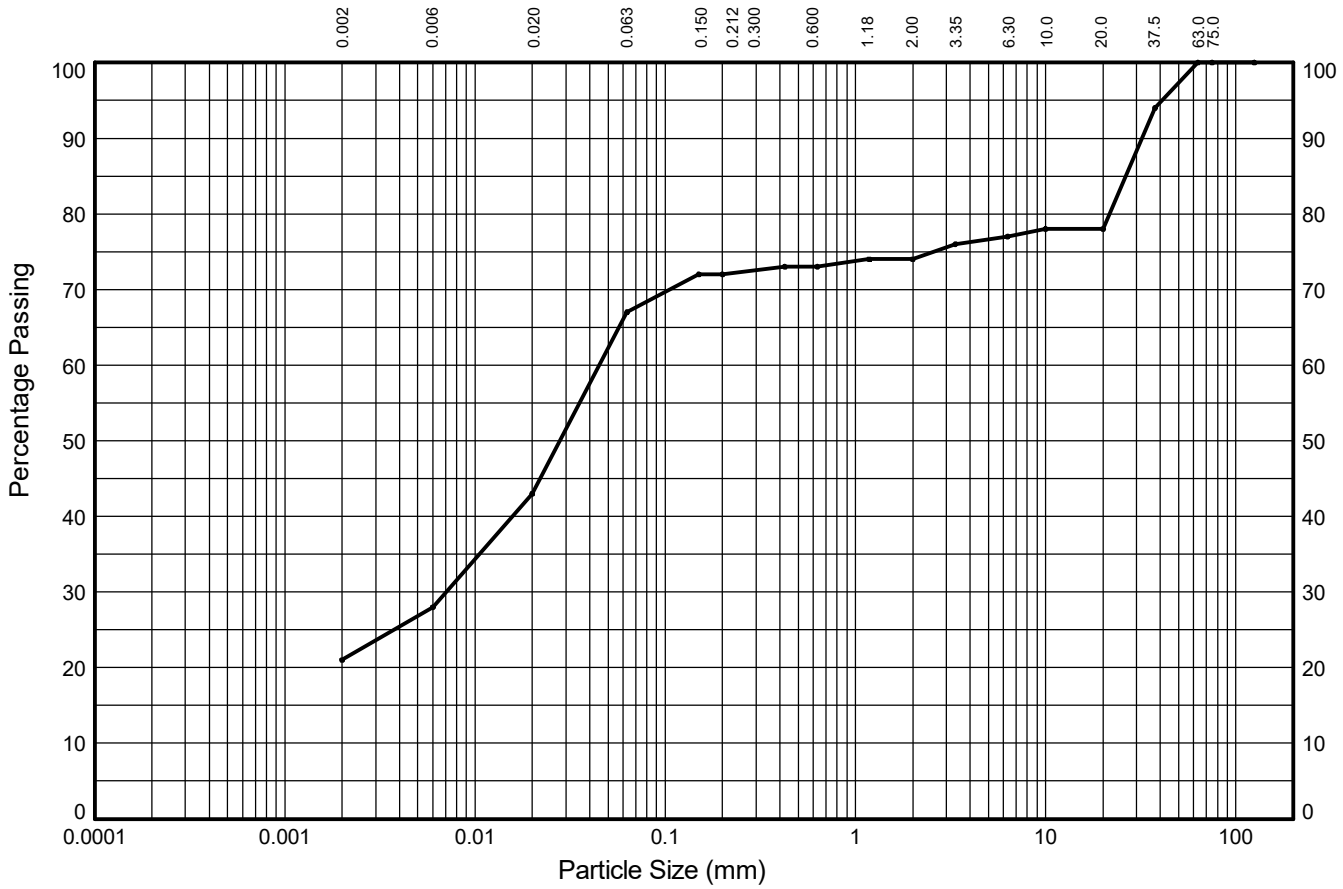
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH204** Sample Ref: **52** Sample Type: **B** Depth (m): **13.60**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	7%	15%	24%	5%	1%	1%	3%	1%	22%	
	SILT			SAND			GRAVEL			
21%	46%			7%			26%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**94**
20.0	**78**
10.0	**78**
6.30	**77**
3.35	**76**
2.00	**74**
1.18	**74**
0.630	**73**
0.425	**73**
0.200	**72**
0.150	**72**
0.063	**67**

Particle Diameter (mm)	Percent Passing (%)
0.02	**43**
0.006	**28**
0.002	**21**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.007**
D_{50} (mm)	**0.028**
D_{60} (mm)	**0.045**
D_{85} (mm)	**26.331**
D_{90} (mm)	**32.047**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark brown 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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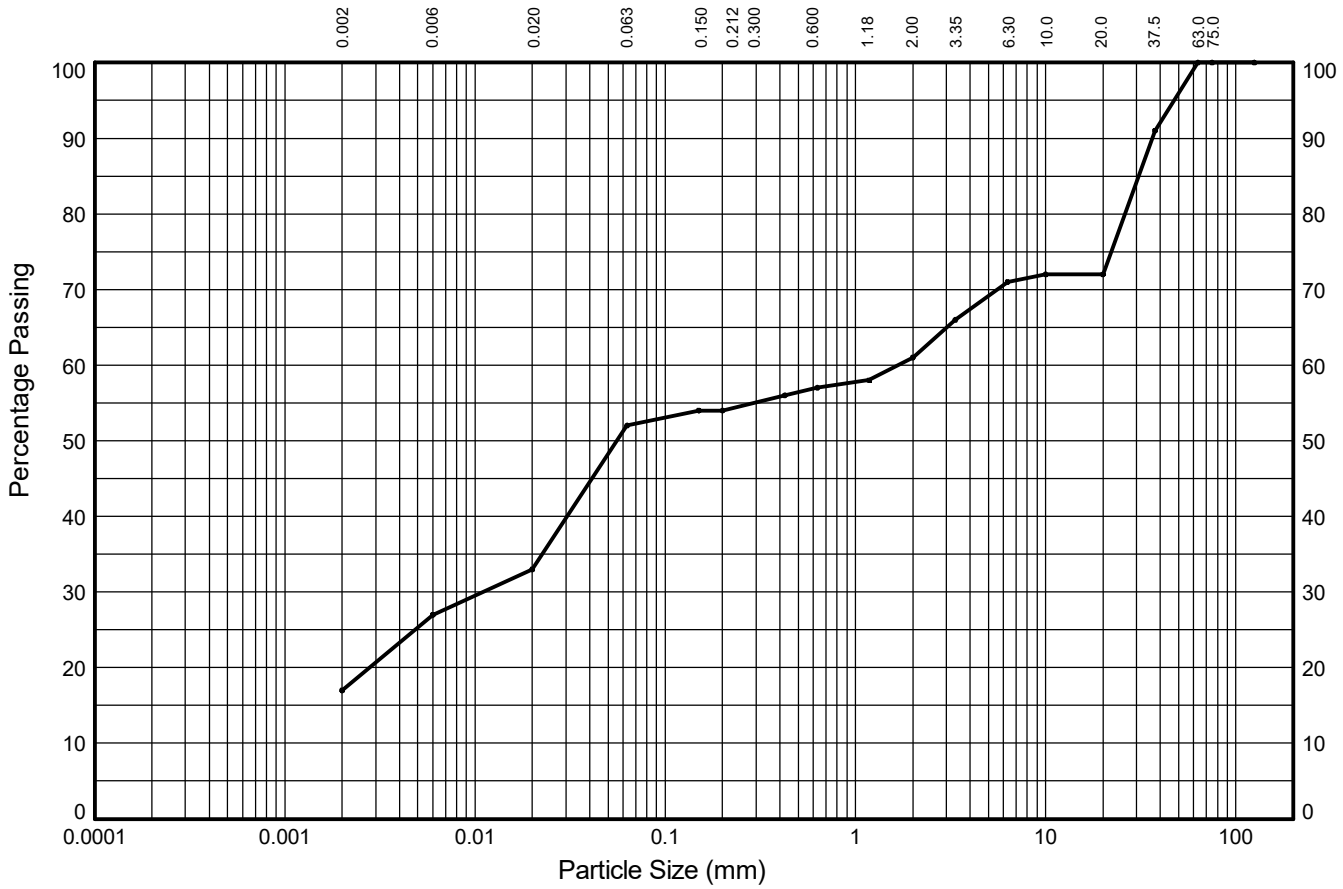
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH204** Sample Ref: **64** Sample Type: **B** Depth (m): **16.70**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	10%	6%	19%	2%	3%	4%	10%	1%	28%	
	SILT			SAND			GRAVEL			
17%	35%			9%			39%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**91**
20.0	**72**
10.0	**72**
6.30	**71**
3.35	**66**
2.00	**61**
1.18	**58**
0.630	**57**
0.425	**56**
0.200	**54**
0.150	**54**
0.063	**52**

Particle Diameter (mm)	Percent Passing (%)
0.02	**33**
0.006	**27**
0.002	**17**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.011**
D_{50} (mm)	**0.056**
D_{60} (mm)	**1.677**
D_{85} (mm)	**30.748**
D_{90} (mm)	**36.280**
C_U	**NA**
C_C	**NA**

Soil Description:

Grey slightly sandy 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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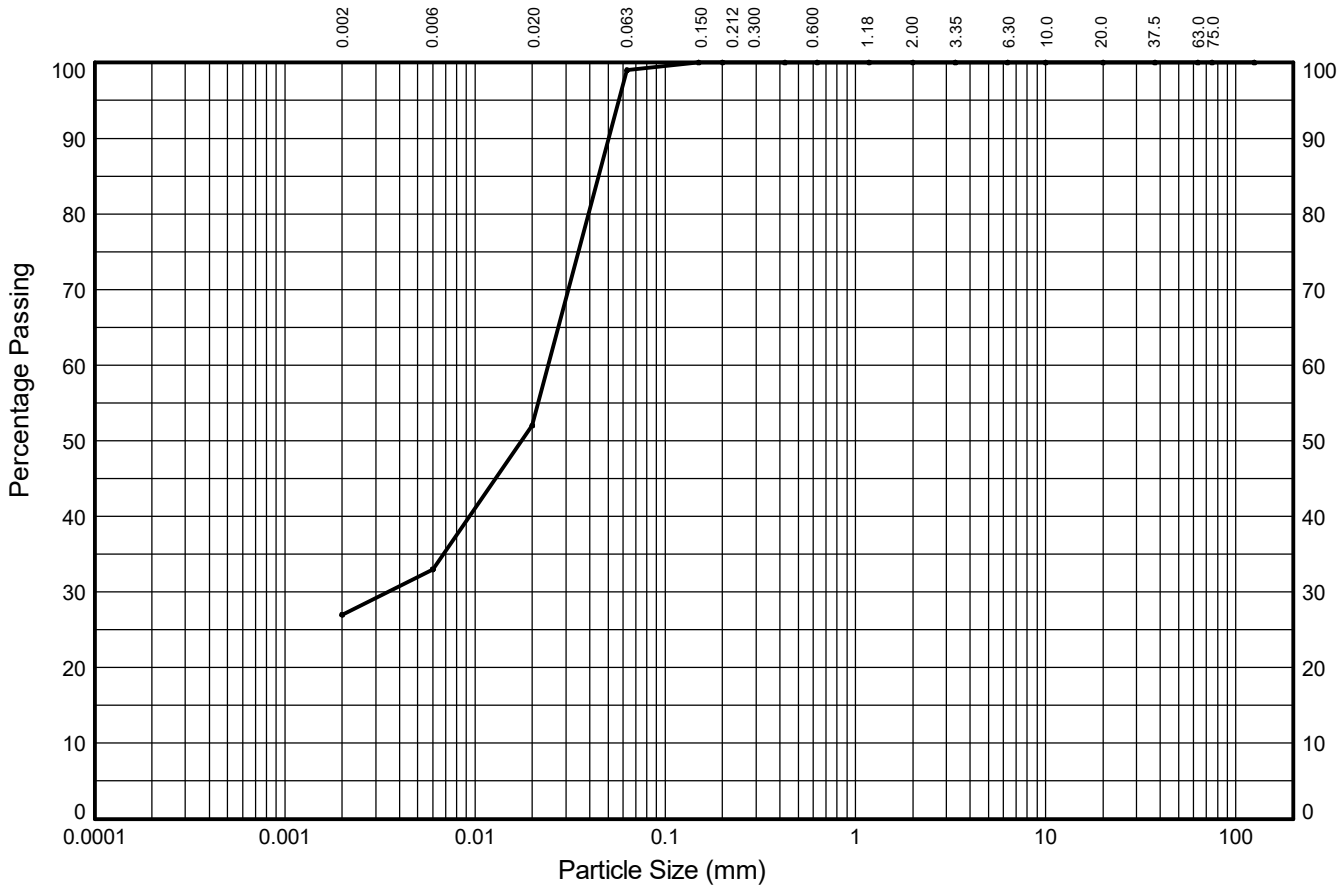
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH204** Sample Ref: **80** Sample Type: **B** Depth (m): **20.60**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	6%	19%	47%	1%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
27%	72%			1%			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	**100**
0.150	**100**
0.063	**99**

Particle Diameter (mm)	Percent Passing (%)
0.02	**52**
0.006	**33**
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)	**0.018**
D_{60} (mm)	**0.024**
D_{85} (mm)	**0.045**
D_{90} (mm)	**0.051**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark brown mottled greyish green slightly sandy clayey SILT

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

Compiled By: [redacted]

Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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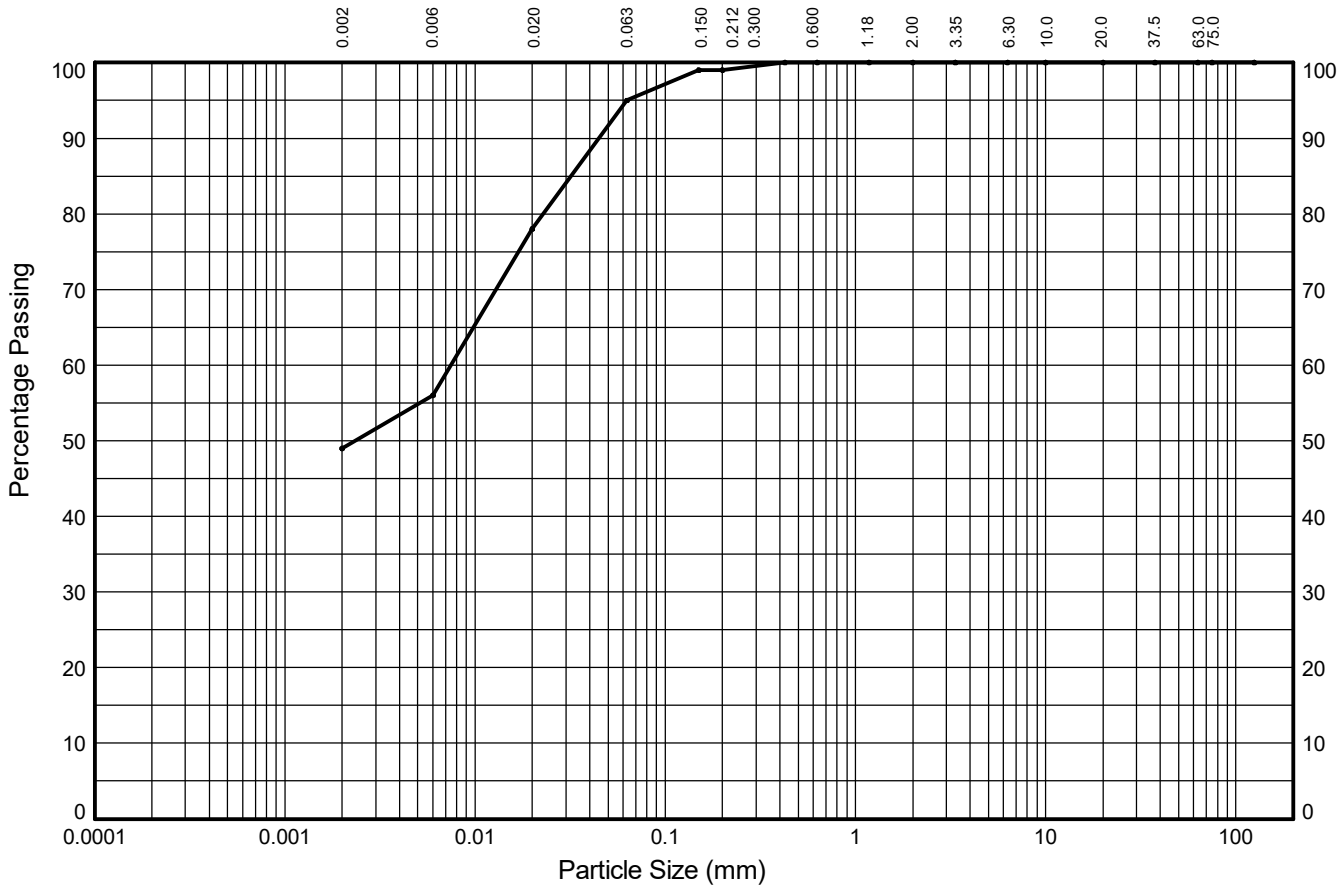
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH205** Sample Ref: **2** Sample Type: **B** Depth (m): **0.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	7%	22%	17%	4%	1%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
49%	46%			5%			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	**95**

Particle Diameter (mm)	Percent Passing (%)
0.02	**78**
0.006	**56**
0.002	**49**

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)	**0.007**
D_{85} (mm)	**0.032**
D_{90} (mm)	**0.045**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown slightly sandy silty CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

STRUCTURAL SOILS
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Hertfordshire
HP3 9RT

Compiled By: [redacted]

Date: **26/03/24**

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Contract Ref: **563607**

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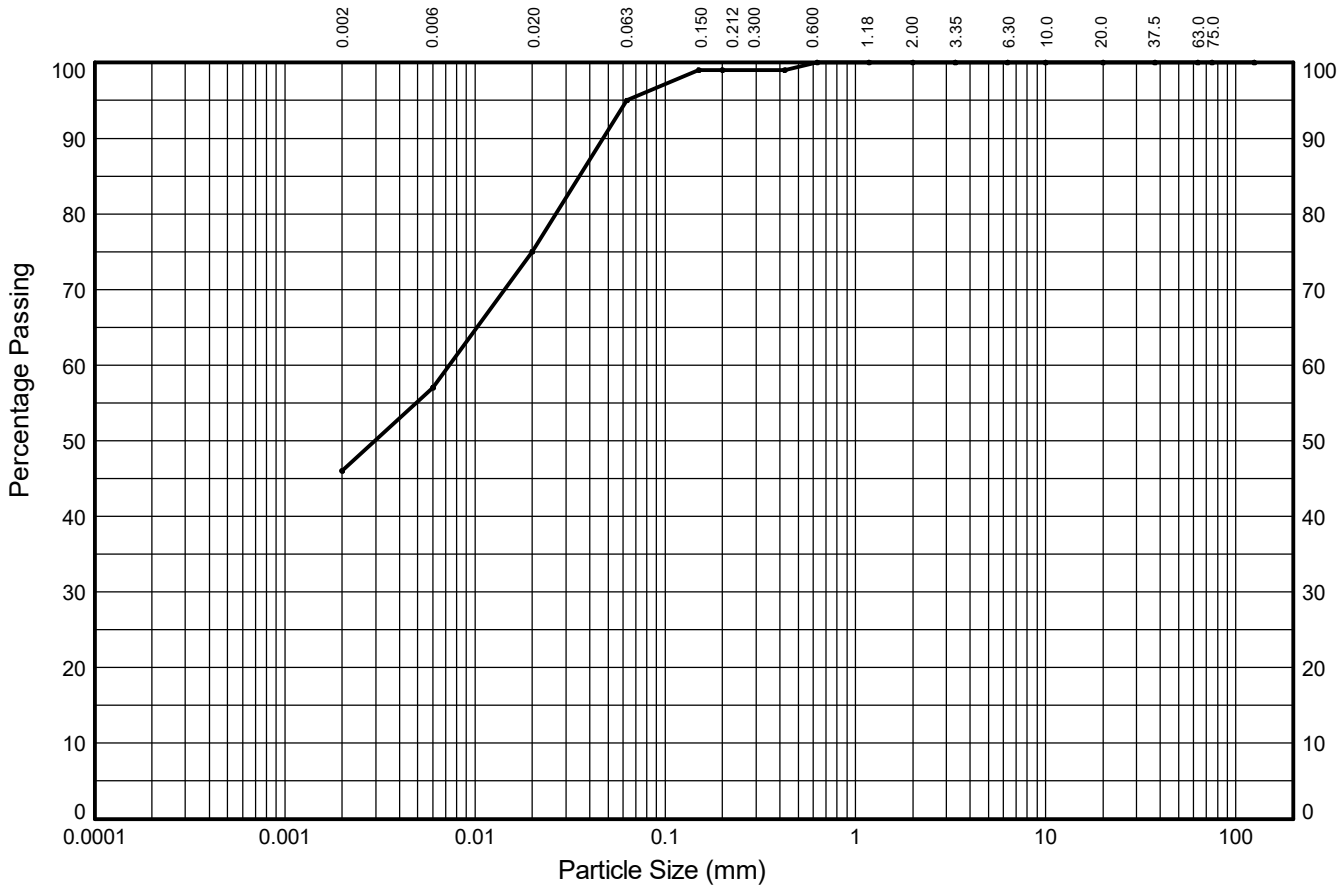
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH205** Sample Ref: **4** Sample Type: **B** Depth (m): **1.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	11%	18%	20%	4%	1%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
46%	49%			5%			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	**95**

Particle Diameter (mm)	Percent Passing (%)
0.02	**75**
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)	**0.007**
D_{85} (mm)	**0.035**
D_{90} (mm)	**0.047**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown slightly sandy silty 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
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Hertfordshire
HP3 9RT

Compiled By: [redacted] [redacted] Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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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: **R22-BH205** Sample Ref: **17** Sample Type: **B** Depth (m): **4.50**

CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	11%	18%	17%	17%	1%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
36%	46%			18%			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	**82**

Particle Diameter (mm)	Percent Passing (%)
0.02	**65**
0.006	**47**
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)	**0.007**
D_{60} (mm)	**0.014**
D_{85} (mm)	**0.073**
D_{90} (mm)	**0.095**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark brown slightly sandy silty CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

STRUCTURAL SOILS
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Hemel Hempstead
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HP3 9RT

Compiled By: [redacted] [redacted]

Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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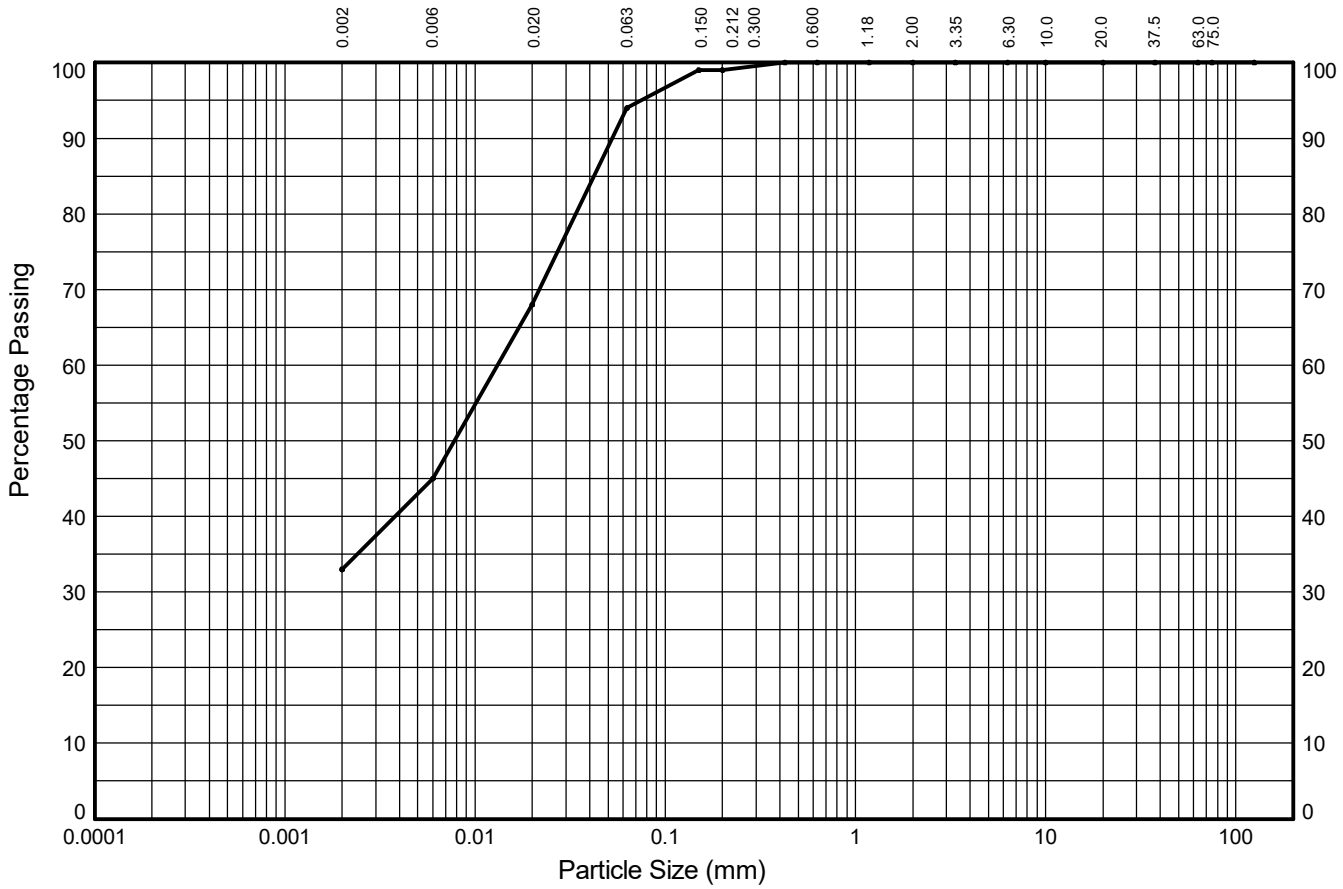
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH205** Sample Ref: **35** Sample Type: **B** Depth (m): **9.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	12%	23%	26%	5%	1%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
33%	61%			6%			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	**94**

Particle Diameter (mm)	Percent Passing (%)
0.02	**68**
0.006	**45**
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)	**0.008**
D_{60} (mm)	**0.013**
D_{85} (mm)	**0.042**
D_{90} (mm)	**0.053**
C_U	**NA**
C_C	**NA**

Soil Description:

Greenish brown slightly sandy silty CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

STRUCTURAL SOILS
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Hertfordshire
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Contract Ref: **563607**

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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: **R22-BH205** Sample Ref: **68** Sample Type: **B** Depth (m): **20.50**

CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	14%	24%	22%	1%	1%	0%	1%	5%	0%	
	SILT			SAND			GRAVEL			
32%	60%			2%			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	**95**
3.35	**94**
2.00	**94**
1.18	**94**
0.630	**94**
0.425	**94**
0.200	**93**
0.150	**93**
0.063	**92**

Particle Diameter (mm)	Percent Passing (%)
0.02	**70**
0.006	**45**
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)	**0.012**
D_{85} (mm)	**0.044**
D_{90} (mm)	**0.057**
C_U	**NA**
C_C	**NA**

Soil Description:

Grey 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

STRUCTURAL SOILS
Anerley Court
Half Moon Lane
Hildenborough
Tonbridge TN11 9HU

Compiled By: [redacted] [redacted] Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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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: **R22-BH501** Sample Ref: **2** Sample Type: **B** Depth (m): **0.50**

CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	12%	16%	30%	7%	1%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
34%	58%			8%			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	**92**

Particle Diameter (mm)	Percent Passing (%)
0.02	**62**
0.006	**46**
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)	**0.008**
D_{60} (mm)	**0.017**
D_{85} (mm)	**0.048**
D_{90} (mm)	**0.058**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown slightly sandy silty 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

Compiled By: [redacted]

Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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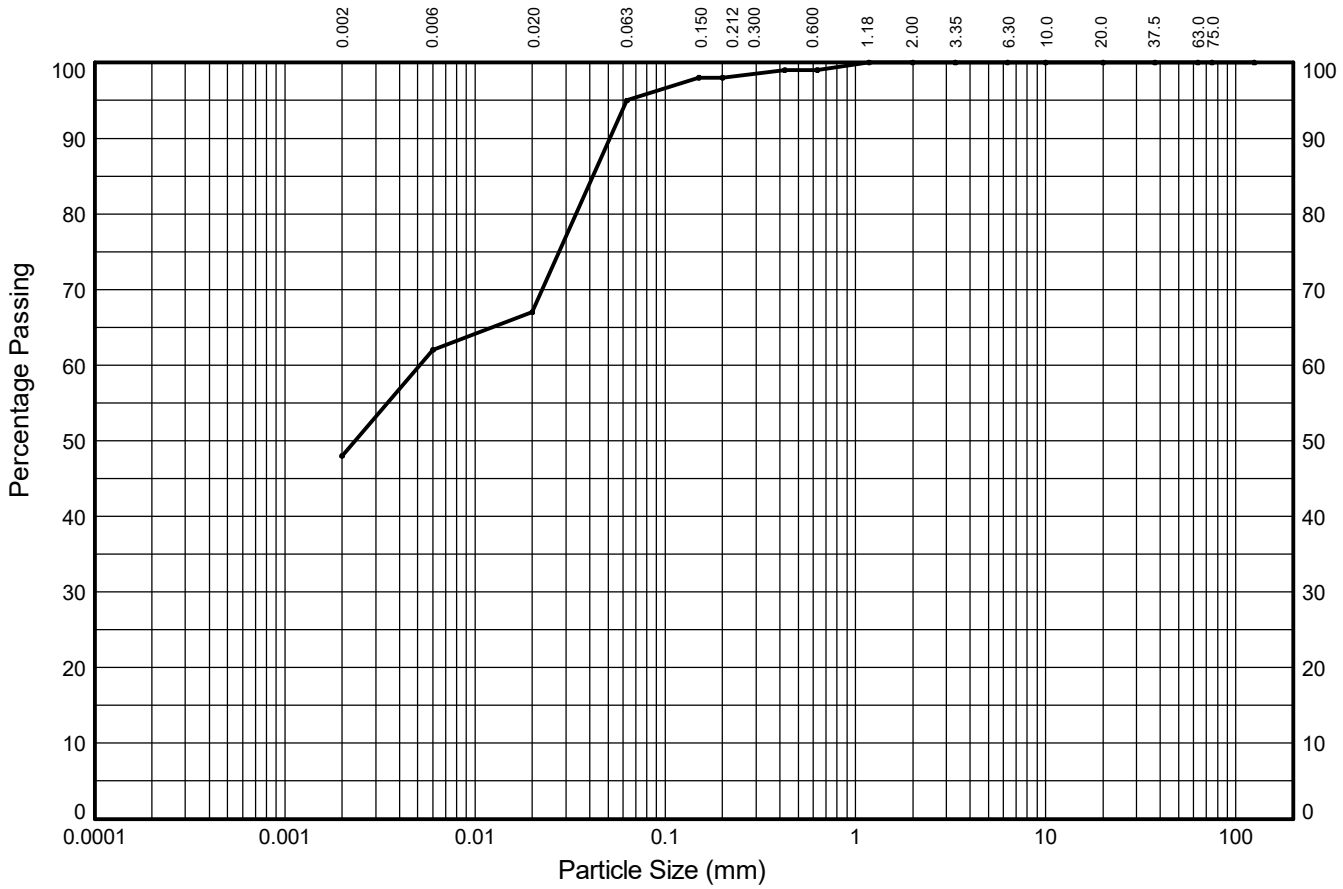
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH501** Sample Ref: **6** Sample Type: **B** Depth (m): **1.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	14%	5%	28%	3%	1%	1%	0%	0%	0%	
	SILT			SAND			GRAVEL			
48%	47%			5%			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	**98**
0.150	**98**
0.063	**95**

Particle Diameter (mm)	Percent Passing (%)
0.02	**67**
0.006	**62**
0.002	**48**

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)	**0.005**
D_{85} (mm)	**0.042**
D_{90} (mm)	**0.051**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown slightly sandy silty 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

Compiled By: [redacted] [redacted] Date: **26/03/24**

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Contract Ref: **563607**

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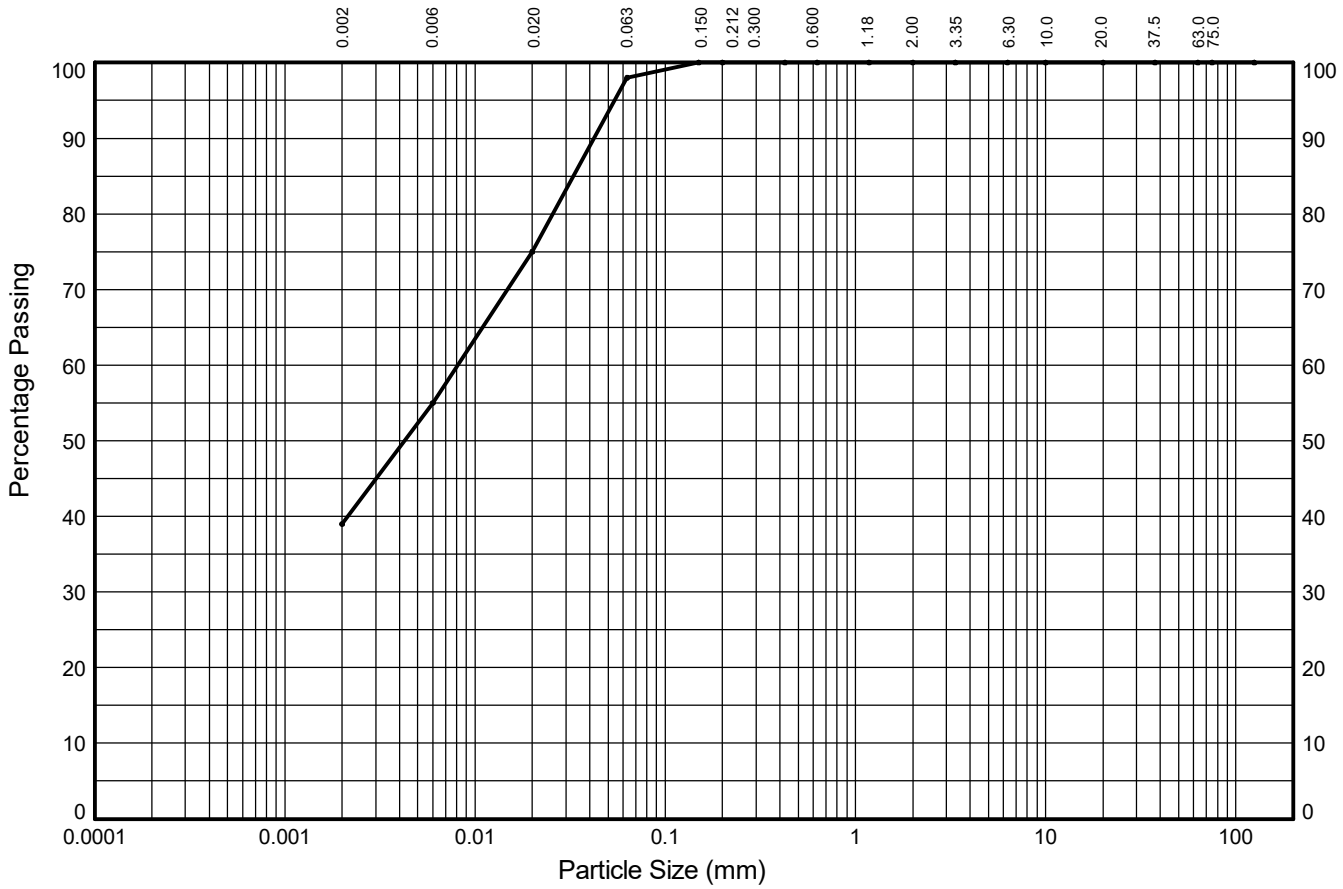
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH501** Sample Ref: **13** Sample Type: **B** Depth (m): **4.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	16%	20%	23%	2%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
39%	59%			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	**100**
0.150	**100**
0.063	**98**

Particle Diameter (mm)	Percent Passing (%)
0.02	**75**
0.006	**55**
0.002	**39**

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)	**0.033**
D_{90} (mm)	**0.042**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown mottled orangish brown and dark grey slightly sandy clayey SILT

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

STRUCTURAL SOILS
18 Frogmore Road
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Hertfordshire
HP3 9RT

Compiled By: [redacted] [redacted] Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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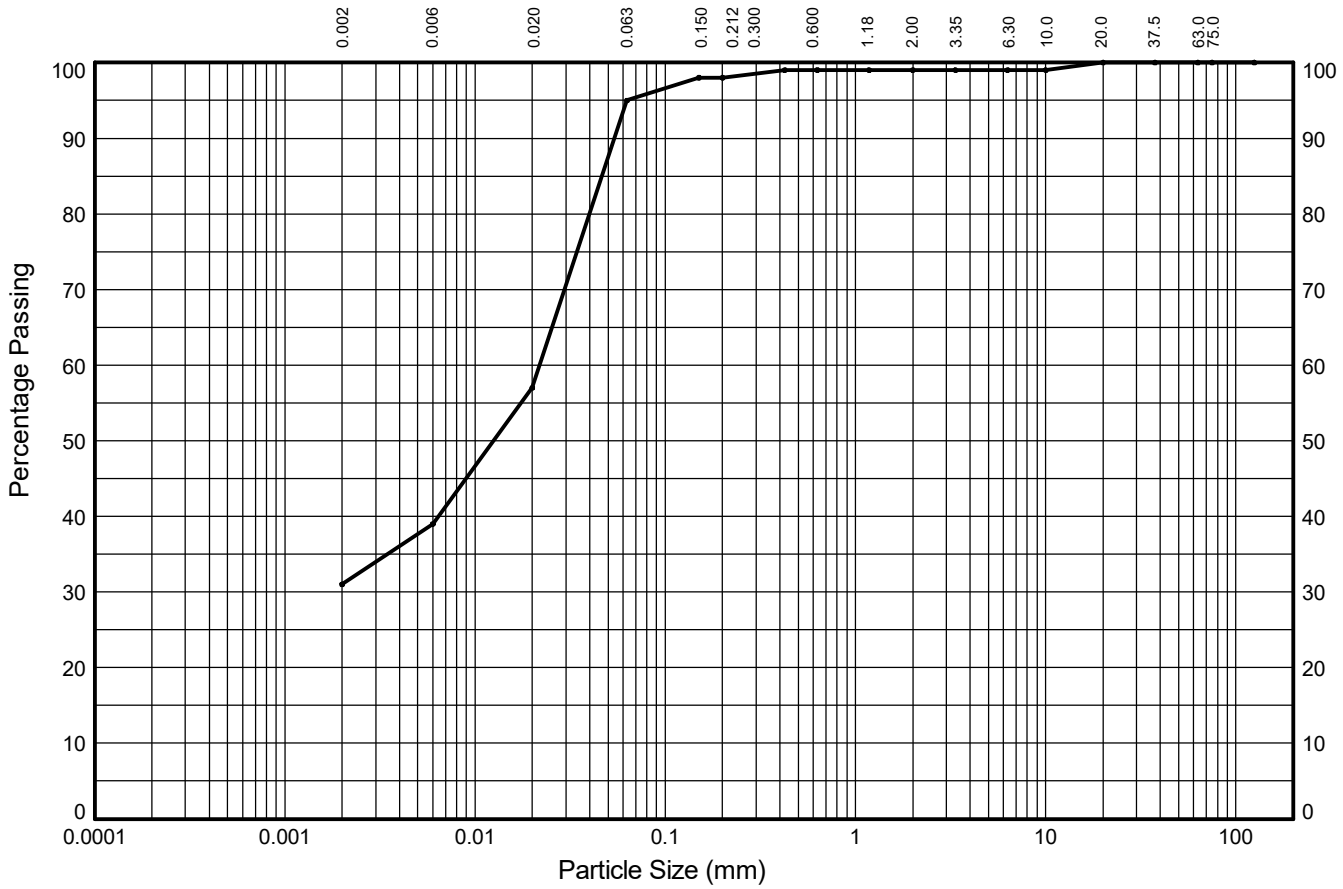
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH501** Sample Ref: **24** Sample Type: **B** Depth (m): **8.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	8%	18%	38%	3%	1%	0%	0%	1%	0%	
	SILT			SAND			GRAVEL			
31%	64%			4%			1%			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	**99**
1.18	**99**
0.630	**99**
0.425	**99**
0.200	**98**
0.150	**98**
0.063	**95**

Particle Diameter (mm)	Percent Passing (%)
0.02	**57**
0.006	**39**
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)	**0.013**
D_{60} (mm)	**0.022**
D_{85} (mm)	**0.047**
D_{90} (mm)	**0.054**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown mottled blue slightly sandy silty CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

STRUCTURAL SOILS
Anerley Court
Half Moon Lane
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Tonbridge TN11 9HU

Compiled By: [redacted] [redacted] Date: **26/03/24**

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Contract Ref: **563607**

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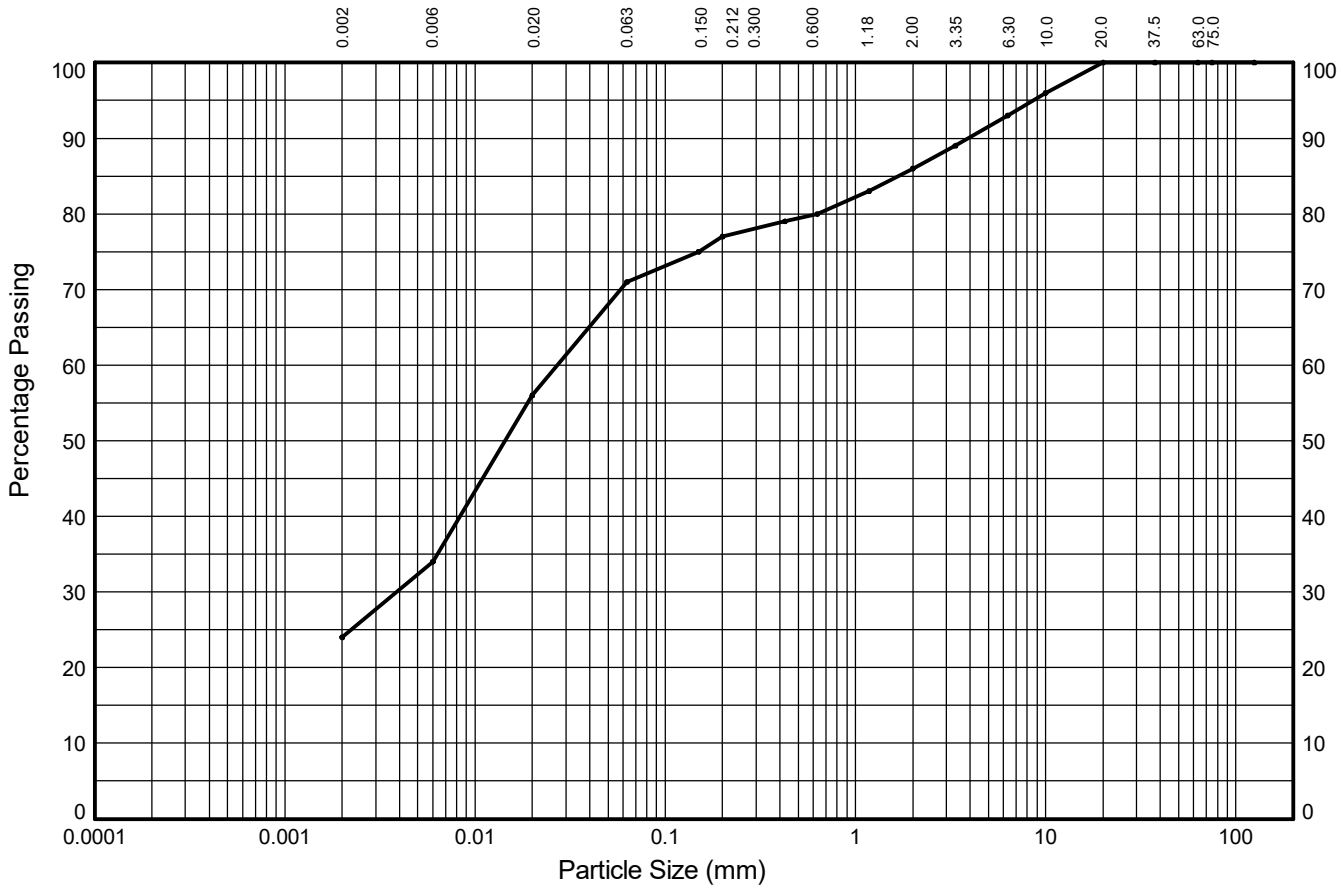
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH501** Sample Ref: **45** Sample Type: **B** Depth (m): **14.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	10%	22%	15%	6%	3%	6%	7%	7%	0%	
	SILT			SAND			GRAVEL			
24%	47%			15%			14%			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	**93**
3.35	**89**
2.00	**86**
1.18	**83**
0.630	**80**
0.425	**79**
0.200	**77**
0.150	**75**
0.063	**71**

Particle Diameter (mm)	Percent Passing (%)
0.02	**56**
0.006	**34**
0.002	**24**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.004**
D_{50} (mm)	**0.014**
D_{60} (mm)	**0.027**
D_{85} (mm)	**1.677**
D_{90} (mm)	**3.923**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark 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

STRUCTURAL SOILS
18 Frogmore Road
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Hertfordshire
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Compiled By: [redacted]

Date: **26/03/24**

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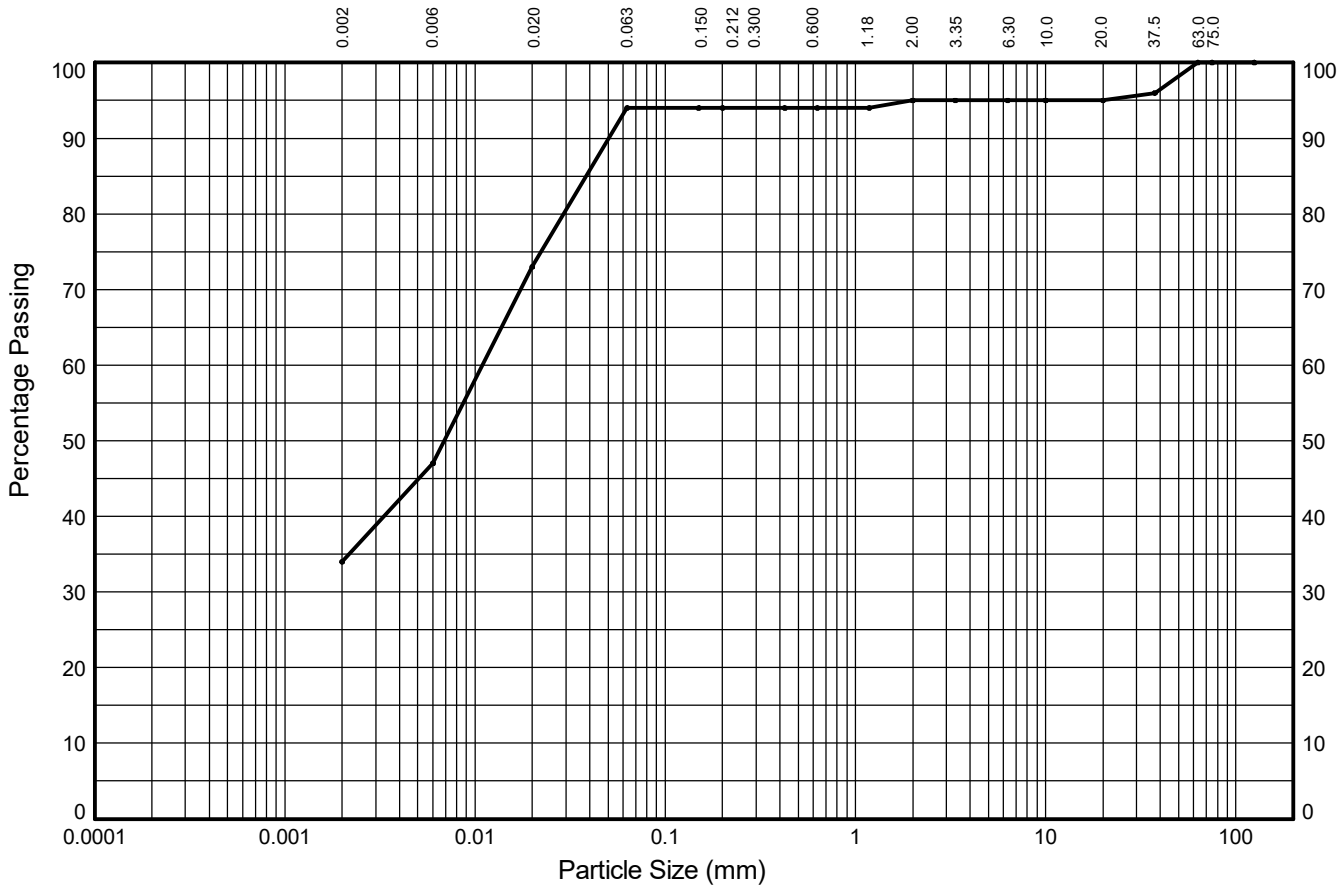
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH501** Sample Ref: **54** Sample Type: **B** Depth (m): **17.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	14%	25%	21%	0%	0%	1%	0%	0%	5%	
	SILT			SAND			GRAVEL			
34%	60%			1%			5%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**96**
20.0	**95**
10.0	**95**
6.30	**95**
3.35	**95**
2.00	**95**
1.18	**94**
0.630	**94**
0.425	**94**
0.200	**94**
0.150	**94**
0.063	**94**

Particle Diameter (mm)	Percent Passing (%)
0.02	**73**
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)	**0.007**
D_{60} (mm)	**0.011**
D_{85} (mm)	**0.039**
D_{90} (mm)	**0.051**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark greyish 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

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By: [redacted]

Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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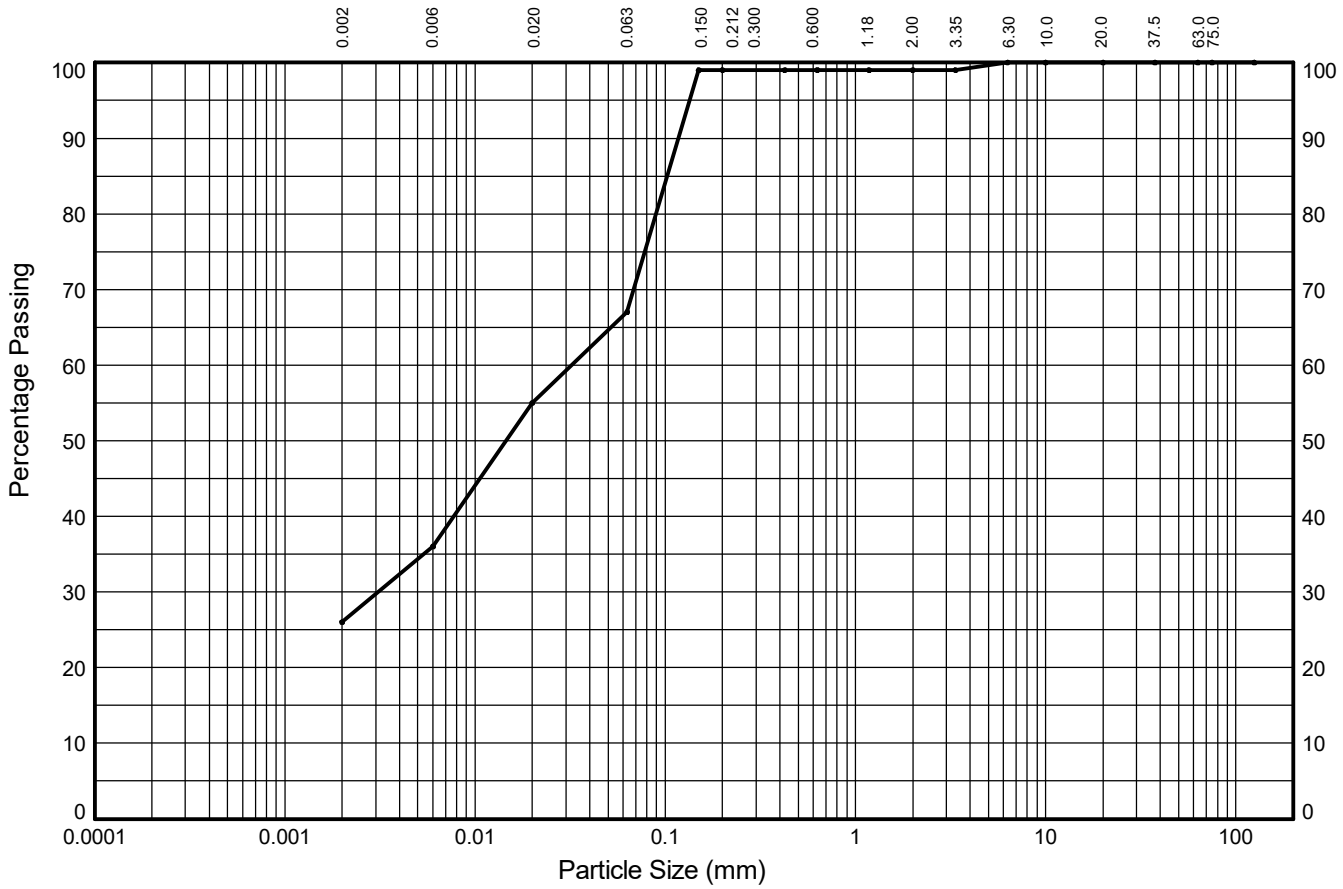
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH501** Sample Ref: **66** Sample Type: **B** Depth (m): **21.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	10%	19%	12%	32%	0%	0%	1%	0%	0%	
	SILT			SAND			GRAVEL			
26%	41%			32%			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	**99**
0.425	**99**
0.200	**99**
0.150	**99**
0.063	**67**

Particle Diameter (mm)	Percent Passing (%)
0.02	**55**
0.006	**36**
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)	**0.015**
D_{60} (mm)	**0.032**
D_{85} (mm)	**0.103**
D_{90} (mm)	**0.118**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark 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

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By: [redacted] [redacted] Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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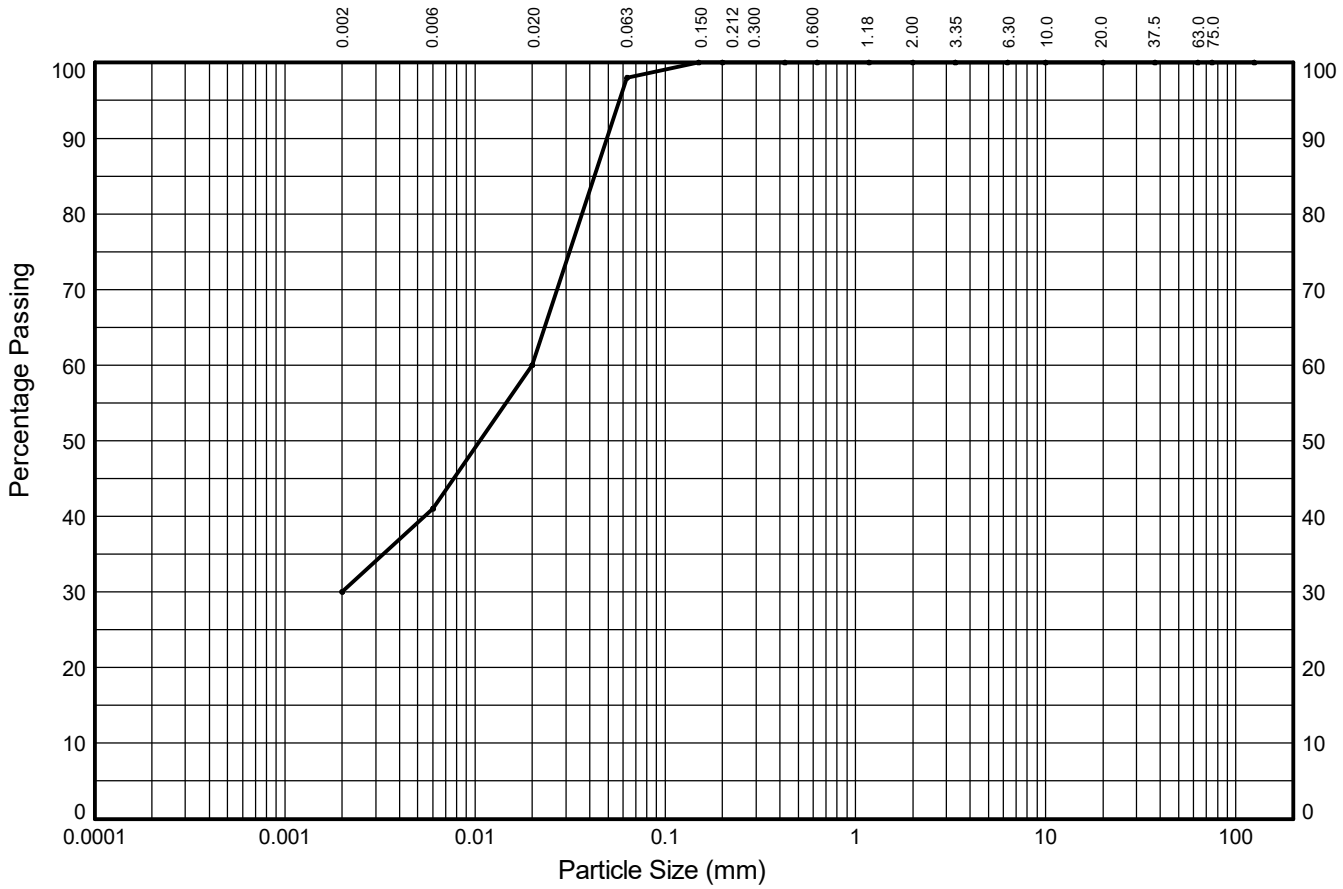
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH501** Sample Ref: **75** Sample Type: **B** Depth (m): **24.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	11%	19%	38%	2%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
30%	68%			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	**100**
0.150	**100**
0.063	**98**

Particle Diameter (mm)	Percent Passing (%)
0.02	**60**
0.006	**41**
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)	**0.020**
D_{85} (mm)	**0.043**
D_{90} (mm)	**0.049**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark greyish brown slightly sandy clayey SILT

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
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Compiled By: [redacted]

Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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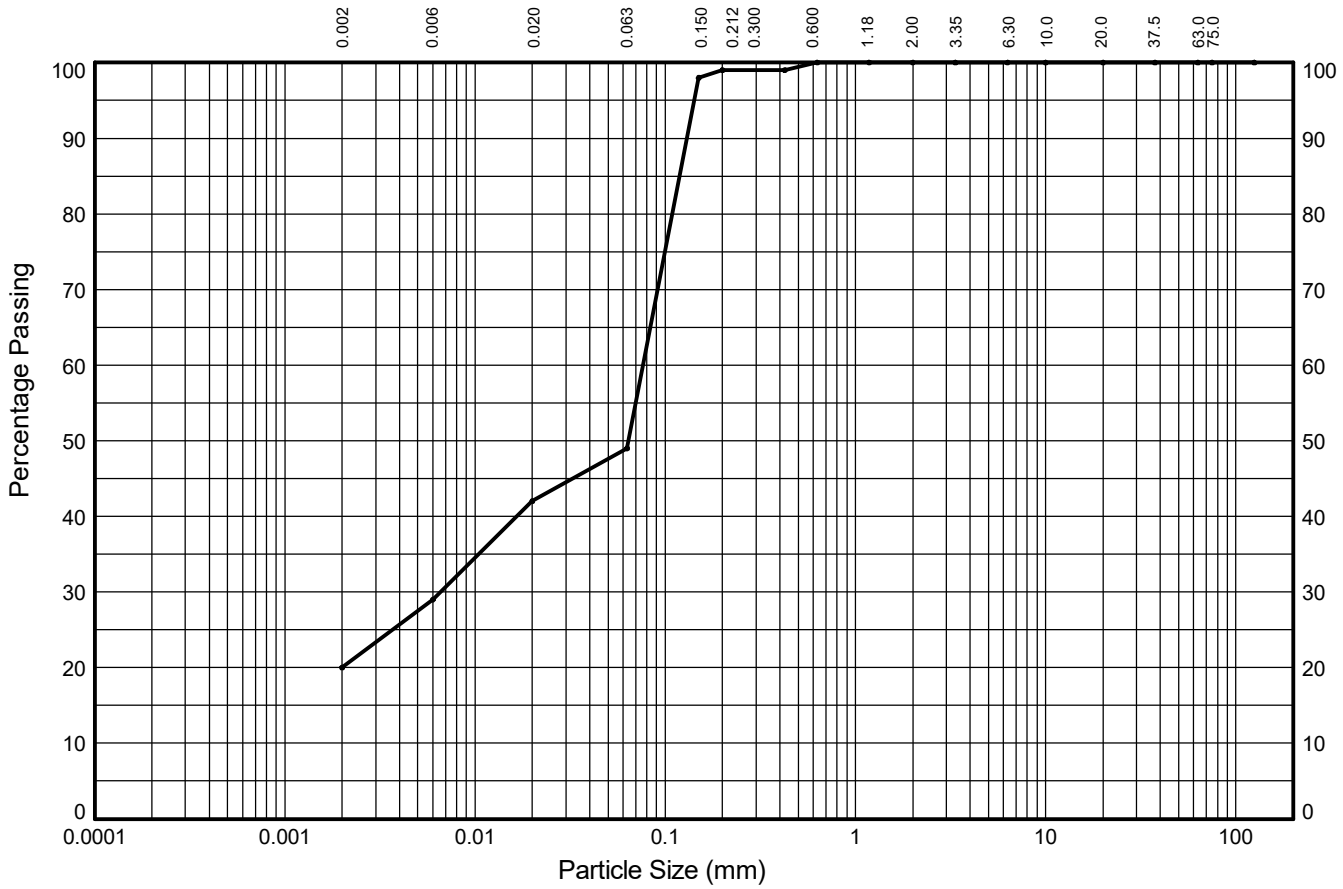
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH501** Sample Ref: **81** Sample Type: **B** Depth (m): **26.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	9%	13%	7%	50%	1%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
20%	29%			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	**100**
0.425	**99**
0.200	**99**
0.150	**98**
0.063	**49**

Particle Diameter (mm)	Percent Passing (%)
0.02	**42**
0.006	**29**
0.002	**20**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.007**
D_{50} (mm)	**0.064**
D_{60} (mm)	**0.077**
D_{85} (mm)	**0.119**
D_{90} (mm)	**0.130**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark brown mottled dark grey sandy silty 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

Compiled By: [redacted] [redacted]

Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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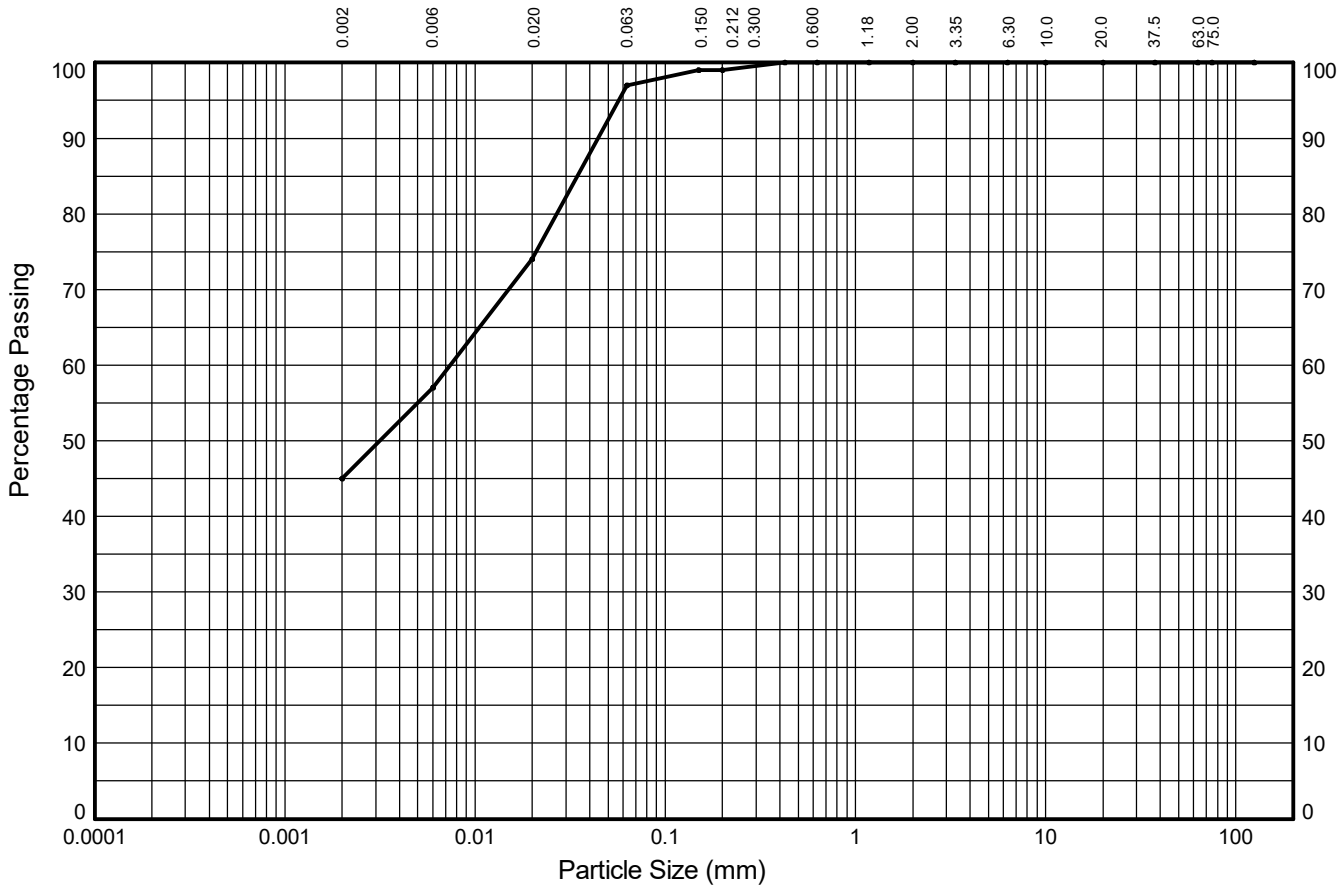
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH502** Sample Ref: **4** Sample Type: **B** Depth (m): **1.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	12%	17%	23%	2%	1%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
45%	52%			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	**100**
0.425	**100**
0.200	**99**
0.150	**99**
0.063	**97**

Particle Diameter (mm)	Percent Passing (%)
0.02	**74**
0.006	**57**
0.002	**45**

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)	**0.035**
D_{90} (mm)	**0.044**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown slightly sandy silty 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
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Hertfordshire
HP3 9RT

Compiled By: [redacted] [redacted]

Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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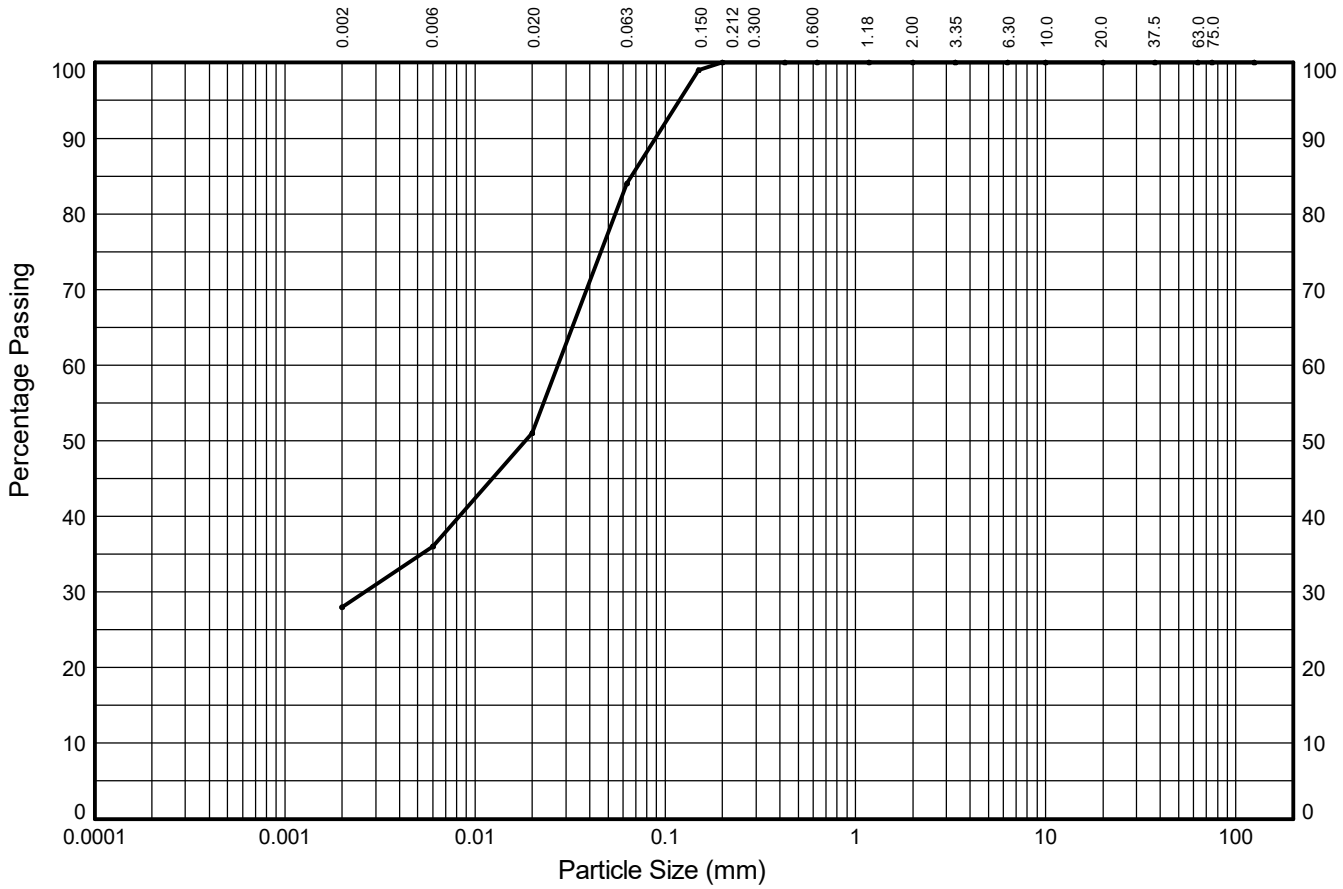
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH502** Sample Ref: **9** Sample Type: **B** Depth (m): **2.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	8%	15%	33%	16%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
28%	56%			16%			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	**100**
0.150	**99**
0.063	**84**

Particle Diameter (mm)	Percent Passing (%)
0.02	**51**
0.006	**36**
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)	**0.018**
D_{60} (mm)	**0.027**
D_{85} (mm)	**0.067**
D_{90} (mm)	**0.089**
C_U	**NA**
C_C	**NA**

Soil Description:

Light brown mottled grey slightly sandy silty 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
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Compiled By: [redacted] [redacted] Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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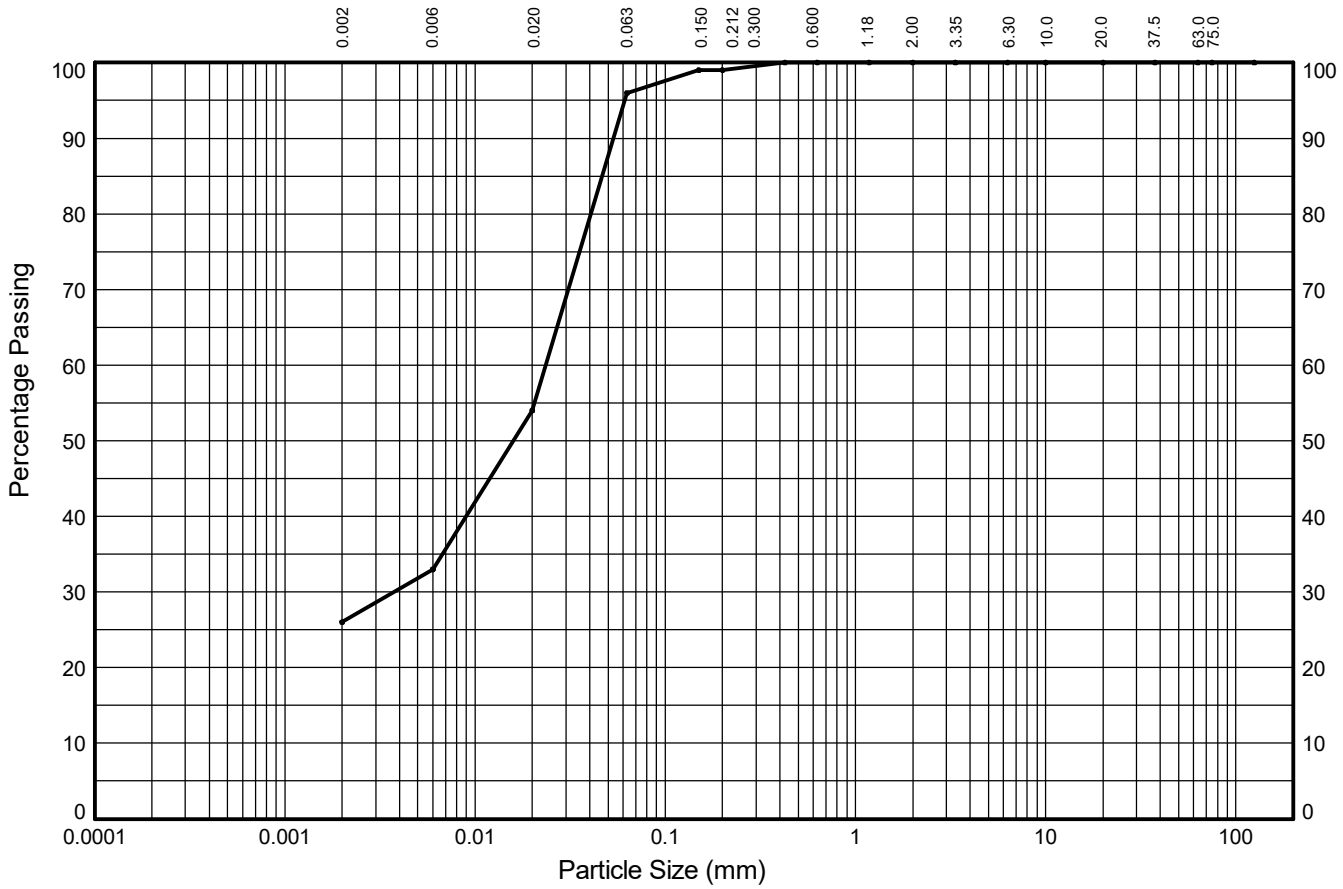
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH502** Sample Ref: **24** Sample Type: **B** Depth (m): **6.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	7%	21%	42%	3%	1%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
26%	70%			4%			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	**96**

Particle Diameter (mm)	Percent Passing (%)
0.02	**54**
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)	**0.016**
D_{60} (mm)	**0.024**
D_{85} (mm)	**0.047**
D_{90} (mm)	**0.053**
C_U	**NA**
C_C	**NA**

Soil Description:

Grey mottled brown slightly sandy clayey SILT

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

STRUCTURAL SOILS
Anerley Court
Half Moon Lane
Hildenborough
Tonbridge TN11 9HU

Compiled By: [redacted] [redacted] Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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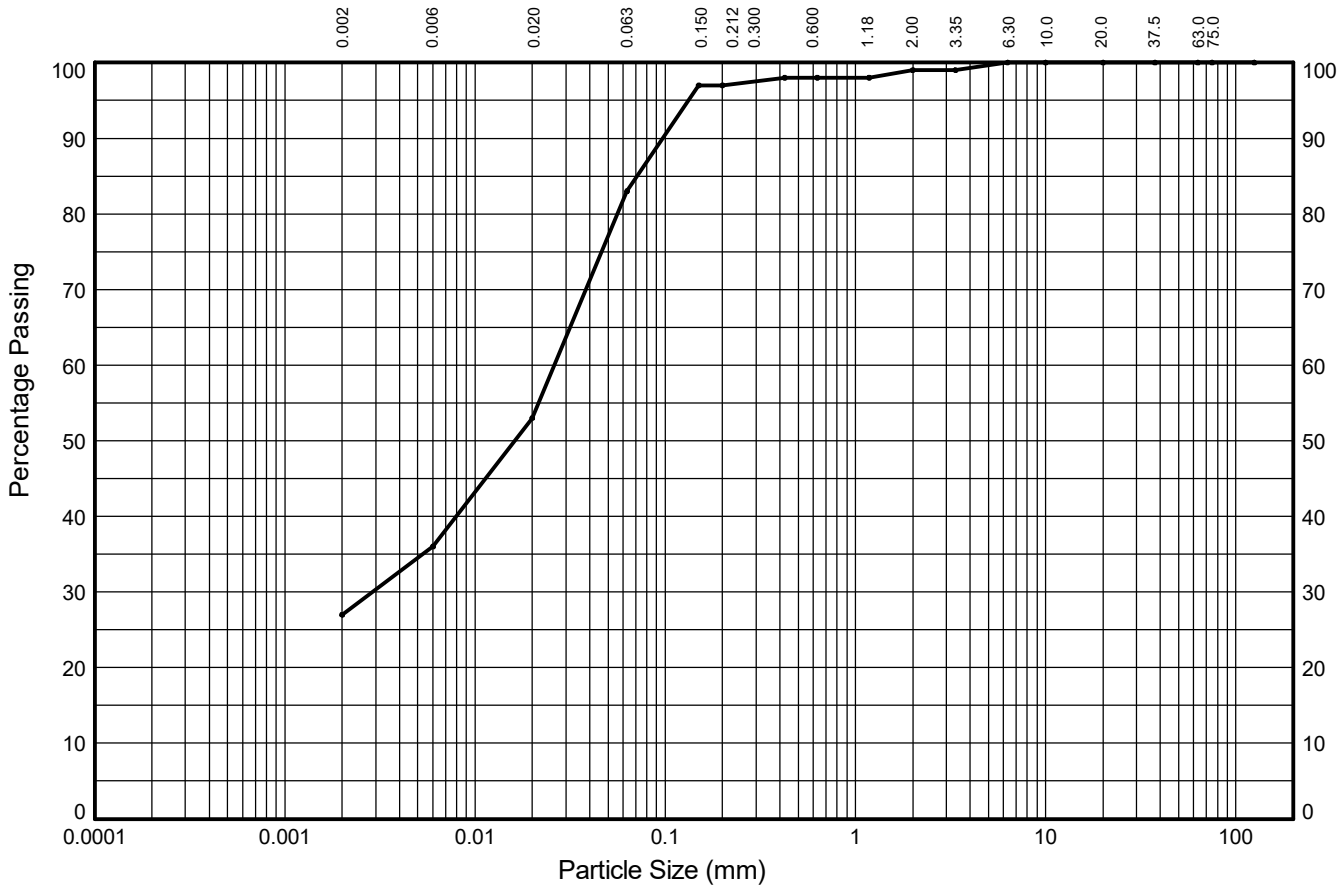
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH502** Sample Ref: **32** Sample Type: **B** Depth (m): **8.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	9%	17%	30%	14%	1%	1%	1%	0%	0%	
	SILT			SAND			GRAVEL			
27%	56%			16%			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	**98**
0.630	**98**
0.425	**98**
0.200	**97**
0.150	**97**
0.063	**83**

Particle Diameter (mm)	Percent Passing (%)
0.02	**53**
0.006	**36**
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)	**0.016**
D_{60} (mm)	**0.026**
D_{85} (mm)	**0.071**
D_{90} (mm)	**0.097**
C_U	**NA**
C_C	**NA**

Soil Description:

Grey 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

STRUCTURAL SOILS
Anerley Court
Half Moon Lane
Hildenborough
Tonbridge TN11 9HU

Compiled By: [redacted] [redacted] Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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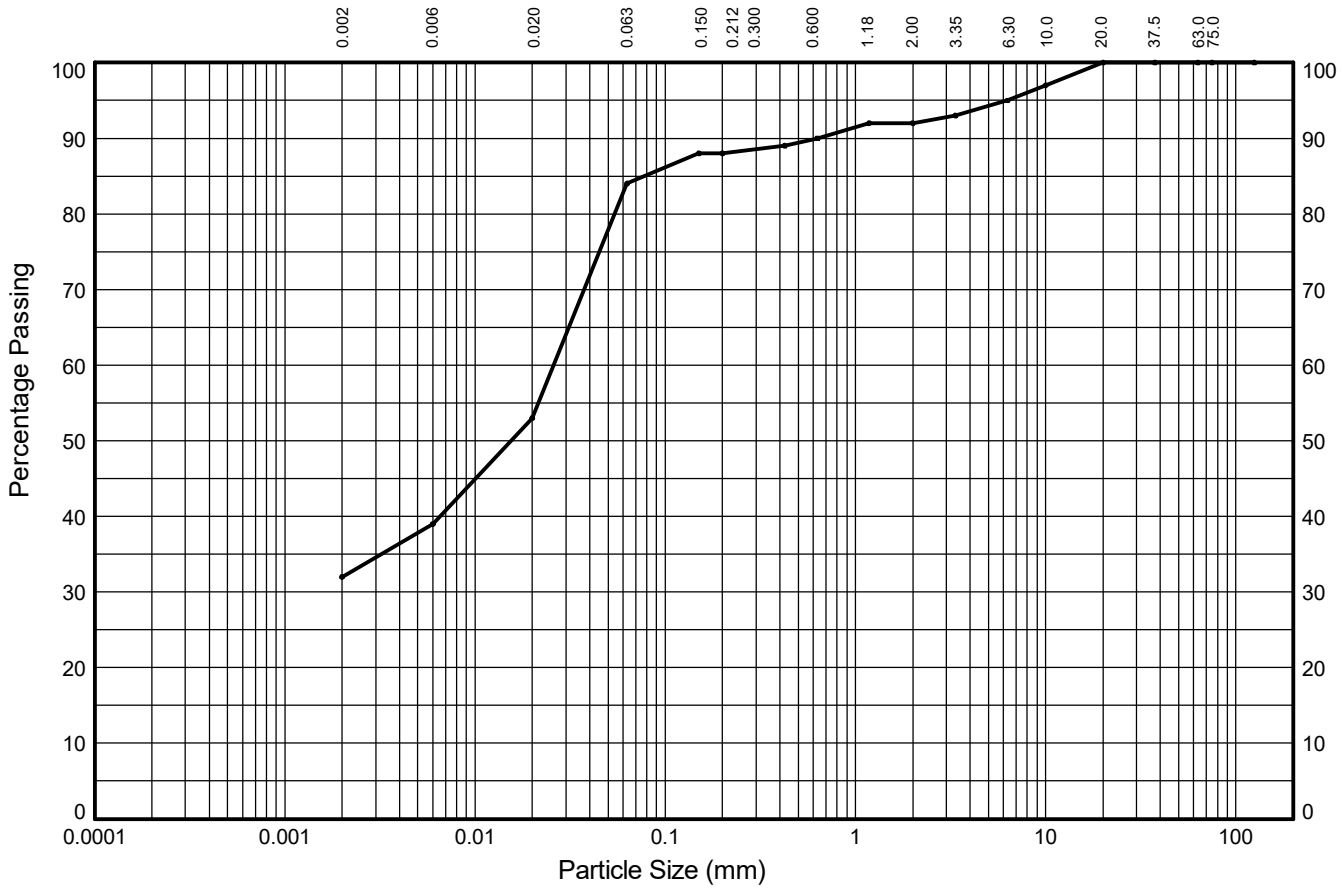
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH502** Sample Ref: **40** Sample Type: **B** Depth (m): **10.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	7%	14%	31%	4%	2%	2%	3%	5%	0%	
	SILT			SAND			GRAVEL			
32%	52%			8%			8%			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	**92**
1.18	**92**
0.630	**90**
0.425	**89**
0.200	**88**
0.150	**88**
0.063	**84**

Particle Diameter (mm)	Percent Passing (%)
0.02	**53**
0.006	**39**
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)	**0.015**
D_{60} (mm)	**0.026**
D_{85} (mm)	**0.078**
D_{90} (mm)	**0.630**
C_U	**NA**
C_C	**NA**

Soil Description:

Greyish 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

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By: [redacted]

Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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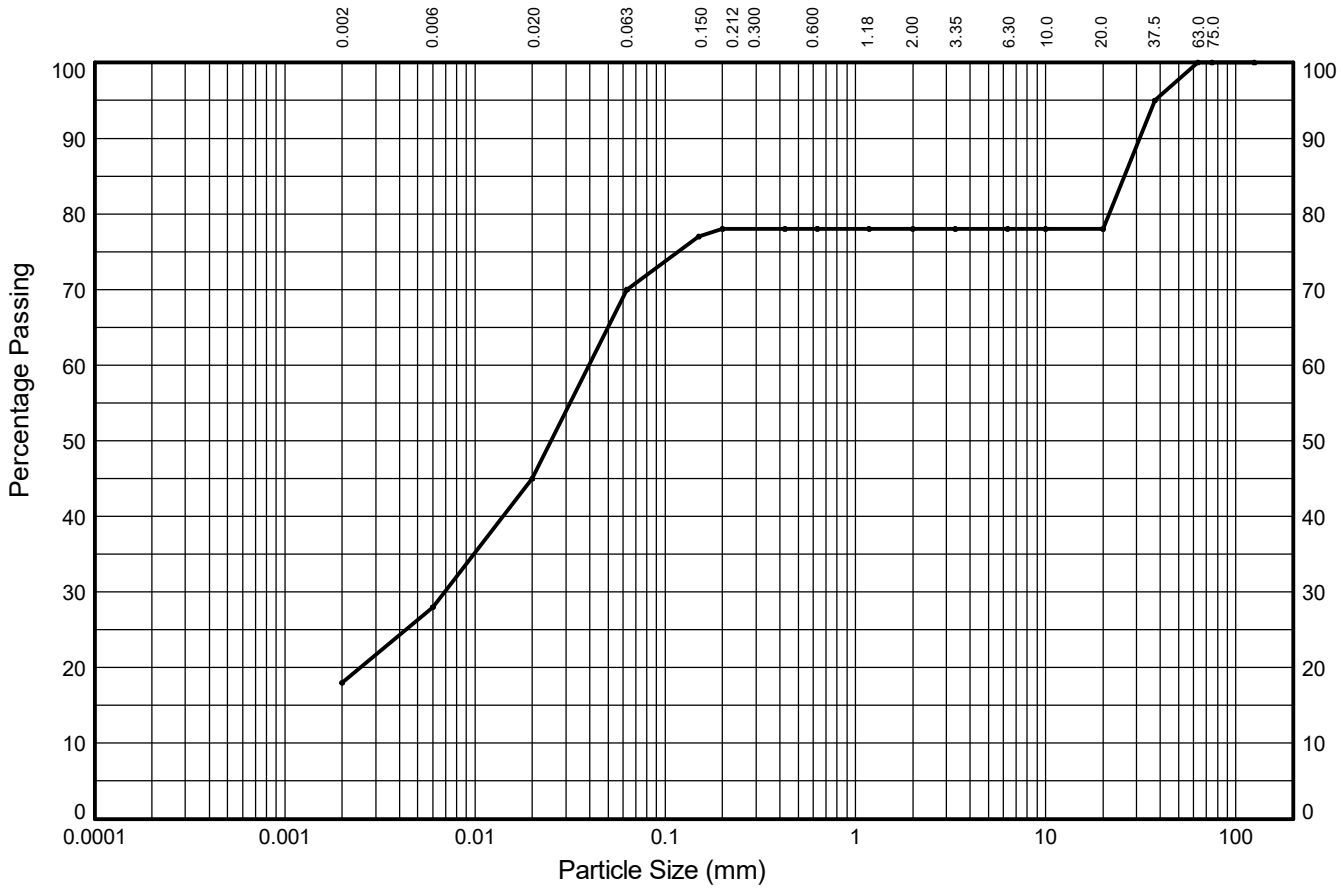
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH502** Sample Ref: **50** Sample Type: **B** Depth (m): **13.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	10%	17%	25%	8%	0%	0%	0%	0%	22%	
	SILT			SAND			GRAVEL			
18%	52%			8%			22%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**95**
20.0	**78**
10.0	**78**
6.30	**78**
3.35	**78**
2.00	**78**
1.18	**78**
0.630	**78**
0.425	**78**
0.200	**78**
0.150	**77**
0.063	**70**

Particle Diameter (mm)	Percent Passing (%)
0.02	**45**
0.006	**28**
0.002	**18**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.007**
D_{50} (mm)	**0.025**
D_{60} (mm)	**0.040**
D_{85} (mm)	**25.909**
D_{90} (mm)	**31.170**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark brown 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

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By: [redacted] [redacted]

Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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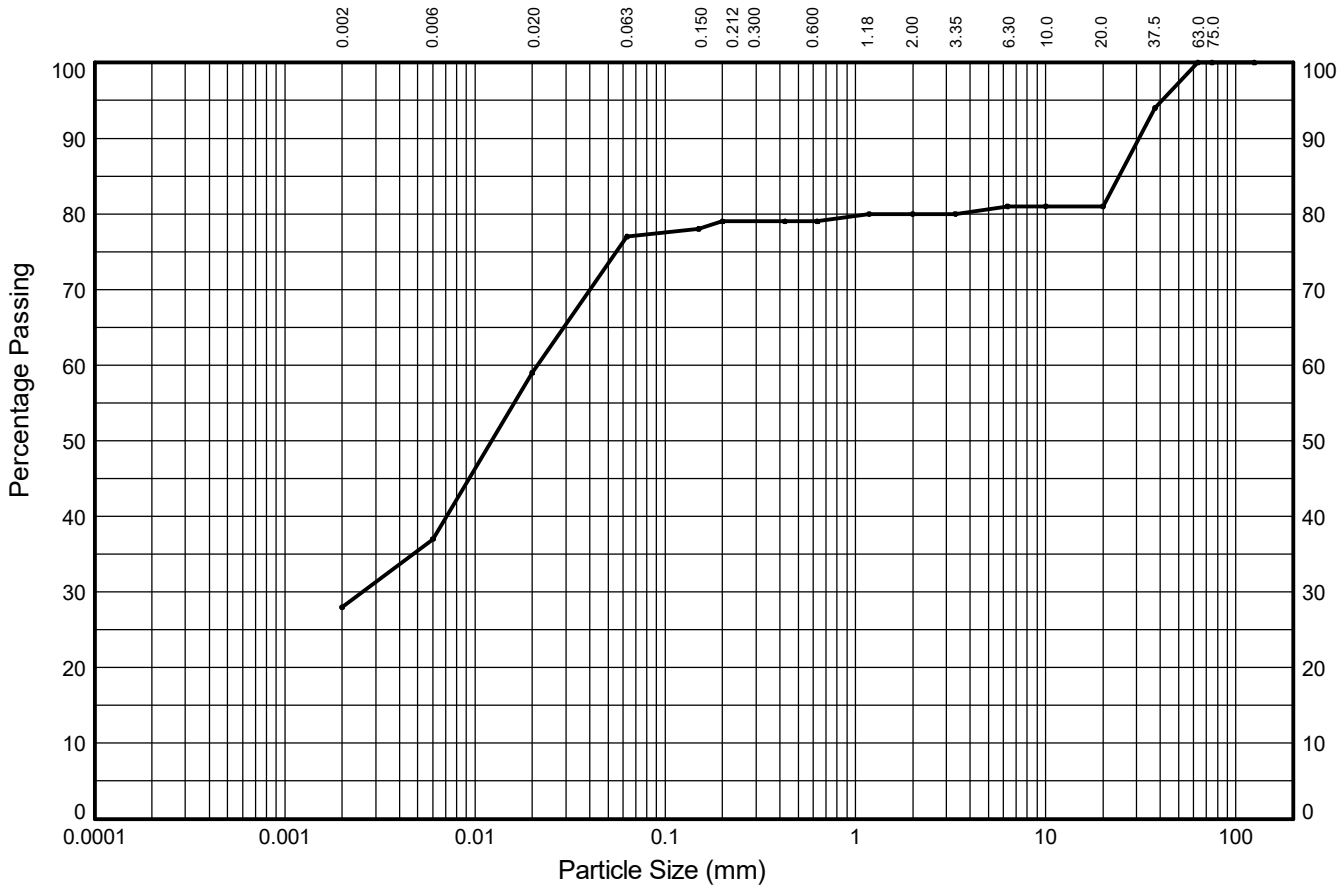
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-BH502** Sample Ref: **74** Sample Type: **B** Depth (m): **21.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	9%	22%	18%	2%	0%	1%	1%	0%	19%	
	SILT			SAND			GRAVEL			
28%	49%			3%			20%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**94**
20.0	**81**
10.0	**81**
6.30	**81**
3.35	**80**
2.00	**80**
1.18	**80**
0.630	**79**
0.425	**79**
0.200	**79**
0.150	**78**
0.063	**77**

Particle Diameter (mm)	Percent Passing (%)
0.02	**59**
0.006	**37**
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)	**0.012**
D_{60} (mm)	**0.021**
D_{85} (mm)	**24.268**
D_{90} (mm)	**30.905**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark grey 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

STRUCTURAL SOILS
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Hemel Hempstead
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Compiled By: [redacted] [redacted]

Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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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: **R22-TP101** Sample Ref: **4** Sample Type: **B** Depth (m): **0.70**

CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	10%	19%	18%	2%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
51%	47%			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	**100**
0.150	**100**
0.063	**98**

Particle Diameter (mm)	Percent Passing (%)
0.02	**80**
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)	**0.028**
D_{90} (mm)	**0.038**
C_U	**NA**
C_C	**NA**

Soil Description:

Bown 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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BS3 4AG

Compiled By: [redacted] [redacted] Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

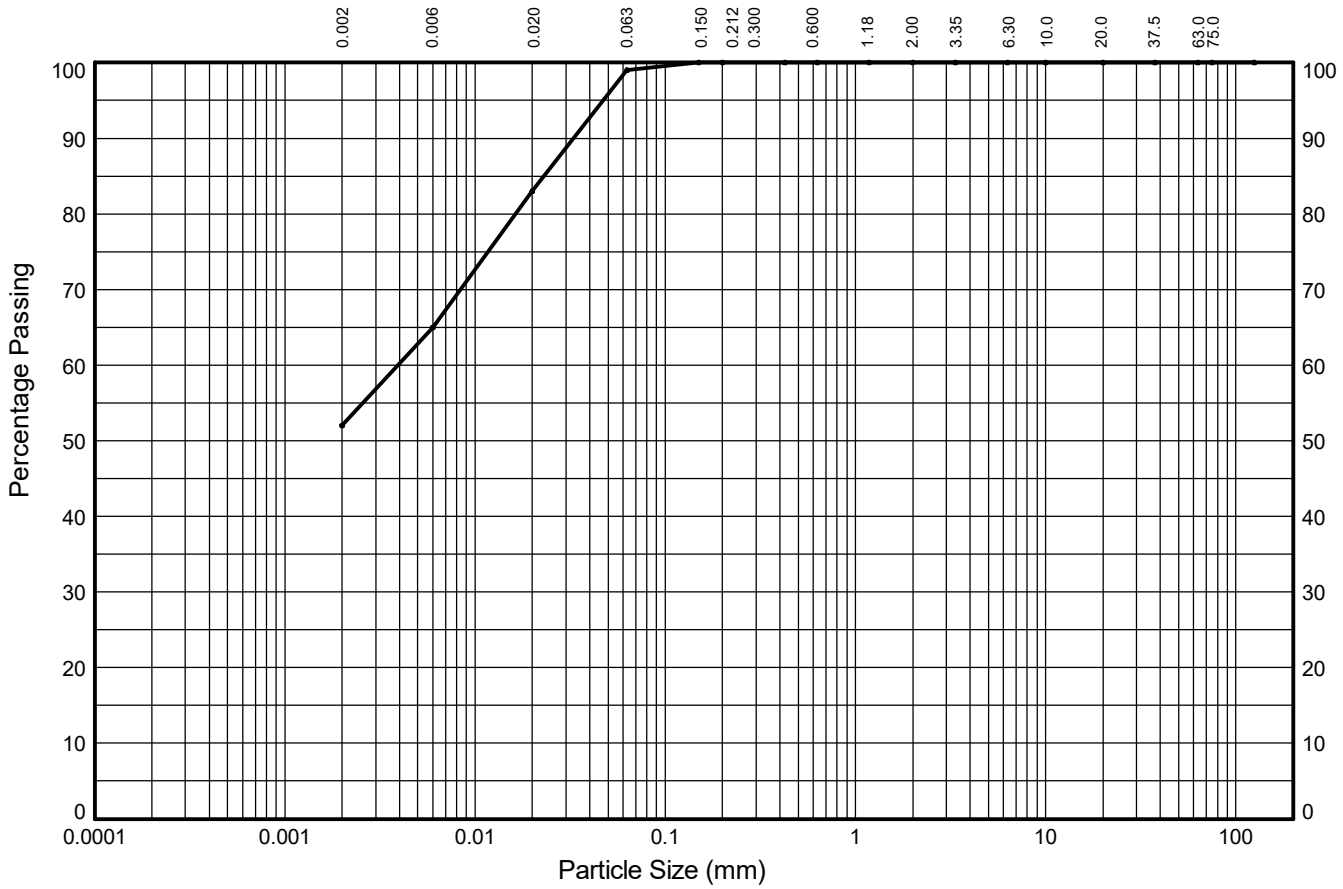
Contract Ref: **563607**

AGS

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP101** Sample Ref: **9** Sample Type: **B** Depth (m): **1.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	13%	18%	16%	1%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
52%	47%			1%			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	**100**
0.150	**100**
0.063	**99**

Particle Diameter (mm)	Percent Passing (%)
0.02	**83**
0.006	**65**
0.002	**52**

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)	**0.023**
D_{90} (mm)	**0.033**
C_U	**NA**
C_C	**NA**

Soil Description:

Greyish brown mottled orangish brown slightly sandy silty 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

Compiled By: [redacted] [redacted]

Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

AGS

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP101** Sample Ref: **14** Sample Type: **B** Depth (m): **2.00**

CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	11%	16%	28%	13%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
32%	55%			13%			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	**100**
0.150	**100**
0.063	**87**

Particle Diameter (mm)	Percent Passing (%)
0.02	**59**
0.006	**43**
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)	**0.010**
D_{60} (mm)	**0.021**
D_{85} (mm)	**0.058**
D_{90} (mm)	**0.077**
C_U	**NA**
C_C	**NA**

Soil Description:

Grey mottled brown slightly sandy silty 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

Compiled By: [redacted] [redacted] Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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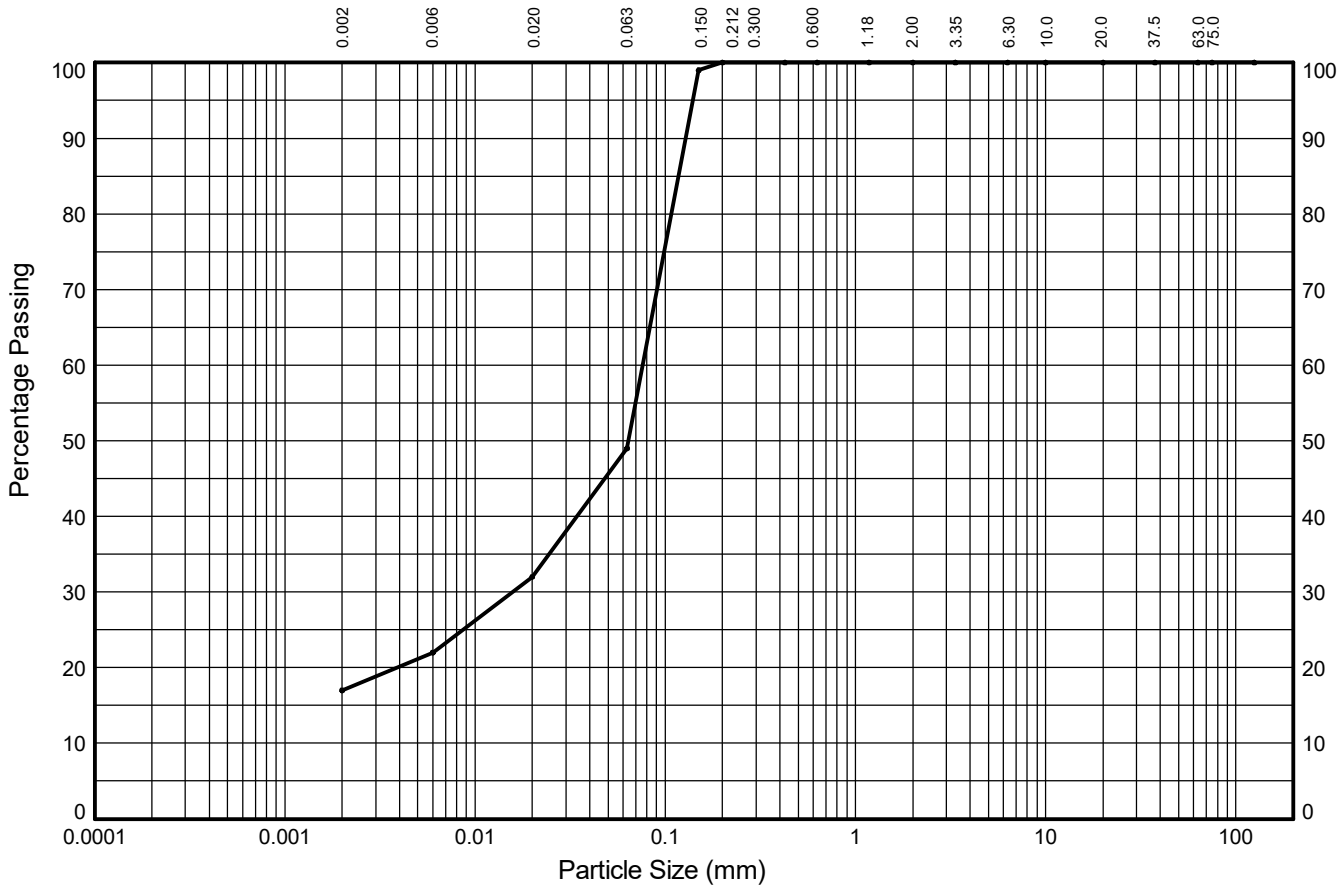
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP102** Sample Ref: **2** Sample Type: **B** Depth (m): **0.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	5%	10%	17%	51%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
17%	32%			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	**100**
0.425	**100**
0.200	**100**
0.150	**99**
0.063	**49**

Particle Diameter (mm)	Percent Passing (%)
0.02	**32**
0.006	**22**
0.002	**17**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.016**
D_{50} (mm)	**0.064**
D_{60} (mm)	**0.076**
D_{85} (mm)	**0.118**
D_{90} (mm)	**0.128**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown sandy silty 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

Compiled By: [redacted]

Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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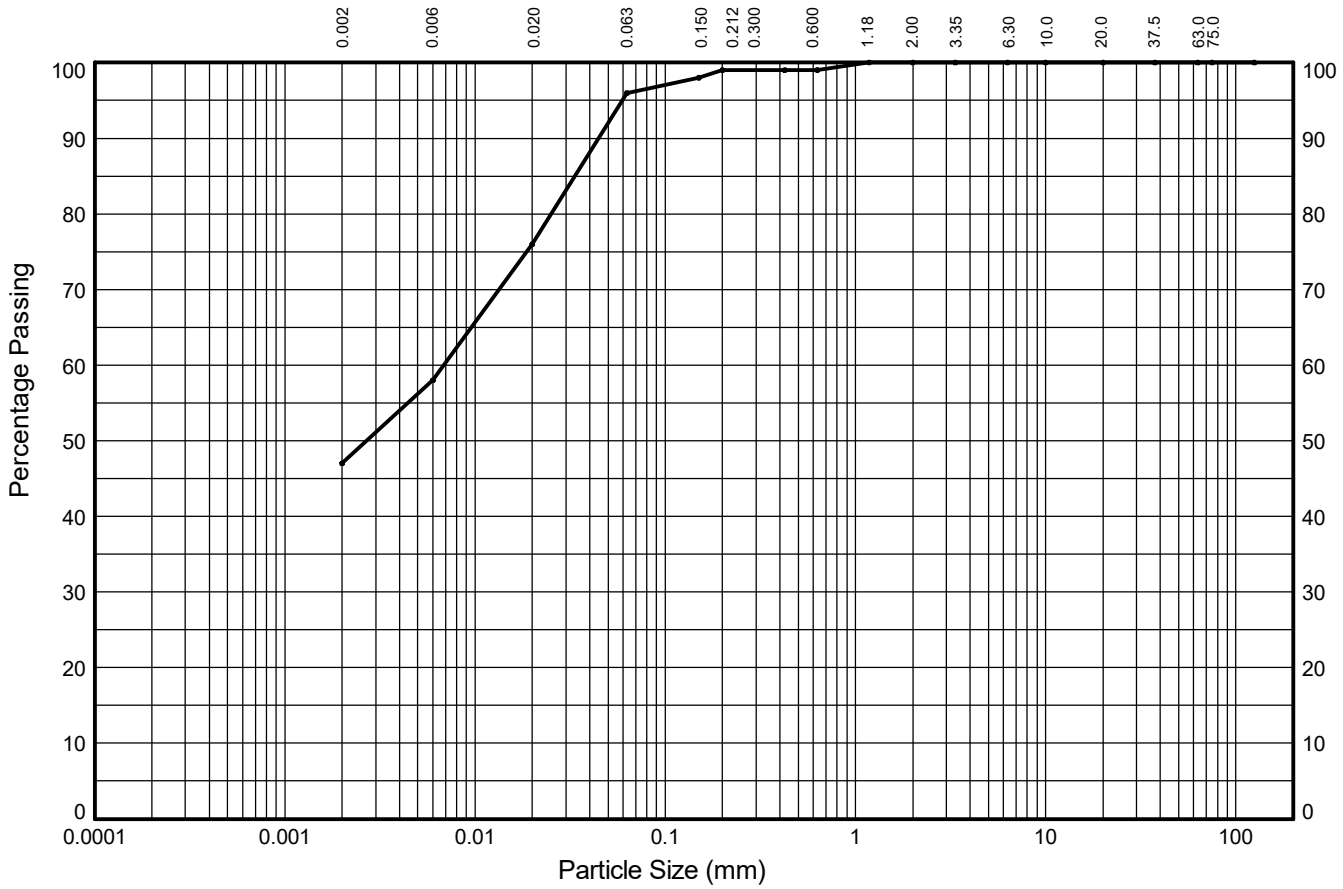
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP102** Sample Ref: **13** Sample Type: **B** Depth (m): **2.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	11%	18%	20%	3%	0%	1%	0%	0%	0%	
	SILT			SAND			GRAVEL			
47%	49%			4%			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	**98**
0.063	**96**

Particle Diameter (mm)	Percent Passing (%)
0.02	**76**
0.006	**58**
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)	**0.003**
D_{60} (mm)	**0.007**
D_{85} (mm)	**0.034**
D_{90} (mm)	**0.045**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark grey mottled light grey and brown slightly sandy silty 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

Compiled By: [redacted] [redacted] Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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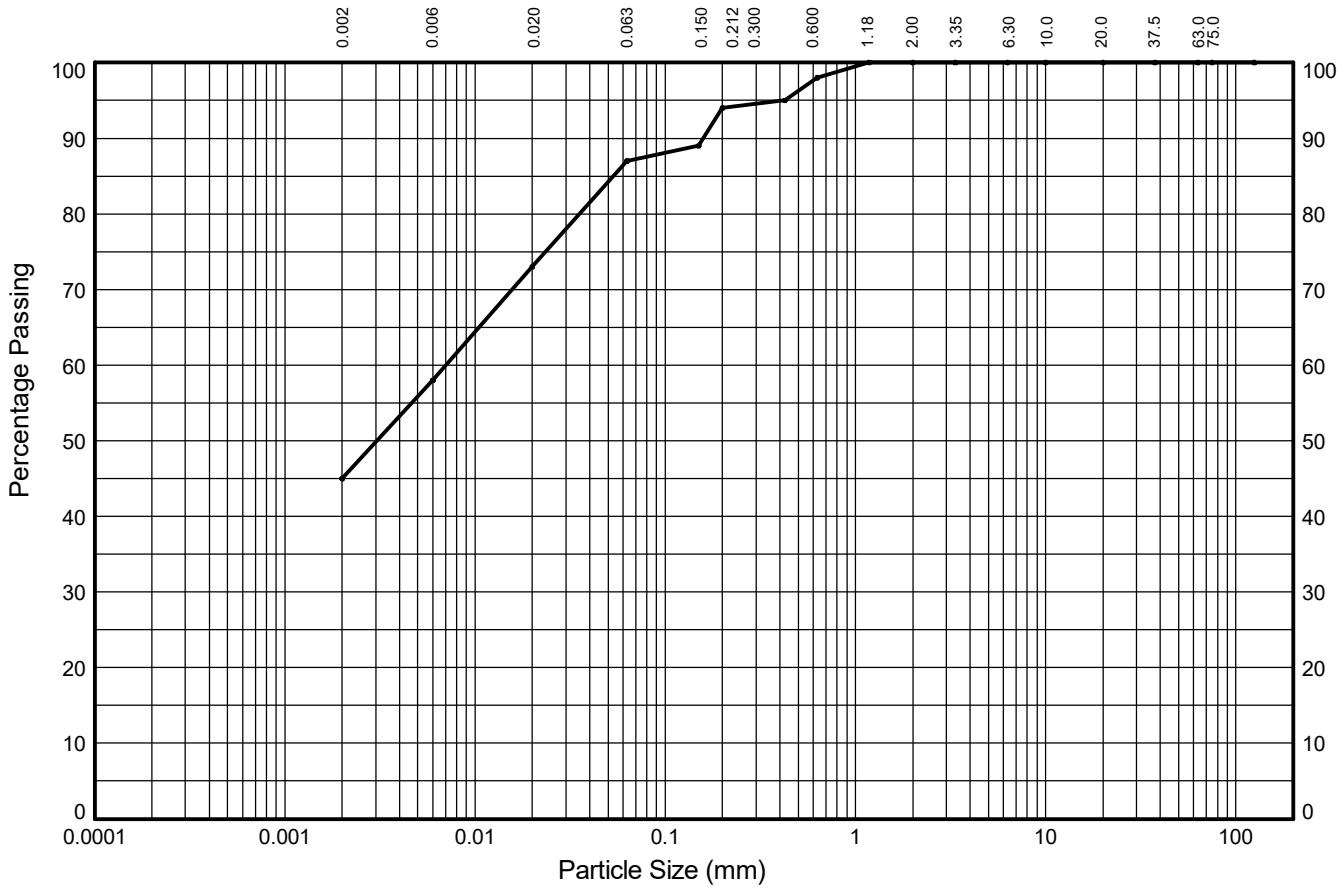
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.3 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP102** Sample Ref: **15** Sample Type: **B** Depth (m): **3.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	13%	15%	14%	7%	4%	2%	0%	0%	0%	
	SILT			SAND			GRAVEL			
45%	42%			13%			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	**98**
0.425	**95**
0.200	**94**
0.150	**89**
0.063	**87**

Particle Diameter (mm)	Percent Passing (%)
0.02	**73**
0.006	**58**
0.002	**45**

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)	**0.053**
D_{90} (mm)	**0.159**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark grey slightly sandy silty CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

STRUCTURAL SOILS
1a Princess Street
Bedminster
Bristol
BS3 4AG

Compiled By: [redacted] [redacted]

Date: **26/03/24**

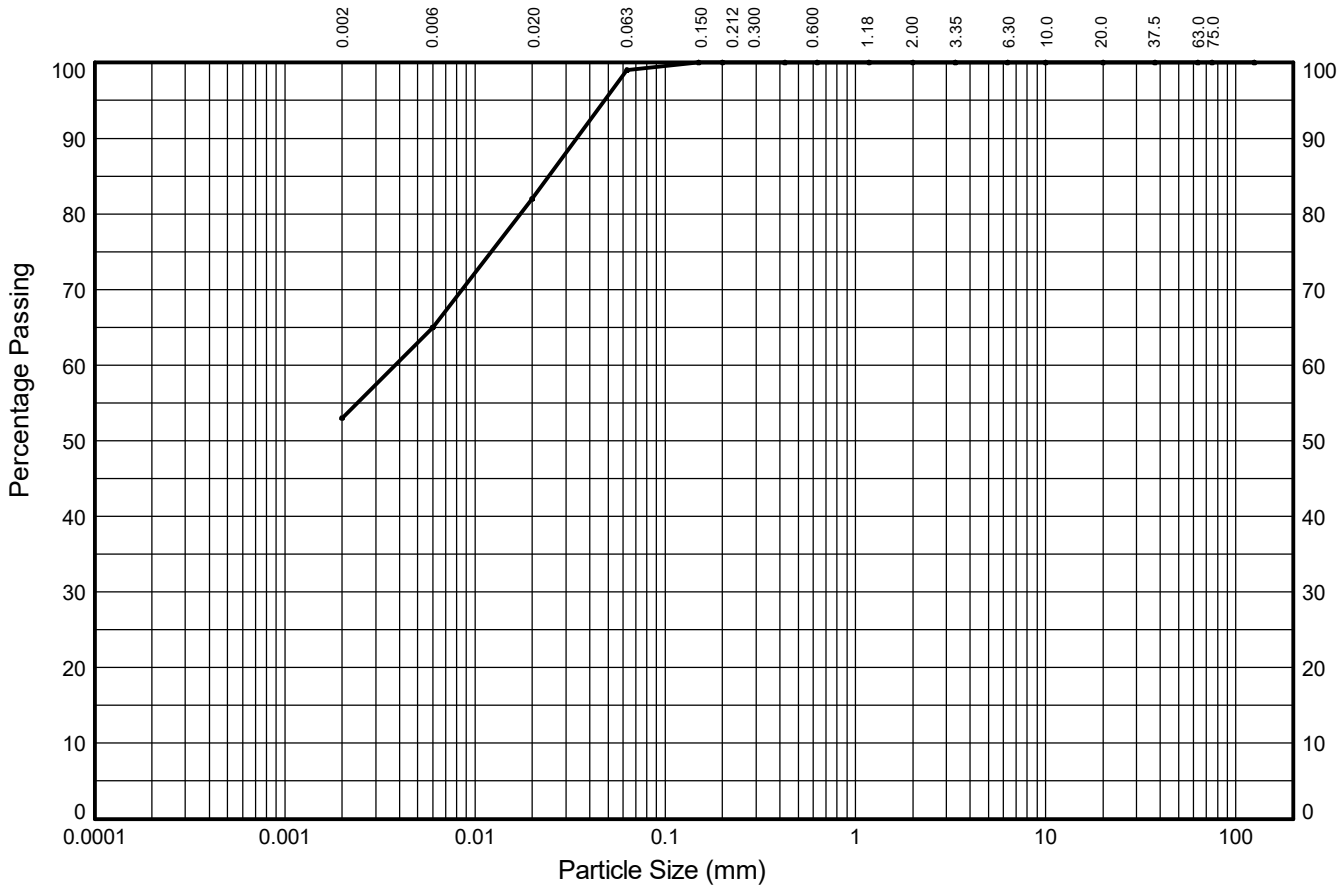
Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP103** Sample Ref: **4** Sample Type: **B** Depth (m): **0.70**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	12%	17%	17%	1%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
53%	46%			1%			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	**100**
0.150	**100**
0.063	**99**

Particle Diameter (mm)	Percent Passing (%)
0.02	**82**
0.006	**65**
0.002	**53**

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)	**0.024**
D_{90} (mm)	**0.034**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown slightly sandy silty 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

Compiled By: [redacted] [redacted] Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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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: **R22-TP103** Sample Ref: **9** Sample Type: **B** Depth (m): **1.00**

CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	12%	22%	18%	1%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
47%	52%			1%			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	**100**
0.150	**100**
0.063	**99**

Particle Diameter (mm)	Percent Passing (%)
0.02	**81**
0.006	**59**
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)	**0.003**
D_{60} (mm)	**0.006**
D_{85} (mm)	**0.026**
D_{90} (mm)	**0.035**
C_U	**NA**
C_C	**NA**

Soil Description:

Light brown slightly sandy silty 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

Compiled By: [redacted] [redacted] Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

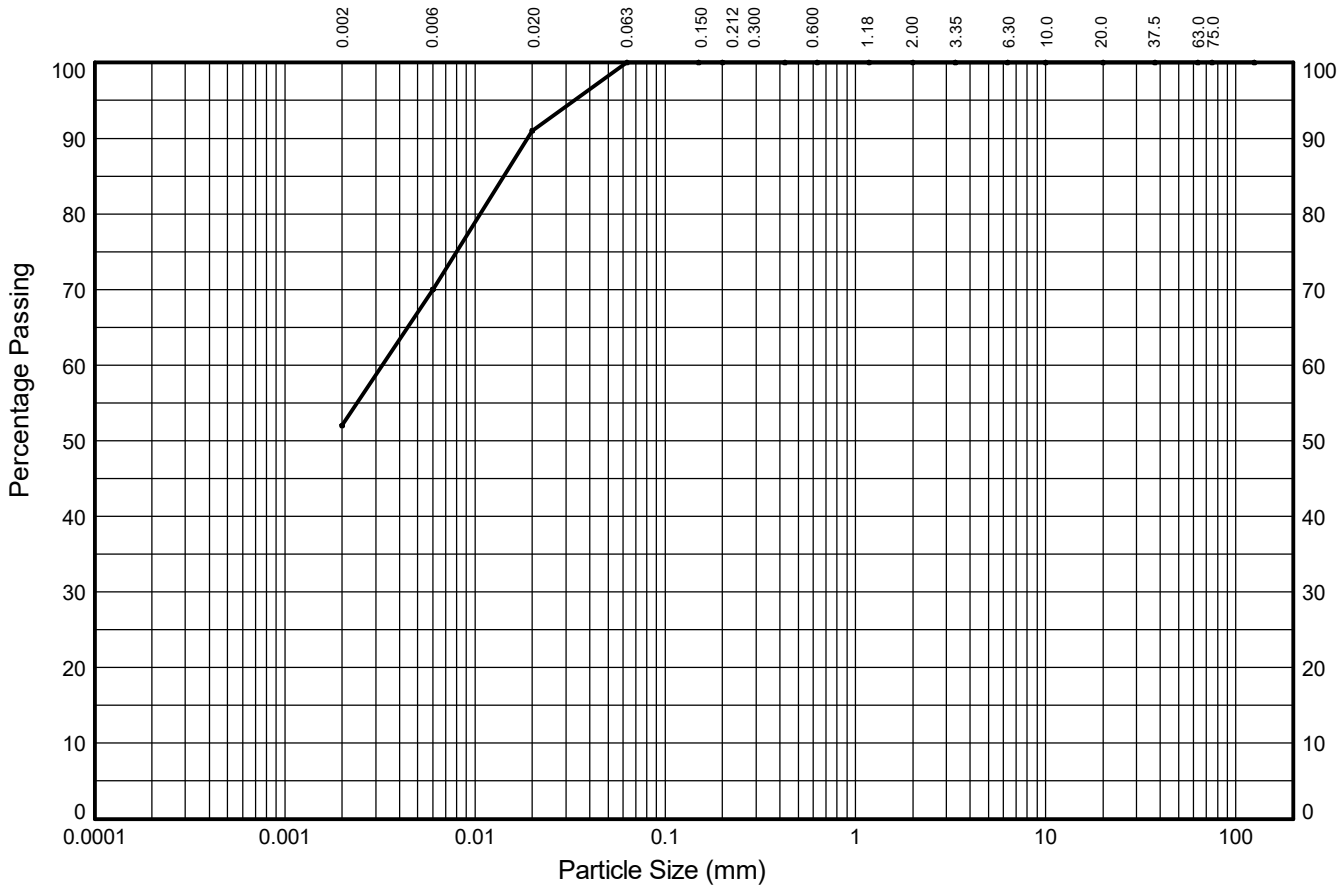
Contract Ref: **563607**

AGS

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP103** Sample Ref: **15** Sample Type: **B** Depth (m): **3.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	18%	21%	9%	0%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
52%	48%			0%			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	**100**
0.150	**100**
0.063	**100**

Particle Diameter (mm)	Percent Passing (%)
0.02	**91**
0.006	**70**
0.002	**52**

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)	**0.003**
D_{85} (mm)	**0.014**
D_{90} (mm)	**0.019**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark greyish brown silty 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

Compiled By: [redacted]

Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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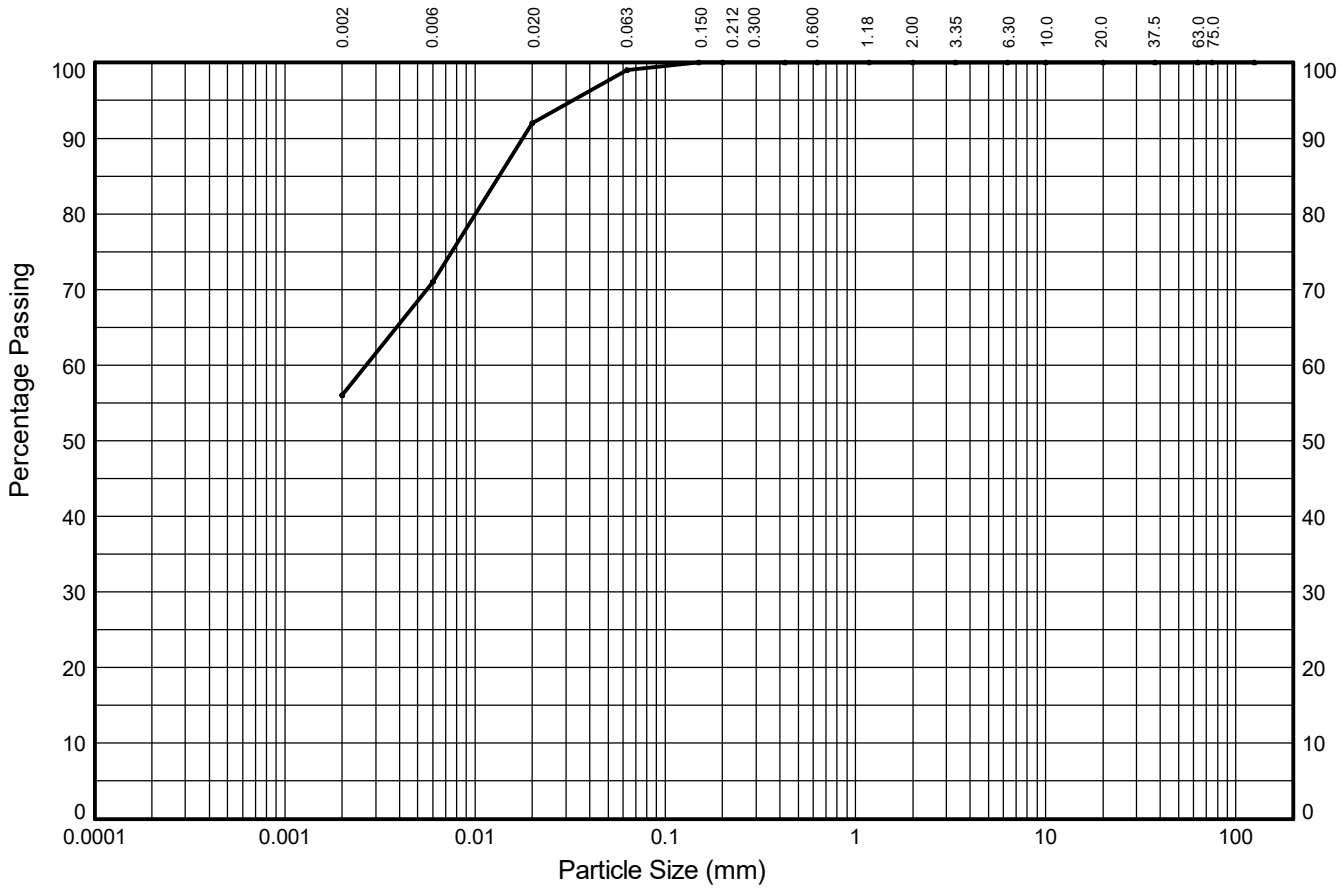
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP104** Sample Ref: **2** Sample Type: **B** Depth (m): **0.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	15%	21%	7%	1%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
56%	43%			1%			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	**100**
0.150	**100**
0.063	**99**

Particle Diameter (mm)	Percent Passing (%)
0.02	**92**
0.006	**71**
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)	**0.003**
D_{85} (mm)	**0.013**
D_{90} (mm)	**0.018**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown mottled orangish brown slightly sandy silty 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

Compiled By: [redacted]

Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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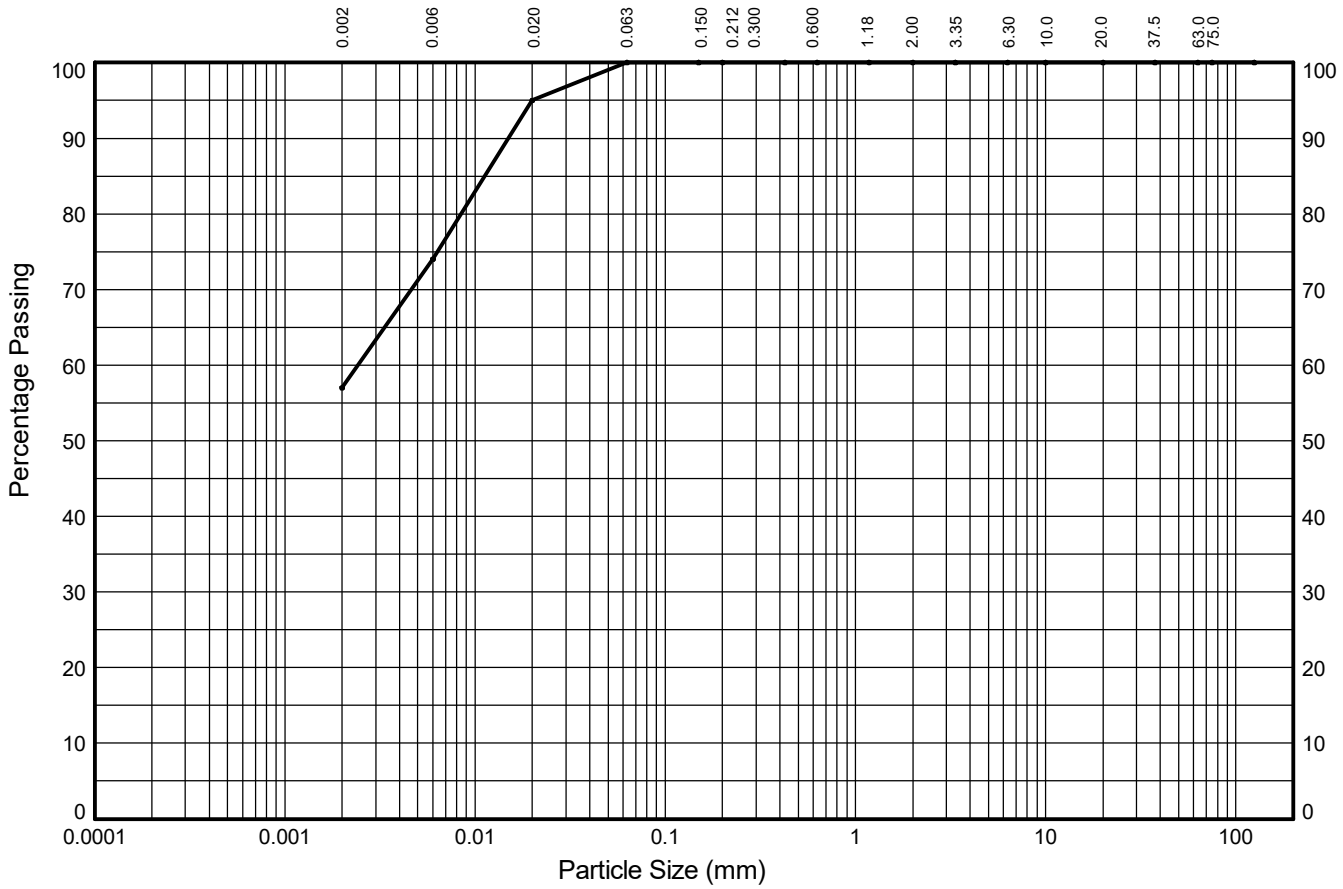
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP104** Sample Ref: **10** Sample Type: **B** Depth (m): **1.10**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	17%	21%	5%	0%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
57%	43%			0%			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	**100**
0.150	**100**
0.063	**100**

Particle Diameter (mm)	Percent Passing (%)
0.02	**95**
0.006	**74**
0.002	**57**

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)	**0.011**
D_{90} (mm)	**0.015**
C_U	**NA**
C_C	**NA**

Soil Description:

Light brown mottled orangish brown clayey SILT

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

Compiled By: [redacted] [redacted]

Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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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: **R22-TP104** Sample Ref: **15** Sample Type: **B** Depth (m): **2.50**

CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	16%	17%	13%	1%	2%	1%	0%	0%	0%	
	SILT			SAND			GRAVEL			
50%	46%			4%			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	**97**
0.150	**97**
0.063	**96**

Particle Diameter (mm)	Percent Passing (%)
0.02	**83**
0.006	**66**
0.002	**50**

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)	**0.024**
D_{90} (mm)	**0.037**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark grey slightly sandy clayey SILT

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

Compiled By: [redacted] [redacted] Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

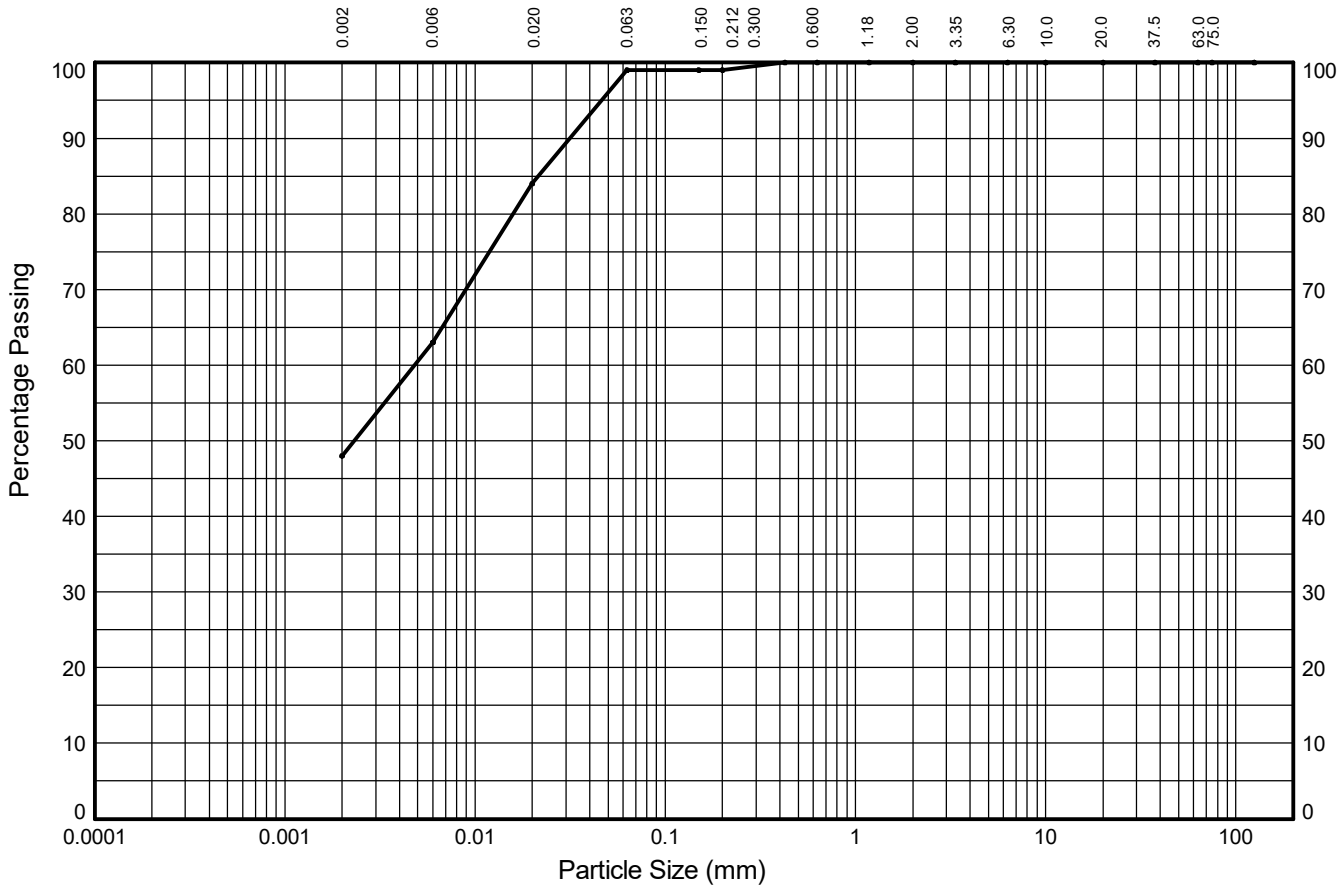
Contract Ref: **563607**

AGS

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP105** Sample Ref: **4** Sample Type: **B** Depth (m): **0.70**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	15%	21%	15%	0%	1%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
48%	51%			1%			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	**99**

Particle Diameter (mm)	Percent Passing (%)
0.02	**84**
0.006	**63**
0.002	**48**

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)	**0.005**
D_{85} (mm)	**0.022**
D_{90} (mm)	**0.032**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown slightly sandy silty CLAY with chalk

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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Hemel Hempstead
Hertfordshire
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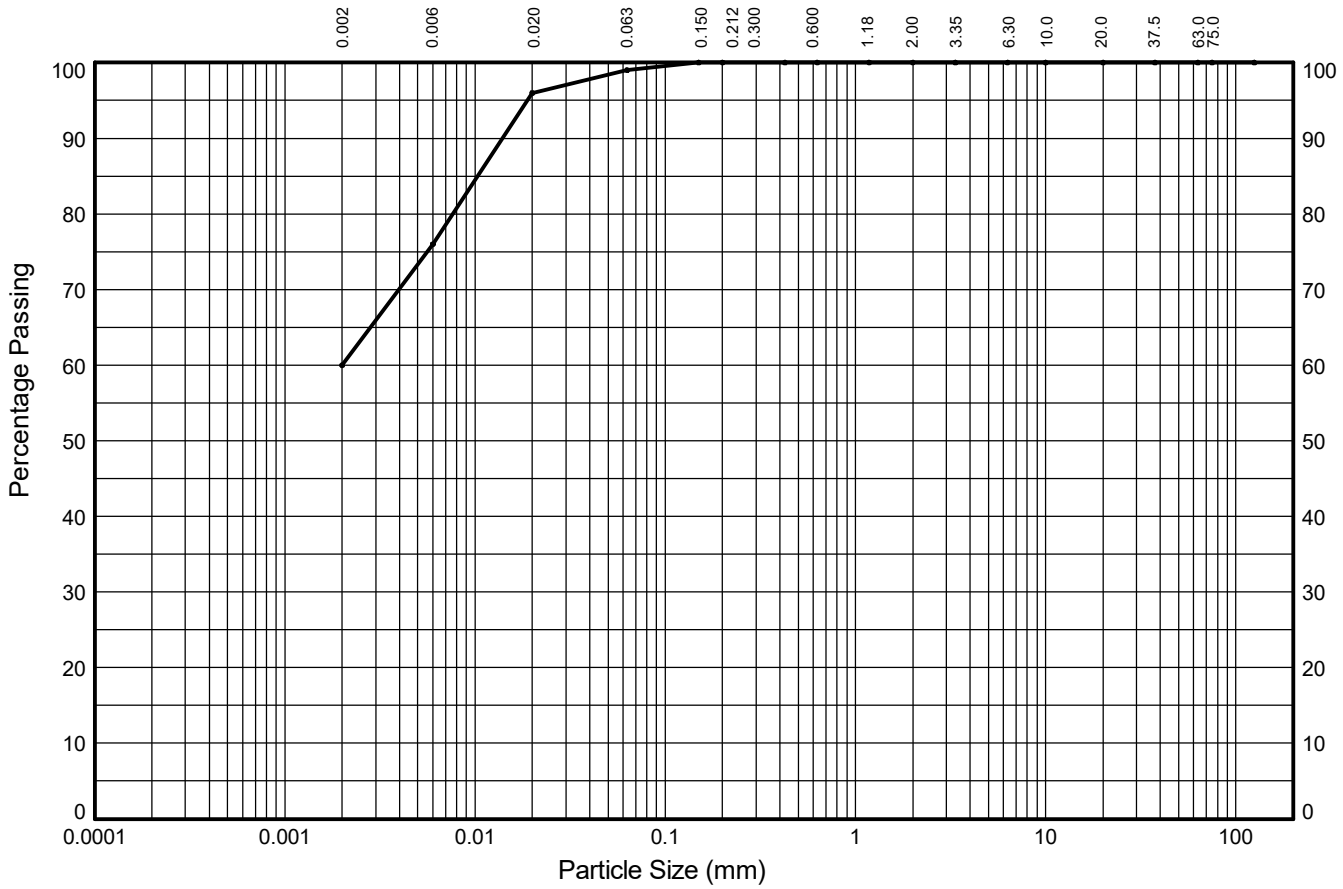
Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP105** Sample Ref: **10** Sample Type: **B** Depth (m): **1.10**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	16%	20%	3%	1%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
60%	39%			1%			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	**100**
0.150	**100**
0.063	**99**

Particle Diameter (mm)	Percent Passing (%)
0.02	**96**
0.006	**76**
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)	**0.010**
D_{90} (mm)	**0.014**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown mottled orangish brown 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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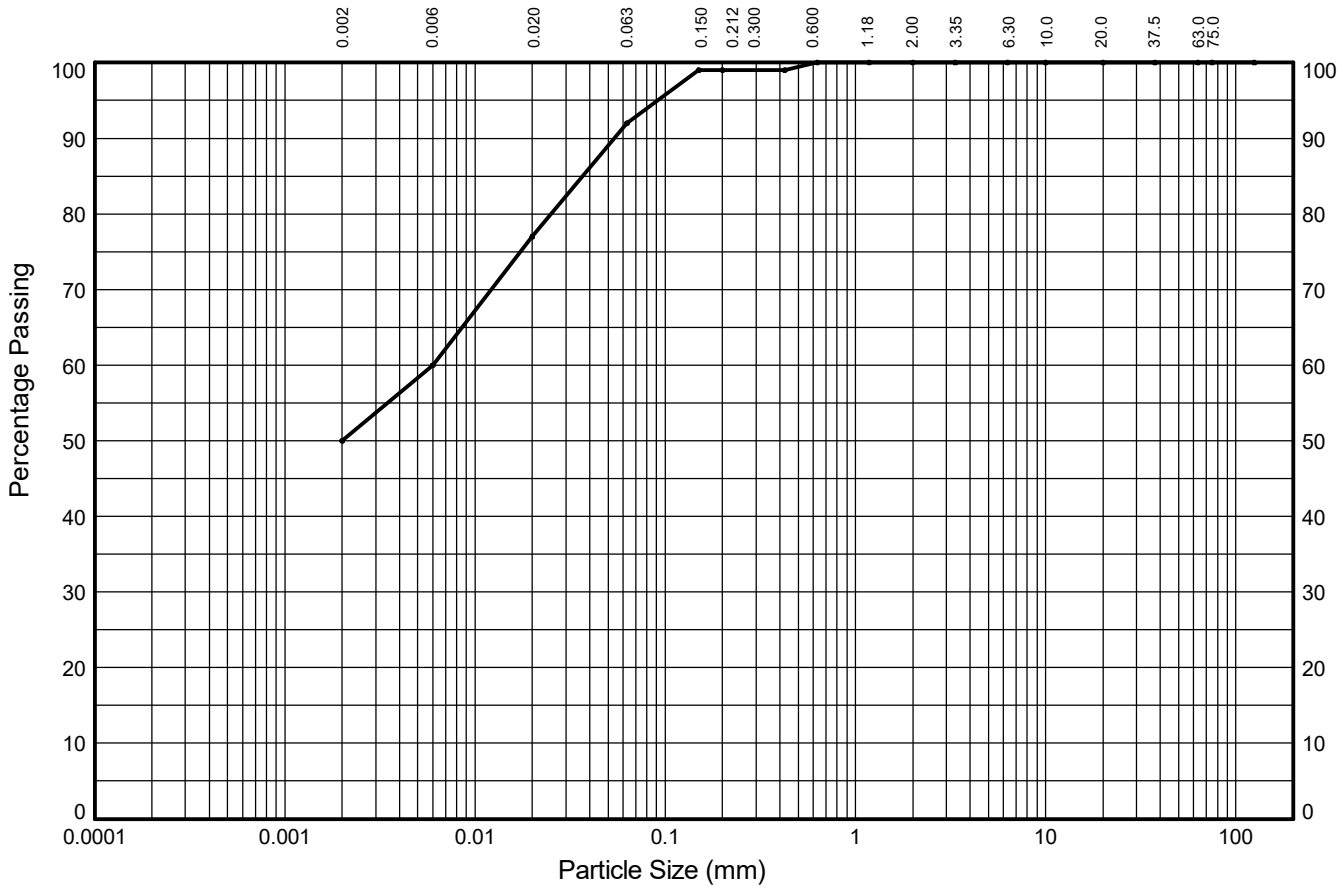
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP105** Sample Ref: **13** Sample Type: **B** Depth (m): **2.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	10%	17%	15%	7%	1%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
50%	42%			8%			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	**92**

Particle Diameter (mm)	Percent Passing (%)
0.02	**77**
0.006	**60**
0.002	**50**

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)	**0.006**
D_{85} (mm)	**0.037**
D_{90} (mm)	**0.054**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown 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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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP106** Sample Ref: **2** Sample Type: **B** Depth (m): **0.50**

CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	12%	22%	12%	9%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
45%	46%			9%			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	**100**
0.150	**100**
0.063	**91**

Particle Diameter (mm)	Percent Passing (%)
0.02	**79**
0.006	**57**
0.002	**45**

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)	**0.035**
D_{90} (mm)	**0.057**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown 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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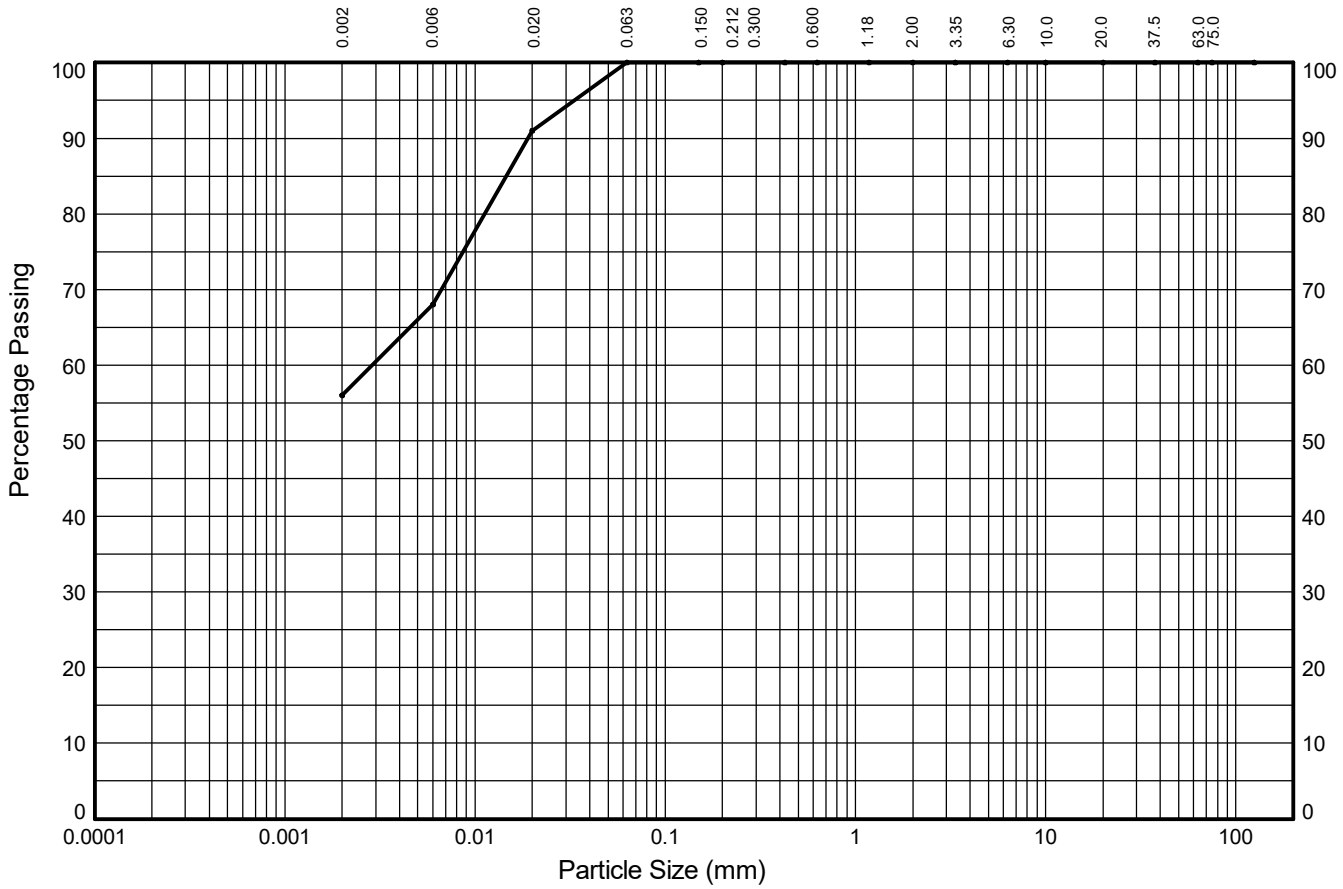
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP106** Sample Ref: **7** Sample Type: **B** Depth (m): **0.90**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	12%	23%	9%	0%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
56%	44%			0%			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	**100**
0.150	**100**
0.063	**100**

Particle Diameter (mm)	Percent Passing (%)
0.02	**91**
0.006	**68**
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)	**0.003**
D_{85} (mm)	**0.015**
D_{90} (mm)	**0.019**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown mottled grey 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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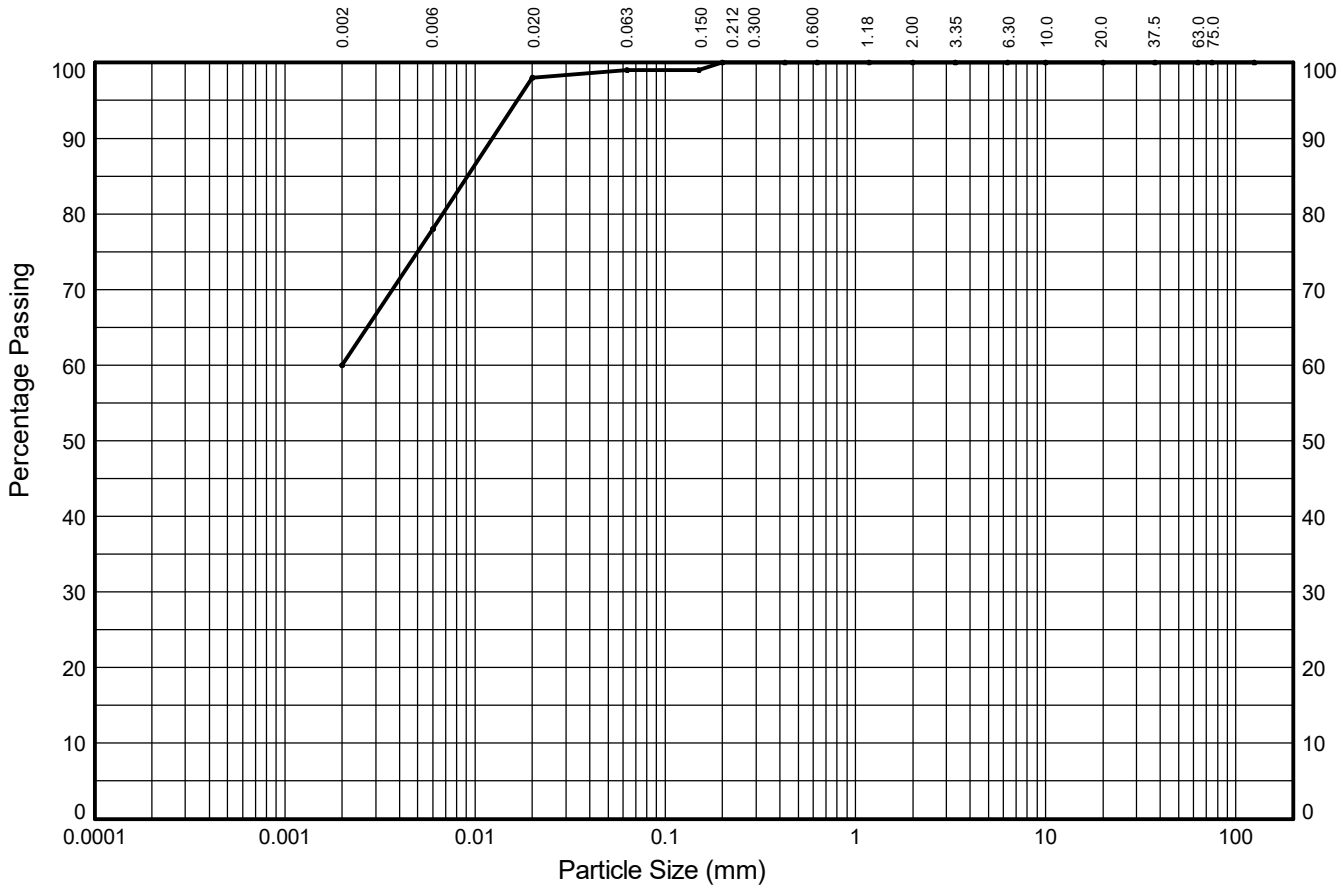
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP106** Sample Ref: **15** Sample Type: **B** Depth (m): **3.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	18%	20%	1%	1%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
60%	39%			1%			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	**100**
0.150	**99**
0.063	**99**

Particle Diameter (mm)	Percent Passing (%)
0.02	**98**
0.006	**78**
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)	**0.009**
D_{90} (mm)	**0.012**
C_U	**NA**
C_C	**NA**

Soil Description:

Greyish brown 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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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP107** Sample Ref: **2** Sample Type: **B** Depth (m): **0.50**

CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	15%	21%	9%	1%	0%	1%	0%	0%	0%	
	SILT			SAND			GRAVEL			
53%	45%			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	**99**
0.425	**99**
0.200	**99**
0.150	**99**
0.063	**98**

Particle Diameter (mm)	Percent Passing (%)
0.02	**89**
0.006	**68**
0.002	**53**

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)	**0.003**
D_{85} (mm)	**0.016**
D_{90} (mm)	**0.023**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown 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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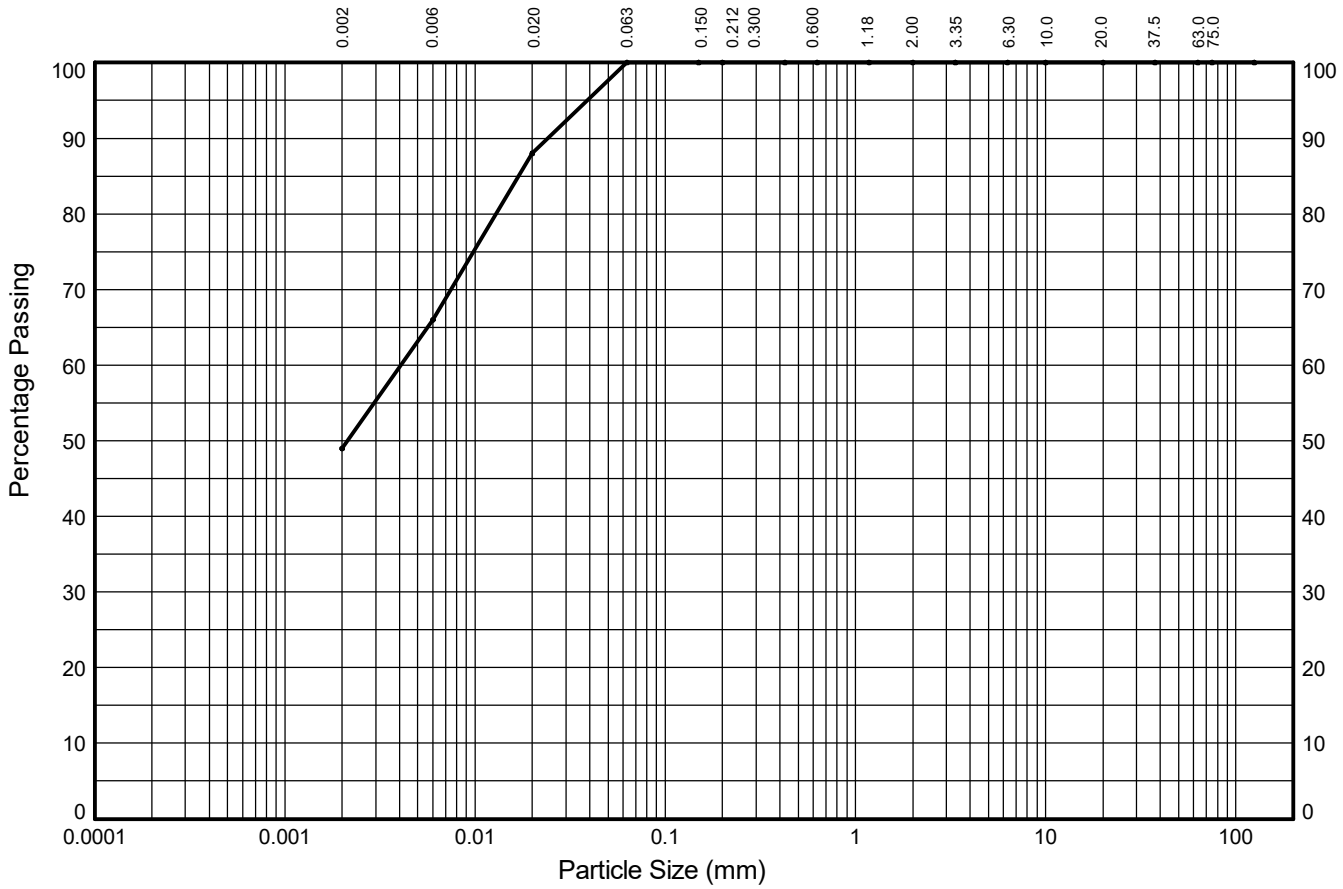
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP107** Sample Ref: **7** Sample Type: **B** Depth (m): **0.90**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	17%	22%	12%	0%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
49%	51%			0%			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	**100**
0.150	**100**
0.063	**100**

Particle Diameter (mm)	Percent Passing (%)
0.02	**88**
0.006	**66**
0.002	**49**

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)	**0.017**
D_{90} (mm)	**0.024**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown 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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Date: **26/03/24**

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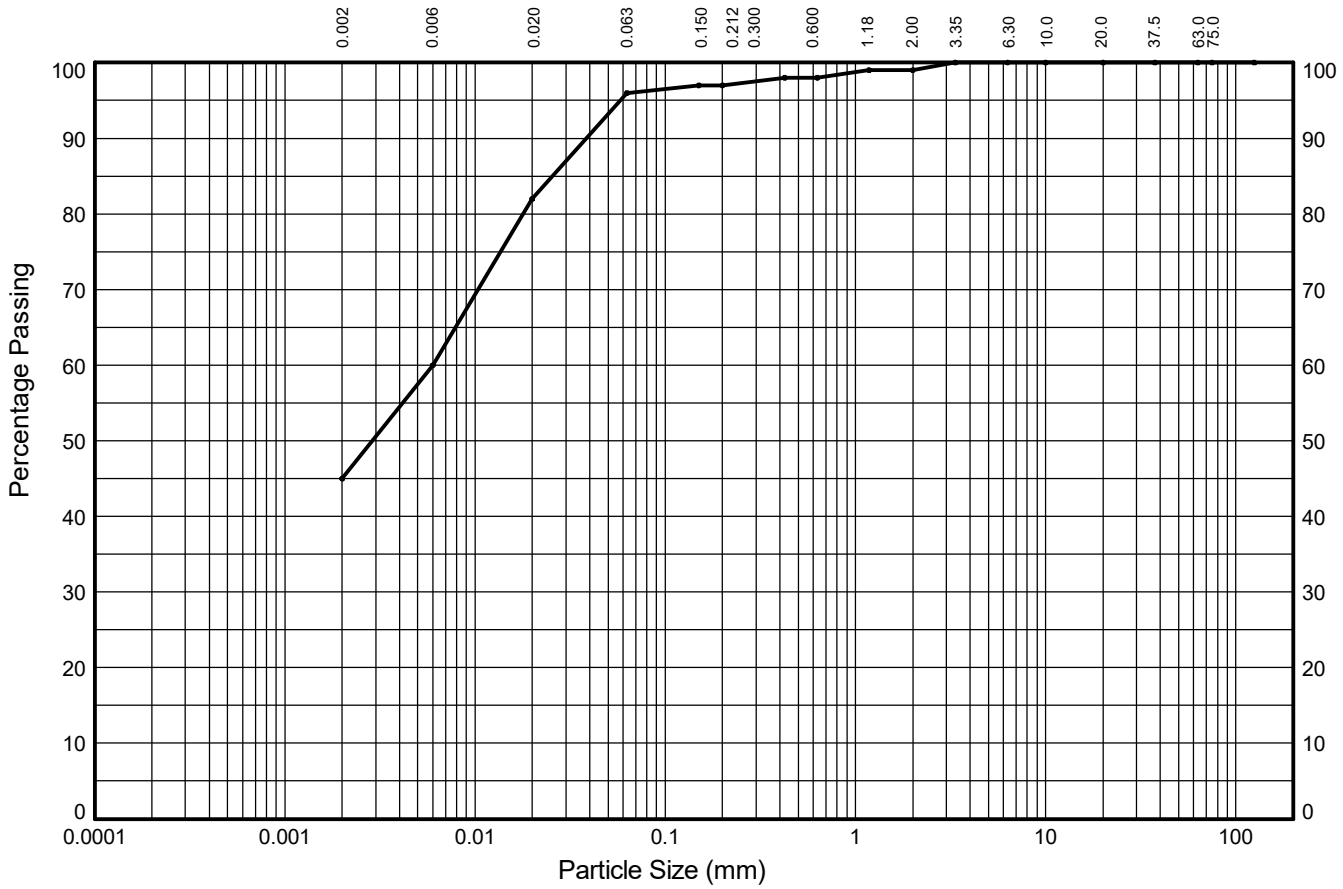
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP107** Sample Ref: **14** Sample Type: **B** Depth (m): **1.80**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	15%	22%	14%	1%	1%	1%	1%	0%	0%	
	SILT			SAND			GRAVEL			
45%	51%			3%			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	**97**
0.063	**96**

Particle Diameter (mm)	Percent Passing (%)
0.02	**82**
0.006	**60**
0.002	**45**

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)	**0.026**
D_{90} (mm)	**0.039**
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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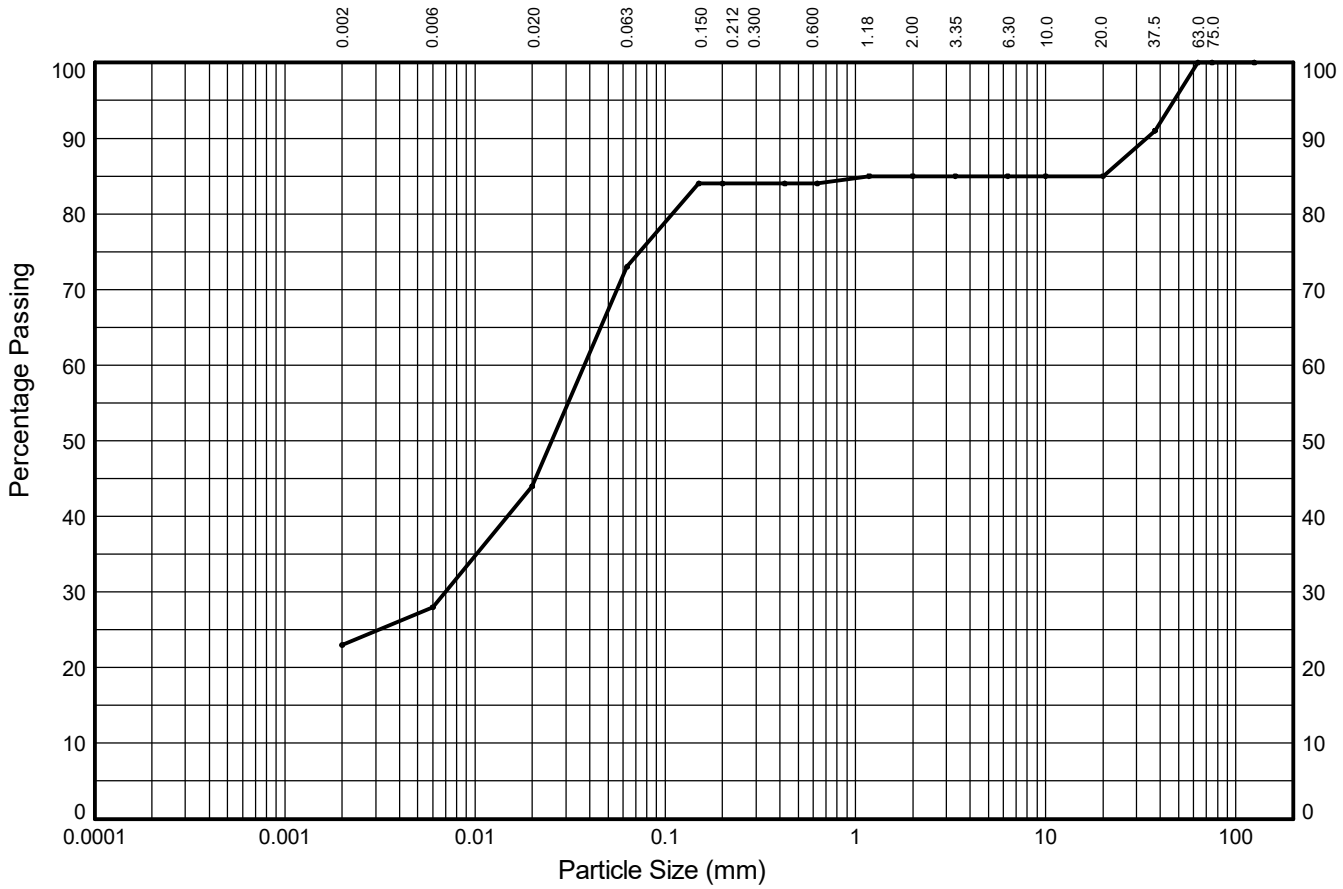
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP201** Sample Ref: **8** Sample Type: **B** Depth (m): **1.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	5%	16%	29%	11%	0%	1%	0%	0%	15%	
	SILT			SAND			GRAVEL			
23%	50%			12%			15%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**91**
20.0	**85**
10.0	**85**
6.30	**85**
3.35	**85**
2.00	**85**
1.18	**85**
0.630	**84**
0.425	**84**
0.200	**84**
0.150	**84**
0.063	**73**

Particle Diameter (mm)	Percent Passing (%)
0.02	**44**
0.006	**28**
0.002	**23**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.007**
D_{50} (mm)	**0.025**
D_{60} (mm)	**0.038**
D_{85} (mm)	**1.180**
D_{90} (mm)	**33.770**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark 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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Compiled By: [redacted] [redacted]

Date: **26/03/24**

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Contract Ref: **563607**

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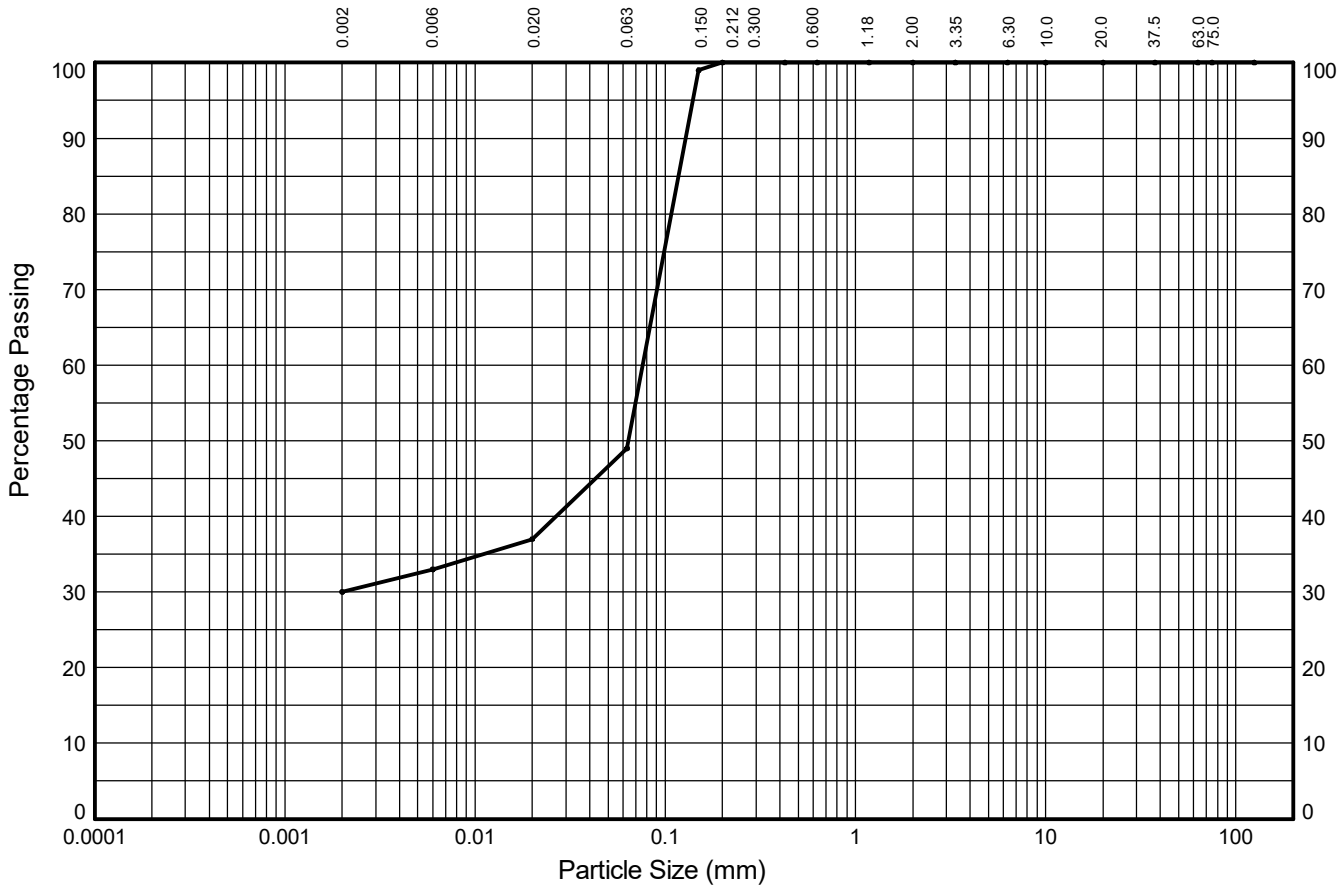
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP202** Sample Ref: **6** Sample Type: **B** Depth (m): **0.90**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	3%	4%	12%	51%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
30%	19%			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	**100**
0.425	**100**
0.200	**100**
0.150	**99**
0.063	**49**

Particle Diameter (mm)	Percent Passing (%)
0.02	**37**
0.006	**33**
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)	**0.064**
D_{60} (mm)	**0.076**
D_{85} (mm)	**0.118**
D_{90} (mm)	**0.128**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown 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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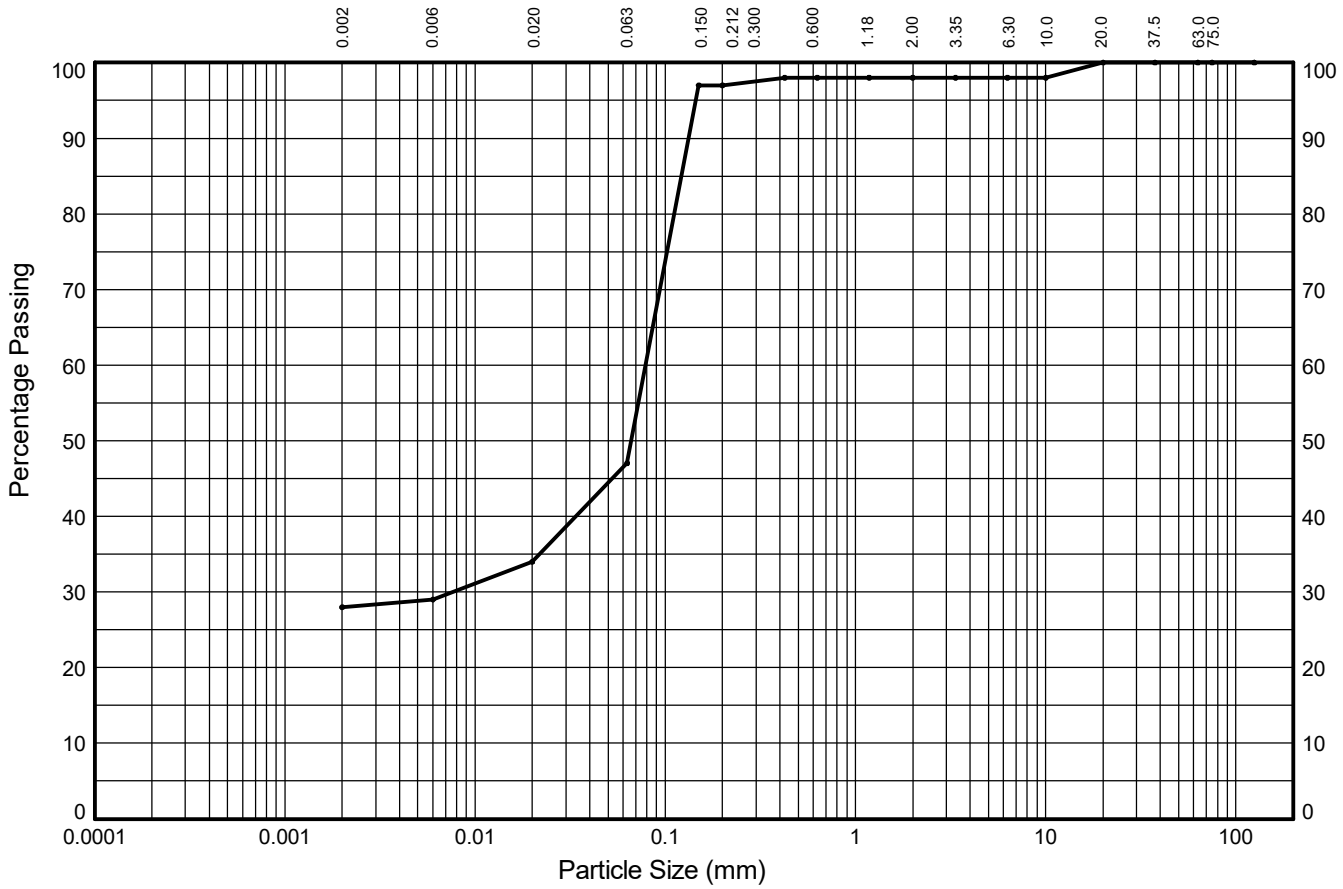
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP203** Sample Ref: **7** Sample Type: **B** Depth (m): **0.90**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	1%	5%	13%	50%	1%	0%	0%	2%	0%	
	SILT			SAND			GRAVEL			
28%	19%			51%			2%			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	**98**
2.00	**98**
1.18	**98**
0.630	**98**
0.425	**98**
0.200	**97**
0.150	**97**
0.063	**47**

Particle Diameter (mm)	Percent Passing (%)
0.02	**34**
0.006	**29**
0.002	**28**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.008**
D_{50} (mm)	**0.066**
D_{60} (mm)	**0.079**
D_{85} (mm)	**0.122**
D_{90} (mm)	**0.133**
C_U	**NA**
C_C	**NA**

Soil Description:

Light 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

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By: [redacted]

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Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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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: **R22-TP203** Sample Ref: **9** Sample Type: **B** Depth (m): **1.00**

CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	2%	5%	6%	62%	0%	1%	0%	0%	0%	
	SILT			SAND			GRAVEL			
24%	13%			63%			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	**37**

Particle Diameter (mm)	Percent Passing (%)
0.02	**31**
0.006	**26**
0.002	**24**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.016**
D_{50} (mm)	**0.076**
D_{60} (mm)	**0.087**
D_{85} (mm)	**0.123**
D_{90} (mm)	**0.132**
C_U	**NA**
C_C	**NA**

Soil Description:

Orangish brown 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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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP204** Sample Ref: **4** Sample Type: **B** Depth (m): **0.70**

CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	13%	22%	10%	1%	0%	1%	0%	0%	0%	
	SILT			SAND			GRAVEL			
53%	45%			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	**99**
0.425	**99**
0.200	**99**
0.150	**99**
0.063	**98**

Particle Diameter (mm)	Percent Passing (%)
0.02	**88**
0.006	**66**
0.002	**53**

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)	**0.017**
D_{90} (mm)	**0.025**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown mottled orangish brown 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
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Contract: **SEA Link FEED - Kent Onshore Cable Link**

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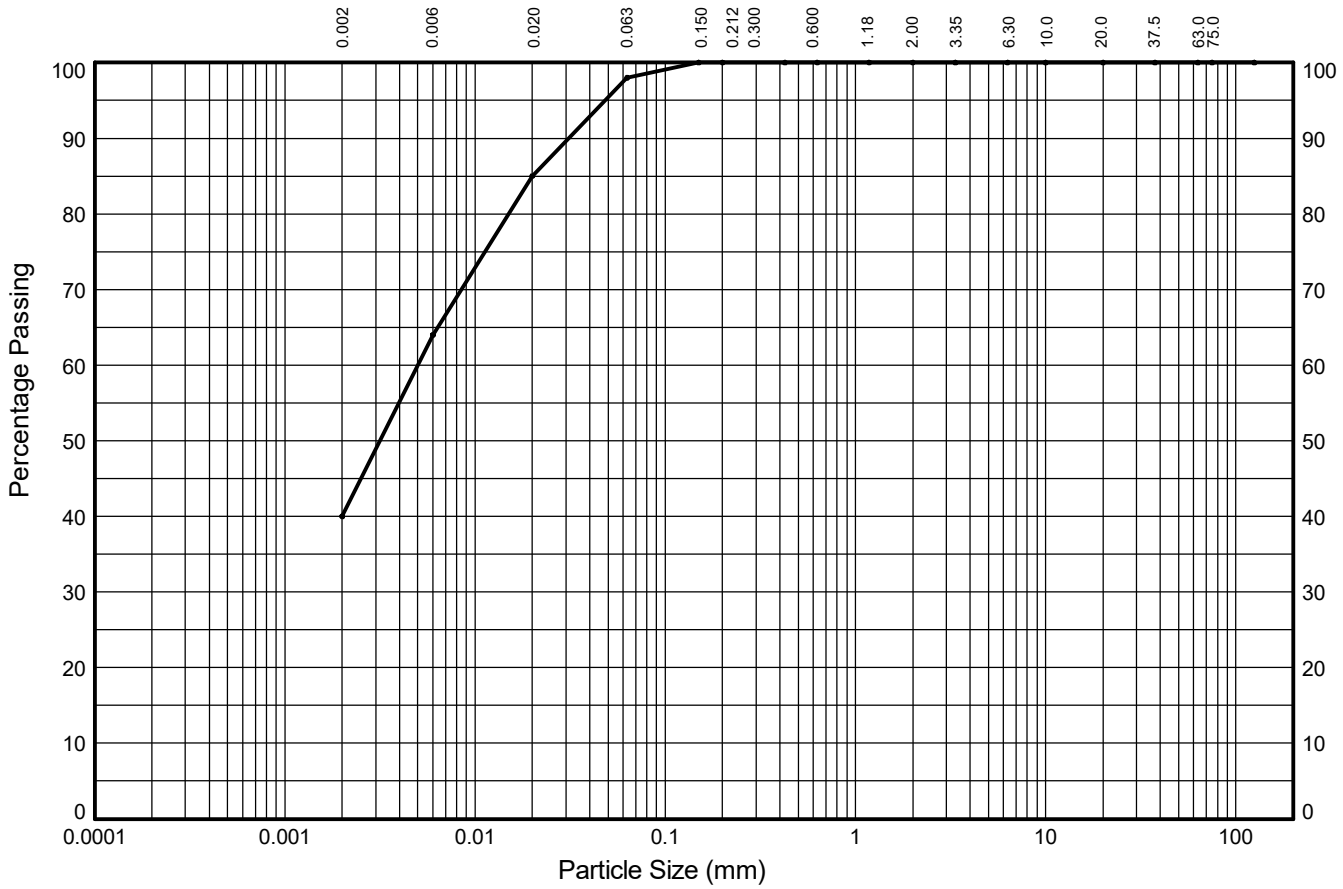
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP204** Sample Ref: **14** Sample Type: **B** Depth (m): **1.70**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	24%	21%	13%	2%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
40%	58%			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	**100**
0.150	**100**
0.063	**98**

Particle Diameter (mm)	Percent Passing (%)
0.02	**85**
0.006	**64**
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)	**0.003**
D_{60} (mm)	**0.005**
D_{85} (mm)	**0.020**
D_{90} (mm)	**0.031**
C_U	**NA**
C_C	**NA**

Soil Description:

Light brown mottled grey 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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Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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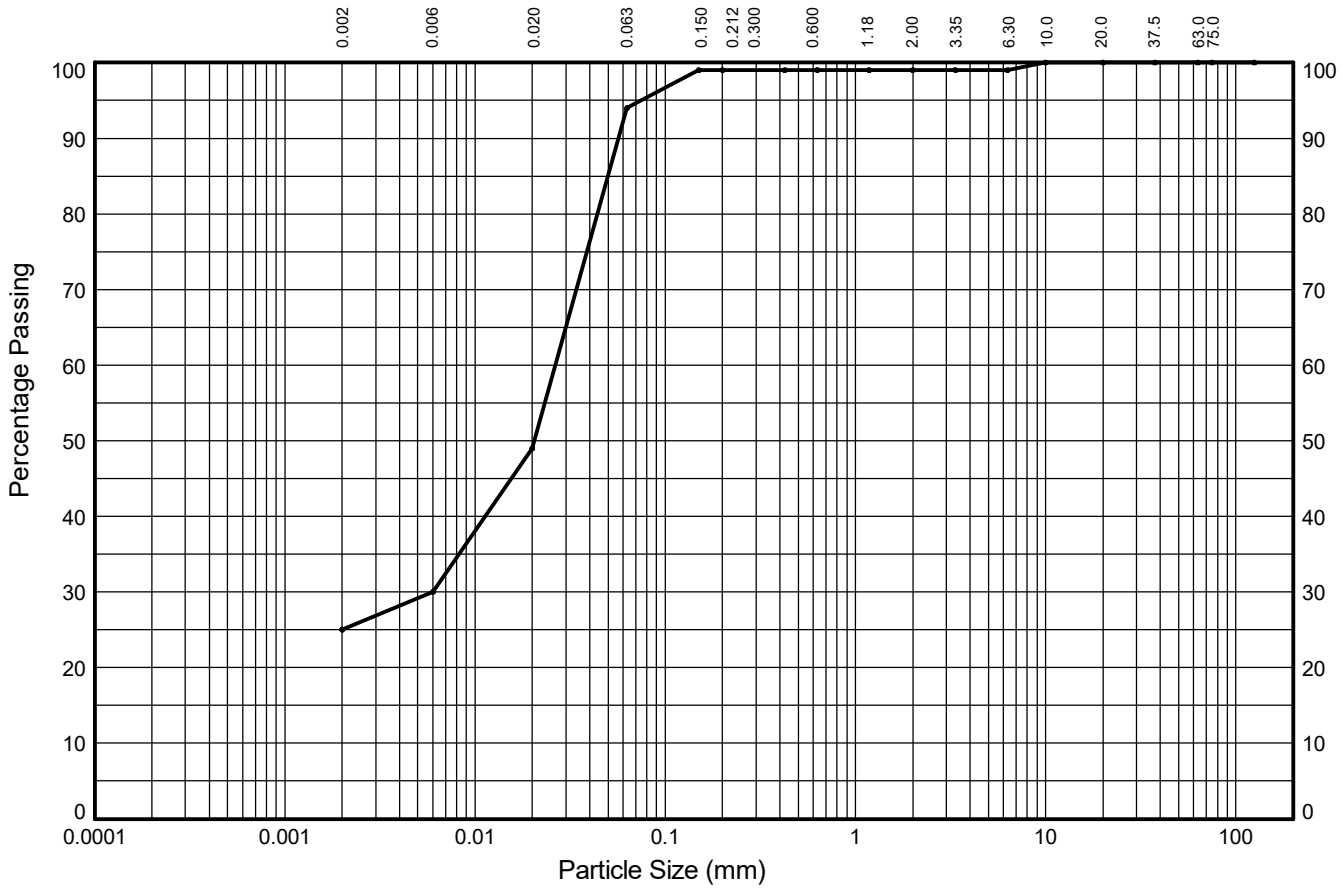
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP204** Sample Ref: **17** Sample Type: **B** Depth (m): **2.70**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	5%	19%	45%	5%	0%	0%	0%	1%	0%	
	SILT			SAND			GRAVEL			
25%	69%			5%			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	**99**
3.35	**99**
2.00	**99**
1.18	**99**
0.630	**99**
0.425	**99**
0.200	**99**
0.150	**99**
0.063	**94**

Particle Diameter (mm)	Percent Passing (%)
0.02	**49**
0.006	**30**
0.002	**25**

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)	**0.026**
D_{85} (mm)	**0.050**
D_{90} (mm)	**0.057**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark greyish brown mottled dark greenish grey 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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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP205** Sample Ref: **11** Sample Type: **B** Depth (m): **1.10**

CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	13%	20%	26%	3%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
38%	59%			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	**100**
0.425	**100**
0.200	**100**
0.150	**100**
0.063	**97**

Particle Diameter (mm)	Percent Passing (%)
0.02	**71**
0.006	**51**
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)	**0.006**
D_{60} (mm)	**0.010**
D_{85} (mm)	**0.037**
D_{90} (mm)	**0.046**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown mottled orangish brown slightly sandy silty CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

STRUCTURAL SOILS
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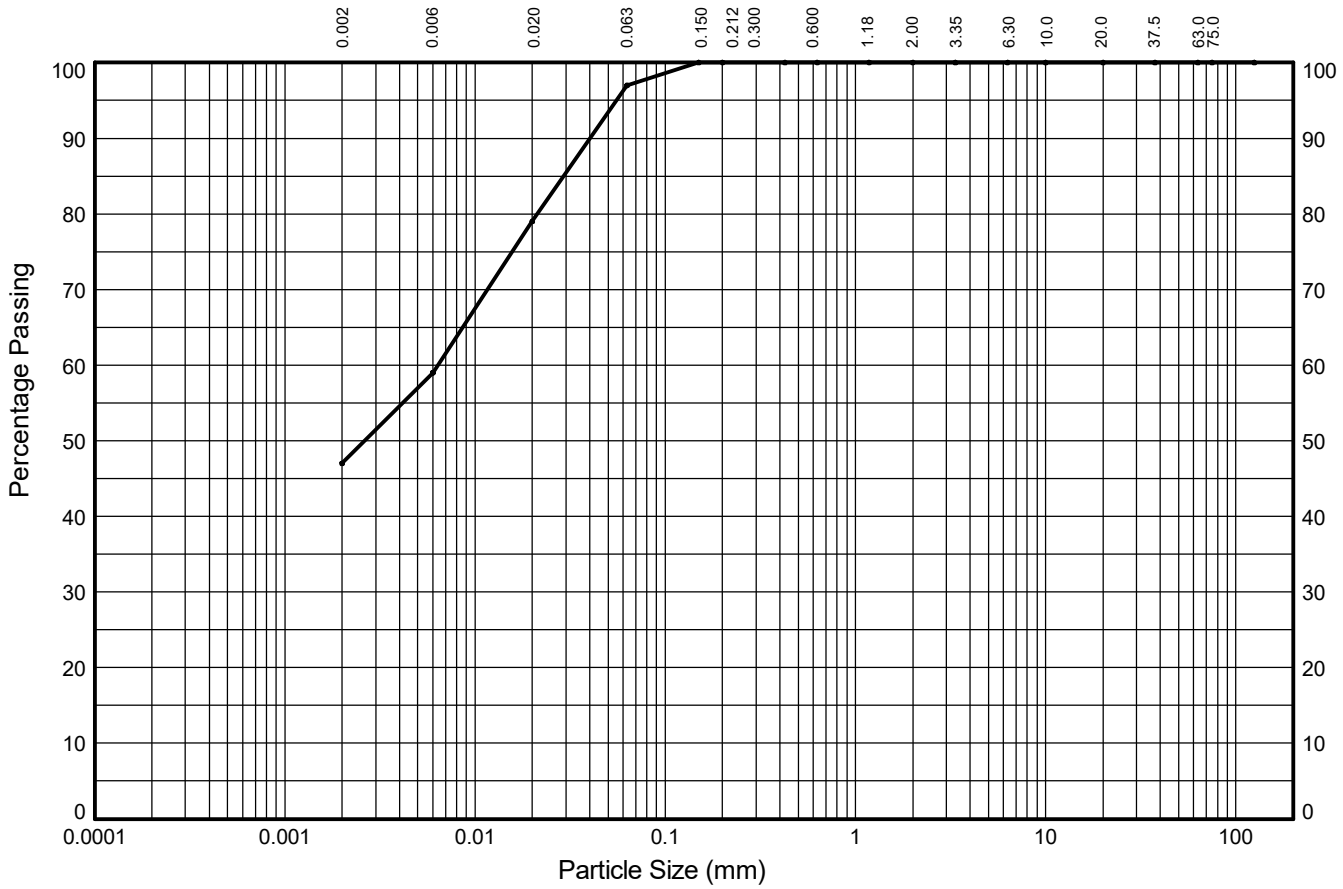
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP205** Sample Ref: **14** Sample Type: **B** Depth (m): **2.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	12%	20%	18%	3%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
47%	50%			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	**100**
0.425	**100**
0.200	**100**
0.150	**100**
0.063	**97**

Particle Diameter (mm)	Percent Passing (%)
0.02	**79**
0.006	**59**
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)	**0.003**
D_{60} (mm)	**0.006**
D_{85} (mm)	**0.029**
D_{90} (mm)	**0.040**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown mottled dark grey slightly sandy silty 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
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Hertfordshire
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Compiled By: [redacted] [redacted]

Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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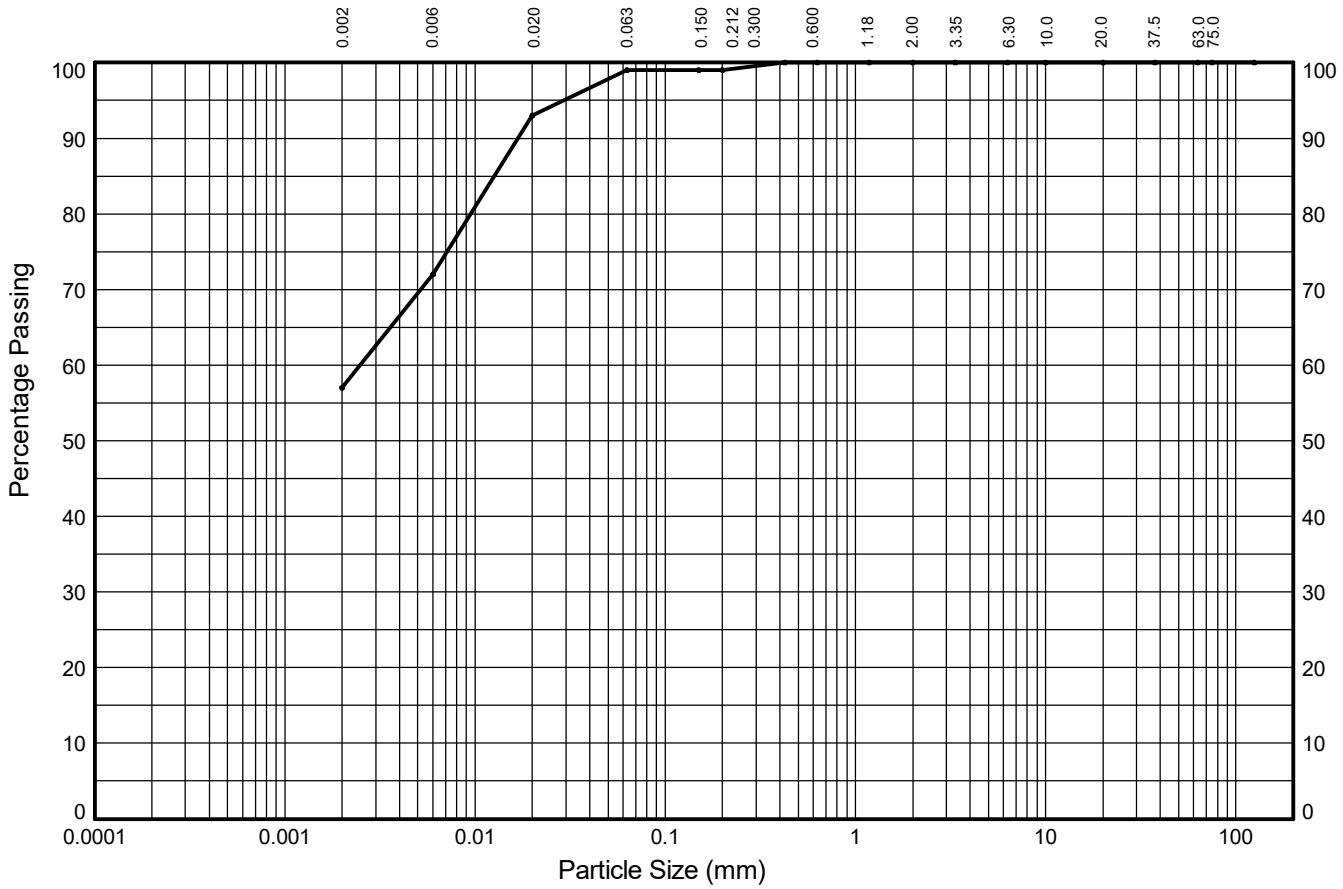
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP405** Sample Ref: **2** Sample Type: **B** Depth (m): **0.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	15%	21%	6%	0%	1%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
57%	42%			1%			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	**99**

Particle Diameter (mm)	Percent Passing (%)
0.02	**93**
0.006	**72**
0.002	**57**

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)	**0.013**
D_{90} (mm)	**0.017**
C_U	**NA**
C_C	**NA**

Soil Description:

Light brown mottled orangish brown and white slightly sandy silty 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
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Compiled By: [redacted] [redacted] Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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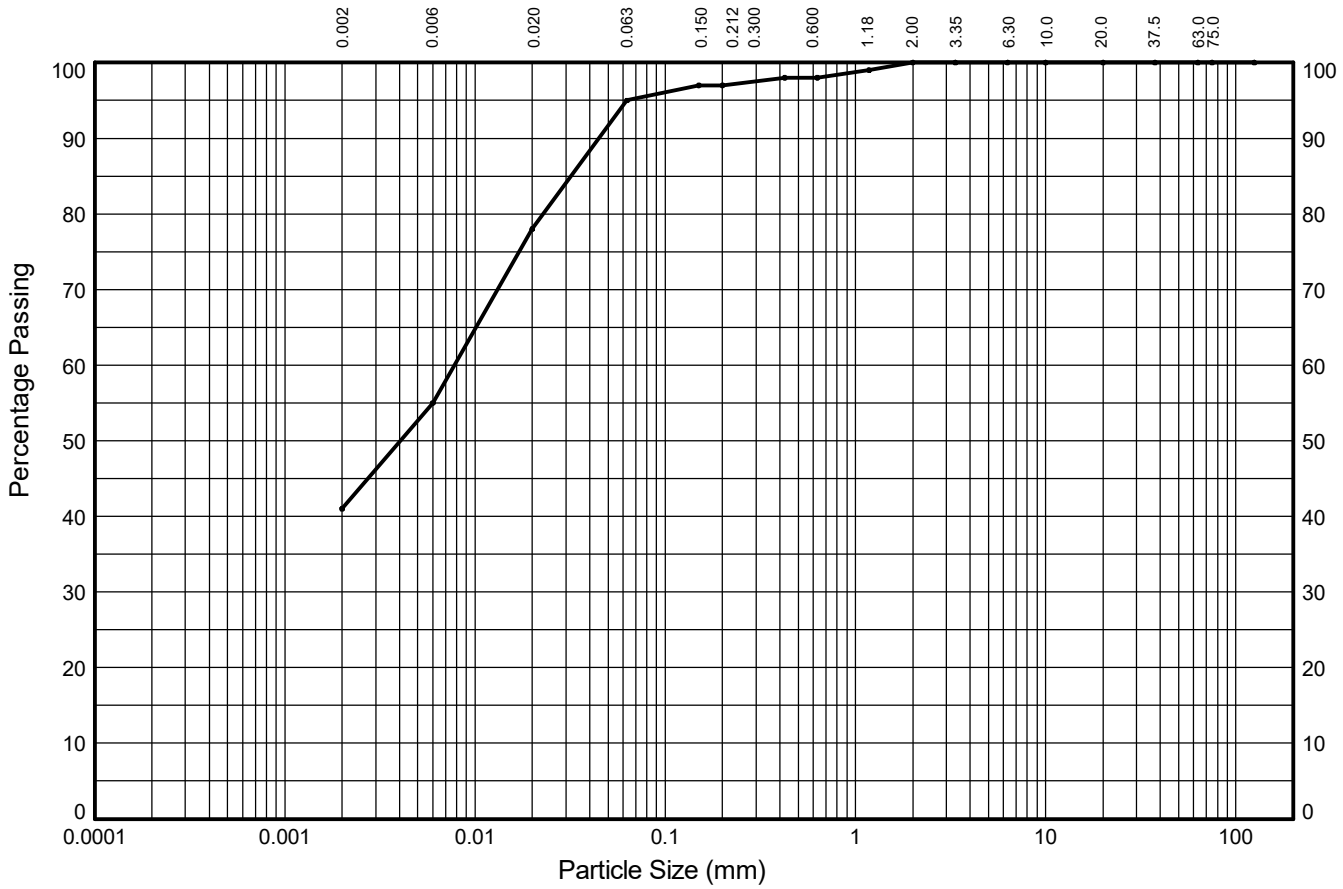
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP405** Sample Ref: **7** Sample Type: **B** Depth (m): **2.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	14%	23%	17%	2%	1%	2%	0%	0%	0%	
	SILT			SAND			GRAVEL			
41%	54%			5%			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	**98**
0.425	**98**
0.200	**97**
0.150	**97**
0.063	**95**

Particle Diameter (mm)	Percent Passing (%)
0.02	**78**
0.006	**55**
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)	**0.004**
D_{60} (mm)	**0.008**
D_{85} (mm)	**0.032**
D_{90} (mm)	**0.045**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark greyish brown slightly sandy silty CLAY

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

STRUCTURAL SOILS
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Hertfordshire
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Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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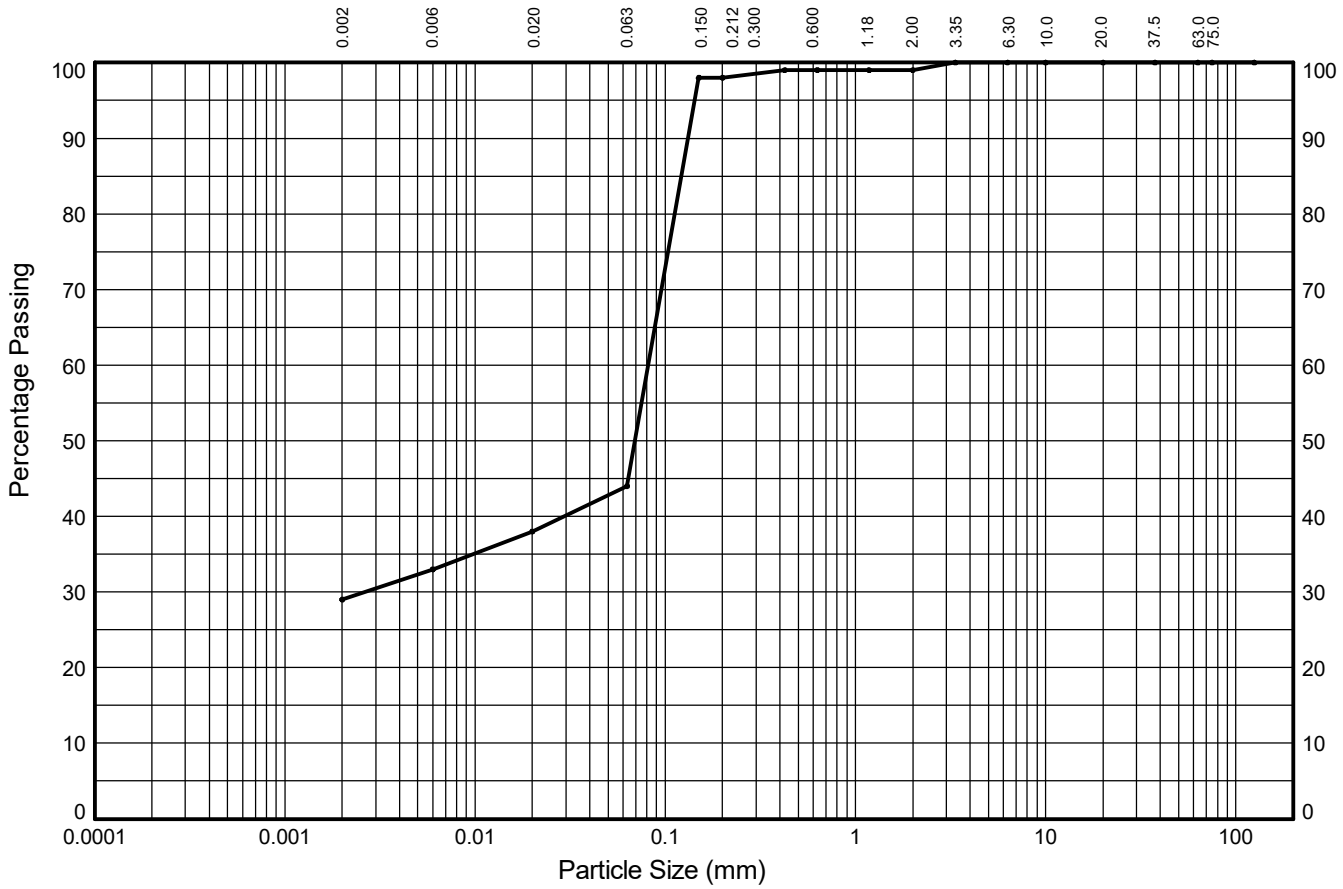
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP501** Sample Ref: **5** Sample Type: **B** Depth (m): **1.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	4%	5%	6%	54%	1%	0%	1%	0%	0%	
	SILT			SAND			GRAVEL			
29%	15%			55%			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	**98**
0.150	**98**
0.063	**44**

Particle Diameter (mm)	Percent Passing (%)
0.02	**38**
0.006	**33**
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)	**0.069**
D_{60} (mm)	**0.081**
D_{85} (mm)	**0.122**
D_{90} (mm)	**0.132**
C_U	**NA**
C_C	**NA**

Soil Description:

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

STRUCTURAL SOILS
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Compiled By: [redacted]

Date: **26/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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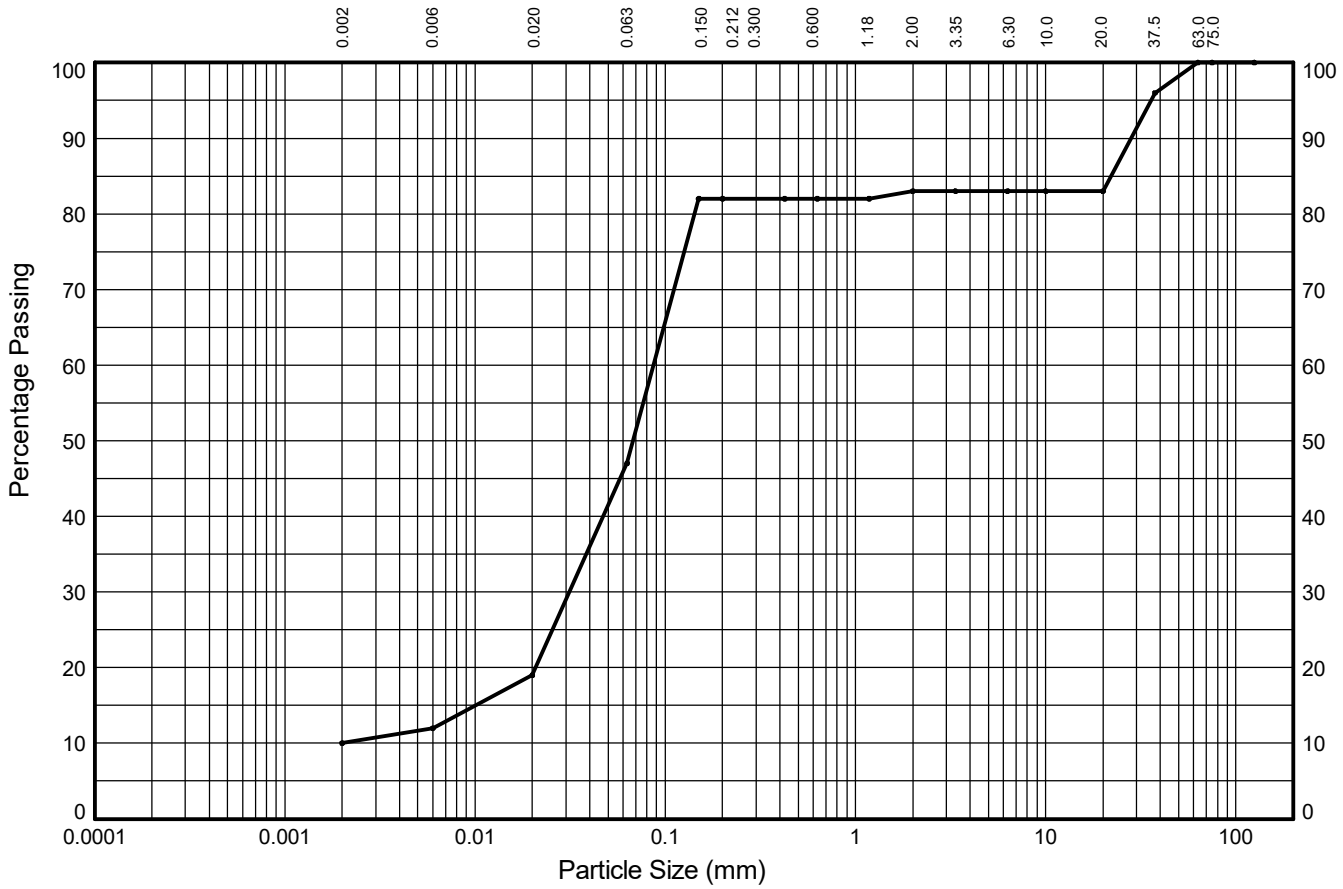
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.3 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP502** Sample Ref: **2** Sample Type: **B** Depth (m): **0.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	2%	7%	28%	35%	0%	1%	0%	0%	17%	
	SILT			SAND			GRAVEL			
10%	37%			36%			17%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**96**
20.0	**83**
10.0	**83**
6.30	**83**
3.35	**83**
2.00	**83**
1.18	**82**
0.630	**82**
0.425	**82**
0.200	**82**
0.150	**82**
0.063	**47**

Particle Diameter (mm)	Percent Passing (%)
0.02	**19**
0.006	**12**
0.002	**10**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**0.002**
D_{15} (mm)	**0.010**
D_{30} (mm)	**0.031**
D_{50} (mm)	**0.068**
D_{60} (mm)	**0.087**
D_{85} (mm)	**22.031**
D_{90} (mm)	**28.056**
C_U	**43**
C_C	**6**

Soil Description:

Yellowish 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: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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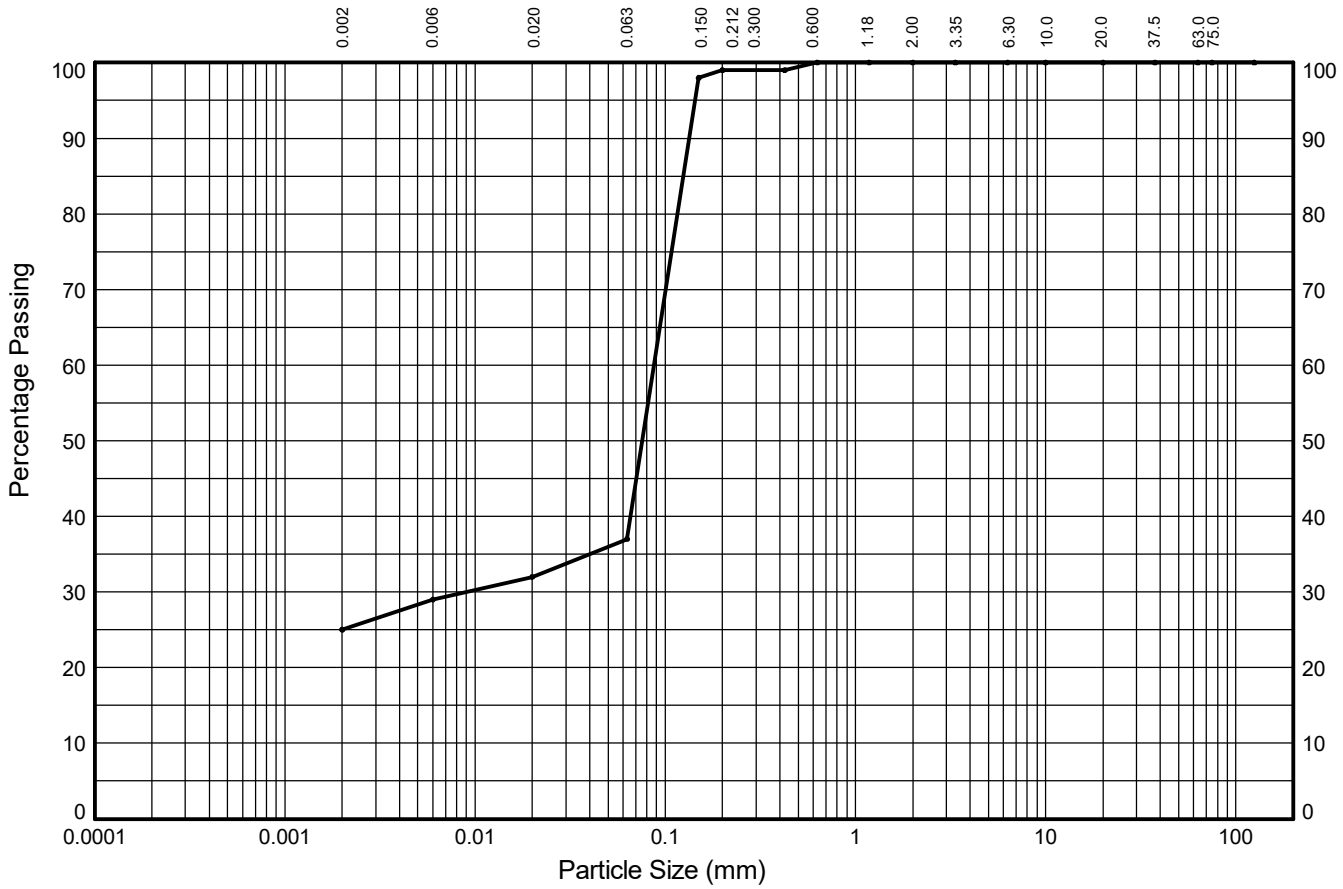
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP502** Sample Ref: **7** Sample Type: **B** Depth (m): **1.40**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	4%	3%	5%	62%	1%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
25%	12%			63%			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	**98**
0.063	**37**

Particle Diameter (mm)	Percent Passing (%)
0.02	**32**
0.006	**29**
0.002	**25**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.009**
D_{50} (mm)	**0.076**
D_{60} (mm)	**0.087**
D_{85} (mm)	**0.125**
D_{90} (mm)	**0.134**
C_U	**NA**
C_C	**NA**

Soil Description:

Light brown 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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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP503A** Sample Ref: **4** Sample Type: **B** Depth (m): **1.00**

CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	11%	14%	30%	8%	0%	1%	0%	0%	0%	
	SILT			SAND			GRAVEL			
36%	55%			9%			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	**99**
0.200	**99**
0.150	**98**
0.063	**91**

Particle Diameter (mm)	Percent Passing (%)
0.02	**61**
0.006	**47**
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)	**0.008**
D_{60} (mm)	**0.018**
D_{85} (mm)	**0.050**
D_{90} (mm)	**0.061**
C_U	**NA**
C_C	**NA**

Soil Description:

Greyish brown mottled brown 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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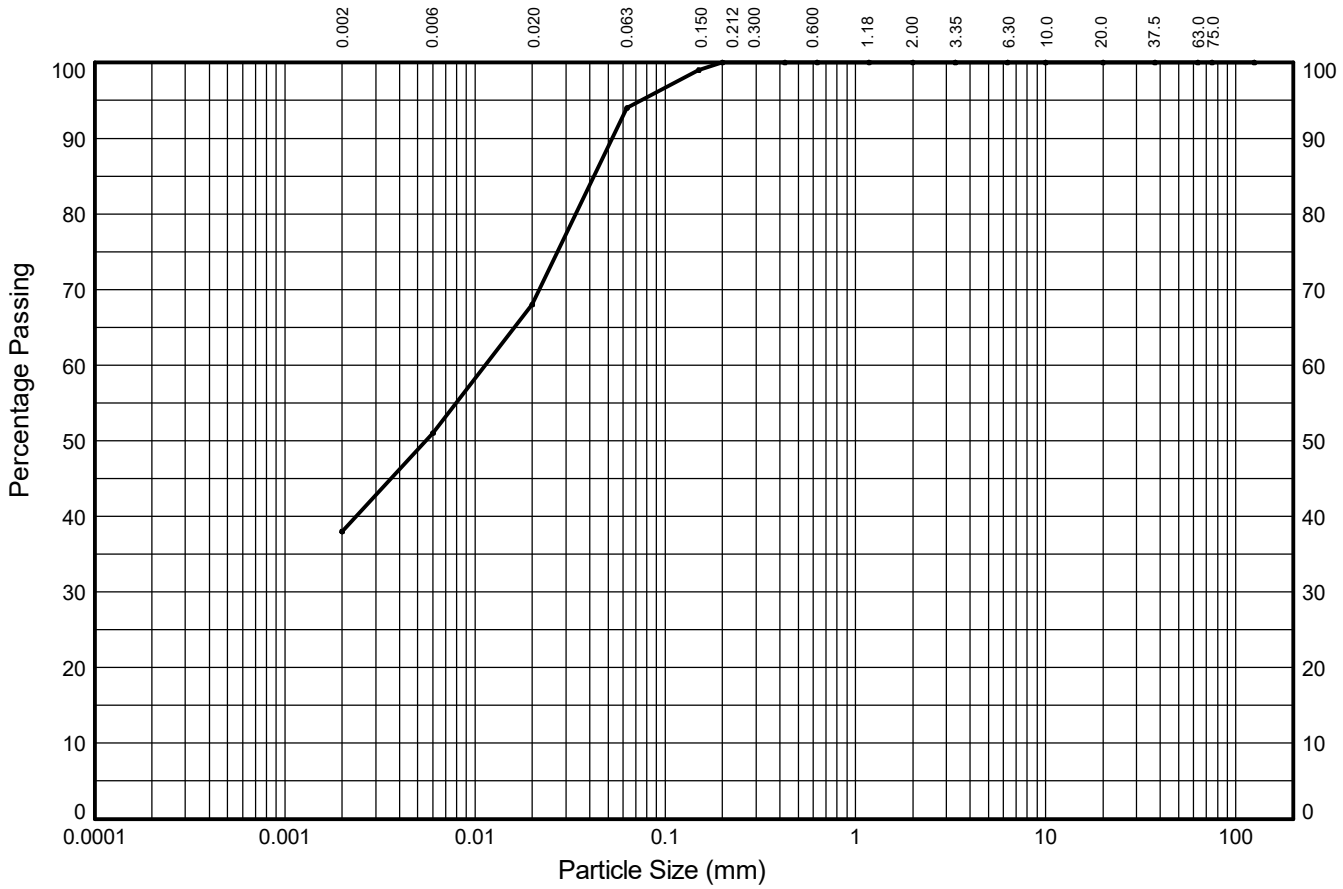
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP503A** Sample Ref: **8** Sample Type: **B** Depth (m): **2.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	13%	17%	26%	6%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
38%	56%			6%			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	**100**
0.150	**99**
0.063	**94**

Particle Diameter (mm)	Percent Passing (%)
0.02	**68**
0.006	**51**
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)	**0.006**
D_{60} (mm)	**0.011**
D_{85} (mm)	**0.042**
D_{90} (mm)	**0.053**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown mottled dark grey 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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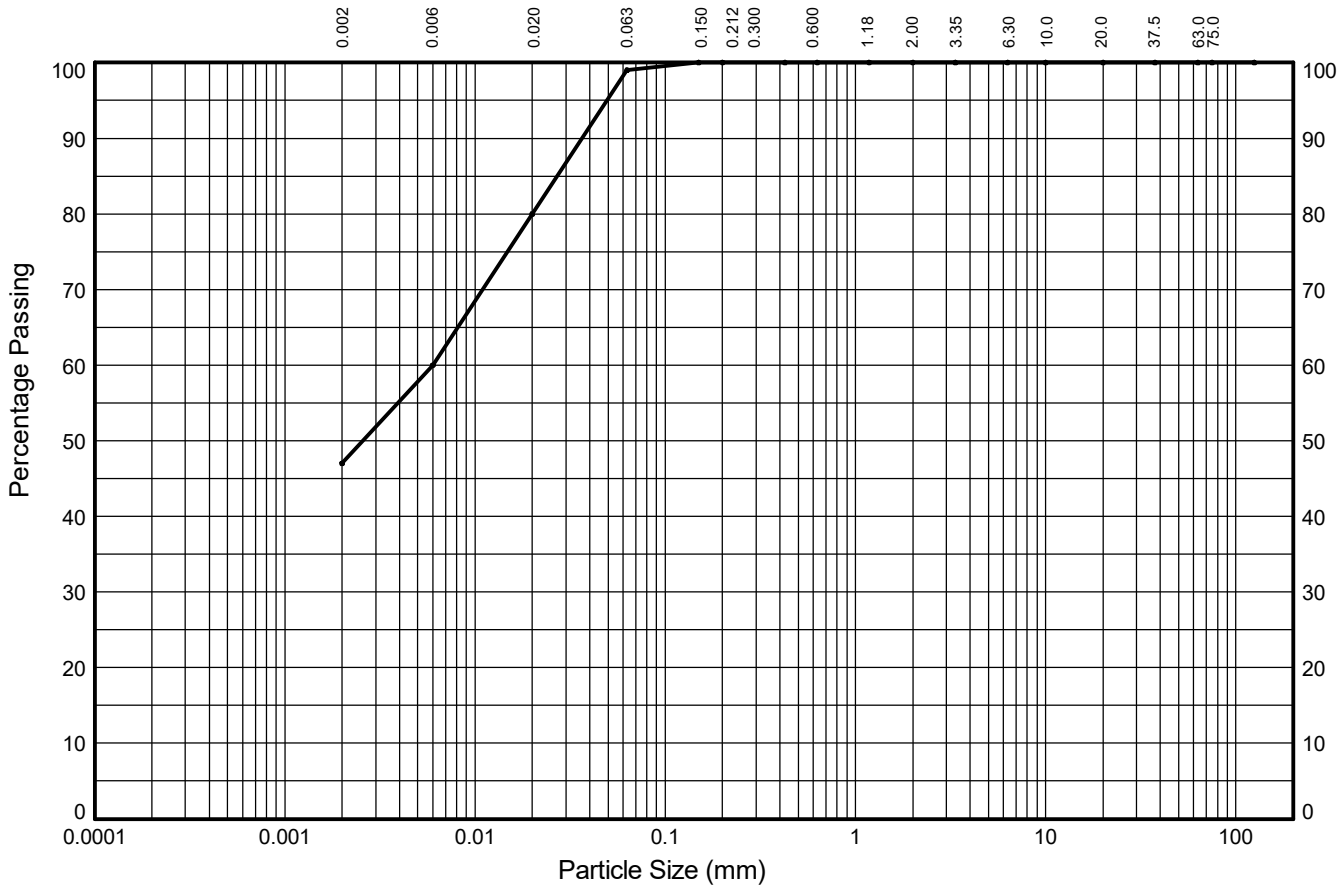
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP504** Sample Ref: **2** Sample Type: **B** Depth (m): **0.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	13%	20%	19%	1%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
47%	52%			1%			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	**100**
0.150	**100**
0.063	**99**

Particle Diameter (mm)	Percent Passing (%)
0.02	**80**
0.006	**60**
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)	**0.003**
D_{60} (mm)	**0.006**
D_{85} (mm)	**0.027**
D_{90} (mm)	**0.037**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown 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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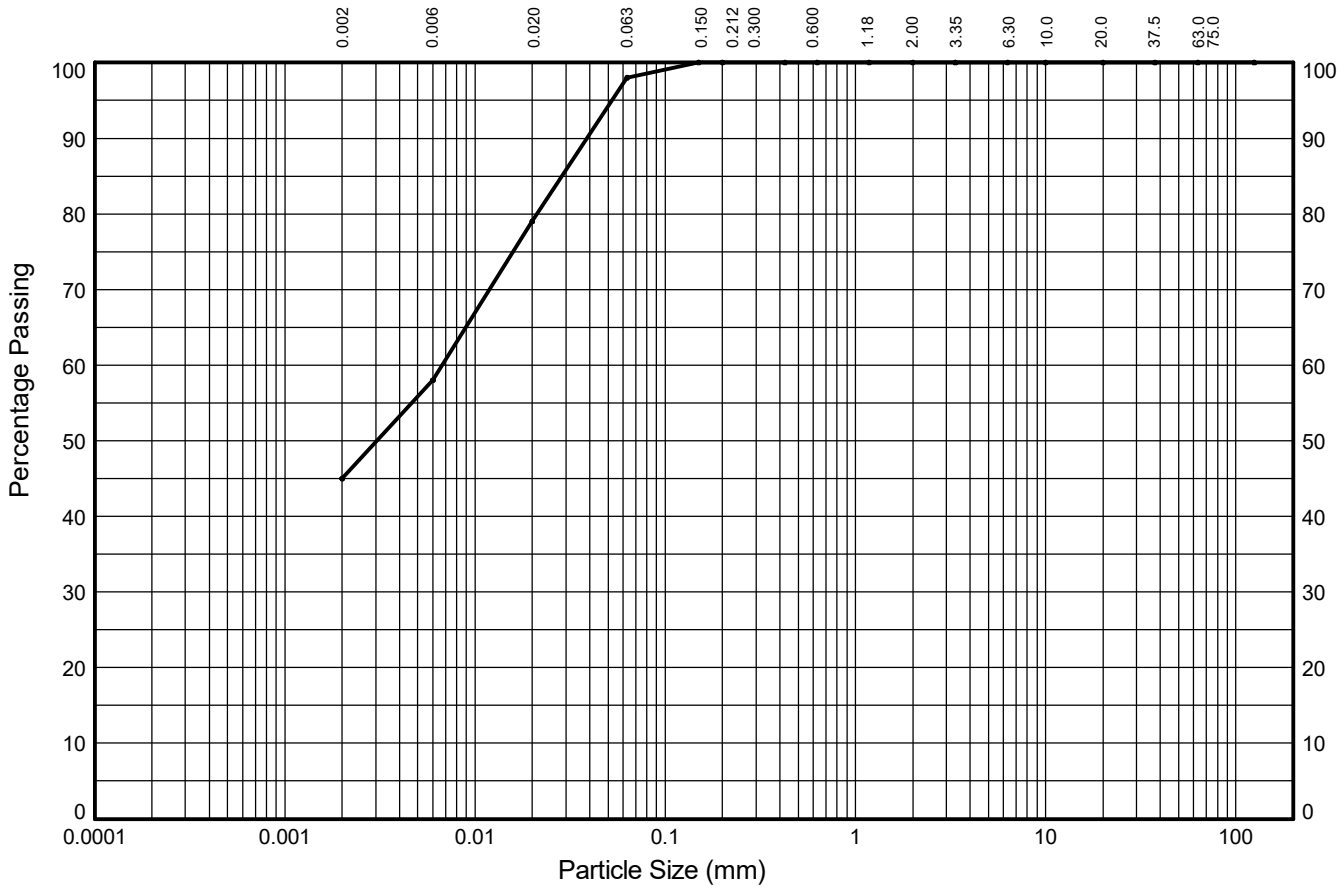
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP504** Sample Ref: **4** Sample Type: **B** Depth (m): **1.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	13%	21%	19%	2%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
45%	53%			2%			0%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	
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	**100**
0.150	**100**
0.063	**98**

Particle Diameter (mm)	Percent Passing (%)
0.02	**79**
0.006	**58**
0.002	**45**

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)	**0.029**
D_{90} (mm)	**0.039**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown mottled orangish brown 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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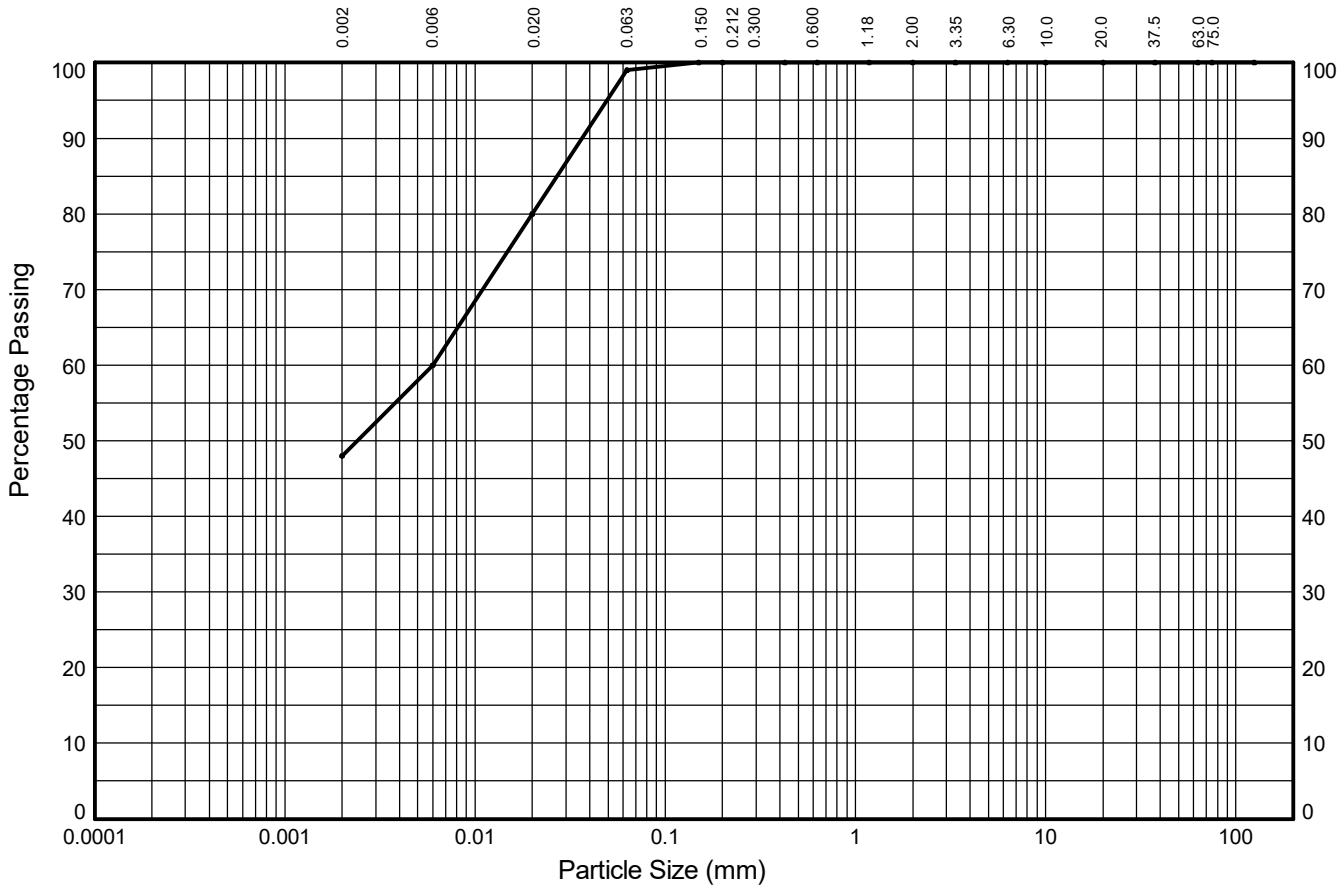
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP505** Sample Ref: **2** Sample Type: **B** Depth (m): **0.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	12%	20%	19%	1%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
48%	51%			1%			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	**100**
0.150	**100**
0.063	**99**

Particle Diameter (mm)	Percent Passing (%)
0.02	**80**
0.006	**60**
0.002	**48**

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)	**0.006**
D_{85} (mm)	**0.027**
D_{90} (mm)	**0.037**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown 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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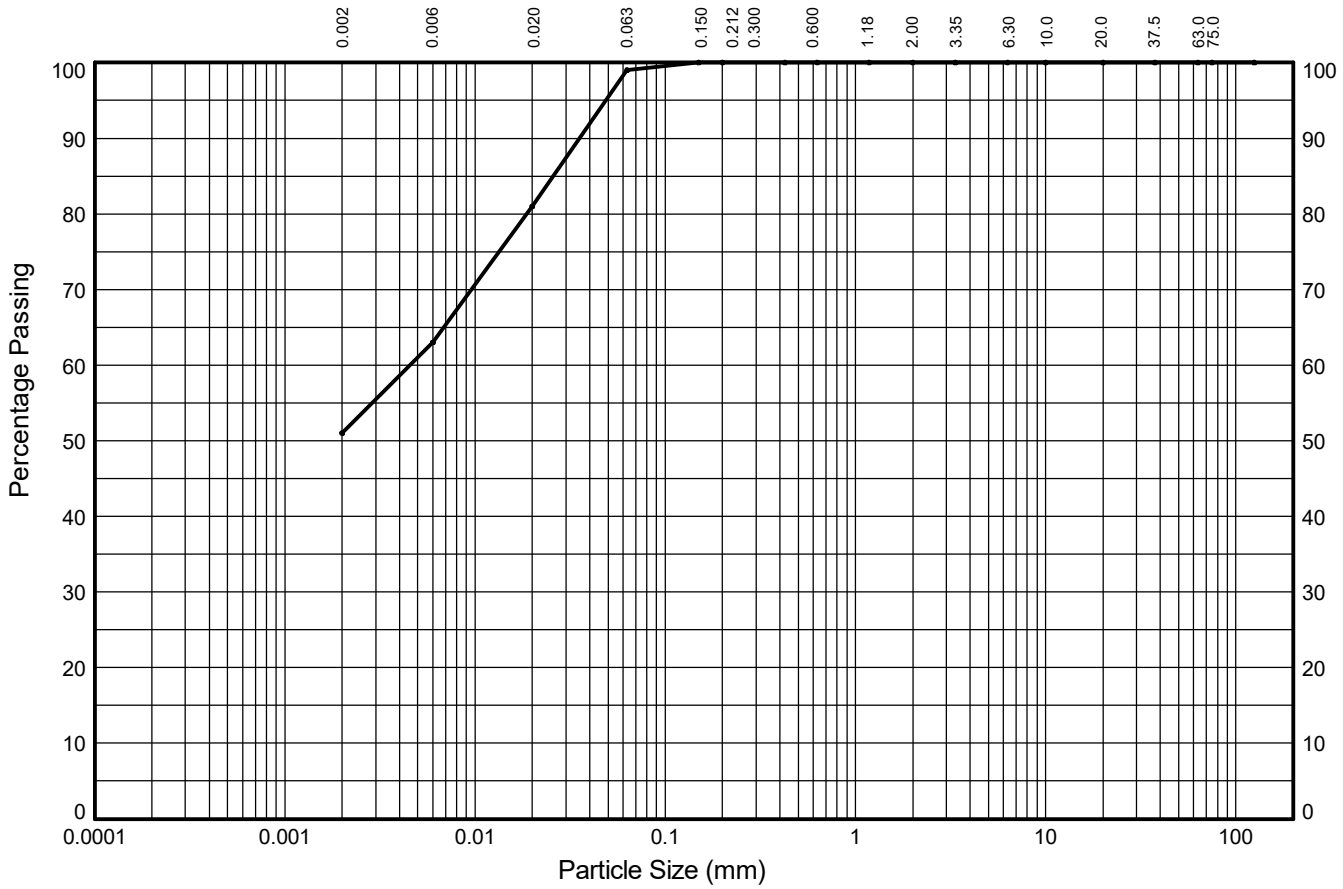
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP505** Sample Ref: **4** Sample Type: **B** Depth (m): **1.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	12%	18%	18%	1%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
51%	48%			1%			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	**100**
0.150	**100**
0.063	**99**

Particle Diameter (mm)	Percent Passing (%)
0.02	**81**
0.006	**63**
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)	**0.026**
D_{90} (mm)	**0.035**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown mottled grey and reddish brown 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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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP506** Sample Ref: **4** Sample Type: **B** Depth (m): **1.00**

CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	11%	20%	17%	1%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
51%	48%			1%			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	**100**
0.150	**100**
0.063	**99**

Particle Diameter (mm)	Percent Passing (%)
0.02	**82**
0.006	**62**
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)	**0.024**
D_{90} (mm)	**0.034**
C_U	**NA**
C_C	**NA**

Soil Description:

Light brown 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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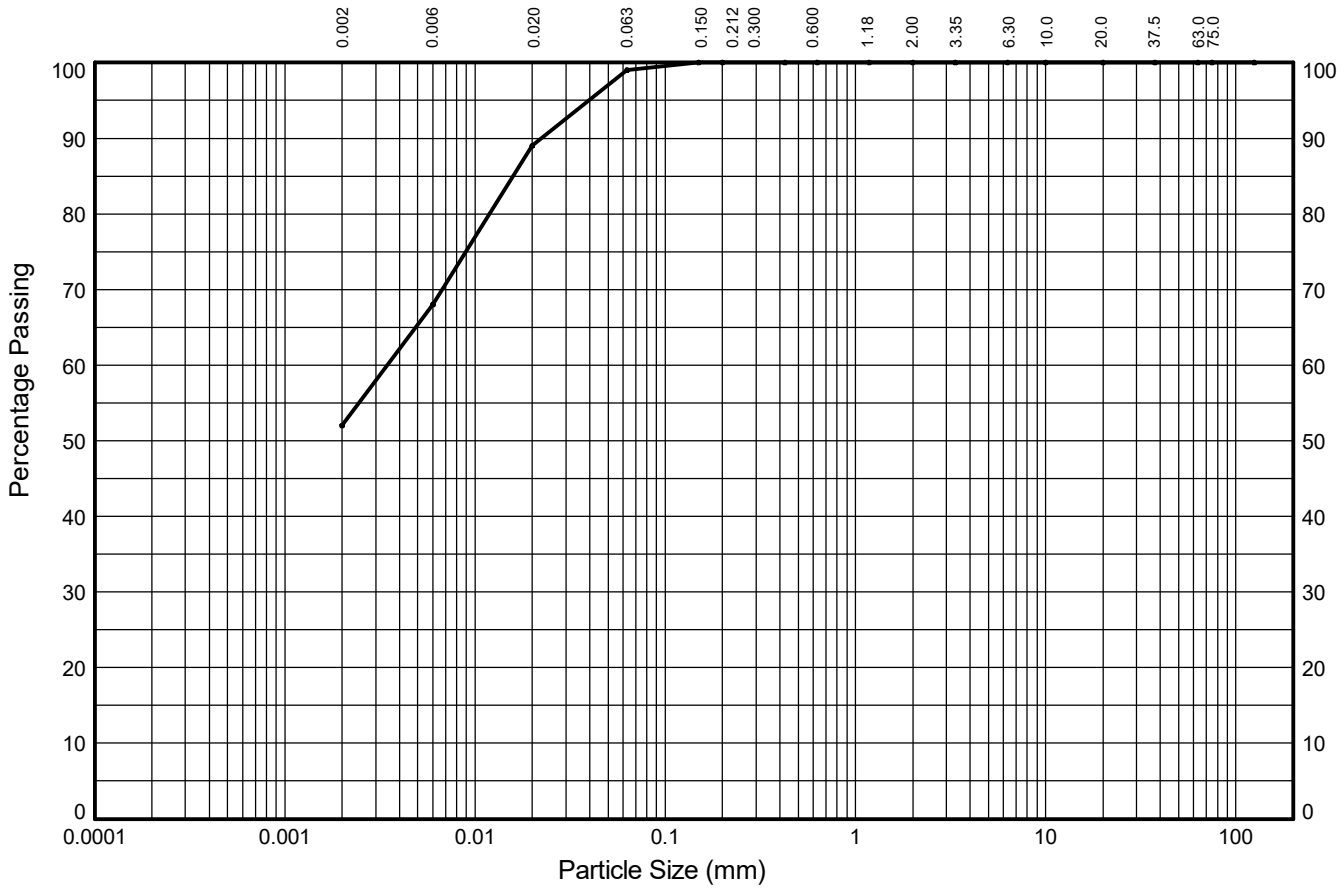
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP508** Sample Ref: **4** Sample Type: **B** Depth (m): **1.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	16%	21%	10%	1%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
52%	47%			1%			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	**100**
0.150	**100**
0.063	**99**

Particle Diameter (mm)	Percent Passing (%)
0.02	**89**
0.006	**68**
0.002	**52**

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)	**0.003**
D_{85} (mm)	**0.016**
D_{90} (mm)	**0.022**
C_U	**NA**
C_C	**NA**

Soil Description:

Light brown mottled grey 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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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **R22-TP510** Sample Ref: **7** Sample Type: **B** Depth (m): **2.00**

CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	13%	35%	6%	3%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
43%	54%			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	**100**
0.425	**100**
0.200	**100**
0.150	**100**
0.063	**97**

Particle Diameter (mm)	Percent Passing (%)
0.02	**91**
0.006	**55**
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)	**0.004**
D_{60} (mm)	**0.007**
D_{85} (mm)	**0.016**
D_{90} (mm)	**0.019**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown mottled dark brown and black 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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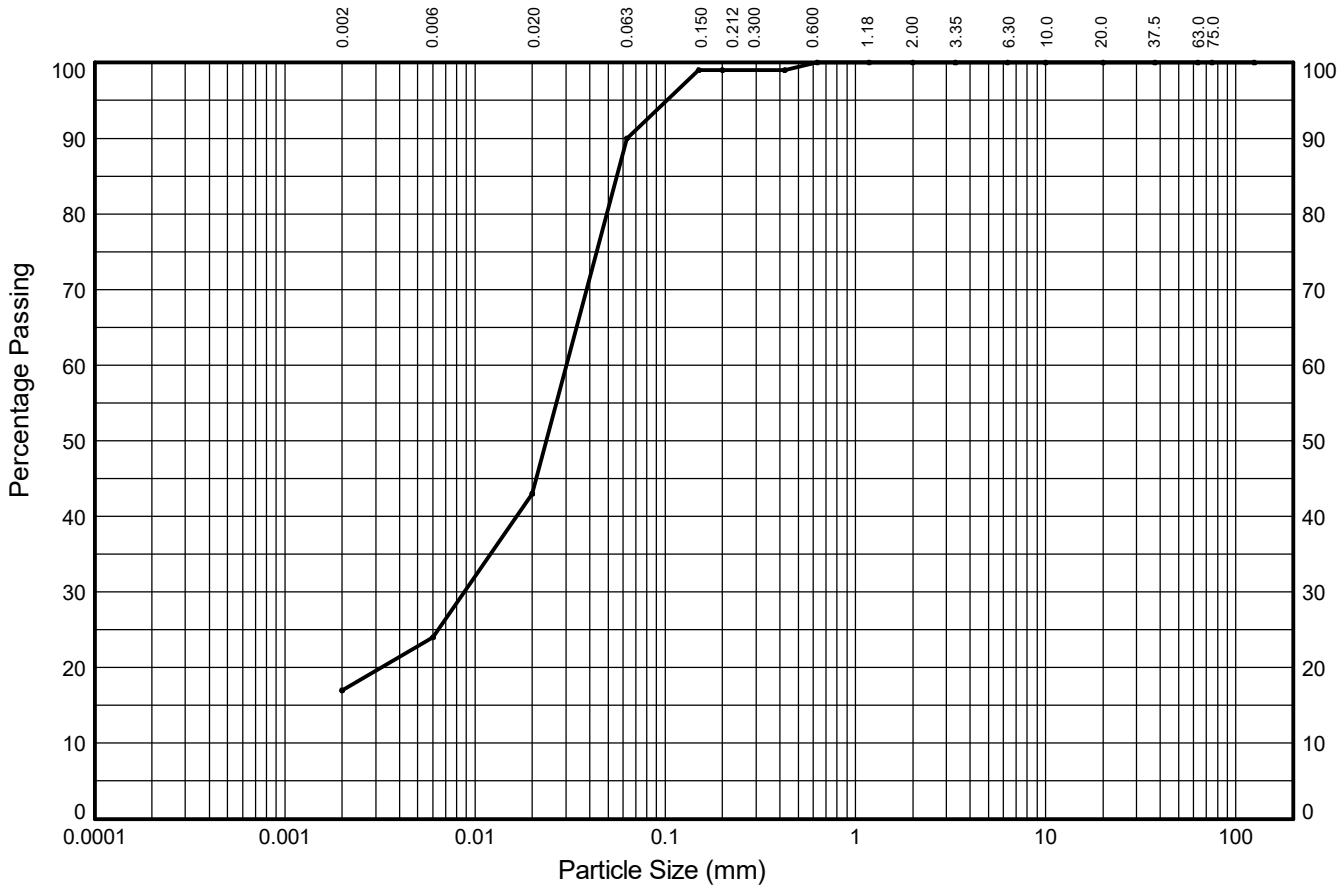
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **RedP-BH-6** Sample Ref: **21** Sample Type: **B** Depth (m): **5.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	7%	19%	47%	9%	1%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
17%	73%			10%			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	**90**

Particle Diameter (mm)	Percent Passing (%)
0.02	**43**
0.006	**24**
0.002	**17**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.009**
D_{50} (mm)	**0.024**
D_{60} (mm)	**0.030**
D_{85} (mm)	**0.056**
D_{90} (mm)	**0.063**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown mottled orangish brown brown and grey 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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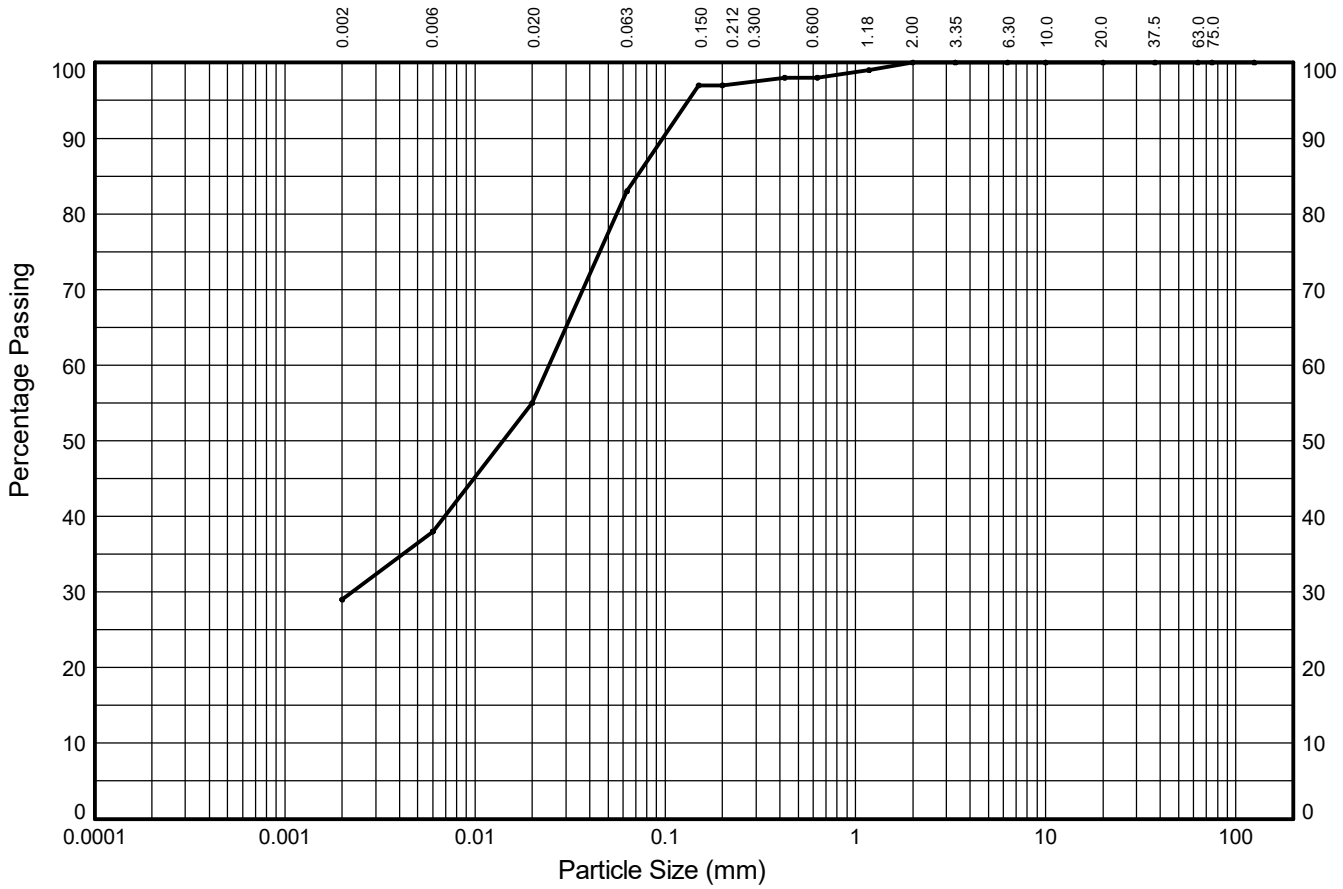
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **RedP-BH-6** Sample Ref: **29** Sample Type: **B** Depth (m): **7.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	9%	17%	28%	14%	1%	2%	0%	0%	0%	
	SILT			SAND			GRAVEL			
29%	54%			17%			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	**98**
0.425	**98**
0.200	**97**
0.150	**97**
0.063	**83**

Particle Diameter (mm)	Percent Passing (%)
0.02	**55**
0.006	**38**
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)	**0.014**
D_{60} (mm)	**0.025**
D_{85} (mm)	**0.071**
D_{90} (mm)	**0.097**
C_U	**NA**
C_C	**NA**

Soil Description:

Greyish brown mottled orangish brown 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 Ref: **563607**

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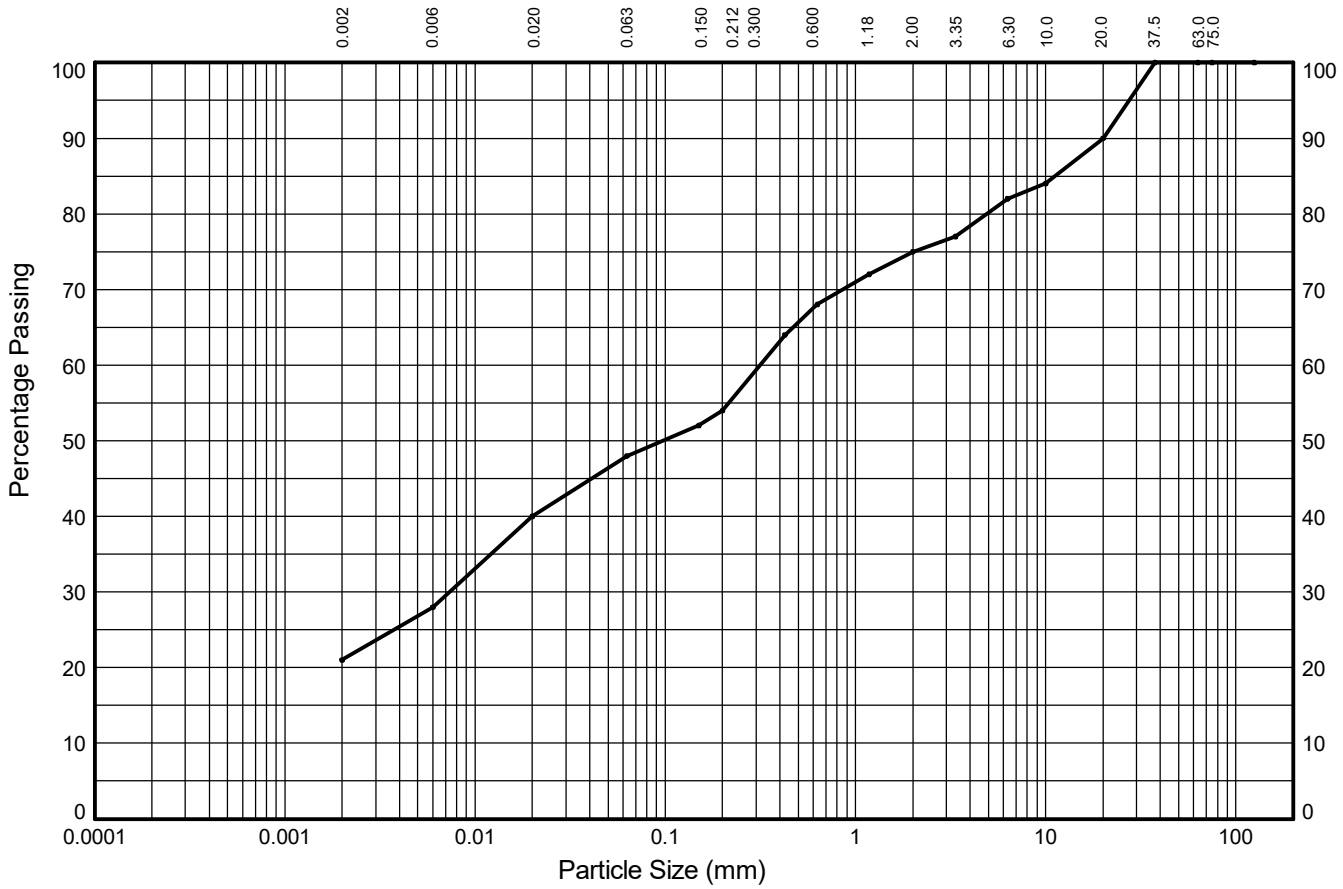
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **RedP-BH-7** Sample Ref: **5** Sample Type: **B** Depth (m): **1.10**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	7%	12%	8%	6%	14%	7%	7%	8%	10%	
	SILT			SAND			GRAVEL			
21%	27%			27%			25%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**90**
10.0	**84**
6.30	**82**
3.35	**77**
2.00	**75**
1.18	**72**
0.630	**68**
0.425	**64**
0.200	**54**
0.150	**52**
0.063	**48**

Particle Diameter (mm)	Percent Passing (%)
0.02	**40**
0.006	**28**
0.002	**21**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.007**
D_{50} (mm)	**0.097**
D_{60} (mm)	**0.314**
D_{85} (mm)	**11.225**
D_{90} (mm)	**20.000**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark grey slightly gravelly slightly sandy clayey PEAT

Key: C_U = Uniformity coefficient. C_C = Coefficient of curvature as defined in BS EN ISO 14688-2:2018

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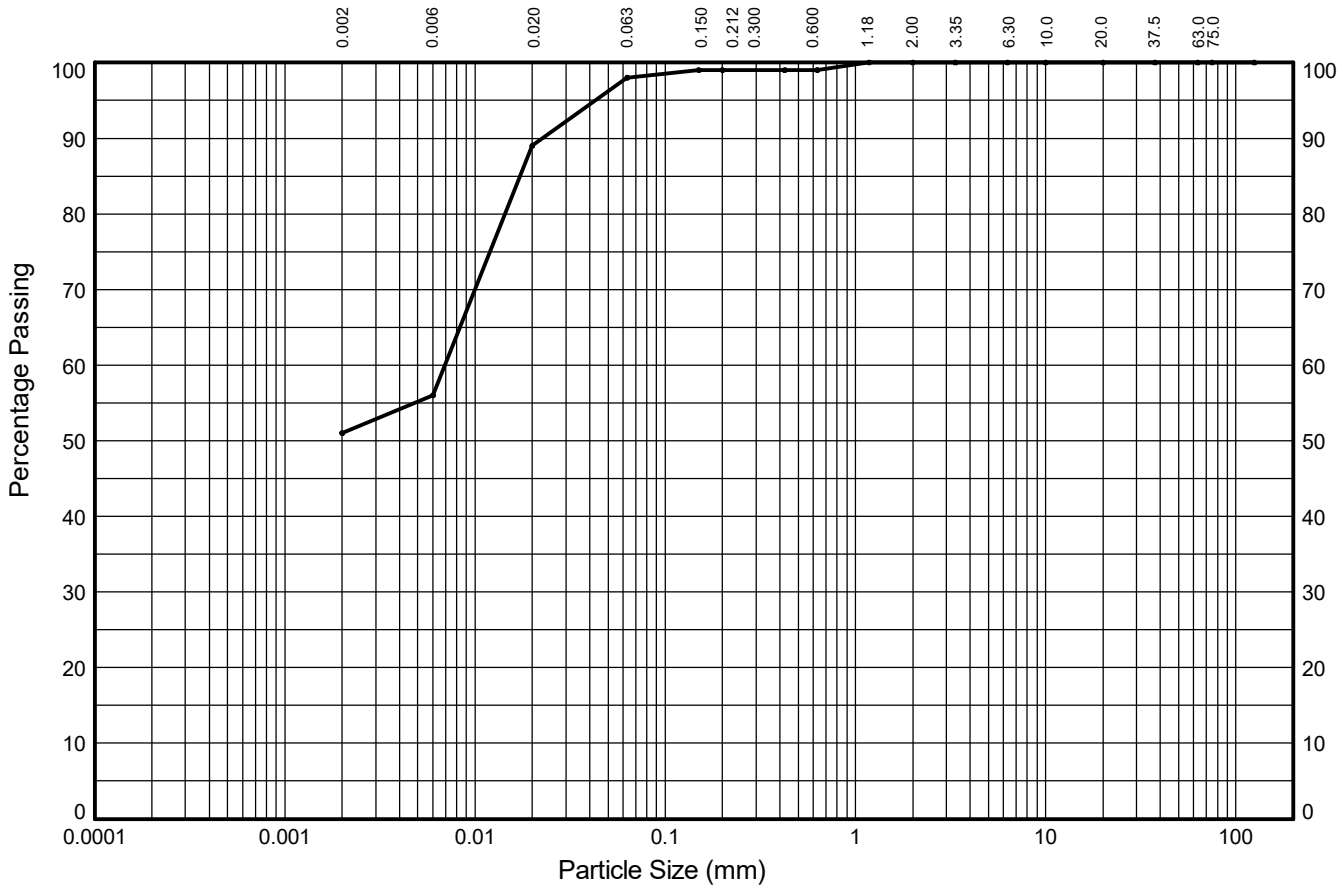
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **RedP-BH-7** Sample Ref: **13** Sample Type: **B** Depth (m): **3.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	6%	32%	9%	1%	0%	1%	0%	0%	0%	
	SILT			SAND			GRAVEL			
51%	47%			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	**99**
0.425	**99**
0.200	**99**
0.150	**99**
0.063	**98**

Particle Diameter (mm)	Percent Passing (%)
0.02	**89**
0.006	**56**
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)	**0.007**
D_{85} (mm)	**0.017**
D_{90} (mm)	**0.023**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark grey 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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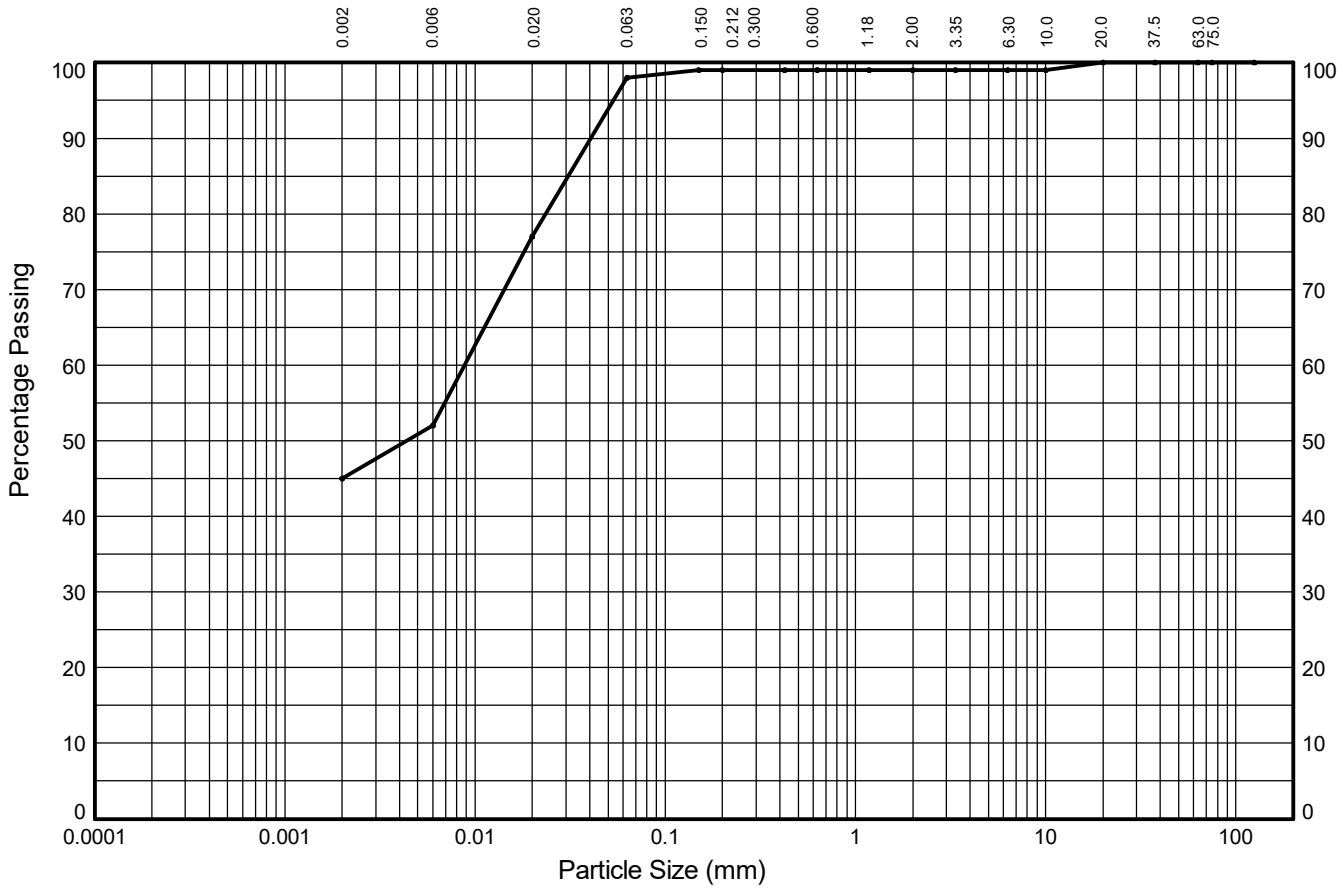
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **RedP-BH-8** Sample Ref: **6** Sample Type: **B** Depth (m): **1.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	8%	24%	21%	1%	0%	0%	0%	1%	0%	
	SILT			SAND			GRAVEL			
45%	53%			1%			1%			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	**99**
1.18	**99**
0.630	**99**
0.425	**99**
0.200	**99**
0.150	**99**
0.063	**98**

Particle Diameter (mm)	Percent Passing (%)
0.02	**77**
0.006	**52**
0.002	**45**

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)	**0.031**
D_{90} (mm)	**0.041**
C_U	**NA**
C_C	**NA**

Soil Description:

Grey 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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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **RedP-BH-8** Sample Ref: **12** Sample Type: **B** Depth (m): **3.50**

CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	14%	14%	5%	15%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
52%	33%			15%			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	**100**
0.150	**100**
0.063	**85**

Particle Diameter (mm)	Percent Passing (%)
0.02	**80**
0.006	**66**
0.002	**52**

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)	**0.063**
D_{90} (mm)	**0.084**
C_U	**NA**
C_C	**NA**

Soil Description:

Grey brown 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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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **RedP-BH-8** Sample Ref: **18** Sample Type: **B** Depth (m): **5.50**

CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	11%	20%	27%	13%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
29%	58%			13%			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	**100**
0.150	**100**
0.063	**87**

Particle Diameter (mm)	Percent Passing (%)
0.02	**60**
0.006	**40**
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)	**0.011**
D_{60} (mm)	**0.020**
D_{85} (mm)	**0.058**
D_{90} (mm)	**0.077**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark grey 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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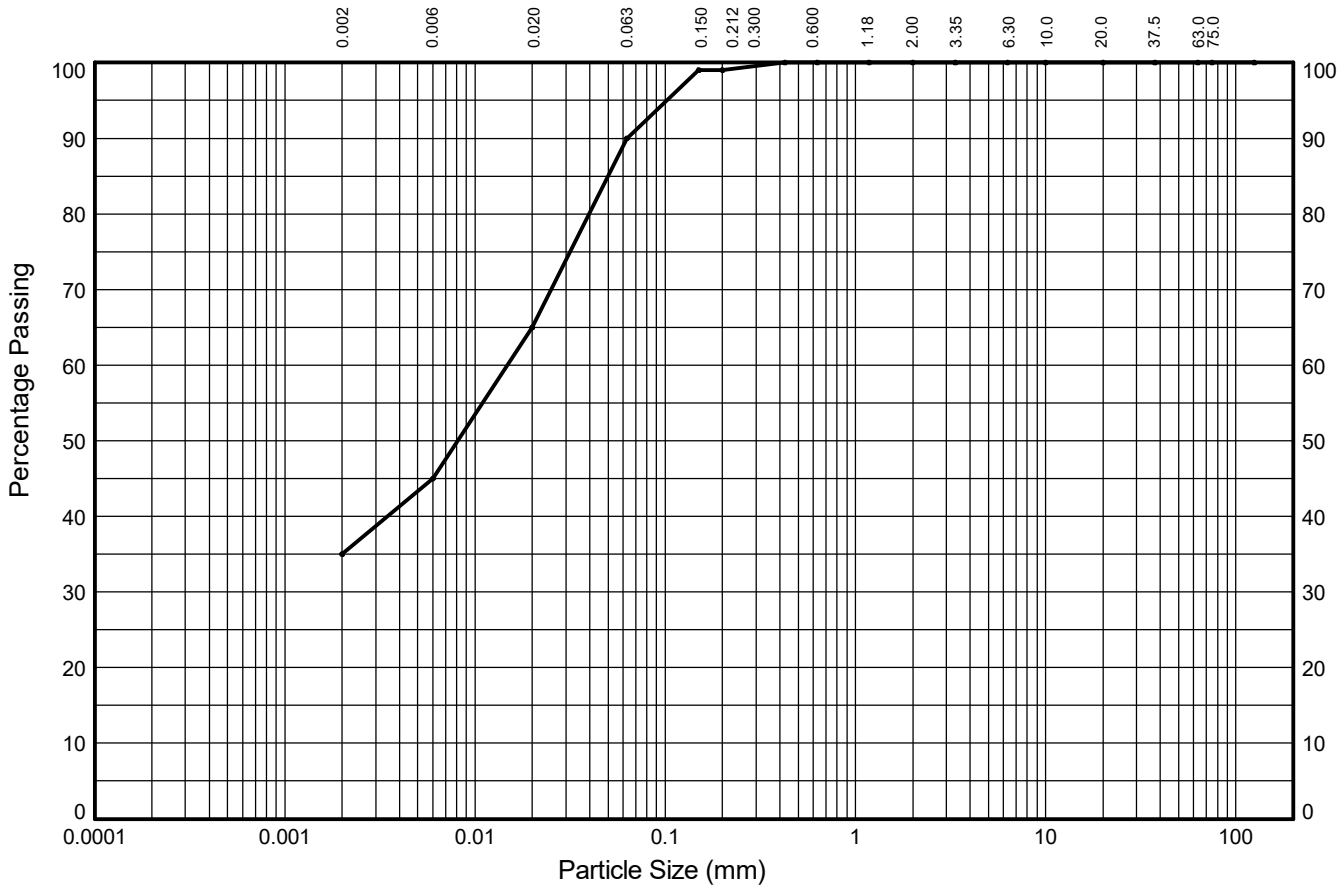
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **RedP-BH-9** Sample Ref: **19** Sample Type: **B** Depth (m): **4.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	10%	20%	25%	9%	1%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
35%	55%			10%			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	**90**

Particle Diameter (mm)	Percent Passing (%)
0.02	**65**
0.006	**45**
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)	**0.008**
D_{60} (mm)	**0.015**
D_{85} (mm)	**0.050**
D_{90} (mm)	**0.063**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown mottled orangish brown greenish brown and grey 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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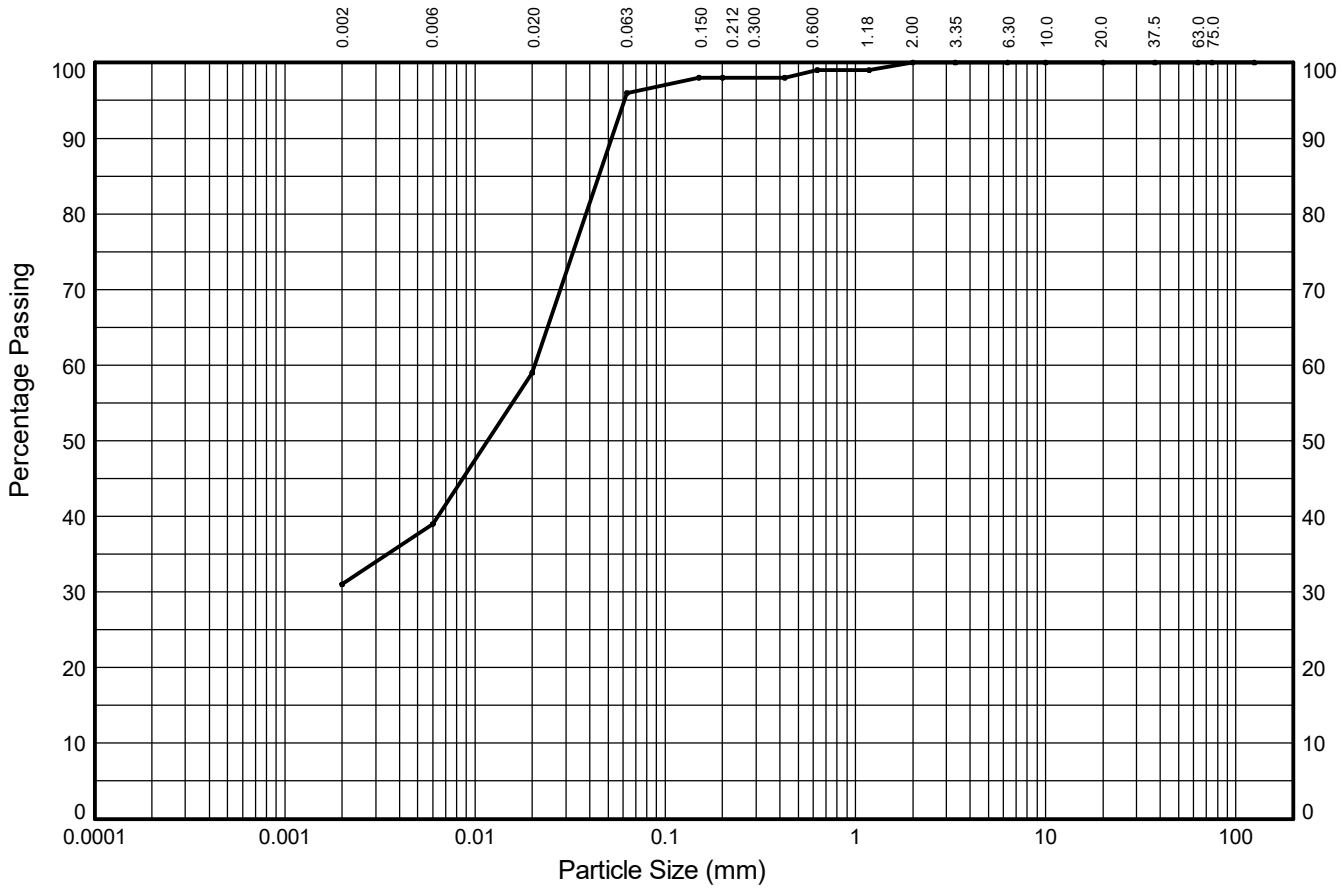
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **RedP-BH-9** Sample Ref: **27** Sample Type: **B** Depth (m): **6.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	8%	20%	37%	2%	1%	1%	0%	0%	0%	
	SILT			SAND			GRAVEL			
31%	65%			4%			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	**98**
0.150	**98**
0.063	**96**

Particle Diameter (mm)	Percent Passing (%)
0.02	**59**
0.006	**39**
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)	**0.012**
D_{60} (mm)	**0.021**
D_{85} (mm)	**0.045**
D_{90} (mm)	**0.052**
C_U	**NA**
C_C	**NA**

Soil Description:

Greyish brown mottled orangish brown 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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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **RedP-BH-9** Sample Ref: **201** Sample Type: **C** Depth (m): **8.00**

CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	11%	15%	15%	28%	1%	2%	0%	0%	0%	
	SILT			SAND			GRAVEL			
28%	41%			31%			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	**98**
0.425	**98**
0.200	**97**
0.150	**96**
0.063	**69**

Particle Diameter (mm)	Percent Passing (%)
0.02	**54**
0.006	**39**
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)	**0.015**
D_{60} (mm)	**0.032**
D_{85} (mm)	**0.105**
D_{90} (mm)	**0.124**
C_U	**NA**
C_C	**NA**

Soil Description:

Grey 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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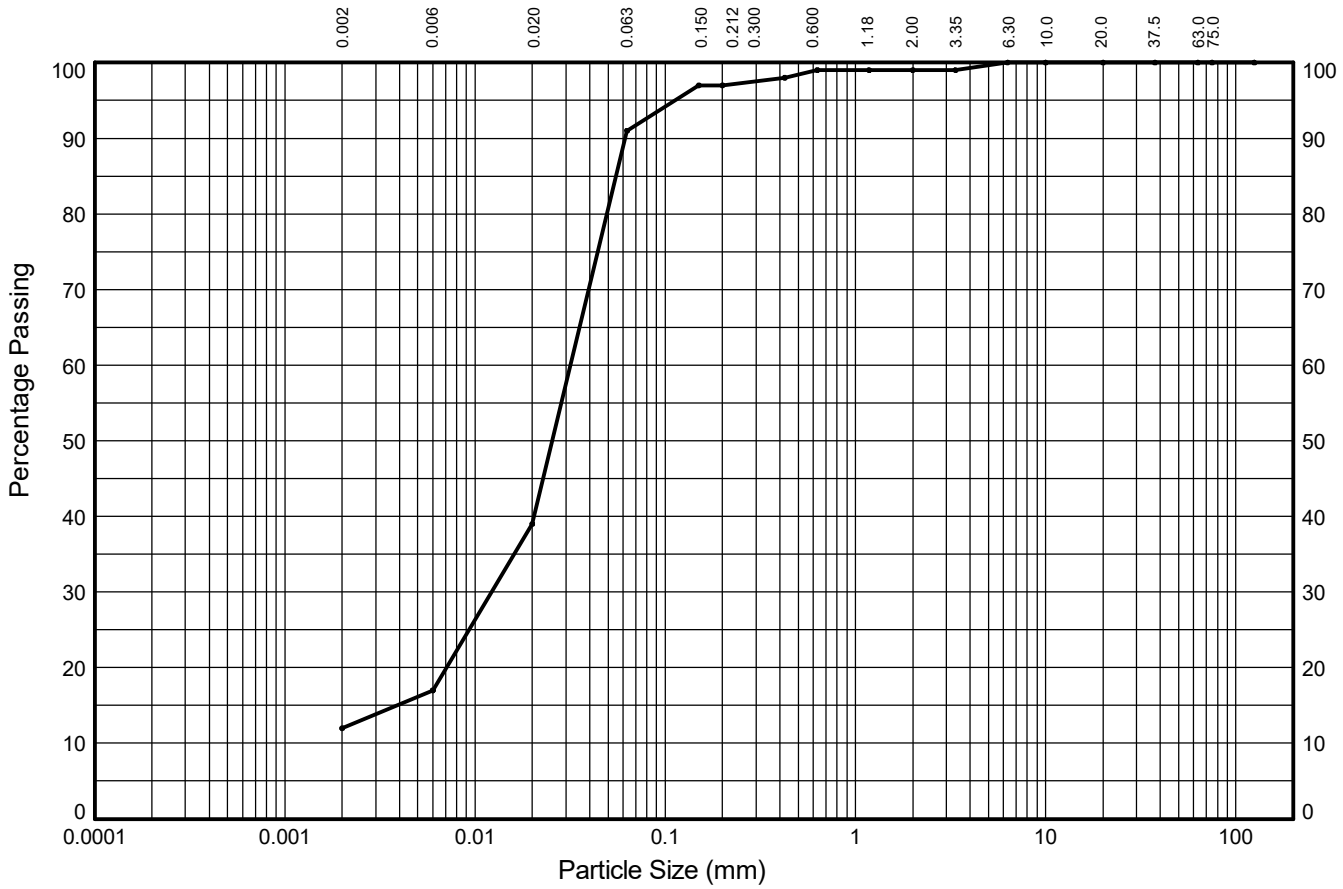
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **RedP-BH-10** Sample Ref: **49** Sample Type: **B** Depth (m): **12.60**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	5%	22%	52%	6%	2%	0%	1%	0%	0%	
	SILT			SAND			GRAVEL			
12%	79%			8%			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	**99**
0.425	**98**
0.200	**97**
0.150	**97**
0.063	**91**

Particle Diameter (mm)	Percent Passing (%)
0.02	**39**
0.006	**17**
0.002	**12**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**0.004**
D_{30} (mm)	**0.012**
D_{50} (mm)	**0.025**
D_{60} (mm)	**0.032**
D_{85} (mm)	**0.055**
D_{90} (mm)	**0.062**
C_U	**NA**
C_C	**NA**

Soil Description:

Greyish 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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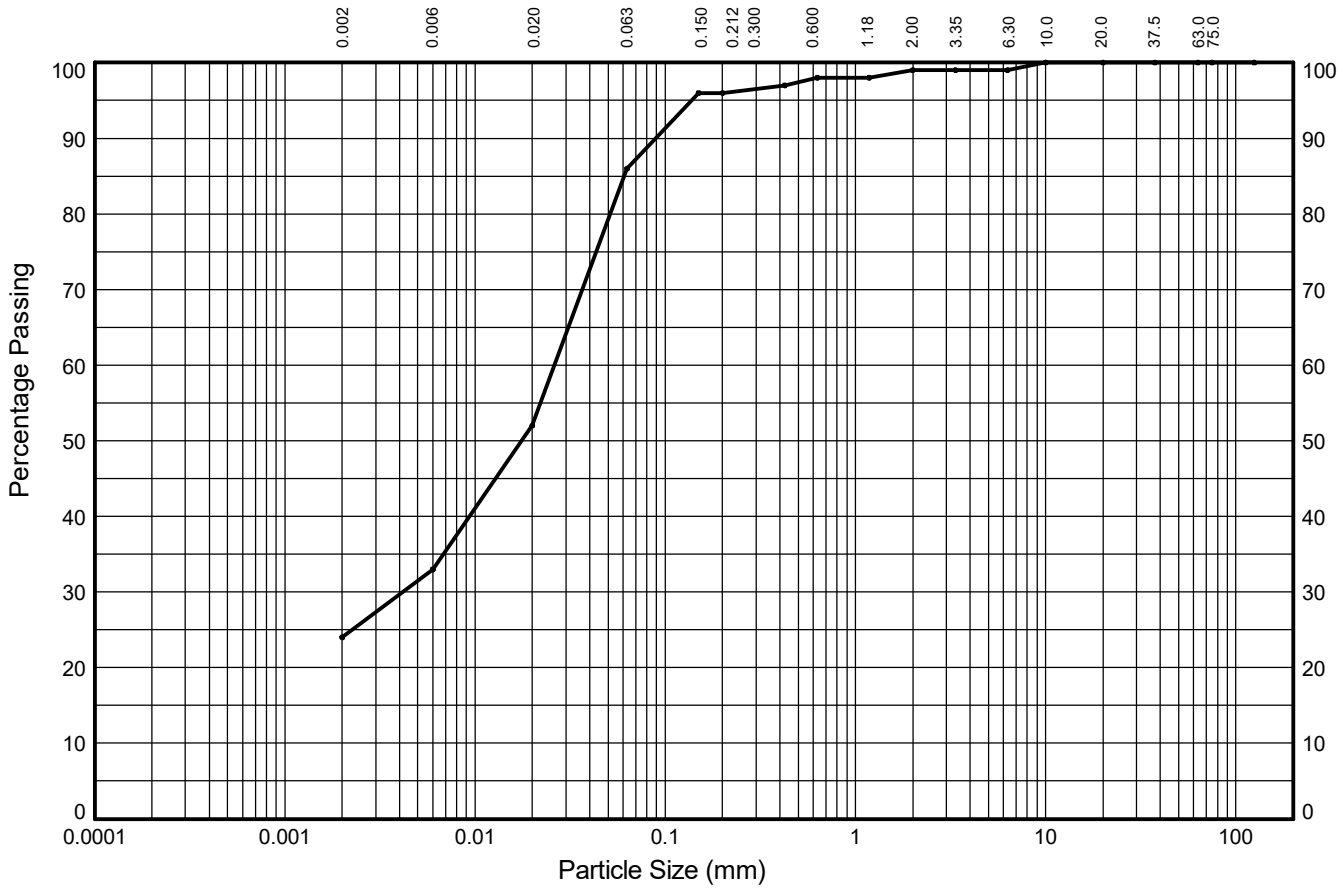
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **RedP-BH-10** Sample Ref: **57** Sample Type: **B** Depth (m): **14.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	9%	19%	34%	10%	2%	1%	0%	1%	0%	
	SILT			SAND			GRAVEL			
24%	62%			13%			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	**99**
3.35	**99**
2.00	**99**
1.18	**98**
0.630	**98**
0.425	**97**
0.200	**96**
0.150	**96**
0.063	**86**

Particle Diameter (mm)	Percent Passing (%)
0.02	**52**
0.006	**33**
0.002	**24**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.004**
D_{50} (mm)	**0.018**
D_{60} (mm)	**0.026**
D_{85} (mm)	**0.061**
D_{90} (mm)	**0.089**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown mottled grey 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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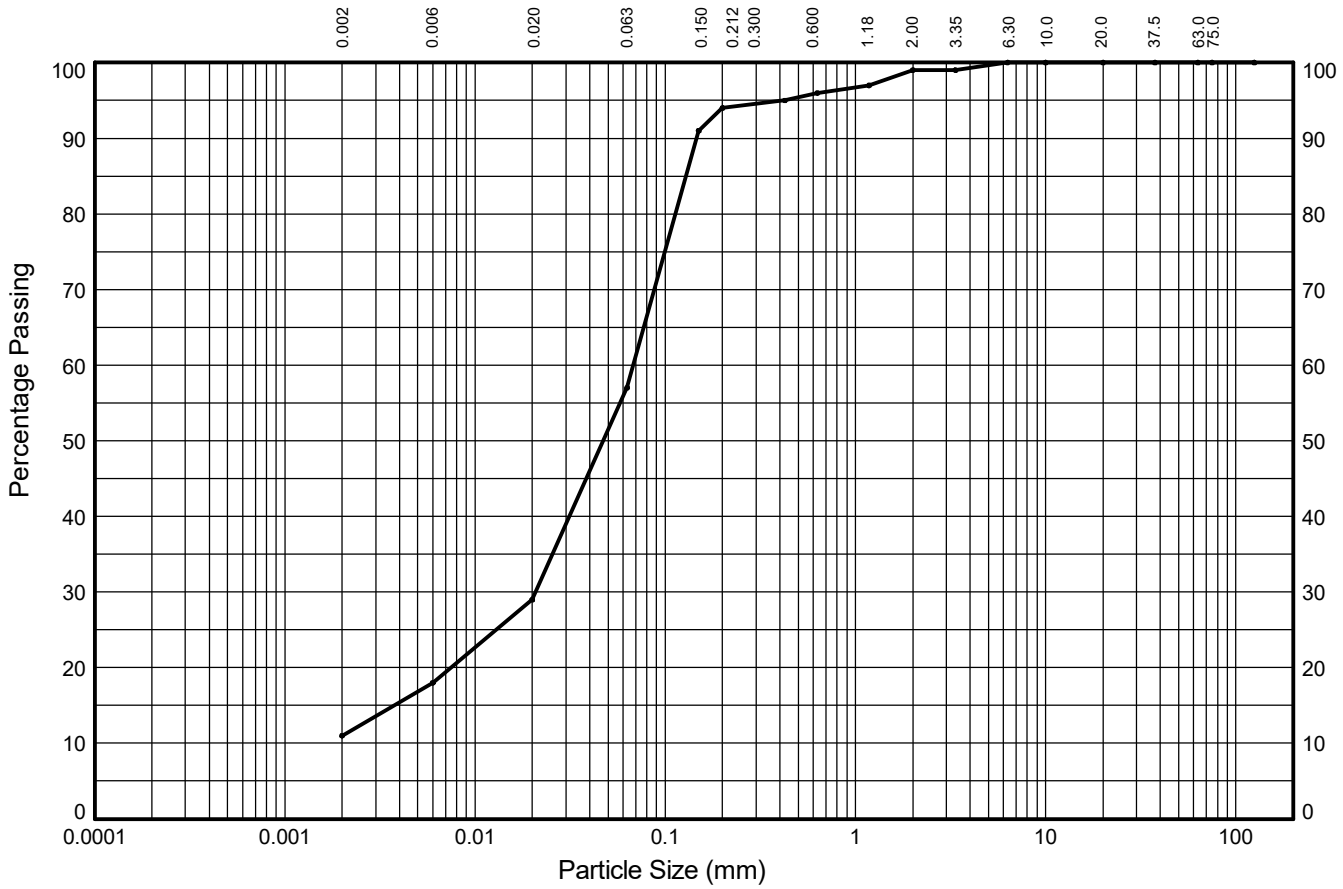
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **RedP-BH-10** Sample Ref: **201** Sample Type: **C** Depth (m): **16.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	7%	11%	28%	37%	2%	3%	1%	0%	0%	
	SILT			SAND			GRAVEL			
11%	46%			42%			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	**97**
0.630	**96**
0.425	**95**
0.200	**94**
0.150	**91**
0.063	**57**

Particle Diameter (mm)	Percent Passing (%)
0.02	**29**
0.006	**18**
0.002	**11**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**0.004**
D_{30} (mm)	**0.021**
D_{50} (mm)	**0.047**
D_{60} (mm)	**0.068**
D_{85} (mm)	**0.129**
D_{90} (mm)	**0.146**
C_U	**NA**
C_C	**NA**

Soil Description:

Grey 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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18 Frogmore Road
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Contract Ref: **563607**

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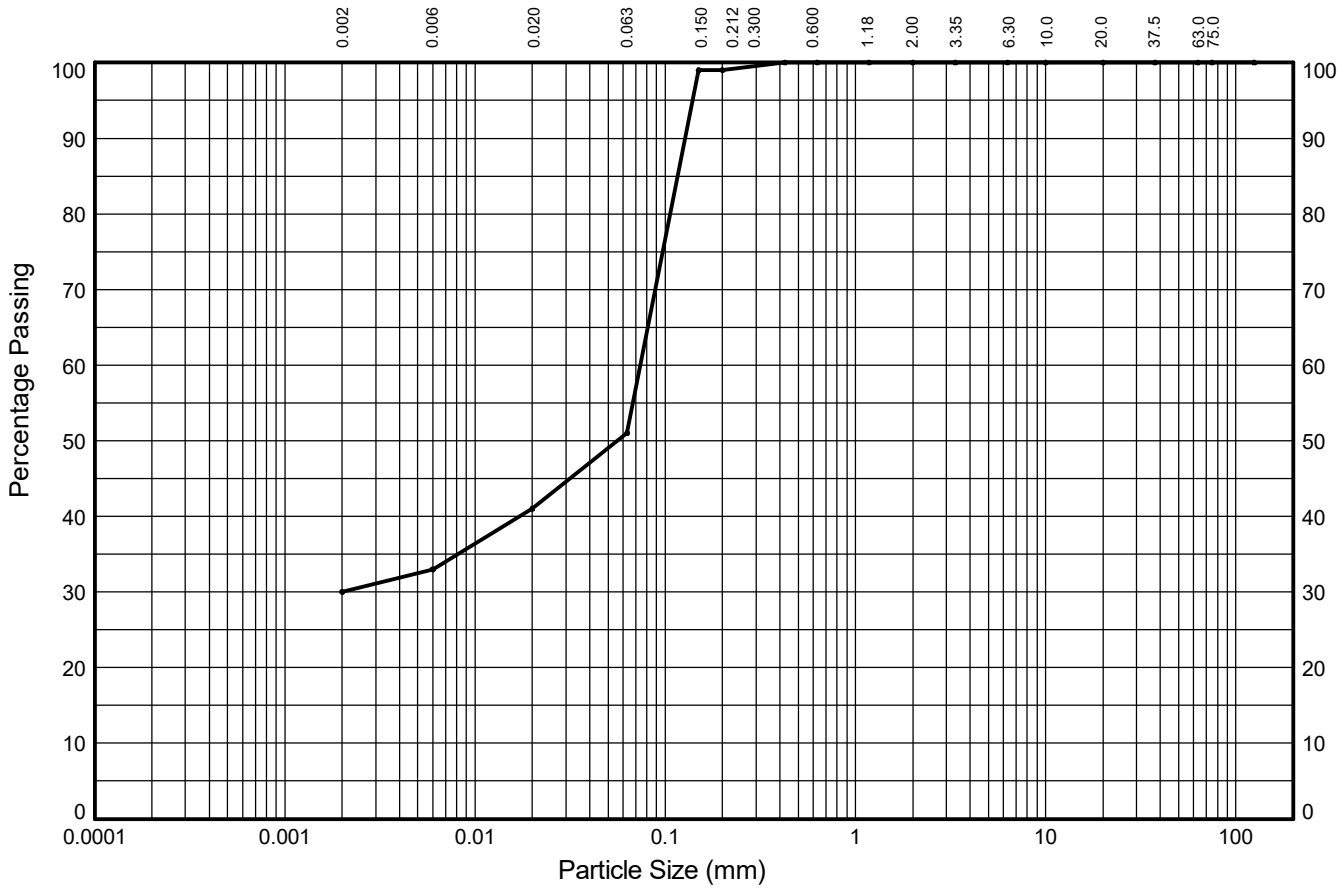
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **RedP-BH-11** Sample Ref: **6** Sample Type: **B** Depth (m): **1.70**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	3%	8%	10%	48%	1%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
30%	21%			49%			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	**51**

Particle Diameter (mm)	Percent Passing (%)
0.02	**41**
0.006	**33**
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)	**0.056**
D_{60} (mm)	**0.074**
D_{85} (mm)	**0.116**
D_{90} (mm)	**0.127**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown mottled dark brown 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 Ref: **563607**

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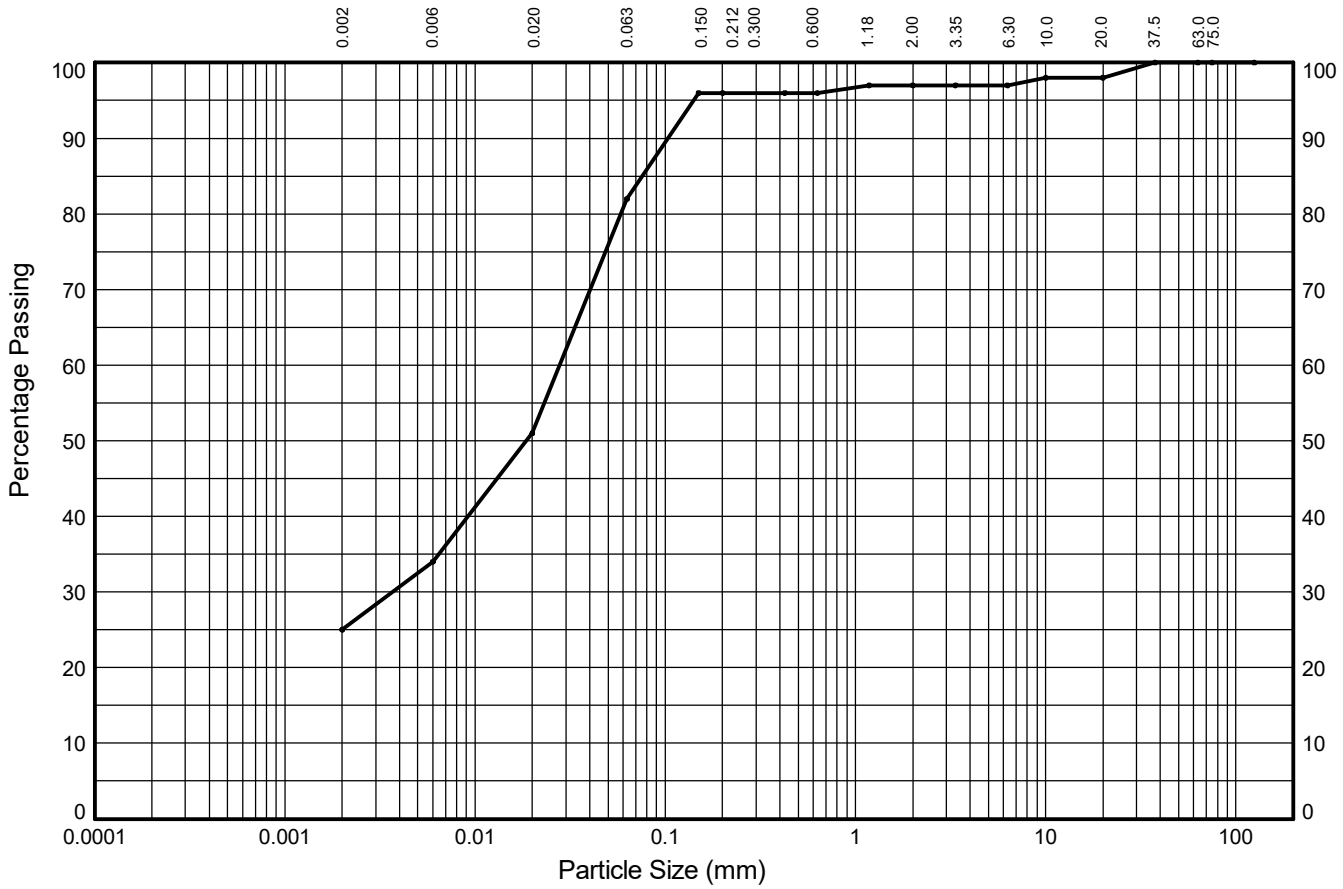
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **RedP-BH-11** Sample Ref: **14** Sample Type: **B** Depth (m): **3.70**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	9%	17%	31%	14%	0%	1%	0%	1%	2%	
	SILT			SAND			GRAVEL			
25%	57%			15%			3%			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	**97**
2.00	**97**
1.18	**97**
0.630	**96**
0.425	**96**
0.200	**96**
0.150	**96**
0.063	**82**

Particle Diameter (mm)	Percent Passing (%)
0.02	**51**
0.006	**34**
0.002	**25**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.004**
D_{50} (mm)	**0.019**
D_{60} (mm)	**0.028**
D_{85} (mm)	**0.076**
D_{90} (mm)	**0.103**
C_U	**NA**
C_C	**NA**

Soil Description:

Light brown mottled grey 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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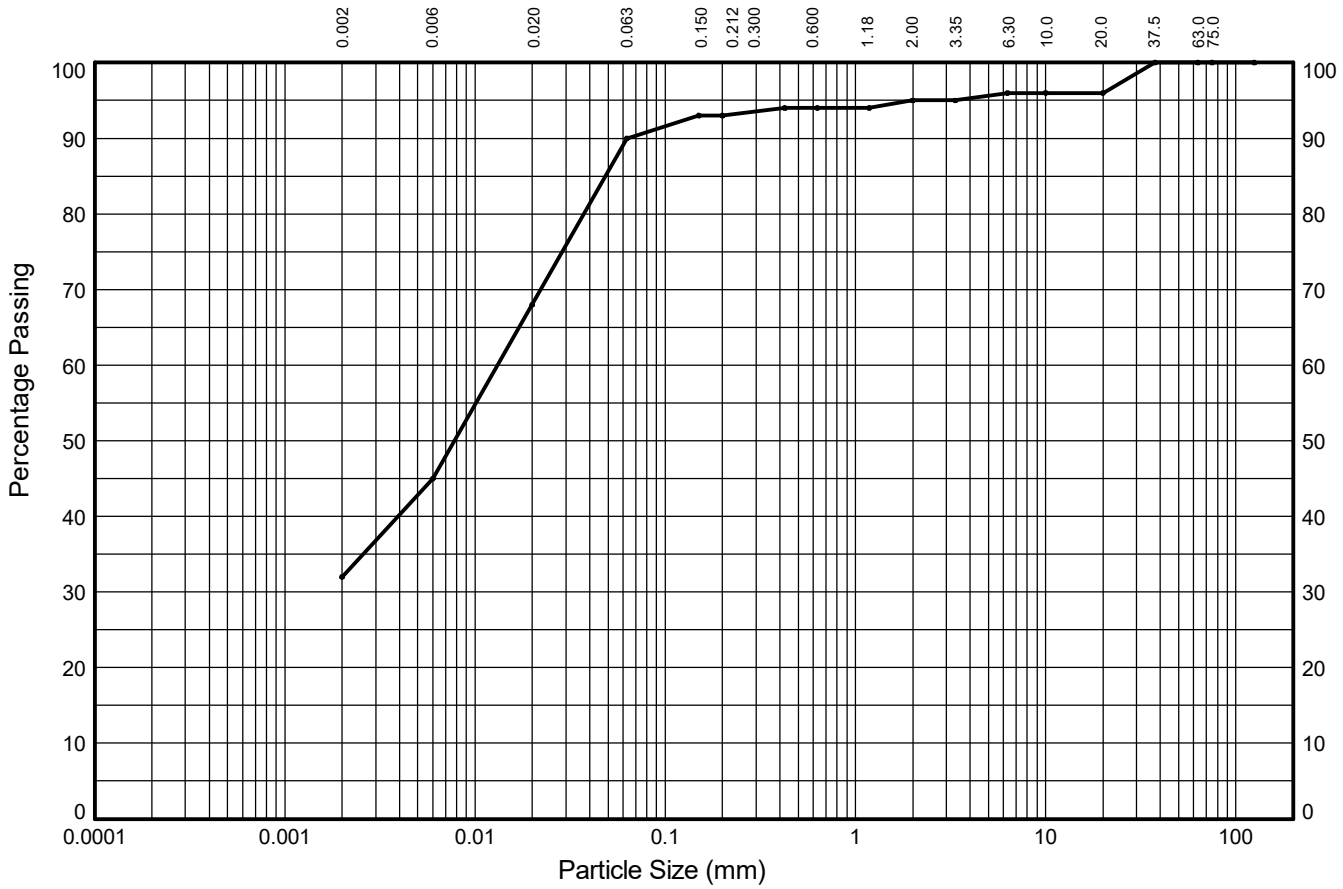
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **RedP-BH-11** Sample Ref: **22** Sample Type: **B** Depth (m): **5.70**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	13%	23%	22%	3%	1%	1%	1%	0%	4%	
	SILT			SAND			GRAVEL			
32%	58%			5%			5%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**100**
20.0	**96**
10.0	**96**
6.30	**96**
3.35	**95**
2.00	**95**
1.18	**94**
0.630	**94**
0.425	**94**
0.200	**93**
0.150	**93**
0.063	**90**

Particle Diameter (mm)	Percent Passing (%)
0.02	**68**
0.006	**45**
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)	**0.013**
D_{85} (mm)	**0.049**
D_{90} (mm)	**0.063**
C_U	**NA**
C_C	**NA**

Soil Description:

Brown mottled 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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PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **RedP-BH-11** Sample Ref: **30** Sample Type: **B** Depth (m): **7.70**

CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	13%	23%	26%	2%	0%	0%	0%	0%	0%	
	SILT			SAND			GRAVEL			
36%	62%			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	**100**
0.150	**100**
0.063	**98**

Particle Diameter (mm)	Percent Passing (%)
0.02	**72**
0.006	**48**
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)	**0.007**
D_{60} (mm)	**0.011**
D_{85} (mm)	**0.035**
D_{90} (mm)	**0.044**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark brown 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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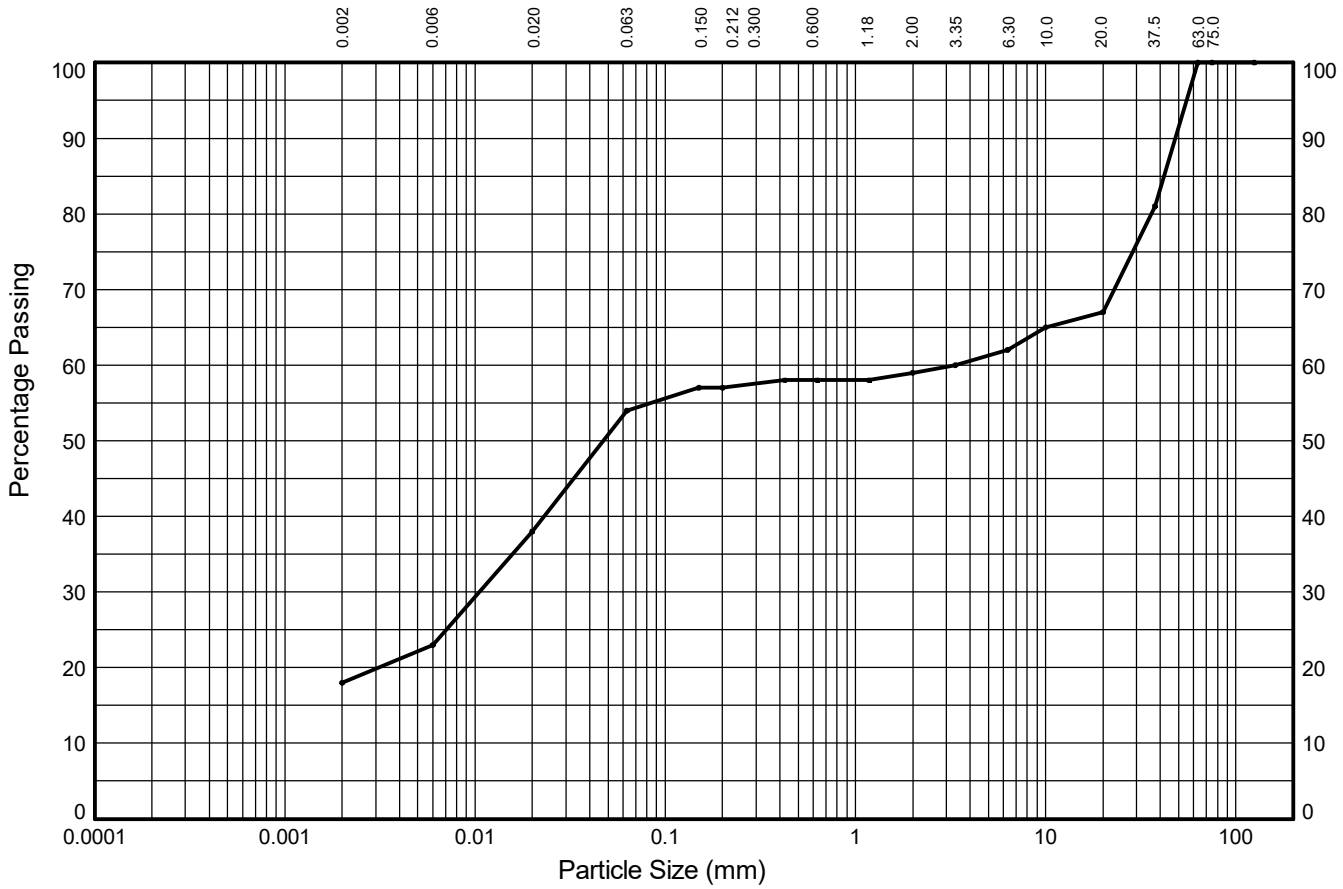
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **RedP-BH-11** Sample Ref: **40** Sample Type: **B** Depth (m): **10.60**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	5%	15%	16%	3%	1%	1%	3%	5%	33%	
	SILT			SAND			GRAVEL			
18%	36%			5%			41%			0%

Test Sieve (mm)	Percent Passing (%)
125.0	**100**
75.0	**100**
63.0	**100**
37.5	**81**
20.0	**67**
10.0	**65**
6.30	**62**
3.35	**60**
2.00	**59**
1.18	**58**
0.630	**58**
0.425	**58**
0.200	**57**
0.150	**57**
0.063	**54**

Particle Diameter (mm)	Percent Passing (%)
0.02	**38**
0.006	**23**
0.002	**18**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.011**
D_{50} (mm)	**0.047**
D_{60} (mm)	**3.350**
D_{85} (mm)	**41.828**
D_{90} (mm)	**47.946**
C_U	**NA**
C_C	**NA**

Soil Description:

Dark grey slightly sandy 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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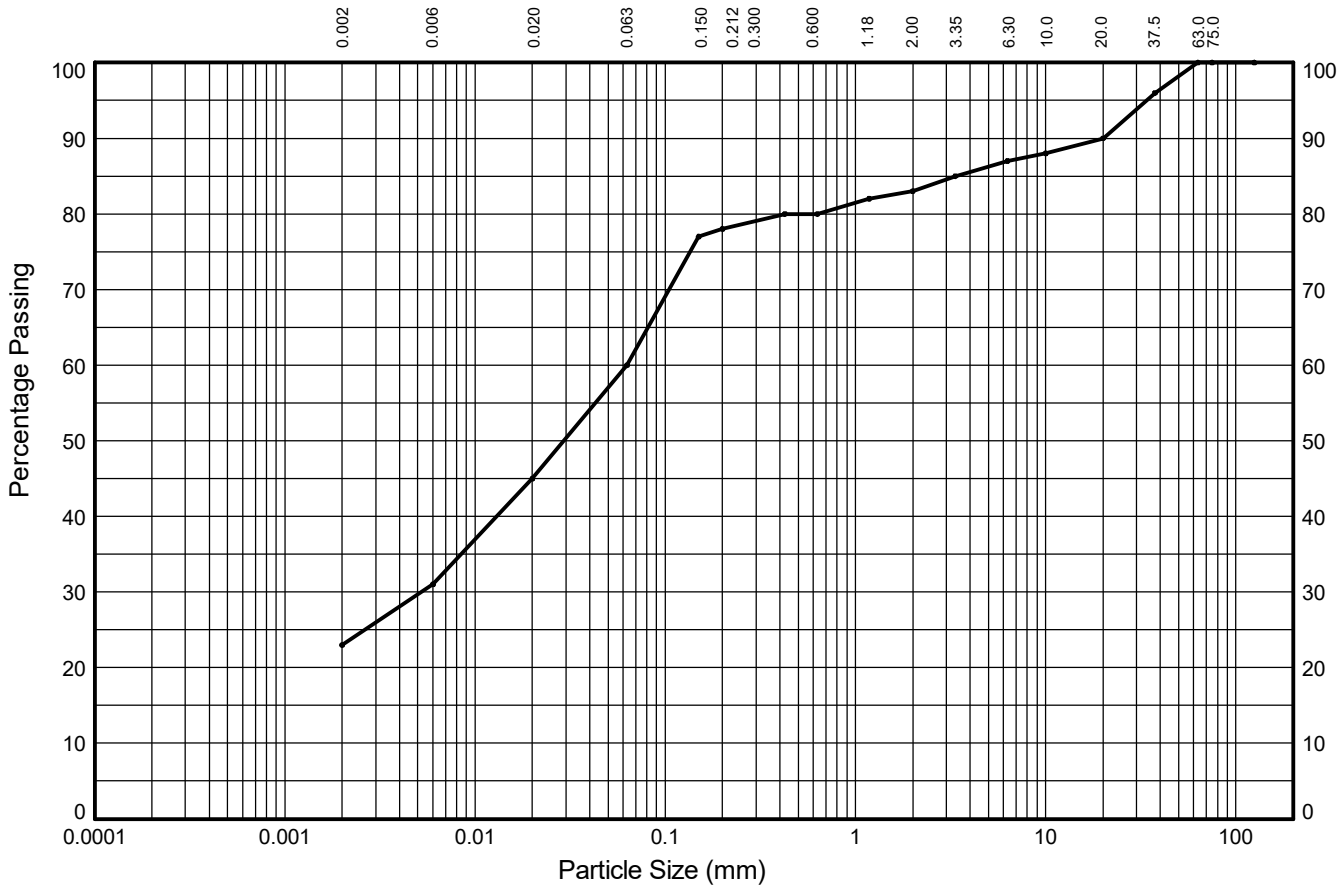
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 5.2, 5.4 of BS EN ISO 17892:Part 4:2016

Position ID: **RedP-BH-11** Sample Ref: **72** Sample Type: **B** Depth (m): **18.60**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	8%	14%	15%	18%	2%	3%	4%	3%	10%	
	SILT			SAND			GRAVEL			
23%	37%			23%			17%			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	**83**
1.18	**82**
0.630	**80**
0.425	**80**
0.200	**78**
0.150	**77**
0.063	**60**

Particle Diameter (mm)	Percent Passing (%)
0.02	**45**
0.006	**31**
0.002	**23**

Sedimentation sample was not pre-treated

Coefficients	
D_{10} (mm)	**NA**
D_{15} (mm)	**NA**
D_{30} (mm)	**0.005**
D_{50} (mm)	**0.029**
D_{60} (mm)	**0.063**
D_{85} (mm)	**3.350**
D_{90} (mm)	**20.000**
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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HP3 9RT

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Contract Ref: **563607**

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SUMMARY OF LABORATORY VANE SHEAR STRENGTH TESTS

In accordance with BS1377: Part 2: 2022, Clause 24

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Sample Type & Diameter	Machine Number	Vane Type	Moisture Content (%)	Average Shear Strength (kPa)	Average Remoulded Shear Strength (kPa)	Description of Sample
R22-BH102	8	UT	2.20	U100 (100mm)	400831	Auto	36	17	4.9	Greyish brown slightly sandy clayey SILT
R22-BH103	13	UT	3.80	U100 (100mm)	400831	Auto	59	8.7	3.4	Grey slightly gravelly silty CLAY
R22-BH105	3	UT	1.22	U100 (100mm)	400831	Auto	44	29	13	Greyish brown silty CLAY
R22-BH502	18	UT	5.29	UT100 (100mm)	400831	Auto	54	14	5.1	Grey clayey SILT

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Contract Ref: **563607**

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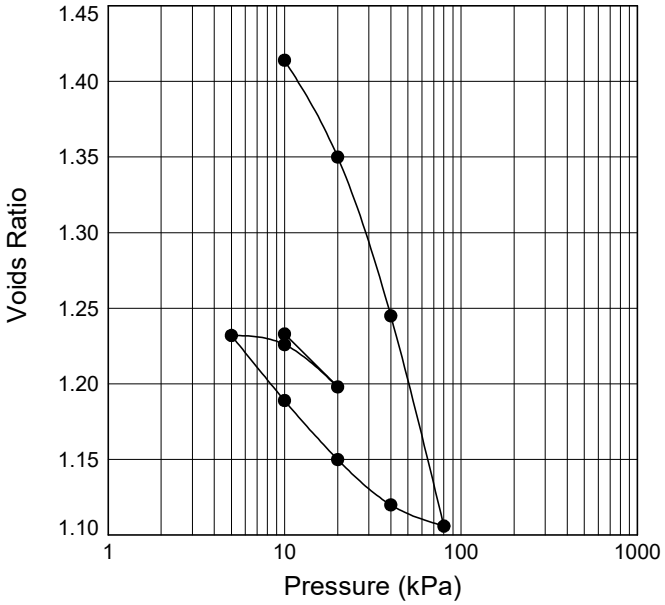
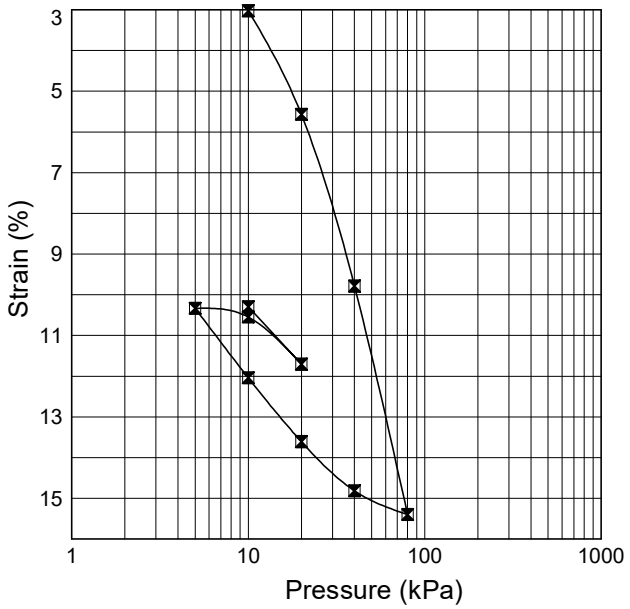
ONE-DIMENSIONAL CONSOLIDATION TEST

In accordance with BS EN ISO 17892 Part 5

Position ID: **R22-BH101** Sample Ref: **9** Sample Type: **UT** Depth (m): **2.02**

Description : Grey mottled dark bluish grey silty CLAY





SPECIMEN DETAILS	INITIAL	FINAL
Diameter (mm) :	75.00	75.00
Height (mm) :	20.13	18.06
Assumed Particle Density (Mg/m^3) :	2.65	2.65
Water Content (%) :	56.5	48.3
Wet Density (Mg/m^3) :	1.67	1.76
Dry Density (Mg/m^3) :	1.06	1.19
Voids Ratio :	1.489	1.233

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 - 10	3.025	1.414	3.0	42	1.0	
Loading	1	10 - 20	5.569	1.350	2.6	134	0.31	
Loading	1	20 - 40	9.786	1.245	2.2	158	0.24	
Loading	1	40 - 80	15.395	1.106	1.6	149	0.23	
Unloading	1	80 - 40	14.814	1.120	NA	NA	NA	
Unloading	1	40 - 20	13.607	1.150	NA	NA	NA	
Unloading	1	20 - 10	12.037	1.189	NA	NA	NA	
Unloading	1	10 - 5	10.333	1.232	NA	NA	NA	
Loading	1	5 - 10	10.546	1.226	0.48	234	0.15	
Loading	1	10 - 20	11.704	1.198	1.3	169	0.21	
Unloading	1	20 - 10	10.293	1.233	NA	NA	NA	

Notes: Method of time-setting used (min): **T_{90}.** Average temperature during test (degC): **20.2**.
Frame Correction Applied

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1a Princess Street
Bedminster
Bristol
BS3 4AG

Compiled By: [redacted]

Date: **18/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

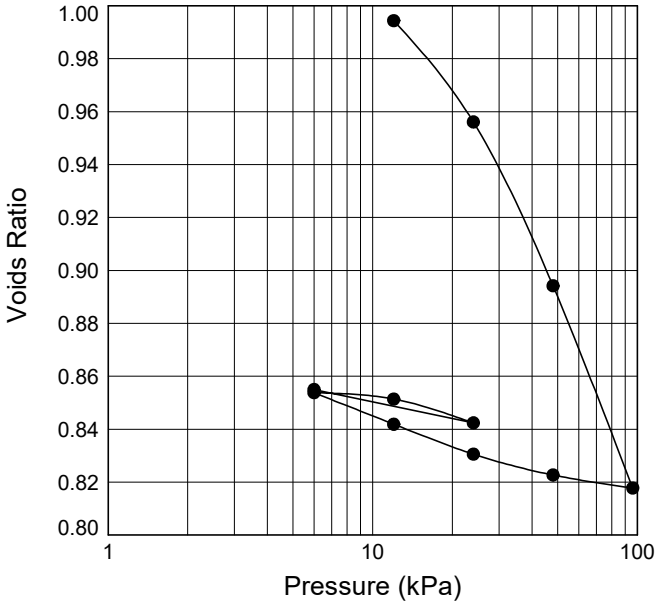
Contract Ref: **563607**

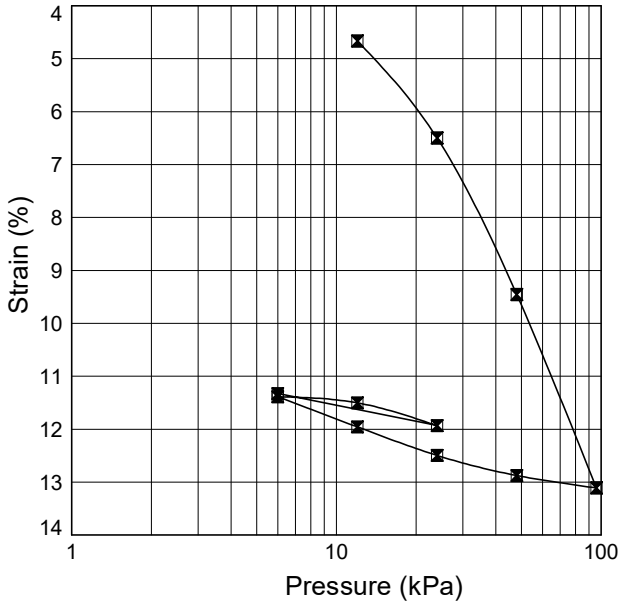
ONE-DIMENSIONAL CONSOLIDATION TEST

In accordance with BS EN ISO 17892 Part 5

Position ID: **R22-BH102** Sample Ref: **16** Sample Type: **UT** Depth (m): **4.02**

Description : Grey clayey SILT





SPECIMEN DETAILS	INITIAL	FINAL
Diameter (mm) :	75.01	75.01
Height (mm) :	20.04	17.77
Assumed Particle Density (Mg/m^3) :	2.65	2.65
Water Content (%) :	43.3	36.0
Wet Density (Mg/m^3) :	1.81	1.94
Dry Density (Mg/m^3) :	1.27	1.43
Voids Ratio :	1.092	0.8550

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 - 12	4.666	0.9944	3.9	6	7.2	
Loading	0.5	12 - 24	6.497	0.9561	1.6	17	2.4	
Loading	0.5	24 - 48	9.456	0.8942	1.3	15	2.6	
Loading	1	48 - 96	13.109	0.8178	0.84	13	2.7	
Unloading	0.5	96 - 48	12.874	0.8227	NA	NA	NA	
Unloading	0.5	48 - 24	12.495	0.8306	NA	NA	NA	
Unloading	1	24 - 12	11.956	0.8419	NA	NA	NA	
Unloading	0.5	12 - 6	11.387	0.8538	NA	NA	NA	
Loading	0.5	6 - 12	11.502	0.8514	0.22	11	3.2	
Loading	1	12 - 24	11.931	0.8424	0.40	6	6.1	
Unloading	1	24 - 6	11.327	0.8550	NA	NA	NA	

Notes: Method of time-setting used (min): **T_{90}.** Average temperature during test (degC): **19.8**.
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Compiled By: [redacted]

Date: **17/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

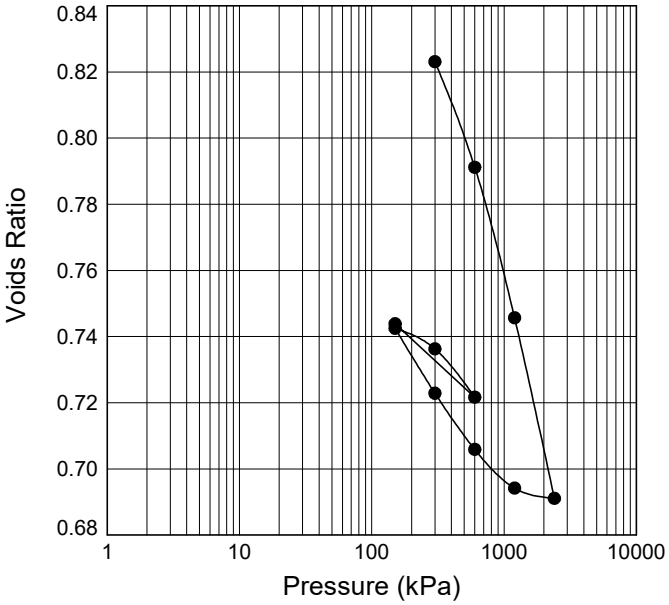
Contract Ref: **563607**

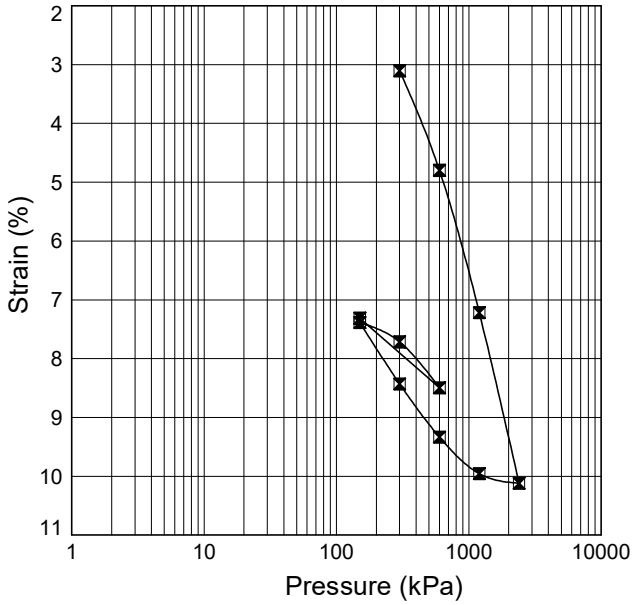
ONE-DIMENSIONAL CONSOLIDATION TEST

In accordance with BS EN ISO 17892 Part 5

Position ID: **R22-BH103** Sample Ref: **33** Sample Type: **UT** Depth (m): **10.09**

Description : Grey clayey SILT





SPECIMEN DETAILS	INITIAL	FINAL
Diameter (mm) :	75.00	75.00
Height (mm) :	20.13	18.66
Assumed Particle Density (Mg/m^3) :	2.65	2.65
Water Content (%) :	33.1	30.9
Wet Density (Mg/m^3) :	1.87	1.99
Dry Density (Mg/m^3) :	1.41	1.52
Voids Ratio :	0.8815	0.7439

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 - 300	3.105	0.8231	0.10	2.8	16	
Loading	1	300 - 600	4.799	0.7912	0.058	4.9	8.5	
Loading	1	600 - 1200	7.218	0.7457	0.042	6	6.2	
Loading	1	1200 - 2400	10.119	0.6911	0.026	10	3.8	
Unloading	1	2400 - 1200	9.955	0.6942	NA	NA	NA	
Unloading	1	1200 - 600	9.334	0.7059	NA	NA	NA	
Unloading	1	600 - 300	8.430	0.7229	NA	NA	NA	
Unloading	1	300 - 150	7.387	0.7425	NA	NA	NA	
Loading	1	150 - 300	7.715	0.7363	0.024	10	3.9	
Loading	1	300 - 600	8.495	0.7217	0.028	11	3.5	
Unloading	1	600 - 150	7.313	0.7439	NA	NA	NA	

Notes: Method of time-setting used (min): **T_{90}.** Average temperature during test (degC): **19.6**.
Frame Correction Applied

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Contract Ref: **563607**

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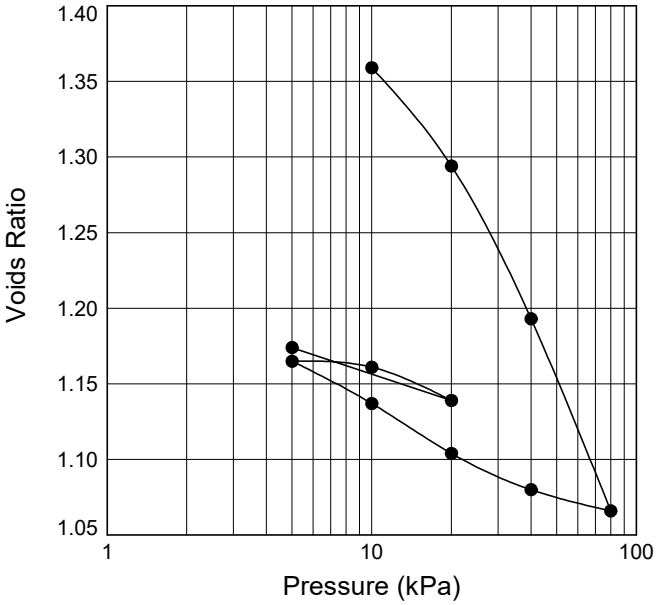
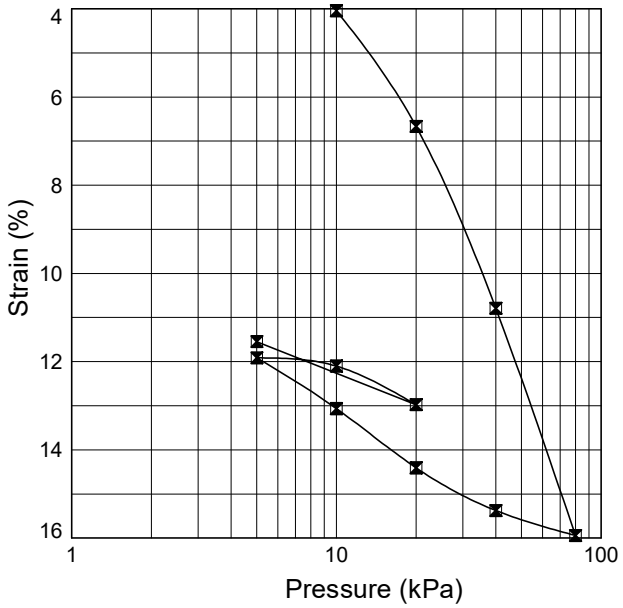
ONE-DIMENSIONAL CONSOLIDATION TEST

In accordance with BS EN ISO 17892 Part 5

Position ID: **R22-BH104** Sample Ref: **7** Sample Type: **UT** Depth (m): **2.02**

Description : Grey clayey SILT





SPECIMEN DETAILS	INITIAL	FINAL
Diameter (mm) :	75.00	75.00
Height (mm) :	20.13	17.81
Assumed Particle Density (Mg/m^3) :	2.65	2.65
Water Content (%) :	56.3	46.8
Wet Density (Mg/m^3) :	1.68	1.79
Dry Density (Mg/m^3) :	1.08	1.22
Voids Ratio :	1.458	1.174

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 - 10	4.044	1.359	4.0	119	0.36	
Loading	0.5	10 - 20	6.667	1.294	2.7	144	0.28	
Loading	0.5	20 - 40	10.790	1.193	2.2	176	0.21	
Loading	1	40 - 80	15.941	1.066	1.4	160	0.21	
Unloading	0.5	80 - 40	15.375	1.080	NA	NA	NA	
Unloading	0.5	40 - 20	14.406	1.104	NA	NA	NA	
Unloading	1	20 - 10	13.065	1.137	NA	NA	NA	
Unloading	0.5	10 - 5	11.913	1.165	NA	NA	NA	
Loading	0.5	5 - 10	12.101	1.161	0.43	81	0.43	
Loading	1	10 - 20	12.976	1.139	0.99	119	0.29	
Unloading	1	20 - 5	11.545	1.174	NA	NA	NA	

Notes: Method of time-setting used (min): **T_{90}.** Average temperature during test (degC): **19.8**.
Frame Correction Applied

STRUCTURAL SOILS
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Compiled By: [redacted]

Date: **17/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

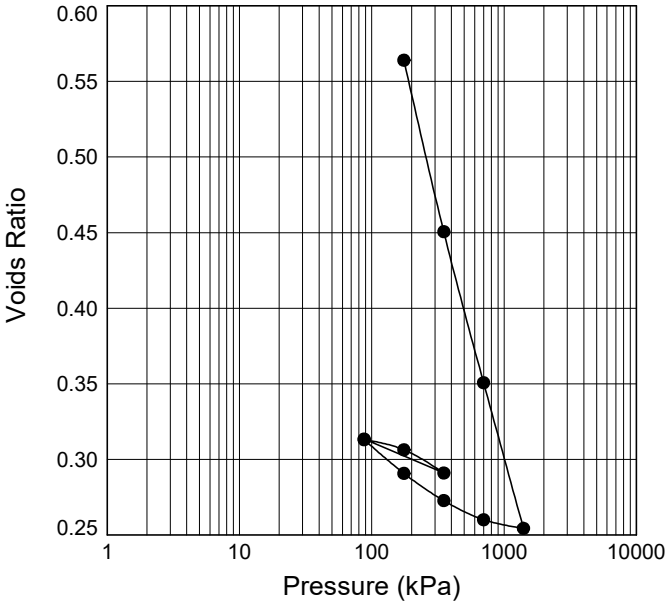
AGS

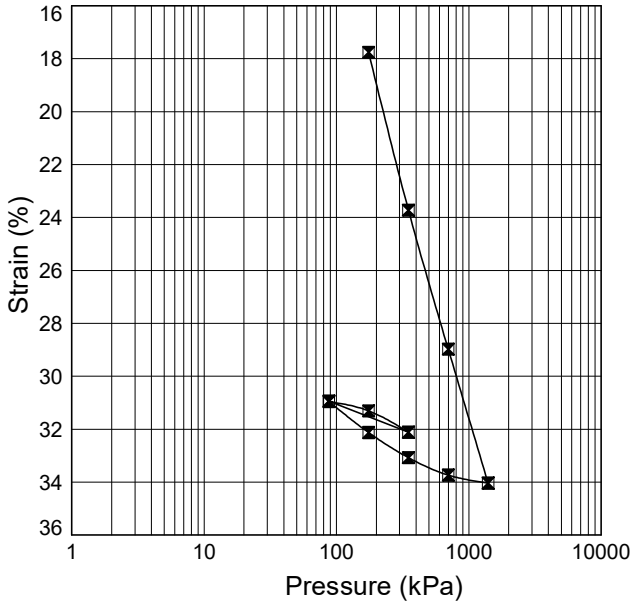
ONE-DIMENSIONAL CONSOLIDATION TEST

In accordance with BS EN ISO 17892 Part 5

Position ID: **R22-BH105** Sample Ref: **18** Sample Type: **UT** Depth (m): **5.04**

Description : Grey clayey SILT





SPECIMEN DETAILS	INITIAL	FINAL
Diameter (mm) :	75.00	75.00
Height (mm) :	20.00	13.81
Assumed Particle Density (Mg/m^3) :	2.65	2.65
Water Content (%) :	56.0	29.2
Wet Density (Mg/m^3) :	1.68	2.02
Dry Density (Mg/m^3) :	1.08	1.56
Voids Ratio :	1.456	0.6962

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	17.760	0.5640	1.0	28	1.3	
Loading	0.5	175 - 350	23.725	0.4506	0.41	25	1.1	
Loading	0.5	350 - 700	28.975	0.3508	0.20	17	1.4	
Loading	1	700 - 1400	34.035	0.2545	0.10	15	1.4	
Unloading	0.5	1400 - 700	33.735	0.2602	NA	NA	NA	
Unloading	0.5	700 - 350	33.075	0.2728	NA	NA	NA	
Unloading	1	350 - 175	32.125	0.2908	NA	NA	NA	
Unloading	0.5	175 - 87.5	30.955	0.3131	NA	NA	NA	
Loading	0.5	87.5 - 175	31.305	0.3064	0.058	13	1.6	
Loading	1	175 - 350	32.110	0.2911	0.067	15	1.4	
Unloading	1	350 - 87.5	30.935	0.3135	NA	NA	NA	

Notes: Method of time-setting used (min): **T_{90}.** Average temperature during test (degC): **19.8**.
Frame Correction Applied

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Contract Ref: **563607**

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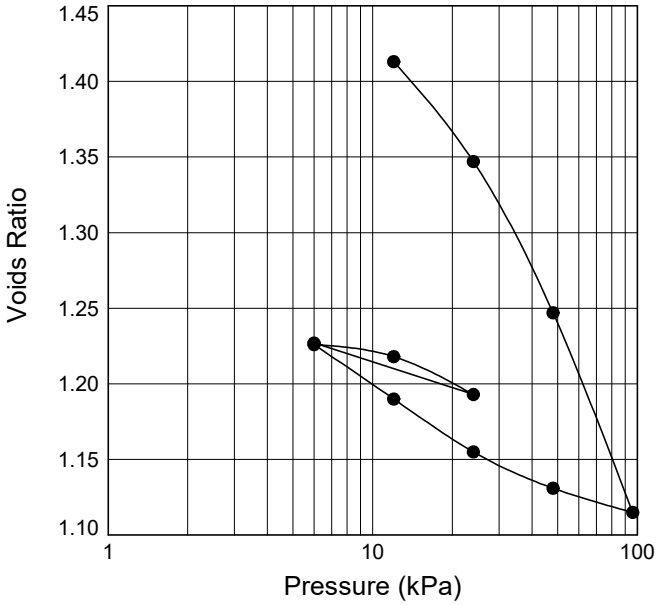
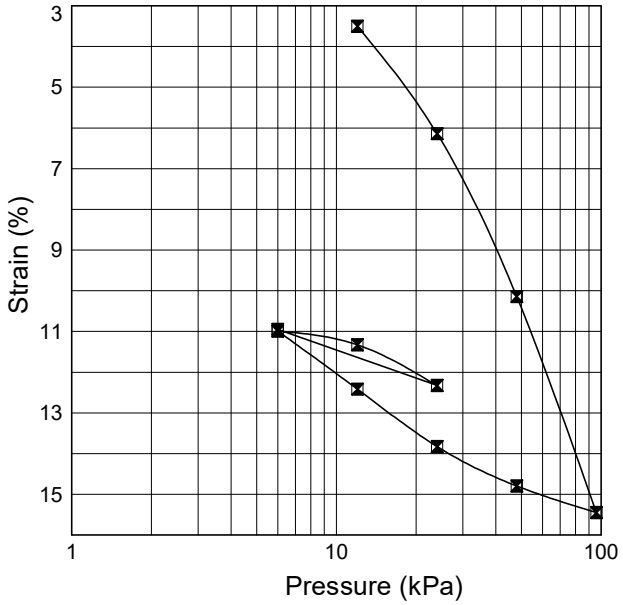
ONE-DIMENSIONAL CONSOLIDATION TEST

In accordance with BS EN ISO 17892 Part 5

Position ID: **R22-BH106A** Sample Ref: **6** Sample Type: **UT** Depth (m): **2.01**

Description : Brownish grey clayey SILT





SPECIMEN DETAILS	INITIAL	FINAL
Diameter (mm) :	75.78	75.78
Height (mm) :	19.00	16.92
Assumed Particle Density (Mg/m^3) :	2.65	2.65
Water Content (%) :	58.9	48.7
Wet Density (Mg/m^3) :	1.68	1.77
Dry Density (Mg/m^3) :	1.06	1.19
Voids Ratio :	1.501	1.227

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 - 12	3.505	1.413	2.9	162	0.24	
Loading	2	12 - 24	6.142	1.347	2.3	252	0.14	
Loading	1	24 - 48	10.142	1.247	1.8	180	0.19	
Loading	1	48 - 96	15.447	1.115	1.2	155	0.20	
Unloading	1	96 - 48	14.795	1.131	NA	NA	NA	
Unloading	1	48 - 24	13.826	1.155	NA	NA	NA	
Unloading	2	24 - 12	12.416	1.190	NA	NA	NA	
Unloading	2	12 - 6	10.990	1.226	NA	NA	NA	
Loading	1	6 - 12	11.326	1.218	0.63	80	0.39	
Loading	1	12 - 24	12.326	1.193	0.94	122	0.26	
Unloading	1	24 - 6	10.947	1.227	NA	NA	NA	

Notes: Method of time-setting used (min): **T_{90}.** Average temperature during test (degC): **19.9**.
Frame Correction Applied

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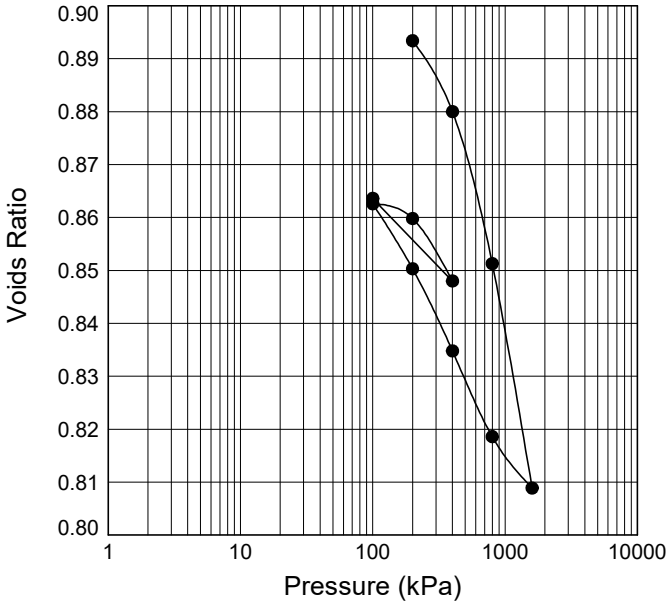
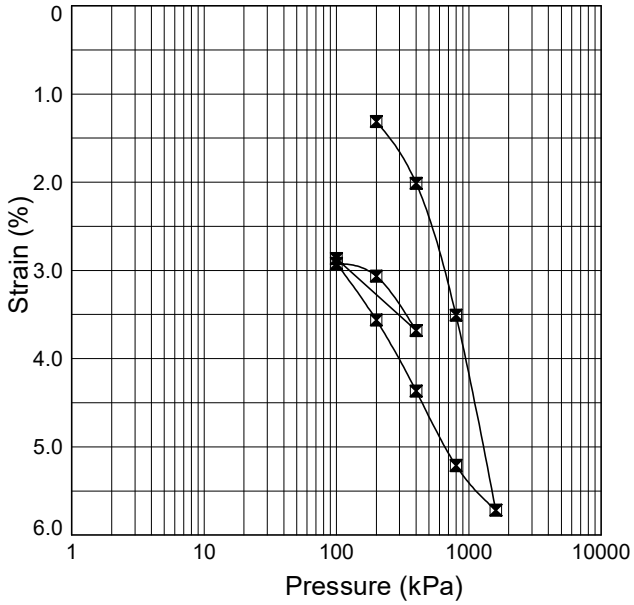
ONE-DIMENSIONAL CONSOLIDATION TEST

In accordance with BS EN ISO 17892 Part 5

Position ID: **R22-BH204** Sample Ref: **15** Sample Type: **UT** Depth (m): **4.36**

Description : Greyish brown silty CLAY





SPECIMEN DETAILS	INITIAL	FINAL
Diameter (mm) :	75.00	75.00
Height (mm) :	20.13	19.55
Assumed Particle Density (Mg/m^3) :	2.65	2.65
Water Content (%) :	34.1	33.7
Wet Density (Mg/m^3) :	1.85	1.90
Dry Density (Mg/m^3) :	1.38	1.42
Voids Ratio :	0.9186	0.8636

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	1.312	0.8934	0.066	0.4	111	
Loading	1	200 - 400	2.012	0.8800	0.035	4.3	10	
Loading	1	400 - 800	3.507	0.8513	0.038	5	7.9	
Loading	1	800 - 1600	5.718	0.8089	0.029	6	7.1	
Unloading	1	1600 - 800	5.211	0.8186	NA	NA	NA	
Unloading	1	800 - 400	4.367	0.8348	NA	NA	NA	
Unloading	1	400 - 200	3.562	0.8503	NA	NA	NA	
Unloading	1	200 - 100	2.921	0.8626	NA	NA	NA	
Loading	1	100 - 200	3.065	0.8598	0.015	6	7.3	
Loading	1	200 - 400	3.681	0.8480	0.032	8	5.1	
Unloading	1	400 - 100	2.866	0.8636	NA	NA	NA	

Notes: Method of time-setting used (min): **T_{90}.** Average temperature during test (degC): **20.1**.
Frame Correction Applied

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Contract Ref: **563607**

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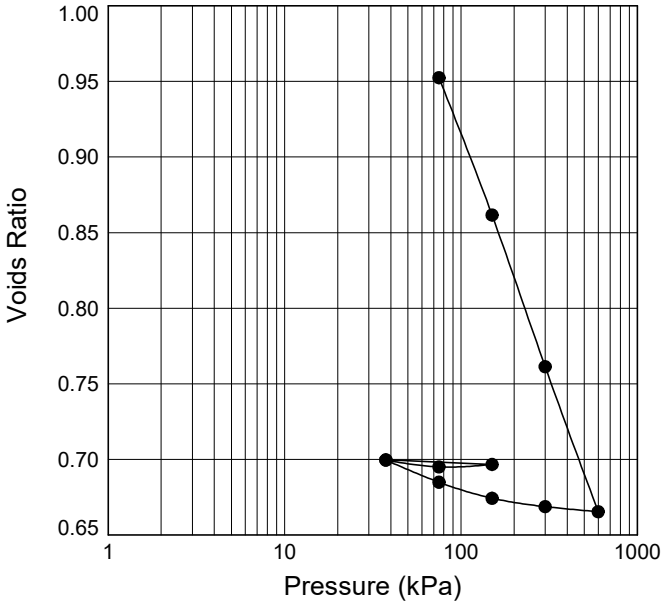
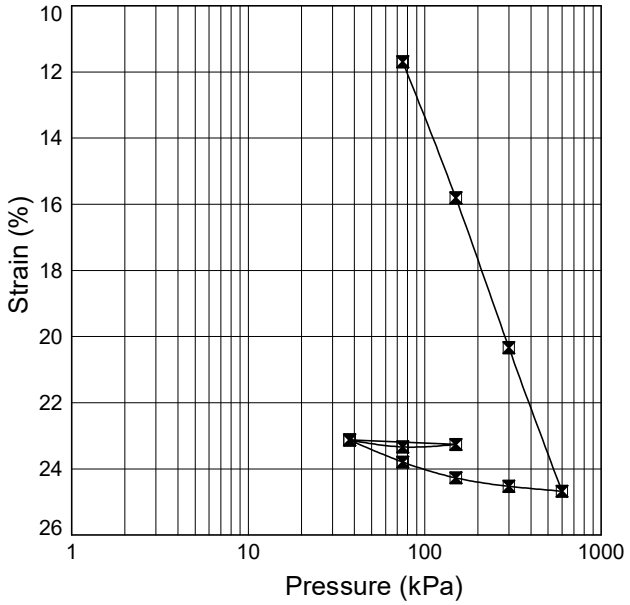
ONE-DIMENSIONAL CONSOLIDATION TEST

In accordance with BS EN ISO 17892 Part 5

Position ID: **R22-BH205** Sample Ref: **11** Sample Type: **UT** Depth (m): **3.24**

Description : Grey clayey SILT





SPECIMEN DETAILS	INITIAL	FINAL
Diameter (mm) :	75.00	75.00
Height (mm) :	18.83	14.48
Assumed Particle Density (Mg/m^3) :	2.65	2.65
Water Content (%) :	47.6	29.5
Wet Density (Mg/m^3) :	1.77	2.02
Dry Density (Mg/m^3) :	1.20	1.56
Voids Ratio :	1.211	0.6998

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	11.694	0.9524	1.6	15	2.3	
Loading	1	75 - 150	15.805	0.8616	0.62	18	1.6	
Loading	1	150 - 300	20.335	0.7614	0.36	13	2.0	
Loading	1	300 - 600	24.673	0.6655	0.18	10	2.5	
Unloading	1	600 - 300	24.525	0.6688	NA	NA	NA	
Unloading	1	300 - 150	24.270	0.6744	NA	NA	NA	
Unloading	1	150 - 75	23.792	0.6850	NA	NA	NA	
Unloading	1	75 - 37.5	23.128	0.6996	NA	NA	NA	
Loading	1	37.5 - 75	23.335	0.6951	0.072	11	2.2	
Loading	1	75 - 150	23.261	0.6967	-0.013	6	3.7	
Unloading	1	150 - 37.5	23.123	0.6998	NA	NA	NA	

Notes: Method of time-setting used (min): **T_{90}.** Average temperature during test (degC): **20.0**.
Frame Correction Applied

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Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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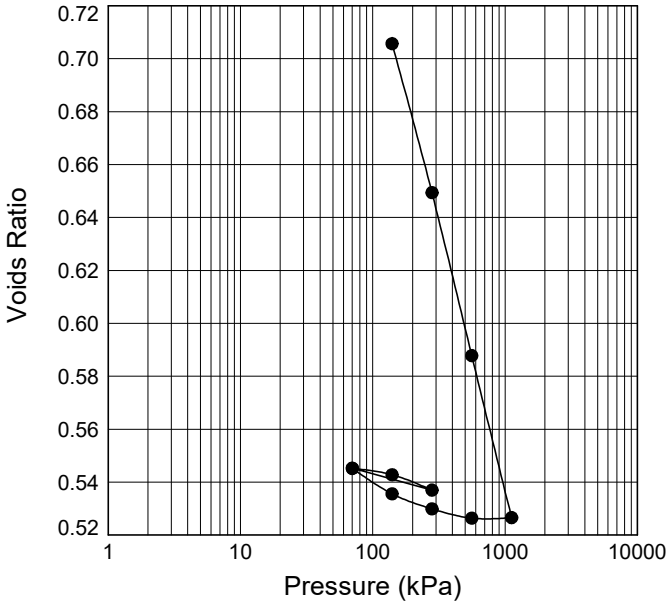
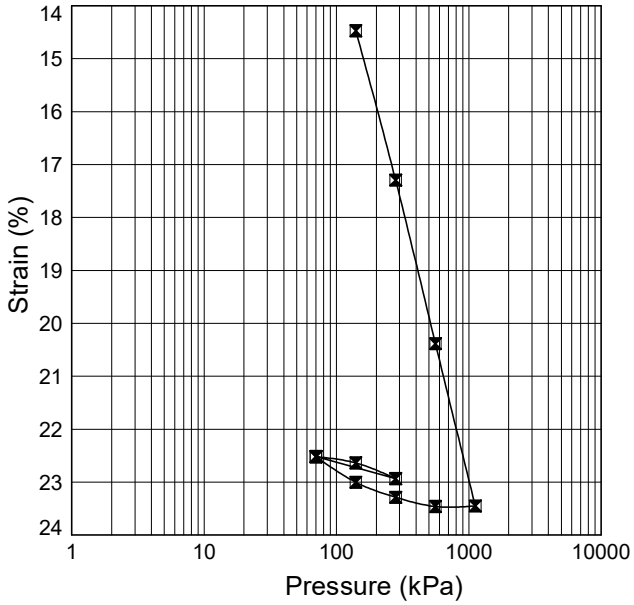
ONE-DIMENSIONAL CONSOLIDATION TEST

In accordance with BS EN ISO 17892 Part 5

Position ID: **R22-BH501** Sample Ref: **17** Sample Type: **UT** Depth (m): **5.56**

Description : Grey clayey SILT





SPECIMEN DETAILS	INITIAL	FINAL
Diameter (mm) :	75.00	75.00
Height (mm) :	18.96	14.69
Assumed Particle Density (Mg/m^3) :	2.65	2.65
Water Content (%) :	39.8	23.3
Wet Density (Mg/m^3) :	1.86	2.12
Dry Density (Mg/m^3) :	1.33	1.72
Voids Ratio :	0.9943	0.5453

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 - 140	14.473	0.7057	1.0	27	1.3	
Loading	1	140 - 280	17.294	0.6494	0.24	13	2.1	
Loading	1	280 - 560	20.385	0.5878	0.13	7	3.6	
Loading	1	560 - 1120	23.449	0.5266	0.069	4.4	5.5	
Unloading	1	1120 - 560	23.460	0.5264	NA	NA	NA	
Unloading	1	560 - 280	23.286	0.5299	NA	NA	NA	
Unloading	1	280 - 140	23.001	0.5356	NA	NA	NA	
Unloading	1	140 - 70	22.521	0.5452	NA	NA	NA	
Loading	1	70 - 140	22.637	0.5428	0.021	3.1	7.7	
Loading	1	140 - 280	22.933	0.5370	0.027	3.2	7.4	
Unloading	1	280 - 70	22.516	0.5453	NA	NA	NA	

Notes: Method of time-setting used (min): **T_{90}.** Average temperature during test (degC): **20.0**.
Frame Correction Applied

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1a Princess Street
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Compiled By: [redacted]

Date: **17/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

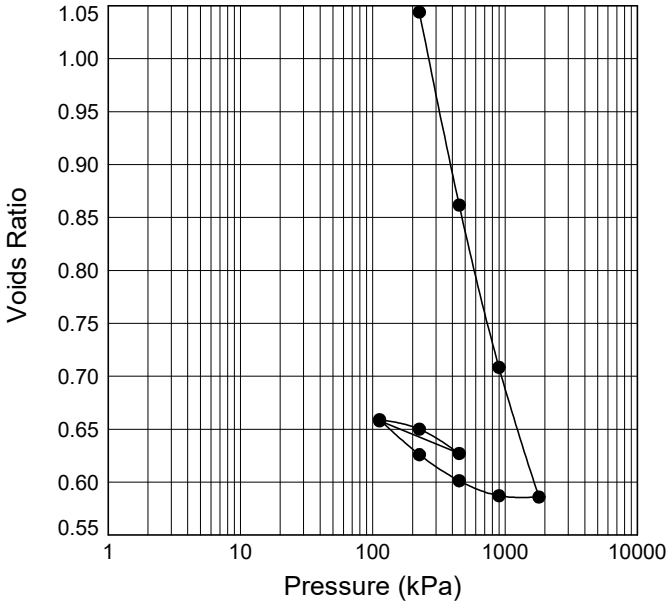
Contract Ref: **563607**

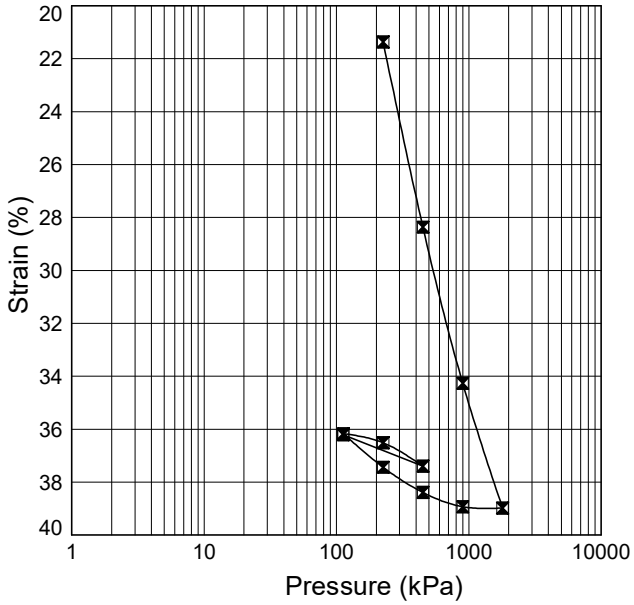
ONE-DIMENSIONAL CONSOLIDATION TEST

In accordance with BS EN ISO 17892 Part 5

Position ID: **R22-BH502** Sample Ref: **34** Sample Type: **UT** Depth (m): **9.02**

Description : Grey clayey SILT





SPECIMEN DETAILS	INITIAL	FINAL
Diameter (mm) :	75.00	75.00
Height (mm) :	20.72	13.22
Assumed Particle Density (Mg/m^3) :	2.65	2.65
Water Content (%) :	62.3	29.3
Wet Density (Mg/m^3) :	1.65	2.07
Dry Density (Mg/m^3) :	1.02	1.60
Voids Ratio :	1.599	0.6580

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 - 225	21.366	1.044	0.95	24	1.6	
Loading	1	225 - 450	28.364	0.8618	0.40	26	1.1	
Loading	1	450 - 900	34.262	0.7085	0.18	21	1.1	
Loading	1	900 - 1800	38.977	0.5860	0.080	15	1.3	
Unloading	1	1800 - 900	38.929	0.5872	NA	NA	NA	
Unloading	1	900 - 450	38.388	0.6013	NA	NA	NA	
Unloading	1	450 - 225	37.437	0.6260	NA	NA	NA	
Unloading	1	225 - 112.5	36.168	0.6590	NA	NA	NA	
Loading	1	112.5 - 225	36.511	0.6501	0.048	14	1.4	
Loading	1	225 - 450	37.394	0.6271	0.062	15	1.2	
Unloading	1	450 - 112.5	36.207	0.6580	NA	NA	NA	

Notes: Method of time-setting used (min): **T_{90}.** Average temperature during test (degC): **19.8**.
Frame Correction Applied

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Compiled By: [redacted] Date: **17/03/24**

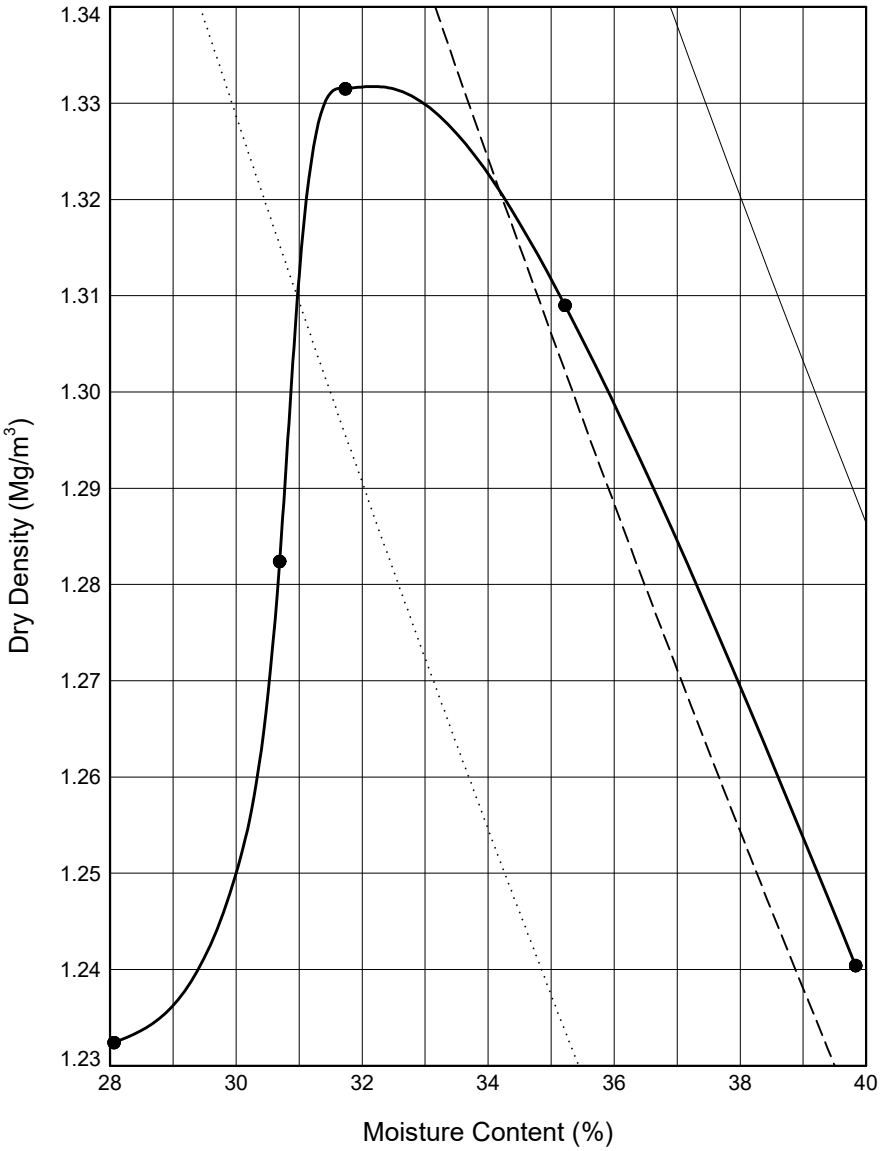
Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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: **R22-TP101** Sample Ref: **12** Sample Type: **LB** Depth (m): **1.30**



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**40**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m^3)	:	**1.33**
% Retained on 37.5mm BS Sieve	:	**0**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**31.7**
% 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 test carried out at each point**		
Size of Soil Pieces	:	**<37.5mm**	Single sample was used.					

Sample Description	Key to Air Voids Lines		
Brown CLAY	——— 0%	– – – – 5%	····· 10%

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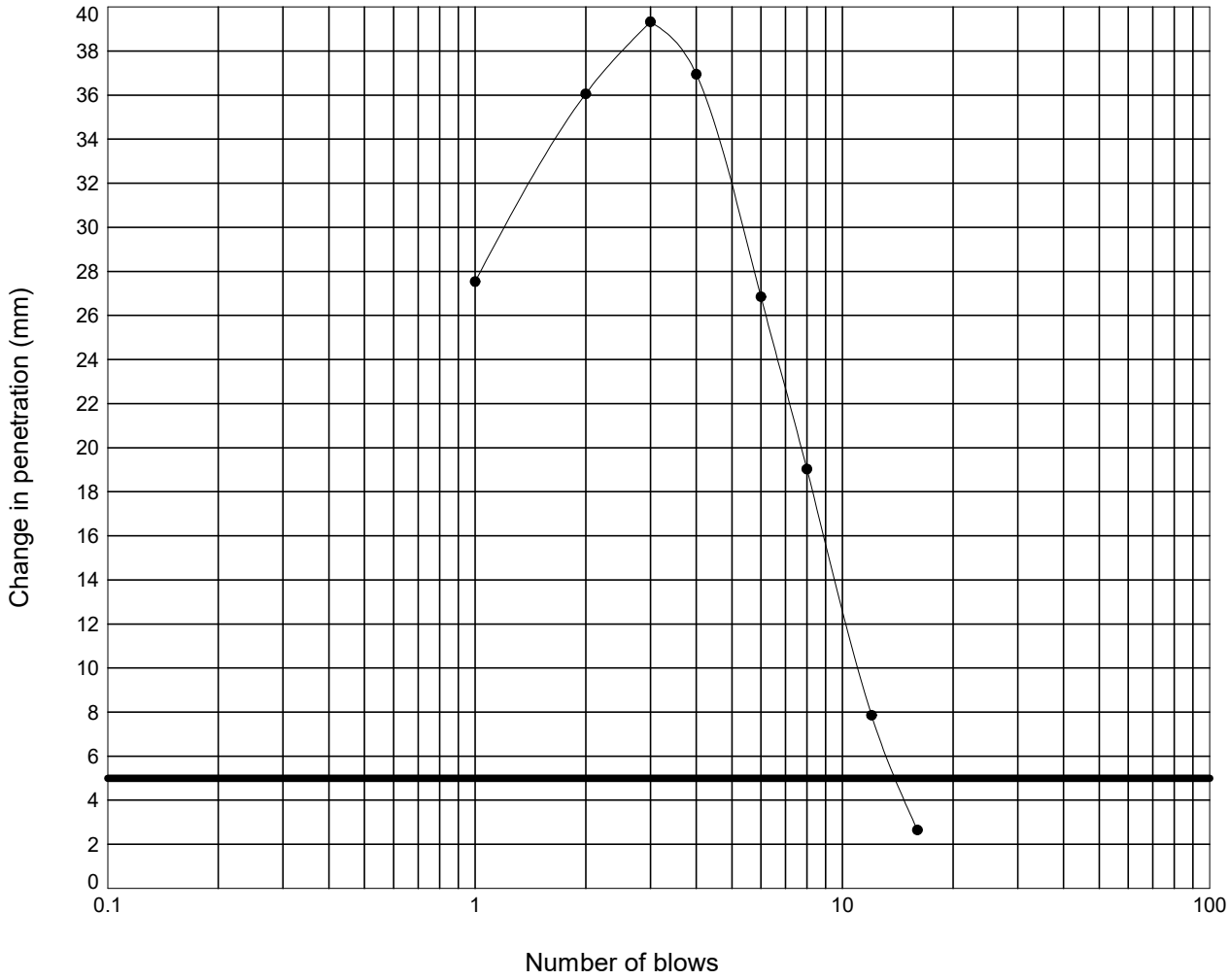
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP101** Sample Ref: **12** Sample Type: **LB** Depth (m): **1.30**

Description : **Brown CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	40	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	11.2	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Compiled By		Date
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Contract	Contract Ref:
SEA Link FEED - Kent Onshore Cable Link	**563607**

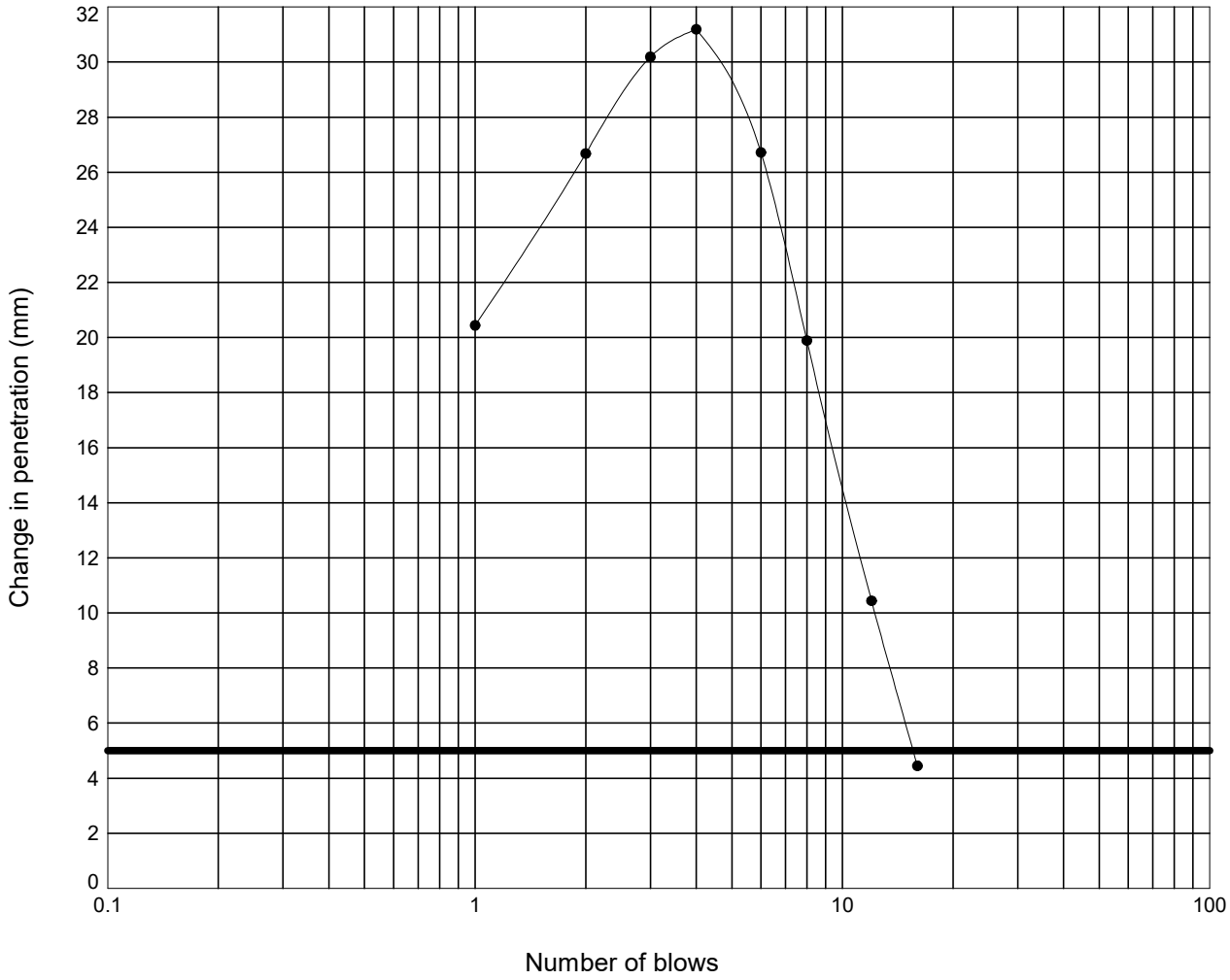
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP101** Sample Ref: **12** Sample Type: **LB** Depth (m): **1.30**

Description : **Brown CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	35	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	11.8	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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W. Yorkshire WF10 1NJ

Compiled By		Date
[redacted]	[redacted]	19/03/24

Contract	Contract Ref:
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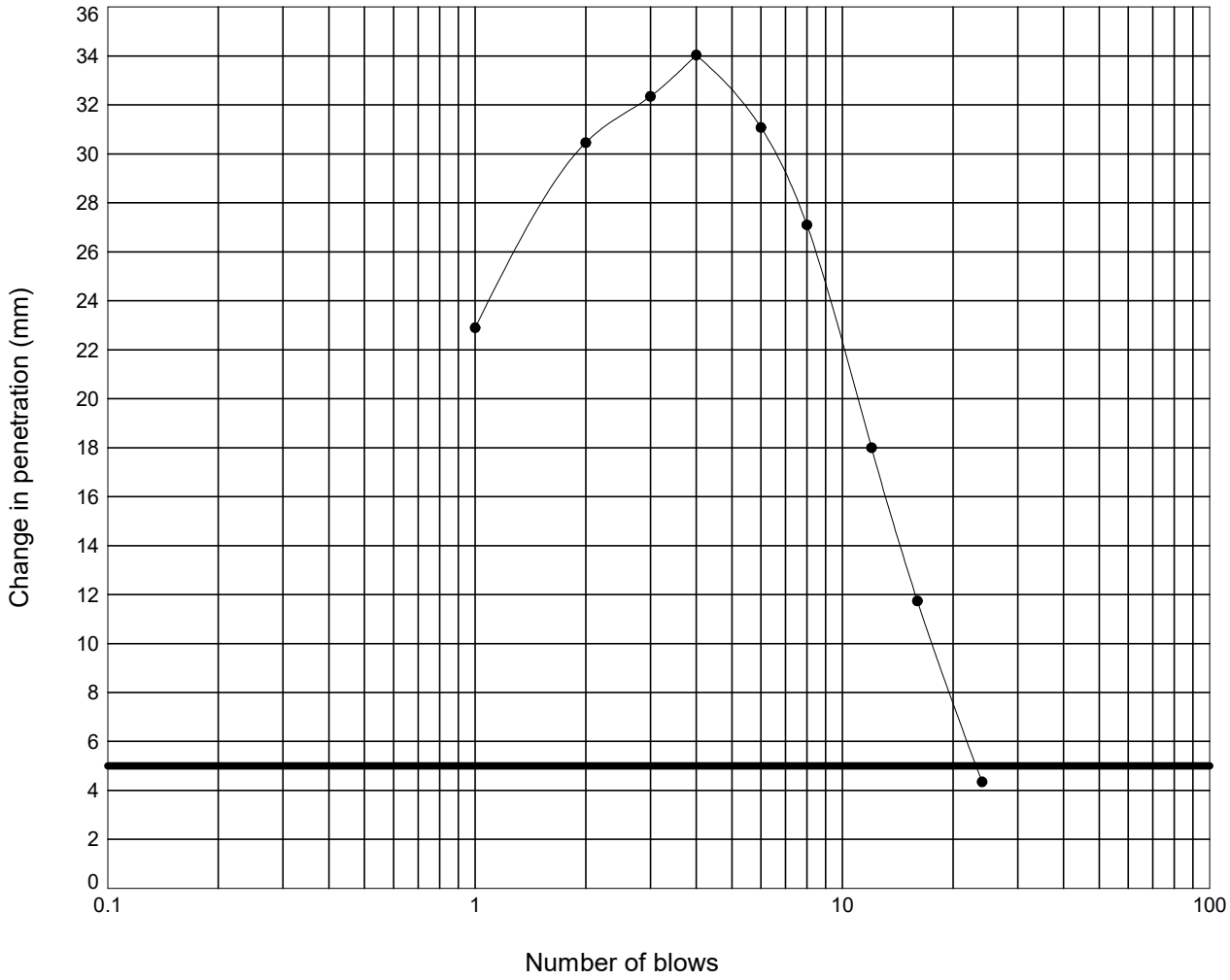
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP101** Sample Ref: **12** Sample Type: **LB** Depth (m): **1.30**

Description : **Brown CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	32	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	13.3	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract	Contract Ref:
SEA Link FEED - Kent Onshore Cable Link	**563607**

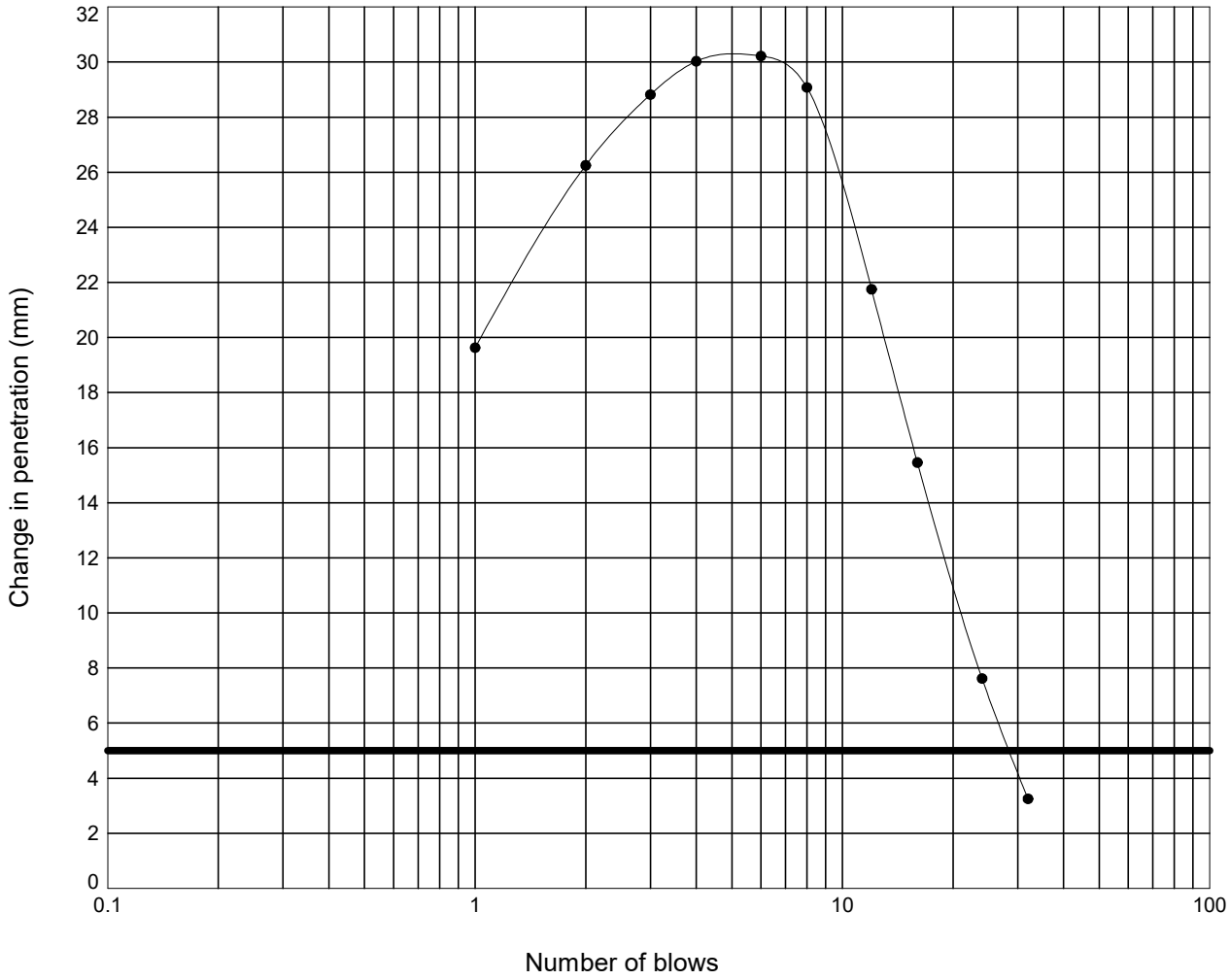
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP101** Sample Ref: **12** Sample Type: **LB** Depth (m): **1.30**

Description : **Brown CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	32	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	14.1	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract	Contract Ref:
SEA Link FEED - Kent Onshore Cable Link	**563607**

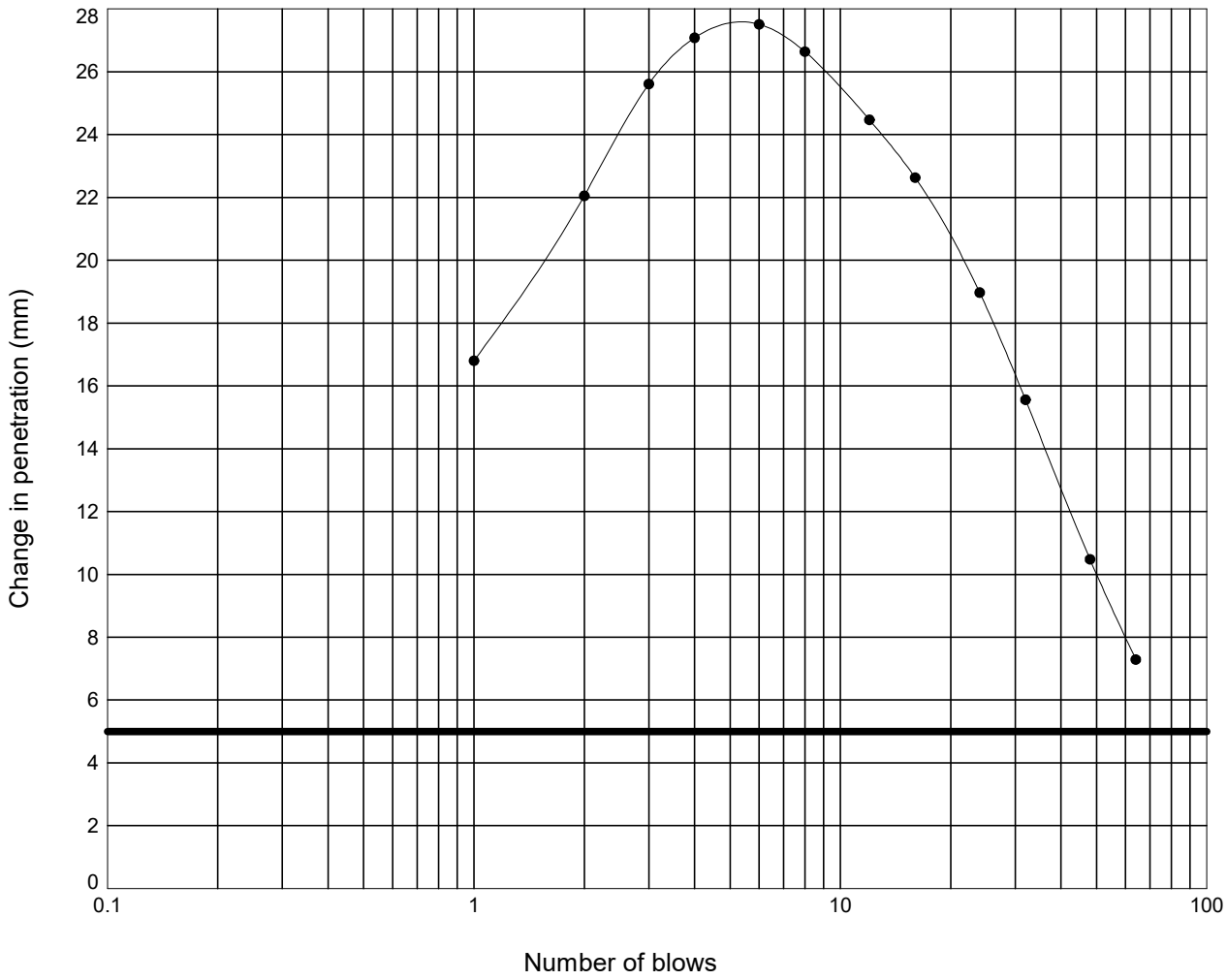
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP101** Sample Ref: **12** Sample Type: **LB** Depth (m): **1.30**

Description : **Brown CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	28	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	18.9	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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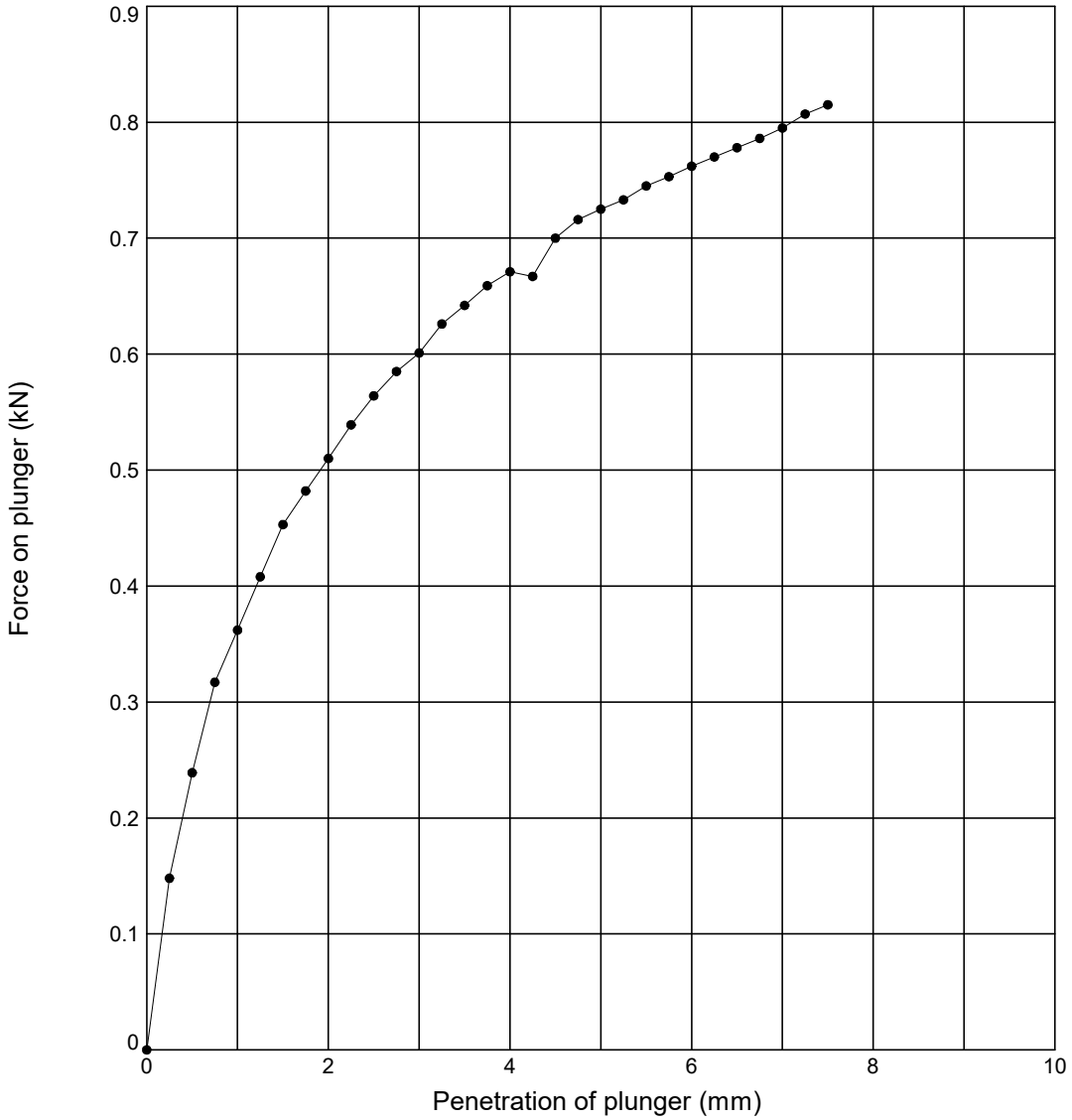
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP101** Sample Ref: **12** Sample Type: **LB** Depth (m): **1.30**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**40**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**40**	**42**
Initial Bulk Density (Mg/m^3)	:	**1.73**	Surcharge (kg)	:	**4.0**	CBR value (%)	**4.3**	**0.00**
Initial Dry Density (Mg/m^3)	:	**1.24**	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
Brown CLAY	● **Top** ⧓ **Base**

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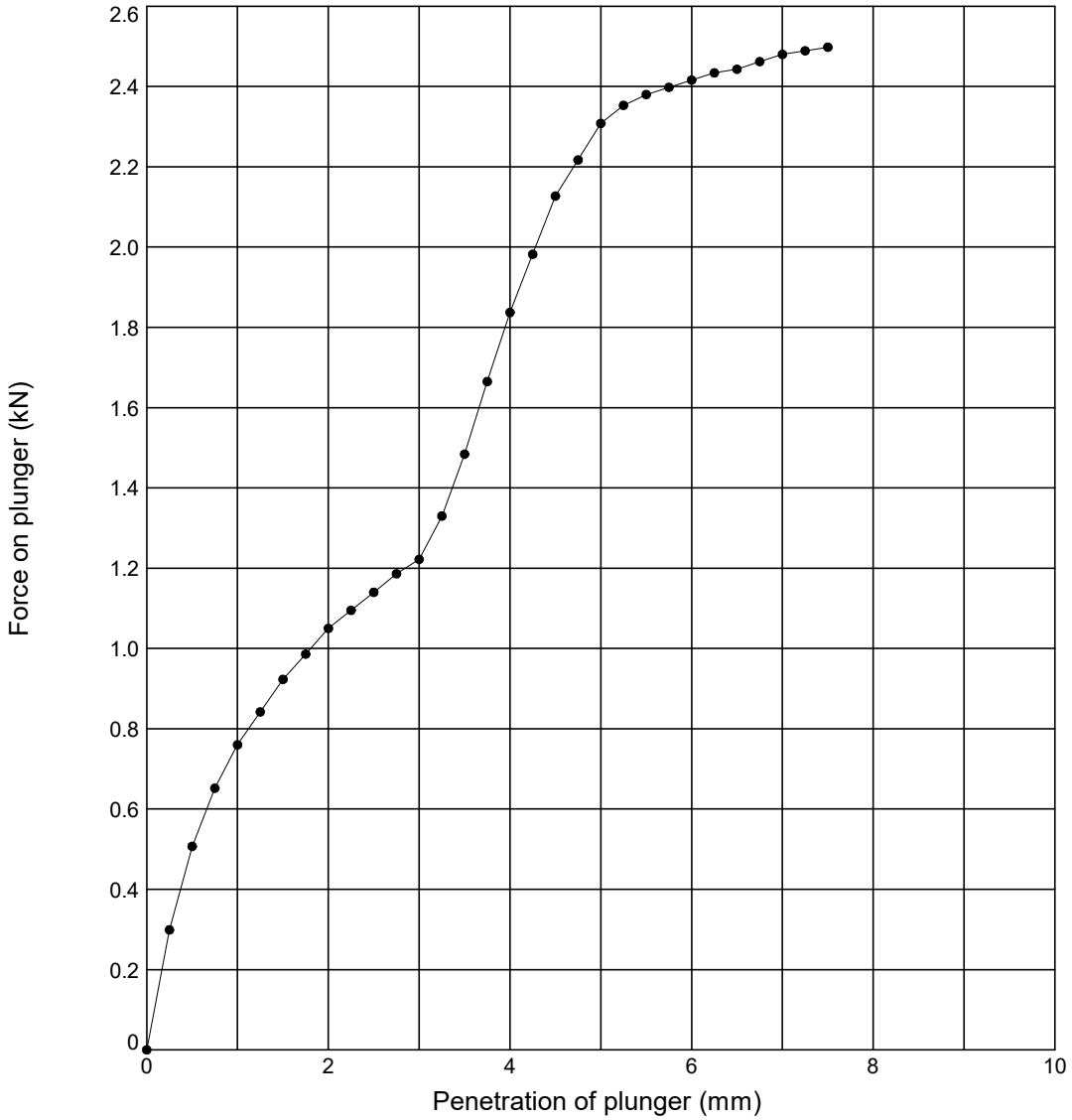
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP101** Sample Ref: **12** Sample Type: **LB** Depth (m): **1.30**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**34**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**34**	**36**
Initial Bulk Density (Mg/m^3)	:	**1.77**	Surcharge (kg)	:	**4.0**	CBR value (%)	**12**	**0.00**
Initial Dry Density (Mg/m^3)	:	**1.32**	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
Brown CLAY	● **Top** ⧓ **Base**

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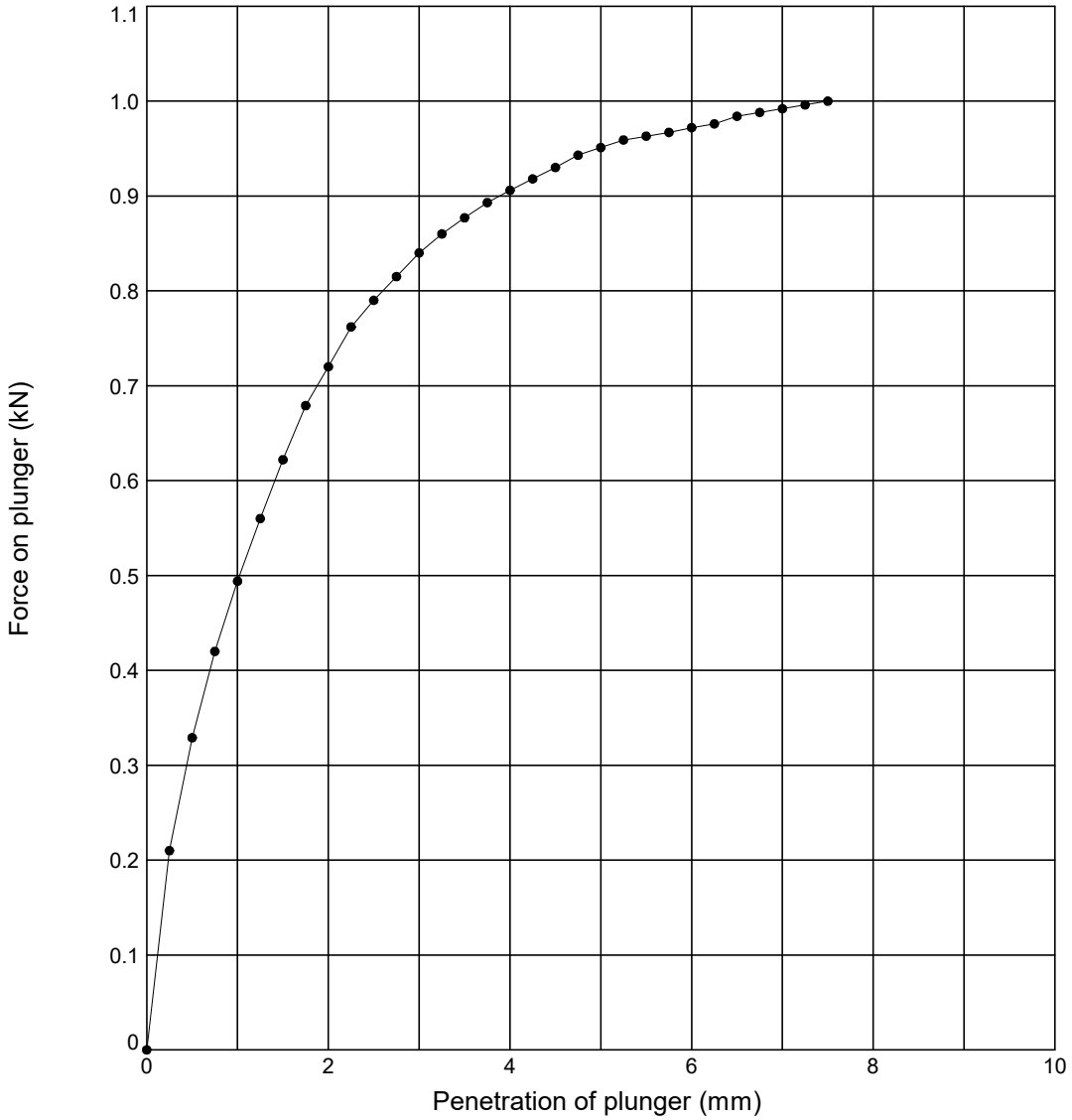
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP101** Sample Ref: **12** Sample Type: **LB** Depth (m): **1.30**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**34**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**34**	**30**
Initial Bulk Density (Mg/m^3)	:	**1.75**	Surcharge (kg)	:	**4.0**	CBR value (%)	**6.0**	**0.00**
Initial Dry Density (Mg/m^3)	:	**1.31**	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
Brown CLAY	● **Top** ⧓ **Base**

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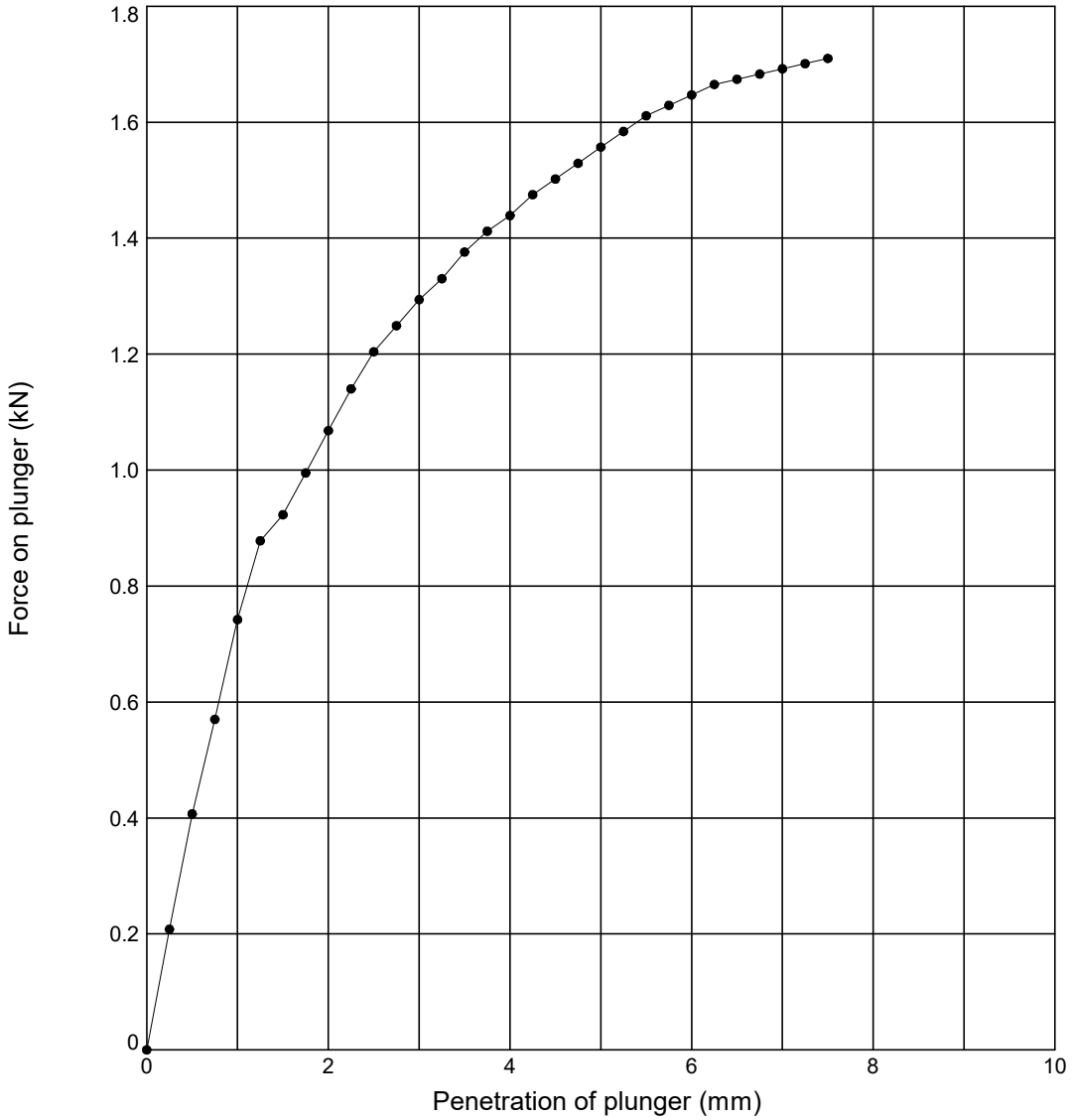
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP101** Sample Ref: **12** Sample Type: **LB** Depth (m): **1.30**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**31**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**31**	**30**
Initial Bulk Density (Mg/m^3)	:	**1.68**	Surcharge (kg)	:	**4.0**	CBR value (%)	**9.1**	**0.00**
Initial Dry Density (Mg/m^3)	:	**1.28**	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
Brown CLAY	● **Top** ⧓ **Base**

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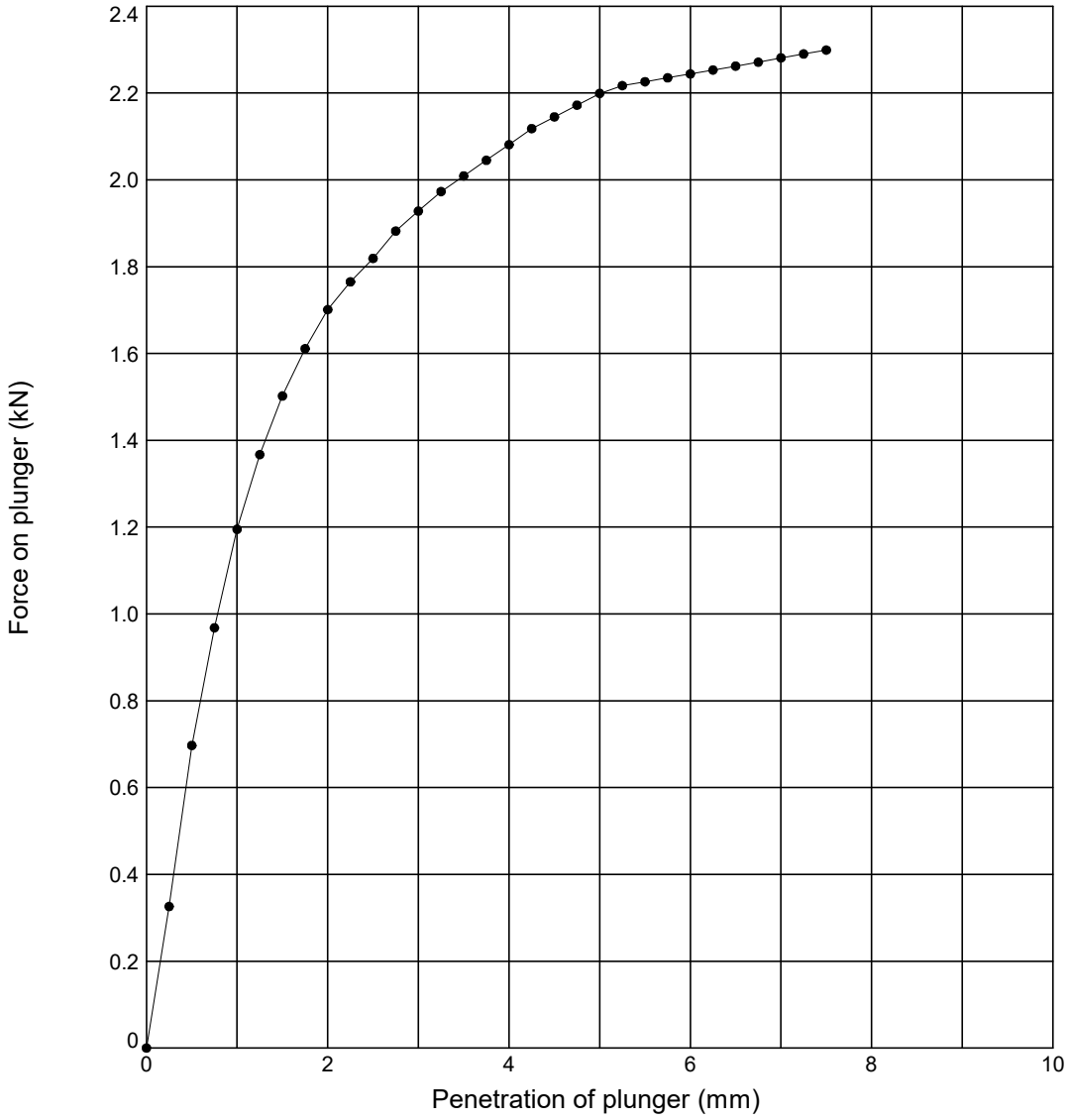
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP101** Sample Ref: **12** Sample Type: **LB** Depth (m): **1.30**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**29**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**29**	**27**
Initial Bulk Density (Mg/m^3)	:	**1.58**	Surcharge (kg)	:	**4.0**	CBR value (%)	**14**	**0.00**
Initial Dry Density (Mg/m^3)	:	**1.22**	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
Brown CLAY	● **Top** ⧓ **Base**

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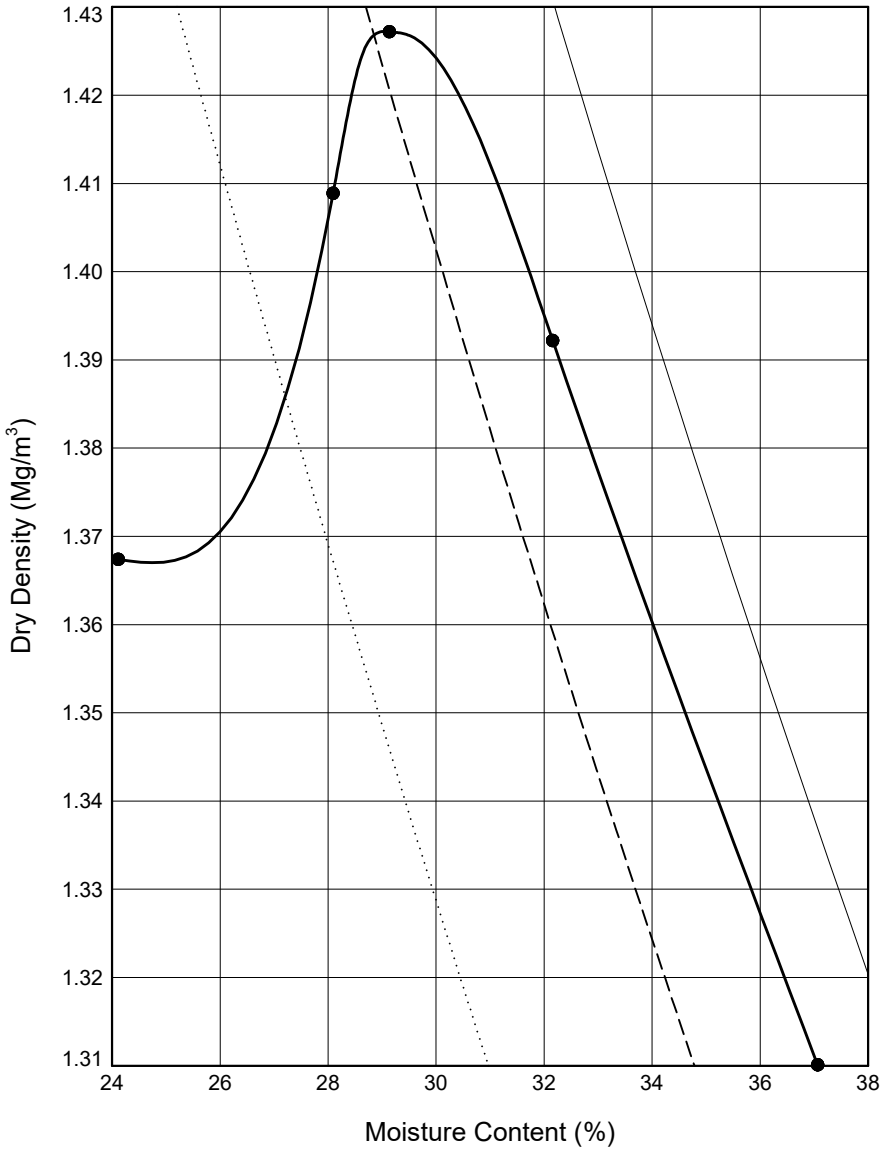
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **R22-TP102** Sample Ref: **12** Sample Type: **LB** Depth (m): **1.50**



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**37**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m³)	:	**1.43**
% Retained on 37.5mm BS Sieve	:	**0**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**29.1**
% 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 carried out at each point**		
Size of Soil Pieces	:	**<37.5mm**	Single sample was used.					

Sample Description	Key to Air Voids Lines		
Brown CLAY	——— 0%	– – – – 5%	····· 10%

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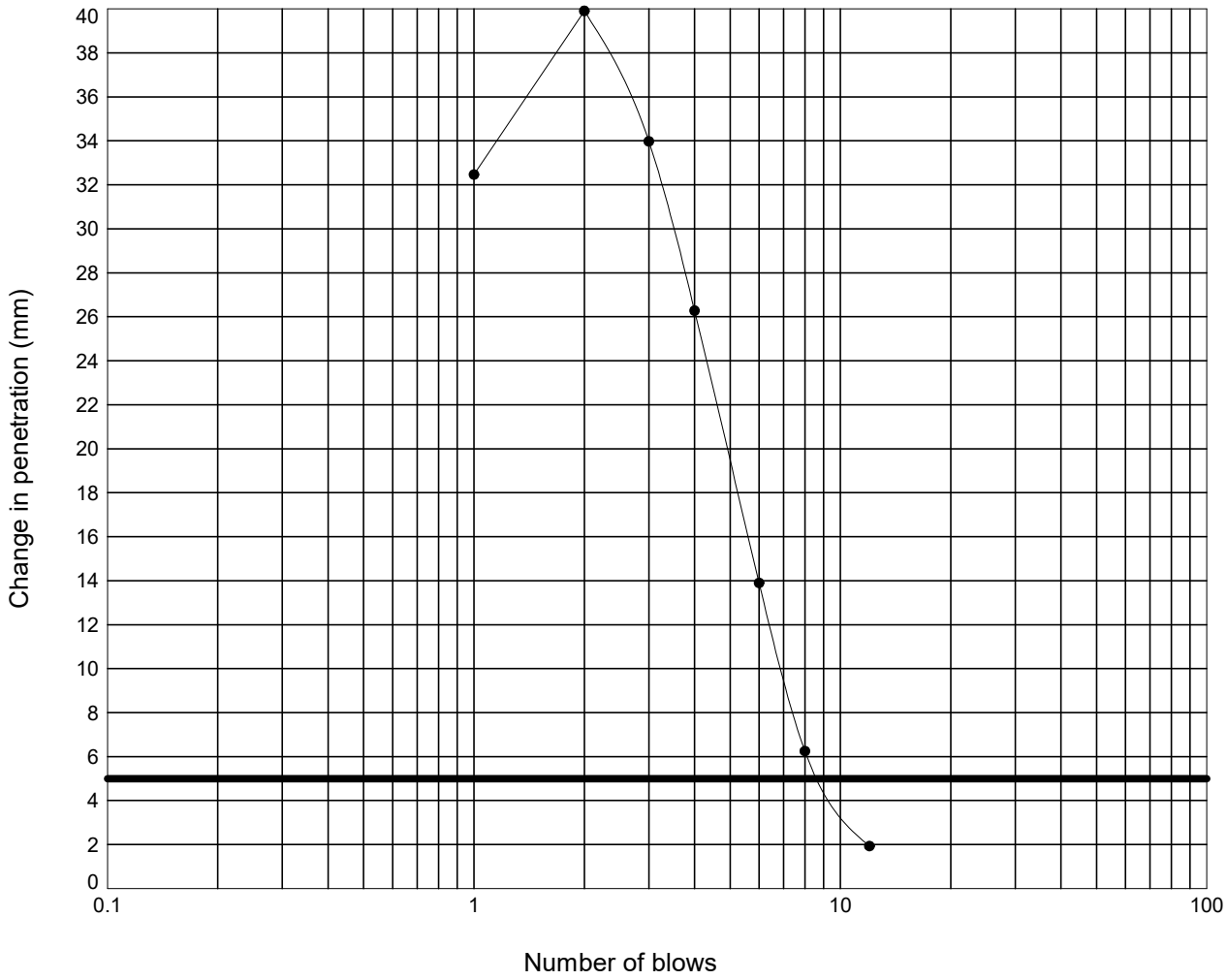
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP102** Sample Ref: **12** Sample Type: **LB** Depth (m): **1.50**

Description : **Brown CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	37	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	9.0	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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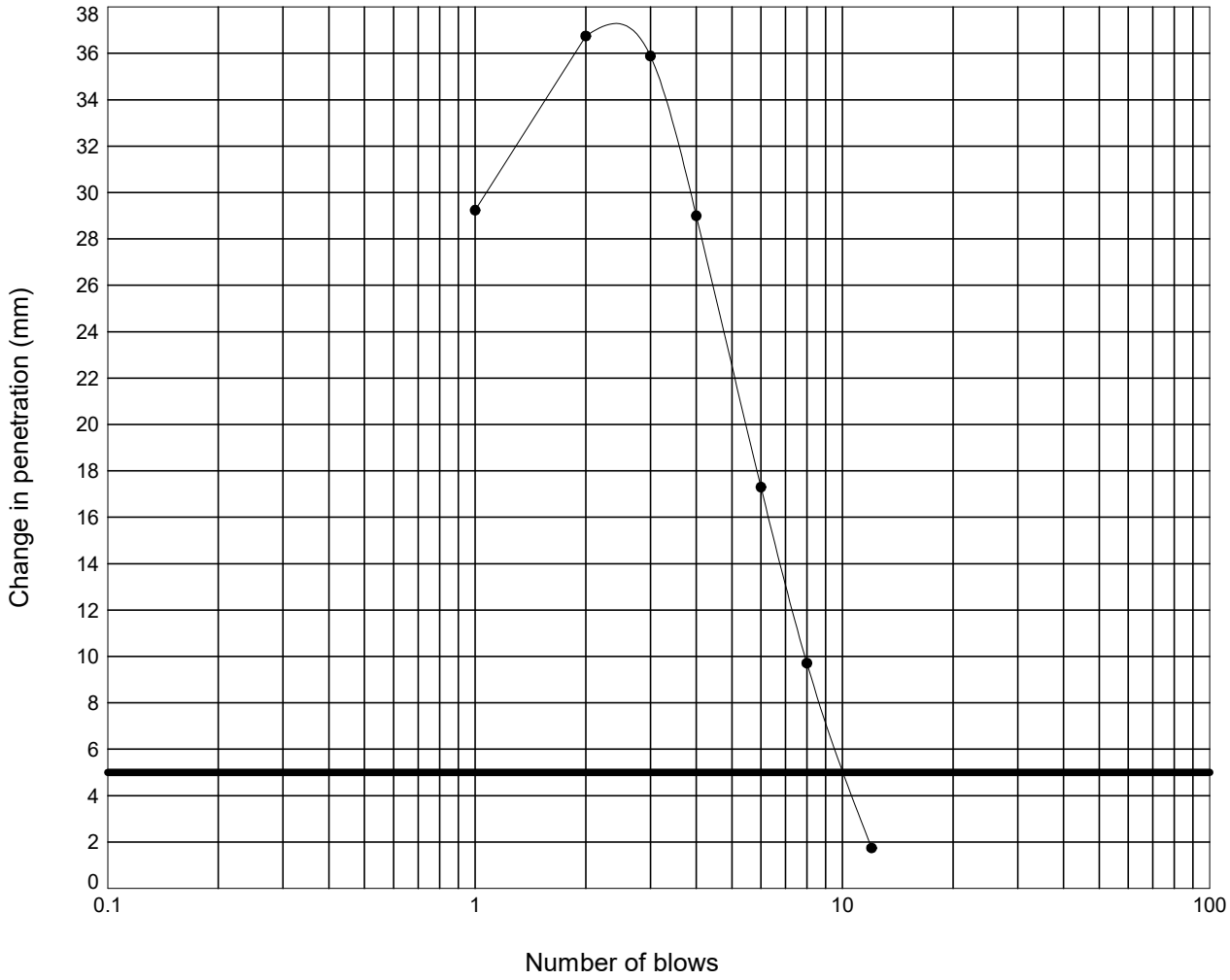
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP102** Sample Ref: **12** Sample Type: **LB** Depth (m): **1.50**

Description : **Brown CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	34	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	9.8	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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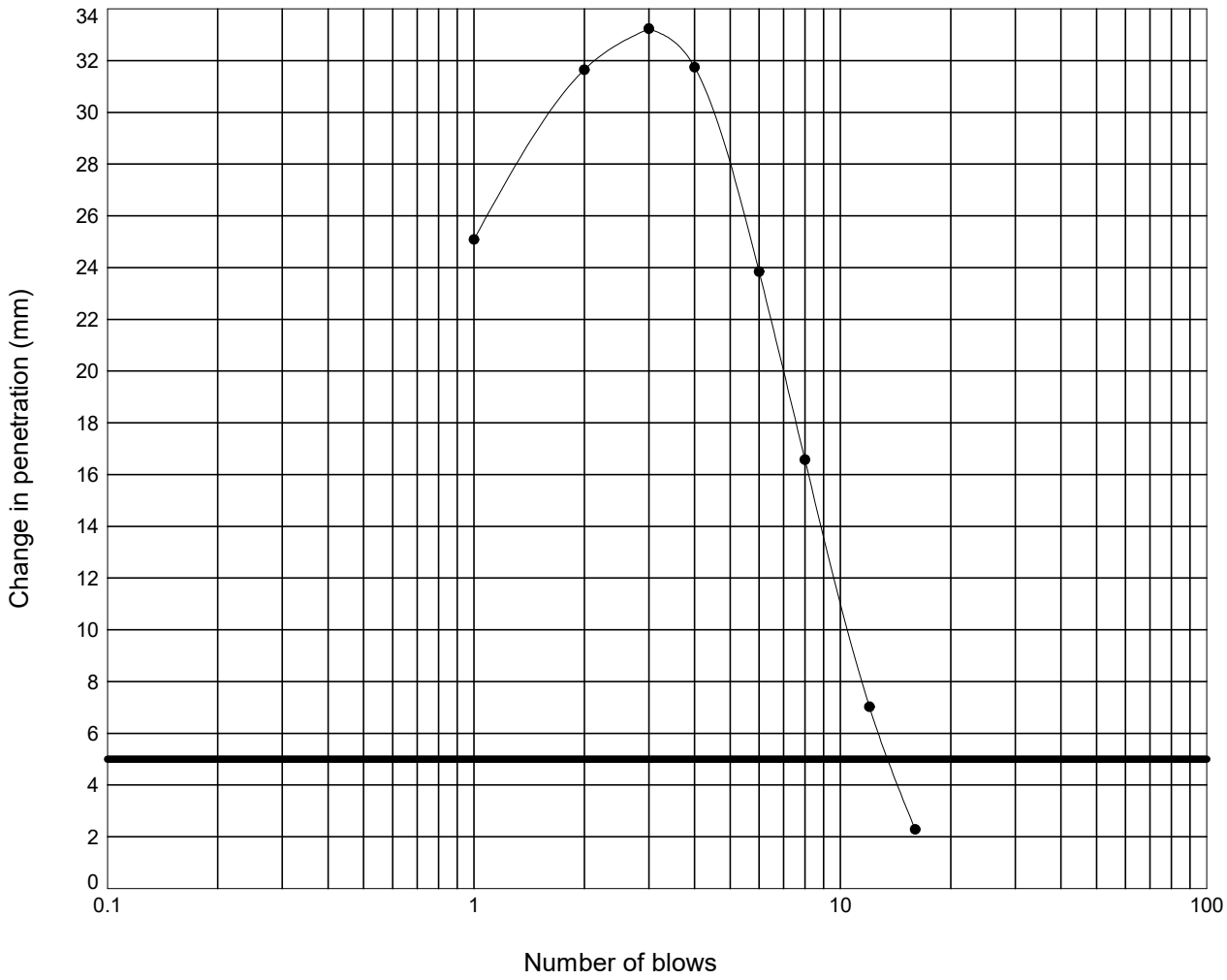
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP102** Sample Ref: **12** Sample Type: **LB** Depth (m): **1.50**

Description : **Brown CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	= 30	%
Percentage retained on 20 mm sieve :	= 0	%
Moisture Condition Value :	= 11.2	
Interpretation of curve:	= Steepest straight line - Fig 9	

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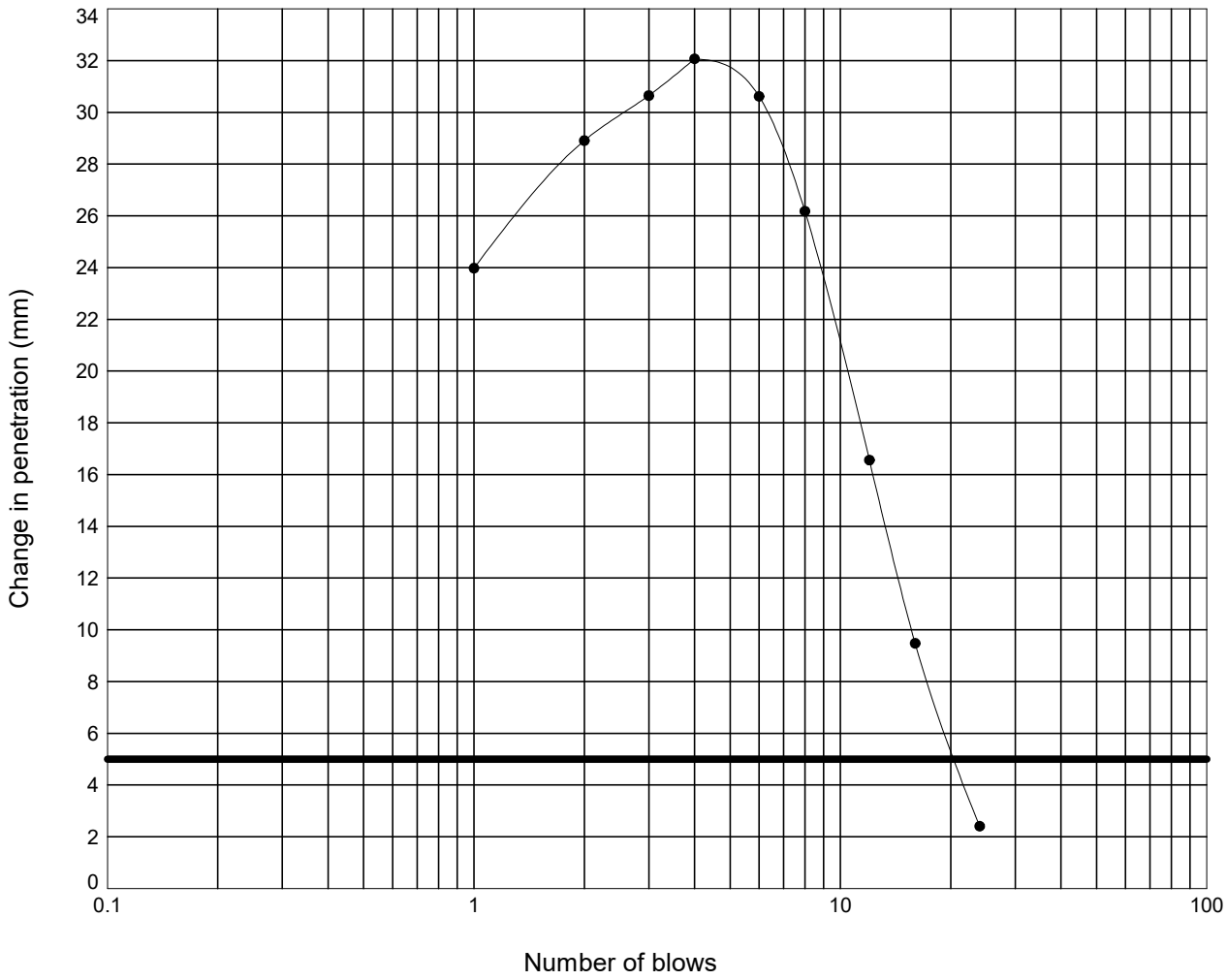
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP102** Sample Ref: **12** Sample Type: **LB** Depth (m): **1.50**

Description : **Brown CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	= 27	%
Percentage retained on 20 mm sieve :	= 0	%
Moisture Condition Value :	= 12.8	
Interpretation of curve:	= Steepest straight line - Fig 9	

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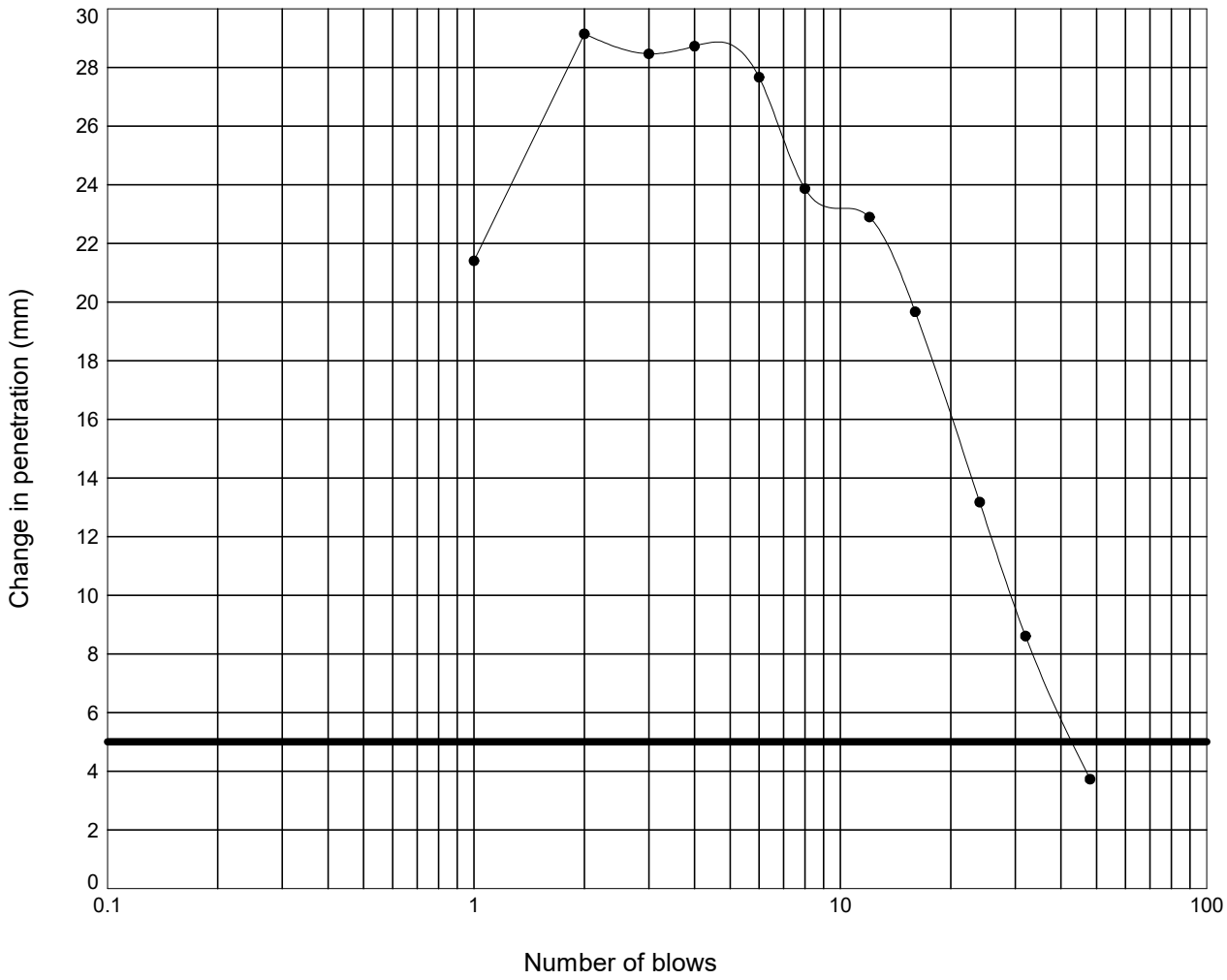
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP102** Sample Ref: **12** Sample Type: **LB** Depth (m): **1.50**

Description : **Brown 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 :	= 0	%
Moisture Condition Value :	= 16.0	
Interpretation of curve:	= Steepest straight line - Fig 9	

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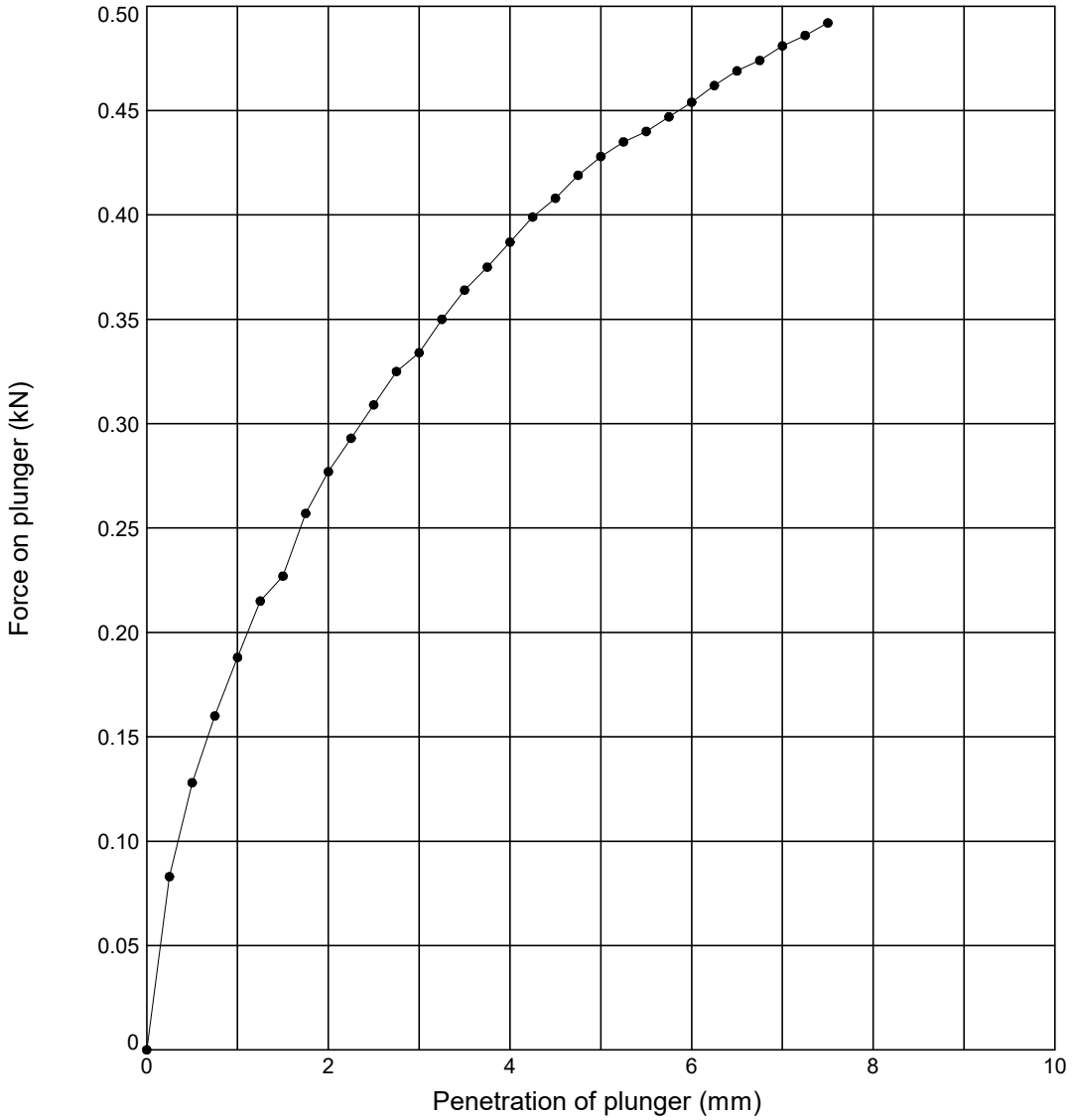
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP102** Sample Ref: **12** Sample Type: **LB** Depth (m): **1.50**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**53**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**53**	**35**
Initial Bulk Density (Mg/m^3)	:	**1.80**	Surcharge (kg)	:	**4.0**	CBR value (%)	**2.3**	**0.00**
Initial Dry Density (Mg/m^3)	:	**1.17**	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
Brown CLAY	● **Top** ⧓ **Base**

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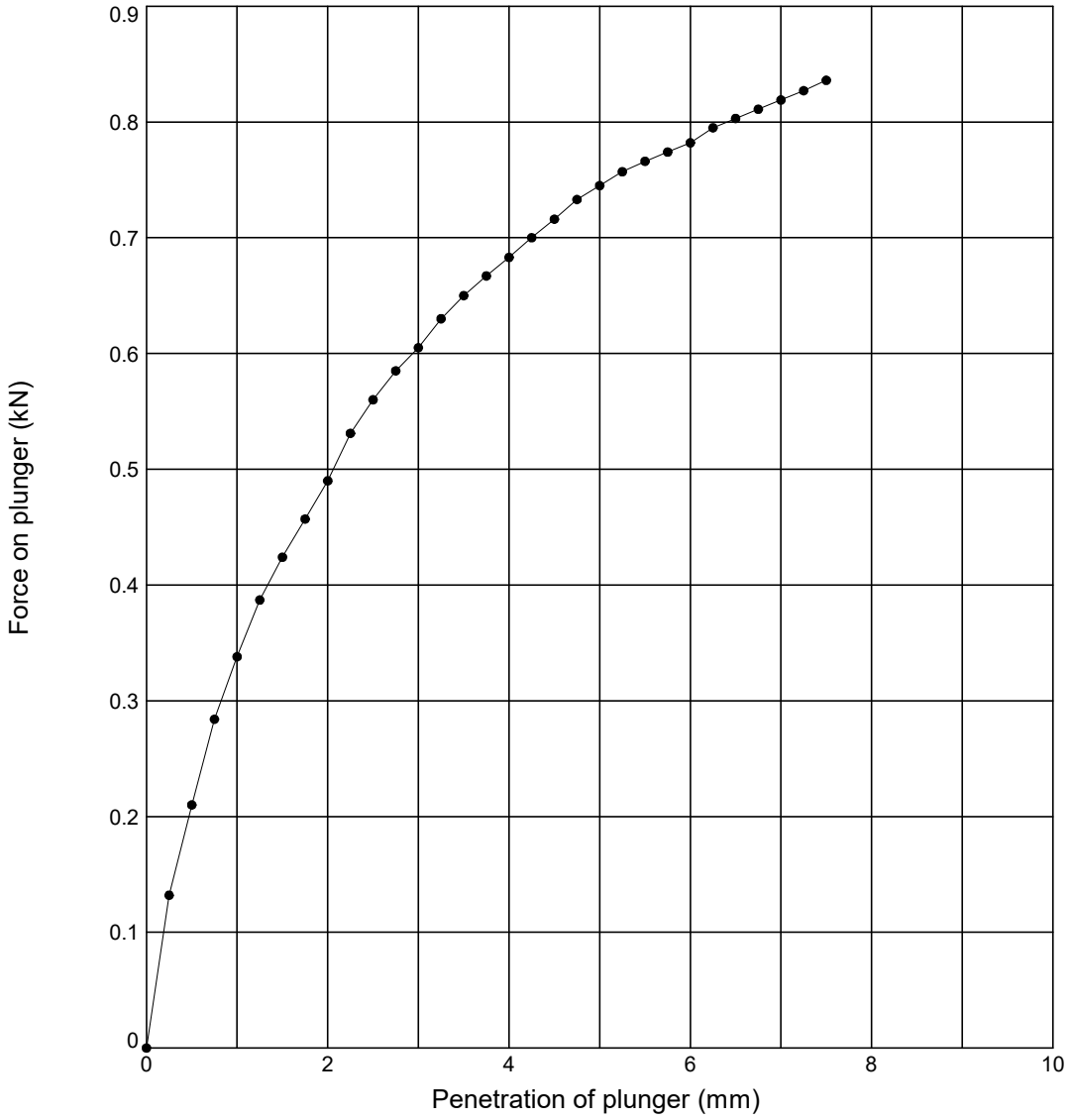
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP102** Sample Ref: **12** Sample Type: **LB** Depth (m): **1.50**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**32**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**32**	**34**
Initial Bulk Density (Mg/m^3)	:	**1.84**	Surcharge (kg)	:	**4.0**	CBR value (%)	**4.2**	**0.00**
Initial Dry Density (Mg/m^3)	:	**1.39**	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
Brown CLAY	● **Top** ⧓ **Base**

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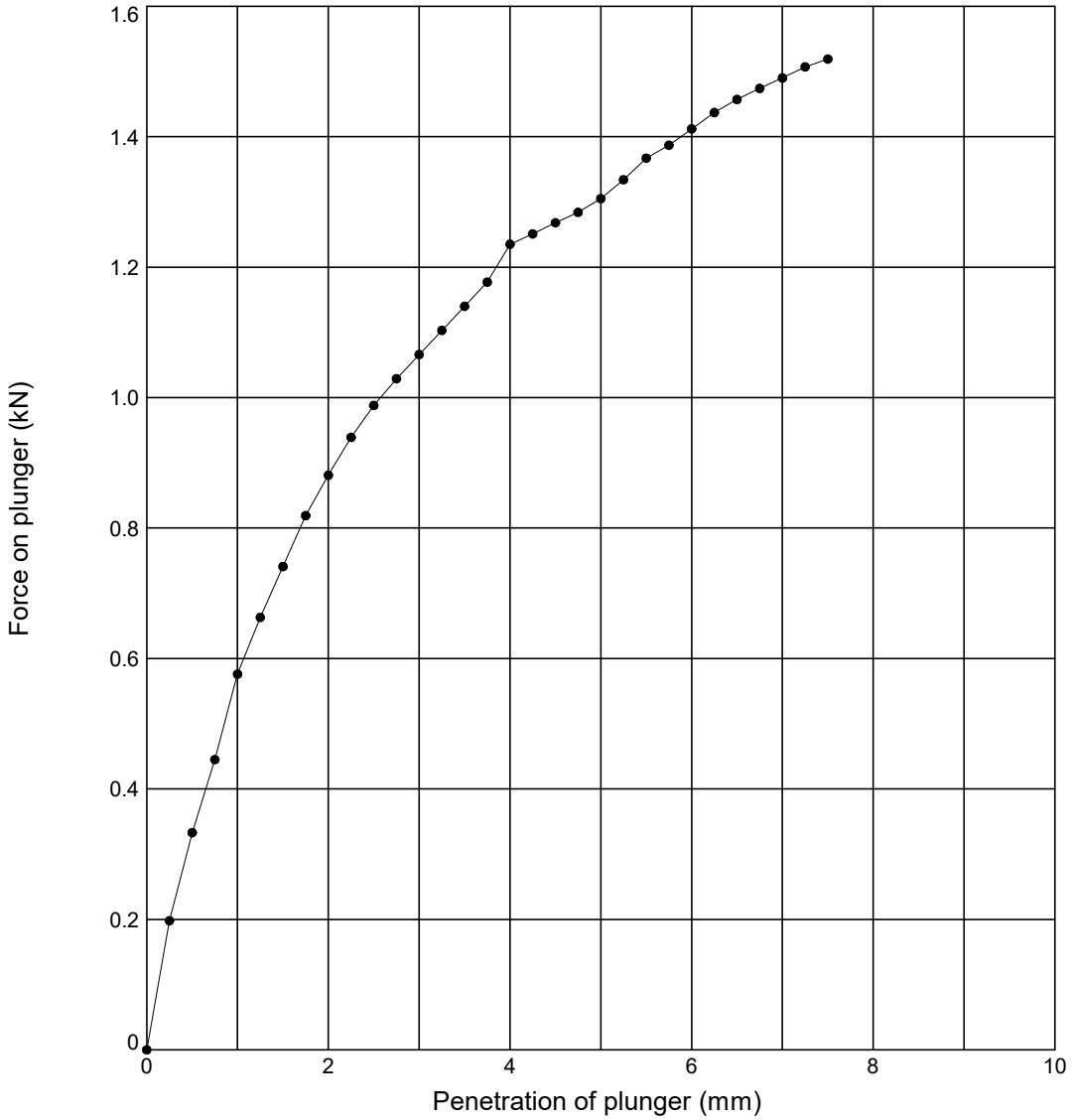
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP102** Sample Ref: **12** Sample Type: **LB** Depth (m): **1.50**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**29**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**29**	**29**
Initial Bulk Density (Mg/m^3)	:	**1.84**	Surcharge (kg)	:	**4.0**	CBR value (%)	**7.5**	**0.00**
Initial Dry Density (Mg/m^3)	:	**1.43**	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
Brown CLAY	● **Top** ⧓ **Base**

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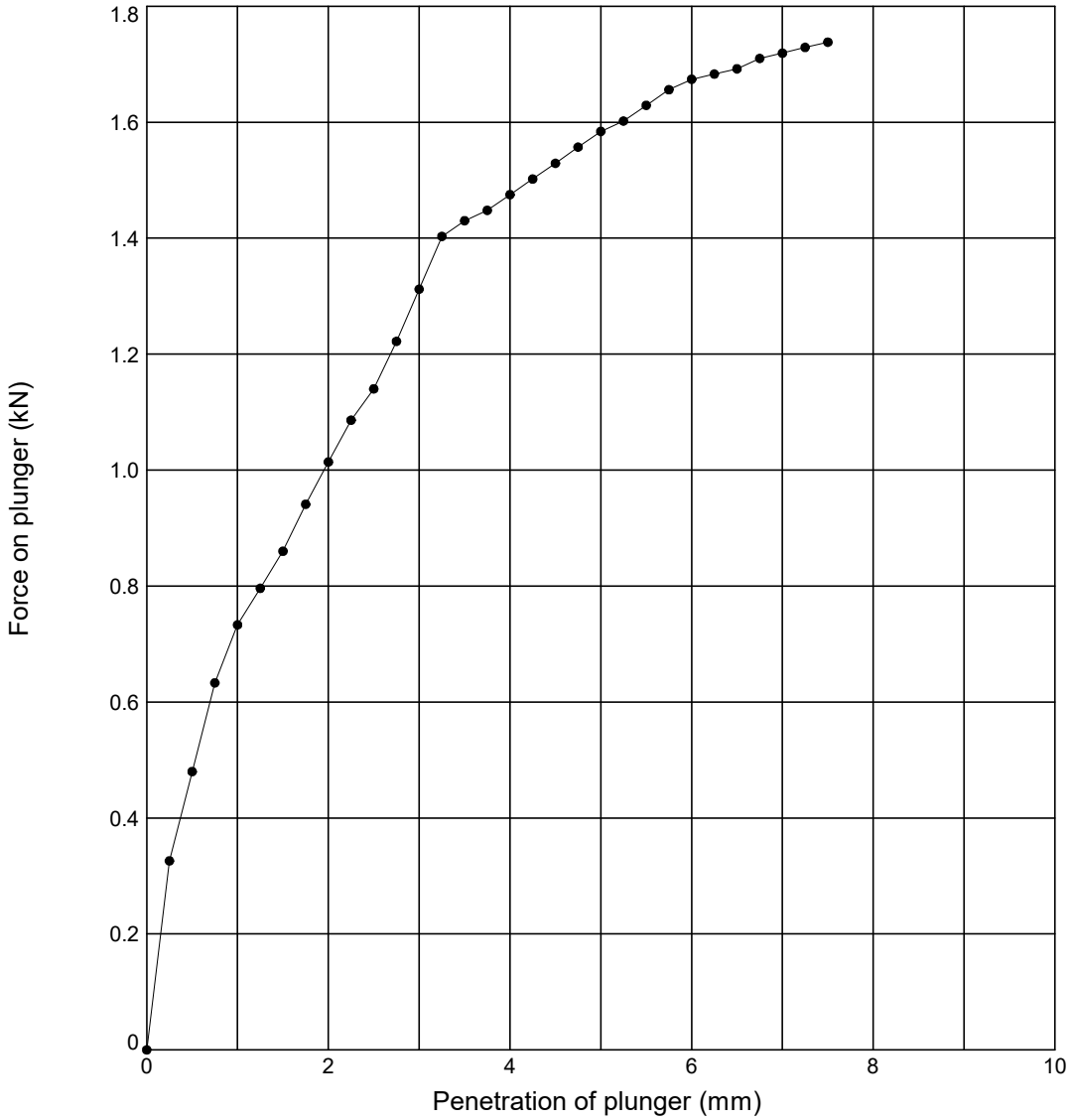
In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP102** Sample Ref: **12** Sample Type: **LB** Depth (m): **1.50**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**29**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**29**	**27**
Initial Bulk Density (Mg/m^3)	:	**1.81**	Surcharge (kg)	:	**4.0**	CBR value (%)	**8.6**	**0.00**
Initial Dry Density (Mg/m^3)	:	**1.40**	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
Brown CLAY	● **Top** ⧓ **Base**

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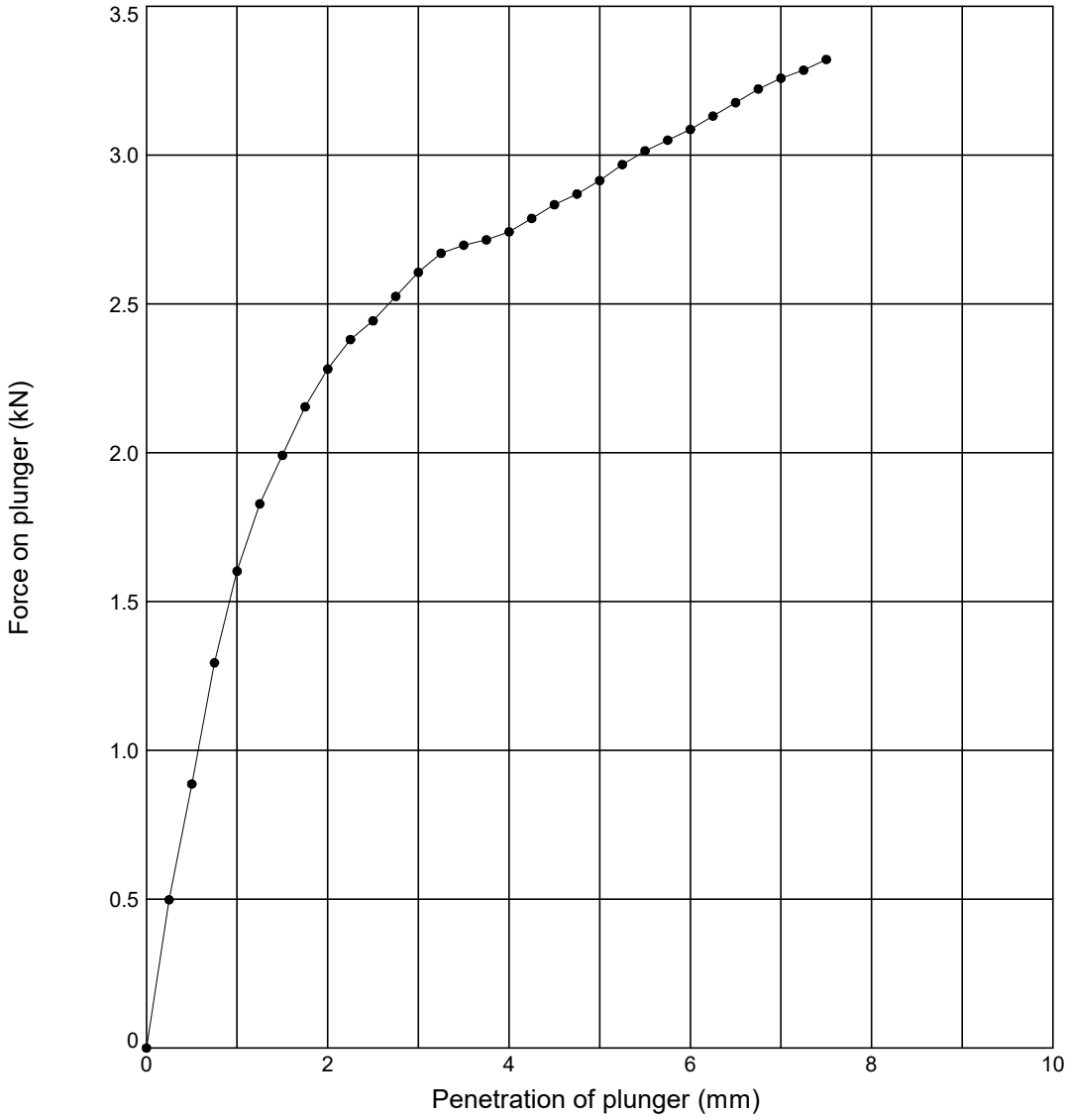
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP102** Sample Ref: **12** Sample Type: **LB** Depth (m): **1.50**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**24**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**24**	**25**
Initial Bulk Density (Mg/m^3)	:	**1.70**	Surcharge (kg)	:	**4.0**	CBR value (%)	**18**	**0.00**
Initial Dry Density (Mg/m^3)	:	**1.37**	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
Brown CLAY	● **Top** ⧓ **Base**

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Compiled By	Date
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Contract	Contract Ref:
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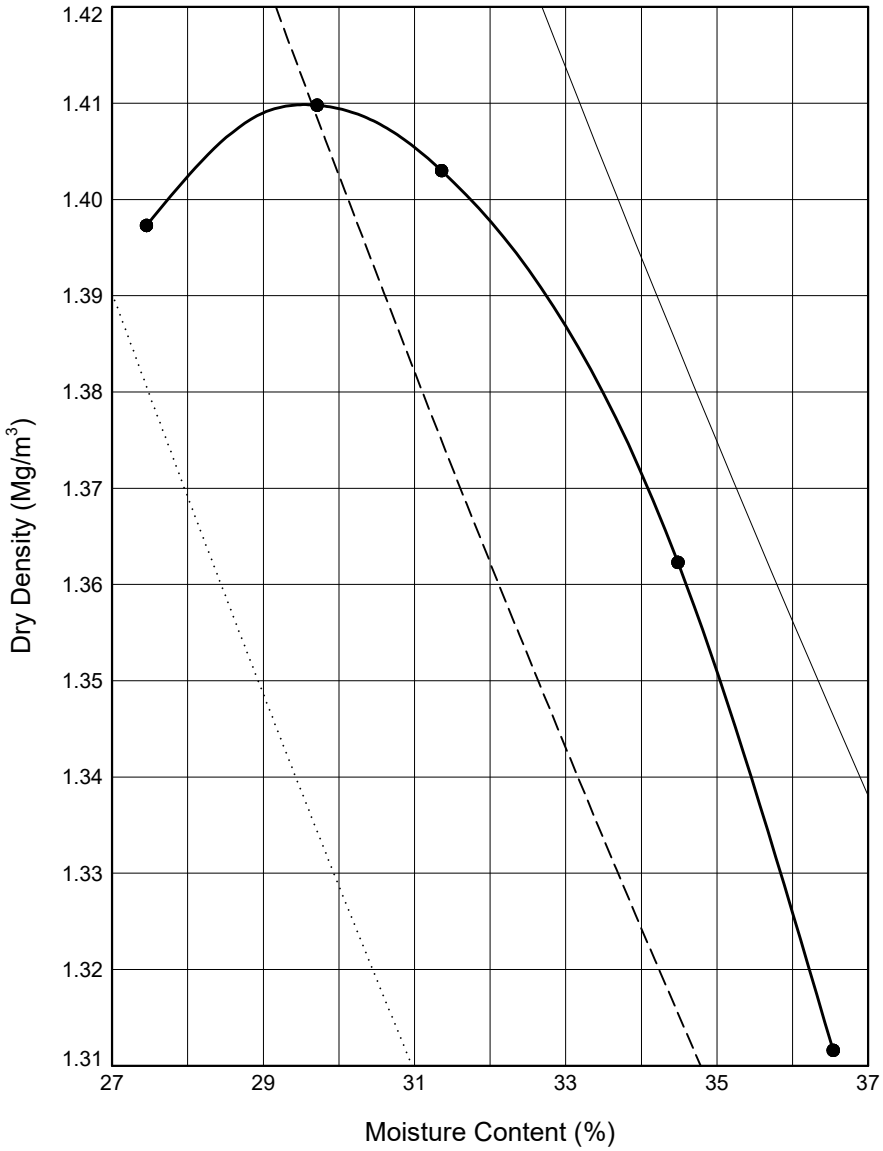
AGS

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: **R22-TP103** Sample Ref: **7** Sample Type: **LB** Depth (m): **0.90**



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**37**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m³)	:	**1.41**
% Retained on 37.5mm BS Sieve	:	**0**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**29.7**
% 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 carried out at each point**		
Size of Soil Pieces	:	**<37.5mm**	Single sample was used.					

Sample Description	Key to Air Voids Lines		
Brown CLAY	——— 0%	– – – – 5%	····· 10%

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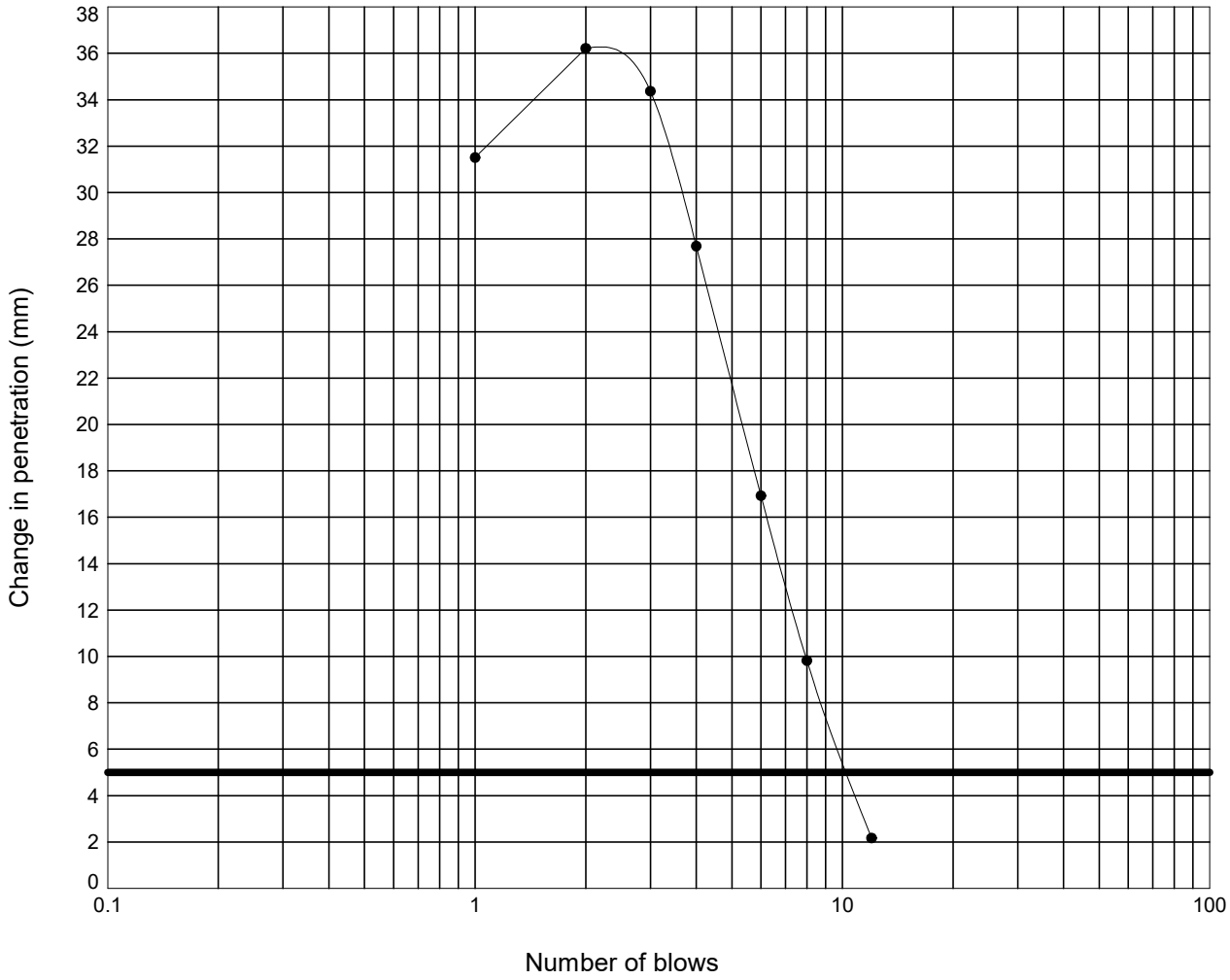
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP103** Sample Ref: **7** Sample Type: **LB** Depth (m): **0.90**

Description : **Brown CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	36	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	9.7	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

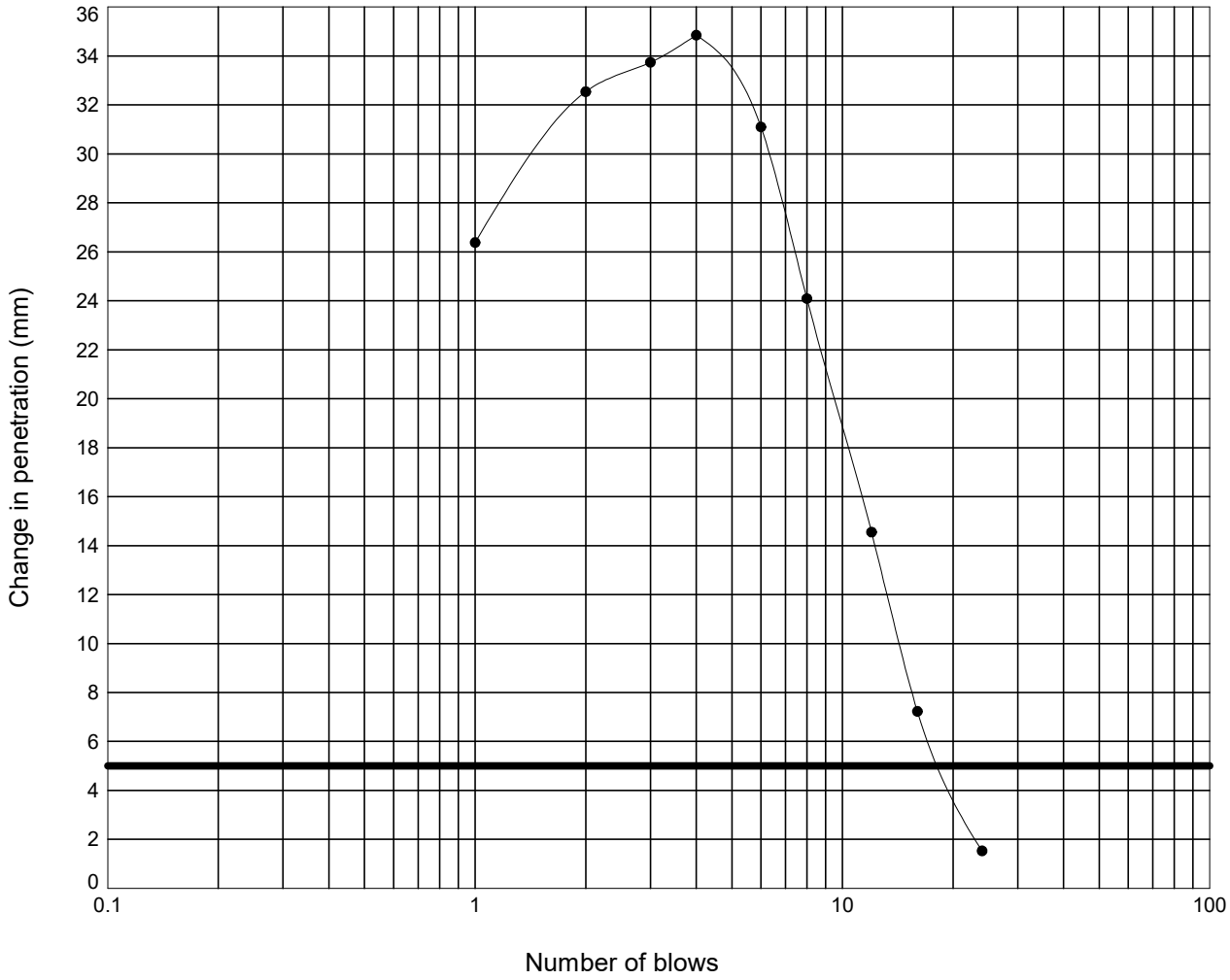
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP103** Sample Ref: **7** Sample Type: **LB** Depth (m): **0.90**

Description : **Brown CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	34	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	12.4	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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SEA Link FEED - Kent Onshore Cable Link	**563607**

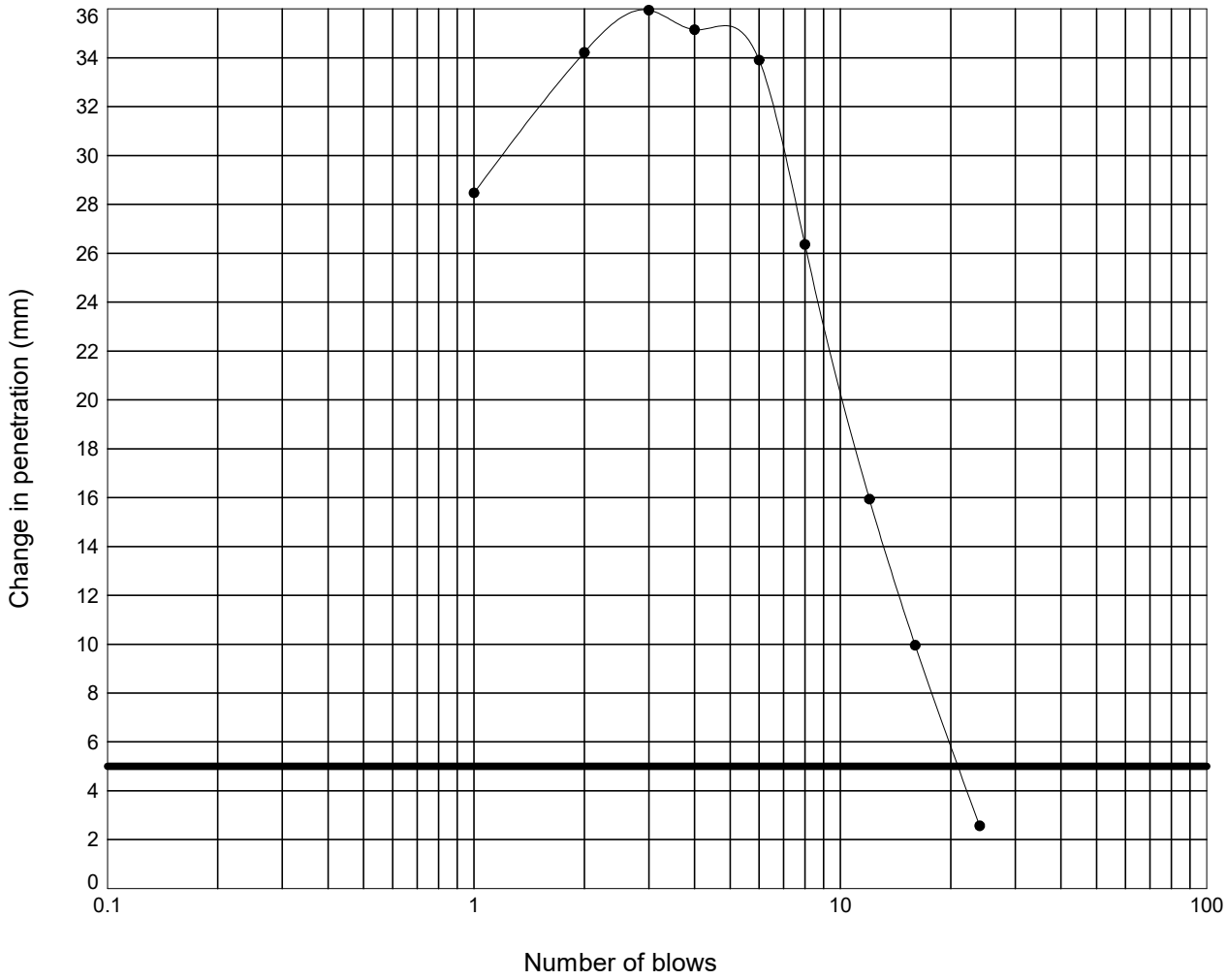
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP103** Sample Ref: **7** Sample Type: **LB** Depth (m): **0.90**

Description : **Brown CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	31	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	12.6	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract Ref: **563607**

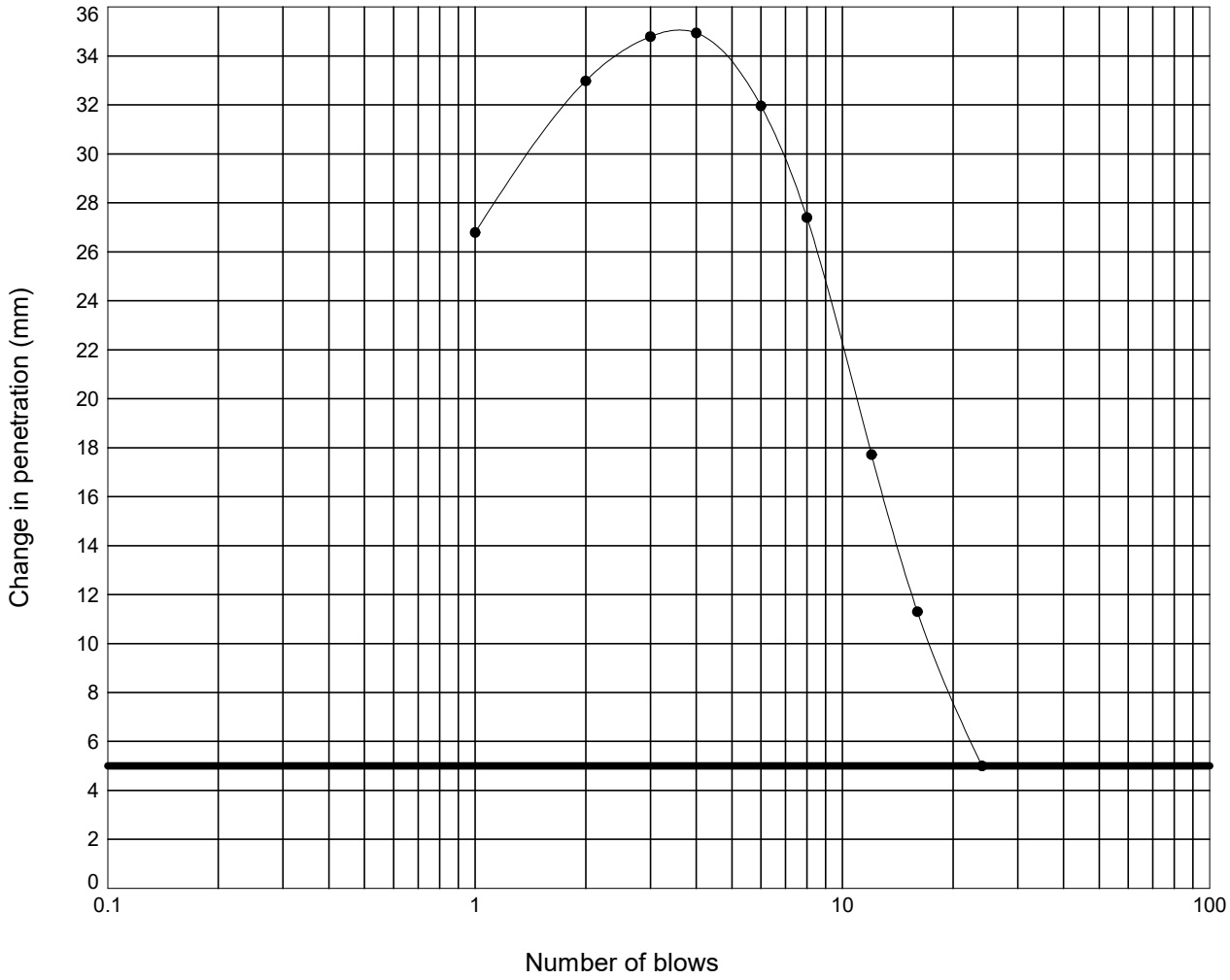
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP103** Sample Ref: **7** Sample Type: **LB** Depth (m): **0.90**

Description : **Brown CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	27	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	13.1	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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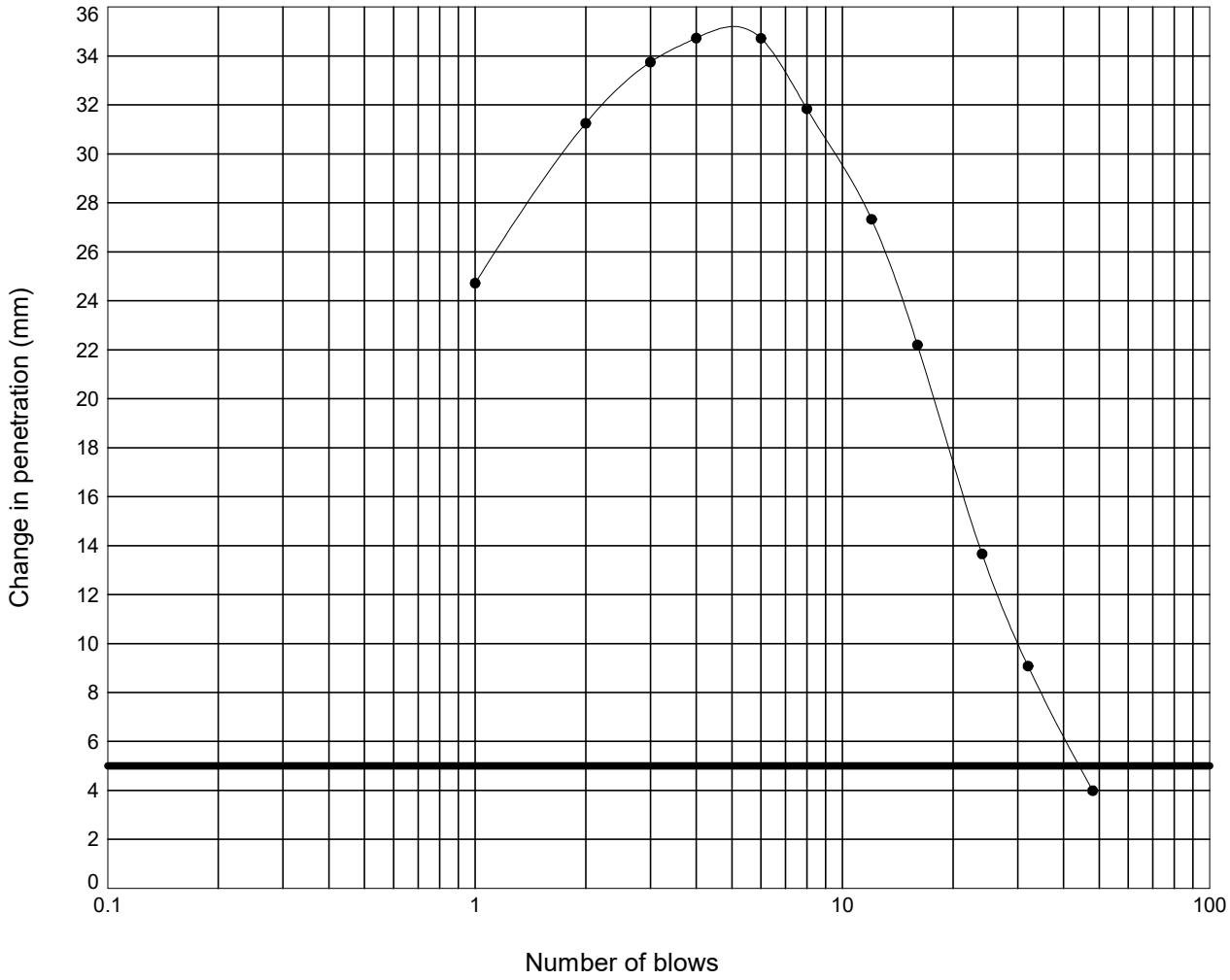
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP103** Sample Ref: **7** Sample Type: **LB** Depth (m): **0.90**

Description : **Brown CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	25	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	15.6	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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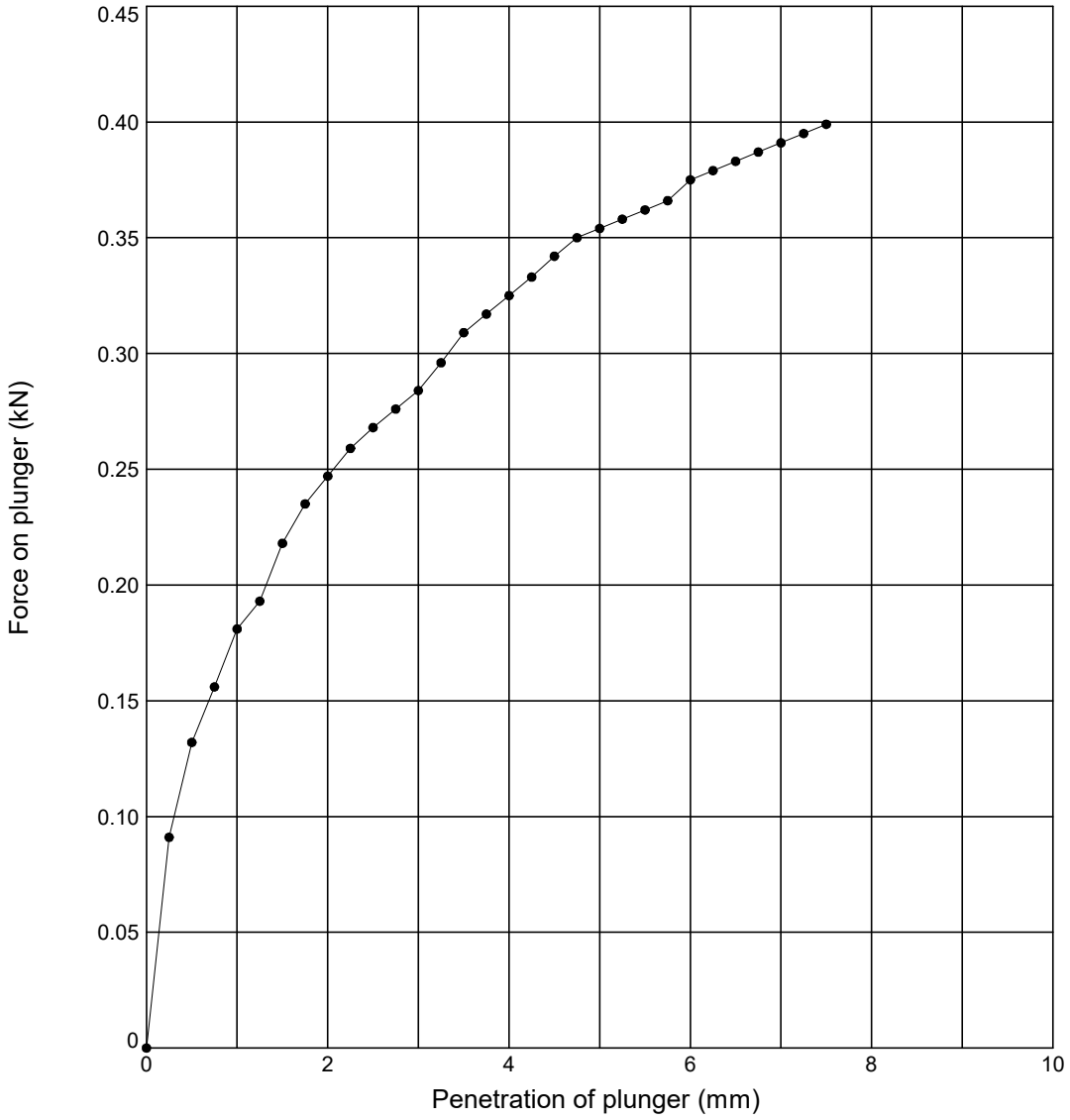
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP103** Sample Ref: **7** Sample Type: **LB** Depth (m): **0.90**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**36**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**36**	**37**
Initial Bulk Density (Mg/m^3)	:	**1.78**	Surcharge (kg)	:	**4.0**	CBR value (%)	**2.0**	**0.00**
Initial Dry Density (Mg/m^3)	:	**1.31**	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
Brown CLAY	● **Top** ⧓ **Base**

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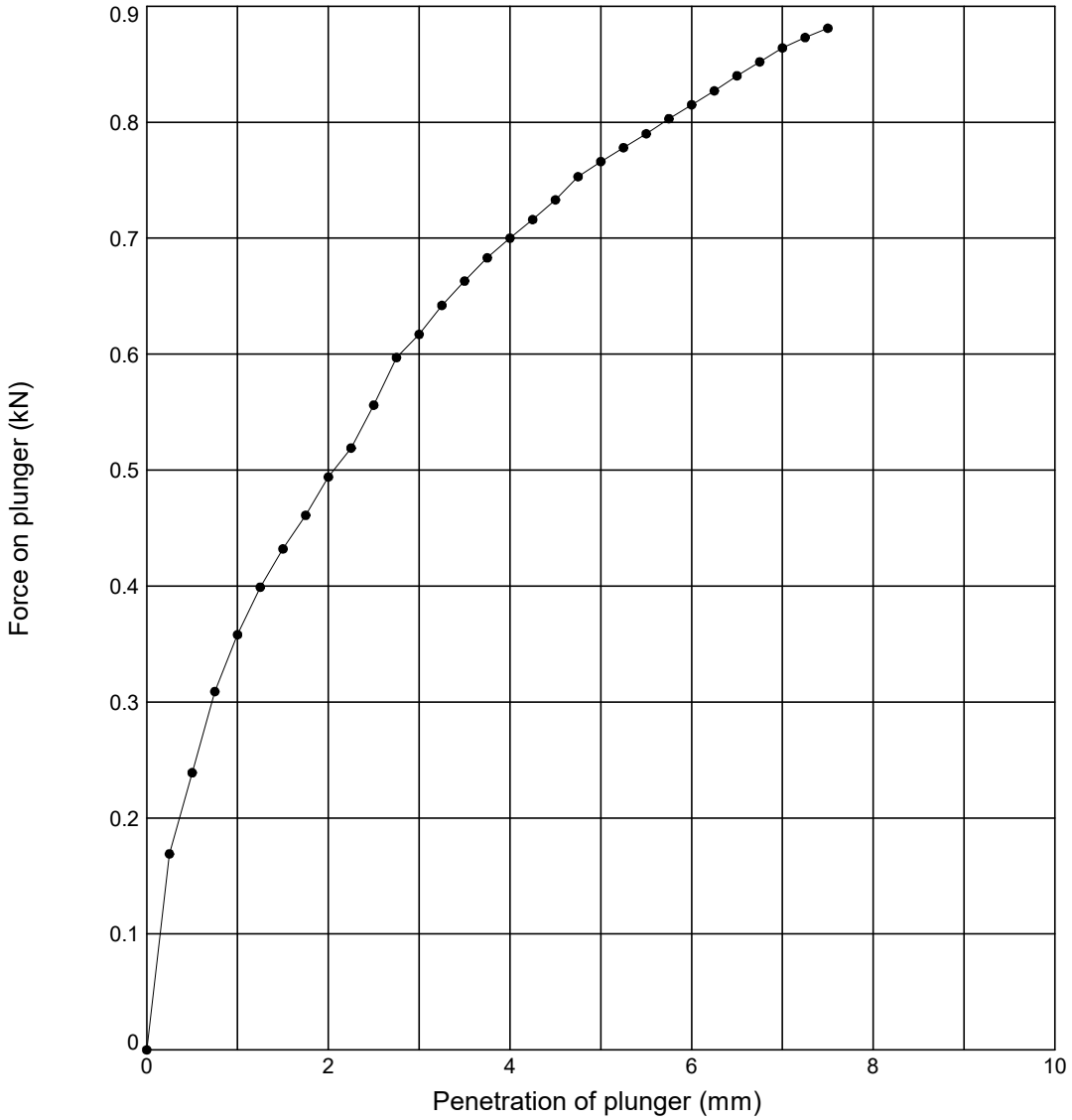
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP103** Sample Ref: **7** Sample Type: **LB** Depth (m): **0.90**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**35**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**35**	**34**
Initial Bulk Density (Mg/m^3)	:	**3.13**	Surcharge (kg)	:	**4.0**	CBR value (%)	**4.2**	**0.00**
Initial Dry Density (Mg/m^3)	:	**2.32**	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
Brown CLAY	● **Top** ⧓ **Base**

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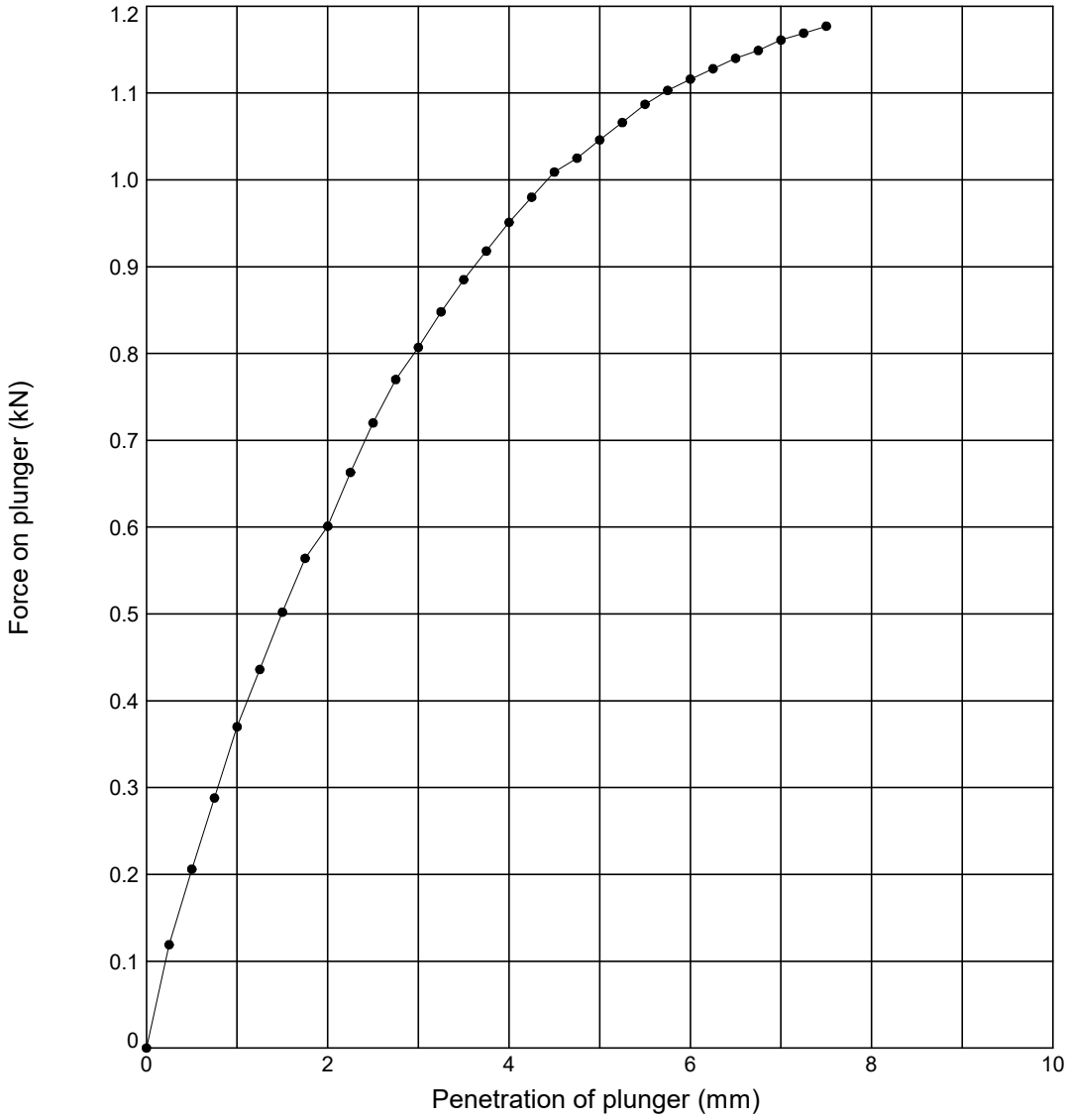
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP103** Sample Ref: **7** Sample Type: **LB** Depth (m): **0.90**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**30**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**30**	**30**
Initial Bulk Density (Mg/m^3)	:	**1.84**	Surcharge (kg)	:	**4.0**	CBR value (%)	**5.4**	**0.00**
Initial Dry Density (Mg/m^3)	:	**1.42**	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
Brown CLAY	● **Top** ⧓ **Base**

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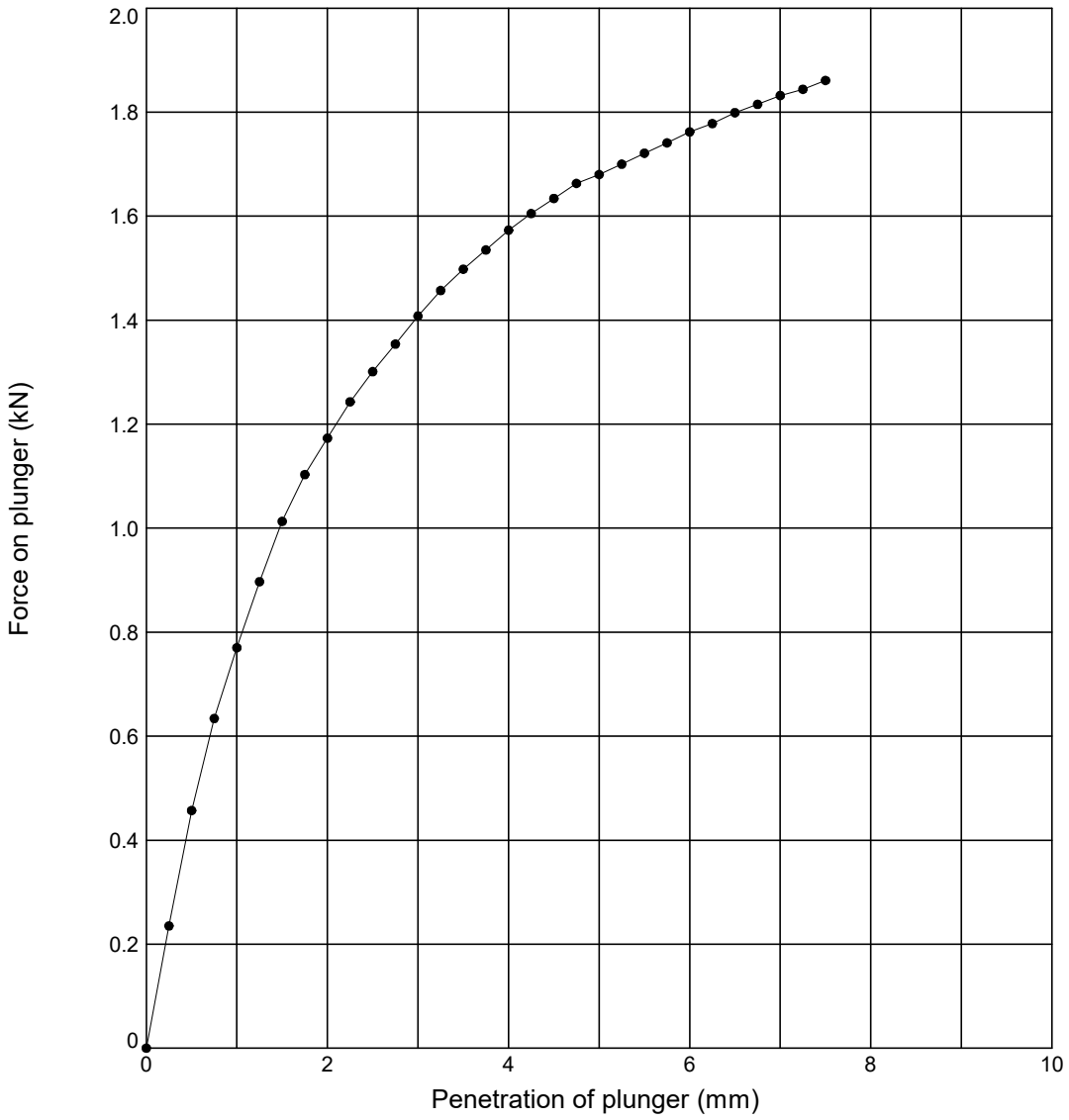
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP103** Sample Ref: **7** Sample Type: **LB** Depth (m): **0.90**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**30**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**30**	**30**
Initial Bulk Density (Mg/m^3)	:	**1.83**	Surcharge (kg)	:	**4.0**	CBR value (%)	**9.8**	**0.00**
Initial Dry Density (Mg/m^3)	:	**1.41**	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
Brown CLAY	● **Top** ⧓ **Base**

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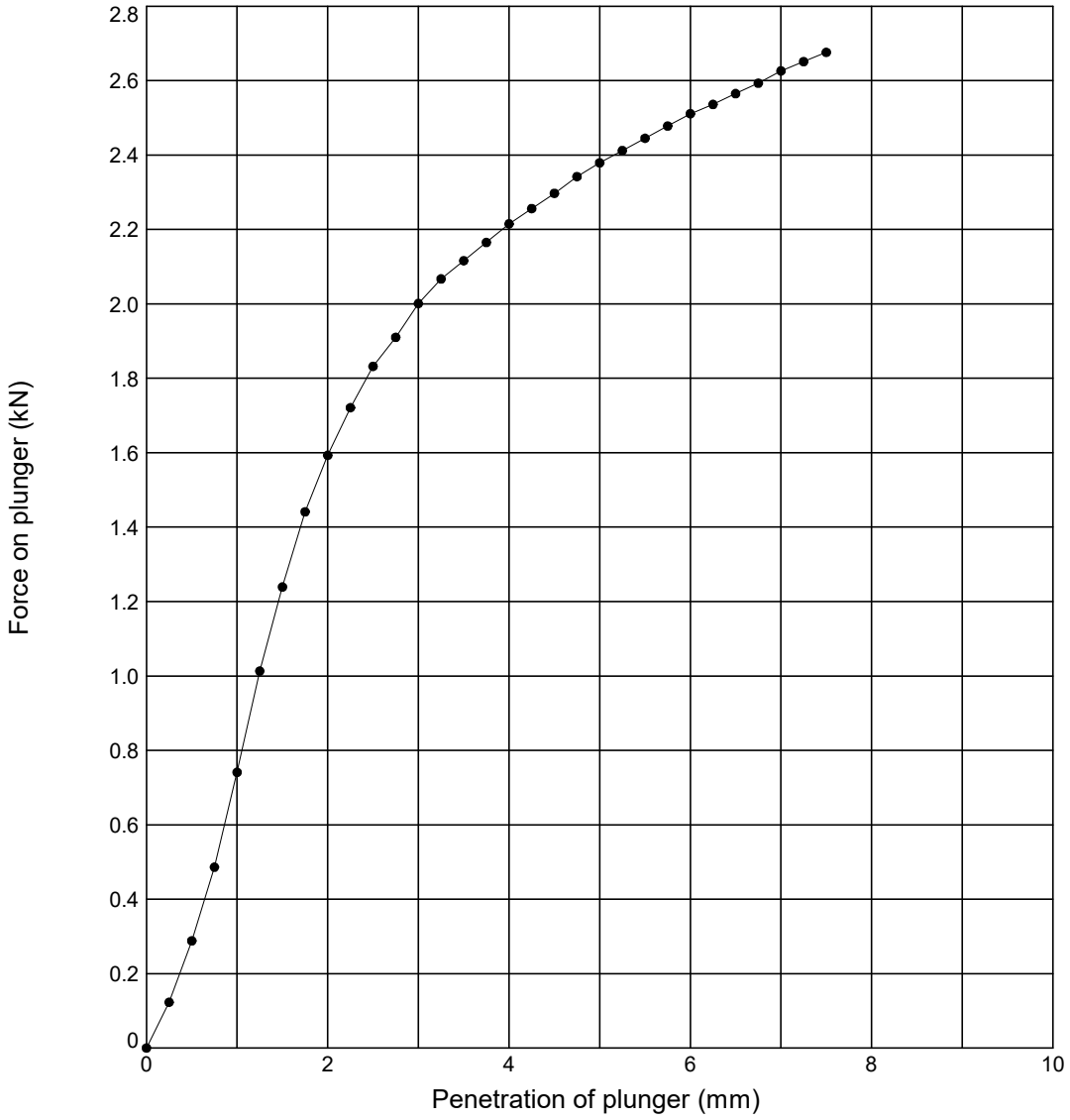
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP103** Sample Ref: **7** Sample Type: **LB** Depth (m): **0.90**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**28**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**28**	**27**
Initial Bulk Density (Mg/m^3)	:	**1.78**	Surcharge (kg)	:	**4.0**	CBR value (%)	**14**	**0.00**
Initial Dry Density (Mg/m^3)	:	**1.39**	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
Brown CLAY	● **Top** ⧓ **Base**

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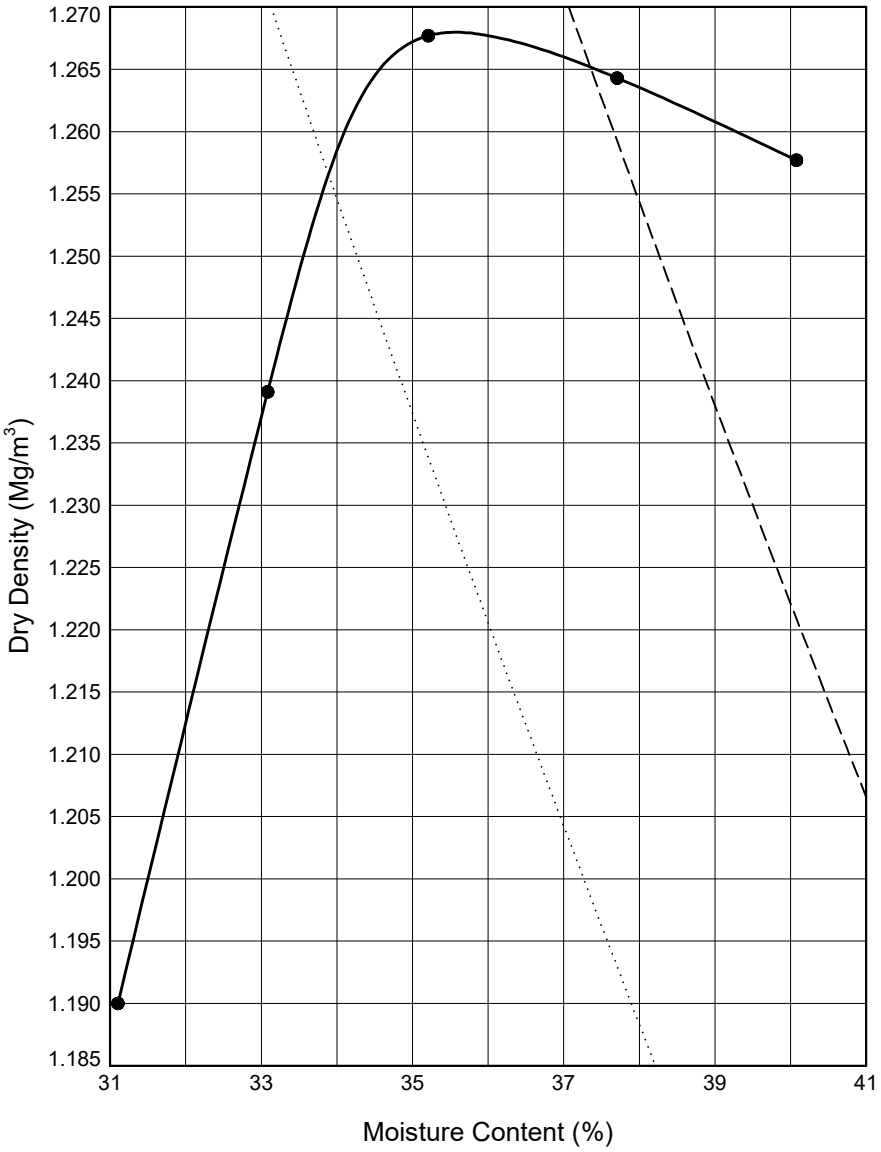
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **R22-TP104** Sample Ref: **13** Sample Type: **LB** Depth (m): **1.80**



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**40**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m³)	:	**1.27**
% Retained on 37.5mm BS Sieve	:	**0**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**35.2**
% 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 test carried out at each point**		
Size of Soil Pieces	:	**<37.5mm**	Single sample was used.					

Sample Description	Key to Air Voids Lines		
Grey CLAY	——— 0%	– – – – 5%	····· 10%

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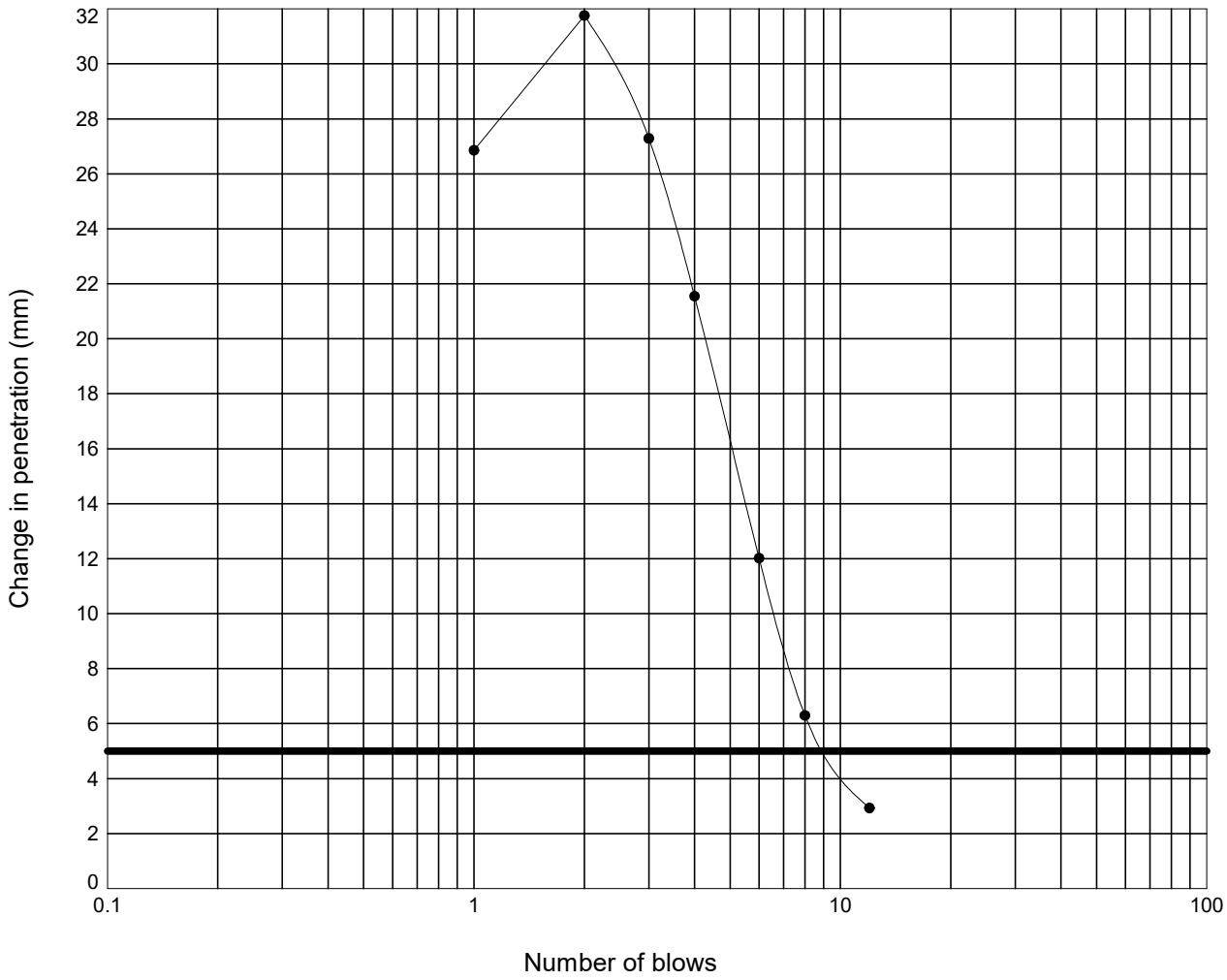
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP104** Sample Ref: **13** Sample Type: **LB** Depth (m): **1.80**

Description : **Grey CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	= 39	%
Percentage retained on 20 mm sieve :	= 0	%
Moisture Condition Value :	= 9.1	
Interpretation of curve:	= Steepest straight line - Fig 9	

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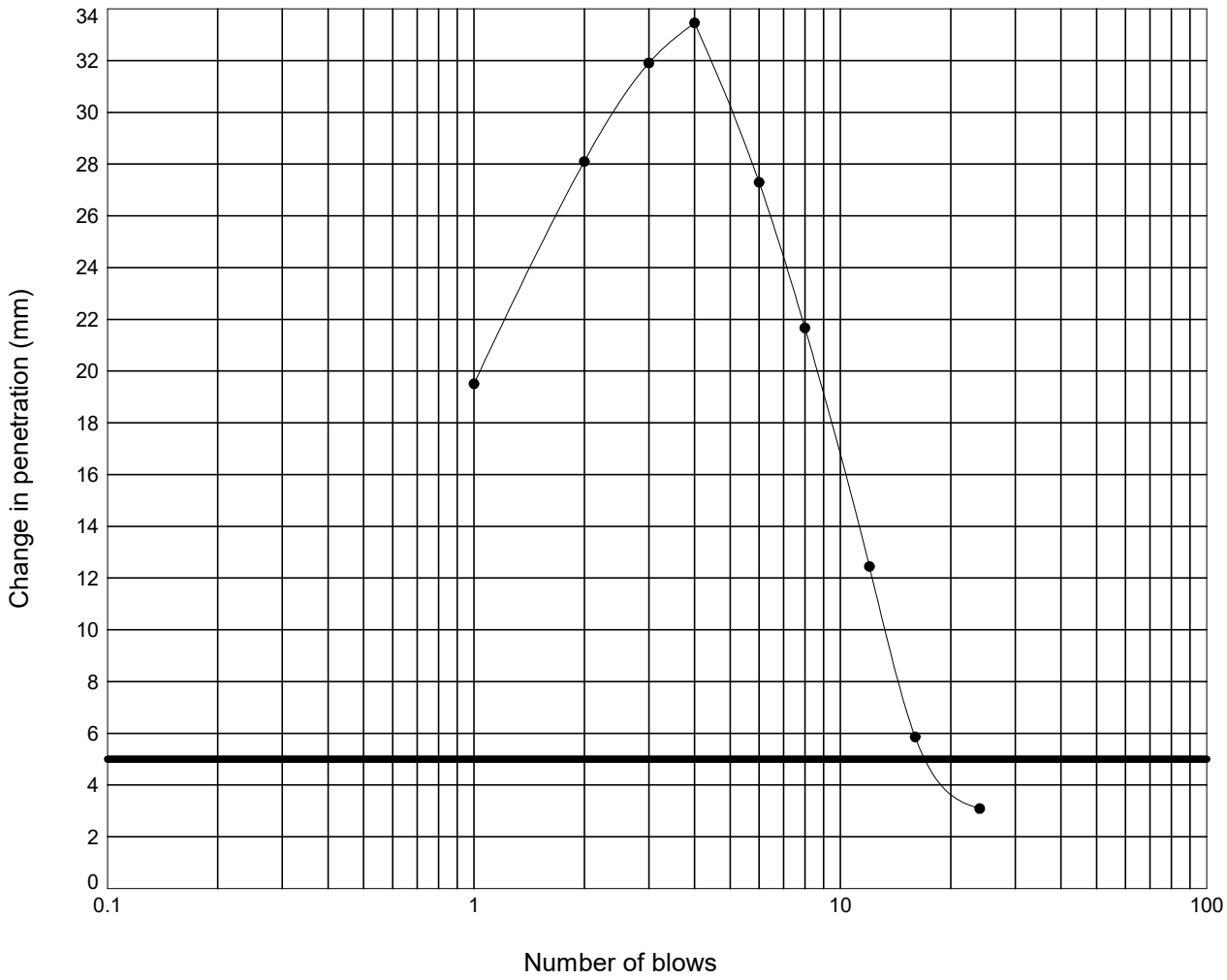
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP104** Sample Ref: **13** Sample Type: **LB** Depth (m): **1.80**

Description : **Grey CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	33	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	12.2	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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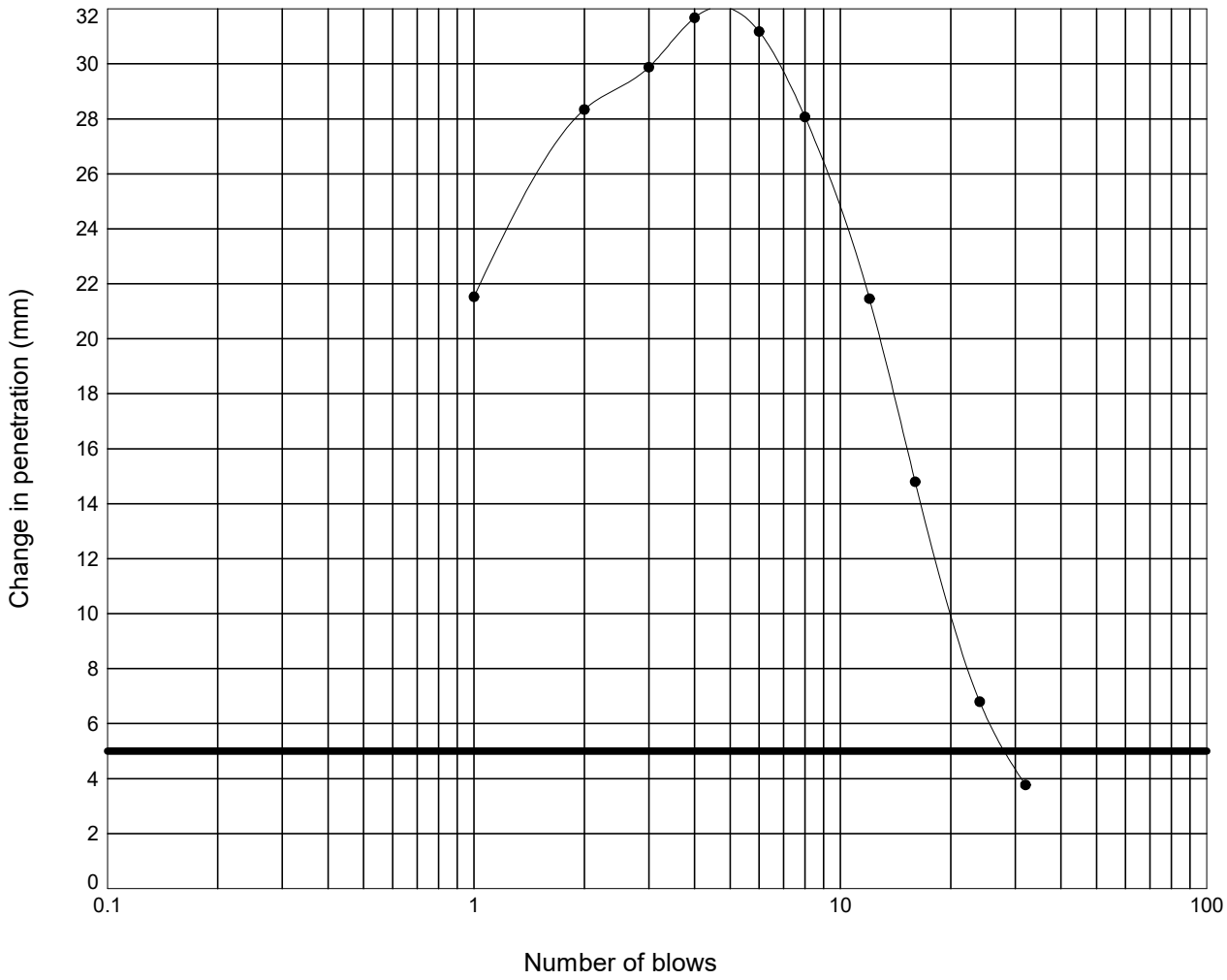
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP104** Sample Ref: **13** Sample Type: **LB** Depth (m): **1.80**

Description : **Grey CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	34	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	13.9	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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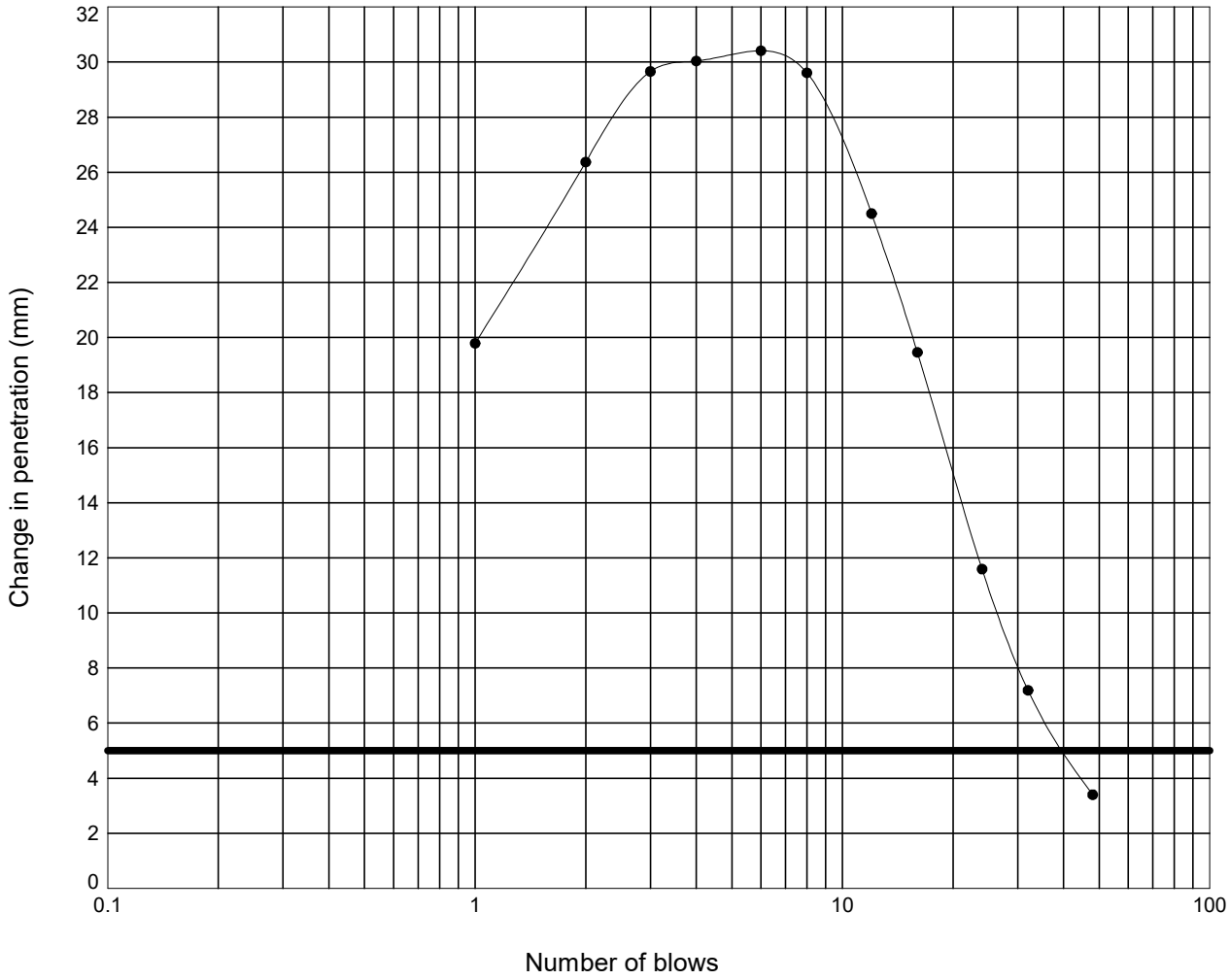
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP104** Sample Ref: **13** Sample Type: **LB** Depth (m): **1.80**

Description : **Grey CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	37	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	15.3	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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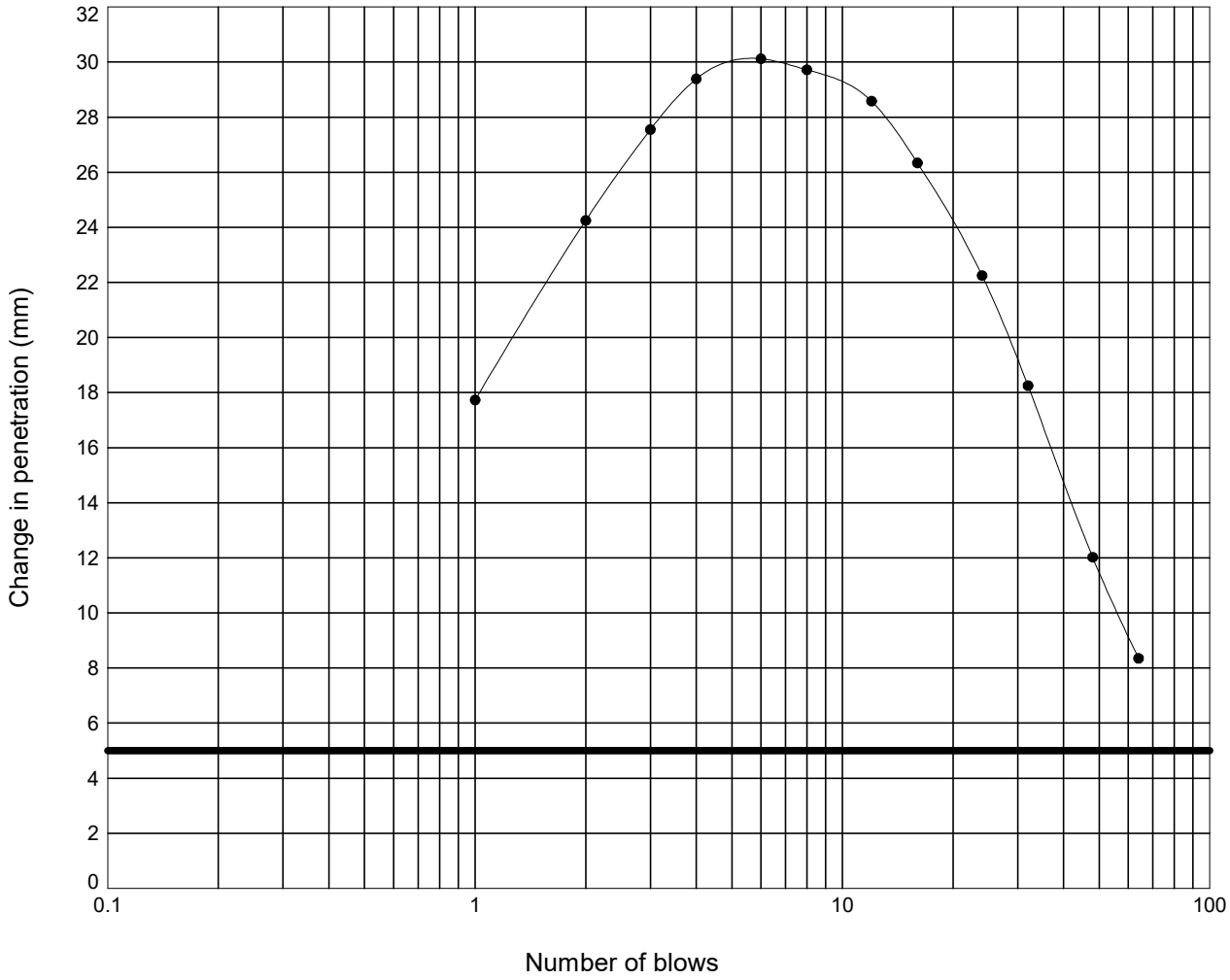
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP104** Sample Ref: **13** Sample Type: **LB** Depth (m): **1.80**

Description : **Grey CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	= 38	%
Percentage retained on 20 mm sieve :	= 0	%
Moisture Condition Value :	= 18.8	
Interpretation of curve:	= Steepest straight line - Fig 9	

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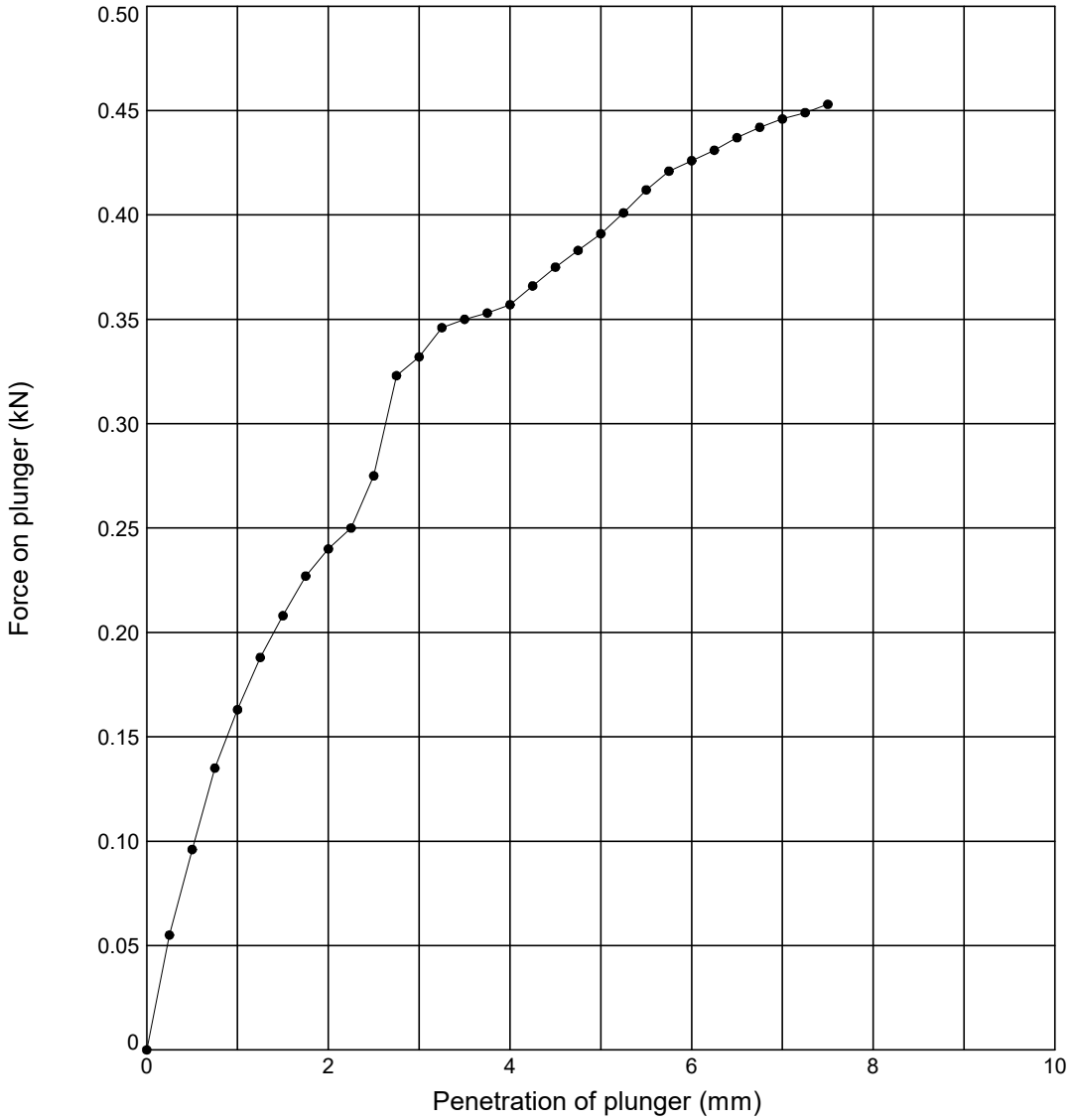
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP104** Sample Ref: **13** Sample Type: **LB** Depth (m): **1.80**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**40**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**40**	**40**
Initial Bulk Density (Mg/m^3)	:	**1.76**	Surcharge (kg)	:	**4.0**	CBR value (%)	**2.1**	**0.00**
Initial Dry Density (Mg/m^3)	:	**1.26**	Soaking Time (hrs)	:	**-**	Remarks: **None**		
% retained on 20mm sieve	:	**0**	Swelling (mm)	:	**-**			

Sample Description	Key
Grey CLAY	● **Top** ⧓ **Base**

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Compiled By	Date
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Contract	Contract Ref:
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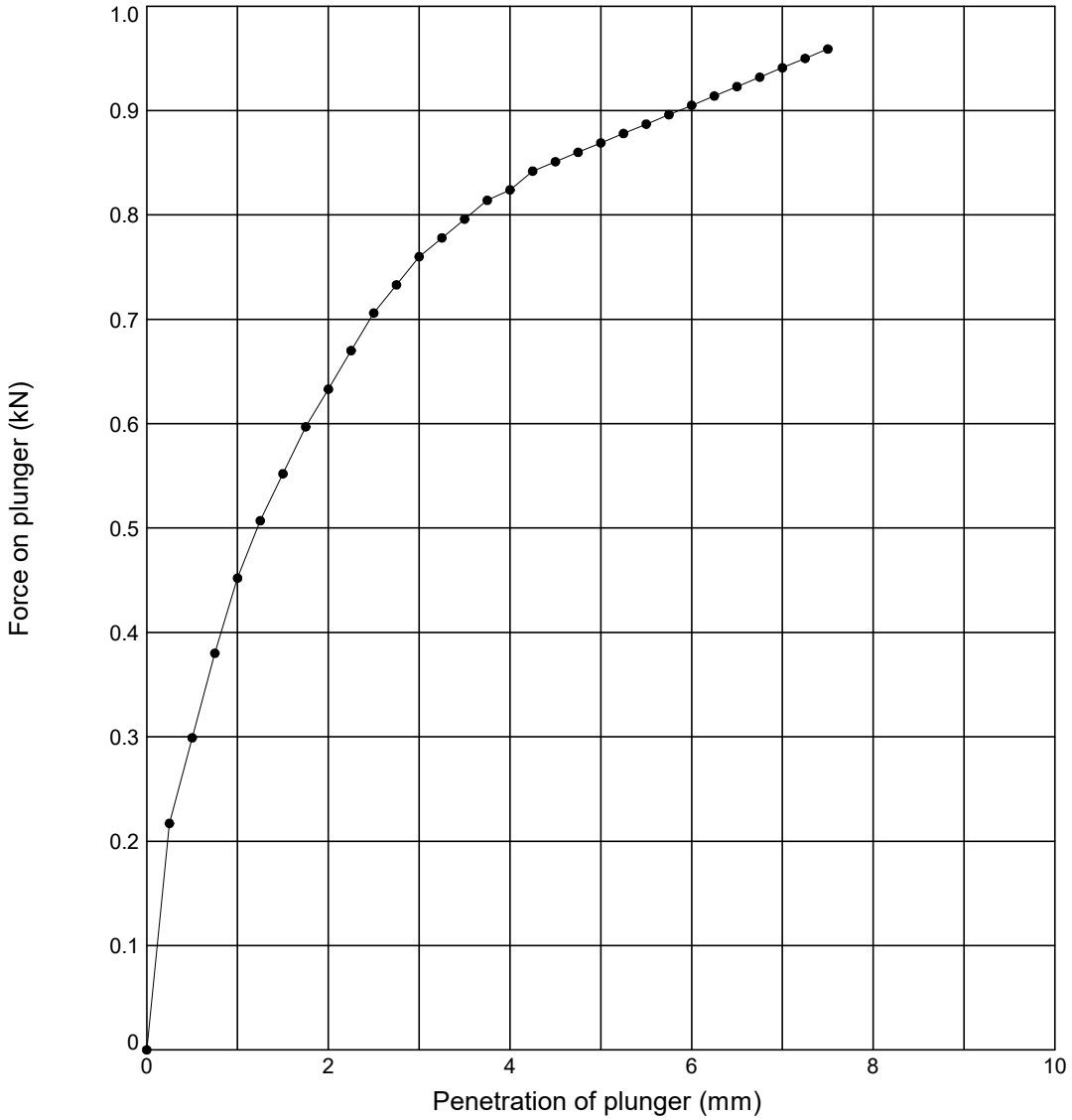
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP104** Sample Ref: **13** Sample Type: **LB** Depth (m): **1.80**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:		Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)		
Initial Bulk Density (Mg/m^3)	:	**1.74**	Surcharge (kg)	:	**4.0**	CBR value (%)	**5.3**	**0.00**
Initial Dry Density (Mg/m^3)	:	**1.74**	Soaking Time (hrs)	:	**-**	Remarks: **None**		
% retained on 20mm sieve	:	**0**	Swelling (mm)	:	**-**			

Sample Description	Key
Grey CLAY	● **Top** ⧓ **Base**

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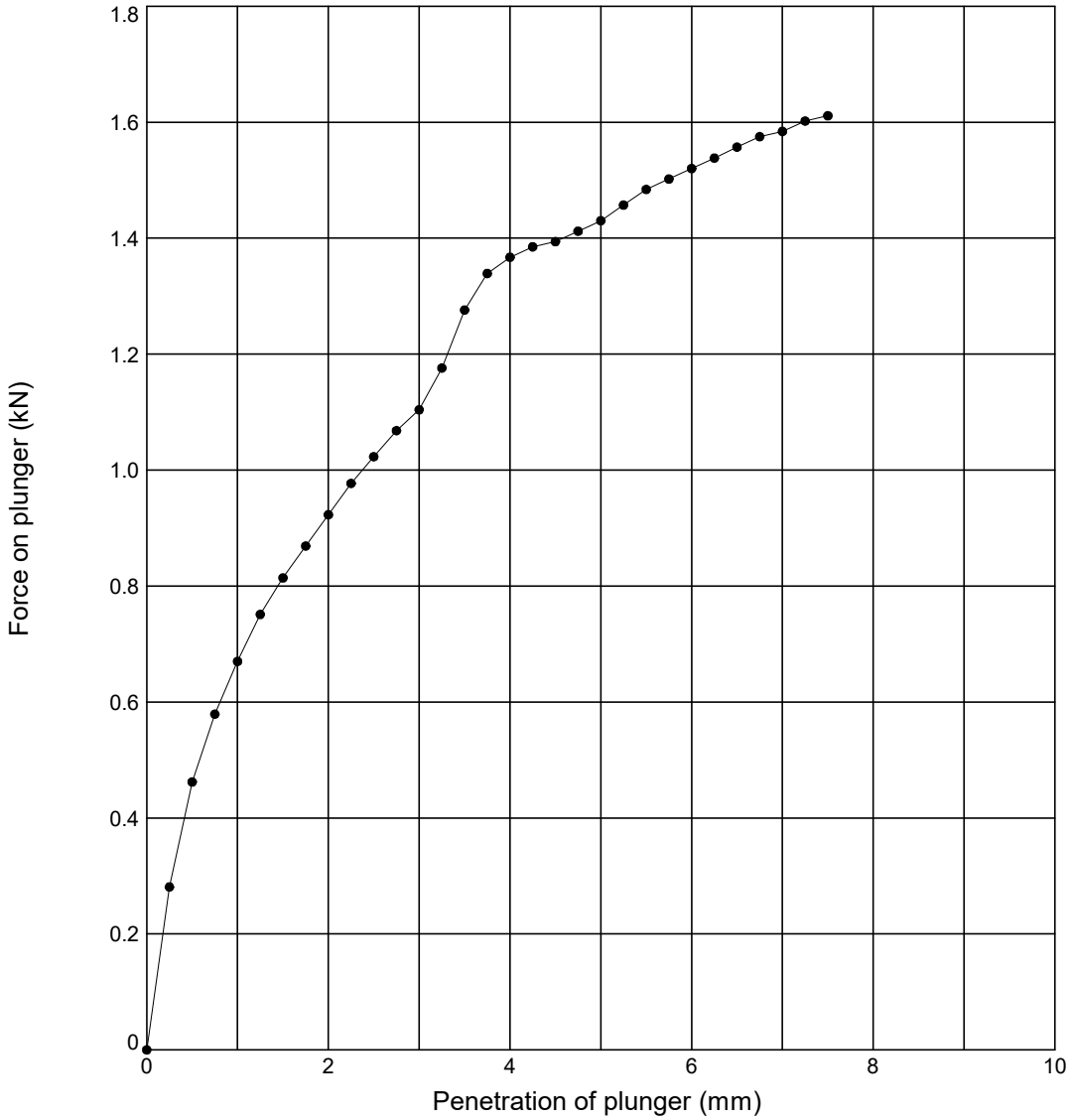
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP104** Sample Ref: **13** Sample Type: **LB** Depth (m): **1.80**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**35**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**35**	**24**
Initial Bulk Density (Mg/m^3)	:	**1.71**	Surcharge (kg)	:	**4.0**	CBR value (%)	**7.7**	**0.00**
Initial Dry Density (Mg/m^3)	:	**1.26**	Soaking Time (hrs)	:	**-**	Remarks: **None**		
% retained on 20mm sieve	:	**0**	Swelling (mm)	:	**-**			

Sample Description	Key
Grey CLAY	● **Top** ⧓ **Base**

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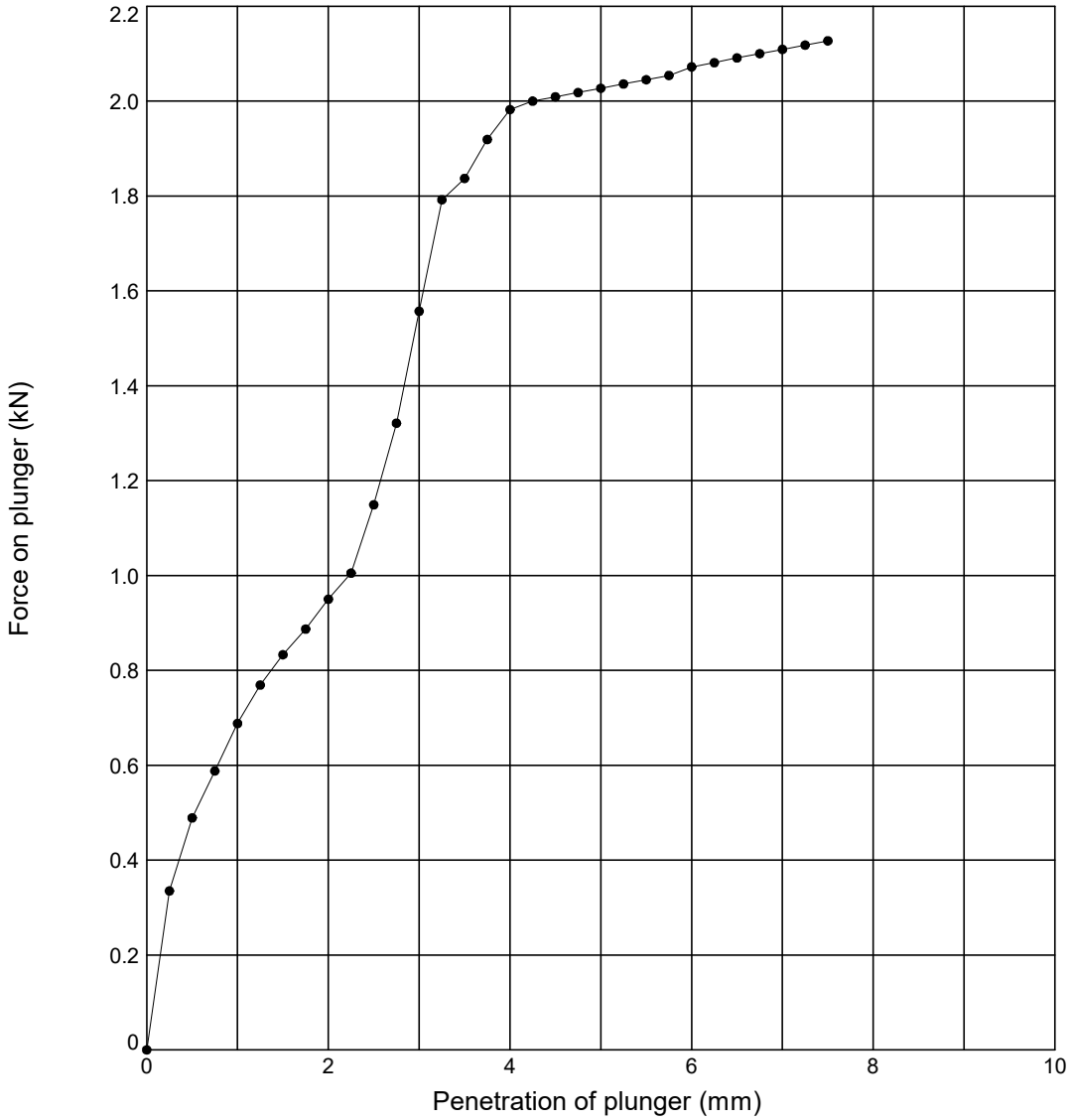
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP104** Sample Ref: **13** Sample Type: **LB** Depth (m): **1.80**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**33**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**33**	**33**
Initial Bulk Density (Mg/m^3)	:	**1.65**	Surcharge (kg)	:	**4.0**	CBR value (%)	**10**	**0.00**
Initial Dry Density (Mg/m^3)	:	**1.24**	Soaking Time (hrs)	:	**-**	Remarks: **None**		
% retained on 20mm sieve	:	**0**	Swelling (mm)	:	**-**			

Sample Description	Key
Grey CLAY	● **Top** ⧓ **Base**

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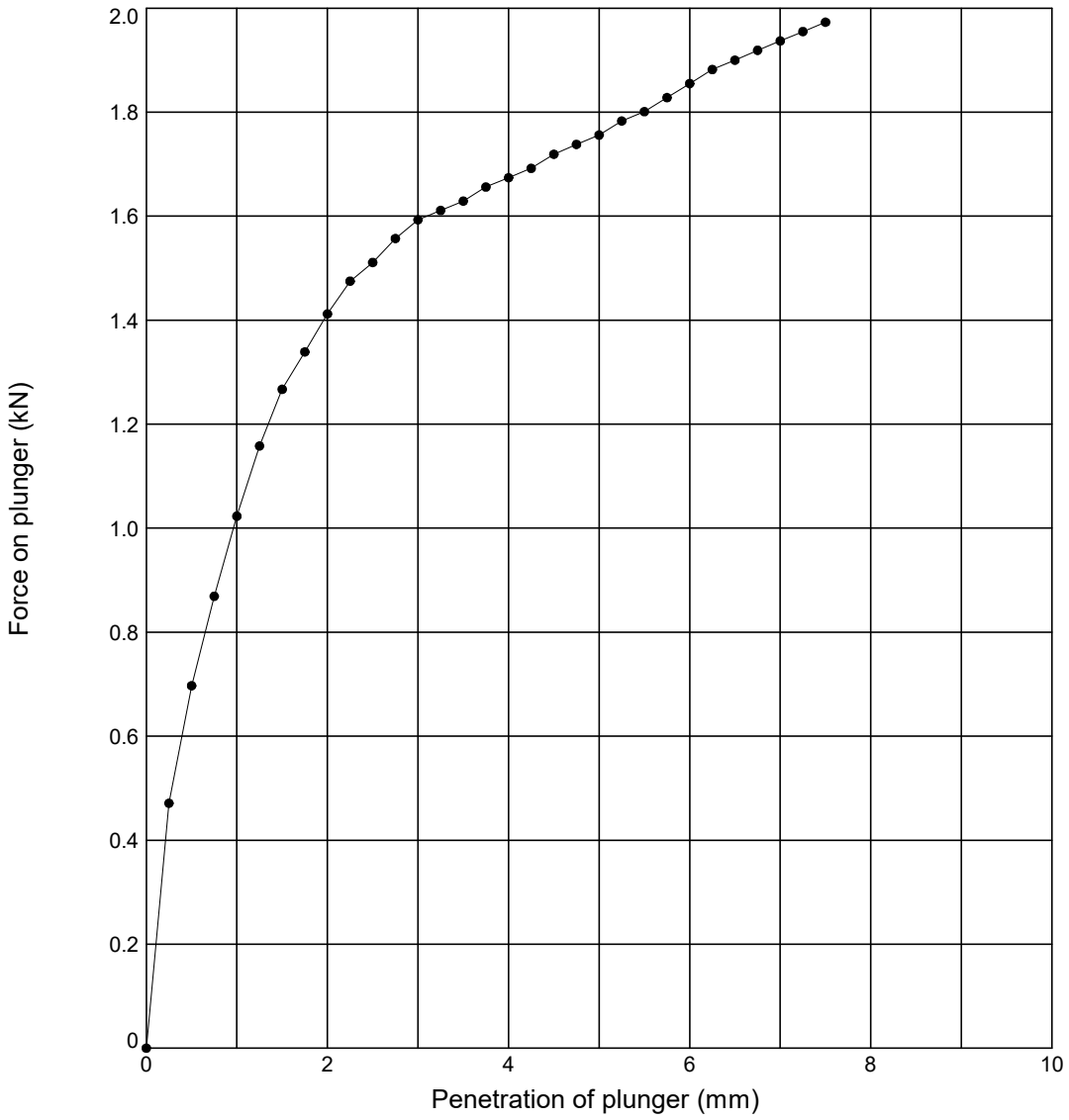
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP104** Sample Ref: **13** Sample Type: **LB** Depth (m): **1.80**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**31**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**30**	**32**
Initial Bulk Density (Mg/m^3)	:	**1.56**	Surcharge (kg)	:	**4.0**	CBR value (%)	**11**	**0.00**
Initial Dry Density (Mg/m^3)	:	**1.20**	Soaking Time (hrs)	:	**-**	Remarks: **None**		
% retained on 20mm sieve	:	**0**	Swelling (mm)	:	**-**			

Sample Description	Key
Grey CLAY	● **Top** ⧓ **Base**

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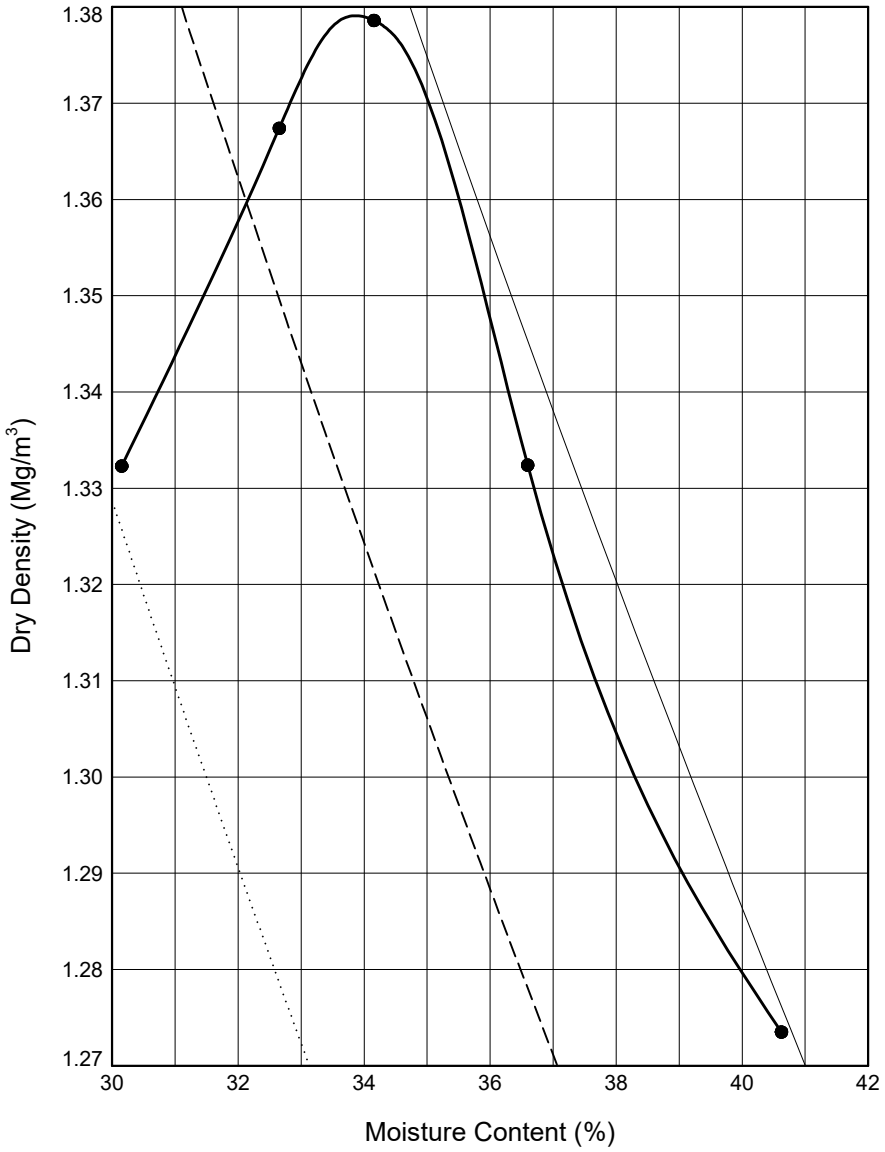
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **R22-TP105** Sample Ref: **11** Sample Type: **LB** Depth (m): **1.10**



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**41**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m³)	:	**1.38**
% Retained on 37.5mm BS Sieve	:	**0**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**33.9**
% 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 test carried out at each point**		
Size of Soil Pieces	:	**<37.5mm**	Single sample was used.					

Sample Description	Key to Air Voids Lines		
Brown very silty sandy CLAY	——— 0%	– – – – 5%	····· 10%

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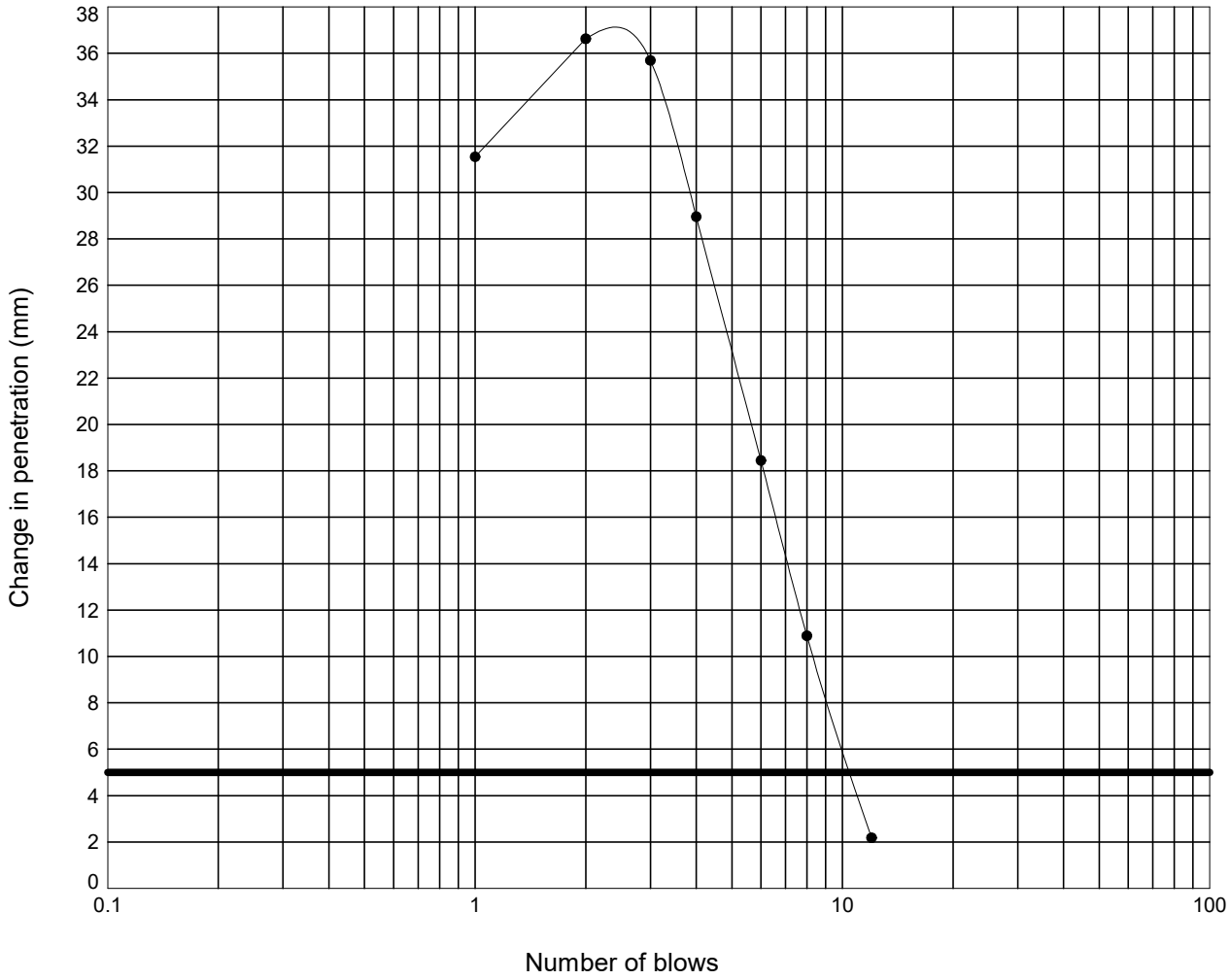
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP105** Sample Ref: **11** Sample Type: **LB** Depth (m): **1.10**

Description : **Brown very silty sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	39	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	10.0	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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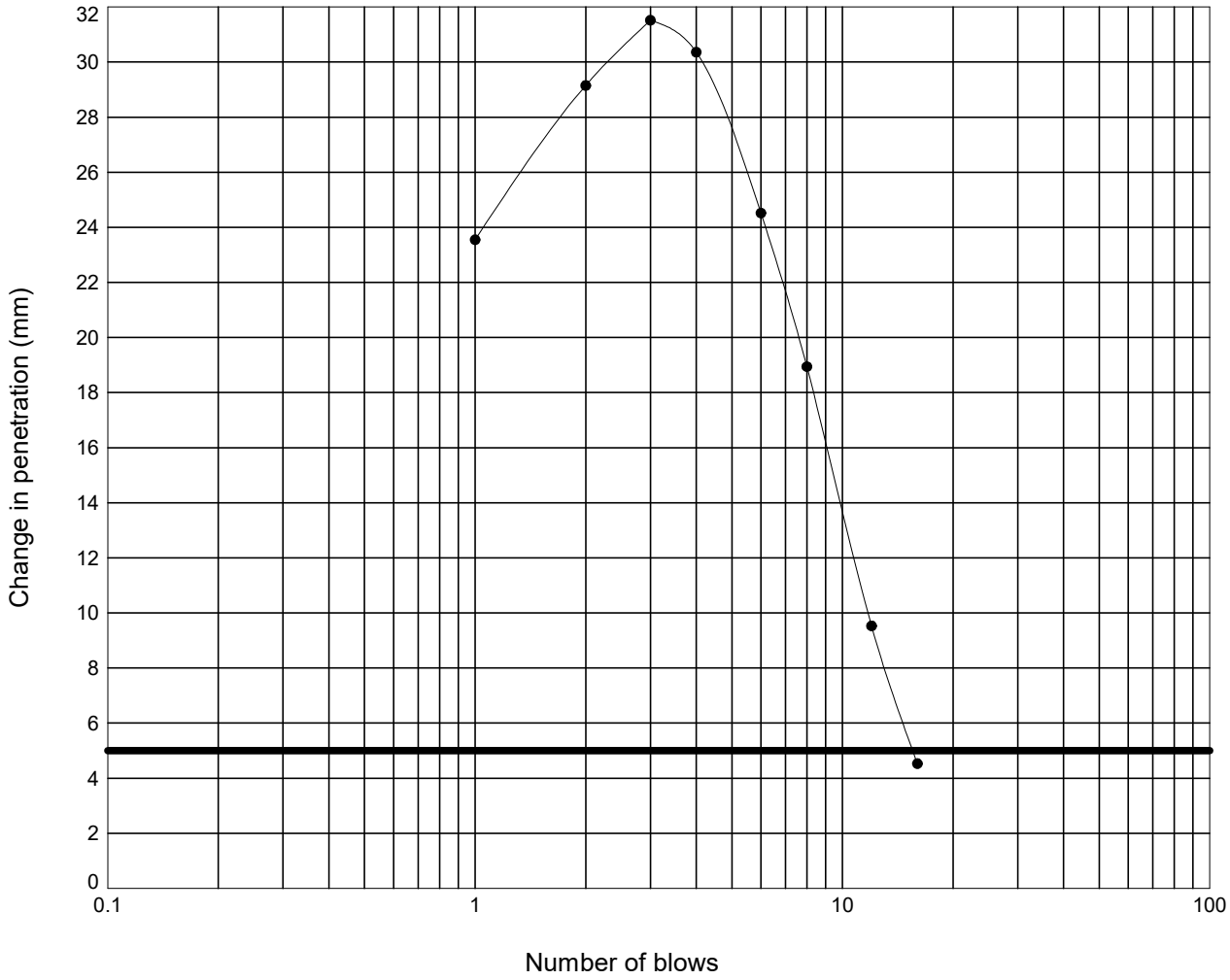
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP105** Sample Ref: **11** Sample Type: **LB** Depth (m): **1.10**

Description : **Brown very silty sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	34	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	11.6	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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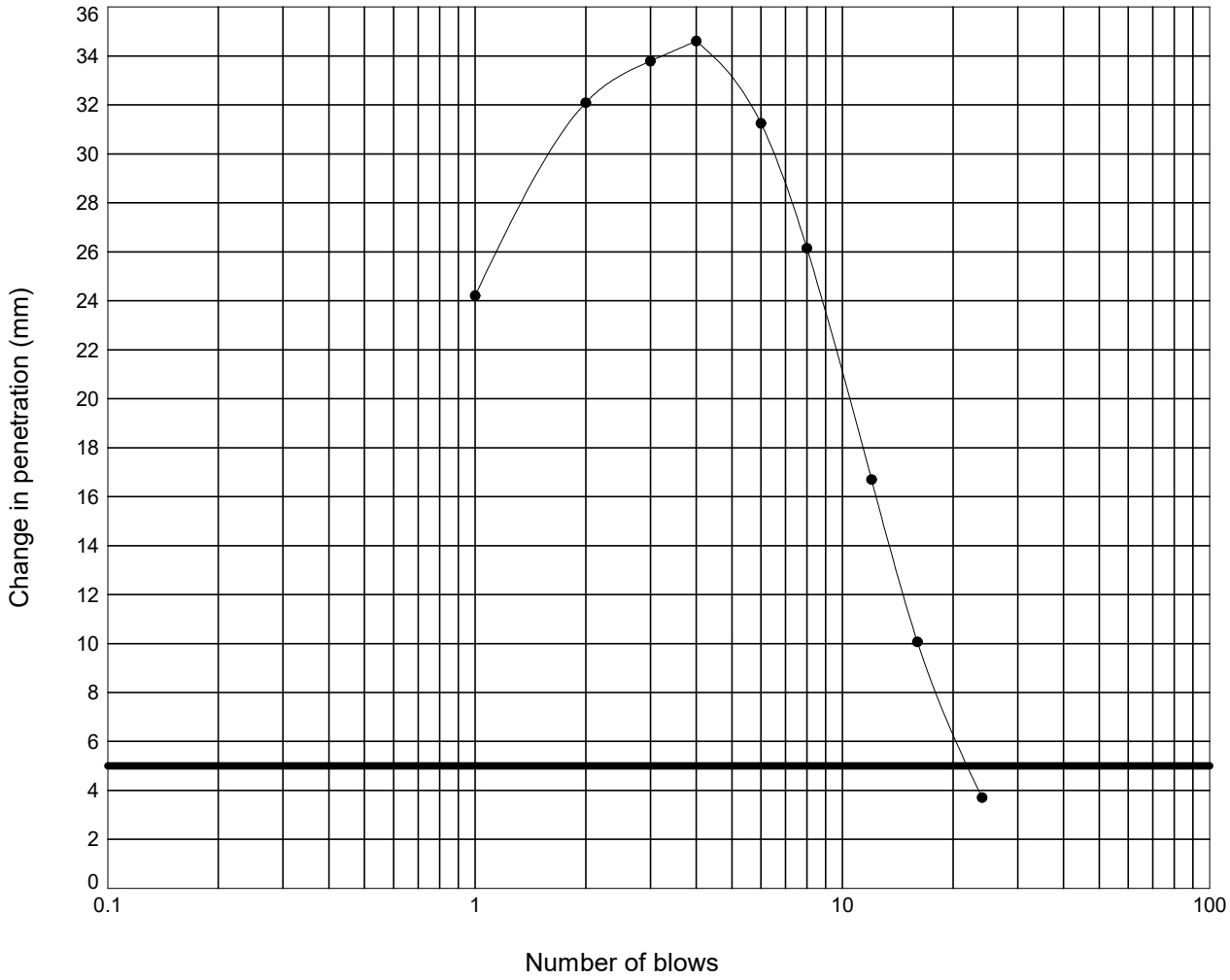
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP105** Sample Ref: **11** Sample Type: **LB** Depth (m): **1.10**

Description : **Brown very silty sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	32	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	13.0	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract	Contract Ref:
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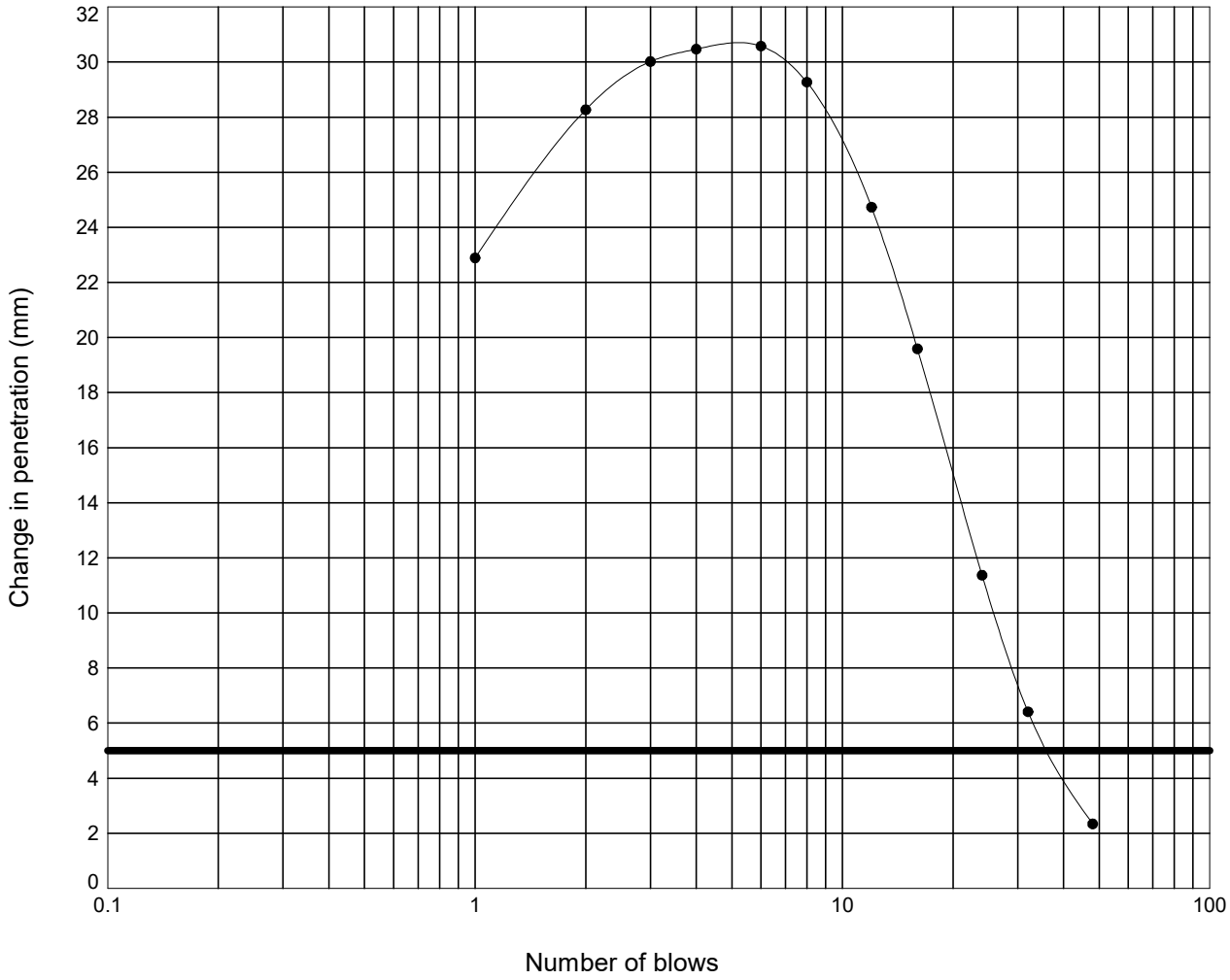
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP105** Sample Ref: **11** Sample Type: **LB** Depth (m): **1.10**

Description : **Brown very silty sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	29	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	15.2	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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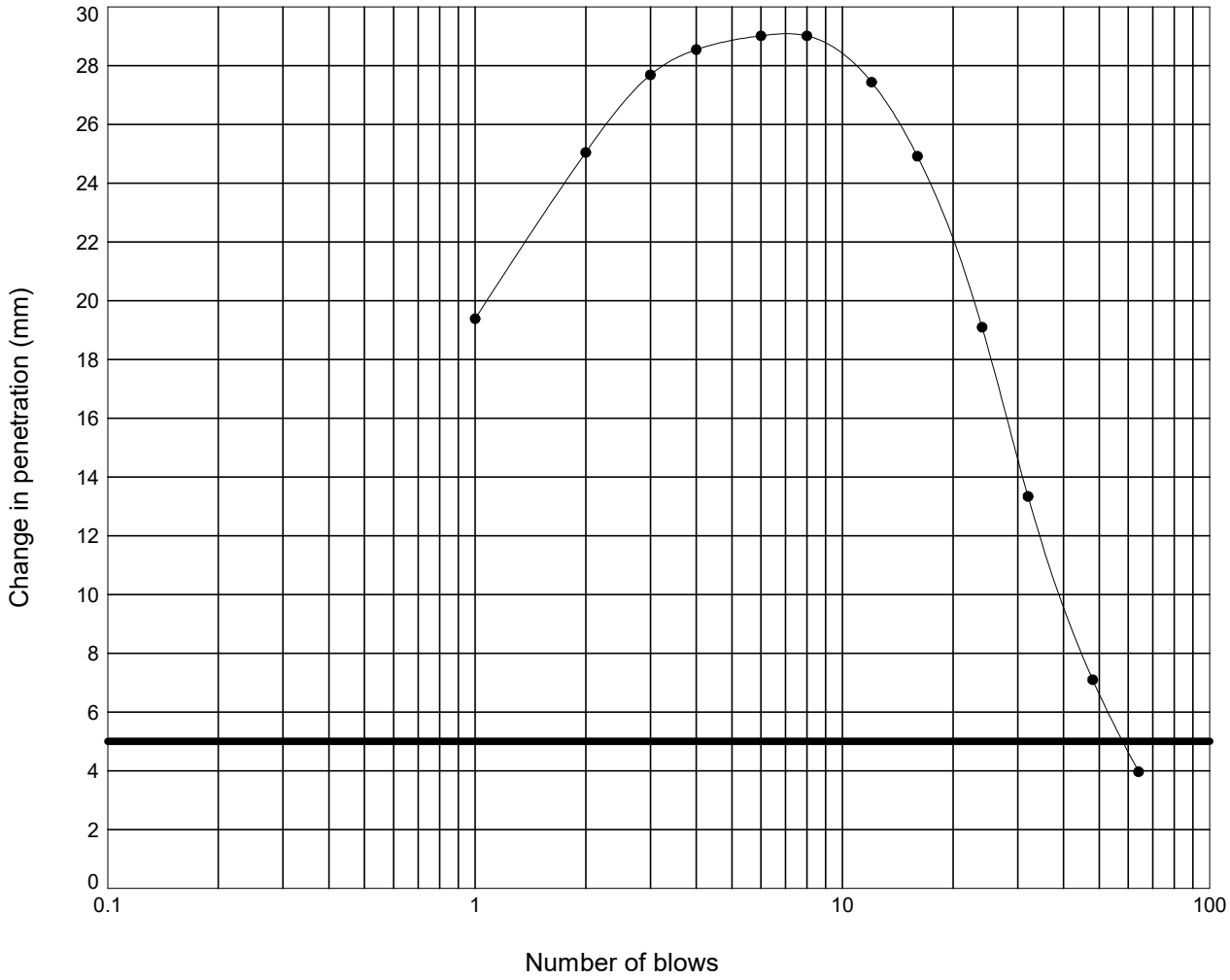
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP105** Sample Ref: **11** Sample Type: **LB** Depth (m): **1.10**

Description : **Brown very silty sandy CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	= 27	%
Percentage retained on 20 mm sieve :	= 0	%
Moisture Condition Value :	= 16.9	
Interpretation of curve:	= Steepest straight line - Fig 9	

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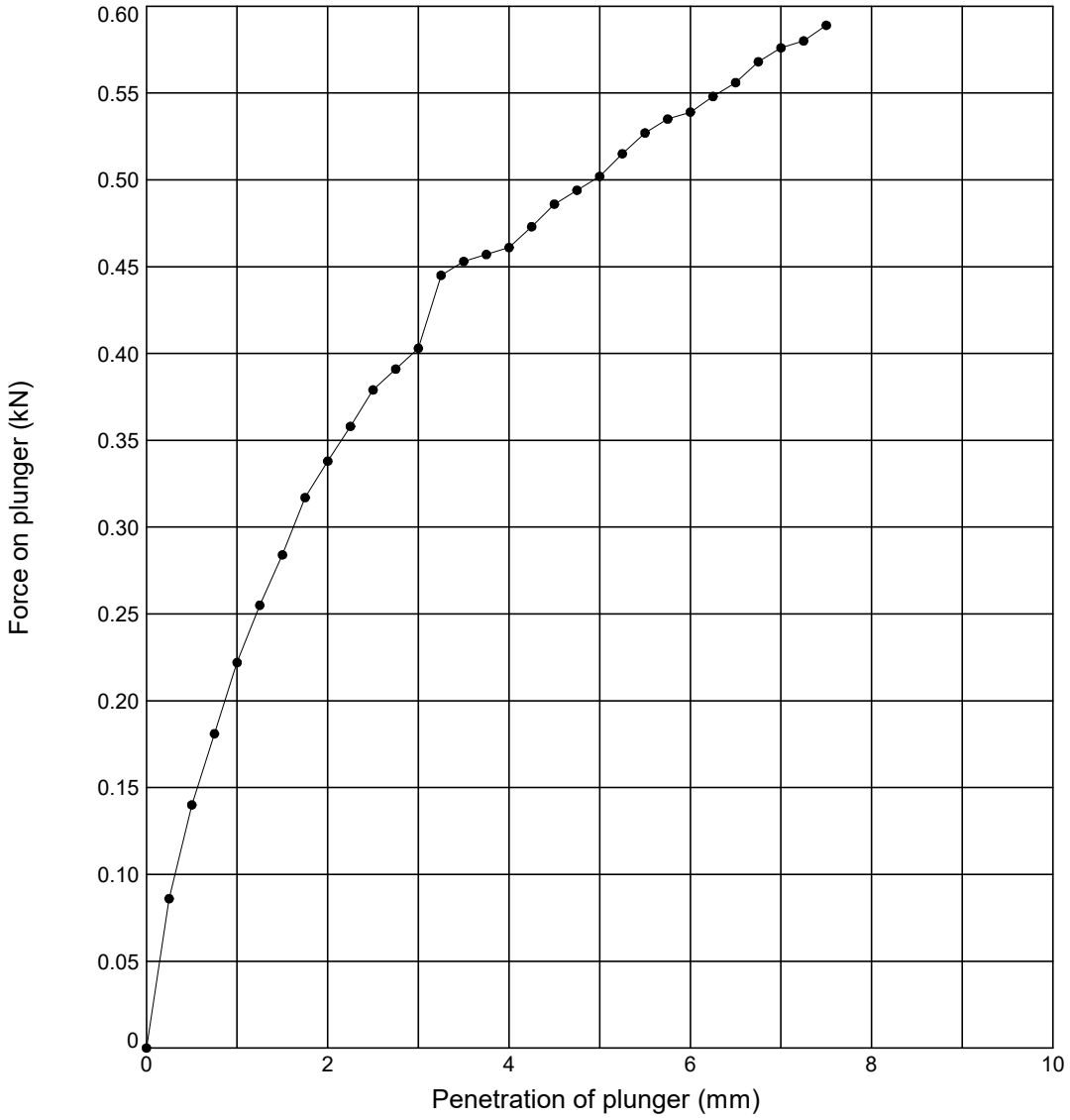
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP105** Sample Ref: **11** Sample Type: **LB** Depth (m): **1.10**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**41**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**41**	**41**
Initial Bulk Density (Mg/m^3)	:	**1.79**	Surcharge (kg)	:	**4.0**	CBR value (%)	**2.9**	**0.00**
Initial Dry Density (Mg/m^3)	:	**1.27**	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
Brown very silty sandy CLAY	● **Top** ⧓ **Base**

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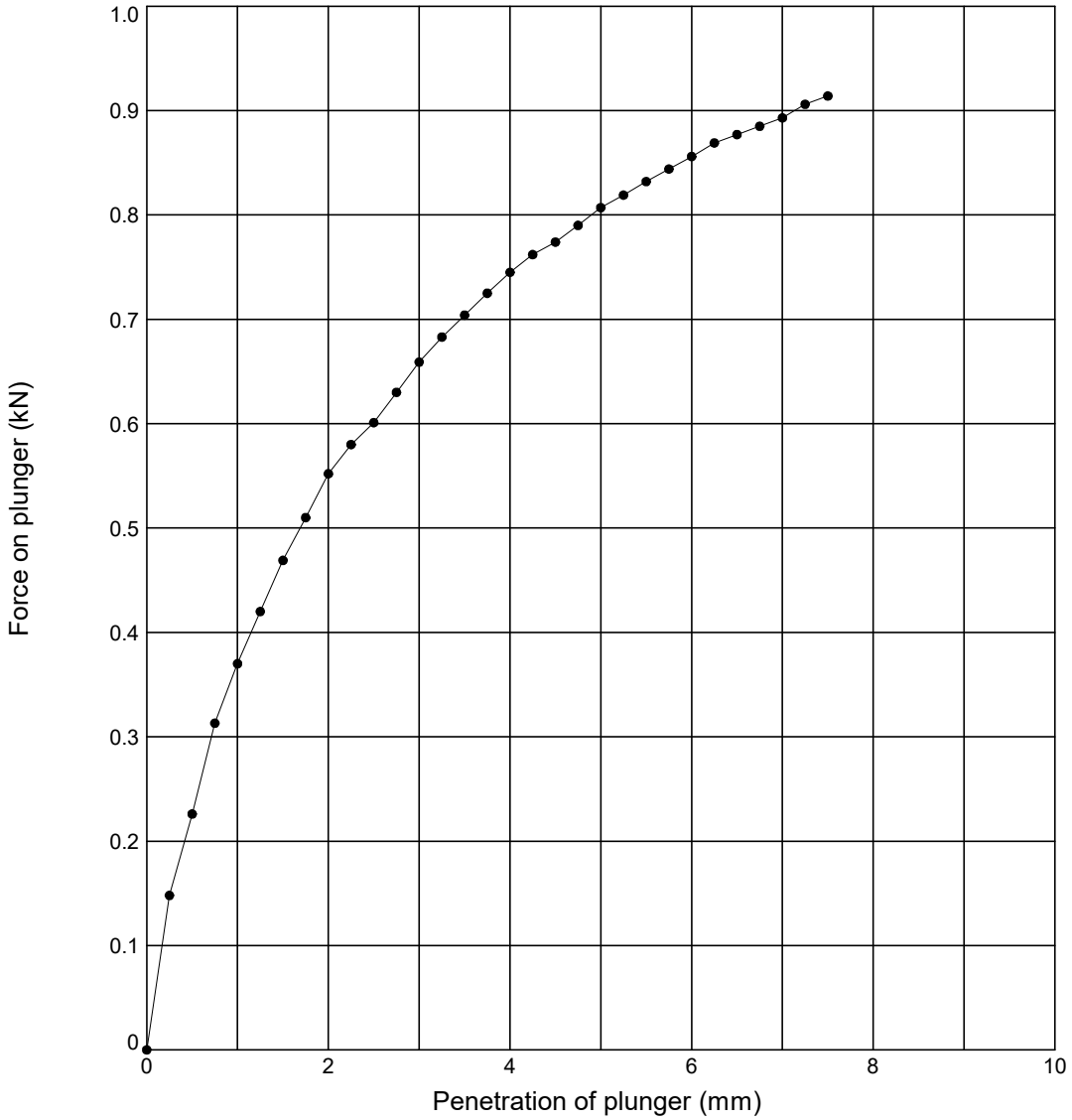
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP105** Sample Ref: **11** Sample Type: **LB** Depth (m): **1.10**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**37**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**37**	**36**
Initial Bulk Density (Mg/m^3)	:	**1.82**	Surcharge (kg)	:	**4.0**	CBR value (%)	**4.5**	**0.00**
Initial Dry Density (Mg/m^3)	:	**1.33**	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
Brown very silty sandy CLAY	● **Top** ⧓ **Base**

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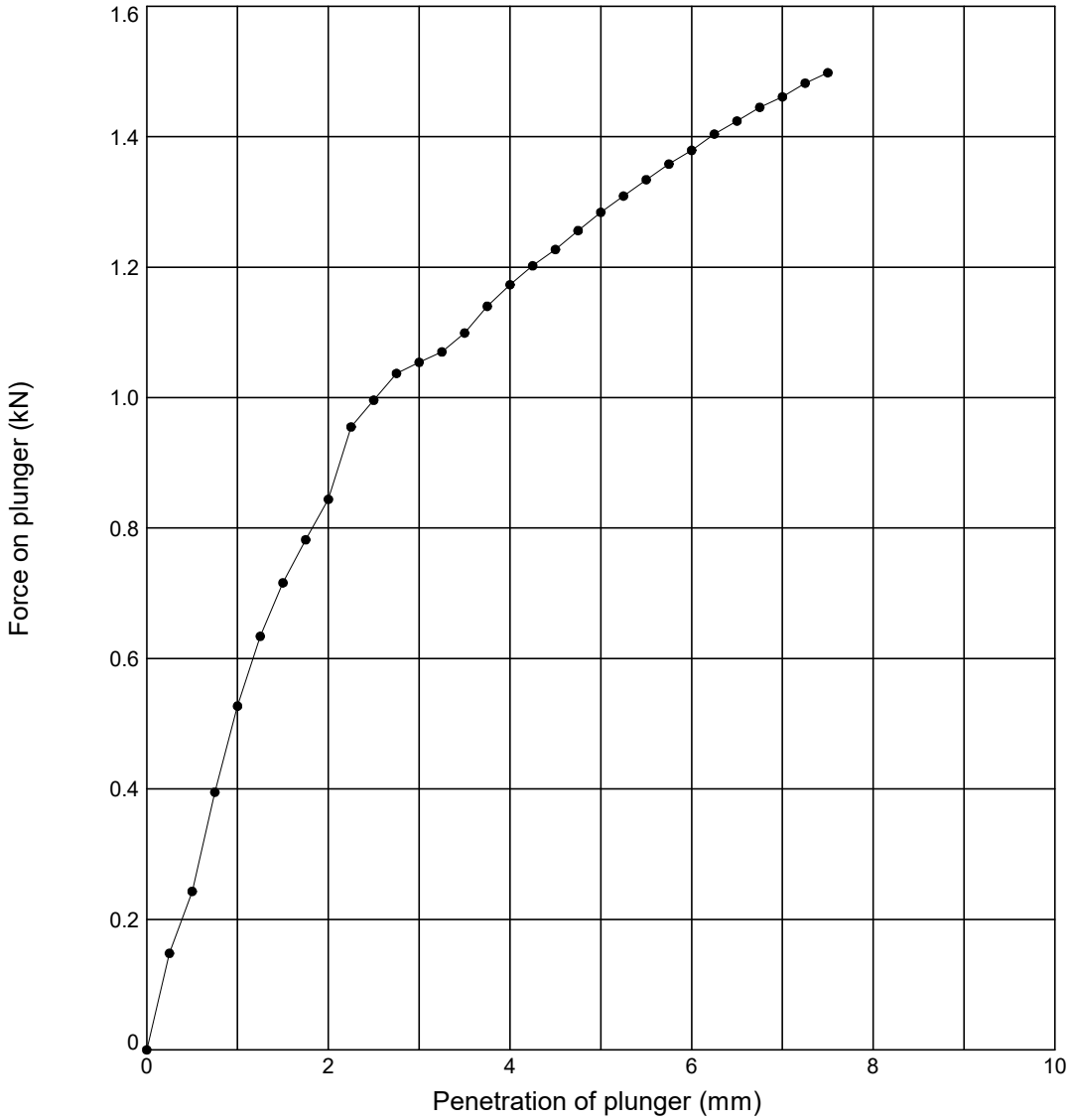
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP105** Sample Ref: **11** Sample Type: **LB** Depth (m): **1.10**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**34**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**34**	**34**
Initial Bulk Density (Mg/m^3)	:	**1.85**	Surcharge (kg)	:	**4.0**	CBR value (%)	**7.5**	**0.00**
Initial Dry Density (Mg/m^3)	:	**1.38**	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
Brown very silty sandy CLAY	● **Top** ⧓ **Base**

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W. Yorkshire WF10 1NJ

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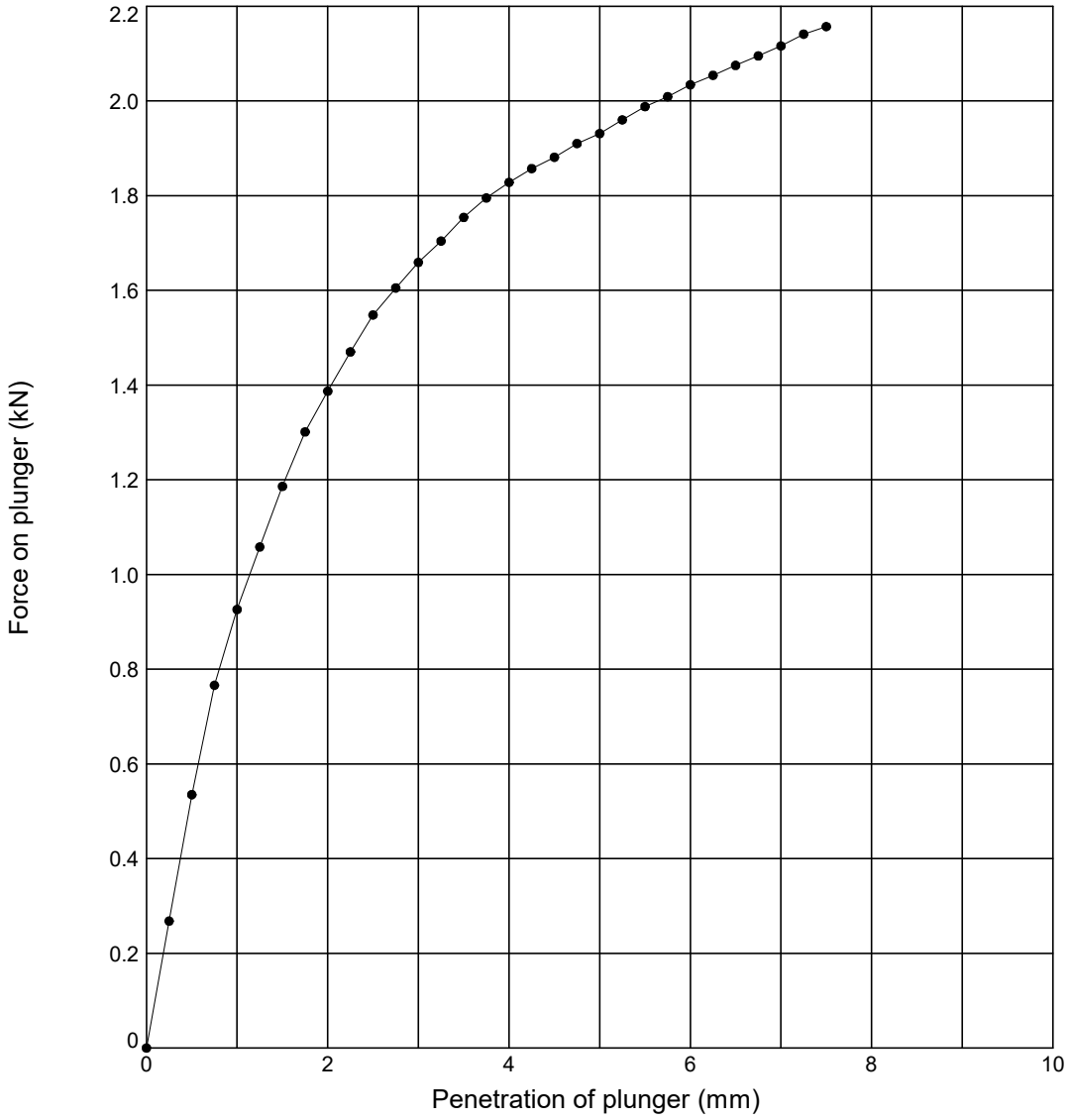
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP105** Sample Ref: **11** Sample Type: **LB** Depth (m): **1.10**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**33**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**33**	**33**
Initial Bulk Density (Mg/m^3)	:	**1.81**	Surcharge (kg)	:	**4.0**	CBR value (%)	**12**	**0.00**
Initial Dry Density (Mg/m^3)	:	**1.36**	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
Brown very silty sandy CLAY	● **Top** ⧓ **Base**

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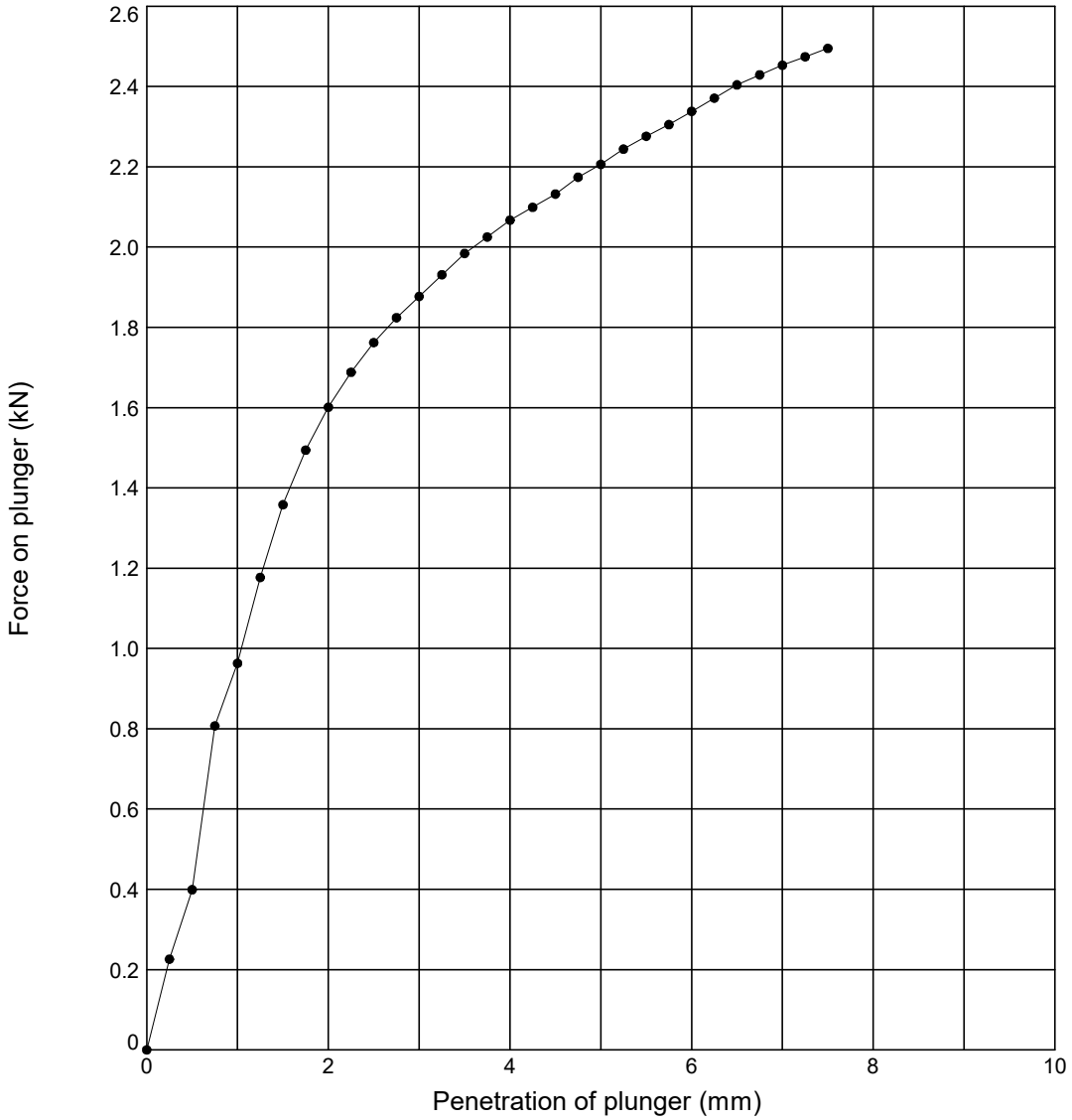
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP105** Sample Ref: **11** Sample Type: **LB** Depth (m): **1.10**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**30**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**30**	**31**
Initial Bulk Density (Mg/m^3)	:	**1.73**	Surcharge (kg)	:	**4.0**	CBR value (%)	**13**	**0.00**
Initial Dry Density (Mg/m^3)	:	**1.33**	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
Brown very silty sandy CLAY	● **Top** ⧓ **Base**

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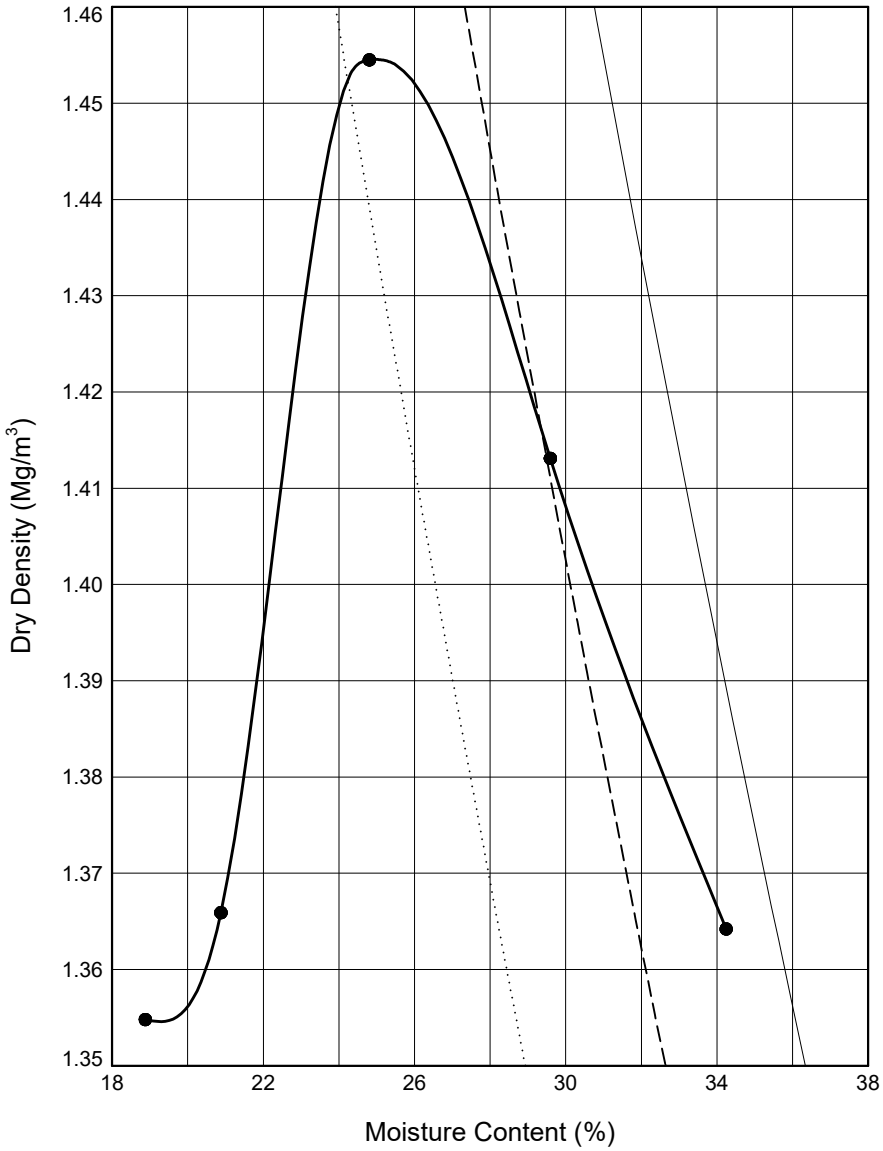
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **R22-TP106** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.50**



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**34**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m³)	:	**1.45**
% Retained on 37.5mm BS Sieve	:	**0**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**25**
% 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 carried out at each point**		
Size of Soil Pieces	:	**<37.5mm**	Separate samples were used.					

Sample Description	Key to Air Voids Lines		
Brown CLAY	——— 0%	– – – – 5%	····· 10%

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1a Princess Street
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BS3 4AG

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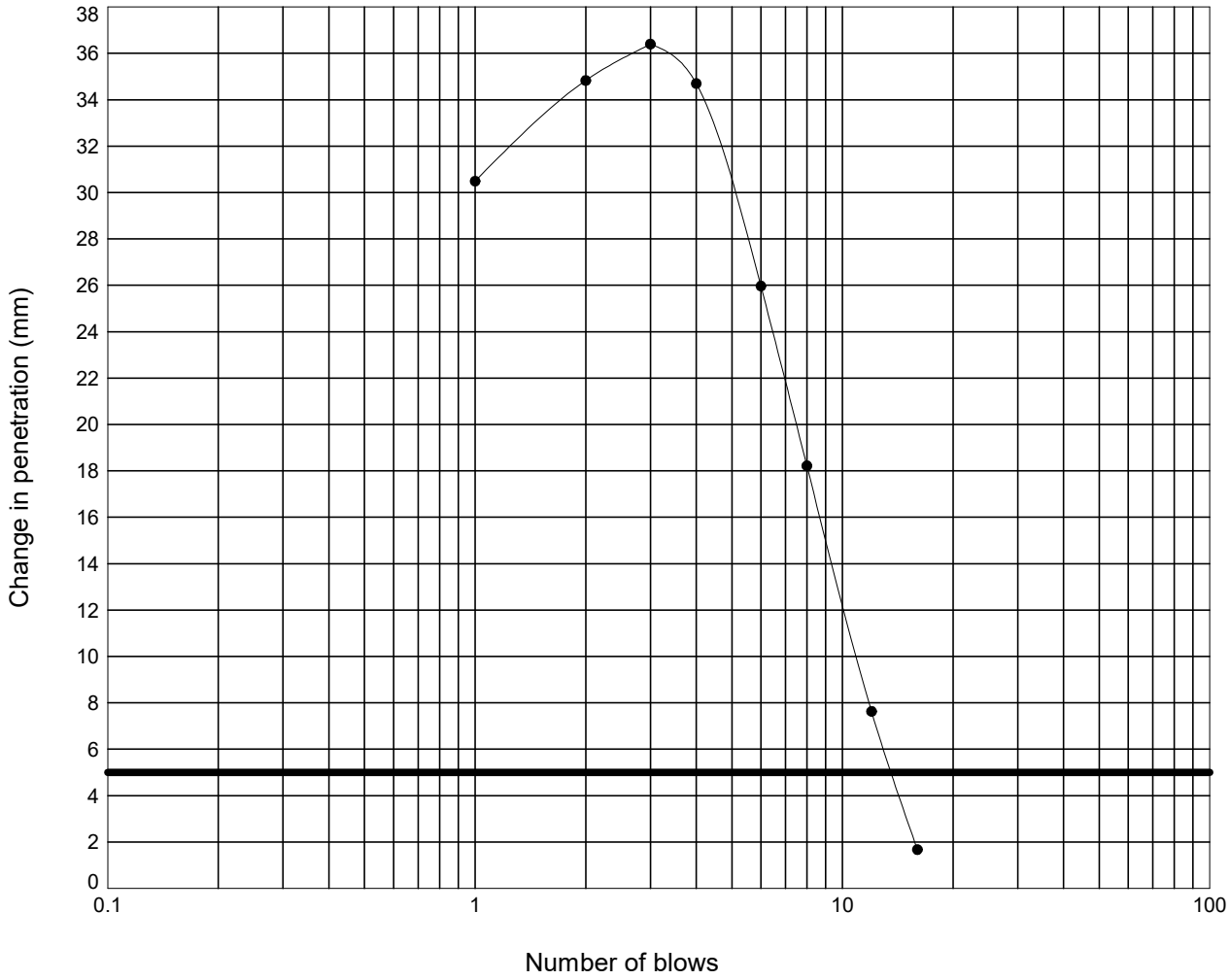
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP106** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.50**

Description : **Brown CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	34	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	11.2	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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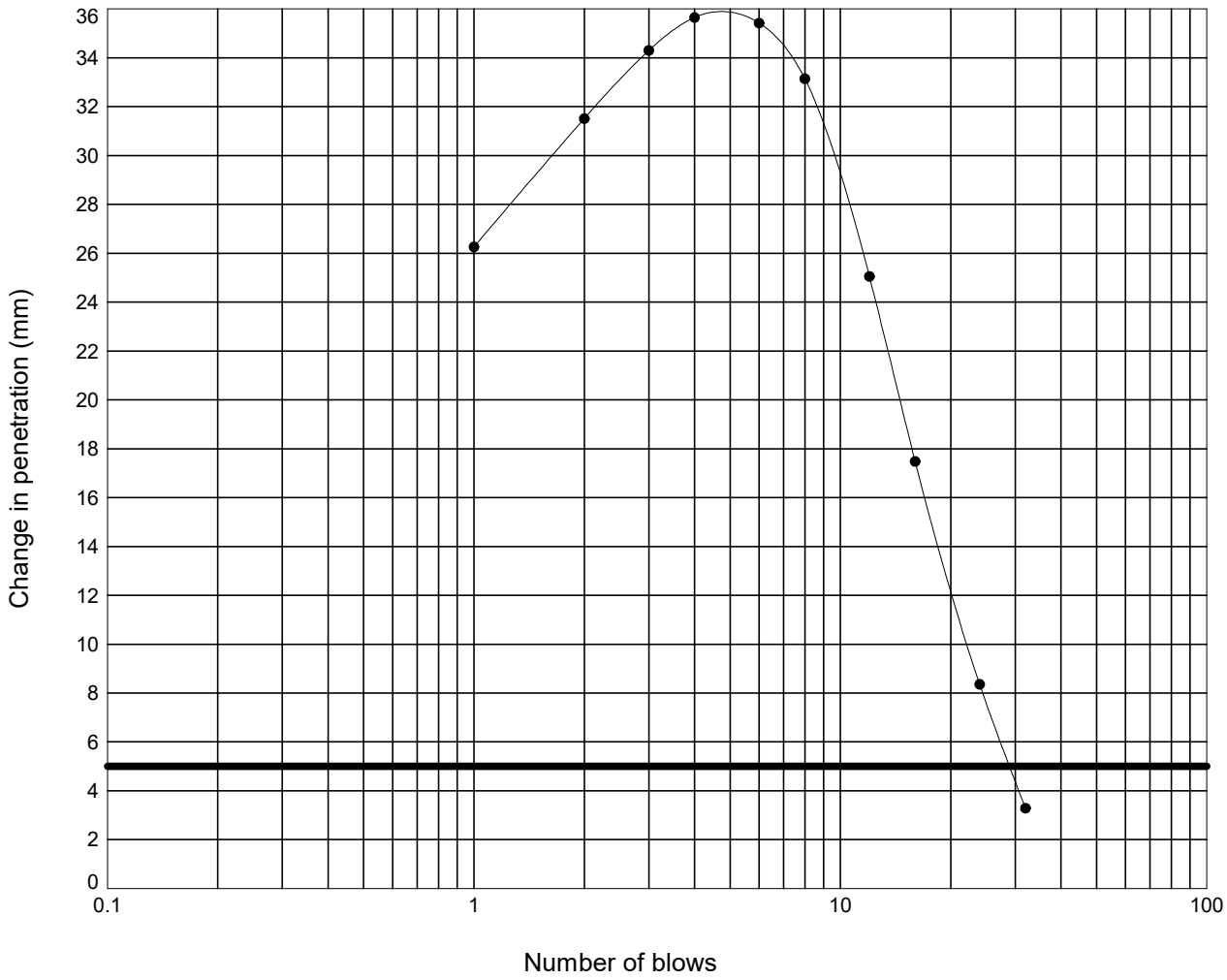
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP106** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.50**

Description : **Brown CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	30	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	14.1	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract	Contract Ref:
SEA Link FEED - Kent Onshore Cable Link	**563607**

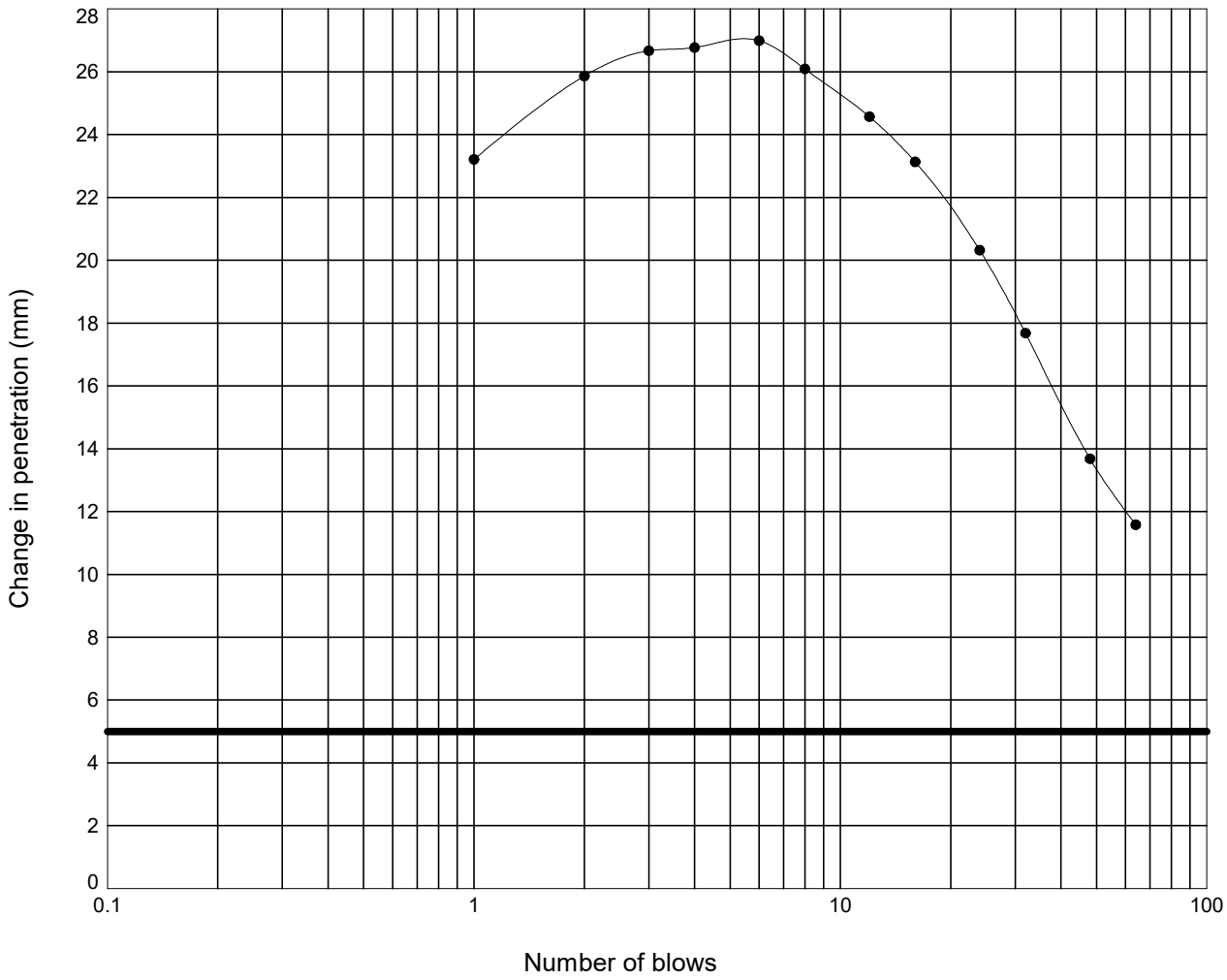
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP106** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.50**

Description : **Brown CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	25	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	20.6	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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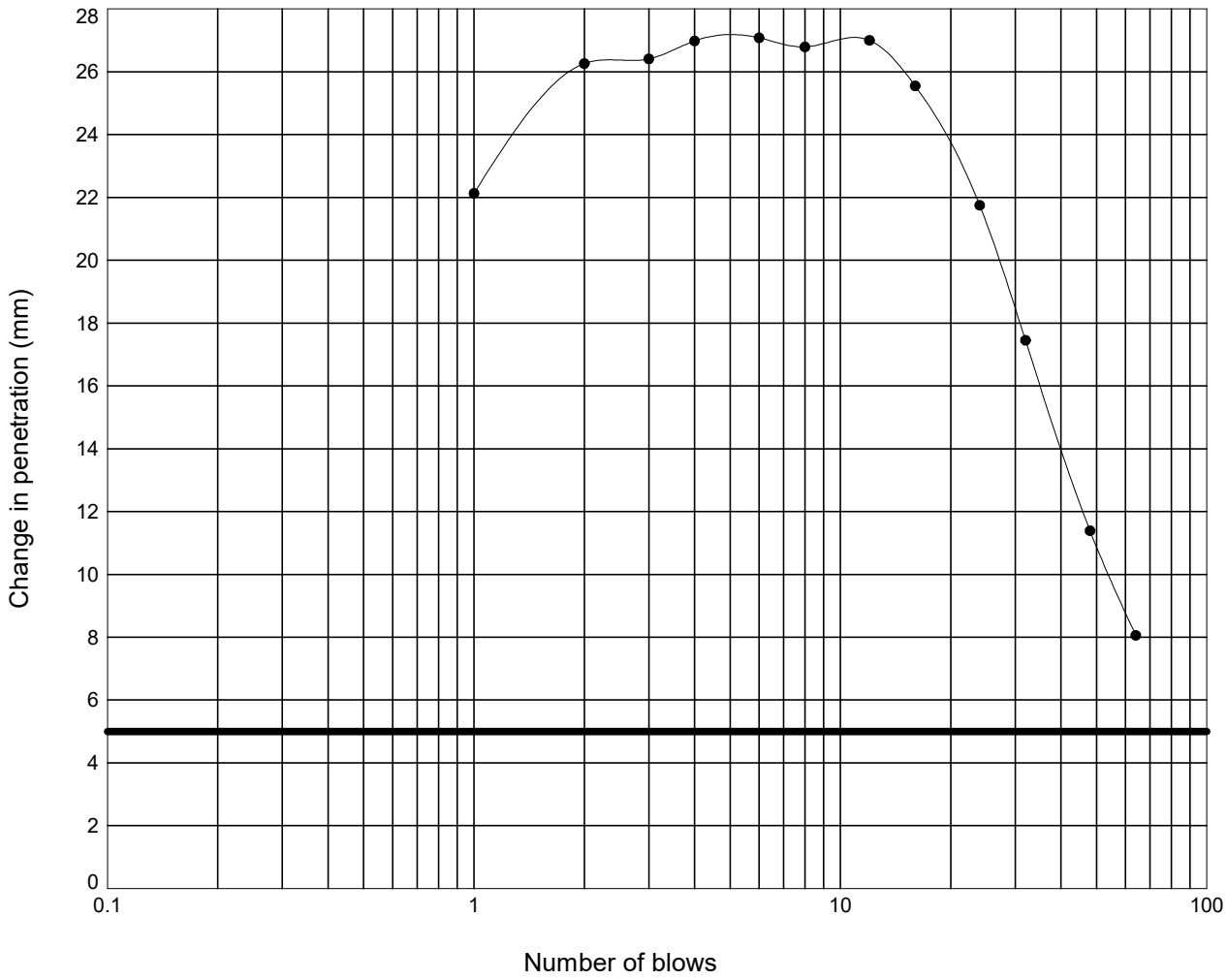
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP106** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.50**

Description : **Brown 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 :	=	0	%
Moisture Condition Value :	=	18.7	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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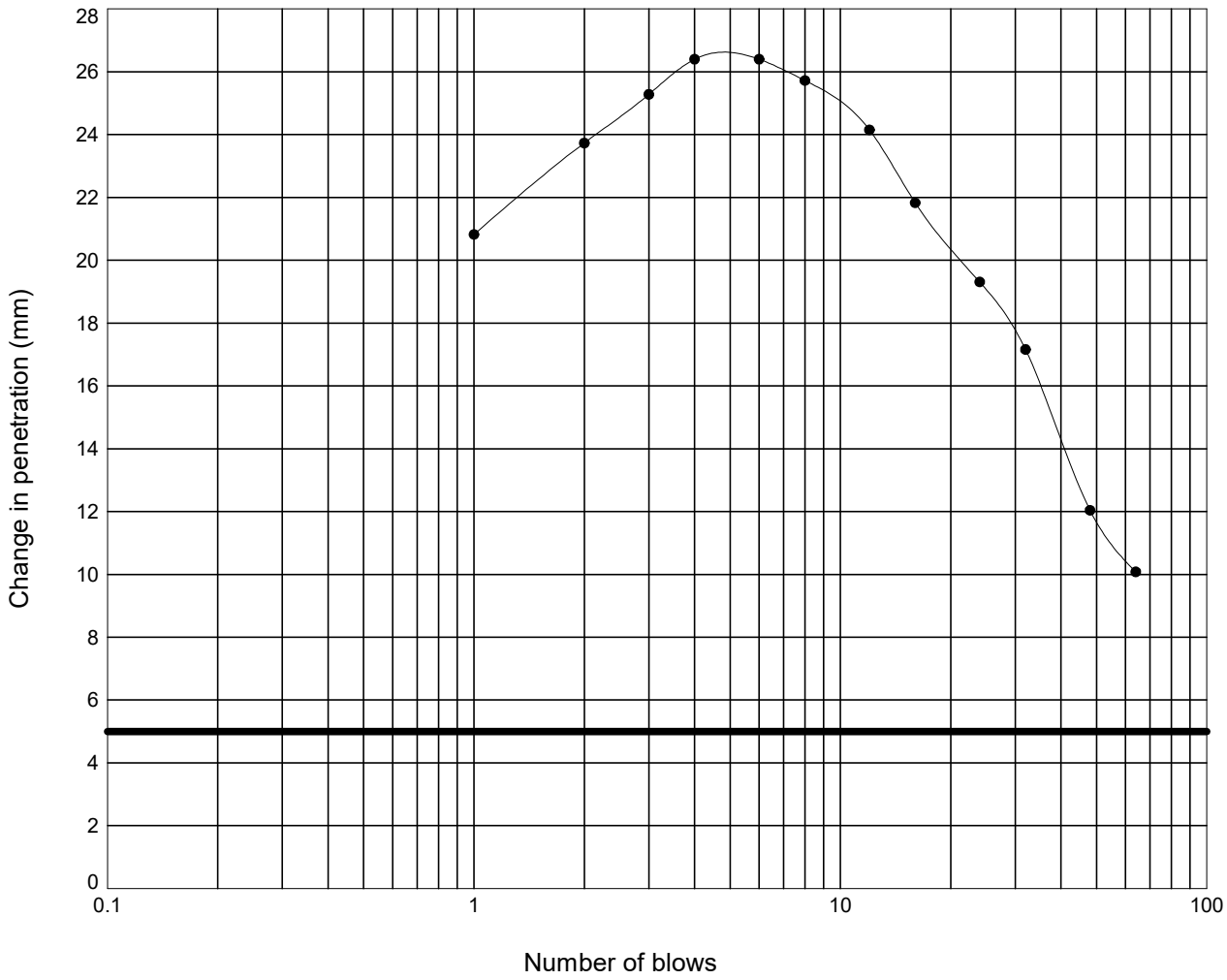
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP106** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.50**

Description : **Brown 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 :	=	0	%
Moisture Condition Value :	=	19.2	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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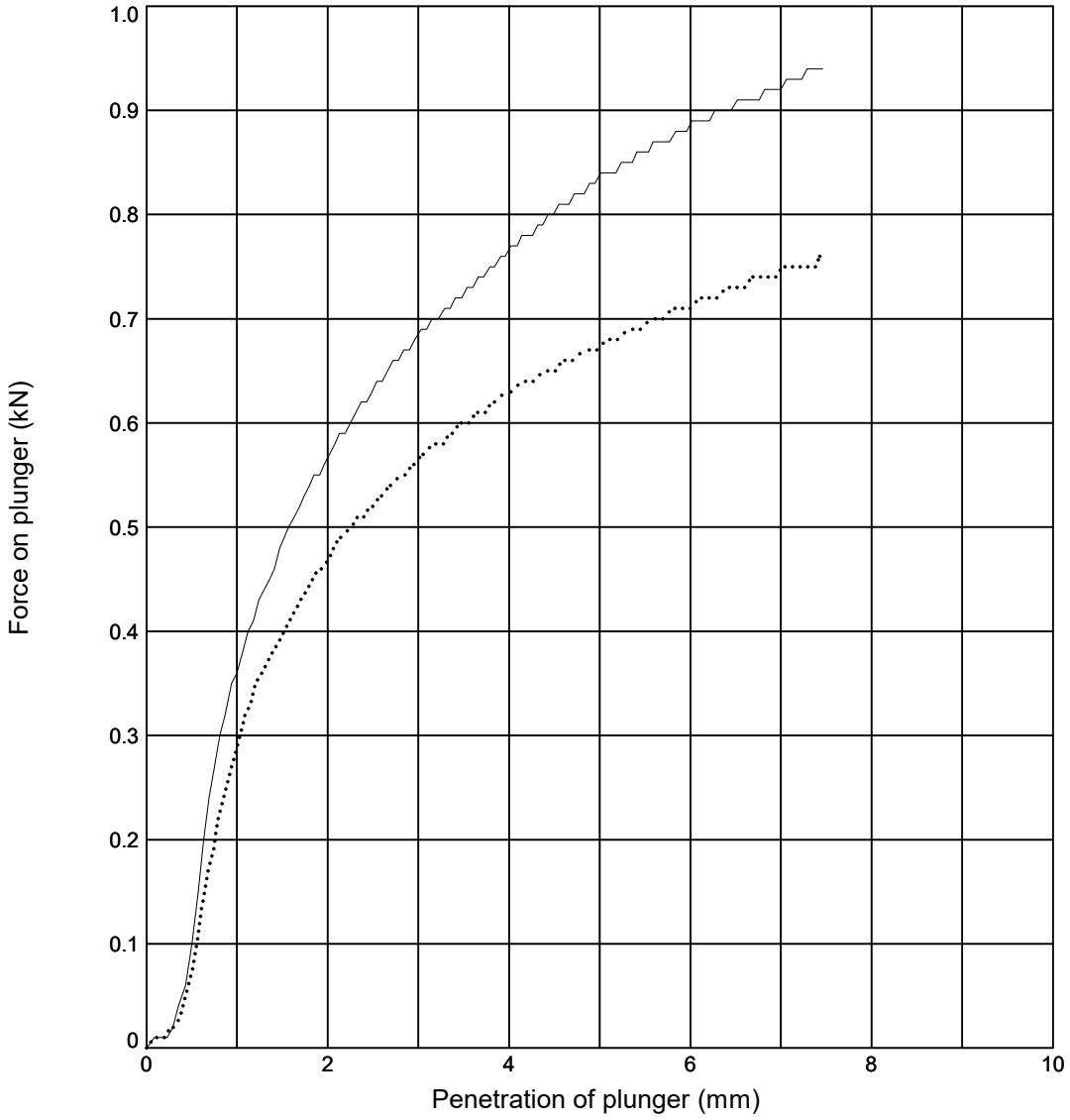
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP106** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.50**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**36**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**35**	**36**
Initial Bulk Density (Mg/m^3)	:	**1.83**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**4.8**	**3.9**
Initial Dry Density (Mg/m^3)	:	**1.35**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**0.1**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**4.9**	**NA**

Sample Description	Key
Brown CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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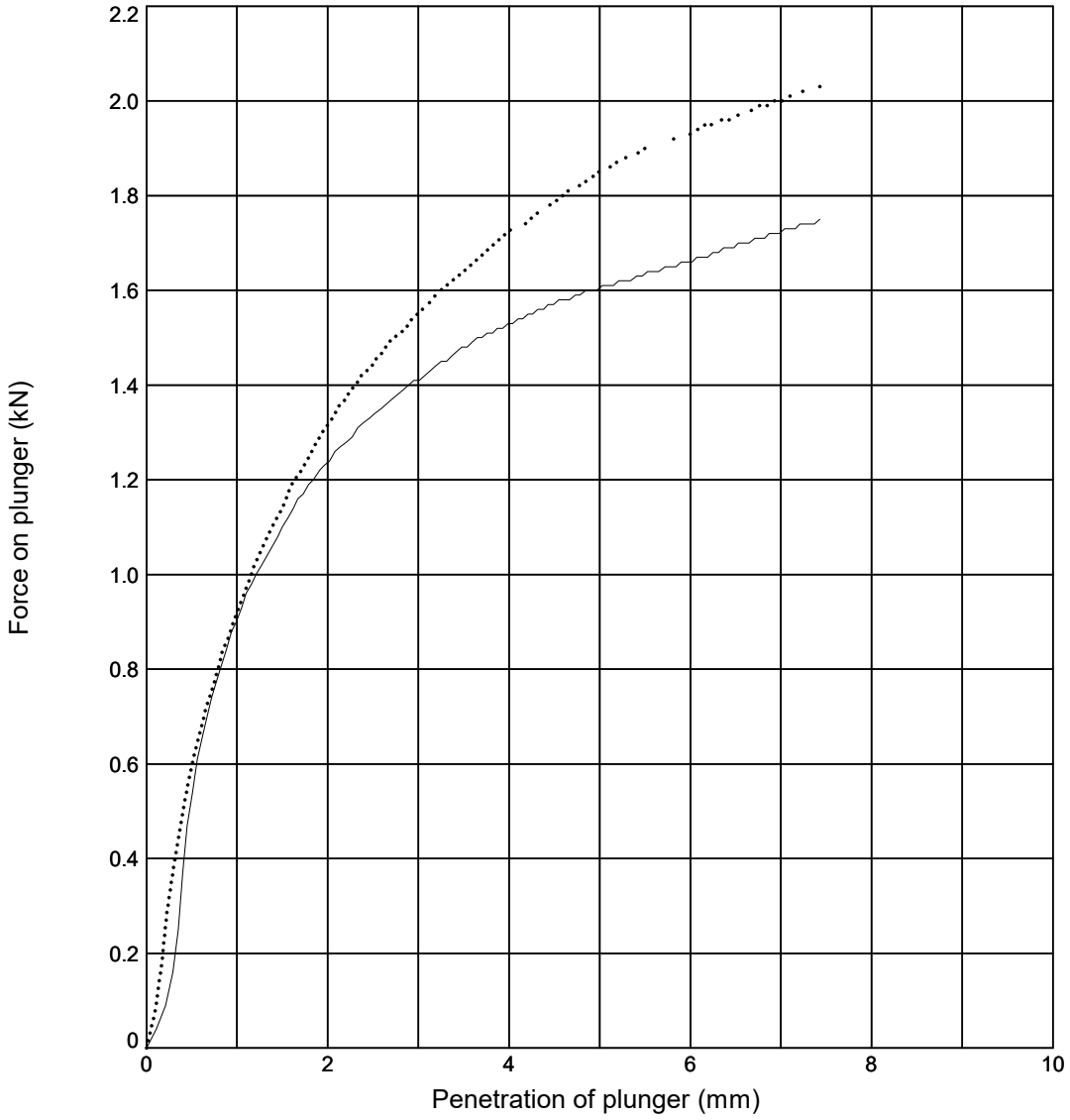
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP106** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.50**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**29**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**29**	**30**
Initial Bulk Density (Mg/m^3)	:	**1.84**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**10**	**11**
Initial Dry Density (Mg/m^3)	:	**1.42**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Brown CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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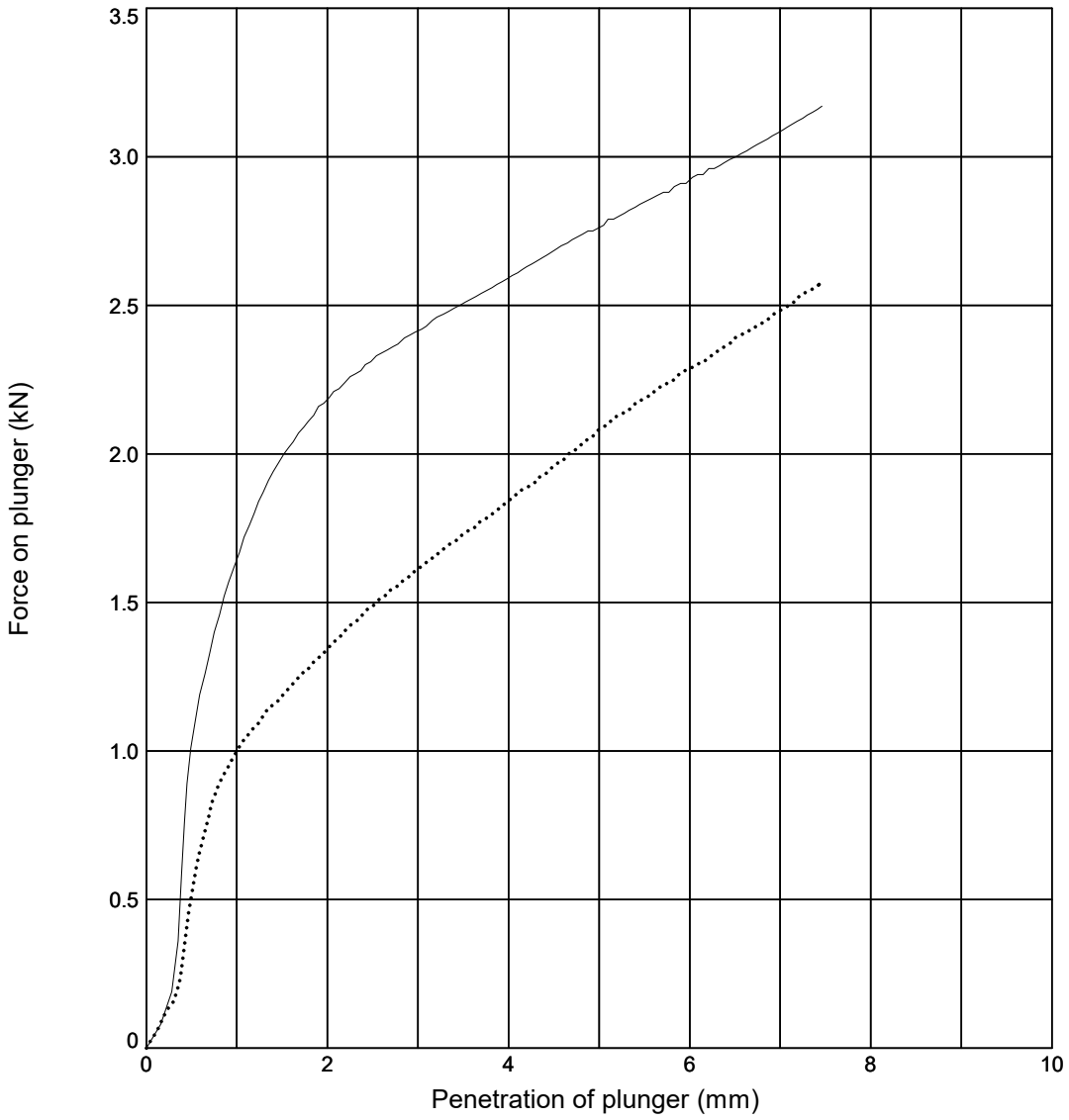
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP106** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.50**



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)	:	**1.82**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**18**	**11**
Initial Dry Density (Mg/m^3)	:	**1.45**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Brown CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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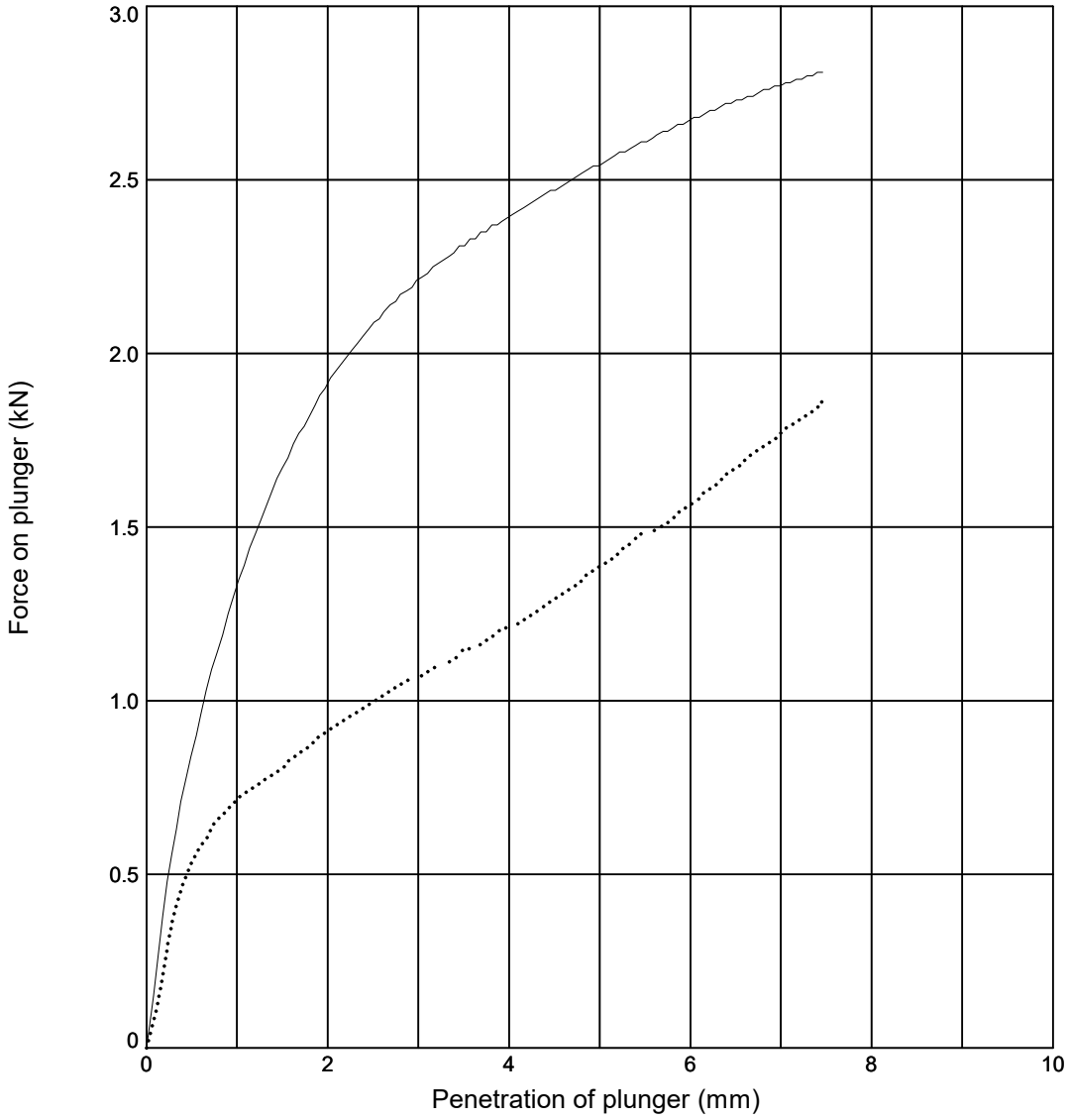
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP106** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.50**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**21**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**22**	**21**
Initial Bulk Density (Mg/m^3)	:	**1.65**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**16**	**7.6**
Initial Dry Density (Mg/m^3)	:	**1.36**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Brown CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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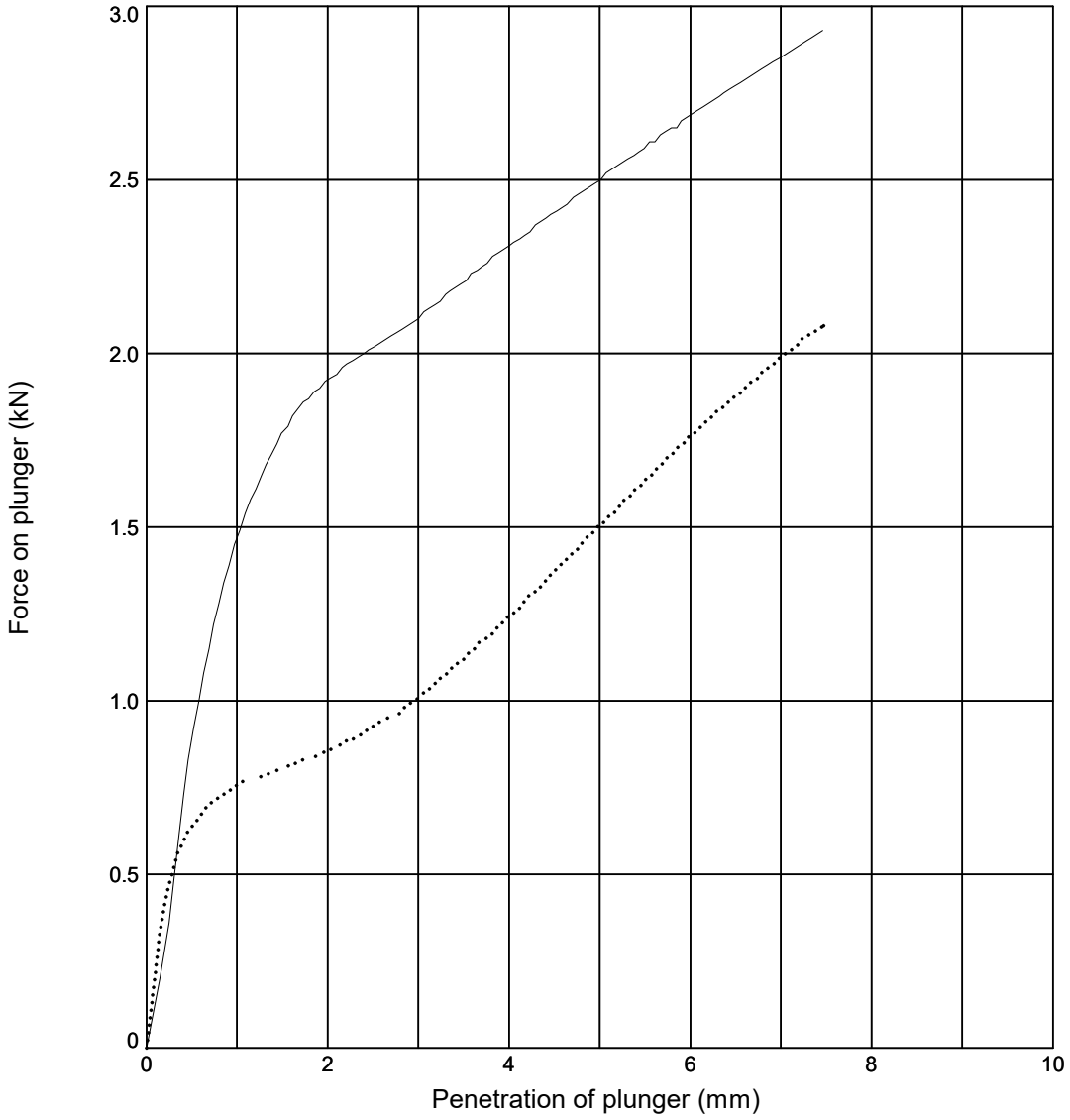
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP106** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.50**



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)	:	**1.61**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**15**	**7.5**
Initial Dry Density (Mg/m^3)	:	**1.35**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Brown CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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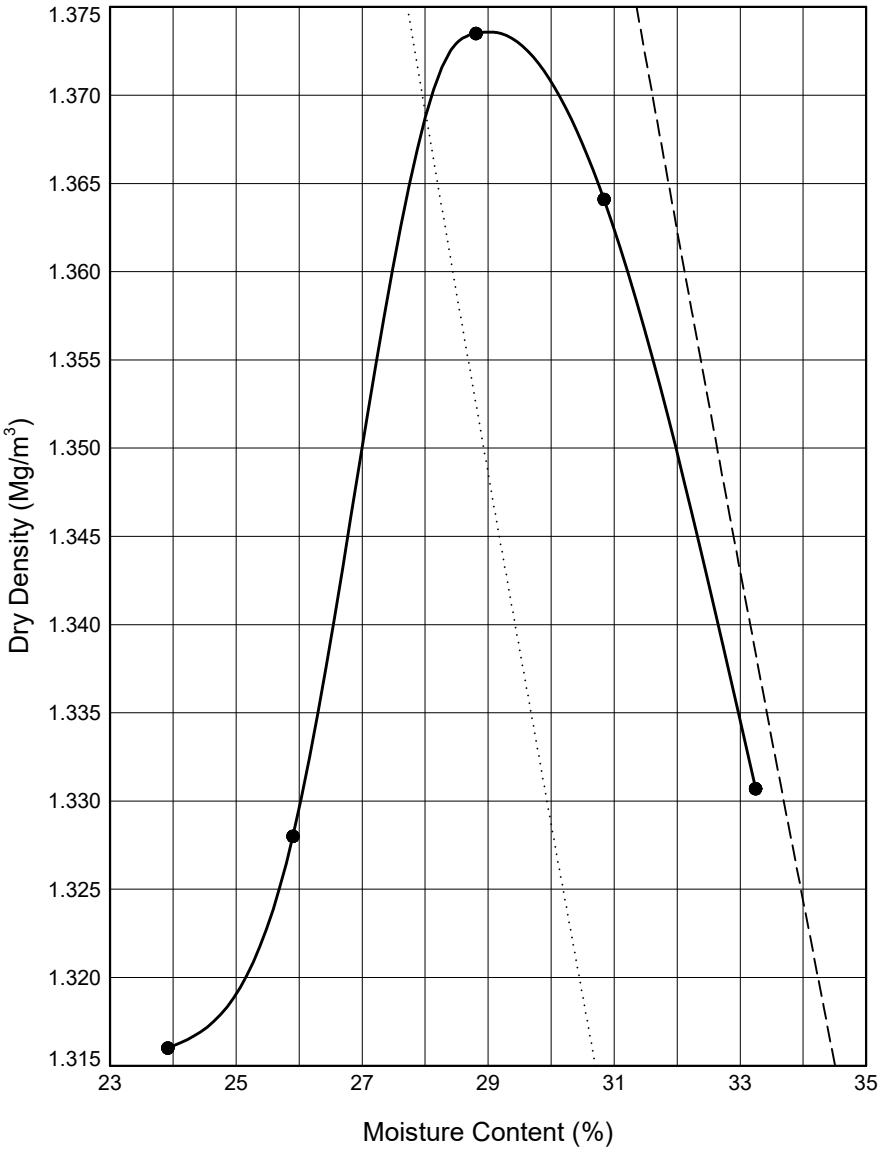
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **R22-TP107** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.50**



Initial Sample Conditions		Test Details		Test Results	
Initial Moisture Content (%)	: **29**	Compaction Type	: **Light**	Maximum Dry Density (Mg/m³)	: **1.37**
% Retained on 37.5mm BS Sieve	: **0**	Mass of Rammer (kg):	**2.5**	Optimum Moisture Content (%)	: **28.8**
% 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 test carried out at each point**	
Size of Soil Pieces	:**<37.5mm**	Single sample was used.			

Sample Description	Key to Air Voids Lines		
Brown slightly silty CLAY	——— 0%	– – – – 5%	····· 10%

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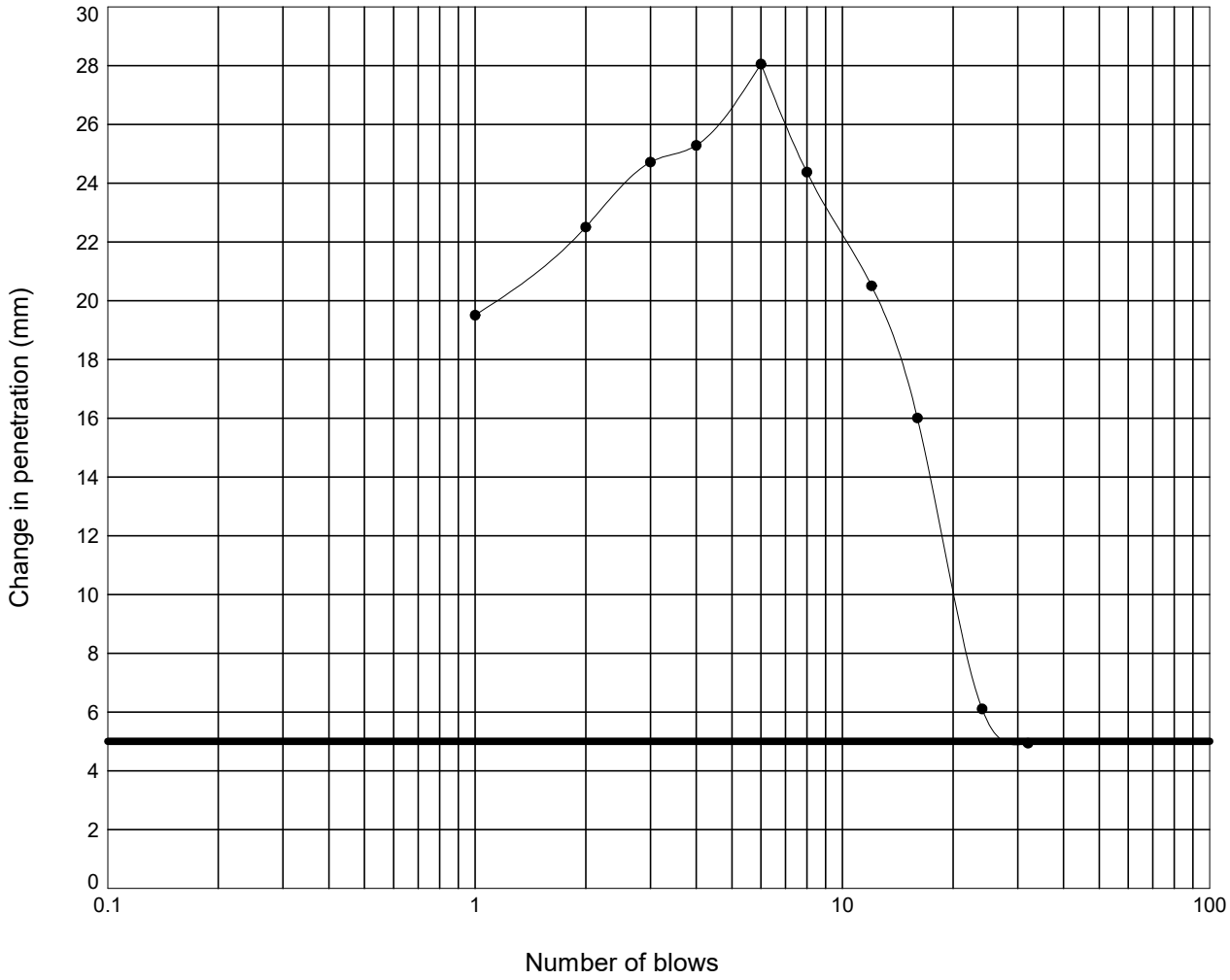
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP107** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.50**

Description : **Brown slightly silty CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	31	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	14.0	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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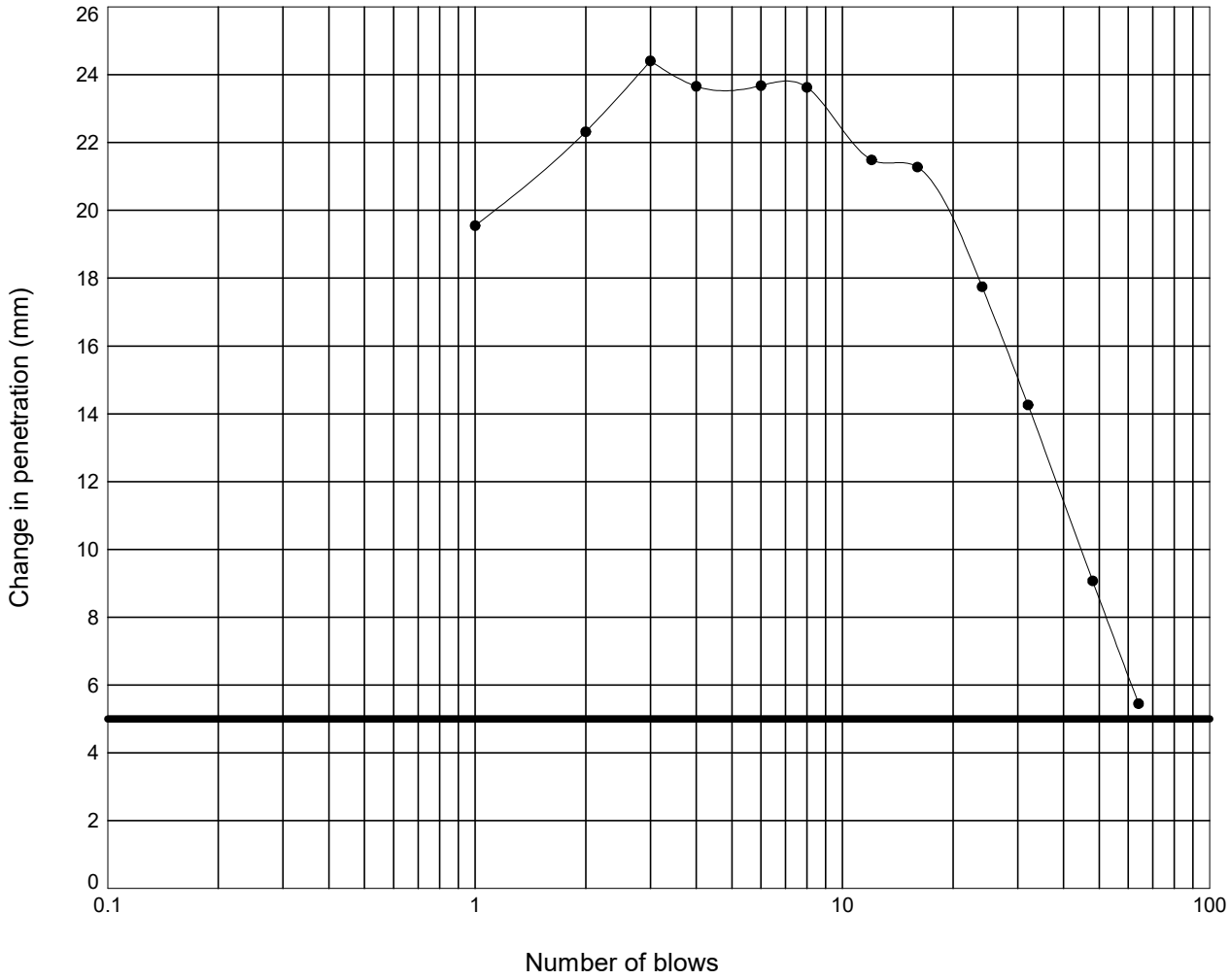
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP107** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.50**

Description : **Brown slightly silty CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	29	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	18.2	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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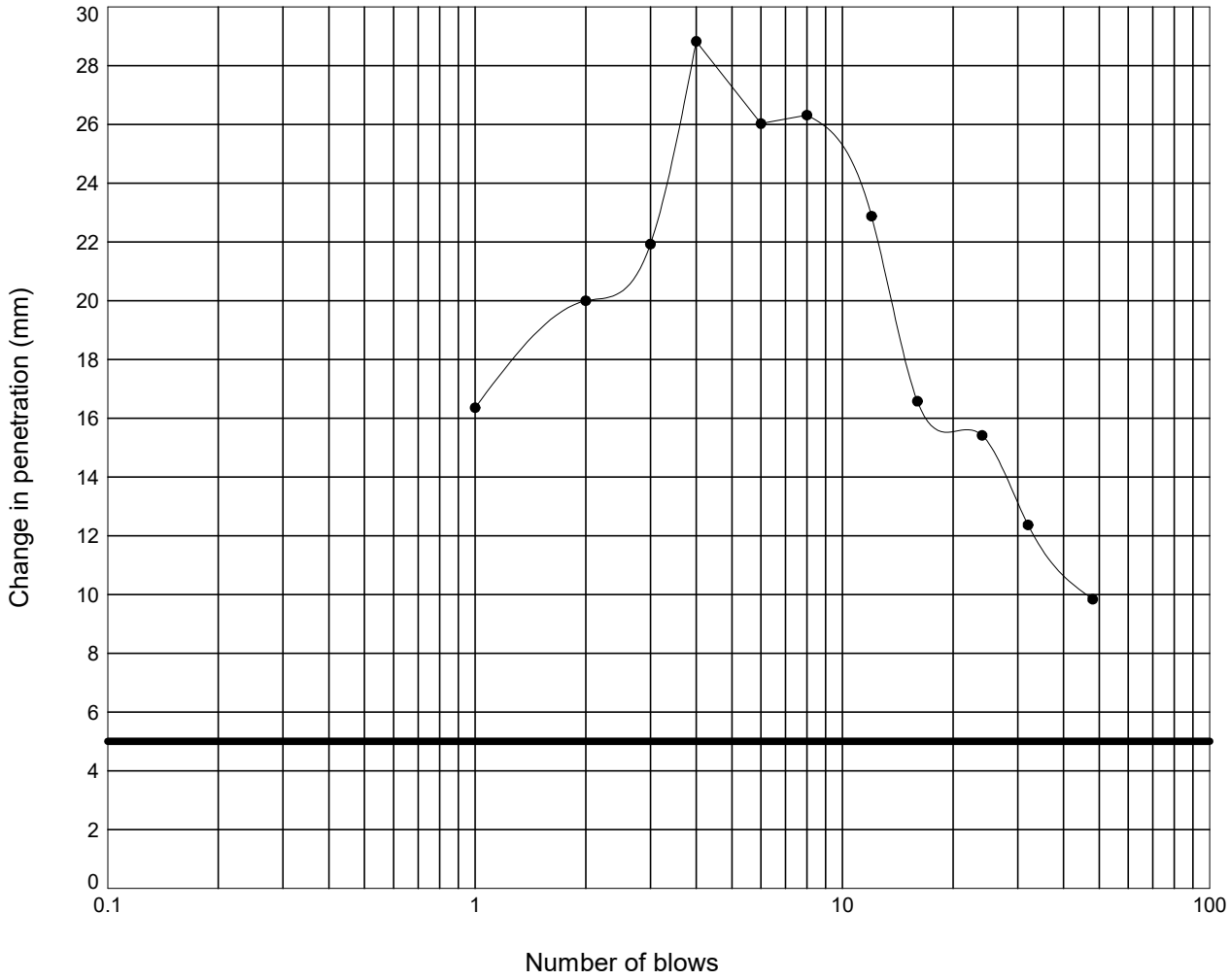
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP107** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.50**

Description : **Brown slightly silty CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	27	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	14.3	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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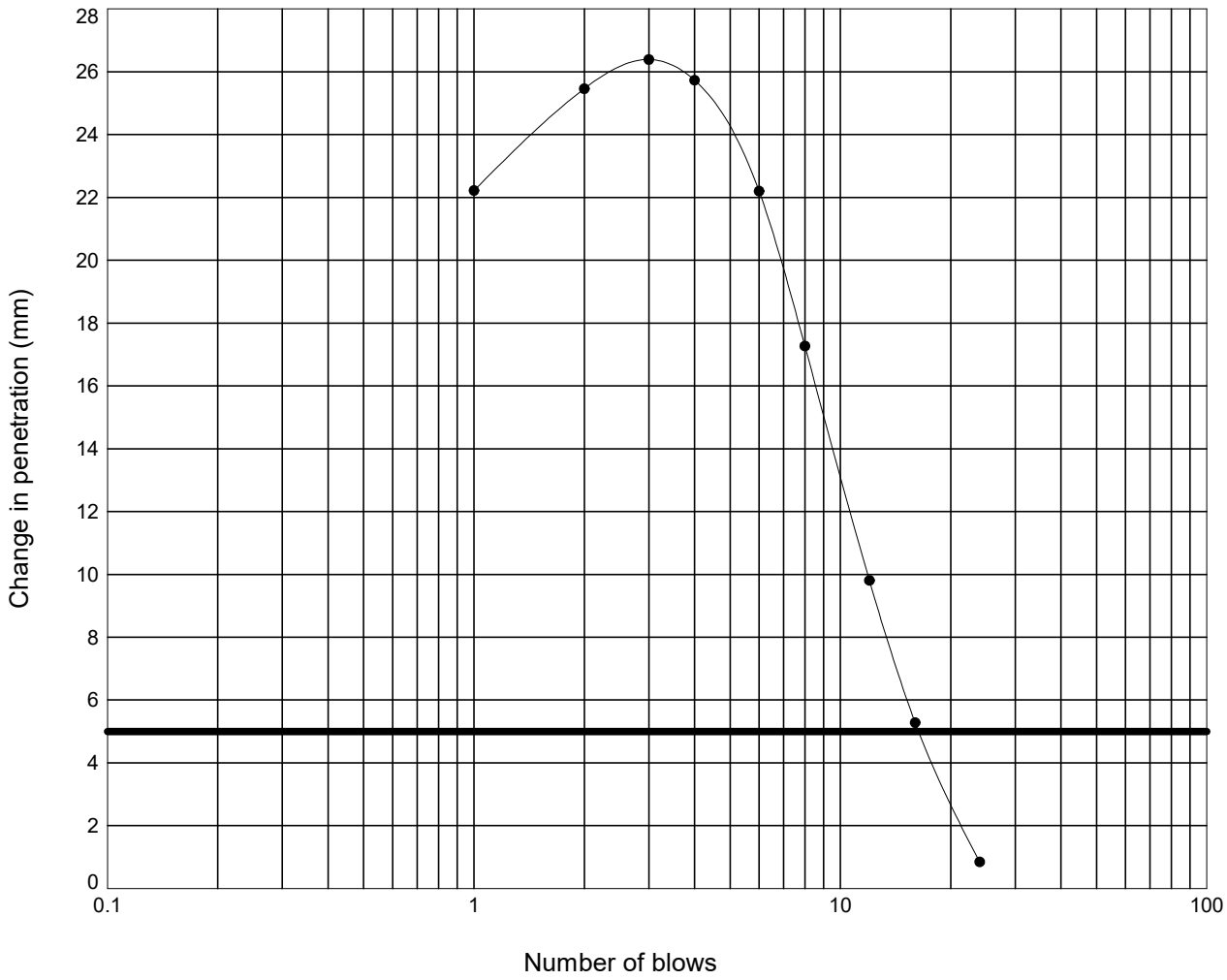
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP107** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.50**

Description : **Brown slightly silty CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	= 34	%
Percentage retained on 20 mm sieve :	= 0	%
Moisture Condition Value :	= 11.9	
Interpretation of curve:	= Steepest straight line - Fig 9	

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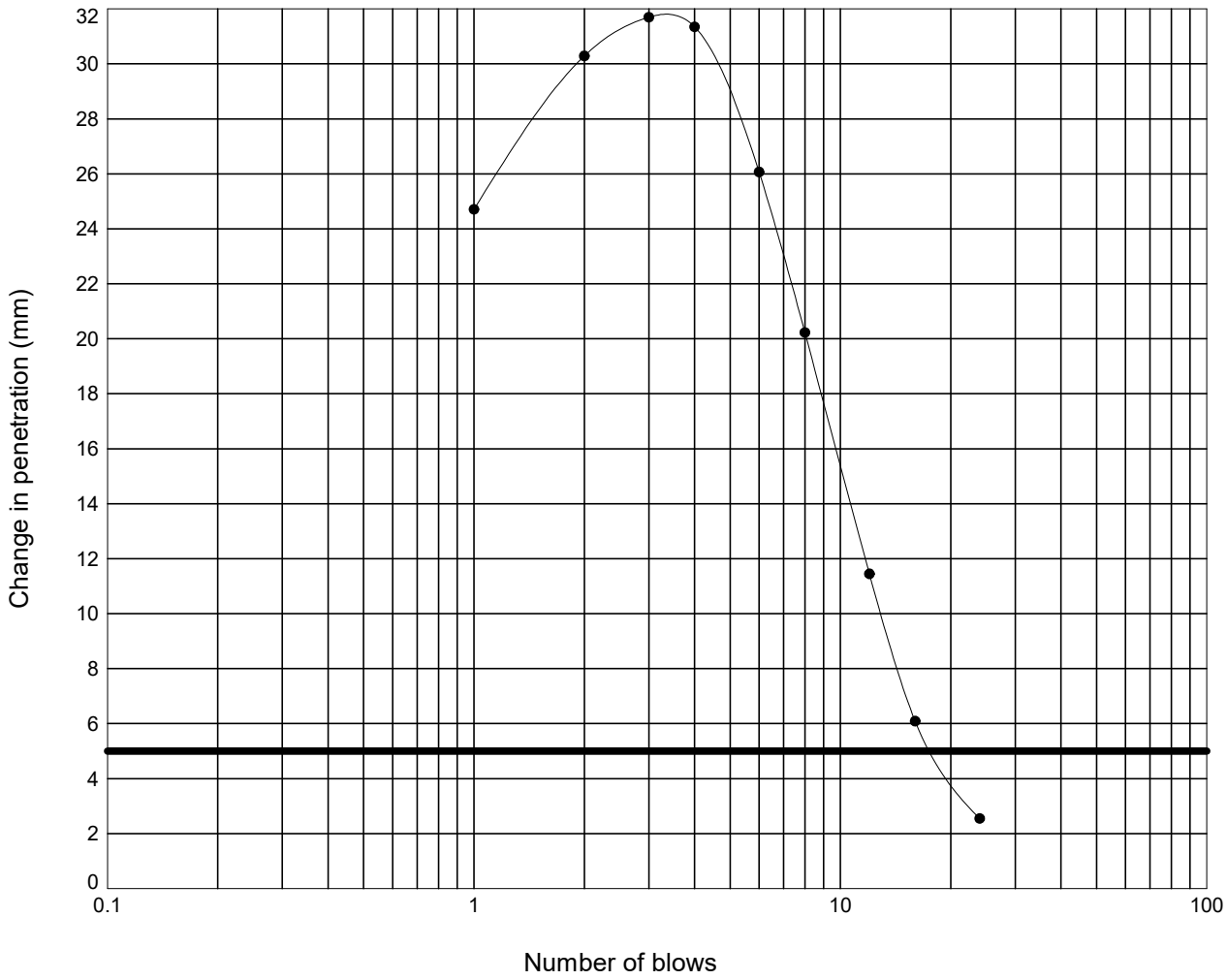
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP107** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.50**

Description : **Brown slightly silty CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	37	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	12.1	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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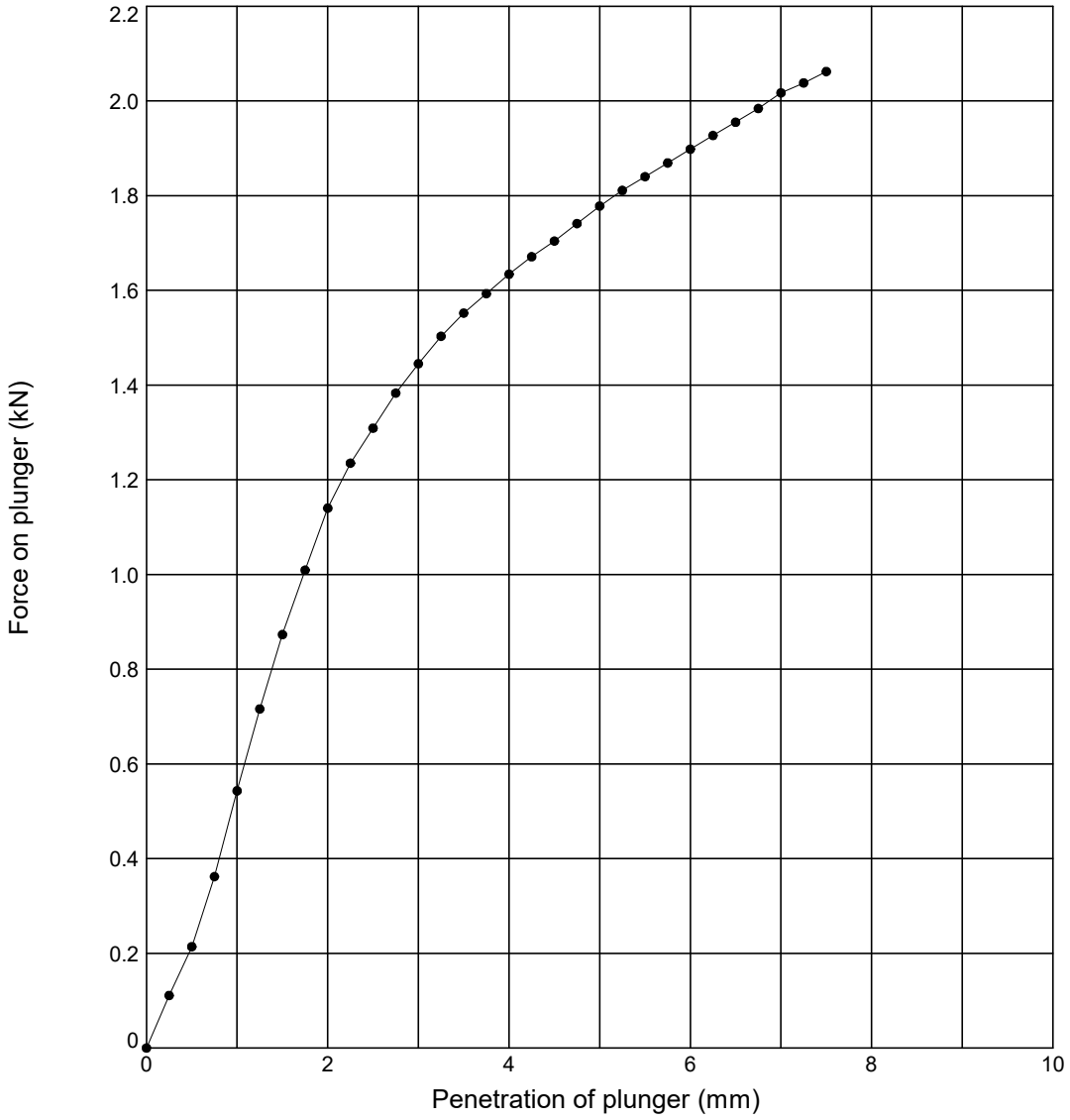
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP107** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.50**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**26**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**26**	**31**
Initial Bulk Density (Mg/m^3)	:	**1.77**	Surcharge (kg)	:	**4.0**	CBR value (%)	**9.9**	**0.00**
Initial Dry Density (Mg/m^3)	:	**1.40**	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
Brown slightly silty CLAY	● **Top** ⧓ **Base**

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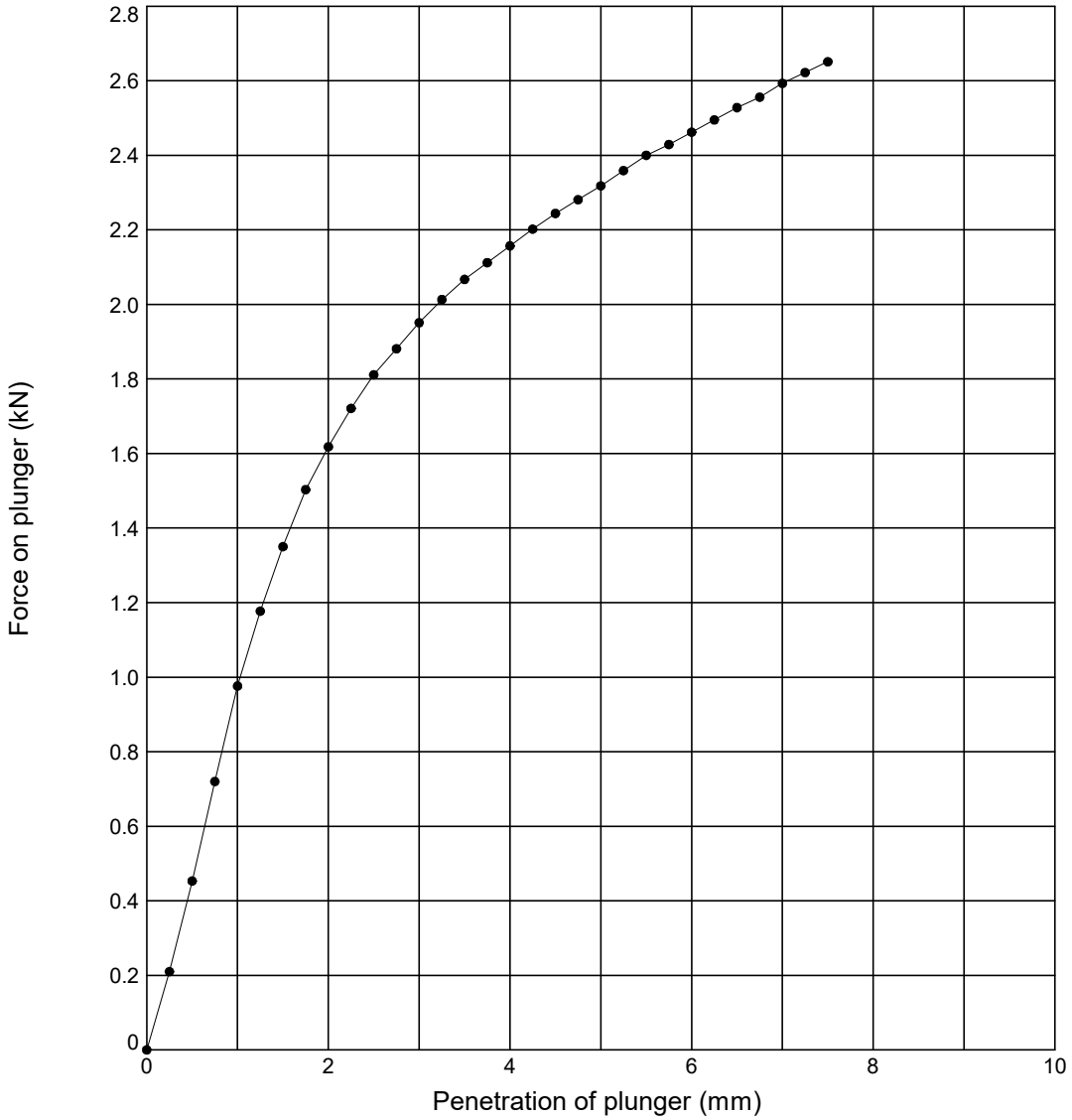
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP107** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.50**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**28**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**28**	**24**
Initial Bulk Density (Mg/m^3)	:	**1.67**	Surcharge (kg)	:	**4.0**	CBR value (%)	**14**	**0.00**
Initial Dry Density (Mg/m^3)	:	**1.31**	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
Brown slightly silty CLAY	● **Top** ⧓ **Base**

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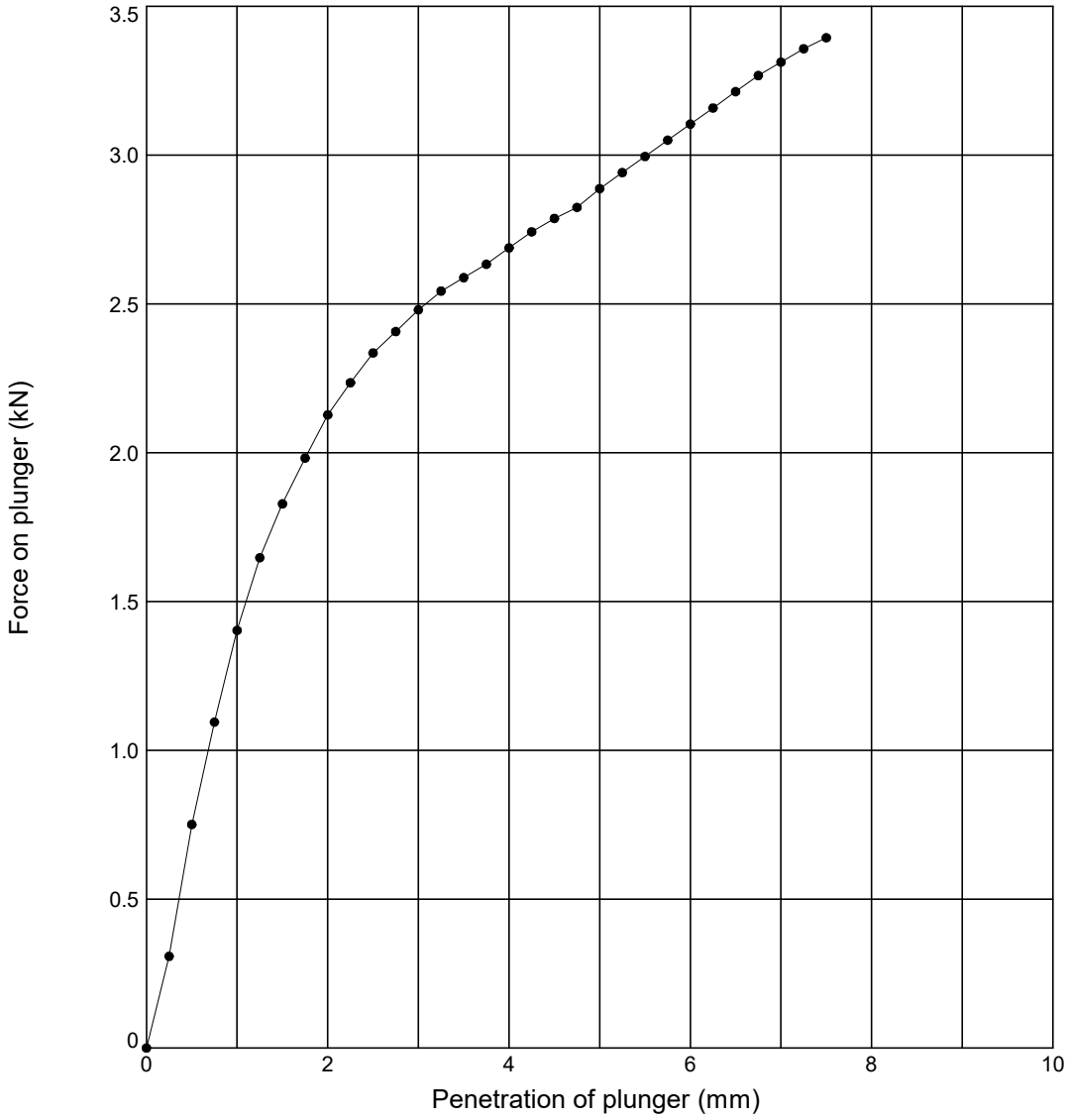
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP107** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.50**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**23**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**23**	**25**
Initial Bulk Density (Mg/m^3)	:	**1.63**	Surcharge (kg)	:	**4.0**	CBR value (%)	**18**	**0.00**
Initial Dry Density (Mg/m^3)	:	**1.33**	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
Brown slightly silty CLAY	● **Top** ⧓ **Base**

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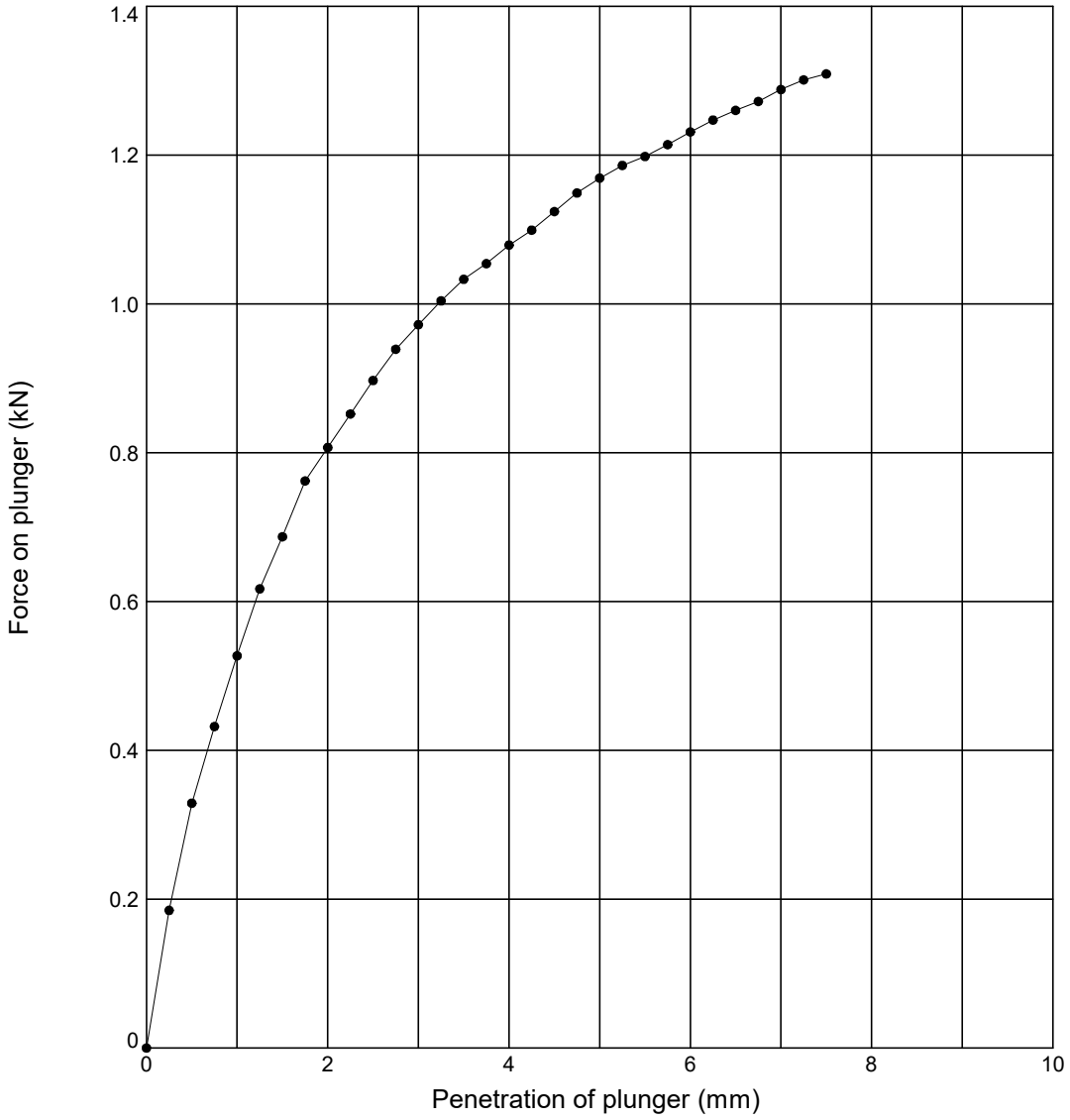
In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP107** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.50**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**33**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**33**	**28**
Initial Bulk Density (Mg/m^3)	:	**1.79**	Surcharge (kg)	:	**4.0**	CBR value (%)	**6.8**	**0.00**
Initial Dry Density (Mg/m^3)	:	**1.34**	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
Brown slightly silty CLAY	● **Top** ⧓ **Base**

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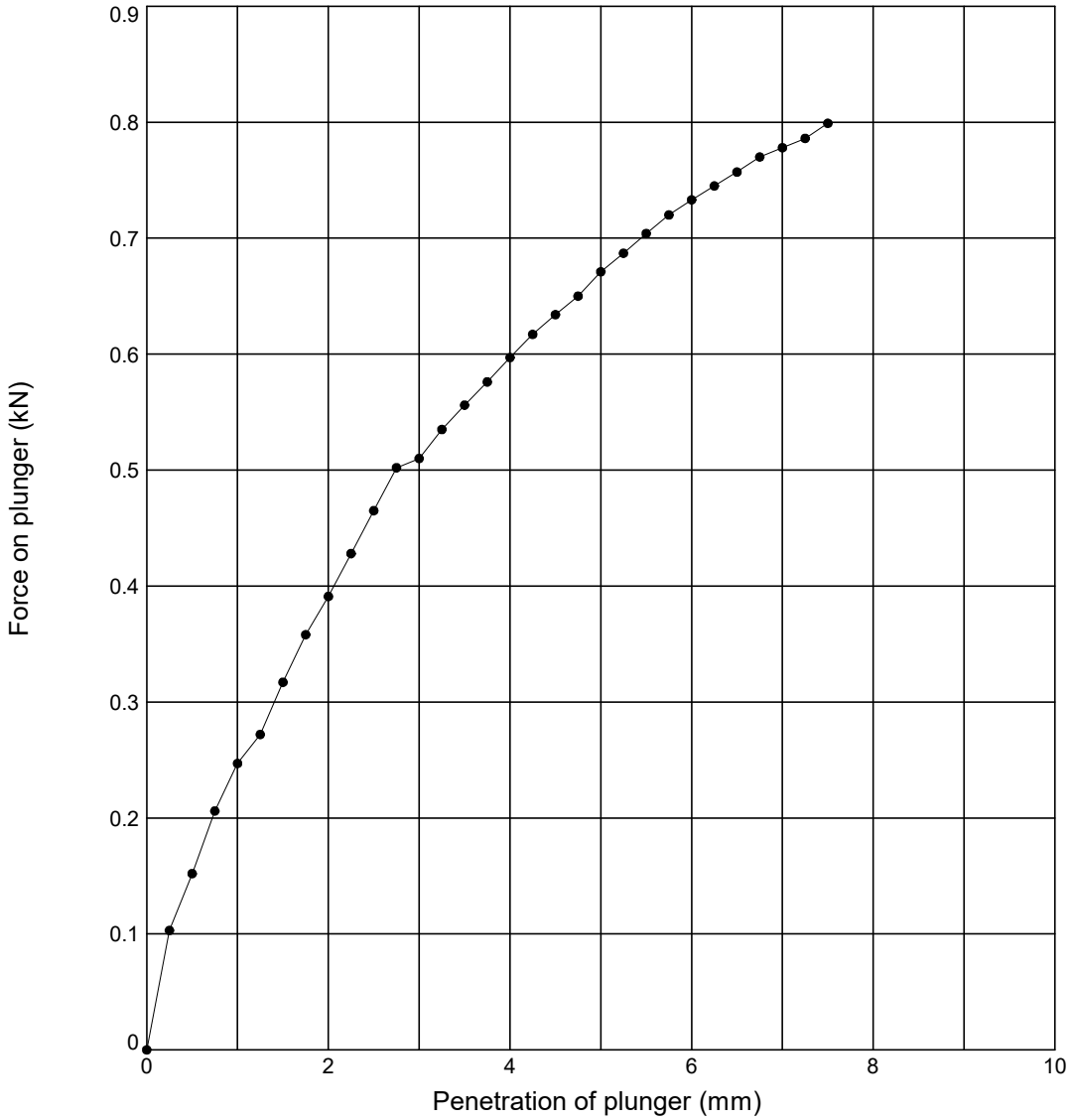
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP107** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.50**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**33**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**33**	**34**
Initial Bulk Density (Mg/m^3)	:	**1.77**	Surcharge (kg)	:	**4.0**	CBR value (%)	**3.5**	**0.00**
Initial Dry Density (Mg/m^3)	:	**1.33**	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
Brown slightly silty CLAY	● **Top** ⧓ **Base**

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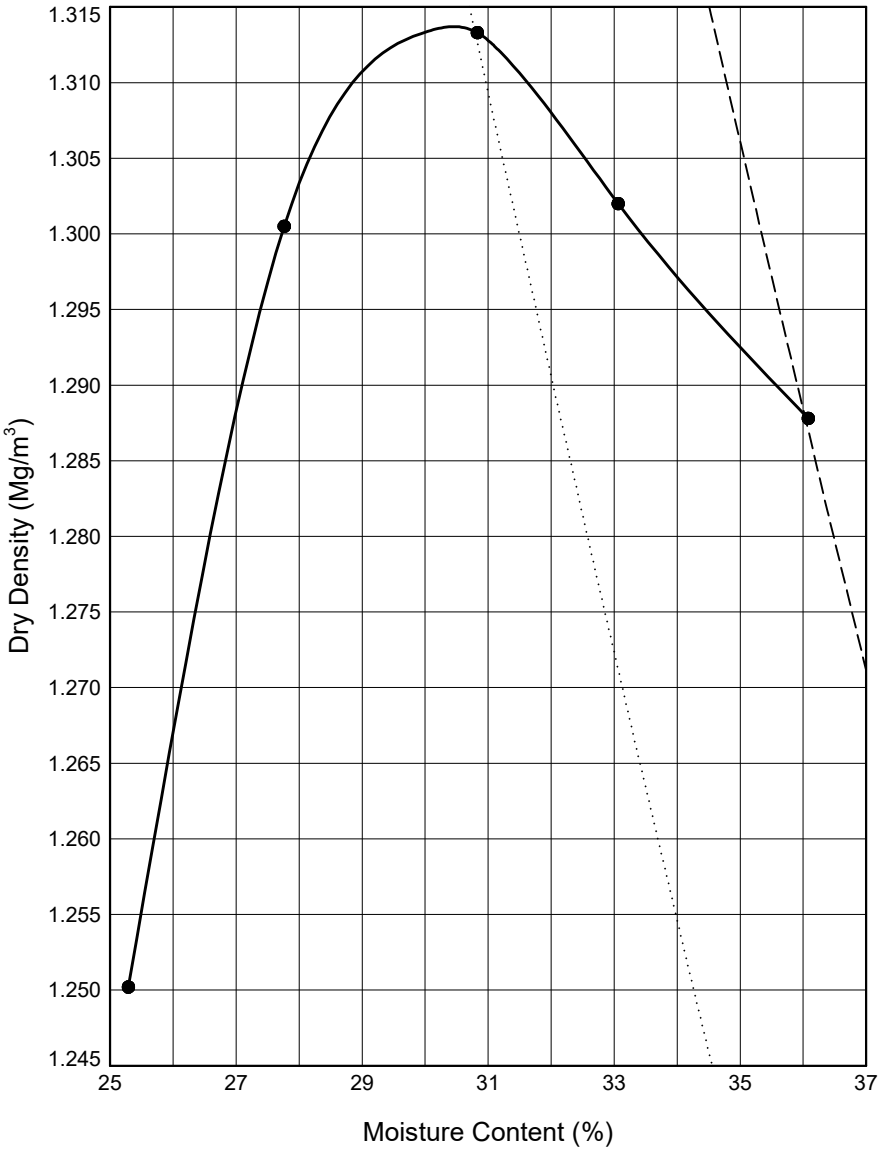
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **R22-TP201** Sample Ref: **11** Sample Type: **LB** Depth (m): **1.40**



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**33**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m³)	:	**1.31**
% Retained on 37.5mm BS Sieve	:	**0**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**30**
% 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 test carried out at each point**		
Size of Soil Pieces	:	**<37.5mm**	Separate samples were used.					

Sample Description	Key to Air Voids Lines		
Brown CLAY	——— 0%	– – – – 5%	····· 10%

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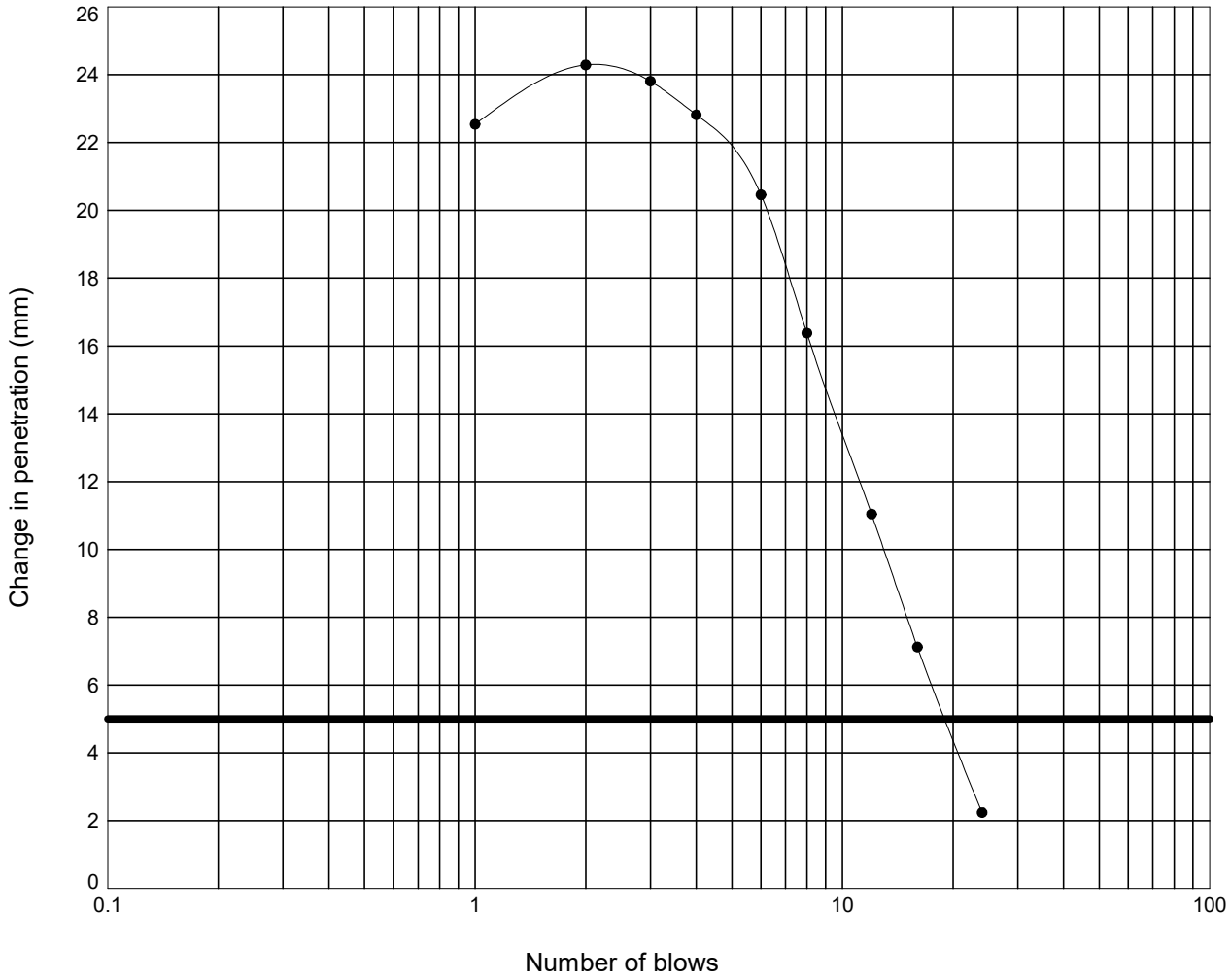
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP201** Sample Ref: **11** Sample Type: **LB** Depth (m): **1.40**

Description : **Brown CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	33.1	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	12.5	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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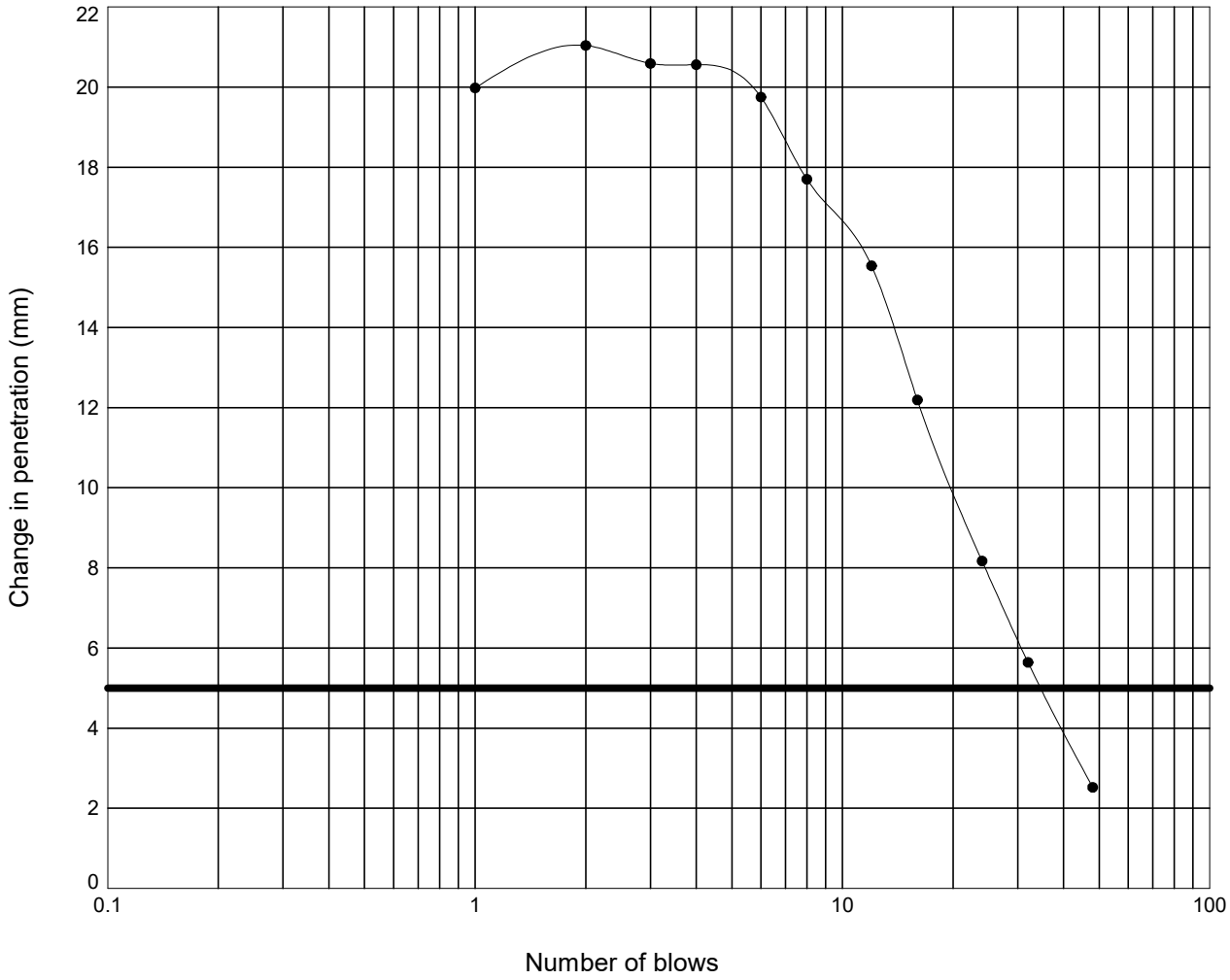
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP201** Sample Ref: **11** Sample Type: **LB** Depth (m): **1.40**

Description : **Brown CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	31	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	14.7	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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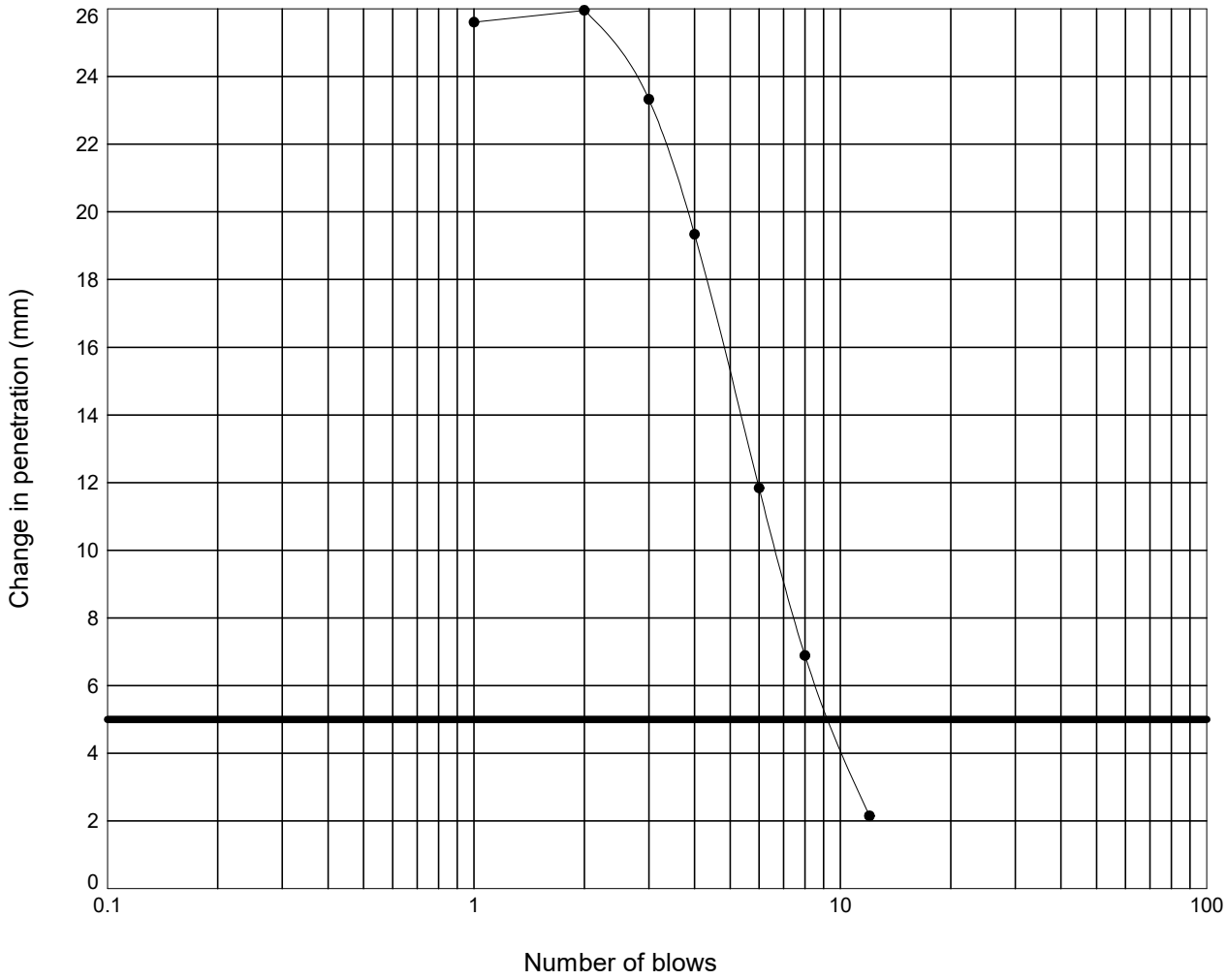
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP201** Sample Ref: **11** Sample Type: **LB** Depth (m): **1.40**

Description : **Brown CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	36	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	9.4	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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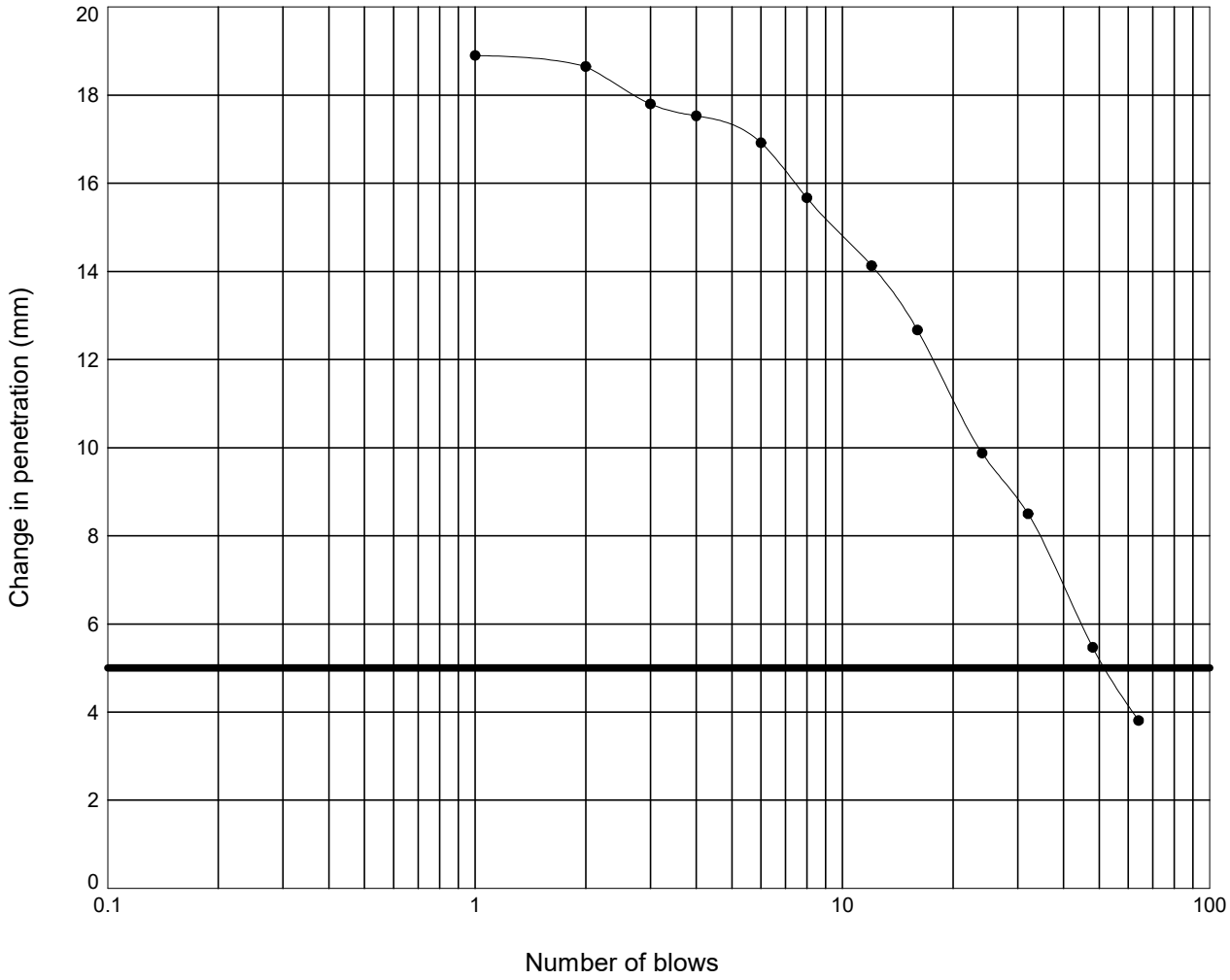
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP201** Sample Ref: **11** Sample Type: **LB** Depth (m): **1.40**

Description : **Brown CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	28	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	16.9	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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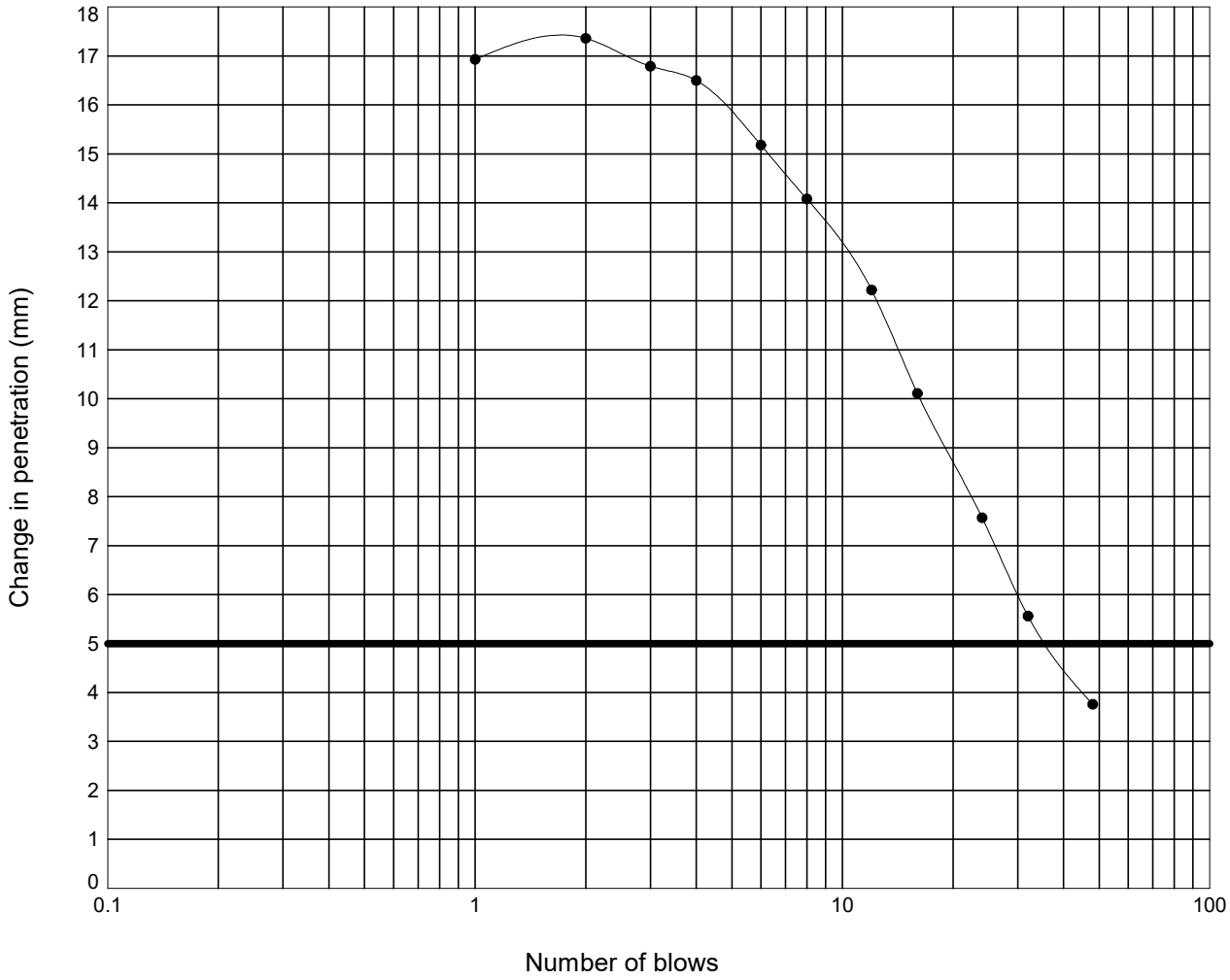
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP201** Sample Ref: **11** Sample Type: **LB** Depth (m): **1.40**

Description : **Brown CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	= 25	%
Percentage retained on 20 mm sieve :	= 0	%
Moisture Condition Value :	= 15.1	
Interpretation of curve:	= Steepest straight line - Fig 9	

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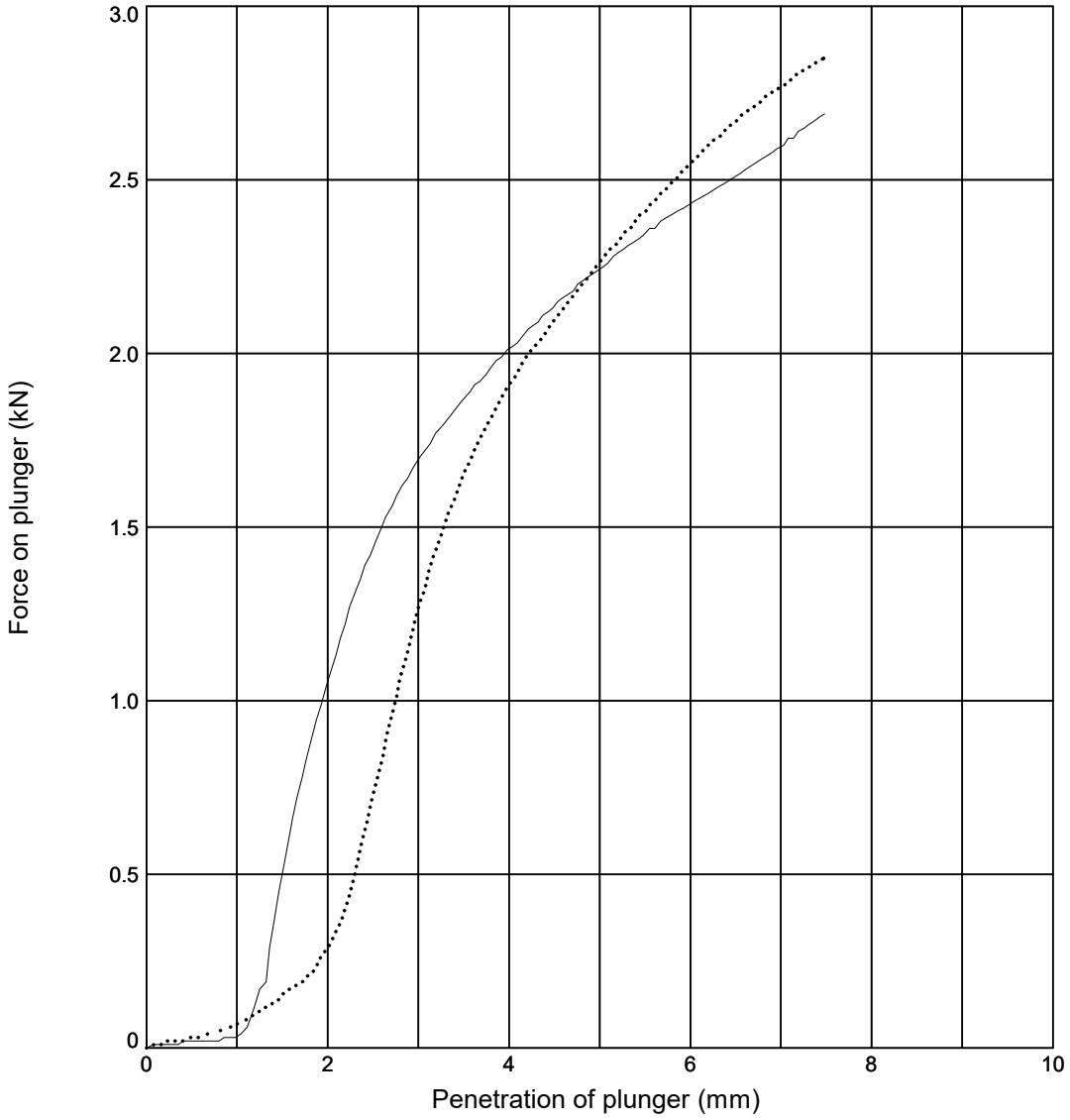
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP201** Sample Ref: **11** Sample Type: **LB** Depth (m): **1.40**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**33**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**33**	**33**
Initial Bulk Density (Mg/m^3)	:	**1.73**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**11**	**11**
Initial Dry Density (Mg/m^3)	:	**1.30**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**0.5**	**1.1**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**13**	**13**

Sample Description	Key
Brown CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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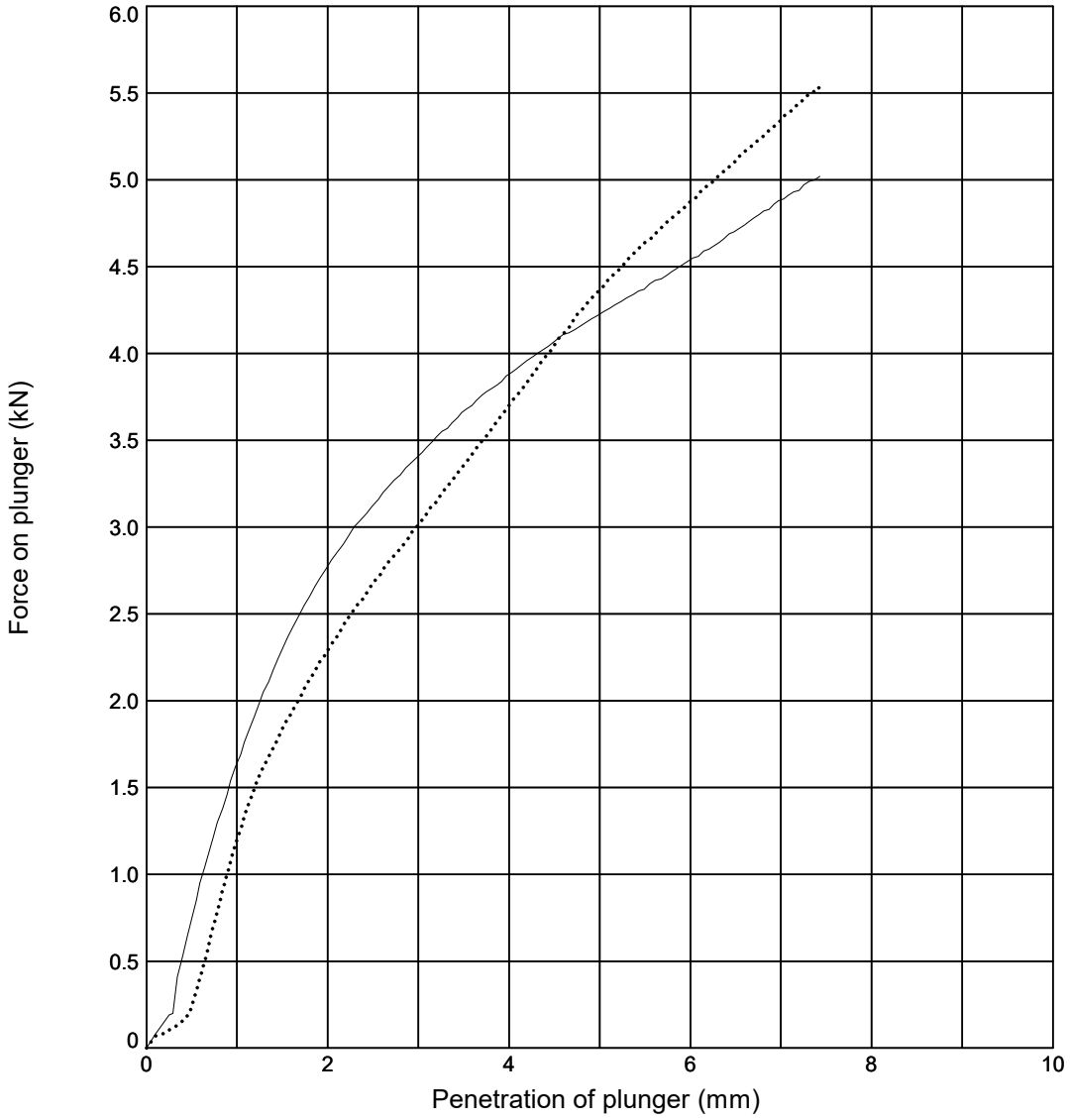
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP201** Sample Ref: **11** Sample Type: **LB** Depth (m): **1.40**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**31**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**31**	**30**
Initial Bulk Density (Mg/m^3)	:	**1.72**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**24**	**22**
Initial Dry Density (Mg/m^3)	:	**1.31**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Brown CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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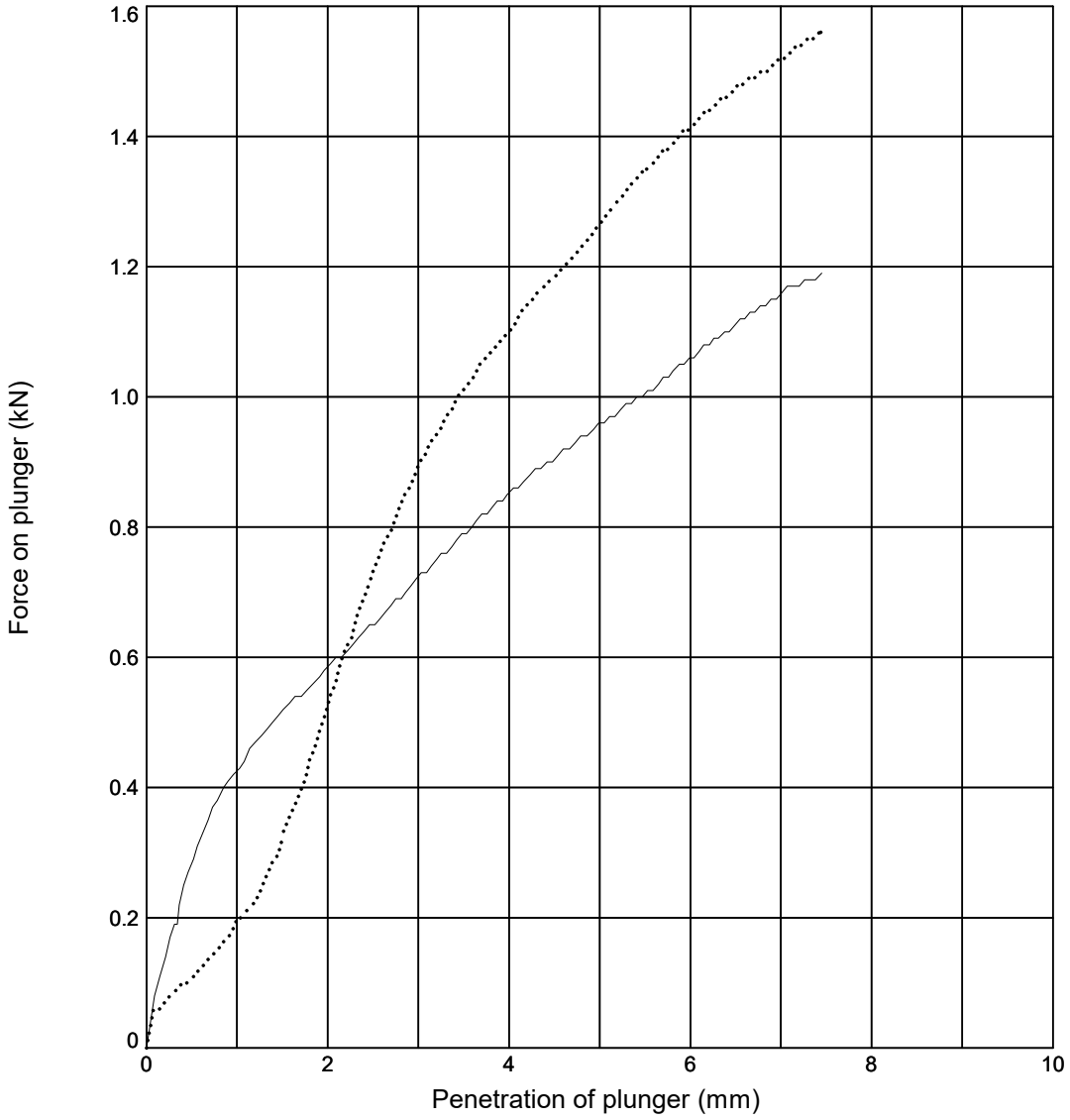
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP201** Sample Ref: **11** Sample Type: **LB** Depth (m): **1.40**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**36**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**35**	**36**
Initial Bulk Density (Mg/m^3)	:	**1.75**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**4.9**	**6.3**
Initial Dry Density (Mg/m^3)	:	**1.29**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**0.4**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**6.6**

Sample Description	Key
Brown CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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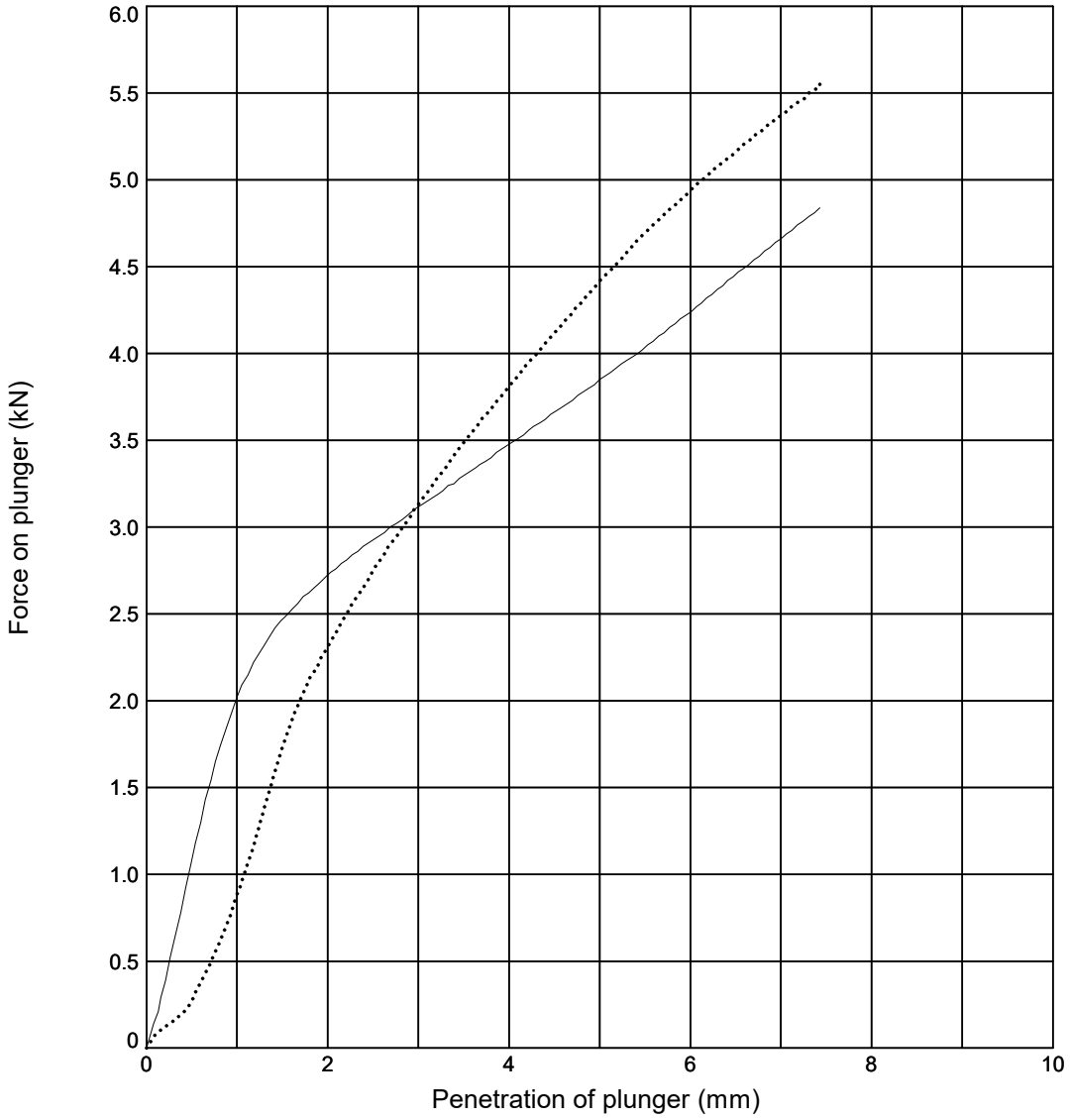
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP201** Sample Ref: **11** Sample Type: **LB** Depth (m): **1.40**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**28**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**28**	**28**
Initial Bulk Density (Mg/m^3)	:	**1.66**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**22**	**22**
Initial Dry Density (Mg/m^3)	:	**1.30**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**0.4**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**23**

Sample Description	Key
Brown CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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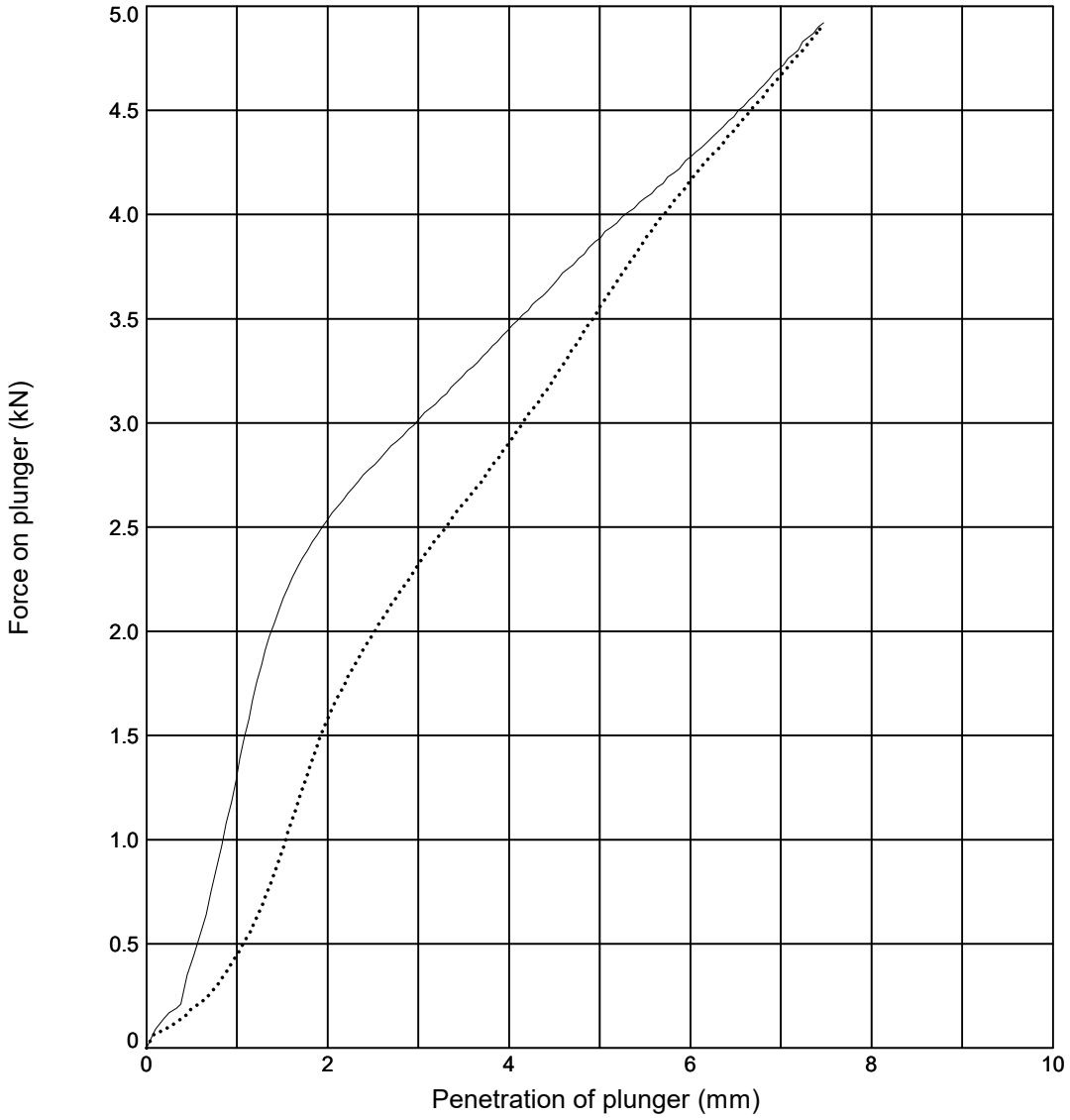
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP201** Sample Ref: **11** Sample Type: **LB** Depth (m): **1.40**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**26**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**25**	**26**
Initial Bulk Density (Mg/m^3)	:	**1.57**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**21**	**18**
Initial Dry Density (Mg/m^3)	:	**1.24**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**0.6**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**20**

Sample Description	Key
Brown CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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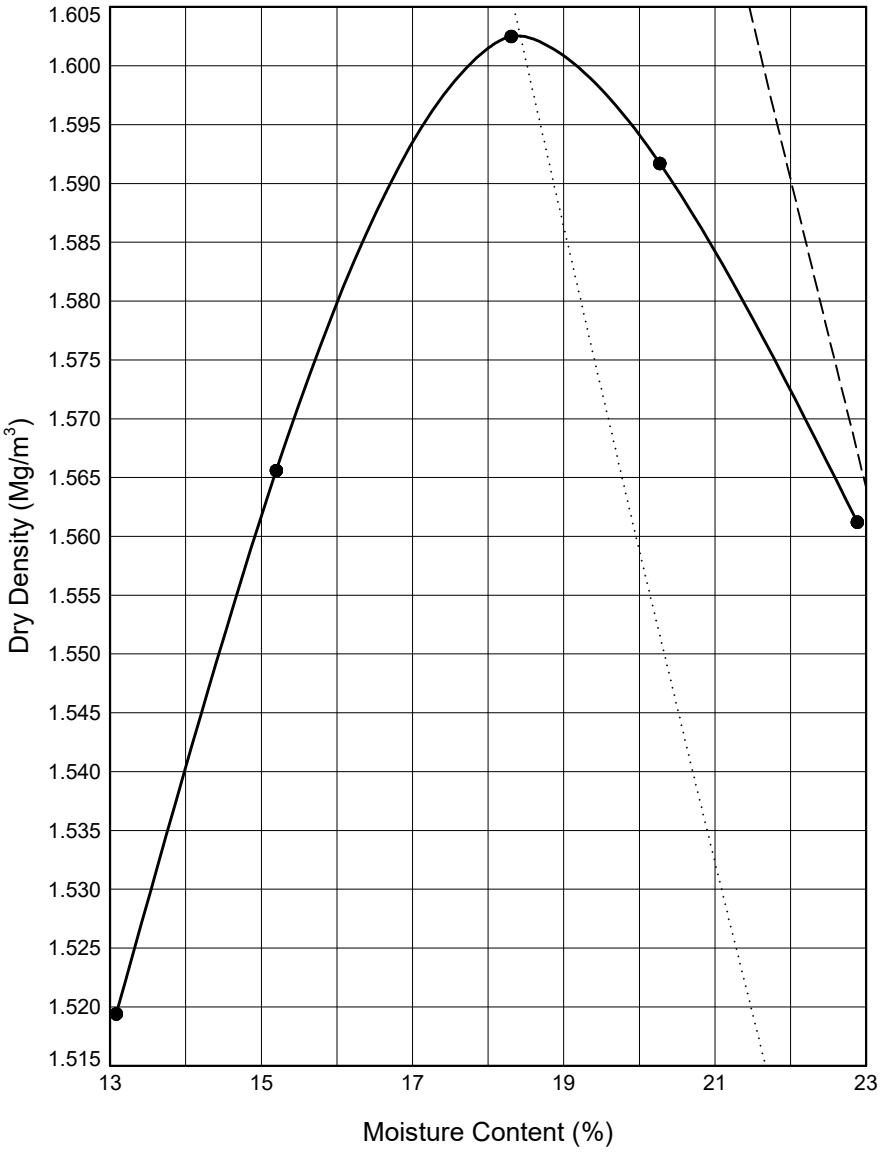
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **R22-TP202** Sample Ref: **9** Sample Type: **LB** Depth (m): **1.10**



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**18**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m³)	:	**1.60**
% Retained on 37.5mm BS Sieve	:	**0**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**18**
% 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 test carried out at each point**		
Size of Soil Pieces	:	**<37.5mm**	Separate samples were used.					

Sample Description	Key to Air Voids Lines		
Yellowish brown silty CLAY	——— 0%	– – – – 5%	····· 10%

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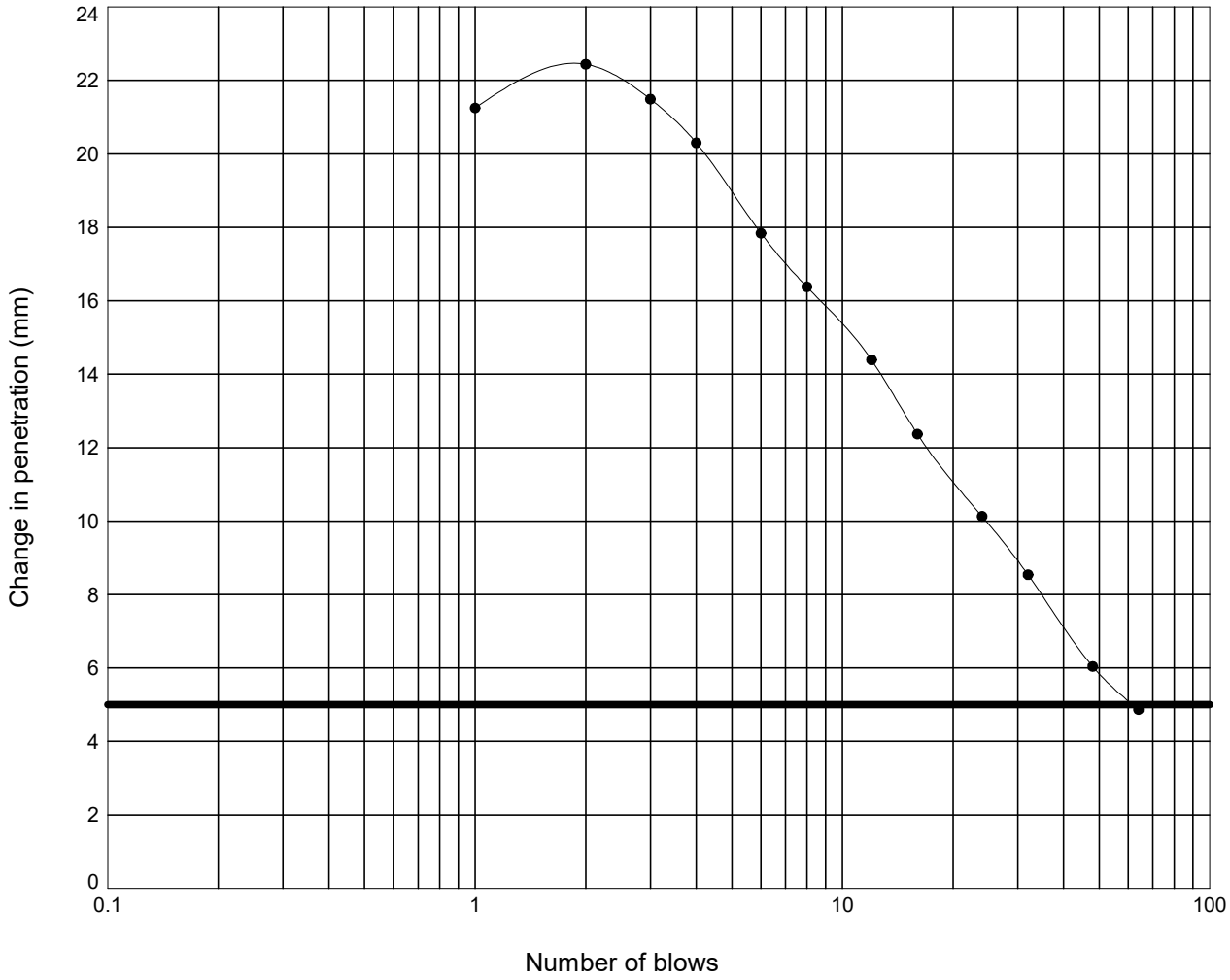
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP202** Sample Ref: **9** Sample Type: **LB** Depth (m): **1.10**

Description : **Yellowish brown silty CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	18.3	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	17.0	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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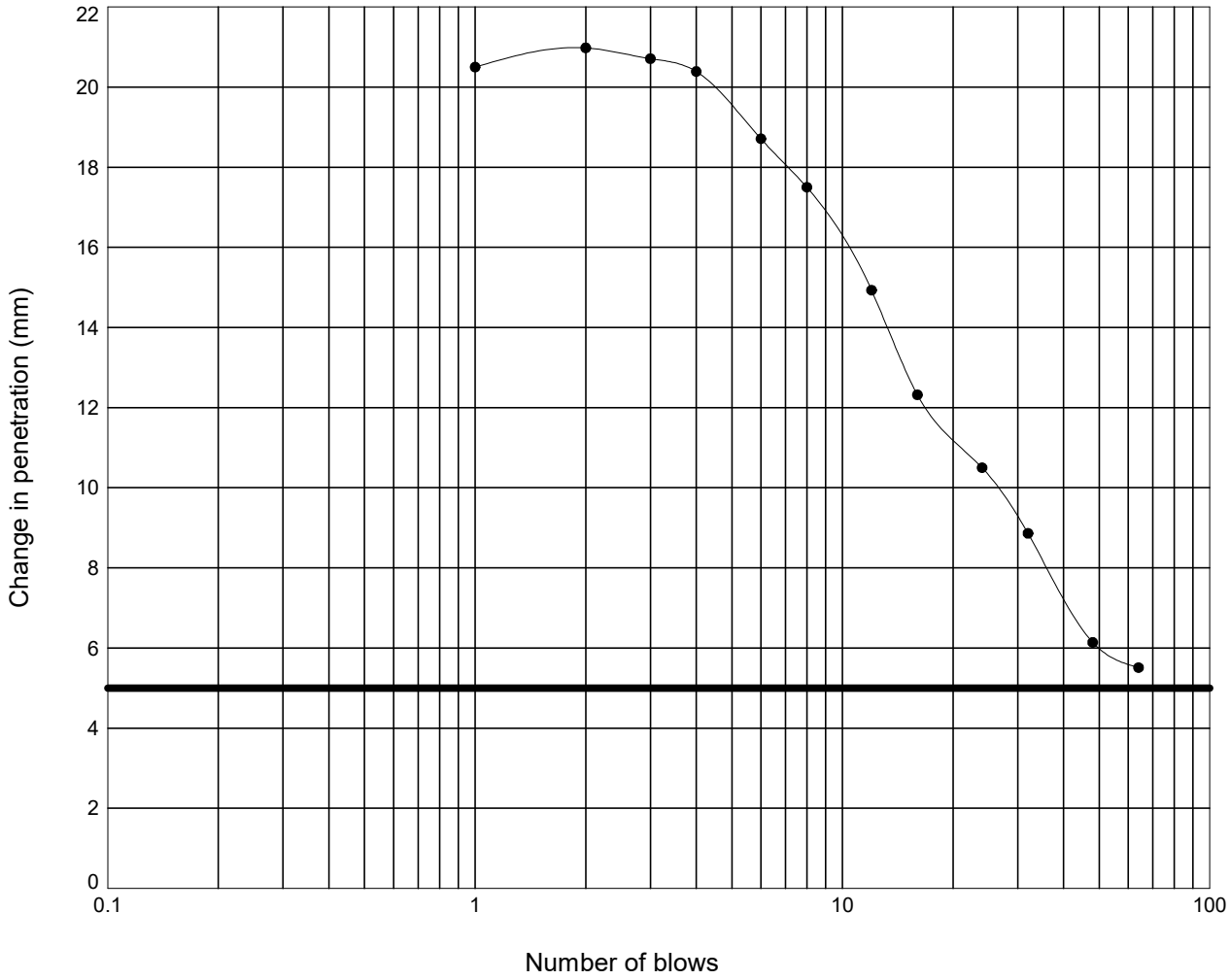
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP202** Sample Ref: **9** Sample Type: **LB** Depth (m): **1.10**

Description : **Yellowish brown silty CLAY -2**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	15	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	17.6	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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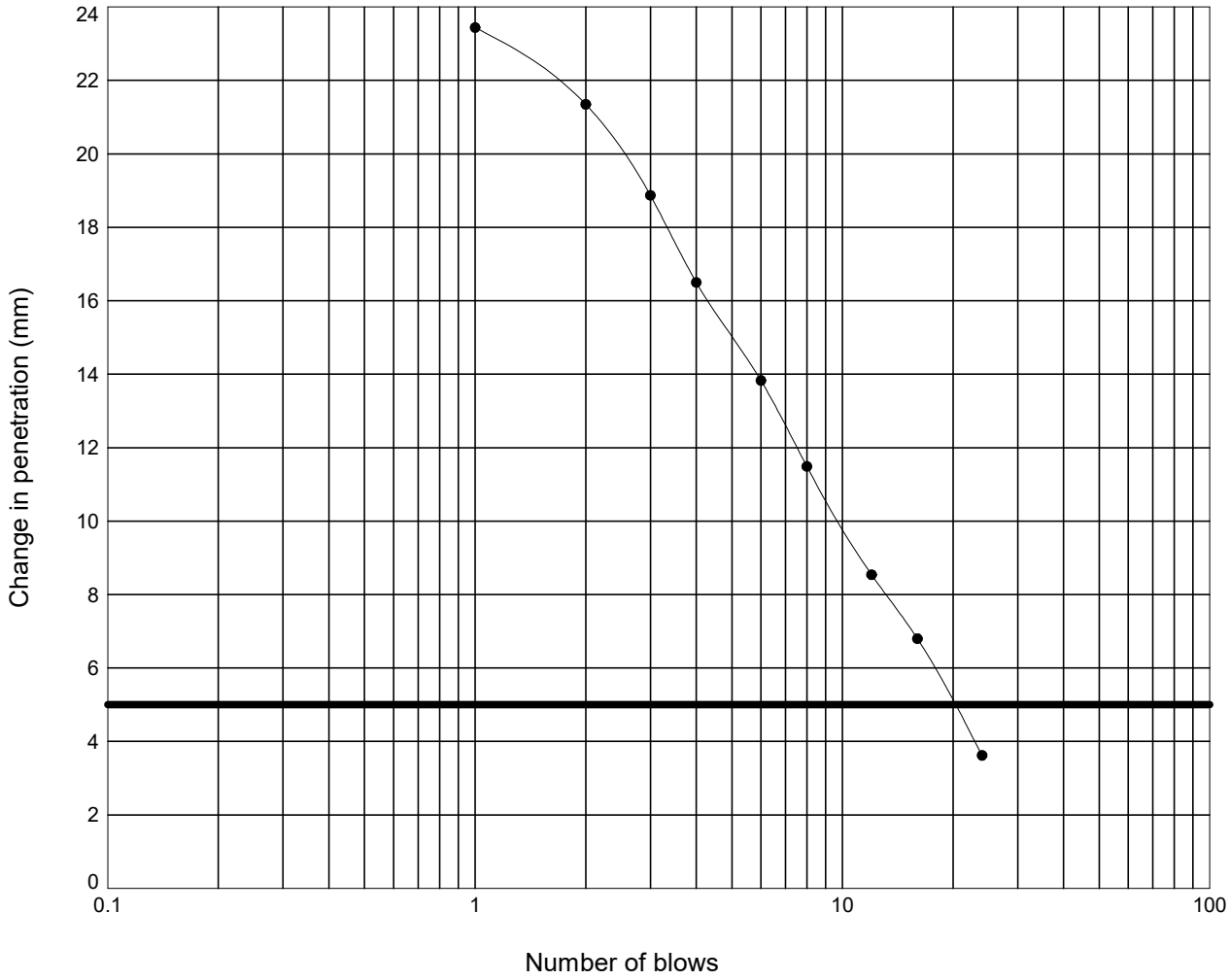
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP202** Sample Ref: **9** Sample Type: **LB** Depth (m): **1.10**

Description : **Yellowish brown silty CLAY +2**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	= 20	%
Percentage retained on 20 mm sieve :	= 0	%
Moisture Condition Value :	= 12.5	
Interpretation of curve:	= Steepest straight line - Fig 9	

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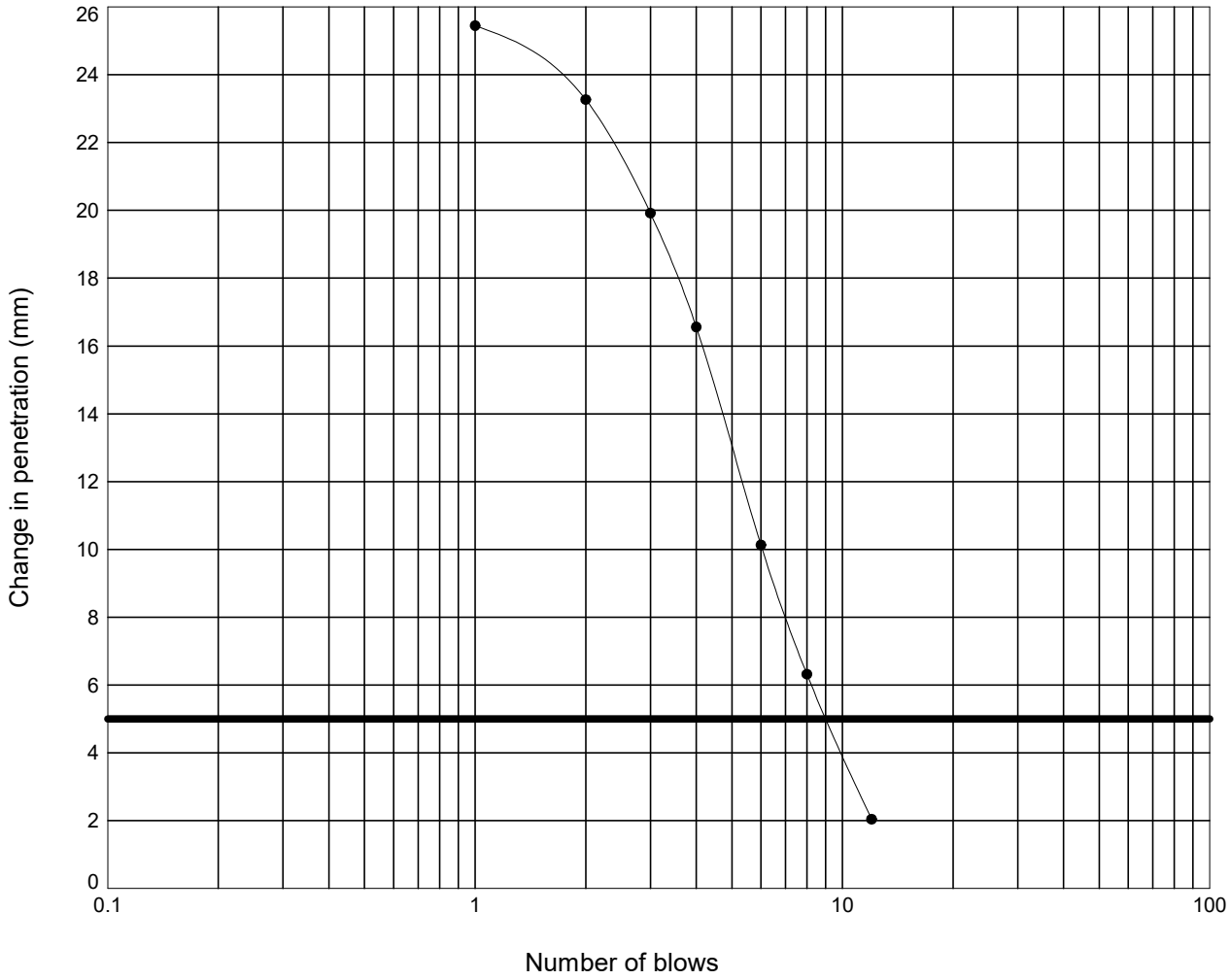
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP202** Sample Ref: **9** Sample Type: **LB** Depth (m): **1.10**

Description : **Yellowish brown silty CLAY +4**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	23	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	9.2	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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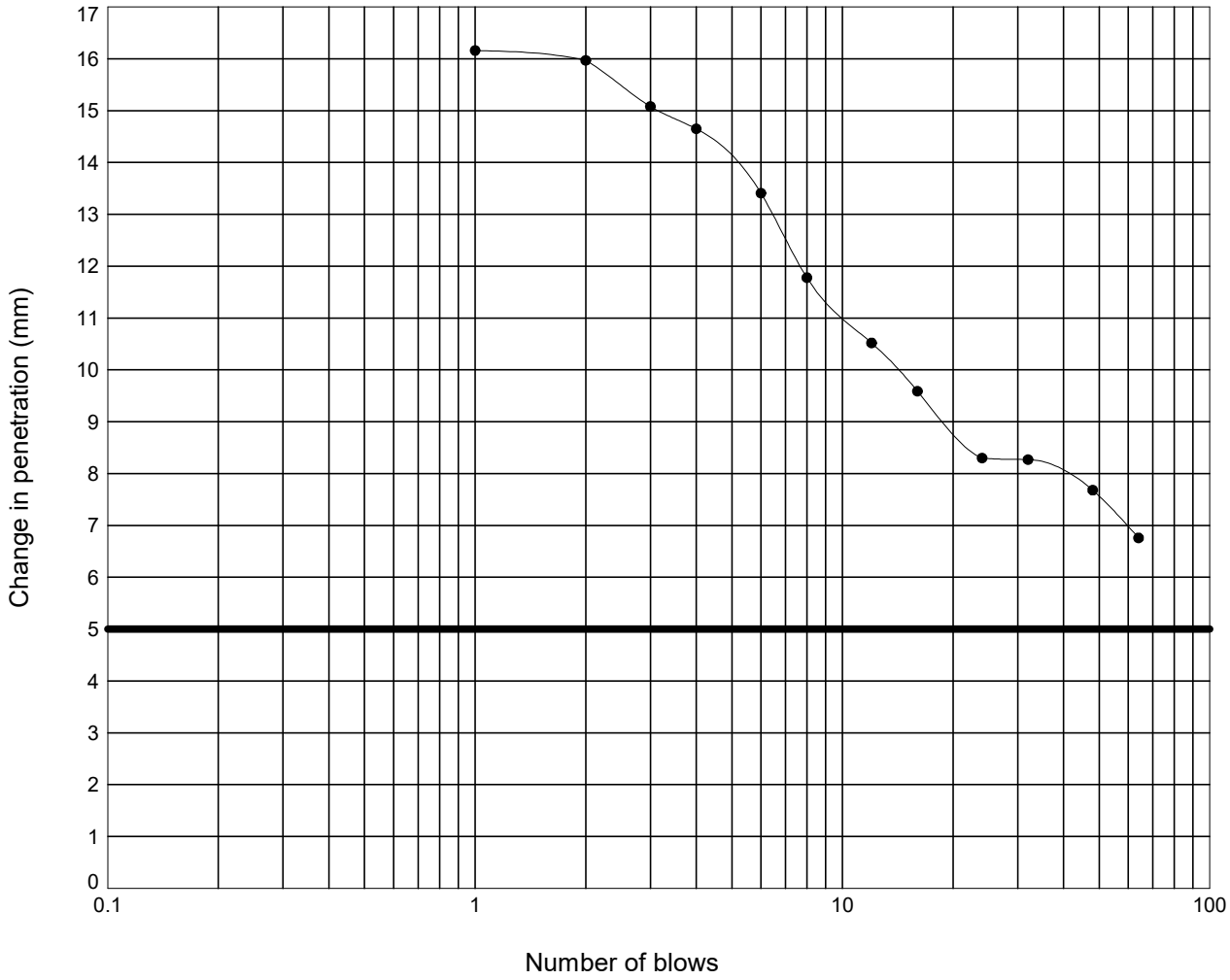
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP202** Sample Ref: **9** Sample Type: **LB** Depth (m): **1.10**

Description : **Yellowish brown silty CLAY -4**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	13	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	14.2	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract	Contract Ref:
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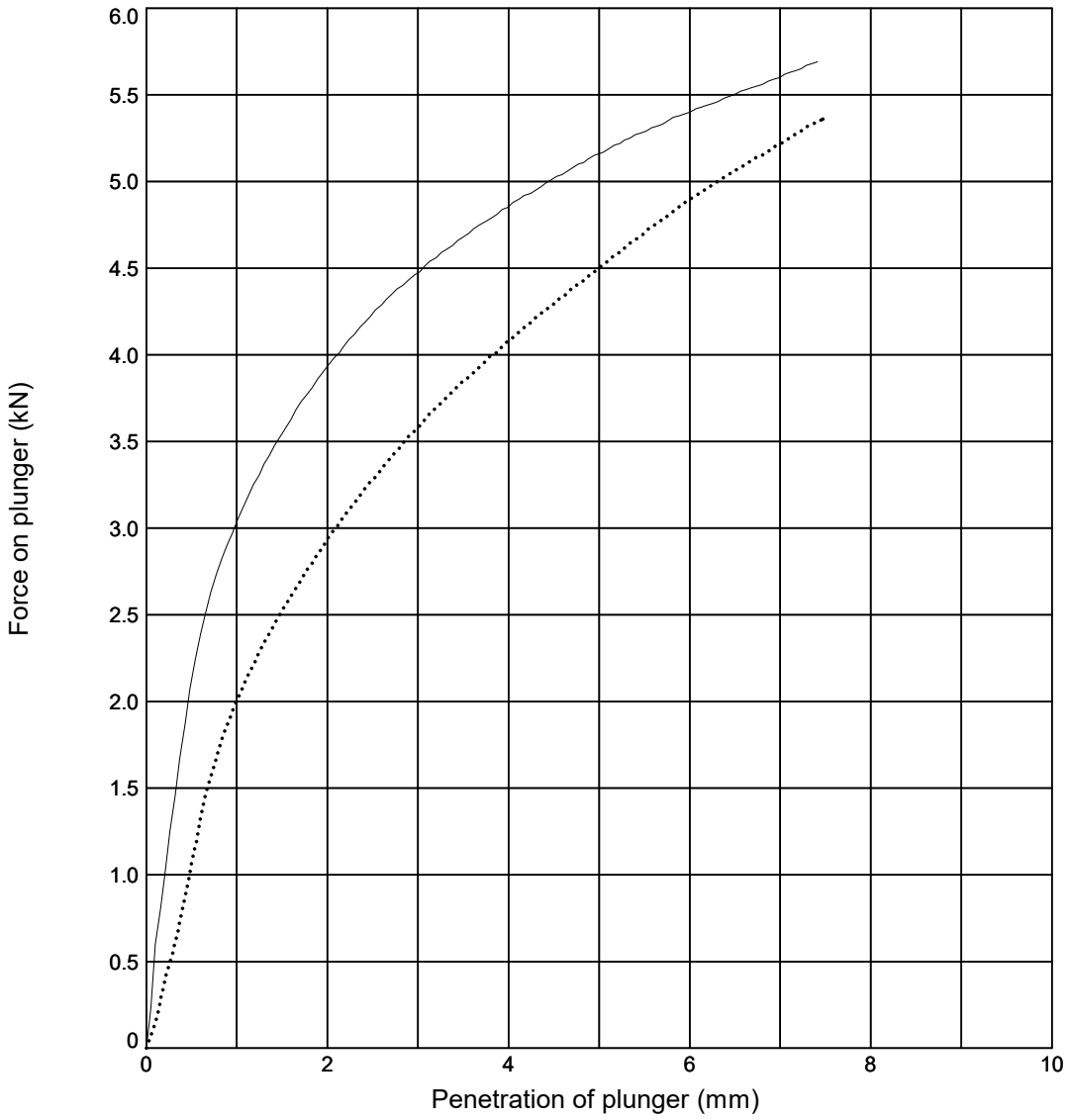
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP202** Sample Ref: **9** Sample Type: **LB** Depth (m): **1.10**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**25**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**19**	**11**
Initial Bulk Density (Mg/m^3)	:	**1.81**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**32**	**25**
Initial Dry Density (Mg/m^3)	:	**1.45**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Yellowish brown silty CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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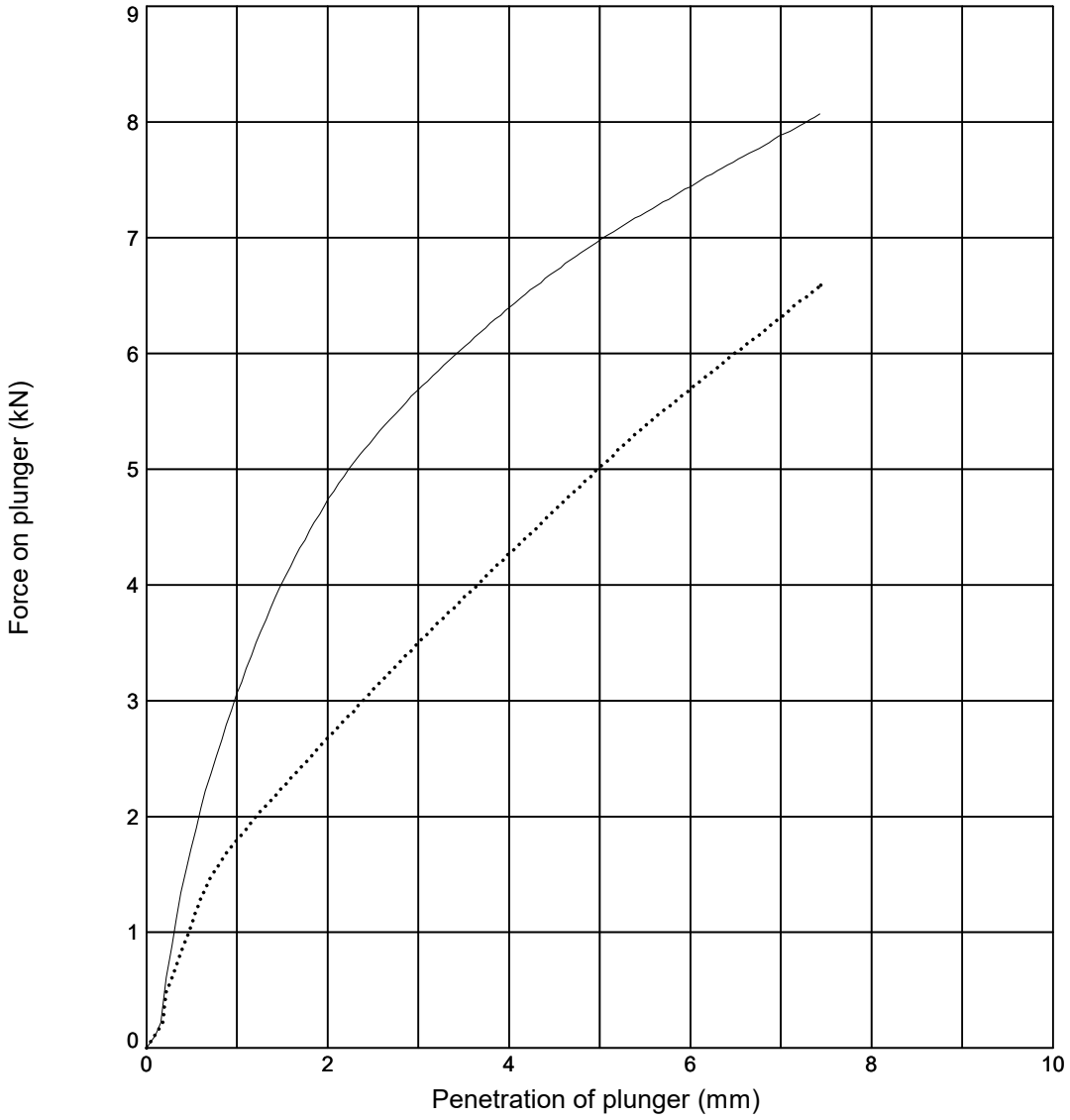
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP202** Sample Ref: **9** Sample Type: **LB** Depth (m): **1.10**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**15**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**16**	**15**
Initial Bulk Density (Mg/m^3)	:	**1.79**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**40**	**25**
Initial Dry Density (Mg/m^3)	:	**1.56**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Yellowish brown silty CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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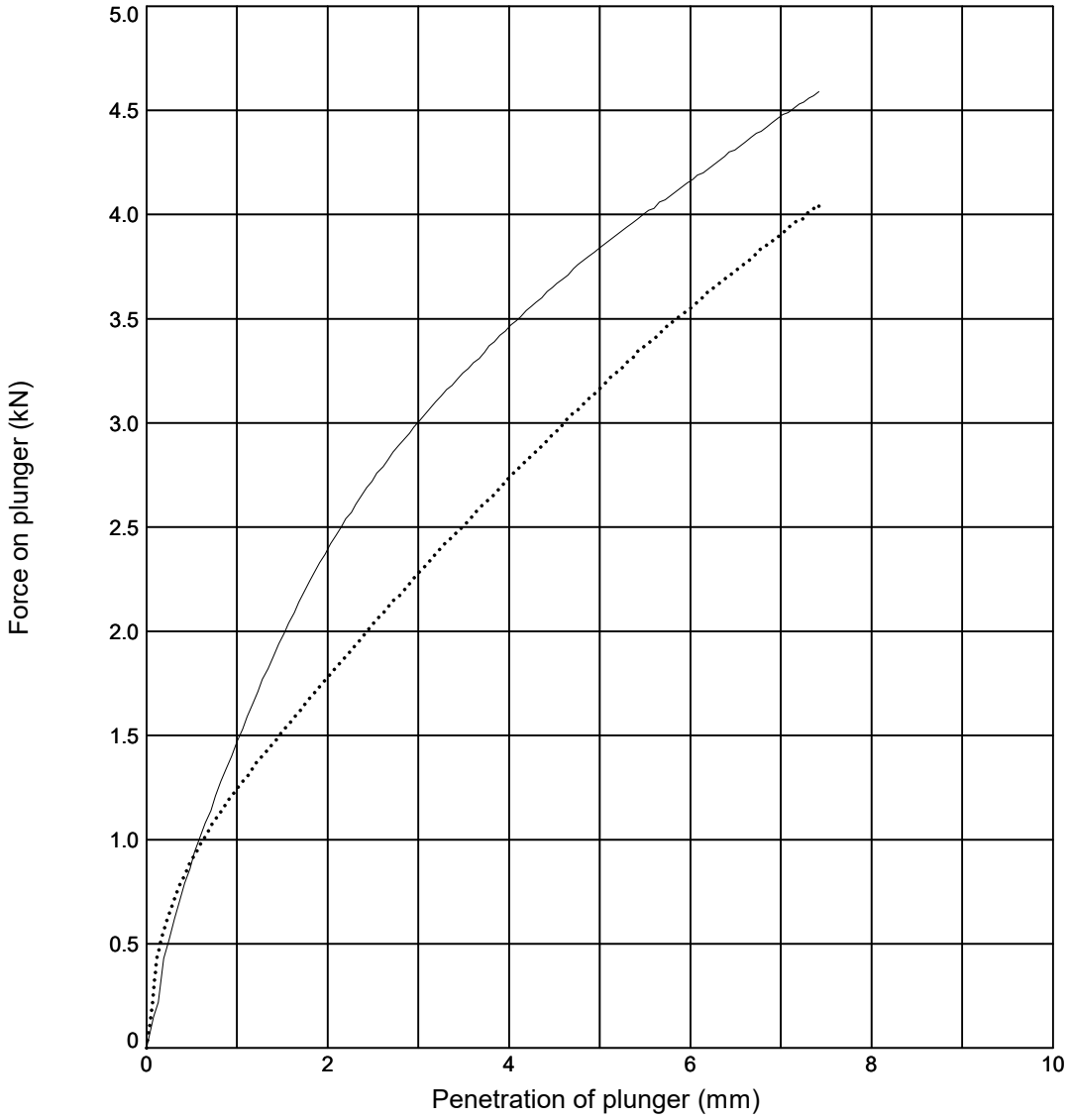
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP202** Sample Ref: **9** Sample Type: **LB** Depth (m): **1.10**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**20**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**19**	**19**
Initial Bulk Density (Mg/m^3)	:	**1.91**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**21**	**16**
Initial Dry Density (Mg/m^3)	:	**1.59**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Yellowish brown silty CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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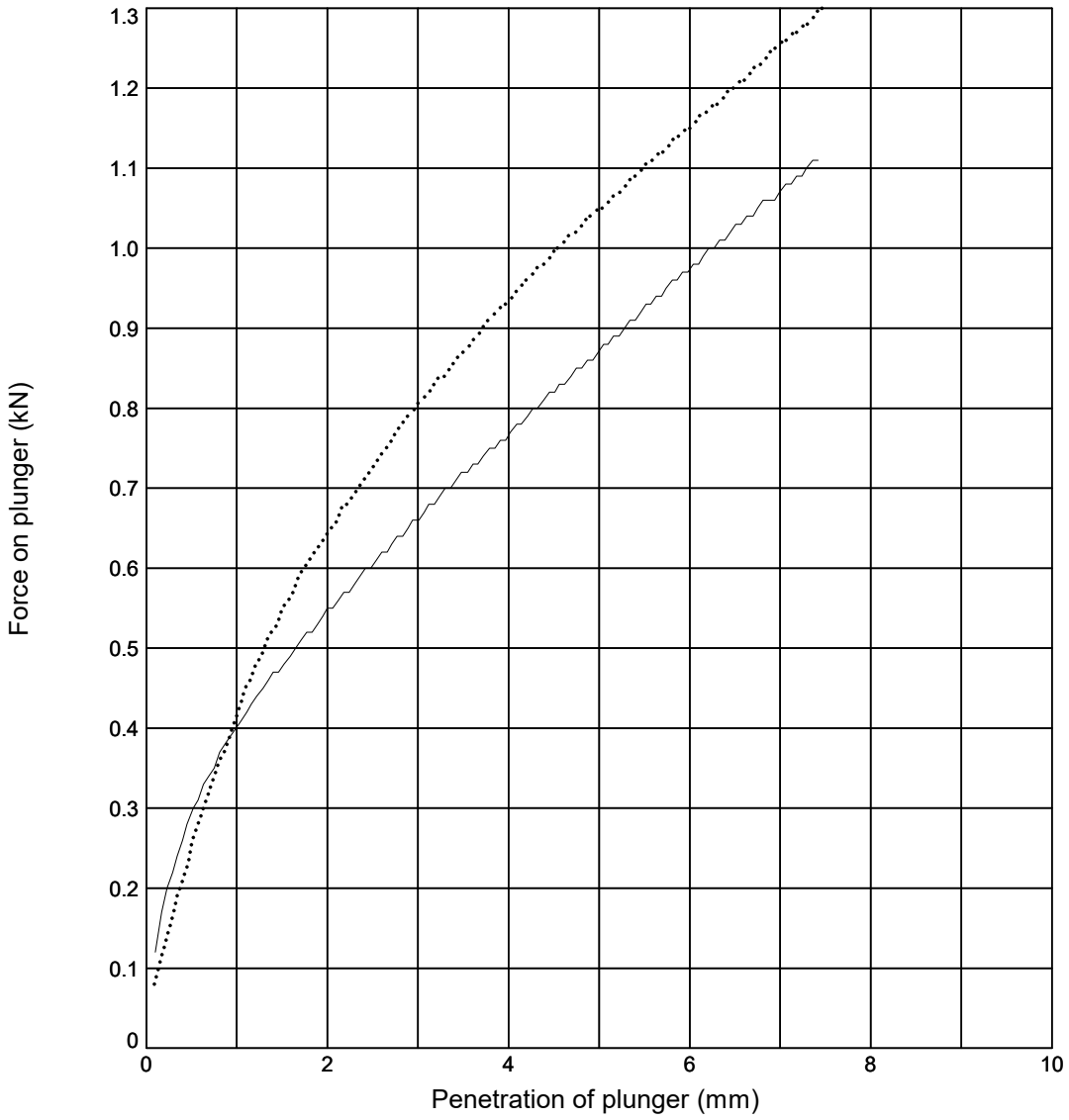
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP202** Sample Ref: **9** Sample Type: **LB** Depth (m): **1.10**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**23**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**23**	**23**
Initial Bulk Density (Mg/m^3)	:	**1.91**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**4.6**	**5.5**
Initial Dry Density (Mg/m^3)	:	**1.55**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Yellowish brown silty CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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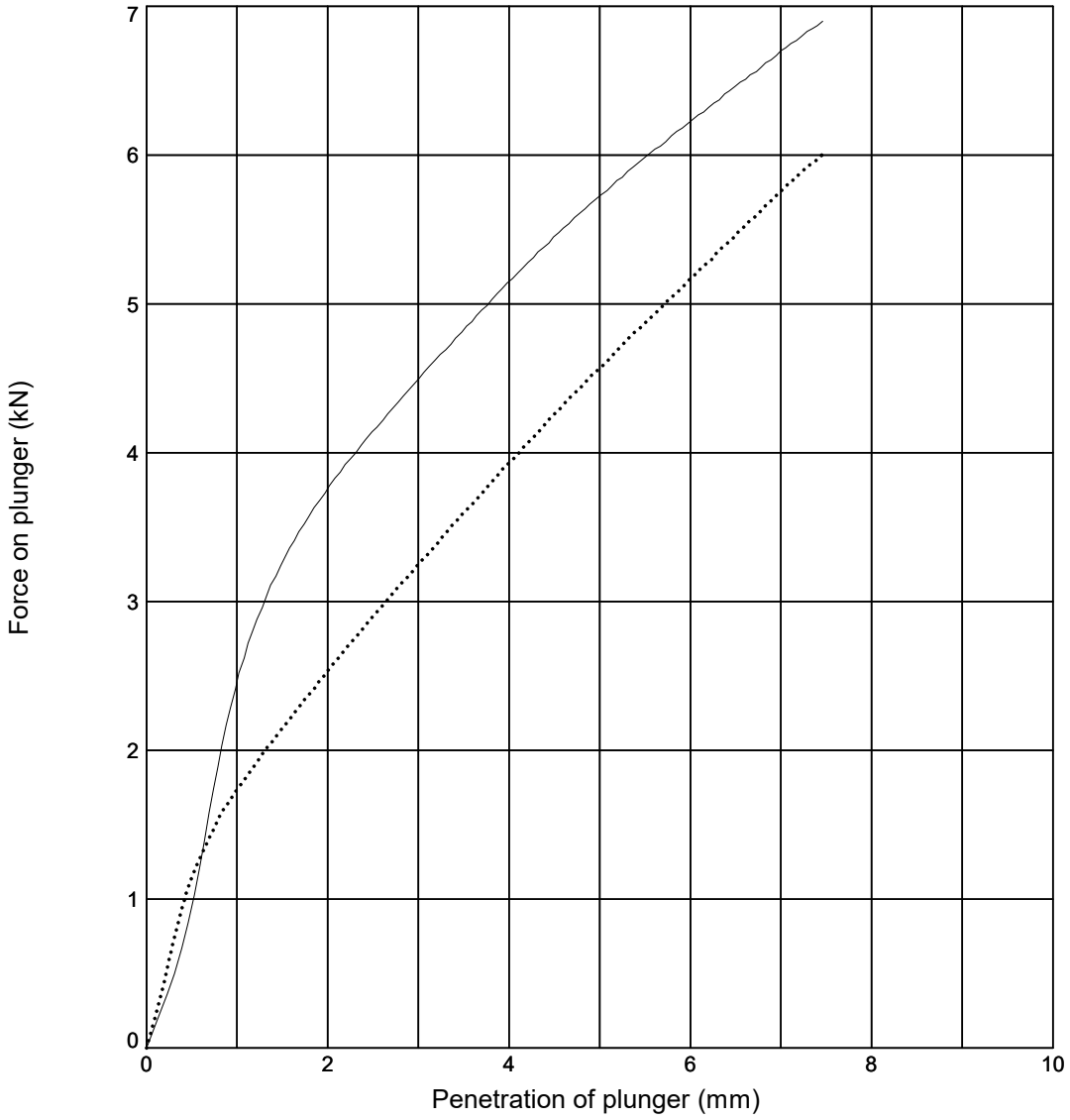
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP202** Sample Ref: **9** Sample Type: **LB** Depth (m): **1.10**



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)	:	**1.72**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**31**	**23**
Initial Dry Density (Mg/m^3)	:	**1.51**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Yellowish brown silty CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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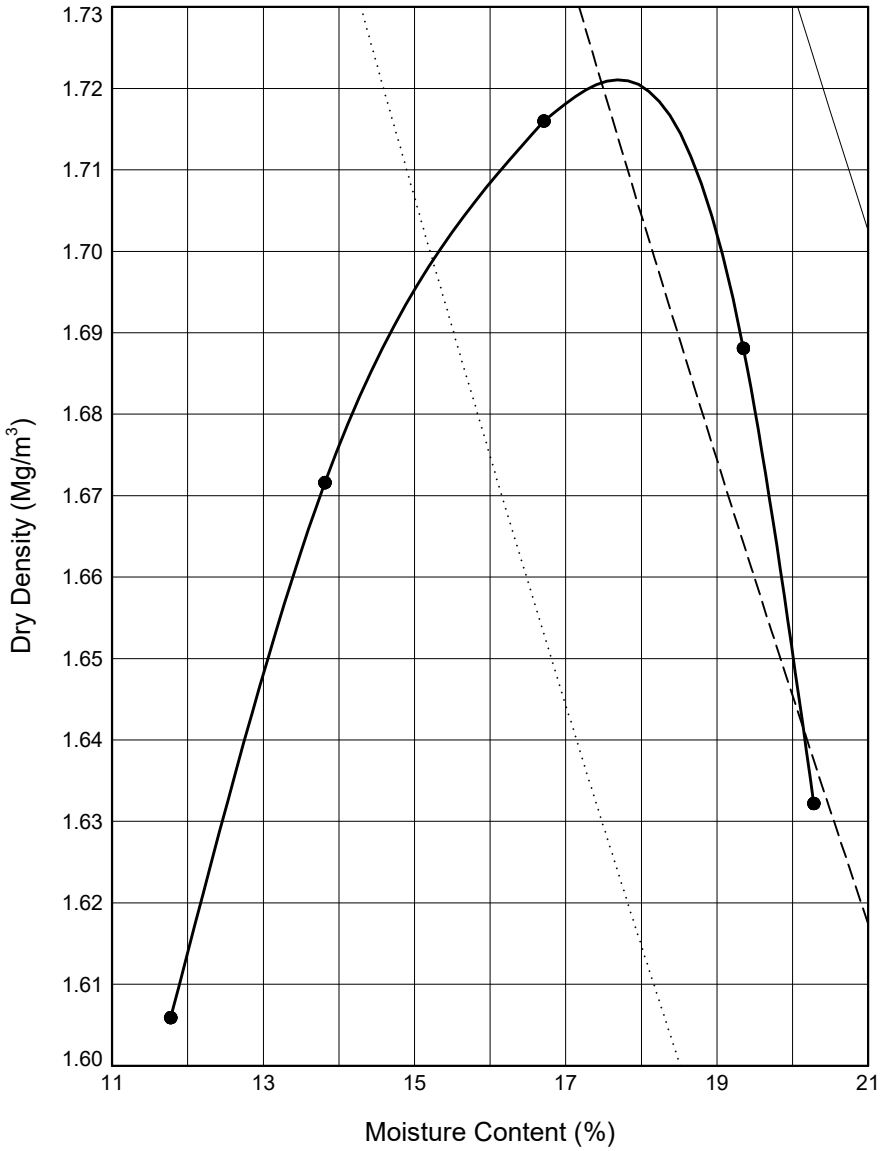
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **R22-TP203** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.70**



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**14**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m³)	:	**1.72**
% Retained on 37.5mm BS Sieve	:	**0**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**18**
% 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 test carried out at each point**		
Size of Soil Pieces	:	**<37.5mm**	Separate samples were used.					

Sample Description	Key to Air Voids Lines		
Yellowish brown SILT	——— 0%	– – – – 5%	····· 10%

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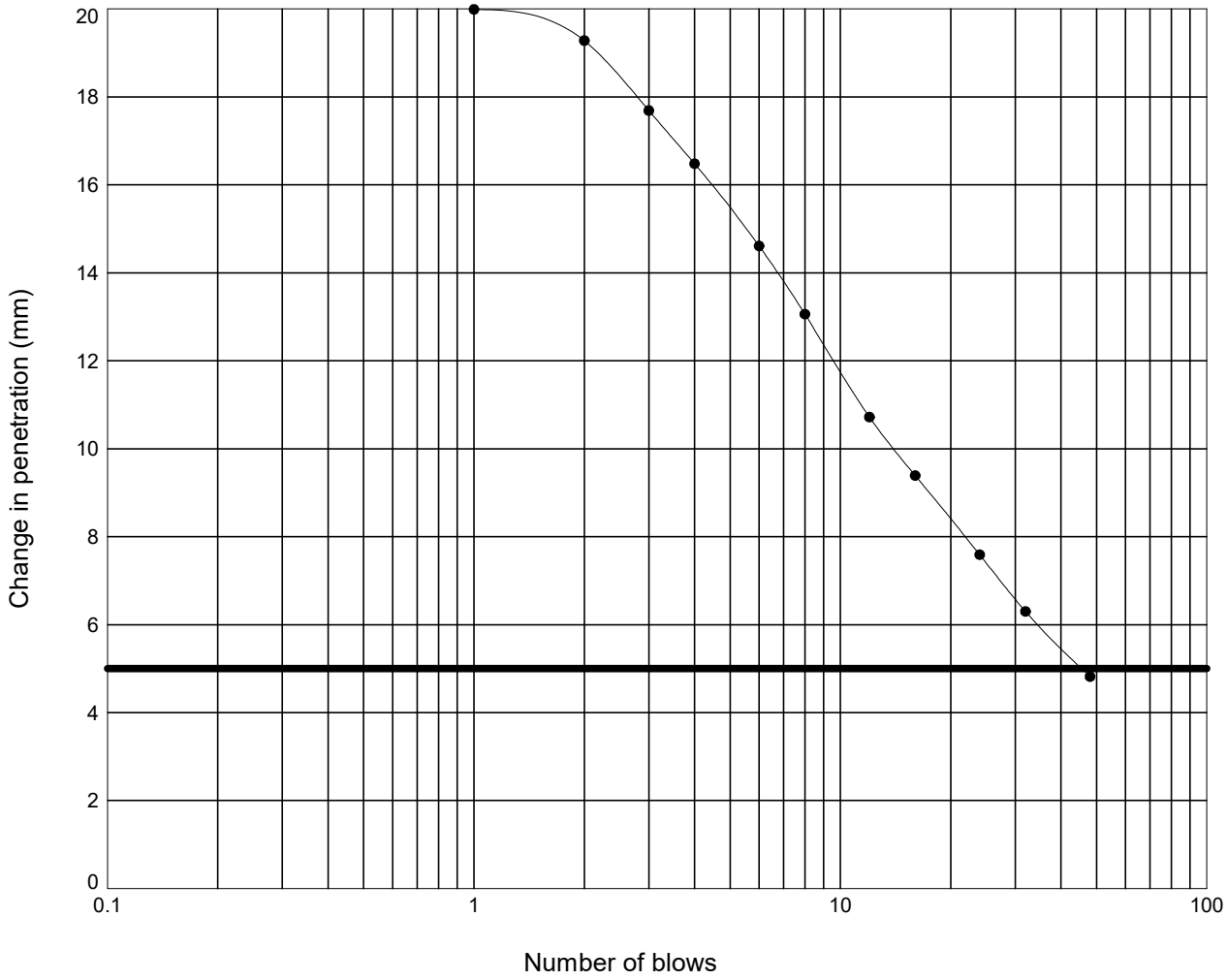
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP203** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.70**

Description : **Yellowish brown SILT**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	13.8	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	15.1	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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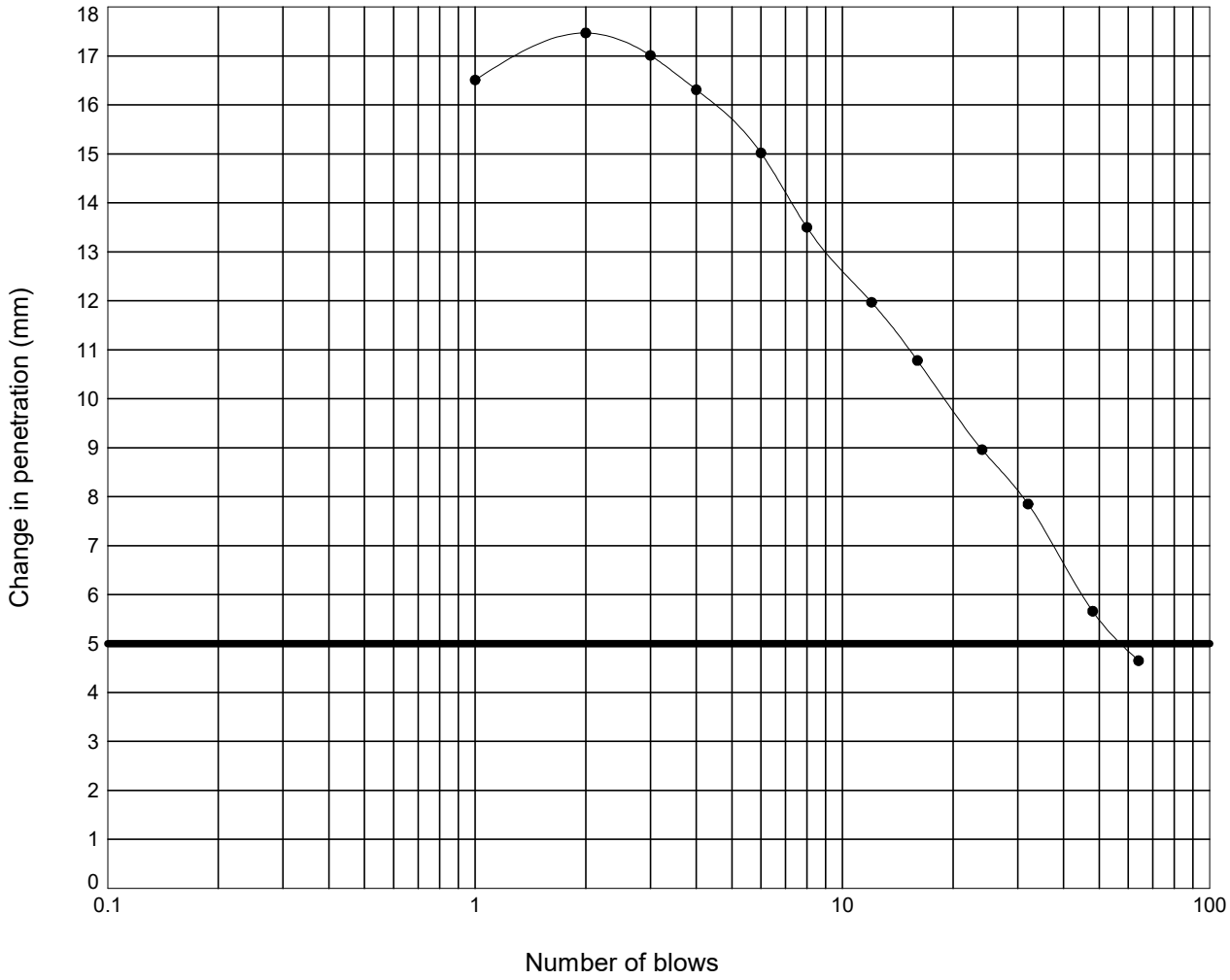
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP203** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.70**

Description : **Yellowish brown SILT**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	12	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	17.3	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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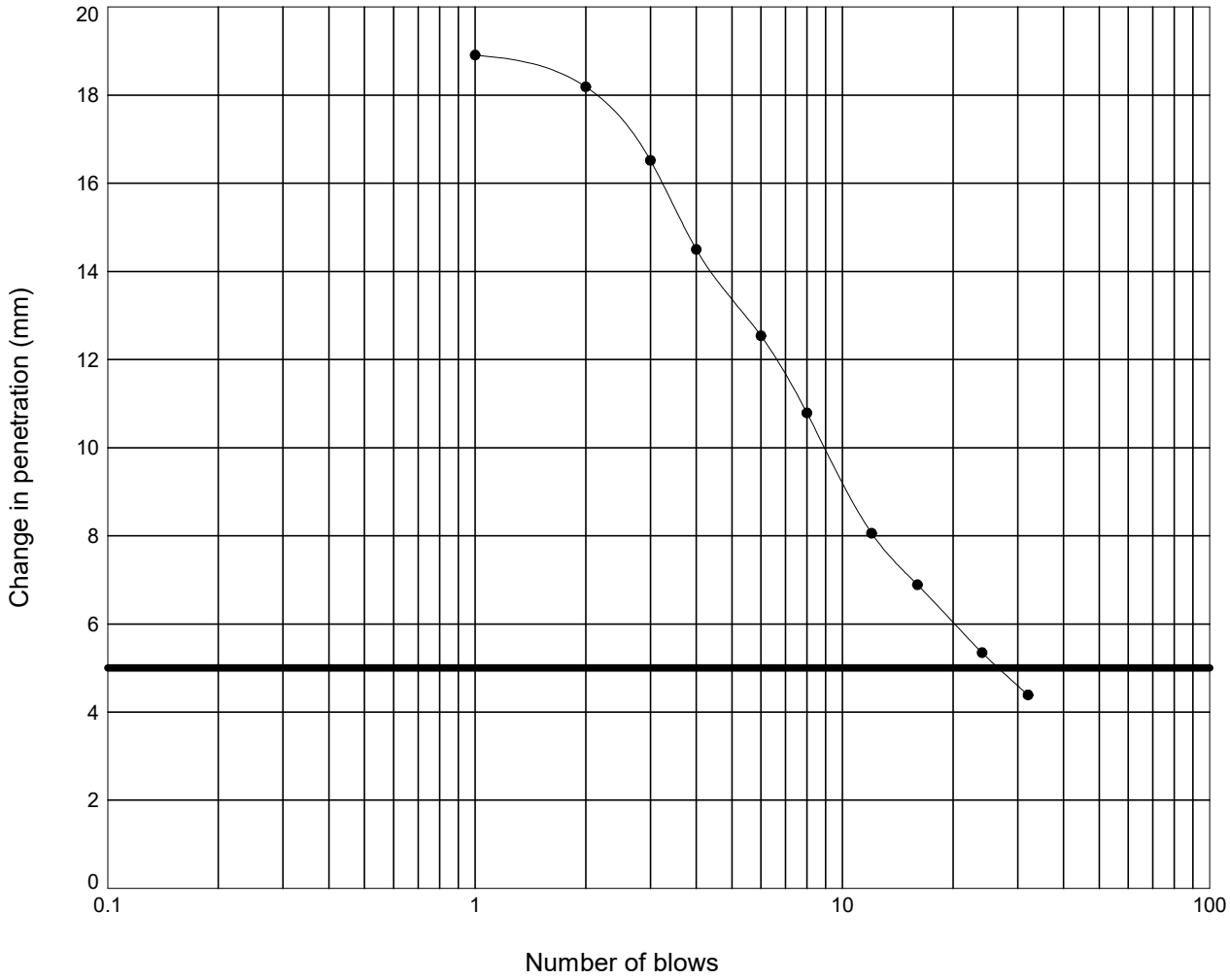
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP203** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.70**

Description : **Yellowish brown SILT**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	17	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	12.8	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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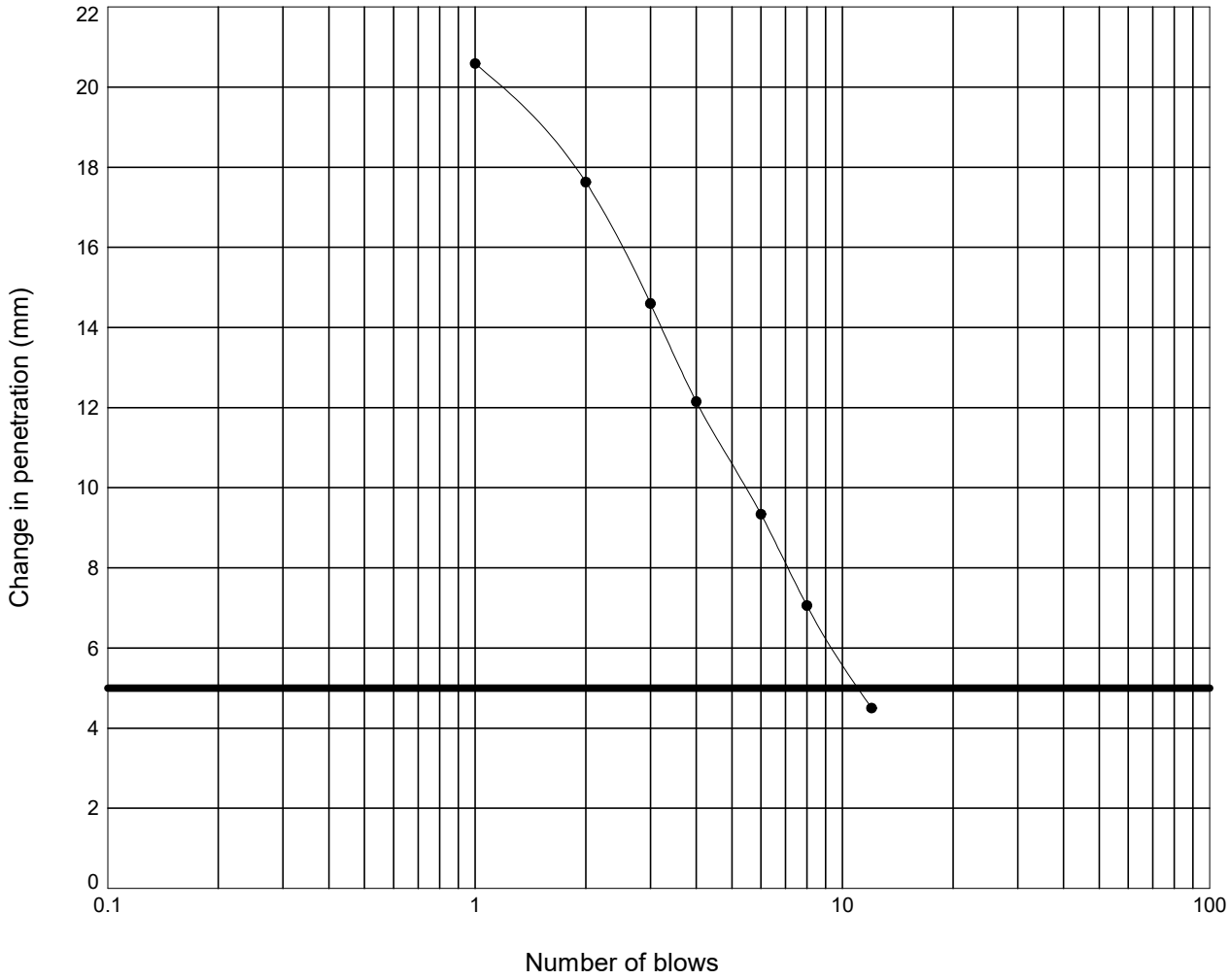
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP203** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.70**

Description : **Yellowish brown SILT**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	= 19	%
Percentage retained on 20 mm sieve :	= 0	%
Moisture Condition Value :	= 9.7	
Interpretation of curve:	= Steepest straight line - Fig 9	

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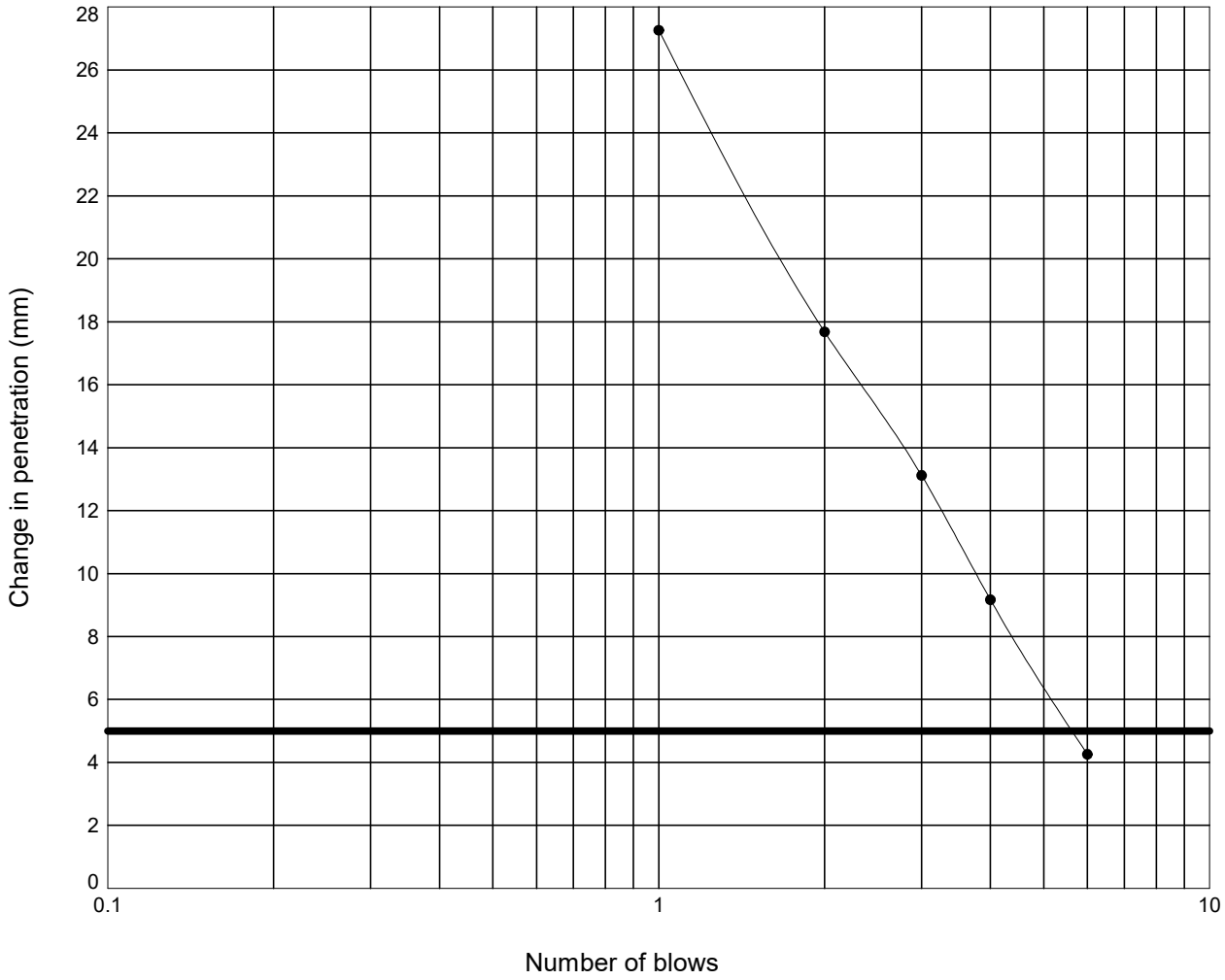
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP203** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.70**

Description : **Yellowish brown SILT**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	20	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	7.3	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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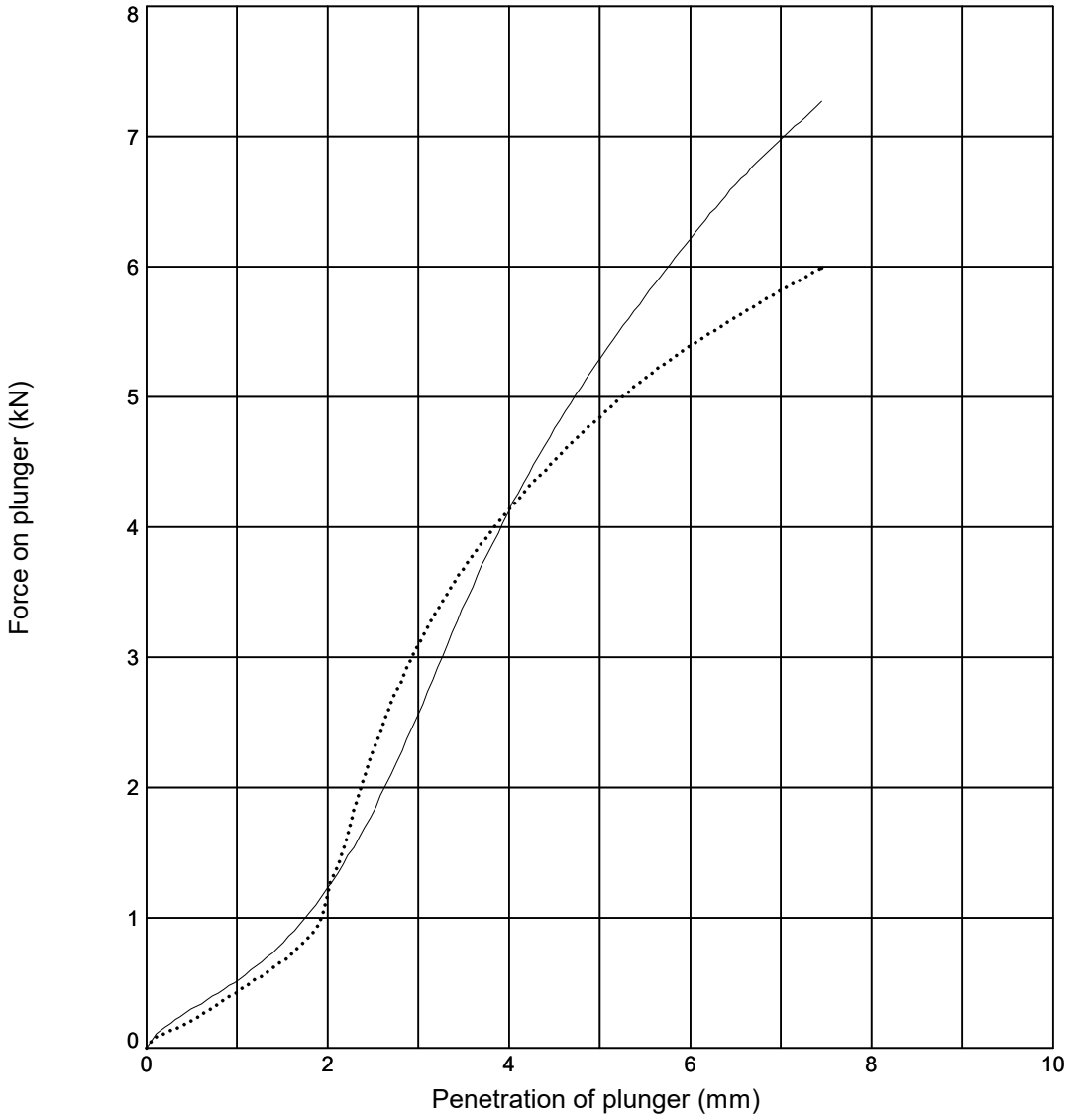
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP203** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.70**



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)	:	**4.0**	CBR Value (%)	**26**	**24**
Initial Dry Density (Mg/m^3)	:	**1.67**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**0.5**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**26**

Sample Description	Key
Yellowish brown SILT	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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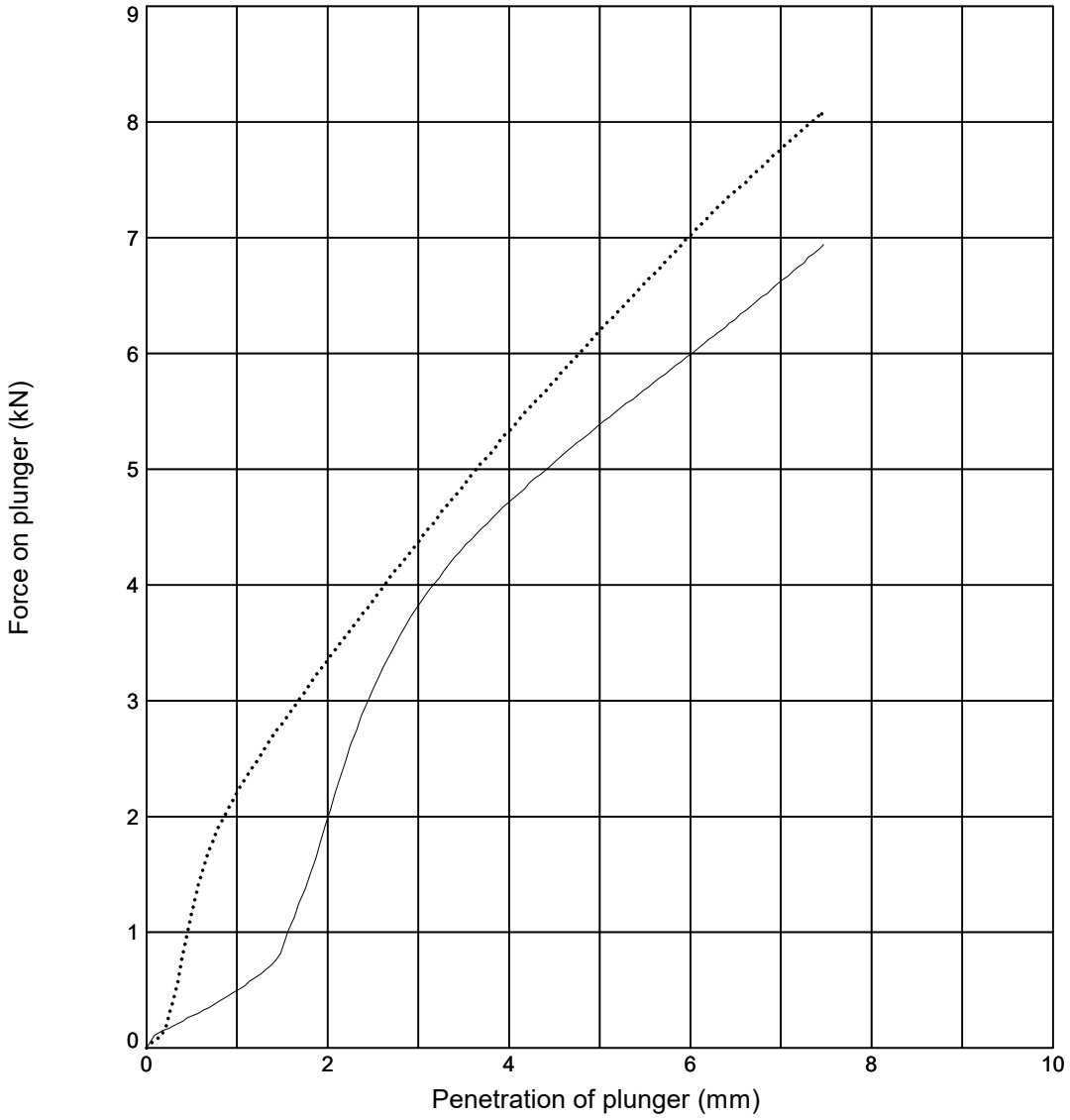
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP203** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.70**



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)	:	**1.80**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**27**	**31**
Initial Dry Density (Mg/m^3)	:	**1.62**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**1**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**33**	**NA**

Sample Description	Key
Yellowish brown SILT	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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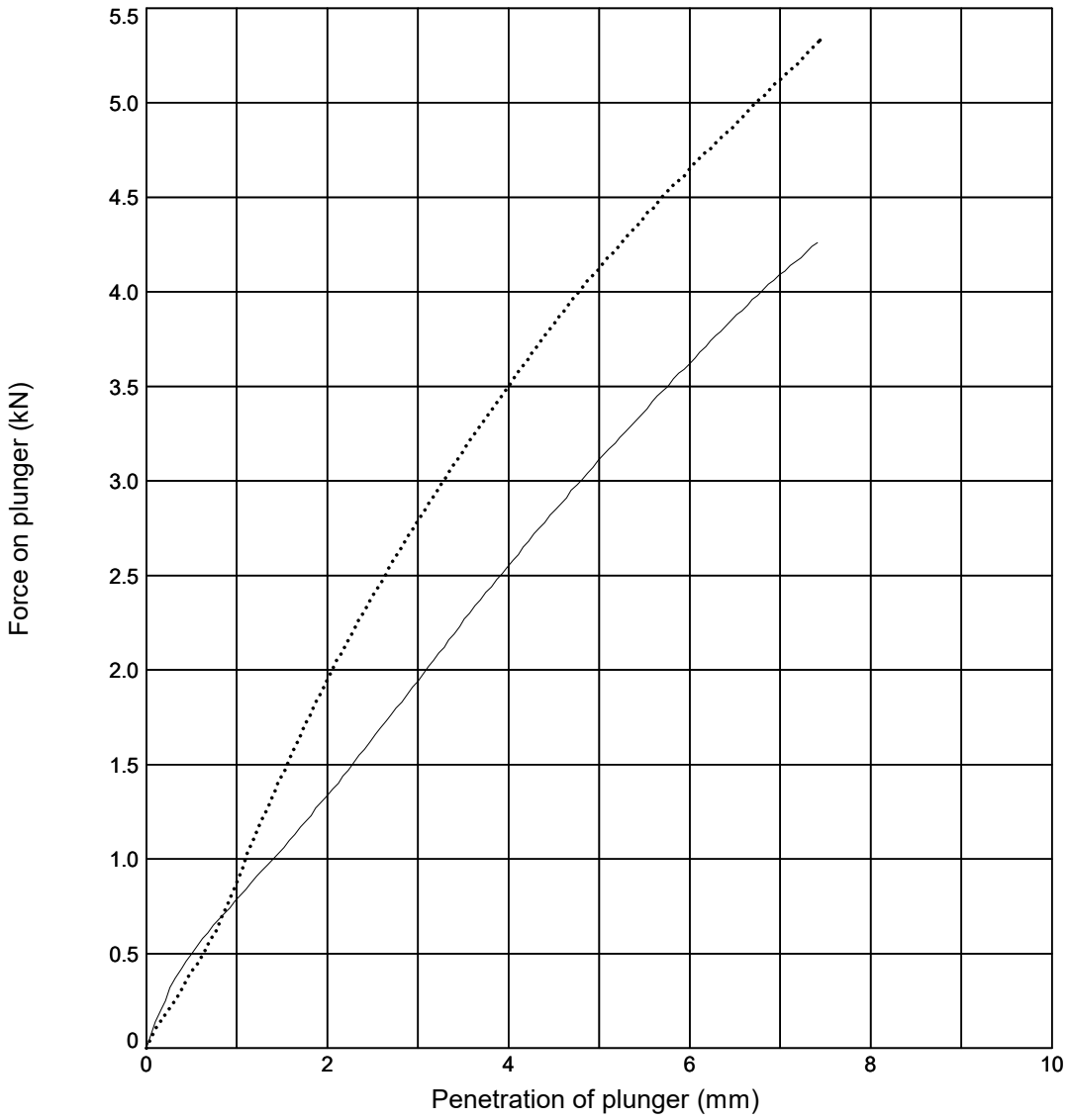
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP203** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.70**



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)	:	**2.00**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**16**	**21**
Initial Dry Density (Mg/m^3)	:	**1.73**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Yellowish brown SILT	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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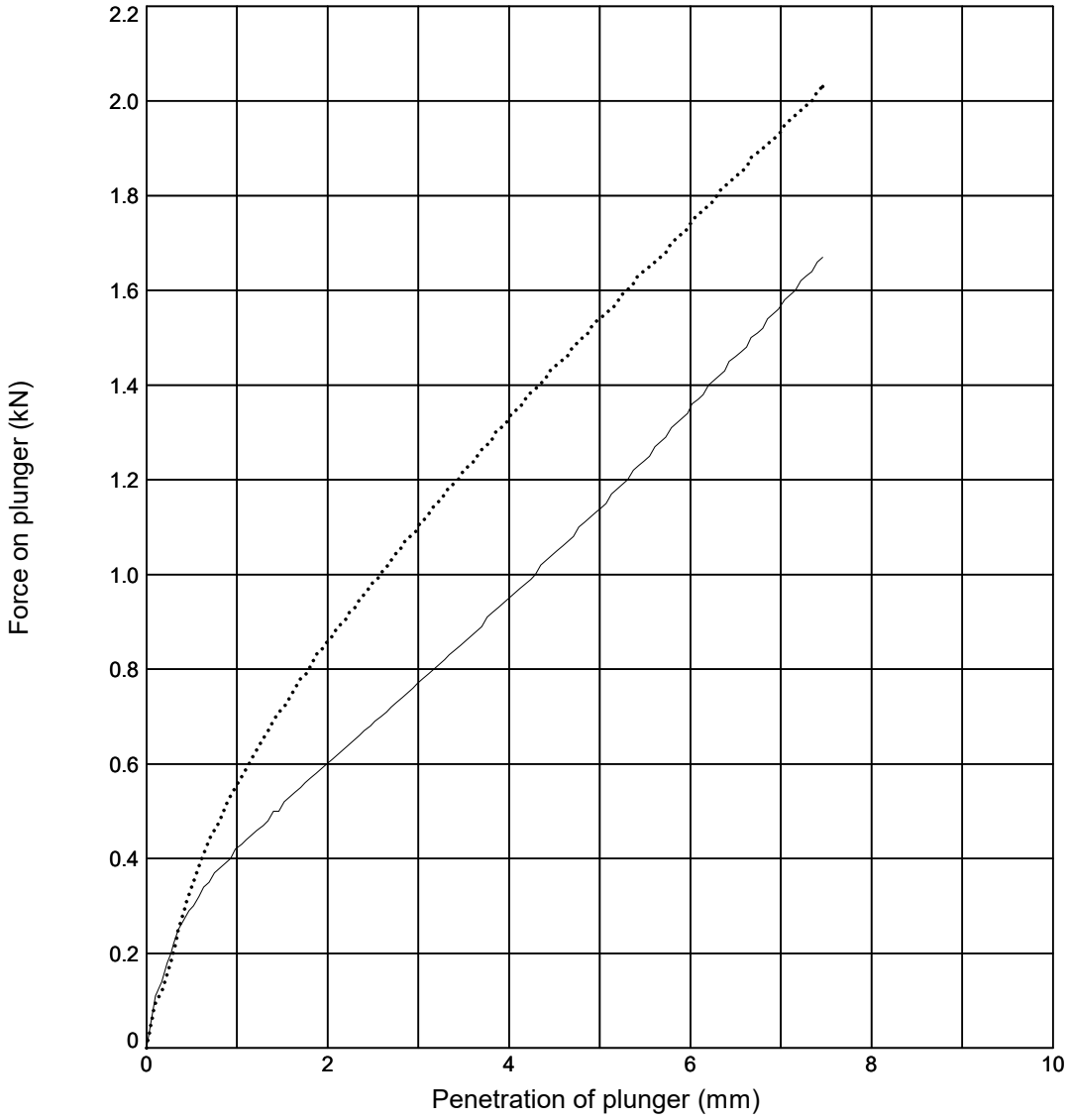
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP203** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.70**



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)	:	**2.01**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**5.7**	**7.7**
Initial Dry Density (Mg/m^3)	:	**1.71**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Yellowish brown SILT	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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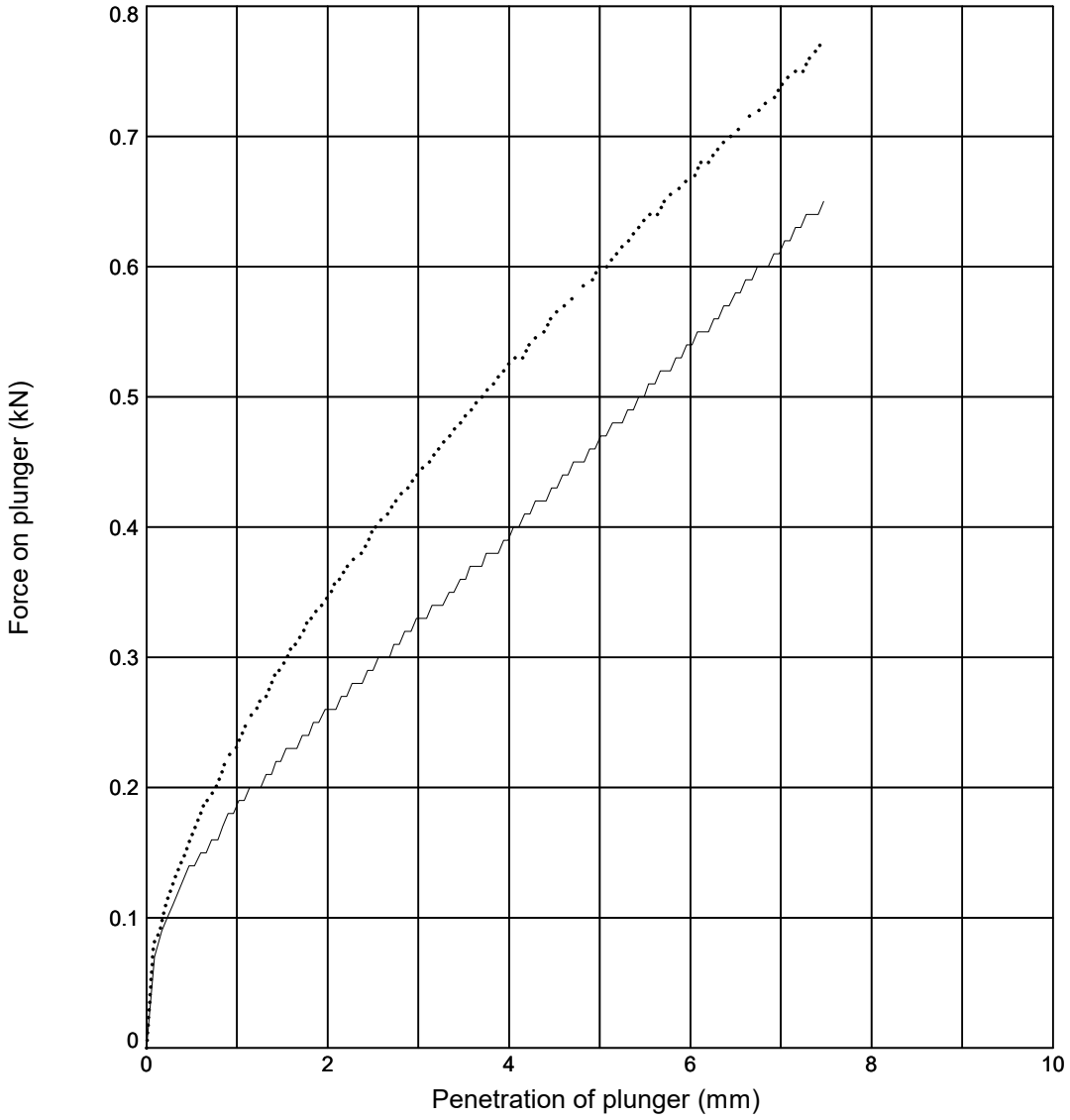
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP203** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.70**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**20**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**21**	**21**
Initial Bulk Density (Mg/m^3)	:	**1.96**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**2.3**	**3.0**
Initial Dry Density (Mg/m^3)	:	**1.64**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Yellowish brown SILT	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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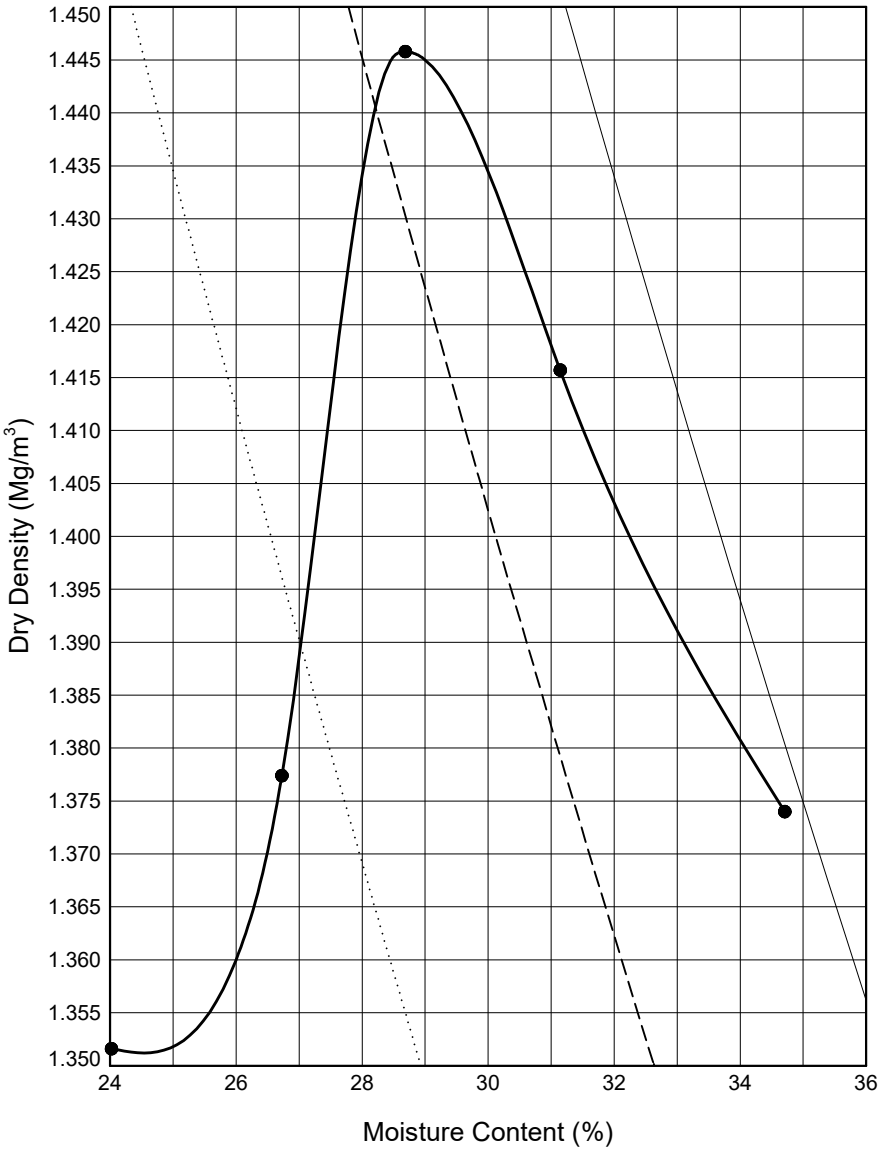
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **R22-TP204** Sample Ref: **7** Sample Type: **LB** Depth (m): **0.90**



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**31**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m³)	:	**1.45**
% Retained on 37.5mm BS Sieve	:	**0**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**29**
% 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 test carried out at each point**		
Size of Soil Pieces	:	**<37.5mm**	Separate samples were used.					

Sample Description	Key to Air Voids Lines		
Orangish brown silty CLAY	——— 0%	– – – – 5%	····· 10%

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Contract	Contract Ref:
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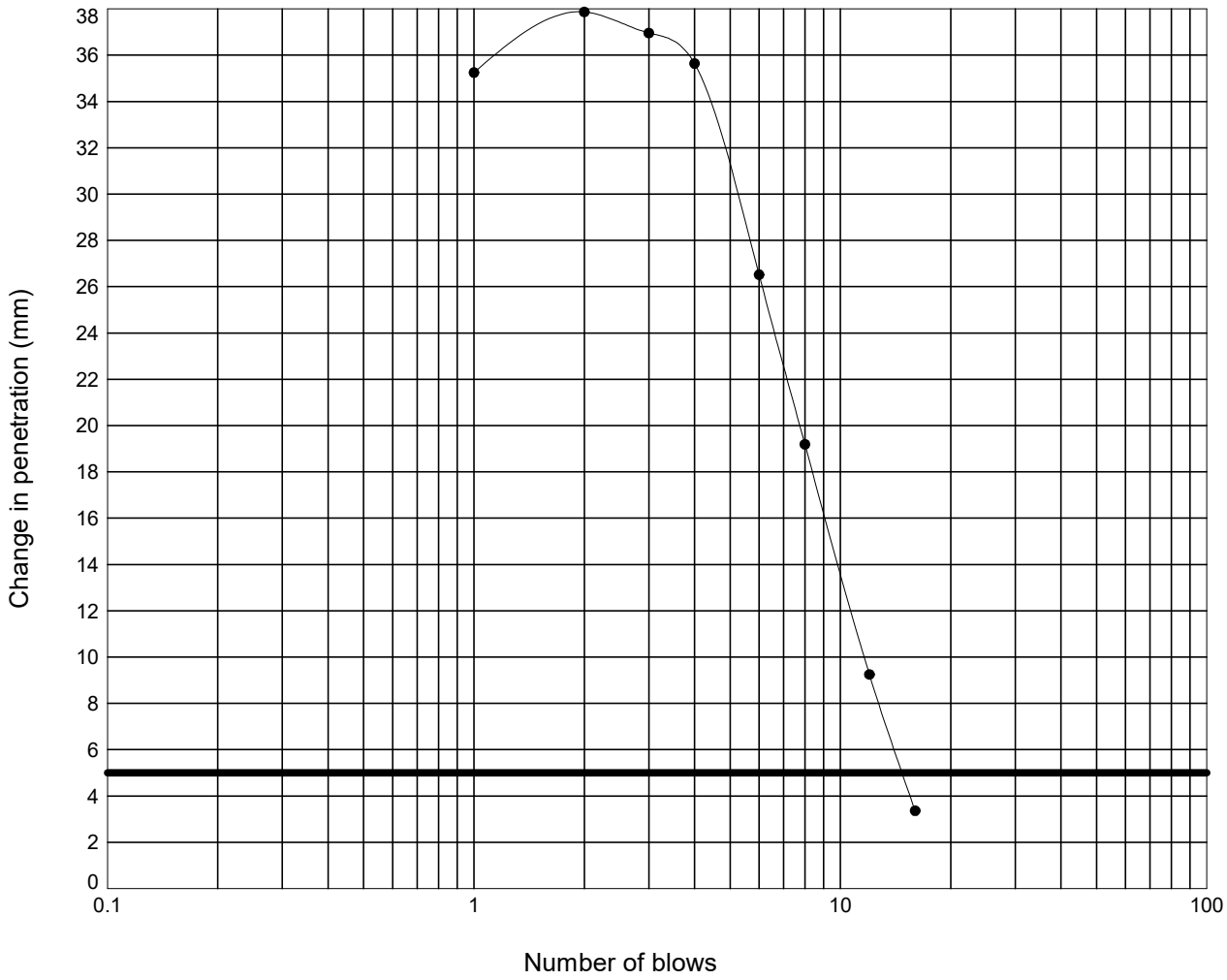
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP204** Sample Ref: **7** Sample Type: **LB** Depth (m): **0.90**

Description : **Orangish brown silty CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	31.1	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	11.4	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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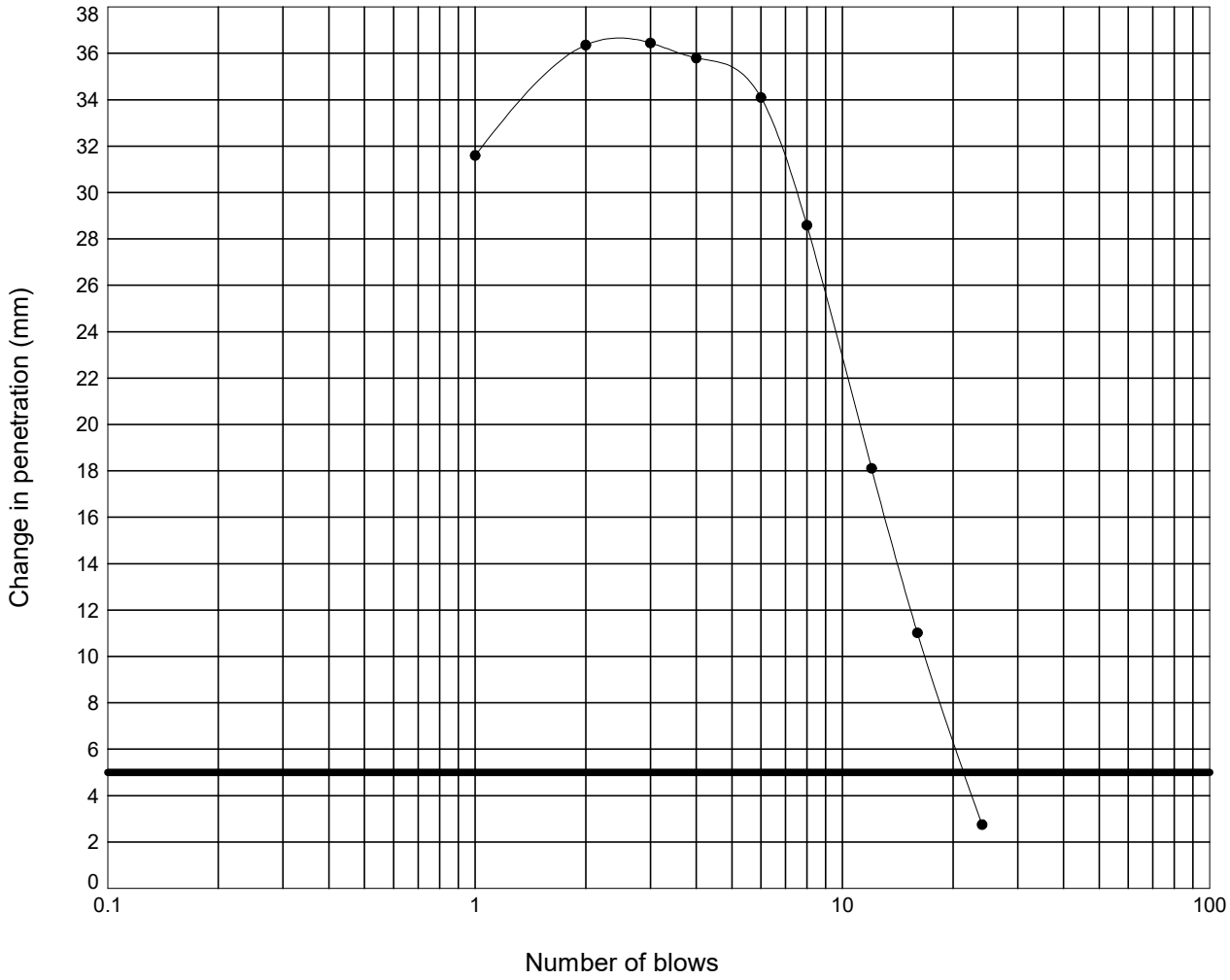
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP204** Sample Ref: **7** Sample Type: **LB** Depth (m): **0.90**

Description : **Orangish brown silty CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	29	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	13.1	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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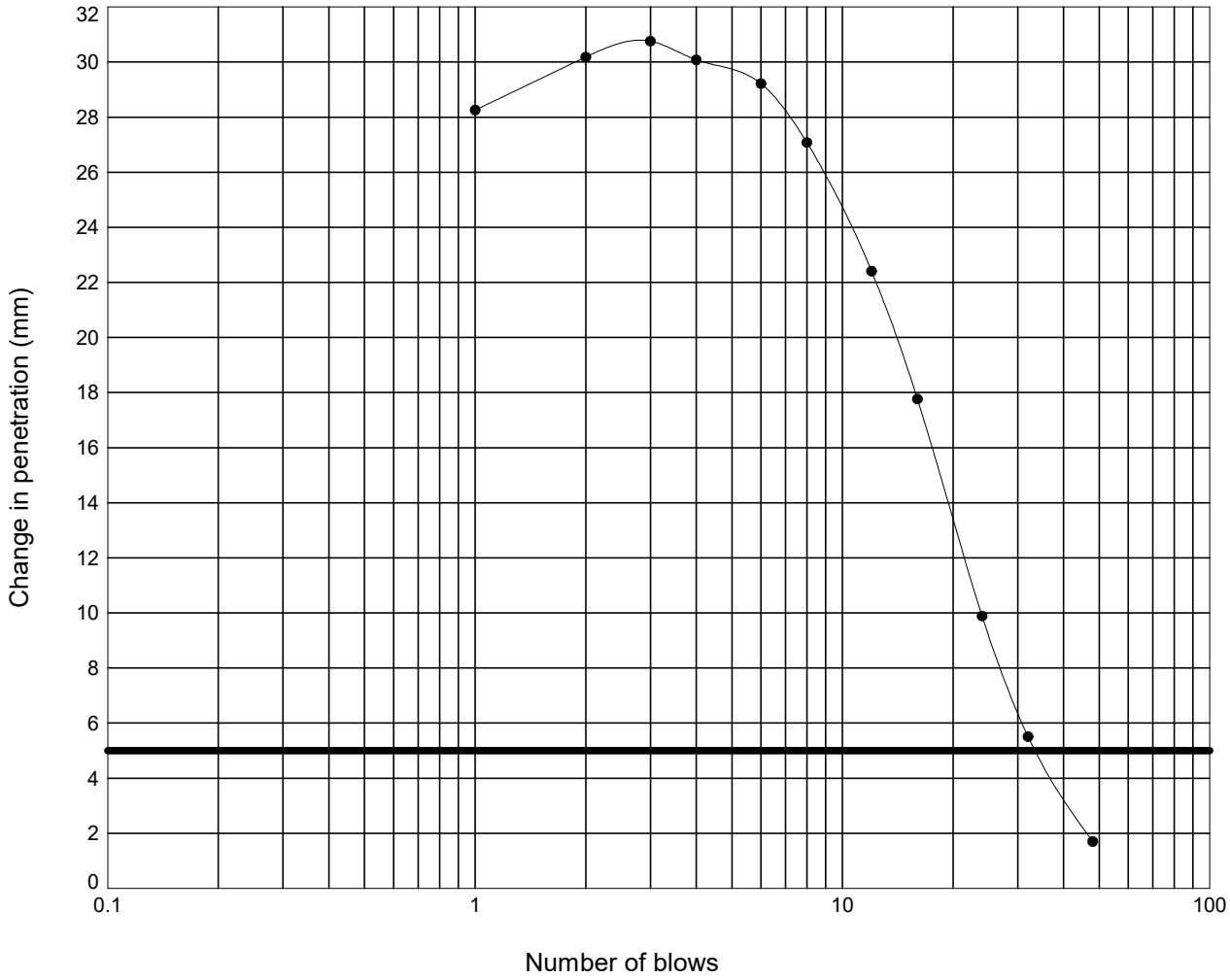
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP204** Sample Ref: **7** Sample Type: **LB** Depth (m): **0.90**

Description : **Orangish brown silty CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	27	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	14.9	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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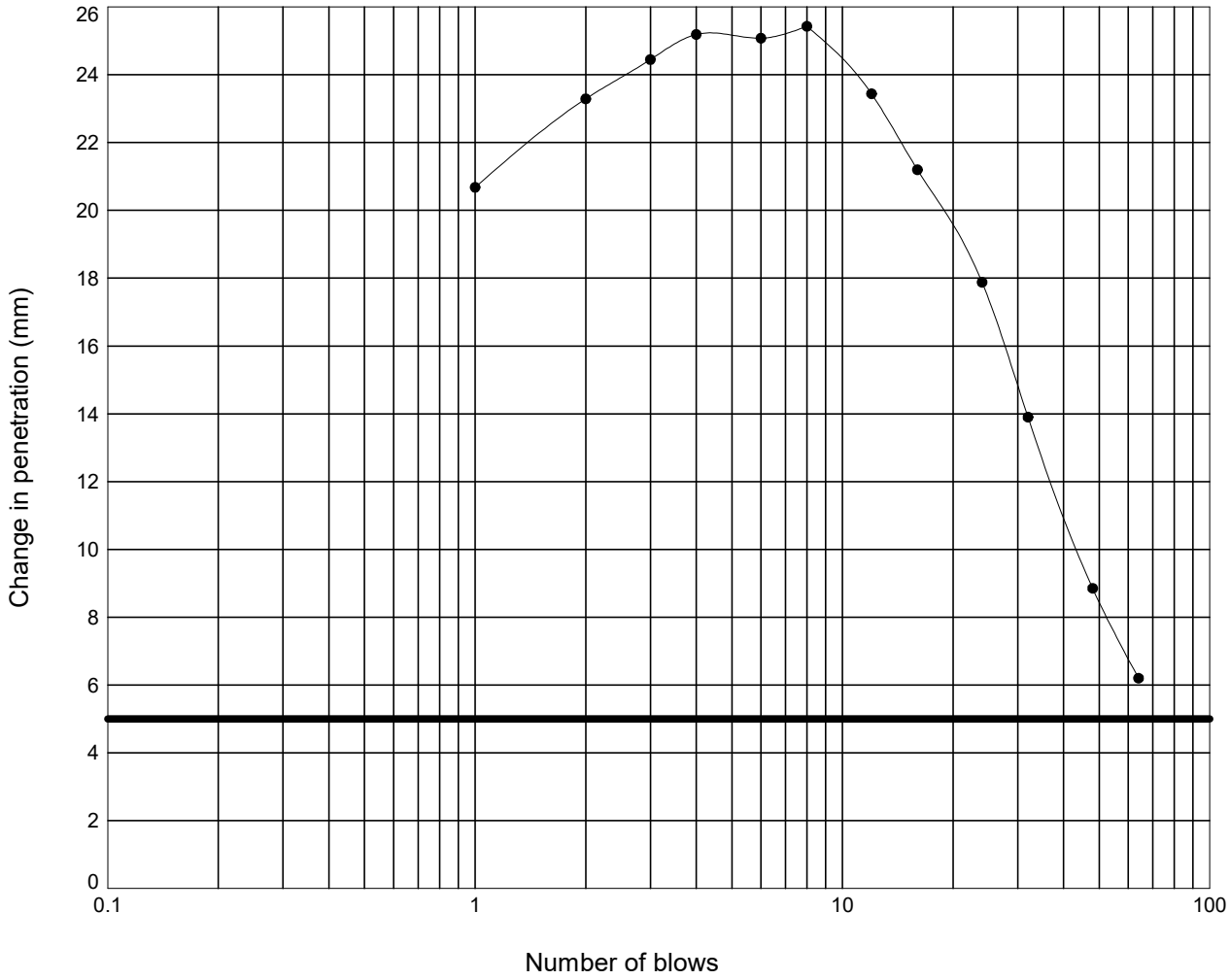
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP204** Sample Ref: **7** Sample Type: **LB** Depth (m): **0.90**

Description : **Orangish brown silty 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 :	=	0	%
Moisture Condition Value :	=	17.8	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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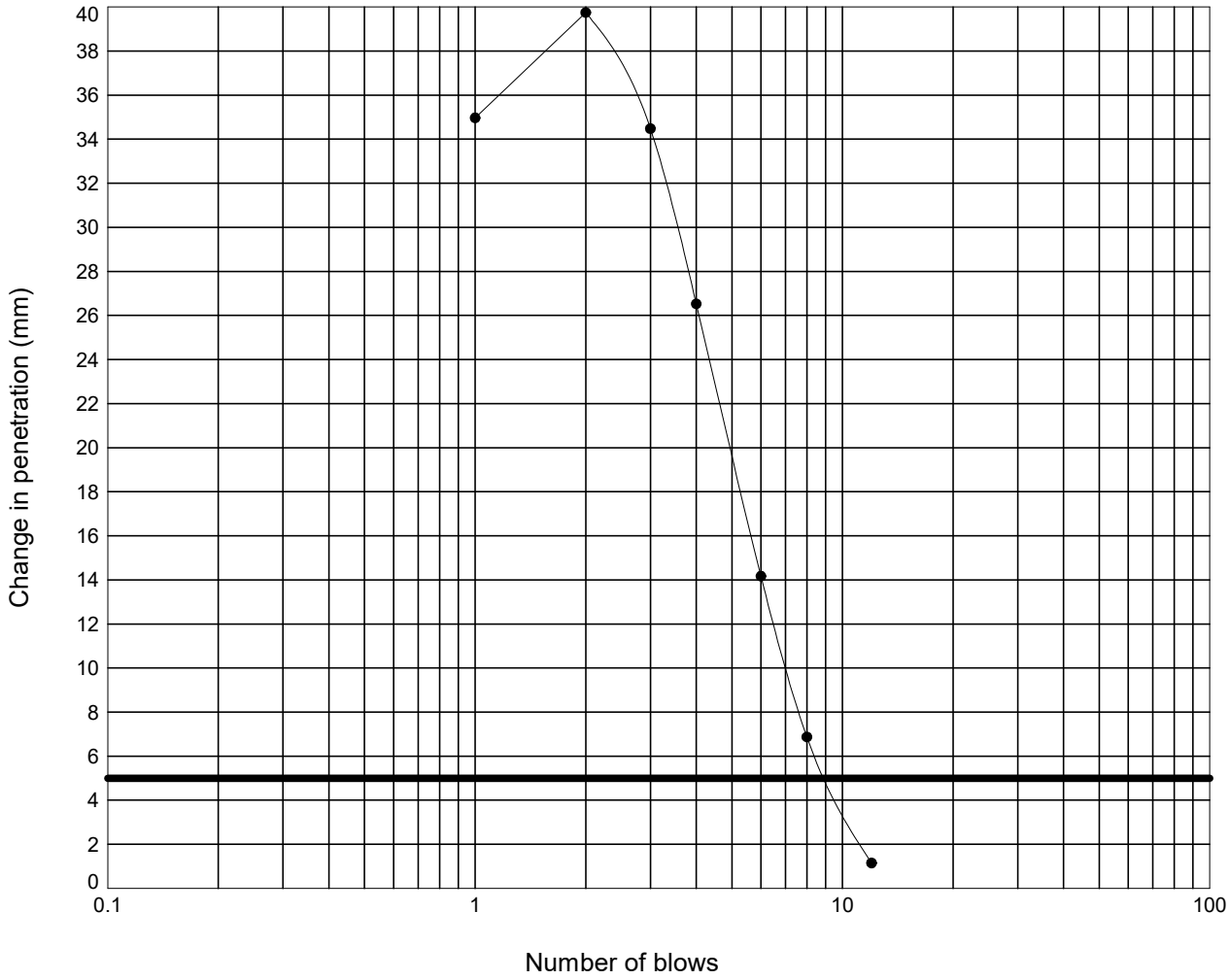
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP204** Sample Ref: **7** Sample Type: **LB** Depth (m): **0.90**

Description : **Orangish brown silty CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	35	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	9.1	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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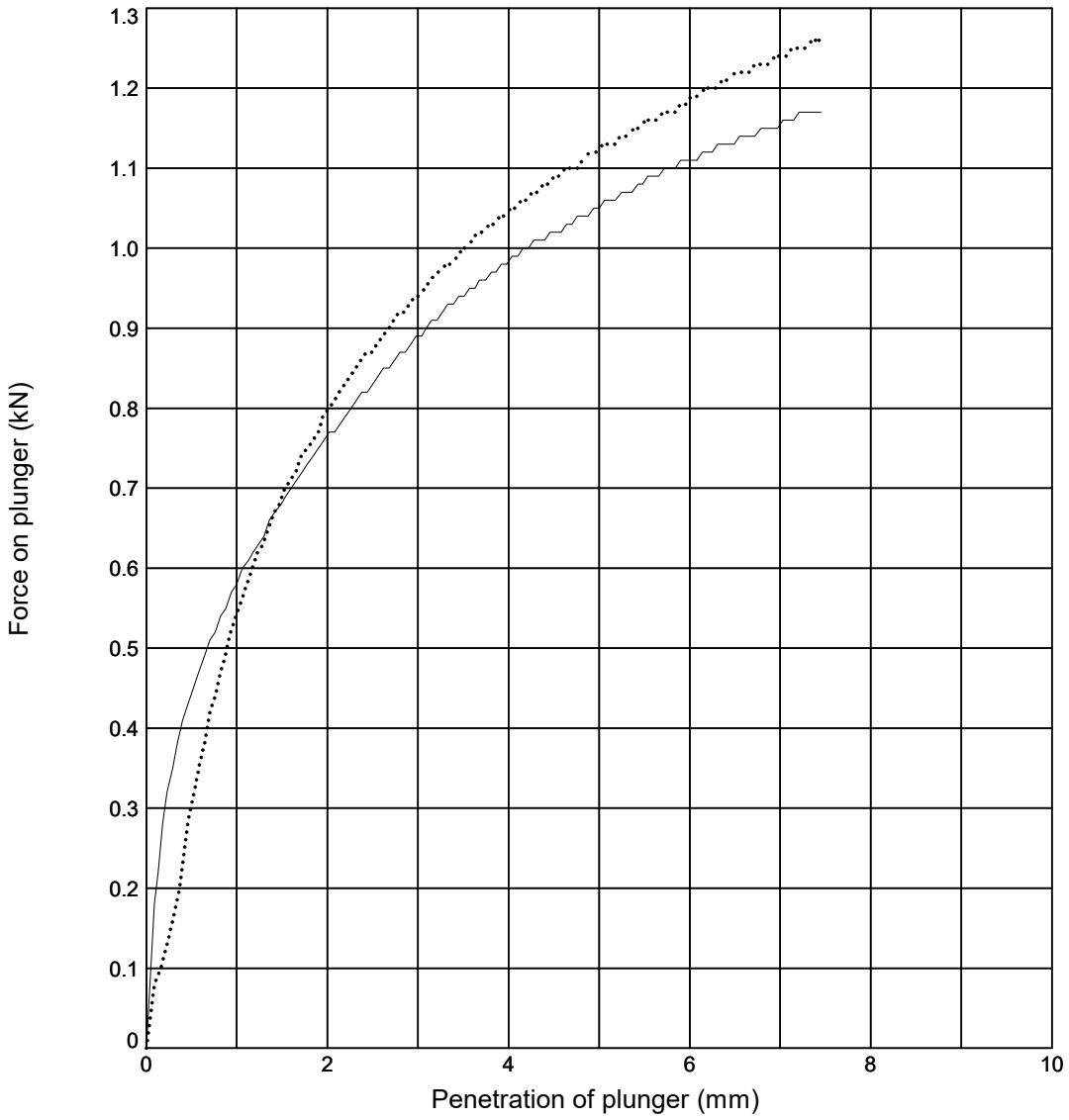
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP204** Sample Ref: **7** Sample Type: **LB** Depth (m): **0.90**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**31**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**31**	**30**
Initial Bulk Density (Mg/m^3)	:	**1.86**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**6.3**	**6.6**
Initial Dry Density (Mg/m^3)	:	**1.42**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Orangish brown silty CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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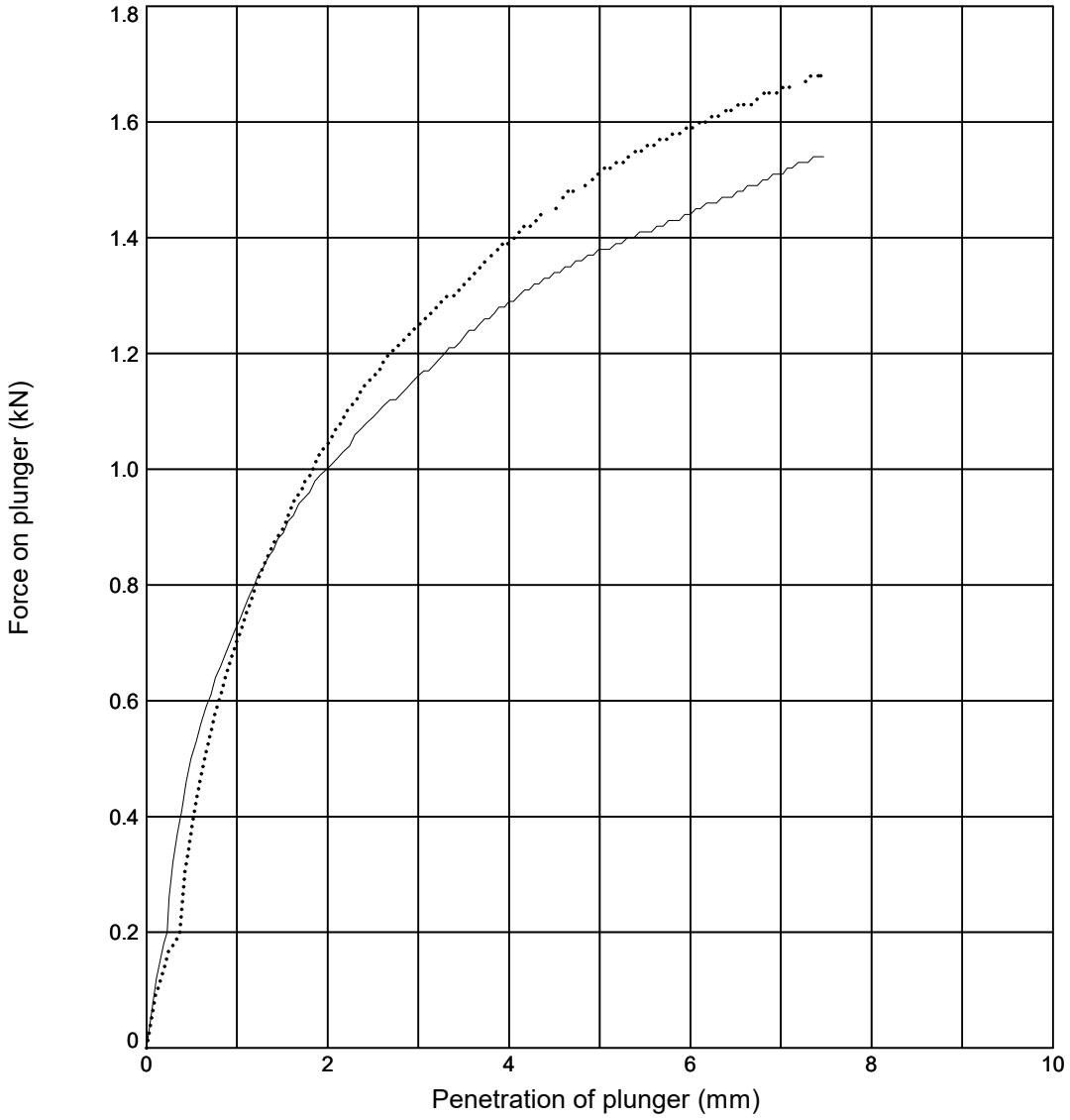
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP204** Sample Ref: **7** Sample Type: **LB** Depth (m): **0.90**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**29**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**29**	**29**
Initial Bulk Density (Mg/m^3)	:	**1.86**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**8.3**	**8.8**
Initial Dry Density (Mg/m^3)	:	**1.44**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Orangish brown silty CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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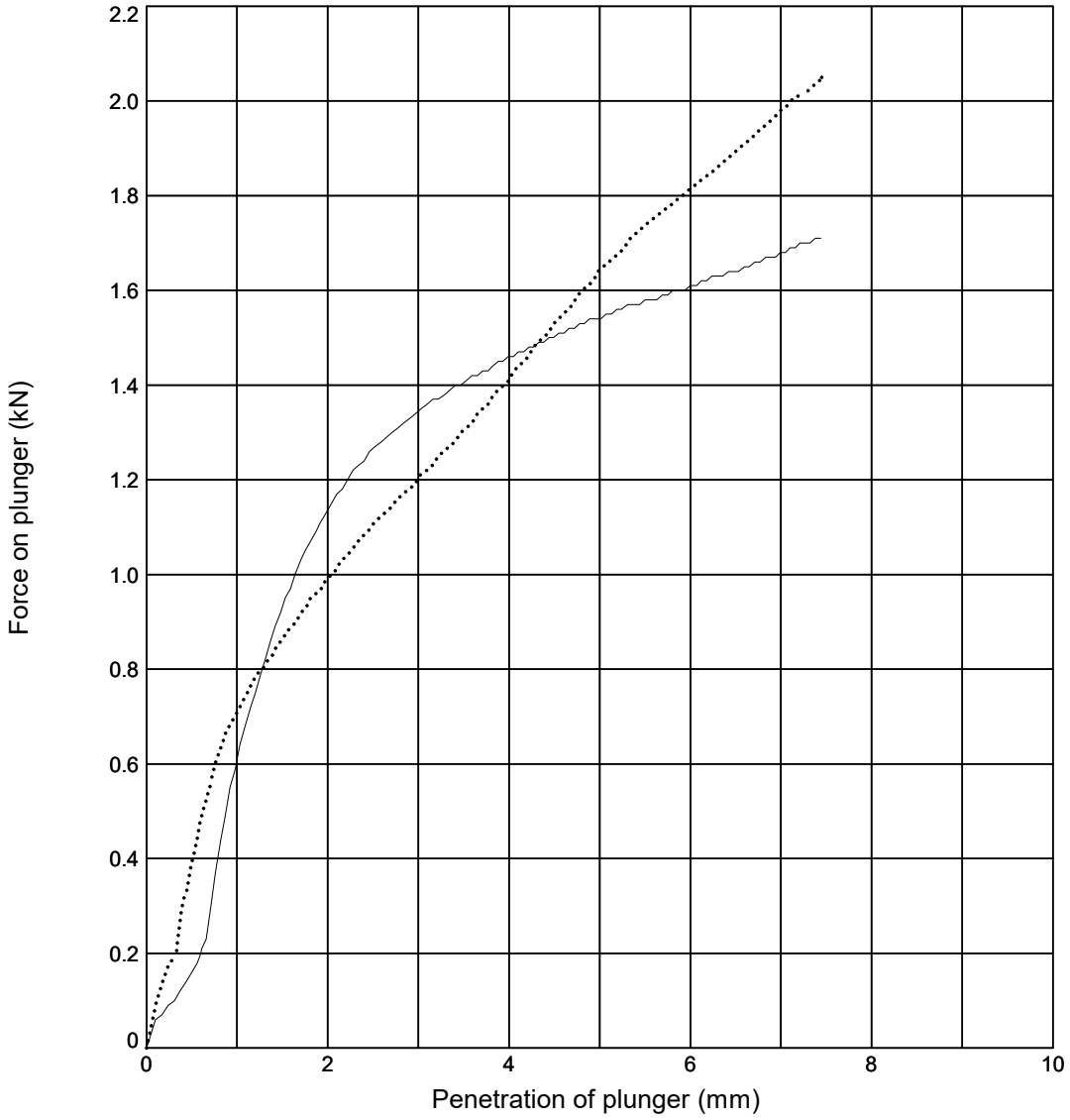
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP204** Sample Ref: **7** Sample Type: **LB** Depth (m): **0.90**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**27**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**26**	**27**
Initial Bulk Density (Mg/m^3)	:	**1.75**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**9.6**	**8.4**
Initial Dry Density (Mg/m^3)	:	**1.37**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Orangish brown silty CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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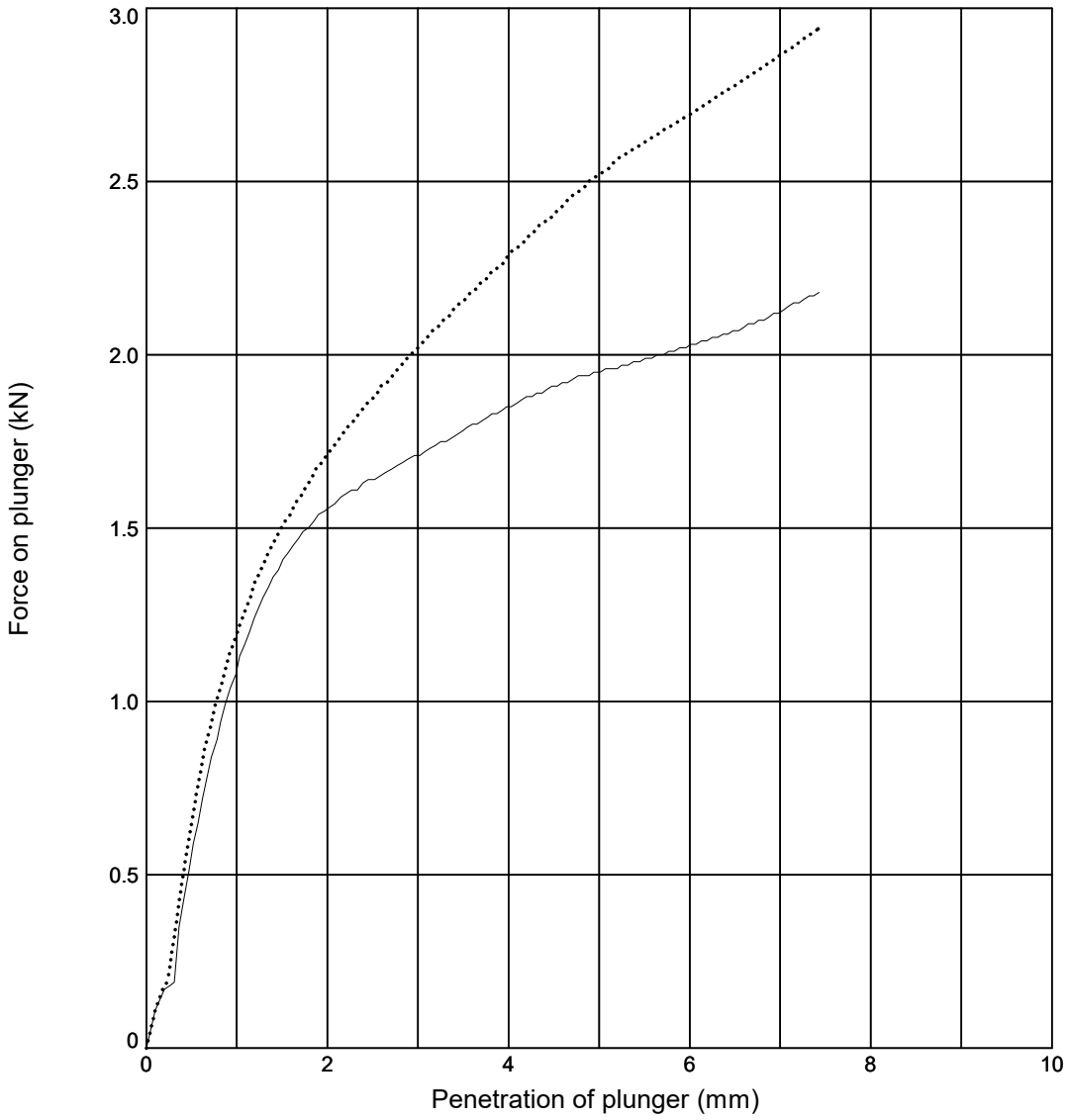
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP204** Sample Ref: **7** Sample Type: **LB** Depth (m): **0.90**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**23**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**23**	**23**
Initial Bulk Density (Mg/m^3)	:	**1.68**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**12**	**14**
Initial Dry Density (Mg/m^3)	:	**1.36**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Orangish brown silty CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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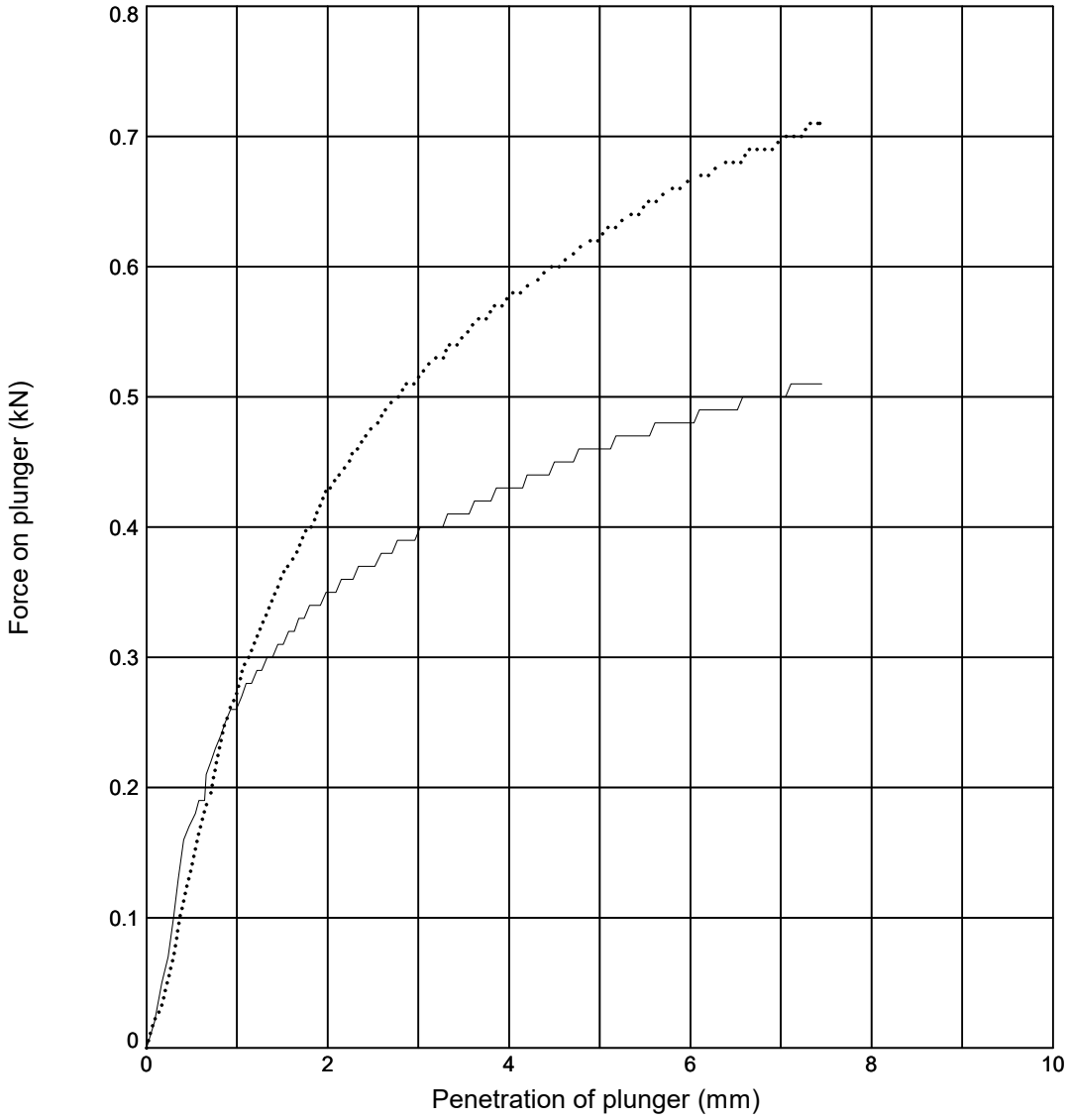
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP204** Sample Ref: **7** Sample Type: **LB** Depth (m): **0.90**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**34**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**35**	**34**
Initial Bulk Density (Mg/m^3)	:	**1.85**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**2.8**	**3.6**
Initial Dry Density (Mg/m^3)	:	**1.38**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Orangish brown silty CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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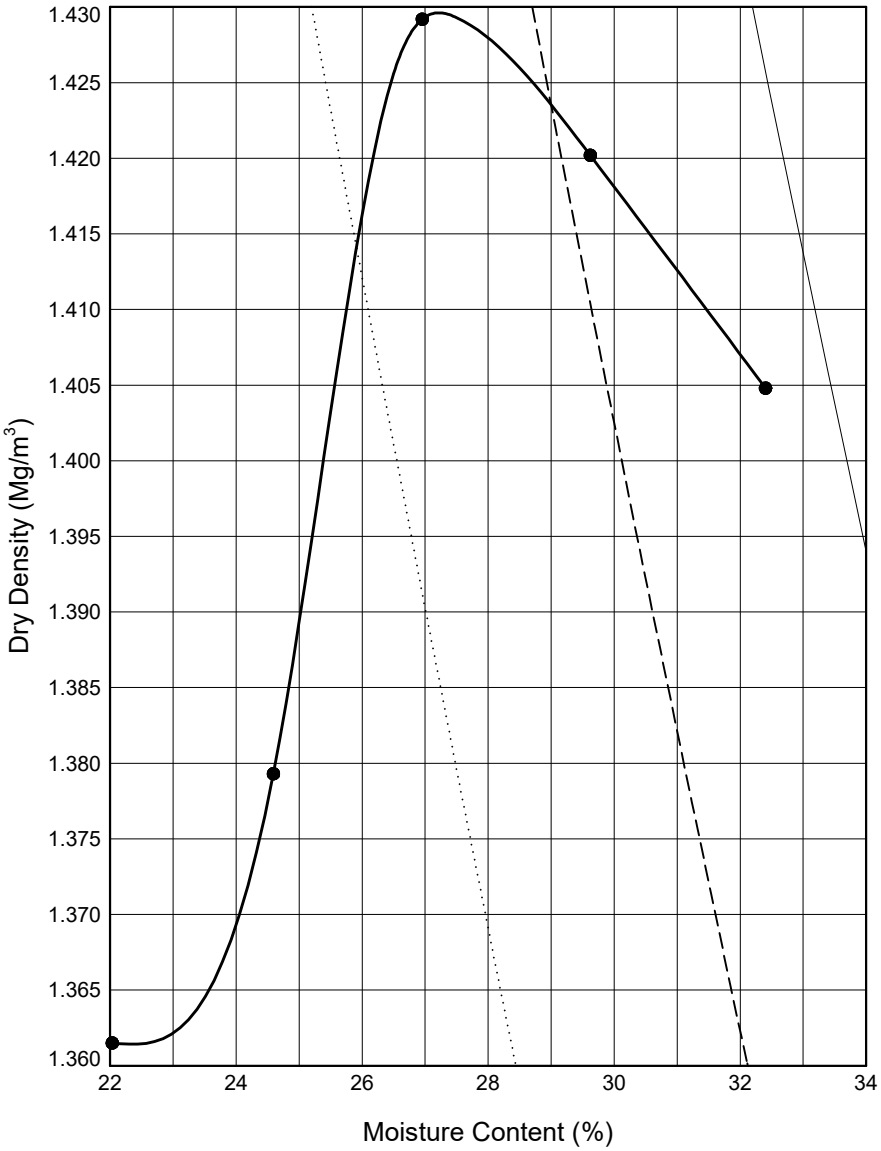
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **R22-TP205** Sample Ref: **5** Sample Type: **LB** Depth (m): **0.70**



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**30**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m³)	:	**1.43**
% Retained on 37.5mm BS Sieve	:	**0**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**28**
% 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 test carried out at each point**		
Size of Soil Pieces	:	**<37.5mm**	Separate samples were used.					

Sample Description	Key to Air Voids Lines		
Brown CLAY	——— 0%	– – – – 5%	····· 10%

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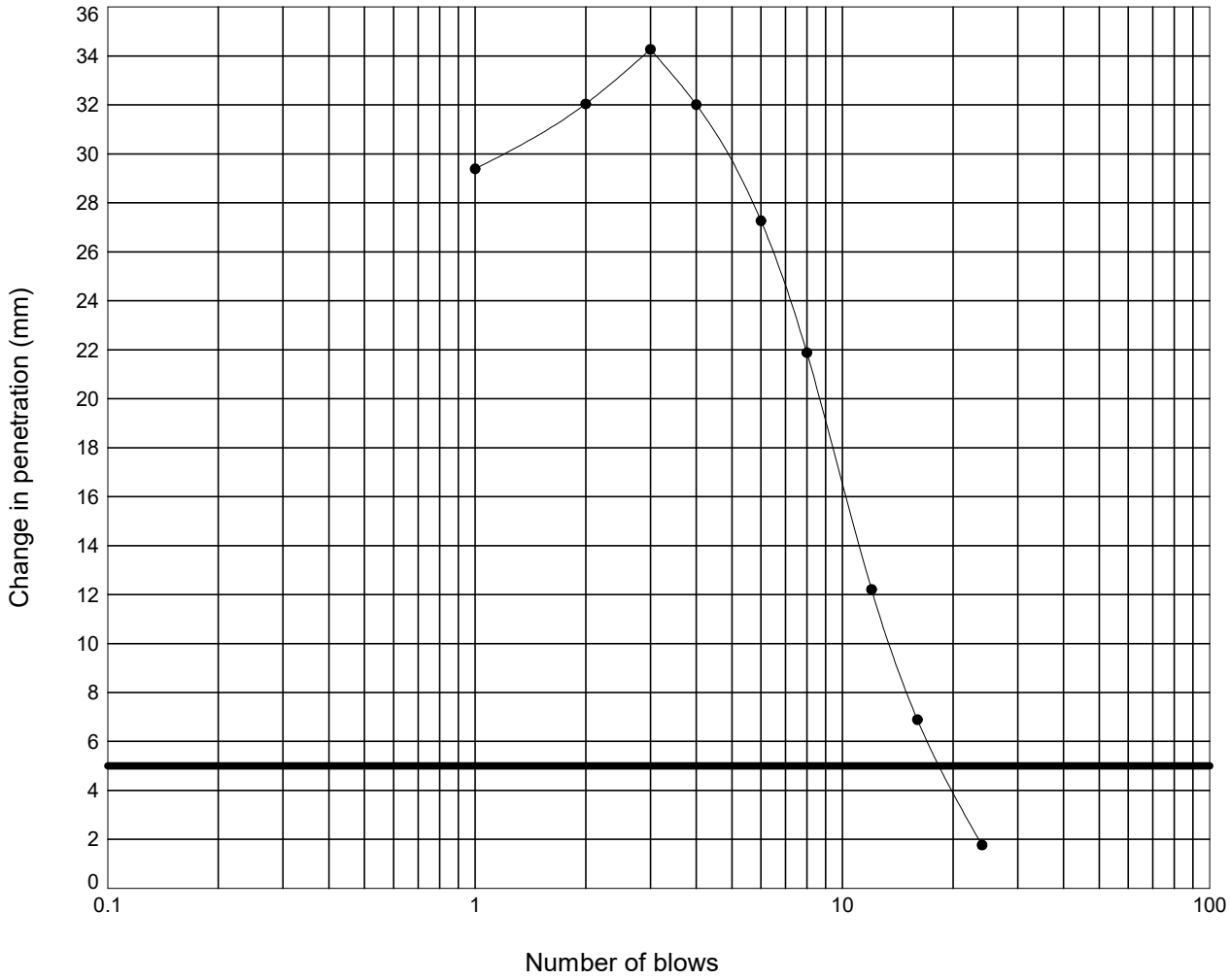
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP205** Sample Ref: **5** Sample Type: **LB** Depth (m): **0.70**

Description : **Brown CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	30	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	12.1	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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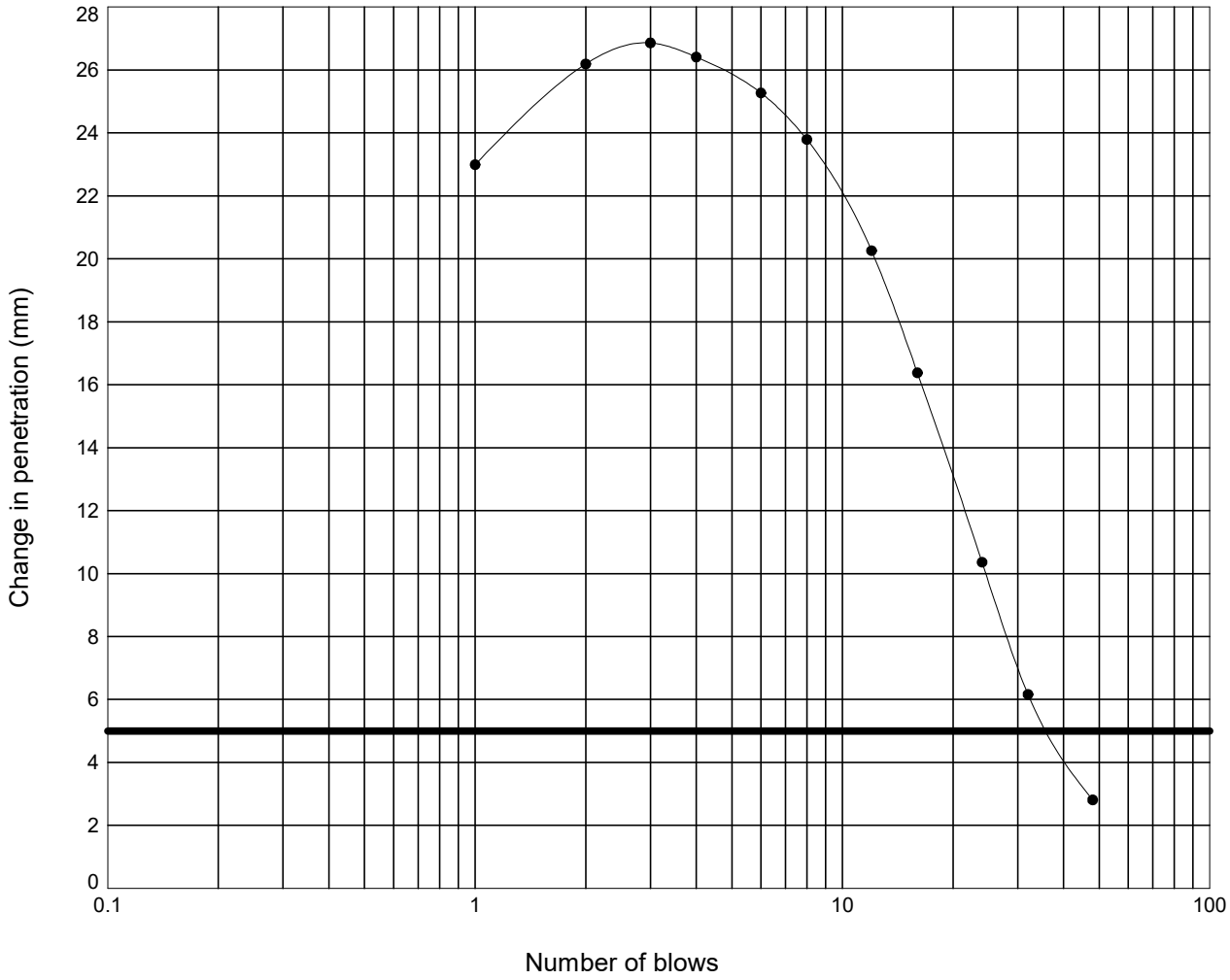
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP205** Sample Ref: **5** Sample Type: **LB** Depth (m): **0.70**

Description : **Brown CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	= 27	%
Percentage retained on 20 mm sieve :	= 0	%
Moisture Condition Value :	= 15.4	
Interpretation of curve:	= Steepest straight line - Fig 9	

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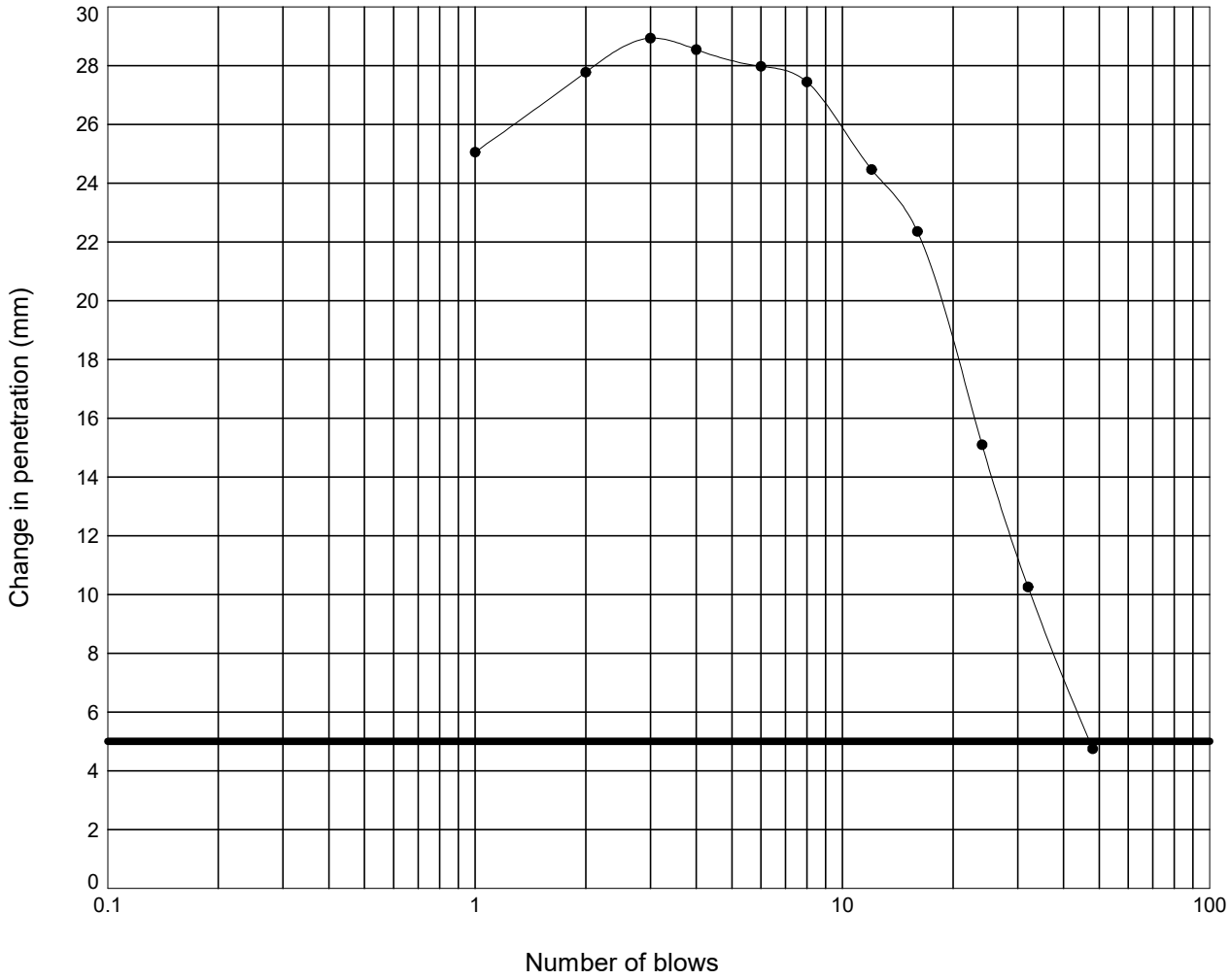
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP205** Sample Ref: **5** Sample Type: **LB** Depth (m): **0.70**

Description : **Brown CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	= 25	%
Percentage retained on 20 mm sieve :	= 0	%
Moisture Condition Value :	= 16.3	
Interpretation of curve:	= Steepest straight line - Fig 9	

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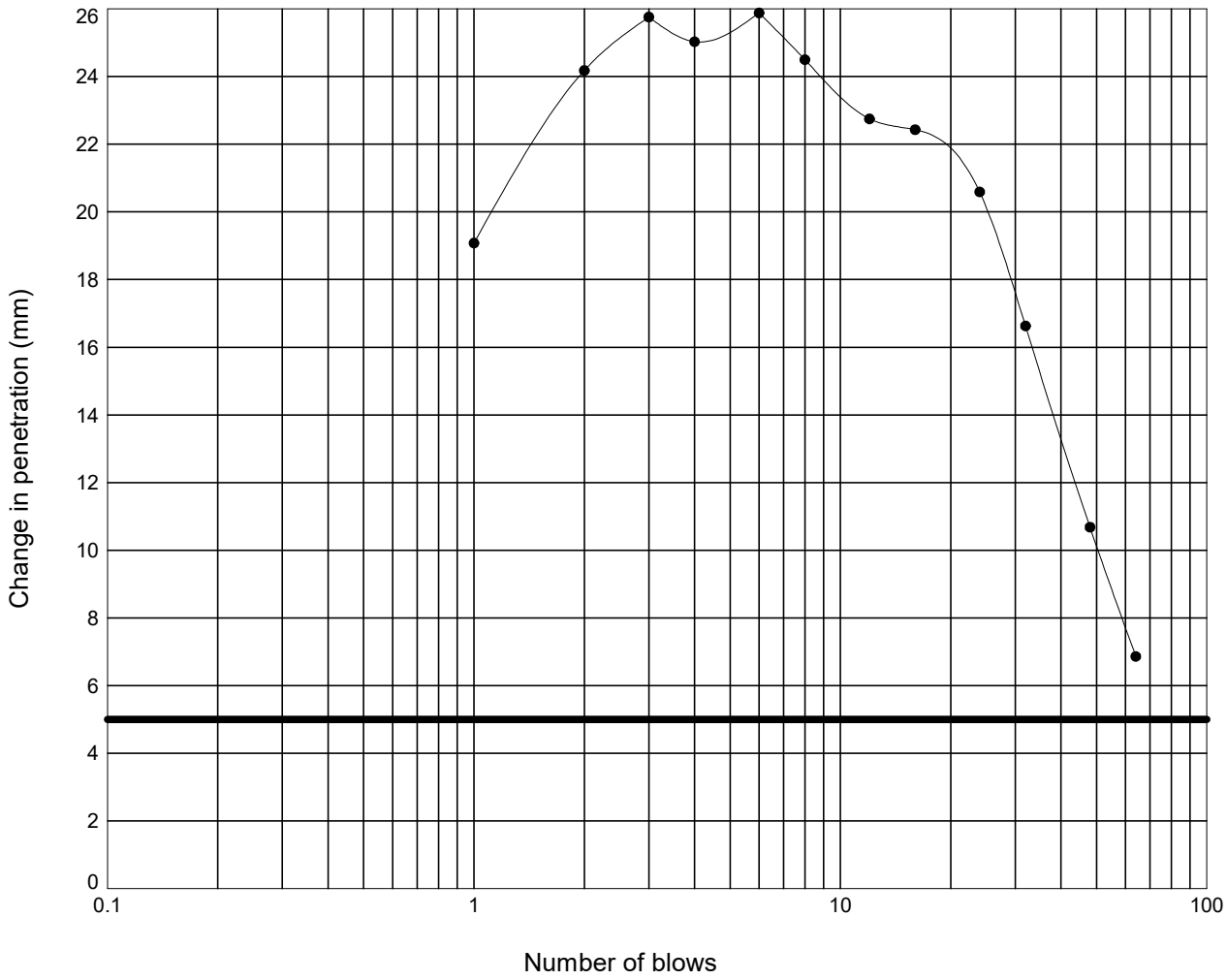
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP205** Sample Ref: **5** Sample Type: **LB** Depth (m): **0.70**

Description : **Brown 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 :	=	0	%
Moisture Condition Value :	=	18.5	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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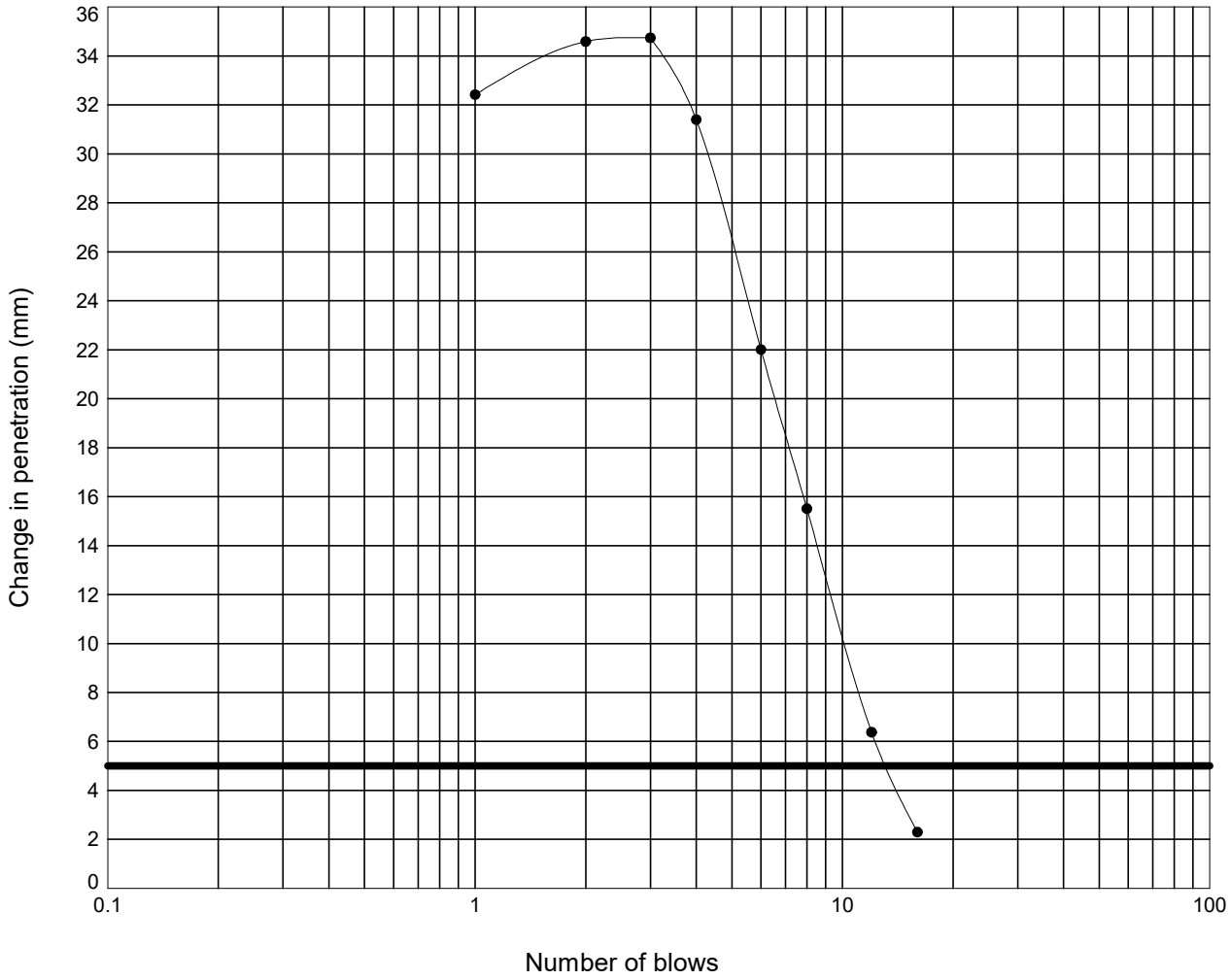
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP205** Sample Ref: **5** Sample Type: **LB** Depth (m): **0.70**

Description : **Brown CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	32	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	11.1	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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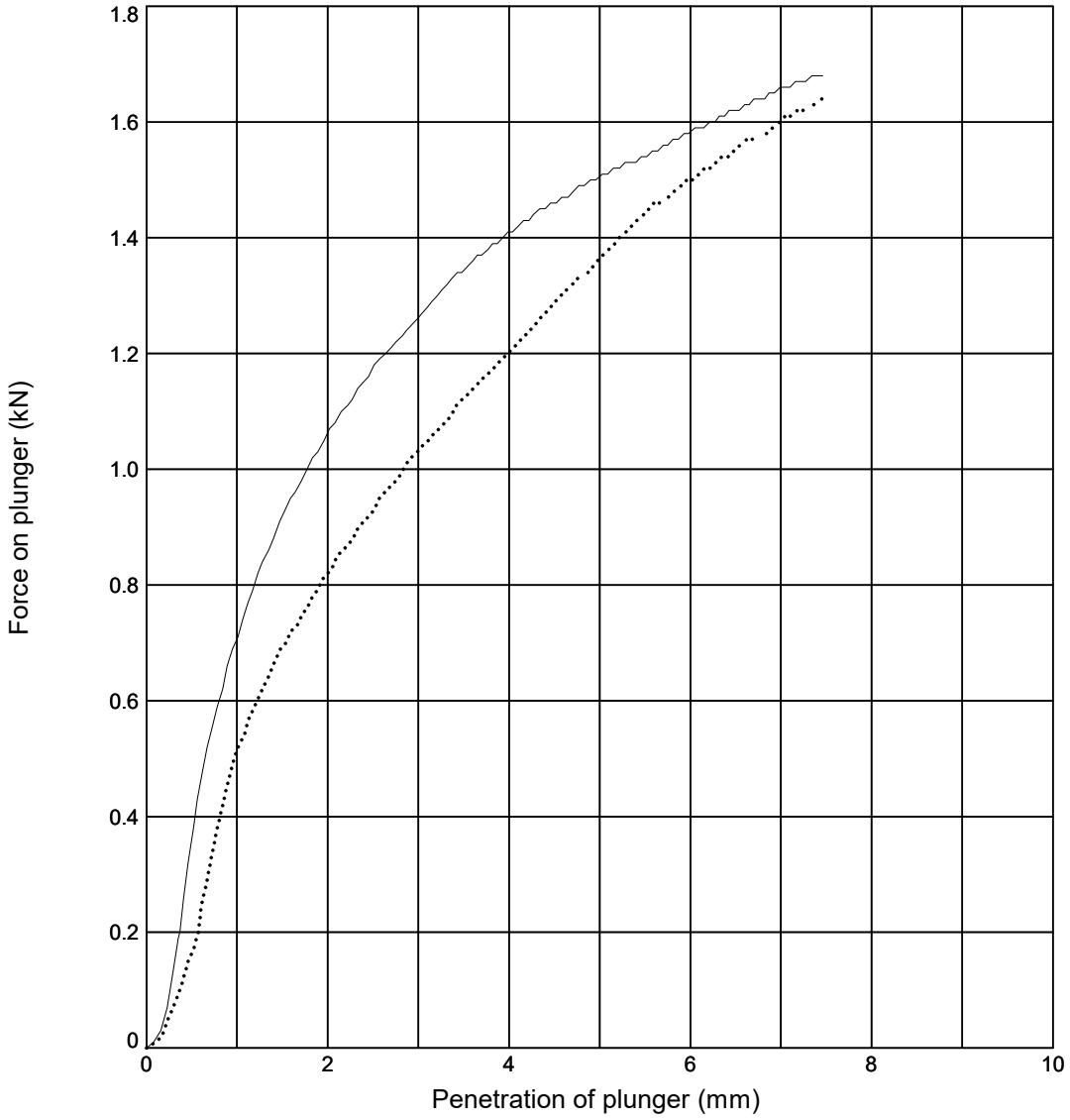
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP205** Sample Ref: **5** Sample Type: **LB** Depth (m): **0.70**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**29**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**30**	**29**
Initial Bulk Density (Mg/m^3)	:	**1.84**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**8.9**	**7.0**
Initial Dry Density (Mg/m^3)	:	**1.43**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Brown CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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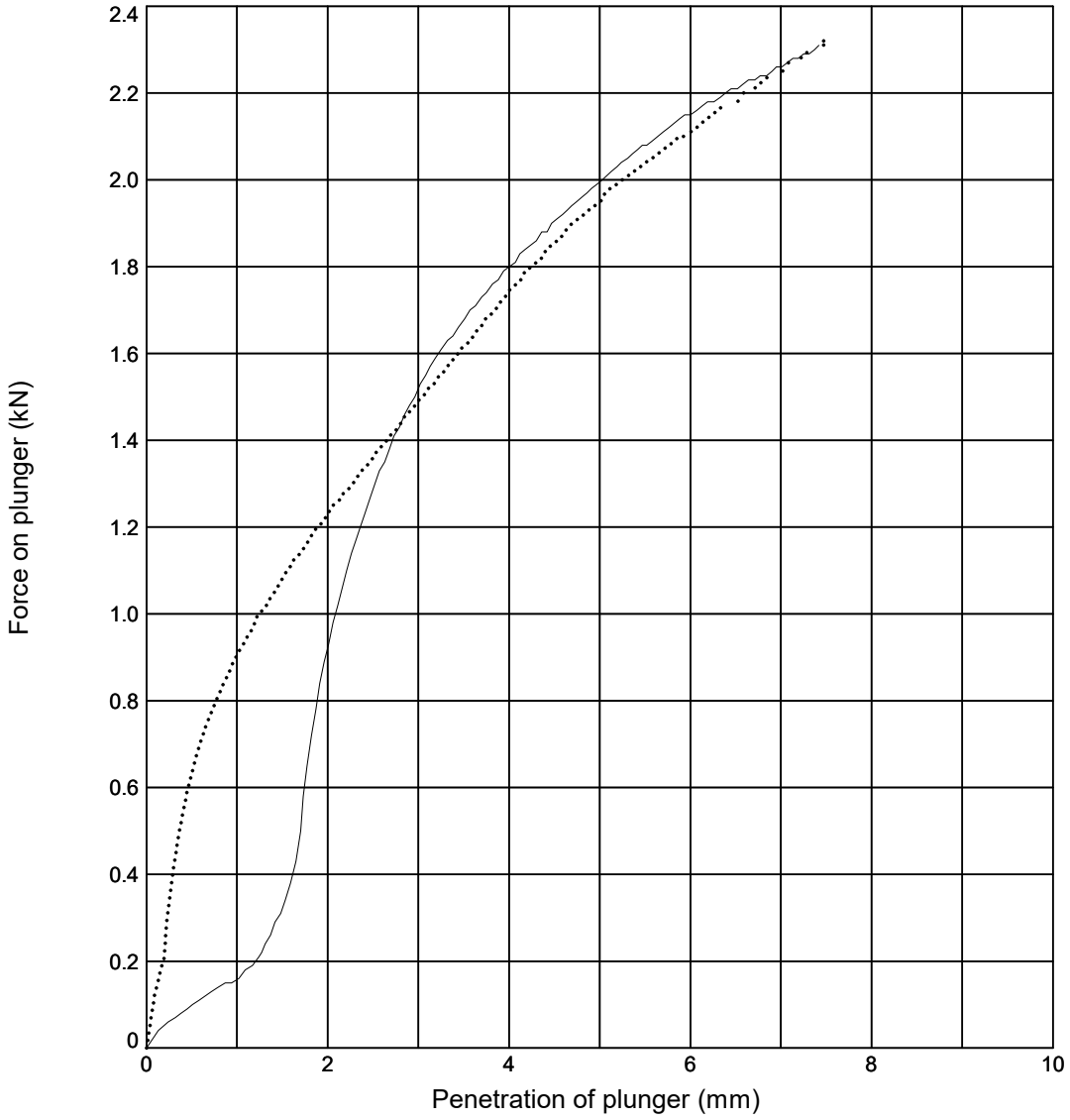
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP205** Sample Ref: **5** Sample Type: **LB** Depth (m): **0.70**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**27**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**27**	**26**
Initial Bulk Density (Mg/m^3)	:	**1.81**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**10**	**10**
Initial Dry Density (Mg/m^3)	:	**1.43**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**0.4**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**11**	**NA**

Sample Description	Key
Brown CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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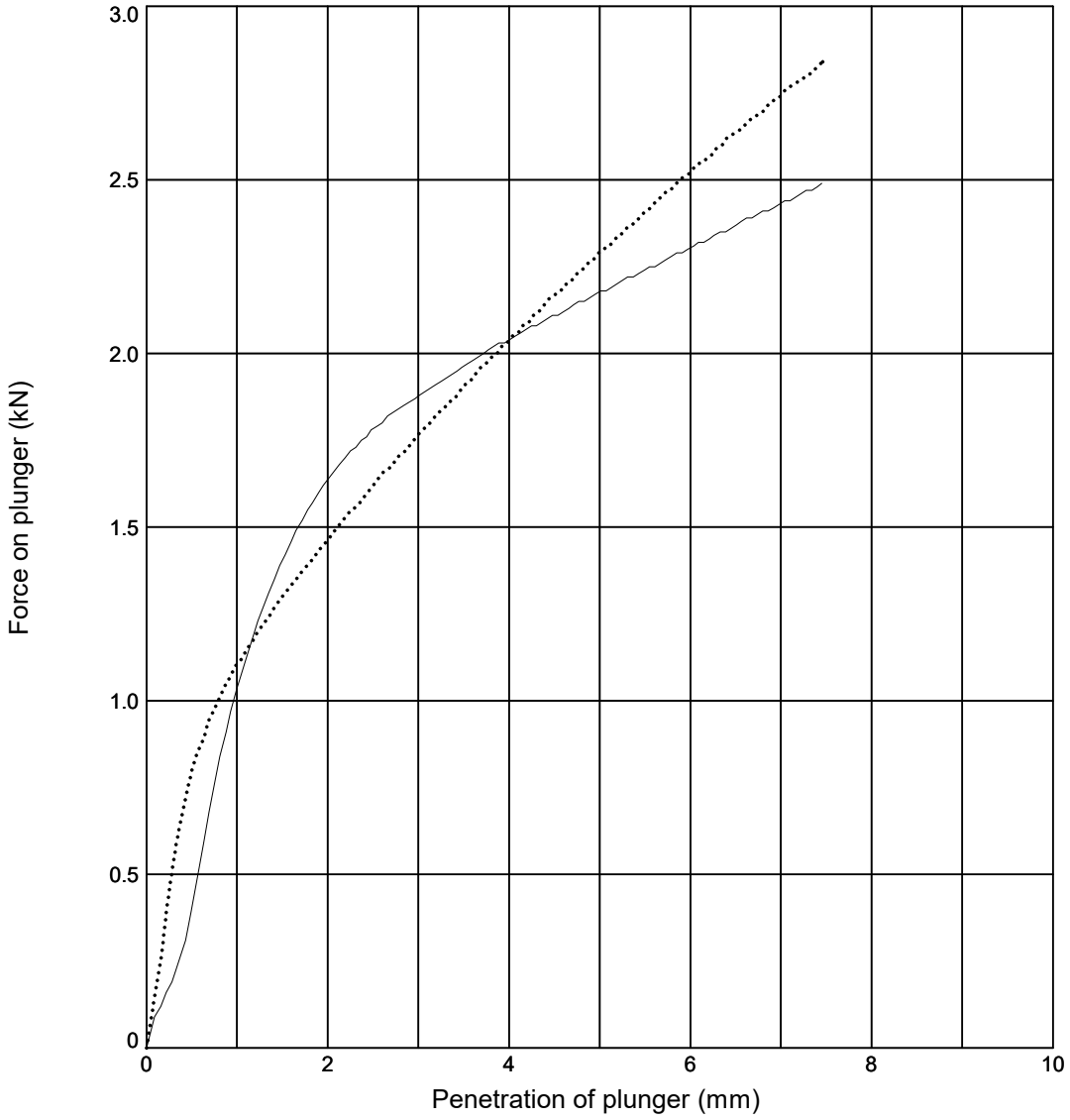
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP205** Sample Ref: **5** Sample Type: **LB** Depth (m): **0.70**



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)	:	**1.72**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**14**	**12**
Initial Dry Density (Mg/m^3)	:	**1.37**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Brown CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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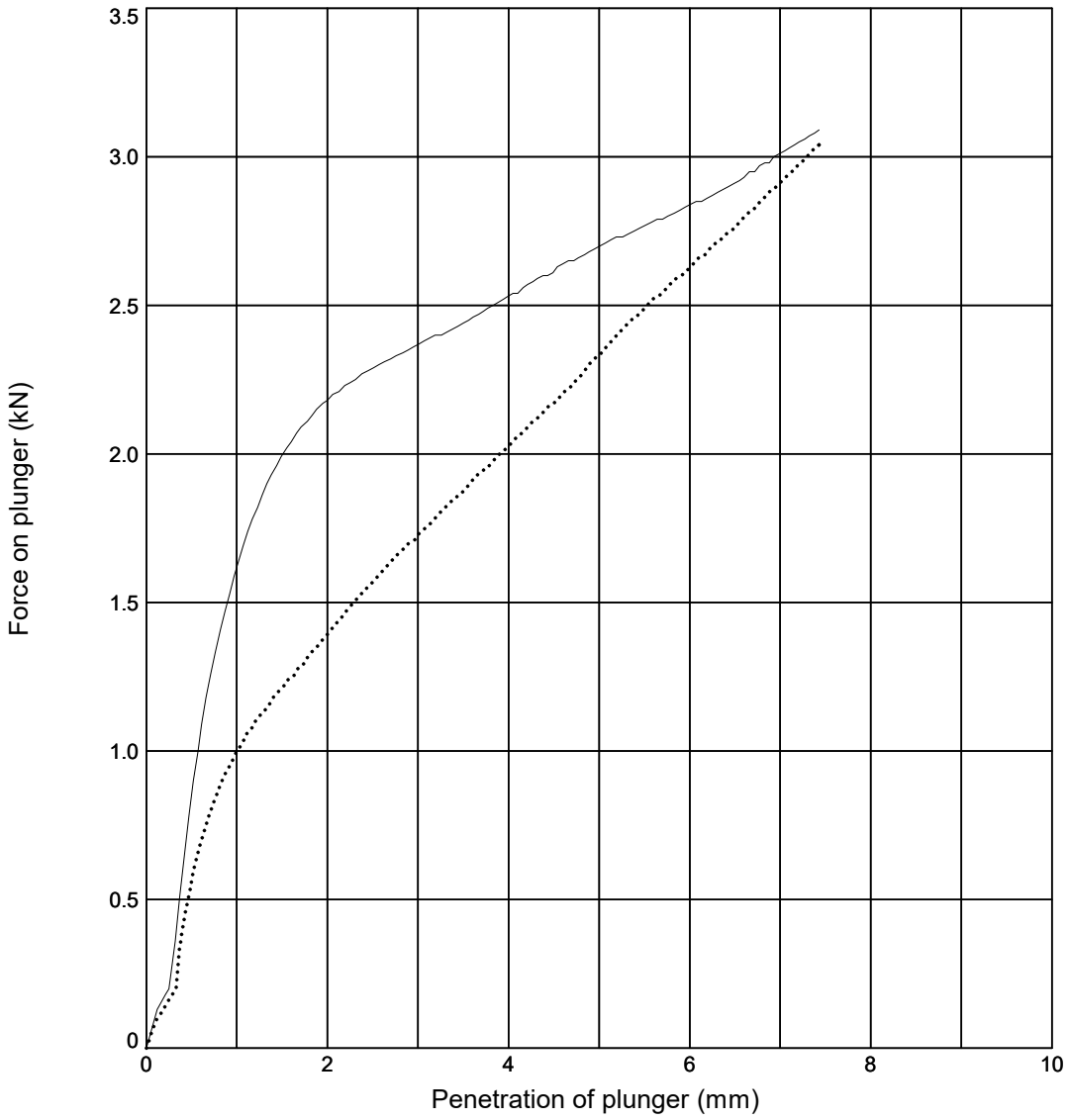
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP205** Sample Ref: **5** Sample Type: **LB** Depth (m): **0.70**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**21**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**22**	**21**
Initial Bulk Density (Mg/m^3)	:	**1.66**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**17**	**12**
Initial Dry Density (Mg/m^3)	:	**1.37**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Brown CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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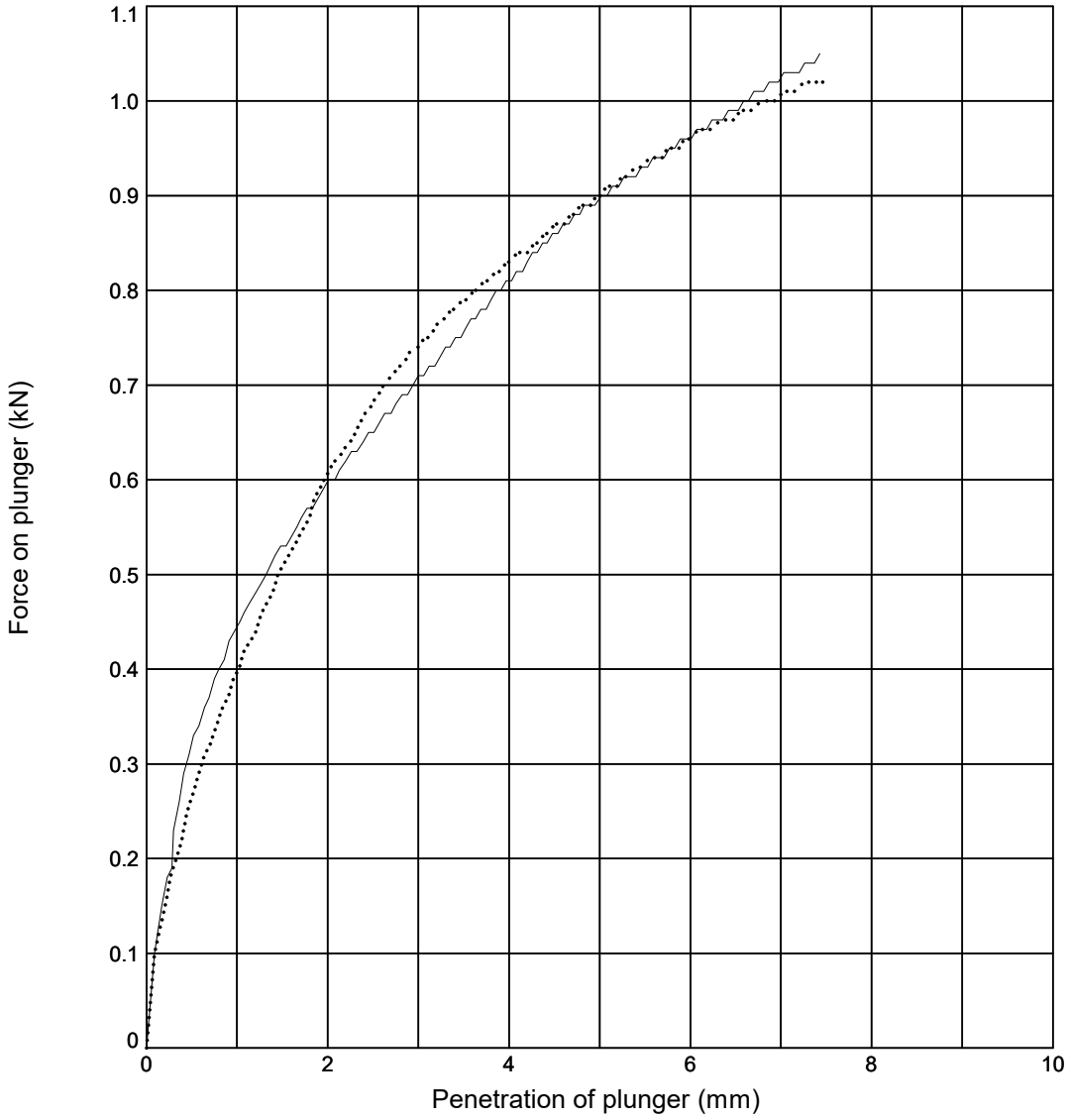
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP205** Sample Ref: **5** Sample Type: **LB** Depth (m): **0.70**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**32**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**32**	**32**
Initial Bulk Density (Mg/m^3)	:	**1.86**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**4.9**	**5.1**
Initial Dry Density (Mg/m^3)	:	**1.41**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Brown CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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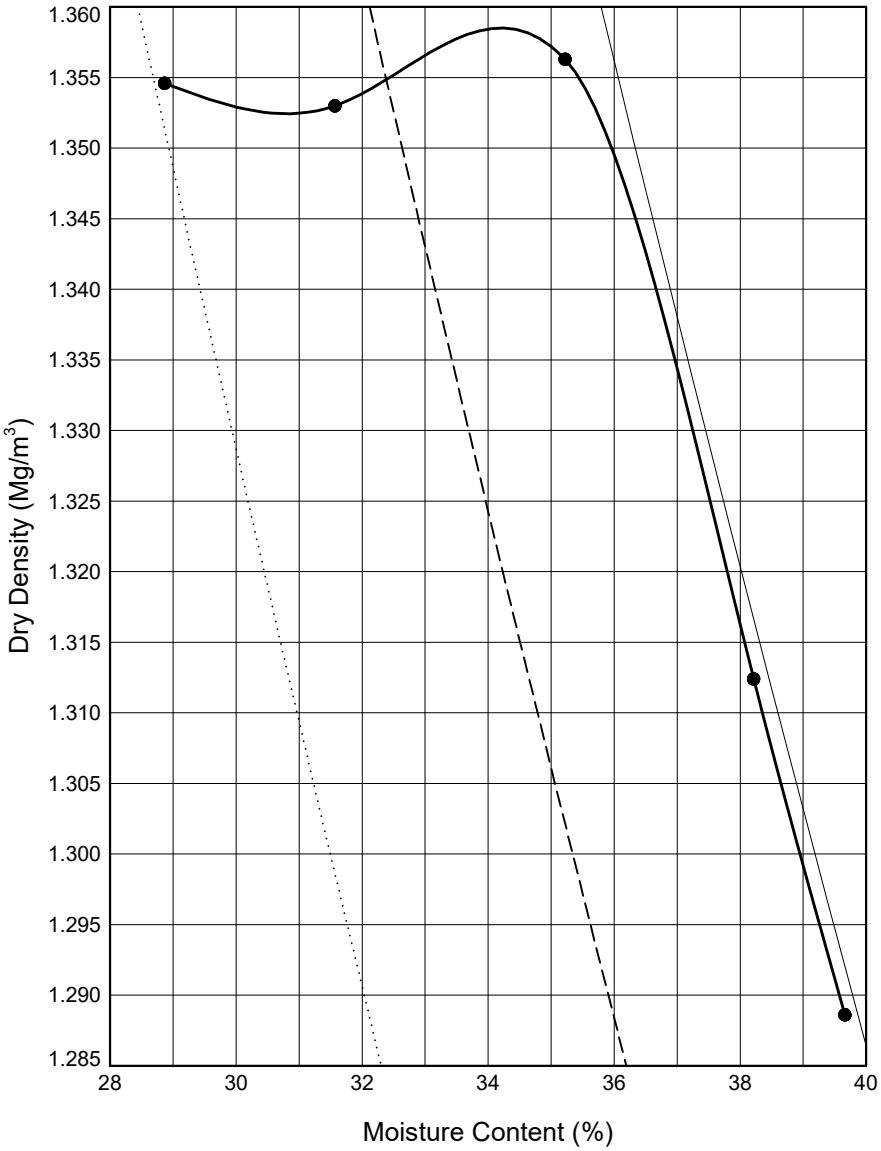
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **R22-TP405** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.30**



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**38**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m³)	:	**1.36**
% Retained on 37.5mm BS Sieve	:	**0**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**34.5**
% 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 test carried out at each point**		
Size of Soil Pieces	:	**<37.5mm**	Separate samples were used.					

Sample Description	Key to Air Voids Lines		
Greyish brown silty CLAY -10	——— 0%	– – – – 5%	····· 10%

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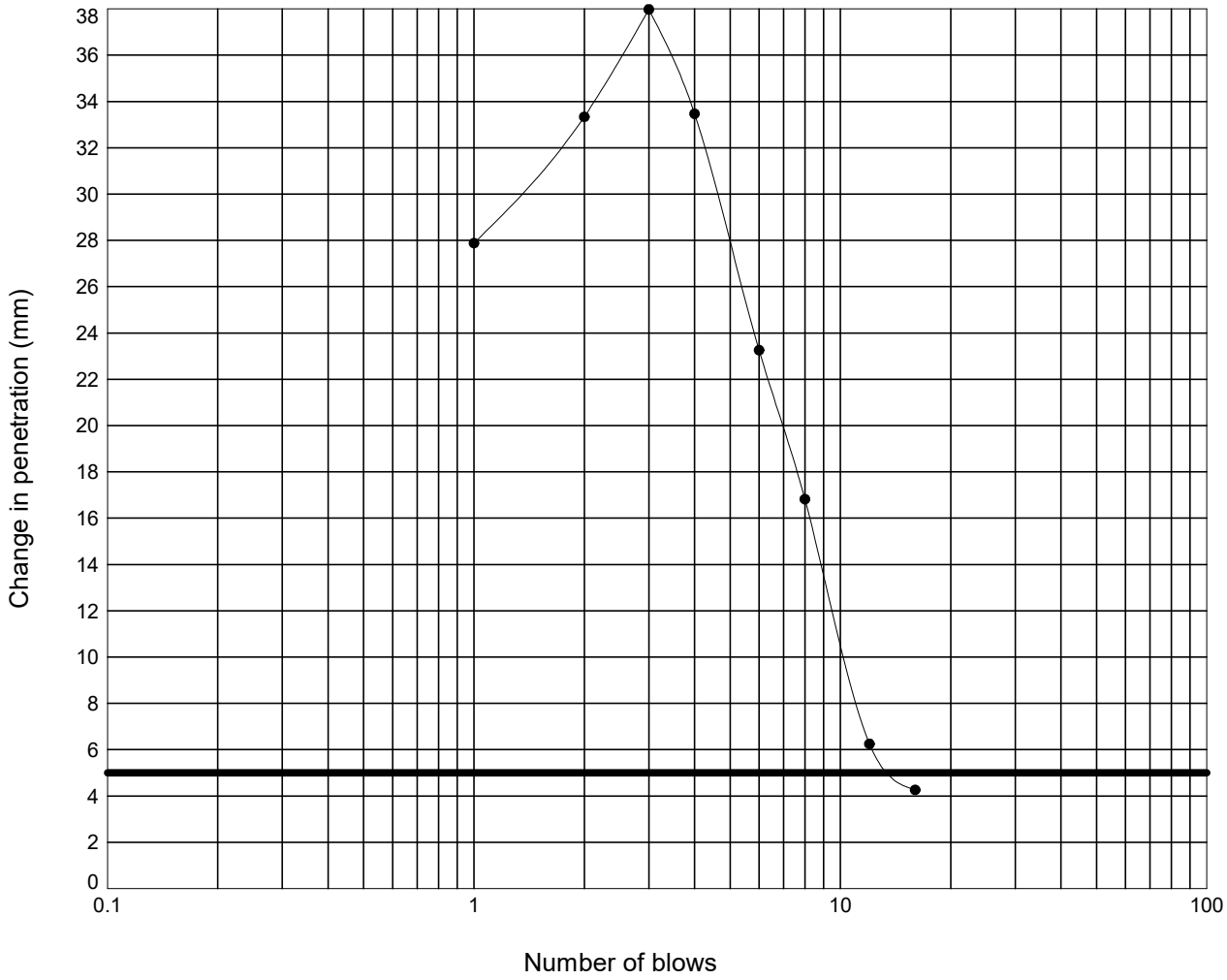
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP405** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.30**

Description : **Greyish brown silty CLAY -10**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	38	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	11.0	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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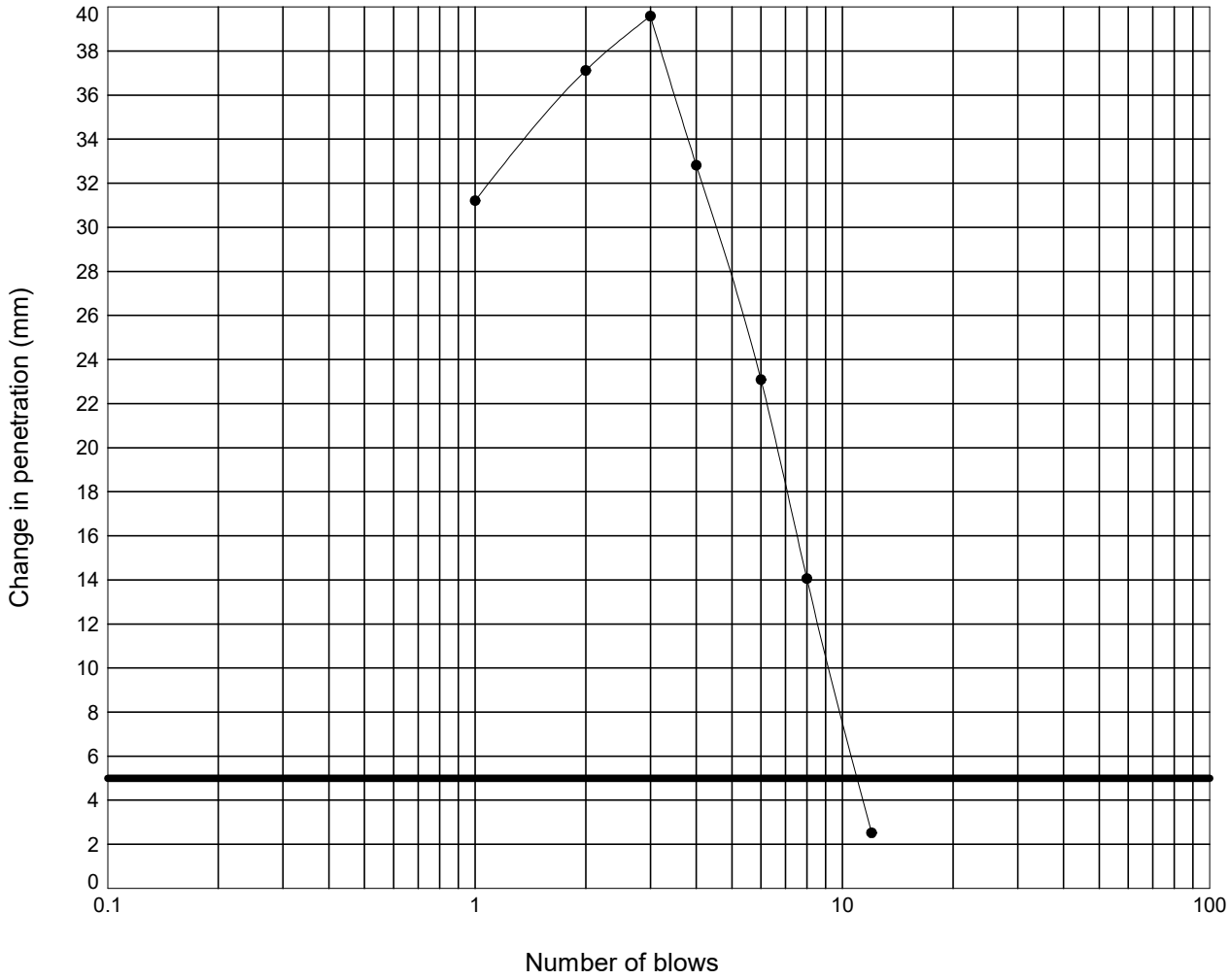
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP405** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.30**

Description : **Greyish brown silty CLAY -12**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	40	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	10.3	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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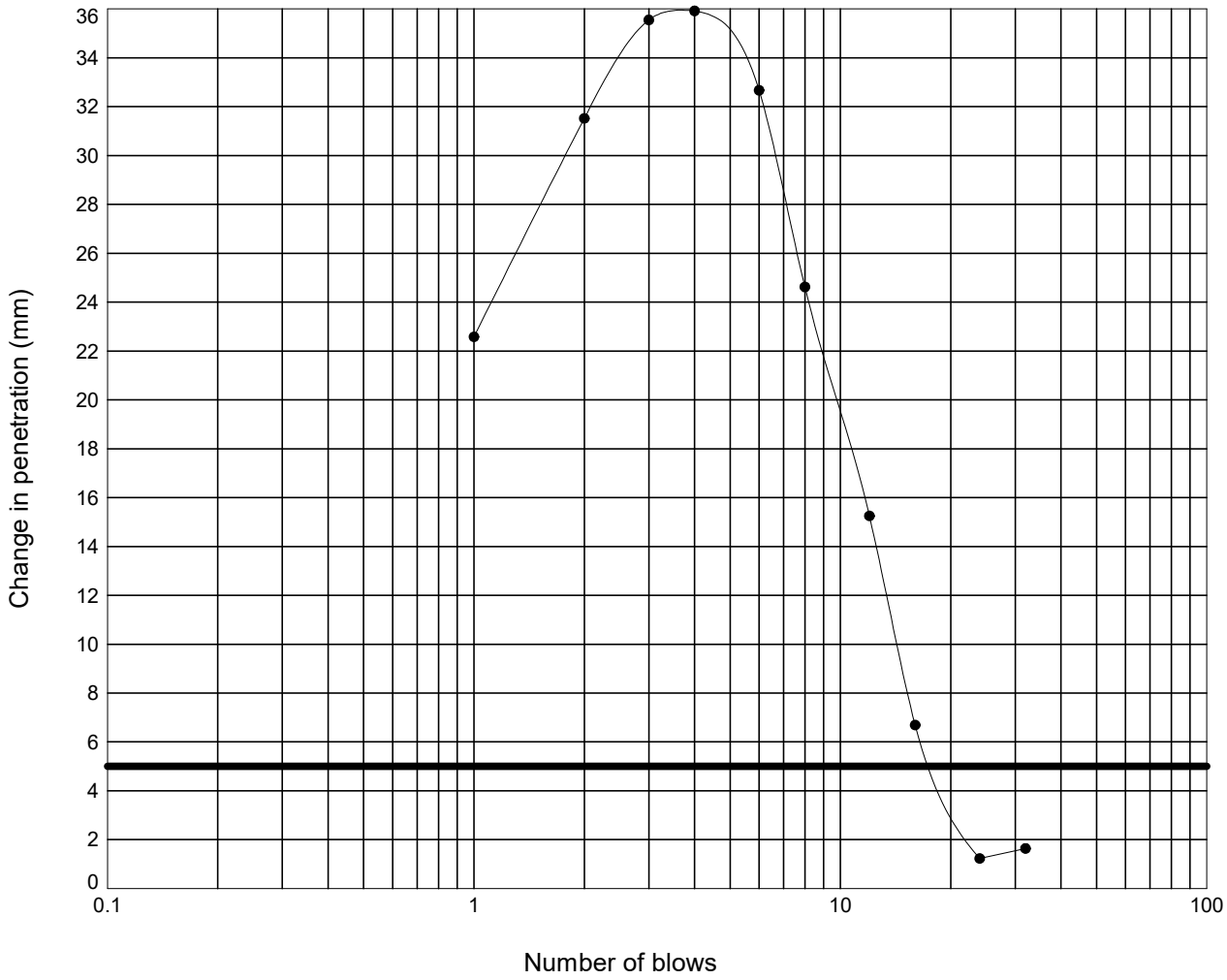
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP405** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.30**

Description : **Greyish brown silty CLAY -14**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	35	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	12.3	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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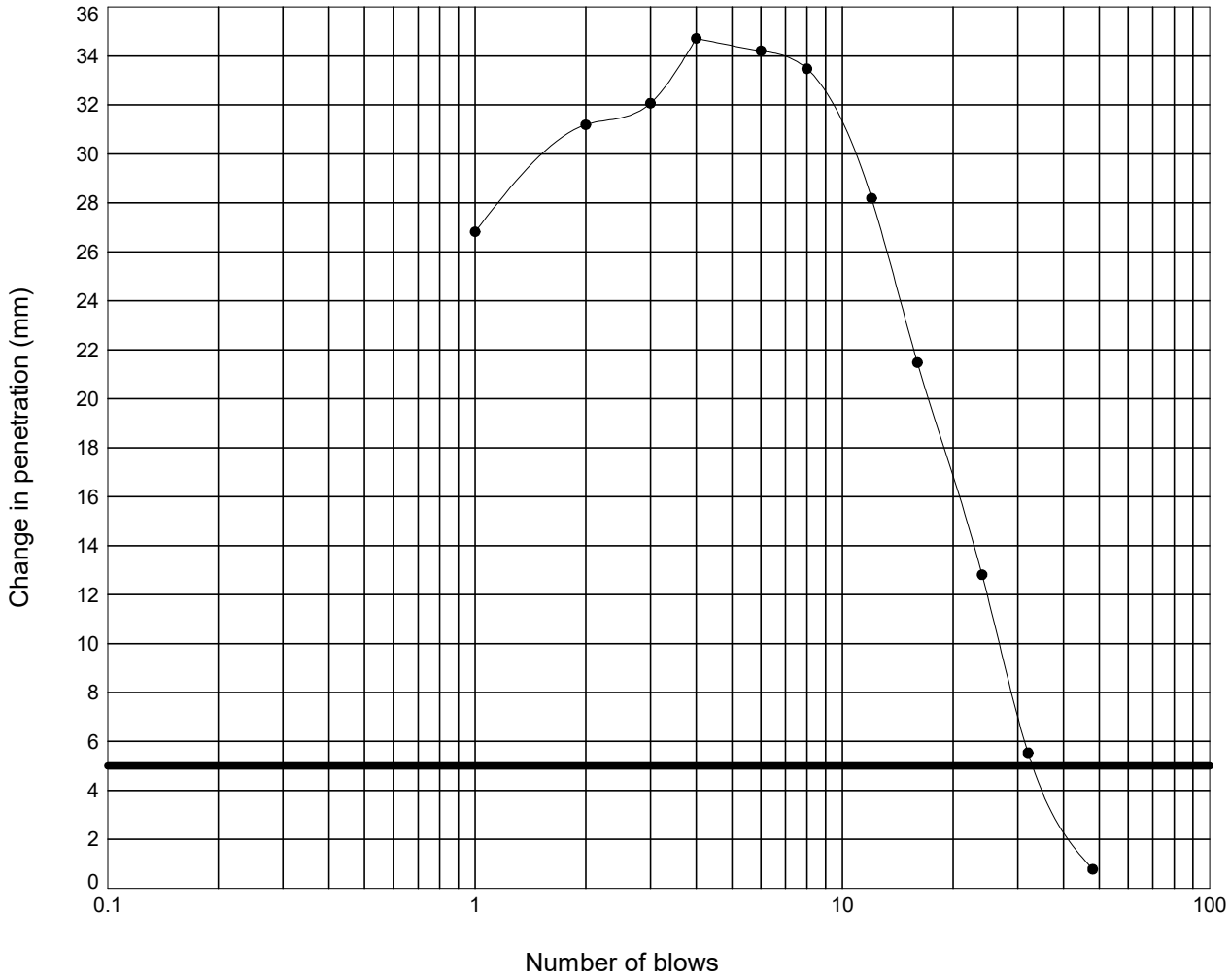
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP405** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.30**

Description : **Greyish brown silty CLAY -16**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	32	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	15.1	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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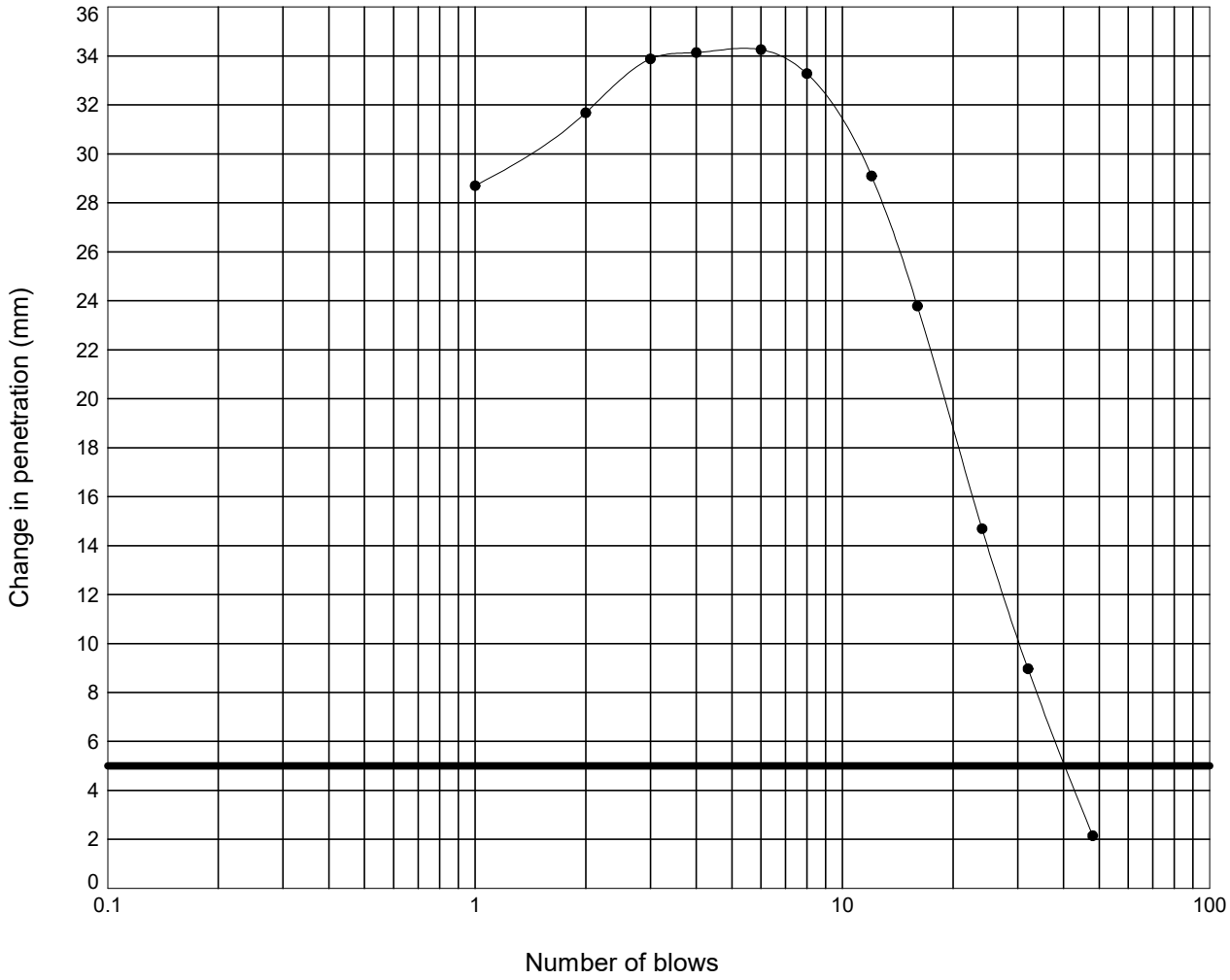
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP405** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.30**

Description : **Greyish brown silty CLAY -18**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	29	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	15.7	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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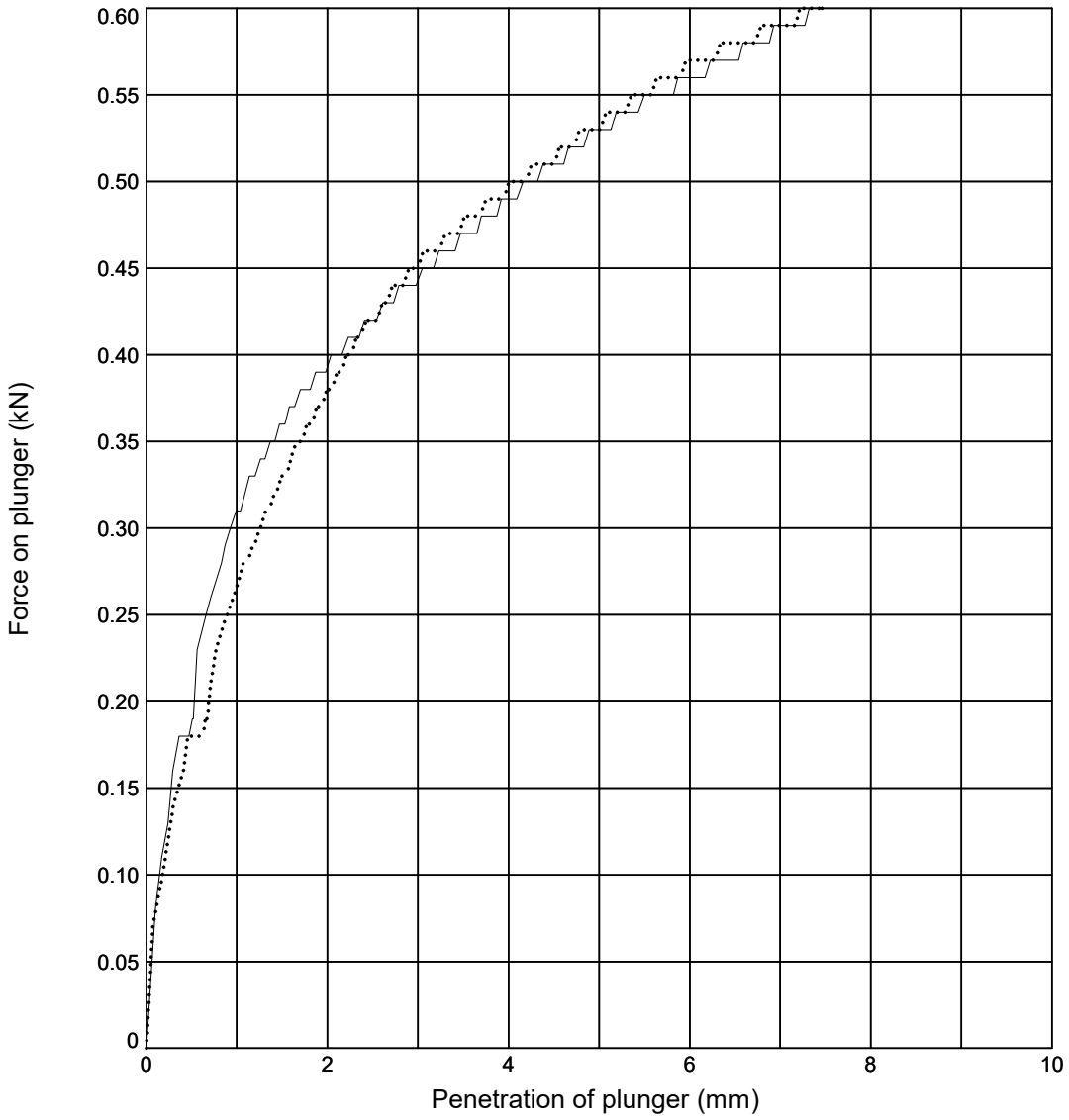
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP405** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.30**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**39**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**38**	**38**
Initial Bulk Density (Mg/m^3)	:	**1.81**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**3.2**	**3.2**
Initial Dry Density (Mg/m^3)	:	**1.31**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Greyish brown silty CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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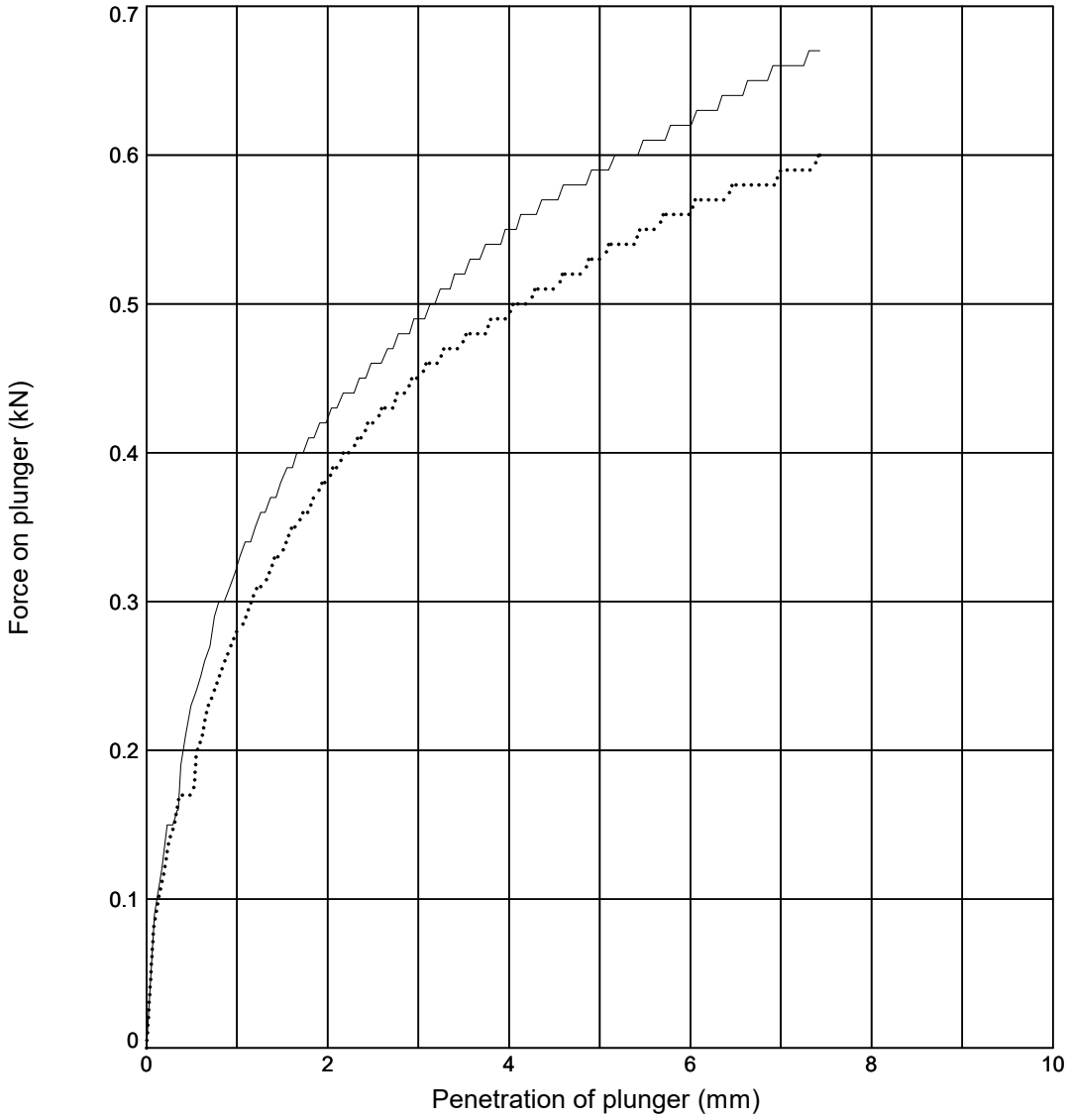
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP405** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.30**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**44**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**45**	**44**
Initial Bulk Density (Mg/m^3)	:	**1.80**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**3.5**	**3.2**
Initial Dry Density (Mg/m^3)	:	**1.25**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Greyish brown silty CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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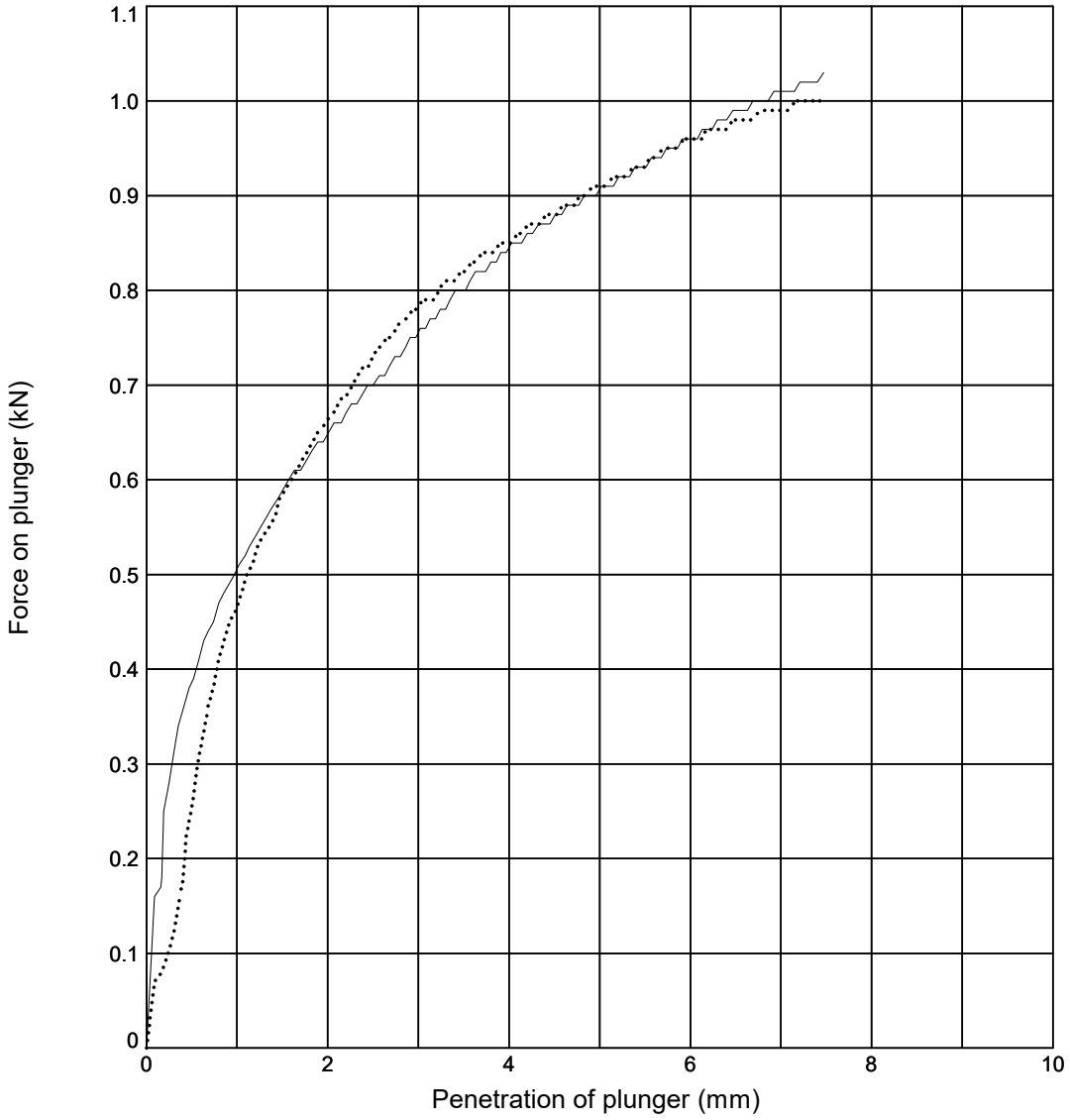
Position ID: **R22-TP405** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.30**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**36**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**36**	**36**
Initial Bulk Density (Mg/m^3)	:	**1.83**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**5.3**	**5.5**
Initial Dry Density (Mg/m^3)	:	**1.35**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Greyish brown silty CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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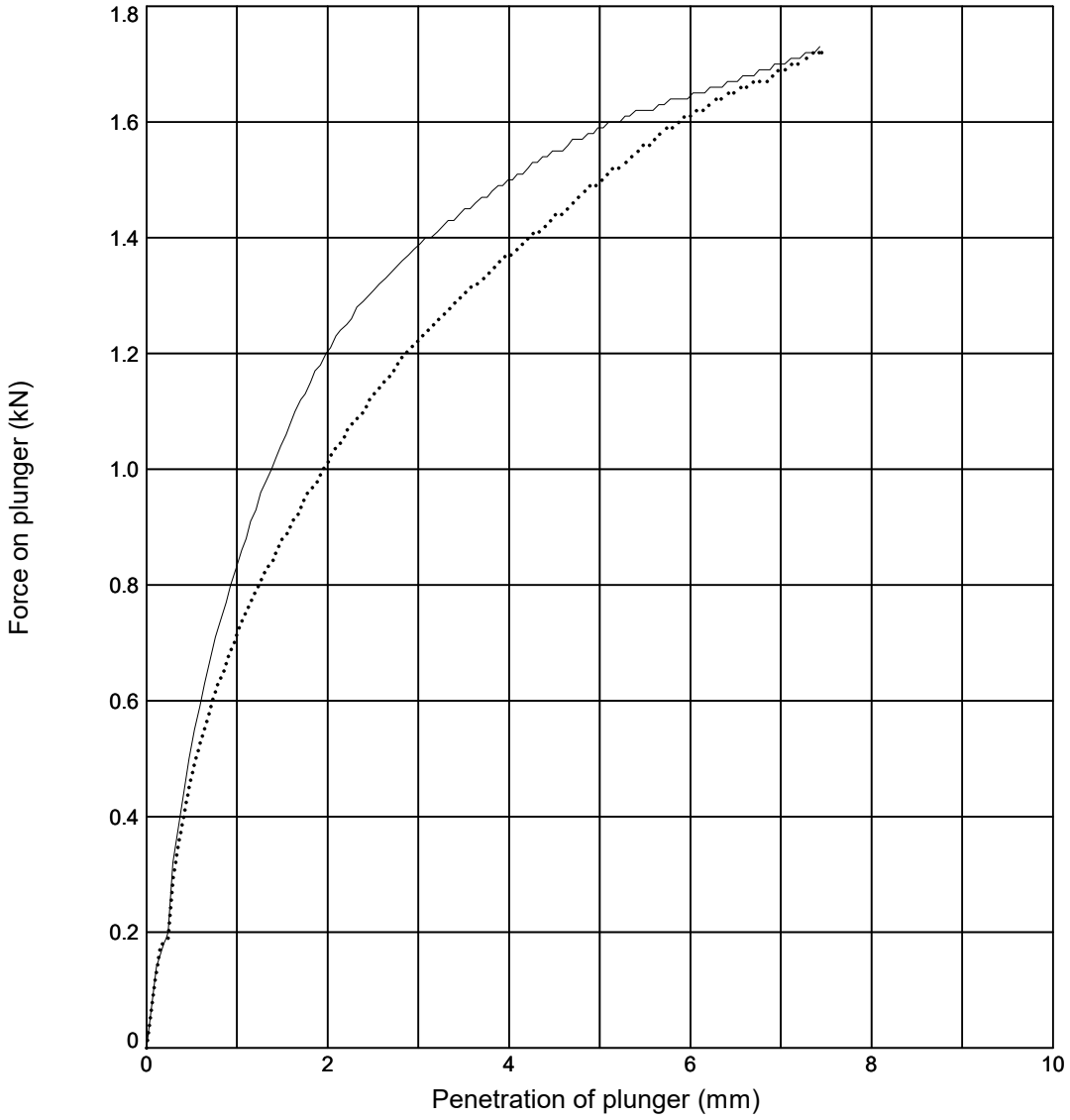
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP405** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.30**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**31**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**29**	**32**
Initial Bulk Density (Mg/m^3)	:	**1.78**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**9.9**	**8.6**
Initial Dry Density (Mg/m^3)	:	**1.36**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Greyish brown silty CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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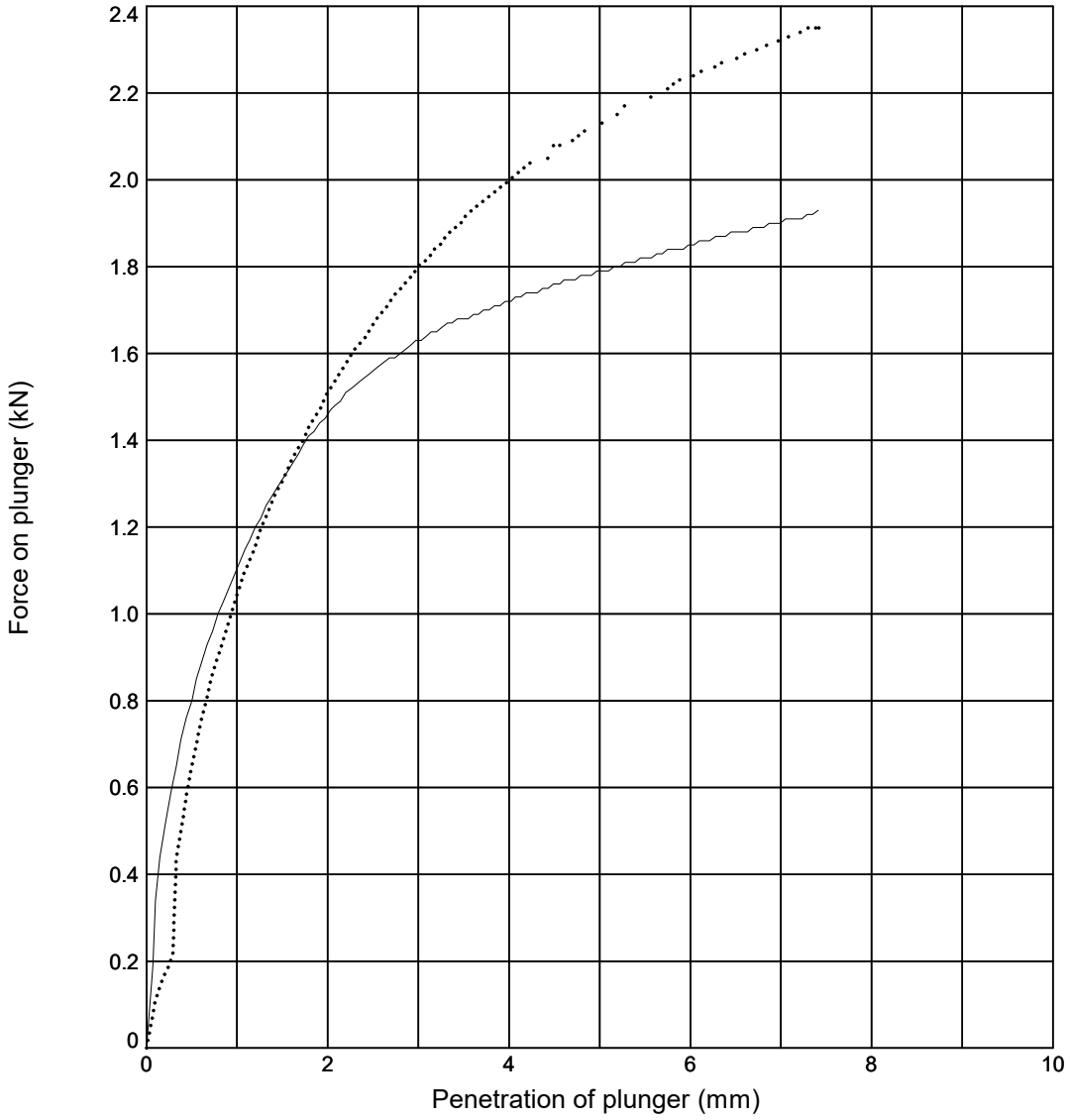
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP405** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.30**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**30**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**29**	**30**
Initial Bulk Density (Mg/m^3)	:	**1.75**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**12**	**13**
Initial Dry Density (Mg/m^3)	:	**1.34**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Greyish brown silty CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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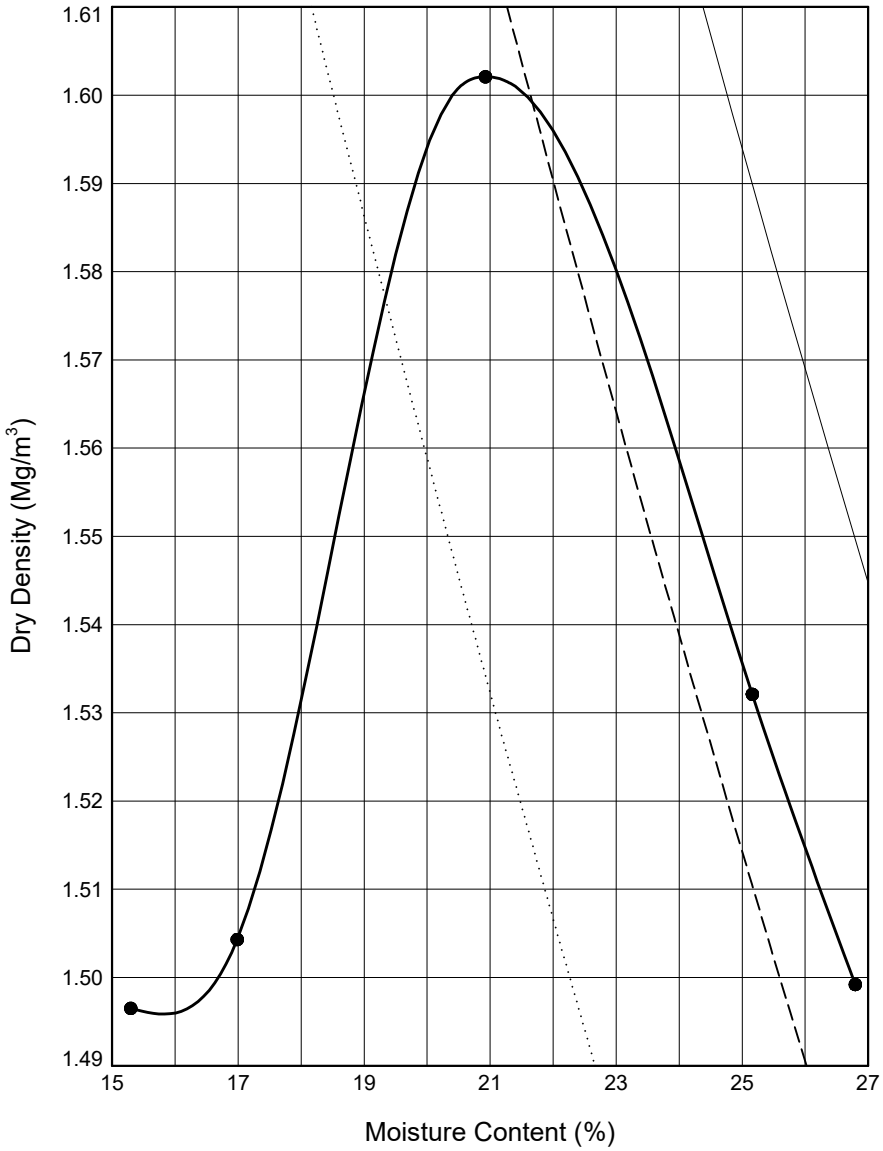
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **R22-TP501** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.90**



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**25**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m³)	:	**1.60**
% Retained on 37.5mm BS Sieve	:	**0**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**20.9**
% 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 test carried out at each point**		
Size of Soil Pieces	:	**<37.5mm**	Separate samples were used.					

Sample Description	Key to Air Voids Lines		
Brown silty CLAY	——— 0%	– – – – 5%	····· 10%

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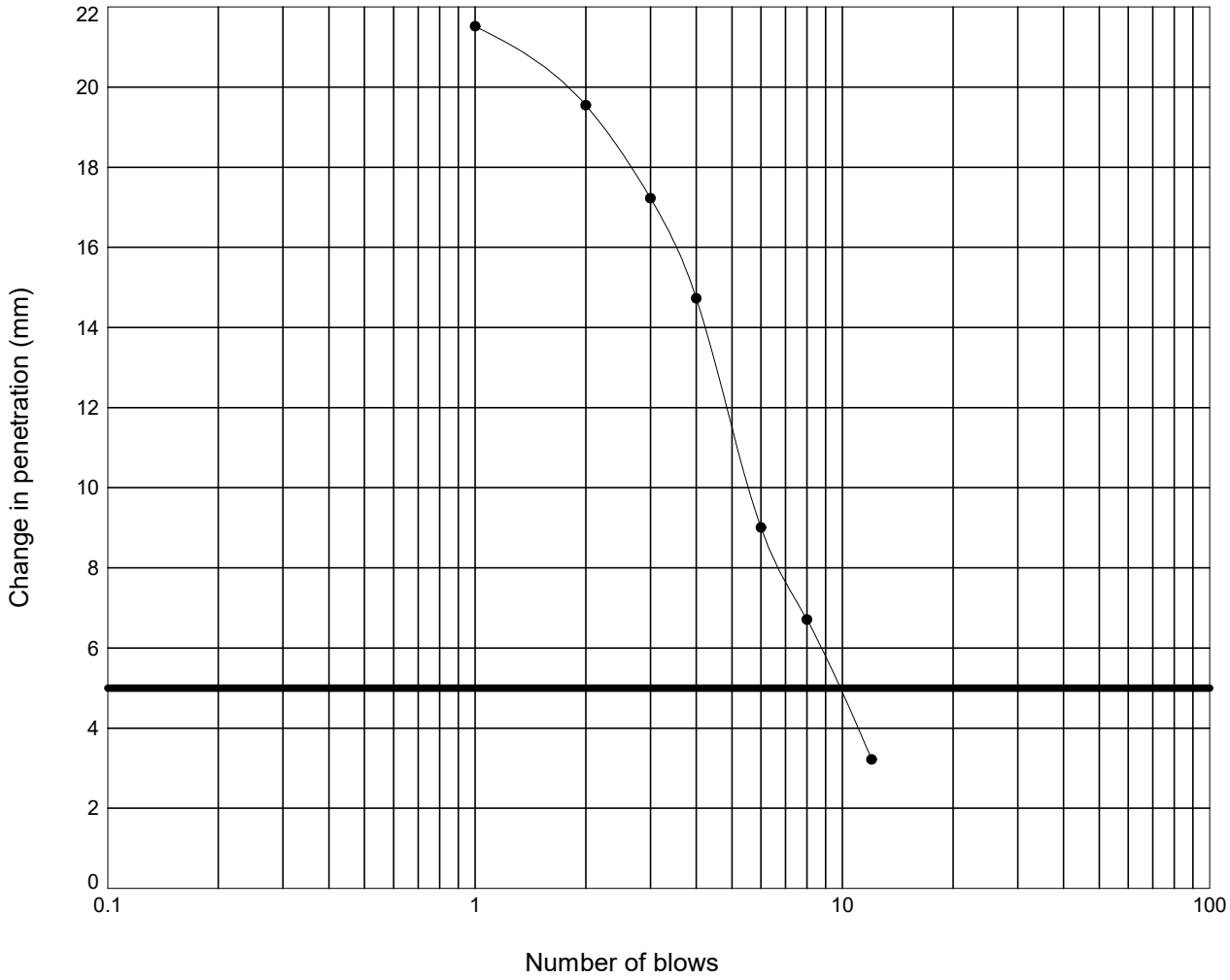
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP501** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.90**

Description : **Brown silty CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	25	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	9.0	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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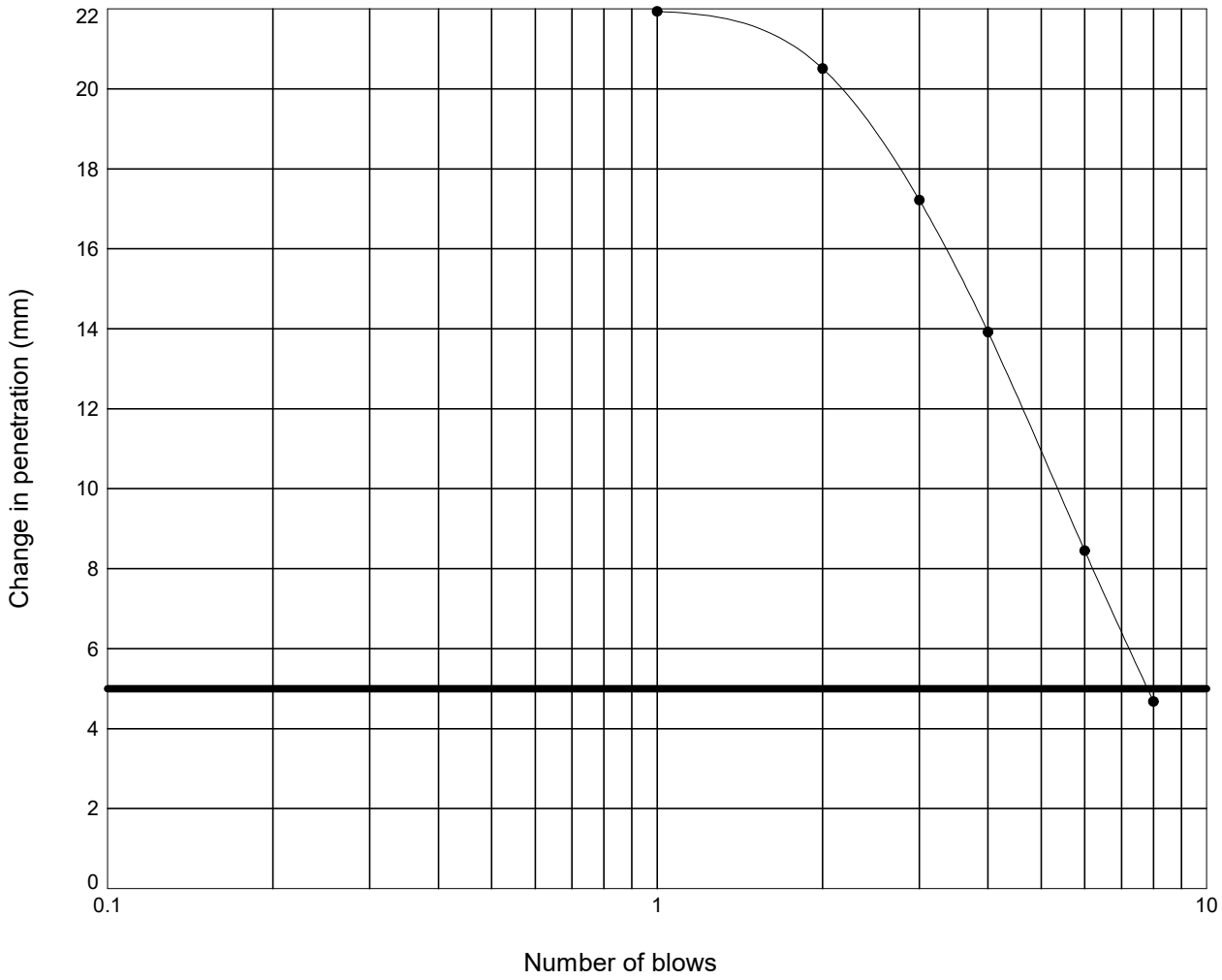
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP501** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.90**

Description : **Brown silty CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	27	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	8.9	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract	Contract Ref:
SEA Link FEED - Kent Onshore Cable Link	**563607**

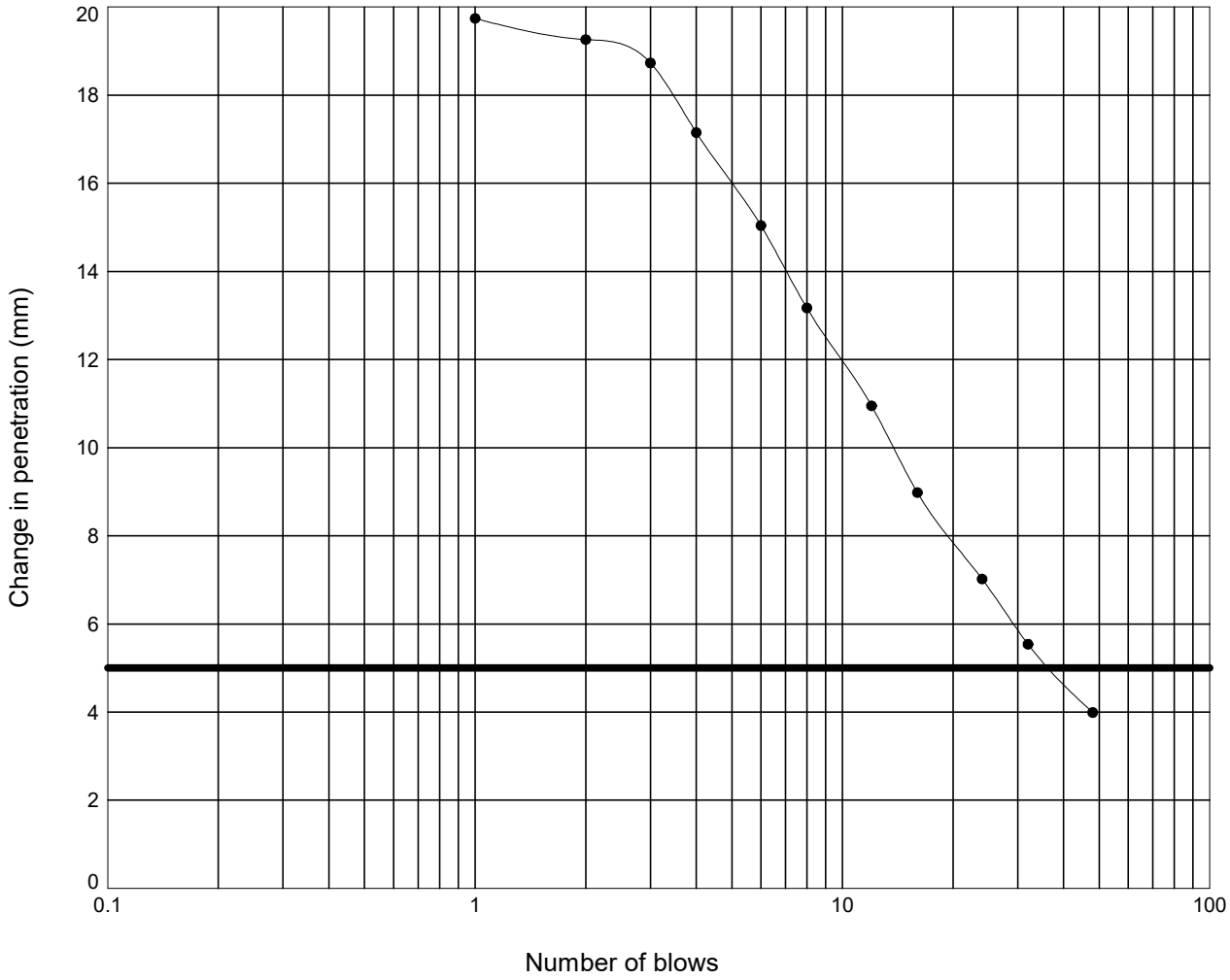
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP501** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.90**

Description : **Brown 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 :	= 0	%
Moisture Condition Value :	= 14.6	
Interpretation of curve:	= Steepest straight line - Fig 9	

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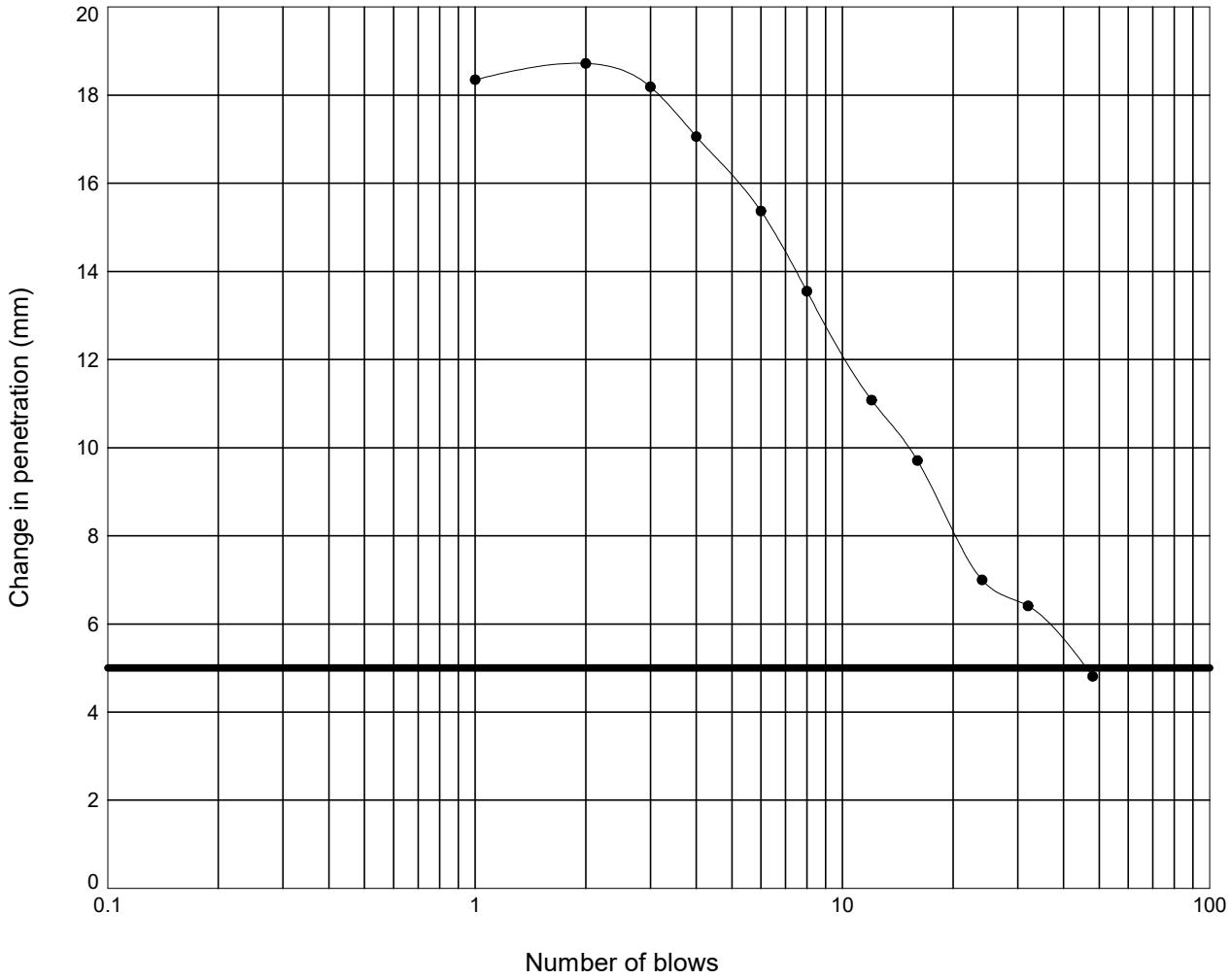
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP501** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.90**

Description : **Brown 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 :	= 0	%
Moisture Condition Value :	= 15.1	
Interpretation of curve:	= Steepest straight line - Fig 9	

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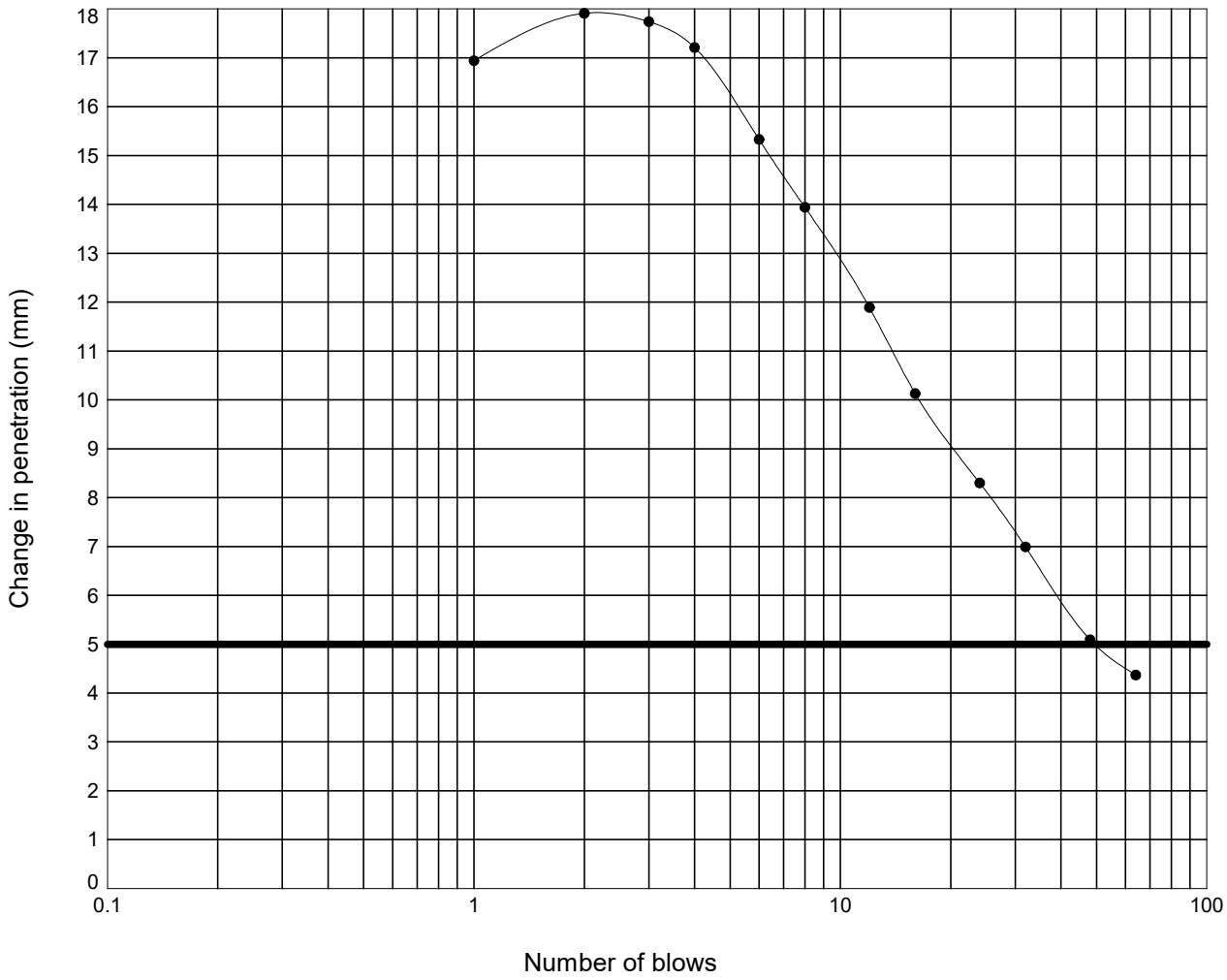
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP501** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.90**

Description : **Brown 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 :	= 0	%
Moisture Condition Value :	= 15.7	
Interpretation of curve:	= Steepest straight line - Fig 9	

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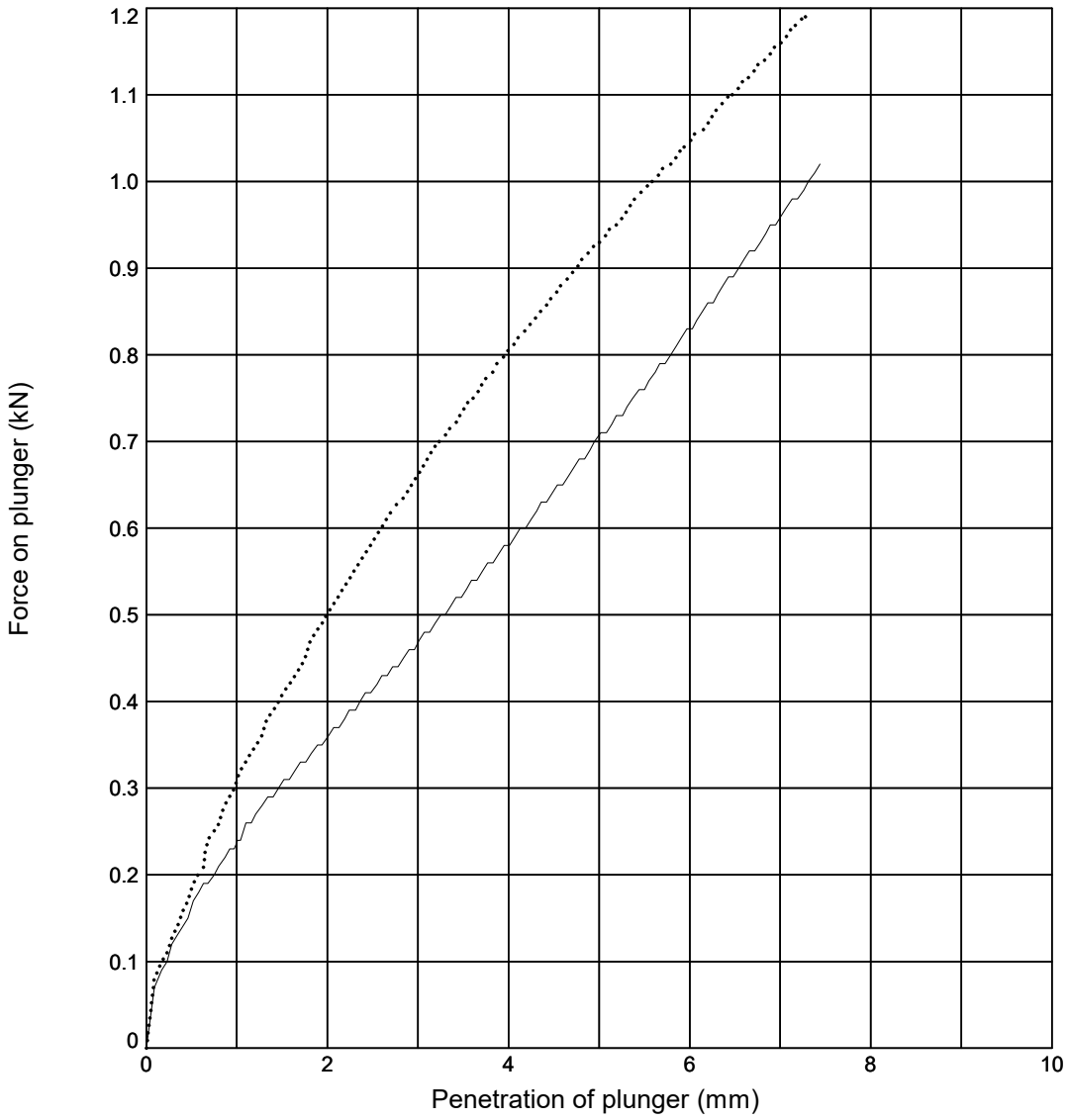
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP501** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.90**



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)	:	**1.92**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**3.5**	**4.7**
Initial Dry Density (Mg/m^3)	:	**1.54**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Brown silty CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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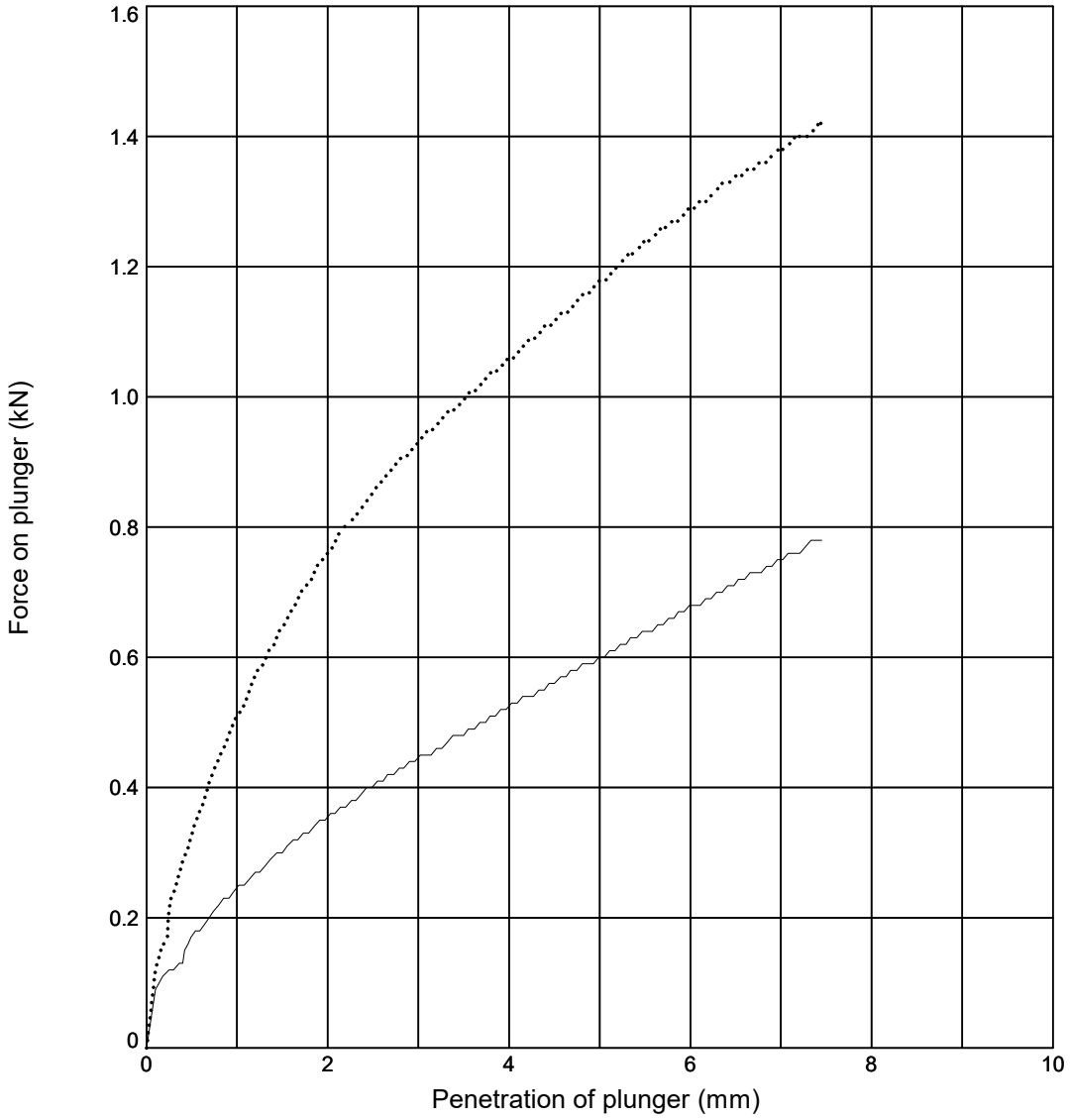
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP501** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.90**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**26**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**26**	**25**
Initial Bulk Density (Mg/m^3)	:	**1.90**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**3.0**	**6.5**
Initial Dry Density (Mg/m^3)	:	**1.51**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Brown silty CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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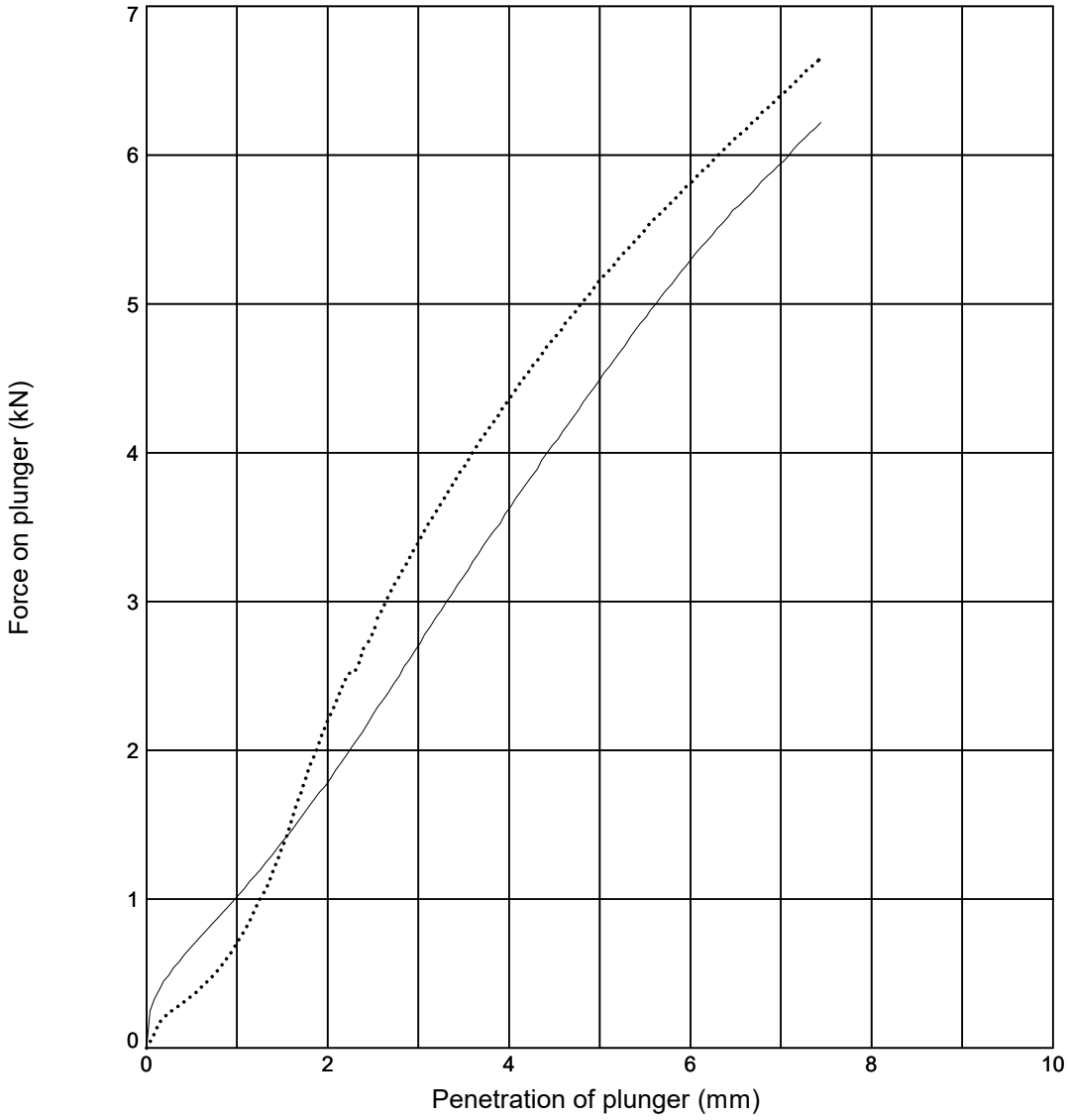
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP501** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.90**



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)	:	**1.94**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**22**	**26**
Initial Dry Density (Mg/m^3)	:	**1.62**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Brown silty CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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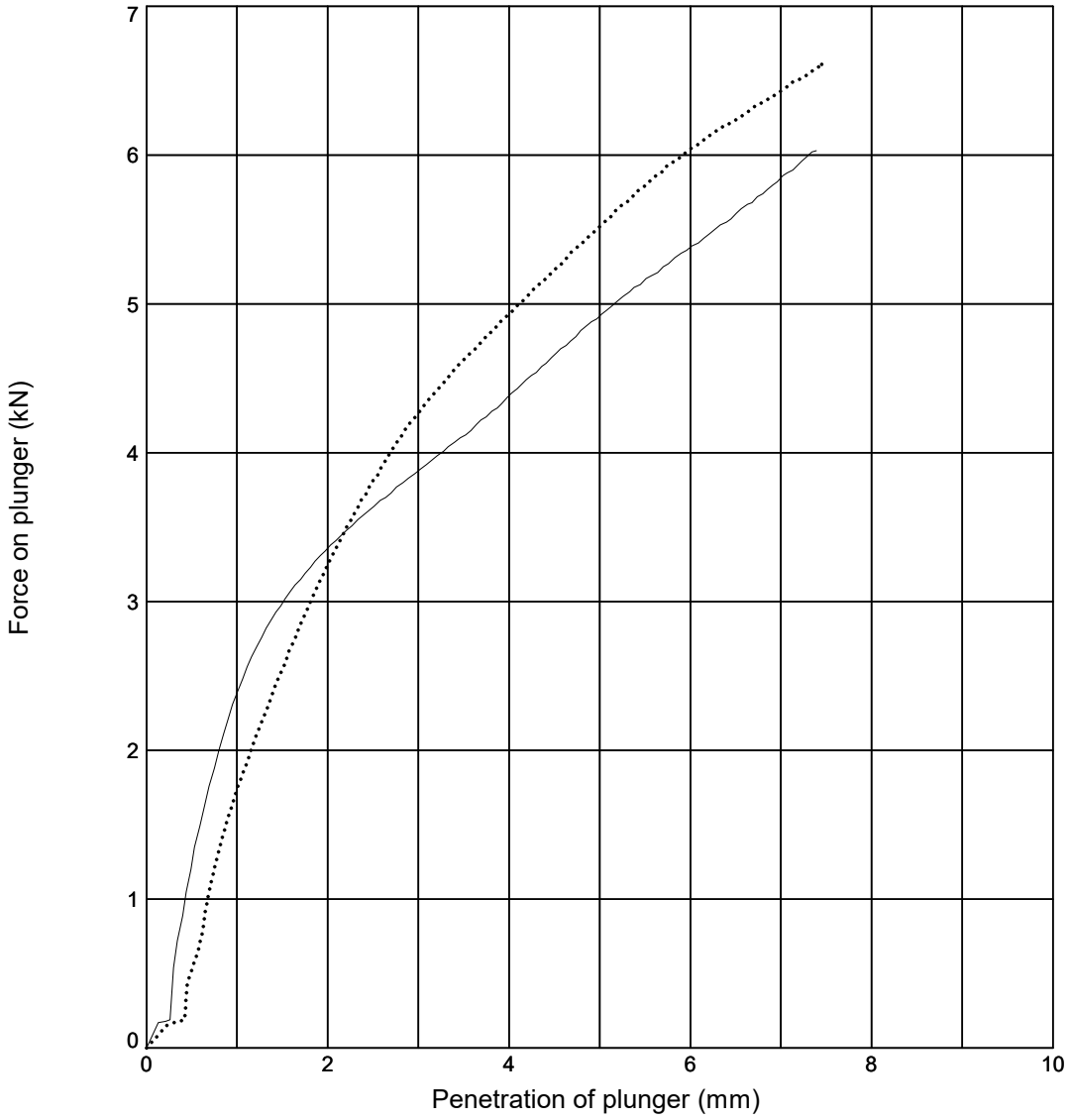
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP501** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.90**



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)	:	**1.76**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**28**	**29**
Initial Dry Density (Mg/m^3)	:	**1.50**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Brown silty CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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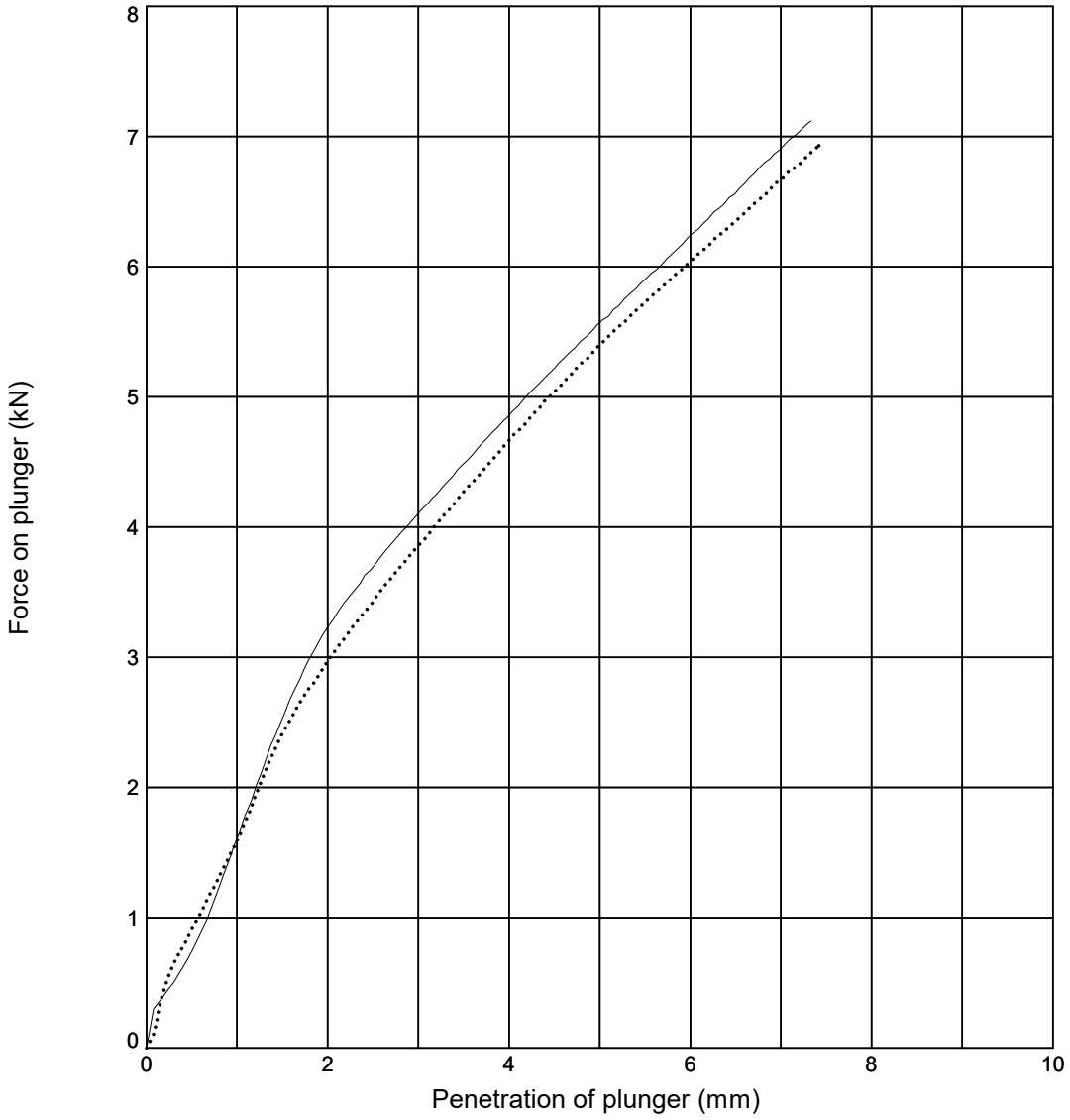
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP501** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.90**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**15**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**15**	**14**
Initial Bulk Density (Mg/m^3)	:	**1.73**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**28**	**27**
Initial Dry Density (Mg/m^3)	:	**1.51**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Brown silty CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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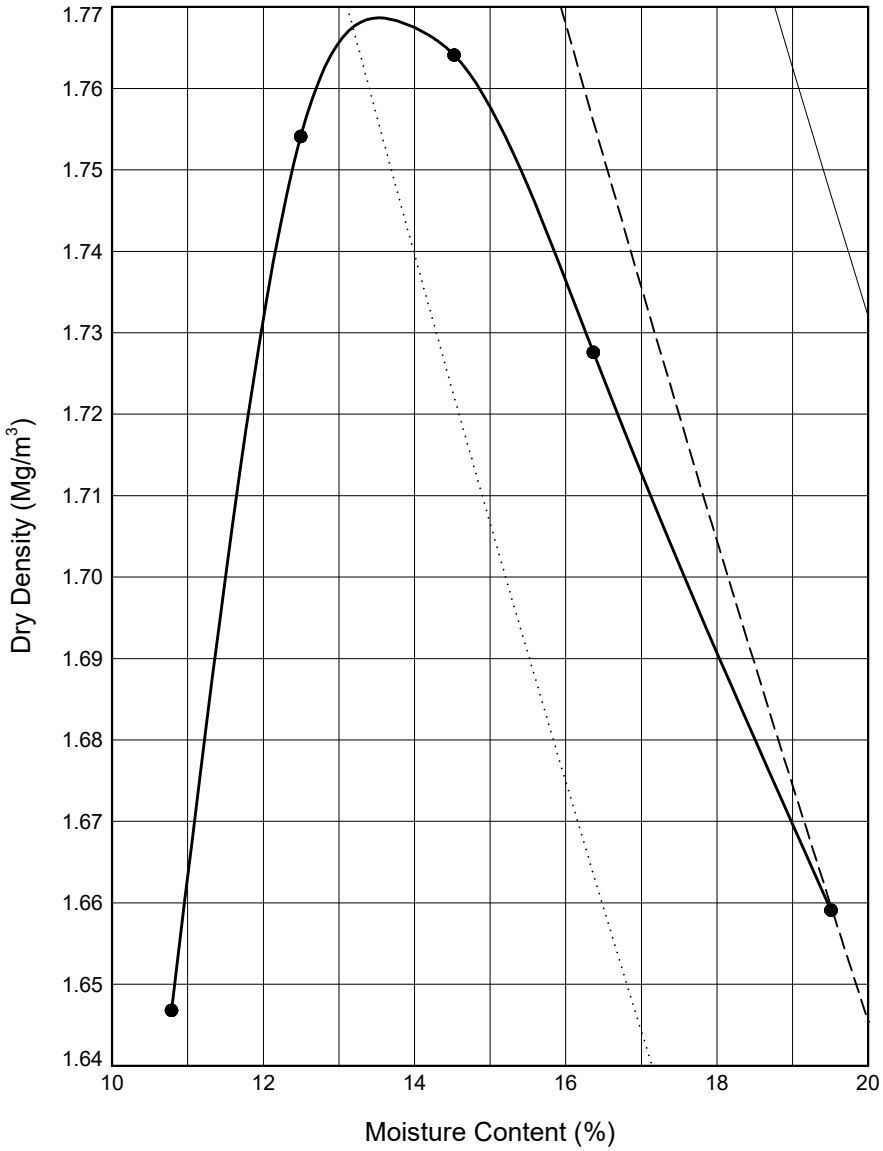
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **R22-TP502** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.50**



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**11**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m³)	:	**1.77**
% Retained on 37.5mm BS Sieve	:	**0**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**13.5**
% 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 test carried out at each point**		
Size of Soil Pieces	:	**<37.5mm**	Separate samples were used.					

Sample Description	Key to Air Voids Lines		
Brown clayey SILT	——— 0%	– – – – 5%	····· 10%

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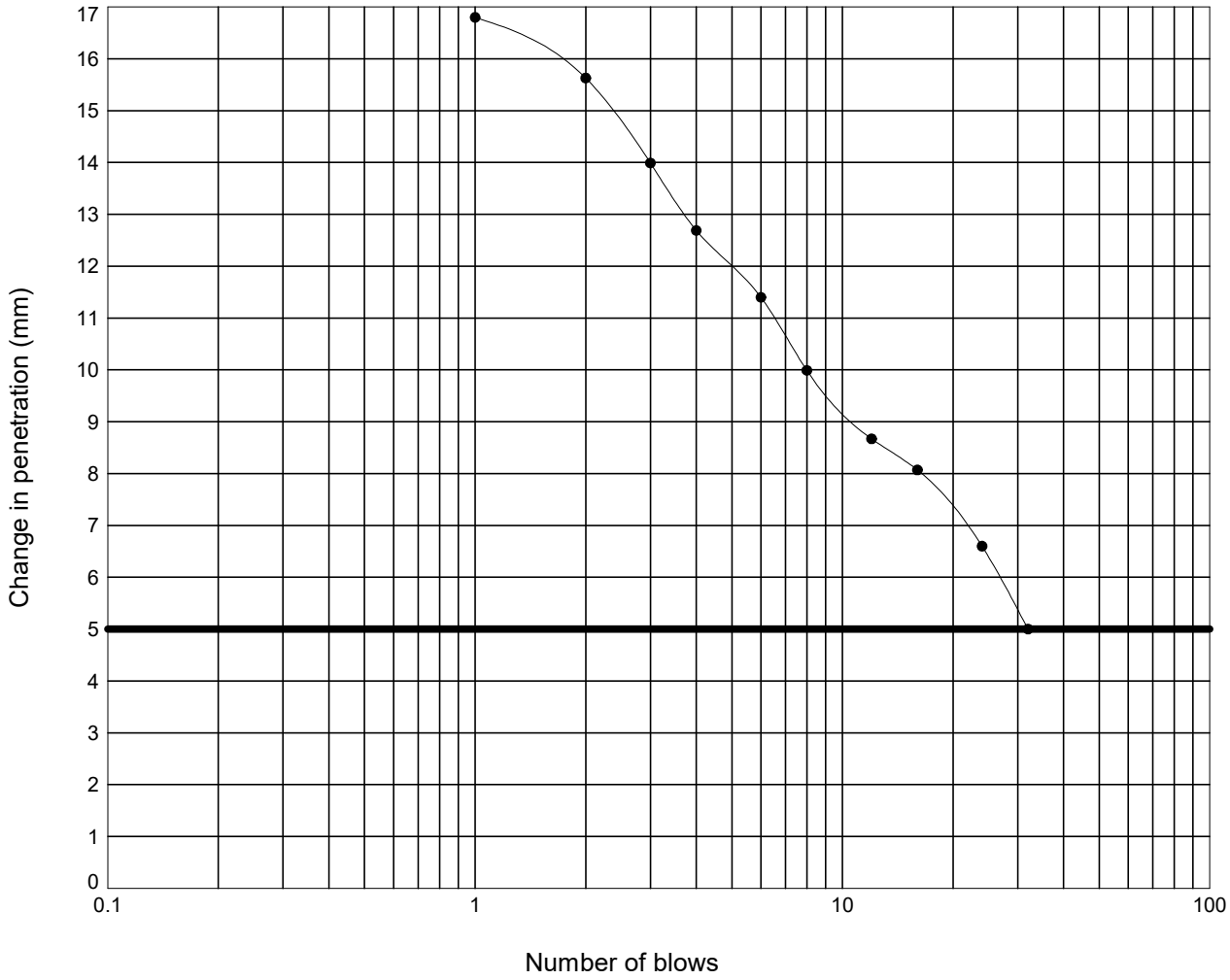
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP502** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.50**

Description : **Brown clayey SILT**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	12	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	13.5	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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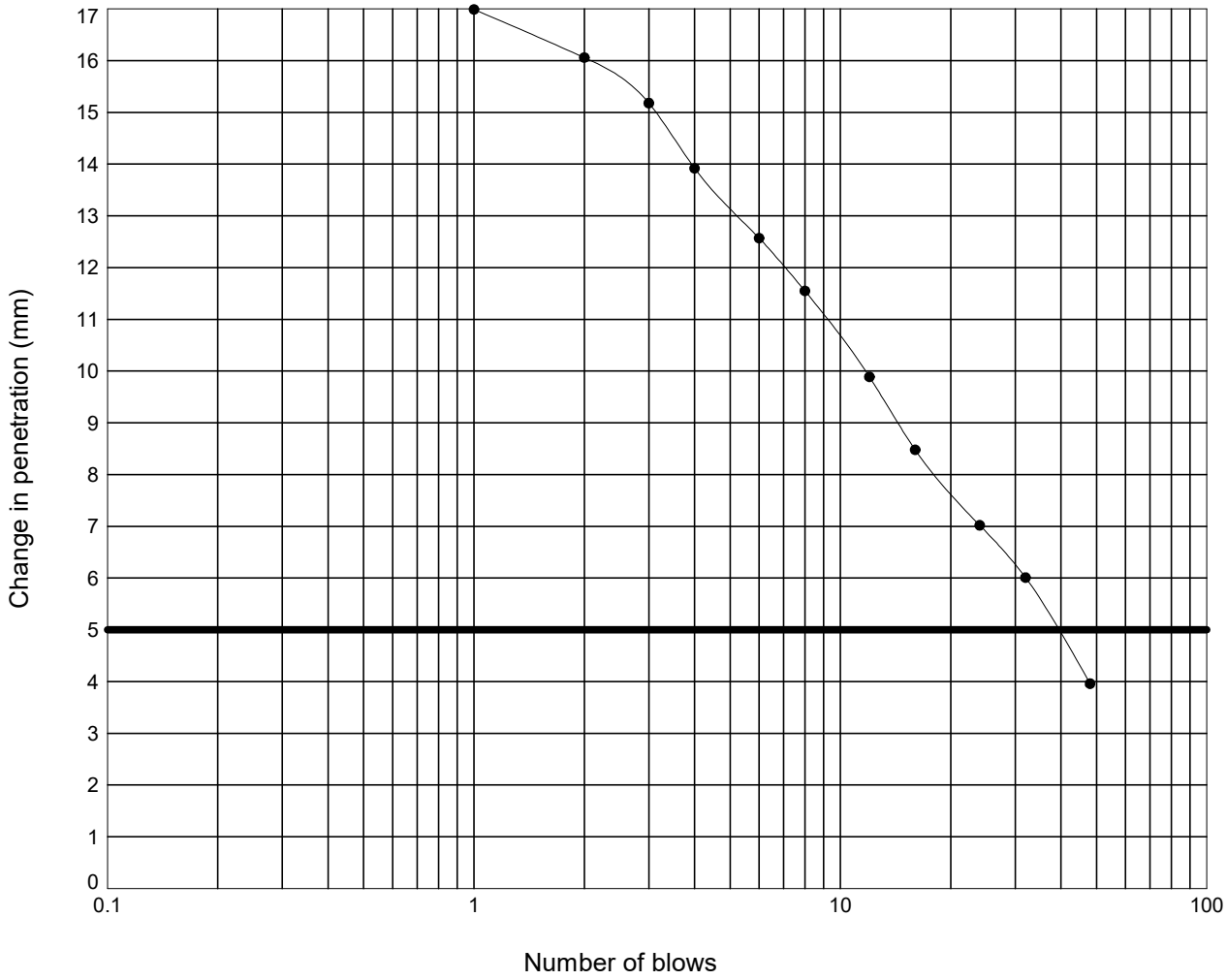
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP502** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.50**

Description : **Brown clayey SILT**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	11	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	15.1	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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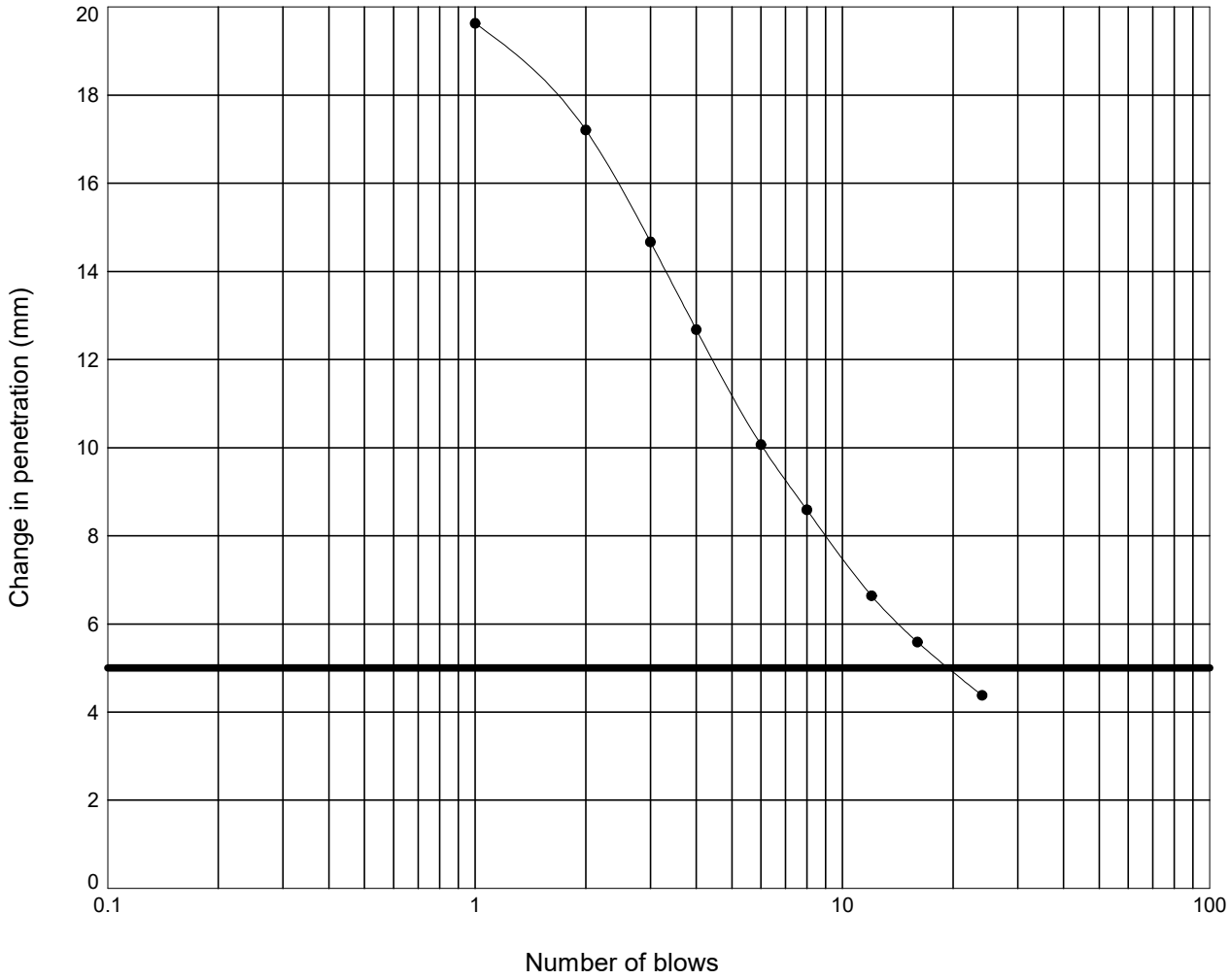
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP502** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.50**

Description : **Brown clayey SILT**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	15	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	11.5	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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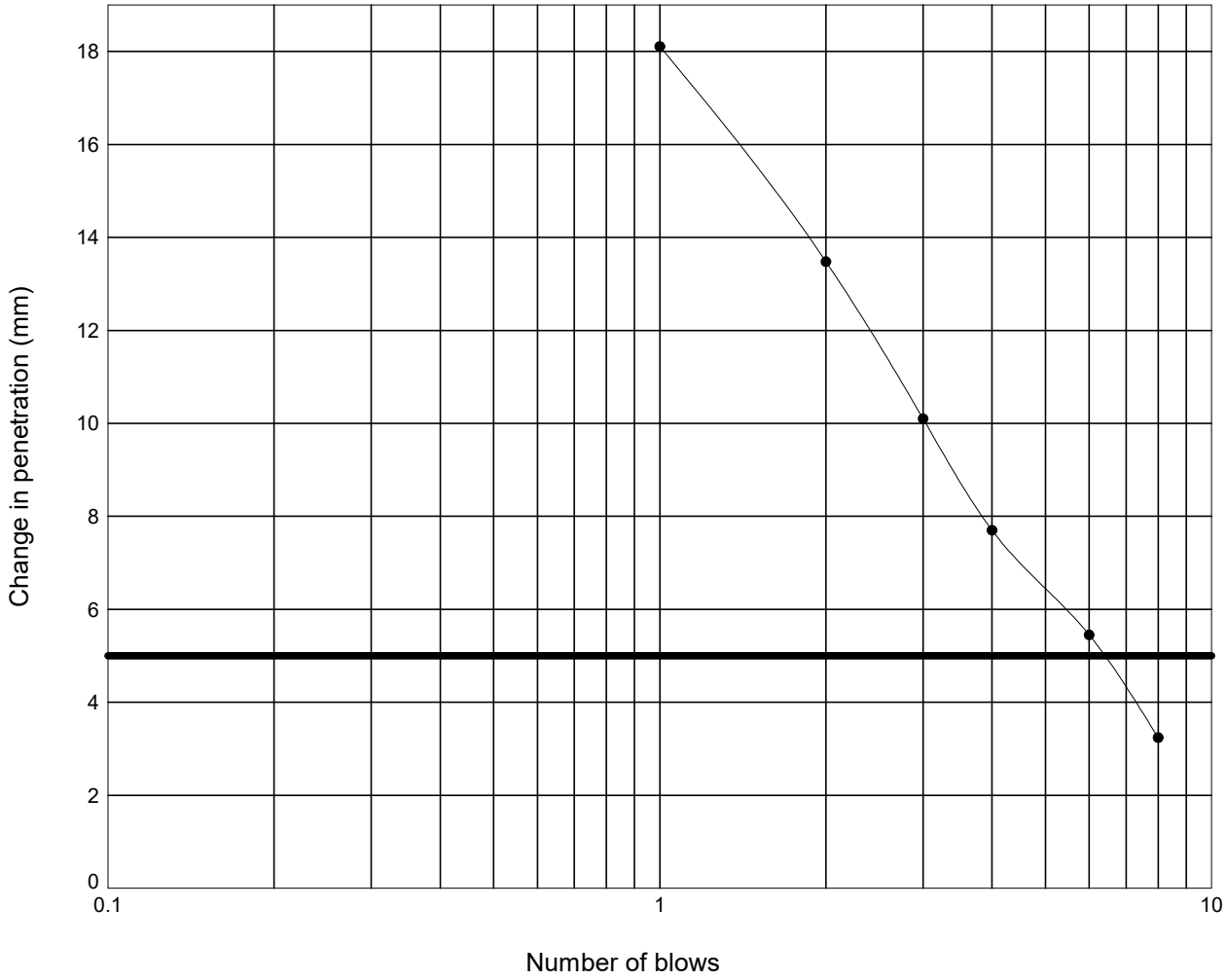
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP502** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.50**

Description : **Brown clayey SILT**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	16	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	7.4	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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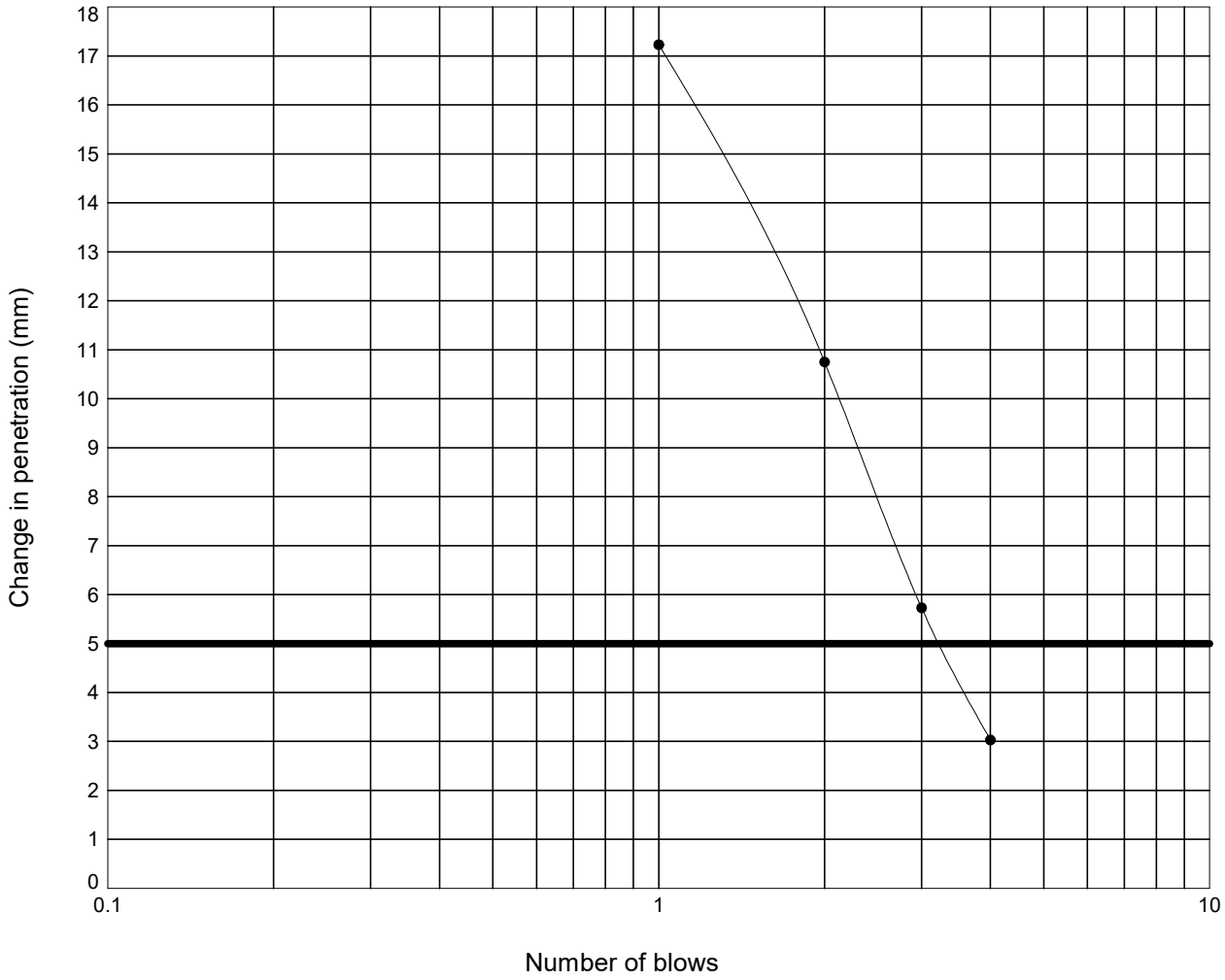
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP502** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.50**

Description : **Brown clayey SILT**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	20	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	5.0	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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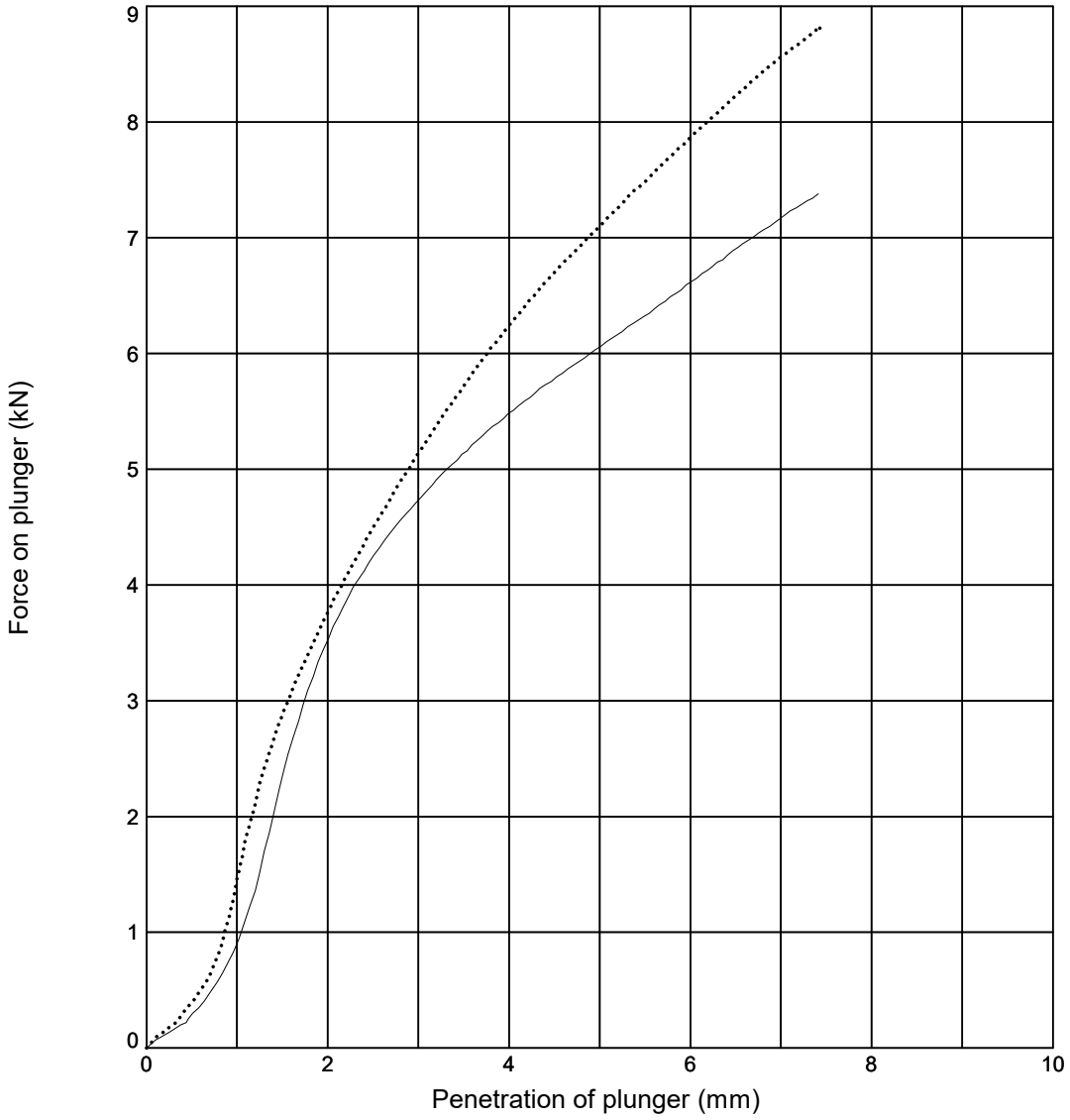
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP502** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.50**



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)	:	**1.82**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**32**	**35**
Initial Dry Density (Mg/m^3)	:	**1.64**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**0.7**	**0.4**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**37**	**38**

Sample Description	Key
Brown clayey SILT	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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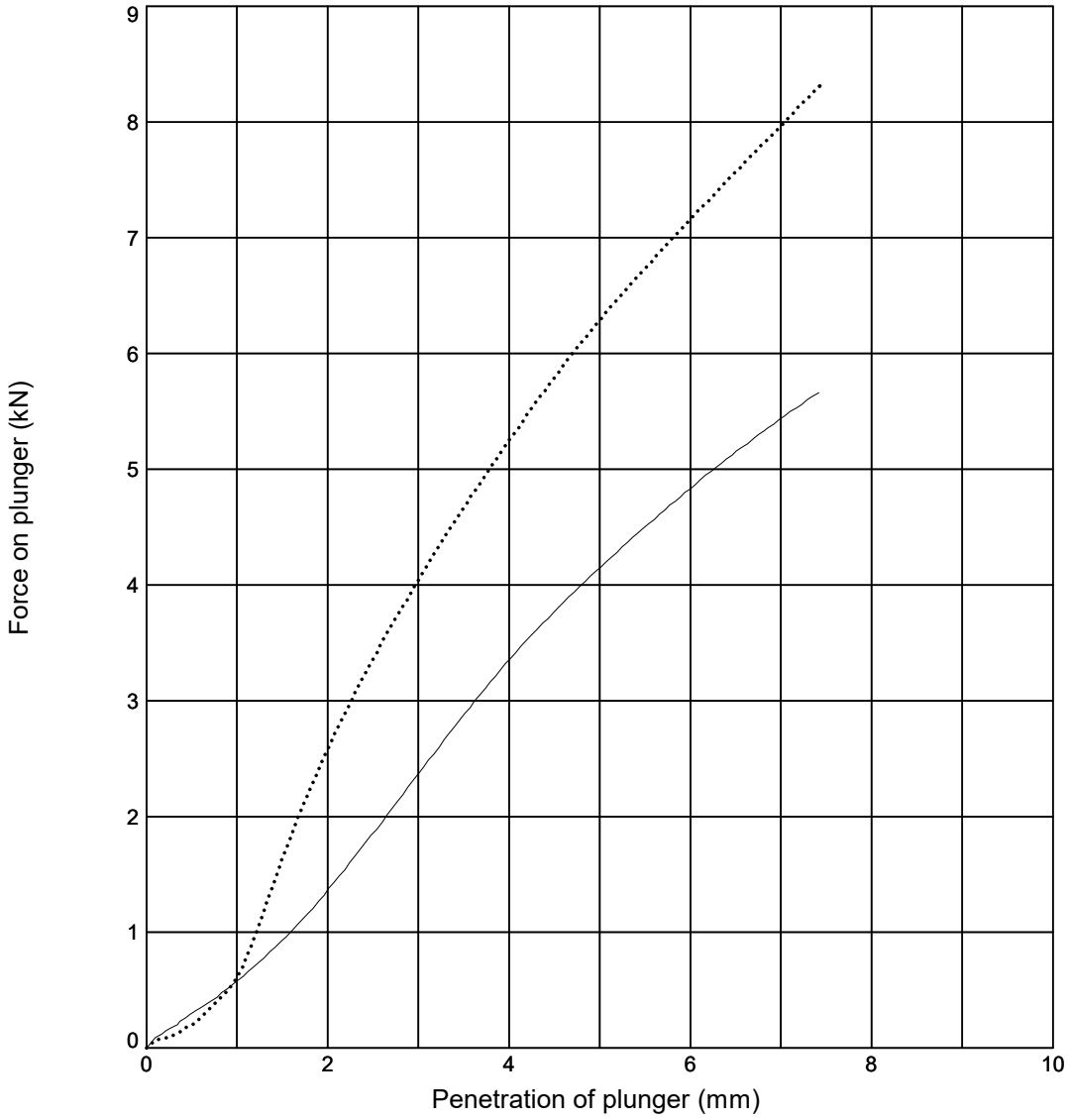
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP502** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.50**



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)	:	**1.97**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**21**	**31**
Initial Dry Density (Mg/m^3)	:	**1.75**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**0.3**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**33**

Sample Description	Key
Brown clayey SILT	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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Contract: **SEA Link FEED - Kent Onshore Cable Link**

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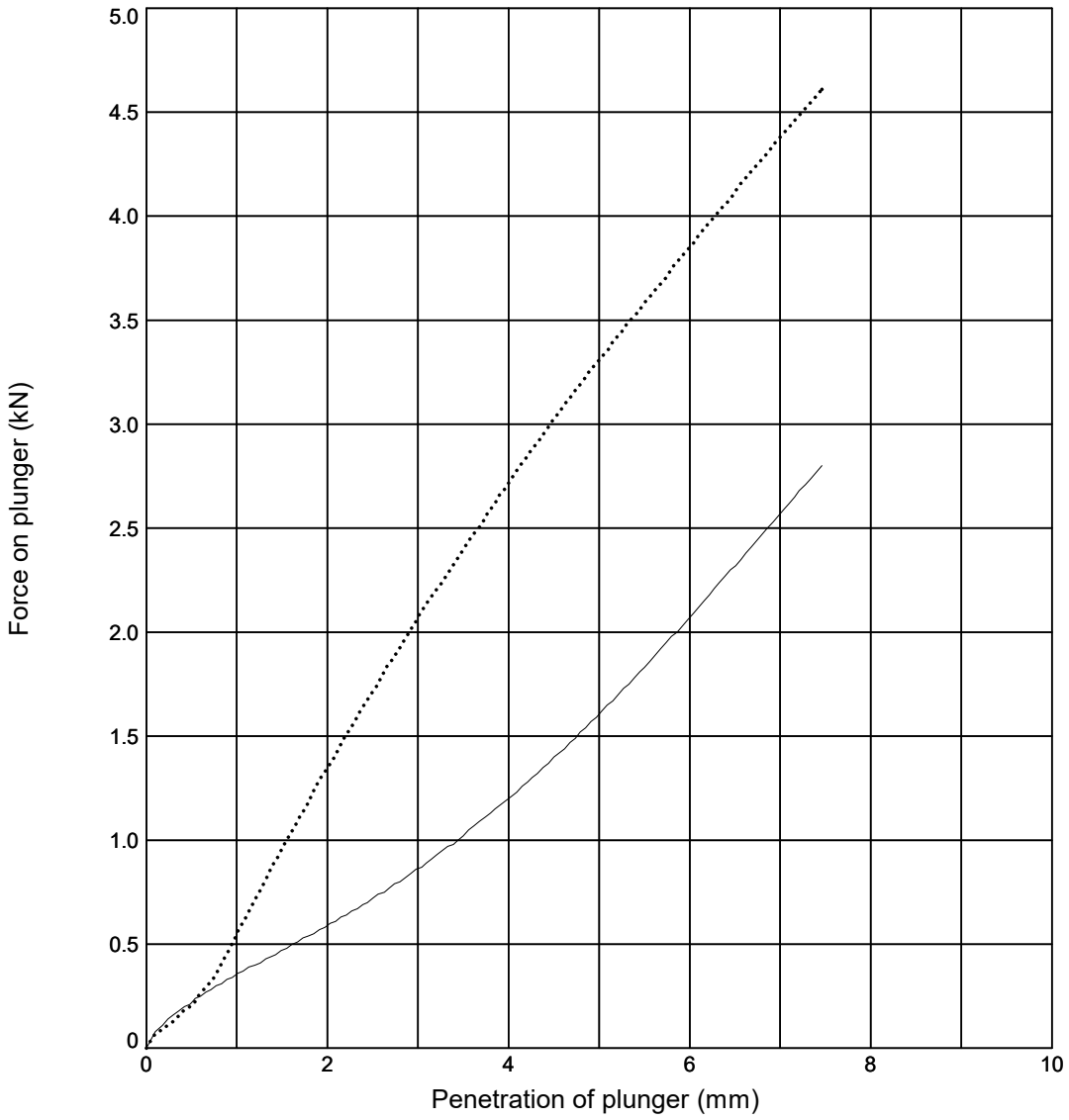
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP502** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.50**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**15**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**15**	**14**
Initial Bulk Density (Mg/m^3)	:	**2.02**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**8.0**	**17**
Initial Dry Density (Mg/m^3)	:	**1.76**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Brown clayey SILT	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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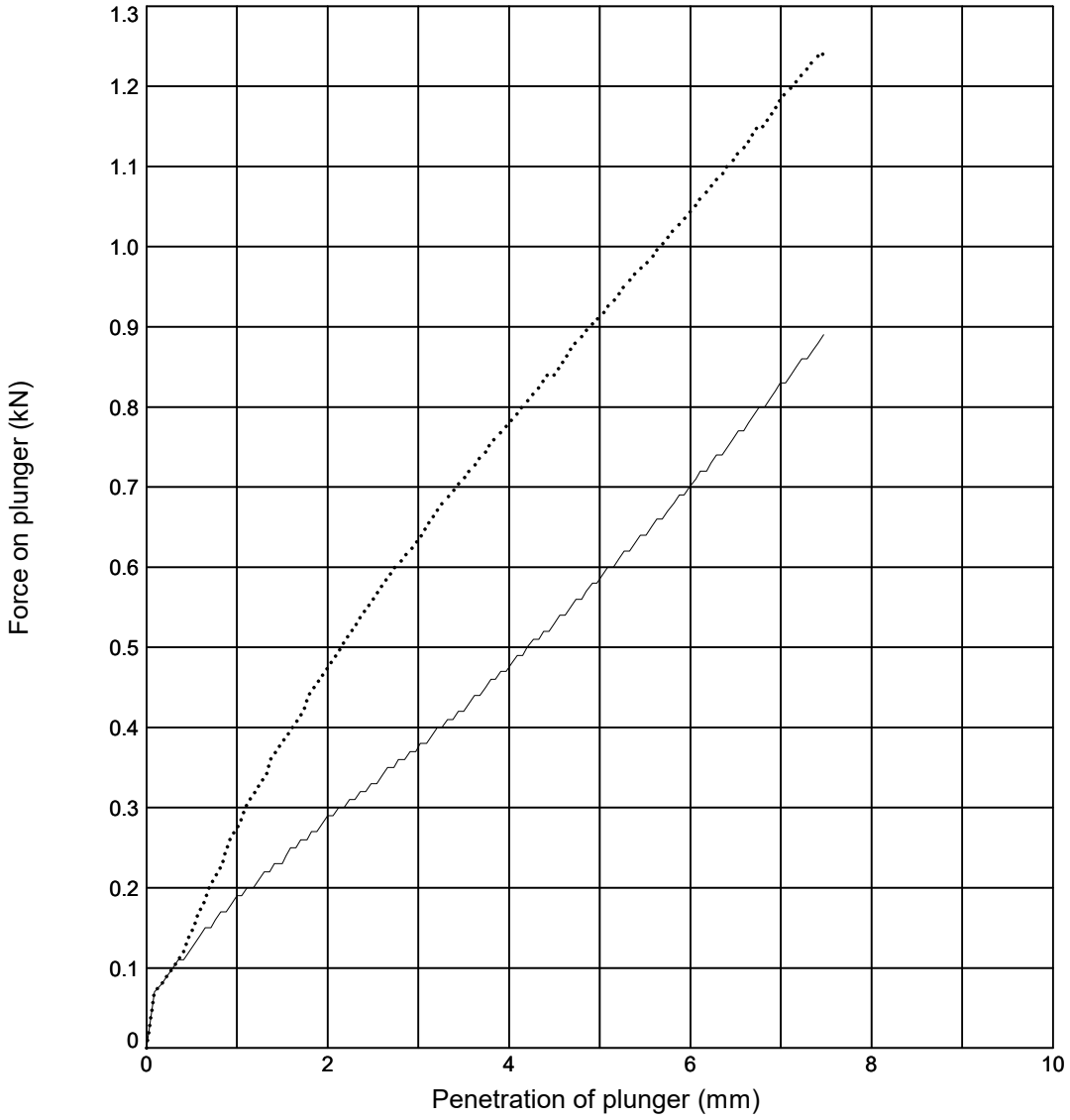
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP502** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.50**



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)	:	**2.04**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**2.9**	**4.6**
Initial Dry Density (Mg/m^3)	:	**1.74**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Brown clayey SILT	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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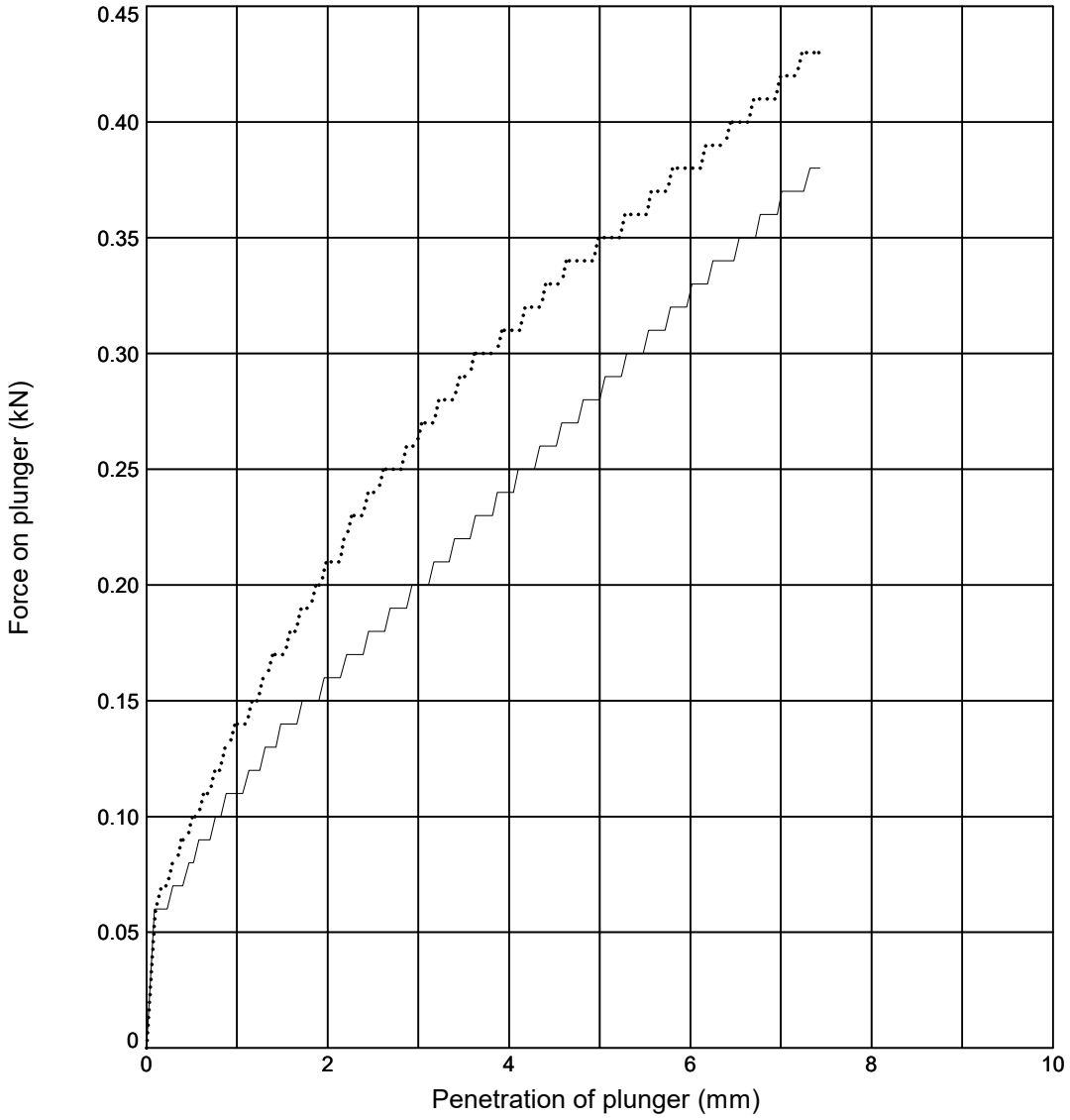
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP502** Sample Ref: **3** Sample Type: **LB** Depth (m): **0.50**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**21**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**19**	**18**
Initial Bulk Density (Mg/m^3)	:	**1.98**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**1.4**	**1.8**
Initial Dry Density (Mg/m^3)	:	**1.64**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Brown clayey SILT	——— **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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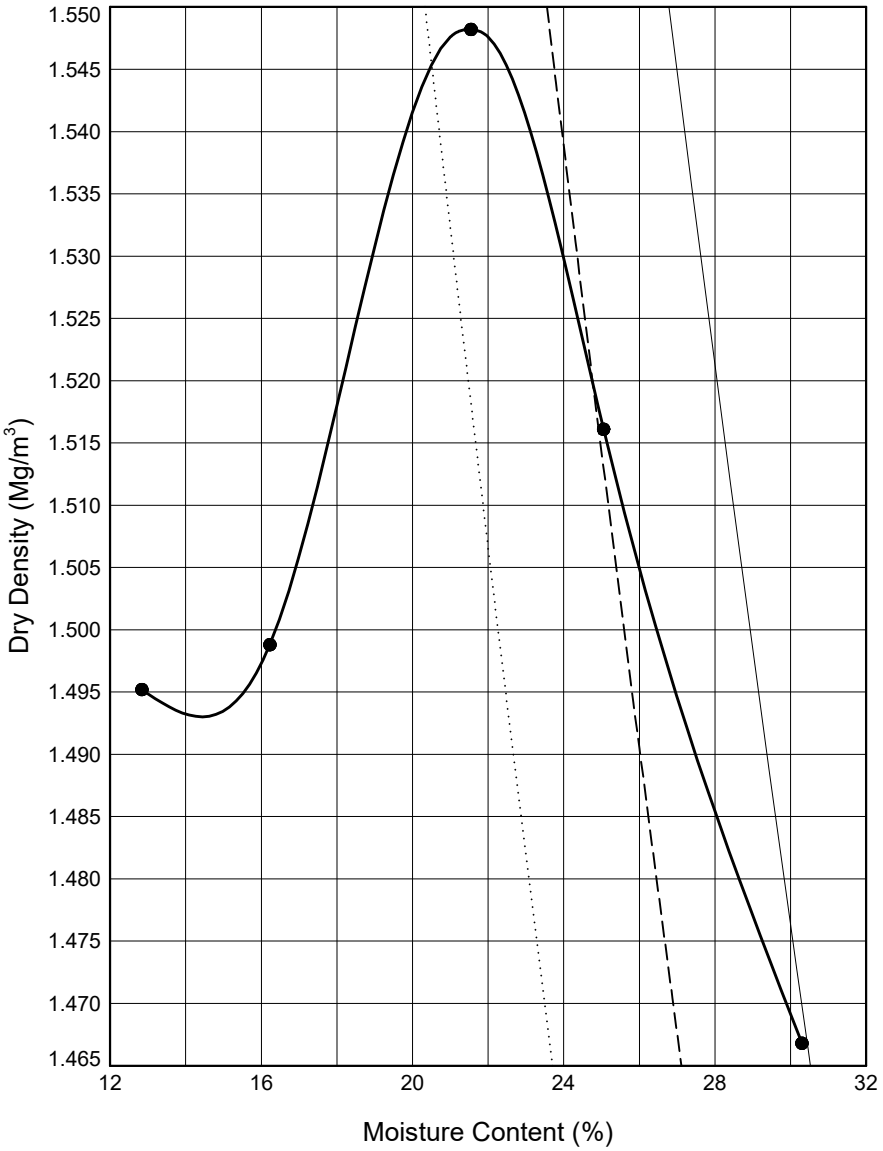
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **R22-TP503A** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**30**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m³)	:	**1.55**
% Retained on 37.5mm BS Sieve	:	**0**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**21.5**
% 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 test carried out at each point**		
Size of Soil Pieces	:	**<37.5mm**	Separate samples were used.					

Sample Description	Key to Air Voids Lines		
Brown silty CLAY	——— 0%	– – – – 5%	····· 10%

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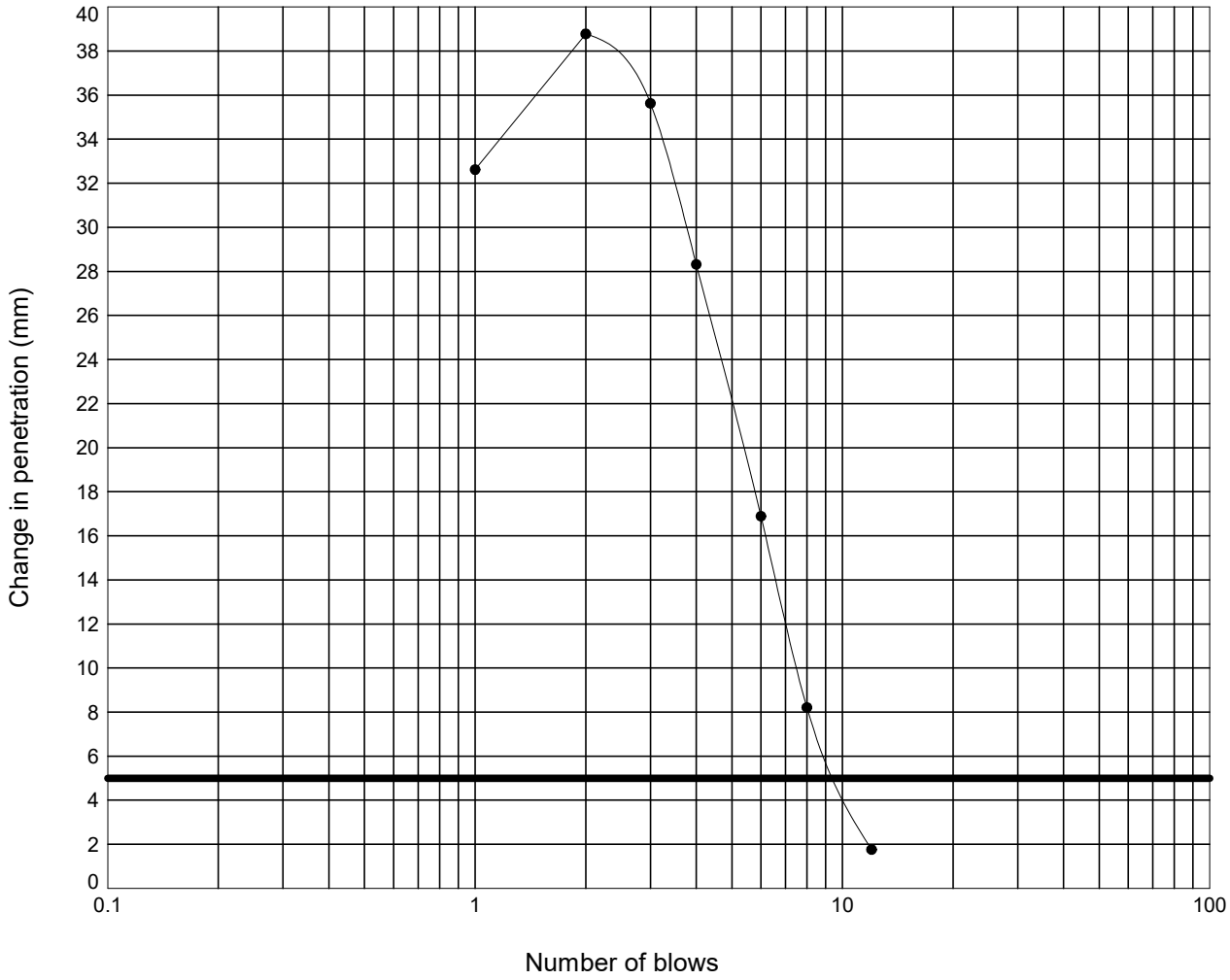
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP503A** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**

Description : **Brown silty CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	30	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	9.5	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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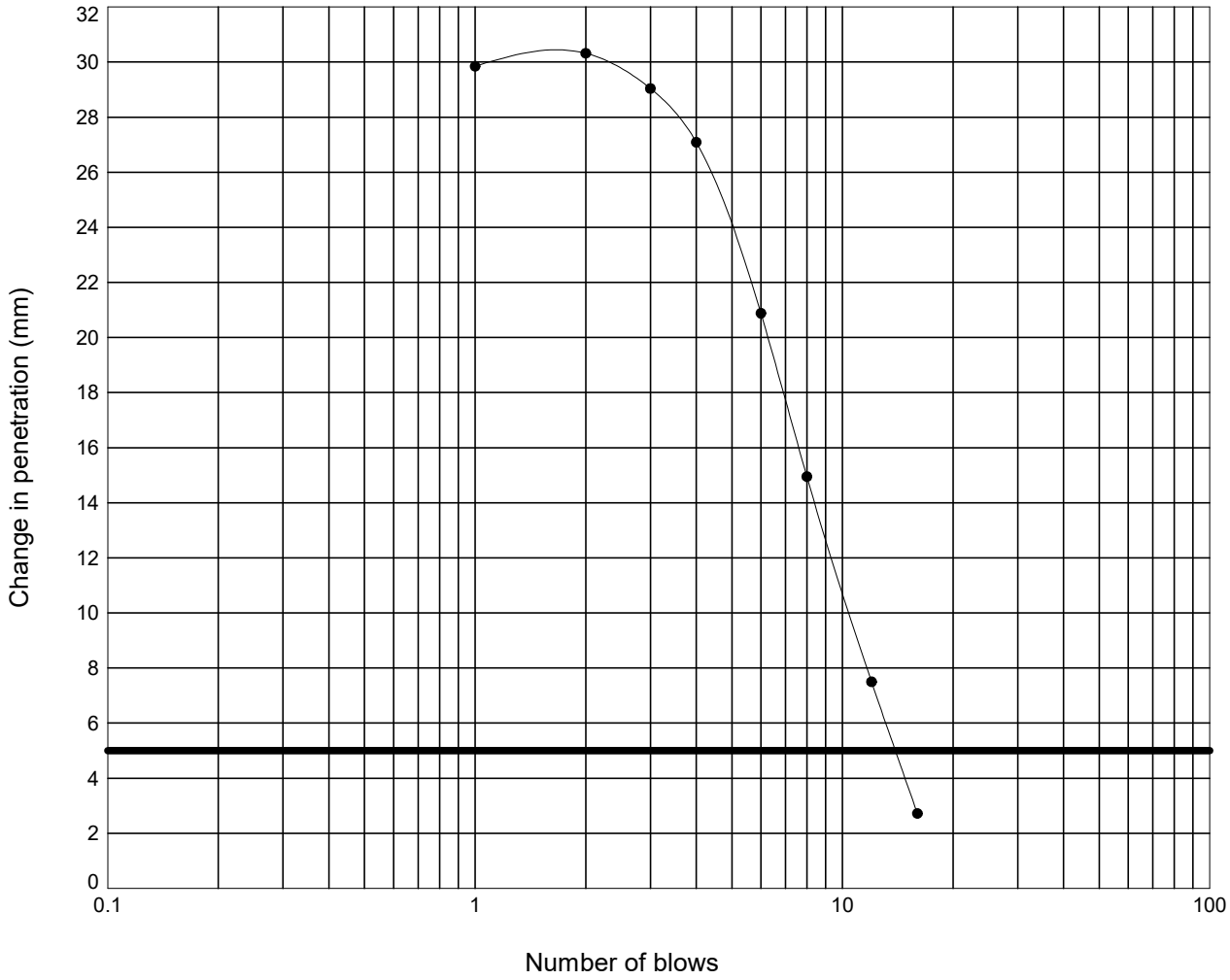
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP503A** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**

Description : **Brown silty CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	= 25	%
Percentage retained on 20 mm sieve :	= 0	%
Moisture Condition Value :	= 11.1	
Interpretation of curve:	= Steepest straight line - Fig 9	

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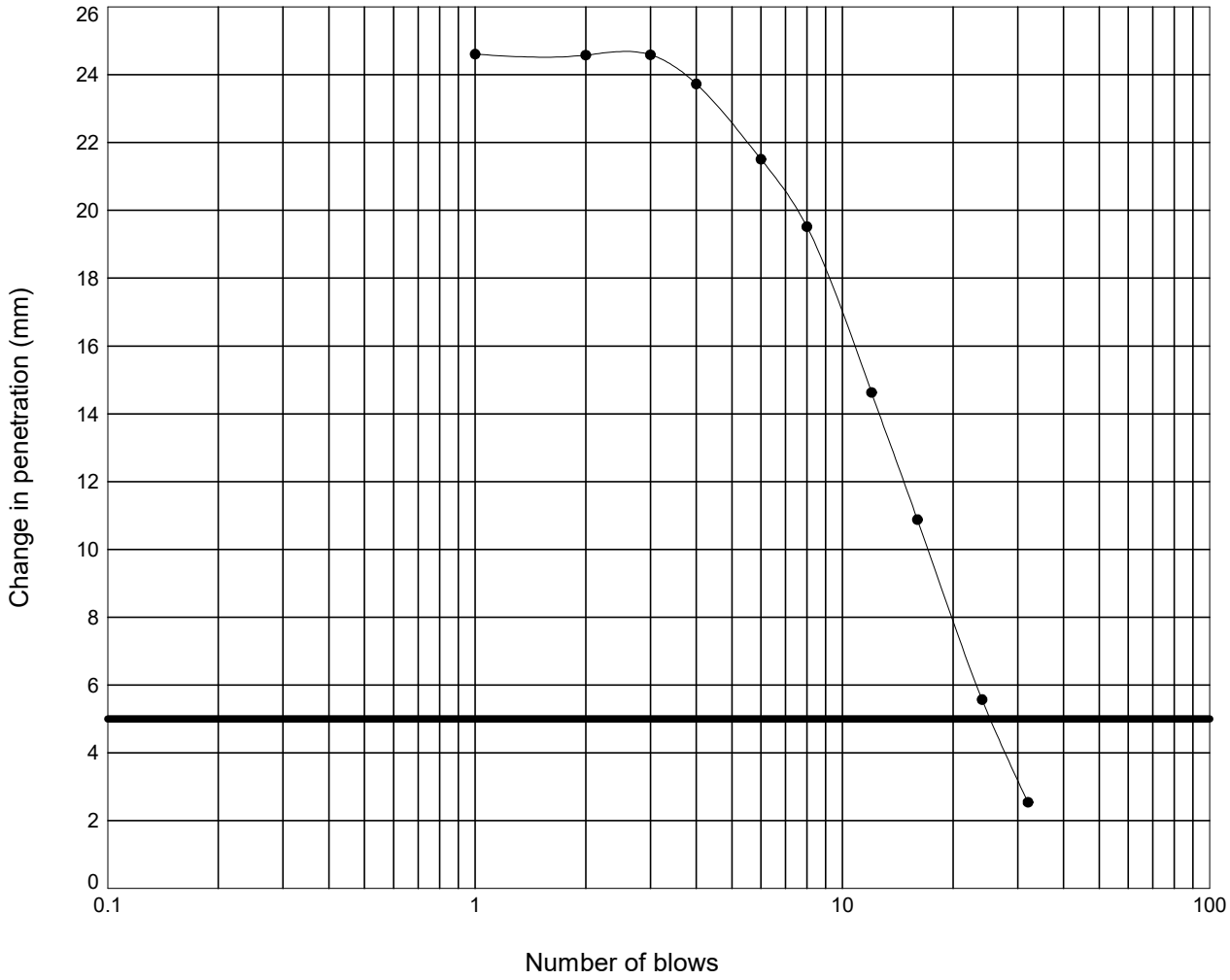
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP503A** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**

Description : **Brown silty 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 :	=	0	%
Moisture Condition Value :	=	14.0	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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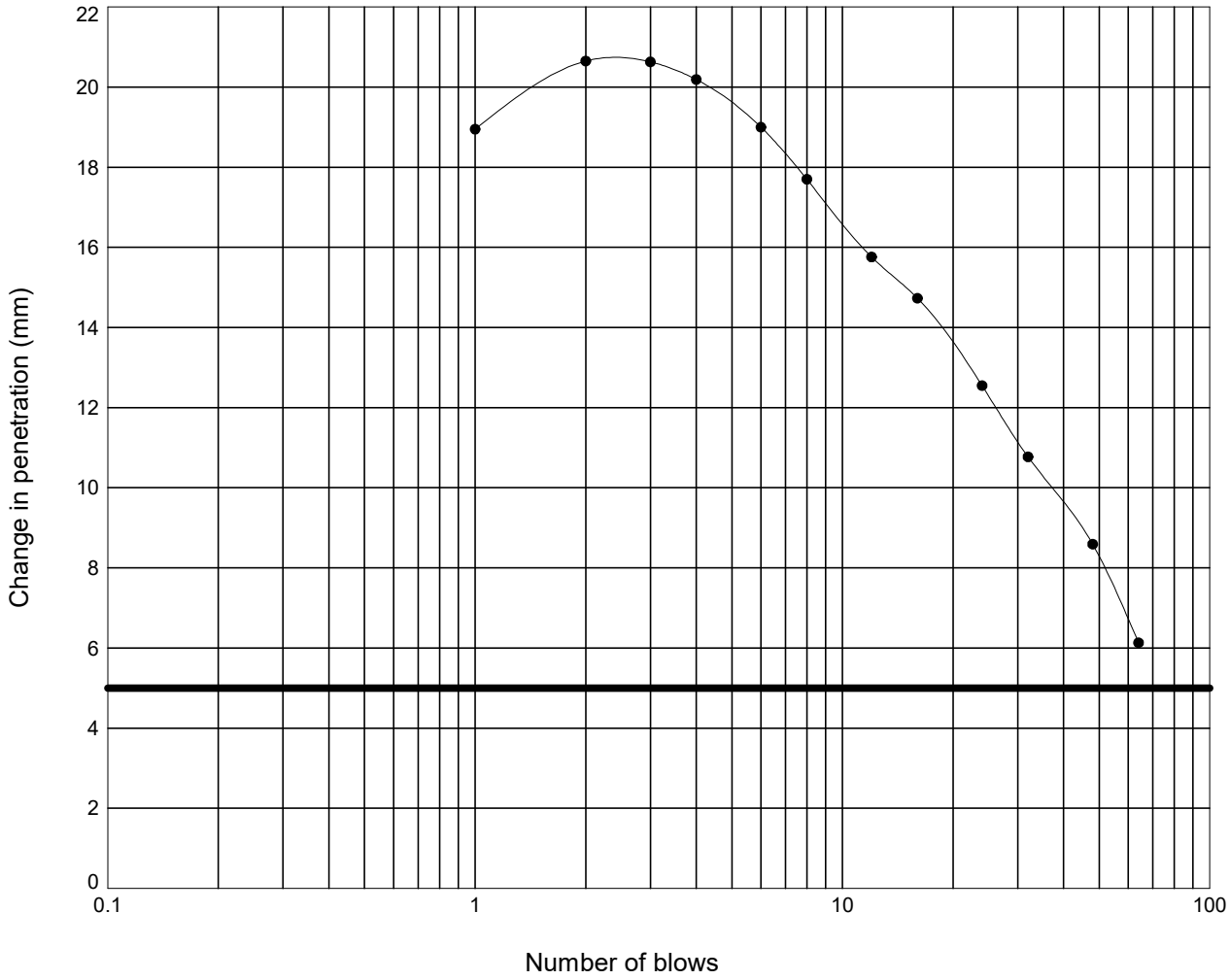
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP503A** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**

Description : **Brown silty 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 :	=	0	%
Moisture Condition Value :	=	18.6	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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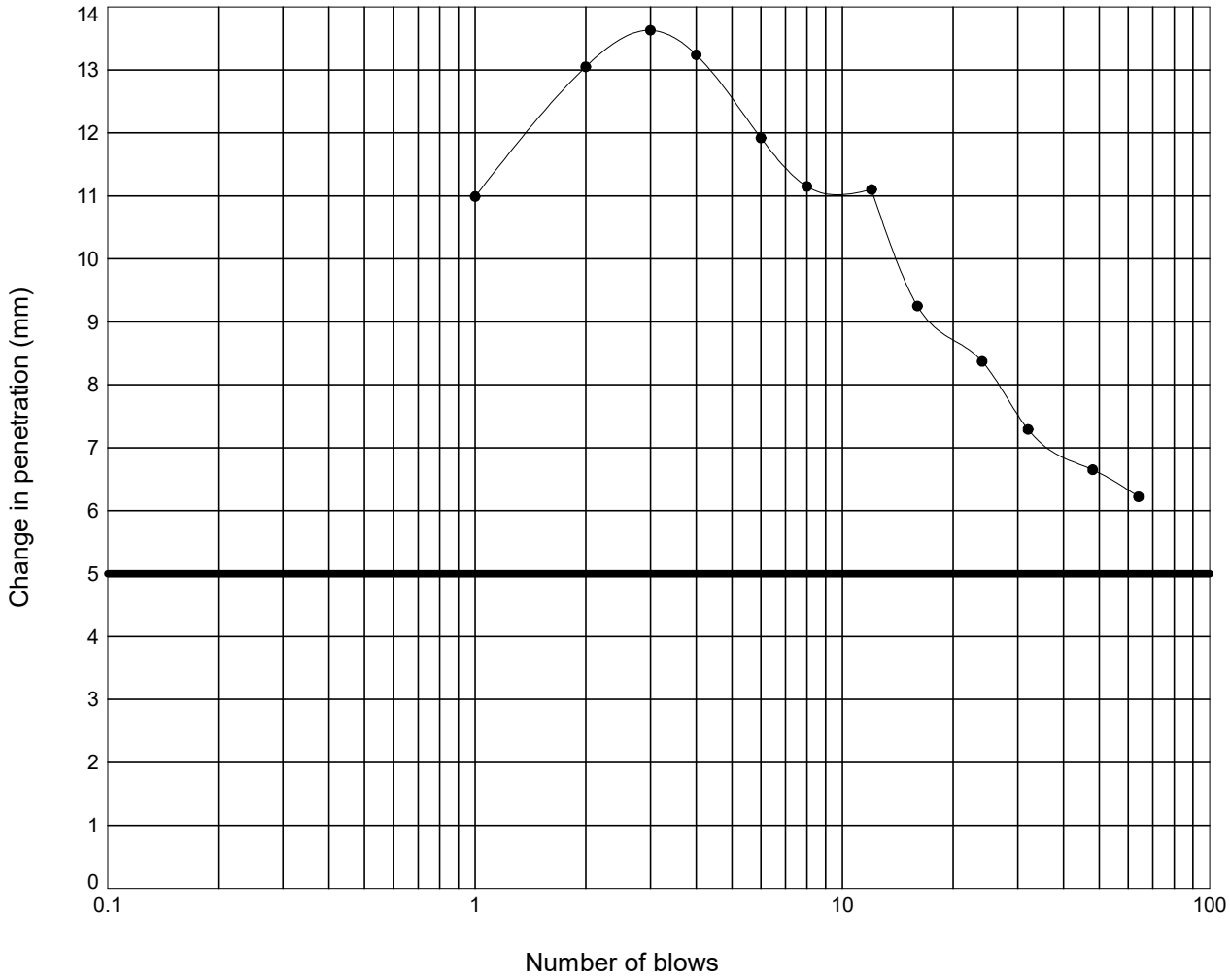
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP503A** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**

Description : **Brown 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 :	=	0	%
Moisture Condition Value :	=	14.9	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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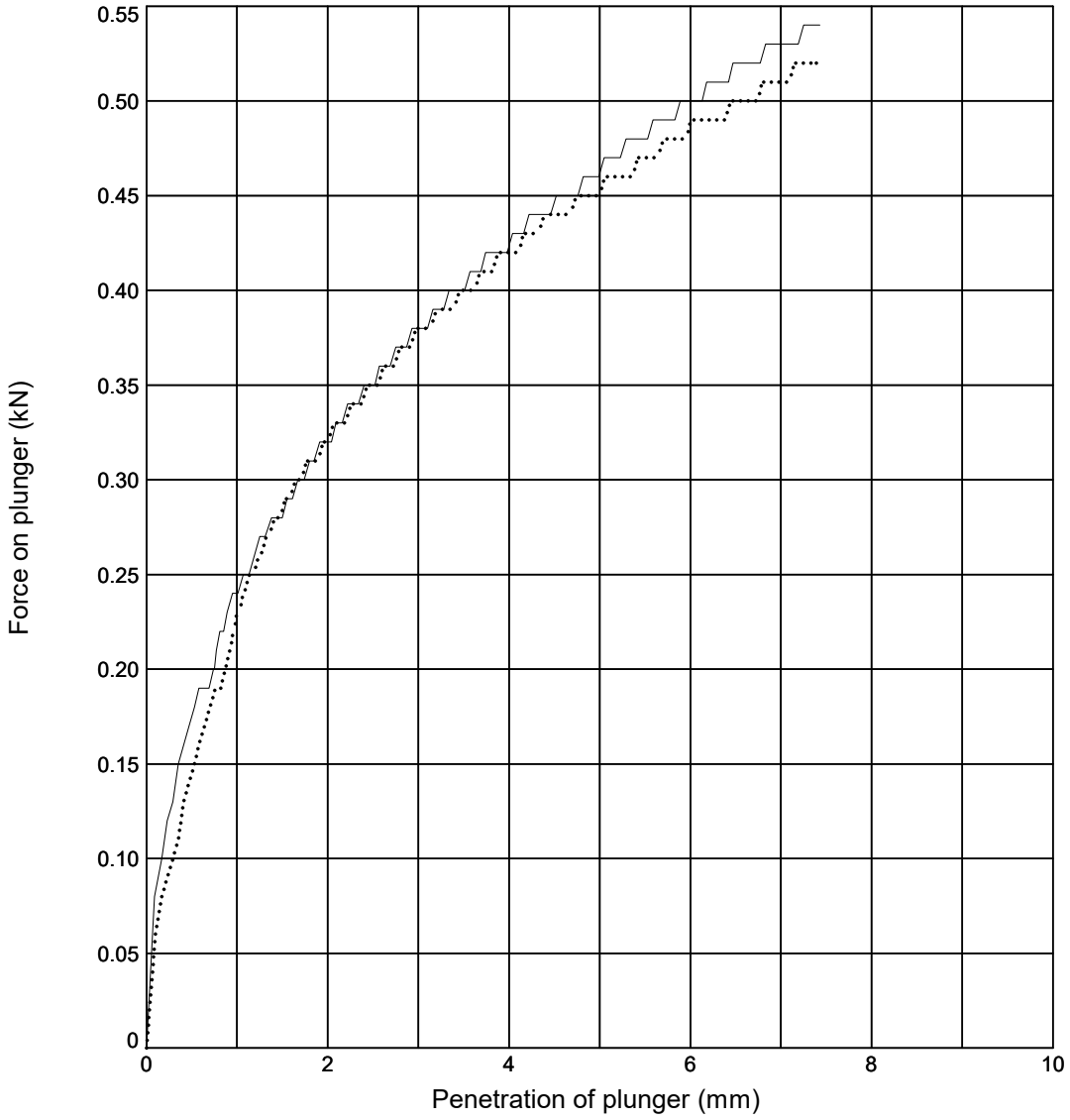
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP503A** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**29**	Compaction Type	:	**Undisturbed**	Moisture Content (%)	**30**	**30**
Initial Bulk Density (Mg/m^3)	:	**1.91**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**2.7**	**2.7**
Initial Dry Density (Mg/m^3)	:	**1.48**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Brown silty CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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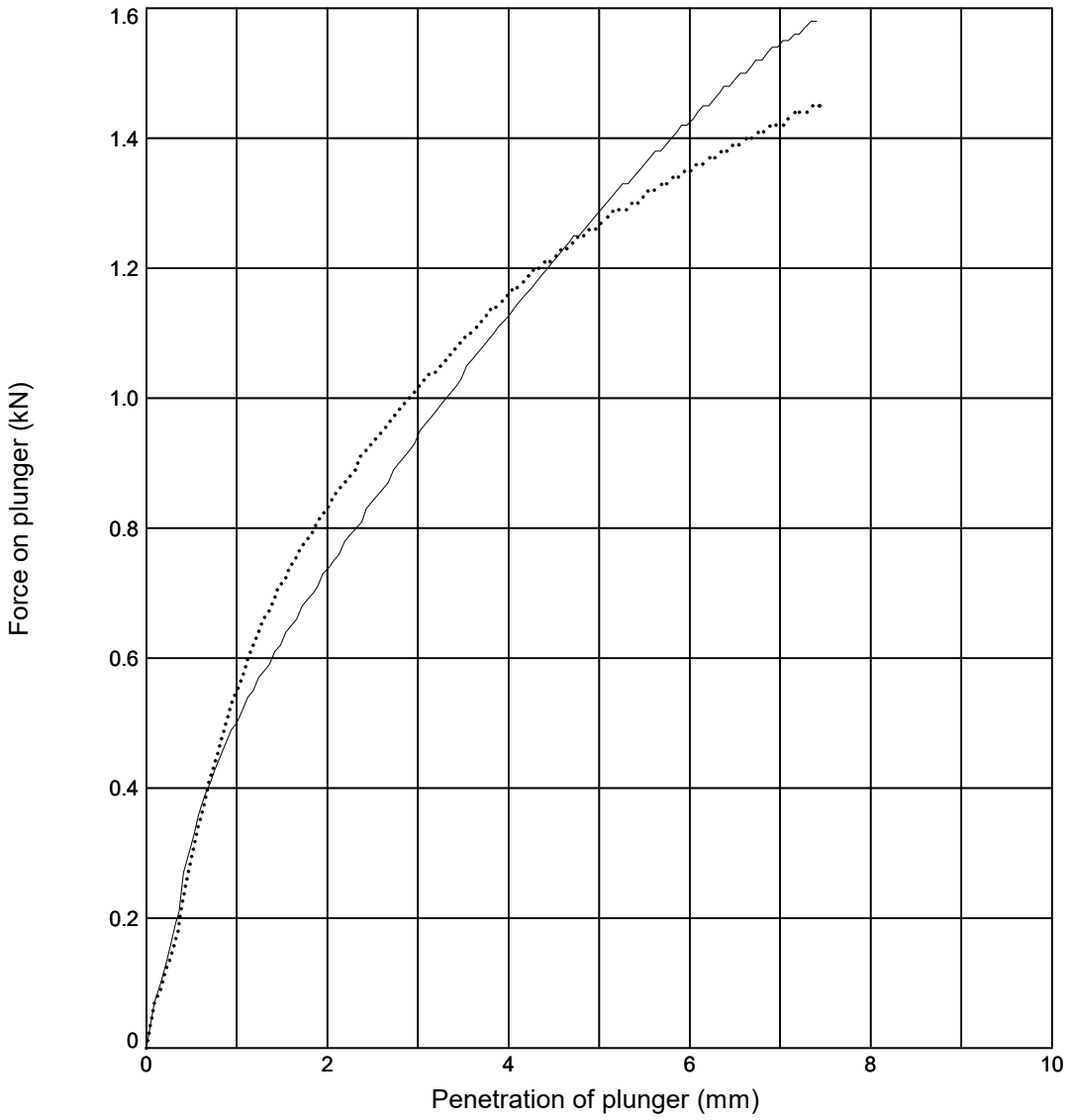
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP503A** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**26**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**25**	**24**
Initial Bulk Density (Mg/m^3)	:	**1.90**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**6.4**	**7.1**
Initial Dry Density (Mg/m^3)	:	**1.50**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Brown silty CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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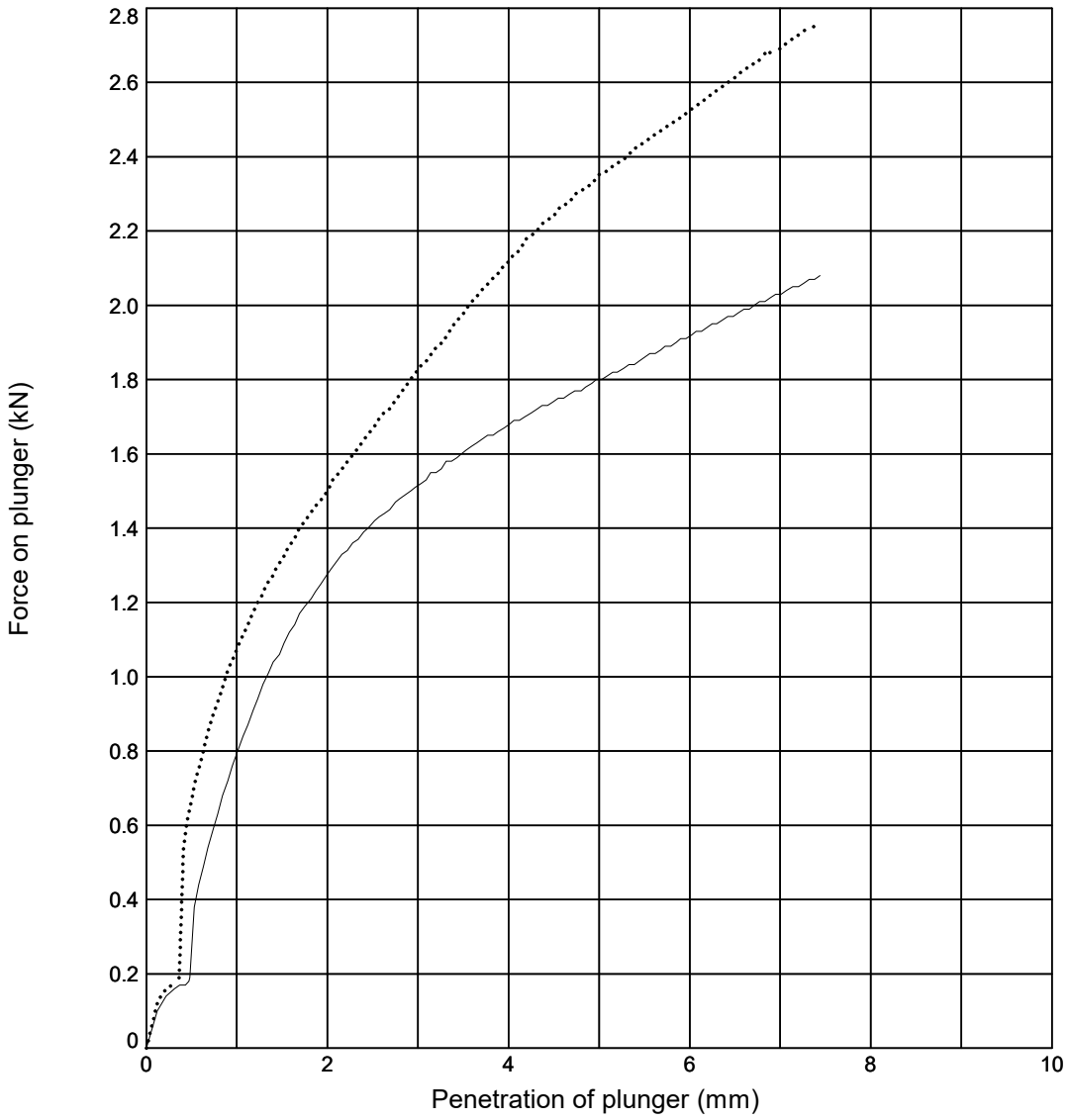
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP503A** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**



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)	:	**1.88**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**11**	**13**
Initial Dry Density (Mg/m^3)	:	**1.56**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Brown silty CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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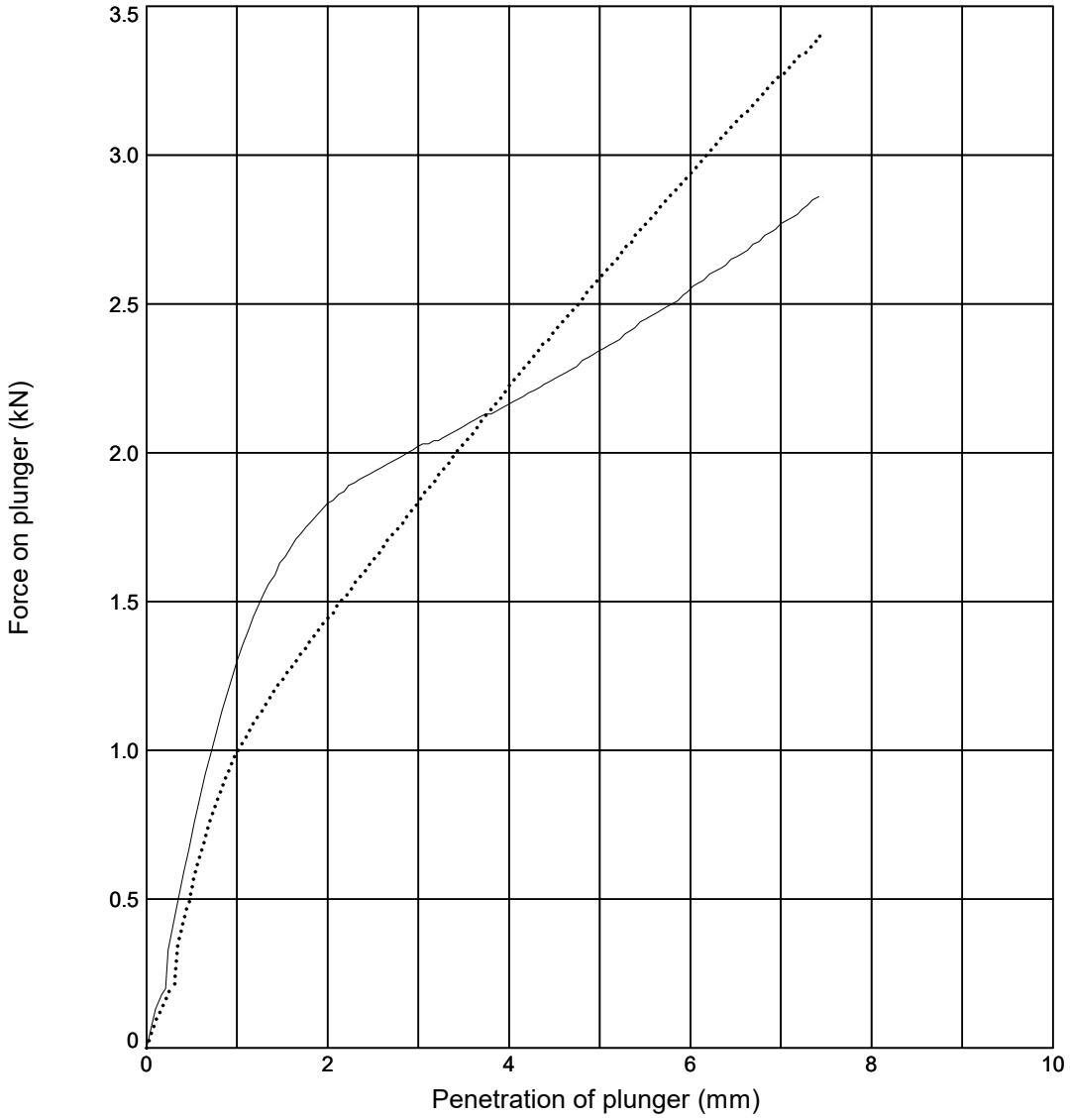
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP503A** Sample Ref: **5** 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)	:	**0.01**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**15**	**13**
Initial Dry Density (Mg/m^3)	:	**0.01**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Brown silty CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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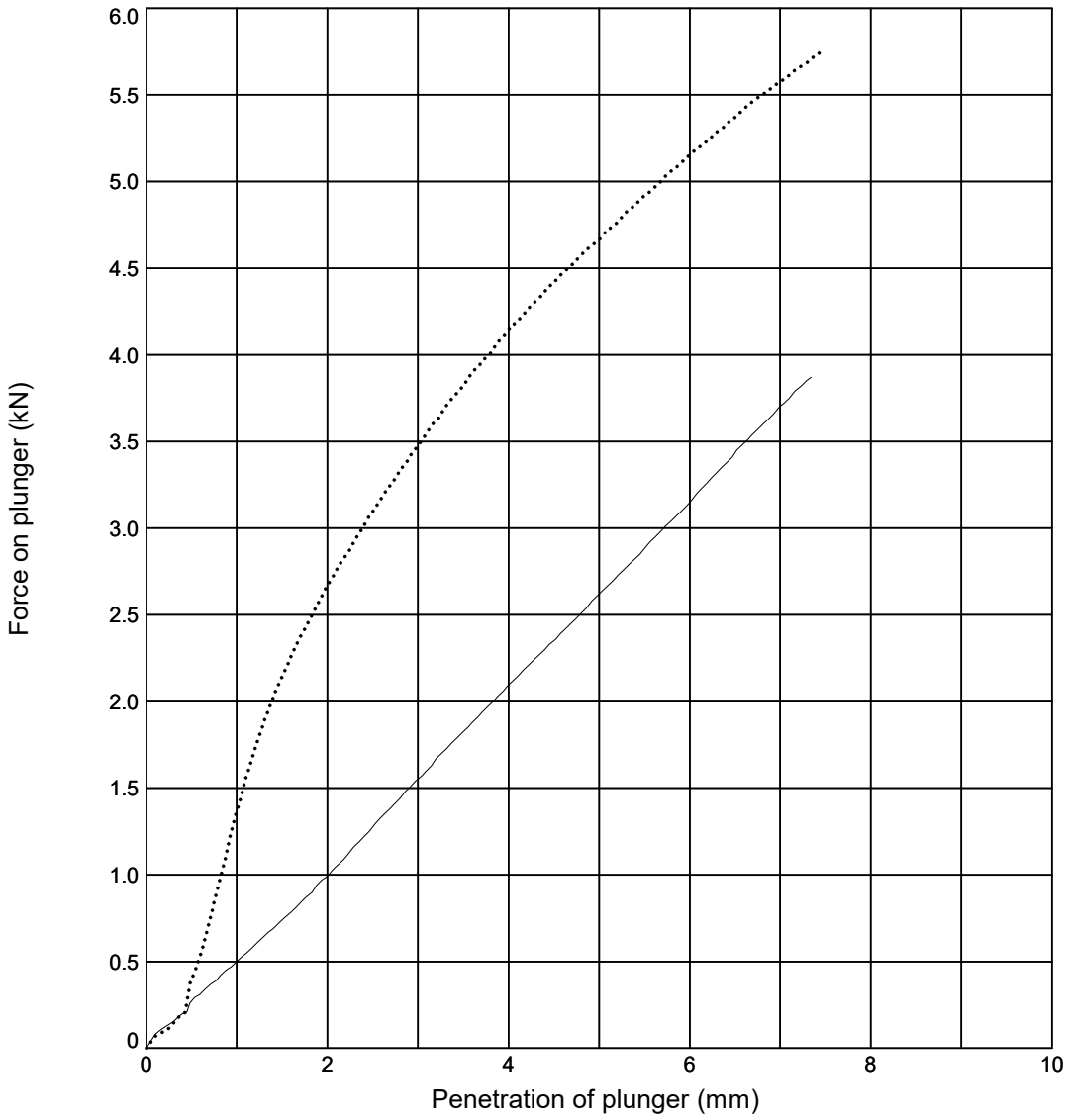
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP503A** Sample Ref: **5** 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 (%)	**9.1**	**12**
Initial Bulk Density (Mg/m^3)	:	**1.69**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**13**	**23**
Initial Dry Density (Mg/m^3)	:	**1.51**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Brown silty CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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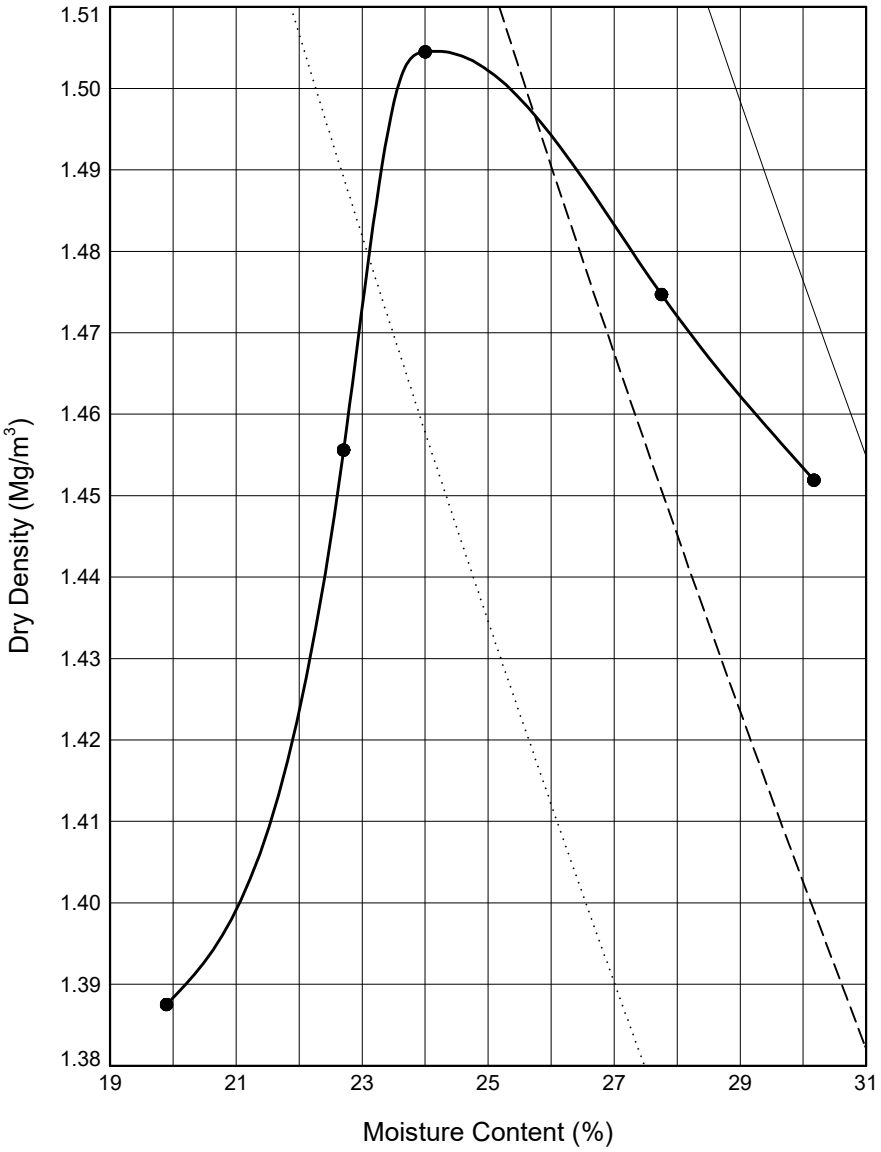
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **R22-TP504** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.10**



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**30**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m³)	:	**1.50**
% Retained on 37.5mm BS Sieve	:	**0**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**24**
% 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 test carried out at each point**		
Size of Soil Pieces	:	**<37.5mm**	Separate samples were used.					

Sample Description	Key to Air Voids Lines		
Greyish brown CLAY	——— 0%	– – – – 5%	····· 10%

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Contract: **SEA Link FEED - Kent Onshore Cable Link**

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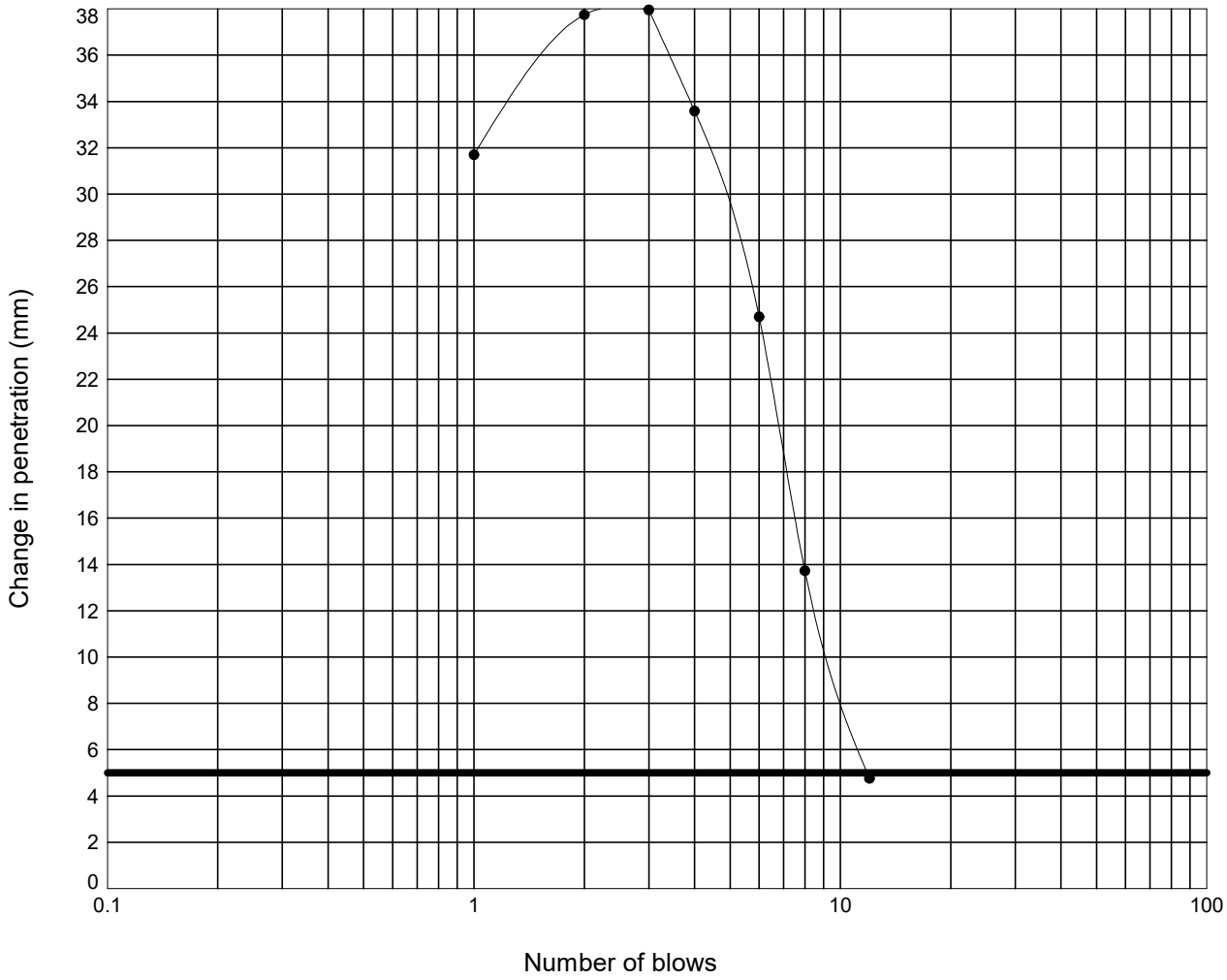
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP504** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.10**

Description : **Greyish brown CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	30	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	10.0	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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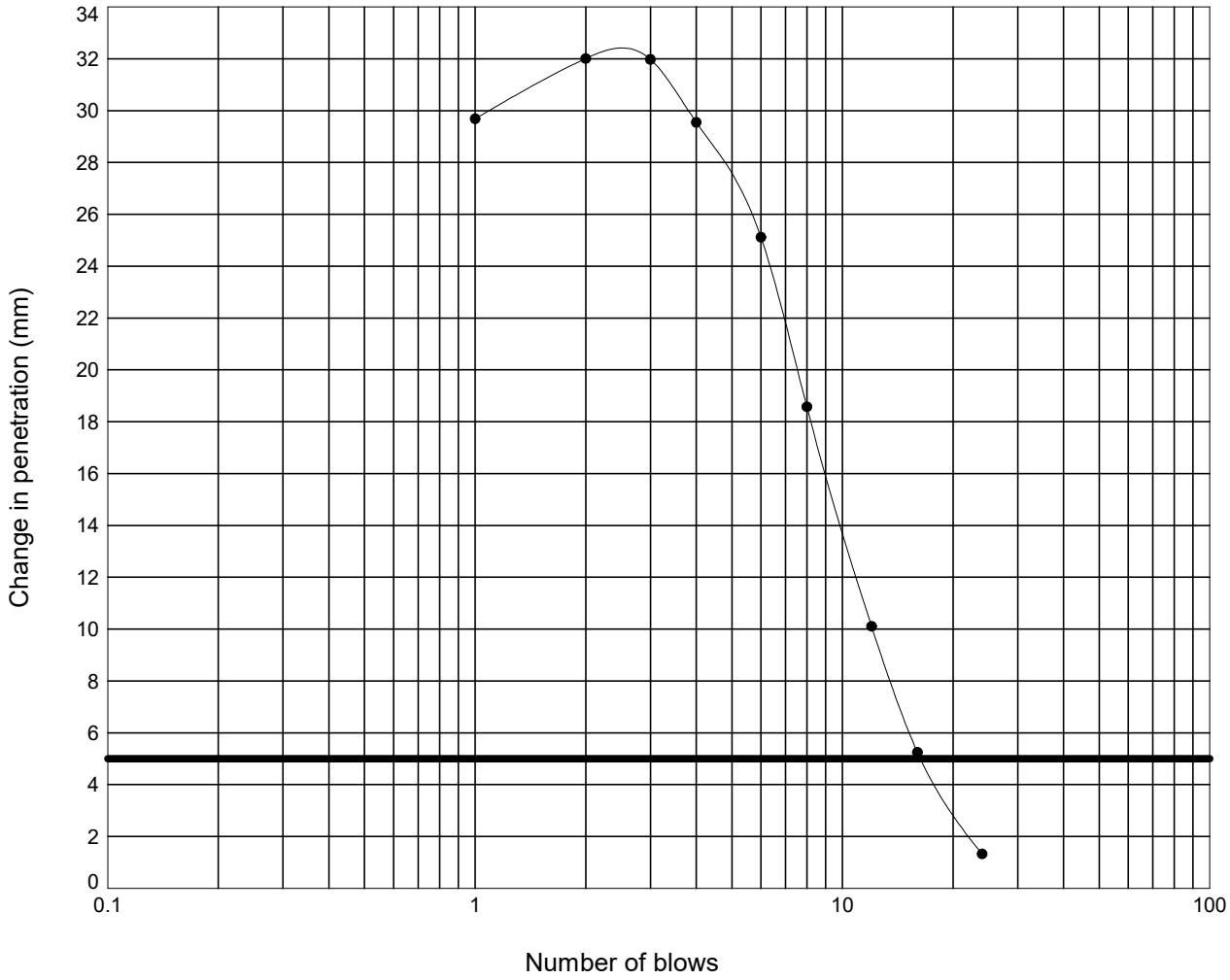
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP504** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.10**

Description : **Greyish brown CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	28	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	11.6	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract Ref: **563607**

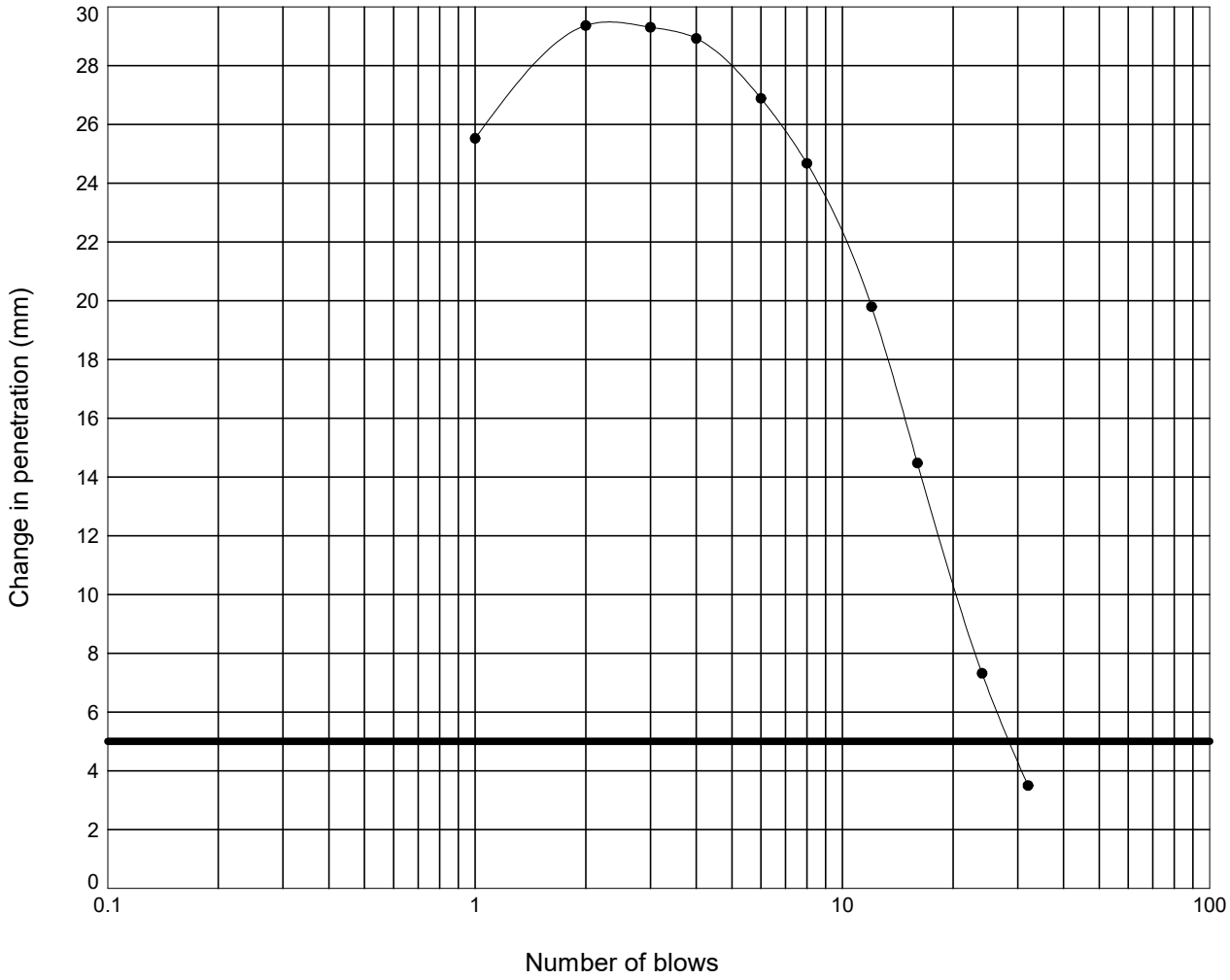
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP504** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.10**

Description : **Greyish brown 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 :	=	0	%
Moisture Condition Value :	=	14.3	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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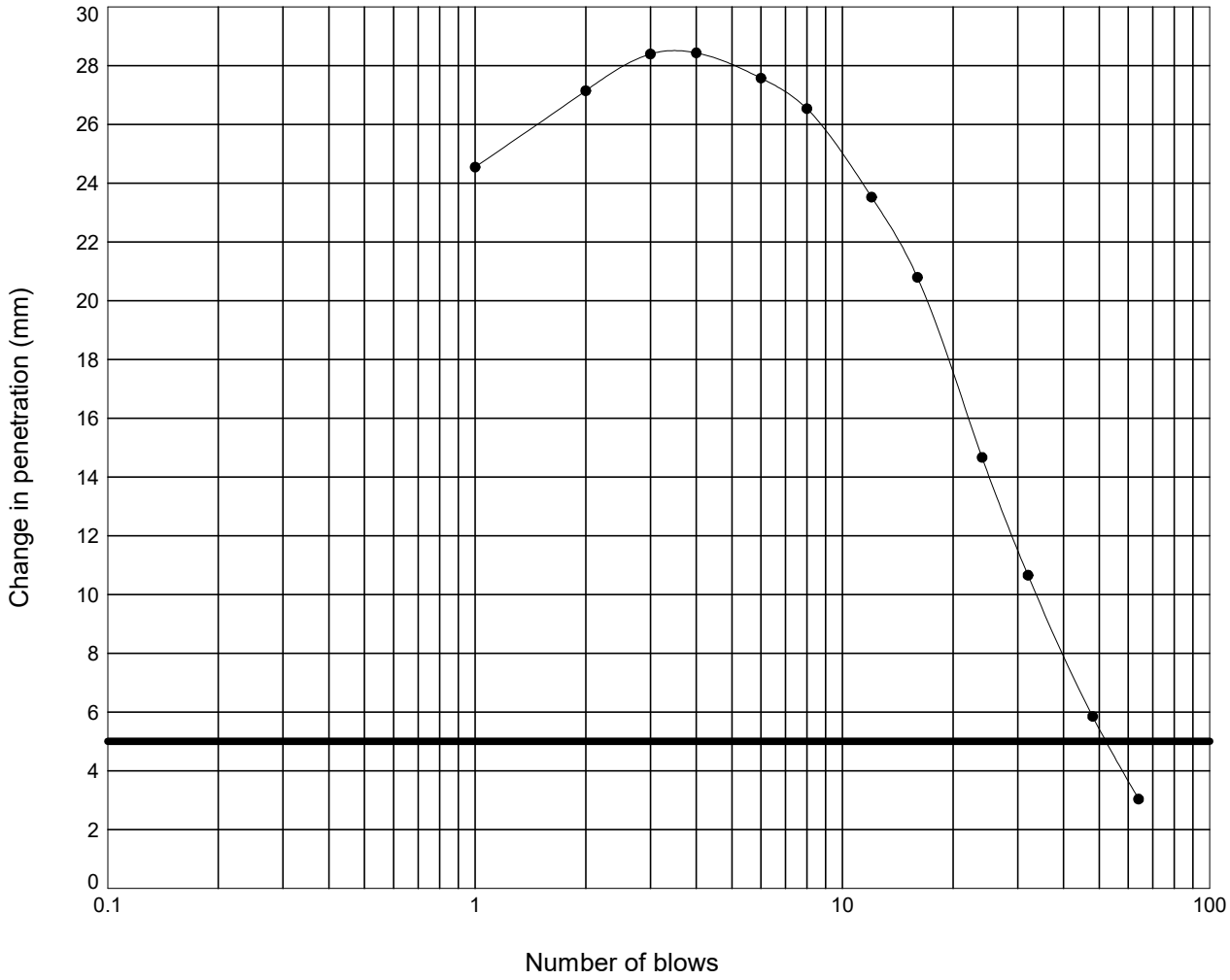
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP504** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.10**

Description : **Greyish brown 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 :	=	0	%
Moisture Condition Value :	=	16.6	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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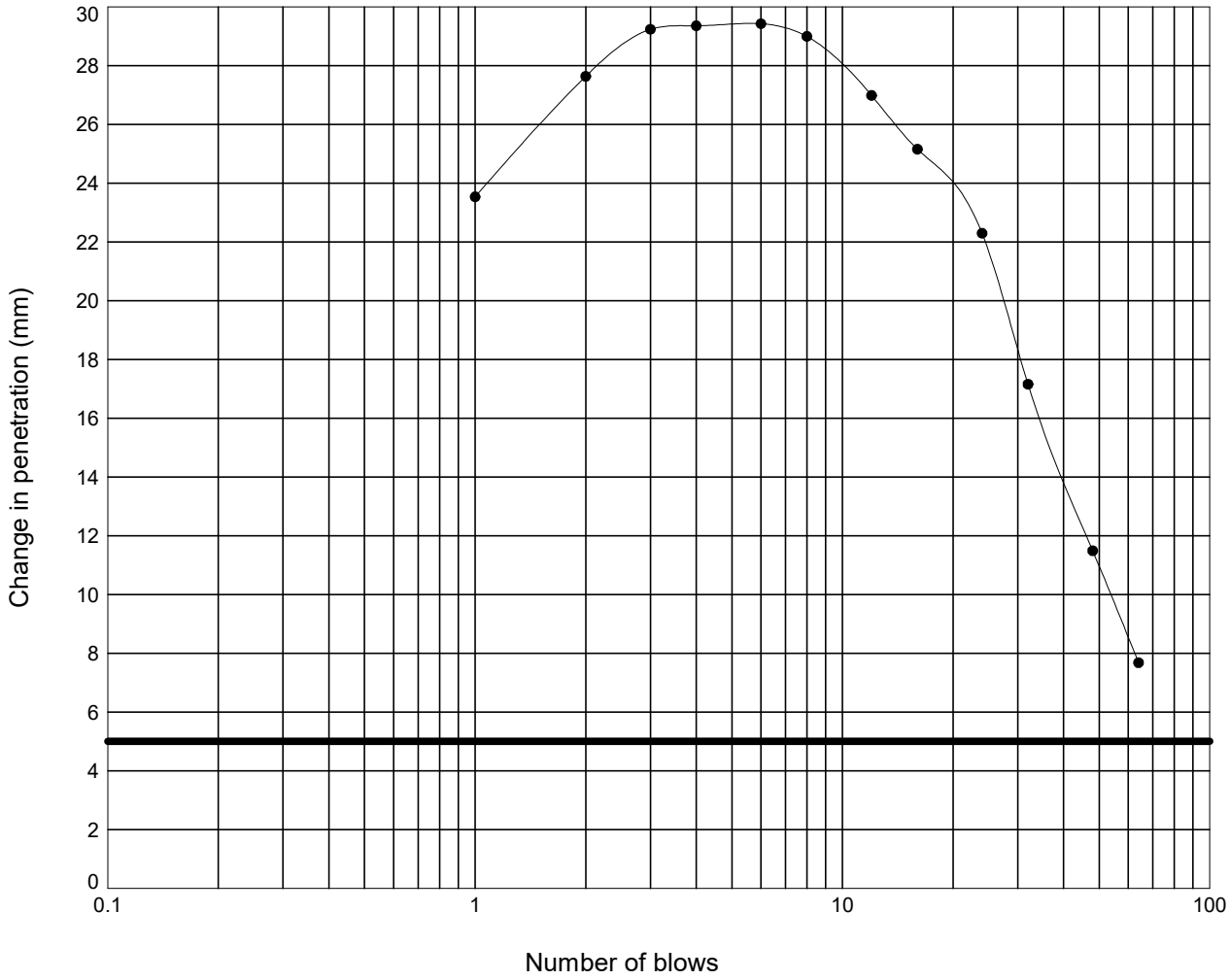
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP504** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.10**

Description : **Greyish brown 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 :	=	0	%
Moisture Condition Value :	=	18.0	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract	Contract Ref:
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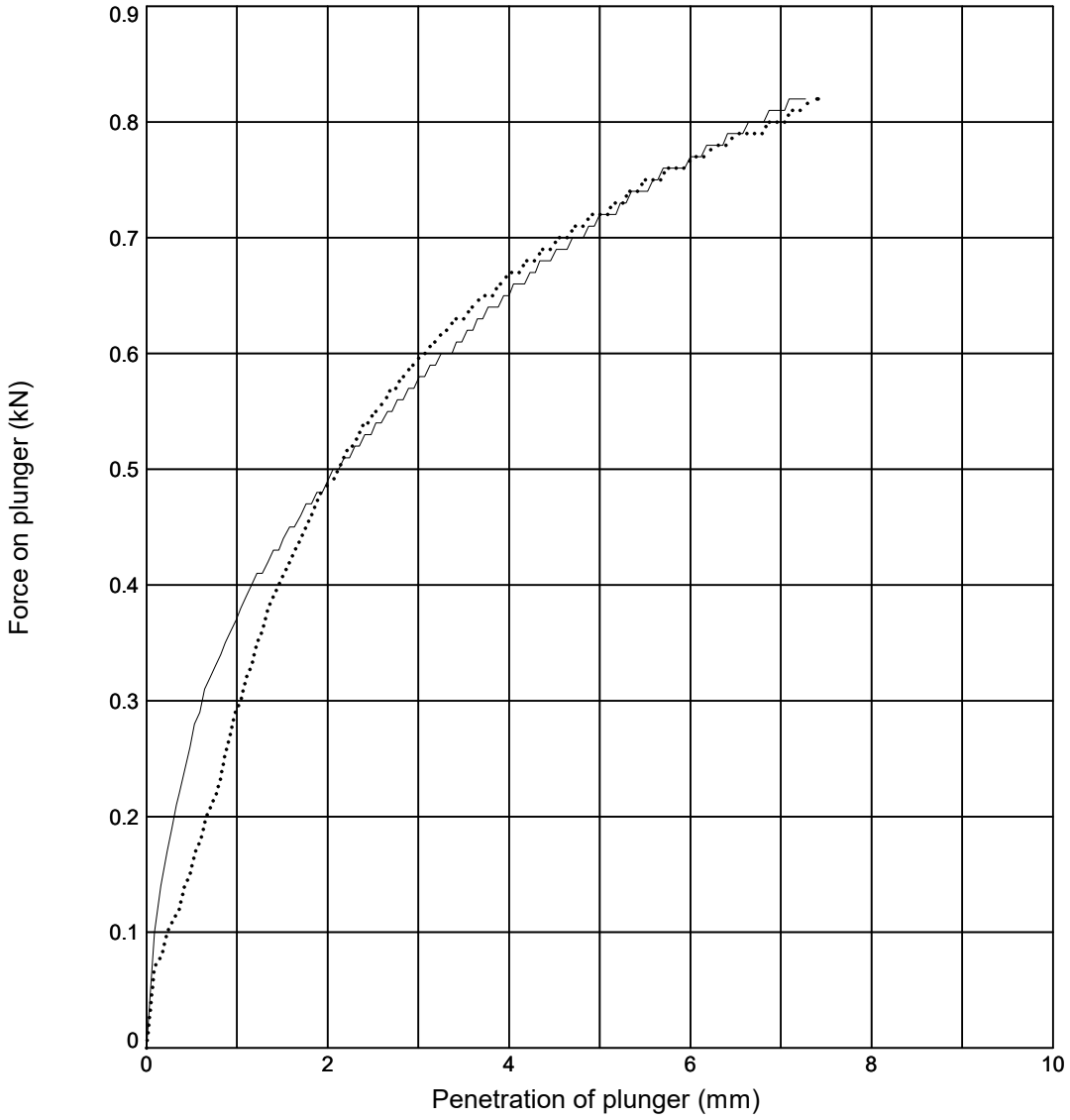
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP504** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.10**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**30**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**30**	**31**
Initial Bulk Density (Mg/m^3)	:	**1.89**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**4.1**	**4.1**
Initial Dry Density (Mg/m^3)	:	**1.45**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Greyish brown CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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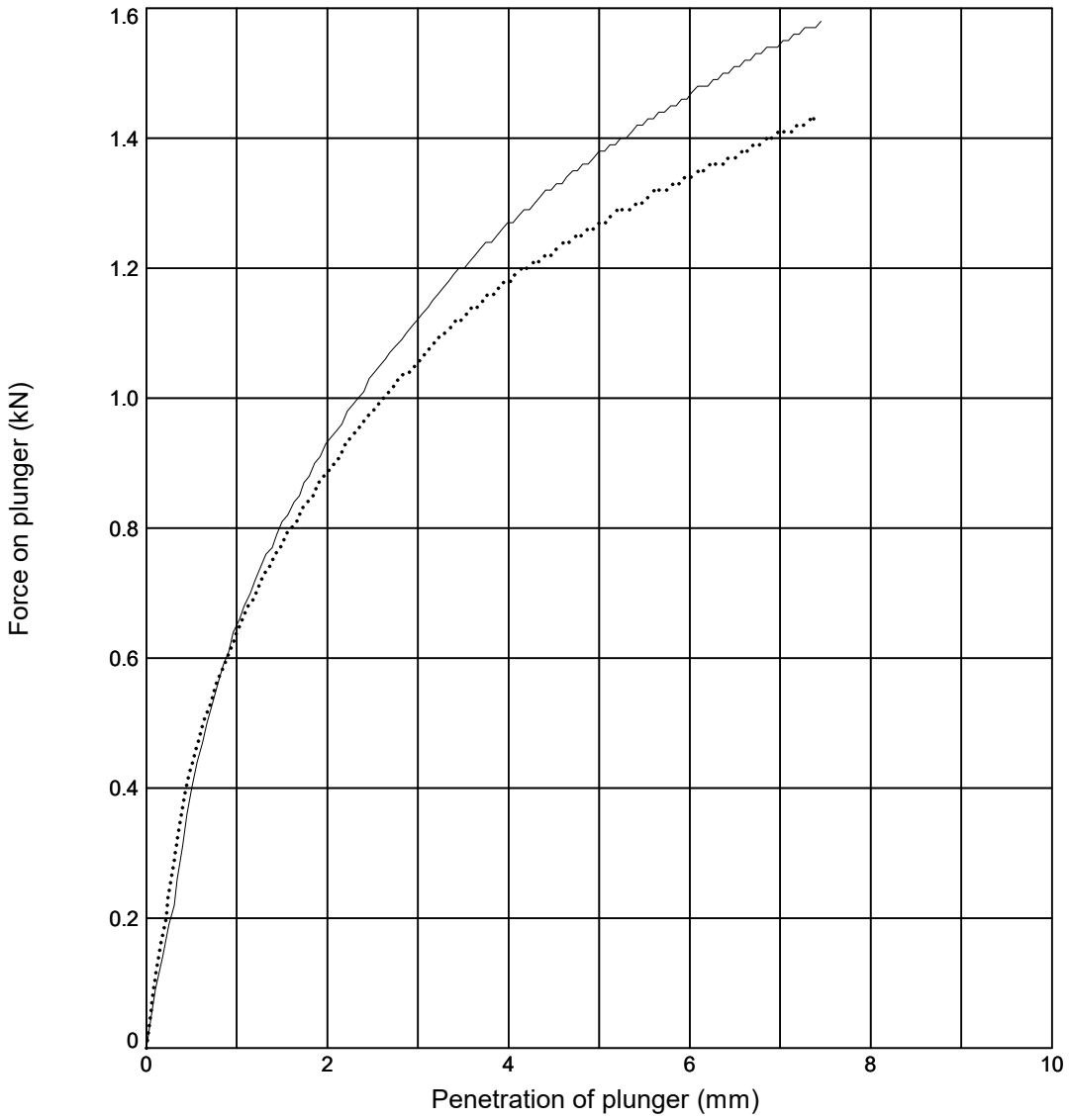
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP504** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.10**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**28**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**28**	**28**
Initial Bulk Density (Mg/m^3)	:	**1.88**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**7.9**	**7.4**
Initial Dry Density (Mg/m^3)	:	**1.47**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Greyish brown CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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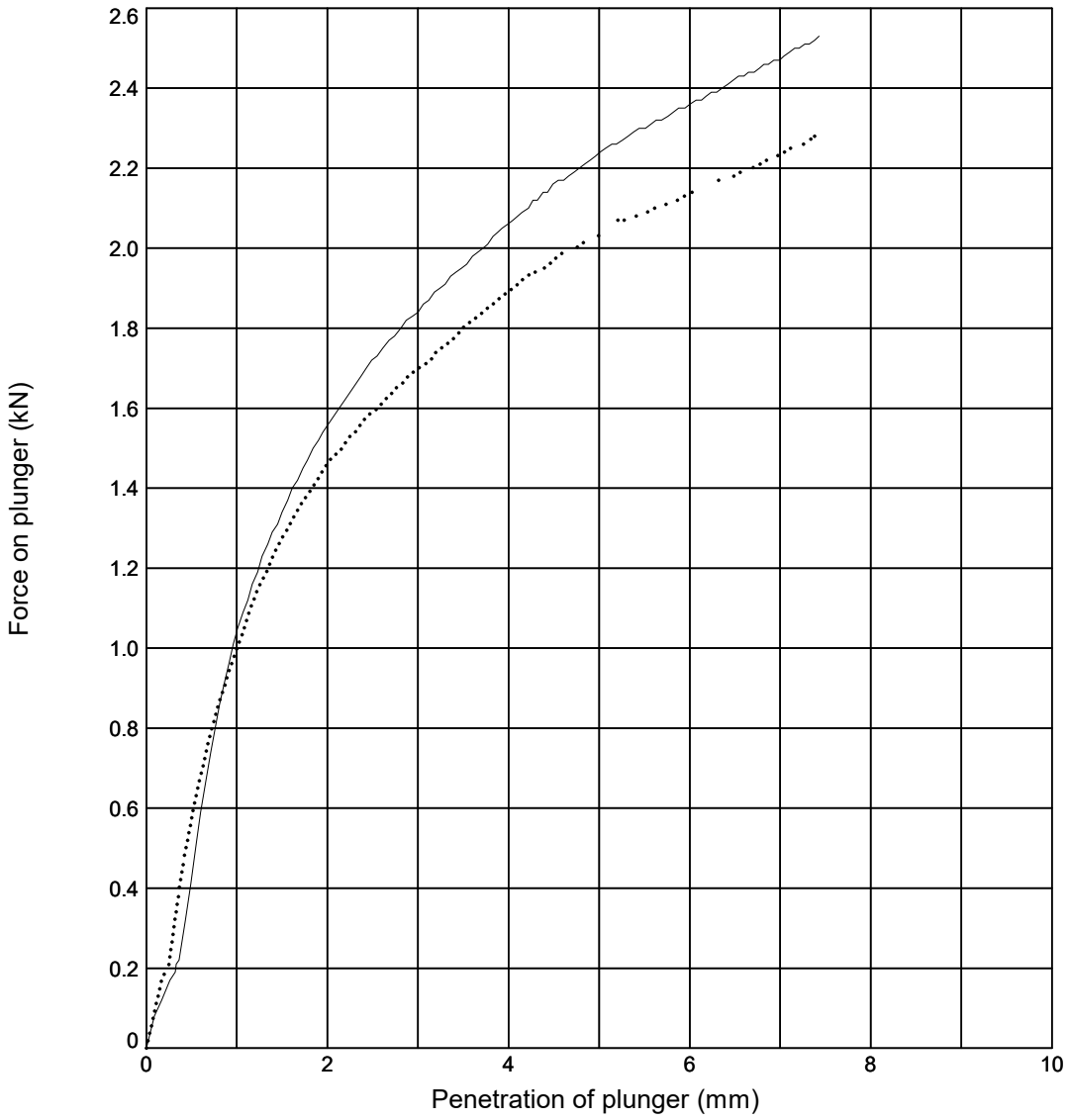
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP504** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.10**



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)	:	**1.87**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**13**	**12**
Initial Dry Density (Mg/m^3)	:	**1.49**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Greyish brown CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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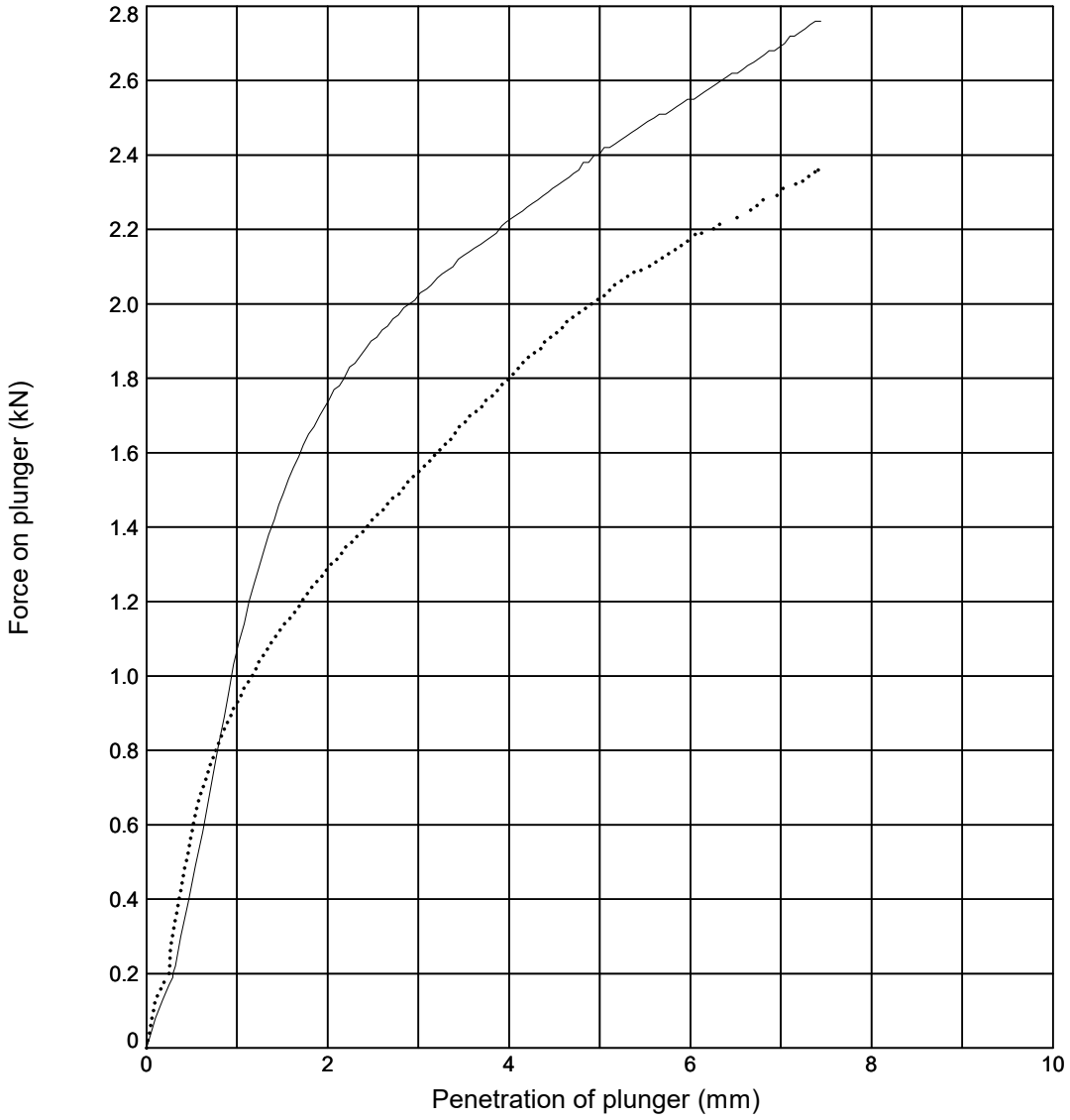
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP504** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.10**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**24**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**23**	**23**
Initial Bulk Density (Mg/m^3)	:	**1.79**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**14**	**11**
Initial Dry Density (Mg/m^3)	:	**1.45**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Greyish brown CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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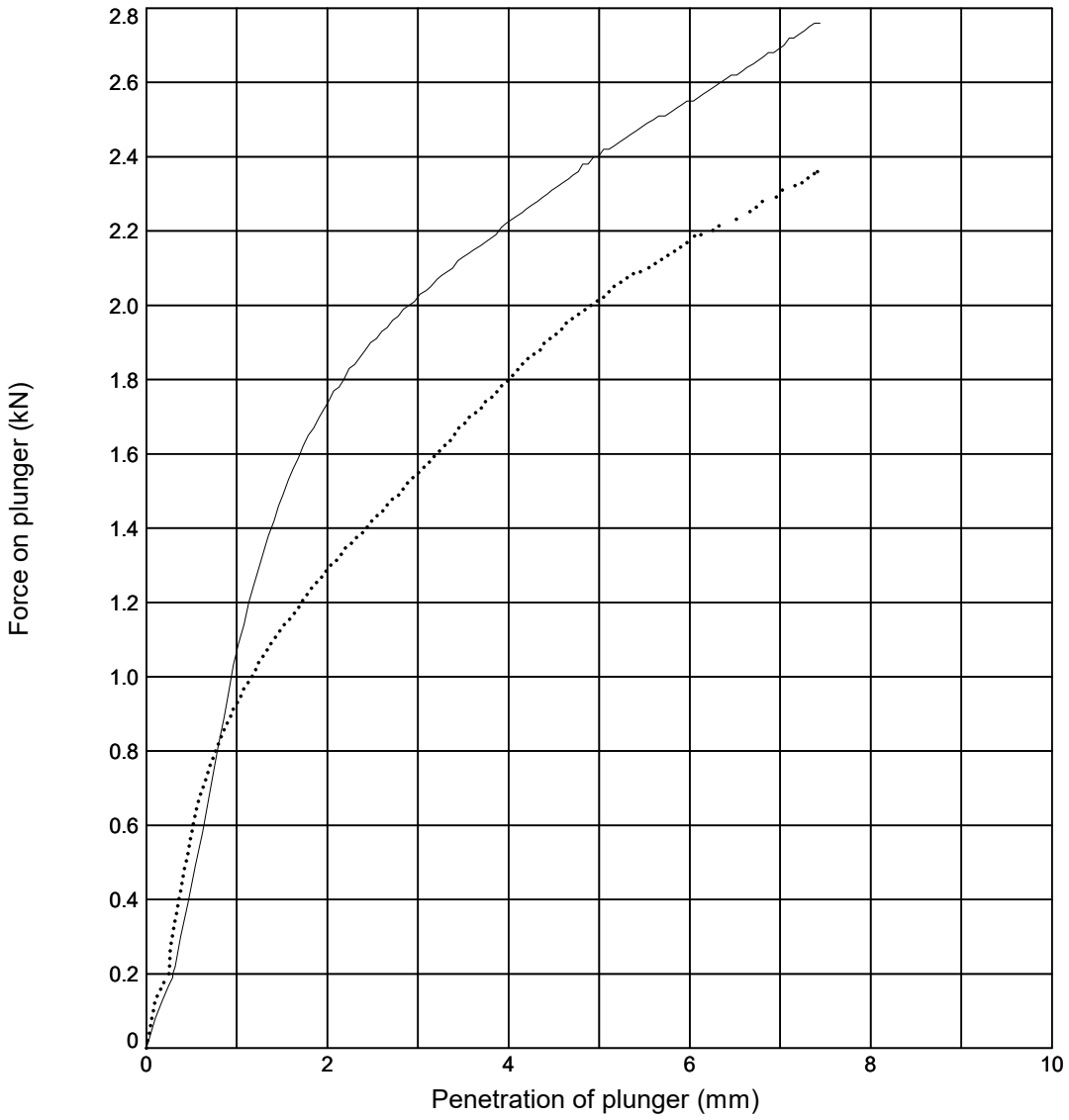
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP504** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.10**



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)	:	**1.66**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**14**	**11**
Initial Dry Density (Mg/m^3)	:	**1.37**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Greyish brown CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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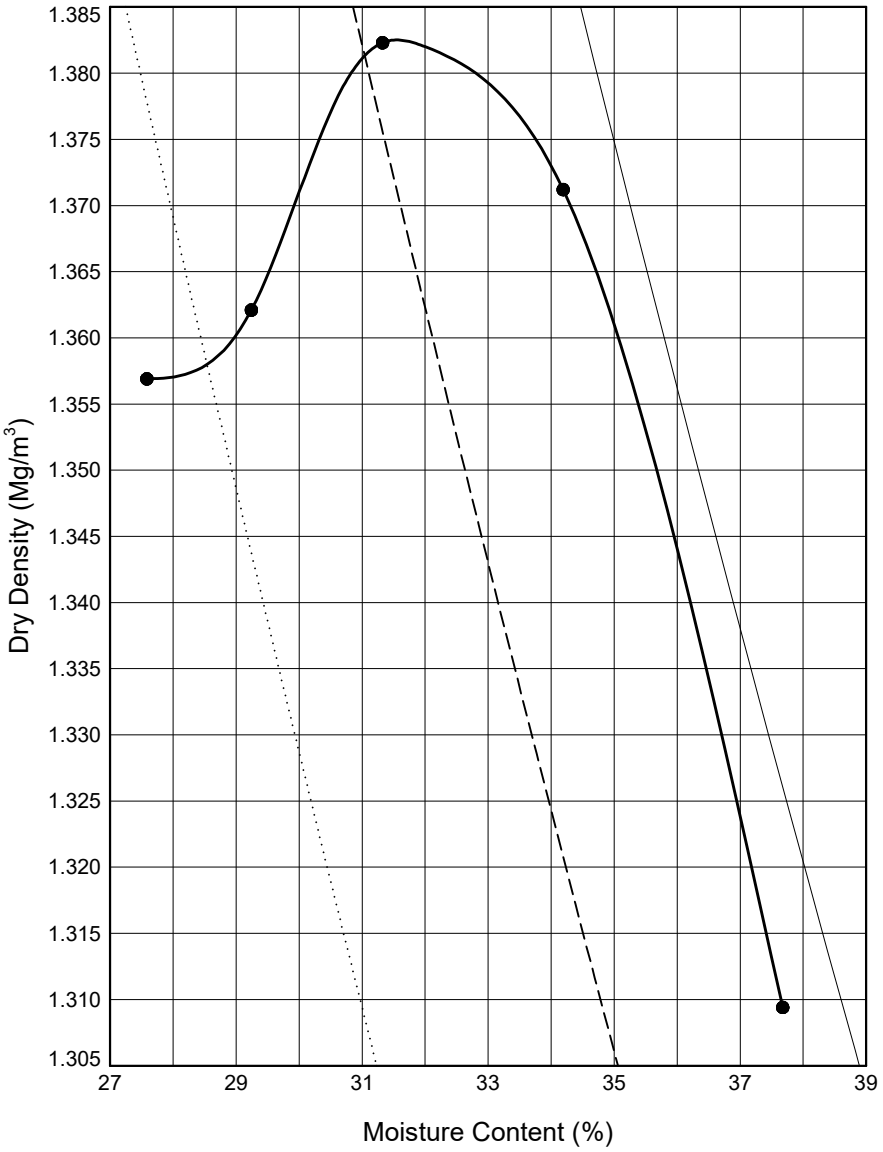
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **R22-TP505** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.50**



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**38**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m³)	:	**1.38**
% Retained on 37.5mm BS Sieve	:	**0**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**32**
% 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 test carried out at each point**		
Size of Soil Pieces	:	**<37.5mm**	Separate samples were used.					

Sample Description	Key to Air Voids Lines		
Brownish grey CLAY	——— 0%	– – – – 5%	····· 10%

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Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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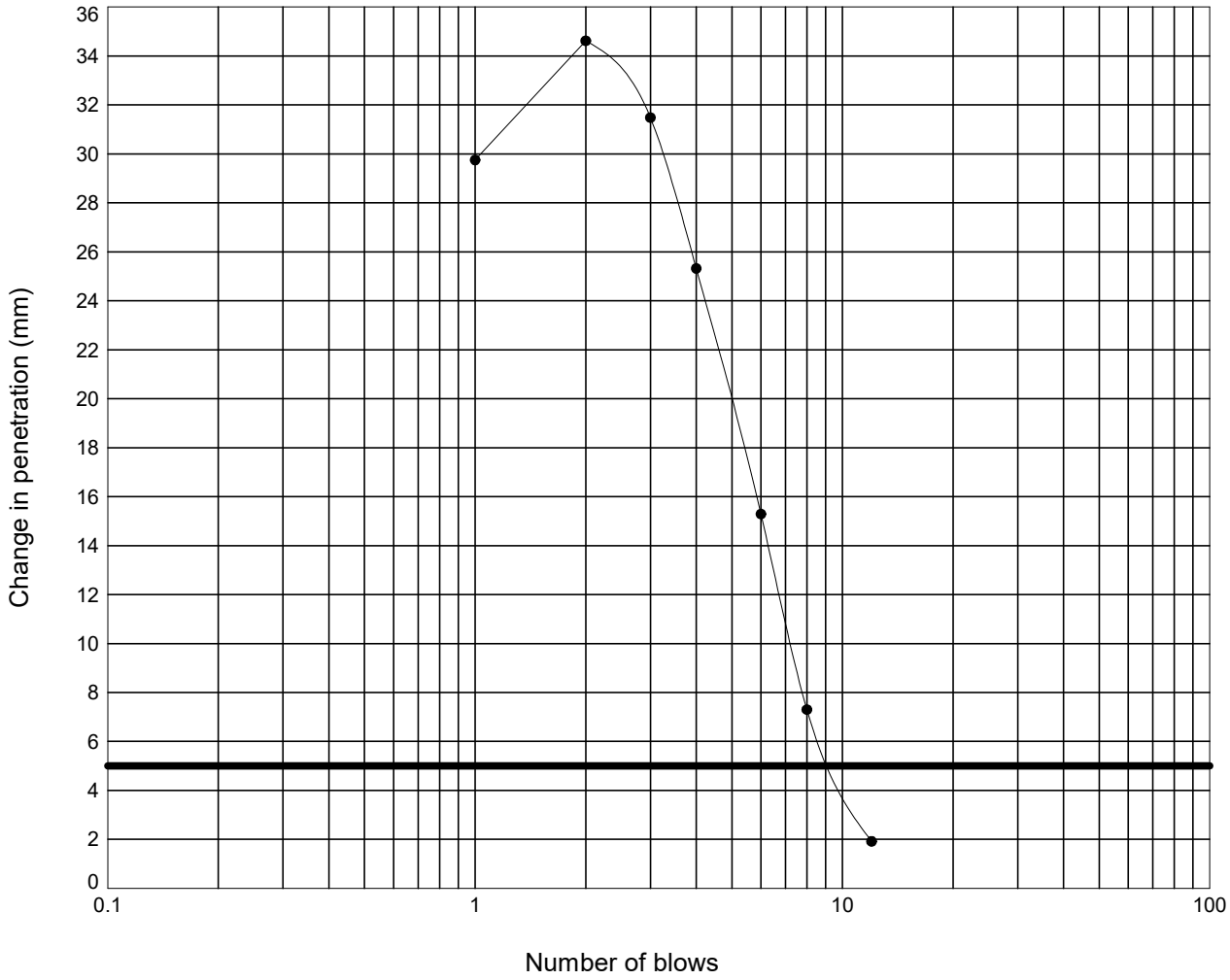
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP505** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.50**

Description : **Brownish grey CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	38	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	9.4	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract	Contract Ref:
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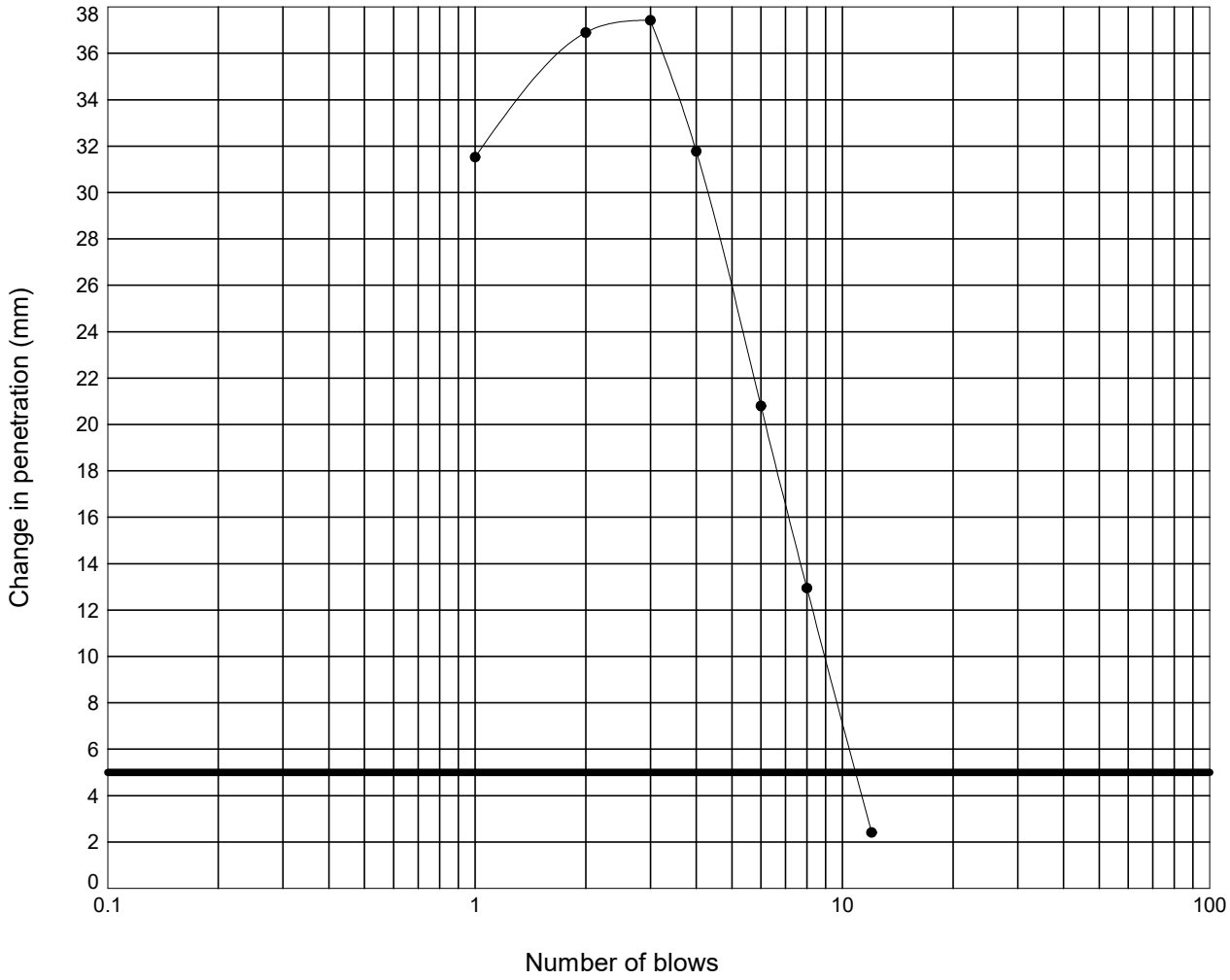
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP505** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.50**

Description : **Brownish grey CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	34	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	10.3	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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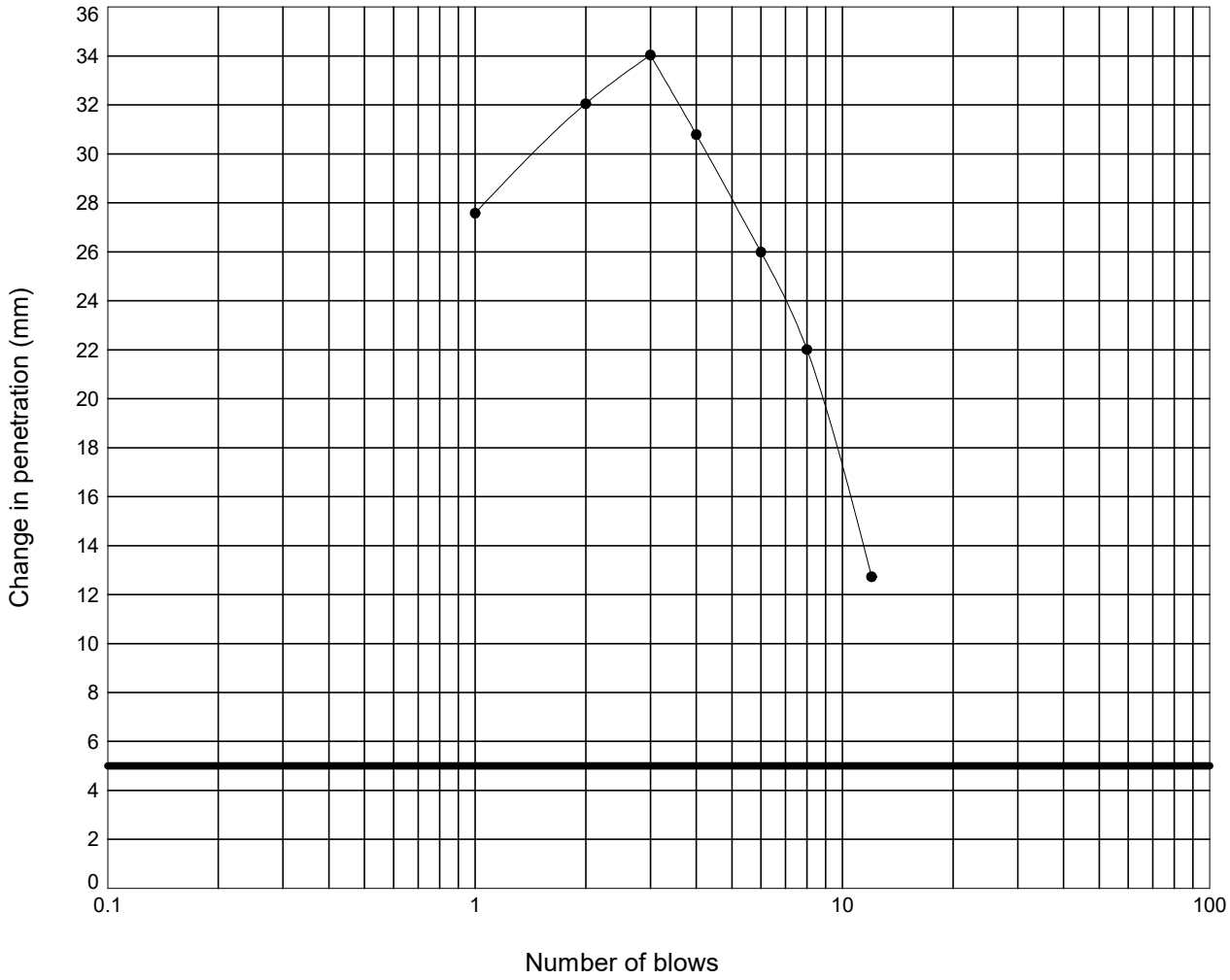
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP505** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.50**

Description : **Brownish grey CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	31	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	12.3	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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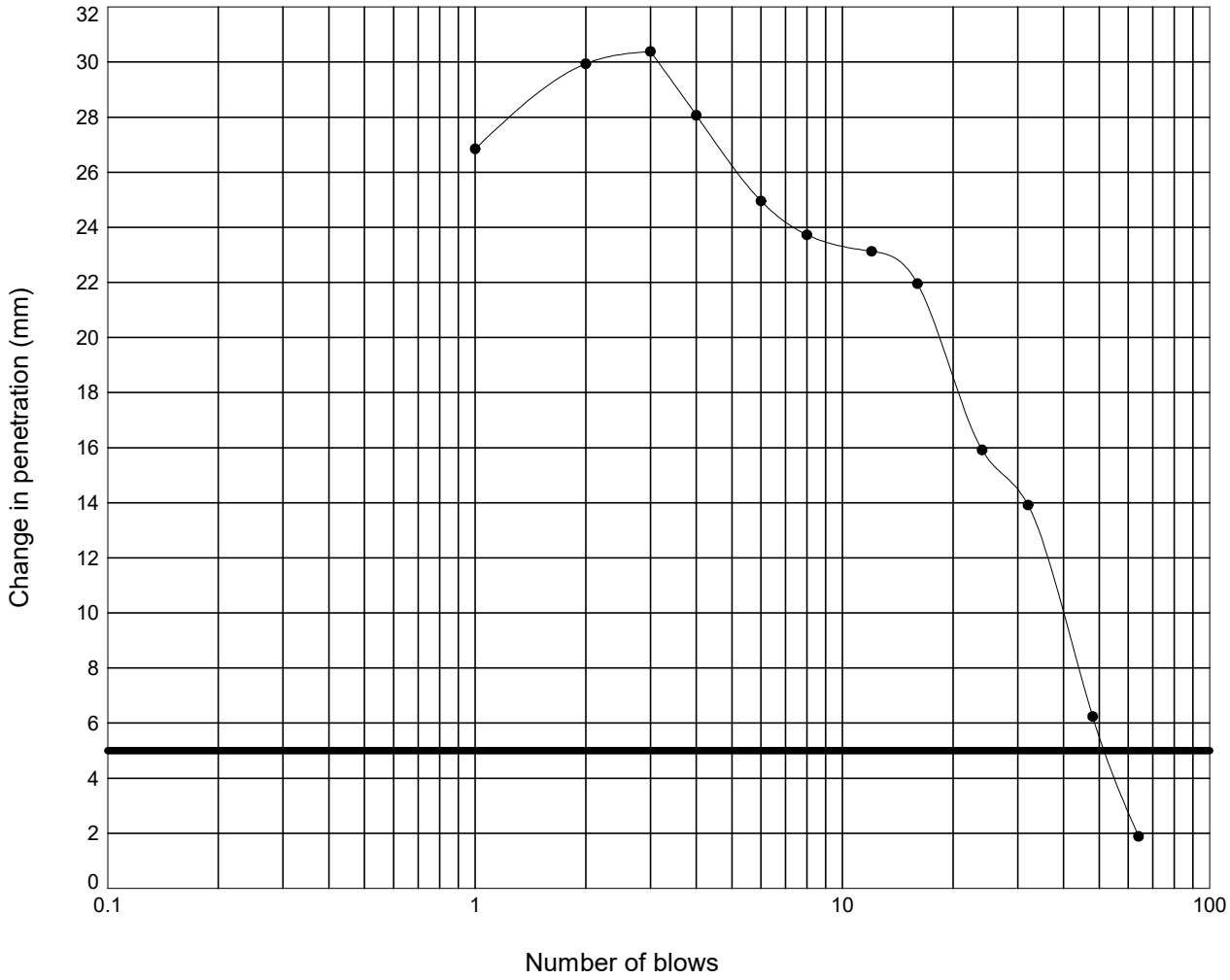
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP505** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.50**

Description : **Brownish grey CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	29	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	17.1	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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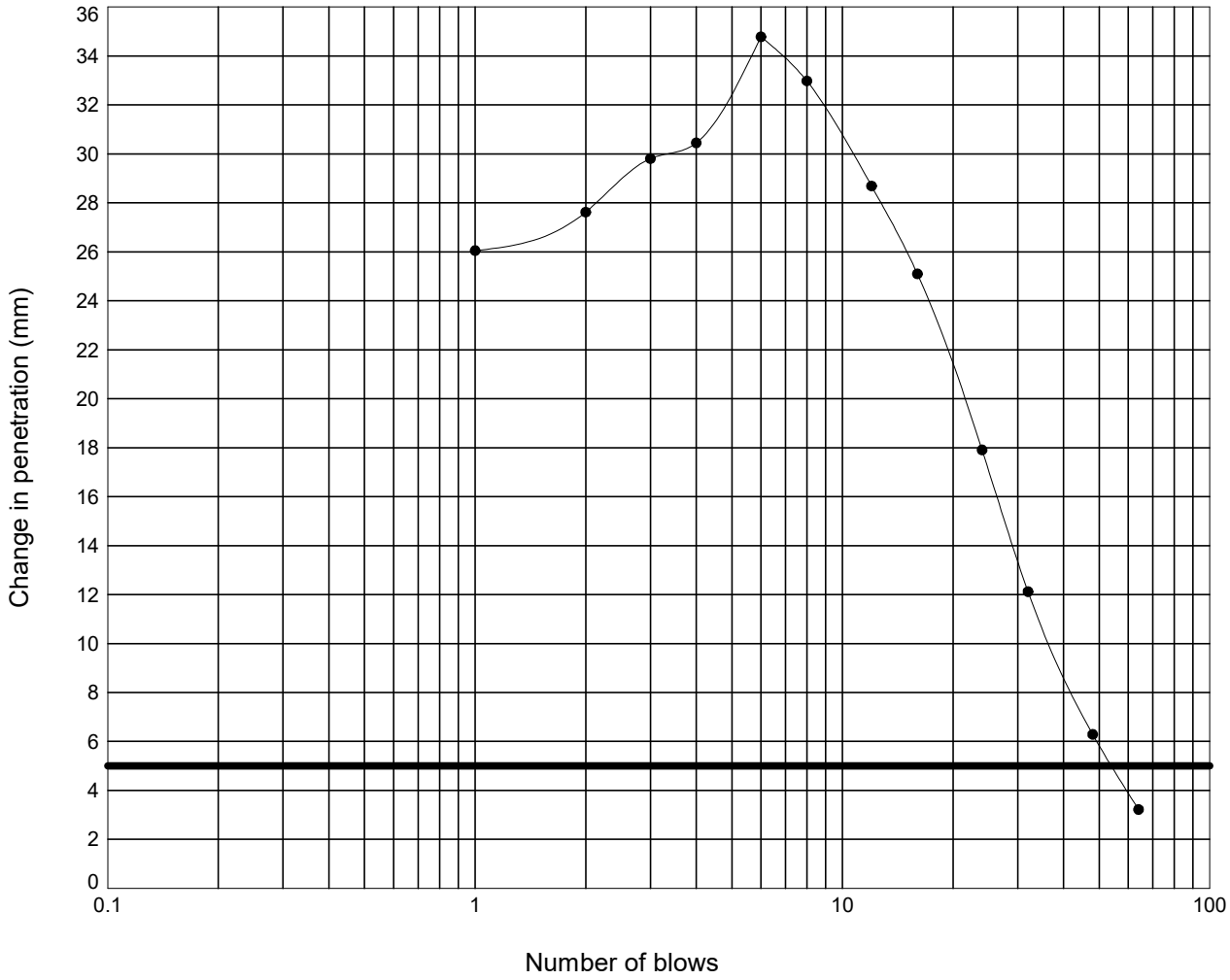
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP505** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.50**

Description : **Brownish grey CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	28	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	16.6	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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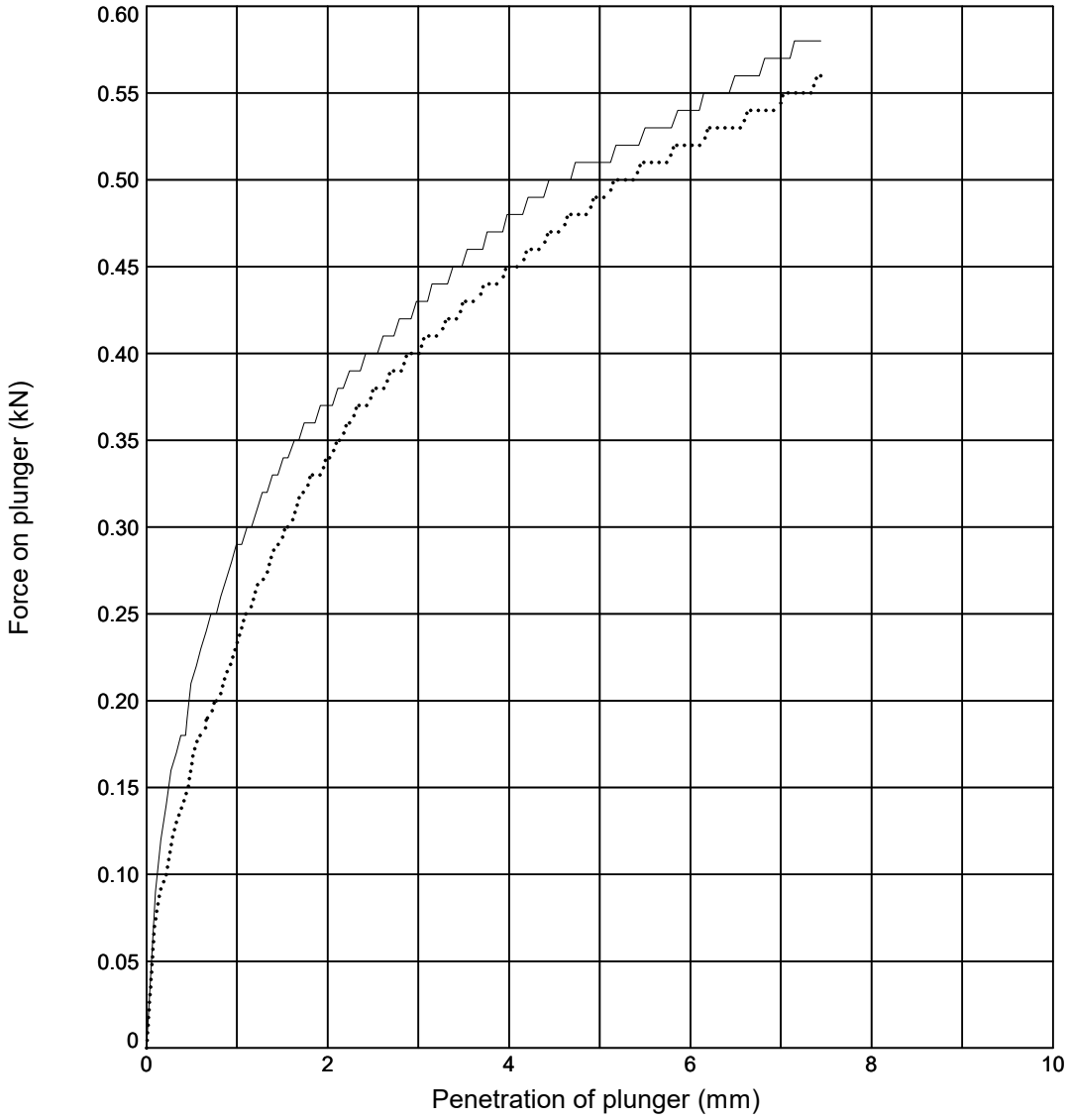
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP505** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.50**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**39**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**39**	**39**
Initial Bulk Density (Mg/m^3)	:	**1.80**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**3.0**	**2.9**
Initial Dry Density (Mg/m^3)	:	**1.30**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Brownish grey CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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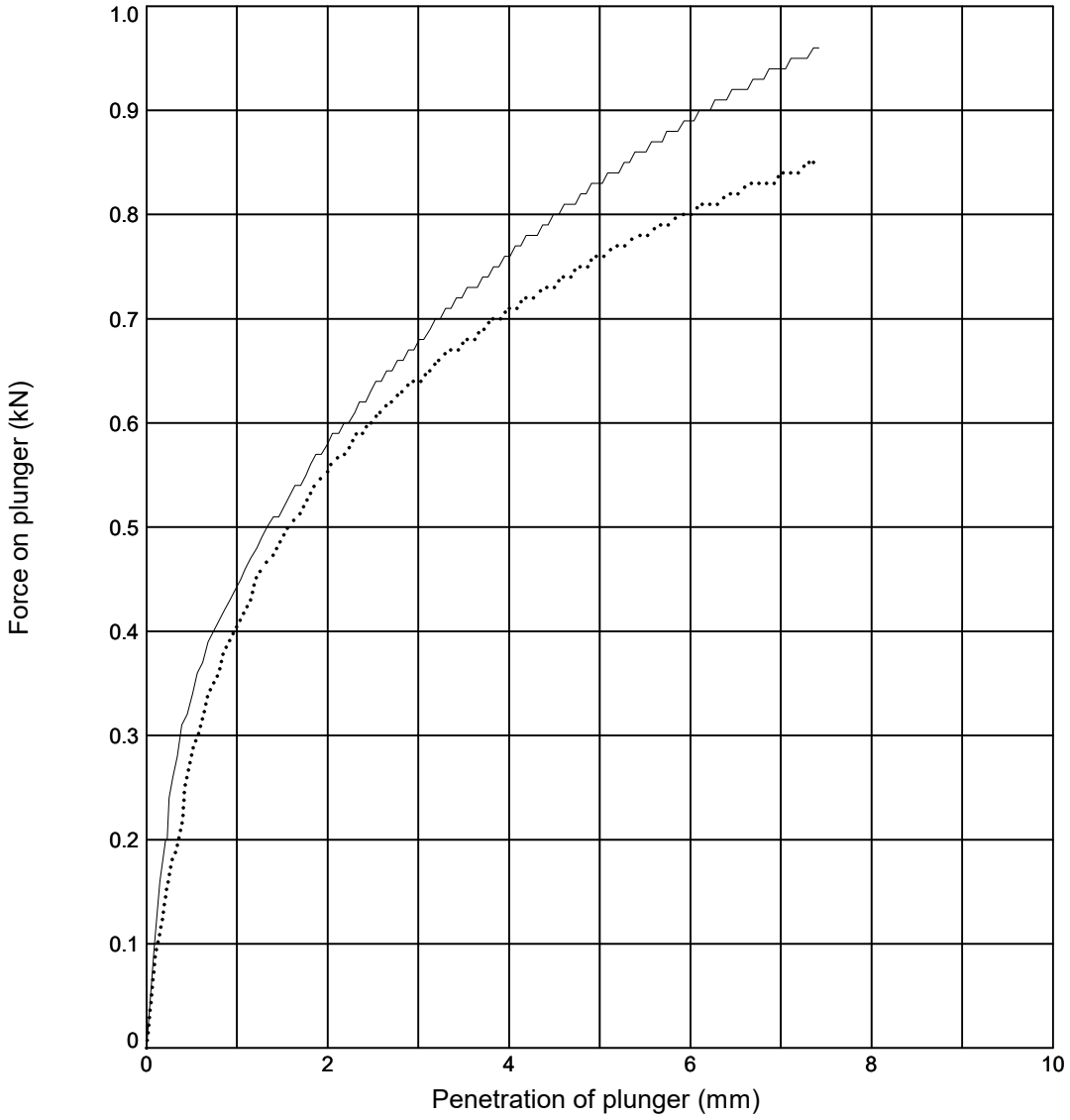
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP505** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.50**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**35**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**34**	**34**
Initial Bulk Density (Mg/m^3)	:	**1.84**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**4.8**	**4.6**
Initial Dry Density (Mg/m^3)	:	**1.37**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Brownish grey CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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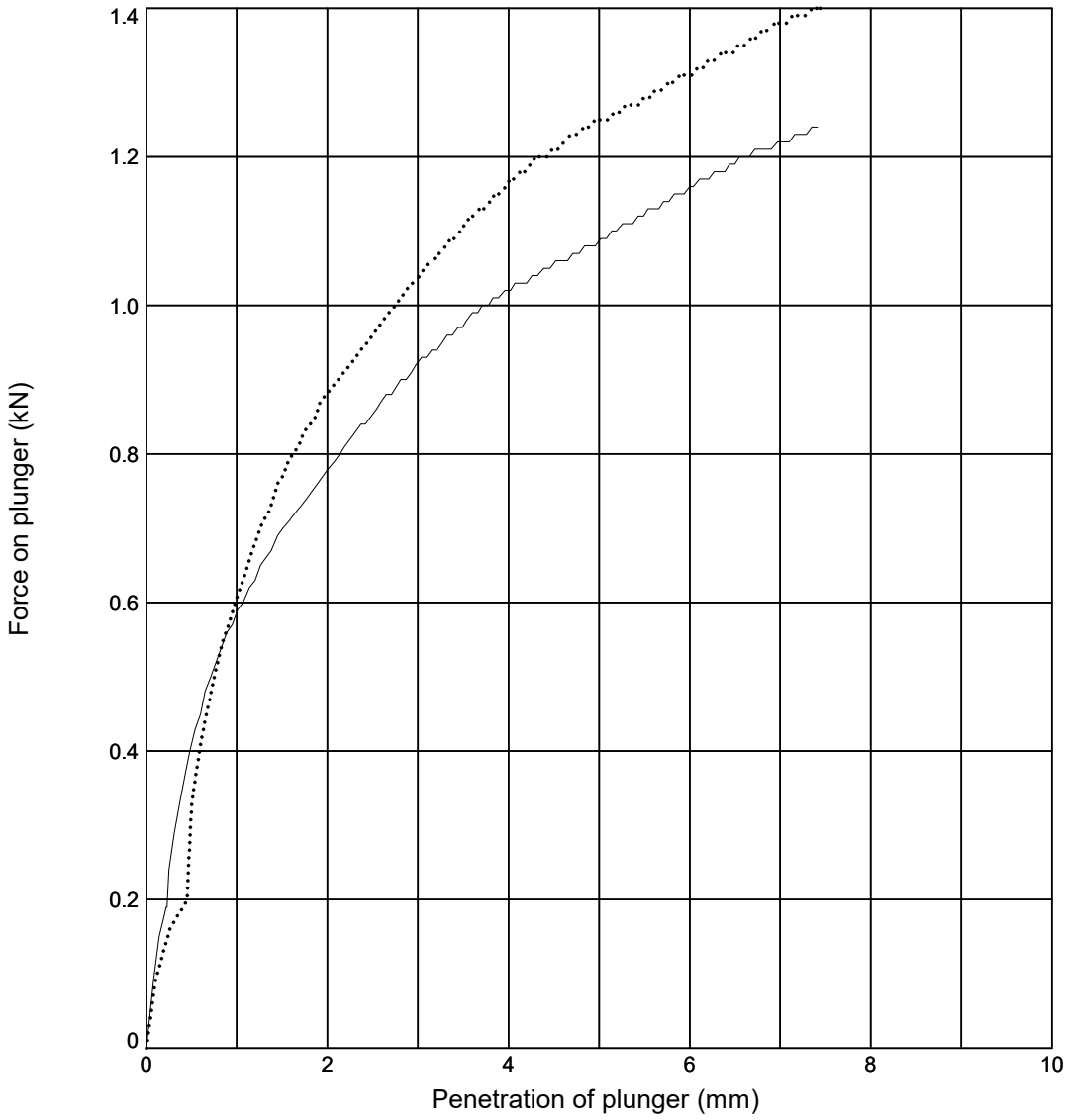
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP505** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.50**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**31**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**32**	**32**
Initial Bulk Density (Mg/m^3)	:	**1.79**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**6.5**	**7.3**
Initial Dry Density (Mg/m^3)	:	**1.36**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Brownish grey CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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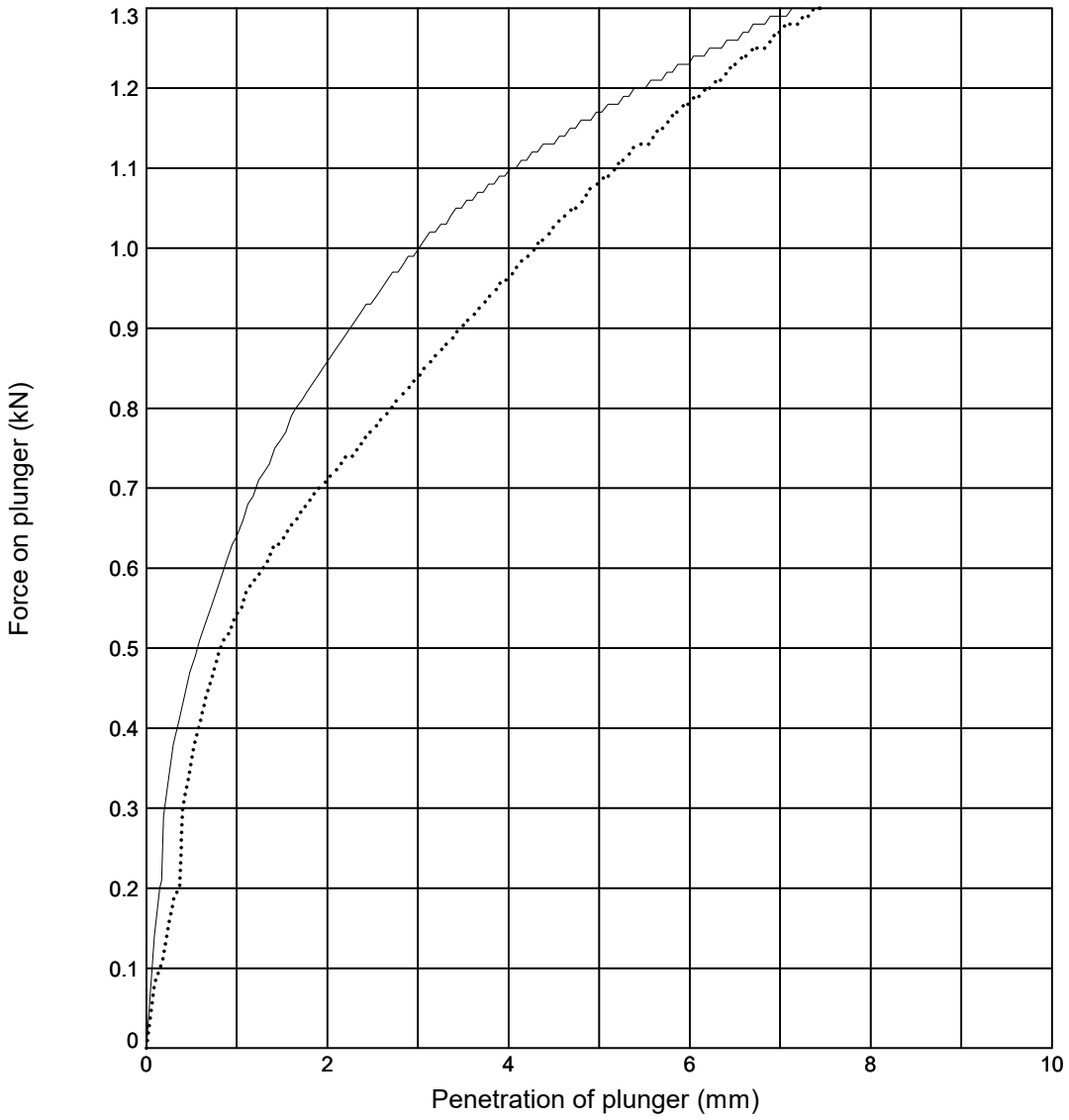
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP505** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.50**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**29**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**29**	**29**
Initial Bulk Density (Mg/m^3)	:	**1.76**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**7.1**	**5.8**
Initial Dry Density (Mg/m^3)	:	**1.36**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Brownish grey CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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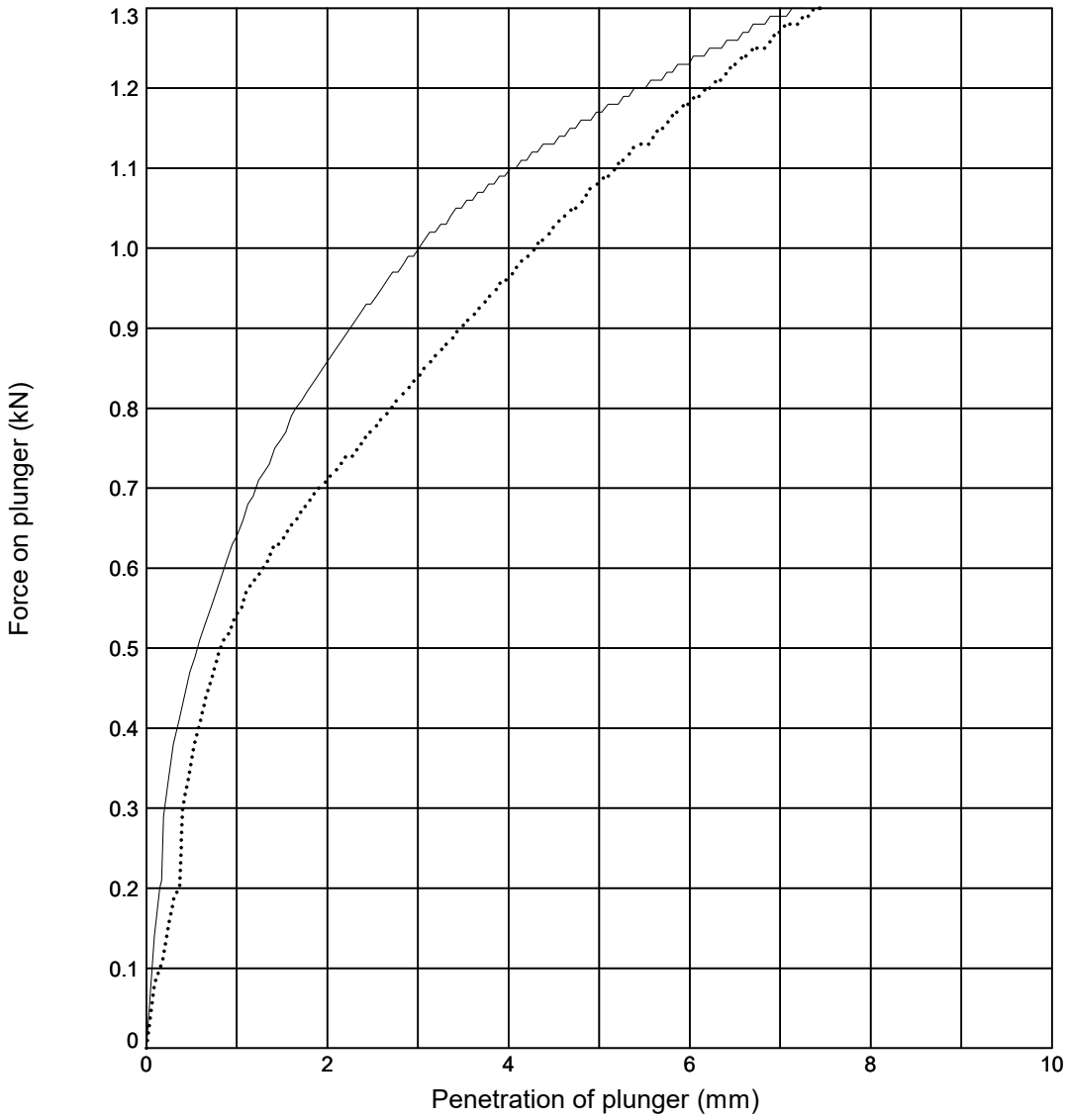
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP505** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.50**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**29**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**29**	**29**
Initial Bulk Density (Mg/m^3)	:	**1.76**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**7.1**	**5.8**
Initial Dry Density (Mg/m^3)	:	**1.36**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Brownish grey CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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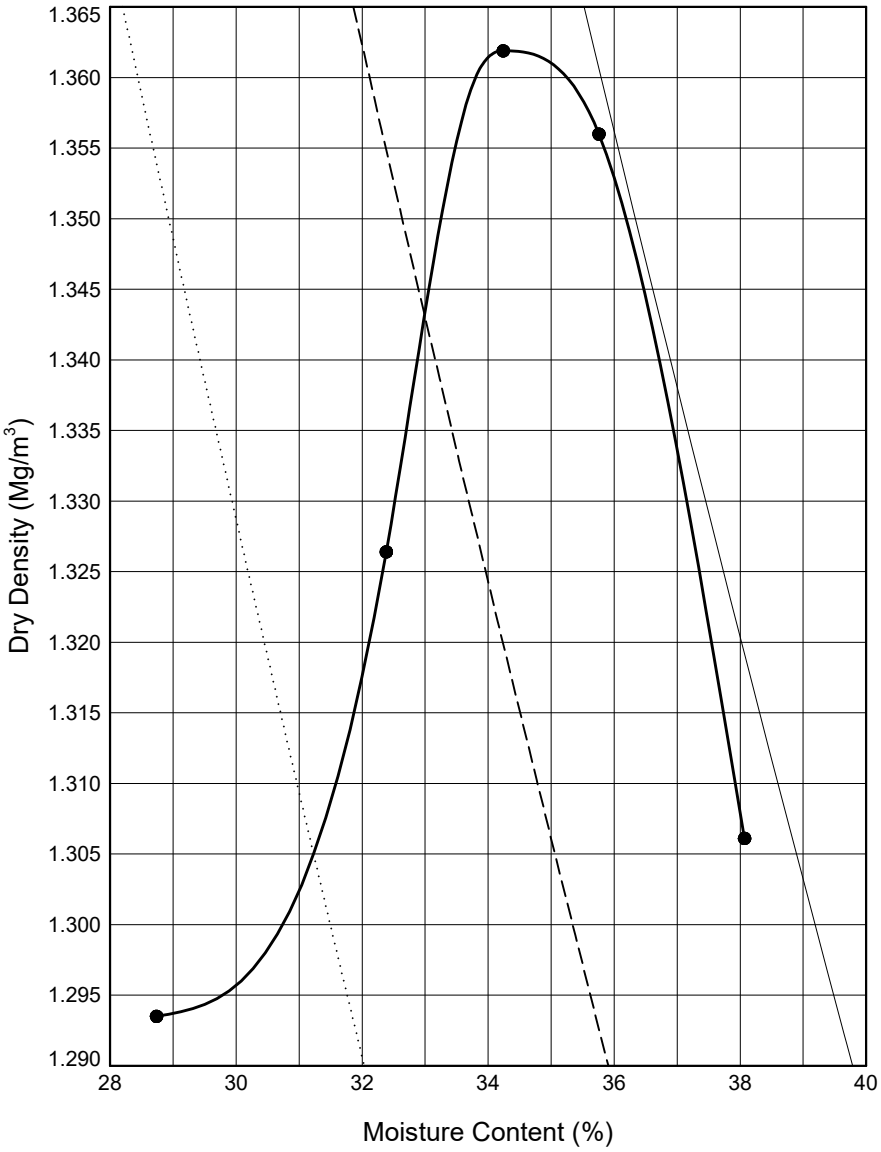
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **R22-TP506** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details		Test Results		
Initial Moisture Content (%)	:	**38**	Compaction Type	: **Light**	Maximum Dry Density (Mg/m^3)	:	**1.36**
% Retained on 37.5mm BS Sieve	:	**0**	Mass of Rammer (kg):	**2.5**	Optimum Moisture Content (%)	:	**34**
% 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 carried out at each point**		
Size of Soil Pieces	:	**<37.5mm**	Separate samples were used.				

Sample Description	Key to Air Voids Lines		
Brownish orange CLAY	——— 0%	– – – – 5%	····· 10%

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Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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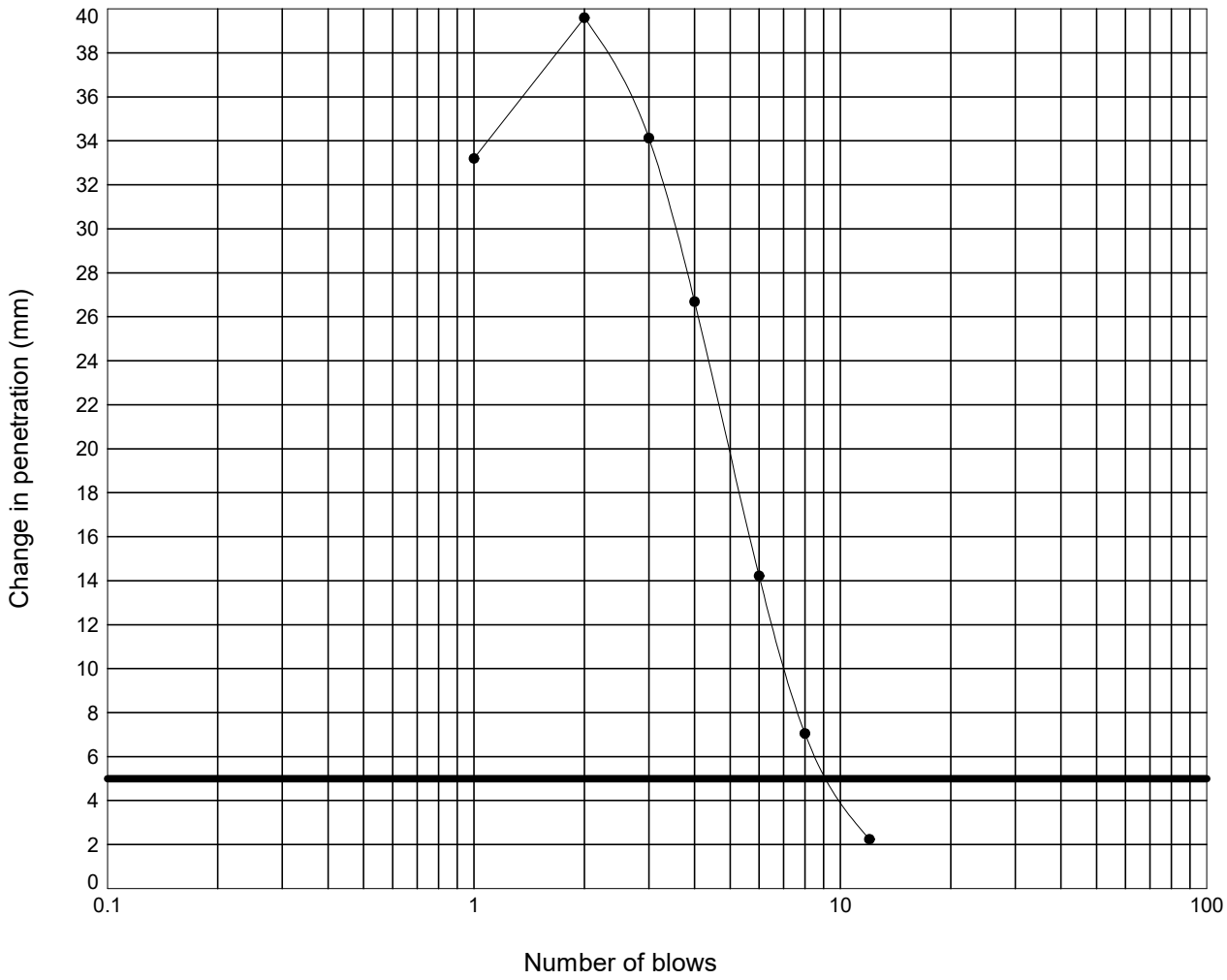
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP506** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**

Description : **Brownish orange CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	38	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	9.1	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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	Contract **SEA Link FEED - Kent Onshore Cable Link**	Contract Ref: **563607**

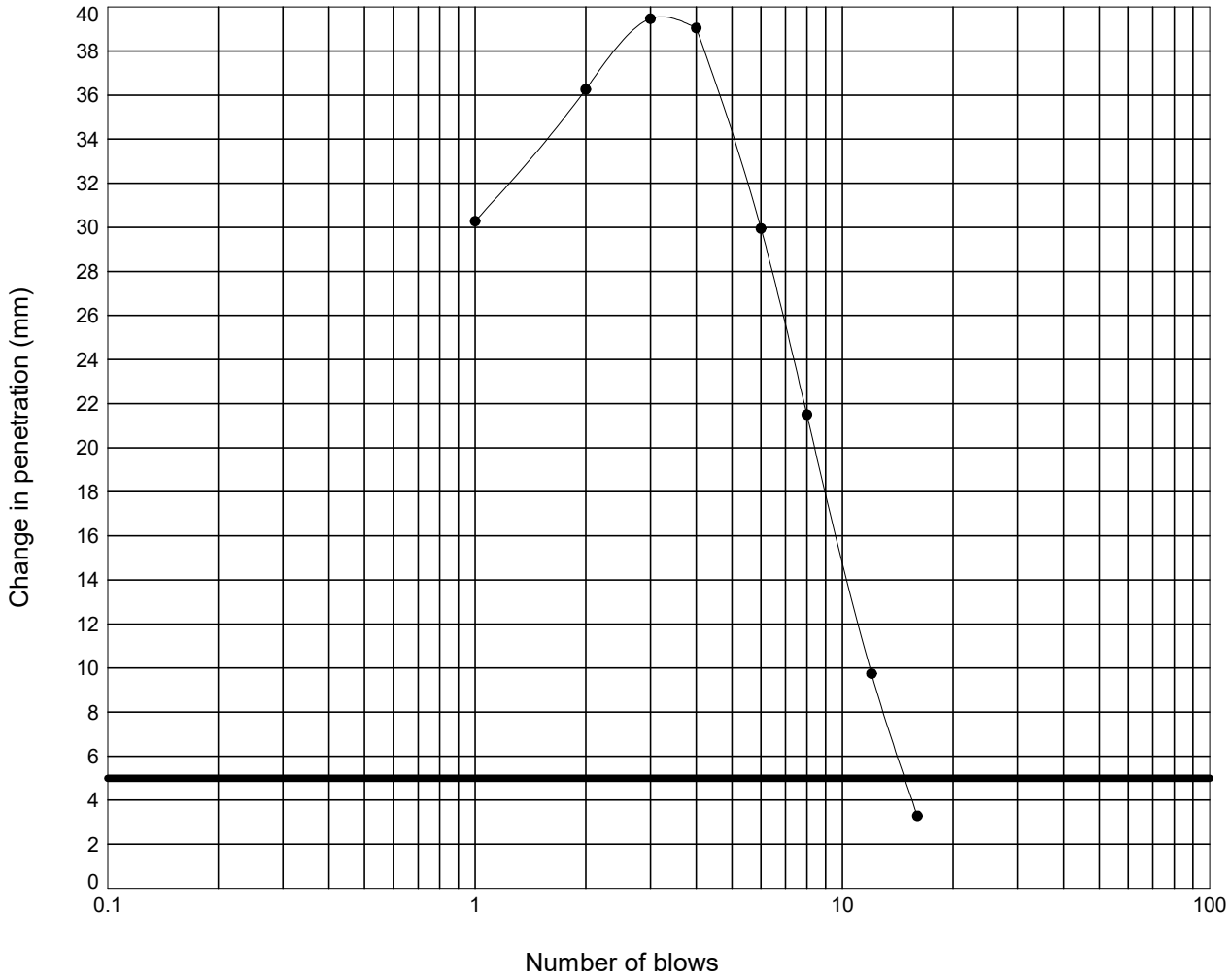
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP506** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**

Description : **Brownish orange CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	36	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	11.5	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract	Contract Ref:
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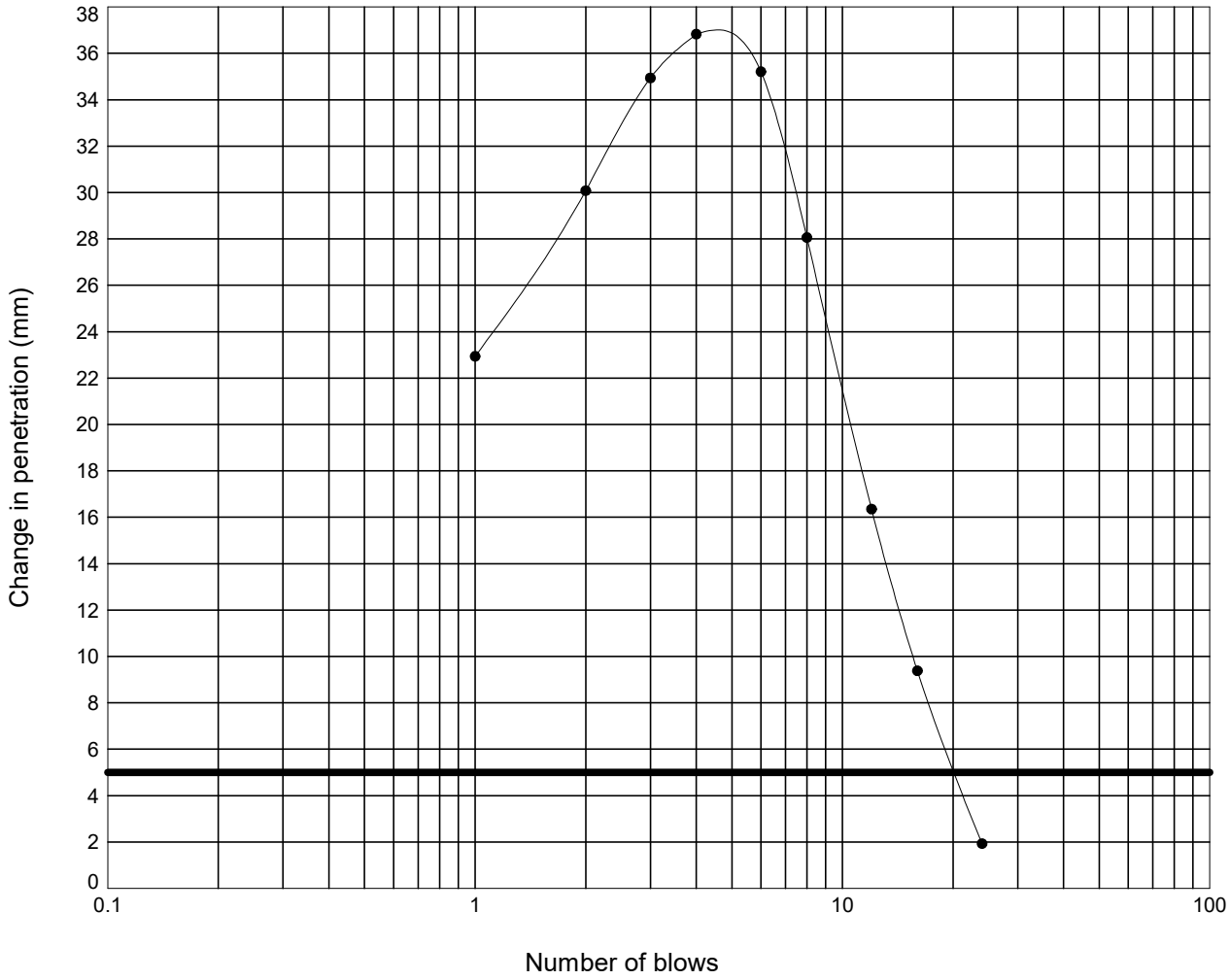
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP506** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**

Description : **Brownish orange CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	34	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	12.5	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract	Contract Ref:
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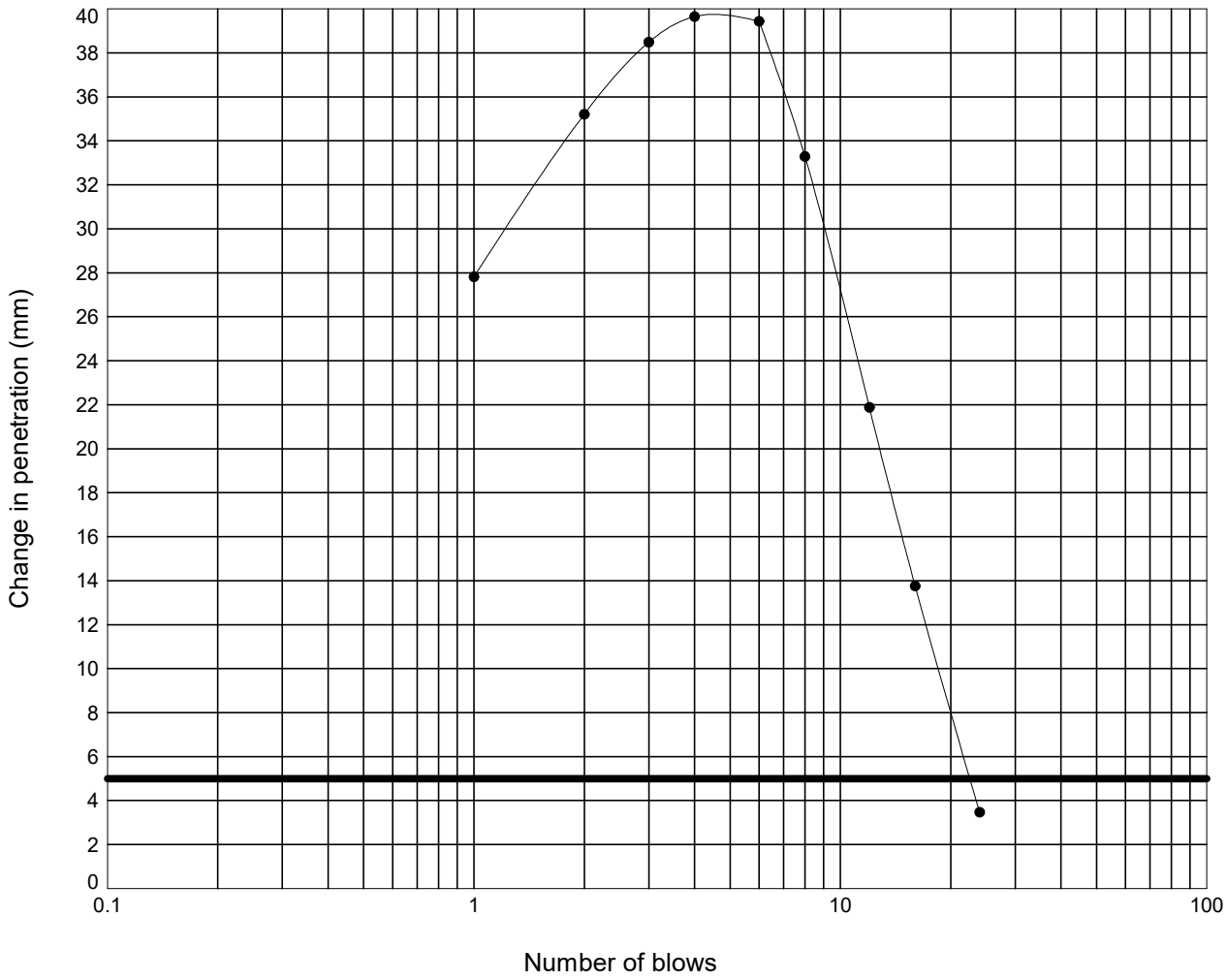
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP506** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**

Description : **Brownish orange CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	32	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	13.4	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Date: **18/03/24**

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Contract Ref: **563607**

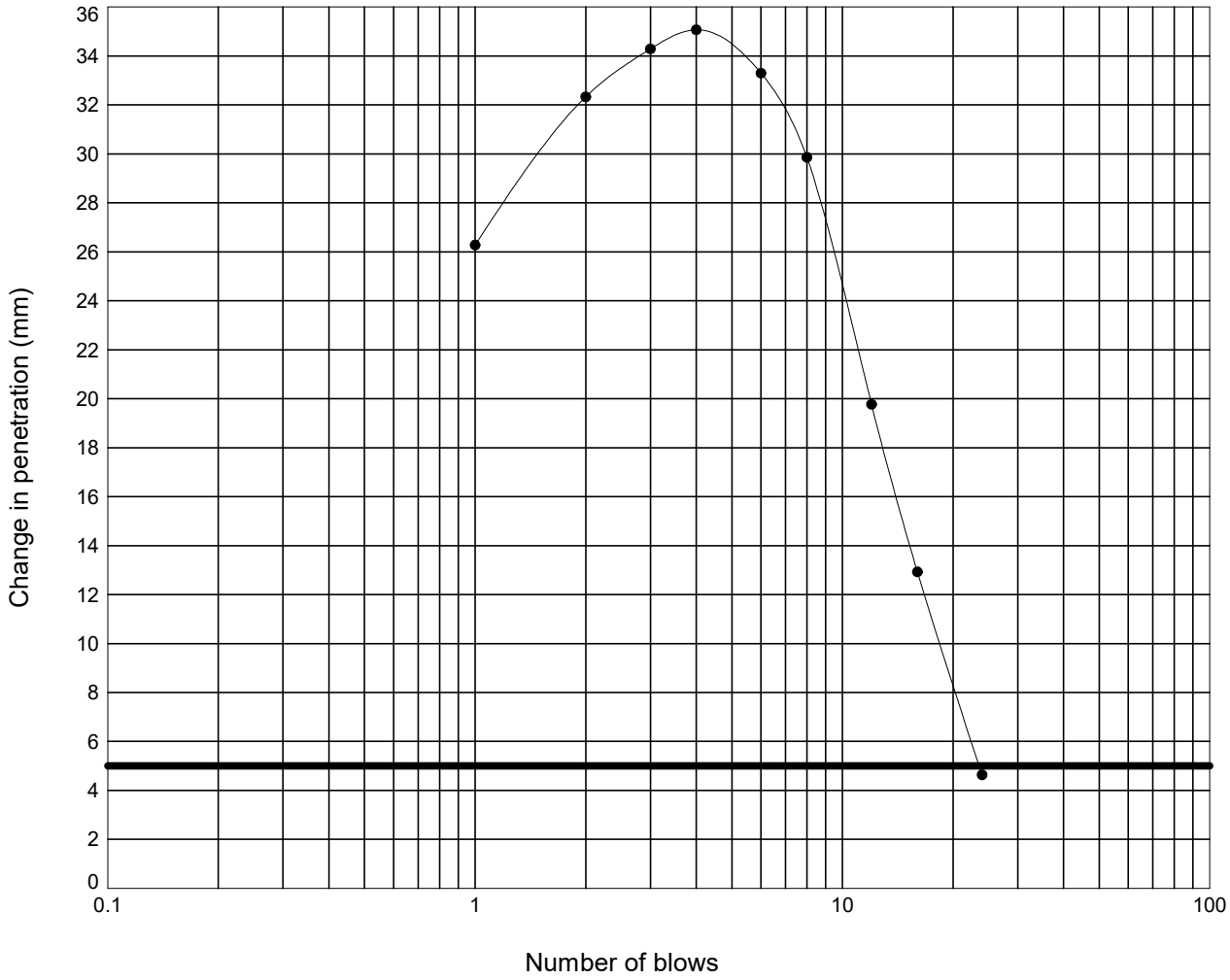
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP506** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**

Description : **Brownish orange CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	29	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	13.4	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract	Contract Ref:
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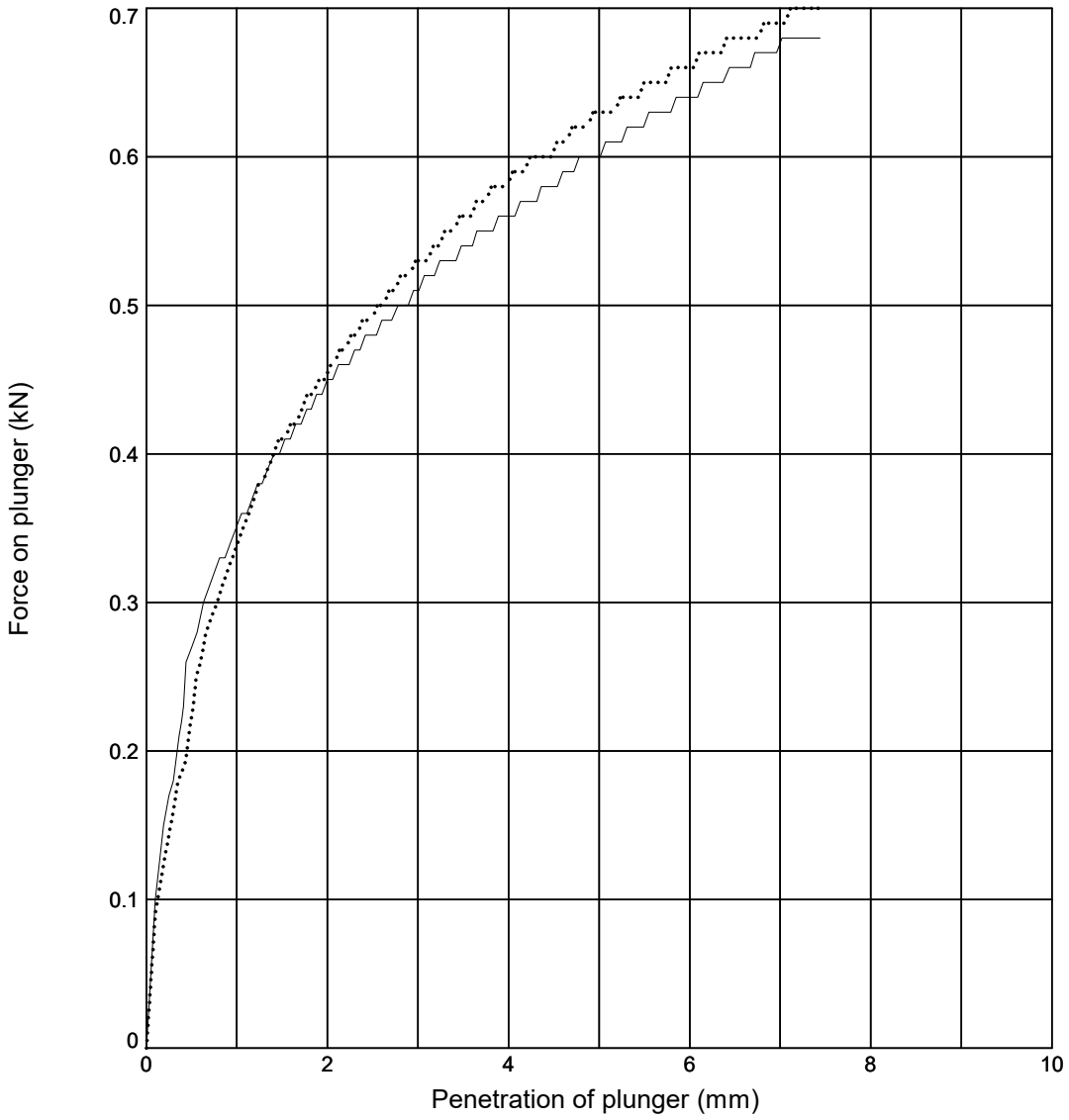
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP506** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**38**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**38**	**38**
Initial Bulk Density (Mg/m^3)	:	**1.80**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**3.6**	**3.7**
Initial Dry Density (Mg/m^3)	:	**1.31**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Brownish orange CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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SEA Link FEED - Kent Onshore Cable Link | **563607**

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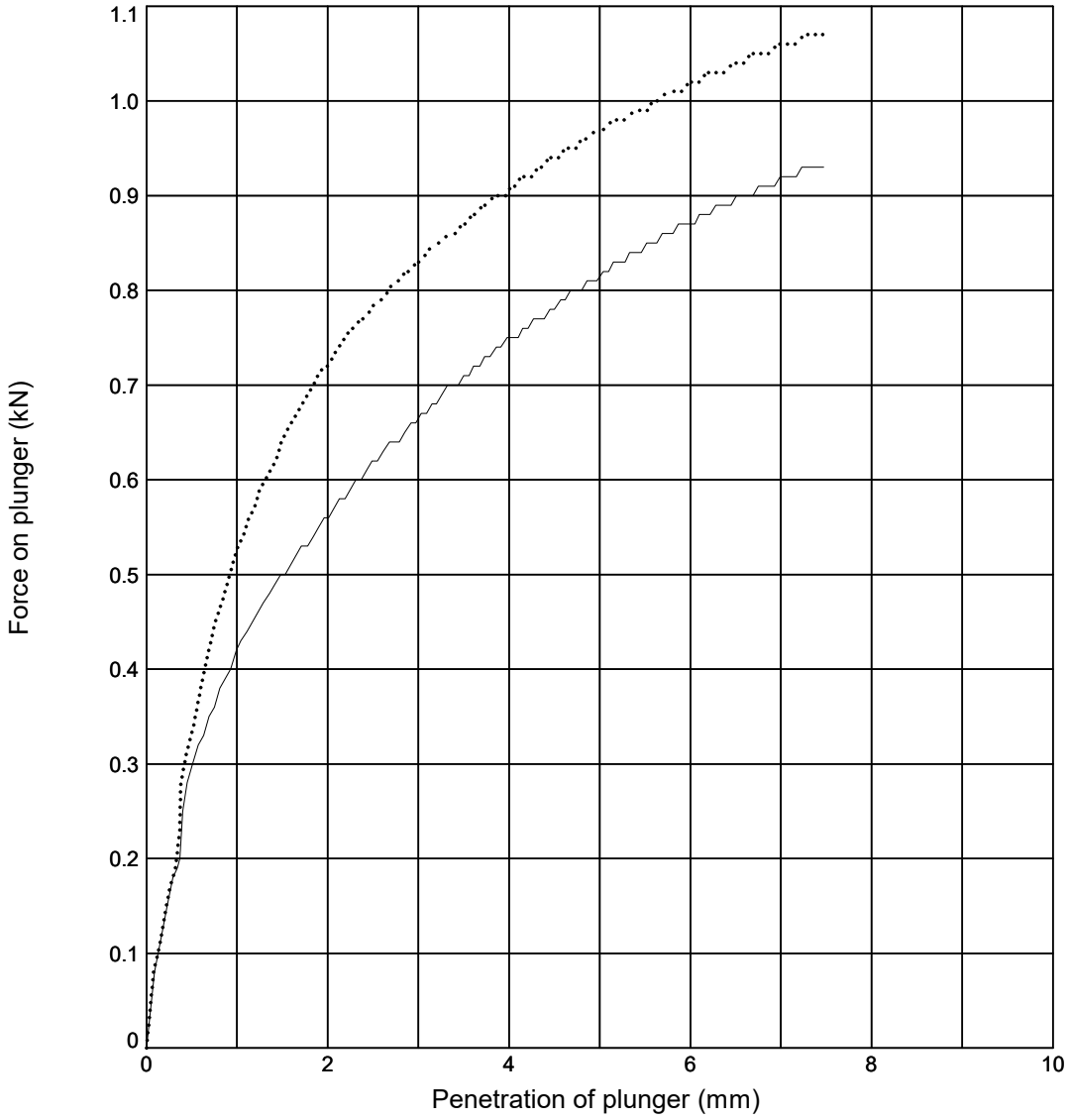
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP506** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**35**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**36**	**35**
Initial Bulk Density (Mg/m^3)	:	**1.84**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**4.7**	**5.9**
Initial Dry Density (Mg/m^3)	:	**1.36**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Brownish orange 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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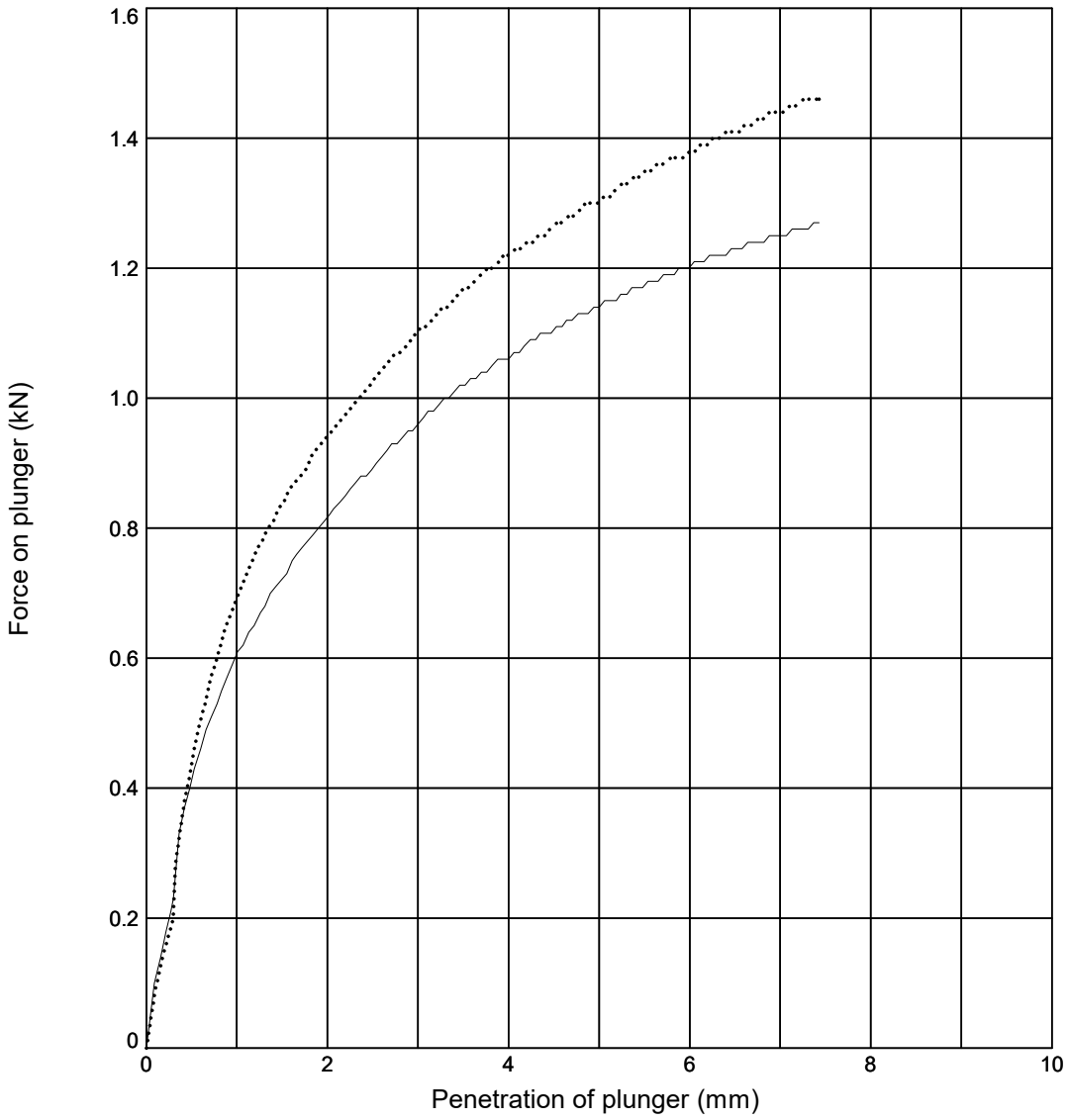
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP506** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**34**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**35**	**33**
Initial Bulk Density (Mg/m^3)	:	**1.83**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**6.8**	**7.8**
Initial Dry Density (Mg/m^3)	:	**1.36**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Brownish orange CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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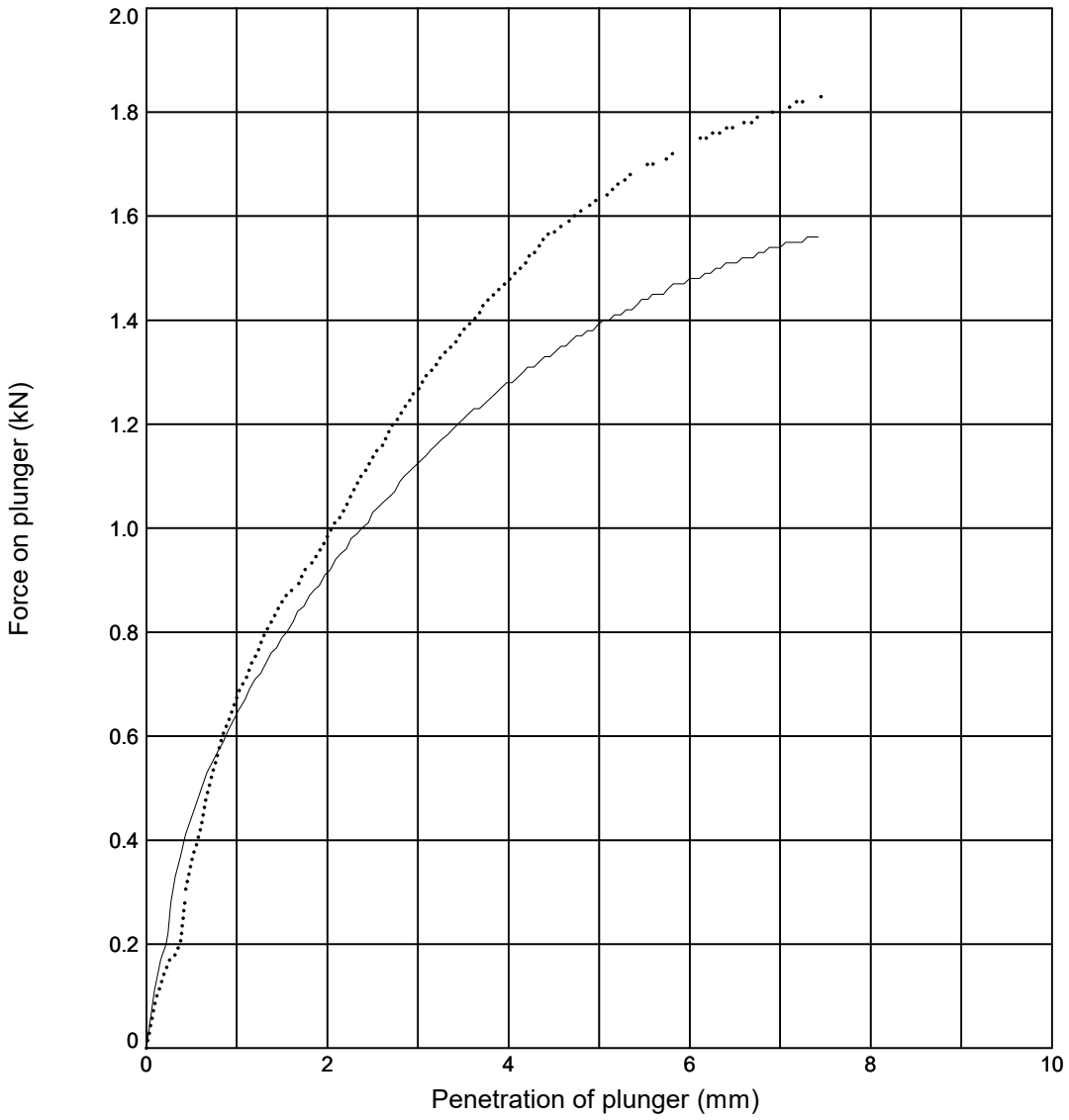
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP506** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**31**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**31**	**29**
Initial Bulk Density (Mg/m^3)	:	**1.76**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**7.8**	**8.6**
Initial Dry Density (Mg/m^3)	:	**1.34**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Brownish orange 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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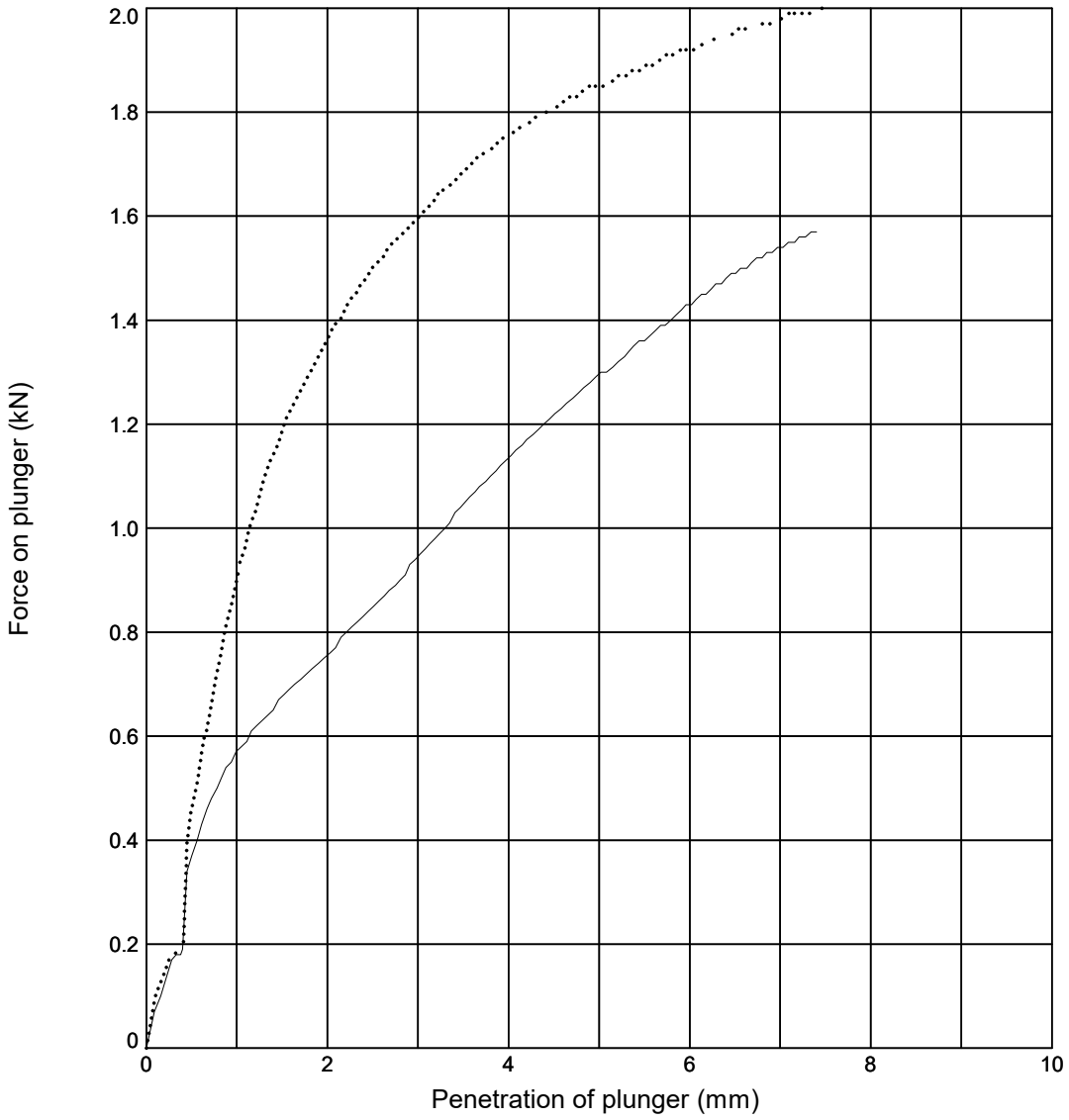
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP506** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**32**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**31**	**30**
Initial Bulk Density (Mg/m^3)	:	**1.67**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**6.5**	**11**
Initial Dry Density (Mg/m^3)	:	**1.26**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Brownish orange CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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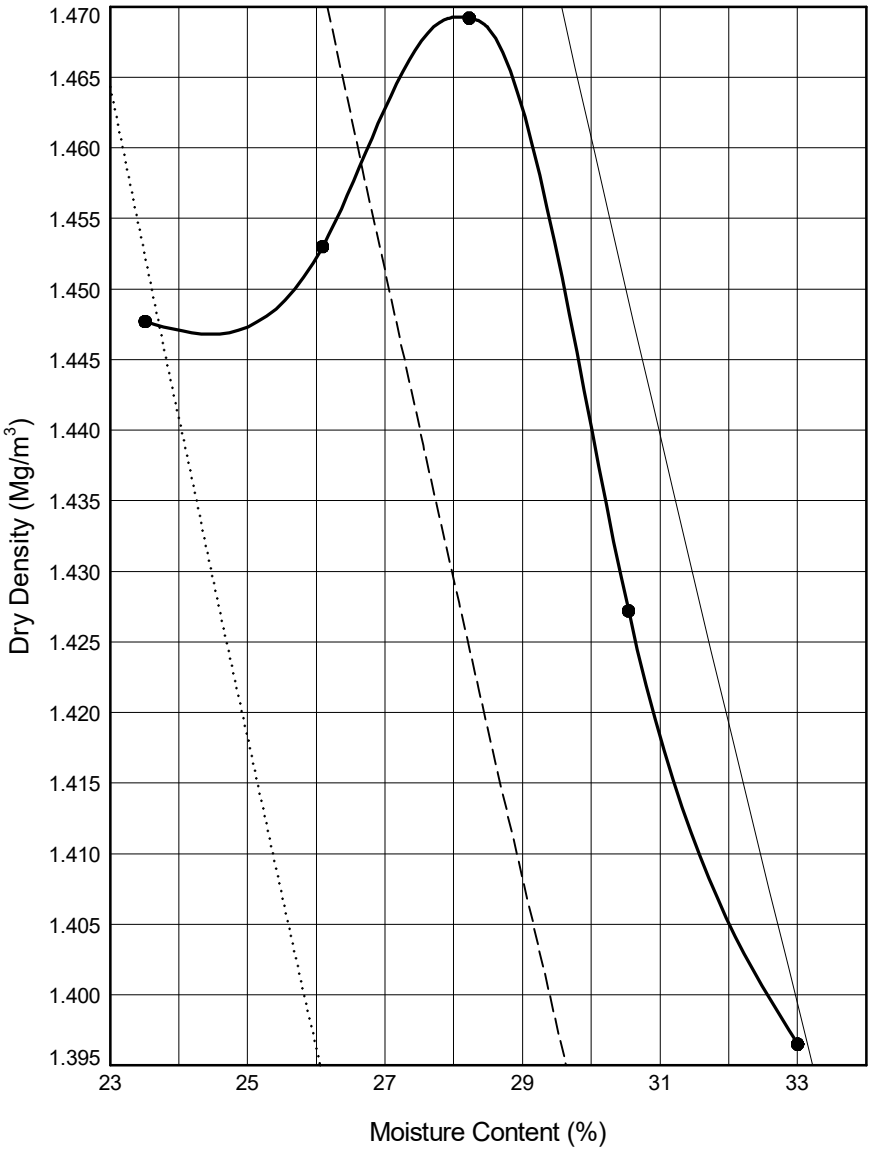
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **R22-TP508** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results		
Initial Moisture Content (%)	:	**28**	Compaction Type	:	**Light**	Maximum Dry Density (Mg/m³)	:	**1.47**
% Retained on 37.5mm BS Sieve	:	**0**	Mass of Rammer (kg):		**2.5**	Optimum Moisture Content (%)	:	**28**
% Retained on 20.0mm BS Sieve	:	**0**	Type of Mould	:	**CBR**	Method Used: **Clause 11.4**		
Particle Density - assumed (Mg/m³)	:	**2.60**				Remarks: **CBR and MCV test carried out at each point**		
Size of Soil Pieces	:	**<37.5mm**	Separate samples were used.					

Sample Description	Key to Air Voids Lines		
Dark greyish brown CLAY (NAT)	——— 0%	– – – – 5%	····· 10%

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Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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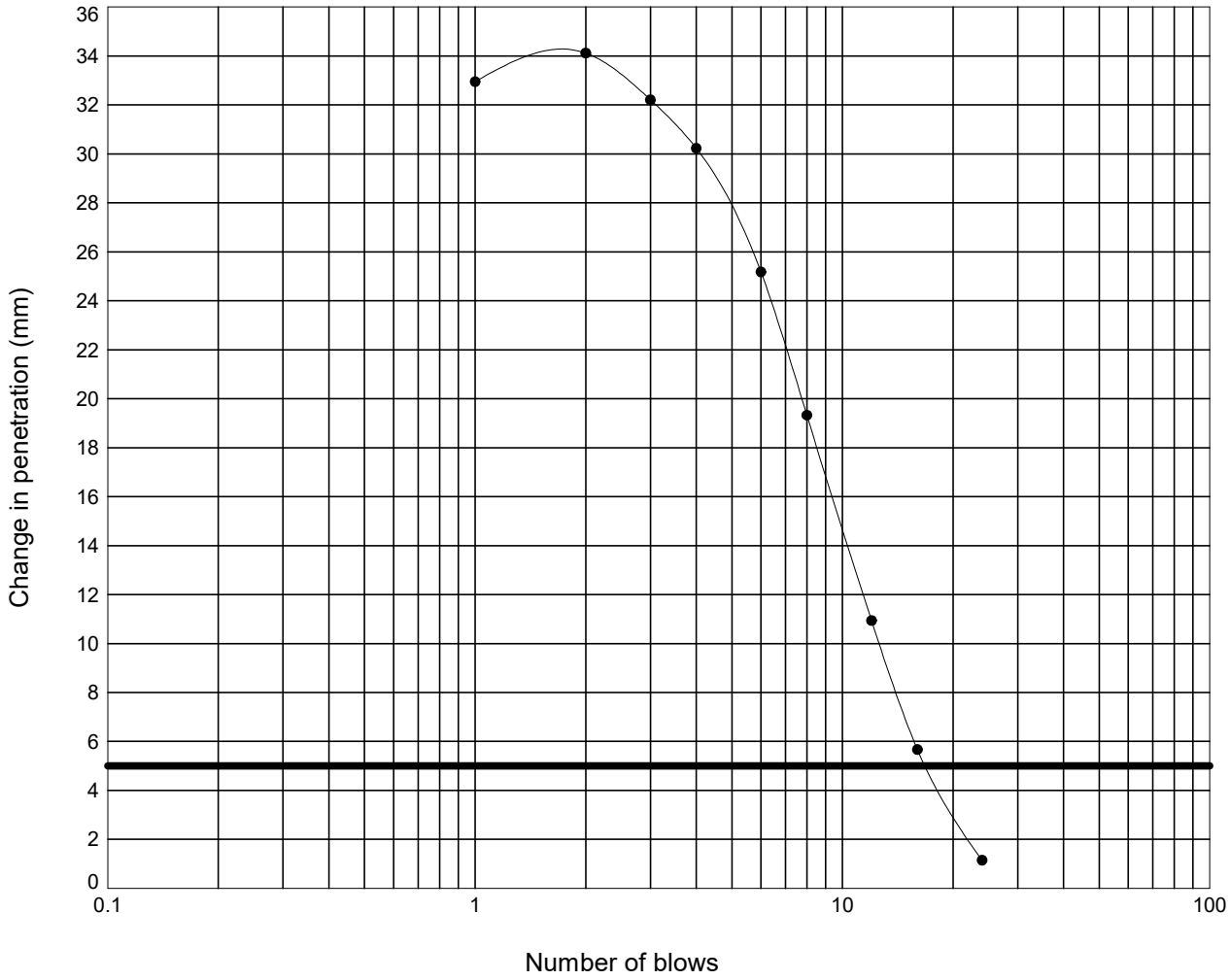
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP508** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**

Description : **Dark greyish brown CLAY (NAT)**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	28	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	12.1	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Date: **18/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

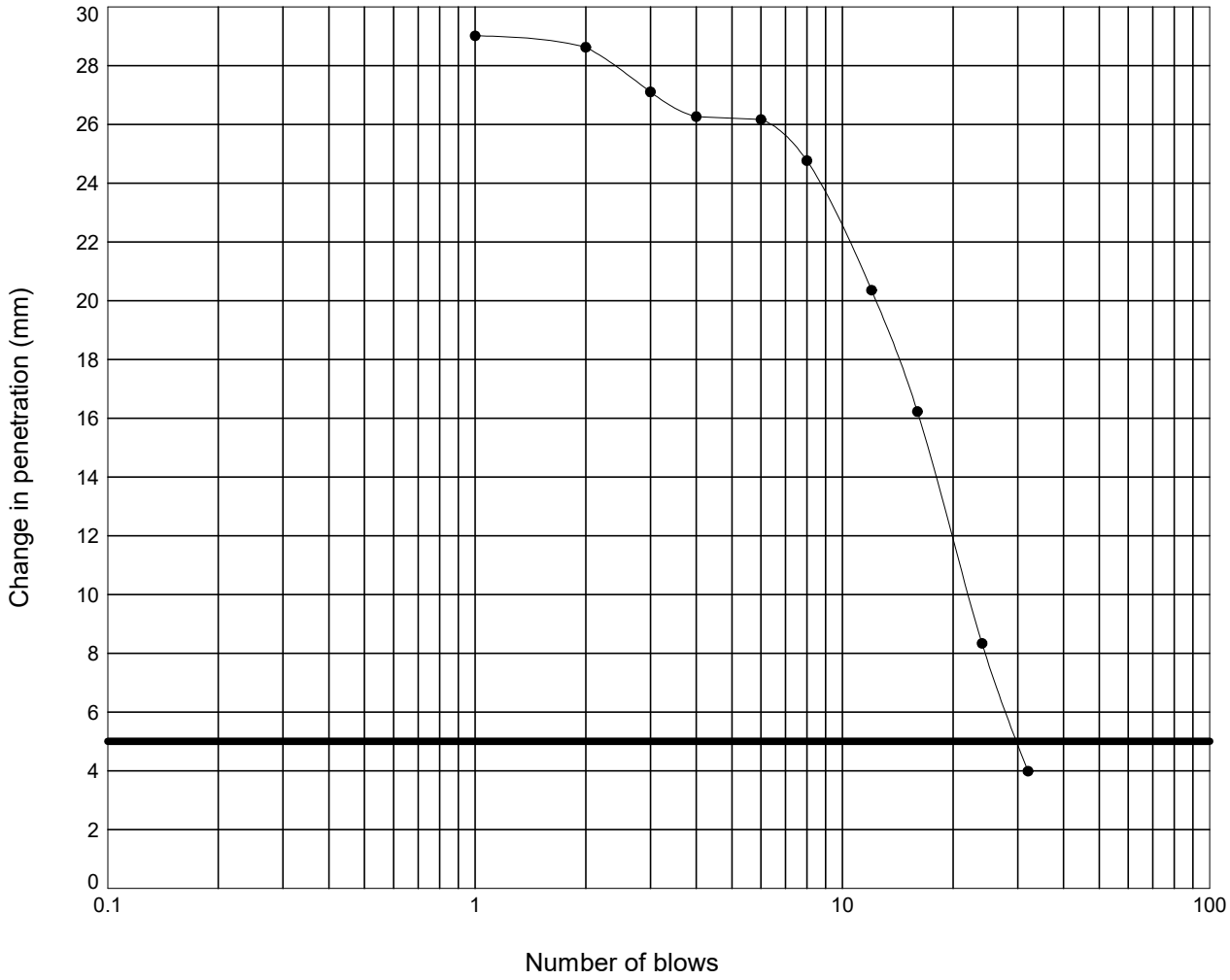
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP508** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**

Description : **Dark greyish brown CLAY (-2)**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	23	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	14.5	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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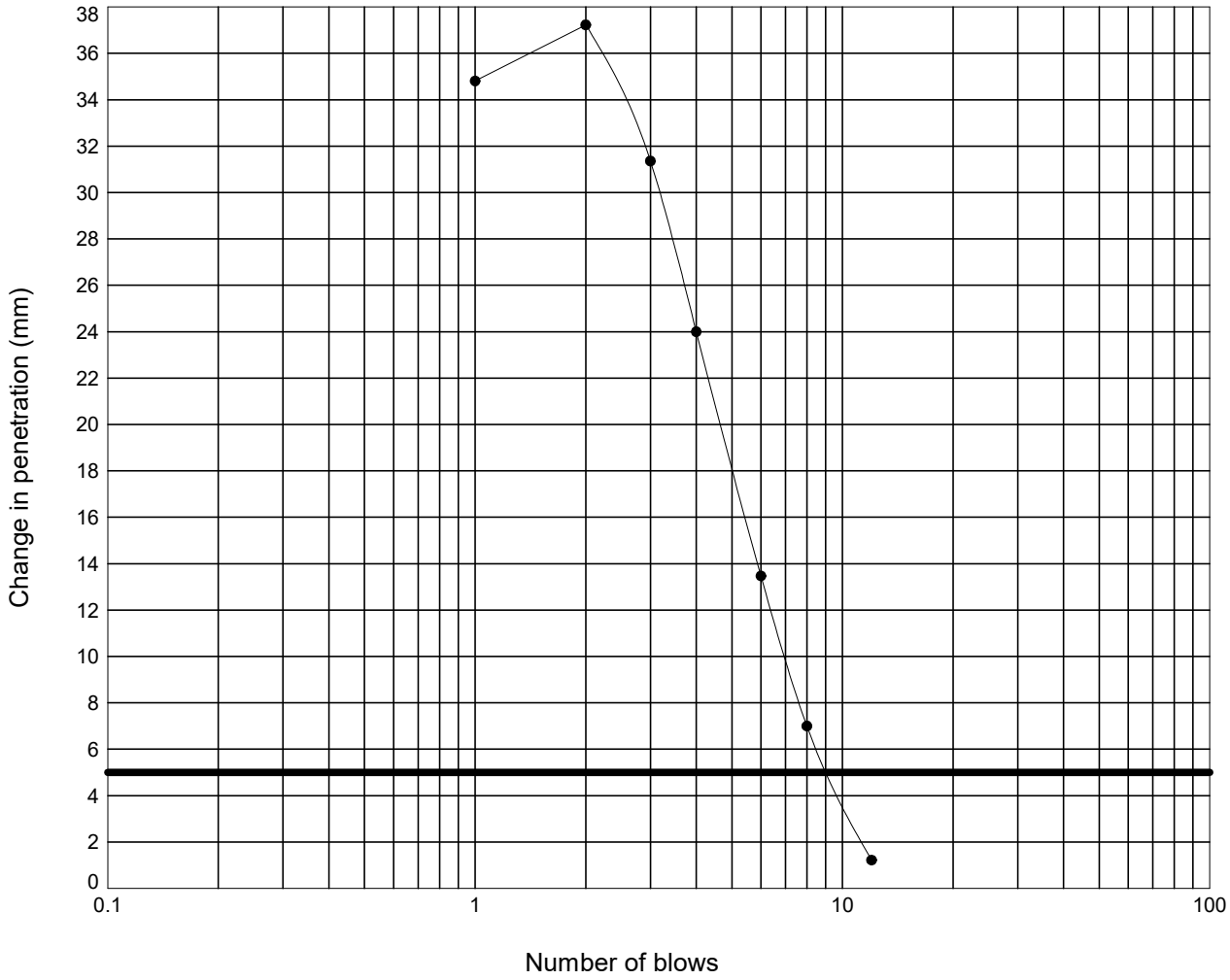
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP508** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**

Description : **Dark greyish brown CLAY (+2)**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	32	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	9.2	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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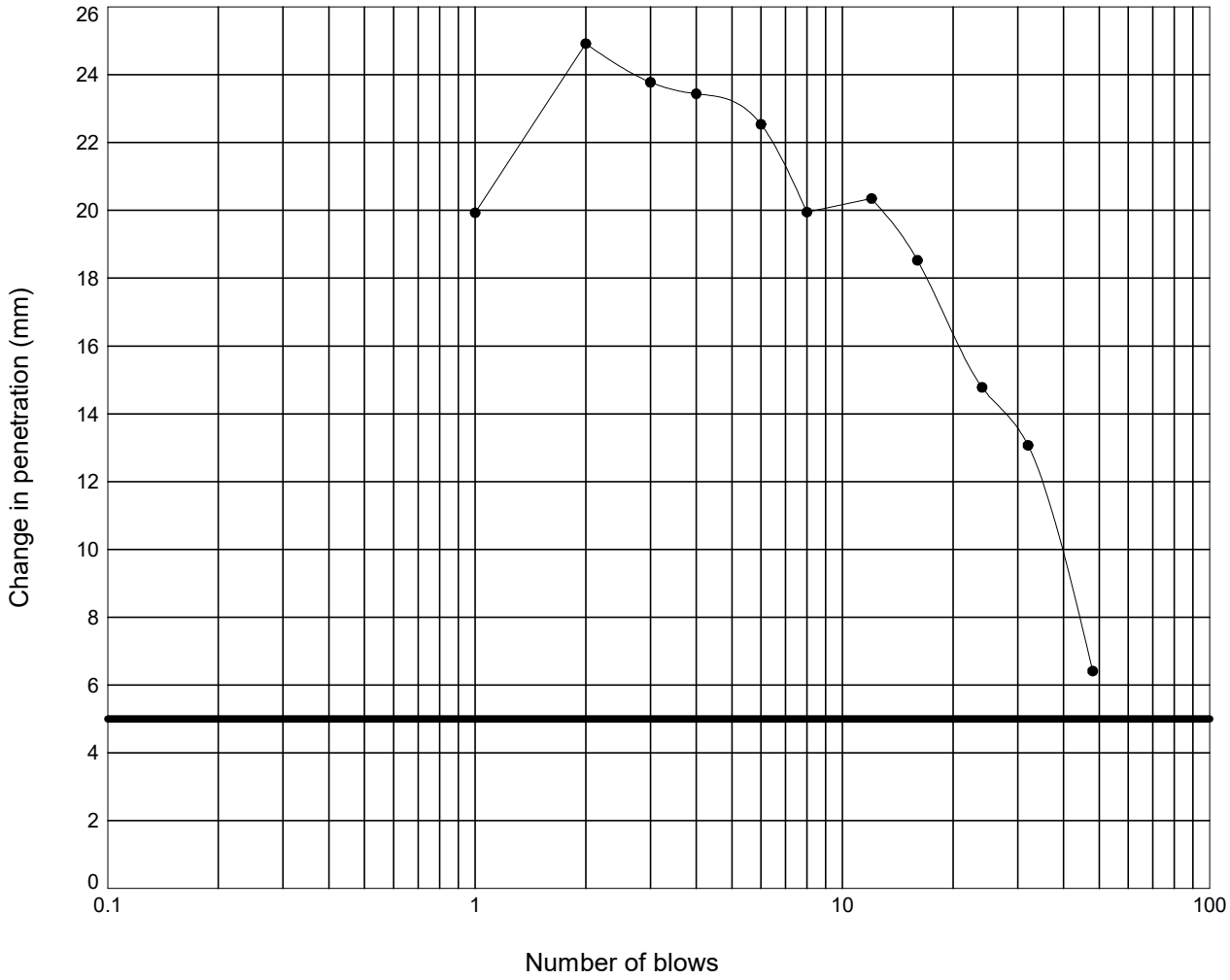
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP508** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**

Description : **Dark greyish brown CLAY (-4)**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	23	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	17.2	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Contract	Contract Ref:
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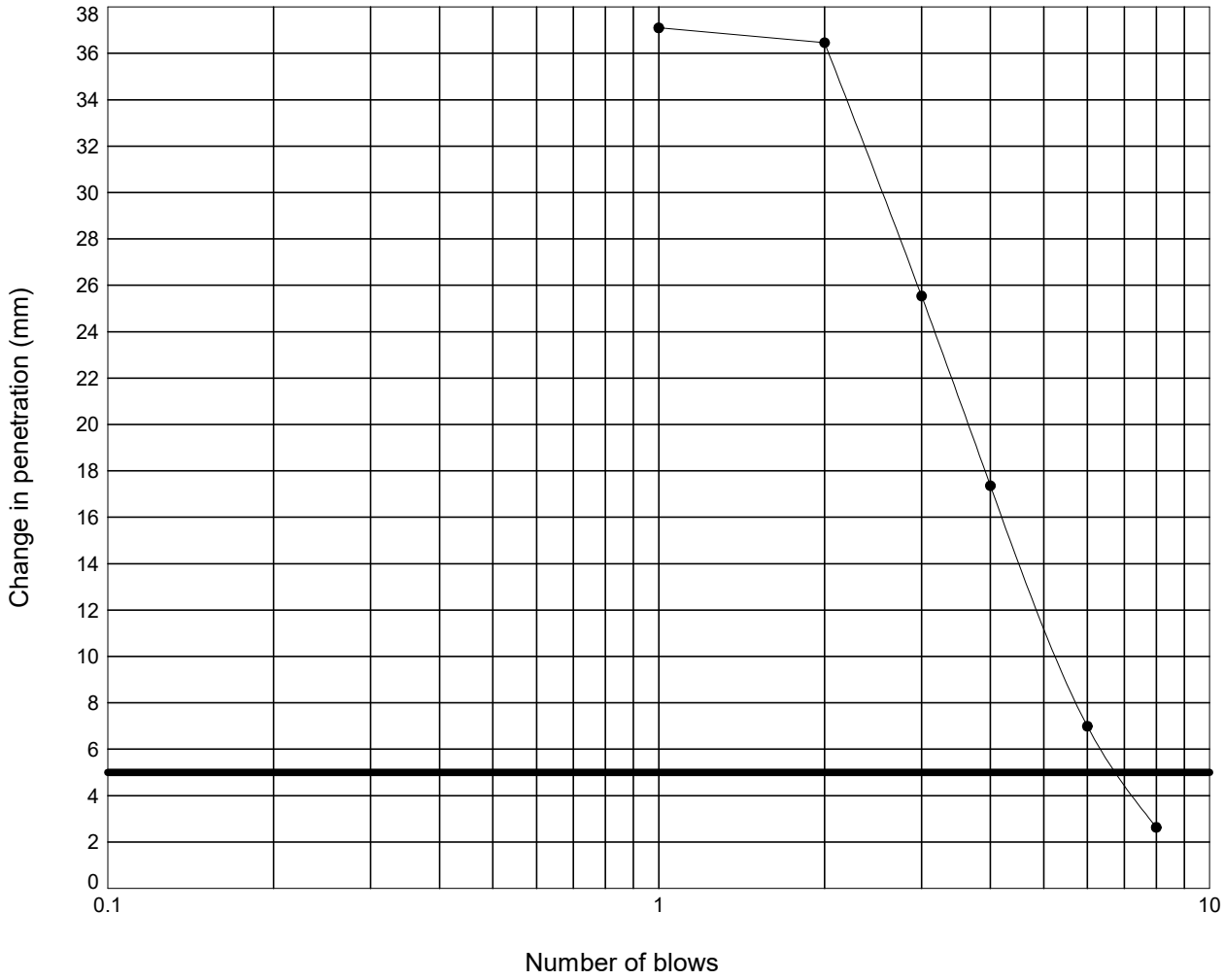
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP508** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**

Description : **Dark greyish brown CLAY (+4)**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	32	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	7.9	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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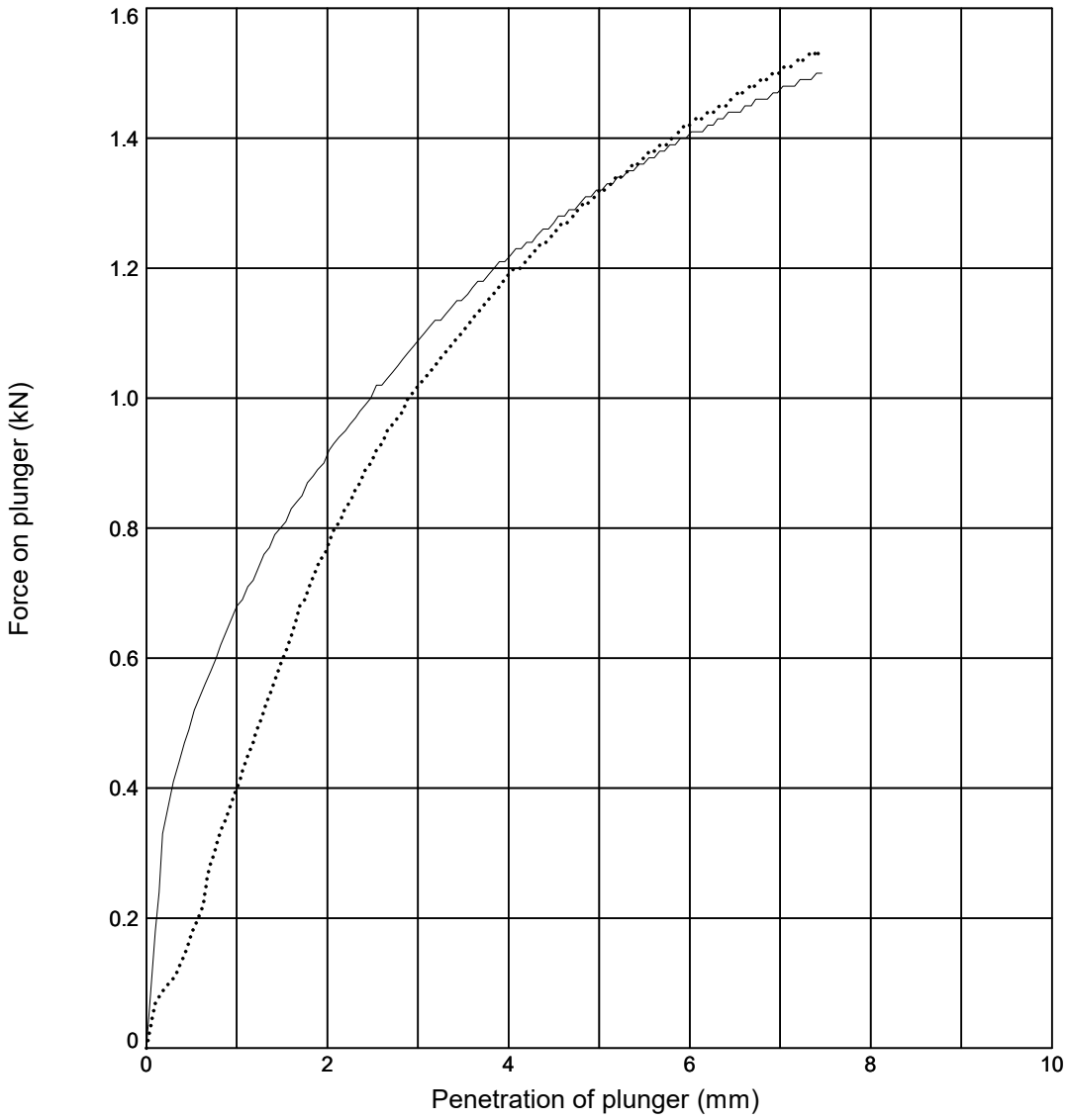
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP508** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**24**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**28**	**29**
Initial Bulk Density (Mg/m^3)	:	**1.88**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**7.6**	**6.9**
Initial Dry Density (Mg/m^3)	:	**1.52**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Dark greyish brown CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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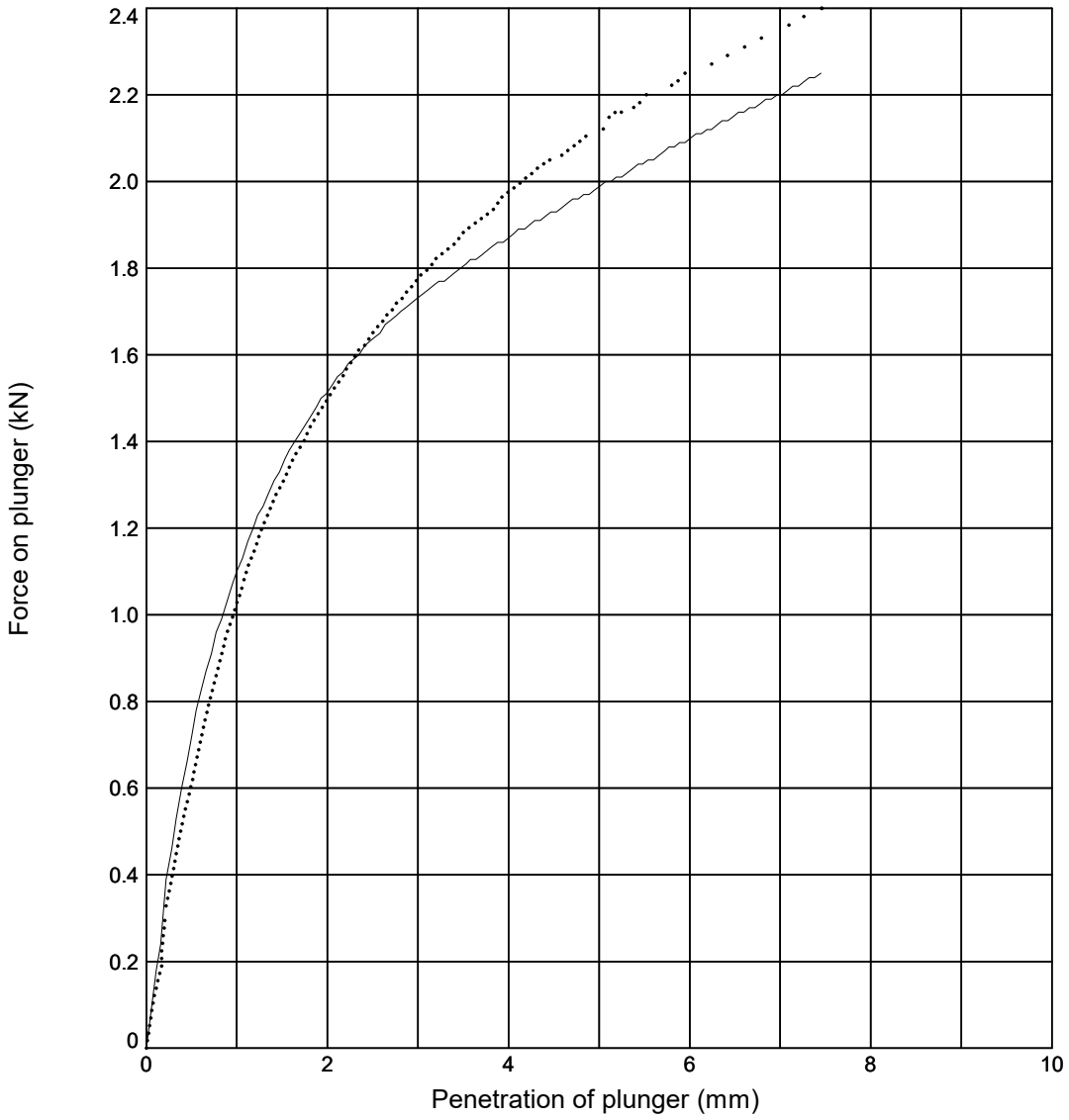
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP508** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**27**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**27**	**26**
Initial Bulk Density (Mg/m^3)	:	**1.83**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**12**	**13**
Initial Dry Density (Mg/m^3)	:	**1.44**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Dark greyish brown CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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SEA Link FEED - Kent Onshore Cable Link | **563607**

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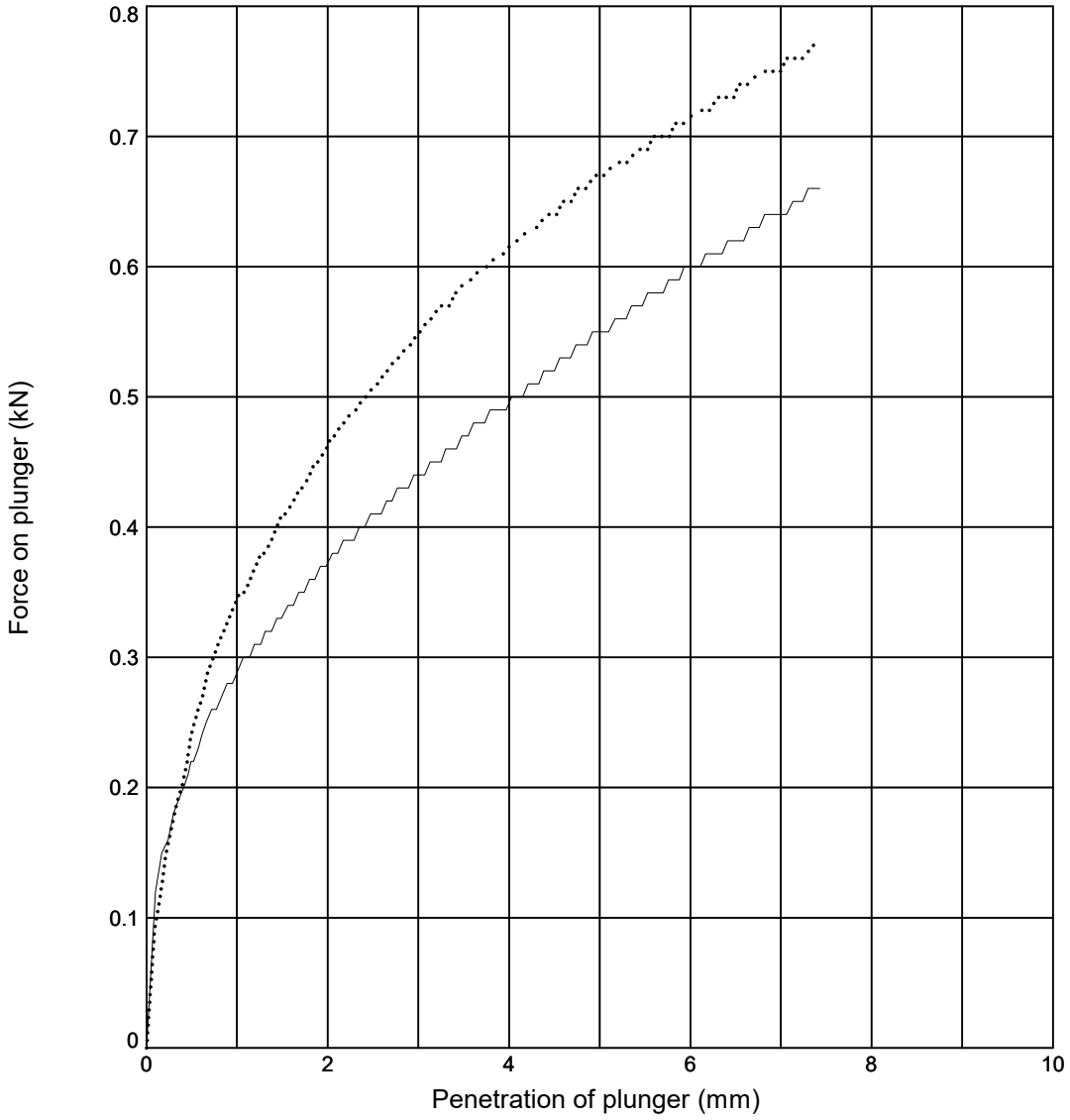
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP508** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**31**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**30**	**31**
Initial Bulk Density (Mg/m^3)	:	**1.86**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**3.1**	**3.8**
Initial Dry Density (Mg/m^3)	:	**1.42**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Dark greyish brown CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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1a Princess Street
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Compiled By	Date
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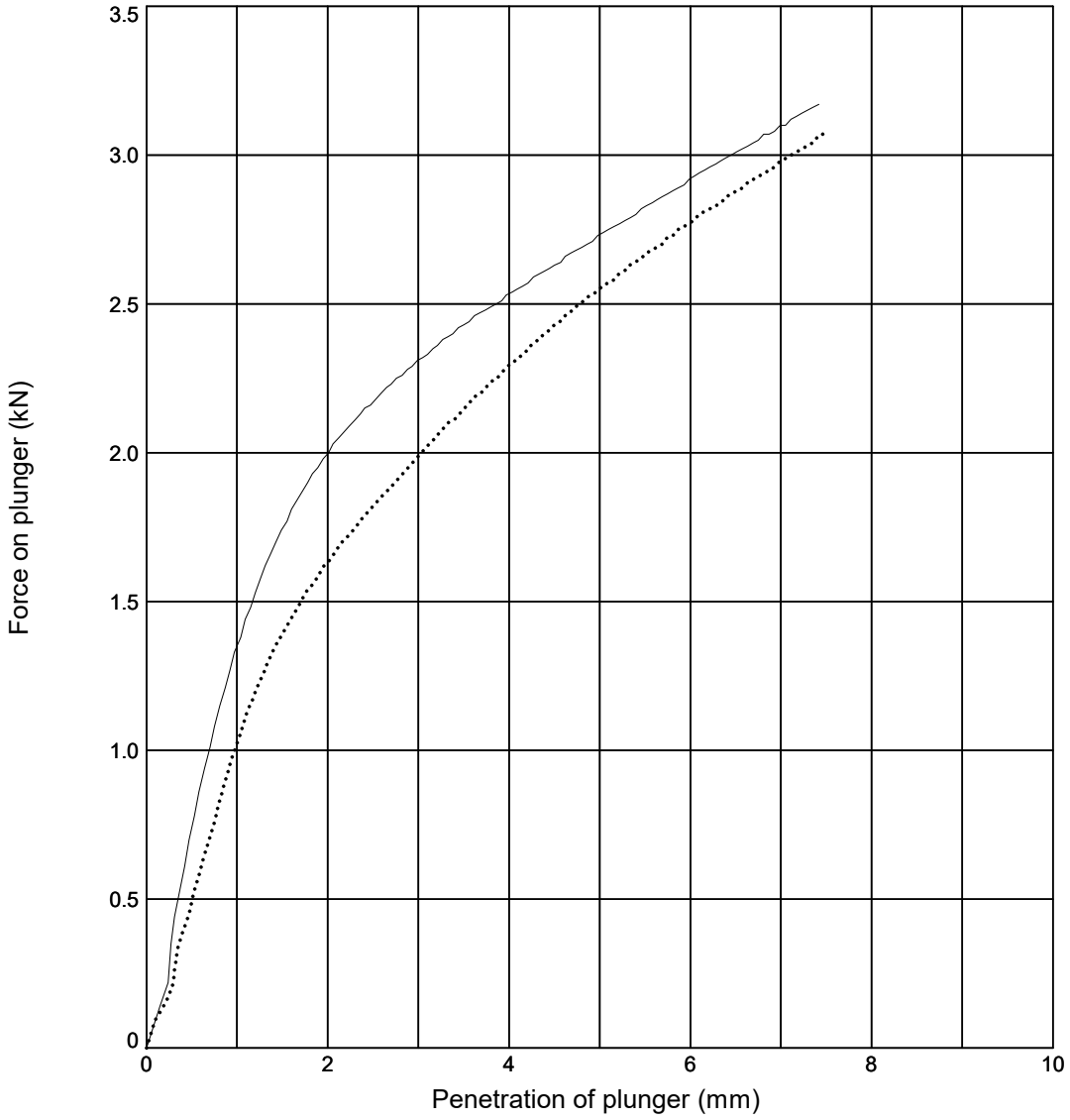
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP508** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**



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)	:	**1.79**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**16**	**14**
Initial Dry Density (Mg/m^3)	:	**1.45**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Dark greyish brown 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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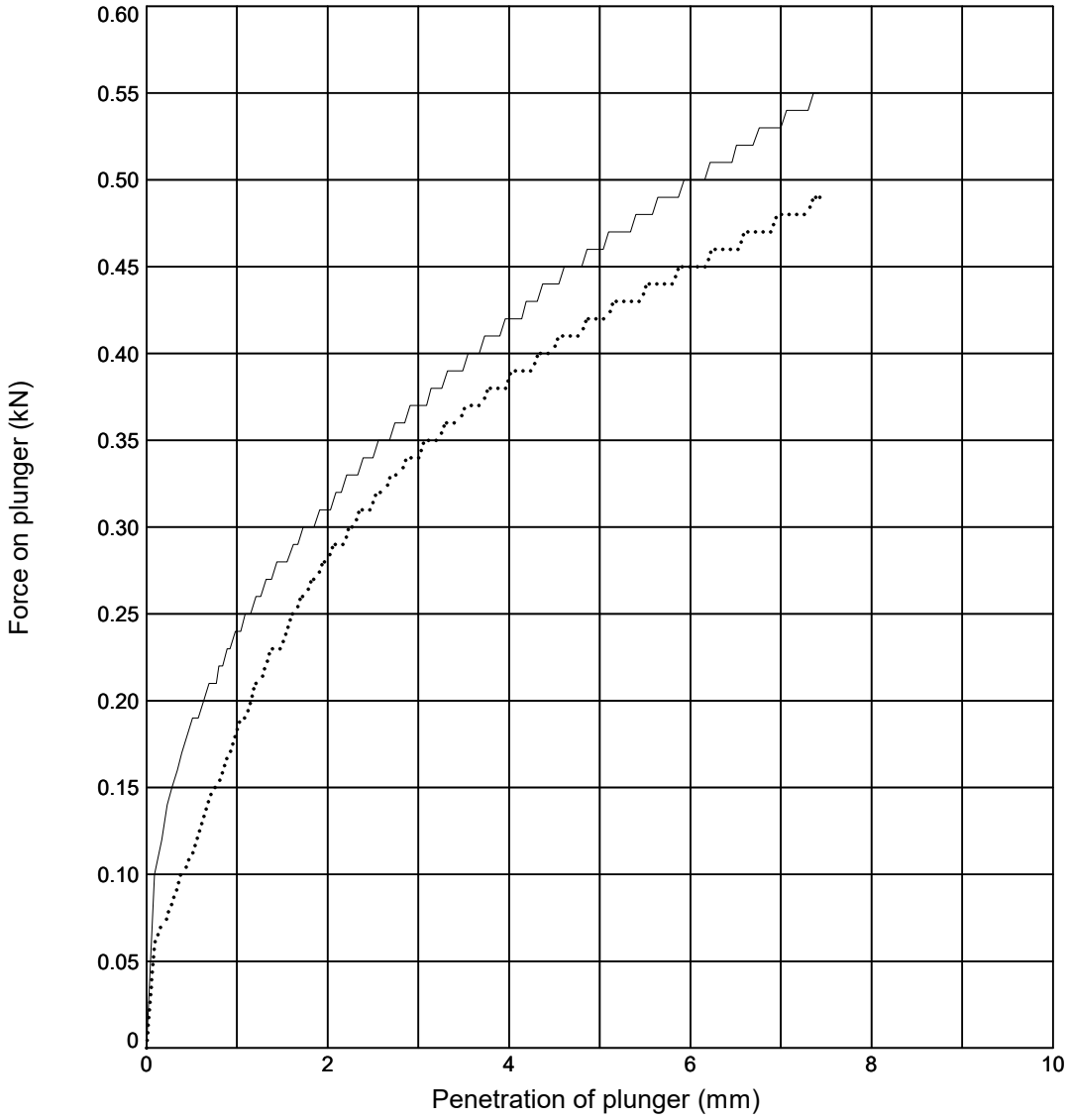
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP508** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**32**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**33**	**33**
Initial Bulk Density (Mg/m^3)	:	**1.86**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**2.6**	**2.4**
Initial Dry Density (Mg/m^3)	:	**1.41**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Dark greyish brown CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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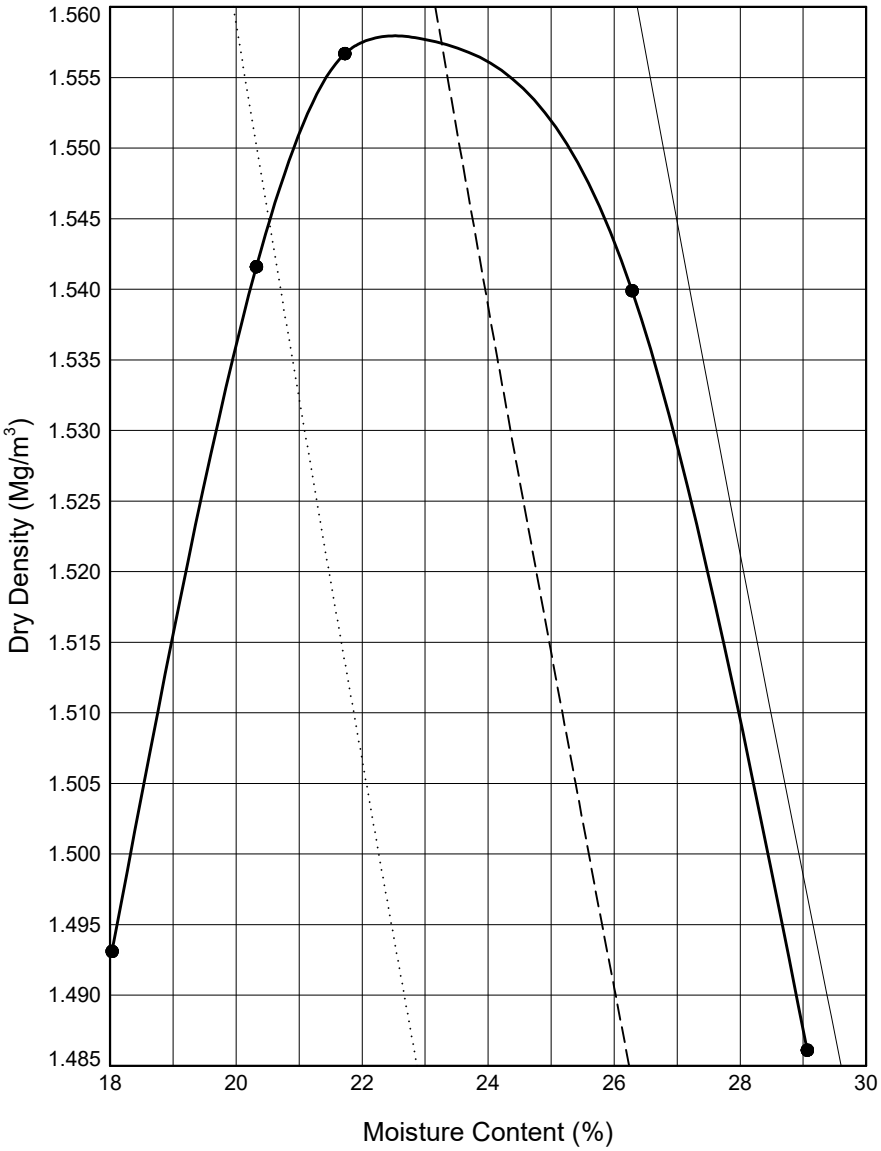
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP TEST

In accordance with clauses 11.3,11.4,11.5,11.6,11.7 of BS1377:Part 2:2022

Position ID: **R22-TP510** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions		Test Details		Test Results	
Initial Moisture Content (%)	: **26**	Compaction Type	: **Light**	Maximum Dry Density (Mg/m^3)	: **1.56**
% Retained on 37.5mm BS Sieve	: **0**	Mass of Rammer (kg):	**2.5**	Optimum Moisture Content (%)	: **23**
% 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 test carried out at each point**	
Size of Soil Pieces	:**<37.5mm**	Single sample was used.			

Sample Description	Key to Air Voids Lines		
Orangish brown silty CLAY	——— 0%	– – – – 5%	····· 10%

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Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

AGS

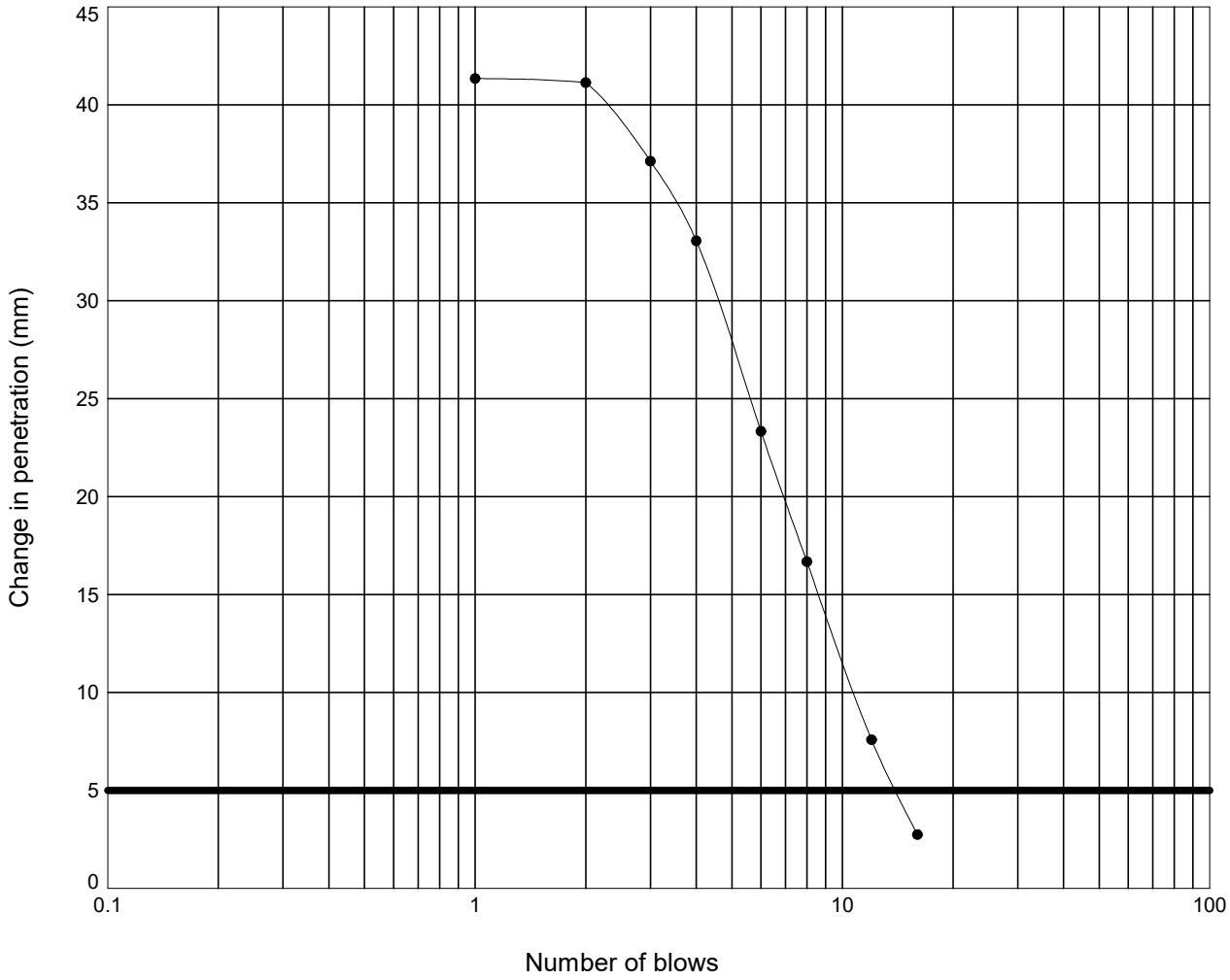
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP510** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**

Description : **Orangish brown silty CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	26	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	11.1	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Compiled By	Date
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Contract	Contract Ref:
SEA Link FEED - Kent Onshore Cable Link	**563607**

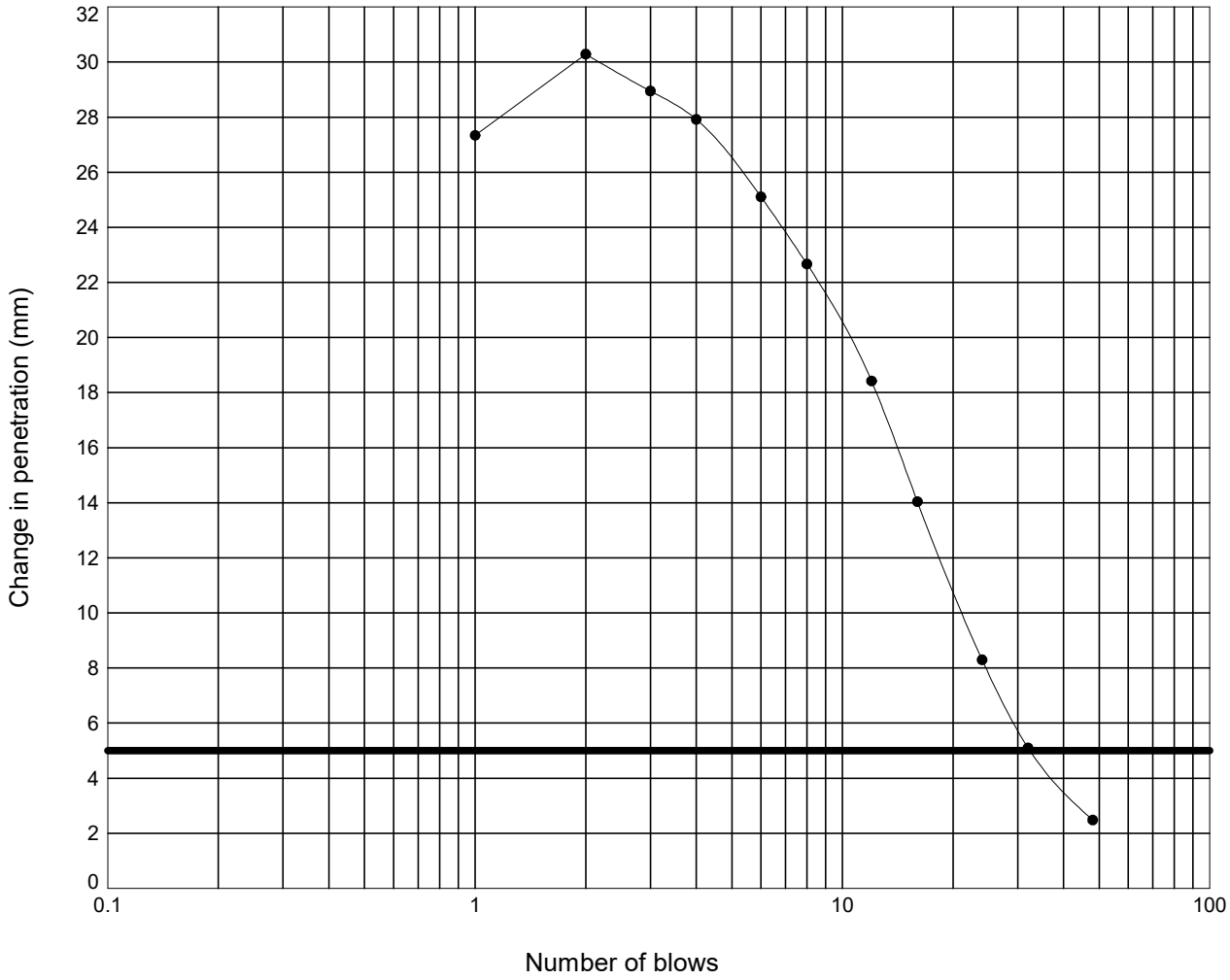
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP510** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**

Description : **Orangish brown silty 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 :	=	0	%
Moisture Condition Value :	=	14.6	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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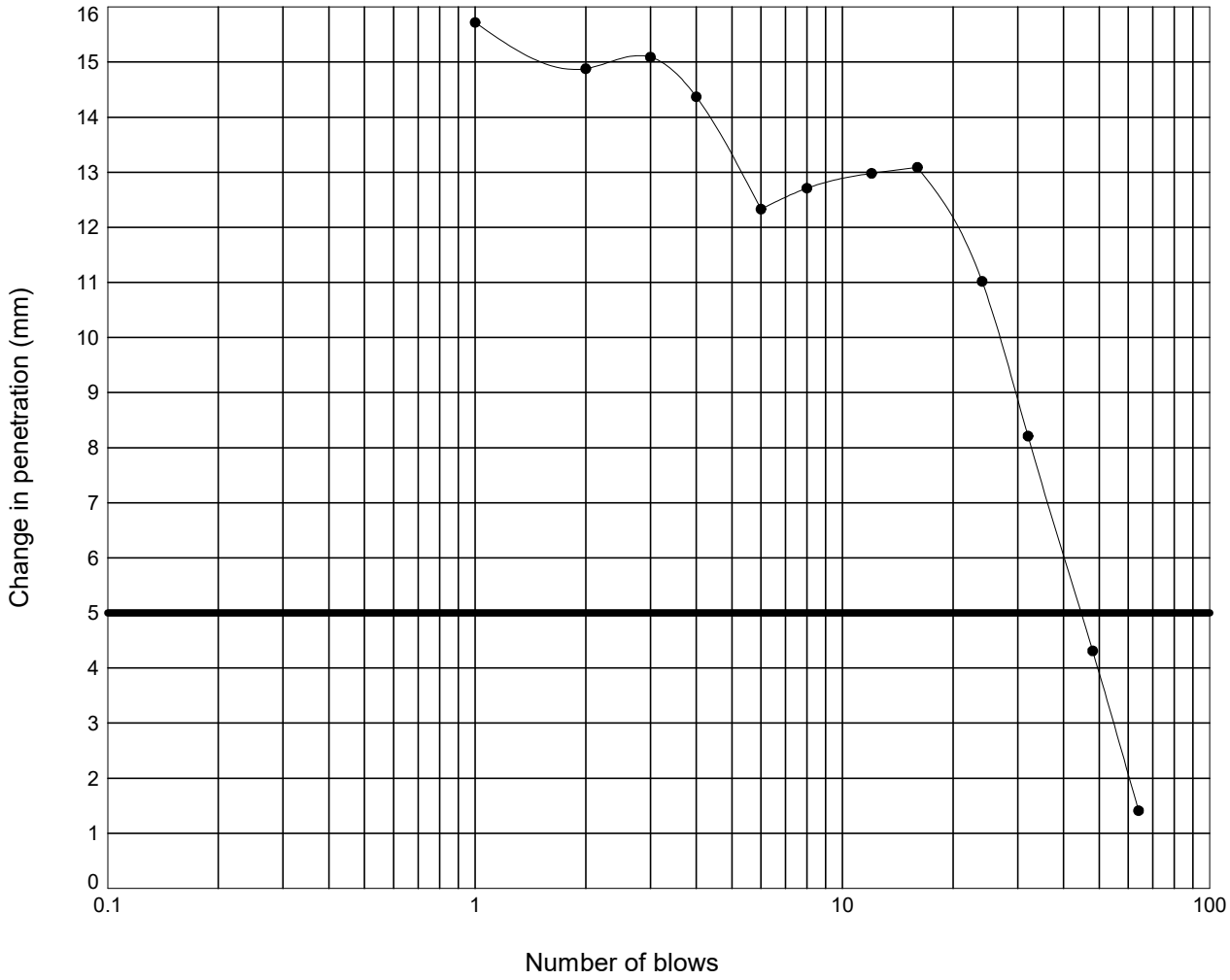
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP510** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**

Description : **Orangish brown 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 :	=	0	%
Moisture Condition Value :	=	16.5	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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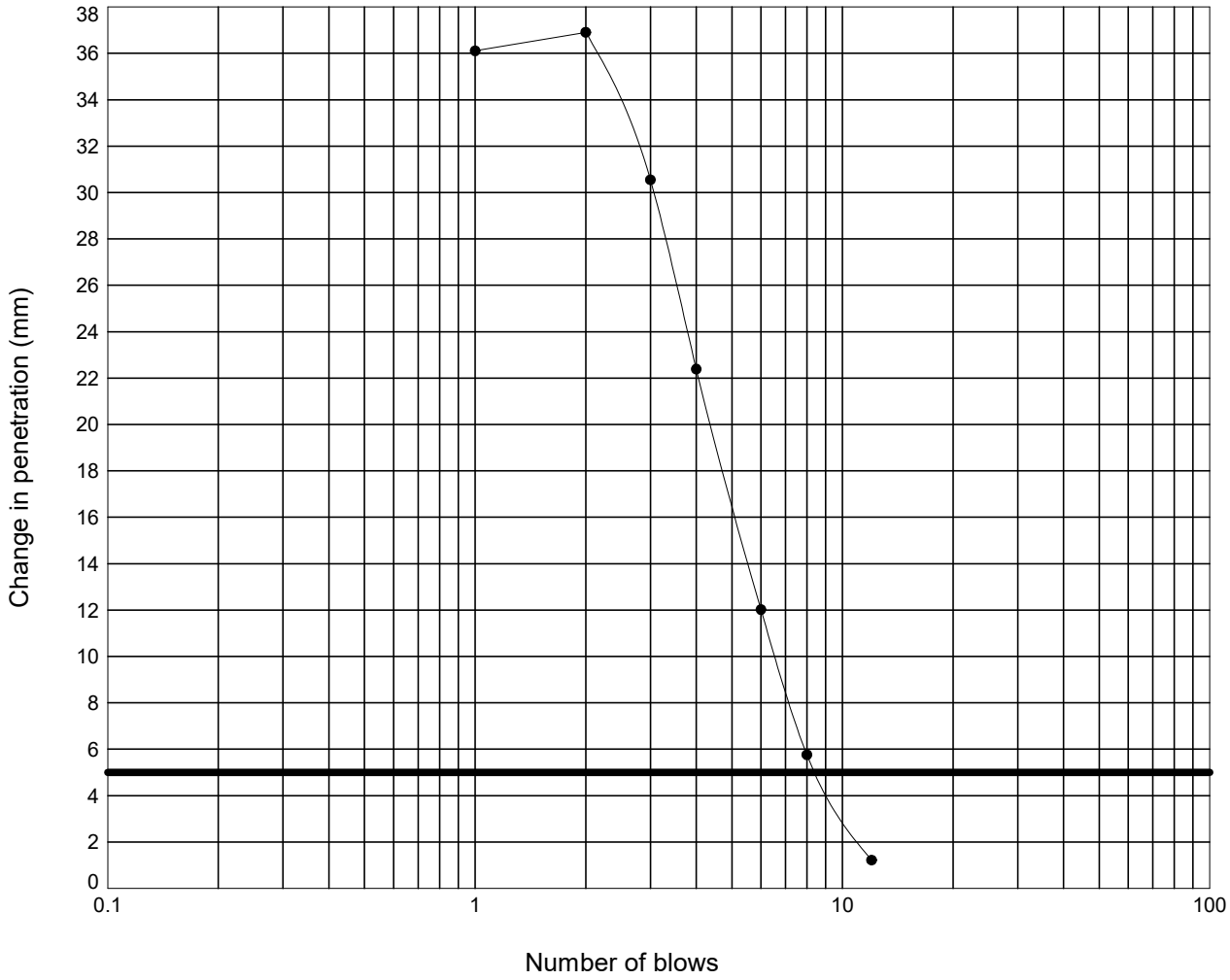
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP510** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**

Description : **Orangish brown silty CLAY**

Remarks : **Test carried out at corresponding compaction point from dry density/moisture content relationship test**



Moisture Content :	=	29	%
Percentage retained on 20 mm sieve :	=	0	%
Moisture Condition Value :	=	8.7	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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Date: **18/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

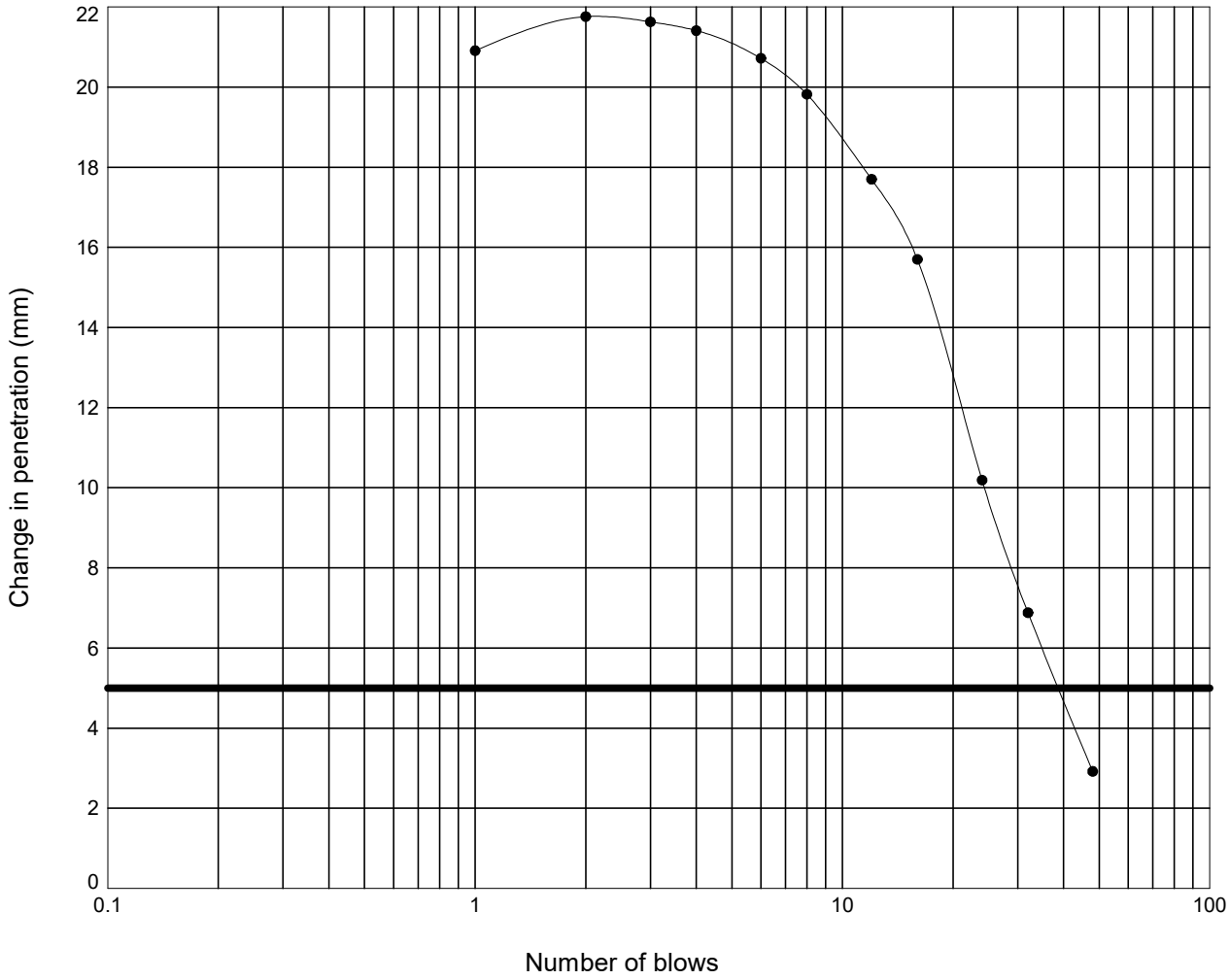
MOISTURE CONDITION VALUE

In accordance with clause 13.4 of BS1377:Part 2:2022

Position ID: **R22-TP510** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**

Description : **Orangish brown 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 :	=	0	%
Moisture Condition Value :	=	15.5	
Interpretation of curve:	=	Steepest straight line - Fig 9	

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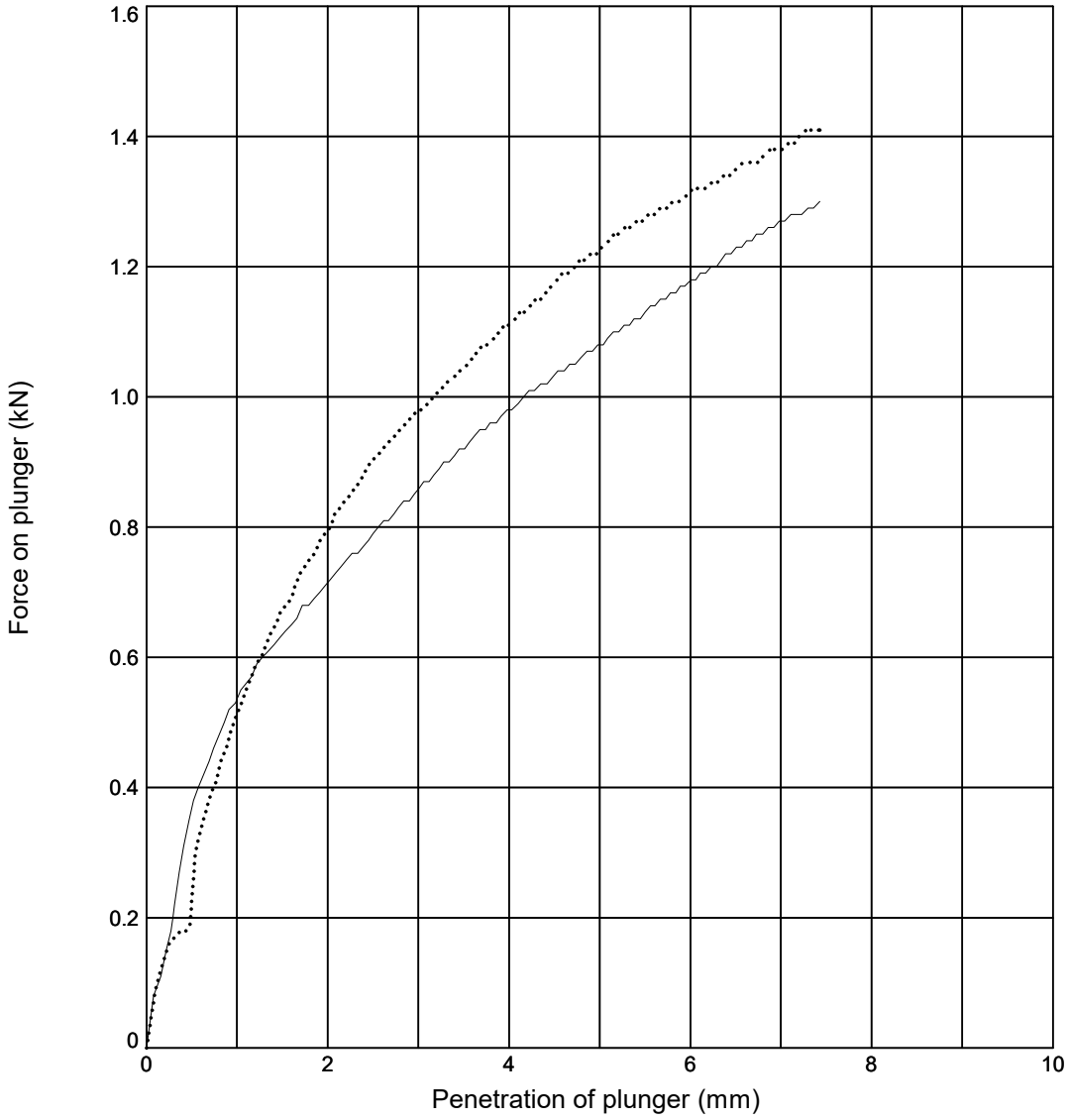
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP510** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**26**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**26**	**26**
Initial Bulk Density (Mg/m^3)	:	**1.94**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**6.0**	**6.8**
Initial Dry Density (Mg/m^3)	:	**1.54**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Orangish brown silty CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

STRUCTURAL SOILS
1a Princess Street
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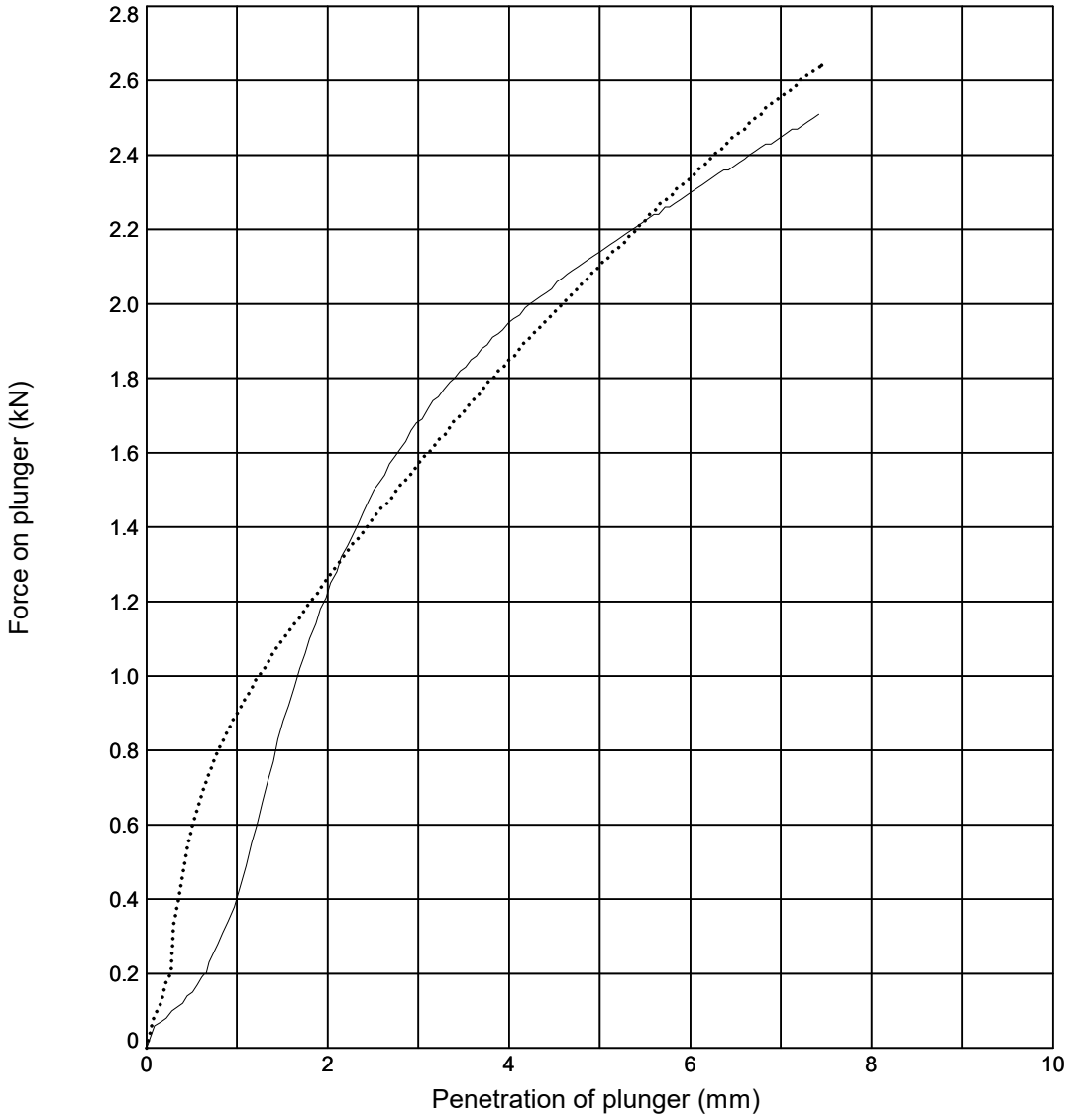
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP510** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**22**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**22**	**22**
Initial Bulk Density (Mg/m^3)	:	**1.89**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**11**	**11**
Initial Dry Density (Mg/m^3)	:	**1.55**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Orangish brown silty CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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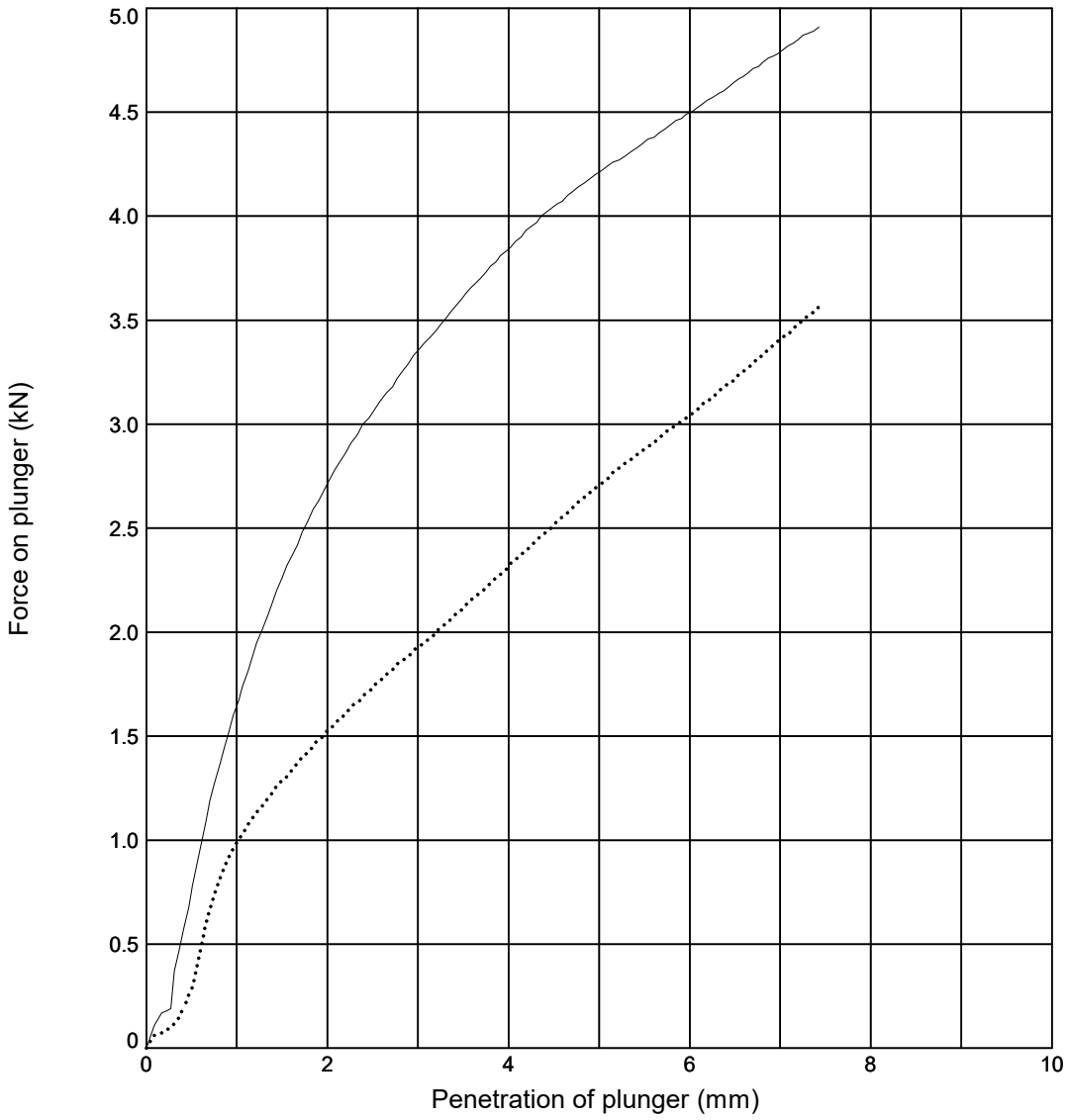
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP510** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**



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)	:	**1.77**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**23**	**14**
Initial Dry Density (Mg/m^3)	:	**1.50**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Orangish brown silty CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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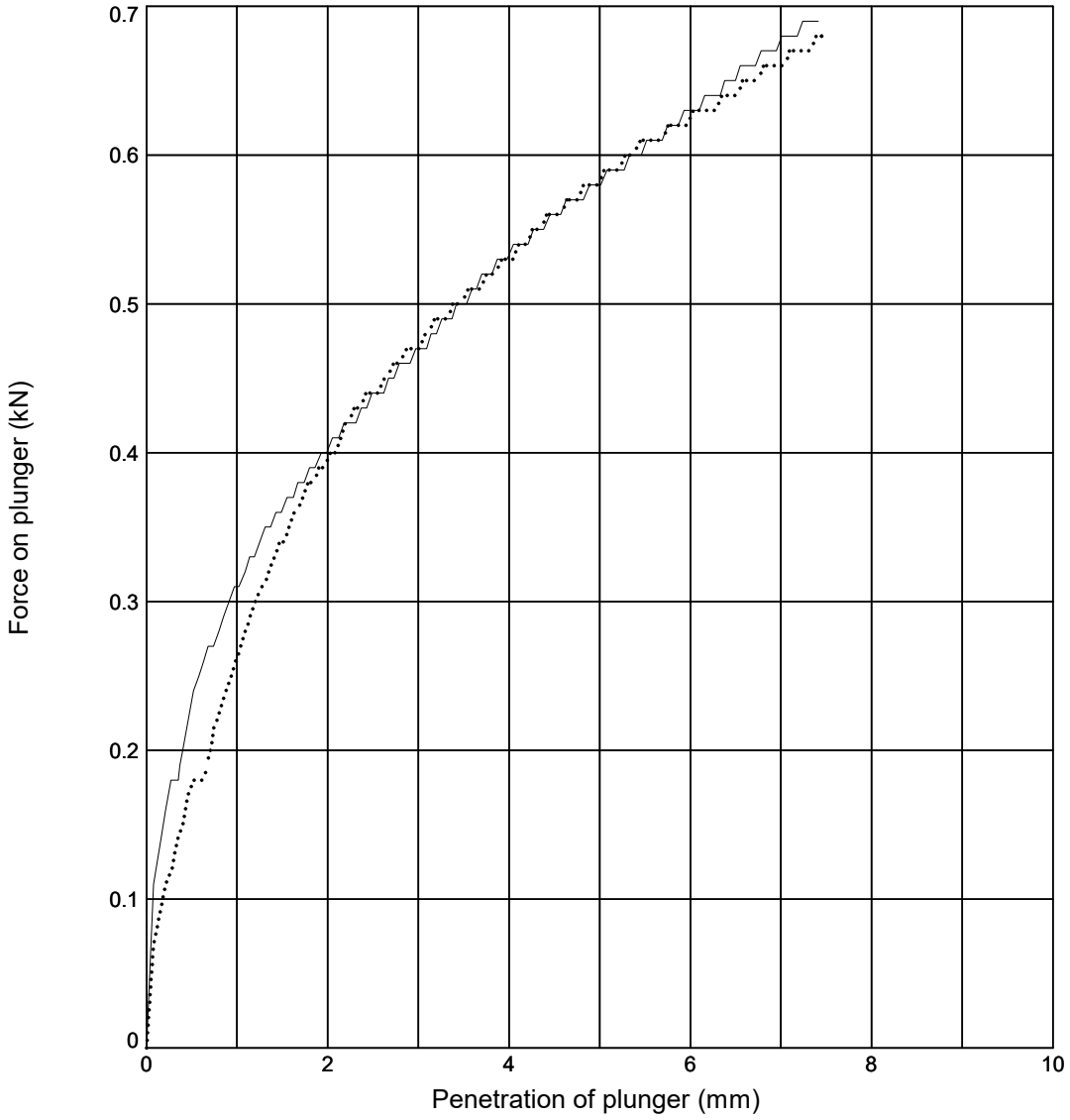
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP510** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**



Initial Sample Conditions			Test Details			Test Results	Top	Base
Initial Moisture Content (%)	:	**29**	Compaction Type	:	**2.5 kg Dynamic**	Moisture Content (%)	**29**	**29**
Initial Bulk Density (Mg/m^3)	:	**1.92**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**3.3**	**3.3**
Initial Dry Density (Mg/m^3)	:	**1.49**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Orangish brown silty CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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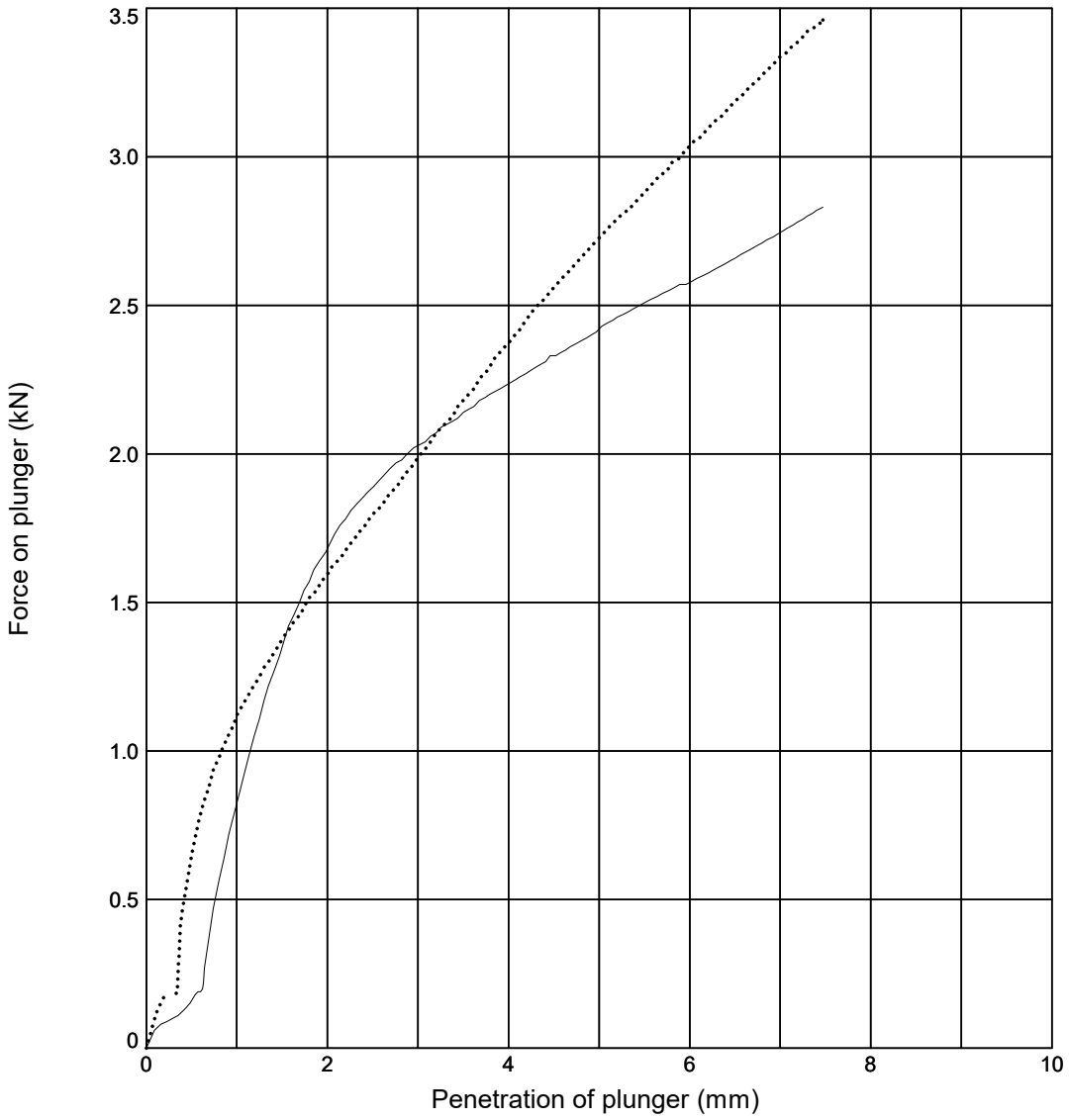
LABORATORY CALIFORNIA BEARING RATIO TEST

In accordance with clause 15 of BS1377:Part 2:2022

Position ID: **R22-TP510** Sample Ref: **5** Sample Type: **LB** Depth (m): **1.00**



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)	:	**1.85**	Surcharge (kg)	:	**4.0**	CBR Value (%)	**14**	**14**
Initial Dry Density (Mg/m^3)	:	**1.55**	Soaking Time (hrs)	:	**-**	Correction Applied (mm)	**NA**	**NA**
% Retained on 20mm Sieve	:	**0**	Swelling (mm)	:	**-**	CBR Value (Corrected) (%)	**NA**	**NA**

Sample Description	Key
Orangish brown silty CLAY	——— **Top** ····· **Base**

Remarks: Test carried out at corresponding compaction point from dry density/moisture content relationship test

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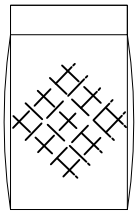
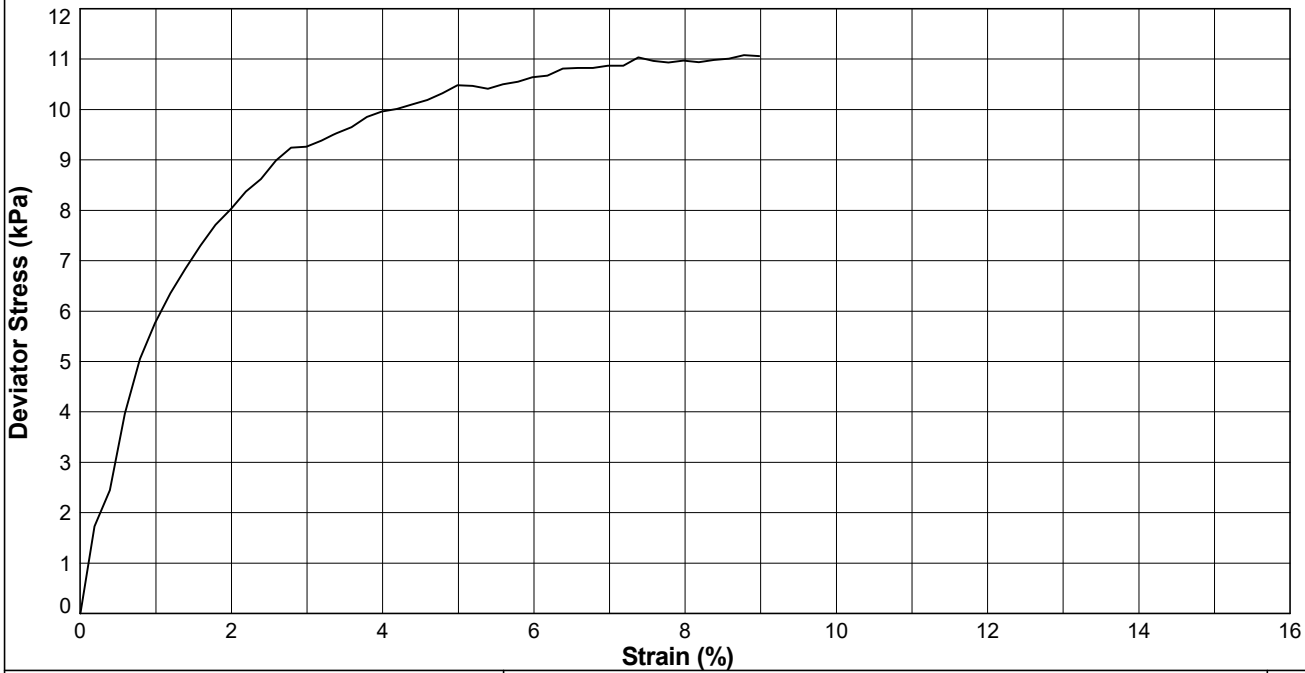
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH101** Sample Ref: **12** Sample Type: **UT** Depth (m): **3.00**

Description : **Dark grey clayey PEAT**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**102.69**		
	Height	(mm)	**208.33**		
	Water Content	(%)	**69.4**		
	Bulk Density	(Mg/m^3)	**1.62**		
	Dry Density	(Mg/m^3)	**0.96**		
	Void Ratio		**1.7704**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.77**		
	Rate of Axial Displacement	(%/min)	**0.82**		
	Cell Pressure	(kPa)	**60**		
	Membrane Correction	(kPa)	**1.55**		
	Corrected Deviator Stress	(kPa)	**11**		
	Undrained Shear Strength	(kPa)	**6**		
FAILURE DETAILS	Strain at Failure	(%)	**8.8**		
	Mode of Failure 1 : **Semi-plastic (intermediate)**				



STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By: [redacted]

Date: **2/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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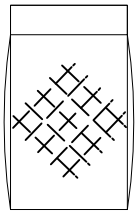
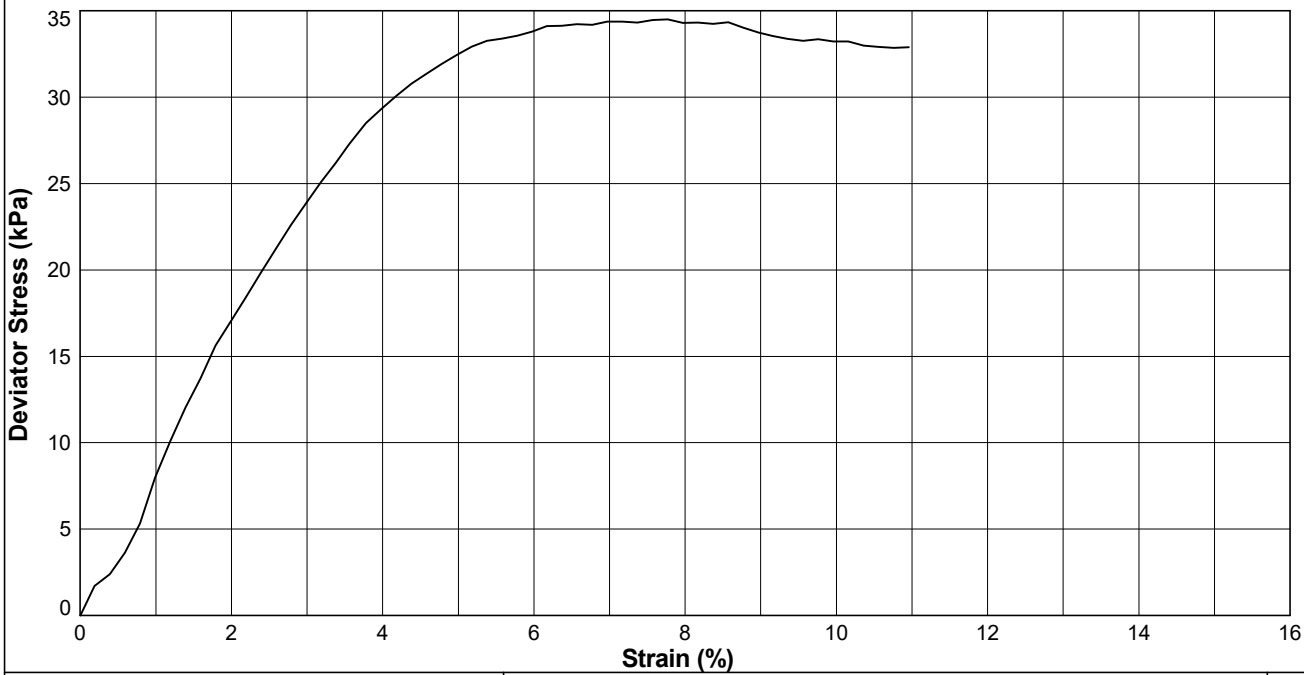
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH101** Sample Ref: **21** Sample Type: **UT** Depth (m): **6.00**

Description : **Dark grey sandy CLAY with peat**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**102.19**		
	Height	(mm)	**208.39**		
	Water Content	(%)	**51.4**		
	Bulk Density	(Mg/m^3)	**1.75**		
	Dry Density	(Mg/m^3)	**1.16**		
	Void Ratio		**1.2868**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.77**		
	Rate of Axial Displacement	(%/min)	**1.01**		
	Cell Pressure	(kPa)	**120**		
	Membrane Correction	(kPa)	**1.42**		
	Corrected Deviator Stress	(kPa)	**34**		
	Undrained Shear Strength	(kPa)	**17**		
FAILURE DETAILS	Strain at Failure	(%)	**7.8**		
	Mode of Failure 1 : **Semi-plastic (intermediate)**				



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Hertfordshire
HP3 9RT

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Date: 2/03/24

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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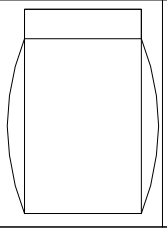
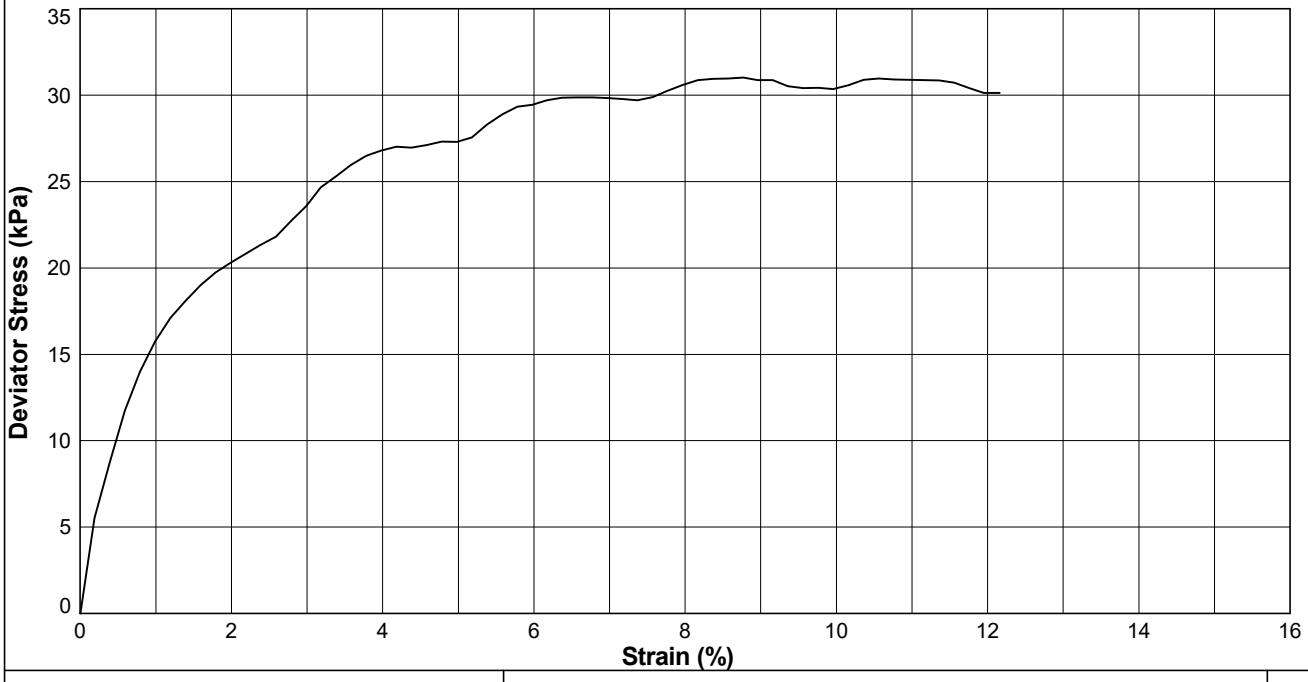
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH101** Sample Ref: **24** Sample Type: **UT** Depth (m): **7.00**

Description : **Dark grey slightly sandy CLAY with shell fragments and peat**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**103.07**		
	Height	(mm)	**207.73**		
	Water Content	(%)	**47.0**		
	Bulk Density	(Mg/m^3)	**1.76**		
	Dry Density	(Mg/m^3)	**1.20**		
	Void Ratio		**1.2103**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.90**		
	Rate of Axial Displacement	(%/min)	**0.91**		
	Cell Pressure	(kPa)	**140**		
	Membrane Correction	(kPa)	**1.81**		
	Corrected Deviator Stress	(kPa)	**31**		
	Undrained Shear Strength	(kPa)	**16**		
FAILURE DETAILS	Strain at Failure	(%)	**8.8**		
	Mode of Failure 1 : **Plastic (Barrelling)**				



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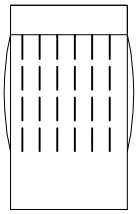
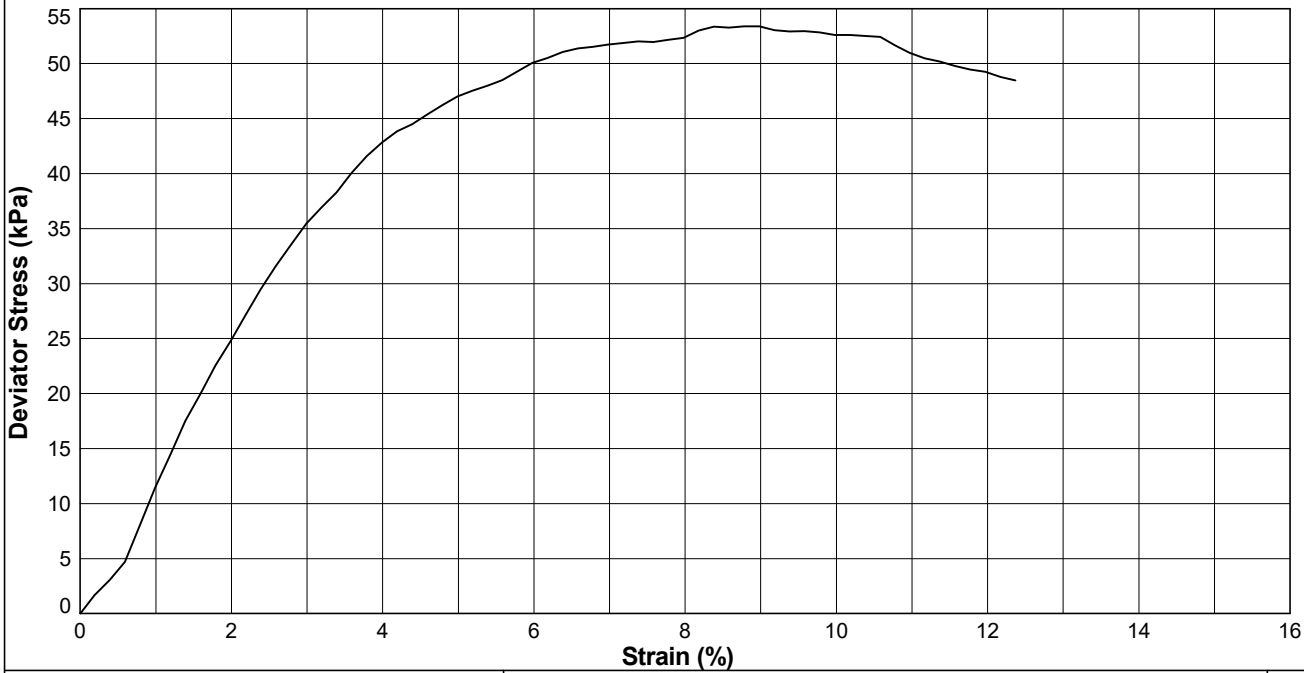
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH101** Sample Ref: **27** Sample Type: **UT** Depth (m): **8.00**

Description : **Grey mottled dark brown, black and light grey sandy silty 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)	**102.63**		
	Height	(mm)	**207.79**		
	Water Content	(%)	**42.4**		
	Bulk Density	(Mg/m^3)	**1.79**		
	Dry Density	(Mg/m^3)	**1.26**		
	Void Ratio		**1.1115**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.68**		
	Rate of Axial Displacement	(%/min)	**0.91**		
	Cell Pressure	(kPa)	**160**		
	Membrane Correction	(kPa)	**1.40**		
	Corrected Deviator Stress	(kPa)	**53**		
	Undrained Shear Strength	(kPa)	**27**		
FAILURE DETAILS	Strain at Failure	(%)	**9.0**		
	Mode of Failure 1 : **Semi-plastic (axial splitting with bulging)**				



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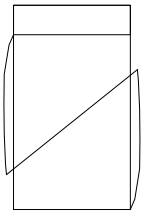
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

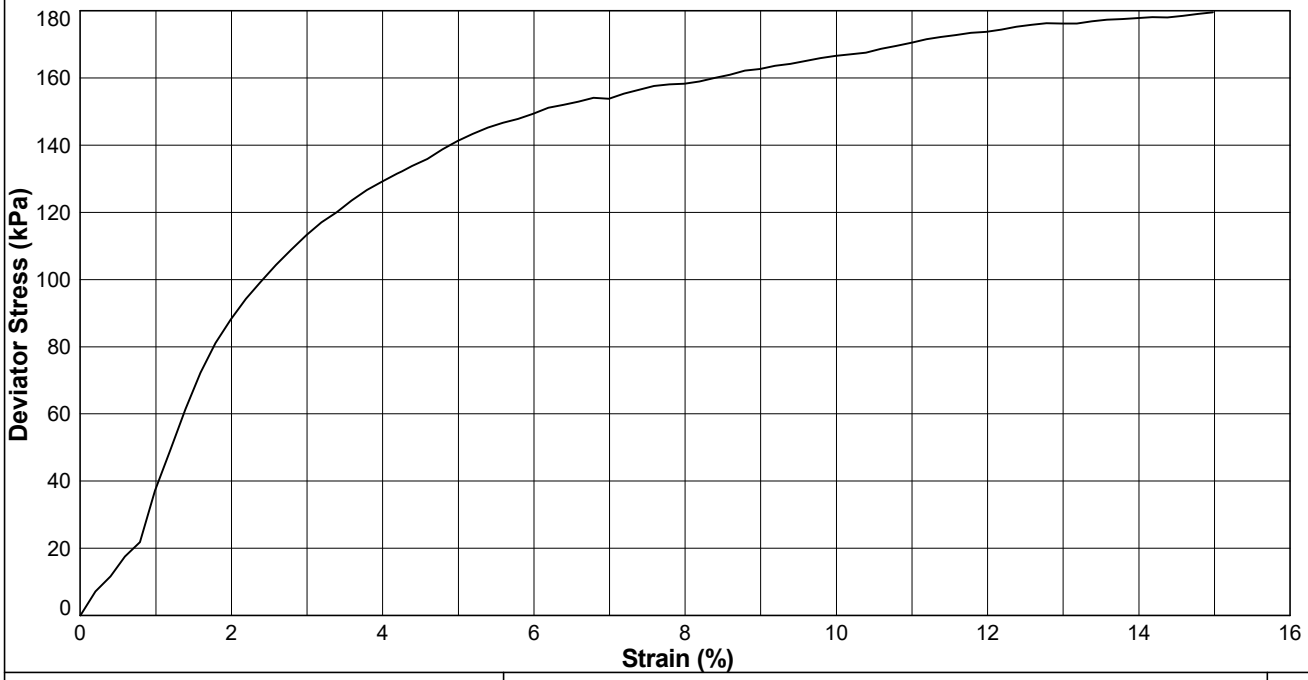
In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH101** Sample Ref: **34** Sample Type: **UT** Depth (m): **10.00**

Description : **Brown mottled greenish brown and grey 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)	**103.14**		
	Height	(mm)	**207.53**		
	Water Content	(%)	**39.6**		
	Bulk Density	(Mg/m^3)	**1.82**		
	Dry Density	(Mg/m^3)	**1.30**		
	Void Ratio		**1.0359**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.77**		
	Rate of Axial Displacement	(%/min)	**1.40**		
	Cell Pressure	(kPa)	**200**		
	Membrane Correction	(kPa)	**2.29**		
	Corrected Deviator Stress	(kPa)	**179**		
	Undrained Shear Strength	(kPa)	**90**		
FAILURE DETAILS	Strain at Failure	(%)	**15.0**		
	Mode of Failure 1 : **Brittle (shear plane)**				



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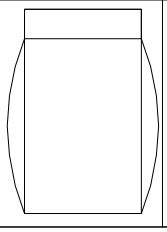
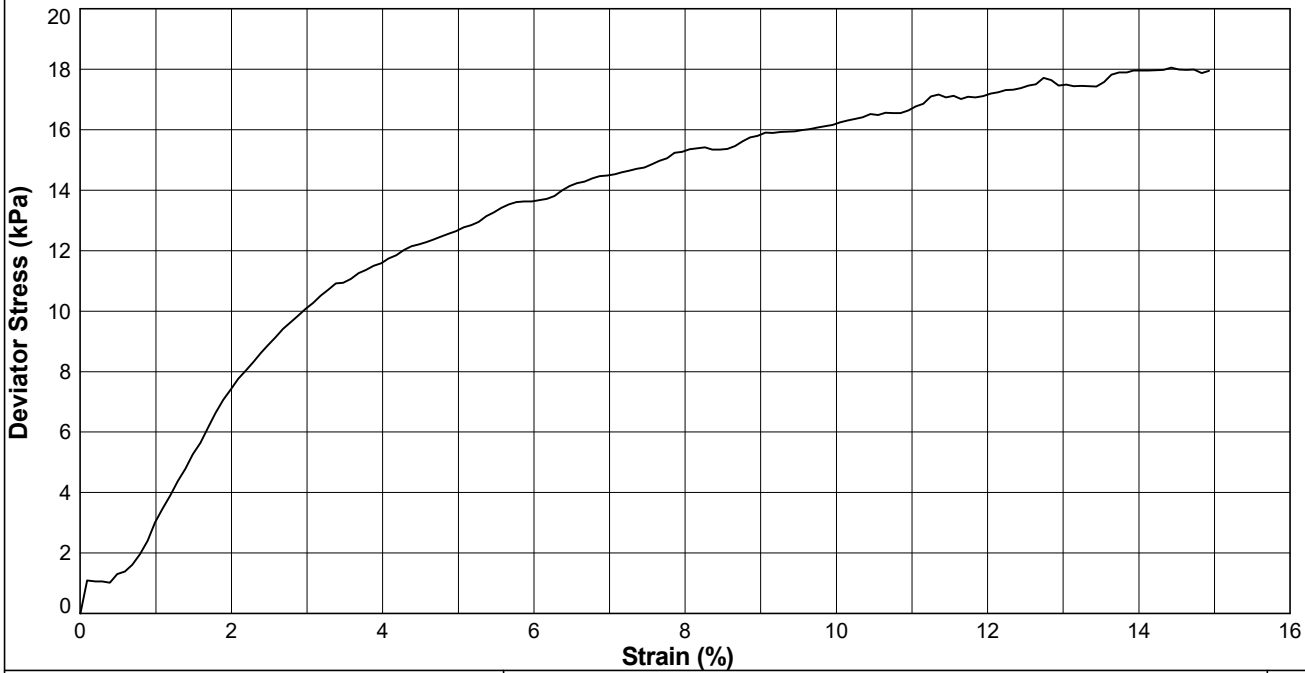
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH102** Sample Ref: **12** Sample Type: **UT** Depth (m): **3.00**

Description : **Brown mottled dark brown and black CLAY with peat**
Non-standard notes : **Failed perpendicularity check**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**101.04**		
	Height	(mm)	**207.47**		
	Water Content	(%)	**47.7**		
	Bulk Density	(Mg/m^3)	**1.84**		
	Dry Density	(Mg/m^3)	**1.24**		
	Void Ratio		**1.1290**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.77**		
	Rate of Axial Displacement	(%/min)	**1.93**		
	Cell Pressure	(kPa)	**60**		
	Membrane Correction	(kPa)	**2.27**		
	Corrected Deviator Stress	(kPa)	**18**		
	Undrained Shear Strength	(kPa)	**9**		
FAILURE DETAILS	Strain at Failure	(%)	**14.4**		
	Mode of Failure 1 : **Plastic (Barrelling)**				



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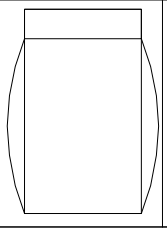
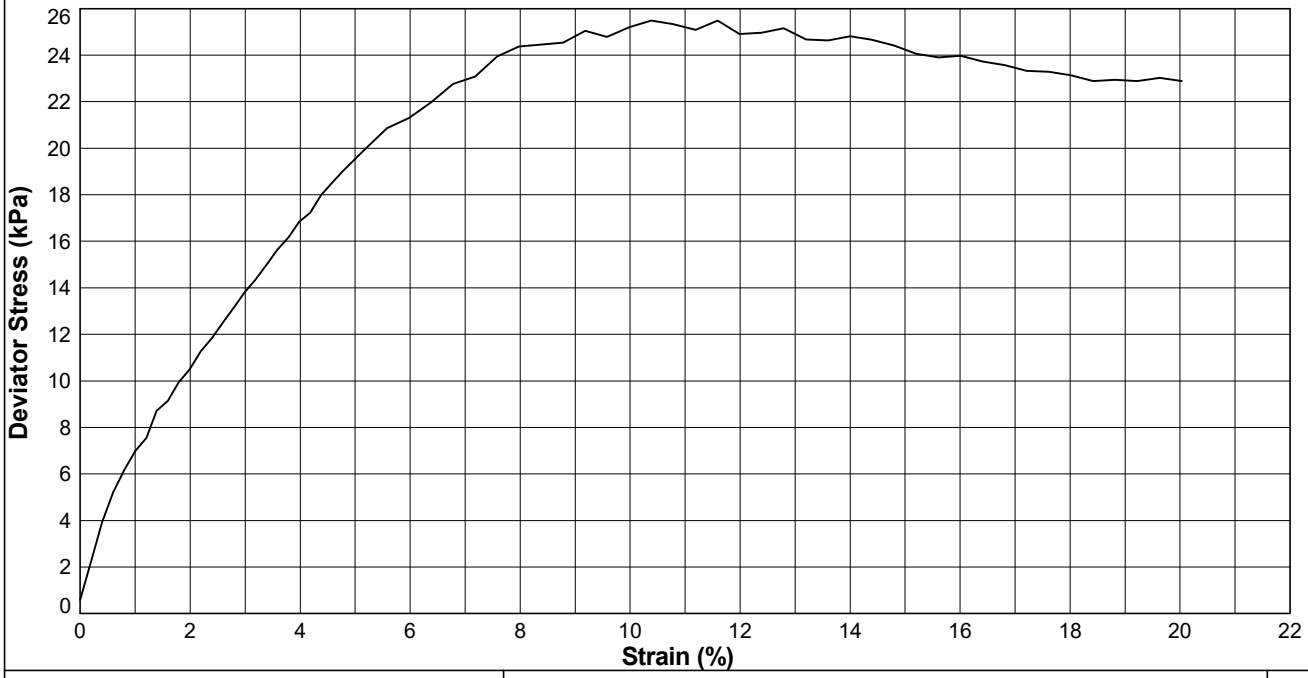
In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH102** Sample Ref: **16** Sample Type: **UT** Depth (m): **4.06**

Description : **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)	**102.28**		
	Height	(mm)	**195.56**		
	Water Content	(%)	**46.2**		
	Bulk Density	(Mg/m^3)	**1.82**		
	Dry Density	(Mg/m^3)	**1.24**		
	Void Ratio		**1.1341**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.44**		
	Rate of Axial Displacement	(%/min)	**1.38**		
	Cell Pressure	(kPa)	**80**		
	Membrane Correction	(kPa)	**1.02**		
	Corrected Deviator Stress	(kPa)	**25**		
	Undrained Shear Strength	(kPa)	**13**		
FAILURE DETAILS	Strain at Failure	(%)	**10.4**		
	Mode of Failure 1 : **Plastic (Barrelling)**				



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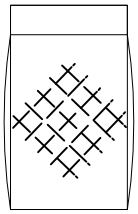
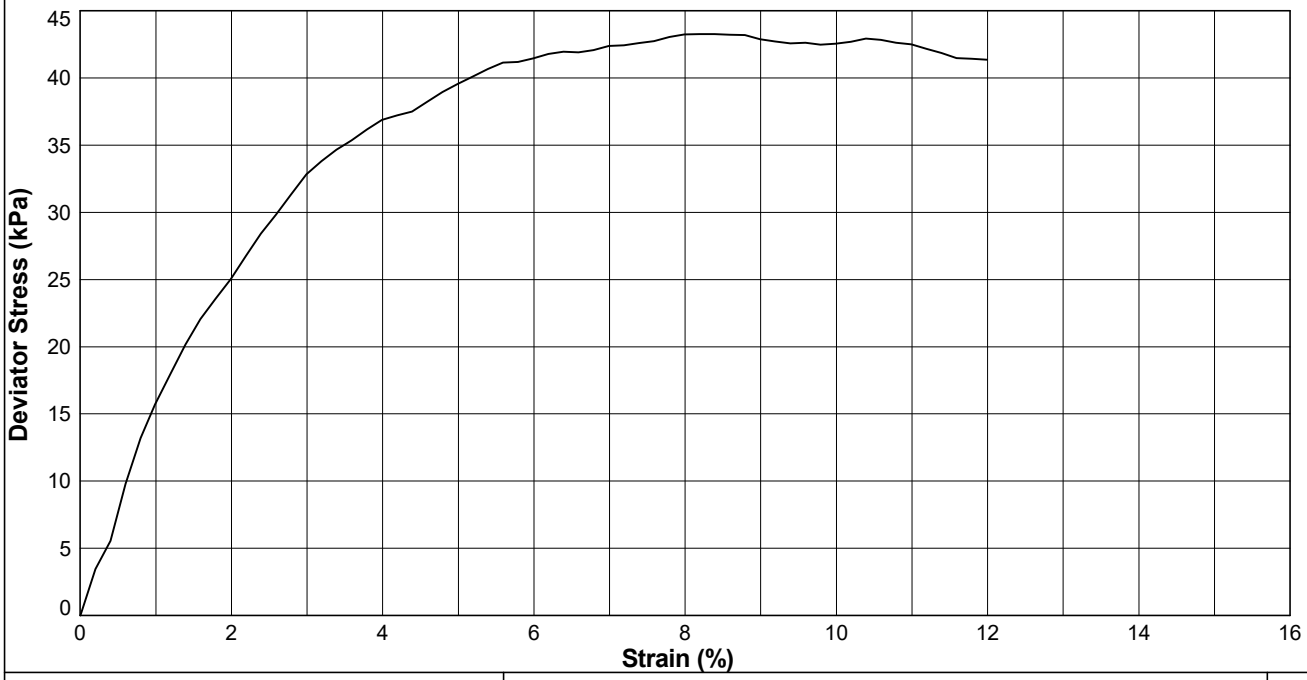
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH102** Sample Ref: **28** Sample Type: **UT** Depth (m): **7.00**

Description : **Greyish brown mottled dark 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)	**101.22**		
	Height	(mm)	**208.03**		
	Water Content	(%)	**39.2**		
	Bulk Density	(Mg/m^3)	**1.87**		
	Dry Density	(Mg/m^3)	**1.34**		
	Void Ratio		**0.9769**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.77**		
	Rate of Axial Displacement	(%/min)	**1.63**		
	Cell Pressure	(kPa)	**140**		
	Membrane Correction	(kPa)	**1.52**		
	Corrected Deviator Stress	(kPa)	**43**		
	Undrained Shear Strength	(kPa)	**22**		
FAILURE DETAILS	Strain at Failure	(%)	**8.4**		
	Mode of Failure 1 : **Semi-plastic (intermediate)**				



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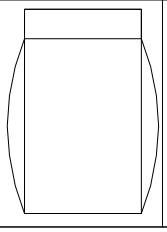
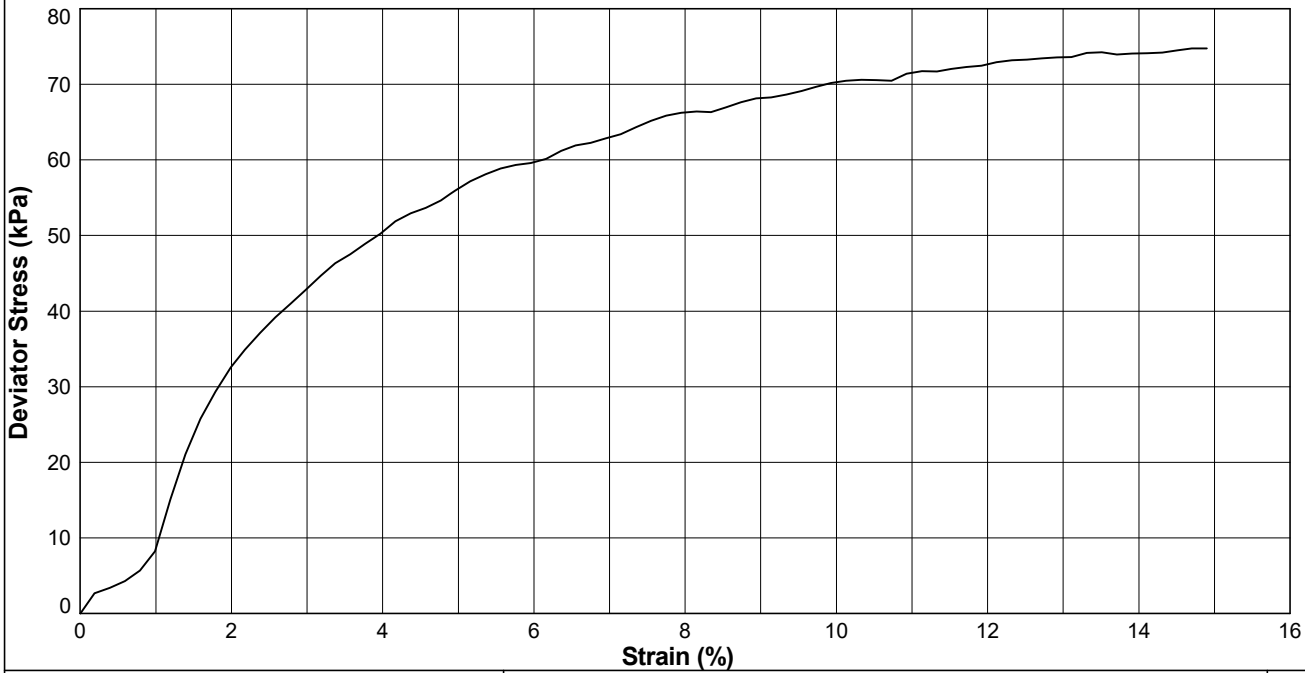
In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH102** Sample Ref: **32** Sample Type: **UT** Depth (m): **8.00**

Description : **Light grey mottled brown slightly gravelly sandy silty 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)	**102.54**		
	Height	(mm)	**208.48**		
	Water Content	(%)	**37.8**		
	Bulk Density	(Mg/m^3)	**1.84**		
	Dry Density	(Mg/m^3)	**1.34**		
	Void Ratio		**0.9847**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.77**		
	Rate of Axial Displacement	(%/min)	**1.44**		
	Cell Pressure	(kPa)	**160**		
	Membrane Correction	(kPa)	**2.29**		
	Corrected Deviator Stress	(kPa)	**75**		
	Undrained Shear Strength	(kPa)	**37**		
FAILURE DETAILS	Strain at Failure	(%)	**14.9**		
	Mode of Failure 1 : **Plastic (Barrelling)**				



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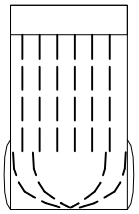
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

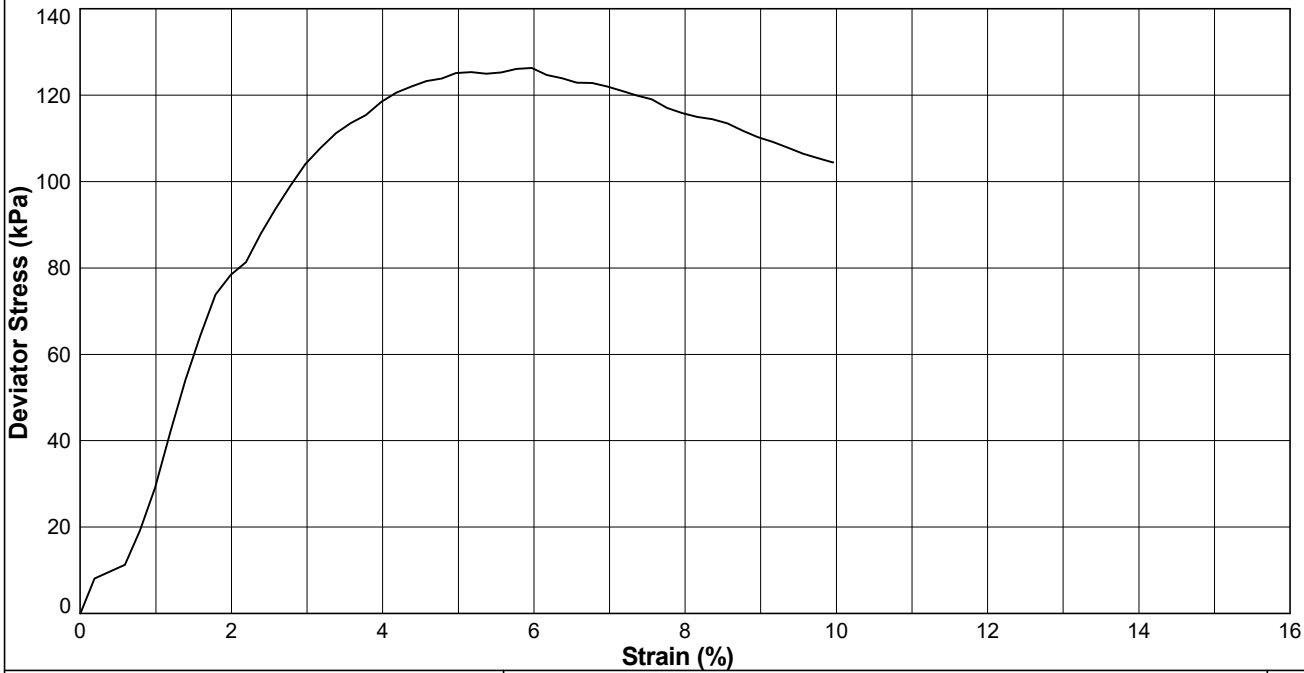
In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH102** Sample Ref: **39** Sample Type: **UT** Depth (m): **10.00**

Description : **Brown mottled grey sandy silty CLAY**

Non-standard notes : **Failed flatness check**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**103.41**		
	Height	(mm)	**199.92**		
	Water Content	(%)	**40.6**		
	Bulk Density	(Mg/m^3)	**1.82**		
	Dry Density	(Mg/m^3)	**1.30**		
	Void Ratio		**1.0432**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.68**		
	Rate of Axial Displacement	(%/min)	**1.40**		
	Cell Pressure	(kPa)	**200**		
	Membrane Correction	(kPa)	**1.01**		
	Corrected Deviator Stress	(kPa)	**126**		
	Undrained Shear Strength	(kPa)	**63**		
FAILURE DETAILS	Strain at Failure	(%)	**6.0**		
	Mode of Failure 1 : **Semi-plastic (bulging, shear & axial splitting)**				



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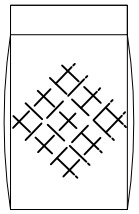
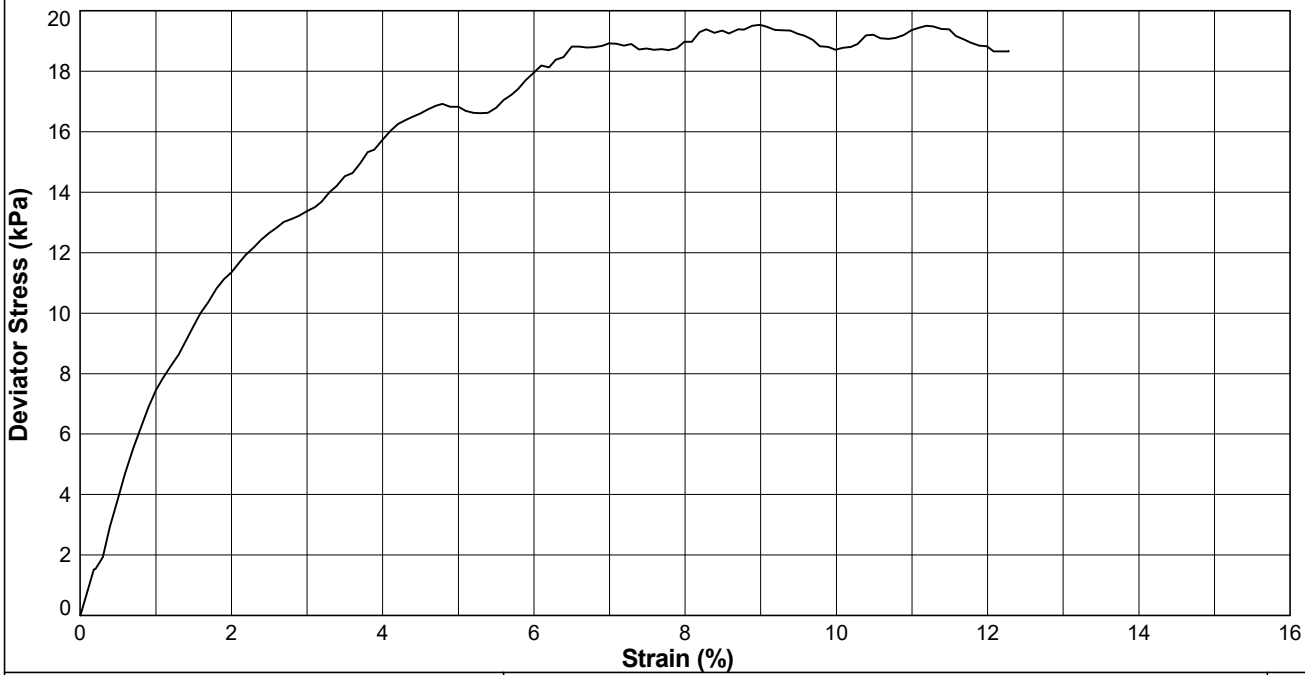
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH103** Sample Ref: **10** Sample Type: **UT** Depth (m): **2.50**

Description : **Dark brown mottled black slightly sandy CLAY with pockets of peat**
Non-standard notes : **Failed perpendicularity check**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**99.63**		
	Height	(mm)	**218.39**		
	Water Content	(%)	**51.5**		
	Bulk Density	(Mg/m^3)	**1.80**		
	Dry Density	(Mg/m^3)	**1.19**		
	Void Ratio		**1.2280**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.77**		
	Rate of Axial Displacement	(%/min)	**1.83**		
	Cell Pressure	(kPa)	**50**		
	Membrane Correction	(kPa)	**1.63**		
	Corrected Deviator Stress	(kPa)	**20**		
	Undrained Shear Strength	(kPa)	**10**		
FAILURE DETAILS	Strain at Failure	(%)	**9.0**		
	Mode of Failure 1 : **Semi-plastic (intermediate)**				



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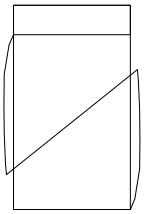
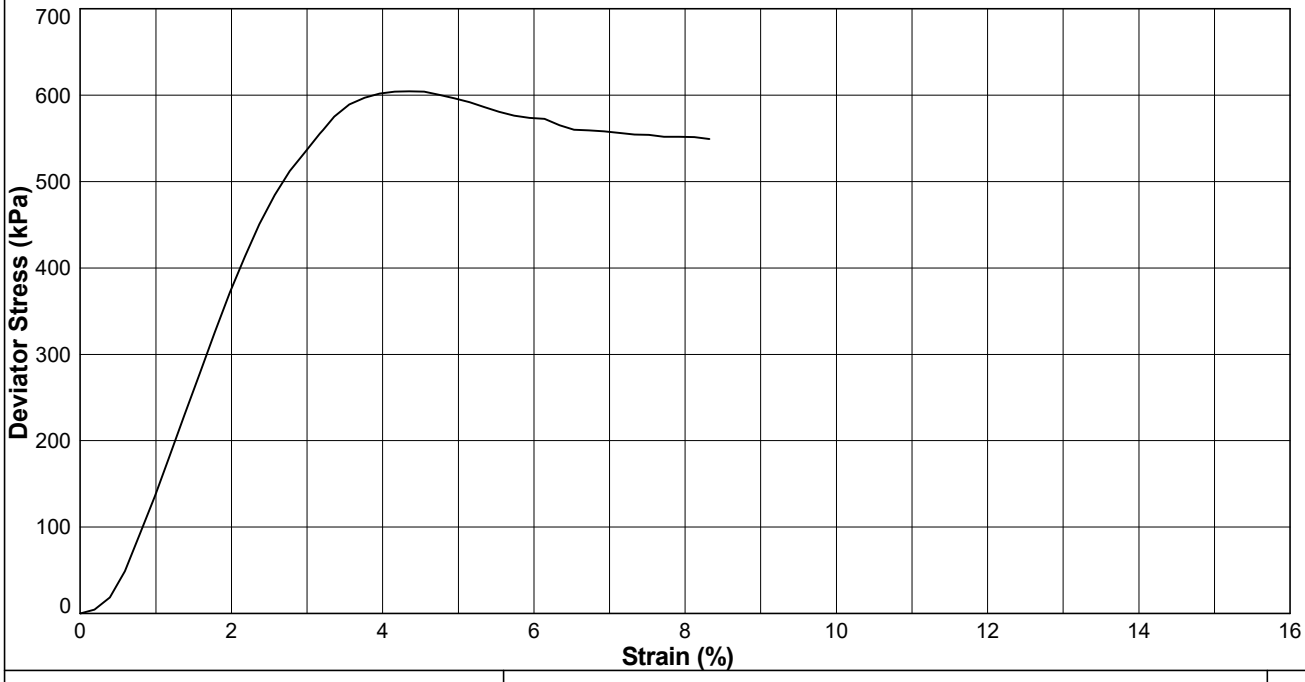
In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH103** Sample Ref: **27** Sample Type: **UT** Depth (m): **8.00**

Description : **Brown mottled greenish brown sandy CLAY**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**103.67**		
	Height	(mm)	**207.81**		
	Water Content	(%)	**31.3**		
	Bulk Density	(Mg/m^3)	**1.90**		
	Dry Density	(Mg/m^3)	**1.44**		
	Void Ratio		**0.8341**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.66**		
	Rate of Axial Displacement	(%/min)	**1.44**		
	Cell Pressure	(kPa)	**160**		
	Membrane Correction	(kPa)	**0.76**		
	Corrected Deviator Stress	(kPa)	**604**		
	Undrained Shear Strength	(kPa)	**302**		
FAILURE DETAILS	Strain at Failure	(%)	**4.4**		
	Mode of Failure 1 : **Brittle (shear plane)**				



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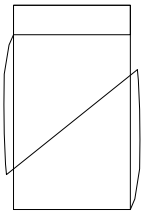
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

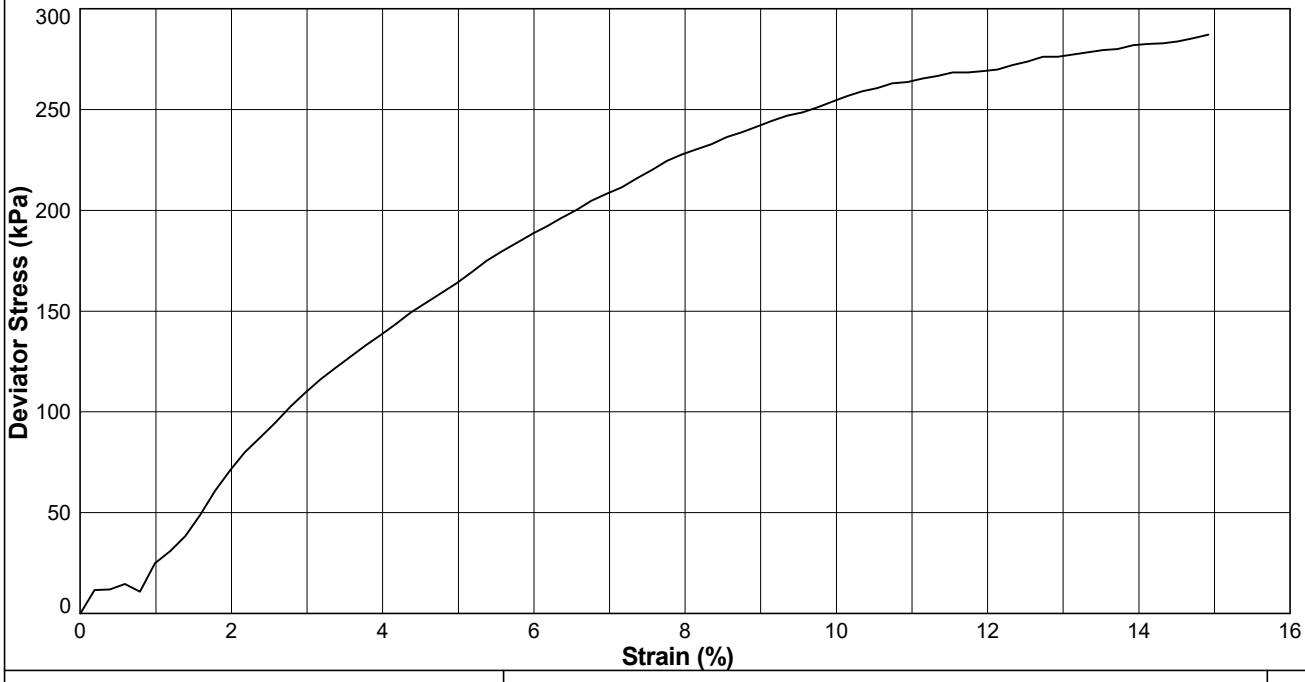
In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH103** Sample Ref: **39** Sample Type: **UT** Depth (m): **12.00**

Description : **Grey mottled dark grey CLAY with chalk**

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)	**103.71**		
	Height	(mm)	**207.92**		
	Water Content	(%)	**36.5**		
	Bulk Density	(Mg/m^3)	**1.84**		
	Dry Density	(Mg/m^3)	**1.35**		
	Void Ratio		**0.9681**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.77**		
	Rate of Axial Displacement	(%/min)	**1.44**		
	Cell Pressure	(kPa)	**240**		
	Membrane Correction	(kPa)	**2.27**		
	Corrected Deviator Stress	(kPa)	**287**		
	Undrained Shear Strength	(kPa)	**144**		
FAILURE DETAILS	Strain at Failure	(%)	**14.9**		
	Mode of Failure 1 : **Brittle (shear plane)**				



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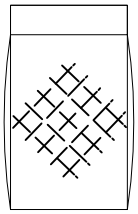
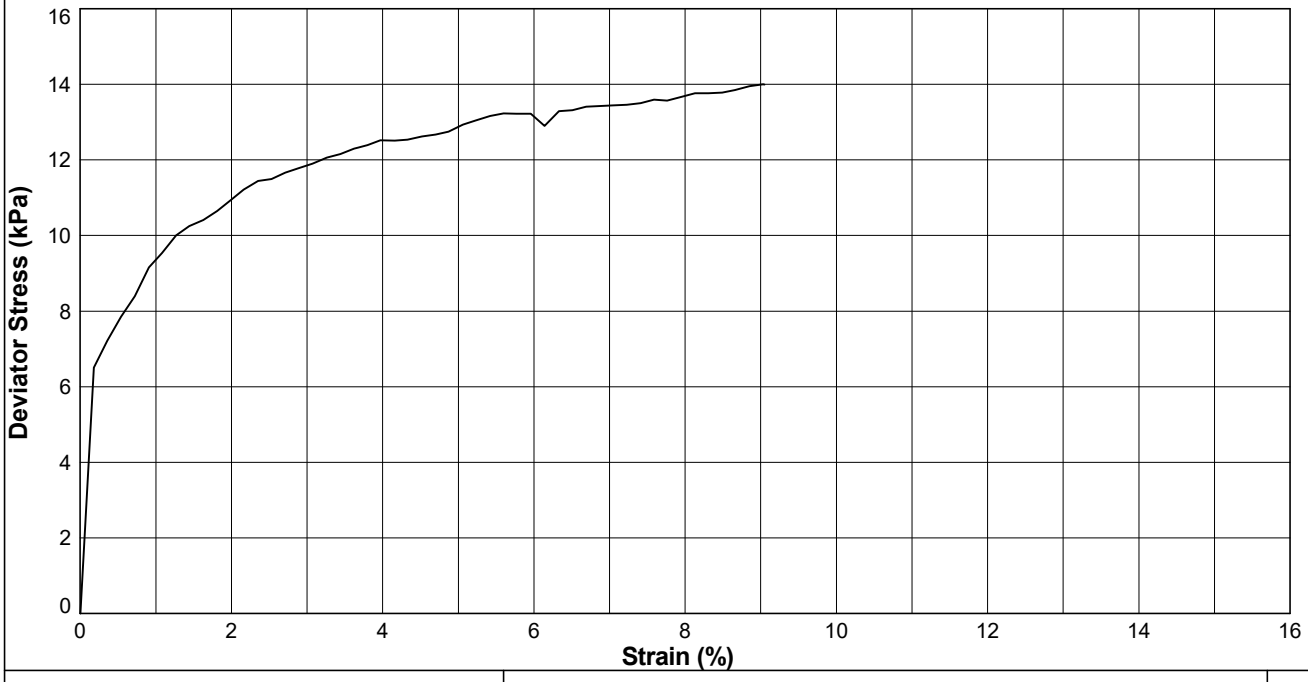
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH104** Sample Ref: **10** Sample Type: **UT** Depth (m): **3.00**

Description : **Dark grey mottled dark brown and black clayey PEAT**
Non-standard notes : **Failed perpendicularity check**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**101.07**		
	Height	(mm)	**208.76**		
	Water Content	(%)	**65.5**		
	Bulk Density	(Mg/m^3)	**1.65**		
	Dry Density	(Mg/m^3)	**1.00**		
	Void Ratio		**1.6603**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.77**		
	Rate of Axial Displacement	(%/min)	**0.67**		
	Cell Pressure	(kPa)	**60**		
	Membrane Correction	(kPa)	**1.62**		
	Corrected Deviator Stress	(kPa)	**14**		
	Undrained Shear Strength	(kPa)	**7**		
FAILURE DETAILS	Strain at Failure	(%)	**9.0**		
	Mode of Failure 1 : **Semi-plastic (intermediate)**				



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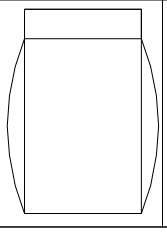
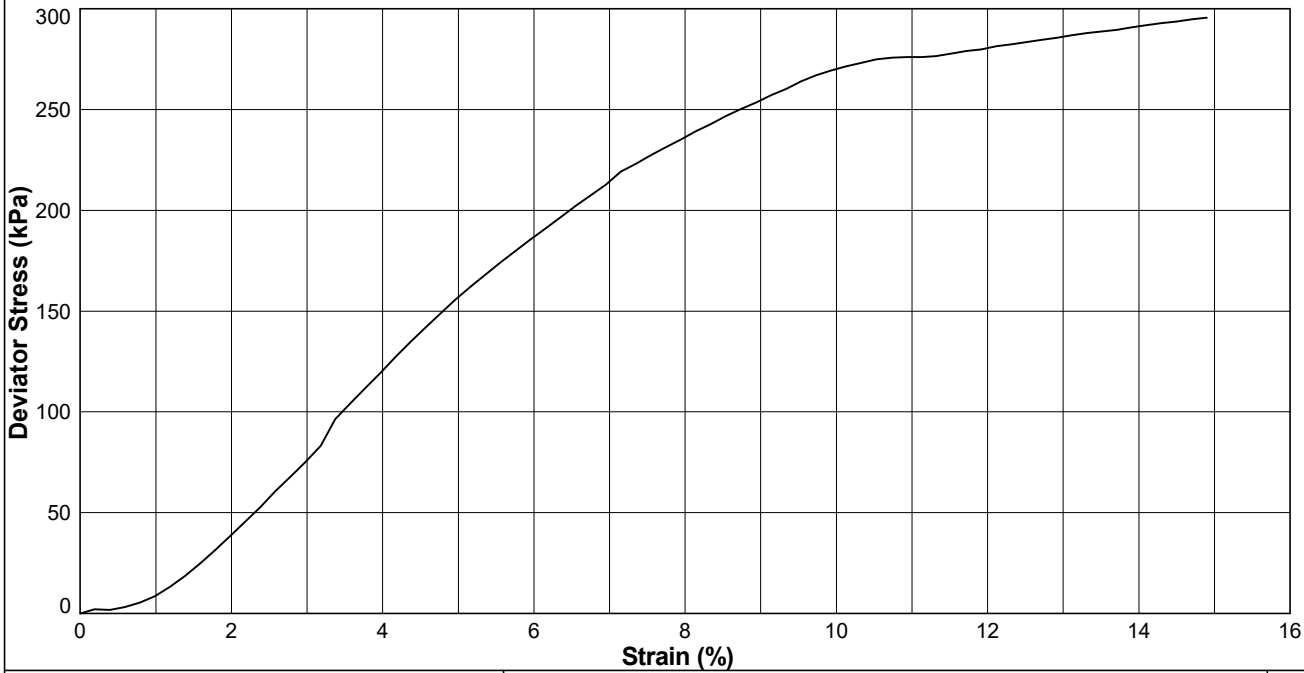
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH104** Sample Ref: **17** Sample Type: **UT** Depth (m): **5.00**

Description : **Brown mottled grey and white sandy CLAY with shell fragments**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**101.70**		
	Height	(mm)	**182.39**		
	Water Content	(%)	**31.3**		
	Bulk Density	(Mg/m^3)	**1.96**		
	Dry Density	(Mg/m^3)	**1.49**		
	Void Ratio		**0.7730**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.68**		
	Rate of Axial Displacement	(%/min)	**1.43**		
	Cell Pressure	(kPa)	**100**		
	Membrane Correction	(kPa)	**2.04**		
	Corrected Deviator Stress	(kPa)	**296**		
	Undrained Shear Strength	(kPa)	**148**		
FAILURE DETAILS	Strain at Failure	(%)	**14.9**		
	Mode of Failure 1 : **Plastic (Barrelling)**				



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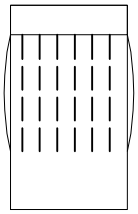
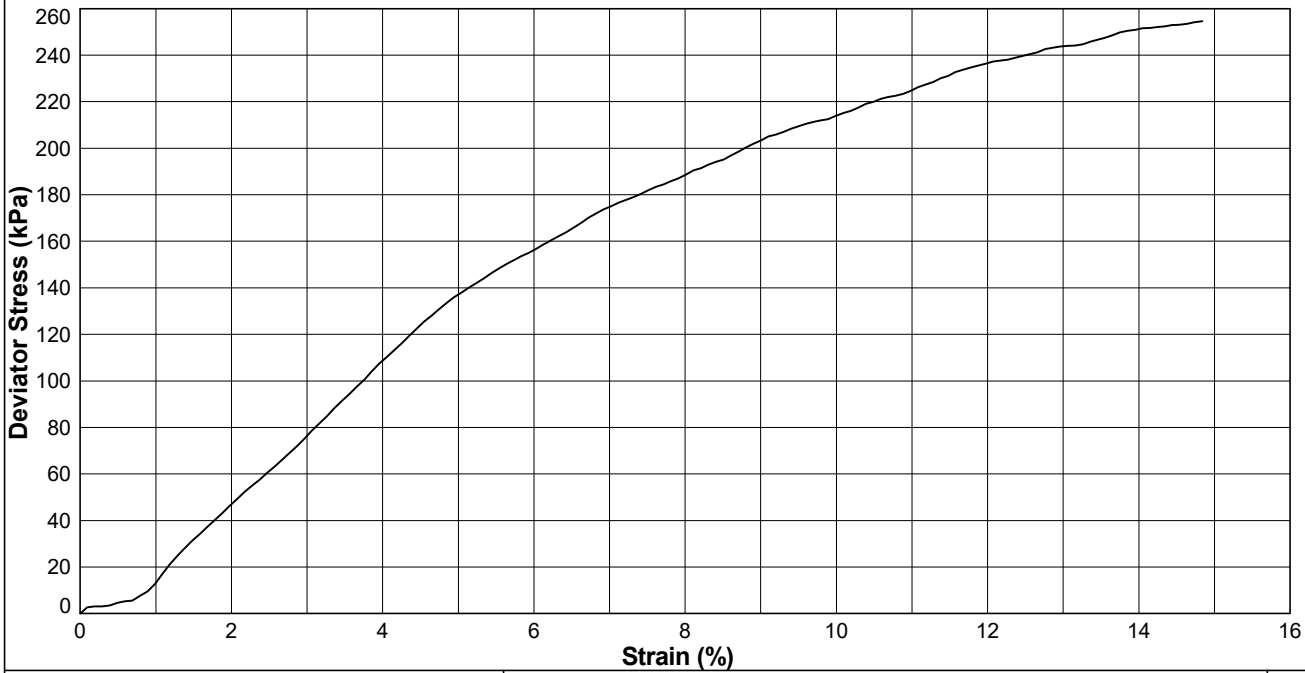
In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH104** Sample Ref: **24** Sample Type: **UT** Depth (m): **7.00**

Description : **Brown mottled light grey and orangish brown sandy CLAY with shell fragments**

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)	**101.96**		
	Height	(mm)	**209.45**		
	Water Content	(%)	**37.0**		
	Bulk Density	(Mg/m^3)	**1.84**		
	Dry Density	(Mg/m^3)	**1.34**		
	Void Ratio		**0.9768**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.68**		
	Rate of Axial Displacement	(%/min)	**1.05**		
	Cell Pressure	(kPa)	**140**		
	Membrane Correction	(kPa)	**2.03**		
	Corrected Deviator Stress	(kPa)	**255**		
	Undrained Shear Strength	(kPa)	**127**		
FAILURE DETAILS	Strain at Failure	(%)	**14.8**		
	Mode of Failure 1 : **Semi-plastic (axial splitting with bulging)**				



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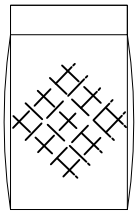
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

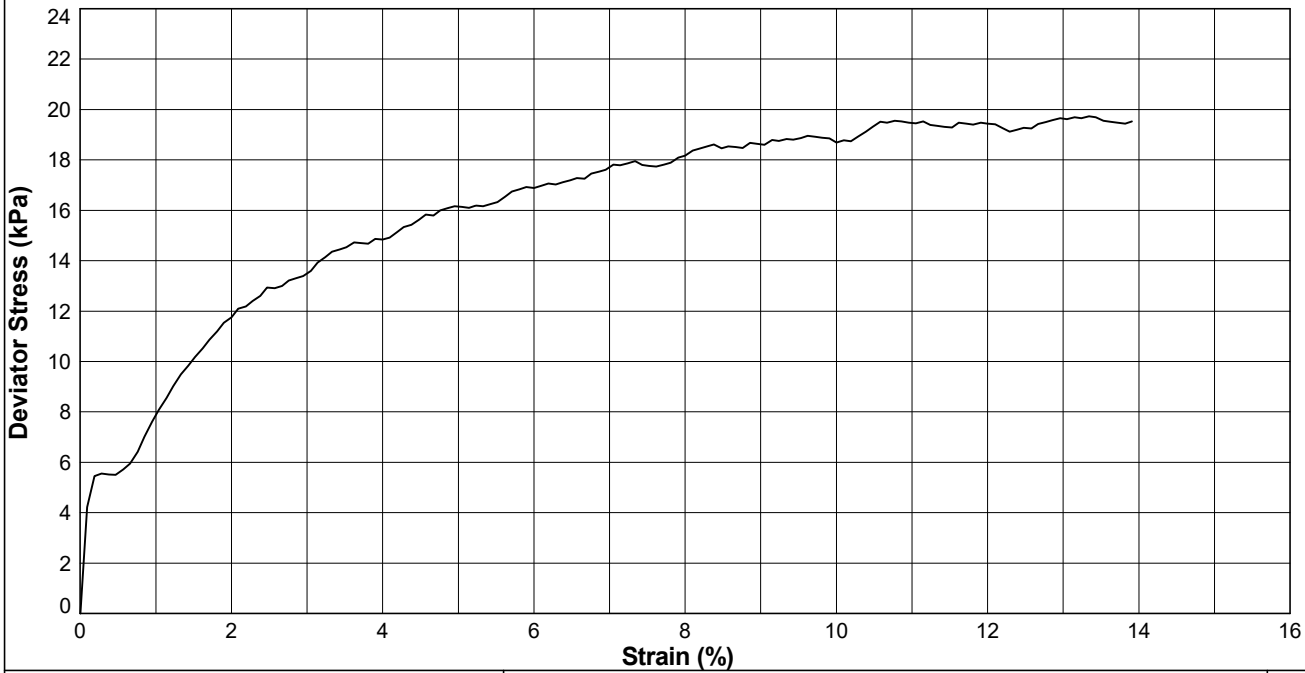
In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH105** Sample Ref: **14** Sample Type: **UT** Depth (m): **4.00**

Description : **Grey mottled dark grey and black clayey PEAT**

Non-standard notes : **Failed perpendicularity check**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**100.69**		
	Height	(mm)	**207.05**		
	Water Content	(%)	**55.5**		
	Bulk Density	(Mg/m^3)	**1.72**		
	Dry Density	(Mg/m^3)	**1.11**		
	Void Ratio		**1.3920**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.77**		
	Rate of Axial Displacement	(%/min)	**1.93**		
	Cell Pressure	(kPa)	**80**		
	Membrane Correction	(kPa)	**2.23**		
	Corrected Deviator Stress	(kPa)	**22**		
	Undrained Shear Strength	(kPa)	**11**		
FAILURE DETAILS	Strain at Failure	(%)	**14.0**		
	Mode of Failure 1 : **Semi-plastic (intermediate)**				



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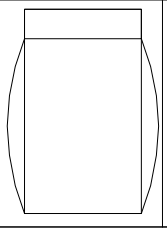
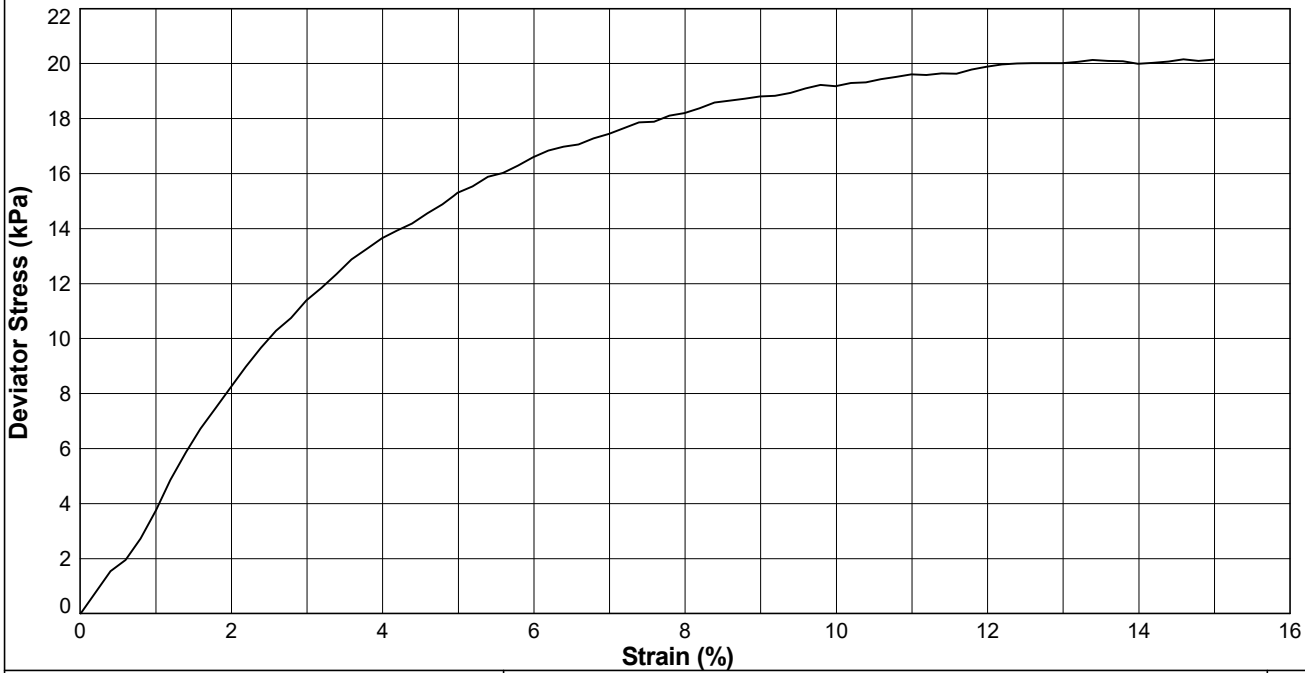
In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH105** Sample Ref: **22** Sample Type: **UT** Depth (m): **6.00**

Description : **Greyish brown slightly silty CLAY with peat**

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)	**101.25**		
	Height	(mm)	**205.87**		
	Water Content	(%)	**37.2**		
	Bulk Density	(Mg/m^3)	**1.83**		
	Dry Density	(Mg/m^3)	**1.33**		
	Void Ratio		**0.9924**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.57**		
	Rate of Axial Displacement	(%/min)	**1.89**		
	Cell Pressure	(kPa)	**120**		
	Membrane Correction	(kPa)	**1.69**		
	Corrected Deviator Stress	(kPa)	**20**		
	Undrained Shear Strength	(kPa)	**10**		
FAILURE DETAILS	Strain at Failure	(%)	**14.6**		
	Mode of Failure 1 : **Plastic (Barrelling)**				



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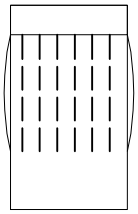
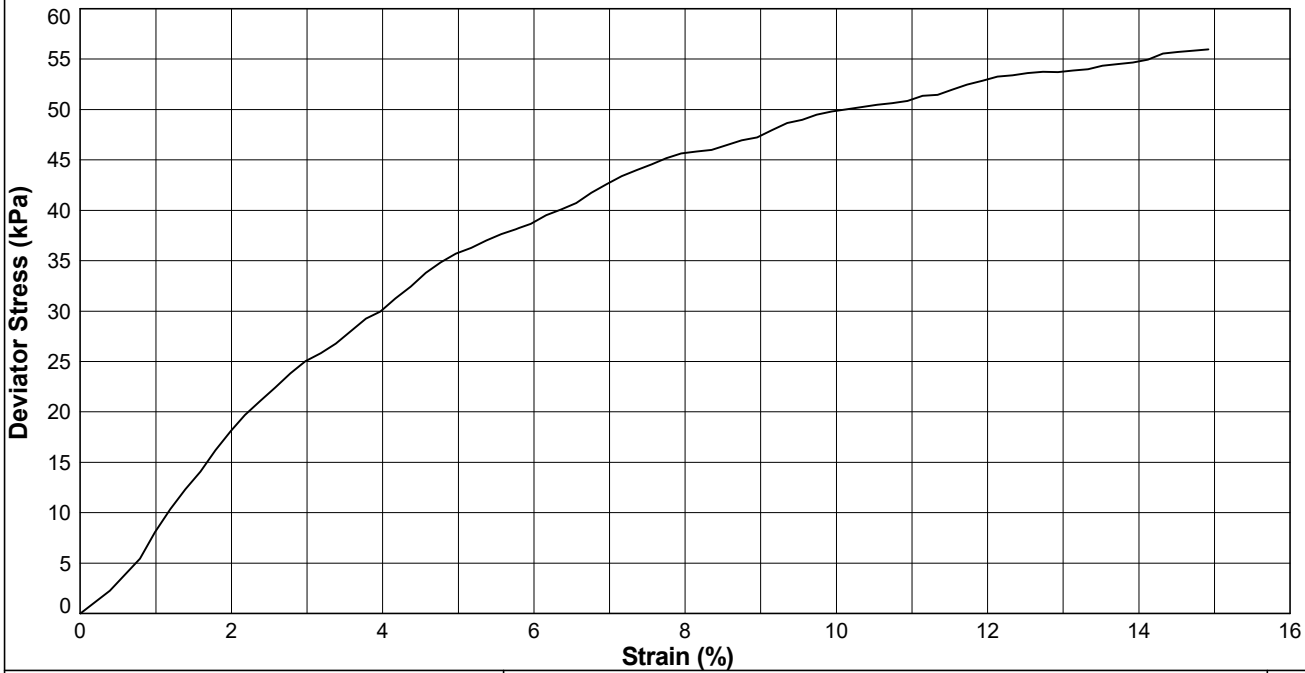
In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH105** Sample Ref: **26** Sample Type: **UT** Depth (m): **7.00**

Description : **Light grey mottled greenish brown and light brown and brown slightly sandy CLAY with peat**

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)	**101.90**		
	Height	(mm)	**201.14**		
	Water Content	(%)	**47.7**		
	Bulk Density	(Mg/m^3)	**1.70**		
	Dry Density	(Mg/m^3)	**1.15**		
	Void Ratio		**1.3037**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.57**		
	Rate of Axial Displacement	(%/min)	**1.99**		
	Cell Pressure	(kPa)	**140**		
	Membrane Correction	(kPa)	**1.71**		
	Corrected Deviator Stress	(kPa)	**56**		
	Undrained Shear Strength	(kPa)	**28**		
FAILURE DETAILS	Strain at Failure	(%)	**14.9**		
	Mode of Failure 1 : **Semi-plastic (axial splitting with bulging)**				



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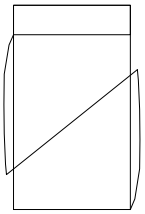
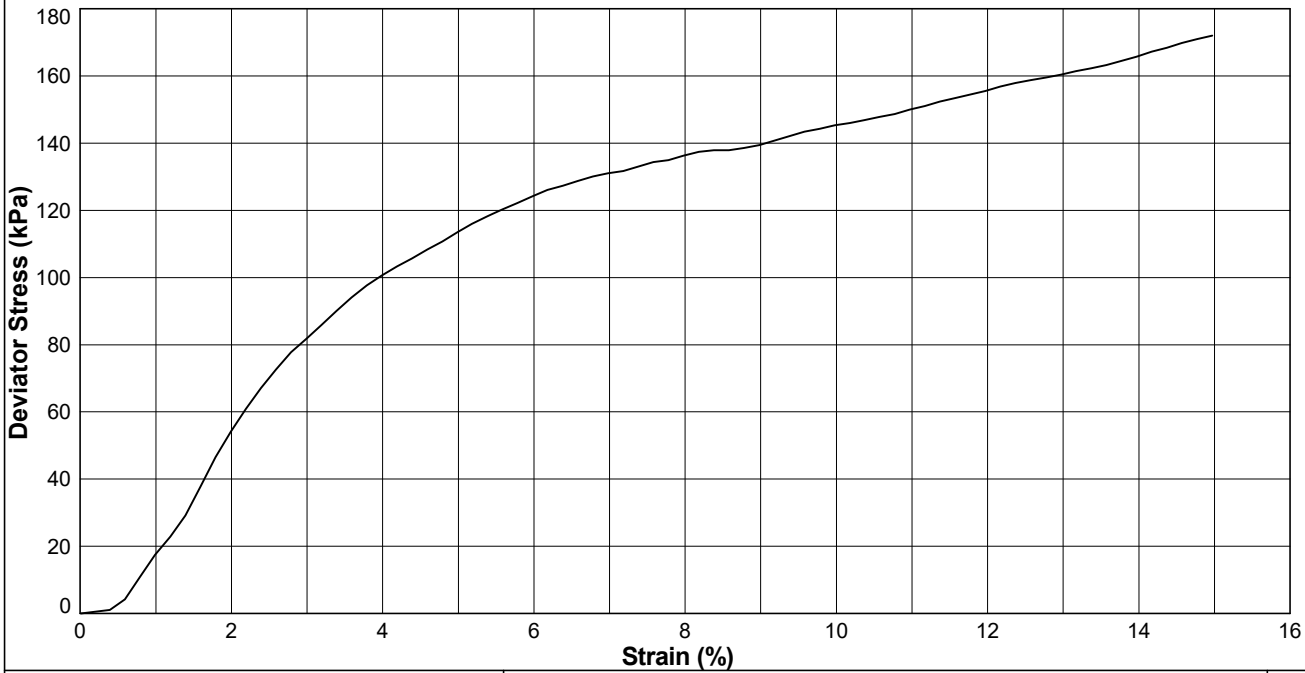
In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH105** Sample Ref: **34** Sample Type: **UT** Depth (m): **9.00**

Description : **Brown mottled greyish brown slightly gravelly CLAY with claystone**
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)	**102.54**		
	Height	(mm)	**203.19**		
	Water Content	(%)	**40.1**		
	Bulk Density	(Mg/m^3)	**1.81**		
	Dry Density	(Mg/m^3)	**1.29**		
	Void Ratio		**1.0575**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.68**		
	Rate of Axial Displacement	(%/min)	**1.43**		
	Cell Pressure	(kPa)	**180**		
	Membrane Correction	(kPa)	**2.03**		
	Corrected Deviator Stress	(kPa)	**172**		
	Undrained Shear Strength	(kPa)	**86**		
FAILURE DETAILS	Strain at Failure	(%)	**15.0**		
	Mode of Failure 1 : **Brittle (shear plane)**				



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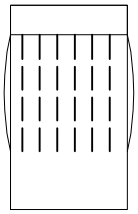
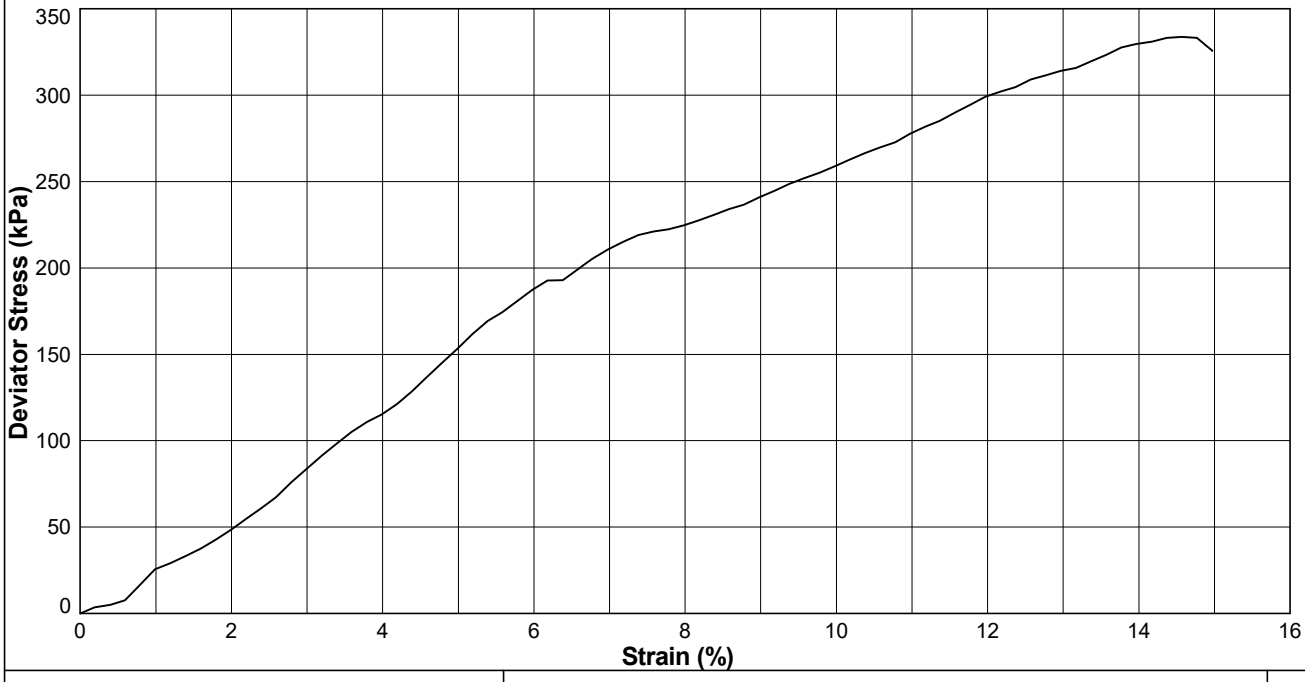
In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH105** Sample Ref: **38** Sample Type: **UT** Depth (m): **10.00**

Description : **Grey 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)	**102.25**		
	Height	(mm)	**210.26**		
	Water Content	(%)	**33.7**		
	Bulk Density	(Mg/m^3)	**1.89**		
	Dry Density	(Mg/m^3)	**1.41**		
	Void Ratio		**0.8770**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.63**		
	Rate of Axial Displacement	(%/min)	**1.76**		
	Cell Pressure	(kPa)	**200**		
	Membrane Correction	(kPa)	**1.85**		
	Corrected Deviator Stress	(kPa)	**334**		
	Undrained Shear Strength	(kPa)	**167**		
FAILURE DETAILS	Strain at Failure	(%)	**14.6**		
	Mode of Failure 1 : **Semi-plastic (axial splitting with bulging)**				



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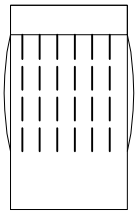
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

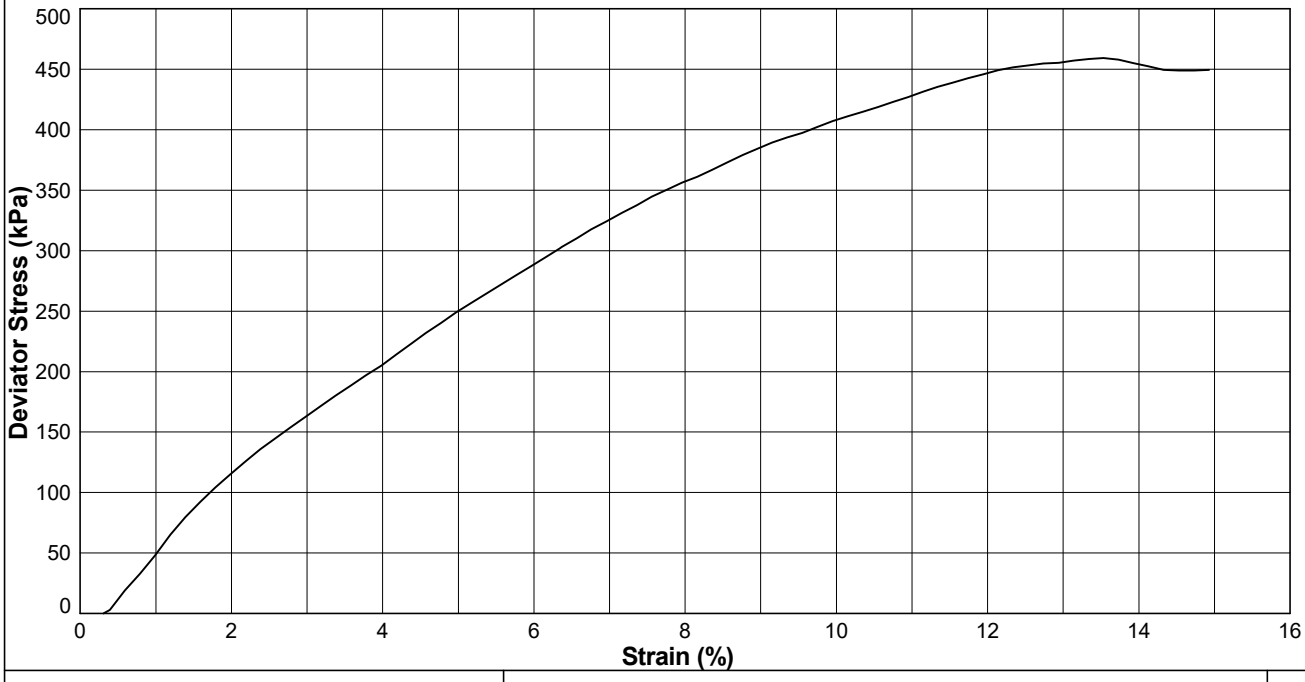
In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH105** Sample Ref: **86** Sample Type: **UT** Depth (m): **22.00**

Description : **Grey 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)	**102.54**		
	Height	(mm)	**201.26**		
	Water Content	(%)	**31.6**		
	Bulk Density	(Mg/m^3)	**1.92**		
	Dry Density	(Mg/m^3)	**1.46**		
	Void Ratio		**0.8117**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.51**		
	Rate of Axial Displacement	(%/min)	**1.04**		
	Cell Pressure	(kPa)	**440**		
	Membrane Correction	(kPa)	**1.41**		
	Corrected Deviator Stress	(kPa)	**459**		
	Undrained Shear Strength	(kPa)	**230**		
FAILURE DETAILS	Strain at Failure	(%)	**13.5**		
	Mode of Failure 1 : **Semi-plastic (axial splitting with bulging)**				



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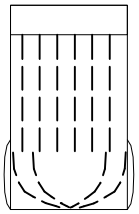
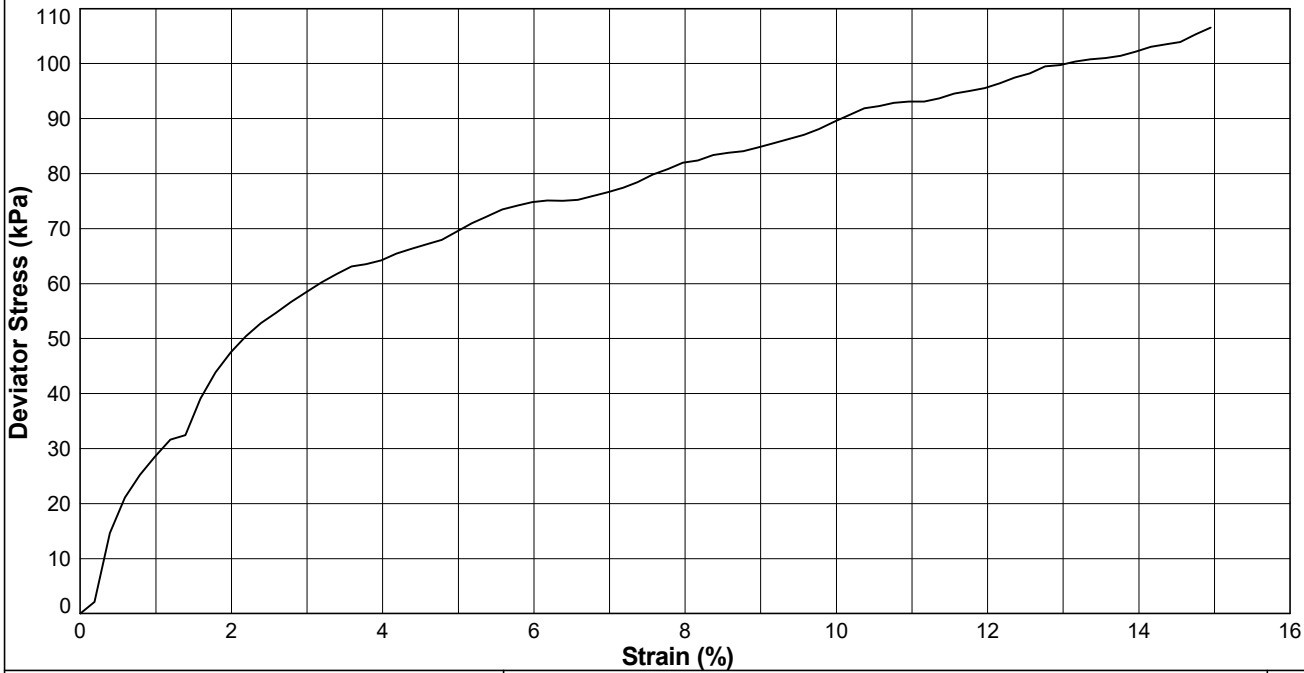
In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH105** Sample Ref: **94** Sample Type: **UT** Depth (m): **24.00**

Description : **Dark grey sandy CLAY**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**102.86**		
	Height	(mm)	**207.45**		
	Water Content	(%)	**44.2**		
	Bulk Density	(Mg/m^3)	**1.86**		
	Dry Density	(Mg/m^3)	**1.29**		
	Void Ratio		**1.0565**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.77**		
	Rate of Axial Displacement	(%/min)	**1.64**		
	Cell Pressure	(kPa)	**480**		
	Membrane Correction	(kPa)	**2.29**		
	Corrected Deviator Stress	(kPa)	**107**		
	Undrained Shear Strength	(kPa)	**53**		
FAILURE DETAILS	Strain at Failure	(%)	**15.0**		
	Mode of Failure 1 : **Semi-plastic (bulging, shear & axial splitting)**				



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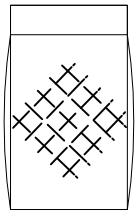
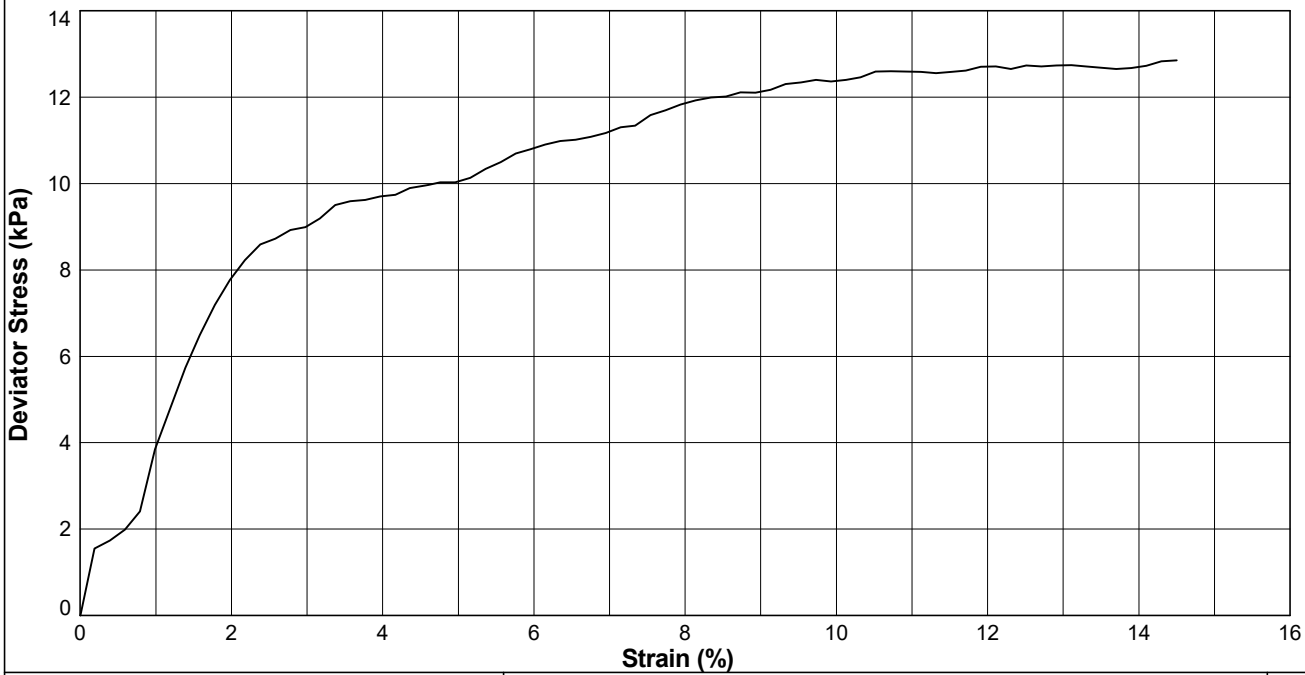
In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH106A** Sample Ref: **10** Sample Type: **UT** Depth (m): **3.00**

Description : **Grey mottled brown and black clayey PEAT**

Non-standard notes : **Failed perpendicularity check**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**102.19**		
	Height	(mm)	**205.55**		
	Water Content	(%)	**55.3**		
	Bulk Density	(Mg/m^3)	**1.71**		
	Dry Density	(Mg/m^3)	**1.10**		
	Void Ratio		**1.4132**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.51**		
	Rate of Axial Displacement	(%/min)	**1.95**		
	Cell Pressure	(kPa)	**60**		
	Membrane Correction	(kPa)	**1.49**		
	Corrected Deviator Stress	(kPa)	**13**		
	Undrained Shear Strength	(kPa)	**6**		
FAILURE DETAILS	Strain at Failure	(%)	**14.5**		
	Mode of Failure 1 : **Semi-plastic (intermediate)**				



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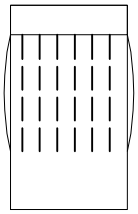
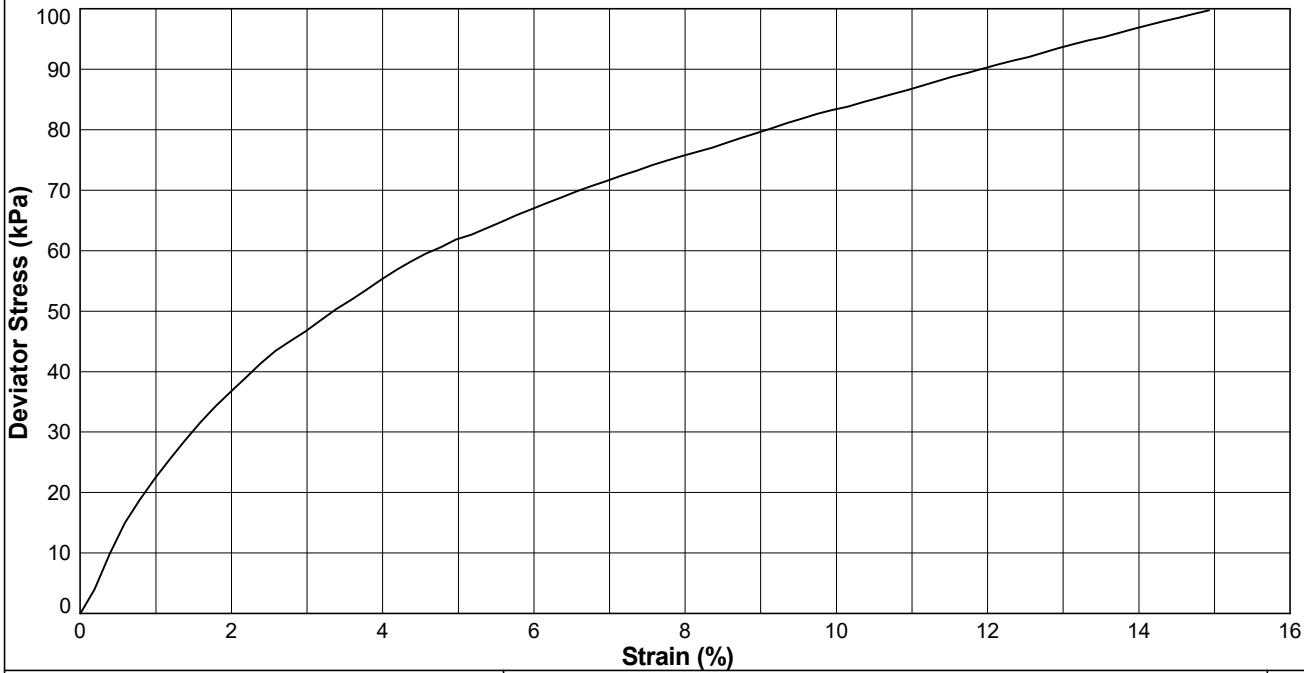
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH106A** Sample Ref: **18** Sample Type: **UT** Depth (m): **5.00**

Description : **Greenish black very sandy CLAY**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**103.14**		
	Height	(mm)	**213.42**		
	Water Content	(%)	**29.2**		
	Bulk Density	(Mg/m^3)	**1.97**		
	Dry Density	(Mg/m^3)	**1.52**		
	Void Ratio		**0.7384**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.77**		
	Rate of Axial Displacement	(%/min)	**1.17**		
	Cell Pressure	(kPa)	**100**		
	Membrane Correction	(kPa)	**2.28**		
	Corrected Deviator Stress	(kPa)	**100**		
	Undrained Shear Strength	(kPa)	**50**		
FAILURE DETAILS	Strain at Failure	(%)	**14.9**		
	Mode of Failure 1 : **Semi-plastic (axial splitting with bulging)**				



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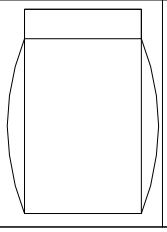
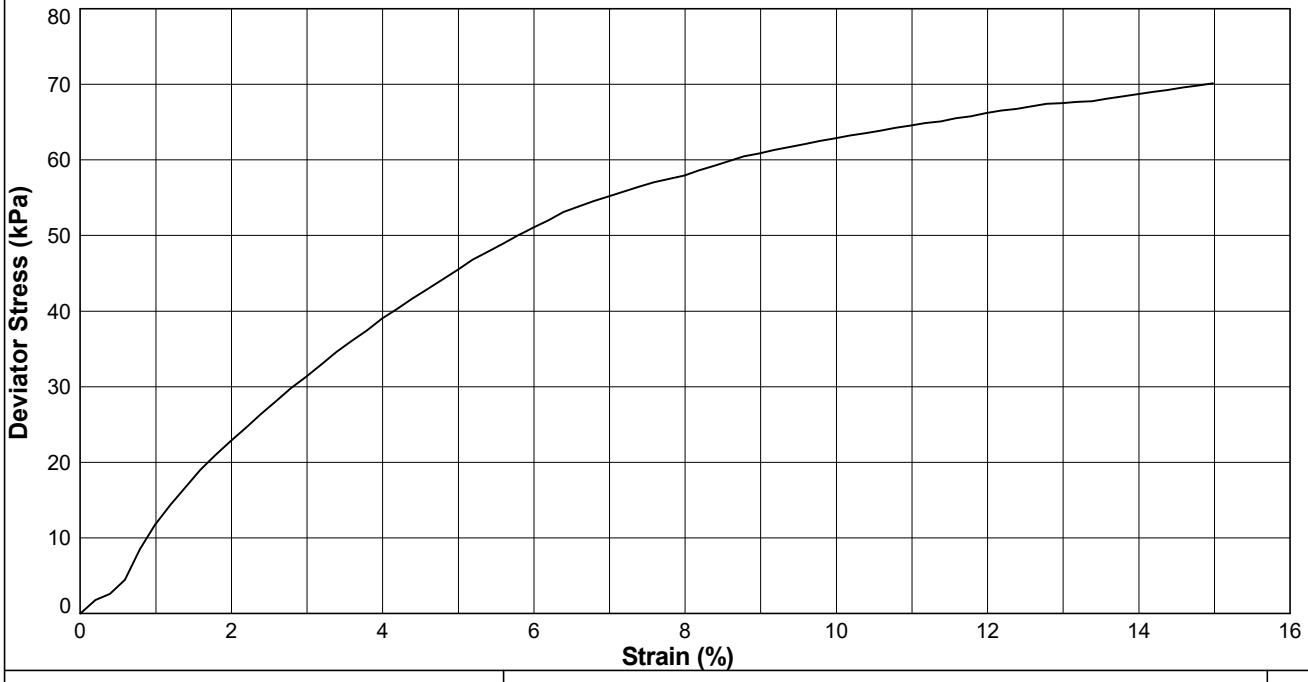
In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH106A** Sample Ref: **22** Sample Type: **UT** Depth (m): **6.00**

Description : **Greenish brown sandy CLAY with peats**

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)	**102.83**		
	Height	(mm)	**209.26**		
	Water Content	(%)	**41.6**		
	Bulk Density	(Mg/m^3)	**1.82**		
	Dry Density	(Mg/m^3)	**1.28**		
	Void Ratio		**1.0628**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.65**		
	Rate of Axial Displacement	(%/min)	**1.43**		
	Cell Pressure	(kPa)	**120**		
	Membrane Correction	(kPa)	**1.94**		
	Corrected Deviator Stress	(kPa)	**70**		
	Undrained Shear Strength	(kPa)	**35**		
FAILURE DETAILS	Strain at Failure	(%)	**15.0**		
	Mode of Failure 1 : **Plastic (Barrelling)**				



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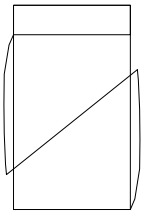
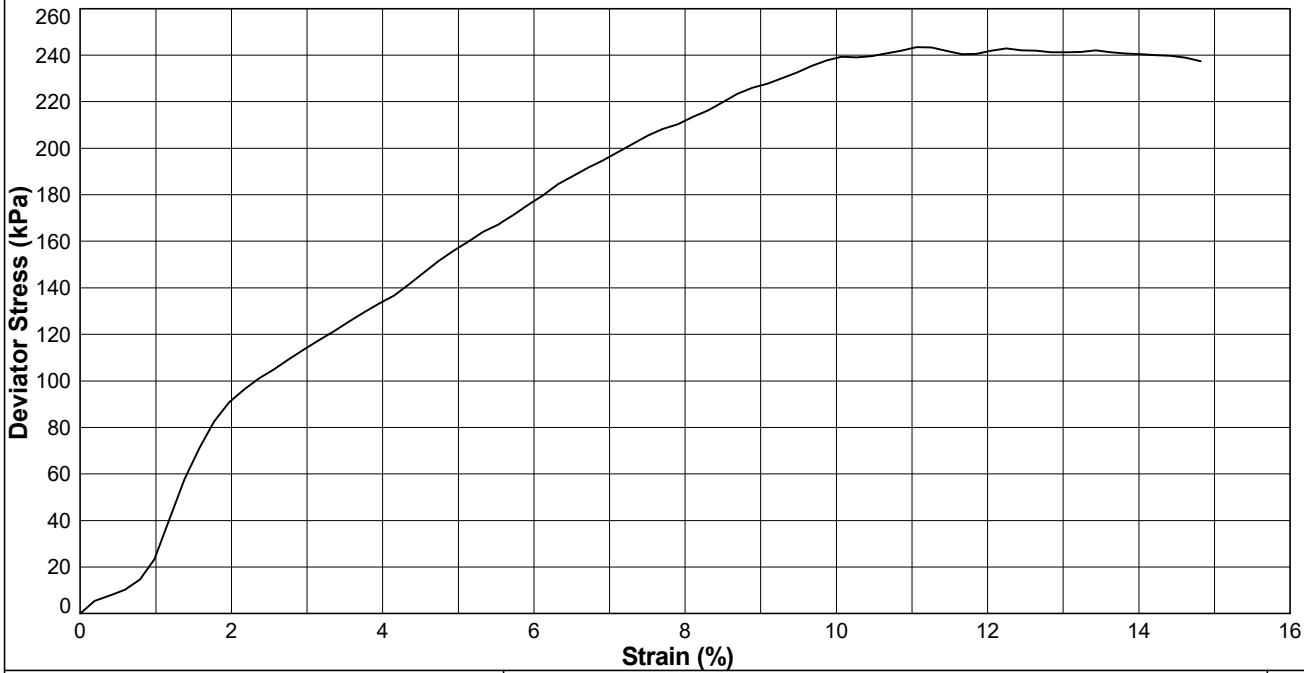
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH203** Sample Ref: **15** Sample Type: **UT** Depth (m): **4.00**

Description : **Brown mottled dark brown sandy CLAY with claystone**
Non-standard notes : **Failed flatness check**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**103.22**		
	Height	(mm)	**208.06**		
	Water Content	(%)	**34.2**		
	Bulk Density	(Mg/m^3)	**1.84**		
	Dry Density	(Mg/m^3)	**1.37**		
	Void Ratio		**0.9337**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.77**		
	Rate of Axial Displacement	(%/min)	**1.39**		
	Cell Pressure	(kPa)	**80**		
	Membrane Correction	(kPa)	**1.84**		
	Corrected Deviator Stress	(kPa)	**243**		
	Undrained Shear Strength	(kPa)	**122**		
FAILURE DETAILS	Strain at Failure	(%)	**11.1**		
	Mode of Failure 1 : **Brittle (shear plane)**				



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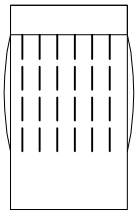
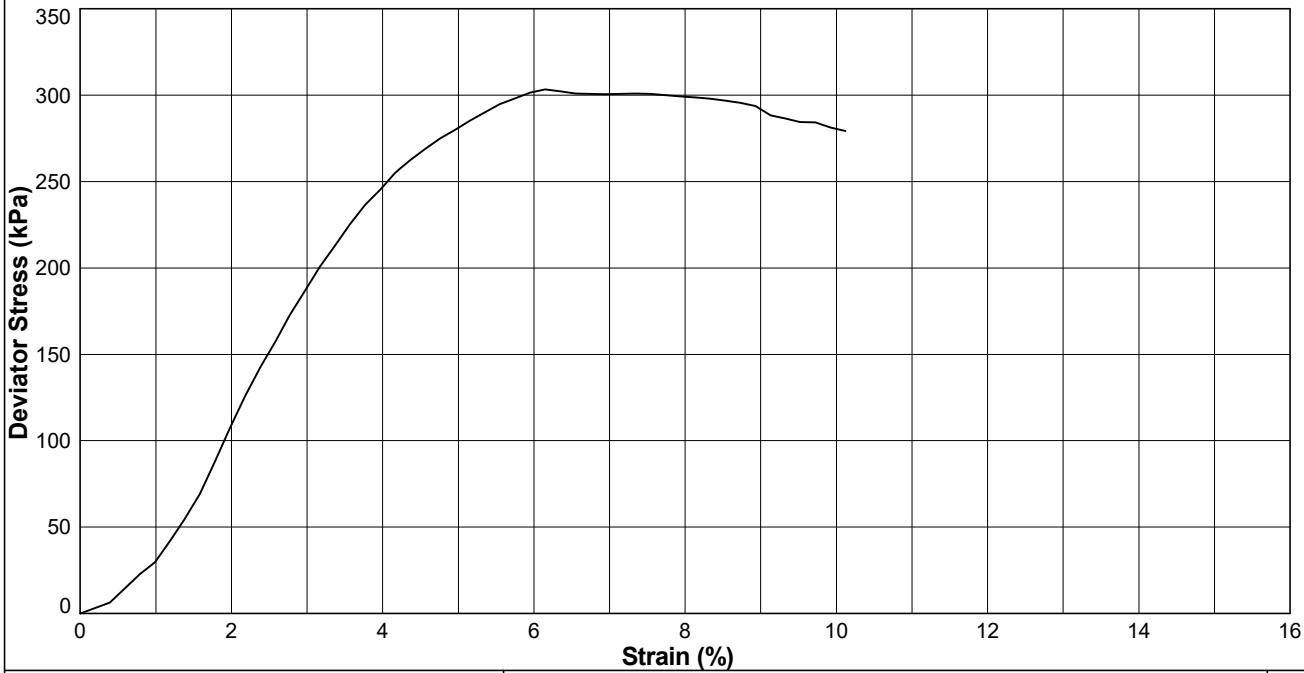
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH204** Sample Ref: **23** Sample Type: **UT** Depth (m): **6.00**

Description : **Grey mottled dark grey slightly sandy CLAY with chalk**
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)	**103.24**		
	Height	(mm)	**208.93**		
	Water Content	(%)	**35.2**		
	Bulk Density	(Mg/m^3)	**1.85**		
	Dry Density	(Mg/m^3)	**1.37**		
	Void Ratio		**0.9334**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.77**		
	Rate of Axial Displacement	(%/min)	**1.39**		
	Cell Pressure	(kPa)	**120**		
	Membrane Correction	(kPa)	**1.17**		
	Corrected Deviator Stress	(kPa)	**303**		
	Undrained Shear Strength	(kPa)	**152**		
FAILURE DETAILS	Strain at Failure	(%)	**6.2**		
	Mode of Failure 1 : **Semi-plastic (axial splitting with bulging)**				



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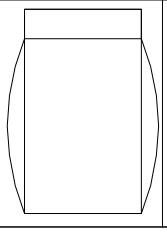
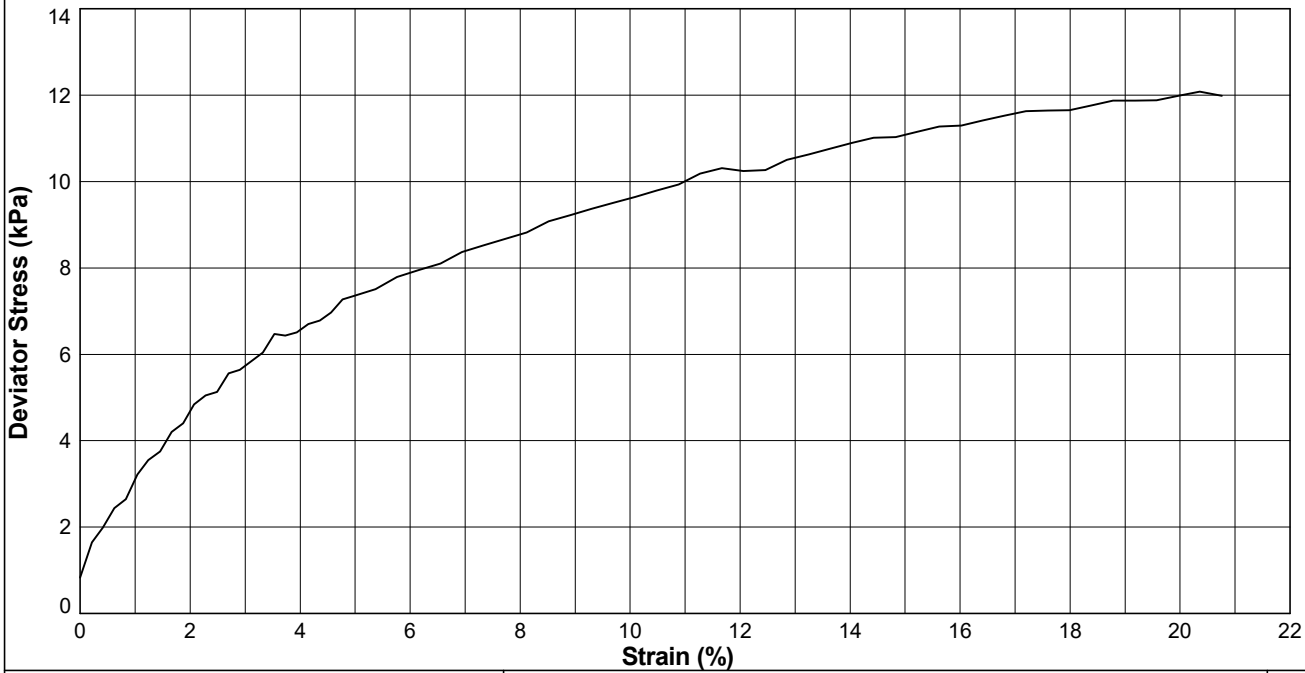
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH205** Sample Ref: **11** Sample Type: **UT** Depth (m): **3.02**

Description : **Grey clayey SILT**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**102.45**		
	Height	(mm)	**187.84**		
	Water Content	(%)	**38.5**		
	Bulk Density	(Mg/m^3)	**1.88**		
	Dry Density	(Mg/m^3)	**1.36**		
	Void Ratio		**0.9507**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.46**		
	Rate of Axial Displacement	(%/min)	**1.44**		
	Cell Pressure	(kPa)	**60**		
	Membrane Correction	(kPa)	**1.38**		
	Corrected Deviator Stress	(kPa)	**11**		
	Undrained Shear Strength	(kPa)	**6**		
FAILURE DETAILS	Strain at Failure	(%)	**15.0**		
	Mode of Failure 1 : **Plastic (Barrelling)**				



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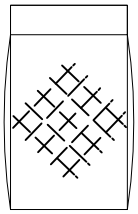
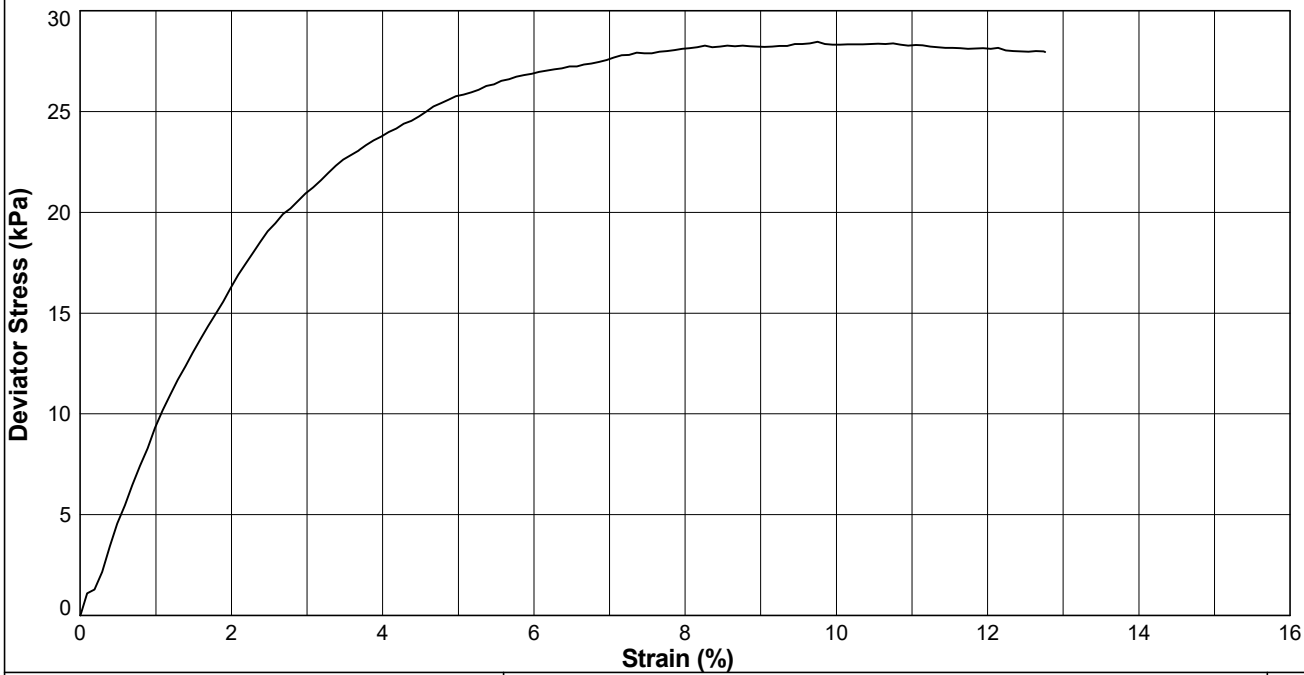
In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH205** Sample Ref: **15** Sample Type: **UT** Depth (m): **4.00**

Description : **Black slightly sandy clayey PEAT**
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)	**207.87**		
	Water Content	(%)	**41.6**		
	Bulk Density	(Mg/m^3)	**1.82**		
	Dry Density	(Mg/m^3)	**1.29**		
	Void Ratio		**1.0571**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.57**		
	Rate of Axial Displacement	(%/min)	**0.91**		
	Cell Pressure	(kPa)	**80**		
	Membrane Correction	(kPa)	**1.25**		
	Corrected Deviator Stress	(kPa)	**28**		
	Undrained Shear Strength	(kPa)	**14**		
FAILURE DETAILS	Strain at Failure	(%)	**9.8**		
	Mode of Failure 1 : **Semi-plastic (intermediate)**				



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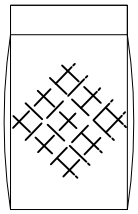
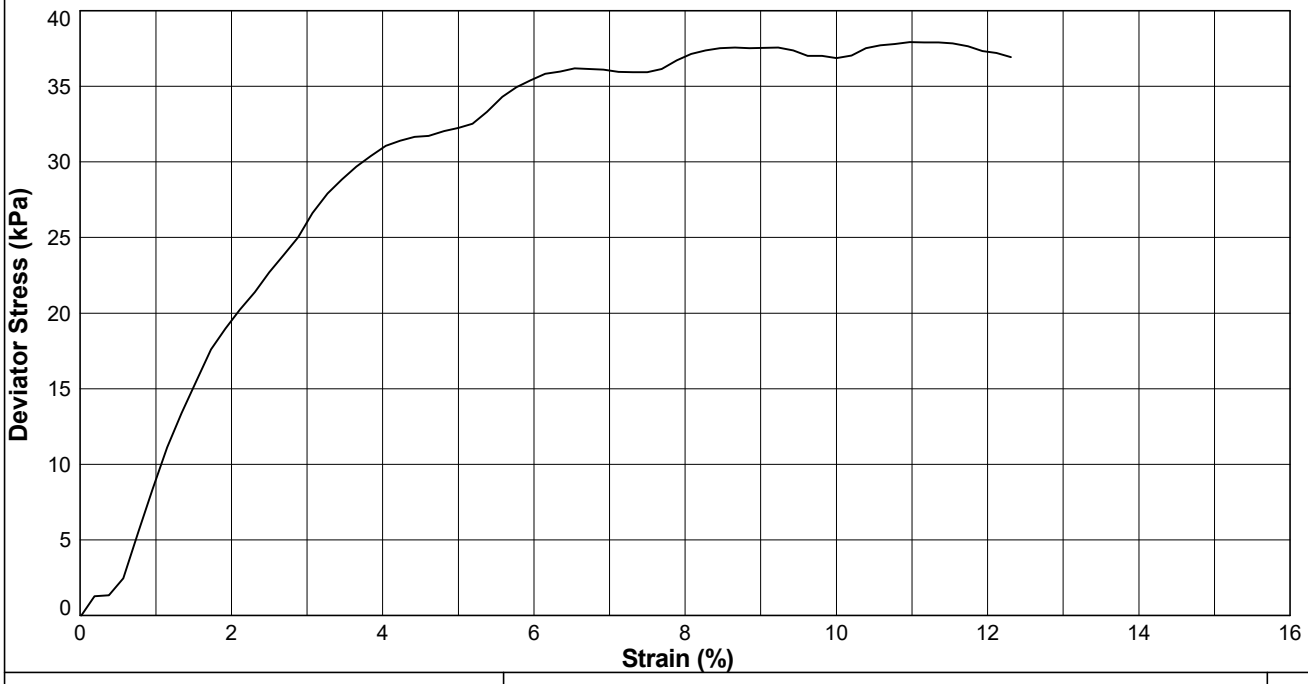
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH205** Sample Ref: **19** Sample Type: **UT** Depth (m): **5.00**

Description : **Brown mottled grey and black CLAY with peat**
Non-standard notes : **Failed perpendicularity checks**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**101.75**		
	Height	(mm)	**207.37**		
	Water Content	(%)	**31.4**		
	Bulk Density	(Mg/m^3)	**1.95**		
	Dry Density	(Mg/m^3)	**1.48**		
	Void Ratio		**0.7892**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.77**		
	Rate of Axial Displacement	(%/min)	**1.06**		
	Cell Pressure	(kPa)	**100**		
	Membrane Correction	(kPa)	**1.86**		
	Corrected Deviator Stress	(kPa)	**38**		
	Undrained Shear Strength	(kPa)	**19**		
FAILURE DETAILS	Strain at Failure	(%)	**11.0**		
	Mode of Failure 1 : **Semi-plastic (intermediate)**				



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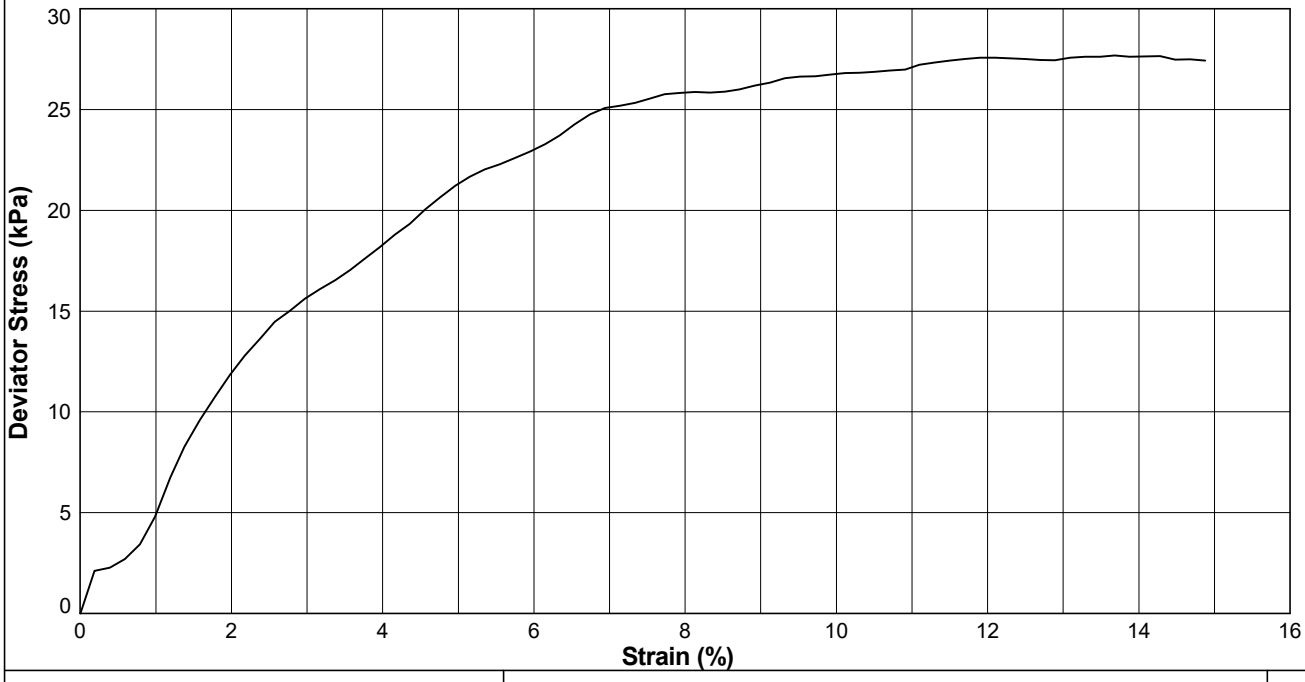
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH501** Sample Ref: **8** Sample Type: **UT** Depth (m): **2.00**

Description : **Brown mottled dark brown and black very clayey PEAT**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**102.55**		
	Height	(mm)	**212.87**		
	Water Content	(%)	**46.0**		
	Bulk Density	(Mg/m^3)	**1.75**		
	Dry Density	(Mg/m^3)	**1.20**		
	Void Ratio		**1.2122**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.57**		
	Rate of Axial Displacement	(%/min)	**1.74**		
	Cell Pressure	(kPa)	**40**		
	Membrane Correction	(kPa)	**1.59**		
	Corrected Deviator Stress	(kPa)	**28**		
	Undrained Shear Strength	(kPa)	**14**		
FAILURE DETAILS	Strain at Failure	(%)	**13.7**		
	Mode of Failure				



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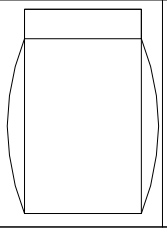
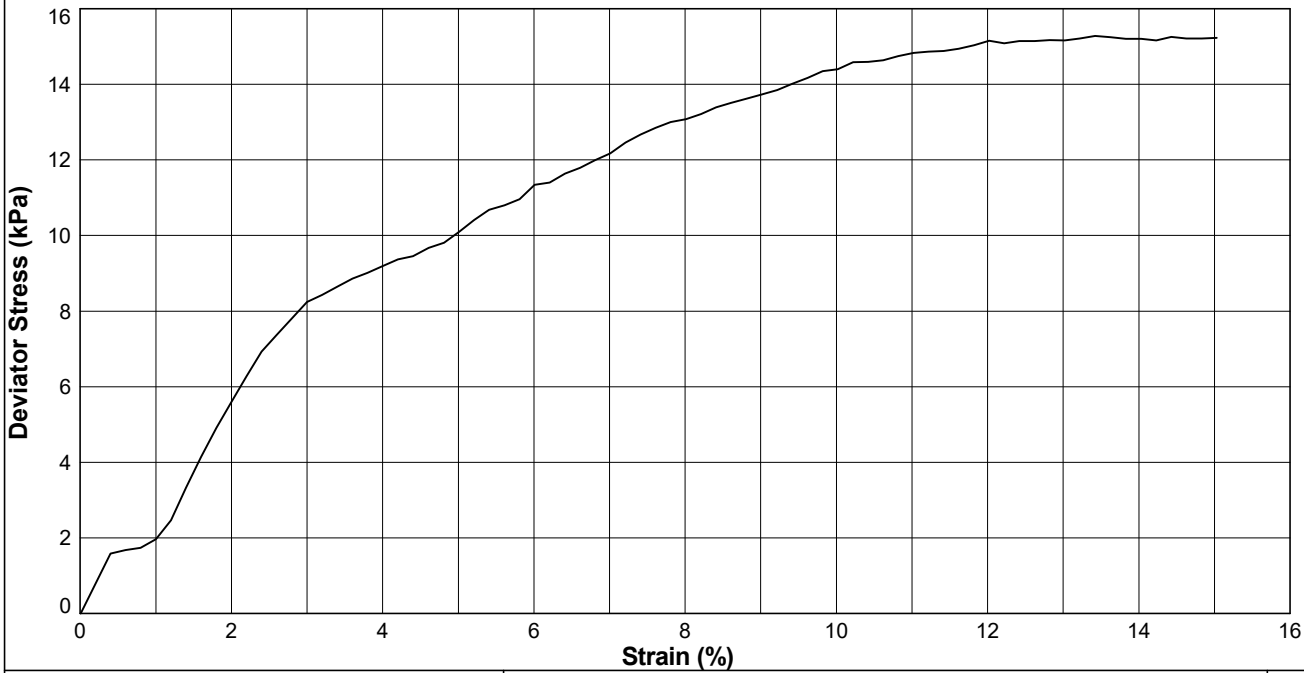
In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH501** Sample Ref: **14** Sample Type: **UT** Depth (m): **4.50**

Description : **Dark brown mottled grey and black slightly sandy CLAY with peat**
Non-standard notes : **Failed perpendicularity check**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**98.05**		
	Height	(mm)	**204.07**		
	Water Content	(%)	**47.8**		
	Bulk Density	(Mg/m^3)	**1.87**		
	Dry Density	(Mg/m^3)	**1.26**		
	Void Ratio		**1.0984**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.57**		
	Rate of Axial Displacement	(%/min)	**1.47**		
	Cell Pressure	(kPa)	**90**		
	Membrane Correction	(kPa)	**1.64**		
	Corrected Deviator Stress	(kPa)	**15**		
	Undrained Shear Strength	(kPa)	**8**		
FAILURE DETAILS	Strain at Failure	(%)	**13.4**		
	Mode of Failure 1 : **Plastic (Barrelling)**				



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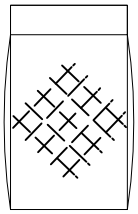
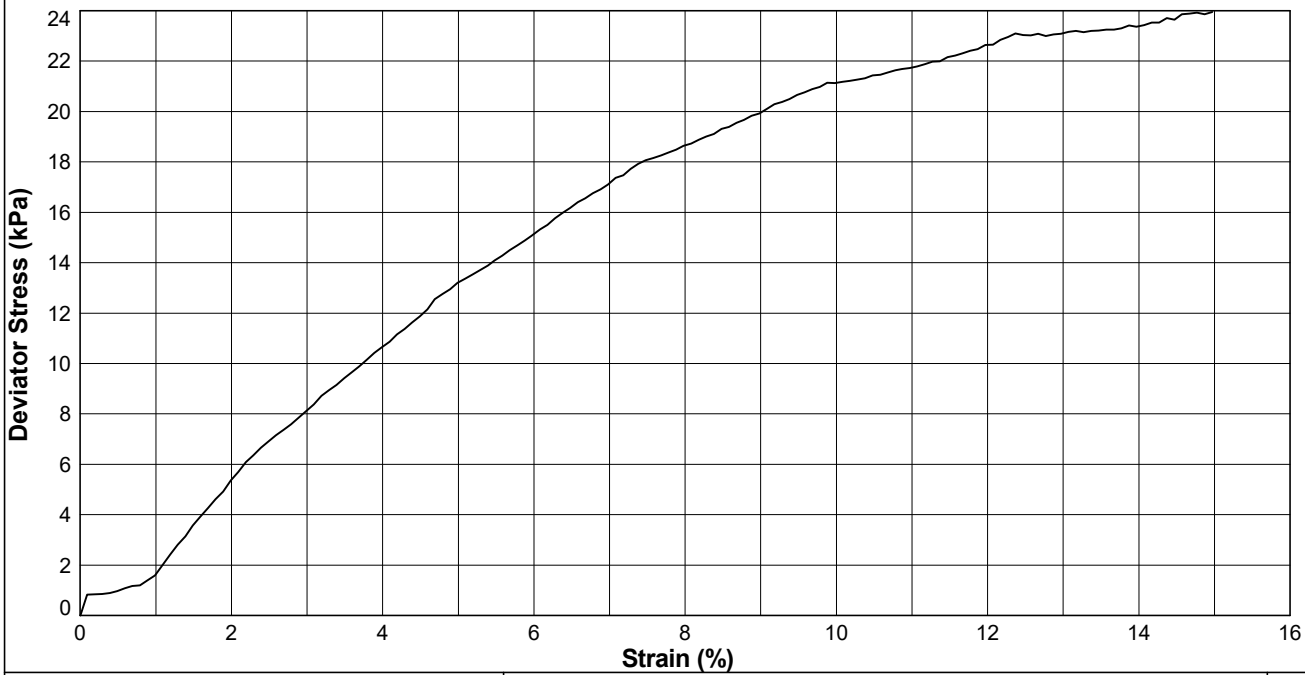
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH501** Sample Ref: **20** Sample Type: **UT** Depth (m): **6.50**

Description : **Dark brown mottled greyish brown very sandy CLAY with pockets of PEAT**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**97.95**		
	Height	(mm)	**201.29**		
	Water Content	(%)	**160**		
	Bulk Density	(Mg/m^3)	**1.91**		
	Dry Density	(Mg/m^3)	**0.73**		
	Void Ratio		**2.6120**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.53**		
	Rate of Axial Displacement	(%/min)	**0.79**		
	Cell Pressure	(kPa)	**130**		
	Membrane Correction	(kPa)	**1.66**		
	Corrected Deviator Stress	(kPa)	**24**		
	Undrained Shear Strength	(kPa)	**12**		
FAILURE DETAILS	Strain at Failure	(%)	**15.0**		
	Mode of Failure 1 : **Semi-plastic (intermediate)**				



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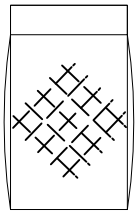
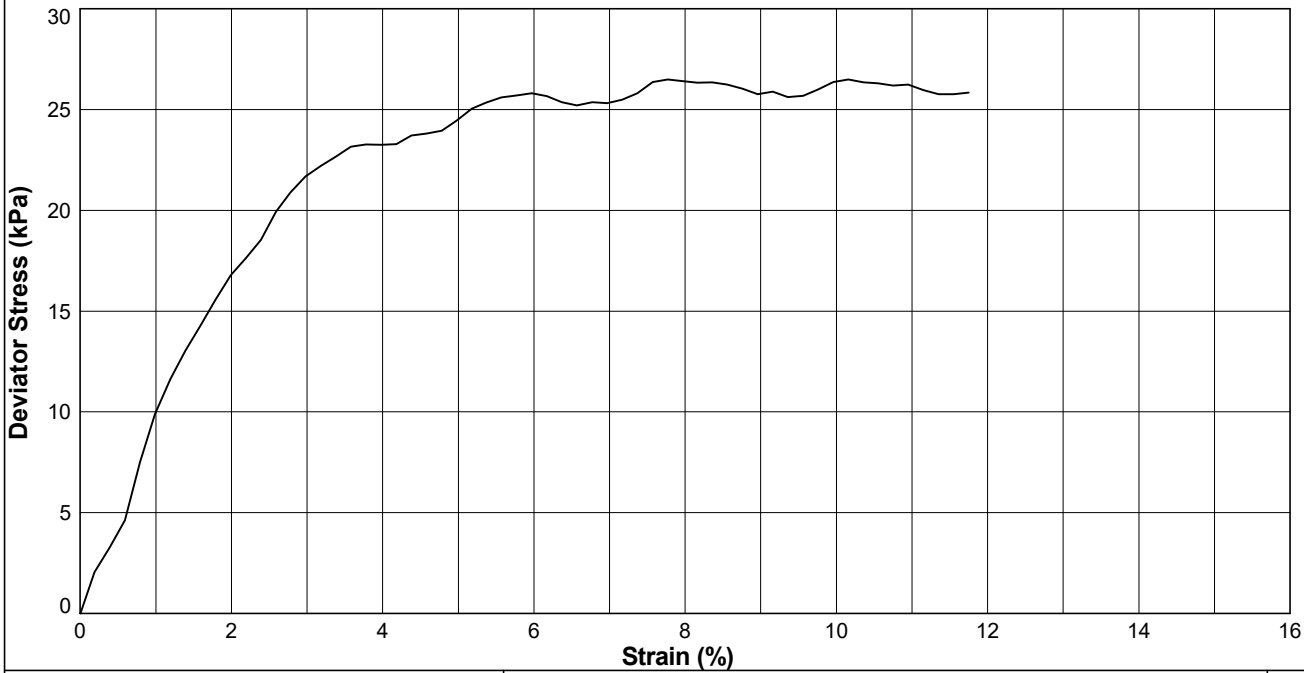
In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH502** Sample Ref: **8** Sample Type: **UT** Depth (m): **2.00**

Description : **Dark grey mottled black and brown slightly sandy very clayey PEAT**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**102.58**		
	Height	(mm)	**207.72**		
	Water Content	(%)	**88.1**		
	Bulk Density	(Mg/m^3)	**1.52**		
	Dry Density	(Mg/m^3)	**0.81**		
	Void Ratio		**2.2773**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.77**		
	Rate of Axial Displacement	(%/min)	**1.16**		
	Cell Pressure	(kPa)	**40**		
	Membrane Correction	(kPa)	**1.75**		
	Corrected Deviator Stress	(kPa)	**26**		
	Undrained Shear Strength	(kPa)	**13**		
FAILURE DETAILS	Strain at Failure	(%)	**10.2**		
	Mode of Failure 1 : **Semi-plastic (intermediate)**				



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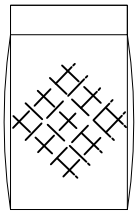
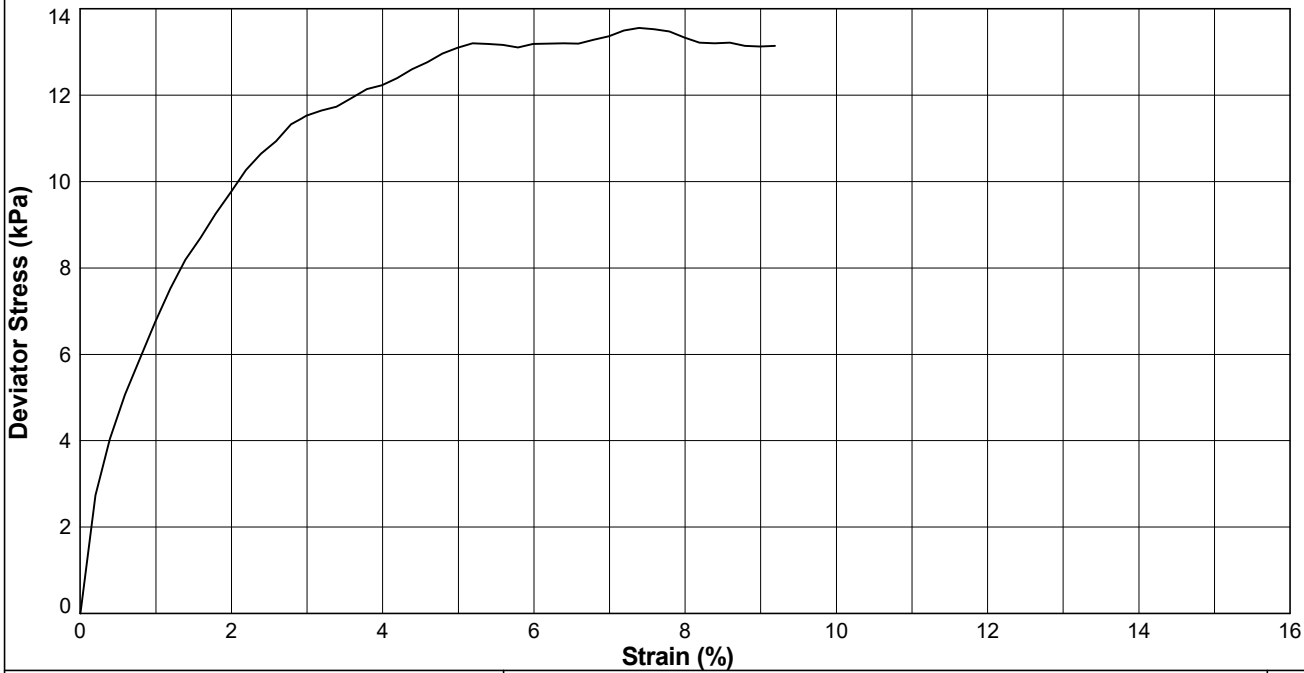
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH502** Sample Ref: **15** Sample Type: **UT** Depth (m): **4.00**

Description : **Dark grey mottled brown clayey PEAT**
Non-standard notes : **Failed perpendicularity check**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**102.72**		
	Height	(mm)	**207.57**		
	Water Content	(%)	**63.7**		
	Bulk Density	(Mg/m^3)	**1.33**		
	Dry Density	(Mg/m^3)	**0.81**		
	Void Ratio		**2.2734**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.62**		
	Rate of Axial Displacement	(%/min)	**0.96**		
	Cell Pressure	(kPa)	**80**		
	Membrane Correction	(kPa)	**1.09**		
	Corrected Deviator Stress	(kPa)	**14**		
	Undrained Shear Strength	(kPa)	**7**		
FAILURE DETAILS	Strain at Failure	(%)	**7.4**		
	Mode of Failure 1 : **Semi-plastic (intermediate)**				



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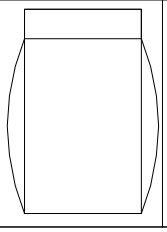
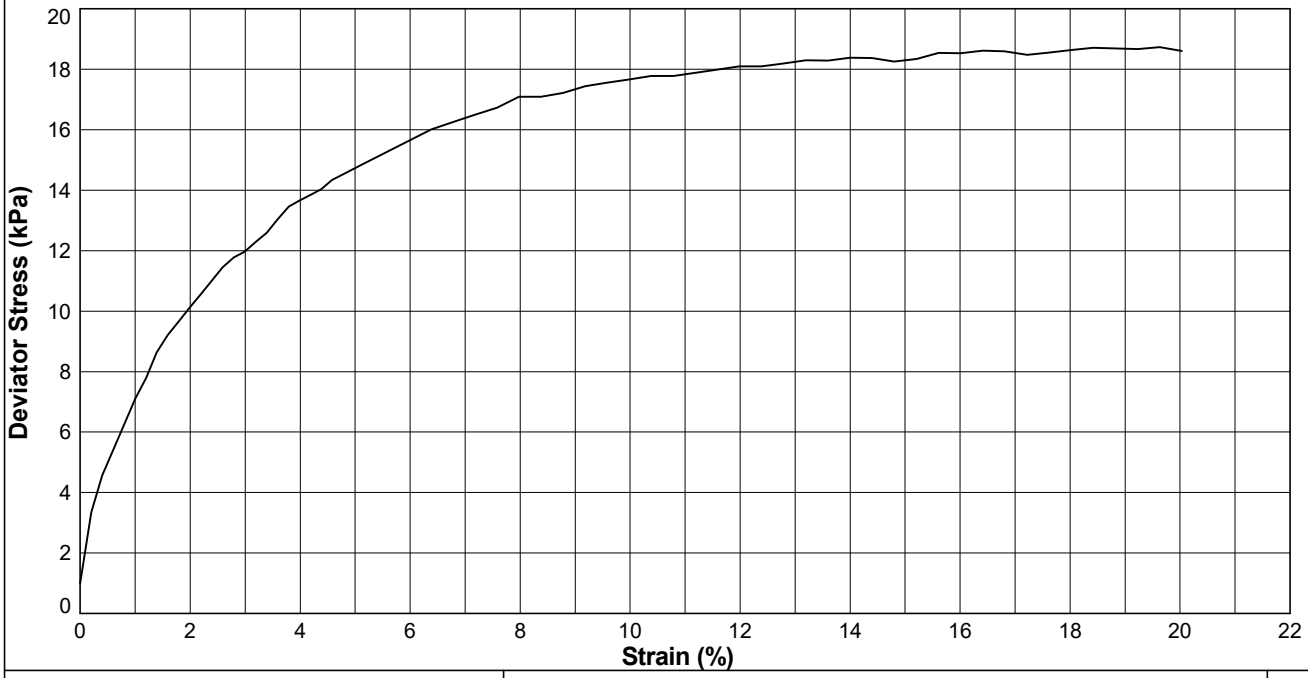
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH502** Sample Ref: **18** Sample Type: **UT** Depth (m): **5.04**

Description : **Grey clayey SILT**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**100.54**		
	Height	(mm)	**195.56**		
	Water Content	(%)	**58.3**		
	Bulk Density	(Mg/m^3)	**1.76**		
	Dry Density	(Mg/m^3)	**1.11**		
	Void Ratio		**1.3829**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.46**		
	Rate of Axial Displacement	(%/min)	**1.38**		
	Cell Pressure	(kPa)	**100**		
	Membrane Correction	(kPa)	**1.40**		
	Corrected Deviator Stress	(kPa)	**18**		
	Undrained Shear Strength	(kPa)	**9**		
FAILURE DETAILS	Strain at Failure	(%)	**15.0**		
	Mode of Failure 1 : **Plastic (Barrelling)**				



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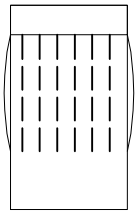
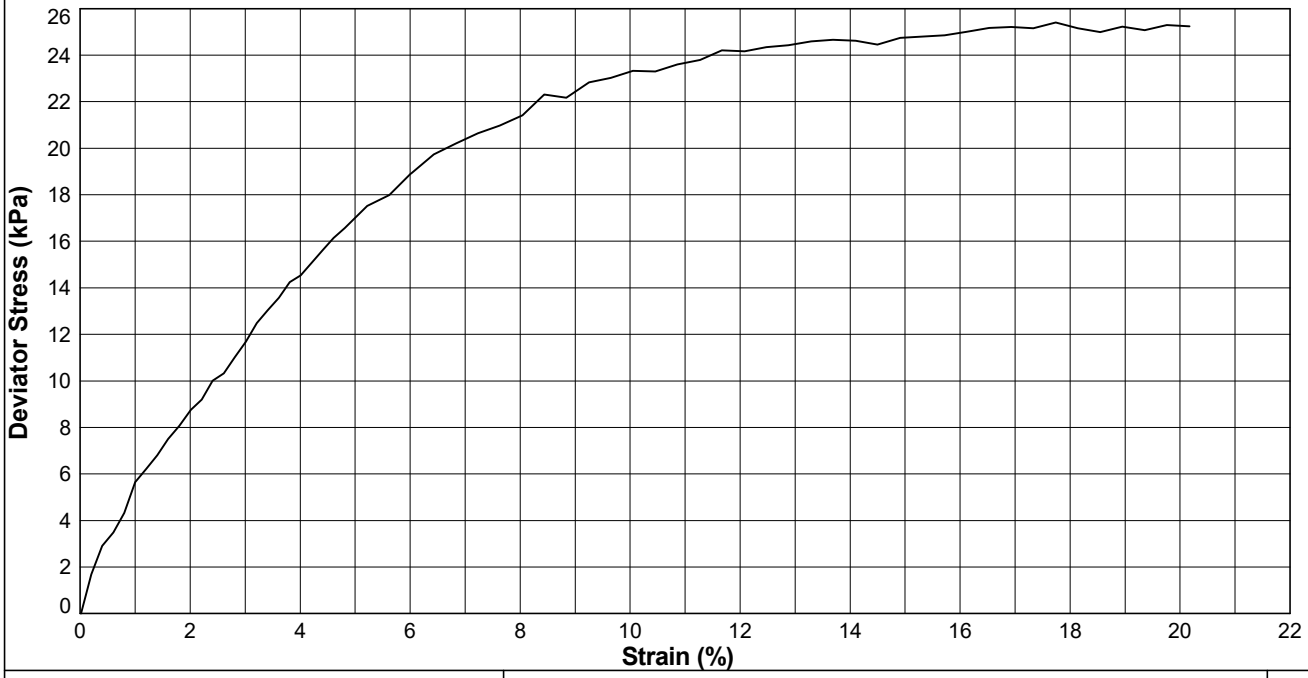
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH502** Sample Ref: **26** Sample Type: **UT** Depth (m): **7.25**

Description : **Dark grey sity CLAY**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**101.15**		
	Height	(mm)	**194.27**		
	Water Content	(%)	**34.0**		
	Bulk Density	(Mg/m^3)	**1.93**		
	Dry Density	(Mg/m^3)	**1.44**		
	Void Ratio		**0.8412**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.47**		
	Rate of Axial Displacement	(%/min)	**1.39**		
	Cell Pressure	(kPa)	**140**		
	Membrane Correction	(kPa)	**1.42**		
	Corrected Deviator Stress	(kPa)	**25**		
	Undrained Shear Strength	(kPa)	**12**		
FAILURE DETAILS	Strain at Failure	(%)	**15.0**		
	Mode of Failure 1 : **Semi-plastic (axial splitting with bulging)**				



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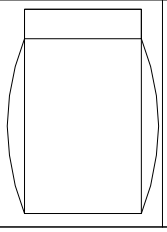
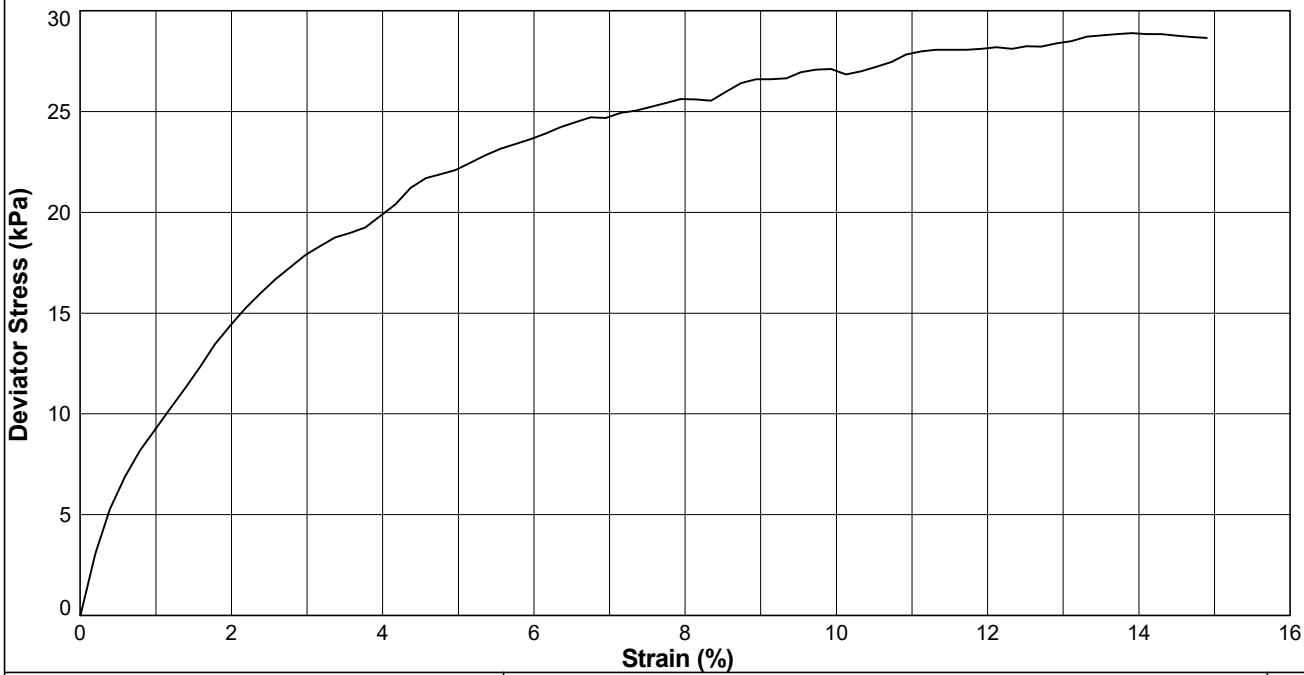
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8

Position ID: **R22-BH502** Sample Ref: **30** Sample Type: **UT** Depth (m): **8.00**

Description : **Dark grey mottled black sandy CLAY with peat and shell fragments**
Non-standard notes : **Failed perpendicularity check**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**102.79**		
	Height	(mm)	**207.64**		
	Water Content	(%)	**36.9**		
	Bulk Density	(Mg/m^3)	**1.91**		
	Dry Density	(Mg/m^3)	**1.40**		
	Void Ratio		**0.8965**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.68**		
	Rate of Axial Displacement	(%/min)	**1.64**		
	Cell Pressure	(kPa)	**160**		
	Membrane Correction	(kPa)	**1.92**		
	Corrected Deviator Stress	(kPa)	**29**		
	Undrained Shear Strength	(kPa)	**14**		
FAILURE DETAILS	Strain at Failure	(%)	**13.9**		
	Mode of Failure 1 : **Plastic (Barrelling)**				



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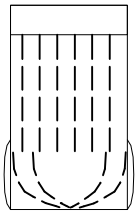
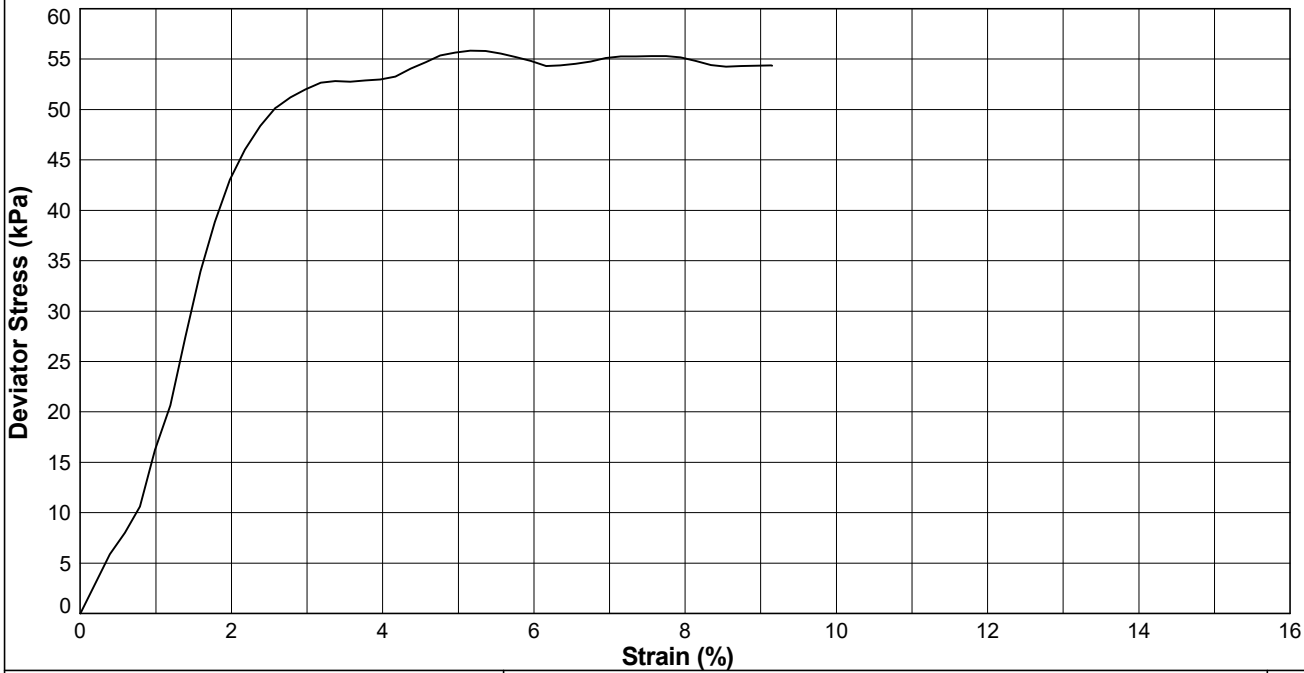
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8

Position ID: **RedP-BH-6** Sample Ref: **15** Sample Type: **UT** Depth (m): **4.00**

Description : **Dark brown mottled grey and black slightly gravelly slightly sandy CLAY with peat**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**103.30**		
	Height	(mm)	**207.41**		
	Water Content	(%)	**47.0**		
	Bulk Density	(Mg/m^3)	**1.74**		
	Dry Density	(Mg/m^3)	**1.18**		
	Void Ratio		**1.2451**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.77**		
	Rate of Axial Displacement	(%/min)	**1.83**		
	Cell Pressure	(kPa)	**80**		
	Membrane Correction	(kPa)	**1.03**		
	Corrected Deviator Stress	(kPa)	**56**		
	Undrained Shear Strength	(kPa)	**28**		
FAILURE DETAILS	Strain at Failure	(%)	**5.2**		
	Mode of Failure 1 : **Semi-plastic (bulging, shear & axial splitting)**				



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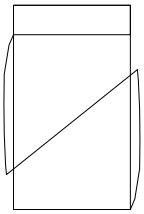
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

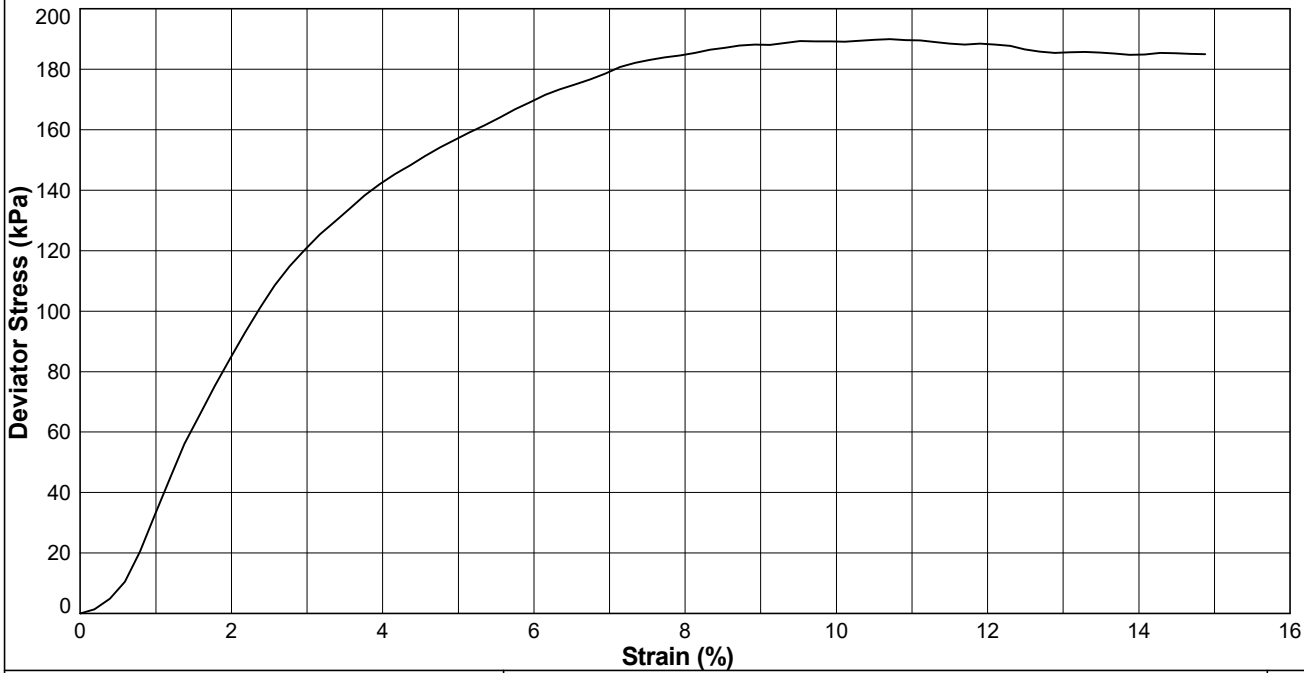
In accordance with BS EN ISO 17892 Part 8

Position ID: **RedP-BH-6** Sample Ref: **23** Sample Type: **UT** Depth (m): **6.00**

Description : **Light brown very 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)	**103.65**		
	Height	(mm)	**207.37**		
	Water Content	(%)	**34.1**		
	Bulk Density	(Mg/m^3)	**1.86**		
	Dry Density	(Mg/m^3)	**1.38**		
	Void Ratio		**0.9136**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.77**		
	Rate of Axial Displacement	(%/min)	**1.45**		
	Cell Pressure	(kPa)	**120**		
	Membrane Correction	(kPa)	**1.80**		
	Corrected Deviator Stress	(kPa)	**190**		
	Undrained Shear Strength	(kPa)	**95**		
FAILURE DETAILS	Strain at Failure	(%)	**10.7**		
	Mode of Failure 1 : **Brittle (shear plane)**				



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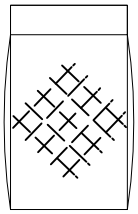
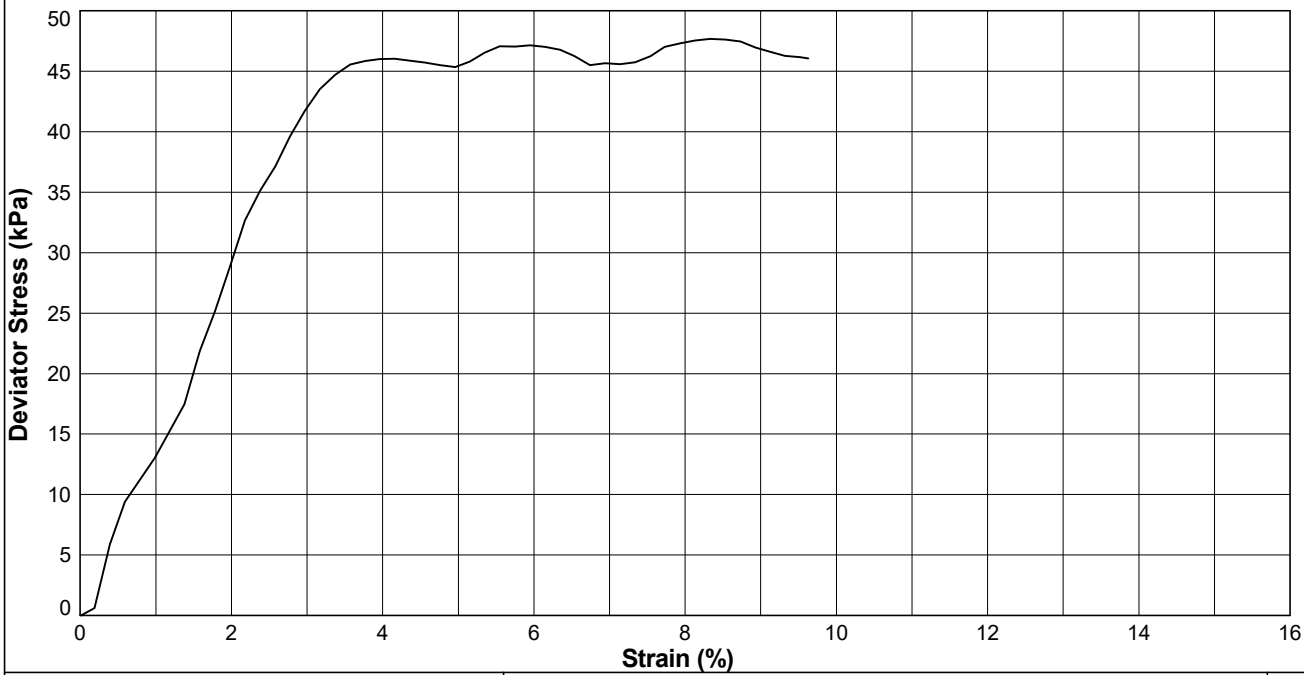
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8

Position ID: **RedP-BH-7** Sample Ref: **6** Sample Type: **UT** Depth (m): **1.50**

Description : **Dark brown mottled black, grey and greenish grey slightly sandy CLAY with peat**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**103.42**		
	Height	(mm)	**207.96**		
	Water Content	(%)	**45.2**		
	Bulk Density	(Mg/m^3)	**1.74**		
	Dry Density	(Mg/m^3)	**1.20**		
	Void Ratio		**1.2148**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.77**		
	Rate of Axial Displacement	(%/min)	**1.44**		
	Cell Pressure	(kPa)	**30**		
	Membrane Correction	(kPa)	**1.48**		
	Corrected Deviator Stress	(kPa)	**48**		
	Undrained Shear Strength	(kPa)	**24**		
FAILURE DETAILS	Strain at Failure	(%)	**8.3**		
	Mode of Failure 1 : **Semi-plastic (intermediate)**				



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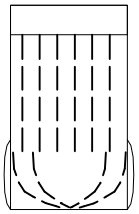
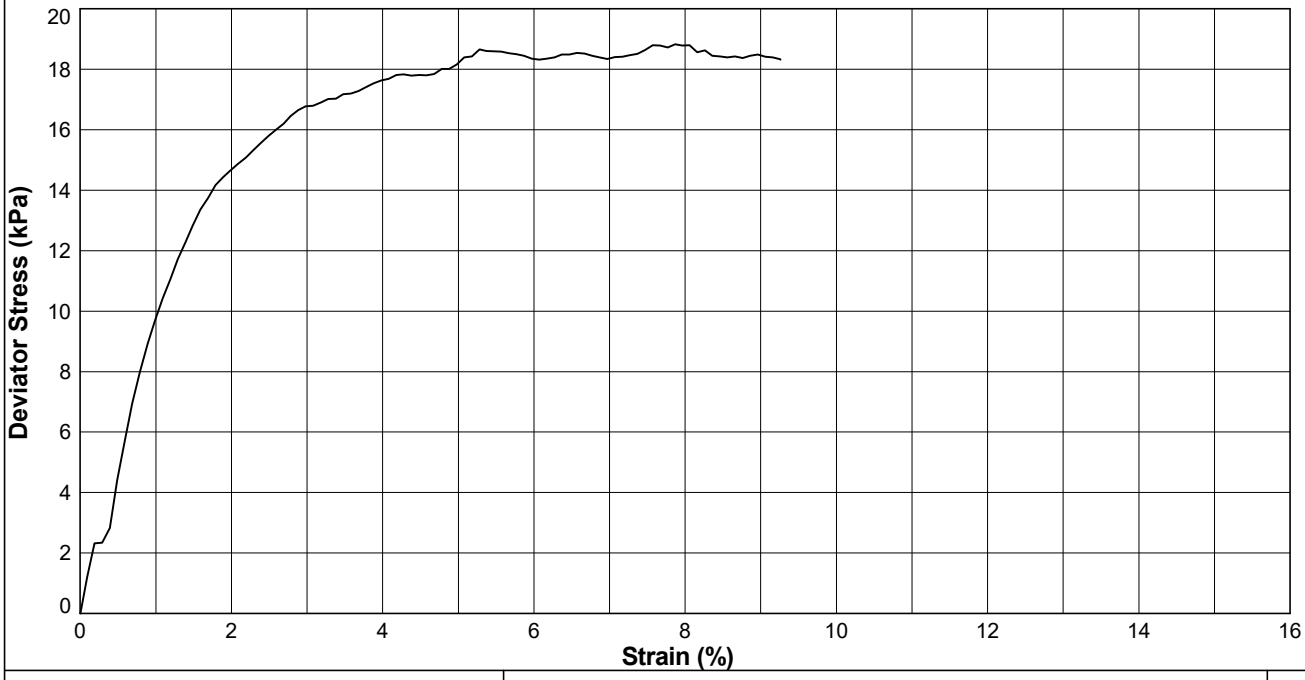
In accordance with BS EN ISO 17892 Part 8

Position ID: **RedP-BH-7** Sample Ref: **12** Sample Type: **UT** Depth (m): **3.50**

Description : **Dark grey mottled black and dark brown clayey PEAT**
Non-standard notes : **Failed perpendicularity check**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**102.61**		
	Height	(mm)	**207.41**		
	Water Content	(%)	**70.2**		
	Bulk Density	(Mg/m^3)	**1.62**		
	Dry Density	(Mg/m^3)	**0.95**		
	Void Ratio		**1.7772**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.77**		
	Rate of Axial Displacement	(%/min)	**0.72**		
	Cell Pressure	(kPa)	**70**		
	Membrane Correction	(kPa)	**1.42**		
	Corrected Deviator Stress	(kPa)	**19**		
	Undrained Shear Strength	(kPa)	**9**		
FAILURE DETAILS	Strain at Failure	(%)	**7.9**		
	Mode of Failure 1 : **Semi-plastic (bulging, shear & axial splitting)**				



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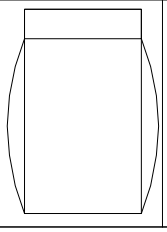
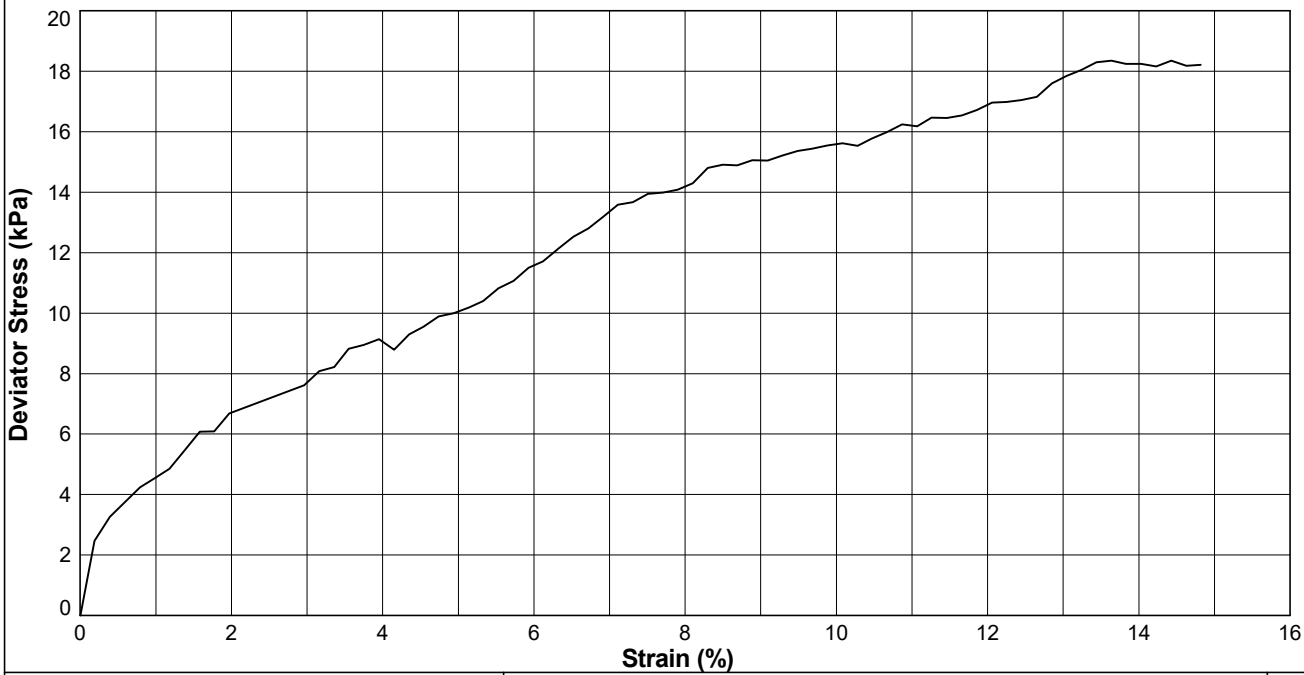
In accordance with BS EN ISO 17892 Part 8

Position ID: **RedP-BH-7** Sample Ref: **19** Sample Type: **UT** Depth (m): **5.50**

Description : **Brown mottled white and dark grey very gravelly 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)	**104.68**		
	Height	(mm)	**204.90**		
	Water Content	(%)	**16.4**		
	Bulk Density	(Mg/m^3)	**2.13**		
	Dry Density	(Mg/m^3)	**1.83**		
	Void Ratio		**0.4472**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.77**		
	Rate of Axial Displacement	(%/min)	**1.56**		
	Cell Pressure	(kPa)	**110**		
	Membrane Correction	(kPa)	**2.10**		
	Corrected Deviator Stress	(kPa)	**18**		
	Undrained Shear Strength	(kPa)	**9**		
FAILURE DETAILS	Strain at Failure	(%)	**13.6**		
	Mode of Failure 1 : **Plastic (Barrelling)**				



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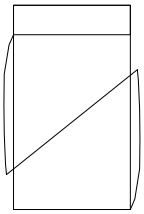
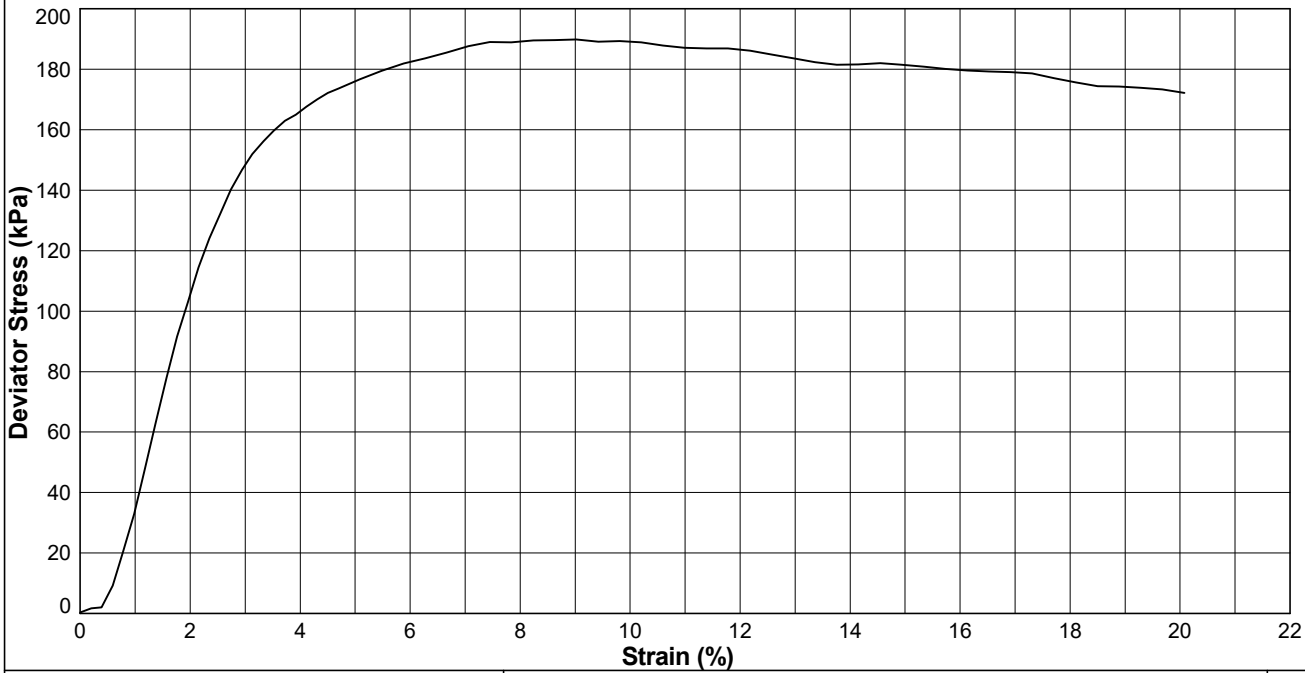
In accordance with BS EN ISO 17892 Part 8

Position ID: **RedP-BH-8** Sample Ref: **8** Sample Type: **UT** Depth (m): **2.25**

Description : **Light brown mottled grey slightly sandy silty CLAY**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**102.95**		
	Height	(mm)	**198.96**		
	Water Content	(%)	**41.8**		
	Bulk Density	(Mg/m^3)	**1.77**		
	Dry Density	(Mg/m^3)	**1.25**		
	Void Ratio		**1.1223**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.45**		
	Rate of Axial Displacement	(%/min)	**1.01**		
	Cell Pressure	(kPa)	**40**		
	Membrane Correction	(kPa)	**0.93**		
	Corrected Deviator Stress	(kPa)	**190**		
	Undrained Shear Strength	(kPa)	**95**		
FAILURE DETAILS	Strain at Failure	(%)	**9.0**		
	Mode of Failure 1 : **Brittle (shear plane)**				



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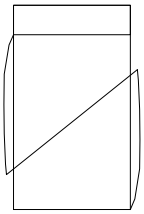
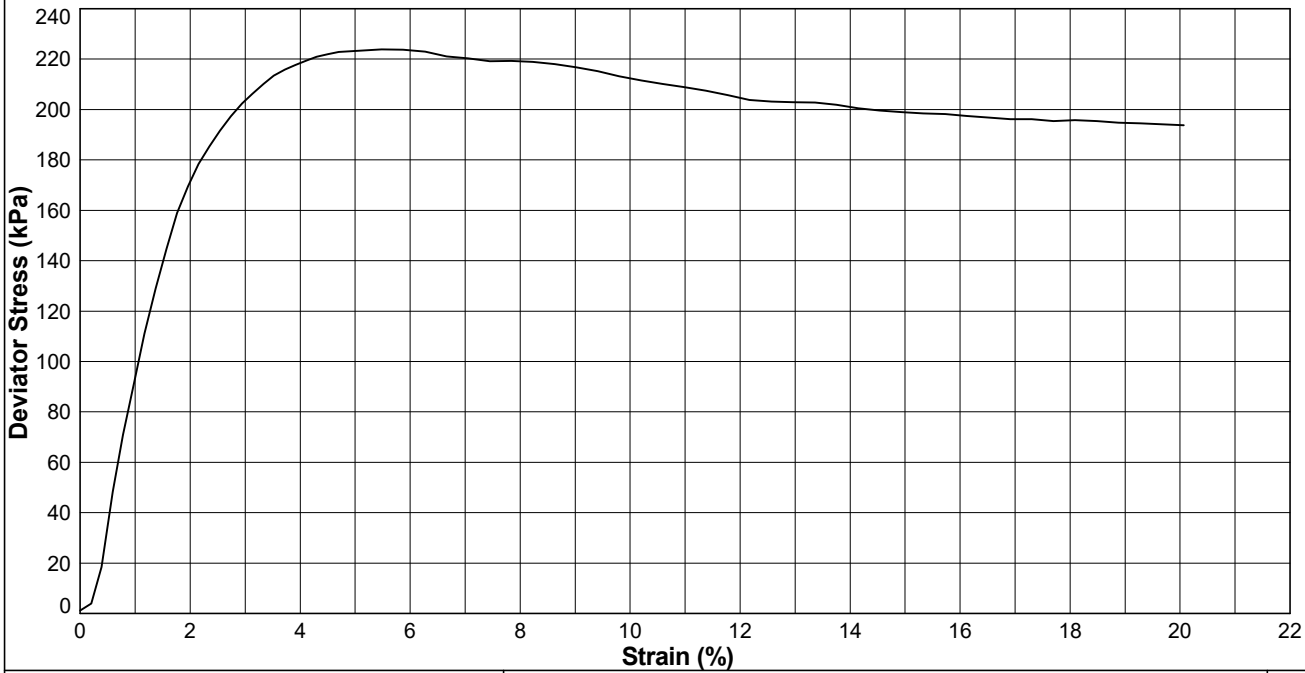
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8

Position ID: **RedP-BH-8** Sample Ref: **14** Sample Type: **UT** Depth (m): **4.14**

Description : **Dark grey slightly sandy silty CLAY**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**102.90**		
	Height	(mm)	**199.11**		
	Water Content	(%)	**33.8**		
	Bulk Density	(Mg/m^3)	**1.88**		
	Dry Density	(Mg/m^3)	**1.41**		
	Void Ratio		**0.8819**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.43**		
	Rate of Axial Displacement	(%/min)	**1.00**		
	Cell Pressure	(kPa)	**80**		
	Membrane Correction	(kPa)	**0.60**		
	Corrected Deviator Stress	(kPa)	**224**		
	Undrained Shear Strength	(kPa)	**112**		
FAILURE DETAILS	Strain at Failure	(%)	**5.5**		
	Mode of Failure 1 : **Brittle (shear plane)**				



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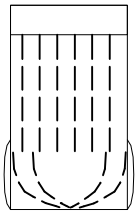
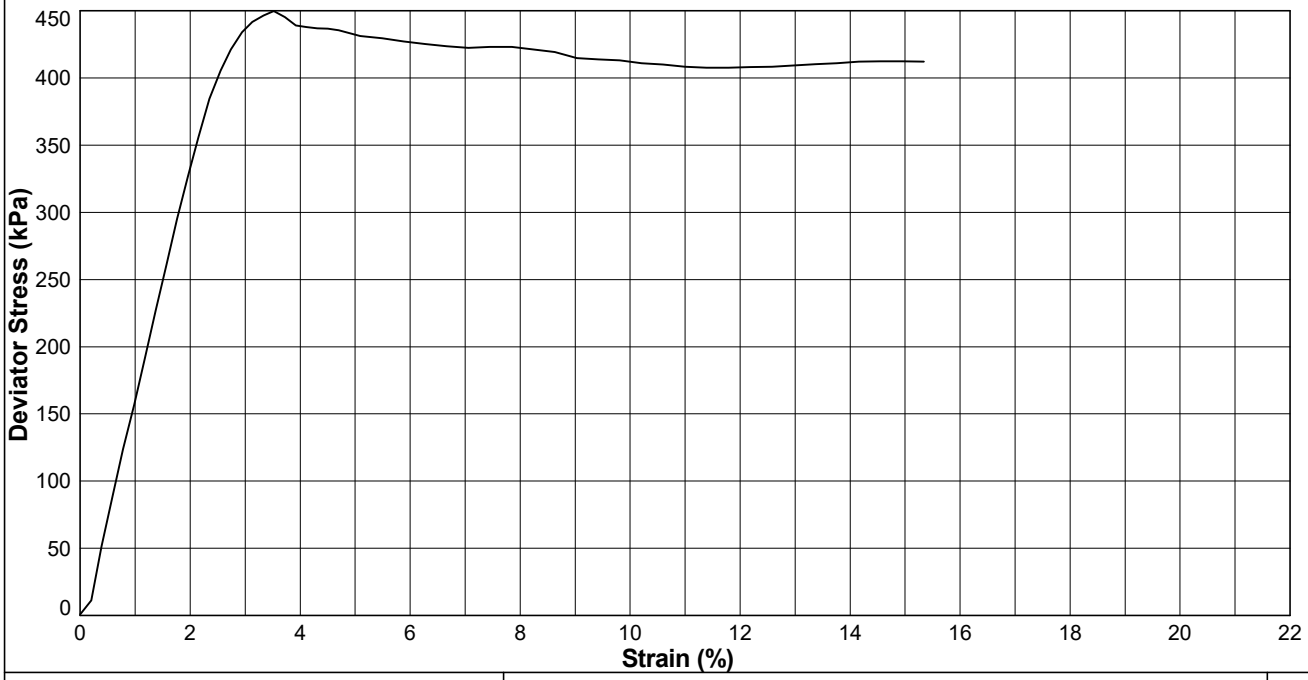
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8

Position ID: **RedP-BH-8** Sample Ref: **19** Sample Type: **UT** Depth (m): **6.15**

Description : **Dark grey slightly sandy CLAY**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**102.94**		
	Height	(mm)	**198.97**		
	Water Content	(%)	**26.5**		
	Bulk Density	(Mg/m^3)	**1.93**		
	Dry Density	(Mg/m^3)	**1.53**		
	Void Ratio		**0.7331**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.43**		
	Rate of Axial Displacement	(%/min)	**1.01**		
	Cell Pressure	(kPa)	**120**		
	Membrane Correction	(kPa)	**0.41**		
	Corrected Deviator Stress	(kPa)	**450**		
	Undrained Shear Strength	(kPa)	**225**		
FAILURE DETAILS	Strain at Failure	(%)	**3.5**		
	Mode of Failure 1 : **Semi-plastic (bulging, shear & axial splitting)**				



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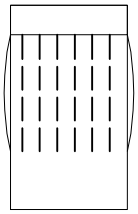
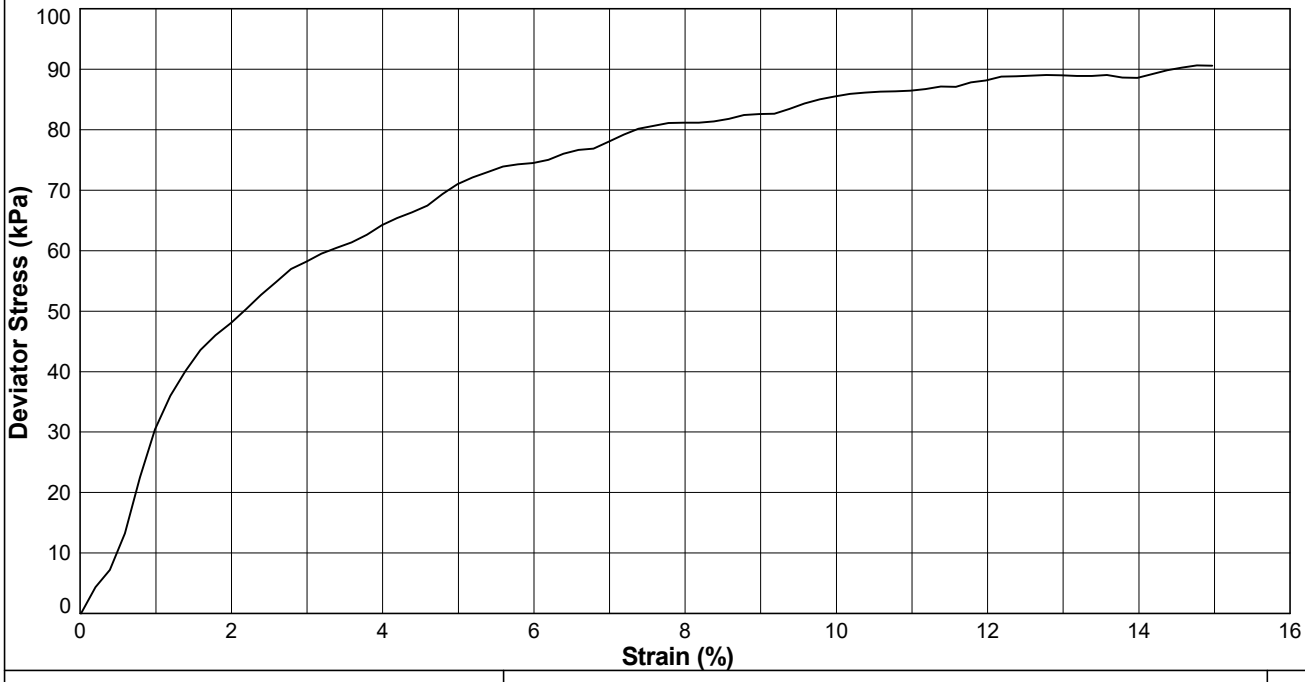
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8

Position ID: **RedP-BH-9** Sample Ref: **21** Sample Type: **UT** Depth (m): **5.00**

Description : **Brown mottled grey and green sandy CLAY**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**103.46**		
	Height	(mm)	**208.22**		
	Water Content	(%)	**43.4**		
	Bulk Density	(Mg/m^3)	**1.79**		
	Dry Density	(Mg/m^3)	**1.25**		
	Void Ratio		**1.1184**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.77**		
	Rate of Axial Displacement	(%/min)	**1.06**		
	Cell Pressure	(kPa)	**100**		
	Membrane Correction	(kPa)	**2.26**		
	Corrected Deviator Stress	(kPa)	**91**		
	Undrained Shear Strength	(kPa)	**45**		
FAILURE DETAILS	Strain at Failure	(%)	**14.8**		
	Mode of Failure 1 : **Semi-plastic (axial splitting with bulging)**				



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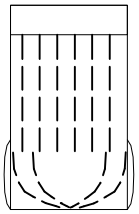
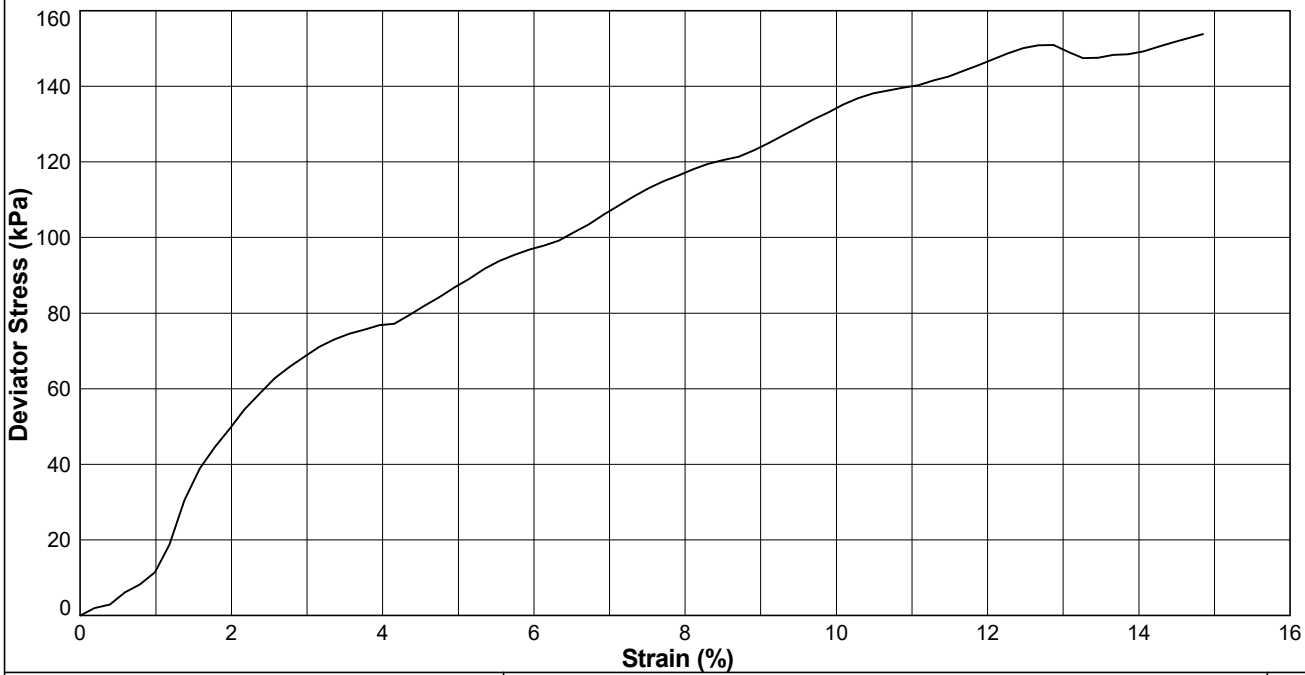
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8

Position ID: **RedP-BH-9** Sample Ref: **29** Sample Type: **UT** Depth (m): **7.00**

Description : **Brown mottled light grey and greenish grye sandy CLAY with peat**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**102.84**		
	Height	(mm)	**207.55**		
	Water Content	(%)	**37.8**		
	Bulk Density	(Mg/m^3)	**1.88**		
	Dry Density	(Mg/m^3)	**1.37**		
	Void Ratio		**0.9394**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.77**		
	Rate of Axial Displacement	(%/min)	**1.30**		
	Cell Pressure	(kPa)	**140**		
	Membrane Correction	(kPa)	**2.28**		
	Corrected Deviator Stress	(kPa)	**154**		
	Undrained Shear Strength	(kPa)	**77**		
FAILURE DETAILS	Strain at Failure	(%)	**14.8**		
	Mode of Failure 1 : **Semi-plastic (bulging, shear & axial splitting)**				



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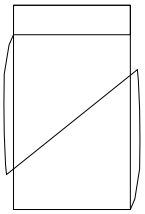
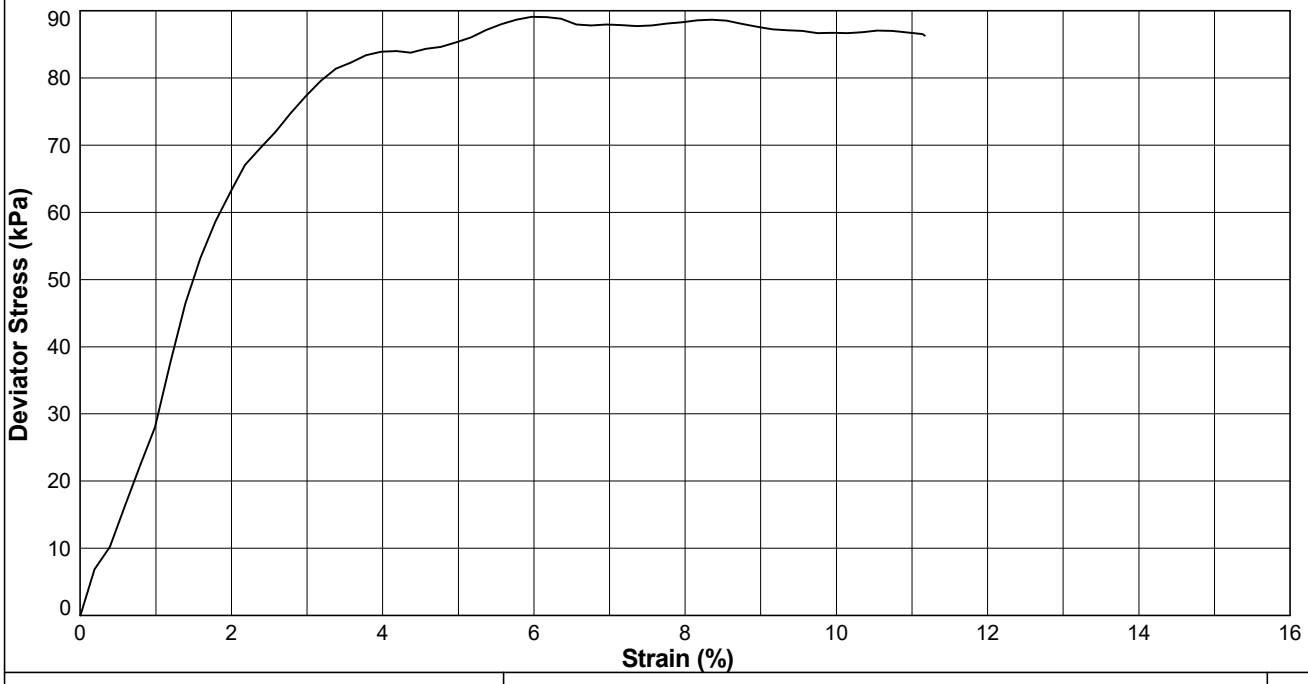
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8

Position ID: **RedP-BH-10** Sample Ref: **39** Sample Type: **UT** Depth (m): **10.00**

Description : **Brown mottled dark brown and black slightly gravelly CLAY with peat**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**103.37**		
	Height	(mm)	**207.62**		
	Water Content	(%)	**36.1**		
	Bulk Density	(Mg/m^3)	**1.84**		
	Dry Density	(Mg/m^3)	**1.35**		
	Void Ratio		**0.9572**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.77**		
	Rate of Axial Displacement	(%/min)	**1.73**		
	Cell Pressure	(kPa)	**200**		
	Membrane Correction	(kPa)	**1.14**		
	Corrected Deviator Stress	(kPa)	**89**		
	Undrained Shear Strength	(kPa)	**45**		
FAILURE DETAILS	Strain at Failure	(%)	**6.0**		
	Mode of Failure 1 : **Brittle (shear plane)**				



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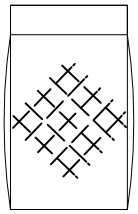
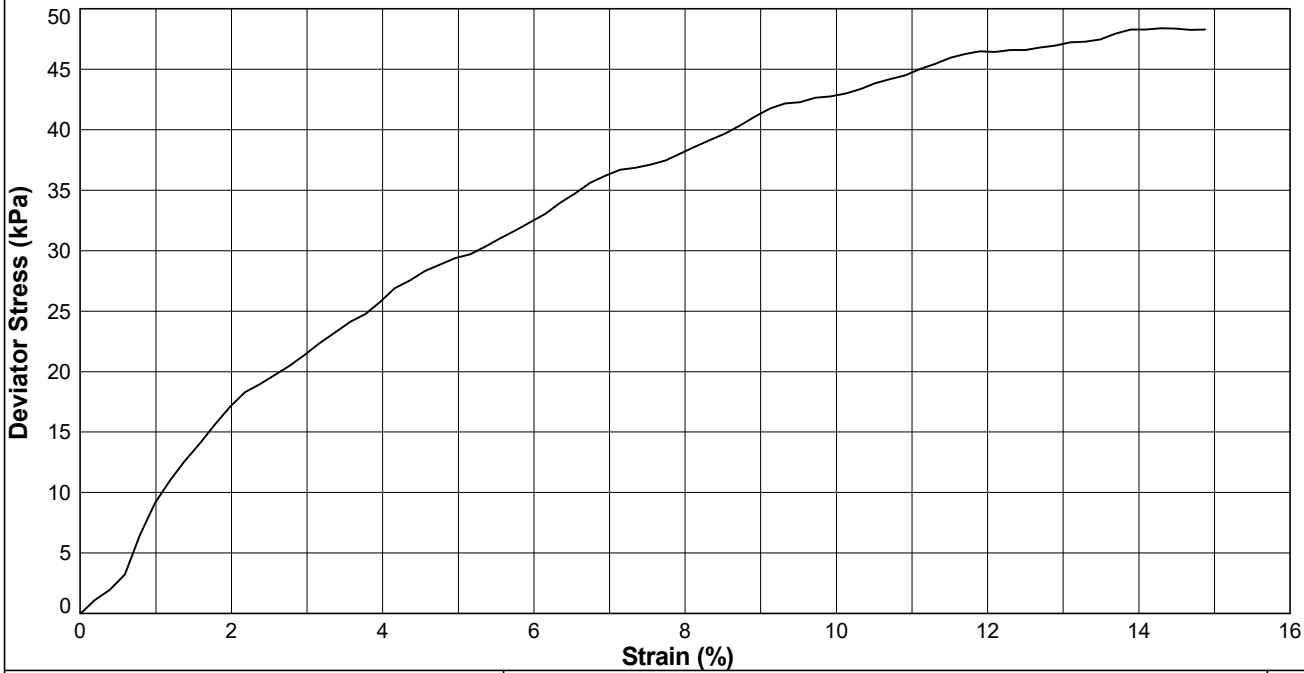
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

In accordance with BS EN ISO 17892 Part 8

Position ID: **RedP-BH-10** Sample Ref: **47** Sample Type: **UT** Depth (m): **12.00**

Description : **Grey mottled dark brown and black sandy CLAY with peat**
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)	**103.24**		
	Height	(mm)	**208.41**		
	Water Content	(%)	**29.0**		
	Bulk Density	(Mg/m^3)	**1.99**		
	Dry Density	(Mg/m^3)	**1.54**		
	Void Ratio		**0.6865**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.77**		
	Rate of Axial Displacement	(%/min)	**0.62**		
	Cell Pressure	(kPa)	**240**		
	Membrane Correction	(kPa)	**2.21**		
	Corrected Deviator Stress	(kPa)	**48**		
	Undrained Shear Strength	(kPa)	**24**		
FAILURE DETAILS	Strain at Failure	(%)	**14.3**		
	Mode of Failure 1 : **Semi-plastic (intermediate)**				



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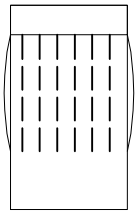
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

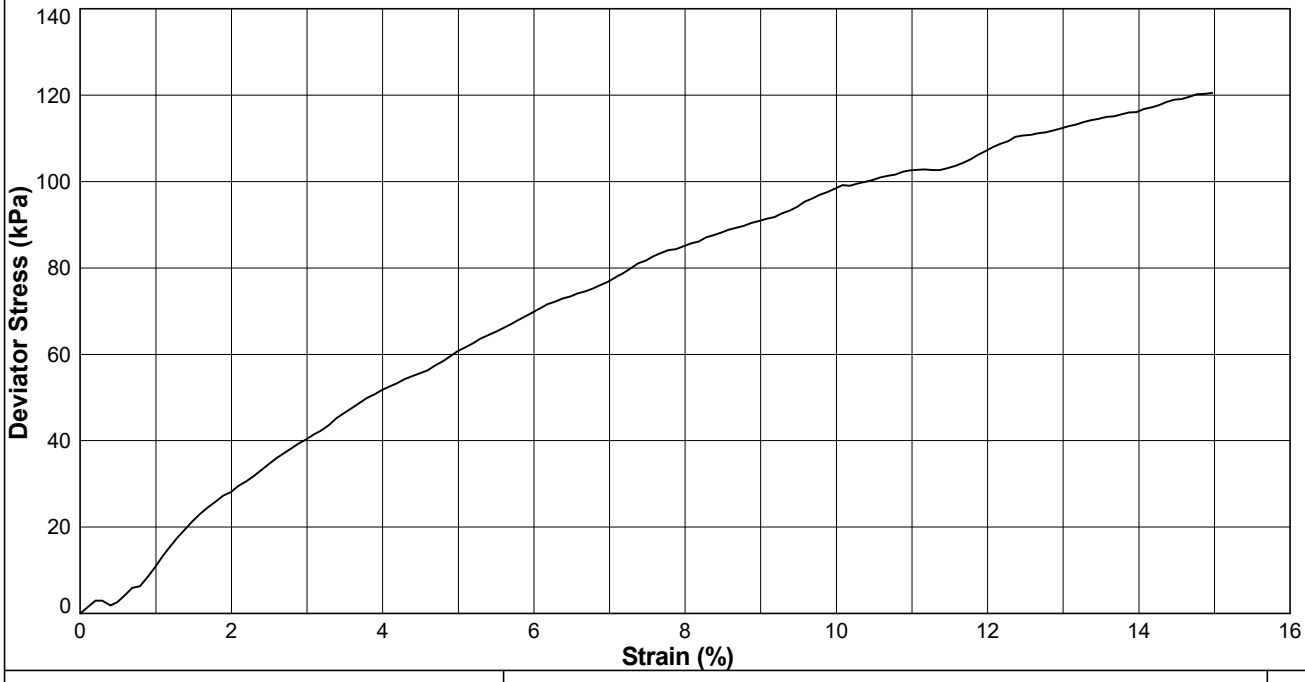
In accordance with BS EN ISO 17892 Part 8

Position ID: **RedP-BH-10** Sample Ref: **55** Sample Type: **UT** Depth (m): **14.00**

Description : **Brown mottled grey 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)	**104.08**		
	Height	(mm)	**209.15**		
	Water Content	(%)	**38.8**		
	Bulk Density	(Mg/m^3)	**1.81**		
	Dry Density	(Mg/m^3)	**1.30**		
	Void Ratio		**1.0334**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.77**		
	Rate of Axial Displacement	(%/min)	**1.20**		
	Cell Pressure	(kPa)	**280**		
	Membrane Correction	(kPa)	**2.26**		
	Corrected Deviator Stress	(kPa)	**120**		
	Undrained Shear Strength	(kPa)	**60**		
FAILURE DETAILS	Strain at Failure	(%)	**15.0**		
	Mode of Failure 1 : **Semi-plastic (axial splitting with bulging)**				



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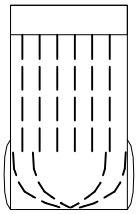
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

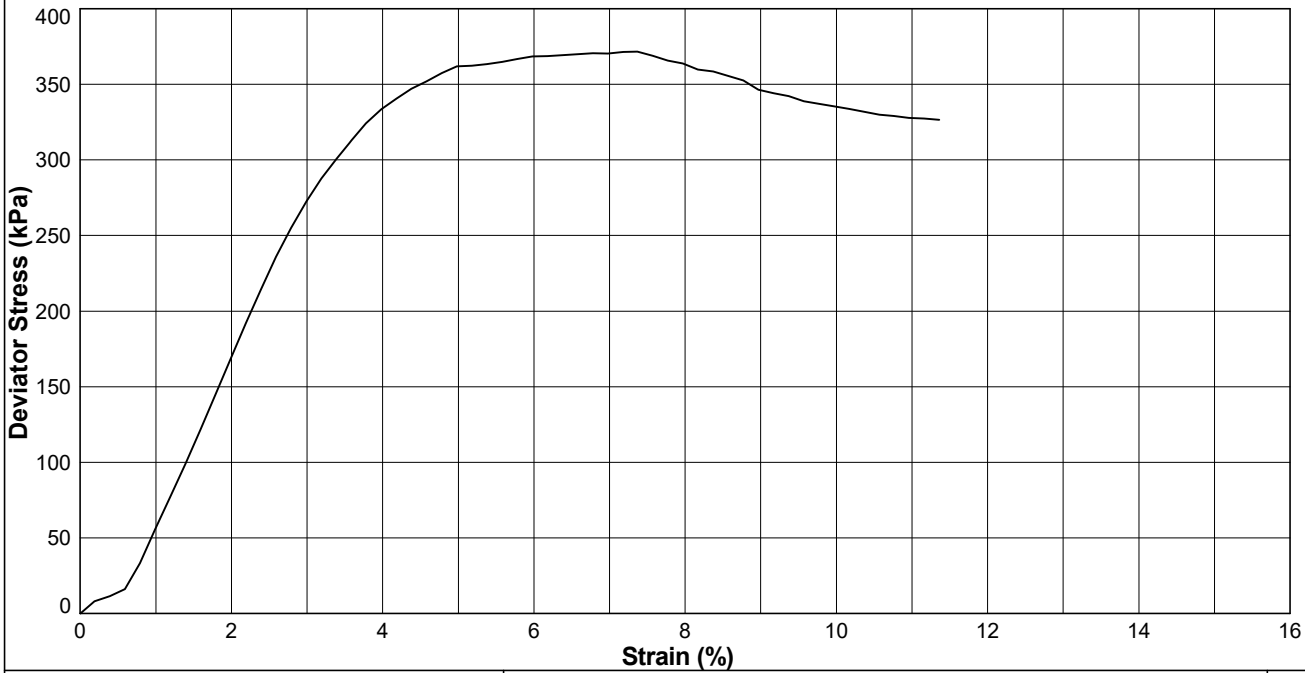
In accordance with BS EN ISO 17892 Part 8

Position ID: **RedP-BH-11** Sample Ref: **11** Sample Type: **UT** Depth (m): **3.00**

Description : **Light brown mottled orangish brown 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)	**103.36**		
	Height	(mm)	**208.21**		
	Water Content	(%)	**29.1**		
	Bulk Density	(Mg/m^3)	**1.84**		
	Dry Density	(Mg/m^3)	**1.42**		
	Void Ratio		**0.8643**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.77**		
	Rate of Axial Displacement	(%/min)	**1.20**		
	Cell Pressure	(kPa)	**60**		
	Membrane Correction	(kPa)	**1.34**		
	Corrected Deviator Stress	(kPa)	**372**		
	Undrained Shear Strength	(kPa)	**186**		
FAILURE DETAILS	Strain at Failure	(%)	**7.4**		
	Mode of Failure 1 : **Semi-plastic (bulging, shear & axial splitting)**				



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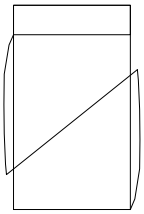
UNCONSOLIDATED UNDRAINED (QUICK) TRIAXIAL COMPRESSION TEST

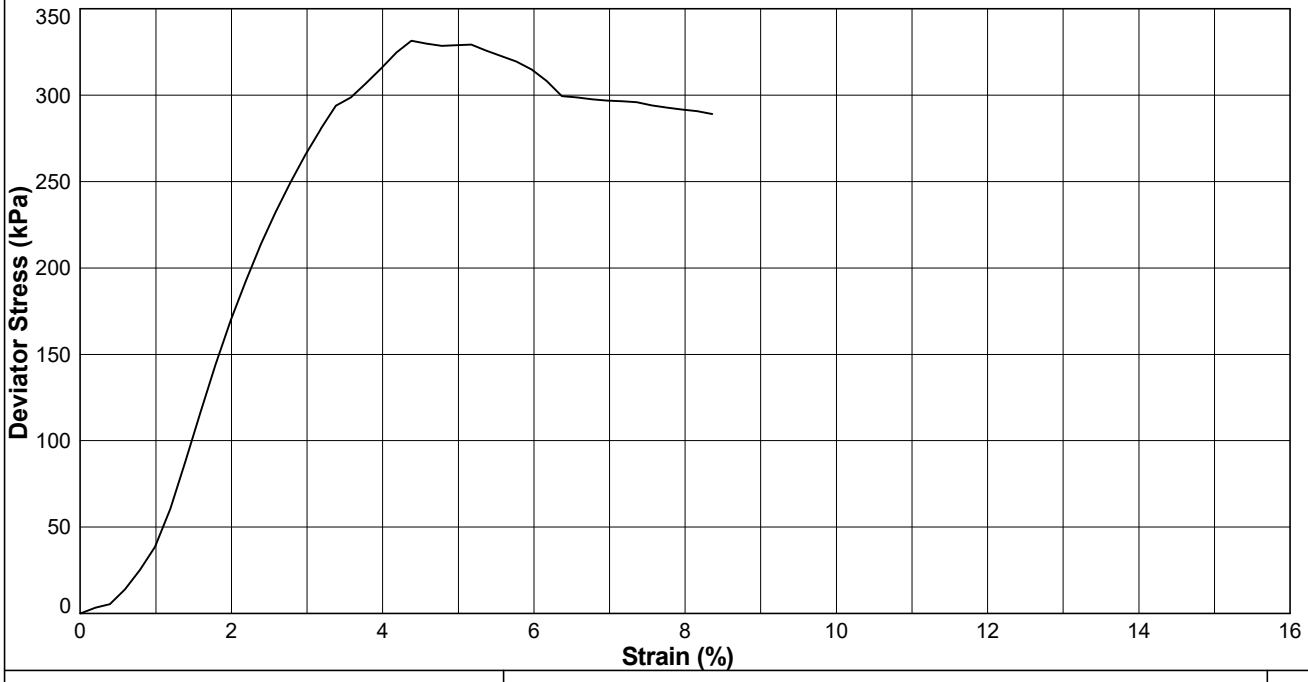
In accordance with BS EN ISO 17892 Part 8

Position ID: **RedP-BH-11** Sample Ref: **19** Sample Type: **UT** Depth (m): **5.00**

Description : **Brown mottled light brown and orangish brown slightly sandy slightly gravelly CLAY with cobbles.**

General Notes : **Failed flatness check**

STAGE/SPECIMEN NUMBER			1	2	3
SPECIMEN DETAILS	Sample Condition		**Undisturbed**		
	Orientation of sample		**Vertical**		
	Diameter	(mm)	**103.79**		
	Height	(mm)	**208.87**		
	Water Content	(%)	**34.4**		
	Bulk Density	(Mg/m^3)	**1.82**		
	Dry Density	(Mg/m^3)	**1.35**		
	Void Ratio		**0.9573**		
TEST DETAILS	Membrane Type		**Rubber**		
	Membrane Thickness	(mm)	**0.51**		
	Rate of Axial Displacement	(%/min)	**1.44**		
	Cell Pressure	(kPa)	**100**		
	Membrane Correction	(kPa)	**0.59**		
	Corrected Deviator Stress	(kPa)	**331**		
	Undrained Shear Strength	(kPa)	**166**		
FAILURE DETAILS	Strain at Failure	(%)	**4.4**		
	Mode of Failure 1 : **Brittle (shear plane)**				



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ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

In accordance with BS EN ISO 17892 Part 9

Borehole : **R22-BH101** Sample Ref : **18** Sample Type : **UT** Depth (m) : **5.07**

Description : **Grey silty CLAY**

Condition : **Undisturbed.**

Saturation Type : **Cell Pressure.** Side Drains : **Y.**

SPECIMEN DETAILS			
Initial Diameter (mm)	103.55		
Initial Height (mm)	207.29		
Initial Mass (g)	3310.88		
Sample Orientation	Vertical		
Initial Water Content (%)	38.3		
Initial Bulk Density (Mg/m^3)	1.90		
Initial Dry Density (Mg/m^3)	1.37		
Initial Voids Ratio	0.9260		
Initial B-Value	0.91		
Final Water Content (%)	31.7		
Final Bulk Density (Mg/m^3)	1.96		
Final Dry Density (Mg/m^3)	1.49		
SATURATION			
Duration (days)	1		
Final B-Value	0.99		
Voids Ratio	0.926		
CONSOLIDATION			
Stage	1		
Duration (days)	2		
Cell Pressure (kPa)	450		
Back Pressure (kPa)	400		
Initial Volume (cm^3)	1746		
Final Volume (cm^3)	1606		
Voids Ratio	0.7724		
Effective Major Principal Stress (kPa)	48		
Effective Minor Principal Stress (kPa)	48		
Ext. Axial Strain (%)	-		
Ext. Volumetric Strain (%)	7.98		

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ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

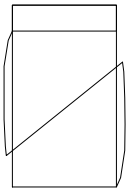
In accordance with BS EN ISO 17892 Part 9

Borehole : **R22-BH101** Sample Ref : **18** Sample Type : **UT** Depth (m) : **5.07**

Description : **Grey silty CLAY**

Condition : **Undisturbed.**

Saturation Type : **Cell Pressure.** Side Drains : **Y.**

COMPRESSION			
Duration (days)	3		
Cell Pressure (kPa)	450		
Initial Porewater Pressure (kPa)	402		
Strain Rate (mm/min)	0.00701		
Failure Criteria	Maximum Deviator Stress		
Axial Strain at Failure (%)	10.39		
Time to Failure (h)	50.0		
Deviator Stress at Failure (kPa)	55		
Vertical Membrane Correction at Failure (kPa)	2.522		
Horizontal Membrane Correction at Failure (kPa)	0.514		
Side Drain Correction at Failure (kPa)	3.774		
Porewater Pressure at Failure (kPa)	429		
Effective Major Principal Stress (kPa)	76		
Effective Minor Principal Stress (kPa)	21		
Effective Principal Stress Ratio	3.54		
Pore Pressure Coefficient - A_f	0.48		
Mode of Failure Brittle (shear plane)			

Effective Cohesion (kPa) : **N/A**	Angle of Shear Resistance (degs) : **N/A**

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Contract:	Contract Ref:
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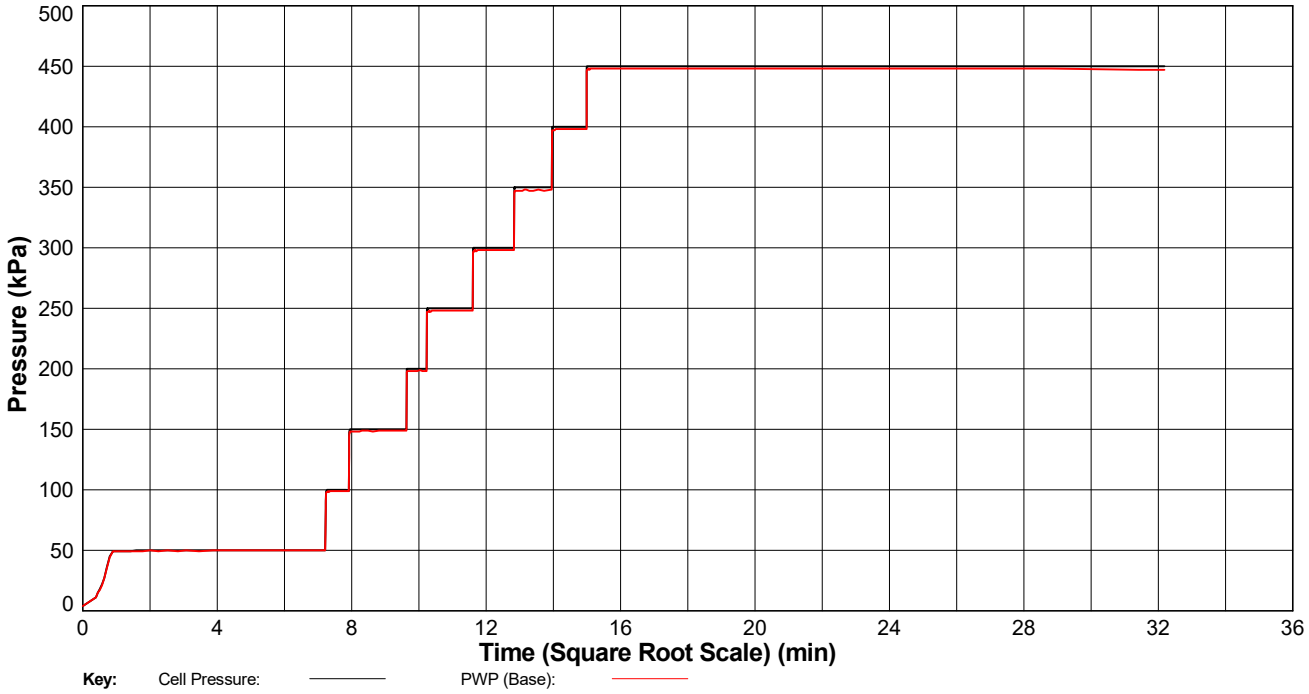
ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

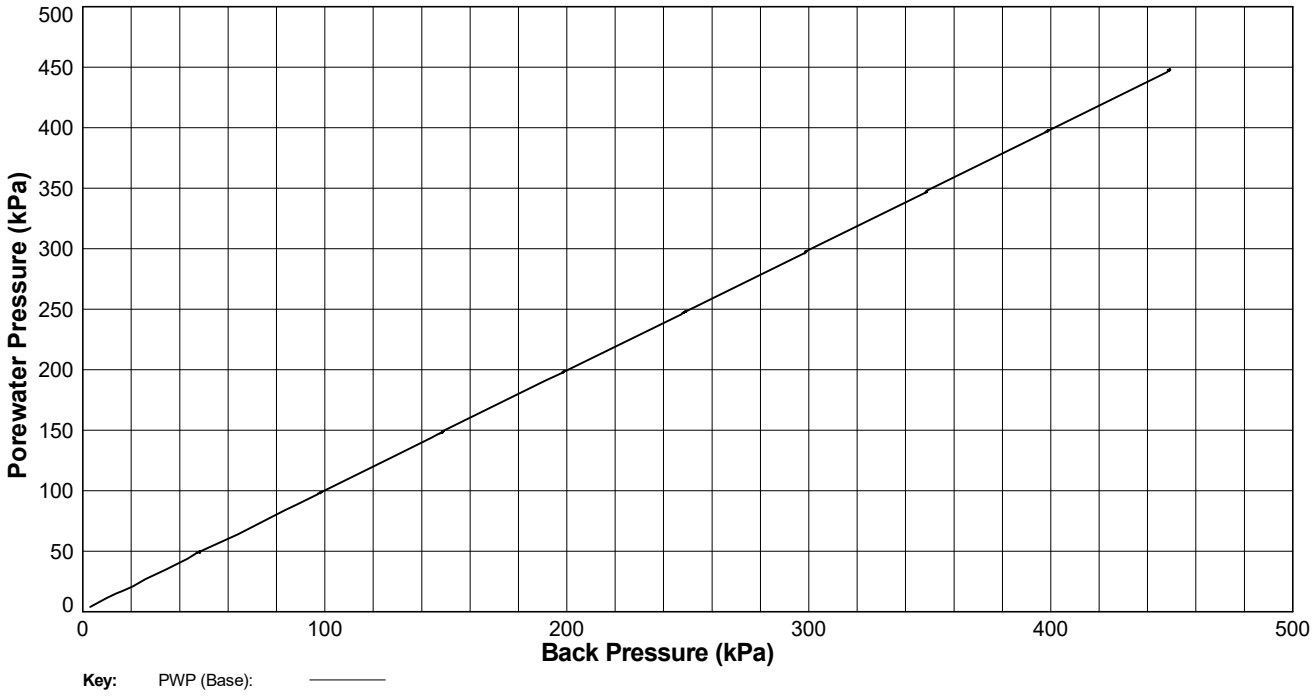
In accordance with BS EN ISO 17892 Part 9

Position ID: **R22-BH101** Sample Ref: **18** Sample Type: **UT** Depth (m): **5.07**

SATURATION



SATURATION



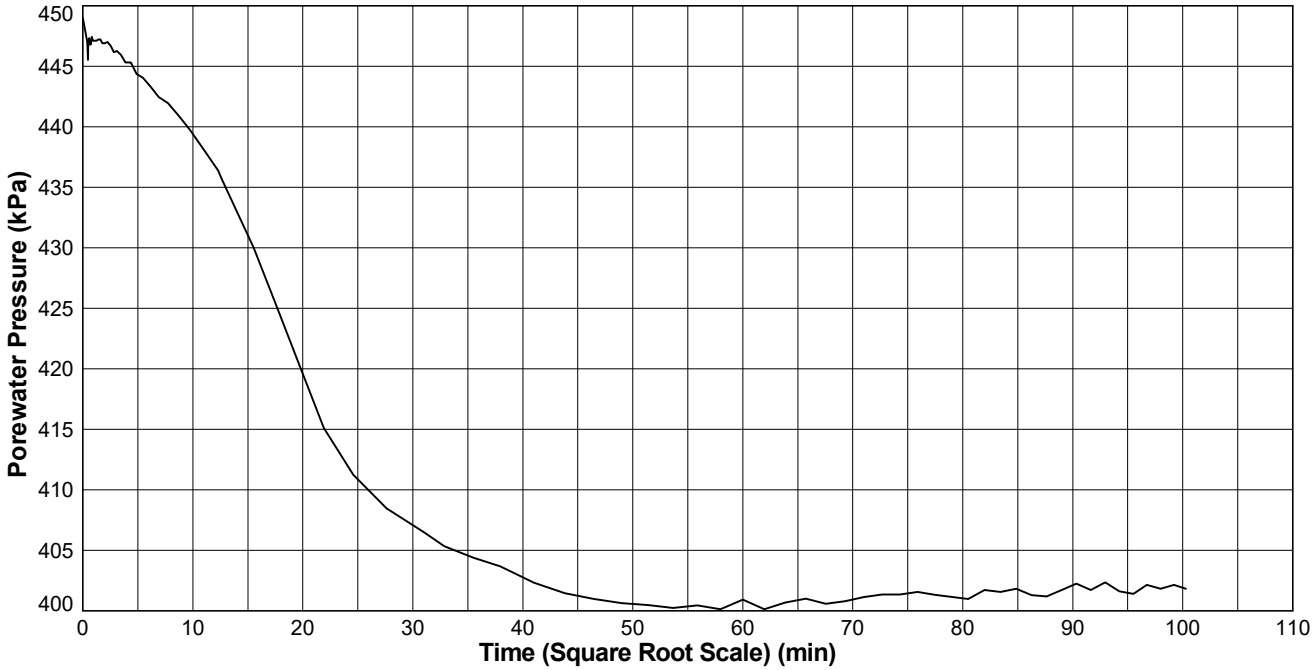
STRUCTURAL SOILS 1a Princess Street Bedminster Bristol BS3 4AG	Compiled By	Date	
	[redacted]	**22/01/24**	
	Contract **Sea Link - Richborough**	Contract Ref: **563607**	

ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

In accordance with BS EN ISO 17892 Part 9

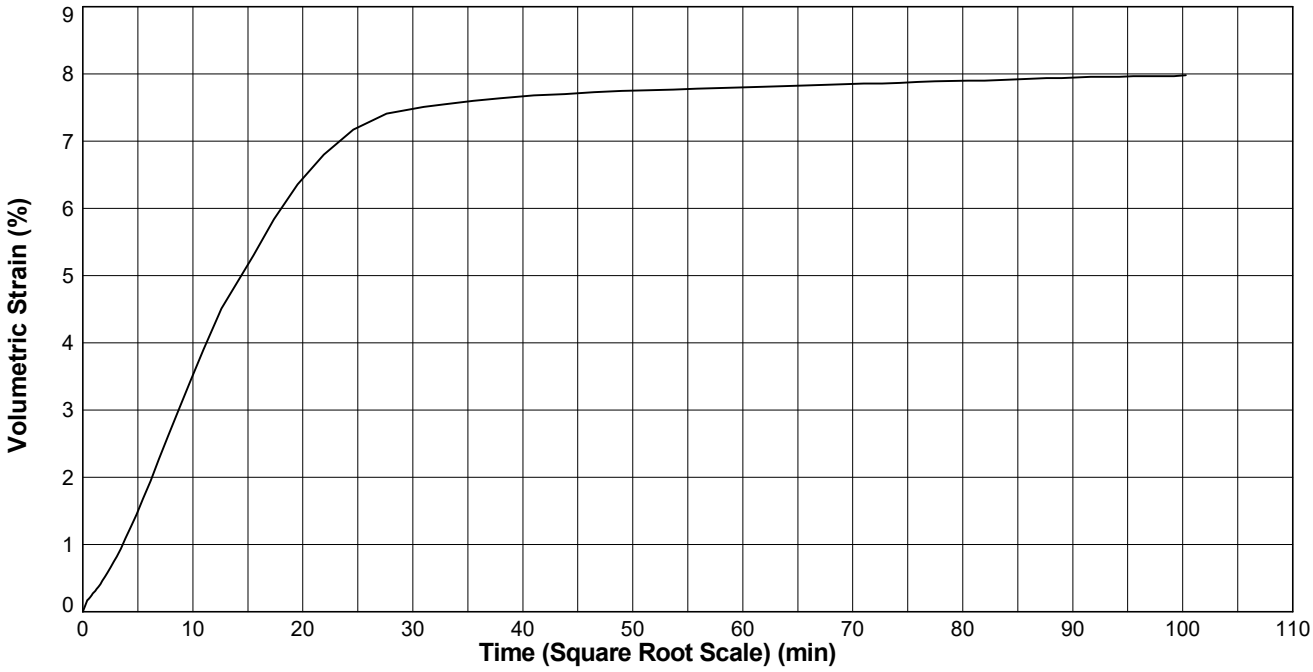
Position ID: **R22-BH101** Sample Ref: **18** Sample Type: **UT** Depth (m): **5.07**

CONSOLIDATION



Key: PWP (Base):

CONSOLIDATION



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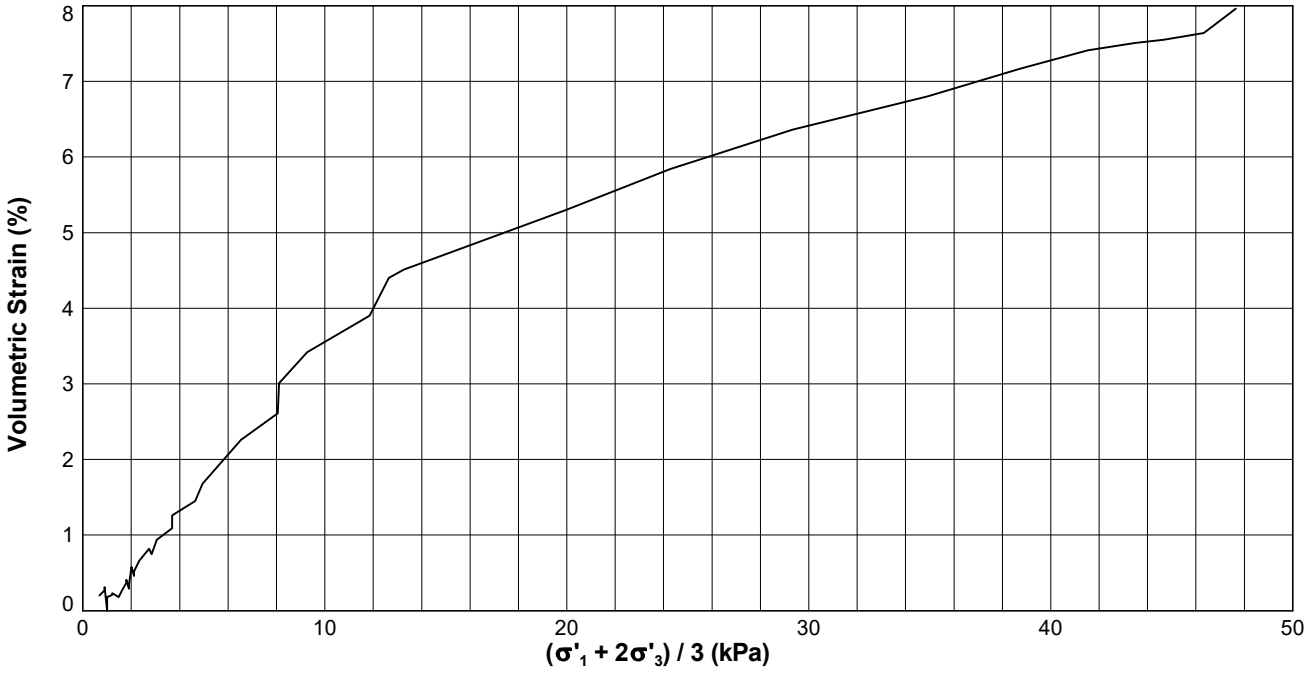
ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

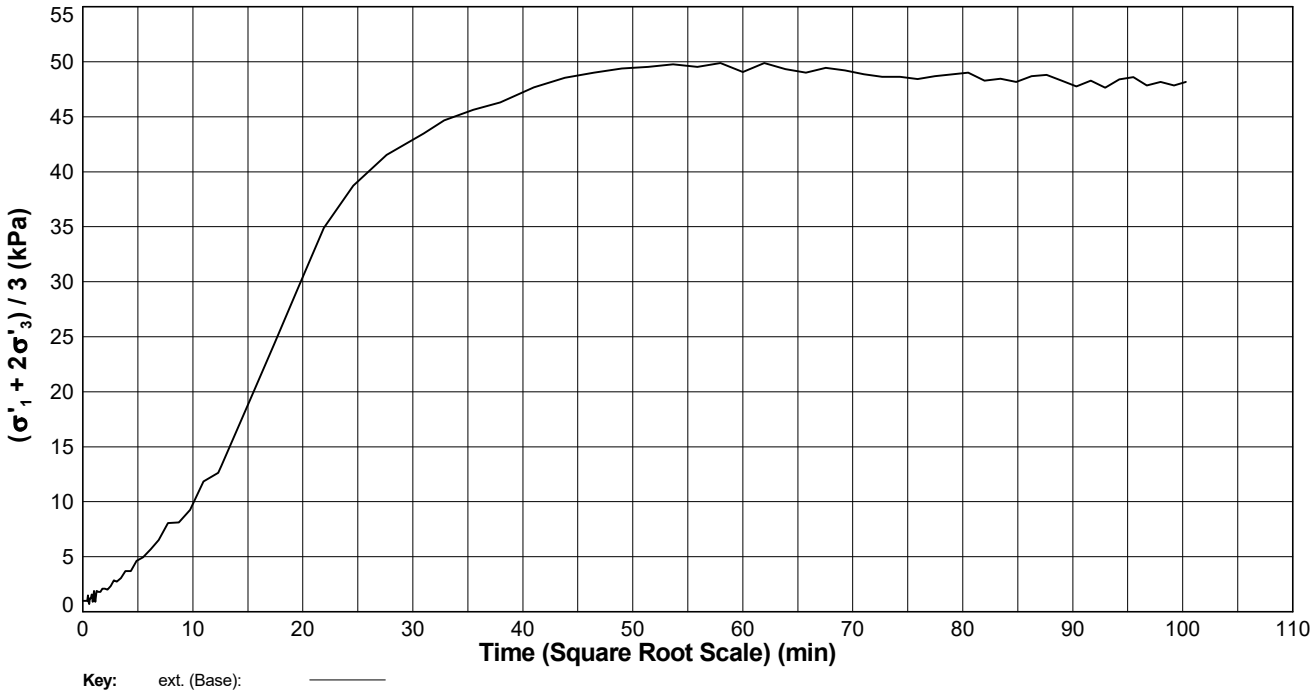
In accordance with BS EN ISO 17892 Part 9

Position ID: **R22-BH101** Sample Ref: **18** Sample Type: **UT** Depth (m): **5.07**

CONSOLIDATION



CONSOLIDATION



Key: ext. (Base):

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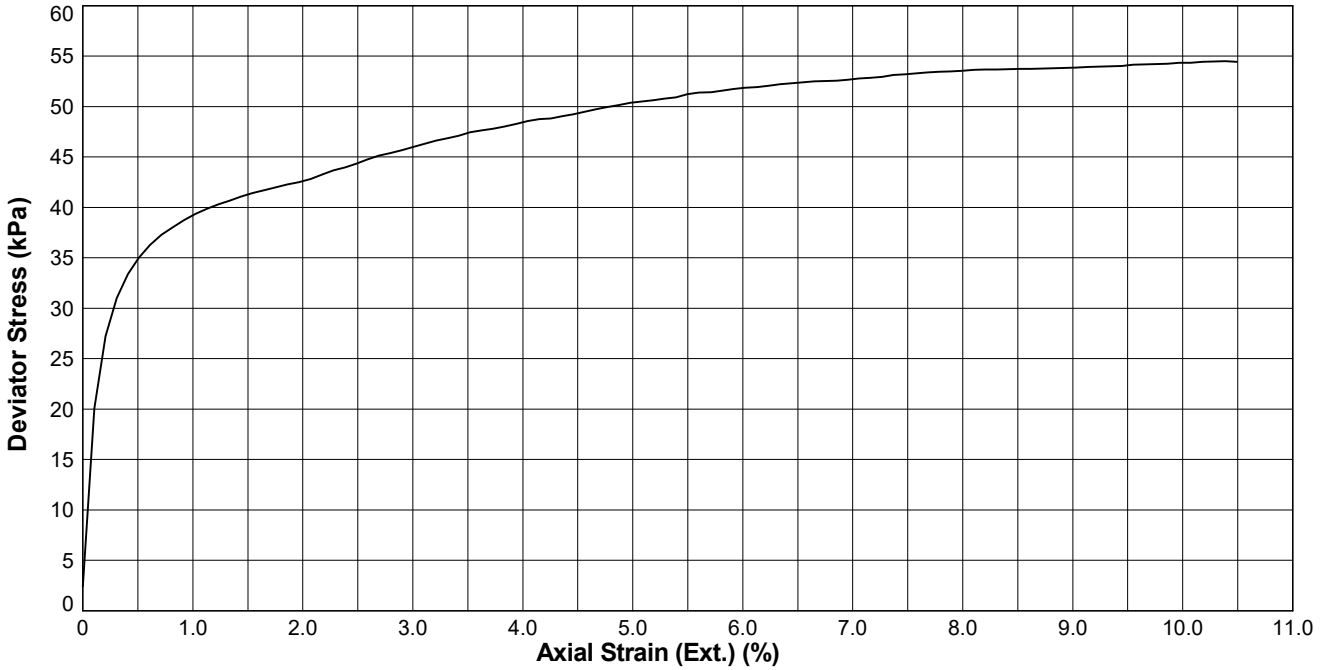
Contract: **Sea Link - Richborough**	Contract Ref: **563607**

ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

In accordance with BS EN ISO 17892 Part 9

Position ID: **R22-BH101** Sample Ref: **18** Sample Type: **UT** Depth (m): **5.07**

SHEAR



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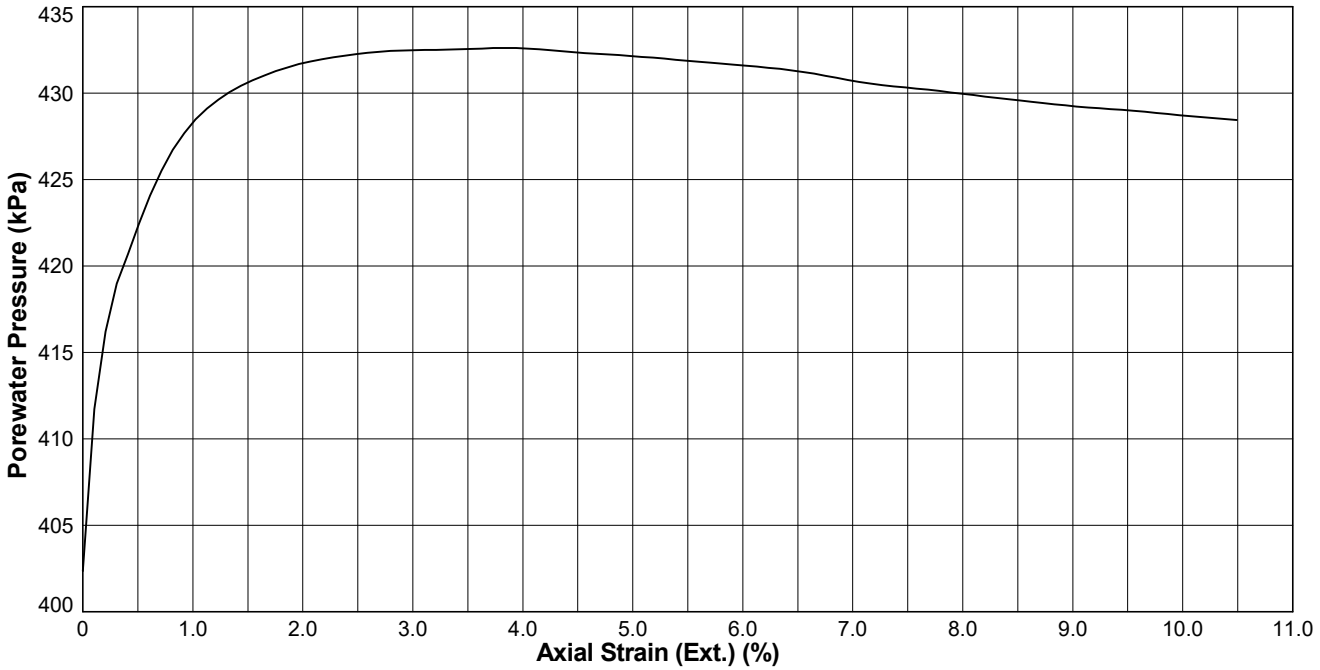
SHEAR



Key: PWP (Base):

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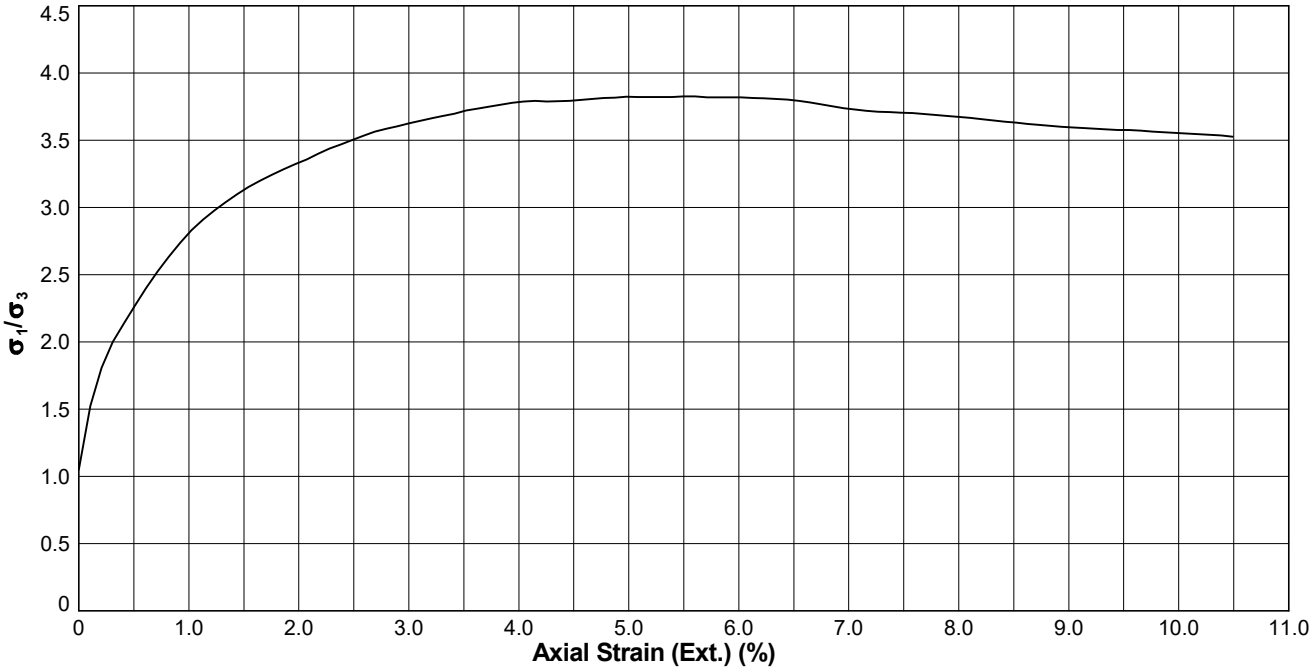
In accordance with BS EN ISO 17892 Part 9

Position ID: **R22-BH101** Sample Ref: **18** Sample Type: **UT** Depth (m): **5.07**

SHEAR



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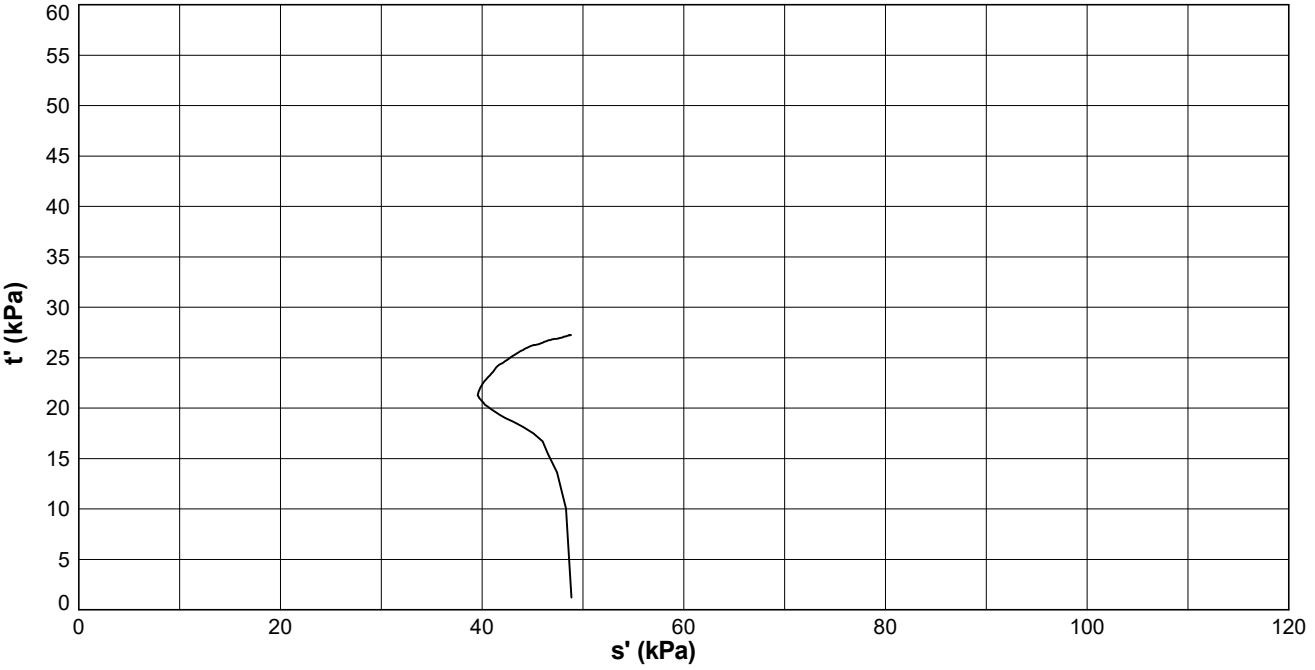
SHEAR



Key: ext. (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 : **R22-BH102** Sample Ref : **20** Sample Type : **UT** Depth (m) : **5.08**

Description : **Grey silty CLAY**

Condition : **Undisturbed.**

Saturation Type : **Cell Pressure.** Side Drains : **Y.**

SPECIMEN DETAILS			
Initial Diameter (mm)	103.42		
Initial Height (mm)	207.12		
Initial Mass (g)	3155.56		
Sample Orientation	Vertical		
Initial Water Content (%)	47.1		
Initial Bulk Density (Mg/m^3)	1.81		
Initial Dry Density (Mg/m^3)	1.23		
Initial Voids Ratio	1.1424		
Initial B-Value	0.83		
Final Water Content (%)	38.8		
Final Bulk Density (Mg/m^3)	1.88		
Final Dry Density (Mg/m^3)	1.36		
SATURATION			
Duration (days)	1		
Final B-Value	1		
Voids Ratio	1.1424		
CONSOLIDATION			
Stage	1		
Duration (days)	4		
Cell Pressure (kPa)	400		
Back Pressure (kPa)	375		
Initial Volume (cm^3)	1740		
Final Volume (cm^3)	1583		
Voids Ratio	0.9490		
Effective Major Principal Stress (kPa)	25		
Effective Minor Principal Stress (kPa)	25		
Ext. Axial Strain (%)	-		
Ext. Volumetric Strain (%)	9.03		

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ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

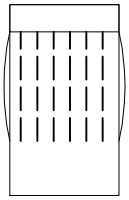
In accordance with BS EN ISO 17892 Part 9

Borehole : **R22-BH102** Sample Ref : **20** Sample Type : **UT** Depth (m) : **5.08**

Description : **Grey silty CLAY**

Condition : **Undisturbed.**

Saturation Type : **Cell Pressure.** Side Drains : **Y.**

COMPRESSION			
Duration (days)	5		
Cell Pressure (kPa)	400		
Initial Porewater Pressure (kPa)	375		
Strain Rate (mm/min)	0.00419		
Failure Criteria	Maximum Deviator Stress		
Axial Strain at Failure (%)	6.80		
Time to Failure (h)	54.5		
Deviator Stress at Failure (kPa)	25		
Vertical Membrane Correction at Failure (kPa)	2.350		
Horizontal Membrane Correction at Failure (kPa)	0.721		
Side Drain Correction at Failure (kPa)	3.794		
Porewater Pressure at Failure (kPa)	390		
Effective Major Principal Stress (kPa)	36		
Effective Minor Principal Stress (kPa)	10		
Effective Principal Stress Ratio	3.51		
Pore Pressure Coefficient - A_f	0.59		
Mode of Failure Semi-plastic (axial splitting with bulging)			

Effective Cohesion (kPa) : **N/A**	Angle of Shear Resistance (degs) : **N/A**

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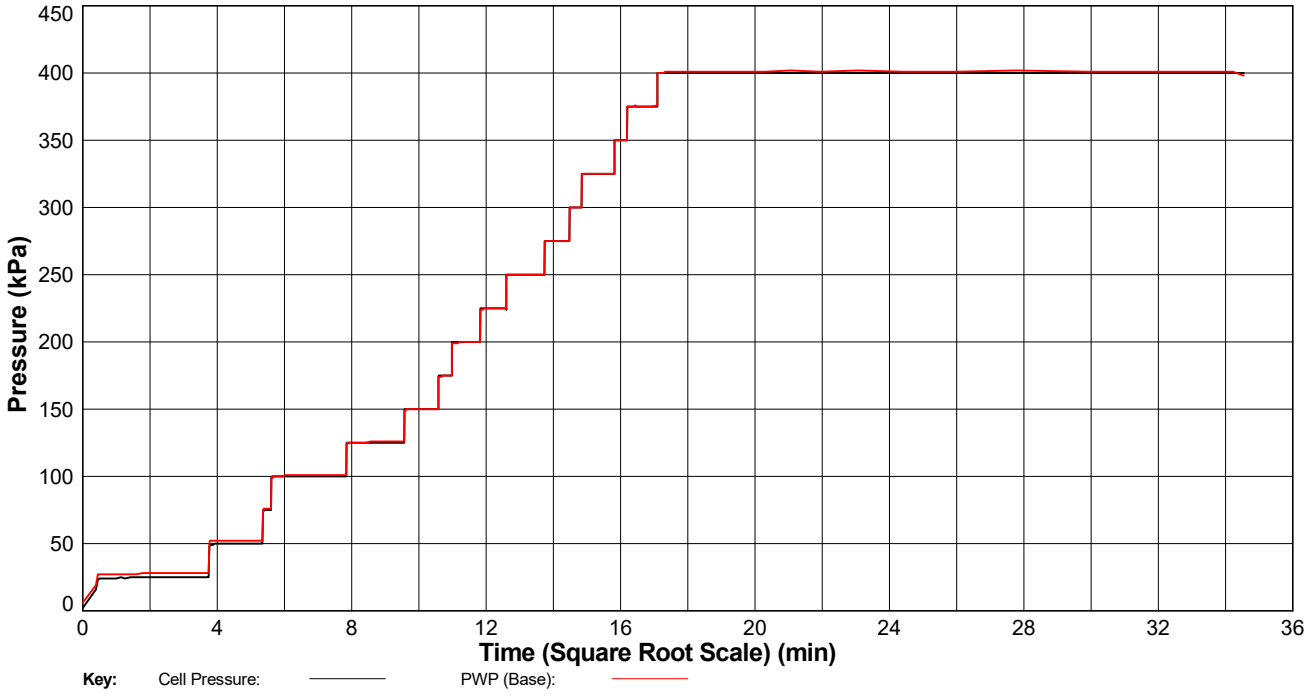
ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

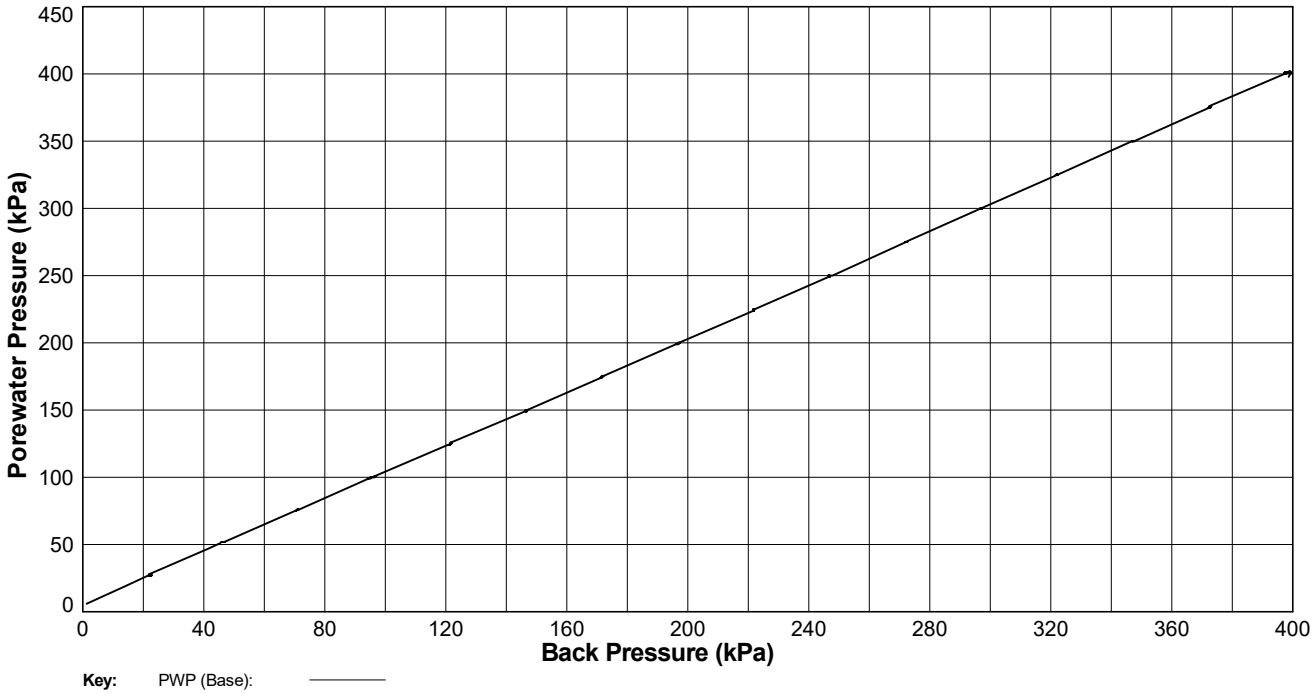
In accordance with BS EN ISO 17892 Part 9

Position ID: **R22-BH102** Sample Ref: **20** Sample Type: **UT** Depth (m): **5.08**

SATURATION



SATURATION



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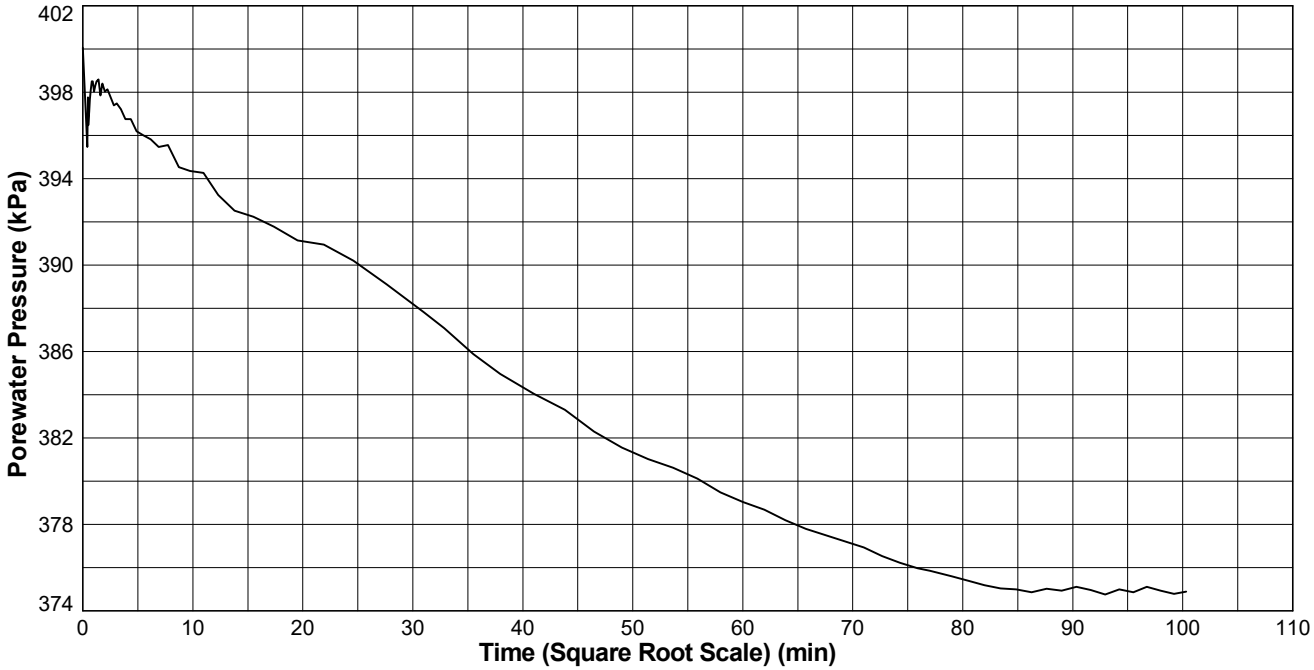
ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

In accordance with BS EN ISO 17892 Part 9

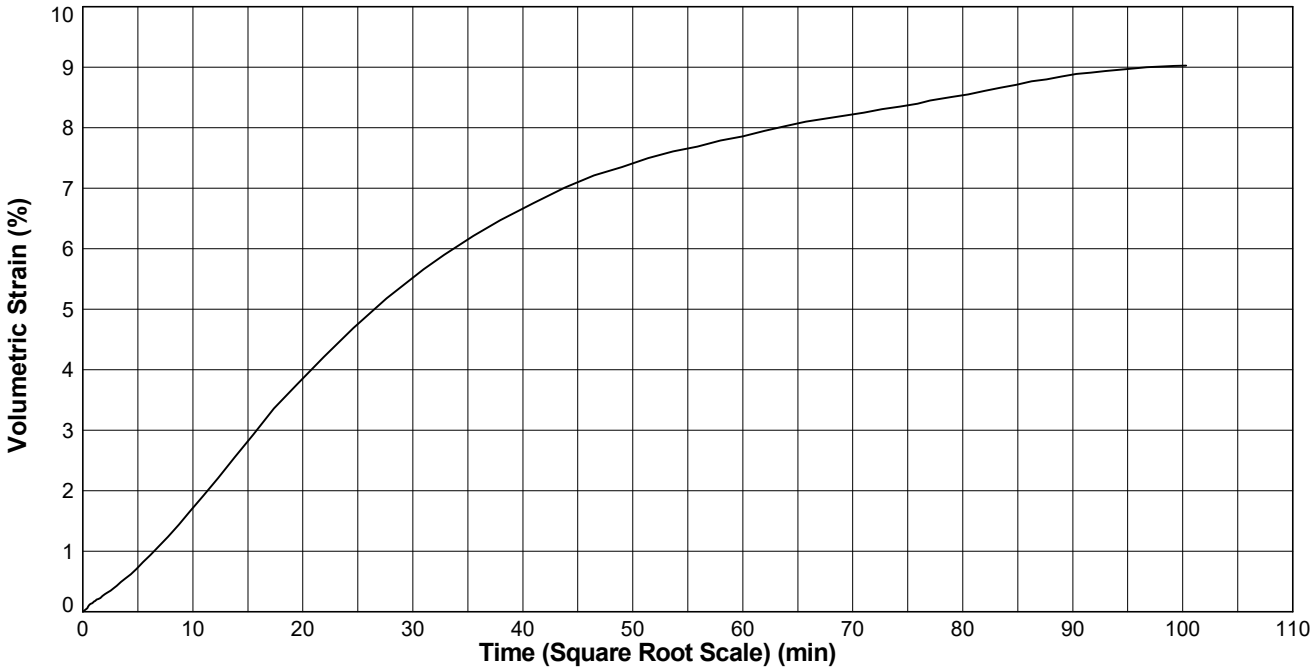
Position ID: **R22-BH102** Sample Ref: **20** Sample Type: **UT** Depth (m): **5.08**

CONSOLIDATION



Key: PWP (Base):

CONSOLIDATION



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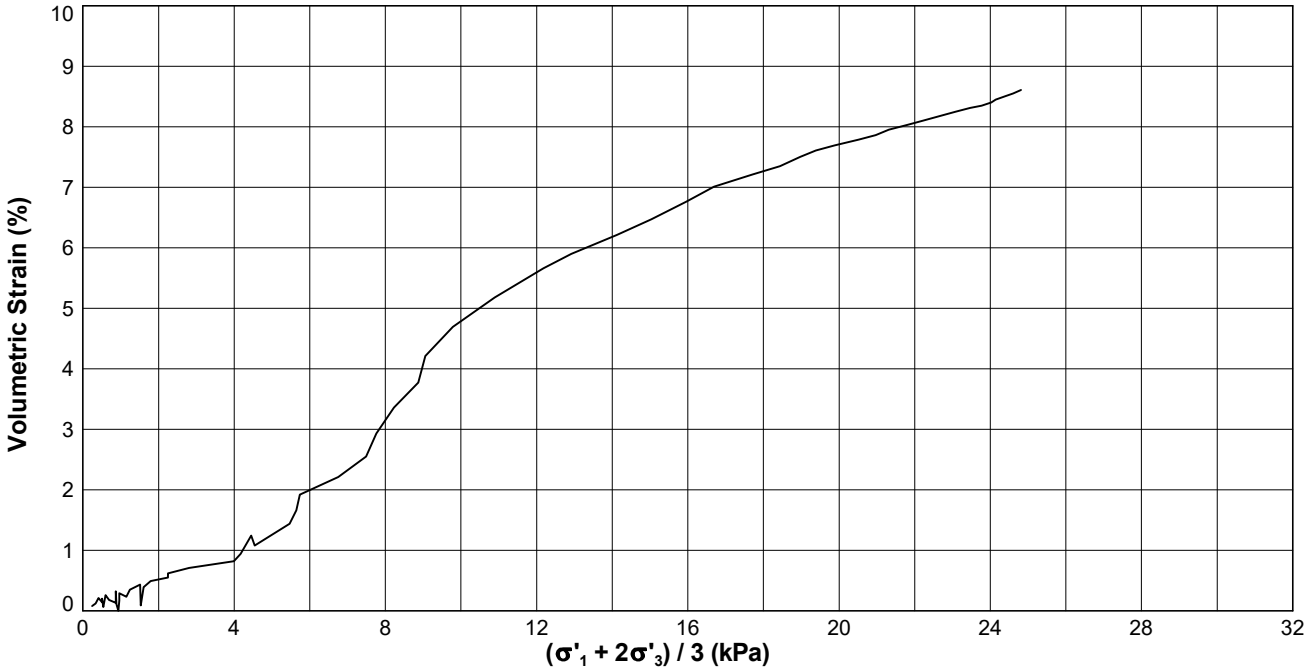
ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

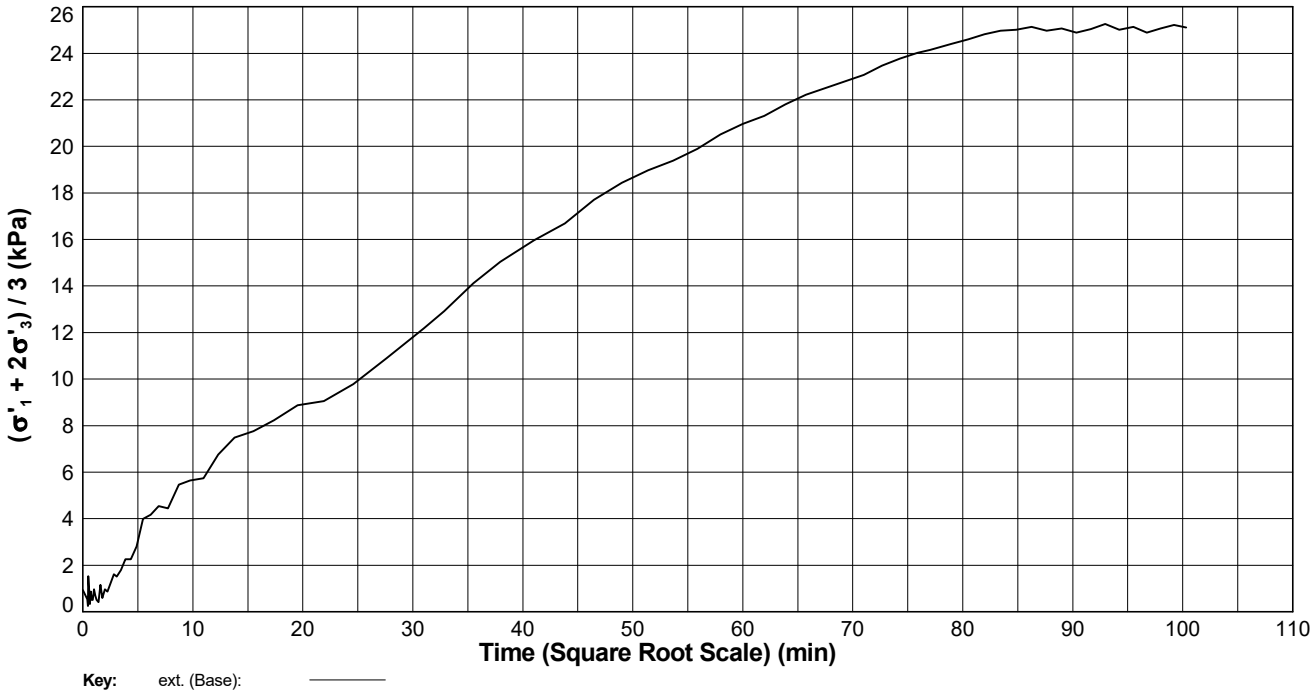
In accordance with BS EN ISO 17892 Part 9

Position ID: **R22-BH102** Sample Ref: **20** Sample Type: **UT** Depth (m): **5.08**

CONSOLIDATION



CONSOLIDATION



Key: ext. (Base):

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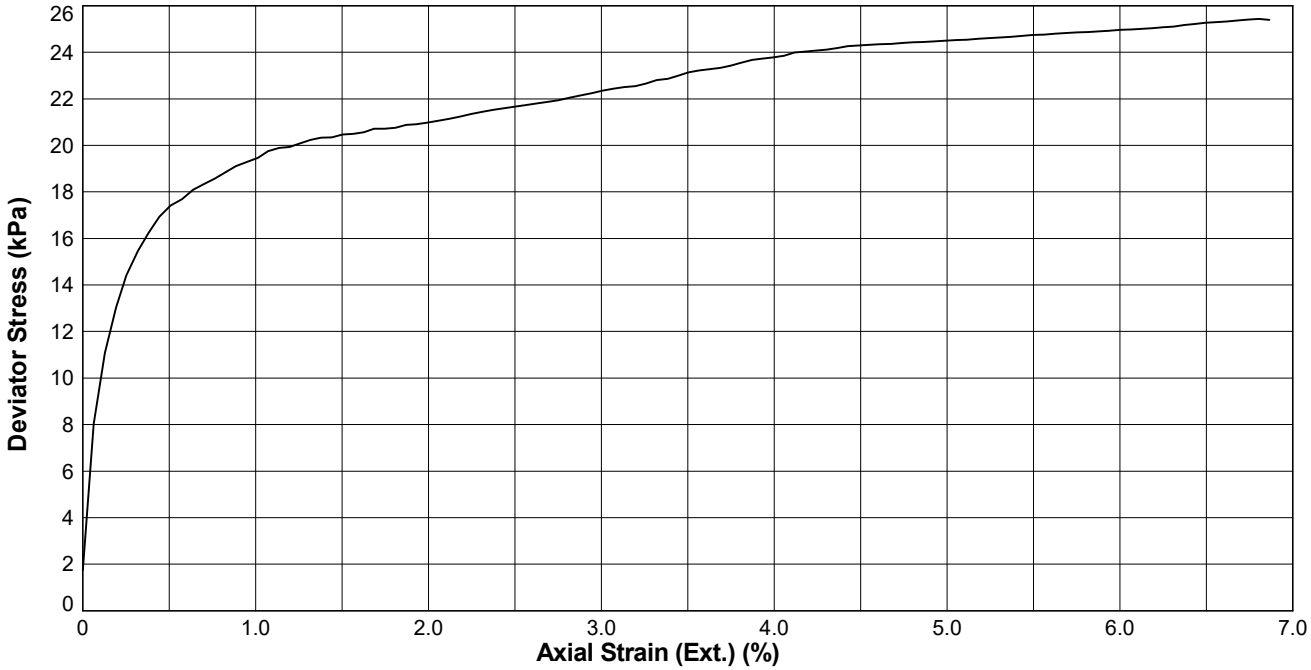
ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

In accordance with BS EN ISO 17892 Part 9

Position ID: **R22-BH102** Sample Ref: **20** Sample Type: **UT** Depth (m): **5.08**

SHEAR



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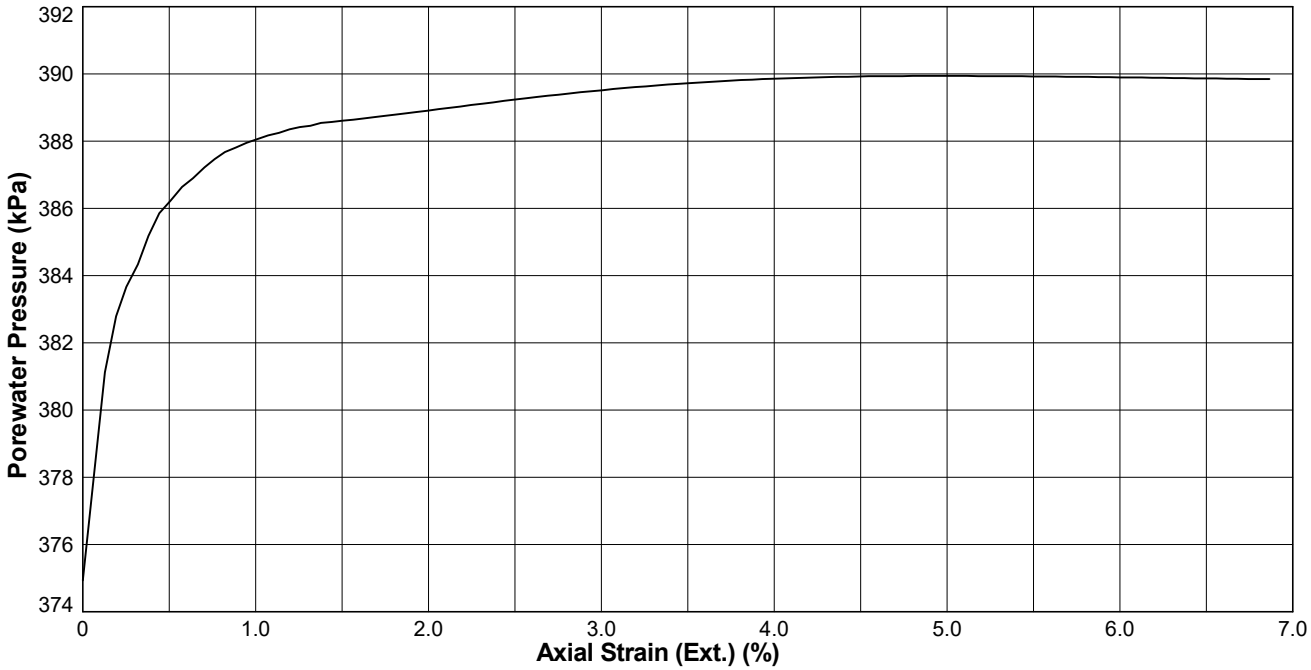
SHEAR



Key: PWP (Base): ————

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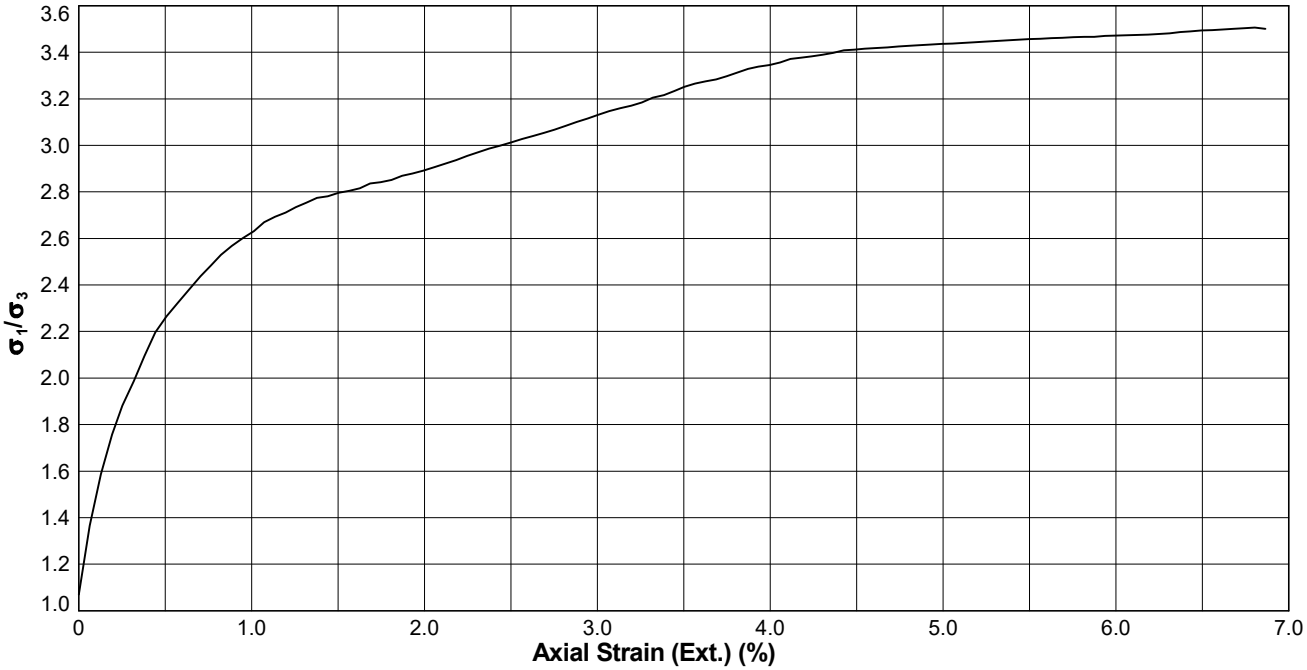
ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

In accordance with BS EN ISO 17892 Part 9

Position ID: **R22-BH102** Sample Ref: **20** Sample Type: **UT** Depth (m): **5.08**

SHEAR



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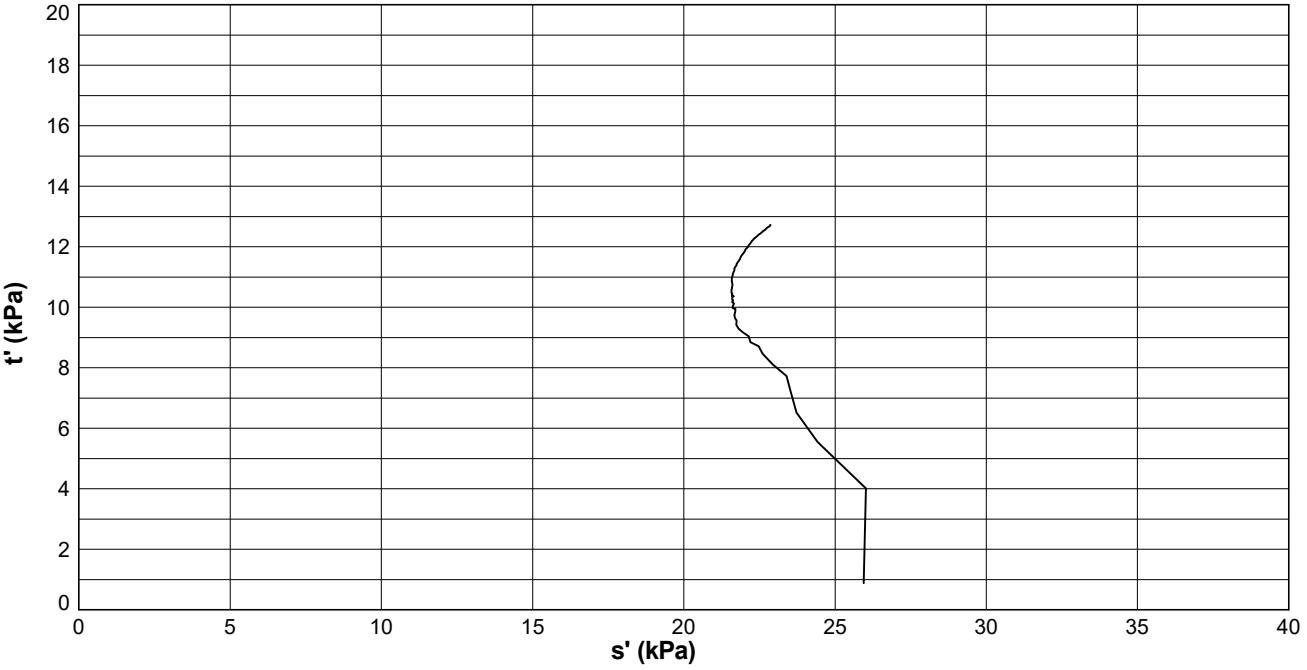

Key: ext. (Base):

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ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

In accordance with BS EN ISO 17892 Part 9

Borehole : **R22-BH103** Sample Ref : **18** Sample Type : **UT** Depth (m) : **5.04**

Description : **Grey CLAY**

Condition : **Undisturbed.**

Saturation Type : **Cell Pressure.** Side Drains : **Y.**

SPECIMEN DETAILS			
Initial Diameter (mm)	102.54		
Initial Height (mm)	202.37		
Initial Mass (g)	2917.69		
Sample Orientation	Vertical		
Initial Water Content (%)	56.4		
Initial Bulk Density (Mg/m^3)	1.75		
Initial Dry Density (Mg/m^3)	1.12		
Initial Voids Ratio	1.3673		
Initial B-Value	0.92		
Final Water Content (%)	37.7		
Final Bulk Density (Mg/m^3)	1.93		
Final Dry Density (Mg/m^3)	1.40		
SATURATION			
Duration (days)	2		
Final B-Value	1		
Voids Ratio	1.3673		
CONSOLIDATION			
Stage	1		
Duration (days)	5		
Cell Pressure (kPa)	550		
Back Pressure (kPa)	450		
Initial Volume (cm^3)	1671		
Final Volume (cm^3)	1331		
Voids Ratio	0.8858		
Effective Major Principal Stress (kPa)	98		
Effective Minor Principal Stress (kPa)	98		
Ext. Axial Strain (%)	-		
Ext. Volumetric Strain (%)	20.34		

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ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

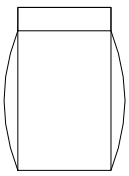
In accordance with BS EN ISO 17892 Part 9

Borehole : **R22-BH103** Sample Ref : **18** Sample Type : **UT** Depth (m) : **5.04**

Description : **Grey CLAY**

Condition : **Undisturbed.**

Saturation Type : **Cell Pressure.** Side Drains : **Y.**

COMPRESSION			
Duration (days)	6		
Cell Pressure (kPa)	550		
Initial Porewater Pressure (kPa)	452		
Strain Rate (mm/min)	0.00328		
Failure Criteria	Maximum Deviator Stress		
Axial Strain at Failure (%)	8.56		
Time to Failure (h)	82.5		
Deviator Stress at Failure (kPa)	67		
Vertical Membrane Correction at Failure (kPa)	2.964		
Horizontal Membrane Correction at Failure (kPa)	1.310		
Side Drain Correction at Failure (kPa)	4.009		
Porewater Pressure at Failure (kPa)	519		
Effective Major Principal Stress (kPa)	99		
Effective Minor Principal Stress (kPa)	31		
Effective Principal Stress Ratio	3.14		
Pore Pressure Coefficient - A_f	0.99		
Mode of Failure Plastic (Barrelling)			

Effective Cohesion (kPa) : **N/A**	Angle of Shear Resistance (degs) : **N/A**

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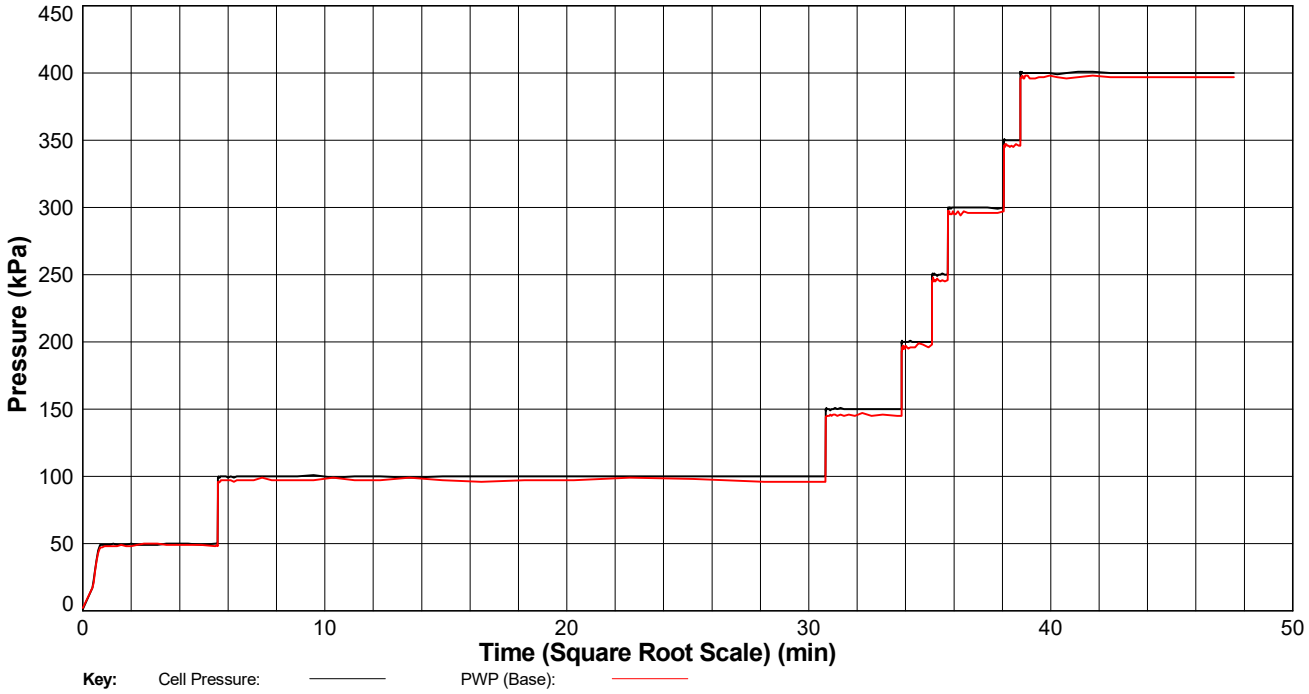
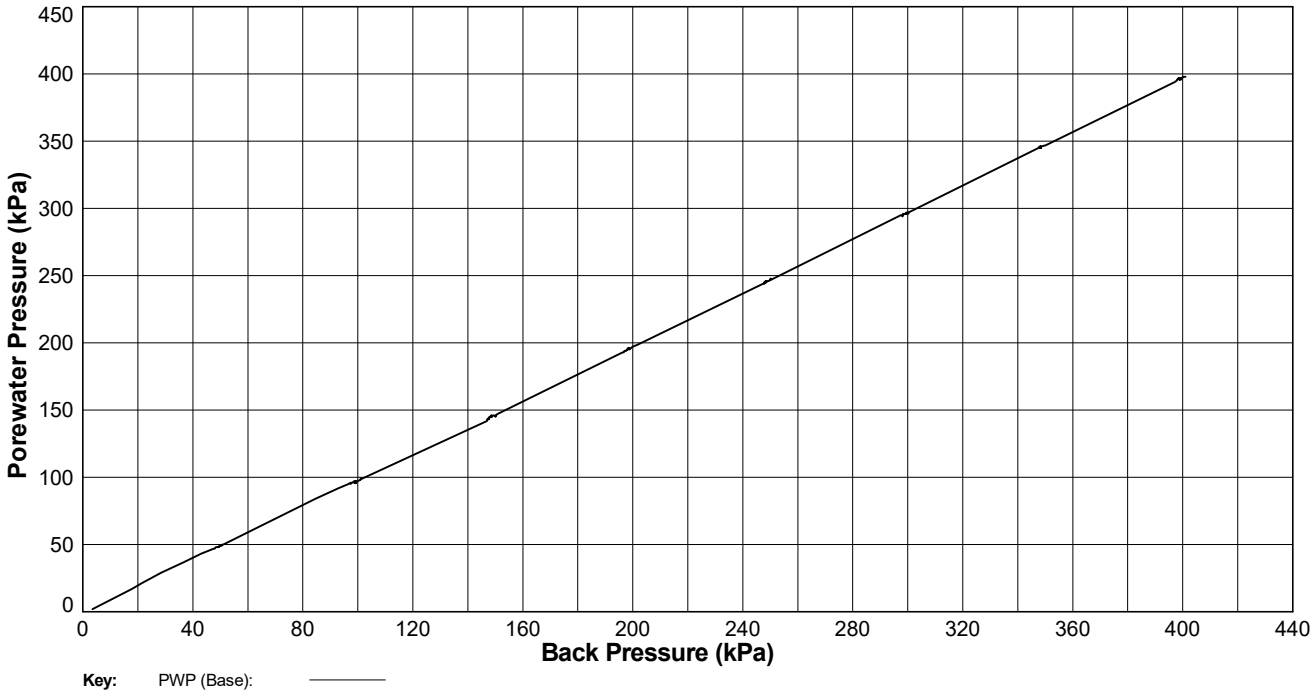
Position ID: **R22-BH103** Sample Ref: **18** Sample Type: **UT** Depth (m): **5.04**

SATURATION



SATURATION



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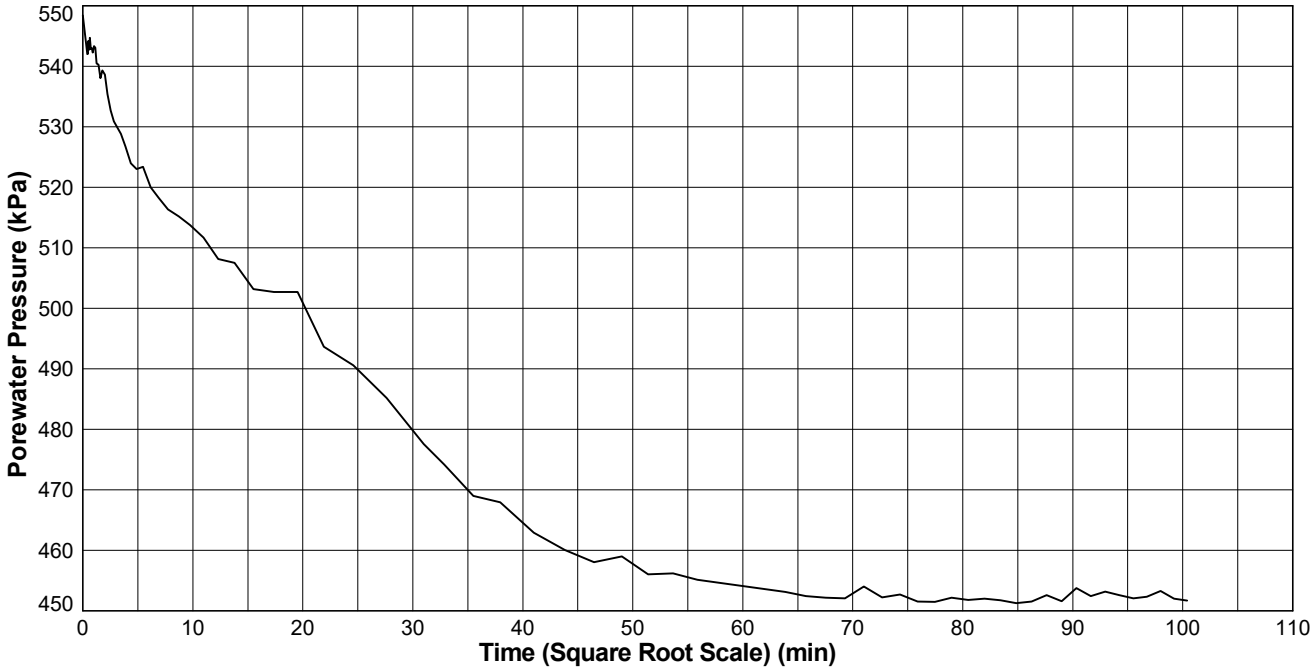
ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

In accordance with BS EN ISO 17892 Part 9

Position ID: **R22-BH103** Sample Ref: **18** Sample Type: **UT** Depth (m): **5.04**

CONSOLIDATION



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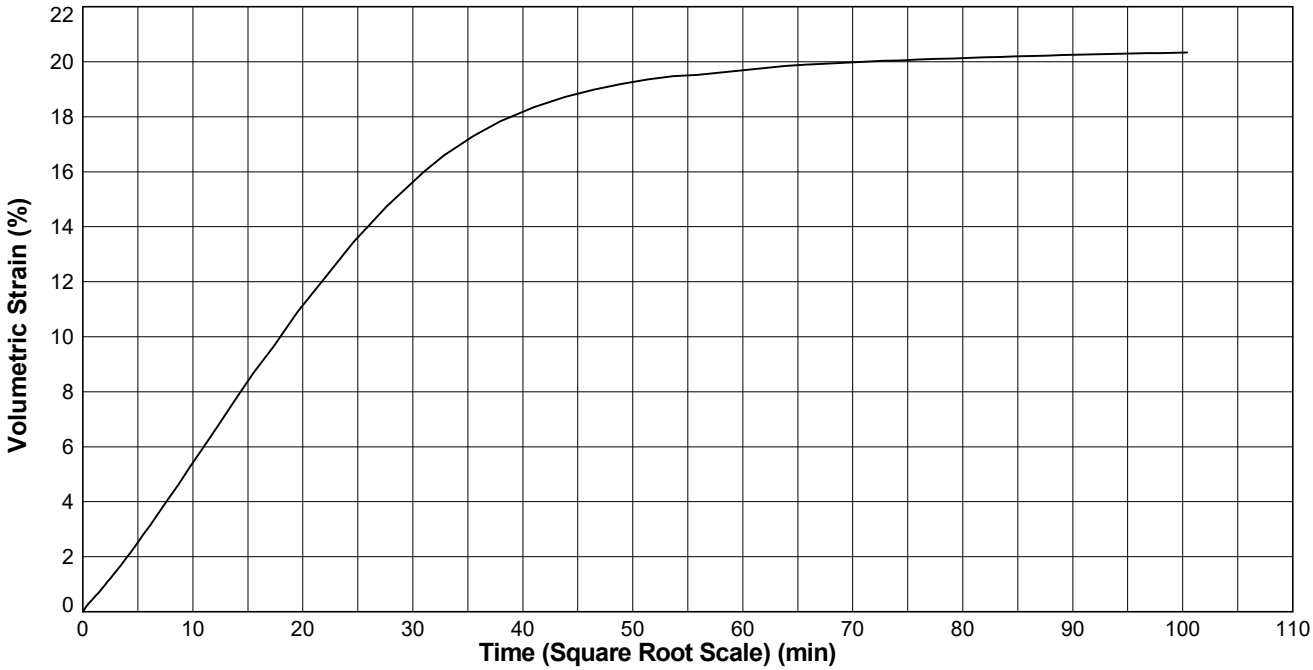

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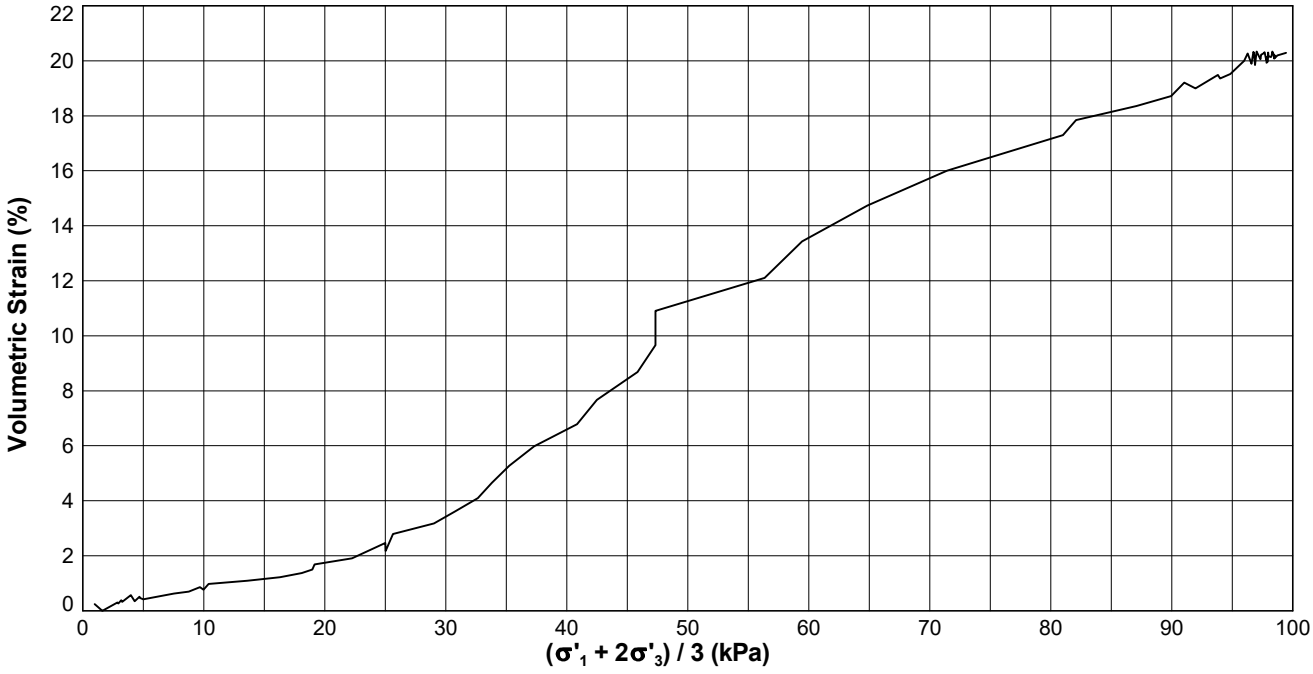
ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

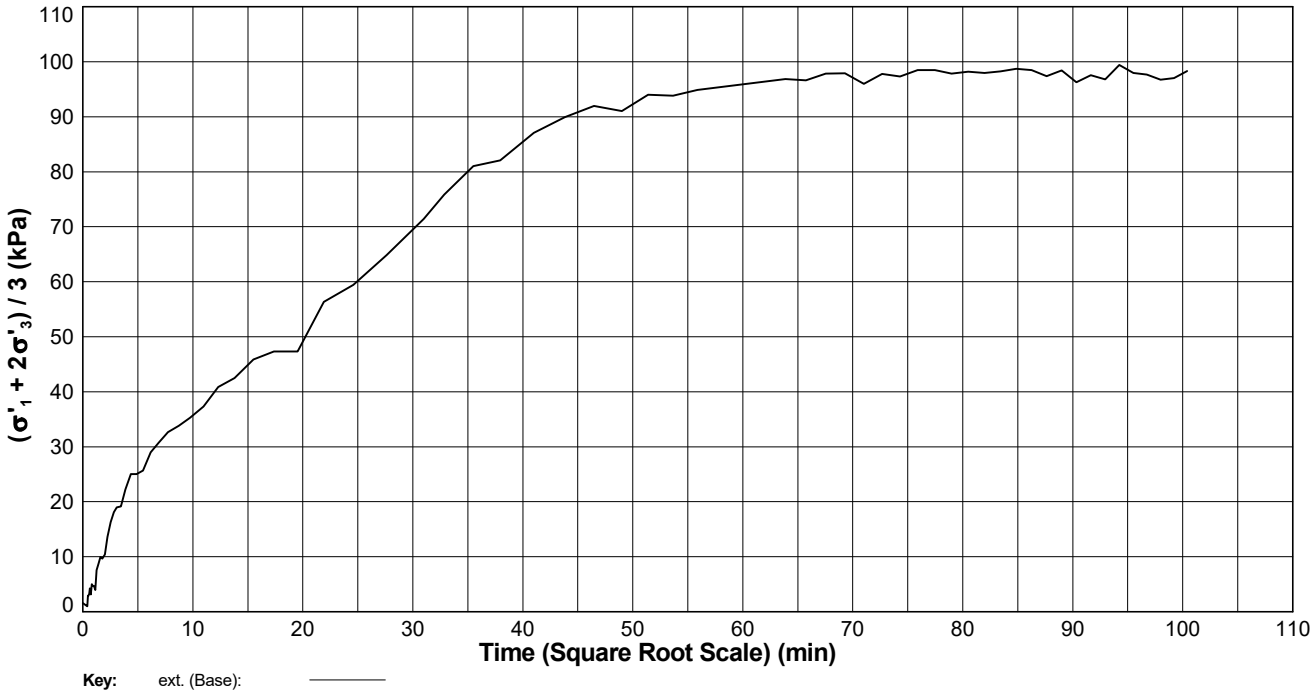
In accordance with BS EN ISO 17892 Part 9

Position ID: **R22-BH103** Sample Ref: **18** Sample Type: **UT** Depth (m): **5.04**

CONSOLIDATION



CONSOLIDATION



Key: ext. (Base): ————

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[redacted]	**17/03/24**

Contract	Contract Ref:
SEA Link FEED - Kent Onshore Cable Link	**563607**

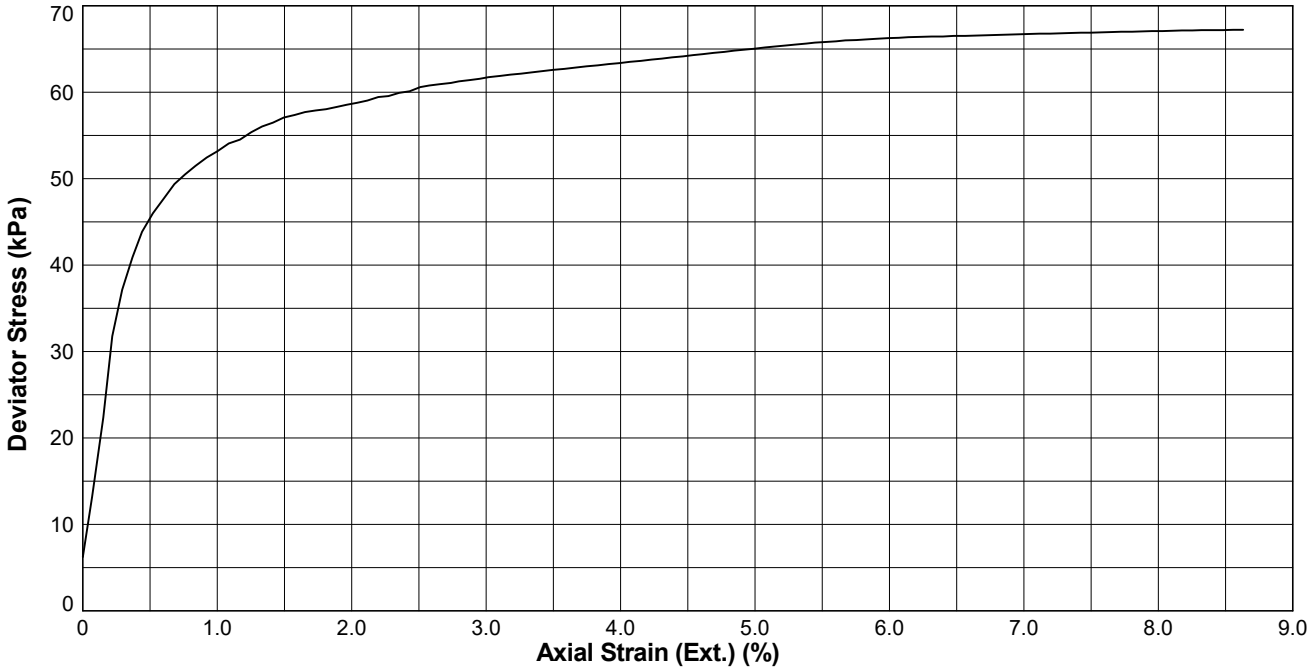
AGS

ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

In accordance with BS EN ISO 17892 Part 9

Position ID: **R22-BH103** Sample Ref: **18** Sample Type: **UT** Depth (m): **5.04**

SHEAR



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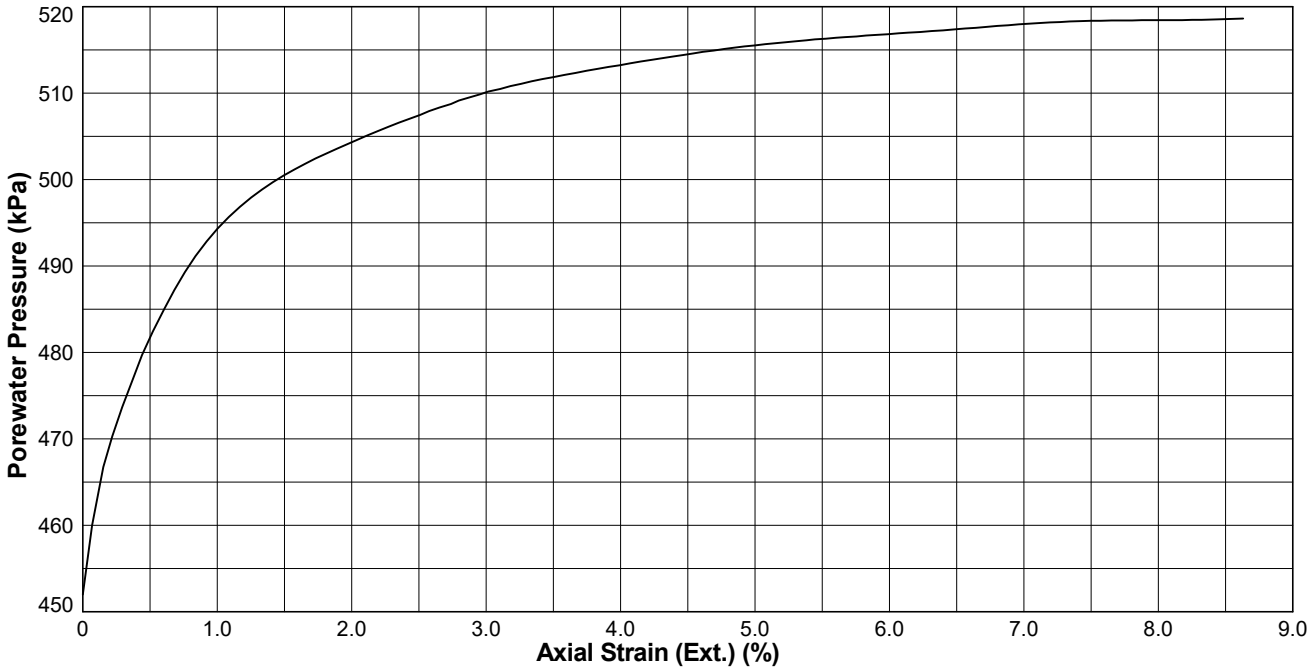

Key: PWP (Base):

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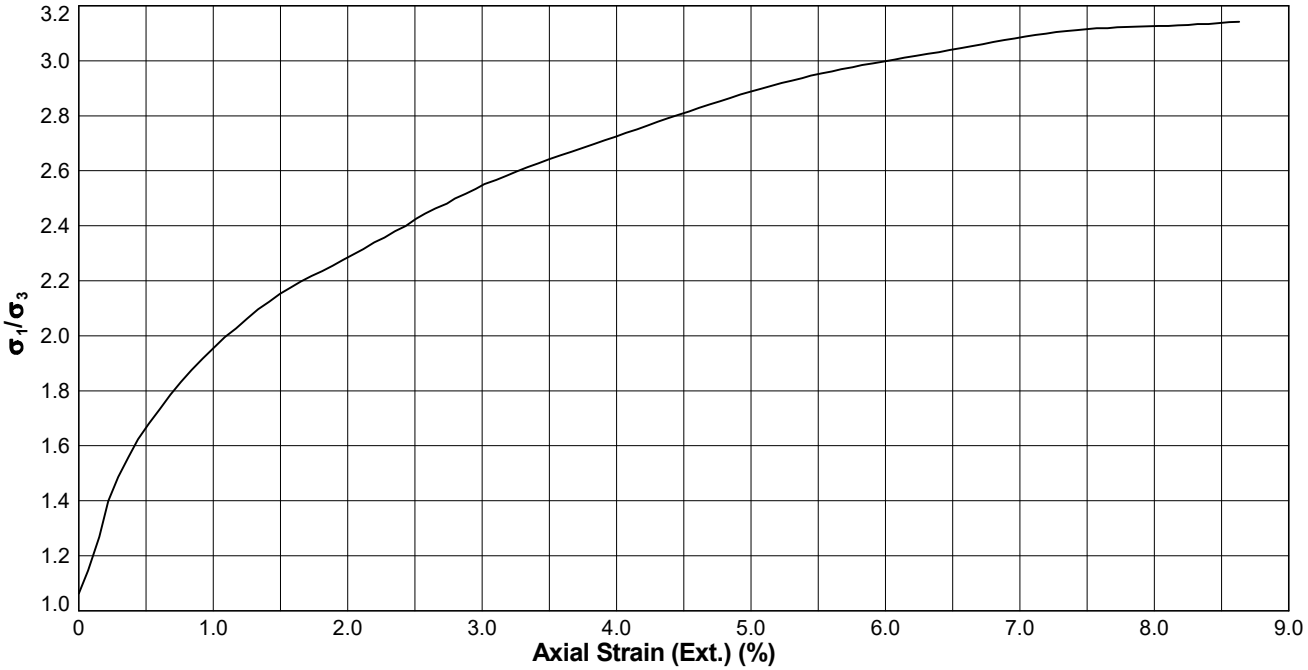
ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

In accordance with BS EN ISO 17892 Part 9

Position ID: **R22-BH103** Sample Ref: **18** Sample Type: **UT** Depth (m): **5.04**

SHEAR



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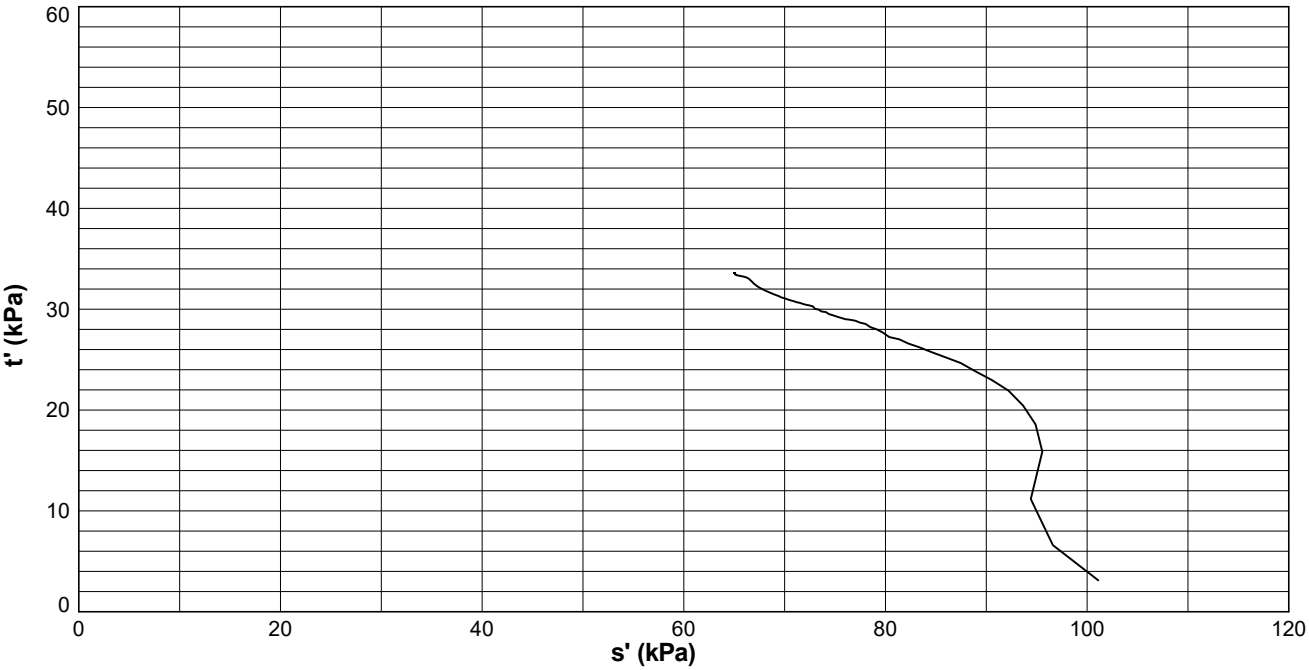

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	Contract	Contract Ref:	
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ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

In accordance with BS EN ISO 17892 Part 9

Borehole : **R22-BH104** Sample Ref : **31** Sample Type : **UT** Depth (m) : **9.03**

Description : **Grey silty CLAY**

Condition : **Undisturbed.**

Saturation Type : **Back Pressure.** Side Drains : **Y.**

SPECIMEN DETAILS			
Initial Diameter (mm)	102.7		
Initial Height (mm)	202.3		
Initial Mass (g)	3186.92		
Sample Orientation	Vertical		
Initial Water Content (%)	31.5		
Initial Bulk Density (Mg/m^3)	1.90		
Initial Dry Density (Mg/m^3)	1.45		
Initial Voids Ratio	0.8268		
Initial B-Value	0.73		
Final Water Content (%)	32.4		
Final Bulk Density (Mg/m^3)	1.95		
Final Dry Density (Mg/m^3)	1.47		
SATURATION			
Duration (days)	3		
Final B-Value	0.95		
Voids Ratio	0.8268		
CONSOLIDATION			
Stage	1		
Duration (days)	1		
Cell Pressure (kPa)	525		
Back Pressure (kPa)	439		
Initial Volume (cm^3)	1676		
Final Volume (cm^3)	1647		
Voids Ratio	0.7957		
Effective Major Principal Stress (kPa)	84		
Effective Minor Principal Stress (kPa)	84		
Ext. Axial Strain (%)	-		
Ext. Volumetric Strain (%)	1.70		

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ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

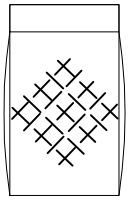
In accordance with BS EN ISO 17892 Part 9

Borehole : **R22-BH104** Sample Ref : **31** Sample Type : **UT** Depth (m) : **9.03**

Description : **Grey silty CLAY**

Condition : **Undisturbed.**

Saturation Type : **Back Pressure.** Side Drains : **Y.**

COMPRESSION			
Duration (days)	1		
Cell Pressure (kPa)	525		
Initial Porewater Pressure (kPa)	441		
Strain Rate (mm/min)	0.01676		
Failure Criteria	Maximum Deviator Stress		
Axial Strain at Failure (%)	4.02		
Time to Failure (h)	7.8		
Deviator Stress at Failure (kPa)	377		
Vertical Membrane Correction at Failure (kPa)	0.956		
Horizontal Membrane Correction at Failure (kPa)	0.118		
Side Drain Correction at Failure (kPa)	3.721		
Porewater Pressure at Failure (kPa)	478		
Effective Major Principal Stress (kPa)	424		
Effective Minor Principal Stress (kPa)	47		
Effective Principal Stress Ratio	9.03		
Pore Pressure Coefficient - A_f	0.10		
Mode of Failure Semi-plastic (intermediate)			

Effective Cohesion (kPa) : **N/A**	Angle of Shear Resistance (degs) : **N/A**

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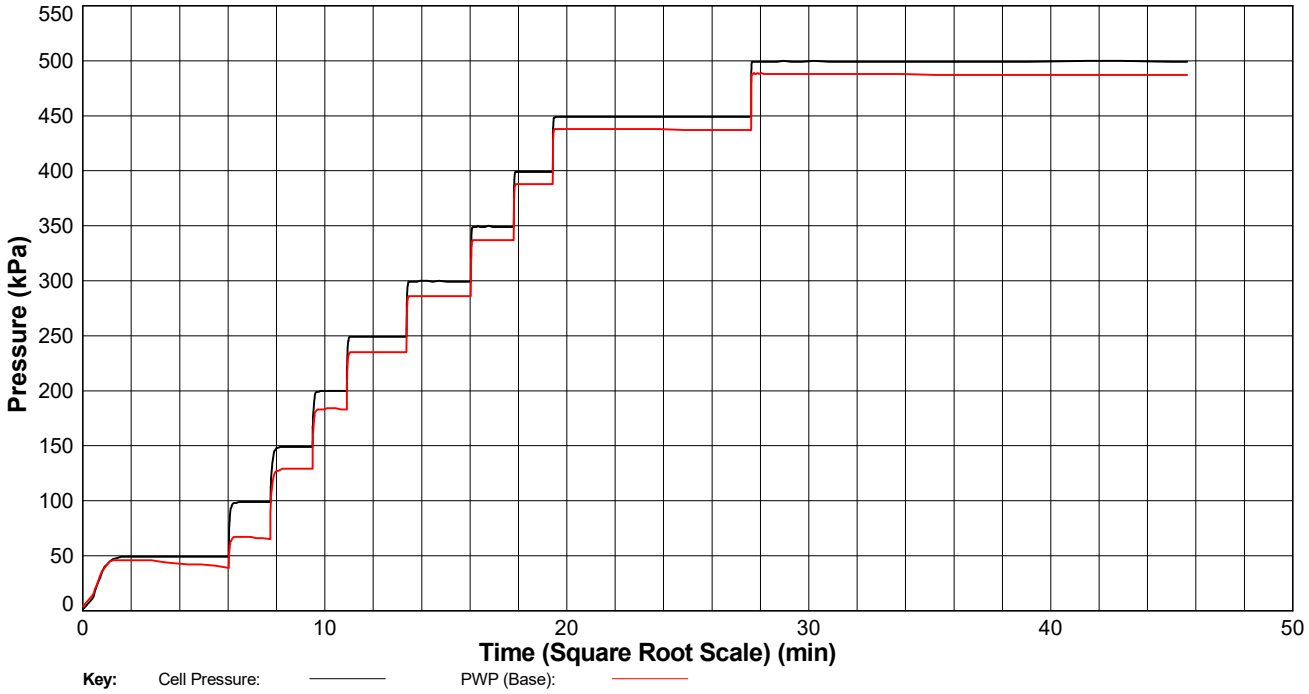
ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

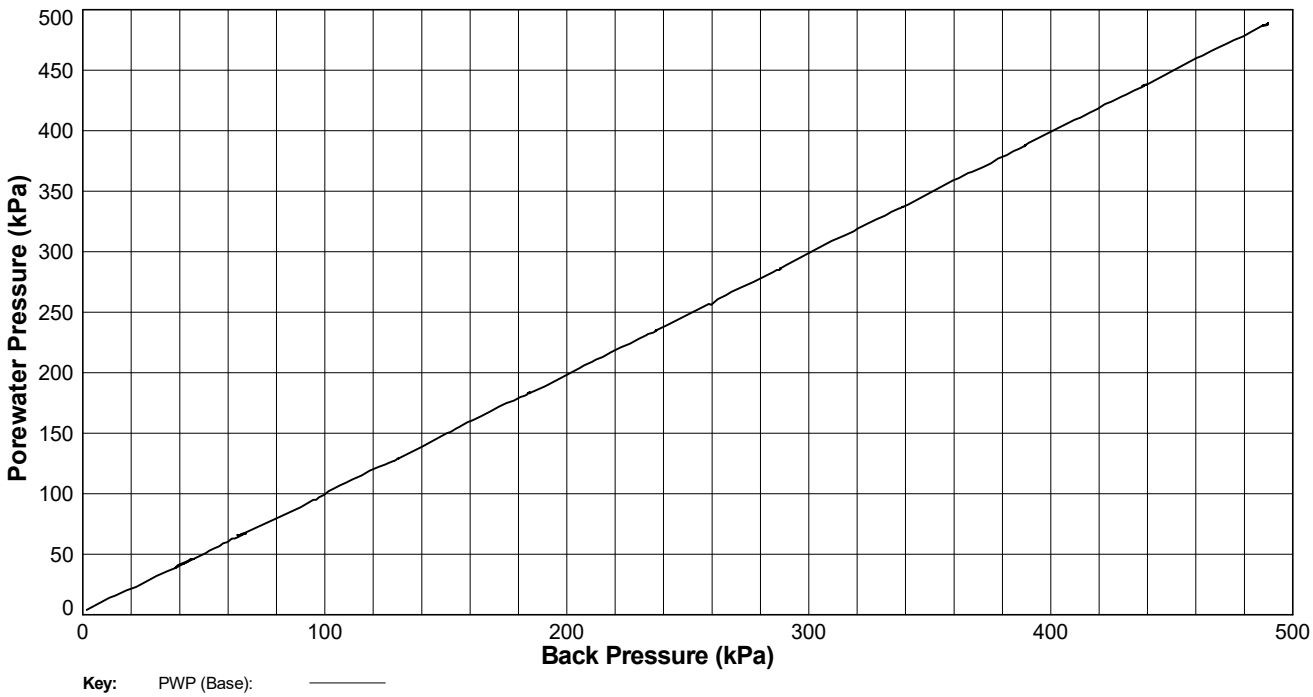
In accordance with BS EN ISO 17892 Part 9

Position ID: **R22-BH104** Sample Ref: **31** Sample Type: **UT** Depth (m): **9.03**

SATURATION



SATURATION



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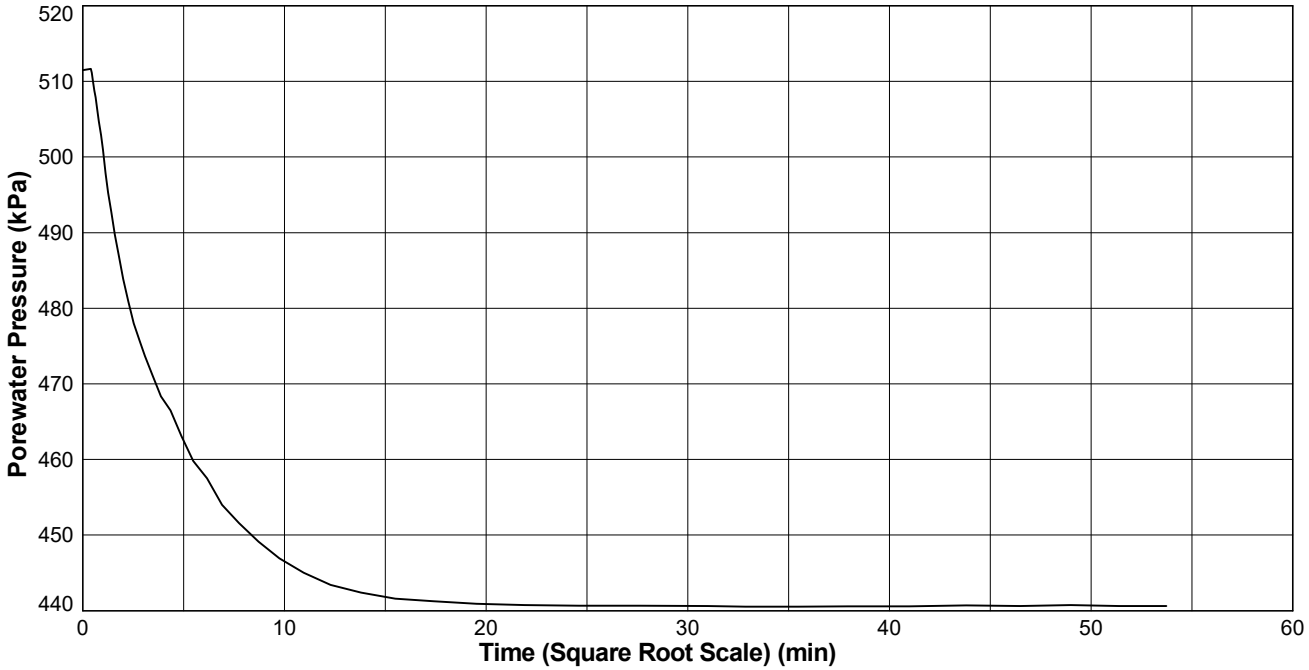
ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

In accordance with BS EN ISO 17892 Part 9

Position ID: **R22-BH104** Sample Ref: **31** Sample Type: **UT** Depth (m): **9.03**

CONSOLIDATION



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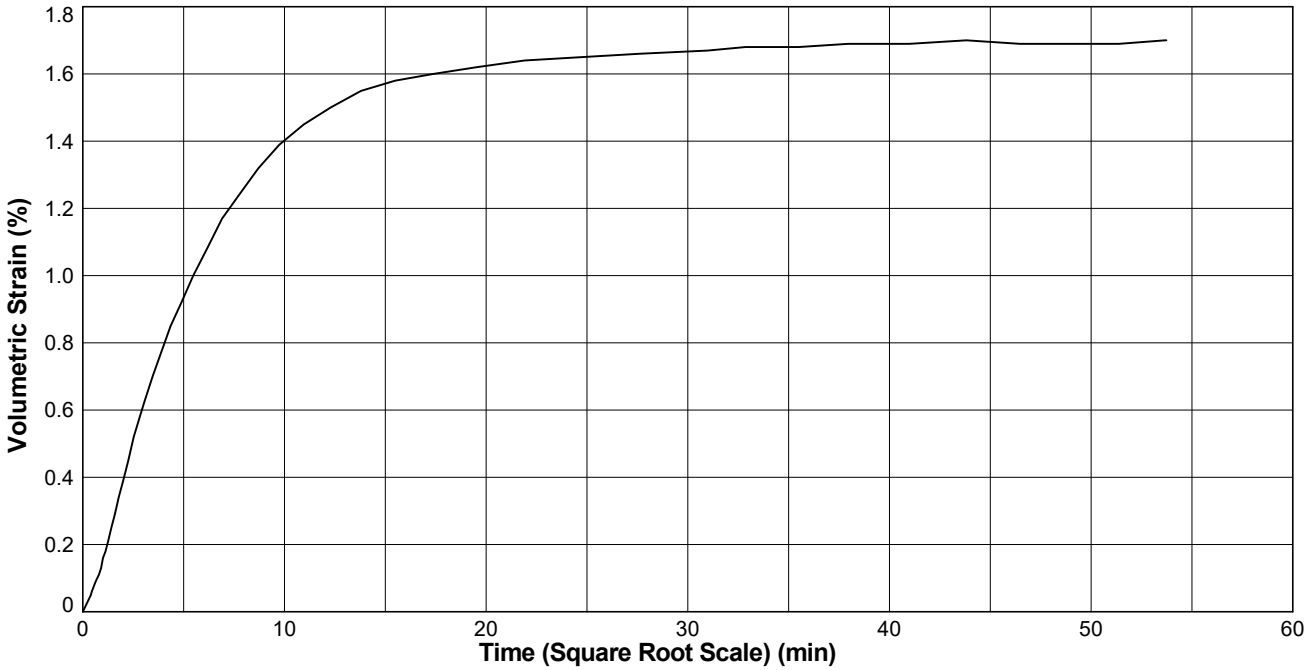
CONSOLIDATION



STRUCTURAL SOILS 1a Princess Street Bedminster Bristol BS3 4AG	Compiled By		Date
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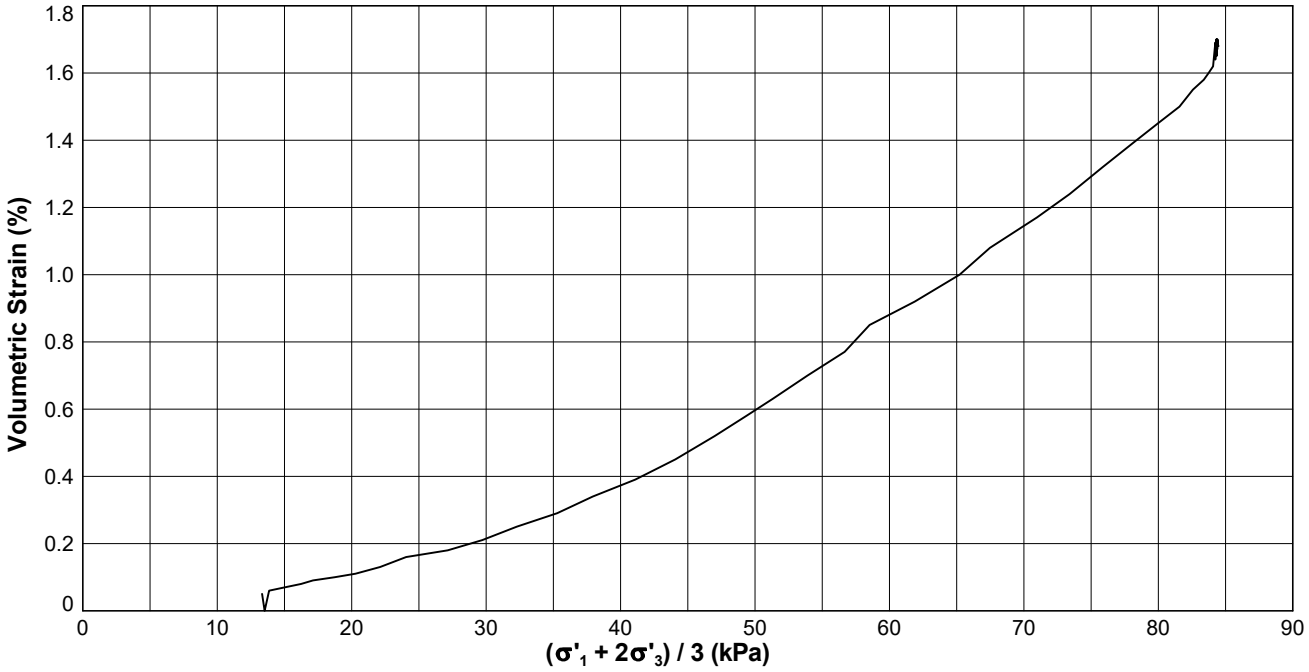
ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

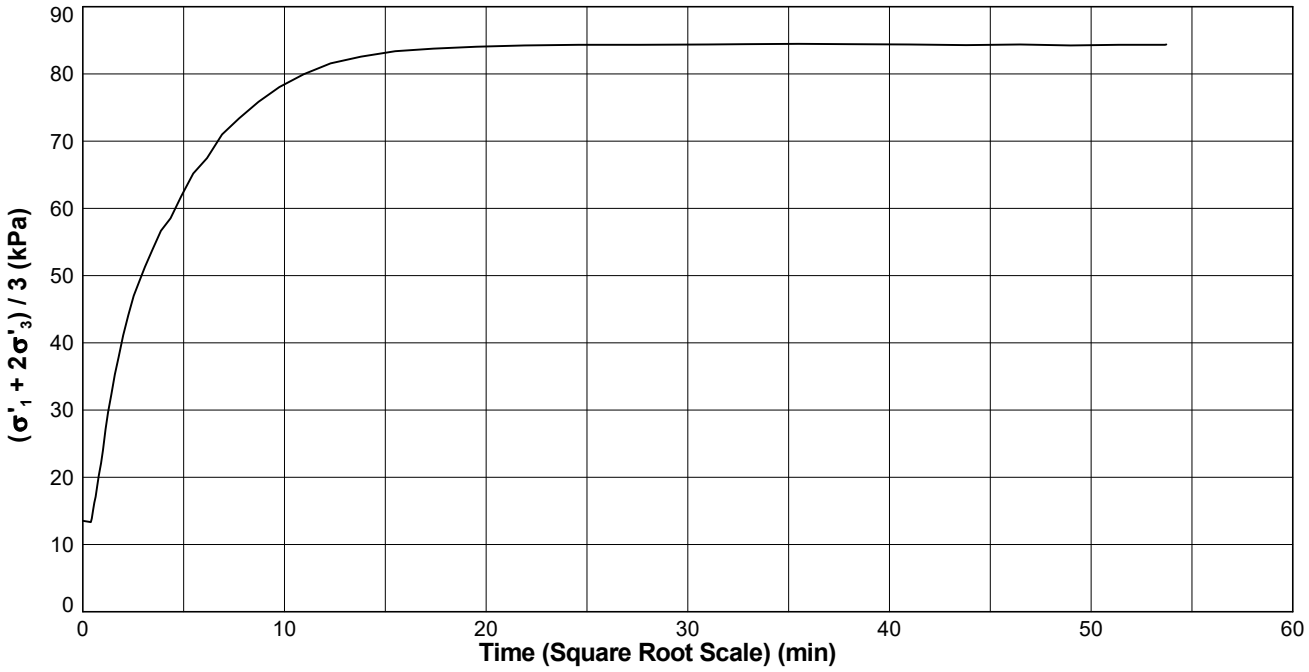
In accordance with BS EN ISO 17892 Part 9

Position ID: **R22-BH104** Sample Ref: **31** Sample Type: **UT** Depth (m): **9.03**

CONSOLIDATION



CONSOLIDATION



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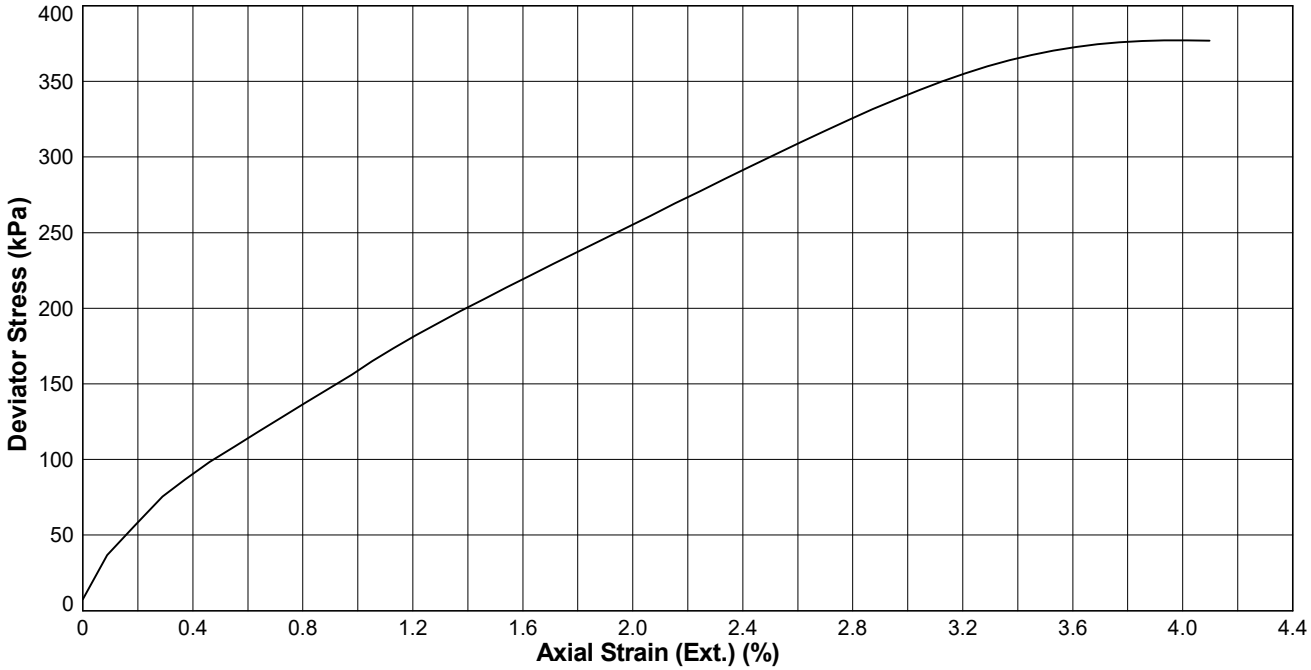
ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

In accordance with BS EN ISO 17892 Part 9

Position ID: **R22-BH104** Sample Ref: **31** Sample Type: **UT** Depth (m): **9.03**

SHEAR



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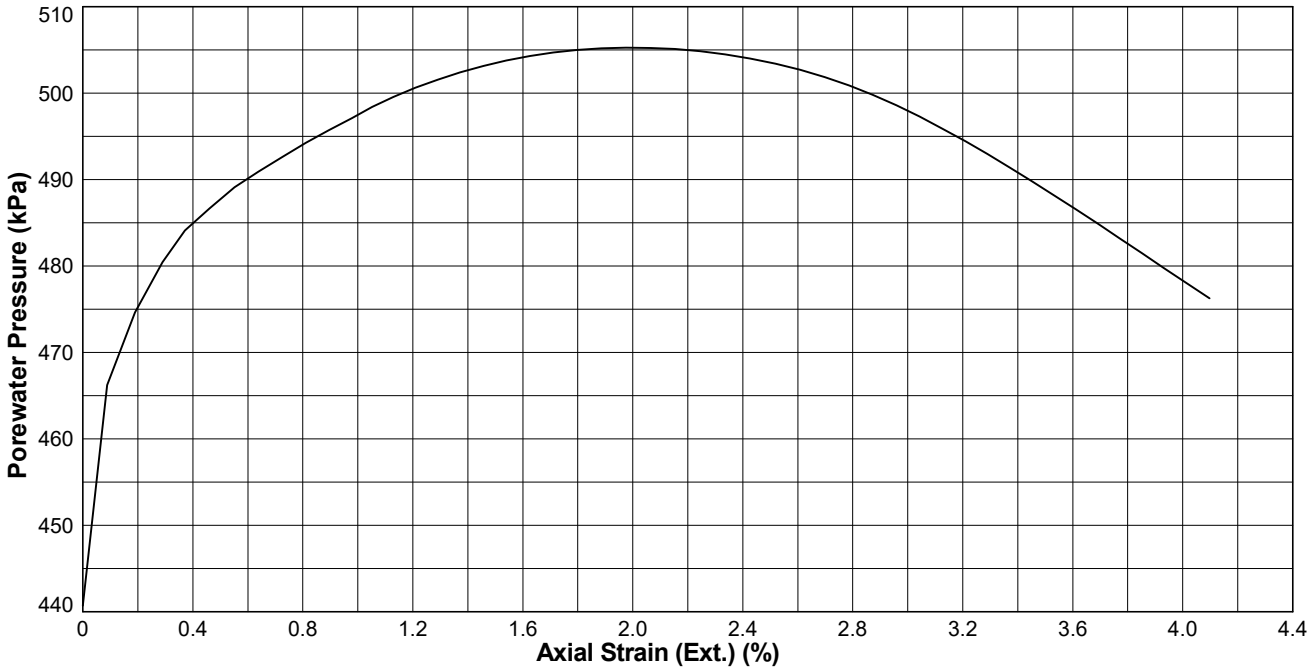
SHEAR



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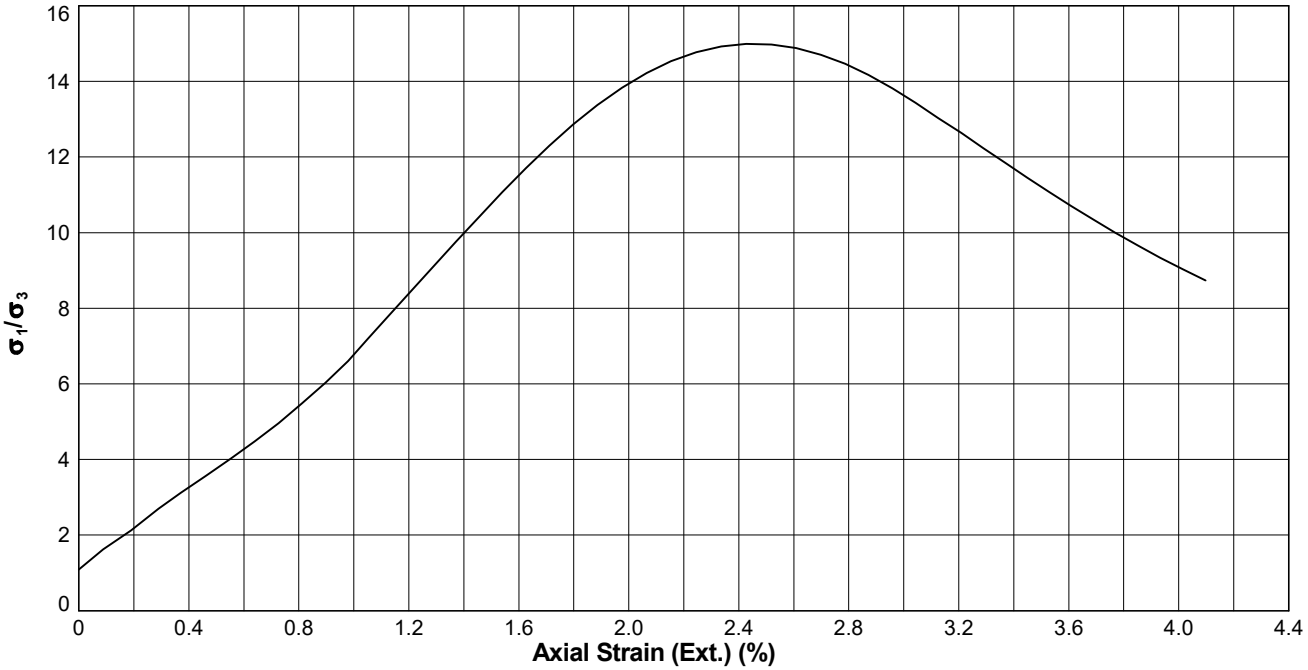
Position ID: **R22-BH104** Sample Ref: **31** Sample Type: **UT** Depth (m): **9.03**

SHEAR



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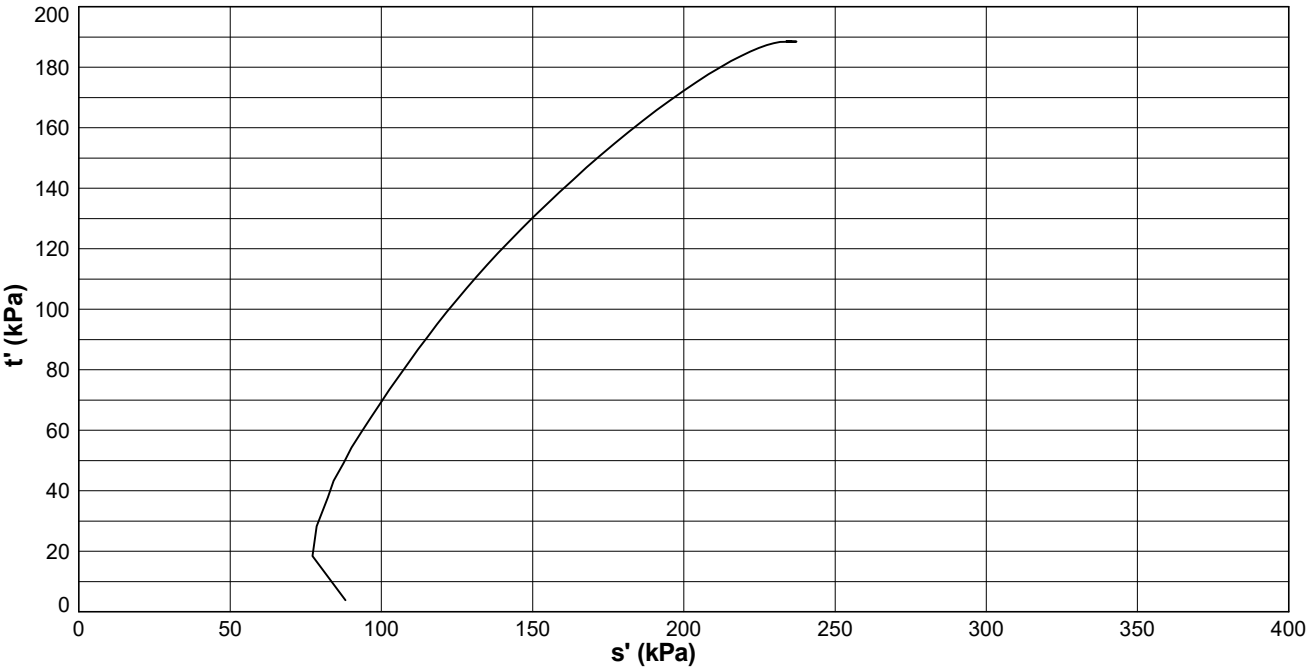
SHEAR



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ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

In accordance with BS EN ISO 17892 Part 9

Borehole : **R22-BH105** Sample Ref : **30** Sample Type : **UT** Depth (m) : **8.03**

Description : **Grey mottled bluish grey CLAY**

Condition : **Undisturbed.**

Saturation Type : **Back Pressure.** Side Drains : **Y.**

SPECIMEN DETAILS			
Initial Diameter (mm)	102.7		
Initial Height (mm)	202.16		
Initial Mass (g)	2994.26		
Sample Orientation	Vertical		
Initial Water Content (%)	44.6		
Initial Bulk Density (Mg/m^3)	1.79		
Initial Dry Density (Mg/m^3)	1.24		
Initial Voids Ratio	1.1361		
Initial B-Value	0.84		
Final Water Content (%)	39.3		
Final Bulk Density (Mg/m^3)	1.86		
Final Dry Density (Mg/m^3)	1.33		
SATURATION			
Duration (days)	3		
Final B-Value	0.95		
Voids Ratio	1.7643		
CONSOLIDATION			
Stage	1		
Duration (days)	1		
Cell Pressure (kPa)	730		
Back Pressure (kPa)	390		
Initial Volume (cm^3)	1675		
Final Volume (cm^3)	1555		
Voids Ratio	1.5661		
Effective Major Principal Stress (kPa)	340		
Effective Minor Principal Stress (kPa)	340		
Ext. Axial Strain (%)	-		
Ext. Volumetric Strain (%)	7.17		

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ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

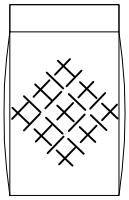
In accordance with BS EN ISO 17892 Part 9

Borehole : **R22-BH105** Sample Ref : **30** Sample Type : **UT** Depth (m) : **8.03**

Description : **Grey mottled bluish grey CLAY**

Condition : **Undisturbed.**

Saturation Type : **Back Pressure.** Side Drains : **Y.**

COMPRESSION			
Duration (days)	2		
Cell Pressure (kPa)	730		
Initial Porewater Pressure (kPa)	393		
Strain Rate (mm/min)	0.00725		
Failure Criteria	Maximum Deviator Stress		
Axial Strain at Failure (%)	3.47		
Time to Failure (h)	16.3		
Deviator Stress at Failure (kPa)	350		
Vertical Membrane Correction at Failure (kPa)	1.385		
Horizontal Membrane Correction at Failure (kPa)	0.565		
Side Drain Correction at Failure (kPa)	3.794		
Porewater Pressure at Failure (kPa)	633		
Effective Major Principal Stress (kPa)	446		
Effective Minor Principal Stress (kPa)	97		
Effective Principal Stress Ratio	4.61		
Pore Pressure Coefficient - A_f	0.69		
Mode of Failure Semi-plastic (intermediate)			

Effective Cohesion (kPa) : **B/A**	Angle of Shear Resistance (degs) : **N/A**

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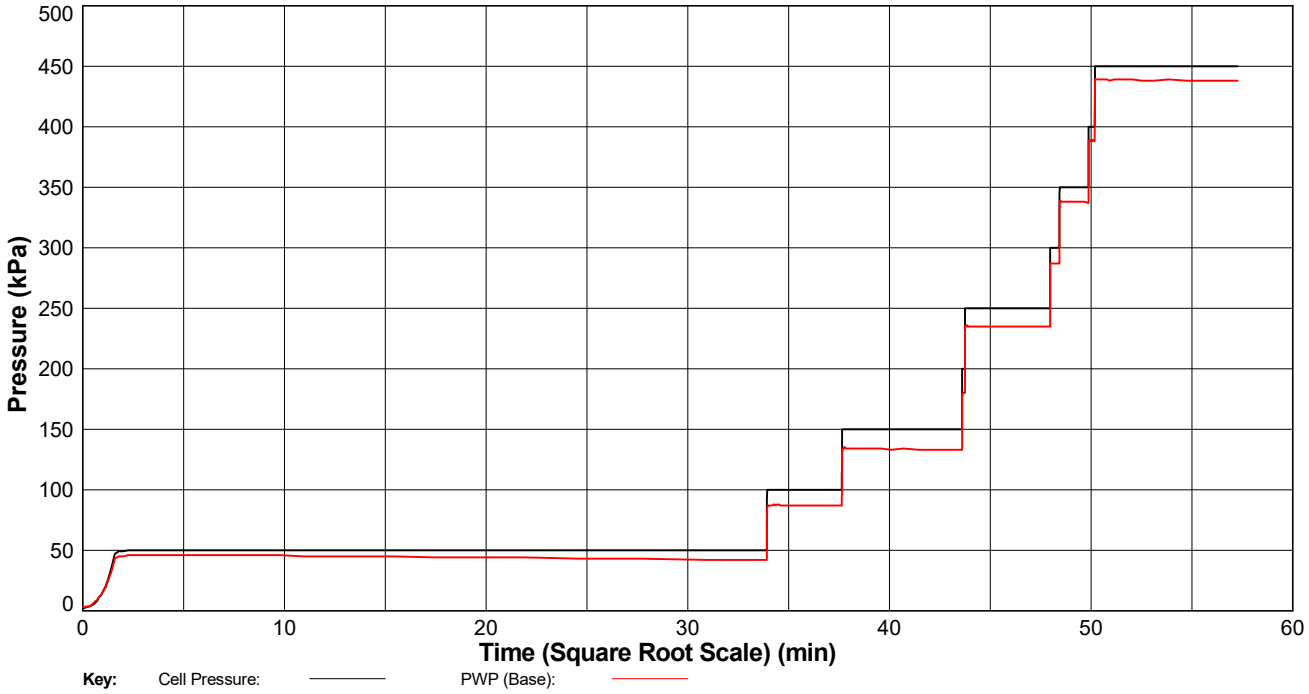
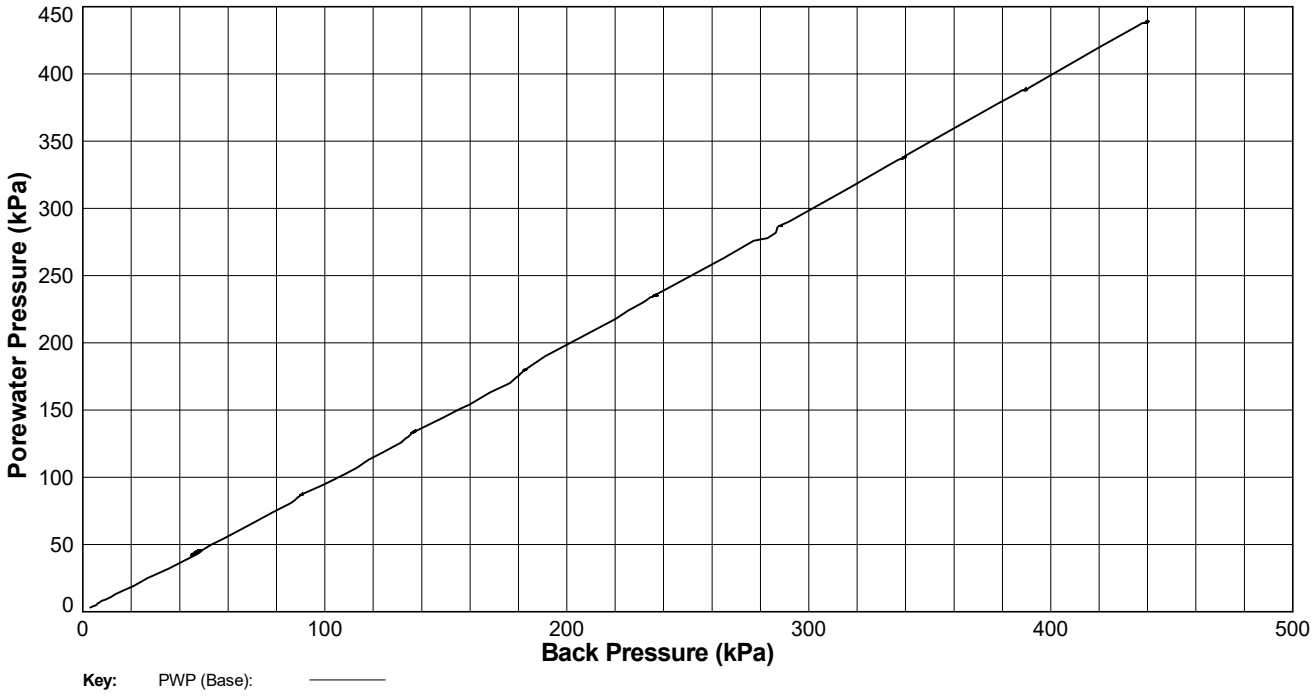
In accordance with BS EN ISO 17892 Part 9

Position ID: **R22-BH105** Sample Ref: **30** Sample Type: **UT** Depth (m): **8.03**

SATURATION



SATURATION



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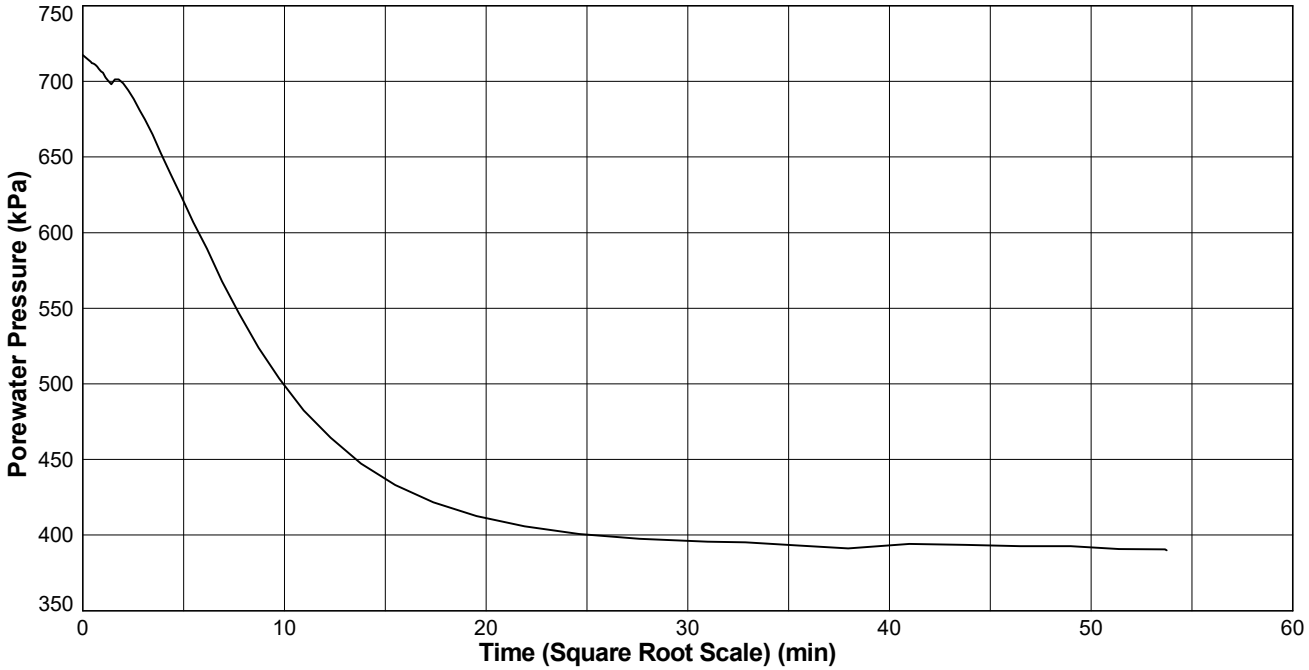
ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

In accordance with BS EN ISO 17892 Part 9

Position ID: **R22-BH105** Sample Ref: **30** Sample Type: **UT** Depth (m): **8.03**

CONSOLIDATION



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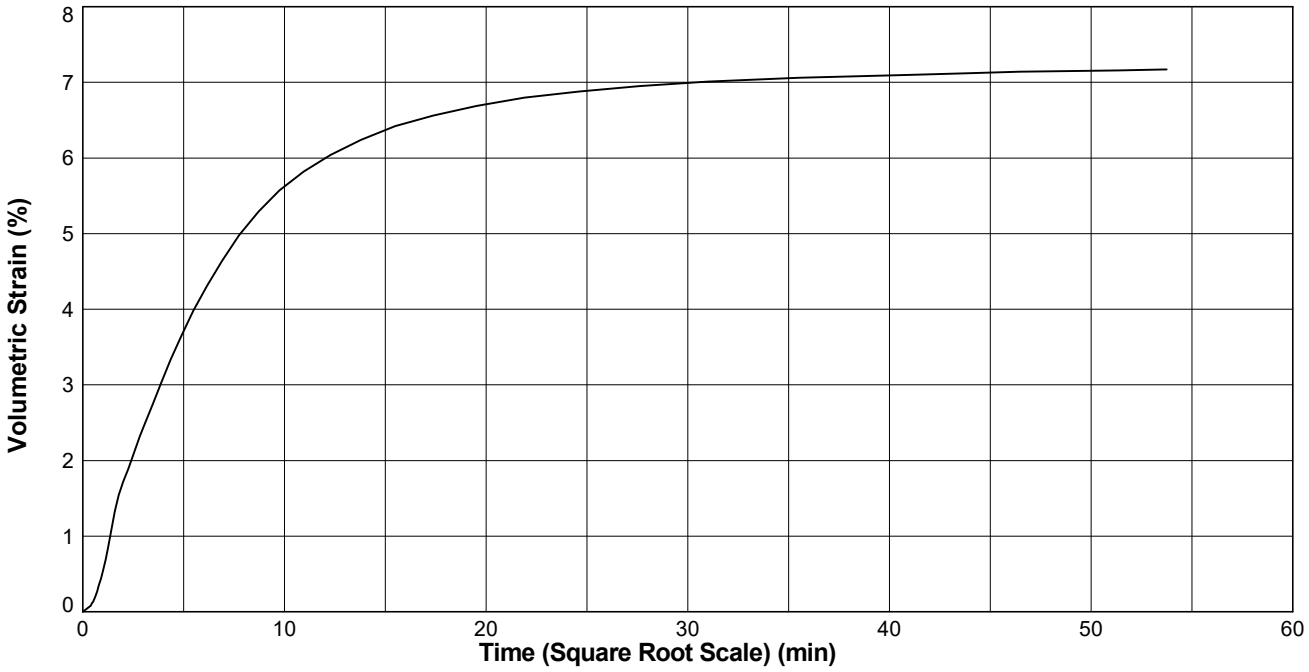
CONSOLIDATION



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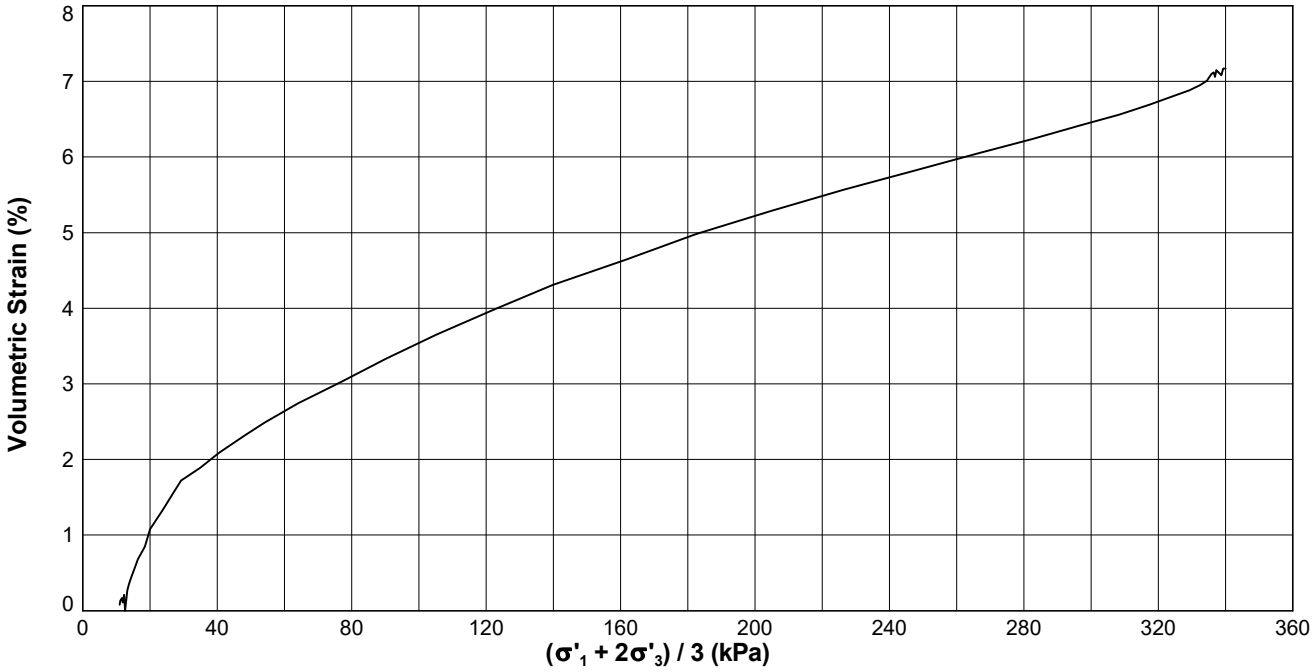
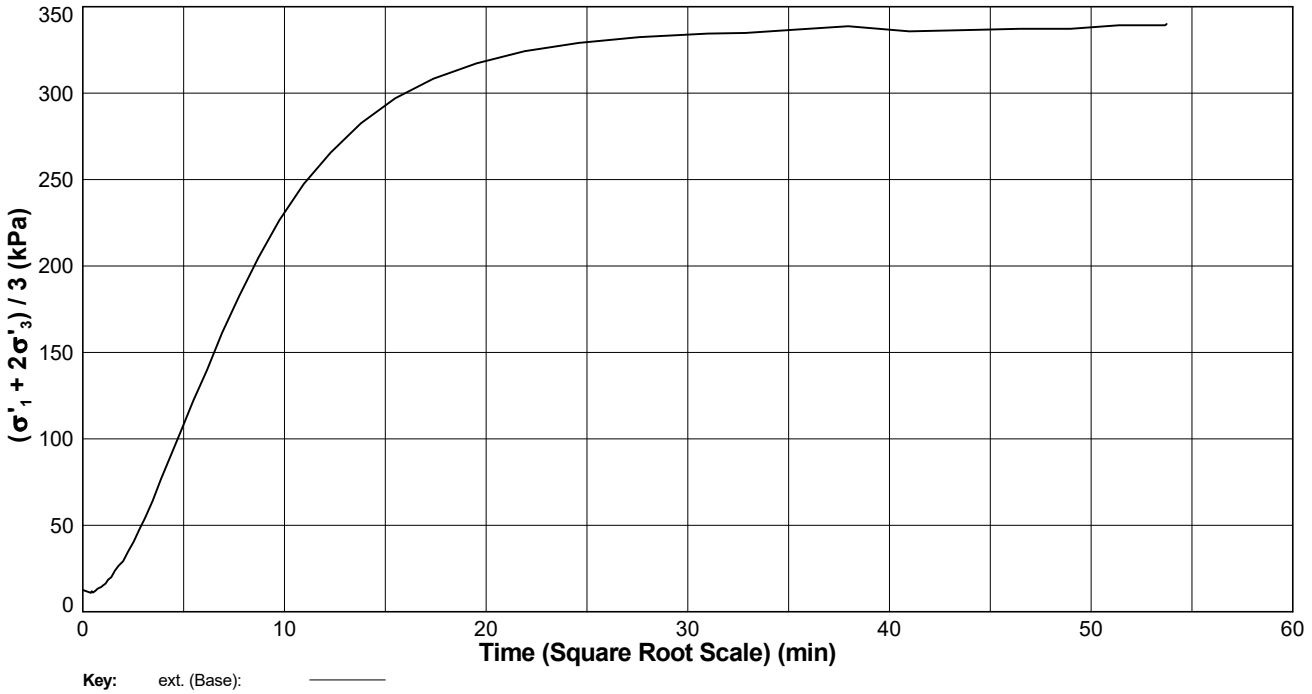
In accordance with BS EN ISO 17892 Part 9

Position ID: **R22-BH105** Sample Ref: **30** Sample Type: **UT** Depth (m): **8.03**

CONSOLIDATION



CONSOLIDATION



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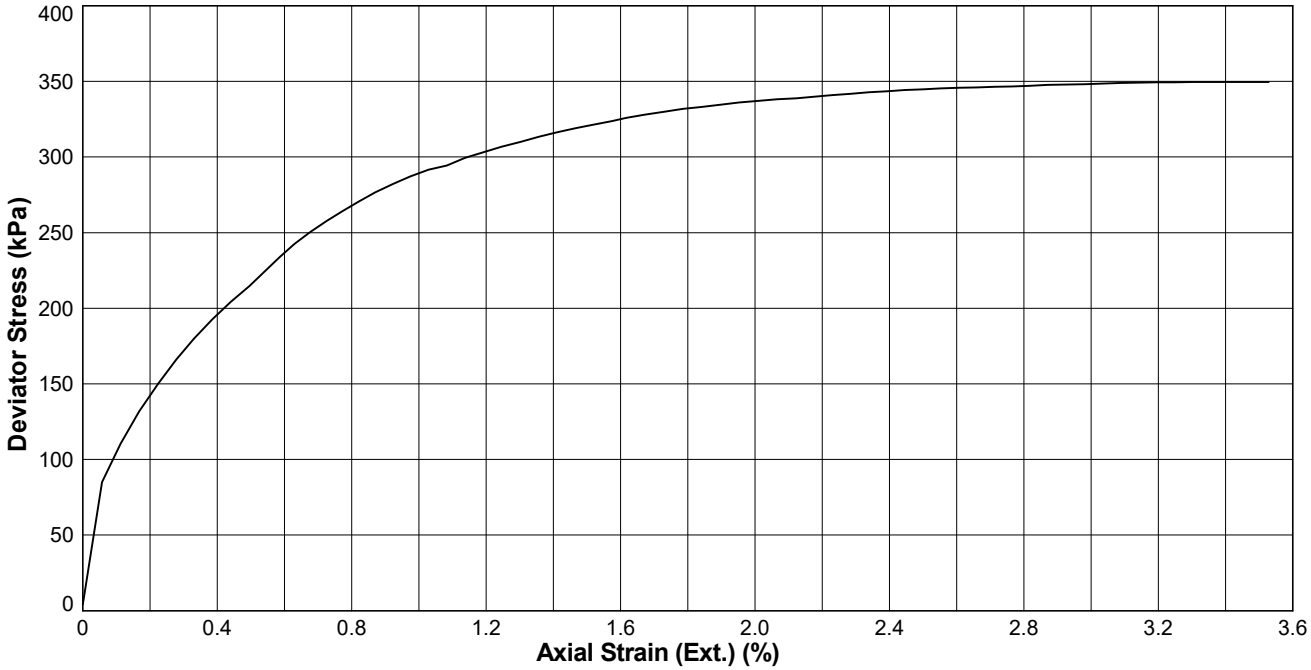
ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

In accordance with BS EN ISO 17892 Part 9

Position ID: **R22-BH105** Sample Ref: **30** Sample Type: **UT** Depth (m): **8.03**

SHEAR



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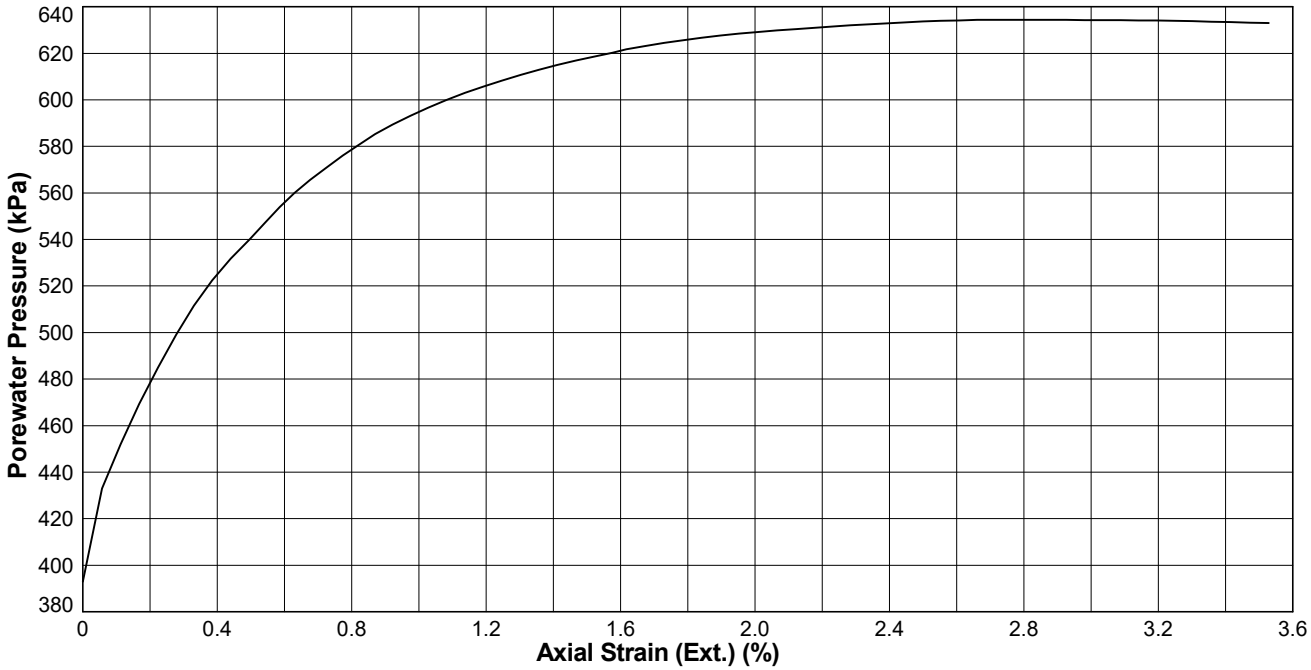
SHEAR



Key: PWP (Base): ————

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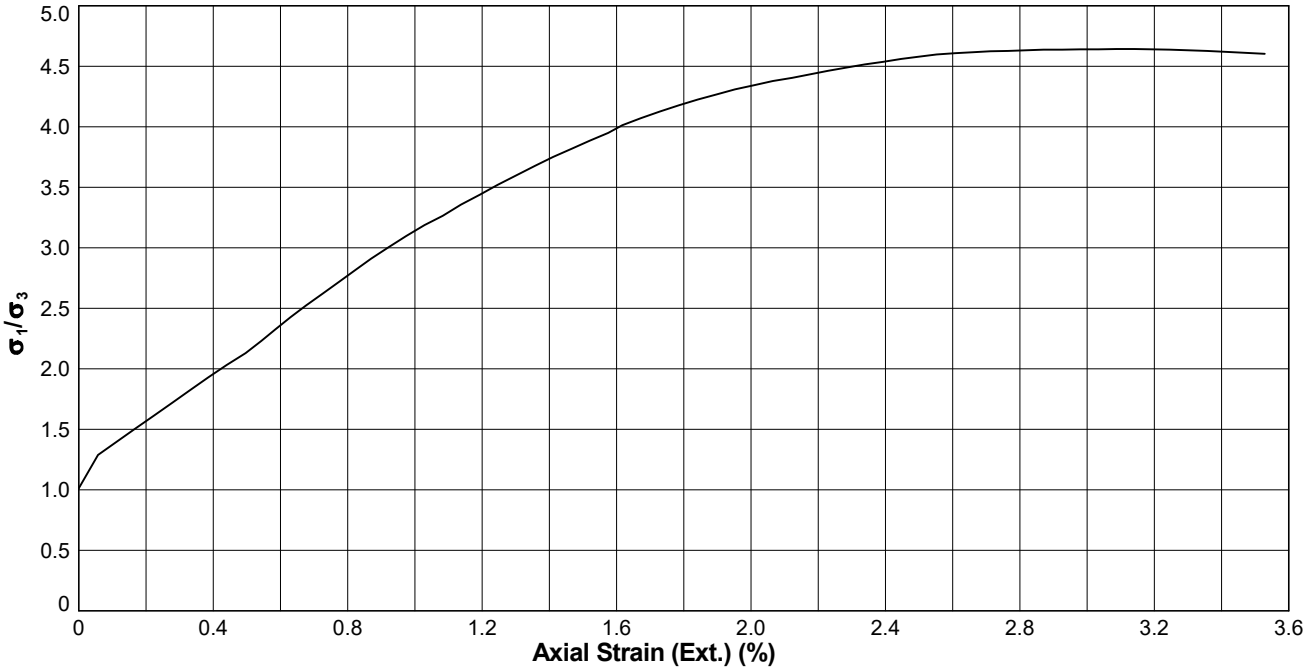
In accordance with BS EN ISO 17892 Part 9

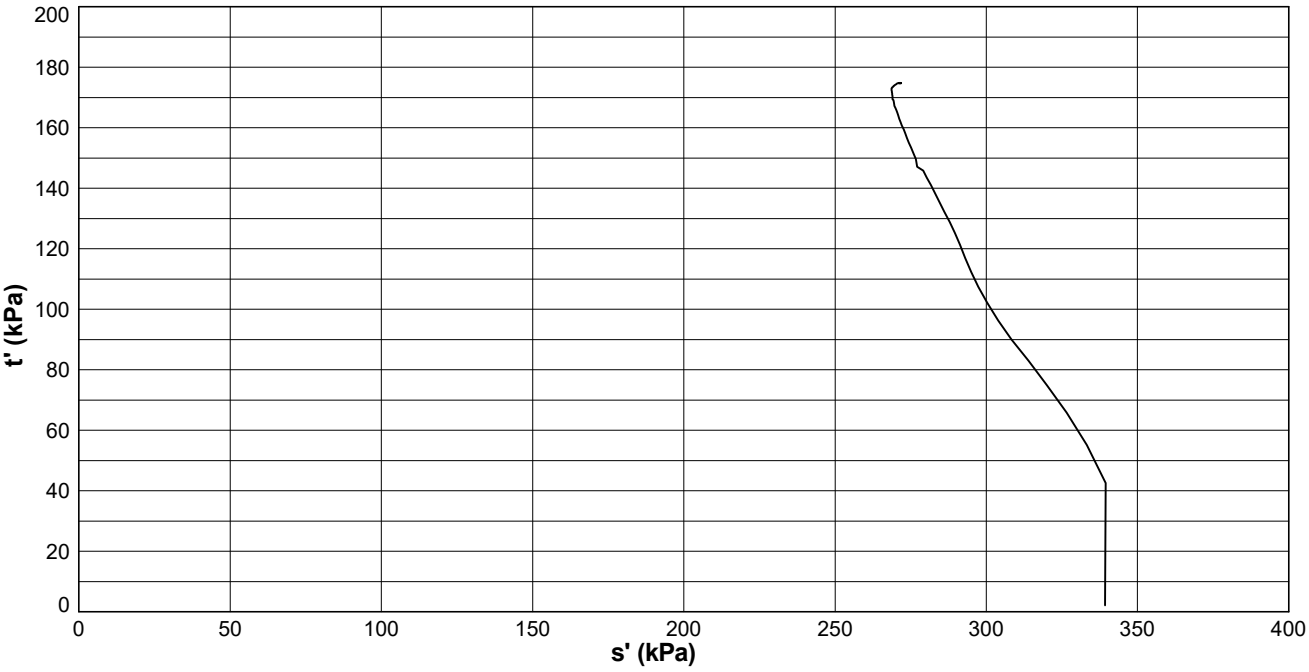
Position ID: **R22-BH105** Sample Ref: **30** Sample Type: **UT** Depth (m): **8.03**

SHEAR



Key: ext. (Base):

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 : **R22-BH205** Sample Ref : **23** Sample Type : **UT** Depth (m) : **6.13**

Description : **Grey silty CLAY**

Condition : **Undisturbed.**

Saturation Type : **Cell Pressure.** Side Drains : **Y.**

SPECIMEN DETAILS			
Initial Diameter (mm)	103.7		
Initial Height (mm)	202.19		
Initial Mass (g)	3045.9		
Sample Orientation	Vertical		
Initial Water Content (%)	48.2		
Initial Bulk Density (Mg/m^3)	1.79		
Initial Dry Density (Mg/m^3)	1.21		
Initial Voids Ratio	1.1923		
Initial B-Value	0.85		
Final Water Content (%)	30.5		
Final Bulk Density (Mg/m^3)	1.98		
Final Dry Density (Mg/m^3)	1.51		
SATURATION			
Duration (days)	2		
Final B-Value	1		
Voids Ratio	1.1948		
CONSOLIDATION			
Stage	1		
Duration (days)	6		
Cell Pressure (kPa)	700		
Back Pressure (kPa)	460		
Initial Volume (cm^3)	1706		
Final Volume (cm^3)	1358		
Voids Ratio	0.7453		
Effective Major Principal Stress (kPa)	235		
Effective Minor Principal Stress (kPa)	235		
Ext. Axial Strain (%)	-		
Ext. Volumetric Strain (%)	20.39		

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ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

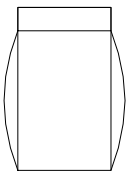
In accordance with BS EN ISO 17892 Part 9

Borehole : **R22-BH205** Sample Ref : **23** Sample Type : **UT** Depth (m) : **6.13**

Description : **Grey silty CLAY**

Condition : **Undisturbed.**

Saturation Type : **Cell Pressure.** Side Drains : **Y.**

COMPRESSION			
Duration (days)	7		
Cell Pressure (kPa)	700		
Initial Porewater Pressure (kPa)	469		
Strain Rate (mm/min)	0.00245		
Failure Criteria	Maximum Deviator Stress		
Axial Strain at Failure (%)	6.45		
Time to Failure (h)	84.0		
Deviator Stress at Failure (kPa)	148		
Vertical Membrane Correction at Failure (kPa)	3.047		
Horizontal Membrane Correction at Failure (kPa)	1.563		
Side Drain Correction at Failure (kPa)	3.967		
Porewater Pressure at Failure (kPa)	628		
Effective Major Principal Stress (kPa)	220		
Effective Minor Principal Stress (kPa)	72		
Effective Principal Stress Ratio	3.08		
Pore Pressure Coefficient - A_f	1.07		
Mode of Failure Plastic (Barrelling)			

Effective Cohesion (kPa) : **N/A**	Angle of Shear Resistance (degs) : **N/A**

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Compiled By	Date
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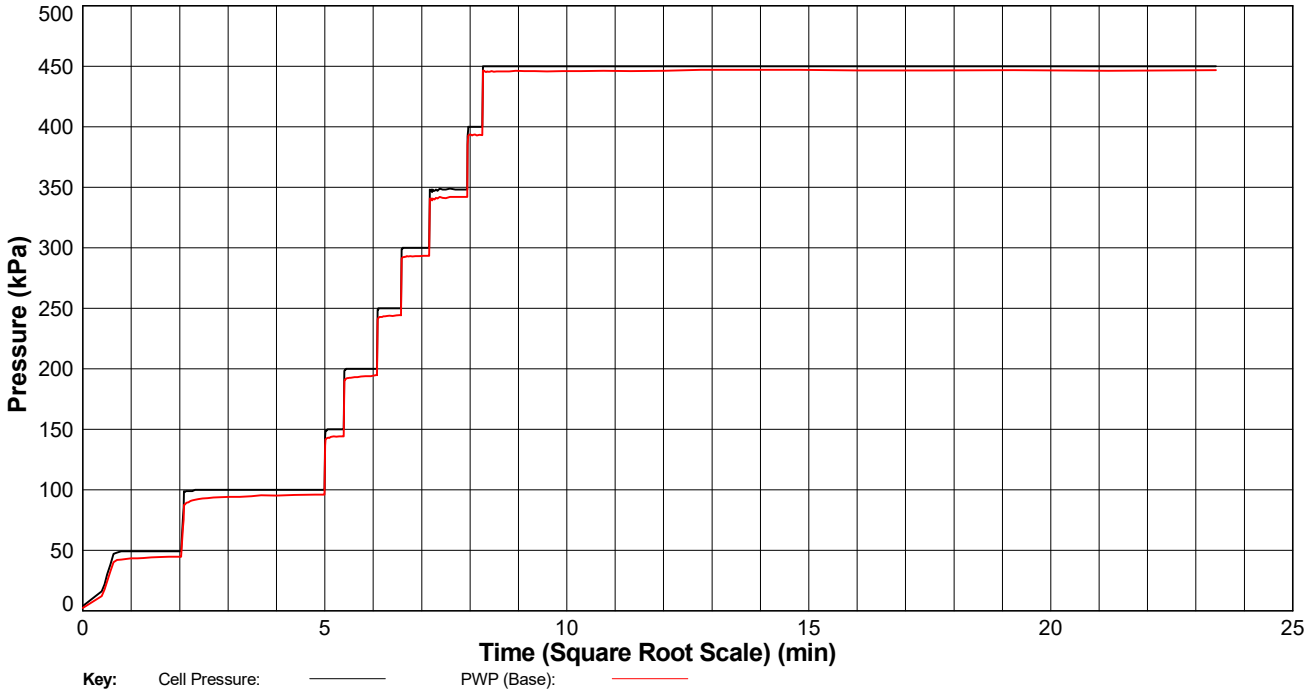
Contract:	Contract Ref:
Sea Link - Richborough	**563607**

ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

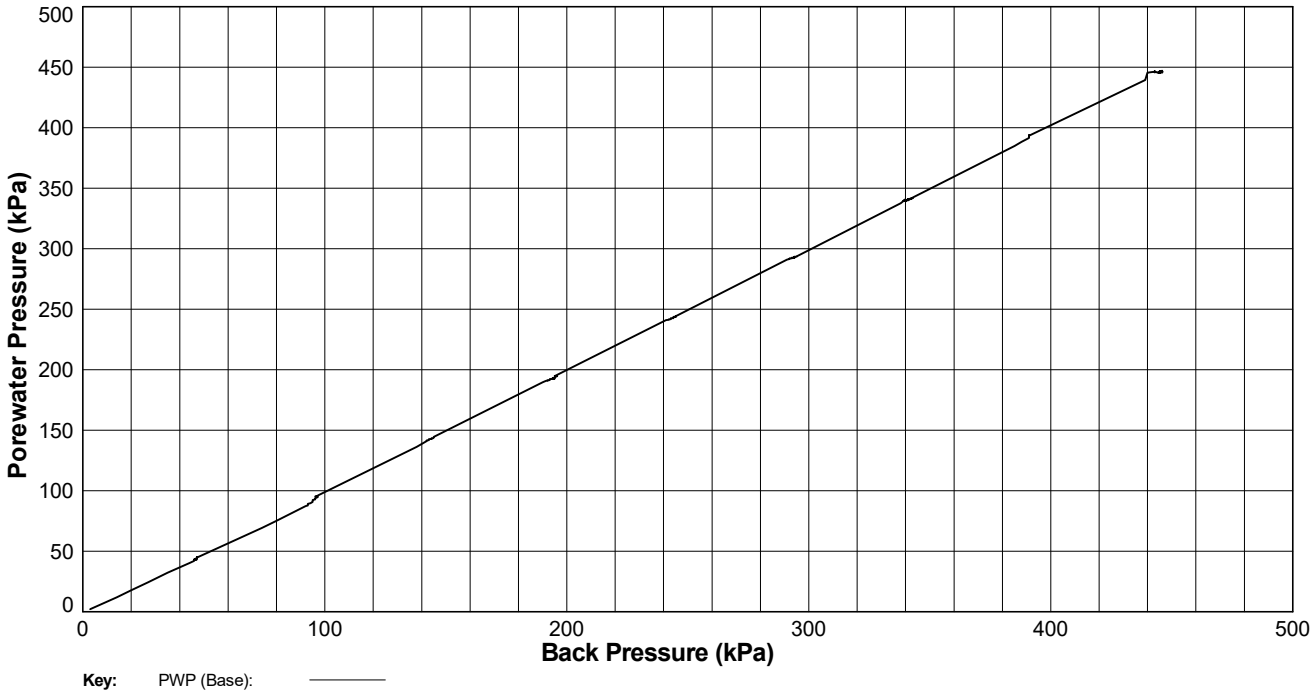
In accordance with BS EN ISO 17892 Part 9

Position ID: **R22-BH205** Sample Ref: **23** Sample Type: **UT** Depth (m): **6.13**

SATURATION



SATURATION



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	Contract	Contract Ref:	
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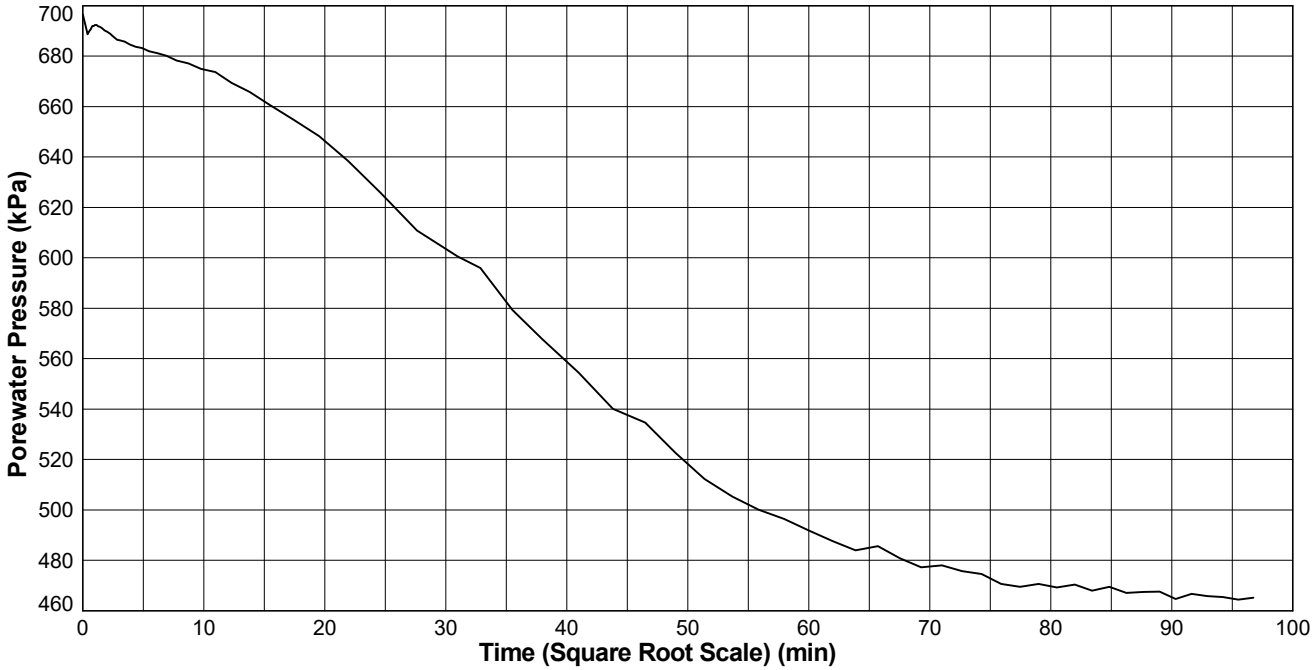
ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

In accordance with BS EN ISO 17892 Part 9

Position ID: **R22-BH205** Sample Ref: **23** Sample Type: **UT** Depth (m): **6.13**

CONSOLIDATION



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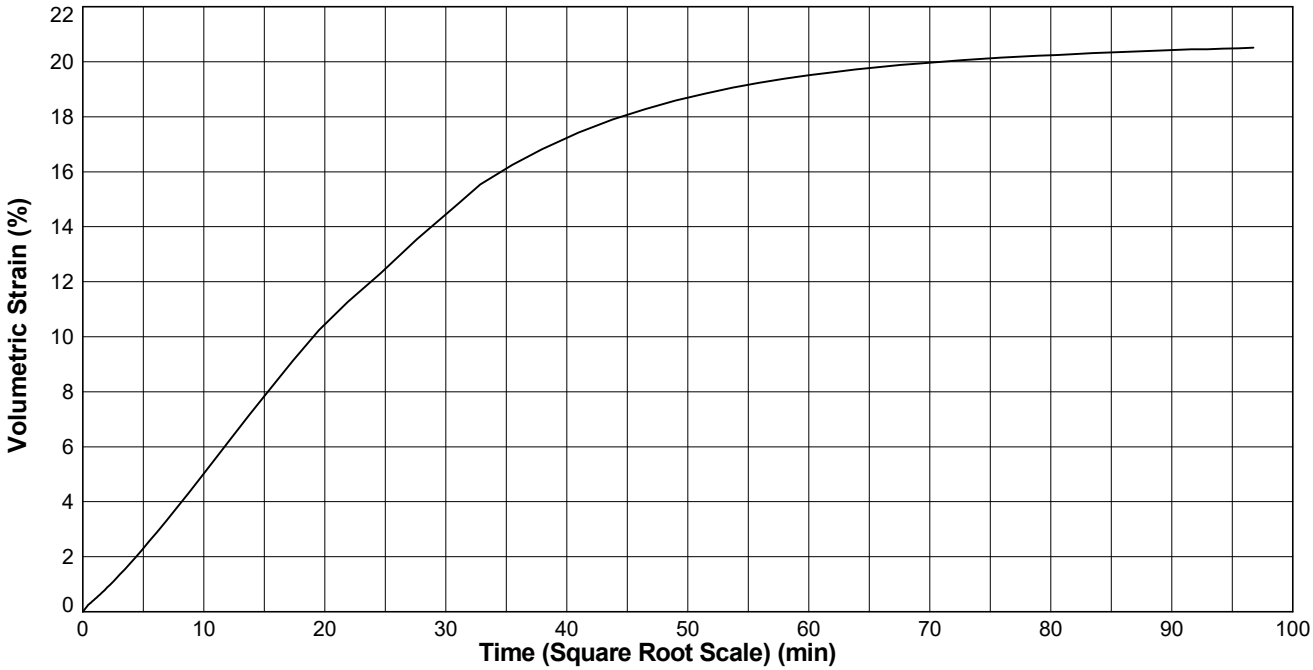
CONSOLIDATION



STRUCTURAL SOILS 1a Princess Street Bedminster Bristol BS3 4AG	Compiled By		Date
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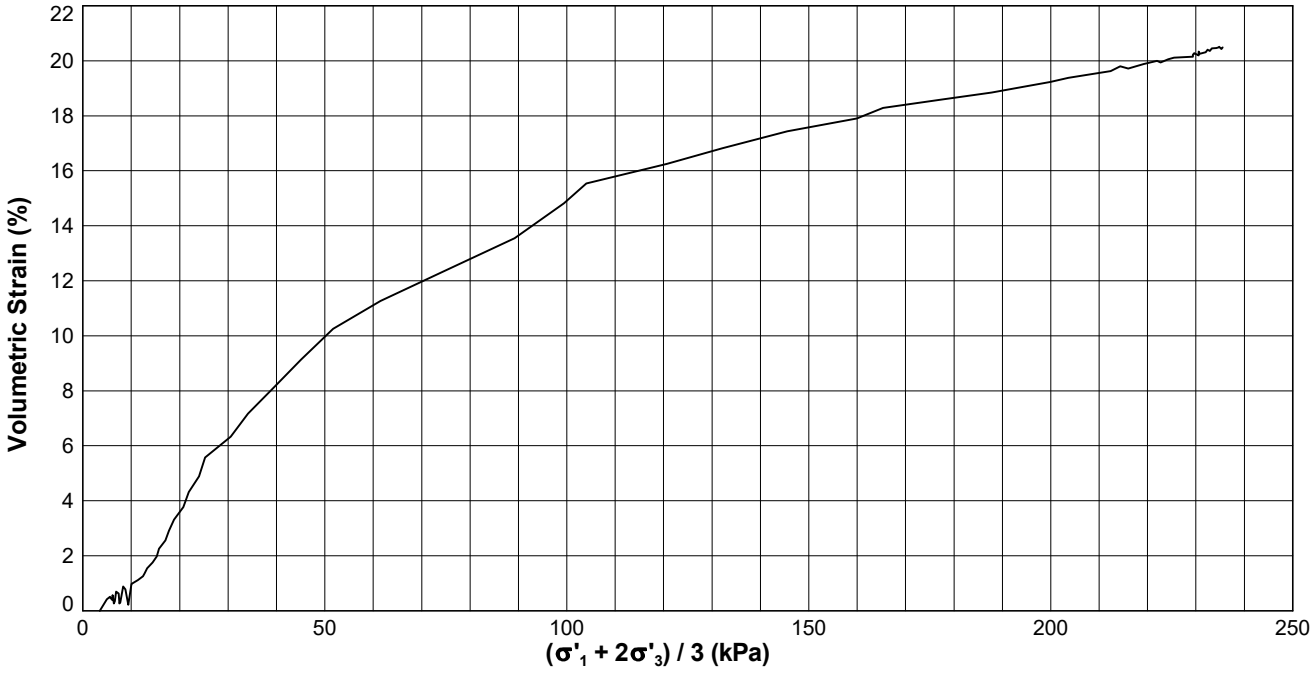
	Contract	Contract Ref:	
	Sea Link - Richborough	**563607**	

ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

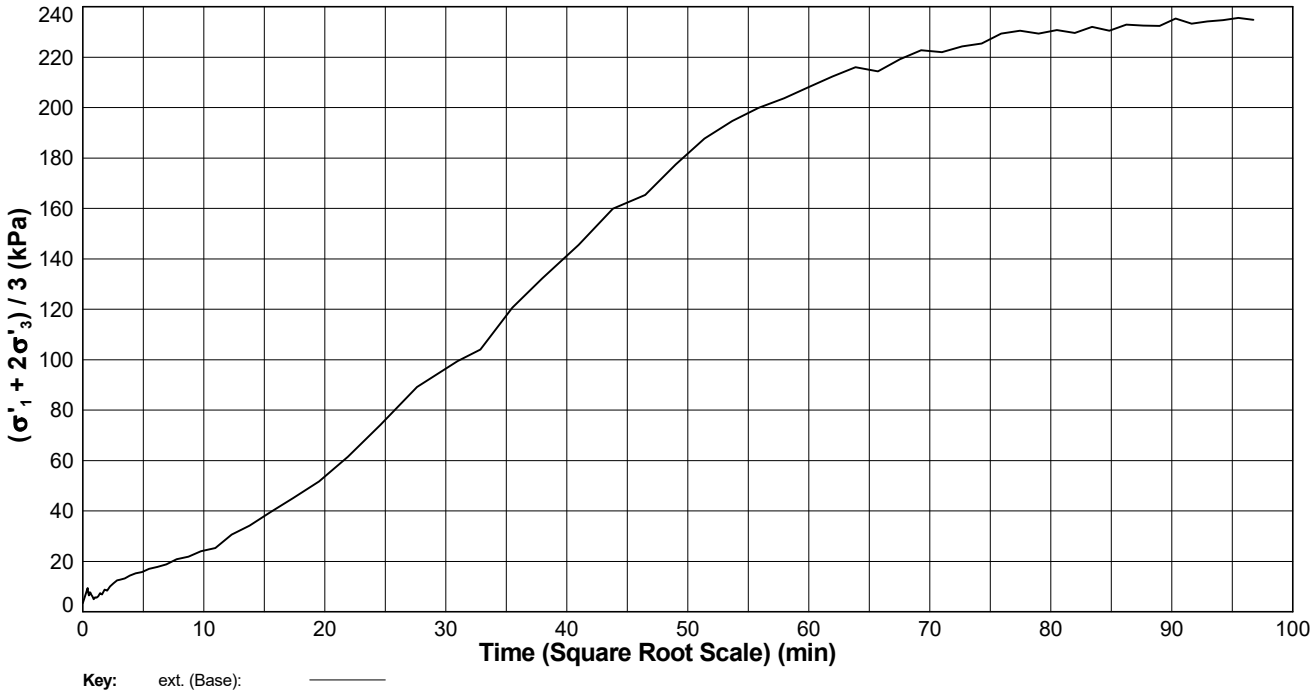
In accordance with BS EN ISO 17892 Part 9

Position ID: **R22-BH205** Sample Ref: **23** Sample Type: **UT** Depth (m): **6.13**

CONSOLIDATION



CONSOLIDATION



Key: ext. (Base): ————

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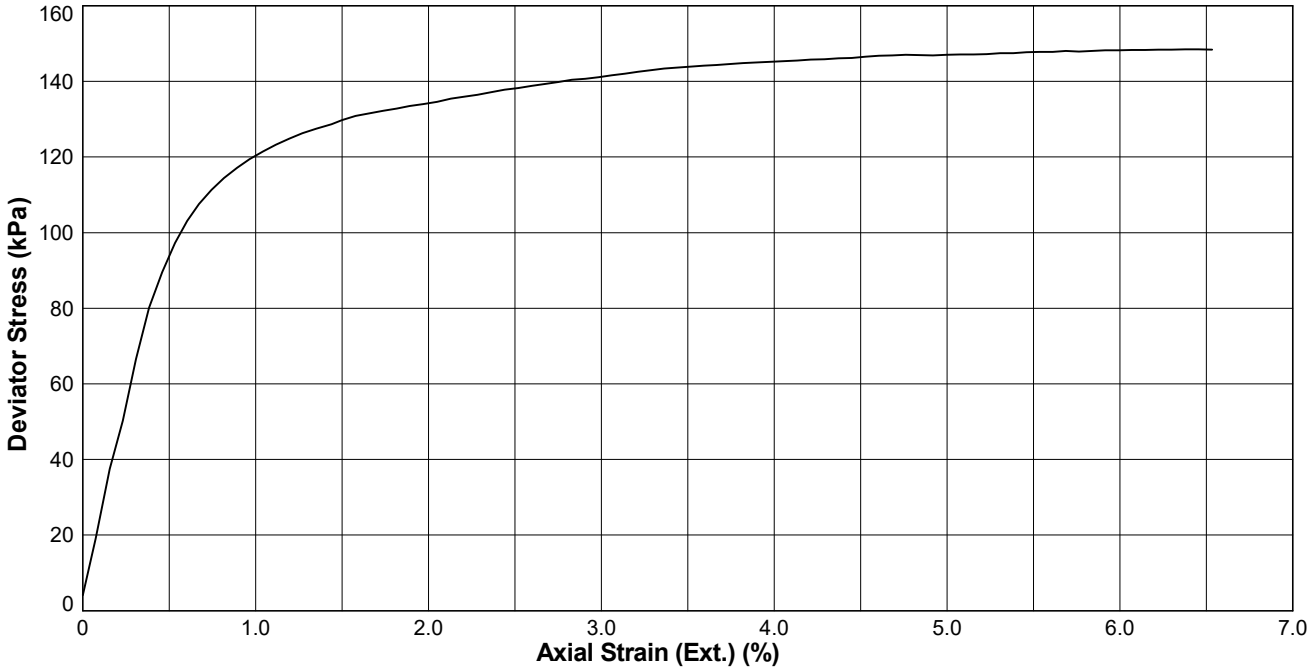
ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

In accordance with BS EN ISO 17892 Part 9

Position ID: **R22-BH205** Sample Ref: **23** Sample Type: **UT** Depth (m): **6.13**

SHEAR



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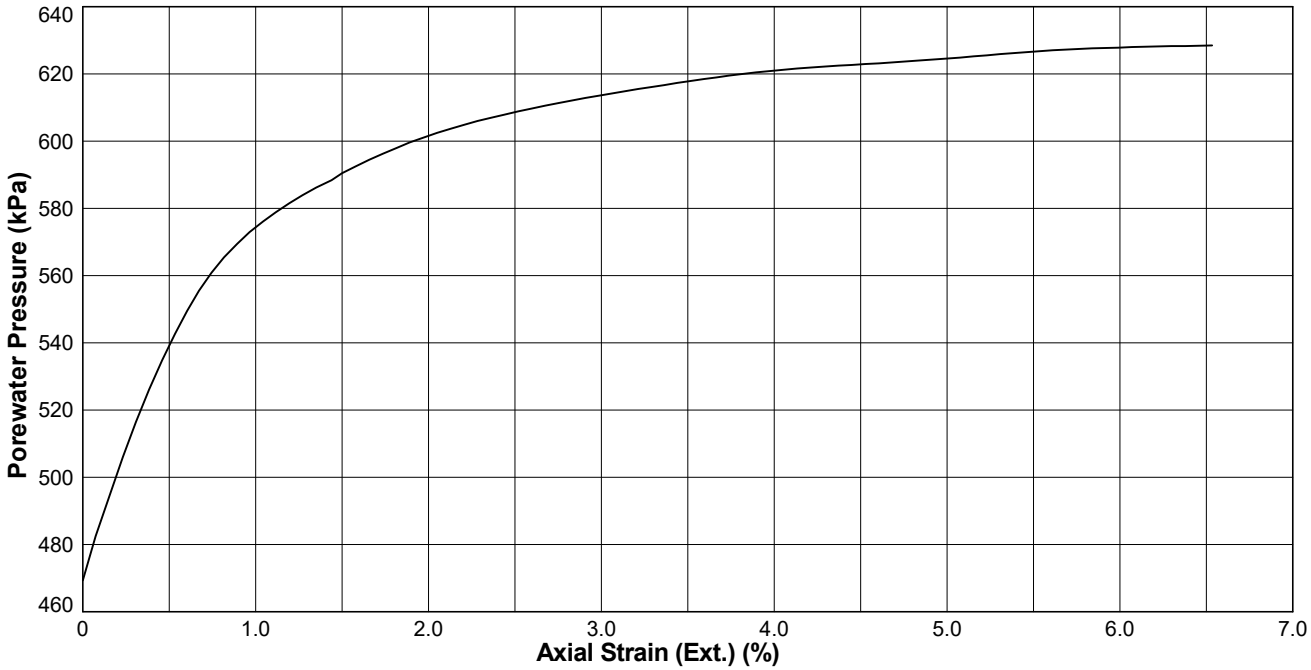
SHEAR



Key: PWP (Base): ————

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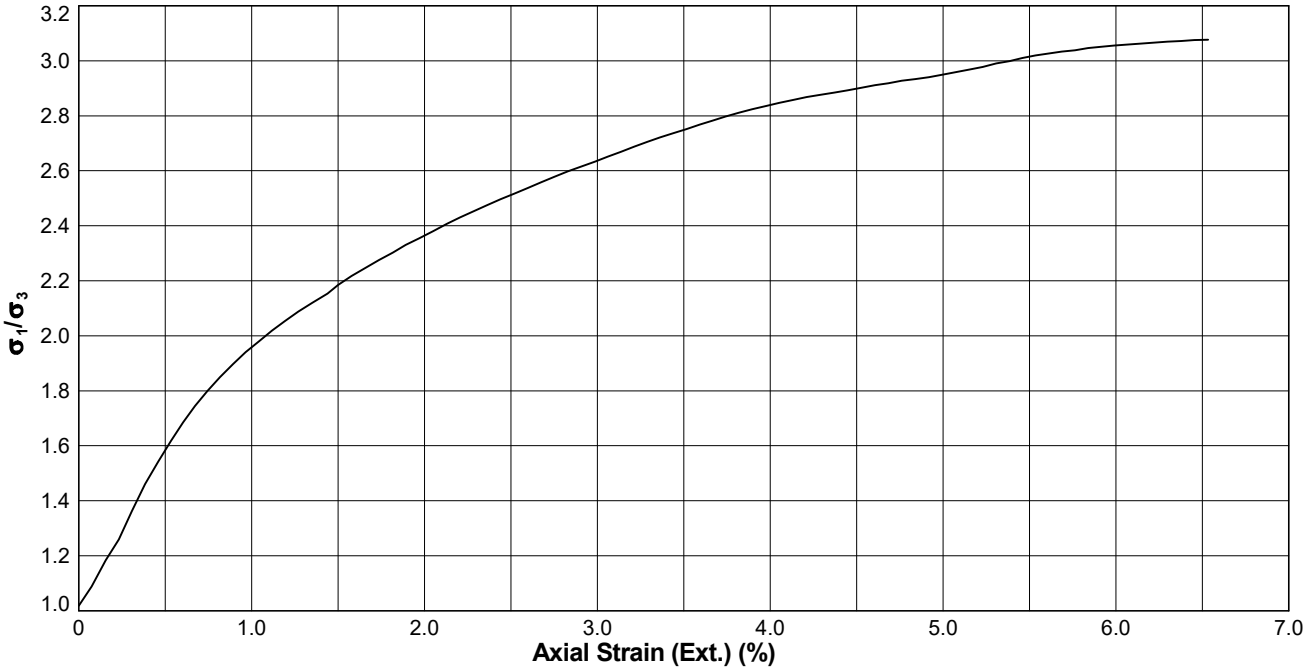
Contract: **Sea Link - Richborough**	Contract Ref: **563607**

ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

In accordance with BS EN ISO 17892 Part 9

Position ID: **R22-BH205** Sample Ref: **23** Sample Type: **UT** Depth (m): **6.13**

SHEAR



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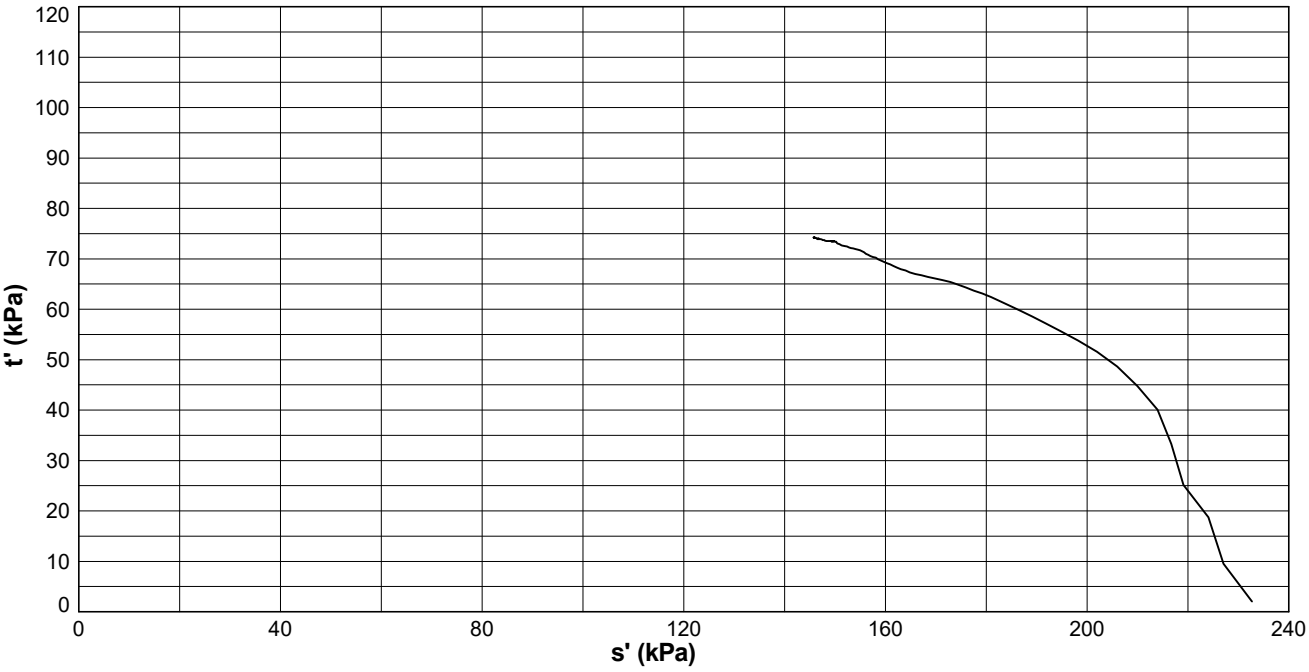
SHEAR



Key: ext. (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 : **R22-BH501** Sample Ref : **26** Sample Type : **UT** Depth (m) : **8.54**

Description : **Grey mottled brown silty CLAY**

Condition : **Undisturbed.**

Saturation Type : **Back Pressure.** Side Drains : **Y.**

SPECIMEN DETAILS			
Initial Diameter (mm)	103.08		
Initial Height (mm)	202.21		
Initial Mass (g)	3043.42		
Sample Orientation	Vertical		
Initial Water Content (%)	41.3		
Initial Bulk Density (Mg/m^3)	1.80		
Initial Dry Density (Mg/m^3)	1.28		
Initial Voids Ratio	1.0695		
Initial B-Value	0.67		
Final Water Content (%)	40.4		
Final Bulk Density (Mg/m^3)	1.87		
Final Dry Density (Mg/m^3)	1.33		
SATURATION			
Duration (days)	7		
Final B-Value	0.95		
Voids Ratio	1.0695		
CONSOLIDATION			
Stage	1		
Duration (days)	1		
Cell Pressure (kPa)	560		
Back Pressure (kPa)	390		
Initial Volume (cm^3)	1688		
Final Volume (cm^3)	1616		
Voids Ratio	0.9815		
Effective Major Principal Stress (kPa)	168		
Effective Minor Principal Stress (kPa)	168		
Ext. Axial Strain (%)	-		
Ext. Volumetric Strain (%)	4.25		

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Contract Ref: **563607**

ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

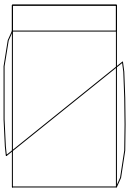
In accordance with BS EN ISO 17892 Part 9

Borehole : **R22-BH501** Sample Ref : **26** Sample Type : **UT** Depth (m) : **8.54**

Description : **Grey mottled brown silty CLAY**

Condition : **Undisturbed.**

Saturation Type : **Back Pressure.** Side Drains : **Y.**

COMPRESSION			
Duration (days)	1		
Cell Pressure (kPa)	560		
Initial Porewater Pressure (kPa)	392		
Strain Rate (mm/min)	0.01038		
Failure Criteria	Maximum Deviator Stress		
Axial Strain at Failure (%)	3.32		
Time to Failure (h)	11.0		
Deviator Stress at Failure (kPa)	216		
Vertical Membrane Correction at Failure (kPa)	0.942		
Horizontal Membrane Correction at Failure (kPa)	0.282		
Side Drain Correction at Failure (kPa)	3.740		
Porewater Pressure at Failure (kPa)	505		
Effective Major Principal Stress (kPa)	271		
Effective Minor Principal Stress (kPa)	55		
Effective Principal Stress Ratio	4.95		
Pore Pressure Coefficient - A_f	0.52		
Mode of Failure Brittle (shear plane)			

Effective Cohesion (kPa) : **N/A**	Angle of Shear Resistance (degs) : **N/A**

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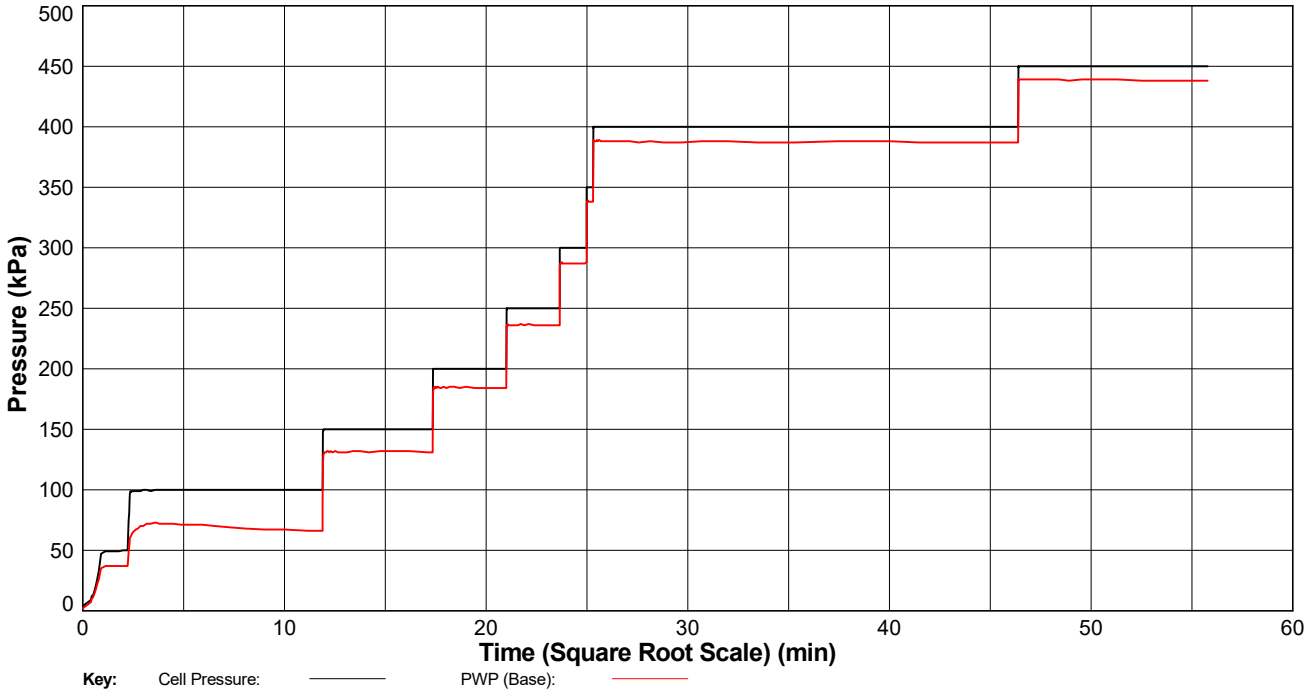
ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

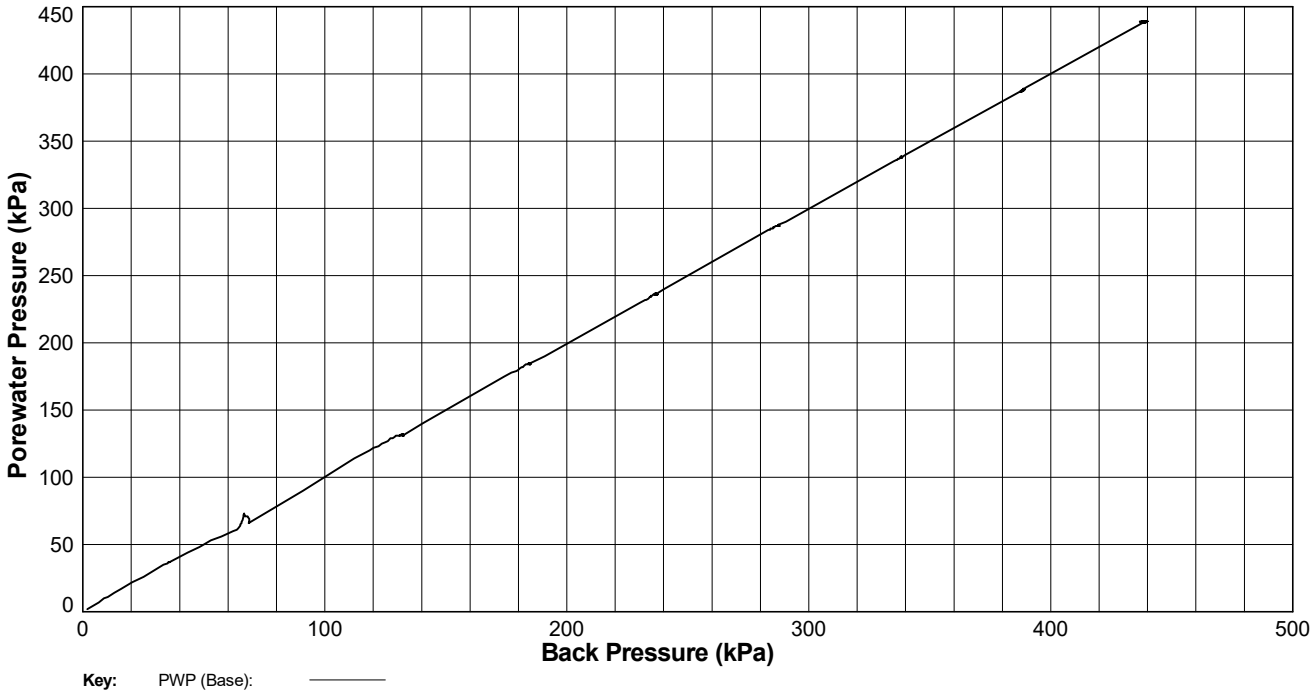
In accordance with BS EN ISO 17892 Part 9

Position ID: **R22-BH501** Sample Ref: **26** Sample Type: **UT** Depth (m): **8.54**

SATURATION



SATURATION



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1a Princess Street
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Compiled By	Date
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Contract	Contract Ref:
Sea Link - Richborough	**563607**

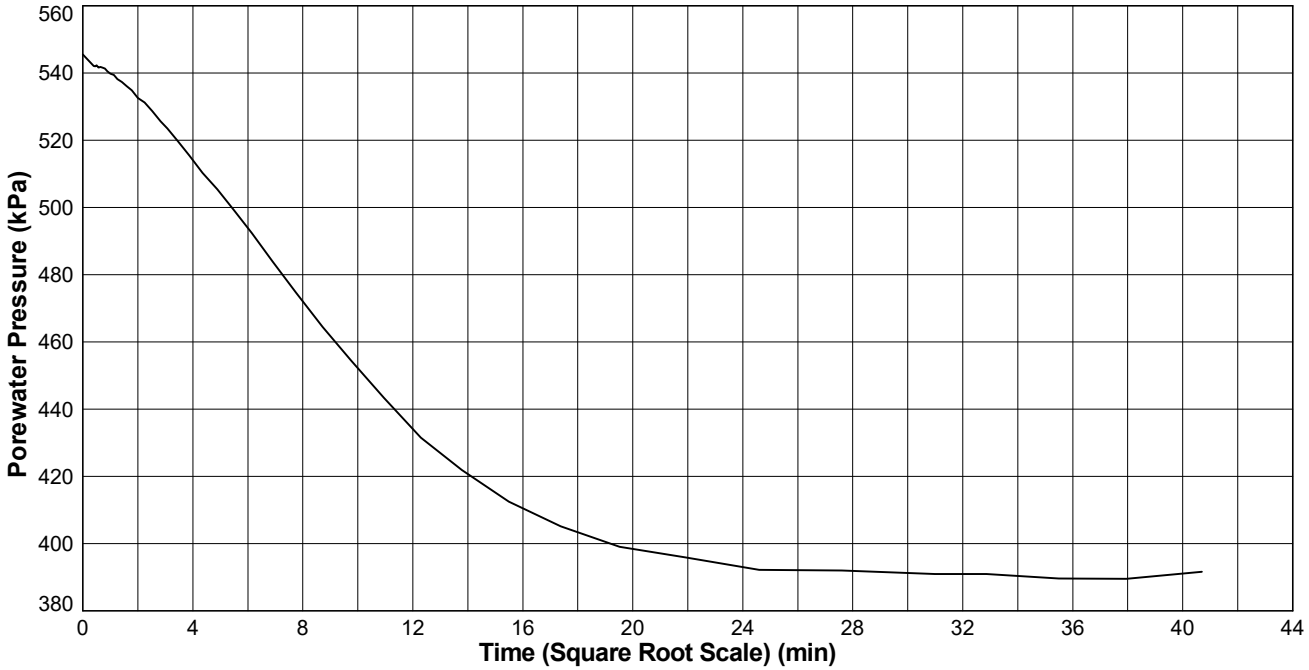
AGS

ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

In accordance with BS EN ISO 17892 Part 9

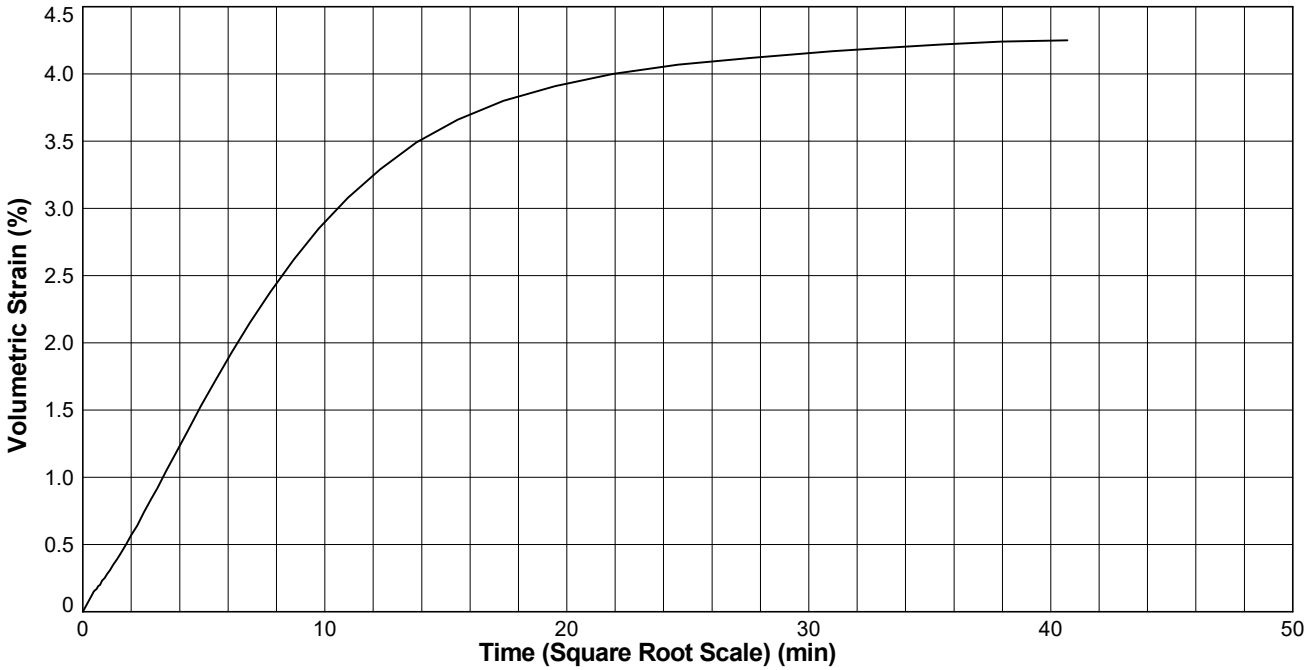
Position ID: **R22-BH501** Sample Ref: **26** Sample Type: **UT** Depth (m): **8.54**

CONSOLIDATION



Key: PWP (Base):

CONSOLIDATION



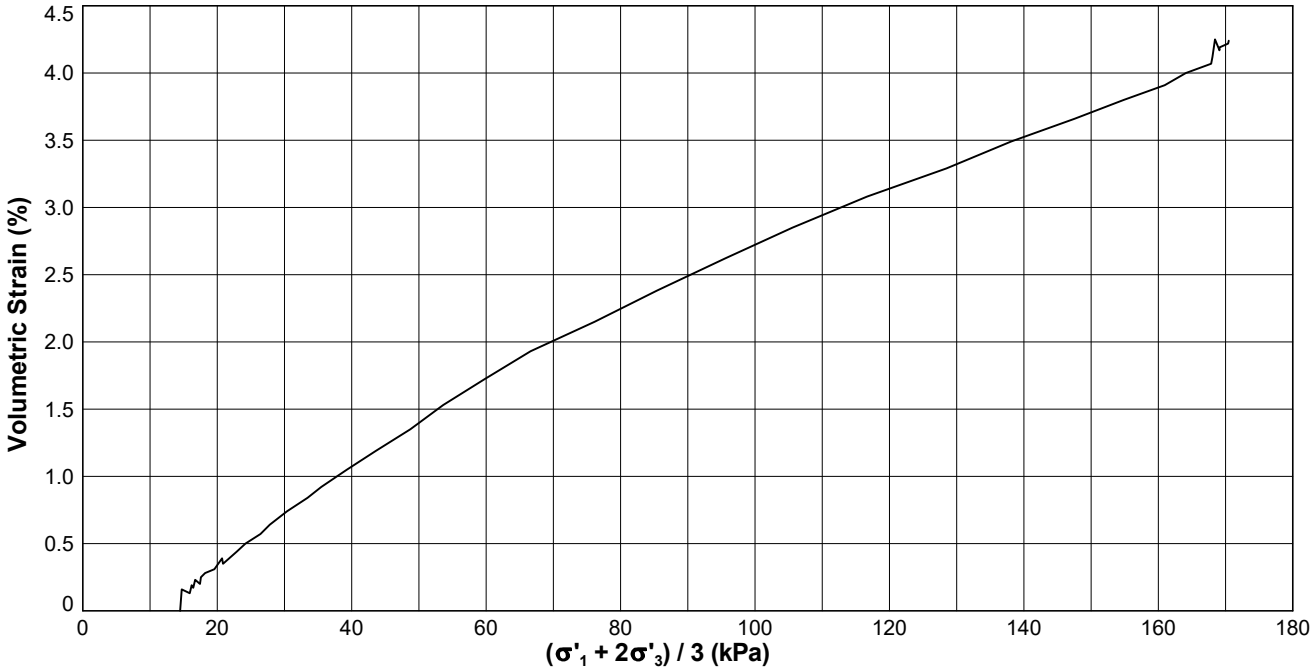
STRUCTURAL SOILS 1a Princess Street Bedminster Bristol BS3 4AG	Compiled By		Date
	[redacted]		**22/01/24**
	Contract	Contract Ref:	
	Sea Link - Richborough	**563607**	

ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

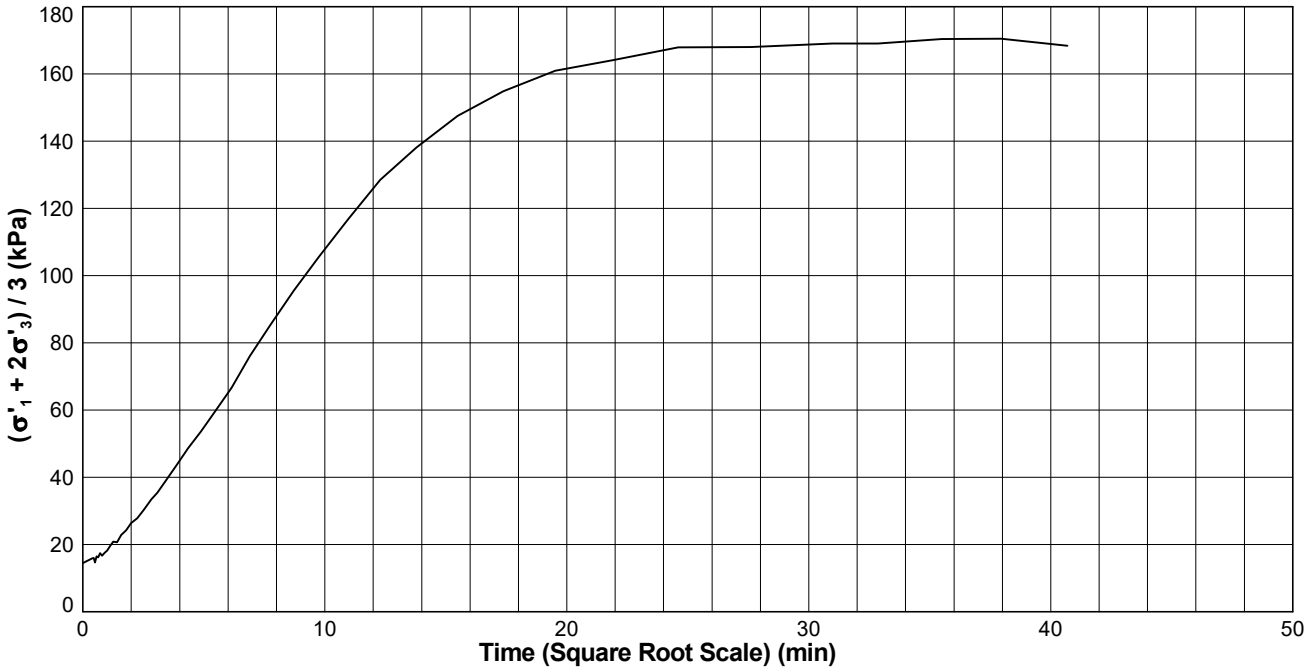
In accordance with BS EN ISO 17892 Part 9

Position ID: **R22-BH501** Sample Ref: **26** Sample Type: **UT** Depth (m): **8.54**

CONSOLIDATION



CONSOLIDATION



Key: ext. (Base): ————

STRUCTURAL SOILS
1a Princess Street
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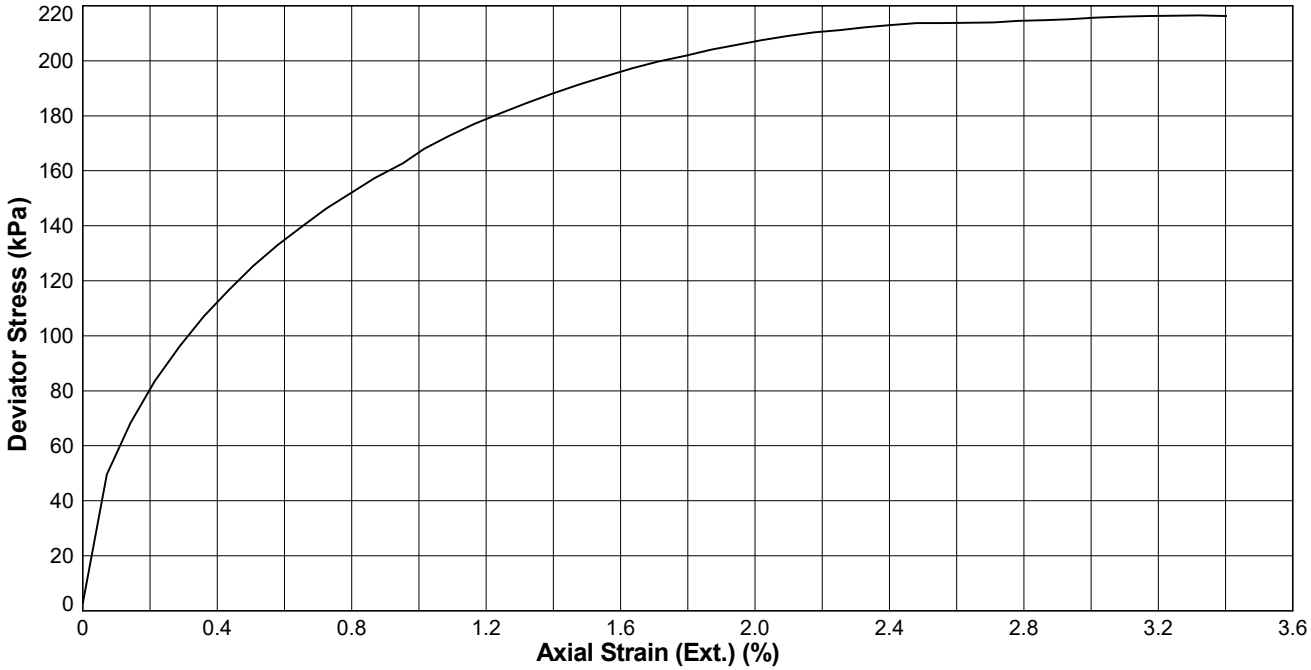
Compiled By	Date
[redacted]	**22/01/24**
Contract: **Sea Link - Richborough**	Contract Ref: **563607**

ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

In accordance with BS EN ISO 17892 Part 9

Position ID: **R22-BH501** Sample Ref: **26** Sample Type: **UT** Depth (m): **8.54**

SHEAR



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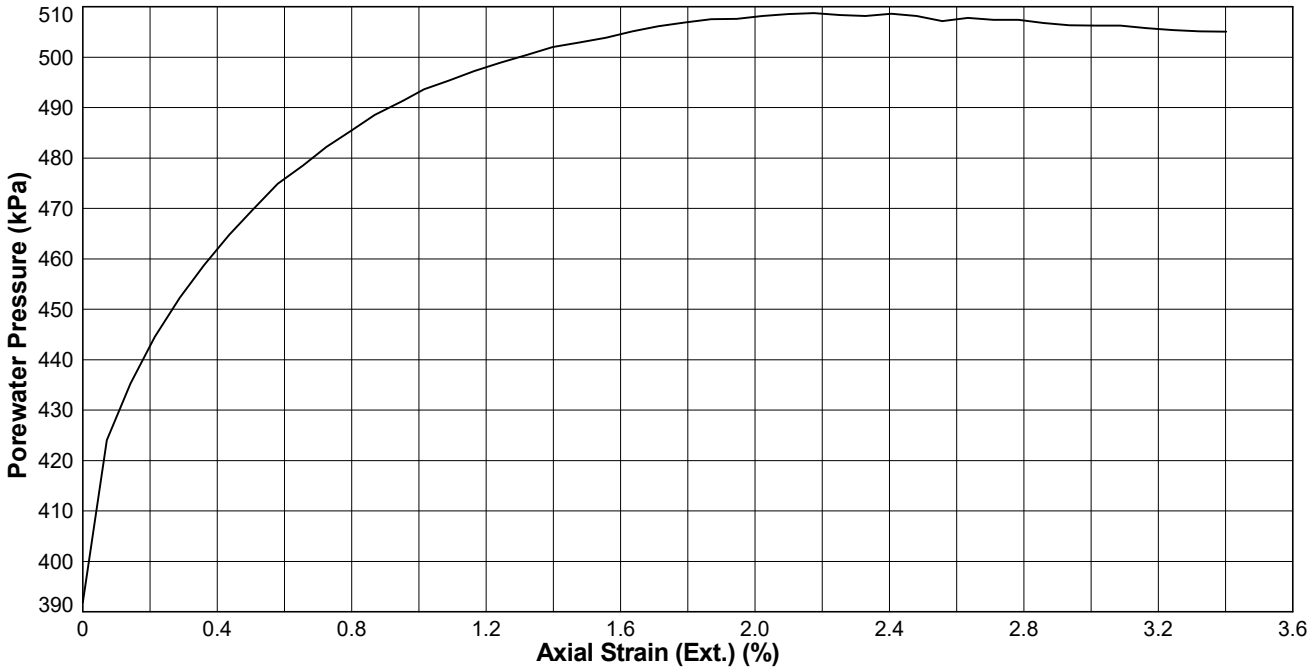
SHEAR



Key: PWP (Base): ————

STRUCTURAL SOILS 1a Princess Street Bedminster Bristol BS3 4AG	Compiled By		Date
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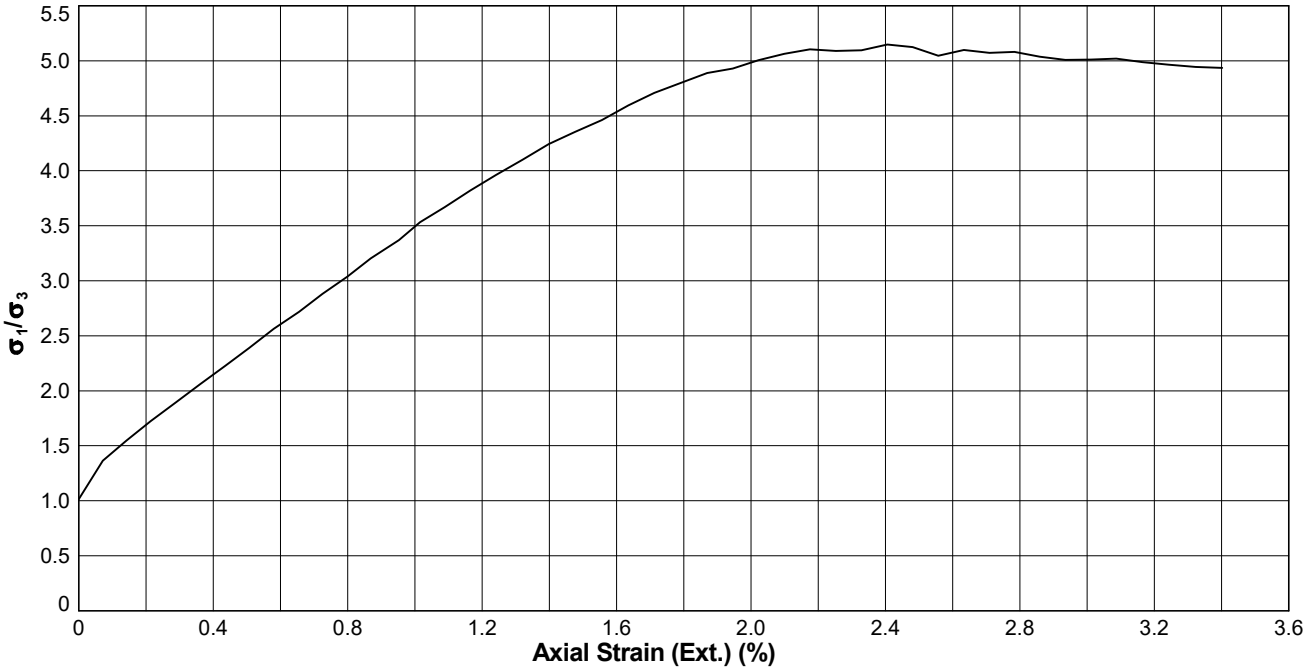
	Contract	Contract Ref:	
	Sea Link - Richborough	**563607**	

ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

In accordance with BS EN ISO 17892 Part 9

Position ID: **R22-BH501** Sample Ref: **26** Sample Type: **UT** Depth (m): **8.54**

SHEAR



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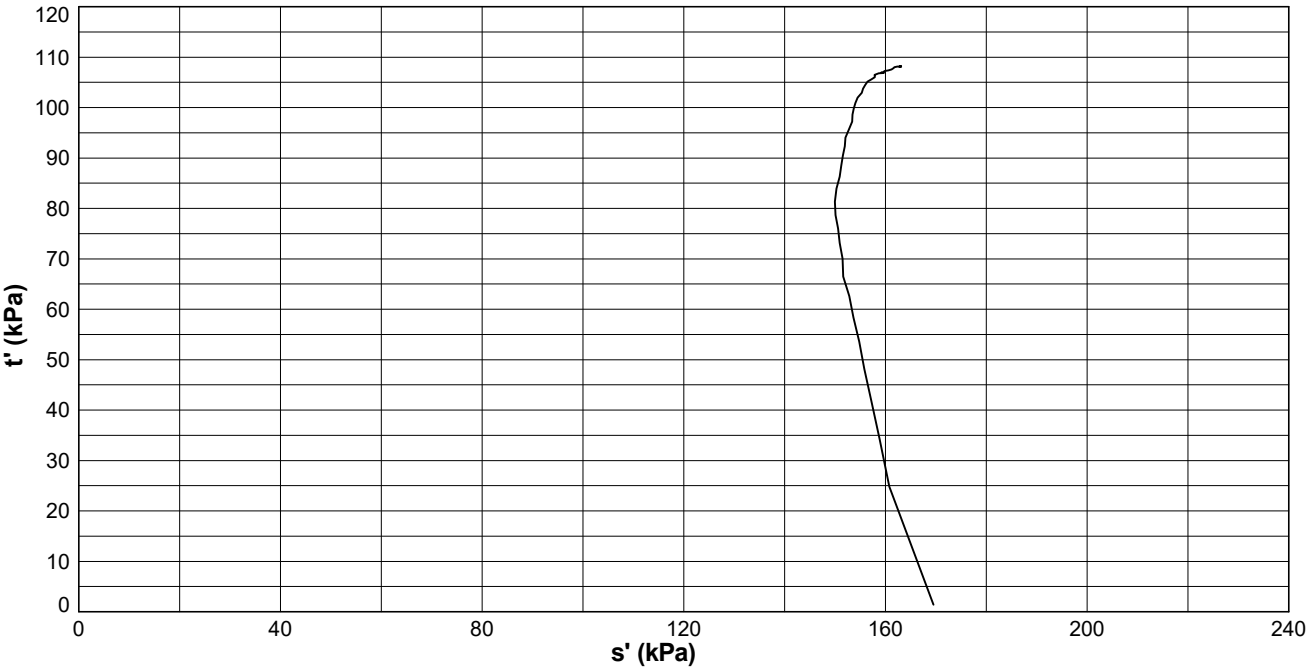
SHEAR



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STRUCTURAL SOILS 1a Princess Street Bedminster Bristol BS3 4AG	Compiled By [redacted]	Date **22/01/24**
	Contract **Sea Link - Richborough**	Contract Ref: **563607**

ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

In accordance with BS EN ISO 17892 Part 9

Borehole : **R22-BH502** Sample Ref : **22** Sample Type : **UT** Depth (m) : **6.04**

Description : **Grey silty organic CLAY**

Condition : **Undisturbed.**

Saturation Type : **Cell Pressure.** Side Drains : **Y.**

SPECIMEN DETAILS			
Initial Diameter (mm)	102.71		
Initial Height (mm)	202.53		
Initial Mass (g)	2813.85		
Sample Orientation	Vertical		
Initial Water Content (%)	57.5		
Initial Bulk Density (Mg/m^3)	1.68		
Initial Dry Density (Mg/m^3)	1.06		
Initial Voids Ratio	1.4814		
Initial B-Value	0.87		
Final Water Content (%)	42.9		
Final Bulk Density (Mg/m^3)	1.75		
Final Dry Density (Mg/m^3)	1.22		
SATURATION			
Duration (days)	2		
Final B-Value	1		
Voids Ratio	1.4814		
CONSOLIDATION			
Stage	1		
Duration (days)	5		
Cell Pressure (kPa)	600		
Back Pressure (kPa)	480		
Initial Volume (cm^3)	1678		
Final Volume (cm^3)	1460		
Voids Ratio	1.1583		
Effective Major Principal Stress (kPa)	117		
Effective Minor Principal Stress (kPa)	117		
Ext. Axial Strain (%)	-		
Ext. Volumetric Strain (%)	13.02		

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ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

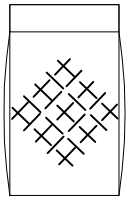
In accordance with BS EN ISO 17892 Part 9

Borehole : **R22-BH502** Sample Ref : **22** Sample Type : **UT** Depth (m) : **6.04**

Description : **Grey silty organic CLAY**

Condition : **Undisturbed.**

Saturation Type : **Cell Pressure.** Side Drains : **Y.**

COMPRESSION			
Duration (days)	3		
Cell Pressure (kPa)	600		
Initial Porewater Pressure (kPa)	484		
Strain Rate (mm/min)	0.00336		
Failure Criteria	Maximum Deviator Stress		
Axial Strain at Failure (%)	6.17		
Time to Failure (h)	59.3		
Deviator Stress at Failure (kPa)	74		
Vertical Membrane Correction at Failure (kPa)	2.513		
Horizontal Membrane Correction at Failure (kPa)	1.038		
Side Drain Correction at Failure (kPa)	3.880		
Porewater Pressure at Failure (kPa)	559		
Effective Major Principal Stress (kPa)	116		
Effective Minor Principal Stress (kPa)	41		
Effective Principal Stress Ratio	2.80		
Pore Pressure Coefficient - A_f	1.00		
Mode of Failure Semi-plastic (intermediate)			

Effective Cohesion (kPa) : **N/A**	Angle of Shear Resistance (degs) : **N/A**

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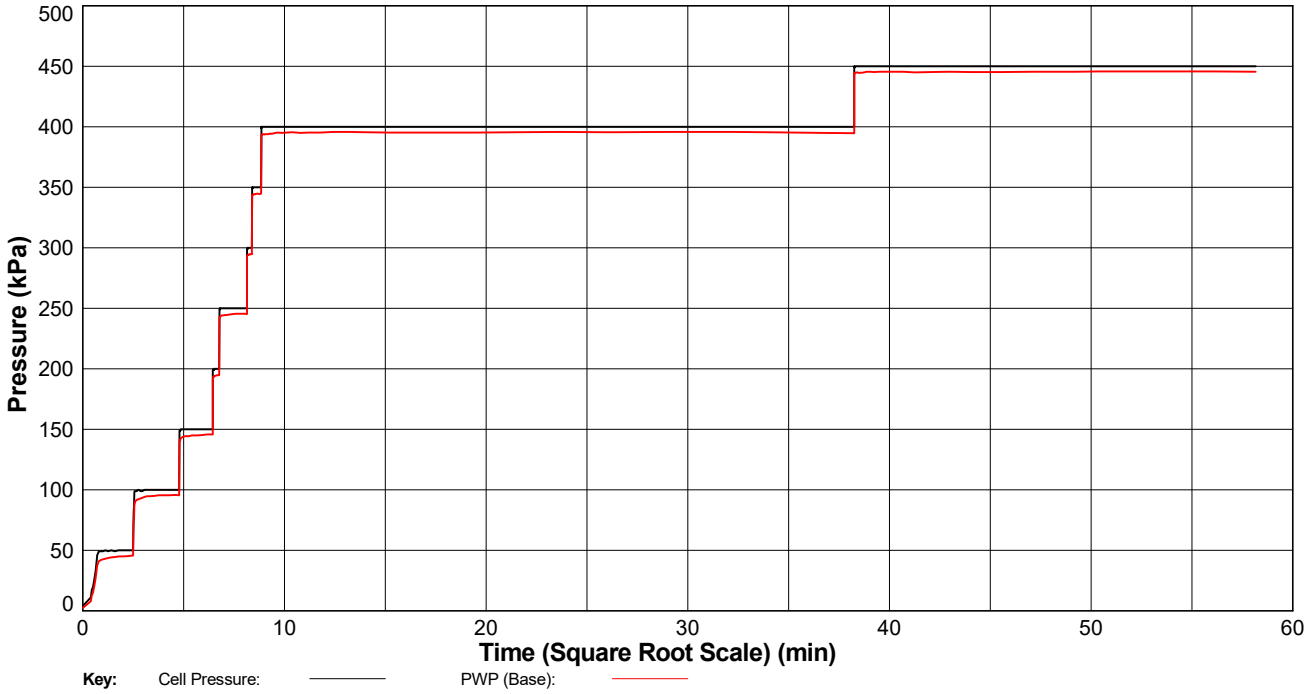
ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

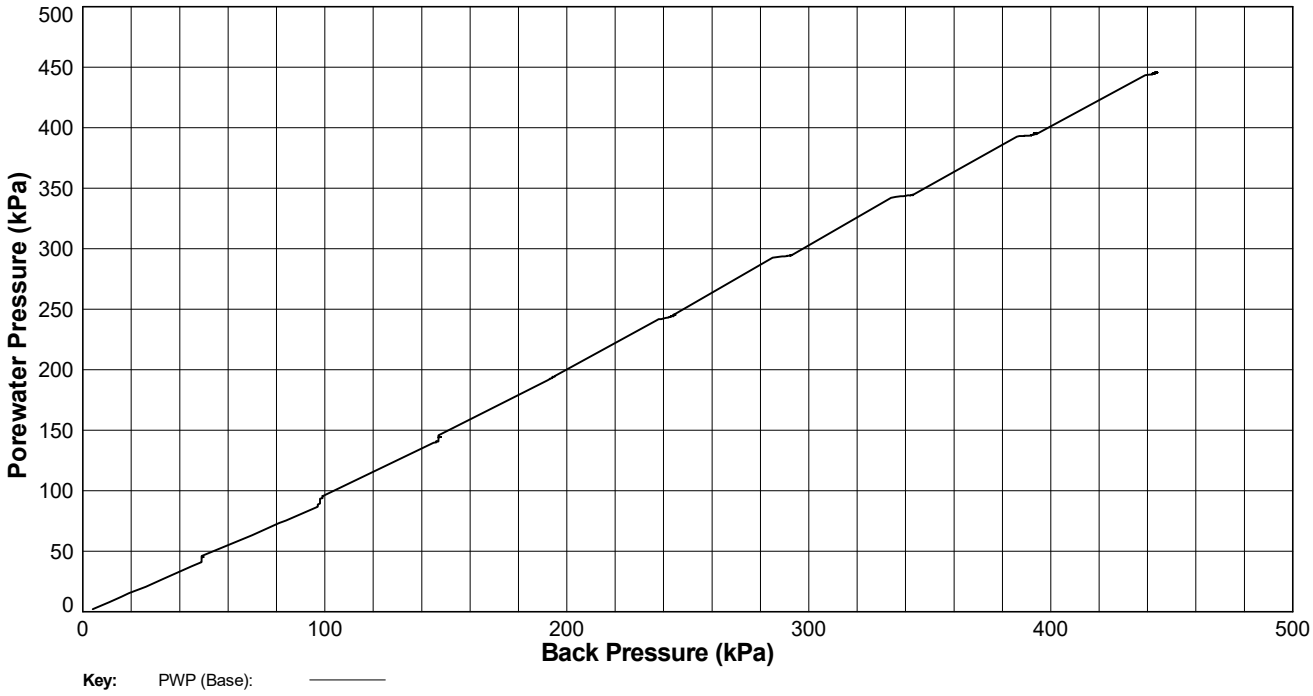
In accordance with BS EN ISO 17892 Part 9

Position ID: **R22-BH502** Sample Ref: **22** Sample Type: **UT** Depth (m): **6.04**

SATURATION



SATURATION



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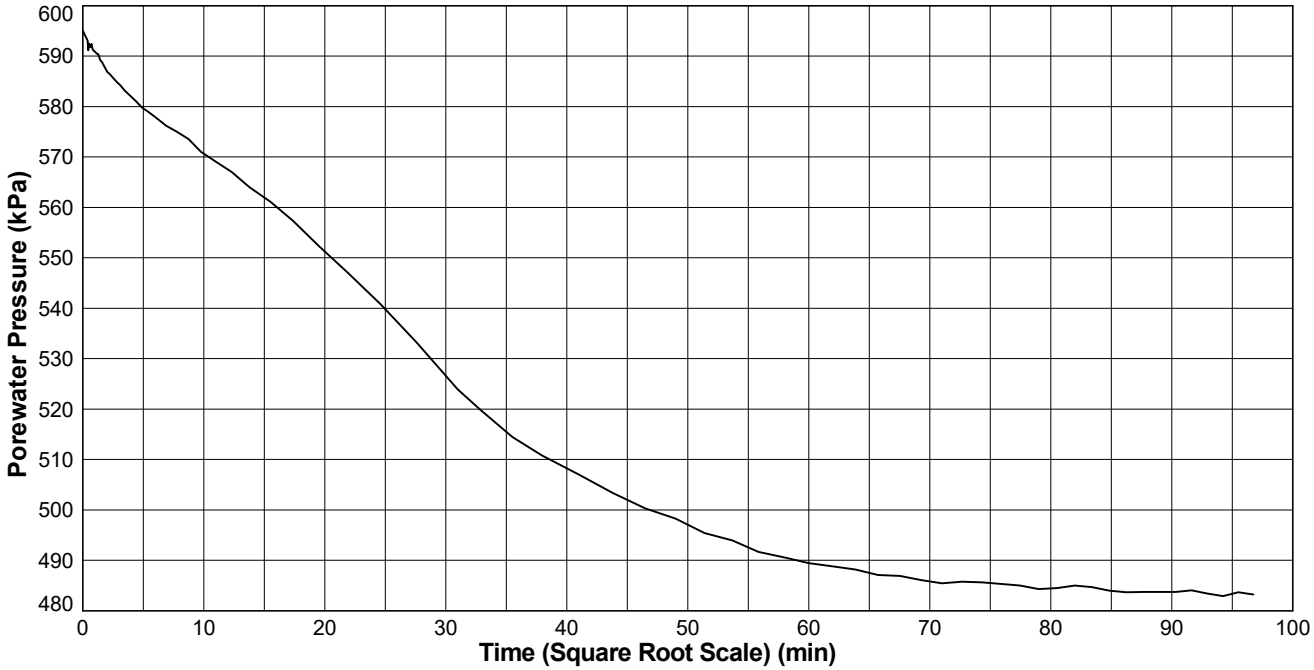
	Contract **Sea Link - Richborough**	Contract Ref: **563607**	

ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

In accordance with BS EN ISO 17892 Part 9

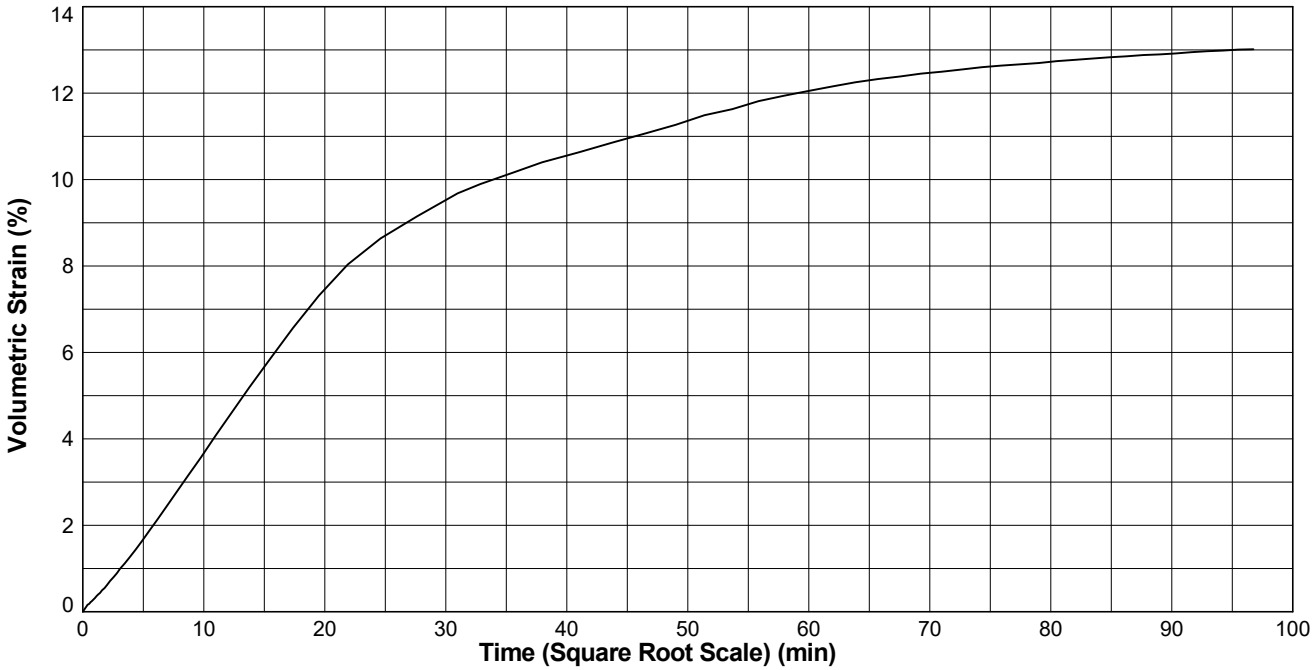
Position ID: **R22-BH502** Sample Ref: **22** Sample Type: **UT** Depth (m): **6.04**

CONSOLIDATION



Key: PWP (Base):

CONSOLIDATION



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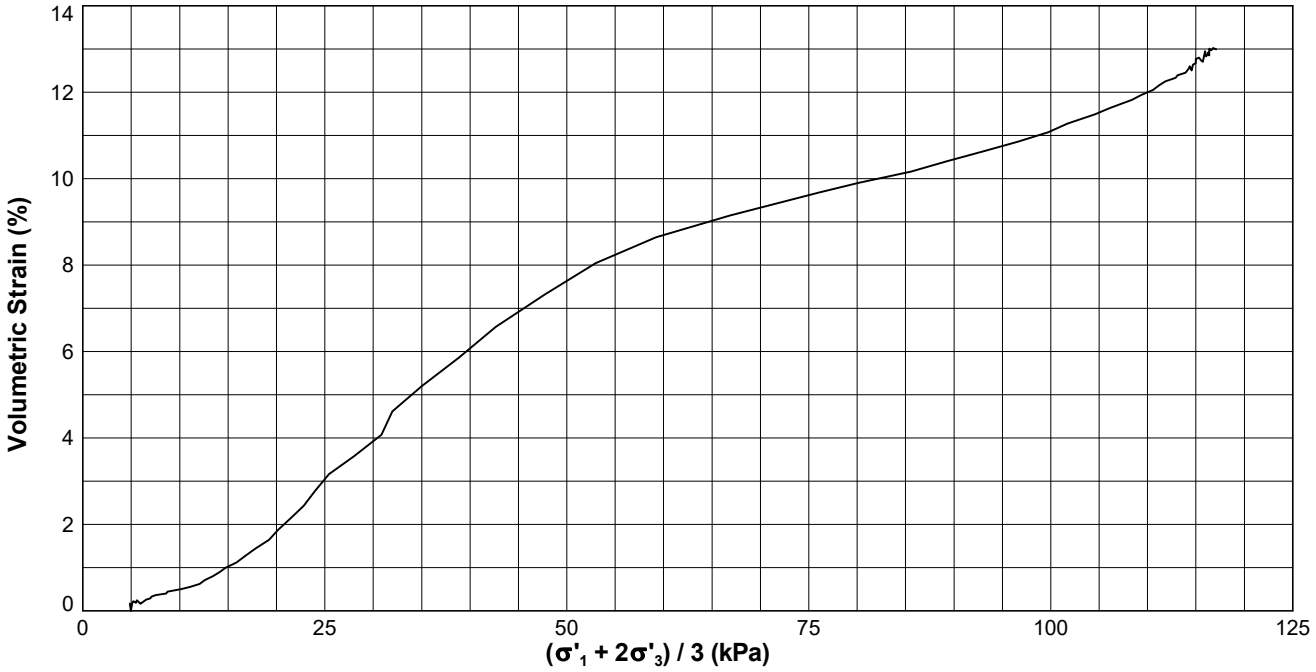
ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

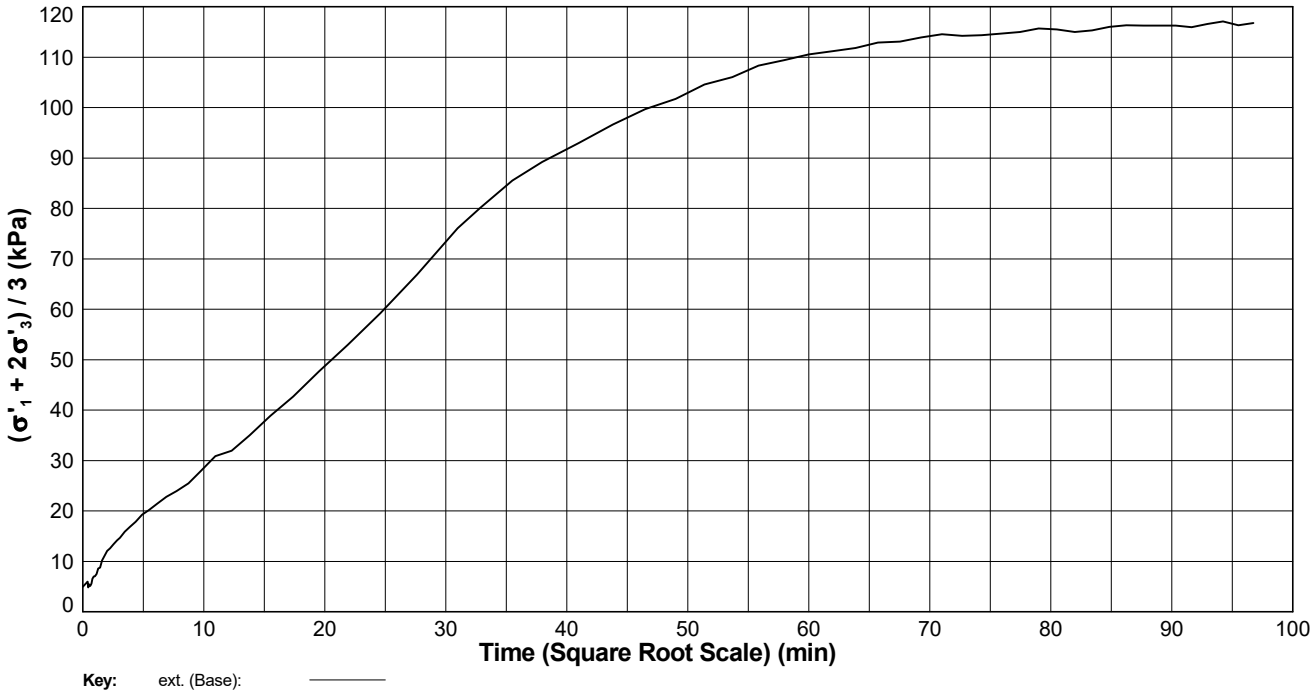
In accordance with BS EN ISO 17892 Part 9

Position ID: **R22-BH502** Sample Ref: **22** Sample Type: **UT** Depth (m): **6.04**

CONSOLIDATION



CONSOLIDATION



Key: ext. (Base): ————

STRUCTURAL SOILS
1a Princess Street
Bedminster
Bristol
BS3 4AG

Compiled By	Date
[redacted]	**15/02/24**

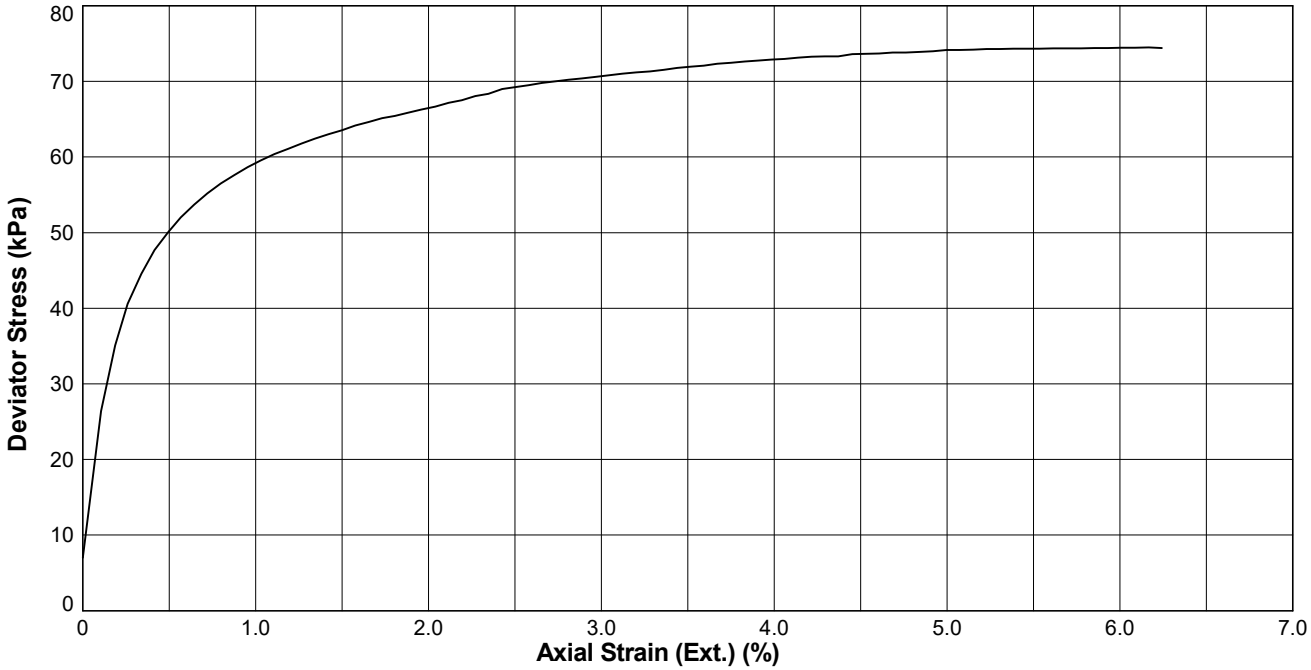
Contract	Contract Ref:
Sea Link - Richborough	**563607**

ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

In accordance with BS EN ISO 17892 Part 9

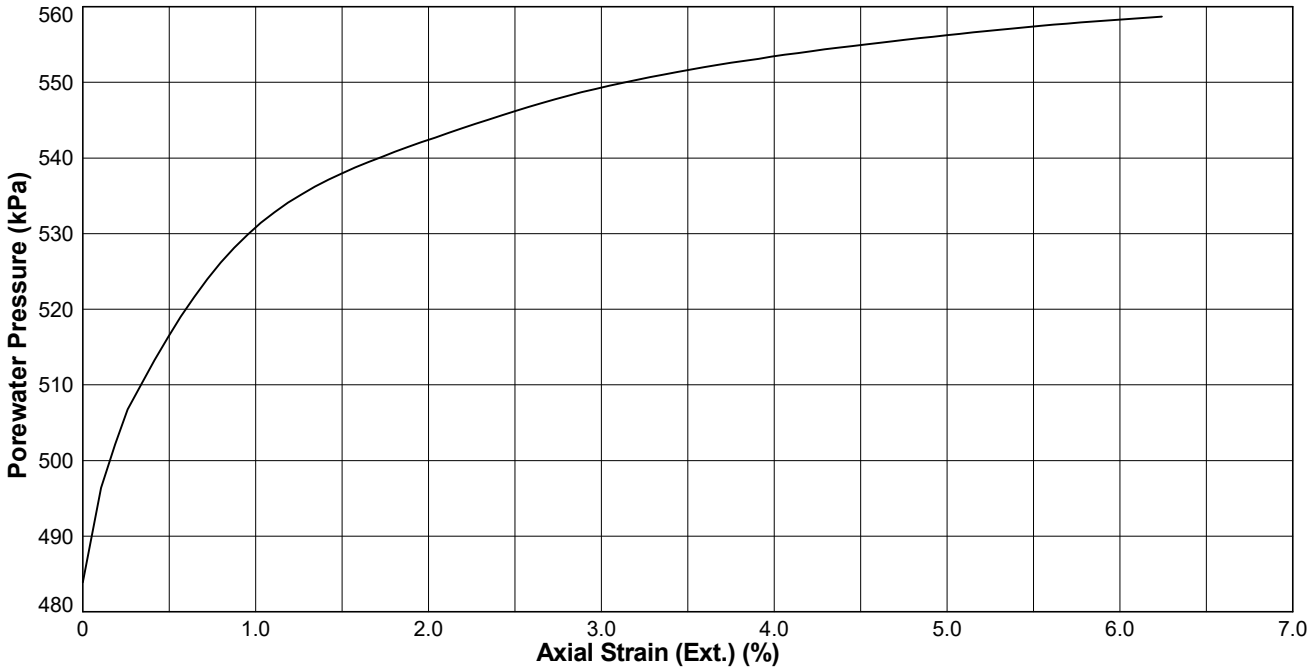
Position ID: **R22-BH502** Sample Ref: **22** Sample Type: **UT** Depth (m): **6.04**

SHEAR



Key: ext.: ————

SHEAR



Key: PWP (Base): ————

STRUCTURAL SOILS
1a Princess Street
Bedminster
Bristol
BS3 4AG

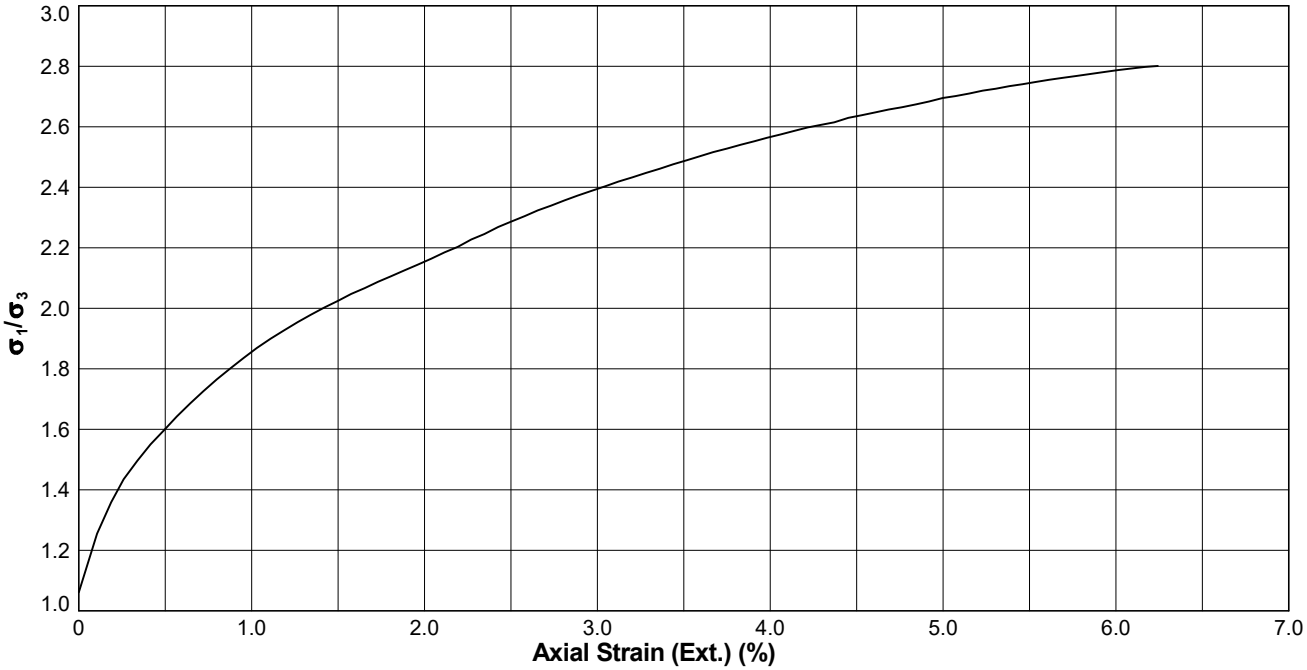
Compiled By	Date
[redacted]	**15/02/24**
Contract: **Sea Link - Richborough**	Contract Ref: **563607**

ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST WITH POREWATER PRESSURE MEASUREMENT

In accordance with BS EN ISO 17892 Part 9

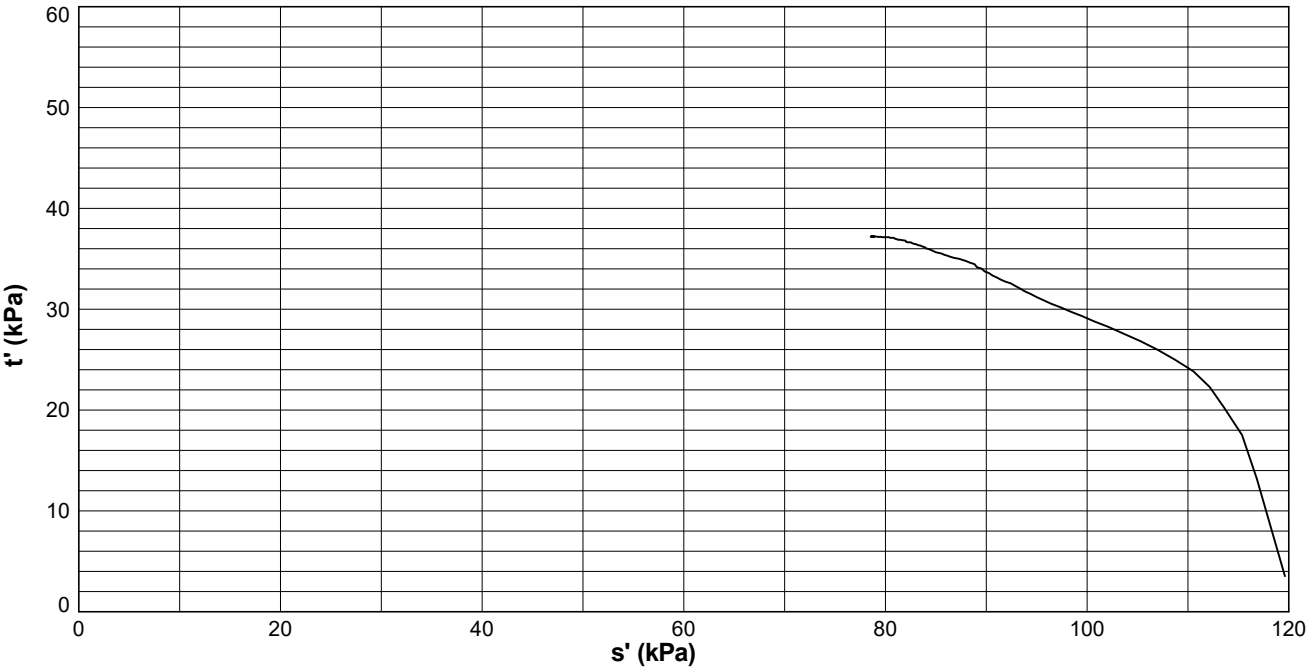
Position ID: **R22-BH502** Sample Ref: **22** Sample Type: **UT** Depth (m): **6.04**

SHEAR



Key: ext. (Base): ————

SHEAR



Key: ext. (Base): ————

STRUCTURAL SOILS 1a Princess Street Bedminster Bristol BS3 4AG	Compiled By		Date
	[redacted]		**15/02/24**
	Contract	Contract Ref:	
	Sea Link - Richborough	**563607**	

STRUCTURAL SOILS

Contract:	Client:	Exploratory Position:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH102**
Contract Ref:	Sample Details:	Sheet:
563607	Depth (m): **6.00** - Base (m): **6.45** - Ref: **24** - Type: **UT**	**1** of **1**

Sample Description

Very soft to soft dark brown mottled grey and greyish brown slightly sandy CLAY with occasional peat pockets. Sand is fine to medium.

Logged By:	MBattle
Undisturbed Type:	U-UT100
Blows:	6
Recovery:	100%
Sampled:	05/10/2023
Sampled By:	FPrice

STRUCTURAL SOILS

Contract:	Client:	Exploratory Position:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH103**
Contract Ref:	Sample Details:	Sheet:
563607	Depth (m): **6.00** - Base (m): **6.45** - Ref: **21** - Type: **UT**	**1** of **1**

Sample Description

6.00 - 6.27m: Soft to firm brown mottled light grey and dark grey very sandy CLAY. Sand is fine to medium. Organic putrid odour present.

6.27 - 6.45m: Very soft to soft light grey mottled cream and brown sandy silty CLAY with occasional shell fragments. Sand is fine to coarse. Organic putrid odour present.

Logged By:	MBattle
Undisturbed Type:	U-UT100
Blows:	30
Recovery:	100%
Sampled:	19/10/2023

STRUCTURAL SOILS

Contract:	Client:	Exploratory Position:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH204**
Contract Ref:	Sample Details:	Sheet:
563607	Depth (m): **16.00** - Base (m): **16.45** - Ref: **61** - Type: **UT**	**1** of **1**

Sample Description

16.00 - 16.13m: Stiff to very stiff dark grey slightly sandy slightly gravelly CLAY. Gravel is coarse of CLAYSTONE.

Logged By:	MBattle
Undisturbed Type:	U-UT100
Blows:	88
Recovery:	56%
Sampled:	22/09/2023
Sampled By:	KWordsworth

STRUCTURAL SOILS

Contract:	Client:	Exploratory Position:
SEA Link FEED - Kent Onshore Cable Link	**National Grid**	**R22-BH502**
Contract Ref:	Sample Details:	Sheet:
563607	Depth (m): **10.00** - Base (m): **10.45** - Ref: **38** - Type: **UT**	**1** of **1**

Sample Description

10.00 - 10.20m: Soft dark grey slightly gravelly sandy silty CLAY with occasional pockets of peat and occasional seashell fragments. Gravel is fine to medium. Sand is fine to coarse. Organic odour present.

10.20 - 10.45m Firm grey mottled brown, light grey and black sandy clayey SILT with occasional pockets of peat and occasional seashell fragments. Organic odour present.

Logged By:	MBattle
Undisturbed Type:	U-UT100
Blows:	20
Recovery:	100%
Sampled:	18/10/2023

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
R22-BH203	8	UT	2.00	31.16	HVP	102	Light brown mottled light grey very sandy CLAY with sandstone	**H**
R22-BH204	39	UT	10.00	33.16	HVP	>92	Dark grey gravelly sandy CLAY with claystone	**H**
R22-BH204	47	UT	12.00	33.44	HVP	99	Dark grey gravelly sandy CLAY with claystone	**H**

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.

STRUCTURAL SOILS
18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT

Compiled By		Date	Contract Ref:
[redacted]	[redacted]	**03.04.24**	**563607**
Contract: **SEA Link FEED - Kent Onshore Cable Link**			

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **R22-BH101** Sample Ref: **57** Sample Type: **B** Depth (m): **18.50**

Description: **Dark grey gravelly silty CLAY**

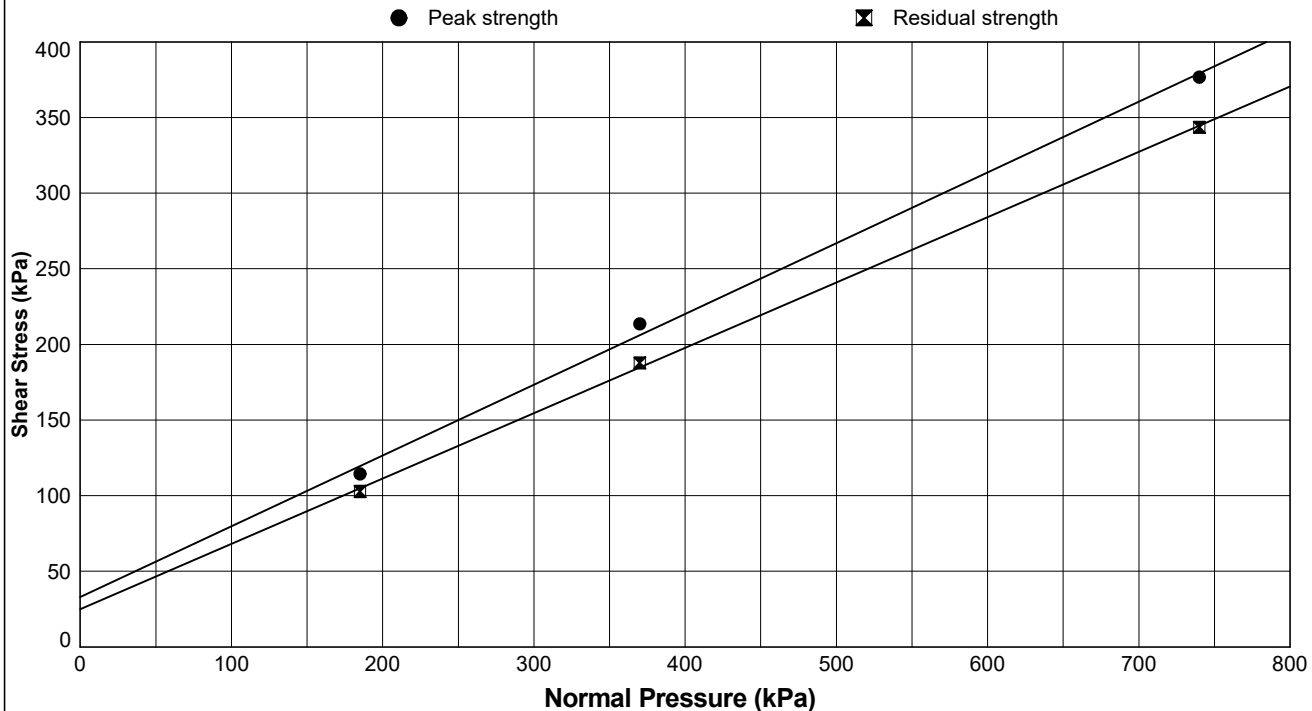
Sample Condition: **Recompacted**

Start Date: **03/01/2024**

End Date: **03/02/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**43.6**	**43.6**	**43.6**
	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)	**20.2**	**20.2**	**20.2**
	Initial Bulk Density	(Mg/m^3)	**1.72**	**1.72**	**1.72**
	Initial Dry Density	(Mg/m^3)	**1.20**	**1.20**	**1.20**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.2073**	**1.2079**	**1.2077**
	Initial Degree of Saturation	(%)	**96**	**96**	**96**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**3**	**3**	**3**
CONSOLIDATION	Normal Pressure	(kPa)	**185**	**370**	**740**
	Consolidated Height	(mm)	**16.9**	**15.8**	**13.3**
	Voids Ratio after Consolidation		**0.8533**	**0.7234**	**0.4554**
SHEAR	Shearing Rate	(mm/min)	**0.0129**	**0.0143**	**0.0161**
	Horiz. Displacement at Peak Shear Stress	(mm)	**6.0**	**6.1**	**5.7**
	Voids Ratio after Shear		**0.6867**	**0.5776**	**0.3177**
	Peak Shear Stress	(kPa)	**114**	**214**	**377**
	Residual Shear Stress	(kPa)	**103**	**188**	**344**

PEAK STRENGTH	Effective Cohesion (C ')	**33** (kPa)	Effective Angle of Friction (ϕ ')	**25**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C '$_R$)	**25** (kPa)	Residual Angle of Friction (ϕ '$_R$)	**23.5**	(deg)



STRUCTURAL SOILS
1a Princess Street
Bedminster
Bristol
BS3 4AG

Compiled By	Date
[redacted]	**11/03/24**

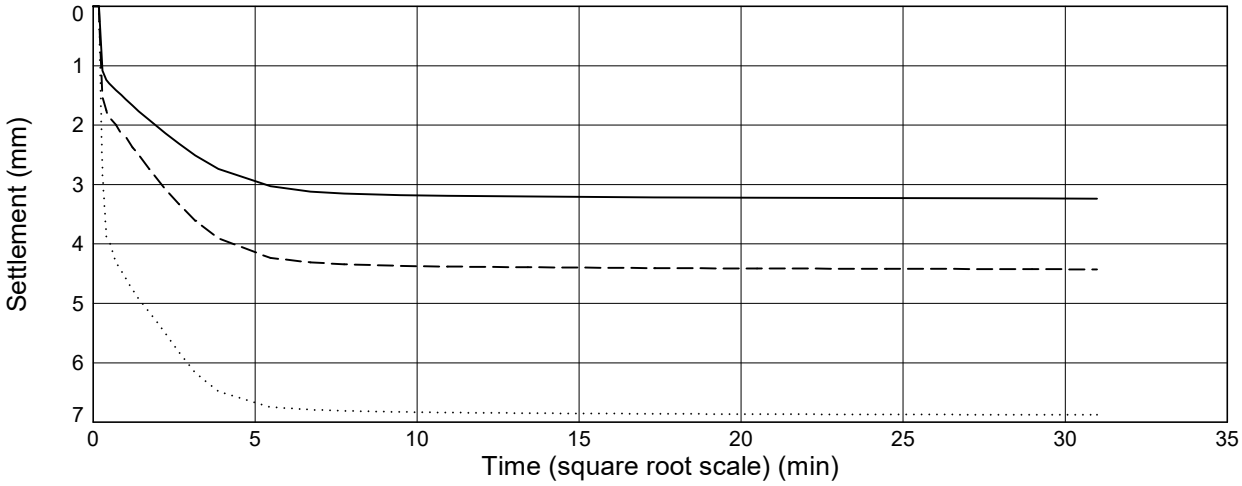
Contract	Contract Ref:
SEA Link FEED - Kent Onshore Cable Link	**563607** [redacted]

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

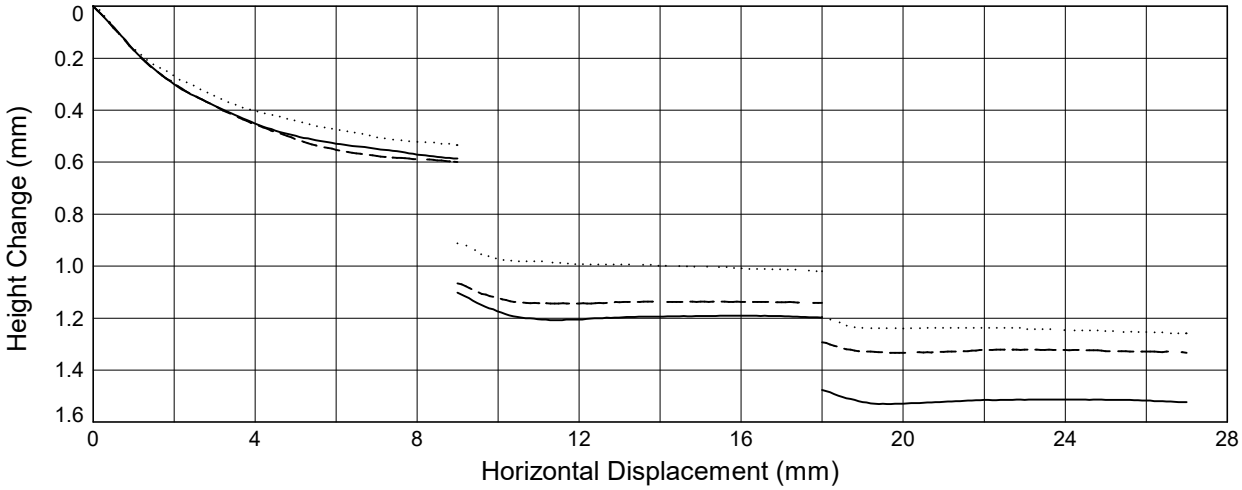
In accordance with BS EN ISO 17892-10

Position ID: **R22-BH101** Sample Ref: **57** Sample Type: **B** Depth (m): **18.50**

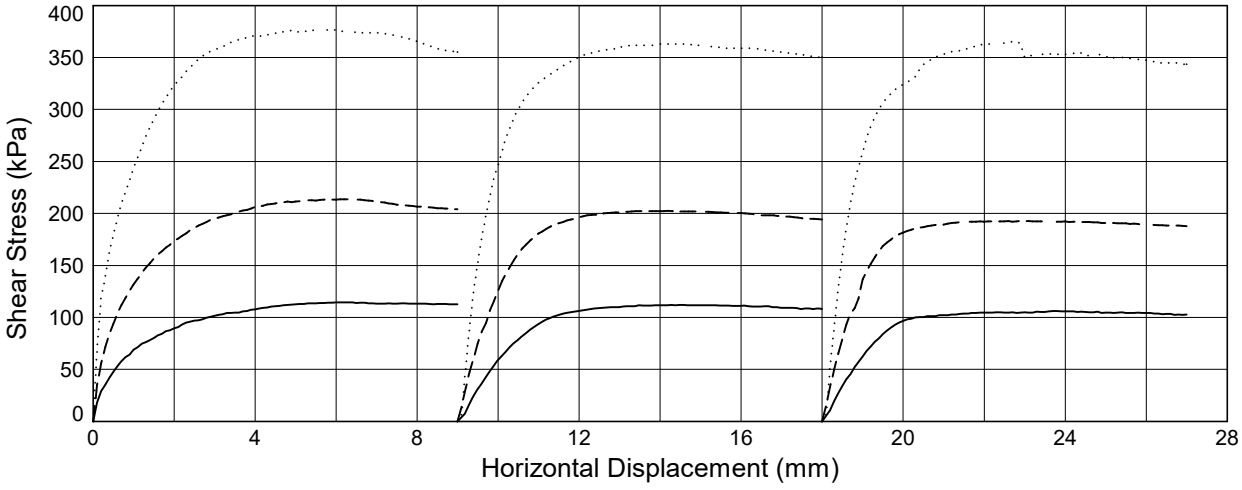
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**185** kPa) *Dashed Line* = Specimen 2 (**370** kPa) *Dotted Line* = Specimen 3 (**740** kPa)

STRUCTURAL SOILS 1a Princess Street Bedminster Bristol BS3 4AG	Compiled By [redacted]	Date **11/03/24**
	Contract **SEA Link FEED - Kent Onshore Cable Link**	Contract Ref: **563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **R22-BH101** Sample Ref: **67** Sample Type: **B** Depth (m): **23.50**

Description: **Dark grey silty CLAY**

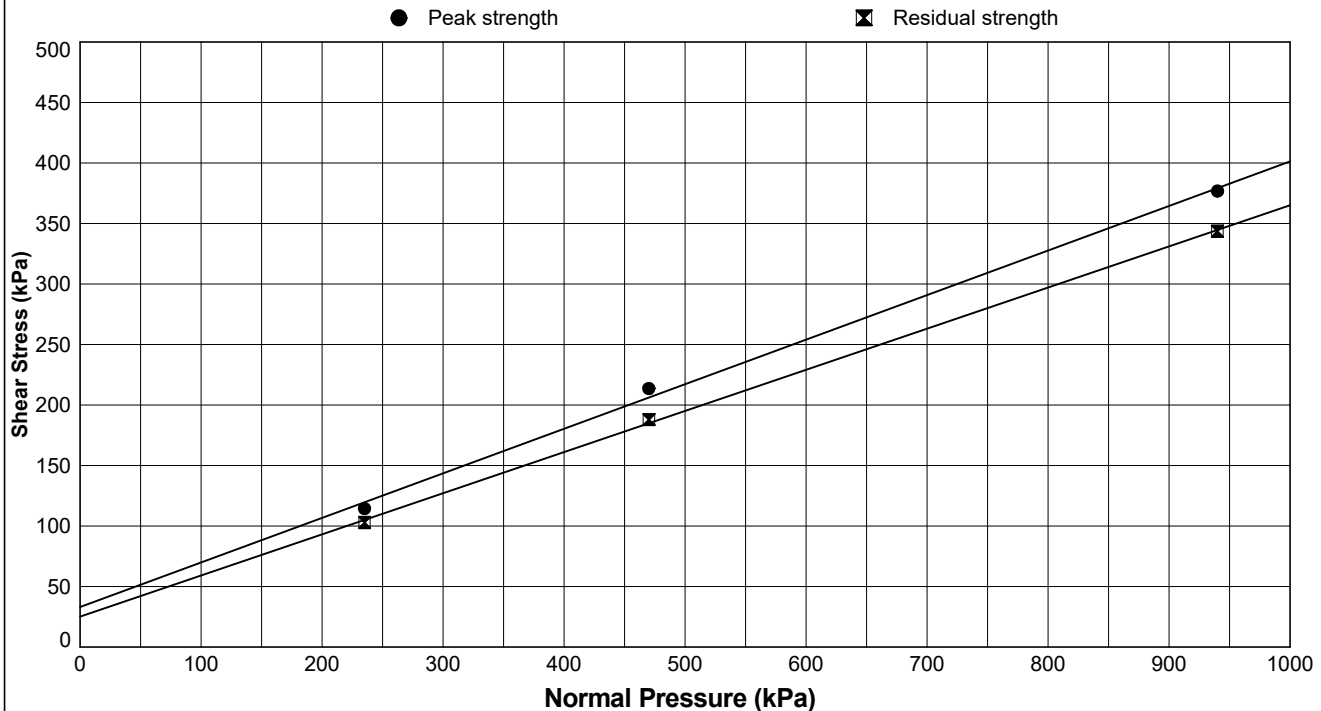
Sample Condition: **Recompacted**

Start Date: **29/02/2024**

End Date: **02/03/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**43.1**	**43.1**	**43.1**
	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)	**20.2**	**20.2**	**20.2**
	Initial Bulk Density	(Mg/m^3)	**1.71**	**1.71**	**1.71**
	Initial Dry Density	(Mg/m^3)	**1.20**	**1.20**	**1.20**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.2170**	**1.2173**	**1.2168**
	Initial Degree of Saturation	(%)	**94**	**94**	**94**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**4**	**4**	**4**
CONSOLIDATION	Normal Pressure	(kPa)	**235**	**470**	**940**
	Consolidated Height	(mm)	**17.0**	**15.8**	**13.3**
	Voids Ratio after Consolidation		**0.8617**	**0.7311**	**0.4619**
SHEAR	Shearing Rate	(mm/min)	**0.0050**	**0.0052**	**0.0053**
	Horiz. Displacement at Peak Shear Stress	(mm)	**6.0**	**6.1**	**5.7**
	Voids Ratio after Shear		**0.6944**	**0.5847**	**0.3238**
	Peak Shear Stress	(kPa)	**114**	**214**	**377**
	Residual Shear Stress	(kPa)	**103**	**188**	**344**

PEAK STRENGTH	Effective Cohesion (C ')	**33** (kPa)	Effective Angle of Friction (ϕ ')	**20**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C '$_R$)	**25** (kPa)	Residual Angle of Friction (ϕ '$_R$)	**19**	(deg)



STRUCTURAL SOILS
1a Princess Street
Bedminster
Bristol
BS3 4AG

Compiled By: [redacted]

Date: **17/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

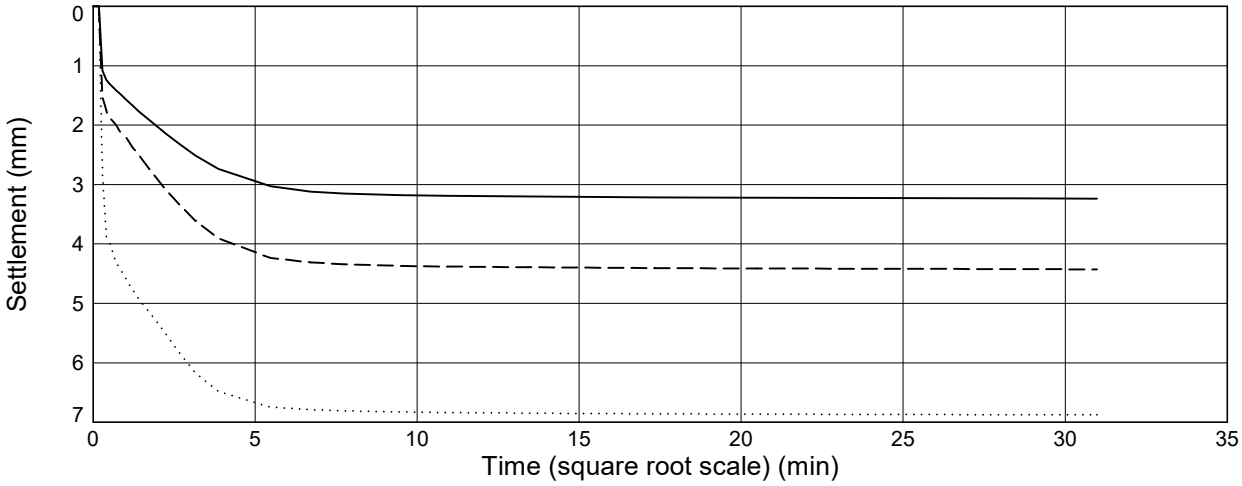
AGS

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

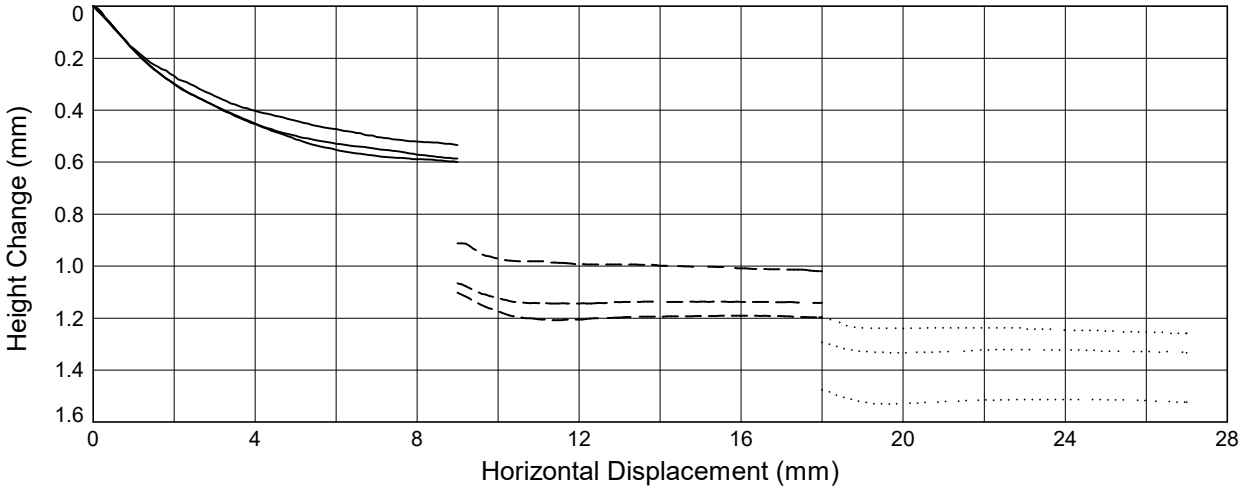
In accordance with BS EN ISO 17892-10

Position ID: **R22-BH101** Sample Ref: **67** Sample Type: **B** Depth (m): **23.50**

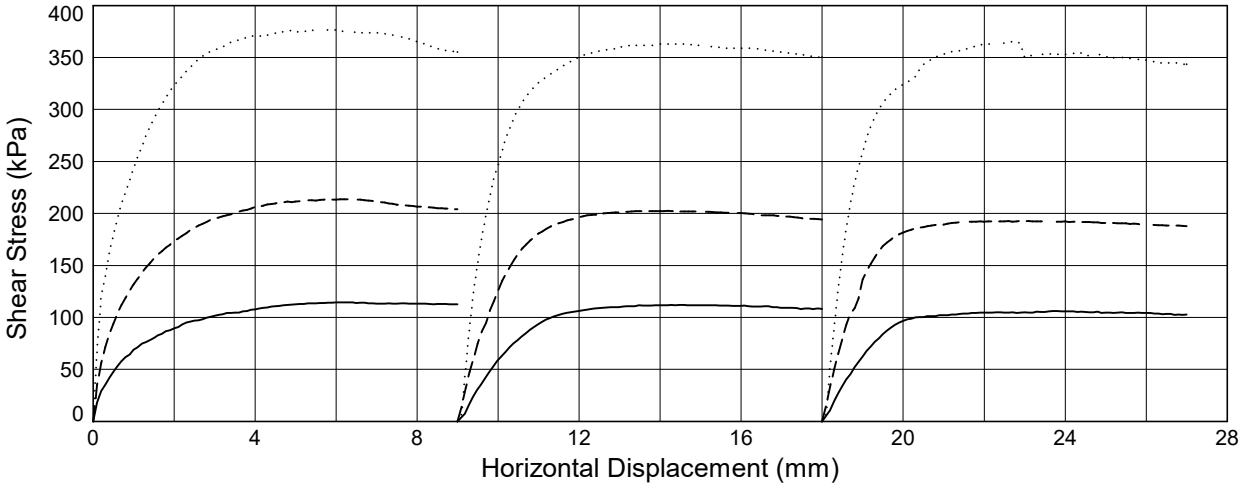
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**235** kPa) *Dashed Line* = Specimen 2 (**470** kPa) *Dotted Line* = Specimen 3 (**940** kPa)

STRUCTURAL SOILS 1a Princess Street Bedminster Bristol BS3 4AG	Compiled By [redacted]	Date **17/03/24**
	Contract **SEA Link FEED - Kent Onshore Cable Link**	Contract Ref: **563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **R22-BH102** Sample Ref: **50** Sample Type: **B** Depth (m): **13.50**

Description: **Dark grey slightly gravelly silty CLAY**

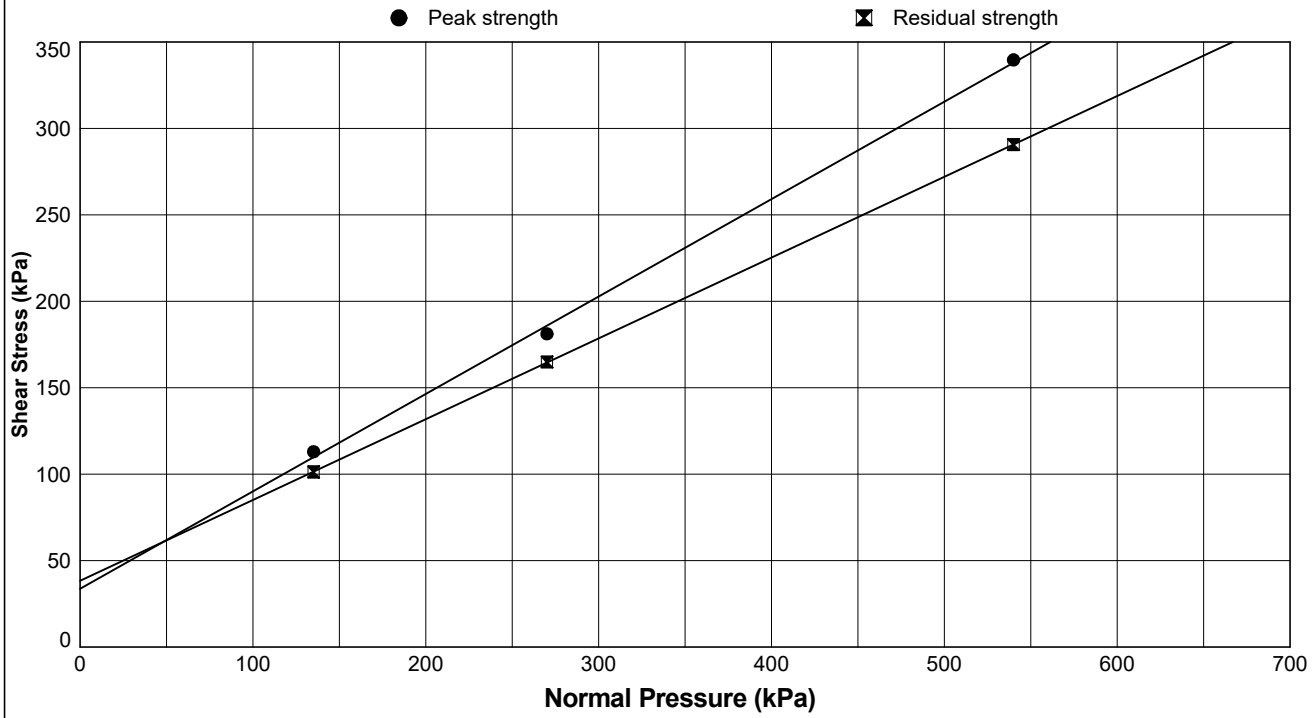
Sample Condition: **Recompacted**

Start Date: **22/02/2024**

End Date: **26/02/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**41.9**	**41.9**	**41.9**
	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)	**1.71**	**1.71**	**1.71**
	Initial Dry Density	(Mg/m^3)	**1.21**	**1.21**	**1.21**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.1969**	**1.1970**	**1.1965**
	Initial Degree of Saturation	(%)	**93**	**93**	**93**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**3**	**3**	**3**
CONSOLIDATION	Normal Pressure	(kPa)	**135**	**270**	**540**
	Consolidated Height	(mm)	**18.8**	**17.9**	**17.3**
	Voids Ratio after Consolidation		**1.0267**	**0.9343**	**0.8727**
SHEAR	Shearing Rate	(mm/min)	**0.0194**	**0.0213**	**0.0246**
	Horiz. Displacement at Peak Shear Stress	(mm)	**9.0**	**6.9**	**5.6**
	Voids Ratio after Shear		**0.8066**	**0.7804**	**0.6995**
	Peak Shear Stress	(kPa)	**113**	**181**	**340**
	Residual Shear Stress	(kPa)	**101**	**165**	**291**

PEAK STRENGTH	Effective Cohesion (C ')	**34** (kPa)	Effective Angle of Friction (ϕ ')	**29.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C '$_R$)	**38** (kPa)	Residual Angle of Friction (ϕ '$_R$)	**25**	(deg)



STRUCTURAL SOILS
1a Princess Street
Bedminster
Bristol
BS3 4AG

Compiled By	Date
[redacted]	**17/03/24**

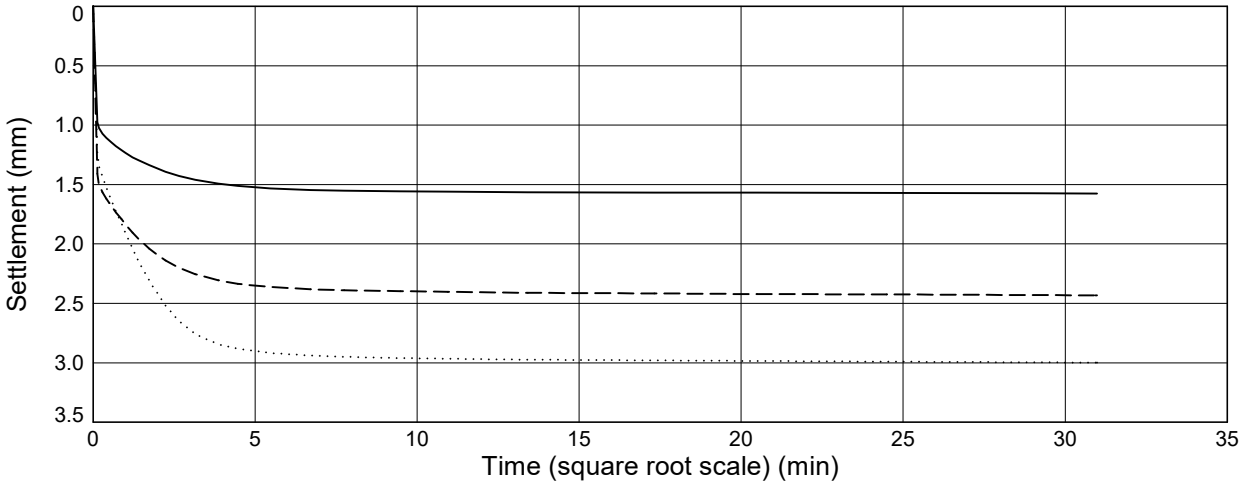
Contract	Contract Ref:
SEA Link FEED - Kent Onshore Cable Link	**563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

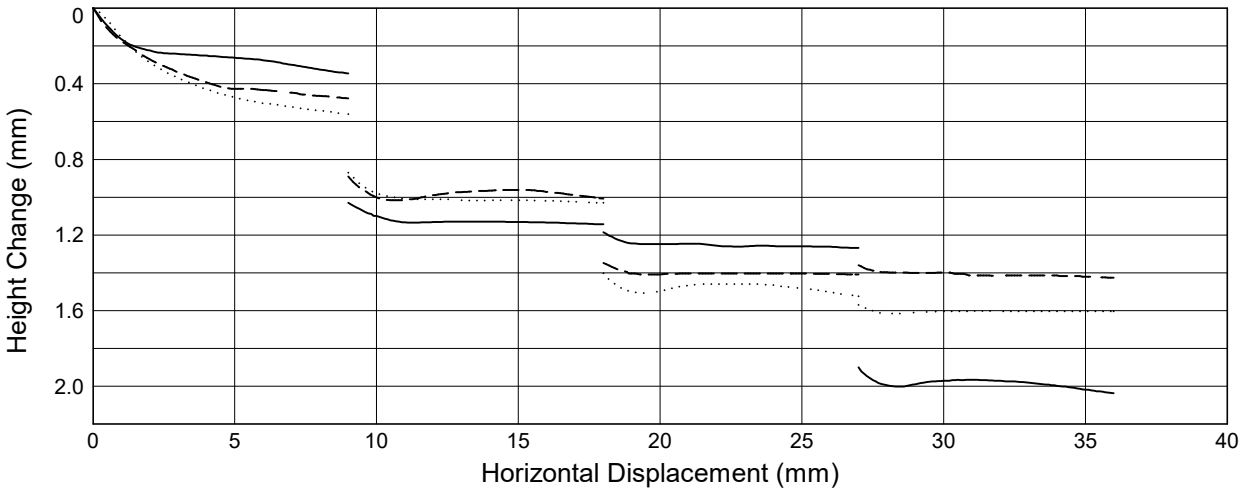
In accordance with BS EN ISO 17892-10

Position ID: **R22-BH102** Sample Ref: **50** Sample Type: **B** Depth (m): **13.50**

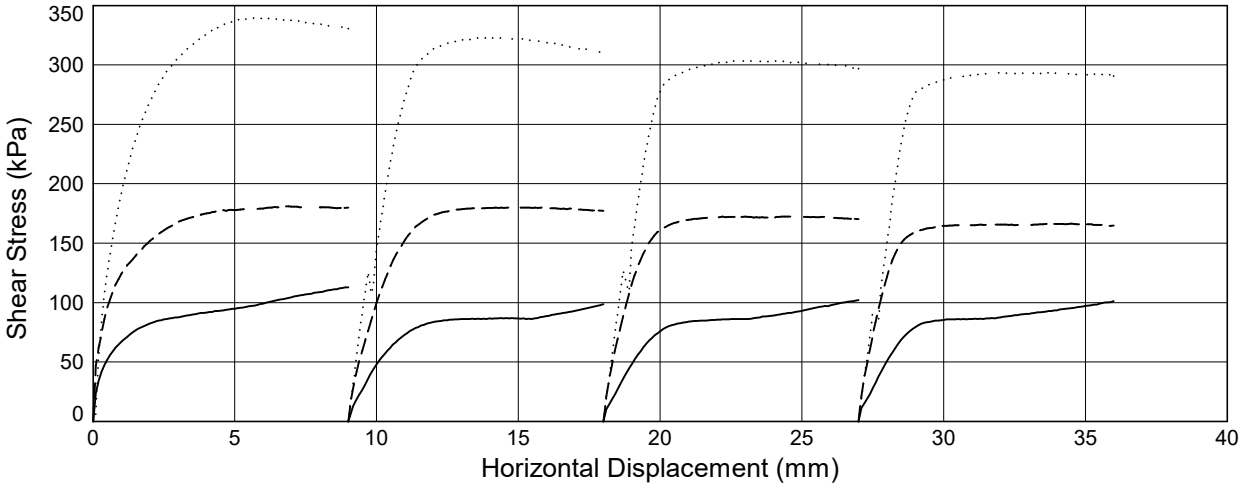
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**135** kPa) *Dashed Line* = Specimen 2 (**270** kPa) *Dotted Line* = Specimen 3 (**540** kPa)

STRUCTURAL SOILS
1a Princess Street
Bedminster
Bristol
BS3 4AG

Compiled By	Date
[redacted]	**17/03/24**

Contract	Contract Ref:
SEA Link FEED - Kent Onshore Cable Link	**563607**

AGS

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **R22-BH102** Sample Ref: **74** Sample Type: **B** Depth (m): **21.50**

Description: **Grey gravelly CLAY**

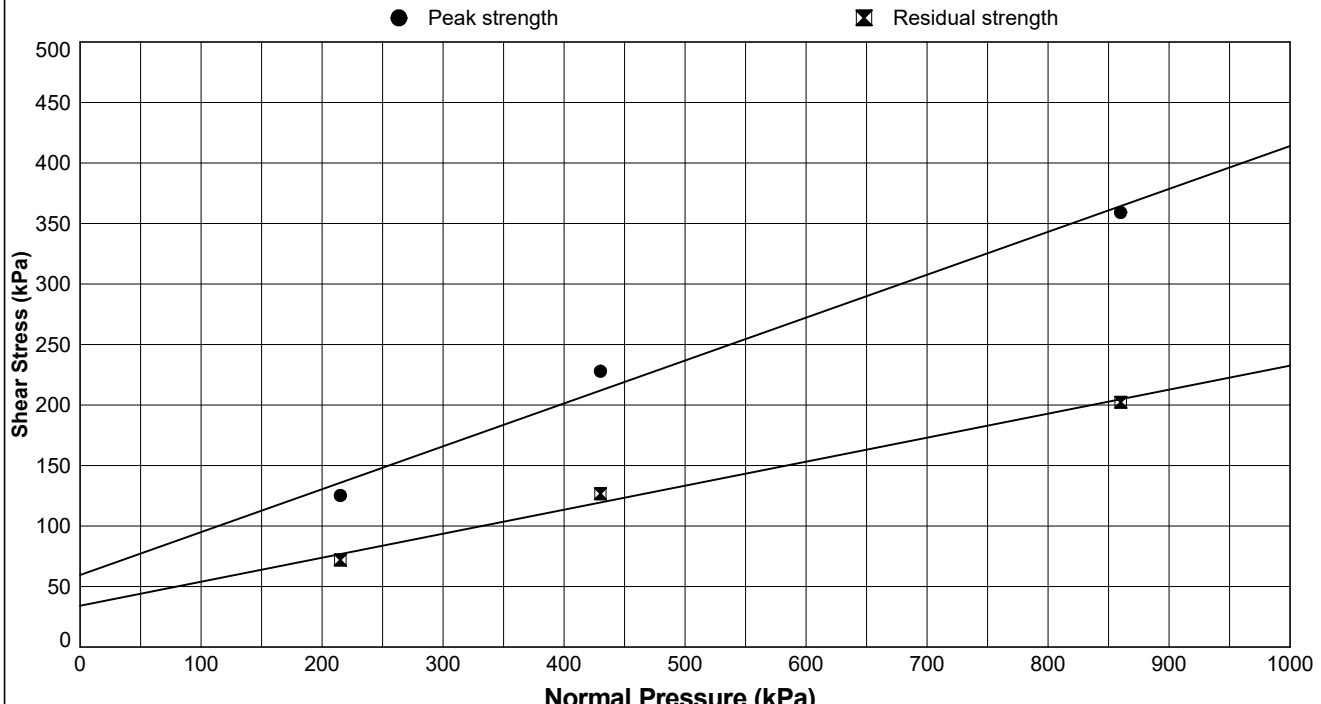
Sample Condition: **Recompacted**

Start Date: **12/01/2024**

End Date: **15/01/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**57.3**	**57.3**	**57.3**
	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)	**20.3**	**20.3**	**20.3**
	Initial Bulk Density	(Mg/m^3)	**1.61**	**1.61**	**1.61**
	Initial Dry Density	(Mg/m^3)	**1.03**	**1.03**	**1.03**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.5843**	**1.5839**	**1.5828**
	Initial Degree of Saturation	(%)	**96**	**96**	**96**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**4**	**4**	**4**
CONSOLIDATION	Normal Pressure	(kPa)	**215**	**430**	**860**
	Consolidated Height	(mm)	**17.1**	**14.9**	**17.4**
	Voids Ratio after Consolidation		**1.1711**	**0.8984**	**1.2159**
SHEAR	Shearing Rate	(mm/min)	**0.0073**	**0.0074**	**0.0076**
	Horiz. Displacement at Peak Shear Stress	(mm)	**6.4**	**6.4**	**2.7**
	Voids Ratio after Shear		**0.9908**	**0.7388**	**1.0263**
	Peak Shear Stress	(kPa)	**125**	**228**	**359**
	Residual Shear Stress	(kPa)	**72**	**127**	**202**

PEAK STRENGTH	Effective Cohesion (C ')	**60** (kPa)	Effective Angle of Friction (ϕ ')	**19.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C '$_R$)	**34** (kPa)	Residual Angle of Friction (ϕ '$_R$)	**11**	(deg)



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Compiled By	Date
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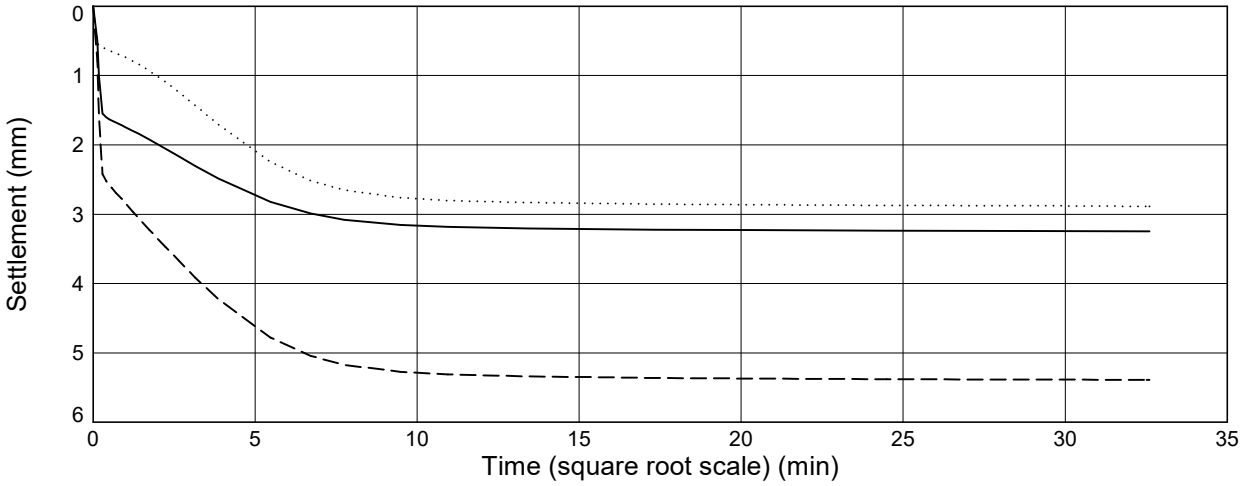
Contract	Contract Ref:
Sea Link - Richborough	**563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

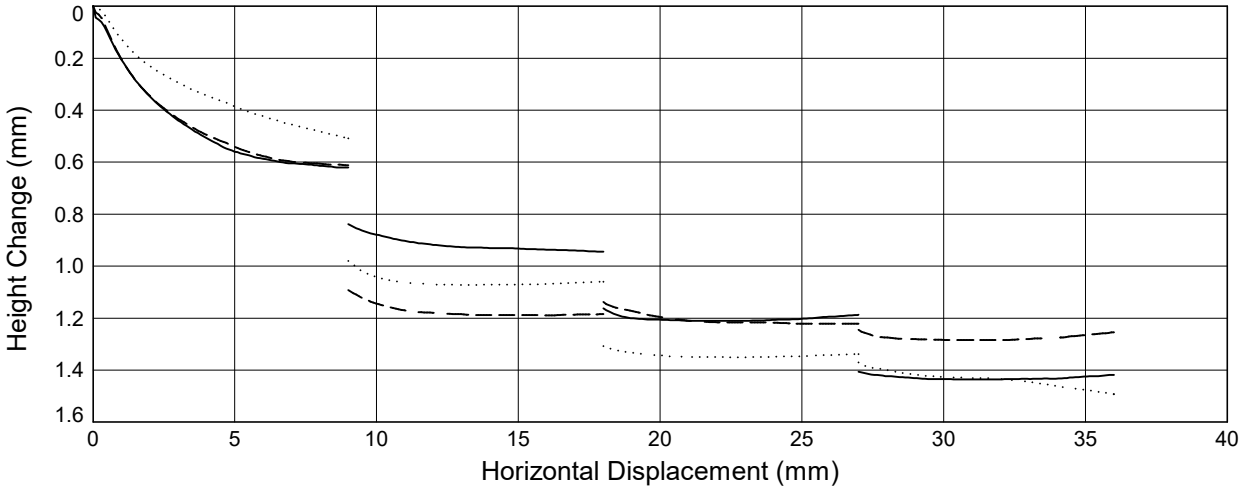
In accordance with BS EN ISO 17892-10

Position ID: **R22-BH102** Sample Ref: **74** Sample Type: **B** Depth (m): **21.50**

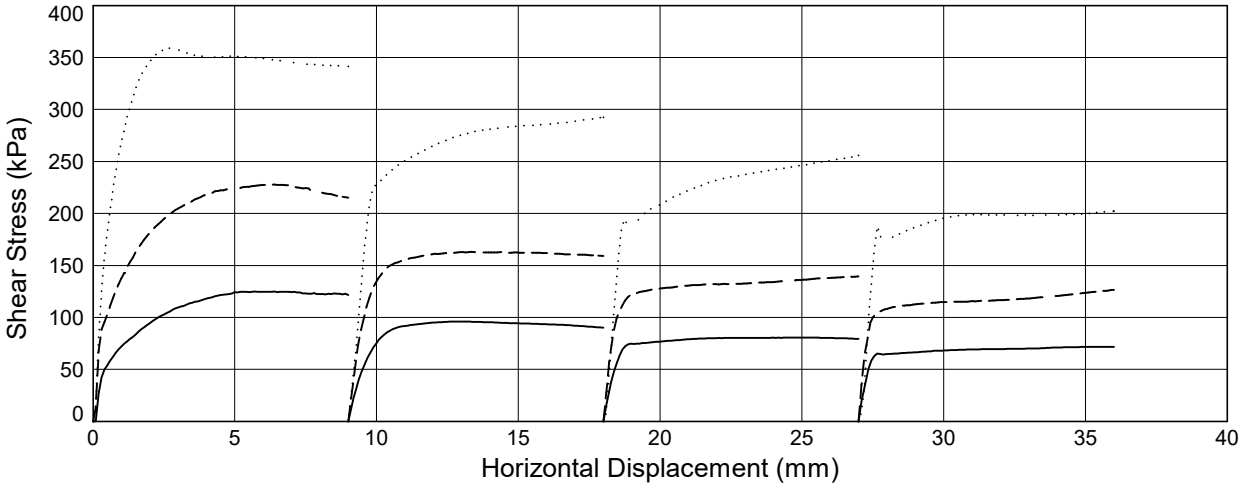
Consolidation Stage



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: **Sea Link - Richborough**	Contract Ref: **563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **R22-BH103** Sample Ref: **20** Sample Type: **B** Depth (m): **5.60**

Description: **Grey mottled green slightly gravelly silty CLAY**

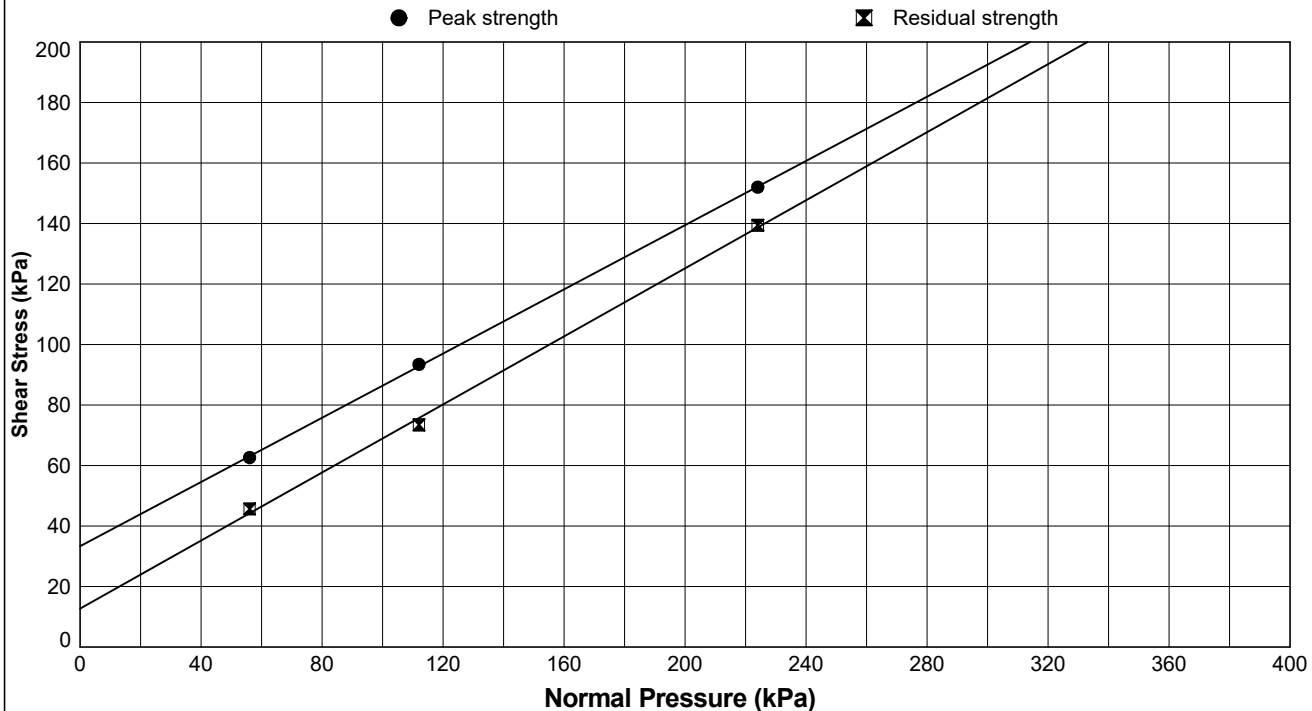
Sample Condition: **Recompacted**

Start Date: **22/02/2024**

End Date: **26/02/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**42.3**	**42.3**	**42.3**
	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)	**1.79**	**1.79**	**1.79**
	Initial Dry Density	(Mg/m^3)	**1.26**	**1.26**	**1.26**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.1113**	**1.1115**	**1.1112**
	Initial Degree of Saturation	(%)	**101**	**101**	**101**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**4**	**4**	**4**
CONSOLIDATION	Normal Pressure	(kPa)	**56**	**112**	**224**
	Consolidated Height	(mm)	**16.4**	**15.6**	**15.5**
	Voids Ratio after Consolidation		**0.7173**	**0.6343**	**0.6215**
SHEAR	Shearing Rate	(mm/min)	**0.0088**	**0.0094**	**0.0100**
	Horiz. Displacement at Peak Shear Stress	(mm)	**8.8**	**8.7**	**8.8**
	Voids Ratio after Shear		**0.5672**	**0.4765**	**0.4727**
	Peak Shear Stress	(kPa)	**63**	**93**	**152**
	Residual Shear Stress	(kPa)	**46**	**73**	**139**

PEAK STRENGTH	Effective Cohesion (C ')	**33**	(kPa)	Effective Angle of Friction (ϕ ')	**28**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C '$_R$)	**13**	(kPa)	Residual Angle of Friction (ϕ '$_R$)	**29.5**	(deg)



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Date: **17/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

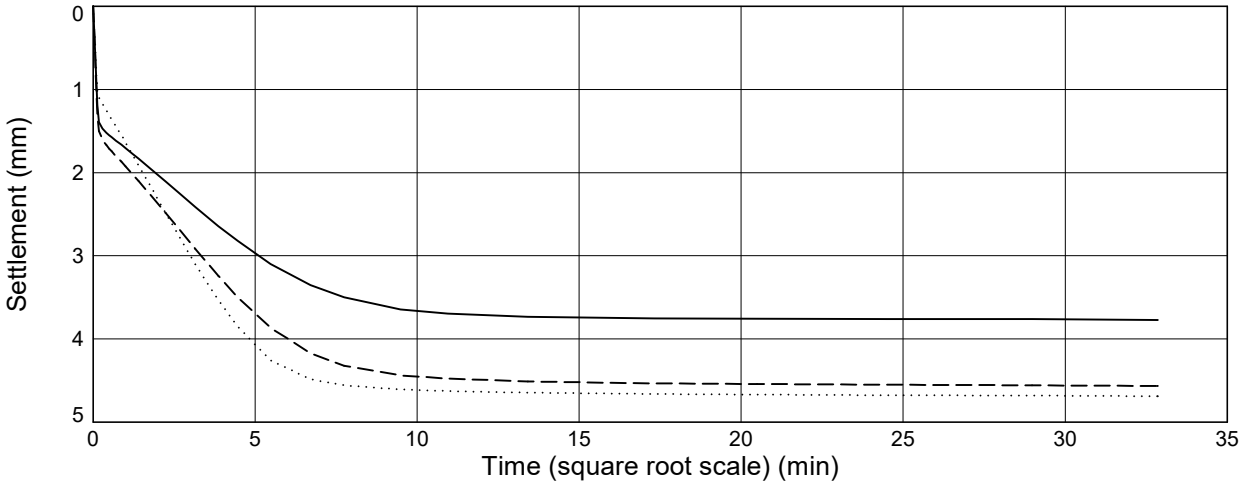
Contract Ref: **563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

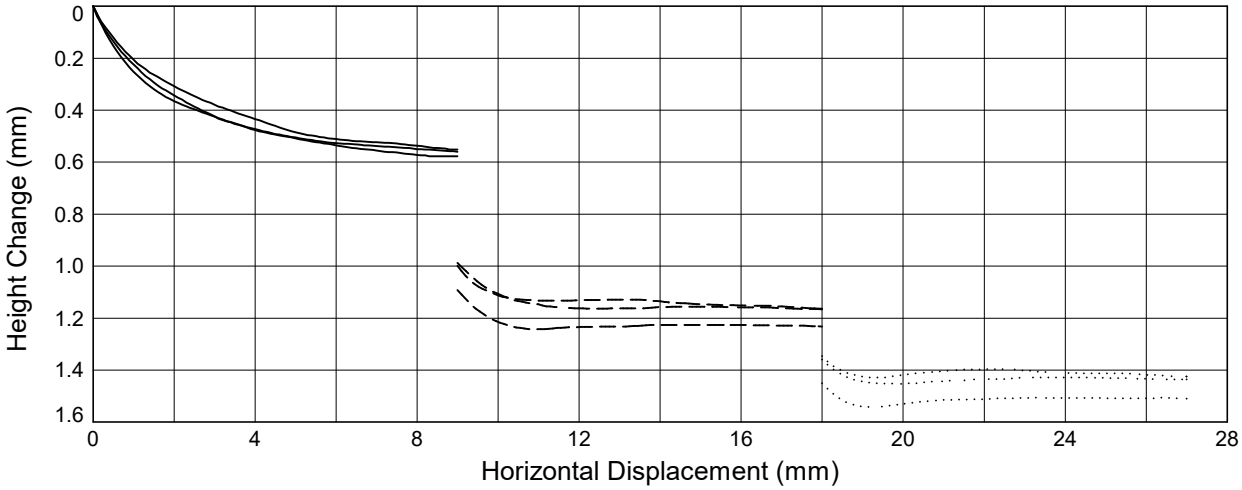
In accordance with BS EN ISO 17892-10

Position ID: **R22-BH103** Sample Ref: **20** Sample Type: **B** Depth (m): **5.60**

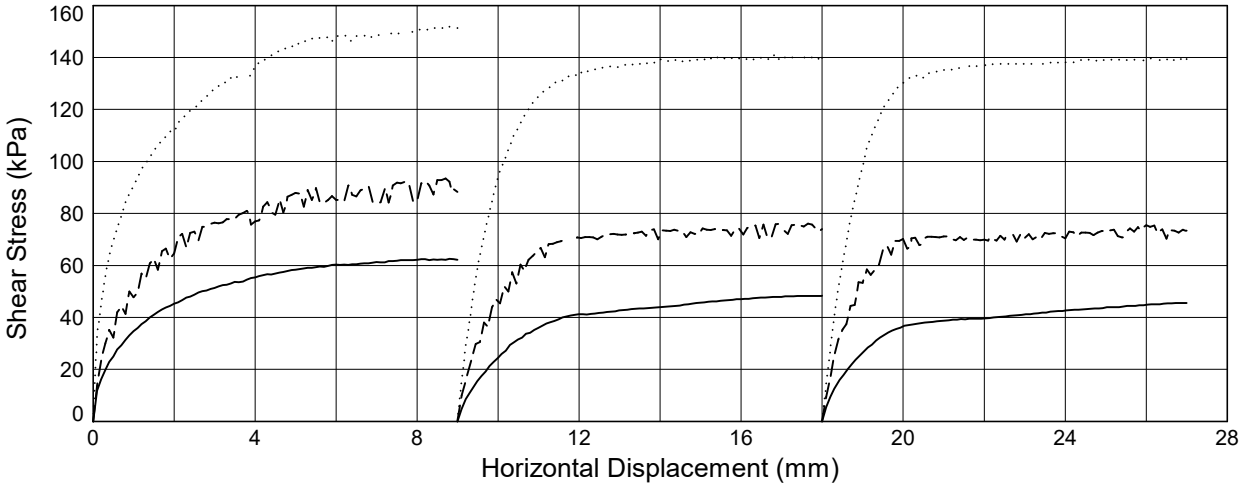
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**56** kPa) *Dashed Line* = Specimen 2 (**112** kPa) *Dotted Line* = Specimen 3 (**224** 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: **R22-BH103** Sample Ref: **25** Sample Type: **B** Depth (m): **7.50**

Description: **Greenish grey mottled brown slightly gravelly silty CLAY**

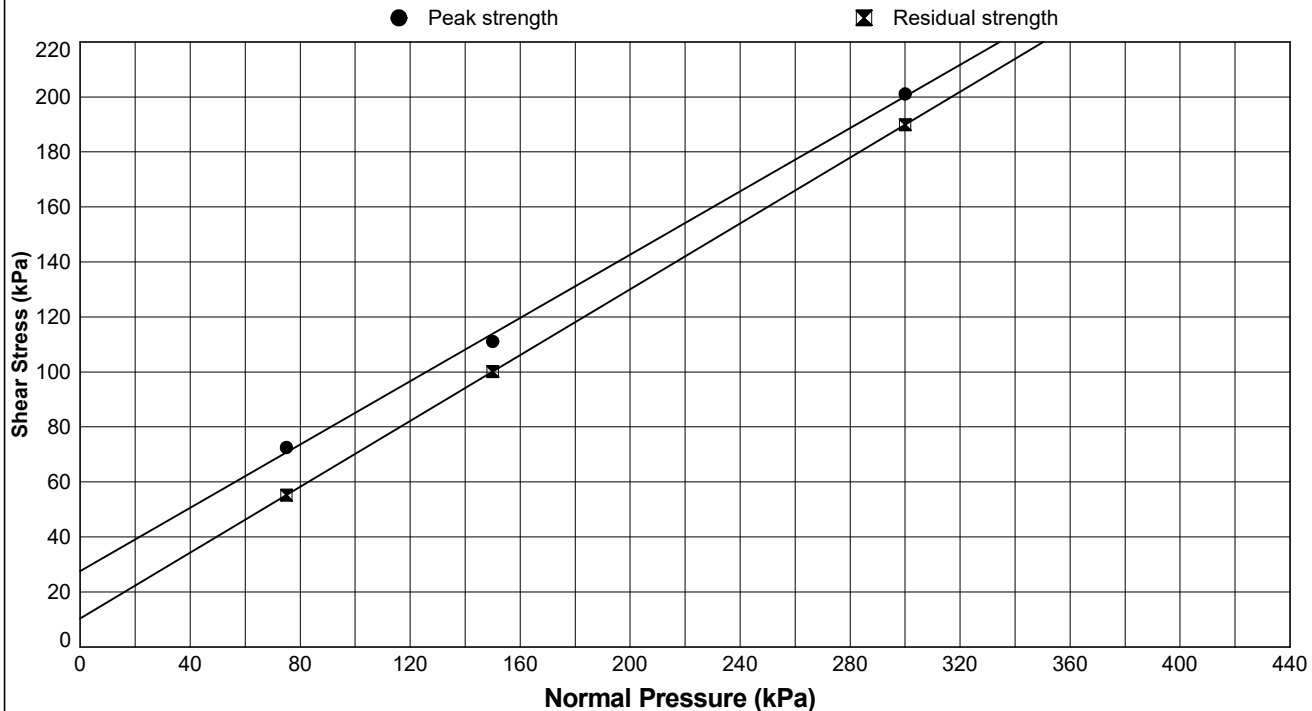
Sample Condition: **Recompacted**

Start Date: **19/02/2024**

End Date: **22/02/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**40.7**	**40.7**	**40.7**
	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)	**20.2**	**20.2**	**20.2**
	Initial Bulk Density	(Mg/m^3)	**1.79**	**1.79**	**1.79**
	Initial Dry Density	(Mg/m^3)	**1.27**	**1.27**	**1.27**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.0870**	**1.0857**	**1.0852**
	Initial Degree of Saturation	(%)	**99**	**99**	**99**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**4**	**4**	**4**
CONSOLIDATION	Normal Pressure	(kPa)	**75**	**150**	**300**
	Consolidated Height	(mm)	**17.7**	**17.3**	**16.5**
	Voids Ratio after Consolidation		**0.8297**	**0.7837**	**0.6980**
SHEAR	Shearing Rate	(mm/min)	**0.0156**	**0.0188**	**0.0201**
	Horiz. Displacement at Peak Shear Stress	(mm)	**9.0**	**5.7**	**8.6**
	Voids Ratio after Shear		**0.6677**	**0.6432**	**0.5482**
	Peak Shear Stress	(kPa)	**73**	**111**	**201**
	Residual Shear Stress	(kPa)	**55**	**100**	**190**

PEAK STRENGTH	Effective Cohesion (C ')	**28** (kPa)	Effective Angle of Friction (ϕ ')	**30**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C '$_R$)	**10** (kPa)	Residual Angle of Friction (ϕ '$_R$)	**31**	(deg)



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Compiled By	Date
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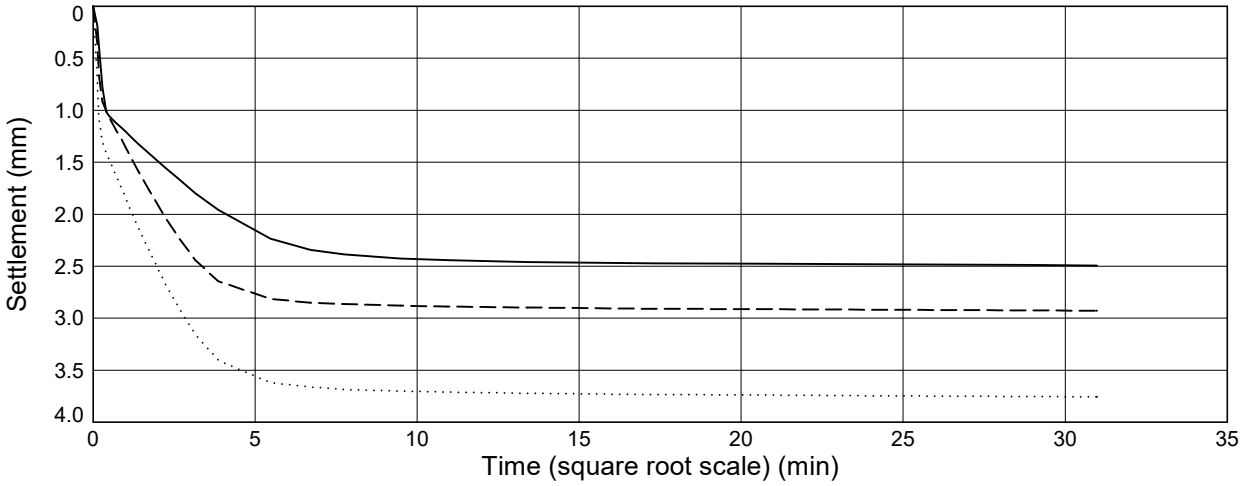
Contract	Contract Ref:
SEA Link FEED - Kent Onshore Cable Link	**563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

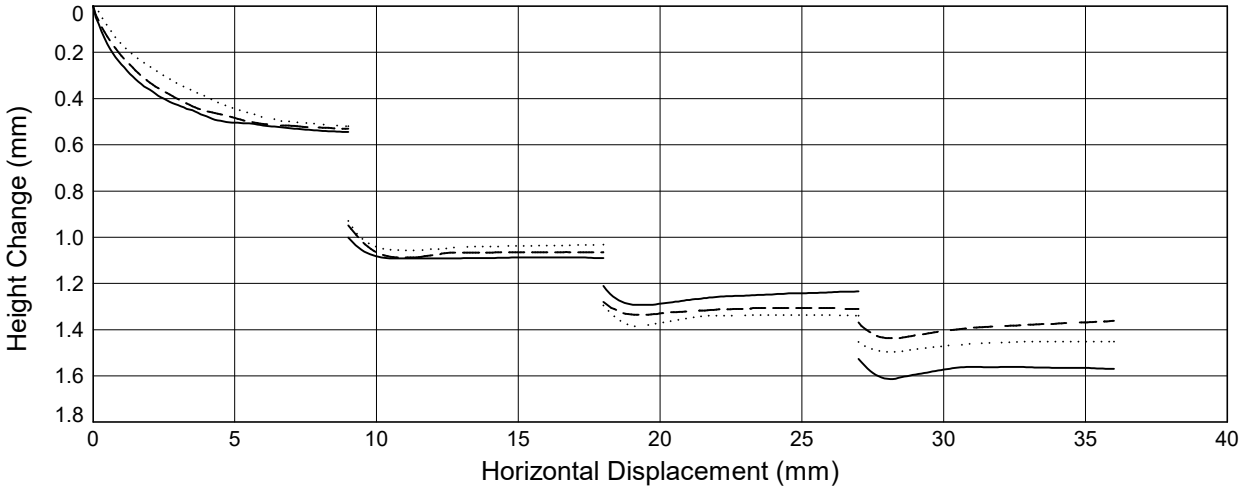
In accordance with BS EN ISO 17892-10

Position ID: **R22-BH103** Sample Ref: **25** Sample Type: **B** Depth (m): **7.50**

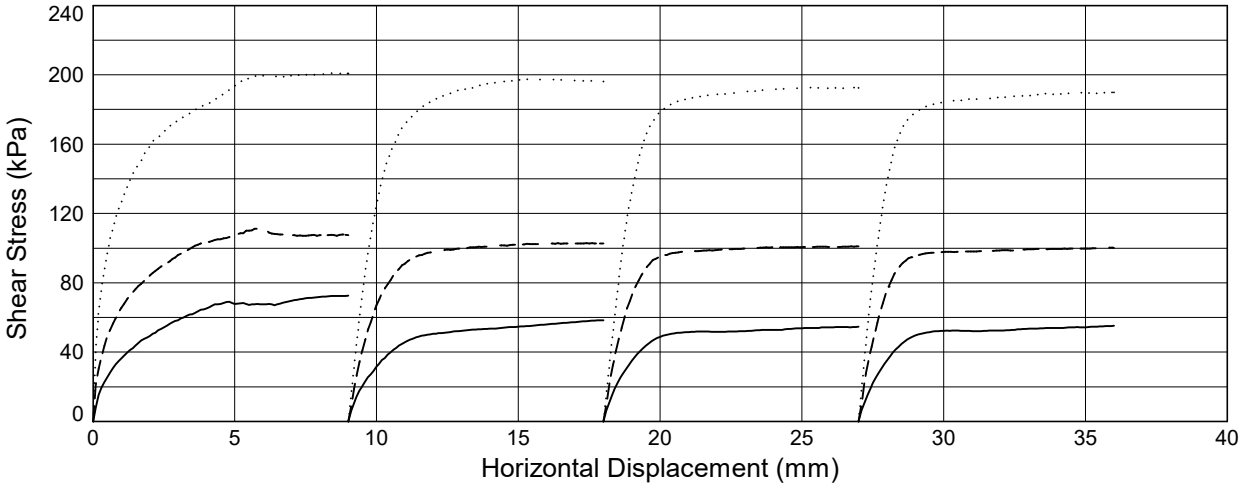
Consolidation Stage



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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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: **R22-BH103** Sample Ref: **64** Sample Type: **B** Depth (m): **23.50**

Description: **Grey slightly gravelly CLAY**

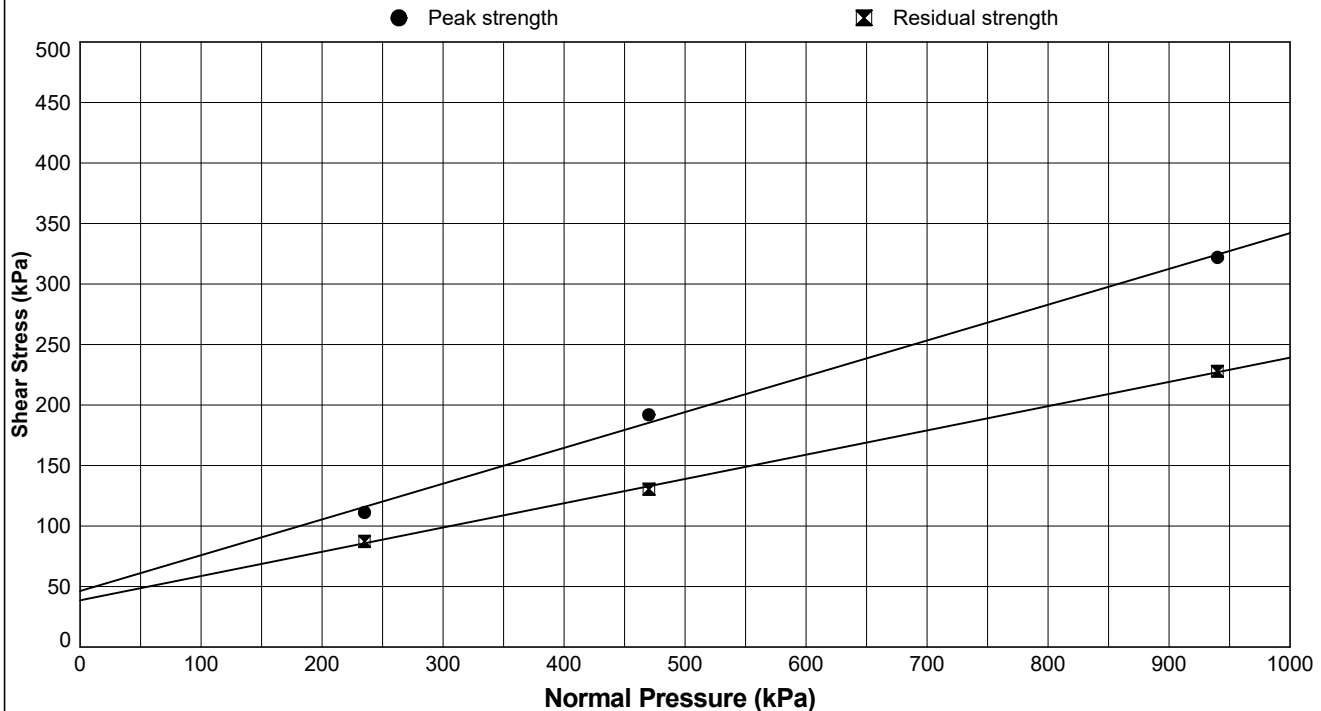
Sample Condition: **Recompacted**

Start Date: **05/02/2024**

End Date: **11/02/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**37.8**	**37.8**	**37.8**
	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)	**20.3**	**20.3**	**20.3**
	Initial Bulk Density	(Mg/m^3)	**1.79**	**1.79**	**1.79**
	Initial Dry Density	(Mg/m^3)	**1.30**	**1.30**	**1.30**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.0439**	**1.0453**	**1.0441**
	Initial Degree of Saturation	(%)	**96**	**96**	**96**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**7**	**7**	**7**
CONSOLIDATION	Normal Pressure	(kPa)	**235**	**470**	**940**
	Consolidated Height	(mm)	**18.4**	**17.8**	**17.0**
	Voids Ratio after Consolidation		**0.8534**	**0.7889**	**0.7108**
SHEAR	Shearing Rate	(mm/min)	**0.0052**	**0.0053**	**0.0055**
	Horiz. Displacement at Peak Shear Stress	(mm)	**5.2**	**5.1**	**4.0**
	Voids Ratio after Shear		**0.6406**	**0.5063**	**0.5585**
	Peak Shear Stress	(kPa)	**111**	**192**	**322**
	Residual Shear Stress	(kPa)	**87**	**130**	**228**

PEAK STRENGTH	Effective Cohesion (C ')	**46** (kPa)	Effective Angle of Friction (ϕ ')	**16.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C '$_R$)	**38** (kPa)	Residual Angle of Friction (ϕ '$_R$)	**11.5**	(deg)



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Date: **17/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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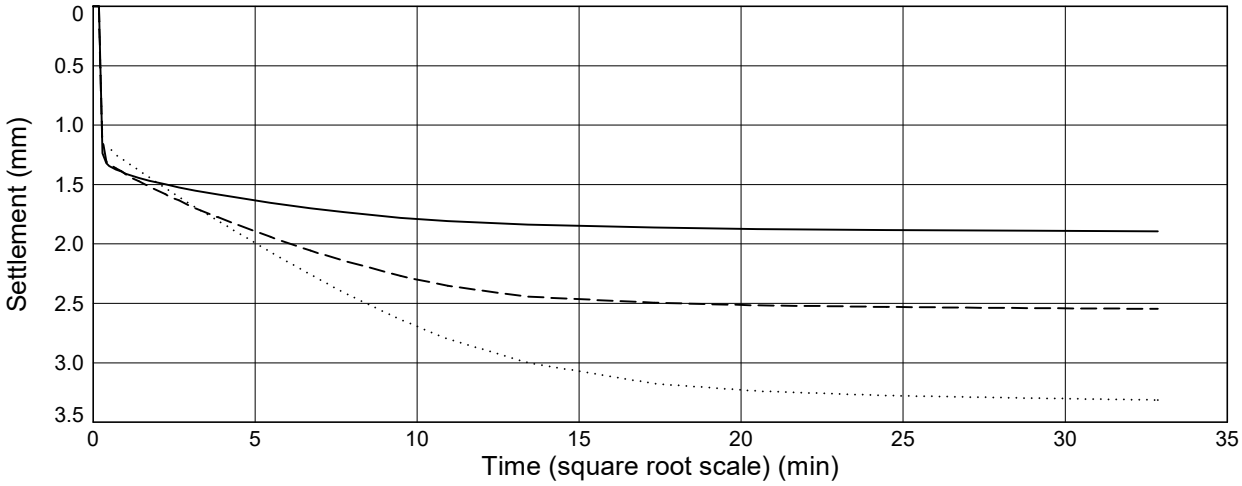
DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

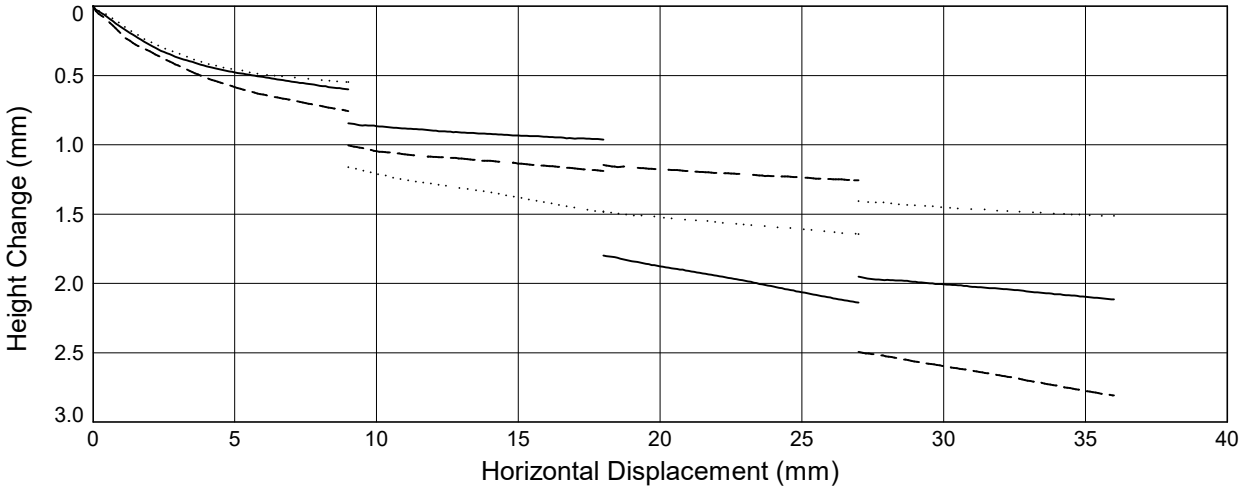
In accordance with BS EN ISO 17892-10

Position ID: **R22-BH103** Sample Ref: **64** Sample Type: **B** Depth (m): **23.50**

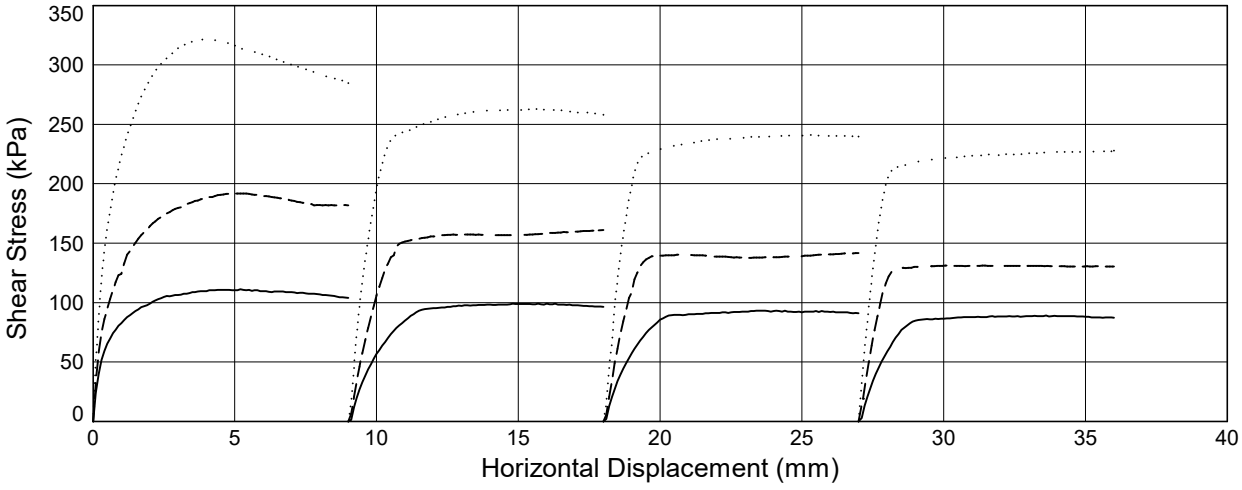
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**235** kPa) *Dashed Line* = Specimen 2 (**470** kPa) *Dotted Line* = Specimen 3 (**940** kPa)

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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: **R22-BH104** Sample Ref: **36** Sample Type: **B** Depth (m): **10.50**

Description: **Grey slightly gravelly silty CLAY**

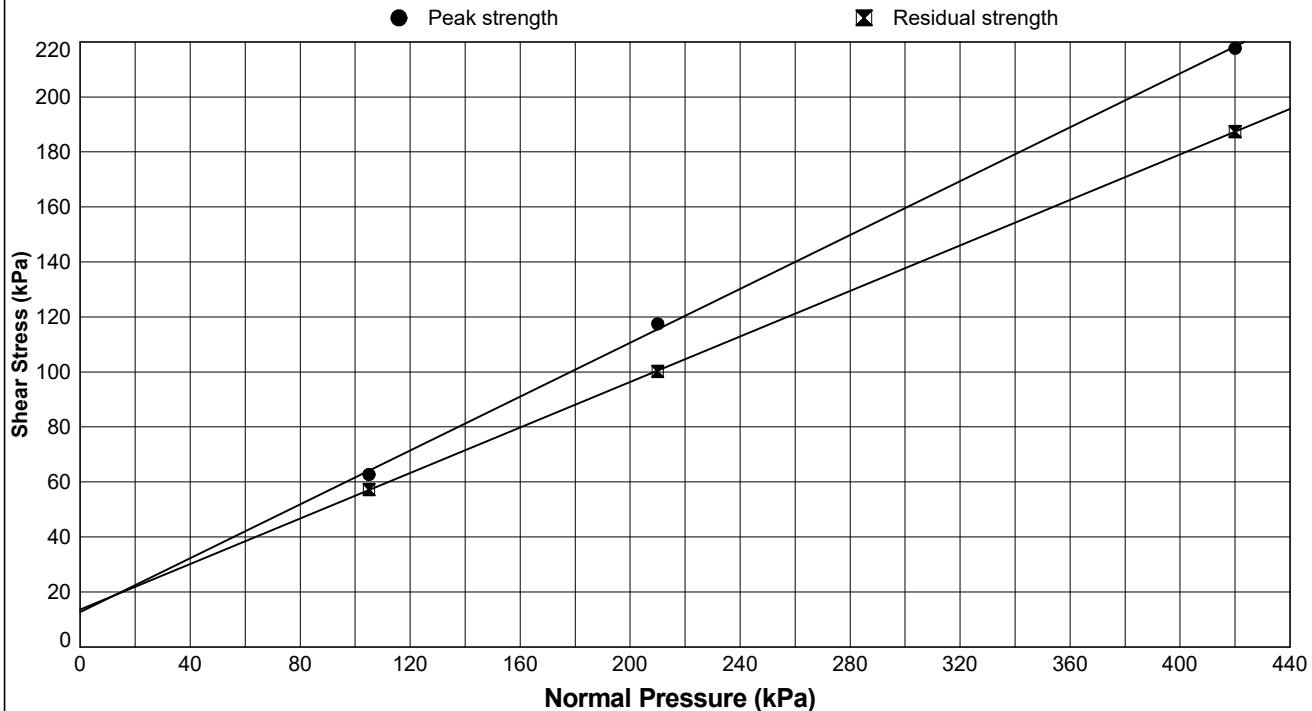
Sample Condition: **Recompacted**

Start Date: **22/01/2024**

End Date: **26/01/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**44.1**	**44.1**	**44.1**
	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**	**20.3**	**20.3**
	Initial Bulk Density	(Mg/m^3)	**1.67**	**1.67**	**1.67**
	Initial Dry Density	(Mg/m^3)	**1.16**	**1.16**	**1.16**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.2878**	**1.2886**	**1.2873**
	Initial Degree of Saturation	(%)	**91**	**91**	**91**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**5**	**5**	**5**
CONSOLIDATION	Normal Pressure	(kPa)	**105**	**210**	**420**
	Consolidated Height	(mm)	**18.6**	**17.7**	**17.0**
	Voids Ratio after Consolidation		**1.0993**	**0.9952**	**0.9170**
SHEAR	Shearing Rate	(mm/min)	**0.0120**	**0.0128**	**0.0129**
	Horiz. Displacement at Peak Shear Stress	(mm)	**5.2**	**4.7**	**5.3**
	Voids Ratio after Shear		**0.9378**	**0.8595**	**0.7794**
	Peak Shear Stress	(kPa)	**63**	**118**	**218**
	Residual Shear Stress	(kPa)	**57**	**100**	**187**

PEAK STRENGTH	Effective Cohesion (C ')	**13** (kPa)	Effective Angle of Friction (ϕ ')	**26**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C '$_R$)	**14** (kPa)	Residual Angle of Friction (ϕ '$_R$)	**22.5**	(deg)



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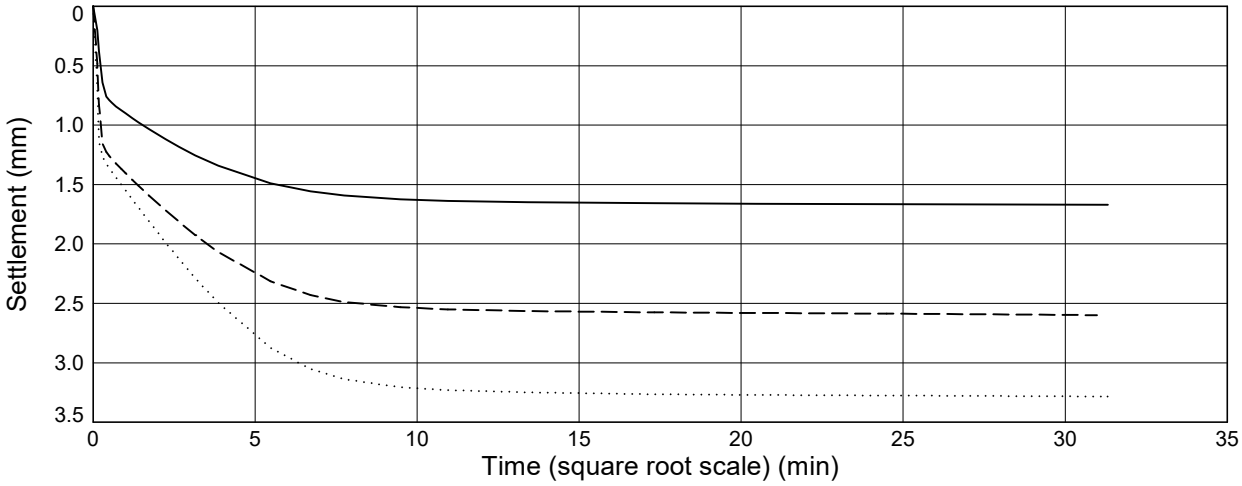
Contract	Contract Ref:
Sea Link - Richborough	**563607** [redacted]

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

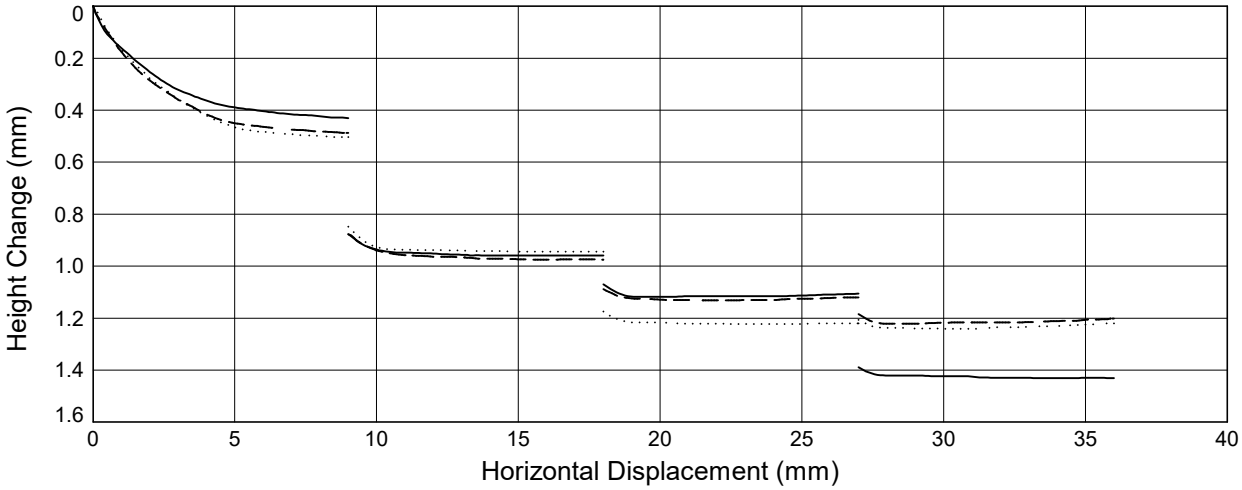
In accordance with BS EN ISO 17892-10

Position ID: **R22-BH104** Sample Ref: **36** Sample Type: **B** Depth (m): **10.50**

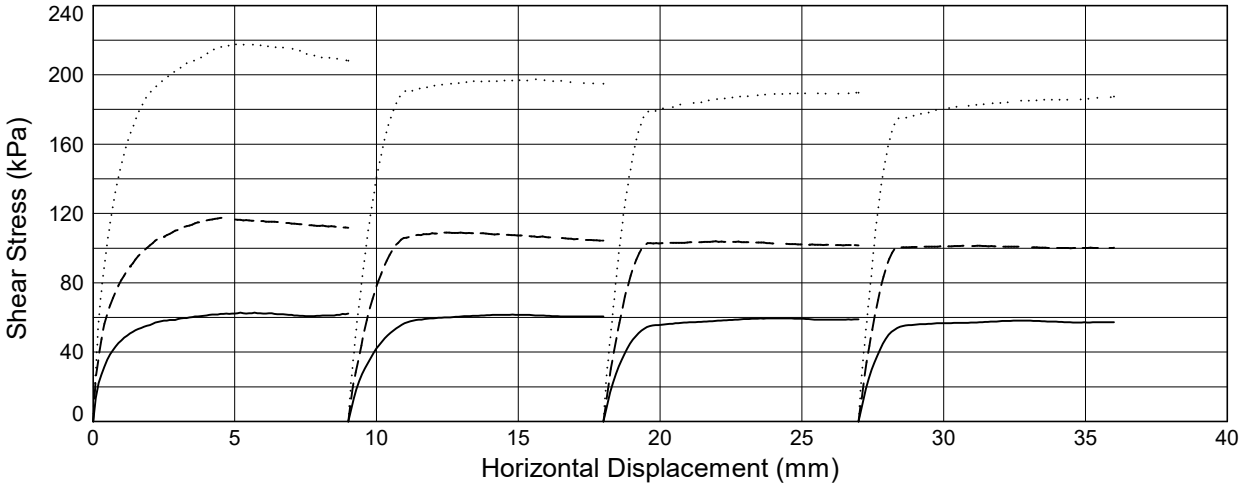
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**105** kPa) *Dashed Line* = Specimen 2 (**210** kPa) *Dotted Line* = Specimen 3 (**420** kPa)

STRUCTURAL SOILS 1a Princess Street Bedminster Bristol BS3 4AG	Compiled By [redacted]	Date **16/02/24**
	Contract **Sea Link - Richborough**	Contract Ref: **563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **R22-BH104** Sample Ref: **48** Sample Type: **B** Depth (m): **14.50**

Description: **Dark grey slightly gravelly silty CLAY**

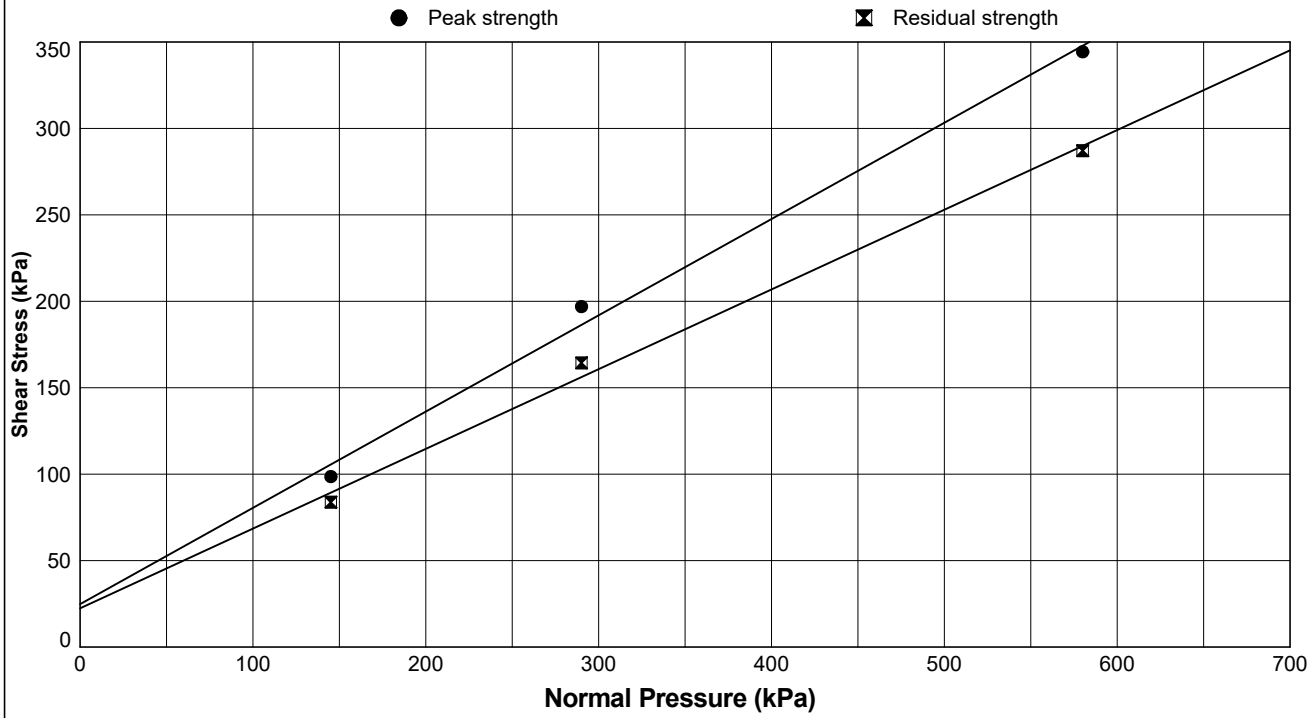
Sample Condition: **Recompacted**

Start Date: **29/01/2024**

End Date: **01/02/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**46.5**	**46.5**	**46.5**
	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)	**20.3**	**20.3**	**20.3**
	Initial Bulk Density	(Mg/m^3)	**1.68**	**1.68**	**1.68**
	Initial Dry Density	(Mg/m^3)	**1.15**	**1.15**	**1.15**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.3055**	**1.3070**	**1.3056**
	Initial Degree of Saturation	(%)	**94**	**94**	**94**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**4**	**4**	**4**
CONSOLIDATION	Normal Pressure	(kPa)	**145**	**290**	**580**
	Consolidated Height	(mm)	**18.1**	**17.3**	**15.8**
	Voids Ratio after Consolidation		**1.0562**	**0.9631**	**0.7886**
SHEAR	Shearing Rate	(mm/min)	**0.0140**	**0.0145**	**0.0164**
	Horiz. Displacement at Peak Shear Stress	(mm)	**5.2**	**5.1**	**6.3**
	Voids Ratio after Shear		**0.9114**	**0.8131**	**0.6328**
	Peak Shear Stress	(kPa)	**99**	**197**	**344**
	Residual Shear Stress	(kPa)	**84**	**164**	**287**

PEAK STRENGTH	Effective Cohesion (C ')	**25** (kPa)	Effective Angle of Friction (ϕ ')	**29**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C '$_R$)	**22** (kPa)	Residual Angle of Friction (ϕ '$_R$)	**25**	(deg)



STRUCTURAL SOILS
1a Princess Street
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Compiled By	Date
[redacted]	**17/03/24**

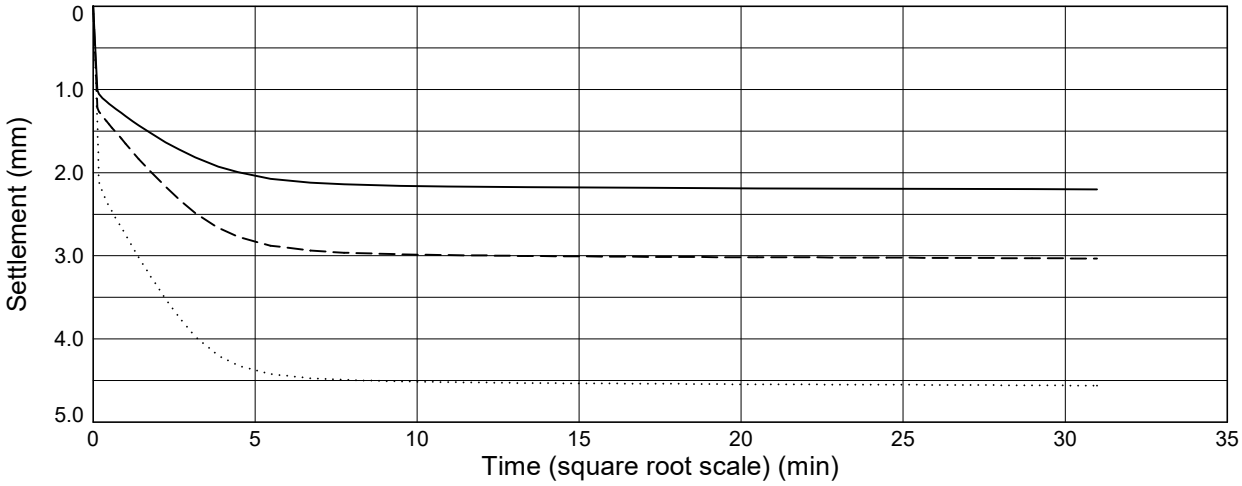
Contract	Contract Ref:
SEA Link FEED - Kent Onshore Cable Link	**563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

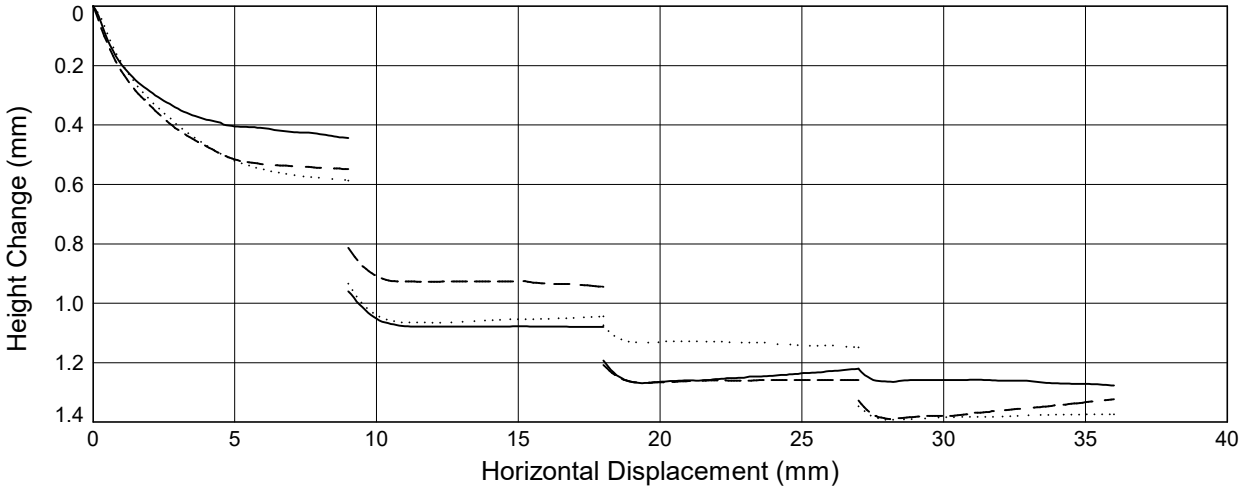
In accordance with BS EN ISO 17892-10

Position ID: **R22-BH104** Sample Ref: **48** Sample Type: **B** Depth (m): **14.50**

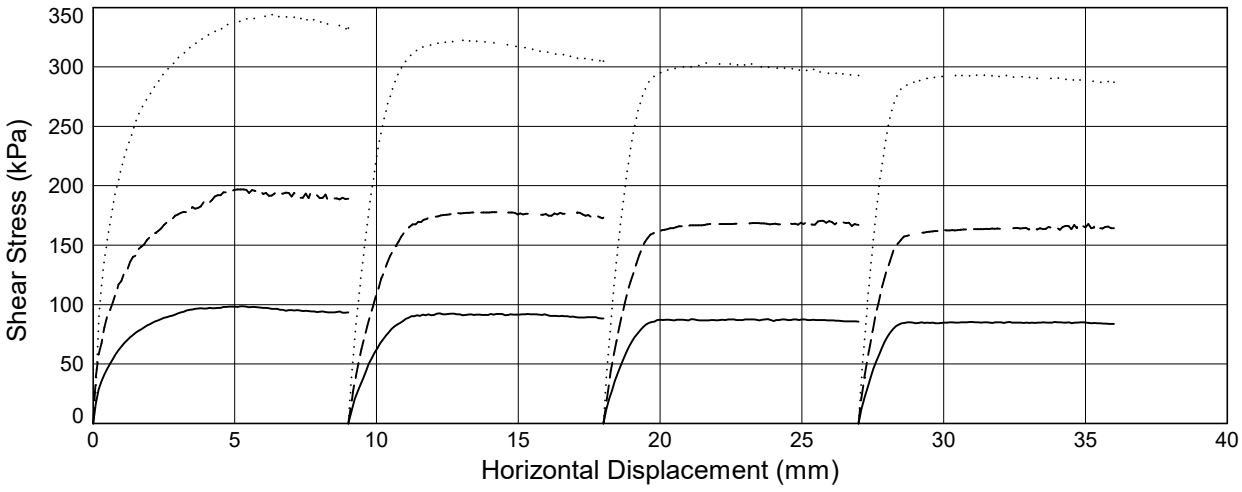
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**145** kPa) *Dashed Line* = Specimen 2 (**290** kPa) *Dotted Line* = Specimen 3 (**580** kPa)

STRUCTURAL SOILS 1a Princess Street Bedminster Bristol BS3 4AG	Compiled By [redacted]	Date **17/03/24**
	Contract **SEA Link FEED - Kent Onshore Cable Link**	Contract Ref: **563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **R22-BH104** Sample Ref: **60** Sample Type: **B** Depth (m): **18.50**

Description: **Grey silty CLAY**

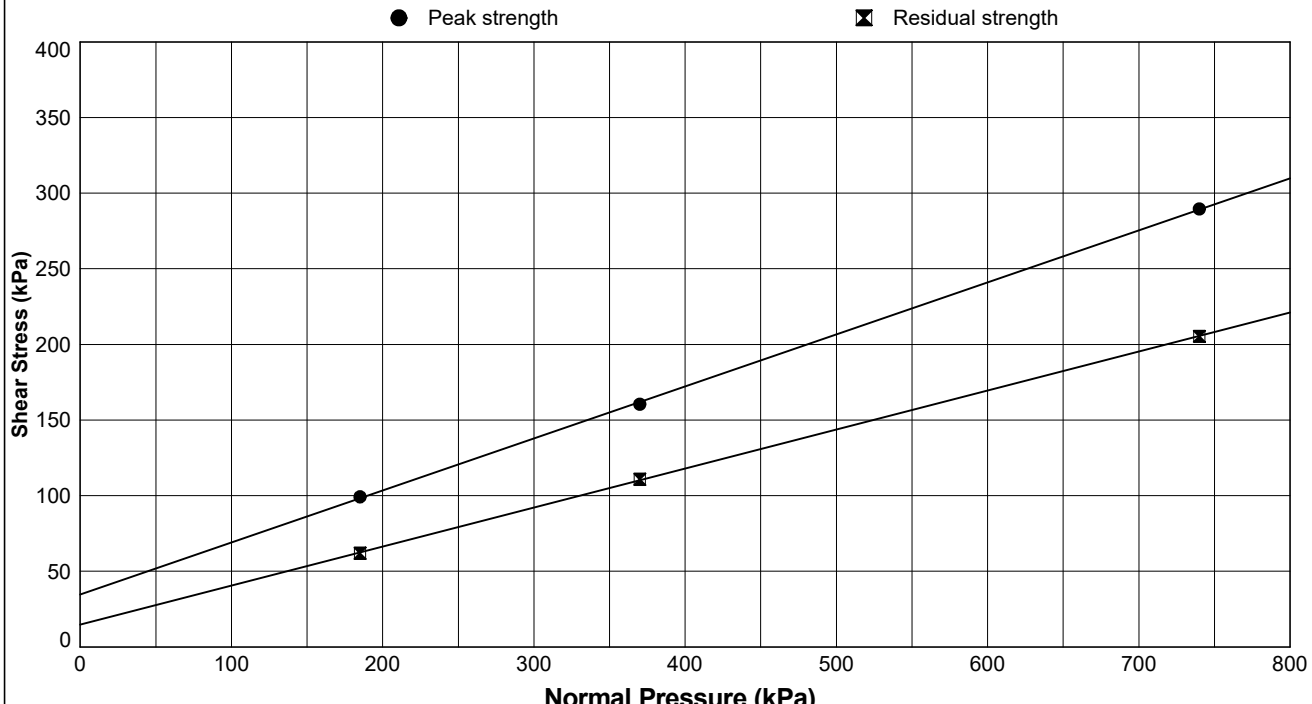
Sample Condition: **Recompacted**

Start Date: **02/02/2024**

End Date: **06/02/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**41.5**	**41.5**	**41.5**
	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)	**20.3**	**20.3**	**20.3**
	Initial Bulk Density	(Mg/m^3)	**1.73**	**1.73**	**1.73**
	Initial Dry Density	(Mg/m^3)	**1.22**	**1.22**	**1.22**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.1692**	**1.1700**	**1.1702**
	Initial Degree of Saturation	(%)	**94**	**94**	**94**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**5**	**5**	**5**
CONSOLIDATION	Normal Pressure	(kPa)	**185**	**370**	**740**
	Consolidated Height	(mm)	**18.8**	**17.9**	**16.6**
	Voids Ratio after Consolidation		**1.0088**	**0.9100**	**0.7749**
SHEAR	Shearing Rate	(mm/min)	**0.0060**	**0.0063**	**0.0065**
	Horiz. Displacement at Peak Shear Stress	(mm)	**3.4**	**4.0**	**5.0**
	Voids Ratio after Shear		**0.8812**	**0.7738**	**0.6261**
	Peak Shear Stress	(kPa)	**99**	**161**	**290**
	Residual Shear Stress	(kPa)	**62**	**111**	**205**

PEAK STRENGTH	Effective Cohesion (C ')	**13** (kPa)	Effective Angle of Friction (ϕ ')	**26**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C '$_R$)	**14** (kPa)	Residual Angle of Friction (ϕ '$_R$)	**14.5**	(deg)



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Compiled By	Date
[redacted]	**23/02/24**

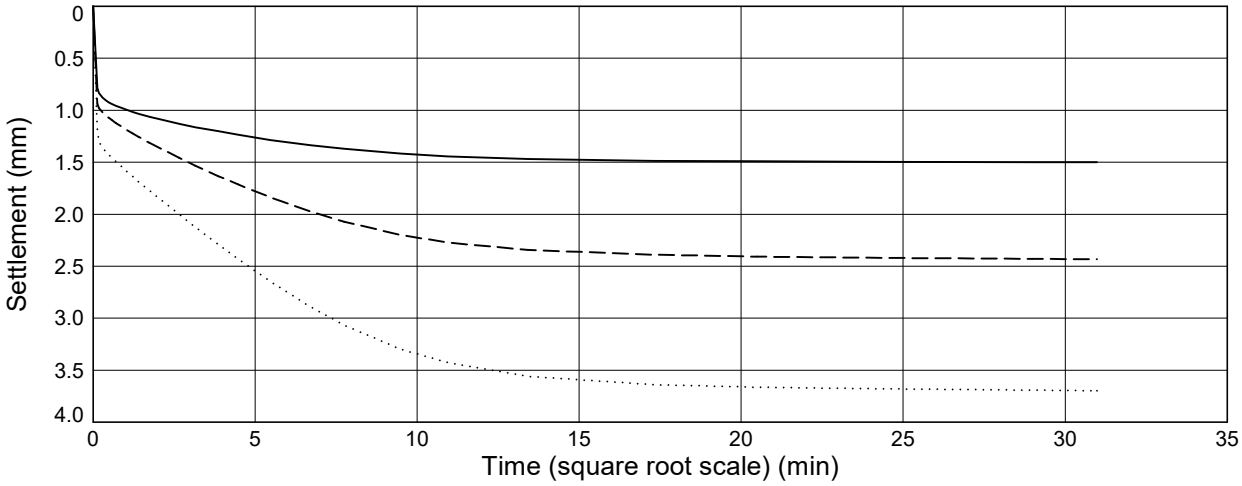
Contract	Contract Ref:
Sea Link - Richborough	**563607** [redacted]

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

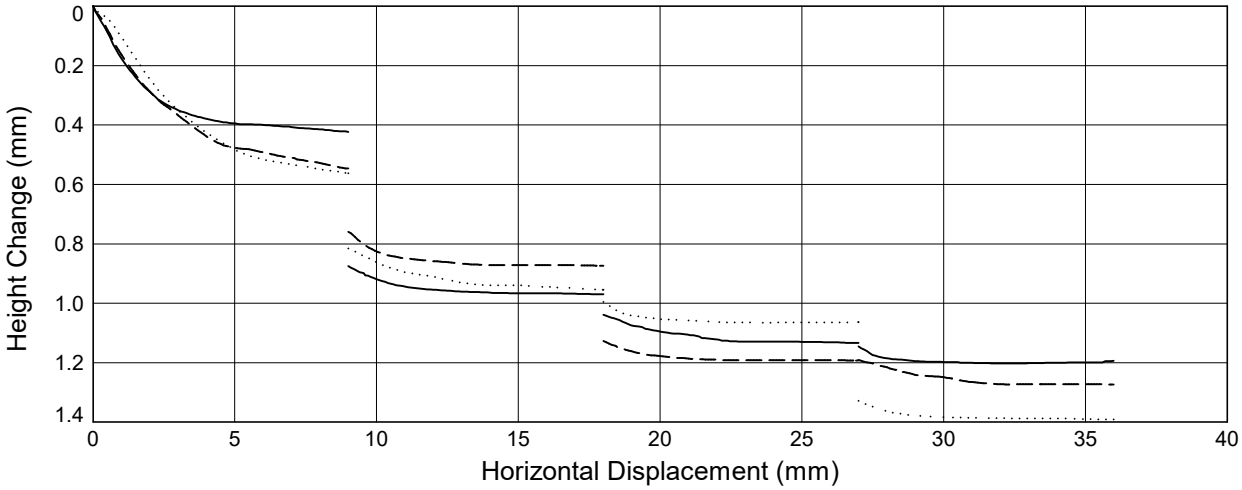
In accordance with BS EN ISO 17892-10

Position ID: **R22-BH104** Sample Ref: **60** Sample Type: **B** Depth (m): **18.50**

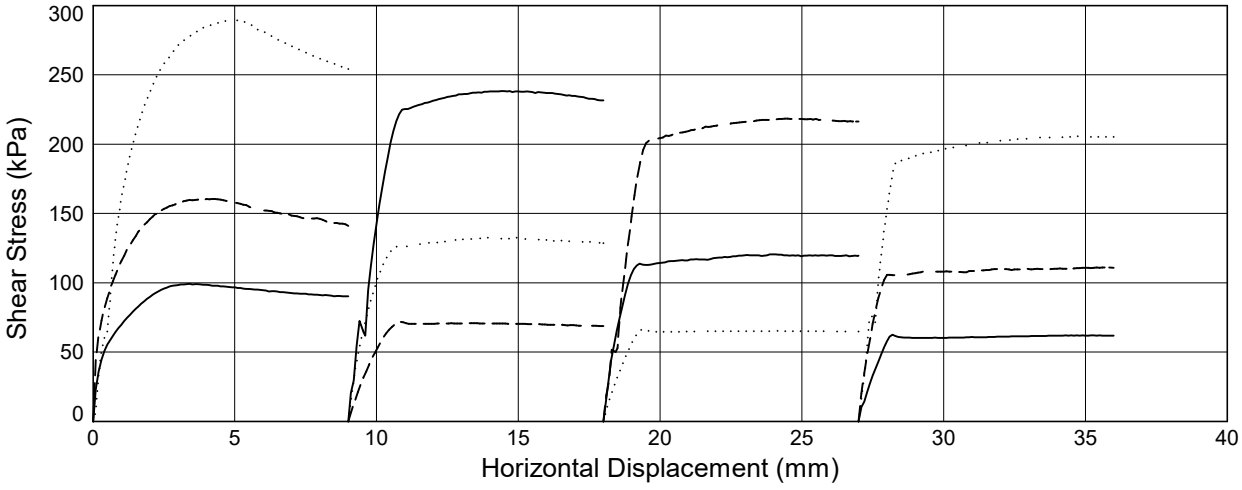
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**185** kPa) *Dashed Line* = Specimen 2 (**370** kPa) *Dotted Line* = Specimen 3 (**740** kPa)

STRUCTURAL SOILS 1a Princess Street Bedminster Bristol BS3 4AG	Compiled By [redacted]	Date **23/02/24**
	Contract **Sea Link - Richborough**	Contract Ref: **563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **R22-BH104** Sample Ref: **72** Sample Type: **B** Depth (m): **22.50**

Description: **Grey silty CLAY**

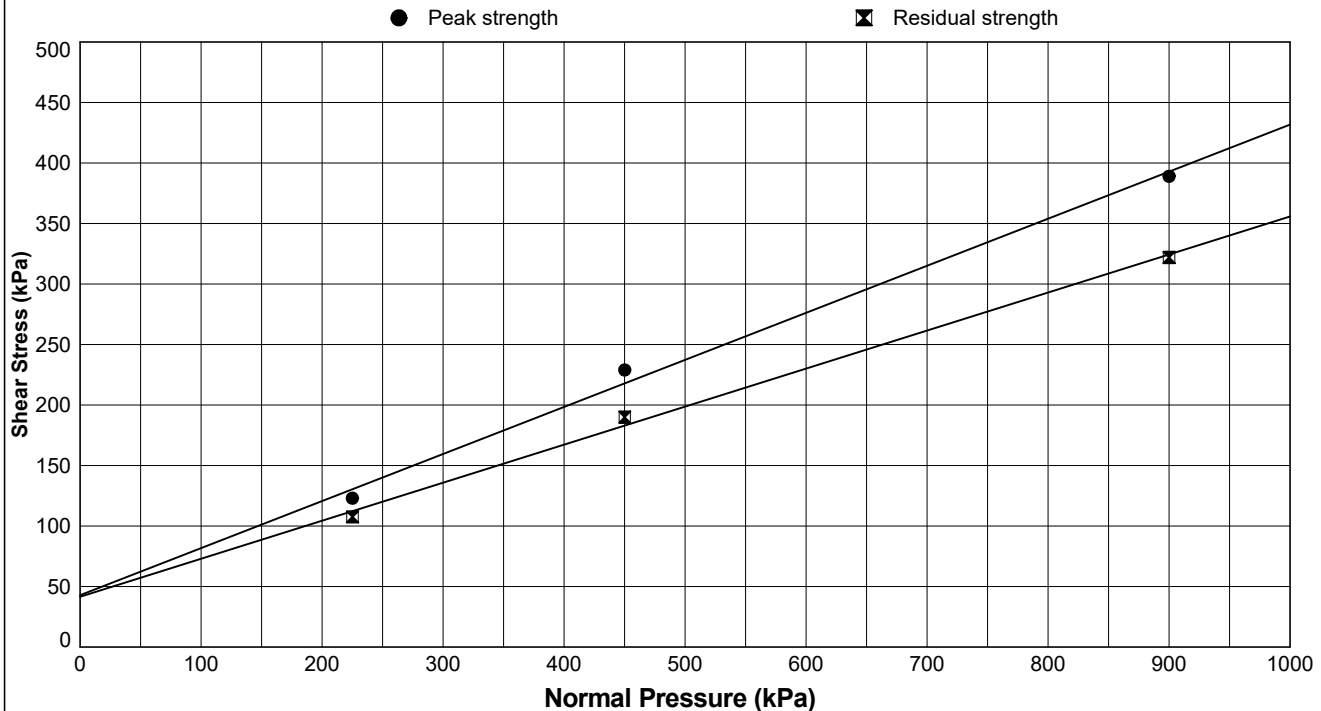
Sample Condition: **Recompacted**

Start Date: **01/02/2024**

End Date: **05/02/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**47.8**	**48.3**	**48.3**
	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)	**1.67**	**1.67**	**1.67**
	Initial Dry Density	(Mg/m^3)	**1.13**	**1.13**	**1.13**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.3406**	**1.3484**	**1.3480**
	Initial Degree of Saturation	(%)	**95**	**95**	**95**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**5**	**5**	**5**
CONSOLIDATION	Normal Pressure	(kPa)	**225**	**450**	**900**
	Consolidated Height	(mm)	**15.4**	**15.1**	**12.5**
	Voids Ratio after Consolidation		**0.7787**	**0.7497**	**0.4521**
SHEAR	Shearing Rate	(mm/min)	**0.0066**	**0.0070**	**0.0074**
	Horiz. Displacement at Peak Shear Stress	(mm)	**5.7**	**6.1**	**4.0**
	Voids Ratio after Shear		**0.5798**	**0.5869**	**0.2757**
	Peak Shear Stress	(kPa)	**123**	**229**	**389**
	Residual Shear Stress	(kPa)	**108**	**190**	**322**

PEAK STRENGTH	Effective Cohesion (C ')	**43** (kPa)	Effective Angle of Friction (ϕ ')	**21**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C '$_R$)	**41** (kPa)	Residual Angle of Friction (ϕ '$_R$)	**17.5**	(deg)



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1a Princess Street
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Compiled By: [redacted]

Date: **23/02/24**

Contract: **Sea Link - Richborough**

Contract Ref: **563607**

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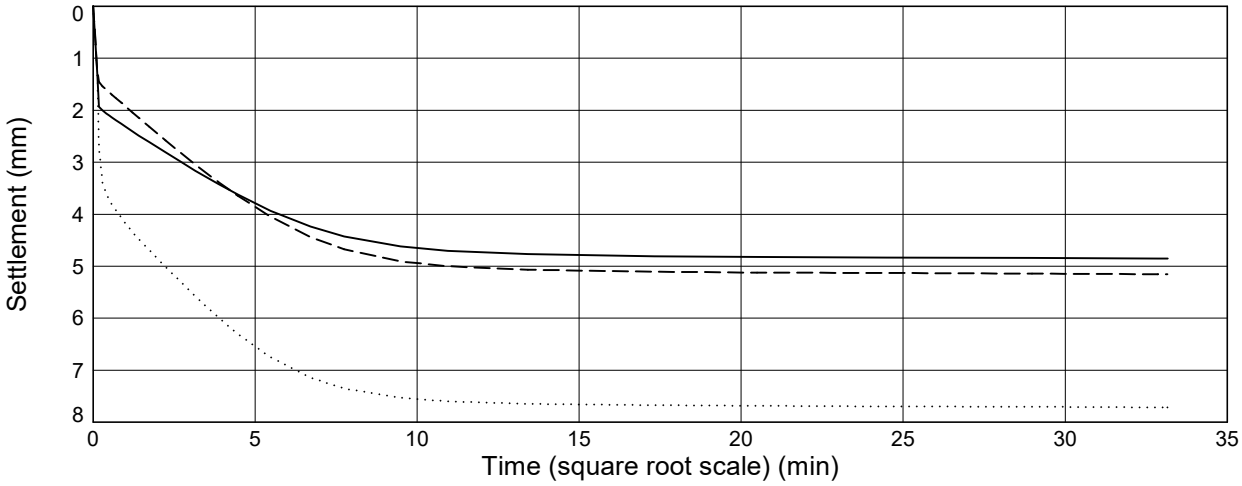
DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

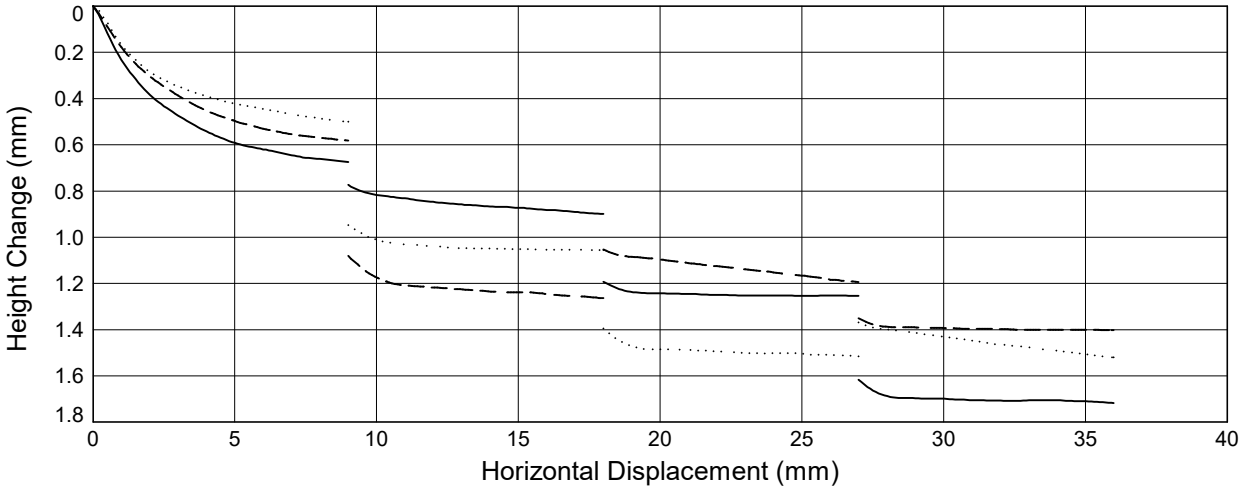
In accordance with BS EN ISO 17892-10

Position ID: **R22-BH104** Sample Ref: **72** Sample Type: **B** Depth (m): **22.50**

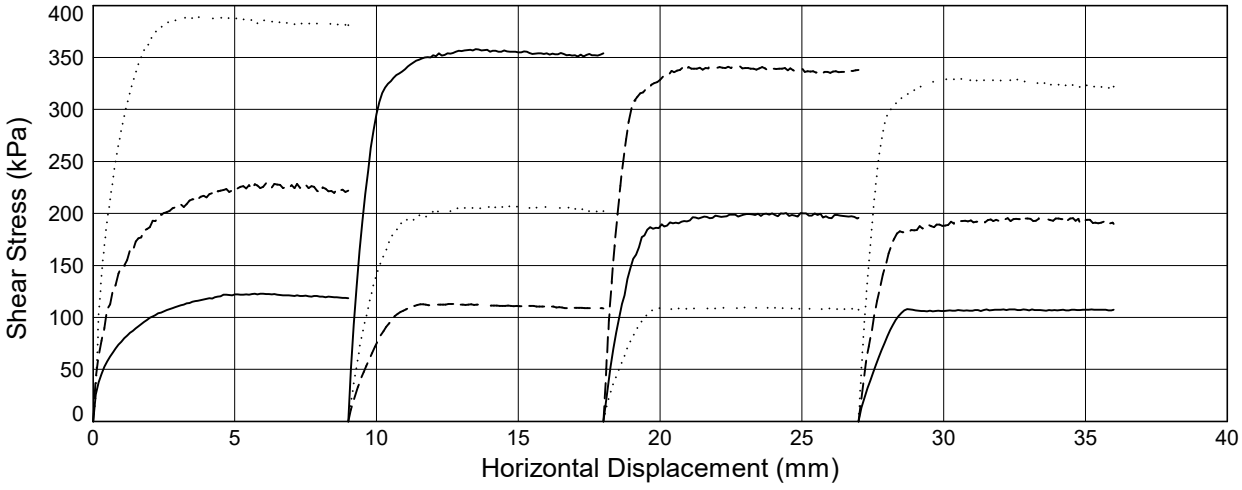
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**225** kPa) *Dashed Line* = Specimen 2 (**450** kPa) *Dotted Line* = Specimen 3 (**900** kPa)

STRUCTURAL SOILS
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Compiled By	Date
[redacted]	**23/02/24**

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Sea Link - Richborough	**563607**

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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: **R22-BH105** Sample Ref: **9** Sample Type: **B** Depth (m): **2.60**

Description: **Grey silty CLAY**

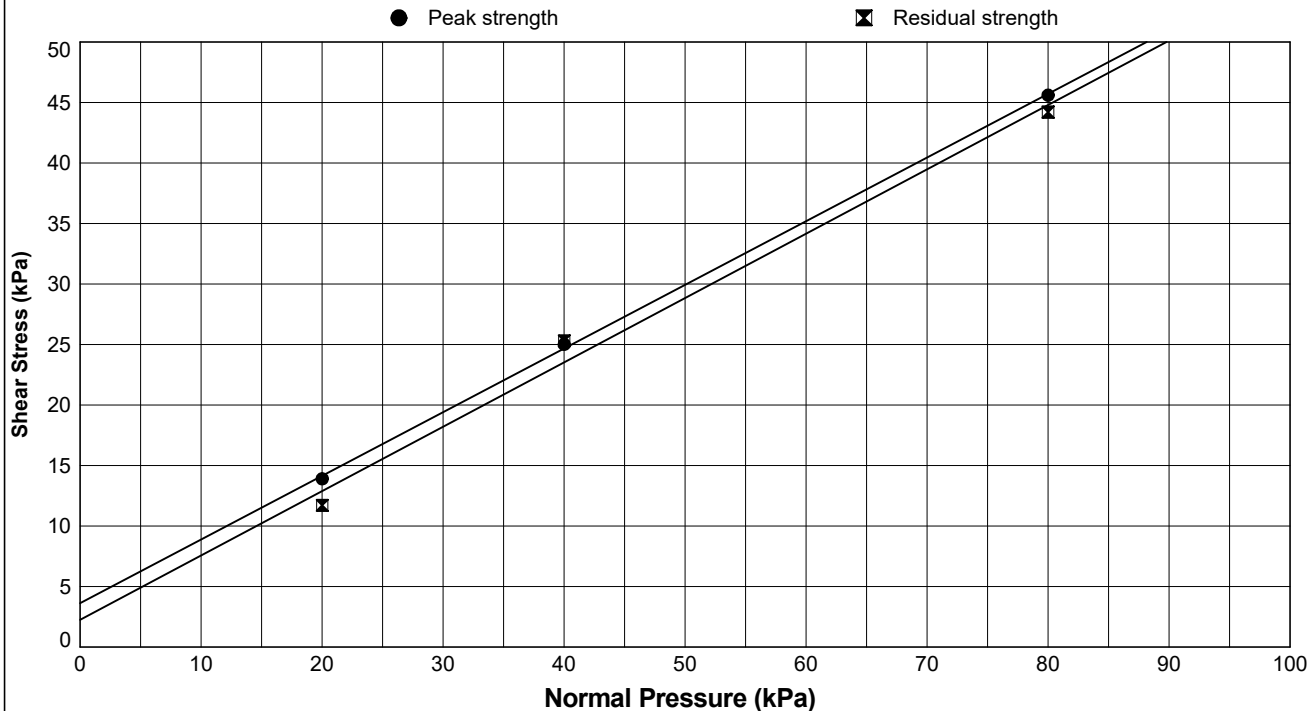
Sample Condition: **Recompacted**

Start Date: **18/03/2024**

End Date: **21/03/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**52.6**	**52.6**	**52.6**
	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)	**20.3**	**20.3**	**20.3**
	Initial Bulk Density	(Mg/m^3)	**1.67**	**1.67**	**1.67**
	Initial Dry Density	(Mg/m^3)	**1.10**	**1.09**	**1.10**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.4180**	**1.4212**	**1.4170**
	Initial Degree of Saturation	(%)	**98**	**98**	**98**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**4**	**4**	**4**
CONSOLIDATION	Normal Pressure	(kPa)	**20**	**40**	**80**
	Consolidated Height	(mm)	**18.1**	**17.0**	**16.5**
	Voids Ratio after Consolidation		**1.1557**	**1.0238**	**0.9615**
SHEAR	Shearing Rate	(mm/min)	**0.0074**	**0.0079**	**0.0085**
	Horiz. Displacement at Peak Shear Stress	(mm)	**4.8**	**7.0**	**4.4**
	Voids Ratio after Shear		**0.9818**	**0.8572**	**0.8038**
	Peak Shear Stress	(kPa)	**14**	**25**	**46**
	Residual Shear Stress	(kPa)	**25**	**25**	**44**

PEAK STRENGTH	Effective Cohesion (C ')	**4** (kPa)	Effective Angle of Friction (ϕ ')	**28**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C '$_R$)	**2** (kPa)	Residual Angle of Friction (ϕ '$_R$)	**28**	(deg)



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Compiled By: [redacted]

Date: **22/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

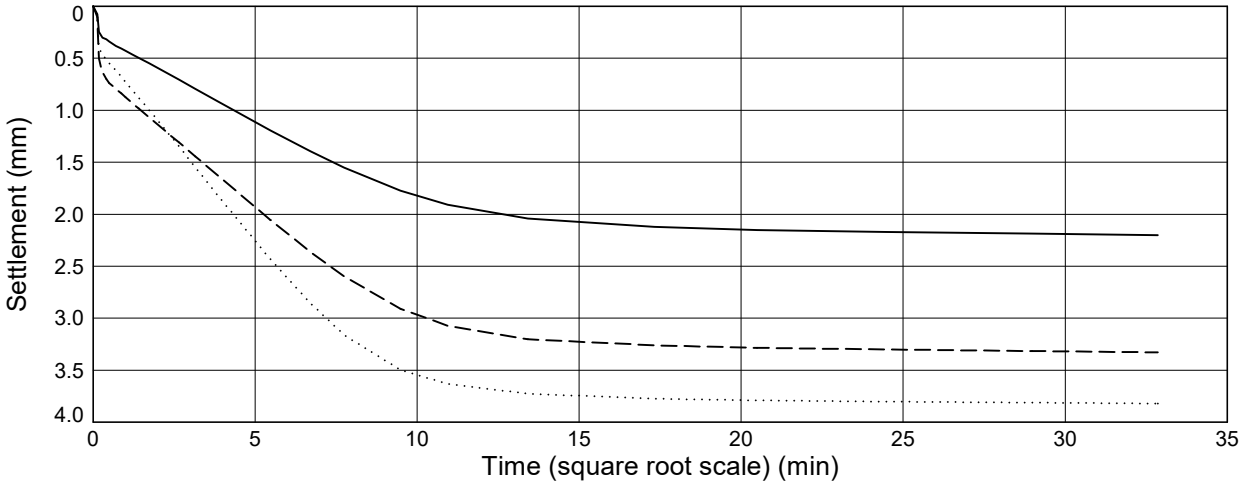
Contract Ref: **563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

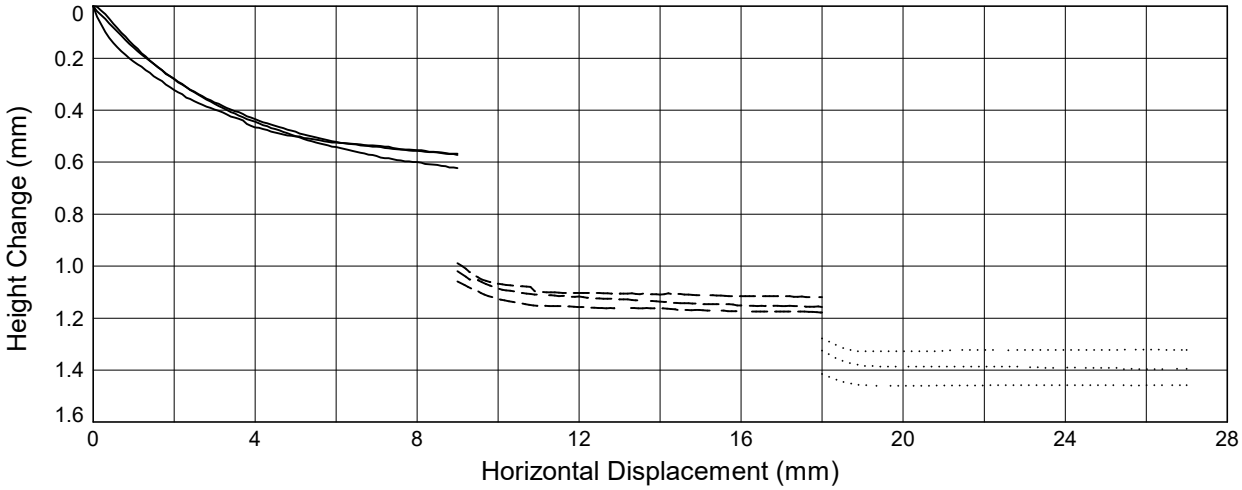
In accordance with BS EN ISO 17892-10

Position ID: **R22-BH105** Sample Ref: **9** Sample Type: **B** Depth (m): **2.60**

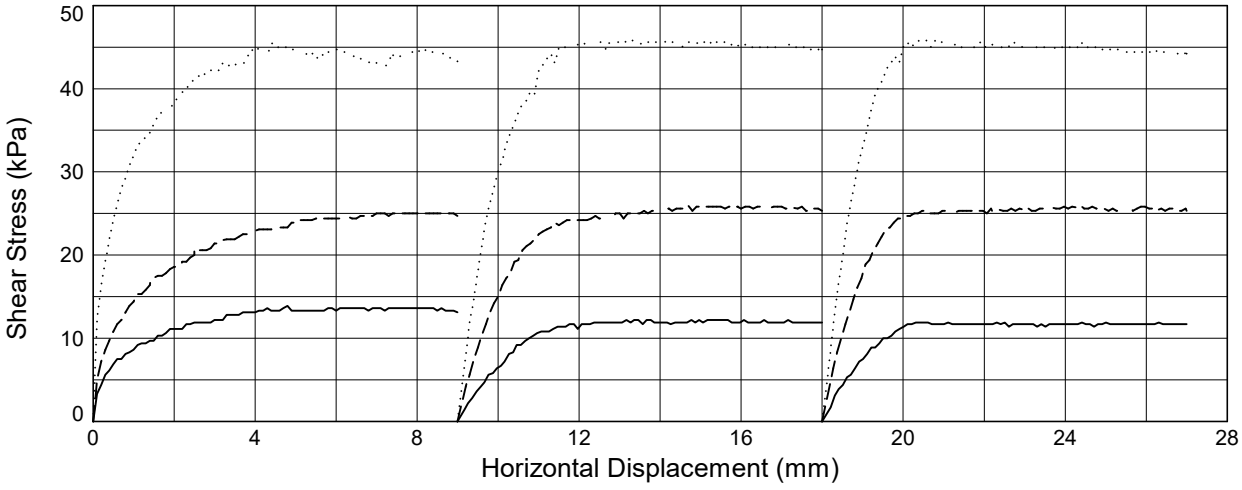
Consolidation Stage



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
[redacted]	**22/03/24**

Contract	Contract Ref:
SEA Link FEED - Kent Onshore Cable Link	**563607**

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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: **R22-BH105** Sample Ref: **33** Sample Type: **B** Depth (m): **8.70**

Description: **Brown silty CLAY**

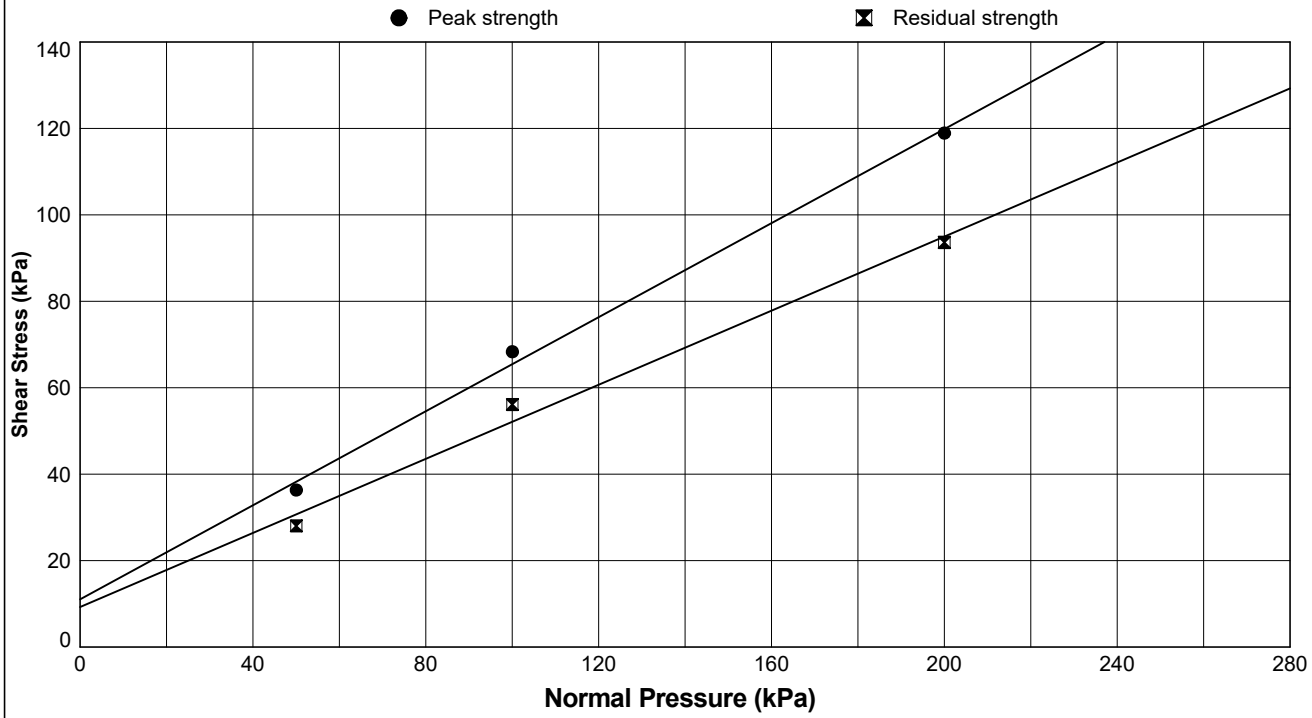
Sample Condition: **Recompacted**

Start Date: **04/03/2024**

End Date: **07/03/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**40.6**	**40.6**	**40.6**
	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)	**20.3**	**20.3**	**20.3**
	Initial Bulk Density	(Mg/m^3)	**1.73**	**1.73**	**1.73**
	Initial Dry Density	(Mg/m^3)	**1.23**	**1.23**	**1.23**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.1509**	**1.1494**	**1.1496**
	Initial Degree of Saturation	(%)	**93**	**94**	**94**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**4**	**4**	**4**
CONSOLIDATION	Normal Pressure	(kPa)	**50**	**100**	**200**
	Consolidated Height	(mm)	**19.5**	**19.3**	**18.6**
	Voids Ratio after Consolidation		**1.0655**	**1.0461**	**0.9685**
SHEAR	Shearing Rate	(mm/min)	**0.0070**	**0.0074**	**0.0078**
	Horiz. Displacement at Peak Shear Stress	(mm)	**2.9**	**3.8**	**3.8**
	Voids Ratio after Shear		**0.9685**	**0.9540**	**0.8416**
	Peak Shear Stress	(kPa)	**36**	**68**	**119**
	Residual Shear Stress	(kPa)	**28**	**56**	**94**

PEAK STRENGTH	Effective Cohesion (C ')	**11** (kPa)	Effective Angle of Friction (ϕ ')	**28.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C '$_R$)	**9** (kPa)	Residual Angle of Friction (ϕ '$_R$)	**23**	(deg)



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Date: **17/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

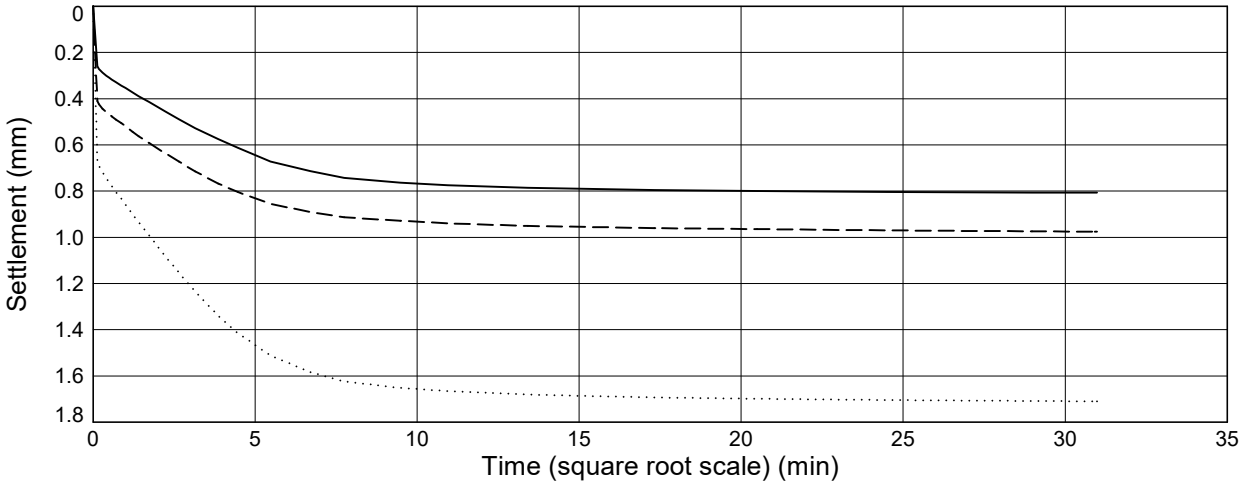
Contract Ref: **563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

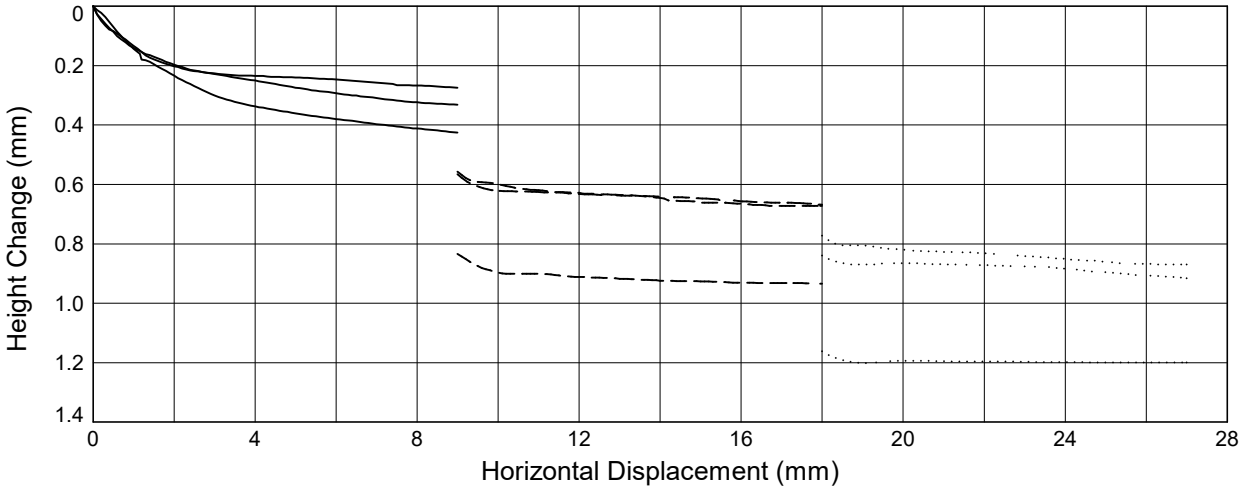
In accordance with BS EN ISO 17892-10

Position ID: **R22-BH105** Sample Ref: **33** Sample Type: **B** Depth (m): **8.70**

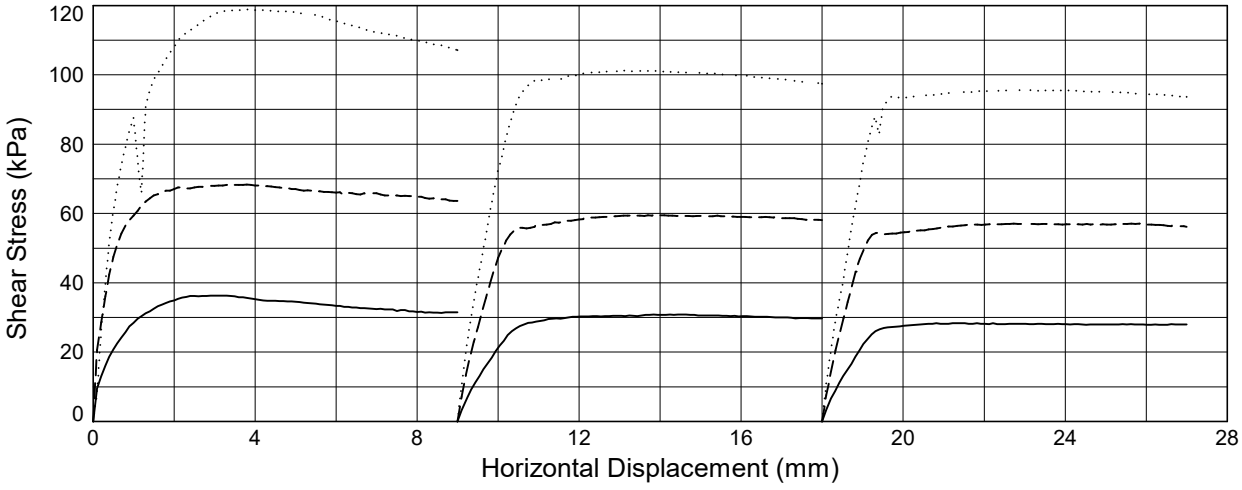
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**50** kPa) *Dashed Line* = Specimen 2 (**100** kPa) *Dotted Line* = Specimen 3 (**200** kPa)

STRUCTURAL SOILS 1a Princess Street Bedminster Bristol BS3 4AG	Compiled By [redacted]	Date **17/03/24**
	Contract **SEA Link FEED - Kent Onshore Cable Link**	Contract Ref: **563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **R22-BH106A** Sample Ref: **4** Sample Type: **B** Depth (m): **1.80**

Description: **Dark brown slightly sandy silty CLAY**

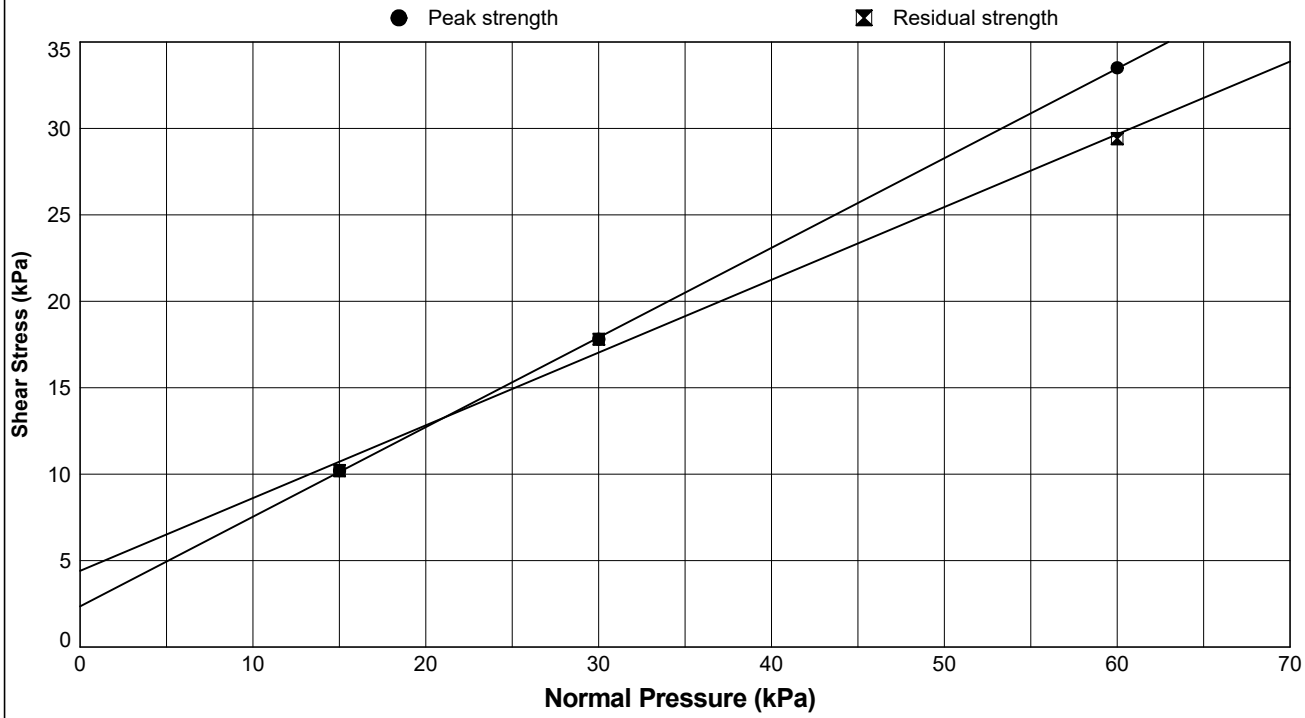
Sample Condition: **Recompacted**

Start Date: **03/03/2024**

End Date: **09/03/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**50.5**	**50.5**	**50.5**
	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)	**20.3**	**20.3**	**20.3**
	Initial Bulk Density	(Mg/m^3)	**1.70**	**1.70**	**1.70**
	Initial Dry Density	(Mg/m^3)	**1.13**	**1.13**	**1.13**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.3521**	**1.3517**	**1.3511**
	Initial Degree of Saturation	(%)	**99**	**99**	**99**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**7**	**7**	**7**
CONSOLIDATION	Normal Pressure	(kPa)	**15**	**30**	**60**
	Consolidated Height	(mm)	**19.2**	**18.3**	**17.5**
	Voids Ratio after Consolidation		**1.2161**	**1.1225**	**1.0195**
SHEAR	Shearing Rate	(mm/min)	**0.0033**	**0.0034**	**0.0034**
	Horiz. Displacement at Peak Shear Stress	(mm)	**2.8**	**4.1**	**5.9**
	Voids Ratio after Shear		**1.1071**	**0.9570**	**0.8007**
	Peak Shear Stress	(kPa)	**10**	**18**	**34**
	Residual Shear Stress	(kPa)	**10**	**18**	**29**

PEAK STRENGTH	Effective Cohesion (C ')	**2** (kPa)	Effective Angle of Friction (ϕ ')	**4**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C '$_R$)	**27.5** (kPa)	Residual Angle of Friction (ϕ '$_R$)	**23**	(deg)



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Compiled By: [redacted]

Date: **27/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

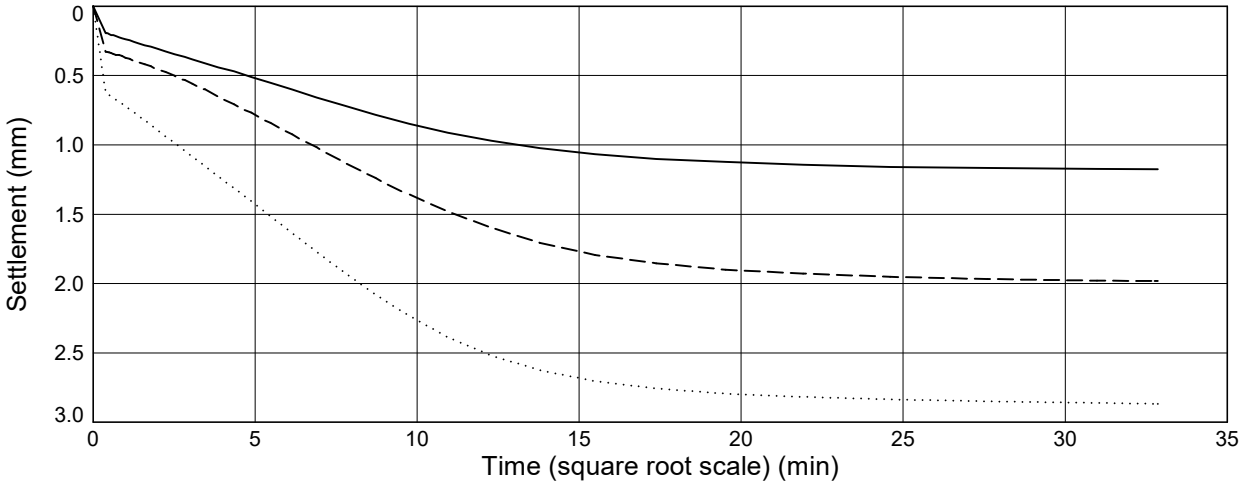
Contract Ref: **563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

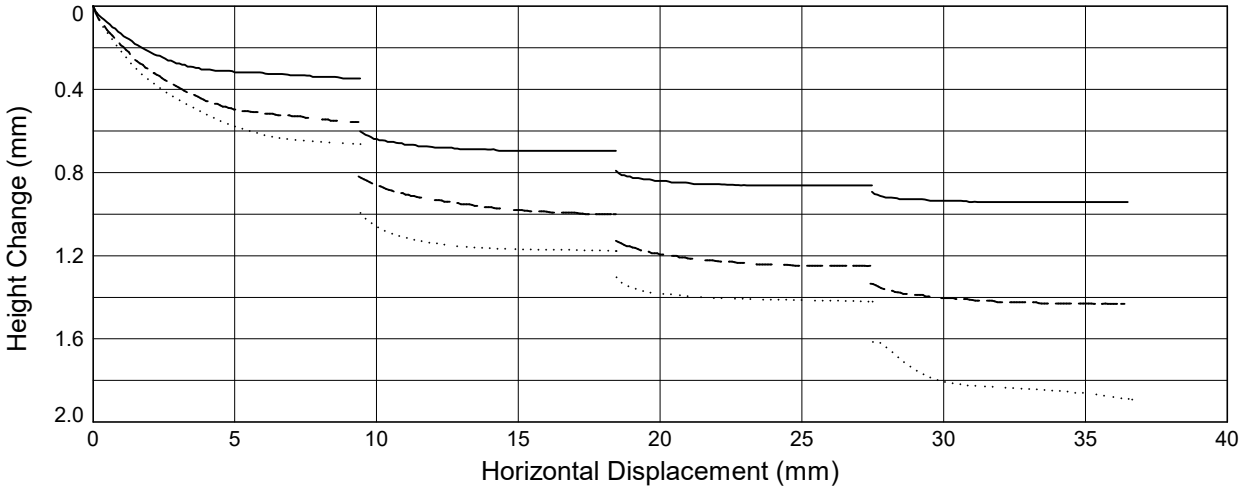
In accordance with BS EN ISO 17892-10

Position ID: **R22-BH106A** Sample Ref: **4** Sample Type: **B** Depth (m): **1.80**

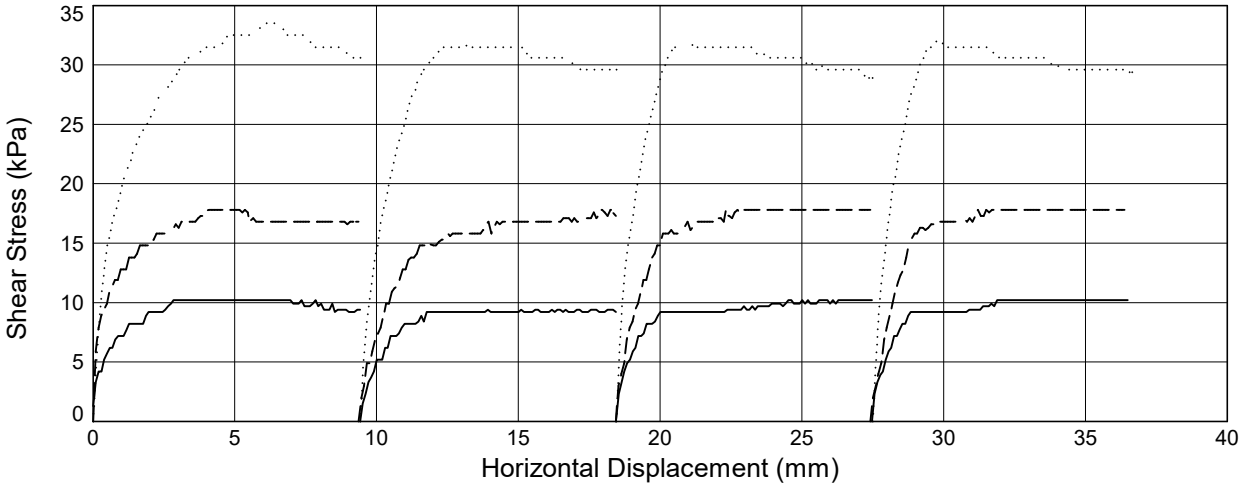
Consolidation Stage



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	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

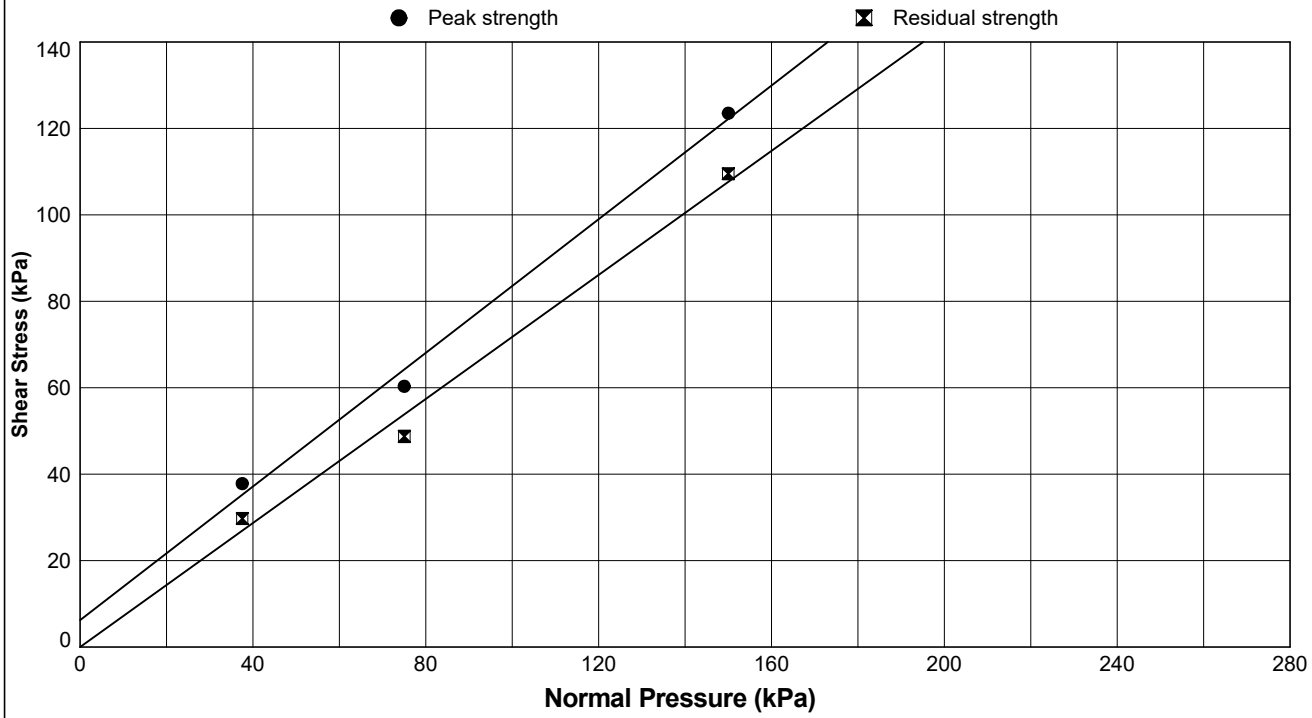
Position ID: **R22-BH106A** Sample Ref: **20** Sample Type: **B** Depth (m): **5.60**

Description: **Grey slightly gravelly slightly sandy silty CLAY** Start Date: **22/02/2024**

Sample Condition: **Recompacted** End Date: **25/02/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**31.0**	**31.0**	**31.0**
	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)	**20.2**	**20.2**	**20.2**
	Initial Bulk Density	(Mg/m^3)	**1.91**	**1.91**	**1.91**
	Initial Dry Density	(Mg/m^3)	**1.46**	**1.46**	**1.46**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**0.8151**	**0.8153**	**0.8147**
	Initial Degree of Saturation	(%)	**101**	**101**	**101**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**4**	**4**	**4**
CONSOLIDATION	Normal Pressure	(kPa)	**37.5**	**75**	**150**
	Consolidated Height	(mm)	**18.5**	**18.3**	**17.7**
	Voids Ratio after Consolidation		**0.6675**	**0.6503**	**0.5936**
SHEAR	Shearing Rate	(mm/min)	**0.0120**	**0.0138**	**0.0170**
	Horiz. Displacement at Peak Shear Stress	(mm)	**8.9**	**4.7**	**5.2**
	Voids Ratio after Shear		**0.5621**	**0.5664**	**0.4878**
	Peak Shear Stress	(kPa)	**38**	**60**	**124**
	Residual Shear Stress	(kPa)	**30**	**49**	**110**

PEAK STRENGTH	Effective Cohesion (C ')	**6** (kPa)	Effective Angle of Friction (ϕ ')	**37.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C '$_R$)	**0** (kPa)	Residual Angle of Friction (ϕ '$_R$)	**35.5**	(deg)



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Compiled By: [redacted] Date: **17/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

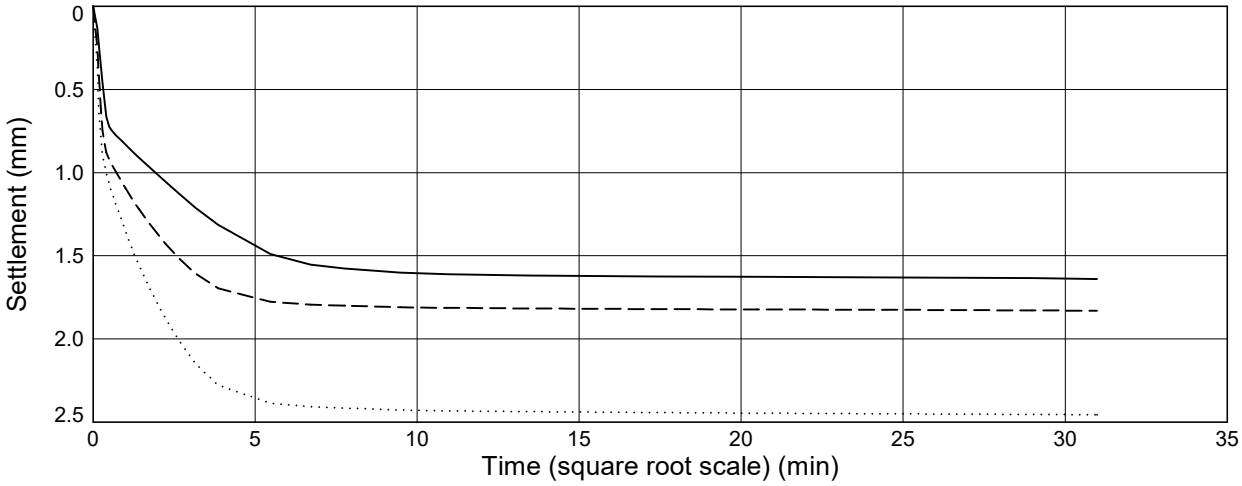
Contract Ref: **563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

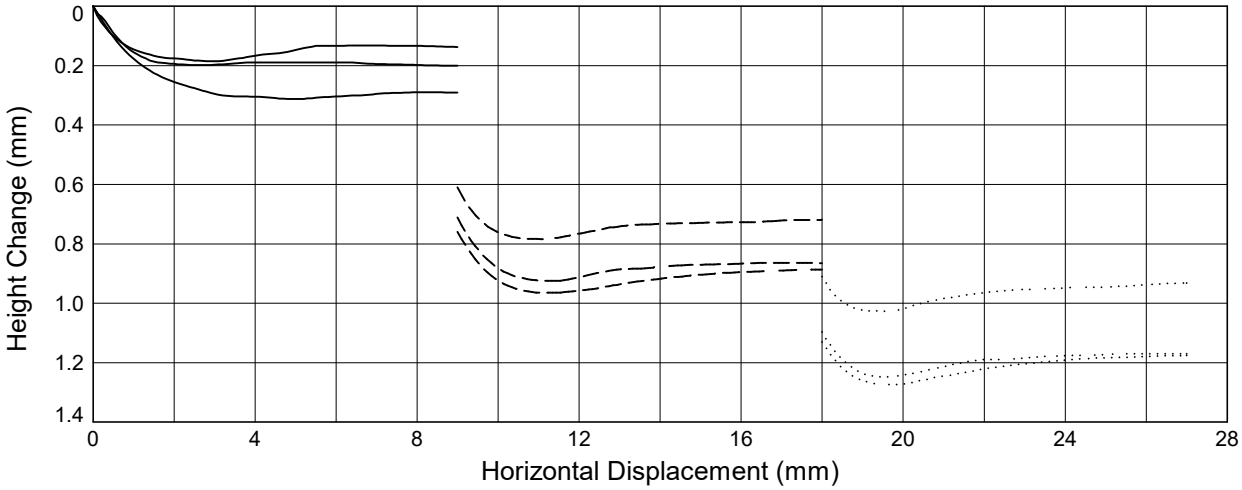
In accordance with BS EN ISO 17892-10

Position ID: **R22-BH106A** Sample Ref: **20** Sample Type: **B** Depth (m): **5.60**

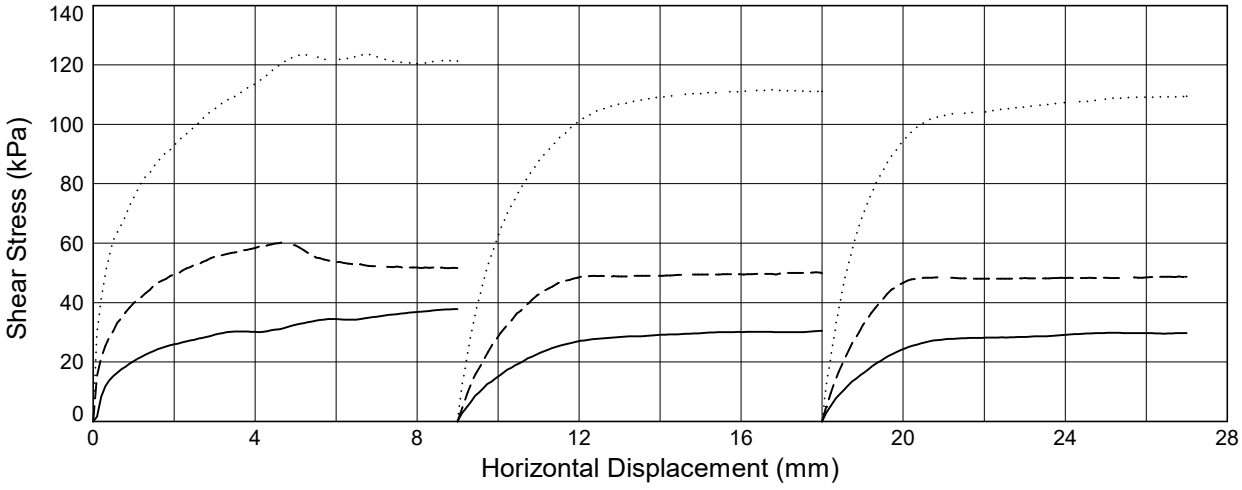
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**37.5** kPa) *Dashed Line* = Specimen 2 (**75** kPa) *Dotted Line* = Specimen 3 (**150** kPa)

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Compiled By	Date
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Contract	Contract Ref:
SEA Link FEED - Kent Onshore Cable Link	**563607**

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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: **R22-BH106A** Sample Ref: **26** Sample Type: **B** Depth (m): **7.50**

Description: **Greenish grey silty CLAY**

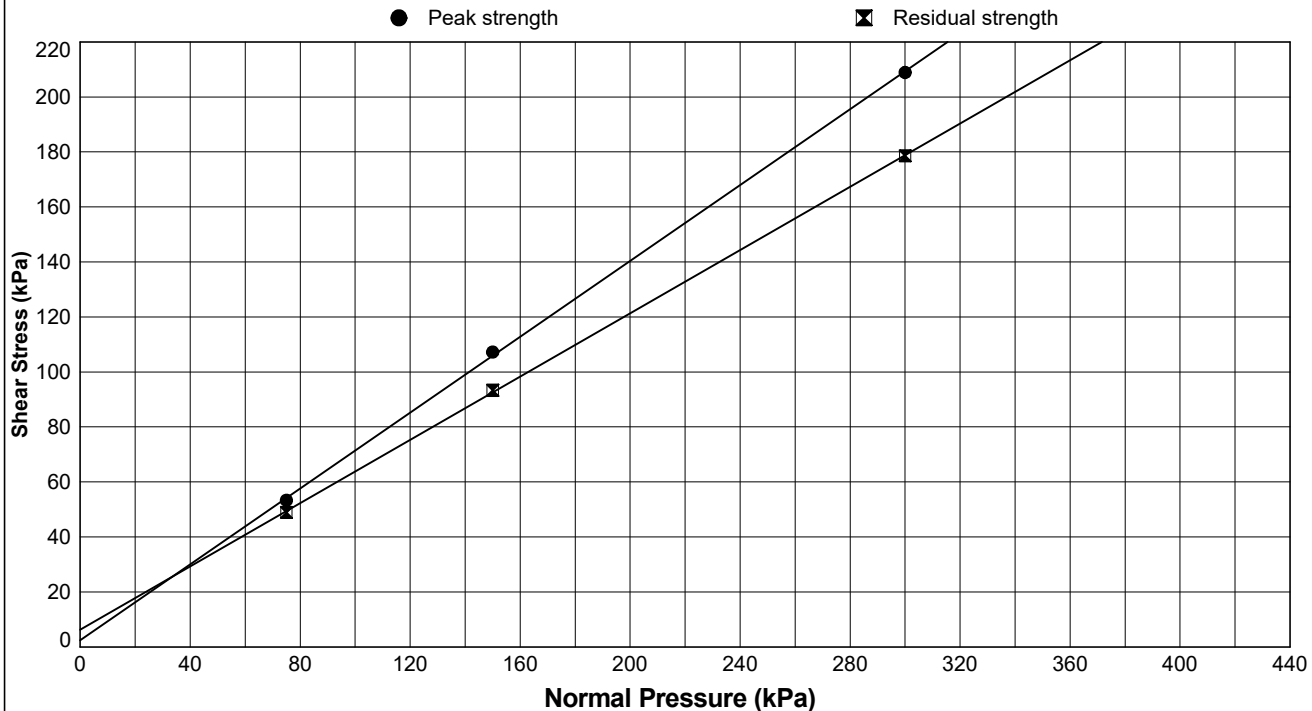
Sample Condition: **Recompacted**

Start Date: **23/02/2024**

End Date: **25/02/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**41.7**	**41.7**	**41.7**
	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)	**1.75**	**1.75**	**1.75**
	Initial Dry Density	(Mg/m^3)	**1.24**	**1.24**	**1.24**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.1439**	**1.1429**	**1.1433**
	Initial Degree of Saturation	(%)	**97**	**97**	**97**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**3**	**3**	**3**
CONSOLIDATION	Normal Pressure	(kPa)	**75**	**150**	**300**
	Consolidated Height	(mm)	**18.0**	**17.5**	**16.9**
	Voids Ratio after Consolidation		**0.9040**	**0.8472**	**0.7897**
SHEAR	Shearing Rate	(mm/min)	**0.0151**	**0.0161**	**0.0182**
	Horiz. Displacement at Peak Shear Stress	(mm)	**4.6**	**5.2**	**5.8**
	Voids Ratio after Shear		**0.7702**	**0.7001**	**0.6500**
	Peak Shear Stress	(kPa)	**53**	**107**	**209**
	Residual Shear Stress	(kPa)	**49**	**93**	**179**

PEAK STRENGTH	Effective Cohesion (C ')	**2**	(kPa)	Effective Angle of Friction (ϕ ')	**34.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C '$_R$)	**6**	(kPa)	Residual Angle of Friction (ϕ '$_R$)	**30**	(deg)



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Date: **17/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

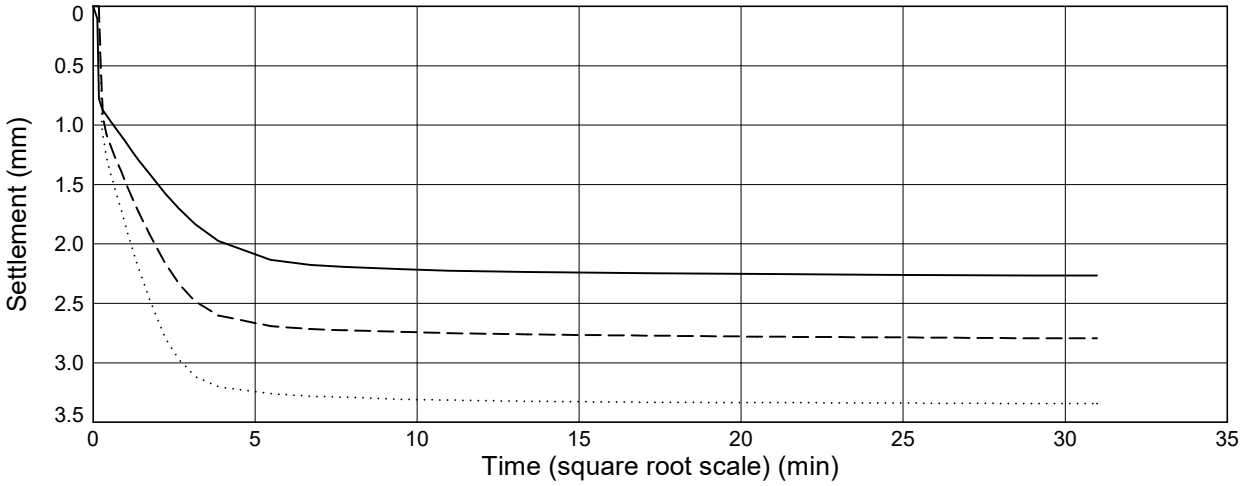
Contract Ref: **563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

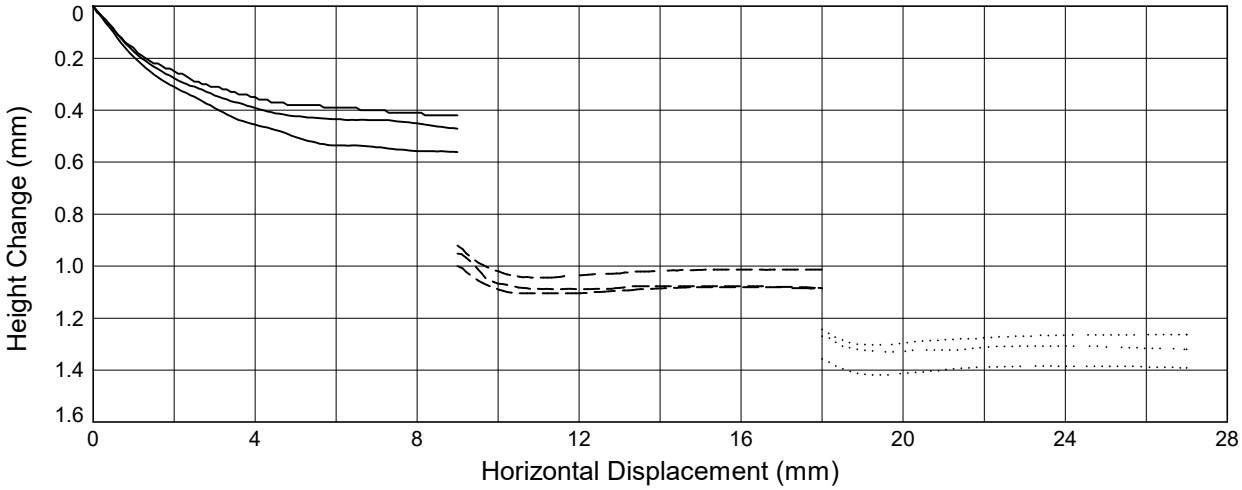
In accordance with BS EN ISO 17892-10

Position ID: **R22-BH106A** Sample Ref: **26** Sample Type: **B** Depth (m): **7.50**

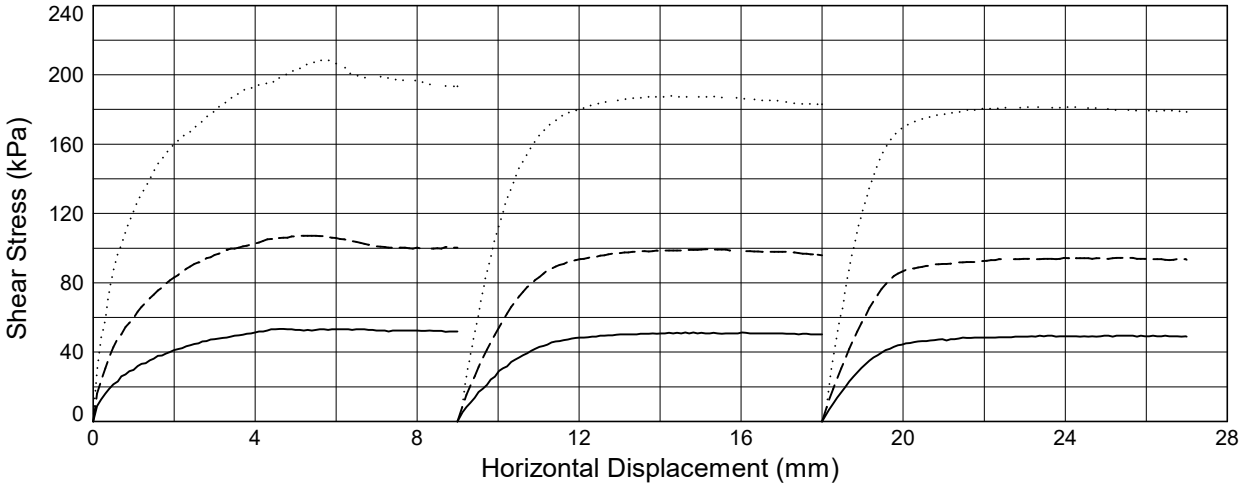
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**75** kPa) *Dashed Line* = Specimen 2 (**150** kPa) *Dotted Line* = Specimen 3 (**300** kPa)

STRUCTURAL SOILS 1a Princess Street Bedminster Bristol BS3 4AG	Compiled By [redacted]	Date **17/03/24**
	Contract **SEA Link FEED - Kent Onshore Cable Link**	Contract Ref: **563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **R22-BH203** Sample Ref: **13** Sample Type: **B** Depth (m): **3.50**

Description: **Brown clayey SILT**

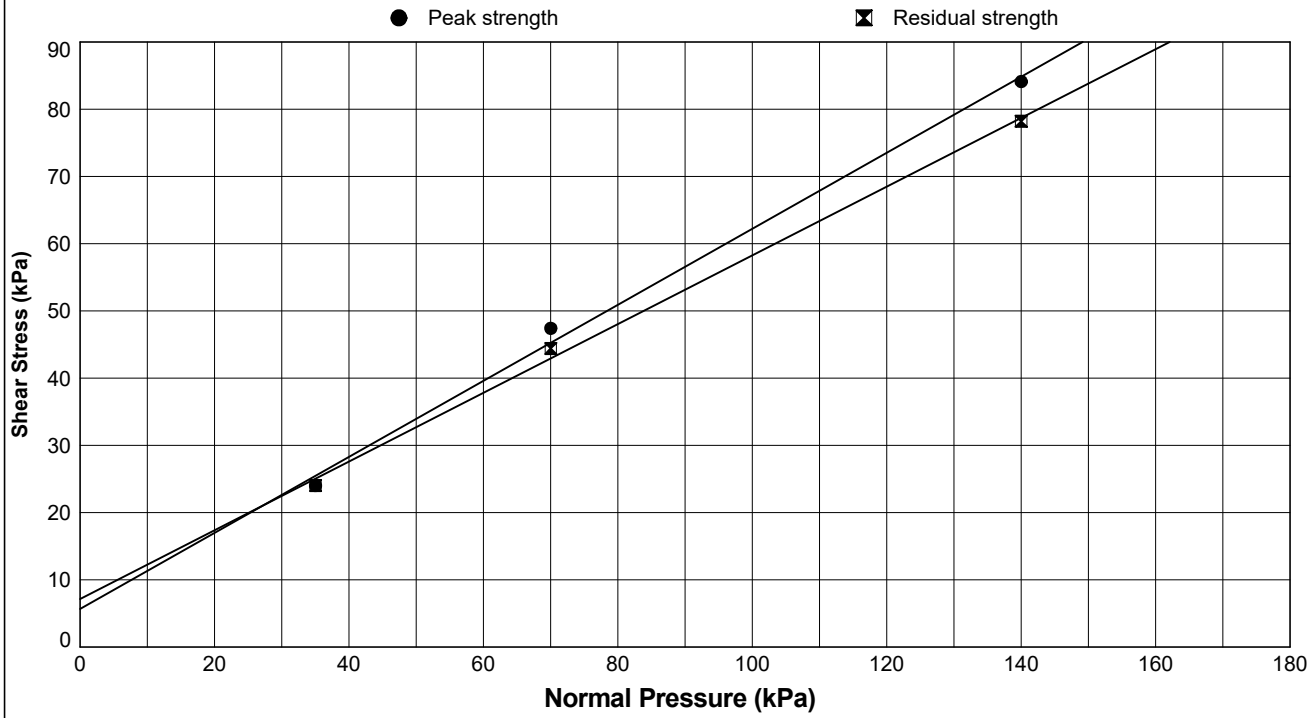
Sample Condition: **Recompacted**

Start Date: **21/02/2024**

End Date: **24/02/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**30.2**	**30.2**	**30.2**
	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)	**1.53**	**1.54**	**1.54**
	Initial Dry Density	(Mg/m^3)	**1.18**	**1.18**	**1.18**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.2483**	**1.2471**	**1.2474**
	Initial Degree of Saturation	(%)	**64**	**64**	**64**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**4**	**4**	**4**
CONSOLIDATION	Normal Pressure	(kPa)	**35**	**70**	**140**
	Consolidated Height	(mm)	**19.4**	**18.5**	**18.1**
	Voids Ratio after Consolidation		**1.1449**	**1.0493**	**1.0041**
SHEAR	Shearing Rate	(mm/min)	**0.0314**	**0.0321**	**0.0327**
	Horiz. Displacement at Peak Shear Stress	(mm)	**6.5**	**8.2**	**8.6**
	Voids Ratio after Shear		**0.9936**	**0.8613**	**0.7597**
	Peak Shear Stress	(kPa)	**24**	**47**	**84**
	Residual Shear Stress	(kPa)	**24**	**44**	**78**

PEAK STRENGTH	Effective Cohesion (C ')	**6** (kPa)	Effective Angle of Friction (ϕ ')	**7**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C '$_R$)	**29.5** (kPa)	Residual Angle of Friction (ϕ '$_R$)	**27**	(deg)



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Date: **27/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

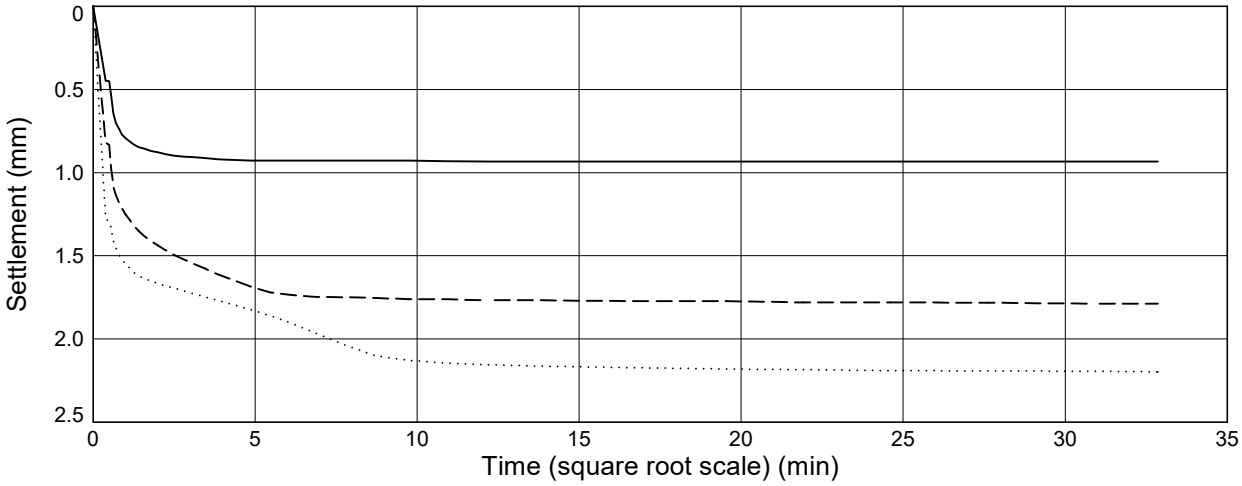
Contract Ref: **563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

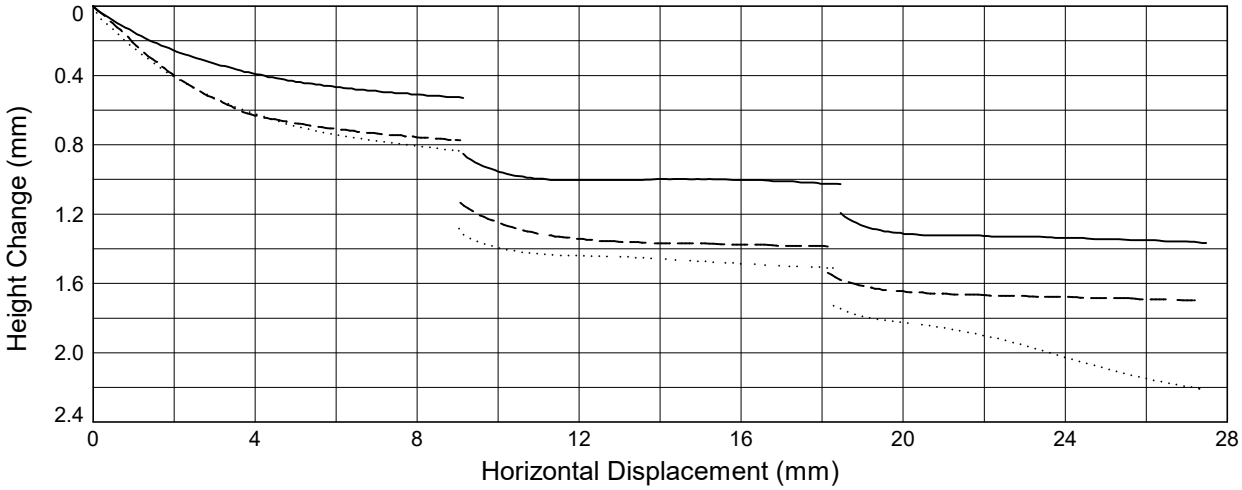
In accordance with BS EN ISO 17892-10

Position ID: **R22-BH203** Sample Ref: **13** Sample Type: **B** Depth (m): **3.50**

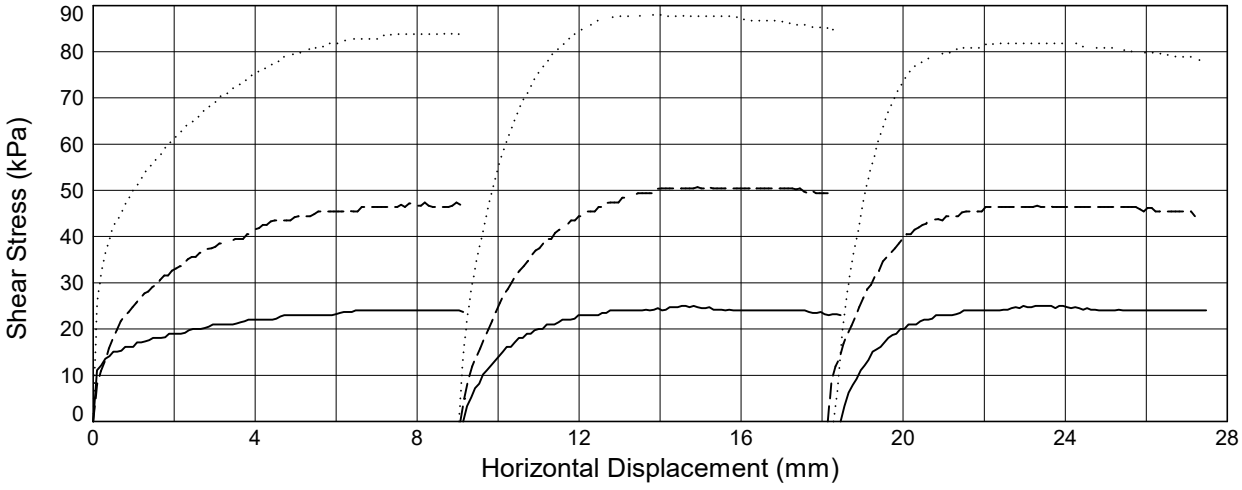
Consolidation Stage



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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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **R22-BH203** Sample Ref: **20** Sample Type: **B** Depth (m): **5.50**

Description: **Grey slightly sandy silty CLAY**

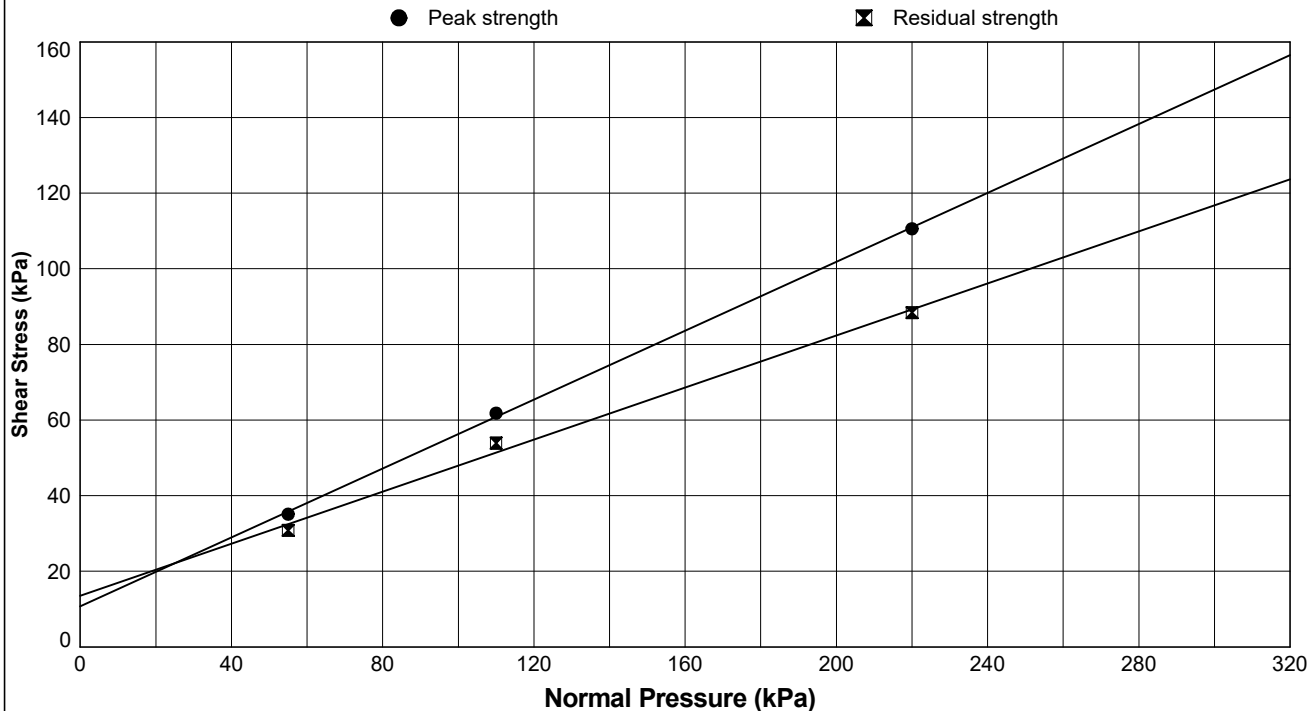
Sample Condition: **Recompacted**

Start Date: **12/01/2024**

End Date: **15/01/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**35.4**	**35.4**	**35.4**
	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)	**20.3**	**20.3**	**20.3**
	Initial Bulk Density	(Mg/m^3)	**1.54**	**1.54**	**1.54**
	Initial Dry Density	(Mg/m^3)	**1.14**	**1.14**	**1.14**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.3241**	**1.3259**	**1.3228**
	Initial Degree of Saturation	(%)	**71**	**71**	**71**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**4**	**4**	**4**
CONSOLIDATION	Normal Pressure	(kPa)	**55**	**110**	**220**
	Consolidated Height	(mm)	**19.5**	**18.5**	**18.0**
	Voids Ratio after Consolidation		**1.2364**	**1.1241**	**1.0632**
SHEAR	Shearing Rate	(mm/min)	**0.0145**	**0.0151**	**0.0158**
	Horiz. Displacement at Peak Shear Stress	(mm)	**8.4**	**7.1**	**6.8**
	Voids Ratio after Shear		**1.0913**	**0.9523**	**0.8556**
	Peak Shear Stress	(kPa)	**35**	**62**	**111**
	Residual Shear Stress	(kPa)	**31**	**54**	**88**

PEAK STRENGTH	Effective Cohesion (C ')	**11** (kPa)	Effective Angle of Friction (ϕ ')	**24.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C '$_R$)	**14** (kPa)	Residual Angle of Friction (ϕ '$_R$)	**19**	(deg)



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Date: **17/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

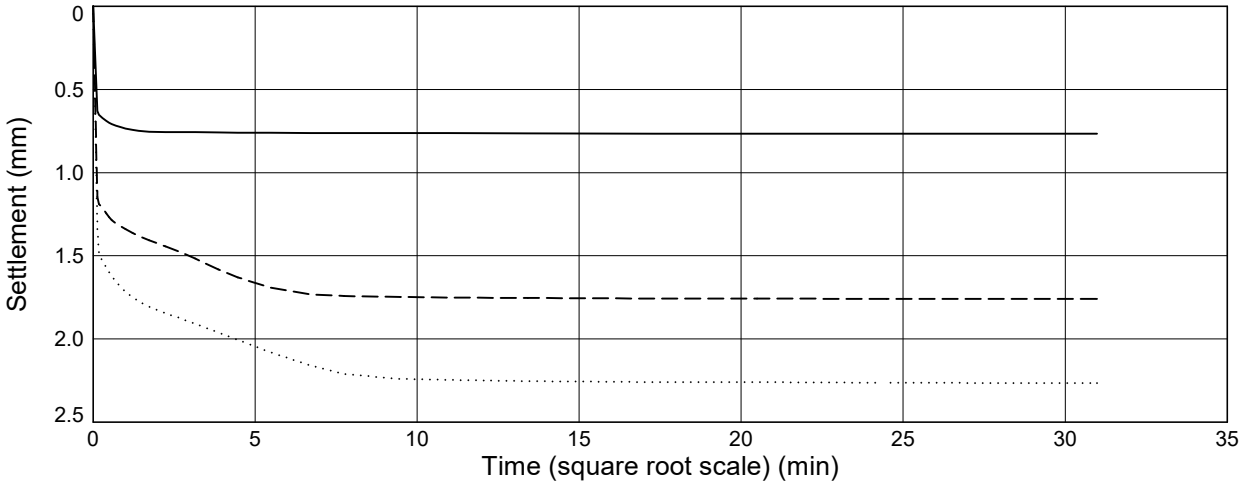
Contract Ref: **563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

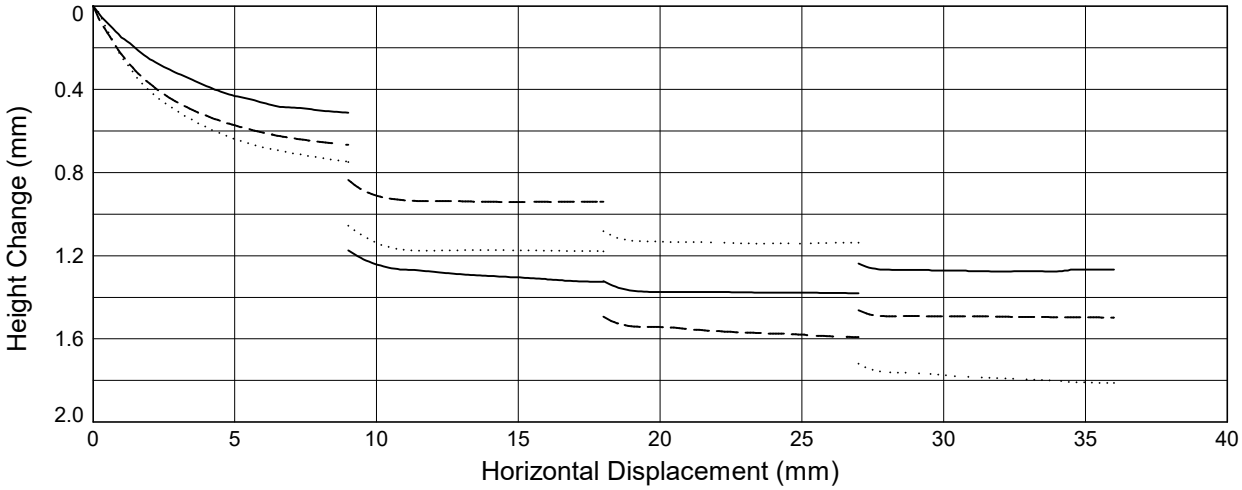
In accordance with BS EN ISO 17892-10

Position ID: **R22-BH203** Sample Ref: **20** Sample Type: **B** Depth (m): **5.50**

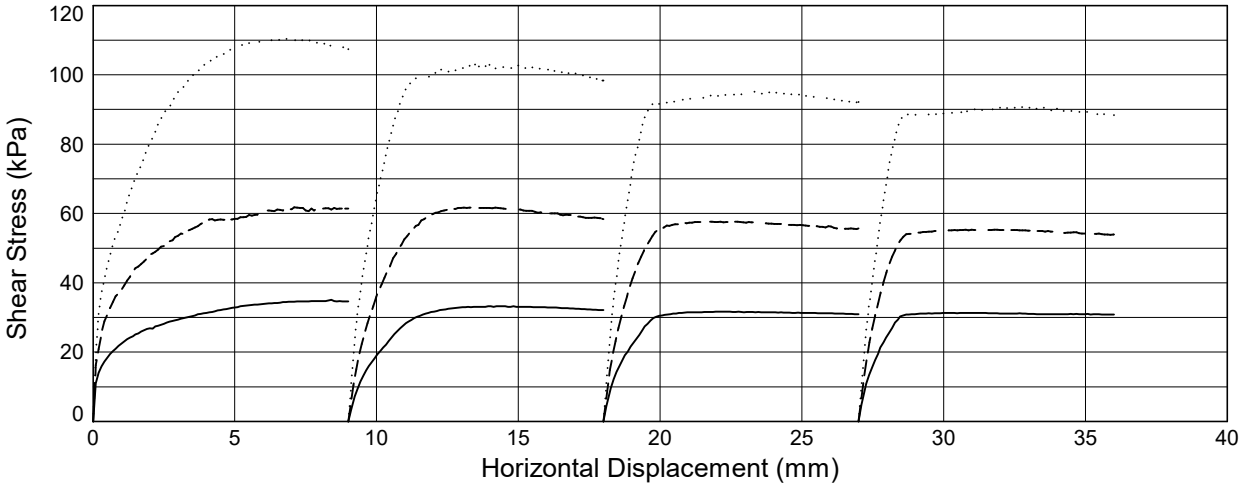
Consolidation Stage



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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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: **R22-BH203** Sample Ref: **29** Sample Type: **B** Depth (m): **8.50**

Description: **Dark grey slightly sandy silty CLAY**

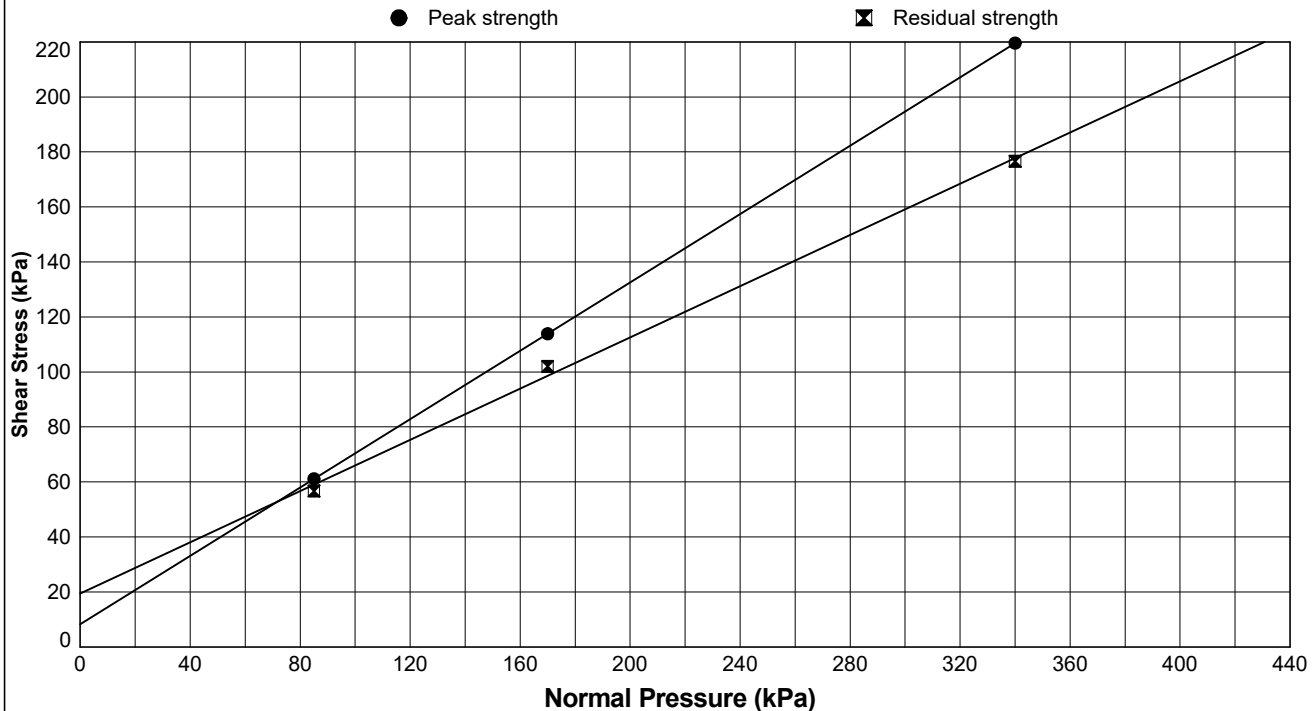
Sample Condition: **Recompacted**

Start Date: **23/01/2024**

End Date: **25/01/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**45.8**	**45.8**	**45.8**
	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)	**20.3**	**20.3**	**20.3**
	Initial Bulk Density	(Mg/m^3)	**1.69**	**1.69**	**1.69**
	Initial Dry Density	(Mg/m^3)	**1.16**	**1.16**	**1.16**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.2805**	**1.2793**	**1.2800**
	Initial Degree of Saturation	(%)	**95**	**95**	**95**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**3**	**3**	**3**
CONSOLIDATION	Normal Pressure	(kPa)	**85**	**170**	**340**
	Consolidated Height	(mm)	**18.6**	**18.1**	**17.3**
	Voids Ratio after Consolidation		**1.0908**	**1.0354**	**0.9383**
SHEAR	Shearing Rate	(mm/min)	**0.0213**	**0.0246**	**0.0259**
	Horiz. Displacement at Peak Shear Stress	(mm)	**4.2**	**4.9**	**4.9**
	Voids Ratio after Shear		**0.9439**	**0.8829**	**0.6568**
	Peak Shear Stress	(kPa)	**61**	**114**	**220**
	Residual Shear Stress	(kPa)	**57**	**102**	**177**

PEAK STRENGTH	Effective Cohesion (C ')	**8** (kPa)	Effective Angle of Friction (ϕ ')	**32**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C '$_R$)	**19** (kPa)	Residual Angle of Friction (ϕ '$_R$)	**25**	(deg)



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Date: **16/02/24**

Contract: **Sea Link - Richborough**

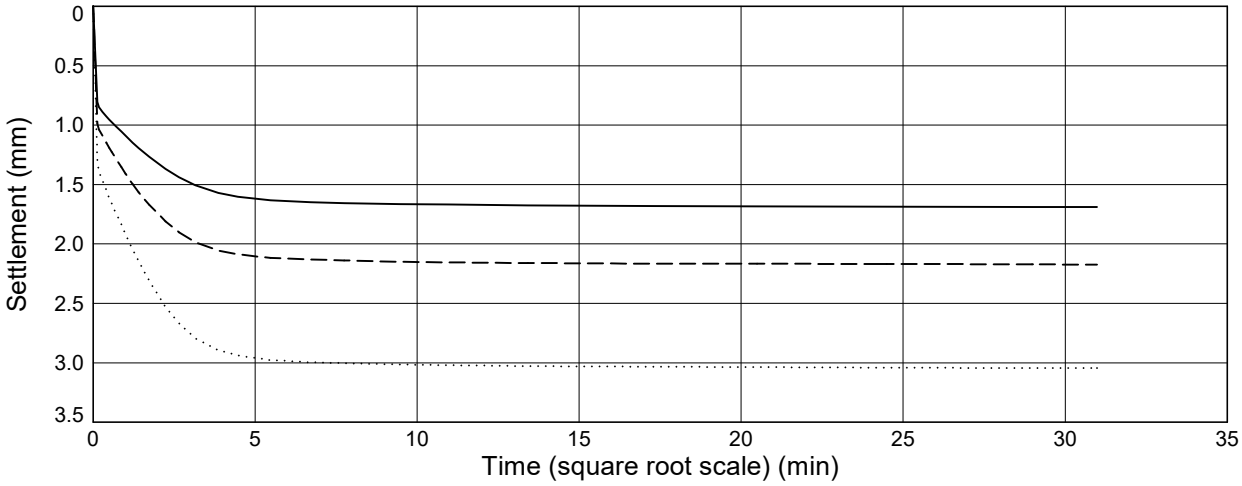
Contract Ref: **563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

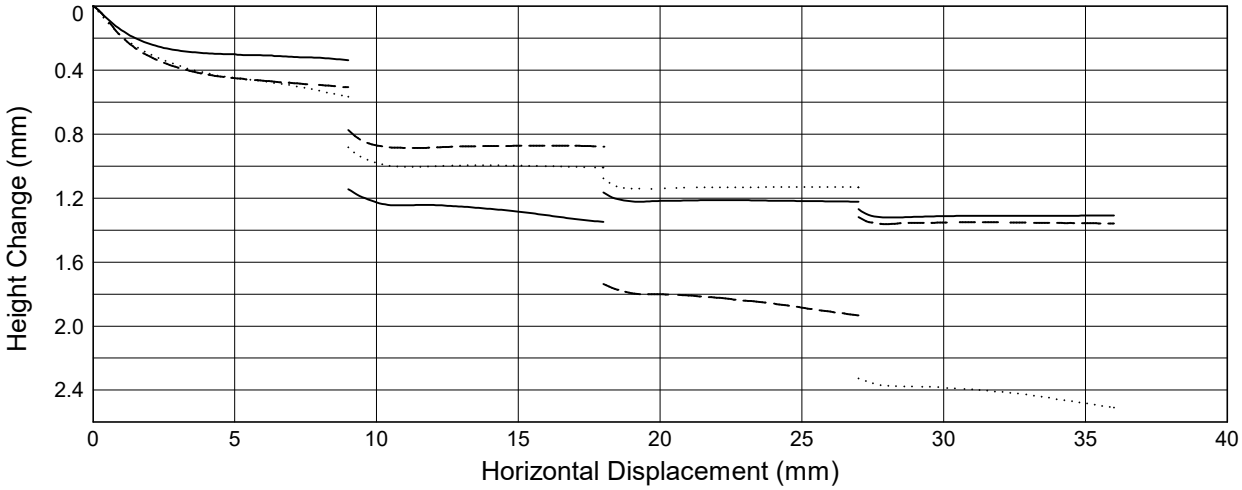
In accordance with BS EN ISO 17892-10

Position ID: **R22-BH203** Sample Ref: **29** Sample Type: **B** Depth (m): **8.50**

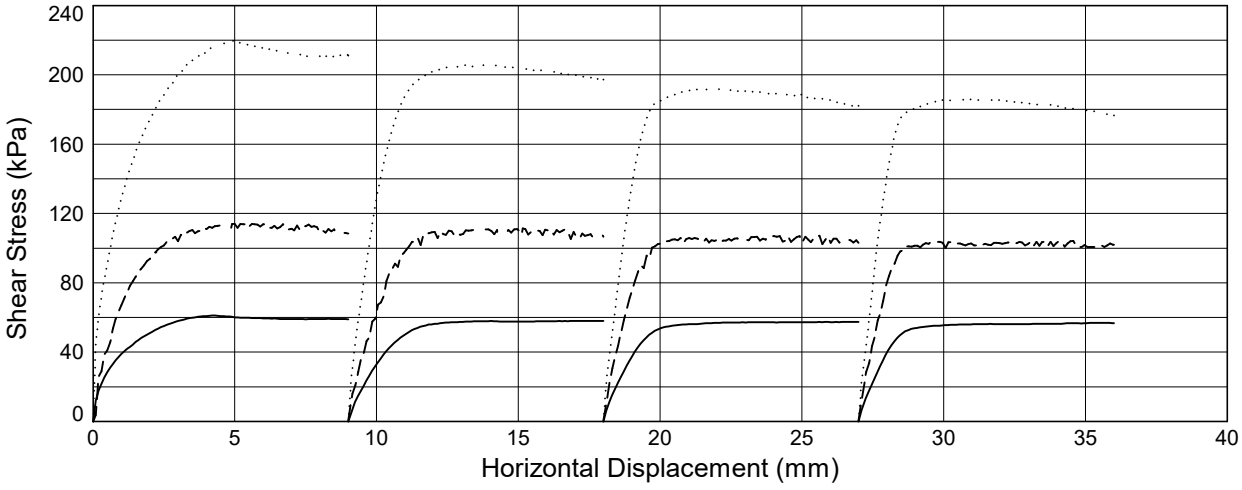
Consolidation Stage



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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DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **R22-BH204** Sample Ref: **18** Sample Type: **B** Depth (m): **4.55**

Description: **Grey slightly gravelly silty CLAY**

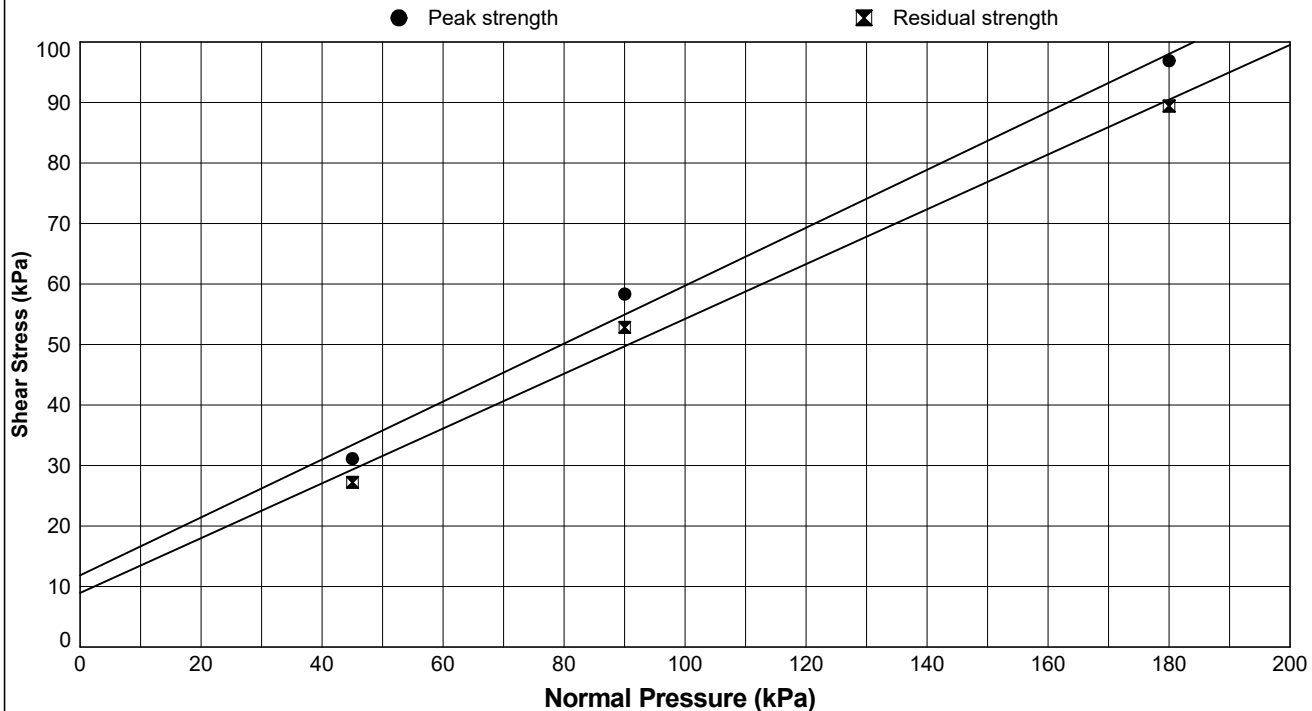
Sample Condition: **Recompacted**

Start Date: **13/01/2024**

End Date: **20/01/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**46.5**	**46.5**	**46.5**
	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)	**20.3**	**20.4**	**20.4**
	Initial Bulk Density	(Mg/m^3)	**1.67**	**1.67**	**1.67**
	Initial Dry Density	(Mg/m^3)	**1.14**	**1.14**	**1.14**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.3216**	**1.3223**	**1.3225**
	Initial Degree of Saturation	(%)	**93**	**93**	**93**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**6**	**6**	**6**
CONSOLIDATION	Normal Pressure	(kPa)	**45**	**90**	**180**
	Consolidated Height	(mm)	**19.2**	**18.2**	**17.4**
	Voids Ratio after Consolidation		**1.1893**	**1.0732**	**0.9811**
SHEAR	Shearing Rate	(mm/min)	**0.0062**	**0.0071**	**0.0088**
	Horiz. Displacement at Peak Shear Stress	(mm)	**4.5**	**4.9**	**4.2**
	Voids Ratio after Shear		**1.0147**	**0.8772**	**0.8293**
	Peak Shear Stress	(kPa)	**31**	**58**	**97**
	Residual Shear Stress	(kPa)	**27**	**53**	**89**

PEAK STRENGTH	Effective Cohesion (C ')	**12** (kPa)	Effective Angle of Friction (ϕ ')	**25.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C '$_R$)	**9** (kPa)	Residual Angle of Friction (ϕ '$_R$)	**24.5**	(deg)



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Date: **25/01/24**

Contract: **Sea Link - Richborough**

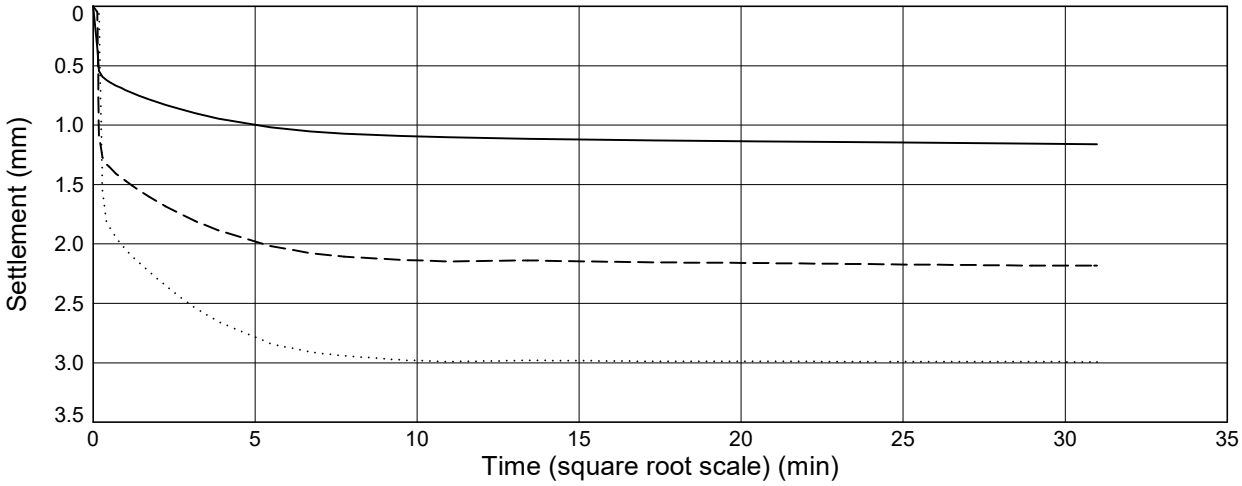
Contract Ref: **563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

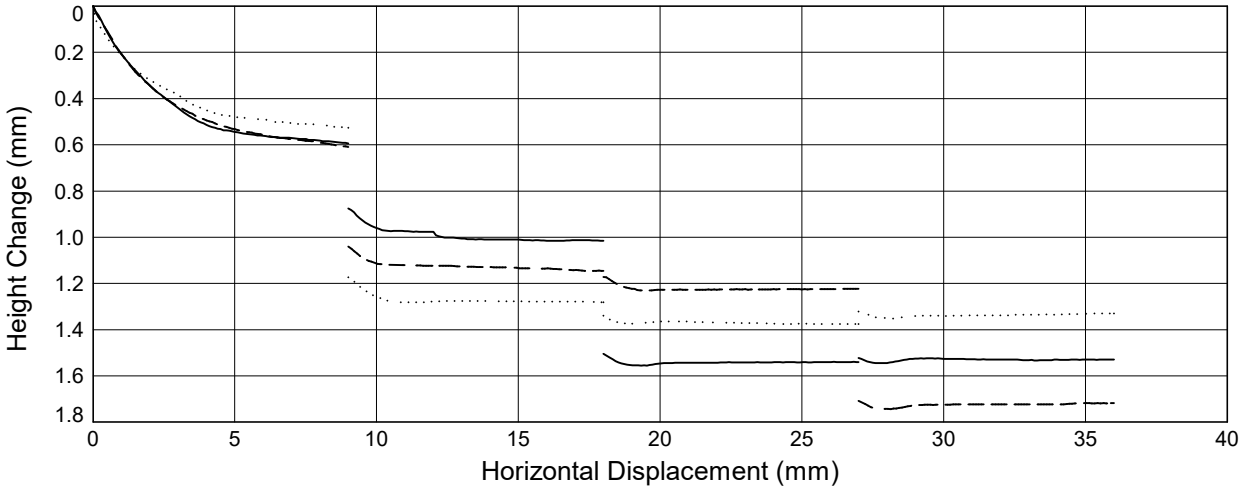
In accordance with BS EN ISO 17892-10

Position ID: **R22-BH204** Sample Ref: **18** Sample Type: **B** Depth (m): **4.55**

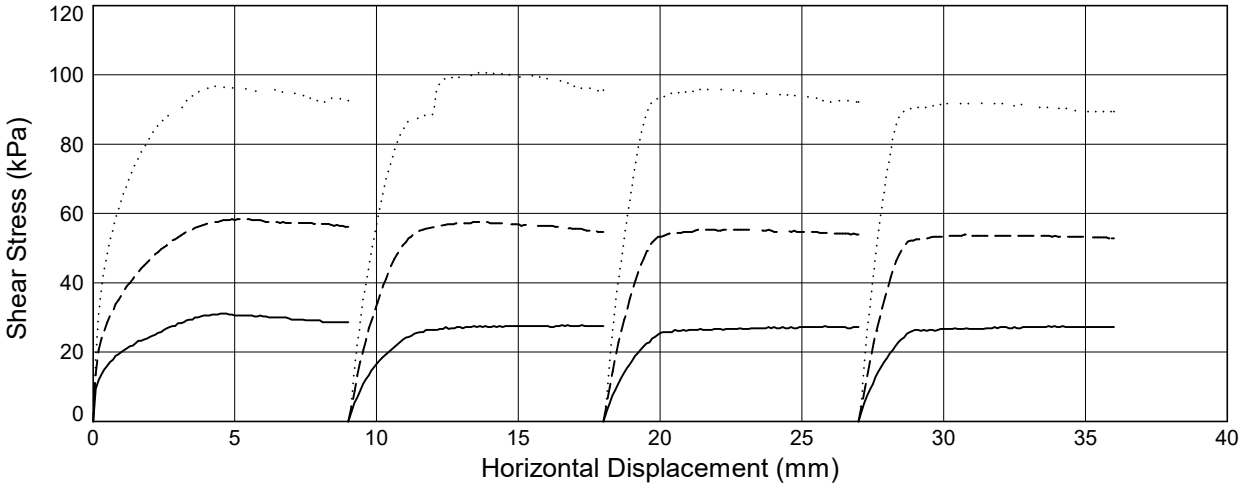
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**45** kPa) *Dashed Line* = Specimen 2 (**90** kPa) *Dotted Line* = Specimen 3 (**180** 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: **R22-BH204** Sample Ref: **34** Sample Type: **B** Depth (m): **8.60**

Description: **Dark grey slightly gravelly slightly sandy silty CLAY**

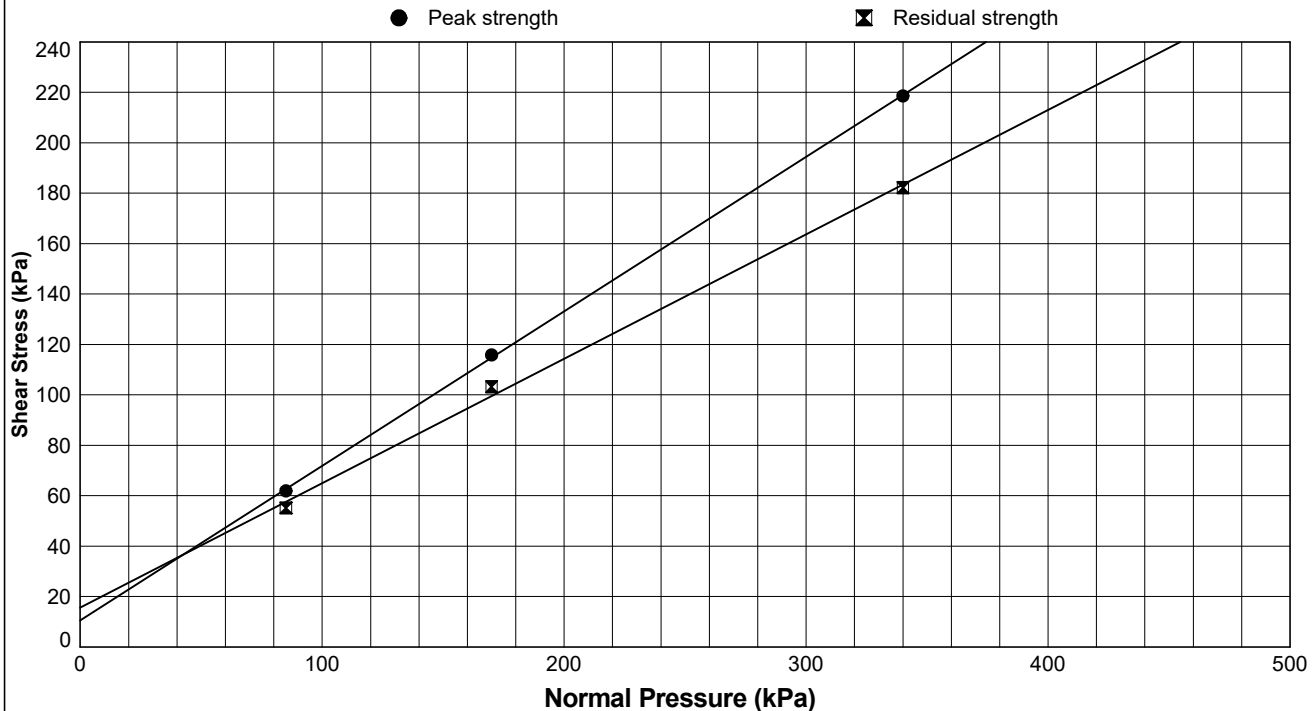
Sample Condition: **Recompacted**

Start Date: **30/01/2024**

End Date: **01/02/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**48.1**	**48.1**	**48.1**
	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)	**20.2**	**20.2**	**20.2**
	Initial Bulk Density	(Mg/m^3)	**1.67**	**1.68**	**1.68**
	Initial Dry Density	(Mg/m^3)	**1.13**	**1.13**	**1.13**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.3448**	**1.3428**	**1.3436**
	Initial Degree of Saturation	(%)	**95**	**95**	**95**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**3**	**3**	**3**
CONSOLIDATION	Normal Pressure	(kPa)	**85**	**170**	**340**
	Consolidated Height	(mm)	**18.5**	**17.8**	**17.2**
	Voids Ratio after Consolidation		**1.1430**	**1.0585**	**0.9907**
SHEAR	Shearing Rate	(mm/min)	**0.0190**	**0.0200**	**0.0230**
	Horiz. Displacement at Peak Shear Stress	(mm)	**5.2**	**5.3**	**5.1**
	Voids Ratio after Shear		**1.0025**	**0.9196**	**0.7973**
	Peak Shear Stress	(kPa)	**62**	**116**	**219**
	Residual Shear Stress	(kPa)	**55**	**103**	**182**

PEAK STRENGTH	Effective Cohesion (C ')	**10** (kPa)	Effective Angle of Friction (ϕ ')	**31.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C '$_R$)	**16** (kPa)	Residual Angle of Friction (ϕ '$_R$)	**26.5**	(deg)



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Date: **11/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

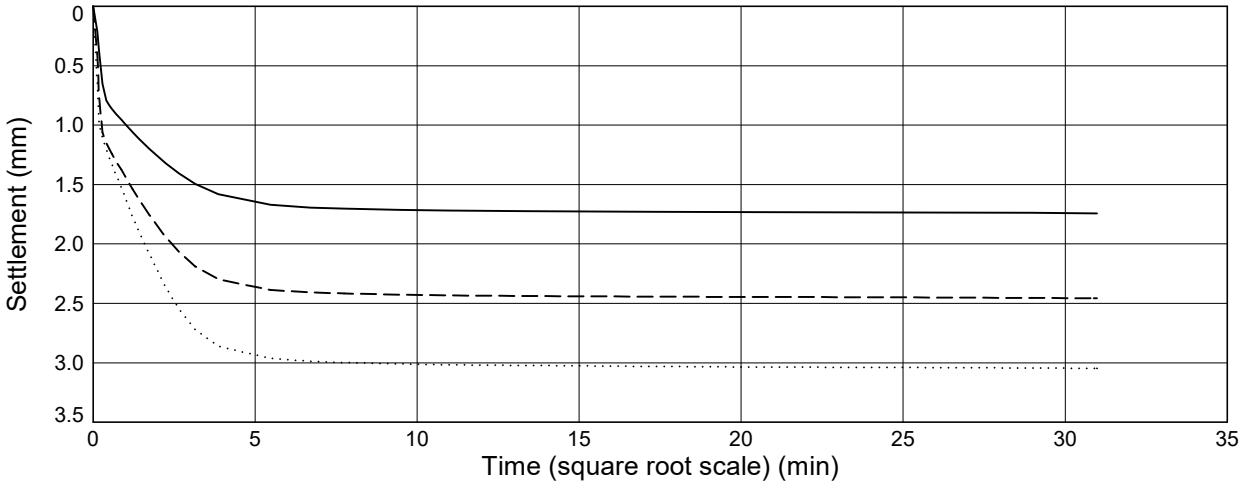
Contract Ref: **563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

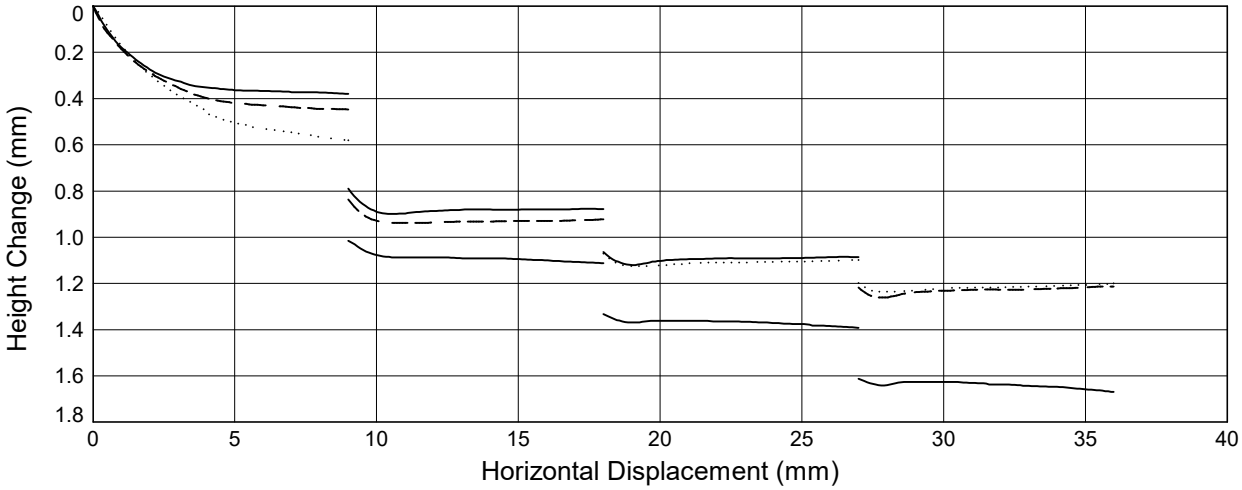
In accordance with BS EN ISO 17892-10

Position ID: **R22-BH204** Sample Ref: **34** Sample Type: **B** Depth (m): **8.60**

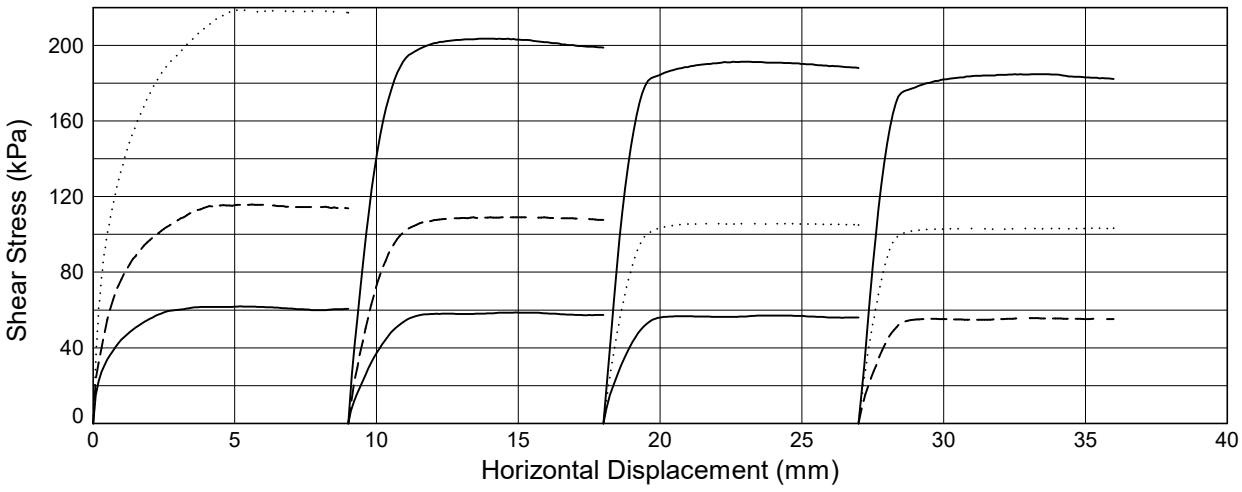
Consolidation Stage



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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Contract Ref: **563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **R22-BH204** Sample Ref: **72** Sample Type: **B** Depth (m): **18.60**

Description: **Grey CLAY**

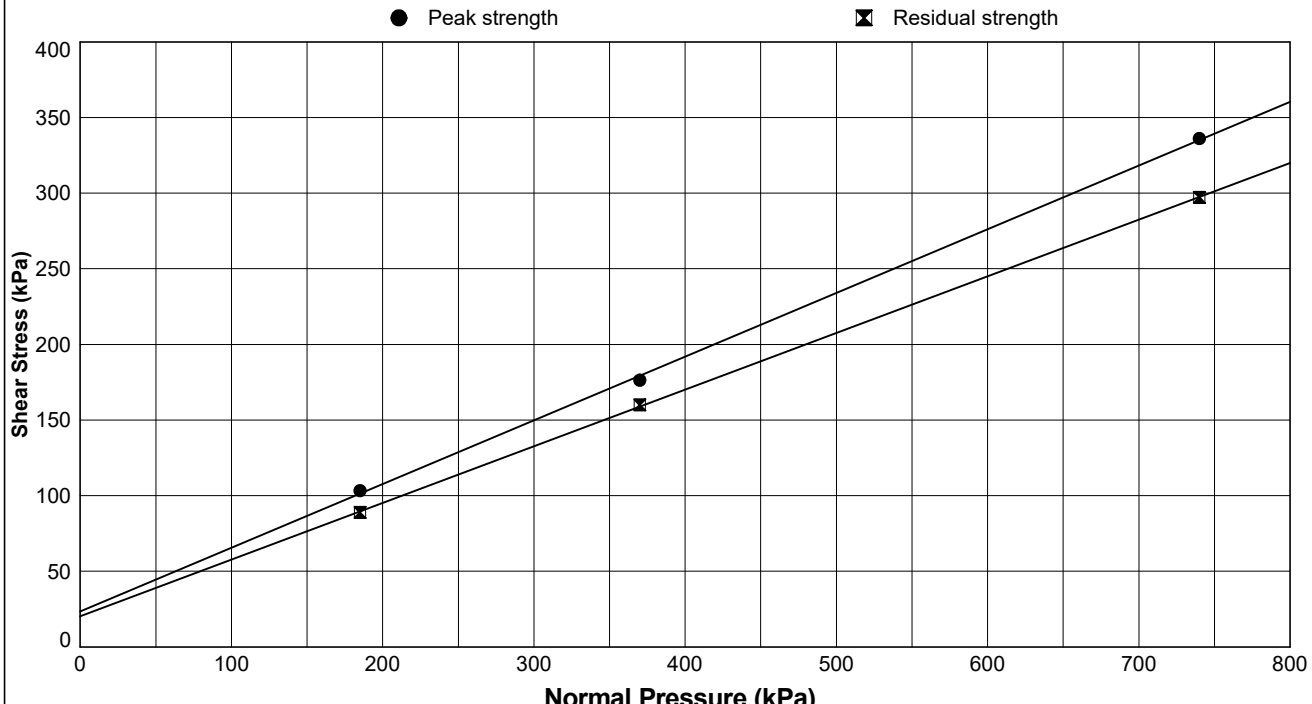
Sample Condition: **Recompacted**

Start Date: **11/03/2024**

End Date: **14/03/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**41.2**	**41.2**	**41.2**
	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)	**20.7**	**20.5**	**20.4**
	Initial Bulk Density	(Mg/m^3)	**1.80**	**1.81**	**1.82**
	Initial Dry Density	(Mg/m^3)	**1.27**	**1.28**	**1.29**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.0838**	**1.0689**	**1.0601**
	Initial Degree of Saturation	(%)	**101**	**102**	**103**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**4**	**4**	**4**
CONSOLIDATION	Normal Pressure	(kPa)	**185**	**370**	**740**
	Consolidated Height	(mm)	**18.7**	**17.1**	**16.5**
	Voids Ratio after Consolidation		**0.8837**	**0.7224**	**0.6660**
SHEAR	Shearing Rate	(mm/min)	**0.0058**	**0.0076**	**0.0065**
	Horiz. Displacement at Peak Shear Stress	(mm)	**4.4**	**5.6**	**5.7**
	Voids Ratio after Shear		**0.7306**	**0.6236**	**0.5651**
	Peak Shear Stress	(kPa)	**103**	**176**	**336**
	Residual Shear Stress	(kPa)	**89**	**160**	**297**

PEAK STRENGTH	Effective Cohesion (C ')	**23** (kPa)	Effective Angle of Friction (ϕ ')	**23**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C '$_R$)	**20** (kPa)	Residual Angle of Friction (ϕ '$_R$)	**20.5**	(deg)



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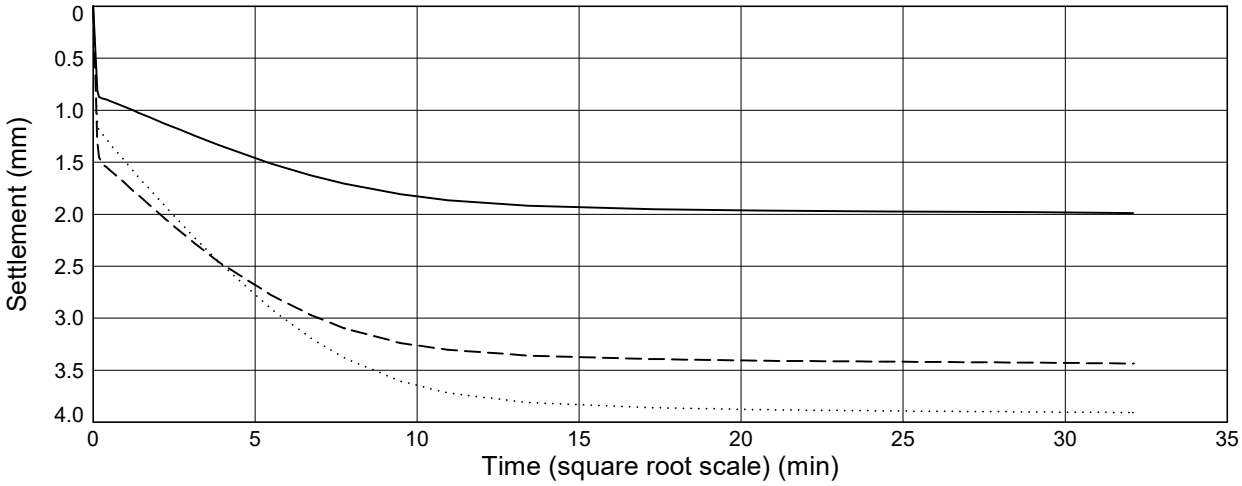
Contract Ref: **563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

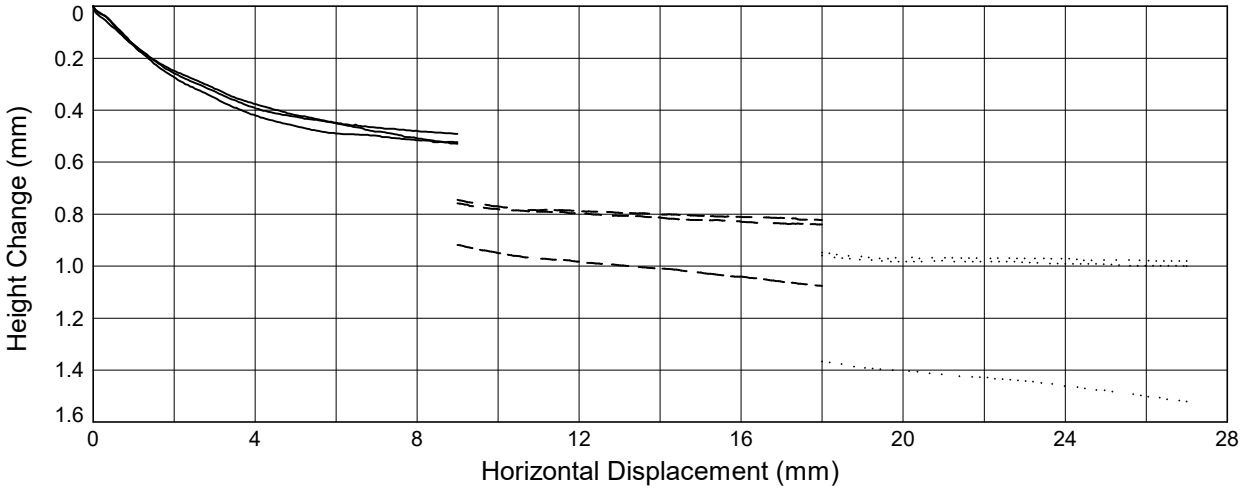
In accordance with BS EN ISO 17892-10

Position ID: **R22-BH204** Sample Ref: **72** Sample Type: **B** Depth (m): **18.60**

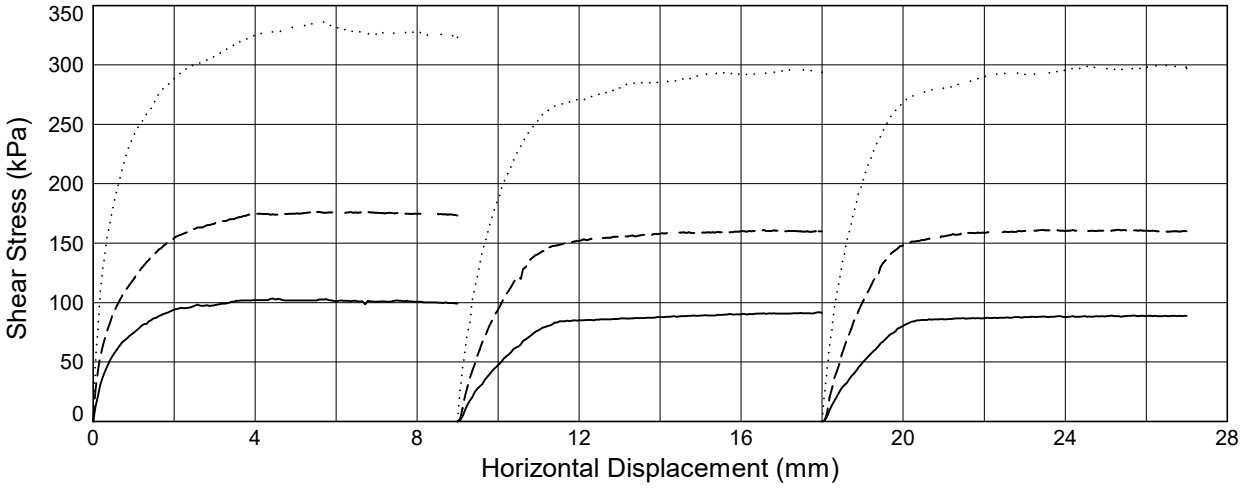
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**185** kPa) *Dashed Line* = Specimen 2 (**370** kPa) *Dotted Line* = Specimen 3 (**740** kPa)

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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: **R22-BH205** Sample Ref: **13** Sample Type: **B** Depth (m): **3.50**

Description: **Brownish grey silty CLAY**

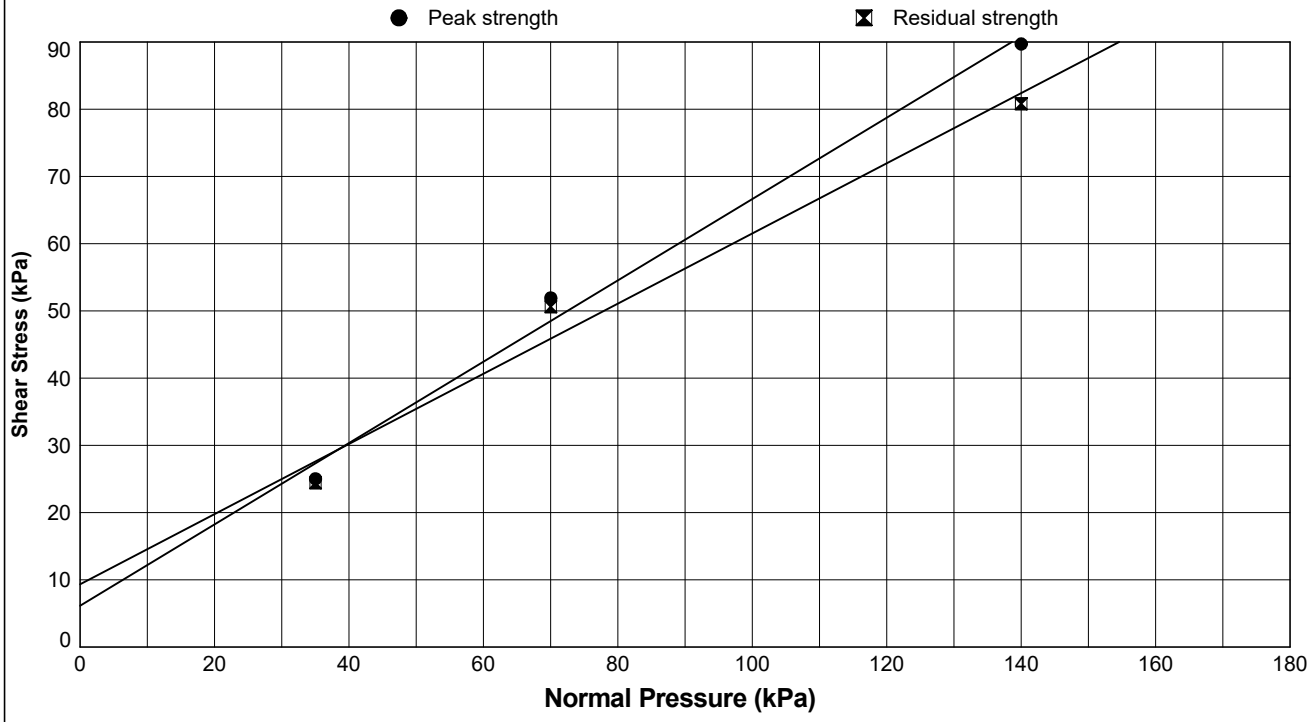
Sample Condition: **Recompacted**

Start Date: **26/02/2024**

End Date: **29/02/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**39.7**	**39.7**	**39.7**
	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)	**20.2**	**20.3**	**20.2**
	Initial Bulk Density	(Mg/m^3)	**1.84**	**1.83**	**1.84**
	Initial Dry Density	(Mg/m^3)	**1.32**	**1.31**	**1.32**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.0132**	**1.0234**	**1.0140**
	Initial Degree of Saturation	(%)	**104**	**103**	**104**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**4**	**4**	**4**
CONSOLIDATION	Normal Pressure	(kPa)	**35**	**70**	**140**
	Consolidated Height	(mm)	**18.1**	**17.3**	**16.8**
	Voids Ratio after Consolidation		**0.7998**	**0.7245**	**0.6738**
SHEAR	Shearing Rate	(mm/min)	**0.0092**	**0.0100**	**0.0116**
	Horiz. Displacement at Peak Shear Stress	(mm)	**8.8**	**5.6**	**5.0**
	Voids Ratio after Shear		**0.6626**	**0.5854**	**0.5479**
	Peak Shear Stress	(kPa)	**25**	**52**	**90**
	Residual Shear Stress	(kPa)	**24**	**51**	**81**

PEAK STRENGTH	Effective Cohesion (C ')	**6** (kPa)	Effective Angle of Friction (ϕ ')	**31**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C '$_R$)	**9** (kPa)	Residual Angle of Friction (ϕ '$_R$)	**27.5**	(deg)



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Contract: **SEA Link FEED - Kent Onshore Cable Link**

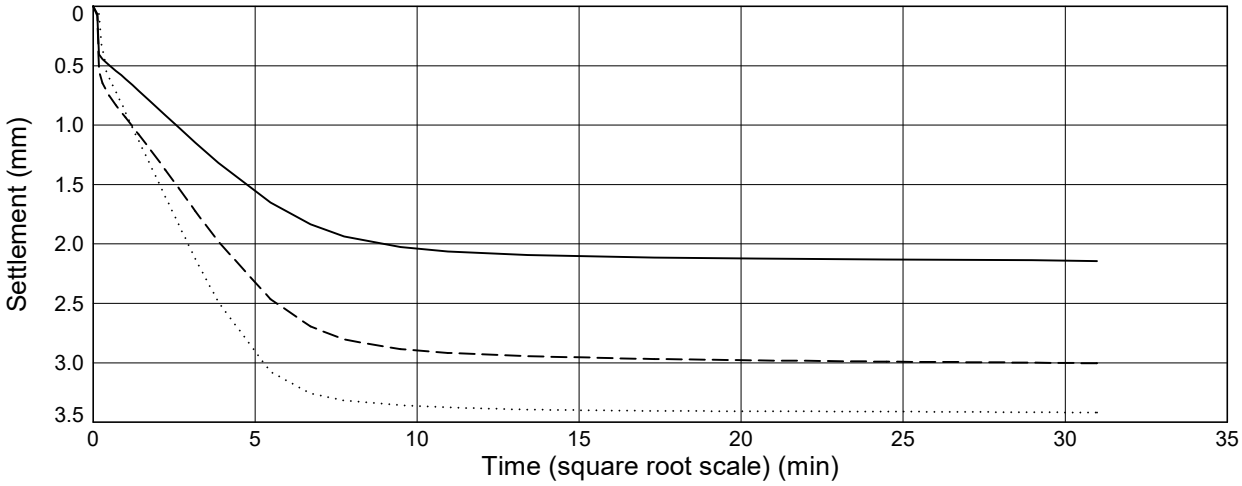
Contract Ref: **563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

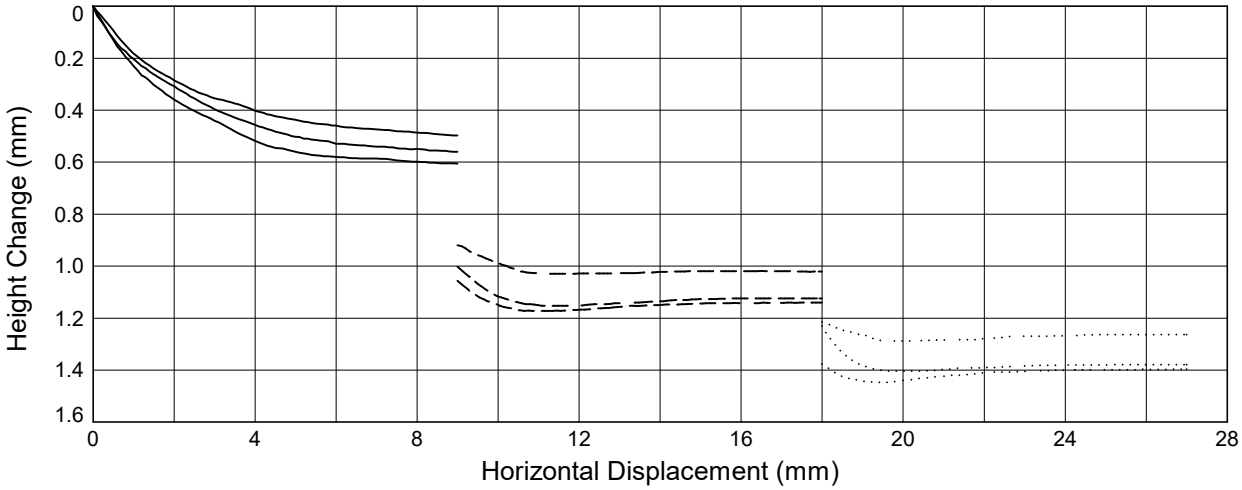
In accordance with BS EN ISO 17892-10

Position ID: **R22-BH205** Sample Ref: **13** Sample Type: **B** Depth (m): **3.50**

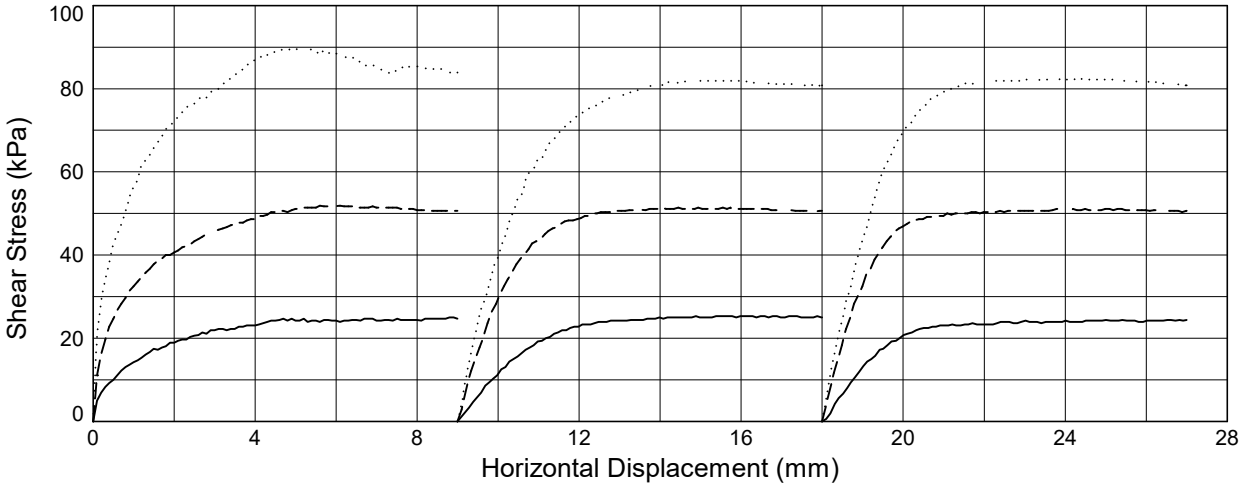
Consolidation Stage



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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Contract	Contract Ref:
SEA Link FEED - Kent Onshore Cable Link	**563607**

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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: **R22-BH205** Sample Ref: **41** Sample Type: **B** Depth (m): **11.50**

Description: **Grey mottled brown silty CLAY**

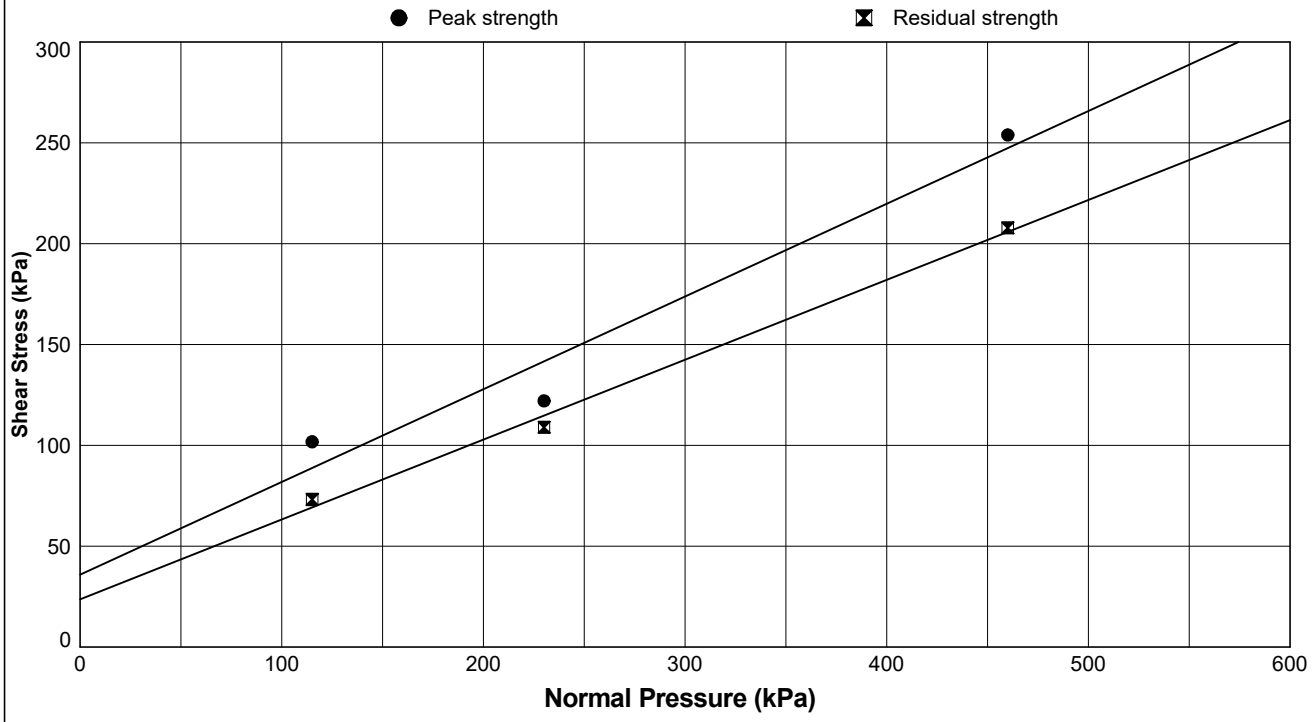
Sample Condition: **Recompacted**

Start Date: **26/02/2024**

End Date: **29/02/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**56.1**	**56.1**	**56.1**
	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)	**20.2**	**20.2**	**20.3**
	Initial Bulk Density	(Mg/m^3)	**1.64**	**1.64**	**1.64**
	Initial Dry Density	(Mg/m^3)	**1.05**	**1.05**	**1.05**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.5255**	**1.5247**	**1.5264**
	Initial Degree of Saturation	(%)	**98**	**98**	**97**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**4**	**4**	**4**
CONSOLIDATION	Normal Pressure	(kPa)	**115**	**230**	**460**
	Consolidated Height	(mm)	**16.8**	**16.0**	**15.2**
	Voids Ratio after Consolidation		**1.0916**	**0.9920**	**0.9018**
SHEAR	Shearing Rate	(mm/min)	**0.0082**	**0.0090**	**0.0094**
	Horiz. Displacement at Peak Shear Stress	(mm)	**5.7**	**5.4**	**6.1**
	Voids Ratio after Shear		**0.9087**	**0.8516**	**0.7533**
	Peak Shear Stress	(kPa)	**102**	**122**	**254**
	Residual Shear Stress	(kPa)	**73**	**109**	**208**

PEAK STRENGTH	Effective Cohesion (C ')	**36** (kPa)	Effective Angle of Friction (ϕ ')	**24.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C '$_R$)	**24** (kPa)	Residual Angle of Friction (ϕ '$_R$)	**21.5**	(deg)



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Compiled By: [redacted]

Date: **17/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

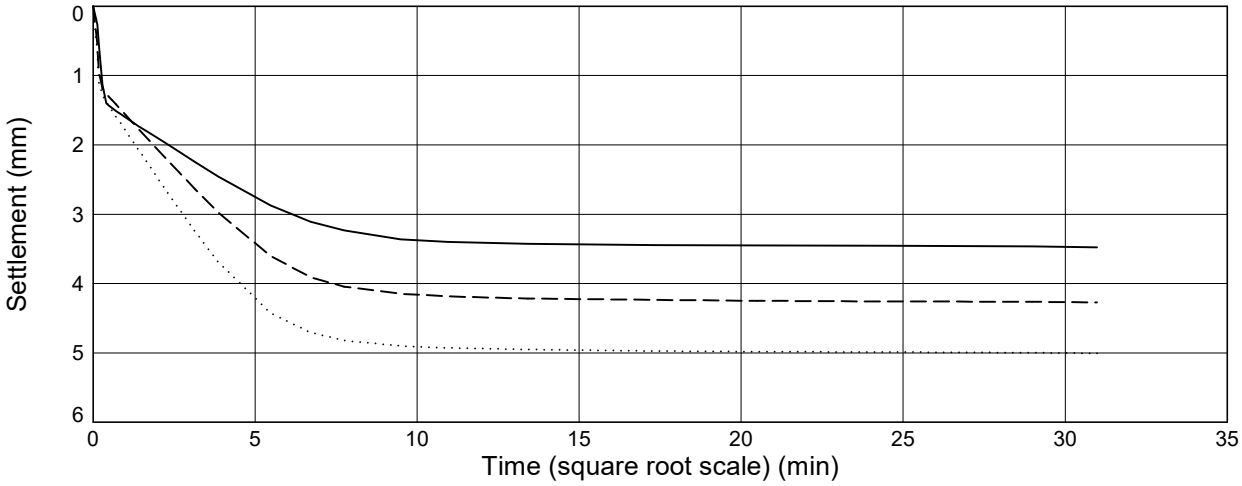
Contract Ref: **563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

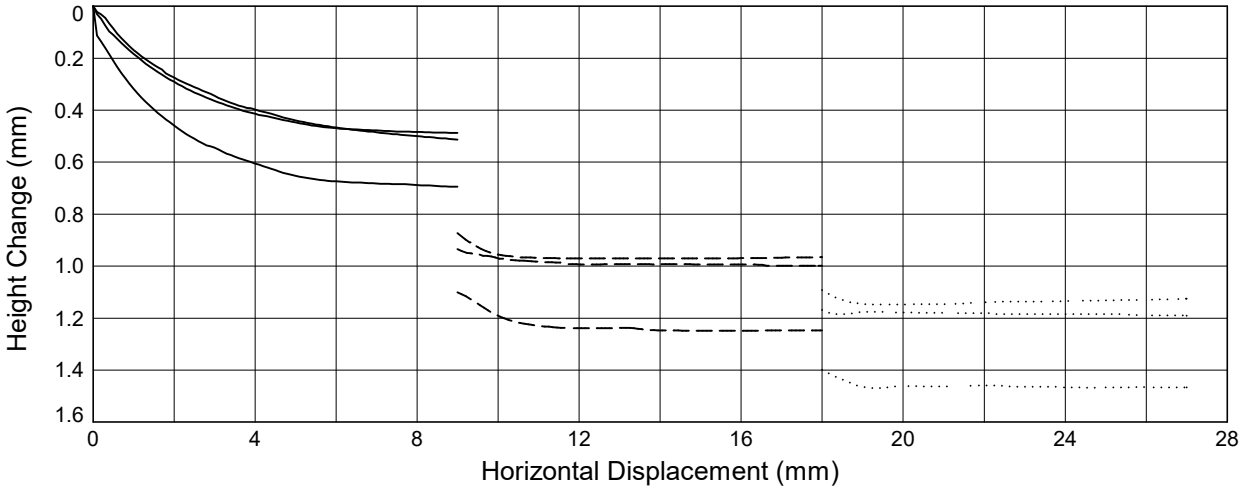
In accordance with BS EN ISO 17892-10

Position ID: **R22-BH205** Sample Ref: **41** Sample Type: **B** Depth (m): **11.50**

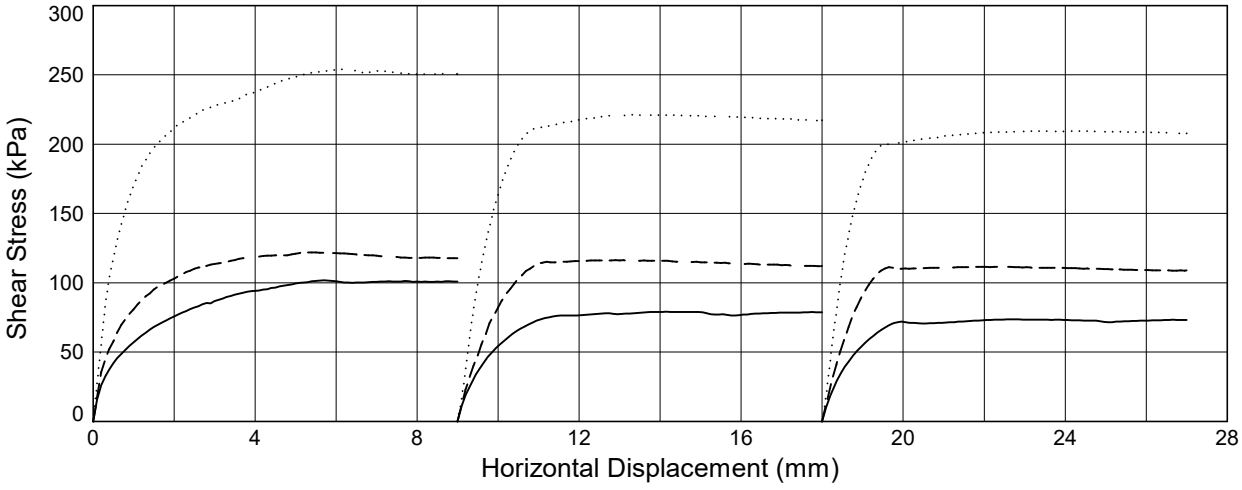
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**115** kPa) *Dashed Line* = Specimen 2 (**230** kPa) *Dotted Line* = Specimen 3 (**460** kPa)

STRUCTURAL SOILS 1a Princess Street Bedminster Bristol BS3 4AG	Compiled By [redacted]	Date **17/03/24**
	Contract **SEA Link FEED - Kent Onshore Cable Link**	Contract Ref: **563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **R22-BH205** Sample Ref: **59** Sample Type: **B** Depth (m): **17.50**

Description: **Dark grey slightly gravelly silty CLAY**

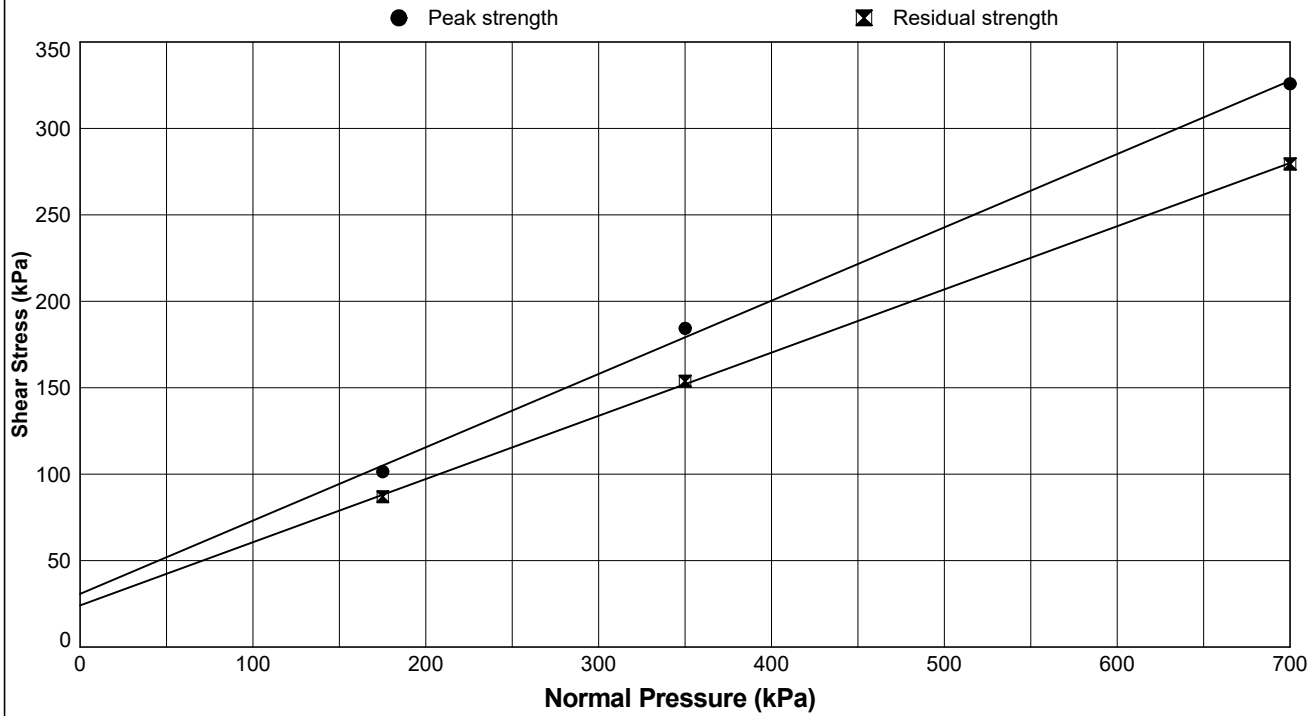
Sample Condition: **Recompacted**

Start Date: **08/02/2024**

End Date: **14/02/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**58.4**	**58.4**	**58.4**
	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)	**1.60**	**1.60**	**1.60**
	Initial Dry Density	(Mg/m^3)	**1.01**	**1.01**	**1.01**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.6190**	**1.6183**	**1.6171**
	Initial Degree of Saturation	(%)	**96**	**96**	**96**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**5**	**5**	**5**
CONSOLIDATION	Normal Pressure	(kPa)	**175**	**350**	**700**
	Consolidated Height	(mm)	**16.0**	**15.2**	**14.2**
	Voids Ratio after Consolidation		**1.0710**	**0.9745**	**0.8348**
SHEAR	Shearing Rate	(mm/min)	**0.0090**	**0.0092**	**0.0097**
	Horiz. Displacement at Peak Shear Stress	(mm)	**5.8**	**5.5**	**2.9**
	Voids Ratio after Shear		**0.8956**	**0.8253**	**0.7060**
	Peak Shear Stress	(kPa)	**101**	**184**	**326**
	Residual Shear Stress	(kPa)	**87**	**154**	**279**

PEAK STRENGTH	Effective Cohesion (C ')	**31** (kPa)	Effective Angle of Friction (ϕ ')	**23**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C '$_R$)	**24** (kPa)	Residual Angle of Friction (ϕ '$_R$)	**20**	(deg)



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Date: **14/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

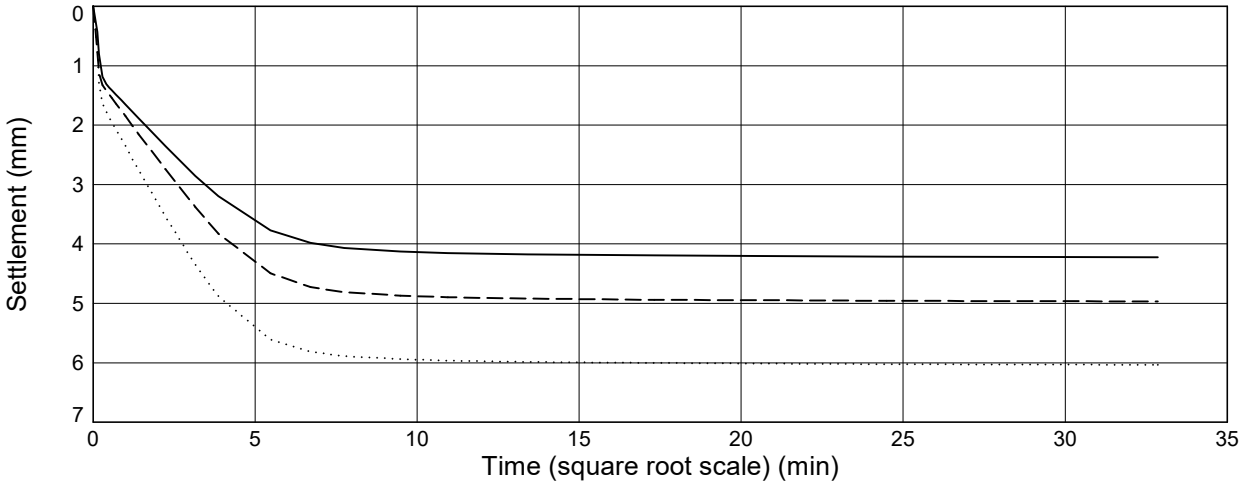
Contract Ref: **563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

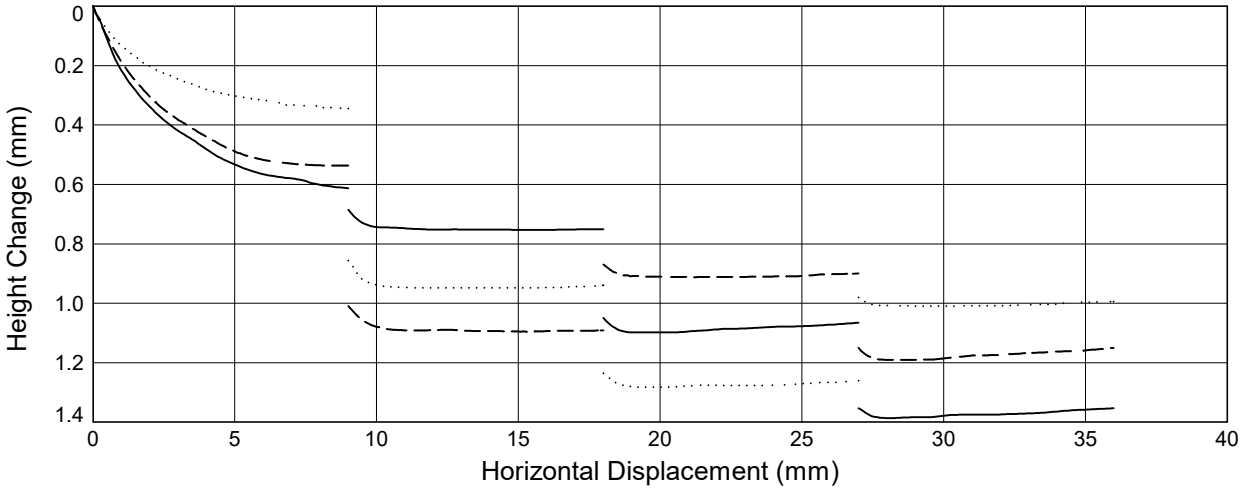
In accordance with BS EN ISO 17892-10

Position ID: **R22-BH205** Sample Ref: **59** Sample Type: **B** Depth (m): **17.50**

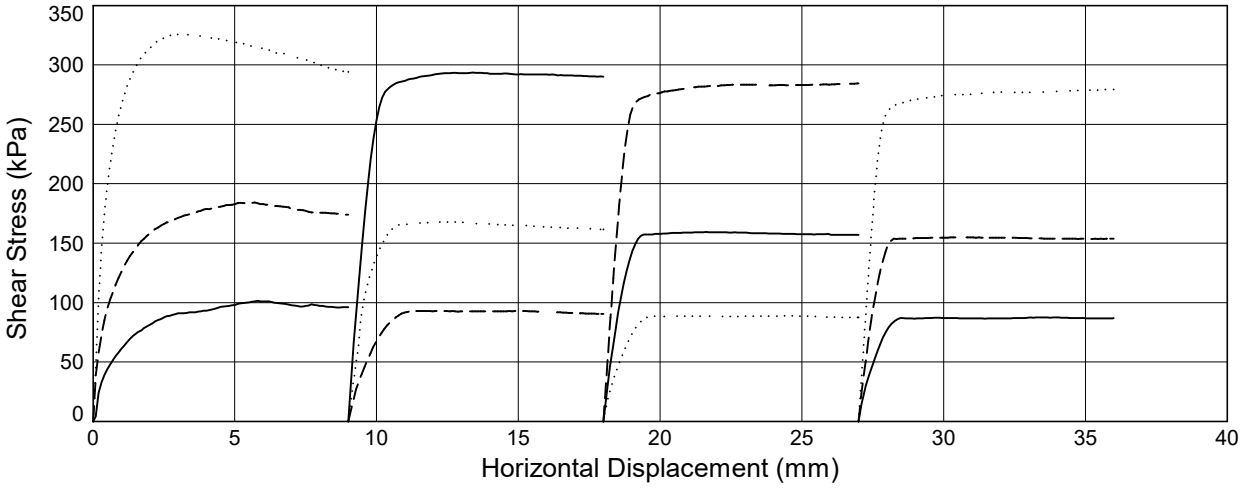
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**175** kPa) *Dashed Line* = Specimen 2 (**350** kPa) *Dotted Line* = Specimen 3 (**700** kPa)

STRUCTURAL SOILS 1a Princess Street Bedminster Bristol BS3 4AG	Compiled By [redacted]	Date **23/02/24**
	Contract **Sea Link - Richborough**	Contract Ref: **563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **R22-BH501** Sample Ref: **12** Sample Type: **B** Depth (m): **3.50**

Description: **Brown silty CLAY**

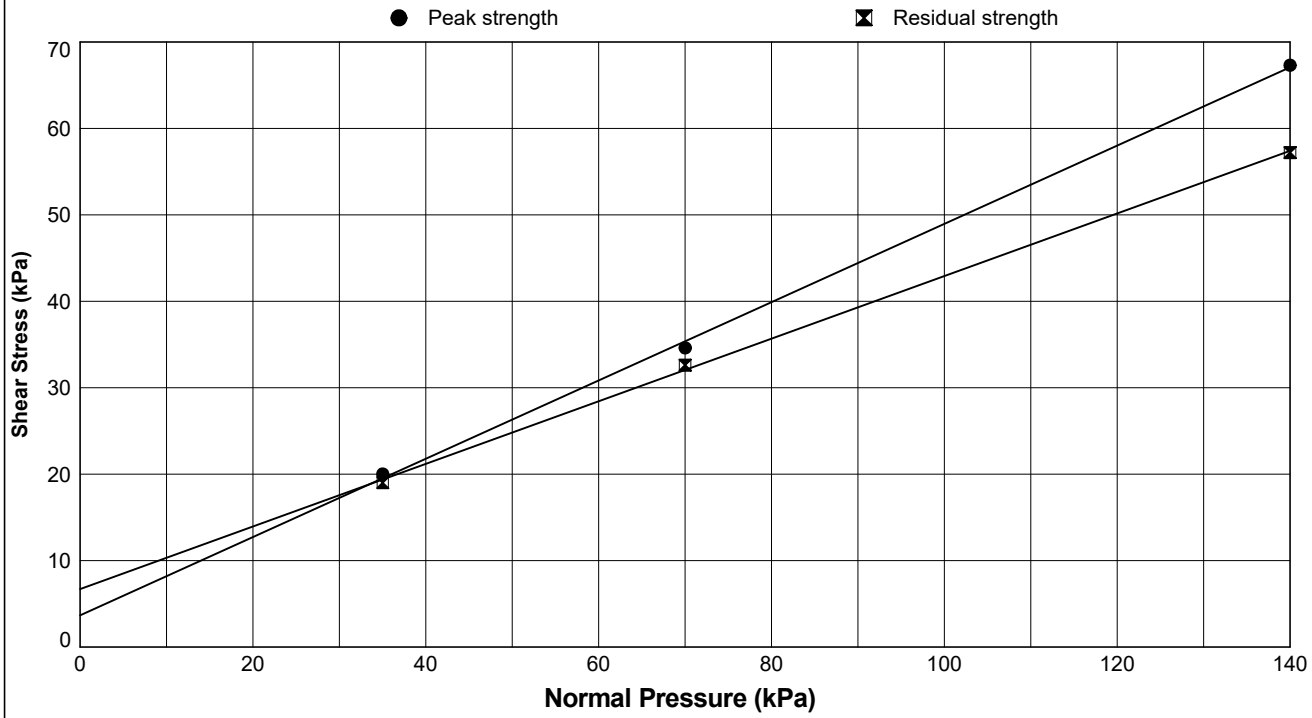
Sample Condition: **Recompacted**

Start Date: **14/02/2024**

End Date: **21/02/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**52.9**	**52.9**	**52.9**
	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)	**1.70**	**1.70**	**1.70**
	Initial Dry Density	(Mg/m^3)	**1.11**	**1.11**	**1.11**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.3854**	**1.3853**	**1.3853**
	Initial Degree of Saturation	(%)	**101**	**101**	**101**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**7**	**7**	**7**
CONSOLIDATION	Normal Pressure	(kPa)	**35**	**70**	**140**
	Consolidated Height	(mm)	**17.8**	**16.1**	**15.0**
	Voids Ratio after Consolidation		**1.0937**	**0.8898**	**0.7697**
SHEAR	Shearing Rate	(mm/min)	**0.0032**	**0.0033**	**0.0033**
	Horiz. Displacement at Peak Shear Stress	(mm)	**3.3**	**4.7**	**5.4**
	Voids Ratio after Shear		**0.9385**	**0.6949**	**0.5737**
	Peak Shear Stress	(kPa)	**20**	**35**	**67**
	Residual Shear Stress	(kPa)	**19**	**33**	**57**

PEAK STRENGTH	Effective Cohesion (C ')	**4** (kPa)	Effective Angle of Friction (ϕ ')	**24.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C '$_R$)	**7** (kPa)	Residual Angle of Friction (ϕ '$_R$)	**20**	(deg)



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Compiled By: [redacted]

Date: **27/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

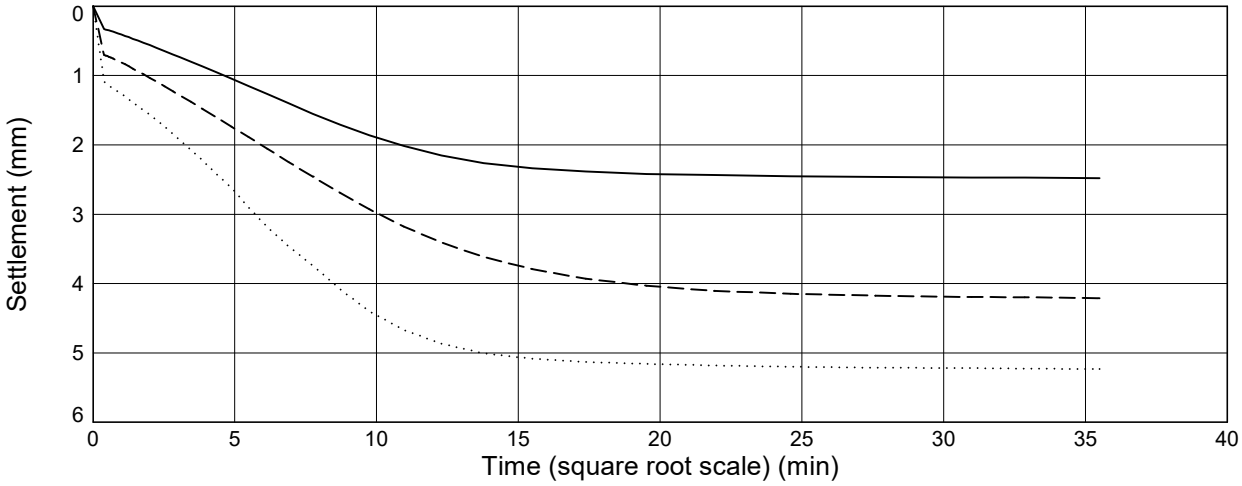
Contract Ref: **563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

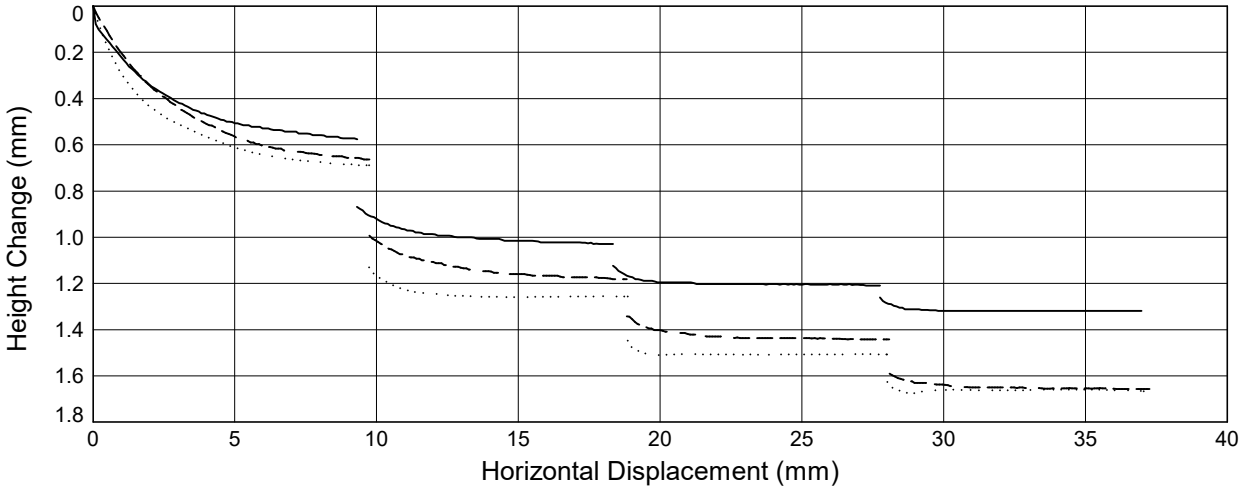
In accordance with BS EN ISO 17892-10

Position ID: **R22-BH501** Sample Ref: **12** Sample Type: **B** Depth (m): **3.50**

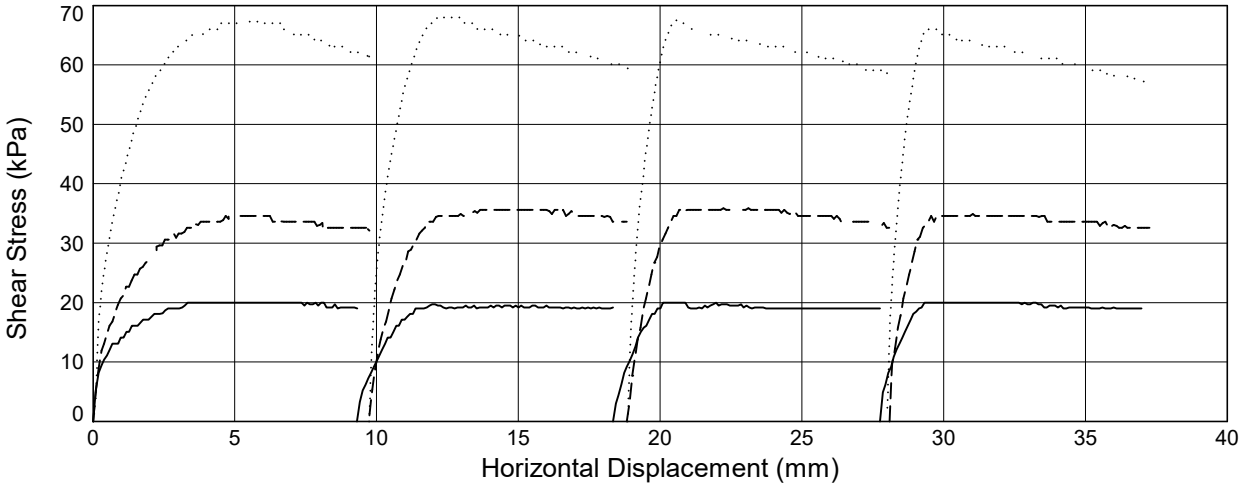
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**35** kPa) *Dashed Line* = Specimen 2 (**70** kPa) *Dotted Line* = Specimen 3 (**140** kPa)

STRUCTURAL SOILS 1a Princess Street Bedminster Bristol BS3 4AG	Compiled By [redacted]	Date **27/03/24**
	Contract **SEA Link FEED - Kent Onshore Cable Link**	Contract Ref: **563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **R22-BH501** Sample Ref: **39** Sample Type: **B** Depth (m): **12.50**

Description: **Grey gravelly silty CLAY**

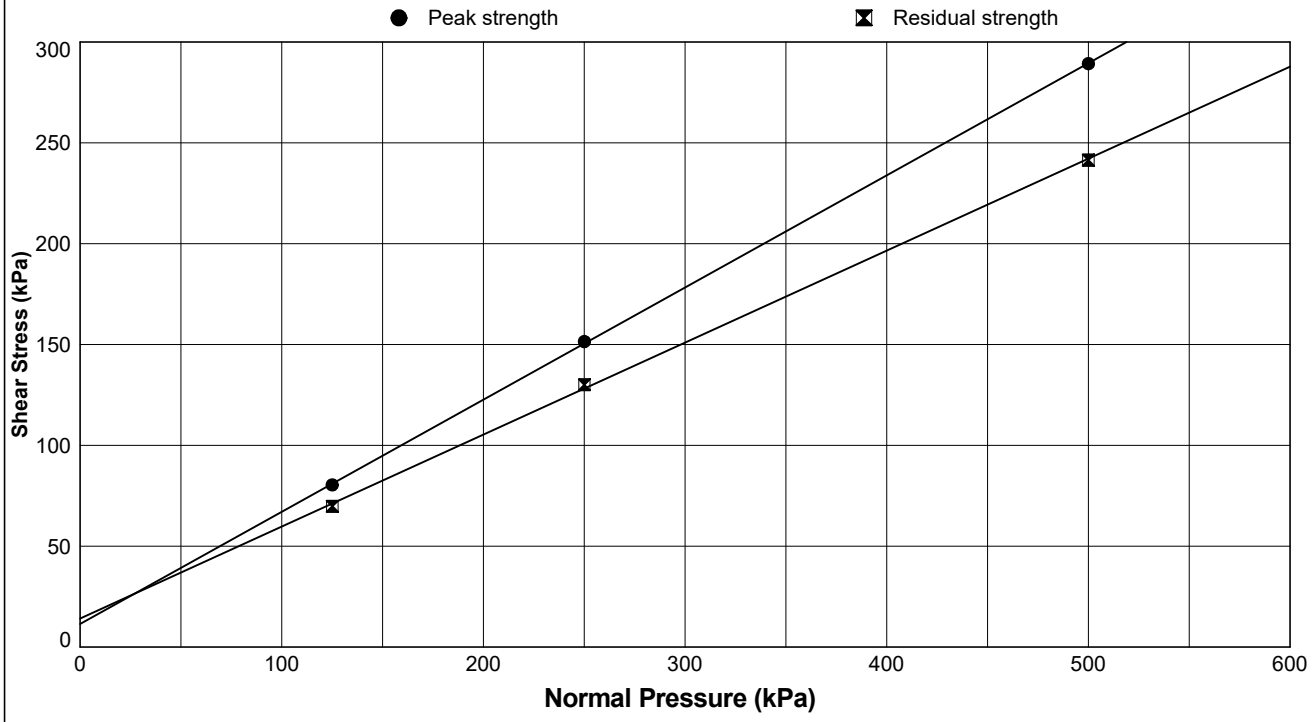
Sample Condition: **Recompacted**

Start Date: **12/02/2024**

End Date: **15/02/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**48.7**	**48.7**	**48.7**
	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)	**20.2**	**20.2**	**20.2**
	Initial Bulk Density	(Mg/m^3)	**1.68**	**1.68**	**1.68**
	Initial Dry Density	(Mg/m^3)	**1.13**	**1.13**	**1.13**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.3434**	**1.3424**	**1.3433**
	Initial Degree of Saturation	(%)	**96**	**96**	**96**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**4**	**4**	**4**
CONSOLIDATION	Normal Pressure	(kPa)	**125**	**250**	**500**
	Consolidated Height	(mm)	**17.9**	**16.4**	**16.0**
	Voids Ratio after Consolidation		**1.0689**	**0.8976**	**0.8531**
SHEAR	Shearing Rate	(mm/min)	**0.0128**	**0.0137**	**0.0173**
	Horiz. Displacement at Peak Shear Stress	(mm)	**4.4**	**5.2**	**5.5**
	Voids Ratio after Shear		**0.9024**	**0.7399**	**0.6958**
	Peak Shear Stress	(kPa)	**80**	**151**	**289**
	Residual Shear Stress	(kPa)	**70**	**130**	**241**

PEAK STRENGTH	Effective Cohesion (C ')	**11** (kPa)	Effective Angle of Friction (ϕ ')	**29**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C '$_R$)	**14** (kPa)	Residual Angle of Friction (ϕ '$_R$)	**24.5**	(deg)



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1a Princess Street
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Compiled By: [redacted]

Date: **17/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

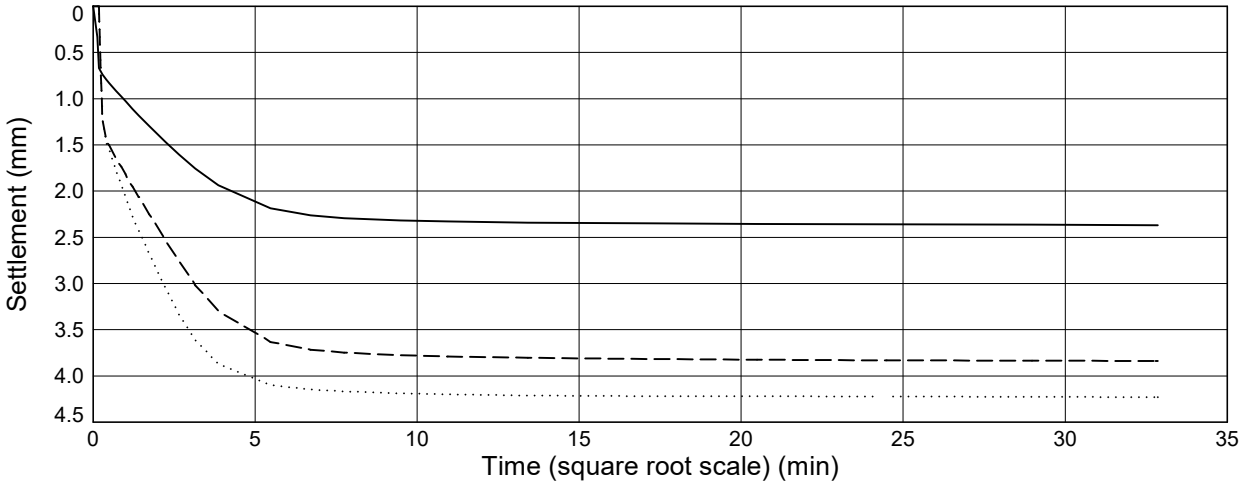
Contract Ref: **563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

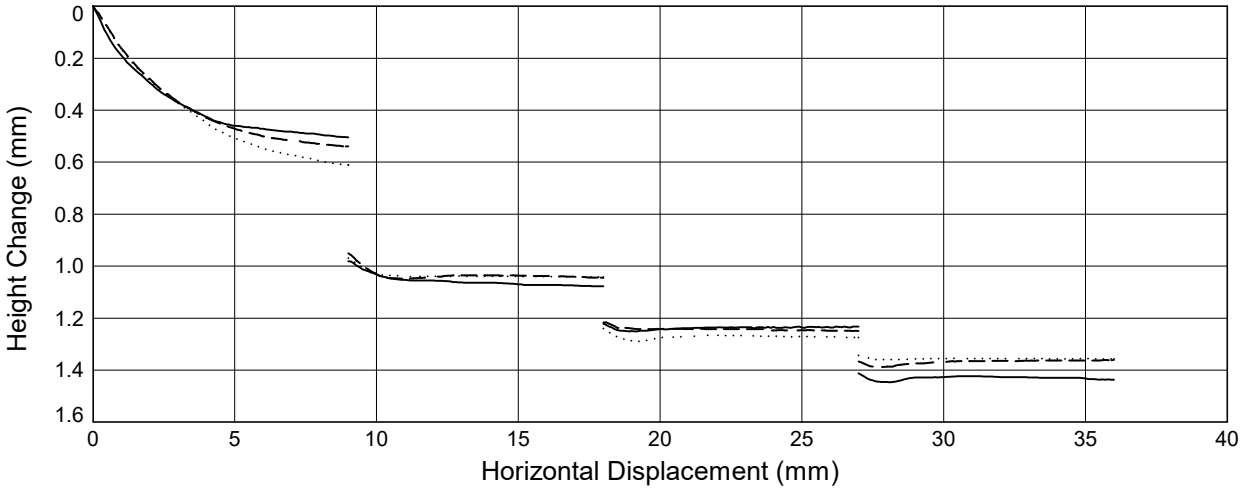
In accordance with BS EN ISO 17892-10

Position ID: **R22-BH501** Sample Ref: **39** Sample Type: **B** Depth (m): **12.50**

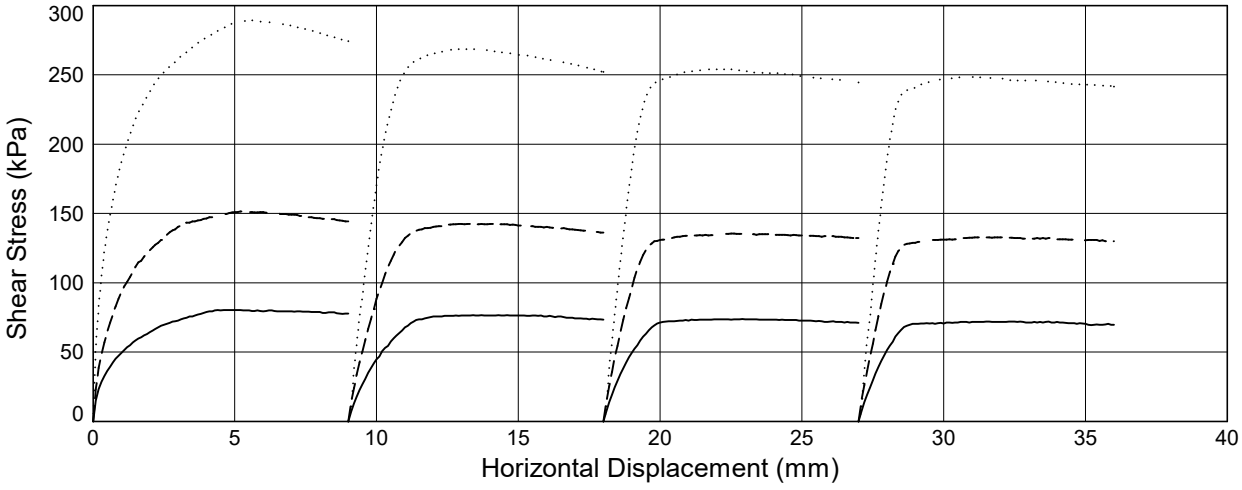
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**125** kPa) *Dashed Line* = Specimen 2 (**250** kPa) *Dotted Line* = Specimen 3 (**500** kPa)

STRUCTURAL SOILS 1a Princess Street Bedminster Bristol BS3 4AG	Compiled By [redacted]	Date **17/03/24**
	Contract **SEA Link FEED - Kent Onshore Cable Link**	Contract Ref: **563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **R22-BH501** Sample Ref: **63** Sample Type: **B** Depth (m): **20.50**

Description: **Grey silty CLAY**

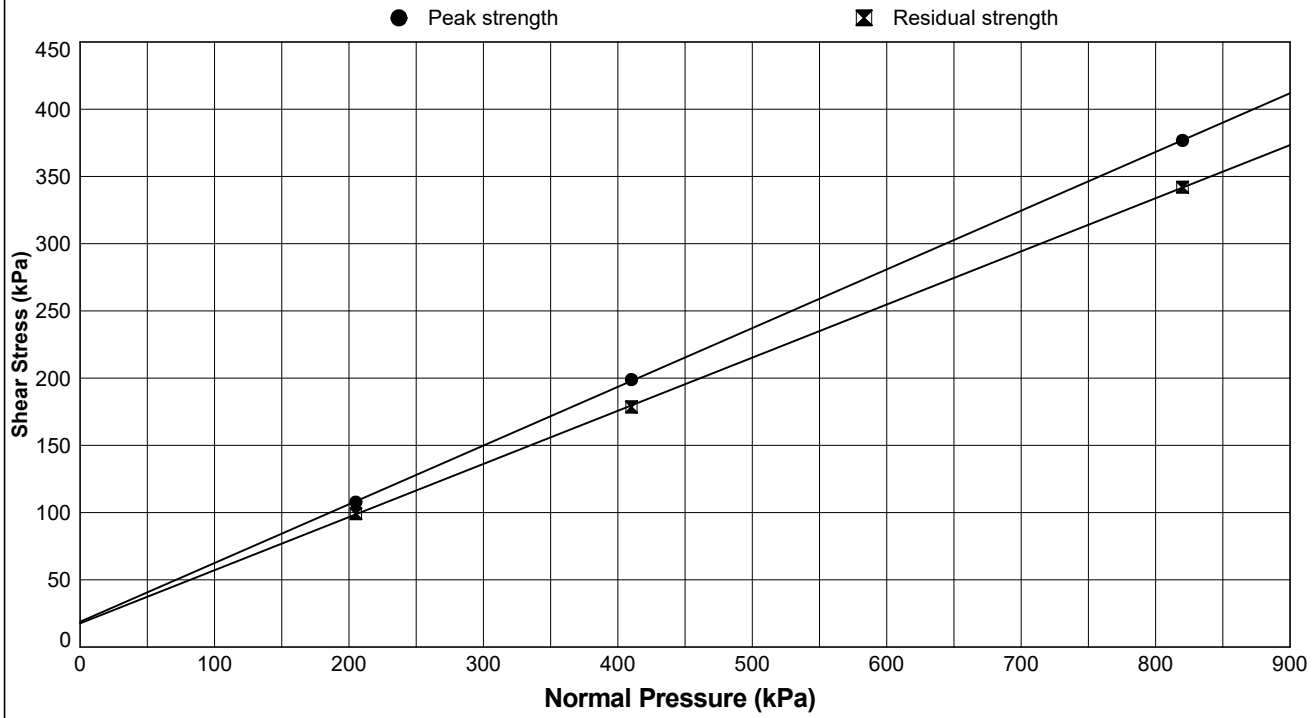
Sample Condition: **Recompacted**

Start Date: **22/01/2024**

End Date: **26/01/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**36.9**	**36.9**	**36.9**
	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)	**1.80**	**1.80**	**1.80**
	Initial Dry Density	(Mg/m^3)	**1.31**	**1.31**	**1.31**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.0186**	**1.0188**	**1.0193**
	Initial Degree of Saturation	(%)	**96**	**96**	**96**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**5**	**5**	**5**
CONSOLIDATION	Normal Pressure	(kPa)	**205**	**410**	**820**
	Consolidated Height	(mm)	**17.3**	**16.4**	**15.2**
	Voids Ratio after Consolidation		**0.7257**	**0.6307**	**0.5117**
SHEAR	Shearing Rate	(mm/min)	**0.0073**	**0.0078**	**0.0081**
	Horiz. Displacement at Peak Shear Stress	(mm)	**5.0**	**6.0**	**6.2**
	Voids Ratio after Shear		**0.5880**	**0.4848**	**0.3773**
	Peak Shear Stress	(kPa)	**108**	**199**	**377**
	Residual Shear Stress	(kPa)	**99**	**179**	**342**

PEAK STRENGTH	Effective Cohesion (C ')	**19** (kPa)	Effective Angle of Friction (ϕ ')	**23.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C '$_R$)	**17** (kPa)	Residual Angle of Friction (ϕ '$_R$)	**21.5**	(deg)



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Date: **16/02/24**

Contract: **Sea Link - Richborough**

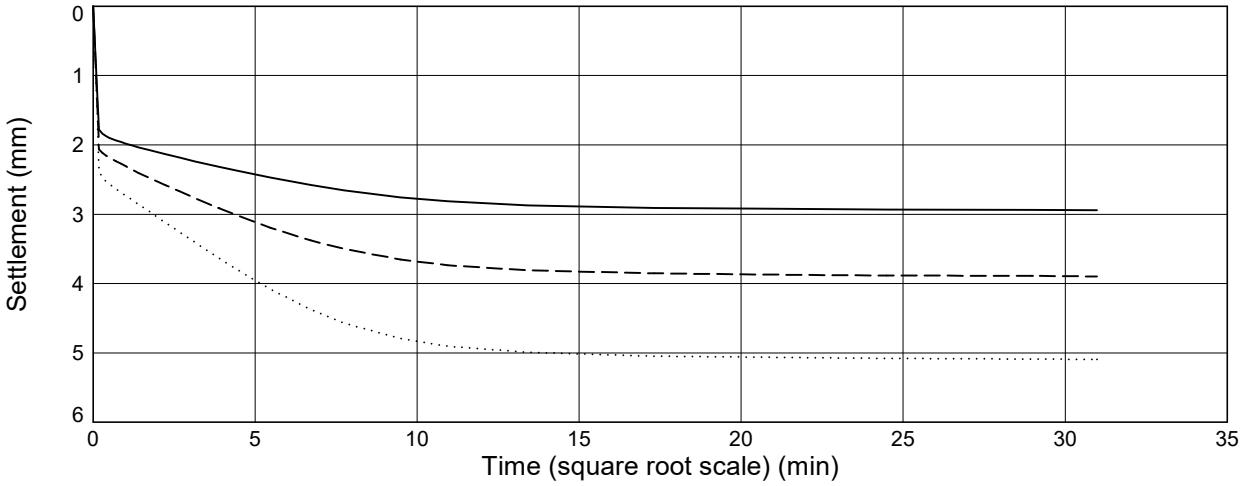
Contract Ref: **563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

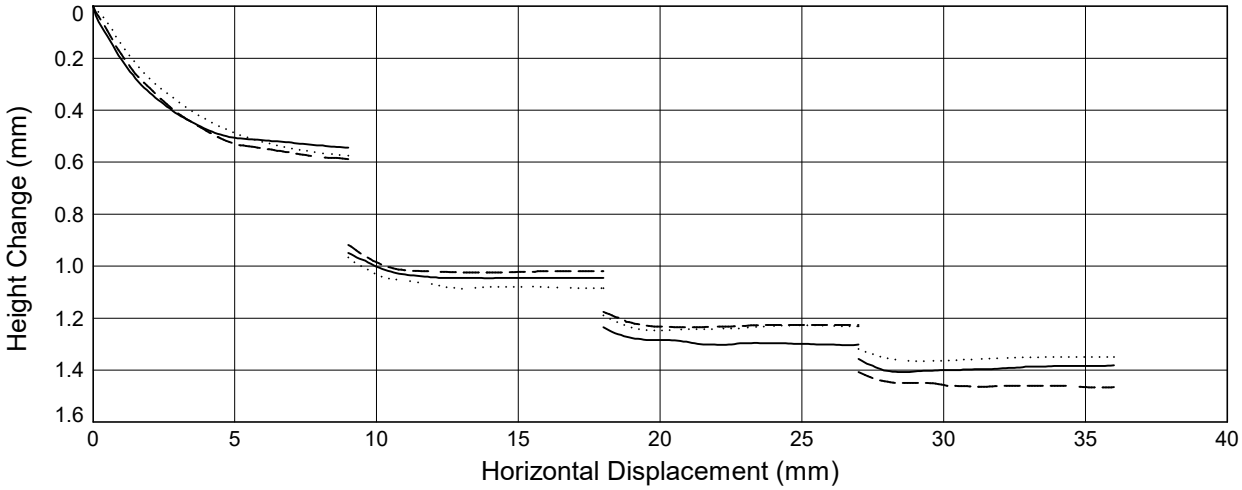
In accordance with BS EN ISO 17892-10

Position ID: **R22-BH501** Sample Ref: **63** Sample Type: **B** Depth (m): **20.50**

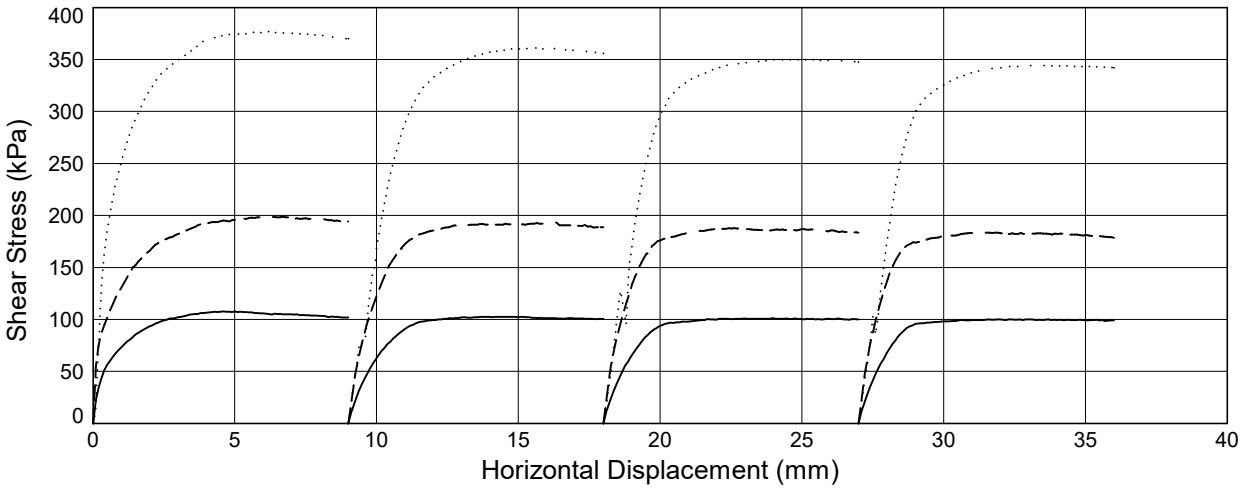
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**205** kPa) *Dashed Line* = Specimen 2 (**410** kPa) *Dotted Line* = Specimen 3 (**820** kPa)

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Compiled By	Date
[redacted]	**17/03/24**

Contract	Contract Ref:
SEA Link FEED - Kent Onshore Cable Link	**563607** [redacted]

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **R22-BH502** Sample Ref: **13** Sample Type: **B** Depth (m): **3.50**

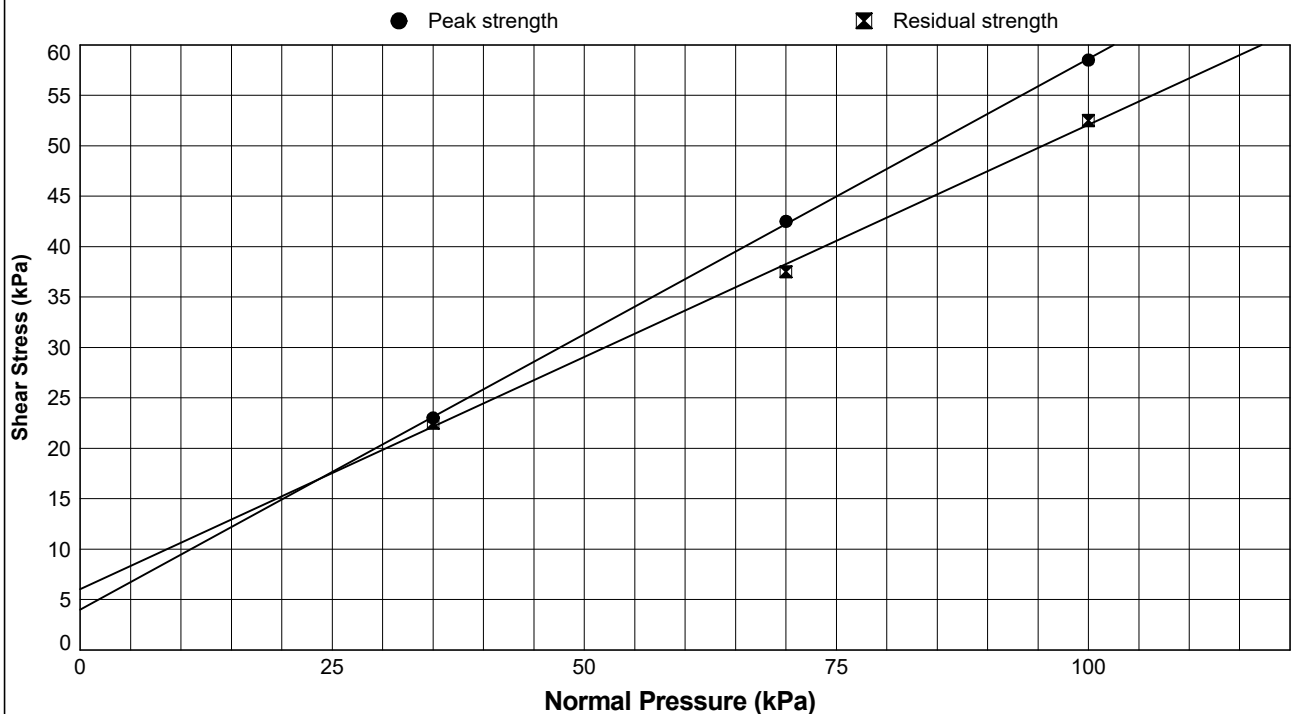
Description: **Grey mottled brown silty CLAY**

Sample Condition: **Recompacted**

Start Date: **29/02/2024**

End Date: **14/03/2024**

SPECIMEN NUMBER				1	2	3
PROPERTIES	Initial Water Content		(%)	**57.5**	**57.5**	**57.5**
	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)	**20.2**	**20.2**	**20.2**
	Initial Bulk Density		(Mg/m^3)	**1.68**	**1.68**	**1.68**
	Initial Dry Density		(Mg/m^3)	**1.07**	**1.07**	**1.07**
	Particle Density		(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio			**1.4869**	**1.4852**	**1.4836**
	Initial Degree of Saturation		(%)	**103**	**103**	**103**
TEST CONDITIONS	Specimen Conditions			**Submerged**	**Submerged**	**Submerged**
	Test Duration		(days)	**8**	**8**	**8**
CONSOLIDATION	Normal Pressure		(kPa)	**35**	**70**	**100**
	Consolidated Height		(mm)	**17.2**	**15.6**	**14.9**
	Voids Ratio after Consolidation			**1.1170**	**0.9215**	**0.8348**
SHEAR	Shearing Rate		(mm/min)	**0.0033**	**0.0034**	**0.0034**
	Horiz. Displacement at Peak Shear Stress		(mm)	**5.0**	**5.5**	**6.4**
	Voids Ratio after Shear			**0.9366**	**0.7342**	**0.6283**
	Peak Shear Stress		(kPa)	**23**	**43**	**59**
	Residual Shear Stress		(kPa)	**23**	**38**	**53**
PEAK STRENGTH	Effective Cohesion (C ')	**4**	(kPa)	Effective Angle of Friction (ϕ ')		**28.5** (deg)
RESIDUAL STRENGTH	Residual Cohesion (C '$_R$)	**6**	(kPa)	Residual Angle of Friction (ϕ '$_R$)		**24.5** (deg)



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Compiled By: [redacted]

Date: **27/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

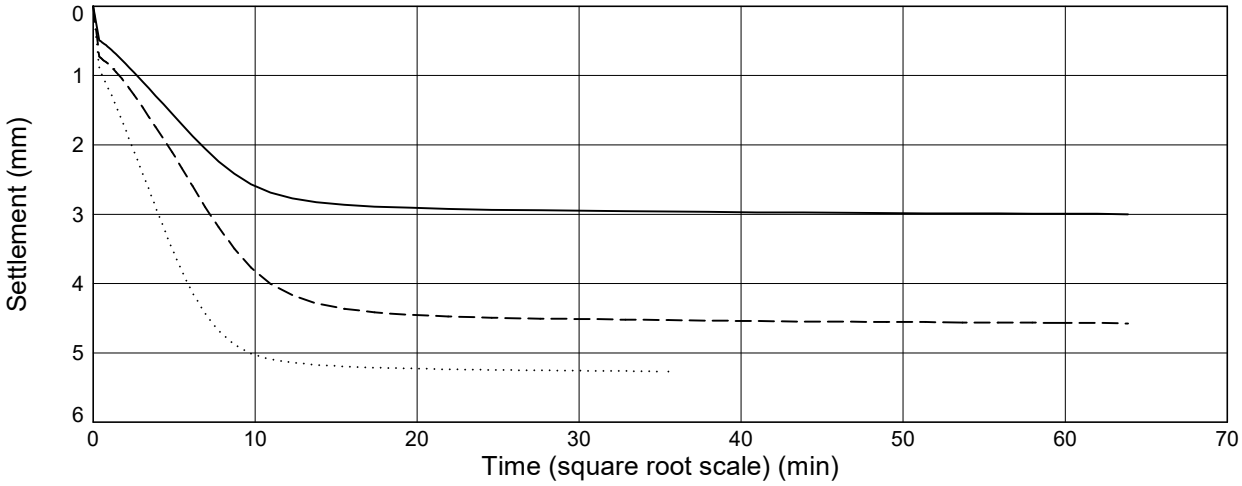
Contract Ref: **563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

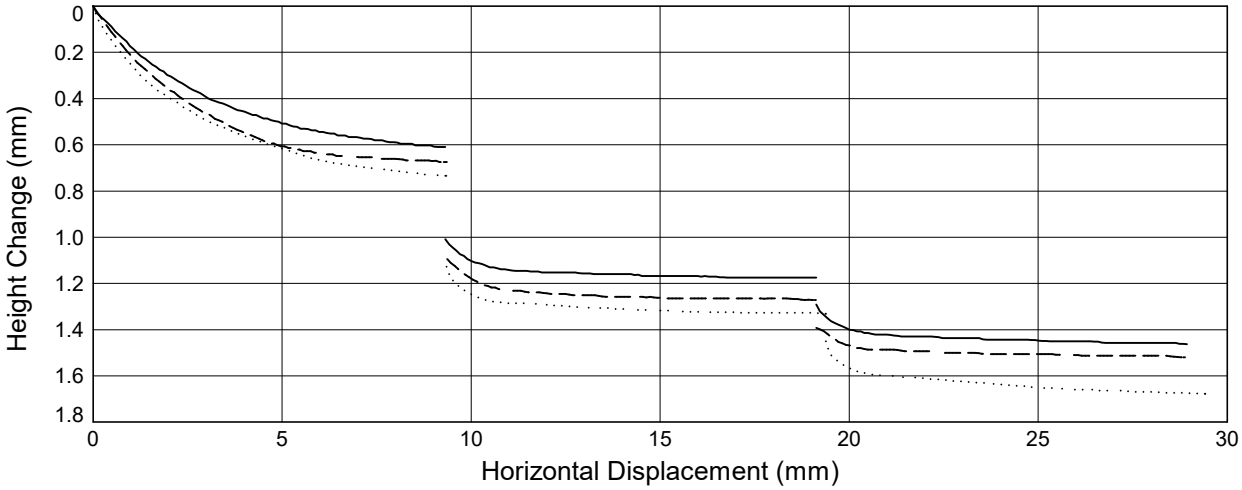
In accordance with BS EN ISO 17892-10

Position ID: **R22-BH502** Sample Ref: **13** Sample Type: **B** Depth (m): **3.50**

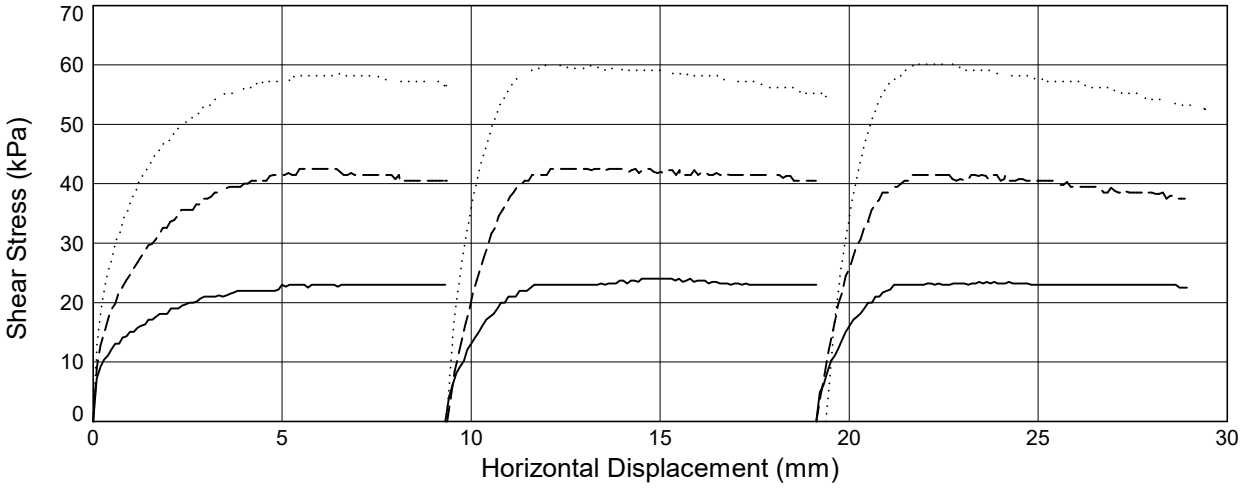
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**35** kPa) *Dashed Line* = Specimen 2 (**70** kPa) *Dotted Line* = Specimen 3 (**100** kPa)

STRUCTURAL SOILS
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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: **R22-BH502** Sample Ref: **36** Sample Type: **B** Depth (m): **9.50**

Description: **Grey slightly gravelly silty CLAY**

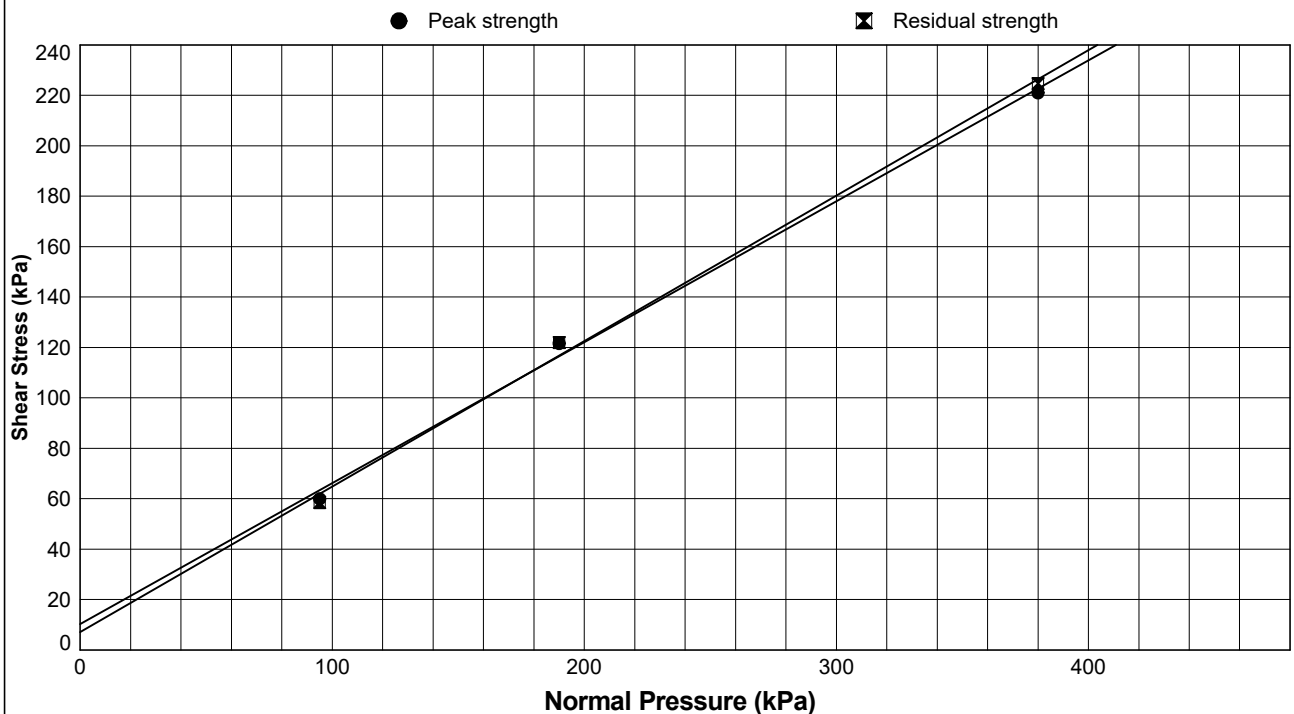
Sample Condition: **Recompacted**

Start Date: **27/02/2024**

End Date: **02/03/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**41.5**	**41.5**	**41.5**
	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)	**20.2**	**20.2**	**20.2**
	Initial Bulk Density	(Mg/m^3)	**1.79**	**1.79**	**1.79**
	Initial Dry Density	(Mg/m^3)	**1.27**	**1.27**	**1.27**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.0905**	**1.0908**	**1.0901**
	Initial Degree of Saturation	(%)	**101**	**101**	**101**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**5**	**5**	**5**
CONSOLIDATION	Normal Pressure	(kPa)	**95**	**190**	**380**
	Consolidated Height	(mm)	**17.3**	**16.4**	**15.9**
	Voids Ratio after Consolidation		**0.7890**	**0.6934**	**0.6482**
SHEAR	Shearing Rate	(mm/min)	**0.0062**	**0.0064**	**0.0067**
	Horiz. Displacement at Peak Shear Stress	(mm)	**5.0**	**6.6**	**9.0**
	Voids Ratio after Shear		**0.6566**	**0.5462**	**0.4968**
	Peak Shear Stress	(kPa)	**60**	**122**	**221**
	Residual Shear Stress	(kPa)	**59**	**122**	**225**

PEAK STRENGTH	Effective Cohesion (C ')	**10** (kPa)	Effective Angle of Friction (ϕ ')	**29**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C '$_R$)	**7** (kPa)	Residual Angle of Friction (ϕ '$_R$)	**30**	(deg)



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Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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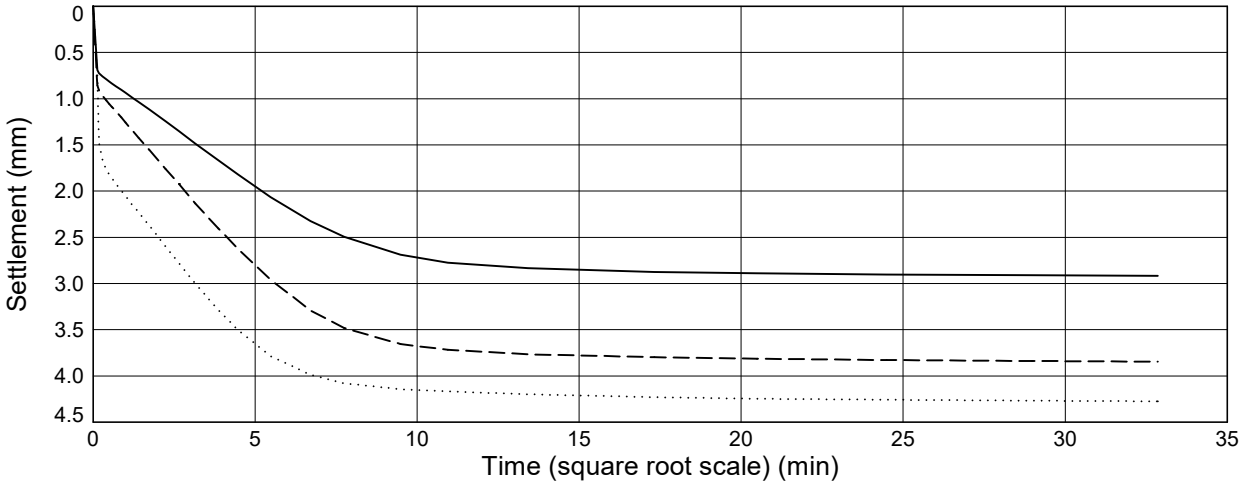
DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

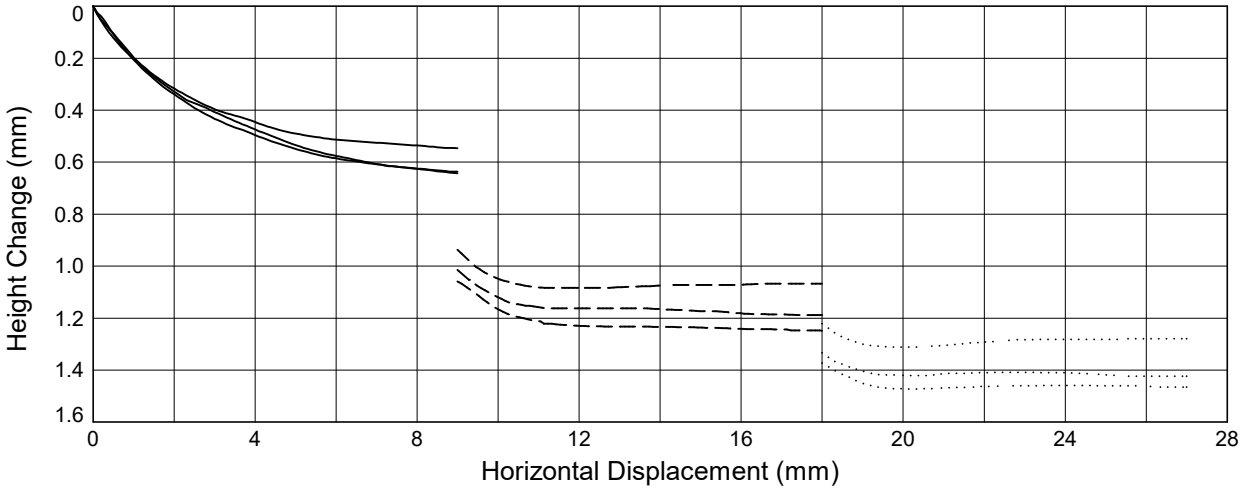
In accordance with BS EN ISO 17892-10

Position ID: **R22-BH502** Sample Ref: **36** Sample Type: **B** Depth (m): **9.50**

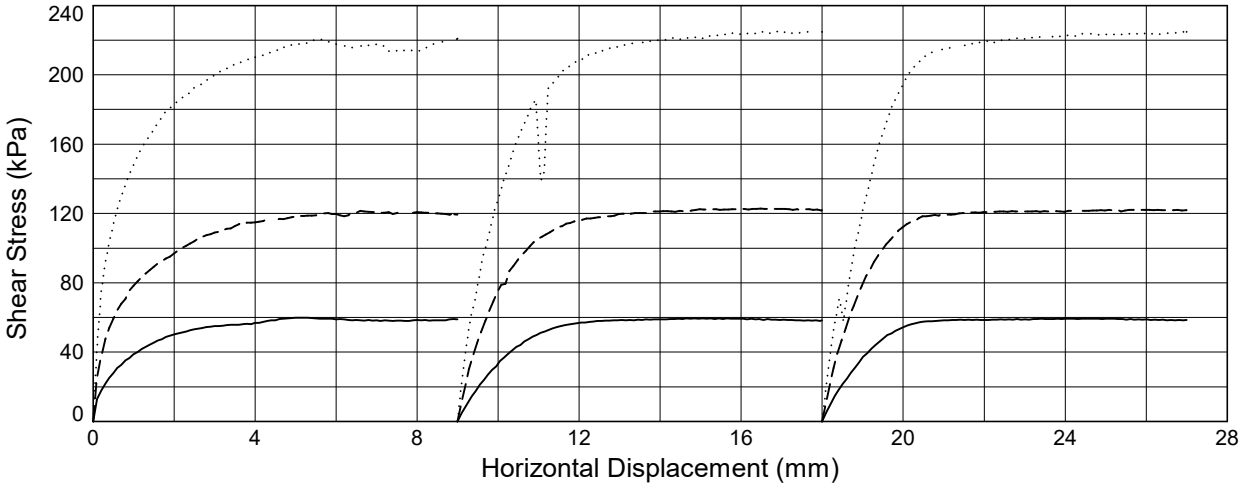
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**95** kPa) *Dashed Line* = Specimen 2 (**190** kPa) *Dotted Line* = Specimen 3 (**380** kPa)

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Compiled By	Date
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Contract	Contract Ref:
SEA Link FEED - Kent Onshore Cable Link	**563607**

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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: **R22-BH502** Sample Ref: **53** Sample Type: **B** Depth (m): **14.50**

Description: **Grey clayey SILT**

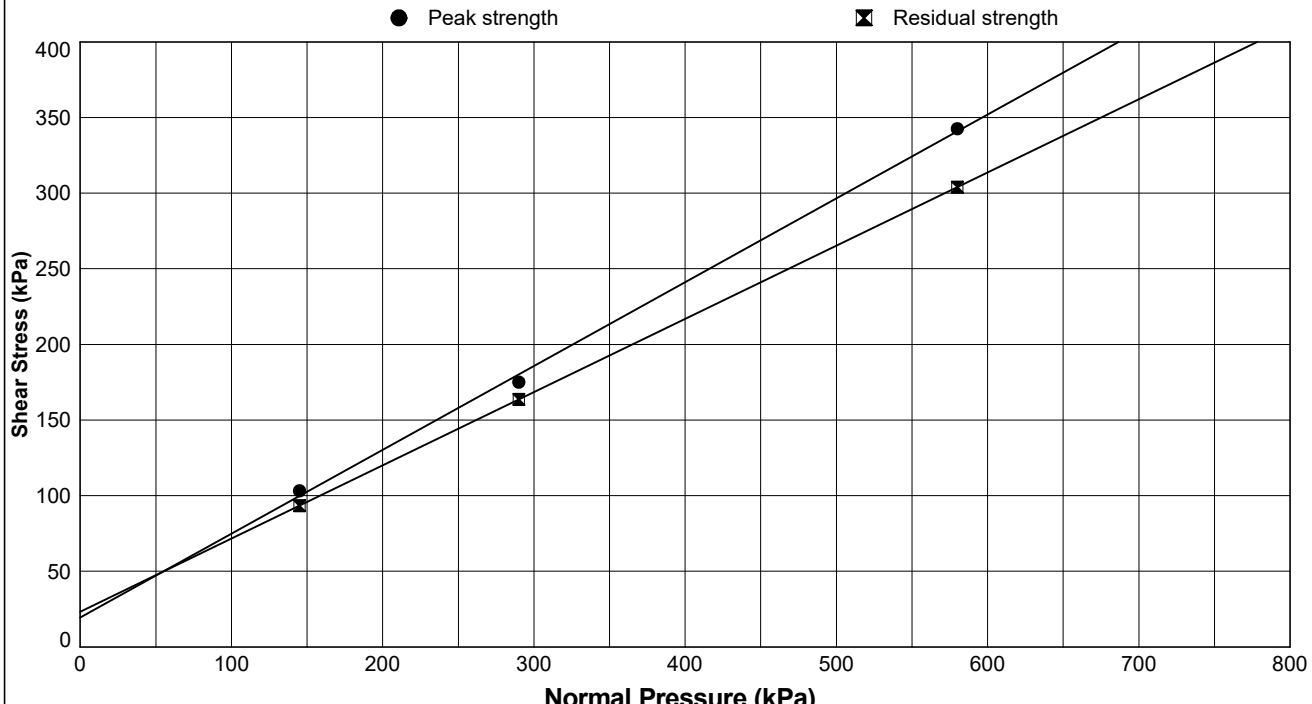
Sample Condition: **Recompacted**

Start Date: **02/02/2024**

End Date: **02/02/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**37.2**	**37.2**	**37.2**
	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)	**1.59**	**1.59**	**1.60**
	Initial Dry Density	(Mg/m^3)	**1.16**	**1.16**	**1.16**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.2801**	**1.2818**	**1.2789**
	Initial Degree of Saturation	(%)	**77**	**77**	**77**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**4**	**4**	**4**
CONSOLIDATION	Normal Pressure	(kPa)	**145**	**290**	**580**
	Consolidated Height	(mm)	**18.6**	**17.6**	**16.9**
	Voids Ratio after Consolidation		**1.0905**	**0.9716**	**0.8958**
SHEAR	Shearing Rate	(mm/min)	**0.0200**	**0.0220**	**0.0256**
	Horiz. Displacement at Peak Shear Stress	(mm)	**9.0**	**8.7**	**7.0**
	Voids Ratio after Shear		**0.8004**	**0.7643**	**0.7176**
	Peak Shear Stress	(kPa)	**103**	**175**	**343**
	Residual Shear Stress	(kPa)	**93**	**164**	**304**

PEAK STRENGTH	Effective Cohesion (C ')	**19** (kPa)	Effective Angle of Friction (ϕ ')	**29**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C '$_R$)	**23** (kPa)	Residual Angle of Friction (ϕ '$_R$)	**26**	(deg)



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Compiled By: [redacted]

Date: **23/02/24**

Contract: **Sea Link - Richborough**

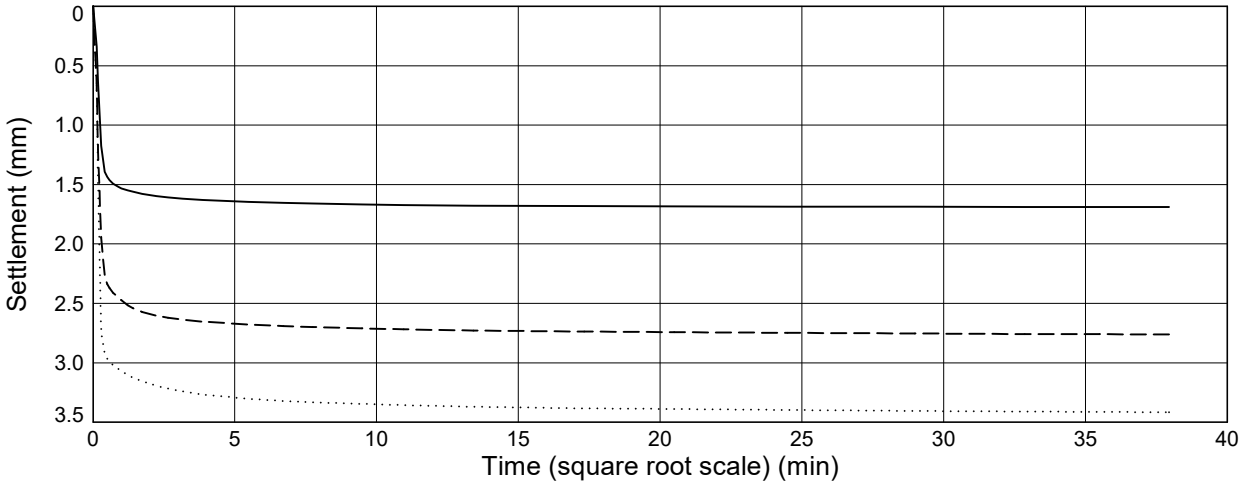
Contract Ref: **563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

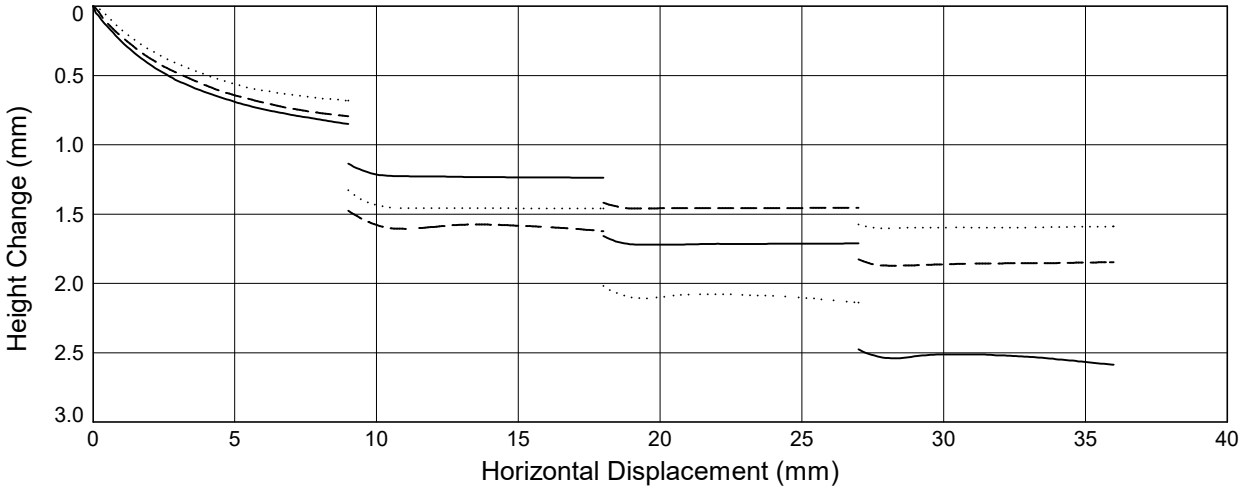
In accordance with BS EN ISO 17892-10

Position ID: **R22-BH502** Sample Ref: **53** Sample Type: **B** Depth (m): **14.50**

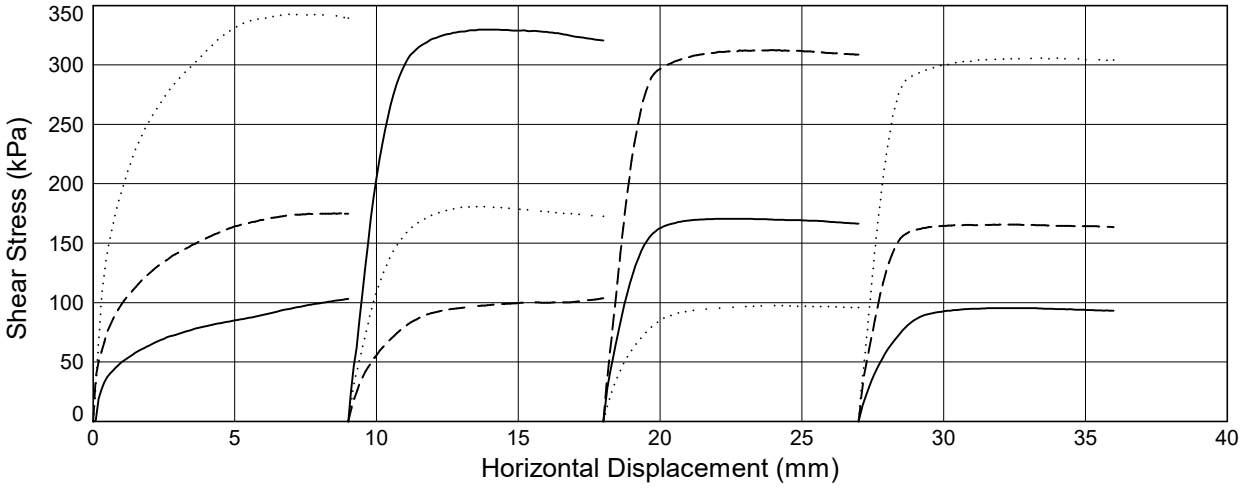
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**145** kPa) *Dashed Line* = Specimen 2 (**290** kPa) *Dotted Line* = Specimen 3 (**580** kPa)

STRUCTURAL SOILS 1a Princess Street Bedminster Bristol BS3 4AG	Compiled By: [redacted]	Date: **23/02/24**
	Contract: **Sea Link - Richborough**	Contract Ref: **563607** [redacted]

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **RedP-BH-11** Sample Ref: **18** Sample Type: **B** Depth (m): **4.60**

Description: **Greyish brown CLAY**

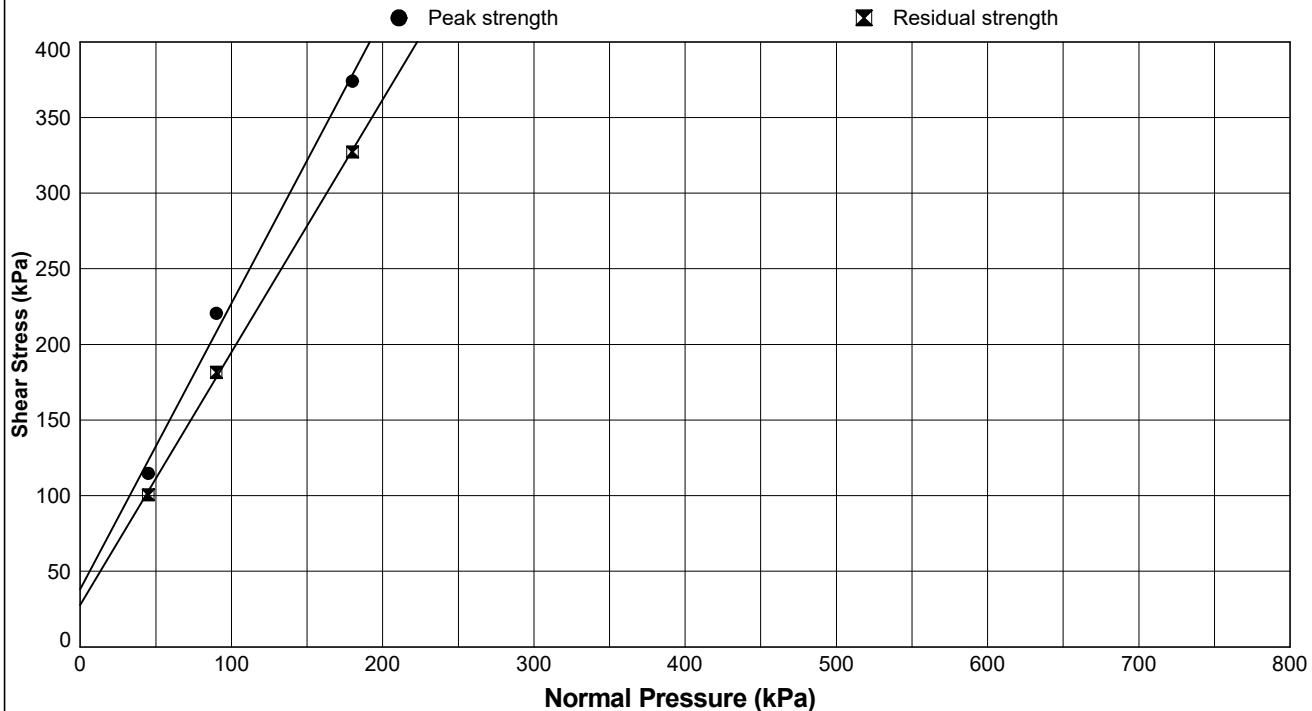
Sample Condition: **Recompacted**

Start Date: **19/01/2024**

End Date: **22/01/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**41.4**	**41.4**	**41.4**
	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)	**20.3**	**20.3**	**20.3**
	Initial Bulk Density	(Mg/m^3)	**1.68**	**1.69**	**1.68**
	Initial Dry Density	(Mg/m^3)	**1.19**	**1.19**	**1.19**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.2246**	**1.2233**	**1.2238**
	Initial Degree of Saturation	(%)	**90**	**90**	**90**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**5**	**5**	**5**
CONSOLIDATION	Normal Pressure	(kPa)	**45**	**90**	**180**
	Consolidated Height	(mm)	**19.6**	**19.3**	**18.4**
	Voids Ratio after Consolidation		**1.1425**	**1.1116**	**1.0160**
SHEAR	Shearing Rate	(mm/min)	**0.0324**	**0.0328**	**0.0328**
	Horiz. Displacement at Peak Shear Stress	(mm)	**4.8**	**8.0**	**3.9**
	Voids Ratio after Shear		**1.0250**	**1.0226**	**0.9563**
	Peak Shear Stress	(kPa)	**115**	**221**	**374**
	Residual Shear Stress	(kPa)	**101**	**182**	**327**

PEAK STRENGTH	Effective Cohesion (C ')	**38** (kPa)	Effective Angle of Friction (ϕ ')	**62**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C '$_R$)	**28** (kPa)	Residual Angle of Friction (ϕ '$_R$)	**59**	(deg)



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1a Princess Street
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Date: **17/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

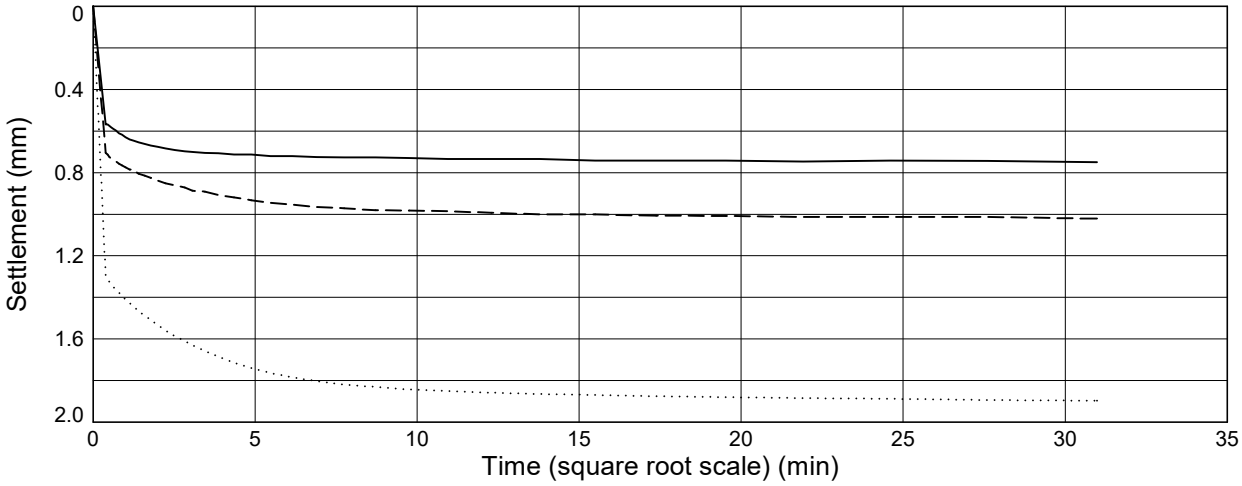
Contract Ref: **563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

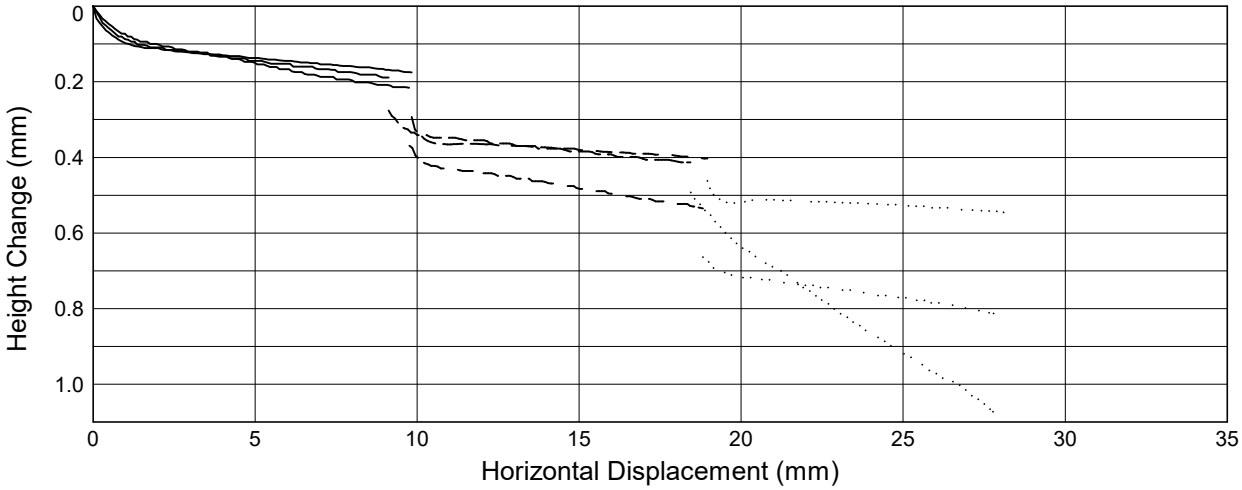
In accordance with BS EN ISO 17892-10

Position ID: **RedP-BH-11** Sample Ref: **18** Sample Type: **B** Depth (m): **4.60**

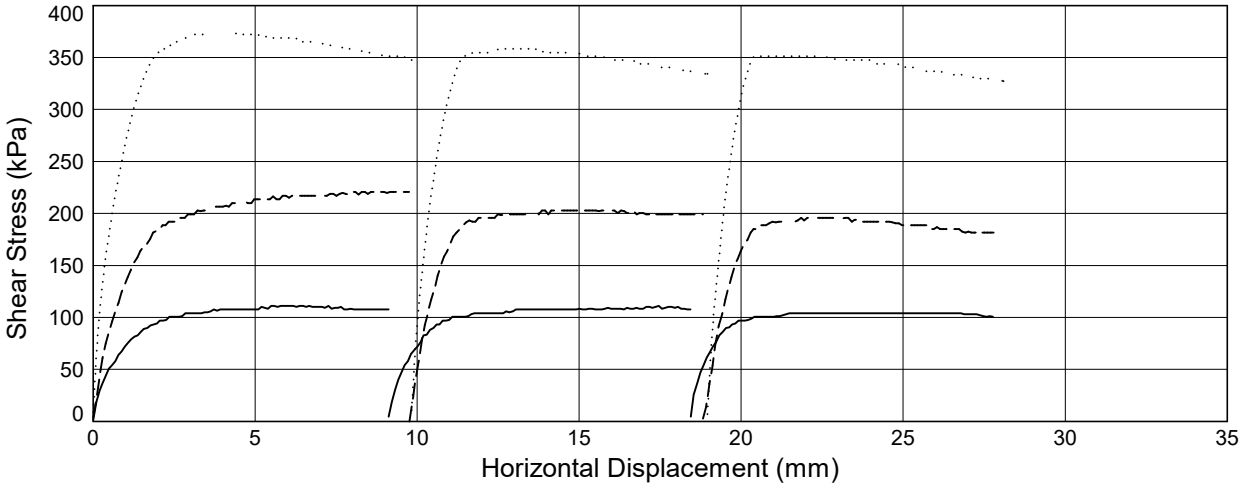
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**45** kPa) *Dashed Line* = Specimen 2 (**90** kPa) *Dotted Line* = Specimen 3 (**180** kPa)

STRUCTURAL SOILS 1a Princess Street Bedminster Bristol BS3 4AG	Compiled By [redacted]	Date **17/03/24**
	Contract **SEA Link FEED - Kent Onshore Cable Link**	Contract Ref: **563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

In accordance with BS EN ISO 17892-10

Position ID: **RedP-BH-11** Sample Ref: **64** Sample Type: **B** Depth (m): **16.60**

Description: **Grey silty CLAY**

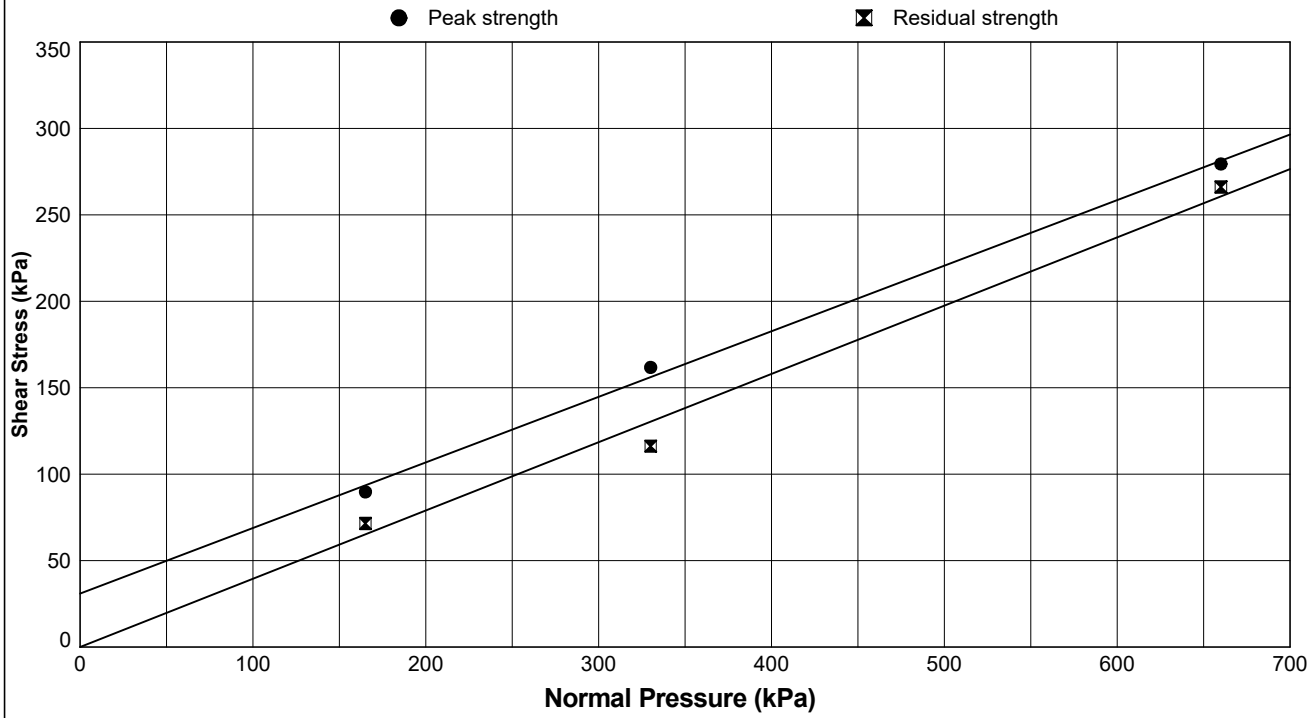
Sample Condition: **Recompacted**

Start Date: **19/02/2024**

End Date: **22/02/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**58.7**	**58.7**	**58.7**
	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)	**20.2**	**20.2**	**20.2**
	Initial Bulk Density	(Mg/m^3)	**1.63**	**1.63**	**1.63**
	Initial Dry Density	(Mg/m^3)	**1.03**	**1.03**	**1.03**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.5743**	**1.5754**	**1.5747**
	Initial Degree of Saturation	(%)	**99**	**99**	**99**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**4**	**4**	**4**
CONSOLIDATION	Normal Pressure	(kPa)	**165**	**330**	**660**
	Consolidated Height	(mm)	**17.3**	**16.2**	**13.1**
	Voids Ratio after Consolidation		**1.1988**	**1.0674**	**0.6625**
SHEAR	Shearing Rate	(mm/min)	**0.0063**	**0.0066**	**0.0071**
	Horiz. Displacement at Peak Shear Stress	(mm)	**5.2**	**4.4**	**7.8**
	Voids Ratio after Shear		**1.0056**	**0.9575**	**0.5060**
	Peak Shear Stress	(kPa)	**90**	**162**	**279**
	Residual Shear Stress	(kPa)	**71**	**116**	**266**

PEAK STRENGTH	Effective Cohesion (C ')	**31** (kPa)	Effective Angle of Friction (ϕ ')	**21**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C '$_R$)	**0** (kPa)	Residual Angle of Friction (ϕ '$_R$)	**21.5**	(deg)



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Date: **17/03/24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

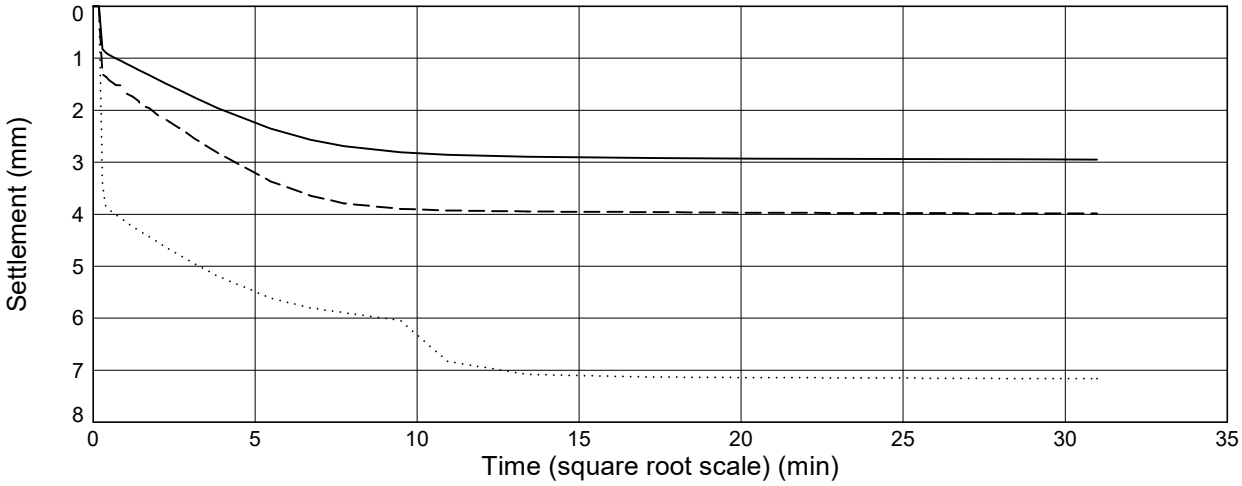
Contract Ref: **563607**

DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

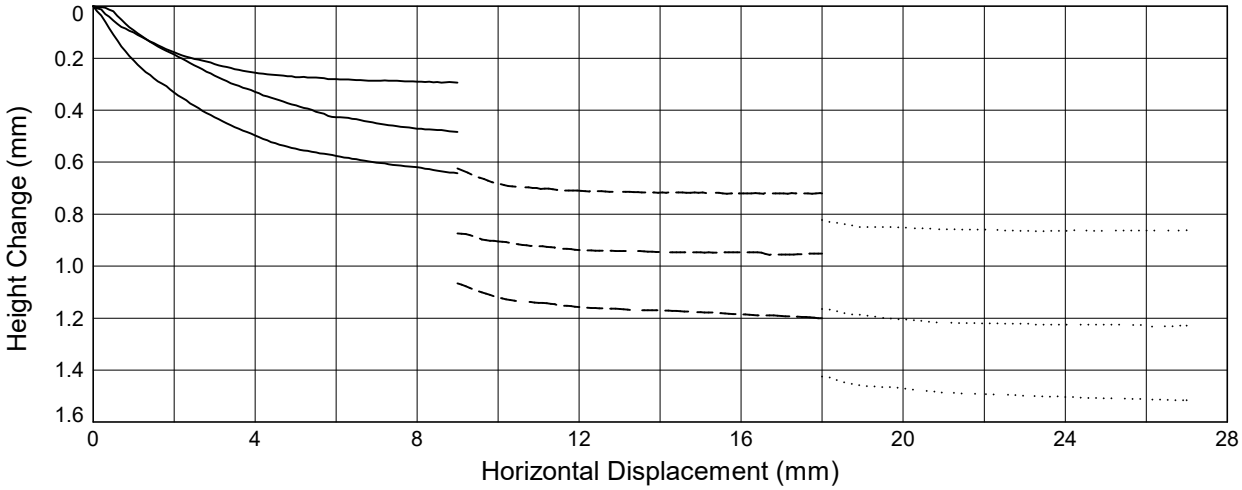
In accordance with BS EN ISO 17892-10

Position ID: **RedP-BH-11** Sample Ref: **64** Sample Type: **B** Depth (m): **16.60**

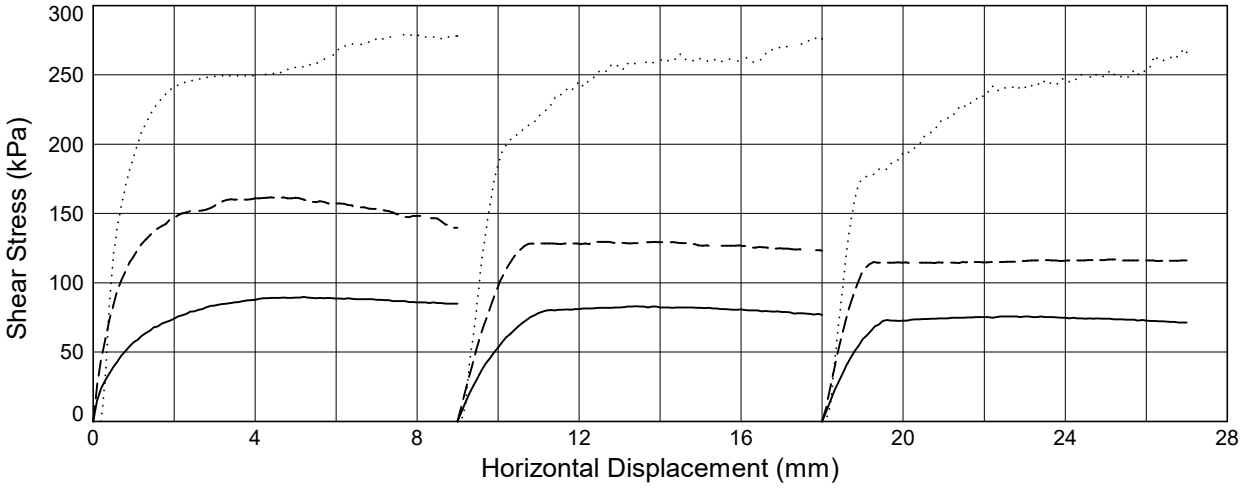
Consolidation Stage



Shear Stage



Shear Stage



Solid Line = Specimen 1 (**165** kPa) *Dashed Line* = Specimen 2 (**330** kPa) *Dotted Line* = Specimen 3 (**660** kPa)

STRUCTURAL SOILS
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Compiled By	Date
[redacted]	**17/03/24**

Contract	Contract Ref:
SEA Link FEED - Kent Onshore Cable Link	**563607**

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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-11** Sample Ref: **76** Sample Type: **B** Depth (m): **19.60**

Description: **Dark grey slightly gravelly silty CLAY**

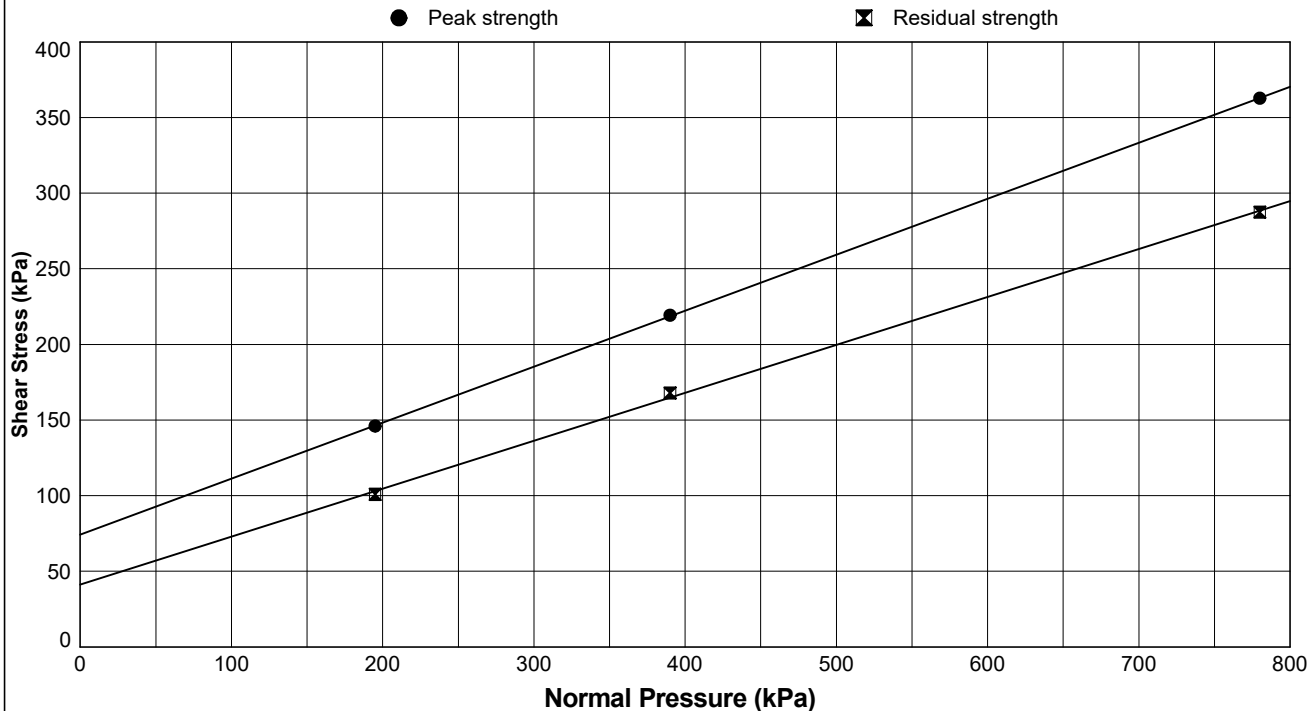
Sample Condition: **Recompacted**

Start Date: **04/02/2024**

End Date: **07/03/2024**

	SPECIMEN NUMBER		1	2	3
PROPERTIES	Initial Water Content	(%)	**36.1**	**36.1**	**36.1**
	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**	**20.3**	**20.3**
	Initial Bulk Density	(Mg/m^3)	**1.74**	**1.74**	**1.74**
	Initial Dry Density	(Mg/m^3)	**1.28**	**1.28**	**1.28**
	Particle Density	(Mg/m^3)	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$	**2.65**$_{(Assumed)}$
	Initial Voids Ratio		**1.0725**	**1.0730**	**1.0727**
	Initial Degree of Saturation	(%)	**89**	**89**	**89**
TEST CONDITIONS	Specimen Conditions		**Submerged**	**Submerged**	**Submerged**
	Test Duration	(days)	**4**	**4**	**4**
CONSOLIDATION	Normal Pressure	(kPa)	**195**	**390**	**780**
	Consolidated Height	(mm)	**17.4**	**16.5**	**16.8**
	Voids Ratio after Consolidation		**0.7816**	**0.6893**	**0.7200**
SHEAR	Shearing Rate	(mm/min)	**0.0072**	**0.0076**	**0.0078**
	Horiz. Displacement at Peak Shear Stress	(mm)	**4.7**	**5.3**	**4.2**
	Voids Ratio after Shear		**0.6551**	**0.5620**	**0.6169**
	Peak Shear Stress	(kPa)	**146**	**219**	**363**
	Residual Shear Stress	(kPa)	**101**	**168**	**287**

PEAK STRENGTH	Effective Cohesion (C ')	**74** (kPa)	Effective Angle of Friction (ϕ ')	**20.5**	(deg)
RESIDUAL STRENGTH	Residual Cohesion (C '$_R$)	**41** (kPa)	Residual Angle of Friction (ϕ '$_R$)	**17.5**	(deg)



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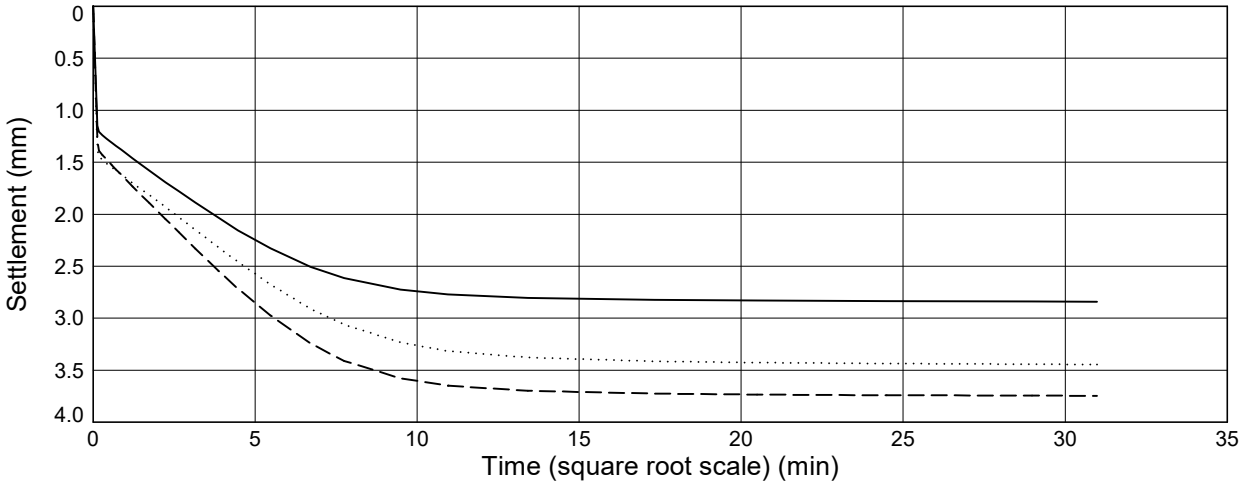
DETERMINATION OF SHEAR STRENGTH BY DIRECT SHEAR (SMALL SHEAR BOX APPARATUS)

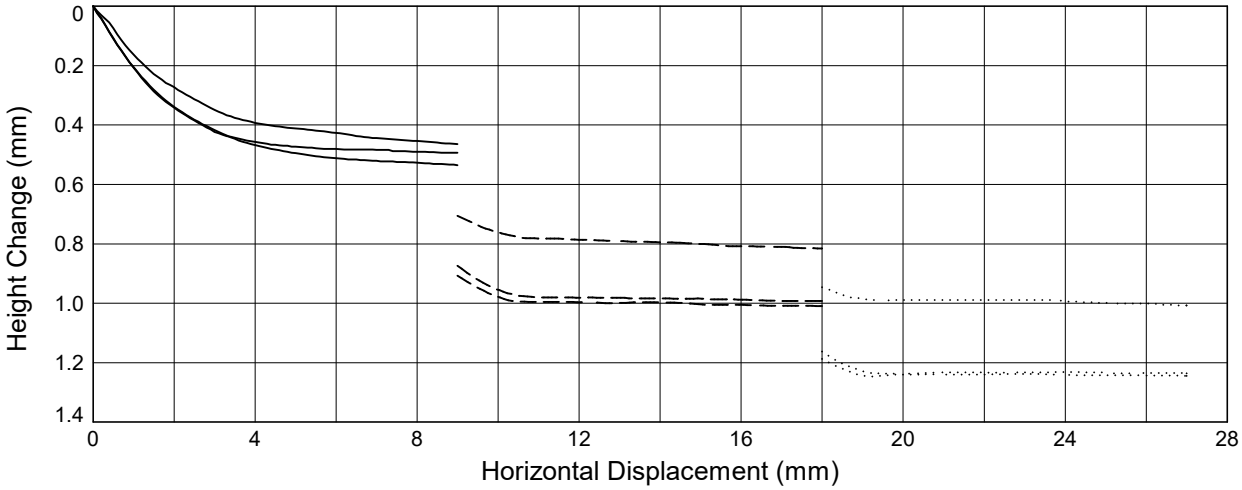
In accordance with BS EN ISO 17892-10

Position ID: **RedP-BH-11** Sample Ref: **76** Sample Type: **B** Depth (m): **19.60**

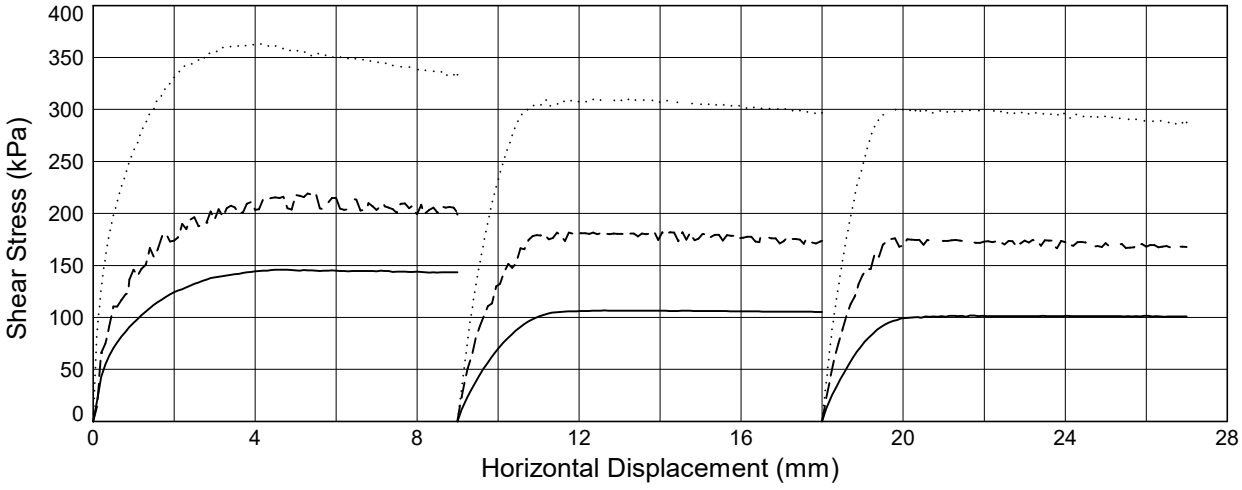
Consolidation Stage



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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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: **R22-BH101** Sample Ref: **7** Sample Type: **B** Depth (m): **1.80**

Description: **Dark grey clayey SILT**

Water Content Condition: **As received** Remould Method: **Maximum achievable density**

Probe Material: **Stainless Steel** Number of Probes: **4** Probe Location in Sample: **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 (%): **71.0**

Bulk Density (Mg/m^3): **1.53**

Dry Density (Mg/m^3): **0.89**

Temperature at Time of Test (^{o}C): **20.9**

Electrical Resistivity at 20^{o}C (ohm.m): **2.20**

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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: **R22-BH103** Sample Ref: **35** Sample Type: **B** Depth (m): **10.60**

Description: **Grey silty CLAY**

Water Content Condition: **As received** Remould Method: **Maximum achievable density**

Probe Material: **Stainless Steel** Number of Probes: **4** Probe Location in Sample: **Side**

Probe Diameter (mm): **8** Probe Length (mm): **200** Probe Depth (mm): **28**

Probe Spacing (mm): **124.0**

Length of Test Specimen (mm): **219.20**

Diameter of Test Specimen (mm): **NA**

Water Content (%): **52.3**

Bulk Density (Mg/m^3): **1.59**

Dry Density (Mg/m^3): **1.04**

Temperature at Time of Test (^{o}C): **22.5**

Electrical Resistivity at 20^{o}C (ohm.m): **0.82**

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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: **R22-BH104** Sample Ref: **2** Sample Type: **B** Depth (m): **0.50**

Description: **Yellowish brown CLAY**

Water Content Condition: **As received** Remould Method: **Maximum achievable density**

Probe Material: **Stainless Steel** Number of Probes: **4** Probe Location in Sample: **Side**

Probe Diameter (mm): **8** Probe Length (mm): **200** Probe Depth (mm): **28**

Probe Spacing (mm): **124.0**

Length of Test Specimen (mm): **219.20**

Diameter of Test Specimen (mm): **NA**

Water Content (%): **45.8**

Bulk Density (Mg/m^3): **1.67**

Dry Density (Mg/m^3): **1.15**

Temperature at Time of Test (^{o}C): **21.2**

Electrical Resistivity at 20^{o}C (ohm.m): **6.27**

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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: **R22-BH105** Sample Ref: **61** Sample Type: **B** Depth (m): **15.60**

Description: **Dark grey slightly gravelly sandy CLAY**

Water Content Condition: **As received** Remould Method: **Maximum achievable density**

Probe Material: **Stainless Steel** Number of Probes: **4** Probe Location in Sample: **Side**

Probe Diameter (mm): **8** Probe Length (mm): **200** Probe Depth (mm): **28**

Probe Spacing (mm): **124.0**

Length of Test Specimen (mm): **219.20**

Diameter of Test Specimen (mm): **NA**

Water Content (%): **65.5**

Bulk Density (Mg/m^3): **1.56**

Dry Density (Mg/m^3): **0.94**

Temperature at Time of Test (^{o}C): **21.5**

Electrical Resistivity at 20^{o}C (ohm.m): **0.74**

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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: **R22-BH106A** Sample Ref: **12** Sample Type: **B** Depth (m): **3.60**

Description: **Grey SILT with occasional shell frags**

Water Content Condition: **As received** Remould Method: **Maximum achievable density**

Probe Material: **Stainless Steel** Number of Probes: **4** Probe Location in Sample: **Side**

Probe Diameter (mm): **8** Probe Length (mm): **200** Probe Depth (mm): **28**

Probe Spacing (mm): **124.0**

Length of Test Specimen (mm): **219.20**

Diameter of Test Specimen (mm): **NA**

Water Content (%): **59.9**

Bulk Density (Mg/m^3): **1.62**

Dry Density (Mg/m^3): **1.01**

Temperature at Time of Test (^oC): **21.7**

Electrical Resistivity at 20^oC (ohm.m): **1.39**

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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: **R22-TP101** Sample Ref: **4** Sample Type: **B** Depth (m): **0.70**

Description: **Bown 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: **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 (%): **30.5**

Bulk Density (Mg/m^3): **1.83**

Dry Density (Mg/m^3): **1.40**

Temperature at Time of Test (^oC): **21.5**

Electrical Resistivity at 20^oC (ohm.m): **8.27**

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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: **R22-TP102** Sample Ref: **15** Sample Type: **B** Depth (m): **3.00**

Description: **Dark grey 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: **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 (%): **67.3**

Bulk Density (Mg/m^3): **1.58**

Dry Density (Mg/m^3): **0.94**

Temperature at Time of Test (^{o}C): **22.1**

Electrical Resistivity at 20^{o}C (ohm.m): **1.39**

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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: **R22-TP103** Sample Ref: **11** Sample Type: **B** Depth (m): **1.10**

Description: **Grey mottled yellowish brown silty CLAY**

Water Content Condition: **As received** Remould Method: **Maximum achievable density**

Probe Material: **Stainless Steel** Number of Probes: **4** Probe Location in Sample: **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 (%): **65.2**

Bulk Density (Mg/m^3): **1.6**

Dry Density (Mg/m^3): **0.97**

Temperature at Time of Test (^oC): **21.5**

Electrical Resistivity at 20^oC (ohm.m): **3.96**

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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: **R22-TP104** Sample Ref: **12** Sample Type: **B** Depth (m): **1.50**

Description: **Bluish grey clayey SILT**

Water Content Condition: **As received** Remould Method: **Maximum achievable density**

Probe Material: **Stainless Steel** Number of Probes: **4** Probe Location in Sample: **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 (%): **75.9**

Bulk Density (Mg/m^3): **1.49**

Dry Density (Mg/m^3): **0.85**

Temperature at Time of Test (^{o}C): **21.3**

Electrical Resistivity at 20^{o}C (ohm.m): **2.01**

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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: **R22-TP105** Sample Ref: **6** Sample Type: **B** Depth (m): **0.90**

Description: **Light grey CLAY**

Water Content Condition: **As received** Remould Method: **Maximum achievable density**

Probe Material: **Stainless Steel** Number of Probes: **4** Probe Location in Sample: **Side**

Probe Diameter (mm): **8** Probe Length (mm): **200** Probe Depth (mm): **28**

Probe Spacing (mm): **124.0**

Length of Test Specimen (mm): **219.20**

Diameter of Test Specimen (mm): **NA**

Water Content (%): **36.5**

Bulk Density (Mg/m^3): **1.73**

Dry Density (Mg/m^3): **1.27**

Temperature at Time of Test (^{o}C): **22.0**

Electrical Resistivity at 20^{o}C (ohm.m): **5.06**

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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: **R22-TP106** Sample Ref: **13** Sample Type: **B** Depth (m): **2.00**

Description: **Grey silty CLAY**

Water Content Condition: **As received** Remould Method: **Maximum achievable density**

Probe Material: **Stainless Steel** Number of Probes: **4** Probe Location in Sample: **Side**

Probe Diameter (mm): **8** Probe Length (mm): **200** Probe Depth (mm): **28**

Probe Spacing (mm): **124.0**

Length of Test Specimen (mm): **219.20**

Diameter of Test Specimen (mm): **NA**

Water Content (%): **68.4**

Bulk Density (Mg/m^3): **1.58**

Dry Density (Mg/m^3): **0.94**

Temperature at Time of Test (^{o}C): **22.0**

Electrical Resistivity at 20^{o}C (ohm.m): **2.37**

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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: **R22-TP107** Sample Ref: **9** Sample Type: **B** Depth (m): **1.00**

Description: **Brown CLAY**

Water Content Condition: **As received** Remould Method: **Maximum achievable density**

Probe Material: **Stainless Steel** Number of Probes: **4** Probe Location in Sample: **Side**

Probe Diameter (mm): **8** Probe Length (mm): **200** Probe Depth (mm): **28**

Probe Spacing (mm): **124.0**

Length of Test Specimen (mm): **219.20**

Diameter of Test Specimen (mm): **NA**

Water Content (%): **38.2**

Bulk Density (Mg/m^3): **1.79**

Dry Density (Mg/m^3): **1.29**

Temperature at Time of Test (^oC): **21.7**

Electrical Resistivity at 20^oC (ohm.m): **4.21**

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MEASUREMENT OF RESISTIVITY
WENNER PROBE METHOD

Please use output template for open container method (L - RESISTIVITY OPEN CONTAINER - A4P)
Water Content reported to BS EN ISO 17892-1:2014
Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **R22-BH101** Sample Ref: **7** Sample Type: **B** Depth (m): **1.80**

Description: **Dark grey clayey SILT**

Sample Condition: **Recompacted** Number of Compacted Layers: Compaction Method:

Number of Probes: **4** Probe Material: **Stainless Steel** Probe Location in Sample: **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):

Water Content (%): **71.0**

Bulk Density (Mg/m^3): **1.53**

Dry Density (Mg/m^3): **0.89**

Temperature at Time of Test (^{o}C): **20.9**

Electrical Resistivity at 20^{o}C (ohm.m): **2.20**

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MEASUREMENT OF RESISTIVITY
WENNER PROBE METHOD

Please use output template for open container method (L - RESISTIVITY OPEN CONTAINER - A4P)
Water Content reported to BS EN ISO 17892-1:2014
Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **R22-BH103** Sample Ref: **35** Sample Type: **B** Depth (m): **10.60**

Description: **Grey silty CLAY**

Sample Condition: **Recompacted** Number of Compacted Layers: Compaction Method:

Number of Probes: **4** Probe Material: **Stainless Steel** Probe Location in Sample: **Side**

Probe Diameter (mm): **8** Probe Length (mm): **200** Probe Depth (mm): **28**

Probe Spacing (mm): **124.0**

Length of Test Specimen (mm): **219.20**

Diameter of Test Specimen (mm):

Water Content (%): **52.3**

Bulk Density (Mg/m^3): **1.59**

Dry Density (Mg/m^3): **1.04**

Temperature at Time of Test (^{o}C): **22.5**

Electrical Resistivity at 20^{o}C (ohm.m): **0.82**

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MEASUREMENT OF RESISTIVITY
WENNER PROBE METHOD

Please use output template for open container method (L - RESISTIVITY OPEN CONTAINER - A4P)
Water Content reported to BS EN ISO 17892-1:2014
Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **R22-BH104** Sample Ref: **2** Sample Type: **B** Depth (m): **0.50**

Description: **Yellowish brown CLAY**

Sample Condition: **Recompacted** Number of Compacted Layers: Compaction Method:

Number of Probes: **4** Probe Material: **Stainless Steel** Probe Location in Sample: **Side**

Probe Diameter (mm): **8** Probe Length (mm): **200** Probe Depth (mm): **28**

Probe Spacing (mm): **124.0**

Length of Test Specimen (mm): **219.20**

Diameter of Test Specimen (mm):

Water Content (%): **45.8**

Bulk Density (Mg/m^3): **1.67**

Dry Density (Mg/m^3): **1.15**

Temperature at Time of Test (^{o}C): **21.2**

Electrical Resistivity at 20^{o}C (ohm.m): **6.27**

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MEASUREMENT OF RESISTIVITY
WENNER PROBE METHOD

Please use output template for open container method (L - RESISTIVITY OPEN CONTAINER - A4P)
Water Content reported to BS EN ISO 17892-1:2014
Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **R22-BH105** Sample Ref: **61** Sample Type: **B** Depth (m): **15.60**

Description: **Dark grey slightly gravelly sandy CLAY**

Sample Condition: **Recompacted** Number of Compacted Layers: Compaction Method:

Number of Probes: **4** Probe Material: **Stainless Steel** Probe Location in Sample: **Side**

Probe Diameter (mm): **8** Probe Length (mm): **200** Probe Depth (mm): **28**

Probe Spacing (mm): **124.0**

Length of Test Specimen (mm): **219.20**

Diameter of Test Specimen (mm):

Water Content (%): **65.5**

Bulk Density (Mg/m^3): **1.56**

Dry Density (Mg/m^3): **0.94**

Temperature at Time of Test (^{o}C): **21.5**

Electrical Resistivity at 20^{o}C (ohm.m): **0.74**

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MEASUREMENT OF RESISTIVITY
WENNER PROBE METHOD

Please use output template for open container method (L - RESISTIVITY OPEN CONTAINER - A4P)
Water Content reported to BS EN ISO 17892-1:2014
Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **R22-BH106A** Sample Ref: **12** Sample Type: **B** Depth (m): **3.60**

Description: **Grey SILT with occasional shell frags**

Sample Condition: **Recompacted** Number of Compacted Layers: Compaction Method:

Number of Probes: **4** Probe Material: **Stainless Steel** Probe Location in Sample: **Side**

Probe Diameter (mm): **8** Probe Length (mm): **200** Probe Depth (mm): **28**

Probe Spacing (mm): **124.0**

Length of Test Specimen (mm): **219.20**

Diameter of Test Specimen (mm):

Water Content (%): **59.9**

Bulk Density (Mg/m^3): **1.62**

Dry Density (Mg/m^3): **1.01**

Temperature at Time of Test (^{o}C): **21.7**

Electrical Resistivity at 20^{o}C (ohm.m): **1.39**

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MEASUREMENT OF RESISTIVITY
WENNER PROBE METHOD

Please use output template for open container method (L - RESISTIVITY OPEN CONTAINER - A4P)
Water Content reported to BS EN ISO 17892-1:2014
Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **R22-TP101** Sample Ref: **4** Sample Type: **B** Depth (m): **0.70**

Description: **Bown slightly sandy silty CLAY**

Sample Condition: **Recompacted** Number of Compacted Layers: Compaction Method:

Number of Probes: **4** Probe Material: **Stainless Steel** Probe Location in Sample: **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):

Water Content (%): **30.5**

Bulk Density (Mg/m^3): **1.83**

Dry Density (Mg/m^3): **1.40**

Temperature at Time of Test (^{o}C): **21.5**

Electrical Resistivity at 20^{o}C (ohm.m): **8.27**

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MEASUREMENT OF RESISTIVITY
WENNER PROBE METHOD

Please use output template for open container method (L - RESISTIVITY OPEN CONTAINER - A4P)
Water Content reported to BS EN ISO 17892-1:2014
Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **R22-TP102** Sample Ref: **15** Sample Type: **B** Depth (m): **3.00**

Description: **Dark grey slightly sandy silty CLAY**

Sample Condition: **Recompacted** Number of Compacted Layers: Compaction Method:

Number of Probes: **4** Probe Material: **Stainless Steel** Probe Location in Sample: **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):

Water Content (%): **67.3**

Bulk Density (Mg/m^3): **1.58**

Dry Density (Mg/m^3): **0.94**

Temperature at Time of Test (^{o}C): **22.1**

Electrical Resistivity at 20^{o}C (ohm.m): **1.39**

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MEASUREMENT OF RESISTIVITY
WENNER PROBE METHOD

Please use output template for open container method (L - RESISTIVITY OPEN CONTAINER - A4P)
Water Content reported to BS EN ISO 17892-1:2014
Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **R22-TP103** Sample Ref: **11** Sample Type: **B** Depth (m): **1.10**

Description: **Grey mottled yellowish brown silty CLAY**

Sample Condition: **Recompacted** Number of Compacted Layers: Compaction Method:

Number of Probes: **4** Probe Material: **Stainless Steel** Probe Location in Sample: **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):

Water Content (%): **65.2**

Bulk Density (Mg/m^3): **1.6**

Dry Density (Mg/m^3): **0.97**

Temperature at Time of Test (^{o}C): **21.5**

Electrical Resistivity at 20^{o}C (ohm.m): **3.96**

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MEASUREMENT OF RESISTIVITY
WENNER PROBE METHOD

Please use output template for open container method (L - RESISTIVITY OPEN CONTAINER - A4P)
Water Content reported to BS EN ISO 17892-1:2014
Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **R22-TP104** Sample Ref: **12** Sample Type: **B** Depth (m): **1.50**

Description: **Bluish grey clayey SILT**

Sample Condition: **Recompacted** Number of Compacted Layers: Compaction Method:

Number of Probes: **4** Probe Material: **Stainless Steel** Probe Location in Sample: **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):

Water Content (%): **75.9**

Bulk Density (Mg/m^3): **1.49**

Dry Density (Mg/m^3): **0.85**

Temperature at Time of Test (^{o}C): **21.3**

Electrical Resistivity at 20^{o}C (ohm.m): **2.01**

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MEASUREMENT OF RESISTIVITY
WENNER PROBE METHOD

Please use output template for open container method (L - RESISTIVITY OPEN CONTAINER - A4P)
Water Content reported to BS EN ISO 17892-1:2014
Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **R22-TP105** Sample Ref: **6** Sample Type: **B** Depth (m): **0.90**

Description: **Light grey CLAY**

Sample Condition: **Recompacted** Number of Compacted Layers: Compaction Method:

Number of Probes: **4** Probe Material: **Stainless Steel** Probe Location in Sample: **Side**

Probe Diameter (mm): **8** Probe Length (mm): **200** Probe Depth (mm): **28**

Probe Spacing (mm): **124.0**

Length of Test Specimen (mm): **219.20**

Diameter of Test Specimen (mm):

Water Content (%): **36.5**

Bulk Density (Mg/m^3): **1.73**

Dry Density (Mg/m^3): **1.27**

Temperature at Time of Test (^{o}C): **22.0**

Electrical Resistivity at 20^{o}C (ohm.m): **5.06**

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MEASUREMENT OF RESISTIVITY
WENNER PROBE METHOD

Please use output template for open container method (L - RESISTIVITY OPEN CONTAINER - A4P)
Water Content reported to BS EN ISO 17892-1:2014
Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **R22-TP106** Sample Ref: **13** Sample Type: **B** Depth (m): **2.00**

Description: **Grey silty CLAY**

Sample Condition: **Recompacted** Number of Compacted Layers: Compaction Method:

Number of Probes: **4** Probe Material: **Stainless Steel** Probe Location in Sample: **Side**

Probe Diameter (mm): **8** Probe Length (mm): **200** Probe Depth (mm): **28**

Probe Spacing (mm): **124.0**

Length of Test Specimen (mm): **219.20**

Diameter of Test Specimen (mm):

Water Content (%): **68.4**

Bulk Density (Mg/m^3): **1.58**

Dry Density (Mg/m^3): **0.94**

Temperature at Time of Test (^{o}C): **22.0**

Electrical Resistivity at 20^{o}C (ohm.m): **2.37**

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MEASUREMENT OF RESISTIVITY
WENNER PROBE METHOD

Please use output template for open container method (L - RESISTIVITY OPEN CONTAINER - A4P)
Water Content reported to BS EN ISO 17892-1:2014
Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **R22-TP107** Sample Ref: **9** Sample Type: **B** Depth (m): **1.00**

Description: **Brown CLAY**

Sample Condition: **Recompacted** Number of Compacted Layers: Compaction Method:

Number of Probes: **4** Probe Material: **Stainless Steel** Probe Location in Sample: **Side**

Probe Diameter (mm): **8** Probe Length (mm): **200** Probe Depth (mm): **28**

Probe Spacing (mm): **124.0**

Length of Test Specimen (mm): **219.20**

Diameter of Test Specimen (mm):

Water Content (%): **38.2**

Bulk Density (Mg/m^3): **1.79**

Dry Density (Mg/m^3): **1.29**

Temperature at Time of Test (^{o}C): **21.7**

Electrical Resistivity at 20^{o}C (ohm.m): **4.21**

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THERMAL DRY-OUT CURVE AND CRITICAL WATER CONTENT OF SOILS

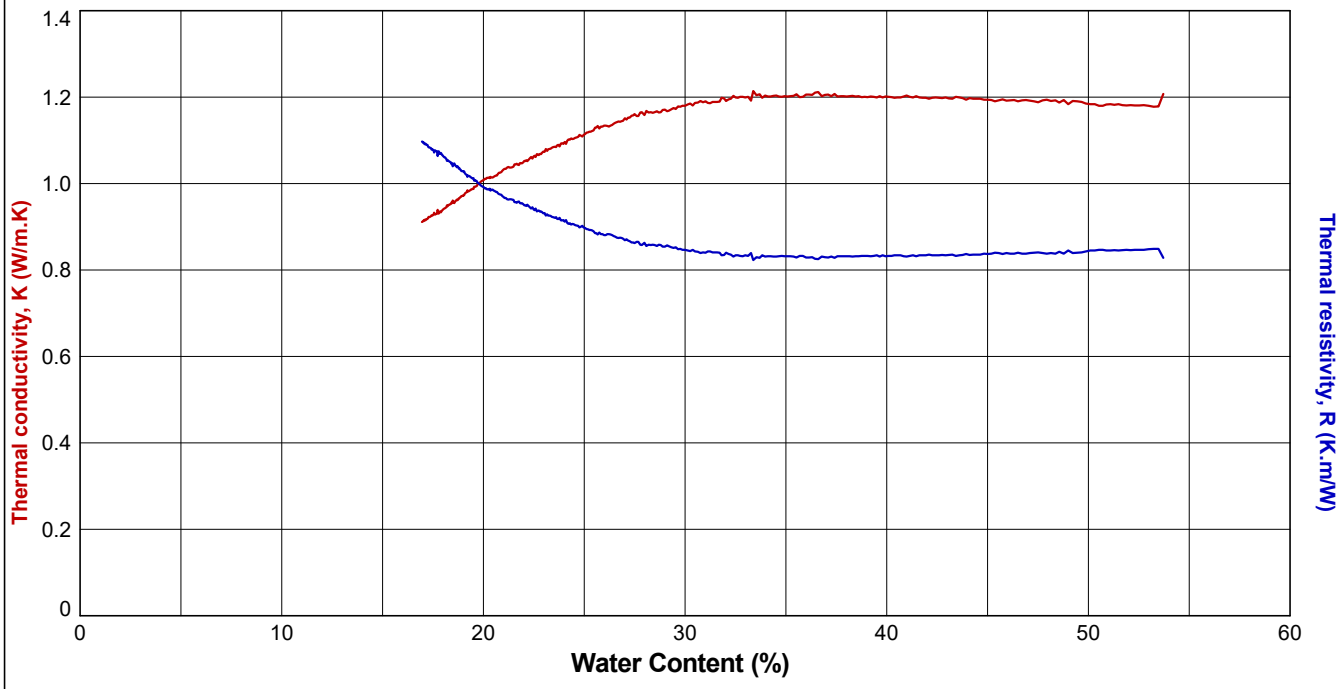
In accordance with ASTM D5334-22a^{E1} & IEEE 442-2017
Water Content reported to BS EN ISO 17892-1:2014, Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **RedP-BH-8** Sample Ref: **8** Sample Type: **UT** Depth (m): **2.18**

Description: **Light brown mottled grey slightly sandy silty CLAY** Specimen Condition: **Intact**

SPECIMEN DETAILS		INITIAL	FINAL
Mass	g	437.43	437.43
Height	mm	50.14	50.14
Diameter	mm	79.83	79.83
Water Content	%	44.6	12.2
Particle Density	Mg/m^3	2.65$_{(assumed)}$	2.65$_{(assumed)}$
Bulk Density	Mg/m^3	1.74	1.74
Dry Density	Mg/m^3	1.21	1.55
Void Ratio		1.1987	0.7052
Degree of Saturation	%	99	46

Water Content, WC		Thermal conductivity, K	Thermal resistivity, R
%		W/m.K	K.m/W
Max	53.7	1.207	0.828
Min	17.0	0.911	1.097
Critical			



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DETERMINATION OF SOIL AND ROCK BY THERMAL NEEDLE PROBE PROCEDURE

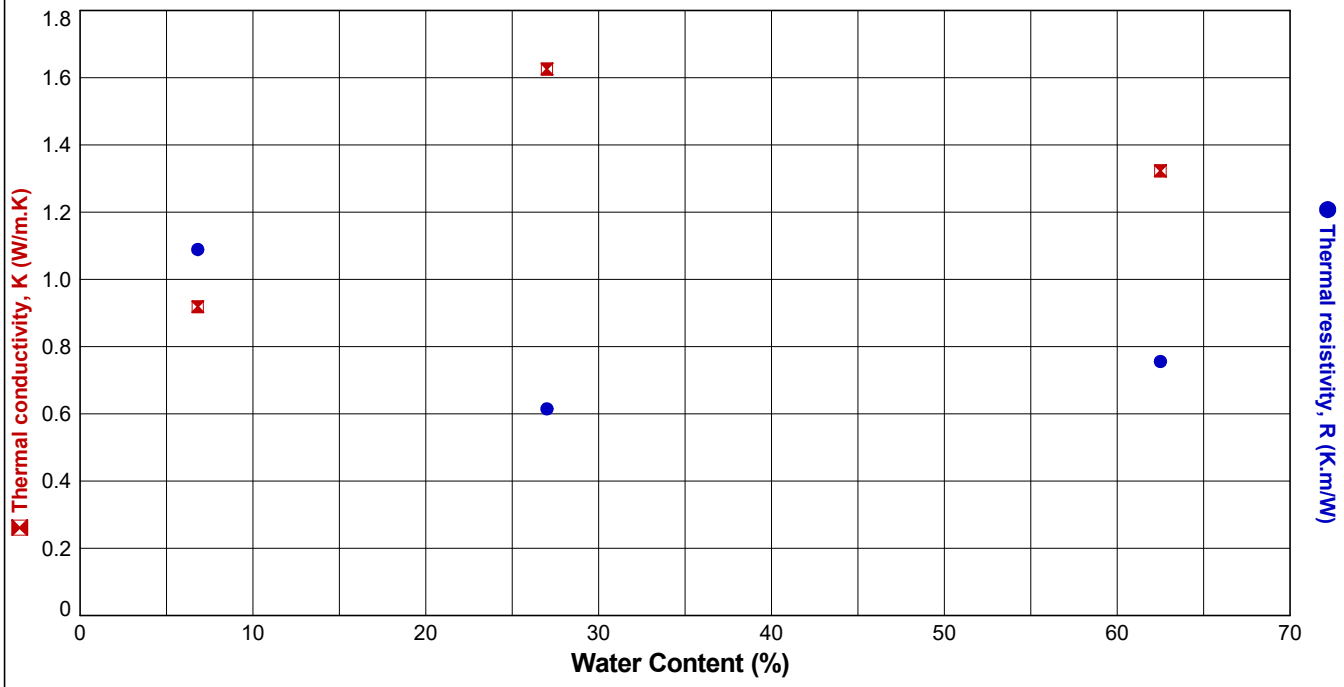
In accordance with ASTM D5334-22a^{E1} & IEEE 442-2017
Water Content reported to BS EN ISO 17892-1:2014, Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **R22-BH101** Sample Ref: **9** Sample Type: **UT** Depth (m): **2.07**

Description: **Grey mottled dark bluish grey silty CLAY** Specimen Condition: **Intact**

SPECIMEN DETAILS		INITIAL	FINAL
Mass	g	2391.23	1571.71
Height	mm	175.80	175.80
Diameter	mm	102.03	102.03
Water Content	%	62.5	4.0
Particle Density	Mg/m^3	$2.65_{(assumed)}$	$2.65_{(assumed)}$
Bulk Density	Mg/m^3	1.66	1.09
Dry Density	Mg/m^3	1.02	1.05
Void Ratio		1.5879	1.5211
Degree of Saturation	%	104	7

Water Content, WC		Thermal conductivity, K	Thermal resistivity, R
%		W/m.K	K.m/W
1	62.5	1.323	0.756
2	27.0	1.626	0.615
3	6.8	0.919	1.089



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DETERMINATION OF SOIL AND ROCK BY THERMAL NEEDLE PROBE PROCEDURE

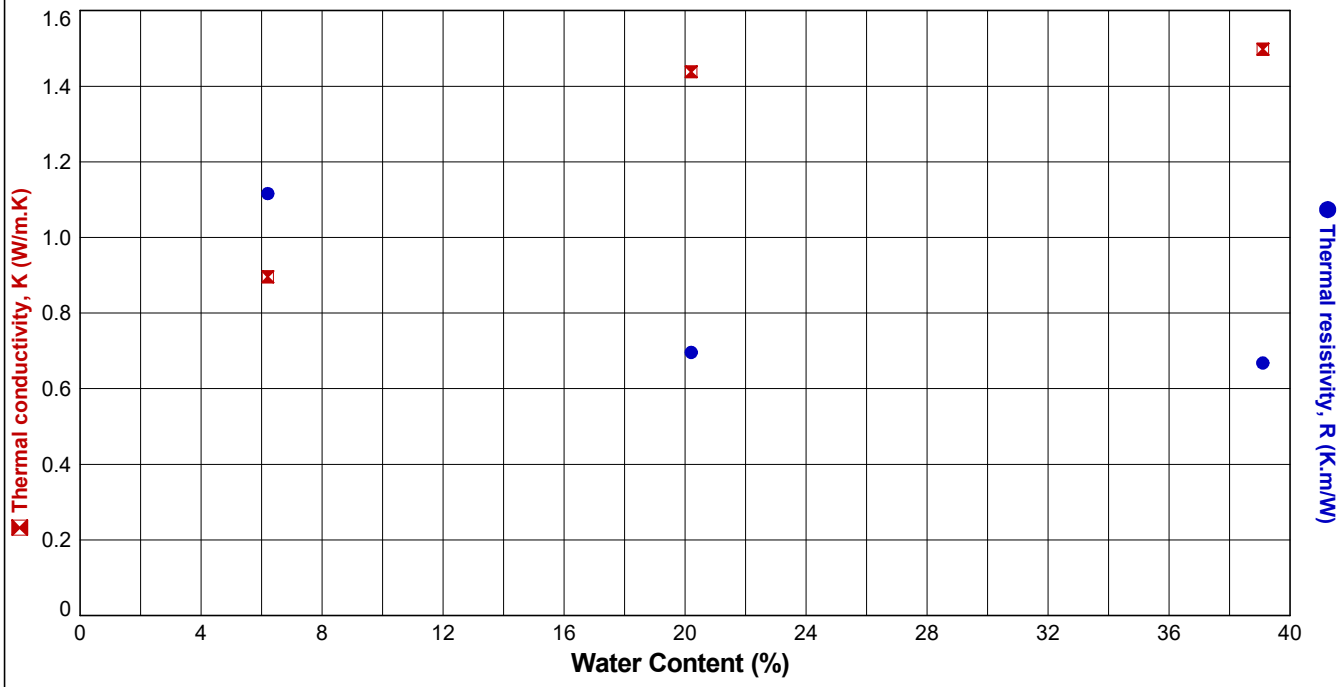
In accordance with ASTM D5334-22a^{E1} & IEEE 442-2017
Water Content reported to BS EN ISO 17892-1:2014, Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **R22-BH102** Sample Ref: **8** Sample Type: **UT** Depth (m): **2.30**

Description: **Greyish brown slightly sandy clayey SILT** Specimen Condition: **Intact**

SPECIMEN DETAILS		INITIAL	FINAL
Mass	g	812.08	620.10
Height	mm	118.19	118.19
Diameter	mm	68.64	68.64
Water Content	%	37.7	6.2
Particle Density	Mg/m^3	$2.65_{(assumed)}$	$2.65_{(assumed)}$
Bulk Density	Mg/m^3	1.86	1.42
Dry Density	Mg/m^3	1.35	1.34
Void Ratio		0.9649	0.9844
Degree of Saturation	%	103	17

Water Content, WC		Thermal conductivity, K	Thermal resistivity, R
%		W/m.K	K.m/W
1	39.1	1.498	0.668
2	20.2	1.438	0.696
3	6.2	0.896	1.116



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DETERMINATION OF SOIL AND ROCK BY THERMAL NEEDLE PROBE PROCEDURE

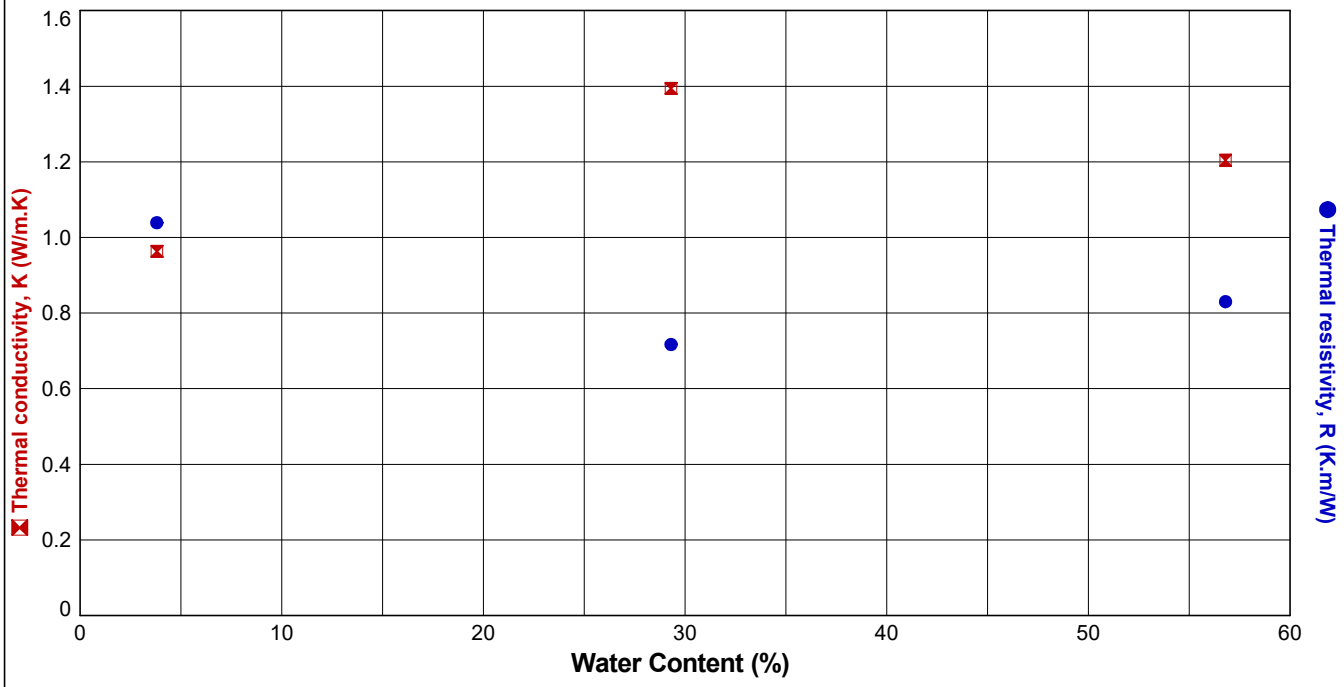
In accordance with ASTM D5334-22a^{E1} & IEEE 442-2017
Water Content reported to BS EN ISO 17892-1:2014, Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **R22-BH103** Sample Ref: **13** Sample Type: **UT** Depth (m): **3.68**

Description: **Grey slightly gravelly silty CLAY** Specimen Condition: **Intact**

SPECIMEN DETAILS		INITIAL	FINAL
Mass	g	708.28	468.70
Height	mm	111.95	111.95
Diameter	mm	69.46	69.46
Water Content	%	56.8	5.2
Particle Density	Mg/m^3	$2.65_{(assumed)}$	$2.65_{(assumed)}$
Bulk Density	Mg/m^3	1.67	1.11
Dry Density	Mg/m^3	1.06	1.05
Void Ratio		1.4885	1.5233
Degree of Saturation	%	101	9

Water Content, WC		Thermal conductivity, K	Thermal resistivity, R
%		W/m.K	K.m/W
1	56.8	1.204	0.830
2	29.3	1.394	0.717
3	3.8	0.963	1.039



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DETERMINATION OF SOIL AND ROCK BY THERMAL NEEDLE PROBE PROCEDURE

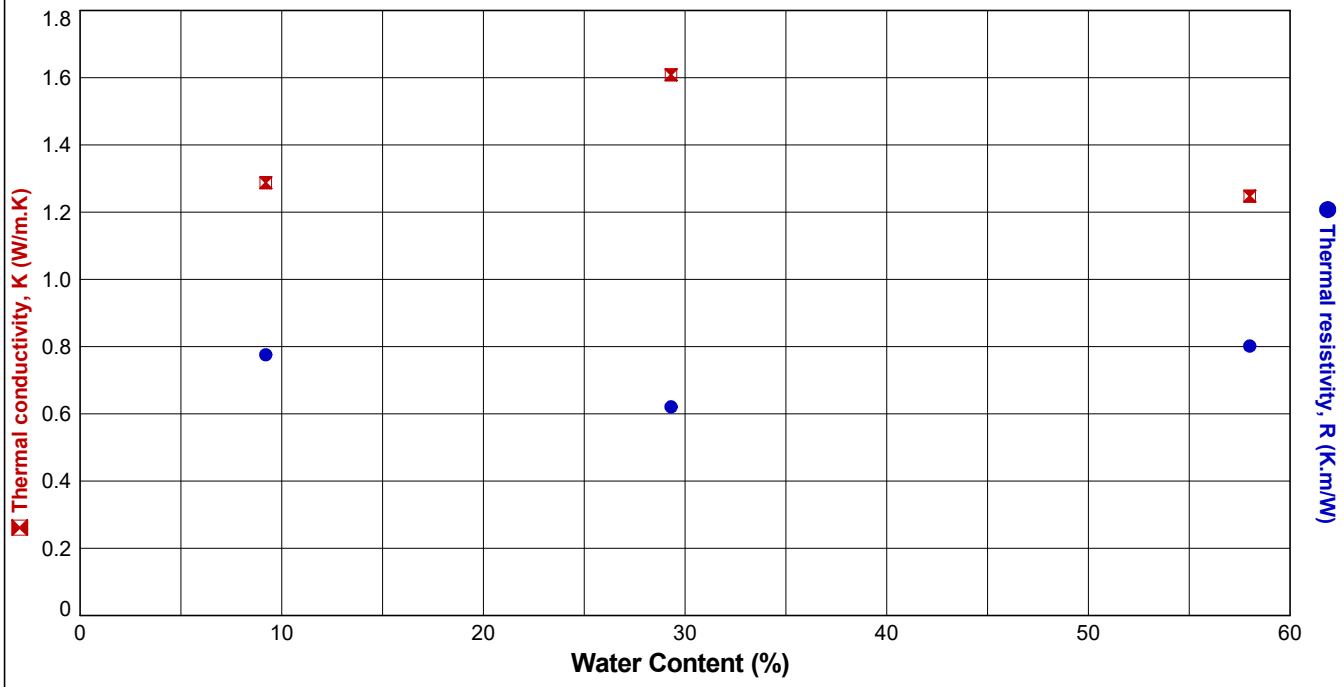
In accordance with ASTM D5334-22a^{E1} & IEEE 442-2017
Water Content reported to BS EN ISO 17892-1:2014, Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **R22-BH104** Sample Ref: **7** Sample Type: **UT** Depth (m): **2.20**

Description: **Grey silty CLAY** Specimen Condition: **Intact**

SPECIMEN DETAILS		INITIAL	FINAL
Mass	g	879.28	607.83
Height	mm	140.26	140.26
Diameter	mm	70.02	70.02
Water Content	%	58.9	9.2
Particle Density	Mg/m^3	$2.65_{(assumed)}$	$2.65_{(assumed)}$
Bulk Density	Mg/m^3	1.63	1.13
Dry Density	Mg/m^3	1.02	1.03
Void Ratio		1.5855	1.5713
Degree of Saturation	%	98	16

Water Content, WC		Thermal conductivity, K	Thermal resistivity, R
%		W/m.K	K.m/W
1	58.0	1.248	0.802
2	29.3	1.609	0.621
3	9.2	1.288	0.776



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DETERMINATION OF SOIL AND ROCK BY THERMAL NEEDLE PROBE PROCEDURE

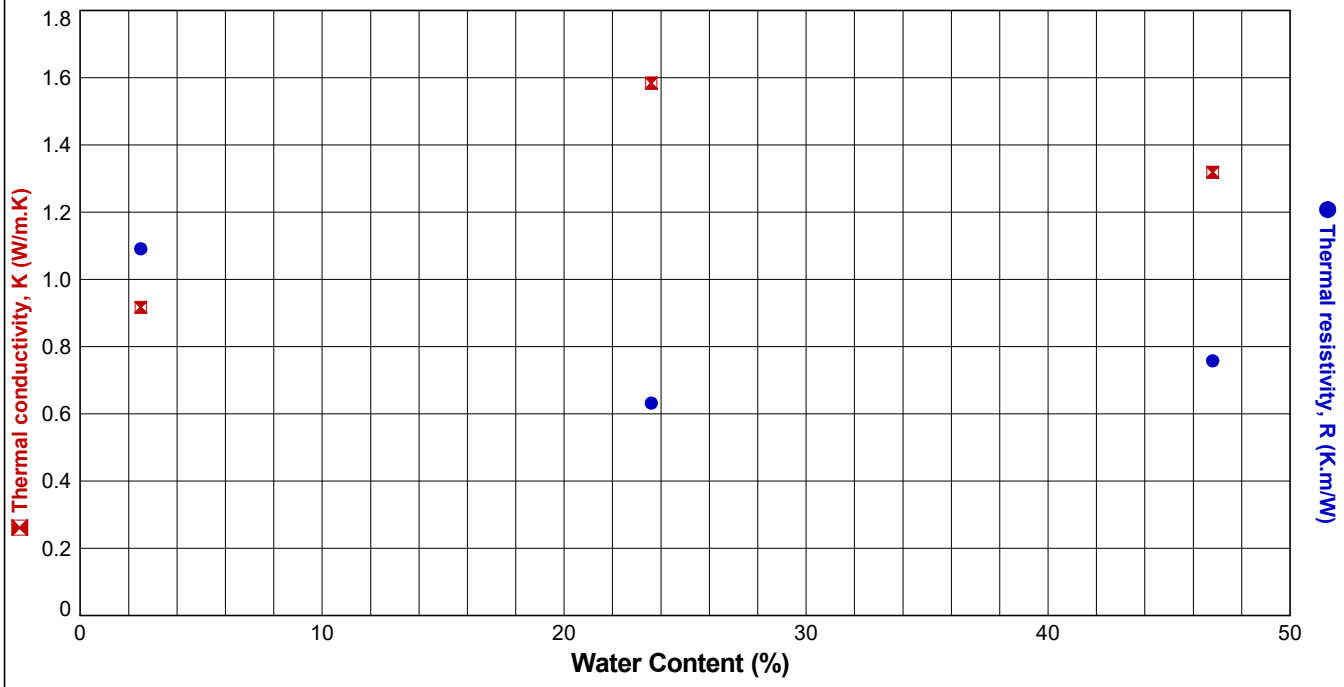
In accordance with ASTM D5334-22a^{E1} & IEEE 442-2017
Water Content reported to BS EN ISO 17892-1:2014, Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **R22-BH105** Sample Ref: **3** Sample Type: **UT** Depth (m): **1.41**

Description: **Greyish brown silty CLAY** Specimen Condition: **Intact**

SPECIMEN DETAILS		INITIAL	FINAL
Mass	g	902.97	630.49
Height	mm	139.78	139.78
Diameter	mm	68.44	68.44
Water Content	%	46.8	5.1
Particle Density	Mg/m^3	$2.65_{(assumed)}$	$2.65_{(assumed)}$
Bulk Density	Mg/m^3	1.76	1.23
Dry Density	Mg/m^3	1.20	1.17
Void Ratio		1.2160	1.2716
Degree of Saturation	%	102	11

Water Content, WC		Thermal conductivity, K	Thermal resistivity, R
%		W/m.K	K.m/W
1	46.8	1.319	0.758
2	23.6	1.584	0.632
3	2.5	0.917	1.091



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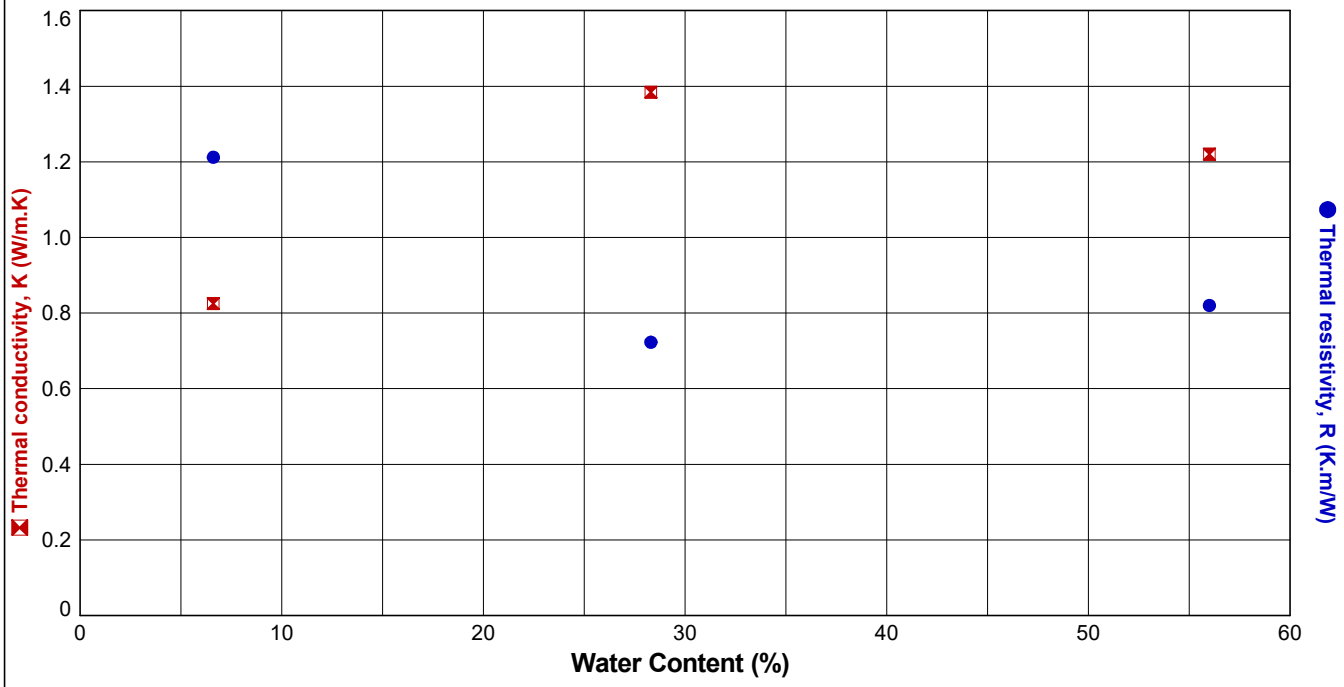
In accordance with ASTM D5334-22a^{E1} & IEEE 442-2017
Water Content reported to BS EN ISO 17892-1:2014, Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **R22-BH106A** Sample Ref: **6** Sample Type: **UT** Depth (m): **2.05**

Description: **Grey silty CLAY** Specimen Condition: **Intact**

SPECIMEN DETAILS		INITIAL	FINAL
Mass	g	2821.97	1928.15
Height	mm	201.76	201.76
Diameter	mm	102.18	102.18
Water Content	%	54.0	6.6
Particle Density	Mg/m^3	$2.65_{(assumed)}$	$2.65_{(assumed)}$
Bulk Density	Mg/m^3	1.71	1.17
Dry Density	Mg/m^3	1.11	1.09
Void Ratio		1.3932	1.4237
Degree of Saturation	%	103	12

Water Content, WC		Thermal conductivity, K	Thermal resistivity, R
%		W/m.K	K.m/W
1	56.0	1.220	0.820
2	28.3	1.384	0.723
3	6.6	0.825	1.212



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DETERMINATION OF SOIL AND ROCK BY THERMAL NEEDLE PROBE PROCEDURE

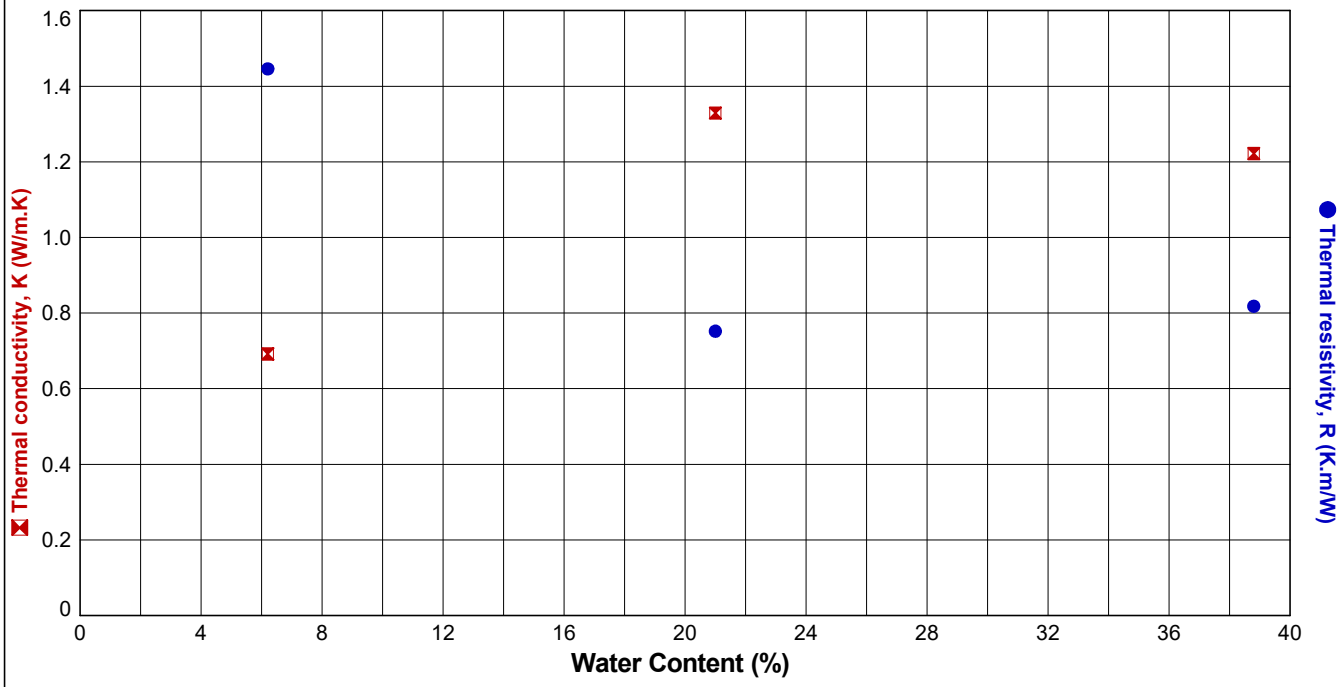
In accordance with ASTM D5334-22a^{E1} & IEEE 442-2017
Water Content reported to BS EN ISO 17892-1:2014, Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **R22-TP101** Sample Ref: **7** Sample Type: **B** Depth (m): **0.90**

Description: **Greyish brown silty CLAY** Specimen Condition: **Recompacted**

SPECIMEN DETAILS		INITIAL	FINAL
Mass	g	1705.50	1675.56
Height	mm	115.35	115.35
Diameter	mm	105.21	105.21
Water Content	%	38.8	6.2
Particle Density	Mg/m^3	$2.65_{(assumed)}$	$2.65_{(assumed)}$
Bulk Density	Mg/m^3	1.70	1.67
Dry Density	Mg/m^3	1.23	1.57
Void Ratio		1.1631	0.6847
Degree of Saturation	%	88	24

Water Content, WC		Thermal conductivity, K	Thermal resistivity, R
%		W/m.K	K.m/W
1	38.8	1.222	0.818
2	21.0	1.329	0.752
3	6.2	0.692	1.446



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DETERMINATION OF SOIL AND ROCK BY THERMAL NEEDLE PROBE PROCEDURE

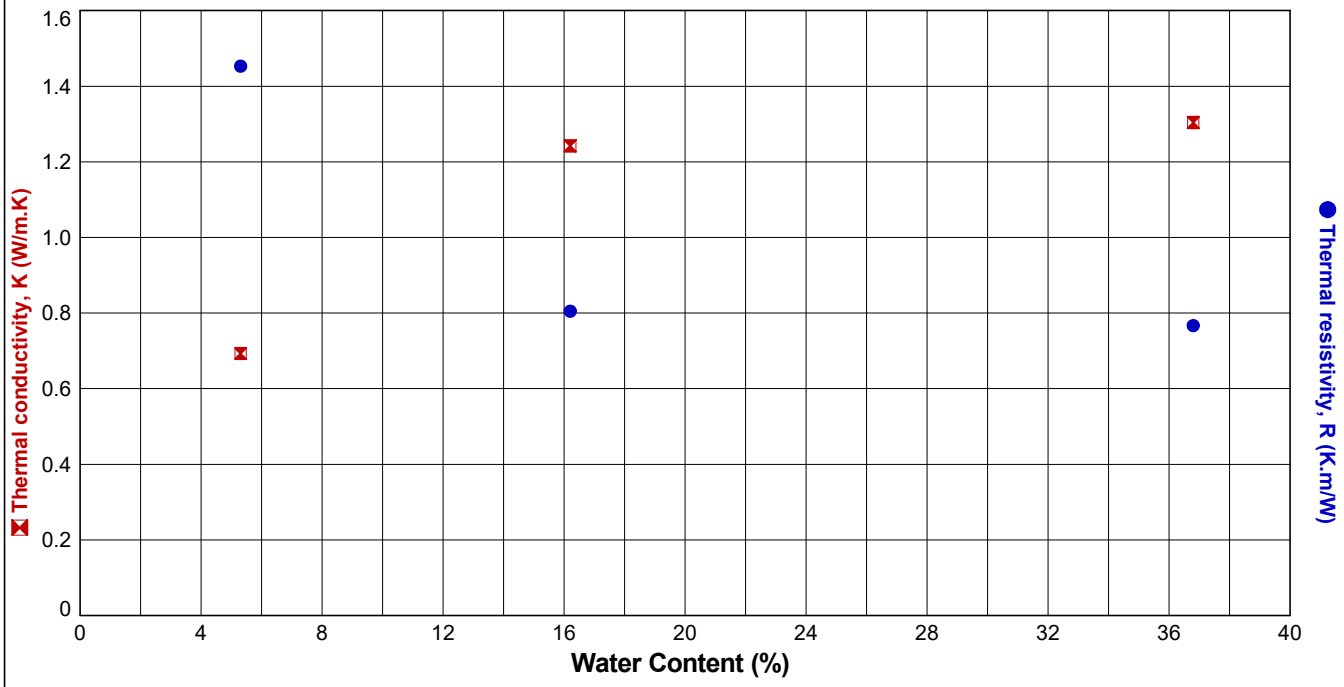
In accordance with ASTM D5334-22a^{E1} & IEEE 442-2017
Water Content reported to BS EN ISO 17892-1:2014, Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **R22-TP102** Sample Ref: **4** Sample Type: **B** Depth (m): **0.70**

Description: **Greyish brown silty CLAY** Specimen Condition: **Recompacted**

SPECIMEN DETAILS		INITIAL	FINAL
Mass	g	1706.50	1596.05
Height	mm	115.35	115.35
Diameter	mm	105.21	105.21
Water Content	%	36.8	5.3
Particle Density	Mg/m^3	$2.65_{(assumed)}$	$2.65_{(assumed)}$
Bulk Density	Mg/m^3	1.70	1.59
Dry Density	Mg/m^3	1.24	1.51
Void Ratio		1.1308	0.7537
Degree of Saturation	%	86	19

Water Content, WC		Thermal conductivity, K	Thermal resistivity, R
%		W/m.K	K.m/W
1	36.8	1.304	0.767
2	16.2	1.242	0.805
3	5.3	0.693	1.453



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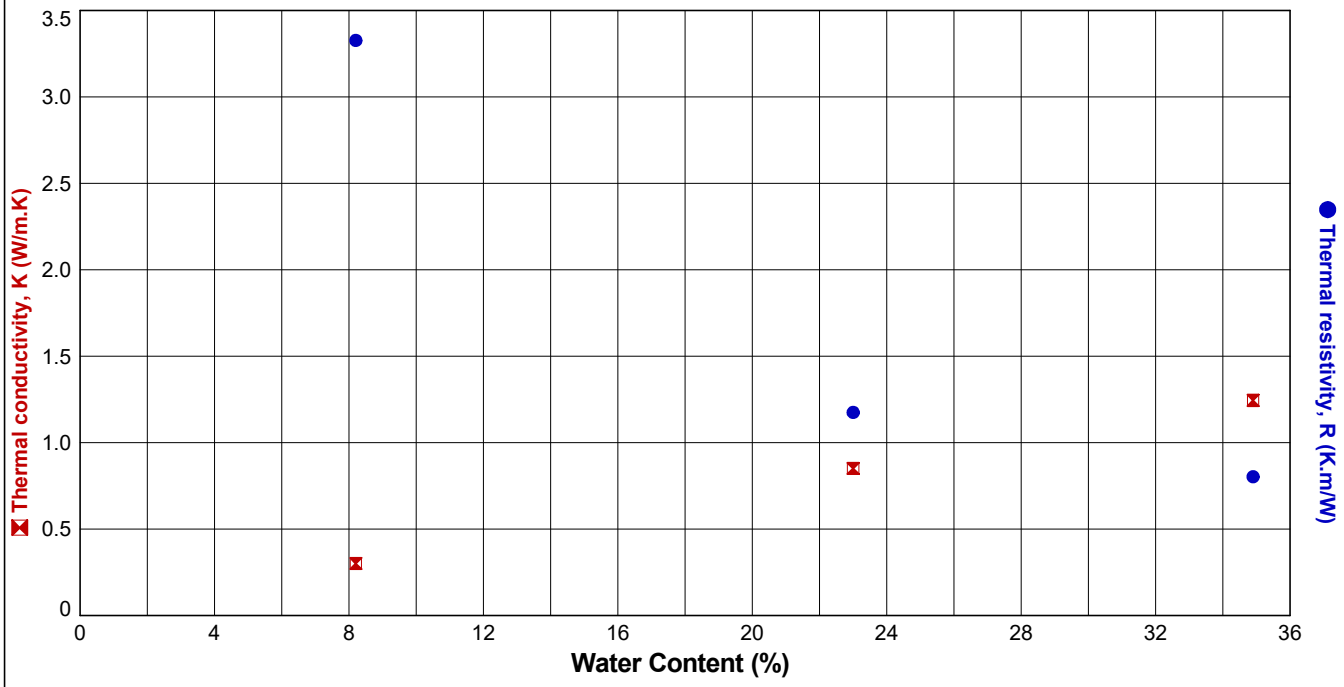
In accordance with ASTM D5334-22a^{E1} & IEEE 442-2017
Water Content reported to BS EN ISO 17892-1:2014, Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **R22-TP103** Sample Ref: **2** Sample Type: **B** Depth (m): **0.50**

Description: **Greyish brown silty CLAY** Specimen Condition: **Remoulded**

SPECIMEN DETAILS		INITIAL	FINAL
Mass	g	1735.21	1392.28
Height	mm	115.34	115.34
Diameter	mm	105.37	105.37
Water Content	%	34.9	5.8
Particle Density	Mg/m^3	$2.65_{(assumed)}$	$2.65_{(assumed)}$
Bulk Density	Mg/m^3	1.73	1.38
Dry Density	Mg/m^3	1.28	1.31
Void Ratio		1.0720	1.0252
Degree of Saturation	%	86	15

Water Content, WC		Thermal conductivity, K	Thermal resistivity, R
%		W/m.K	K.m/W
1	34.9	1.245	0.803
2	23.0	0.851	1.175
3	8.2	0.301	3.327



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DETERMINATION OF SOIL AND ROCK BY THERMAL NEEDLE PROBE PROCEDURE

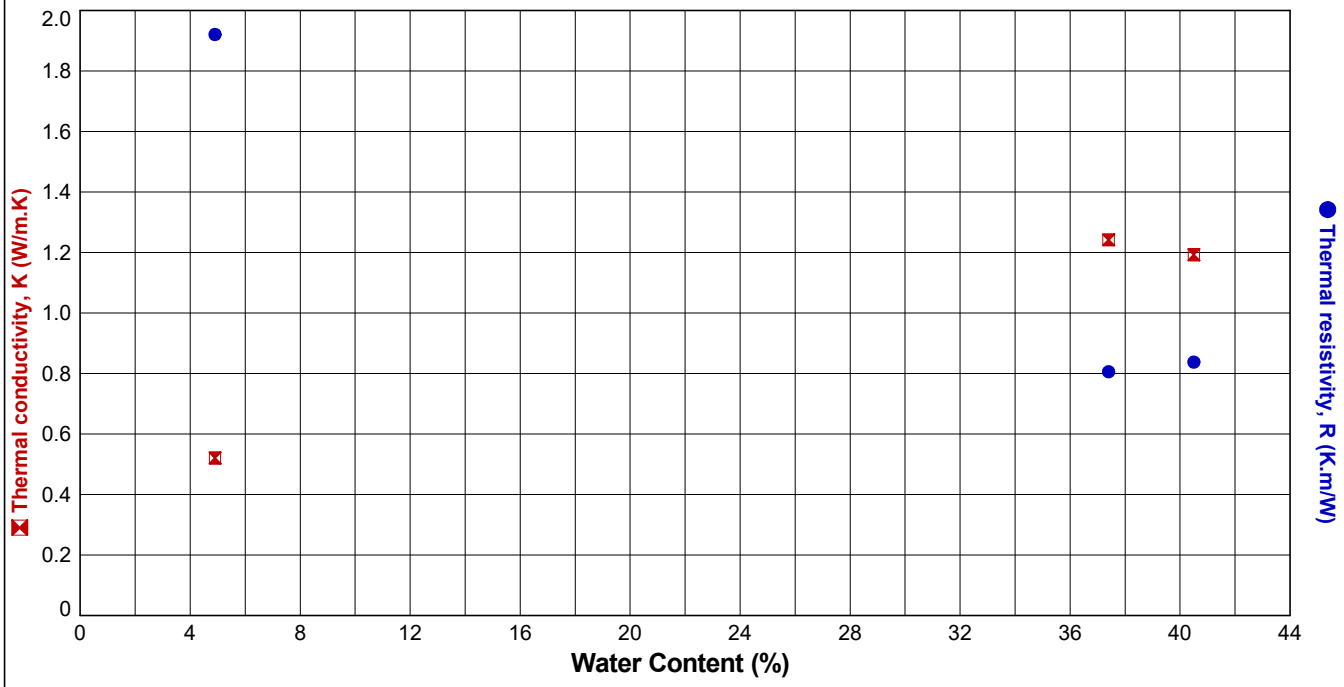
In accordance with ASTM D5334-22a^{E1} & IEEE 442-2017
Water Content reported to BS EN ISO 17892-1:2014, Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **R22-TP104** Sample Ref: **8** Sample Type: **B** Depth (m): **1.00**

Description: **Greyish brown slightly gravelly silty CLAY with few shell fragments** Specimen Condition: **Remoulded**

SPECIMEN DETAILS		INITIAL	FINAL
Mass	g	1639.28	1471.66
Height	mm	115.34	115.34
Diameter	mm	105.24	105.24
Water Content	%	40.9	4.9
Particle Density	Mg/m^3	$2.65_{(assumed)}$	$2.65_{(assumed)}$
Bulk Density	Mg/m^3	1.63	1.47
Dry Density	Mg/m^3	1.16	1.40
Void Ratio		1.2847	0.8951
Degree of Saturation	%	84	15

Water Content, WC		Thermal conductivity, K	Thermal resistivity, R
%		W/m.K	K.m/W
1	40.5	1.193	0.838
2	37.4	1.242	0.806
3	4.9	0.521	1.921



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DETERMINATION OF SOIL AND ROCK BY THERMAL NEEDLE PROBE PROCEDURE

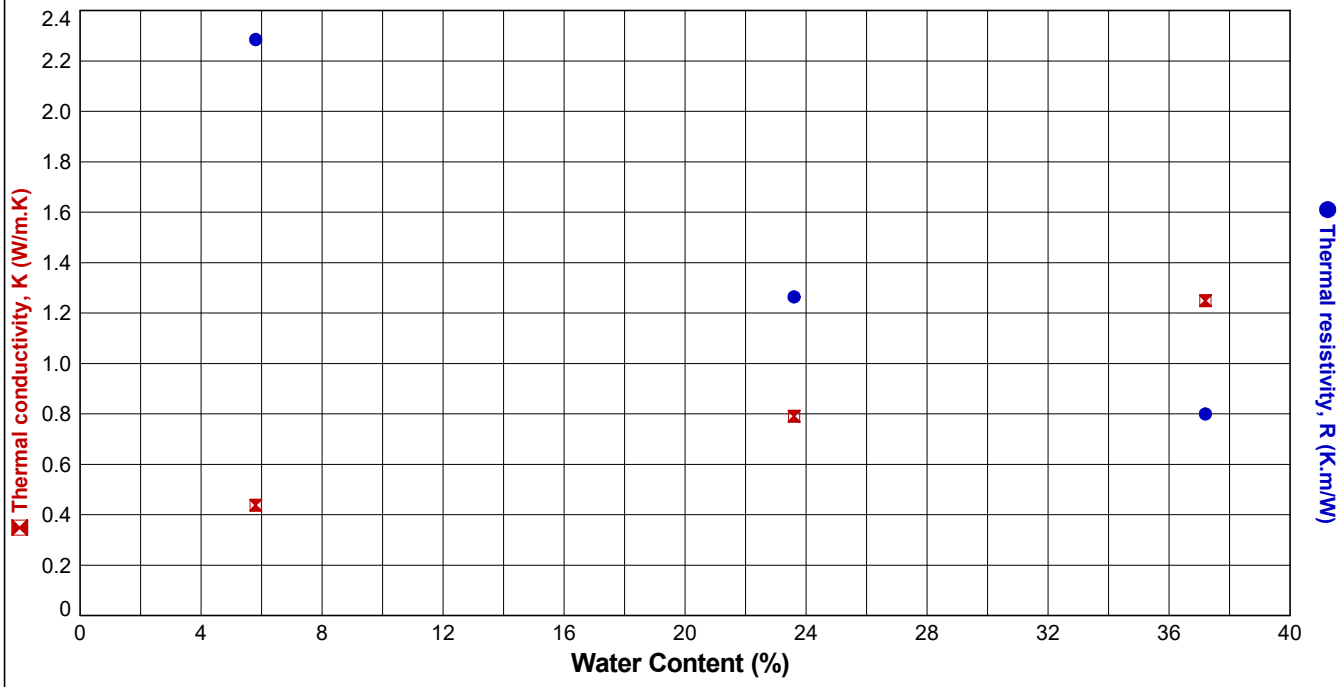
In accordance with ASTM D5334-22a^{E1} & IEEE 442-2017
Water Content reported to BS EN ISO 17892-1:2014, Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **R22-TP105** Sample Ref: **8** Sample Type: **B** Depth (m): **1.00**

Description: **Brown mottled grey slightly gravelly silty CLAY** Specimen Condition: **Remoulded**

SPECIMEN DETAILS		INITIAL	FINAL
Mass	g	1705.24	1529.44
Height	mm	115.49	115.49
Diameter	mm	105.06	105.06
Water Content	%	37.2	5.8
Particle Density	Mg/m^3	$2.65_{(assumed)}$	$2.65_{(assumed)}$
Bulk Density	Mg/m^3	1.70	1.53
Dry Density	Mg/m^3	1.24	1.44
Void Ratio		1.1351	0.8360
Degree of Saturation	%	87	19

Water Content, WC		Thermal conductivity, K	Thermal resistivity, R
%		W/m.K	K.m/W
1	37.2	1.249	0.800
2	23.6	0.791	1.264
3	5.8	0.438	2.285



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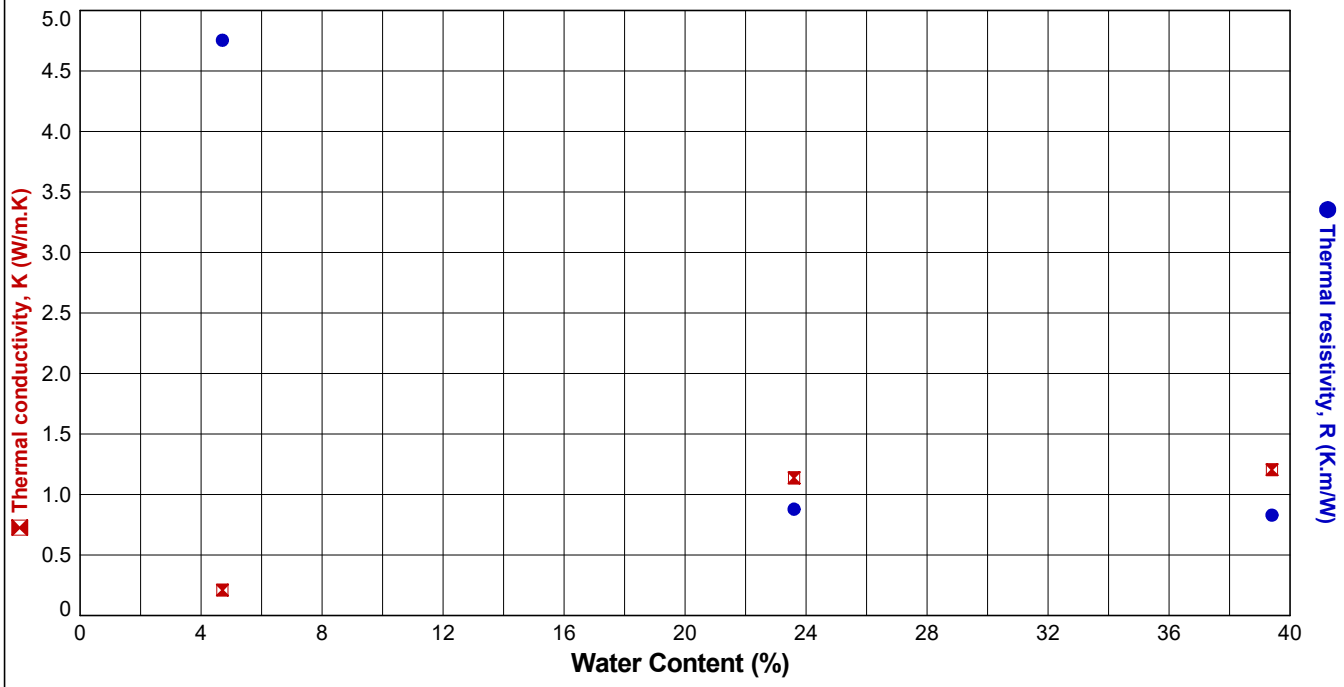
In accordance with ASTM D5334-22a^{E1} & IEEE 442-2017
Water Content reported to BS EN ISO 17892-1:2014, Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **R22-TP106** Sample Ref: **5** Sample Type: **B** Depth (m): **0.70**

Description: **Greyish brown silty CLAY** Specimen Condition: **Remoulded**

SPECIMEN DETAILS		INITIAL	FINAL
Mass	g	1601.82	1474.39
Height	mm	115.37	115.37
Diameter	mm	105.32	105.32
Water Content	%	39.6	4.7
Particle Density	Mg/m^3	$2.65_{(assumed)}$	$2.65_{(assumed)}$
Bulk Density	Mg/m^3	1.59	1.47
Dry Density	Mg/m^3	1.14	1.40
Void Ratio		1.3212	0.8908
Degree of Saturation	%	79	14

Water Content, WC		Thermal conductivity, K	Thermal resistivity, R
%		W/m.K	K.m/W
1	39.4	1.205	0.830
2	23.6	1.138	0.879
3	4.7	0.210	4.755



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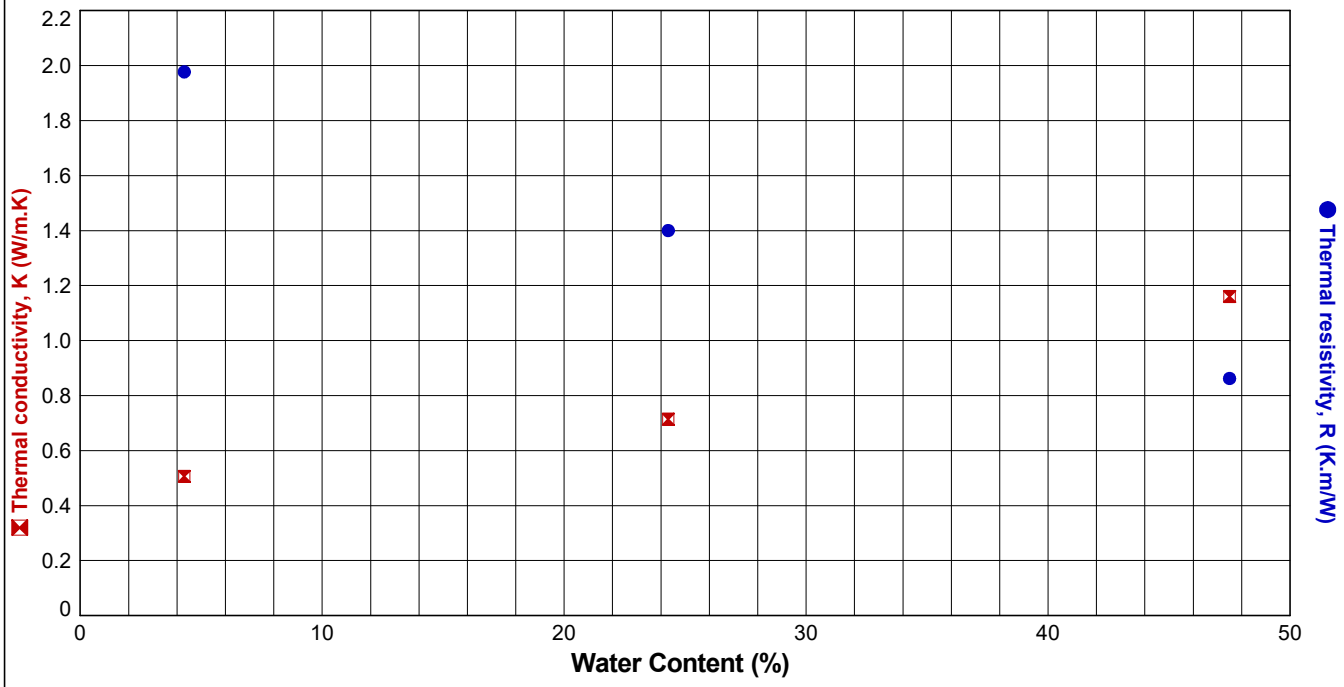
In accordance with ASTM D5334-22a^{E1} & IEEE 442-2017
Water Content reported to BS EN ISO 17892-1:2014, Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **R22-TP107** Sample Ref: **11** Sample Type: **B** Depth (m): **1.10**

Description: **Brownish grey silty CLAY** Specimen Condition: **Remoulded**

SPECIMEN DETAILS		INITIAL	FINAL
Mass	g	1670.18	1400.41
Height	mm	115.43	115.43
Diameter	mm	105.08	105.08
Water Content	%	47.5	-118.6
Particle Density	Mg/m^3	$2.65_{(assumed)}$	$2.65_{(assumed)}$
Bulk Density	Mg/m^3	1.67	1.40
Dry Density	Mg/m^3	1.13	-7.53
Void Ratio		1.3428	-1.3521
Degree of Saturation	%	94	232

Water Content, WC		Thermal conductivity, K	Thermal resistivity, R
%		W/m.K	K.m/W
1	47.5	1.160	0.862
2	24.3	0.714	1.400
3	4.3	0.506	1.977



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DETERMINATION OF SOIL AND ROCK BY THERMAL NEEDLE PROBE PROCEDURE

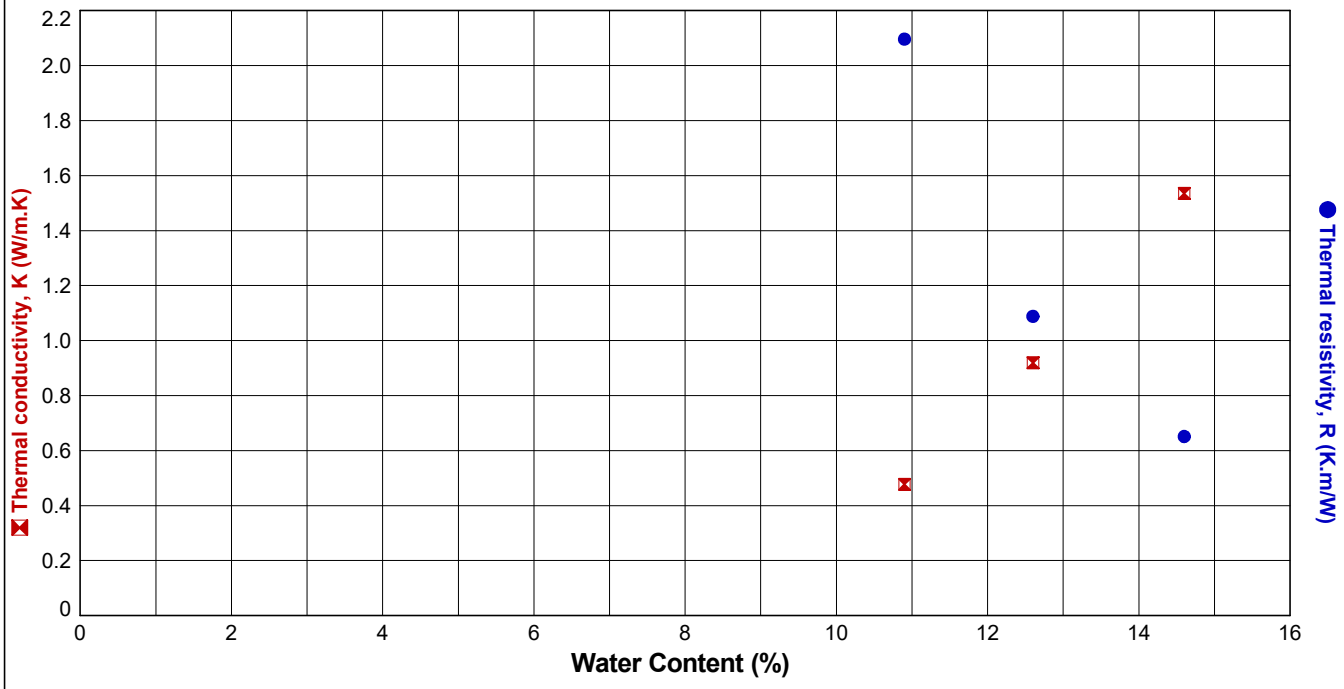
In accordance with ASTM D5334-22a^{E1} & IEEE 442-2017
Water Content reported to BS EN ISO 17892-1:2014, Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **R22-TP201** Sample Ref: **6** Sample Type: **B** Depth (m): **0.90**

Description: **Brown slightly sandy silty CLAY** Specimen Condition: **Remoulded**

SPECIMEN DETAILS		INITIAL	FINAL
Mass	g	1720.52	1464.57
Height	mm	115.48	115.48
Diameter	mm	105.05	105.05
Water Content	%	14.6	3.3
Particle Density	Mg/m^3	$2.65_{(assumed)}$	$2.65_{(assumed)}$
Bulk Density	Mg/m^3	1.72	1.46
Dry Density	Mg/m^3	1.50	1.42
Void Ratio		0.7664	0.8706
Degree of Saturation	%	50	10

Water Content, WC		Thermal conductivity, K	Thermal resistivity, R
%		W/m.K	K.m/W
1	14.6	1.535	0.651
2	12.6	0.919	1.088
3	10.9	0.477	2.096



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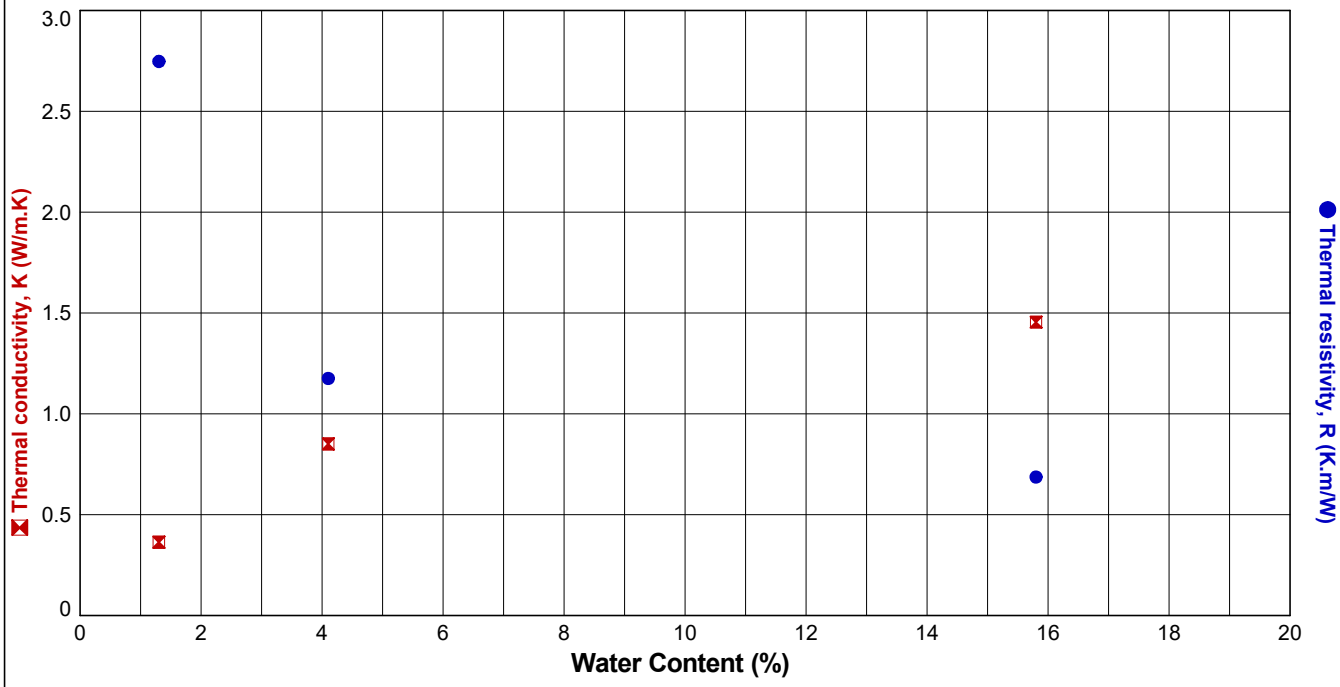
In accordance with ASTM D5334-22a^{E1} & IEEE 442-2017
Water Content reported to BS EN ISO 17892-1:2014, Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **R22-TP202** Sample Ref: **8** Sample Type: **B** Depth (m): **1.10**

Description: **Yellowish brown sandy CLAY** Specimen Condition: **Remoulded**

SPECIMEN DETAILS		INITIAL	FINAL
Mass	g	1704.12	1490.02
Height	mm	115.30	115.30
Diameter	mm	105.22	105.22
Water Content	%	15.8	5.1
Particle Density	Mg/m^3	$2.65_{(assumed)}$	$2.65_{(assumed)}$
Bulk Density	Mg/m^3	1.70	1.49
Dry Density	Mg/m^3	1.47	1.41
Void Ratio		0.8059	0.8732
Degree of Saturation	%	52	15

Water Content, WC		Thermal conductivity, K	Thermal resistivity, R
%		W/m.K	K.m/W
1	15.8	1.455	0.687
2	4.1	0.851	1.176
3	1.3	0.364	2.748



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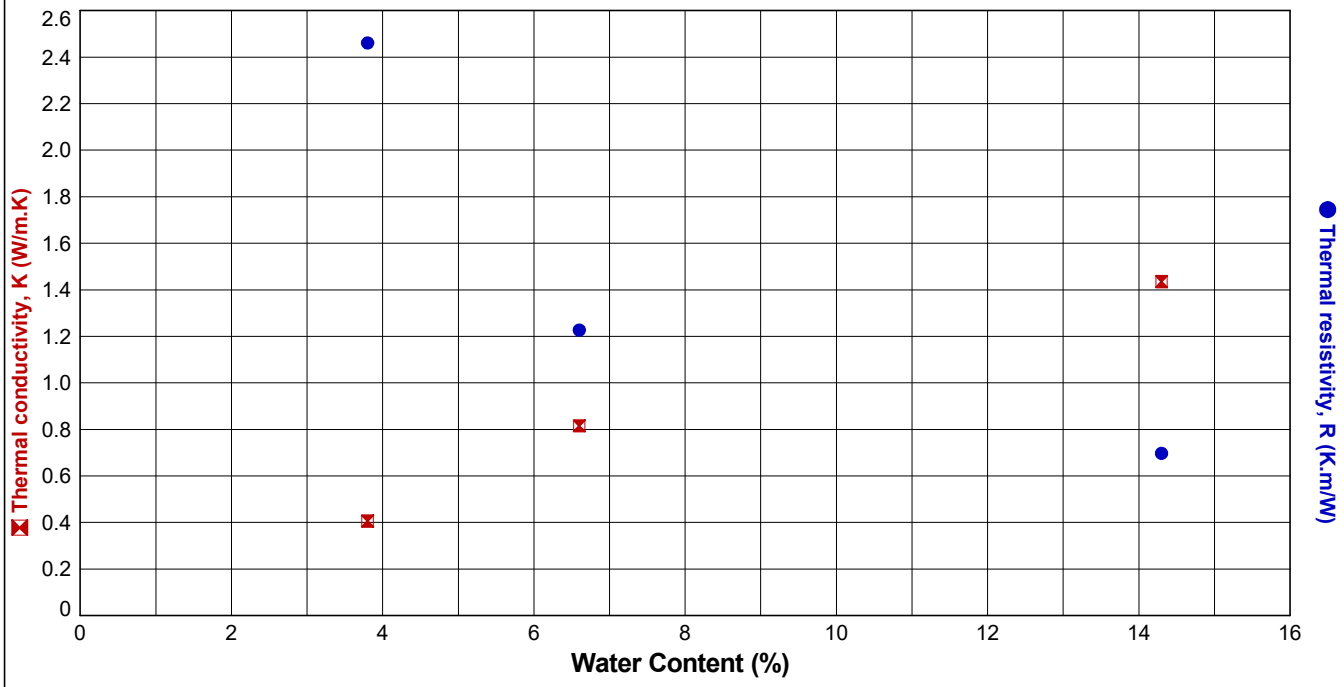
In accordance with ASTM D5334-22a^{E1} & IEEE 442-2017
Water Content reported to BS EN ISO 17892-1:2014, Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **R22-TP203** Sample Ref: **5** Sample Type: **B** Depth (m): **0.70**

Description: **Yellowish brown clayey SAND** Specimen Condition: **Recompacted**

SPECIMEN DETAILS		INITIAL	FINAL
Mass	g	1698.10	1504.22
Height	mm	115.34	115.34
Diameter	mm	105.23	105.23
Water Content	%	14.3	3.8
Particle Density	Mg/m^3	$2.65_{(assumed)}$	$2.65_{(assumed)}$
Bulk Density	Mg/m^3	1.69	1.50
Dry Density	Mg/m^3	1.48	1.44
Void Ratio		0.7888	0.8349
Degree of Saturation	%	48	12

Water Content, WC		Thermal conductivity, K	Thermal resistivity, R
%		W/m.K	K.m/W
1	14.3	1.435	0.697
2	6.6	0.815	1.227
3	3.8	0.406	2.461



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DETERMINATION OF SOIL AND ROCK BY THERMAL NEEDLE PROBE PROCEDURE

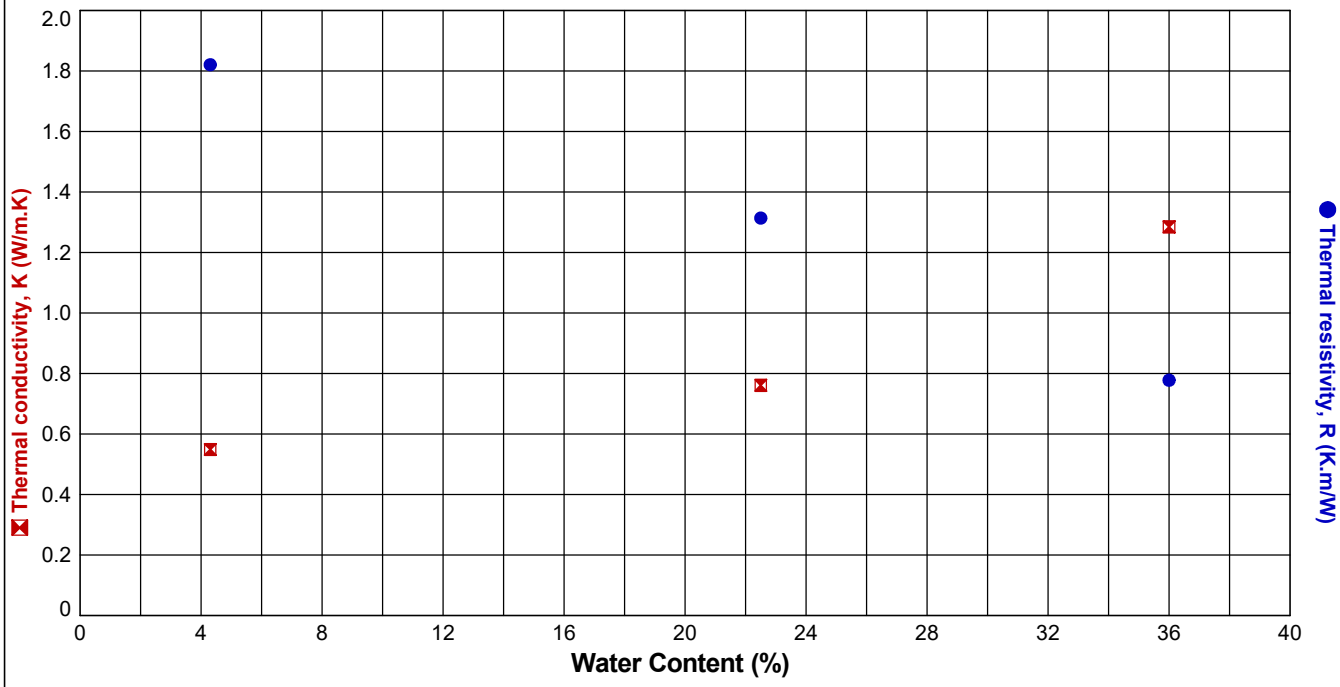
In accordance with ASTM D5334-22a^{E1} & IEEE 442-2017
Water Content reported to BS EN ISO 17892-1:2014, Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **R22-TP204** Sample Ref: **6** Sample Type: **B** Depth (m): **0.90**

Description: **Brown silty CLAY** Specimen Condition: **Remoulded**

SPECIMEN DETAILS		INITIAL	FINAL
Mass	g	1749.05	1537.49
Height	mm	115.35	115.35
Diameter	mm	105.32	105.32
Water Content	%	36.0	4.3
Particle Density	Mg/m^3	$2.65_{(assumed)}$	$2.65_{(assumed)}$
Bulk Density	Mg/m^3	1.74	1.53
Dry Density	Mg/m^3	1.28	1.47
Void Ratio		1.0710	0.8059
Degree of Saturation	%	89	14

Water Content, WC		Thermal conductivity, K	Thermal resistivity, R
%		W/m.K	K.m/W
1	36.0	1.285	0.778
2	22.5	0.761	1.314
3	4.3	0.549	1.821



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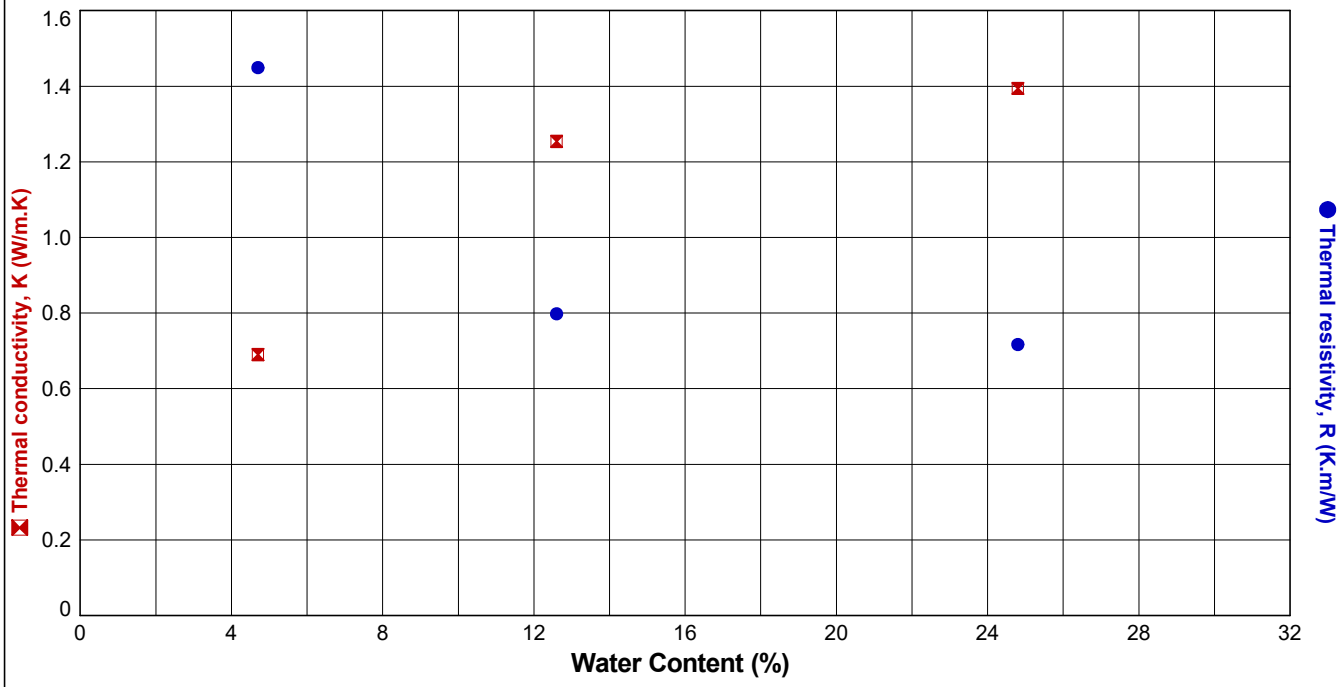
In accordance with ASTM D5334-22a^{E1} & IEEE 442-2017
Water Content reported to BS EN ISO 17892-1:2014, Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **R22-TP205** Sample Ref: **9** Sample Type: **B** Depth (m): **1.00**

Description: **Greyish brown silty CLAY** Specimen Condition: **Remoulded**

SPECIMEN DETAILS		INITIAL	FINAL
Mass	g	1747.45	1682.82
Height	mm	115.43	115.43
Diameter	mm	105.07	105.07
Water Content	%	24.8	4.7
Particle Density	Mg/m^3	$2.65_{(assumed)}$	$2.65_{(assumed)}$
Bulk Density	Mg/m^3	1.75	1.68
Dry Density	Mg/m^3	1.40	1.61
Void Ratio		0.8940	0.6499
Degree of Saturation	%	74	19

Water Content, WC		Thermal conductivity, K	Thermal resistivity, R
%		W/m.K	K.m/W
1	24.8	1.394	0.717
2	12.6	1.254	0.798
3	4.7	0.690	1.449



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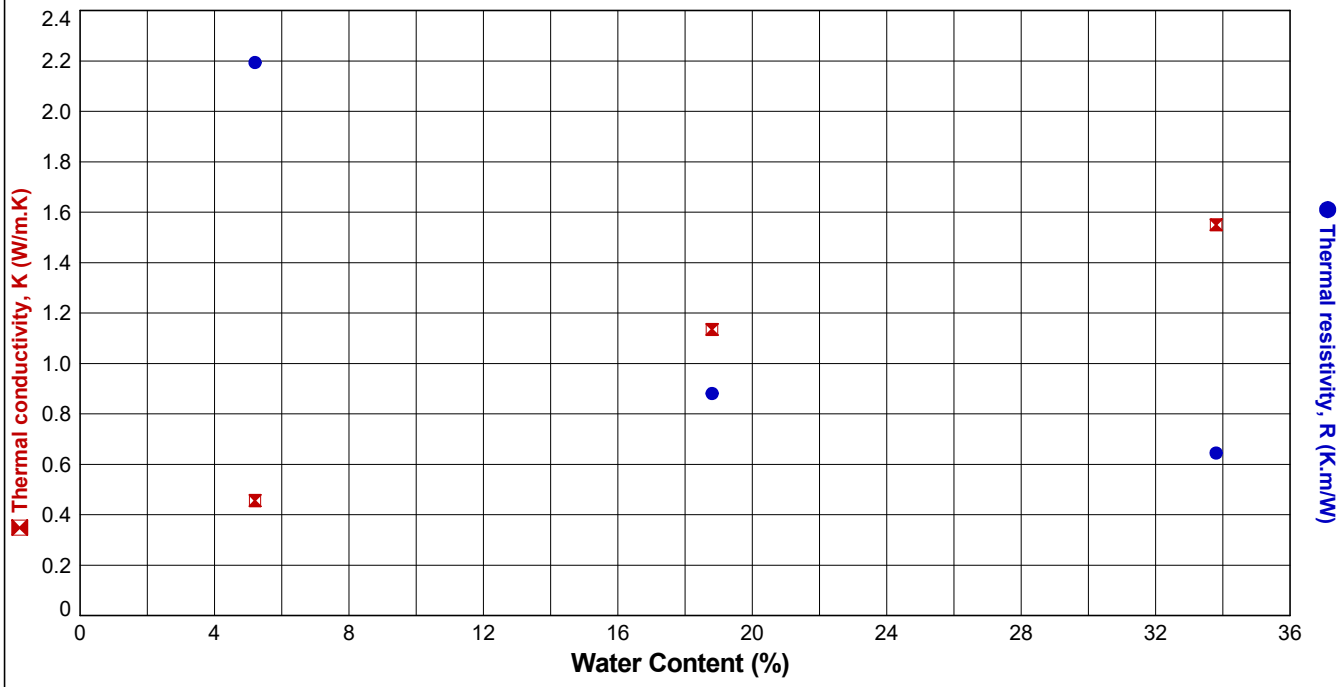
In accordance with ASTM D5334-22a^{E1} & IEEE 442-2017
Water Content reported to BS EN ISO 17892-1:2014, Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **RedP-BH-8** Sample Ref: **14** Sample Type: **UT** Depth (m): **4.00**

Description: **Light greyish brown slightly sandy clayey SILT** Specimen Condition: **Intact**

SPECIMEN DETAILS		INITIAL	FINAL
Mass	g	969.07	1324.24
Height	mm	141.02	141.02
Diameter	mm	69.66	69.66
Water Content	%	33.8	5.1
Particle Density	Mg/m^3	$2.65_{(assumed)}$	$2.65_{(assumed)}$
Bulk Density	Mg/m^3	1.80	2.46
Dry Density	Mg/m^3	1.35	2.34
Void Ratio		0.9662	0.1309
Degree of Saturation	%	93	104

Water Content, WC		Thermal conductivity, K	Thermal resistivity, R
%		W/m.K	K.m/W
1	33.8	1.550	0.645
2	18.8	1.135	0.881
3	5.2	0.456	2.194



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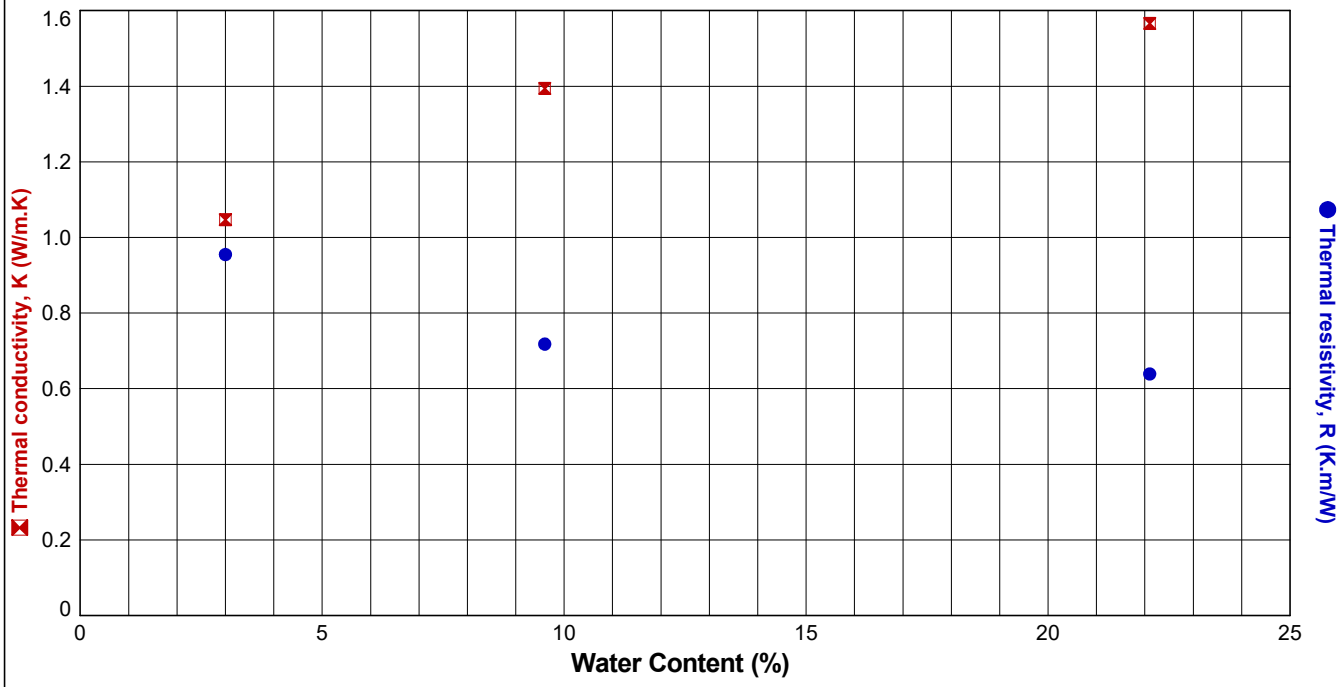
In accordance with ASTM D5334-22a^{E1} & IEEE 442-2017
Water Content reported to BS EN ISO 17892-1:2014, Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **RedP-BH-8** Sample Ref: **19** Sample Type: **UT** Depth (m): **6.00**

Description: **Dark grey slightly sandy CLAY** Specimen Condition: **Intact**

SPECIMEN DETAILS		INITIAL	FINAL
Mass	g	2241.07	1889.91
Height	mm	136.74	136.74
Diameter	mm	103.80	103.80
Water Content	%	22.1	8.1
Particle Density	Mg/m^3	$2.65_{(assumed)}$	$2.65_{(assumed)}$
Bulk Density	Mg/m^3	1.94	1.63
Dry Density	Mg/m^3	1.59	1.51
Void Ratio		0.6710	0.7535
Degree of Saturation	%	87	28

Water Content, WC		Thermal conductivity, K	Thermal resistivity, R
%		W/m.K	K.m/W
1	22.1	1.566	0.639
2	9.6	1.394	0.718
3	3.0	1.047	0.955



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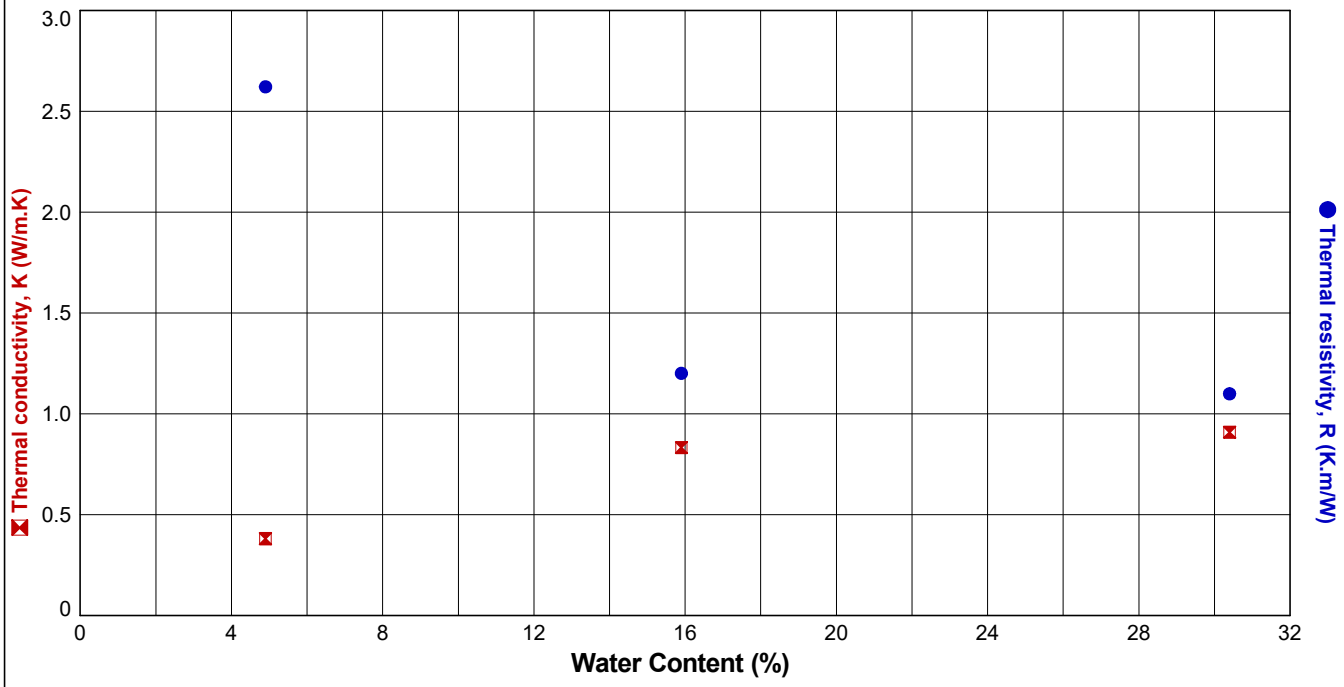
In accordance with ASTM D5334-22a^{E1} & IEEE 442-2017
Water Content reported to BS EN ISO 17892-1:2014, Bulk Density reported to BS EN ISO 17892-2:2014

Position ID: **RedP-BH-11** Sample Ref: **27** Sample Type: **UT** Depth (m): **7.29**

Description: **Grey slightly gravelly silty CLAY** Specimen Condition: **Intact**

SPECIMEN DETAILS		INITIAL	FINAL
Mass	g	2490.16	1295.47
Height	mm	163.81	163.81
Diameter	mm	103.13	103.13
Water Content	%	30.4	4.9
Particle Density	Mg/m^3	$2.65_{(assumed)}$	$2.65_{(assumed)}$
Bulk Density	Mg/m^3	1.82	0.95
Dry Density	Mg/m^3	1.40	0.90
Void Ratio		0.8994	1.9356
Degree of Saturation	%	90	7

Water Content, WC		Thermal conductivity, K	Thermal resistivity, R
%		W/m.K	K.m/W
1	30.4	0.909	1.100
2	15.9	0.833	1.201
3	4.9	0.381	2.622



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In accordance with ASTM D5334-22a^{E1}

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.m/W)	Soil Temperature (^{o}C)	Description of Sample	Lab location
RedP-BH-6	102	C	12.63	30.0	1.92	1.48	1.052	0.950	19.55	White CHALK	**B**
RedP-BH-6	206	C	16.50	246.2	1.89	0.55	1.582	0.632	19.67	Off white CHALK	**B**
RedP-BH-6	109	C	25.54	27.2	1.97	1.55	1.680	0.595	18.79	White CHALK	**B**
RedP-BH-7	204	C	17.00	65.1	1.95	1.18	1.584	0.632	19.40	Off white CHALK	**B**
RedP-BH-7	207	C	22.00	24.5	1.93	1.55	1.502	0.666	19.20	Off white CHALK	**B**
RedP-BH-7	211	C	28.30	28.3	1.94	1.51	1.628	0.614	20.07	Off white CHALK	**B**
RedP-BH-8	204	C	13.20	29.6	1.91	1.47	1.359	0.735	19.73	Off white CHALK	**B**
RedP-BH-8	105	C	15.82	28.1	1.94	1.52	1.114	0.898	18.79	White CHALK	**B**
RedP-BH-8	211	C	23.80	29.1	1.91	1.48	1.698	0.589	19.85	White CHALK	**B**
RedP-BH-9	104	C	17.57	30.5	1.94	1.48	1.558	0.642	20.53	White CHALK	**B**
RedP-BH-9	207	C	22.00	28.6	1.92	1.50	1.414	0.707	20.77	Off white CHALK	**B**
RedP-BH-9	211	C	30.00	26.3	1.92	1.52	1.650	0.606	19.20	Off white CHALK	**B**
RedP-BH-10	204	C	23.85	28.7	1.93	1.50	1.571	0.637	18.57	Off white CHALK	**B**
RedP-BH-10	207	C	29.10	28.2	1.95	1.52	1.240	0.806	18.67	Off white CHALK	**B**
RedP-BH-10	211	C	36.40	28.8	2.00	1.55	1.471	0.680	20.36	Off white CHALK	**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
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Bristol
BS3 4AG

Compiled By: [redacted]

Date: **28.03.24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

SUMMARY OF SATURATED MOISTURE CONTENT OF CHALK TESTS

In accordance with clause 3.3 of BS1377:Part 2:1990

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Number of Lumps	Moisture Content %	Bulk Density Mg/m^3	Dry Density Mg/m^3	Saturated Moisture Content %	Description of Sample	Lab location
RedP-BH-6	102	C	12.63	1	28	1.95	1.52	29	White CHALK	**B**
RedP-BH-6	109	C	25.54	1	26	1.98	1.57	26	White CHALK	**B**
RedP-BH-8	103	C	13.80	1	29	1.93	1.49	30	White CHALK	**B**
RedP-BH-9	101	C	9.91	1	30	1.93	1.48	30	White CHALK	**B**
RedP-BH-9	102	C	13.14	1	30	1.92	1.48	31	White CHALK	**B**
RedP-BH-9	104	C	17.57	1	28	1.94	1.51	29	White CHALK	**B**
RedP-BH-9	105	C	19.00	1	30	1.94	1.49	30	White CHALK	**B**
RedP-BH-9	107	C	24.81	1	27	1.96	1.54	28	White CHALK	**B**

* denotes the average values from multiple lumps

Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

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Date: **17.03.24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

SUMMARY OF SATURATED MOISTURE CONTENT OF CHALK TESTS

In accordance with clause 3.3 of BS1377:Part 2:1990

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Number of Lumps	Moisture Content %	Bulk Density Mg/m^3	Dry Density Mg/m^3	Saturated Moisture Content %	Description of Sample	Lab location
RedP-BH-9	108	C	28.67	1	28	1.97	1.53	28	White CHALK	**B**
RedP-BH-10	104	C	23.53	1	31	1.92	1.47	31	White CHALK	**B**
RedP-BH-10	105	C	27.21	1	29	1.94	1.51	29	White CHALK	**B**
RedP-BH-10	106	C	29.37	1	28	1.96	1.53	28	White CHALK	**B**
RedP-BH-10	107	C	31.33	1	28	1.95	1.53	28	White CHALK	**B**
RedP-BH-10	110	C	40.50	1	29	1.94	1.51	29	White CHALK	**B**

* denotes the average values from multiple lumps

Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

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BS3 4AG

Compiled By: [redacted]

Date: **17.03.24**

Contract Ref: **563607**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

SUMMARY OF WATER CONTENT TESTS

RT08 Water Content of Rock (in accordance with ISRM 2007)

Exploratory Position ID	Sample Ref	Depth (m)	Sample Type	Water Content (%)	Lab	
RedP-BH-6	**101**	**12.20**	**C**	**29.4**	**B**	
RedP-BH-6	**102**	**12.63**	**C**	**30.5**	**B**	
RedP-BH-6	**103**	**14.53**	**C**	**29.7**	**B**	
RedP-BH-6	**104**	**16.01**	**C**	**28.4**	**B**	
RedP-BH-6	**105**	**17.68**	**C**	**28.5**	**B**	
RedP-BH-6	**106**	**19.01**	**C**	**28.9**	**B**	
RedP-BH-6	**107**	**20.47**	**C**	**30.0**	**B**	
RedP-BH-6	**108**	**22.19**	**C**	**29.7**	**B**	
RedP-BH-6	**109**	**25.54**	**C**	**28.7**	**B**	
RedP-BH-6	**110**	**26.71**	**C**	**29.2**	**B**	
RedP-BH-6	**111**	**27.62**	**C**	**27.5**	**H**	
RedP-BH-6	**112**	**29.51**	**C**	**28.0**	**B**	
RedP-BH-7	**101**	**15.27**	**C**	**29.9**	**B**	
RedP-BH-7	**102**	**16.56**	**C**	**28.6**	**H**	
RedP-BH-7	**103**	**18.50**	**C**	**29.9**	**B**	
RedP-BH-7	**104**	**20.29**	**C**	**28.0**	**B**	
RedP-BH-7	**105**	**21.10**	**C**	**27.6**	**B**	
RedP-BH-7	**106**	**22.54**	**C**	**25.8**	**B**	
RedP-BH-7	**107**	**24.71**	**C**	**29.8**	**B**	
RedP-BH-7	**108**	**26.20**	**C**	**28.9**	**B**	
RedP-BH-7	**109**	**27.05**	**C**	**28.7**	**B**	
RedP-BH-7	**110**	**28.78**	**C**	**27.7**	**H**	
RedP-BH-7	**111**	**30.72**	**C**	**27.4**	**B**	
RedP-BH-8	**101**	**8.90**	**C**	**27.9**	**B**	
RedP-BH-8	**102**	**10.44**	**C**	**29.1**	**B**	
RedP-BH-8	**103**	**13.80**	**C**	**30.1**	**B**	
RedP-BH-8	**104**	**14.84**	**C**	**30.4**	**B**	
RedP-BH-8	**105**	**15.82**	**C**	**28.1**	**B**	
RedP-BH-8	**106**	**19.18**	**C**	**28.9**	**B**	
RedP-BH-8	**107**	**20.90**	**C**	**28.7**	**B**	
RedP-BH-8	**108**	**22.06**	**C**	**30.5**	**H**	
RedP-BH-8	**109**	**24.00**	**C**	**28.5**	**H**	
RedP-BH-8	**110**	**25.80**	**C**	**28.6**	**B**	
RedP-BH-9	**101**	**9.91**	**C**	**30.4**	**B**	

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
[redacted]	**03/04/24**

Contract:	Contract Ref:
SEA Link FEED - Kent Onshore Cable Link	**563607**

SUMMARY OF WATER CONTENT TESTS

RT08 Water Content of Rock (in accordance with ISRM 2007)

Exploratory Position ID	Sample Ref	Depth (m)	Sample Type	Water Content (%)	Lab	
RedP-BH-9	**102**	**13.14**	**C**	**30.5**	**B**	
RedP-BH-9	**103**	**14.60**	**C**	**30.6**	**B**	
RedP-BH-9	**104**	**17.57**	**C**	**28.8**	**B**	
RedP-BH-9	**105**	**19.00**	**C**	**27.9**	**B**	
RedP-BH-9	**106**	**21.66**	**C**	**30.3**	**H**	
RedP-BH-9	**107**	**24.81**	**C**	**26.6**	**B**	
RedP-BH-9	**108**	**28.67**	**C**	**29.9**	**B**	
RedP-BH-9	**109**	**29.96**	**C**	**27.8**	**H**	
RedP-BH-10	**101**	**19.42**	**C**	**30.4**	**B**	
RedP-BH-10	**102**	**20.58**	**C**	**30.3**	**B**	
RedP-BH-10	**103**	**22.23**	**C**	**30.4**	**B**	
RedP-BH-10	**104**	**23.53**	**C**	**30.8**	**B**	
RedP-BH-10	**105**	**27.21**	**C**	**28.3**	**B**	
RedP-BH-10	**106**	**29.37**	**C**	**29.9**	**B**	
RedP-BH-10	**107**	**31.33**	**C**	**29.6**	**B**	
RedP-BH-10	**108**	**32.71**	**C**	**27.5**	**H**	
RedP-BH-10	**109**	**37.82**	**C**	**23.3**	**B**	
RedP-BH-10	**110**	**40.50**	**C**	**29.1**	**B**	

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
[redacted]	**03/04/24**

Contract:	Contract Ref:
SEA Link FEED - Kent Onshore Cable Link	**563607**

SUMMARY OF POROSITY TESTS

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Moisture Content %	Bulk Density Mg/m^3	Dry Density Mg/m^3	Porosity %	Test Method	Description	Lab location
RedP-BH-6	101	C	12.20	30	1940	1490	45	Clause 3	White CHALK	**B**
RedP-BH-6	103	C	14.53	31	1930	1480	46	Clause 3	White CHALK	**B**
RedP-BH-6	104	C	16.01	29	1950	1510	44	Clause 3	White CHALK	**B**
RedP-BH-6	105	C	17.68	27	1900	1490	41	Clause 3	White CHALK	**B**
RedP-BH-6	106	C	19.01	29	1950	1510	44	Clause 3	White CHALK	**B**
RedP-BH-6	107	C	20.47	28	1890	1480	41	Clause 3	White CHALK	**B**
RedP-BH-6	108	C	22.19	28	1960	1530	43	Clause 3	White CHALK	**B**
RedP-BH-6	110	C	26.71	29	1960	1510	44	Clause 3	White CHALK	**B**
RedP-BH-6	111	C	27.62	28	1930	1510	43	Clause 3	White CHALK	**H**

Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

Key: Clause 3 = Saturation and buoyancy method

STRUCTURAL SOILS LTD

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Date: **03.04.24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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SUMMARY OF POROSITY TESTS

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Moisture Content %	Bulk Density Mg/m^3	Dry Density Mg/m^3	Porosity %	Test Method	Description	Lab location
RedP-BH-6	112	C	29.51	29	1960	1530	44	Clause 3	White CHALK	**B**
RedP-BH-7	101	C	15.27	30	1950	1510	44	Clause 3	White CHALK	**B**
RedP-BH-7	102	C	16.56	28	1980	1540	44	Clause 3	White CHALK	**H**
RedP-BH-7	103	C	18.50	29	1960	1520	44	Clause 3	White CHALK	**B**
RedP-BH-7	104	C	20.29	25	1920	1530	39	Clause 3	White CHALK	**B**
RedP-BH-7	105	C	21.10	30	1940	1490	45	Clause 3	White CHALK	**B**
RedP-BH-7	106	C	22.54	23	1950	1580	37	Clause 3	White CHALK	**B**
RedP-BH-7	107	C	24.71	29	1960	1510	44	Clause 3	White CHALK	**B**
RedP-BH-7	108	C	26.20	27	1910	1510	41	Clause 3	White CHALK. Non-standard test due to 31mm flint present in sample	**B**

Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

Key: Clause 3 = Saturation and buoyancy method

STRUCTURAL SOILS LTD

Compiled By: [redacted]

Date: **03.04.24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

AGS

SUMMARY OF POROSITY TESTS

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Moisture Content %	Bulk Density Mg/m^3	Dry Density Mg/m^3	Porosity %	Test Method	Description	Lab location
RedP-BH-7	109	C	27.05	29	1960	1520	44	Clause 3	White CHALK	**B**
RedP-BH-7	110	C	28.78	28	1960	1540	42	Clause 3	White CHALK	**H**
RedP-BH-7	111	C	30.72	27	1980	1560	43	Clause 3	White CHALK	**B**
RedP-BH-8	101	C	8.90	29	1960	1520	44	Clause 3	Dark grey MUDSTONE	**B**
RedP-BH-8	102	C	10.44	27	1900	1500	40	Clause 3	White CHALK	**B**
RedP-BH-8	104	C	14.84	30	1940	1490	45	Clause 3	White CHALK	**B**
RedP-BH-8	105	C	15.82	29	1960	1520	44	Clause 3	White CHALK	**B**
RedP-BH-8	106	C	19.18	29	1960	1520	44	Clause 3	White CHALK	**B**
RedP-BH-8	107	C	20.90	29	1960	1520	44	Clause 3	White CHALK	**B**

Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

Key: Clause 3 = Saturation and buoyancy method

STRUCTURAL SOILS LTD

Compiled By: [redacted]

Date: **03.04.24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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SUMMARY OF POROSITY TESTS

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Moisture Content %	Bulk Density Mg/m^3	Dry Density Mg/m^3	Porosity %	Test Method	Description	Lab location
RedP-BH-8	108	C	22.06	32	1920	1460	46	Clause 3	White CHALK	**H**
RedP-BH-8	109	C	24.00	29	1960	1520	44	Clause 3	White CHALK	**H**
RedP-BH-8	110	C	25.80	30	1950	1510	44	Clause 3	White CHALK	**B**
RedP-BH-9	103	C	14.60	28	1890	1470	42	Clause 3	White CHALK	**B**
RedP-BH-9	106	C	21.66	29	1960	1520	44	Clause 3	White CHALK	**H**
RedP-BH-9	109	C	29.96	29	1970	1530	44	Clause 3	White CHALK	**H**
RedP-BH-10	101	C	19.42	29	1890	1470	42	Clause 3	White CHALK	**B**
RedP-BH-10	103	C	22.23	30	1940	1490	45	Clause 3	White CHALK	**B**
RedP-BH-10	108	C	32.71	28	1970	1540	43	Clause 3	White CHALK	**H**

Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

Key: Clause 3 = Saturation and buoyancy method

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Date: **03.04.24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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SUMMARY OF POROSITY TESTS

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Moisture Content %	Bulk Density Mg/m^3	Dry Density Mg/m^3	Porosity %	Test Method	Description	Lab location
RedP-BH-10	109	C	37.82	25	2020	1610	41	Clause 3	White CHALK	**B**

Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

Key: Clause 3 = Saturation and buoyancy method

	Compiled By	Date	Contract Ref:
STRUCTURAL SOILS LTD	[redacted]	**03.04.24**	**563607**
	Contract: **SEA Link FEED - Kent Onshore Cable Link**		

UNIAXIAL COMPRESSIVE STRENGTH

Preparation in accordance with ASTM D4543-19
Testing in accordance with ISRM 1974-2006

Borehole: **RedP-BH-6** Sample Ref: **104** Sample Type: **C** Depth (m) : **16.01**

Bulk Density (Mg/m^3): **1.94** Dry Density (Mg/m^3): **1.51** Moisture Content (%): **28**
Length (mm): **204.06** Diameter (mm): **98.79** Length/Diameter Ratio: **2.07**
Test Duration (mins:secs): **02:45** Stress Rate (MPa/s): **0.0130** Load at Failure (kN): **17.3**
UCS (MPa): **2.3** Failure Type: **Vertical splitting**

Note: **Axis of loading parallel to core axis**
Description: **White CHALK**
Specimen Preparation: **Specimen was not recored.**
Sample tolerance checks: Straightness: **FAIL**. Flatness: **FAIL**. Perpendicularity: **FAIL**.
Machine Used: **Impact 2000kN**

Front view (pre-test)

Rear view (pre-test)

Front view (post-test)

Rear view (post-test)

Samples delivered from site to storage facility. Samples are stored in a frost free environment, at temperatures >4°C
Compression machine: Impact CT340 2000kN Auto Compression Machine Serial No. CT340-22. SSL No. 011076

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SEA Link FEED - Kent Onshore Cable Link	**563607**

UNIAXIAL COMPRESSIVE STRENGTH

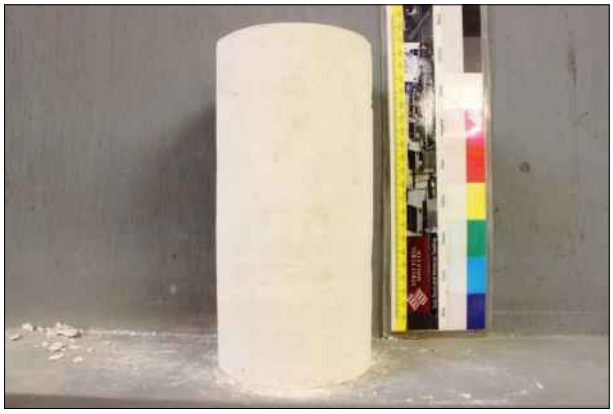
Preparation in accordance with ASTM D4543-19
Testing in accordance with ISRM 1974-2006

Borehole: **RedP-BH-6** Sample Ref: **106** Sample Type: **C** Depth (m) : **19.01**

Bulk Density (Mg/m^3): **1.94** Dry Density (Mg/m^3): **1.50** Moisture Content (%): **29**
Length (mm): **203.49** Diameter (mm): **100.27** Length/Diameter Ratio: **2.03**
Test Duration (mins:secs): **06:18** Stress Rate (MPa/s): **0.0063** Load at Failure (kN): **19.4**
UCS (MPa): **2.5** Failure Type: **Vertical splitting**

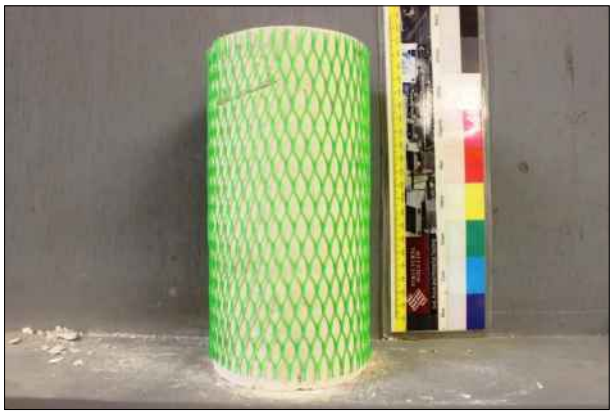
Note: **Axis of loading parallel to core axis**
Description: **White CHALK**
Specimen Preparation: **Specimen was not recored.**
Sample tolerance checks: Straightness: **FAIL**. Flatness: **FAIL**. Perpendicularity: **FAIL**.
Machine Used: **Impact 2000kN**

Front view (pre-test)



Rear view (pre-test)

Front view (post-test)



Rear view (post-test)

Samples delivered from site to storage facility. Samples are stored in a frost free environment, at temperatures >4°C
Compression machine: Impact CT340 2000kN Auto Compression Machine Serial No. CT340-22. SSL No. 011076

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BS3 4AG

Compiled By	Date
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Contract	Job No
SEA Link FEED - Kent Onshore Cable Link	**563607**

UNIAXIAL COMPRESSIVE STRENGTH

Preparation in accordance with ASTM D4543-19
Testing in accordance with ISRM 1974-2006

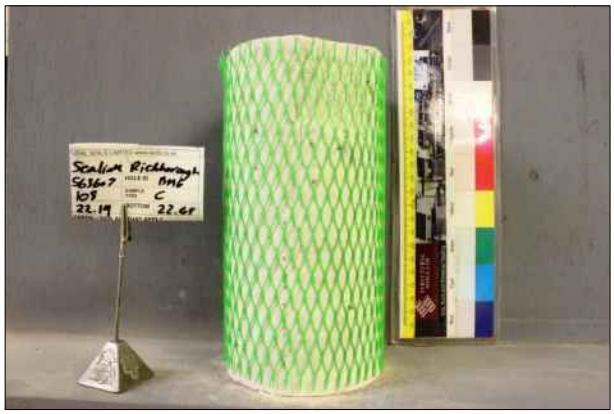
Borehole: **RedP-BH-6** Sample Ref: **108** Sample Type: **C** Depth (m) : **22.19**

Bulk Density (Mg/m^3): **1.97** Dry Density (Mg/m^3): **1.52** Moisture Content (%): **30**
Length (mm): **201.59** Diameter (mm): **99.33** Length/Diameter Ratio: **2.03**
Test Duration (mins:secs): **09:45** Stress Rate (MPa/s): **0.0065** Load at Failure (kN): **29.9**
UCS (MPa): **3.9** Failure Type: **Vertical splitting**

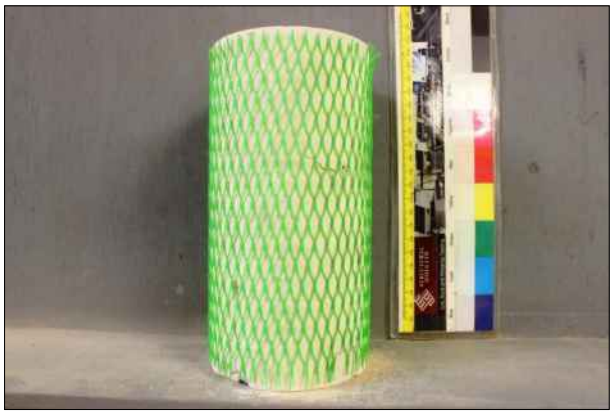
Note: **Axis of loading parallel to core axis**
Description: **White CHALK**
Specimen Preparation: **Specimen was not recored.**
Sample tolerance checks: Straightness: **FAIL**. Flatness: **FAIL**. Perpendicularity: **FAIL**.
Machine Used: **Impact 2000kN**

Front view (pre-test)

Rear view (pre-test)



Front view (post-test)



Rear view (post-test)

Samples delivered from site to storage facility. Samples are stored in a frost free environment, at temperatures >4°C
Compression machine: Impact CT340 2000kN Auto Compression Machine Serial No. CT340-22. SSL No. 011076

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SEA Link FEED - Kent Onshore Cable Link	**563607**

UNIAXIAL COMPRESSIVE STRENGTH

Preparation in accordance with ASTM D4543-19
Testing in accordance with ISRM 1974-2006

Borehole: **RedP-BH-6** Sample Ref: **110** Sample Type: **C** Depth (m) : **26.71**

Bulk Density (Mg/m^3): **1.94** Dry Density (Mg/m^3): **1.50** Moisture Content (%): **29**
Length (mm): **206.07** Diameter (mm): **98.58** Length/Diameter Ratio: **2.09**
Test Duration (mins:secs): **07:55** Stress Rate (MPa/s): **0.0066** Load at Failure (kN): **24.3**
UCS (MPa): **3.2** Failure Type: **Vertical splitting**

Note: **Axis of loading parallel to core axis**
Description: **White CHALK**
Specimen Preparation: **Specimen was not recored.**
Sample tolerance checks: Straightness: **FAIL**. Flatness: **FAIL**. Perpendicularity: **FAIL**.
Machine Used: **Impact 2000kN**

Front view (pre-test)

Rear view (pre-test)

Front view (post-test)

Rear view (post-test)

Samples delivered from site to storage facility. Samples are stored in a frost free environment, at temperatures >4°C
Compression machine: Impact CT340 2000kN Auto Compression Machine Serial No. CT340-22. SSL No. 011076

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UNIAXIAL COMPRESSIVE STRENGTH

Preparation in accordance with ASTM D4543-19
Testing in accordance with ISRM 1974-2006

Borehole: **RedP-BH-6** Sample Ref: **112** Sample Type: **C** Depth (m) : **29.51**

Bulk Density (Mg/m^3): **1.95** Dry Density (Mg/m^3): **1.52** Moisture Content (%): **28**
Length (mm): **205.10** Diameter (mm): **99.23** Length/Diameter Ratio: **2.07**
Test Duration (mins:secs): **10:01** Stress Rate (MPa/s): **0.0065** Load at Failure (kN): **31.1**
UCS (MPa): **4.0** Failure Type: **Vertical splitting**

Note: **Axis of loading parallel to core axis**
Description: **White CHALK**
Specimen Preparation: **Specimen was not recored.**
Sample tolerance checks: Straightness: **FAIL**. Flatness: **FAIL**. Perpendicularity: **FAIL**.
Machine Used: **Impact 2000kN**

Front view (pre-test)

Rear view (pre-test)

Front view (post-test)

Rear view (post-test)

Samples delivered from site to storage facility. Samples are stored in a frost free environment, at temperatures >4°C
Compression machine: Impact CT340 2000kN Auto Compression Machine Serial No. CT340-22. SSL No. 011076

STRUCTURAL SOILS
1a Princess Street
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Bristol
BS3 4AG

Compiled By	Date
[redacted]	27/03/24

Contract	Job No
SEA Link FEED - Kent Onshore Cable Link	**563607**

UNIAXIAL COMPRESSIVE STRENGTH

Preparation in accordance with ASTM D4543-19
Testing in accordance with ISRM 1974-2006

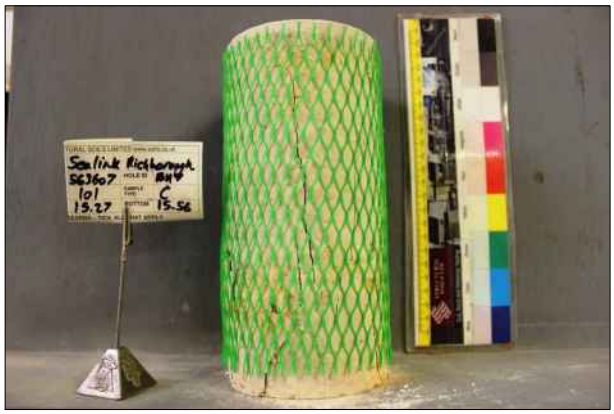
Borehole: **RedP-BH-7** Sample Ref: **101** Sample Type: **C** Depth (m) : **15.27**

Bulk Density (Mg/m^3): **1.95** Dry Density (Mg/m^3): **1.50** Moisture Content (%): **30**
Length (mm): **211.01** Diameter (mm): **98.33** Length/Diameter Ratio: **2.15**
Test Duration (mins:secs): **04:32** Stress Rate (MPa/s): **0.0066** Load at Failure (kN): **14.2**
UCS (MPa): **1.9** Failure Type: **Vertical splitting**

Note: **Axis of loading parallel to core axis**
Description: **White CHALK**
Specimen Preparation: **Specimen was not recored.**
Sample tolerance checks: Straightness: **FAIL**. Flatness: **FAIL**. Perpendicularity: **FAIL**.
Machine Used: **Impact 2000kN**

Front view (pre-test)

Rear view (pre-test)



Front view (post-test)

Rear view (post-test)

Samples delivered from site to storage facility. Samples are stored in a frost free environment, at temperatures >4°C
Compression machine: Impact CT340 2000kN Auto Compression Machine Serial No. CT340-22. SSL No. 011076

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Contract	Job No
SEA Link FEED - Kent Onshore Cable Link	**563607**

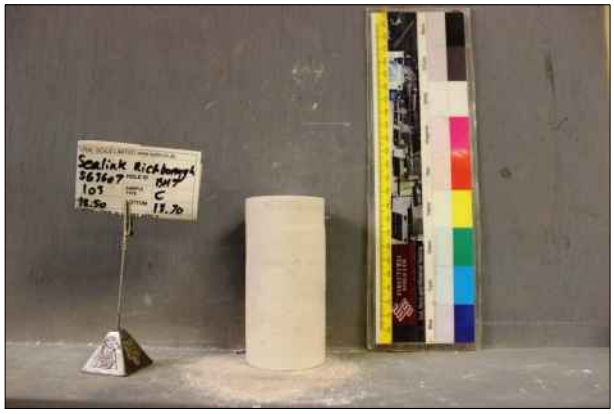
UNIAXIAL COMPRESSIVE STRENGTH

Preparation in accordance with ASTM D4543-19
Testing in accordance with ISRM 1974-2006

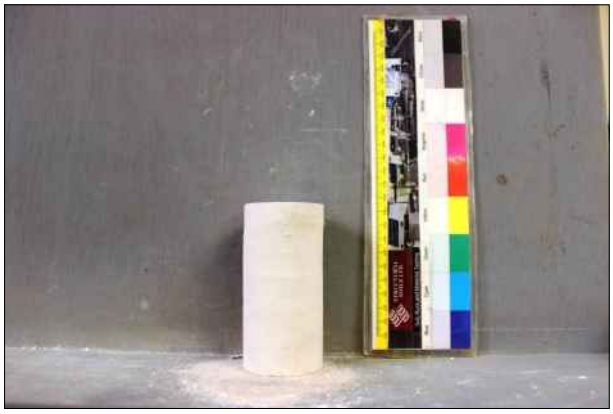
Borehole: **RedP-BH-7** Sample Ref: **103** Sample Type: **C** Depth (m) : **18.50**

Bulk Density (Mg/m^3): **1.95** Dry Density (Mg/m^3): **1.51** Moisture Content (%): **29**
Length (mm): **109.37** Diameter (mm): **54.16** Length/Diameter Ratio: **2.02**
Test Duration (mins:secs): **09:59** Stress Rate (MPa/s): **0.0069** Load at Failure (kN): **10.7**
UCS (MPa): **4.6** Failure Type: **Vertical splitting**

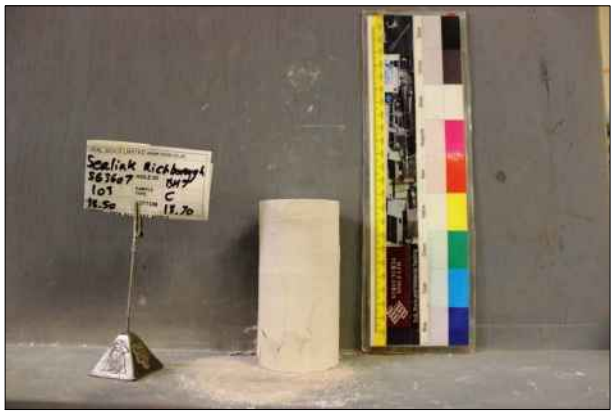
Note: **Axis of loading parallel to core axis**
Description: **White CHALK**
Specimen Preparation: **Specimen was recored.**
Sample tolerance checks: Straightness: **PASS**. Flatness: **PASS**. Perpendicularity: **PASS**.
Machine Used: **Impact 2000kN**



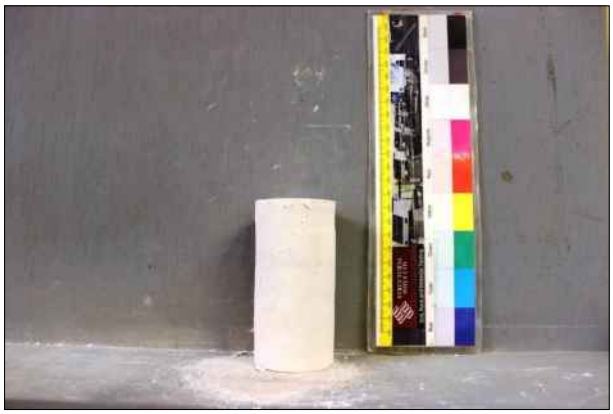
Front view (pre-test)



Rear view (pre-test)



Front view (post-test)



Rear view (post-test)

Samples delivered from site to storage facility. Samples are stored in a frost free environment, at temperatures >4°C
Compression machine: Impact CT340 2000kN Auto Compression Machine Serial No. CT340-22. SSL No. 011076

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Compiled By	Date
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SEA Link FEED - Kent Onshore Cable Link	**563607**

UNIAXIAL COMPRESSIVE STRENGTH

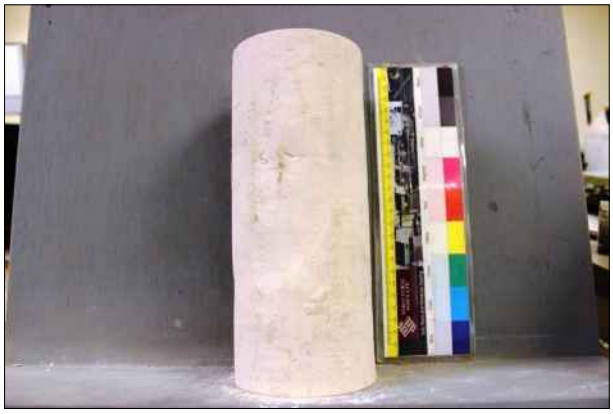
Preparation in accordance with ASTM D4543-19
Testing in accordance with ISRM 1974-2006

Borehole: **RedP-BH-7** Sample Ref: **105** Sample Type: **C** Depth (m) : **21.10**

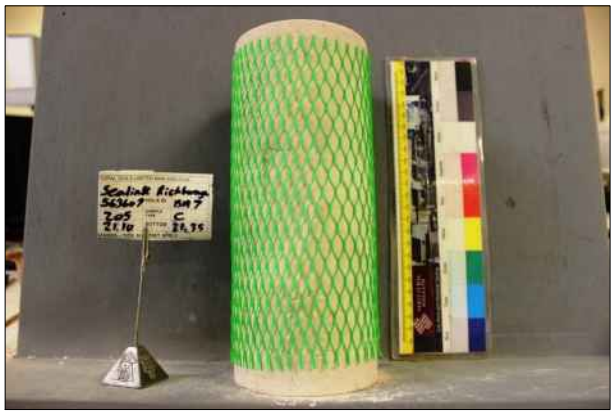
Bulk Density (Mg/m^3): **1.96** Dry Density (Mg/m^3): **1.53** Moisture Content (%): **28**
Length (mm): **242.19** Diameter (mm): **99.76** Length/Diameter Ratio: **2.43**
Test Duration (mins:secs): **07:53** Stress Rate (MPa/s): **0.0064** Load at Failure (kN): **25.0**
UCS (MPa): **3.2** Failure Type: **Vertical splitting**

Note: **Axis of loading parallel to core axis**
Description: **White CHALK**
Specimen Preparation: **Specimen was not recored.**
Sample tolerance checks: Straightness: **FAIL**. Flatness: **FAIL**. Perpendicularity: **FAIL**.
Machine Used: **Impact 2000kN**

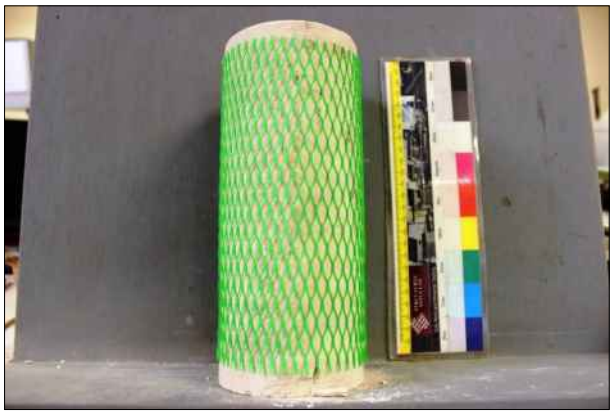
Front view (pre-test)



Rear view (pre-test)



Front view (post-test)



Rear view (post-test)

Samples delivered from site to storage facility. Samples are stored in a frost free environment, at temperatures >4°C
Compression machine: Impact CT340 2000kN Auto Compression Machine Serial No. CT340-22. SSL No. 011076

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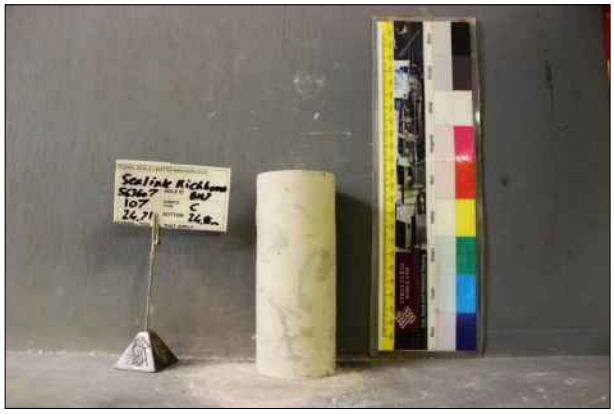
UNIAXIAL COMPRESSIVE STRENGTH

Preparation in accordance with ASTM D4543-19
Testing in accordance with ISRM 1974-2006

Borehole: **RedP-BH-7** Sample Ref: **107** Sample Type: **C** Depth (m) : **24.71**

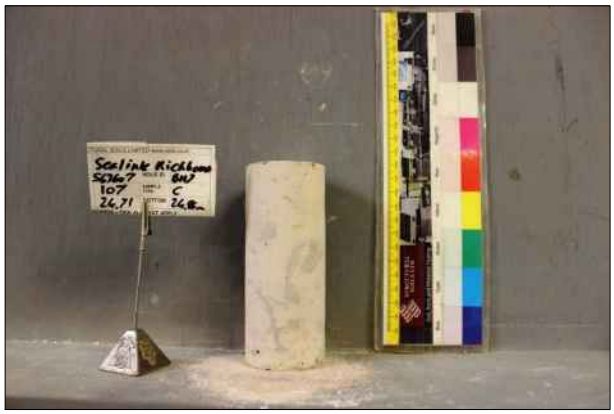
Bulk Density (Mg/m^3): **1.93** Dry Density (Mg/m^3): **1.49** Moisture Content (%): **30**
Length (mm): **131.97** Diameter (mm): **53.72** Length/Diameter Ratio: **2.46**
Test Duration (mins:secs): **02:08** Stress Rate (MPa/s): **0.0221** Load at Failure (kN): **7.1**
UCS (MPa): **3.1** Failure Type: **Vertical splitting**

Note: **Axis of loading parallel to core axis**
Description: **White CHALK**
Specimen Preparation: **Specimen was recored.**
Sample tolerance checks: Straightness: **FAIL**. Flatness: **FAIL**. Perpendicularity: **FAIL**.
Machine Used: **Impact 2000kN**

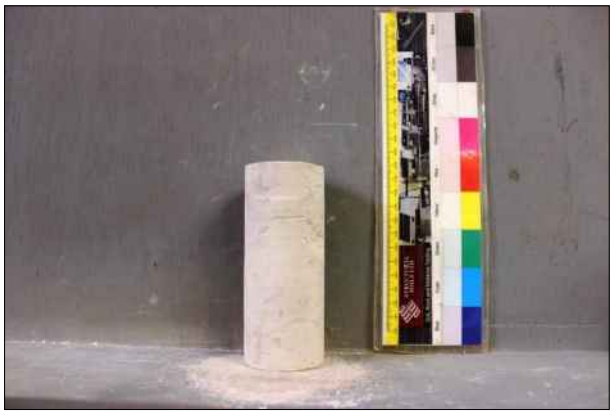


Front view (pre-test)

Rear view (pre-test)



Front view (post-test)



Rear view (post-test)

Samples delivered from site to storage facility. Samples are stored in a frost free environment, at temperatures >4°C
Compression machine: Impact CT340 2000kN Auto Compression Machine Serial No. CT340-22. SSL No. 011076

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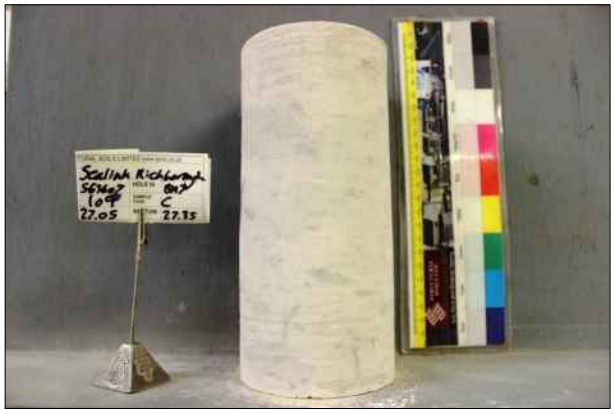
UNIAXIAL COMPRESSIVE STRENGTH

Preparation in accordance with ASTM D4543-19
Testing in accordance with ISRM 1974-2006

Borehole: **RedP-BH-7** Sample Ref: **109** Sample Type: **C** Depth (m) : **27.05**

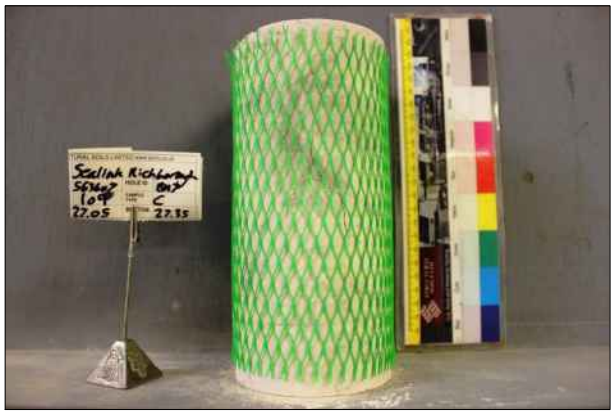
Bulk Density (Mg/m^3): **1.95** Dry Density (Mg/m^3): **1.51** Moisture Content (%): **29**
Length (mm): **209.96** Diameter (mm): **97.04** Length/Diameter Ratio: **2.16**
Test Duration (mins:secs): **06:41** Stress Rate (MPa/s): **0.0068** Load at Failure (kN): **20.9**
UCS (MPa): **2.8** Failure Type: **Vertical splitting**

Note: **Axis of loading parallel to core axis**
Description: **White CHALK**
Specimen Preparation: **Specimen was not recored.**
Sample tolerance checks: Straightness: **FAIL**. Flatness: **FAIL**. Perpendicularity: **FAIL**.
Machine Used: **Impact 2000kN**

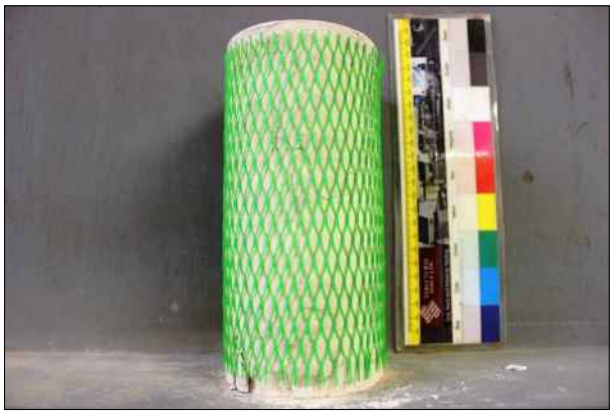


Front view (pre-test)

Rear view (pre-test)



Front view (post-test)



Rear view (post-test)

Samples delivered from site to storage facility. Samples are stored in a frost free environment, at temperatures >4°C
Compression machine: Impact CT340 2000kN Auto Compression Machine Serial No. CT340-22. SSL No. 011076

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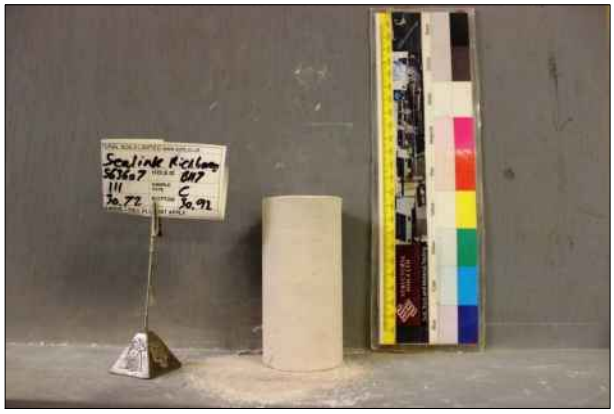
UNIAXIAL COMPRESSIVE STRENGTH

Preparation in accordance with ASTM D4543-19
Testing in accordance with ISRM 1974-2006

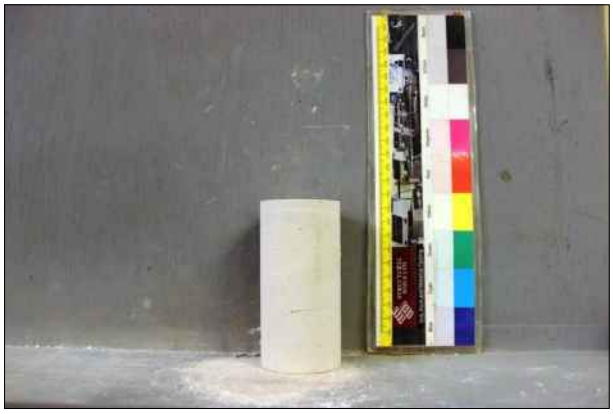
Borehole: **RedP-BH-7** Sample Ref: **111** Sample Type: **C** Depth (m) : **30.72**

Bulk Density (Mg/m^3): **1.98** Dry Density (Mg/m^3): **1.56** Moisture Content (%): **27**
Length (mm): **109.85** Diameter (mm): **54.06** Length/Diameter Ratio: **2.03**
Test Duration (mins:secs): **02:17** Stress Rate (MPa/s): **0.0218** Load at Failure (kN): **7.4**
UCS (MPa): **3.2** Failure Type: **Vertical splitting**

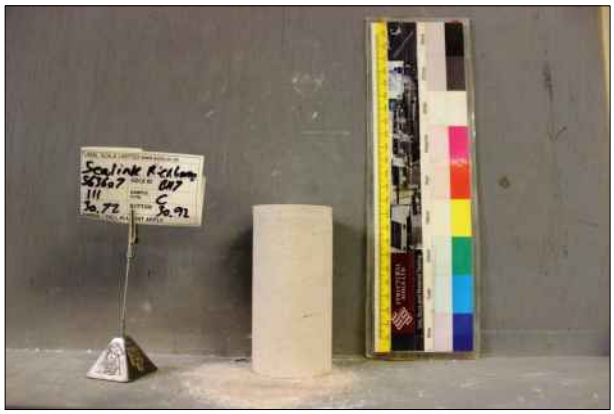
Note: **Axis of loading parallel to core axis**
Description: **White CHALK**
Specimen Preparation: **Specimen was recored.**
Sample tolerance checks: Straightness: **FAIL**. Flatness: **FAIL**. Perpendicularity: **FAIL**.
Machine Used: **Impact 2000kN**



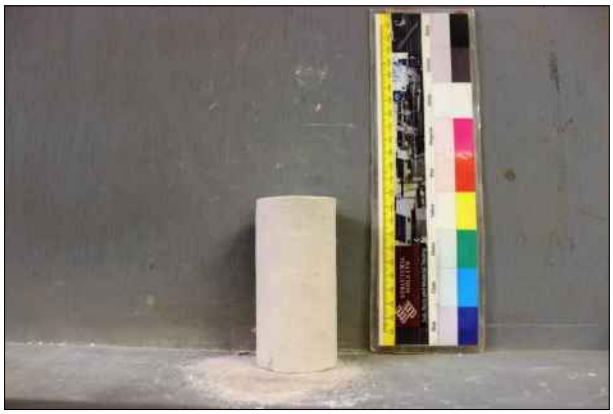
Front view (pre-test)



Rear view (pre-test)



Front view (post-test)



Rear view (post-test)

Samples delivered from site to storage facility. Samples are stored in a frost free environment, at temperatures >4°C
Compression machine: Impact CT340 2000kN Auto Compression Machine Serial No. CT340-22. SSL No. 011076

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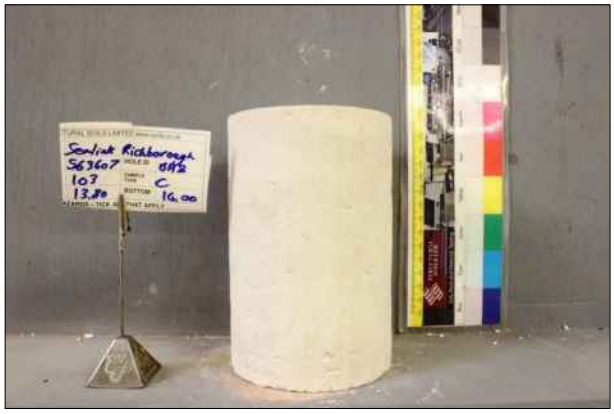
UNIAXIAL COMPRESSIVE STRENGTH

Preparation in accordance with ASTM D4543-19
Testing in accordance with ISRM 1974-2006

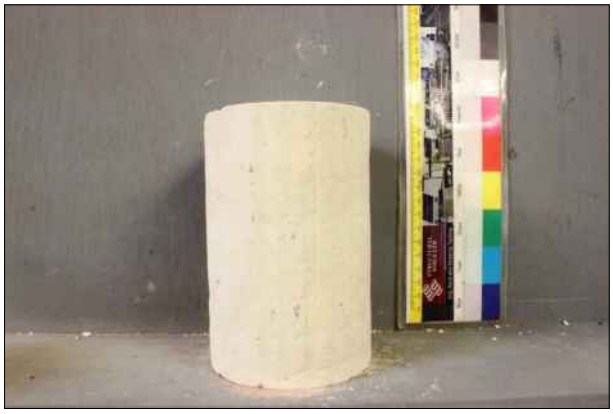
Borehole: **RedP-BH-8** Sample Ref: **103** Sample Type: **C** Depth (m) : **13.80**

Bulk Density (Mg/m^3): **1.93** Dry Density (Mg/m^3): **1.48** Moisture Content (%): **30**
Length (mm): **151.75** Diameter (mm): **100.37** Length/Diameter Ratio: **1.51**
Test Duration (mins:secs): **08:24** Stress Rate (MPa/s): **0.0063** Load at Failure (kN): **25.8**
UCS (MPa): **3.3** Failure Type: **Vertical splitting**

Note: **Axis of loading parallel to core axis**
Description: **White CHALK**
Specimen Preparation: **Specimen was not recored.**
Sample tolerance checks: Straightness: **FAIL**. Flatness: **FAIL**. Perpendicularity: **FAIL**.
Machine Used: **Impact 2000kN**



Front view (pre-test)



Rear view (pre-test)

Front view (post-test)

Rear view (post-test)

Samples delivered from site to storage facility. Samples are stored in a frost free environment, at temperatures >4°C
Compression machine: Impact CT340 2000kN Auto Compression Machine Serial No. CT340-22. SSL No. 011076

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UNIAXIAL COMPRESSIVE STRENGTH

Preparation in accordance with ASTM D4543-19
Testing in accordance with ISRM 1974-2006

Borehole: **RedP-BH-8** Sample Ref: **106** Sample Type: **C** Depth (m) : **19.18**

Bulk Density (Mg/m^3): **1.95** Dry Density (Mg/m^3): **1.51** Moisture Content (%): **29**
Length (mm): **208.74** Diameter (mm): **99.92** Length/Diameter Ratio: **2.09**
Test Duration (mins:secs): **09:32** Stress Rate (MPa/s): **0.0064** Load at Failure (kN): **29.2**
UCS (MPa): **3.7** Failure Type: **Vertical splitting**

Note: **Axis of loading parallel to core axis**
Description: **White CHALK**
Specimen Preparation: **Specimen was not recored.**
Sample tolerance checks: Straightness: **FAIL**. Flatness: **FAIL**. Perpendicularity: **FAIL**.
Machine Used: **Impact 2000kN**

Front view (pre-test)

Rear view (pre-test)

Front view (post-test)

Rear view (post-test)

Samples delivered from site to storage facility. Samples are stored in a frost free environment, at temperatures >4°C
Compression machine: Impact CT340 2000kN Auto Compression Machine Serial No. CT340-22. SSL No. 011076

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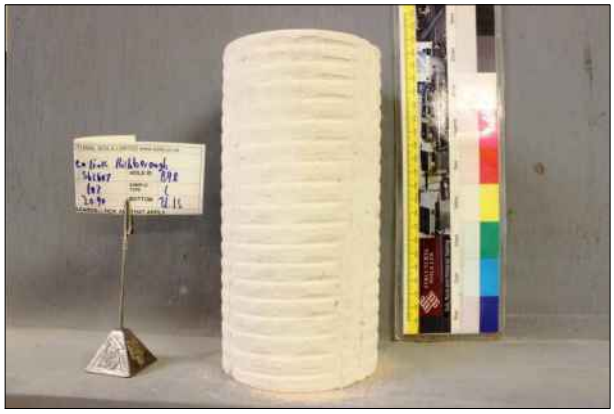
UNIAXIAL COMPRESSIVE STRENGTH

Preparation in accordance with ASTM D4543-19
Testing in accordance with ISRM 1974-2006

Borehole: **RedP-BH-8** Sample Ref: **107** Sample Type: **C** Depth (m) : **20.90**

Bulk Density (Mg/m^3): **1.95** Dry Density (Mg/m^3): **1.51** Moisture Content (%): **29**
Length (mm): **200.16** Diameter (mm): **99.90** Length/Diameter Ratio: **2.00**
Test Duration (mins:secs): **10:29** Stress Rate (MPa/s): **0.0064** Load at Failure (kN): **32.1**
UCS (MPa): **4.1** Failure Type: **Vertical splitting**

Note: **Axis of loading parallel to core axis**
Description: **White CHALK**
Specimen Preparation: **Specimen was not recored.**
Sample tolerance checks: Straightness: **FAIL**. Flatness: **FAIL**. Perpendicularity: **FAIL**.
Machine Used: **Impact 2000kN**



Front view (pre-test)

Rear view (pre-test)

Front view (post-test)

Rear view (post-test)

Samples delivered from site to storage facility. Samples are stored in a frost free environment, at temperatures >4°C
Compression machine: Impact CT340 2000kN Auto Compression Machine Serial No. CT340-22. SSL No. 011076

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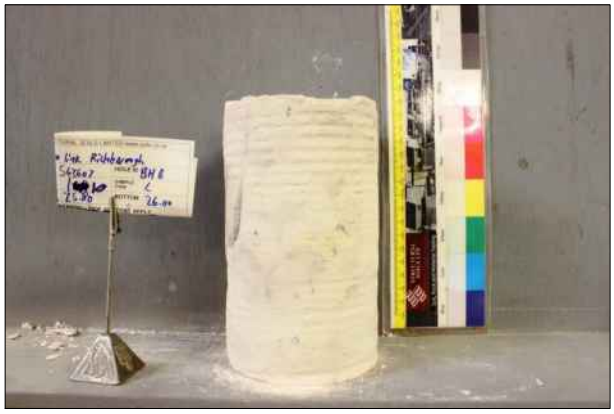
UNIAXIAL COMPRESSIVE STRENGTH

Preparation in accordance with ASTM D4543-19
Testing in accordance with ISRM 1974-2006

Borehole: **RedP-BH-8** Sample Ref: **110** Sample Type: **C** Depth (m) : **25.80**

Bulk Density (Mg/m^3): **1.92** Dry Density (Mg/m^3): **1.49** Moisture Content (%): **29**
Length (mm): **164.84** Diameter (mm): **98.92** Length/Diameter Ratio: **1.67**
Test Duration (mins:secs): **06:39** Stress Rate (MPa/s): **0.0065** Load at Failure (kN): **20.6**
UCS (MPa): **2.7** Failure Type: **Vertical splitting**

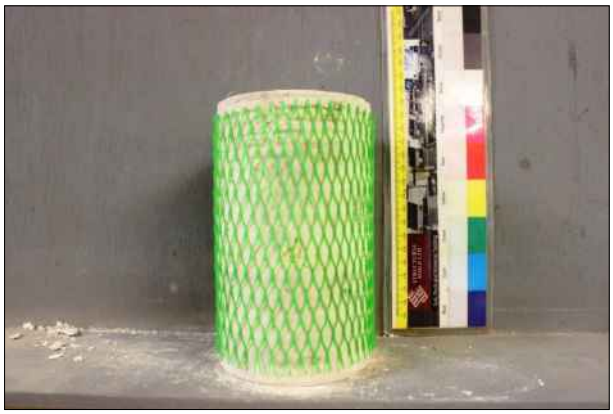
Note: **Axis of loading parallel to core axis**
Description: **White CHALK**
Specimen Preparation: **Specimen was not recored.**
Sample tolerance checks: Straightness: **FAIL**. Flatness: **FAIL**. Perpendicularity: **FAIL**.
Machine Used: **Impact 2000kN**



Front view (pre-test)

Rear view (pre-test)

Front view (post-test)



Rear view (post-test)

Samples delivered from site to storage facility. Samples are stored in a frost free environment, at temperatures >4°C
Compression machine: Impact CT340 2000kN Auto Compression Machine Serial No. CT340-22. SSL No. 011076

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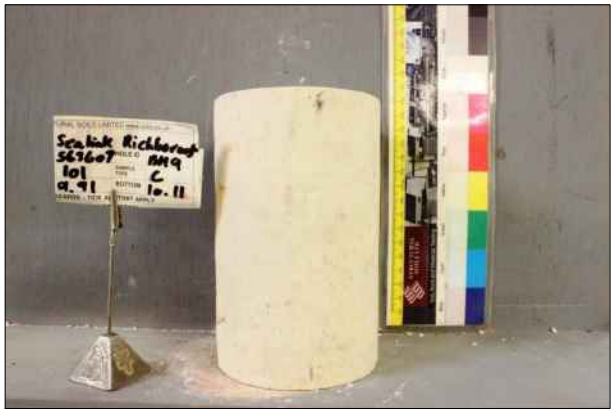
UNIAXIAL COMPRESSIVE STRENGTH

Preparation in accordance with ASTM D4543-19
Testing in accordance with ISRM 1974-2006

Borehole: **RedP-BH-9** Sample Ref: **101** Sample Type: **C** Depth (m) : **9.91**

Bulk Density (Mg/m^3): **1.92** Dry Density (Mg/m^3): **1.48** Moisture Content (%): **30**
Length (mm): **157.78** Diameter (mm): **99.81** Length/Diameter Ratio: **1.58**
Test Duration (mins:secs): **09:00** Stress Rate (MPa/s): **0.0064** Load at Failure (kN): **23.4**
UCS (MPa): **3.0** Failure Type: **Vertical splitting**

Note: **Axis of loading parallel to core axis**
Description: **White CHALK**
Specimen Preparation: **Specimen was not recored.**
Sample tolerance checks: Straightness: **FAIL**. Flatness: **FAIL**. Perpendicularity: **FAIL**.
Machine Used: **Impact 2000kN**



Front view (pre-test)

Rear view (pre-test)

Front view (post-test)

Rear view (post-test)

Samples delivered from site to storage facility. Samples are stored in a frost free environment, at temperatures >4°C
Compression machine: Impact CT340 2000kN Auto Compression Machine Serial No. CT340-22. SSL No. 011076

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1a Princess Street
Bedminster
Bristol
BS3 4AG

Compiled By	Date
[redacted]	27/03/24

Contract	Job No
SEA Link FEED - Kent Onshore Cable Link	**563607**

UNIAXIAL COMPRESSIVE STRENGTH

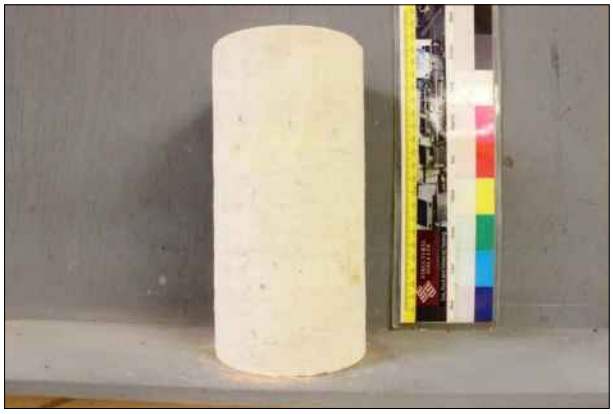
Preparation in accordance with ASTM D4543-19
Testing in accordance with ISRM 1974-2006

Borehole: **RedP-BH-9** Sample Ref: **102** Sample Type: **C** Depth (m) : **13.14**

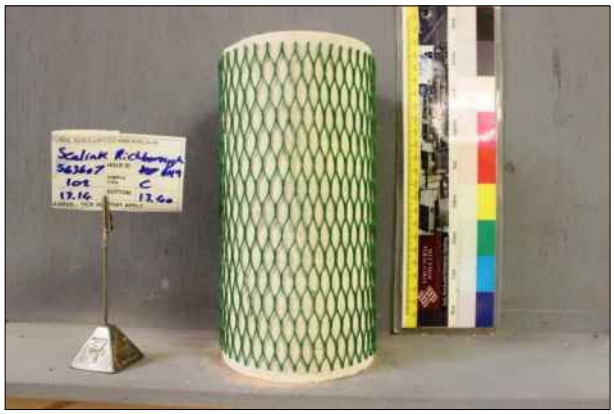
Bulk Density (Mg/m^3): **1.92** Dry Density (Mg/m^3): **1.47** Moisture Content (%): **31**
Length (mm): **200.38** Diameter (mm): **99.06** Length/Diameter Ratio: **2.02**
Test Duration (mins:secs): **07:19** Stress Rate (MPa/s): **0.0065** Load at Failure (kN): **22.6**
UCS (MPa): **2.9** Failure Type: **Vertical splitting**

Note: **Axis of loading parallel to core axis**
Description: **White CHALK**
Specimen Preparation: **Specimen was not recored.**
Sample tolerance checks: Straightness: **FAIL**. Flatness: **FAIL**. Perpendicularity: **FAIL**.
Machine Used: **Impact 2000kN**

Front view (pre-test)



Rear view (pre-test)



Front view (post-test)

Rear view (post-test)

Samples delivered from site to storage facility. Samples are stored in a frost free environment, at temperatures >4°C
Compression machine: Impact CT340 2000kN Auto Compression Machine Serial No. CT340-22. SSL No. 011076

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UNIAXIAL COMPRESSIVE STRENGTH

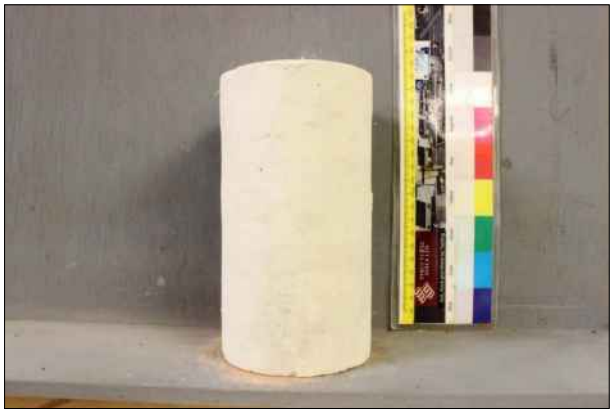
Preparation in accordance with ASTM D4543-19
Testing in accordance with ISRM 1974-2006

Borehole: **RedP-BH-9** Sample Ref: **104** Sample Type: **C** Depth (m) : **17.57**

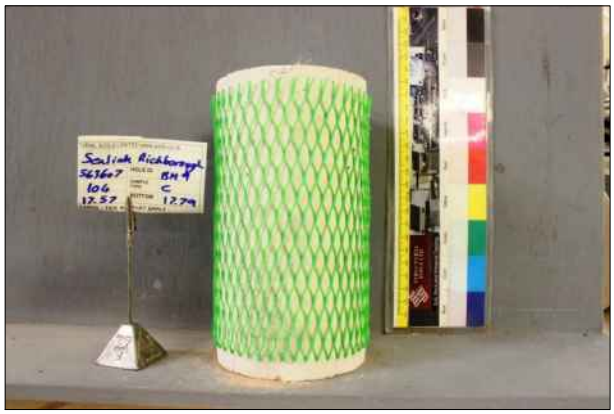
Bulk Density (Mg/m^3): **1.91** Dry Density (Mg/m^3): **1.47** Moisture Content (%): **30**
Length (mm): **181.53** Diameter (mm): **99.73** Length/Diameter Ratio: **1.82**
Test Duration (mins:secs): **06:27** Stress Rate (MPa/s): **0.0064** Load at Failure (kN): **20.0**
UCS (MPa): **2.6** Failure Type: **Vertical splitting**

Note: **Axis of loading parallel to core axis**
Description: **White CHALK**
Specimen Preparation: **Specimen was not recored.**
Sample tolerance checks: Straightness: **FAIL**. Flatness: **FAIL**. Perpendicularity: **FAIL**.
Machine Used: **Impact 2000kN**

Front view (pre-test)



Rear view (pre-test)



Front view (post-test)

Rear view (post-test)

Samples delivered from site to storage facility. Samples are stored in a frost free environment, at temperatures >4°C
Compression machine: Impact CT340 2000kN Auto Compression Machine Serial No. CT340-22. SSL No. 011076

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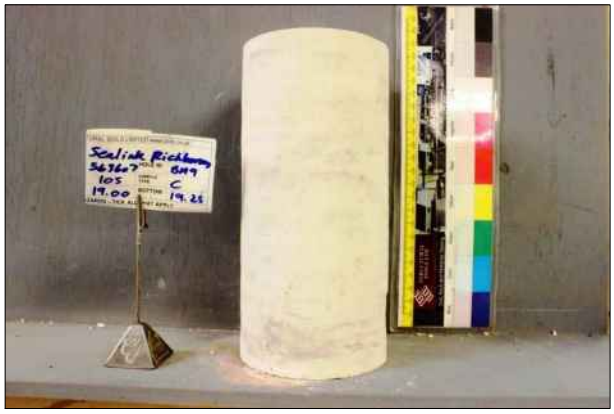
UNIAXIAL COMPRESSIVE STRENGTH

Preparation in accordance with ASTM D4543-19
Testing in accordance with ISRM 1974-2006

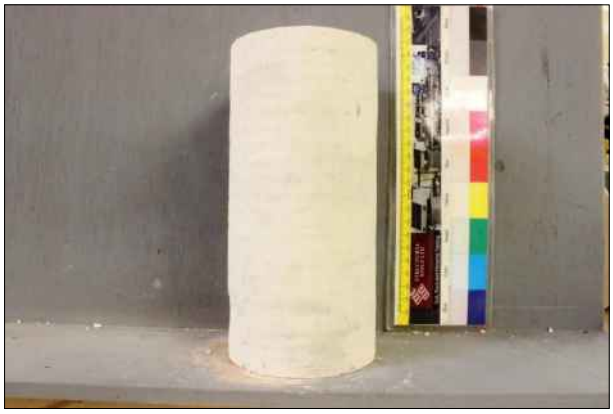
Borehole: **RedP-BH-9** Sample Ref: **105** Sample Type: **C** Depth (m) : **19.00**

Bulk Density (Mg/m^3): **1.95** Dry Density (Mg/m^3): **1.52** Moisture Content (%): **28**
Length (mm): **203.81** Diameter (mm): **98.27** Length/Diameter Ratio: **2.07**
Test Duration (mins:secs): **08:48** Stress Rate (MPa/s): **0.0066** Load at Failure (kN): **27.0**
UCS (MPa): **3.6** Failure Type: **Vertical splitting**

Note: **Axis of loading parallel to core axis**
Description: **White CHALK**
Specimen Preparation: **Specimen was not recored.**
Sample tolerance checks: Straightness: **FAIL**. Flatness: **FAIL**. Perpendicularity: **FAIL**.
Machine Used: **Impact 2000kN**

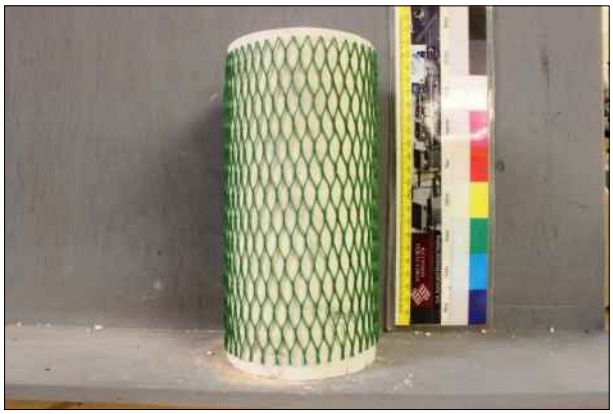


Front view (pre-test)



Rear view (pre-test)

Front view (post-test)



Rear view (post-test)

Samples delivered from site to storage facility. Samples are stored in a frost free environment, at temperatures >4°C
Compression machine: Impact CT340 2000kN Auto Compression Machine Serial No. CT340-22. SSL No. 011076

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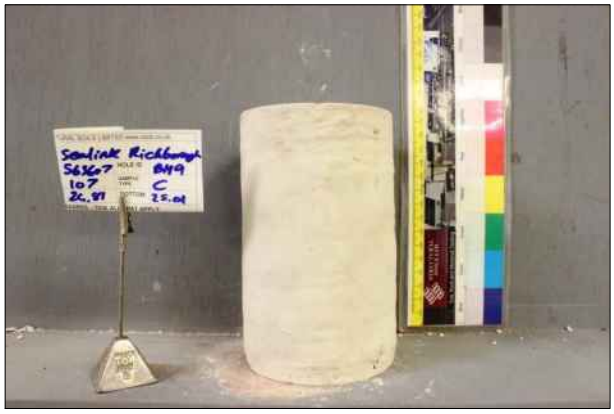
UNIAXIAL COMPRESSIVE STRENGTH

Preparation in accordance with ASTM D4543-19
Testing in accordance with ISRM 1974-2006

Borehole: **RedP-BH-9** Sample Ref: **107** Sample Type: **C** Depth (m) : **24.81**

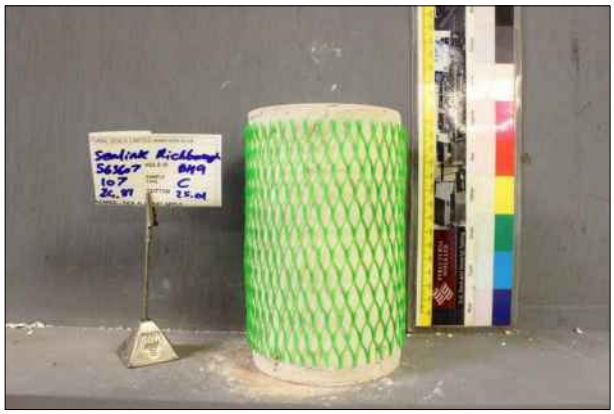
Bulk Density (Mg/m^3): **1.98** Dry Density (Mg/m^3): **1.56** Moisture Content (%): **27**
Length (mm): **153.81** Diameter (mm): **95.34** Length/Diameter Ratio: **1.61**
Test Duration (mins:secs): **08:20** Stress Rate (MPa/s): **0.0070** Load at Failure (kN): **25.5**
UCS (MPa): **3.6** Failure Type: **Vertical splitting**

Note: **Axis of loading parallel to core axis**
Description: **White CHALK**
Specimen Preparation: **Specimen was not recored.**
Sample tolerance checks: Straightness: **FAIL**. Flatness: **FAIL**. Perpendicularity: **FAIL**.
Machine Used: **Impact 2000kN**



Front view (pre-test)

Rear view (pre-test)



Front view (post-test)

Rear view (post-test)

Samples delivered from site to storage facility. Samples are stored in a frost free environment, at temperatures >4°C
Compression machine: Impact CT340 2000kN Auto Compression Machine Serial No. CT340-22. SSL No. 011076

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UNIAXIAL COMPRESSIVE STRENGTH

Preparation in accordance with ASTM D4543-19
Testing in accordance with ISRM 1974-2006

Borehole: **RedP-BH-9** Sample Ref: **108** Sample Type: **C** Depth (m) : **28.67**

Bulk Density (Mg/m^3): **1.97** Dry Density (Mg/m^3): **1.54** Moisture Content (%): **28**
Length (mm): **206.42** Diameter (mm): **99.58** Length/Diameter Ratio: **2.07**
Test Duration (mins:secs): **07:40** Stress Rate (MPa/s): **0.0064** Load at Failure (kN): **23.7**
UCS (MPa): **3.0** Failure Type: **Vertical splitting**

Note: **Axis of loading parallel to core axis**
Description: **White CHALK**
Specimen Preparation: **Specimen was not recored.**
Sample tolerance checks: Straightness: **FAIL**. Flatness: **FAIL**. Perpendicularity: **FAIL**.
Machine Used: **Impact 2000kN**

Front view (pre-test)

Rear view (pre-test)

Front view (post-test)

Rear view (post-test)

Samples delivered from site to storage facility. Samples are stored in a frost free environment, at temperatures >4°C
Compression machine: Impact CT340 2000kN Auto Compression Machine Serial No. CT340-22. SSL No. 011076

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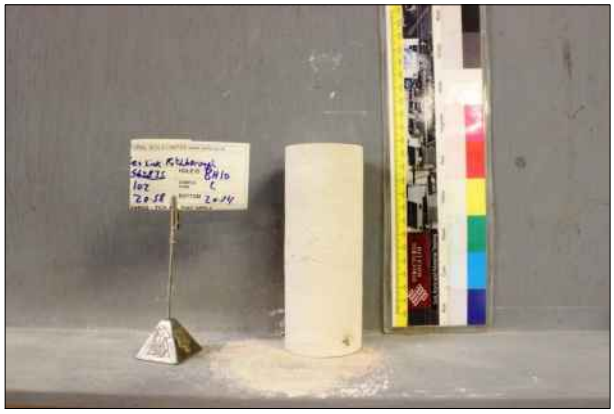
Preparation in accordance with ASTM D4543-19
Testing in accordance with ISRM 1974-2006

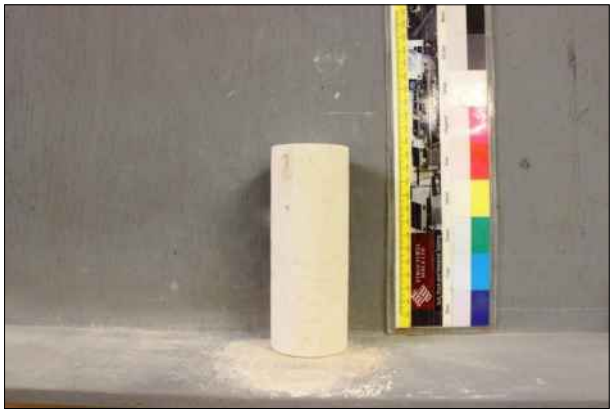
Borehole: **RedP-BH-10** Sample Ref: **102** Sample Type: **C** Depth (m) : **20.58**

Bulk Density (Mg/m^3): **1.92** Dry Density (Mg/m^3): **1.48** Moisture Content (%): **30**
Length (mm): **139.41** Diameter (mm): **54.24** Length/Diameter Ratio: **2.57**
Test Duration (mins:secs): **01:36** Stress Rate (MPa/s): **0.0216** Load at Failure (kN): **5.4**
UCS (MPa): **2.4** Failure Type: **Vertical splitting**

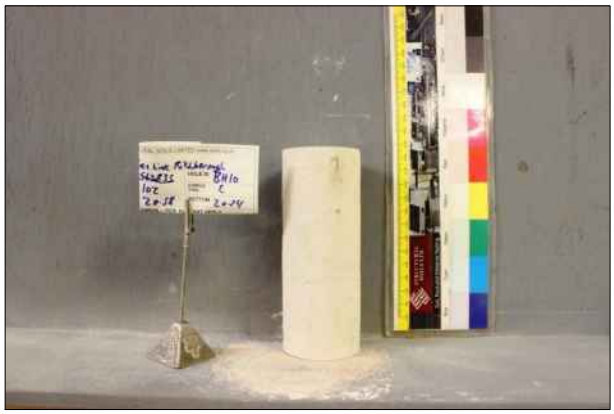
Note: **Axis of loading parallel to core axis**
Description: **White CHALK**
Specimen Preparation: **Specimen was recored.**
Sample tolerance checks: Straightness: **PASS**. Flatness: **PASS**. Perpendicularity: **PASS**.
Machine Used: **Impact 2000kN**



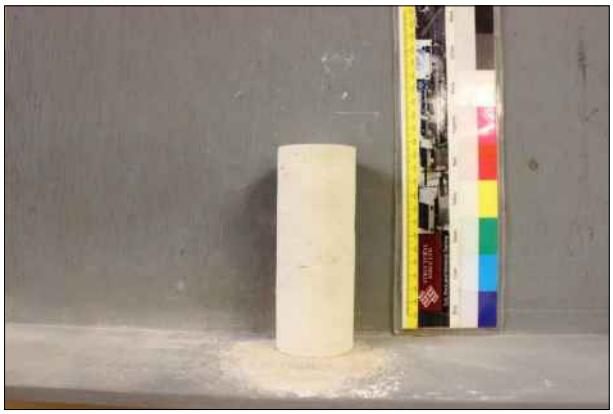
Front view (pre-test)



Rear view (pre-test)



Front view (post-test)



Rear view (post-test)

Samples delivered from site to storage facility. Samples are stored in a frost free environment, at temperatures >4°C
Compression machine: Impact CT340 2000kN Auto Compression Machine Serial No. CT340-22. SSL No. 011076

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UNIAXIAL COMPRESSIVE STRENGTH

Preparation in accordance with ASTM D4543-19
Testing in accordance with ISRM 1974-2006

Borehole: **RedP-BH-10** Sample Ref: **103** Sample Type: **C** Depth (m) : **22.23**

Bulk Density (Mg/m^3): **1.91** Dry Density (Mg/m^3): **1.47** Moisture Content (%): **30**
Length (mm): **182.33** Diameter (mm): **100.99** Length/Diameter Ratio: **1.81**
Test Duration (mins:secs): **10:02** Stress Rate (MPa/s): **0.0062** Load at Failure (kN): **30.7**
UCS (MPa): **3.8** Failure Type: **Vertical splitting**

Note: **Axis of loading parallel to core axis**
Description: **White CHALK**
Specimen Preparation: **Specimen was not recored.**
Sample tolerance checks: Straightness: **FAIL**. Flatness: **FAIL**. Perpendicularity: **FAIL**.
Machine Used: **Impact 2000kN**

Front view (pre-test)

Rear view (pre-test)

Front view (post-test)

Rear view (post-test)

Samples delivered from site to storage facility. Samples are stored in a frost free environment, at temperatures >4°C
Compression machine: Impact CT340 2000kN Auto Compression Machine Serial No. CT340-22. SSL No. 011076

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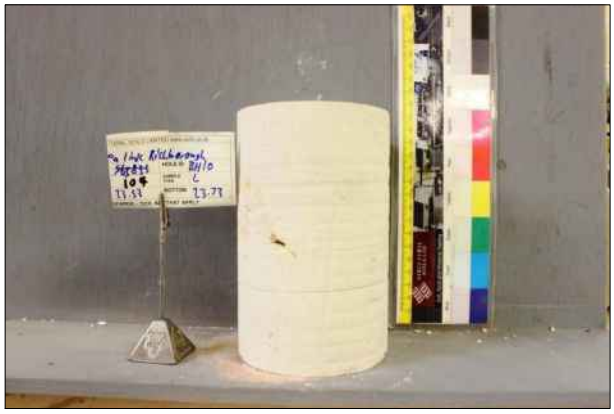
UNIAXIAL COMPRESSIVE STRENGTH

Preparation in accordance with ASTM D4543-19
Testing in accordance with ISRM 1974-2006

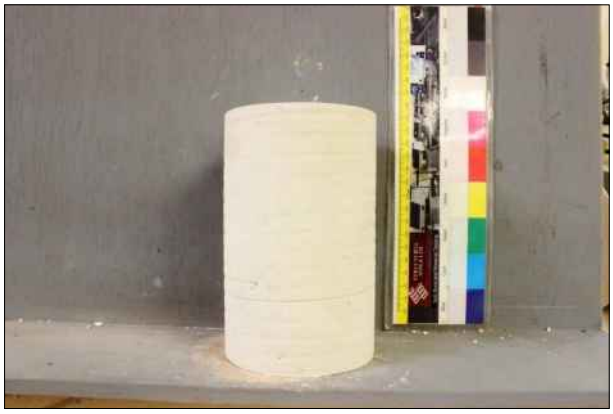
Borehole: **RedP-BH-10** Sample Ref: **104** Sample Type: **C** Depth (m) : **23.53**

Bulk Density (Mg/m^3): **1.91** Dry Density (Mg/m^3): **1.46** Moisture Content (%): **31**
Length (mm): **159.31** Diameter (mm): **101.20** Length/Diameter Ratio: **1.57**
Test Duration (mins:secs): **07:01** Stress Rate (MPa/s): **0.0062** Load at Failure (kN): **21.9**
UCS (MPa): **2.7** Failure Type: **Vertical splitting**

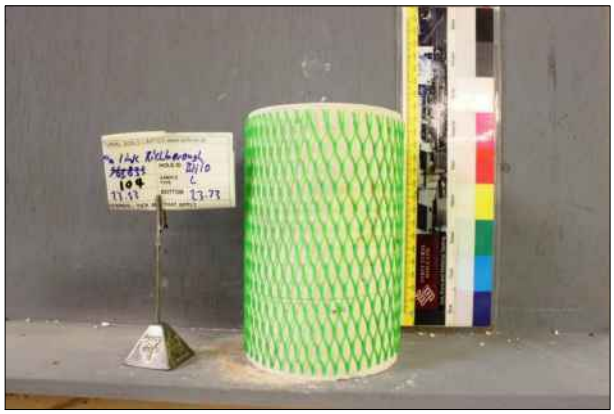
Note: **Axis of loading parallel to core axis**
Description: **White CHALK**
Specimen Preparation: **Specimen was not recored.**
Sample tolerance checks: Straightness: **PASS**. Flatness: **PASS**. Perpendicularity: **PASS**.
Machine Used: **Impact 2000kN**



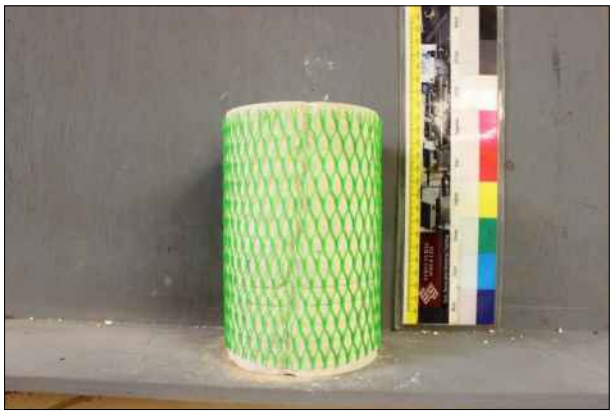
Front view (pre-test)



Rear view (pre-test)



Front view (post-test)



Rear view (post-test)

Samples delivered from site to storage facility. Samples are stored in a frost free environment, at temperatures >4°C
Compression machine: Impact CT340 2000kN Auto Compression Machine Serial No. CT340-22. SSL No. 011076

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UNIAXIAL COMPRESSIVE STRENGTH

Preparation in accordance with ASTM D4543-19
Testing in accordance with ISRM 1974-2006

Borehole: **RedP-BH-10** Sample Ref: **105** Sample Type: **C** Depth (m) : **27.21**

Bulk Density (Mg/m^3): **1.95** Dry Density (Mg/m^3): **1.52** Moisture Content (%): **28**
Length (mm): **203.41** Diameter (mm): **100.12** Length/Diameter Ratio: **2.03**
Test Duration (mins:secs): **08:53** Stress Rate (MPa/s): **0.0064** Load at Failure (kN): **27.3**
UCS (MPa): **3.5** Failure Type: **Vertical splitting**

Note: **Axis of loading parallel to core axis**
Description: **White CHALK**
Specimen Preparation: **Specimen was not recored.**
Sample tolerance checks: Straightness: **FAIL**. Flatness: **FAIL**. Perpendicularity: **FAIL**.
Machine Used: **Impact 2000kN**

Front view (pre-test)

Rear view (pre-test)

Front view (post-test)

Rear view (post-test)

Samples delivered from site to storage facility. Samples are stored in a frost free environment, at temperatures >4°C
Compression machine: Impact CT340 2000kN Auto Compression Machine Serial No. CT340-22. SSL No. 011076

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UNIAXIAL COMPRESSIVE STRENGTH

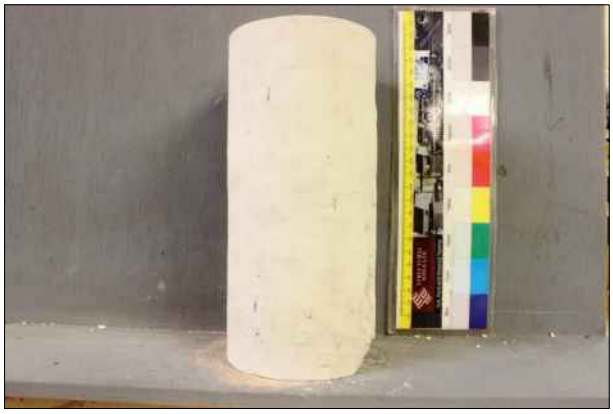
Preparation in accordance with ASTM D4543-19
Testing in accordance with ISRM 1974-2006

Borehole: **RedP-BH-10** Sample Ref: **106** Sample Type: **C** Depth (m) : **29.37**

Bulk Density (Mg/m^3): **1.93** Dry Density (Mg/m^3): **1.48** Moisture Content (%): **30**
Length (mm): **213.67** Diameter (mm): **100.09** Length/Diameter Ratio: **2.13**
Test Duration (mins:secs): **07:29** Stress Rate (MPa/s): **0.0064** Load at Failure (kN): **23.1**
UCS (MPa): **2.9** Failure Type: **Vertical splitting**

Note: **Axis of loading parallel to core axis**
Description: **White CHALK**
Specimen Preparation: **Specimen was not recored.**
Sample tolerance checks: Straightness: **FAIL**. Flatness: **FAIL**. Perpendicularity: **FAIL**.
Machine Used: **Impact 2000kN**

Front view (pre-test)



Rear view (pre-test)

Front view (post-test)

Rear view (post-test)

Samples delivered from site to storage facility. Samples are stored in a frost free environment, at temperatures >4°C
Compression machine: Impact CT340 2000kN Auto Compression Machine Serial No. CT340-22. SSL No. 011076

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UNIAXIAL COMPRESSIVE STRENGTH

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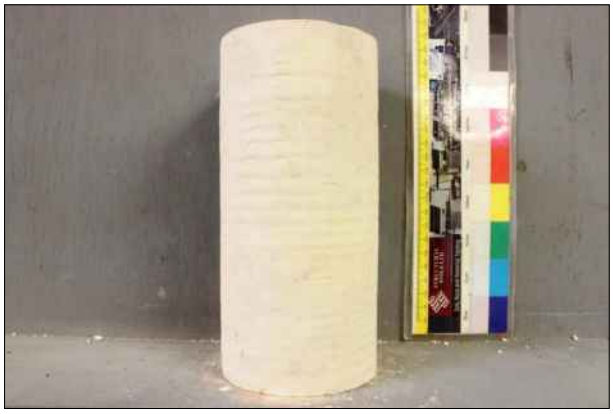
Testing in accordance with ISRM 1974-2006

Borehole: **RedP-BH-10** Sample Ref: **107** Sample Type: **C** Depth (m) : **31.33**

Bulk Density (Mg/m^3): **1.94** Dry Density (Mg/m^3): **1.52** Moisture Content (%): **28**
Length (mm): **202.74** Diameter (mm): **98.75** Length/Diameter Ratio: **2.05**
Test Duration (mins:secs): **08:54** Stress Rate (MPa/s): **0.0065** Load at Failure (kN): **27.4**
UCS (MPa): **3.6** Failure Type: **Vertical splitting**

Note: **Axis of loading parallel to core axis**
Description: **White CHALK**
Specimen Preparation: **Specimen was not recored.**
Sample tolerance checks: Straightness: **FAIL**. Flatness: **FAIL**. Perpendicularity: **FAIL**.
Machine Used: **Impact 2000kN**

Front view (pre-test)



Rear view (pre-test)

Front view (post-test)

Rear view (post-test)

Samples delivered from site to storage facility. Samples are stored in a frost free environment, at temperatures >4°C
Compression machine: Impact CT340 2000kN Auto Compression Machine Serial No. CT340-22. SSL No. 011076

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Testing in accordance with ISRM 1974-2006

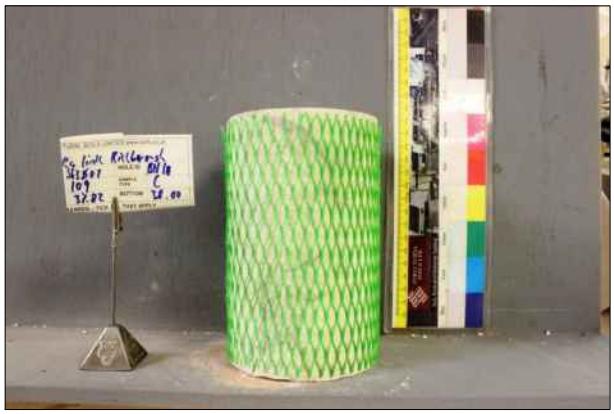
Borehole: **RedP-BH-10** Sample Ref: **109** Sample Type: **C** Depth (m) : **37.82**

Bulk Density (Mg/m^3): **1.99** Dry Density (Mg/m^3): **1.62** Moisture Content (%): **23**
Length (mm): **157.39** Diameter (mm): **99.09** Length/Diameter Ratio: **1.59**
Test Duration (mins:secs): **07:28** Stress Rate (MPa/s): **0.0065** Load at Failure (kN): **23.2**
UCS (MPa): **3.0** Failure Type: **Vertical splitting**

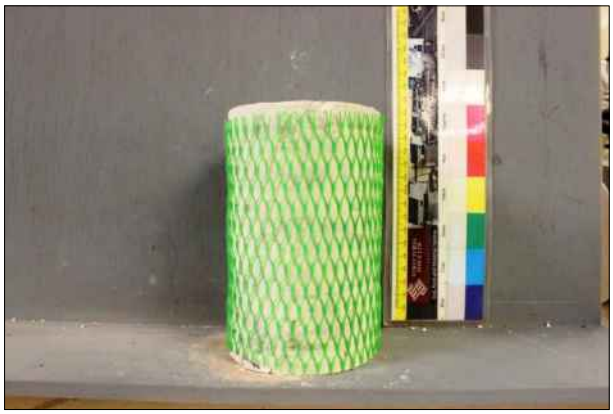
Note: **Axis of loading parallel to core axis**
Description: **White CHALK**
Specimen Preparation: **Specimen was not recored.**
Sample tolerance checks: Straightness: **FAIL**. Flatness: **FAIL**. Perpendicularity: **FAIL**.
Machine Used: **Impact 2000kN**

Front view (pre-test)

Rear view (pre-test)



Front view (post-test)



Rear view (post-test)

Samples delivered from site to storage facility. Samples are stored in a frost free environment, at temperatures >4°C
Compression machine: Impact CT340 2000kN Auto Compression Machine Serial No. CT340-22. SSL No. 011076

STRUCTURAL SOILS
1a Princess Street
Bedminster
Bristol
BS3 4AG

Compiled By	Date
[redacted]	27/03/24

Contract	Job No
SEA Link FEED - Kent Onshore Cable Link	**563607**

UNIAXIAL COMPRESSIVE STRENGTH

Preparation in accordance with ASTM D4543-19
Testing in accordance with ISRM 1974-2006

Borehole: **RedP-BH-10** Sample Ref: **110** Sample Type: **C** Depth (m) : **40.50**

Bulk Density (Mg/m^3): **1.93** Dry Density (Mg/m^3): **1.51** Moisture Content (%): **28**
Length (mm): **203.60** Diameter (mm): **100.54** Length/Diameter Ratio: **2.03**
Test Duration (mins:secs): **09:06** Stress Rate (MPa/s): **0.0063** Load at Failure (kN): **28.0**
UCS (MPa): **3.5** Failure Type: **Vertical splitting**

Note: **Axis of loading parallel to core axis**
Description: **White CHALK**
Specimen Preparation: **Specimen was not recored.**
Sample tolerance checks: Straightness: **FAIL**. Flatness: **FAIL**. Perpendicularity: **FAIL**.
Machine Used: **Impact 2000kN**

Front view (pre-test)

Rear view (pre-test)

Front view (post-test)

Rear view (post-test)

Samples delivered from site to storage facility. Samples are stored in a frost free environment, at temperatures >4°C
Compression machine: Impact CT340 2000kN Auto Compression Machine Serial No. CT340-22. SSL No. 011076

STRUCTURAL SOILS
1a Princess Street
Bedminster
Bristol
BS3 4AG

Compiled By	Date
[redacted]	27/03/24

Contract	Job No
SEA Link FEED - Kent Onshore Cable Link	**563607**

DETERMINATION OF POINT LOAD STRENGTH

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-6	102	12.63	I	90	59	0.096	82	0.01	1.25	0.02	30	CHALK	**B**
RedP-BH-6	102	12.63	I	80	45	0.324	68	0.07	1.15	0.08	30	CHALK	**B**

Results

$I_s(50)$ Mean Irregular tests = **0.05** MN/m^2
Unable to calculate $I_a(50)$ Strength Anisotropy Index from this dataset.
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
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]	**17.03.24**	**563607**

Contract:

SEA Link FEED - Kent Onshore Cable Link

DETERMINATION OF POINT LOAD STRENGTH

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-6	104	16.01	I	90	44	0.622	71	0.12	1.17	0.14	28	CHALK	**B**
RedP-BH-6	104	16.01	I	65	54	0.644	67	0.14	1.14	0.16	28	CHALK	**B**

Results

$I_s(50)$ Mean Irregular tests = **0.15** MN/m^2
Unable to calculate $I_a(50)$ Strength Anisotropy Index from this dataset.
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

	Compiled By	Date	Contract Ref:
STRUCTURAL SOILS LTD	[redacted]	**17.03.24**	**563607**
	Contract: **SEA Link FEED - Kent Onshore Cable Link**		

DETERMINATION OF POINT LOAD STRENGTH

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-6	105	17.68	D	110	97	0.908	97	0.10	1.35	0.13 (✓)	29	CHALK	**H**
RedP-BH-6	105	17.68	D	50	98	0.590	98	0.06	1.35	0.08 (✓)	29	CHALK	**H**
RedP-BH-6	105	17.68	A	98	78	0.554	99	0.06	1.36	0.08 (✓)	29	CHALK	**H**

Results

$I_s(50)$ Mean Axial tests = **0.08** MN/m^2
$I_s(50)$ Mean Diametral tests = **0.11** MN/m^2
$I_a(50)$ Strength Anisotropy Index = **1.38** (calculated from highest and lowest diametral and axial $I_s(50)$ ratio)
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
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]	**17.03.24**	**563607**

Contract:

SEA Link FEED - Kent Onshore Cable Link

DETERMINATION OF POINT LOAD STRENGTH

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-6	106	19.01	A	98	82	1.306	101	0.13	1.37	0.18 (✓)	29	CHALK	**B**
RedP-BH-6	106	19.01	I	78	51	0.274	71	0.05	1.17	0.06	29	CHALK	**B**

Results

$I_s(50)$ Mean Axial tests = **0.18** MN/m^2
$I_s(50)$ Mean Irregular tests = **0.06** MN/m^2
Unable to calculate $I_a(50)$ Strength Anisotropy Index from this dataset.
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

	Compiled By	Date	Contract Ref:
STRUCTURAL SOILS LTD	[redacted]	**17.03.24**	**563607**
	Contract: **SEA Link FEED - Kent Onshore Cable Link**		

DETERMINATION OF POINT LOAD STRENGTH

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-6	107	20.47	D	114	99	0.940	99	0.10	1.36	0.13 (✓)	31	CHALK	**H**
RedP-BH-6	107	20.47	D	65	99	0.902	99	0.09	1.36	0.13 (✓)	31	CHALK	**H**
RedP-BH-6	107	20.47	A	99	69	0.994	93	0.11	1.32	0.15 (✓)	31	CHALK	**H**

Results

$I_s(50)$ Mean Axial tests = **0.15** MN/m^2
$I_s(50)$ Mean Diametral tests = **0.13** MN/m^2
$I_a(50)$ Strength Anisotropy Index = **1.18** (calculated from highest and lowest diametral and axial $I_s(50)$ ratio)
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
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]	**17.03.24**	**563607**

Contract:

SEA Link FEED - Kent Onshore Cable Link

DETERMINATION OF POINT LOAD STRENGTH

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-6	108	22.19	A	94	50	1.032	77	0.17	1.22	0.21 (✓)	30	CHALK	**B**
RedP-BH-6	108	22.19	I	68	45	0.336	62	0.09	1.10	0.10	30	CHALK	**B**

Results

$I_s(50)$ Mean Axial tests = **0.21** MN/m^2
$I_s(50)$ Mean Irregular tests = **0.1** MN/m^2
Unable to calculate $I_a(50)$ Strength Anisotropy Index from this dataset.
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

	Compiled By	Date	Contract Ref:
STRUCTURAL SOILS LTD	[redacted]	**17.03.24**	**563607**
	Contract: **SEA Link FEED - Kent Onshore Cable Link**		

DETERMINATION OF POINT LOAD STRENGTH

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-6	109	25.54	D	80	99	0.926	99	0.09	1.36	0.13 (✓)	29	CHALK	**B**
RedP-BH-6	109	25.54	A	99	75	1.166	97	0.12	1.35	0.17 (✓)	29	CHALK	**B**

Results

$I_s(50)$ Mean Axial tests = **0.17** MN/m^2
$I_s(50)$ Mean Diametral tests = **0.13** MN/m^2
$I_a(50)$ Strength Anisotropy Index = **1.29** (calculated from highest and lowest diametral and axial $I_s(50)$ ratio)
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
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]	**17.03.24**	**563607**

Contract:

SEA Link FEED - Kent Onshore Cable Link

DETERMINATION OF POINT LOAD STRENGTH

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-6	110	26.71	I	84	38	0.424	64	0.10	1.12	0.12	29	CHALK	**B**
RedP-BH-6	110	26.71	I	62	39	0.292	55	0.09	1.05	0.10	29	CHALK	**B**

Results

$I_s(50)$ Mean Irregular tests = **0.11** MN/m^2
Unable to calculate $I_a(50)$ Strength Anisotropy Index from this dataset.
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
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]	**17.03.24**	**563607**

Contract:

SEA Link FEED - Kent Onshore Cable Link

DETERMINATION OF POINT LOAD STRENGTH

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-6	111	27.62	D	120	98	0.112	98	0.01	1.35	0.02 (✓)	28	CHALK	**H**
RedP-BH-6	111	27.62	D	71	67	0.666	67	0.15	1.14	0.17 (✓)	28	CHALK	**H**
RedP-BH-6	111	27.62	A	97	58	0.482	85	0.07	1.27	0.09 (✓)	28	CHALK	**H**

Results

$I_s(50)$ Mean Axial tests = **0.09** MN/m^2
$I_s(50)$ Mean Diametral tests = **0.09** MN/m^2
$I_a(50)$ Strength Anisotropy Index = **1.08** (calculated from highest and lowest diametral and axial $I_s(50)$ ratio)
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
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: **17.03.24**

Contract Ref: **563607**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

DETERMINATION OF POINT LOAD STRENGTH

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-6	112	29.51	A	100	79	0.484	100	0.05	1.37	0.07 (✓)	28	CHALK	**B**
RedP-BH-6	112	29.51	I	97	53	0.322	81	0.05	1.24	0.06	28	CHALK	**B**

Results

$I_s(50)$ Mean Axial tests = **0.07** MN/m^2
$I_s(50)$ Mean Irregular tests = **0.06** MN/m^2
Unable to calculate $I_a(50)$ Strength Anisotropy Index from this dataset.
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

	Compiled By	Date	Contract Ref:
STRUCTURAL SOILS LTD	[redacted]	**17.03.24**	**563607**
	Contract: **SEA Link FEED - Kent Onshore Cable Link**		

DETERMINATION OF POINT LOAD STRENGTH

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-7	101	15.27	I	65	36	0.218	55	0.07	1.04	0.08	30	CHALK	**B**
RedP-BH-7	101	15.27	I	76	42	0.220	64	0.05	1.12	0.06	30	CHALK	**B**

Results

$I_s(50)$ Mean Irregular tests = **0.07** MN/m^2
Unable to calculate $I_a(50)$ Strength Anisotropy Index from this dataset.
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

	Compiled By	Date	Contract Ref:
STRUCTURAL SOILS LTD	[redacted]	**17.03.24**	**563607**
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DETERMINATION OF POINT LOAD STRENGTH

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-7	102	16.56	D	119	100	0.834	100	0.08	1.37	0.11 (✓)	29	CHALK	**H**
RedP-BH-7	102	16.56	D	50	81	0.710	81	0.11	1.24	0.13 (✓)	29	CHALK	**H**
RedP-BH-7	102	16.56	A	100	48	0.458	78	0.07	1.22	0.09 (✓)	29	CHALK	**H**
RedP-BH-7	102	16.56	D	119	100	0.834	100	0.08	1.37	0.11 (✓)	29	CHALK	**H**
RedP-BH-7	102	16.56	D	50	81	0.710	81	0.11	1.24	0.13 (✓)	29	CHALK	**H**
RedP-BH-7	102	16.56	A	100	48	0.458	78	0.07	1.22	0.09 (✓)	29	CHALK	**H**

Results

$I_s(50)$ Mean Axial tests = **0.09** MN/m^2
$I_s(50)$ Mean Diametral tests = **0.12** MN/m^2
$I_a(50)$ Strength Anisotropy Index = **1.36** (calculated from highest and lowest diametral and axial $I_s(50)$ ratio)
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
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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SEA Link FEED - Kent Onshore Cable Link

DETERMINATION OF POINT LOAD STRENGTH

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-7	103	18.50	A	96	55	0.470	82	0.07	1.25	0.09 (✓)	30	CHALK	**B**
RedP-BH-7	103	18.50	I	81	49	0.192	71	0.04	1.17	0.04	30	CHALK	**B**

Results

$I_s(50)$ Mean Axial tests = **0.09** MN/m^2
$I_s(50)$ Mean Irregular tests = **0.04** MN/m^2
Unable to calculate $I_a(50)$ Strength Anisotropy Index from this dataset.
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

	Compiled By	Date	Contract Ref:
STRUCTURAL SOILS LTD	[redacted]	**17.03.24**	**563607**
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DETERMINATION OF POINT LOAD STRENGTH

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-7	104	20.29	D	110	98	0.820	98	0.09	1.35	0.12 (✓)	28	CHALK	**H**
RedP-BH-7	104	20.29	D	54	99	0.910	99	0.09	1.36	0.13 (✓)	28	CHALK	**H**
RedP-BH-7	104	20.29	A	99	55	0.848	83	0.12	1.26	0.15 (✓)	28	CHALK	**H**
RedP-BH-7	104	20.29	D	110	98	0.820	98	0.09	1.35	0.12 (✓)	28	CHALK	**H**
RedP-BH-7	104	20.29	D	54	99	0.910	99	0.09	1.36	0.13 (✓)	28	CHALK	**H**
RedP-BH-7	104	20.29	A	99	55	0.848	83	0.12	1.26	0.15 (✓)	28	CHALK	**H**

Results

$I_s(50)$ Mean Axial tests = **0.15** MN/m^2
$I_s(50)$ Mean Diametral tests = **0.12** MN/m^2
$I_a(50)$ Strength Anisotropy Index = **1.27** (calculated from highest and lowest diametral and axial $I_s(50)$ ratio)
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
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]	**17.03.24**	**563607**

Contract:

SEA Link FEED - Kent Onshore Cable Link

DETERMINATION OF POINT LOAD STRENGTH

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-7	105	21.10	I	120	59	0.704	95	0.08	1.33	0.10	28	CHALK	**B**
RedP-BH-7	105	21.10	I	76	59	0.594	76	0.10	1.20	0.13	28	CHALK	**B**

Results

$I_s(50)$ Mean Irregular tests = **0.11** MN/m^2
Unable to calculate $I_a(50)$ Strength Anisotropy Index from this dataset.
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
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:
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Contract:

SEA Link FEED - Kent Onshore Cable Link

DETERMINATION OF POINT LOAD STRENGTH

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-7	106	22.54	D	90	94	1.022	94	0.12	1.33	0.15 (✓)	27	CHALK	**H**
RedP-BH-7	106	22.54	A	94	85	1.410	101	0.14	1.37	0.19 (✓)	27	CHALK	**H**
RedP-BH-7	106	22.54	D	42	50	0.710	50	0.28	1.00	0.28 (✓)	27	CHALK	**H**

Results

$I_s(50)$ Mean Axial tests = **0.19** MN/m^2
$I_s(50)$ Mean Diametral tests = **0.22** MN/m^2
$I_a(50)$ Strength Anisotropy Index = **1.15** (calculated from highest and lowest diametral and axial $I_s(50)$ ratio)
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
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:
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Contract:

SEA Link FEED - Kent Onshore Cable Link

DETERMINATION OF POINT LOAD STRENGTH

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-7	107	24.71	I	102	21	0.298	52	0.11	1.02	0.11	30	CHALK	**B**
RedP-BH-7	107	24.71	I	76	22	0.238	46	0.11	0.96	0.11	30	CHALK	**B**

Results

$I_s(50)$ Mean Irregular tests = **0.11** MN/m^2
Unable to calculate $I_a(50)$ Strength Anisotropy Index from this dataset.
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

	Compiled By	Date	Contract Ref:
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DETERMINATION OF POINT LOAD STRENGTH

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-7	108	26.20	D	125	98	0.696	98	0.07	1.35	0.10 (✓)	30	CHALK	**H**
RedP-BH-7	108	26.20	D	80	94	0.552	94	0.06	1.33	0.08 (✓)	30	CHALK	**H**
RedP-BH-7	108	26.20	A	98	68	0.776	92	0.09	1.32	0.12 (✓)	30	CHALK	**H**
RedP-BH-7	108	26.20	D	125	98	0.696	98	0.07	1.35	0.10 (✓)	30	CHALK	**H**
RedP-BH-7	108	26.20	D	80	94	0.552	94	0.06	1.33	0.08 (✓)	30	CHALK	**H**
RedP-BH-7	108	26.20	A	98	68	0.776	92	0.09	1.32	0.12 (✓)	30	CHALK	**H**

Results

$I_s(50)$ Mean Axial tests = **0.12** MN/m^2
$I_s(50)$ Mean Diametral tests = **0.09** MN/m^2
$I_a(50)$ Strength Anisotropy Index = **1.33** (calculated from highest and lowest diametral and axial $I_s(50)$ ratio)
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

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DETERMINATION OF POINT LOAD STRENGTH

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-7	109	27.05	I	100	44	0.534	75	0.10	1.20	0.11	29	CHALK	**B**
RedP-BH-7	109	27.05	I	64	43	0.234	59	0.07	1.08	0.07	29	CHALK	**B**

Results

$I_s(50)$ Mean Irregular tests = **0.09** MN/m^2
Unable to calculate $I_a(50)$ Strength Anisotropy Index from this dataset.
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

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DETERMINATION OF POINT LOAD STRENGTH

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-7	110	28.78	D	125	97	0.824	97	0.09	1.35	0.12 (✓)	28	CHALK	**H**
RedP-BH-7	110	28.78	D	64	97	0.640	97	0.07	1.35	0.09 (✓)	28	CHALK	**H**
RedP-BH-7	110	28.78	A	97	67	0.878	91	0.11	1.31	0.14 (✓)	28	CHALK	**H**

Results

$I_s(50)$ Mean Axial tests = **0.14** MN/m^2
$I_s(50)$ Mean Diametral tests = **0.1** MN/m^2
$I_a(50)$ Strength Anisotropy Index = **1.33** (calculated from highest and lowest diametral and axial $I_s(50)$ ratio)
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
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: [redacted]

Date: **17.03.24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

AGS

DETERMINATION OF POINT LOAD STRENGTH

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-7	111	30.72	I	54	18	0.118	35	0.10	0.85	0.08	27	CHALK	**B**
RedP-BH-7	111	30.72	I	49	21	0.156	36	0.12	0.86	0.10	27	CHALK	**B**

Results

$I_s(50)$ Mean Irregular tests = **0.09** MN/m^2
Unable to calculate $I_a(50)$ Strength Anisotropy Index from this dataset.
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

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DETERMINATION OF POINT LOAD STRENGTH

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-8	101	8.90	D	83	96	0.340	96	0.04	1.34	0.05 (✓)	28	Silty SAND	**B**
RedP-BH-8	101	8.90	A	98	78	0.342	99	0.04	1.36	0.05 (✓)	28	Silty SAND	**B**

Results

$I_s(50)$ Mean Axial tests = **0.05** MN/m^2
$I_s(50)$ Mean Diametral tests = **0.05** MN/m^2
$I_a(50)$ Strength Anisotropy Index = **1.04** (calculated from highest and lowest diametral and axial $I_s(50)$ ratio)
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

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Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

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DETERMINATION OF POINT LOAD STRENGTH

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-8	102	10.44	D	63	96	0.820	96	0.09	1.34	0.12 (✓)	31	CHALK	**H**
RedP-BH-8	102	10.44	A	96	65	0.822	89	0.10	1.30	0.13 (✓)	31	CHALK	**H**
RedP-BH-8	102	10.44	D	25	47	0.348	47	0.16	0.97	0.15 (✓)	31	CHALK	**H**

Results

$I_s(50)$ Mean Axial tests = **0.13** MN/m^2
$I_s(50)$ Mean Diametral tests = **0.14** MN/m^2
$I_a(50)$ Strength Anisotropy Index = **1.02** (calculated from highest and lowest diametral and axial $I_s(50)$ ratio)
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

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Contract Ref: **563607**

DETERMINATION OF POINT LOAD STRENGTH

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-8	103	13.80	D	70	100	0.494	100	0.05	1.37	0.07 (✓)	30	CHALK	**B**
RedP-BH-8	103	13.80	I	77	61	0.172	77	0.03	1.22	0.03	30	CHALK	**B**

Results

$I_s(50)$ Mean Diametral tests = **0.07** MN/m^2
$I_s(50)$ Mean Irregular tests = **0.03** MN/m^2
Unable to calculate $I_a(50)$ Strength Anisotropy Index from this dataset.
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

	Compiled By	Date	Contract Ref:
STRUCTURAL SOILS LTD	[redacted]	**17.03.24**	**563607**
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DETERMINATION OF POINT LOAD STRENGTH

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-8	105	15.82	D	82	99	0.296	99	0.03	1.36	0.04 (✓)	28	CHALK	**B**
RedP-BH-8	105	15.82	A	99	63	0.584	89	0.07	1.30	0.10 (✓)	28	CHALK	**B**

Results

$I_s(50)$ Mean Axial tests = **0.1** MN/m^2
$I_s(50)$ Mean Diametral tests = **0.04** MN/m^2
$I_a(50)$ Strength Anisotropy Index = **2.32** (calculated from highest and lowest diametral and axial $I_s(50)$ ratio)
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

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DETERMINATION OF POINT LOAD STRENGTH

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Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-8	106	19.18	I	96	64	0.670	88	0.09	1.29	0.11	29	CHALK	**B**
RedP-BH-8	106	19.18	I	88	63	0.802	84	0.11	1.26	0.14	29	CHALK	**B**

Results

$I_s(50)$ Mean Irregular tests = **0.13** MN/m^2
Unable to calculate $I_a(50)$ Strength Anisotropy Index from this dataset.
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

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DETERMINATION OF POINT LOAD STRENGTH

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-8	107	20.90	I	90	66	0.920	87	0.12	1.28	0.16	29	CHALK	**B**
RedP-BH-8	107	20.90	I	81	60	0.966	79	0.16	1.23	0.19	29	CHALK	**B**

Results

$I_s(50)$ Mean Irregular tests = **0.17** MN/m^2
Unable to calculate $I_a(50)$ Strength Anisotropy Index from this dataset.
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

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DETERMINATION OF POINT LOAD STRENGTH

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-8	108	22.06	D	127	99	0.714	99	0.07	1.36	0.10 (✓)	30	CHALK	**H**
RedP-BH-8	108	22.06	D	64	99	0.820	99	0.08	1.36	0.11 (✓)	30	CHALK	**H**
RedP-BH-8	108	22.06	A	99	61	0.954	88	0.12	1.29	0.16 (✓)	30	CHALK	**H**

Results

$I_s(50)$ Mean Axial tests = **0.16** MN/m^2
$I_s(50)$ Mean Diametral tests = **0.11** MN/m^2
$I_a(50)$ Strength Anisotropy Index = **1.5** (calculated from highest and lowest diametral and axial $I_s(50)$ ratio)
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
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]	**17.03.24**	**563607**

Contract:

SEA Link FEED - Kent Onshore Cable Link

DETERMINATION OF POINT LOAD STRENGTH

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-8	109	24.00	D	85	99	0.982	99	0.10	1.36	0.14 (✓)	29	CHALK	**H**
RedP-BH-8	109	24.00	D	52	99	0.928	99	0.09	1.36	0.13 (✓)	29	CHALK	**H**
RedP-BH-8	109	24.00	A	99	53	1.016	82	0.15	1.25	0.19 (✓)	29	CHALK	**H**

Results

$I_s(50)$ Mean Axial tests = **0.19** MN/m^2
$I_s(50)$ Mean Diametral tests = **0.13** MN/m^2
$I_a(50)$ Strength Anisotropy Index = **1.43** (calculated from highest and lowest diametral and axial $I_s(50)$ ratio)
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
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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Contract:

SEA Link FEED - Kent Onshore Cable Link

DETERMINATION OF POINT LOAD STRENGTH

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-8	110	25.80	D	82	99	0.646	99	0.07	1.36	0.09 (✓)	29	CHALK	**B**
RedP-BH-8	110	25.80	A	99	97	0.572	111	0.05	1.43	0.07 (✓)	29	CHALK	**B**

Results

$I_s(50)$ Mean Axial tests = **0.07** MN/m^2
$I_s(50)$ Mean Diametral tests = **0.09** MN/m^2
$I_a(50)$ Strength Anisotropy Index = **1.34** (calculated from highest and lowest diametral and axial $I_s(50)$ ratio)
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
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	Contract Ref:
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Contract:

SEA Link FEED - Kent Onshore Cable Link

DETERMINATION OF POINT LOAD STRENGTH

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-9	101	9.91	D	70	100	0.458	100	0.05	1.37	0.06 (✓)	30	CHALK	**B**
RedP-BH-9	101	9.91	I	100	60	0.516	87	0.07	1.29	0.09	30	CHALK	**B**

Results

$I_s(50)$ Mean Diametral tests = **0.06** MN/m^2
$I_s(50)$ Mean Irregular tests = **0.09** MN/m^2
Unable to calculate $I_a(50)$ Strength Anisotropy Index from this dataset.
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

	Compiled By	Date	Contract Ref:
STRUCTURAL SOILS LTD	[redacted]	**17.03.24**	**563607**
	Contract: **SEA Link FEED - Kent Onshore Cable Link**		

DETERMINATION OF POINT LOAD STRENGTH

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-9	102	13.14	D	90	100	0.168	100	0.02	1.37	0.02 (✓)	30	CHALK	**B**
RedP-BH-9	102	13.14	I	100	46	0.344	77	0.06	1.21	0.07	30	CHALK	**B**

Results

$I_s(50)$ Mean Diametral tests = **0.02** MN/m^2
$I_s(50)$ Mean Irregular tests = **0.07** MN/m^2
Unable to calculate $I_a(50)$ Strength Anisotropy Index from this dataset.
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

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DETERMINATION OF POINT LOAD STRENGTH

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-9	103	14.60	D	55	100	0.170	100	0.02	1.37	0.02 (✓)	31	CHALK	**H**
RedP-BH-9	103	14.60	A	100	57	0.564	85	0.08	1.27	0.10 (✓)	31	CHALK	**H**
RedP-BH-9	103	14.60	D	30	55	0.336	55	0.11	1.04	0.12 (✓)	31	CHALK	**H**
RedP-BH-9	103	14.60	D	55	100	0.170	100	0.02	1.37	0.02 (✓)	31	CHALK	**H**
RedP-BH-9	103	14.60	A	100	57	0.564	85	0.08	1.27	0.10 (✓)	31	CHALK	**H**
RedP-BH-9	103	14.60	D	30	55	0.336	55	0.11	1.04	0.12 (✓)	31	CHALK	**H**

Results

$I_s(50)$ Mean Axial tests = **0.1** MN/m^2
$I_s(50)$ Mean Diametral tests = **0.07** MN/m^2
$I_a(50)$ Strength Anisotropy Index = **1.42** (calculated from highest and lowest diametral and axial $I_s(50)$ ratio)
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
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:
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Contract:

SEA Link FEED - Kent Onshore Cable Link

DETERMINATION OF POINT LOAD STRENGTH

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-9	104	17.57	I	90	73	0.662	91	0.08	1.31	0.10	29	CHALK	**B**
RedP-BH-9	104	17.57	I	85	76	0.652	91	0.08	1.31	0.10	29	CHALK	**B**

Results

$I_s(50)$ Mean Irregular tests = **0.1** MN/m^2
Unable to calculate $I_a(50)$ Strength Anisotropy Index from this dataset.
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

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SEA Link FEED - Kent Onshore Cable Link

DETERMINATION OF POINT LOAD STRENGTH

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-9	105	19.00	I	100	77	0.872	99	0.09	1.36	0.12	28	CHALK	**B**
RedP-BH-9	105	19.00	I	82	42	0.126	66	0.03	1.13	0.03	28	CHALK	**B**

Results

$I_s(50)$ Mean Irregular tests = **0.08** MN/m^2
Unable to calculate $I_a(50)$ Strength Anisotropy Index from this dataset.
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

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STRUCTURAL SOILS LTD	[redacted]	**17.03.24**	**563607**
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DETERMINATION OF POINT LOAD STRENGTH

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-9	106	21.66	D	90	99	0.669	99	0.07	1.36	0.09 (✓)	30	CHALK	**H**
RedP-BH-9	106	21.66	A	99	77	0.824	99	0.08	1.36	0.12 (✓)	30	CHALK	**H**
RedP-BH-9	106	21.66	D	38	59	0.472	59	0.14	1.08	0.15 (✓)	30	CHALK	**H**

Results

$I_s(50)$ Mean Axial tests = **0.12** MN/m^2
$I_s(50)$ Mean Diametral tests = **0.12** MN/m^2
$I_a(50)$ Strength Anisotropy Index = **1.04** (calculated from highest and lowest diametral and axial $I_s(50)$ ratio)
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

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Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

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Contract:

SEA Link FEED - Kent Onshore Cable Link

DETERMINATION OF POINT LOAD STRENGTH

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Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-9	107	24.81	D	60	95	0.226	95	0.03	1.33	0.03 (✓)	27	CHALK	**B**
RedP-BH-9	107	24.81	I	90	80	0.216	96	0.02	1.34	0.03	27	CHALK	**B**

Results

$I_s(50)$ Mean Diametral tests = **0.03** MN/m^2
$I_s(50)$ Mean Irregular tests = **0.03** MN/m^2
Unable to calculate $I_a(50)$ Strength Anisotropy Index from this dataset.
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

	Compiled By	Date	Contract Ref:
STRUCTURAL SOILS LTD	[redacted]	**17.03.24**	**563607**
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Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-9	108	28.67	A	101	94	0.850	110	0.07	1.43	0.10 (✓)	30	CHALK	**B**
RedP-BH-9	108	28.67	I	97	61	0.152	87	0.02	1.28	0.03	30	CHALK	**B**
RedP-BH-9	108	28.67	I	71	45	0.300	64	0.07	1.12	0.08	30	CHALK	**B**

Results

$I_s(50)$ Mean Axial tests = **0.1** MN/m^2
$I_s(50)$ Mean Irregular tests = **0.05** MN/m^2
Unable to calculate $I_a(50)$ Strength Anisotropy Index from this dataset.
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

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SEA Link FEED - Kent Onshore Cable Link

DETERMINATION OF POINT LOAD STRENGTH

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Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-9	109	29.96	D	109	98	0.930	98	0.10	1.35	0.13 (✓)	28	CHALK	**H**
RedP-BH-9	109	29.96	D	65	98	0.734	98	0.08	1.35	0.10 (✓)	28	CHALK	**H**
RedP-BH-9	109	29.96	A	98	48	0.662	77	0.11	1.22	0.13 (✓)	28	CHALK	**H**

Results

$I_s(50)$ Mean Axial tests = **0.13** MN/m^2
$I_s(50)$ Mean Diametral tests = **0.12** MN/m^2
$I_a(50)$ Strength Anisotropy Index = **1.15** (calculated from highest and lowest diametral and axial $I_s(50)$ ratio)
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

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Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

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DETERMINATION OF POINT LOAD STRENGTH

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Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-10	101	19.42	D	57	100	0.686	100	0.07	1.37	0.09 (✓)	32	CHALK	**H**
RedP-BH-10	101	19.42	A	100	65	0.738	91	0.09	1.31	0.12 (✓)	32	CHALK	**H**
RedP-BH-10	101	19.42	A	100	58	0.312	86	0.04	1.28	0.05 (✓)	32	CHALK	**H**
RedP-BH-10	101	19.42	D	57	100	0.686	100	0.07	1.37	0.09 (✓)	32	CHALK	**H**
RedP-BH-10	101	19.42	A	100	65	0.738	91	0.09	1.31	0.12 (✓)	32	CHALK	**H**
RedP-BH-10	101	19.42	A	100	58	0.312	86	0.04	1.28	0.05 (✓)	32	CHALK	**H**

Results

$I_s(50)$ Mean Axial tests = **0.09** MN/m^2
$I_s(50)$ Mean Diametral tests = **0.09** MN/m^2
$I_a(50)$ Strength Anisotropy Index = **1.1** (calculated from highest and lowest diametral and axial $I_s(50)$ ratio)
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

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Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

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Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-10	102	20.58	D	38	55	0.312	55	0.10	1.04	0.11 (✓)	30	CHALK	**B**
RedP-BH-10	102	20.58	A	54	29	0.110	45	0.06	0.95	0.05 (✓)	30	CHALK	**B**

Results

$I_s(50)$ Mean Axial tests = **0.05** MN/m^2
$I_s(50)$ Mean Diametral tests = **0.11** MN/m^2
$I_a(50)$ Strength Anisotropy Index = **2.05** (calculated from highest and lowest diametral and axial $I_s(50)$ ratio)
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

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Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
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]	**17.03.24**	**563607**

Contract:

SEA Link FEED - Kent Onshore Cable Link

DETERMINATION OF POINT LOAD STRENGTH

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-10	103	22.23	I	80	48	0.480	70	0.10	1.16	0.11	30	CHALK	**B**
RedP-BH-10	103	22.23	I	62	30	0.228	49	0.10	0.99	0.10	30	CHALK	**B**

Results

$I_s(50)$ Mean Irregular tests = **0.1** MN/m^2
Unable to calculate $I_a(50)$ Strength Anisotropy Index from this dataset.
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

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Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-10	104	23.53	D	80	100	0.472	100	0.05	1.37	0.06 (✓)	31	CHALK	**B**
RedP-BH-10	104	23.53	I	75	47	0.462	67	0.10	1.14	0.12	31	CHALK	**B**

Results

$I_s(50)$ Mean Diametral tests = **0.06** MN/m^2
$I_s(50)$ Mean Irregular tests = **0.12** MN/m^2
Unable to calculate $I_a(50)$ Strength Anisotropy Index from this dataset.
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

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Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-10	105	27.21	A	100	55	1.042	84	0.15	1.26	0.19 (✓)	28	CHALK	**B**
RedP-BH-10	105	27.21	I	55	53	0.398	61	0.11	1.09	0.12	28	CHALK	**B**
RedP-BH-10	105	27.21	I	52	46	0.516	55	0.17	1.05	0.18	28	CHALK	**B**

Results

$I_s(50)$ Mean Axial tests = **0.19** MN/m^2
$I_s(50)$ Mean Irregular tests = **0.15** MN/m^2
Unable to calculate $I_a(50)$ Strength Anisotropy Index from this dataset.
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

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Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-10	106	29.37	D	90	100	0.304	100	0.03	1.37	0.04 (✓)	30	CHALK	**B**
RedP-BH-10	106	29.37	I	90	73	0.494	91	0.06	1.31	0.08	30	CHALK	**B**

Results

$I_s(50)$ Mean Diametral tests = **0.04** MN/m^2
$I_s(50)$ Mean Irregular tests = **0.08** MN/m^2
Unable to calculate $I_a(50)$ Strength Anisotropy Index from this dataset.
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

	Compiled By	Date	Contract Ref:
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RedP-BH-10	107	31.33	A	100	66	0.906	92	0.11	1.31	0.14 (✓)	30	CHALK	**B**
RedP-BH-10	107	31.33	I	65	51	0.282	65	0.07	1.13	0.08	30	CHALK	**B**

Results

$I_s(50)$ Mean Axial tests = **0.14** MN/m^2
$I_s(50)$ Mean Irregular tests = **0.08** MN/m^2
Unable to calculate $I_a(50)$ Strength Anisotropy Index from this dataset.
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

	Compiled By	Date	Contract Ref:
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DETERMINATION OF POINT LOAD STRENGTH

In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-10	108	32.71	D	65	97	0.490	97	0.05	1.35	0.07 (✓)	27	CHALK	**H**
RedP-BH-10	108	32.71	A	97	72	0.970	94	0.11	1.33	0.15 (✓)	27	CHALK	**H**
RedP-BH-10	108	32.71	D	97	58	0.518	58	0.15	1.07	0.16 (✓)	27	CHALK	**H**
RedP-BH-10	108	32.71	D	65	97	0.490	97	0.05	1.35	0.07 (✓)	27	CHALK	**H**
RedP-BH-10	108	32.71	A	97	72	0.970	94	0.11	1.33	0.15 (✓)	27	CHALK	**H**
RedP-BH-10	108	32.71	A	97	58	0.518	85	0.07	1.27	0.09 (✓)	27	CHALK	**H**

Results

$I_s(50)$ Mean Axial tests = **0.15** MN/m^2
$I_s(50)$ Mean Diametral tests = **0.12** MN/m^2
$I_a(50)$ Strength Anisotropy Index = **1.24** (calculated from highest and lowest diametral and axial $I_s(50)$ ratio)
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

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In accordance with ISRM 1974-2006

Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-10	109	37.82	D	72	100	0.218	100	0.02	1.37	0.03 (✓)	23	CHALK	**B**
RedP-BH-10	109	37.82	I	95	59	0.180	84	0.03	1.27	0.03	23	CHALK	**B**

Results

$I_s(50)$ Mean Diametral tests = **0.03** MN/m^2
$I_s(50)$ Mean Irregular tests = **0.03** MN/m^2
Unable to calculate $I_a(50)$ Strength Anisotropy Index from this dataset.
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

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Exploratory Position ID	Sample Ref	Depth (m)	Type of Test	Width or Length (W or L) (mm)	Platen Separation (D) (mm)	Failure Load (P) (kN)	Equivalent Diameter (D_e) (mm)	Point Load (I_s) (MN/m^2)	Size Factor (F)	Point Load Index ($I_{s(50)}$) (MN/m^2)	Water Content (%)	Rock Type	Lab location
RedP-BH-10	110	40.50	A	100	50	0.830	80	0.13	1.23	0.16 (✓)	29	CHALK	**B**
RedP-BH-10	110	40.50	I	50	46	0.374	54	0.13	1.04	0.13	29	CHALK	**B**

Results

$I_s(50)$ Mean Axial tests = **0.16** MN/m^2
$I_s(50)$ Mean Irregular tests = **0.13** MN/m^2
Unable to calculate $I_a(50)$ Strength Anisotropy Index from this dataset.
Note:Size Correction Factor (F) calculated using $F = (D_e/50)^{0.45}$ (where D_e is equivalent core diameter).

Key

Type of Test column:, A = Axial, D = Diametral, I = Irregular, B = Block, L = Parallel, P = Perpendicular, [NS] denotes Non-standard Test.
Point Load Index column: (✓) = included in mean calculations, (✗) = excluded from mean calculations
Lab location: B = Bristol (BS3 4AG), C = Castleford (WF10 1NJ), H = Hemel Hempstead (HP3 9RT), T = Tonbridge (TN11 9HU)

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CERCHAR ABRASIVITY TEST

In accordance with ISRM 2007-2014

Borehole : **RedP-BH-6** Sample Ref : **204** Sample Type : **C** Depth (m) : **12.50**

Description : **White CHALK**

Test Date : **29/02/2024** Sample Condition : **As received** Maximum Grain Size (mm) : **N/A**

Type of Apparatus Used : **Type 2** Measurement Method : **Side, Digital**

Stylus Number	Stylus Re-sharpened?	Stylus Hardness	Rough or Saw-cut	Relative to Anisotropy	Mean Reading (mm)	CAI
1	Yes	58	Rough	NA	0.00	0.0[(2)]
2	Yes	58	Rough	NA	0.00	0.0[(2)]
3	Yes	54	Rough	NA	0.00	0.0
4	Yes	58	Rough	NA	0.00	0.0[(2)]
5	Yes	56	Rough	NA	0.00	0.0
-	-	-	-	-	-	-
Overall Mean Stylus Wear (mm)						0.00
Average CERCHAR Abrasivity Index (CAI)						0.0[(2)]
Standard Deviation of CAI						0.00
Classification of CAI						NA

Key

[(1)] denotes that a correction factor of $d = 1.14*d_s$ was applied to the mean reading (where d is the corrected value and d_s is the original wear flat measurement). This is to account for tests carried out on saw-cut specimens.

[(2)] denotes that a correction factor of $CAI' = 0.415*CAI_{(x)} / (1 - 0.0107x)$ was applied to the value of CAI (where CAI' is the corrected value, CAI is the original value and x is the stylus hardness). This is to account for instances where a stylus was used with an HRC other than 55±1.

[(3)] denotes that the result was excluded from calculations due to the wear pattern of the stylus.

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CERCHAR ABRASIVITY TEST

In accordance with ISRM 2007-2014

Borehole : **RedP-BH-6** Sample Ref : **205** Sample Type : **C** Depth (m) : **14.85**

Description : **White CHALK**

Test Date : **29/02/2024** Sample Condition : **As received** Maximum Grain Size (mm) : **N/A**

Type of Apparatus Used : **Type 2** Measurement Method : **Side, Digital**

Stylus Number	Stylus Re-sharpened?	Stylus Hardness	Rough or Saw-cut	Relative to Anisotropy	Mean Reading (mm)	CAI
1	Yes	58	Rough	NA	0.00	0.0[2]
2	Yes	58	Rough	NA	0.00	0.0[2]
3	Yes	54	Rough	NA	0.00	0.0
4	Yes	58	Rough	NA	0.00	0.0[2]
5	Yes	56	Rough	NA	0.00	0.0
-	-	-	-	-	-	-
Overall Mean Stylus Wear (mm)						0.00
Average CERCHAR Abrasivity Index (CAI)						0.0[2]
Standard Deviation of CAI						0.00
Classification of CAI						NA

Key

[1] denotes that a correction factor of $d = 1.14*d_s$ was applied to the mean reading (where d is the corrected value and d_s is the original wear flat measurement). This is to account for tests carried out on saw-cut specimens.

[2] denotes that a correction factor of $CAI' = 0.415*CAI_{(x)} / (1 - 0.0107x)$ was applied to the value of CAI (where CAI' is the corrected value, CAI is the original value and x is the stylus hardness). This is to account for instances where a stylus was used with an HRC other than 55±1.

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CERCHAR ABRASIVITY TEST

In accordance with ISRM 2007-2014

Borehole : **RedP-BH-6** Sample Ref : **207** Sample Type : **C** Depth (m) : **18.40**

Description : **White CHALK**

Test Date : **29/02/2024** Sample Condition : **As received** Maximum Grain Size (mm) : **N/A**

Type of Apparatus Used : **Type 2** Measurement Method : **Side, Digital**

Stylus Number	Stylus Re-sharpened?	Stylus Hardness	Rough or Saw-cut	Relative to Anisotropy	Mean Reading (mm)	CAI
1	Yes	58	Rough	NA	0.00	0.0[2]
2	Yes	58	Rough	NA	0.00	0.0[2]
3	Yes	54	Rough	NA	0.00	0.0
4	Yes	58	Rough	NA	0.00	0.0[2]
5	Yes	56	Rough	NA	0.00	0.0
-	-	-	-	-	-	-
Overall Mean Stylus Wear (mm)						0.00
Average CERCHAR Abrasivity Index (CAI)						0.0[2]
Standard Deviation of CAI						0.00
Classification of CAI						NA

Key

[1] denotes that a correction factor of $d = 1.14*d_s$ was applied to the mean reading (where d is the corrected value and d_s is the original wear flat measurement). This is to account for tests carried out on saw-cut specimens.

[2] denotes that a correction factor of $CAI' = 0.415*CAI_{(x)} / (1 - 0.0107x)$ was applied to the value of CAI (where CAI' is the corrected value, CAI is the original value and x is the stylus hardness). This is to account for instances where a stylus was used with an HRC other than 55±1.

[3] denotes that the result was excluded from calculations due to the wear pattern of the stylus.

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CERCHAR ABRASIVITY TEST

In accordance with ISRM 2007-2014

Borehole : **RedP-BH-6** Sample Ref : **208** Sample Type : **C** Depth (m) : **21.50**

Description : **White CHALK**

Test Date : **29/02/2024** Sample Condition : **As received** Maximum Grain Size (mm) : **N/A**

Type of Apparatus Used : **Type 2** Measurement Method : **Side, Digital**

Stylus Number	Stylus Re-sharpened?	Stylus Hardness	Rough or Saw-cut	Relative to Anisotropy	Mean Reading (mm)	CAI
1	Yes	58	Rough	NA	0.00	0.0[2]
2	Yes	58	Rough	NA	0.00	0.0[2]
3	Yes	54	Rough	NA	0.00	0.0
4	Yes	58	Rough	NA	0.00	0.0[2]
5	Yes	56	Rough	NA	0.00	0.0
-	-	-	-	-	-	-
Overall Mean Stylus Wear (mm)						0.00
Average CERCHAR Abrasivity Index (CAI)						0.0[2]
Standard Deviation of CAI						0.00
Classification of CAI						NA

Key

[1] denotes that a correction factor of $d = 1.14*d_s$ was applied to the mean reading (where d is the corrected value and d_s is the original wear flat measurement). This is to account for tests carried out on saw-cut specimens.

[2] denotes that a correction factor of $CAI' = 0.415*CAI_{(x)} / (1 - 0.0107x)$ was applied to the value of CAI (where CAI' is the corrected value, CAI is the original value and x is the stylus hardness). This is to account for instances where a stylus was used with an HRC other than 55±1.

[3] denotes that the result was excluded from calculations due to the wear pattern of the stylus.

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CERCHAR ABRASIVITY TEST

In accordance with ISRM 2007-2014

Borehole : **RedP-BH-6** Sample Ref : **210** Sample Type : **C** Depth (m) : **25.50**

Description : **White CHALK**

Test Date : **07/03/2024** Sample Condition : **As received** Maximum Grain Size (mm) : **N/A**

Type of Apparatus Used : **Type 2** Measurement Method : **Side, Digital**

Stylus Number	Stylus Re-sharpened?	Stylus Hardness	Rough or Saw-cut	Relative to Anisotropy	Mean Reading (mm)	CAI
1	Yes	55	Rough	NA	0.20	2.0
2	Yes	58	Rough	NA	0.24	2.7(2)
3	Yes	57	Rough	NA	0.32	3.4(2)
4	Yes	59	Rough	NA	0.20	2.3(2)
5	Yes	58	Rough	NA	0.21	2.3(2)
-	-	-	-	-	-	-
Overall Mean Stylus Wear (mm)						0.24
Average CERCHAR Abrasivity Index (CAI)						2.5(2)
Standard Deviation of CAI						0.58
Classification of CAI						Medium

Key

(1) denotes that a correction factor of $d = 1.14*d_s$ was applied to the mean reading (where d is the corrected value and d_s is the original wear flat measurement). This is to account for tests carried out on saw-cut specimens.

(2) denotes that a correction factor of $CAI' = 0.415*CAI_{(x)} / (1 - 0.0107x)$ was applied to the value of CAI (where CAI' is the corrected value, CAI is the original value and x is the stylus hardness). This is to account for instances where a stylus was used with an HRC other than 55±1.

(3) denotes that the result was excluded from calculations due to the wear pattern of the stylus.

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CERCHAR ABRASIVITY TEST

In accordance with ISRM 2007-2014

Borehole : **RedP-BH-6** Sample Ref : **211** Sample Type : **C** Depth (m) : **27.95**

Description : **White CHALK**

Test Date : **29/02/2024** Sample Condition : **As received** Maximum Grain Size (mm) : **N/A**

Type of Apparatus Used : **Type 2** Measurement Method : **Side, Digital**

Stylus Number	Stylus Re-sharpened?	Stylus Hardness	Rough or Saw-cut	Relative to Anisotropy	Mean Reading (mm)	CAI
1	Yes	58	Rough	NA	0.30	3.3(2)
2	Yes	58	Rough	NA	0.26	2.8(2)
3	Yes	54	Rough	NA	0.29	2.9
4	Yes	58	Rough	NA	0.19	2.1(2)
5	Yes	56	Rough	NA	0.16	1.6
-	-	-	-	-	-	-
Overall Mean Stylus Wear (mm)						0.24
Average CERCHAR Abrasivity Index (CAI)						2.6(2)
Standard Deviation of CAI						0.70
Classification of CAI						Medium

Key

(1) denotes that a correction factor of $d = 1.14*d_s$ was applied to the mean reading (where d is the corrected value and d_s is the original wear flat measurement). This is to account for tests carried out on saw-cut specimens.

(2) denotes that a correction factor of $CAI' = 0.415*CAI_{(x)} / (1 - 0.0107x)$ was applied to the value of CAI (where CAI' is the corrected value, CAI is the original value and x is the stylus hardness). This is to account for instances where a stylus was used with an HRC other than 55±1.

(3) denotes that the result was excluded from calculations due to the wear pattern of the stylus.

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CERCHAR ABRASIVITY TEST

In accordance with ISRM 2007-2014

Borehole : **RedP-BH-7** Sample Ref : **201** Sample Type : **C** Depth (m) : **12.00**

Description : **FLINT**

Test Date : **05/03/2024** Sample Condition : **As received** Maximum Grain Size (mm) : **N/A**

Type of Apparatus Used : **Type 2** Measurement Method : **Side, Digital**

Stylus Number	Stylus Re-sharpened?	Stylus Hardness	Rough or Saw-cut	Relative to Anisotropy	Mean Reading (mm)	CAI
1	Yes	54	Rough	NA	0.44	4.4
2	Yes	58	Rough	NA	0.45	5.0(2)
3	Yes	58	Rough	NA	0.40	4.4(2)
4	Yes	58	Rough	NA	0.56	6.2(2)
5	Yes	59	Rough	NA	0.48	5.4(2)
-	-	-	-	-	-	-
Overall Mean Stylus Wear (mm)						0.47
Average CERCHAR Abrasivity Index (CAI)						5.1(2)
Standard Deviation of CAI						0.88
Classification of CAI						Very high

Key

(1) denotes that a correction factor of $d = 1.14*d_s$ was applied to the mean reading (where d is the corrected value and d_s is the original wear flat measurement). This is to account for tests carried out on saw-cut specimens.

(2) denotes that a correction factor of $CAI' = 0.415*CAI_{(x)} / (1 - 0.0107x)$ was applied to the value of CAI (where CAI' is the corrected value, CAI is the original value and x is the stylus hardness). This is to account for instances where a stylus was used with an HRC other than 55±1.

(3) denotes that the result was excluded from calculations due to the wear pattern of the stylus.

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Compiled By	Date
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Contract	Job No
SEA Link FEED - Kent Onshore Cable Link	**563607**

CERCHAR ABRASIVITY TEST

In accordance with ISRM 2007-2014

Borehole : **RedP-BH-7** Sample Ref : **202** Sample Type : **C** Depth (m) : **13.70**

Description : **White CHALK**

Test Date : **05/03/2024** Sample Condition : **As received** Maximum Grain Size (mm) : **N/A**

Type of Apparatus Used : **Type 2** Measurement Method : **Side, Digital**

Stylus Number	Stylus Re-sharpened?	Stylus Hardness	Rough or Saw-cut	Relative to Anisotropy	Mean Reading (mm)	CAI
1	Yes	54	Rough	NA	0.00	0.0
2	Yes	58	Rough	NA	0.00	0.0(2)
3	Yes	58	Rough	NA	0.00	0.0(2)
4	Yes	58	Rough	NA	0.00	0.0(2)
5	Yes	59	Rough	NA	0.00	0.0(2)
-	-	-	-	-	-	-
Overall Mean Stylus Wear (mm)						0.00
Average CERCHAR Abrasivity Index (CAI)						0.0(2)
Standard Deviation of CAI						0.00
Classification of CAI						NA

Key

(1) denotes that a correction factor of $d = 1.14*d_s$ was applied to the mean reading (where d is the corrected value and d_s is the original wear flat measurement). This is to account for tests carried out on saw-cut specimens.

(2) denotes that a correction factor of $CAI' = 0.415*CAI_{(x)} / (1 - 0.0107x)$ was applied to the value of CAI (where CAI' is the corrected value, CAI is the original value and x is the stylus hardness). This is to account for instances where a stylus was used with an HRC other than 55±1.

(3) denotes that the result was excluded from calculations due to the wear pattern of the stylus.

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CERCHAR ABRASIVITY TEST

In accordance with ISRM 2007-2014

Borehole : **RedP-BH-7** Sample Ref : **205** Sample Type : **C** Depth (m) : **17.30**

Description : **White CHALK**

Test Date : **05/03/2024** Sample Condition : **As received** Maximum Grain Size (mm) : **N/A**

Type of Apparatus Used : **Type 2** Measurement Method : **Side, Digital**

Stylus Number	Stylus Re-sharpened?	Stylus Hardness	Rough or Saw-cut	Relative to Anisotropy	Mean Reading (mm)	CAI
1	Yes	54	Rough	NA	0.00	0.0
2	Yes	58	Rough	NA	0.00	0.0(2)
3	Yes	58	Rough	NA	0.00	0.0(2)
4	Yes	58	Rough	NA	0.00	0.0(2)
5	Yes	59	Rough	NA	0.00	0.0(2)
-	-	-	-	-	-	-
Overall Mean Stylus Wear (mm)						0.00
Average CERCHAR Abrasivity Index (CAI)						0.0(2)
Standard Deviation of CAI						0.00
Classification of CAI						NA

Key

(1) denotes that a correction factor of $d = 1.14*d_s$ was applied to the mean reading (where d is the corrected value and d_s is the original wear flat measurement). This is to account for tests carried out on saw-cut specimens.

(2) denotes that a correction factor of $CAI' = 0.415*CAI_{(x)} / (1 - 0.0107x)$ was applied to the value of CAI (where CAI' is the corrected value, CAI is the original value and x is the stylus hardness). This is to account for instances where a stylus was used with an HRC other than 55±1.

(3) denotes that the result was excluded from calculations due to the wear pattern of the stylus.

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CERCHAR ABRASIVITY TEST

In accordance with ISRM 2007-2014

Borehole : **RedP-BH-7** Sample Ref : **206** Sample Type : **C** Depth (m) : **20.20**

Description : **White CHALK**

Test Date : **05/03/2024** Sample Condition : **As received** Maximum Grain Size (mm) : **N/A**

Type of Apparatus Used : **Type 2** Measurement Method : **Side, Digital**

Stylus Number	Stylus Re-sharpened?	Stylus Hardness	Rough or Saw-cut	Relative to Anisotropy	Mean Reading (mm)	CAI
1	Yes	54	Rough	NA	0.00	0.0
2	Yes	58	Rough	NA	0.00	0.0(2)
3	Yes	58	Rough	NA	0.00	0.0(2)
4	Yes	58	Rough	NA	0.00	0.0(2)
5	Yes	59	Rough	NA	0.00	0.0(2)
-	-	-	-	-	-	-
Overall Mean Stylus Wear (mm)						0.00
Average CERCHAR Abrasivity Index (CAI)						0.0(2)
Standard Deviation of CAI						0.00
Classification of CAI						NA

Key

(1) denotes that a correction factor of $d = 1.14*d_s$ was applied to the mean reading (where d is the corrected value and d_s is the original wear flat measurement). This is to account for tests carried out on saw-cut specimens.

(2) denotes that a correction factor of $CAI' = 0.415*CAI_{(x)} / (1 - 0.0107x)$ was applied to the value of CAI (where CAI' is the corrected value, CAI is the original value and x is the stylus hardness). This is to account for instances where a stylus was used with an HRC other than 55±1.

(3) denotes that the result was excluded from calculations due to the wear pattern of the stylus.

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CERCHAR ABRASIVITY TEST

In accordance with ISRM 2007-2014

Borehole : **RedP-BH-7** Sample Ref : **208** Sample Type : **C** Depth (m) : **23.00**

Description : **White CHALK**

Test Date : **05/03/2024** Sample Condition : **As received** Maximum Grain Size (mm) : **N/A**

Type of Apparatus Used : **Type 2** Measurement Method : **Side, Digital**

Stylus Number	Stylus Re-sharpened?	Stylus Hardness	Rough or Saw-cut	Relative to Anisotropy	Mean Reading (mm)	CAI
1	Yes	58	Rough	NA	0.20	2.2(2)
2	Yes	58	Rough	NA	0.22	2.4(2)
3	Yes	54	Rough	NA	0.26	2.6
4	Yes	58	Rough	NA	0.29	3.1(2)
5	Yes	56	Rough	NA	0.30	3.0
-	-	-	-	-	-	-
Overall Mean Stylus Wear (mm)						0.25
Average CERCHAR Abrasivity Index (CAI)						2.7(2)
Standard Deviation of CAI						0.41
Classification of CAI						Medium

Key

(1) denotes that a correction factor of $d = 1.14*d_s$ was applied to the mean reading (where d is the corrected value and d_s is the original wear flat measurement). This is to account for tests carried out on saw-cut specimens.

(2) denotes that a correction factor of $CAI' = 0.415*CAI_{(x)} / (1 - 0.0107x)$ was applied to the value of CAI (where CAI' is the corrected value, CAI is the original value and x is the stylus hardness). This is to account for instances where a stylus was used with an HRC other than 55±1.

(3) denotes that the result was excluded from calculations due to the wear pattern of the stylus.

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CERCHAR ABRASIVITY TEST

In accordance with ISRM 2007-2014

Borehole : **RedP-BH-7** Sample Ref : **209** Sample Type : **C** Depth (m) : **25.52**

Description : **White CHALK**

Test Date : **05/03/2024** Sample Condition : **As received** Maximum Grain Size (mm) : **N/A**

Type of Apparatus Used : **Type 2** Measurement Method : **Side, Digital**

Stylus Number	Stylus Re-sharpened?	Stylus Hardness	Rough or Saw-cut	Relative to Anisotropy	Mean Reading (mm)	CAI
1	Yes	59	Rough	NA	0.18	2.1(2)
2	Yes	57	Rough	NA	0.28	3.0(2)
3	Yes	58	Rough	NA	0.28	3.1(2)
4	Yes	57	Rough	NA	0.20	2.2(2)
5	Yes	58	Rough	NA	0.20	2.2(2)
-	-	-	-	-	-	-
Overall Mean Stylus Wear (mm)						0.23
Average CERCHAR Abrasivity Index (CAI)						2.5(2)
Standard Deviation of CAI						0.55
Classification of CAI						Medium

Key

(1) denotes that a correction factor of $d = 1.14*d_s$ was applied to the mean reading (where d is the corrected value and d_s is the original wear flat measurement). This is to account for tests carried out on saw-cut specimens.

(2) denotes that a correction factor of $CAI' = 0.415*CAI_{(x)} / (1 - 0.0107x)$ was applied to the value of CAI (where CAI' is the corrected value, CAI is the original value and x is the stylus hardness). This is to account for instances where a stylus was used with an HRC other than 55±1.

(3) denotes that the result was excluded from calculations due to the wear pattern of the stylus.

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CERCHAR ABRASIVITY TEST

In accordance with ISRM 2007-2014

Borehole : **RedP-BH-7** Sample Ref : **210** Sample Type : **C** Depth (m) : **28.10**

Description : **White CHALK**

Test Date : **05/03/2024** Sample Condition : **As received** Maximum Grain Size (mm) : **N/A**

Type of Apparatus Used : **Type 2** Measurement Method : **Side, Digital**

Stylus Number	Stylus Re-sharpened?	Stylus Hardness	Rough or Saw-cut	Relative to Anisotropy	Mean Reading (mm)	CAI
1	Yes	54	Rough	NA	0.00	0.0
2	Yes	58	Rough	NA	0.00	0.0(2)
3	Yes	58	Rough	NA	0.00	0.0(2)
4	Yes	58	Rough	NA	0.00	0.0(2)
5	Yes	59	Rough	NA	0.00	0.0(2)
-	-	-	-	-	-	-
Overall Mean Stylus Wear (mm)						0.00
Average CERCHAR Abrasivity Index (CAI)						0.0(2)
Standard Deviation of CAI						0.00
Classification of CAI						NA

Key

(1) denotes that a correction factor of $d = 1.14*d_s$ was applied to the mean reading (where d is the corrected value and d_s is the original wear flat measurement). This is to account for tests carried out on saw-cut specimens.

(2) denotes that a correction factor of $CAI' = 0.415*CAI_{(x)} / (1 - 0.0107x)$ was applied to the value of CAI (where CAI' is the corrected value, CAI is the original value and x is the stylus hardness). This is to account for instances where a stylus was used with an HRC other than 55±1.

(3) denotes that the result was excluded from calculations due to the wear pattern of the stylus.

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CERCHAR ABRASIVITY TEST

In accordance with ISRM 2007-2014

Borehole : **RedP-BH-8** Sample Ref : **202** Sample Type : **C** Depth (m) : **10.30**

Description : **White CHALK**

Test Date : **23/02/2024** Sample Condition : **As received** Maximum Grain Size (mm) : **N/A**

Type of Apparatus Used : **Type 2** Measurement Method : **Side, Digital**

Stylus Number	Stylus Re-sharpened?	Stylus Hardness	Rough or Saw-cut	Relative to Anisotropy	Mean Reading (mm)	CAI
1	Yes	59	Rough	NA	0.00	0.0(2)
2	Yes	58	Rough	NA	0.00	0.0(2)
3	Yes	58	Rough	NA	0.00	0.0(2)
4	Yes	53	Rough	NA	0.00	0.0(2)
5	Yes	60	Rough	NA	0.00	0.0(2)
-	-	-	-	-	-	-
Overall Mean Stylus Wear (mm)						0.00
Average CERCHAR Abrasivity Index (CAI)						0.0(2)
Standard Deviation of CAI						0.00
Classification of CAI						NA

Key

(1) denotes that a correction factor of $d = 1.14*d_s$ was applied to the mean reading (where d is the corrected value and d_s is the original wear flat measurement). This is to account for tests carried out on saw-cut specimens.

(2) denotes that a correction factor of $CAI' = 0.415*CAI_{(x)} / (1 - 0.0107x)$ was applied to the value of CAI (where CAI' is the corrected value, CAI is the original value and x is the stylus hardness). This is to account for instances where a stylus was used with an HRC other than 55±1.

(3) denotes that the result was excluded from calculations due to the wear pattern of the stylus.

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CERCHAR ABRASIVITY TEST

In accordance with ISRM 2007-2014

Borehole : **RedP-BH-8** Sample Ref : **203** Sample Type : **C** Depth (m) : **12.40**

Description : **White CHALK**

Test Date : **22/02/2024** Sample Condition : **As received** Maximum Grain Size (mm) : **N/A**

Type of Apparatus Used : **Type 2** Measurement Method : **Side, Digital**

Stylus Number	Stylus Re-sharpened?	Stylus Hardness	Rough or Saw-cut	Relative to Anisotropy	Mean Reading (mm)	CAI
1	Yes	59	Rough	NA	0.00	0.0[2]
2	Yes	58	Rough	NA	0.00	0.0[2]
3	Yes	58	Rough	NA	0.00	0.0[2]
4	Yes	53	Rough	NA	0.00	0.0[2]
5	Yes	60	Rough	NA	0.00	0.0[2]
-	-	-	-	-	-	-
Overall Mean Stylus Wear (mm)						0.00
Average CERCHAR Abrasivity Index (CAI)						0.0[2]
Standard Deviation of CAI						0.00
Classification of CAI						NA

Key

[1] denotes that a correction factor of $d = 1.14*d_s$ was applied to the mean reading (where d is the corrected value and d_s is the original wear flat measurement). This is to account for tests carried out on saw-cut specimens.

[2] denotes that a correction factor of $CAI' = 0.415*CAI_{(x)} / (1 - 0.0107x)$ was applied to the value of CAI (where CAI' is the corrected value, CAI is the original value and x is the stylus hardness). This is to account for instances where a stylus was used with an HRC other than 55±1.

[3] denotes that the result was excluded from calculations due to the wear pattern of the stylus.

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CERCHAR ABRASIVITY TEST

In accordance with ISRM 2007-2014

Borehole : **RedP-BH-8** Sample Ref : **205** Sample Type : **C** Depth (m) : **14.70**

Description : **White CHALK**

Test Date : **29/02/2024** Sample Condition : **As received** Maximum Grain Size (mm) : **N/A**

Type of Apparatus Used : **Type 2** Measurement Method : **Side, Digital**

Stylus Number	Stylus Re-sharpened?	Stylus Hardness	Rough or Saw-cut	Relative to Anisotropy	Mean Reading (mm)	CAI
1	Yes	58	Rough	NA	0.00	0.0[(2)]
2	Yes	58	Rough	NA	0.00	0.0[(2)]
3	Yes	54	Rough	NA	0.00	0.0
4	Yes	58	Rough	NA	0.00	0.0[(2)]
5	Yes	56	Rough	NA	0.00	0.0
-	-	-	-	-	-	-
Overall Mean Stylus Wear (mm)						0.00
Average CERCHAR Abrasivity Index (CAI)						0.0[(2)]
Standard Deviation of CAI						0.00
Classification of CAI						NA

Key

[(1)] denotes that a correction factor of $d = 1.14*d_s$ was applied to the mean reading (where d is the corrected value and d_s is the original wear flat measurement). This is to account for tests carried out on saw-cut specimens.

[(2)] denotes that a correction factor of $CAI' = 0.415*CAI_{(x)} / (1 - 0.0107x)$ was applied to the value of CAI (where CAI' is the corrected value, CAI is the original value and x is the stylus hardness). This is to account for instances where a stylus was used with an HRC other than 55±1.

[(3)] denotes that the result was excluded from calculations due to the wear pattern of the stylus.

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CERCHAR ABRASIVITY TEST

In accordance with ISRM 2007-2014

Borehole : **RedP-BH-8** Sample Ref : **207** Sample Type : **C** Depth (m) : **18.20**

Description : **White CHALK**

Test Date : **15/05/2024** Sample Condition : **As received** Maximum Grain Size (mm) : **N/A**

Type of Apparatus Used : **Type 2** Measurement Method : **Side, Digital**

Stylus Number	Stylus Re-sharpened?	Stylus Hardness	Rough or Saw-cut	Relative to Anisotropy	Mean Reading (mm)	CAI
1	Yes	54	Rough	NA	0.00	0.0
2	Yes	55	Rough	NA	0.00	0.0
3	Yes	54	Rough	NA	0.00	0.0
4	Yes	58	Rough	NA	0.00	0.0(2)
5	Yes	58	Rough	NA	0.00	0.0(2)
-	-	-	-	-	-	-
Overall Mean Stylus Wear (mm)						0.00
Average CERCHAR Abrasivity Index (CAI)						0.0(2)
Standard Deviation of CAI						0.00
Classification of CAI						NA

Key

(1) denotes that a correction factor of $d = 1.14*d_s$ was applied to the mean reading (where d is the corrected value and d_s is the original wear flat measurement). This is to account for tests carried out on saw-cut specimens.

(2) denotes that a correction factor of $CAI' = 0.415*CAI_{(x)} / (1 - 0.0107x)$ was applied to the value of CAI (where CAI' is the corrected value, CAI is the original value and x is the stylus hardness). This is to account for instances where a stylus was used with an HRC other than 55±1.

(3) denotes that the result was excluded from calculations due to the wear pattern of the stylus.

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Contract	Job No
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CERCHAR ABRASIVITY TEST

In accordance with ISRM 2007-2014

Borehole : **RedP-BH-8** Sample Ref : **210** Sample Type : **C** Depth (m) : **22.40**

Description : **White CHALK**

Test Date : **29/02/2024** Sample Condition : **As received** Maximum Grain Size (mm) : **N/A**

Type of Apparatus Used : **Type 2** Measurement Method : **Side, Digital**

Stylus Number	Stylus Re-sharpened?	Stylus Hardness	Rough or Saw-cut	Relative to Anisotropy	Mean Reading (mm)	CAI
1	Yes	58	Rough	NA	0.00	0.0[2]
2	Yes	58	Rough	NA	0.00	0.0[2]
3	Yes	54	Rough	NA	0.00	0.0
4	Yes	58	Rough	NA	0.00	0.0[2]
5	Yes	56	Rough	NA	0.00	0.0
-	-	-	-	-	-	-
Overall Mean Stylus Wear (mm)						0.00
Average CERCHAR Abrasivity Index (CAI)						0.0[2]
Standard Deviation of CAI						0.00
Classification of CAI						NA

Key

[1] denotes that a correction factor of $d = 1.14*d_s$ was applied to the mean reading (where d is the corrected value and d_s is the original wear flat measurement). This is to account for tests carried out on saw-cut specimens.

[2] denotes that a correction factor of $CAI' = 0.415*CAI_{(x)} / (1 - 0.0107x)$ was applied to the value of CAI (where CAI' is the corrected value, CAI is the original value and x is the stylus hardness). This is to account for instances where a stylus was used with an HRC other than 55±1.

[3] denotes that the result was excluded from calculations due to the wear pattern of the stylus.

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CERCHAR ABRASIVITY TEST

In accordance with ISRM 2007-2014

Borehole : **RedP-BH-8** Sample Ref : **211** Sample Type : **C** Depth (m) : **23.80**

Description : **White CHALK**

Test Date : **23/02/2024** Sample Condition : **As received** Maximum Grain Size (mm) : **N/A**

Type of Apparatus Used : **Type 2** Measurement Method : **Side, Digital**

Stylus Number	Stylus Re-sharpened?	Stylus Hardness	Rough or Saw-cut	Relative to Anisotropy	Mean Reading (mm)	CAI
1	Yes	59	Rough	NA	0.00	0.0[2]
2	Yes	58	Rough	NA	0.00	0.0[2]
3	Yes	58	Rough	NA	0.00	0.0[2]
4	Yes	53	Rough	NA	0.00	0.0[2]
5	Yes	60	Rough	NA	0.00	0.0[2]
-	-	-	-	-	-	-
Overall Mean Stylus Wear (mm)						0.00
Average CERCHAR Abrasivity Index (CAI)						0.0[2]
Standard Deviation of CAI						0.00
Classification of CAI						NA

Key

[1] denotes that a correction factor of $d = 1.14*d_s$ was applied to the mean reading (where d is the corrected value and d_s is the original wear flat measurement). This is to account for tests carried out on saw-cut specimens.

[2] denotes that a correction factor of $CAI' = 0.415*CAI_{(x)} / (1 - 0.0107x)$ was applied to the value of CAI (where CAI' is the corrected value, CAI is the original value and x is the stylus hardness). This is to account for instances where a stylus was used with an HRC other than 55±1.

[3] denotes that the result was excluded from calculations due to the wear pattern of the stylus.

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CERCHAR ABRASIVITY TEST

In accordance with ISRM 2007-2014

Borehole : **RedP-BH-9** Sample Ref : **202** Sample Type : **C** Depth (m) : **9.00**

Description : **White CHALK**

Test Date : **23/02/2024** Sample Condition : **As received** Maximum Grain Size (mm) : **N/A**

Type of Apparatus Used : **Type 2** Measurement Method : **Side, Digital**

Stylus Number	Stylus Re-sharpened?	Stylus Hardness	Rough or Saw-cut	Relative to Anisotropy	Mean Reading (mm)	CAI
1	Yes	59	Rough	NA	0.20	2.2(2)
2	Yes	58	Rough	NA	0.18	2.0(2)
3	Yes	58	Rough	NA	0.18	1.9(2)
4	Yes	53	Rough	NA	0.18	1.7(2)
5	Yes	60	Rough	NA	0.17	2.0(2)
-	-	-	-	-	-	-
Overall Mean Stylus Wear (mm)						0.18
Average CERCHAR Abrasivity Index (CAI)						2.0(2)
Standard Deviation of CAI						0.25
Classification of CAI						Low

Key

(1) denotes that a correction factor of $d = 1.14*d_s$ was applied to the mean reading (where d is the corrected value and d_s is the original wear flat measurement). This is to account for tests carried out on saw-cut specimens.

(2) denotes that a correction factor of $CAI' = 0.415*CAI_{(x)} / (1 - 0.0107x)$ was applied to the value of CAI (where CAI' is the corrected value, CAI is the original value and x is the stylus hardness). This is to account for instances where a stylus was used with an HRC other than 55±1.

(3) denotes that the result was excluded from calculations due to the wear pattern of the stylus.

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1a Princess Street
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BS3 4AG

Compiled By	Date
[redacted]	18/03/24

Contract	Job No
SEA Link FEED - Kent Onshore Cable Link	**563607**

CERCHAR ABRASIVITY TEST

In accordance with ISRM 2007-2014

Borehole : **RedP-BH-9** Sample Ref : **205** Sample Type : **C** Depth (m) : **15.00**

Description : **White CHALK**

Test Date : **22/02/2024** Sample Condition : **As received** Maximum Grain Size (mm) : **N/A**

Type of Apparatus Used : **Type 2** Measurement Method : **Side, Digital**

Stylus Number	Stylus Re-sharpened?	Stylus Hardness	Rough or Saw-cut	Relative to Anisotropy	Mean Reading (mm)	CAI
1	Yes	59	Rough	NA	0.00	0.0[2]
2	Yes	58	Rough	NA	0.00	0.0[2]
3	Yes	58	Rough	NA	0.00	0.0[2]
4	Yes	53	Rough	NA	0.00	0.0[2]
5	Yes	60	Rough	NA	0.00	0.0[2]
-	-	-	-	-	-	-
Overall Mean Stylus Wear (mm)						0.00
Average CERCHAR Abrasivity Index (CAI)						0.0[2]
Standard Deviation of CAI						0.00
Classification of CAI						NA

Key

[1] denotes that a correction factor of $d = 1.14*d_s$ was applied to the mean reading (where d is the corrected value and d_s is the original wear flat measurement). This is to account for tests carried out on saw-cut specimens.

[2] denotes that a correction factor of $CAI' = 0.415*CAI_{(x)} / (1 - 0.0107x)$ was applied to the value of CAI (where CAI' is the corrected value, CAI is the original value and x is the stylus hardness). This is to account for instances where a stylus was used with an HRC other than 55±1.

[3] denotes that the result was excluded from calculations due to the wear pattern of the stylus.

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Contract	Job No
SEA Link FEED - Kent Onshore Cable Link	**563607**

CERCHAR ABRASIVITY TEST

In accordance with ISRM 2007-2014

Borehole : **RedP-BH-9** Sample Ref : **206** Sample Type : **C** Depth (m) : **19.90**

Description : **White CHALK**

Test Date : **22/02/2024** Sample Condition : **As received** Maximum Grain Size (mm) : **N/A**

Type of Apparatus Used : **Type 2** Measurement Method : **Side, Digital**

Stylus Number	Stylus Re-sharpened?	Stylus Hardness	Rough or Saw-cut	Relative to Anisotropy	Mean Reading (mm)	CAI
1	Yes	59	Rough	NA	0.00	0.0(2)
2	Yes	58	Rough	NA	0.00	0.0(2)
3	Yes	58	Rough	NA	0.00	0.0(2)
4	Yes	53	Rough	NA	0.00	0.0(2)
5	Yes	60	Rough	NA	0.00	0.0(2)
-	-	-	-	-	-	-
Overall Mean Stylus Wear (mm)						0.00
Average CERCHAR Abrasivity Index (CAI)						0.0(2)
Standard Deviation of CAI						0.00
Classification of CAI						NA

Key

(1) denotes that a correction factor of $d = 1.14*d_s$ was applied to the mean reading (where d is the corrected value and d_s is the original wear flat measurement). This is to account for tests carried out on saw-cut specimens.

(2) denotes that a correction factor of $CAI' = 0.415*CAI_{(x)} / (1 - 0.0107x)$ was applied to the value of CAI (where CAI' is the corrected value, CAI is the original value and x is the stylus hardness). This is to account for instances where a stylus was used with an HRC other than 55±1.

(3) denotes that the result was excluded from calculations due to the wear pattern of the stylus.

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Compiled By	Date
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Contract	Job No
SEA Link FEED - Kent Onshore Cable Link	**563607**

CERCHAR ABRASIVITY TEST

In accordance with ISRM 2007-2014

Borehole : **RedP-BH-9** Sample Ref : **208** Sample Type : **C** Depth (m) : **22.90**

Description : **White CHALK**

Test Date : **22/02/2024** Sample Condition : **As received** Maximum Grain Size (mm) : **N/A**

Type of Apparatus Used : **Type 2** Measurement Method : **Side, Digital**

Stylus Number	Stylus Re-sharpened?	Stylus Hardness	Rough or Saw-cut	Relative to Anisotropy	Mean Reading (mm)	CAI
1	Yes	59	Rough	NA	0.00	0.0(2)
2	Yes	58	Rough	NA	0.00	0.0(2)
3	Yes	58	Rough	NA	0.00	0.0(2)
4	Yes	53	Rough	NA	0.00	0.0(2)
5	Yes	60	Rough	NA	0.00	0.0(2)
-	-	-	-	-	-	-
Overall Mean Stylus Wear (mm)						0.00
Average CERCHAR Abrasivity Index (CAI)						0.0(2)
Standard Deviation of CAI						0.00
Classification of CAI						NA

Key

(1) denotes that a correction factor of $d = 1.14*d_s$ was applied to the mean reading (where d is the corrected value and d_s is the original wear flat measurement). This is to account for tests carried out on saw-cut specimens.

(2) denotes that a correction factor of $CAI' = 0.415*CAI_{(x)} / (1 - 0.0107x)$ was applied to the value of CAI (where CAI' is the corrected value, CAI is the original value and x is the stylus hardness). This is to account for instances where a stylus was used with an HRC other than 55±1.

(3) denotes that the result was excluded from calculations due to the wear pattern of the stylus.

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Compiled By	Date
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Contract	Job No
SEA Link FEED - Kent Onshore Cable Link	**563607**

CERCHAR ABRASIVITY TEST

In accordance with ISRM 2007-2014

Borehole : **RedP-BH-9** Sample Ref : **210** Sample Type : **C** Depth (m) : **26.40**

Description : **White CHALK**

Test Date : **23/02/2024** Sample Condition : **As received** Maximum Grain Size (mm) : **N/A**

Type of Apparatus Used : **Type 2** Measurement Method : **Side, Digital**

Stylus Number	Stylus Re-sharpened?	Stylus Hardness	Rough or Saw-cut	Relative to Anisotropy	Mean Reading (mm)	CAI
1	Yes	54	Rough	NA	0.29	2.9
2	Yes	57	Rough	NA	0.18	1.9(2)
3	Yes	57	Rough	NA	0.16	1.7(2)
4	Yes	57	Rough	NA	0.18	2.0(2)
5	Yes	57	Rough	NA	0.19	2.0(2)
-	-	-	-	-	-	-
Overall Mean Stylus Wear (mm)						0.20
Average CERCHAR Abrasivity Index (CAI)						2.1(2)
Standard Deviation of CAI						0.48
Classification of CAI						Medium

Key

(1) denotes that a correction factor of $d = 1.14*d_s$ was applied to the mean reading (where d is the corrected value and d_s is the original wear flat measurement). This is to account for tests carried out on saw-cut specimens.

(2) denotes that a correction factor of $CAI' = 0.415*CAI_{(x)} / (1 - 0.0107x)$ was applied to the value of CAI (where CAI' is the corrected value, CAI is the original value and x is the stylus hardness). This is to account for instances where a stylus was used with an HRC other than 55±1.

(3) denotes that the result was excluded from calculations due to the wear pattern of the stylus.

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Compiled By	Date
[redacted]	18/03/24

Contract	Job No
SEA Link FEED - Kent Onshore Cable Link	**563607**

CERCHAR ABRASIVITY TEST

In accordance with ISRM 2007-2014

Borehole : **RedP-BH-10** Sample Ref : **202** Sample Type : **C** Depth (m) : **18.40**

Description : **White CHALK**

Test Date : **29/02/2024** Sample Condition : **As received** Maximum Grain Size (mm) : **N/A**

Type of Apparatus Used : **Type 2** Measurement Method : **Side, Digital**

Stylus Number	Stylus Re-sharpened?	Stylus Hardness	Rough or Saw-cut	Relative to Anisotropy	Mean Reading (mm)	CAI
1	Yes	58	Rough	NA	0.00	0.0(2)
2	Yes	58	Rough	NA	0.00	0.0(2)
3	Yes	54	Rough	NA	0.00	0.0
4	Yes	58	Rough	NA	0.00	0.0(2)
5	Yes	56	Rough	NA	0.00	0.0
-	-	-	-	-	-	-
Overall Mean Stylus Wear (mm)						0.00
Average CERCHAR Abrasivity Index (CAI)						0.0(2)
Standard Deviation of CAI						0.00
Classification of CAI						NA

Key

(1) denotes that a correction factor of $d = 1.14*d_s$ was applied to the mean reading (where d is the corrected value and d_s is the original wear flat measurement). This is to account for tests carried out on saw-cut specimens.

(2) denotes that a correction factor of $CAI' = 0.415*CAI_{(x)} / (1 - 0.0107x)$ was applied to the value of CAI (where CAI' is the corrected value, CAI is the original value and x is the stylus hardness). This is to account for instances where a stylus was used with an HRC other than 55±1.

(3) denotes that the result was excluded from calculations due to the wear pattern of the stylus.

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Contract	Job No
SEA Link FEED - Kent Onshore Cable Link	**563607**

CERCHAR ABRASIVITY TEST

In accordance with ISRM 2007-2014

Borehole : **RedP-BH-10** Sample Ref : **203** Sample Type : **C** Depth (m) : **23.40**

Description : **White CHALK**

Test Date : **22/02/2024** Sample Condition : **As received** Maximum Grain Size (mm) : **N/A**

Type of Apparatus Used : **Type 2** Measurement Method : **Side, Digital**

Stylus Number	Stylus Re-sharpened?	Stylus Hardness	Rough or Saw-cut	Relative to Anisotropy	Mean Reading (mm)	CAI
1	Yes	59	Rough	NA	0.00	0.0[2]
2	Yes	58	Rough	NA	0.00	0.0[2]
3	Yes	58	Rough	NA	0.00	0.0[2]
4	Yes	53	Rough	NA	0.00	0.0[2]
5	Yes	60	Rough	NA	0.00	0.0[2]
-	-	-	-	-	-	-
Overall Mean Stylus Wear (mm)						0.00
Average CERCHAR Abrasivity Index (CAI)						0.0[2]
Standard Deviation of CAI						0.00
Classification of CAI						NA

Key

[1] denotes that a correction factor of $d = 1.14*d_s$ was applied to the mean reading (where d is the corrected value and d_s is the original wear flat measurement). This is to account for tests carried out on saw-cut specimens.

[2] denotes that a correction factor of $CAI' = 0.415*CAI_{(x)} / (1 - 0.0107x)$ was applied to the value of CAI (where CAI' is the corrected value, CAI is the original value and x is the stylus hardness). This is to account for instances where a stylus was used with an HRC other than 55±1.

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Contract	Job No
SEA Link FEED - Kent Onshore Cable Link	**563607**

CERCHAR ABRASIVITY TEST

In accordance with ISRM 2007-2014

Borehole : **RedP-BH-10** Sample Ref : **205** Sample Type : **C** Depth (m) : **26.10**

Description : **White CHALK**

Test Date : **22/02/2024** Sample Condition : **As received** Maximum Grain Size (mm) : **N/A**

Type of Apparatus Used : **Type 2** Measurement Method : **Side, Digital**

Stylus Number	Stylus Re-sharpened?	Stylus Hardness	Rough or Saw-cut	Relative to Anisotropy	Mean Reading (mm)	CAI
1	Yes	59	Rough	NA	0.00	0.0[2]
2	Yes	58	Rough	NA	0.00	0.0[2]
3	Yes	58	Rough	NA	0.00	0.0[2]
4	Yes	53	Rough	NA	0.00	0.0[2]
5	Yes	60	Rough	NA	0.00	0.0[2]
-	-	-	-	-	-	-
Overall Mean Stylus Wear (mm)						0.00
Average CERCHAR Abrasivity Index (CAI)						0.0[2]
Standard Deviation of CAI						0.00
Classification of CAI						NA

Key

[1] denotes that a correction factor of $d = 1.14*d_s$ was applied to the mean reading (where d is the corrected value and d_s is the original wear flat measurement). This is to account for tests carried out on saw-cut specimens.

[2] denotes that a correction factor of $CAI' = 0.415*CAI_{(x)} / (1 - 0.0107x)$ was applied to the value of CAI (where CAI' is the corrected value, CAI is the original value and x is the stylus hardness). This is to account for instances where a stylus was used with an HRC other than 55±1.

[3] denotes that the result was excluded from calculations due to the wear pattern of the stylus.

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Contract	Job No
SEA Link FEED - Kent Onshore Cable Link	**563607**

CERCHAR ABRASIVITY TEST

In accordance with ISRM 2007-2014

Borehole : **RedP-BH-10** Sample Ref : **206** Sample Type : **C** Depth (m) : **28.90**

Description : **White CHALK**

Test Date : **22/02/2024** Sample Condition : **As received** Maximum Grain Size (mm) : **N/A**

Type of Apparatus Used : **Type 2** Measurement Method : **Side, Digital**

Stylus Number	Stylus Re-sharpened?	Stylus Hardness	Rough or Saw-cut	Relative to Anisotropy	Mean Reading (mm)	CAI
1	Yes	59	Rough	NA	0.00	0.0[2]
2	Yes	58	Rough	NA	0.00	0.0[2]
3	Yes	58	Rough	NA	0.00	0.0[2]
4	Yes	53	Rough	NA	0.00	0.0[2]
5	Yes	60	Rough	NA	0.00	0.0[2]
-	-	-	-	-	-	-
Overall Mean Stylus Wear (mm)						0.00
Average CERCHAR Abrasivity Index (CAI)						0.0[2]
Standard Deviation of CAI						0.00
Classification of CAI						NA

Key

[1] denotes that a correction factor of $d = 1.14*d_s$ was applied to the mean reading (where d is the corrected value and d_s is the original wear flat measurement). This is to account for tests carried out on saw-cut specimens.

[2] denotes that a correction factor of $CAI' = 0.415*CAI_{(x)} / (1 - 0.0107x)$ was applied to the value of CAI (where CAI' is the corrected value, CAI is the original value and x is the stylus hardness). This is to account for instances where a stylus was used with an HRC other than 55±1.

[3] denotes that the result was excluded from calculations due to the wear pattern of the stylus.

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Compiled By	Date
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Contract	Job No
SEA Link FEED - Kent Onshore Cable Link	**563607**

CERCHAR ABRASIVITY TEST

In accordance with ISRM 2007-2014

Borehole : **RedP-BH-10** Sample Ref : **208** Sample Type : **C** Depth (m) : **33.50**

Description : **FLINT**

Test Date : **23/02/2024** Sample Condition : **As received** Maximum Grain Size (mm) : **N/A**

Type of Apparatus Used : **Type 2** Measurement Method : **Side, Digital**

Stylus Number	Stylus Re-sharpened?	Stylus Hardness	Rough or Saw-cut	Relative to Anisotropy	Mean Reading (mm)	CAI
1	Yes	55	Rough	NA	0.28	2.8
2	Yes	57	Rough	NA	0.24	2.5(2)
3	Yes	57	Rough	NA	0.19	2.0(2)
4	Yes	59	Rough	NA	0.21	2.3(2)
5	Yes	60	Rough	NA	0.26	3.0(2)
-	-	-	-	-	-	-
Overall Mean Stylus Wear (mm)						0.24
Average CERCHAR Abrasivity Index (CAI)						2.5(2)
Standard Deviation of CAI						0.44
Classification of CAI						Medium

Key

(1) denotes that a correction factor of $d = 1.14*d_s$ was applied to the mean reading (where d is the corrected value and d_s is the original wear flat measurement). This is to account for tests carried out on saw-cut specimens.

(2) denotes that a correction factor of $CAI' = 0.415*CAI_{(x)} / (1 - 0.0107x)$ was applied to the value of CAI (where CAI' is the corrected value, CAI is the original value and x is the stylus hardness). This is to account for instances where a stylus was used with an HRC other than 55±1.

(3) denotes that the result was excluded from calculations due to the wear pattern of the stylus.

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Contract: **SEA Link FEED - Kent Onshore Cable Link**

Job No: **563607**

CERCHAR ABRASIVITY TEST

In accordance with ISRM 2007-2014

Borehole : **RedP-BH-10** Sample Ref : **210** Sample Type : **C** Depth (m) : **35.15**

Description : **FLINT**

Test Date : **23/02/2024** Sample Condition : **As received** Maximum Grain Size (mm) : **N/A**

Type of Apparatus Used : **Type 2** Measurement Method : **Side, Digital**

Stylus Number	Stylus Re-sharpened?	Stylus Hardness	Rough or Saw-cut	Relative to Anisotropy	Mean Reading (mm)	CAI
1	Yes	57	Rough	NA	0.18	1.9(2)
2	Yes	56	Rough	NA	0.19	1.9
3	Yes	57	Rough	NA	0.28	3.0(2)
4	Yes	58	Rough	NA	0.24	2.7(2)
5	Yes	54	Rough	NA	0.24	2.4
-	-	-	-	-	-	-
Overall Mean Stylus Wear (mm)						0.23
Average CERCHAR Abrasivity Index (CAI)						2.4(2)
Standard Deviation of CAI						0.50
Classification of CAI						Medium

Key

(1) denotes that a correction factor of $d = 1.14*d_s$ was applied to the mean reading (where d is the corrected value and d_s is the original wear flat measurement). This is to account for tests carried out on saw-cut specimens.

(2) denotes that a correction factor of $CAI' = 0.415*CAI_{(x)} / (1 - 0.0107x)$ was applied to the value of CAI (where CAI' is the corrected value, CAI is the original value and x is the stylus hardness). This is to account for instances where a stylus was used with an HRC other than 55±1.

(3) denotes that the result was excluded from calculations due to the wear pattern of the stylus.

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Compiled By	Date
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Contract	Job No
SEA Link FEED - Kent Onshore Cable Link	**563607**

CERCHAR ABRASIVITY TEST

In accordance with ISRM 2007-2014

Borehole : **RedP-BH-10** Sample Ref : **212** Sample Type : **C** Depth (m) : **38.00**

Description : **White CHALK**

Test Date : **23/02/2024** Sample Condition : **As received** Maximum Grain Size (mm) : **N/A**

Type of Apparatus Used : **Type 2** Measurement Method : **Side, Digital**

Stylus Number	Stylus Re-sharpened?	Stylus Hardness	Rough or Saw-cut	Relative to Anisotropy	Mean Reading (mm)	CAI
1	Yes	59	Rough	NA	0.00	0.0[2]
2	Yes	58	Rough	NA	0.00	0.0[2]
3	Yes	58	Rough	NA	0.00	0.0[2]
4	Yes	53	Rough	NA	0.00	0.0[2]
5	Yes	60	Rough	NA	0.00	0.0[2]
-	-	-	-	-	-	-
Overall Mean Stylus Wear (mm)						0.00
Average CERCHAR Abrasivity Index (CAI)						0.0[2]
Standard Deviation of CAI						0.00
Classification of CAI						NA

Key

[1] denotes that a correction factor of $d = 1.14*d_s$ was applied to the mean reading (where d is the corrected value and d_s is the original wear flat measurement). This is to account for tests carried out on saw-cut specimens.

[2] denotes that a correction factor of $CAI' = 0.415*CAI_{(x)} / (1 - 0.0107x)$ was applied to the value of CAI (where CAI' is the corrected value, CAI is the original value and x is the stylus hardness). This is to account for instances where a stylus was used with an HRC other than 55±1.

[3] denotes that the result was excluded from calculations due to the wear pattern of the stylus.

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Compiled By	Date
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Contract	Job No
SEA Link FEED - Kent Onshore Cable Link	**563607**

CERCHAR ABRASIVITY TEST

In accordance with ISRM 2007-2014

Borehole : **RedP-BH-10** Sample Ref : **214** Sample Type : **C** Depth (m) : **39.40**

Description : **White CHALK**

Test Date : **20/02/2024** Sample Condition : **As received** Maximum Grain Size (mm) : **N/A**

Type of Apparatus Used : **Type 2** Measurement Method : **Side, Digital**

Stylus Number	Stylus Re-sharpened?	Stylus Hardness	Rough or Saw-cut	Relative to Anisotropy	Mean Reading (mm)	CAI
1	Yes	59	Rough	NA	0.24	2.7(2)
2	Yes	56	Rough	NA	0.35	3.5
3	Yes	60	Rough	NA	0.36	4.1(2)
4	Yes	55	Rough	NA	0.27	2.7
5	Yes	59	Rough	NA	0.24	2.7(2)
-	-	-	-	-	-	-
Overall Mean Stylus Wear (mm)						0.29
Average CERCHAR Abrasivity Index (CAI)						3.1(2)
Standard Deviation of CAI						0.69
Classification of CAI						Medium

Key

(1) denotes that a correction factor of $d = 1.14*d_s$ was applied to the mean reading (where d is the corrected value and d_s is the original wear flat measurement). This is to account for tests carried out on saw-cut specimens.

(2) denotes that a correction factor of $CAI' = 0.415*CAI_{(x)} / (1 - 0.0107x)$ was applied to the value of CAI (where CAI' is the corrected value, CAI is the original value and x is the stylus hardness). This is to account for instances where a stylus was used with an HRC other than 55±1.

(3) denotes that the result was excluded from calculations due to the wear pattern of the stylus.

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Compiled By	Date
[redacted]	18/03/24

Contract	Job No
SEA Link FEED - Kent Onshore Cable Link	**563607**

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	Organic Matter Content (%)	Total Sulphur (%)	Description
R22-BH101	8	D	2.00	0.38	1100	7.6		0.57	Grey mottled yellowish brown silty CLAY
R22-BH101	10	D	2.45				1.1		Bluish grey silty CLAY
R22-BH101	63	B	21.50	0.61	2100	7.8		0.99	Grey slightly gravelly silty CLAY
R22-BH102	13	D	3.50				0.9		Grey clayey SILT
R22-BH102	25	D	6.50	0.25	940	8.5		0.60	Grey slightly sandy clayey SILT
R22-BH102	38	D	10.00	0.08	340	8.7		0.04	Bluish grey mottled orangish brown slightly sandy clayey SILT
R22-BH103	9	D	2.50				2.2		Bluish grey silty CLAY
R22-BH103	15	B	4.10	0.52	1500	8.4		1.2	Bluish grey slightly sandy silty CLAY

NOTES:- Chemical tests were undertaken by Derwentside Environmental Testing and Envirolab

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Compiled By: [redacted]

Date: **10.04.24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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	Organic Matter Content (%)	Total Sulphur (%)	Description
R22-BH103	56	B	19.50	0.04	28	8.7		0.02	Greenish grey silty sandy GRAVEL with occasional shell fragments
R22-BH104	13	D	4.00	0.17	580	8.7		0.44	Grey silty CLAY
R22-BH104	19	D	6.00				0.3		Greenish grey mottled orangish brown sandy clayey SILT with frequent shell fragments
R22-BH104	46	D	14.00	0.47	1900	7.9		1.0	Grey silty sandy GRAVEL
R22-BH105	5	D	1.80				1.8		Grey slightly sandy silty CLAY with occasional shell fragments
R22-BH105	12	D	3.60	0.16	340	9.0		0.59	Grey slightly sandy silty CLAY with occasional shell fragments
R22-BH105	28	D	7.60	0.11	450	8.7		0.08	Grey mottled greenish brown silty SAND
R22-BH105	32	D	8.60				2.7		Brown sandy silty CLAY

NOTES:- Chemical tests were undertaken by Derwentside Environmental Testing and Envirolab

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Date: **10.04.24**

Contract: **SEA Link FEED - Kent Onshore Cable Link**

Contract Ref: **563607**

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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	Organic Matter Content (%)	Total Sulphur (%)	Description
R22-BH105	32	D	8.60				2.7		Grey mottled greenish brown silty SAND
R22-BH106A	7	D	2.45	0.60	2200	8.2		2.5	Bluish grey silty CLAY
R22-BH106A	9	D	3.00				1.5		Grey silty CLAY
R22-BH106A	16	B	4.60	0.02	45	8.3	0.4	0.02	Bluish grey silty CLAY with rare shell fragments
R22-BH203	11	D	3.00	0.03	25	8.4		<0.01	Orangish brown mottled greyish brown very sandy clayey SILT
R22-BH203	24	D	7.00	0.79	2500	8.3		1.1	Grey clayey SILT with rare shell fragments
R22-BH204	9	D	2.55	0.03	72	8.2		0.02	greenish brown mottled light grey sandy SILT with occasional shell fragments
R22-BH204	16	D	4.45	0.23	970	8.6		0.23	Greenish brown mottled light grey sandy SILT with occasional shell fragments

NOTES:- Chemical tests were undertaken by Derwentside Environmental Testing and Envirolab

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SUMMARY OF CHEMICAL ANALYSES

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R22-BH204	41	D	10.55				2.0		Dark grey gravelly clayey SILT with a low cobble content
R22-BH205	12	D	3.50				0.4		Grey sandy clayey SILT
R22-BH205	36	D	10.00	0.75	2300	7.8		1.1	Grey mottled greenish brown and orange slightly sandy clayey SILT
R22-BH205	54	D	16.00	0.13	110	8.0		0.06	Grey slightly sandy clayey SILT
R22-BH501	9	D	2.45				0.7		Bluish grey silty CLAY
R22-BH501	15	D	4.95				2.4		Bluish grey slightly sandy silty CLAY
R22-BH501	25	D	8.50				0.6		Light bluish grey mottled brownish yellow slightly sandy silty CLAY
R22-BH502	3	D	1.00				1.8		Brownish grey mottled orangish brown and black slightly sandy silty CLAY

NOTES:- Chemical tests were undertaken by Derwentside Environmental Testing and Envirolab

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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	Organic Matter Content (%)	Total Sulphur (%)	Description
R22-BH502	14	D	4.00				2.2		Bluish grey mottled black slightly sandy clayey SILT
R22-BH502	19	D	5.50	0.36	1300	8.6		0.90	Grey slightly sandy clayey SILT
R22-BH502	23	D	6.50				0.4		Grey slightly sandy clayey SILT
R22-BH502	45	D	12.00	0.32	950	7.8		1.1	Grey slightly sandy slightly gravelly clayey SILT
R22-TP101	3	D	0.70	0.04	61	8.6		0.11	Grey mottled orange slightly sandy silty CLAY
R22-TP102	5	D	0.90				0.6		Brownish grey mottled orange slightly sandy slightly gravelly silty CLAY
R22-TP102	9	D	1.10	0.16	640	8.8		0.28	Grey mottled orange slightly sandy silty CLAY
R22-TP103	13	B	2.00	0.21	730	8.3		0.42	Grey mottled dark grey slightly sandy silty CLAY

NOTES:- Chemical tests were undertaken by Derwentside Environmental Testing and Envirolab

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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	Organic Matter Content (%)	Total Sulphur (%)	Description
R22-TP103	14	D	2.50				0.9		Grey mottled dark grey slightly sandy silty CLAY
R22-TP104	11	D	1.50	0.35	1200	8.5		1.4	Dark grey slightly silty CLAY
R22-TP104	14	D	2.00				5.0		Dark grey slightly silty CLAY
R22-TP105	7	D	1.00	0.19	620	8.6		0.13	Grey mottled orange slightly sandy CLAY
R22-TP105	16	D	3.50				0.7		Grey mottled dark grey slightly sandy CLAY
R22-TP106	6	D	0.90				0.8		Grey mottled orange slightly sandy silty CLAY
R22-TP106	14	D	2.50	0.27	820	8.7		0.54	Grey mottled dark grey slightly sandy silty CLAY
R22-TP106	16	D	3.50				20		Dark brown PEAT

NOTES:- Chemical tests were undertaken by Derwentside Environmental Testing and Envirolab

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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	Organic Matter Content (%)	Total Sulphur (%)	Description
R22-TP107	6	D	0.90	2.1	3700	6.6		3.2	Grey mottled orange slightly sandy CLAY
R22-TP107	13	D	1.80				0.6		Dark grey slightly sandy CLAY with rare shell fragments
R22-TP107	17	D	3.50				0.2		Dark grey slightly sandy CLAY with rare shell fragments
R22-TP201	9	D	1.10				0.6		Yellowish brown sandy clayey SILT
R22-TP201	12	D	1.50	0.07	84	8.2		0.05	Greyish brown mottled yellow and orange sandy clayey SILT
R22-TP202	5	D	0.90	0.02	21	8.0		0.02	Orangish brown mottled grey sandy clayey SILT
R22-TP202	7	D	1.10				0.3		Orangish brown mottled grey sandy clayey SILT
R22-TP203	8	D	1.00	0.31	1100	8.2		0.23	Light greyish brown slightly sandy slightly gravelly SILT with a low cobble content

NOTES:- Chemical tests were undertaken by Derwentside Environmental Testing and Envirolab

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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	Organic Matter Content (%)	Total Sulphur (%)	Description
R22-TP204	1	D	0.50	0.05	35	8.2		0.03	Grey mottled orange slightly sandy CLAY
R22-TP204	15	D	2.40				3.7		Grey mottled dark blue slightly sandy CLAY
R22-TP205	8	D	1.00	0.04	53	8.5		0.02	Grey mottled orange slightly sandy silty CLAY
R22-TP205	13	D	2.00				0.5		Grey mottled dark grey slightly sandy silty CLAY
R22-TP405	3	D	1.00	0.08	300	8.4		0.06	Grey mottled orange slightly gravelly CLAY
R22-TP405	10	D	3.50				7.5		Grey mottled dark grey slightly gravelly CLAY
R22-TP501	1	D	0.50				0.4		Dark brown slightly sandy slightly gravelly clayey SILT with a low cobble content
R22-TP501	4	D	1.00	0.10	320	8.7		0.17	Light brown sandy clayey SILT

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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	Organic Matter Content (%)	Total Sulphur (%)	Description
R22-TP502	4	D	1.00	0.02	31	8.1		0.02	Light brown slightly sandy slightly gravelly SILT with a low cobble content
R22-TP503A	2	B	0.50	0.26	640	8.7		0.36	Grey mottled orangish brown slightly gravelly CLAY with rare shell fragments
R22-TP504	7	B	2.00	0.35	730	8.1	1.1	0.42	Grey mottled dark grey slightly sandy CLAY with rare shell fragments
R22-TP505	6	D	1.50	0.11	440	8.1		0.04	Grey mottled orange slightly sandy CLAY
R22-TP505	8	D	2.50				2.3		Grey slightly sandy CLAY
R22-TP506	6	D	1.50	0.10	380	8.4		0.04	Grey mottled orange slightly sandy silty CLAY
R22-TP506	7	D	2.00				1.5		Grey mottled dark grey slightly sandy silty CLAY
R22-TP508	6	D	1.50	0.46	1600	8.3		1.8	Light brown mottled light bluish grey slightly gravelly silty CLAY with occasional shell frgaments

NOTES:- Chemical tests were undertaken by Derwentside Environmental Testing and Envirolab

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Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Acid Soluble Sulphate (% SO_4)	Aqueous Extract Sulphate (mg/l SO_4)	pH	Organic Matter Content (%)	Total Sulphur (%)	Description
R22-TP508	10	D	3.50				1.2		Light bluish grey mottled black silty CLAY
R22-TP510	8	D	2.00				0.9		Grey mottled dark grey slightly sandy silty CLAY with rare shell fragments
R22-TP510	11	D	3.50	0.21	760	7.8	2.5	0.18	Grey slightly sandy clayey SILT
RedP-BH-6	8	D	2.45				10.1		Black slightly sandy slightly gravelly CLAY
RedP-BH-6	202	C	10.00		30	9.0			Yellowish white CHALK
RedP-BH-7	5	B	1.10				1.2		Dark grey slightly gravelly slightly sandy clayey PEAT
RedP-BH-7	203	C	16.00		950	7.7			Yellowish white CHALK
RedP-BH-7	212	C	29.40		46	8.97			Black FLINT

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RedP-BH-8	201	C	9.50		46	8.8			Dark grey silty fine SAND
RedP-BH-8	206	C	18.00		29	8.8			Yellowish white CHALK
RedP-BH-9	8	D	2.00				2.2		Black CLAY with peat
RedP-BH-9	16	D	4.00				2.1		Dark grey silty CLAY with peat
RedP-BH-9	18	DSPT	4.00				0.5		Dark grey mottled orangish brown and grey slightly gravelly slightly sandy CLAY
RedP-BH-9	204	C	12.70		41	8.9			Yellowish white CHALK
RedP-BH-9	209	C	25.00		39	8.8			Off-white mottled light grey CHALK
RedP-BH-10	40	D	10.45				0.5		Brownish grey mottled brown silty CLAY

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Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Acid Soluble Sulphate (% SO_4)	Aqueous Extract Sulphate (mg/l SO_4)	pH	Organic Matter Content (%)	Total Sulphur (%)	Description
RedP-BH-10	48	D	12.45				0.8		Brownish grey mottled brown silty CLAY
RedP-BH-10	209	C	33.80		36	8.8			Yellowish white CHALK
RedP-BH-10	213	C	38.40		40	9.1			Off white CHALK
RedP-BH-11	35	D	9.50	0.54	1400	7.6		1.2	Dark brown slightly gravelly slightly sandy clayey SILT
RedP-BH-11	63	D	16.50	0.14	260	8.3		0.06	Grey slightly sandy clayey SILT

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