

The Lake Lothing (Lowestoft) Third Crossing Order 201[*]



Lake Lothing
**THIRD
CROSSING**

Document 6.3: Environmental Statement Volume 3 Appendices

Appendix 12A Part 1 of 2

Environmental Desk Study Report



Lake Lothing

**THIRD
CROSSING**

Suffolk County Council

LAKE LOTHING CROSSING, LOWESTOFT

Environmental Desk Study Report





Suffolk County **Council**

LAKE LOTHING CROSSING, LOWESTOFT

Environmental Desk Study Report

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1 INTRODUCTION

1.1 TERMS OF REFERENCE

WSP were commissioned by Suffolk County Council ("the Applicant") to prepare an Environmental Desk Study in relation to contaminated land risk for the Scheme. This report assesses the potential environmental risks, constraints and liabilities associated with the proposed development.

This report supersedes the Mouchel Environmental Desk Study Reports issued in January 2017 (version A), June 2017 (version B) and November 2017 (version C). The following changes are incorporated:-

- information received from Suffolk Coastal and Waveney District Councils Environmental Protection Officer in October 2017;
- updates to the boundary of the study area to match the Scheme Order limits (refer to Drawing 1069948-WSP-ENG-LL_C19-SK-LE-0027 - Order Limit Regulation 5(2)(a) Figure 1.2);

1.2 SCHEME DESCRIPTION

The scheme involves the construction, operation and maintenance of a new bascule bridge highway crossing linking the areas north and south of Lake Lothing in Lowestoft, hereafter referred to as the Lake Lothing Third Crossing ("the Scheme").

The Scheme would provide a new single-carriageway road crossing of Lake Lothing, consisting of a multi-span bridge with associated approach roads, and would comprise:

- An opening bascule bridge over the Port of Lowestoft, in Lake Lothing;
- On the north side of Lake Lothing, a bridge over Network Rail's East Suffolk Line, and a reinforced earth embankment joining that bridge, via a new roundabout junction, to the C970 Peto Way, between Rotterdam Road and Barnards Way; and
- On the south side of Lake Lothing, a bridge over the northern end of Riverside Road including the existing access to commercial property (Nexen Lift Trucks) and a reinforced earth embankment (following the alignment of Riverside Road) joining this bridge to a new roundabout junction with the B1531 Waveney Drive.

The Scheme would be approximately 1 kilometre long and would be able to accommodate all types of vehicular traffic as well as non-motorised users, such as cyclists and pedestrians.

The opening bascule bridge design would allow large vessels to continue to use the Port of Lowestoft.

A new control tower building would be located immediately to the south of Lake Lothing, on the west side of the new highway crossing, to facilitate the operation of the opening section of the new bascule bridge.

The Scheme would also entail:-

- The following changes to the existing highway network:
 - The closure of Durban Road to vehicular traffic at its junction with Waveney Drive;
 - The closure of Canning Road at its junction with Riverside Road, and the construction of a replacement road between Riverside Road and Canning Road to the west of the Registry Office; and
 - A new access road from Waveney Drive west of Riverside Road, to provide access to property at Riverside Business Park;
 - Improvements to Kimberley Road at its junction with Kirkley Run; and
 - Part-signalisation of the junction of the B1531 Victoria Road / B1531 Waveney Drive with Kirkley Run.
- The provision of a pontoon for use by recreational vessels, located to the east of the new highway crossing, within the Inner Harbour of Lake Lothing; and
- Works to facilitate the construction, operation and maintenance of the Scheme, including the installation of road drainage systems; landscaping and lighting; accommodation works for accesses to premises; the diversion and installation of utility services; and temporary construction sites and access routes.

The works required for the delivery of the Scheme are set out in Schedule 1 to the draft DCO (application document reference 3.1), where they are referred to as "the authorised development", with their key component parts being allocated reference numbers, which correspond to the layout of the numbered works

as shown on the Works Plans (application document reference 2.4). The General Arrangement Plans (application document reference 2.2) illustrate the key features of the Scheme.

Figure 1 below provides a diagrammatic representation of the Scheme:

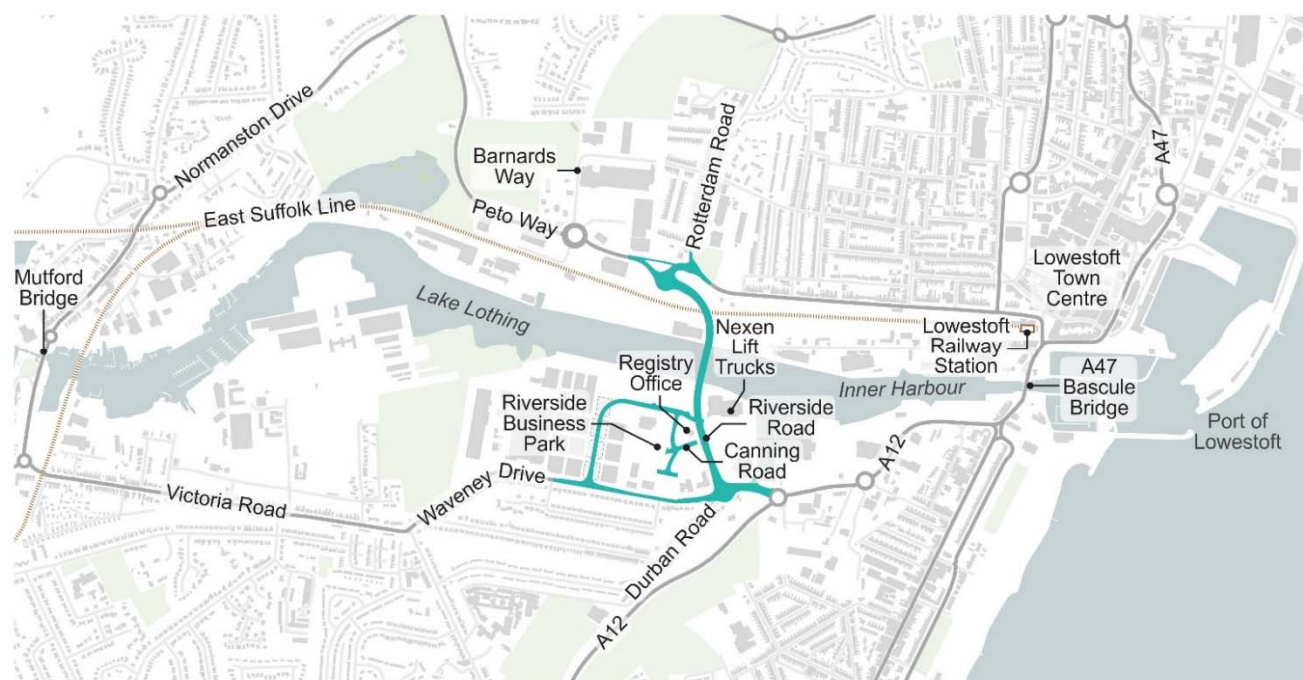


Figure 1 - Location of the Scheme in Lowestoft

1.3 CONTAMINATED LAND LEGISLATIVE CONTEXT

As set out in paragraph 5.168 of the National Networks National Policy Statement (NNNPS), project promoters are required to ensure that they have considered the risk posed by land contamination and how it is proposed to address this risk.

The presence of contaminants which may pose a risk to human health or the environment is a material planning consideration. For planning it should be considered whether the site is suitable for its new use, and the responsibility for securing a safe development (including cumulative effects of pollution on health, and the potential sensitivity of the proposed development to adverse effects from pollution), rests with the developer and/or landowner. Planning is concerned with the site's proposed use not its current use.

Section 57 of the Environment Act 1995, adds Part 2A (ss.78A-18YC) to the Environmental Protection Act 1990 and contains the legislative framework for identifying and dealing with contaminated land. Where development is undertaken on land which may be affected by contamination, the National Planning Policy Framework, paragraphs 120 to 122 considers pollution and remediation.

1.4 OBJECTIVES AND SCOPE

The objective of this study is to assess the potential environmental risks, constraints and liabilities associated with the study area in respect of potential redevelopment.

The scope of work comprises:-

- A site walkover (including photographs) undertaken by a suitably qualified Geo-Environmental Scientist,
- An interpretation of the information obtained from a Groundsure Report,
- A preliminary assessment of potential geo-environmental risks following the methodology of CLR11,
- Recommendations for further investigation/actions if required.

2 DESK STUDY RESEARCH

2.1 SITE LOCATION

Drawing 1069948-WSP-ENG-LL_C19-SK-LE-0001 - Site Location Plan Regulation 5(2)(a) Figure 1.1 presents the Site Location Plan.

The study area is defined as the Order limits as indicated on Drawing 1069948-WSP-ENG-LL_C19-SK-LE-0027 - Order Limit Regulation 5(2)(a) Figure 1.2.

2.2 SITE SETTING AND DESCRIPTION

A walkover survey was undertaken by a qualified WSP Geo-Environmental Engineer on 21st September 2016. Photographs and a photograph location plan are presented in Annex A.

Access to much of the northern half of the study area between Denmark Road and the north quay was not obtained at the time of the walkover and therefore information was obtained by viewing this parcel of land from Denmark Road and from Commercial Road.

The land within the study area is of mixed use which is summarised below:-

The southern part of the study area predominantly comprises highway including Waveney Drive, Riverside Road and Canning Road, areas of derelict / vacant land, a residential property and a small beauty clinic commercial property. In addition, the study area encroaches onto the edges of commercial properties including a Motorlings car dealership, Nexen, Essex and Suffolk Water Ltd, a nursery and Waveney District Council offices.

The northern part of the study area comprises highway including Denmark Road; commercial properties including the corner of land belonging to a Wickes DIY store, railway land including track and sidings; hard standing including quayside and areas of derelict land.

2.3 ADJACENT LAND USE

Table 1 below summarises the adjacent land uses.

Table 1: Summary of Adjacent Land uses

Direction	Surrounding Land Use
North	Residential properties, small commercial / industrial park and a small play park
East	Commercial park, industrial area associated with the port / quayside, railway lines and residential properties.
South	Residential properties and a small commercial park.
West	Derelict land, port / quayside industrial land and commercial properties.

2.4 ENVIRONMENTAL DESIGNATIONS AND ECOLOGY

No invasive weeds were confirmed during the walkover, carried out for the purposes of this study, although due to access restrictions at some locations, not all of the study area was accessible to confirm this.

The study area is located entirely within a groundwater nitrate vulnerable zone and is immediately adjacent to a surface water nitrate vulnerable zone. Three other environmentally sensitive areas are located within 2km of the study area:-

- Outer Thames Estuary, approximately 440m to the south east of the study area,
- Leathes Ham local nature reserve, approximately 100m to the west of the study area,
- The Broads, approximately 1950m to the south west (Environmentally Sensitive Area) of the study area and approximately 1200m to the west (National Park) of the study area.

2.5 SITE HISTORY

The history of the study area has been assessed from a review of historical Ordnance Survey maps from the GroundSure report presented in Annex B. A summary is presented below. A more detailed site history, including the surrounding land is presented in Annex C.

NORTHERN STUDY AREA

The earliest map provided by GroundSure dated 1883 indicates the study area to be predominantly agricultural land with some small buildings and a railway line adjacent to the waterfront area.

Some industrial development occurred in the early 1900's including a railway and associated land through the centre of the study area and timber yard at the western end. However, no significant changes occurred until the 1970's when most of the railways had been dismantled and by 1992, a new road (Peto Way) had been constructed.

SOUTHERN STUDY AREA

The earliest map provided by GroundSure dated 1883 indicates the study area to be predominantly agricultural land with marsh and mudflats. By the early 1900's, many of the mudflats had been removed and formal waterfront wharfs appear to form the waterside area. Some industry is present including unlabelled works and a gasometer marked in the south east corner. By 1926 the gasometer is no longer marked and industrial development including a railway spur line had occurred across a large part of the study area. The study area remained largely industrial, including canning and processing works, ice works and boatbuilding until circa 2002 when the access roads for Riverside Business Park were constructed.

2.6 GEOLOGY

DRIFT

The British Geological Survey website (www.bgs.ac.uk) indicates the area occupied by Lake Lothing is underlain by Tidal River Or Creek Deposits of clay and silt. Immediately adjacent to the Lake are Alluvium comprising clay, silt, sand and gravel. Beyond this towards Denmark Road in the north and Waveney Drive in the south the study area is underlain by sand of the Happisburgh Glacigenic Formation.

SOLID

The British Geological Survey website (www.bgs.ac.uk) indicates the bedrock geology is composed of sand of the Crag Group.

No geological faults are recorded by GroundSure within 500m of the study area.

GROUND WORKINGS

GroundSure records a number of historical ground workings within the Study area; ponds, unspecified pit, lake, unspecified wharf, quay and a refuse heap. Within approximately 100m of the Study area, a number of historical ground workings are also recorded; unspecified wharf, pond, quay, cuttings, sand pit, refuse heap, unspecified heap and unspecified pit.

BGS BOREHOLES

Historical borehole / trial pit records are available from the British Geological Survey (BGS) website <http://www.bgs.ac.uk/data/boreholescans/home.html>. A large number are recorded within the Study area including and within Lake Lothing. A summary of the recorded ground conditions is presented in **Table 2** below.

Table 2: Summary of Available BGS Borehole Records

Location	Encountered Ground Conditions	Potential Contamination Identified
Northern Study Area	Made ground – Deposits up to 5m thick generally comprising concretes and tarmacs overlying black ash and clinker, slag, brick fragments, railway fill and sleepers with sandy and silty clays. Superficial – Deposits up to 23m thick generally comprising sandy and silty clays, silty sands with peat and chalk and flint gravels. Bedrock – Crag Formation encountered at a minimum depth of -18m aOD. Comprises silty sands with occasional shell fragments.	TM59SW136 - Oily odours 1.25-1.5m TM59SW127 – Sulphurous odour 1.6-2.5m TM59SW123 – Oily contamination noted 3-4m
Within Lake Lothing	Made ground – None recorded Superficial – Deposits up to 24.1m thick generally comprising black silts, silty sands and silty clays. There are occasional flint gravel and shell fragments throughout. Bedrock – Crag Formation encountered at a minimum depth of -20.05m aOD. Predominantly consisting of silty sands with shell fragments and occasional silty clay.	None recorded
Southern Study Area	Made ground – Deposits up to 4.35m thick generally comprising reinforced concrete (predominant surface material) overlying black and brown clays and sands. Brick and concrete rubbles, steel, ash and timber are all recorded. Superficial – Deposits recorded up to 20m thick comprising alluvial and glaciofluvial sands, silts, clays and gravels. With some shallow peat deposits present further south. Bedrock – Crag Formation encountered from -20.09m aOD. Consisting of silty sands with clay pockets and shell fragments.	TM59SW103 – oil odour 1.5-3.2m TM59SW104 – oil odour 1.5-4.35m TM59SW121 – ammoniacal odour 0.5-1.7m

2.7 HYDROGEOLOGY

The superficial deposits underlying the study area is classified as a Secondary (A) Aquifer with permeable layers. These are defined by the Environment Agency as permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers.

The underlying bedrock is classified as a Principal Aquifer. These are defined by the Environment Agency as layers of rock or drift deposits that have high intergranular and/or fracture permeability - meaning they usually provide a high level of water storage. They may support water supply and/or river base flow on a strategic scale.

The GroundSure report indicates the study area is not within a Source Protection Zone.

There are no groundwater abstraction points within approximately 500m of the Study area. One is present approximately 815m to the south west of the study area but this is considered to be far enough away that it is unlikely to be impacted by the Scheme.

2.8 HYDROLOGY

The Lake Lothing watercourse is recorded as a Primary River and there is a culverted watercourse (un-named in the GroundSure report but understood to be Kirkley Stream) beneath the south east part of the study area.

No surface water or potable water abstractions are present within 2km of the study area.

Much of the study area is within Zone 3 and Zone 2 floodplain. The only sections not within floodplain are at the south east, south west, north east and north west corners of the study area

Risk of flooding from the rivers and the sea varies from high in the centre of the study area to medium and low towards the edges of the study area. The only sections of the study area not at risk are in the south east, south west, north east and north west corners.

2.9 WASTE MANAGEMENT FACILITIES

No active Environment Agency landfill sites are present within 1km of the study area.

One historic Environment Agency landfill site is present in the south east corner of the study area. The address is provided as South Inner Harbour, reference WAV35, OFSW36. No other information is provided by GroundSure.

One historic Environment Agency landfill site is present approximately 500m to the north east of the study area. The address is provided as Love Road, reference OFSW11, WAV10, 3500/5163. No other information is provided by GroundSure.

No BGS/DoE non-operational landfill sites are present within 500m of the study area.

Two Local Authority recorded landfill sites are present within the study area. No others are present within 500m of the Study area. Both are recorded on 1963 mapping as refuse tips.

No operational or non-operational waste treatment, transfer or disposal sites are present within 500m of the study area.

No Environment Agency licensed waste sites are present within the Study area and only one is recorded within 500m of the Study area; Brooke Marina, Heath Road, NR33 9LZ, approximately 500m to the west. Recorded as a metal recycling site operated by Mitchell Demolition Ltd and East Point Metal Trading Ltd. Various waste management licence references are provided – 401425, MIT037, EA/EPR/BB3601TF/V002.

2.10 ENVIRONMENTAL PERMITS, INCIDENTS AND REGISTERS

Records of Environmental Permits or registers within the study area and within 250m of the study area are detailed below.

HISTORIC IPC AUTHORISATIONS

- Timber process approximately 250m to the west. GroundSure records the status as 'referred to LA'.

LIST 1 DANGEROUS SUBSTANCES INVENTORY SITES

- M.P.(eastern) Limited approximately 215m to the north. Authorised substance is recorded as mercury (other). Status is recorded as 'active'.

LIST 2 DANGEROUS SUBSTANCES INVENTORY SITES

- Within the study area – M.R.King and Sons. Authorised substance is recorded as pH, but the status is recorded as 'not active'.
- Ev Head approximately 225m to the north. Authorised substance is recorded as pH, but the status is recorded as 'not active'.

PART A(2) AND PART B ACTIVITIES AND ENFORCEMENTS

- Asda Stores Limited approximately 80m to the north. Part B permit relating to the unloading and storage of petrol at service station.
- Dudman (Lowestoft) Ltd approximately 180m to the south east. Part B permit relating to bulk cement.
- Aura Graphics Limited approximately 225m to the south. Part B process for screen printing, coating and SED.
- Fashion Clean approximately 250m to the south east. Part B process for dry cleaning.

None of the above are recorded as having any enforcements.

In addition to the 4 active permits above, there are a further 10 records of historic permits within 250m. None are recorded as having had any enforcements. They relate to; unloading and storage of petrol; cement/lime/mortar; coating and enamelling; timber impregnation.

LICENSED DISCHARGE CONSENTS

- Within the study area – St Peters St and Rotterdam Road, CSO. Sewer Storm Overflow. Permit ASETS16977. Status is recorded as 'New consent by application'. Receiving water is not recorded. GroundSure records this same permit 6 times.
- Norwich Road CSO's (#1 and #2) approximately 90m to the west. Permit ASETS16992 for sewer storm overflow.
- Shell UK Ltd approximately 160m to the north east. Permit NPSWQD000453 for sewage discharge of final/treated effluent.
- Belvedere Road overflow approximately 185m to the south. Permit ASETS16995 for sewer storm overflow.

Four records are recorded as 'Pre-NRA legislation where issue date <01-Sept 89'. These are detailed below;

- Within the study area – Riverside Business Park. Permit PR4TS605 for discharge of process effluent.
- Norwich Road /Denmark Road approximately 18m to the west. Permit AW4TS1413 for discharge of surface water.
- Rotterdam and Gorleston Roads CSOS approximately 20m to the south east. Permit AW4NF328X for sewer storm overflow.
- British Parts Building, Norfolk Quay Road approximately 130m to the south. Permit PR4TS1013X for sewage discharge of final/treated effluent.

A further 5 records are for revoked permits and have therefore not be detailed here.

PLANNING HAZARDOUS SUBSTANCE CONSENTS AND ENFORCEMENTS

Two records of hazardous substance consents are recorded by GroundSure within 250m of the study area, both for storage of ammonium nitrate at North Quay Cargo Terminal but both applications were refused.

NATIONAL INCIDENTS RECORDING SYSTEM, LIST 2

Thirteen records of incidents are recorded by GroundSure within 250m of the study area generally relating to; construction and demolition wastes; tyres; vehicles and parts; other specific waste material; final effluent; sewage; smoke; firefighting run-off.

2.11 NATURAL GROUND HAZARDS

Table 3 below summarises the natural ground subsidence findings presented in the GroundSure report.

Table 3: Summary of Natural Ground Hazards

Natural Hazard	Hazard Potential
Shrink Swell Clay	Varies from negligible to low
Landslides	Very low
Dissolution of soluble rocks	Negligible
Compressible ground	Varies from Moderate to negligible
Collapsible deposits	Varies from very low to negligible
Running sand	Varies from moderate to very low

2.12 MINING, EXTRACTION AND NATURAL CAVITIES

The study area is not in an area likely to be affected by historical mining, coal mining, non-coal mining, natural cavities, brine extraction, gypsum extraction, tin mining or clay mining.

2.13 RADON

The GroundSure report indicates the study area is not in a radon affected area and any new buildings if required as part of the proposed development do not require radon protection measures.

2.14 PART 2A DETERMINATION

GroundSure does not record any locations within the study area as being determined as contaminated land.

Liaison with Suffolk Coastal and Waveney District Council Environmental Protection Officer was undertaken in October 2017 and it was confirmed that no Part 2A sites existed within the study area.

A landfill on the junction of Waveney Drive and Tom Crisp Way (A12) was known and was investigated in 2008. Further details are provided in 2.16 below and a copy of the report is presented in Annex D.

2.15 EXISTING REPORTS – CANNING ROAD COUNCIL OFFICES

Waveney District Council have indicated that ground conditions information for the Council Offices site on Canning Road is available on the East Suffolk Council planning website (www.eastsuffolk.gov.uk). Four reports have been identified under three different planning permissions (DC/13/0743/RG3; DC/13/3017/DRC; DC/15/1654/DRC), all relating to the construction of the Council Offices:-

- Environmental Review and Desk Study Report, reference 13578DS prepared by RSA Geotechnics Ltd dated June 2013;
- Interpretative Report, Ground Investigation Report Number 13578GI prepared by RSA Geotechnical Ltd dated July 2013;
- Phase III Remediation Method Statement, reference NG13/015/RMC prepared by JPC Environmental Services dated October 2013.
- Phase IV Environmental Remediation and Validation Report, reference NG13/015/RMC/v1.1, prepared by JPC Environmental Services dated April 2015.

These four reports are briefly summarised below. It is understood from Waveney District Council that the small site adjacent to the Council offices (currently occupied by the Register Office, car park and vacant land) was historically part of the same industrial site on which the Council offices were constructed. However, the remedial works undertaken during construction of the Council offices were not undertaken on the Register Office site. As such, the ground conditions are likely to be similar to the Council offices site prior to remediation being carried out. Any ground investigation or construction works carried out on the Council offices site must take into account the remedial measures in place to ensure their continuing integrity.

ENVIRONMENTAL REVIEW AND DESK STUDY REPORT, REFERENCE 13578DS PREPARED BY RSA GEOTECHNICS LTD DATED JUNE 2013.

Terms of Reference

The Introduction section indicates that RAS Geotechnics Ltd (RSA) were employed by JPC Environmental Services Ltd to prepare a desk study for a proposed office redevelopment.

Site History

The site is reported to have been undeveloped in the 1880's but by 1905 houses are present in the north, sand pits in the south and west and an unlabelled building in the east. By the 1950's the sand pits were marked as refuse heaps and the building in the east had been demolished. Through the late 1900's, the refuse heap was no longer marked and various buildings were constructed including a depot by 1992 and part of the site was occupied by a coach company.

Previous Investigations

Two previous phases of ground investigations are noted by RSA – one in 2006 by WES and a second in 2007 by White Young Green Environmental Ltd (WYG).

The WES investigation was undertaken while part of the site was an operational coach company. RSA summarised the findings and indicate the scope of works comprised six window samples, two dynamic probes and two gas monitoring wells. Above ground and below ground storage tanks are reported as well as a pump island and wash down areas.

Made ground was recorded to at least 1.8m depth and underlain by natural sand deposits. Chemical testing was undertaken but none of the results exceeded the commercial / industrial screening values used at the time.

The later WYG investigation comprised eleven cable percussion boreholes, eight window samples and eight machine excavated trial pits. Made ground to at least 4m depth was reported. Chemical testing reported elevated benzo(a)pyrene, lead, benzo(b)fluoranthene, total petroleum hydrocarbons, copper and zinc. Asbestos was reported in samples from outside of the RSA study area. Elevated ground gas to Characteristic Situation 2 was also reported.

Conclusions and recommendations

RSA Geotechnics Ltd conclude that potential contaminants are likely to be present and elevated concentrations were identified by previous investigations.

A targeted ground investigation was recommended to assess previously identified contamination sources.

INTERPRETATIVE REPORT, GROUND INVESTIGATION REPORT NUMBER 13578GI PREPARED BY RSA GEOTECHNICAL LTD DATED JULY 2013.

Terms of Reference

The Introduction Section indicates that RSA were employed by JPC Environmental Services Ltd to undertake a ground investigation at the site following completion of the above desk study report.

Ground Investigation Scope

The scope of works comprised fifteen window samples, twelve dynamic probes, three cable percussion boreholes and three gas / groundwater monitoring wells.

Ground Conditions

RSA report that made ground up to 4.3m thick was recorded as brown to dark brown slightly silty medium to coarse sand and sandy clay with some gravel sized concrete and yellow and red brick fragments and occasional gravel sized fragments of clinker, slag, metal, roots and rootlets. Suspected cement bound asbestos fragments were recorded in one location. Natural soils were recorded as stiff brown silty clay and loose to medium dense light orange brown to grey brown slightly silty fine to coarse sand.

Groundwater was observed between 2.3m and 3.9m below ground level.

Risk Assessment

RSA identified the following determinands that could pose a potential risk to human health and will require remedial measures to mitigate:-

- A low risk from a hotspot of lead,
- A low risk from polycyclic aromatic hydrocarbons, particularly benzo(a)pyrene,
- A low risk from total petroleum hydrocarbons,
- A moderate risk of asbestos containing materials.

Some exceedences of groundwater screening values were recorded but RSA conclude that a negligible risk to controlled waters exists.

A negligible risk from ground gas was also identified.

Remediation Strategy

The following remediation strategy was proposed by RSA Geotechnical Ltd:-

- Clean cover system comprising a minimum of 300mm thickness in all landscaping areas,
- Removal of all underground fuel storage tanks and validation of the excavations. Placement of clean inert fill in tank excavations,
- Removal of asbestos containing materials (ACM's) as and when encountered.

PHASE III REMEDIATION METHOD STATEMENT, REFERENCE NG13/015/RMC PREPARED BY JPC ENVIRONMENTAL SERVICES DATED OCTOBER 2013.

Terms of Reference

This report was prepared by JPC Environmental Services Ltd (JPC) for Concertus Ltd on behalf of The Applicant and Waveney District Council.

Background Information

This section summarises the previous reports and is therefore not summarised again here.

Remedial Options Appraisal

This Section details the options for treatment of each of the identified risks and WSP have summarised the main points only.

- Source Removal/treatment in the area of the former tank farm and pump island - extraction of all buried structures that may be contaminated with oil. Affected soils will be screened and aerated with further treatment as required. Post-treatment materials to be removed from site or considered for re-use. Asbestos may also be present within these materials and contaminated material to be removed by hand.
- Cover system - A simple plan of encapsulating the onsite contamination below the proposed building and hard standing car park footprint. Areas beyond the footprint will require a 600mm soft landscaping cap over a geotextile layer.
- Services - Upgrades to pipes may be required dependent upon TPH concentrations around the proposed development. Protecta-line barrier pipe is suggested.
- Ground Gas – No gas protection measures deemed necessary following a study over a six week period.
- Imported topsoil – Minimising the risk to end users requires a quality topsoil material. This should be obtained from a reputable vendor accompanied by relevant documentation. Supplied material should be in accordance with BS3882:2007 with appropriate testing prior to use.
- Waste disposal - The intrusive investigation suggests that the made ground should be classed as non-hazardous. Isolated pockets of material containing elevated levels of hydrocarbons or asbestos containing materials (ACM) will cause waste to be classified as hazardous. Volumes can be minimised using an appropriate discovery strategy, separating potentially contaminated materials for treatment.

PHASE IV ENVIRONMENTAL REMEDIATION AND VALIDATION REPORT, REFERENCE NG13/015/RMC/V1.1, PREPARED BY JPC ENVIRONMENTAL SERVICES DATED APRIL 2015.

Terms of Reference

JPC were contracted by Kier Construction Ltd to document and validate the remedial works and the final site condition.

Brief / Background and Methodology

This Section details the background and methodologies that have already been summarised by WSP above and have therefore not been summarised again here.

Unforeseen Items / Incidents of Contamination

A pocket of amosite material was identified and comprised rope, gaskets, pipe lagging and 'flock'. 'Dig and dump' was determined as the most appropriate method of dealing with this contamination. Galvanised tanks containing asbestos were encountered and removed accordingly under a similar strategy.

Material Treated / Reused / Removed from Site

Approximately 3,478 tonnes of asbestos impacted waste was reported as being removed from site.

1,100m³ of soil was removed from site to construct the piling mat and approximately 220m³ of surplus soil was also removed from site.

5,000m³ of made ground was excavated, screened and re-processed for use as 6F1 and 6F2 capping material.

1,000m³ of natural sand was excavated and re-used to backfill excavations and used as oversite for the car park.

1,156 tonnes of topsoil was imported for the landscaping areas.

Final Site Conditions

JPC make the following conclusions:-

Remediation was completed to the pre-agreed standard. The discovery and disposal of unforeseen asbestos was dealt with appropriately. For future deep excavations in areas where no remediation took place, contaminant risks are considered to be HIGH. No significant contaminant concentrations were present in the imported topsoil resulting in negligible risks to future site users under currently proposed land uses.

2.16 SUFFOLK COASTAL AND WAVENEY DISTRICT COUNCILS REPORT

Discussion was undertaken with the Environmental Protection Officer at Suffolk Coastal and Waveney District Councils in October 2017 regarding their knowledge of the site. It was confirmed that an assessment of the landfill in the south of the site at the junction of Waveney Drive and Tom Crisp Way (A12) was undertaken in 2008 by WAS Ltd. A copy of the report is presented in Annex D and indicates the following:

- Six soil sampling points and three gas spike probe points were assessed;
- Petroleum hydrocarbons recorded in soil up to 480mg/kg, ;
- Two rounds of gas monitoring recorded maximum methane of 6.9% and carbon dioxide of 0.4%.

2.17 EXISTING REPORTS – OTHER SITES

A further four planning applications have been identified by The Applicant as being of potential interest to the study area. Information is available on the Waveney District Council planning portal and is summarised below.

APPLICATION 08/046

Application for landscaping and remodelling of land adjacent to Riverside Road. The site area covers the vacant land to the west of Riverside Road and to the north of Waveney Drive up to Lake Lothing, including the land currently occupied by the Waveney District Council Offices. No documents or reports specifically relating to contaminated land or ground conditions are available on the Waveney District Council planning portal but contaminated land is mentioned in two pieces of correspondence but no detail is discussed. The application is recorded as 'withdrawn'.

APPLICATION 11/1224

Application for construction of a non-food retail warehouse development and associated car parking and access arrangements on the former coal depot site on Denmark Road to the north of Lake Lothing. A desk study was prepared by LK Consult Ltd and is summarised below. No other documents related to contaminated land were available on the planning portal. The application is recorded as 'refused'.

LK Consult Ltd Desk Study – reference CL-602-1375-01 dated November 2011.

LK Consult Ltd were commissioned by CA Planning on behalf of Lausanne Investments Ltd to prepare a Preliminary Risk Assessment to support a future planning application.

The site history Section indicates the site was occupied by a number of historical uses including; hotel, orchard, un-named building, railway sidings and cutting, depot, garage (later labelled as a works, then as a tank) and a depot.

LK Consult Ltd conclude that potential contaminants may be present from the historical site uses and could include heavy metals, polyaromatic hydrocarbons, glycols, asbestos and petroleum hydrocarbons. Hazardous and ground gases are also identified as potentially present.

Recommendations are made for an intrusive ground investigation which should include soil sampling for both chemical and geotechnical testing.

No indication is given as to whether a ground investigation was undertaken.

APPLICATION 12/1391

Application by Northumbrian Water for development of commercial offices and car parking. The site area is to the west of Riverside Road and is currently occupied by the development relevant to this planning application.

Four reports have been identified under the planning application and relate to investigation of the site and discharge of the planning conditions:-

- Factual Report, reference C12677 prepared by Ground Engineering dated May 2012;
- Geotechnical and Geoenvironmental Report reference 41519561Geo prepared by MWH Ltd dated July 2012;
- Letter report, reference GTS-13-339_01 prepared by Ground Technology Services dated 4th December 2013.
- Letter report, reference GTS-13-339_02 prepared by Ground Technology Services dated 24th January 2014.

These four report are briefly summarised below. It is considered unlikely that any works associated with the proposed third crossing will significantly interact with land within the Northumbrian Water site boundary. However, given the proximity it is considered prudent to review the available information.

Factual Report, reference C12677 prepared by Ground Engineering dated May 2012.

Ground Engineering undertook the ground investigation for MWH Ltd. The site works consisted of three cable percussion boreholes (BH1-BH3) drilled to between 6m and 12m depth and fifteen machine excavated trial pits (TP1 – TP15) excavated to between 1.5m and 3.5m depth. Sampling included soil and water samples and in-situ testing included falling head permeability tests and landfill gas monitoring.

Geotechnical and Geoenvironmental Report reference 41519561Geo prepared by MWH Ltd dated July 2012.

MWH prepared a desk study and ground investigation report for Northumbrian Water (trading as Essex and Suffolk Water). The site was historically occupied by the Ragland fish curing and canning works.

Made ground was recorded during the works between 0.1 and 4.2m thick and generally comprised sand and gravel containing brick, clinker, ash and occasionally asphalt. The underlying natural strata comprised alluvial clay and Happisburgh Sand.

A Tier 1 risk assessment was carried out for both human health and controlled waters and did not identify any exceedances. Gas monitoring did not identify any elevated methane or carbon dioxide concentrations.

For waste disposal purposes, no hazardous properties were identified and MWH report that excavated soils were likely to be classed as inert for disposal purposes.

Letter report, reference GTS-13-339_01 prepared by Ground Technology Services dated 4th December 2013.

Ground Technology Services (GTS) were instructed to observe and report on a remediation excavation. Hydrocarbon contamination was previously identified during the construction works and removed but Waveney District Council have subsequently instructed the Construction Contractor to undertake further remediation / excavation. GTS took validation samples from the excavations and tested for total petroleum hydrocarbons and 3 band total petroleum hydrocarbons. GTS report that the validation results indicate a slight residual amount of hydrocarbon contamination remains but conclude there is unlikely to be any risk to the identified receptors.

Photographs, chemical test results and waste transfer notes are appended to the letter report.

Letter report, reference GTS-13-339_02 prepared by Ground Technology Services dated 24th January 2014.

GTS were instructed by R G Carter Ltd to undertake a risk assessment for an unquantified area of hydrocarbon contamination that may be present below the floor slab of the building. No additional testing was carried out other than that reported in the GTS letter report dated 4th December 2013.

GTS have undertaken their risk assessment using information presented within the MWH report reference 41519561 and conclude that the risks to all receptors is low or negligible.

APPLICATION 13/3482

Application for the demolition of existing industrial units and development of mixed use infrastructure including residential, commercial, a marina, primary school and associated highways and open space.

An Environmental Statement was completed and the application approved but it is located approximately 750m to the west of the Scheme and is therefore considered to be too far away to be of relevance to this environmental desk study.

2.18 BURIED SERVICES

A review of buried services is beyond the scope of this report but it should be noted that a fibre optic cable is located close to the car park to the Council offices and runs towards the Register Office. Any intrusive works undertaken in this area must take precautions to avoid damaging this data cable.

3 PRELIMINARY ASSESSMENT

3.1 GROUND MODEL

The study area is generally level, although there is a small rise towards the north west corner of the study area. Published geological maps indicate glaciofluvio sand underlies the study area. Bedrock geology is also composed of sand.

Historical maps indicate the study area was predominantly agricultural and marshland in the late 1800's prior to development which has comprised some residential properties, but is mostly industrial in nature (some of which could have resulted in potentially significant sources of contamination), including boatbuilding, railways, canning and processing, ice works, unlabelled factories and tanks and a gasworks.

3.2 POTENTIAL CONTAMINANT LINKAGES

POTENTIAL SOURCES

Table 4 below summarises the potential sources of contamination.

Table 4: Summary of Potential Sources of Contamination

Ref	Primary source	Expected distribution	Likely contaminants
S1	Potentially contaminated made ground	Site wide but contamination is anticipated to be discontinuous pockets associated with the differing historic industrial uses.	Heavy metals, asbestos, hydrocarbons, polychlorinated biphenyls, organotins and organochloride pesticides, ammonia, polyaromatic hydrocarbons, volatile organic compounds.
S2	Potentially contaminated silt	Within the waterbody or immediately adjacent to the waterbody. Potential for mobilisation during the construction works or scoured due to changes in water flow post construction.	Heavy metals, organotins, polychlorinated biphenyls, hydrocarbons, organochloride pesticides, ammonia, polyaromatic hydrocarbons, volatile organic compounds.

POTENTIAL RECEPTORS

Table 5 below details the potential receptors.

Table 5: Potential receptors

Ref	Receptor	Description
R1	Site users	Future site users, visitors and maintenance workers.
R2	Adjacent site users	Residents of nearby properties
R3	Controlled waters	Principal and Secondary (A) aquifers and surface watercourses
R4	On site infrastructure	Buildings, foundations and buried services.
R5	Marine Ecology	Vertebrates and invertebrates within Lake Lothing

POTENTIAL PATHWAYS

Table 6 below details the potential pathways.

Table 6: Potential pathways

Ref	Pathway	Description
P1	Direct contact	Soil contaminants could come into direct contact with the site users.
P2	Ingestion	Soil derived contaminants could be ingested.
P3	Inhalation of fugitive dust	During dry dusty conditions, contaminated dust could be inhaled by site users and adjacent site users.
P4	Leaching and vertical / lateral migration of contaminants	Contaminants could leach and migrate into the underlying aquifers and the surface watercourse including as a result of construction activities such as piling.

3.3 RISK EVALUATION

Each potential contaminant linkage is identified in **Table 7** below. This assumes redevelopment with no remediation. An evaluation of the risk that each pollutant linkage poses to the project has been undertaken in general accordance with CIRIA guidance document C552, 2001. Risk classification matrices are presented in Annex E.

The evaluation and the resultant actions identified are based on the available information presented within this report. Once the final design is known it may be necessary to review the risk evaluation.

During development, there is a potential for short term risk to construction workers and the general public. These should be assessed and mitigated by the construction Contractor under the CDM 2015 Regulations.

Table 7: Potential Contaminant Linkages

1. Hazard Identification	2. Hazard Assessment		3. Risk Estimation		4. Risk Evaluation	5. Managing the Risk
Contaminant Source	Receptor	Pathway	Consequence of risk being realised	Probability of risk being realised	Classification	Discussion / Action required
S1 – Potentially contaminated made ground	R1 – Site Users	P1 – Direct Contact	Medium	Unlikely	Low	From the previous uses across the study area, an environmental ground investigation is likely to be required. It may be possible to incorporate this into any geotechnical investigation to assess ground conditions for foundation design, which may reduce costs.
		P2 – Ingestion	Medium	Unlikely	Low	
		P3 – Inhalation of fugitive dust	Medium	Low	Moderate	
		P5 – Migration and inhalation of ground / landfill gas	Minor	Unlikely	Very Low	
	Minor		Unlikely	Very Low		
	R2 – Adjacent Site Users	P3 – Inhalation of fugitive dust	Medium	Low	Moderate	
		R3 – Controlled Waters	P4 – Leaching and vertical / lateral migration of contaminants	Severe	Likely	
	R4 – Site Infrastructure	P1 – Direct Contact	Mild	Likely	Moderate / Low	
	R5 – Marine Ecology		Severe	Likely	High	
			P2 – Ingestion	Severe	Likely	
P4 – Leaching and vertical / lateral migration of contaminants			Severe	Likely	High	
S2 – Potentially contaminated silt	R3 – Controlled Waters	P4 – Leaching and vertical / lateral migration of contaminants	Severe	Likely	High	
	R4 – Site Infrastructure	P1 – Direct Contact	Mild	Low	Low	
			Severe	Likely	High	
	R5 – Marine Ecology	P2 – Ingestion	Severe	Likely	High	
		P4 – Leaching and vertical / lateral migration of contaminants	Severe	Likely	High	

3.4 POTENTIAL WASTE AND SUSTAINABILITY CONSIDERATIONS

The study area is proposed to be redeveloped for a new bridge and associated highway. Detailed designs are not available at this stage, but surplus soils may be generated during the redevelopment works. It is possible that these would need to be disposed of off site to a suitably licensed facility if there cannot be certainty of re-use for them within the development under a Materials Management Plan.

3.5 SAFETY, HEALTH AND ENVIRONMENTAL CONSIDERATIONS

With respect to any proposed ground investigation, the study area should be classified in accordance with the SISG “Guideline Notes for the Safe Investigation by Drilling of Landfills and Contaminated Land”. This document makes recommendations for carrying out site investigation on landfills and potentially contaminated ground. Appendix IV of the guidance sets out a record of assessment for potentially contaminated sites, to be completed as part of the ground investigation contract.

Site personnel involved with any intrusive works, including site investigations or maintenance works should be appropriately qualified with experience of working on potentially contaminated sites. Those working in close proximity to fill materials should wear appropriate personal protective equipment. A reasonable standard of hygiene should be maintained.

4 CONCLUSIONS

4.1 KEY FINDINGS

The desk study has indicated that the study area was generally agricultural land with some marsh/mudflats and minor development until the later 1800's / early 1900's when industrial development started including a railway, boatbuilding, gasworks and factories.

The study area is expected to be underlain by demolition and fill material which could be contaminated. Ground gas / landfill gas may be generated by the fill material and could migrate to impact adjacent site users and infrastructure.

From the information reviewed above, contaminated made ground is expected but is unlikely to be sufficiently contaminated or sufficiently widespread to pose a significant constraint for an infrastructure project such as this.

The potential for environmental liabilities as detailed in Table 7 is considered likely to be in the range **high to low** due to the potential for contaminated made ground and / or silts to be present within the study area derived from a variety of former industrial uses. The high risks are associated with the controlled waters and marine ecology receptors.

5 RECOMMENDATIONS

5.1 GROUND INVESTIGATION

At the time of writing this version of the report (June 2018) a ground investigation has been undertaken to inform the Environmental Statement, the planning process and outline design. This has included sampling and chemical testing of the major strata encountered including the silts within the Lake.

For any future ground investigation works particularly at or close to the Council offices consideration must be given to the likelihood that asbestos may be encountered within made ground.

5.2 URGENT ACTIONS

No urgent actions are considered necessary.

6 REFERENCES

British Geological Survey, www.bgs.ac.uk.

Environment Agency; <https://www.gov.uk/government/organisations/environment-agency>

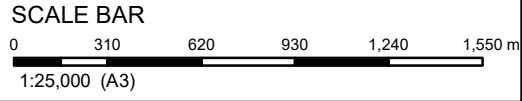
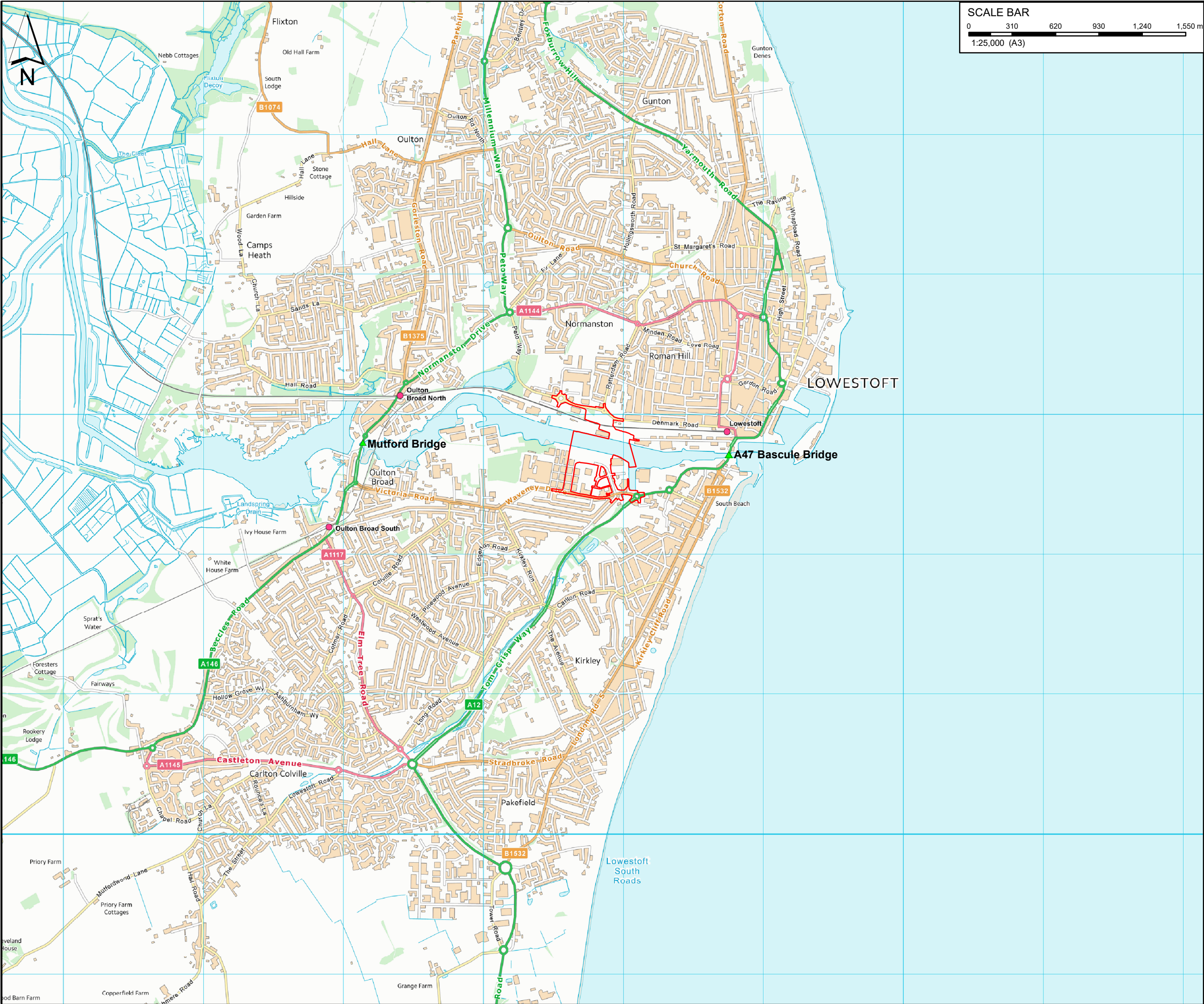
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KEY

Order Limit/Site Location

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FOR DCO SUBMISSION				
REVISION	DRAWN	CHECKED	APPROVED	DATE
DESCRIPTION				

PROJECT TITLE

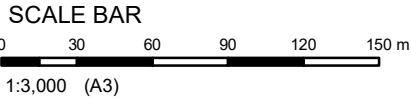
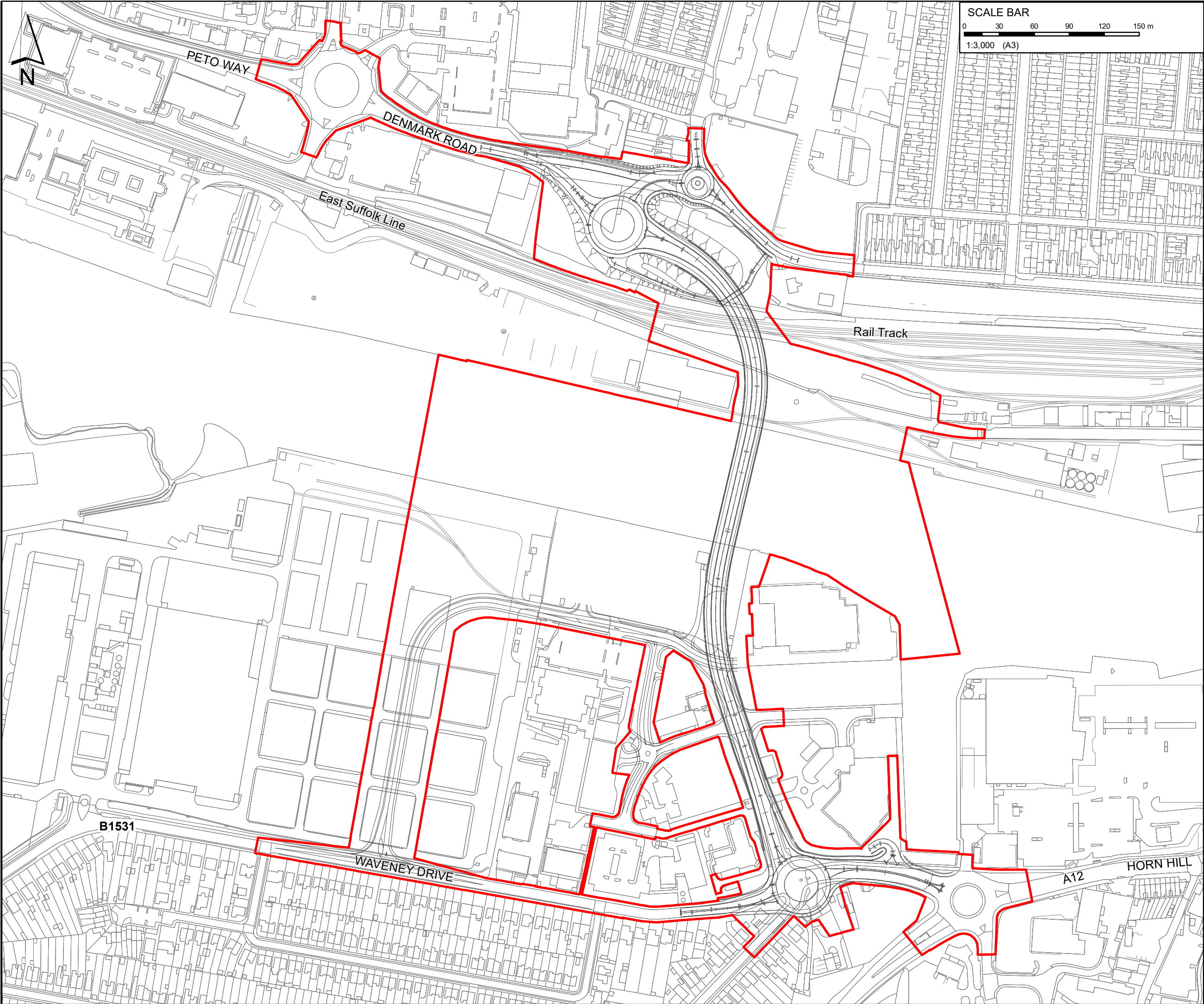


Lake Lothing
THIRD CROSSING

DRAWING TITLE

Site Location Plan
Regulation 5(2)(a)
Figure 1.1

DRAWING STATUS				
FOR DCO SUBMISSION				
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SCALE @ A3 SIZE		DATE	REVISION	
1:25,000		18/06/2018	P00	
DRAWING NUMBER				
Project		Originator	Volume	
1069948-WSP-EGN-LL-SK-LE-0001				
Location	Type	Role	Number	



KEY


— The Scheme(illustrative)

Order Limit

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REVISION	DRAWN	CHECKED	APPROVED	DATE
DESCRIPTION				

PROJECT TITLE



Lake Lothing
THIRD CROSSING

DRAWING TITLE

Order Limit
Regulation 5(2)(a)
Figure 1.2

DRAWING STATUS

FOR DCO SUBMISSION

DRAWN	CHECKED	APPROVED	AUTHORISED	SUITABILITY
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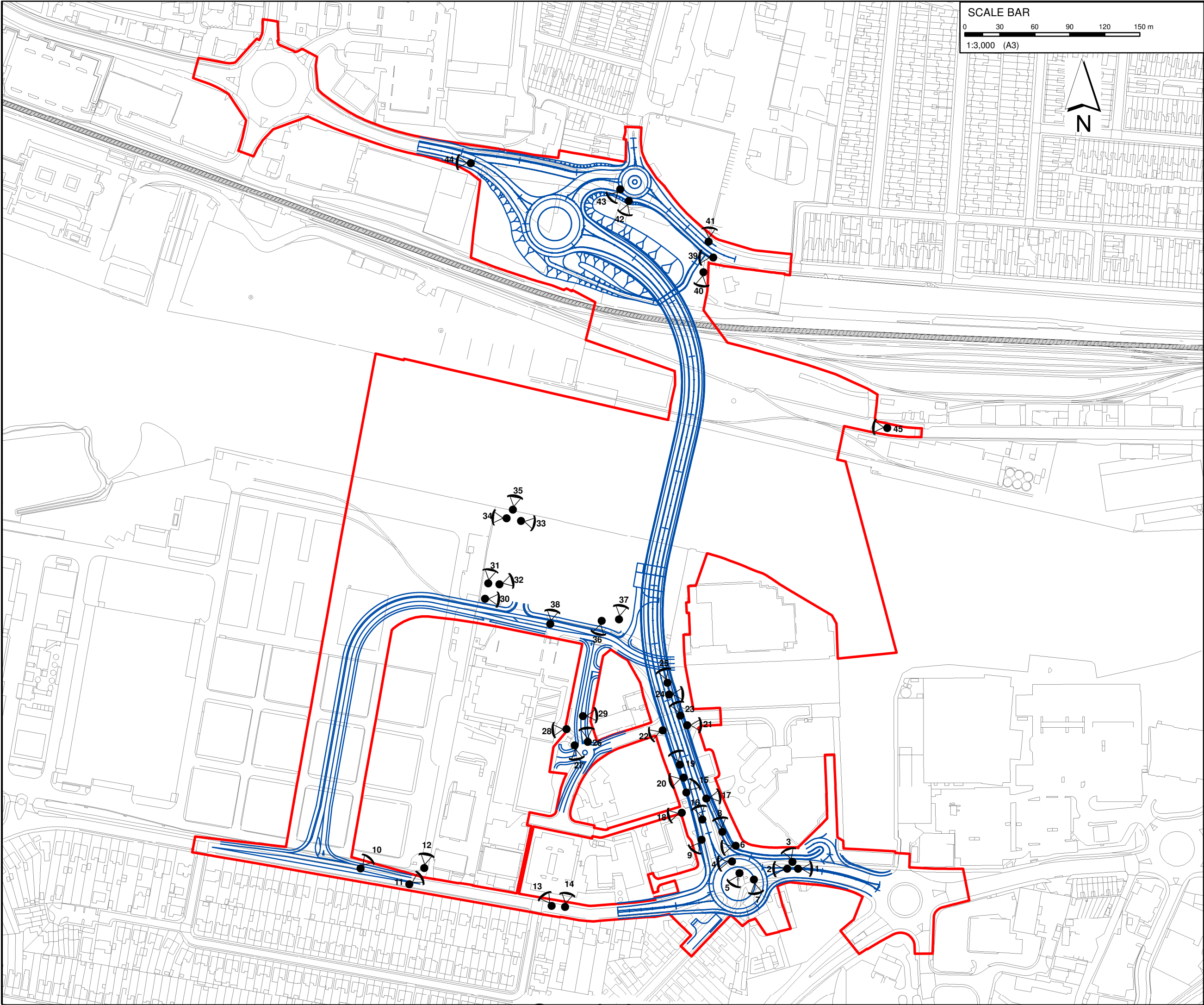
DRAWING NUMBER

Project	Originator	Volume	
1069948-WSP-EGN-LL-SK-LE-0027			
Location	Type	Role	Number

Annex A

PHOTOGRAPHS





SCALE BAR
0 30 60 90 120 150 m
1:3,000 (A3)



- KEY**
- The Scheme (illustrative)
 - Existing Rail Track
 - Order Limits
 - Walkover Photograph

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REVISION	DRAWN	CHECKED	APPROVED	DATE
DESCRIPTION				



PROJECT TITLE
 Lake Lothing
THIRD CROSSING

DRAWING TITLE
Walkover Photographs

DRAWING STATUS				
For DCO Submission				
DRAWN IW	CHECKED NB	APPROVED NB	AUTHORISED JB	SUITABILITY S4
SCALE @ A3 SIZE 1:3,000		DATE 22/06/2018	REVISION P00	

DRAWING NUMBER				
Project		Originator		Volume
Appendix A				
Location		Type	Role	Number

Photograph 1,



Photograph 2,



Photograph 3,



Photograph 4,



Photograph 5,



Photograph 6,



Photograph 7,



Photograph 8,



Photograph 9,



Photograph 10,



Photograph 11,



Photograph 12,



Photograph 13,



Photograph 14,



Photograph 15,



Photograph 16,



Photograph 17,



Photograph 18,



Photograph 19,



Photograph 20,



Photograph 21,



Photograph 22,



Photograph 23,



Photograph 24,



Photograph 25,



Photograph 26,



Photograph 27,



Photograph 28,



Photograph 29,



Photograph 30,



Photograph 31,



Photograph 32,



Photograph 33,



Photograph 34,



Photograph 35,



Photograph 36,



Photograph 37,



Photograph 38,



Photograph 39



Photograph 40,



Photograph 41,



Photograph 42,



Photograph 43,



Photograph 44,



Photograph 45,



Annex B

GROUNDSURE REPORT





CENTREMAPS

Open Space, Upper Interfields,
Worcester, WR14 1UT

Groundsure Reference: CMAPS-CM-535051-16287-070616EDR

Your Reference: 16287

Report Date 7 Jun 2016

Report Delivery Method: Email - pdf

Groundsure Enviro Insight

Address: Denmark Road Lowestoft,

Dear Sir/ Madam,

Thank you for placing your order with Groundsure. Please find enclosed the **Groundsure Enviro Insight** as requested.

If you need any further assistance, please do not hesitate to contact our helpline on 01886 832972 quoting the above CENTREMAPS reference number.

Yours faithfully,

CENTREMAPS

Enc.
Groundsure Enviroinsight

Groundsure Enviro Insight

Address: Denmark Road Lowestoft,
Date: 7 Jun 2016
Reference: CMAPS-CM-535051-16287-070616EDR
Client: CENTREMAPS

NW

N

NE

W

E



SW

S

SE

Aerial Photograph Capture date: 10-Oct-2014
Grid Reference: 653884,292755
Site Size: 21.42ha

Report Reference: CMAPS-CM-535051-16287-070616EDR
Client Reference: 16287

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Overview of Findings

For further details on each dataset, please refer to each individual section in the main report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched '-' will be recorded.

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1.2 Additional Information – Historical Tank Database	39	26	43	51
1.3 Additional Information – Historical Energy Features Database	25	5	43	67
1.4 Additional Information – Historical Petrol and Fuel Site Database	0	0	0	0
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database	20	4	28	0
1.6 Potentially Infilled Land	19	15	58	35
Section 2: Environmental Permits, Incidents and Registers	On-site	0-50m	51-250	251-500
2.1 Industrial Sites Holding Environmental Permits and/or Authorisations				
2.1.1 Records of historic IPC Authorisations	0	0	3	4
2.1.2 Records of Part A(1) and IPPC Authorised Activities	0	0	0	3
2.1.3 Records of Red List Discharge Consents	0	0	0	0
2.1.4 Records of List 1 Dangerous Substances Inventory sites	0	0	1	0
2.1.5 Records of List 2 Dangerous Substances Inventory sites	1	0	1	6
2.1.6 Records of Part A(2) and Part B Activities and Enforcements	0	5	9	1
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0
2.1.8 Records of Licensed Discharge Consents	8	3	10	11
2.1.9 Records of Water Industry Referrals	0	0	0	0
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	0	0	2	0
2.2 Records of COMAH and NIHHS sites	0	0	0	0
2.3 Environment Agency Recorded Pollution Incidents				
2.3.1 National Incidents Recording System, List 2	8	0	5	4
2.3.2 National Incidents Recording System, List 1	0	0	0	0
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	0	0	0	0

Section 3: Landfill and Other Waste Sites	On-site	0-50m	51-250	251-500	501-1000	1000-1500
3.1 Landfill Sites						
3.1.1 Environment Agency Registered Landfill Sites	0	0	0	0	0	Not searched
3.1.2 Environment Agency Historic Landfill Sites	1	0	0	1	11	6
3.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	1	0
3.1.4 Records of Landfills in Local Authority and Historical Mapping Records	2	0	0	0	7	2
3.2 Landfill and Other Waste Sites Findings						
3.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	0	0	Not searched	Not searched
3.2.2 Environment Agency Licensed Waste Sites	0	0	0	1	3	1

Section 4: Current Land Use	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	18	21	82	Not searched
4.2 Records of Petrol and Fuel Sites	1	1	1	0
4.3 National Grid Underground Electricity Cables	0	0	0	0
4.4 National Grid Gas Transmission Pipelines	0	0	0	0

Section 5: Geology	
5.1 Are there any records of Artificial Ground and Made Ground present beneath the study site?	Yes
5.2 Are there any records of Superficial Ground and Drift Geology present beneath the study site?	Yes
5.3 For records of Bedrock and Solid Geology beneath the study site see the detailed findings section.	

Section 6: Hydrogeology and Hydrology	0-500m					
6.1 Are there any records of Strata Classification in the Superficial Geology within 500m of the study site?	Yes					
6.2 Are there any records of Strata Classification in the Bedrock Geology within 500m of the study site?	Yes					
	On-site	0-50m	51-250	251-500	501-1000	1000-2000
6.3 Groundwater Abstraction Licences (within 2000m of the study site)	0	0	0	0	1	3
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
6.6 Source Protection Zones (within 500m of the study site)	0	0	0	1	Not searched	Not searched
6.7 Source Protection Zones within Confined Aquifer	0	0	0	0	Not searched	Not searched
6.8 Groundwater Vulnerability and Soil Leaching Potential (within 500m of the study site)	1	0	0	0	Not searched	Not searched
	On-site	0-50m	51-250	251-500	501-1000	1000-1500

Section 6: Hydrogeology and Hydrology

0-500m

6.9 Is there any Environment Agency information on river quality within 1500m of the study site?	No	No	No	No	No	No
6.10 Detailed River Network entries within 500m of the site	2	1	4	4	Not searched	Not searched
6.11 Surface water features within 250m of the study site	Yes	No	Yes	Not searched	Not searched	Not searched

Section 7: Flooding

7.1 Are there any Environment Agency Zone 2 floodplains within 250m of the study site?	Yes
7.2 Are there any Environment Agency Zone 3 floodplains within 250m of the study site	Yes
7.3 What is the Risk of flooding from Rivers and the Sea (RoFRaS) rating for the study site?	High
7.4 Are there any Flood Defences within 250m of the study site?	No
7.5 Are there any areas benefiting from Flood Defences within 250m of the study site?	No
7.6 Are there any areas used for Flood Storage within 250m of the study site?	No
7.7 What is the maximum BGS Groundwater Flooding susceptibility within 50m of the study site?	Limited potential
7.8 What is the BGS confidence rating for the Groundwater Flooding susceptibility areas?	Low

Section 8: Designated Environmentally Sensitive Sites

On-site 0-50m 51-250 251-500 501-1000 1000-2000

8.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	0	0	0
8.2 Records of National Nature Reserves (NNR)	0	0	0	0	0	0
8.3 Records of Special Areas of Conservation (SAC)	0	0	0	0	0	0
8.4 Records of Special Protection Areas (SPA)	0	0	0	1	0	0
8.5 Records of Ramsar sites	0	0	0	0	0	0
8.6 Records of Ancient Woodlands	0	0	0	0	0	0
8.7 Records of Local Nature Reserves (LNR)	0	0	1	0	0	0
8.8 Records of World Heritage Sites	0	0	0	0	0	0
8.9 Records of Environmentally Sensitive Areas	0	0	0	0	0	1
8.10 Records of Areas of Outstanding Natural Beauty (AONB)	0	0	0	0	0	0

Section 8: Designated Environmentally Sensitive Sites	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.11 Records of National Parks	0	0	0	0	0	1
8.12 Records of Nitrate Sensitive Areas	0	0	0	0	0	0
8.13 Records of Nitrate Vulnerable Zones	1	1	0	0	0	0
8.14 Records of Green Belt land	0	0	0	0	0	0

Section 9: Natural Hazards	
9.1 What is the maximum risk of natural ground subsidence?	Moderate
9.1.1 What is the maximum Shrink-Swell hazard rating identified on the study site?	Low
9.1.2 What is the maximum Landslides hazard rating identified on the study site?	Very Low
9.1.3 What is the maximum Soluble Rocks hazard rating identified on the study site?	Negligible
9.1.4 What is the maximum Compressible Ground hazard rating identified on the study site?	Moderate
9.1.5 What is the maximum Collapsible Rocks hazard rating identified on the study site?	Very Low
9.1.6 What is the maximum Running Sand hazard rating identified on the study site?	Moderate
9.2 Radon	
9.2.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.
9.2.2 Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?	No radon protective measures are necessary.

Section 10: Mining	
10.1 Are there any coal mining areas within 75m of the study site?	No
10.2 Are there any Non-Coal Mining areas within 50m of the study site boundary?	No
10.3 Are there any brine affected areas within 75m of the study site?	No

Using this report

The following report is designed by Environmental Consultants for Environmental Professionals bringing together the most up-to-date market leading environmental data. This report is provided under and subject to the Terms & Conditions agreed between Groundsure and the Client. The document contains the following sections:

1. Historical Industrial Sites

Provides information on past land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. Potentially Infilled Land features are also included. This search is conducted using radii of up to 500m.

2. Environmental Permits, Incidents and Registers

Provides information on Regulated Industrial Activities and Pollution Incidents as recorded by Regulatory Authorities, and sites determined as Contaminated Land. This search is conducted using radii up to 500m.

3. Landfills and Other Waste Sites

Provides information on landfills and other waste sites that may pose a risk to the study site. This search is conducted using radii up to 1500m.

4. Current Land Uses

Provides information on current land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. These searches are conducted using radii of up to 500m. This includes information on potentially contaminative industrial sites, petrol stations and fuel sites as well as high pressure gas pipelines and underground electricity transmission lines.

5. Geology

Provides information on artificial and superficial deposits and bedrock beneath the study site.

6. Hydrogeology and Hydrology

Provides information on productive strata within the bedrock and superficial geological layers, abstraction licenses, Source Protection Zones (SPZs) and river quality. These searches are conducted using radii of up to 2000m.

7. Flooding

Provides information on river and coastal flooding, flood defences, flood storage areas and groundwater flood areas. This search is conducted using radii of up to 250m.

8. Designated Environmentally Sensitive Sites

Provides information on the Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites, Local Nature Reserves (LNR), Areas of Outstanding Natural Beauty (AONB), National Parks (NP), Environmentally Sensitive Areas, Nitrate Sensitive Areas, Nitrate Vulnerable Zones and World Heritage Sites and Scheduled Ancient Woodland. These searches are conducted using radii of up to 2000m.

9. Natural Hazards

Provides information on a range of natural hazards that may pose a risk to the study site. These factors include natural ground subsidence and radon..

10. Mining

Provides information on areas of coal and non-coal mining and brine affected areas.

11. Contacts

This section of the report provides contact points for statutory bodies and data providers that may be able to provide further information on issues raised within this report. Alternatively, Groundsure provide a free Technical Helpline (08444 159000) for further information and guidance.

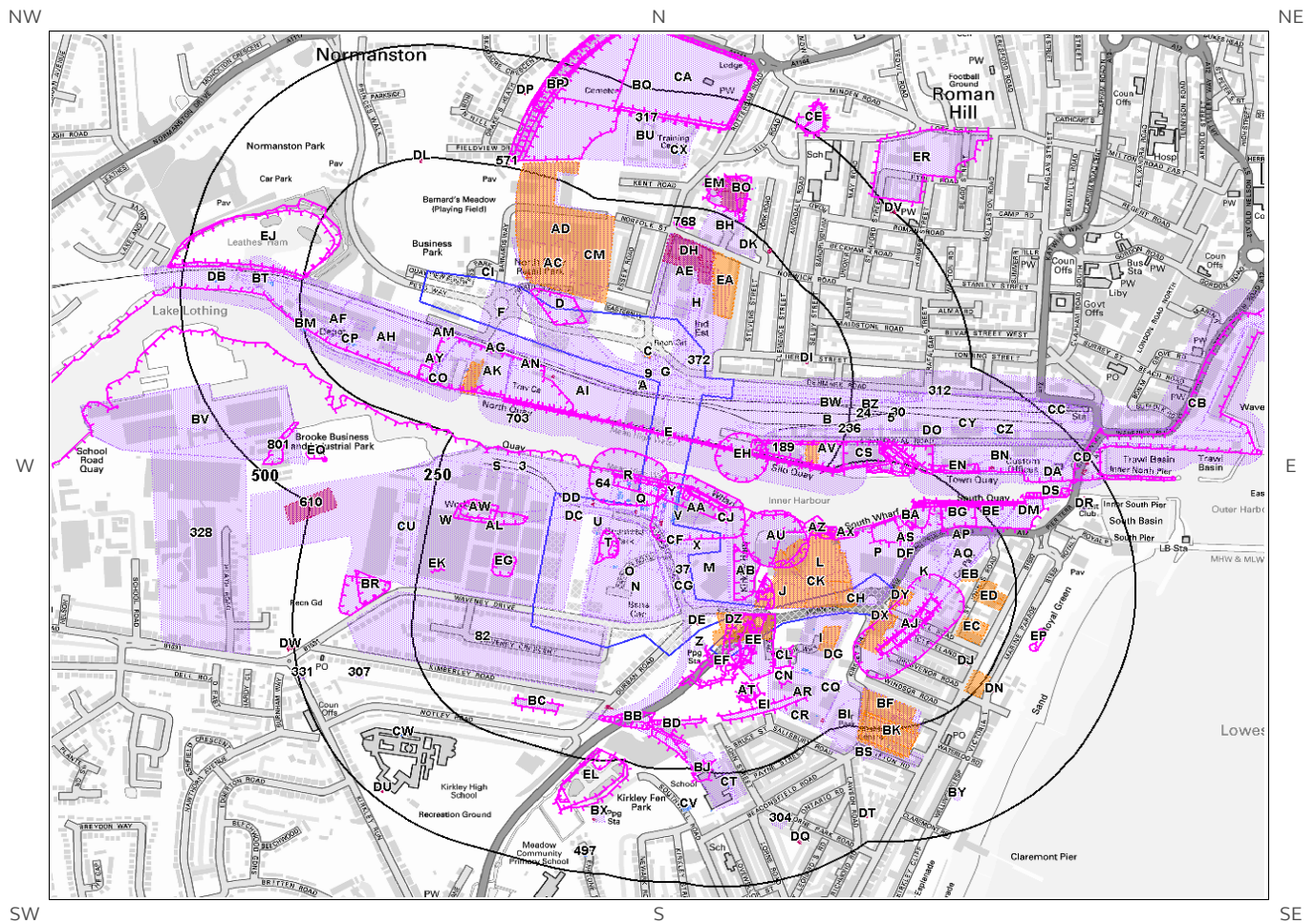
Note: Maps

Only certain features are placed on the maps within the report. All features represented on maps found within this search are given an identification number. This number identifies the feature on the mapping and correlates it to the additional information provided below. This identification number precedes all other information and takes the following format -Id: 1, Id: 2, etc. Where numerous features on the same map are in such close proximity that the numbers would obscure each other a letter identifier is used instead to represent the features. (e.g. Three features which overlap may be given the identifier "A" on the map and would be identified separately as features 1A, 3A, 10A on the data tables provided).

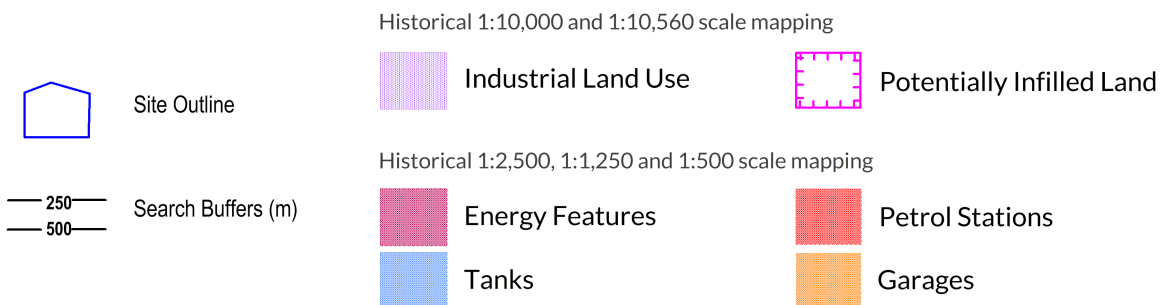
Where a feature is reported in the data tables to a distance greater than the map area, it is noted in the data table as "Not Shown".

All distances given in this report are in Metres (m). Directions are given as compass headings such as N: North, E: East, NE: North East from the nearest point of the study site boundary.

1. Historical Land Use



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1. Historical Industrial Sites

1.1 Potentially Contaminative Uses identified from 1:10,000 scale Mapping

The systematic analysis of data extracted from standard 1:10,560 and 1:10,000 scale historical maps provides the following information:

Records of sites with a potentially contaminative past land use within 500m of the search boundary: 338

ID	Distance [m]	Direction	Use	Date
1A	0	On Site	Railway Sidings	1974
2S	0	On Site	Railway Sidings	1974
3	0	On Site	Railway Sidings	1992
4B	0	On Site	Goods Yard	1904
5	0	On Site	Railway Sidings	1883
6A	0	On Site	Railway Sidings	1951
7D	0	On Site	Unspecified Pit	1974
8	0	On Site	Railway Sidings	1982
9	0	On Site	Railway Sidings	1904
10B	0	On Site	Railway Sidings	1992
11C	0	On Site	Unspecified Depot	1974
12C	0	On Site	Unspecified Depot	1982
13G	0	On Site	Railway Building	1904
14E	0	On Site	Quay	1946
15BW	0	On Site	Railway Sidings	1946
16D	0	On Site	Unspecified Pit	1982
17C	0	On Site	Unspecified Depot	1992
18E	0	On Site	Railway Building	1883
19H	0	On Site	Unspecified Yard	1951
20F	0	On Site	Timber Yard	1904
21Q	0	On Site	Unspecified Tank	1938
22AI	0	On Site	Coal Yard	1938
23F	0	On Site	Timber Yard	1938
24	0	On Site	Goods Yard	1938
25G	0	On Site	Railway Building	1938
26C	0	On Site	Railway Building	1938
27BZ	0	On Site	Railway Sidings	1938
28H	0	On Site	Tramway Sidings	1938
29H	0	On Site	Unspecified Depot	1992
30	0	On Site	Railway Sidings	1904
31R	0	On Site	Unspecified Wharves	1904
32EE	0	On Site	Unspecified Pit	1951
33I	0	On Site	Unspecified Works	1982
34I	0	On Site	Unspecified Works	1974

35J	0	On Site	Unspecified Works	1904
36J	0	On Site	Unspecified Works	1946
37	0	On Site	Railway Sidings	1951
38N	0	On Site	Unspecified Works	1951
39K	0	On Site	Sawmills	1982
40K	0	On Site	Sawmills	1974
41T	0	On Site	Refuse Heap	1951
42L	0	On Site	Unspecified Works	1974
43L	0	On Site	Unspecified Works	1982
44M	0	On Site	Unspecified Works	1951
45M	0	On Site	Unspecified Factory	1982
46M	0	On Site	Unspecified Works	1974
47U	0	On Site	Unspecified Depot	1982
48N	0	On Site	Canning Factory	1946
49P	0	On Site	Unspecified Factory	1951
50O	0	On Site	Unspecified Factory	1982
51O	0	On Site	Unspecified Works	1974
52P	0	On Site	Unspecified Works	1982
53	0	On Site	Railway Sidings	1946
54P	0	On Site	Unspecified Works	1974
55Q	0	On Site	Unspecified Tank	1946
56DD	0	On Site	Railway Sidings	1951
57V	0	On Site	Boat Building Yard	1904
58X	0	On Site	Canning Factory	1946
59Q	0	On Site	Ice Works	1904
60Q	0	On Site	Unspecified Works	1951
61Q	0	On Site	Ice Works	1946
62R	0	On Site	Unspecified Wharf	1946
63Q	0	On Site	Unspecified Works	1982
64	0	On Site	Unspecified Works	1951
65Q	0	On Site	Unspecified Works	1974
66AL	0	On Site	Unspecified Works	1974
67S	0	On Site	Railway Sidings	1982
68W	0	On Site	Unspecified Works	1982
69T	0	On Site	Unspecified Pit	1904
70U	0	On Site	Nurseries	1904
71V	0	On Site	Boat Building Yard	1883
72DX	0	On Site	Windmill	1883
73CH	0	On Site	Unspecified Tank	1883
74L	0	On Site	Unspecified Works	1992
75W	0	On Site	Unspecified Works	1992
76Q	0	On Site	Unspecified Works	1992
77U	0	On Site	Unspecified Depot	1992
78O	0	On Site	Unspecified Factory	1992
79P	0	On Site	Unspecified Commercial/Industrial	1992

80I	0	On Site	Unspecified Works	1992
81Q	0	On Site	Ice Works	1938
82	0	On Site	Joinery Works	1938
83N	0	On Site	Canning Factory	1938
84X	0	On Site	Canning Factory	1938
85J	0	On Site	Unspecified Works	1938
86AS	0	On Site	Boat Building Yard	1938
87U	0	On Site	Railway Sidings	1938
88Y	0	On Site	Unspecified Wharf	1938
89J	0	On Site	Unspecified Wharf	1938
90Y	0	On Site	Unspecified Wharf	1938
91J	0	On Site	Unspecified Wharf	1938
92M	0	On Site	Unspecified Factory	1992
93AA	0	On Site	Unspecified Wharf	1992
94AJ	0	On Site	Cuttings	1904
95Y	5	E	Unspecified Wharf	1904
96AB	8	N	Unspecified Wharf	1951
97Z	8	W	Pumping Station	1982
98Z	8	W	Pumping Station	1974
99Z	8	W	Pumping Station	1992
100H	11	N	Unspecified Depots	1974
101H	11	N	Unspecified Depots	1982
102AA	15	E	Unspecified Wharf	1974
103AA	15	E	Unspecified Wharf	1982
104AB	19	N	Unspecified Wharf	1946
105AC	20	N	Omnibus Depot and Coach Building Factory	1938
106AC	20	N	Omnibus Depot and Coach Building Factory	1946
107AF	23	S	Unspecified Depot	1992
108L	23	N	Unspecified Works	1951
109AD	25	NE	Unspecified Works	1982
110AD	25	NE	Unspecified Works	1974
111AE	27	N	Tramway Depot	1946
112K	27	NE	Timber Yard	1938
113K	27	NE	Timber Yard	1946
114AE	28	N	Tramway Depot	1938
115K	30	NE	Unspecified Depot	1951
116AE	31	N	Tramway Depot	1904
117AC	34	NE	Unspecified Factory	1951
118L	36	N	Boat Building Yard	1883
119L	37	N	Boat Building Yard	1904
120L	37	N	Boat Building Yard	1946
121AF	37	S	Unspecified Depot	1938
122AF	38	S	Railway Sidings	1946
123AG	39	S	Railway Building	1951

124AG	39	S	Railway Buildings	1951
125AN	41	S	Railway Building	1951
126AF	42	S	Railway Sidings	1938
127AH	43	S	Unspecified Depot	1974
128AH	43	S	Unspecified Depot	1982
129AI	43	S	Coal Yard	1946
130AK	44	S	Quay	1974
131H	45	NE	Unspecified Depots	1974
132H	45	NE	Unspecified Depots	1982
133AJ	45	SE	Cuttings	1883
134AJ	46	SE	Cuttings	1946
135AK	47	S	Ship Building Yard	1883
136AU	47	E	Unspecified Wharf	1992
137AL	47	W	Sand Pit	1946
138AJ	48	SE	Cuttings	1974
139AJ	48	SE	Cuttings	1982
140AJ	48	SE	Cuttings	1992
141CL	48	SE	Refuse Heap	1951
142AK	48	S	Ship Building Yard	1938
143AK	49	S	Ship Building Yard	1946
144AK	49	S	Ship Building Yard	1904
145AH	50	S	Ship Building Yard	1883
146AM	51	S	Railway Building	1946
147AO	51	S	Railway Buildings	1883
148AM	53	S	Railway Building	1946
149EG	54	W	Unspecified Heap	1951
150EH	55	E	Unspecified Wharf	1883
151AN	55	S	Railway Building	1951
152AI	59	S	Railway Building	1951
153AQ	63	SE	Railway Sidings	1883
154AJ	64	SE	Cuttings	1974
155AJ	64	SE	Cuttings	1982
156AJ	64	SE	Cuttings	1992
157AO	64	S	Railway Building	1951
158AP	66	SE	Railway Sidings	1904
159AP	66	SE	Railway Sidings	1946
160AT	67	SE	Unspecified Pit	1904
161AO	67	SE	Railway Building	1951
162AE	67	N	Unspecified Depots	1982
163AE	67	N	Unspecified Depots	1974
164AQ	70	SE	Railway Sidings	1951
165AR	71	SE	Unspecified Works	1982
166AR	71	SE	Unspecified Works	1974
167AR	71	SE	Unspecified Works	1992
168AP	72	E	Railway Sidings	1938
169AQ	72	E	Goods Yard	1938

170AS	72	N	Unspecified Wharf	1883
171AT	75	SE	Unspecified Pit	1951
172AF	83	S	Railway Sidings	1904
173AT	86	SE	Unspecified Pit	1946
174AU	89	N	Unspecified Wharf	1946
175AE	92	NE	Railway Building	1946
176AX	92	NW	Unspecified Wharf	1904
177CN	94	SE	Cemetery	1904
178AV	101	SE	Unspecified Commercial/Industrial	1982
179AV	101	SE	Quay	1992
180AV	101	SE	Unspecified Commercial/Industrial	1974
181AH	103	SW	Railway Building	1951
182DO	105	SE	Goods Yard	1946
183AY	111	S	Railway Building	1951
184AW	112	W	Railway Sidings	1951
185AW	112	W	Cuttings	1951
186AH	113	SW	Unspecified Depot	1946
187AX	115	NW	Unspecified Wharf	1946
188DH	117	N	Electric Light Works	1904
189	117	SE	Oil Mill	1883
190AV	118	SE	Unspecified Wharf	1904
191AF	118	SW	Unspecified Depot	1951
192AX	118	NW	Unspecified Wharf	1982
193AX	118	NW	Unspecified Wharf	1974
194EI	120	S	Cuttings	1883
195AY	121	S	Railway Building	1946
196BA	125	NE	Unspecified Wharf	1946
197BB	129	S	Unspecified Ground Workings	1974
198AY	130	S	Railway Building	1951
199AZ	131	N	Unspecified Wharf	1938
200AZ	131	N	Unspecified Wharf	1938
201BA	134	NE	Unspecified Wharf	1951
202AF	134	SW	Railway Building	1951
203BD	135	S	Unspecified Pit	1951
204BB	144	S	Unspecified Ground Workings	1982
205BB	144	S	Unspecified Ground Workings	1992
206AR	149	S	Unspecified Works	1951
207BC	149	S	Cuttings	1974
208BC	149	S	Cuttings	1982
209BI	152	S	Unspecified Works	1946
210AF	156	SW	Railway Building	1951
211AF	157	W	Railway Building	1982

212BF	161	S	Unspecified Works	1938
213BD	162	S	Unspecified Heap	1974
214BD	162	S	Unspecified Heap	1982
215BD	162	S	Unspecified Heap	1992
216BG	162	NE	Quay	1974
217BE	162	NE	Quay	1982
218BE	162	NE	Quay	1992
219BF	164	S	Unspecified Works	1946
220BA	169	NE	Unspecified Wharf	1938
221BA	169	NE	Unspecified Wharf	1938
222BG	171	NE	Quay	1883
223BG	171	NE	Quay	1904
224BG	171	NE	Quay	1946
225BJ	178	S	Railway Sidings	1938
226BH	185	NE	Unspecified Commercial/Industrial	1992
227BH	185	NE	Unspecified Works	1974
228BH	185	NE	Unspecified Works	1982
229BI	187	S	Windmill	1883
230AF	188	W	Railway Building	1982
231AF	190	W	Railway Buildings	1974
232AF	190	W	Railway Buildings	1982
233DK	198	NE	Unspecified Works	1951
234BJ	201	S	Goods Yard	1946
235BJ	204	S	Goods Yard	1938
236	206	E	Iron Foundry	1883
237EK	207	W	Sand Pit	1883
238BK	210	S	Unspecified Works	1951
239BK	217	S	Unspecified Works	1938
240BK	217	S	Unspecified Works	1974
241BK	217	S	Unspecified Works	1982
242AF	219	W	Railway Building	1946
243BE	220	NE	Unspecified Works	1974
244BL	222	N	Dry Dock	1938
245BL	222	N	Dry Dock	1938
246AV	223	SE	Sawmill	1946
247AF	228	W	Railway Building	1946
248CS	237	N	Sawmill	1938
249BM	238	W	Railway Building	1974
250BM	238	W	Railway Building	1982
251BM	239	W	Railway Building	1946
252BL	242	N	Dry Dock	1946
253BL	242	N	Dry Dock	1883
254BO	255	NE	Unspecified Pit	1946
255BN	255	NE	Iron Works	1946
256EN	255	NE	Unspecified Wharves	1904

257BN	256	NE	Unspecified Works	1992
258BN	256	NE	Unspecified Works	1982
259BN	256	NE	Unspecified Works	1974
260BN	258	NE	Harbour Works	1883
261BO	263	NE	Sand Pit	1904
262BP	264	N	Cuttings	1938
263BP	268	N	Cuttings	1946
264BP	268	N	Cuttings	1904
265BN	269	NE	Iron Works	1938
266EO	269	N	Cuttings	1951
267BQ	272	N	Cemetery	1974
268BQ	272	N	Cemetery	1982
269BQ	272	N	Cemetery	1951
270BQ	272	N	Cemetery	1992
271BE	274	NE	Unspecified Tank	1974
272BE	275	NE	Unspecified Tank	1982
273BE	275	NE	Unspecified Tank	1992
274BT	278	W	Heliport	1974
275CU	279	W	Electric Substation	1974
276BN	280	NE	Unspecified Works	1951
277EM	282	N	Gravel Pit	1883
278BR	304	W	Unspecified Pit	1974
279BR	304	W	Unspecified Pit	1992
280BR	304	W	Unspecified Pit	1982
281BS	305	S	Fire Station	1982
282BS	305	S	Fire Station	1974
283BS	305	S	Fire Station	1992
284BU	310	NE	Isolation Hospital	1951
285DM	317	NE	Mortuary	1951
286BT	328	W	Railway Building	1982
287BU	328	N	Infectious Diseases Sanatorium	1904
288BU	328	N	Isolation Hospital	1946
289BU	328	N	Isolation Hospital	1938
290BV	334	SW	Unspecified Works	1974
291BV	334	SW	Railway Sidings	1992
292BV	334	SW	Unspecified Works	1992
293BV	334	SW	Railway Sidings	1974
294BV	334	SW	Railway Sidings	1982
295BV	334	SW	Unspecified Works	1982
296DS	341	NE	Quay	1951
297BW	348	E	Railway Building	1946
298BT	349	W	Railway Building	1946
299BX	349	S	Pumping Station	1974
300BX	349	S	Pumping Station	1982
301BX	349	S	Pumping Station	1992

302CY	353	NE	Unspecified Depot	1951
303BW	355	E	Unspecified Warehouse	1974
304	356	S	Net Works	1883
305BW	359	E	Unspecified Warehouse	1982
306BW	359	E	Unspecified Warehouse	1992
307	368	W	Railway Building	1883
308BP	383	N	Cuttings	1974
309BP	383	N	Cuttings	1982
310BP	383	N	Cuttings	1992
311CZ	402	NE	Railway Building	1951
312	413	N	Railway Building	1946
313BY	415	S	Unspecified Tank	1974
314BY	415	S	Unspecified Tank	1982
315BY	415	S	Unspecified Tank	1992
316CD	419	NE	Sewage Pumping Station	1946
317	419	N	Small Pox Hospital	1883
318BQ	421	N	Cemetery	1938
319DR	427	NE	Lifeboat Station	1992
320BZ	432	NE	Railway Building	1946
321CA	432	N	Cemetery	1946
322CA	432	N	Cemetery	1904
323BZ	438	NE	Engine Shed	1883
324CB	440	NE	Dock	1938
325CB	440	NE	Dock	1938
326CC	464	NE	Railway Station	1946
327CC	464	NE	Railway Station	1904
328	465	SW	Nurseries	1904
329CC	465	NE	Railway Station	1938
330CD	471	NE	Sewage Pumping Station	1938
331	487	W	Railway Building	1883
332ER	488	NE	Brick Works	1883
333CC	491	NE	Goods Shed	1883
334CE	493	NE	Unspecified Pit	1904
335CE	494	NE	Unspecified Pit	1946
336CE	496	NE	Unspecified Pit	1938
337CE	496	NE	Unspecified Pit	1938
338CC	498	NE	Railway Station	1883

1.2 Additional Information – Historical Tank Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical tanks within 500m of the search boundary:

159

ID	Distance (m)	Direction	Use	Date
339T	0	On Site	Unspecified Tank	1986
340T	0	On Site	Unspecified Tank	1990
341O	0	On Site	Water Cooler Tank	1949
342O	0	On Site	Water Cooler Tank	1950
343Q	0	On Site	Unspecified Tank	1986
344Q	0	On Site	Unspecified Tank	1990
345Q	0	On Site	Unspecified Tank	1983
346Q	0	On Site	Unspecified Tank	1983
347Q	0	On Site	Unspecified Tank	1927
348Q	0	On Site	Unspecified Tank	1904
349Q	0	On Site	Water Cooler Tank	1949
350Q	0	On Site	Water Cooler Tank	1950
351C	0	On Site	Unspecified Tank	1986
352C	0	On Site	Unspecified Tank	1983
353C	0	On Site	Unspecified Tank	1983
354C	0	On Site	Unspecified Tank	1970
355Q	0	On Site	Unspecified Tank	1904
356Y	0	On Site	Tanks	1983
357Y	0	On Site	Tanks	1983
358Y	0	On Site	Tanks	1986
359Y	0	On Site	Tanks	1950
360Y	0	On Site	Unspecified Tank	1949
361V	0	On Site	Unspecified Tank	1970
362V	0	On Site	Unspecified Tank	1949
363V	0	On Site	Tanks	1950
364V	0	On Site	Tanks	1949
365V	0	On Site	Tanks	1950
366T	0	On Site	Unspecified Tank	1983
367T	0	On Site	Unspecified Tank	1983
368CF	0	On Site	Unspecified Tank	1949
369CF	0	On Site	Unspecified Tank	1950
370CG	0	On Site	Oil Tank	1950
371CG	0	On Site	Oil Tank	1950
372	0	On Site	Tanks	1927
373CH	0	On Site	Gasometer	1883
374CH	0	On Site	Tanks	1950
375CH	0	On Site	Unspecified Tank	1950
376CH	0	On Site	Unspecified Tank	1950
377T	0	On Site	Unspecified Tank	1993
378CI	6	N	Unspecified Tank	1990
379CI	6	N	Unspecified Tank	1987

380Q	7	N	Unspecified Tank	1993
381Q	7	N	Unspecified Tank	1983
382Q	7	N	Unspecified Tank	1990
383Q	7	N	Unspecified Tank	1983
384Q	7	N	Unspecified Tank	1986
385Q	9	N	Tanks	1964
386Q	9	N	Tanks	1970
387Q	9	N	Unspecified Tank	1964
388R	19	W	Unspecified Tank	1949
389R	21	W	Unspecified Tank	1970
390Q	22	N	Tanks	1970
391R	22	W	Unspecified Tank	1950
392CJ	25	N	Unspecified Tank	1976
393CJ	26	N	Unspecified Tank	1990
394CK	26	N	Unspecified Tank	1950
395CK	26	N	Unspecified Tank	1976
396CK	26	N	Unspecified Tank	1964
397CK	26	N	Unspecified Tank	1976
398CK	26	N	Unspecified Tank	1990
399CK	26	N	Unspecified Tank	1950
400I	27	S	Unspecified Tank	1950
401I	28	S	Unspecified Tank	1950
402CJ	30	N	Tanks	1990
403CJ	36	N	Unspecified Tank	1990
404CK	54	N	Unspecified Tank	1949
405CK	56	N	Unspecified Tank	1950
406K	59	NE	Unspecified Tank	1949
407K	59	NE	Unspecified Tank	1966
408K	59	NE	Unspecified Tank	1950
409AS	93	NE	Tanks	1990
410AS	93	NE	Tanks	1976
411AS	93	NE	Tanks	1966
412AI	96	S	Unspecified Tank	1986
413AI	96	S	Unspecified Tank	1990
414AX	100	NW	Tanks	1976
415AX	101	NW	Tanks	1990
416AX	102	NW	Unspecified Tank	1966
417AK	104	S	Unspecified Tank	1990
418CL	107	SE	Unspecified Tank	1990
419CL	107	SE	Unspecified Tank	1976
420CL	107	SE	Unspecified Tank	1976
421AI	108	S	Unspecified Tank	1990
422AI	108	S	Unspecified Tank	1986
423AH	110	SW	Unspecified Tank	1984
424CM	113	N	Unspecified Tank	1949
425CM	113	N	Unspecified Tank	1949

426CN	117	S	Unspecified Tank	1976
427CN	118	S	Unspecified Tank	1990
428CN	118	S	Unspecified Tank	1976
429AY	134	S	Unspecified Tank	1949
430AY	134	S	Unspecified Tank	1950
431CO	153	S	Unspecified Tank	1964
432CO	153	S	Unspecified Tank	1965
433CP	164	SW	Tanks	1963
434CP	164	SW	Tanks	1949
435CQ	165	S	Unspecified Tank	1990
436CQ	165	S	Unspecified Tank	1976
437BF	190	S	Unspecified Tank	1976
438CR	194	SE	Unspecified Tank	1950
439CR	195	SE	Unspecified Tank	1950
440CR	208	SE	Tanks	1950
441CR	209	SE	Tanks	1950
442CR	215	SE	Tanks	1950
443CR	216	SE	Tanks	1950
444CS	234	N	Unspecified Tank	1976
445BM	241	W	Tanks	1976
446BM	242	W	Tanks	1984
447BK	262	S	Unspecified Tank	1950
448BK	263	S	Unspecified Tank	1950
449CS	272	N	Unspecified Tank	1927
450BE	274	NE	Unspecified Tank	1988
451BE	274	NE	Unspecified Tank	1990
452BE	274	NE	Unspecified Tank	1968
453BE	274	NE	Unspecified Tank	1976
454CT	275	S	Unspecified Tank	1990
455CT	275	S	Unspecified Tank	1976
456CT	275	S	Unspecified Tank	1976
457BS	284	S	Unspecified Tank	1950
458BS	284	S	Unspecified Tank	1950
459CU	300	W	Tanks	1964
460CU	301	W	Tanks	1965
461CU	305	W	Unspecified Tank	1990
462BT	309	W	Tanks	1976
463BT	309	W	Tanks	1967
464BT	309	W	Tanks	1984
465BT	316	W	Tanks	1984
466CV	328	S	Unspecified Tank	1950
467CV	328	S	Unspecified Tank	1950
468BO	332	NE	Unspecified Tank	1960
469BO	332	NE	Unspecified Tank	1950
470BO	332	NE	Unspecified Tank	1949
471BO	332	NE	Unspecified Tank	1956

472CV	333	S	Unspecified Tank	1950
473CV	333	S	Unspecified Tank	1950
474CV	334	S	Unspecified Tank	1964
475BN	334	NE	Disused Gasometer	1883
476CV	334	S	Unspecified Tank	1927
477CW	360	SW	Unspecified Tank	1976
478CW	361	SW	Unspecified Tank	1993
479CW	361	SW	Unspecified Tank	1987
480CW	361	SW	Unspecified Tank	1990
481CX	363	N	Unspecified Tank	1990
482CX	363	N	Unspecified Tank	1987
483CX	363	N	Unspecified Tank	1971
484CY	397	NE	Unspecified Tank	1976
485CZ	399	NE	Unspecified Tank	1950
486CZ	400	NE	Unspecified Tank	1950
487CZ	400	NE	Unspecified Tank	1968
488DA	411	NE	Unspecified Tank	1988
489DA	411	NE	Unspecified Tank	1990
490DA	412	NE	Unspecified Tank	1976
491DA	412	NE	Unspecified Tank	1993
492DB	426	W	Unspecified Tank	1963
493DB	426	W	Unspecified Tank	1958
494DB	426	W	Unspecified Tank	1957
495DB	435	W	Unspecified Tank	1949
496DB	435	W	Unspecified Tank	1950
497	456	S	Unspecified Tank	1927

1.3 Additional Information – Historical Energy Features Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical energy features within 500m of the search boundary:

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ID	Distance (m)	Direction	Use	Date
498V	0	On Site	Electricity Substation	1983
499V	0	On Site	Electricity Substation	1986
500V	0	On Site	Electricity Substation	1983
501DC	0	On Site	Electricity Substation	1983
502DC	0	On Site	Electricity Substation	1986
503DC	0	On Site	Electricity Substation	1983
504DD	0	On Site	Electricity Substation	1983
505DD	0	On Site	Electricity Substation	1983
506DE	0	On Site	Electricity Substation	1990

507V	0	On Site	Electricity Substation	1970
508V	0	On Site	Electricity Substation	1990
509CH	0	On Site	Gasometer	1883
510DE	0	On Site	Electricity Substation	1993
511V	0	On Site	Electricity Substation	1993
512Q	0	On Site	Electricity Substation	1993
513DD	0	On Site	Electricity Substation	1993
514DC	0	On Site	Electricity Substation	1993
515DC	0	On Site	Electricity Substation	1970
516DC	0	On Site	Electricity Substation	1990
517DD	0	On Site	Electricity Substation	1986
518DD	0	On Site	Electricity Substation	1990
519DD	0	On Site	Electricity Substation	1970
520DE	0	On Site	Electricity Substation	1984
521DE	0	On Site	Electricity Substation	1987
522DE	0	On Site	Electricity Substation	1990
523AC	24	NE	Electricity Substation	1987
524AC	25	NE	Electricity Substation	1971
525AM	45	S	Electricity Substation	1984
526AM	45	S	Electricity Substation	1976
527AM	45	S	Electricity Substation	1967
528AN	55	S	Electricity Substation	1993
529AN	55	S	Electricity Substation	1986
530AN	55	S	Electricity Substation	1990
531DF	65	NE	Electricity Substation	1990
532DF	65	NE	Electricity Substation	1976
533DG	92	S	Electricity Substation	1976
534DG	92	S	Electricity Substation	1990
535AE	93	NE	Electricity Transmission Station	1971
536DH	116	N	Electric Light Works	1904
537AU	120	N	Electricity Substation	1976
538AU	121	N	Electricity Substation	1990
539BB	128	S	Electricity Substation	1984
540BB	128	S	Electricity Substation	1987
541BB	128	S	Electricity Substation	1990
542BB	128	S	Electricity Substation	1990
543BB	128	S	Electricity Substation	1993
544BB	128	S	Electricity Substation	1950
545BB	128	S	Electricity Substation	1950
546DH	132	N	Electricity Depot	1971
547DH	132	N	Electricity Substation	1987
548DH	132	N	Electricity Substation	1990
549DH	139	N	Electricity Substation	1971
550DI	154	E	Electricity Substation	1990
551DI	155	E	Electricity Substation	1976

552DH	155	N	Electricity Substation	1987
553DH	155	N	Electricity Substation	1990
554DH	156	N	Electricity Substation	1971
555DJ	193	SE	Electricity Substation	1990
556DJ	193	SE	Electricity Substation	1990
557BF	209	S	Electricity Substation	1976
558BI	221	SE	Electricity Substation	1990
559BI	221	SE	Electricity Substation	1976
560BI	221	SE	Electricity Substation	1976
561CS	233	N	Electricity Substation	1990
562DK	239	NE	Electricity Substation	1990
563DK	239	NE	Electricity Substation	1990
564DK	239	NE	Electricity Substation	1989
565DK	239	NE	Electricity Substation	1989
566DL	240	N	Electricity Substation	1967
567DL	240	N	Electricity Substation	1976
568DL	240	N	Electricity Substation	1984
569DK	241	NE	Electricity Substation	1970
570DK	246	NE	Electricity Substation	1996
571	253	N	Electricity Substation	1971
572BE	255	NE	Electricity Substation	1968
573BE	255	NE	Electricity Substation	1976
574BE	260	NE	Electricity Substation	1988
575BE	260	NE	Electricity Substation	1990
576BO	266	N	Electricity Transmission Station	1970
577BL	266	NE	Electricity Substation	1976
578DM	268	NE	Electricity Substation	1990
579DM	268	NE	Electricity Substation	1993
580DN	280	SE	Electricity Substation	1990
581DN	280	SE	Electricity Substation	1990
582DO	292	N	Electricity Substation	1990
583DO	292	N	Electricity Substation	1976
584BO	295	N	Electricity Transmission Station	1990
585BO	295	N	Electricity Transmission Station	1990
586BO	295	N	Electricity Transmission Station	1989
587BO	295	N	Electricity Transmission Station	1989
588BO	300	N	Electricity Transmission Station	1996
589DO	306	NE	Electricity Substation	1976
590DO	307	N	Electricity Substation	1990
591BN	334	NE	Disused Gasometer	1883
592CX	339	N	Gas Governor	1990
593BX	378	S	Electricity Substation	1993

594BX	378	S	Electricity Substation	1989
595BX	378	S	Electricity Substation	1986
596DP	414	N	Electricity Substation	1974
597DP	414	N	Electricity Substation	1969
598DP	415	N	Electricity Substation	1990
599DP	415	N	Electricity Substation	1990
600DP	415	N	Electricity Substation	1990
601DP	415	N	Electricity Substation	1990
602DQ	423	S	Electricity Substation	1990
603DQ	423	S	Electricity Substation	1993
604DQ	425	S	Electricity Substation	1968
605DR	429	NE	Electricity Substation	1988
606DR	429	NE	Electricity Substation	1990
607DR	430	NE	Electricity Substation	1993
608DR	431	NE	Electricity Substation	1976
609DS	435	NE	Electricity Substation	1950
610	443	W	Disused Power Store	1949
611DR	443	NE	Electricity Substation	1950
612DT	444	S	Electricity Substation	1993
613DT	444	S	Electricity Substation	1990
614DR	444	NE	Electricity Substation	1968
615CD	467	NE	Electricity Substation	1950
616CD	475	NE	Electricity Substation	1968
617CD	475	NE	Electricity Substation	1950
618DU	477	SW	Electricity Substation	1976
619DU	477	SW	Electricity Substation	1993
620DU	477	SW	Electricity Substation	1990
621DU	477	SW	Electricity Substation	1987
622DU	477	SW	Electricity Substation	1990
623CD	486	NE	Electricity Substation	1988
624CD	486	NE	Electricity Substation	1990
625CD	487	NE	Electricity Substation	1993
626CD	487	NE	Electricity Substation	1976
627DV	495	NE	Electricity Substation	1990
628DV	495	NE	Electricity Substation	1990
629DV	495	NE	Electricity Substation	1989
630DV	495	NE	Electricity Substation	1989
631DV	496	NE	Electricity Substation	1970
632DV	496	NE	Electricity Substation	1996
633DW	497	W	Electricity Substation	1976
634DW	497	W	Electricity Substation	1993
635DW	497	W	Electricity Substation	1990
636DW	497	W	Electricity Substation	1987
637DW	497	W	Electricity Substation	1990

1.4 Additional Information – Historical Petrol and Fuel Site Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical petrol stations and fuel sites within 500m of the search boundary: 0

Database searched and no data found.

1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical garage and motor vehicle repair sites within 500m of the search boundary: 52

ID	Distance (m)	Direction	Use	Date
638DZ	0	On Site	Garage	1976
639CH	0	On Site	Garage	1976
640CH	0	On Site	Garage	1964
641CH	0	On Site	Garage	1990
642DX	0	On Site	Garage	1990
643AJ	0	On Site	Garage	1964
644AJ	0	On Site	Garage	1976
645DY	0	On Site	Garage	1990
646DY	0	On Site	Garage	1964
647DY	0	On Site	Garage	1976
648L	0	On Site	Boat Repairing and Engineering Works	1950
649J	0	On Site	Bodybuilding and Engineering Works	1950
650DZ	0	On Site	Garage	1964
651DZ	0	On Site	Garage	1990
652DY	0	On Site	Garage	1976
653DX	0	On Site	Garage	1976
654CH	0	On Site	Garage	1976
655DZ	0	On Site	Garage	1976
656CH	0	On Site	Garage	1950
657C	0	On Site	Garage	1949
658L	16	NW	Boat Repairing and Engineering Works	1949
659AD	18	N	Coach Building Works	1971
660I	24	S	Coach Building Works	1950
661I	26	S	Garage	1976
662EA	67	NE	Garage	1990
663EA	67	NE	Garage	1990

664EA	67	NE	Garage	1989
665EA	67	NE	Garage	1989
666EA	67	NE	Garage	1996
667AK	74	S	Marine Engineering Works	1964
668AK	87	S	Marine Engineering Works	1965
669EB	136	E	Garage	1976
670EB	136	E	Garage	1968
671EB	136	E	Garage	1988
672EC	149	SE	Garage	1990
673EC	149	SE	Garage	1990
674EC	150	SE	Garage	1964
675ED	159	E	Garage	1990
676ED	159	E	Garage	1990
677BF	163	S	Motor Accessories Works	1927
678ED	165	E	Garage	1964
679EB	170	E	Garage	1990
680EB	170	E	Garage	1990
681EB	171	E	Garage	1964
682AV	186	SE	Marine Engineering Works	1966
683BK	212	S	Motor Body Building Works	1950
684BK	214	S	Garage	1990
685BK	214	S	Garage	1976
686BK	217	S	Garage	1976
687BK	218	S	Motor Body Building Works	1927
688DN	220	SE	Garage	1964
689BK	234	S	Motor Body Building Works	1950

1.6 Potentially Infilled Land

Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site: 127

The following Historical Potentially Infilled Features derived from the Historical Mapping information is provided by Groundsure:

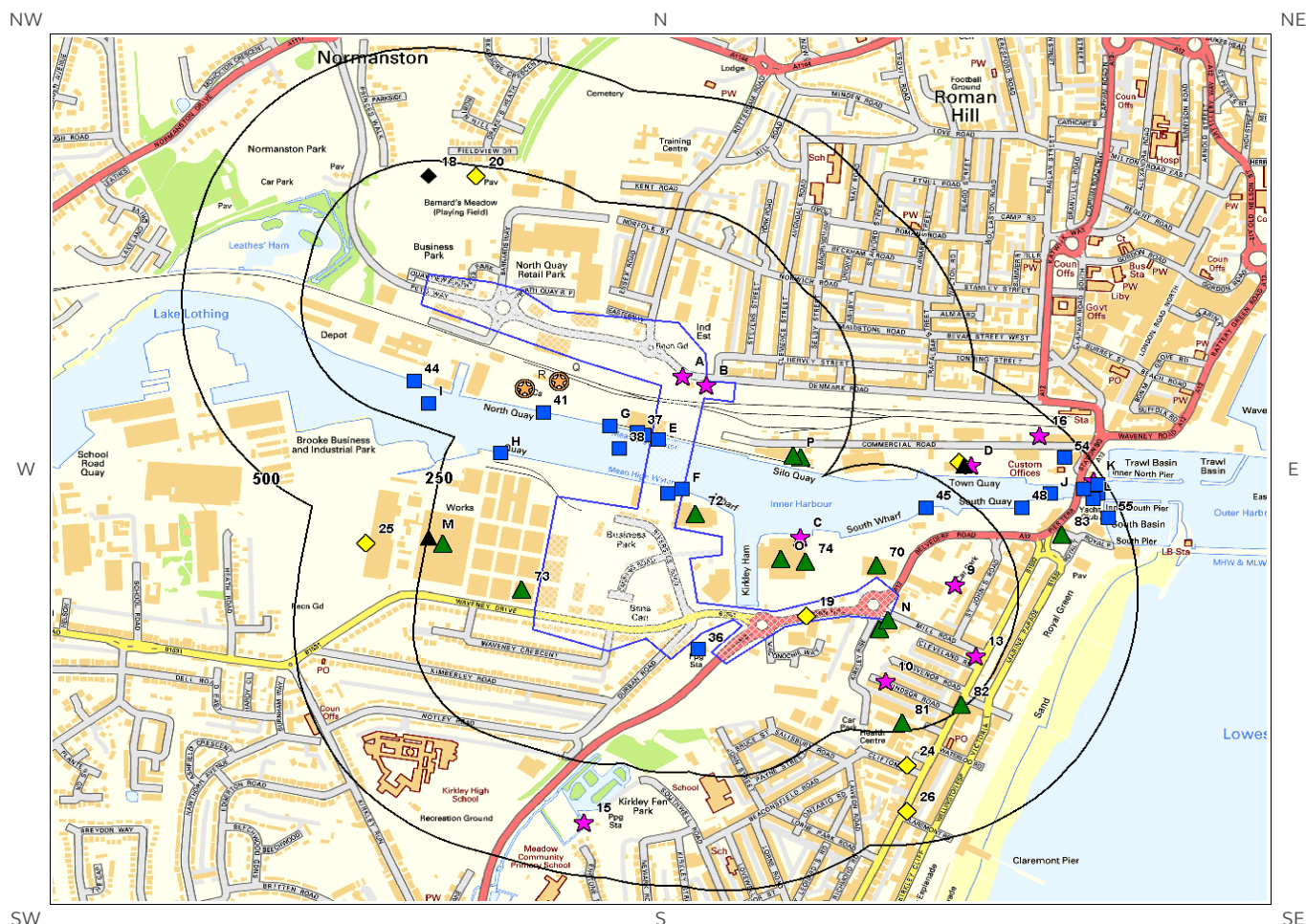
ID	Distance(m)	Direction	Use	Date
690T	0	On Site	Refuse Heap	1951
691R	0	On Site	Unspecified Wharf	1946
692E	0	On Site	Quay	1946
693D	0	On Site	Unspecified Pit	1974
694D	0	On Site	Unspecified Pit	1982
695Y	0	On Site	Unspecified Wharf	1938
696J	0	On Site	Unspecified Wharf	1938
697EE	0	On Site	Pond	1951
698EE	0	On Site	Unspecified Pit	1951
699EE	0	On Site	Pond	1938

700EE	0	On Site	Ponds	1946
701EF	0	On Site	Pond	1904
702T	0	On Site	Unspecified Pit	1904
703	0	On Site	Lake	1951
704Y	0	On Site	Unspecified Wharf	1938
705J	0	On Site	Unspecified Wharf	1938
706V	0	On Site	Unspecified Wharf	1992
707R	0	On Site	Unspecified Wharves	1904
708AJ	0	On Site	Cuttings	1904
709Y	5	E	Unspecified Wharf	1904
710AB	8	N	Unspecified Wharf	1951
711EF	11	SW	Pond	1951
712AA	15	E	Unspecified Wharf	1982
713AA	15	E	Unspecified Wharf	1974
714AB	19	N	Unspecified Wharf	1946
715AK	44	S	Quay	1974
716AJ	45	SE	Cuttings	1883
717AJ	46	SE	Cuttings	1946
718AU	47	E	Unspecified Wharf	1992
719AL	47	W	Sand Pit	1946
720AJ	48	SE	Cuttings	1974
721AJ	48	SE	Cuttings	1982
722AJ	48	SE	Cuttings	1992
723CL	48	SE	Refuse Heap	1951
724EG	54	W	Unspecified Heap	1951
725EH	55	E	Unspecified Wharf	1883
726AJ	64	SE	Cuttings	1974
727AJ	64	SE	Cuttings	1982
728AJ	64	SE	Cuttings	1992
729AT	67	SE	Unspecified Pit	1904
730AS	72	N	Unspecified Wharf	1883
731AT	75	SE	Unspecified Pit	1951
732AT	86	SE	Unspecified Pit	1946
733AU	89	N	Unspecified Wharf	1946
734AX	92	NW	Unspecified Wharf	1904
735CN	94	SE	Cemetery	1904
736AV	101	SE	Quay	1992
737AW	112	W	Cuttings	1951
738AX	115	NW	Unspecified Wharf	1946
739AV	118	SE	Unspecified Wharf	1904
740AX	118	NW	Unspecified Wharf	1982
741AX	118	NW	Unspecified Wharf	1974
742EI	120	S	Cuttings	1883
743BA	125	NE	Unspecified Wharf	1946
744BB	129	S	Unspecified Ground Workings	1974

745AZ	131	N	Unspecified Wharf	1938
746AZ	131	N	Unspecified Wharf	1938
747BA	134	NE	Unspecified Wharf	1951
748BD	135	S	Unspecified Pit	1951
749BB	144	S	Unspecified Ground Workings	1992
750BB	144	S	Unspecified Ground Workings	1982
751BC	149	S	Cuttings	1974
752BC	149	S	Cuttings	1982
753BD	162	S	Unspecified Heap	1982
754BD	162	S	Unspecified Heap	1974
755BD	162	S	Unspecified Heap	1992
756BG	162	NE	Quay	1974
757BE	162	NE	Quay	1992
758BE	162	NE	Quay	1982
759BA	169	NE	Unspecified Wharf	1938
760BA	169	NE	Unspecified Wharf	1938
761BG	171	NE	Quay	1946
762BG	171	NE	Quay	1883
763BG	171	NE	Quay	1904
764EJ	195	W	Water Body	1951
765EJ	195	W	Water Body	1982
766EJ	195	W	Water Body	1974
767EJ	195	W	Water Body	1992
768	202	N	Pond	1883
769EJ	205	W	Water Body	1883
770EJ	205	W	Water Body	1904
771EJ	205	W	Water Body	1946
772EK	207	W	Sand Pit	1883
773BL	222	N	Dry Dock	1938
774BL	222	N	Dry Dock	1938
775EL	223	S	Ponds	1951
776BJ	225	S	Ponds	1883
777EL	233	S	Water Body	1974
778EL	233	S	Water Body	1992
779EL	233	S	Water Body	1982
780BL	242	N	Dry Dock	1946
781BL	242	N	Dry Dock	1883
782EM	255	NE	Unspecified Pit	1946
783EN	255	NE	Unspecified Wharves	1904
784EM	263	NE	Sand Pit	1904
785BP	264	N	Cuttings	1938
786BP	268	N	Cuttings	1904
787BP	268	N	Cuttings	1946
788EO	269	N	Cuttings	1951

789BQ	272	N	Cemetery	1951
790BQ	272	N	Cemetery	1982
791BQ	272	N	Cemetery	1974
792BQ	272	N	Cemetery	1992
793EM	282	N	Gravel Pit	1883
794EP	302	SE	Pond	1974
795EP	302	SE	Pond	1982
796EP	302	SE	Pond	1992
797BR	304	W	Unspecified Pit	1982
798BR	304	W	Unspecified Pit	1992
799BR	304	W	Unspecified Pit	1974
800DS	341	NE	Quay	1951
801	370	SW	Ponds	1951
802BP	383	N	Cuttings	1974
803BP	383	N	Cuttings	1982
804BP	383	N	Cuttings	1992
805EQ	386	SW	Pond	1904
806EQ	386	SW	Pond	1883
807BQ	421	N	Cemetery	1938
808CA	432	N	Cemetery	1946
809CA	432	N	Cemetery	1904
810CB	440	NE	Dock	1938
811CB	440	NE	Dock	1938
812ER	488	NE	Brick Works	1883
813CE	493	NE	Unspecified Pit	1904
814CE	494	NE	Unspecified Pit	1946
815CE	496	NE	Unspecified Pit	1938
816CE	496	NE	Unspecified Pit	1938

2. Environmental Permits, Incidents and Registers Map



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|-------------------------------|---|--|
| Site Outline | Recorded Pollution Incident | RAS 3 & 4 Authorisations |
| Dangerous Substances (List 1) | Dangerous Substances (List 2) | Part A(1) Authorised Processes and Historic IPC Authorisations |
| Licenced Discharge Consents | Water Industry Referrals | Part A(2) and Part B Authorised Processes |
| Red List Discharge Consents | COMAH / NIHS Sites | Sites Determined as Contaminated Land |
| | Hazardous Substance Consents and Enforcements | |

2. Environmental Permits, Incidents and Registers

2.1 Industrial Sites Holding Licences and/or Authorisations

Searches of information provided by the Environment Agency and Local Authorities reveal the following information:

2.1.1 Records of historic IPC Authorisations within 500m of the study site:

7

The following IPC Authorisations are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
89M	248	W	653400 292600	Operator: Jeld-wen UK Ltd Address: Waveney Drive, Lowestoft, Suffolk, NR33 0TS Process: Timber Processes Permit Number: AU8750 Original Permit Number: IPCAPP Date Approved: 7-12-1998 Effective Date: 1-1-1999 Status: Superseded By Variation
90M	248	W	653400 292600	Operator: Jeld-wen UK Ltd Address: Waveney Drive, Lowestoft, Suffolk, NR33 0TS Process: Timber Processes Permit Number: BK1813 Original Permit Number: IPCMINVAR Date Approved: 12-1-2001 Effective Date: 17-1-2001 Status: Superseded By Variation
91M	248	W	653400 292600	Operator: Jeld-wen UK Ltd Address: Waveney Drive, Lowestoft, Suffolk, NR33 0TS Process: Timber Processes Permit Number: BY8365 Original Permit Number: IPCMINVAR Date Approved: 13-1-2005 Effective Date: 14-1-2005 Status: Referred To La
92D	304	NE	654520 292760	Operator: Varco Ltd Address: Brandt Enviromental Division, Town Quay, Commercial Road, Lowestoft, Suffolk, NR32 2TE Process: Recovery Processes Permit Number: AZ8153 Original Permit Number: IPCMINVAR Date Approved: 2-10-1997 Effective Date: 2-10-1997 Status: Superseded By Variation
93D	304	NE	654520 292760	Operator: Varco Ltd Address: Brandt Enviromental Division, Town Quay, Commercial Road, Lowestoft, Suffolk, NR32 2TE Process: Recovery Processes Permit Number: BE1429 Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Superseded By Variation
94D	304	NE	654520 292760	Operator: Varco Ltd Address: Brandt Enviromental Division, Town Quay, Commercial Road, Lowestoft, Suffolk, NR32 2TE Process: Recovery Processes Permit Number: AV1424 Original Permit Number: IPCAPP Date Approved: 2-7-1996 Effective Date: 5-7-1996 Status: Superseded By Variation

ID	Distance (m)	Direction	NGR	Details
95D	304	NE	654520 292760	<p>Operator: Varco Ltd Address: Brandt Environmental Division, Town Quay, Commercial Road, Lowestoft, Suffolk, NR32 2TE Process: Recovery Processes</p> <p>Permit Number: BT6322 Original Permit Number: IPCMINVAR Date Approved: 16-12-2002 Effective Date: 20-12-2002 Status: Revoked - Now Ippc</p>

2.1.2 Records of Part A(1) and IPPC Authorised Activities within 500m of the study site:

3

The following Part A(1) and IPPC Authorised Activities are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
86D	304	NE	654520 292760	<p>Operator: National Oilwell Varco Uk Ltd Installation Name: Brandt Environmental Division Process: RECOVERY OF WASTE; BY DISTILLATION OF OIL/ORGANIC SOLVENT</p> <p>Permit Number: EP3834SX Original Permit Number: EP3834SX EPR Reference: - Issue Date: 31/3/2006 Effective Date: 31/3/2006 Last date noted as effective: 2016-01-01 Status: Superseded</p>
87D	304	NE	654520 292760	<p>Operator: National Oilwell Varco Uk Ltd Installation Name: Brandt Environmental Division Process: RECOVERY OF WASTE; BY DISTILLATION OF OIL/ORGANIC SOLVENT</p> <p>Permit Number: TP3036LS Original Permit Number: EP3834SX EPR Reference: - Issue Date: 4/8/2006 Effective Date: 7/8/2006 Last date noted as effective: 2016-01-01 Status: Superseded</p>
88D	304	NE	654520 292760	<p>Operator: National Oilwell Varco Uk Ltd Installation Name: Brandt Environmental Division Process: DISPOSAL OR RECOVERY OF HAZARDOUS WASTE WITH A CAPACITY EXCEEDING 10 TONNES PER DAY INVOLVING PHYSICO-CHEMICAL TREATMENT</p> <p>Permit Number: EP3237NR Original Permit Number: EP3834SX EPR Reference: - Issue Date: 4/12/2013 Effective Date: 4/12/2013 Last date noted as effective: 2016-01-01 Status: Effective</p>

2.1.3 Records of Red List Discharge Consents (potentially harmful discharges to controlled waters) within 500m of the study site:

0

Database searched and no data found.

2.1.4 Records of List 1 Dangerous Substances Inventory Sites within 500m of the study site:

1

The following List 1 Dangerous Substance Inventory Site records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
18	215	N	653400 293400	Name: M.p. (eastern) Limited Status: Active Receiving Water: Na Authorised Substances: Mercury (other)

2.1.5 Records of List 2 Dangerous Substance Inventory Sites within 500m of the study site:

8

The following List 2 Dangerous Substance Inventory Site records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
19	0	On Site	654190 292430	Name: M R King & Sons Status: Not Active Receiving Water: Na Authorised Substances: pH
20	226	N	653500 293400	Name: Ev Head Status: Not Active Receiving Water: Na Authorised Substances: pH
21D	307	NE	654510 292770	Name: Brandt Environmental Division Status: Not Active Receiving Water: Na Authorised Substances: pH
22D	307	NE	654510 292770	Name: Brandt Environmental Division Status: Not Active Receiving Water: Na Authorised Substances: pH
23D	307	NE	654510 292770	Name: Brandt Environmental Division Status: Active Receiving Water: Na Authorised Substances: pH, Zinc
24	326	S	654400 292100	Name: Supersine Ltd Status: Not Active Receiving Water: Na Authorised Substances: pH
25	374	W	653270 292590	Name: Jeld-wen Uk Ltd Status: Not Active Receiving Water: Na Authorised Substances: pH
26	426	S	654400 292000	Name: John Al Jory Status: Not Active Receiving Water: Na Authorised Substances: pH

2.1.6 Records of Part A(2) and Part B Activities and Enforcements within 500m of the study site:

15

The following Part A(2) and Part B Activities are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
69N	5	S	654361 292419	<p>Address: Malthurst Ltd, Mill Road Service Station, Mill Road, Lowestoft, Suffolk, NR33 0PP</p> <p>Process: Unloading of Petrol into Storage at Service Stations</p> <p>Status: Historical Permit</p> <p>Permit Type: Part B</p> <p>Enforcement: No Enforcements Notified</p> <p>Date of Enforcement: No Enforcements Notified</p> <p>Comment: No Enforcements Notified</p>
70	24	N	654336 292540	<p>Address: Redland, Flixton Park, Bungay, Suffolk, NR35 1NN</p> <p>Process: cement/lime/mortar process</p> <p>Status: Historical Permit</p> <p>Permit Type: Part B</p> <p>Enforcement: No Enforcements Notified</p> <p>Date of Enforcement: No Enforcements Notified</p> <p>Comment: No Enforcements Notified</p>
71N	27	S	654343 292399	<p>Address: Mil Road Service Station, Mill Road, Lowestoft, NR33 0PP</p> <p>Process: Petrol Vapour Recovery, Petrol Filling Stn</p> <p>Status: Historical Permit</p> <p>Permit Type: Part B</p> <p>Enforcement: No Enforcements Notified</p> <p>Date of Enforcement: No Enforcements Notified</p> <p>Comment: No Enforcements Notified</p>
72	34	N	653958 292652	<p>Address: Redland Ltd, Riverside Road, Lowestoft, NR33 0TU</p> <p>Process: No Details</p> <p>Status: Historical Permit</p> <p>Permit Type: Part B</p> <p>Enforcement: No Enforcements Notified</p> <p>Date of Enforcement: No Enforcements Notified</p> <p>Comment: No Enforcements Notified</p>
73	35	W	653595 292485	<p>Address: Sanyo Industries, Waveney Drive, Lowestoft, NR33 0TR</p> <p>Process: coating & enamelling process</p> <p>Status: Historical Permit</p> <p>Permit Type: Part B</p> <p>Enforcement: No Enforcements Notified</p> <p>Date of Enforcement: No Enforcements Notified</p> <p>Comment: No Enforcements Notified</p>
74	87	N	654189 292547	<p>Address: Asda, Asda Stores Limited, Belvedere Road, Lowestoft, Suffolk, NR33 0PX</p> <p>Process: Unloading of Petrol into Storage at Service Stations</p> <p>Status: Current Permit</p> <p>Permit Type: Part B</p> <p>Enforcement: No Enforcements Notified</p> <p>Date of Enforcement: No Enforcements Notified</p> <p>Comment: No Enforcements Notified</p>
75O	106	N	654136 292553	<p>Address: Tarmac Topmix, Ellough Industrial Estate, Ellough, Beccles, Suffolk, NR34 7TD</p> <p>Process: cement/lime/mortar process</p> <p>Status: Historical Permit</p> <p>Permit Type: Part B</p> <p>Enforcement: No Enforcements Notified</p> <p>Date of Enforcement: No Enforcements Notified</p> <p>Comment: No Enforcements Notified</p>
76O	106	N	654136 292553	<p>Address: Readicrete, Horn Hill, Lowestoft, NR33 0PX</p> <p>Process: cement/lime/mortar process</p> <p>Status: Historical Permit</p> <p>Permit Type: Part B</p> <p>Enforcement: No Enforcements Notified</p> <p>Date of Enforcement: No Enforcements Notified</p> <p>Comment: No Enforcements Notified</p>
77O	106	N	654136 292553	<p>Address: Readicrete, Horn Hill, Lowestoft, NR33 0PX</p> <p>Process: cement/lime/mortar process</p> <p>Status: Historical Permit</p> <p>Permit Type: Part B</p> <p>Enforcement: No Enforcements Notified</p> <p>Date of Enforcement: No Enforcements Notified</p> <p>Comment: No Enforcements Notified</p>

ID	Distance (m)	Direction	NGR	Details
78P	174	SE	654162 292781	<p>Address: Plasmor Ltd, Silo Storage Unit, Commercial Road, North Quay, Lowestoft, Suffolk, NR32 2TR Process: cement/lime/mortar process Status: Historical Permit Permit Type: Part B</p> <p>Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified</p>
79P	188	SE	654178 292777	<p>Address: Dudman (Lowestoft) Ltd, The Dudman Group of Companies, Commercial Road, Lowestoft, Suffolk, NR32 2TE Process: Bulk cement Status: Current Permit Permit Type: Part B</p> <p>Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified</p>
80M	217	W	653429 292586	<p>Address: Jeld-Wen, Waveney Drive, Lowestoft, Suffolk, NR33 0TS Process: Timber impregnation Status: Historical Permit Permit Type: Part B</p> <p>Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified</p>
81	234	S	654391 292192	<p>Address: Aura Graphics Limited (Formally Supersine Duramark), Freemantle Road, Lowestoft, Suffolk, NR33 0EA Process: Screen Printing; Coating & SED Status: Current Permit Permit Type: Part B</p> <p>Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified</p>
82	246	SE	654514 292231	<p>Address: Fashion Clean, 140 London Road South, Lowestoft, Suffolk, NR33 0AZ Process: Dry Cleaning Status: Current Permit Permit Type: Part B</p> <p>Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified</p>
83	363	E	654723 292606	<p>Address: Gooch Motors Accident Repair Centre, Belvedere Rd, Lowestoft, NR33 0PP Process: No Details Status: Historical Permit Permit Type: Part B</p> <p>Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified</p>

2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations:

0

Database searched and no data found.

2.1.8 Records of Licensed Discharge Consents within 500m of the study site:

32

The following Licensed Discharge Consents records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
27E	0	On Site	653880 292820	<p>Address: ST PETERS ST & ROTTERDAM RD CSO, LOWESTOFT, SUFFOLK</p> <p>Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY</p> <p>Permit Number: ASETS16977 Permit Version: 1</p> <p>Receiving Water: Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88) Issue date: 24/03/2005 Effective Date: 24-Mar-2005 Revocation Date: -</p>
28E	0	On Site	653880 292820	<p>Address: ST PETERS ST & ROTTERDAM RD CSO, LOWESTOFT, SUFFOLK</p> <p>Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY</p> <p>Permit Number: ASETS16977 Permit Version: 1</p> <p>Receiving Water: Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88) Issue date: 24/03/2005 Effective Date: 24-Mar-2005 Revocation Date: -</p>
29E	0	On Site	653880 292820	<p>Address: ST PETERS ST & ROTTERDAM RD CSO, LOWESTOFT, SUFFOLK</p> <p>Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY</p> <p>Permit Number: ASETS16977 Permit Version: 1</p> <p>Receiving Water: Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88) Issue date: 24/03/2005 Effective Date: 24-Mar-2005 Revocation Date: -</p>
30E	0	On Site	653880 292820	<p>Address: ST PETERS ST & ROTTERDAM RD CSO, LOWESTOFT, SUFFOLK</p> <p>Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY</p> <p>Permit Number: ASETS16977 Permit Version: 1</p> <p>Receiving Water: Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88) Issue date: 24/03/2005 Effective Date: 24-Mar-2005 Revocation Date: -</p>
31E	0	On Site	653880 292820	<p>Address: ST PETERS ST & ROTTERDAM RD CSO, LOWESTOFT, SUFFOLK</p> <p>Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY</p> <p>Permit Number: ASETS16977 Permit Version: 1</p> <p>Receiving Water: Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88) Issue date: 24/03/2005 Effective Date: 24-Mar-2005 Revocation Date: -</p>
32E	0	On Site	653880 292820	<p>Address: ST PETERS ST & ROTTERDAM RD CSO, LOWESTOFT, SUFFOLK</p> <p>Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY</p> <p>Permit Number: ASETS16977 Permit Version: 1</p> <p>Receiving Water: Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88) Issue date: 24/03/2005 Effective Date: 24-Mar-2005 Revocation Date: -</p>
33F	0	On Site	653930 292710	<p>Address: CANNING FACTORY L/TOFT, LOWESTOFT, NR33</p> <p>Effluent Type: TRADE DISCHARGES - PROCESS EFFLUENT - NOT WATER COMPANY</p> <p>Permit Number: PRENF02101 Permit Version: 1</p> <p>Receiving Water: Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: 19/01/1990 Effective Date: 19-Jan-1990 Revocation Date: 26/06/2000</p>

ID	Distance (m)	Direction	NGR	Details	
34F	0	On Site	653900 292700	Address: RIVERSIDE BUSINESS PARK, RIVERSIDE ROAD, LOWESTOFT, SUFFOLK, NR33 0TU Effluent Type: TRADE DISCHARGES - PROCESS EFFLUENT - NOT WATER COMPANY Permit Number: PR4TS605 Permit Version: 1	Receiving Water: Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 24/09/1986 Effective Date: 24-Sep-1986 Revocation Date: -
35E	18	W	653850 292830	Address: NORWICH ROAD/DENMARK ROAD, LOWESTOFT Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: AW4TS1413 Permit Version: 1	Receiving Water: Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 14/10/1987 Effective Date: 14-Oct-1987 Revocation Date: -
36	21	SE	653964 292357	Address: ROTTERDAM & GORLESTON RDS CSOS, LOWESTOFT, SUFFOLK Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: AW4NF328X Permit Version: 1	Receiving Water: Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 23/10/1962 Effective Date: 23-Oct-1962 Revocation Date: -
37	31	W	653837 292836	Address: ROTTERDAM & GORLESTON RDS CSOS, LOWESTOFT, SUFFOLK Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: AW4NF328X Permit Version: 1	Receiving Water: Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 23/10/1962 Effective Date: 23-Oct-1962 Revocation Date: -
38	61	W	653800 292800	Address: BEECHAM FOODS LTD, LOWESTOFT Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - NOT WATER COMPANY Permit Number: PR4TS665X Permit Version: 1	Receiving Water: Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 11/07/1969 Effective Date: 11-Jul-1969 Revocation Date: 24/02/1992
39G	90	W	653780 292850	Address: NORWICH ROAD CSO'S (#1 & #2), LOWESTOFT, SUFFOLK Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: ASETS16992 Permit Version: 1	Receiving Water: Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88) Issue date: 24/03/2005 Effective Date: 24-Mar-2005 Revocation Date: -
40G	90	W	653780 292850	Address: NORWICH ROAD CSO'S (#1 & #2), LOWESTOFT, SUFFOLK Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: ASETS16992 Permit Version: 1	Receiving Water: Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88) Issue date: 24/03/2005 Effective Date: 24-Mar-2005 Revocation Date: -
41	134	S	653640 292880	Address: BRITISH PARTS BUILDING, INDUSTRIAL ESTATE, NORTH QUAY ROAD, LOWESTOFT, SUFFOLK Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: PR4TS1013X Permit Version: 1	Receiving Water: Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 23/01/1984 Effective Date: 23-Jan-1984 Revocation Date: -
42H	152	NW	653550 292790	Address: JELD WEN UK LTD, WAVENEY DRIVE, LOWESTOFT, SUFFOLK, NR33 0TS Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: PRENF19983 Permit Version: 1	Receiving Water: Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 21/06/2006 Effective Date: 21-Jun-2006 Revocation Date: 08/11/2009

ID	Distance (m)	Direction	NGR	Details	
43H	152	NW	653550 292790	Address: JELD WEN UK LTD, WAVENEY DRIVE, LOWESTOFT, SUFFOLK, NR33 0TS Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: PRENF19983 Permit Version: 2	Receiving Water: Status: REVOKED (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 09/11/2009 Effective Date: 09-Nov-2009 Revocation Date: 01/07/2010
44	163	S	653370 292950	Address: SHELL UK LTD, LOTHING DEPOT, P.O. BOX 4, COMMERCIAL ROAD, NORTH QUAY, LOWESTOFT, SUFFOLK, NR32 2TH Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: NPSWQD000453 Permit Version: 1	Receiving Water: Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 27/03/2008 Effective Date: 27-Mar-2008 Revocation Date: -
45	185	NE	654440 292670	Address: BELVEDERE ROAD OVERFLOW, LOWESTOFT, SUFFOLK, NR33 0PU Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: ASETS16995 Permit Version: 1	Receiving Water: Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88) Issue date: 24/03/2005 Effective Date: 24-Mar-2005 Revocation Date: -
46I	199	S	653400 292900	Address: SHELL UK LTD, LOTHING DEPOT, P.O. BOX 4, COMMERCIAL ROAD, NORTH QUAY, LOWESTOFT, SUFFOLK, NR32 2TH Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: PR4TS564X Permit Version: 1	Receiving Water: Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 10/06/1966 Effective Date: 10-Jun-1966 Revocation Date: 01/07/1993
47I	199	S	653400 292900	Address: SHELL UK LTD, LOTHING DEPOT, P.O. BOX 4, COMMERCIAL ROAD, NORTH QUAY, LOWESTOFT, SUFFOLK, NR32 2TH Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: PR4TS873X Permit Version: 1	Receiving Water: Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 30/09/1980 Effective Date: 30-Sep-1980 Revocation Date: 30/06/2004
48	321	NE	654640 292670	Address: ST JOHN'S ROAD CSO, ST JOHN'S ROAD, LOWESTOFT, SUFFOLK Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: ASETS16950 Permit Version: 1	Receiving Water: Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 25/01/2005 Effective Date: 25-Jan-2005 Revocation Date: -
49J	387	NE	654700 292700	Address: BRIDGE, LOWESTOFT, NR32 1BG Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: ASETS2159 Permit Version: 1	Receiving Water: Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: 02/01/1990 Effective Date: 02-Jan-1990 Revocation Date: 02/09/2010
50J	387	NE	654700 292700	Address: BRIDGE, LOWESTOFT, NR32 1BG Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: ASETS2159 Permit Version: 2	Receiving Water: Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: 03/09/2010 Effective Date: 03-Sep-2010 Revocation Date: -
51K	451	NE	654770 292710	Address: WINNIPEG ROAD/ST PETERS STREET, LOWESTOFT Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: AW4TS1414 Permit Version: 1	Receiving Water: Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 14/10/1987 Effective Date: 14-Oct-1987 Revocation Date: -

ID	Distance (m)	Direction	NGR	Details	
52L	458	NE	654790 292690	Address: ROYAL NORFOLK & SUFFOLK YACHT CLUB, LOWESTOFT, SUFFOLK, NR33 0AQ Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: AW4TS12090 Permit Version: 1	Receiving Water: Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88) Issue date: 08/03/2002 Effective Date: 08-Mar-2002 Revocation Date: -
53L	458	NE	654790 292690	Address: ROYAL NORFOLK & SUFFOLK YACHT CLUB, LOWESTOFT, SUFFOLK, NR33 0AQ Effluent Type: MISCELLANEOUS DISCHARGES - EMERGENCY DISCHARGES Permit Number: AW4TS12090 Permit Version: 1	Receiving Water: Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88) Issue date: 08/03/2002 Effective Date: 08-Mar-2002 Revocation Date: -
54	460	NE	654730 292780	Address: CLAPHAM ROAD SOUTH/BEVAN STREET EAS, LOWESTOFT Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: AW4TS1415 Permit Version: 1	Receiving Water: Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 14/10/1987 Effective Date: 14-Oct-1987 Revocation Date: 22/01/1992
55	469	E	654821 292647	Address: ROYAL NORFOLK & SUFFOLK YACHT CLUB, ROYAL PLAIN, LOWESTOFT, SUFFOLK, NR33 0AQ Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: PR4TS1515 Permit Version: 1	Receiving Water: Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 15/09/1987 Effective Date: 15-Sep-1987 Revocation Date: -
56K	472	NE	654800 292700	Address: ROYAL NORFOLK & SUFFOLK YACHT CLUB, LOWESTOFT, SUFFOLK, NR33 0AQ Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: AW4TS1411 Permit Version: 1	Receiving Water: Status: REVOKED (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 14/10/1987 Effective Date: 14-Oct-1987 Revocation Date: 07/03/2002
57K	482	NE	654800 292720	Address: STATION SQUARE#2 & COMERCIAL RD CSO, LOWESTOFT, SUFFOLK Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: ASETS16994 Permit Version: 1	Receiving Water: Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88) Issue date: 24/03/2005 Effective Date: 24-Mar-2005 Revocation Date: -
58K	482	NE	654800 292720	Address: STATION SQUARE#2 & COMERCIAL RD CSO, LOWESTOFT, SUFFOLK Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: ASETS16994 Permit Version: 1	Receiving Water: Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88) Issue date: 24/03/2005 Effective Date: 24-Mar-2005 Revocation Date: -

2.1.9 Records of Water Industry Referrals (potentially harmful discharges to the public sewer) within 500m of the study site:

0

Database searched and no data found.

2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site:

2

The following records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	Application Reference Number	NGR	Application Status	Application Date	Address	Details	Details of Enforcement Action
96Q	58	S	DC/06/0225/HAZ	653673 292949	Refused	16/01/2006	North Quay Cargo Terminal, Commercial Road, Lowestoft, NR32 2TE	Storage of Ammonium Nitrate - Up to 4,999 tonnes	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified
97R	98	S	DC/00/0241/HAZ	653601 292933	Refused	01/09/2000	Land At North Quay, Lowestoft Retail Park, Peto Way, Lowestoft, NR32 2ED	Storage of ammonium nitrate	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified

2.2 Dangerous or Hazardous Sites

Records of COMAH & NIHHS sites within 500m of the study site:

0

Database searched and no data found.

2.3 Environment Agency Recorded Pollution Incidents

2.3.1 Records of National Incidents Recording System, List 2 within 500m of the study site:

17

The following NIRS List 2 records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
1A	0	On Site	653930 292960	Incident Date: 10-Mar-2003 Incident Identification: 142495 Pollutant: Inert Materials and Wastes: Specific Waste Materials: Specific Waste Materials: Specific Waste Materials Pollutant Description: Construction and Demolition Materials and Wastes: Tyres: Vehicles and Vehicle Parts: Other Specific Waste Material Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
2B	0	On Site	653980 292940	Incident Date: 10-Mar-2003 Incident Identification: 142496 Pollutant: Specific Waste Materials: Specific Waste Materials Pollutant Description: Tyres: Vehicles and Vehicle Parts Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
3A	0	On Site	653930 292960	Incident Date: 10-Mar-2003 Incident Identification: 142495 Pollutant: Specific Waste Materials Pollutant Description: Tyres Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
4B	0	On Site	653980 292940	Incident Date: 10-Mar-2003 Incident Identification: 142496 Pollutant: Specific Waste Materials Pollutant Description: Vehicles and Vehicle Parts Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
5A	0	On Site	653930 292960	Incident Date: 10-Mar-2003 Incident Identification: 142495 Pollutant: Inert Materials and Wastes Pollutant Description: Construction and Demolition Materials and Wastes Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
6B	0	On Site	653980 292940	Incident Date: 10-Mar-2003 Incident Identification: 142496 Pollutant: Specific Waste Materials Pollutant Description: Tyres Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
7A	0	On Site	653930 292960	Incident Date: 10-Mar-2003 Incident Identification: 142495 Pollutant: Specific Waste Materials Pollutant Description: Vehicles and Vehicle Parts Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
8A	0	On Site	653930 292960	Incident Date: 10-Mar-2003 Incident Identification: 142495 Pollutant: Specific Waste Materials Pollutant Description: Other Specific Waste Material Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
9	118	E	654500 292500	Incident Date: 17-Jun-2001 Incident Identification: 9748 Pollutant: Sewage Materials Pollutant Description: Final Effluent Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)

ID	Distance (m)	Direction	NGR	Details	
10	136	S	654354 292288	Incident Date: 02-Nov-2002 Incident Identification: 118326 Pollutant: Sewage Materials Pollutant Description: Other Sewage Material	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
11C	146	N	654176 292605	Incident Date: 19-Nov-2002 Incident Identification: 121794 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Smoke	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
12C	146	N	654176 292605	Incident Date: 19-Nov-2002 Incident Identification: 121794 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Smoke	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
13	199	SE	654543 292343	Incident Date: 06-Mar-2002 Incident Identification: 62261 Pollutant: Contaminated Water Pollutant Description: Firefighting Run-Off	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
14D	315	NE	654534 292763	Incident Date: 18-Sep-2002 Incident Identification: 108770 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
15	382	S	653724 291976	Incident Date: 28-Jul-2003 Incident Identification: 177218 Pollutant: Sewage Materials Pollutant Description: Crude Sewage	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
16	457	NE	654677 292828	Incident Date: 16-Jun-2003 Incident Identification: 166091 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Dust	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
17K	478	NE	654790 292730	Incident Date: 12-Nov-2001 Incident Identification: 42458 Pollutant: Sewage Materials Pollutant Description: Crude Sewage	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

2.3.2 Records of National Incidents Recording System, List 1 within 500m of the study site:

0

Database searched and no data found.

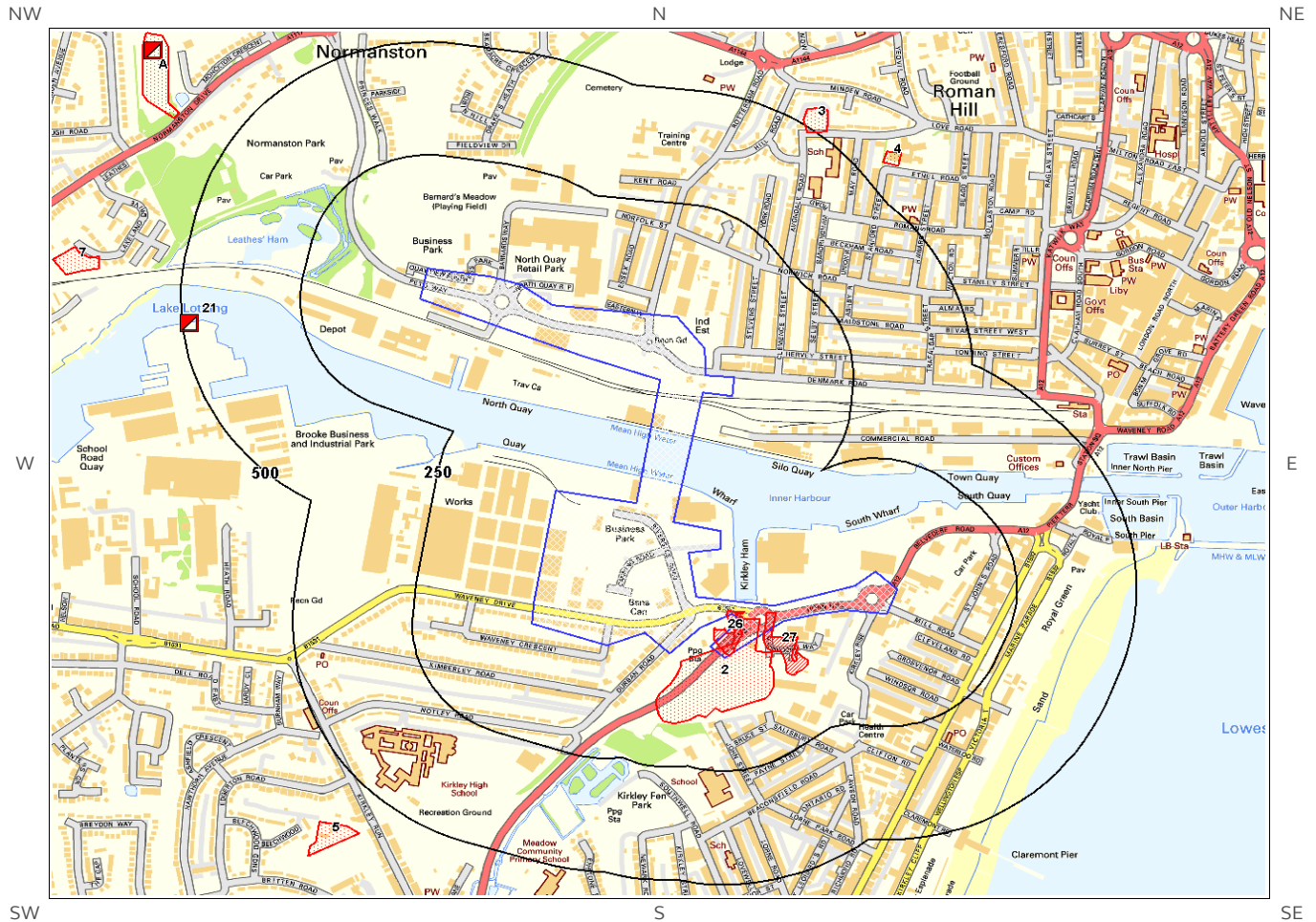
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990

How many records of sites determined as contaminated land under Section 78R of the Environmental Protection Act 1990 are there within 500m of the study site?

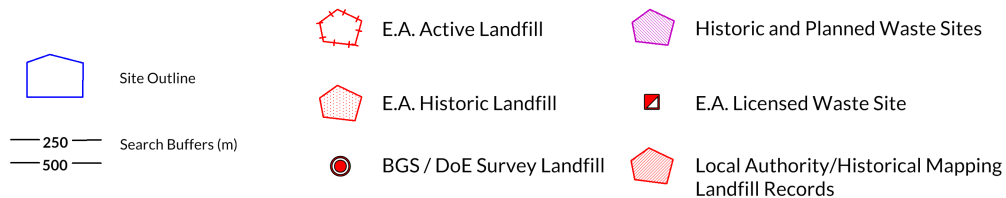
0

Database searched and no data found.

3. Landfill and Other Waste Sites Map



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3. Landfill and Other Waste Sites

3.1 Landfill Sites

3.1.1 Records from Environment Agency landfill data within 1000m of the study site:

0

Database searched and no data found.

3.1.2 Records of Environment Agency historic landfill sites within 1500m of the study site:

19

The following landfill records are represented as either points or polygons on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details
2	0	On Site	654000 292200	Site Address: South Inner Harbour, Lowestoft, Suffolk Waste Licence: - Site Reference: WAV35, OFSW36 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
3	488	NE	654200 293500	Site Address: Love Road, Lowestoft, Suffolk Waste Licence: - Site Reference: OFSW11, WAV10, 3500/5163 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
4	548	NE	654300 293400	Site Address: Roman Hill, Lowestoft Waste Licence: - Site Reference: OFSW12, WAV11, 3500/5162 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
5	586	SW	653100 291900	Site Address: Kirkley Run/Britten Road, Lowestoft Waste Licence: - Site Reference: OFSW15, WAV14, 3500/5159 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: 01-May-1955 Last Recorded: 31-Oct-1956

ID	Distance (m)	Direction	NGR	Details	
6A	623	NW	652800 293600	Site Address: Normanston Drive, Lowestoft, Suffolk Waste Licence: - Site Reference: WAV19, OFSW20 Waste Type: - Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
7	674	W	652600 293100	Site Address: Roman Hill, Lowestoft, Suffolk Waste Licence: - Site Reference: OFSW13, WAV12, 3500/5161 Waste Type: - Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
Not shown	749	N	653200 293900	Site Address: Fir Lane, Lowestoft, Suffolk Waste Licence: - Site Reference: OFSW8, WAV7, 3500/5166 Waste Type: - Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
Not shown	801	NW	653000 293900	Site Address: Slaters Pond, Normanston Drive Waste Licence: - Site Reference: OFSW07, WAV5, 3500/5168 Waste Type: - Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
Not shown	814	N	653200 293900	Site Address: Fir Lane, Lowestoft, Suffolk Waste Licence: - Site Reference: OFSW8, WAV6, 3500/5167 Waste Type: - Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
Not shown	857	N	653600 294000	Site Address: June Avenue, Lowestoft, Suffolk Waste Licence: - Site Reference: WAV36, OFSW37 Waste Type: - Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
Not shown	863	N	654100 293900	Site Address: Marham Road Pit, Marham Road, Lowestoft, Suffolk Waste Licence: - Site Reference: OFSW10, WAV9, 3500/5164 Waste Type: - Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
Not shown	870	N	653300 294000	Site Address: Elizabeth Close, Lowestoft, Suffolk Waste Licence: - Site Reference: OFSW9, WAV8, 3500/5165 Waste Type: - Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -

ID	Distance (m)	Direction	NGR	Details	
Not shown	898	NW	652900 293900	Site Address: Kesgrave Drive, Oulton Broad Waste Licence: - Site Reference: OFSW6, WAV4, 3500/5169 Waste Type: - Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
Not shown	1182	N	653900 294300	Site Address: Haven Avenue, Lowestoft, Suffolk Waste Licence: - Site Reference: WAV3, OFSW5, 3500/5170 Waste Type: - Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
Not shown	1252	SW	652700 291400	Site Address: Oak Wood Road, Lowestoft, Suffolk Waste Licence: - Site Reference: WAV32, OFSW33 Waste Type: - Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
Not shown	1345	SW	652300 291800	Site Address: Colville Road/Boon Drive, Lowestoft, Suffolk Waste Licence: - Site Reference: OFSW14, WAV13, 3500/5160 Waste Type: - Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: 01-May-1964 Last Recorded: 31-Oct-1964
Not shown	1347	S	653100 291100	Site Address: Martin's Pit, Blackheath Road, Lowestoft Waste Licence: - Site Reference: 907/17/01, WAV42, FSW1 Waste Type: Inert, Industrial Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: Mr Martin Licence Holder: Mr Martin First Recorded: 01-Jul-1948 Last Recorded: -
Not shown	1357	NE	655400 293300	Site Address: Hamilton Road, Lowestoft, Suffolk Waste Licence: - Site Reference: WAV56, FSW16, 907/02/17 Waste Type: Household Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: Suffolk County Council Licence Holder: - First Recorded: 31-Dec-1977 Last Recorded: 31-Dec-1989
Not shown	1458	SW	652200 291700	Site Address: Whitton Close, Lowestoft, Suffolk Waste Licence: - Site Reference: WAV33, OFSW34 Waste Type: - Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -

3.1.3 Records of BGS/DoE non-operational landfill sites within 1500m of the study site:

1

The following landfill records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details
Not shown	962	N	654200.0 294000.0	Address: Marham Road Pit, Marham Rd, Lowestoft BGS Number: 2004.0 Risk: Risk to minor aquifer Waste Type: N/A

3.1.4 Records of Landfills from Local Authority and Historical Mapping Records within 1500m of the study site:

11

The following landfill records are represented as points or polygons on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Site Address	Source	Data Type
26	0	On Site	654032 292379	Refuse Tip	1963 mapping	Polygon
27	0	On Site	654150 292357	Refuse Tip	1963 mapping	Polygon
Not shown	831	NW	652938 293954	Refuse Tip	1968 mapping	Polygon
Not shown	845	NW	652983 293934	Refuse Tip	1963 mapping	Polygon
Not shown	846	NW	652983 293935	Refuse Tip	1962 mapping	Polygon
Not shown	849	NW	653002 293957	Refuse Tip	1971 mapping	Polygon
Not shown	909	NW	652954 294037	Refuse Tip	1965 mapping	Polygon
Not shown	909	NW	652953 294038	Refuse Tip	1965 mapping	Polygon
Not shown	909	NW	652894 294055	Refuse Tip	1968 mapping	Polygon
Not shown	1307	NE	655455 293270	Refuse Tip	1984 mapping	Polygon
Not shown	1423	SW	653056 291044	Refuse Tip	1971 mapping	Polygon

3.2 Other Waste Sites

3.2.1 Records of waste treatment, transfer or disposal sites within 500m of the study site:

0

Database searched and no data found.

3.2.2 Records of Environment Agency licensed waste sites within 1500m of the study site:

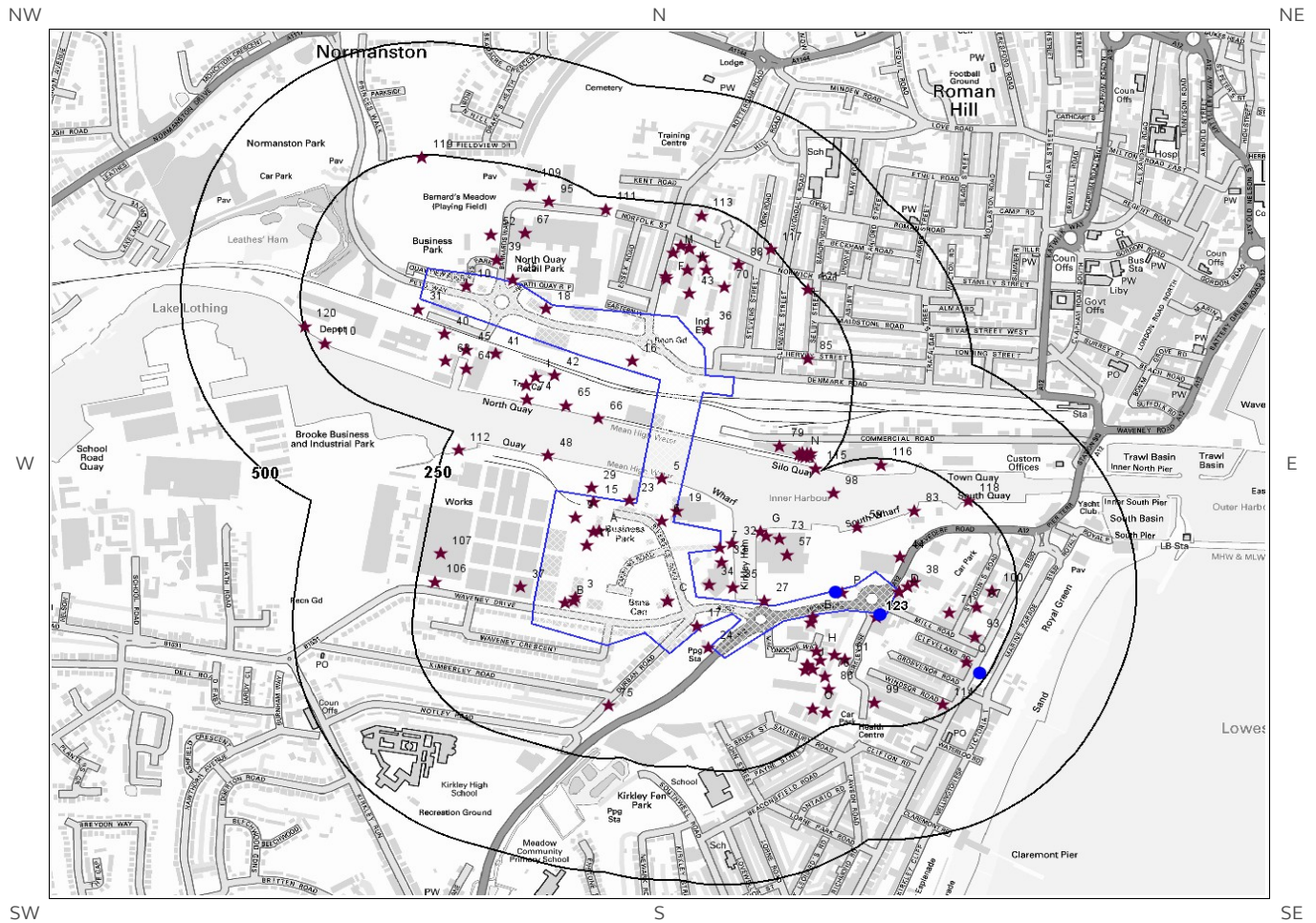
5

The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details
21	486	W	652902 293066	<p>Site Address: Brooke Marina, Heath Road, Lowestoft, Suffolk, NR33 9LZ Type: Metal Recycling Site (Vehicle Dismantler) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MIT037 EPR reference: EA/EPR/BB3601TF/V002 Operator: Mitchell Demolition Limited And East Point Metal Trading Limited Waste Management licence No: 401425 Annual Tonnage: 24999.999</p> <p>Issue Date: 29/10/2014 Effective Date: - Modified: 16/03/2015 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: East Point Metal Trading Limited / Mitchell Demolition Limited Correspondence Address: -, -</p>
22A	751	NW	652826 293667	<p>Site Address: Neeves Pit, Normanstone Drive, Oulton Broad, Lowestoft, Suffolk, NR32 3DA Type: Transfer Station taking Non-Biodegradable Wastes Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: WAV001 EPR reference: EA/EPR/AP3495NY/A001 Operator: Waveney District Council Waste Management licence No: 70782 Annual Tonnage: 5000.0</p> <p>Issue Date: 12/09/1990 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Oulton Correspondence Address: -, -</p>
Not shown	871	W	652533 292939	<p>Site Address: Unit 6, Harbour Road Ind Est, Oulton Broad, Suffolk, NR32 3LZ Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: WAT001 EPR reference: - Operator: P W Waters Ltd Waste Management licence No: 70784 Annual Tonnage: 4999.0</p> <p>Issue Date: 03/10/1991 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Oulton Broad Correspondence Address: -, Unit 6, Harbour Road Ind Est, Oulton Broad, Suffolk, NR32 3LZ</p>

ID	Distance (m)	Direction	NGR	Details
Not shown	940	W	652467 292915	<p>Site Address: Unit 6, Harbour Road Ind Est, Oulton Broad, Suffolk, NR32 3LZ Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: WAT001 EPR reference: EA/EPR/BP3695LP/V001 Operator: P W Waters Ltd Waste Management licence No: 70784 Annual Tonnage: 4999.0</p> <p>Issue Date: 03/10/1991 Effective Date: - Modified: 31/07/2008 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Oulton Broad Correspondence Address: -, -</p>
Not shown	1471	NE	655477 293462	<p>Site Address: Wildes Street, Lowestoft, Suffolk, NR32 1XH Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SUF009 EPR reference: EA/EPR/AP3795NL/S002 Operator: Viridor Waste Suffolk Ltd Waste Management licence No: 70787 Annual Tonnage: 7500.0</p> <p>Issue Date: 25/05/1994 Effective Date: - Modified: - Surrendered Date: 17/11/2006 Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Lowestoft C A Site Correspondence Address: -, -</p>

4. Current Land Use Map



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Site Outline

★ Current Industrial Sites

— Electricity Transmission Cables

— 250 — Search Buffers (m)
— 500 —

● Petrol & Fuel Sites

— Gas Transmission Pipelines

4. Current Land Uses

4.1 Current Industrial Data

Records of potentially contaminative industrial sites within 250m of the study site:

121

The following records are represented as points on the Current Land Uses map.

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1B	0	On Site	Chimney	653687 292448	NR33	Chimneys	Industrial Features
2P	0	On Site	M R King & Sons Lowestoft Ltd	654266 292469	Horn Hill, Lowestoft, NR33 OPX	New Vehicles	Motoring
3	0	On Site	Depot	653709 292461	NR33	Container and Storage	Transport, Storage and Delivery
4A	0	On Site	Chimney	653760 292607	NR33	Chimneys	Industrial Features
5	0	On Site	Wharf	653890 292722	NR33	Moorings and Unloading Facilities	Water
6	0	On Site	Electricity Sub Station	653891 292629	NR33	Electrical Features	Infrastructure and Facilities
7	0	On Site	Electricity Sub Station	654011 292569	NR33	Electrical Features	Infrastructure and Facilities
8A	0	On Site	Tank	653748 292606	NR33	Tanks (Generic)	Industrial Features
9	0	On Site	Electricity Sub Station	653710 292637	NR33	Electrical Features	Infrastructure and Facilities
10	0	On Site	Pipeshield	653482 293146	4 Quay View Business Park, Barnards Way, Lowestoft, NR32 2HD	Special Purpose Machinery and Equipment	Industrial Products
11	0	On Site	Depot	653734 292575	NR33	Container and Storage	Transport, Storage and Delivery
12C	0	On Site	Packrobat	653903 292453	Riverside Business Centre 1, Riverside Road, Lowestoft, NR33 0TQ	Packaging	Industrial Products
13B	0	On Site	Arrow Group	653706 292452	Compass House, Waveney Drive, Lowestoft, NR33 0TP	Office and Shop Equipment	Industrial Products
14C	0	On Site	Lings Honda Mitsubishi Motorlings Used Cars	653903 292453	Riverside Business Centre 1, Riverside Road, Lowestoft, NR33 0TQ	Secondhand Vehicles	Motoring
15	0	On Site	Electricity Sub Station	653748 292671	NR33	Electrical Features	Infrastructure and Facilities
16	0	On Site	Depot	653828 292982	NR32	Container and Storage	Transport, Storage and Delivery
17	0	On Site	Electricity Sub Station	653963 292398	NR33	Electrical Features	Infrastructure and Facilities

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
18	0	On Site	Electricity Sub Station	653649 293097	NR32	Electrical Features	Infrastructure and Facilities
19	1	E	Nexen Lift Trucks Ltd	653923 292652	Riverside Road, Lowestoft, NR33 OTU	Lifting and Handling Equipment	Industrial Products
20E	4	S	Precision Pipework Ltd	654206 292417	Horn Hill, Lowestoft, NR33 OPX	Industrial Repairs and Servicing	Repair and Servicing
21D	5	SE	Gooch Car Centre Ltd	654387 292472	Mill Road, Lowestoft, NR33 OPP	Secondhand Vehicles	Motoring
22D	5	SE	Gooch Accident Repair Centre Ltd	654387 292472	Mill Road, Lowestoft, NR33 OPP	Vehicle Repair, Testing and Servicing	Repair and Servicing
23	5	N	Tank	653822 292675	NR33	Tanks (Generic)	Industrial Features
24	6	SW	Pumping Station	653988 292349	NR33	Water Pumping Stations	Industrial Features
25	7	N	Gas Governor Station	653579 293161	NR32	Gas Features	Infrastructure and Facilities
26	9	S	MRH Mill Road	654338 292417	Mill Road, Lowestoft, Suffolk, NR33 OPP	Petrol and Fuel Stations	Road and Rail
27	9	N	Asda Lowestoft Automat	654104 292453	Horn Hill, Lowestoft, Suffolk, NR33 OPX	Petrol and Fuel Stations	Road and Rail
28E	14	S	Works	654201 292406	NR33	Unspecified Works Or Factories	Industrial Features
29	18	N	Hoppers	653743 292702	NR33	Hoppers and Silos	Farming
30D	21	E	Works	654404 292484	NR33	Unspecified Works Or Factories	Industrial Features
31	22	S	Electricity Sub Station	653381 293096	NR32	Electrical Features	Infrastructure and Facilities
32	22	E	Wharf	654037 292579	NR33	Moorings and Unloading Facilities	Water
33	29	S	Riverside Business Park	654016 292538	NR33	Business Parks and Industrial Estates	Industrial Features
34	32	E	Lings Mitsubishi	653990 292488	Riverside Road, Lowestoft, NR33 OTQ	New Vehicles	Motoring
35	32	N	Wharf	654040 292483	NR33	Moorings and Unloading Facilities	Water
36	32	NE	Depot	653985 293053	NR32	Container and Storage	Transport, Storage and Delivery
37	35	W	Works	653595 292484	NR33	Unspecified Works Or Factories	Industrial Features
38	39	NE	Works	654419 292494	NR33	Unspecified Works Or Factories	Industrial Features
39	41	N	Electricity Sub Station	653546 293206	NR32	Electrical Features	Infrastructure and Facilities
40	54	S	Electricity Sub Station	653435 293042	NR32	Electrical Features	Infrastructure and Facilities
41	57	S	Works	653544 292998	NR32	Unspecified Works Or Factories	Industrial Features
42	57	S	Electricity Sub Station	653666 292952	NR32	Electrical Features	Infrastructure and Facilities

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
43	58	NE	Depot	653948 293131	NR32	Container and Storage	Transport, Storage and Delivery
44	58	NE	Electricity Sub Station	654388 292550	NR33	Electrical Features	Infrastructure and Facilities
45	70	S	Slipway	653482 293007	NR32	Moorings and Unloading Facilities	Water
46I	75	S	Depot	653627 292948	NR32	Container and Storage	Transport, Storage and Delivery
47H	79	S	A R Motorcycles	654214 292342	Unit 2, Horn Hill, Lowestoft, NR33 0PX	New Vehicles	Motoring
48	80	N	Quay	653652 292774	NR33	Moorings and Unloading Facilities	Water
49G	82	E	Electricity Sub Station	654096 292606	NR33	Electrical Features	Infrastructure and Facilities
50F	82	N	Eastpoint	653899 293163	Rotterdam Road, Lowestoft, NR32 2EX	Educational Equipment and Supplies	Industrial Products
51F	89	N	Works	653898 293170	NR32	Unspecified Works Or Factories	Industrial Features
52	93	N	Apex Scaffolding Anglia Ltd	653533 293260	Barnards Way, Lowestoft, NR32 2HF	Construction and Tool Hire	Hire Services
53G	94	E	Slipway	654108 292595	NR33	Moorings and Unloading Facilities	Water
54H	94	S	Electricity Sub Station	654252 292333	NR33	Electrical Features	Infrastructure and Facilities
55I	99	S	Travelling Crane	653606 292930	NR32	Travelling Cranes and Gantries	Industrial Features
56H	100	S	Works	654221 292322	NR33	Unspecified Works Or Factories	Industrial Features
57	103	N	Asda Petrol	654152 292554	Horn Hill, Lowestoft, NR33 0PX	Petrol and Fuel Stations	Road and Rail
58J	105	S	Works	654195 292311	NR33	Unspecified Works Or Factories	Industrial Features
59	106	N	South Wharf	654300 292615	NR33	Moorings and Unloading Facilities	Water
60J	107	S	Tank	654197 292310	NR33	Tanks (Generic)	Industrial Features
61	107	S	Works	654273 292323	NR33	Unspecified Works Or Factories	Industrial Features
62K	108	N	Waveney District Council M O T Testing Centre	653944 293184	Rotterdam Road, Lowestoft, NR32 2EF	Vehicle Repair, Testing and Servicing	Repair and Servicing
63	109	S	Depot	653438 292982	NR32	Container and Storage	Transport, Storage and Delivery
64	109	S	Tank	653482 292965	NR32	Tanks (Generic)	Industrial Features
65	113	S	Crane	653689 292884	NR32	Travelling Cranes and Gantries	Industrial Features
66	114	W	North Quay	653757 292855	NR32	Moorings and Unloading Facilities	Water
67	114	N	Halfords	653604 293264	2 North Quay Retail Park, Peto Way, Lowestoft, NR32 2ED	Vehicle Parts and Accessories	Motoring

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
68J	115	SE	Hopper	654190 292300	NR33	Hoppers and Silos	Farming
69J	117	S	Tank	654206 292302	NR33	Tanks (Generic)	Industrial Features
70	118	NE	Norwich Road Industrial Estate	654021 293145	NR32	Business Parks and Industrial Estates	Industrial Features
71	118	SE	Works	654491 292428	NR33	Unspecified Works Or Factories	Industrial Features
72K	120	NE	Autolec Lowestoft	653982 293183	97, Norwich Road Industrial Estate, Lowestoft, NR32 2BN	Vehicle Repair, Testing and Servicing	Repair and Servicing
73	122	E	Slipway	654136 292590	NR33	Moorings and Unloading Facilities	Water
74	128	S	Travelling Crane	653608 292898	NR32	Travelling Cranes and Gantries	Industrial Features
75	132	S	Electricity Sub Station	653780 292222	NR33	Electrical Features	Infrastructure and Facilities
76	137	S	Works	654232 292287	NR33	Unspecified Works Or Factories	Industrial Features
77M	142	N	Anglia Diesel Injection Service Ltd	653914 293221	Montana Place, Rotterdam Road, Lowestoft, NR32 2EX	Vehicle Repair, Testing and Servicing	Repair and Servicing
78L	144	N	Electricity Sub Station	653976 293212	NR32	Electrical Features	Infrastructure and Facilities
79	146	SE	Grain Silo	654136 292795	NR32	Hoppers and Silos	Farming
80L	156	N	D K Fibreglass Works	653948 293231	Montana Place, Rotterdam Road, Lowestoft, NR32 2EX	Glass Fibre Services	Industrial Products
81L	156	N	A1 Ironworks Ltd	653948 293231	Unit 2 Montana Place, Rotterdam Road, Lowestoft, NR32 2EX	Metalworkers Including Blacksmiths	Construction Services
82L	156	N	T & R Motorcycles	653948 293231	Norwich Road Industrial Estate, Lowestoft, NR32 2BN	New Vehicles	Motoring
83	158	NE	Wharf	654419 292652	NR33	Moorings and Unloading Facilities	Water
84M	159	N	Electricity Sub Station	653931 293237	NR32	Electrical Features	Infrastructure and Facilities
85	161	E	Electricity Sub Station	654197 292987	NR32	Electrical Features	Infrastructure and Facilities
86	166	S	Tank	654239 292259	NR33	Tanks (Generic)	Industrial Features
87	169	E	Works	654549 292439	NR33	Unspecified Works Or Factories	Industrial Features
88	173	NE	Norwich Road Garage	654051 293194	91, Norwich Road Industrial Estate, Lowestoft, NR32 2BN	Vehicle Repair, Testing and Servicing	Repair and Servicing
89N	188	SE	A C N Offshore	654178 292777	North Quay, Commercial Road, Lowestoft, NR32 2TE	Special Purpose Machinery and Equipment	Industrial Products
90N	188	SE	O G N Group	654178 292777	North Quay, Commercial Road, Lowestoft, NR32 2TE	Structural Engineers	Engineering Services

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
91N	188	SE	Dudman Lowestoft	654178 292777	North Quay, Commercial Road, Lowestoft, NR32 2TE	Container and Storage	Transport, Storage and Delivery
92N	188	SE	Associated British Ports	654178 292777	North Quay, Commercial Road, Lowestoft, NR32 2TE	Moorings and Unloading Facilities	Water
93	189	SE	Dingles Motor Group Ltd	654545 292374	London Road South, Lowestoft, NR33 0AS	New Vehicles	Motoring
94N	191	SE	Silo	654185 292781	NR32	Hoppers and Silos	Farming
95	194	N	Electricity Sub Station	653655 293334	NR32	Electrical Features	Infrastructure and Facilities
96O	194	SE	Works	654206 292215	NR33	Unspecified Works Or Factories	Industrial Features
97N	196	SE	Silo	654184 292772	NR32	Hoppers and Silos	Farming
98	196	NW	Inner Harbour	654249 292691	NR32	Moorings and Unloading Facilities	Water
99	197	S	Works	654335 292229	NR33	Unspecified Works Or Factories	Industrial Features
100	197	E	Works	654581 292475	NR33	Unspecified Works Or Factories	Industrial Features
101Q	198	SE	Electricity Sub Station	654528 292318	NR33	Electrical Features	Infrastructure and Facilities
102N	199	SE	Silo	654194 292779	NR32	Hoppers and Silos	Farming
103N	202	SE	Silo	654191 292771	NR32	Hoppers and Silos	Farming
104N	205	SE	Silo	654201 292778	NR32	Hoppers and Silos	Farming
105N	210	SE	Silo	654200 292770	NR32	Hoppers and Silos	Farming
106	212	W	Works	653417 292495	NR33	Unspecified Works Or Factories	Industrial Features
107	213	W	Works	653427 292558	NR33	Unspecified Works Or Factories	Industrial Features
108O	216	S	Electricity Sub Station	654234 292206	NR33	Electrical Features	Infrastructure and Facilities
109	216	N	EU Linco	653614 293369	Unit 5 Leyland Court, Barnard's Way, Lowestoft, NR32 2EP	Vehicle Parts and Accessories	Motoring
110	222	SW	North Quay	653186 293020	NR32	Moorings and Unloading Facilities	Water
111	223	N	Electricity Sub Station	653773 293317	NR32	Electrical Features	Infrastructure and Facilities
112	223	NW	Quay	653465 292786	NR33	Moorings and Unloading Facilities	Water
113	230	N	Central Motors	653973 293302	Volta Terrace, Norwich Road, Lowestoft, NR32 2HN	Vehicle Repair, Testing and Servicing	Repair and Servicing
114	231	SE	East Coast Second Hand	654477 292224	147, London Road South, Lowestoft, NR33 0DP	Clearance and Salvage Dealers	Recycling Services
115	235	SE	Silo Quay	654212 292745	NR32	Moorings and Unloading Facilities	Water

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
116	237	N	Electricity Sub Station	654348 292753	NR32	Electrical Features	Infrastructure and Facilities
117	245	NE	Electricity Sub Station	654118 293228	NR32	Electrical Features	Infrastructure and Facilities
118	246	NE	Admiralty Wharf	654532 292674	NR33	Moorings and Unloading Facilities	Water
119	247	N	Electricity Sub Station	653388 293432	NR32	Electrical Features	Infrastructure and Facilities
120	248	W	Tank	653144 293059	NR32	Tanks (Generic)	Industrial Features
121	248	NE	Inkies	654196 293139	26, Selby Street, Lowestoft, NR32 2BG	Plate Makers, Print Finishers and Type Setters	IT, Advertising, Marketing and Media Services

4.2 Petrol and Fuel Sites

Records of petrol or fuel sites within 500m of the study site:

3

The following petrol or fuel site records provided by Catalist are represented as points on the Current Land Use map:

ID	Distance (m)	Direction	NGR	Company	Address	LPG	Status
122P	0	On Site	654254 292470	Asda	Asda Lowestoft Automat, Horn Hill, Horn Hill, Belvedere Road, Lowestoft, Suffolk, NR33 0PX	No	Open
123	4	S	654347 292421	BP	Mrh Mill Road, Mill Road, Mill Road, Lowestoft, Suffolk, NR33 0PP	No	Closed
124Q	235	SE	654556 292292	Obsolete	Marine Service Station, Marine Parade, Marine Parade, London Road South, Lowestoft, Suffolk, NR33 0QN	Not Applicable	Obsolete

4.3 National Grid High Voltage Underground Electricity Transmission Cables

This dataset identifies the high voltage electricity transmission lines running between generating power plants and electricity substations. The dataset does not include the electricity distribution network (smaller, lower voltage cables distributing power from substations to the local user network). This information has been extracted from databases held by National Grid and is provided for information only with no guarantee as to its completeness or accuracy. National Grid do not offer any warranty as to the accuracy of the available data and are excluded from any liability for any such inaccuracies or errors.

Records of National Grid high voltage underground electricity transmission cables within 500m of the study site:

0

Database searched and no data found.

4.4 National Grid High Pressure Gas Transmission Pipelines

This dataset identifies high-pressure, large diameter pipelines which carry gas between gas terminals, power stations, compressors and storage facilities. The dataset does not include the Local Transmission System (LTS) which supplies gas directly into homes and businesses. This information has been extracted from databases held by National Grid and is provided for information only with no guarantee as to its completeness or accuracy. National Grid do not offer any warranty as to the accuracy of the available data and are excluded from any liability for any such inaccuracies or errors.

Records of National Grid high pressure gas transmission pipelines within 500m of the study site: 0

Database searched and no data found.

5. Geology

5.1 Artificial Ground and Made Ground

The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
MGR-MGRD	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
MGR-MGRD	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
MGR-MGRD	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
WGR-OPEN	WORKED GROUND (UNDIVIDED)	VOID

5.2 Superficial Ground and Drift Geology

The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
HPGL	HAPPISBURGH GLACIGENIC FORMATION	SAND [UNLITHIFIED DEPOSITS CODING SCHEME]
HPGL	HAPPISBURGH GLACIGENIC FORMATION	SAND [UNLITHIFIED DEPOSITS CODING SCHEME]
ALV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL [UNLITHIFIED DEPOSITS CODING SCHEME]
TRD	TIDAL RIVER OR CREEK DEPOSITS	CLAY AND SILT [UNLITHIFIED DEPOSITS CODING SCHEME]
ALV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL [UNLITHIFIED DEPOSITS CODING SCHEME]
HPGL	HAPPISBURGH GLACIGENIC FORMATION	SAND [UNLITHIFIED DEPOSITS CODING SCHEME]

5.3 Bedrock and Solid Geology

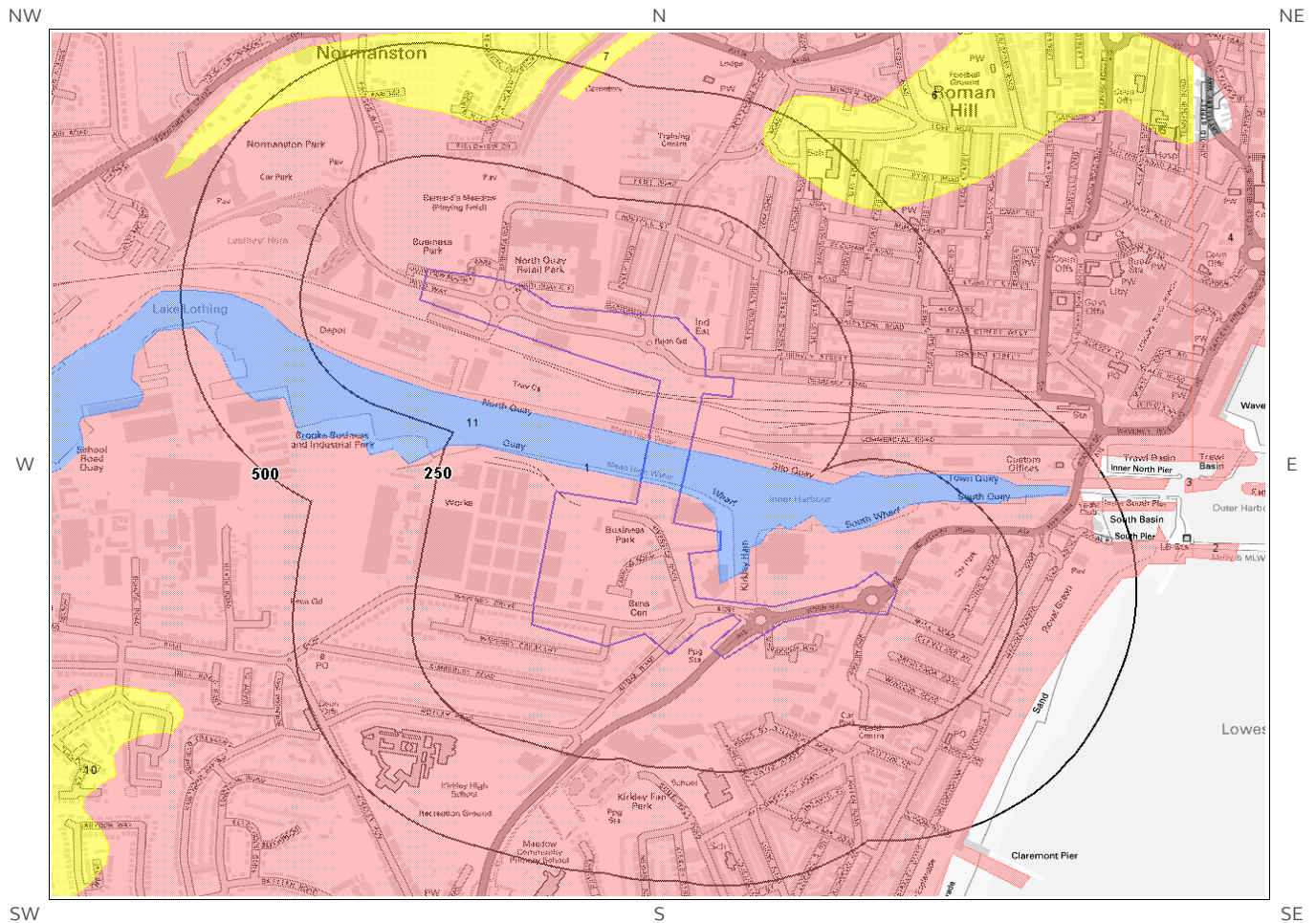
The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
CRA-SANDU	CRA GROUP	SAND

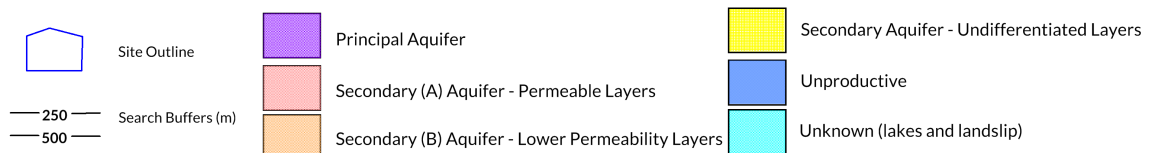
(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

6 Hydrogeology and Hydrology

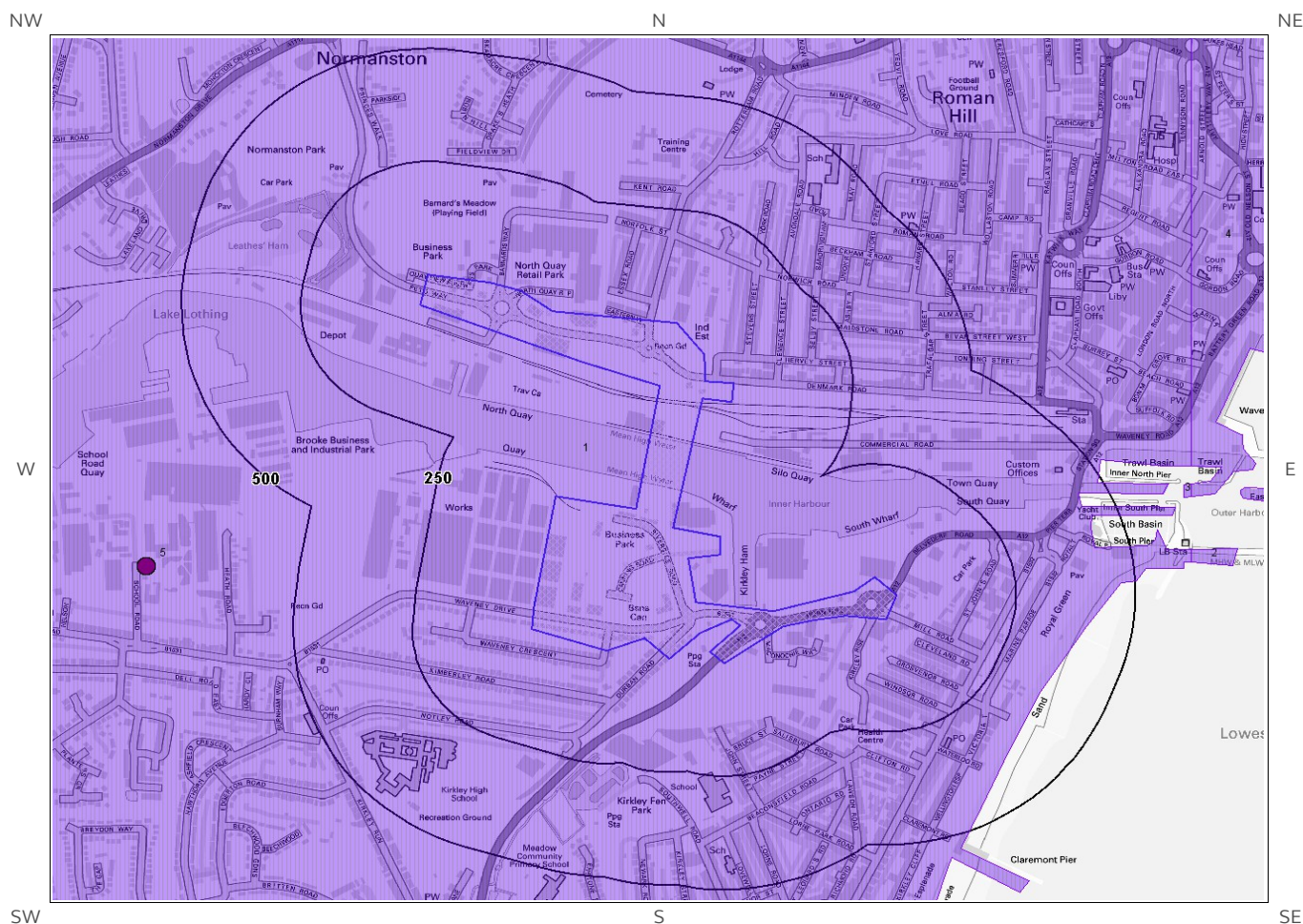
6a. Aquifer Within Superficial Geology



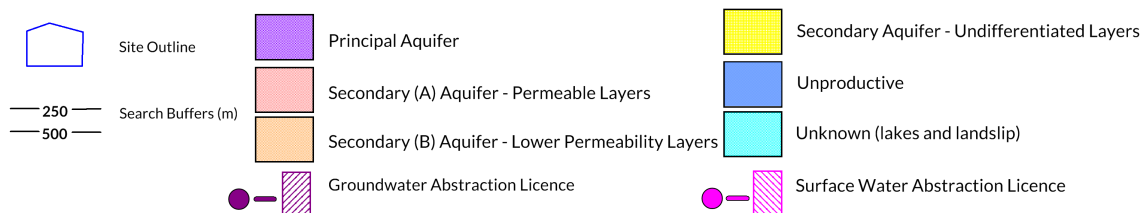
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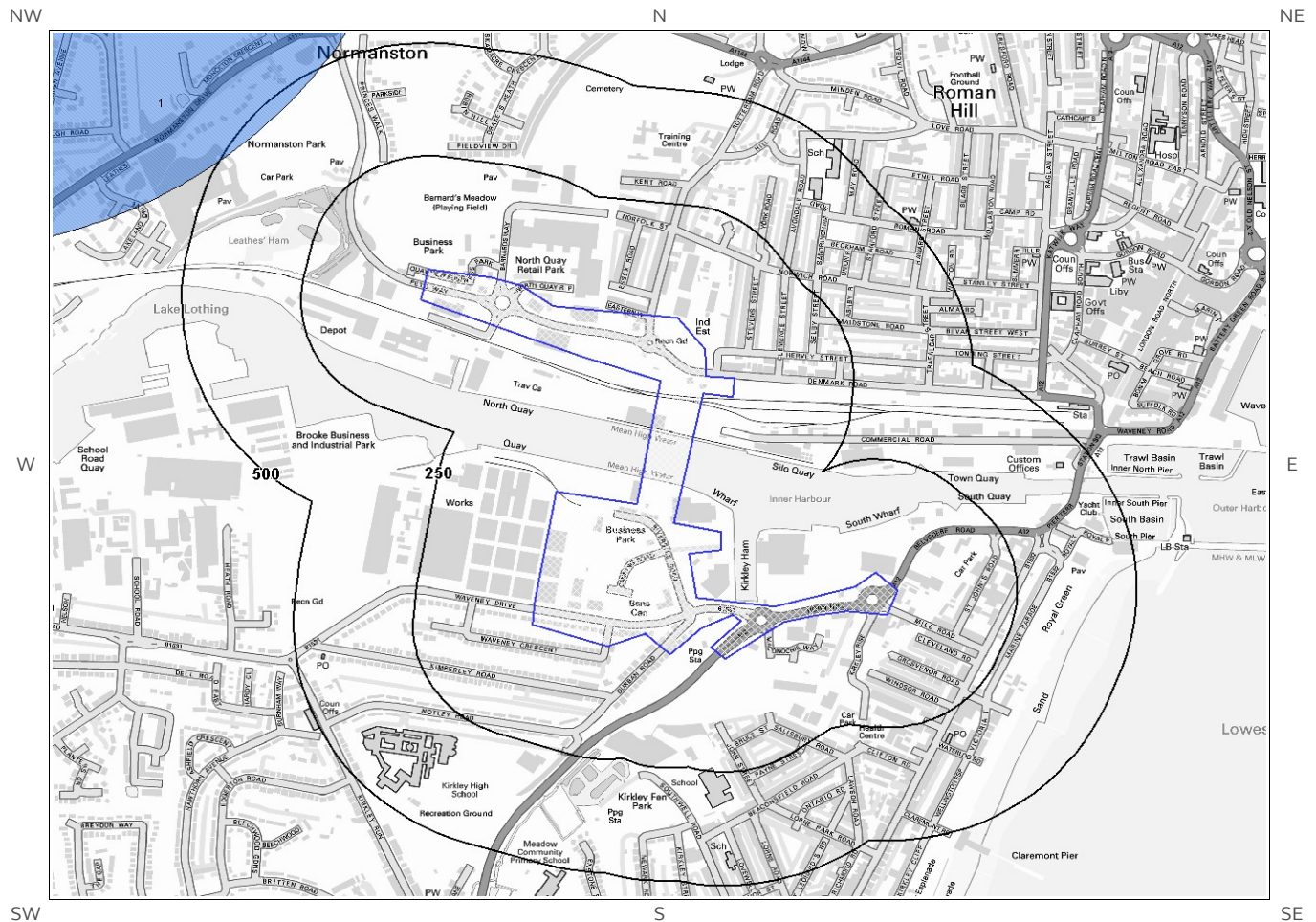
6b. Aquifer Within Bedrock Geology and Abstraction Licenses



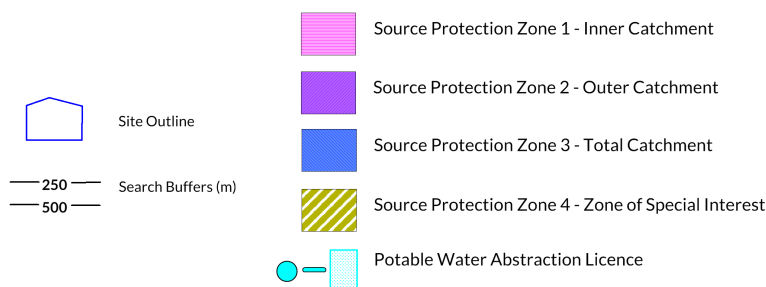
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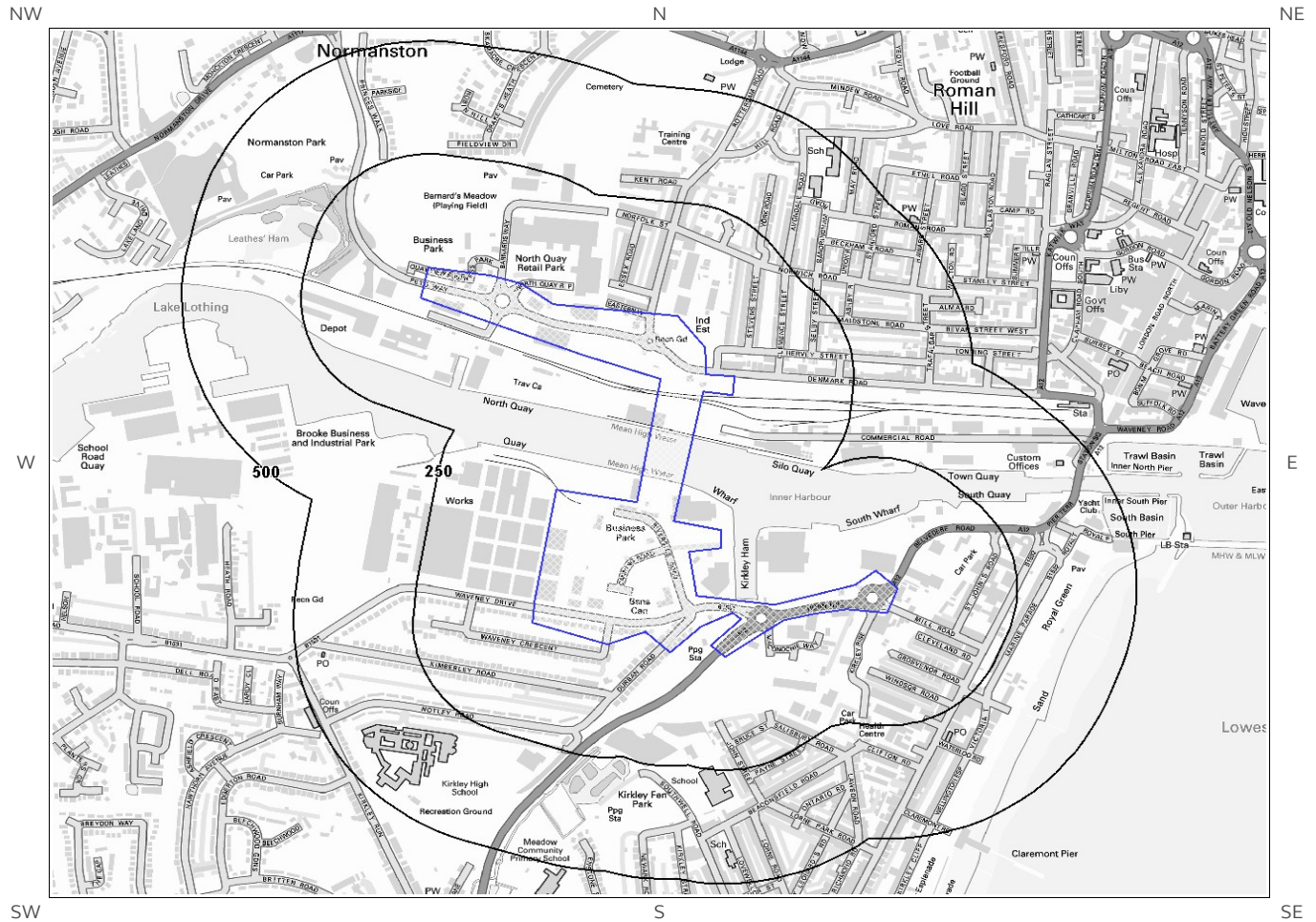
6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licenses



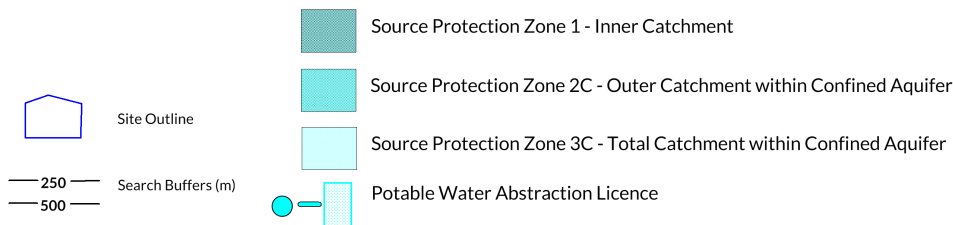
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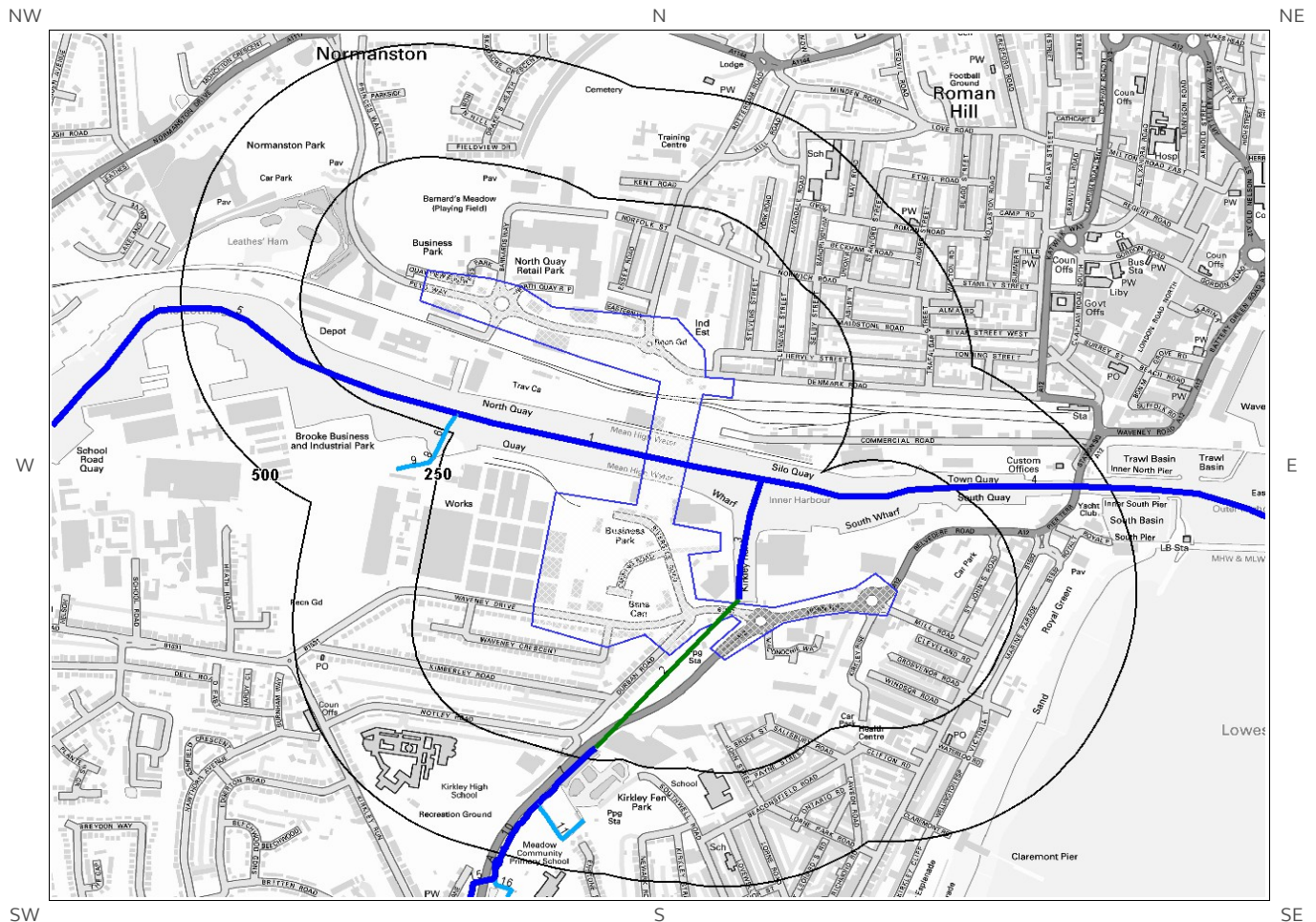
6d. Hydrogeology – Source Protection Zones within confined aquifer



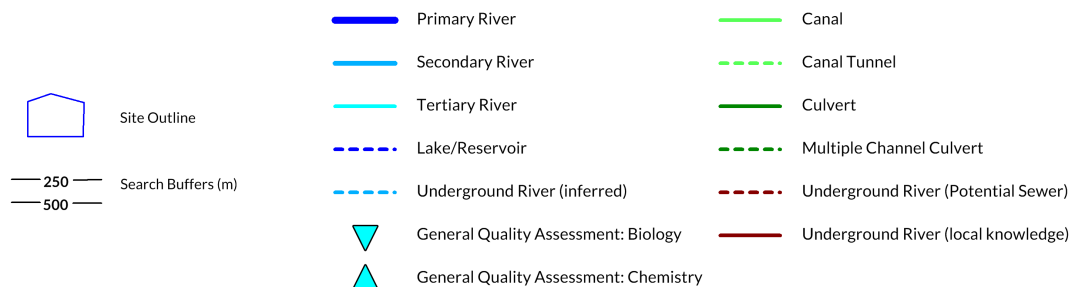
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6e. Hydrology – Detailed River Network and River Quality



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6. Hydrogeology and Hydrology

6.1 Aquifer within Superficial Deposits

Are there records of strata classification within the superficial geology at or in proximity to the property? **Yes**

From 1 April 2010, the Environment Agency's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviro Insight User Guide.

The following aquifer records are shown on the Aquifer within Superficial Geology Map (6a):

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
11	0	On Site	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
6	340	N	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
7	423	N	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type

6.2 Aquifer within Bedrock Deposits

Are there records of strata classification within the bedrock geology at or in proximity to the property? **Yes**

From 1 April 2010, the Environment Agency's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviro Insight User Guide.

The following aquifer records are shown on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers

6.3 Groundwater Abstraction Licences

Are there any Groundwater Abstraction Licences within 2000m of the study site?

Yes

The following Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	NGR	Details
5	815	SW	652810 292540	Status: Historical Licence No: 7/34/19/*G/0064 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Ground Water Source Of Supply Point: Well At School Rd Wks,lowest't Data Type: Point Name: SANYO INDUSTRIES (UK) LTD Annual Volume (m³): 35000 Max Daily Volume (m³): 214 Original Application No: - Original Start Date: 1/3/1967 Expiry Date: - Issue No: 100 Version Start Date: 1/6/1982 Version End Date:
Not shown	1307	NE	655230 293490	Status: Historical Licence No: 7/34/19/*G/0124 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water Source Of Supply Point: Well At Whapload Rd,lowestoft Data Type: Point Name: LOWESTOFT COLD STORE LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 1/4/1984 Expiry Date: - Issue No: 100 Version Start Date: 1/4/1984 Version End Date:
Not shown	1483	NW	652350 294230	Status: Active Licence No: 7/34/19/*G/0100 Details: Process Water Direct Source: Ground Water Source Of Supply Point: Bore At Gorleston Rd,lowestoft Data Type: Point Name: NORBERT DENTRESSANGLE LOGISTICS UK LTD Annual Volume (m³): 227300 Max Daily Volume (m³): 2500 Original Application No: NPS/WR/016033 Original Start Date: 20/5/1969 Expiry Date: - Issue No: 104 Version Start Date: 22/10/2014 Version End Date:
Not shown	1511	NW	652350 294270	Status: Historical Licence No: 7/34/19/*G/0100 Details: Process water Direct Source: Ground Water Source Of Supply Point: Bore At Gorleston Rd,lowestoft Data Type: Point Name: CHRISTIAN SALVESEN Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: ES2176 Original Start Date: 1/5/1969 Expiry Date: - Issue No: 101 Version Start Date: 27/10/1999 Version End Date:

6.4 Surface Water Abstraction Licences

Are there any Surface Water Abstraction Licences within 2000m of the study site?

No

Database searched and no data found.

6.5 Potable Water Abstraction Licences

Are there any Potable Water Abstraction Licences within 2000m of the study site?

No

Database searched and no data found.

6.6 Source Protection Zones

Are there any Source Protection Zones within 500m of the study site?

Yes

The following Source Protection Zones records are represented on the SPZ and Potable Water Abstraction Map (6c):

ID	Distance (m)	Direction	Zone	Description
1	467	NW	3	Total catchment

6.7 Source Protection Zones within Confined Aquifer

Are there any Source Protection Zones within the Confined Aquifer within 500m of the study site?

No

Historically, Source Protection Zone maps have been focused on regulation of activities which occur at or near the ground surface, such as prevention of point source pollution and bacterial contamination of water supplies. Sources in confined aquifers were often considered to be protected from these surface pressures due to the presence of a low permeability confining layer (e.g. glacial till, clay). The increased interest in subsurface activities such as onshore oil and gas exploration, ground source heating and cooling requires protection zones for confined sources to be marked on SPZ maps where this has not already been done.

Database searched and no data found.

6.8 Groundwater Vulnerability and Soil Leaching Potential

Is there any Environment Agency information on groundwater vulnerability and soil leaching potential within 500m of the study site?

Yes

Distance (m)	Direction	Classification	Soil Vulnerability Category	Description
0	On Site	Major Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.

6.9 River Quality

Is there any Environment Agency information on river quality within 1500m of the study site?

No

6.9.1 Biological Quality:

Database searched and no data found.

Database searched and no data found.

6.10 Detailed River Network

Are there any Detailed River Network entries within 500m of the study site?

Yes

The following Detailed River Network records are represented on the Hydrology Map (6e):

ID	Distance (m)	Direction	Details	
1	0	On Site	River Name: - Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
2	0	On Site	River Name: - Welsh River Name: - Alternative Name: -	River Type: Culvert Main River Status: Currently Undefined
3	8	N	River Name: - Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
4	146	NE	River Name: - Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
5	206	S	River Name: - Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
6	206	S	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
7	224	S	River Name: - Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
8	267	W	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
9	268	W	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
10	373	S	River Name: - Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
11	373	S	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined

6.11 Surface Water Features

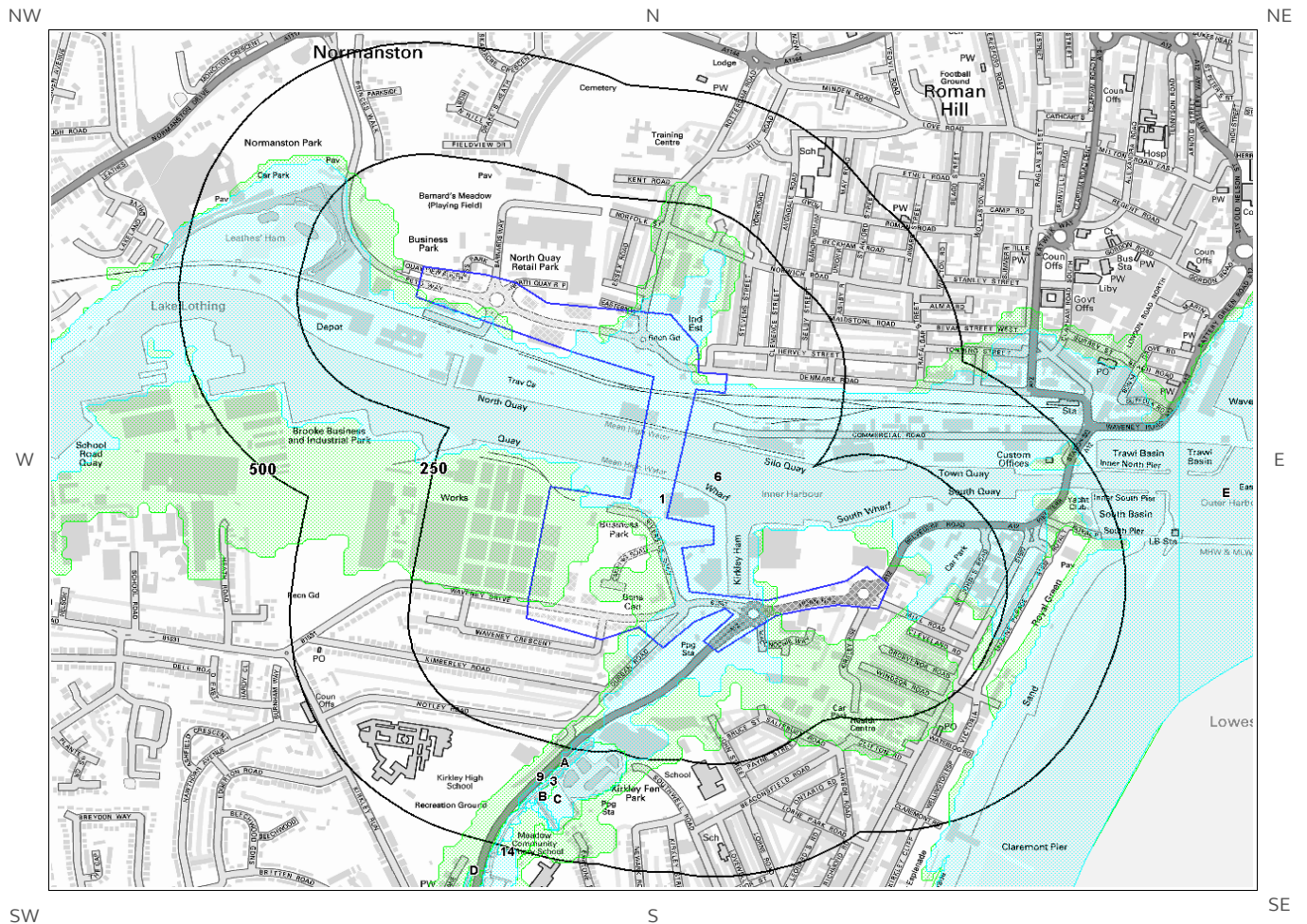
Are there any surface water features within 250m of the study site?

Yes

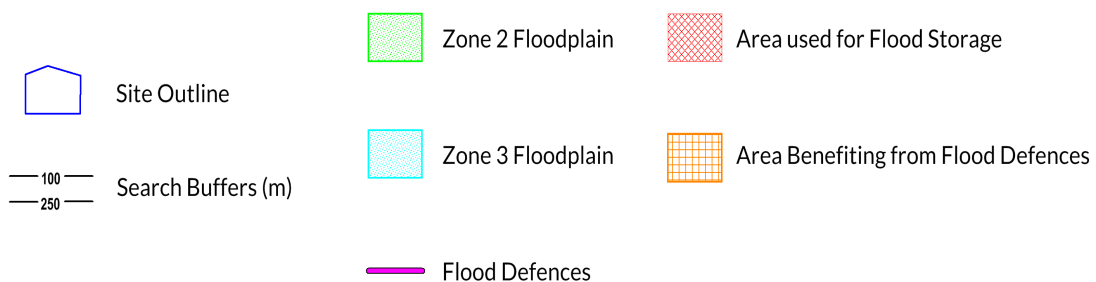
The following surface water records are not represented on mapping:

Distance (m)	Direction
0	On Site
176	W
192	W
195	W
199	NW
224	S
235	W

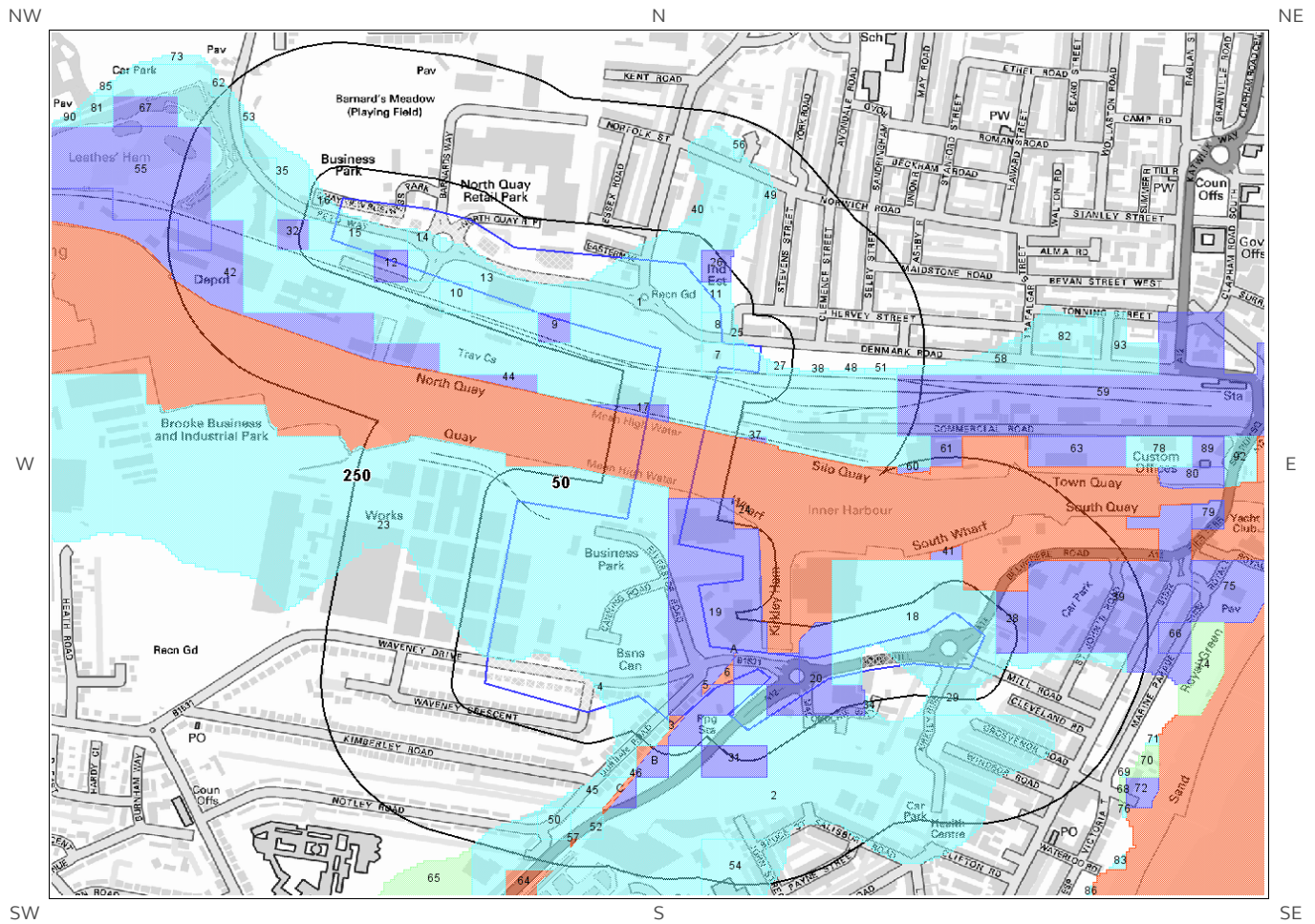
7a. Environment Agency Flood Map for Planning (from rivers and the sea)



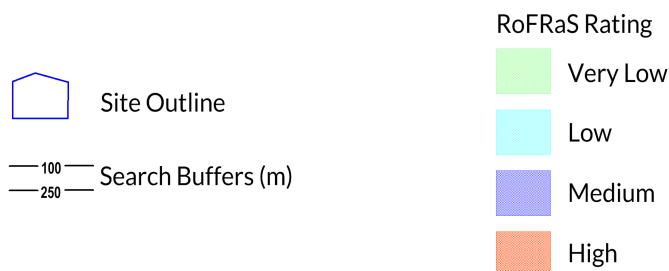
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7b. Environment Agency Risk of Flooding from Rivers and the Sea (RoFRaS) Map



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7 Flooding

7.1 River and Coastal Zone 2 Flooding

Is the site within 250m of an Environment Agency Zone 2 floodplain? Yes

Environment Agency Zone 2 floodplains estimate the annual probability of flooding as between 1 in 1000 (0.1%) and 1 in 100 (1%) from rivers and between 1 in 1000 (0.1%) and 1 in 200 (0.5%) from the sea. Any relevant data is represented on Map 7a – Flood Map for Planning:

ID	Distance (m)	Direction	Update	Type
1	0	On Site	08-Feb-2016	Zone 2 - (Fluvial /Tidal Models)
2C	219	S	08-Feb-2016	Zone 2 - (Fluvial /Tidal Models)

7.2 River and Coastal Zone 3 Flooding

Is the site within 250m of an Environment Agency Zone 3 floodplain? Yes

Zone 3 shows the extent of a river flood with a 1 in 100 (1%) or greater chance of occurring in any year or a sea flood with a 1 in 200 (0.5%) or greater chance of occurring in any year. Any relevant data is represented on Map 7a – Flood Map for Planning.

ID	Distance (m)	Direction	Update	Type
1	0	On Site	23-Feb-2016	Zone 3 - (Fluvial Models)
2C	219	S	23-Feb-2016	Zone 3 - (Fluvial Models)

7.3 Risk of Flooding from Rivers and the Sea (RoFRaS) Flood Rating

What is the highest risk of flooding onsite?

High

The Environment Agency RoFRaS database provides an indication of river and coastal flood risk at a national level on a 50m grid with the flood rating at the centre of the grid calculated and given above. The data considers the probability that the flood defences will overtop or breach by considering their location, type, condition and standard of protection.

RoFRaS data for the study site indicates the property is in an area with a High (1 in 30 or greater) chance of flooding in any given year.

Any relevant data within 250m is represented on the RoFRaS Flood map. Data to 50m is reported in the table below.

ID	Distance (m)	Direction	RoFRaS flood Risk
1	0.0	On Site	Low
2	0.0	On Site	Low
3	0.0	On Site	High
4	0.0	On Site	Low
5	0.0	On Site	High
6	0.0	On Site	High
7	0.0	On Site	Low
8	0.0	On Site	Low
9	0.0	On Site	Medium
10	0.0	On Site	Low
11	0.0	On Site	Low
12	0.0	On Site	Medium
13	0.0	On Site	Low
14	0.0	On Site	Low
15	0.0	On Site	Low
16	0.0	On Site	Low
17	0.0	On Site	Medium
18	0.0	On Site	Low
19	0.0	On Site	Medium
20	0.0	On Site	Medium
21A	0.0	On Site	High
22A	0.0	On Site	High
23	0.0	On Site	Low
24	0.0	On Site	High
25	1.0	N	Low
26	3.0	NE	Medium
27	10.0	E	Low
28	16.0	E	Medium
29	24.0	S	Low
30	25.0	SE	Low
31	26.0	S	Medium
32	35.0	W	Medium
33B	36.0	S	Medium

34	39.0	S	Low
35	42.0	W	Low
36B	45.0	SW	High
37	46.0	E	Medium

7.4 Flood Defences

Are there any Flood Defences within 250m of the study site? No
Database searched and no data found.

7.5 Areas benefiting from Flood Defences

Are there any areas benefiting from Flood Defences within 250m of the study site? No

7.6 Areas benefiting from Flood Storage

Are there any areas used for Flood Storage within 250m of the study site? No

7.7 Groundwater Flooding Susceptibility Areas

7.7.1 Are there any British Geological Survey groundwater flooding susceptibility areas within 50m of the boundary of the study site? Yes

Does this relate to Clearwater Flooding or Superficial Deposits Flooding? Clearwater Flooding

Notes: Groundwater flooding may either be associated with shallow unconsolidated sedimentary aquifers which overlie unproductive aquifers (Superficial Deposits Flooding), or with unconfined aquifers (Clearwater Flooding).

7.7.2 What is the highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions?

Limited potential

Where limited potential for groundwater flooding to occur is indicated, this means that although given the geological conditions there may be a groundwater flooding hazard, unless other relevant information, e.g. records of previous flooding, suggests groundwater flooding has occurred before in this area, you need take no further action in relation to groundwater flooding hazard.

7.8 Groundwater Flooding Confidence Areas

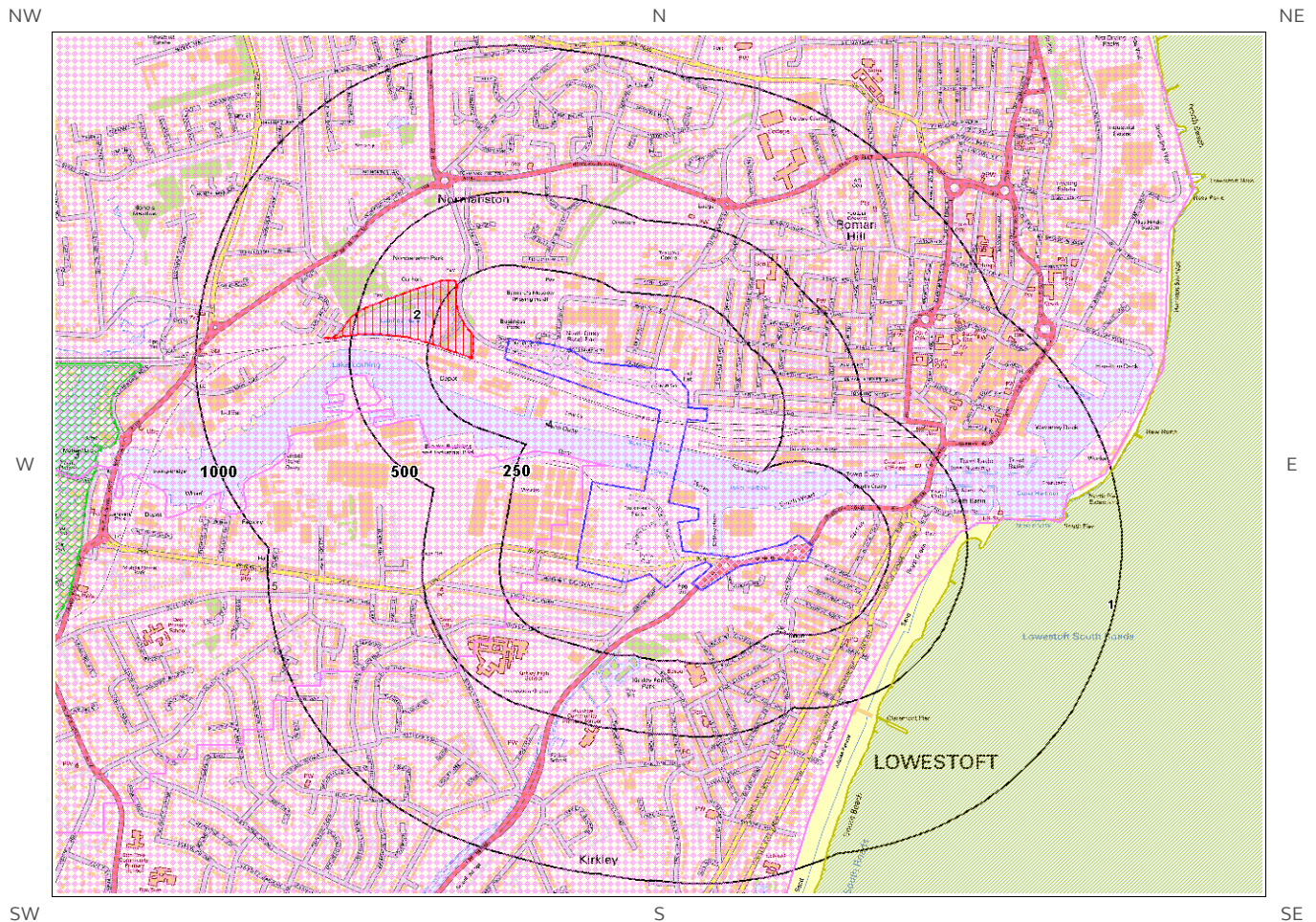
What is the British Geological Survey confidence rating in this result?

Low

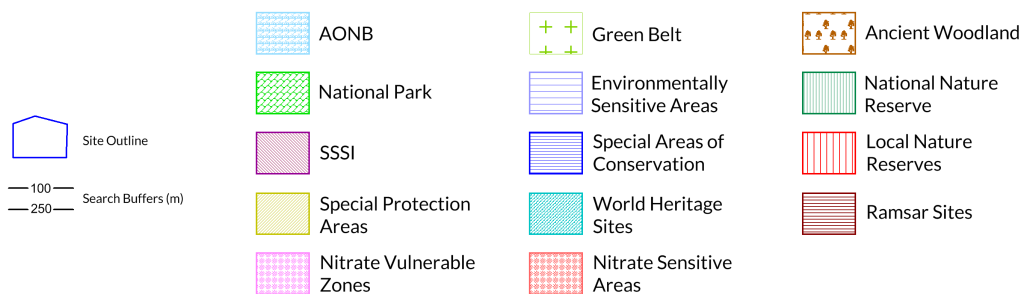
Notes: Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded.

The confidence rating is on a threefold scale - Low, Moderate and High. This provides a relative indication of the BGS confidence in the accuracy of the susceptibility result for groundwater flooding. This is based on the amount and precision of the information used in the assessment. In areas with a relatively lower level of confidence the susceptibility result should be treated with more caution. In other areas with higher levels of confidence the susceptibility result can be used with more confidence.

8. Designated Environmentally Sensitive Sites Map



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8. Designated Environmentally Sensitive Sites

Presence of Designated Environmentally Sensitive Sites within 2000m of the study site?

Yes

8.1 Records of Sites of Special Scientific Interest (SSSI) within 2000m of the study site:

0

Database searched and no data found.

8.2 Records of National Nature Reserves (NNR) within 2000m of the study site:

0

Database searched and no data found.

8.3 Records of Special Areas of Conservation (SAC) within 2000m of the study site:

0

Database searched and no data found.

8.4 Records of Special Protection Areas (SPA) within 2000m of the study site:

1

The following Special Protection Area (SPA) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	SPA Name	Data Source
1	441	SE	Outer Thames Estuary	Natural England

8.5 Records of Ramsar sites within 2000m of the study site:

0

Database searched and no data found.

8.6 Records of Ancient Woodland within 2000m of the study site:

0

Database searched and no data found.

8.7 Records of Local Nature Reserves (LNR) within 2000m of the study site:

1

The following Local Nature Reserve (LNR) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	LNR Name	Data Source
2	103	W	Leathes Ham	Natural England

8.8 Records of World Heritage Sites within 2000m of the study site:

0

Database searched and no data found.

8.9 Records of Environmentally Sensitive Areas within 2000m of the study site:

1

The following Environmentally Sensitive Area records produced by DEFRA are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	ESA Name	Data Source
Not shown	1954	SW	Broads	Natural England

8.10 Records of Areas of Outstanding Natural Beauty (AONB) within 2000m of the study site:

0

Database searched and no data found.

8.11 Records of National Parks (NP) within 2000m of the study site:

1

The following National Park records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	NP Name	Data Source
3	1176	W	The Broads	Natural England

8.12 Records of Nitrate Sensitive Areas within 2000m of the study site:

0

Database searched and no data found.

8.13 Records of Nitrate Vulnerable Zones within 2000m of the study site:

2

The following Nitrate Vulnerable Zone records produced by DEFRA are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	NVZ Name	Data Source
4	0	On Site	Existing	DEFRA
5	12	W	Existing	DEFRA

8.14 Records of Green Belt land within 2000m of the study site:

0

Database searched and no data found.

9. Natural Hazards Findings

9.1 Detailed BGS GeoSure Data

BGS GeoSure Data has been searched to 50m. The data is included in tabular format. If you require further information on geology and ground stability, please obtain a **Groundsure Geo Insight**, available from our **website**. The following information has been found:

9.1.1 Shrink Swell

What is the maximum Shrink-Swell* hazard rating identified on the study site? Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Ground conditions predominantly medium plasticity. Do not plant trees with high soil moisture demands near to buildings. For new build, consideration should be given to advice published by the National House Building Council (NHBC) and the Building Research Establishment (BRE). There is a possible increase in construction cost to reduce potential shrink-swell problems. For existing property, there is a possible increase in insurance risk, especially during droughts or where vegetation with high moisture demands is present.

9.1.2 Landslides

What is the maximum Landslide* hazard rating identified on the study site? Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

9.1.3 Soluble Rocks

What is the maximum Soluble Rocks* hazard rating identified on the study site? Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

* This indicates an automatically generated 50m buffer and site.

9.1.4 Compressible Ground

What is the maximum Compressible Ground* hazard rating identified on the study site?

Moderate

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Significant potential for compressibility problems. Avoid large differential loadings of ground. Do not drain or de-water ground near the property without technical advice. For new build Ö consider possibility of compressible ground in ground investigation, construction and building design. Consider effects of groundwater changes. Extra construction costs are likely. For existing property x°ossible increase in insurance risk from compressibility, especially if water conditions or loading of the ground change significantly.

9.1.5 Collapsible Rocks

What is the maximum Collapsible Rocks* hazard rating identified on the study site?

Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

9.1.6 Running Sand

What is the maximum Running Sand** hazard rating identified on the study site?

Moderate

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Significant potential for running sand problems with relatively small changes in ground conditions. Avoid large amounts of water entering the ground (for example through pipe leakage or soak-aways). Do not dig (deep) holes into saturated ground near the property without technical advice. For new build Ö consider the consequences of soil and groundwater conditions during and after construction. For existing property Ö possible increase in insurance risk from running sand, for example, due to water leakage, high rainfall events or flooding.

9.2 Radon

9.2.1 Radon Affected Areas

Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

* This indicates an automatically generated 50m buffer and site.

Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? ☐ No radon protective measures are necessary.

10. Mining

10.1 Coal Mining

Are there any coal mining areas within 75m of the study site?

No

Database searched and no data found.

10.2 Non-Coal Mining

Are there any Non-Coal Mining areas within 50m of the study site boundary?

No

Database searched and no data found.

10.3 Brine Affected Areas

Are there any brine affected areas within 75m of the study site?

No

Guidance: No Guidance Required.

Contact Details

CENTREMAPS

Telephone: 01886 832972
Groundsure@centremaps.co.uk
Open Space, Upper Interfields, Malvern, Worcester, WR14 1UT



British Geological Survey Enquiries

Kingsley Dunham Centre
Keyworth, Nottingham NG12 5GG
Tel: 0115 936 3143.
Fax: 0115 936 3276.
Email:

Web: www.bgs.ac.uk

BGS Geological Hazards Reports and general geological enquiries:
enquiries@bgs.ac.uk



**British
Geological Survey**

NATURAL ENVIRONMENT RESEARCH COUNCIL

Environment Agency

National Customer Contact Centre, PO Box 544
Rotherham, S60 1BY
Tel: 08708 506 506

Web: www.environment-agency.gov.uk

Email: enquiries@environment-agency.gov.uk



**Environment
Agency**

Public Health England

Public information access office
Public Health England, Wellington House
133-155 Waterloo Road, London, SE1 8UG
www.gov.uk/phe

Email: enquiries@phe.gov.uk
Main switchboard: 020 7654 8000



**Public Health
England**

The Coal Authority

200 Lichfield Lane
Mansfield
Notts NG18 4RG
Tel: 0345 7626 848
DX 716176 Mansfield 5
www.coal.gov.uk



**The Coal
Authority**

Ordnance Survey

Adanac Drive, Southampton
SO16 0AS
Tel: 08456 050505



Local Authority

Authority: Waveney District Council
Phone: 01502 562 111
Web: <http://www.waveney.gov.uk/>
Address: Town Hall, High Street, Lowestoft, Suffolk, NR32 1HS

Gemapping PLC

Virginia Villas, High Street, Hartley Witney,
Hampshire RG27 8NW
Tel: 01252 845444



Acknowledgements: Site of Special Scientific Interest, National Nature Reserve, Ramsar Site, Special Protection Area, Special Area of Conservation data is provided by, and used with the permission of, Natural England who retain the Copyright and Intellectual Property Rights for the data.

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This report has been prepared in accordance with the Groundsure Ltd standard Terms and Conditions of business for work of this nature.

Standard Terms and Conditions

1 Definitions

In these terms and conditions unless the context otherwise requires:

“Beneficiary” means the person or entity for whose benefit the Client has obtained the Services.

“Client” means the party or parties entering into a Contract with Groundsure.

“Commercial” means any building or property which is not Residential.

“Confidential Information” means the contents of this Contract and all information received from the Client as a result of, or in connection with, this Contract other than

(i) information which the Client can prove was rightfully in its possession prior to disclosure by Groundsure and

(ii) any information which is in the public domain (other than by virtue of a breach of this Contract).

“Support Services” means Support Services provided by Groundsure including, without limitation, interpreting third party and in-house environmental data, providing environmental support advice, undertaking environmental audits and assessments, Site investigation, Site monitoring and related items.

“Contract” means the contract between Groundsure and the Client for the provision of the Services, and which shall incorporate these terms and conditions, the Order, and the relevant User Guide.

“Third Party Data Provider” means any third party providing Third Party Content to Groundsure.

“Data Reports” means reports comprising factual data with no accompanying interpretation.

“Fees” has the meaning set out in clause 5.1.

“Groundsure” means Groundsure Limited, a company registered in England and Wales under number 03421028.

“Groundsure Materials” means all materials prepared by Groundsure and provided as part of the Services, including but not limited to Third Party Content, Data Reports, Mapping, and Risk Screening Reports.

“Intellectual Property” means any patent, copyright, design rights, trade or service mark, moral rights, data protection rights, know-how or trade mark in each case whether registered or not and including applications for the same or any other rights of a similar nature anywhere in the world.

“Mapping” means a map, map data or a combination of historical maps of various ages, time periods and scales.

“Order” means an electronic, written or other order form submitted by the Client requesting Services from Groundsure in respect of a specified Site.

“Ordnance Survey” means the Secretary of State for Business, Innovation and Skills, acting through Ordnance Survey, Adanac Drive, Southampton, SO16 0AS, UK.

“Order Website” means the online platform through which Orders may be placed by the Client and accepted by Groundsure.

“Report” means a Risk Screening Report or Data Report for Commercial or Residential property.

“Residential” means any building or property used as or intended to be used as a single dwelling.

“Risk Screening Report” means a risk screening report comprising factual data with an accompanying interpretation by Groundsure.

“Services” means any Report, Mapping and/or Support Services which Groundsure has agreed to provide by accepting an Order pursuant to clause 2.6.

“Site” means the area of land in respect of which the Client has requested Groundsure to provide the Services.

“Third Party Content” means data, database information or other information which is provided to Groundsure by a Third Party Data Provider.

“User Guide” means the user guide, as amended from time to time, available upon request from Groundsure and on the website (www.Groundsure.com) and forming part of this Contract.

2 Scope of Services, terms and conditions, requests for insurance and quotations

2.1 Groundsure agrees to provide the Services in accordance with the Contract.

2.2 Groundsure shall exercise reasonable skill and care in the provision of the Services.

2.3 Subject to clause 7.3 the Client acknowledges that it has not relied on any statement or representation made by or on behalf of Groundsure which is not set out and expressly agreed in writing in the Contract and all such statements and representations are hereby excluded to the fullest extent permitted by law.

2.4 The Client acknowledges that terms and conditions appearing on a Client’s order form, printed stationery or other communication, or any terms or conditions implied by custom, practice or course of dealing shall be of no effect, and that this Contract shall prevail over all others in relation to the Order.

2.5 If the Client or Beneficiary requests insurance in conjunction with or as a result of the Services, Groundsure shall use reasonable endeavours to recommend such insurance, but makes no warranty that such insurance shall be available from insurers or that it will be offered on reasonable terms. Any insurance purchased by the Client or Beneficiary shall be subject solely to the terms of the policy issued by insurers and Groundsure will have no liability therefor. In addition you acknowledge and agree that Groundsure does not act as an agent or broker for any insurance providers. The Client should take (and ensure that the Beneficiary takes) independent advice to ensure that the insurance policy requested or offered is suitable for its requirements.

2.6 Groundsure's quotations or proposals are valid for a period of 30 days only unless an alternative period of time is explicitly stipulated by Groundsure. Groundsure reserves the right to withdraw any quotation or proposal at any time before an Order is accepted by Groundsure. Groundsure's acceptance of an Order shall be binding only when made in writing and signed by Groundsure's authorised representative or when accepted through the Order Website.

3 The Client’s obligations

3.1 The Client shall comply with the terms of this Contract and

(i) procure that the Beneficiary or any third party relying on the Services complies with and acts as if it is bound by the Contract and

(ii) be liable to Groundsure for the acts and omissions of the Beneficiary or any third party relying on the Services as if such acts and omissions were those of the Client.

3.2 The Client shall be solely responsible for ensuring that the Services are appropriate and suitable for its and/or the Beneficiary’s needs.

3.3 The Client shall supply to Groundsure as soon as practicable and without charge all requisite information (and the Client warrants that such information is accurate, complete and appropriate), including without limitation any environmental information relating to the Site and shall give such assistance as Groundsure shall reasonably require in the provision of the Services including, without limitation, access to the Site, facilities and equipment.

3.4 Where the Client’s approval or decision is required to enable Groundsure to carry out work in order to provide the Services, such approval or decision shall be given or procured in reasonable time and so as not to delay or disrupt the performance of the Services.

3.5 Save as expressly permitted by this Contract the Client shall not, and shall procure that the Beneficiary shall not, re-sell, alter, add to, or amend the Groundsure Materials, or use the Groundsure Materials in a manner for which they were not intended. The Client may make the Groundsure Materials available to a third party who is considering acquiring some or all of, or providing funding in relation to, the Site, but such third party cannot rely on the same unless expressly permitted under clause 4.

3.6 The Client is responsible for maintaining the confidentiality of its user name and password if using the Order Website and the Client acknowledges that Groundsure accepts no liability of any kind for any loss or damage suffered by the Client as a consequence of using the Order Website.

4 Reliance

4.1 The Client acknowledges that the Services provided by Groundsure consist of the presentation and analysis of Third Party Content and other content and that information obtained from a Third Party Data Provider cannot be guaranteed or warranted by Groundsure to be reliable.

4.2 In respect of Data Reports, Mapping and Risk Screening Reports, the following classes of person and no other are entitled to rely on their contents;

- (i) the Beneficiary,
- (ii) the Beneficiary's professional advisers, (iii) any person providing funding to the Beneficiary in relation to the Site (whether directly or as part of a lending syndicate),
- (iv) the first purchaser or first tenant of the Site, and
- (v) the professional advisers and lenders of the first purchaser or tenant of the Site.

4.3 In respect of Support Services, only the Client, Beneficiary and parties expressly named in a Report and no other parties are entitled to rely on its contents.

4.4 Save as set out in clauses 4.2 and 4.3 and unless otherwise expressly agreed in writing, no other person or entity of any kind is entitled to rely on any Services or Report issued or provided by Groundsure. Any party considering such Reports and Services does so at their own risk.

5 Fees and Disbursements

5.1 Groundsure shall charge and the Client shall pay fees at the rate and

frequency specified in the written proposal, Order Website or Order acknowledgement form, plus (in the case of Support Services) all proper disbursements incurred by Groundsure. The Client shall in addition pay all value added tax or other tax payable on such fees and disbursements in relation to the provision of the Services (together "Fees").

5.2 The Client shall pay all outstanding Fees to Groundsure in full without deduction, counterclaim or set off within 30 days of the date of Groundsure's invoice or such other period as may be agreed in writing between Groundsure and the Client ("Payment Date"). Interest on late payments will accrue on a daily basis from the Payment Date until the date of payment (whether before or after judgment) at the rate of 8% per annum.

5.3 The Client shall be deemed to have agreed the amount of any invoice unless an objection is made in writing within 28 days of the date of the invoice. As soon as reasonably practicable after being notified of an objection, without prejudice to clause 5.2 a member of Groundsure's management team will contact the Client and the parties shall then use all reasonable endeavours to resolve the dispute within 15 days.

6 Intellectual Property and Confidentiality

6.1 Subject to

- (i) full payment of all relevant Fees and
- (ii) compliance with this Contract, the Client is granted (and is permitted to sub-licence to the Beneficiary) a royalty-free, worldwide, non-assignable and (save to the extent set out in this Contract) non-transferable licence to make use of the Groundsure Materials.

6.2 All Intellectual Property in the Groundsure Materials are and shall remain owned by Groundsure or Groundsure's licensors (including without limitation the Third Party Data Providers) the Client acknowledges, and shall procure acknowledgement by the Beneficiary of, such ownership. Nothing in this Contract purports to transfer or assign any rights to the Client or the Beneficiary in respect of such Intellectual Property.

6.3 Third Party Data Providers may enforce any breach of clauses 6.1 and 6.2 against the Client or Beneficiary.

6.4 The Client shall, and shall procure that any recipients of the Groundsure Materials shall:

- (i) not remove, suppress or modify any trade mark, copyright or other proprietary marking belonging to Groundsure or any third party from the Services;
- (ii) use the information obtained as part of the Services in respect of the subject Site only, and shall not store or reuse any information obtained as part of the Services provided in respect of adjacent or nearby sites;
- (iii) not create any product or report which is derived directly or indirectly from the Services (save that those acting in a professional capacity to the Beneficiary may provide advice based upon the Services);
- (iv) not combine the Services with or incorporate such Services into any other information data or service;
- (v) not reformat or otherwise change (whether by modification, addition or enhancement), the Services (save that those acting for the Beneficiary in a professional capacity shall not be in breach of this clause 6.4(v) where such reformatting is in the normal course of providing advice based upon the Services);
- (vi) where a Report and/or Mapping contains material belonging to Ordnance Survey, acknowledge and agree that such content is protected by Crown Copyright and shall not use such content for any purpose outside of receiving the Services; and
- (vii) not copy in whole or in part by any means any map prints or run-on copies containing content belonging to Ordnance Survey (other than that contained within Ordnance Survey's OS Street Map) without first being in possession of a valid Paper Map Copying Licence from Ordnance Survey,

6.5 Notwithstanding clause 6.4, the Client may make reasonable use of the Groundsure Materials in order to advise the Beneficiary in a professional capacity. However, Groundsure shall have no liability in respect of any advice, opinion or report given or provided to Beneficiaries by the Client.

6.6 The Client shall procure that any person to whom the Services are made available shall notify Groundsure of any request or requirement to disclose, publish or disseminate any information contained in the Services in accordance with the Freedom of Information Act 2000, the Environmental Information Regulations 2004 or any associated legislation or regulations in force from time to time.

7.Liability: Particular Attention Should Be Paid To This Clause

7.1 This Clause 7 sets out the entire liability of Groundsure, including any liability for the acts or omissions of its employees, agents, consultants, subcontractors and Third Party Content, in respect of:

- (i) any breach of contract, including any deliberate breach of the Contract by Groundsure or its employees, agents or

subcontractors;

- (ii) any use made of the Reports, Services, Materials or any part of them; and
- (iii) any representation, statement or tortious act or omission (including negligence) arising under or in connection with the Contract.

7.2 All warranties, conditions and other terms implied by statute or common law are, to the fullest extent permitted by law, excluded from the Contract.

7.3 Nothing in the Contract limits or excludes the liability of the Supplier for death or personal injury resulting from negligence, or for any damage or liability incurred by the Client or Beneficiary as a result of fraud or fraudulent misrepresentation.

7.4 Groundsure shall not be liable for

- (i) loss of profits;
- (ii) loss of business;
- (iii) depletion of goodwill and/or similar losses;
- (iv) loss of anticipated savings;
- (v) loss of goods;
- (vi) loss of contract;
- (vii) loss of use;
- (viii) loss or corruption of data or information;
- (ix) business interruption;
- (x) any kind of special, indirect, consequential or pure economic loss, costs, damages, charges or expenses;
- (xi) loss or damage that arise as a result of the use of all or part of the Groundsure Materials in breach of the Contract;
- (xii) loss or damage arising as a result of any error, omission or inaccuracy in any part of the Groundsure Materials where such error, omission or inaccuracy is caused by any Third Party Content or any reasonable interpretation of Third Party Content;
- (xiii) loss or damage to a computer, software, modem, telephone or other property; and
- (xiv) loss or damage caused by a delay or loss of use of Groundsure's internet ordering service.

7.5 Groundsure's total liability in relation to or under the Contract shall be limited to £10 million for any claim or claims.

7.6 Groundsure shall procure that the Beneficiary shall be bound by limitations and exclusions of liability in favour of Groundsure which accord with those detailed in clauses 7.4 and 7.5 (subject to clause 7.3) in respect of all claims which the Beneficiary may bring against Groundsure in relation to the Services or other matters arising pursuant to the Contract.

8 Groundsure's right to suspend or terminate

8.1 If Groundsure reasonably believes that the Client or Beneficiary has not provided the information or assistance required to enable the proper provision of the Services, Groundsure shall be entitled to suspend all further performance of the Services until such time as any such deficiency has been made good.

8.2 Groundsure shall be entitled to terminate the Contract immediately on written notice in the event that:

- (i) the Client fails to pay any sum due to Groundsure within 30 days of the Payment Date; or
- (ii) the Client (being an individual) has a bankruptcy order made against him or (being a company) shall enter into liquidation whether compulsory or voluntary or have an administration order made against it or if a receiver shall be appointed over the whole or any part of its property assets or undertaking or if the Client is struck off the Register of Companies or dissolved; or
- (iii) the Client being a company is unable to pay its debts within the meaning of Section 123 of the Insolvency Act 1986 or being an individual appears unable to pay his debts within the meaning of Section 268 of the Insolvency Act 1986 or if the Client shall enter into a composition or arrangement with the Client's creditors or shall suffer distress or execution to be levied on his goods; or
- (iv) the Client or the Beneficiary breaches any term of the Contract (including, but not limited to, the obligations in clause 4) which is incapable of remedy or if remediable, is not remedied within five days of notice of the breach.

9. Client's Right to Terminate and Suspend

9.1 Subject to clause 10.1, the Client may at any time upon written notice terminate or suspend the provision of all or any of the Services.

9.2 In any event, where the Client is a consumer (and not a business) he/she hereby expressly acknowledges and agrees that:

(i) the supply of Services under this Contract (and therefore the performance of this Contract) commences immediately upon Groundsure's acceptance of the Order; and

(ii) the Reports and/or Mapping provided under this Contract are

- (a) supplied to the Client's specification(s) and in any event
- (b) by their nature cannot be returned.

10 Consequences of Withdrawal, Termination or Suspension

10.1 Upon termination of the Contract:

(i) Groundsure shall take steps to bring to an end the Services in an orderly manner, vacate any Site with all reasonable speed and shall deliver to the Client and/or Beneficiary any property of the Client and/or Beneficiary in Groundsure's possession or control; and

(ii) the Client shall pay to Groundsure all and any Fees payable in respect of the performance of the Services up to the date of termination or suspension. In respect of any Support Services provided, the Client shall also pay Groundsure any additional costs incurred in relation to the termination or suspension of the Contract.

11 Anti-Bribery

11.1 The Client warrants that it shall:

(i) comply with all applicable laws, statutes and regulations relating to anti-bribery and anti-corruption including but not limited to the Bribery Act 2010;

(ii) comply with such of Groundsure's anti-bribery and anti-corruption policies as are notified to the Client from time to time; and

(iii) promptly report to Groundsure any request or demand for any undue financial or other advantage of any kind received by or on behalf of the Client in connection with the performance of this Contract.

11.2 Breach of this Clause 11 shall be deemed a material breach of this Contract.

12 General

12.1 The Mapping contained in the Services is protected by Crown copyright and must not be used for any purpose other than as part of the Services or as specifically provided in the Contract.

12.2 The Client shall be permitted to make one copy only of each Report or Mapping Order. Thereafter the Client shall be entitled to make unlimited copies of the Report or Mapping Order only in accordance with an Ordnance Survey paper map copy license available through Groundsure.

12.3 Groundsure reserves the right to amend or vary this Contract. No amendment or variation to this Contract shall be valid unless signed by an authorised representative of Groundsure.

12.4 No failure on the part of Groundsure to exercise, and no delay in exercising, any right, power or provision under this Contract shall operate as a waiver thereof.

12.5 Save as expressly provided in this Contract, no person other than the persons set out therein shall have any right under the Contract (Rights of Third Parties) Act 1999 to enforce any terms of the Contract.

12.6 The Secretary of State for Business, Innovation and Skills ("BIS") or BIS' successor body, as the case may be, acting through Ordnance Survey may enforce a breach of clause 6.4(vi) and clause 6.4(vii) of these terms and conditions against the Client in accordance with the provisions of the Contracts (Rights of Third Parties) Act 1999.

12.7 Groundsure shall not be liable to the Client if the provision of the Services is delayed or prevented by one or more of the following circumstances:

(i) the Client or Beneficiary's failure to provide facilities, access or information;

(ii) fire, storm, flood, tempest or epidemic;

(iii) Acts of God or the public enemy;

(iv) riot, civil commotion or war;

(v) strikes, labour disputes or industrial action;

(vi) acts or regulations of any governmental or other agency;

(vii) suspension or delay of services at public registries by Third Party Data Providers;

(viii) changes in law; or

(ix) any other reason beyond Groundsure's reasonable control.

In the event that Groundsure is prevented from performing the Services (or any part thereof) in accordance with this clause 12.6 for a period of not less than 30 days then Groundsure shall be entitled to terminate this Contract immediately on written notice to the Client.

12.8 Any notice provided shall be in writing and shall be deemed to be properly given if delivered by hand or sent by first class post, facsimile or by email to the address, facsimile number or email address of the relevant party as may have been notified by each party to the other for such purpose or in the absence of such notification the last known address.

12.9 Such notice shall be deemed to have been received on the day of delivery if delivered by hand, facsimile or email (save to the extent such day is not a working day where it shall be deemed to have been delivered on the next working day) and on the second working day after the day of posting if sent by first class post.

12.10 The Contract constitutes the entire agreement between the parties and shall supersede all previous arrangements between the parties relating to the subject matter hereof.

12.11 Each of the provisions of the Contract is severable and distinct from the others and if one or more provisions is or should become invalid, illegal or unenforceable, the validity and enforceability of the remaining provisions shall not in any way be tainted or impaired.

12.12 This Contract shall be governed by and construed in accordance with English law and any proceedings arising out of or connected with this Contract shall be subject to the exclusive jurisdiction of the English courts.

12.13 Groundsure is an executive member of the Council of Property Search Organisation (CoPSO) and has signed up to the Search Code administered by the Property Codes Compliance Board (PCCB). All Risk Screening Reports shall be supplied in accordance with the provisions of the Search Code.

12.14 If the Client or Beneficiary has a complaint about the Services, written notice should be given to the Compliance Officer at Groundsure who will respond in a timely manner. In the event you are not satisfied with Groundsure's complaints handling process or you are unable to resolve the complaint, at your discretion you may refer the complaint to The Property Ombudsman Scheme at the following URL/email: website www.tpos.co.uk or email: admin@tpos.co.uk

12.15 The Client agrees that it shall, and shall procure that each Beneficiary shall, treat in confidence all Confidential Information and shall not, and shall procure that each Beneficiary shall not (i) disclose any Confidential Information to any third party other than in accordance with the terms of this Contract; and (ii) use Confidential Information for a purpose other than the exercise of its rights and obligations under this Contract. Subject to clause 6.6, nothing shall prevent the Client or any Beneficiary from disclosing Confidential Information to the extent required by law. © Groundsure Limited June 2013



CENTREMAPS

Open Space, Upper Interfields,
Worcester, WR14 1UT

Report Reference: CMAPS-CM-535051-16287-
070616GEO

Your Reference: 16287

Report Date 7 Jun 2016

Report Delivery Method: Email - pdf

Groundsure Geo Insight

Address: Denmark Road Lowestoft,

Dear Sir/ Madam,

Thank you for placing your order with Groundsure. Please find enclosed the **Groundsure Geo Insight** as requested.

If you need any further assistance, please do not hesitate to contact our helpline on 01886 832972 quoting the above CENTREMAPS reference number.

Yours faithfully,

CENTREMAPS

Enc.
Groundsure Geoinsight

Groundsure Geo Insight

Address: Denmark Road Lowestoft,
Date: 7 Jun 2016
Reference: CMAPS-CM-535051-16287-070616GEO
Client: CENTREMAPS



Aerial Photograph Capture date: 10-Oct-2014
Grid Reference: 653884,292755
Site Size: 21.42ha

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Overview of Findings

The Groundsure Geo Insight provides high quality geo-environmental information that allows geo-environmental professionals and their clients to make informed decisions and be forewarned of potential ground instability problems that may affect the ground investigation, foundation design and possibly remediation options that could lead to possible additional costs.

The report is based on the BGS 1:50,000 Digital Geological Map of Great Britain, BGS Geosure data; BRITPITS database; Shallow Mining data and Borehole Records, Coal Authority data including brine extraction areas, PBA non-coal mining and natural cavities database, Johnson Poole and Bloomer mining data and Groundsure's unique database including historical surface ground and underground workings.

For further details on each dataset, please refer to each individual section in the report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched '-' will be recorded.

Section 1:Geology

1.1 Artificial Ground	1.1.1 Is there any Artificial Ground/ Made Ground present beneath the study site?	Yes
	1.1.2 Are there any records relating to permeability of artificial ground within the study site* boundary?	Yes
1.2 Superficial Geology and Landslips	1.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site?	Yes
	1.2.2 Are there any records relating to permeability of superficial geology within the study site boundary?	Yes
	1.2.3 Are there any records of landslip within 500m of the study site boundary?	No
	1.2.4 Are there any records relating to permeability of landslips within the study site boundary?	No
1.3 Bedrock, Solid Geology & Faults	1.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	
	1.3.2 Are there any records relating to permeability of bedrock within the study site boundary?	Yes
	1.3.3 Are there any records of faults within 500m of the study site boundary?	No
1.4 Radon data	1.4.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level
	1.4.2 Is the property in an area where Radon Protection Measures are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?	No radon protective measures are necessary

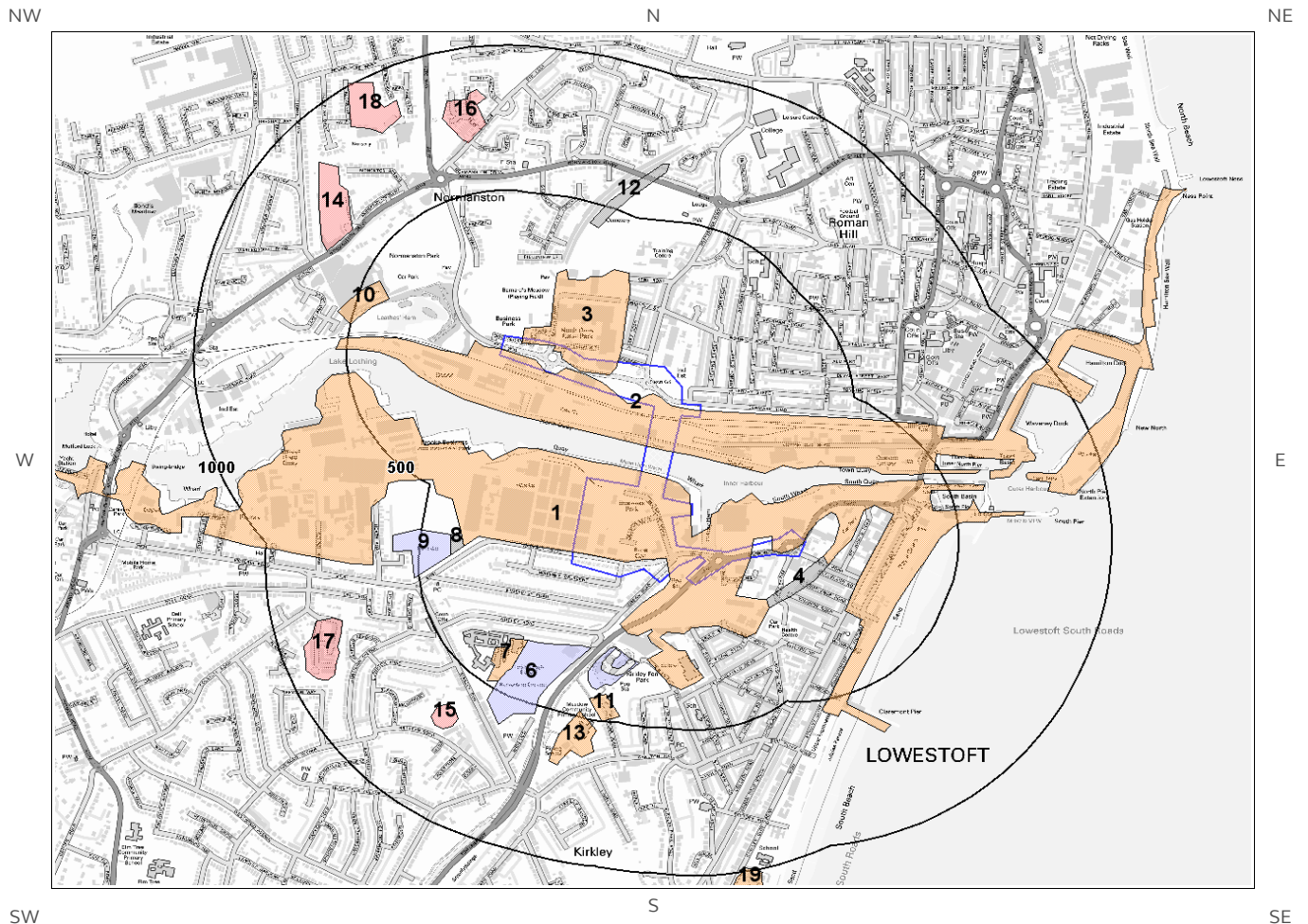
Section 2:Ground Workings	On-site	0-50m	51-250	251-500	501-1000
2.1 Historical Surface Ground Working Features from Small Scale Mapping	11	14	50	Not Searched	Not Searched
2.2 Historical Underground Workings from Small Scale Mapping	0	0	0	0	0
2.3 Current Ground Workings	0	1	1	1	13

Section 3: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
3.1 Historical Mining	0	0	0	0	0
3.2 Coal Mining	0	0	0	0	0
3.3 Johnson Poole and Bloomer Mining Area	0	0	0	0	0
3.4 Non-Coal Mining	0	0	0	0	0
3.5 Non-Coal Mining Cavities	0	0	0	0	0
3.6 Natural Cavities	0	0	0	0	0
3.7 Brine Extraction	0	0	0	0	0
3.8 Gypsum Extraction	0	0	0	0	0
3.9 Tin Mining	0	0	0	0	0
3.10 Clay Mining	0	0	0	0	0
Section 4: Natural Ground Subsidence	On-site				
4.1 Shrink Swell Clay	Low				
4.2 Landslides	Very Low				
4.3 Ground Dissolution of Soluble Rocks	Negligible				
4.4 Compressible Deposits	Moderate				
4.5 Collapsible Deposits	Very Low				
4.6 Running Sand	Moderate				
Section 5: Borehole Records	On-site	0-50m	51-250		
5 BGS Recorded Boreholes	54	20	31		
Section 6: Estimated Background Soil Chemistry	On-site	0-50m	51-250		
6 Records of Background Soil Chemistry	19	9	20		
Section 7: Railways and Tunnels	On-site	0-50m	51-250	251-500	
7.1 Tunnels	0	0	0	Not Searched	
7.2 Historical Railway and Tunnel Features	82	22	45	Not Searched	
7.3 Historical Railways	1	0	0	Not Searched	
7.4 Active Railways	4	3	0	Not Searched	

Section 7:Railways and Tunnels	On-site	0-50m	51-250	251-500
7.5 Railway Projects	0	0	0	0

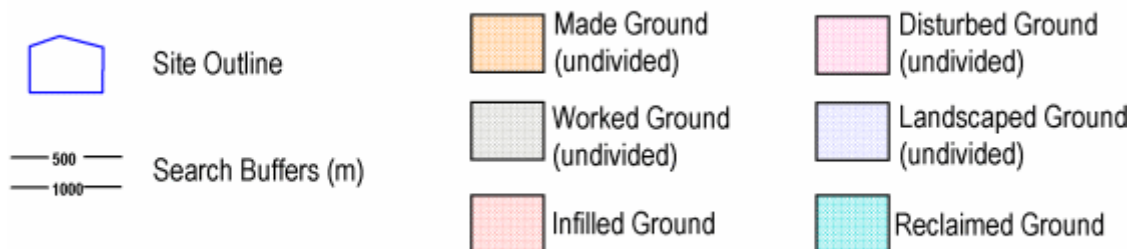
1 Geology

1.1 Artificial Ground Map



Artificial Ground Legend

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1 Geology

1.1 Artificial Ground

1.1.1 Artificial/ Made Ground

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No:176

Are there any records of Artificial/Made Ground within 500m of the study site boundary? Yes

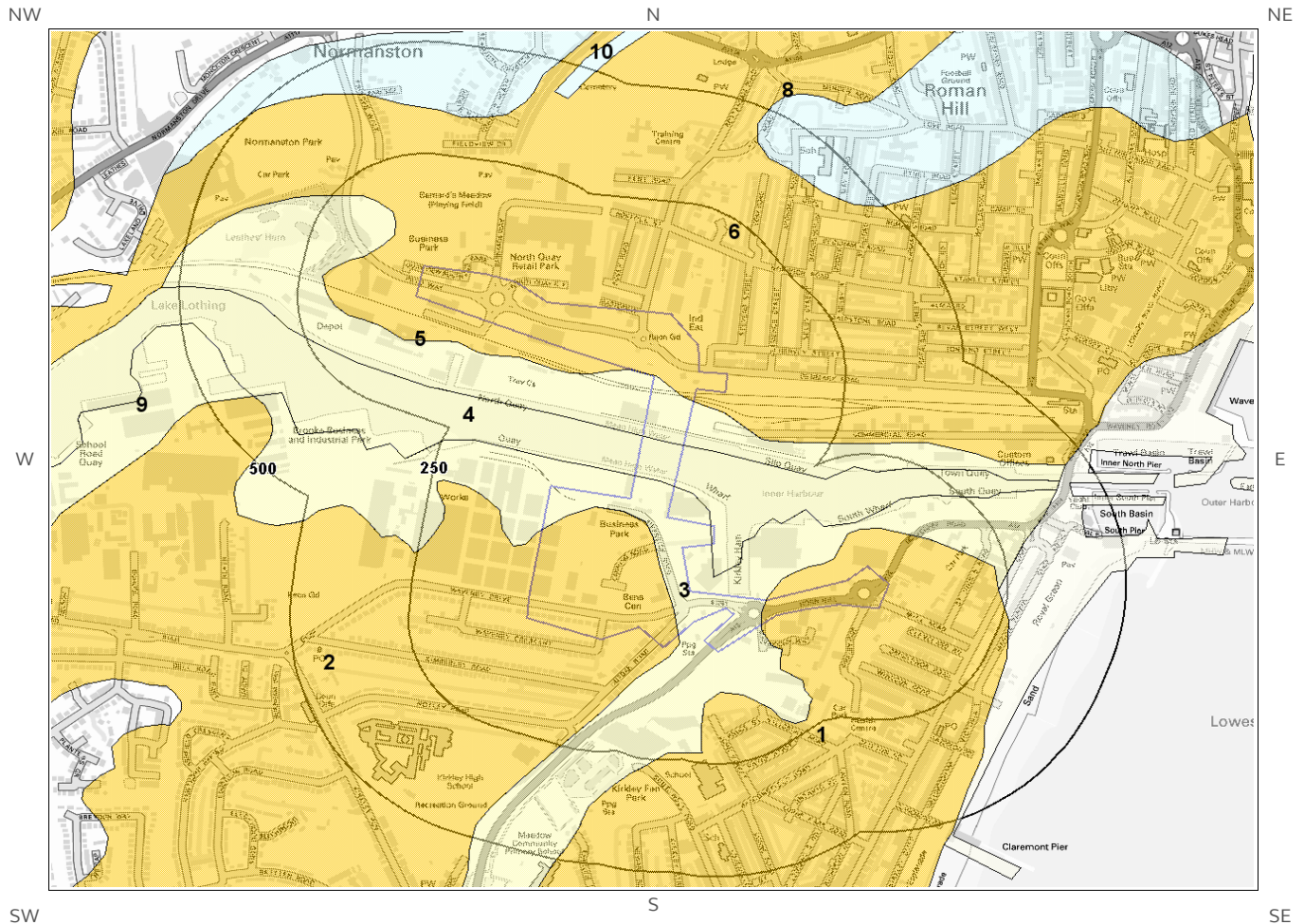
ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	MGR-MGRD	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
2	0.0	On Site	MGR-MGRD	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
3	0.0	On Site	MGR-MGRD	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
4	48.0	SE	WGR-OPEN	WORKED GROUND (UNDIVIDED)	VOID
5	242.0	S	LSGR-ARTGR	LANDSCAPED GROUND (UNDIVIDED)	ARTIFICIALLY MODIFIED GROUND
6	261.0	S	LSGR-ARTGR	LANDSCAPED GROUND (UNDIVIDED)	ARTIFICIALLY MODIFIED GROUND
7	299.0	SW	MGR-MGRD	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
8	358.0	W	WGR-OPEN	WORKED GROUND (UNDIVIDED)	VOID
9	397.0	W	LSGR-ARTGR	LANDSCAPED GROUND (UNDIVIDED)	ARTIFICIALLY MODIFIED GROUND
10	401.0	W	MGR-MGRD	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
11	405.0	S	MGR-MGRD	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
12	423.0	N	WGR-OPEN	WORKED GROUND (UNDIVIDED)	VOID
13	478.0	S	MGR-MGRD	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

1.1.2 Permeability of Artificial Ground

Are there any records relating to permeability of artificial ground within the study site boundary? Yes

Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Mixed	Very High	Low
0.0	On Site	Mixed	Very High	Low
0.0	On Site	Mixed	Very High	Low

1.2 Superficial Deposits and Landslips Map

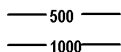


**Superficial Deposits and Landslips
Legend**

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Site Outline



Search Buffers (m)

1.2 Superficial Deposits and Landslips

1.2.1 Superficial Deposits/ Drift Geology

Are there any records of Superficial Deposits/ Drift Geology within 500m of the study site boundary? Yes

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	HPGL	HAPPISBURGH GLACIGENIC FORMATION	SAND [UNLITHIFIED DEPOSITS CODING SCHEME]
2	0.0	On Site	HPGL	HAPPISBURGH GLACIGENIC FORMATION	SAND [UNLITHIFIED DEPOSITS CODING SCHEME]
3	0.0	On Site	ALV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL [UNLITHIFIED DEPOSITS CODING SCHEME]
4	0.0	On Site	TRD	TIDAL RIVER OR CREEK DEPOSITS	CLAY AND SILT [UNLITHIFIED DEPOSITS CODING SCHEME]
5	0.0	On Site	ALV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL [UNLITHIFIED DEPOSITS CODING SCHEME]
6	0.0	On Site	HPGL	HAPPISBURGH GLACIGENIC FORMATION	SAND [UNLITHIFIED DEPOSITS CODING SCHEME]
7	230.0	E	BSA	BLOWN SAND	SAND [UNLITHIFIED DEPOSITS CODING SCHEME]
8	340.0	N	LOFT	LOWESTOFT FORMATION	DIAMICTON
9	409.0	SW	ALV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL [UNLITHIFIED DEPOSITS CODING SCHEME]
10	423.0	N	LOFT	LOWESTOFT FORMATION	DIAMICTON

1.2.2 Permeability of Superficial Ground

Are there any records relating to permeability of superficial ground within the study site boundary? Yes

Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Intergranular	High	Very Low
0.0	On Site	Intergranular	High	Very Low
0.0	On Site	Intergranular	High	High
0.0	On Site	Intergranular	High	High
0.0	On Site	Intergranular	High	High

Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Intergranular	Low	Very Low

1.2.3 Landslip

Are there any records of Landslip within 500m of the study site boundary? No

Database searched and no data found.

This Geology shows the main components as discrete layers, these are: Artificial / Made Ground, Superficial / Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

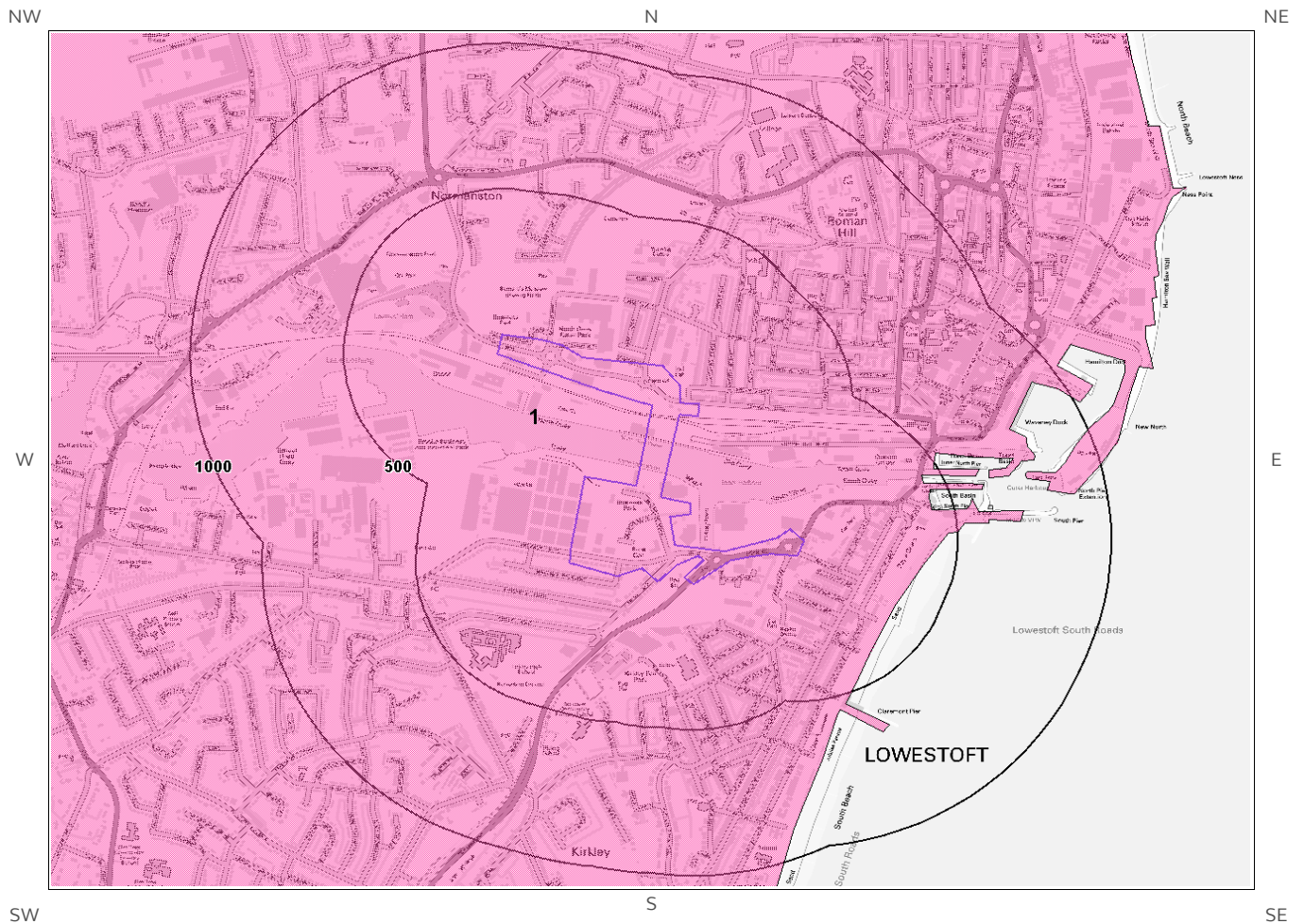
1.2.4 Landslip Permeability

Are there any records relating to permeability of landslips within the study site** boundary? No

Database searched and no data found.

* This includes an automatically generated 50m buffer zone around the site

1.3 Bedrock and Faults Map

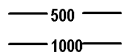


Bedrock and Faults Legend

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Site Outline



Search Buffers (m)

1.3 Bedrock, Solid Geology & Faults

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No:176

1.3.1 Bedrock/ Solid Geology

Records of Bedrock/ Solid Geology within 500m of the study site boundary:

ID	Distance (m)	Direction	LEX Code	Description	Rock Age
1	0.0	On Site	Crag-SANDU	Crag Group - Sand	No Details

1.3.2 Permeability of Bedrock Ground

Are there any records relating to permeability of bedrock ground within the study site* boundary? Yes

Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Intergranular	High	High

1.3.3 Faults

Are there any records of Faults within 500m of the study site boundary? No

Database searched and no data found.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:50,000 scale.

This Geology shows the main components as discrete layers, these are: Bedrock/ Solid Geology and linear features such as Faults. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

* This includes an automatically generated 50m buffer zone around the site

1.4 Radon Data

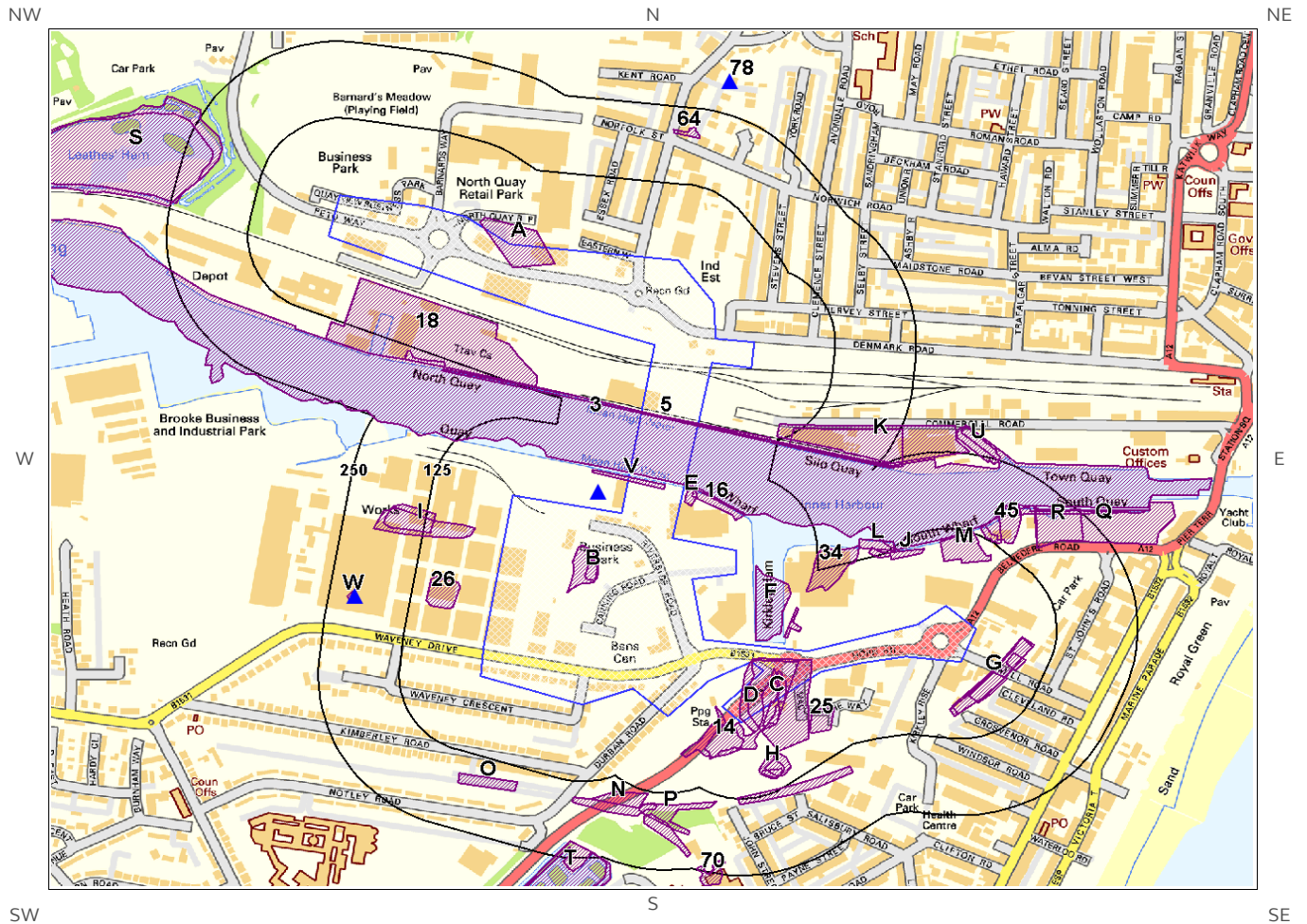
1.4.1 Radon Affected Areas

Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level

1.4.2 Radon Protection

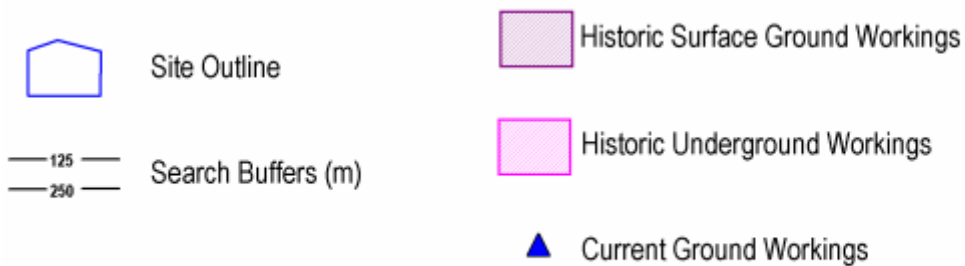
Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary

2 Ground Workings Map



Ground Workings Legend

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2 Ground Workings

2.1 Historical Surface Ground Working Features derived from Historical Mapping

This dataset is based on Groundsure's unique Historical Land Use Database derived from 1:10,560 and 1:10,000 scale historical mapping.

Are there any Historical Surface Ground Working Features within 250m of the study site boundary? Yes

The following Historical Surface Ground Working Features are provided by Groundsure:

ID	Distance (m)	Direction	NGR	Use	Date
1C	0.0	On Site	654082 292364	Pond	1951
2B	0.0	On Site	653791 292572	Unspecified Pit	1904
3	0.0	On Site	653487 292878	Lake	1951
4V	0.0	On Site	653848 292722	Unspecified Wharf	1946
5	0.0	On Site	653905 292821	Quay	1946
6A	0.0	On Site	653676 293107	Unspecified Pit	1982
7A	0.0	On Site	653676 293107	Unspecified Pit	1974
8B	0.0	On Site	653777 292576	Refuse Heap	1951
9C	0.0	On Site	654040 292354	Unspecified Pit	1951
10D	0.0	On Site	653984 292348	Ponds	1946
11D	0.0	On Site	653987 292310	Pond	1904
12E	5.0	E	653944 292694	Unspecified Wharf	1904
13F	8.0	N	654071 292520	Unspecified Wharf	1951
14	11.0	SW	653995 292296	Pond	1951
15E	15.0	E	653987 292681	Unspecified Wharf	1982
16	15.0	E	653987 292681	Unspecified Wharf	1974
17F	19.0	N	654102 292488	Unspecified Wharf	1946
18	44.0	S	653543 292960	Quay	1974
19G	45.0	SE	654409 292402	Cuttings	1883
20G	46.0	SE	654409 292400	Cuttings	1946

ID	Distance (m)	Direction	NGR	Use	Date
21I	47.0	W	653533 292650	Sand Pit	1946
22G	48.0	SE	654403 292381	Cuttings	1974
23G	48.0	SE	654403 292381	Cuttings	1982
24G	48.0	SE	654403 292381	Cuttings	1992
25	48.0	SE	654146 292330	Refuse Heap	1951
26	54.0	W	653561 292537	Unspecified Heap	1951
27G	64.0	SE	654446 292424	Cuttings	1974
28G	64.0	SE	654446 292424	Cuttings	1982
29G	64.0	SE	654446 292424	Cuttings	1992
30H	67.0	SE	654068 292255	Unspecified Pit	1904
31M	72.0	N	654369 292611	Unspecified Wharf	1883
32H	75.0	SE	654078 292256	Unspecified Pit	1951
33H	86.0	SE	654069 292242	Unspecified Pit	1946
34	89.0	N	654162 292575	Unspecified Wharf	1946
35J	92.0	NW	654278 292600	Unspecified Wharf	1904
36K	101.0	SE	654226 292779	Quay	1992
37I	112.0	W	653533 292658	Cuttings	1951
38J	115.0	NW	654235 292602	Unspecified Wharf	1946
39K	118.0	SE	654184 292773	Unspecified Wharf	1904
40L	118.0	NW	654232 292614	Unspecified Wharf	1982
41L	118.0	NW	654232 292614	Unspecified Wharf	1974
42H	120.0	S	654105 292223	Cuttings	1883
43M	125.0	NE	654408 292644	Unspecified Wharf	1946
44N	129.0	S	653826 292188	Unspecified Ground Workings	1974
45	134.0	NE	654426 292648	Unspecified Wharf	1951
46P	135.0	S	653899 292170	Unspecified Pit	1951
47N	144.0	S	653826 292188	Unspecified Ground Workings	1992
48N	144.0	S	653826 292188	Unspecified Ground Workings	1982

ID	Distance (m)	Direction	NGR	Use	Date
49O	149.0	S	653631 292228	Cuttings	1974
50O	149.0	S	653631 292228	Cuttings	1982
51P	162.0	S	653907 292141	Unspecified Heap	1992
52P	162.0	S	653907 292141	Unspecified Heap	1974
53P	162.0	S	653907 292141	Unspecified Heap	1982
54Q	162.0	NE	654584 292647	Quay	1992
55R	162.0	NE	654512 292644	Quay	1974
56Q	162.0	NE	654584 292647	Quay	1982
57R	171.0	NE	654533 292669	Quay	1883
58R	171.0	NE	654533 292669	Quay	1946
59R	171.0	NE	654533 292669	Quay	1904
60S	195.0	W	653038 293258	Water Body	1974
61S	195.0	W	653038 293258	Water Body	1982
62S	195.0	W	653038 293258	Water Body	1951
63S	195.0	W	653038 293258	Water Body	1992
64	202.0	N	653937 293286	Pond	1883
65S	205.0	W	653033 293243	Water Body	1904
66S	205.0	W	653033 293243	Water Body	1883
67S	205.0	W	653033 293243	Water Body	1946
68W	207.0	W	653421 292531	Sand Pit	1883
69T	223.0	S	653743 292064	Ponds	1951
70	225.0	S	653976 292080	Ponds	1883
71T	233.0	S	653744 292058	Water Body	1982
72T	233.0	S	653744 292058	Water Body	1974
73T	233.0	S	653744 292058	Water Body	1992
74U	242.0	N	654389 292776	Dry Dock	1883
75U	242.0	N	654389 292776	Dry Dock	1946

2.2 Historical Underground Working Features derived from Historical Mapping

This data is derived from the Groundsure unique Historical Land Use Database. It contains data derived from 1:10,000 and 1:10,560 historical Ordnance Survey Mapping and includes some natural topographical features (Shake Holes for example) as well as manmade features that may have implications for ground stability. Underground and mining features have been identified from surface features such as shafts. The distance that these extend underground is not shown.

Are there any Historical Underground Working Features within 1000m of the study site boundary? No

Database searched and no data found.

2.3 Current Ground Workings

This dataset is derived from the BGS BRITPITS database covering active; inactive mines; quarries; oil wells; gas wells and mineral wharves; and rail deposits throughout the British Isles.

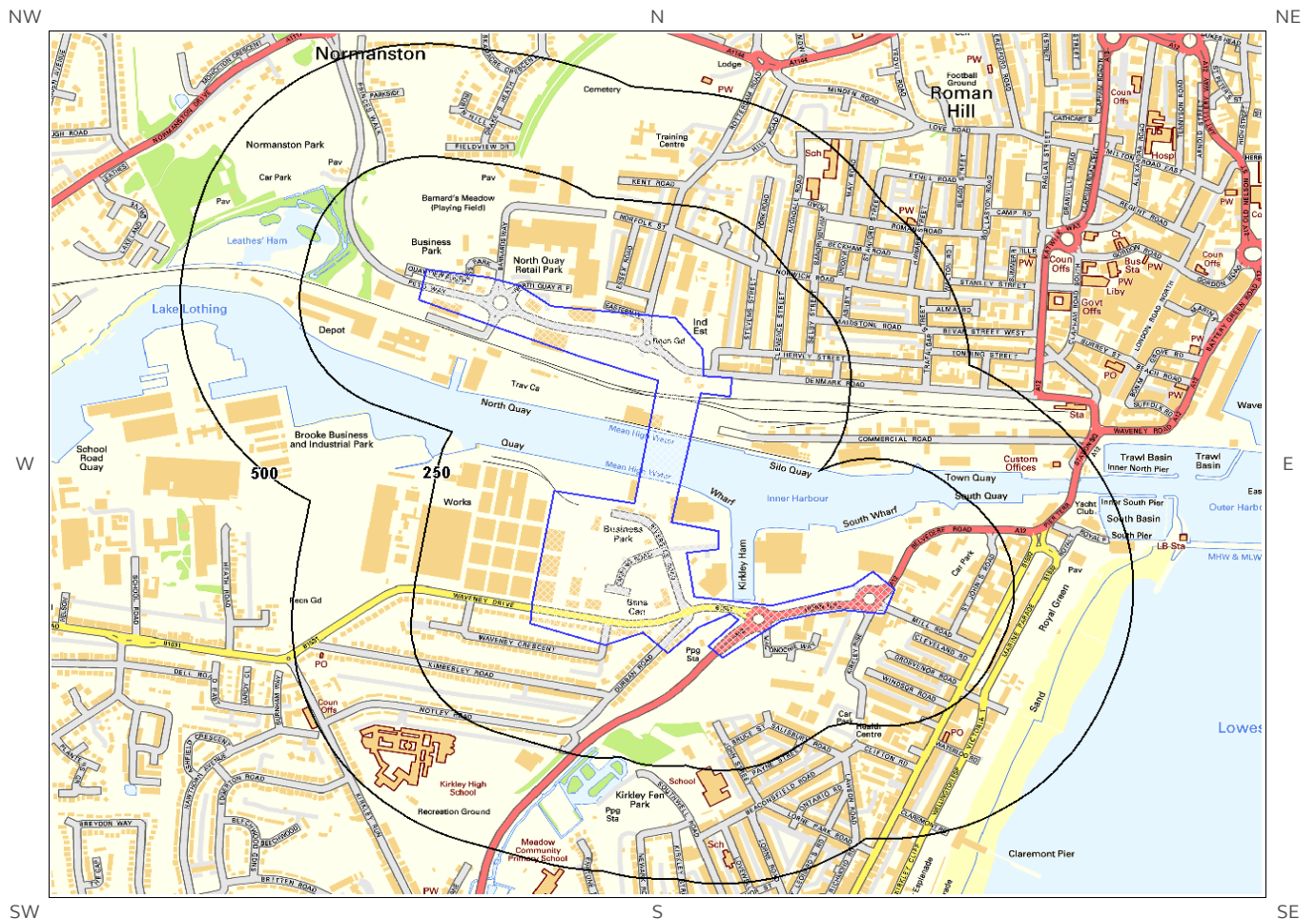
Are there any BGS Current Ground Workings within 1000m of the study site boundary? Yes

The following Current Ground Workings information is provided by British Geological Survey:

ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
76V	26.0	N	653800 292700	Marine Sand & Gravel	Inner Dock - Lowestoft	Sea, river or canal wharf where mineral commodities are unloaded and stored	Ceased
77W	210.0	W	653425 292530	Sand	Colville House Sand Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
78	302.0	N	654004 293369	Sand & Gravel	Pope's Farm Gravel Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	532.0	NE	654226 293516	Sand & Gravel	Roman Hill Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	607.0	SW	653219 291944	Sand	Mutfordbridge Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	653.0	W	652776 293370	Sand & Gravel	Oulton Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	662.0	W	652730 293212	Sand & Gravel	Oulton Gravel Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	671.0	NW	652830 293535	Sand & Gravel	Oulton Sand Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	716.0	NE	654537 293463	Clay & Shale	Roman Hill Brick Works	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	757.0	N	653218 293919	Clay & Shale	Normanston Brick Works	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	776.0	NE	654494 293605	Sand	Roman Hill Sand Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased

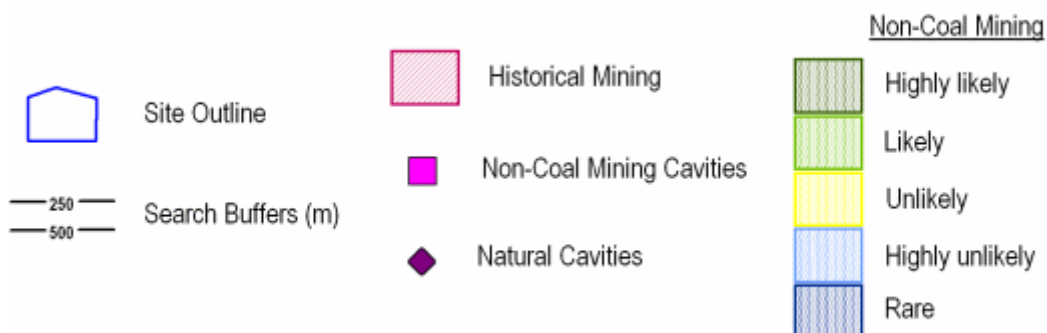
ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
Not shown	813.0	W	652821 292246	Clay & Shale	Carlton Brick Works	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	817.0	N	653207 293978	Clay & Shale	Normanston Brick Works	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	880.0	N	653330 294062	Clay & Shale	Normanston Brick Works	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	882.0	NW	653021 293980	Clay & Shale	Normanston Brick Works	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	945.0	SW	652563 292651	Sand & Gravel	Mutfordbridge Gravel Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased

3 Mining, Extraction & Natural Cavities Map



**Mining, Extraction and
Natural Cavities Legend**

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3 Mining, Extraction & Natural Cavities

3.1 Historical Mining

This dataset is derived from Groundsure unique Historical Land-use Database that are indicative of mining or extraction activities.

Are there any Historical Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

3.2 Coal Mining

This dataset provides information as to whether the study site lies within a known coal mining affected area as defined by the coal authority.

Are there any Coal Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

3.3 Johnson Poole and Bloomer

This dataset provides information as to whether the study site lies within an area where JPB hold information relating to mining.

Are there any JPB Mining areas within 1000m of the study site boundary? No

The following information provided by JPB is not represented on mapping: Database searched and no data found.

3.4 Non-Coal Mining

This dataset provides information as to whether the study site lies within an area which may have been subject to non-coal historic mining.

Are there any Non-Coal Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

3.5 Non-Coal Mining Cavities

This dataset provides information from the Peter Brett Associates (PBA) mining cavities database (compiled for the national study entitled “Review of mining instability in Great Britain, 1990” PBA has also continued adding to this database) on mineral extraction by mining.

Are there any Non-Coal Mining cavities within 1000m of the study site boundary? No

Database searched and no data found.

3.6 Natural Cavities

This dataset provides information based on Peter Brett Associates natural cavities database.

Are there any Natural Cavities within 1000m of the study site boundary? No

Database searched and no data found.

3.7 Brine Extraction

This data provides information from the Coal Authority issued on behalf of the Cheshire Brine Subsidence Compensation Board.

Are there any Brine Extraction areas within 1000m of the study site boundary? No

Database searched and no data found.

3.8 Gypsum Extraction

This dataset provides information on Gypsum extraction from British Gypsum records.

Are there any Gypsum Extraction areas within 1000m of the study site boundary? No

Database searched and no data found.

3.9 Tin Mining

This dataset provides information on tin mining areas and is derived from tin mining records. This search is based upon postcode information to a sector level.

Are there any Tin Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

3.10 Clay Mining

This dataset provides information on Kaolin and Ball Clay mining from relevant mining records.

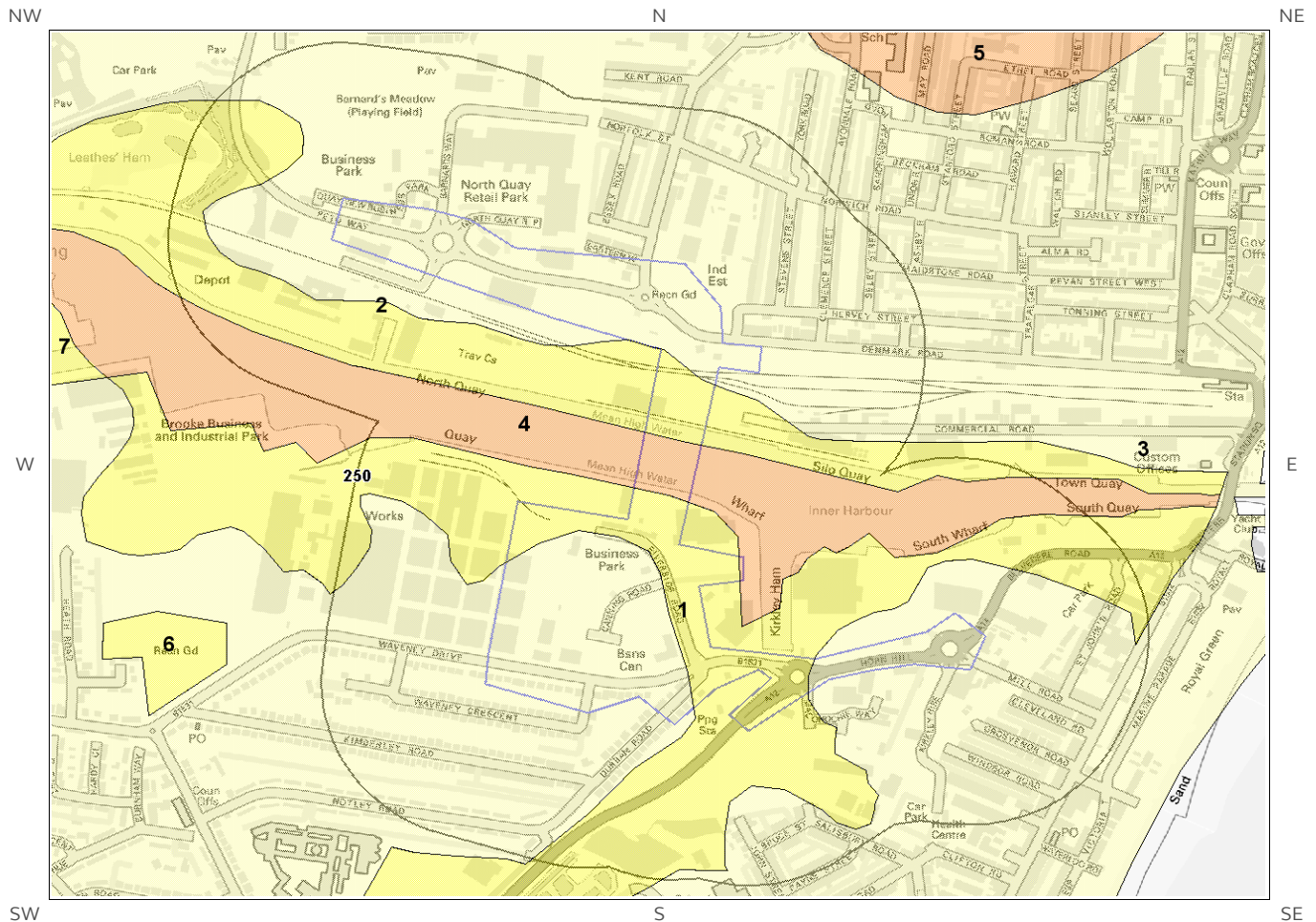
Are there any Clay Mining areas within 1000m of the study site boundary?

No

Database searched and no data found.

4 Natural Ground Subsidence

4.1 Shrink-Swell Clay Map

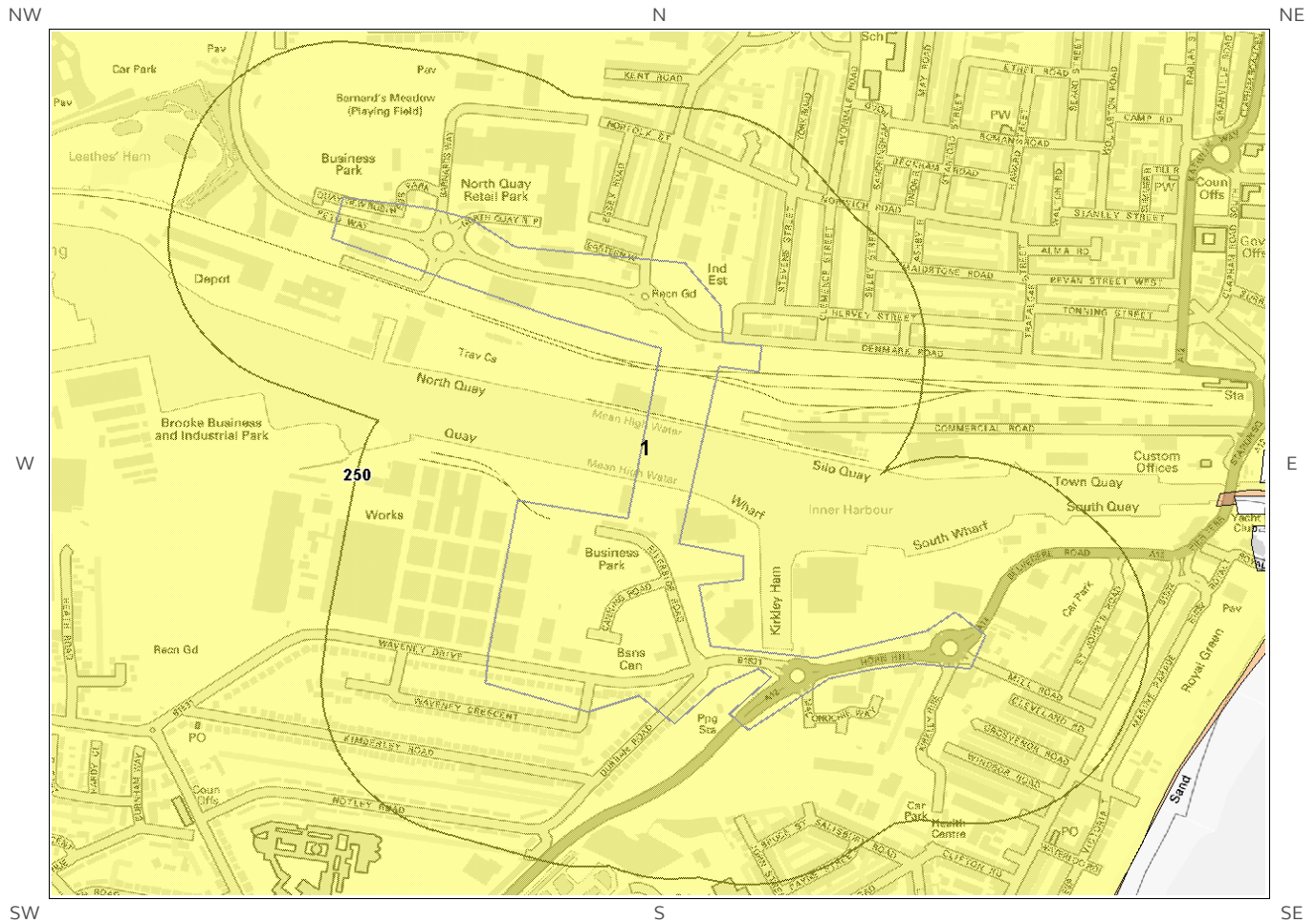


Shrink Swell Clay Legend

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4.2 Landslides Map

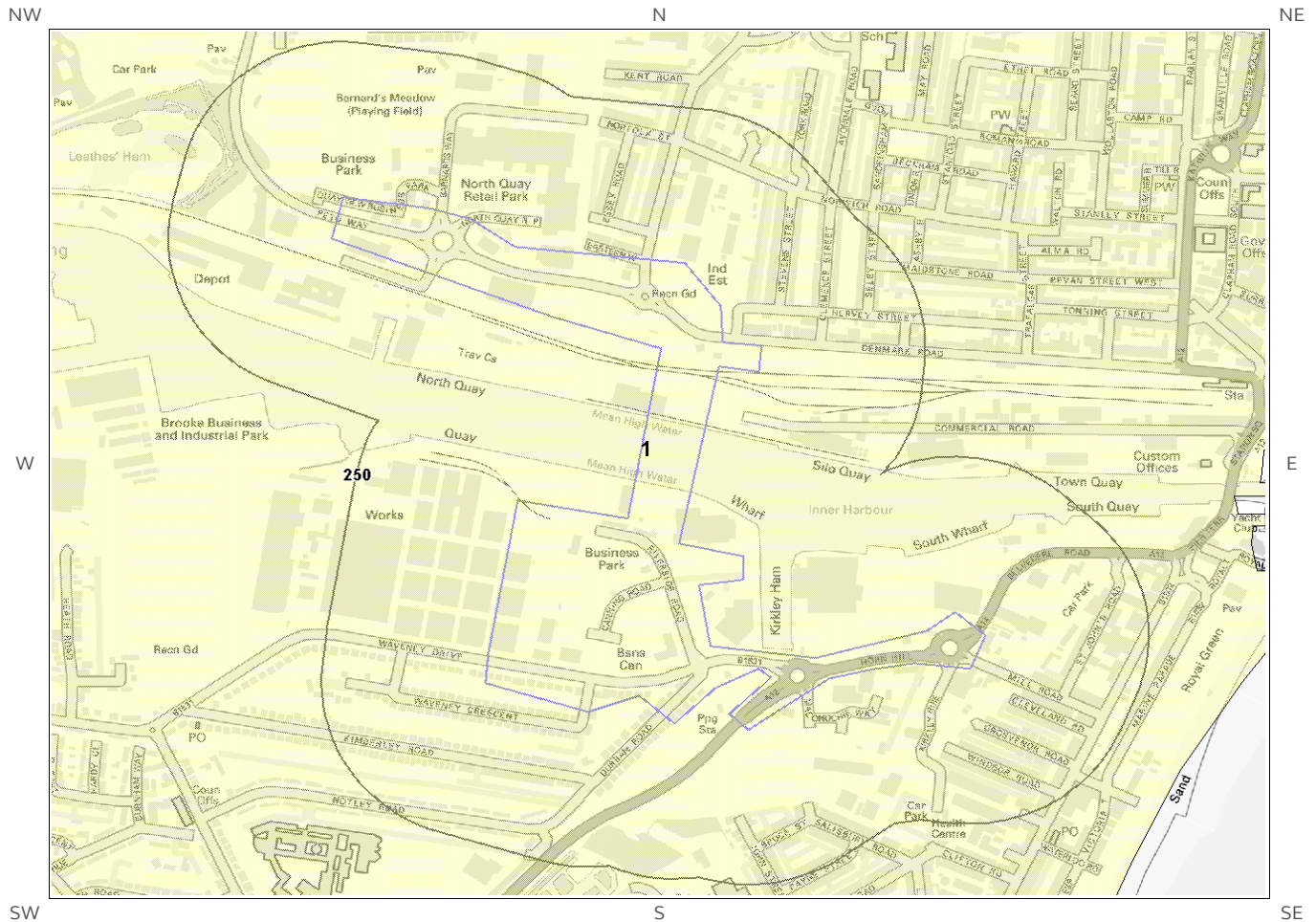


Landslides Legend

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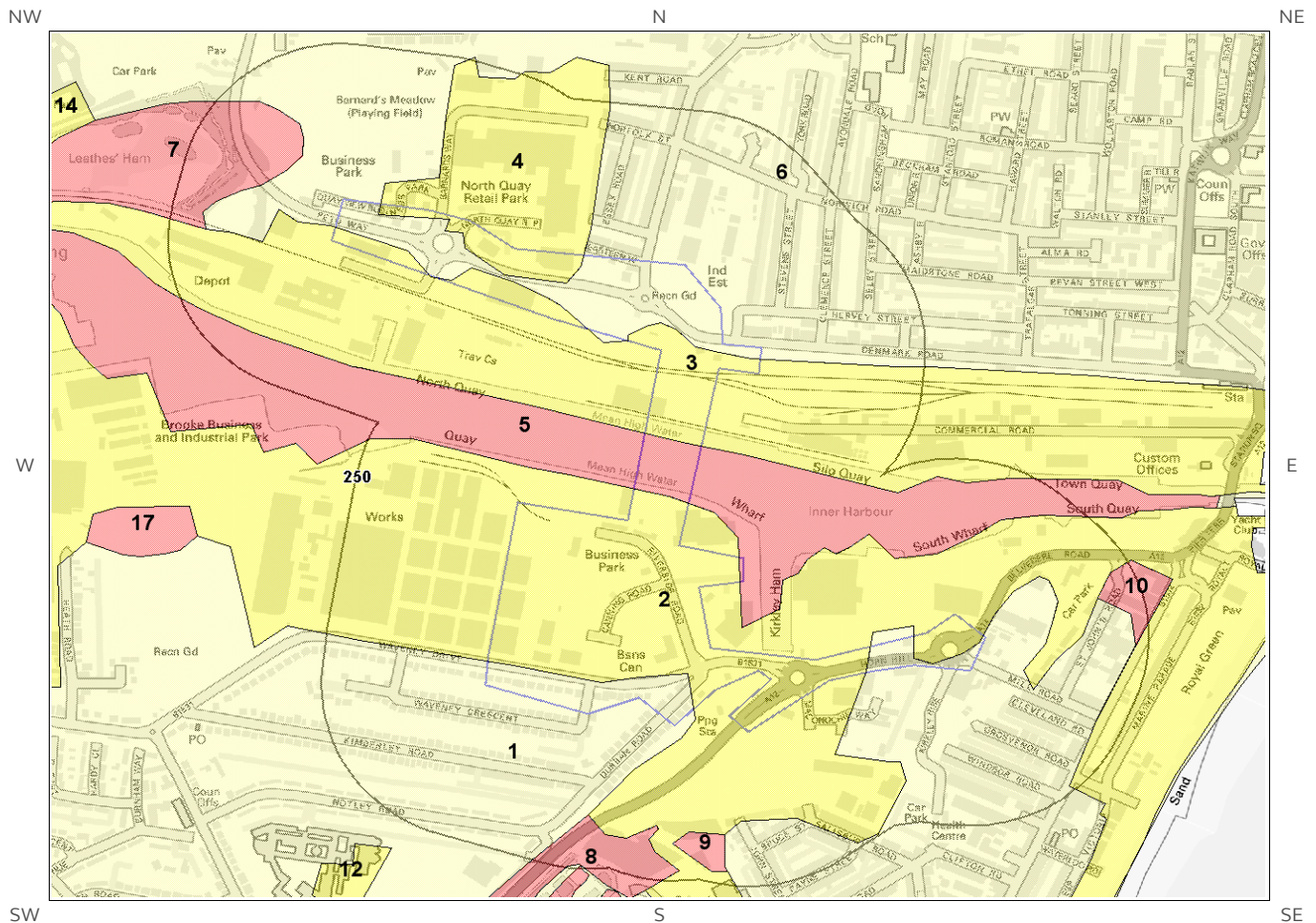
4.3 Ground Dissolution Soluble Rocks Map



Ground Dissolution
Soluble Rocks Legend

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4.4 Compressible Deposits Map

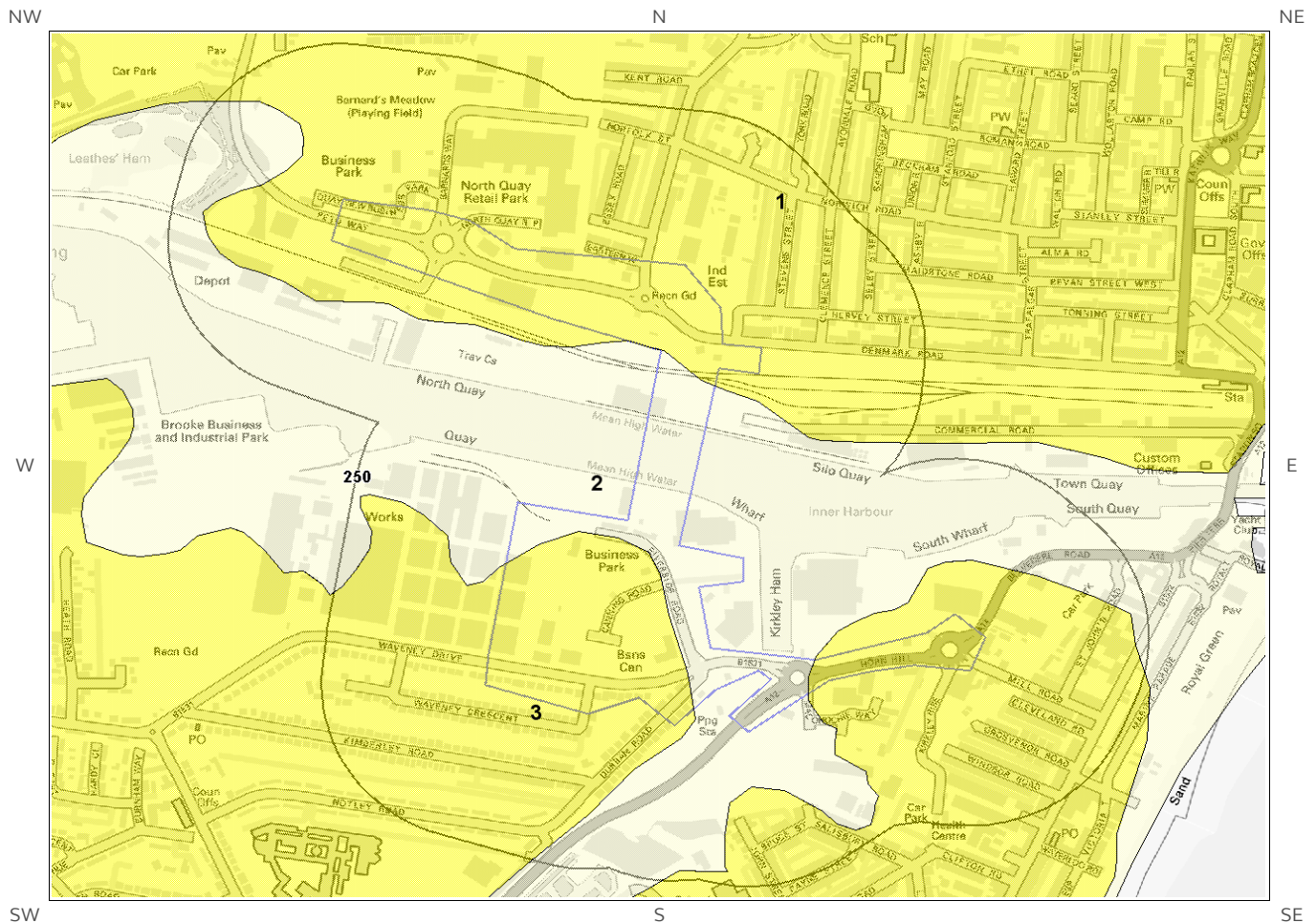


Compressible Deposits Legend

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4.5 Collapsible Deposits Map

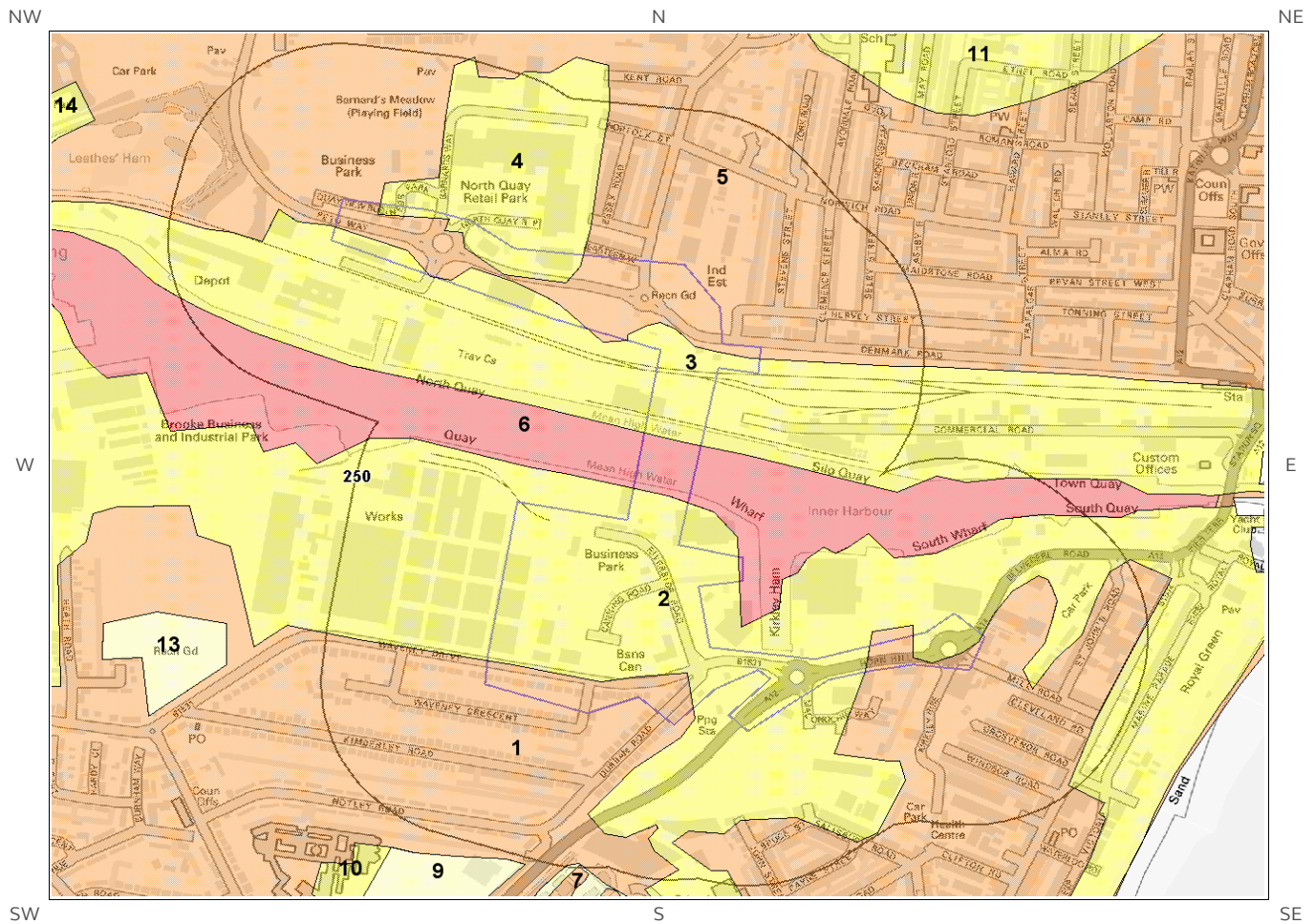


Collapsible Deposits Legend

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4.6 Running Sand Map



Running Sand Legend

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4 Natural Ground Subsidence

The National Ground Subsidence rating is obtained through the 6 natural ground stability hazard datasets, which are supplied by the British Geological Survey (BGS).

The following GeoSure data represented on the mapping is derived from the BGS Digital Geological map of Great Britain at 1:50,000 scale.

What is the maximum hazard rating of natural subsidence within the study site** boundary? **Moderate**

4.1 Shrink-Swell Clays

The following Shrink Swell information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.
2	0.0	On Site	Very Low	Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.
3	0.0	On Site	Negligible	Ground conditions predominantly non-plastic. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.
4	0.0	On Site	Low	Ground conditions predominantly medium plasticity. Do not plant trees with high soil moisture demands near to buildings. For new build, consideration should be given to advice published by the National House Building Council (NHBC) and the Building Research Establishment (BRE). There is a possible increase in construction cost to reduce potential shrink swell problems. For existing property, there is a possible increase in insurance risk, especially during droughts or where vegetation with high moisture demands is present.

4.2 Landslides

The following Landslides information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

* This includes an automatically generated 50m buffer zone around the site

4.3 Ground Dissolution of Soluble Rocks

The following Ground Dissolution information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

4.4 Compressible Deposits

The following Compressible Deposits information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for compressible ground identified. No special actions required to avoid problems due to compressible ground. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible ground.
2	0.0	On Site	Very Low	Very low potential for compressible ground to be present. No special actions required to avoid problems due to compressible ground. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible ground.
3	0.0	On Site	Very Low	Very low potential for compressible ground to be present. No special actions required to avoid problems due to compressible ground. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible ground.
4	0.0	On Site	Very Low	Very low potential for compressible ground to be present. No special actions required to avoid problems due to compressible ground. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible ground.
5	0.0	On Site	Moderate	Significant potential for compressibility problems. Do not drain, load or de-water ground near the property without technical advice. For new build, consider possibility of compressible ground in ground investigation, construction and building design. Consider effects of groundwater changes. Extra construction costs are likely. For existing property, possible increase in insurance risk from compressibility, especially if water conditions or loading of the ground change significantly.
6	0.0	On Site	Negligible	No indicators for compressible ground identified. No special actions required to avoid problems due to compressible ground. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible ground.

4.5 Collapsible Deposits

The following Collapsible Rocks information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

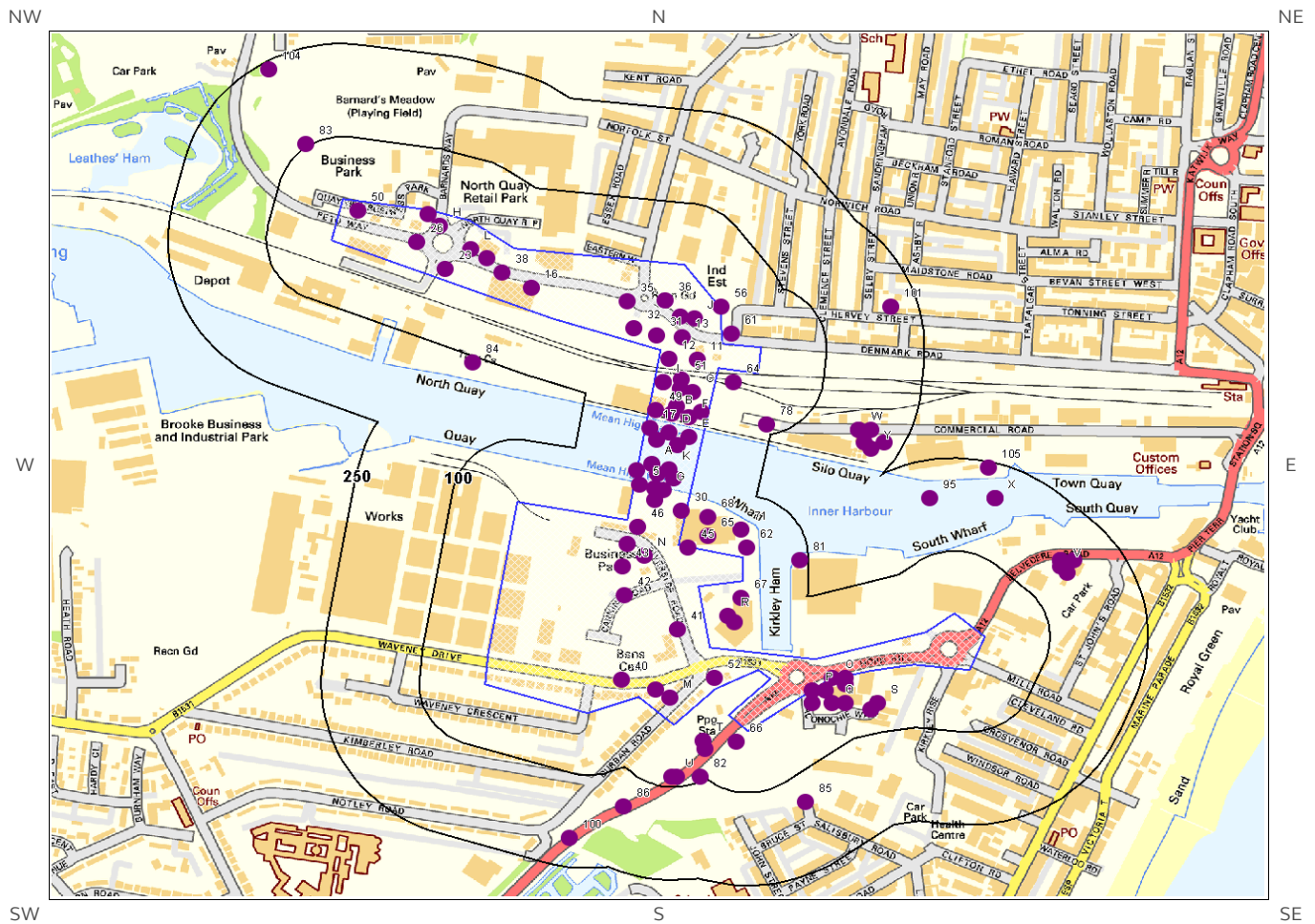
ID	Distance (m)	Direction	Hazard Rating	Details
2	0.0	On Site	Negligible	No indicators for collapsible deposits identified. No actions required to avoid problems due to collapsible deposits. No special ground investigation required, or increased construction costs or increased financial risk due to potential problems with collapsible deposits.
3	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

4.6 Running Sands

The following Running Sands information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Low	Possibility of running sand problems after major changes in ground conditions. Normal maintenance to avoid leakage of water-bearing services or water bodies (ponds, swimming pools) should reduce likelihood of problems due to running sand. For new build, consider possibility of running sand into trenches or excavations if water table is high or sandy strata are exposed to water. Avoid concentrated water inputs to site. Unlikely to be an increase in construction costs due to potential for running sand. For existing property, no significant increase in insurance risk due to running sand problems is likely.
2	0.0	On Site	Very Low	Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.
3	0.0	On Site	Very Low	Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.
4	0.0	On Site	Very Low	Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.
5	0.0	On Site	Low	Possibility of running sand problems after major changes in ground conditions. Normal maintenance to avoid leakage of water-bearing services or water bodies (ponds, swimming pools) should reduce likelihood of problems due to running sand. For new build, consider possibility of running sand into trenches or excavations if water table is high or sandy strata are exposed to water. Avoid concentrated water inputs to site. Unlikely to be an increase in construction costs due to potential for running sand. For existing property, no significant increase in insurance risk due to running sand problems is likely.
6	0.0	On Site	Moderate	Significant potential for running sand problems with relatively small changes in ground conditions. Avoid large amounts of water entering the ground (for example through pipe leakage or soak-aways). Do not dig (deep) holes into saturated ground near the property without technical advice. For new build, consider the consequences of soil and groundwater conditions during and after construction. For existing property, possible increase in insurance risk from running sand, for example, due to water leakage, high rainfall events or flooding.

5 Borehole Records Map



Borehole Records Legend

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5 Borehole Records

The systematic analysis of data extracted from the BGS Borehole Records database provides the following information.

Records of boreholes within 250m of the study site boundary:

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ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
1E	0.0	On Site	653931 292799	TM59SW113	25.0	A12 LOWESTOFT RELIEF ROAD 49
2D	0.0	On Site	653900 292806	TM59SW115	35.0	A12 RELIEF ROAD 51
3A	0.0	On Site	653874 292755	TM59SW110	29.6	A12 RELIEF ROAD 46
4A	0.0	On Site	653883 292739	TM59SW108	40.7	A12 RELIEF ROAD 44
5	0.0	On Site	653856 292722	TM59SW104	30.0	A12 RELIEF ROAD 40
6B	0.0	On Site	653905 292837	TM59SW118	30.0	A12 RELIEF ROAD 54
7G	0.0	On Site	653891 292714	TM59SW106	30.0	A12 RELIEF ROAD 42
8B	0.0	On Site	653912 292848	TM59SW120	2.3	A12 RELIEF ROAD 56
9C	0.0	On Site	653936 292871	TM59SW125	30.0	A12 RELIEF ROAD 59
10C	0.0	On Site	653918 292877	TM59SW124	30.0	A12 RELIEF ROAD 58
11	0.0	On Site	653944 292924	TM59SW129	25.0	A12 RELIEF ROAD 63
12	0.0	On Site	653900 292926	TM59SW127	25.0	A12 RELIEF ROAD 61
13	0.0	On Site	653921 292960	TM59SW131	25.0	A12 RELIEF ROAD 65
14D	0.0	On Site	653882 292795	TM59SW112	40.0	A12 RELIEF ROAD 48
15E	0.0	On Site	653913 292786	TM59SW116	30.6	A12 LOWESTOFT RELIEF ROAD 52
16	0.0	On Site	653690 293040	TM59SW137	5.0	A12 RELIEF ROAD 71
17	0.0	On Site	653871 292814	TM59SW114	26.9	A12 LOWESTOFT RELIEF ROAD 50
18K	0.0	On Site	653901 292747	TM59SW111	25.1	A12 RELIEF ROAD 47
19F	0.0	On Site	653931 292831	TM59SW119	30.0	A12 RELIEF ROAD 55
20F	0.0	On Site	653950 292840	TM59SW232	23.47	LOWESTOFT HARBOUR BH2
21G	0.0	On Site	653878 292717	TM59SW105	25.0	A12 RELIEF ROAD 41
22L	0.0	On Site	653597 293103	TM59SW139	10.0	A12 RELIEF ROAD 73

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
23	0.0	On Site	653558 293071	TM59SW141	5.0	A12 RELIEF ROAD 75
24I	0.0	On Site	653892 292887	TM59SW123	30.0	A12 RELIEF ROAD 57A
25H	0.0	On Site	653550 293140	TM59SW21	9.14	LOWESTOFT BC MAIN DRAINAGE NO 30
26	0.0	On Site	653514 293114	TM59SW142	5.0	A12 RELIEF ROAD 76
27H	0.0	On Site	653532 293159	TM59SW140	5.0	A12 RELIEF ROAD 74
28I	0.0	On Site	653892 292887	TM59SW122	2.0	A12 RELIEF ROAD 57
29G	0.0	On Site	653879 292697	TM59SW103	30.0	A12 RELIEF ROAD 39
30	0.0	On Site	653920 292680	TM59SW290	15.0	GOODS WAREHOUSE BH2
31	0.0	On Site	653882 292963	TM59SW133	25.0	A12 RELIEF ROAD 67
32	0.0	On Site	653847 292974	TM59SW134	15.0	A12 RELIEF ROAD 68
33J	0.0	On Site	653940 292990	TM59SW386	16.0	DENMARK ROAD 1
34J	0.0	On Site	653918 292993	TM59SW132	10.5	A12 LOWESTOFT RELIEF ROAD 66
35	0.0	On Site	653836 293018	TM59SW136	10.0	A12 RELIEF ROAD 70
36	0.0	On Site	653894 293020	TM59SW135	10.0	A12 RELIEF ROAD 69
37K	0.0	On Site	653908 292732	TM59SW109	25.2	A12 RELIEF ROAD 45
38	0.0	On Site	653645 293064	TM59SW138	10.0	A12 RELIEF ROAD 72
39L	0.0	On Site	653622 293088	TM59SW193	4.1	A12 RELIEF ROAD 325
40	0.0	On Site	653828 292407	TM59SW98	5.5	A12 RELIEF ROAD 34
41	0.0	On Site	653913 292488	TM59SW121	30.0	A12 RELIEF ROAD 56A
42	0.0	On Site	653832 292543	TM59SW99	10.0	A12 RELIEF ROAD 35
43	0.0	On Site	653830 292590	TM59SW53	558.39	LOWESTOFT EAST ANGLIAN ICE CO WORKS
44N	0.0	On Site	653862 292607	TM59SW100	20.0	A12 RELIEF ROAD 36
45	0.0	On Site	653930 292620	TM59SW289	15.0	GOODS WAREHOUSE BH1
46	0.0	On Site	653852 292654	TM59SW102	20.0	A12 RELIEF ROAD 38
47M	0.0	On Site	653902 292378	TM59SW96	10.0	A12 RELIEF ROAD 32
48M	0.0	On Site	653880 292391	TM59SW97	5.0	A12 RELIEF ROAD 33
49	0.0	On Site	653880 292843	TM59SW117	30.0	A12 RELIEF ROAD 53
50	0.0	On Site	653424 293165	TM59SW143	5.5	A12 RELIEF ROAD 77

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
51	0.0	On Site	653920 292892	TM59SW126	25.0	A12 RELIEF ROAD 60
52	0.0	On Site	653970 292410	TM59SW24	6.6	LOWESTOFT BC MAIN DRAINAGE NO 34
53O	0.0	On Site	654150 292410	TM59SW677	2.0	NEW PEUGEOT SHOWROOM AND VEHICLE WORKSHOP AT HORN HILL LOWESTOFT SUFFOLK TP2
54N	0.0	On Site	653837 292626	TM59SW101	20.0	A12 RELIEF ROAD 37
55P	1.0	SE	654120 292390	TM59SW679	2.5	NEW PEUGEOT SHOWROOM AND VEHICLE WORKSHOP AT HORN HILL LOWESTOFT SUFFOLK TP4
56	1.0	NE	653980 293010	TM59SW387	9.0	DENMARK ROAD 2
57A	1.0	W	653851 292745	TM59SW107	25.1	A12 RELIEF ROAD 43
58O	3.0	S	654170 292410	TM59SW676	2.8	NEW PEUGEOT SHOWROOM AND VEHICLE WORKSHOP AT HORN HILL LOWESTOFT SUFFOLK TP1
59P	12.0	SE	654140 292390	TM59SW678	3.0	NEW PEUGEOT SHOWROOM AND VEHICLE WORKSHOP AT HORN HILL LOWESTOFT SUFFOLK TP3
60O	13.0	S	654170 292400	TM59SW674	5.5	NEW PEUGEOT SHOWROOM AND VEHICLE WORKSHOP AT HORN HILL LOWESTOFT SUFFOLK 2
61	15.0	E	653996 292966	TM59SW130	10.0	A12 RELIEF ROAD 64
62	15.0	NE	654020 292620	TM59SW293	15.0	GOODS WAREHOUSE BH5
63P	18.0	SE	654120 292370	TM59SW680	2.0	NEW PEUGEOT SHOWROOM AND VEHICLE WORKSHOP AT HORN HILL LOWESTOFT SUFFOLK TP5
64	20.0	S	653999 292888	TM59SW128	25.0	A12 RELIEF ROAD 62
65	23.0	N	653960 292640	TM59SW294	18.0	GOODS WAREHOUSE BH6
66	26.0	SW	654004 292307	TM59SW95	5.0	A12 RELIEF ROAD 31
67	26.0	S	654010 292540	TM59SW480	9.0	TIN WAREHOUSE BH1
68	34.0	E	653960 292670	TM59SW291	15.0	GOODS WAREHOUSE BH3
69Q	34.0	SE	654150 292370	TM59SW673	12.0	NEW PEUGEOT SHOWROOM AND VEHICLE WORKSHOP AT HORN HILL LOWESTOFT SUFFOLK 1

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
70R	35.0	E	653990 292510	TM59SW481	9.0	TIN WAREHOUSE BH2
71	42.0	N	654010 292650	TM59SW292	15.0	GOODS WAREHOUSE BH4
72Q	42.0	S	654170 292370	TM59SW681	2.0	NEW PEUGEOT SHOWROOM AND VEHICLE WORKSHOP AT HORN HILL LOWESTOFT SUFFOLK TP6
73R	43.0	E	654000 292500	TM59SW62	19.81	HORN HILL
74T	50.0	SE	653952 292308	TM59SW94	5.0	A12 RELIEF ROAD 30
75S	53.0	S	654220 292370	TM59SW682	2.3	NEW PEUGEOT SHOWROOM AND VEHICLE WORKSHOP AT HORN HILL LOWESTOFT SUFFOLK TP7
76S	61.0	S	654210 292360	TM59SW675	5.5	NEW PEUGEOT SHOWROOM AND VEHICLE WORKSHOP AT HORN HILL LOWESTOFT SUFFOLK 3
77T	61.0	SE	653956 292296	TM59SW211	4.8	A12 RELIEF ROAD 349
78	84.0	S	654050 292820	TM59SW233	21.95	LOWESTOFT HARBOUR BH3
79U	84.0	S	653905 292251	TM59SW209	2.0	A12 RELIEF ROAD 348
80U	84.0	S	653912 292251	TM59SW210	3.0	A12 RELIEF ROAD 348A
81	86.0	E	654100 292600	TM59SW525	15.0	HORN HILL LOWESTOFT 1
82	93.0	SE	653948 292251	TM59SW93	5.5	A12 RELIEF ROAD 29
83	105.0	NW	653344 293272	TM59SW144	5.0	A12 RELIEF ROAD 78
84	110.0	S	653600 292920	TM59SW231	28.35	LOWESTOFT HARBOUR BH1
85	145.0	SE	654110 292210	TM59SW25	6.55	LOWESTOFT BC MAIN DRAINAGE NO 35
86	153.0	SW	653831 292203	TM59SW92	10.0	A12 RELIEF ROAD 28
87V	162.0	NE	654500 292590	TM59SW478	10.0	BELVEDERE ROAD BH2
88V	163.0	NE	654510 292580	TM59SW479	10.0	BELVEDERE ROAD BH3
89V	169.0	NE	654500 292600	TM59SW512	10.0	BELVEDERE ROAD LOWESTOFT 1
90V	169.0	NE	654500 292600	TM59SW513	10.0	BELVEDERE ROAD LOWESTOFT 2
91V	169.0	NE	654500 292600	TM59SW514	10.0	BELVEDERE ROAD LOWESTOFT 3
92W	178.0	SE	654190 292810	TM59SW318	10.0	BULK STORAGE FACILITIES 5
93W	178.0	SE	654190 292810	TM59SW315	23.0	BULK STORAGE FACILITIES 2

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
94V	183.0	NE	654520 292600	TM59SW477	10.0	BELVEDERE ROAD BH1
95	188.0	N	654300 292700	TM59SW522	30.0	NORTH QUAY LOWESTOFT 1
96X	194.0	N	654400 292700	TM59SW491	20.0	50 COMMERCIAL RD LOWESTOFT 2
97X	194.0	N	654400 292700	TM59SW490	20.0	50 COMMERCIAL RD LOWESTOFT 1
98W	196.0	SE	654210 292810	TM59SW314	20.0	BULK STORAGE FACILITIES 1
99W	198.0	SE	654200 292790	TM59SW316	22.0	BULK STORAGE FACILITIES 3
100	204.0	S	653748 292152	TM59SW91	5.0	A12 RELIEF ROAD 27
101	208.0	E	654240 293010	TM59SW558	-1.0	58 HERVEY STREET P1
102Y	211.0	SE	654210 292780	TM59SW317	11.65	BULK STORAGE FACILITIES 4
103Y	223.0	SE	654230 292790	TM59SW319	11.0	BULK STORAGE FACILITIES 6
104	237.0	NW	653288 293393	TM59SW145	5.0	A12 RELIEF ROAD 79
105	240.0	N	654390 292750	TM59SW521	15.0	NORTH QUAY LOWESTOFT 1

The borehole records are available using the hyperlinks below: Please note that if the donor of the borehole record has requested the information be held as commercial-in-confidence, the additional data will be held separately by the BGS and a formal request must be made for its release.

#1E: scans.bgs.ac.uk/sobi_scans/boreholes/568919
 #2D: scans.bgs.ac.uk/sobi_scans/boreholes/568921
 #3A: scans.bgs.ac.uk/sobi_scans/boreholes/568916
 #4A: scans.bgs.ac.uk/sobi_scans/boreholes/568914
 #5: scans.bgs.ac.uk/sobi_scans/boreholes/568910
 #6B: scans.bgs.ac.uk/sobi_scans/boreholes/568924
 #7G: scans.bgs.ac.uk/sobi_scans/boreholes/568912
 #8B: scans.bgs.ac.uk/sobi_scans/boreholes/568926
 #9C: scans.bgs.ac.uk/sobi_scans/boreholes/568931
 #10C: scans.bgs.ac.uk/sobi_scans/boreholes/568930
 #11: scans.bgs.ac.uk/sobi_scans/boreholes/568935
 #12: scans.bgs.ac.uk/sobi_scans/boreholes/568933
 #13: scans.bgs.ac.uk/sobi_scans/boreholes/568937
 #14D: scans.bgs.ac.uk/sobi_scans/boreholes/568918
 #15E: scans.bgs.ac.uk/sobi_scans/boreholes/568922
 #16: scans.bgs.ac.uk/sobi_scans/boreholes/568943
 #17: scans.bgs.ac.uk/sobi_scans/boreholes/568920
 #18K: scans.bgs.ac.uk/sobi_scans/boreholes/568917
 #19F: scans.bgs.ac.uk/sobi_scans/boreholes/568925
 #20F: scans.bgs.ac.uk/sobi_scans/boreholes/569038
 #21G: scans.bgs.ac.uk/sobi_scans/boreholes/568911
 #22L: scans.bgs.ac.uk/sobi_scans/boreholes/568945
 #23: scans.bgs.ac.uk/sobi_scans/boreholes/568947
 #24I: scans.bgs.ac.uk/sobi_scans/boreholes/568929
 #25H: scans.bgs.ac.uk/sobi_scans/boreholes/568822

#26: scans.bgs.ac.uk/sobi_scans/boreholes/568948
 #27H: scans.bgs.ac.uk/sobi_scans/boreholes/568946
 #28I: scans.bgs.ac.uk/sobi_scans/boreholes/568928
 #29G: scans.bgs.ac.uk/sobi_scans/boreholes/568909
 #30: scans.bgs.ac.uk/sobi_scans/boreholes/569096
 #31: scans.bgs.ac.uk/sobi_scans/boreholes/568939
 #32: scans.bgs.ac.uk/sobi_scans/boreholes/568940
 #33J: scans.bgs.ac.uk/sobi_scans/boreholes/569192
 #34J: scans.bgs.ac.uk/sobi_scans/boreholes/568938
 #35: scans.bgs.ac.uk/sobi_scans/boreholes/568942
 #36: scans.bgs.ac.uk/sobi_scans/boreholes/568941
 #37K: scans.bgs.ac.uk/sobi_scans/boreholes/568915
 #38: scans.bgs.ac.uk/sobi_scans/boreholes/568944
 #39L: scans.bgs.ac.uk/sobi_scans/boreholes/568999
 #40: scans.bgs.ac.uk/sobi_scans/boreholes/568904
 #41: scans.bgs.ac.uk/sobi_scans/boreholes/568927
 #42: scans.bgs.ac.uk/sobi_scans/boreholes/568905
 #43: scans.bgs.ac.uk/sobi_scans/boreholes/568859
 #44N: scans.bgs.ac.uk/sobi_scans/boreholes/568906
 #45: scans.bgs.ac.uk/sobi_scans/boreholes/569095
 #46: scans.bgs.ac.uk/sobi_scans/boreholes/568908
 #47M: scans.bgs.ac.uk/sobi_scans/boreholes/568902
 #48M: scans.bgs.ac.uk/sobi_scans/boreholes/568903
 #49: scans.bgs.ac.uk/sobi_scans/boreholes/568923
 #50: scans.bgs.ac.uk/sobi_scans/boreholes/568949
 #51: scans.bgs.ac.uk/sobi_scans/boreholes/568932
 #52: scans.bgs.ac.uk/sobi_scans/boreholes/568825
 #53O: scans.bgs.ac.uk/sobi_scans/boreholes/18766699
 #54N: scans.bgs.ac.uk/sobi_scans/boreholes/568907
 #55P: scans.bgs.ac.uk/sobi_scans/boreholes/18766701
 #56: scans.bgs.ac.uk/sobi_scans/boreholes/569193
 #57A: scans.bgs.ac.uk/sobi_scans/boreholes/568913
 #58O: scans.bgs.ac.uk/sobi_scans/boreholes/18766698
 #59P: scans.bgs.ac.uk/sobi_scans/boreholes/18766700
 #60O: scans.bgs.ac.uk/sobi_scans/boreholes/18766694
 #61: scans.bgs.ac.uk/sobi_scans/boreholes/568936
 #62: scans.bgs.ac.uk/sobi_scans/boreholes/569099
 #63P: scans.bgs.ac.uk/sobi_scans/boreholes/18766702
 #64: scans.bgs.ac.uk/sobi_scans/boreholes/568934
 #65: scans.bgs.ac.uk/sobi_scans/boreholes/569100
 #66: scans.bgs.ac.uk/sobi_scans/boreholes/568901
 #67: scans.bgs.ac.uk/sobi_scans/boreholes/569286
 #68: scans.bgs.ac.uk/sobi_scans/boreholes/569097
 #69Q: scans.bgs.ac.uk/sobi_scans/boreholes/18766693
 #70R: scans.bgs.ac.uk/sobi_scans/boreholes/569287
 #71: scans.bgs.ac.uk/sobi_scans/boreholes/569098
 #72Q: scans.bgs.ac.uk/sobi_scans/boreholes/18766703
 #73R: scans.bgs.ac.uk/sobi_scans/boreholes/568868
 #74T: scans.bgs.ac.uk/sobi_scans/boreholes/568900
 #75S: scans.bgs.ac.uk/sobi_scans/boreholes/18766704
 #76S: scans.bgs.ac.uk/sobi_scans/boreholes/18766696
 #77T: scans.bgs.ac.uk/sobi_scans/boreholes/569017
 #78: scans.bgs.ac.uk/sobi_scans/boreholes/569039
 #79U: scans.bgs.ac.uk/sobi_scans/boreholes/569015
 #80U: scans.bgs.ac.uk/sobi_scans/boreholes/569016

#81: scans.bgs.ac.uk/sobi_scans/boreholes/569331
#82: scans.bgs.ac.uk/sobi_scans/boreholes/568899
#83: scans.bgs.ac.uk/sobi_scans/boreholes/568950
#84: scans.bgs.ac.uk/sobi_scans/boreholes/569037
#85: scans.bgs.ac.uk/sobi_scans/boreholes/568826
#86: scans.bgs.ac.uk/sobi_scans/boreholes/568898
#87V: scans.bgs.ac.uk/sobi_scans/boreholes/569284
#88V: scans.bgs.ac.uk/sobi_scans/boreholes/569285
#89V: scans.bgs.ac.uk/sobi_scans/boreholes/569318
#90V: scans.bgs.ac.uk/sobi_scans/boreholes/569319
#91V: scans.bgs.ac.uk/sobi_scans/boreholes/569320
#92W: scans.bgs.ac.uk/sobi_scans/boreholes/569124
#93W: scans.bgs.ac.uk/sobi_scans/boreholes/569121
#94V: scans.bgs.ac.uk/sobi_scans/boreholes/569283
#95: scans.bgs.ac.uk/sobi_scans/boreholes/569328
#96X: scans.bgs.ac.uk/sobi_scans/boreholes/569297
#97X: scans.bgs.ac.uk/sobi_scans/boreholes/569296
#98W: scans.bgs.ac.uk/sobi_scans/boreholes/569120
#99W: scans.bgs.ac.uk/sobi_scans/boreholes/569122
#100: scans.bgs.ac.uk/sobi_scans/boreholes/568897
#102Y: scans.bgs.ac.uk/sobi_scans/boreholes/569123
#103Y: scans.bgs.ac.uk/sobi_scans/boreholes/569125
#104: scans.bgs.ac.uk/sobi_scans/boreholes/568951
#105: scans.bgs.ac.uk/sobi_scans/boreholes/569327

6 Estimated Background Soil Chemistry

Records of background estimated soil chemistry within 250m of the study site boundary:

48

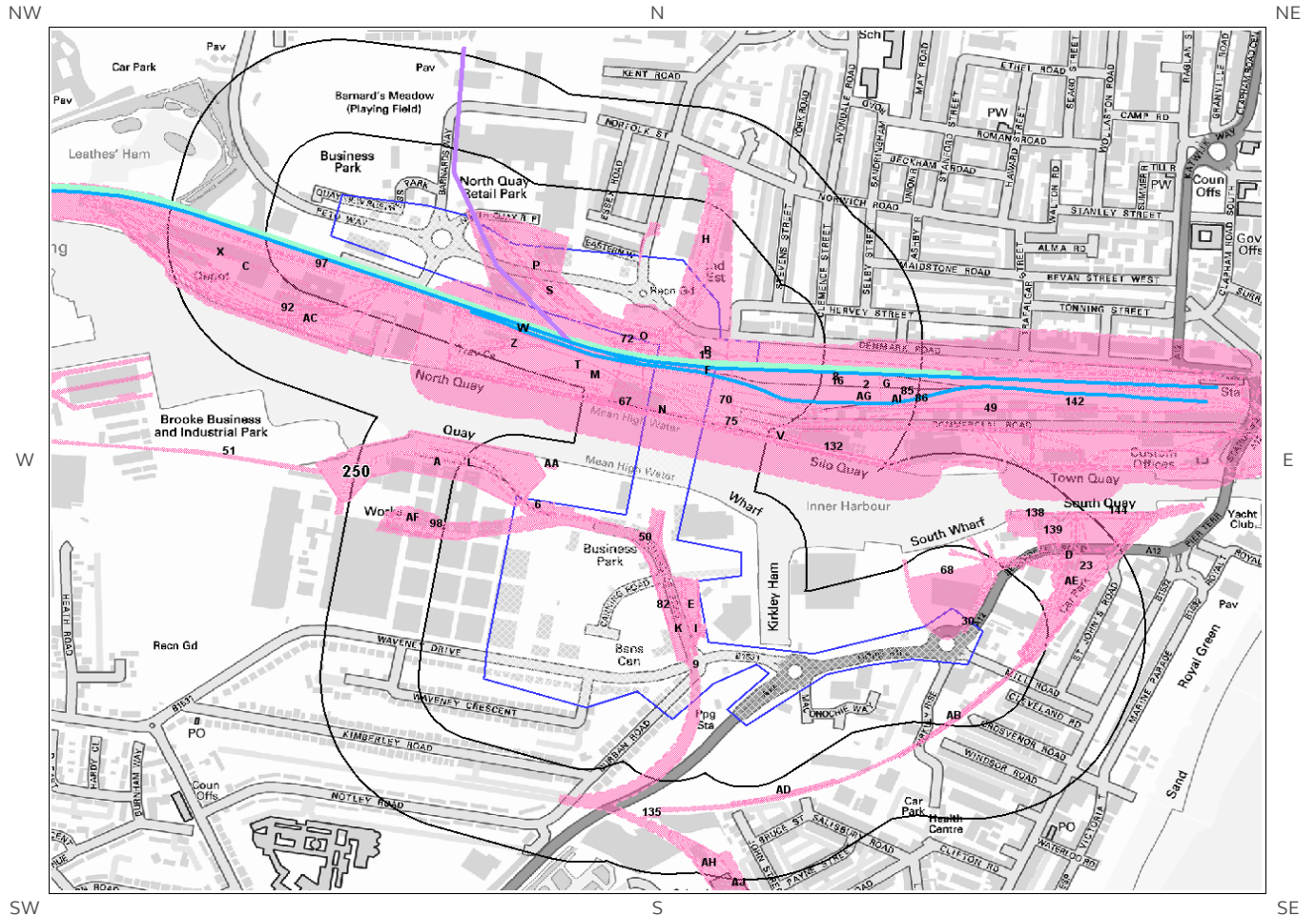
For further information on how this data is calculated and limitations upon its use, please see the Groundsure Geo Insight User Guide, available on request.

Distance (m)	Direction	Sample Type	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
0.0	On Site	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	100 - 200 mg/kg
0.0	On Site	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	100 - 200 mg/kg
0.0	On Site	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	100 - 200 mg/kg
0.0	On Site	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	100 - 200 mg/kg
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	20 - 40 mg/kg	<15 mg/kg	100 - 200 mg/kg
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	20 - 40 mg/kg	<15 mg/kg	100 - 200 mg/kg
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	20 - 40 mg/kg	<15 mg/kg	100 - 200 mg/kg
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	20 - 40 mg/kg	<15 mg/kg	100 - 200 mg/kg
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	20 - 40 mg/kg	<15 mg/kg	100 - 200 mg/kg
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	20 - 40 mg/kg	<15 mg/kg	100 - 200 mg/kg
0.0	On Site	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	100 - 200 mg/kg
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	20 - 40 mg/kg	<15 mg/kg	100 - 200 mg/kg
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	20 - 40 mg/kg	<15 mg/kg	100 - 200 mg/kg
0.0	On Site	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	100 - 200 mg/kg
0.0	On Site	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	100 - 200 mg/kg
0.0	On Site	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	100 - 200 mg/kg
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	20 - 40 mg/kg	<15 mg/kg	100 - 200 mg/kg
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	20 - 40 mg/kg	<15 mg/kg	100 - 200 mg/kg
0.0	On Site	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	100 - 200 mg/kg
20.0	E	RuralSoil	<15 mg/kg	<1.8 mg/kg	20 - 40 mg/kg	<15 mg/kg	<100 mg/kg
20.0	E	RuralSoil	<15 mg/kg	<1.8 mg/kg	20 - 40 mg/kg	<15 mg/kg	<100 mg/kg
20.0	E	RuralSoil	<15 mg/kg	<1.8 mg/kg	20 - 40 mg/kg	<15 mg/kg	<100 mg/kg
20.0	E	RuralSoil	<15 mg/kg	<1.8 mg/kg	20 - 40 mg/kg	<15 mg/kg	<100 mg/kg
31.0	E	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	100 - 200 mg/kg
31.0	E	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	100 - 200 mg/kg
35.0	N	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	100 - 200 mg/kg
38.0	N	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	100 - 200 mg/kg
44.0	N	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	100 - 200 mg/kg
65.0	S	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	100 - 200 mg/kg
70.0	S	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	100 - 200 mg/kg
70.0	S	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	100 - 200 mg/kg
70.0	S	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	100 - 200 mg/kg
70.0	S	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	100 - 200 mg/kg
112.0	S	RuralSoil	<15 mg/kg	<1.8 mg/kg	20 - 40 mg/kg	<15 mg/kg	100 - 200 mg/kg
112.0	S	RuralSoil	<15 mg/kg	<1.8 mg/kg	20 - 40 mg/kg	<15 mg/kg	100 - 200 mg/kg
116.0	E	RuralSoil	<15 mg/kg	<1.8 mg/kg	20 - 40 mg/kg	<15 mg/kg	100 - 200 mg/kg
118.0	E	RuralSoil	<15 mg/kg	<1.8 mg/kg	20 - 40 mg/kg	<15 mg/kg	100 - 200 mg/kg
119.0	W	RuralSoil	<15 mg/kg	<1.8 mg/kg	20 - 40 mg/kg	<15 mg/kg	100 - 200 mg/kg
131.0	W	RuralSoil	<15 mg/kg	<1.8 mg/kg	20 - 40 mg/kg	<15 mg/kg	100 - 200 mg/kg

Distance (m)	Direction	Sample Type	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
144.0	NE	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	100 - 200 mg/kg
165.0	W	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	100 - 200 mg/kg
168.0	S	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	100 - 200 mg/kg
220.0	SW	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	100 - 200 mg/kg
220.0	SW	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	100 - 200 mg/kg
225.0	NE	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	100 - 200 mg/kg
226.0	E	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	100 - 200 mg/kg
230.0	E	RuralSoil	<15 mg/kg	<1.8 mg/kg	20 - 40 mg/kg	<15 mg/kg	100 - 200 mg/kg
250.0	E	RuralSoil	<15 mg/kg	<1.8 mg/kg	20 - 40 mg/kg	<15 mg/kg	100 - 200 mg/kg

*As this data is based upon underlying 1:50,000 scale geological information, a 50m buffer has been added to the search radius.

7 Railways and Tunnels Map



Railways and Tunnels Legend

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© OpenStreetMapContributors

- | | | | |
|--|--|--|---|
| | Underground or Partially Underground Railway / Subway System | | Railway Track (OpenStreetMap) |
| | Site Outline | | Railway Tunnel (OS Mapping) |
| | Search Buffers (m) | | Abandoned or Dismantled Railway (OpenStreetMap) |
| | | | Railway Track (OS Mapping) |
| | | | High Speed 2 |
| | | | Crossrail 1 |
| | | | Railway and/or Tunnel Feature from Historical Mapping |

7 Railways and Tunnels

7.1 Tunnels

This data is derived from OpenStreetMap and provides information on the possible locations of underground railway systems in the UK - the London Underground, the Tyne & Wear Metro and the Glasgow Subway.

Have any underground railway lines been identified within the study site boundary? No

Have any underground railway lines been identified within 250m of the study site boundary? No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels Map.

This data is derived from Ordnance Survey mapping and provides information on the possible locations of railway tunnels forming part of the UK overground railway network.

Have any other railway tunnels been identified within the site boundary? No

Have any other railway tunnels been identified within 250m of the site boundary? No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels Map.

7.2 Historical Railway and Tunnel Features

This data is derived from Groundsure's unique Historical Land-use Database and contains features relating to tunnels, railway tracks or associated works that have been identified from historical Ordnance Survey mapping.

Have any historical railway or tunnel features been identified within the study site boundary? Yes

Have any historical railway or tunnel features been identified within 250m of the study site boundary? Yes

ID	Distance (m)	Direction	NGR	Details	Date
1L	0	On Site	653600 292735	Railway Sidings	1992
2	0	On Site	654270 292862	Railway Sidings	1992
3E	0	On Site	653935 292510	Railway Sidings	1951
4H	0	On Site	653954 293102	Tramway Sidings	1938
5O	0	On Site	653862 292950	Railway Sidings	1904
6	0	On Site	653701 292677	Railway Sidings	1951

ID	Distance (m)	Direction	NGR	Details	Date
7AI	0	On Site	653713 292910	Railway Sidings	1883
8	0	On Site	654397 292910	Railway Sidings	1946
9	0	On Site	653939 292334	Railway Sidings	1946
10A	0	On Site	653537 292741	Railway Sidings	1982
11A	0	On Site	653537 292741	Railway Sidings	1974
12B	0	On Site	653433 292936	Railway Sidings	1951
13	0	On Site	653433 292936	Railway Sidings	1982
14B	0	On Site	653433 292936	Railway Sidings	1974
15AG	0	On Site	654501 292867	Railway Sidings	1904
16	0	On Site	653663 292946	Railway Sidings	1938
17	0	On Site	653895 292552	Railway Sidings	1938
28E	0	On Site	653942 292496	Railway Sidings	1950
29F	0	On Site	653956 292893	Railway Sidings	1986
30	0	On Site	654361 292488	Railway Sidings	1950
31F	0	On Site	653956 292893	Railway Sidings	1990
32J	0	On Site	653894 292951	Railway Sidings	1950
33Q	0	On Site	653853 292928	Railway Sidings	1990
34G	0	On Site	654250 292871	Railway Sidings	1966
35G	0	On Site	654250 292871	Railway Sidings	1949
36H	0	On Site	653972 293098	Railway Sidings	1949
37H	0	On Site	653971 293098	Railway Sidings	1958
38I	0	On Site	653945 292470	Railway Sidings	1950
39I	0	On Site	653938 292468	Railway Sidings	1964
40E	0	On Site	653939 292527	Railway Sidings	1949
41F	0	On Site	653956 292893	Railway Sidings	1983
42D	0	On Site	654394 292550	Railway Sidings	1950
43F	0	On Site	653956 292893	Railway Sidings	1983
44K	0	On Site	653917 292476	Railway Sidings	1950

ID	Distance (m)	Direction	NGR	Details	Date
45J	0	On Site	653894 292951	Railway Sidings	1949
46J	0	On Site	653911 292941	Railway Sidings	1964
47H	0	On Site	653971 293098	Railway Sidings	1949
48K	0	On Site	653942 292468	Railway Sidings	1964
49	0	On Site	654500 292826	Railway Sidings	1950
50	0	On Site	653891 292567	Railway Sidings	1950
51	0	On Site	653400 292688	Railway Sidings	1964
52	0	On Site	653867 292621	Railway Sidings	1949
53R	0	On Site	653662 292711	Railway Sidings	1970
54K	0	On Site	653917 292476	Railway Sidings	1964
55L	0	On Site	653651 292722	Railway Sidings	1990
56L	0	On Site	653651 292722	Railway Sidings	1986
57L	0	On Site	653651 292722	Railway Sidings	1983
58L	0	On Site	653651 292722	Railway Sidings	1983
59M	0	On Site	653784 292885	Railway Sidings	1950
60M	0	On Site	653784 292885	Railway Sidings	1964
61N	0	On Site	653892 292831	Railway Sidings	1983
62N	0	On Site	653892 292831	Railway Sidings	1986
63N	0	On Site	653892 292831	Railway Sidings	1990
64N	0	On Site	653892 292831	Railway Sidings	1983
65M	0	On Site	653784 292886	Railway Sidings	1964
66M	0	On Site	653784 292886	Railway Sidings	1949
67	0	On Site	653856 292842	Railway Sidings	1970
68	0	On Site	654327 292547	Railway Sidings	1883
69O	0	On Site	653871 292954	Railway Sidings	1964
70	0	On Site	653986 292847	Railway Sidings	1904
71	0	On Site	653713 293033	Railway Sidings	1927
72	0	On Site	653838 292946	Railway Sidings	1904

ID	Distance (m)	Direction	NGR	Details	Date
73O	0	On Site	653886 292949	Railway Sidings	1904
74P	0	On Site	653695 293069	Railway Sidings	1949
75	0	On Site	654001 292808	Railway Sidings	1904
76P	0	On Site	653705 293069	Railway Sidings	1949
77P	0	On Site	653704 293069	Railway Sidings	1958
78L	0	On Site	653652 292721	Railway Sidings	1993
79Q	0	On Site	653849 292929	Railway Sidings	1993
80N	0	On Site	653886 292834	Railway Sidings	1993
81	0	On Site	653897 292556	Railway Sidings	1927
82	0	On Site	653895 292514	Railway Sidings	1927
83R	0	On Site	653662 292711	Railway Sidings	1964
84	0	On Site	654443 292427	Railway Sidings	1927
85	0	On Site	653873 292956	Railway Sidings	1927
86	0	On Site	654596 292884	Railway Sidings	1883
87P	0	On Site	653692 293069	Railway Sidings	1961
88P	0	On Site	653702 293069	Railway Sidings	1963
89S	0	On Site	653719 293025	Railway Sidings	1971
90S	0	On Site	653717 293025	Railway Sidings	1987
91U	0	On Site	653862 293104	Tramway Sidings	1904
92	0	W	653322 293004	Railway Sidings	1927
93T	2	W	653746 292905	Railway Sidings	1882
94T	2	W	653811 292912	Railway Sidings	1904
95	5	NE	654402 292561	Railway Sidings	1949
96	5	NE	654402 292561	Railway Sidings	1966
97	15	S	n/a	Railway	1886
98	22	W	653517 292650	Railway Sidings	1927
99U	31	N	653877 293127	Tramway Sidings	1927
100V	37	E	654067 292791	Railway Sidings	1966
101V	37	E	654067 292791	Railway Sidings	1949

ID	Distance (m)	Direction	NGR	Details	Date
18C	38	S	653239 293062	Railway Sidings	1946
102W	38	S	653670 292964	Railway Sidings	1983
103W	38	S	653670 292964	Railway Sidings	1990
104W	38	S	653670 292964	Railway Sidings	1983
105W	38	S	653670 292964	Railway Sidings	1986
106Y	39	E	654049 292796	Railway Sidings	1990
107X	39	S	653201 293094	Railway Sidings	1958
108C	39	S	653205 293092	Railway Sidings	1949
109X	39	S	653201 293094	Railway Sidings	1963
110Y	39	E	654052 292795	Railway Sidings	1993
111W	39	S	653675 292965	Railway Sidings	1970
112W	39	S	653676 292965	Railway Sidings	1993
19C	42	S	653241 293053	Railway Sidings	1938
113Z	51	S	653650 292937	Tramway Sidings	1950
114Z	52	S	653664 292937	Tramway Sidings	1949
115A A	53	N	653723 292744	Railway Sidings	1990
116A A	53	N	653723 292744	Railway Sidings	1986
117A A	53	N	653723 292744	Railway Sidings	1983
118A B	54	SE	654346 292338	Railway Sidings	1950
119A B	54	SE	654347 292338	Railway Sidings	1964
120A B	54	SE	654347 292338	Railway Sidings	1950
20AE	63	SE	654535 292547	Railway Sidings	1883
21D	66	SE	654519 292551	Railway Sidings	1946
22D	66	SE	654519 292551	Railway Sidings	1904
23	70	SE	654531 292556	Railway Sidings	1951
24D	72	E	654528 292549	Railway Sidings	1938
25C	83	S	653179 293082	Railway Sidings	1904
121	85	SW	653127 293092	Railway Sidings	1967

ID	Distance (m)	Direction	NGR	Details	Date
122	97	S	653191 293072	Railway Sidings	1904
123A C	97	S	653351 292966	Railway Sidings	1949
124A C	97	S	653345 292965	Railway Sidings	1950
125A C	97	S	653340 292964	Railway Sidings	1957
126A C	99	S	653351 292962	Railway Sidings	1964
26AF	112	W	653510 292658	Railway Sidings	1951
127A D	119	S	654096 292218	Railway Sidings	1950
128A D	120	S	654095 292218	Railway Sidings	1950
129A D	120	S	654095 292218	Railway Sidings	1964
130A E	120	E	654518 292559	Railway Sidings	1968
131D	121	E	654518 292583	Railway Sidings	1950
132	134	SE	654154 292772	Railway Sidings	1993
133A C	153	S	653338 292964	Railway Sidings	1965
134	153	W	653118 293100	Railway Sidings	1976
135	154	S	653877 292179	Railway Sidings	1927
136A F	158	W	653489 292655	Railway Sidings	1949
137A G	166	E	n/a	Railway	1905
138	170	NE	654464 292664	Railway Sidings	1949
27AH	178	S	653970 292084	Railway Sidings	1938
139	182	NE	654491 292635	Railway Sidings	1949
140A H	185	S	653969 292081	Railway Sidings	1927
141A G	187	E	n/a	Railway	1886
142	187	E	654526 292910	Railway Sidings	1904
143	205	W	653409 292716	Railway Sidings	1965
144	214	NE	654505 292660	Railway Sidings	1950
145AI	224	E	654367 292843	Railway Sidings	1993
146AI	236	E	654374 292844	Railway Sidings	1990
147AJ	237	S	654020 292055	Railway Sidings	1950

ID	Distance (m)	Direction	NGR	Details	Date
148AJ	240	S	654020 292053	Railway Sidings	1950
149AJ	240	S	654020 292053	Railway Sidings	1964

Any records that have been identified are represented on the Railways and Tunnels Map.

7.3 Historical Railways

This data is derived from OpenStreetMap and provides information on the possible alignments of abandoned or dismantled railway lines in proximity to the study site.

Have any historical railway lines been identified within the study site boundary? Yes

Have any historical railway lines been identified within 250m of the study site boundary? Yes

Distance (m)	Direction	Status
0	On Site	Dismantled

Note: multiple sections of the same track may be listed in the detail above

Any records that have been identified are represented on the Railways and Tunnels Map.

7.4 Active Railways

These datasets are derived from Ordnance Survey mapping and OpenStreetMap and provide information on the possible locations of active railway lines in proximity to the study site.

Have any active railway lines been identified within the study site boundary? Yes

Have any active railway lines been identified within 250m of the study site boundary? Yes

Distance (m)	Direction	Name	Type
0	On Site	Not given	Rail
0	On Site	Not given	Rail
0	On Site	Not given	Multi Track
0	On Site	Not given	Multi Track
23	W	Not given	Multi Track
23	W	Not given	Multi Track
34	S	Not given	Multi Track

Note: multiple sections of the same track may be listed in the detail above

Any records that have been identified are represented on the Railways and Tunnels Map.

7.5 Railway Projects

These datasets provide information on the location of large scale railway projects High Speed 2 and Crossrail 1 .

Is the study site within 5km of the route of the High Speed 2 rail project? No

Is the study site within 500m of the route of the Crossrail 1 rail project? No

Further information on proximity to these routes, the project construction status and associated works can be obtained through the purchase of a Groundsure HS2 and Crossrail 1 Report.

The route data has been digitised from publicly available maps by Groundsure. The route as provided relates to the Crossrail 1 project only, and does not include any details of the Crossrail 2 project, as final details of the route for Crossrail 2 are still under consultation.

Contact Details



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BGS Geological Hazards Reports and general geological enquiries



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Standard Terms and Conditions

1 Definitions

In these terms and conditions unless the context otherwise requires:

“Beneficiary” means the person or entity for whose benefit the Client has obtained the Services.

“Client” means the party or parties entering into a Contract with Groundsure.

“Commercial” means any building or property which is not Residential.

“Confidential Information” means the contents of this Contract and all information received from the Client as a result of, or in connection with, this Contract other than

(i) information which the Client can prove was rightfully in its possession prior to disclosure by Groundsure and

(ii) any information which is in the public domain (other than by virtue of a breach of this Contract).

“Support Services” means Support Services provided by Groundsure including, without limitation, interpreting third party and in-house environmental data, providing environmental support advice, undertaking environmental audits and assessments, Site investigation, Site monitoring and related items.

“Contract” means the contract between Groundsure and the Client for the provision of the Services, and which shall incorporate these terms and conditions, the Order, and the relevant User Guide.

“Third Party Data Provider” means any third party providing Third Party Content to Groundsure.

“Data Reports” means reports comprising factual data with no accompanying interpretation.

“Fees” has the meaning set out in clause 5.1.

“Groundsure” means Groundsure Limited, a company registered in England and Wales under number 03421028.

“Groundsure Materials” means all materials prepared by Groundsure and provided as part of the Services, including but not limited to Third Party Content, Data Reports, Mapping, and Risk Screening Reports.

“Intellectual Property” means any patent, copyright, design rights, trade or service mark, moral rights, data protection rights, know-how or trade mark in each case whether registered or not and including applications for the same or any other rights of a similar nature anywhere in the world.

“Mapping” means a map, map data or a combination of historical maps of various ages, time periods and scales.

“Order” means an electronic, written or other order form submitted by the Client requesting Services from Groundsure in respect of a specified Site.

“Ordnance Survey” means the Secretary of State for Business, Innovation and Skills, acting through Ordnance Survey, Adanac Drive, Southampton, SO16 0AS, UK.

“Order Website” means the online platform through which Orders may be placed by the Client and accepted by Groundsure.

“Report” means a Risk Screening Report or Data Report for Commercial or Residential property.

“Residential” means any building or property used as or intended to be used as a single dwelling.

“Risk Screening Report” means a risk screening report comprising factual data with an accompanying interpretation by Groundsure.

“Services” means any Report, Mapping and/or Support Services which Groundsure has agreed to provide by accepting an Order pursuant to clause 2.6.

“Site” means the area of land in respect of which the Client has requested Groundsure to provide the Services.

“Third Party Content” means data, database information or other information which is provided to Groundsure by a Third Party Data Provider.

“User Guide” means the user guide, as amended from time to time, available upon request from Groundsure and on the website (www.Groundsure.com) and forming part of this Contract.

2 Scope of Services, terms and conditions, requests for insurance and quotations

2.1 Groundsure agrees to provide the Services in accordance with the Contract.

2.2 Groundsure shall exercise reasonable skill and care in the provision of the Services.

2.3 Subject to clause 7.3 the Client acknowledges that it has not relied on any statement or representation made by or on behalf of Groundsure which is not set out and expressly agreed in writing in the Contract and all such statements and representations are hereby excluded to the fullest extent permitted by law.

2.4 The Client acknowledges that terms and conditions appearing on a Client's order form, printed stationery or other communication, or any terms or conditions implied by custom, practice or course of dealing shall be of no effect, and that this Contract shall prevail over all others in relation to the Order.

2.5 If the Client or Beneficiary requests insurance in conjunction with or as a result of the Services, Groundsure shall use reasonable endeavours to recommend such insurance, but makes no warranty that such insurance shall be available from insurers or that it will be offered on reasonable terms. Any insurance purchased by the Client or Beneficiary shall be subject solely to the terms of the policy issued by insurers and Groundsure will have no liability therefor. In addition you acknowledge and agree that Groundsure does not act as an agent or broker for any insurance providers. The Client should take (and ensure that the Beneficiary takes) independent advice to ensure that the insurance policy requested or offered is suitable for its requirements.

2.6 Groundsure's quotations or proposals are valid for a period of 30 days only unless an alternative period of time is explicitly stipulated by Groundsure.

Groundsure reserves the right to withdraw any quotation or proposal at any time before an Order is accepted by Groundsure. Groundsure's acceptance of an Order shall be binding only when made in writing and signed by Groundsure's authorised representative or when accepted through the Order Website.

3 The Client's obligations

3.1 The Client shall comply with the terms of this Contract and

(i) procure that the Beneficiary or any third party relying on the Services complies with and acts as if it is bound by the Contract and

(ii) be liable to Groundsure for the acts and omissions of the Beneficiary or any third party relying on the Services as if such acts and omissions were those of the Client.

3.2 The Client shall be solely responsible for ensuring that the Services are appropriate and suitable for its and/or the Beneficiary's needs.

3.3 The Client shall supply to Groundsure as soon as practicable and without charge all requisite information (and the Client warrants that such information is accurate, complete and appropriate), including without limitation any environmental information relating to the Site and shall give such assistance as Groundsure shall reasonably require in the provision of the Services including, without limitation, access to the Site, facilities and equipment.

3.4 Where the Client's approval or decision is required to enable Groundsure to carry out work in order to provide the Services, such approval or decision shall be given or procured in reasonable time and so as not to delay or disrupt the performance of the Services.

3.5 Save as expressly permitted by this Contract the Client shall not, and shall procure that the Beneficiary shall not, re-sell, alter, add to, or amend the Groundsure Materials, or use the Groundsure Materials in a manner for which they were not intended. The Client may make the Groundsure Materials available to a third party who is considering acquiring some or all of, or providing funding in relation to, the Site, but such third party cannot rely on the same unless expressly permitted under clause 4.

3.6 The Client is responsible for maintaining the confidentiality of its user name and password if using the Order Website and the Client acknowledges that Groundsure accepts no liability of any kind for any loss or damage suffered by the Client as a consequence of using the Order Website.

4 Reliance

4.1 The Client acknowledges that the Services provided by Groundsure consist of the presentation and analysis of Third Party Content and other content and that information obtained from a Third Party Data Provider cannot be guaranteed or warranted by Groundsure to be reliable.

4.2 In respect of Data Reports, Mapping and Risk Screening Reports, the following classes of person and no other are entitled to rely on their contents;

(i) the Beneficiary,
(ii) the Beneficiary's professional advisers, (iii) any person providing funding to the Beneficiary in relation to the Site (whether directly or as part of a lending syndicate),
(iv) the first purchaser or first tenant of the Site, and
(v) the professional advisers and lenders of the first purchaser or tenant of the Site.

4.3 In respect of Support Services, only the Client, Beneficiary and parties expressly named in a Report and no other parties are entitled to rely on its contents.

4.4 Save as set out in clauses 4.2 and 4.3 and unless otherwise expressly agreed in writing, no other person or entity of any kind is entitled to rely on any Services or Report issued or provided by Groundsure. Any party considering such Reports and Services does so at their own risk.

5 Fees and Disbursements

5.1 Groundsure shall charge and the Client shall pay fees at the rate and frequency specified in the written proposal, Order Website or Order acknowledgement form, plus (in the case of Support Services) all proper disbursements incurred by Groundsure. The Client shall in addition pay all value added tax or other tax payable on such fees and disbursements in relation to the provision of the Services (together “Fees”).

5.2 The Client shall pay all outstanding Fees to Groundsure in full without deduction, counterclaim or set off within 30 days of the date of Groundsure's invoice or such other period as may be agreed in writing between Groundsure and the Client (“Payment Date”). Interest on late payments will accrue on a daily basis from the Payment Date until the date of payment (whether before or after judgment) at the rate of 8% per annum.

5.3 The Client shall be deemed to have agreed the amount of any invoice unless an objection is made in writing within 28 days of the date of the invoice. As soon as reasonably practicable after being notified of an objection, without prejudice to clause 5.2 a member of Groundsure's management team will contact the Client and the parties shall then use all reasonable endeavours to resolve the dispute within 15 days.

6 Intellectual Property and Confidentiality

6.1 Subject to

(i) full payment of all relevant Fees and
(ii) compliance with this Contract, the Client is granted (and is permitted to sub-licence to the Beneficiary) a royalty-free, worldwide, non-assignable and (save to the extent set out in this Contract) non-transferable licence to make use of the Groundsure Materials.

6.2 All Intellectual Property in the Groundsure Materials are and shall remain owned by Groundsure or Groundsure's licensors (including without limitation the Third Party Data Providers) the Client acknowledges, and shall procure

acknowledgement by the Beneficiary of, such ownership. Nothing in this Contract purports to transfer or assign any rights to the Client or the Beneficiary in respect of such Intellectual Property.

6.3 Third Party Data Providers may enforce any breach of clauses 6.1 and 6.2 against the Client or Beneficiary.

6.4 The Client shall, and shall procure that any recipients of the Groundsure Materials shall:

(i) not remove, suppress or modify any trade mark, copyright or other proprietary marking belonging to Groundsure or any third party from the Services;

(ii) use the information obtained as part of the Services in respect of the subject Site only, and shall not store or reuse any information obtained as part of the Services provided in respect of adjacent or nearby sites;

(iii) not create any product or report which is derived directly or indirectly from the Services (save that those acting in a professional capacity to the Beneficiary may provide advice based upon the Services);

(iv) not combine the Services with or incorporate such Services into any other information data or service;

(v) not reformat or otherwise change (whether by modification, addition or enhancement), the Services (save that those acting for the Beneficiary in a professional capacity shall not be in breach of this clause 6.4(v) where such reformatting is in the normal course of providing advice based upon the Services);

(vi) where a Report and/or Mapping contains material belonging to Ordnance Survey, acknowledge and agree that such content is protected by Crown Copyright and shall not use such content for any purpose outside of receiving the Services; and

(vii) not copy in whole or in part by any means any map prints or run-on copies containing content belonging to Ordnance Survey (other than that contained within Ordnance Survey's OS Street Map) without first being in possession of a valid Paper Map Copying Licence from Ordnance Survey,

6.5 Notwithstanding clause 6.4, the Client may make reasonable use of the Groundsure Materials in order to advise the Beneficiary in a professional capacity. However, Groundsure shall have no liability in respect of any advice, opinion or report given or provided to Beneficiaries by the Client.

6.6 The Client shall procure that any person to whom the Services are made available shall notify Groundsure of any request or requirement to disclose, publish or disseminate any information contained in the Services in accordance with the Freedom of Information Act 2000, the Environmental Information Regulations 2004 or any associated legislation or regulations in force from time to time.

7.Liability: Particular Attention Should Be Paid To This Clause

7.1 This Clause 7 sets out the entire liability of Groundsure, including any liability for the acts or omissions of its employees, agents, consultants, subcontractors and Third Party Content, in respect of:

(i) any breach of contract, including any deliberate breach of the Contract by Groundsure or its employees, agents or subcontractors;

(ii) any use made of the Reports, Services, Materials or any part of them; and

(iii) any representation, statement or tortious act or omission (including negligence) arising under or in connection with the Contract.

7.2 All warranties, conditions and other terms implied by statute or common law are, to the fullest extent permitted by law, excluded from the Contract.

7.3 Nothing in the Contract limits or excludes the liability of the Supplier for death or personal injury resulting from negligence, or for any damage or liability incurred by the Client or Beneficiary as a result of fraud or fraudulent misrepresentation.

7.4 Groundsure shall not be liable for

(i) loss of profits;

(ii) loss of business;

(iii) depletion of goodwill and/or similar losses;

(iv) loss of anticipated savings;

(v) loss of goods;

(vi) loss of contract;

(vii) loss of use;

(viii) loss or corruption of data or information;

(ix) business interruption;

(x) any kind of special, indirect, consequential or pure economic loss, costs, damages, charges or expenses;

(xi) loss or damage that arise as a result of the use of all or part of the Groundsure Materials in breach of the Contract;

(xii) loss or damage arising as a result of any error, omission or inaccuracy in any part of the Groundsure Materials where such error, omission or inaccuracy is caused by any Third Party Content or any reasonable interpretation of Third Party Content;

(xiii) loss or damage to a computer, software, modem, telephone or other property; and

(xiv) loss or damage caused by a delay or loss of use of Groundsure's internet ordering service.

7.5 Groundsure's total liability in relation to or under the Contract shall be limited to £10 million for any claim or claims.

7.6 Groundsure shall procure that the Beneficiary shall be bound by limitations and exclusions of liability in favour of Groundsure which accord with those detailed in clauses 7.4 and 7.5 (subject to clause 7.3) in respect of all claims which the Beneficiary may bring against Groundsure in relation to the Services or other matters arising pursuant to the Contract.

8 Groundsure's right to suspend or terminate

8.1 If Groundsure reasonably believes that the Client or Beneficiary has not provided the information or assistance required to enable the proper provision of the Services, Groundsure shall be entitled to suspend all further performance of the Services until such time as any such deficiency has been made good.

8.2 Groundsure shall be entitled to terminate the Contract immediately on written notice in the event that:

(i) the Client fails to pay any sum due to Groundsure within 30 days of the Payment Date; or

(ii) the Client (being an individual) has a bankruptcy order made against him or (being a company) shall enter into liquidation whether compulsory or voluntary or have an administration order made against it or if a receiver shall be appointed over the whole or any part of its property assets or undertaking or if the Client is struck off the Register of Companies or dissolved; or

(iii) the Client being a company is unable to pay its debts within the meaning of Section 123 of the Insolvency Act 1986 or being an individual appears unable to pay his debts within the meaning of Section 268 of the Insolvency Act 1986 or if the Client shall enter into a composition or arrangement with the Client's creditors or shall suffer distress or execution to be levied on his goods; or

(iv) the Client or the Beneficiary breaches any term of the Contract (including, but not limited to, the obligations in clause 4) which is incapable of remedy or if remediable, is not remedied within five days of notice of the breach.

9. Client's Right to Terminate and Suspend

9.1 Subject to clause 10.1, the Client may at any time upon written notice terminate or suspend the provision of all or any of the Services.

9.2 In any event, where the Client is a consumer (and not a business) he/she hereby expressly acknowledges and agrees that:

(i) the supply of Services under this Contract (and therefore the performance of this Contract) commences immediately upon Groundsure's acceptance of the Order; and

(ii) the Reports and/or Mapping provided under this Contract are

(a) supplied to the Client's specification(s) and in any event
(b) by their nature cannot be returned.

10 Consequences of Withdrawal, Termination or Suspension

10.1 Upon termination of the Contract:

(i) Groundsure shall take steps to bring to an end the Services in an orderly manner, vacate any Site with all reasonable speed and shall deliver to the Client and/or Beneficiary any property of the Client and/or Beneficiary in Groundsure's possession or control; and

(ii) the Client shall pay to Groundsure all and any Fees payable in respect of the performance of the Services up to the date of termination or suspension. In respect of any Support Services provided, the Client shall also pay Groundsure any additional costs incurred in relation to the termination or suspension of the Contract.

11 Anti-Bribery

11.1 The Client warrants that it shall:

(i) comply with all applicable laws, statutes and regulations relating to anti-bribery and anti-corruption including but not limited to the Bribery Act 2010;

(ii) comply with such of Groundsure's anti-bribery and anti-corruption policies as are notified to the Client from time to time; and

(iii) promptly report to Groundsure any request or demand for any undue financial or other advantage of any kind received by or on behalf of the Client in connection with the performance of this Contract.

11.2 Breach of this Clause 11 shall be deemed a material breach of this Contract.

12 General

12.1 The Mapping contained in the Services is protected by Crown copyright and must not be used for any purpose other than as part of the Services or as specifically provided in the Contract.

12.2 The Client shall be permitted to make one copy only of each Report or Mapping Order. Thereafter the Client shall be entitled to make unlimited copies of the Report or Mapping Order only in accordance with an Ordnance Survey paper map copy license available through Groundsure.

12.3 Groundsure reserves the right to amend or vary this Contract. No amendment or variation to this Contract shall be valid unless signed by an authorised representative of Groundsure.

12.4 No failure on the part of Groundsure to exercise, and no delay in exercising, any right, power or provision under this Contract shall operate as a waiver thereof.

12.5 Save as expressly provided in this Contract, no person other than the persons set out therein shall have any right under the Contract (Rights of Third Parties) Act 1999 to enforce any terms of the Contract.

12.6 The Secretary of State for Business, Innovation and Skills ("BIS") or BIS' successor body, as the case may be, acting through Ordnance Survey may enforce a breach of clause 6.4(vi) and clause 6.4(vii) of these terms and conditions against the Client in accordance with the provisions of the Contracts (Rights of Third Parties) Act 1999.

12.7 Groundsure shall not be liable to the Client if the provision of the Services is delayed or prevented by one or more of the following circumstances:

- (i) the Client or Beneficiary's failure to provide facilities, access or information;
- (ii) fire, storm, flood, tempest or epidemic;
- (iii) Acts of God or the public enemy;
- (iv) riot, civil commotion or war;
- (v) strikes, labour disputes or industrial action;
- (vi) acts or regulations of any governmental or other agency;
- (vii) suspension or delay of services at public registries by Third Party Data Providers;
- (viii) changes in law; or
- (ix) any other reason beyond Groundsure's reasonable control.

In the event that Groundsure is prevented from performing the Services (or any part thereof) in accordance with this clause 12.6 for a period of not less than 30 days then Groundsure shall be entitled to terminate this Contract immediately on written notice to the Client.

12.8 Any notice provided shall be in writing and shall be deemed to be properly given if delivered by hand or sent by first class post, facsimile or by email to the address, facsimile number or email address of the relevant party as may have been notified by each party to the other for such purpose or in the absence of such notification the last known address.

12.9 Such notice shall be deemed to have been received on the day of delivery if delivered by hand, facsimile or email (save to the extent such day is not a working day where it shall be deemed to have been delivered on the next working day) and on the second working day after the day of posting if sent by first class post.

12.10 The Contract constitutes the entire agreement between the parties and shall supersede all previous arrangements between the parties relating to the subject matter hereof.

12.11 Each of the provisions of the Contract is severable and distinct from the others and if one or more provisions is or should become invalid, illegal or unenforceable, the validity and enforceability of the remaining provisions shall not in any way be tainted or impaired.

12.12 This Contract shall be governed by and construed in accordance with English law and any proceedings arising out of or connected with this Contract shall be subject to the exclusive jurisdiction of the English courts.

12.13 Groundsure is an executive member of the Council of Property Search Organisation (CoPSO) and has signed up to the Search Code administered by the Property Codes Compliance Board (PCCB). All Risk Screening Reports shall be supplied in accordance with the provisions of the Search Code.

12.14 If the Client or Beneficiary has a complaint about the Services, written notice should be given to the Compliance Officer at Groundsure who will respond in a timely manner. In the event you are not satisfied with Groundsure's complaints handling process or you are unable to resolve the complaint, at your discretion you may refer the complaint to The Property Ombudsman Scheme at the following URL/email: website www.tpos.co.uk or email: admin@tpos.co.uk

12.15 The Client agrees that it shall, and shall procure that each Beneficiary shall, treat in confidence all Confidential Information and shall not, and shall procure that each Beneficiary shall not (i) disclose any Confidential Information to any third party other than in accordance with the terms of this Contract; and (ii) use Confidential Information for a purpose other than the exercise of its rights and obligations under this Contract. Subject to clause 6.6, nothing shall prevent the Client or any Beneficiary from disclosing Confidential Information to the extent required by law



Site Details:

Denmark Road Lowestoft

Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653384, 292255

Map Name: National Grid
Map date: 1949-1950
Scale: 1:1,250
Printed at: 1:2,000



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Site Details:

Denmark Road Lowestoft

Client Ref: 16287

Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale

Grid Ref: 653384, 292255

Map Name: National Grid

Map date: 1950-1953

Scale: 1:1,250

Printed at: 1:2,000



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Site Details:

Denmark Road Lowestoft

Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653384, 292255

Map Name: National Grid
Map date: 1957-1960
Scale: 1:1,250
Printed at: 1:2,000



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Levelled 1947

Surveyed 1950
Revised 1959
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Copyright 1960
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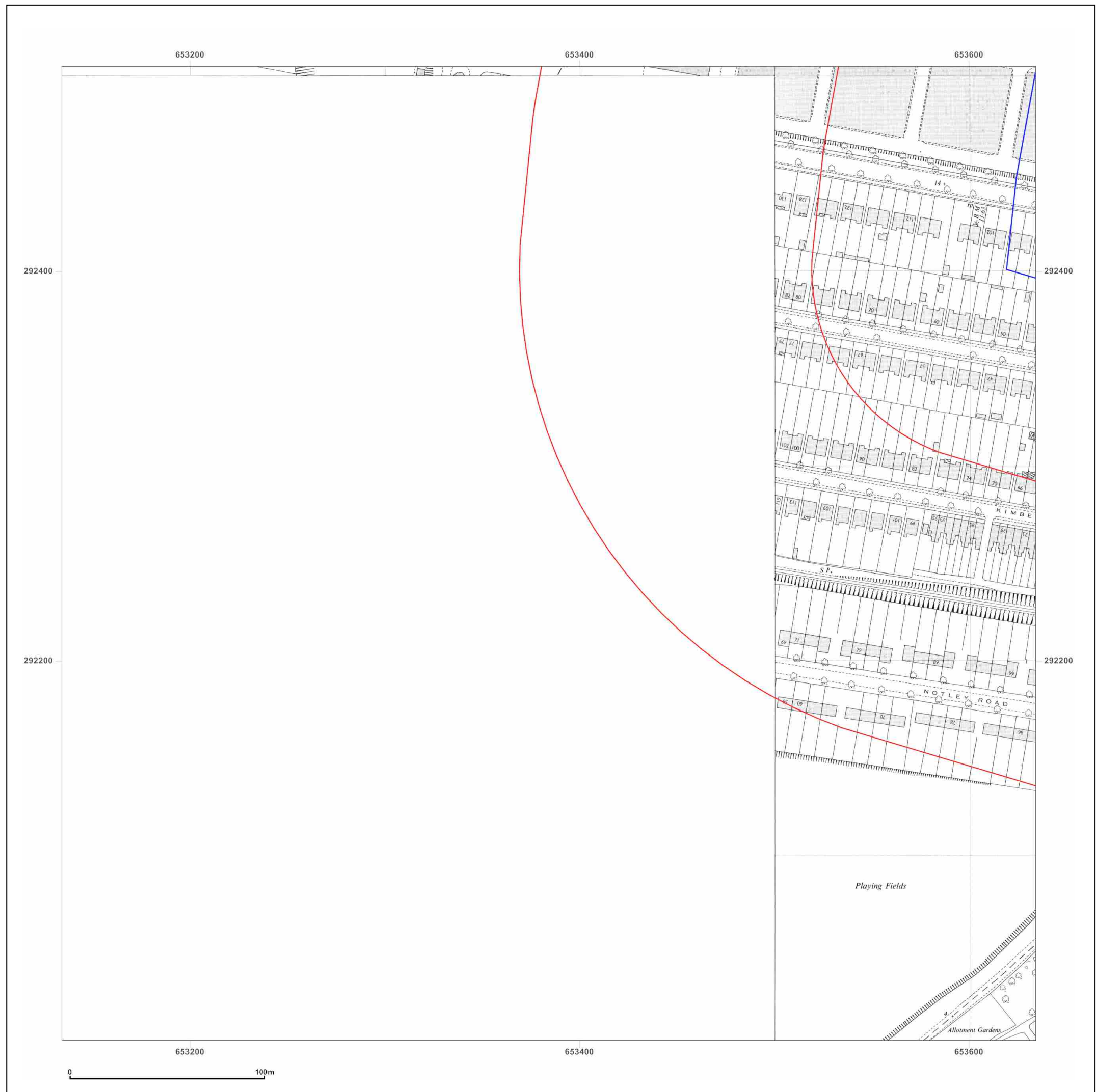


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Site Details:

Denmark Road Lowestoft

Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653384, 292255

Map Name: National Grid
Map date: 1964-1965
Scale: 1:1,250
Printed at: 1:2,000



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Surveyed 1964 Revised 1964 Edition N/A Copyright 1964 Levelled 1958	



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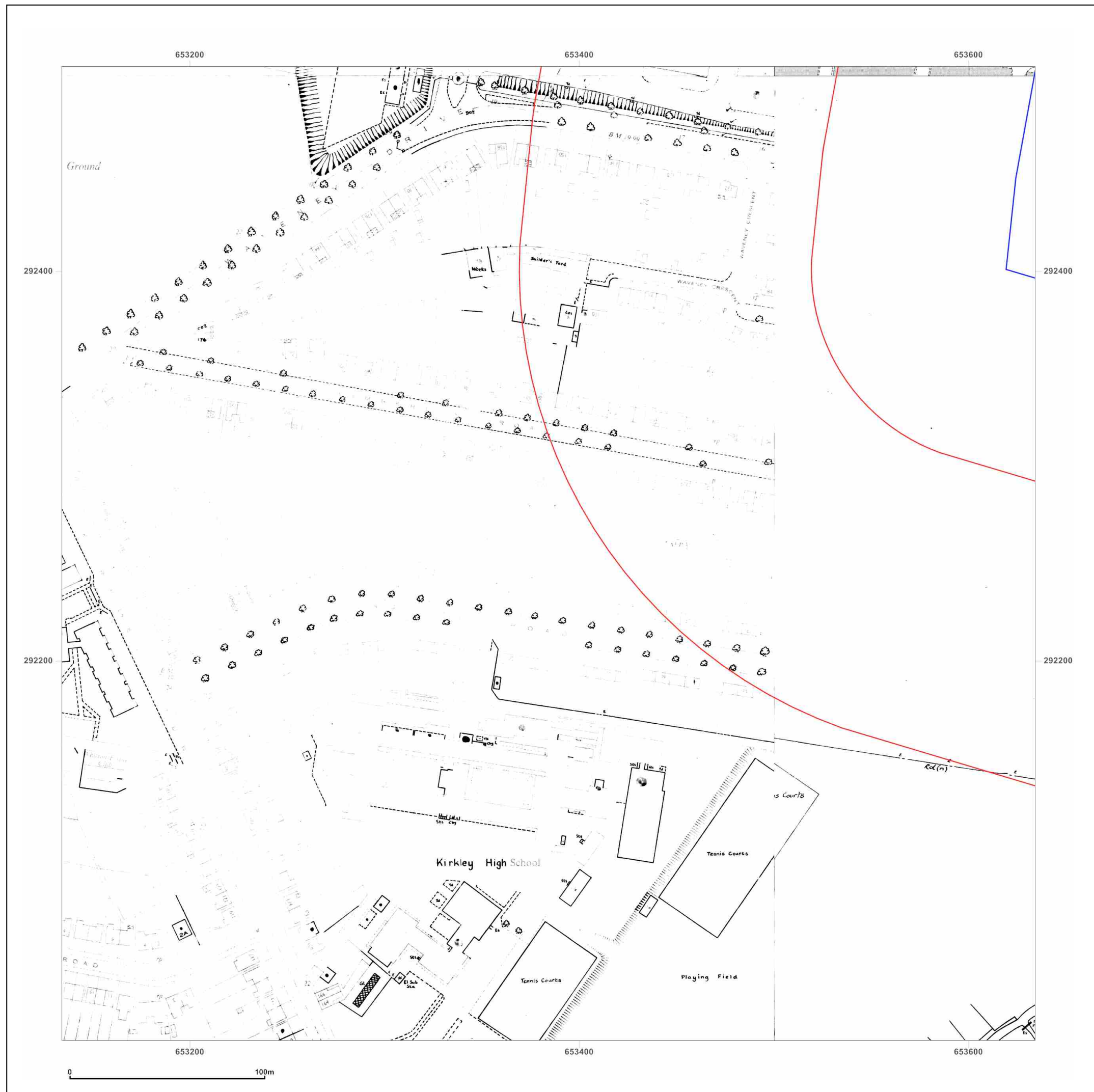


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Site Details:

Denmark Road Lowestoft

Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653384, 292255

Map Name: National Grid
Map date: 1970-1974
Scale: 1:1,250
Printed at: 1:2,000



Surveyed N/A
Revised N/A
Edition N/A
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Surveyed 1949
Revised 1970
Edition N/A
Copyright 1970
Levelled 1958

Surveyed N/A
Revised N/A
Edition N/A
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Denmark Road Lowestoft

Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653384, 292255

Map Name: National Grid
Map date: 1974-1976
Scale: 1:1,250
Printed at: 1:2,000



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Denmark Road Lowestoft

Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653384, 292255

Map Name: National Grid
Map date: 1980-1985
Scale: 1:1,250
Printed at: 1:2,000



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Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653384, 292255

Map Name: National Grid
Map date: 1983-1987
Scale: 1:1,250
Printed at: 1:2,000



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Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653384, 292255

Map Name: National Grid

Map date: 1990-1993

Scale: 1:1,250

Printed at: 1:2,000



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Revised 1990
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Revised 1990
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Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653384, 292255

Map Name: National Grid
Map date: 1993
Scale: 1:1,250
Printed at: 1:2,000



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Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653384, 292755

Map Name: National Grid
Map date: 1949-1950
Scale: 1:1,250
Printed at: 1:2,000



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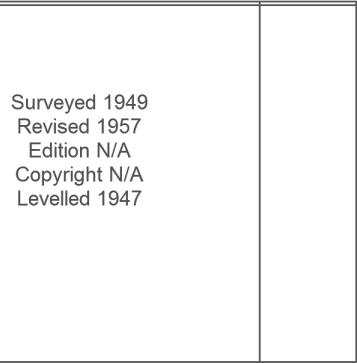
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Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653384, 292755

Map Name: National Grid
Map date: 1957-1961
Scale: 1:1,250
Printed at: 1:2,000



Surveyed 1949
Revised 1960
Edition N/A
Copyright 1961
Levelled 1958



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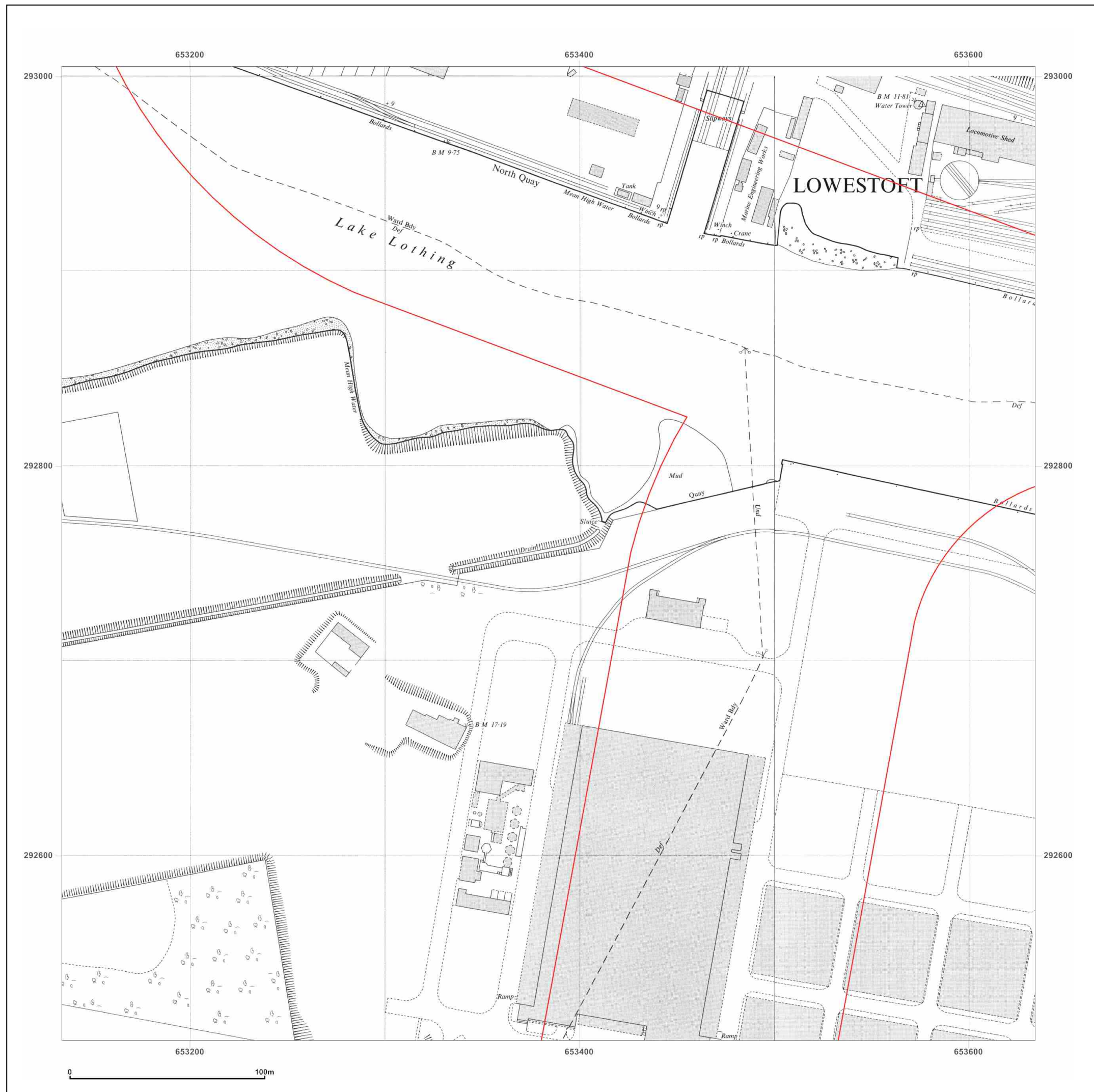


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Denmark Road Lowestoft

Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653384, 292755

Map Name: National Grid

Map date: 1964-1967

Scale: 1:1,250

Printed at: 1:2,000



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Edition N/A
Copyright 1965
Levelled 1958

Surveyed 1949
Revised 1964
Edition N/A
Copyright 1964
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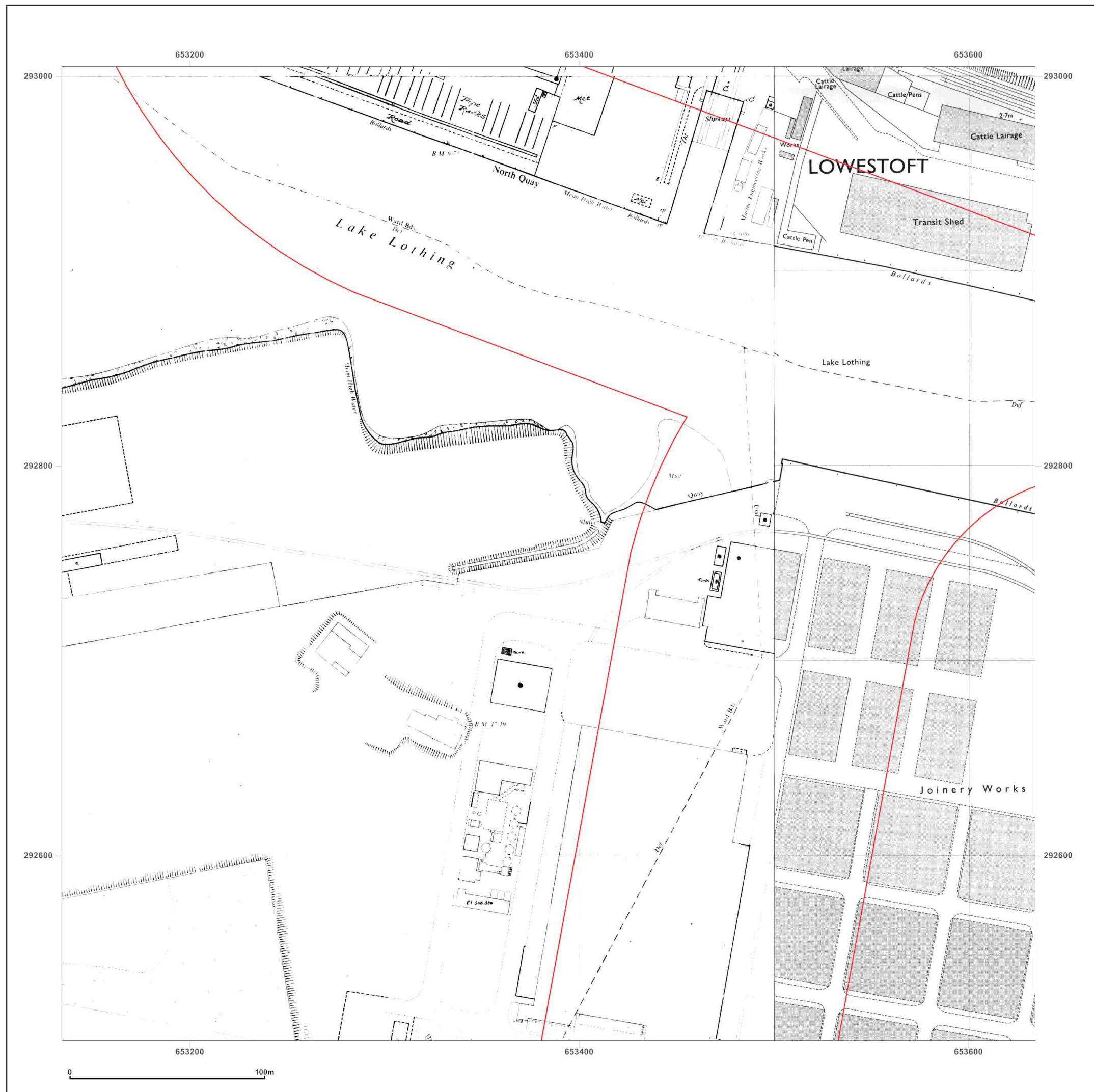


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Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653384, 292755

Map Name: National Grid

Map date: 1970-1974

Scale: 1:1,250

Printed at: 1:2,000



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Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653384, 292755

Map Name: National Grid
Map date: 1980-1984
Scale: 1:1,250
Printed at: 1:2,000



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Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653384, 292755

Map Name: National Grid
Map date: 1986-1991
Scale: 1:1,250
Printed at: 1:2,000



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Revised 1987
Edition N/A
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Levelled 1958

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Site Details:

Denmark Road Lowestoft

Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653384, 292755

Map Name: National Grid

Map date: 1990-1993

Scale: 1:1,250

Printed at: 1:2,000



Surveyed N/A
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Edition N/A
Copyright 1993
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Surveyed 1958
Revised 1990
Edition N/A
Copyright 1990
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Edition N/A
Copyright 1993
Levelled N/A

Surveyed 1958
Revised 1990
Edition N/A
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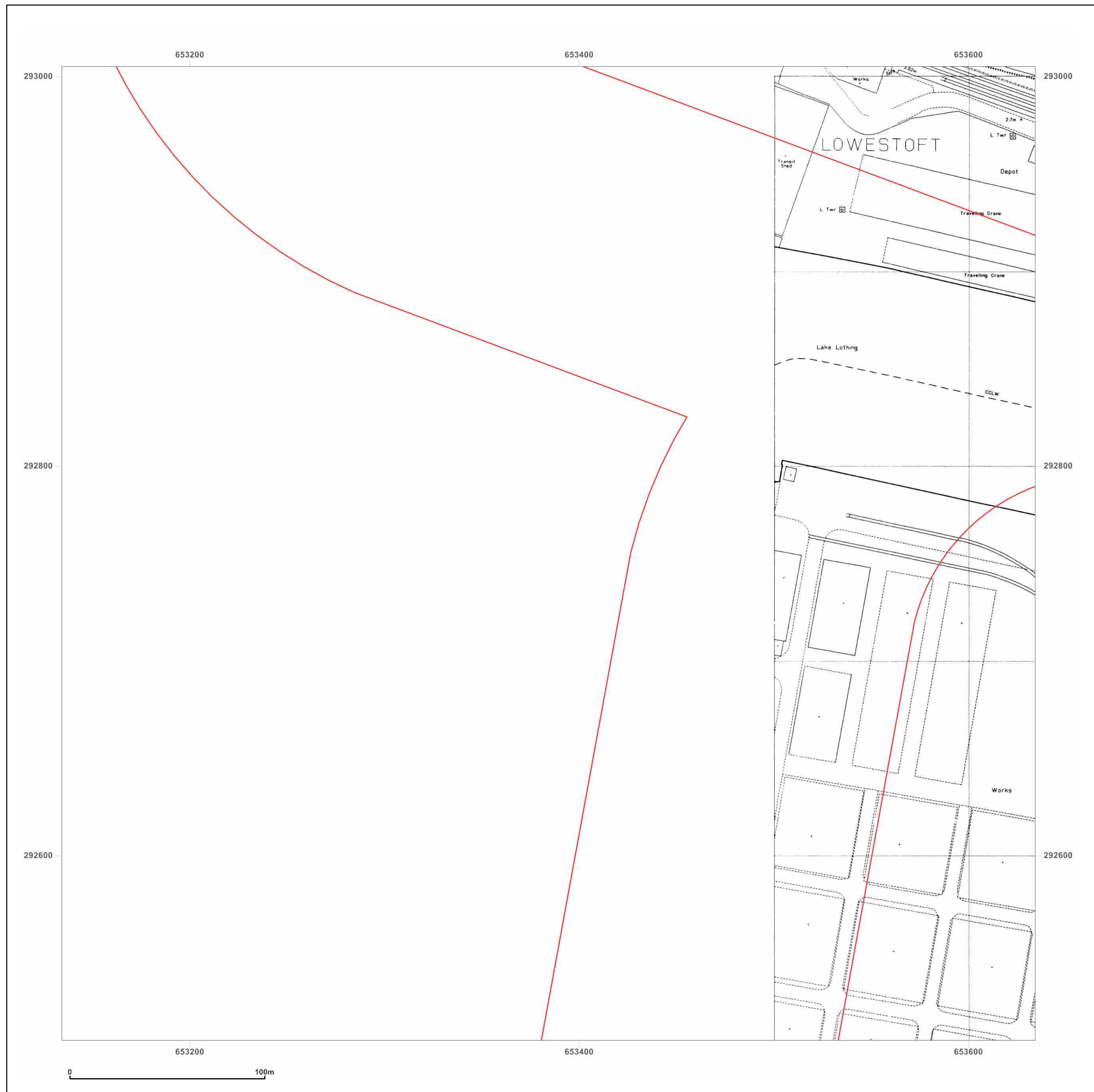


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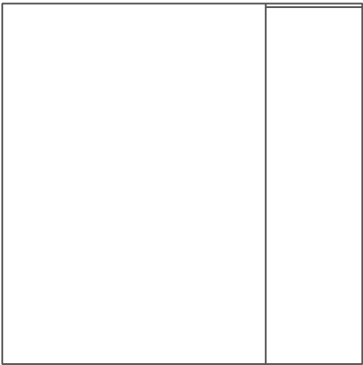


Site Details:

Denmark Road Lowestoft

Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653384, 292755

Map Name: National Grid
Map date: 1993
Scale: 1:1,250
Printed at: 1:2,000



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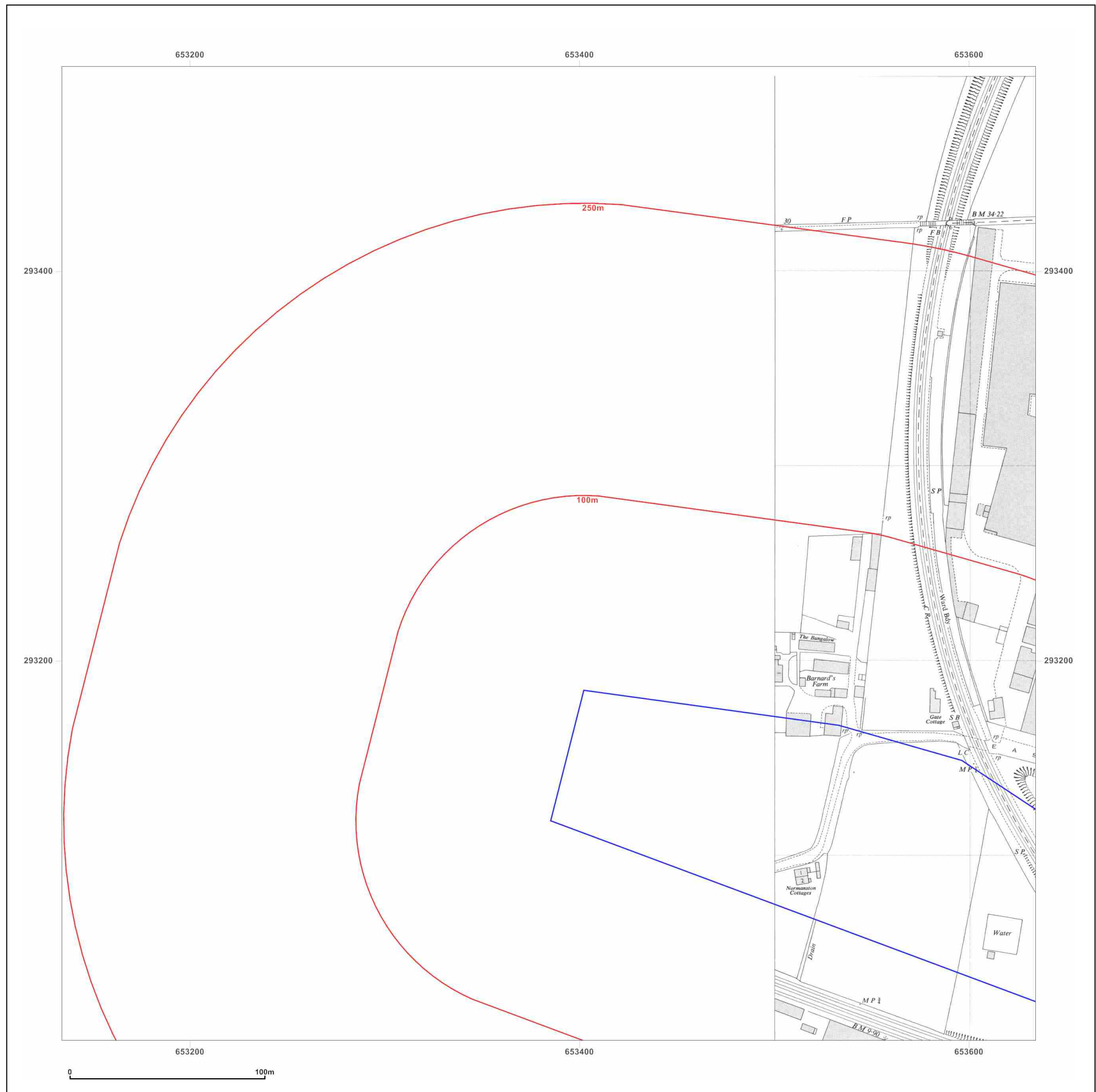


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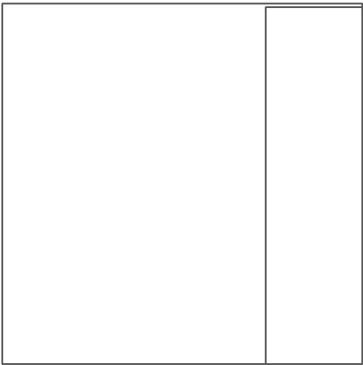
Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653384, 293255

Map Name: National Grid

Map date: 1961

Scale: 1:1,250

Printed at: 1:2,000



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Edition N/A
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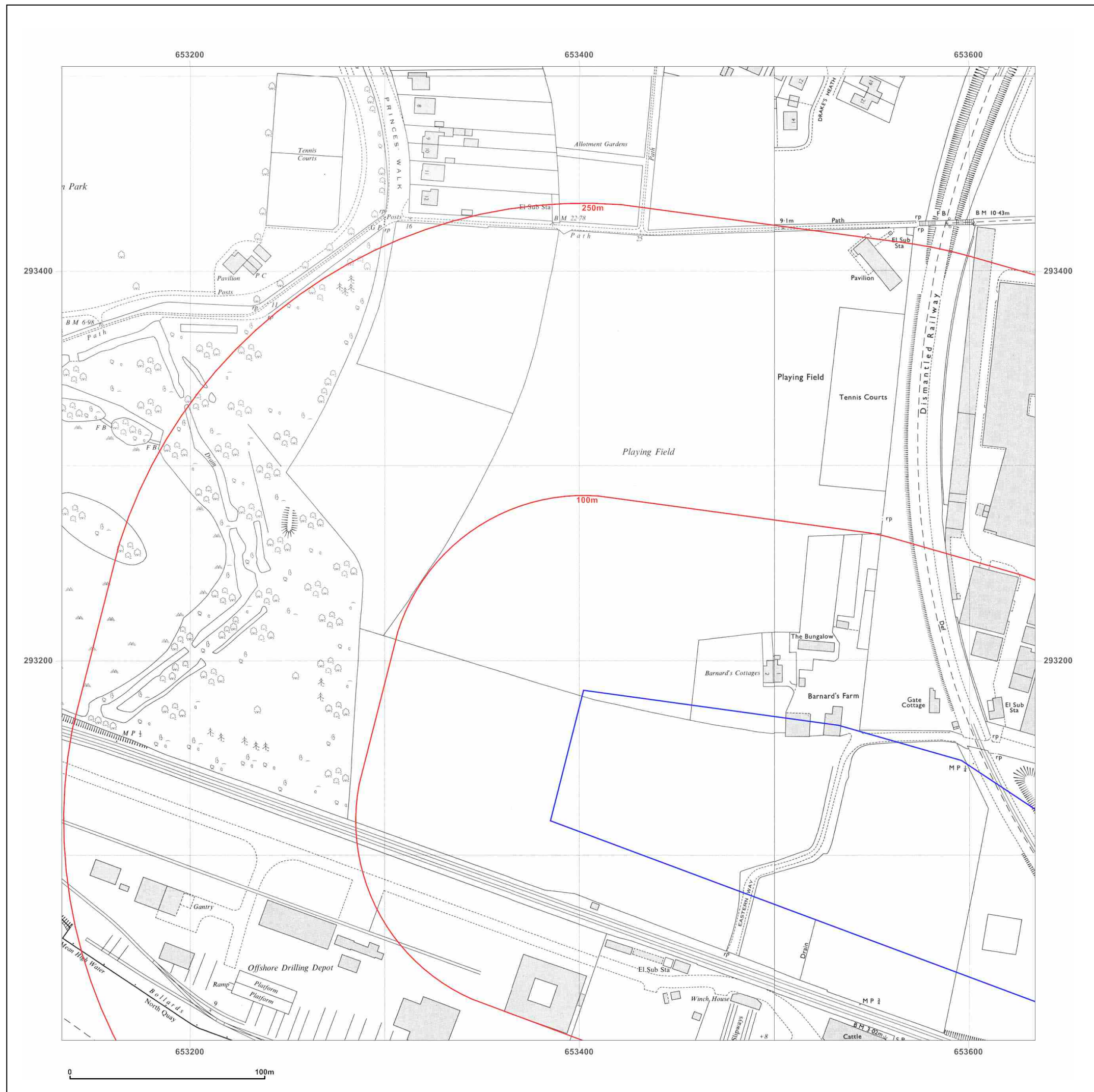


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Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653384, 293255

Map Name: National Grid

Map date: 1967-1971

Scale: 1:1,250

Printed at: 1:2,000



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Revised 1966
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Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653384, 293255

Map Name: National Grid
Map date: 1974
Scale: 1:1,250
Printed at: 1:2,000



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Surveyed N/A Revised N/A Edition N/A Copyright 1974 Levelled N/A	Surveyed N/A Revised N/A Edition N/A Copyright 1974 Levelled N/A

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Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653384, 293255

Map Name: National Grid

Map date: 1974-1976

Scale: 1:1,250

Printed at: 1:2,000



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Surveyed 1949
Revised 1975
Edition N/A
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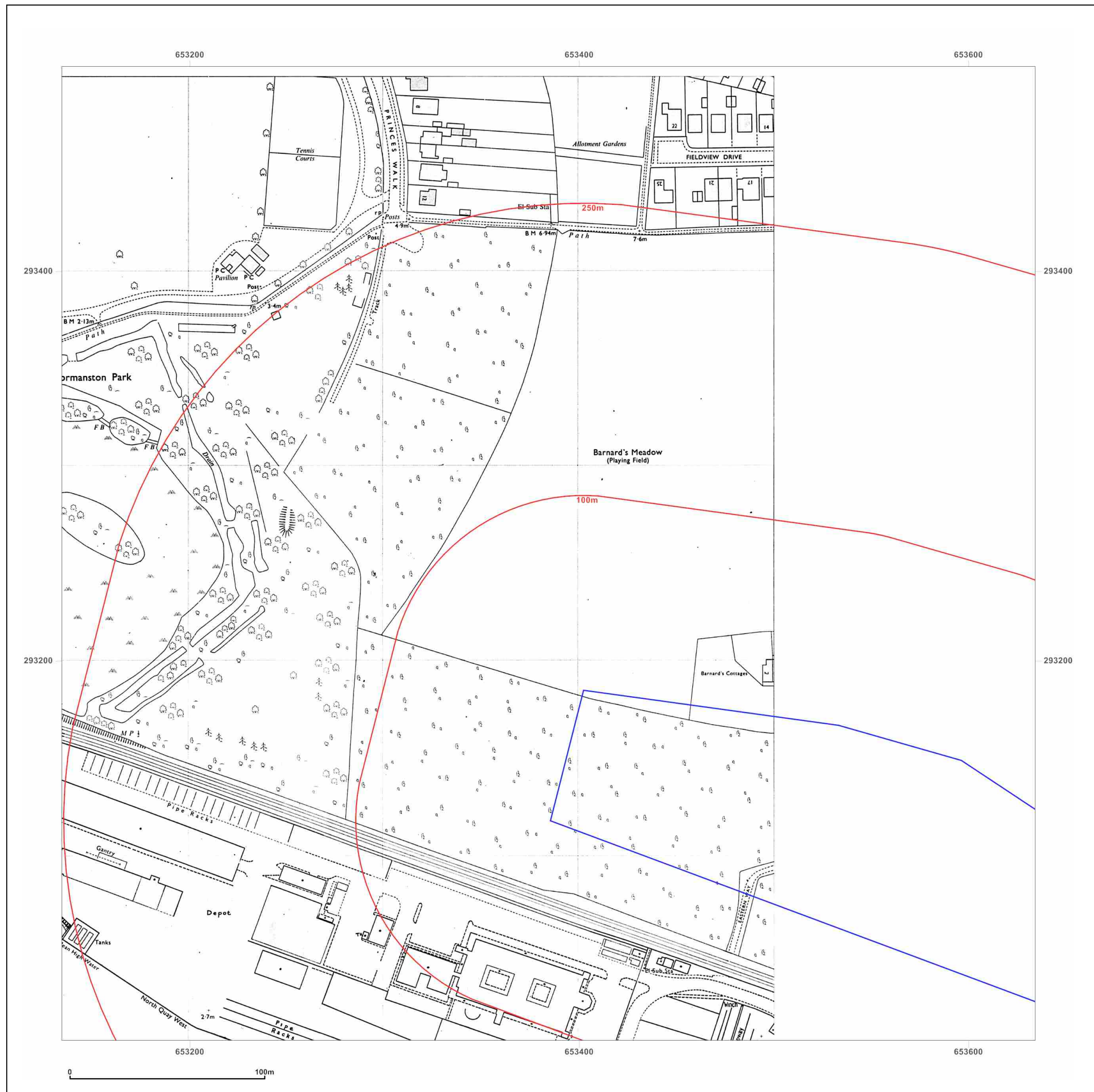


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Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653384, 293255

Map Name: National Grid

Map date: 1984

Scale: 1:1,250

Printed at: 1:2,000



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Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653384, 293255

Map Name: National Grid
Map date: 1987-1991
Scale: 1:1,250
Printed at: 1:2,000



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Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653384, 293255

Map Name: National Grid
Map date: 1990-1993
Scale: 1:1,250
Printed at: 1:2,000



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Surveyed N/A Revised N/A Edition N/A Copyright 1993 Levelled N/A	Surveyed 1958 Revised 1990 Edition N/A Copyright 1990 Levelled 1958



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Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653384, 293255

Map Name: National Grid
Map date: 1990-1993
Scale: 1:1,250
Printed at: 1:2,000



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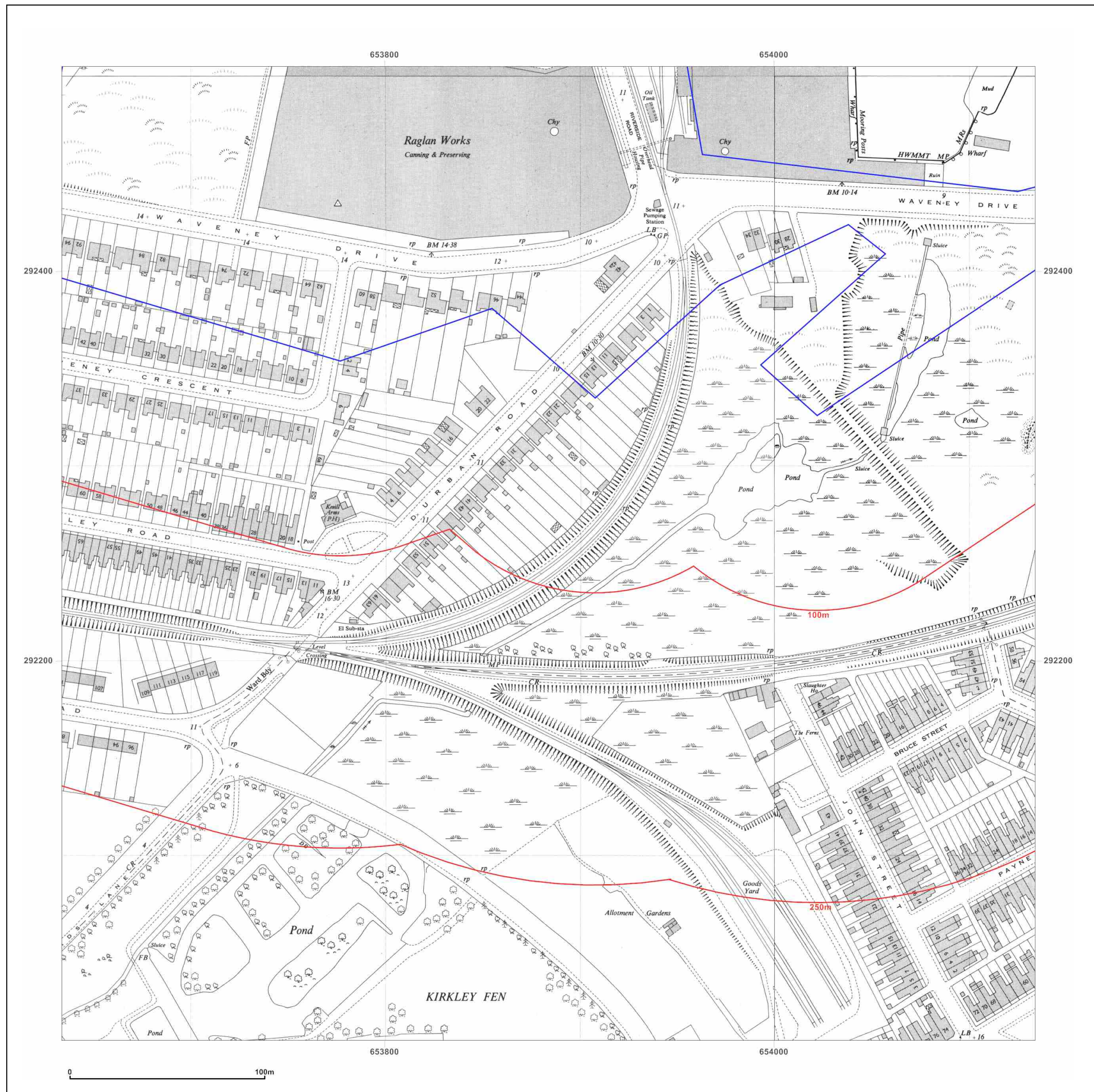


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Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653884, 292255

Map Name: National Grid
Map date: 1949-1950
Scale: 1:1,250
Printed at: 1:2,000



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Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653884, 292255

Map Name: National Grid

Map date: 1964-1966

Scale: 1:1,250

Printed at: 1:2,000



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Edition N/A
Copyright 1966
Levelled 1958

Surveyed 1964
Revised 1964
Edition N/A
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Revised 1963
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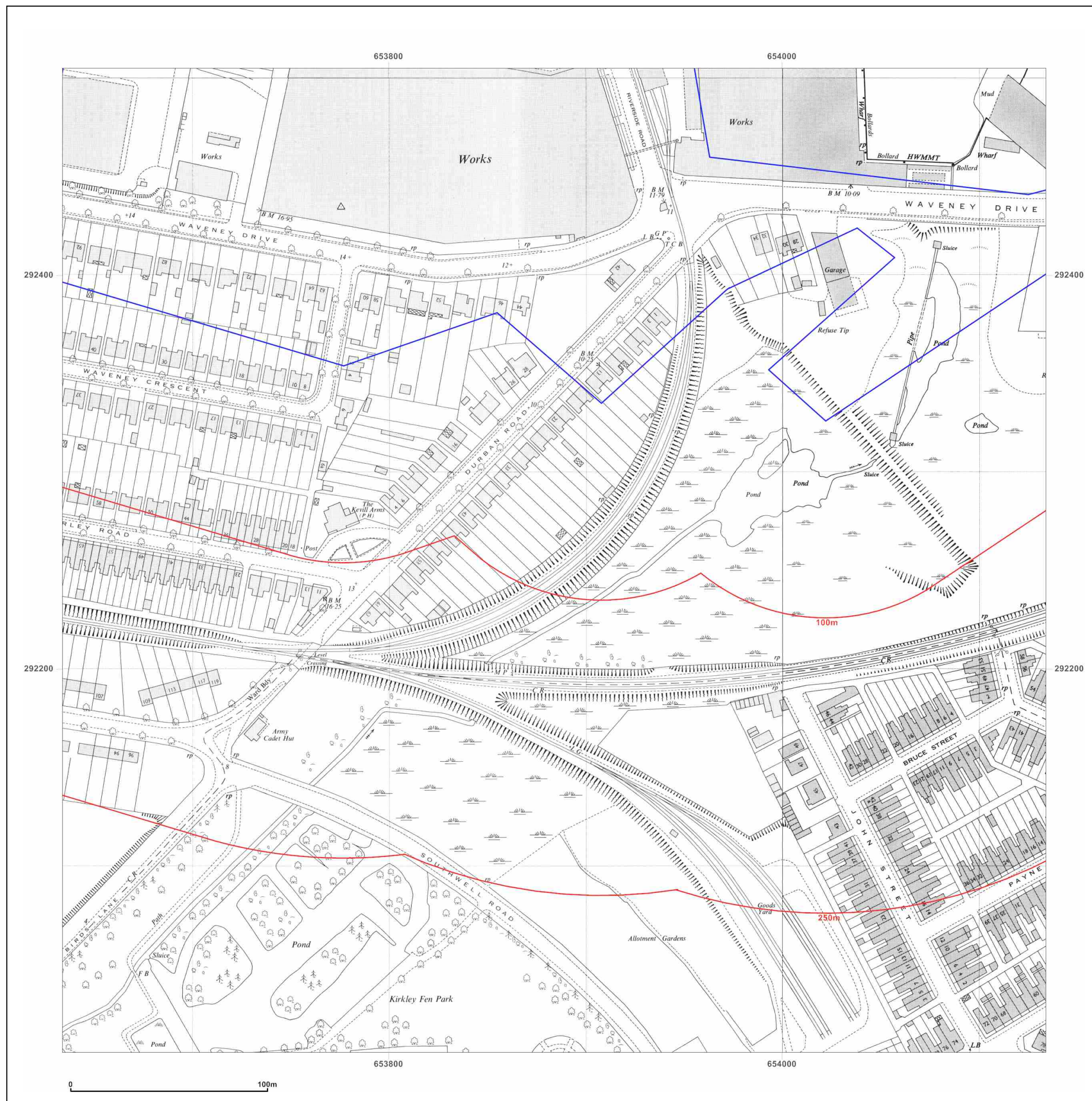


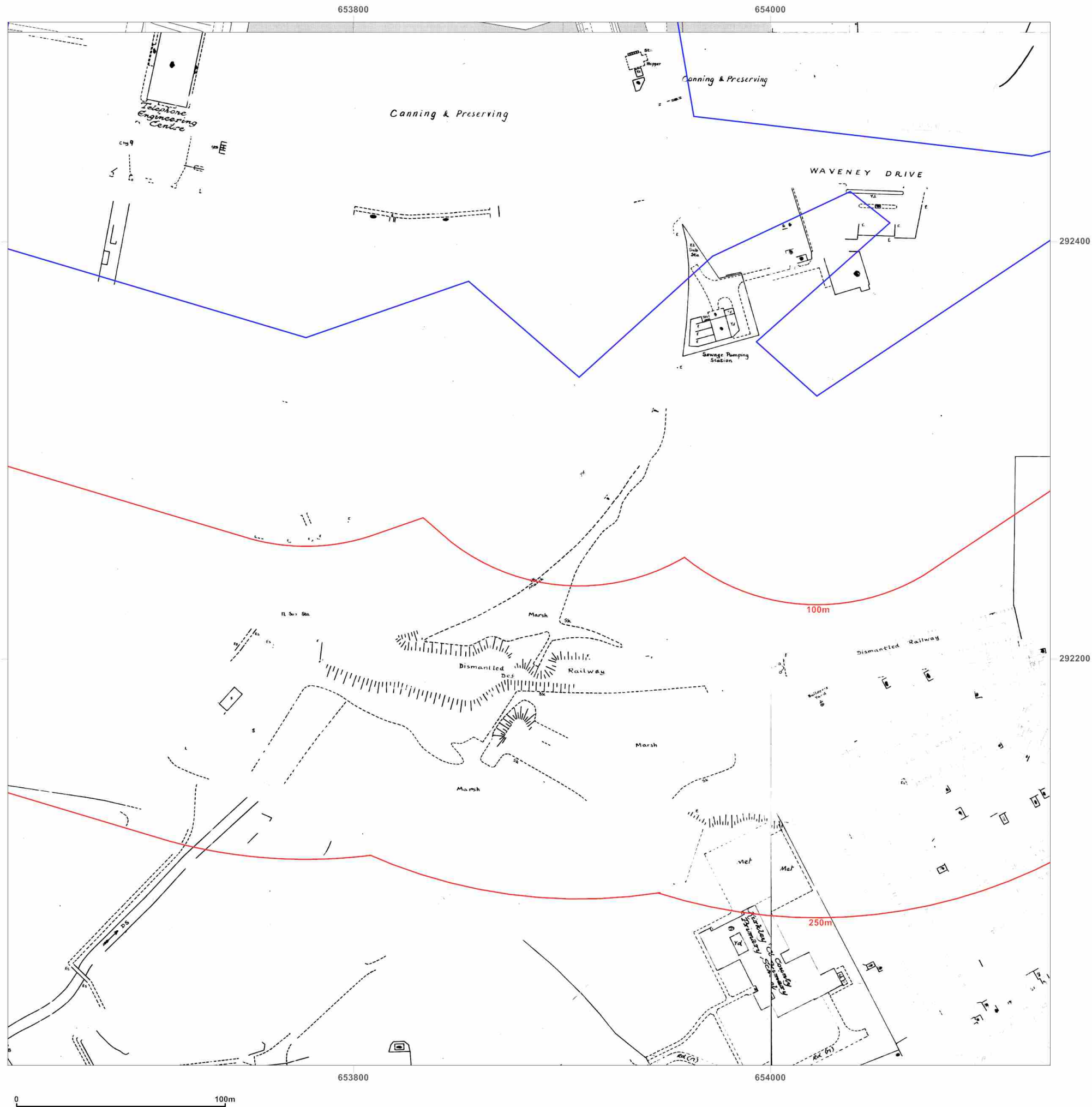
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Site Details:

Denmark Road Lowestoft

Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653884, 292255

Map Name: National Grid
Map date: 1970-1974
Scale: 1:1,250
Printed at: 1:2,000



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Site Details:

Denmark Road Lowestoft

Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653884, 292255

Map Name: National Grid

Map date: 1974-1976

Scale: 1:1,250

Printed at: 1:2,000



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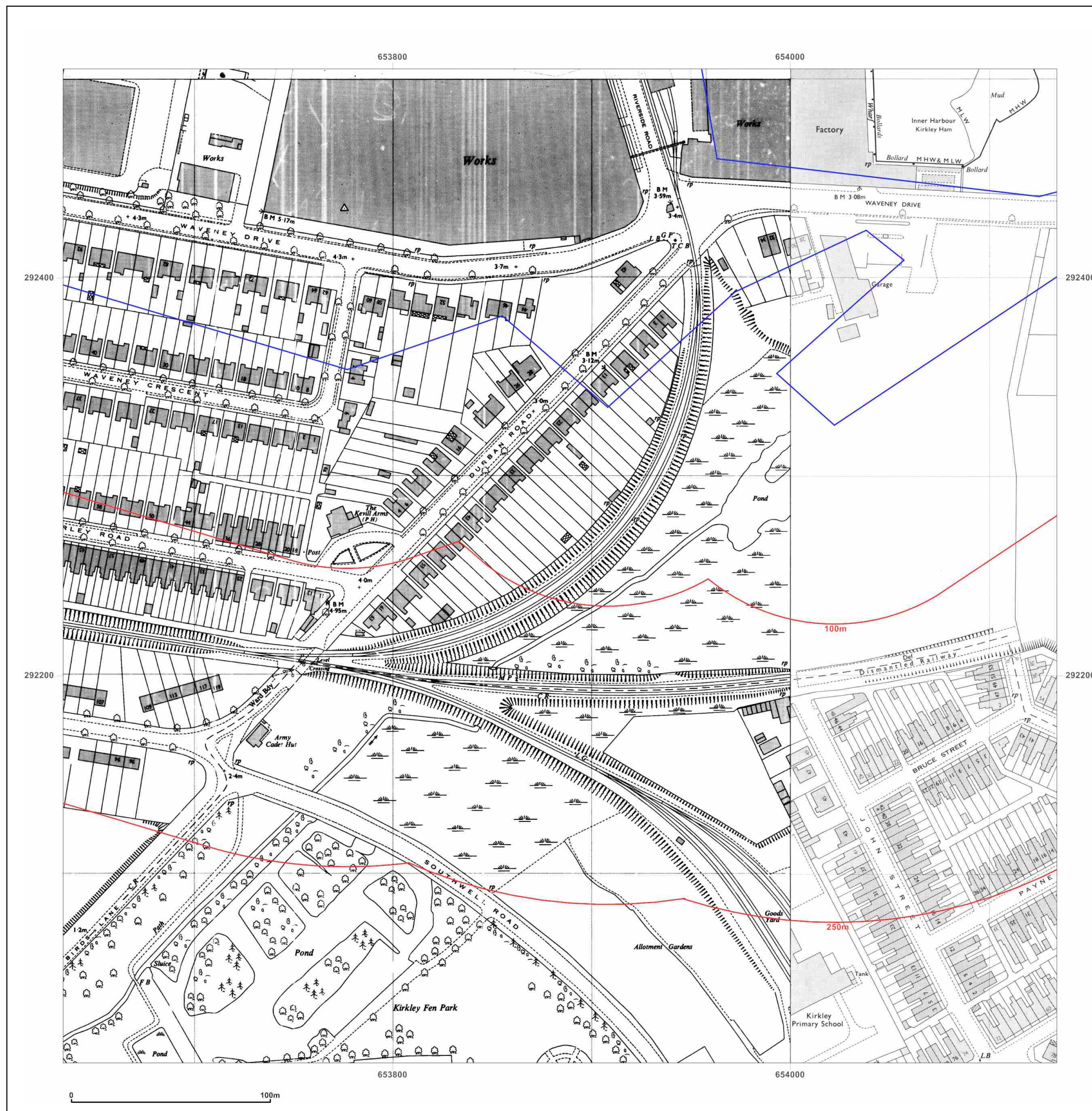


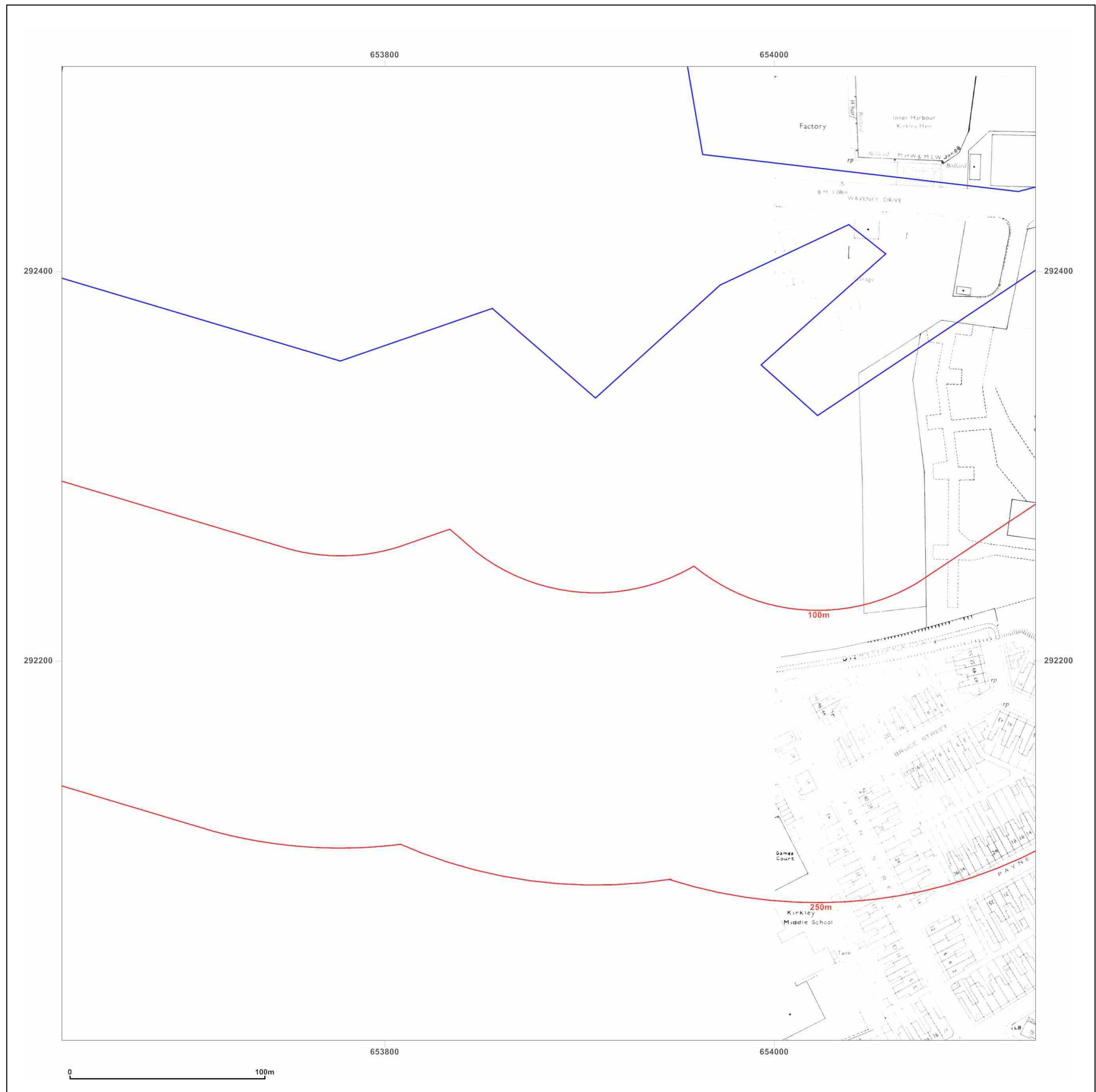
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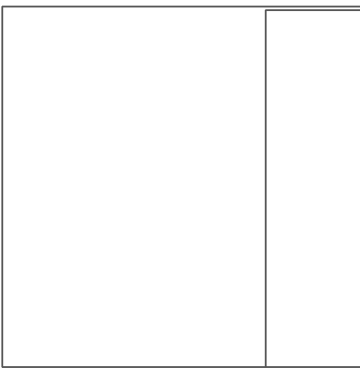
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Grid Ref: 653884, 292255

Map Name: National Grid

Map date: 1976

Scale: 1:1,250

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Site Details:

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Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653884, 292255

Map Name: National Grid

Map date: 1983-1984

Scale: 1:1,250

Printed at: 1:2,000



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Client Ref: 16287

Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale

Grid Ref: 653884, 292255

Map Name: National Grid

Map date: 1983-1988

Scale: 1:1,250

Printed at: 1:2,000



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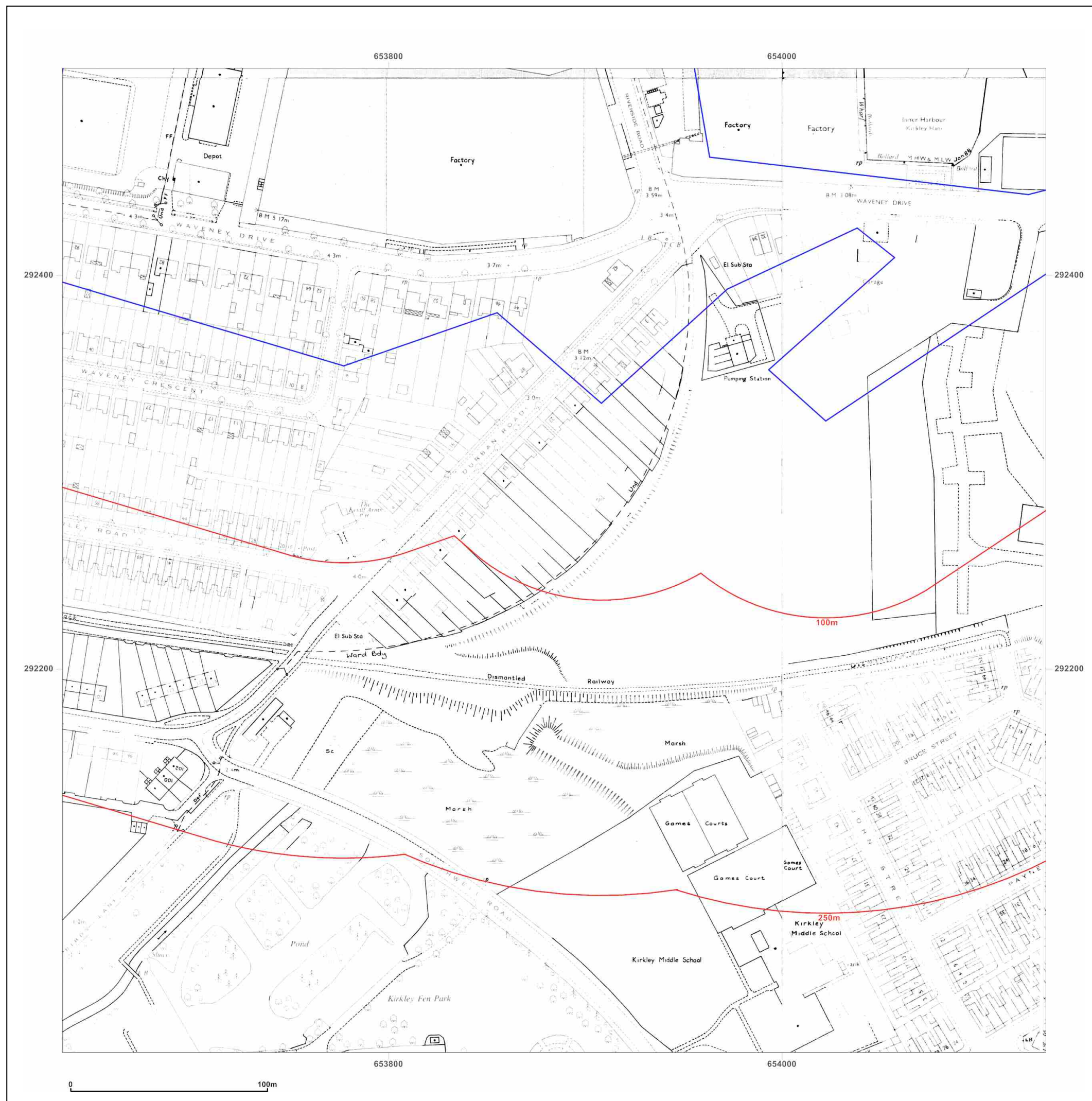


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Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653884, 292255

Map Name: National Grid

Map date: 1990-1993

Scale: 1:1,250

Printed at: 1:2,000



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Grid Ref: 653884, 292755

Map Name: National Grid

Map date: 1949

Scale: 1:1,250

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Client Ref: 16287

Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale

Grid Ref: 653884, 292755

Map Name: National Grid

Map date: 1964-1966

Scale: 1:1,250

Printed at: 1:2,000



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Denmark Road Lowestoft

Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653884, 292755

Map Name: National Grid

Map date: 1970-1974

Scale: 1:1,250

Printed at: 1:2,000



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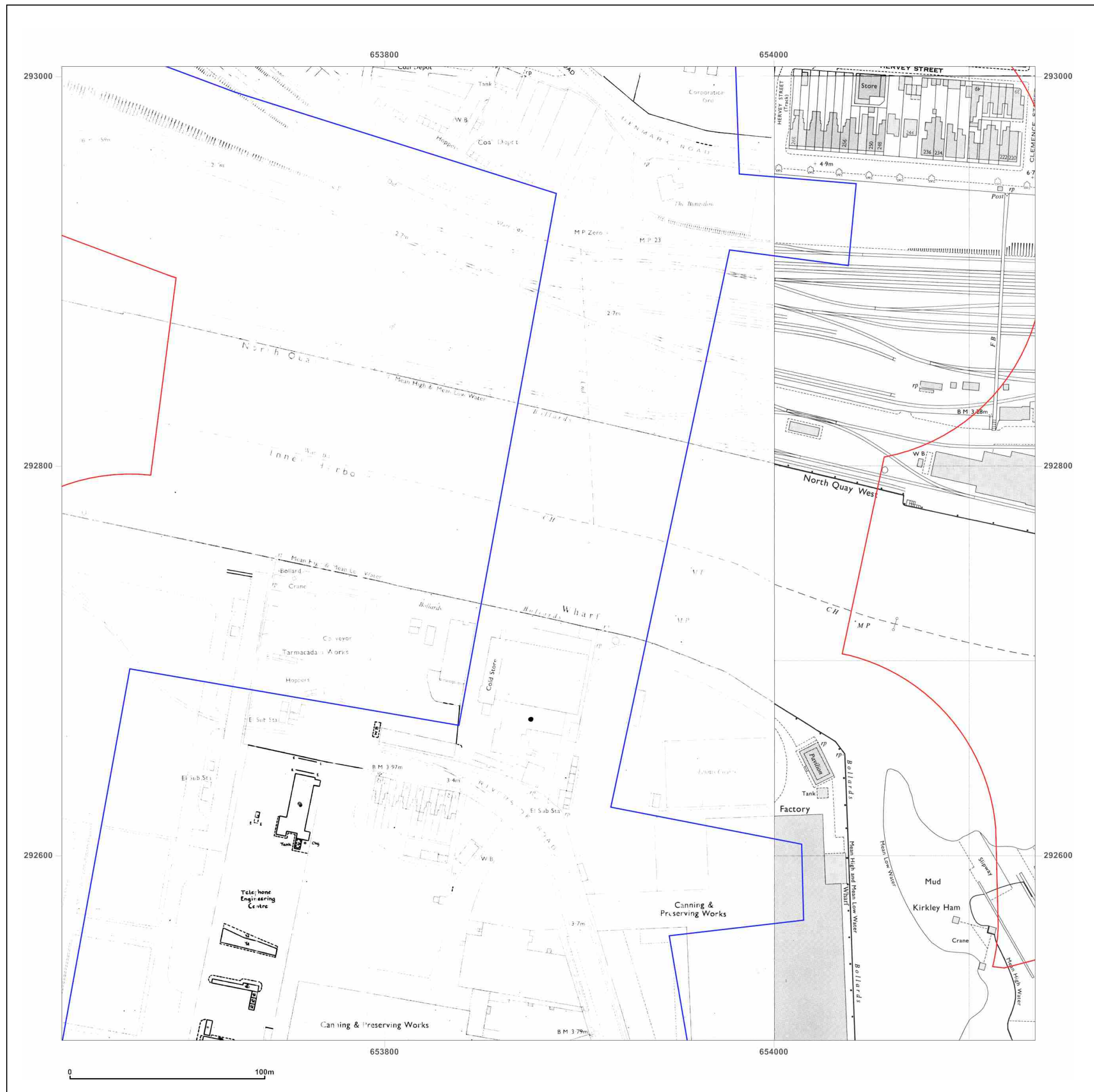
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Client Ref: 16287
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Grid Ref: 653884, 292755

Map Name: National Grid
Map date: 1974-1976
Scale: 1:1,250
Printed at: 1:2,000



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Grid Ref: 653884, 292755

Map Name: National Grid

Map date: 1983-1987

Scale: 1:1,250

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Client Ref: 16287
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Grid Ref: 653884, 292755

Map Name: National Grid

Map date: 1986-1990

Scale: 1:1,250

Printed at: 1:2,000



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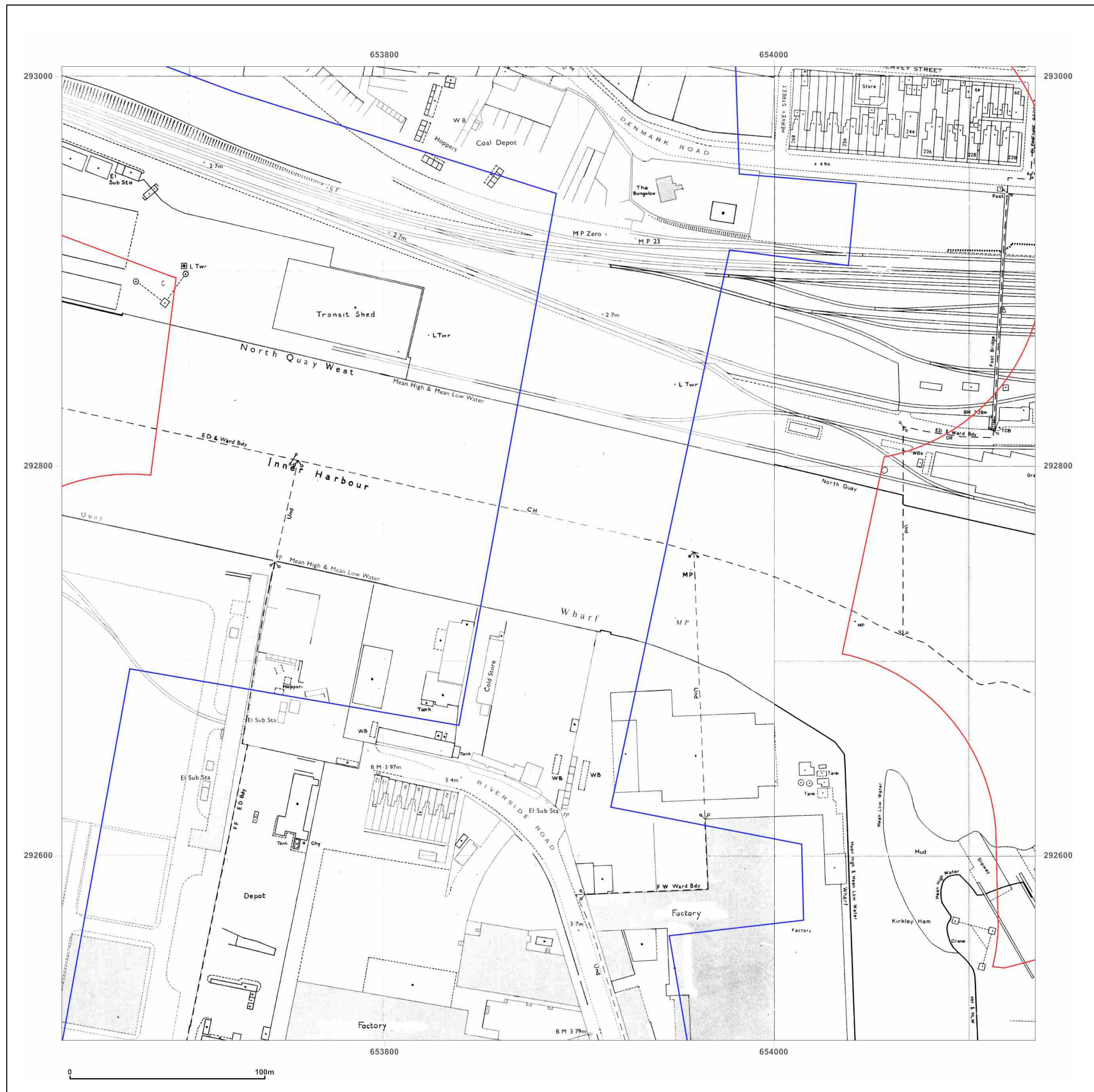
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Denmark Road Lowestoft

Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653884, 292755

Map Name: National Grid
Map date: 1989-1993
Scale: 1:1,250
Printed at: 1:2,000



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Site Details:

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Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653884, 292755

Map Name: National Grid
Map date: 1990-1993
Scale: 1:1,250
Printed at: 1:2,000



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Client Ref: 16287

Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale

Grid Ref: 653884, 293255

Map Name: National Grid

Map date: 1949

Scale: 1:1,250

Printed at: 1:2,000



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Client Ref: 16287

Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale

Grid Ref: 653884, 293255

Map Name: National Grid

Map date: 1956-1961

Scale: 1:1,250

Printed at: 1:2,000



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Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653884, 293255

Map Name: National Grid

Map date: 1969-1971

Scale: 1:1,250

Printed at: 1:2,000



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Site Details:

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Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653884, 293255

Map Name: National Grid

Map date: 1974-1976

Scale: 1:1,250

Printed at: 1:2,000



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Grid Ref: 653884, 293255

Map Name: National Grid

Map date: 1986-1990

Scale: 1:1,250

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Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653884, 293255

Map Name: National Grid
Map date: 1989-1990
Scale: 1:1,250
Printed at: 1:2,000



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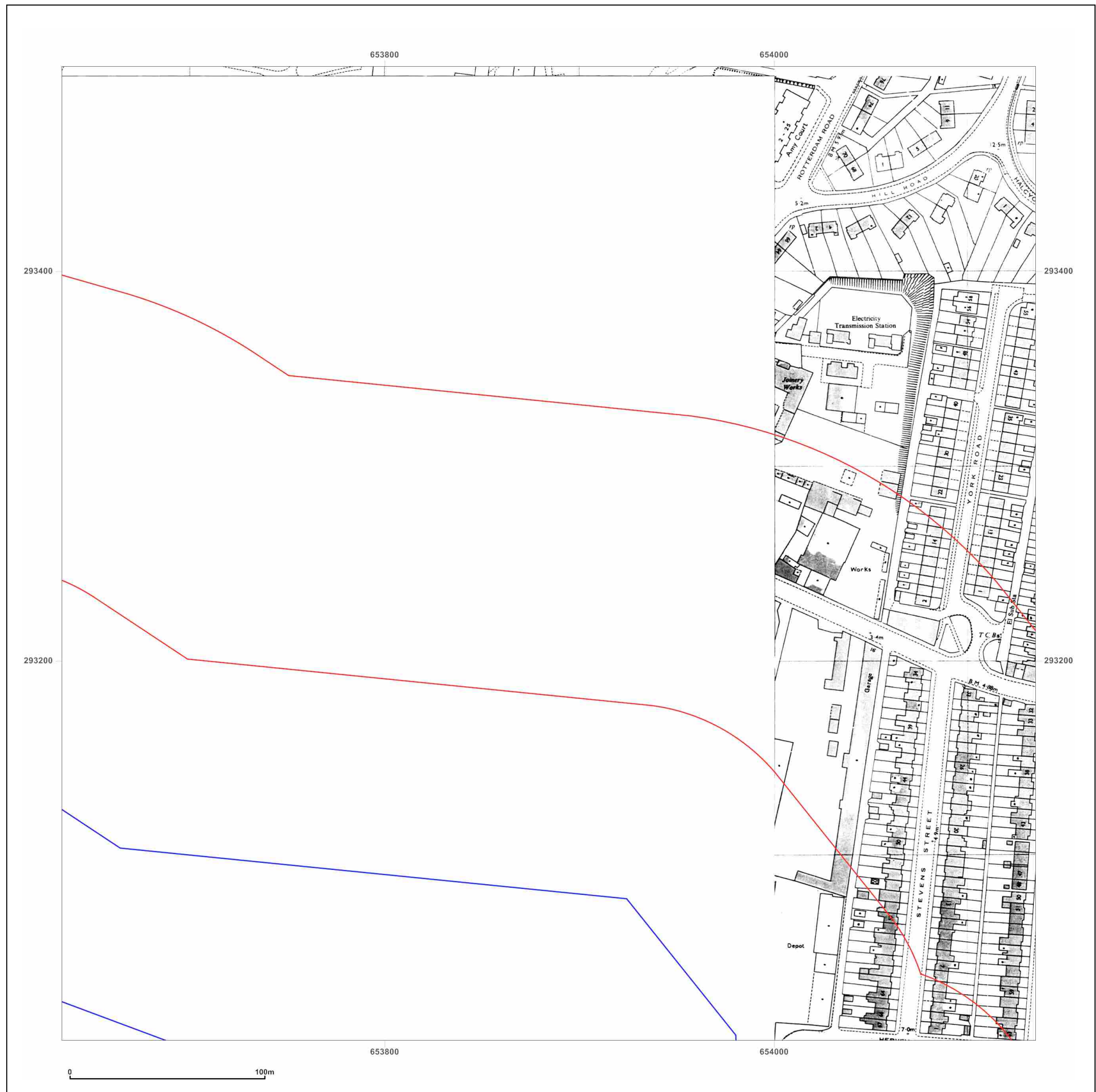
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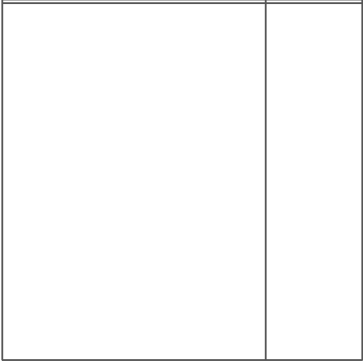
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Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653884, 293255

Map Name: National Grid
Map date: 1990-1993
Scale: 1:1,250
Printed at: 1:2,000



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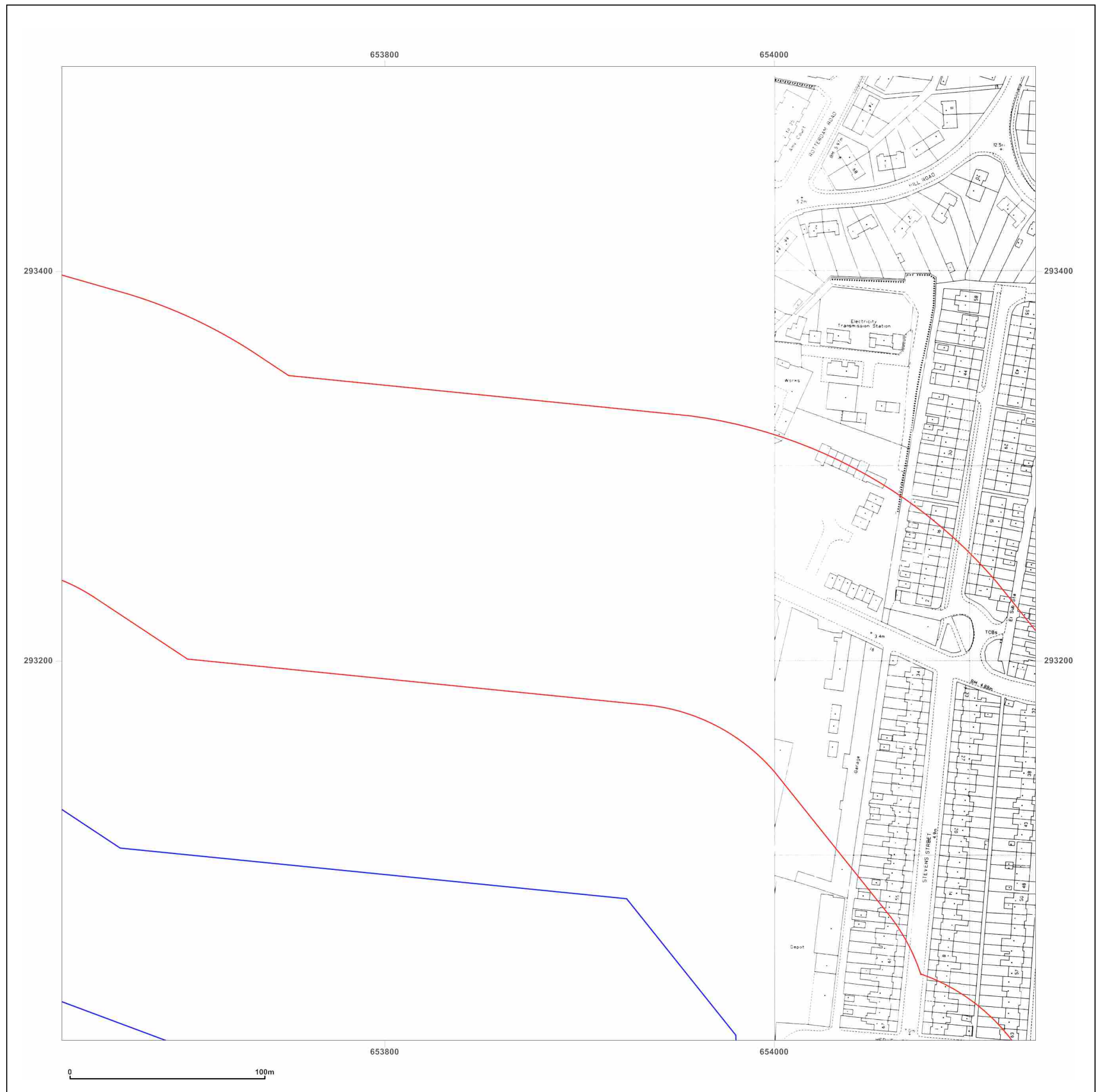


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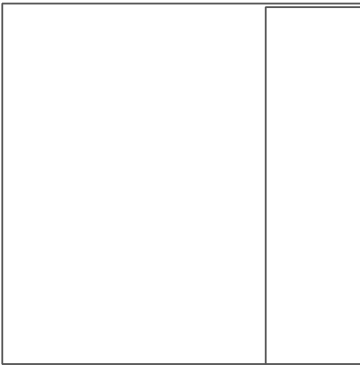


Site Details:

Denmark Road Lowestoft

Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 653884, 293255

Map Name: National Grid
Map date: 1993
Scale: 1:1,250
Printed at: 1:2,000



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Grid Ref: 653884, 293255

Map Name: National Grid

Map date: 1989-1993

Scale: 1:1,250

Printed at: 1:2,000



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Site Details:

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Client Ref: 16287

Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale

Grid Ref: 654384, 292255

Map Name: County Series Town Plan

Map date: 1884-1885

Scale: 1:500

Printed at: 1:1,000



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Site Details:

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Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 654384, 292255

Map Name: National Grid

Map date: 1949-1950

Scale: 1:1,250

Printed at: 1:2,000



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Client Ref: 16287

Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale

Grid Ref: 654384, 292255

Map Name: National Grid

Map date: 1974-1975

Scale: 1:1,250

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Site Details:

Denmark Road Lowestoft

Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 654384, 292255

Map Name: National Grid

Map date: 1986-1990

Scale: 1:1,250

Printed at: 1:2,000



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Edition N/A
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Site Details:

Denmark Road Lowestoft

Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 654384, 292255

Map Name: National Grid

Map date: 1990

Scale: 1:1,250

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Site Details:

Denmark Road Lowestoft

Client Ref: 16287
Report Ref: CMAPS-CM-535051-16287-070616HIS_1250scale
Grid Ref: 654384, 292255

Map Name: National Grid

Map date: 1993

Scale: 1:1,250

Printed at: 1:2,000



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