Application for an Environmental Permit - Thurrock 2 Flexible Generating Facility

Site Condition and Baseline Report

794-ENV-EPC-23409
Site Condition and Baseline Report
V1 R2
26 February 2026

Document status

Version	Authored by	Reviewed by	Approved by	Review date
V1 R0	Alex Kingston			
V1 R1	Alex Kingston	William Summerlin		06/02/2026
V1 R2	Alex Kingston	Jennifer Stringer	Jennifer Stringer	26/02/2026

Approval for issue

Jennifer Stringer		26/02/2026

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1 INTRODUCTION

1.1 Background

1.1.1 This document forms the Site Condition and Baseline Report (SCBR) as a part of an application by Thurrock Power 2 Limited for an environmental permit to operate the Thurrock 2 Flexible Generating Facility (T2FGF) as required during times of peak electricity demand.

1.1.2 The installation will fall under Section 1.1, Part A(1)(a) of Part 2 of Schedule 1 to the Environmental Permitting (England and Wales) Regulations 2016, i.e. burning any fuel in an appliance with a rated thermal input of 50 or more megawatts. This Site Condition and Baseline Report (SCBR) supports the application for an environmental permit. The report has been prepared in accordance with the European Commission Guidance[1] concerning baseline reports required under the IED and the Environment Agency's H5 Horizontal Guidance[2].

1.1.3 The IED, Article 22, paragraphs 2 to 4, contains provisions for the definitive cessation of activities involving the use, production or release of Relevant Hazardous Substances (RHS) in order to prevent and tackle potential soil and groundwater contamination from such substances. A key tool in this respect is the establishment of a 'baseline report' where an activity involves the use, production or release of RHS and having regard to the possibility of soil and groundwater contamination. The report will form the basis for a comparison with the state of contamination upon definitive cessation of activities. Where information produced pursuant to other national or union law reflects the state at the time the report is drawn up, that information may be included in, or attached to, the baseline report.

1.1.4 This SCBR will be maintained within the Environmental Management System (EMS) in place at the site. Any changes, updates or additional information subsequent to the original version will be added within the operational section of this SCBR.

1.1.5 RPS has prepared this report based on information and data available at the time of preparation. Details of the competencies of those involved in producing this SCBR report are provided in Appendix A.

1.2 Key Objectives

1.2.1 The key objectives of this report are to:

- Establish the environmental setting of the site and determine its environmental sensitivity;
- Identify activities that are currently undertaken at the site, including the identification of RHS and preventative measures implemented to protect land and groundwater;
- Establish the extent of historical contamination in the soil and groundwater in areas where current and/or future processes may include similar potentially contaminating substances;
- To provide conclusions on whether land quality has been impacted from historical activities; and

[1] https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32010L0075&from=EN
[2] Environment Agency, H5 Guidance for Applicants, Environmental Permitting Regulations, Site Condition Report – Guidance and Templates, May 2013

- To identify the conditions at the site at the point permitting the facility (baseline condition) such that they may be used as a point of reference to determine whether the site has been contaminated during the site's permitted operation in line with IED and Environmental Permitting Regulations requirements.

1.2.2 Current guidance from the EA sets out a multi-stage process which incorporates the Stage 1-3 identification of Relevant Hazardous Substances (RHS) as required in EU Industrial Emissions Directive (IED) Baseline Reports for Part A permitted activities. A summary of each stage is outlined below along with where it is addressed within this report:

- Evaluation of Environmental Setting to determine the fate of potential emissions of relevant hazardous substances This is addressed within Section 2 of this report;
- Evaluation of Site History and potential for relevant hazardous substances to be present in soils and groundwater. This is addressed within Section 3 of this report;
- Review of infrastructure – Evaluation of primary, secondary and tertiary containment measures, including related maintenance and process control practices. This is addressed within Section 4 of this report;
- Stage 1 – Identify hazardous substances used, produced or released at the installation. This is addressed within Section 5 of this report;
- Stage 2 – Identify relevant hazardous substances used, produced or released at the installation from the list of hazardous substances identified in Stage 1. This is addressed within Section 6 of this report;
- Stage 3 – Undertake an assessment of site-specific pollution possibility for relevant hazardous substances. This is addressed within Section 7 of this report;
- Site Characterisation that synthesises all findings on the basis of a Conceptual Site Model. This is addressed within Section 8 of this report;
- Site Investigation (including sampling strategy). This is addressed within Section 9 of this report; and
- Production of Baseline Report. This is addressed within Section 10 of this report.

1.3 Description of Permitted Activities

1.3.1 Natural gas will be delivered to the T2FGF via a new pipeline connection from the Pressure Reducing Station (PRS) associated with the adjacent Thurrock Flexible Generation Facility (TFGF). An onsite distribution system will connect each of the 22 engines to the gas supply.

1.3.2 The 22 reciprocating spark-ignition gas engines will be housed within purpose-built structures. They will be served by 11 exhaust stacks with one stack serving 2 engines.

1.3.3 The proposed facility will operate to provide additional energy security during periods of peak electricity demand or other periods of system tightness within the UK.

1.3.4 The T2FGF operation will have a total thermal input of up to 232.67 MW under normal operation (22 engines @ 10.58 MWth input, LHV), ultimately providing up to 104.8 MW (net) of electricity for export to the grid during periods of peak demand or other periods of system tightness. The engines can operate for short periods in high power mode where the thermal input to the engines is 11.17 MWth and the output is 5 MWe. Therefore, the maximum combined capacity of the engines in this high power mode is approximately 245.74 MWth (22 engines @ 11.17 MW, LHV).

1.3.5 Each engine will incorporate a generator set to produce electricity. Operation would not be continuous but would run as a flexible back up supply for up to 1,500 hours per engine per year.

2 APPLICATION SITE CONDITION REPORT

2.1 Application Phase

2.1.1 This section of the SCBR, includes information specified within Environment Agency Horizontal Guidance Note H5[1] that is required at the application stage. The summary tables below provide references to the various chapters of this report, where further information on the known current condition of the operational area is provided.

2.2 Site Condition Report Summary

1.0 Site Details	
Name of the applicant	Thurrock Power 2 Limited
Activity address	Land southwest of Station Road, near Tilbury, Essex, RM18 8QR
National grid reference	TQ 66156 76668
Site area (ha)	0.5
Document reference and dates for Site Condition Report at permit application and surrender	Site Condition and Baseline Report V1 R2 25/02/2026
Document references for site plans (including location and boundaries):	Site Location Plan, Site Layout, Receptor Plan 2 km, Receptor Plan 15 km

2.0 Condition of the land at permit issue	
Environmental setting including: • Topography • Geology • Hydrogeology • Hydrology • Environmental Consents, Licences, Authorisations, Permits and Designations	See Section 3
Pollution history including: • Location, nature of incidents or direct discharges that may have affected soil or groundwater • Historical land uses and associated contaminants	See Section 3
Evidence of historic contamination, for example, historical site investigation, assessment, remediation and verification reports (where available)	Appendix D: Phase 2 Site Investigation Report.
Baseline soil and groundwater reference data	Details regarding baseline soil and groundwater reference data at the site are provided in Sections 10 & 11 of this SCR and Baseline Report.
Supporting information	Appendix A – Competencies Appendix B – Groundsure Report

2.0 Condition of the land at permit issue	
	Appendix C – Phase 1 Preliminary Risk Assessment Appendix D – Phase 2 Site Investigation Report Site Plans and Drawings

3.0 Permitted activities	
Permitted activities	Section 1.1, Part A(1)(a) - burning fuel in an appliance with a rated thermal input of more than 50 megawatts
Non-permitted activities undertaken	None
Document references for: • plan showing activity layout; and • environmental risk assessment (ERA).	An ERA is included as Appendix C to Supporting Information. Site Layout Plan

3 IDENTIFY THE SITE'S ENVIRONMENTAL SETTING

3.1 Site Setting and Sources of Desk Study Information

3.1 The following sections detail the environmental setting of the site. The sources of desk study information utilised in order to describe the condition of the installation, and in particular, to determine the potential for substances to be present in, in or under the land associated with past and present uses of T2FGF are listed below:

- Groundsure Report – Appendix B
- Phase 1: Preliminary Risk Assessment – Appendix C
- Phase 2: Site Investigation Report – Appendix D
- British Geological Survey (BGS) Geology of Britain viewer[3]
- Magic Map[4]

3.2 Ground Cover and Topography

3.2.1 The T2FGF site occupies approximately 0.5 hectares approximately 1000 m east of Tilbury, Essex, centred on National Grid Reference TQ 66156 76668. The nearest existing postcode is RM18 8QR.

3.2.2 The ground cover at the proposed site consists of marshland, classifying it as a greenfield site.

3.2.3 OS mapping indicates that the site is approximately 2 m AOD. The topography of the site is flat while the surrounding area is generally flat to the north and slightly undulating to the south.

3.3 Geology

3.3.1 The superficial geological deposits underlaying the site are Alluvium (clay, silt, sand and gravel).

3.3.2 The permeability of the superficial deposits beneath the site is predominantly intergranular, exhibiting very low to moderate permeability.

3.3.3 The bedrock geology beneath the site is represented by the Seaford Chalk Formation.

3.4 Hydrogeology

3.4.1 The bedrock aquifer underlying the site is designated as Principal, described as highly intergranular and / or fracture permeability, usually providing a high level of water storage.

3.4.2 The superficial aquifer underlaying the site is designated as Secondary Undifferentiated.

Source Protection Zone

3.4.3 The site is located within a groundwater Source Protection Zone (SPZ) 3.

[3] BGS Geology Viewer - British Geological Survey
[4] MAGIC

3.5 Hydrology

3.5.1 There are a number of on-site and nearby surface and underground water bodies including:

- One small unnamed inland surface river on-site that is not influenced by normal tidal action.
- Several unnamed small inland rivers (narrower than 5 m) which are not influenced by normal tidal action situated within 250 m of the site boundary. The closest of which is 5m from the site boundary at its nearest point.
- There is a single small pond located roughly 240 m from the site boundary.
- The River Thames is approximately 1.25 km south of the site at its nearest point.
- Surface water run-off from T2FGF will discharge to an onsite swale before discharge to local land drainage systems.

Flood Risk

3.5.2 The site lies in a Flood Zone 3a, meaning there is a high risk of flooding prior to considering any flood protection measures. However, the site is designed to withstand 100-year flood event through the use of raised entrances to buildings, lowering the risk of flooding.

3.5.3 The Thames has tidal flooding defences designed to defend against 1 in 1,000-year flood events. The risk of tidal flooding is, therefore, low.

3.6 Environmental Consents, Licences, Authorisations, Permits and Designations for the Site and Surrounding Areas

Water Discharges and Abstraction Licences

3.6.1 There are two active groundwater abstractions within circa 1 km, detailed in Table 3-1 below.

Table 3-1: Active Groundwater Abstraction Licence within circa 1 km

License No.	Source	Use	Distance from site
AN/037/0056/039	Underground Chalk at Tilbury	Mineral Washing, Process Water and Dust Suppression	557m SW
8/37/56/*G/0006	Well 2 at Polwicks, West Tilbury	General farming, domestic use (includes potable water supply) and spray irrigation	1090m NE

Landfill Sites

3.6.2 There are two active or recently closed landfill sites under Environment Agency regulation within 500 m. These are included within Table 3-2 below.

Table 3-2: Active or Recent Landfill Sites Within 500 m

License No.	Use	Distance from site
EPR/GP3733DZ	Waste Landfilling	222 m SE
EPR/DP3498NX	Industrial Waste Landfill (Factory curtilage)	223 m SE

Waste Treatment or Disposal Sites

3.6.3 There are two licenced waste sites within 500 m of the T2FGF. These are included within Table 3-3 below.

Table 3-3: Licenced Waste Sites Within 500 m

License No.	Use	Distance from site
71186	Industrial Waste Landfill (Factory curtilage)	384 m SE
EPR/ZF0104HP/A001	Storage and Treatment of Waste	446m NE

Permitted Installation

3.6.4 The Thurrock Flexible Generating Facility, permit number EPR/MP3526SF, is located adjacent to the eastern boundary of the T2FGF. This facility is entering commercial operations in 2026.

Statutory Designated and Sensitive Receptors within 2 km

3.6.5 There are no statutory designated or sensitive sites located within 2 km from the proposed site.

3.7 Mining

3.7.1 There are no mining sites located within 500 m from the proposed site.

3.8 COMAH

3.8.1 There are no COMAH sites recorded within 500 m of the site.

3.9 Radon

3.9.1 The site is situated in an area where fewer than 1% of properties are estimated to be affected by Radon and no protective measures are deemed necessary.

4 PROVIDE A SITE HISTORY

4.1.1 The purpose of this section is to determine what hazardous substances have the potential to already be present on site in the soil and groundwater as a result of activities undertaken at the site to date and to determine whether they are coincident with potential future emission points.

4.1.2 This section considers the history of the site prior to development of the proposed facility.

4.2 General Site History

4.2.1 A review of the mapping from 1863 to present provided within the Groundsure Report included within Appendix B is summarised in Table 4-1 below.

Table 4-1: Historic Land Use

On Site Land Use and Features	Surrounding Land Uses	Dates
West Tilbury Marshes located on site. The site occupies a small area of two areas of common land (Walton Common and Parsonage Common) and is undeveloped.	West Tilbury Marshes located surrounding the site	1863
	Railway located ~ 250 m NW	1863
	Unspecified works located ~ 500 m S	1967
	Unspecified works located ~ 500 m SW	1973 - 1991
	Tilbury Power Station located ~ 800 m S	1973 - 2010
	Tilbury Power Station now decommissioned	2025

4.2.2 The site is situated in the West Tilbury Marshes region, and historically there has been minimal construction activity on or surrounding the proposed site. The only exception being the recently constructed Battery Energy Storage System (BESS); and under construction Thurrock Flexible Generation Facility due to be complete mid-2026.

4.2.3 The T2FGF is to be situated on undeveloped land, classified as greenfield, with minimal risk of pollution.

4.3 Previous Ground Investigation

4.3.1 A Phase 2 Site Investigation was undertaken in September 2019 in relation to the Thurrock Flexible Generation Facility. This report considered a wider area that was required for the Thurrock Flexible Generation Facility and BESS and split the site into several Zones. Zone A covered the area to be occupied by the T2FGF, as well as the BESS and customer substation associated with the Thurrock Flexible Generation Facility Development Consent Order (DCO) application and a report was produced by TerraConsult Ltd.

4.3.2 A total of nine dynamic sampler boreholes, referenced WS01 to WS09, were undertaken as a part of the site investigation. Of these, only WS04, WS05 and WS07 are deemed relevant to T2FGF as they bound the site in different directions and are the closest in proximity. Although none are within the T2FGF installation boundary, they are considered to be representative of the conditions on site due to a lack of historical activity and contamination.

4.4 Potential Historic Contaminants

4.4.1 There is no record of potential historic contamination within 250 m of the site.

4.5 Operational History

4.5.1 The site has no operational history.

5 REVIEW OF EXISTING INFRASTRUCTURE

5.1 Site Walkover

5.1.1 A site walkover was conducted as part of the Phase 1 Preliminary Risk Assessment included as Appendix C. The purpose of the walk over and document was to support the DCO application for the wider development site as described in the previous section and includes the area of land to be occupied by the T2FGF.

5.2 Storage Tanks and Transfer Pipework

5.2.1 Lubrication oil (Shell Mysella S5 N 40) storage tanks will be located within bunded containment areas. The 200-litre double skinned tanks for lubricating oil will be located in all 22 engine rooms. All bunds will be sized to hold greater than 110% of the tank contents and be compliant with oil storage regulations.

5.2.2 Waste oil will be transferred to IBCs for collection from site for reprocessing or appropriate disposal. During transfer of waste oil, IBCs will be placed upon temporary bunds.

5.2.3 A closed-circuit cooling water (CCCW) system will be employed, using a water/ethylene glycol mixture. The area housing the fin fan coolers and CCCW pumps will be bunded to contain any potential leaks.

5.2.4 Transformer oil (Shell Diala S4 ZX-I) will not be stored onsite. All 51,750 litres of transformer oil in use will be contained in the double skinned transformer which is housed within a bund.

5.3 Surfacing

5.3.1 All process and storage areas will be situated on a hardstanding.

5.3.2 Engines will be internally housed within containers.

5.3.3 The site surfaces will be regularly inspected as part of the EMS and are repaired where necessary to maintain the impermeable nature.

5.4 Drainage

5.4.1 There will be no process water discharges associated with the T2FGF. The only discharge to water will comprise uncontaminated rainwater run-off.

5.5 Monitoring and Maintenance

5.5.1 Regular inspections will be in place to identify the potential for deterioration or damage of both plant and supporting infrastructure, such as pollution prevention measures (i.e., bunding).

5.5.2 A maintenance schedule will be implemented to minimise the risk of plant failure and the possible subsequent release of contaminants.

5.5.3 All spillage incidents and actions taken will be recorded in accordance with the incident reporting system implemented through the EMS. All staff and contractors working onsite will have training to ensure awareness of their responsibilities within the EMS.

5.5.4 If any system requires a top-up, or a spillage is identified, suitably trained staff will be responsible for carrying out the required task.

5.6 Process Controls

5.6.1 If a pressure drop is detected in a CCCW circuit, a rooftop valve will automatically close to form a bund, preventing glycol from contaminating rainwater runoff.

5.6.2 The combustion control system will link to automatic alarm systems in the control room to alert the remote operators. In the event of an engine failure the unit will either not start when initiated or will automatically shut down.

6 STAGE 1 – IDENTIFY WHICH HAZARDOUS SUBSTANCES ARE USED, PRODUCED OR RELEASED AT THE INSTALLATION AND PRODUCE A LIST OF THESE SUBSTANCES

6.1.1 The IED Baseline Report relates to contamination risk associated with “hazardous substances” used, produced and/or released by the T2FGF site. Hazardous substances are defined as substances or mixtures defined in Article 3 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on Classification, Labelling and Packaging of substances and mixtures (the “CLP Regulations”). The determination of whether a substance is a hazardous substance is largely determined using the substance CAS Number and European Chemicals Agency (ECHA) database[5].

6.1.2 This section identifies the main raw materials, intermediates, products, residues and releases associated with the permitted activities.

6.1.3 Raw materials are identified in Table 6-1 below. For each raw material, products, residue and release the above data sources have been reviewed to determine whether the material contains potentially hazardous substances.

6.1.4 Those which do not contain potentially hazardous materials are discounted at Stage 1 from further consideration. All material which are identified as containing potentially hazardous substances are taken forward to Stage 2.

[5] https://echa.europa.eu/

Table 6-1: Chemical Hazard Identification

Material	Components	CAS / EC Number	Hazardous Properties	Storage	Potential Hazardous Material?
Raw Materials					
Natural Gas	Standard Composition (circa 90% Methane)	CAS No: 74-82-8 EC No: 200-812-7	H220: Extremely flammable gas.	N/A – direct supply from grid. Natural gas will be fully contained within a sealed pipeline.	Yes
Lubricating Oil	Highly refined mineral oil	N/A	This substance does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended. Accidental release into the environment can cause pollution.	22 x 200-litre tanks for lubricating oil within bunded area. Waste oils stored in IBCs on temporary bunds before removal.	Yes
Coolant	Ethylene Glycol (circa 37% v/v glycol water mixture)	CAS No: 107-21-1 EC No: 203-473-3	H373: May cause damage to organs through prolonged or repeated exposure.	None stored but a significant quantity contained within CCCW system.	Yes
Transformer Oil	Distillates (Fischer - Tropsch), heavy, C18-50 – branched, cyclic and linear	CAS No: 848301-69-9 EC No: 482-220-0	H304: May be fatal if swallowed and enters airways. Not classified as environmental hazard.	N/A – 51,750 litres within the transformer.	Yes
Residues					
Waste from Maintenance Activities	Mainly solid waste packaging/rags	N/A	May be hazardous if contaminated with raw materials during maintenance / cleaning.	Unknown quantities, in segregated bins as appropriate.	Yes
Releases					
Combustion Emissions	Products of the combustion of natural gas, primarily carbon dioxide and water vapour plus oxides of nitrogen and carbon monoxide	CAS No: 124-38-9 EC No: 204-696-9	This substance does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended. High levels of emissions from natural gas can reduce the amount of oxygen breathed from the air.	N/A – released directly to atmosphere.	Yes
Surface water run-off	Rainwater run-off from roadways and clean areas such as building roofs	N/A	Non-hazardous providing no contamination from an incident on site.	Swale within T2FGF boundary.	No

6.2 Potential Hazardous Materials

6.2.1 Table 6-1 identifies those raw materials which are considered hazardous and need to be taken forward to Stage 2.

6.2.2 Hazardous properties have been identified in the following materials on site:

- Natural Gas
- Lubricating Oil
- Coolant
- Transformer Oil
- Waste from Maintenance Activities
- Combustion Emissions

7 STAGE 2 – IDENTIFYING THE RELEVANT HAZARDOUS SUBSTANCES

7.1.1 Stage 1 identified a number of hazardous substances that are stored, produced or released on site as part of site operations. Stage 2 requires a review of the listed substances to determine which are relevant hazardous substances (RHS). Each of the substances identified within Stage 1 is reviewed below, considering their chemical and physical properties and how they are stored and used on site, to determine the potential pollution risk of each hazardous substance.

7.1.2 RHS in relation to IED are defined as:

Those substances or mixtures defined within Article 3 of Regulations (EC) No1272/2008, which, as a result of their hazardousness, mobility, persistence and biodegradability (as well as other characteristics), are capable of contaminating soil or groundwater and are used, produced and/or released by the installation.

7.2 Natural Gas

7.2.1 Natural gas is lighter than air and therefore, should a leak occur, it will dissipate into the air. For this reason, it is considered incapable of having a discernible impact on the quality of soil or groundwater. Natural gas is not therefore considered to be an RHS and is not considered further in this report.

7.3 Lubricating Oil

7.3.1 Lubricating oil is used by the engines as part of the site operations. It can contaminate soil and groundwater should it be released into the environment and is toxic to the water environment. Although biodegradable in particular conditions, larger volumes are likely to be relatively persistent in the environment.

7.3.2 On this basis, lubricating oil is identified as an RHS and will be considered further in Stage 3 in the following section.

7.4 Coolant

7.4.1 Coolant is used within the engine cooling system as part of the radiator fluid mix. It has high mobility and can contaminate soil and groundwater should it be released to the environment. It is highly toxic to aquatic organisms.

7.4.2 On this basis, coolant is identified as an RHS and will be considered further in Stage 3.

7.5 Transformer Oil

7.5.1 Transformer oil is used within the transformer to provide cooling and electrical insulation, while also protecting internal components. It has high mobility and can contaminate soil and groundwater should it be released to the environment.

7.5.2 On this basis, transformer oil is identified as an RHS and will be considered further in Stage 3.

7.6 Waste from Maintenance Activities

7.6.1 Wastes from maintenance activities could be contaminated with any relevant hazardous substances discussed in this report. As such it is considered to be an RHS in line with those identified previously.

7.7 Combustion Emissions

7.7.1 Combustion emissions will be dispersed from the stacks at a height of 20 m and will be dissipated into the air. The stack height has been selective to give good dispersion and avoid grounding effects on site. For this reason, it is considered incapable of having discernible impact on soil or ground water and is not considered further in this report.

7.8 Relevant Hazardous Substances

7.8.1 Table 7-1: Assessment of RHS Pollution PotentialTable 7-1 below summarises the properties of each of the potentially hazardous materials associated with the permitted facility and the conclusion as to whether they are considered an RHS.

7.8.2 The identified RHSs are then taken forward for further consideration in Stage 3.

Table 7-1: Assessment of RHS Pollution Potential

Substance	Physical State	Solubility	Toxicity	Mobility	Persistence	Biodegradability	Soil and Groundwater Pollution Potential	RHS?
Natural Gas	Gas	Low solubility	Low	Because of their extreme volatility, air is the only environmental compartment that hydrocarbon gases will be found.	Not persistent.	Readily biodegradable.	Very Low	No
Lubricating Oil	Liquid	Non-soluble	Low	Liquid under most conditions and floats on water. If it enters soil, it will adsorb to soil particles and will not be mobile.	Contains components that may persist in the environment.	Not readily biodegradable.	Medium	Yes
Coolant	Liquid	Soluble in water	Harmful to aquatic organisms	Given its physical and chemical characteristics, the product is generally mobile in the ground and in water.	Not persistent.	This material is expected to be readily biodegradable.	Medium	Yes
Transformer Oil	Liquid	Non-soluble	Low	Liquid under most conditions and floats on water. If it enters soil, it will adsorb to soil particles and will not be mobile.	Contains components that may persist in the environment.	Not readily biodegradable.	Medium	Yes
Waste Lubricating Oil	Liquid (may contain metal solids)	Non-soluble	Low	Liquid under most conditions and floats on water. If it enters soil, it will adsorb to soil particles and will not be mobile.	Contains components that may persist in the environment.	Not readily biodegradable.	Medium	Yes
Waste from Maintenance Activities	Solid	Non-soluble	May contain toxic components	Not mobile.	May contain components that are persistent.	May contain components that are biodegradable.	Low	Yes
Combustion Emissions	Gas	Low solubility	Low	High mobility due to gaseous state. Air is the only environment that combustion emissions will be found.	Not persistent.	Readily biodegradable.	Very Low	No

8 STAGE 3 – ASSESSMENT OF THE SITE SPECIFIC POLLUTION POSSIBILITY

8.1.1 The RHS identified in Stage 2 are to be considered in Stage 3 in the context of the site itself to determine whether circumstances exist which may result in the release of the substance in sufficient quantities to represent a pollution risk, either as a result of a singular emission or the accumulation from multiple emissions.

8.1.2 Circumstances under which emissions may occur include:

- Planned emissions;
- Accidents and / or incidents; and
- Routine operations.

8.1.3 The only planned emissions at the site are the emission of flue gases to atmosphere and discharge of clean surface water run-off to the surface water network. Surface water run-off is not identified as a hazardous substance and flue gases were discounted out as a RHS at stage 2.

8.1.4 An EMS will be established on site and will cover those elements requiring environmental permitting and the key requirements of ISO14001. The EMS will include procedures to minimise the frequency of accidents or incidents occurring, as well as procedures to minimise the risk in the event of an accident or incident.

8.1.5 Management systems will be put in place to ensure that those operations which have the potential to give rise to significant environmental effects are controlled. These systems will not only cover normal running but will also address abnormal operation and start-up and shutdown of the T2FGF. Further details are included in Section 5.6.

8.1.6 Planned maintenance routines will be established to ensure all key plant components which have the potential to affect the environmental performance of the facility remain in good working order. Maintenance routines will draw on manufacturers' recommendations, modified as appropriate by operational experience during the lifetime of the T2FGF. Further details are included in Section 5.5.

8.1.7 An Accident Management Plan (AMP) will be established prior to commencing operation of the proposed T2FGF. The AMP will detail those actions required in the event of an emergency or accident/incident. This will include small incidents such as minor spills and leaks and complaints, as well as major incidents such as fire. In particular, a system for recording and allocating appropriate follow-up for accidents, incidents and non-conformances will be established prior to operation.

8.2 Lubricating Oil

8.2.1 Lubricating oils will be stored in double skinned tanks. All tanks will be positioned within bunded engine rooms. The bunded areas are designed to contain any potential spillage and facilitate straightforward cleanup in the event of a spill and will contain 110% of the tank volume in compliance with CIRIA C736F.

8.2.2 Lubricating oil is delivered to site by road tanker or IBCs and is discharged to the individual tanks via a secure coupling. Deliveries are carried out on an impermeable surface and /or use a portable bund and under supervision of appropriately trained staff.

8.2.3 Oil is pumped to the individual engines via a closed system. Routine inspections and maintenance are carried out on the lubrication system to prevent or detect and repair any leaks.

8.2.4 Used lubricating oil will be transferred to IBCs for collection from site for reprocessing or appropriate disposal. During transfer of waste oil, IBCs will be placed upon temporary bunds.

8.2.5 Spill containment kits are available in the delivery area. Relevant site staff are trained in the containment and clean-up of spills.

8.2.6 Given these precautions, the risk of pollution to surface water and groundwater from lubricating oil is considered low.

8.3 Coolant

8.3.1 The coolant used in the CCCW systems contains approximately 37% ethylene glycol by volume. All the coolant is held within the CCCW systems with no spare stock held on site until the CCCW systems need replenishing, at which point the coolant is brought in specifically.

8.3.2 The CCCW systems all operate entirely within bunded areas which, if activated, are capable of containing at least 110% of the contents of the cooling water system.

8.3.3 Coolant leak detection is included via monitoring of pressure drop within CCCW system.

8.3.4 The CCCW systems are subject to routine maintenance and inspection to detect leaks and faults.

8.3.5 Spill kits are available and all relevant site staff are trained in the containment and clean-up of spills.

8.3.6 Since there is limited inventory, the ethylene glycol is contained diluted with water (37% solution) within the closed loop cooling system which is also bunded, the risk of pollution is considered low.

8.4 Transformer Oil

8.4.1 The transformer is double skinned and housed within a bund capable of containing at least 110% of the total volume of transformer oil.

8.4.2 Transformer oil is delivered to site by road tanker or IBCs and is discharged to the transformer via a secure coupling. Deliveries are carried out on an impermeable surface and /or use a portable bund and under supervision of appropriately trained staff.

8.4.3 Routine inspections and maintenance are carried out on the transformer to prevent or detect and repair any leaks.

8.4.4 Spill containment kits are available in the area. Relevant site staff are trained in the containment and clean-up of spills.

8.4.5 Given these precautions, the risk of pollution to surface water and groundwater from transformer oil is considered low.

8.5 Wastes From Maintenance Activities

8.5.1 Waste from maintenance activities may include oily rags, used PPE, spent filters, scrap from the replacement of parts etc. General routine inspections and scheduled maintenance activities will generate these types of waste and can attribute to raw materials contamination. Proper handling and disposal of these wastes are essential to reduce the risk of pollution caused by inappropriate discharging these items.

8.5.2 Solid waste and packaging from maintenance operations will be placed into appropriate closed bins for storage prior to collection from site for appropriate disposal. Site staff conduct inspections to ensure litter is identified and removed promptly.

8.5.3 These waste items are typically solid and the pollution risk to surface water and groundwater are considered very low.

8.6 Site Specific Pollution Possibility

8.6.1 A summary assessment of the site-specific pollution risk associated with material containing RHS identified for the site is presented in Table 8-1 below:

Table 8-1: Site Specific Pollution Possibility

RHS	Maximum amount stored at site	Details of existing pollution prevention measures	Pathway	Receptors	Is the RHS a pollution risk?
Lubricating Oil	22 no. 200 litre tanks	4,400 (max.) across 22 separate double-skinned tanks located within bunded areas. Stored on hardstanding with sealed drainage system. Waste IBCs stored on temporary bunds.	Leaching of mobile contaminants, vertical and lateral migration in permeable strata Site surface water drainage system	Shallow Soils Groundwater (Principal and Secondary Aquifers) Surface Waters	Yes - Low
Coolant	420 litres per engine system	9,240 litres across 22 separate CCCW systems. All within bunded areas. Stored on hardstanding with sealed drainage system.	Leaching of mobile contaminants, vertical and lateral migration in permeable strata Site surface water drainage system	Shallow Soils Groundwater (Principal and Secondary Aquifers) Surface Waters	Yes - Low
Transformer Oil	51,750 litres within the Transformer	The transformer is double-skinned and situated within a bund. House on hardstanding with sealed drainage system.	Leaching of mobile contaminants, vertical and lateral migration in permeable strata Site surface water drainage system	Shallow Soils Groundwater (Principal and Secondary Aquifers) Surface Waters	Yes - Low
Wastes from Maintenance Activities	Variable	Records of maintenance and inspection will be kept identifying any pollution possibility. Stored on hardstanding with sealed drainage system.	Leaching of mobile contaminants, vertical and lateral migration in permeable strata Site surface water drainage system	Shallow Soils Groundwater (Principal and Secondary Aquifers) Surface Waters	Yes - Very Low

9 SITE CHARACTERISATION

9.1.1 An outline conceptual site model (CSM) consists of an appraisal of the source-pathway-receptor 'contaminant linkages'. All three of the following components must be present to facilitate a potential 'pollutant linkage'.

- Source referring to the source of contamination (Hazard).
- Pathway for the contaminant to move/migrate to receptor(s).
- Receptor (target) that could be affected by the contaminant(s).

9.1.2 Receptors include human beings, controlled waters and buildings / structures.

9.1.3 As part of the assessment the potential risks to receptors for potential source is given one of the following classifications:

- Low risk - it is considered unlikely that issues within the category will give rise to significant harm to identified receptors
- Moderate risk - it is possible, but not certain that issues within the category will give rise to significant harm to receptors
- High risk - there is a high potential that issues within the category will give rise to significant harm to identified receptors

Potential Pollutant Linkages

9.1.4 Each stage of the potential pollutant linkage sequence has been assessed individually on the basis of information obtained during the review of previous site investigation reports and desk study exercise and are discussed in the following section. Current site use is considered to be the site once the permitted activities have started.

9.2 Potential Contaminant Sources

On Site Operational Phase

9.2.1 The potential contamination sources from the facility are discussed in Sections 6 – 8. The principal release scenarios associated with RHS on site include:

- Accidental leakage of petroleum-based lubricating oils / waste oil and coolant during transfer, use and/or accidental damage to primary containment.
- Accidental leakage / release of lubricating / waste oils and coolant because of either, a connection issue when refilling / emptying or due to failure of primary containment.
- Accidental release of lubricating / waste oil or coolant into the onsite drainage system.

On Site – Historical

9.2.2 The site is situated in the West Tilbury Marshes region, and historically there has been minimal to no development activity on the proposed site.

9.2.3 T2FGF is to be situated on undeveloped land, classified as greenfield, with none to minimal risk of pollution.

Off Site – Operational Phase

9.2.4 The TFGF (EPR/MP3526SF) will be located on the eastern boundary of T2FGF and share the same RHS identified within this SCBR.

9.2.5 A BESS facility lies to the south of T2FGF.

Off Site – Historical

9.2.6 Historical potential sources of contaminants of concern include the works associated with Tilbury Power Station to the south first established in 1973 and then decommissioned in 1991. The activities that were undertaken during this operational period could give rise of contamination off site.

9.2.7 It is unlikely such contamination would be present within the T2FGF site boundary, as British Geological Survey groundwater mapping indicates the general direction of groundwater flow in the area being south towards the Tilbury Power Station, and from there towards the River Thames.

Potential Pathways

9.2.8 Topsoil and subsoil horizons are likely to be present across the proposed site owing to its agricultural use.

9.2.9 Drainage ditches across the site may act as pathways to spread contamination horizontally and vertically.

9.2.10 BGS indicates that superficial deposits comprise of Alluvium (clay, silt, sand and gravel) are present underlaying the site. The underlaying bedrock is of the Seaford Chalk Formation.

9.2.11 Where superficial deposits are intergranular in nature, any shallow groundwater and any mobile contaminants that may be present are not likely to be able to migrate due to low/moderate permeability. The bedrock which is suggested to be of high permeability allowing for the mobility of groundwater and mobile contaminants to deeper strata.

9.2.12 There is a low risk that contaminants (if any present) beneath the site will migrate on or off-site via underlaying superficial deposits due to complex local groundwater systems which will generally flow towards the River Thames. Due to the greenfield nature of the site, it is unlike to impact any controlled water receptors or on/off-site human heath receptors via the dermal contact, ingestion and vapour inhalation pathways.

9.2.13 On completion of the proposed development, large areas of the site will be covered by structures or hardstanding. In these areas the risks to ground and groundwater will be mitigated.

9.2.14 There may be minimal areas of managed soft landscaping, however there will be no operation activities undertaken in these areas.

Associated Pollution Prevention Measures

9.2.15 General pollution prevention measures and mitigation measures associated with process and the RHS at the facility are described below:

- A combination of concrete bund / double skinned tanks are used in areas where potentially hazardous substances / materials are stored or used.
- All storage vessels are situated on concrete bunded areas designed to contain 110% or more of the tank contents as per CIRIA 736 guidance. The bunded area therefore will retain any accidental releases associated with the loss of primary containment, tank overfill, or issues associated with connection during filling / emptying. The effectiveness of these pollution prevention measures to contain any accidental releases of stored product is dependent on routine integrity monitoring and

maintenance of bunds and tanks implemented by the site management and training protocols with regards to tank filling / emptying delivered to key personnel.

- A drop in pressure in any CCCW system will trigger the automatic closure of a valve on the roof ensuring any leak from that system will be retained within a roof bund. The retained cooling system fluid will then be pumped to an appropriate vessel for off-site disposal or recovery.
- The site will have an 'Accident Management Plan' that forms part of the site EMS which sets out hazard identification and risk assessment. In addition, it sets out steps to be taken by the operator to ensure that all preventative measures are in place to avoid an incident that does occur it can be mitigated in the most appropriate manner.
- T2FGF operates a formal inspection programme whereby tanks and bunds are visually inspected for any evidence of leaks / spills and general conditions on a regular basis.

Potential Receptors

9.2.16 Post development receptors include future site users and off-site human health receptors.

9.2.17 Soil and surface waters are at risk due to the high infiltration value of surface soils.

9.2.18 The development site is underlain by a bedrock Principal Aquifer (the White Chalk Subgroup). The relatively thick and low permeability overlying Alluvium will provide a high level of protection to the underlying groundwater within this aquifer. However, service corridors, subterranean infrastructure corridors or piling activities could act as preferential pathways for the migration of any potential contaminants of concern which could impact the White Chalk Subgroup. Therefore, this aquifer is considered to be a sensitive receptor.

9.2.19 The Secondary Undifferentiated Aquifer (Alluvium) present beneath the site is not considered to represent a particularly sensitive receptor. However, it may represent a pathway to nearby surface waterbodies.

9.2.20 The assessment does not consider the risk to construction workers during development of the site. These risks will be managed through appropriate H&S legislation including Health and Safety at works act and Construction Design and Management regulations.

9.3 Outline Conceptual Site Model

9.3.1 An outline CSM has been developed on the basis of the Stage 1-3 assessment of RHS and a review of site investigations. The CSM is used to identify potential sources, pathways and receptors (i.e. potential pollutant linkages) on site post development and is summarised in Table 9-1 below.

Table 9-1: Conceptual Site Model

Location	Contaminant Source / Process	Potential Contaminants	Pathway	Receptor(s)	Probability	Risk Level to Receptor(s)	Notes
On site (current)	Storage and use of Oils - Lubricating Oil, Transformer Oil	Total Petroleum Hydrocarbons (TPH)	Leaching of mobile contaminants, vertical and lateral migration in permeable strata Site surface water drainage system	Shallow Soils Groundwater (Principal and Secondary Aquifers) Surface Waters	Unlikely	Low	The identified associated pollution prevention measures will mitigate the potential pathways to shallow soils, aquifers or nearby surface water receptors.
	Circuit Cooling Water System - Coolant	Ethylene glycol (37% solution in water)	Leaching of mobile contaminants, vertical and lateral migration in permeable strata Site surface water drainage system	Shallow Soils Groundwater (Principal and Secondary Aquifers) Surface Waters	Unlikely	Low	The identified associated pollution prevention measures will mitigate the potential pathways to shallow soils, aquifers or nearby surface water receptors.
	Wastes from Maintenance Activities	TPH	Leaching of mobile contaminants, vertical and lateral migration in permeable strata Site surface water drainage system	Shallow Soils Groundwater (Principal and Secondary Aquifers) Surface Waters	Unlikely	Very Low	The identified associated pollution prevention measures will mitigate the potential pathways to shallow soils, aquifers or nearby surface water receptors.
On site (historical)	None	N/A	N/A	N/A	N/A	N/A	N/A
Off site (current)	Thurrock Flexible Generating Facility (with the same associated RHS as T2FGF) Lubricating Oil Coolant Transformer Oil Wastes from Maintenance Activities	TPH, ethylene glycol (37% solution in water)	Leaching of mobile contaminants, vertical and lateral migration in permeable strata	Groundwater	Unlikely	Low	Pollution prevention measures are in place at the TFGF. Hardstanding surfaces at all facilities will reduce the risk of vertical and lateral migration. Groundwater flow direction is due south towards the River Thames.
	Battery Energy Storage System Facility	Metals	Leaching of mobile contaminants, vertical and lateral migration in permeable strata	Groundwater	Unlikely	Low	Pollution prevention measures are in place at the BESS. Hardstanding surfaces at all facilities will reduce the risk of vertical and lateral migration. Groundwater flow direction is due south towards the River Thames.
Off site (historical)	Tilbury Power Station, coal and oil-fired power station.	Metals, hydrocarbons, and solvents	Leaching of mobile contaminants, vertical and lateral migration in permeable strata	Groundwater	Unlikely	Low	Any contaminants of concern (if present) could be localised within shallow groundwater. Limited potential for significant volatile contamination in groundwater. Groundwater flow direction is due south towards the River Thames.

10 SITE INVESTIGATION

10.1.1 Stage 3 of the baseline assessment determines that hazardous substances are present on site, however as they have a low or very low risk of pollution and are to be effectively managed in accordance with the sites Environmental Management System it concluded that on a site specific basis there are no RHS for which site investigations would be required to obtain baseline data.

10.2 Summary of Works Undertaken

10.2.1 Whilst the conclusions of the Stage 3 assessment do not require data to be collected, TerraConsult Ltd was commissioned by Statera Energy Limited to undertake a Phase 2 Site Investigation report for the development area covered by the DCO application. A copy of this report is included within Appendix D and a summary of the works undertaken is included within Section 4.3.

10.2.2 The Borehole Location Plan included as Drawing 4 covers the area surrounding T2FGF.

10.2.3 The site investigation data includes analysis of hydrocarbons which would be relevant to the oil based RHS. Ethylene glycol has not been tested in the analytical suite used to baseline the site. However, based on previous site uses it is not considered likely that ethylene glycol contaminated the area to be occupied by the T2FGF.

10.3 Laboratory Analysis

10.3.1 The scheduled analysis and number of samples tested is summarised in Table 10-1 below.

Table 10-1: Summary of Scheduled Chemical Testing

Analysis	No. of Soil Samples Tested
Metals	9
Speciated polycyclic aromatic hydrocarbons (PAHs)	9
Water Soluble Sulphate & Water Soluble Chloride	9
Phenols – Total (monohydric)	9
Mineral Oil, TPH C10-C40, TPH C10-C25	9
Benzene, toluene, ethylbenzene and xylenes (BTEX)	9
Asbestos screen	9
pH	9
Total Cyanide	9
Moisture Content & Stone Content	9
Analysis	No. of Water Samples Tested
Metals	9

Analysis	No. of Soil Samples Tested
General Inorganics	9
Speciated polycyclic aromatic hydrocarbons (PAHs)	9
Heavy Metals	9
Monoaromatics and Oxygenates	9
Mineral Oil, TPH C10-C40, TPH C10-C25	9

10.3.2 Only those analyses from the dynamic sampler borehole locations relevant to the T2FGF area have been considered in the following section, as discussed in Section 4.3.2.

11 PRODUCE A SITE BASELINE REPORT

11.1.1 This section of the IED baseline assessment is to summarise all of the information collected to produce a report which identifies the state of the soil and groundwater contamination by relevant hazardous substances.

11.1.2 Details provided in previous sections includes information on potential contaminant sources on site both historic and those which will be present as a result of the permitted activity.

11.1.3 Based on the hazardous substances identified in Stages 1-3 whilst there are a number of RHS that are associated with the T2FGF due to the site-specific measures outlined in Stage 3 (Section 8) the pollution potential for all hazardous substances is low or very low.

11.1.4 A ground investigation around the T2FGF area has been conducted and provides sufficient data to baseline the site. The data is summarised in the sections below, with full details provided in Appendix D – Phase 2: Site Investigation.

11.1.5 Baseline Conditions of soil analysis from samples taken from the ground investigation are used as the baseline conditions for the T2FGF area and are described in Table 11-1: Results of Laboratory Soil Analysis for Metals Table 11-2, Table 11-3, Table 11-4 and Table 11-5 below.

Table 11-1: Results of Laboratory Soil Analysis for Metals

Determinand Metals	WS4 (mg/kg)	WS5 (mg/kg)	WS7 (mg/kg)
Arsenic	7.4	25	14
Cadmium	<0.2	<0.2	<0.2
Chromium (III)	43	39	38
Copper	24	11	9.7
Lead	15	23	32
Mercury	<0.3	<0.3	<0.3
Nickel	40	27	26
Selenium	<1.0	<1.0	<1.0
Zinc	110	77	78

Table 11-2: Results of Laboratory Soil Analysis for Polycyclic Aromatic Hydrocarbons

Determinand PAHs	WS4 (mg/kg)	WS5 (mg/kg)	WS7 (mg/kg)
Acenaphthene	<0.05	<0.05	<0.05
Acenaphthylene	<0.05	<0.05	<0.05
Anthracene	<0.05	<0.05	<0.05

Determinand PAHs	WS4 (mg/kg)	WS5 (mg/kg)	WS7 (mg/kg)
Benzo[a]anthracene	<0.05	<0.05	<0.05
Benzo[a]pyrene	<0.05	<0.05	<0.05
Benzo[b]fluoranthene	<0.05	<0.05	<0.05
Benzo[ghi]perylene	<0.05	<0.05	<0.05
Benzo[k]fluoranthene	<0.05	<0.05	<0.05
Chrysene	<0.05	<0.05	<0.05
Dibenzo[ah]anthracene	<0.05	<0.05	<0.05
Fluoranthene	<0.05	<0.05	<0.05
Fluorene	<0.05	<0.05	<0.05
Indeno[123-cd]pyrene	<0.05	<0.05	<0.05
Naphthalene	<0.05	<0.05	<0.05
Phenanthrene	<0.05	<0.05	<0.05
Pyrene	<0.05	<0.05	<0.05
Total PAH	<0.09	<0.09	<0.09

Table 11-3: Results of Laboratory Soil Analysis for Petroleum Hydrocarbons

Determinand Petroleum Hydrocarbons	WS4 (mg/kg)	WS5 (mg/kg)	WS7 (mg/kg)
Mineral Oil (C10-C40)	<10	<10	<10
TPH (C10-C40)	<10	<10	<10
TPH (C10-C25)	<10	<10	<10

Table 11-4: Results of Laboratory Soil Analysis for BTEX and MTBE

Determinand BTEX and MTBE	WS4 (mg/kg)	WS5 (mg/kg)	WS7 (mg/kg)
Benzene	<0.001	<0.001	<0.001
Toluene	<0.001	<0.001	<0.001

Determinand BTEX and MTBE	WS4 (mg/kg)	WS5 (mg/kg)	WS7 (mg/kg)
Ethylbenzene	<0.001	<0.001	<0.001
o-xylene	<0.001	<0.001	<0.001
m-xylene	<0.001	<0.001	<0.001
p-xylene	<0.001	<0.001	<0.001

Table 11-5: Asbestos Screening

Determinand Asbestos	Screening Result
Asbestos	None detected

11.1.6 Asbestos was not detected in any of the analysed soil samples.

Baseline Conditions of Groundwater

11.1.7 Results of groundwater analysis from samples taken from groundwater monitoring wells installed across the T2FGF area that are used to baseline the groundwater conditions underlaying the T2FGF area are described in Table 11-6 below.

Table 11-6: Summary of Groundwater Analysis Results

Determinand	Units	WS4	WS7
General Inorganics			
pH	pH Units	7.4	7.4
Electrical Conductivity at 20°C	µS/cm	6700	5500
Total Cyanide	µg/l	<10	<10
Sulphate as SO_4	µg/l	2200000	1970000
Chloride	mg/l	810	610
Ammonium as NH_4	µg/l	6100	6200
Nitrate as N	mg/l	0.58	0.54
Nitrate as NO_3	mg/l	2.59	2.37
Alkalinity	mgCaCO3/l	960	880
Hardness - Total	mgCaCO3/l	1450	1740

Determinand	Units	WS4	WS7
Total Phenols			
Total Phenols (monohydric)	µg/l	13	<10
Speciated PAHs			
Naphthalene	µg/l	<0.01	<0.01
Acenaphthylene	µg/l	<0.01	<0.01
Acenaphthene	µg/l	<0.01	<0.01
Fluorene	µg/l	<0.01	<0.01
Phenanthrene	µg/l	<0.01	<0.01
Anthracene	µg/l	<0.01	<0.01
Fluoranthene	µg/l	<0.01	<0.01
Pyrene	µg/l	<0.01	<0.01
Benzo(a)anthracene	µg/l	<0.01	<0.01
Chrysene	µg/l	<0.01	<0.01
Benzo(b)fluoranthene	µg/l	<0.01	<0.01
Benzo(k)fluoranthene	µg/l	<0.01	<0.01
Benzo(a)pyrene	µg/l	<0.01	<0.01
Indeno(1,2,3-cd)pyrene	µg/l	<0.01	<0.01
Dibenz(a,h)anthracene	µg/l	<0.01	<0.01
Benzo(ghi)perylene	µg/l	<0.01	<0.01
Total PAH (EPA-16)	µg/l	<0.16	<0.16
Heavy Metals			
Boron	µg/l	1500	1100
Calcium	mg/l	190	330
Magnesium	mg/l	240	220
Selenium	µg/l	14	13

Determinand	Units	WS4	WS7
Arsenic	µg/l	1.4	0.89
Cadmium	µg/l	<0.02	<0.02
Chromium	µg/l	0.2	<0.2
Copper	µg/l	<0.5	<0.5
Lead	µg/l	0.4	<0.2
Mercury	µg/l	<0.05	<0.05
Nickel	µg/l	9.2	<0.5
Zinc	µg/l	<0.5	<0.5
Monoaromatics & Oxygenates			
Benzene	µg/l	<1.0	<1.0
Toluene	µg/l	<1.0	<1.0
Ethylbenzene	µg/l	<1.0	<1.0
p & m-xylene	µg/l	<1.0	<1.0
o-xylene	µg/l	<1.0	<1.0
MTBE	µg/l	<1.0	<1.0
Petroleum Hydrocarbons			
TPH-CWG - Aliphatic (C5 - C35)	µg/l	<10	<10
PH-CWG - Aromatic (C5 - C35)	µg/l	<10	<10

12 OPERATIONAL STAGE SITE CONDITION REPORT

12.1.1 This section of the SCBR sets out the information that will be recorded relevant to the condition of the site during the operational phase of the facility.

12.2 Keeping Records

12.2.1 To maintain this SCBR, records will be kept as per procedures in the EMS and will include:

- Details of any agreed changes to your permitted activities.
- Records of how you have inspected, maintained and where applicable repaired or updated your pollution prevention measures.
- Site investigation, remediation and verification reports to show how you have managed pollution incidents.
- Monitoring results for soil and groundwater or other media, if applicable.

12.3 Making a Change to the Activity

12.3.1 If a change is required to site boundary or the permitted activity changes to produce or release new substances, the SCBR must be updated to include the new area and/or a Stage 1-3 assessment of the new substances. This also applies if any hazardous substances used, produced or released are relocated to a new area within the site boundary.

12.3.2 If applicable, new baseline reference data will be established.

12.4 Inspect and Maintain Pollution Prevention Measures

12.4.1 Pollution prevention measures will be inspected and maintained following BAT recommendations to ensure soil and groundwater are protected from the permitted activities.

12.4.2 Records of the information will be kept:

- Closed circuit television (CCTV) inspection surveys for below ground drainage systems.
- Damage or failure.
- Maintenance, repair and replacement.
- Design, construction and quality assurance of any new measures.

12.4.3 The SCBR will include a summary of EMS procedure relevant to pollution prevention measures. The EMS will consider the effects of climate change on the installation.

12.5 Manage Pollution Incidents

12.5.1 The SCBR will be updated to include records capturing all pollution incidents and information on how incidents were dealt with at the time they occurred. Records will include the following:

- Records of pollution incidents and associated corrective actions.
- Steps taken to return the site to its original condition (if applicable).
- Any site investigation, remediation and verification reports.

12.6 Monitor Soil and Groundwater

12.6.1 Baseline data has been collected for the T2FGF.

12.6.2 Onsite potential contaminants have a low probability of infiltrating soil, groundwater or surface waters due to the pollution prevention measures outlined in Section 8.

12.6.3 Soil and groundwater monitoring is usually expected to be monitored on a 5- and 10-year basis unless otherwise agreed with the Environment Agency based on risk. Unless there have been changes such as significant incidents or changes to the raw materials for example, due to the low risk of contamination, a risk-based assessment may be suitable. This would be reviewed at the time of each 5-year monitoring period.

13 SURRENDER SITE CONDITION REPORT

13.1.1 At permit surrender, a site surrender condition report will be prepared and submitted to the EA as part of the permit surrender application. Information that has been gathered over the lifetime of the Permit will be used to identify whether the land is in a satisfactory condition. If necessary, surrender reference data will be collected, and remediation will be undertaken if required.

13.2 Requirements

13.2.1 Information related to the following will be provided at site surrender:

- Decommissioning
- Scope of surrender
- Intrusive investigation requirements
- Remediation
- Statement of site condition

14 CONCLUSIONS

14.1.1 This site condition and baseline report has been produced in support of the application for an environmental permit for the Thurrock 2 Flexible Generating Facility.

14.1.2 The site is underlaid by geological deposits of Alluvium. Sources indicate that the bedrock geology is represented by the Seaford Chalk Formation and the bedrock aquifer designated as Principal.

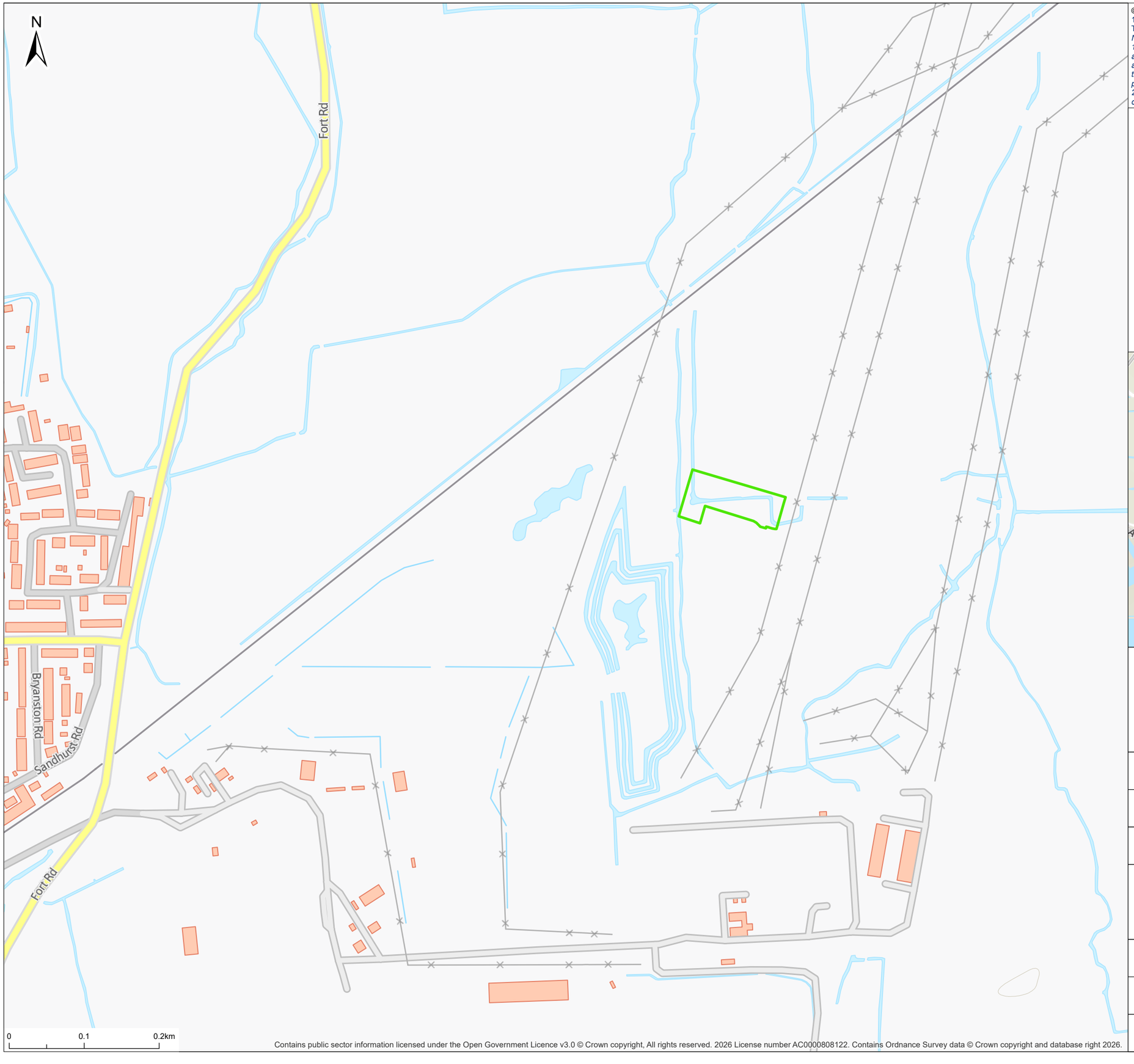
14.1.3 The groundcover of the site comprises marshland, classifying the site as greenfield since 1863, possibly longer. No pollution incidents have occurred or have been noted at the site.

14.1.4 A number of RHS have been identified at the site. All will be stored in appropriate tanks, CCCW system or bunds on impermeable surfaces of the site. Spill kits and leak detection measures will be in place.

14.1.5 Of the RHS identified in Section 8 of this report, the risk attributed to the storage and usage are considered low or very low risk. Whilst the overall conclusions would lead to there being no RHS for which baseline data is required, ground investigation data for T2FGF is available and has been provided to inform the baseline conditions of the site.

14.1.6 Consistent with the sites historical land uses, the baseline data does not show any indication of existing contamination.

Drawings



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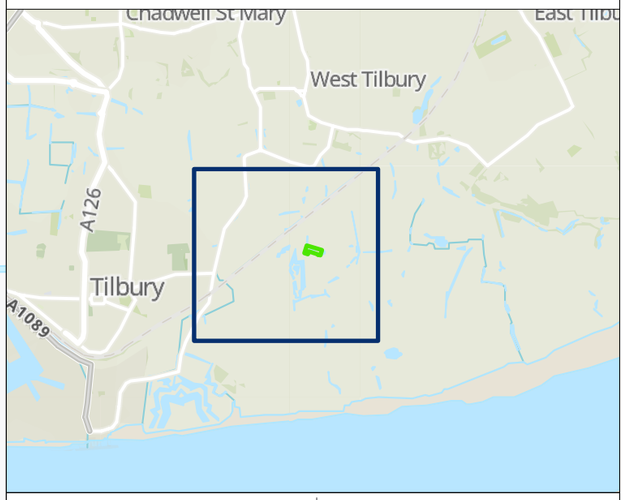
LEGEND

Site Boundary



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Client	**Statera Energy Ltd.**
Project	**Thurrock 2**
Project No.	**794-ENV-EPC-23409**
Title	**Site Location Plan**

Drawing No.	Figure No.	Revision	Status
23409-0001-03	01	03	FINAL

Date	Drawn By	Checked By	Revision By
FEB 2026	JM	AK	XX

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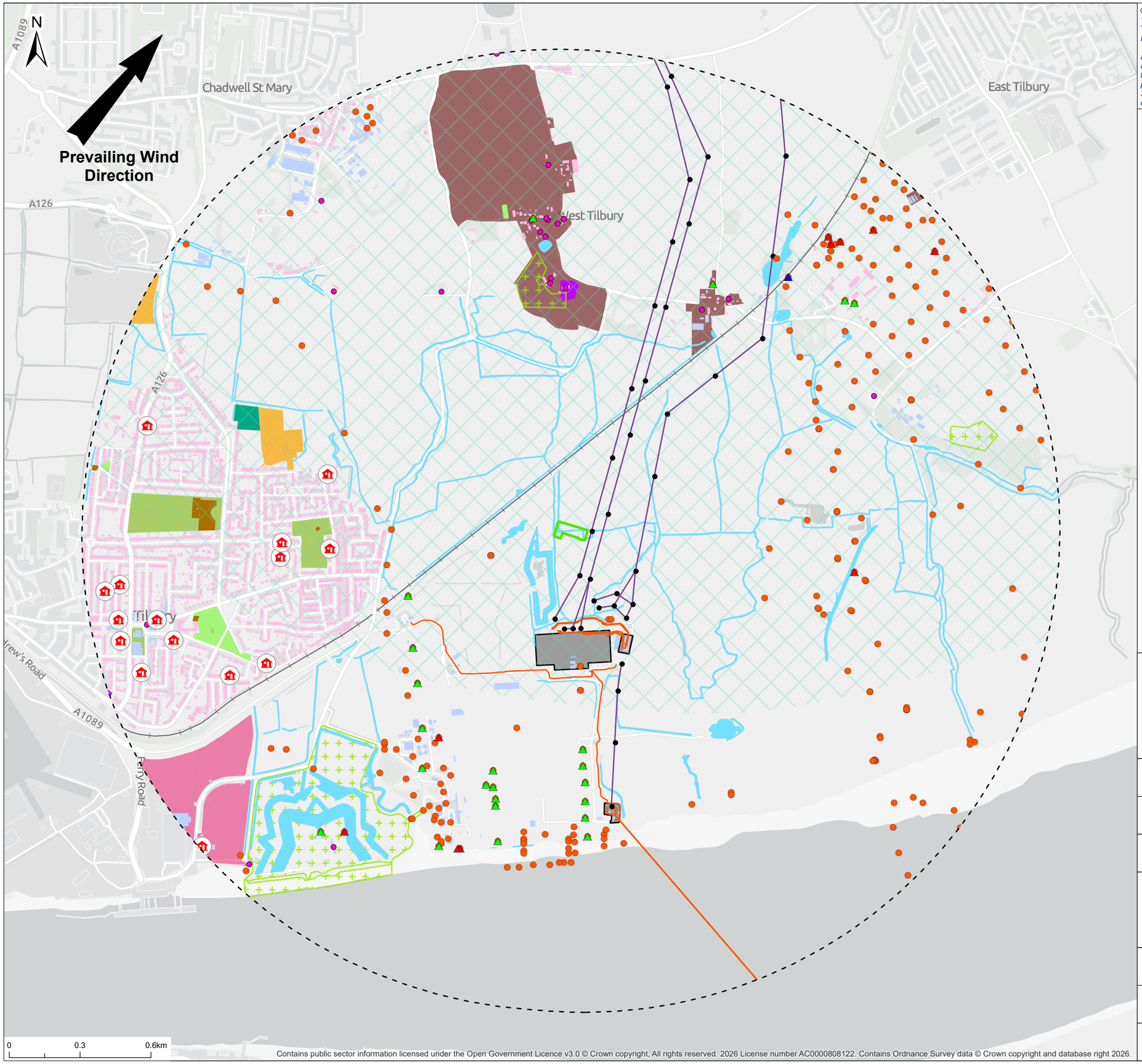

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Notes

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LEGEND

- Site Boundary
- 2km Buffer
- GP / Dental / Care Centres
- Commercial
- Residential
- Education
- Allotments
- Recreational Facilities
- Play Space
- Public Park Or Garden
- Religious Grounds
- Water Transport
- Railway
- National Grid - Towers
- National Grid - Cable
- National Grid - OHL
- National Grid - Substation
- Listed Building
- Scheduled Monument
- Conservation Area
- Water well - 0 - 10m
- Water well - 10 - 30m
- Water well - 30m+
- Borehole
- Source Protection Zone
- Surface Water

TETRA TECH | rps A TETRA TECH COMPANY

Client	**Statera Energy Ltd.**
Project	**Thurrock 2**
Project No.	**794-ENV-EPC-23409**
Title	**Human Sensitive Receptors**

Drawing No.	Figure No.	Revision	Status
23409-0002-02	02	02	FINAL

Date	Drawn By	Checked By	Revision By
FEB 2026	JM	AK	XX

Scale @ A3	Datum
1:16,000	OSGB 1936

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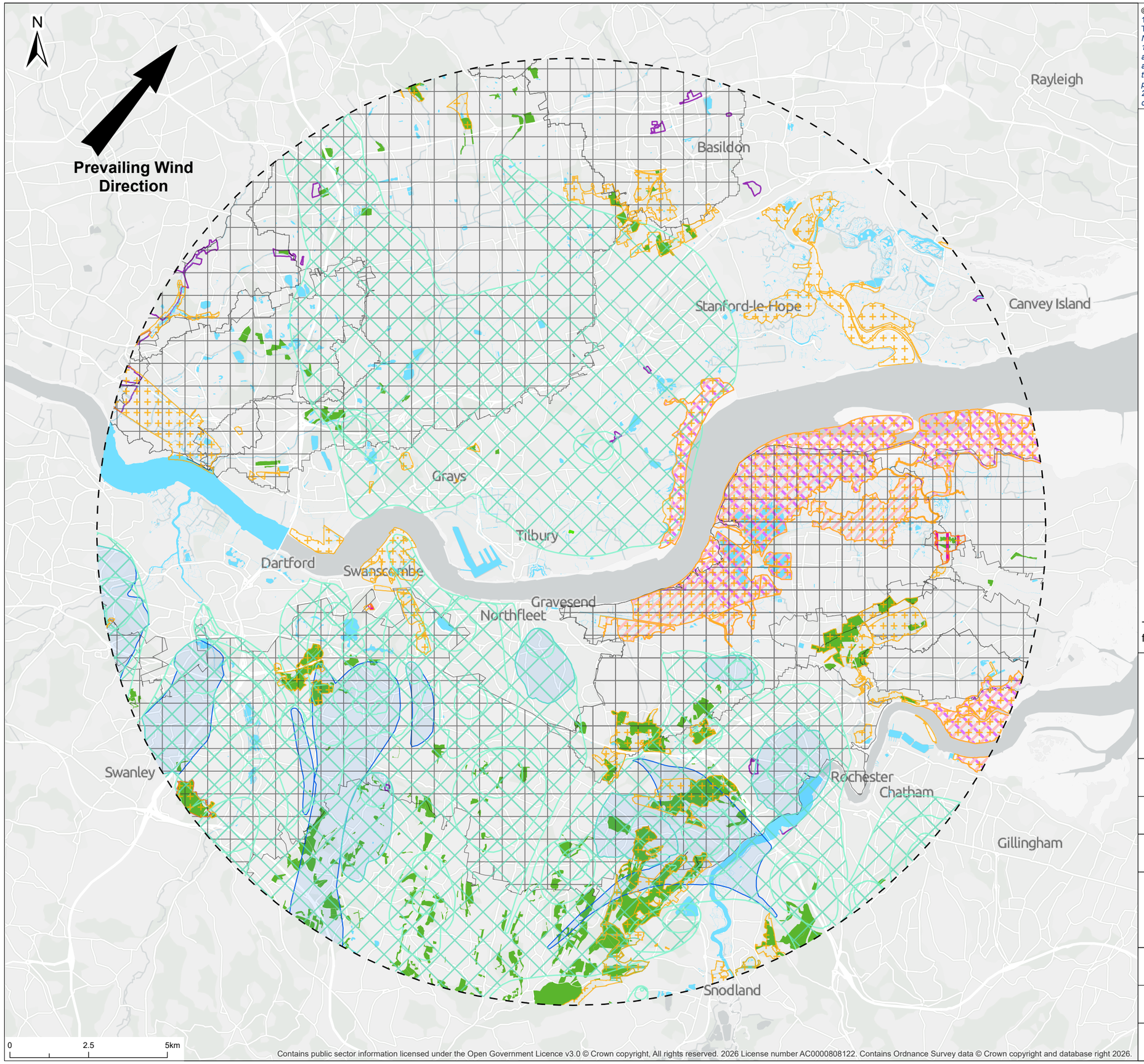

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LEGEND

- Site Boundary
- 15km Buffer
- Site of Special Scientific Interest
- Source Protection Zone
- Nitrate Vulnerable Zone
- Drinking Water Safeguard Zones - Groundwater
- National Nature Reserve
- Ramsar
- Special Protection Area
- Special Area of Conservation
- Surface Water
- Ancient Woodland
- Local Nature Reserve

The site falls within a Medium-High risk and Soluble Rock Risk category area for Groundwater Vulnerability

TETRA TECH | rps A TETRA TECH COMPANY

Client	**Statera Energy Ltd.**
Project	**Thurrock 2**
Project No.	**794-ENV-EPC-23409**
Title	**Ecological Sensitive Receptors**

Drawing No.	Figure No.	Revision	Status
23409-0003-02	03	01	FINAL

Date	Drawn By	Checked By	Revision By
FEB 2026	JM	AK	XX

Scale @ A3	Datum
1:120,000	OSGB 1936

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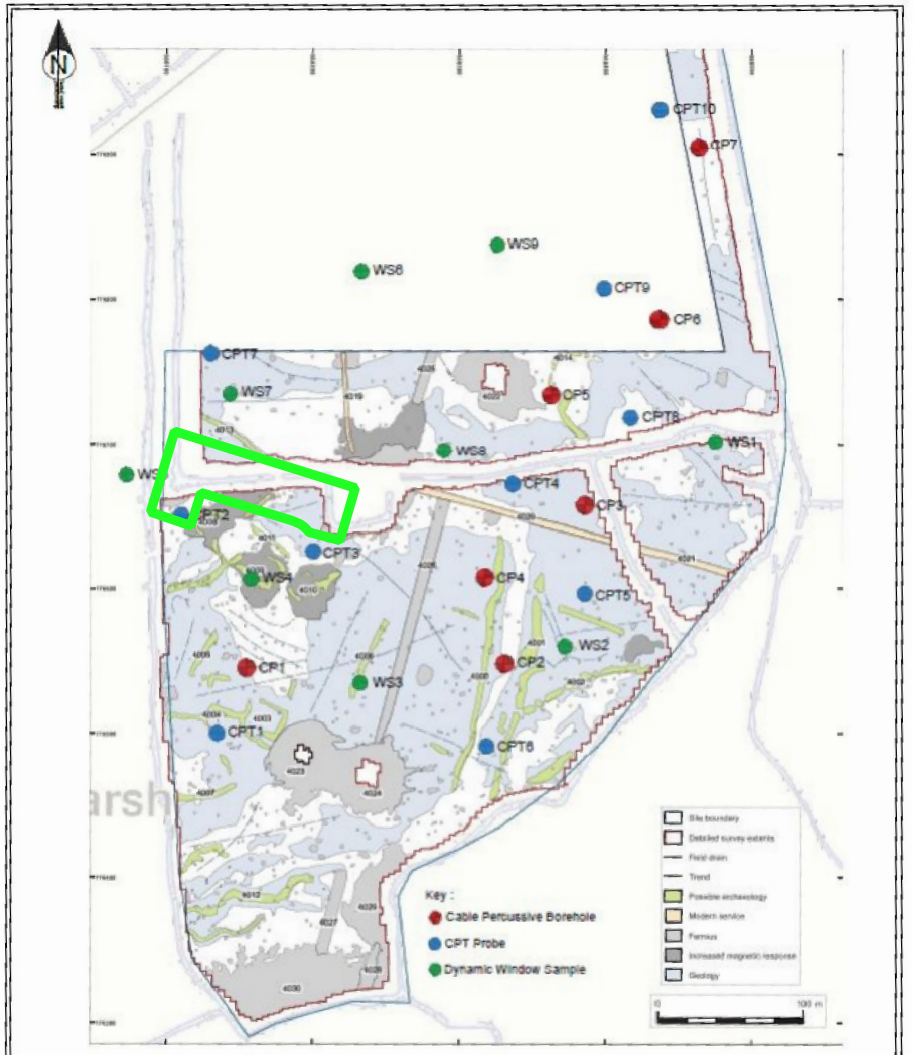


TerraConsult

9 The Courtyard, Phoenix Square,
Wyncolls Road
COLCHESTER, CO4 9PE

Client

Statera

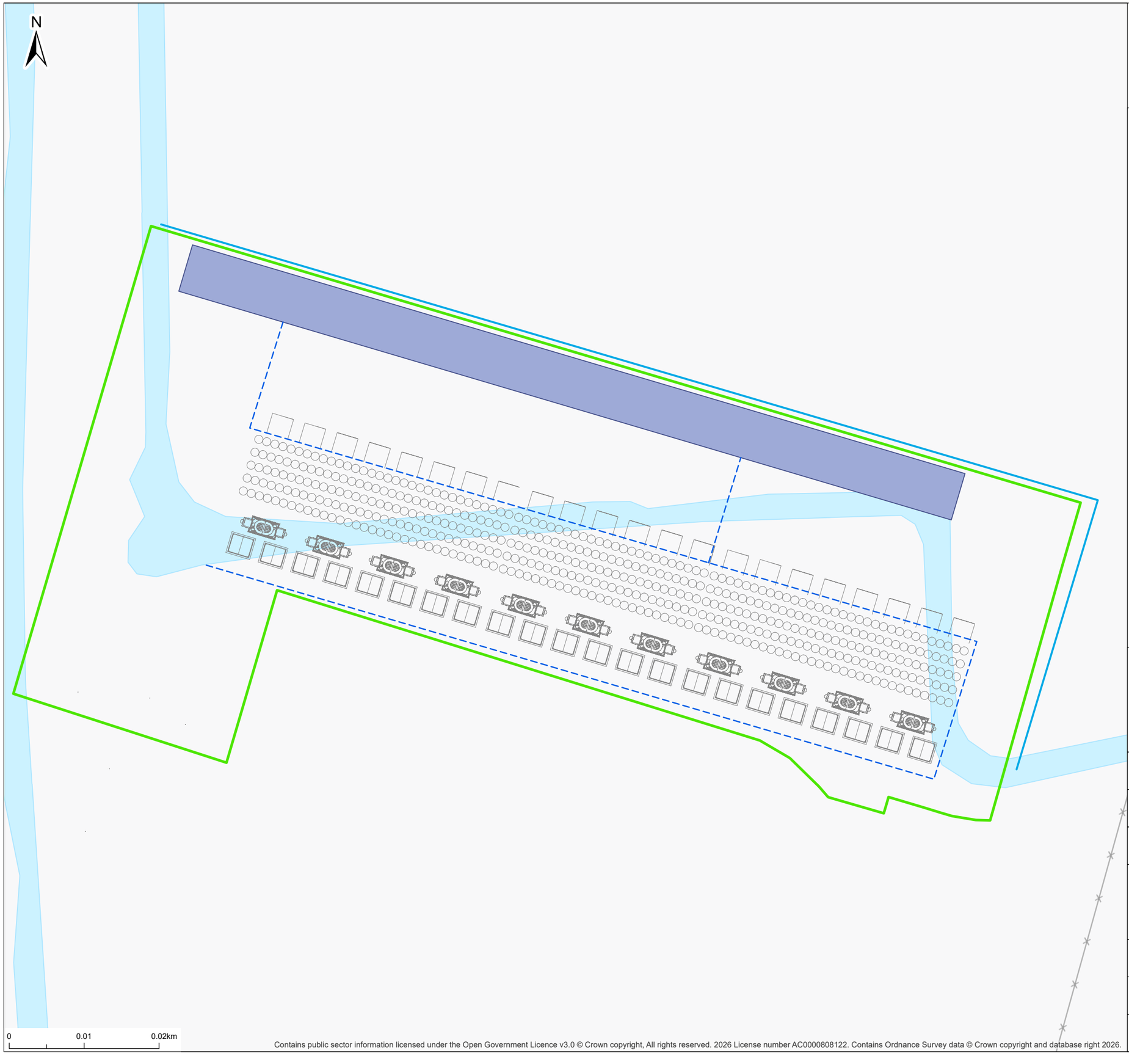
Site

Statera Tilbury

Title

Borehole Location Plan

Scale		Scale Bar	@ A3
Drawing No.		4693-1-001	
Rev	Date	Description	
File	4693-1-001 Borehole Location Plan.dwg		
Drawn:	DF	Checked:	AS
Date:	27-09-2019	Engineer:	TM



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LEGEND

- Site Boundary
- Drain
- Redirected ditch
- Attentuation swale / pond connecting into redirected ditch

TETRA TECH | rps A TETRA TECH COMPANY

Client	**Statera Energy Ltd.**
Project	**Thurrock 2**
Project No.	**794-ENV-EPC-23409**
Title	**Surface Water Drainage Plan**

Drawing No.	Figure No.	Revision	Status
23409-0005-03	-	02	FINAL

Date	Drawn By	Checked By	Revision By
FEB 2026	JM	AK	XX

Scale @ A3	Datum
1:500	OSGB 1936

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Appendices

Appendix A Authors Competencies

Authors Competencies

The Tetra Tech RPS Environmental Permitting Team has extensive experience supporting clients in complying with the Environmental Permitting (England and Wales) Regulations 2016 (EPR). The team has long-standing expertise in preparing regulator-compliant permit applications and associated documentation, including Site Condition and Baseline Reports across a wide range of industrial and waste sectors. They are familiar with UK and EU guidance relating to site condition and baseline reports and routinely apply this to the applications they support.

The Environmental Permitting team works alongside Ground Investigation specialists to design and deliver baseline data collection and ongoing monitoring requirements.

Team Experience and Qualifications

Jennifer Stringer – Technical Director

Jennifer has over 30 years' experience in environmental compliance within both industry and consultancy. She specialises in the provision of environmental permitting and environmental risk assessment support for complex industrial developments. Jennifer holds Master's degrees in Chemical Engineering and Environmental Pollution Control, and has extensive experience interpreting and applying the EPR, Best Available Techniques (BAT), and related regulatory frameworks.

She has been preparing and overseeing site condition and baseline reports in accordance with EA, NRW and SEPA requirements since they were introduced in 2000. Her experience includes application site condition reports for new facilities, variations, surrender site condition reports and those required via Regulation 61 notices. She also supports clients in delivering ongoing monitoring requirements related to site condition including responding to permit condition requirements for 5 yearly groundwater and 10 yearly soil sampling.

Alex Kingston – Environmental Consultant

Alex holds a Master's degree in Environmental and Energy Engineering and has prior experience working within heavy industry. His background includes implementing and managing environmental management systems, internal auditing, environmental training, and liaising with regulatory bodies.

In consultancy, Alex has contributed to the production of key technical permitting documents including Site Condition Reports, Environmental Risk Assessments, Waste Recovery Plans and Waste Acceptance Procedures.

Appendix B Groundsure Report

Groundsure LOCATION INTELLIGENCE

Enviro+Geo Insight

Thurrock 2

Order Details

Date: 19/12/2025

Your ref: 794-ENV-EPC-23409

Our Ref: RPS-LT4-16C-OVR-OAM

Site Details

Location: 566156 176668

Area: 0.48 ha

Authority: Thurrock Council ↗

Contact us with any questions at:
info@groundsure.com ↗
01273 257 755

Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
15 >	1.1 >	Historical industrial land uses >	1	0	5	3	-
16 >	1.2 >	Historical tanks >	0	0	0	2	-
16	1.3	Historical energy features	0	0	0	0	-
17	1.4	Historical petrol stations	0	0	0	0	-
17	1.5	Historical garages	0	0	0	0	-
17	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped >	On site	0-50m	50-250m	250-500m	500-2000m
18 >	2.1 >	Historical industrial land uses >	1	0	9	5	-
19 >	2.2 >	Historical tanks >	0	0	0	2	-
20	2.3	Historical energy features	0	0	0	0	-
20	2.4	Historical petrol stations	0	0	0	0	-
20	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
21 >	3.1 >	Active or recent landfill >	0	0	2	0	-
22	3.2	Historical landfill (BGS records)	0	0	0	0	-
22	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
22	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
22	3.5	Historical waste sites	0	0	0	0	-
23 >	3.6 >	Licensed waste sites >	0	0	0	5	-
24 >	3.7 >	Waste exemptions >	0	0	0	5	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
26 >	4.1 >	Recent industrial land uses >	0	1	6	-	-
27	4.2	National Geographic Database (NGD) - Current or recent tanks	0	0	0	-	-
27	4.3	Current or recent petrol stations	0	0	0	0	-
27 >	4.4 >	Electricity cables >	0	0	0	10	-
28	4.5	Gas pipelines	0	0	0	0	-

28	4.6	Sites determined as Contaminated Land	0	0	0	0	-
29	4.7	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
29	4.8	Regulated explosive sites	0	0	0	0	-
29	4.9	Hazardous substance storage/usage	0	0	0	0	-
29	4.10	Historical licensed industrial activities (IPC)	0	0	0	0	-
29	4.11	Licensed industrial activities (Part A(1))	0	0	0	0	-
30	4.12	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-
30	4.13	Radioactive Substance Authorisations	0	0	0	0	-
30 >	**4.14 >**	**Licensed Discharges to controlled waters >**	0	0	0	2	-
31	4.15	Pollutant release to surface waters (Red List)	0	0	0	0	-
31	4.16	Pollutant release to public sewer	0	0	0	0	-
31	4.17	List 1 Dangerous Substances	0	0	0	0	-
31	4.18	List 2 Dangerous Substances	0	0	0	0	-
31	4.19	Pollution Incidents (EA/NRW)	0	0	0	0	-
32	4.20	Pollution inventory substances	0	0	0	0	-
32	4.21	Pollution inventory waste transfers	0	0	0	0	-
32	4.22	Pollution inventory radioactive waste	0	0	0	0	-

Page	Section	**Hydrogeology >**	On site	0-50m	50-250m	250-500m	500-2000m
33 >	**5.1 >**	**Superficial aquifer >**	Identified (within 500m)				
34 >	**5.2 >**	**Bedrock aquifer >**	Identified (within 500m)				
35 >	**5.3 >**	**Groundwater vulnerability >**	Identified (within 50m)				
36 >	**5.4 >**	**Groundwater vulnerability- soluble rock risk >**	Identified (within 0m)				
36	5.5	Groundwater vulnerability- local information	None (within 0m)				
37 >	**5.6 >**	**Groundwater abstractions >**	0	0	0	0	16
41	5.7	Surface water abstractions	0	0	0	0	0
41 >	**5.8 >**	**Potable abstractions >**	0	0	0	0	1
42 >	**5.9 >**	**Source Protection Zones >**	1	0	0	0	-
42	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

Page	Section	**Hydrology >**	On site	0-50m	50-250m	250-500m	500-2000m

43 >	6.1 >	Water Network (OS MasterMap) >	1	3	19	-	-
45 >	6.2 >	Surface water features >	1	2	7	-	-
46 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
46	6.4	WFD Surface water bodies	0	0	0	-	-
46 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-
Page	Section	River and coastal flooding >	On site	0-50m	50-250m	250-500m	500-2000m
47 >	7.1 >	Risk of flooding from rivers and the sea >	High (within 50m)				
48 >	7.2 >	Historical Flood Events >	1	0	0	-	-
48	7.3	Flood Defences	0	0	0	-	-
48 >	7.4 >	Areas Benefiting from Flood Defences >	1	0	1	-	-
49 >	7.5 >	Flood Storage Areas >	0	0	1	-	-
50	7.6	Flood Zone 2	None (within 50m)				
51 >	7.7 >	Flood Zone 3 >	Identified (within 50m)				
Page	Section	Surface water flooding >					
52 >	8.1 >	Surface water flooding >	1 in 30 year, 0.1m - 0.3m (within 50m)				
Page	Section	Groundwater flooding >					
54 >	9.1 >	Groundwater flooding >	High (within 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
55	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
56	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
56	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
56	10.4	Special Protection Areas (SPA)	0	0	0	0	0
56	10.5	National Nature Reserves (NNR)	0	0	0	0	0
57	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
57	10.7	Designated Ancient Woodland	0	0	0	0	0
57	10.8	Biosphere Reserves	0	0	0	0	0
57	10.9	Forest Parks	0	0	0	0	0
58	10.10	Marine Conservation Zones	0	0	0	0	0
58 >	10.11 >	Green Belt >	1	0	0	0	0

58	10.12	Proposed Ramsar sites	0	0	0	0	0
58	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
59	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
59	10.15	Nitrate Sensitive Areas	0	0	0	0	0
59	10.16	Nitrate Vulnerable Zones	0	0	0	0	0
60 >	10.17 >	SSSI Impact Risk Zones >	1	-	-	-	-
61	10.18	SSSI Units	0	0	0	0	0
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
62	11.1	World Heritage Sites	0	0	0	-	-
62	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
62	11.3	National Parks	0	0	0	-	-
62	11.4	Listed Buildings	0	0	0	-	-
63	11.5	Conservation Areas	0	0	0	-	-
63	11.6	Scheduled Ancient Monuments	0	0	0	-	-
63	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
64 >	12.1 >	Agricultural Land Classification >	Grade 3 (within 250m)				
65 >	12.2 >	Open Access Land >	3	0	2	-	-
65	12.3	Tree Felling Licences	0	0	0	-	-
66	12.4	Environmental Stewardship Schemes	0	0	0	-	-
66	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations >	On site	0-50m	50-250m	250-500m	500-2000m
67 >	13.1 >	Priority Habitat Inventory >	0	0	1	-	-
68	13.2	Habitat Networks	0	0	0	-	-
68 >	13.3 >	Open Mosaic Habitat >	0	0	2	-	-
68	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	Geology 1:10,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
70 >	14.1 >	10k Availability >	Identified (within 500m)				
71 >	14.2 >	Artificial and made ground (10k) >	0	0	1	0	-

72 >	14.3 >	Superficial geology (10k) >	1	0	0	0	-
73	14.4	Landslip (10k)	0	0	0	0	-
74 >	14.5 >	Bedrock geology (10k) >	1	0	0	0	-
75	14.6	Bedrock faults and other linear features (10k)	0	0	0	0	-
Page	Section	Geology 1:50,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
76 >	15.1 >	50k Availability >	Identified (within 500m)				
77 >	15.2 >	Artificial and made ground (50k) >	0	0	1	0	-
78	15.3	Artificial ground permeability (50k)	0	0	-	-	-
79 >	15.4 >	Superficial geology (50k) >	1	0	0	0	-
80 >	15.5 >	Superficial permeability (50k) >	Identified (within 50m)				
80	15.6	Landslip (50k)	0	0	0	0	-
80	15.7	Landslip permeability (50k)	None (within 50m)				
81 >	15.8 >	Bedrock geology (50k) >	1	0	0	0	-
82 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
82	15.10	Bedrock faults and other linear features (50k)	0	0	0	0	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
83	16.1	BGS Boreholes	0	0	0	-	-
Page	Section	Natural ground subsidence >					
84 >	17.1 >	Shrink swell clays >	Low (within 50m)				
85 >	17.2 >	Running sands >	Low (within 50m)				
86 >	17.3 >	Compressible deposits >	High (within 50m)				
87 >	17.4 >	Collapsible deposits >	Negligible (within 50m)				
88 >	17.5 >	Landslides >	Very low (within 50m)				
89 >	17.6 >	Ground dissolution of soluble rocks >	Negligible (within 50m)				
Page	Section	Mining and ground workings >	On site	0-50m	50-250m	250-500m	500-2000m
91	18.1	BritPits	0	0	0	0	-
92 >	18.2 >	Surface ground workings >	0	0	1	-	-
92	18.3	Underground workings	0	0	0	0	0
92	18.4	Underground mining extents	0	0	0	0	-

92	18.5	Historical Mineral Planning Areas	0	0	0	0	-
93 >	**18.6 >**	**Non-coal mining >**	0	0	0	0	3
93	18.7	JPB mining areas	None (within 0m)				
93	18.8	The Coal Authority non-coal mining	0	0	0	0	-
94	18.9	Researched mining	0	0	0	0	-
94	18.10	Mining record office plans	0	0	0	0	-
94	18.11	BGS mine plans	0	0	0	0	-
94	18.12	Coal mining	None (within 0m)				
94	18.13	Brine areas	None (within 0m)				
95	18.14	Gypsum areas	None (within 0m)				
95	18.15	Tin mining	None (within 0m)				
95	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m
96	19.1	Natural cavities	0	0	0	0	-
96	19.2	Mining cavities	0	0	0	0	0
96	19.3	Reported recent incidents	0	0	0	0	-
96	19.4	Historical incidents	0	0	0	0	-
Page	Section	**Radon >**					
98 >	**20.1 >**	**Radon >**	Less than 1% (within 0m)				
Page	Section	**Soil chemistry >**	On site	0-50m	50-250m	250-500m	500-2000m
100 >	**21.1 >**	**BGS Estimated Background Soil Chemistry >**	1	0	-	-	-
100 >	**21.2 >**	**BGS Estimated Urban Soil Chemistry >**	4	5	-	-	-
101	21.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	**Railway infrastructure and projects >**	On site	0-50m	50-250m	250-500m	500-2000m
102	22.1	Underground railways (London)	0	0	0	-	-
102	22.2	Underground railways (Non-London)	0	0	0	-	-
103	22.3	Railway tunnels	0	0	0	-	-
103 >	**22.4 >**	**Historical railway and tunnel features >**	0	0	8	-	-
103	22.5	Royal Mail tunnels	0	0	0	-	-

104 >	22.6 >	Historical railways >	0	0	2	-	-
104 >	22.7 >	Railways >	0	0	6	-	-
104	22.8	Crossrail 2	0	0	0	0	-
105	22.9	HS2	0	0	0	0	-

Recent aerial photograph

Capture Date: 31/05/2021

Site Area: 0.48ha

Recent site history - 2015 aerial photograph

Capture Date: 30/06/2015

Site Area: 0.48ha

Recent site history - 2012 aerial photograph

Capture Date: 25/05/2012

Site Area: 0.48ha

Recent site history - 2009 aerial photograph

Capture Date: 27/09/2009

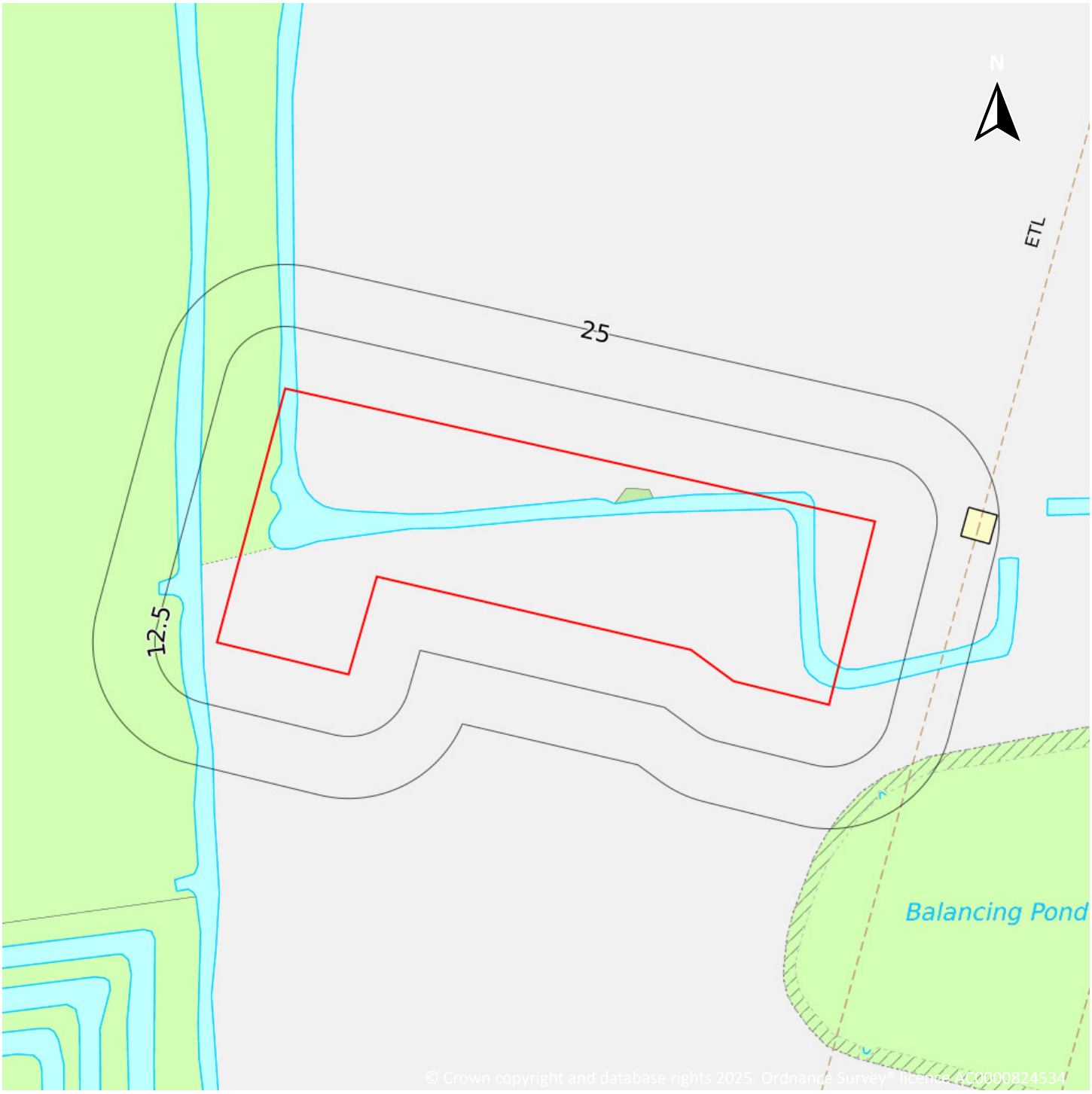
Site Area: 0.48ha

Recent site history - 1999 aerial photograph

Capture Date: 03/09/1999

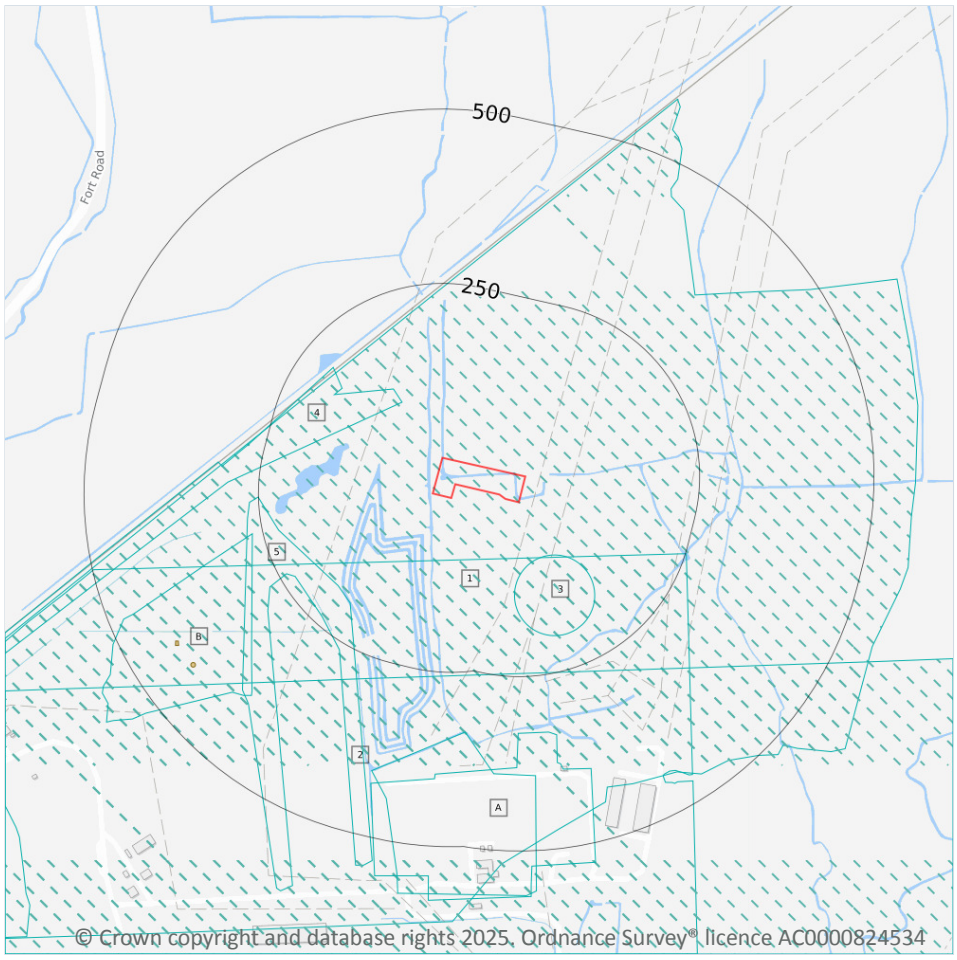
Site Area: 0.48ha

OS MasterMap site plan



Site Area: 0.48ha

1 Past land use



Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

1.1 Historical industrial land uses

Records within 500m	9

Potentially contaminative land use features digitised from historical Ordnance Survey® mapping at 1:10,000 and 1:10,560 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 15 >**

ID	Location	Land use	Dates present	Group ID
1	**On site**	**Marshes**	**1895**	**2257472**

ID	Location	Land use	Dates present	Group ID
2	80m S	Marshes	1916	2316643
3	85m S	Unspecified Level	1955	2194649
4	99m NW	Railway Sidings	1955 - 1991	2215830
5	189m SW	Railway Sidings	1973 - 1991	2204741
A	246m S	Marshes	1888 - 1895	2259040
B	265m W	Unspecified Works	1973 - 1991	2279304
A	331m S	Unspecified Works	1973 - 1991	2221722
A	336m S	Unspecified Works	1967	2296304

This data is sourced from Ordnance Survey® / Groundsure.

1.2 Historical tanks

Records within 500m	**2**

Tank features digitised from historical Ordnance Survey® mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 15 >**

ID	Location	Land use	Dates present	Group ID
B	419m SW	Unspecified Tank	1987	395142
B	422m SW	Tanks	1987	380103

This data is sourced from Ordnance Survey® / Groundsure.

1.3 Historical energy features

Records within 500m	**0**

Energy features digitised from historical Ordnance Survey® mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey® / Groundsure.

1.4 Historical petrol stations

Records within 500m	0

Petrol stations digitised from historical Ordnance Survey® mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey® / Groundsure.

1.5 Historical garages

Records within 500m	0

Garages digitised from historical Ordnance Survey® mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey® / Groundsure.

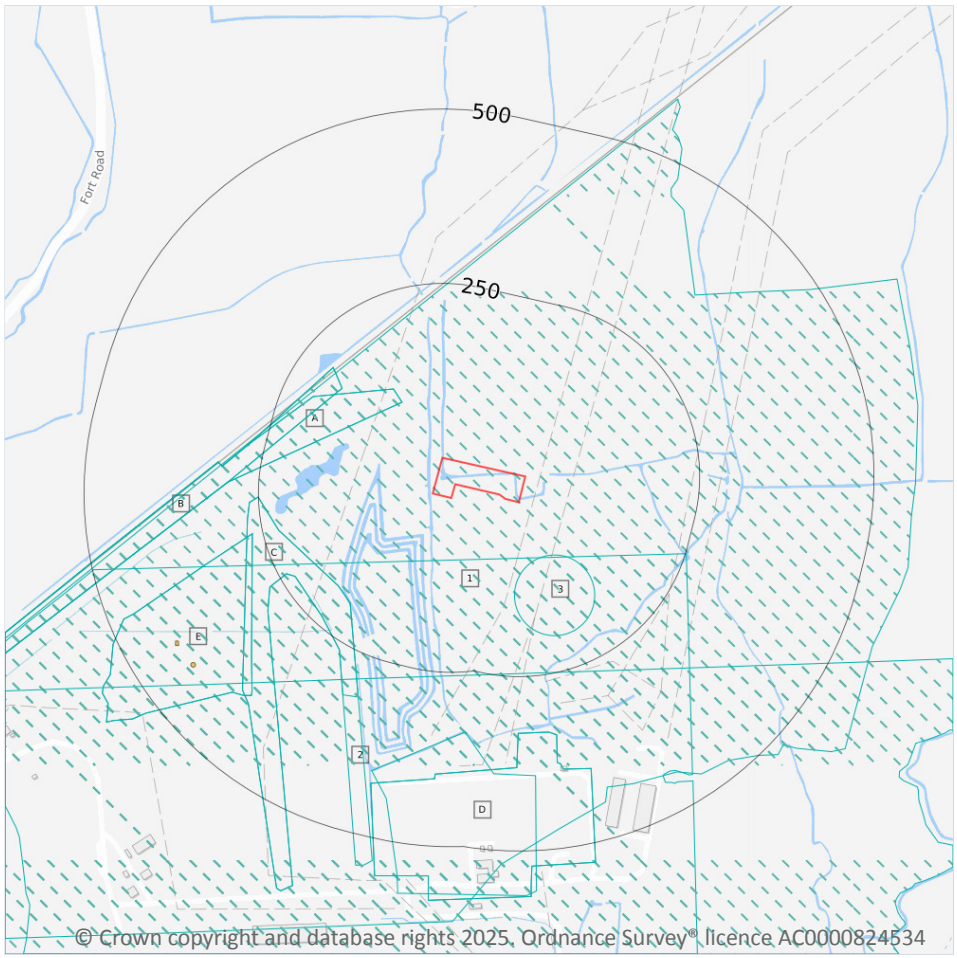
1.6 Historical military land

Records within 500m	0

Areas of military land digitised from multiple sources including the National Archives, local records, MOD records and verified other sources, intelligently grouped into contiguous features.

This data is sourced from Ordnance Survey® / Groundsure / other sources.

2 Past land use - un-grouped



Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

2.1 Historical industrial land uses

Records within 500m	15

Potentially contaminative land use features digitised from historical Ordnance Survey® mapping at 1:10,000 and 10,560 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 18 >**

ID	Location	Land Use	Date	Group ID
1	**On site**	**Marshes**	**1895**	**2257472**
2	80m S	Marshes	1916	2316643
3	85m S	Unspecified Level	1955	2194649

ID	Location	Land Use	Date	Group ID
A	99m NW	Railway Sidings	1991	2215830
A	99m NW	Railway Sidings	1973	2215830
B	175m NW	Railway Sidings	1967	2215830
B	175m NW	Railway Sidings	1955	2215830
C	189m SW	Railway Sidings	1991	2204741
C	189m SW	Railway Sidings	1973	2204741
D	246m S	Marshes	1888	2259040
E	265m W	Unspecified Works	1991	2279304
E	265m W	Unspecified Works	1973	2279304
D	331m S	Unspecified Works	1991	2221722
D	331m S	Unspecified Works	1973	2221722
D	336m S	Unspecified Works	1967	2296304

This data is sourced from Ordnance Survey® / Groundsure.

2.2 Historical tanks

Records within 500m	**2**

Tank features digitised from historical Ordnance Survey® mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 18 >**

ID	Location	Land Use	Date	Group ID
E	419m SW	Unspecified Tank	1987	395142
E	422m SW	Tanks	1987	380103

This data is sourced from Ordnance Survey® / Groundsure.

2.3 Historical energy features

Records within 500m	0

Energy features digitised from historical Ordnance Survey® mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey® / Groundsure.

2.4 Historical petrol stations

Records within 500m	0

Petrol stations digitised from historical Ordnance Survey® mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey® / Groundsure.

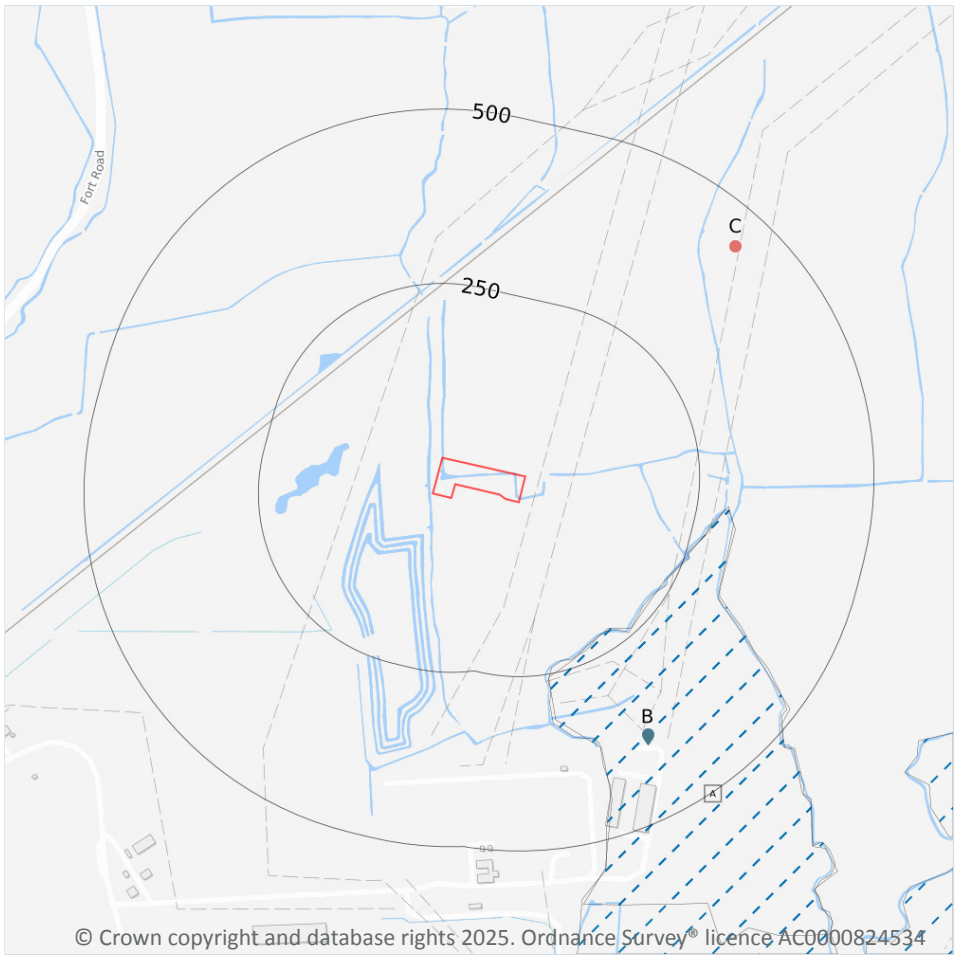
2.5 Historical garages

Records within 500m	0

Garages digitised from historical Ordnance Survey® mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey® / Groundsure.

3 Waste and landfill



Site Outline

Search buffers in metres (m)

Active or recent landfill

Licensed waste sites

Waste exemptions

3.1 Active or recent landfill

Records within 500m	2

Active or recently closed landfill sites under Environment Agency/Natural Resources Wales regulation.

Features are displayed on the Waste and landfill map on **page 21 >**

ID	Location	Details	
A	222m SE	Operator: Ingrebourne Valley Limited Site Address: Tilbury Power Station, Tilbury Ash Disposal Site, Fort Road, West Tilbury, Tilbury, Essex, RM18 8UJ	WML Number: 0 EPR Reference: - Landfill type: Waste Landfilling; >10 T/D With Capacity >25,000T Excluding Inert Waste - 5.2 A(1) a) Status: Effective IPPC Reference: - EPR Number: EPR/GP3733DZ

ID	Location	Details	
A	223m SE	Operator: Rwe Generation Uk Plc Site Address: Rwe Generation Uk Plc, Tilbury B Power Station, Fort Road, Tilbury, Essex, RM18 8UJ	WML Number: 71186 EPR Reference: 646349 Landfill type: A07: Industrial Waste Landfill (Factory curtilage) Status: Superceded IPPC Reference: - EPR Number: EA/EPR/DP3498NX

This data is sourced from the Environment Agency and Natural Resources Wales.

3.2 Historical landfill (BGS records)

Records within 500m	0

Landfill sites identified on a survey carried out on behalf of the DoE in 1973. These sites may have been closed or operational at this time.

This data is sourced from the British Geological Survey.

3.3 Historical landfill (LA/mapping records)

Records within 500m	0

Landfill sites identified from Local Authority records and high detail historical mapping.

This data is sourced from the Ordnance Survey®/Groundsure and Local Authority records.

3.4 Historical landfill (EA/NRW records)

Records within 500m	0

Known historical (closed) landfill sites (e.g. sites where there is no PPC permit or waste management licence currently in force). This includes sites that existed before the waste licensing regime and sites that have been licensed in the past but where a licence has been revoked, ceased to exist or surrendered and a certificate of completion has been issued.

This data is sourced from the Environment Agency and Natural Resources Wales.

3.5 Historical waste sites

Records within 500m	0

Waste site records derived from Local Authority planning records and high detail historical mapping.

This data is sourced from Ordnance Survey®/Groundsure and Local Authority records.

3.6 Licensed waste sites

Records within 500m	**5**

Active or recently closed waste sites under Environment Agency/Natural Resources Wales regulation.

Features are displayed on the Waste and landfill map on **page 21 >**

ID	Location	Details		
B	384m SE	Site Name: Area A3 Site Address: Tilbury B Power Station, Fort Road, Tilbury, RM18 8UJ Correspondence Address: Tilbury B Power Station, Fort Road, Tilbury, RM18 8UJ	Type of Site: Industrial Waste Landfill (Factory curtilage) Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: INT004 EPR reference: - Operator: Innogy Plc Waste Management licence No: 71186 Annual Tonnage: 0	Issue Date: 22/06/2001 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued
B	384m SE	Site Name: Area A3 Site Address: Tilbury B Power Station, Fort Road, Tilbury, RM18 8UJ Correspondence Address: Tilbury B Power Station, Fort Road, Tilbury, RM18 8UJ	Type of Site: Industrial Waste Landfill (Factory curtilage) Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: INT004 EPR reference: - Operator: Rwe Npower Plc Waste Management licence No: 71186 Annual Tonnage: 0	Issue Date: 22/06/2001 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued
B	384m SE	Site Name: Area A3, Tilbury B Power Station Site Address: Tilbury B Power Station, Fort Road, Tilbury, RM18 8UJ Correspondence Address: Tilbury B Power Station, Fort Road, Tilbury, RM18 8UJ	Type of Site: Industrial Waste Landfill (Factory curtilage) Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: INT004 EPR reference: - Operator: Innogy Plc Waste Management licence No: 71186 Annual Tonnage: 0	Issue Date: 22/06/2001 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued

ID	Location	Details		
B	384m SE	Site Name: Area A3 Site Address: Tilbury B Power Station, Fort Road, Tilbury, Essex, RM18 8UJ Correspondence Address: -	Type of Site: Industrial Waste Landfill (Factory curtilage) Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: INT004 EPR reference: EA/EPR/DP3498NX/A001 Operator: Rwe Npower Plc Waste Management licence No: 71186 Annual Tonnage: 350000	Issue Date: 22/06/2001 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Expired
B	384m SE	Site Name: Area A3 Site Address: Tilbury B Power Station, Fort Road, Tilbury, Essex, RM18 8UJ Correspondence Address: -	Type of Site: Industrial Waste Landfill (Factory curtilage) Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: 646349 EPR reference: EA/EPR/DP3498NX Operator: Rwe Generation Uk Plc Waste Management licence No: 71186 Annual Tonnage: 350000	Issue Date: 22/06/2001 Effective Date: 22/06/2001 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Superceded

This data is sourced from the Environment Agency and Natural Resources Wales.

3.7 Waste exemptions

Records within 500m **5**

Activities involving the storage, treatment, use or disposal of waste that are exempt from needing a permit. Exemptions have specific limits and conditions that must be adhered to.

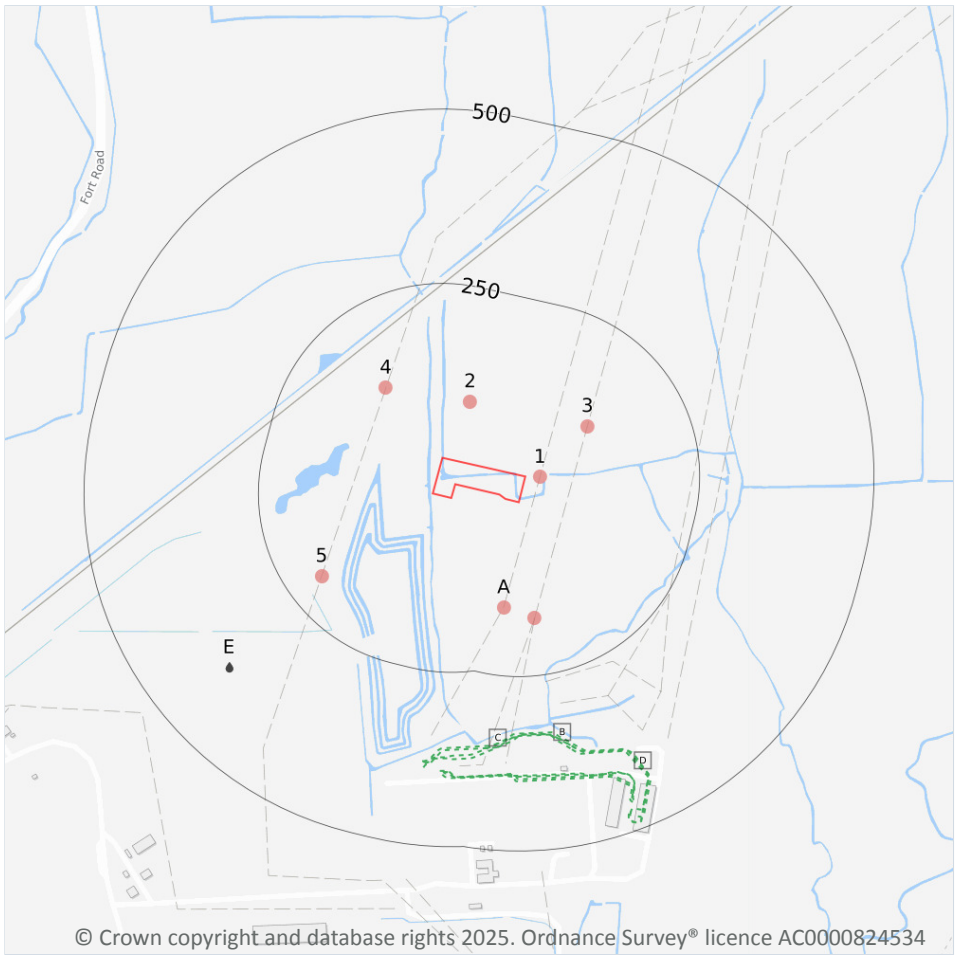
Features are displayed on the Waste and landfill map on **page 21 >**

ID	Location	Site	Reference	Category	Sub-Category	Description
C	446m NE	Travis Perkins Range Centre Windrush Road Tilbury Rm18 7an	EPR/ZF0104HP/A001	Storing waste exemption	Non-agricultural waste only	Storage of waste in secure containers
C	446m NE	Travis Perkins Range Centre Windrush Road Tilbury Rm18 7an	EPR/ZF0104HP/A001	Storing waste exemption	Non-agricultural waste only	Storage of waste in a secure place

ID	Location	Site	Reference	Category	Sub-Category	Description
C	446m NE	Travis Perkins Range Centre Windrush Road Tilbury Rm18 7an	EPR/ZF0104HP/A001	Treating waste exemption	Non-agricultural waste only	Preparatory treatments (baling, sorting, shredding etc)
C	446m NE	Travis Perkins Range Centre Windrush Road Tilbury Rm18 7an	EPR/ZF0104HP/A001	Treating waste exemption	Non-agricultural waste only	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
C	446m NE	Travis Perkins Range Centre Windrush Road Tilbury Rm18 7an	EPR/ZF0104HP/A001	Treating waste exemption	Non-agricultural waste only	Manual treatment of waste

This data is sourced from the Environment Agency and Natural Resources Wales.

4 Current industrial land use



Site Outline

Search buffers in metres (m)

Recent industrial land uses

Electricity cables

Licensed Discharges to controlled waters

4.1 Recent industrial land uses

Records within 250m	7

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 26 >**

ID	Location	Company	Address	Activity	Category
1	21m E	Pylon	Essex, RM18	Electrical Features	Infrastructure and Facilities
2	87m N	E M R	Station Road, East Tilbury, Essex, RM18 8QR	Scrap Metal Merchants	Recycling Services
3	115m NE	Pylon	Essex, RM18	Electrical Features	Infrastructure and Facilities

ID	Location	Company	Address	Activity	Category
4	129m NW	Pylon	Essex, RM18	Electrical Features	Infrastructure and Facilities
A	152m S	Pylon	Essex, RM18	Electrical Features	Infrastructure and Facilities
A	167m S	Pylon	Essex, RM18	Electrical Features	Infrastructure and Facilities
5	199m SW	Pylon	Essex, RM18	Electrical Features	Infrastructure and Facilities

This data is sourced from Ordnance Survey®.

4.2 National Geographic Database (NGD) - Current or recent tanks

Records within 250m	0

Current or recent tanks identified from the Ordnance Survey® NGD.

This data is sourced from Ordnance Survey®.

4.3 Current or recent petrol stations

Records within 500m	0

Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

4.4 Electricity cables

Records within 500m	10

High voltage underground electricity transmission cables.

Features are displayed on the Current industrial land use map on **page 26 >**

ID	Location	Cable Set	Cable Route	Details	
B	331m S	YYJ136 - TILBURY CABLE SECT 01	TILBURY - WEST THURROCK 1	Cable Make: - Cable Type: A/C Operating Voltage (kV): 400	Year of installation: 2011 Cable in tunnel? Not specified
C	333m S	-	-	Cable Make: - Cable Type: A/C Operating Voltage (kV): 400	Year of installation: Not specified Cable in tunnel? Not specified

ID	Location	Cable Set	Cable Route	Details	
C	333m S	-	-	Cable Make: - Cable Type: A/C Operating Voltage (kV): 400	Year of installation: Not specified Cable in tunnel? Not specified
B	335m S	YYJ136 - TILBURY CABLE SECT 01	TILBURY - WEST THURROCK 1	Cable Make: - Cable Type: A/C Operating Voltage (kV): 400	Year of installation: 2011 Cable in tunnel? Not specified
D	358m S	-	-	Cable Make: - Cable Type: A/C Operating Voltage (kV): 400	Year of installation: Not specified Cable in tunnel? Not specified
D	361m S	-	-	Cable Make: - Cable Type: A/C Operating Voltage (kV): 400	Year of installation: Not specified Cable in tunnel? Not specified
B	390m S	YYJ136 - TILBURY CABLE SECT 02	TILBURY - WEST THURROCK 1	Cable Make: - Cable Type: A/C Operating Voltage (kV): 400	Year of installation: 2011 Cable in tunnel? Not specified
B	391m S	YYJ136 - TILBURY CABLE SECT 02	TILBURY - WEST THURROCK 1	Cable Make: - Cable Type: A/C Operating Voltage (kV): 400	Year of installation: 2011 Cable in tunnel? Not specified
B	391m S	-	-	Cable Make: - Cable Type: A/C Operating Voltage (kV): 400	Year of installation: Not specified Cable in tunnel? Not specified
B	393m S	-	-	Cable Make: - Cable Type: A/C Operating Voltage (kV): 400	Year of installation: Not specified Cable in tunnel? Not specified

This data is sourced from National Grid.

4.5 Gas pipelines

Records within 500m	0

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.6 Sites determined as Contaminated Land

Records within 500m	0

Contaminated Land Register of sites designated under Part 2a of the Environmental Protection Act 1990.

This data is sourced from Local Authority records.

4.7 Control of Major Accident Hazards (COMAH)

Records within 500m	0

Control of Major Accident Hazards (COMAH) sites. This data includes upper and lower tier sites, and includes a historical archive of COMAH sites and Notification of Installations Handling Hazardous Substances (NIHHS) records.

This data is sourced from the Health and Safety Executive.

4.8 Regulated explosive sites

Records within 500m	0

Sites registered and licensed by the Health and Safety Executive under the Manufacture and Storage of Explosives Regulations 2005 (MSER). The last update to this data was in April 2011.

This data is sourced from the Health and Safety Executive.

4.9 Hazardous substance storage/usage

Records within 500m	0

Consents granted for a site to hold certain quantities of hazardous substances at or above defined limits in accordance with the Planning (Hazardous Substances) Regulations 2015.

This data is sourced from Local Authority records.

4.10 Historical licensed industrial activities (IPC)

Records within 500m	0

Integrated Pollution Control (IPC) records of substance releases to air, land and water. This data represents a historical archive as the IPC regime has been superseded.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.11 Licensed industrial activities (Part A(1))

Records within 500m	0

Records of Part A(1) installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.12 Licensed pollutant release (Part A(2)/B)

Records within 500m	0

Records of Part A(2) and Part B installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

This data is sourced from Local Authority records.

4.13 Radioactive Substance Authorisations

Records within 500m	0

Records of the storage, use, accumulation and disposal of radioactive substances regulated under the Radioactive Substances Act 1993.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.14 Licensed Discharges to controlled waters

Records within 500m	2

Discharges of treated or untreated effluent to controlled waters under the Water Resources Act 1991.

Features are displayed on the Current industrial land use map on **page 26 >**

ID	Location	Address	Details	
E	384m SW	TILBURY MARSHES, TILBURY, ESSEX	Effluent Type: TRADE DISCHARGES - UNSPECIFIED Permit Number: PR2NFE02865 Permit Version: 1 Receiving Water: Unknown Trib. River Thames	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 09/03/1965 Effective Date: 09/03/1965 Revocation Date: 28/01/1992
E	384m SW	TILBURY MARSHES, TILBURY, ESSEX	Effluent Type: TRADE DISCHARGES - PROCESS EFFLUENT - WATER COMPANY (WTW) Permit Number: PR2NFE02865 Permit Version: 2 Receiving Water: Trib Tidal River Thames	Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: 29/01/1992 Effective Date: 29/01/1992 Revocation Date: 26/01/2001

This data is sourced from the Environment Agency and Natural Resources Wales.

4.15 Pollutant release to surface waters (Red List)

Records within 500m	0

Discharges of specified substances under the Environmental Protection (Prescribed Processes and Substances) Regulations 1991.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.16 Pollutant release to public sewer

Records within 500m	0

Discharges of Special Category Effluents to the public sewer.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.17 List 1 Dangerous Substances

Records within 500m	0

Discharges of substances identified on List I of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.18 List 2 Dangerous Substances

Records within 500m	0

Discharges of substances identified on List II of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.19 Pollution Incidents (EA/NRW)

Records within 500m	0

Records of substantiated pollution incidents. Since 2006 this data has only included category 1 (major) and 2 (significant) pollution incidents.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.20 Pollution inventory substances

Records within 500m	0

The pollution inventory (substances) includes reporting on annual emissions of certain regulated substances to air, controlled waters and land. A reporting threshold for each substance is also included. Where emissions fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

4.21 Pollution inventory waste transfers

Records within 500m	0

The pollution inventory (waste transfers) includes reporting on annual transfers and recovery/disposal of controlled wastes from a site. A reporting threshold for each waste type is also included. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

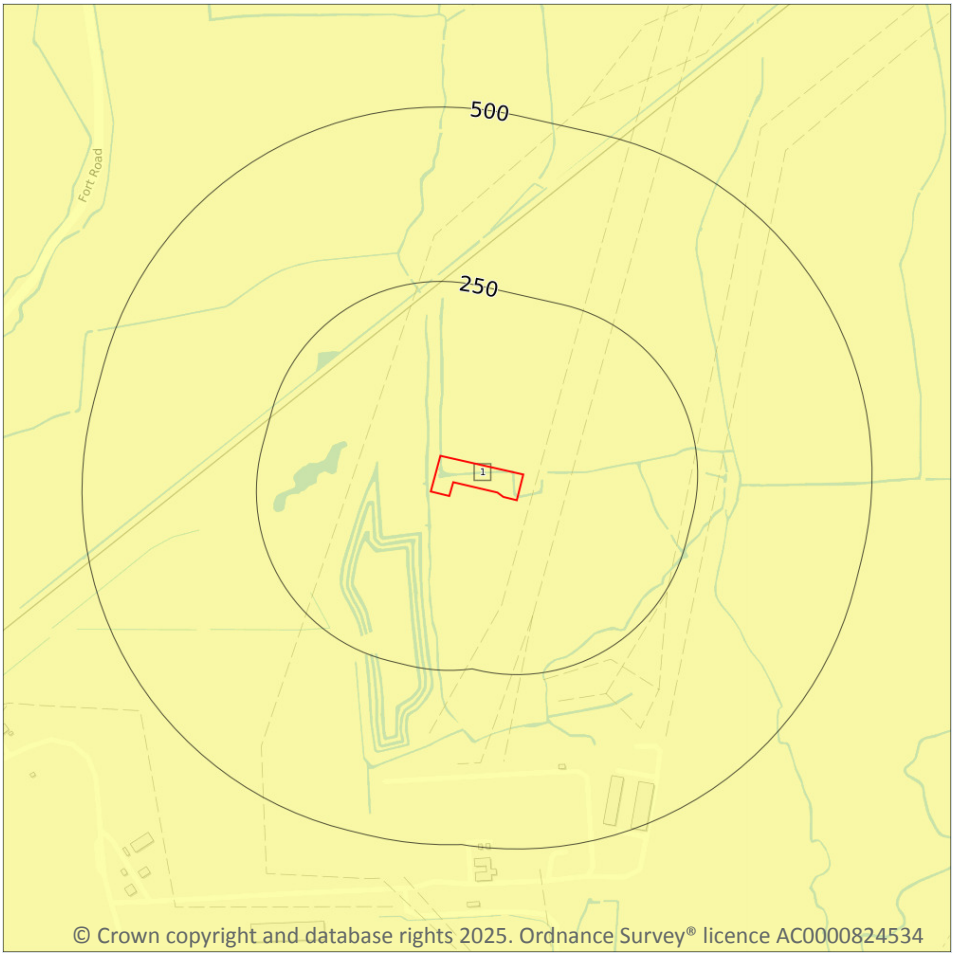
4.22 Pollution inventory radioactive waste

Records within 500m	0

The pollution inventory (radioactive wastes) includes reporting on annual releases of radioactive substances from a site, including the means of release. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

5 Hydrogeology - Superficial aquifer



Site Outline

Search buffers in metres (m)

- Principal
- Secondary A
- Secondary B
- Secondary Undifferentiated
- Unproductive
- Unknown

5.1 Superficial aquifer

Records within 500m	1

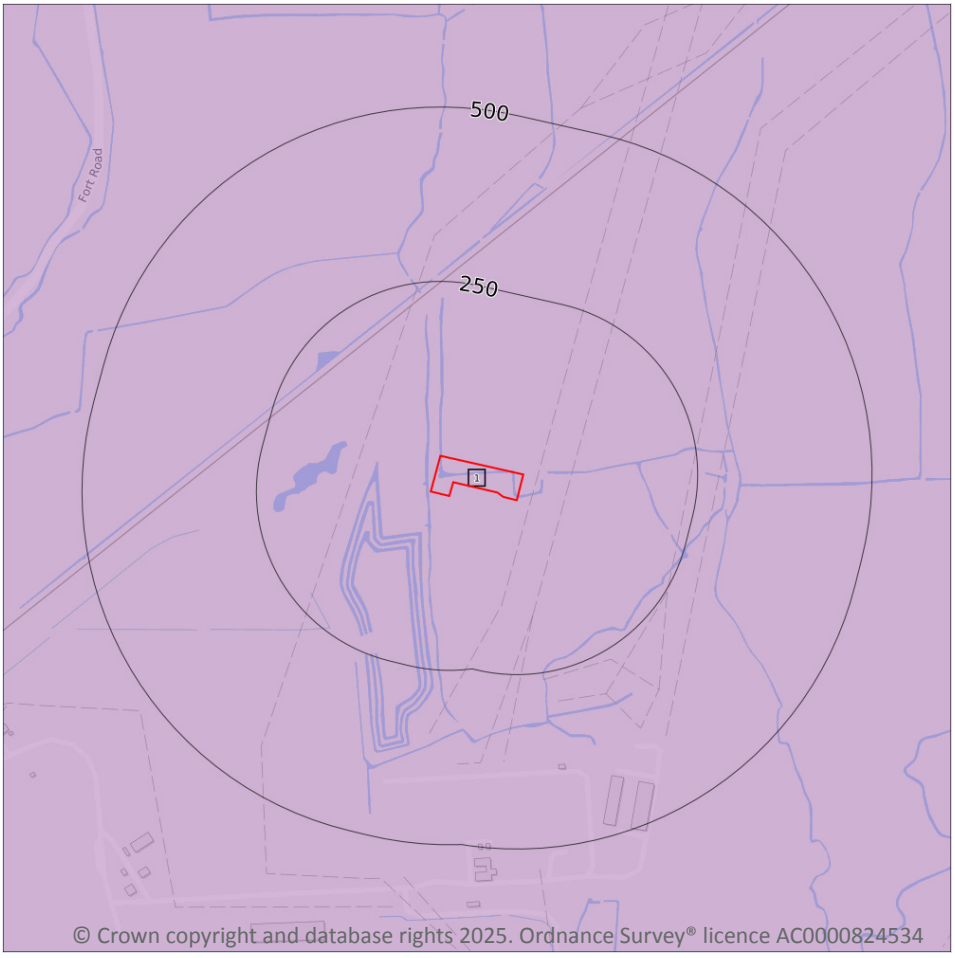
Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on **page 33 >**

ID	Location	Designation	Description
1	**On site**	**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**

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.

Bedrock aquifer



Site Outline

Search buffers in metres (m)

- Principal
- Secondary A
- Secondary B
- Secondary Undifferentiated
- Unproductive

5.2 Bedrock aquifer

Records within 500m	1

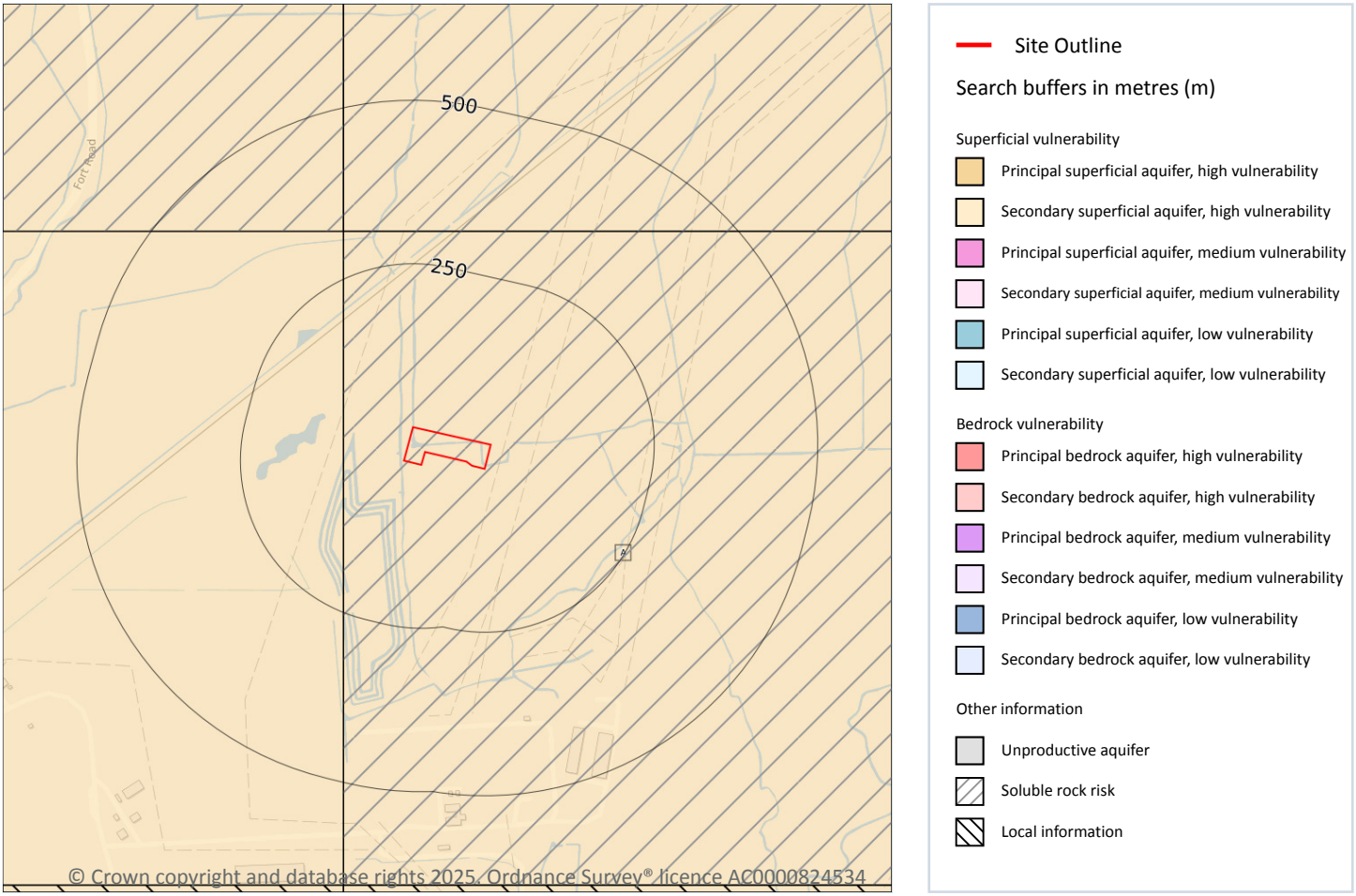
Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on **page 34 >**

ID	Location	Designation	Description
1	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

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.

Groundwater vulnerability



5.3 Groundwater vulnerability

Records within 50m	1

An assessment of the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties within a one kilometre square grid. Groundwater vulnerability is described as High, Medium or Low as follows:

- High - Areas able to easily transmit pollution to groundwater. They are likely to be characterised by high leaching soils and the absence of low permeability superficial deposits.
- Medium - Intermediate between high and low vulnerability.
- Low - Areas that provide the greatest protection from pollution. They are likely to be characterised by low leaching soils and/or the presence of superficial deposits characterised by a low permeability.

Features are displayed on the Groundwater vulnerability map on **page 35 >**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
A	**On site**	**Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer**	**Leaching class: High Infiltration value: >70% Dilution value: <300mm/year**	**Vulnerability: High Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: Low**	**Vulnerability: Low Aquifer type: Principal Flow mechanism: Well connected fractures**

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.

5.4 Groundwater vulnerability- soluble rock risk

Records on site	**1**

This dataset identifies areas where solution features that enable rapid movement of a pollutant may be present within a 1km grid square.

ID	Maximum soluble risk category	Percentage of grid square covered by maximum risk
A	**Significant soluble rocks are likely to be present. Problems unlikely except with considerable surface or subsurface water flow.**	**1.0%**

This data is sourced from the British Geological Survey and the Environment Agency.

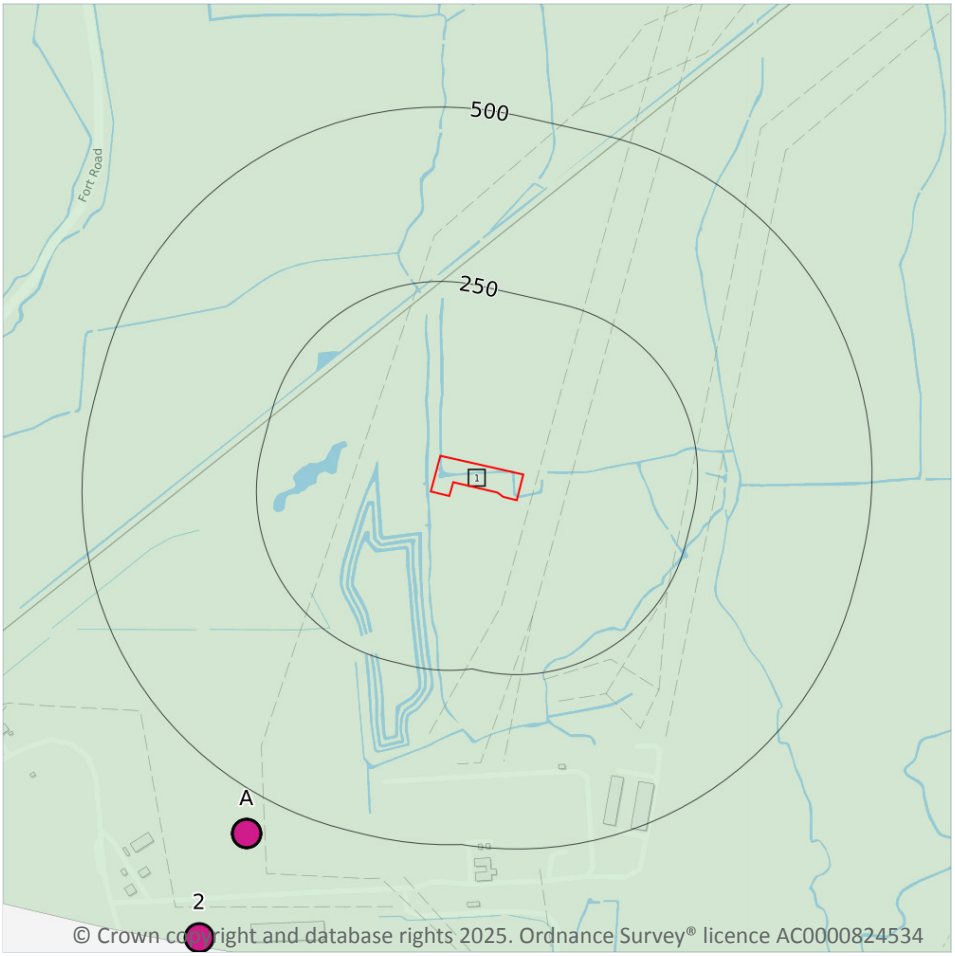
5.5 Groundwater vulnerability- local information

Records on site	**0**

This dataset identifies areas where additional local information affecting vulnerability is held by the Environment Agency. Further information can be obtained by contacting the Environment Agency local Area groundwater team through the Environment Agency National Customer Call Centre on 03798 506 506 or by email on enquiries@environment-agency.gov.uk ↗.

This data is sourced from the British Geological Survey and the Environment Agency.

Abstractions and Source Protection Zones



Site Outline

Search buffers in metres (m)

- Source Protection Zone 1 — Inner catchment
- Source Protection Zone 2 — Outer catchment
- Source Protection Zone 3 — Total catchment
- Source Protection Zone 4 — Zone of Special Interest
- Source Protection Zone 1c — Inner catchment - confined aquifer
- Source Protection Zone 2c — Outer catchment - confined aquifer
- Source Protection Zone 3c — Total catchment - confined aquifer
- Drinking water abstraction licences
- Drinking water abstraction licences — Polygon features
- Drinking water abstraction licences — Linear features
- Groundwater abstraction licence (point)
- Groundwater abstraction licence (area)
- Groundwater abstraction licence (linear)
- Surface Water Abstractions (point)
- Surface Water Abstractions (area)
- Surface Water Abstractions (linear)

5.6 Groundwater abstractions

Records within 2000m	16

Licensed groundwater abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, between two points (line data) or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on **page 37 >**

ID	Location	Details	
A	557m SW	Status: Active Licence No: AN/037/0056/039 Details: Mineral Washing Direct Source: GROUND WATER SOURCE OF SUPPLY Point: UNDERGROUND CHALK AT TILBURY, ESSEX Data Type: Point Name: Tarmac Trading Limited Easting: 565828 Northing: 176159	Annual Volume (m^3): 139690 Max Daily Volume (m^3): 405 Original Application No: NPS/WR/040257 Original Start Date: 24/04/2024 Expiry Date: 31/03/2028 Issue No: 1 Version Start Date: 24/04/2024 Version End Date: -
A	557m SW	Status: Active Licence No: AN/037/0056/039 Details: Process Water Direct Source: GROUND WATER SOURCE OF SUPPLY Point: UNDERGROUND CHALK AT TILBURY, ESSEX Data Type: Point Name: Tarmac Trading Limited Easting: 565828 Northing: 176159	Annual Volume (m^3): 139690 Max Daily Volume (m^3): 405 Original Application No: NPS/WR/040257 Original Start Date: 24/04/2024 Expiry Date: 31/03/2028 Issue No: 1 Version Start Date: 24/04/2024 Version End Date: -
A	557m SW	Status: Active Licence No: AN/037/0056/039 Details: Dust Suppression Direct Source: GROUND WATER SOURCE OF SUPPLY Point: UNDERGROUND CHALK AT TILBURY, ESSEX Data Type: Point Name: Tarmac Trading Limited Easting: 565828 Northing: 176159	Annual Volume (m^3): 139690 Max Daily Volume (m^3): 405 Original Application No: NPS/WR/040257 Original Start Date: 24/04/2024 Expiry Date: 31/03/2028 Issue No: 1 Version Start Date: 24/04/2024 Version End Date: -
2	721m SW	Status: Historical Licence No: 8/37/56/*G/0084 Details: Make-Up or Top Up Water Direct Source: GROUND WATER SOURCE OF SUPPLY Point: BOREHOLE AT TILBURY POWER STN Data Type: Point Name: RWE INNOGY PLC Easting: 565760 Northing: 176010	Annual Volume (m^3): 4000 Max Daily Volume (m^3): 18 Original Application No: - Original Start Date: 16/09/1996 Expiry Date: - Issue No: 103 Version Start Date: 01/10/2003 Version End Date: -
-	1090m NE	Status: Active Licence No: 8/37/56/*G/0006 Details: General Farming & Domestic Direct Source: GROUND WATER SOURCE OF SUPPLY Point: WELL 2 AT POLWICKS, WEST TILBURY Data Type: Point Name: C H COLE & SONS Easting: 566800 Northing: 177600	Annual Volume (m^3): 182000 Max Daily Volume (m^3): 1300 Original Application No: ES2684 Original Start Date: 01/11/1966 Expiry Date: - Issue No: 101 Version Start Date: 17/12/2003 Version End Date: -

ID	Location	Details	
-	1090m NE	Status: Active Licence No: 8/37/56/*G/0006 Details: Spray Irrigation - Direct Direct Source: GROUND WATER SOURCE OF SUPPLY Point: WELL 2 AT POLWICKS, WEST TILBURY Data Type: Point Name: C H COLE & SONS Easting: 566800 Northing: 177600	Annual Volume (m^3): 182000 Max Daily Volume (m^3): 1300 Original Application No: ES2684 Original Start Date: 01/11/1966 Expiry Date: - Issue No: 101 Version Start Date: 17/12/2003 Version End Date: -
-	1367m NE	Status: Active Licence No: 8/37/56/*G/0006 Details: General Farming & Domestic Direct Source: GROUND WATER SOURCE OF SUPPLY Point: EXCAV AT POLWICKS,WEST TILBURY Data Type: Point Name: C H COLE & SONS Easting: 567000 Northing: 177800	Annual Volume (m^3): 182000 Max Daily Volume (m^3): 1300 Original Application No: ES2684 Original Start Date: 01/11/1966 Expiry Date: - Issue No: 101 Version Start Date: 17/12/2003 Version End Date: -
-	1367m NE	Status: Active Licence No: 8/37/56/*G/0006 Details: Spray Irrigation - Direct Direct Source: GROUND WATER SOURCE OF SUPPLY Point: EXCAV AT POLWICKS,WEST TILBURY Data Type: Point Name: C H COLE & SONS Easting: 567000 Northing: 177800	Annual Volume (m^3): 182000 Max Daily Volume (m^3): 1300 Original Application No: ES2684 Original Start Date: 01/11/1966 Expiry Date: - Issue No: 101 Version Start Date: 17/12/2003 Version End Date: -
-	1367m NE	Status: Active Licence No: 8/37/56/*G/0006 Details: Spray Irrigation - Direct Direct Source: GROUND WATER SOURCE OF SUPPLY Point: WELL 1 AT POLWICKS, WEST TILBURY Data Type: Point Name: C H COLE & SONS Easting: 567000 Northing: 177800	Annual Volume (m^3): 182000 Max Daily Volume (m^3): 1300 Original Application No: ES2684 Original Start Date: 01/11/1966 Expiry Date: - Issue No: 101 Version Start Date: 17/12/2003 Version End Date: -
-	1367m NE	Status: Active Licence No: 8/37/56/*G/0006 Details: General Farming & Domestic Direct Source: GROUND WATER SOURCE OF SUPPLY Point: WELL 1 AT POLWICKS, WEST TILBURY Data Type: Point Name: C H COLE & SONS Easting: 567000 Northing: 177800	Annual Volume (m^3): 182000 Max Daily Volume (m^3): 1300 Original Application No: ES2684 Original Start Date: 01/11/1966 Expiry Date: - Issue No: 101 Version Start Date: 17/12/2003 Version End Date: -

ID	Location	Details	
-	1490m NE	Status: Historical Licence No: 8/37/56/*G/0073 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUND WATER SOURCE OF SUPPLY Point: 4 BOREHOLES, LOW ST.,E. TILBURY Data Type: Point Name: INNOGY PLC Easting: 567200 Northing: 177800	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 01/02/1987 Expiry Date: 31/12/2046 Issue No: 103 Version Start Date: 21/07/2000 Version End Date: -
-	1490m NE	Status: Historical Licence No: 8/37/56/*G/0073 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUND WATER SOURCE OF SUPPLY Point: 4 BOREHOLES, LOW ST.,E. TILBURY Data Type: Point Name: INNOGY PLC Easting: 567200 Northing: 177800	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 01/02/1987 Expiry Date: 31/12/2046 Issue No: 103 Version Start Date: 21/07/2000 Version End Date: -
-	1490m NE	Status: Historical Licence No: 8/37/56/*G/0073 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUND WATER SOURCE OF SUPPLY Point: 4 BOREHOLES, LOW ST.,E. TILBURY Data Type: Point Name: INNOGY PLC Easting: 567200 Northing: 177800	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 01/02/1987 Expiry Date: 31/12/2046 Issue No: 103 Version Start Date: 21/07/2000 Version End Date: -
-	1490m NE	Status: Historical Licence No: 8/37/56/*G/0073 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: GROUND WATER SOURCE OF SUPPLY Point: 4 BOREHOLES, LOW ST, EAST TILBURY Data Type: Point Name: RWE Generation UK PLC Easting: 567200 Northing: 177800	Annual Volume (m^3): 1100000 Max Daily Volume (m^3): 5500 Original Application No: - Original Start Date: 13/02/1987 Expiry Date: 31/12/2046 Issue No: 105 Version Start Date: 16/05/2016 Version End Date: -

ID	Location	Details	
-	1490m NE	Status: Historical Licence No: 8/37/56/*G/0073 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: GROUND WATER SOURCE OF SUPPLY Point: 4 BOREHOLES, LOW ST, EAST TILBURY Data Type: Point Name: RWE Generation UK PLC Easting: 567200 Northing: 177800	Annual Volume (m^3): 1100000 Max Daily Volume (m^3): 5500 Original Application No: - Original Start Date: 13/02/1987 Expiry Date: 31/12/2046 Issue No: 105 Version Start Date: 16/05/2016 Version End Date: -
-	1490m NE	Status: Historical Licence No: 8/37/56/*G/0073 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: GROUND WATER SOURCE OF SUPPLY Point: 4 BOREHOLES, LOW ST, EAST TILBURY Data Type: Point Name: RWE Generation UK PLC Easting: 567200 Northing: 177800	Annual Volume (m^3): 1100000 Max Daily Volume (m^3): 5500 Original Application No: - Original Start Date: 13/02/1987 Expiry Date: 31/12/2046 Issue No: 105 Version Start Date: 16/05/2016 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

5.7 Surface water abstractions

Records within 2000m	**0**

Licensed surface water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

This data is sourced from the Environment Agency and Natural Resources Wales.

5.8 Potable abstractions

Records within 2000m	**1**

Licensed potable water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on **page 37 >**

ID	Location	Details	
-	1490m NE	Status: Historical Licence No: 8/37/56/*G/0073 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: GROUND WATER SOURCE OF SUPPLY Point: 4 BOREHOLES, LOW ST, EAST TILBURY Data Type: Point Name: RWE Generation UK PLC Easting: 567200 Northing: 177800	Annual Volume (m^3): 1100000 Max Daily Volume (m^3): 5500 Original Application No: - Original Start Date: 13/02/1987 Expiry Date: 31/12/2046 Issue No: 105 Version Start Date: 16/05/2016 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

5.9 Source Protection Zones

Records within 500m	**1**

Source Protection Zones define the sensitivity of an area around a potable abstraction site to contamination.

Features are displayed on the Abstractions and Source Protection Zones map on **page 37 >**

ID	Location	Type	Description
1	**On site**	**3**	**Total catchment**

This data is sourced from the Environment Agency and Natural Resources Wales.

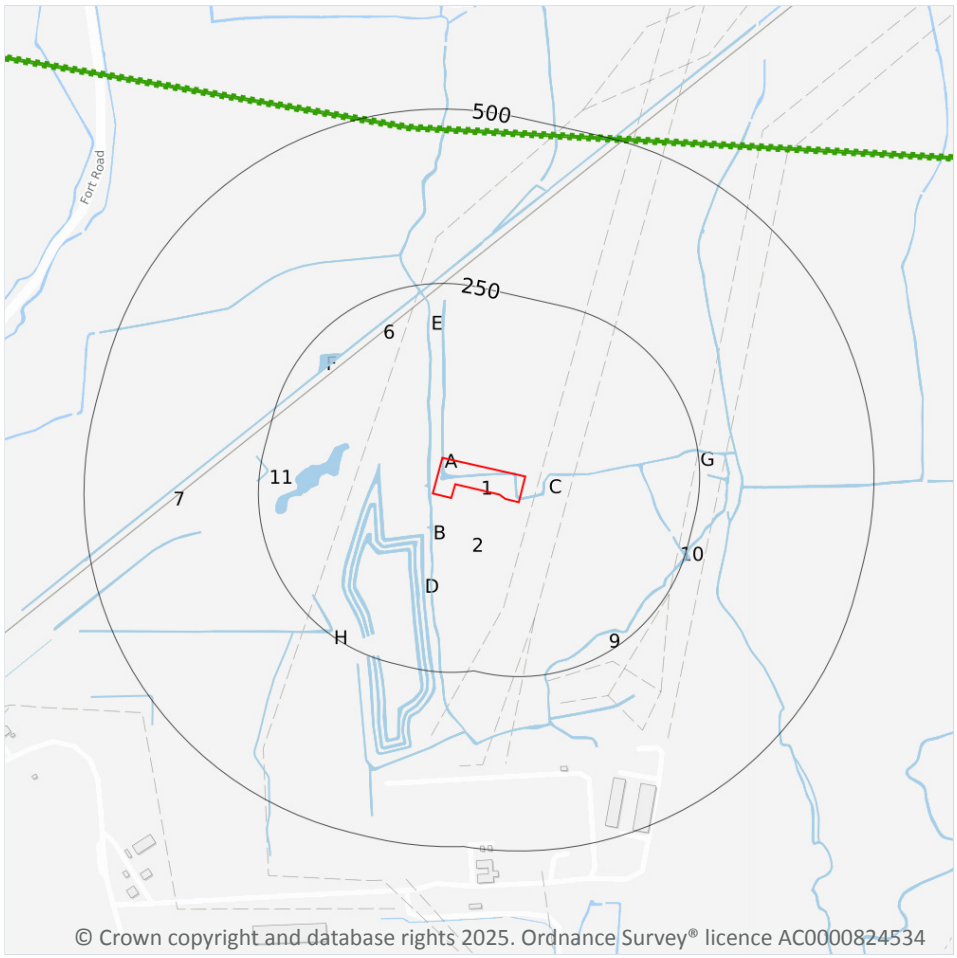
5.10 Source Protection Zones (confined aquifer)

Records within 500m	**0**

Source Protection Zones in the confined aquifer define the sensitivity around a deep groundwater abstraction to contamination. A confined aquifer would normally be protected from contamination by overlying geology and is only considered a sensitive resource if deep excavation/drilling is taking place.

This data is sourced from the Environment Agency and Natural Resources Wales.

6 Hydrology



Site Outline

Search buffers in metres (m)

Water Network (OS MasterMap)

Surface water features (wider than 5m)

Surface water features (narrower than 5m)

WFD River, canal and surface water transfer water bodies

WFD Lake water bodies

WFD Transitional and coastal water bodies

WFD Surface water body catchments boundaries

WFD Groundwater body boundaries

6.1 Water Network (OS MasterMap)

Records within 250m	**23**

Detailed water network of Great Britain showing the flow and precise central course of every river, stream, lake and canal.

Features are displayed on the Hydrology map on **page 43 >**

ID	Location	Type of water feature	Ground level	Permanence	Name
A	**On site**	**Inland river not influenced by normal tidal action.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**-**

ID	Location	Type of water feature	Ground level	Permanence	Name
B	5m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	28m E	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
C	35m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	63m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	76m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	88m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	203m N	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
6	206m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
F	207m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
F	207m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	208m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
G	215m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
7	215m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
9	222m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	224m N	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
H	225m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
10	227m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	236m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
11	239m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	240m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	240m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
G	249m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

This data is sourced from the Ordnance Survey®.

6.2 Surface water features

Records within 250m	10

Covering rivers, streams and lakes (some overlap with OS MasterMap Water Network data in previous section) but additionally covers smaller features such as ponds. Rivers and streams narrower than 5m are represented as a single line. Lakes, ponds and rivers or streams wider than 5m are represented as polygons.

Features are displayed on the Hydrology map on **page 43 >**

This data is sourced from the Ordnance Survey®.

6.3 WFD Surface water body catchments

Records on site	1

The Water Framework Directive is an EU-led framework for the protection of inland surface waters, estuaries, coastal waters and groundwater through river basin-level management planning. In terms of surface water, these basins are broken down into smaller units known as management, operational and water body catchments.

Features are displayed on the Hydrology map on **page 43 >**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
1	**On site**	**Coastal Catchment**	**Not part of a river WB catchment**	**126**	**Mardyke**	**South Essex**

This data is sourced from the Environment Agency and Natural Resources Wales.

6.4 WFD Surface water bodies

Records identified	0

Surface water bodies under the Directive may be rivers, lakes, estuary or coastal. To achieve the purpose of the Directive, environmental objectives have been set and are reported on for each water body. The progress towards delivery of the objectives is then reported on by the relevant competent authorities at the end of each six-year cycle. The river water body directly associated with the catchment listed in the previous section is detailed below, along with any lake, canal, coastal or artificial water body within 250m of the site. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each water body listed.

This data is sourced from the Environment Agency and Natural Resources Wales.

6.5 WFD Groundwater bodies

Records on site	1

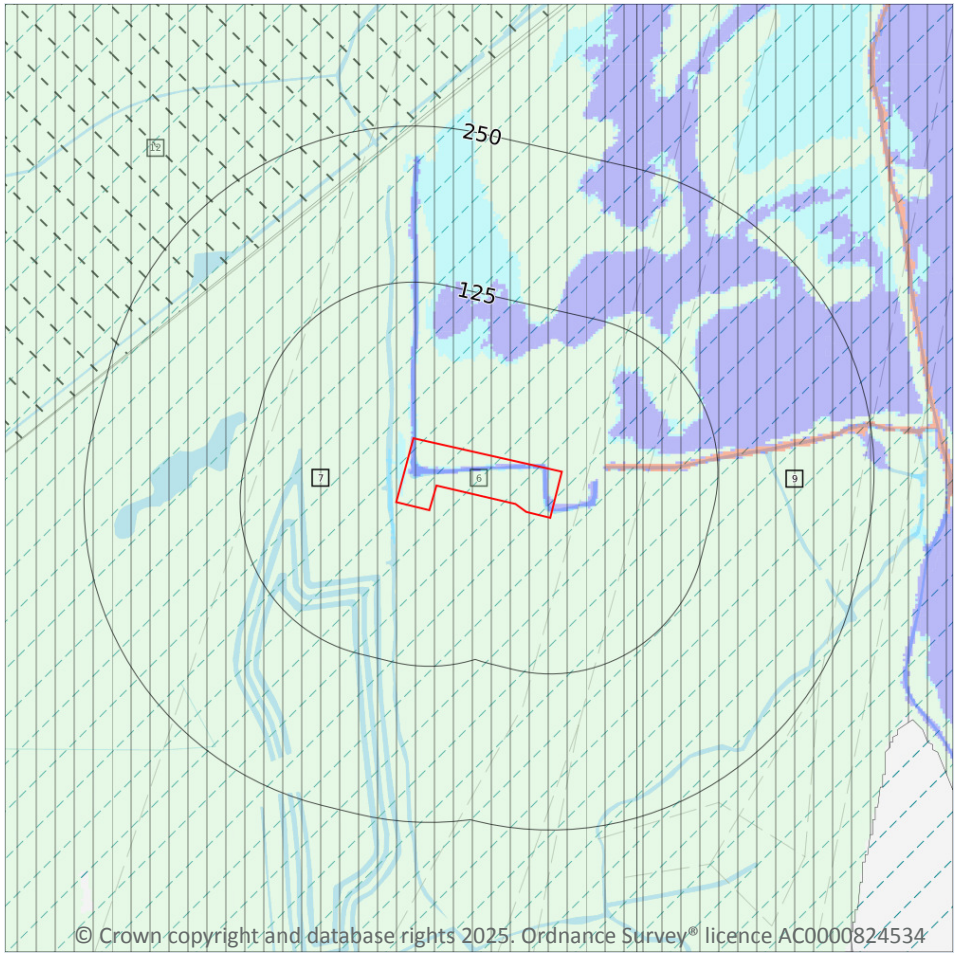
Groundwater bodies are also covered by the Directive and the same regime of objectives and reporting detailed in the previous section is in place. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each groundwater body listed.

Features are displayed on the Hydrology map on **page 43 >**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
2	**On site**	**South Essex Thurrock Chalk**	**GB40601G401100** ↗	**Poor**	**Poor**	**Poor**	**2019**

This data is sourced from the Environment Agency and Natural Resources Wales.

7 River and coastal flooding



Site Outline

Search buffers in metres (m)

River and coastal flooding:

- High
- Medium
- Low
- Very Low
- Historical Flood Events
- Areas Used for Flood Storage
- Areas Benefiting from Flood Defences
- Flood Defences

7.1 Risk of flooding from rivers and the sea

Records within 50m	6

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m within the Risk of Flooding from Rivers and Sea (RoFRaS)/Flood Risk Assessment Wales (FRAW) models. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition. The risk categories for RoFRaS for rivers and the sea and FRAW for rivers are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 100 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 100 chance) or High (greater than or equal to 1 in 30 chance). The risk categories for FRAW for the sea are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 200 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 200 chance) or High (greater than or equal to 1 in 30 chance).

Features are displayed on the River and coastal flooding map on **page 47 >**

Distance	Flood risk category
On site	**Medium**
0 - 50m	High

This data is sourced from the Environment Agency and Natural Resources Wales.

7.2 Historical Flood Events

Records within 250m	**1**

Records of historic flooding from rivers, the sea, groundwater and surface water. Records began in 1946 when predecessor bodies started collecting detailed information about flooding incidents, although limited details may be included on flooding incidents prior to this date. Takes into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding, and includes flood extents that may have been affected by overtopping, breaches or blockages.

Features are displayed on the River and coastal flooding map on **page 47 >**

ID	Location	Event name	Date of flood	Flood source	Flood cause	Type of flood
6	**On site**	**1953 Coast Flood Outline Essex**	**1953-01-31** **1953-02-01**	**Sea**	**Other**	**Tidal**

This data is sourced from the Environment Agency and Natural Resources Wales.

7.3 Flood Defences

Records within 250m	**0**

Records of flood defences owned, managed or inspected by the Environment Agency and Natural Resources Wales. Flood defences can be structures, buildings or parts of buildings. Typically these are earth banks, stone and concrete walls, or sheet-piling that is used to prevent or control the extent of flooding.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.4 Areas Benefiting from Flood Defences

Records within 250m	**2**

Areas that would benefit from the presence of flood defences in a 1 in 100 (1%) chance of flooding each year from rivers or 1 in 200 (0.5%) chance of flooding each year from the sea.

Features are displayed on the River and coastal flooding map on **page 47 >**

ID	Location	
7	**On site**	**Area benefiting from flood defences**
9	60m E	Area benefiting from flood defences

This data is sourced from the Environment Agency and Natural Resources Wales.

7.5 Flood Storage Areas

Records within 250m	**1**

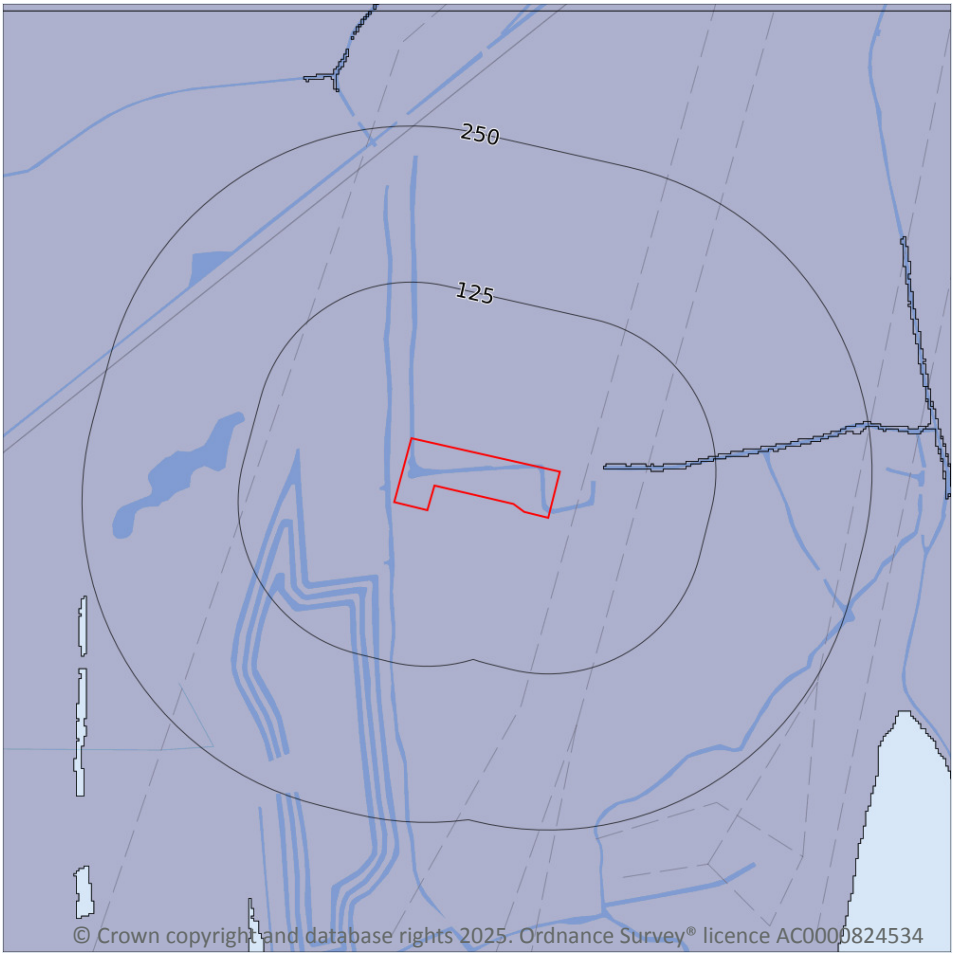
Areas that act as a balancing reservoir, storage basin or balancing pond to attenuate an incoming flood peak to a flow level that can be accepted by the downstream channel or to delay the timing of a flood peak so that its volume is discharged over a longer period.

Features are displayed on the River and coastal flooding map on **page 47 >**

ID	Location	Update
12	196m NW	Flood Storage Area

This data is sourced from the Environment Agency and Natural Resources Wales.

River and coastal flooding - Flood Zones



Site Outline

Search buffers in metres (m)

Flood zone 2

Flood zone 3

7.6 Flood Zone 2

Records within 50m	0

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land between Flood Zone 3 (see next section) and the extent of the flooding from rivers or the sea with a 1 in 1000 (0.1%) chance of flooding each year.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.7 Flood Zone 3

Records within 50m	1

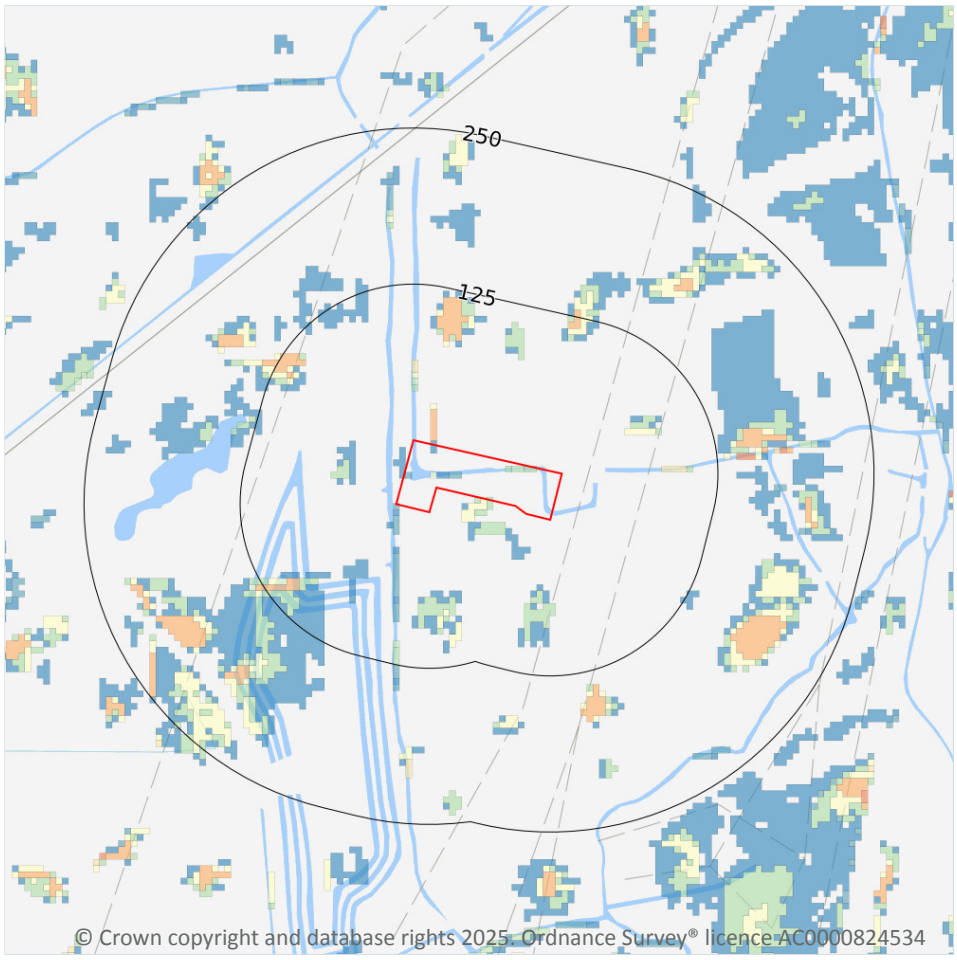
Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land with a 1 in 100 (1%) or greater chance of flooding each year from rivers or a 1 in 200 (0.5%) or greater chance of flooding each year from the sea.

Features are displayed on the River and coastal flooding map on **page 47 >**

Location	Type
On site	**Zone 3 - (Fluvial /Tidal Models)**

This data is sourced from the Environment Agency and Natural Resources Wales.

8 Surface water flooding



Site Outline
Search buffers in metres (m)

1 in 1000 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 250 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 100 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 30 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

8.1 Surface water flooding

Highest risk on site	**1 in 100 year, 0.1m - 0.3m**
Highest risk within 50m	**1 in 30 year, 0.1m - 0.3m**

Ambiental Risk Analytics surface water (pluvial) FloodMap identifies areas likely to flood as a result of extreme rainfall events, i.e. land naturally vulnerable to surface water ponding or flooding. This data set was produced by simulating 1 in 30 year, 1 in 100 year, 1 in 250 year and 1 in 1,000 year rainfall events. Modern urban drainage systems are typically built to cope with rainfall events between 1 in 20 and 1 in 30 years, though some older ones may flood in a 1 in 5 year rainfall event.

Features are displayed on the Surface water flooding map on **page 52 >**

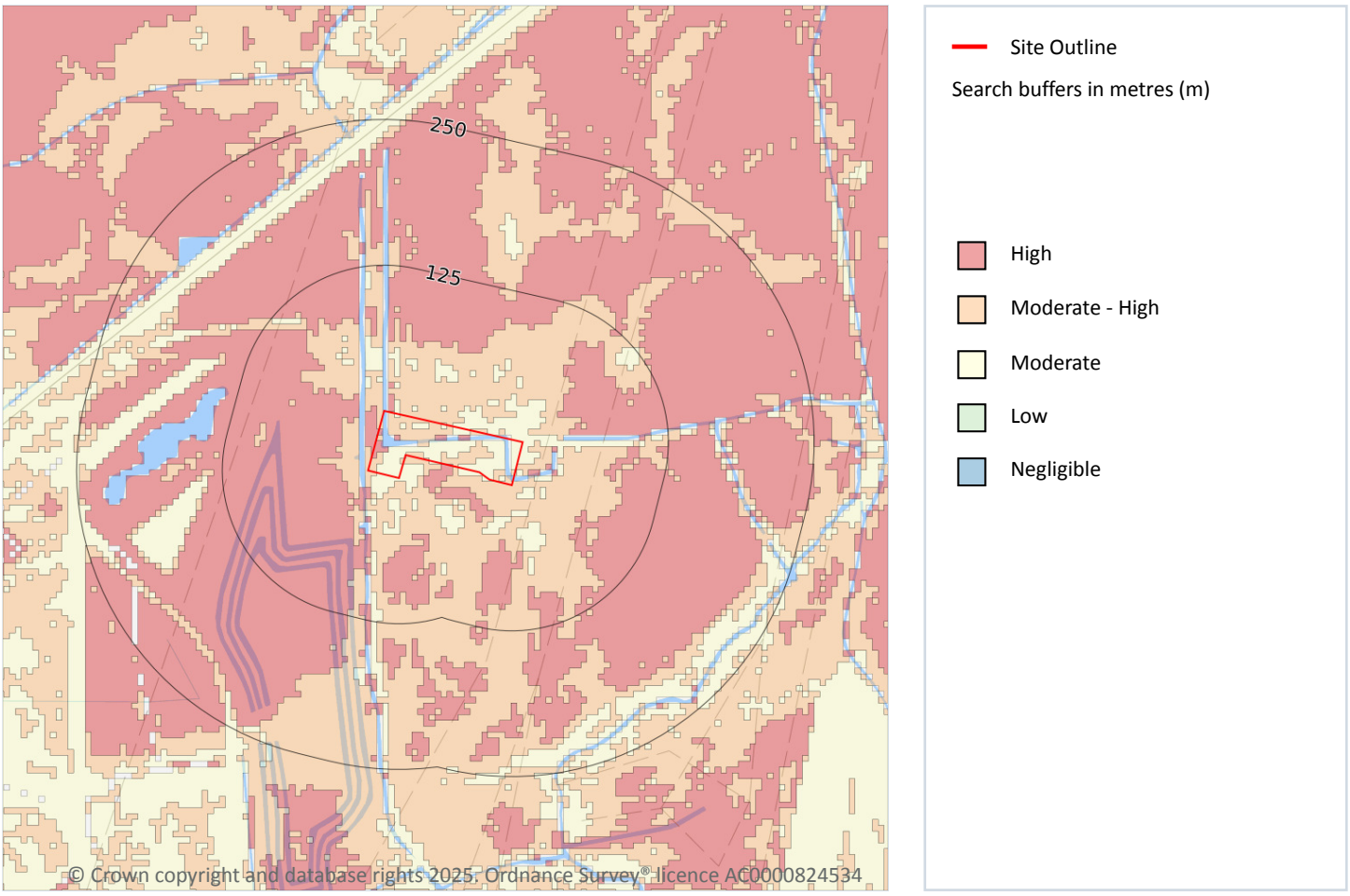
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on

a site. The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Between 0.3m and 1.0m
1 in 250 year	Between 0.3m and 1.0m
1 in 100 year	Between 0.1m and 0.3m
1 in 30 year	Negligible

This data is sourced from Ambiental Risk Analytics.

9 Groundwater flooding



9.1 Groundwater flooding

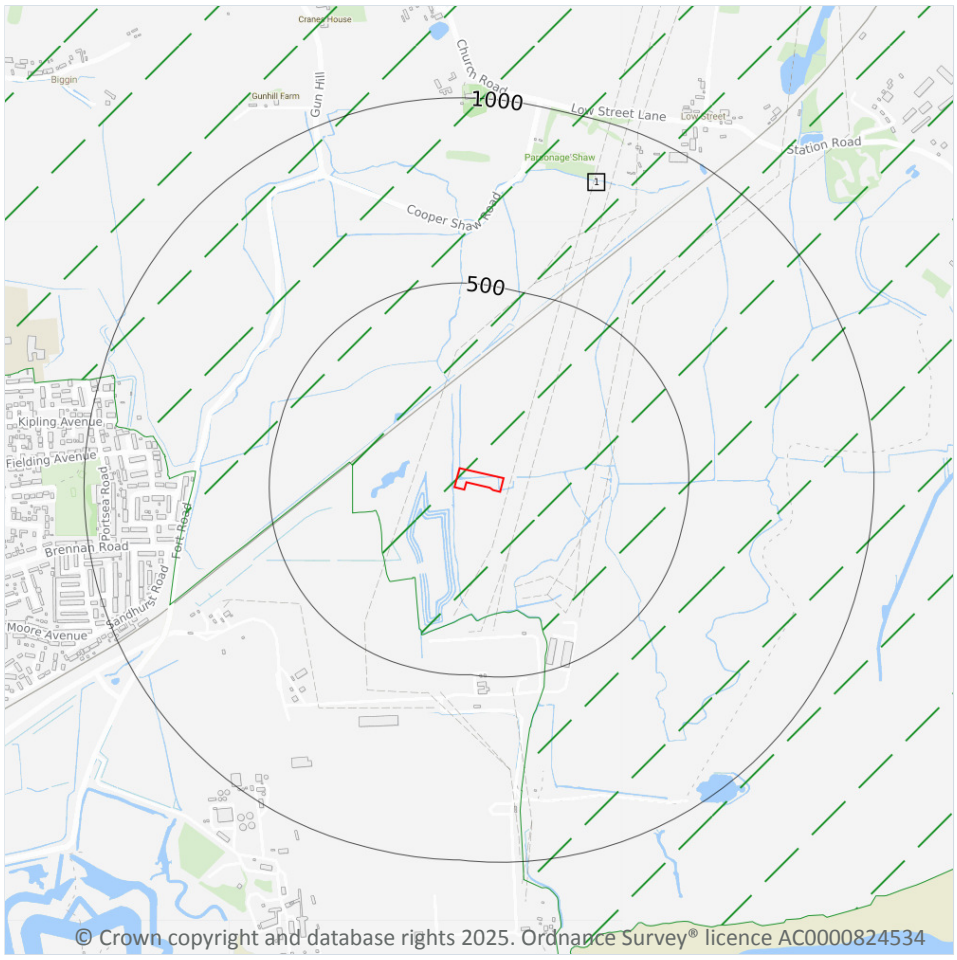
Highest risk on site	**High**
Highest risk within 50m	**High**

Groundwater flooding is caused by unusually high groundwater levels. It occurs when the water table rises above the ground surface or within underground structures such as basements or cellars. Groundwater flooding tends to exhibit a longer duration than surface water flooding, possibly lasting for weeks or months, and as a result it can cause significant damage to property. This risk assessment is based on a 1 in 100 year return period and a 5m Digital Terrain Model (DTM).

Features are displayed on the Groundwater flooding map on **page 54 >**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations



Site Outline

Search buffers in metres (m)

Green Belt

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m	0

Sites providing statutory protection for the best examples of UK flora, fauna, or geological or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs were re-notified under the Wildlife and Countryside Act 1981. Improved provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and (in Scotland) by the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment (Scotland) Act 2010.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m	0

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. They cover all aspects of wetland conservation and wise use, recognizing wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities. These sites cover a broad definition of wetland; marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, and even some marine areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.3 Special Areas of Conservation (SAC)

Records within 2000m	0

Areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.4 Special Protection Areas (SPA)

Records within 2000m	0

Sites classified by the UK Government under the EC Birds Directive, SPAs are areas of the most important habitat for rare (listed on Annex I to the Directive) and migratory birds within the European Union.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.5 National Nature Reserves (NNR)

Records within 2000m	0

Sites containing examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. They are managed to conserve their habitats, provide special opportunities for scientific study or to provide public recreation compatible with natural heritage interests.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.6 Local Nature Reserves (LNR)

Records within 2000m	0

Sites managed for nature conservation, and to provide opportunities for research and education, or simply enjoying and having contact with nature. They are declared by local authorities under the National Parks and Access to the Countryside Act 1949 after consultation with the relevant statutory nature conservation agency.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.7 Designated Ancient Woodland

Records within 2000m	0

Ancient woodlands are classified as areas which have been wooded continuously since at least 1600 AD. This includes semi-natural woodland and plantations on ancient woodland sites. 'Wooded continuously' does not mean there is or has previously been continuous tree cover across the whole site, and not all trees within the woodland have to be old.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.8 Biosphere Reserves

Records within 2000m	0

Biosphere Reserves are internationally recognised by UNESCO as sites of excellence to balance conservation and socioeconomic development between nature and people. They are recognised under the Man and the Biosphere (MAB) Programme with the aim of promoting sustainable development founded on the work of the local community.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.9 Forest Parks

Records within 2000m	0

These are areas managed by the Forestry Commission designated on the basis of recreational, conservation or scenic interest.

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m	0

A type of marine nature reserve in UK waters established under the Marine and Coastal Access Act (2009). They are designated with the aim to protect nationally important, rare or threatened habitats and species.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.11 Green Belt

Records within 2000m	1

Areas designated to prevent urban sprawl by keeping land permanently open.

Features are displayed on the Environmental designations map on **page 55 >**

ID	Location	Name	Local Authority name
1	**On site**	**London Green Belt**	**Thurrock**

This data is sourced from the Ministry of Housing, Communities and Local Government.

10.12 Proposed Ramsar sites

Records within 2000m	0

Ramsar sites are areas listed as a Wetland of International Importance under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention) 1971. The sites here supplied have a status of 'Proposed' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m	0

Special Areas of Conservation are areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive. Those sites supplied here are those with a status of 'Possible' having been identified for potential adoption under the framework.

This data is sourced from Natural England and Natural Resources Wales.

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m	0

Special Protection Areas (SPAs) are areas designated (or 'classified') under the European Union Wild Birds Directive for the protection of nationally and internationally important populations of wild birds. Those sites supplied here are those with a status of 'Potential' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m	0

Areas where nitrate concentrations in drinking water sources exceeded or was at risk of exceeding the limit of 50 mg/l set by the 1980 EC Drinking Water Directive. Voluntary agricultural measures as a means of reducing the levels of nitrate were introduced by DEFRA as MAFF, with payments being made to farmers who complied. The scheme was started as a pilot in 1990 in ten areas, later implemented within 32 areas. The scheme was closed to further new entrants in 1998, although existing agreements continued for their full term. All Nitrate Sensitive Areas fell within the areas designated as Nitrate Vulnerable Zones (NVZs) in 1996 under the EC Nitrate Directive (91/676/EEC).

This data is sourced from Natural England.

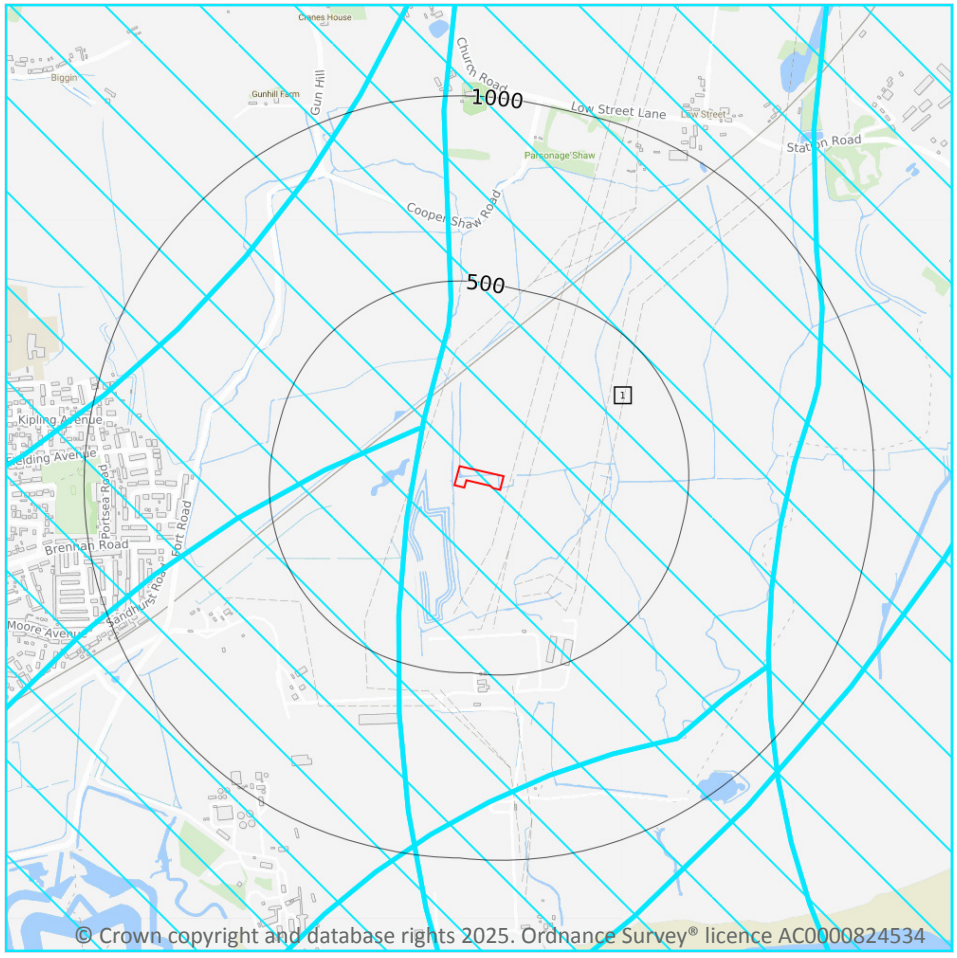
10.16 Nitrate Vulnerable Zones

Records within 2000m	0

Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

This data is sourced from Natural England and Natural Resources Wales.

SSSI Impact Zones and Units



Site Outline

Search buffers in metres (m)

SSSI Impact Risk Zones

SSSI Units

- Not recorded
- Favourable
- Unfavourable - Recovering
- Unfavourable - No change
- Unfavourable - Declining
- Partially destroyed
- Destroyed

10.17 SSSI Impact Risk Zones

Records on site	1

Developed to allow rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts.

Features are displayed on the SSSI Impact Zones and Units map on **page 60 >**

ID	Location	Type of developments requiring consultation
1	**On site**	**https://irz.geodata.org.uk/IRZ/step2.html?irzcode=4321055432040&notes=11401&location=566712,179285%20(IRZ%20polygon%20centre)**

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m	0

Divisions of SSSIs used to record management and condition details. Units are the smallest areas for which Natural England gives a condition assessment, however, the size of units varies greatly depending on the types of management and the conservation interest.

This data is sourced from Natural England and Natural Resources Wales.

11 Visual and cultural designations

11.1 World Heritage Sites

Records within 250m	0

Sites designated for their globally important cultural or natural interest requiring appropriate management and protection measures. World Heritage Sites are designated to meet the UK's commitments under the World Heritage Convention.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.2 Area of Outstanding Natural Beauty

Records within 250m	0

Areas of Outstanding Natural Beauty (AONB) are conservation areas, chosen because they represent 18% of the finest countryside. Each AONB has been designated for special attention because of the quality of their flora, fauna, historical and cultural associations, and/or scenic views. The National Parks and Access to the Countryside Act of 1949 created AONBs and the Countryside and Rights of Way Act, 2000 added further regulation and protection. There are likely to be restrictions to some developments within these areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

11.3 National Parks

Records within 250m	0

In England and Wales, the purpose of National Parks is to conserve and enhance landscapes within the countryside whilst promoting public enjoyment of them and having regard for the social and economic well-being of those living within them. In Scotland National Parks have the additional purpose of promoting the sustainable use of the natural resources of the area and the sustainable social and economic development of its communities. The National Parks and Access to the Countryside Act 1949 established the National Park designation in England and Wales, and The National Parks (Scotland) Act 2000 in Scotland.

This data is sourced from Natural England, Natural Resources Wales and the Scottish Government.

11.4 Listed Buildings

Records within 250m	0

Buildings listed for their special architectural or historical interest. Building control in the form of 'listed building consent' is required in order to make any changes to that building which might affect its special interest. Listed buildings are graded to indicate their relative importance, however building controls apply to all buildings equally, irrespective of their grade, and apply to the interior and exterior of the building in its entirety, together with any curtilage structures.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.5 Conservation Areas

Records within 250m	0

Local planning authorities are obliged to designate as conservation areas any parts of their own area that are of special architectural or historic interest, the character and appearance of which it is desirable to preserve or enhance. Designation of a conservation area gives broader protection than the listing of individual buildings. All the features within the area, listed or otherwise, are recognised as part of its character. Conservation area designation is the means of recognising the importance of all factors and of ensuring that planning decisions address the quality of the landscape in its broadest sense.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.6 Scheduled Ancient Monuments

Records within 250m	0

A scheduled monument is an historic building or site that is included in the Schedule of Monuments kept by the Secretary of State for Digital, Culture, Media and Sport. The regime is set out in the Ancient Monuments and Archaeological Areas Act 1979. The Schedule of Monuments has c.20,000 entries and includes sites such as Roman remains, burial mounds, castles, bridges, earthworks, the remains of deserted villages and industrial sites. Monuments are not graded, but all are, by definition, considered to be of national importance.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

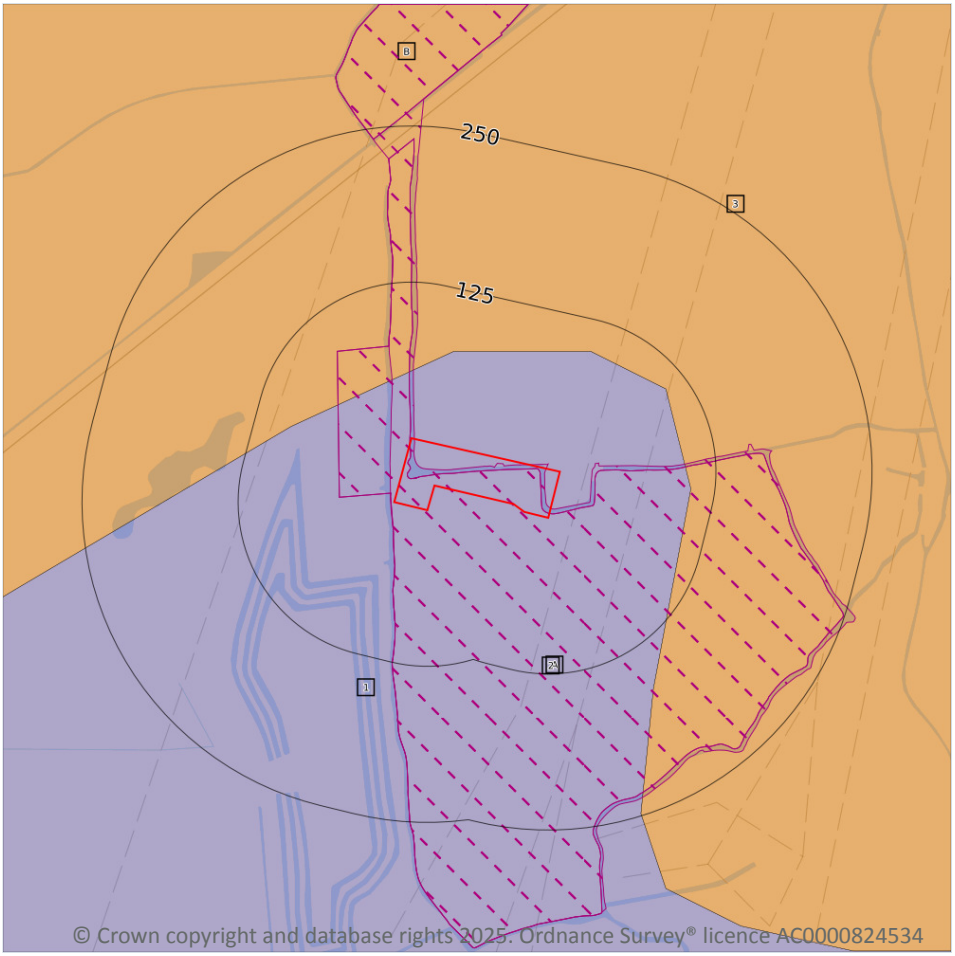
11.7 Registered Parks and Gardens

Records within 250m	0

Parks and gardens assessed to be of particular interest and of special historic interest. The emphasis being on 'designed' landscapes, rather than on planting or botanical importance. Registration is a 'material consideration' in the planning process, meaning that planning authorities must consider the impact of any proposed development on the special character of the landscape.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

12 Agricultural designations



Site Outline
Search buffers in metres (m)
Grade 1 - excellent quality
Grade 2 - very good quality
Grade 3 - good to moderate quality
Grade 3a - good quality
Grade 3b - moderate quality
Grade 4 - poor quality
Grade 5 - very poor quality
Non-agricultural land
Urban land
Exclusion land
Tree felling licences
Open Access land

12.1 Agricultural Land Classification

Records within 250m	2

Classification of the quality of agricultural land taking into consideration multiple factors including climate, physical geography and soil properties. It should be noted that the categories for the grading of agricultural land are not consistent across England, Wales and Scotland.

Features are displayed on the Agricultural designations map on **page 64 >**

ID	Location	Classification	Description
1	**On site**	**Non Agricultural**	**Non-agricultural/no quality assigned**

ID	Location	Classification	Description
3	49m NW	Grade 3	Good to moderate quality agricultural land. Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.

This data is sourced from Natural England.

12.2 Open Access Land

Records within 250m	5

The Countryside and Rights of Way Act 2000 (CROW Act) gives a public right of access to land without having to use paths. Access land includes mountains, moors, heaths and downs that are privately owned. It also includes common land registered with the local council and some land around the England Coast Path. Generally permitted activities on access land are walking, running, watching wildlife and climbing.

Features are displayed on the Agricultural designations map on **page 64 >**

ID	Location	Name	Classification	Other relevant legislation
2	**On site**	**West Tilbury Commons**	**Section 15 Land**	**POCA 1893**
A	**On site**	**The Green, Hall Hill, Fort Road, Parsonage, Walton and Tilbury Fort Commons**	**Section 4 Conclusive Registered Common Land**	**-**
A	**On site**	**The Green, Hall Hill Common, Fort Road Common, Par**	**Section 15 Land**	**S.193 - Urban Borough District**
B	241m N	The Green, Hall Hill, Fort Road, Parsonage, Walton and Tilbury Fort Commons	Section 4 Conclusive Registered Common Land	-
B	241m N	The Green, Hall Hill Common, Fort Road Common, Par	Section 15 Land	S.193 - Urban Borough District

This data is sourced from Natural England and Natural Resources Wales.

12.3 Tree Felling Licences

Records within 250m	0

Felling Licence Application (FLA) areas approved by Forestry Commission England. Anyone wishing to fell trees must ensure that a licence or permission under a grant scheme has been issued by the Forestry Commission before any felling is carried out or that one of the exceptions apply.

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m	0

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. The schemes identified may be historical schemes that have now expired, or may still be active.

This data is sourced from Natural England.

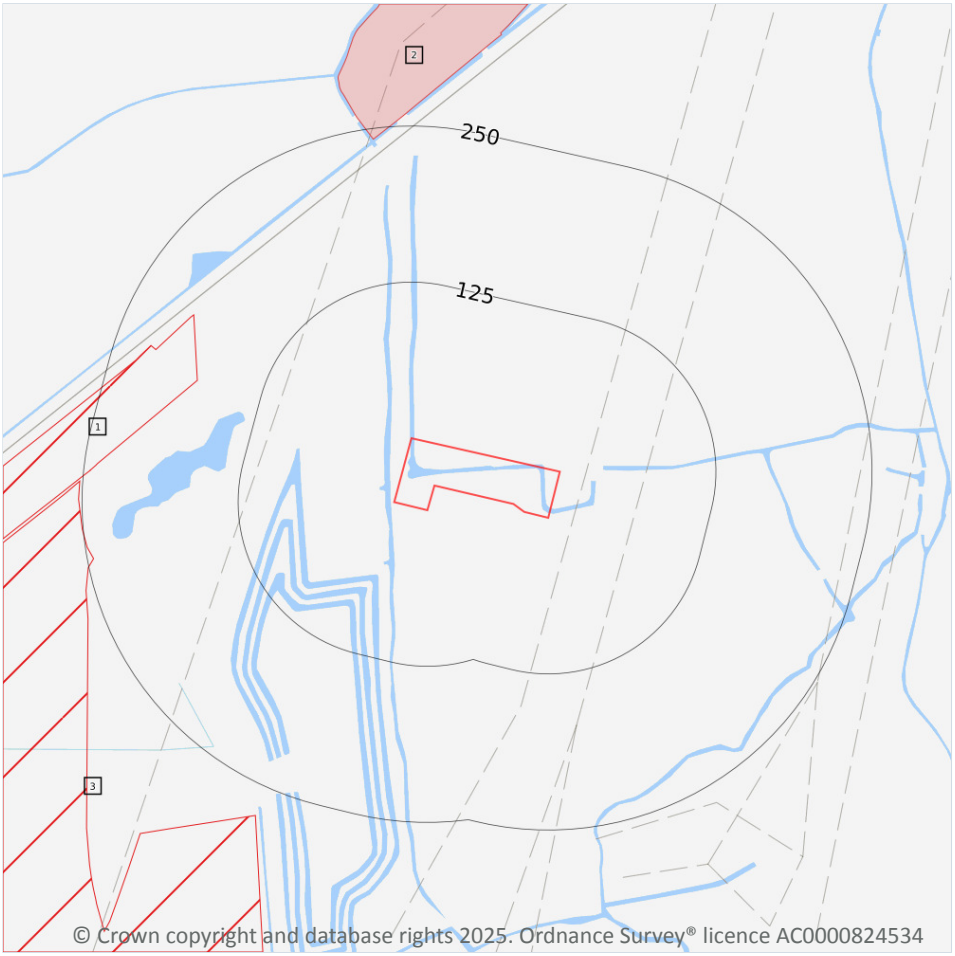
12.5 Countryside Stewardship Schemes

Records within 250m	0

Countryside Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. Main objectives are to improve the farmed environment for wildlife and to reduce diffuse water pollution.

This data is sourced from Natural England.

13 Habitat designations



Site Outline

Search buffers in metres (m)

Priority Habitat Inventory
Open Mosaic Habitat
Limestone Pavement Orders

Habitat Networks
Primary Habitat
Restorable Habitat
Associated Habitats
Habitat Restoration-Creation
Network Enhancement Zone 1
Network Enhancement Zone 2

13.1 Priority Habitat Inventory

Records within 250m	1

Habitats of principal importance as named under Natural Environment and Rural Communities Act (2006) Section 41.

Features are displayed on the Habitat designations map on **page 67 >**

ID	Location	Main Habitat	Other habitats
2	241m N	Coastal and floodplain grazing marsh	Main habitat: CFPGM (INV > 50%)

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m	0

Habitat networks for 18 priority habitat networks (based primarily, but not exclusively, on the priority habitat inventory) and areas suitable for the expansion of networks through restoration and habitat creation.

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m	2

Sites verified as Open Mosaic Habitat. Mosaic habitats are brownfield sites that are identified under the UK Biodiversity Action Plan as a priority habitat due to the habitat variation within a single site, supporting an array of invertebrates.

Features are displayed on the Habitat designations map on **page 67 >**

ID	Location	Site reference	Identification confidence	Primary source	Secondary source	Tertiary source
1	178m W	Disused railway sidings, Tilbury Power Station	Medium	BugLife All Of A Buzz Data	UK Perspectives Aerial Photography	-
3	245m W	Tilbury Power Station Lytag site	High	BugLife All Of A Buzz Data	UK Perspectives Aerial Photography	-

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

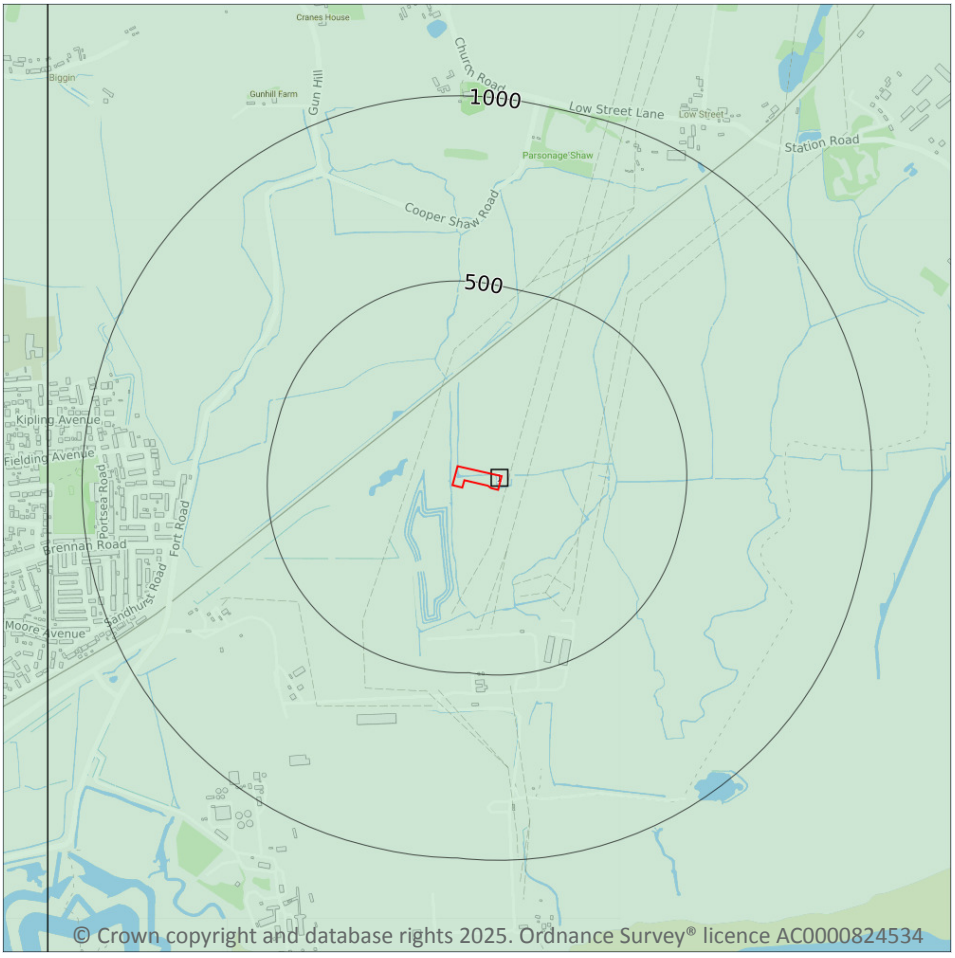
Records within 250m	0

Limestone pavements are outcrops of limestone where the surface has been worn away by natural means over millennia. These rocks have the appearance of paving blocks, hence their name. Not only do they have geological interest, they also provide valuable habitats for wildlife. These habitats are threatened due to their removal for use in gardens and water features. Many limestone pavements have been designated as SSSIs which affords them some protection. In addition, Section 34 of the Wildlife and Countryside Act 1981 gave them additional protection via the creation of Limestone Pavement Orders, which made it a criminal offence to remove any part of the outcrop. The associated Limestone Pavement Priority Habitat is part of

the UK Biodiversity Action Plan priority habitat in England.

This data is sourced from Natural England.

14 Geology 1:10,000 scale - Availability



Site Outline

Search buffers in metres (m)

Full coverage

Partial coverage

No coverage

14.1 10k Availability

Records within 500m	1

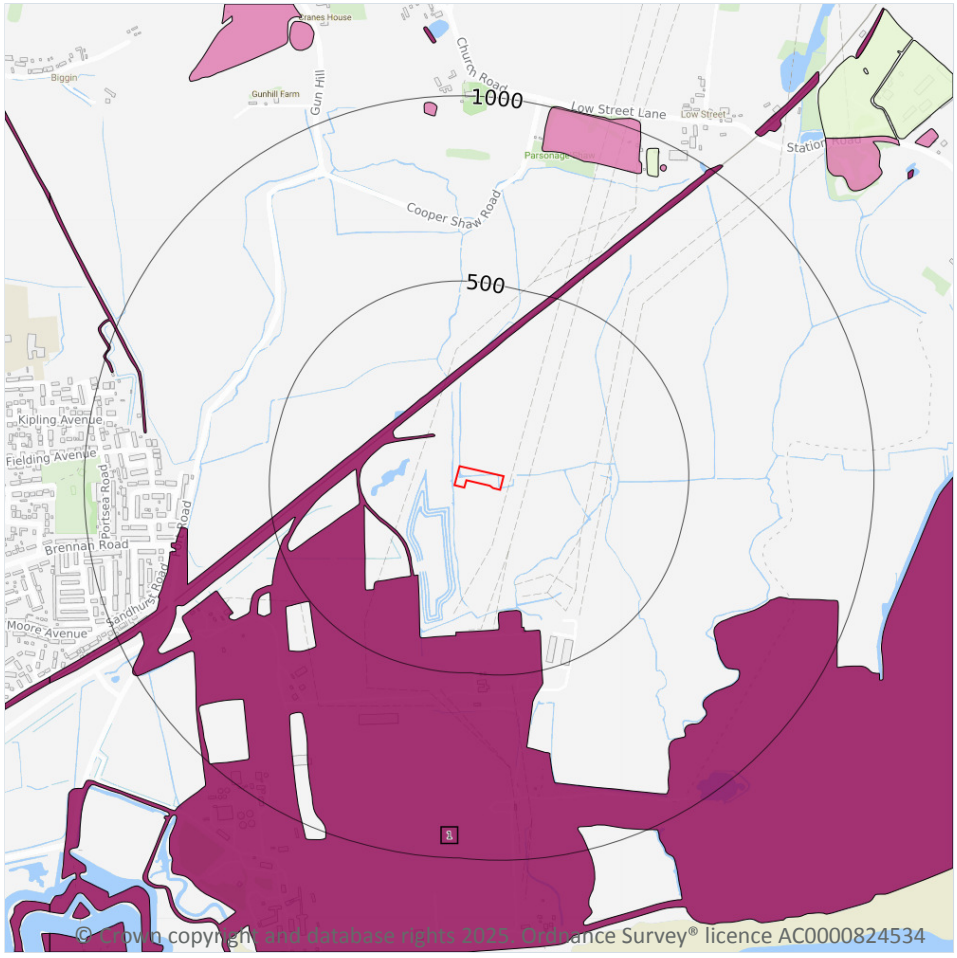
An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 70 >**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**Full**	**TQ67NE**

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Artificial and made ground



Site Outline

Search buffers in metres (m)

- Reclaimed ground
- Made ground
- Worked ground
- Infilled ground
- Disturbed ground
- Landscaped ground

14.2 Artificial and made ground (10k)

Records within 500m	1

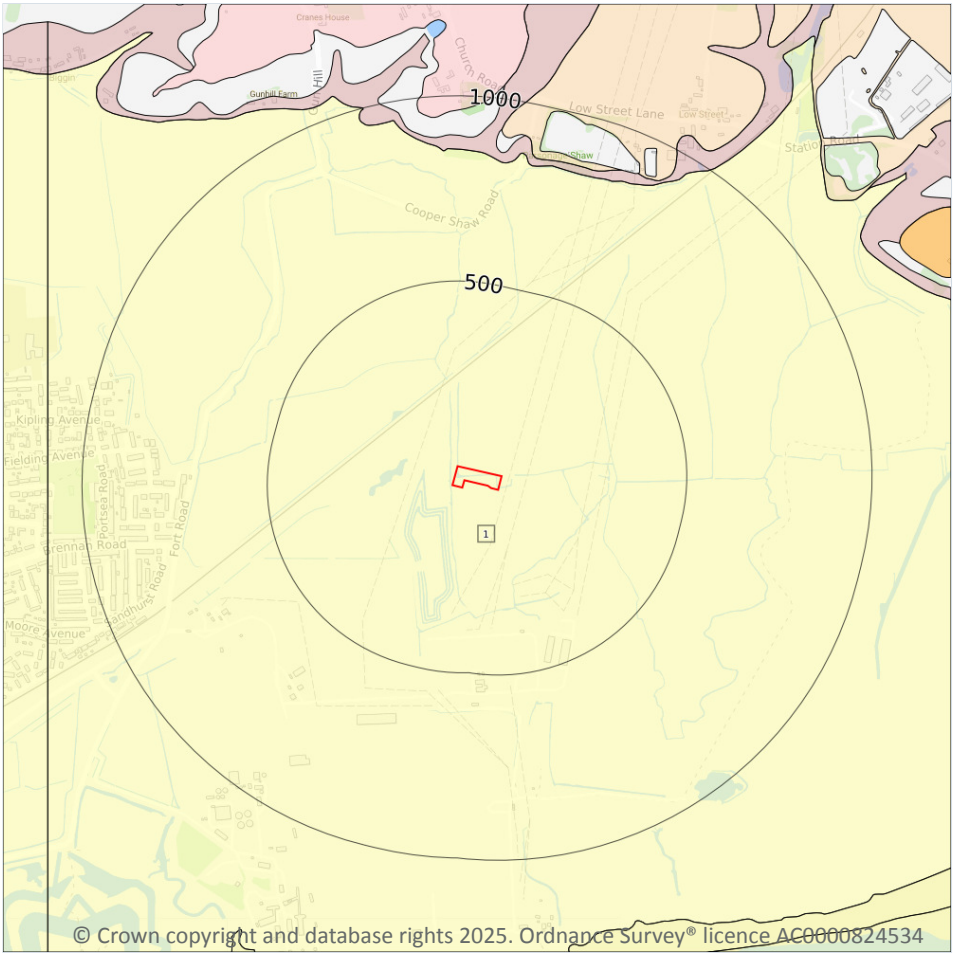
Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on **page 71 >**

ID	Location	LEX Code	Description	Rock description
1	106m NW	MGR-ARTDP	Made Ground (Undivided)	Artificial deposit

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (10k)

Superficial geology (10k)
Please see table for more details.

14.3 Superficial geology (10k)

Records within 500m	1

Superficial geological deposits at 1:10,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:10,000 scale - Superficial map on **page 72 >**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**ALV-Z**	**Alluvium-Silt**	**Silt**

This data is sourced from the British Geological Survey.

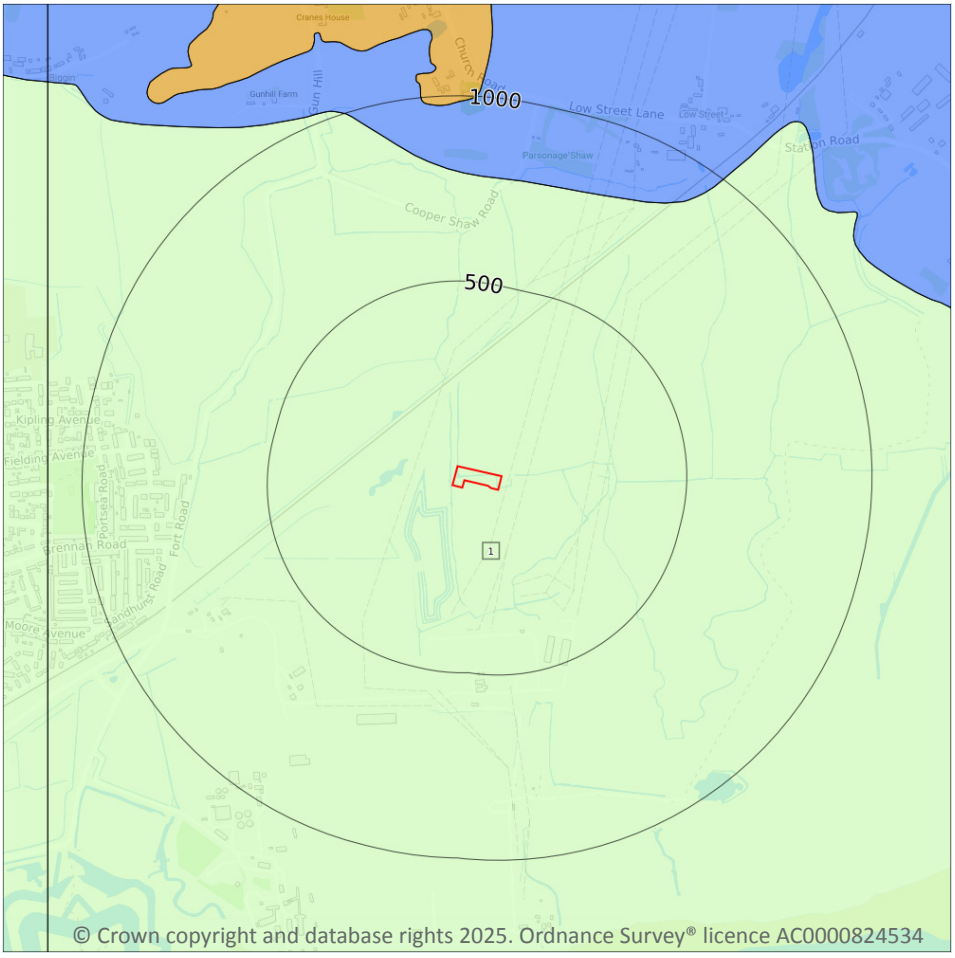
14.4 Landslip (10k)

Records within 500m	0

Mass movement deposits on BGS geological maps at 1:10,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (10k)

Bedrock geology (10k)
Please see table for more details.

14.5 Bedrock geology (10k)

Records within 500m	1

Bedrock geology at 1:10,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 74 >**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**SECK-CHLK**	**Seaford Chalk Formation-Chalk**	**Coniacian**

This data is sourced from the British Geological Survey.

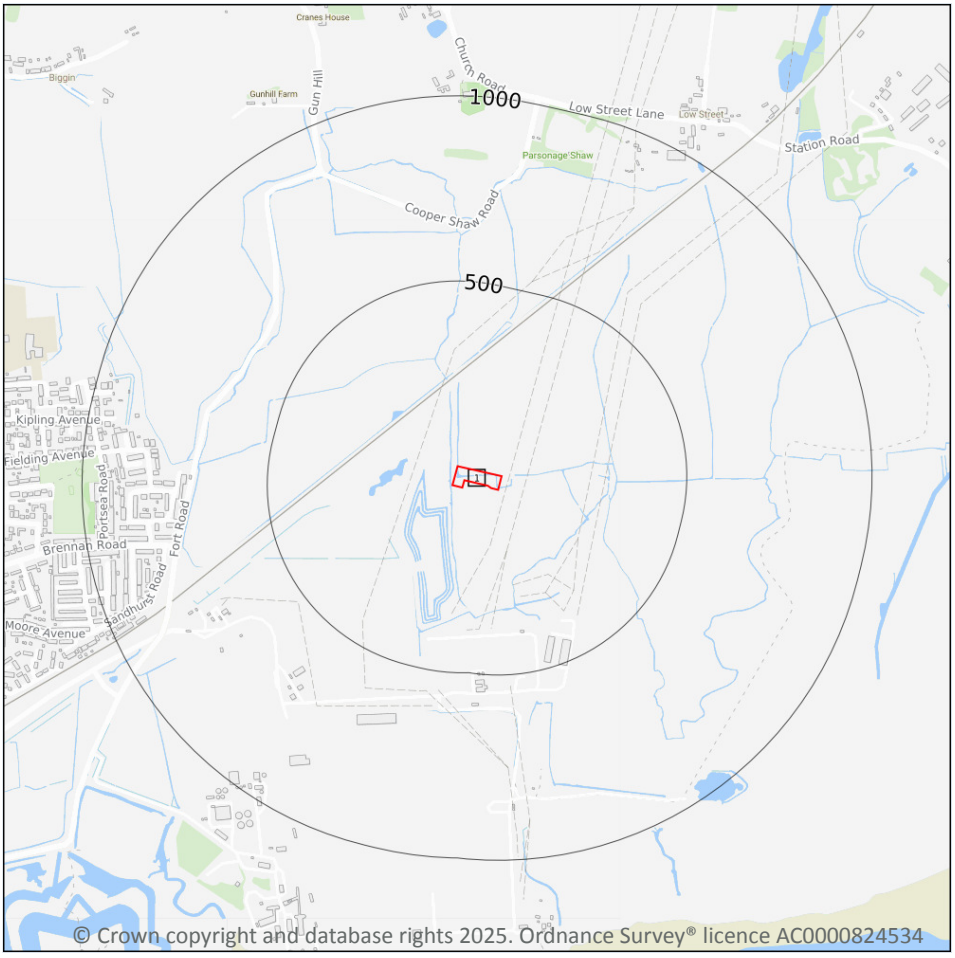
14.6 Bedrock faults and other linear features (10k)

Records within 500m	0

Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

This data is sourced from the British Geological Survey.

15 Geology 1:50,000 scale - Availability



Site Outline

Search buffers in metres (m)

Geological map tile

15.1 50k Availability

Records within 500m	1

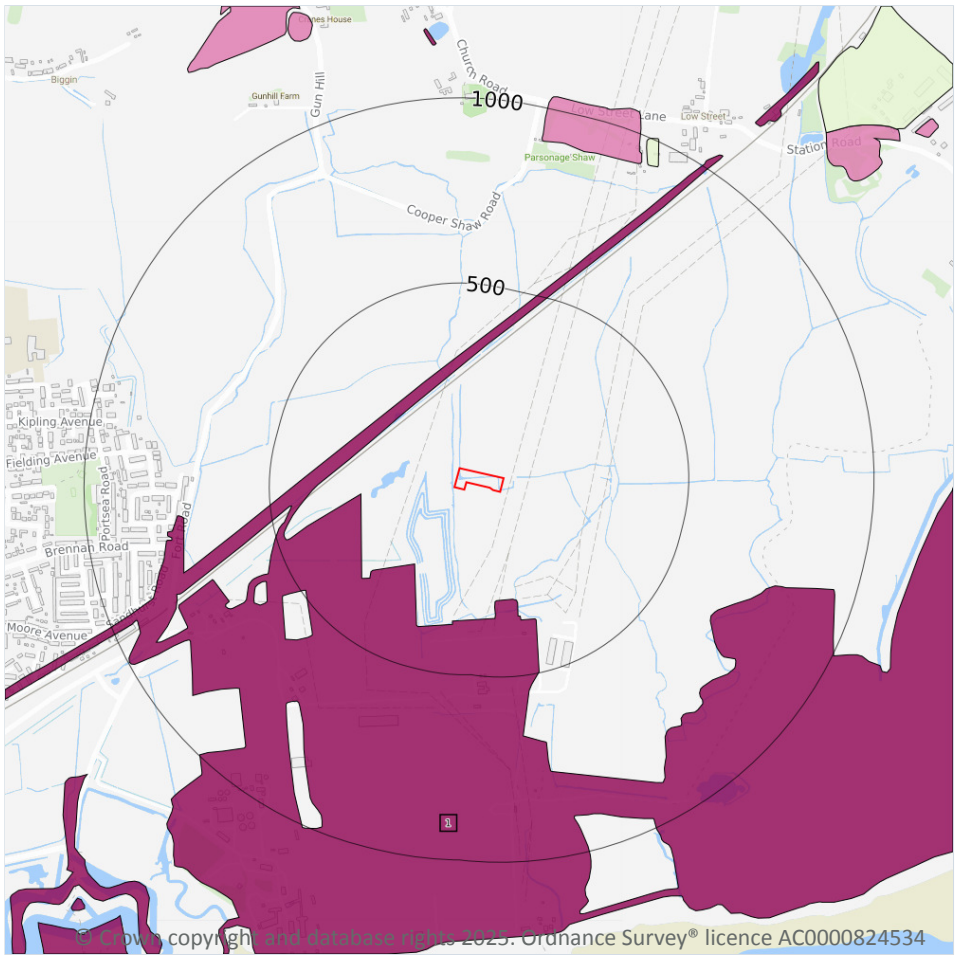
An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:50,000 scale - Availability map on **page 76 >**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**Full**	**EW271_dartford_v4**

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Artificial and made ground



Site Outline

Search buffers in metres (m)

- Made ground
- Worked ground
- Infilled ground
- Disturbed ground
- Landscaped ground

15.2 Artificial and made ground (50k)

Records within 500m	1

Details of made, worked, infilled, disturbed and landscaped ground at 1:50,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:50,000 scale - Artificial and made ground map on **page 77 >**

ID	Location	LEX Code	Description	Rock description
1	211m NW	MGR-ARTDP	Made Ground	Artificial deposit

This data is sourced from the British Geological Survey.

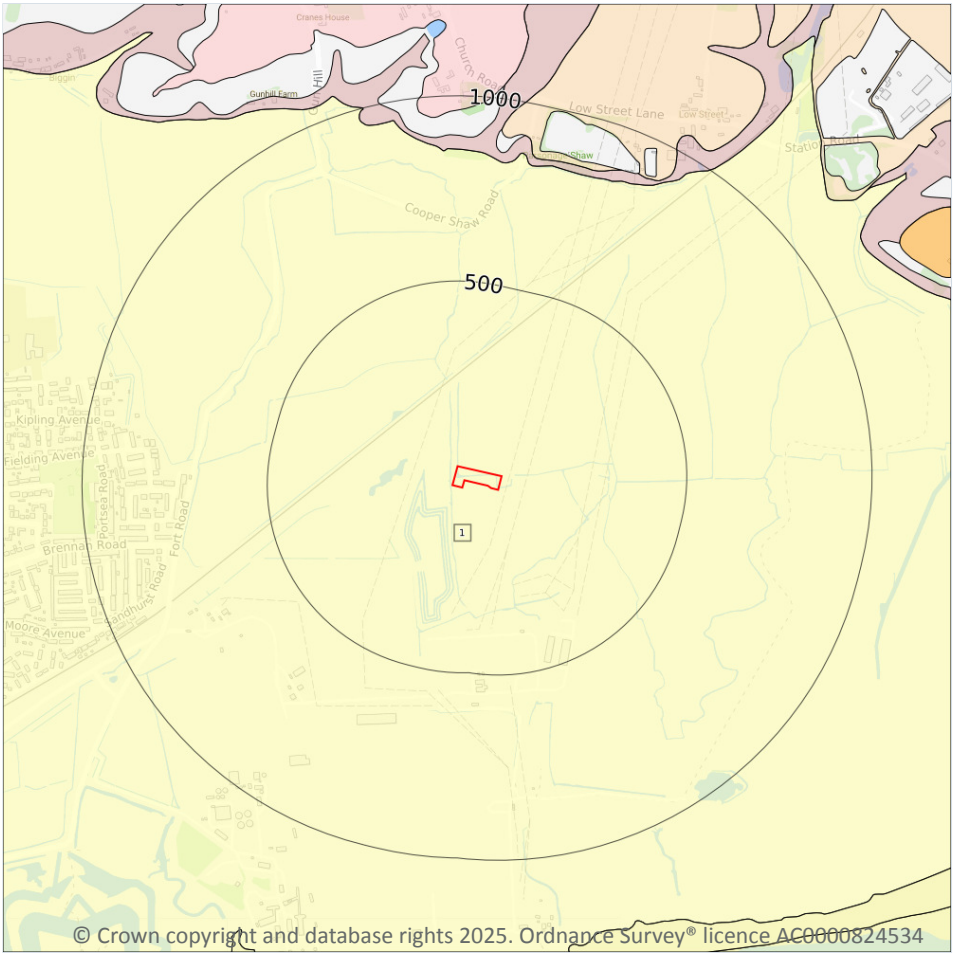
15.3 Artificial ground permeability (50k)

Records within 50m	0

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any artificial deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (50k)

Superficial geology (50k)
Please see table for more details.

15.4 Superficial geology (50k)

Records within 500m	1

Superficial geological deposits at 1:50,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:50,000 scale - Superficial map on **page 79 >**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**ALV-Z**	**Alluvium**	**Silt**

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m	1

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any superficial deposits (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Intergranular**	**Moderate**	**Very Low**

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m	0

Mass movement deposits on BGS geological maps at 1:50,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.

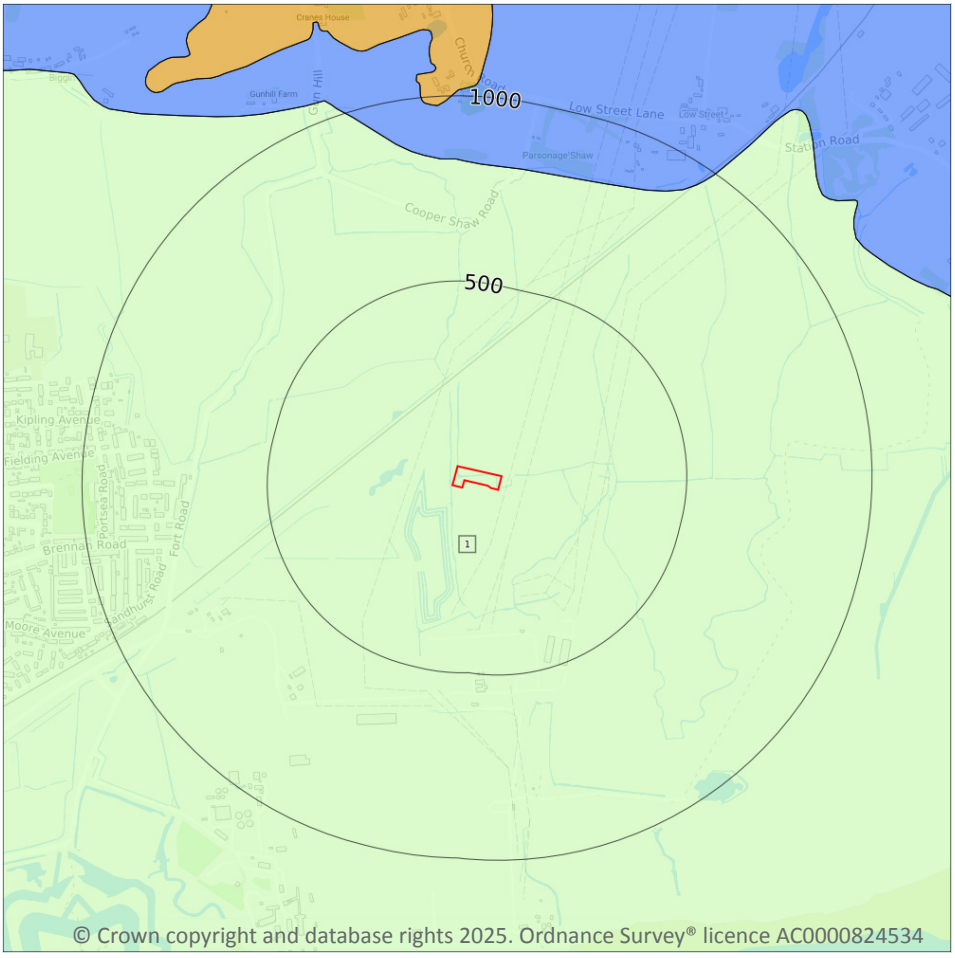
15.7 Landslip permeability (50k)

Records within 50m	0

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any landslip deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (50k)

Bedrock geology (50k)
Please see table for more details.

15.8 Bedrock geology (50k)

Records within 500m	1

Bedrock geology at 1:50,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 81 >**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**SECK-CHLK**	**Seaford Chalk Formation-Chalk**	**Coniacian**

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m	**1**

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of bedrock (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Fracture**	**Very High**	**Very High**

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m	**0**

Linear features at the ground or bedrock surface at 1:50,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

This data is sourced from the British Geological Survey.

16 Boreholes

16.1 BGS Boreholes

Records within 250m	0

The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several thousand metres deep.

This data is sourced from the British Geological Survey.

17 Natural ground subsidence - Shrink swell clays

Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.1 Shrink swell clays

Records within 50m	1

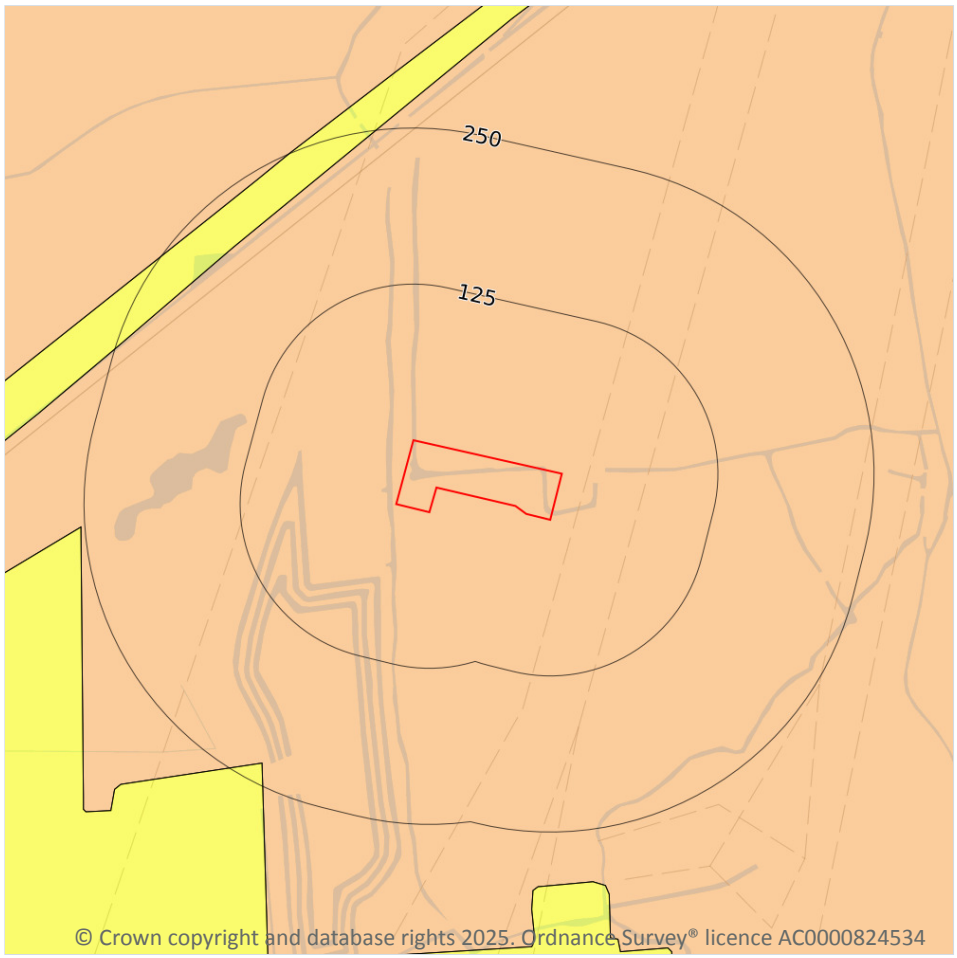
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and local drainage).

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 84 >**

Location	Hazard rating	Details
On site	**Low**	**Ground conditions predominantly medium plasticity.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Running sands



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.2 Running sands

Records within 50m	1

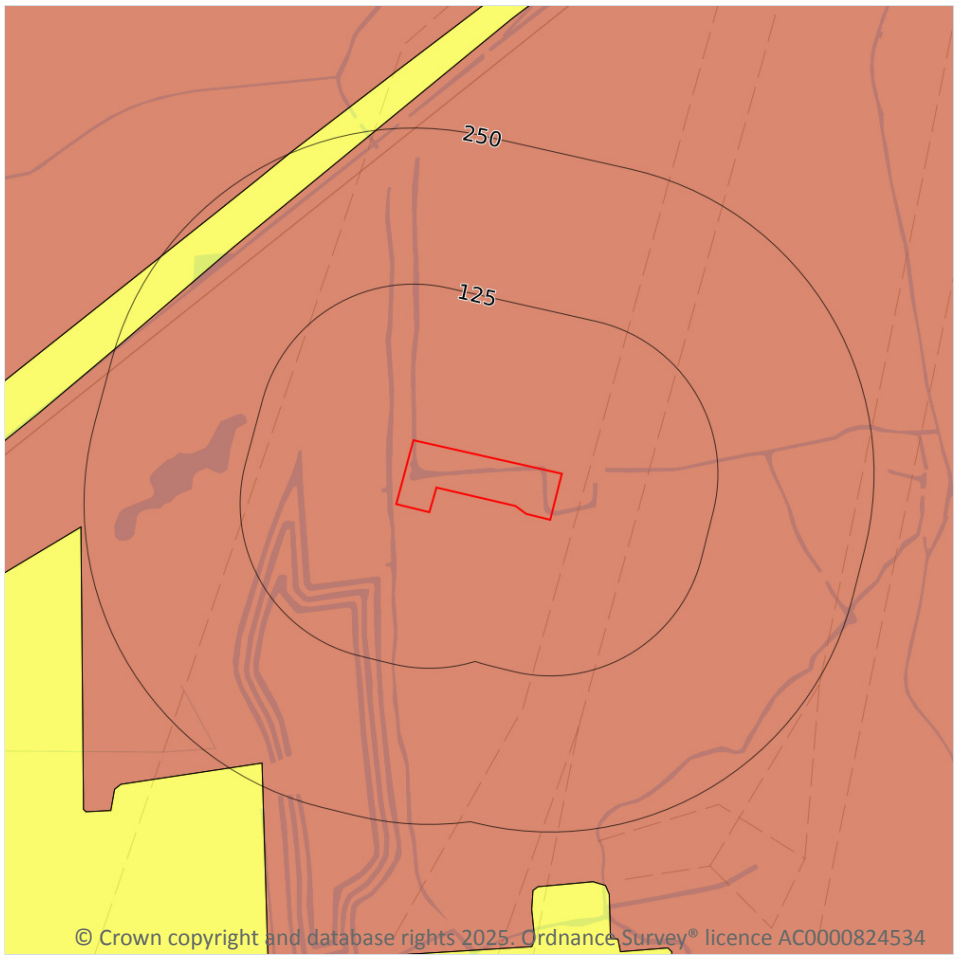
The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

Features are displayed on the Natural ground subsidence - Running sands map on **page 85 >**

Location	Hazard rating	Details
On site	**Low**	**Running sand conditions may be present. Constraints may apply to land uses involving excavation or the addition or removal of water.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Compressible deposits



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.3 Compressible deposits

Records within 50m	1

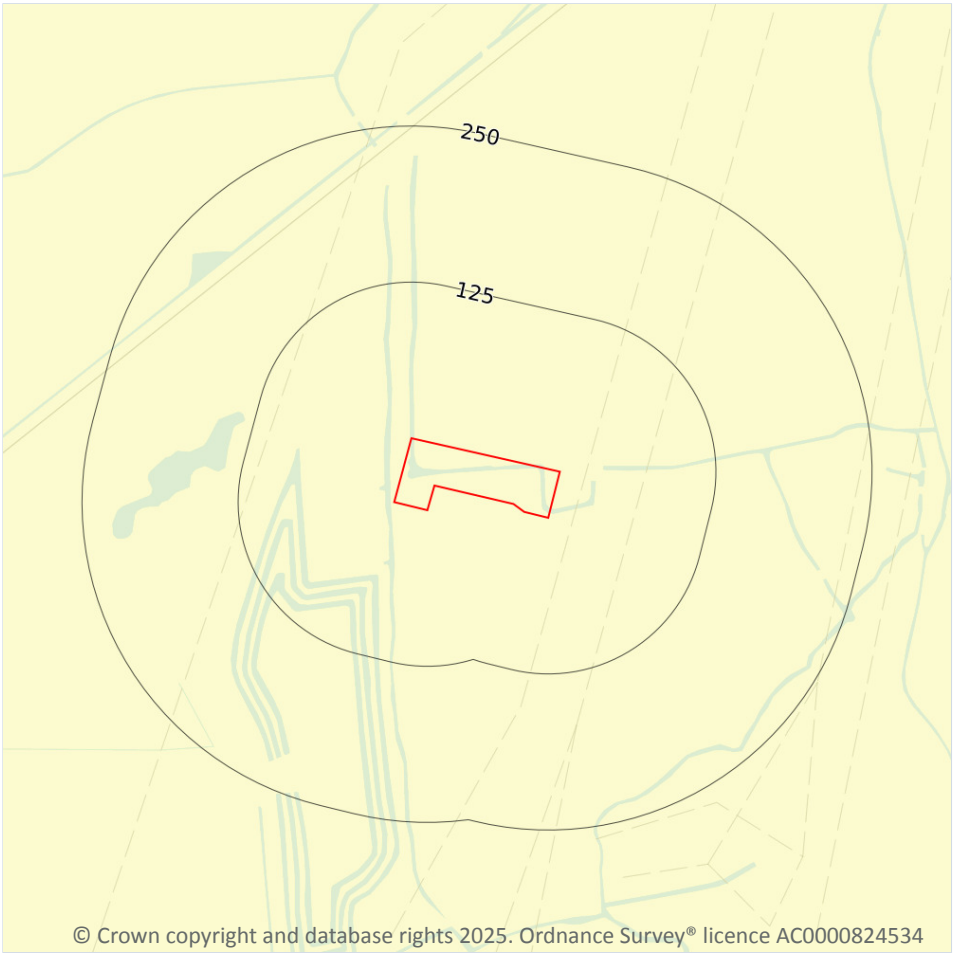
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 86 >**

Location	Hazard rating	Details
On site	**High**	**Highly compressible strata present. Significant constraint on land use depending on thickness.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Collapsible deposits



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.4 Collapsible deposits

Records within 50m	1

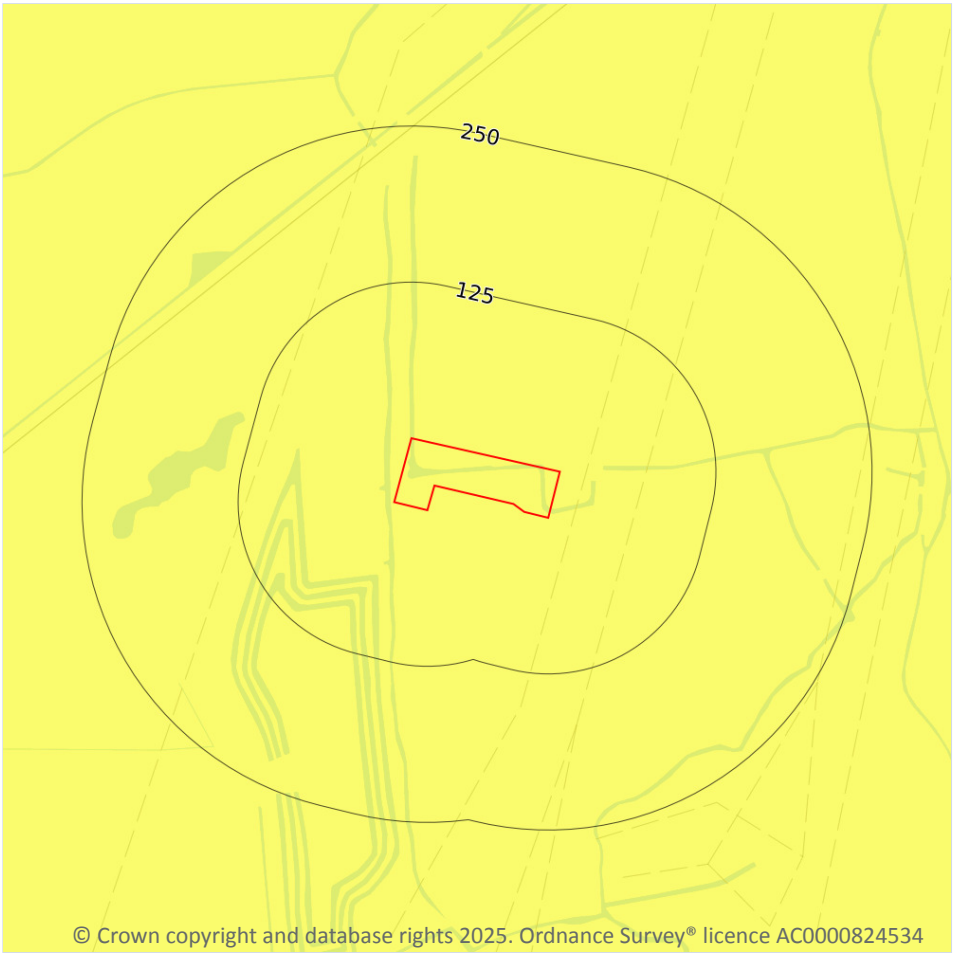
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 87 >**

Location	Hazard rating	Details
On site	**Negligible**	**Deposits with potential to collapse when loaded and saturated are believed not to be present.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Landslides



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.5 Landslides

Records within 50m	1

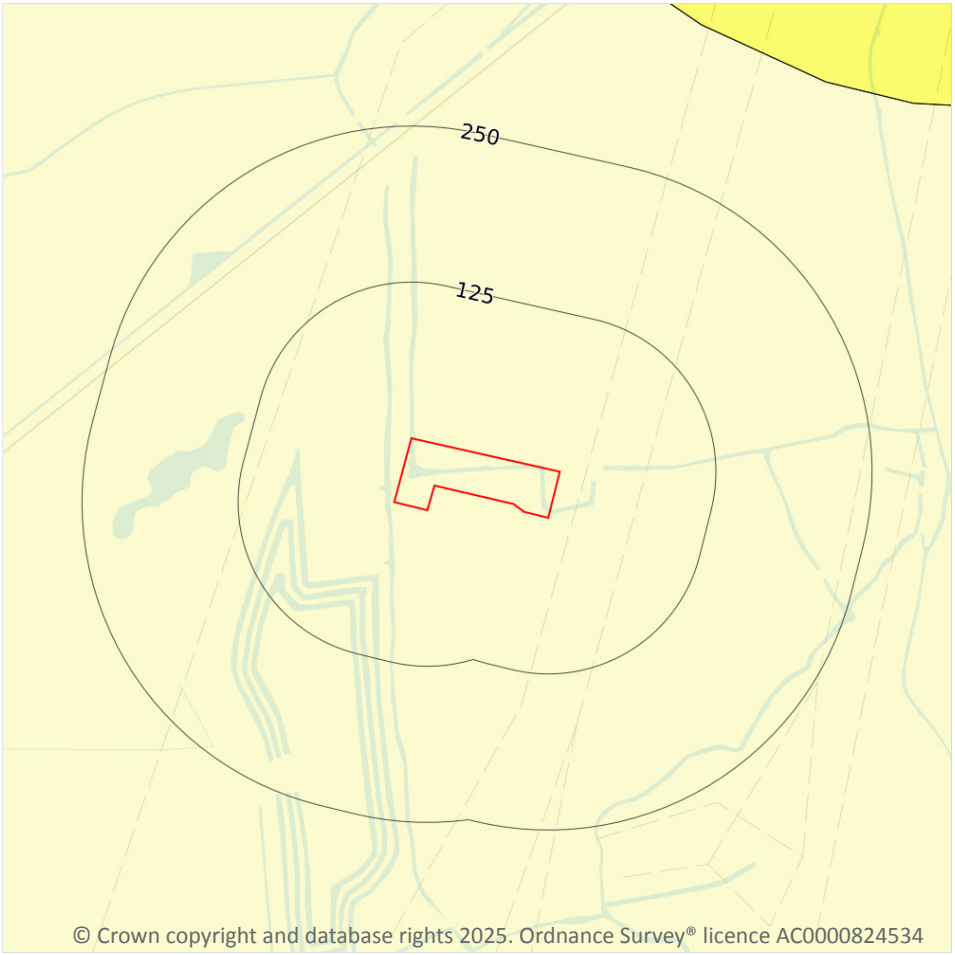
The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

Features are displayed on the Natural ground subsidence - Landslides map on **page 88 >**

Location	Hazard rating	Details
On site	**Very low**	**Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Ground dissolution of soluble rocks



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.6 Ground dissolution of soluble rocks

Records within 50m	1

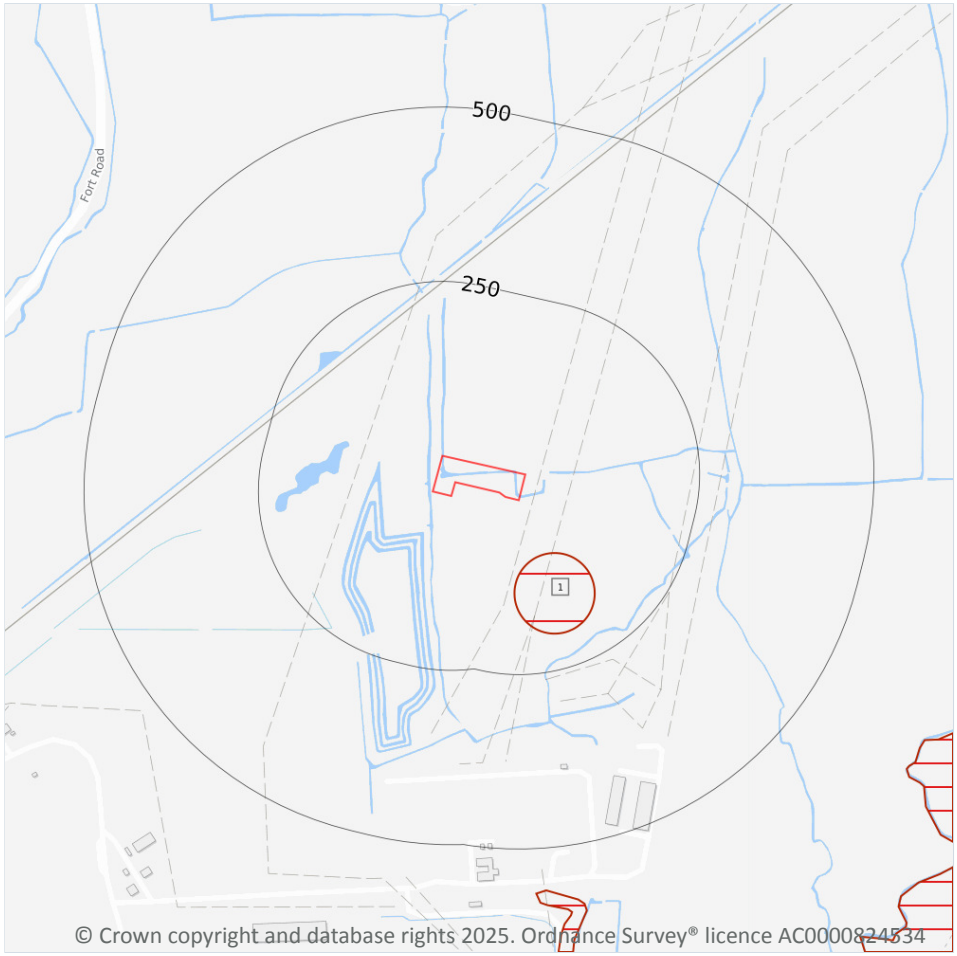
The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 89 >**

Location	Hazard rating	Details
On site	**Negligible**	**Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.**

This data is sourced from the British Geological Survey.

18 Mining and ground workings



Site Outline

Search buffers in metres (m)

BritPits

Surface ground workings

Underground workings

Underground mining extents

Historical mineral planning areas

TCA non-coal mining

Non Coal Mining

Sporadic underground mining of restricted extent possible

Localised small scale underground mining possible

Small scale mining possible

Underground mining known or likely within or in close proximity

Underground mining known within or in very close proximity

18.1 BritPits

Records within 500m	0

BritPits (an abbreviation of British Pits) is a database maintained by the British Geological Survey of currently active and closed surface and underground mineral workings. Details of major mineral handling sites, such as wharfs and rail depots are also held in the database.

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m	1

Historical land uses identified from Ordnance Survey® mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled.

Features are displayed on the Mining and ground workings map on **page 91 >**

ID	Location	Land Use	Year of mapping	Mapping scale
1	85m S	Unspecified Level	1955	1:10560

This is data is sourced from Ordnance Survey®/Groundsure.

18.3 Underground workings

Records within 1000m	0

Historical land uses identified from Ordnance Survey® mapping that indicate the presence of underground workings e.g. mine shafts.

This is data is sourced from Ordnance Survey®/Groundsure.

18.4 Underground mining extents

Records within 500m	0

This data identifies underground mine workings that could present a potential risk, including adits and seam workings. These features have been identified from BGS Geological mapping and mine plans sourced from the BGS and various collections and sources.

This data is sourced from Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m	0

Boundaries of mineral planning permissions for England and Wales. This data was collated between the 1940s (and retrospectively to the 1930s) and the mid 1980s. The data includes permitted, withdrawn and refused permissions.

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m	3

The potential for historical non-coal mining to have affected an area. The assessment is drawn from expert knowledge and literature in addition to the digital geological map of Britain. Mineral commodities may be divided into seven general categories - vein minerals, chalk, oil shale, building stone, bedded ores, evaporites and 'other' commodities (including ball clay, jet, black marble, graphite and chert).

Features are displayed on the Mining and ground workings map on **page 91 >**

ID	Location	Name	Commodity	Class	Likelihood
-	817m N	Not available	Sand	A	Underground mine workings are uncommon, although the geology is similar to that worked elsewhere. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
-	862m N	Not available	Chalk	A	Underground mine workings are uncommon, although the geology is similar to that worked elsewhere. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
-	975m N	Not available	Chalk	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.

This data is sourced from the British Geological Survey.

18.7 JPB mining areas

Records on site	0

Areas which could be affected by former coal and other mining. This data includes some mine plans unavailable to the Coal Authority.

This data is sourced from Johnson Poole and Bloomer.

18.8 The Coal Authority non-coal mining

Records within 500m	0

This data provides an indication of the potential zone of influence of recorded underground non-coal mining workings. Any and all analysis and interpretation of Coal Authority Data in this report is made by Groundsure, and is in no way supported, endorsed or authorised by the Coal Authority. The use of the data is restricted to the terms and provisions contained in this report. Data reproduced in this report may be the copyright of the Coal Authority and permission should be sought from Groundsure prior to any re-use.

This data is sourced from The Coal Authority.

18.9 Researched mining

Records within 500m	0

This data indicates areas of potential mining identified from alternative or archival sources, including; BGS Geological paper maps, Lidar data, aerial photographs (from World War II onwards), archaeological data services, websites, Tithe maps, and various text/plans from collected books and reports. Some of this data is approximate and Groundsure have interpreted the resultant risk area and, where possible, specific areas of risk have been captured.

This data is sourced from Groundsure.

18.10 Mining record office plans

Records within 500m	0

This dataset is representative of Mining Record Office and/or plan extents held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

18.11 BGS mine plans

Records within 500m	0

This dataset is representative of BGS mine plans held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

18.12 Coal mining

Records on site	0

Areas which could be affected by past, current or future coal mining.

This data is sourced from the Coal Authority.

18.13 Brine areas

Records on site	0

The Cheshire Brine Compensation District indicates areas that may be affected by salt and brine extraction in Cheshire and where compensation would be available where damage from this mining has occurred. Damage from salt and brine mining can still occur outside this district, but no compensation will be available.

This data is sourced from the Cheshire Brine Subsidence Compensation Board.

18.14 Gypsum areas

Records on site	0

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.15 Tin mining

Records on site	0

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

18.16 Clay mining

Records on site	0

Generalised areas that may be affected by kaolin and ball clay extraction.

This data is sourced from the Kaolin and Ball Clay Association (UK).

19 Ground cavities and sinkholes

19.1 Natural cavities

Records within 500m	0

Industry recognised national database of natural cavities. Sinkholes and caves are formed by the dissolution of soluble rock, such as chalk and limestone, gulls and fissures by cambering. Ground instability can result from movement of loose material contained within these cavities, often triggered by water.

This data is sourced from Stantec UK Ltd.

19.2 Mining cavities

Records within 1000m	0

Industry recognised national database of mining cavities. Degraded mines may result in hazardous subsidence (crown holes). Climatic conditions and water escape can also trigger subsidence over mine entrances and workings.

This data is sourced from Stantec UK Ltd.

19.3 Reported recent incidents

Records within 500m	0

This data identifies sinkhole information gathered from media reports and Groundsure's own records. This data goes back to 2014 and includes relative accuracy ratings for each event and links to the original data sources. The data is updated on a regular basis and should not be considered a comprehensive catalogue of all sinkhole events. The absence of data in this database does not mean a sinkhole definitely has not occurred during this time.

This data is sourced from Groundsure.

19.4 Historical incidents

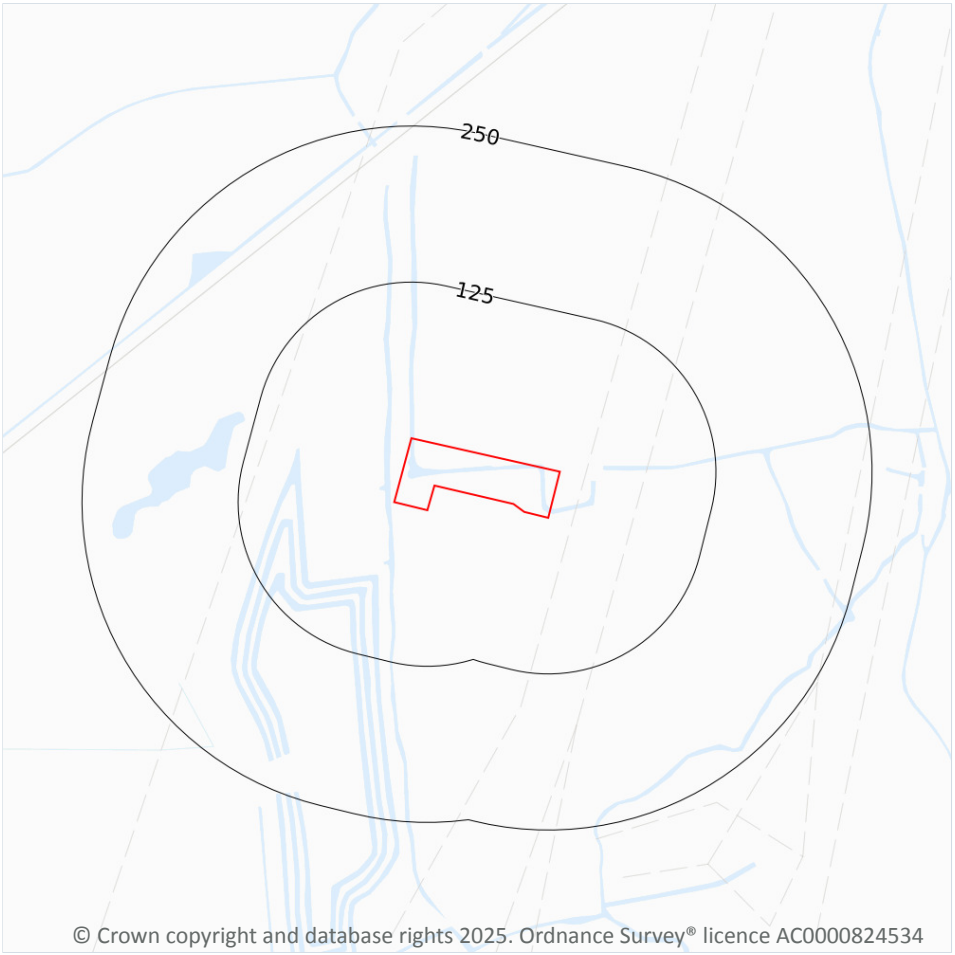
Records within 500m	0

This dataset comprises an extract of 1:10,560, 1:10,000, 1:2,500 and 1:1,250 scale historical Ordnance Survey® maps held by Groundsure, dating back to the 1840s. It shows shakeholes, deneholes and other 'holes' as noted on these maps. Dene holes are medieval chalk extraction pits, usually comprising a narrow shaft with a number of chambers at the base of the shaft. Shakeholes are an alternative name for suffusion sinkholes, most commonly found in the limestone landscapes of North Yorkshire but also extensively noted around the Brecon Beacons National Park.

Not all 'holes' noted on Ordnance Survey® mapping will necessarily be present within this dataset.

This data is sourced from Groundsure.

20 Radon



Site Outline

Search buffers in metres (m)

Greater than 30%

Between 10% and 30%

Between 5% and 10%

Between 3% and 5%

Between 1% and 3%

Less than 1%

20.1 Radon

Records on site	1

The Radon Potential data classifies areas based on their likelihood of a property having a radon level at or above the Action Level in Great Britain. The dataset is intended for use at 1:50,000 scale and was derived from both geological assessments and indoor radon measurements (more than 560,000 records). A minimum 50m buffer should be considered when searching the maps, as the smallest detectable feature at this scale is 50m. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain (1:100,000 scale).

Features are displayed on the Radon map on **page 98 >**

Location	Estimated properties affected	Radon Protection Measures required
On site	**Less than 1%**	**None**

This data is sourced from the British Geological Survey and UK Health Security Agency.

21 Soil chemistry

21.1 BGS Estimated Background Soil Chemistry

Records within 50m	1

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km^2. In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km^2; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	**15 - 25 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**

This data is sourced from the British Geological Survey.

21.2 BGS Estimated Urban Soil Chemistry

Records within 50m	9

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km^2).

Location	Arsenic (mg/kg)	Bioaccessible Arsenic (mg/kg)	Lead (mg/kg)	Bioaccessible Lead (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Nickel (mg/kg)	Tin (mg/kg)
On site	**53**	**9.3**	**171**	**117**	**0.8**	**142**	**147**	**122**	**6**
On site	**55**	**9.6**	**175**	**120**	**0.8**	**144**	**154**	**126**	**6**
On site	**58**	**10.1**	**181**	**124**	**0.8**	**148**	**166**	**135**	**6**
On site	**64**	**11.2**	**193**	**133**	**0.9**	**155**	**189**	**153**	**6**
6m W	57	10	180	124	0.8	142	166	129	6
20m N	51	8.9	167	115	0.8	140	140	116	7
37m S	57	10	185	127	0.9	146	160	126	7

Location	Arsenic (mg/kg)	Bioaccessible Arsenic (mg/kg)	Lead (mg/kg)	Bioaccessible Lead (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Nickel (mg/kg)	Tin (mg/kg)
40m S	60	10.5	184	126	0.8	150	172	140	6
46m S	67	11.7	199	137	0.9	158	201	162	6

This data is sourced from the British Geological Survey.

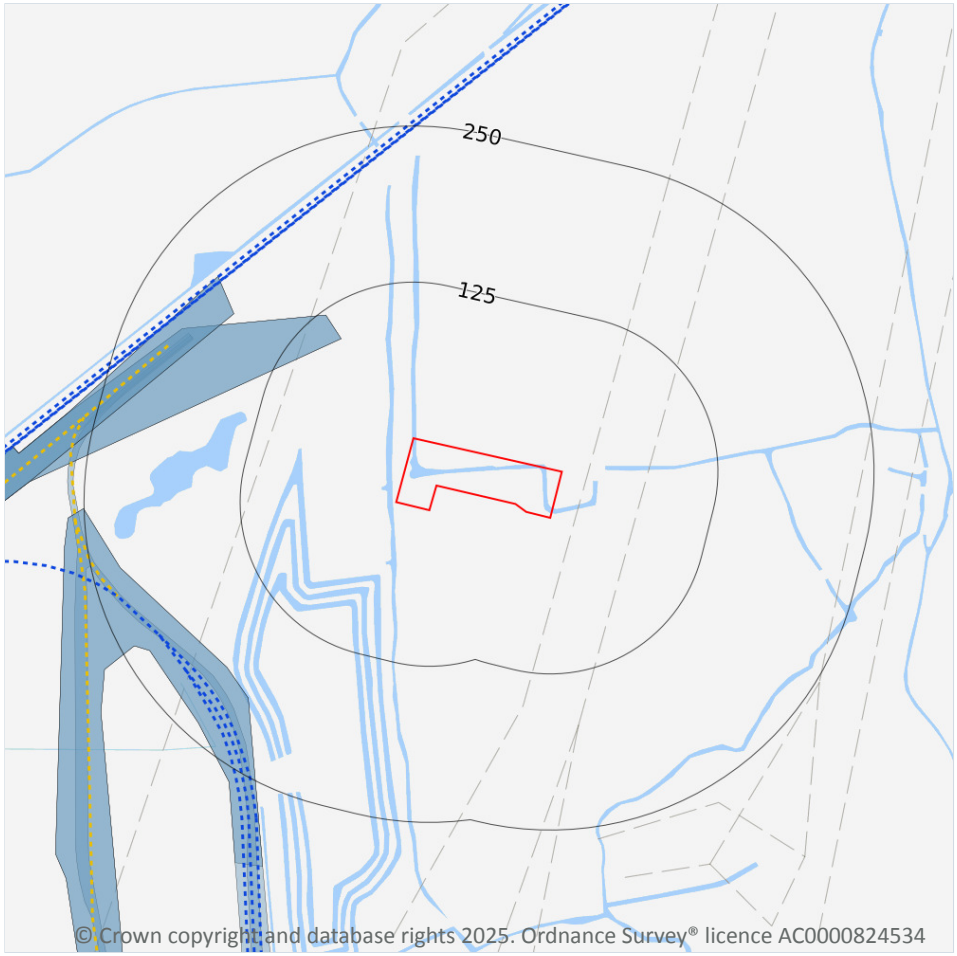
21.3 BGS Measured Urban Soil Chemistry

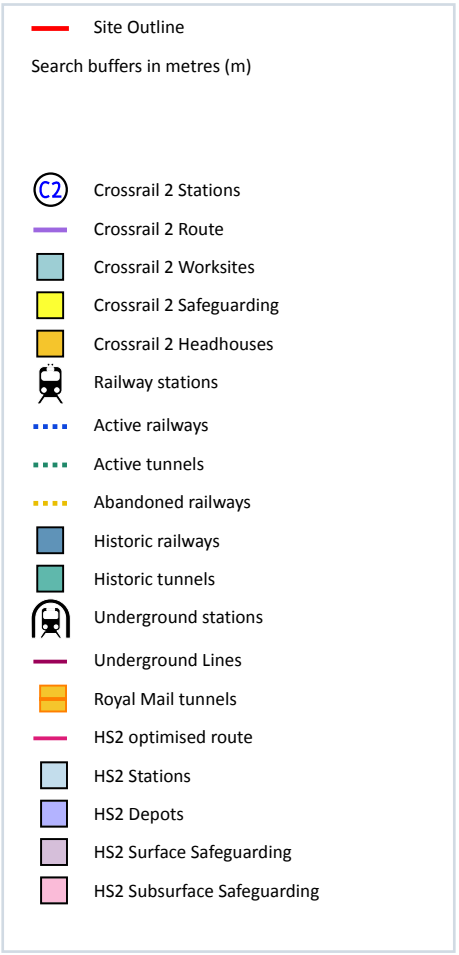
Records within 50m	0

The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km^2.

This data is sourced from the British Geological Survey.

22 Railway infrastructure and projects





22.1 Underground railways (London)

Records within 250m	0

Details of all active London Underground lines, including approximate tunnel roof depth and operational hours.

This data is sourced from publicly available information by Groundsure.

22.2 Underground railways (Non-London)

Records within 250m	0

Details of the Merseyrail system, the Tyne and Wear Metro and the Glasgow Subway. Not all parts of all systems are located underground. The data contains location information only and does not include a depth assessment.

This data is sourced from publicly available information by Groundsure.

22.3 Railway tunnels

Records within 250m	0

Railway tunnels taken from contemporary Ordnance Survey® mapping.

This data is sourced from the Ordnance Survey®.

22.4 Historical railway and tunnel features

Records within 250m	8

Railways and tunnels digitised from historical Ordnance Survey® mapping as scales of 1:1,250, 1:2,500, 1:10,000 and 1:10,560.

Features are displayed on the Railway infrastructure and projects map on **page 102 >**

Location	Land Use	Year of mapping	Mapping scale
99m NW	Railway Sidings	1991	10000
99m NW	Railway Sidings	1973	10000
175m NW	Railway Sidings	1967	10560
175m NW	Railway Sidings	1955	10560
189m SW	Railway Sidings	1991	10000
189m SW	Railway Sidings	1973	10000
193m NW	Railway Sidings	1962	2500
194m NW	Railway Sidings	1987	2500

This data is sourced from Ordnance Survey®/Groundsure.

22.5 Royal Mail tunnels

Records within 250m	0

The Post Office Railway, otherwise known as the Mail Rail, is an underground railway running through Central London from Paddington Head District Sorting Office to Whitechapel Eastern Head Sorting Office. The line is 10.5km long. The data includes details of the full extent of the tunnels, the depth of the tunnel, and the depth to track level.

This data is sourced from Groundsure/the Postal Museum.

22.6 Historical railways

Records within 250m	2

Former railway lines, including dismantled lines, abandoned lines, disused lines, historic railways and razed lines.

Features are displayed on the Railway infrastructure and projects map on **page 102 >**

Location	Description
209m W	Razed
236m W	Razed

This data is sourced from OpenStreetMap.

22.7 Railways

Records within 250m	6

Currently existing railway lines, including standard railways, narrow gauge, funicular, trams and light railways.

Features are displayed on the Railway infrastructure and projects map on **page 102 >**

Location	Name	Type
195m NW	Not given	Multi Track
195m NW	Tilbury Loop Line	rail
199m NW	Tilbury Loop Line	rail
210m SW		rail
216m SW		rail
216m SW		rail

This data is sourced from Ordnance Survey® and OpenStreetMap.

22.8 Crossrail 2

Records within 500m	0

Crossrail 2 is a proposed railway linking the national rail networks in Surrey and Hertfordshire via an underground tunnel through London.

This data is sourced from publicly available information by Groundsure.

22.9 HS2

Records within 500m	0

HS2 is a proposed high speed rail network running from London to Manchester and Leeds via Birmingham. Main civils construction on Phase 1 (London to Birmingham) of the project began in 2019, and it is currently anticipated that this phase will be fully operational by 2026. Construction on Phase 2a (Birmingham to Crewe) is anticipated to commence in 2021, with the service fully operational by 2027. Construction on Phase 2b (Crewe to Manchester and Birmingham to Leeds) is scheduled to begin in 2023 and be operational by 2033.

This data is sourced from HS2 ltd.

Data providers

Groundsure works with respected data providers to bring you the most relevant and accurate information. To find out who they are and their areas of expertise see https://www.groundsure.com/sources-reference ↗.

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Groundsure INSIGHTS

Site Details:

Thurrock 2

Client Ref: 794-ENV-EPC-23409
Report Ref: RPS-NS7-B76-GQ2-JNX
Grid Ref: 566158, 176668

Map Name: County Series

Map date: **1897**

Scale: 1:2,500

Printed at: 1:2,500

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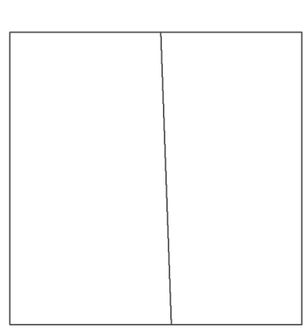
Surveyed 1897
Revised 1897
Edition N/A
Copyright N/A
Levelled N/A



Surveyed 1897
Revised 1897
Edition N/A
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Production date: 19 December 2025

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf

Groundsure INSIGHTS

Site Details:

Thurrock 2

Client Ref: 794-ENV-EPC-23409
Report Ref: RPS-NS7-B76-GQ2-JNX
Grid Ref: 566158, 176668

Map Name: County Series

Map date: **1920-1922**

Scale: 1:2,500

Printed at: 1:2,500

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Surveyed 1920
Revised 1920
Edition N/A
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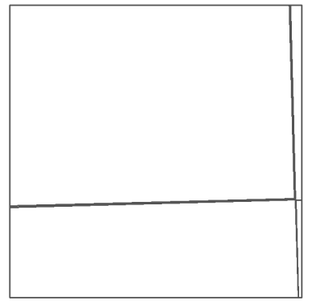
Levelled N/A

Surveyed 1922
Revised 1922
Edition N/A
Copyright N/A
Levelled N/A



Surveyed 1920
Revised 1920
Edition N/A
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Surveyed 1922
Revised 1922
Edition N/A
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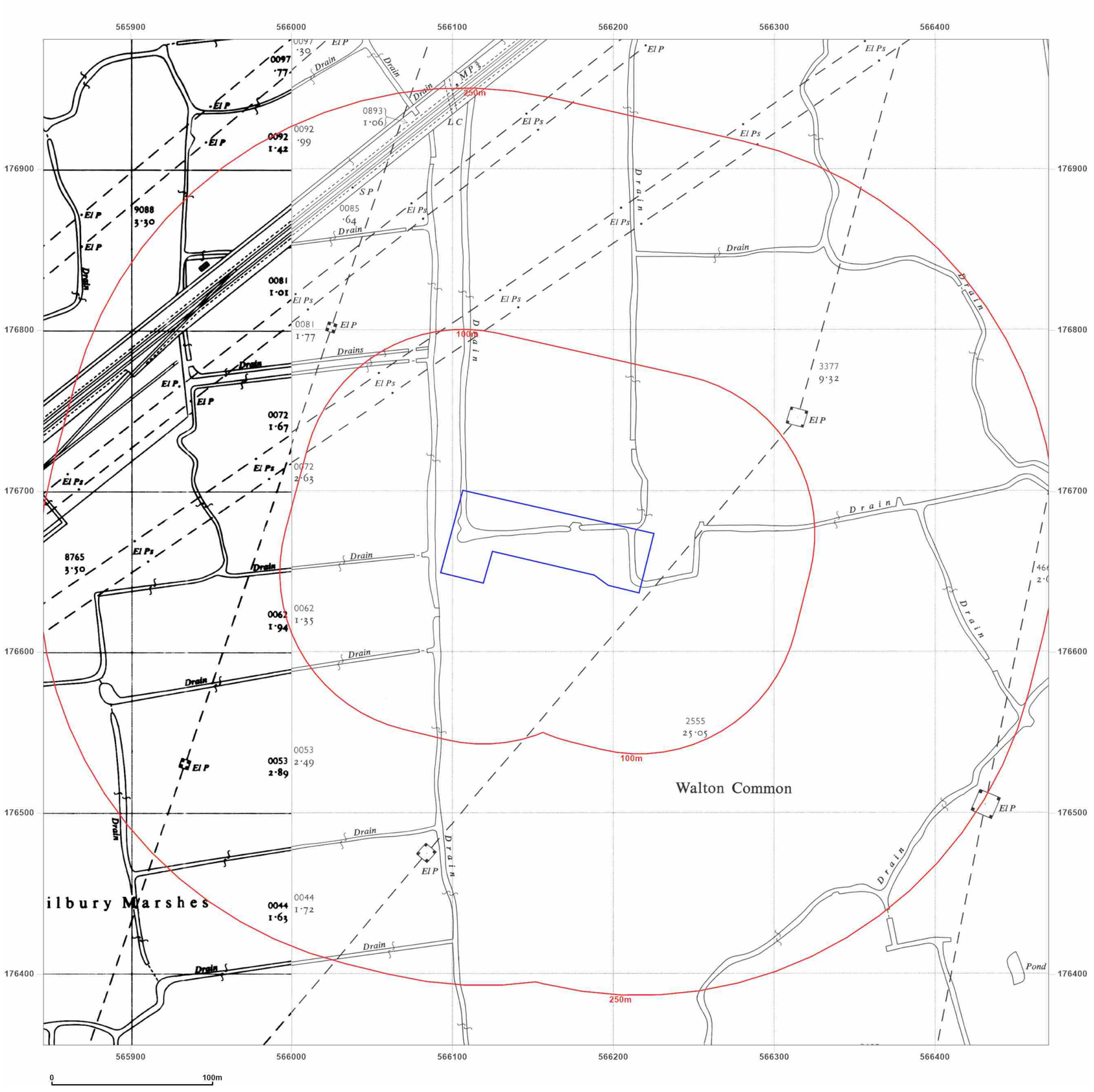

Groundsure INSIGHTS

Site Details:

Thurrock 2

Client Ref: 794-ENV-EPC-23409
Report Ref: RPS-NS7-B76-GQ2-JNX
Grid Ref: 566158, 176668

Map Name: National Grid

Map date: **1961-1962**

Scale: 1:2,500

Printed at: 1:2,500

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Edition 1962
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Revised 1960
Edition N/A
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Map legend available at:
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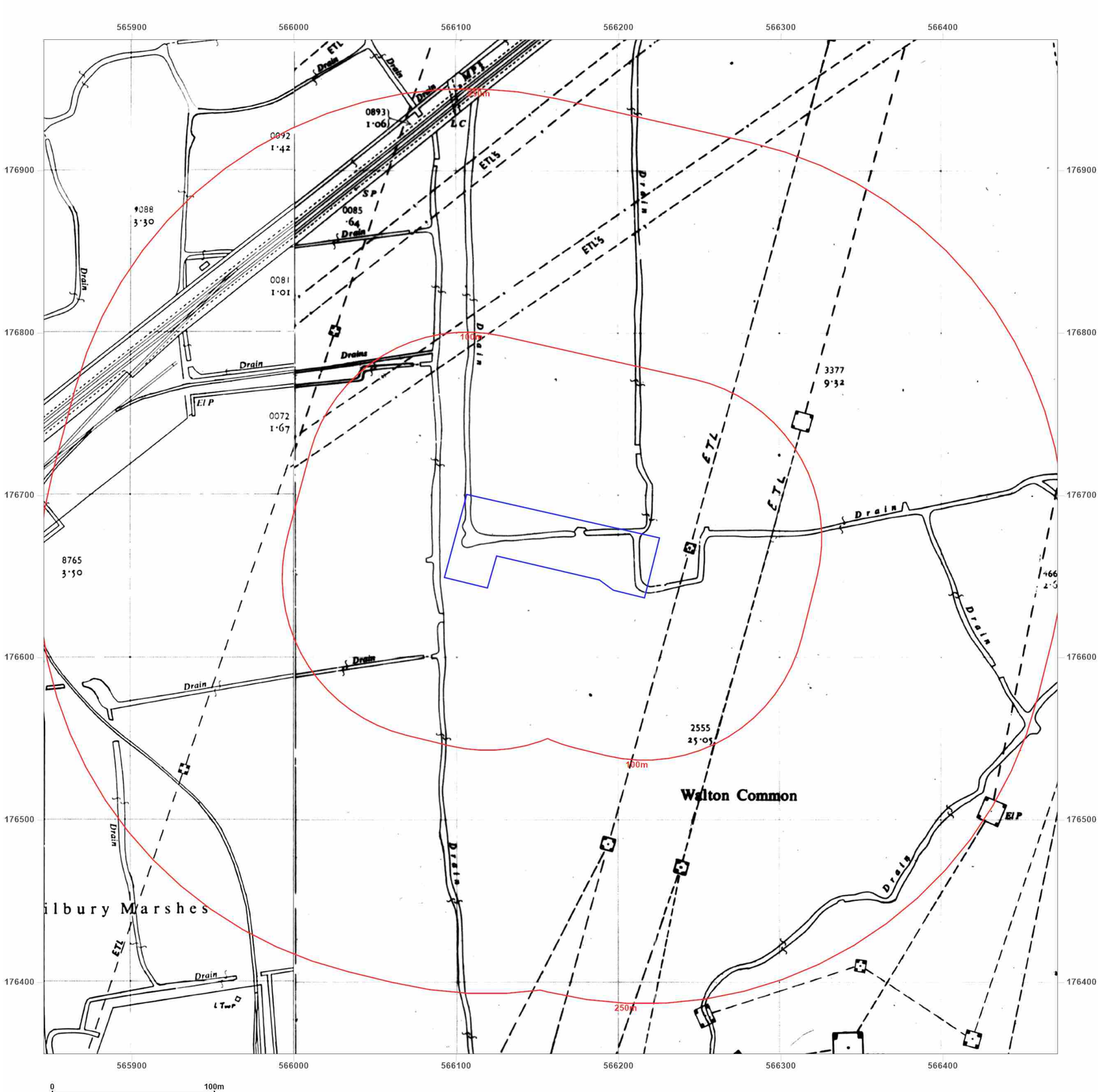

Groundsure INSIGHTS

Site Details:

Thurrock 2

Client Ref: 794-ENV-EPC-23409
Report Ref: RPS-NS7-B76-GQ2-JNX
Grid Ref: 566158, 176668

Map Name: National Grid

Map date: **1987-1988**

Scale: 1:2,500

Printed at: 1:2,500

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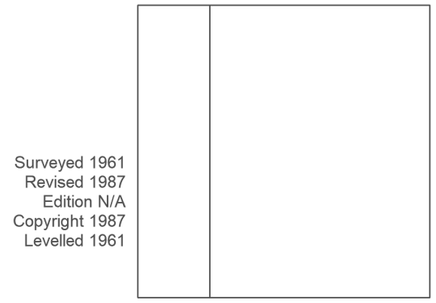

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Revised 1988
Edition N/A
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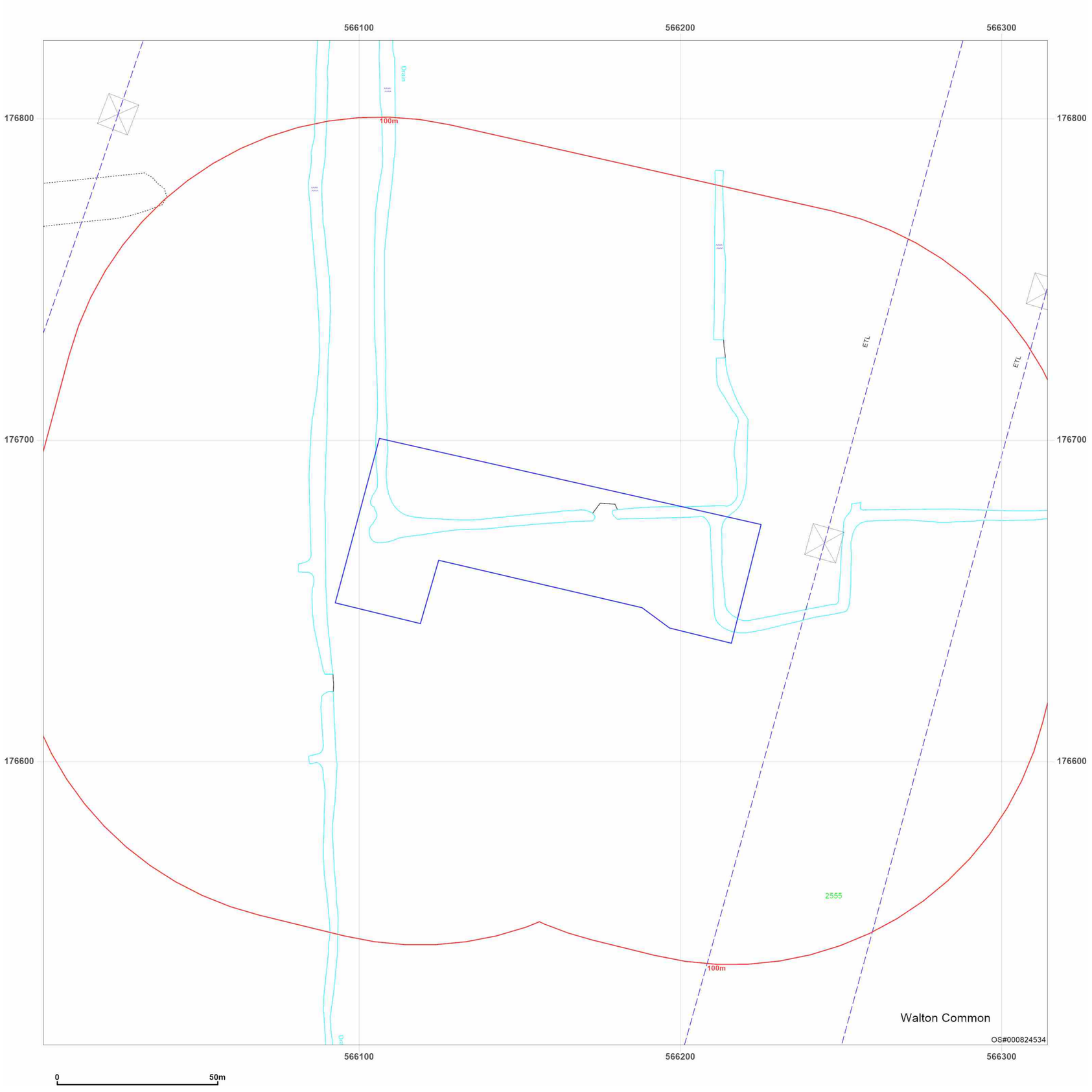

Groundsure INSIGHTS

Site Details:

Thurrock 2

Client Ref: 794-ENV-EPC-23409
Report Ref: RPS-NS7-B76-GQ2-JNX
Grid Ref: 566158, 176668

Map Name: LandLine
Map date: **2003**
Scale: 1:1,250
Printed at: 1:1,250

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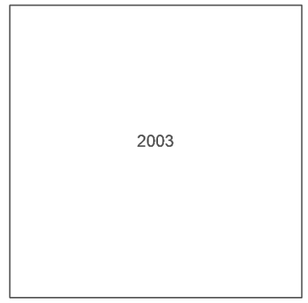

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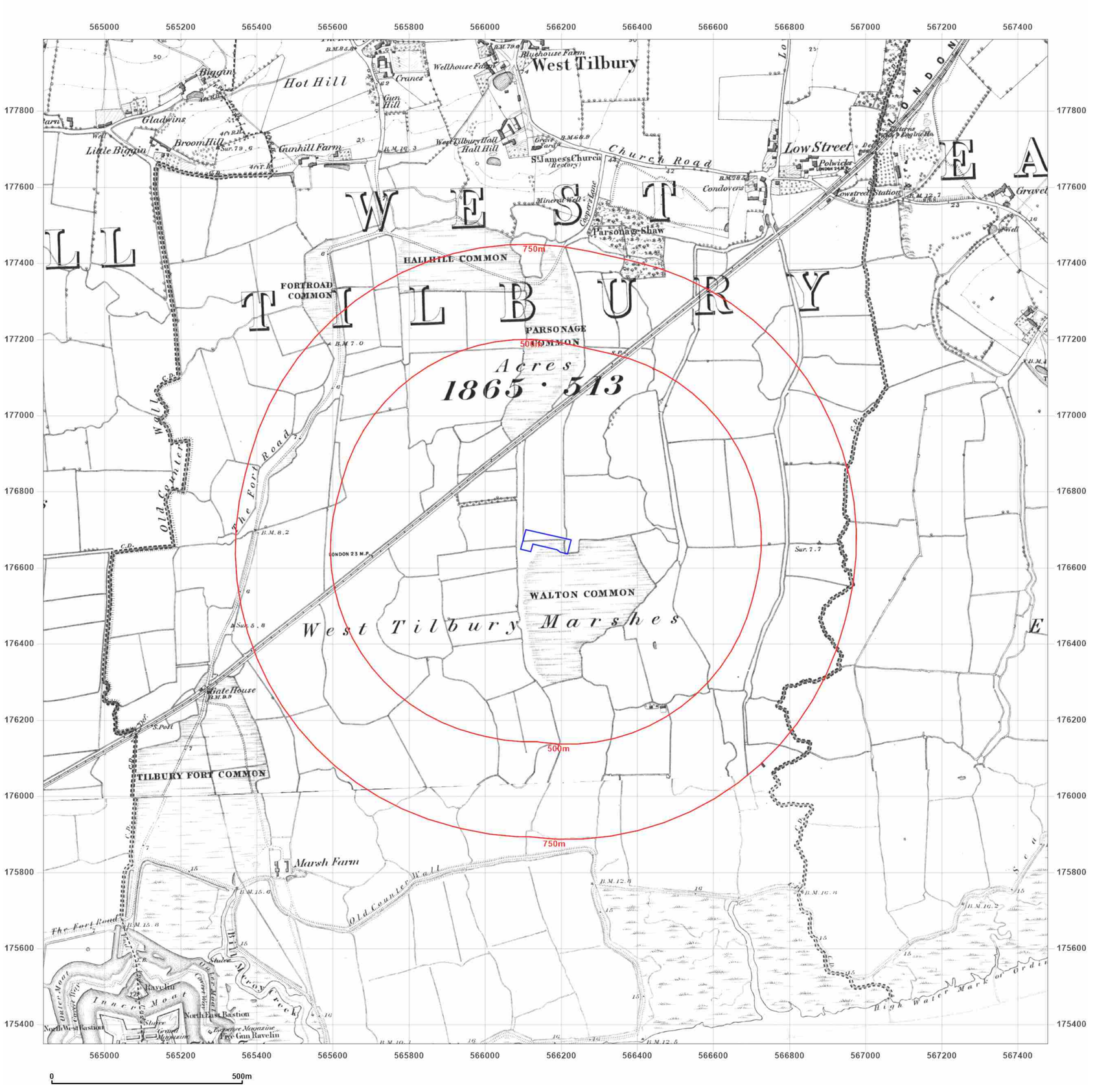

Groundsure INSIGHTS

Site Details:

Thurrock 2

Client Ref: 794-ENV-EPC-23409
Report Ref: RPS-NS7-B76-GQ2-JNX
Grid Ref: 566158, 176668

Map Name: County Series

Map date: **1863-1865**

Scale: 1:10,560

Printed at: 1:10,560

N
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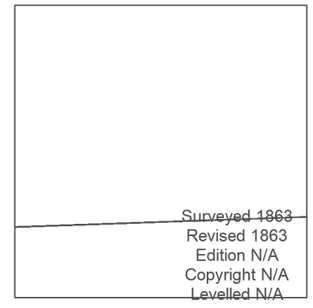
Surveyed 1865
Revised 1865
Edition N/A
Copyright N/A
Levelled N/A



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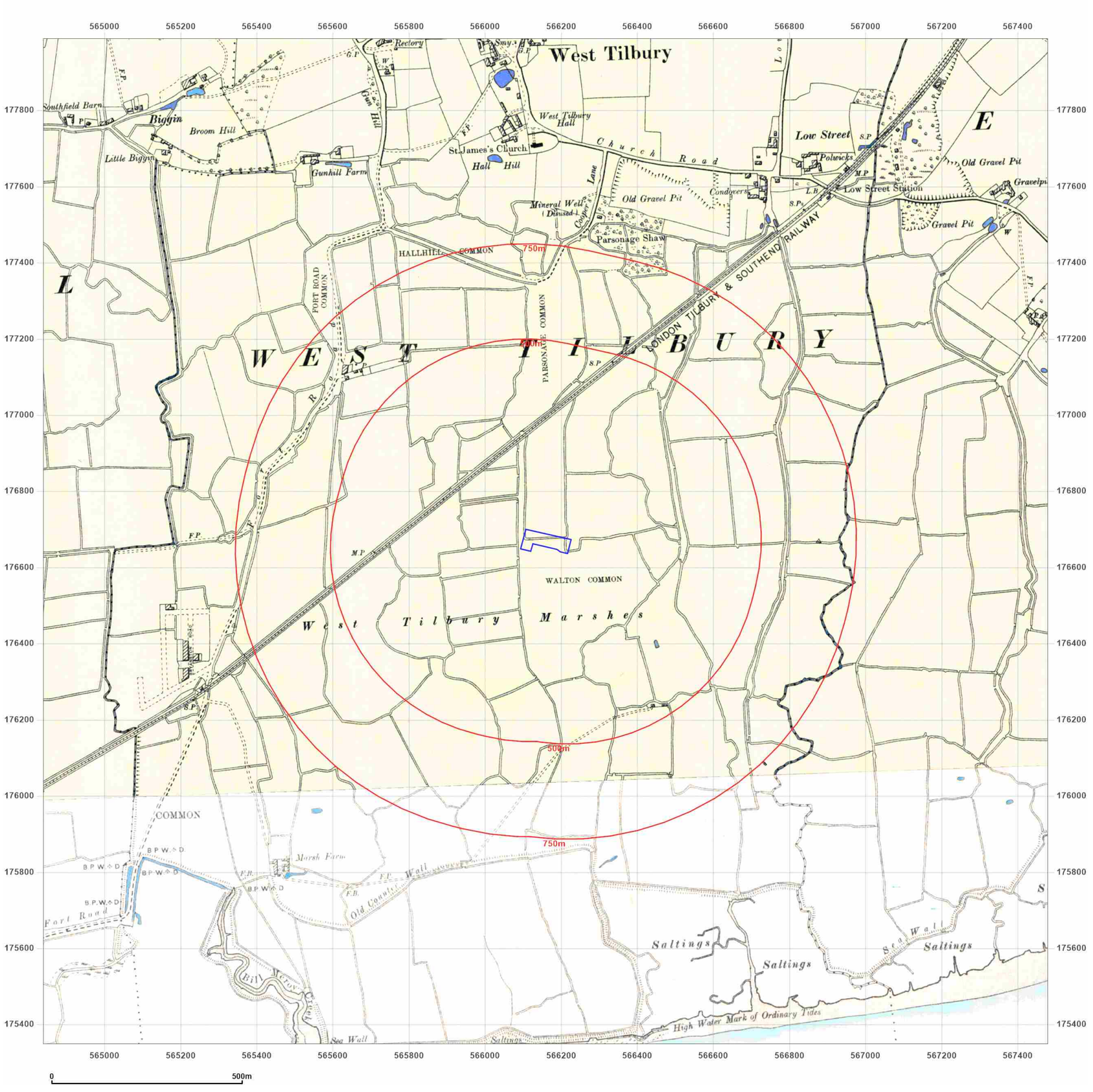

Groundsure INSIGHTS

Site Details:

Thurrock 2

Client Ref: 794-ENV-EPC-23409
Report Ref: RPS-NS7-B76-GQ2-JNX
Grid Ref: 566158, 176668

Map Name: County Series

Map date: **1895**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
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Surveyed 1866
Revised 1895
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1862
Revised 1895
Edition N/A
Copyright N/A
Levelled N/A

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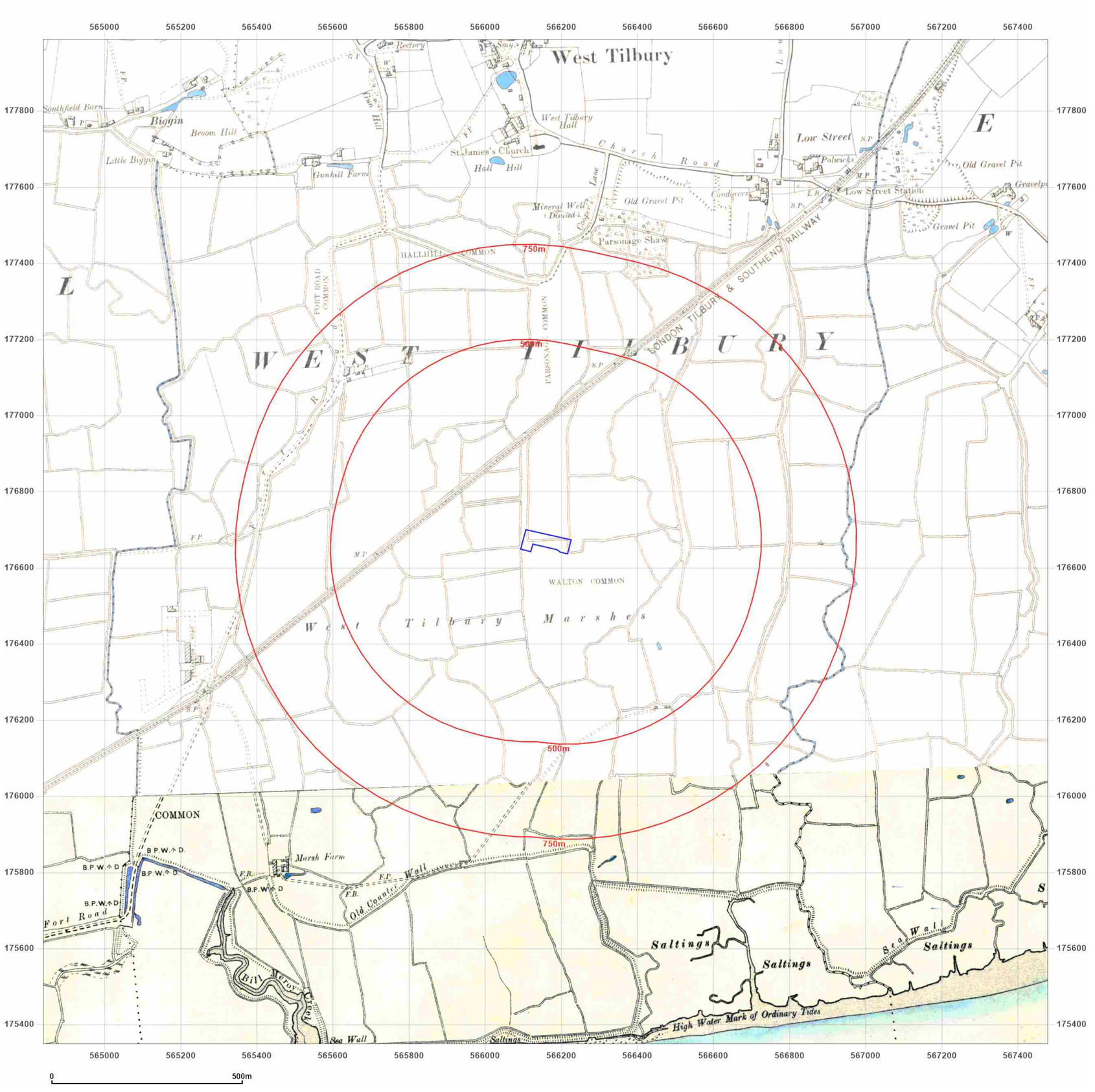

Groundsure INSIGHTS

Site Details:

Thurrock 2

Client Ref: 794-ENV-EPC-23409
Report Ref: RPS-NS7-B76-GQ2-JNX
Grid Ref: 566158, 176668

Map Name: County Series

Map date: **1895**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
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Surveyed 1866
Revised 1895
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1866
Revised 1895
Edition N/A
Copyright N/A
Levelled N/A

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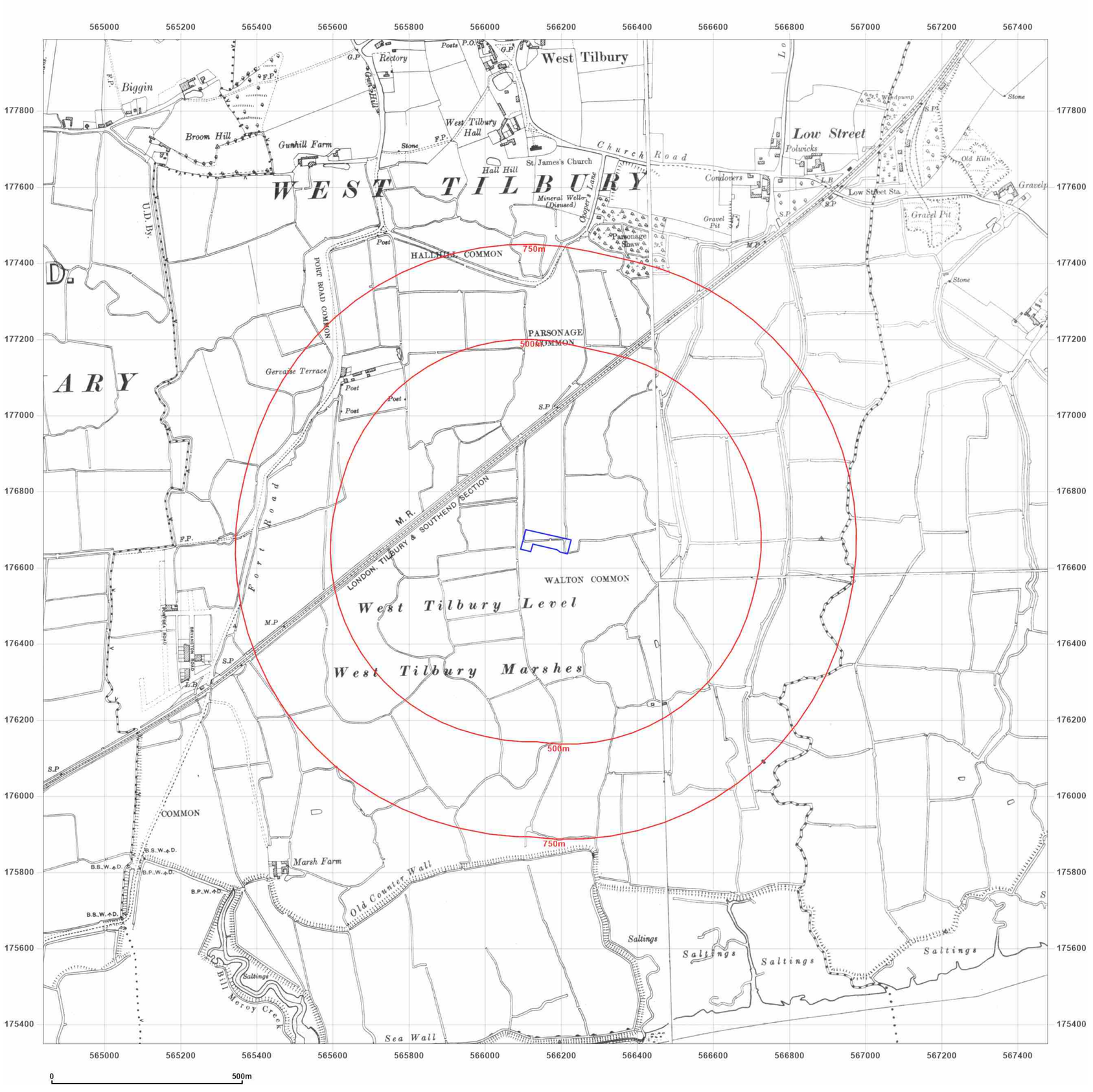

Groundsure INSIGHTS

Site Details:

Thurrock 2

Client Ref: 794-ENV-EPC-23409
Report Ref: RPS-NS7-B76-GQ2-JNX
Grid Ref: 566158, 176668

Map Name: County Series

Map date: **1923**

Scale: 1:10,560

Printed at: 1:10,560

N
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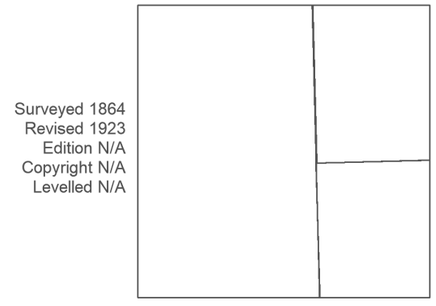
Surveyed 1864
Revised 1923
Edition 1923
Copyright N/A
Levelled N/A



Surveyed 1864
Revised 1923
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1862
Revised 1923
Edition N/A
Copyright N/A
Levelled N/A

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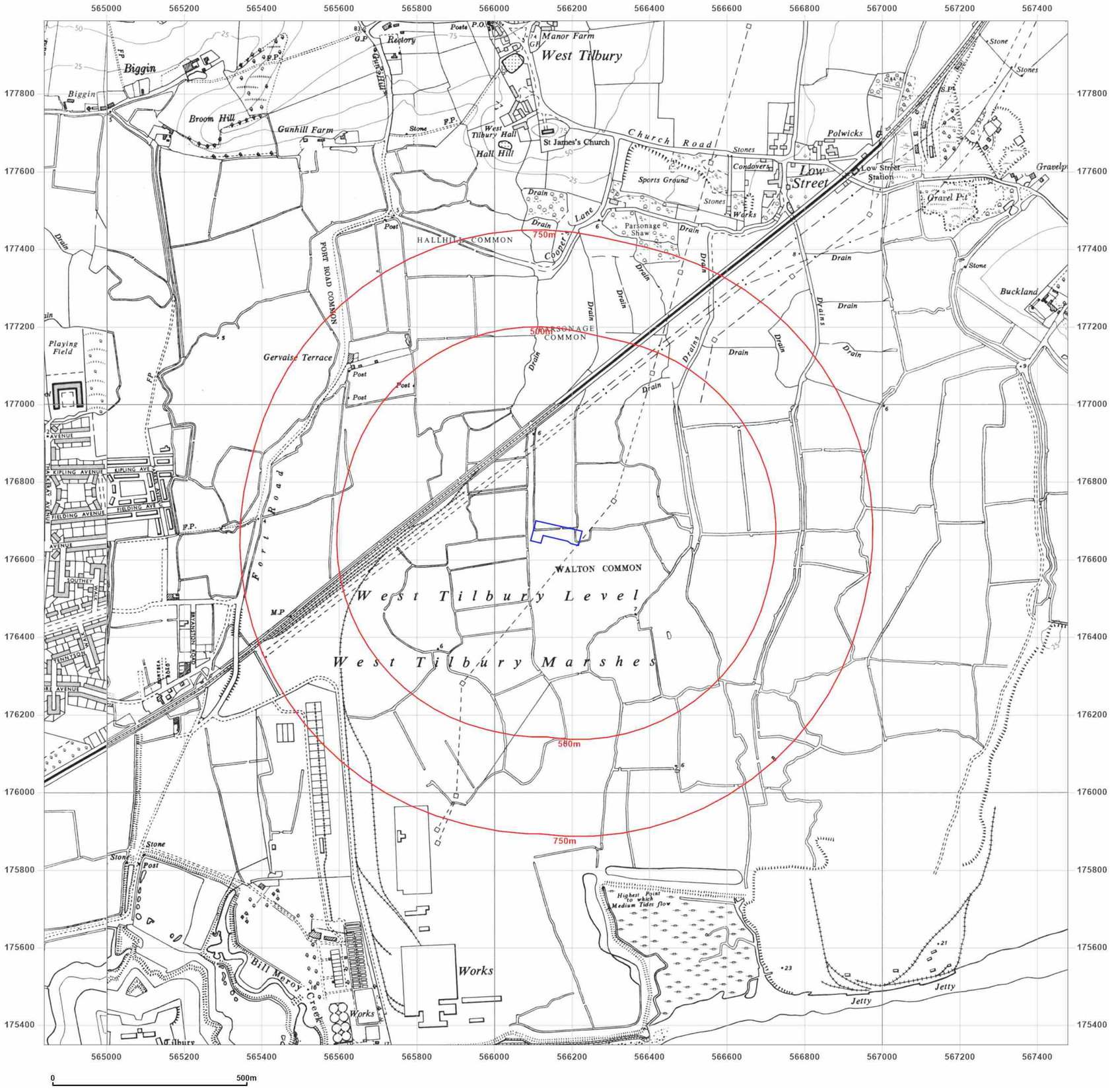

Groundsure INSIGHTS

Site Details:

Thurrock 2

Client Ref: 794-ENV-EPC-23409
Report Ref: RPS-NS7-B76-GQ2-JNX
Grid Ref: 566158, 176668

Map Name: Provisional

Map date: **1955**

Scale: 1:10,560

Printed at: 1:10,560

N
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Surveyed 1864
Revised 1955
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1864
Revised 1955
Edition N/A
Copyright N/A
Levelled N/A

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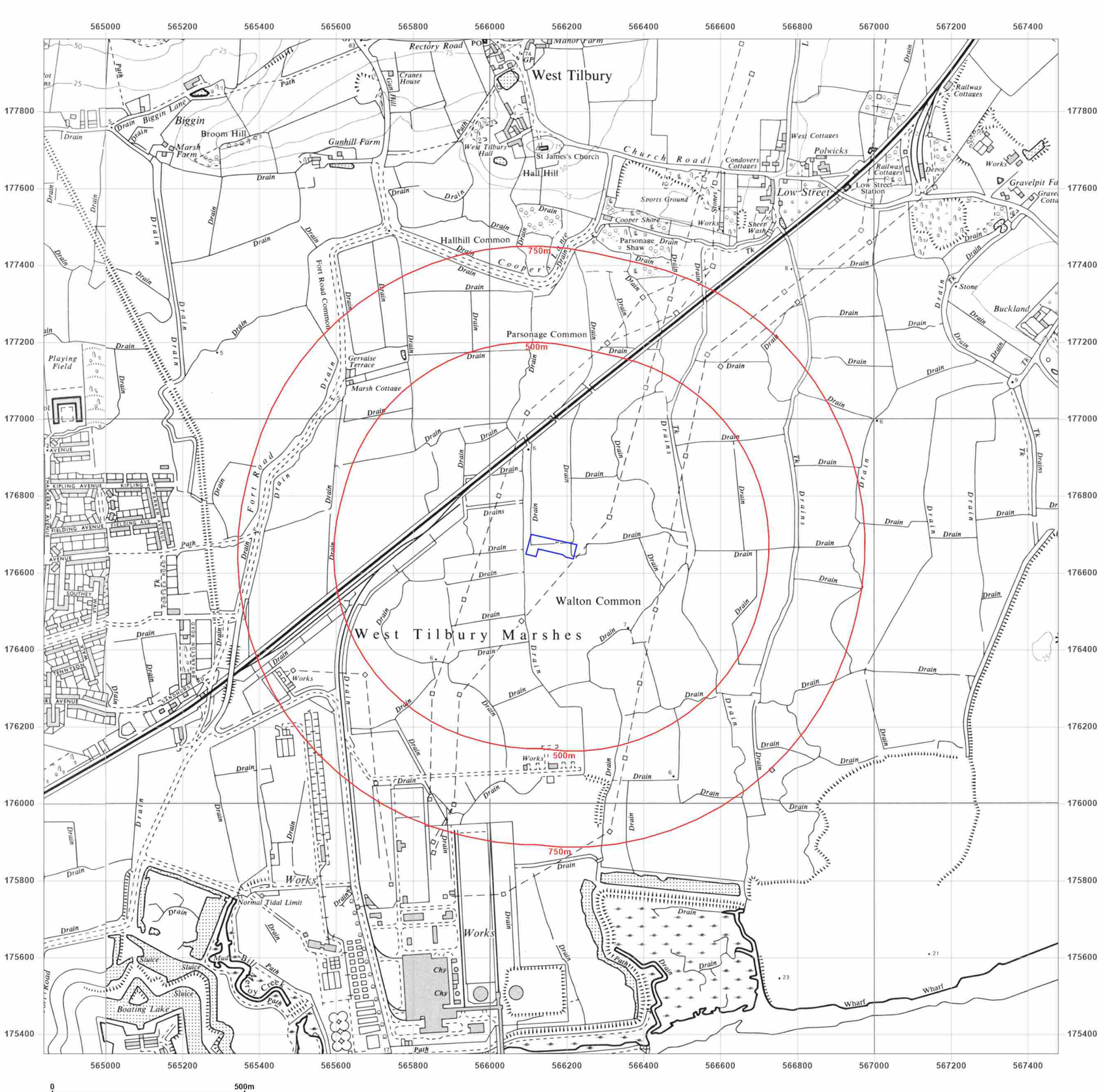

Groundsure INSIGHTS

Site Details:

Thurrock 2

Client Ref: 794-ENV-EPC-23409
Report Ref: RPS-NS7-B76-GQ2-JNX
Grid Ref: 566158, 176668

Map Name: Provisional

Map date: **1966-1967**

Scale: 1:10,560

Printed at: 1:10,560

N
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Surveyed 1966
Revised 1966
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1967
Revised 1967
Edition N/A
Copyright N/A
Levelled N/A

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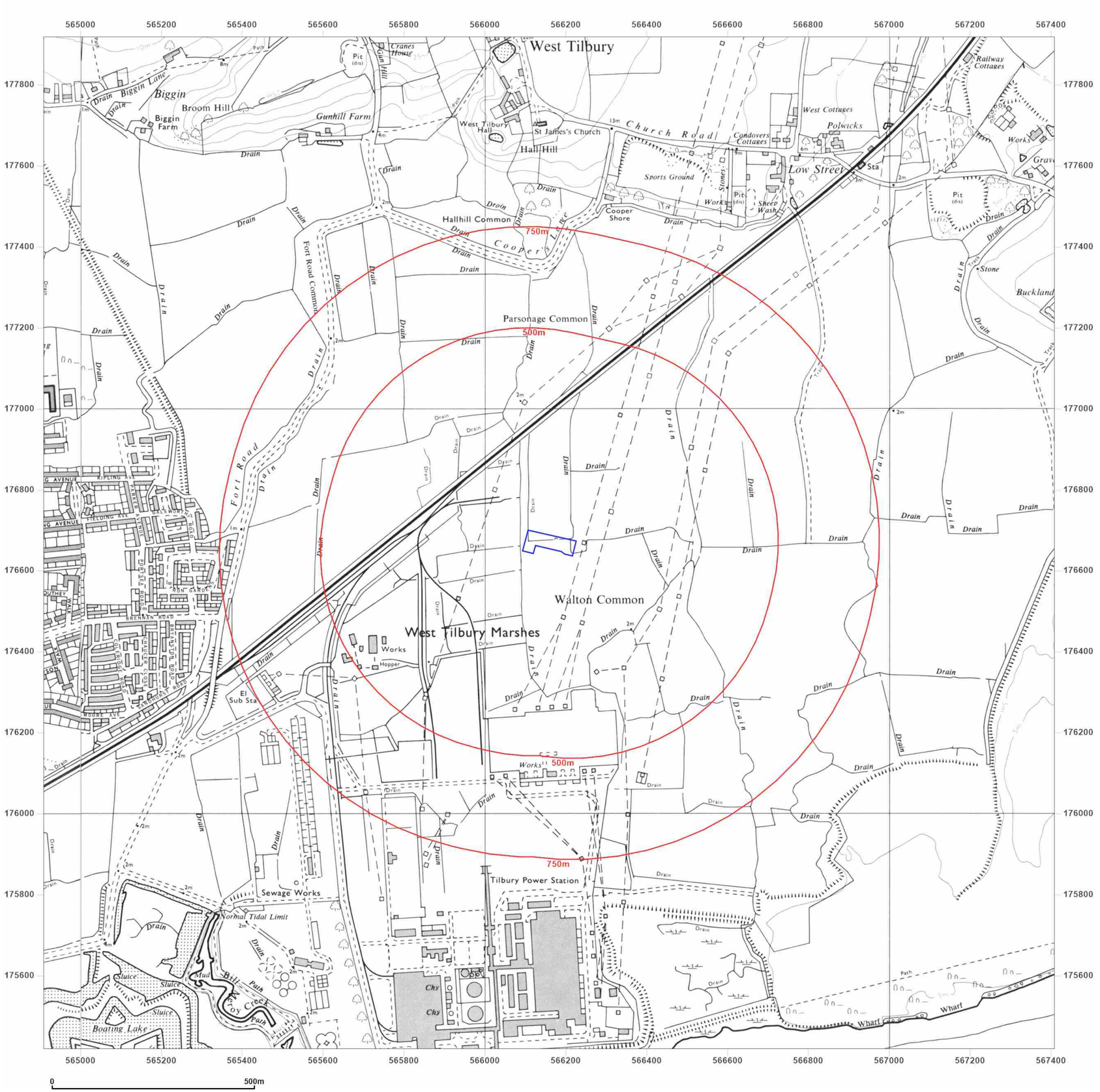

Groundsure INSIGHTS

Site Details:

Thurrock 2

Client Ref: 794-ENV-EPC-23409
Report Ref: RPS-NS7-B76-GQ2-JNX
Grid Ref: 566158, 176668

Map Name: National Grid

Map date: **1973**

Scale: 1:10,000

Printed at: 1:10,000

N
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Surveyed 1973
Revised 1973
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1972
Revised 1973
Edition N/A
Copyright N/A
Levelled N/A

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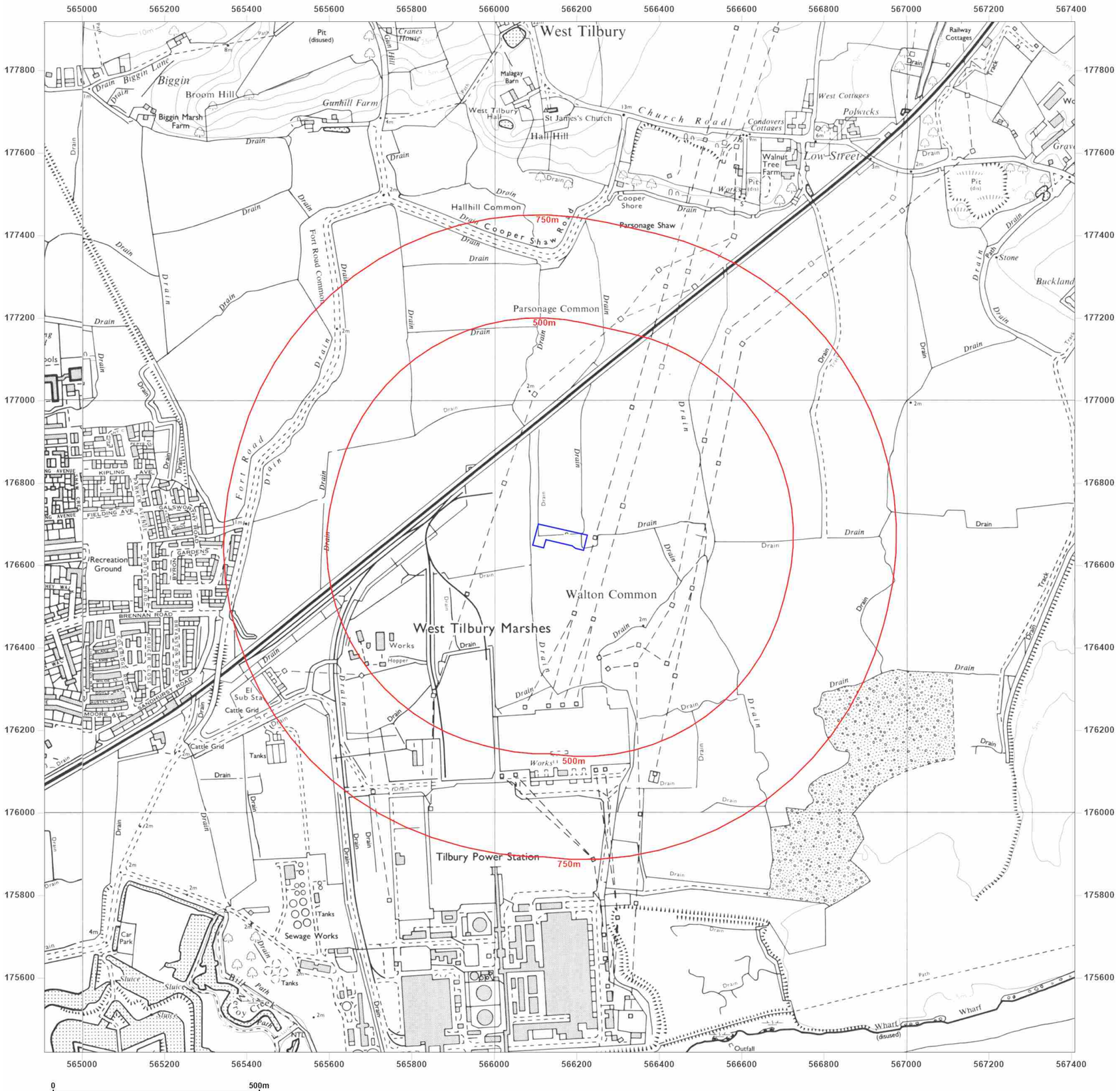

Groundsure INSIGHTS

Site Details:

Thurrock 2

Client Ref: 794-ENV-EPC-23409
Report Ref: RPS-NS7-B76-GQ2-JNX
Grid Ref: 566158, 176668

Map Name: National Grid

Map date: **1991-1992**

Scale: 1:10,000

Printed at: 1:10,000

N
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Surveyed 1981
Revised 1992
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1990
Revised 1991
Edition N/A
Copyright N/A
Levelled N/A

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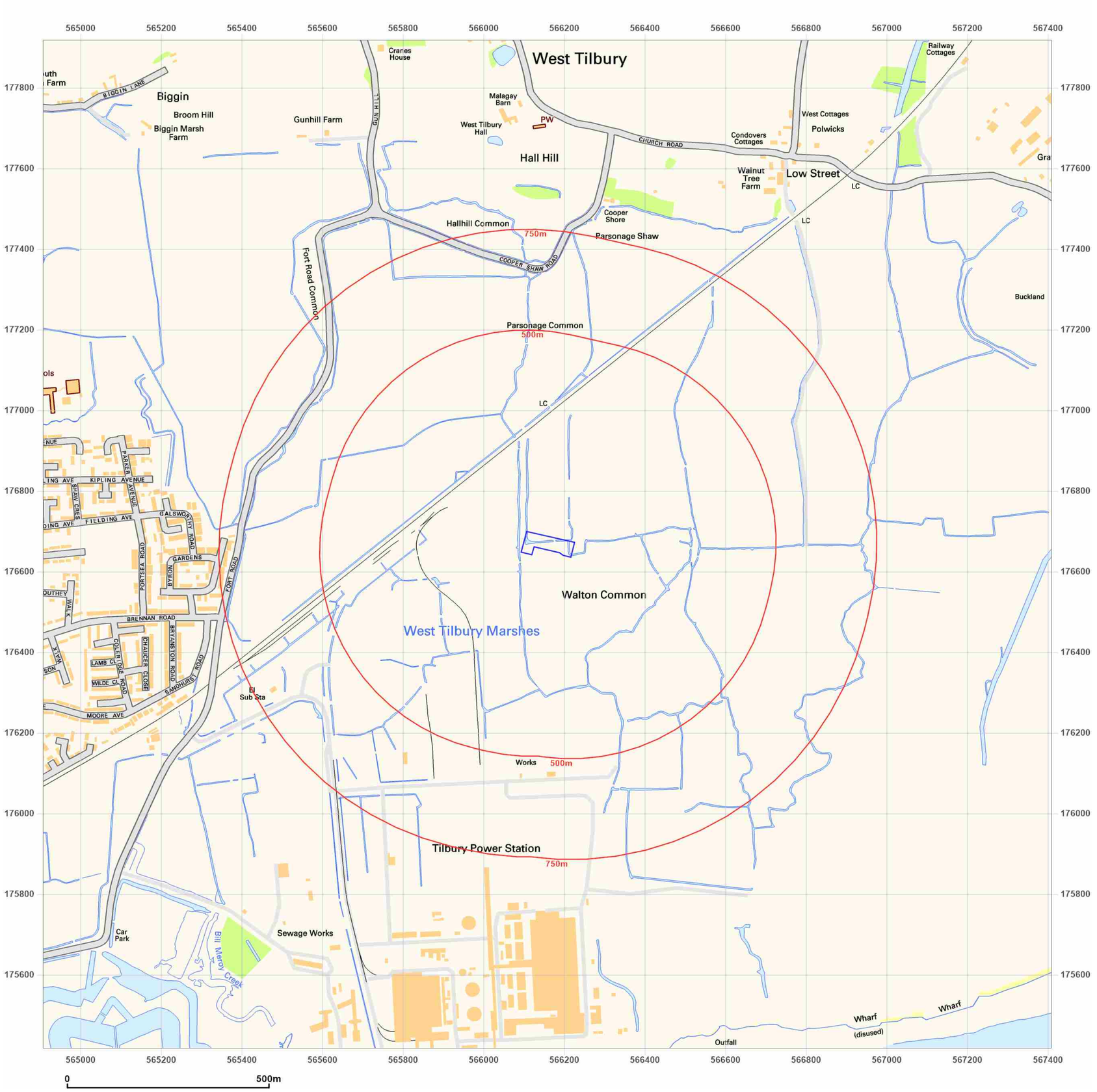

Groundsure INSIGHTS

Site Details:

Thurrock 2

Client Ref: 794-ENV-EPC-23409
Report Ref: RPS-NS7-B76-GQ2-JNX
Grid Ref: 566158, 176668

Map Name: National Grid

Map date: **2001**

Scale: 1:10,000

Printed at: 1:10,000

N
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2001

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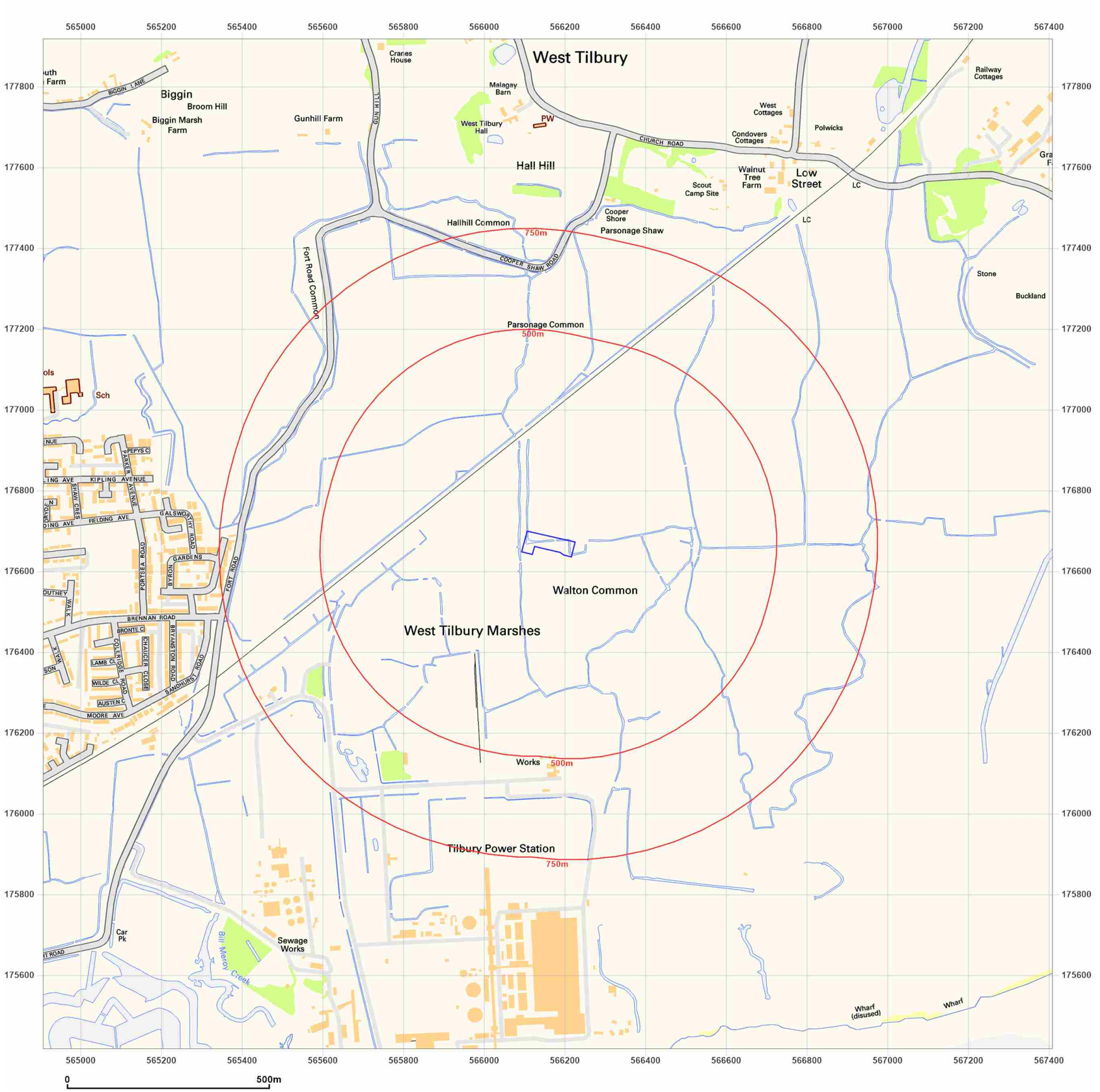

Groundsure INSIGHTS

Site Details:

Thurrock 2

Client Ref: 794-ENV-EPC-23409
Report Ref: RPS-NS7-B76-GQ2-JNX
Grid Ref: 566158, 176668

Map Name: National Grid

Map date: **2010**

Scale: 1:10,000

Printed at: 1:10,000

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2010

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Production date: 19 December 2025

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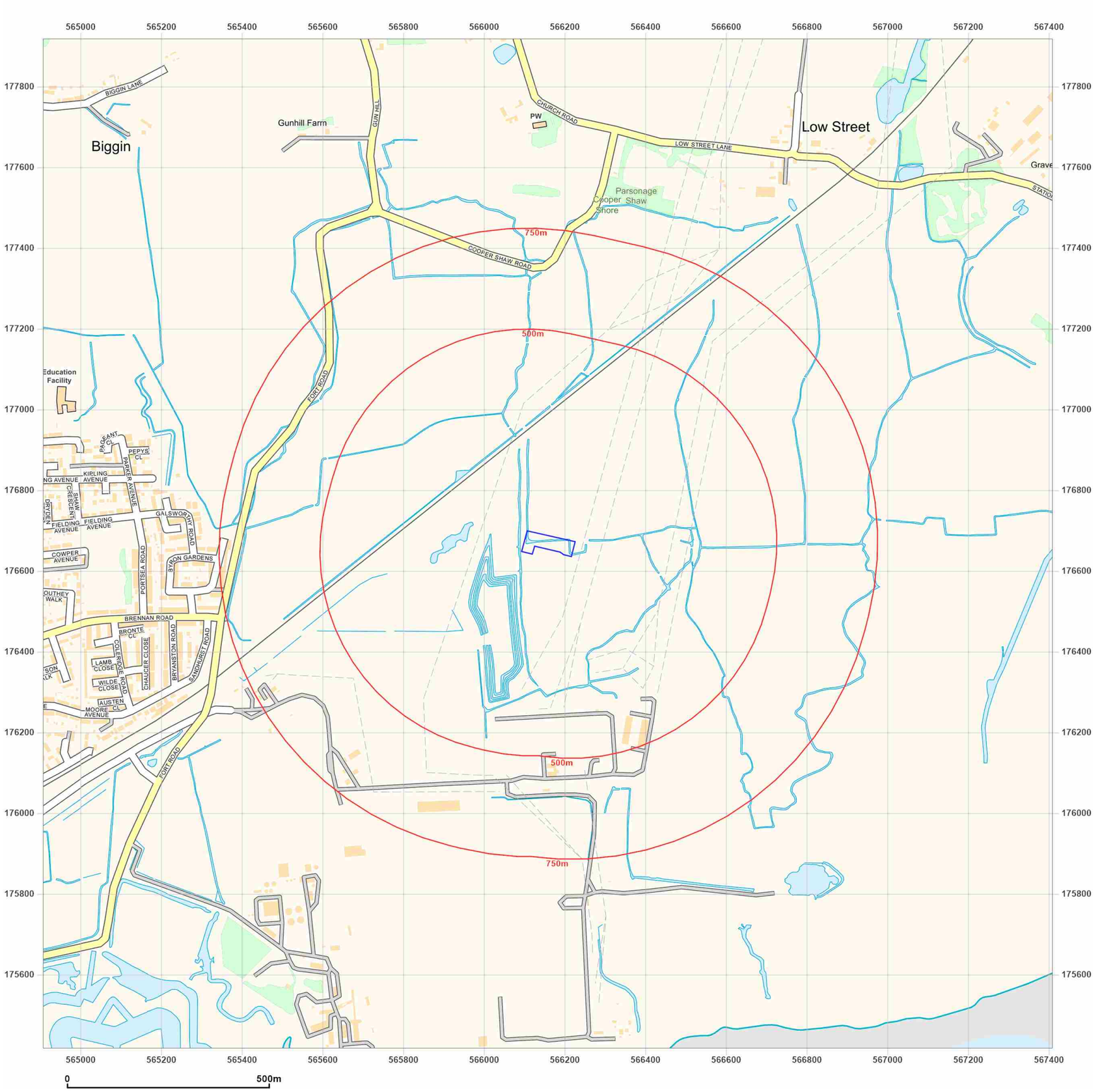

Groundsure INSIGHTS

Site Details:

Thurrock 2

Client Ref: 794-ENV-EPC-23409
Report Ref: RPS-NS7-B76-GQ2-JNX
Grid Ref: 566158, 176668

Map Name: National Grid

Map date: **2025**

Scale: 1:10,000

Printed at: 1:10,000

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2025

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Appendix C Phase 1: Preliminary Risk Assessment

Appendix D Phase 2: Site Investigation Report