

PHASE I GEO-ENVIRONMENTAL ASSESSMENT REPORT

Land off Moorgate Point, Knowsley

August 2025



CIVIL | STRUCTURAL | GEOTECHNICAL & ENVIRONMENTAL | TRAFFIC AND TRANSPORT

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Land off Moorgate Point Knowsley Liverpool L33 7XW

Phase I Geo-Environmental Desk Study Report

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Executive Summary

HSP Consulting Engineers Ltd has been commissioned by Indurent Management Limited to provide technical studies to support a planning application for two commercial units. The geo-environmental desk study (Phase I) is one of a series of studies providing information on likely constraints to the development of the site. The purpose of the report is to collate background historical and geo-environmental data to address where possible land contamination and stability matters within Planning Policy Guidance.

The site is located in Knowsley, approximately 10.5km northeast from Liverpool city centre and can be accessed off Ryhall Road. The approximate National Grid Reference for the centre of the site is NGR 342555, 397212.

The site was undeveloped from earliest mapping until the early 1960's when land in the west forms part of the Engineering Works located immediately adjacent to the west of the site. This area of the site has been laid to hardstanding and utilised for car and lorry parking. A small building is located in the southwest and storage containers are located in the northwest. The land in the east has not been developed, being shown as a sports ground from 1978. In recent years the site is shown as heavily vegetated.

The surrounding area was historically agricultural fields. By the early 1960's, industry is shown in the immediate surrounding area with development comprising factories and works. The surrounding area is broadly similar to present day.

BGS mapping indicates Made Ground (undivided) is mapped across the entirety of the site and is defined as an artificial deposit, described by the BGS as '*an area where the pre-existing (natural or artificial) land surface is raised by artificial deposits*'.

BGS mapping indicates the site is underlain by superficial deposits of Devensian Till and bedrock of the Chester Sandstone Formation.

The Superficial deposits are classified as a Secondary Undifferentiated Aquifer, and the bedrock is classified as a Principal Aquifer.

The nearest surface water feature is located 32m south, though it was not observed during the site walkover, historical mapping dated 2010 shows it labelled a drain. A further watercourse is recorded 194m east of the site.

There is a moderate to high risk from groundwater flooding in the southern half of the site and a negligible risk in the north. The highest risk of surface water flooding on the site is shown as a 1 in 30 year return at a depth of 0.1m – 0.3m in the northeast of the site in the current vegetated area.

The site is within an area in which less than 1% of the properties are above the action level for radon. Radon protection measures will not be required for new developments on the site.



There are no records of Historic, Active or Recent Landfill Sites recorded within a 250m radius of the site.

The Preliminary Conceptual Site Model indicates a moderate/low possibility that harm could arise to a designated receptor from identified hazards.

The executive summary contains an overview of key findings and conclusions. However, no reliance should be placed on the executive summary until the whole of the report has been read. Other sections of the report may contain information which puts into context the findings noted within the executive summary.

1. Introduction

1.1 Background

This report has been prepared to support a planning application. At the time of writing, development plans show two commercial units with loading docks, associated car parking, limited landscaping and attenuation.

1.2 Scope and Limitations

HSP Consulting Engineers Ltd has been commissioned by Indurent Management Limited to provide technical studies to support a planning application for two commercial units. The geo-environmental desk study (Phase I) is one of a series of studies providing information on likely constraints to the development of the site. The purpose of the report is to collate background historical and geo-environmental data to address where possible land contamination and stability matters within Planning Policy Guidance.

The recommendations made in this report are based on the assessment of the published information and information provided by the Client.

1.3 Report Objectives

The objectives of this report are to:

- Establish the geological and hydrogeological conditions using existing available/published information.
- Summarise available information and identify site specific geotechnical and environmental hazards which may place a constraint upon the proposed site use.
- Produce a Conceptual Site Model and preliminary qualitative environmental risk assessment identifying potential pollution linkages between sources of contamination, pathways and receptors.
- Provide recommendations for Phase II Ground Investigation and any other assessments required.

1.4 Sources of Information

The following sources of information were used during the preparation of this report.

- Emapsite™ Groundsure Enviro and Geo Insight Ref: EMS-1037912_1309982
- Emapsite™ Groundsure Historical Mapping Ref: EMS-1037912_1309981_Various Scales
- Google Earth Aerial Photography (Accessed: July 2025)
- British Geological Survey. Onshore Geindex. www.bgs.ac.uk
- DEFRA Magic Map: <http://defra.gov.uk/magicmap.asp-909>
- British Geological Survey. 1:50,000 geological map series, sheet number 84, Bedrock and Superficial, Wigan, 2013.

A walkover was undertaken by HSP Consulting Engineers Ltd on the 23rd July 2025. The purpose of the walkover was to record the current land use, topography and principal physical features and to identify, where possible, visual and olfactory indicators of contamination.

2. Site Setting

2.1 The Site

2.1.1 Location

The site is located in Knowsley, approximately 10.5km northeast from Liverpool city centre and can be accessed off Ryhall Road. The approximate National Grid Reference for the centre of the site is NGR 342555, 397212. A Site Location Plan is included in Appendix I.

2.1.2 Description

The site is approximately trapezoidal in shape and is approximately 4.63Ha in area. Vehicular and pedestrian access is from the southwest of the site through the industrial estate access road, off Moorgate Road North.

The site is split into two distinct areas; the eastern two-thirds comprise vacant land covered in rough vegetation and the western third is currently being utilised as a refuse lorry depot. Access to the vacant section of the site is from the north of the site, off an unused access road.

The municipal waste depot comprised a small building in the south which is used for site offices and maintenance workshops. Immediately north of the commercial units there is a car park. The centre of the refuse lorry depot was primarily lorry parking, with a jet wash station and a refuelling station adjacent to the western site boundary. The refuelling station comprised large metal housing atop a concrete slab, indicating the storage tank is above ground. There are two pumps with concrete lanes either side of the refuelling station for vehicle access. Light staining is noted in these access lanes; however the concrete is observed to be in good condition. There is a drain directly in front of the refuelling pumps, but it is unknown whether this is an interceptor or part of the surface draining system. The north of the depot has refuse storage. There is an access road to the refuse store in the north of the site, however this is not currently in use by the depot. This access road also provides access to the vacant area of the site, via a grass slope.

The vacant land is heavily overgrown with grasses, shrubs, tree saplings and occasional bullrush, varying in height from approximately 1m to 3m. The ground is heavily rutted from previous vehicle use on the site, which is largely obscured by the dense vegetation. The boundary between the vacant land area and the depot comprises a small earthen ridge and mature shrubbery. In the south, adjacent to the commercial units, there is an area of hardstanding laid to concrete with loosely fitting metal sheet. The metal sheet was partially removed and a manhole with standing water was noted. It could not be determined if this comprised any formal drainage.

The site boundary in the west is defined by the edge of the grass landscaping between the refuse lorry depot and the site access road. Towards the northwest there is a level change of approx. 2.40m from the refuse lorry depot to the adjacent site access road. The northern boundary comprises metal palisade fencing and mature trees and shrubs. The eastern

boundary is overgrown with mature trees and shrubs, as is the southern boundary, though Heras fencing can also be seen along the southern boundary of the vacant area. The commercial units comprise the southern boundary of the site in the southwest. Access off Alchemy Way was not possible due to it being heavily vegetated at the time of the walkover.

The topography of the site gently slopes north from 27.28m AOD in the southeast to 31.17m AOD in the north as observed on the topographical survey (Mapmatic drawing no. 7653/0001, March 2025, HSP Ref: C4884-HSP-00-00-DR-C-5111-TopographicalSurvey).

No olfactory or visual evidence of contamination was identified during the walkover.

2.1.3 Surrounding Land Use

The main features of interest identified are:

North: Commercial units
East: Commercial units
West: Commercial units, Moorgate Road North and residential housing beyond
South: Vacant land, Commercial units

2.1.4 Proposed End Use

This report has been prepared to support a planning application. At the time of writing, development plans show two commercial units with loading docks, associated car parking, limited landscaping and attenuation.

2.2 Geology

2.2.1 Made Ground

Based on BGS mapping, Made Ground (undivided) is mapped across the entirety of the site and is defined as an artificial deposit, described by the BGS as '*an area where the pre-existing (natural or artificial) land surface is raised by artificial deposits*'. The depth of Made Ground is unknown at this stage.

2.2.2 Superficial Deposits

BGS mapping indicates the site to be underlain by Devensian Till – Diamicton.

2.2.3 Bedrock Geology

BGS bedrock mapping indicates the site to be underlain by bedrock deposits of the Chester Formation – Sandstone of the early Triassic Period. BGS describes these deposits as '*comprises conglomerates and reddish brown, cross-bedded, pebbly sandstones with subordinate beds of red-brown mudstone*'.

2.2.4 Structural Geology

No records of faults or other linear features have been identified within 250m of the site boundary.

2.2.5 Historical Boreholes

Seven boreholes are recorded within 250m of the site. Two are confidential. The below table summarises the pertinent information from the remaining five records:

Table 2.2 - Summary of BGS Borehole Data

BGS Reference	Summary of Ground Conditions	
SJ49NW1075 75m SE	Drilled by: CC Geotechnical Date: 14/09/2005 Method: Unknown	G.L: MADE GROUND comprising firm very sandy very silty clay with organic traces. 1.60m bgl: Very stiff sandy silty slightly gravelly CLAY 5.00m bgl: Brown/yellow completely weathered clayey SANDSTONE 6.00m bgl: Borehole terminated Borehole noted to be dry.
SJ49NW1077 168m S	Drilled by: CC Geotechnical Date: 14/09/2005 Method: Unknown	GL: MADE GROUND comprising concrete and brick fragments in a sandy clayey matrix with some organic matter. 1.50m bgl: Firm red very sandy silty CLAY 6.00m bgl: Completely weathered yellow/brown fine grained SANDSTONE 6.50m bgl: Borehole terminated Borehole noted to be dry.
SJ49NW656 186m S	Drilled by: J P Whitter (Water Well Eng) Ltd Date: December 2003 – January 2004 Method: Unknown	G.L: Top soil/slag 0.50m bgl: Boulder Clay 5.75m bgl: Sandstone / marl 68.00m bgl: Yellow sandstone 80.00m bgl: End of borehole Water struck at 7m bgl, upon completion water resting at 5m bgl.
SJ49NW1076 191m SE	Drilled by: CC Geotechnical Date: 15/09/2005 Method: Unknown	G.L: Grassed TOP SOIL 0.10m bgl: MADE GROUND comprising grey / brown fine sandy clay fill with some organic inclusions 2.90m bgl: Completely weathered brown / yellow clayey SANDSTONE becoming harder with depth 5.80m bgl: Borehole terminated
SJ49NW1078 239m SE	Drilled by: CC Geotechnical Date: 13/09/2005 Method: Unknown	G.L: MADE GROUND comprising tarmac and brick fragments in a sandy clayey matrix with some organic matter 1.00m bgl: Firm made ground comprising very sandy silty red CLAY 2.40m bgl: Completely weathered yellow / brown fine grained clayey SANDSTONE 5.00m bgl: Borehole terminated Borehole noted to be dry.

2.2.6 Geological Hazard Ratings

The Emapsite™ Insight Report provides ground stability data for the site and surrounding area, a summary is provided in Table 2.2.6 below.

Table 2.2.6 - Summary of BGS Hazard Ratings

Hazard	Located	Hazard Potential
Potential for Shrinking or Swelling Clay Ground Stability Hazards	On-site	Very Low
Potential for Running Sand Ground Stability Hazards	On-site	Very Low
Potential for Compressible Ground Stability Hazards	On-site	Very Low
Potential for Collapsible Ground Stability Hazards	On-site	Very Low
Potential for Landslide Ground Stability Hazards	On-site	Very Low
Potential for Ground Dissolution Stability Hazards	On-site	Negligible

2.3 Mining and Ground Workings

2.3.1 BGS Mineral Sites

There are no recorded BritPits recorded within 250m of the site.

2.3.2 Brine Extraction

No Brine Extraction Areas have been identified within a 250m radius of the site.

2.3.3 Surface Ground workings

There are seven surface ground working records within 250m of the site, relating to three unspecified heaps - 112m northeast, 149m east, and 208m south dated between 1966 and 1988.

2.3.4 Underground Workings

There are no records of underground workings within 250m of the site.

2.3.5 Non-Coal Mining

No records of underground non-coal mining have been identified within a 250m radius of the site.

2.3.6 Coal Mining

The site is not located within a coal mining area as defined by the mining remediation authority.

2.4 Hydrogeology

2.4.1 Aquifer Units

The Superficial deposits recorded on site is classified as a Secondary Undifferentiated Aquifer, described by the Environment Agency as *'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 nonaquifer in different locations due to the variable characteristics of the rock type'*.

The Bedrock geology recorded on site is classified as a Principal Aquifer, described by the Environment Agency as *'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.'*

2.4.2 Groundwater Vulnerability

The superficial and bedrock geology are classified as having high groundwater vulnerability.

The site is located within a source protection zone 3 (total catchment).

2.4.3 Groundwater Abstractions

There two records of groundwater abstraction recorded within 1000m of the site boundary, relating to process water and evaporative cooling at Dairy Crest Ltd, 186m south of the site. The status is classified as historical.

No potable ground water abstraction licenses are recorded within a 1000m radius of the site.

2.4.4 Groundwater Quality

The groundwater beneath the site had an overall classification rating as Poor in 2019.

2.5 Hydrology

2.5.1 Nearest Surface Water Course

A watercourse is recorded 32m south of the site, though it was not observed during the site walkover, historical mapping dated 2010 shows it labelled a drain. A further watercourse is recorded 194m east of the site.

2.5.2 Surface Water Quality

The surface water quality for Croxteth/Knowsley Brook at a location 390m southeast had an overall classification rating as Moderate in 2019.

2.5.3 Surface Water Abstractions

There are no surface water abstraction points recorded within a 250m radius of the site.

2.5.3 Surface Water Discharge Consents

There are no surface water discharge consents identified within 250m of the site.

2.6 Flood Risk

The site does not lie within an Environment Agency Zone 2 and Zone 3 floodplain.

There are no historical records of flooding within 250m of the site. The site does not lie in an area benefitting from flood defences or within an area used for flood storage.

There is a moderate to high risk from groundwater flooding in the southern half of the site and a negligible risk in the north.

The highest risk of surface water flooding on the site is shown as a 1 in 30 year return at a depth of 0.1m – 0.3m in the northeast of the site in the current vegetated area. Within 50m of the site the risk increases to 1 in 30 year return at a depth of 0.3m – 1.0m.

Although the report provides some information on flood risk this does not constitute a flood risk assessment for the site. The flood risk information provided only relates to flooding from Rivers or Seas and surface water. It does not account for flooding from other sources such as blockages in drainage systems and artificial water features. A separate Flood Risk Assessment may be required for the site.

2.7 Radon

The site is within an area in which less than 1% of the properties are above the action level for radon. Radon protection measures will not be required for new developments on the site.

2.8 Sensitive Land Uses, Ecological and Statutory Designations

The site lies within an SSSI impact risk zone. For this proposed development, consultation will likely be required for new transport proposals, including new or extended footways, cycleways, roads, and car parks.

The site lies within a priority habitat inventory for good quality semi-improved grassland.

The site is located within a Nitrate Vulnerable Zone.

No other records of sensitive land use (SAC, Designated Greenbelt, Ancient Woodland, Nature Reserves, Environmentally Sensitive Areas, etc.) have been identified within a 250m radius of the site.

3. Site History

The following section details the historical development of the site, with reference to historical Ordnance Survey maps. All distances are approximate and given from the site boundary. Descriptions in italics are as identified on the historical plans. For a complete list of maps consulted refer to the Emapsite™ Historical Mapping presented in Appendix III.

Table 3 – Summary of Historical Maps

Published Map Date & Scale	Land Use on Site	Surrounding Land Use
Date: 1867 – 1938 Scale: 1:2,500 1:10,560 County Series	The site is undeveloped and comprises agricultural fields. A surface water course with a flow direction northeast to southwest is shown crossing the southeast corner.	The surrounding land is predominantly agricultural fields.
Date: 1960 – 1966 Scale: 1:1,250 1:10,560 County Series	The site is now shown as a vacant parcel of land. The surface water course is shown as a <i>spread</i> in the southeast corner at the base of a slope to the neighbouring land adjacent to the south. By the late 1960s the watercourse appears to have been diverted around the eastern and southern boundaries as a land drain.	<i>Factory</i> located adjacent to the western boundary. A <i>Factory</i> is located adjacent to the northern site boundary with <i>Tanks</i> and small buildings located 4m northeast. <i>Heap</i> located 110m northeast. <i>Works</i> with railway located 200m southeast. A series of <i>Drains</i> are located 200m east within <i>Briton Plantation</i>. Telephone Exchange located 175m west.
Date: 1967 – 1970 Scale: 1:1,250 1:10,000 National Grid	Land in the west now forms part of the <i>Engineering Works</i> located west off site with four lighting towers are located around the fence line. A small building is located in the southwest corner. A slope is shown along the boundary in the northwest corner.	No significant changes.
Date: 1978 - 1988 Scale: 1:1,250 1:10,000 National Grid	The east of the site is now labelled a <i>Sports Ground</i>.	An industrial estate is shown 200m east. The railway is now shown as dismantled and drains across <i>Briton Estate</i> are no longer shown.
Date: 2000 – 2003 Scale: 1:1,250 1:10,000 National Grid Aerial Photography	Aerial photography shows the land to the east as heavily vegetated. Land to the west covered in hardstanding with parking bays in the south,	No significant change.
Date: 2010 - 2025 Scale: 1:10,000 National Grid Aerial Photography	A change to the building footprint in the southwest corner is noted. Land in the west occupied with car and lorries. Storage containers noted in the northwest.	Pond shown 30m to the northeast.

4. Environmental Data

4.1 Polluting Activity

4.1.1 Pollution Incidents

There is one recorded pollution incident within a 250m radius of the site, this is located 77m east and relates to an incident in 2003 from acid pollutant with a significant impact to land.

4.2 Licensed Industrial Activity

4.2.1 Control of Major Accidents Hazards (COMAH)

There are no records within 250m of the site for historical COMAH and Notification of Installations Handling Hazardous Substances (NIHHS).

4.2.2 Licensed Sites

There is one record of a pollutant release located within 250m of site, this is located 100m northwest and relates to coating processes. No enforcements have been notified.

There are no licenced industrial activities (Part A(1)) within 250m of the site.

There are no Registered Radioactive Substance Licences recorded within 250m of the site.

4.2.3 Current Industrial Activities

There are twenty current industrial activities recorded within 250m of the site. There is one related to the site for vehicle repair, testing and servicing which is shown in the southwest corner. Further off-site activities relate to pylon 6m south, printing, woodworking machinery, electricity substation, gas governor and telephone exchange.

4.2.4 Historical Industrial Activities

There are four records of historical industrial land use recorded on site which relate to unspecified factory (1966 mapping), unspecified commercial/industrial (1978 and 1988 mapping).

Further records within 250m of the site include unspecified tanks the closest located 4-5m, northeast, unspecified factory, unspecified heap, telephone exchange and railway sidings.

4.2.5 Fuel Stations & Tanks

There are no historical, current or recent recorded petrol stations within 250m of the site.

There are seven records of historical unspecified tanks within 250m of the site, located 4-5m, 6m, 28m, 31m and 35m northeast (1960 – 1993 mapping), 109m and 243m south (1974 – 1996 mapping).

There is one historical garage located within 57m east of the site noted on 1976 mapping.

There are no records of high-pressure underground pipelines (oil and gas) within 250m of the site.

4.3 Waste and Material Storage Locations

4.3.1 Landfill

There are no records of Historical, Active or Recent Landfill Sites recorded within a 250m radius of the site.

4.3.2 Waste Sites

There are no licenced waste sites located within 250m of the site.

4.3.3 Waste Exemptions

There is one record of waste exemption recorded within a 250m radius of the site, relating to the storage of waste in a secure place 74m east of the site.

4.4 Summary

Based on the information collated for the desk study, the geo-environmental setting of the site is summarised as follows:

- The site was undeveloped from earliest mapping until the early 1960's when land in the west forms part of the Engineering Works located adjacent and to the west of the site. This area of the site has been laid to hardstanding and utilised for car and lorry parking. A small building is located in the southwest and storage containers are located in the northwest. The land in the east has not been developed, being shown as a sports ground from 1978. In recent years the site is shown as heavily vegetated.
- The surrounding area was historically agricultural fields. By the early 1960's, industry is shown in the immediate surrounding area with development comprising factories and works. The surrounding land is broadly similar to present day.
- Based on BGS mapping, Made Ground (undivided) is mapped across the entirety of the site and is defined as an artificial deposit, described by the BGS as '*an area where the pre-existing (natural or artificial) land surface is raised by artificial deposits*'.
- BGS mapping indicates the site is underlain by superficial deposits of Devensian Till and bedrock of the Chester Sandstone Formation.
- The Superficial deposits are classified as a Secondary Undifferentiated Aquifer and the bedrock is classified as a Principal Aquifer.
- The nearest surface water feature is located 32m south, though it was not observed during the site walkover, historical mapping dated 2010 shows it labelled a drain. A further watercourse is recorded 194m east of the site.
- Historically a watercourse ran across the southeastern corner of the site (trending NE to SW and flowing SW), by the late 1960s this appeared to have been diverted to follow the eastern and southern boundaries and is noted as "Spreads" (dissemination of a water course into rough grass land in this instance).

- There is a moderate to high risk from groundwater flooding in the southern half of the site and a negligible risk in the north. The highest risk of surface water flooding on the site is shown as a 1 in 30 year return at a depth of 0.1m – 0.3m in the northeast of the site in the current vegetated area.
- The site is within an area in which less than 1% of the properties are above the action level for radon. Radon protection measures will not be required for new developments on the site.
- There are no records of Historic, Active or Recent Landfill Sites recorded within a 250m radius of the site.

Based on the above, the environmental sensitivity of the site can be considered to be Moderate/Low at this stage.

5. Preliminary Conceptual Site Model (PCSM)

5.1 Introduction

The approach to the human health risk assessment reported here follows the principals given in the Land Contamination Risk Management (LCRM) Guidance¹.

The basis of above guidance is the development of the conceptual site model (CSM) which is the representation of the source-pathway-receptor (pollutant) linkages upon which the assessment of risk can be based.

5.2 Risk Assessment Approach

The approach to the human health risk assessment reported here follows the principles given in LCRM guidance, i.e., application of the following assessment hierarchy:

- Tier 1 risk screening by establishment of potential pollutant linkages, i.e. the preliminary conceptual site model (PCSM), or
- Tier 2 generic quantitative assessment using generic assessment criteria (GACs) that represent 'acceptably low' risk, or
- Tier 3 quantitative risk assessment using site specific assessment criteria (SSACs) that represent 'unacceptable risk', or where generic assessment criteria are not available, or they are not applicable to the CSM.

The potential sources of contamination based on historical and current land uses were identified using the Emapsite™ Enviro + Geo Insight Report and Emapsite™ Historical Mapping (Appendix II & III) and Department of the Environment Industry Profiles. The standard exposure scenario of commercial land has been used to identify potential exposure pathways for human health receptors. Controlled water, flora and fauna and property receptors have also been included within the PCSM.

5.3 Preliminary Conceptual Site Model

The PCSM was produced by undertaking a Source-Pathway-Receptor analysis of the site:

Sources (**S**) are potential or known contaminant sources, e.g., a former land use:

Pathways (**P**) are environmental systems through which a contaminant could migrate, e.g., air, groundwater.

Receptors (**R**) are sensitive environmental receptors that could be adversely affected by a contaminant, e.g., Site Occupiers, groundwater resources.

- 5.3.1** For a pollutant linkage to exist between a contaminant source and a receptor, a pathway must be present.

¹ <https://www.gov.uk/government/publications/land-contamination-risk-management-lcrm>

5.3.2 Sources

The potential sources of contamination within 250m of the site and associated groups of potentially contaminative substances are outlined below. The list of potential contaminants was derived from the Department of the Environment Industry Profiles. The activities and substances listed below should not be considered exhaustive and provides a guide to the likely range of contaminants which may be present.

On Site

S1: Historical and Contemporary land use: Made Ground associated with development of the commercial/industrial buildings and associated hardstanding. It is noted that the site has been raised with artificial deposits. Fuel storage is also noted to be present on the site.

Inorganic and organic contaminants including heavy metals, metalloids, sulfates/sulfur containing compounds, asbestos, TPH's, and PAH's.

Off Site

S2: Historical and Contemporary land use: Made Ground associated with commercial development, former garage, tanks, various commercial works/factories, and artificial land raise.

Inorganic and organic contaminants including heavy metals, metalloids, asbestos, TPH's, PAH's.

On and Off Site

S3: Historical and Contemporary land use: Ground Gases generated from Made Ground/artificial ground forming a land raise.

Carbon Dioxide and Methane.

5.3.3 Pathways

- The site is underlain by superficial deposits classified as a Secondary Undifferentiated Aquifer and the bedrock is classified as a Principal Aquifer. The nearest surface water feature is located 32m south, though it was not observed during the site walkover, historical mapping dated 2010 shows it labelled a drain. A further watercourse is recorded 194m east of the site. Historically a watercourse cut the southeast corner of the site (mapping: 1867 to c.1967) until it was diverted to the eastern boundary and (possibly part of the) southern boundary.

P1: Human uptake;

- Dermal contact with soils and dust
- Ingestion of soils and dust
- Inhalation of soils, dust and vapour

P2: Horizontal and vertical migration of contaminants through potentially permeable soils and rocks

P3: Direct Contact

- P4:** Migration along preferential pathways via underground services and drainage runs (pipes, culverts and granular material)
- P5:** Overland flow / surface runoff
- P6:** Vertical and lateral migration of ground gases and/or vapour
- P7:** Root uptake

5.3.4 Receptors

- R1:** End Users: Site and Office workers
- R2:** Construction and maintenance workers
- R3:** Controlled Water: Groundwater and Surface Water
- R4:** Property: Services (e.g., drinking water supply pipes) and structures/buildings (concrete used in foundations)
- R5:** Adjacent commercial buildings/residential properties
- R6:** Proposed flora and fauna

5.3.5 Preliminary Qualitative Risk Assessment

For each potential pollutant linkage identified within the PCSM, the potential risk has been assessed on the probability of a pollution event and the severity it may have on the identified receptors. The results are presented in Table 5.3 below. The methodology for the assessment is presented in Appendix IV.

Table 5.3 Preliminary Conceptual Site Model and Qualitative Risk Assessment

Source	Pathway	Receptor	Consequence	Probability	Risk	Comments
On site S1: Historical and Contemporary land use: Made Ground associated with development of the commercial/industrial buildings and associated hardstanding. It is noted that the site has been raised with artificial deposits. Fuel storage is also noted to be present on the site.	P1: Human uptake pathways	R1: End Users	Mild	Low	Low	Made Ground is expected to be present on the site due to land raise. Levels and content of which should be qualified and quantified from a ground investigation. There is a potential for contamination to be present from fuel storage at the site. Given the limited potential for contamination, the risk is considered to be LOW.
		R2: Construction and maintenance workers	Mild	Low	Low	
		R5: Adjacent Residential Properties	Mild	Low	Low	
	P2: Horizontal and vertical migration of contaminants through potentially permeable soils and rocks.	R3: Controlled Water: Groundwater and surface watercourses	Mild	Low	Low	The nearest surface water feature is a drain located 32m to the south of the site. The underlying bedrock is a Principal Aquifer; sources of contamination are expected to be limited on site associated with previous uses and development on site, gross contamination is not expected on the site and if present, is expected to be localised and in discrete pockets, therefore the risk to Controlled Waters is presently considered to be LOW, however a suitably targeted ground investigation will be required to include fuel storage areas.
	P3: Direct Contact	R4: Property, services and substructures	Medium	Low	Moderate/Low	Made Ground and natural deposits may be aggressive to concrete and underground utilities. The risk is considered to be MODERATE/LOW. However, this should be quantified by further site investigation.
	P7: Root Uptake.	R6: Proposed Flora and Fauna	Mild	Unlikely	Very Low	No development plans are available at this stage; however, it is anticipated that planting of flora will be limited. The risk at this stage to proposed flora and fauna is considered to be VERY LOW.
Off site S2: Historical and Contemporary land use: Made Ground associated with commercial development, former garage, tanks, various commercial works/factories, and artificial land raise.	P1: Human uptake pathways	R1: End Users	Mild	Low	Low	Potential sources of off-site contamination have been identified within 250m of the site, although these are considered to be limited and relate predominantly to the Made Ground – the risk at this stage is considered to be LOW.
	P2: Horizontal and vertical migration of contaminants through potentially permeable soils and rocks.	R3: Controlled Water: Groundwater and surface watercourses	Mild	Low	Low	
On and Off-Site Gas Sources S3: Ground Gases: Carbon Dioxide and Methane	P6: Vertical and lateral migration of ground gases and/or vapour.	R1: End Users	Medium	Low	Moderate/Low	Made Ground is present on and off-site within 250m of the site, the risk at this stage is considered to be MODERATE to LOW and the ground gas should be investigated as part of an intrusive investigation. The site is located in an area where the risk of Radon has a split classification requiring either basic or full radon protection measures. A site specific BGS radon report should be obtained once development plans are available to confirm the requirements.

6. Preliminary Engineering Constraints and Recommendations

This report has been prepared to support a planning application. At the time of writing, development plans show two commercial units with loading docks, associated car parking, limited landscaping and attenuation.

6.1 Geotechnical Constraints

Made Ground is expected to be present across the site. Made Ground materials may be of various composition and strength and should be investigated as part of any ground investigation.

The groundwater regime on site is unknown and should be assessed further. It is noted that groundwater in the area maybe high due to the presence of several land drains. A watercourse historically flowed southwest across the southeastern corner of the site. It is also noted that some of the site is located within an area that is of a high risk of groundwater flooding. These noted features, along with the presence of artificial deposits (Made Ground), may preclude the use of soakaways on the site.

The soils and groundwater on site may be aggressive to buried/surface concrete and proposed utilities and should be assessed further.

6.2 Environmental Constraints

Any Made Ground on site may contain elevated concentrations of potentially harmful contaminants which may present a risk to the receptors identified in the PCSM including end users or construction workers. This should be investigated in order to ascertain the risk.

Potential sources of ground gas have been identified in the form of Made Ground associated with land raise on and around the site. Given the potential for ground gases, ground gas monitoring should be included as part of any intrusive investigation in accordance with BS8485:2015 to determine the risk.

At this time, the Preliminary Conceptual Site Model indicates a moderate/low possibility that harm could arise to a designated receptor from identified hazards.

6.3 Recommendations

HSP Consulting Engineers Ltd would recommend that an intrusive geo-environmental investigation be undertaken across the site to confirm the recommendations outlined above.

Ground investigations should be suitably designed upon the provision of a proposed plan.

The objectives of an investigation should generally be as follows:

- To establish the ground conditions laterally and vertically across the site, including the presence, distribution and composition of any Made Ground.
- To obtain soil samples for contamination analysis, in order to refine the PCSM and undertake generic quantitative risk assessment.
- To obtain data on the ground gas and groundwater regime.
- To obtain geotechnical design parameters for any proposed new buildings including in-situ and laboratory testing.
- To assess if the soils and groundwater on site are likely to be aggressive to buried/surface concrete and proposed utilities.

Appendix I



DO NOT SCALE
NOTES:



 - Approximate Site Location



Lawrence House, Meadowbank Way,
Eastwood, Nottingham, NG16 3SB
Tel: 01773 535 555 Fax: 0870 600 6091
www.hspconsulting.com

CLIENT:
Indurent

PROJECT:
Moorgate Point

TITLE:
Site Location Plan

SCALE@SIZE : NTS	ISSUE: FINAL
---------------------	-----------------

DESIGN/DRAWN : TG	DATE: July 2025
----------------------	--------------------

PROJECT No: C4884	DRAWING No: 501
----------------------	--------------------

Appendix II

unspecified

Order Details

Date: 21/07/2025
Your ref: EMS_1037912_1297382
Our Ref: EMS-1037912_1309982

Site Details

Location: 342555 397212
Area: 4.63 ha
Authority: [Knowsley Metropolitan Borough Council](#)
↗



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Summary of findings

[p. 2 >](#) **Aerial image**

[p. 9 >](#)

OS MasterMap site plan

[p.14 >](#) [Insight User Guide](#) ↗

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 >	6	9	13	20	-
17 >	1.2 >	Historical tanks >	0	5	2	20	-
19 >	1.3 >	Historical energy features >	0	0	0	15	-
19	1.4	Historical petrol stations	0	0	0	0	-
20 >	1.5 >	Historical garages >	0	0	1	4	-
20	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
21 >	2.1 >	Historical industrial land uses >	8	12	16	25	-
24 >	2.2 >	Historical tanks >	0	25	4	35	-
26 >	2.3 >	Historical energy features >	0	0	0	24	-
27	2.4	Historical petrol stations	0	0	0	0	-
28 >	2.5 >	Historical garages >	0	0	2	5	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
29	3.1	Active or recent landfill	0	0	0	0	-
29	3.2	Historical landfill (BGS records)	0	0	0	0	-
30	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
30	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
30	3.5	Historical waste sites	0	0	0	0	-
30	3.6	Licensed waste sites	0	0	0	0	-
30 >	3.7 >	Waste exemptions >	0	0	11	17	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
34 >	4.1 >	Recent industrial land uses >	1	1	18	-	-
36 >	4.2 >	National Geographic Database (NGD) - Current or recent tanks >	0	0	15	-	-
37	4.3	Current or recent petrol stations	0	0	0	0	-
37	4.4	Electricity cables	0	0	0	0	-
37	4.5	Gas pipelines	0	0	0	0	-



37	4.6	Sites determined as Contaminated Land	0	0	0	0	-
37 >	4.7 >	<u>Control of Major Accident Hazards (COMAH) ></u>	0	0	0	2	-
38	4.8	Regulated explosive sites	0	0	0	0	-
38	4.9	Hazardous substance storage/usage	0	0	0	0	-
38	4.10	Historical licensed industrial activities (IPC)	0	0	0	0	-
38 >	4.11 >	<u>Licensed industrial activities (Part A(1)) ></u>	0	0	0	13	-
41 >	4.12 >	<u>Licensed pollutant release (Part A(2)/B) ></u>	0	0	1	1	-
41	4.13	Radioactive Substance Authorisations	0	0	0	0	-
41	4.14	Licensed Discharges to controlled waters	0	0	0	0	-
41	4.15	Pollutant release to surface waters (Red List)	0	0	0	0	-
42	4.16	Pollutant release to public sewer	0	0	0	0	-
42	4.17	List 1 Dangerous Substances	0	0	0	0	-
42	4.18	List 2 Dangerous Substances	0	0	0	0	-
42 >	4.19 >	<u>Pollution Incidents (EA/NRW) ></u>	0	0	1	1	-
43	4.20	Pollution inventory substances	0	0	0	0	-
43	4.21	Pollution inventory waste transfers	0	0	0	0	-
43	4.22	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	<u>Hydrogeology ></u>	On site	0-50m	50-250m	250-500m	500-2000m
44 >	5.1 >	<u>Superficial aquifer ></u>	Identified (within 500m)				
46 >	5.2 >	<u>Bedrock aquifer ></u>	Identified (within 500m)				
47 >	5.3 >	<u>Groundwater vulnerability ></u>	Identified (within 50m)				
48	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
48	5.5	Groundwater vulnerability- local information	None (within 0m)				
49 >	5.6 >	<u>Groundwater abstractions ></u>	0	0	4	0	33
58	5.7	Surface water abstractions	0	0	0	0	0
58 >	5.8 >	<u>Potable abstractions ></u>	0	0	0	0	9
60 >	5.9 >	<u>Source Protection Zones ></u>	1	0	0	1	-
61	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	<u>Hydrology ></u>	On site	0-50m	50-250m	250-500m	500-2000m

62 >	6.1 >	Water Network (OS MasterMap) >	0	1	1	-	-
63 >	6.2 >	Surface water features >	0	1	1	-	-
63 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
63 >	6.4 >	WFD Surface water bodies >	0	0	0	-	-
64 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
65	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
65	7.2	Historical Flood Events	0	0	0	-	-
65	7.3	Flood Defences	0	0	0	-	-
66	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
66	7.5	Flood Storage Areas	0	0	0	-	-
67	7.6	Flood Zone 2	None (within 50m)				
67	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding >					
68 >	8.1 >	Surface water flooding >	1 in 30 year, 0.3m - 1.0m (within 50m)				
Page	Section	Groundwater flooding >					
70 >	9.1 >	Groundwater flooding >	High (within 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
71	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
72	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
72	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
72	10.4	Special Protection Areas (SPA)	0	0	0	0	0
72	10.5	National Nature Reserves (NNR)	0	0	0	0	0
73 >	10.6 >	Local Nature Reserves (LNR) >	0	0	0	0	2
73	10.7	Designated Ancient Woodland	0	0	0	0	0
73	10.8	Biosphere Reserves	0	0	0	0	0
73	10.9	Forest Parks	0	0	0	0	0
74	10.10	Marine Conservation Zones	0	0	0	0	0
74 >	10.11 >	Green Belt >	0	0	0	0	2

74	10.12	Proposed Ramsar sites	0	0	0	0	0
74	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
75	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
75	10.15	Nitrate Sensitive Areas	0	0	0	0	0
75 >	<u>10.16 ></u>	<u>Nitrate Vulnerable Zones ></u>	1	0	0	0	3
76 >	<u>10.17 ></u>	<u>SSSI Impact Risk Zones ></u>	1	-	-	-	-
77	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
78	11.1	World Heritage Sites	0	0	0	-	-
78	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
78	11.3	National Parks	0	0	0	-	-
78	11.4	Listed Buildings	0	0	0	-	-
79	11.5	Conservation Areas	0	0	0	-	-
79	11.6	Scheduled Ancient Monuments	0	0	0	-	-
79	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	<u>Agricultural designations ></u>	On site	0-50m	50-250m	250-500m	500-2000m
80 >	<u>12.1 ></u>	<u>Agricultural Land Classification ></u>	Urban (within 250m)				
81	12.2	Open Access Land	0	0	0	-	-
81	12.3	Tree Felling Licences	0	0	0	-	-
81	12.4	Environmental Stewardship Schemes	0	0	0	-	-
81	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	<u>Habitat designations ></u>	On site	0-50m	50-250m	250-500m	500-2000m
82 >	<u>13.1 ></u>	<u>Priority Habitat Inventory ></u>	1	1	1	-	-
83	13.2	Habitat Networks	0	0	0	-	-
83 >	<u>13.3 ></u>	<u>Open Mosaic Habitat ></u>	0	1	0	-	-
83	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	<u>Geology 1:10,000 scale ></u>	On site	0-50m	50-250m	250-500m	500-2000m
84 >	<u>14.1 ></u>	<u>10k Availability ></u>	Identified (within 500m)				
85	14.2	Artificial and made ground (10k)	0	0	0	0	-



86	14.3	Superficial geology (10k)	0	0	0	0	-
86	14.4	Landslip (10k)	0	0	0	0	-
87	14.5	Bedrock geology (10k)	0	0	0	0	-
87	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
88 >	15.1 >	50k Availability >	Identified (within 500m)				
89 >	15.2 >	Artificial and made ground (50k) >	1	0	0	2	-
90 >	15.3 >	Artificial ground permeability (50k) >	1	0	-	-	-
91 >	15.4 >	Superficial geology (50k) >	1	1	0	0	-
92 >	15.5 >	Superficial permeability (50k) >	Identified (within 50m)				
92	15.6	Landslip (50k)	0	0	0	0	-
92	15.7	Landslip permeability (50k)	None (within 50m)				
93 >	15.8 >	Bedrock geology (50k) >	1	0	0	0	-
94 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
94	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
95 >	16.1 >	BGS Boreholes >	0	0	7	-	-
Page	Section	Natural ground subsidence >					
97 >	17.1 >	Shrink swell clays >	Very low (within 50m)				
98 >	17.2 >	Running sands >	Very low (within 50m)				
99 >	17.3 >	Compressible deposits >	Very low (within 50m)				
100 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
101 >	17.5 >	Landslides >	Very low (within 50m)				
102 >	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
104	18.1	BritPits	0	0	0	0	-
105 >	18.2 >	Surface ground workings >	0	0	7	-	-
105	18.3	Underground workings	0	0	0	0	0
105	18.4	Underground mining extents	0	0	0	0	-

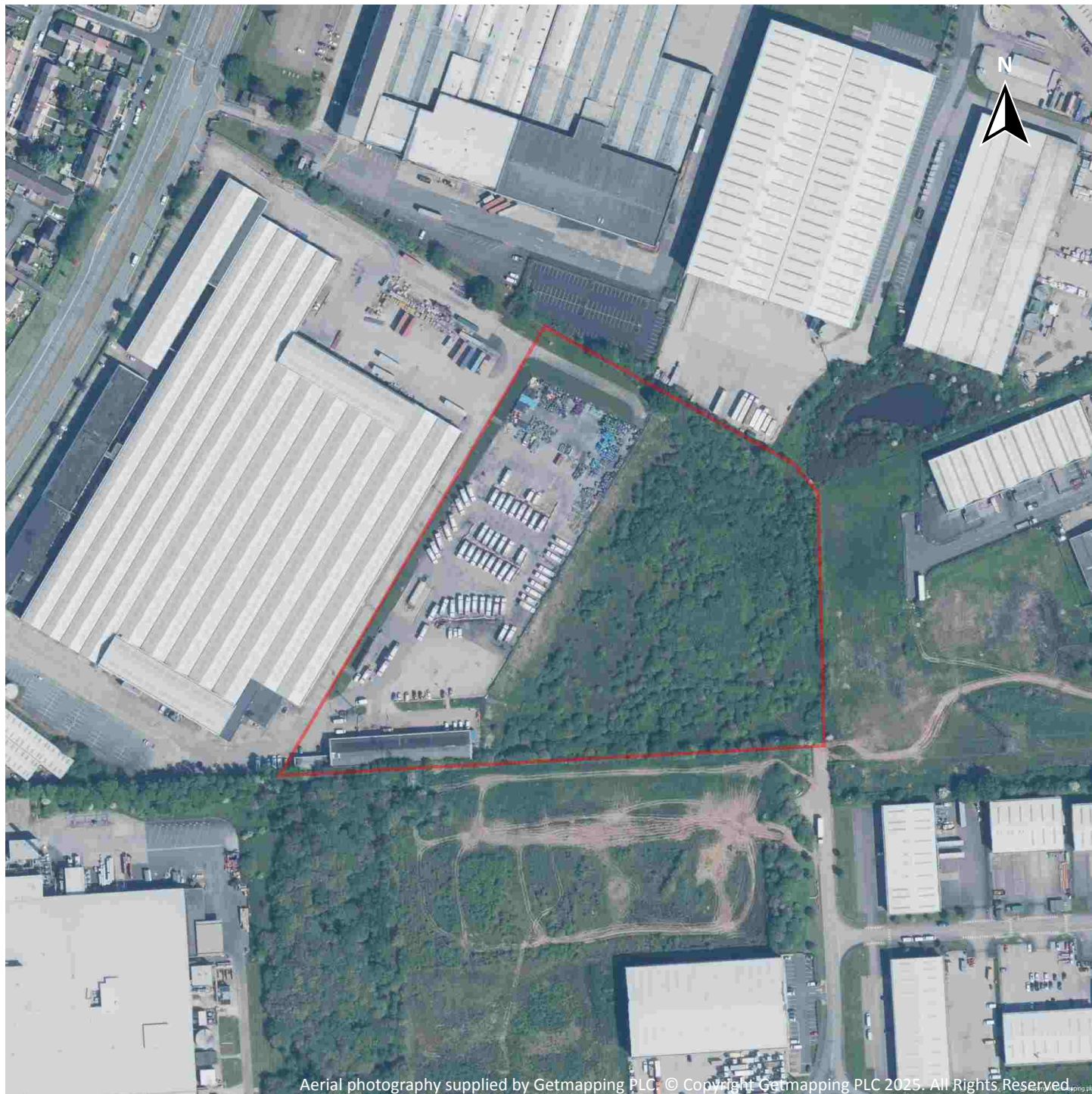


106	18.5	Historical Mineral Planning Areas	0	0	0	0	-
106	18.6	Non-coal mining	0	0	0	0	0
106	18.7	JPB mining areas	None (within 0m)				
106	18.8	The Coal Authority non-coal mining	0	0	0	0	-
107	18.9	Researched mining	0	0	0	0	-
107	18.10	Mining record office plans	0	0	0	0	-
107	18.11	BGS mine plans	0	0	0	0	-
107	18.12	Coal mining	None (within 0m)				
107	18.13	Brine areas	None (within 0m)				
108	18.14	Gypsum areas	None (within 0m)				
108	18.15	Tin mining	None (within 0m)				
108	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m
109	19.1	Natural cavities	0	0	0	0	-
109	19.2	Mining cavities	0	0	0	0	0
109	19.3	Reported recent incidents	0	0	0	0	-
109	19.4	Historical incidents	0	0	0	0	-
Page	Section	Radon >					
111 >	20.1 >	Radon >	Less than 1% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
113 >	21.1 >	BGS Estimated Background Soil Chemistry >	2	0	-	-	-
113	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
113	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
114	22.1	Underground railways (London)	0	0	0	-	-
114	22.2	Underground railways (Non-London)	0	0	0	-	-
115	22.3	Railway tunnels	0	0	0	-	-
115 >	22.4 >	Historical railway and tunnel features >	0	0	3	-	-
115	22.5	Royal Mail tunnels	0	0	0	-	-



115	22.6	Historical railways	0	0	0	-	-
116	22.7	Railways	0	0	0	-	-
116	22.8	Crossrail 2	0	0	0	0	-
116	22.9	HS2	0	0	0	0	-

Recent aerial photograph



Capture Date: 20/05/2023

Site Area: 4.63ha



Recent site history - 2022 aerial photograph



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Capture Date: 18/10/2022

Site Area: 4.63ha



Recent site history - 2015 aerial photograph



Capture Date: 11/06/2015

Site Area: 4.63ha



Recent site history - 2001 aerial photograph



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Capture Date: 01/05/2001

Site Area: 4.63ha



Recent site history - 2000 aerial photograph

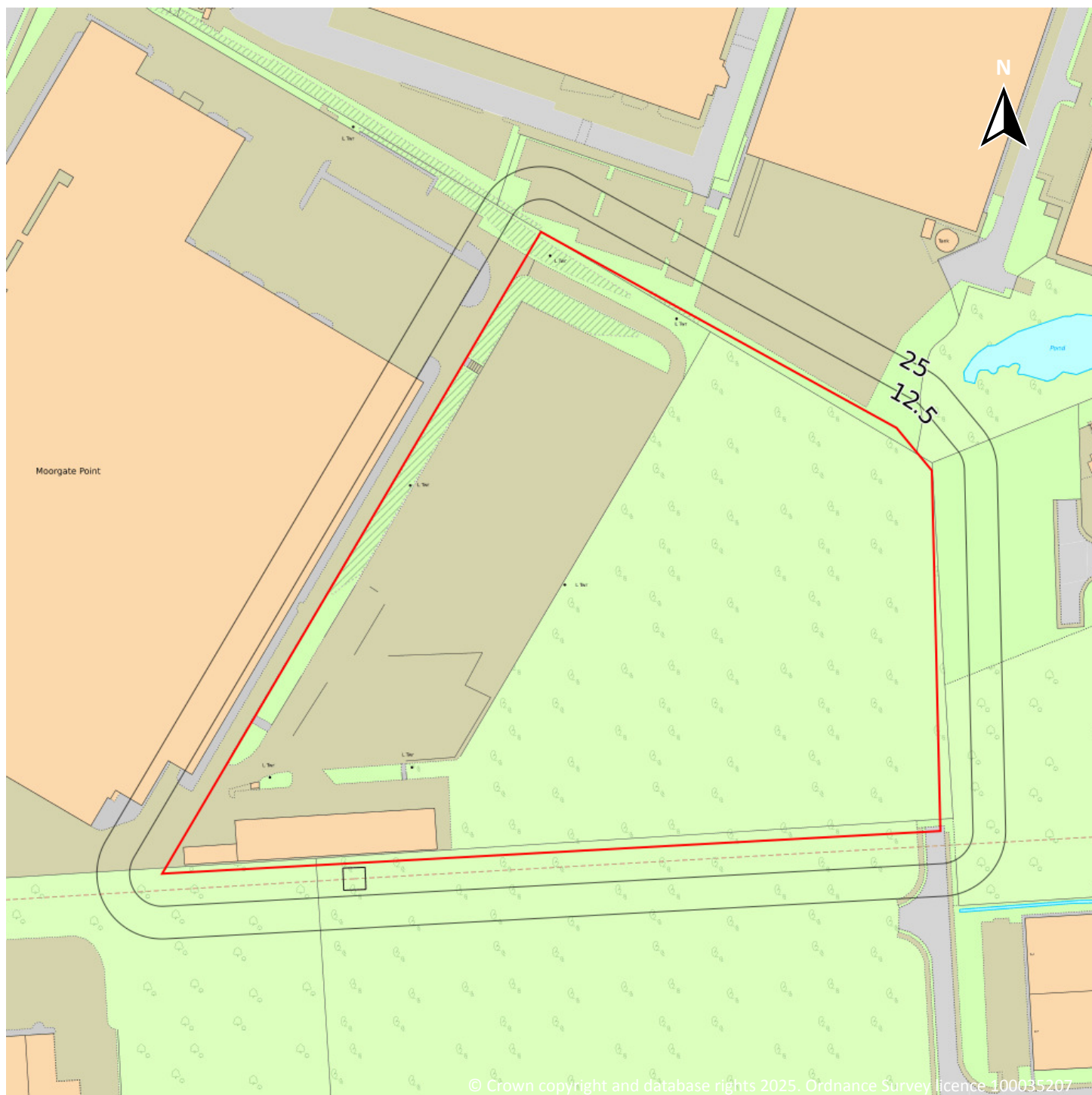


Capture Date: 21/07/2000

Site Area: 4.63ha



OS MasterMap site plan



Site Area: 4.63ha



The map shows the area around Park Brow Community Primary School. Key features include:

- Streets:** Broad Lane, Grosmont Road, Gaywood Avenue, Bewley Drive, Dalry Crescent, Roughdale Avenue, Old Farm Road, School Lane, Knowsley Brook, Anstworth Lane, Penryn Road, Villiers Road, Gores Road, Gale Road, Hornhouse Lane, Faraday Road, Owen Road, and Buxton Road.
- Buildings:** Park Brow Community Primary School, St Martin's Church, St Joseph The Worker Roman Catholic Church, and various residential and commercial buildings.
- Green Spaces:** Playing Field, Briton Plantation, and various parks and gardens.
- Infrastructure:** A580 road, A580B road, and various bus routes.
- Markings:** A red-outlined polygon, numbered points (1-11), and letters (A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z) marking specific locations.

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- Site Outline
- Search buffers in metres (m)
-  Historical industrial land uses
 -  Historical tanks
 -  Historical energy features
 -  Historical garages

Records within 500m	48
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Features are displayed on the Past land use map on [page 15 >](#)

ID	Location	Land use	Dates present	Group ID
A	On site	Unspecified Commercial/Industrial	1978	863782

ID	Location	Land use	Dates present	Group ID
A	On site	Unspecified Commercial/Industrial	1988	999273
B	On site	Unspecified Factory	1966	880028
B	On site	Unspecified Commercial/Industrial	1988	882841
B	On site	Unspecified Commercial/Industrial	1978	909049
C	On site	Unspecified Factory	1966	908185
D	4m NE	Unspecified Tanks	1966 - 1978	885833
D	4m NE	Unspecified Tanks	1988	1000222
D	7m NE	Unspecified Tank	1966 - 1978	973879
D	7m NE	Unspecified Tank	1988	996156
D	32m NE	Unspecified Tank	1978	884910
D	32m NE	Unspecified Tank	1988	923790
D	33m NE	Unspecified Tank	1988	978658
D	33m NE	Unspecified Tank	1966 - 1978	997912
1	46m NW	Unspecified Factory	1966	877939
E	112m NE	Unspecified Heap	1966 - 1978	865859
E	112m NE	Unspecified Heap	1988	881083
3	149m E	Unspecified Heap	1966	843736
F	173m W	Telephone Exchange	1988	897167
F	173m W	Telephone Exchange	1966 - 1978	998910
G	194m E	Railway Sidings	1955 - 1978	2405268
H	208m S	Unspecified Heap	1988	903427
H	208m S	Unspecified Heap	1966 - 1978	918020
I	226m E	Unspecified Works	1966	835705
I	226m E	Unspecified Commercial/Industrial	1988	896480
I	226m E	Unspecified Commercial/Industrial	1978	965566
J	243m S	Unspecified Tanks	1988	878030
J	243m S	Unspecified Tanks	1978	960040
K	255m NE	Refuse Heap	1925	988260



ID	Location	Land use	Dates present	Group ID
K	256m NE	Refuse Heap	1938	909068
L	313m E	Unspecified Heap	1988	922817
L	313m E	Unspecified Heap	1978	999377
L	329m E	Unspecified Heap	1966	953625
M	335m S	Unspecified Commercial/Industrial	1988	978153
M	339m S	Unspecified Commercial/Industrial	1978	956746
N	349m S	Unspecified Commercial/Industrial	1988	896145
N	349m S	Unspecified Commercial/Industrial	1978	916171
P	409m S	Unspecified Pit	1907 - 1938	942930
P	410m S	Unspecified Pit	1925	896031
P	411m S	Unspecified Pit	1956	1007852
P	444m SE	Unspecified Tank	1988	888263
P	444m SE	Unspecified Tank	1978	926320
9	456m NE	Unspecified Commercial/Industrial	1978	822507
V	474m E	Unspecified Tank	1978	973141
V	474m E	Unspecified Tank	1988	983422
10	482m SE	Unspecified Commercial/Industrial	1988	822358
12	494m S	Unspecified Works	1966	835431
13	499m S	Unspecified Tanks	1966	895518

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m

27

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 ungrouped 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
D	5m NE	Tanks	1960 - 1993	144490
D	6m NE	Unspecified Tank	1960 - 1993	131885
D	28m NE	Unspecified Tank	1970 - 1993	150908
D	31m NE	Unspecified Tank	1960 - 1993	148060
D	35m NE	Unspecified Tank	1976 - 1993	148164
C	109m S	Tanks	1996	109031
J	243m S	Unspecified Tank	1974 - 1993	136363
J	255m S	Unspecified Tank	1974 - 1984	135312
J	255m S	Tanks	1974	127075
J	255m S	Unspecified Tank	1993	154321
J	255m S	Tanks	1984	128537
J	257m S	Tanks	1993	144787
P	431m S	Tanks	1974 - 1994	144368
8	434m NE	Tanks	1996 - 1999	153457
P	441m S	Tanks	1974 - 1994	139728
S	441m SE	Unspecified Tank	1994	116110
S	458m SE	Tanks	1994	109046
U	470m S	Unspecified Tank	1985 - 1994	126441
V	472m E	Unspecified Tank	1975 - 1997	138106
V	475m E	Unspecified Tank	1959 - 1997	151400
S	475m SE	Tanks	1991	109042
U	475m S	Unspecified Tank	1985 - 1994	149703
S	481m SE	Tanks	1991	109040
U	482m S	Unspecified Tank	1994	116111
S	489m SE	Tanks	1994	109048
S	491m SE	Tanks	1991	109043
S	491m SE	Tanks	1994	109047

This data is sourced from Ordnance Survey / Groundsure.



1.3 Historical energy features

Records within 500m

15

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 ungrouped 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
4	254m NW	Electricity Substation	1984	66237
5	337m NW	Electricity Substation	1996	67461
O	361m N	Electricity Substation	1968 - 1970	93040
O	364m N	Electricity Substation	1996 - 1999	85722
G	384m E	Electricity Substation	1975 - 1997	90152
6	398m E	Electricity Substation	1997	67700
Q	422m NW	Electricity Substation	1996	86353
7	426m E	Electricity Substation	1997	67701
Q	427m NW	Electricity Substation	1967 - 1970	88523
R	430m NW	Electricity Substation	1994	67467
R	438m NW	Electricity Substation	1972	67470
N	441m S	Electricity Substation	1974 - 1994	75368
T	459m W	Electricity Substation	1989	70040
T	462m W	Electricity Substation	1974	85573
11	491m E	Electricity Substation	1975 - 1997	82547

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 ungrouped 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

5

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 ungrouped 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
2	57m E	Vehicle Repair Depot	1976	28878
K	261m NE	Body Repair Works	1976	26430
W	484m SW	Garage	1961	25008
W	484m SW	Garage	1959	25710
W	484m SW	Garage	1975	25795

This data is sourced from Ordnance Survey / Groundsure.

1.6 Historical military land

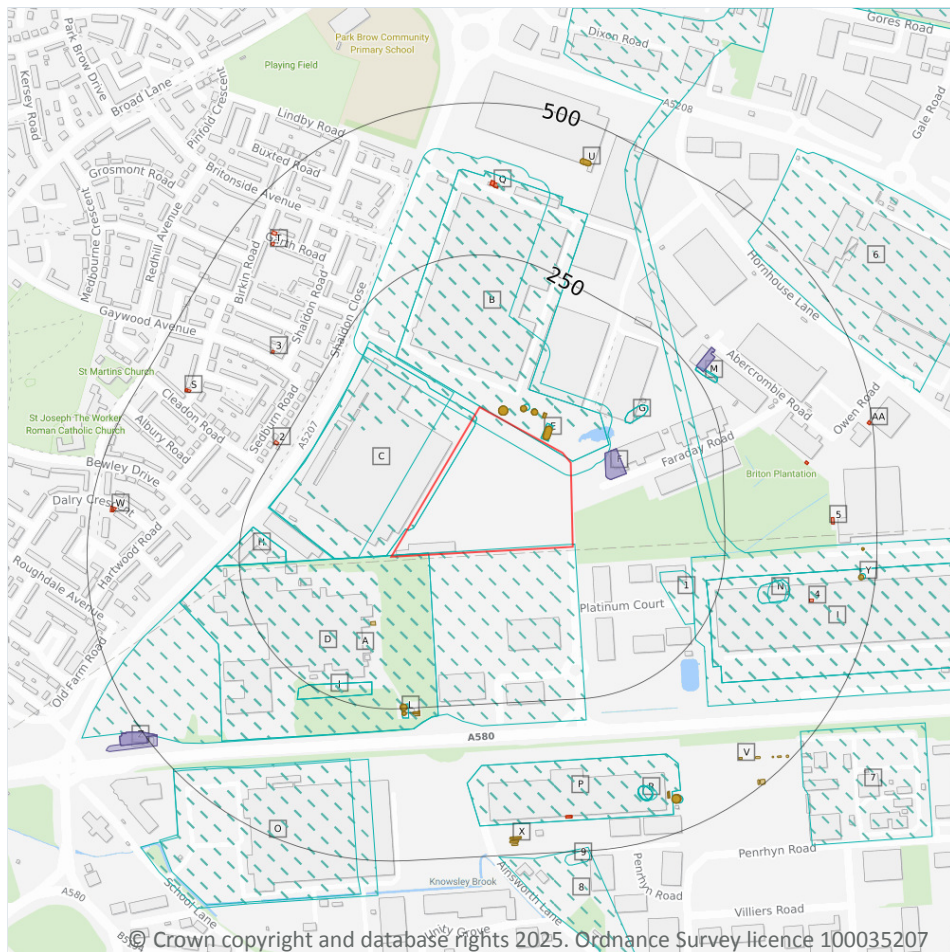
Records within 500m

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
- Historical energy features
- Historical garages

2.1 Historical industrial land uses

Records within 500m

61

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 21](#) >

ID	Location	Land Use	Date	Group ID
A	On site	Unspecified Factory	1966	908185
B	On site	Unspecified Commercial/Industrial	1978	909049
B	On site	Unspecified Commercial/Industrial	1988	882841



ID	Location	Land Use	Date	Group ID
B	On site	Unspecified Factory	1966	880028
C	On site	Unspecified Commercial/Industrial	1978	863782
C	On site	Unspecified Commercial/Industrial	1988	999273
D	On site	Unspecified Commercial/Industrial	1978	863782
D	On site	Unspecified Commercial/Industrial	1988	999273
E	4m NE	Unspecified Tanks	1966	885833
E	4m NE	Unspecified Tanks	1978	885833
E	4m NE	Unspecified Tanks	1988	1000222
E	7m NE	Unspecified Tank	1966	973879
E	7m NE	Unspecified Tank	1978	973879
E	7m NE	Unspecified Tank	1988	996156
E	32m NE	Unspecified Tank	1978	884910
E	32m NE	Unspecified Tank	1988	923790
E	33m NE	Unspecified Tank	1966	997912
E	33m NE	Unspecified Tank	1978	997912
E	33m NE	Unspecified Tank	1988	978658
C	46m NW	Unspecified Factory	1966	877939
G	112m NE	Unspecified Heap	1966	865859
G	112m NE	Unspecified Heap	1978	865859
G	112m NE	Unspecified Heap	1988	881083
1	149m E	Unspecified Heap	1966	843736
H	173m W	Telephone Exchange	1966	998910
H	173m W	Telephone Exchange	1978	998910
H	173m W	Telephone Exchange	1988	897167
I	194m E	Railway Sidings	1966	2405268
J	208m S	Unspecified Heap	1966	918020
J	208m S	Unspecified Heap	1978	918020
J	208m S	Unspecified Heap	1988	903427



ID	Location	Land Use	Date	Group ID
K	226m E	Unspecified Works	1966	835705
K	226m E	Unspecified Commercial/Industrial	1978	965566
K	226m E	Unspecified Commercial/Industrial	1988	896480
L	243m S	Unspecified Tanks	1978	960040
L	243m S	Unspecified Tanks	1988	878030
M	255m NE	Refuse Heap	1925	988260
M	256m NE	Refuse Heap	1938	909068
M	256m NE	Refuse Heap	1938	909068
N	313m E	Unspecified Heap	1978	999377
N	313m E	Unspecified Heap	1988	922817
N	329m E	Unspecified Heap	1966	953625
O	335m S	Unspecified Commercial/Industrial	1988	978153
O	339m S	Unspecified Commercial/Industrial	1978	956746
P	349m S	Unspecified Commercial/Industrial	1978	916171
P	349m S	Unspecified Commercial/Industrial	1988	896145
R	409m S	Unspecified Pit	1938	942930
R	409m S	Unspecified Pit	1925	942930
R	409m S	Unspecified Pit	1907	942930
R	409m S	Unspecified Pit	1938	942930
R	410m S	Unspecified Pit	1925	896031
R	410m S	Unspecified Pit	1925	896031
R	411m S	Unspecified Pit	1956	1007852
R	444m SE	Unspecified Tank	1978	926320
R	444m SE	Unspecified Tank	1988	888263
6	456m NE	Unspecified Commercial/Industrial	1978	822507
Y	474m E	Unspecified Tank	1978	973141
Y	474m E	Unspecified Tank	1988	983422
7	482m SE	Unspecified Commercial/Industrial	1988	822358



ID	Location	Land Use	Date	Group ID
8	494m S	Unspecified Works	1966	835431
9	499m S	Unspecified Tanks	1966	895518

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m

64

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 21 >](#)

ID	Location	Land Use	Date	Group ID
E	5m NE	Tanks	1960	144490
E	5m NE	Tanks	1976	144490
E	5m NE	Tanks	1976	144490
E	6m NE	Tanks	1960	144490
E	6m NE	Tanks	1970	144490
E	6m NE	Tanks	1993	144490
E	6m NE	Unspecified Tank	1960	131885
E	6m NE	Unspecified Tank	1976	131885
E	6m NE	Unspecified Tank	1976	131885
E	6m NE	Unspecified Tank	1993	131885
E	7m NE	Unspecified Tank	1960	131885
E	7m NE	Unspecified Tank	1970	131885
E	28m NE	Unspecified Tank	1976	150908
E	28m NE	Unspecified Tank	1976	150908
E	28m NE	Unspecified Tank	1993	150908
E	29m NE	Unspecified Tank	1970	150908
E	31m NE	Unspecified Tank	1960	148060
E	31m NE	Unspecified Tank	1976	148060



ID	Location	Land Use	Date	Group ID
E	31m NE	Unspecified Tank	1976	148060
E	32m NE	Unspecified Tank	1960	148060
E	32m NE	Unspecified Tank	1970	148060
E	32m NE	Unspecified Tank	1993	148060
E	35m NE	Unspecified Tank	1976	148164
E	35m NE	Unspecified Tank	1976	148164
E	36m NE	Unspecified Tank	1993	148164
A	109m S	Tanks	1996	109031
L	243m S	Unspecified Tank	1974	136363
L	243m S	Unspecified Tank	1984	136363
L	243m S	Unspecified Tank	1993	136363
L	255m S	Unspecified Tank	1974	135312
L	255m S	Unspecified Tank	1984	135312
L	255m S	Tanks	1974	127075
L	255m S	Unspecified Tank	1993	154321
L	255m S	Tanks	1984	128537
L	257m S	Tanks	1993	144787
R	431m S	Tanks	1974	144368
R	432m S	Tanks	1994	144368
R	432m S	Tanks	1985	144368
U	434m NE	Tanks	1997	153457
U	434m NE	Tanks	1996	153457
U	434m NE	Tanks	1999	153457
R	441m S	Tanks	1974	139728
R	441m S	Tanks	1974	139728
R	441m S	Tanks	1994	139728
R	441m S	Tanks	1985	139728
V	441m SE	Unspecified Tank	1994	116110



ID	Location	Land Use	Date	Group ID
V	458m SE	Tanks	1994	109046
X	470m S	Unspecified Tank	1994	126441
X	471m S	Unspecified Tank	1985	126441
Y	472m E	Unspecified Tank	1997	138106
Y	472m E	Unspecified Tank	1975	138106
Y	475m E	Unspecified Tank	1997	151400
Y	475m E	Unspecified Tank	1959	151400
Y	475m E	Unspecified Tank	1975	151400
Y	475m E	Unspecified Tank	1960	151400
Y	475m E	Unspecified Tank	1970	151400
V	475m SE	Tanks	1991	109042
X	475m S	Unspecified Tank	1994	149703
X	477m S	Unspecified Tank	1985	149703
V	481m SE	Tanks	1991	109040
X	482m S	Unspecified Tank	1994	116111
V	489m SE	Tanks	1994	109048
V	491m SE	Tanks	1991	109043
V	491m SE	Tanks	1994	109047

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m

24

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'.

Features are displayed on the Past land use - un-grouped map on [page 21 >](#)

ID	Location	Land Use	Date	Group ID
2	254m NW	Electricity Substation	1984	66237
3	337m NW	Electricity Substation	1996	67461



ID	Location	Land Use	Date	Group ID
Q	361m N	Electricity Substation	1970	93040
Q	361m N	Electricity Substation	1968	93040
Q	364m N	Electricity Substation	1997	85722
Q	364m N	Electricity Substation	1996	85722
Q	364m N	Electricity Substation	1999	85722
I	384m E	Electricity Substation	1975	90152
I	385m E	Electricity Substation	1997	90152
4	398m E	Electricity Substation	1997	67700
S	422m NW	Electricity Substation	1996	86353
5	426m E	Electricity Substation	1997	67701
S	427m NW	Electricity Substation	1970	88523
S	427m NW	Electricity Substation	1967	88523
T	430m NW	Electricity Substation	1994	67467
T	438m NW	Electricity Substation	1972	67470
P	441m S	Electricity Substation	1994	75368
P	441m S	Electricity Substation	1974	75368
P	441m S	Electricity Substation	1974	75368
P	441m S	Electricity Substation	1985	75368
W	459m W	Electricity Substation	1989	70040
W	462m W	Electricity Substation	1974	85573
AA	491m E	Electricity Substation	1997	82547
AA	492m E	Electricity Substation	1975	82547

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

7

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'.

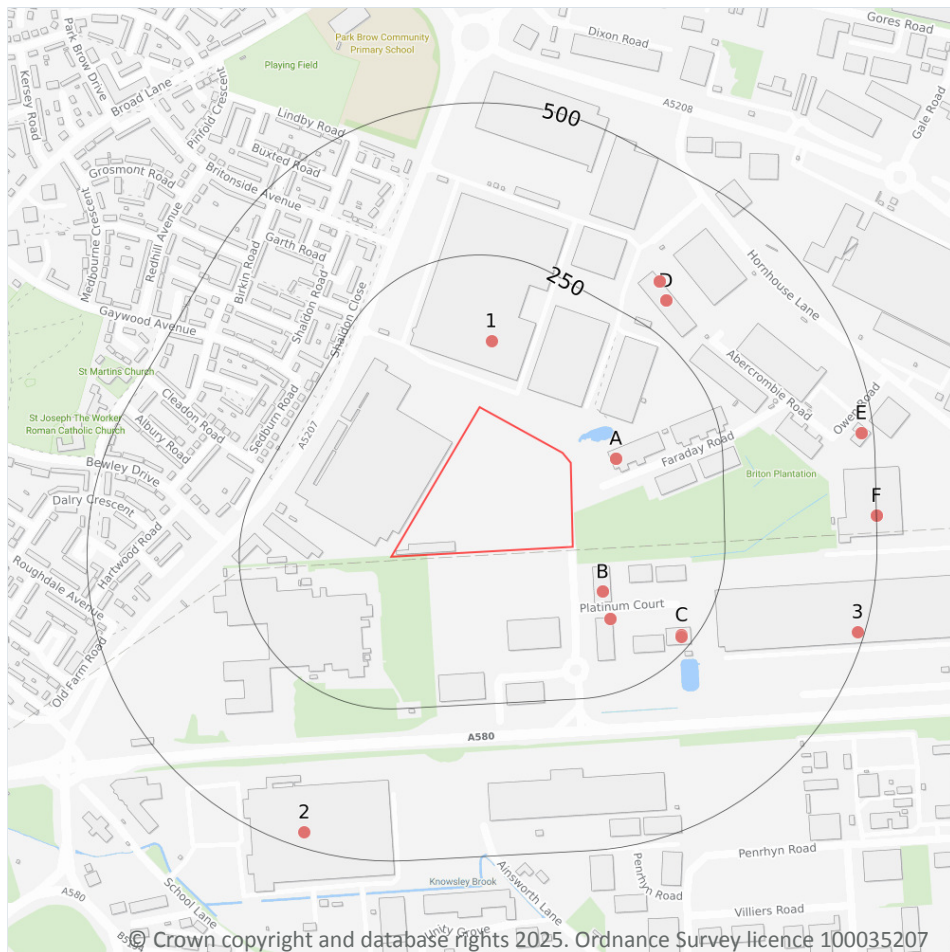
Features are displayed on the Past land use - un-grouped map on [page 21](#) >

ID	Location	Land Use	Date	Group ID
F	57m E	Vehicle Repair Depot	1976	28878
F	57m E	Vehicle Repair Depot	1976	28878
M	261m NE	Body Repair Works	1976	26430
M	261m NE	Body Repair Works	1976	26430
Z	484m SW	Garage	1961	25008
Z	484m SW	Garage	1959	25710
Z	484m SW	Garage	1975	25795

This data is sourced from Ordnance Survey / Groundsure.



3 Waste and landfill



- Site Outline
- Search buffers in metres (m)
- Waste exemptions

3.1 Active or recent landfill

Records within 500m

0

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

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**0**

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

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

3.7 Waste exemptions

Records within 500m**28**

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 29](#) >

ID	Location	Site	Reference	Category	Sub-Category	Description
A	74m E	25, Faraday Road, Knowsley Industrial Park, Liverpool, L33 7ut	WEX148902	Storing waste exemption	Not on a farm	Storage of waste in a secure place



ID	Location	Site	Reference	Category	Sub-Category	Description
A	74m E	25, Faraday Road, Knowsley Industrial Park, Liverpool, L33 7ut	WEX148902	Storing waste exemption	Not on a farm	Storage of waste in secure containers
A	74m E	25, Faraday Road, Knowsley Industrial Park, Liverpool, L33 7ut	WEX148902	Treating waste exemption	Not on a farm	Treatment of waste food
B	89m SE	Smiths News, 9 Platinum Court, Alchemy Way Knowsley Industrial Park, Liverpool, L33 7xn	WEX330190	Storing waste exemption	Not on a farm	Storage of waste in a secure place
B	89m SE	Smiths News, 9 Platinum Court, Alchemy Way Knowsley Industrial Park, Liverpool, L33 7xn	WEX330190	Treating waste exemption	Not on a farm	Sorting mixed waste
1	110m N	Cgl- Knowsley Integrated Recovery Service, Unit 7, Deacon Park, Moorgate Road, Kirkby, L33 7rx	WEX172604	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal
B	135m SE	Land Development (Caddick Construction /Dgs Ltd), Alchemy Way, Knowsley Industrial Estate, Knowsley, L33 7xn	WEX138809	Using waste exemption	Not on a farm	Use of waste in construction
B	135m SE	Land Development (Caddick Construction /Dgs Ltd), Alchemy Way, Knowsley Industrial Estate, Knowsley, L33 7xn	WEX138809	Treating waste exemption	Not on a farm	Screening and blending of waste
C	231m SE	Unit 6, Platinum Court, Alchemy Way, Knowsley, L33 7xn	EA/EPR/VP398 3AH/A001	Treating waste exemption	Not on a farm	Repair or refurbishment of WEEE
C	231m SE	Unit 6, Platinum Court, Alchemy Way, Liverpool, L33 7xn	EXP/VP3983A H	Treating waste exemption	Not on a farm	Repair or refurbishment of WEEE
C	232m SE	Unit 6 Platinum Court, Alchemy Way, Knowsley, L33 7xn	EXP/XP3841YS	Treating waste exemption	Not on a farm	Repair or refurbishment of WEEE
D	301m NE	-	WEX351230	Storing waste exemption	Not on a farm	Storage of waste in secure containers
D	301m NE	-	WEX351230	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)



ID	Location	Site	Reference	Category	Sub-Category	Description
D	301m NE	-	WEX351230	Using waste exemption	Not on a farm	Use of waste in construction
D	301m NE	-	WEX225999	Storing waste exemption	Not on a farm	Storage of waste in secure containers
D	301m NE	-	WEX225999	Using waste exemption	Not on a farm	Use of waste in construction
D	301m NE	-	WEX225999	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
D	323m NE	Deacon Park Moorgate Road Merseyside L33 7rx	EPR/NF0200F M/A001	Storing waste exemption	Non-agricultural waste only	Storage of waste in secure containers
D	323m NE	Deacon Park Moorgate Road Merseyside L33 7rx	EPR/NF0200F M/A001	Storing waste exemption	Non-agricultural waste only	Storage of waste in a secure place
D	323m NE	Deacon Park Moorgate Road Merseyside L33 7rx	EPR/NF0200F M/A001	Treating waste exemption	Non-agricultural waste only	Preparatory treatments (baling, sorting, shredding etc)
2	475m S	Saturn Business Park School Lane Prescot Merseyside L34 9gj	EPR/GF0603N R/A001	Treating waste exemption	Non-agricultural waste only	Preparatory treatments (baling, sorting, shredding etc)
E	479m E	Nagel Langdons Ltd, 2 Owen Road, Knowsley Industrial Park, Kirkby, L33 7yp	WEX159189	Treating waste exemption	Not on a farm	Treatment of waste food
E	479m E	Stef Langdons Ltd, 2 Owen Road, Knowsley Industrial Park, Liverpool, L33 7yp	WEX309837	Treating waste exemption	Not on a farm	Treatment of waste food
E	479m E	Stef Langdons Ltd, 2 Owen Road, Knowsley Industrial Park, Liverpool, L33 7yp	WEX309868	Treating waste exemption	Not on a farm	Treatment of waste food
3	488m E	Yorkshire Copper Tube Ltd Coopers Lane East Kirkby Merseyside L33 7tu	EPR/AF0601TE /A001	Treating waste exemption	Non-agricultural waste only	Crushing waste fluorescent tubes
F	500m E	Hornhouse Lane, Knowsley Industrial Park, Liverpool, L33 7yq	WEX119395	Storing waste exemption	Not on a farm	Storage of waste in a secure place
F	500m E	-	WEX262120	Storing waste exemption	Not on a farm	Storage of waste in a secure place

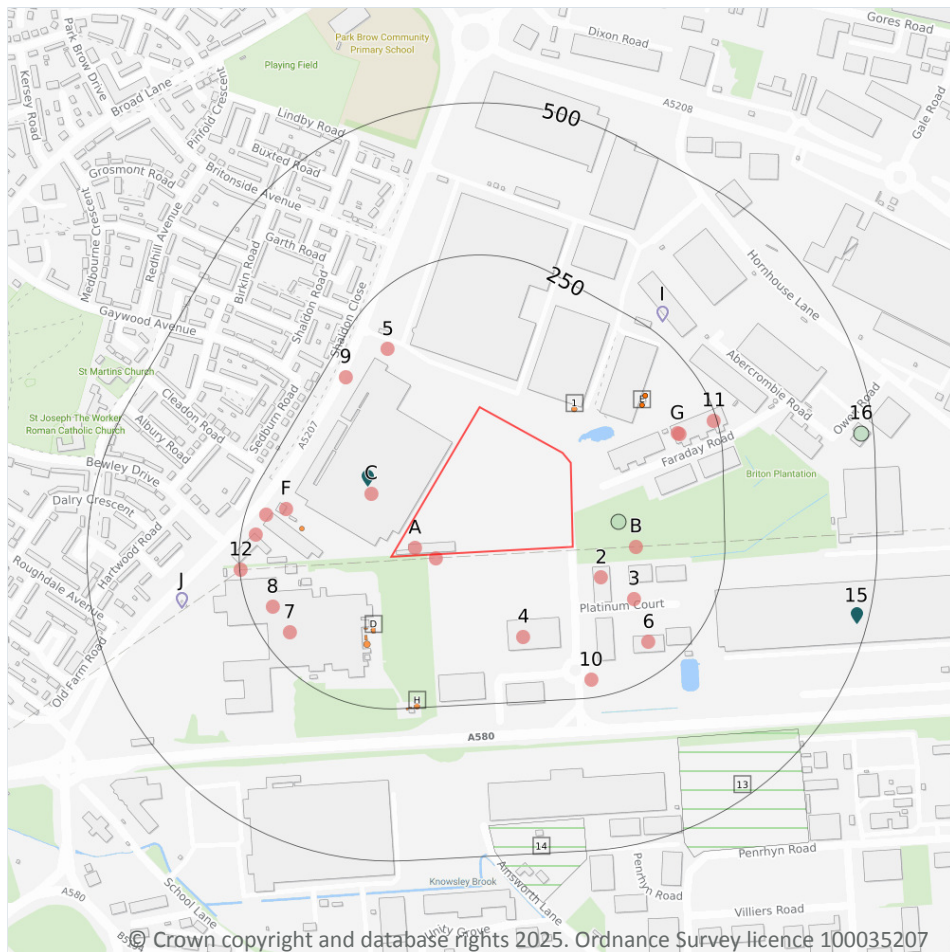


ID	Location	Site	Reference	Category	Sub-Category	Description
F	500m E	Hornhouse Lane, Knowsley Industrial Park, Liverpool, L33 7yq	WEX392552	Storing waste exemption	Not on a farm	Storage of waste in a secure place

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
- NGD current or recent tanks
- Control of Major Accident Hazards
- Part A(1) industrial activities
- Licensed pollutant release (Part A(2)/B)
- Pollution Incidents (EA/NRW)

4.1 Recent industrial land uses

Records within 250m

20

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on [page 34](#) >

ID	Location	Company	Address	Activity	Category
A	On site	Muni-serv Hire	Muni Serv 7b Moorgate Point, Moorgate Road, Southdene, Kirkby, Merseyside, L33 7XW	Vehicle Repair, Testing and Servicing	Repair and Servicing
A	6m S	Pylon	Merseyside, L33	Electrical Features	Infrastructure and Facilities



ID	Location	Company	Address	Activity	Category
2	69m SE	Northern Print	Northern Print 2 Platinum Court, Alchemy Way, Knowsley Industrial Park, Kirkby, Merseyside, L33 7XN	Published Goods	Industrial Products
C	82m NW	J J Smith & Company Woodworking Machinery Ltd	Moorgate Point, Moorgate Road, Southdene, Kirkby, Merseyside, L33 7XW	Tools Including Machine Shops	Industrial Products
B	104m E	Pylon	Merseyside, L33	Electrical Features	Infrastructure and Facilities
3	132m SE	Electricity Sub Station	Merseyside, L33	Electrical Features	Infrastructure and Facilities
4	143m S	Estar Truck & Van	Companies House Head Office Estar Truck and Van Ltd 3, Alchemy Way, Knowsley Industrial Park, Kirkby, Merseyside, L33 7AQ	New Vehicles	Motoring
5	178m NW	Electricity Sub Station	Merseyside, L33	Electrical Features	Infrastructure and Facilities
G	182m E	The Customiser	Unit S8 Faraday Road, Britonwood Trading Estate, Knowsley Industrial Park, Liverpool, Merseyside, L33 7UT	Vehicle Parts and Accessories	Motoring
G	184m E	A L Civils Ltd	Unit S1, Faraday Road, Knowsley Industrial Park, Liverpool, Merseyside, L33 7UT	Civil Engineers	Engineering Services
F	190m NW	Electricity Sub Station	Merseyside, L33	Electrical Features	Infrastructure and Facilities
6	200m SE	Lombard Shipping Plc	7-8 Platinum Court, Alchemy Way, Knowsley Industrial Park, Kirkby, Merseyside, L33 7XN	Distribution and Haulage	Transport, Storage and Delivery
7	208m SW	Factory	Merseyside, L33	Unspecified Works Or Factories	Industrial Features
8	212m SW	Dairy Crest Ltd	Saputo Ltd, Moorgate Road, Southdene, Kirkby, Merseyside, L33 7XW	Catering and Non Specific Food Products	Foodstuffs
9	215m NW	Mast	Merseyside, L33	Telecommunications Features	Infrastructure and Facilities
F	217m W	Electricity Sub Station	Merseyside, L33	Electrical Features	Infrastructure and Facilities
10	221m S	Gas Governor	Merseyside, L33	Gas Features	Infrastructure and Facilities
F	225m W	Telephone Exchange	Merseyside, L33	Telecommunications Features	Infrastructure and Facilities



ID	Location	Company	Address	Activity	Category
11	245m E	Armstrong Lyon Hydraulics Ltd	Hydraulic Engineering 13, Faraday Road, Knowsley Industrial Park, Kirkby, Merseyside, L33 7UT	Industrial Repairs and Servicing	Repair and Servicing
12	248m W	Pylon	Merseyside, L33	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	15
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Current or recent tanks identified from the Ordnance Survey NGD.

Features are displayed on the Current industrial land use map on [page 34](#) >

ID	Location	Tank description	Activity	Date first identified
1	68m NE	Roofed Storage Tank	Commercial Activity: Distribution Or Storage	12/05/2016
D	119m S	Roofed Storage Tank	Commercial Activity: Distribution Or Storage	12/05/2016
D	123m S	Buried Open Storage Tank	Commercial Activity: Distribution Or Storage	22/05/2023
D	135m S	Roofed Storage Tank	Commercial Activity: Distribution Or Storage	12/05/2016
D	144m S	Roofed Storage Tank	Commercial Activity: Distribution Or Storage	27/09/2006
E	147m NE	Roofed Storage Tank	Commercial Activity: Distribution Or Storage	12/05/2016
E	147m NE	Roofed Storage Tank	Commercial Activity: Distribution Or Storage	12/05/2016
E	147m NE	Roofed Storage Tank	Commercial Activity: Distribution Or Storage	12/05/2016
F	150m W	Roofed Storage Tank	Commercial Activity: Distribution Or Storage	20/06/2014
E	161m NE	Roofed Storage Tank	Commercial Activity: Distribution Or Storage	12/05/2016
E	161m NE	Roofed Storage Tank	Commercial Activity: Distribution Or Storage	12/05/2016
E	161m NE	Roofed Storage Tank	Commercial Activity: Distribution Or Storage	12/05/2016
H	243m S	Open Storage Tank	Commercial Activity: Distribution Or Storage	14/05/2008
H	249m S	Roofed Storage Tank	Commercial Activity: Distribution Or Storage	19/05/2015
H	249m S	Roofed Storage Tank	Commercial Activity: Distribution Or Storage	14/05/2008

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**0**

High voltage underground electricity transmission cables.

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**2**

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.

Features are displayed on the Current industrial land use map on [page 34](#) >

ID	Location	Company	Address	Operational status	Tier
13	358m SE	Knowsley Redevelopments Limited	Knowsley Redevelopments Limited, Prescott, Knowsley Industrial Estate, Penrhyn Road, Liverpool, Merseyside, L34 9HY	Current COMAH Site	COMAH Upper Tier Operator



ID	Location	Company	Address	Operational status	Tier
14	446m S	Flogas Britain Limited	Flogas Britain Limited, Liverpool, Knowsley Business Park, Ainsworth Lane, Prescot, Merseyside, L34 9EU	Current COMAH Site	COMAH Lower Tier Operator

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 **13**

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

Features are displayed on the Current industrial land use map on [page 34 >](#)

ID	Location	Details	
I	280m NE	Operator: FACTORY SERVICES UK LIMITED Installation Name: Knowsley Feed Mill - EPR/LP3837FX Process: ANIMAL VEGETABLE AND FOOD; TREATING ETC VEGETABLE RAW MATERIALS FOR FOOD >300T/D Permit Number: LP3837FX Original Permit Number: LP3837FX	EPR Reference: EPR/LP3837FX Issue Date: 04/05/2012 Effective Date: 13/09/2022 Last date noted as effective: 28/04/2025 Status: Effective
I	280m NE	Operator: Factory Services UK Ltd Installation Name: Knowsley Feed Mill - EPR/LP3837FX Process: ANIMAL VEGETABLE AND FOOD; TREATING ETC VEGETABLE RAW MATERIALS FOR FOOD >300T/D Permit Number: JP3008MA Original Permit Number: LP3837FX	EPR Reference: - Issue Date: 06/09/2022 Effective Date: 13/09/2022 Last date noted as effective: 21/03/2023 Status: Effective
I	280m NE	Operator: Factory Services UK Ltd Installation Name: Knowsley Feed Mill Process: ANIMAL VEGETABLE AND FOOD; TREATING ETC VEGETABLE RAW MATERIALS FOR FOOD >300T/D Permit Number: MP3809PA Original Permit Number: LP3837FX	EPR Reference: - Issue Date: 06/11/2019 Effective Date: 06/11/2019 Last date noted as effective: 21/03/2023 Status: Superseded
J	353m W	Operator: DAIRY CREST LIMITED Installation Name: Kirkby Creamery - EPR/VP3234NX Process: ASSOCIATED PROCESS Permit Number: VP3234NX Original Permit Number: VP3234NX	EPR Reference: EPR/VP3234NX Issue Date: 02/06/2014 Effective Date: 12/07/2019 Last date noted as effective: 28/04/2025 Status: Effective
J	353m W	Operator: DAIRY CREST LIMITED Installation Name: Kirkby Creamery - EPR/VP3234NX Process: DISPOSAL OF > 50 T/D NON-HAZARDOUS WASTE (> 100 T/D IF ONLY AD) INVOLVING PHYSICO-CHEMICAL TREATMENT Permit Number: VP3234NX Original Permit Number: VP3234NX	EPR Reference: EPR/VP3234NX Issue Date: 02/06/2014 Effective Date: 12/07/2019 Last date noted as effective: 28/04/2025 Status: Effective
J	353m W	Operator: Dairy Crest Limited Installation Name: Kirkby Creamery - EPR/VP3234NX Process: ASSOCIATED PROCESS Permit Number: MP3706PH Original Permit Number: VP3234NX	EPR Reference: - Issue Date: 12/07/2019 Effective Date: 12/07/2019 Last date noted as effective: 21/03/2023 Status: Effective
J	353m W	Operator: Dairy Crest Limited Installation Name: Kirkby Creamery - EPR/VP3234NX Process: CREATED BY IED - TREATMENT AND PROCESSING (OTHER THAN PACKAGING) OF ANIMAL OR VEGETABLE RAW MATERIALS (OTHER THAN MILK ONLY) WITH FINISHED PRODUCT CAPACITY GREATER THAN FORMULA SHOWN IN REGS Permit Number: MP3706PH Original Permit Number: VP3234NX	EPR Reference: - Issue Date: 12/07/2019 Effective Date: 12/07/2019 Last date noted as effective: 21/03/2023 Status: Effective



ID	Location	Details	
J	353m W	Operator: Dairy Crest Limited Installation Name: Kirkby Creamery - EPR/VP3234NX Process: DISPOSAL OF > 50 T/D NON-HAZARDOUS WASTE (> 100 T/D IF ONLY AD) INVOLVING PHYSICO-CHEMICAL TREATMENT Permit Number: MP3706PH Original Permit Number: VP3234NX	EPR Reference: - Issue Date: 12/07/2019 Effective Date: 12/07/2019 Last date noted as effective: 21/03/2023 Status: Effective
J	353m W	Operator: DAIRY CREST LIMITED Installation Name: Kirkby Creamery - EPR/VP3234NX Process: CREATED BY IED - TREATMENT AND PROCESSING (OTHER THAN PACKAGING) OF ANIMAL OR VEGETABLE RAW MATERIALS (OTHER THAN MILK ONLY) WITH FINISHED PRODUCT CAPACITY GREATER THAN FORMULA SHOWN IN REGS Permit Number: VP3234NX Original Permit Number: VP3234NX	EPR Reference: EPR/VP3234NX Issue Date: 12/07/2019 Effective Date: 12/07/2019 Last date noted as effective: 29/10/2024 Status: Effective
J	353m W	Operator: Dairy Crest Limited Installation Name: Kirkby Creamery - EPR/VP3234NX Process: ASSOCIATED PROCESS Permit Number: AP3332JL Original Permit Number: VP3234NX	EPR Reference: - Issue Date: 14/05/2018 Effective Date: 14/05/2018 Last date noted as effective: 21/03/2023 Status: Superseded
J	353m W	Operator: Dairy Crest Limited Installation Name: Kirkby Creamery - EPR/VP3234NX Process: CREATED BY IED - TREATMENT AND PROCESSING (OTHER THAN PACKAGING) OF ANIMAL OR VEGETABLE RAW MATERIALS (OTHER THAN MILK ONLY) WITH FINISHED PRODUCT CAPACITY GREATER THAN FORMULA SHOWN IN REGS Permit Number: AP3332JL Original Permit Number: VP3234NX	EPR Reference: - Issue Date: 14/05/2018 Effective Date: 14/05/2018 Last date noted as effective: 21/03/2023 Status: Superseded
J	353m W	Operator: Dairy Crest Limited Installation Name: Kirkby Creamery - EPR/VP3234NX Process: DISPOSAL OF > 50 T/D NON-HAZARDOUS WASTE (> 100 T/D IF ONLY AD) INVOLVING PHYSICO-CHEMICAL TREATMENT Permit Number: AP3332JL Original Permit Number: VP3234NX	EPR Reference: - Issue Date: 14/05/2018 Effective Date: 14/05/2018 Last date noted as effective: 21/03/2023 Status: Superseded
J	353m W	Operator: DAIRY CREST LIMITED Installation Name: Kirkby Creamery - EPR/VP3234NX Process: CREATED BY IED - TREATMENT AND PROCESSING (OTHER THAN PACKAGING) OF ANIMAL OR VEGETABLE RAW MATERIALS (OTHER THAN MILK ONLY) WITH FINISHED PRODUCT CAPACITY GREATER THAN FORMULA SHOWN IN REGS Permit Number: VP3234NX Original Permit Number: VP3234NX	EPR Reference: EPR/VP3234NX Issue Date: 02/06/2014 Effective Date: 12/07/2019 Last date noted as effective: 28/04/2025 Status: Effective

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



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

Records within 500m

2

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.

Features are displayed on the Current industrial land use map on [page 34](#) >

ID	Location	Address	Details	
C	100m NW	Otis, Moorgate Rd, Knowsley Industrial Park, Liverpool, L33 7XW	Process: Coating Processes Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
15	479m E	KME Yorkshire Ltd, Kirkby Works, East Lancs Road, L33 7TU	Process: Surface Cleaning Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified

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

0

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

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

2

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

Features are displayed on the Current industrial land use map on [page 34](#) >

ID	Location	Details	
B	77m E	Incident Date: 06/05/2005 Incident Identification: 310446 Pollutant: Inert Materials and Wastes Pollutant Description: Other Inert Material or Waste	Water Impact: Category 4 (No Impact) Land Impact: Category 2 (Significant) Air Impact: Category 4 (No Impact)
16	479m E	Incident Date: 06/09/2003 Incident Identification: 187956 Pollutant: Inorganic Chemicals/Products Pollutant Description: Acids	Water Impact: Category 3 (Minor) Land Impact: Category 2 (Significant) Air Impact: Category 3 (Minor)

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.

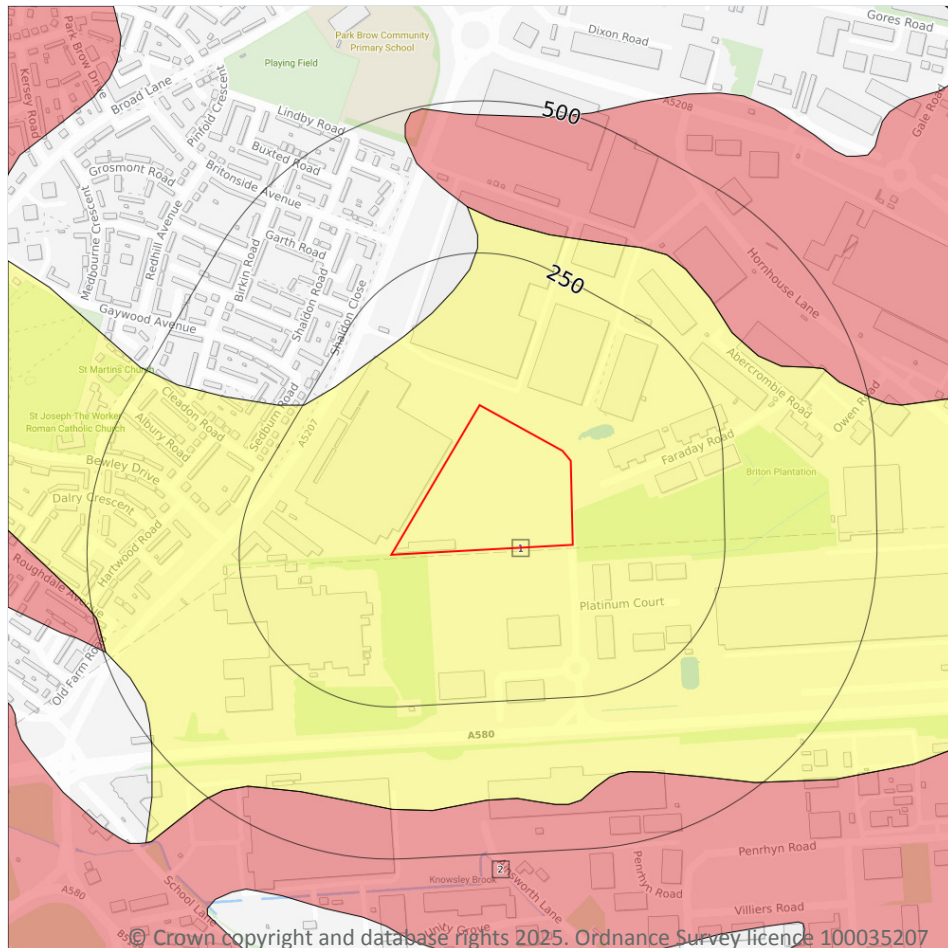
4.22 Pollution inventory radioactive waste

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

2

Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on [page 44 >](#)

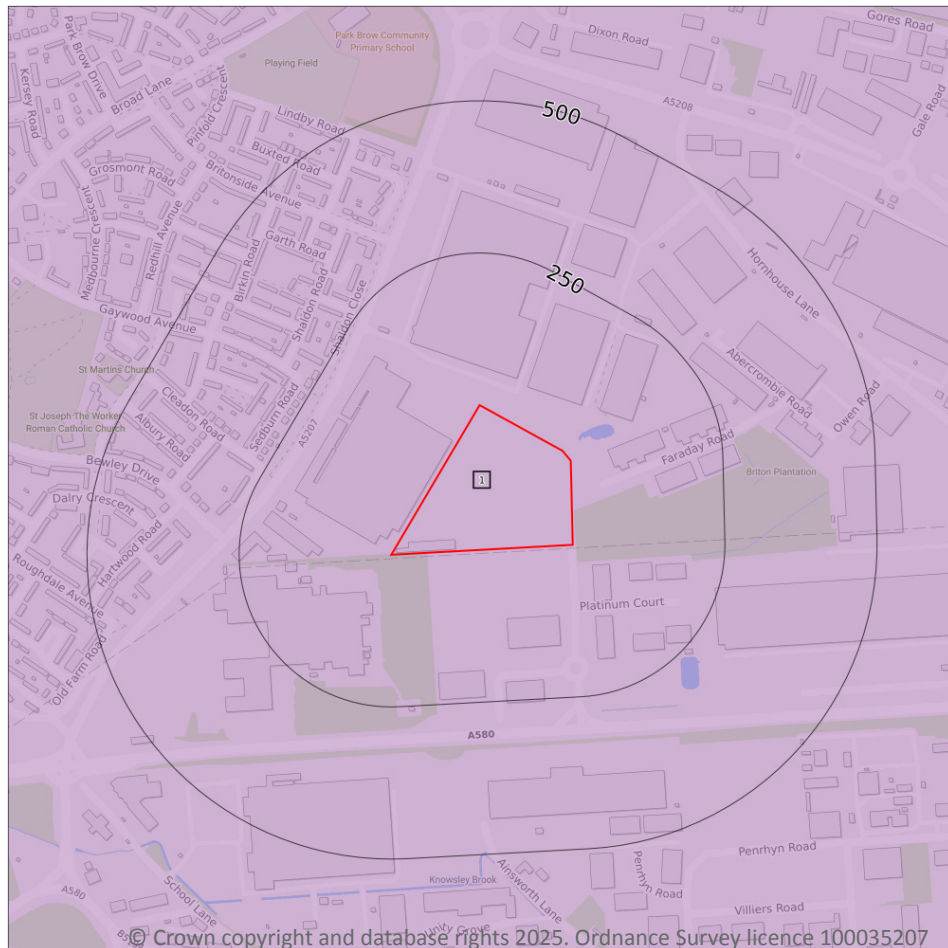
ID	Location	Designation	Description
1	On site	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
2	300m N	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers



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.

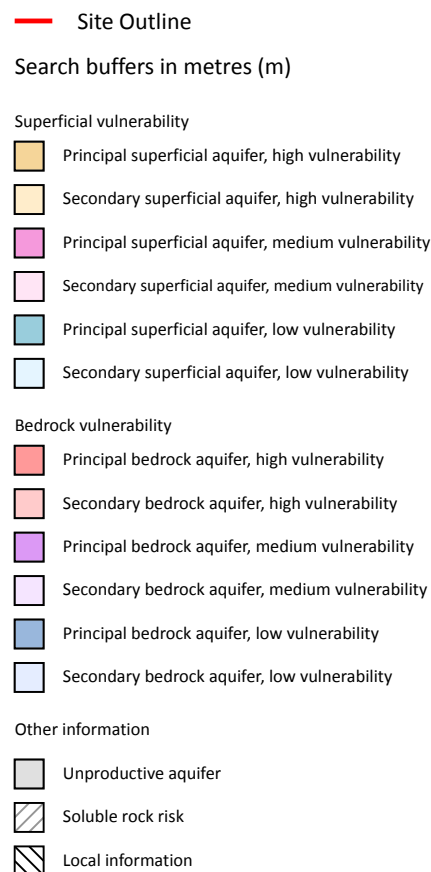
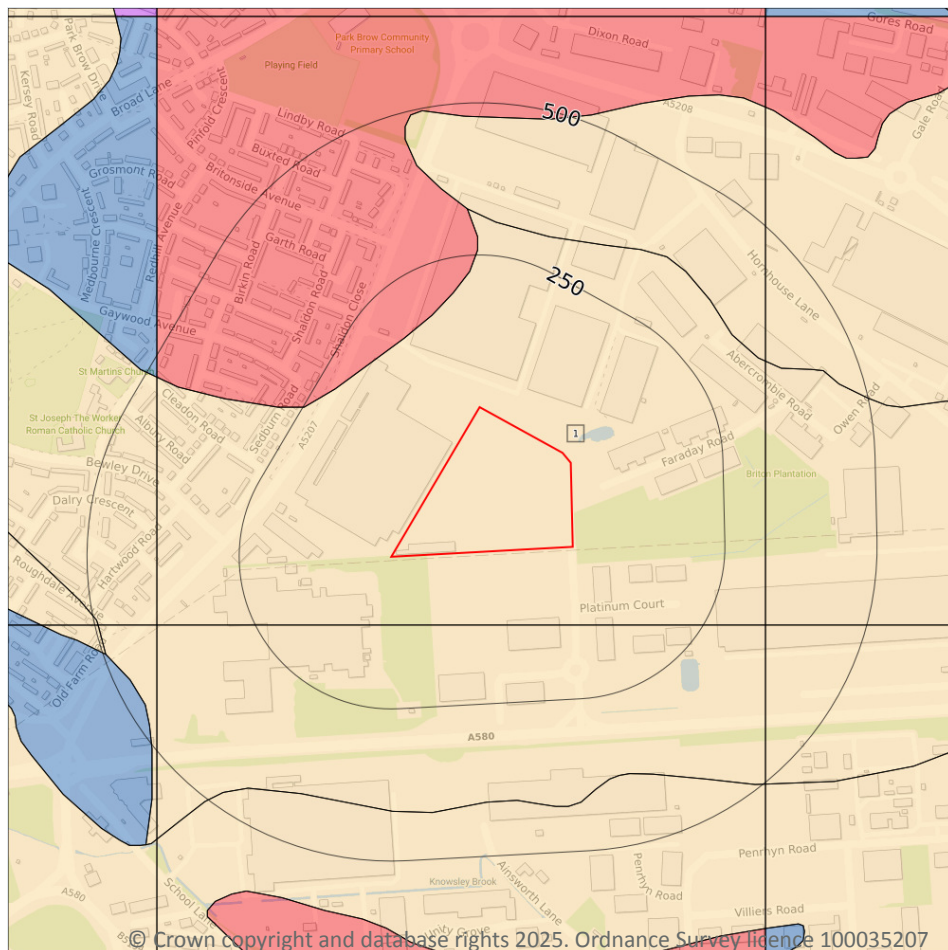
Features are displayed on the Bedrock aquifer map on [page 46 >](#)

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 47](#) >

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	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: 300-550mm/year	Vulnerability: High Aquifer type: Secondary Thickness: <3m Patchiness value: <90% Recharge potential: Low	Vulnerability: High Aquifer type: Principal Flow mechanism: Mixed

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	0
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This dataset identifies areas where solution features that enable rapid movement of a pollutant may be present within a 1km grid square.

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

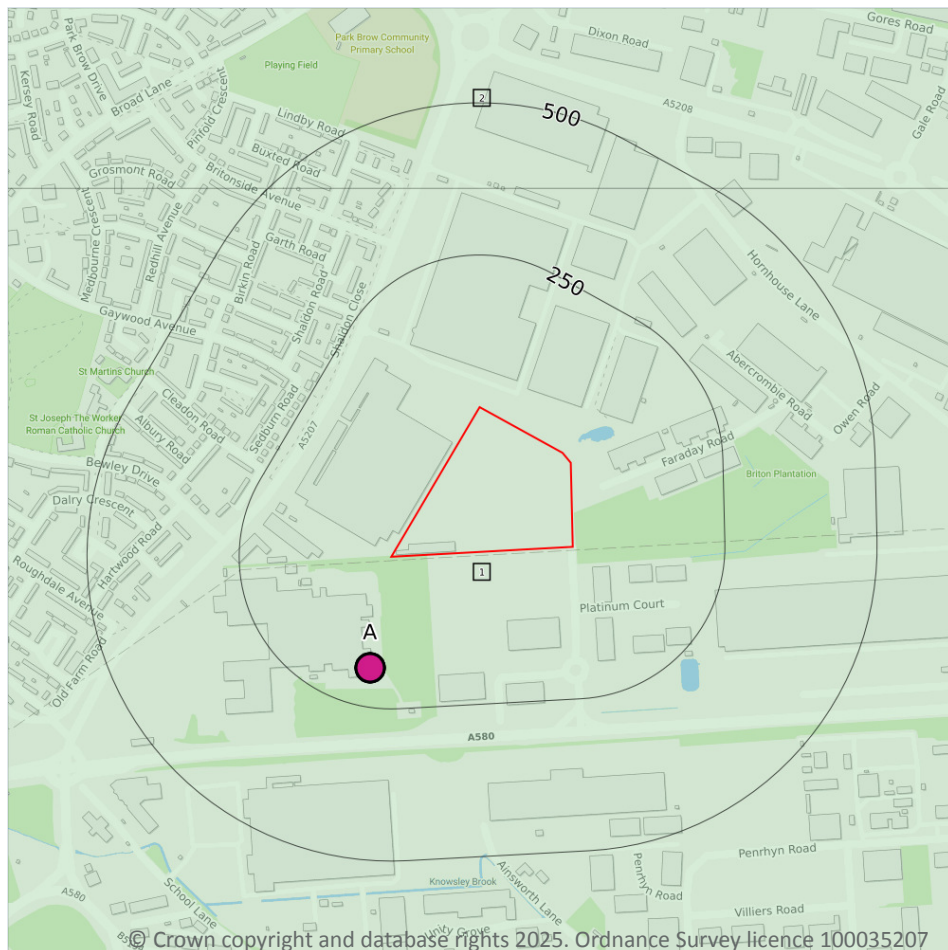
5.5 Groundwater vulnerability- local information

Records on site	0
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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
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

37

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 49 >](#)



ID	Location	Details	
A	186m S	Status: Historical Licence No: 2569031142 Details: Evaporative Cooling Direct Source: Ground Water - North West Region Point: LAND @ DAIRY CREST, KIRKBY Data Type: Point Name: DAIRY CREST LTD Easting: 342350 Northing: 396930	Annual Volume (m ³): 219000 Max Daily Volume (m ³): 600 Original Application No: - Original Start Date: 11/08/2004 Expiry Date: 31/03/2015 Issue No: 1 Version Start Date: 11/08/2004 Version End Date: -
A	186m S	Status: Historical Licence No: 2569031142 Details: Process Water Direct Source: Ground Water - North West Region Point: LAND @ DAIRY CREST, KIRKBY Data Type: Point Name: DAIRY CREST LTD Easting: 342350 Northing: 396930	Annual Volume (m ³): 219000 Max Daily Volume (m ³): 600 Original Application No: - Original Start Date: 11/08/2004 Expiry Date: 31/03/2015 Issue No: 1 Version Start Date: 11/08/2004 Version End Date: -
A	186m S	Status: Historical Licence No: 2569031142R01 Details: Evaporative Cooling Direct Source: Ground Water - North West Region Point: LAND @ DAIRY CREST, KIRKBY Data Type: Point Name: DAIRY CREST LTD Easting: 342350 Northing: 396930	Annual Volume (m ³): 219000 Max Daily Volume (m ³): 600 Original Application No: - Original Start Date: 01/04/2015 Expiry Date: 31/03/2028 Issue No: 2 Version Start Date: 13/06/2019 Version End Date: -
A	186m S	Status: Historical Licence No: 2569031142R01 Details: Process Water Direct Source: Ground Water - North West Region Point: LAND @ DAIRY CREST, KIRKBY Data Type: Point Name: DAIRY CREST LTD Easting: 342350 Northing: 396930	Annual Volume (m ³): 219000 Max Daily Volume (m ³): 600 Original Application No: - Original Start Date: 01/04/2015 Expiry Date: 31/03/2028 Issue No: 2 Version Start Date: 13/06/2019 Version End Date: -
-	1214m N	Status: Historical Licence No: 2569031131 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: "BOREHOLE ""B""AT KIRKBY" Data Type: Point Name: LIVERPOOL FOOTBALL CLUB SOCCER ACADEMY Easting: 342460 Northing: 398570	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 1 Version Start Date: 28/09/1999 Version End Date: -



ID	Location	Details	
-	1214m N	Status: Historical Licence No: 2569031131 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: "BOREHOLE ""B""AT KIRKBY" Data Type: Point Name: LIVERPOOL FOOTBALL CLUB SOCCER ACADEMY Easting: 342460 Northing: 398570	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 1 Version Start Date: 28/09/1999 Version End Date: -
-	1214m N	Status: Historical Licence No: 2569031131 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE "B"AT KIRKBY Data Type: Point Name: LIVERPOOL FOOTBALL CLUB SOCCER ACADEMY Easting: 342460 Northing: 398570	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 1 Version Start Date: 28/09/1999 Version End Date: -
-	1214m N	Status: Historical Licence No: 2569031131 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: BOREHOLE "B"AT KIRKBY Data Type: Point Name: LIVERPOOL FOOTBALL CLUB SOCCER ACADEMY Easting: 342460 Northing: 398570	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 1 Version Start Date: 28/09/1999 Version End Date: -
-	1214m N	Status: Historical Licence No: 2569031131 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE B AT KIRKBY Data Type: Point Name: LIVERPOOL FOOTBALL CLUB SOCCER ACADEMY Easting: 342460 Northing: 398570	Annual Volume (m ³): 150000 Max Daily Volume (m ³): 600 Original Application No: - Original Start Date: 28/09/1999 Expiry Date: - Issue No: 1 Version Start Date: 28/09/1999 Version End Date: -
-	1214m N	Status: Historical Licence No: 2569031131 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: BOREHOLE B AT KIRKBY Data Type: Point Name: LIVERPOOL FOOTBALL CLUB SOCCER ACADEMY Easting: 342460 Northing: 398570	Annual Volume (m ³): 150000 Max Daily Volume (m ³): 600 Original Application No: - Original Start Date: 28/09/1999 Expiry Date: - Issue No: 1 Version Start Date: 28/09/1999 Version End Date: -



ID	Location	Details	
-	1225m N	Status: Historical Licence No: 2569031131 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE A AT KIRKBY Data Type: Point Name: LIVERPOOL FOOTBALL CLUB SOCCER ACADEMY Easting: 342450 Northing: 398580	Annual Volume (m ³): 150000 Max Daily Volume (m ³): 600 Original Application No: - Original Start Date: 28/09/1999 Expiry Date: - Issue No: 1 Version Start Date: 28/09/1999 Version End Date: -
-	1225m N	Status: Historical Licence No: 2569031131 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: "BOREHOLE ""A"" AT KIRKBY" Data Type: Point Name: LIVERPOOL FOOTBALL CLUB SOCCER ACADEMY Easting: 342450 Northing: 398580	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 1 Version Start Date: 28/09/1999 Version End Date: -
-	1225m N	Status: Historical Licence No: 2569031131 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: "BOREHOLE ""A"" AT KIRKBY" Data Type: Point Name: LIVERPOOL FOOTBALL CLUB SOCCER ACADEMY Easting: 342450 Northing: 398580	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 1 Version Start Date: 28/09/1999 Version End Date: -
-	1225m N	Status: Historical Licence No: 2569031131 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: BOREHOLE "A" AT KIRKBY Data Type: Point Name: LIVERPOOL FOOTBALL CLUB SOCCER ACADEMY Easting: 342450 Northing: 398580	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 1 Version Start Date: 28/09/1999 Version End Date: -
-	1225m N	Status: Historical Licence No: 2569031131 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE "A" AT KIRKBY Data Type: Point Name: LIVERPOOL FOOTBALL CLUB SOCCER ACADEMY Easting: 342450 Northing: 398580	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 1 Version Start Date: 28/09/1999 Version End Date: -



ID	Location	Details	
-	1225m N	Status: Historical Licence No: 2569031131 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: BOREHOLE A AT KIRKBY Data Type: Point Name: LIVERPOOL FOOTBALL CLUB SOCCER ACADEMY Easting: 342450 Northing: 398580	Annual Volume (m ³): 150000 Max Daily Volume (m ³): 600 Original Application No: - Original Start Date: 28/09/1999 Expiry Date: - Issue No: 1 Version Start Date: 28/09/1999 Version End Date: -
-	1255m N	Status: Active Licence No: 2569031131 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: BOREHOLE AT KIRKBY Data Type: Point Name: Liverpool Football Club & Athletic Grounds Limited Easting: 342445 Northing: 398610	Annual Volume (m ³): 150000 Max Daily Volume (m ³): 792 Original Application No: NPS/WR/027992 Original Start Date: 28/09/1999 Expiry Date: - Issue No: 3 Version Start Date: 19/11/2019 Version End Date: -
-	1255m N	Status: Active Licence No: 2569031131 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: BOREHOLE AT KIRKBY Data Type: Point Name: Liverpool Football Club & Athletic Grounds Limited Easting: 342445 Northing: 398610	Annual Volume (m ³): 150000 Max Daily Volume (m ³): 792 Original Application No: NPS/WR/027992 Original Start Date: 28/09/1999 Expiry Date: - Issue No: 3 Version Start Date: 19/11/2019 Version End Date: -
-	1255m N	Status: Historical Licence No: 2569031131 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: BOREHOLE AT KIRKBY Data Type: Point Name: Liverpool Football Club & Athletic Grounds Limited Easting: 342445 Northing: 398610	Annual Volume (m ³): 150000 Max Daily Volume (m ³): 432 Original Application No: - Original Start Date: 28/09/1999 Expiry Date: - Issue No: 2 Version Start Date: 23/10/2014 Version End Date: -

ID	Location	Details	
-	1255m N	Status: Historical Licence No: 2569031131 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: BOREHOLE AT KIRKBY Data Type: Point Name: Liverpool Football Club & Athletic Grounds Limited Easting: 342445 Northing: 398610	Annual Volume (m ³): 150000 Max Daily Volume (m ³): 792 Original Application No: - Original Start Date: 28/09/1999 Expiry Date: - Issue No: 3 Version Start Date: 19/11/2019 Version End Date: -
-	1255m N	Status: Historical Licence No: 2569031131 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: BOREHOLE AT KIRKBY Data Type: Point Name: Liverpool Football Club & Athletic Grounds Limited Easting: 342445 Northing: 398610	Annual Volume (m ³): 150000 Max Daily Volume (m ³): 792 Original Application No: - Original Start Date: 28/09/1999 Expiry Date: - Issue No: 3 Version Start Date: 19/11/2019 Version End Date: -
-	1317m E	Status: Active Licence No: 2569031016 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: WELL BOREHOLE AND WELLS AND BOREHOLES X 2 AT KNOWSLEY Data Type: Point Name: United Utilities Water Ltd Easting: 344000 Northing: 397100	Annual Volume (m ³): 2074000 Max Daily Volume (m ³): 7500 Original Application No: NPS/WR/026423 Original Start Date: 16/03/1966 Expiry Date: - Issue No: 102 Version Start Date: 26/11/2018 Version End Date: -
-	1317m E	Status: Historical Licence No: 2569031016 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: "WELL, BOREHOLE AND WELLS AND BOREHOLES (2) AT KNOWSLEY" Data Type: Point Name: UNITED UTILITIES WATER PLC Easting: 344000 Northing: 397100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 16/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 16/03/1966 Version End Date: -



ID	Location	Details	
-	1317m E	Status: Historical Licence No: 2569031016 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: WELL, BOREHOLE AND WELLS AND BOREHOLES (2) AT KNOWSLEY Data Type: Point Name: UNITED UTILITIES WATER PLC Easting: 344000 Northing: 397100	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 16/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 16/03/1966 Version End Date: -
-	1571m W	Status: Active Licence No: 2569031024 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: B/HOLES, WELLS,ADITS & HEADINGS AT KNOWSLEY RANGLES BRIDGE Data Type: Point Name: United Utilities Water Ltd Easting: 340900 Northing: 396600	Annual Volume (m³): 2905000 Max Daily Volume (m³): 9092.18 Original Application No: NPS/WR/026426 Original Start Date: 02/11/1966 Expiry Date: - Issue No: 102 Version Start Date: 26/11/2018 Version End Date: -
-	1571m W	Status: Historical Licence No: 2569031024 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: B/HOLES, WELLS,ADITS & HEADINGS@KNOWSLEY RANGLES BRIDGE215 Data Type: Point Name: NORTH WEST WATER LTD Easting: 340900 Northing: 396600	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 02/11/1966 Expiry Date: - Issue No: 100 Version Start Date: 10/02/1995 Version End Date: -
-	1571m W	Status: Historical Licence No: 2569031024 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: "B/HOLES, WELLS,ADITS & HEADINGS@KNOWSLEY RANGLES BRIDGE \$215" Data Type: Point Name: UNITED UTILITIES WATER PLC Easting: 340900 Northing: 396600	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 02/11/1966 Expiry Date: - Issue No: 100 Version Start Date: 10/02/1995 Version End Date: -

ID	Location	Details	
-	1571m W	Status: Historical Licence No: 2569031024 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: B/HOLES, WELLS, ADITS & HEADINGS@KNOWSLEY RANGLES BRIDGE \$215 Data Type: Point Name: UNITED UTILITIES WATER PLC Easting: 340900 Northing: 396600	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 02/11/1966 Expiry Date: - Issue No: 100 Version Start Date: 10/02/1995 Version End Date: -
-	1595m NE	Status: Historical Licence No: 2569031090 Details: Boiler Feed Direct Source: Ground Water - North West Region Point: BOREHOLE AT KIRKBY INDUSTRIAL ESTATE Data Type: Point Name: Baker Hughes Limited Easting: 343400 Northing: 398700	Annual Volume (m ³): 250030 Max Daily Volume (m ³): 818.28 Original Application No: NPS/WR/006045 Original Start Date: 20/01/1989 Expiry Date: - Issue No: 101 Version Start Date: 18/03/2011 Version End Date: -
-	1595m NE	Status: Historical Licence No: 2569031090 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: BOREHOLE AT KIRKBY INDUSTRIAL ESTATE Data Type: Point Name: Baker Hughes Limited Easting: 343400 Northing: 398700	Annual Volume (m ³): 250030 Max Daily Volume (m ³): 818.28 Original Application No: NPS/WR/006045 Original Start Date: 20/01/1989 Expiry Date: - Issue No: 101 Version Start Date: 18/03/2011 Version End Date: -
-	1595m NE	Status: Historical Licence No: 2569031090 Details: Process Water Direct Source: Ground Water - North West Region Point: BOREHOLE AT KIRKBY INDUSTRIAL ESTATE Data Type: Point Name: Baker Hughes Limited Easting: 343400 Northing: 398700	Annual Volume (m ³): 250030 Max Daily Volume (m ³): 818.28 Original Application No: NPS/WR/006045 Original Start Date: 20/01/1989 Expiry Date: - Issue No: 101 Version Start Date: 18/03/2011 Version End Date: -
-	1595m NE	Status: Active Licence No: 2569031090 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: BOREHOLE AT KIRKBY INDUSTRIAL ESTATE Data Type: Point Name: Baker Hughes Limited Easting: 343400 Northing: 398700	Annual Volume (m ³): 250030 Max Daily Volume (m ³): 818.28 Original Application No: NPS/WR/006045 Original Start Date: 01/01/1989 Expiry Date: - Issue No: 101 Version Start Date: 18/03/2011 Version End Date: -



ID	Location	Details	
-	1595m NE	Status: Active Licence No: 2569031090 Details: Boiler Feed Direct Source: Ground Water - North West Region Point: BOREHOLE AT KIRKBY INDUSTRIAL ESTATE Data Type: Point Name: Baker Hughes Limited Easting: 343400 Northing: 398700	Annual Volume (m ³): 250030 Max Daily Volume (m ³): 818.28 Original Application No: NPS/WR/006045 Original Start Date: 01/01/1989 Expiry Date: - Issue No: 101 Version Start Date: 18/03/2011 Version End Date: -
-	1595m NE	Status: Active Licence No: 2569031090 Details: Process Water Direct Source: Ground Water - North West Region Point: BOREHOLE AT KIRKBY INDUSTRIAL ESTATE Data Type: Point Name: Baker Hughes Limited Easting: 343400 Northing: 398700	Annual Volume (m ³): 250030 Max Daily Volume (m ³): 818.28 Original Application No: NPS/WR/006045 Original Start Date: 01/01/1989 Expiry Date: - Issue No: 101 Version Start Date: 18/03/2011 Version End Date: -
-	1821m N	Status: Active Licence No: 2569031131 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: BOREHOLE AT KIRKBY 2 Data Type: Point Name: Liverpool Football Club & Athletic Grounds Limited Easting: 342734 Northing: 399168	Annual Volume (m ³): 150000 Max Daily Volume (m ³): 792 Original Application No: NPS/WR/027992 Original Start Date: 28/09/1999 Expiry Date: - Issue No: 3 Version Start Date: 19/11/2019 Version End Date: -
-	1894m NE	Status: Active Licence No: 2569031089 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT KIRKBY Data Type: Point Name: AMES GOLDSMITH UK LTD Easting: 343800 Northing: 398800	Annual Volume (m ³): 90920 Max Daily Volume (m ³): 340.95 Original Application No: NPS/WR/023235 Original Start Date: 01/07/1988 Expiry Date: - Issue No: 102 Version Start Date: 26/07/2016 Version End Date: -
-	1894m NE	Status: Historical Licence No: 2569031089 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT KIRKBY Data Type: Point Name: AMES GOLDSMITH UK LTD Easting: 343800 Northing: 398800	Annual Volume (m ³): 90920 Max Daily Volume (m ³): 340.95 Original Application No: - Original Start Date: 01/07/1988 Expiry Date: - Issue No: 101 Version Start Date: 10/11/2006 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

9

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 49 >](#)

ID	Location	Details	
-	1317m E	Status: Active Licence No: 2569031016 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: WELL BOREHOLE AND WELLS AND BOREHOLES X 2 AT KNOWSLEY Data Type: Point Name: United Utilities Water Ltd Easting: 344000 Northing: 397100	Annual Volume (m ³): 2074000 Max Daily Volume (m ³): 7500 Original Application No: NPS/WR/026423 Original Start Date: 16/03/1966 Expiry Date: - Issue No: 102 Version Start Date: 26/11/2018 Version End Date: -
-	1317m E	Status: Historical Licence No: 2569031016 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: "WELL, BOREHOLE AND WELLS AND BOREHOLES (2) AT KNOWSLEY" Data Type: Point Name: UNITED UTILITIES WATER PLC Easting: 344000 Northing: 397100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 16/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 16/03/1966 Version End Date: -



ID	Location	Details	
-	1317m E	Status: Historical Licence No: 2569031016 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: WELL, BOREHOLE AND WELLS AND BOREHOLES (2) AT KNOWSLEY Data Type: Point Name: UNITED UTILITIES WATER PLC Easting: 344000 Northing: 397100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 16/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 16/03/1966 Version End Date: -
-	1571m W	Status: Active Licence No: 2569031024 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: B/HOLES, WELLS,ADITS & HEADINGS AT KNOWSLEY RANGLES BRIDGE Data Type: Point Name: United Utilities Water Ltd Easting: 340900 Northing: 396600	Annual Volume (m ³): 2905000 Max Daily Volume (m ³): 9092.18 Original Application No: NPS/WR/026426 Original Start Date: 02/11/1966 Expiry Date: - Issue No: 102 Version Start Date: 26/11/2018 Version End Date: -
-	1571m W	Status: Historical Licence No: 2569031024 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: B/HOLES, WELLS,ADITS & HEADINGS@KNOWSLEY RANGLES BRIDGE215 Data Type: Point Name: NORTH WEST WATER LTD Easting: 340900 Northing: 396600	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 02/11/1966 Expiry Date: - Issue No: 100 Version Start Date: 10/02/1995 Version End Date: -
-	1571m W	Status: Historical Licence No: 2569031024 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: "B/HOLES, WELLS,ADITS & HEADINGS@KNOWSLEY RANGLES BRIDGE \$215" Data Type: Point Name: UNITED UTILITIES WATER PLC Easting: 340900 Northing: 396600	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 02/11/1966 Expiry Date: - Issue No: 100 Version Start Date: 10/02/1995 Version End Date: -



ID	Location	Details	
-	1571m W	Status: Historical Licence No: 2569031024 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: B/HOLES, WELLS, ADITS & HEADINGS@KNOWSLEY RANGLES BRIDGE \$215 Data Type: Point Name: UNITED UTILITIES WATER PLC Easting: 340900 Northing: 396600	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 02/11/1966 Expiry Date: - Issue No: 100 Version Start Date: 10/02/1995 Version End Date: -
-	1595m NE	Status: Historical Licence No: 2569031090 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: BOREHOLE AT KIRKBY INDUSTRIAL ESTATE Data Type: Point Name: Baker Hughes Limited Easting: 343400 Northing: 398700	Annual Volume (m ³): 250030 Max Daily Volume (m ³): 818.28 Original Application No: NPS/WR/006045 Original Start Date: 20/01/1989 Expiry Date: - Issue No: 101 Version Start Date: 18/03/2011 Version End Date: -
-	1595m NE	Status: Active Licence No: 2569031090 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: BOREHOLE AT KIRKBY INDUSTRIAL ESTATE Data Type: Point Name: Baker Hughes Limited Easting: 343400 Northing: 398700	Annual Volume (m ³): 250030 Max Daily Volume (m ³): 818.28 Original Application No: NPS/WR/006045 Original Start Date: 01/01/1989 Expiry Date: - Issue No: 101 Version Start Date: 18/03/2011 Version End Date: -

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

5.9 Source Protection Zones

Records within 500m	2
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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 49 >](#)

ID	Location	Type	Description
1	On site	3	Total catchment
2	360m N	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

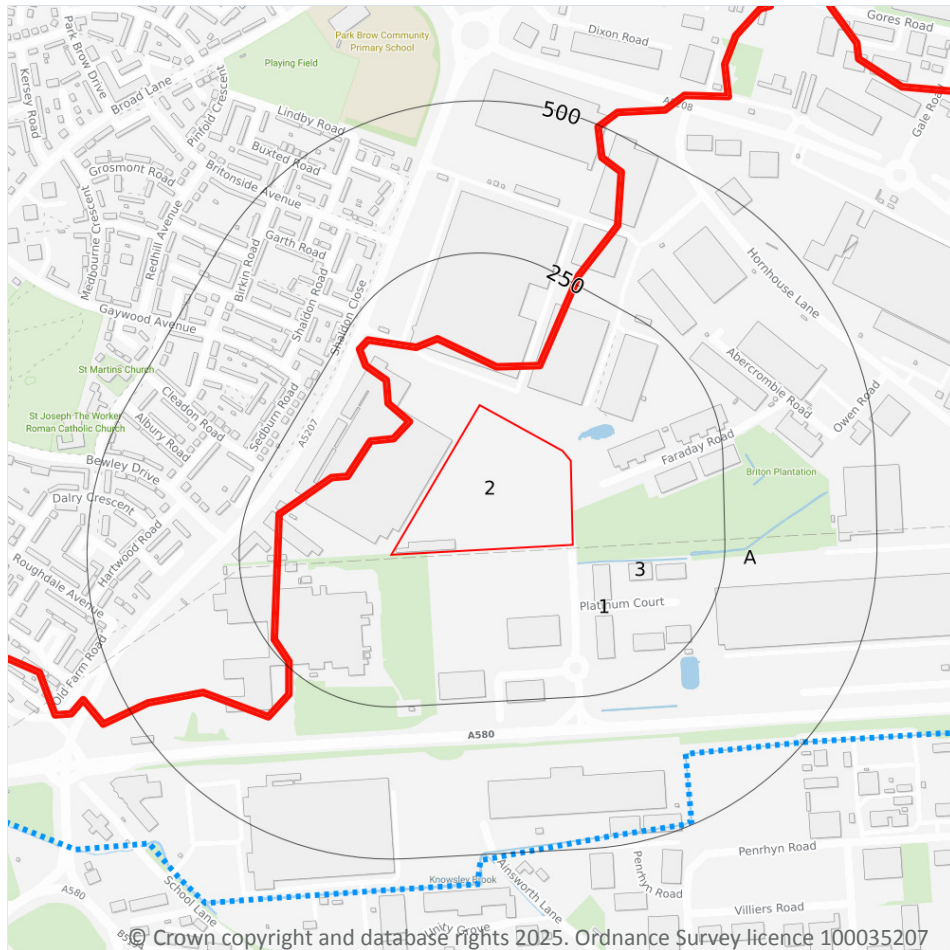
0

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

2

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 62 >](#)

ID	Location	Type of water feature	Ground level	Permanence	Name
3	32m S	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
A	194m 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	2
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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 62 >](#)

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site	1
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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 62 >](#)

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
1	On site	River	Croxteth/Knowsley Brook	GB112069060610	Alt	Alt and Crossens

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

6.4 WFD Surface water bodies

Records identified	1
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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.



Features are displayed on the Hydrology map on [page 62 >](#)

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
8	390m SE	River	Croxteth/Knowsley Brook	GB112069060610 ↗	Moderate	Fail	Moderate	2019

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 62 >](#)

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
2	On site	Lower Mersey Basin and North Merseyside Permo-Triassic Sandstone Aquifers	GB41201G101700 ↗	Poor	Poor	Poor	2019

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



7 River and coastal flooding

7.1 Risk of flooding from rivers and the sea

Records within 50m**0**

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).

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

7.2 Historical Flood Events

Records within 250m**0**

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.

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

0

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.

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

7.5 Flood Storage Areas

Records within 250m

0

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.

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



River and coastal flooding - Flood Zones

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

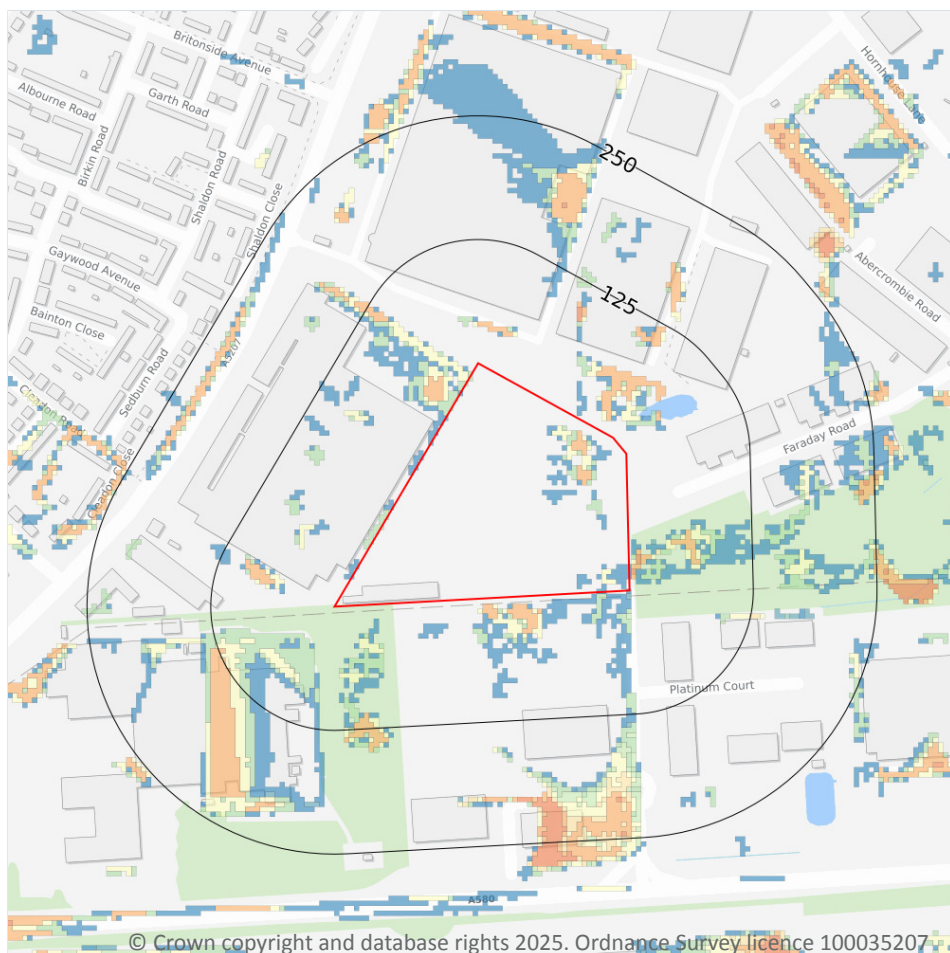
0

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.

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 30 year, 0.1m - 0.3m

Highest risk within 50m

1 in 30 year, 0.3m - 1.0m

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 68](#) >

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.

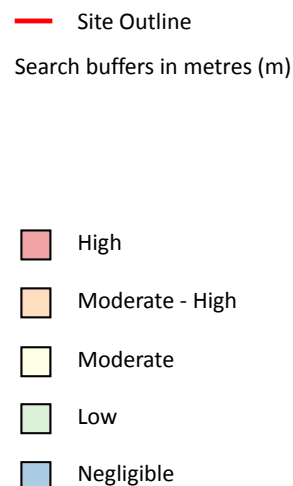
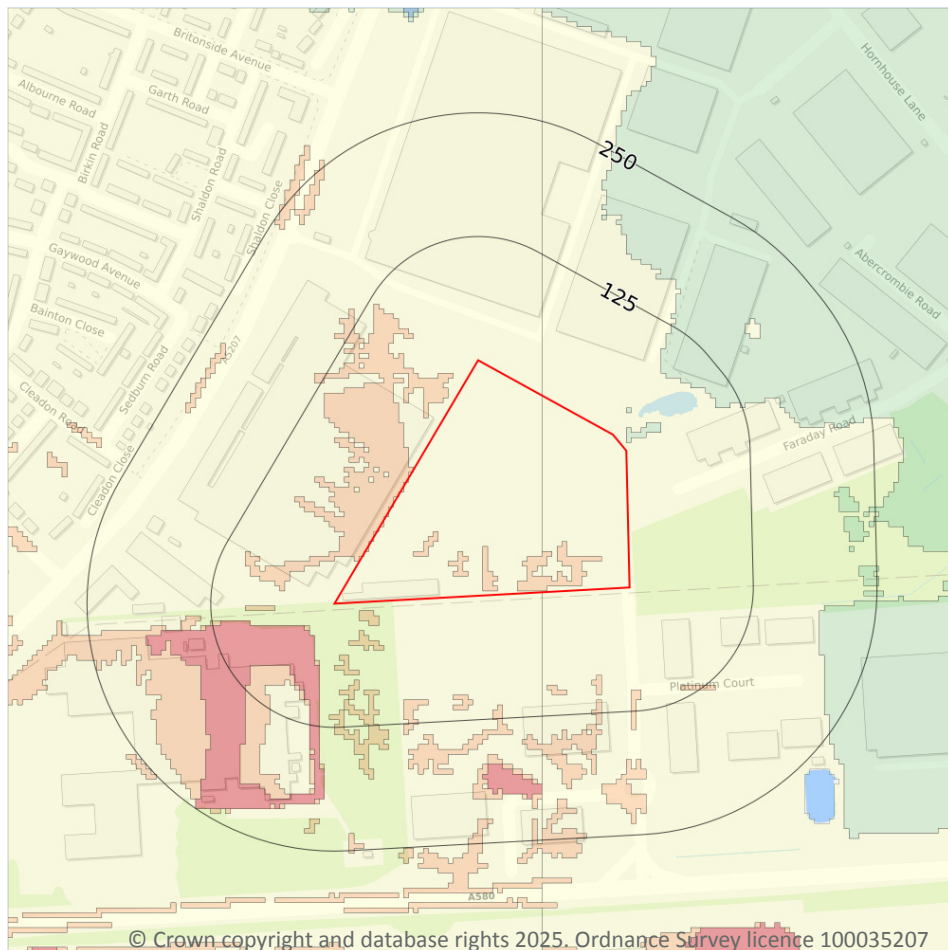
The table below shows the maximum flood depths for a range of return periods for the site.

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 0.3m and 1.0m
1 in 30 year	Between 0.1m and 0.3m

This data is sourced from Ambiantal Risk Analytics.



9 Groundwater flooding



9.1 Groundwater flooding

Highest risk on site

Moderate-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 70 >](#)

This data is sourced from Ambiantal Risk Analytics.

10 Environmental designations



- Site Outline
- Search buffers in metres (m)
- + Local Nature Reserves (LNR)
- ▨ 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

2

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.

Features are displayed on the Environmental designations map on [page 71 >](#)

ID	Location	Name	Data source
2	930m NE	Acornfield Plantation	Natural England
4	1398m SW	Croxteth	Natural England

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

2

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

Features are displayed on the Environmental designations map on [page 71](#) >

ID	Location	Name	Local Authority name
1	601m SW	Merseyside and Greater Manchester Green Belt	Knowsley
3	1381m SW	Merseyside and Greater Manchester Green Belt	Liverpool

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**4**

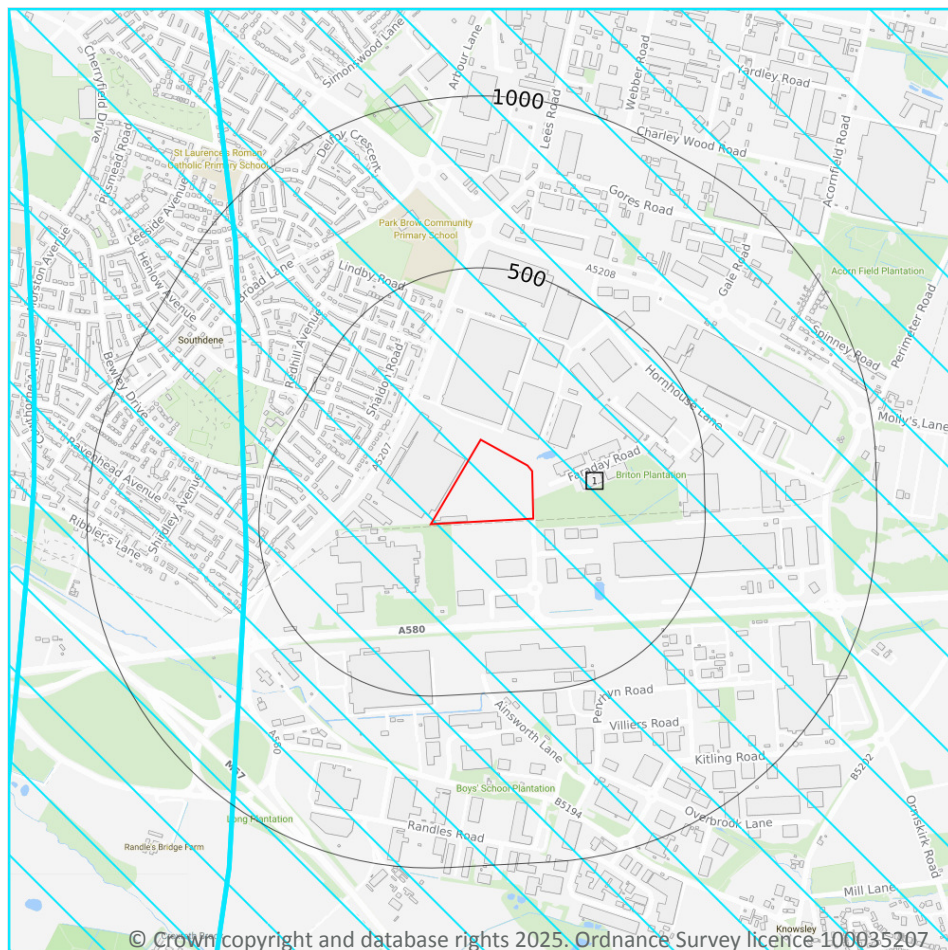
Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

Location	Name	Type	NVZ ID	Status
On site	ALT NVZ	Surface Water	642	Existing
1130m S	ALT NVZ	Surface Water	642	Existing
1409m E	ALT NVZ	Surface Water	642	Existing
1816m SE	ALT NVZ	Surface Water	642	Existing

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 76 >](#)

ID	Location	Type of developments requiring consultation
1	On site	https://irz.geodata.org.uk/IRZ/step2.html?irzcode=000000000000&notes=&location=417554,424273%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

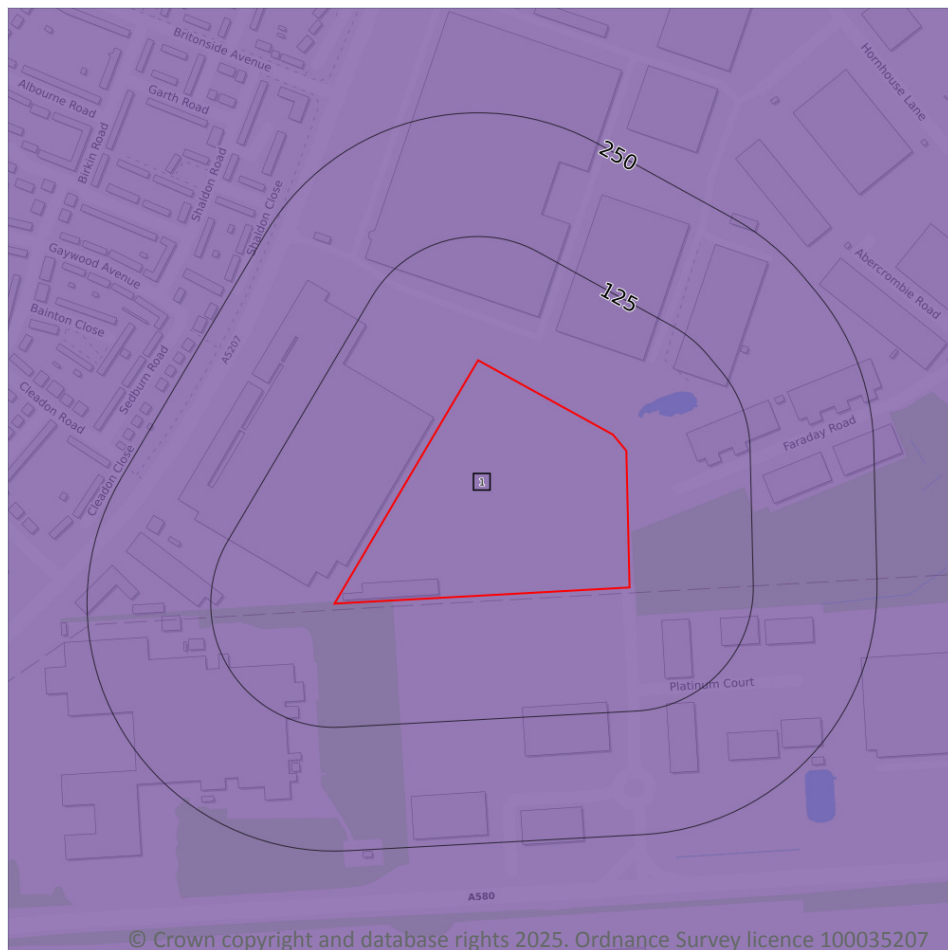
0

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

1

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 80](#) >

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

This data is sourced from Natural England.



12.2 Open Access Land

Records within 250m**0**

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.

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.

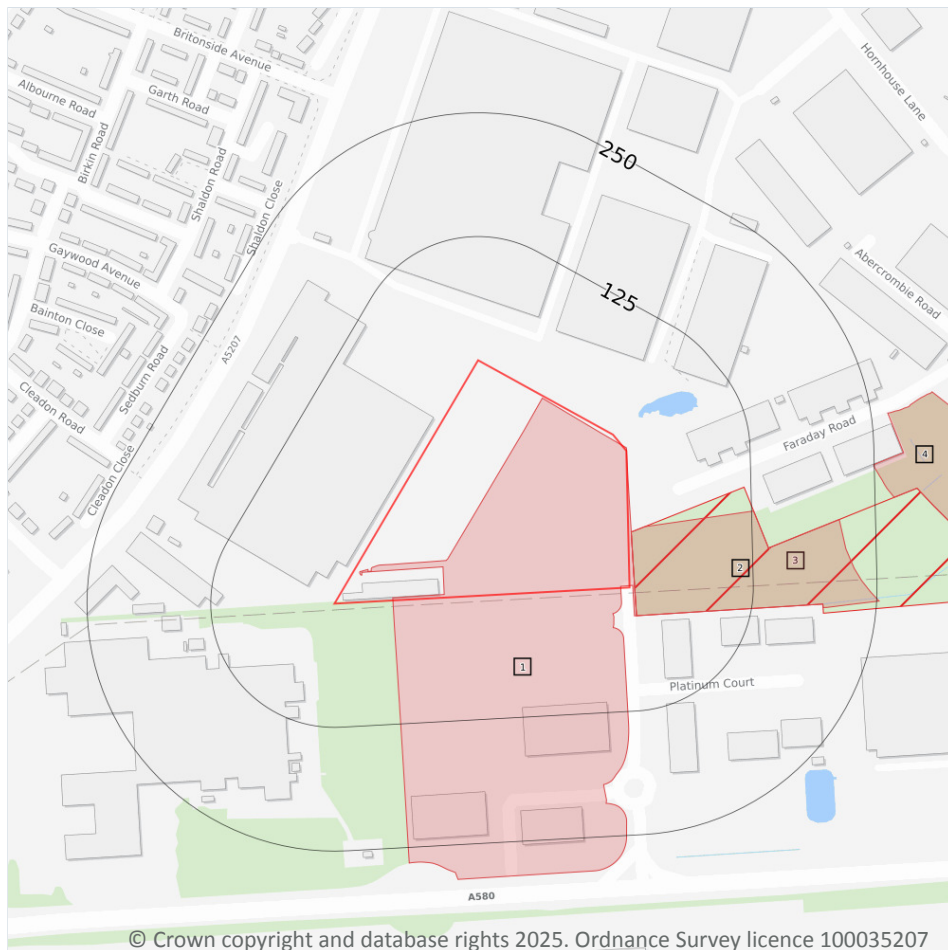
12.5 Countryside Stewardship Schemes

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

3

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 82](#) >

ID	Location	Main Habitat	Other habitats
1	On site	Good quality semi-improved grassland	Main habitat: GQSIG (INV > 50%)
2	3m E	Good quality semi-improved grassland	Main habitat: GQSIG (INV > 50%)
4	250m E	Deciduous woodland	Main habitat: DWOOD (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

1

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 82 >](#)

ID	Location	Site reference	Identification confidence	Primary source	Secondary source	Tertiary source
3	3m E	NLUD Ref: 430500230	Low	National Land Use Database - Previously Developed Land	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

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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 84](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	No coverage	No coverage	No coverage	No coverage	NoCov

This data is sourced from the British Geological Survey.



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

14.2 Artificial and made ground (10k)

Records within 500m

0

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.

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Superficial

14.3 Superficial geology (10k)

Records within 500m

0

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.

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

14.5 Bedrock geology (10k)

Records within 500m

0

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.

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.

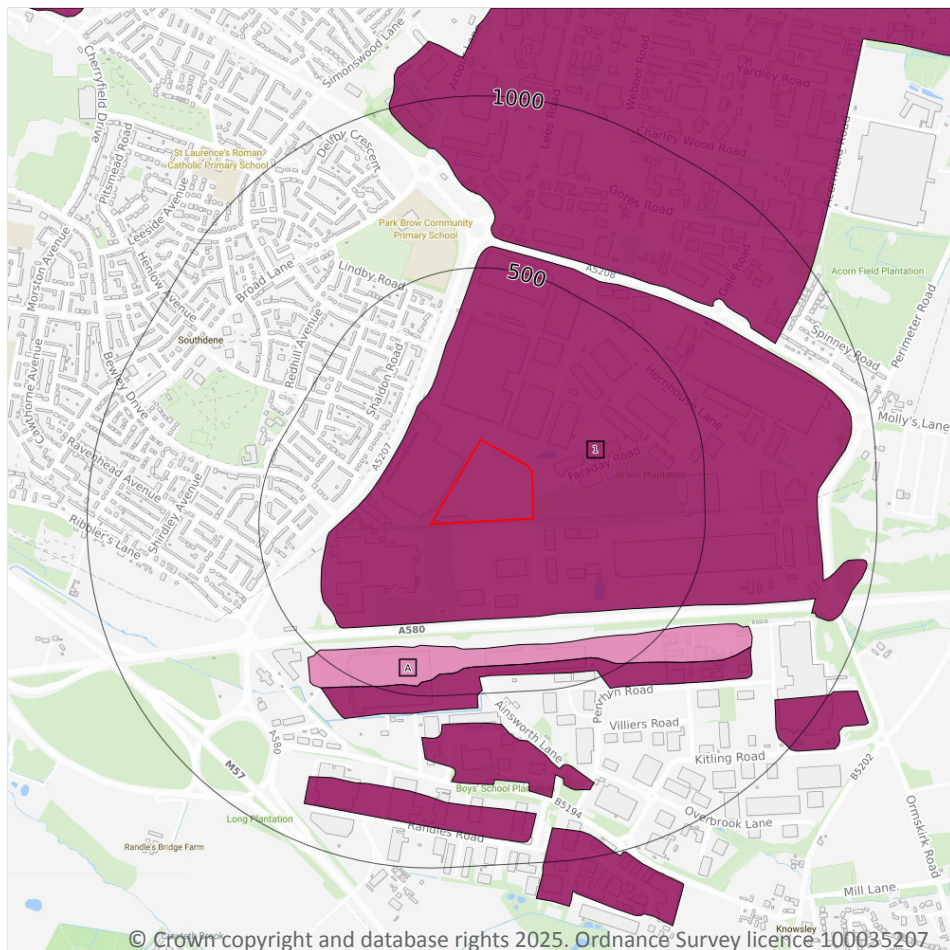
Features are displayed on the Geology 1:50,000 scale - Availability map on [page 88](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	No coverage	Full	Full	No coverage	EW084_wigan_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

3

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 89](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
A	353m S	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID
A	419m S	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

This data is sourced from the British Geological Survey.



15.3 Artificial ground permeability (50k)

Records within 50m**1**

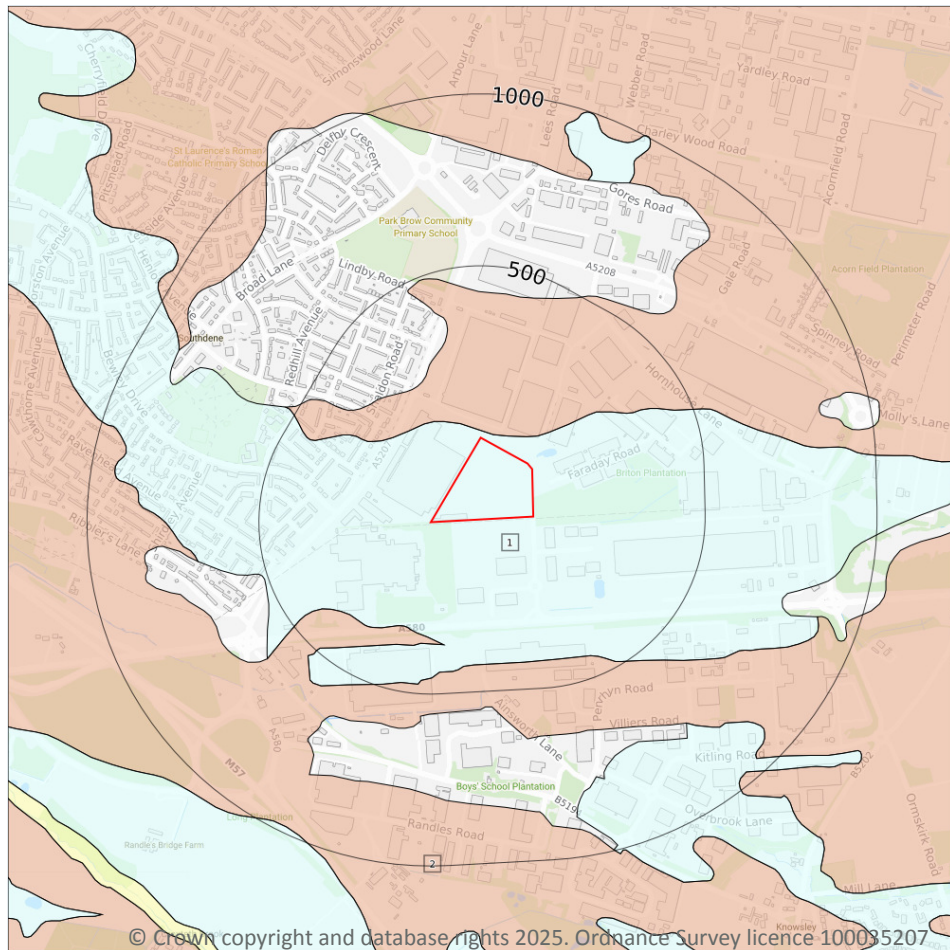
A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any artificial deposits (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Mixed	Very High	Low

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

2

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 91](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	TILLD-DMTN	TILL, DEVANSIAN	DIAMICTON
2	20m N	SSA-S	SHIRDLEY HILL SAND FORMATION	SAND

This data is sourced from the British Geological Survey.



15.5 Superficial permeability (50k)

Records within 50m**2**

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	Mixed	High	Low
20m N	Intergranular	High	High

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.

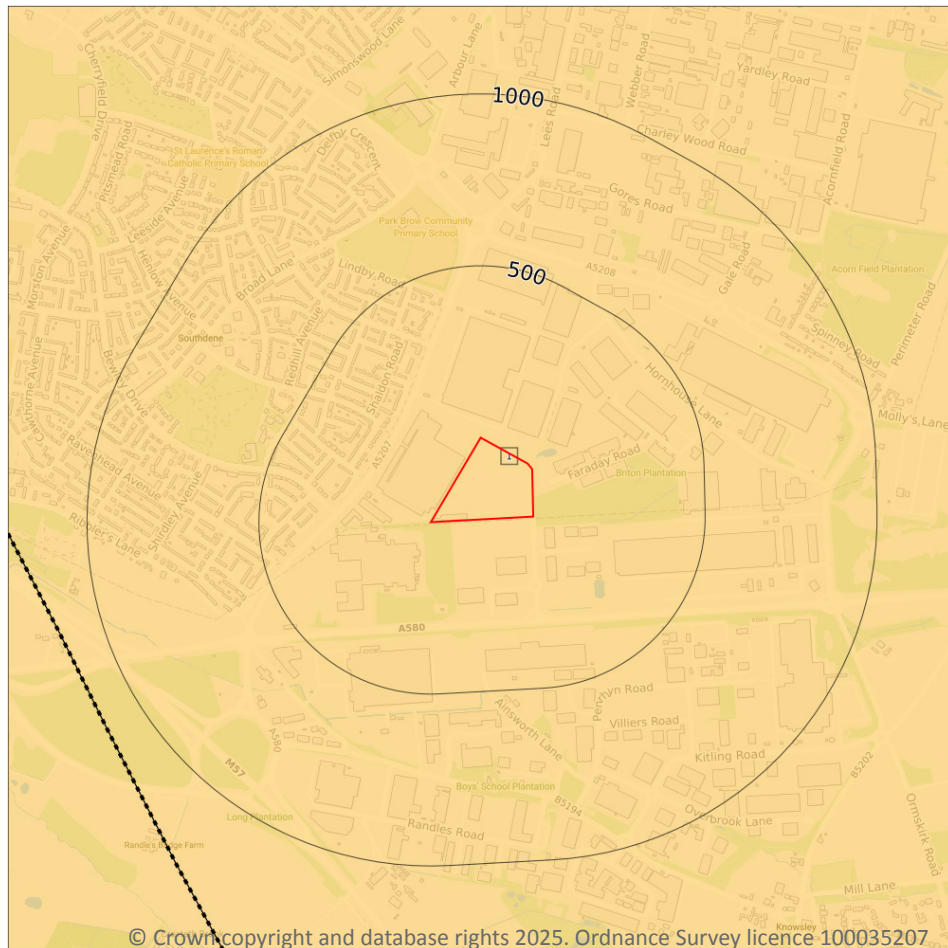
15.7 Landslip permeability (50k)

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 93](#) >

ID	Location	LEX Code	Description	Rock age
1	On site	CHES-SDST	CHESTER FORMATION - SANDSTONE	OLENEKIAN

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	Mixed	High	Moderate

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m

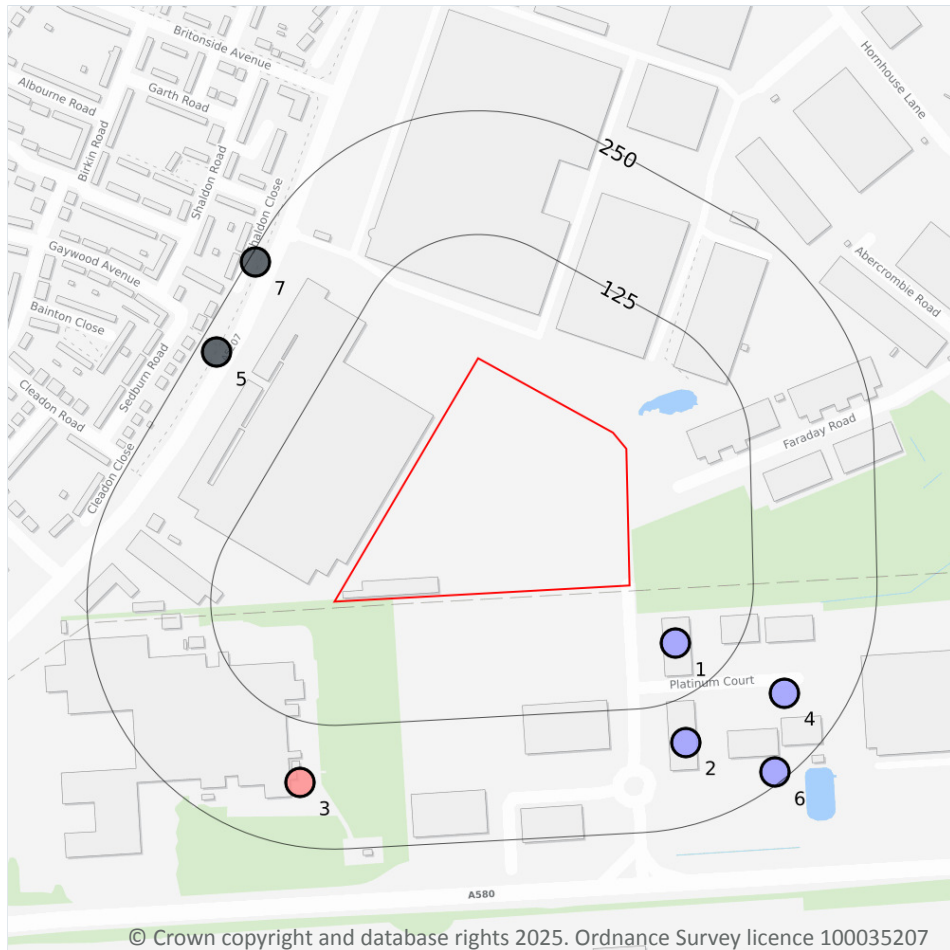
0

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



- Site Outline**
- Search buffers in metres (m)**
- Confidential
 - 0 - 10m
 - 10 - 30m
 - 30m+
 - Unknown

16.1 BGS Boreholes

Records within 250m

7

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.

Features are displayed on the Boreholes map on [page 95 >](#)

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	75m SE	342730 397070	LANGTREE DEVELOPMENT KNOWSLEY 1	6.0	N	17561913 ↗
2	168m S	342740 396970	LANGTREE DEVELOPMENT KNOWSLEY 3	6.5	N	17561915 ↗

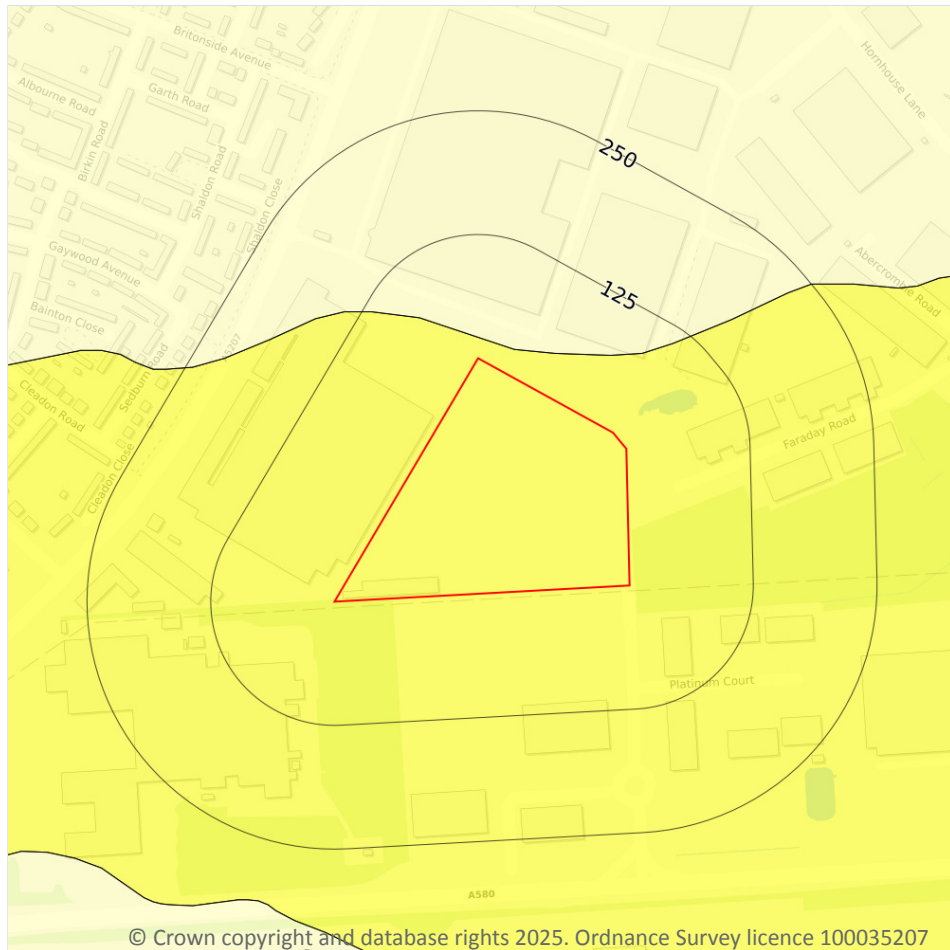


ID	Location	Grid reference	Name	Length	Confidential	Web link
3	186m S	342350 396930	DAIRY CREST, MOORGATE ROAD, KIRKBY	80.0	N	13208438 ↗
4	191m SE	342840 397020	LANGTREE DEVELOPMENT KNOWSLEY 2	5.8	N	17561914 ↗
5	231m NW	342266 397364	MERSEYTRAM LINE 1 1340	-	Y	N/A
6	239m SE	342830 396940	LANGTREE DEVELOPMENT KNOWSLEY 4	5.0	N	17561916 ↗
7	243m NW	342305 397455	MERSEYTRAM LINE 1 1341	-	Y	N/A

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

2

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).

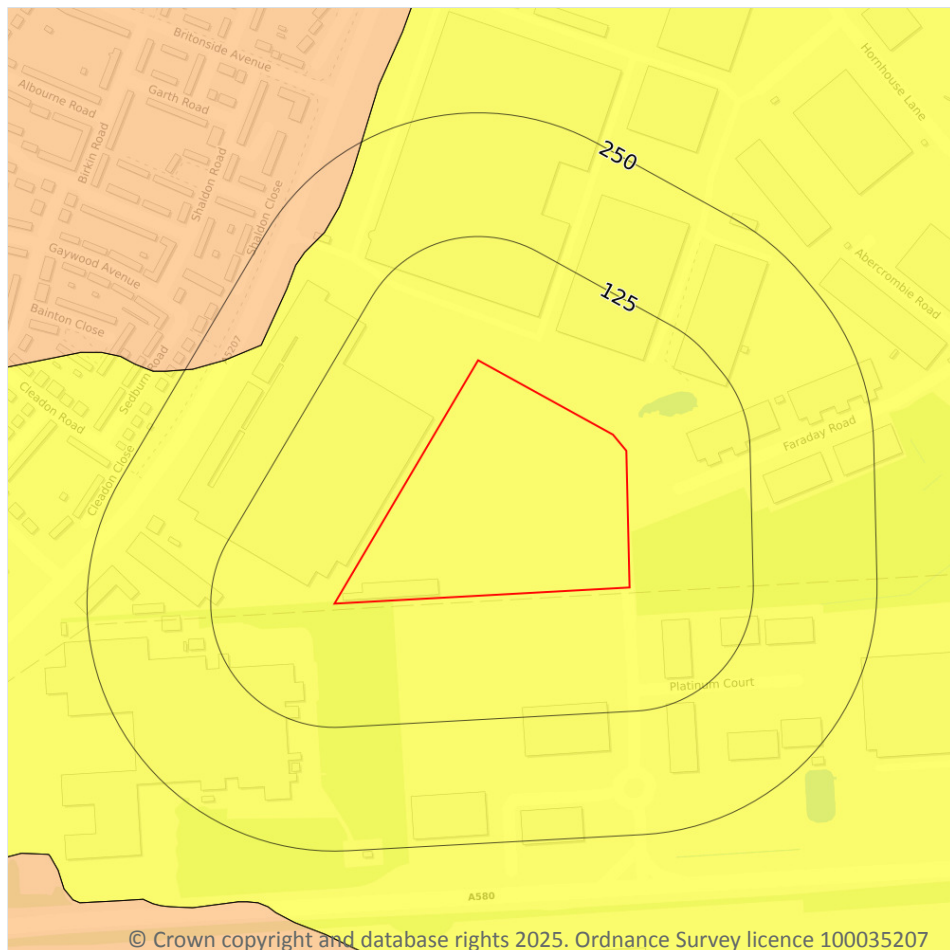
Features are displayed on the Natural ground subsidence - Shrink swell clays map on [page 97 >](#)

Location	Hazard rating	Details
On site	Very low	Ground conditions predominantly low plasticity.
20m N	Negligible	Ground conditions predominantly non-plastic.

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.

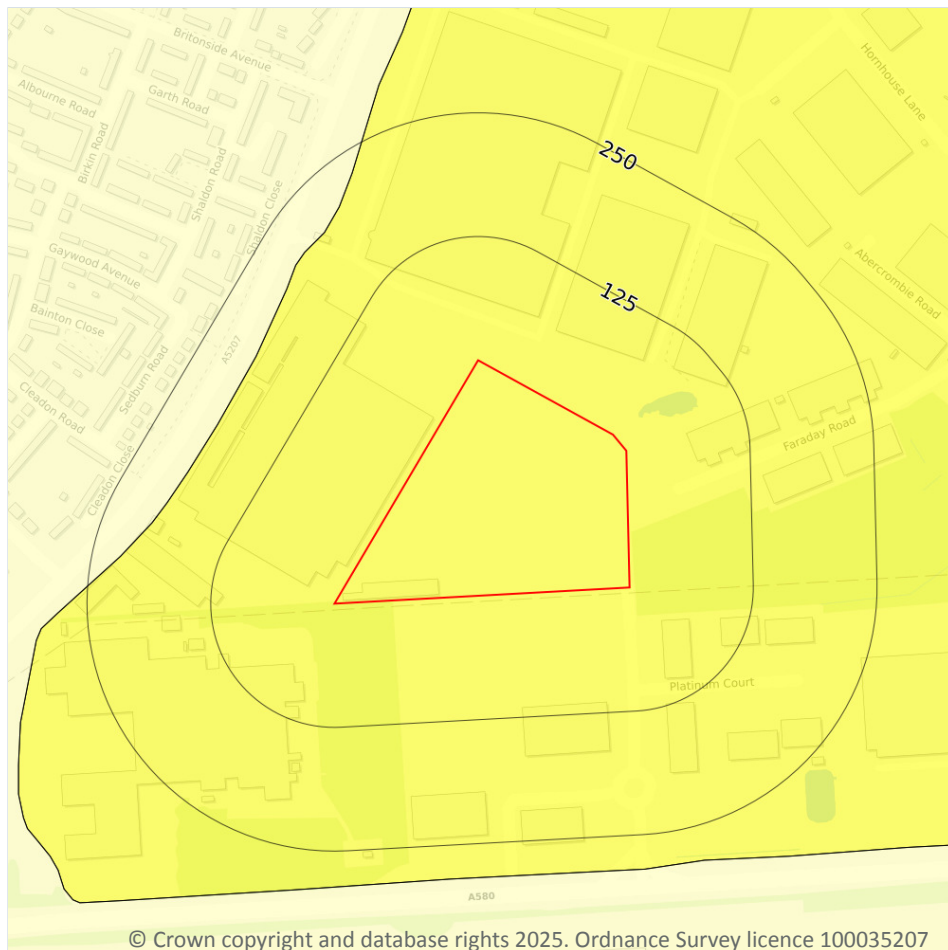
Features are displayed on the Natural ground subsidence - Running sands map on [page 98 >](#)

Location	Hazard rating	Details
On site	Very low	Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.

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.

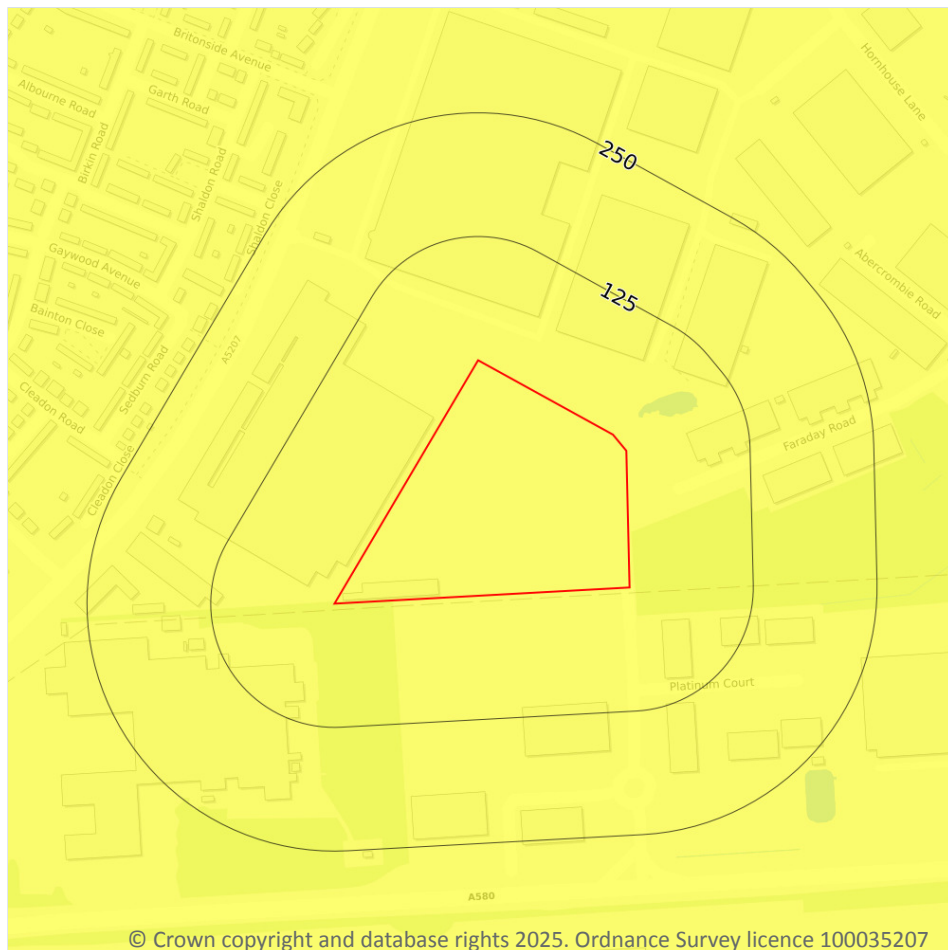
Features are displayed on the Natural ground subsidence - Compressible deposits map on [page 99 >](#)

Location	Hazard rating	Details
On site	Very low	Compressibility and uneven settlement problems are not likely to be significant on the site for most land uses.

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.

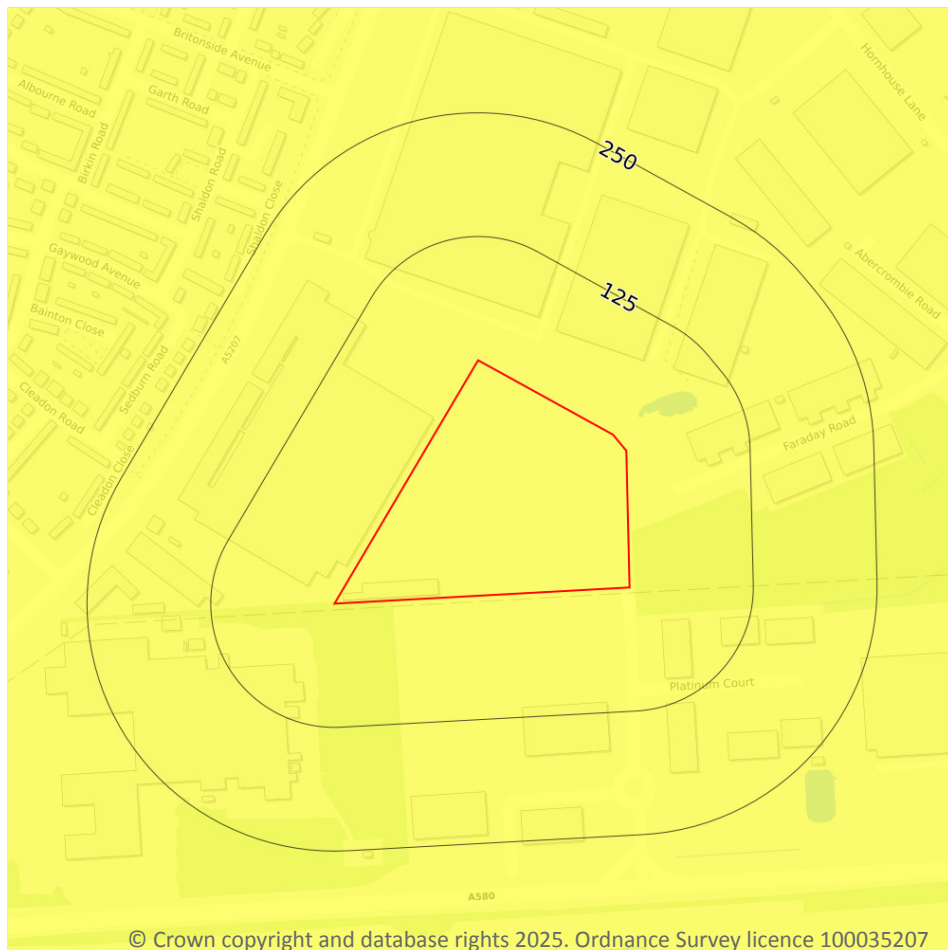
Features are displayed on the Natural ground subsidence - Collapsible deposits map on [page 100](#) >

Location	Hazard rating	Details
On site	Very low	Deposits with potential to collapse when loaded and saturated are unlikely 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.

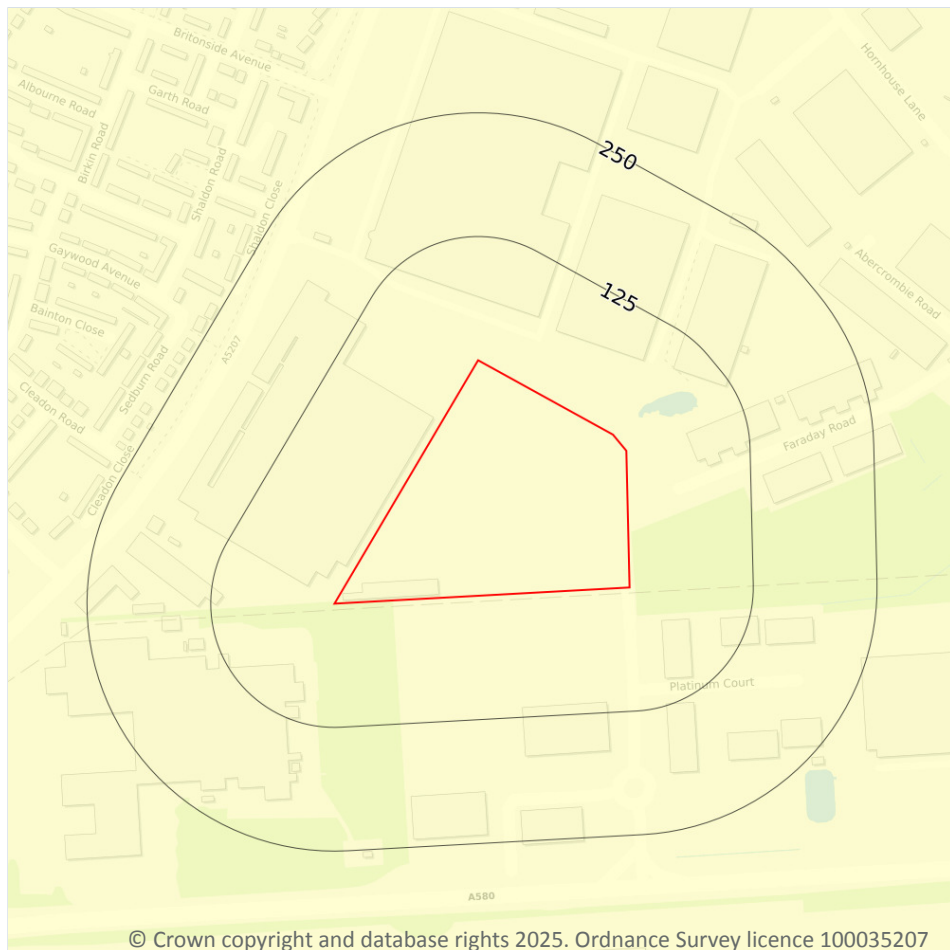
Features are displayed on the Natural ground subsidence - Landslides map on [page 101](#) >

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 102](#) >

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

7

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 104 >](#)

ID	Location	Land Use	Year of mapping	Mapping scale
A	112m NE	Unspecified Heap	1966	1:10560
A	112m NE	Unspecified Heap	1978	1:10000
A	112m NE	Unspecified Heap	1988	1:10000
1	149m E	Unspecified Heap	1966	1:10560
B	208m S	Unspecified Heap	1966	1:10560
B	208m S	Unspecified Heap	1978	1:10000
B	208m S	Unspecified Heap	1988	1:10000

This 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 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

0

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).

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.

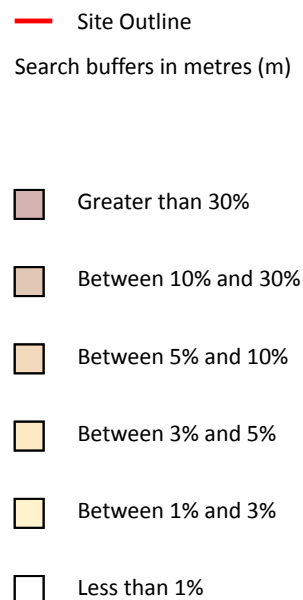
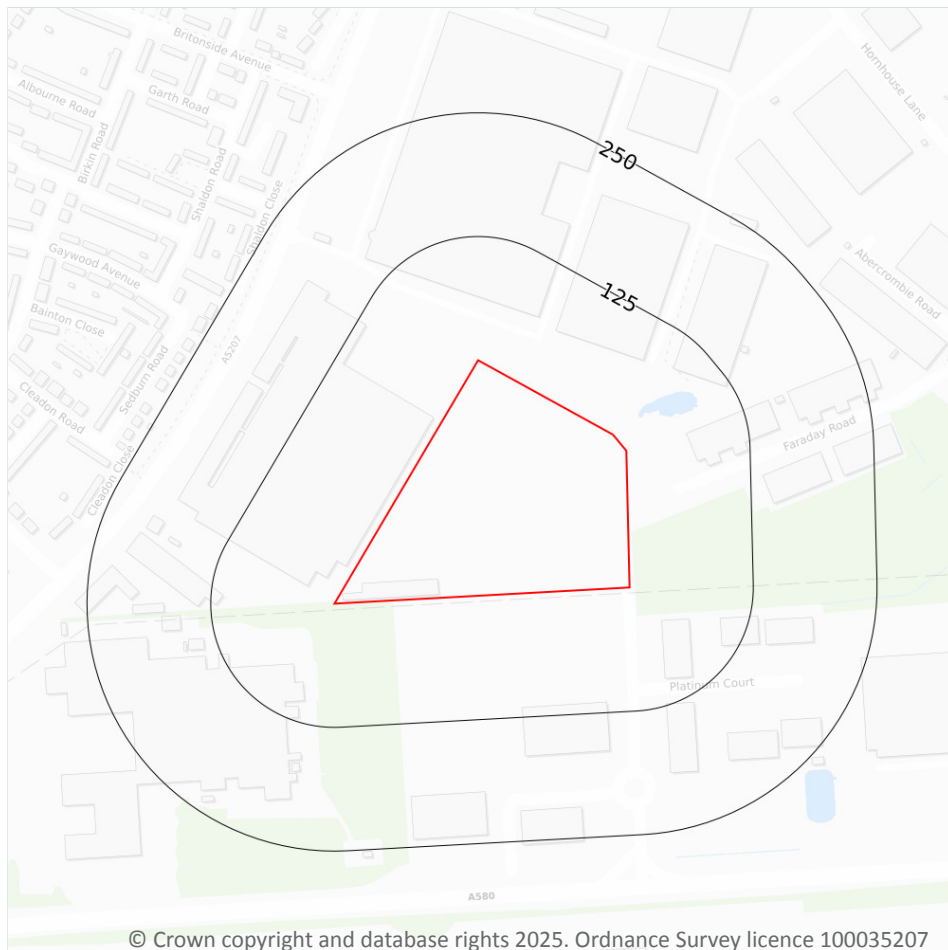
Not all 'holes' noted on Ordnance Survey mapping will necessarily be present within this dataset.



This data is sourced from Groundsure.



20 Radon



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 111](#) >

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

2

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 km². 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 km²; 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	120 - 180 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	120 - 180 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

0

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 km²).

This data is sourced from the British Geological Survey.

21.3 BGS Measured Urban Soil Chemistry

Records within 50m

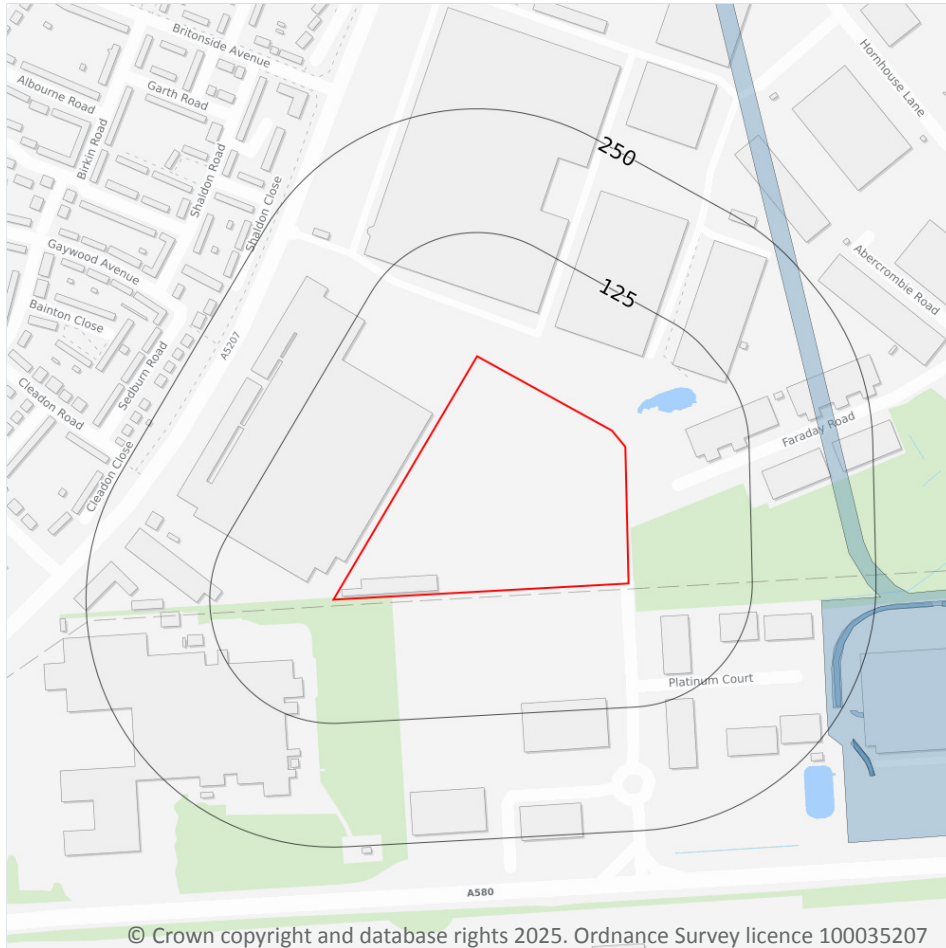
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The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km².

This data is sourced from the British Geological Survey.



22 Railway infrastructure and projects



- Site Outline
- Search buffers in metres (m)
- C2 Crossrail 2 Stations
- Crossrail 2 Route
- Crossrail 2 Worksites
- Crossrail 2 Safeguarding
- Crossrail 2 Headhouses
- Railway stations
- Active railways
- Active tunnels
- Abandoned railways
- Historic railways
- Historic tunnels
- Underground stations
- Underground Lines
- Royal Mail tunnels
- HS2 optimised route
- HS2 Stations
- HS2 Depots
- HS2 Surface Safeguarding
- HS2 Subsurface Safeguarding

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

3

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 114 >](#)

Location	Land Use	Year of mapping	Mapping scale
194m E	Railway Sidings	1966	10560
218m E	Railway Sidings	1960	1250
219m E	Railway Sidings	1960	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

0

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

This data is sourced from OpenStreetMap.



22.7 Railways

Records within 250m**0**

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

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

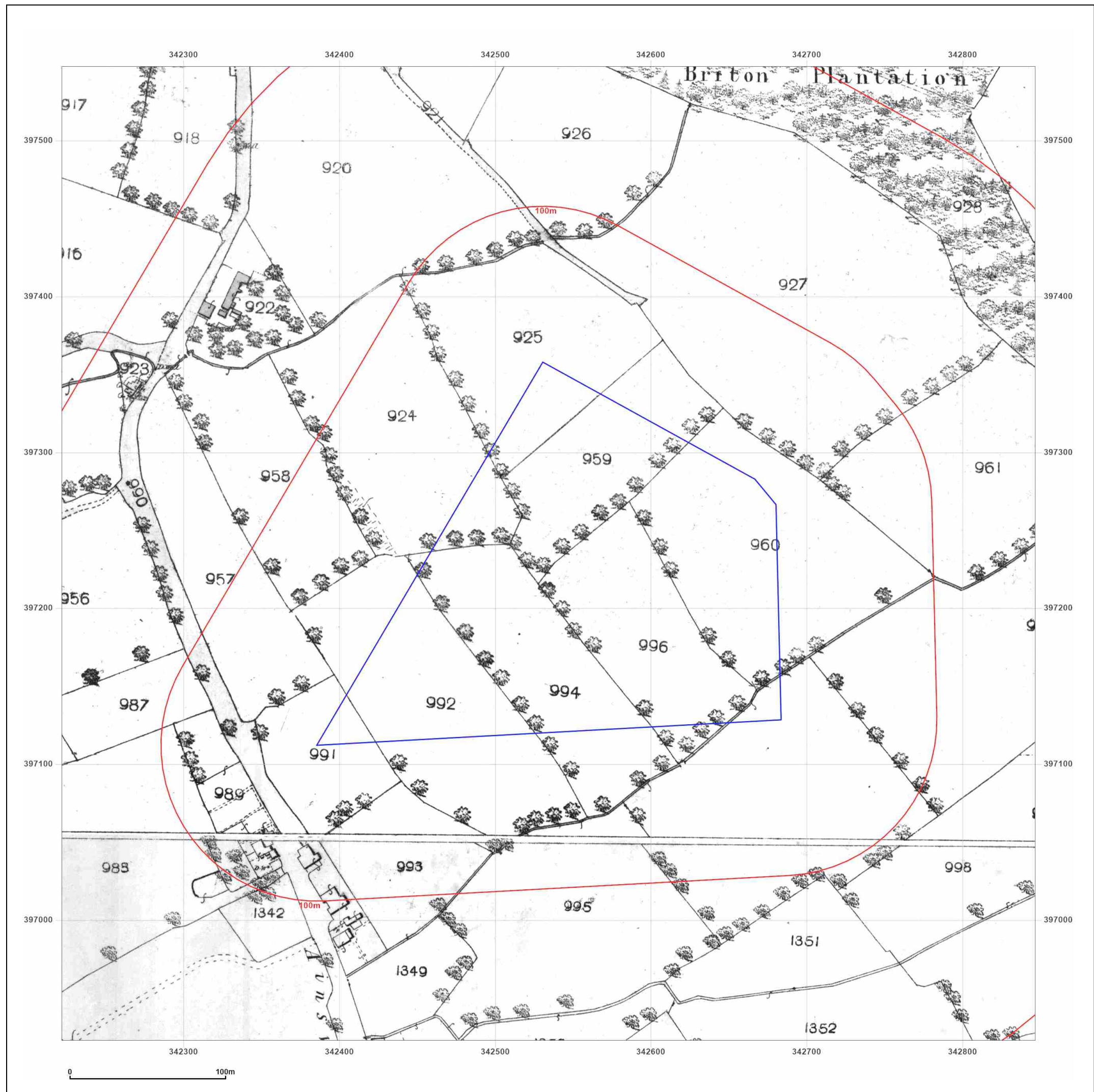
Groundsure works with respected data providers to bring you the most relevant and accurate information. To find out who they are and their areas of expertise see <https://www.groundsure.com/sources-reference> ↗.

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Appendix III



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Report Ref: EMS-1037912_1309981
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Map Name: County Series

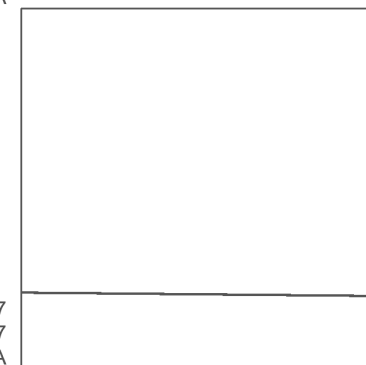
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Scale: 1:2,500

Printed at: 1:2,500



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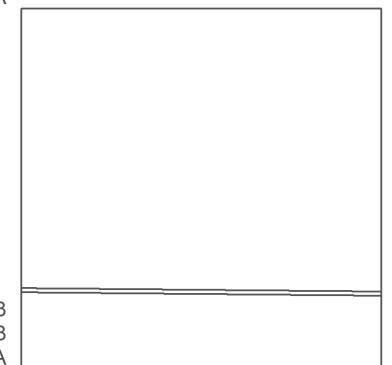
Map date: 1893

Scale: 1:2,500

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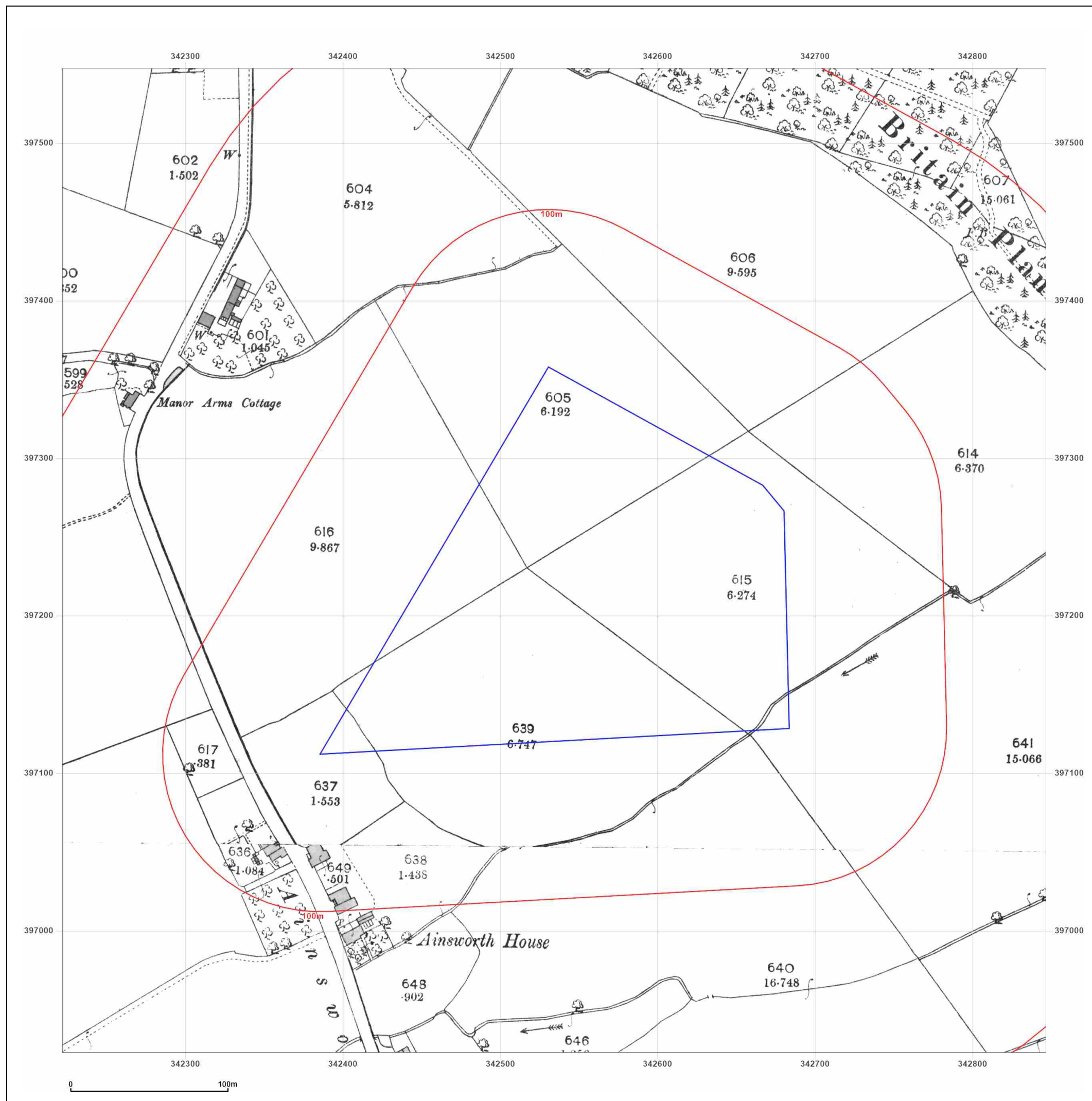


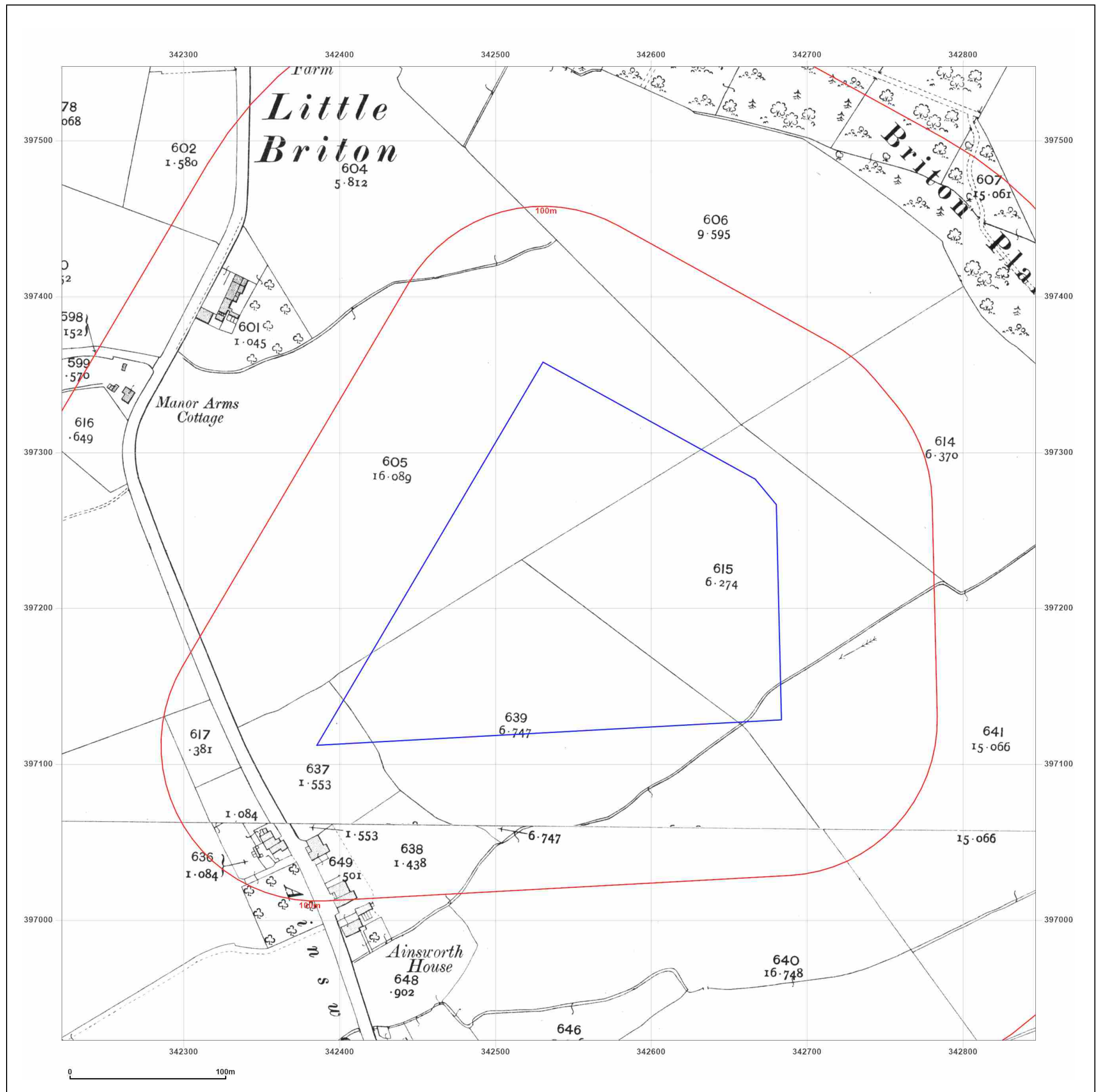
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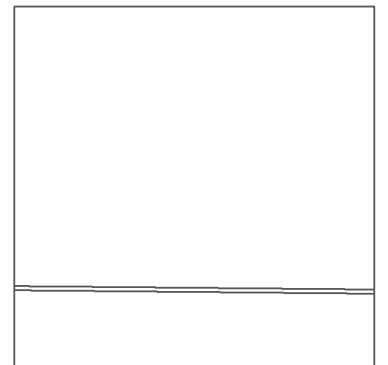
Map date: 1908

Scale: 1:2,500

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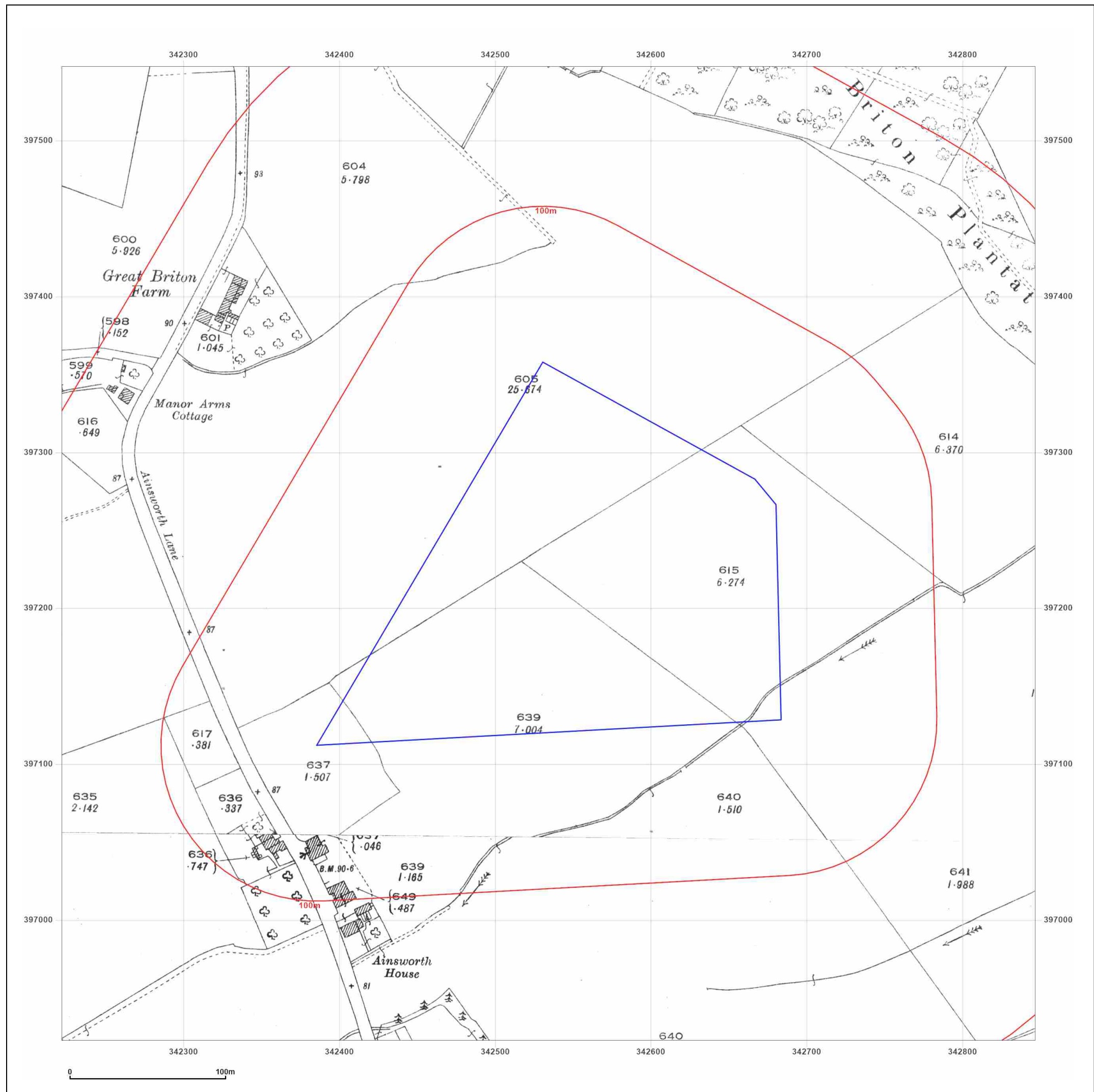


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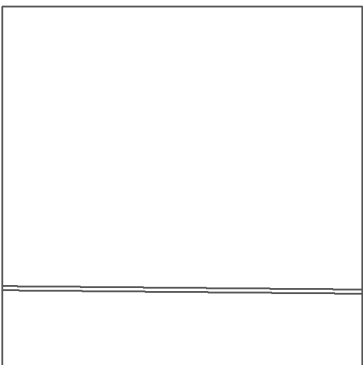
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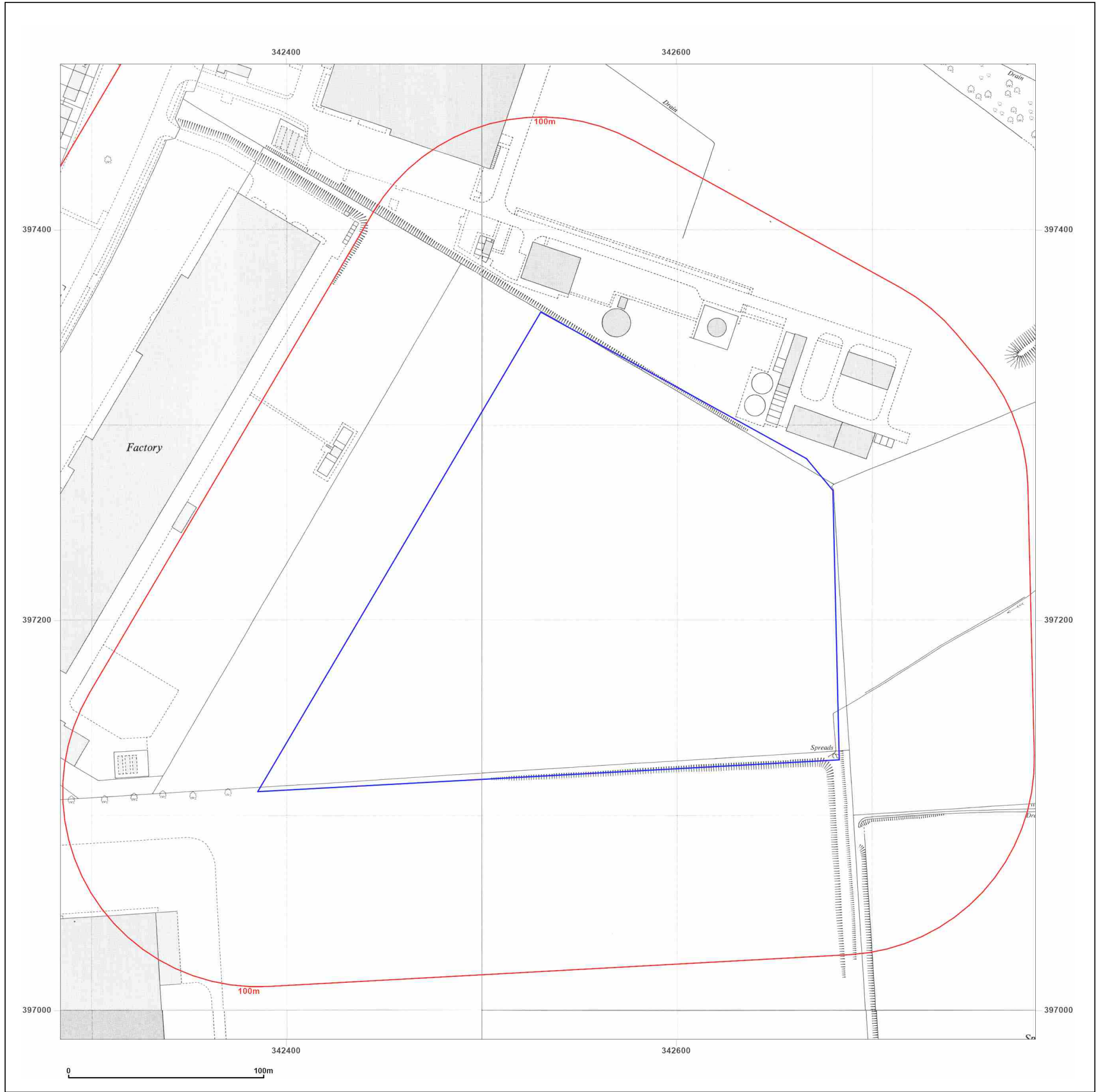


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Site Details:

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Report Ref: EMS-1037912_1309981
Grid Ref: 342534, 397235

Map Name: National Grid

Map date: 1959-1960

Scale: 1:1,250

Printed at: 1:2,000



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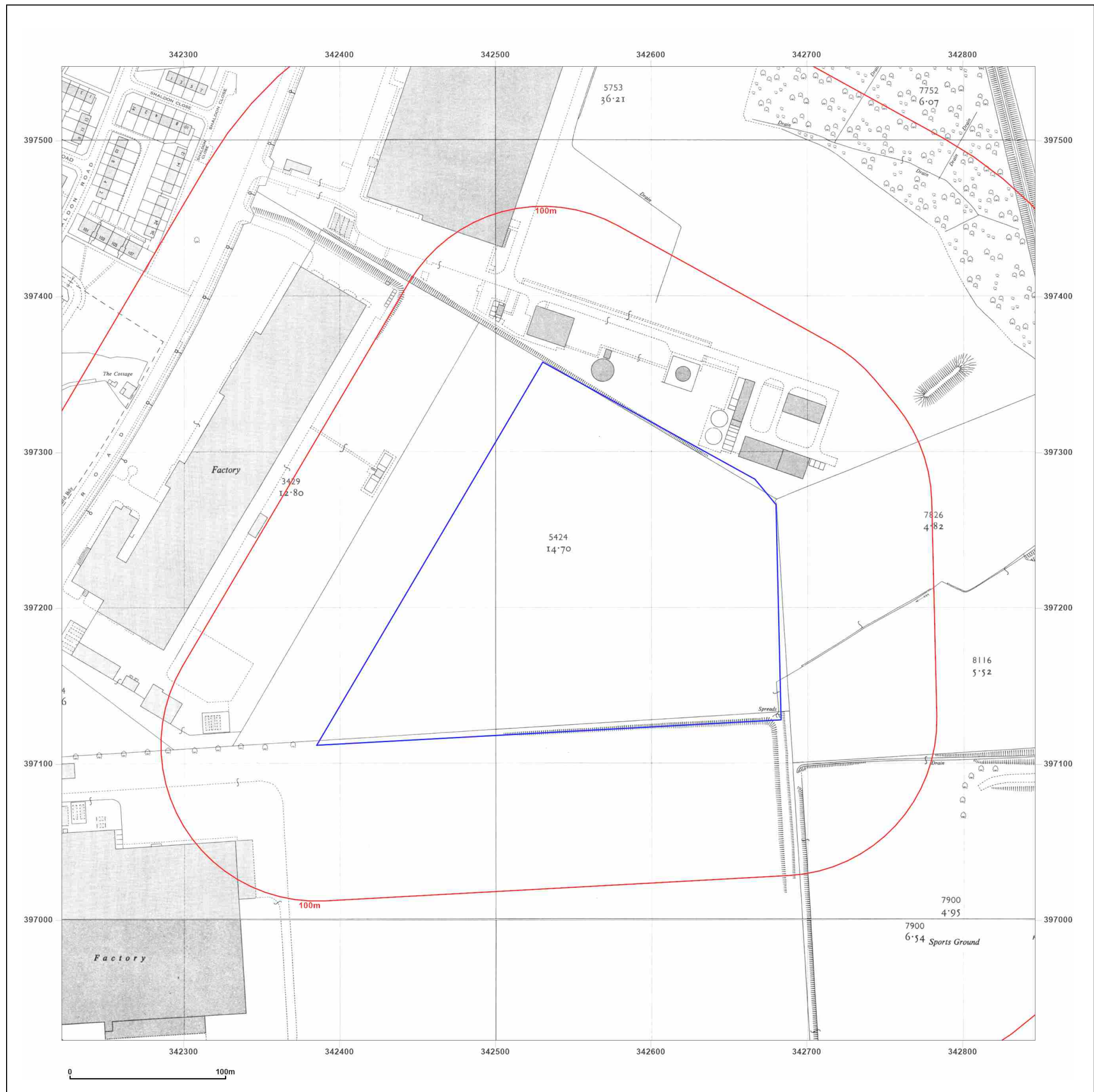


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Grid Ref: 342534, 397235

Map Name: National Grid

Map date: 1960

Scale: 1:2,500

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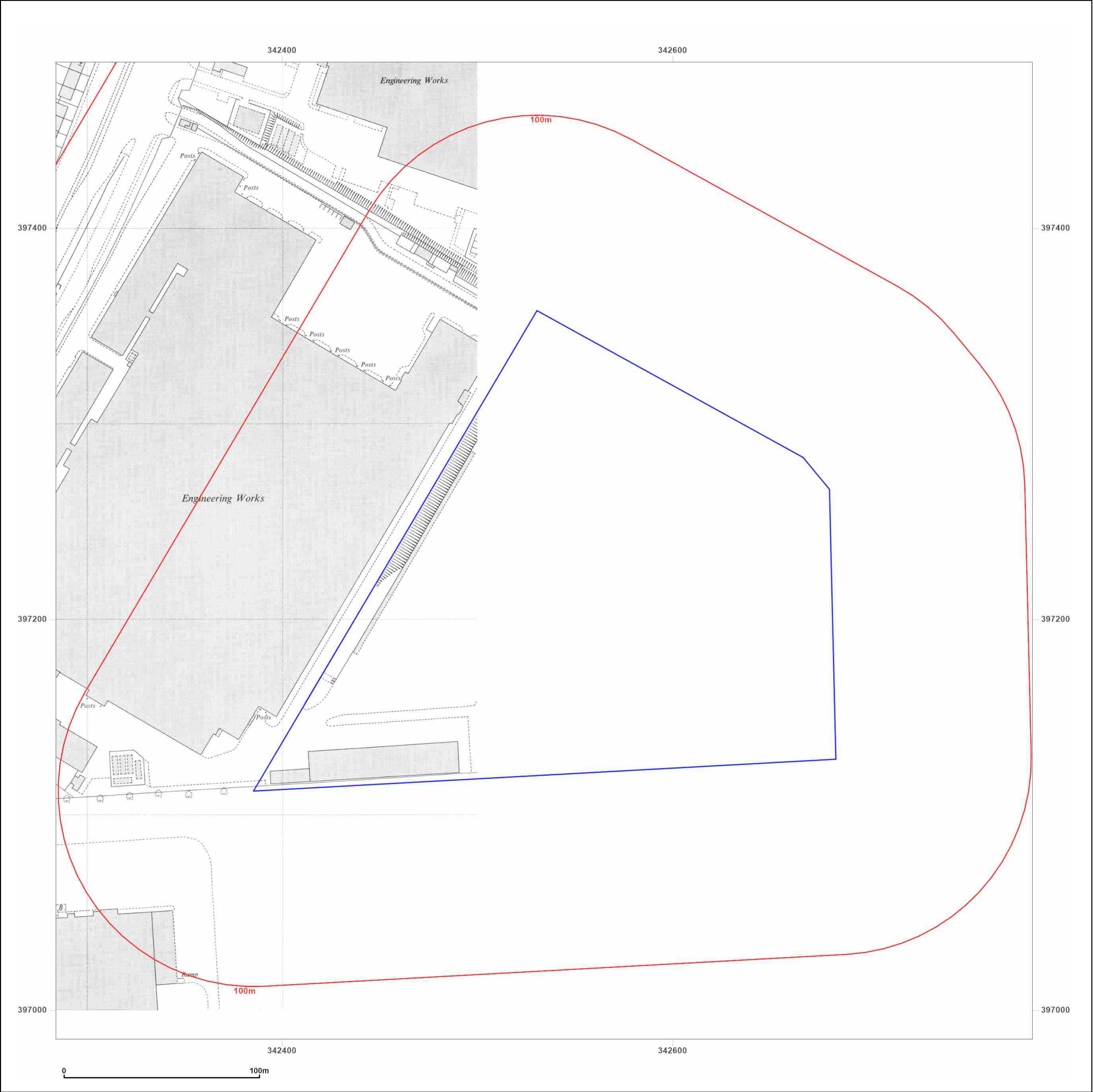


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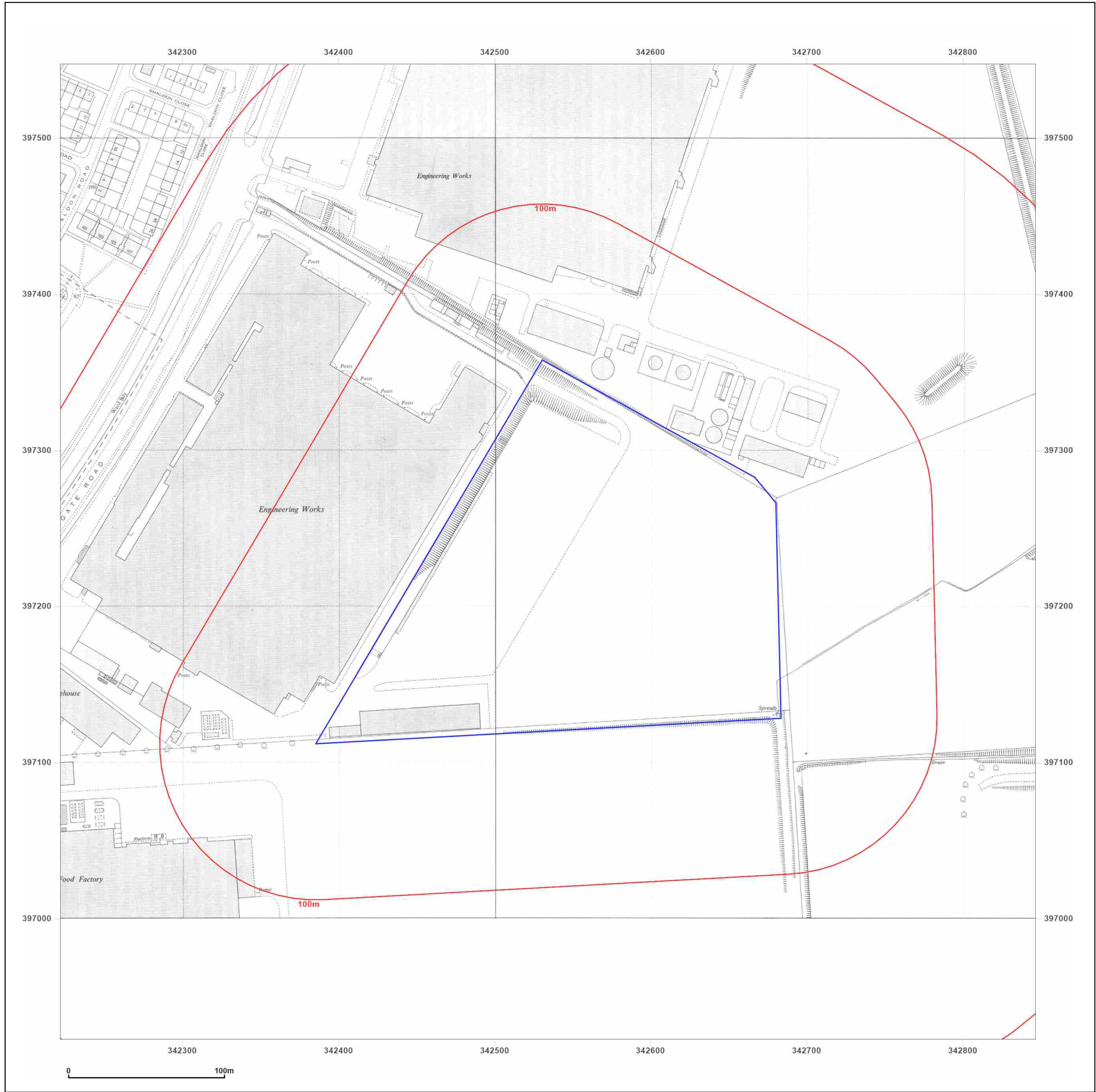
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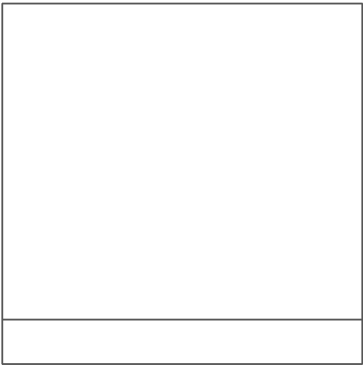
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Map date: 1974-1976

Scale: 1:1,250

Printed at: 1:2,000



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Surveyed 1959 Revised 1973 Edition N/A Copyright 1974 Levelled 1960	Surveyed 1959 Revised 1974 Edition N/A Copyright 1974 Levelled 1960



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Site Details:

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Client Ref: EMS_1037912_1297382
Report Ref: EMS-1037912_1309981
Grid Ref: 342534, 397235

Map Name: National Grid

Map date: 1974-1976

Scale: 1:1,250

Printed at: 1:2,000



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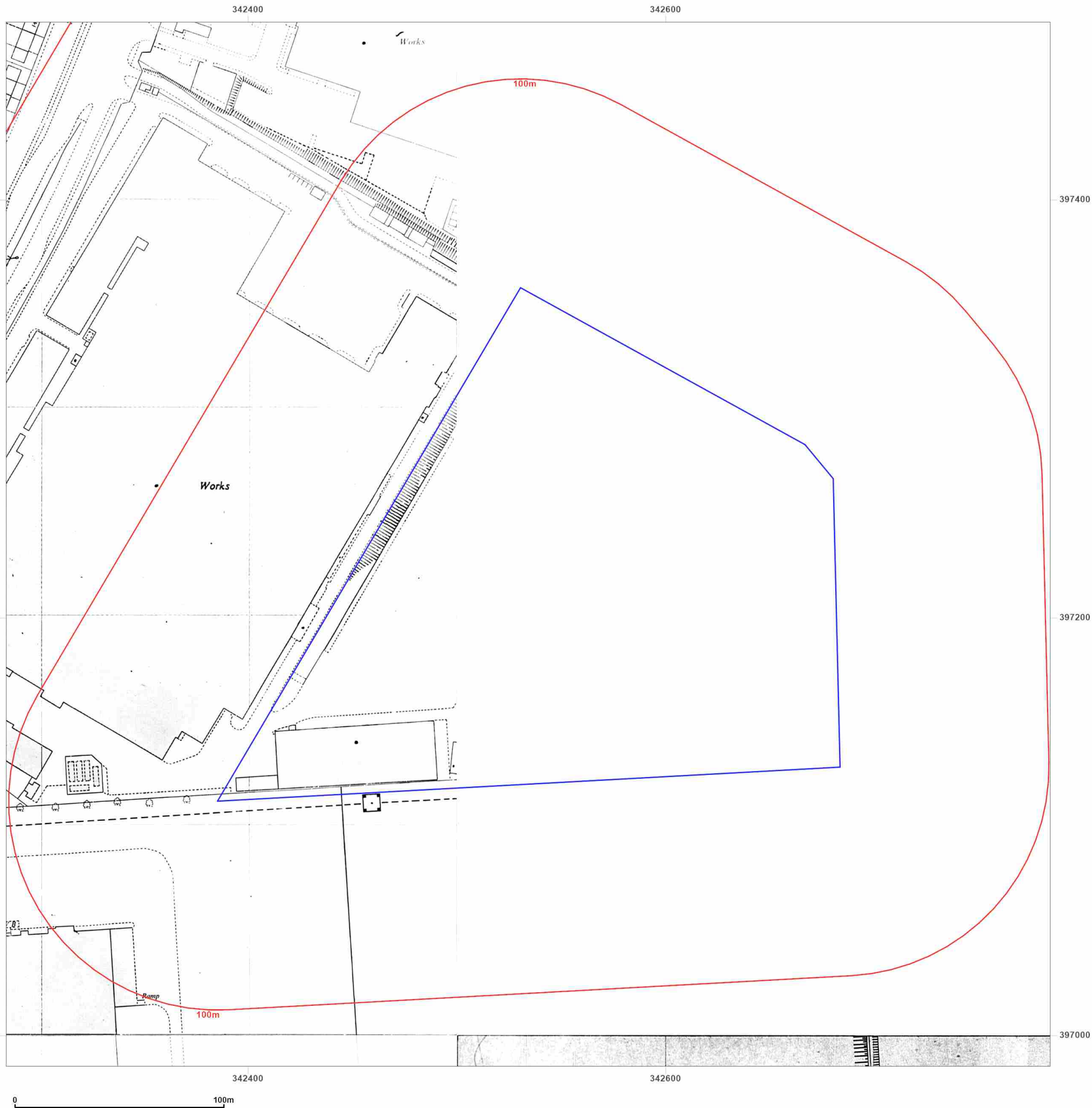


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Report Ref: EMS-1037912_1309981
Grid Ref: 342534, 397235

Map Name: National Grid

Map date: 1984-1985

Scale: 1:1,250

Printed at: 1:2,000



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Revised N/A
Edition N/A
Copyright 1984
Levelled 1960

Surveyed 1960
Revised 1985
Edition N/A
Copyright 1985
Levelled 1960



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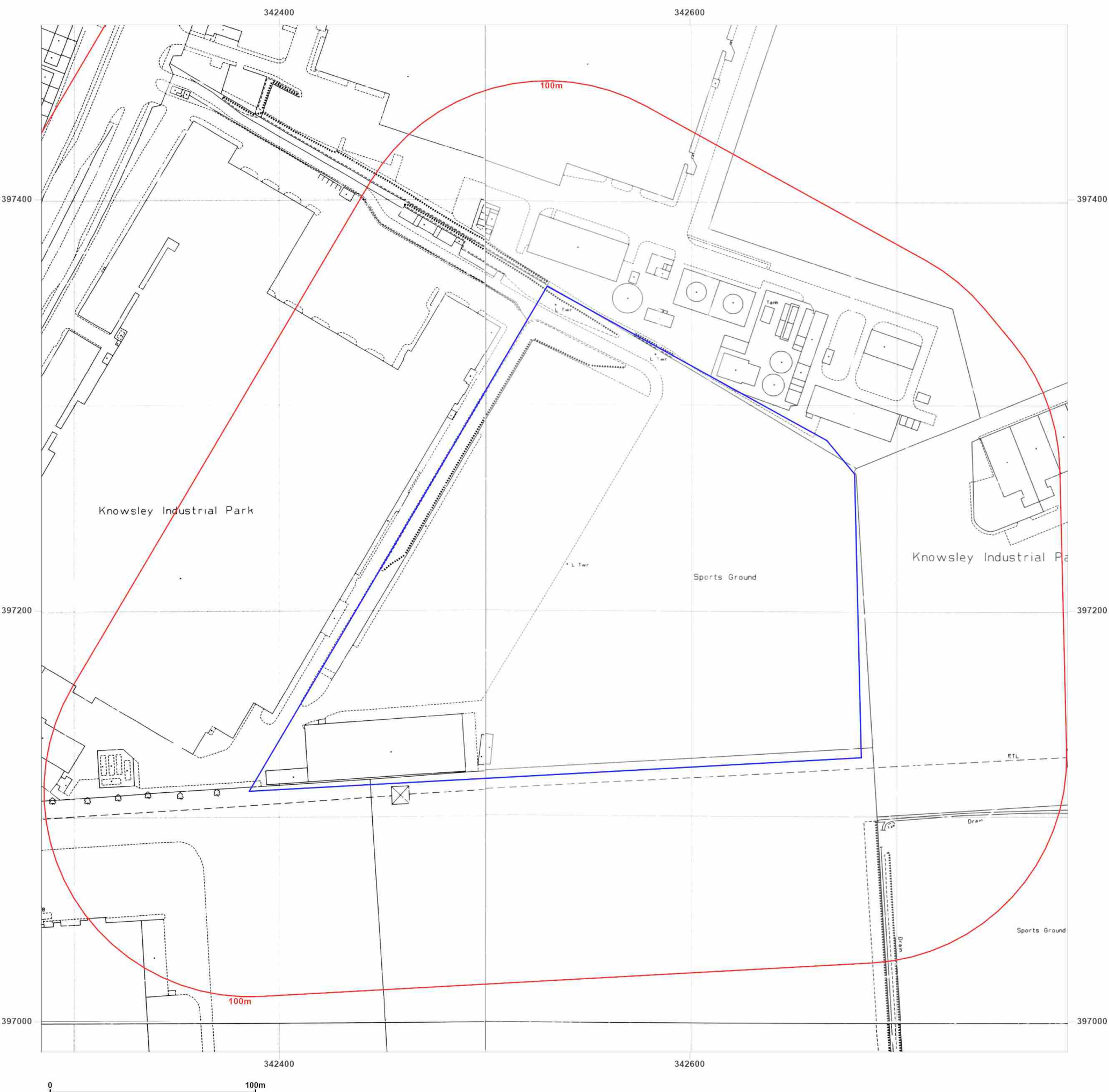


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Report Ref: EMS-1037912_1309981
Grid Ref: 342534, 397235

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



Surveyed N/A Revised N/A Edition N/A Copyright 1993 Levelled N/A	Surveyed 1993 Revised 1993 Edition N/A Copyright N/A Levelled N/A
Surveyed N/A Revised N/A Edition N/A Copyright 1993 Levelled N/A	Surveyed N/A Revised N/A Edition N/A Copyright 1993 Levelled N/A



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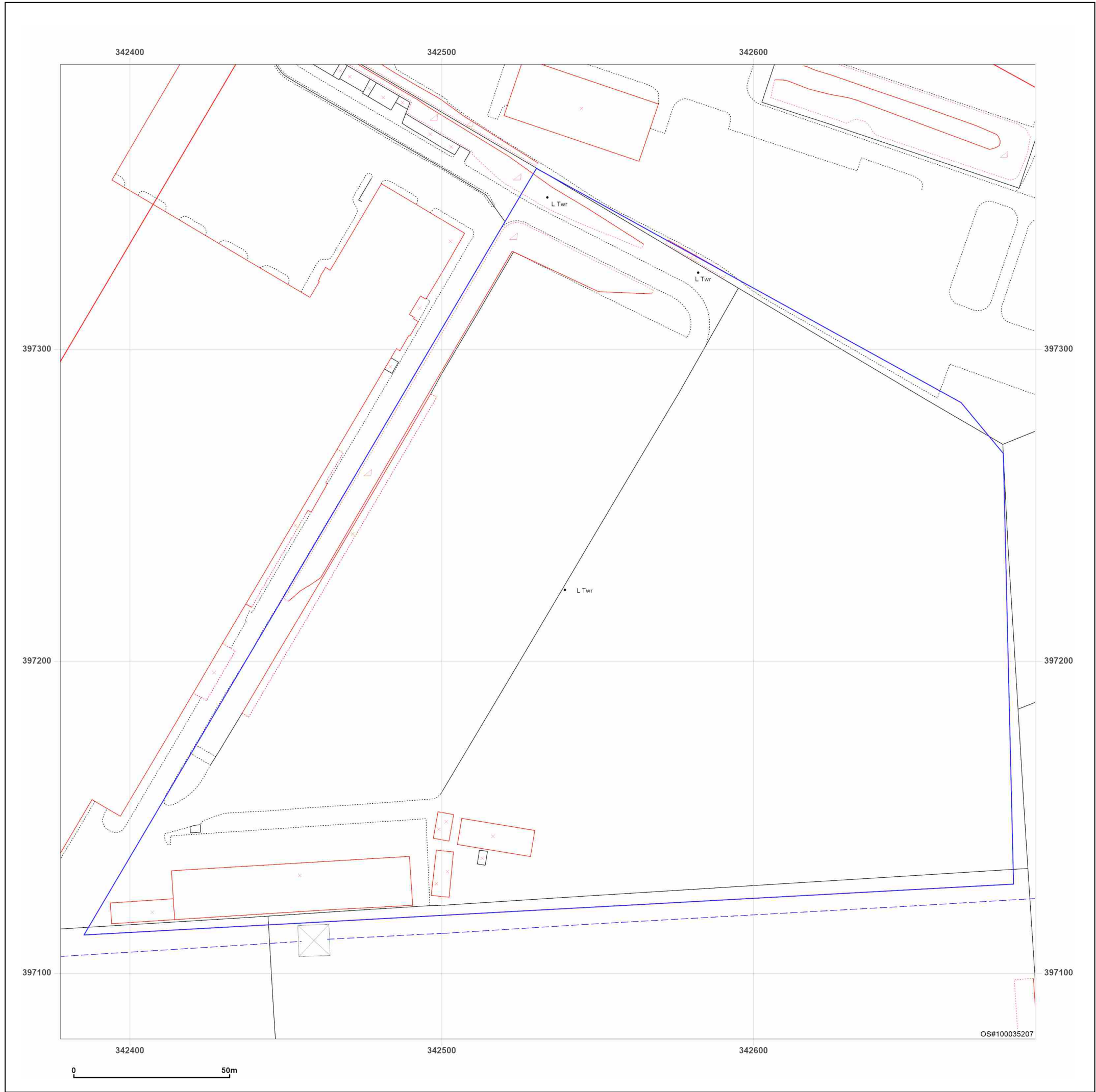


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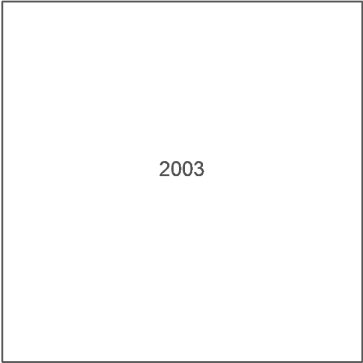
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Report Ref: EMS-1037912_1309981
Grid Ref: 342534, 397235

Map Name: LandLine

Map date: 2003

Scale: 1:1,250

Printed at: 1:1,250



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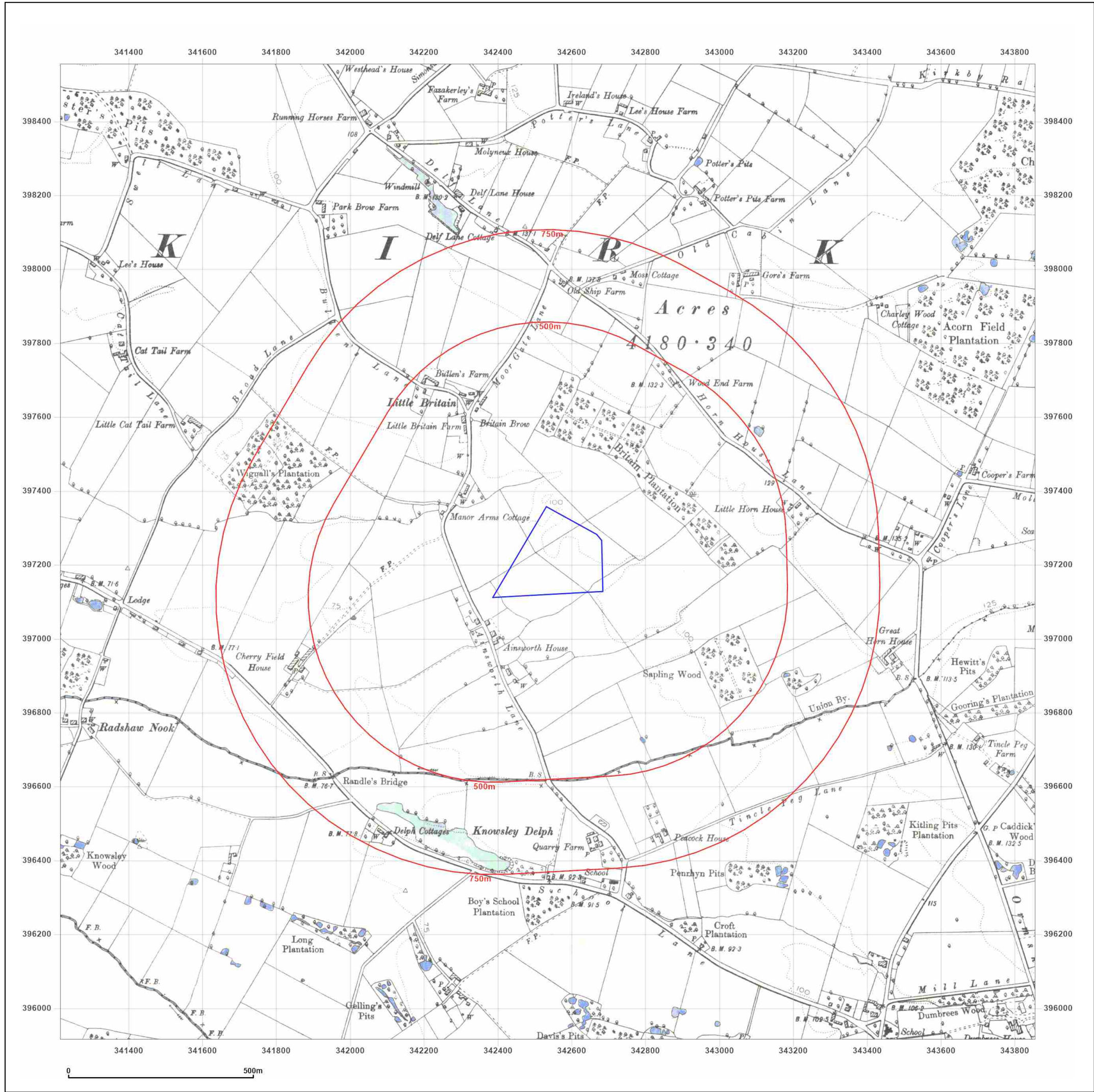


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Site Details:
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Grid Ref: 342534, 397235

Map Name: County Series
Map date: 1892
Scale: 1:10,560
Printed at: 1:10,560



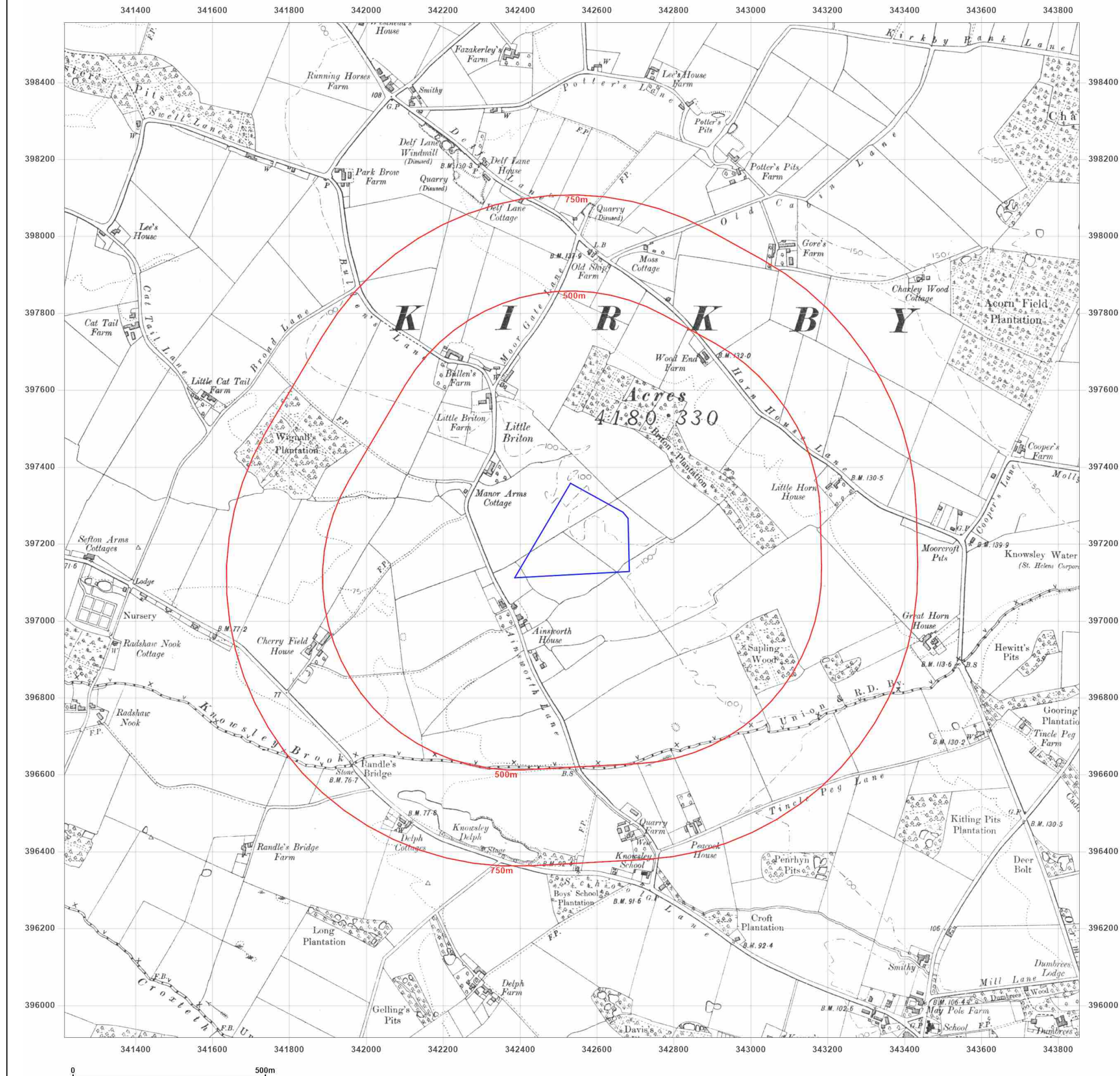
Surveyed 1892
Revised 1892
Edition N/A
Copyright N/A
Levelled N/A



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Client Ref: EMS_1037912_1297382
Report Ref: EMS-1037912_1309981
Grid Ref: 342534, 397235

Map Name: County Series

Map date: 1907

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1892
Revised 1907
Edition N/A
Copyright N/A
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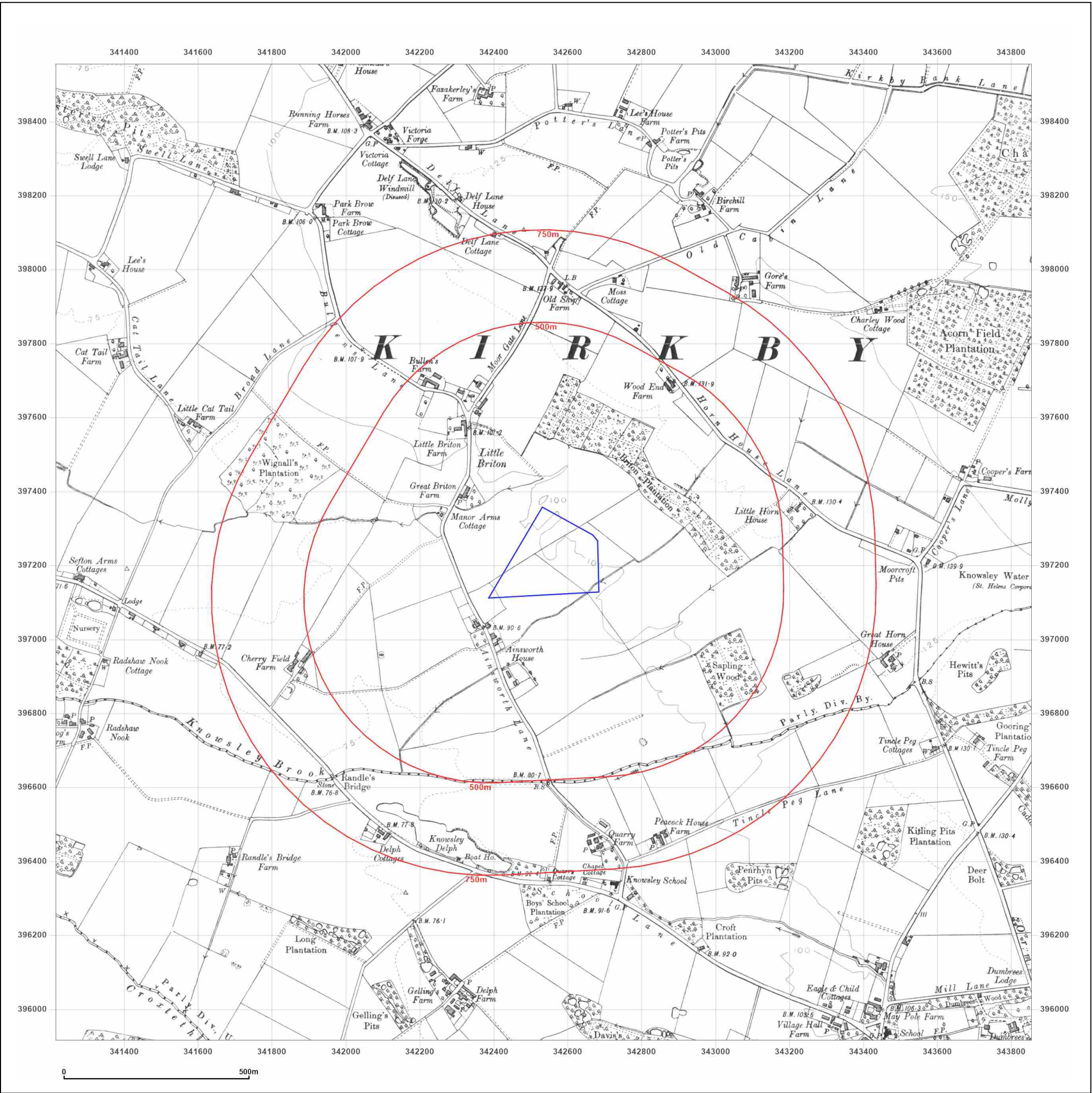


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Grid Ref: 342534, 397235

Map Name: County Series

Map date: 1925

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1847
Revised 1925
Edition N/A
Copyright N/A
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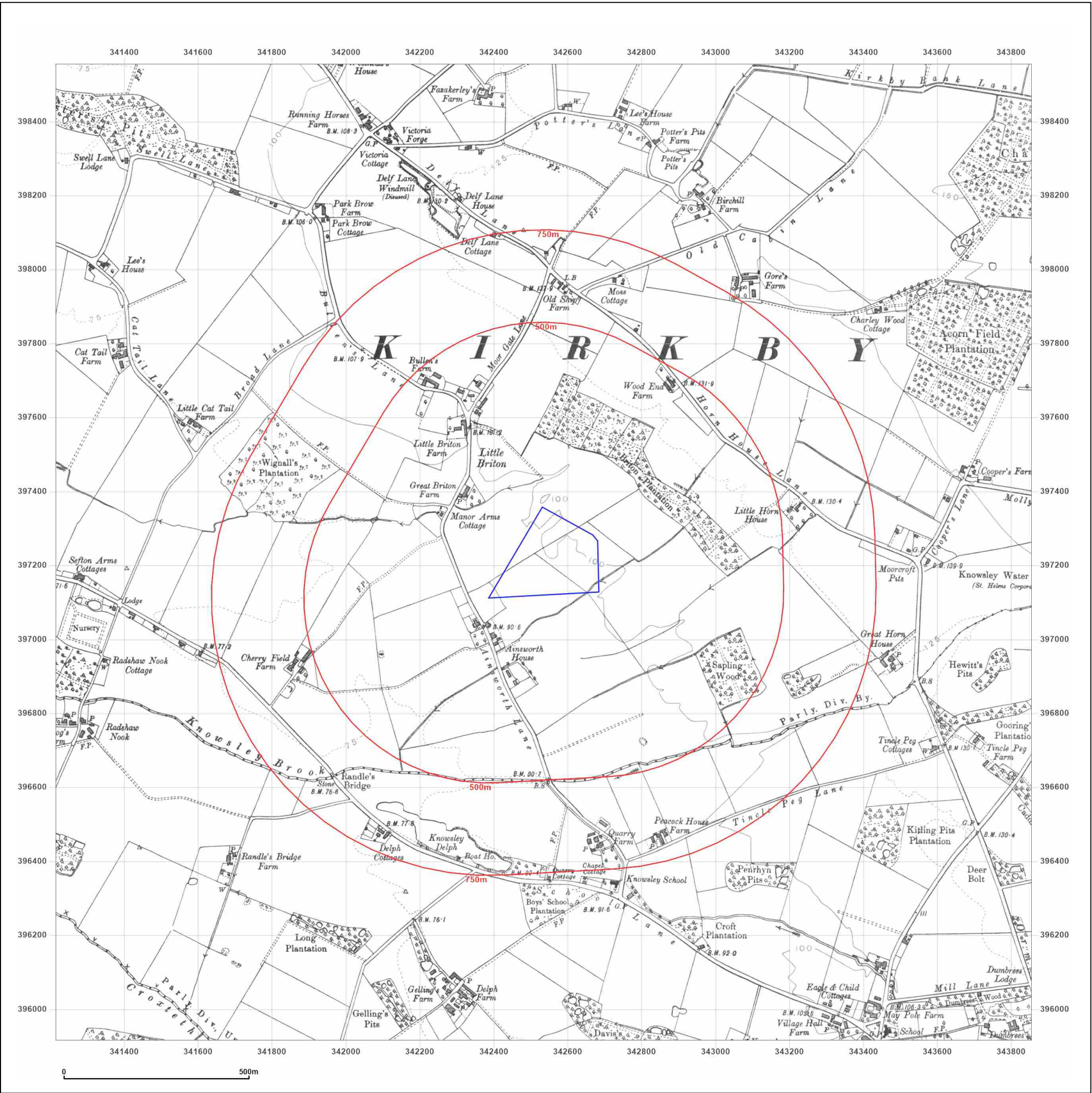


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Report Ref: EMS-1037912_1309981
Grid Ref: 342534, 397235

Map Name: County Series

Map date: 1925

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1847
Revised 1925
Edition N/A
Copyright N/A
Levelled N/A



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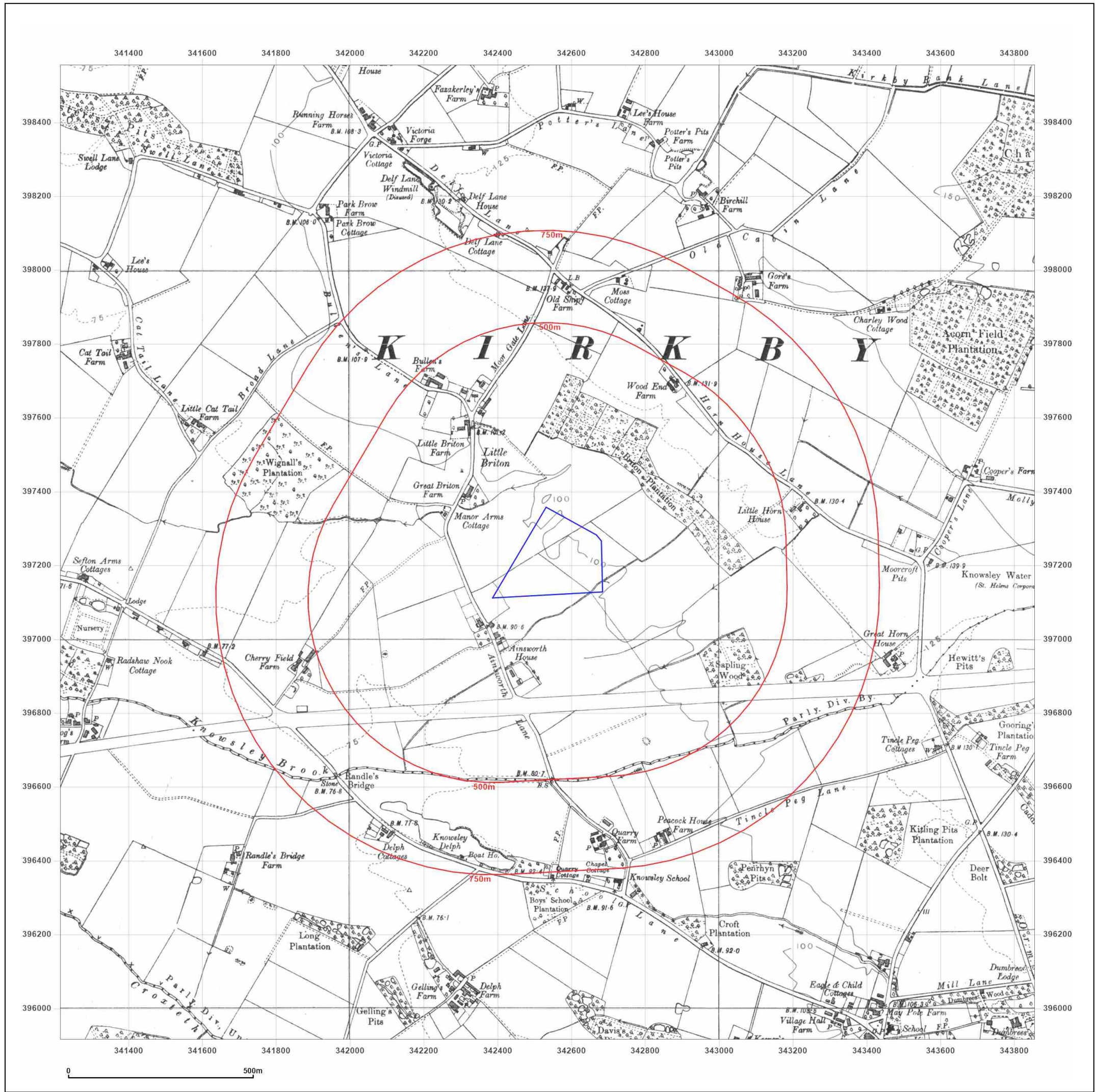


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Client Ref: EMS_1037912_1297382
Report Ref: EMS-1037912_1309981
Grid Ref: 342534, 397235

Map Name: County Series

Map date: 1938

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1847
Revised 1938
Edition N/A
Copyright N/A
Levelled 1926



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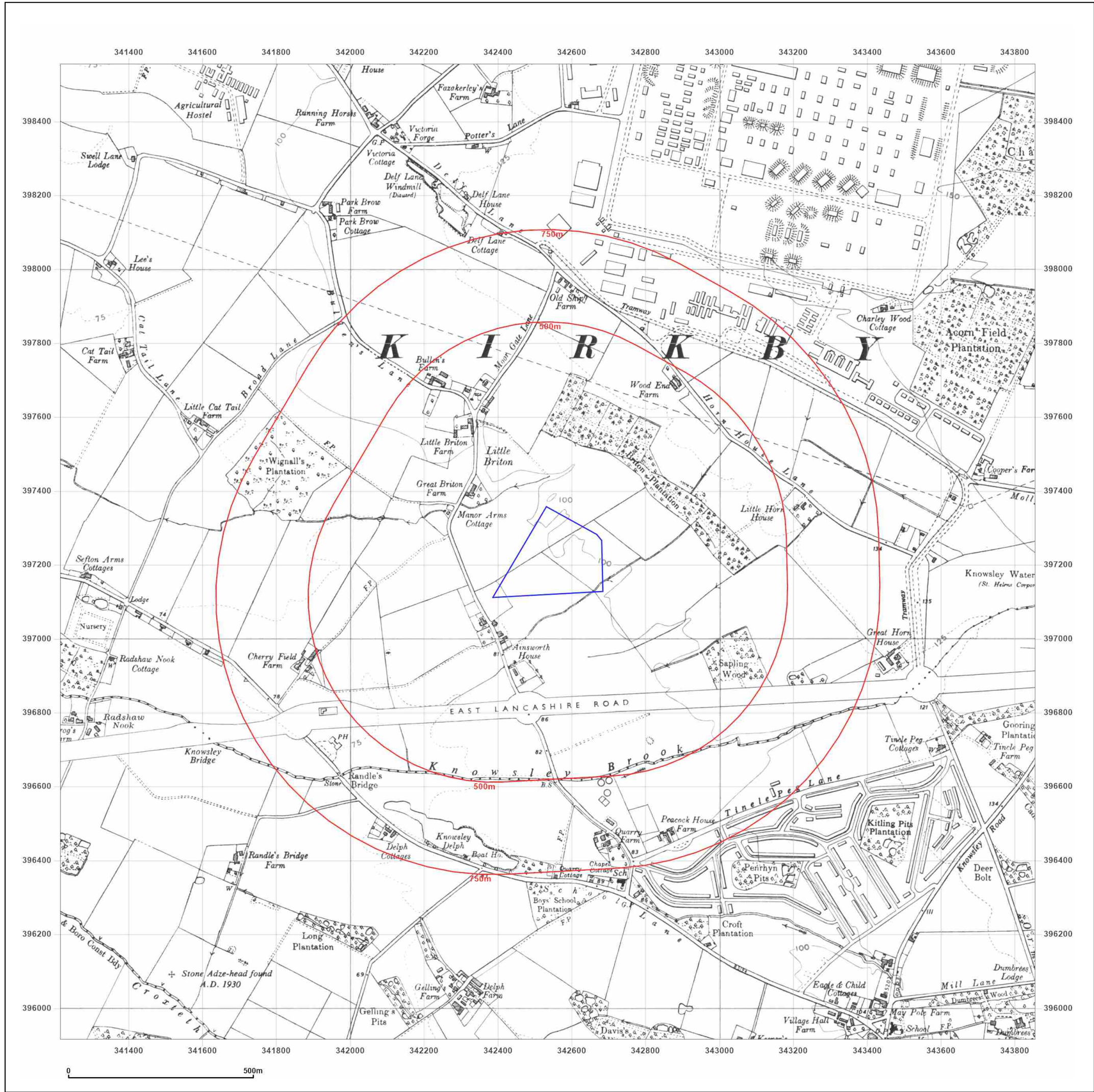


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Site Details:
unspecified

Client Ref: EMS_1037912_1297382
Report Ref: EMS-1037912_1309981
Grid Ref: 342534, 397235

Map Name: Provisional
Map date: 1956
Scale: 1:10,560
Printed at: 1:10,560

Surveyed N/A
Revised 1955
Edition N/A
Copyright 1956
Levelled N/A



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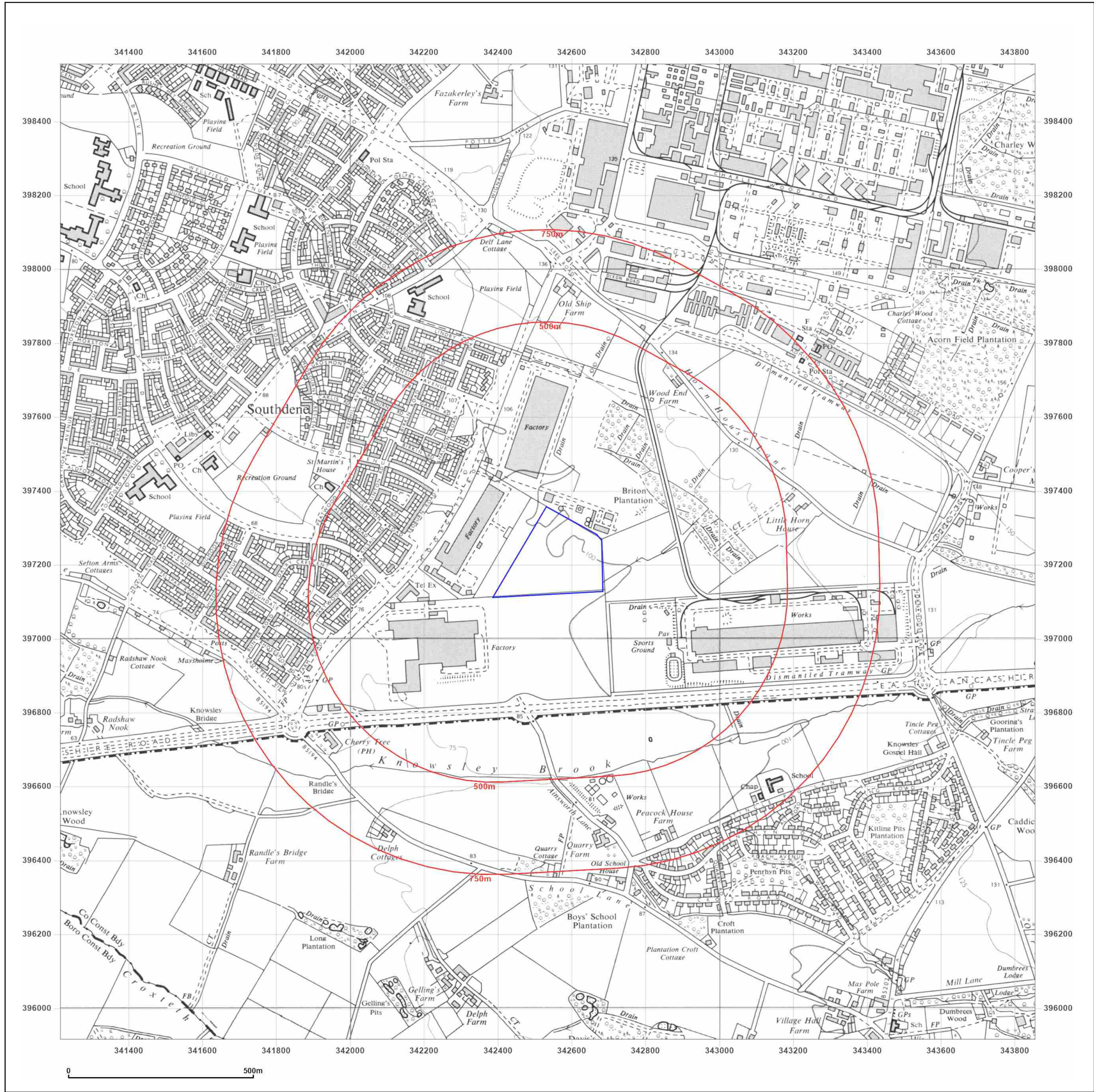


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unspecified

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Report Ref: EMS-1037912_1309981
Grid Ref: 342534, 397235

Map Name: Provisional

Map date: 1966

Scale: 1:10,560

Printed at: 1:10,560



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



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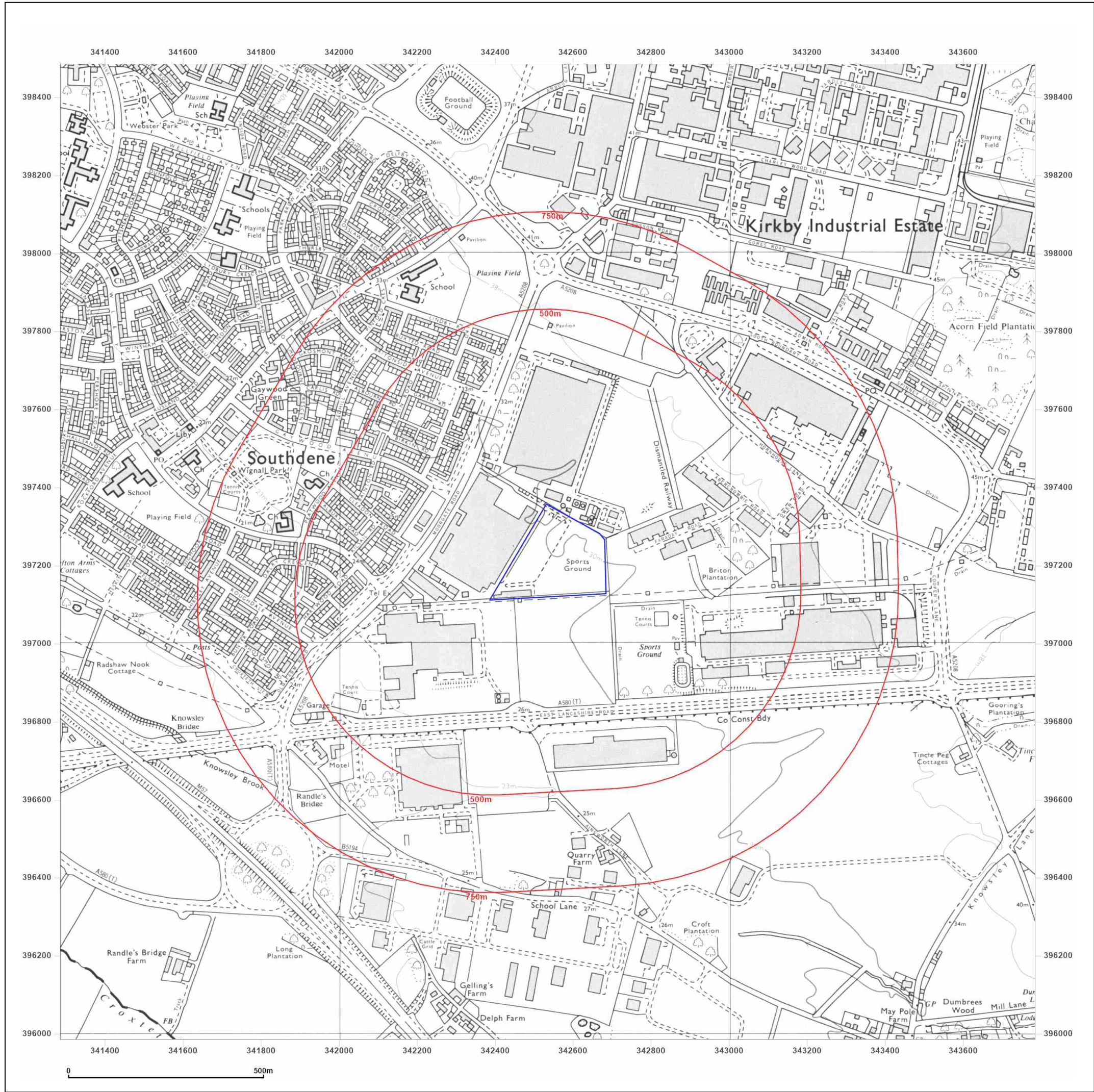


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Client Ref: EMS_1037912_1297382
Report Ref: EMS-1037912_1309981
Grid Ref: 342534, 397235

Map Name: National Grid

Map date: 1978

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1975
Revised 1977
Edition N/A
Copyright 1978
Levelled 1964



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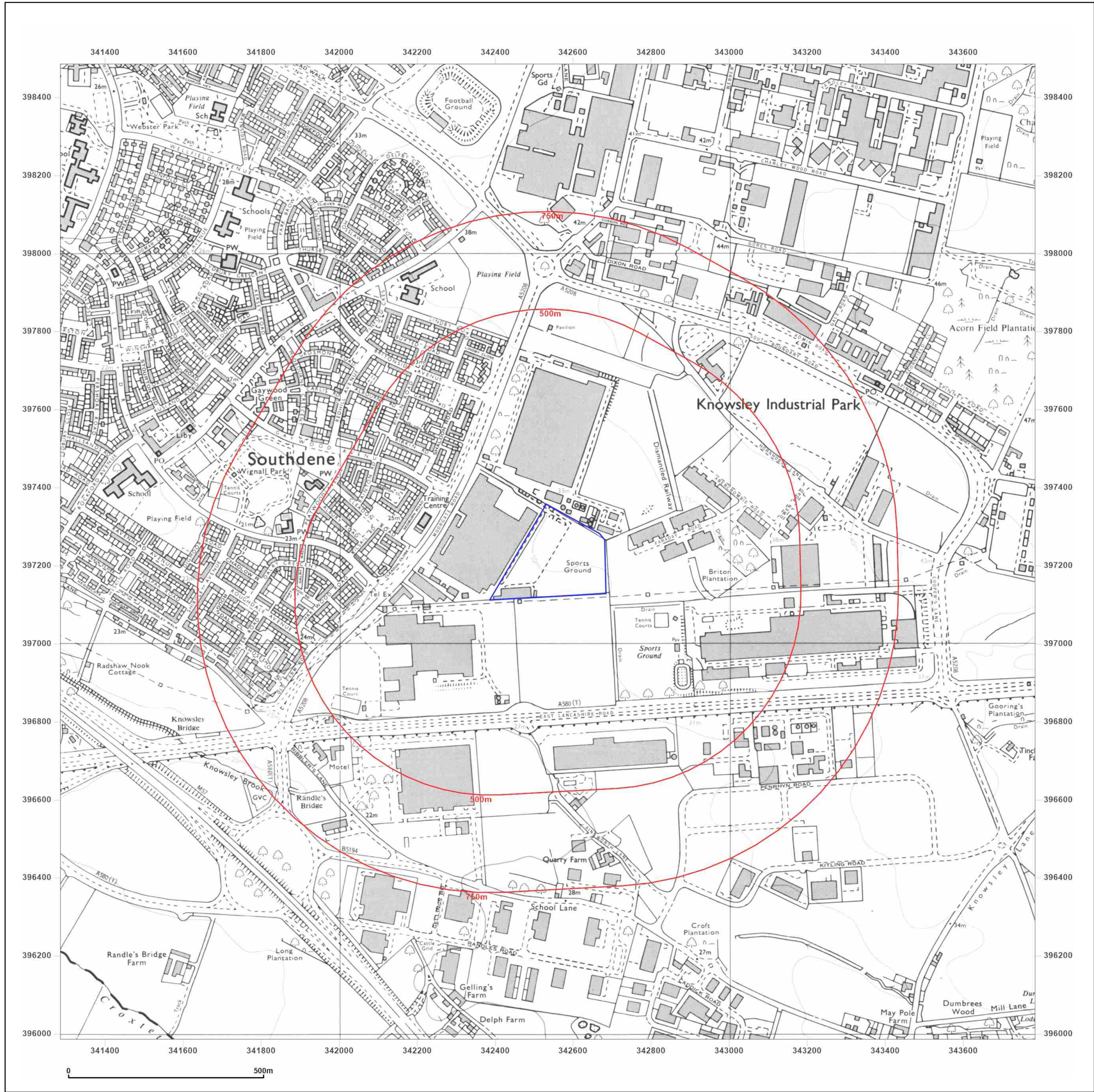


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Report Ref: EMS-1037912_1309981
Grid Ref: 342534, 397235

Map Name: National Grid

Map date: 1988

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1987
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Edition N/A
Copyright N/A
Levelled N/A



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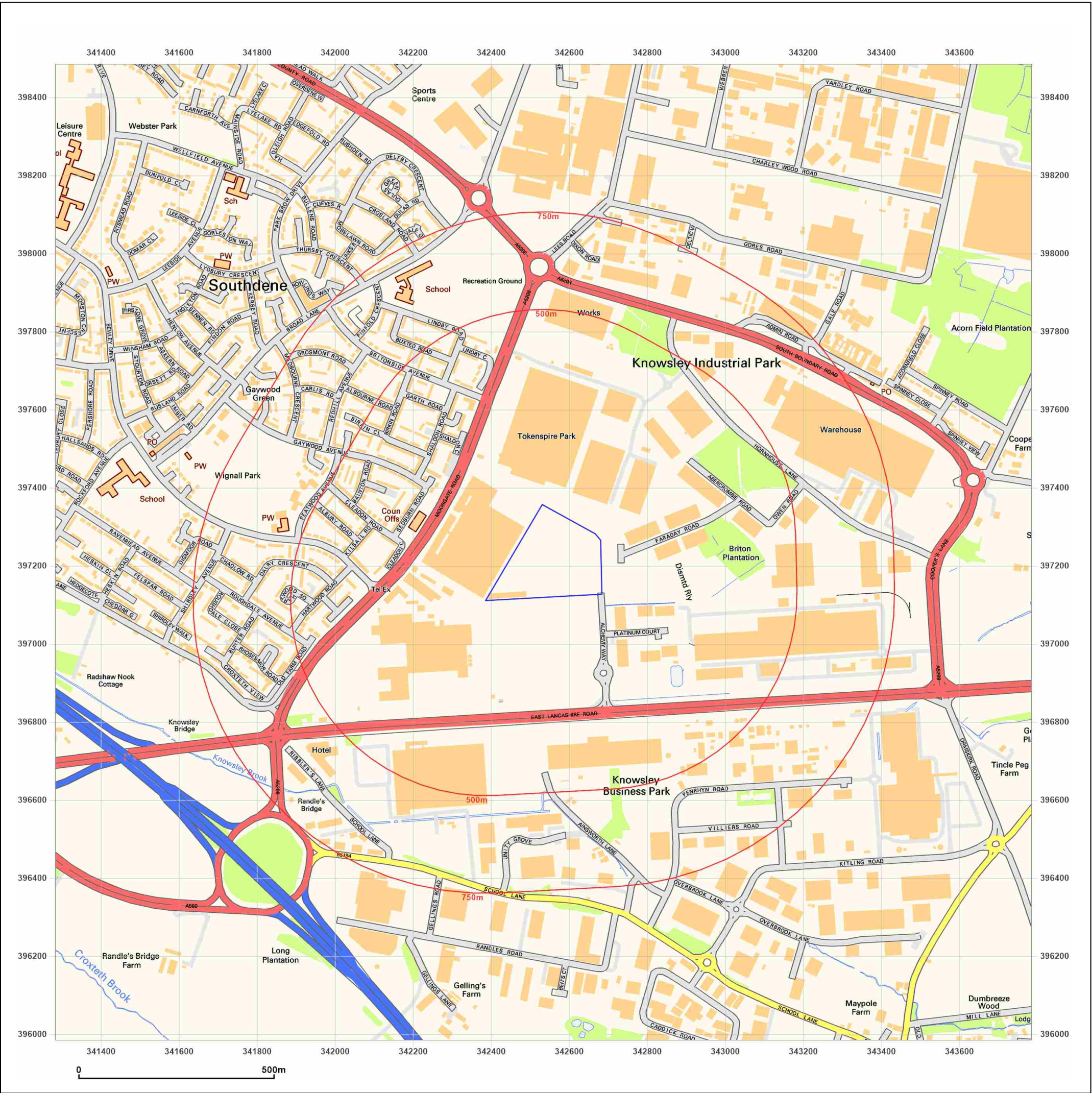


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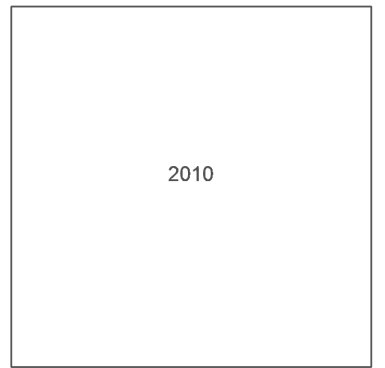
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Grid Ref: 342534, 397235

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000



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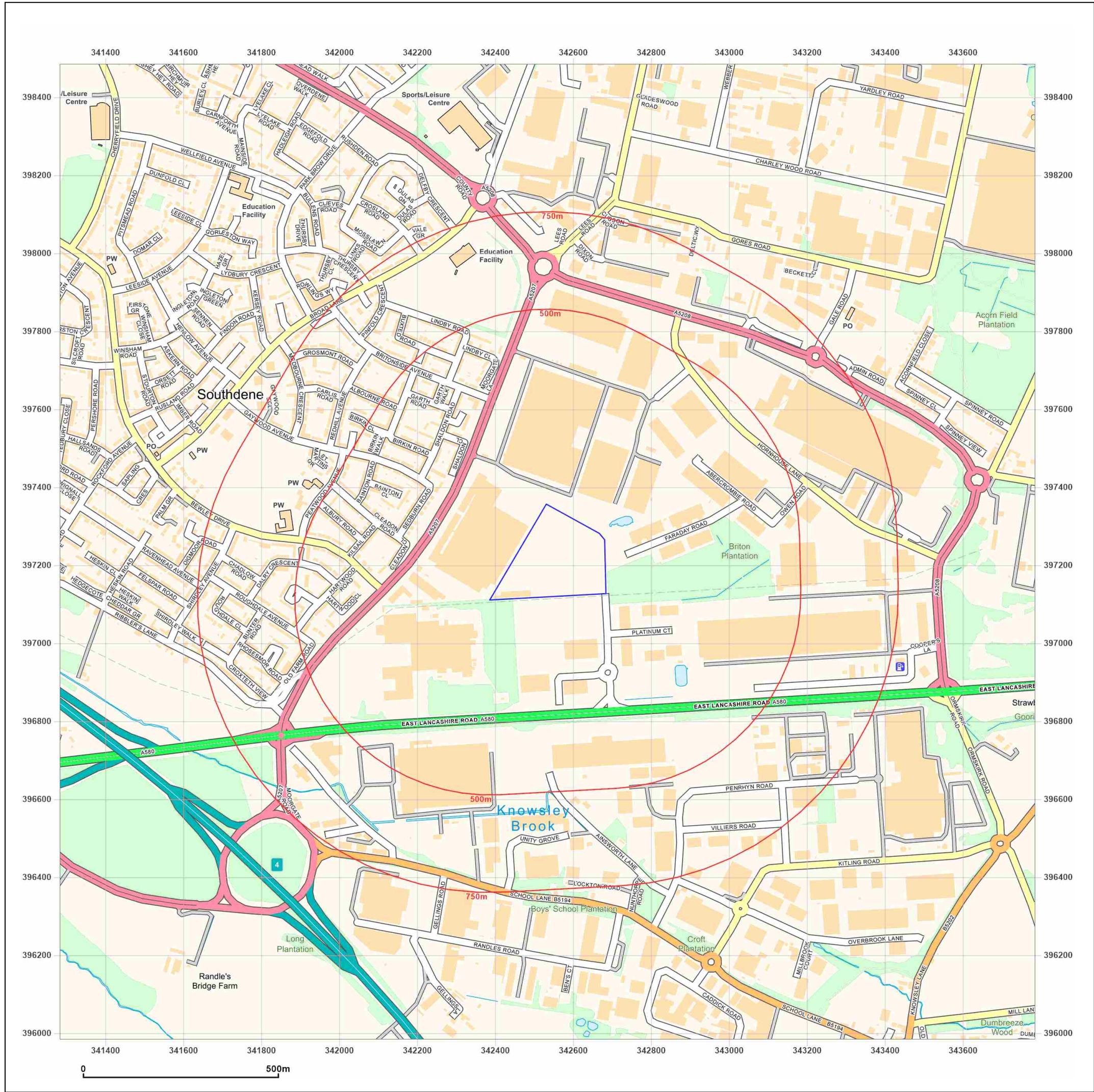


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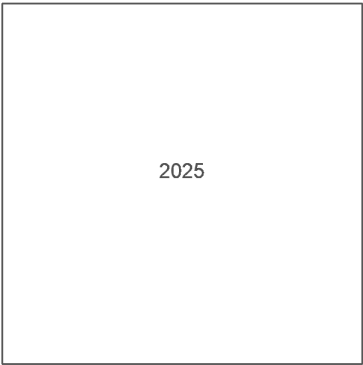
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Report Ref: EMS-1037912_1309981
Grid Ref: 342534, 397235

Map Name: National Grid

Map date: 2025

Scale: 1:10,000

Printed at: 1:10,000



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County Series 1:2,500 scale

National Grid 1:2,500 / 1:1,250 scale



Historical Map Pack Legend

County Series
1:1,250 scale
~

County Series &
National Grid
1:2,500 scale

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GENERAL FEATURES	
	Wood
	Marsh
	Reeds
	Fir
	Mixed Wood
	Brush Wood
	Osiers
	Orchard
	Bush
	Rough Pasture
	Furze
	Ford
	Stepping Stones
	Ferry
	Sloping Masonry
	Flat Rock
	Lock
	Waterfall
	Quarry
	Sand Pit
	Refuse Heap
	Clay Pit
	Shingle
	Gravel Pit
	Trigonometrical Station
	Altitude at Trigonometrical Station
	Bench Mark
	Surface Level
	Permanent Traverse Station
	Antiquities (site of)
	Arrow denotes flow of water
	Sluice
	Trough
	Spring
	Well
	Mooring Ring
	Mooring Post
	Boundary Stone
	Boundary Post

ROADS	
	Road over single stream
	Road crossing railway
	Road over River or Canal
RAILWAYS	
	Railway crossing River or Canal
	Railway crossing Road
	Level Crossing
	Embankment
	Cutting

ABBREVIATIONS	
	Trigonometrical Station
	Altitude at Trigonometrical Station
	Bench Mark
	Surface Level
	Permanent Traverse Station
	Antiquities (site of)
	Arrow denotes flow of water
	Sluice
	Trough
	Spring
	Well
	Mooring Ring
	Mooring Post
	Boundary Stone
	Boundary Post

ABBREVIATIONS	
	Beer House
	Bench Mark
	Boundary Post
	Boundary Stone
	Crane
	Club House
	Chimney
	Capstan
	Drinking Fountain
	Dock
	Electricity Pillar or Post
	Electricity Transmission Line
	Fire Alarm
	Fire Alarm Pillar
	Filter Bed, Foot Bridge
	Fundamental Bench Mark
	Flagstaff
	Fire Station
	Guide Post
	Gas Valve Compound
	Hydrant or Hydraulic
	Hectares
	Lecter Box
	Lifeboat Station
	Level Crossing
	Loading Gauge
	Lighthouse
	Lighting Tower
	Metres
	Mean High Water
	Mean High Water Springs
	Mean Low Water
	Mean Low Water Springs
	Mile or Mooring Post
	Mail Pick-up
	Mile Stone
	National Trust
	Normal Tidal Limit
	National Trust for Scotland
	Pillar, Pole or Post
	Public Convenience
	Police Call Box
	Public House
	Post Office
	Pump
	Police Telephone Pillar
	Reservoir
	Road House
	Revision Point
	Stone
	Signal Box
	Signal Light
	Sluice
	Signal Post
	Spring
	Signal Station
	Telephone Call Box
	Telephone Call Post
	Tank or Track
	Trough
	Traverse Station
	Well
	Weighbridge
	Wind Pump
	Works
	Water Point
	Water Tap

GENERAL FEATURES	
	Non-coniferous Trees
	Coniferous Trees
	Surveyed Trees
	Orchard Trees
	Copple, Osier
	Scrub
	Bracken
	Heath
	Rough Grassland
	Marsh, Saltings
	Reeds
	Slopes
	Cliff
	Cave Entrance
	Rock
	Boulders
	Sloping Masonry
	Roofed Building
	Glasshouse
	Archway
	Change of boundary marking
	see AREAS notes
	Antiquity (site of)
	Culvert
	Direction of water flow
	Electricity Pylon
	Electricity Transmission Line
	Triangulation Station
	Traverse Station (permanent)
	Bench Mark
	Surface Level
	Revision Point (instrumentally fixed)
	Revision Point & Bench Mark coincident
	Top
	Slopes
	Quarry
	Refuse Heap
	Sloping Masonry
	Flat Rock
	Sand
	Sand Pit
	Culvert
	Archway
	Shingle
	Boulders
	Gravel Pit
	Cliff Face
	Glazed Roof Building

BOUNDARIES	
England & Wales	
	County Boundary (geographical)
	County & Civil Parish Boundary coterminous
	Admin County or County Borough Boundary
	London Borough Boundary
	County District Boundaries based on civil parish
England, Wales & Scotland	
	Civil Parish Boundary
	Parly & Ward Boundaries based on civil parish
	Parly & Ward Boundaries not based on civil parish
Scotland	
	County Boundary (geographical)
	County Council Boundary
	County of the City Boundary
	Burgh Boundary
	District Council Boundary
	* Not with parish
	† Coincident with parish

Appendix IV

Appendix IV

Basis for Contaminated Land Qualitative Risk Assessment

The following Contaminated Land Risk Assessment methodology is based on CIRIA C552 (2001) *Contaminated Land Risk Assessment – A Guide to Good Practice*, in order to quantify potential risk via **risk estimation** and **risk evaluation**, which can be adopted at the Phase I (Desk Study) stage. This will then determine an overall risk category which can be used to identify potential investigation or remedial actions. This methodology uses qualitative descriptors and therefore is a qualitative approach based on desk information. The risk assessment should be refined following receipt of ground investigation data.

The methodology requires the classification of:

- the magnitude of the **consequence** (severity) of a risk occurring, and
- the magnitude of the **probability** (likelihood) of a risk occurring.

The potential consequences of contamination risks occurring at this Site are classified in accordance with Table IV-1 below, which is adapted from the CIRIA guidance.

Table IV-1: Classification of Consequence

Classification	Definition of Consequence
Severe	Short-term (acute) risks to human health likely to result in "significant harm" as defined by the Environmental Protection Act 1990, Part IIA. Short-term risk of pollution of sensitive water resource. Catastrophic damage to buildings/property. A short-term risk to a particular ecosystem, or organism forming part of such an ecosystem.
Medium	Chronic damage to Human Health (significant harm as defined in DEFRA, 2012). Pollution of sensitive water resources. A significant change in a particular ecosystem, or organism forming part of such an ecosystem.
Mild	Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services ("significant harm" as defined in the DEFRA, 2012). Damage to sensitive buildings/structures/services or the environment.
Minor	Harm, though not necessarily significant harm, which may result in a financial loss, or expenditure to resolve. Non-permanent health effects to human health (easily prevented by means such as personal protective clothing etc.). Easily repairable effects of damage to buildings, structures and services.

Source: CIRIA C552

The probability of contamination risks occurring at this Site will be classified in accordance with Table IV-2 below from the CIRIA guidance. Note that for each category, it is assumed that a pollution linkage exists. Where a pollution linkage does not exist, the likelihood is zero, as is the risk.

Table IV-2: Classification of Probability

Classification	Definition of Probability
High Likelihood	There is a pollutant linkage and an event that appears very likely in the short term and almost inevitable over the long term or there is evidence at the receptor of harm or pollution.
Likely	There is a pollution linkage and all the elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.
Low Likelihood	There is a pollutant linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period such an event would take place and is less likely in the shorter term.
Unlikely	There is a pollutant linkage but circumstances are such that it is improbable that an event would occur even in the very long term.



For each possible pollution linkage (source-pathway-receptor) identified, the potential risk can be evaluated based upon the following probability x consequence matrix shown in Table IV-3.

Table IV-3: Overall Contamination Risk Matrix

		Consequence			
		Severe	Medium	Mild	Minor
Probability	High likelihood	Very high risk	High risk	Moderate risk	Moderate/Low risk
	Likely	High risk	Moderate risk	Moderate/Low risk	Low risk
	Low likelihood	Moderate risk	Moderate/low risk	Low risk	Very low risk
	Unlikely	Moderate/Low risk	Low risk	Very low risk	Very low risk

Based upon this, CIRIA C552 present definitions of the risk categories, together with the investigatory and remedial actions that are likely to be necessary in each case, as in Table IV-4. These risk categories apply to each pollutant linkage, not simply to each hazard or receptor.

Table IV-4: Definition of Risk Categories and Likely Actions Required

Risk Category	Definition and likely actions required
Very high	There is a high probability that severe harm could arise to a designated receptor from an identified hazard, OR, there is evidence that severe harm to a designated receptor is currently happening. This risk, if realised, is likely to result in a substantial liability. Urgent investigation (if not undertaken already) and remediation are likely to be required.
High	Harm is likely to arise to a designated receptor from an identified hazard. Realisation of the risk is likely to present a substantial liability. Urgent investigation (if not undertaken already) is required and remedial works may be necessary in the short term and are likely over the longer term.
Moderate	It is possible that harm could arise to a designated receptor from an identified hazard. However, if [it] is relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild. Investigation (if not already undertaken) is normally required to clarify the risk and to determine the potential liability. Some remedial works may be required in the longer term.
Low	It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised would at worst be relatively mild.
Very Low	There is a low possibility that harm could rise to a receptor. In the event of such harm being realised it is not likely to be severe.

Appendix V



DO NOT SCALE
NOTES:



 - Approximate Site Location

 - Photo number and orientation



Lawrence House, Meadowbank Way,
Eastwood, Nottingham, NG16 3SB
Tel: 01773 535 555 Fax: 0870 600 6091
www.hspconsulting.com

CLIENT:
Indurent

PROJECT:
**Moorgate Point,
Knowsley**

TITLE:
Photo location plan

SCALE@SIZE : NTS	ISSUE: FINAL
DESIGN/DRAWN : TG	DATE: 23/07/2025
PROJECT No: C4884	DRAWING No: 503

Client: Indurent Management Ltd

Date: 23/07/2025

Project: C4884

Site: Moorgate Point, Knowsley

Photo No: 1

Comments: Photo taken from the slightly raised boundary between the vegetated area of the site and the bin lorry depot, looking west to show the commercial units along the southern site boundary. These units house the site offices, as well as maintenance workshops for the bin lorries.



Client: Indurent Management Ltd

Date: 23/07/2025

Project: C4884

Site: Moorgate Point, Knowsley

Photo No: 2

Comments: Photo taken from the same place as photo 1, looking down at the metal sheet covering a manhole with standing water at an unknown depth.



Client: Indurent Management Ltd

Date: 23/07/2025

Project: C4884

Site: Moorgate Point, Knowsley



Photo No: 3

Comments: Photo taken from the bin lorry depot car park, looking west. The grey board in the background of the photo is the exterior of the lorry cleaning station.



Client: Indurent Management Ltd

Date: 23/07/2025

Project: C4884

Site: Moorgate Point, Knowsley

Photo No: 4

Comments: Photo in the north of the bin lorry depot looking south over the yard and towards the commercial units.



Client: Indurent Management Ltd

Date: 23/07/2025

Project: C4884

Site: Moorgate Point, Knowsley

Photo No: 5

Comments: Photo taken from the same place as photo 4, looking northwest at the bin storage area in the north of the bin lorry depot.



Client: Indurent Management Ltd

Date: 23/07/2025

Project: C4884

Site: Moorgate Point, Knowsley



Photo No: 6

Comments: Photo taken on the industrial estate access road, directly adjacent to the western site boundary, looking south. This is the proposed vehicle access route to the vacant area of the site.



Client: Indurent Management Ltd

Date: 23/07/2025

Project: C4884

Site: Moorgate Point, Knowsley

Photo No: 7

Comments: Photo taken in the northwest corner of the site, looking east towards the access point to the vacant area of the site.

This access road is confirmed to be not in use by site management.



Client: Indurent Management Ltd

Date: 23/07/2025

Project: C4884

Site: Moorgate Point, Knowsley



Photo No: 8

Comments: Photo showing a closer view of the vacant area access point (left of centre).



Client: Indurent Management Ltd

Date: 23/07/2025

Project: C4884

Site: Moorgate Point, Knowsley



Photo No: 9

Comments: Photo showing the vacant area of the site and average height of vegetation. HSP Engineer for scale (approx. 6ft tall).



Client: Indurent Management Ltd

Date: 23/07/2025

Project: C4884

Site: Moorgate Point, Knowsley



Photo No: 10

Comments: Photo showing the lorry cleaning station in the west of the site.



Client: Indurent Management Ltd

Date: 23/07/2025

Project: C4884

Site: Moorgate Point, Knowsley

Photo No: 11

Comments: Photo showing the lorry refuelling station in the west of the site.



Client: Indurent Management Ltd

Date: 23/07/2025

Project: C4884

Site: Moorgate Point, Knowsley



Photo No: 12

Comments: Photo taken from the south of the vacant area, looking north.





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