APPLiED GEOLOGY

DESK STUDY REPORT &
COAL MINING RISK ASSESSMENT
FOR
DOGS TRUST MERSEYSIDE
WHISTON LANE
HUYTON

REPORT STATUS SHEET

Client:	Dogs Trust
Report Title:	Desk Study Report & Coal Mining Risk Assessment for Dogs Trust Merseyside, Whiston Lane, Huyton
Report Number:	AG3533-23-AQ88
Report Status:	Validated Issue 1
Date:	September 2023



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APPENDIX A **DRAWINGS & FIGURES**
- Site Location Plan, Dwg No AG3533-23-01
- Proposed Site Plan, Dwg Ref. PDA-A-EX-00-(90) 9000_Rev C

APPENDIX B **DESK STUDY DATA**
- GroundSure Historical Maps
- GroundSure Enviro+Geo Insight Report
- Coal Authority Consultants Coal Mining Report
- Mine Abandonment Plans

1.0 INTRODUCTION

The existing Dogs Trust Merseyside Rehoming Centre, Huyton (the site) is being considered for redevelopment by Dogs Trust (the Client). The proposals for the site comprise the demolition of existing buildings and construction of several new single-storey buildings, together with associated access, car parking and landscaping. This report presents the results of a desk study/Phase I Geoenvironmental Risk Assessment and a Coal Mining Risk Assessment undertaken on behalf of the Client.

Applied Geology was appointed by the Client to undertake a combined Desk Study/Phase I Geoenvironmental Risk Assessment & Coal Mining Risk Assessment in order to:

- Permit formulation of an opinion, as to the potential for hazardous substances or conditions to exist on, at or near the site at levels or in a situation likely to warrant mitigation or consideration appropriate to the intended end use proposed by the Client.

- Establish anticipated geological conditions.

- To identify site-specific coal mining risks and set out the proposed mitigation strategy to show that the site can be made safe and stable for the proposed development.

- Support a future Planning Application.

The terms of reference/brief for the works were mutually developed between Applied Geology and Nolan Associates (the Client's Engineer) and are outlined in our proposal and estimate AG23-8472let002 of the 17th July 2023. The report should be read in conjunction with the General Notes at the end of the report text. More specifically, the services provided are summarised below and detailed in the following Sections.

- A site inspection and walkover survey to identify indicators (as defined in later sections) of the existence of hazardous substances or conditions on and in the vicinity of the site.

- A review of the following sources to provide data on likely ground conditions, geohazards and features which may affect development and to obtain information about the potential for hazardous substances to exist at and in the vicinity of the site:

    - GroundSure – GeoInsight & EnviroInsight environmental databases.
    - GroundSure – MapInsight historical maps.
    - Knowsley Metropolitan Borough Council Planning Portal
    - British Geological Survey (BGS) - published information & on-line borehole database Historical Maps
    - Coal Authority Consultants Coal Mining Report (ref:51003371852001).
    - Zetica UXO Risk Maps.
    - Historic England Online Archives.

- Assessment and reporting of the results of the works.

2.0 SITE LOCATION AND DESCRIPTION

2.1 General

The site comprises a parcel of land off Whiston Road, Huyton, Liverpool. The Ordnance Survey grid reference for the approximate centre of the site is 345780 391251 as shown on the Site Location Plan in Appendix A.

The site is roughly rectangular in plan shape, with dimensions of approximately 300m x 60m (c.1.8 ha). Topographic levels across the site fall steadily from approximately 40.5m AOD at the eastern site boundary to approximately 33m AOD at the western site boundary as shown on the Topographical Survey, Dwg No. LIV13007-A0 PLOT (01 and 02), dated March 2022, by Battlefield Land Surveys Ltd.

The site is bounded to the north by a railway (Liverpool to Wigan) with a golf course beyond, to the east by the M57 motorway, to the south by allotment gardens and Stadt Moers Park, and to the west by Whiston Lane, with residential properties beyond.

2.2 Walkover Survey

A site inspection/walkover was undertaken by Applied Geology on 4th September 2023. Access to the site was gained via Whiston Lane to the southwest of the site.

At the time of the inspection, the site was in use as a canine rescue centre.

To the front/south-western side of the site, a car park was present, laid to asphalt. In the eastern corner of the car park, a single storey prefabricated ancillary building was present and to the western side, a single shipping container was present.

The majority of the central parts of the site were occupied by soft landscaping, semi mature trees and access track laid to asphalt. A single storey shed/ “training barn” of sheet metal cladding construction was also present in this central area.

The northern/north-eastern parts of the site were primarily occupied by 5No single storey kennels, and several single storey ancillary buildings, including a reception, all of brick construction. Localised soft landscaping was present across this part of the site, with access laid to asphalt and concrete.

Several grassed mounds were noted throughout the landscaped areas across the site.

The site boundary was secured by 2.4m high mesh security fencing.

No significant sources of potentially contaminative substances were noted across the site.



View south-west towards main entrance.



View west across central landscaped area.



Kennels across north-western parts of the site.



View of main access through the site.

It should be noted that Applied Geology Limited does not provide arboricultural surveys or specialist surveys for the detection of invasive plant species (such as Japanese Knotweed) or protected species of wildlife. It is recommended that if required, separate investigation by specialists be undertaken to confirm this.

2.3 Proposed Development

It is understood that the current proposals for the site comprise the demolition of existing buildings and construction of several new single-storey buildings, together with associated access, car parking and landscaping, as shown on the Site Plan, Dwg No. PDA-EX-00-GA-A-(90)9000, Rev C dated March 2023 by Powell Dobson Architects, a copy of which is presented in Appendix A.

3.0 DESK STUDY INFORMATION

The desk study findings are summarised below with the full Groundsure Report and selected Historical Ordnance Survey Maps included in Appendix B.

3.1 Site History

Map Date	On the Site	In the Vicinity of the Site
1850	The site is shown to be occupied by several agricultural fields, with a small pond in the south-western corner. Whiston Lane forms the western site boundary.	The surrounding areas are shown to be generally undeveloped and occupied by agricultural land, with a pond shown immediately adjacent to the southern site boundary. Prescot Brook is shown c.20m to the northwest of the site. Huyton Quarry ("sandstone flags and Slate") is shown

Map Date	On the Site	In the Vicinity of the Site
		c.500m to the southwest and an old coal pit is shown 350m to the southeast. A gravel pit is shown c.400m to the north of the site and the London North Western Railway line is shown.c450m to the south. Several collieries are shown between c.600m and 1km south/southeast of the site.
1891/92	No significant changes are indicated.	A northeast-southwest trending railway line labelled as the Huyton and St Helens Line and embankment are shown immediately adjacent to the north-western site boundary.
1906/07	No significant changes are indicated.	The collieries from c.600m south/southeast of the site are generally labelled as disused.
1907-1950	No significant changes are indicated, apart from a small unlabelled building to the south-western corner (from 1937).	No significant changes are indicated.
1954-1956	The small unlabelled building to the south-western corner is no longer shown and the site is labelled as a nursey. Three buildings are shown in the south-western part, one of which is shown to be a greenhouse. A track is also shown generally crossing the centre of the site. The pond previously to the south-western corner is no longer shown.	No significant changes are indicated.
1961/1970	No significant changes are indicated.	Opencast Workings relating to Huyton Quarry at 500m to the southwest of the site are labelled as disused.
1972-1977	No significant changes are indicated.	Construction of residential properties are shown c.70m to the southwest of the site and Huyton and Prescot Golf Course is shown c.100m to the north of the site. The M57 motorway is shown, immediately adjacent to the north-eastern site boundary.
1994	Rectangular buildings are shown in the northeastern part of the site, which are labelled as kennels. The rest of the site remains labelled as a nursery.	Allotment gardens and Stadt Moers Park are shown immediately south of the southern site boundary.
2003-2023	The site is labelled as a Canine Rescues Centre, with several small buildings shown across the site, generally concurrent with the present-day layout.	No significant changes are indicated.

3.2 Historical Aerial Images

Available aerial images dated 1948 show the site to be agricultural land, with a railway on a raised embankment immediately adjacent to the north-western site boundary. A small rectangular parcel of land is shown to the south-western corner of the site, with a building of unknown use.

A review of available aerial images dated between 2000 and 2019 indicates that the site features were as per the present-day layout.

3.3 Anticipated Geology

The following published BGS data have been reviewed:

- BGS digital Geological Map of Great Britain;
- BGS 1:50,000 scale map Sheet 97;
- BGS Vertical Section of West Lancashire Coal Field;
- BGS 1:63 360 scale map Sheet 80NW (old series).

Based on the available historical Ordnance Survey data and the former use as a nursey and recent usage as canine rescue centre the site is generally expected to be underlain by a limited thickness of Made Ground (possibly of increased thickness in the vicinity of the historical pond in the south-western corner).

Reference to the above published BGS data indicates that any Made Ground is expected to be underlain by Superficial strata comprising Glacial Till (typically firm to stiff sandy gravelly clay). The Superficial strata are shown to be underlain by Solid strata of the Pennine Middle Coal Measures Formation, typically comprising mudstones and siltstones, with subordinate sandstones and workable coal seams. Solid strata of the Pennine Lower Coal Measures Formation are shown to be present beneath the Superficial strata immediately adjacent to/across the south-western corner and may be expected beneath this part of the site. Available BGS archive data across the wider area indicates that the Solid strata are likely to be present at depths of less than 10m below ground level (bgl) across the site. A north-south trending geological fault is shown to truncate the south-western corner of the site, with a downthrow towards the east.

The Lower Florida and Higher Florida coal seams are shown to sub-crop beneath the Superficial strata beneath the southern tip of the site, orientated approximately NW-SE and the Higher Pigeon House coal seam is shown to sub-crop beneath the Superficial strata across the north-eastern part of site, again orientated approximately NW-SE. All three seams are shown to dip towards the southwest at less than 20 degrees. Considering this, the Higher Pigeon House coal seam is expected to be present directly beneath the Superficial strata across the north-eastern parts (i.e., possibly within 10m bgl), increasing to depths of between 30m and 50m towards the southern corner. Depending on the accuracy of the published mapping, the Lower and Higher Florida coal seams may be present directly beneath the Superficial strata (i.e., possibly within 10m bgl) across the southern corner of the site.

Several other coals seams are shown to sub-crop beneath the Superficial strata from approximately 500m to the northeast of the site, including the Park Mine, Higher Ravenhead Delf, Ravenhead Main Delf and Bastion Mine, all of which are again shown to generally dip towards the southwest and as such expected to be present beneath the site, however, at significant depth, greater than 70m bgl.

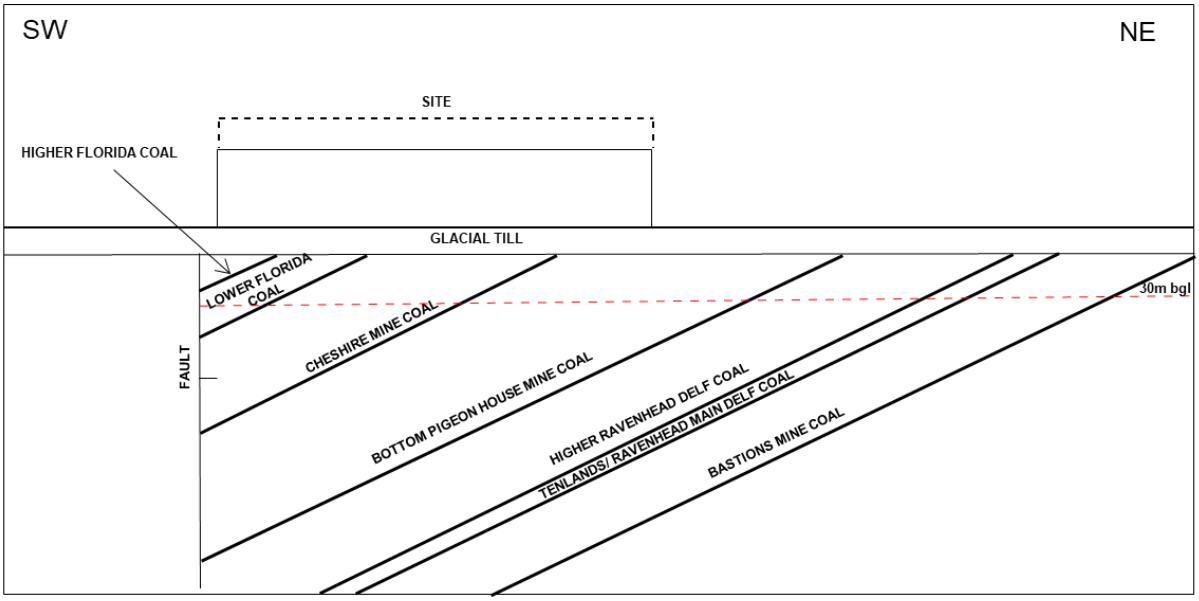
Although the BGS archives were searched, no relevant historical borehole or shaft data was found to be available within 500m of the site boundary.

A summary of the main anticipated sequence of coal seams, as indicated by the published BGS generalised vertical section is given in the table below. Seam separation thicknesses given are indicative only and have been inferred from the published BGS generalised vertical sections given on BGS 1:50,000 scale map Sheet

97, the BGS Vertical Section of West Lancashire Coal Field and available Coal Authority mine abandonment plans.

Coal Seam	Published Thickness (m)	Approx. Separation from Higher Florida Seam (m)	Anticipated Depth Beneath Site (m bgl)
Higher Florida	2.3	--	<30
Lower Florida	0.8	5	
Cheshire Mine (Higher & Lower Pigeon House Mine)	0.3-0.73	15-25	
Bottom Pigeon House Mine (Park Mine)	--	70	>50
Higher Ravenhead Delf	0.9	75	
Tenlands/Ravenhead Main Delf	1.2 – 2.1	105	>100
Bastion Mine	0.4 – 1.9	115	

A schematic section of the anticipated coal seam stratigraphy beneath the site, based on the 1:50,000 scale Geological Map, is shown below (not to scale):



3.4 Non-Coal Mining History/Geological Cavities

Data provided within the GroundSure report indicates that there are no recorded natural cavities within 500m of the site boundary.

The GroundSure report indicates there are eighteen surface ground workings within 250m of the site. Of relevance are cuttings associated with the M57 motorway, immediately adjacent to the north-eastern boundary of the site. In addition, several ponds are reported within 30m of the site, the closest being 12m to the east.

There are eight British Pits (BritPits) records within 500m of the site, the nearest of which is located 290m to the southeast, relating to Brown's House coal pit, recorded as 'ceased'.
There are seven recorded underground workings within 500m of the site. Of relevance are unspecified old levels at 350m to the north of the site.

The GroundSure report indicates that there are two Historical Mineral Planning Areas within 500m of the site. Both relate to a surface mineral working at 345m to the south of the site relating to mineral extraction of clay and shale.

3.5 Natural Ground Stability Hazards

The GroundSure Report has classified the risk of various natural ground stability hazards, depending on the anticipated ground conditions on site. The risk of ground dissolution of soluble rocks, shrink-swell of clays, running sand, collapsible deposits, compressible deposits and landslides is considered to be negligible to low.

3.6 Radon

The site is not indicated to be located within a Radon Affected Area as defined by the Health Protection Organisation, with less than 1% of properties in the site area above the Radon Action Level. As such, radon protection measures are not considered necessary for new developments at the site (BR211:2015).

3.7 Hydrology

A culverted watercourse (Prescot Brook) is located less than 10m west of the western site boundary. There are no surface water abstractions or active licensed discharges to Controlled Waters within 500m of the site.

The Environment Agency indicates that the site lies outside of any floodplains and therefore the flood risk is low; however, a high risk of flooding is indicated immediately west of the site, indicating a 1 in 30 chance of flooding in any given year. Land immediately west of the site is shown to be located within Flood zone 2, where the extent of flooding from rivers or the sea has a 1 in 1000 (0.1%) chance of flooding each year. A 1 in 30-year return period is given for surface water flooding between 0.3m and 1m depth, across localised areas in the north-eastern part of the site. The remainder of the site is not shown to be at risk of surface water flooding.

It should be noted that this report is not intended to be a full hydrological study and if a flood risk assessment is needed, additional analysis by others is recommended to confirm this aspect of the development.

3.8 Hydrogeology

The aquifer designation maps included in the GroundSure report indicate that the Superficial Glacial Till beneath the site is a Secondary 'Undifferentiated' Aquifer of medium vulnerability. The underlying Solid strata of the Pennine Middle Coal Measures Formation are a designated Secondary 'A' Aquifer of low vulnerability.

There are no groundwater abstraction licences or Source Protection Zones within 500m of the site boundary.

3.9 Environmental Searches

Information from the environmental datasets included within the GroundSure Report indicates that there are no active/recent landfills within 250m of the site.

A single recorded historical landfill is shown within 250m, relating to Whiston Tip located approximately 55m to the northeast of the site. Accepted waste types included commercial industrial household and liquid sludge, with the last input date being 1st January 1973.

There are two waste exemptions shown on site, with one relating to the sorting and denaturing of controlled drugs for disposal (Ref: WEX278179) and associated with the existing Dogs Trust Merseyside operations. The other (Ref: WEX168756) relates to the use of waste in construction, associated with the Willow Grange (Bellway Homes Development). There is no additional information to provide further detail on this waste exemption, although it is noted that the Willow Grange development is located off-site, c.70m northwest of the site.

A single recorded pollution incident is located 237m to the south of the site, relating to the spillage of petrol in 2002, indicated as a category 4, no impact incident.

The GroundSure Report states that there are no current fuel stations within 250m of the site.

A single historical industrial land use is shown on site, relating to the former nursery. A further 15 historical industrial land uses are shown within 250m of the site, of relevance, relating to nurseries at 36m to the northeast, recorded in 1955. An unspecified quarry is also shown at 72m to the northeast of the site, last recorded in 1891.

There is a single historical recorded COMAH site recorded approximately 100m to the northeast, relating to Bicc Metals Limited.

There is one recorded licensed discharge to Controlled Waters at 243m to the south of the site, relating to the discharge of sewer storm overflow into Prescot Brook, effective from 2018.

There are no records of Part A(1) or IPPC Authorised Activities within 250m of the site boundary.

There are no records of Part A(2)/B licensed pollutant release within 250m of the site boundary. There are no current NIHHS sites with the local vicinity.

3.10 Current Industrial Land Uses

There are two current industrial land uses identified within the GroundSure Report within 250m of the site, both of which relate to electrical substations located approximately 100m southwest and 240m northwest of the site.

3.11 Railways and Tunnels

An active railway (Liverpool to Wigan line) is recorded along the northern/north-western boundary of the site.
There are no recorded historical, current, or proposed tunnels on or within 250m of the site.

3.12 Ecology

There are no recorded protected species or habitats present on the site or within a 500m radius of the site. In addition, there are no non-statutory designations associated with the site or within a 500m radius of the site.

The GroundSure Report indicates that the site is located within the Merseyside and Greater Manchester green belt. The site is located in a Nitrate Vulnerable Zone.

If a full assessment of Environmental or Ecological aspects is required, it is recommended that other specialists are consulted.

3.13 Unexploded Ordnance (UXO) Risk

Based on available sources (i.e., Zetica UXO Risk maps), the site is shown to lie within an area considered to be at low risk of encountering UXO.

3.14 Review of Planning Portal Search

A review of the Knowsley Council Planning Portal was undertaken on 15th August 2023. However, there was no information available that may inform possible ground conditions etc, relevant to the proposed development.

4.0 ASSESSMENT OF POTENTIAL COAL MINING RISK

4.1 General

The site is located within a Coal Authority designated Development High Risk Area, and as such, a formal Coal Mining Risk Assessment is expected to be required as part of the Planning Process. An assessment of potential coal mining risk across the site has therefore been undertaken in order to:

- Present a desk-based review of available information on the coal mining issues which are relevant to the application site;
- Use that information to identify and assess the risks to the proposed development from coal mining legacy, including the cumulative impact of issues;
- Set out appropriate mitigation measures to address the coal mining legacy;
- Demonstrate to the Local Planning Authority that the application site can be made safe and stable to meet the requirements of National Planning Policy with regard to development on unstable land;

This Coal Mining Risk Assessment follows the general requirements of The Coal Authority document 'Risk Based Approach to Development Management - Guidance for Developers' version 4, dated 2017.

4.2 Published Geology

BGS data indicates that any Made Ground present across the site is expected to be underlain by Superficial strata comprising Glacial Till (typically firm to stiff sandy gravelly clay). The Superficial strata are shown to be underlain by Solid strata of the Pennie Middle Coal Measures Formation (mudstone, siltstone, sandstone and workable coal seams) across much of the site, with the Pennine Lower Coal Measures Formation potentially present in the far south-western corner, separated by a geological fault. Available BGS archive data across the wider area indicates that the Solid strata are likely to be present at depths of less than 10m bgl across the site. Several workable coal seams are expected to be present beneath the site as described in Section 3.3 above.

4.3 Coal Mining History

Reference to the Coal Authority Interactive Map Viewer and Coal Authority Consultants Coal Mining Report (ref: 51003371852001, dated 9th August 2023, included in Appendix B) indicates that the site is located within an area of recorded past historical underground coal mining. The site is also shown to lie within an area of recorded or probable shallow mine workings and as such is located within a Coal Authority Designated Development High Risk Area. The report is discussed in further detail in below.

The Coal Authority indicates that three separate coal seams have been worked at significant depth beneath the site as given in the table below.

Colliery	Seam	Mineral	Depth of Workings (m)	Area of site affected	Dip of Seam (degrees)	Extraction Thickness (cm)	Year Last Mined
Unnamed	Plodder	Coal	147	Beneath site	9.5 S	240	1895
	Sir John		155		9.3 S	60	1895
	Rushy Park		225		9.4 S	130	1885

There are also two abandoned mine entries shown to be located approximately 50m east and north of the site, with Coal Authority references 345391-012 and 346391-010. Although there are no treatment details available for mine entry 345391-012 to the north of the site, mine entry 346391-010 to the east is noted to have been treated under the supervision of Knowsley Borough Council in 1984.

The site is not located within an area likely to be affected by any planned future underground coal mining.

4.4 Coal Mine Abandonment Plans

The Coal Authority archives were searched and copies of two mine abandonment plans were obtained, with Coal Authority Catalogue Nos: 3466 and NW830. Copies of the coal mine abandonment plans are included in Appendix B and discussed below.

Plan 3466

This mine abandonment plan details workings in the Arley coal seam from Prescot Colliery. The plan does not indicate the date at which the seam was worked.

Although no workings beneath the site are shown, the plan indicates that the Arley coal seam was worked from c.250m to the east of the site, with the depth to the workings being 298m bgl, at a recorded extraction thickness of c.0.7m.

NW830

This mine abandonment plan details workings in the Bastian Mine coal seam from Carrs Colliery.

The plan indicates that the Bastian Mine coal seam was worked from c.250m to the north of the site between July and September 1894 with recorded extraction thickness of up to 0.9m. No details are given on the plan indicating the depths of workings.

4.5 Identification and Assessment of Site-Specific Coal Mining Risks

4.5.1 Probable and Recorded Underground Coal Mining at Shallow Depths

The Coal Authority indicates that the site is located in an area of recorded or probable shallow coal workings. As outlined in Section 3.3, there are several seams that are likely to be present beneath the site. A summary of the shallowest anticipated sequence of coal seams is given in the table below.

Coal Seam	Approx. Separation from Higher Florida seam (m)	Anticipated Depth Beneath Site (m BGL)	Published Seam Thickness (m)
Higher Florida	-	<30	2.3
Lower Florida	5		0.8
Cheshire Mine (Higher & Lower Pigeon House Mine)	15-25		0.3-0.73
Bottom Pigeon House Mine (Park Mine)	70	>50	--
Higher Ravenhead Delf	75		0.9
Tenlands/Ravenhead Main Delf	105	>100	1.2-2.1
Bastion Mine	115		0.4-1.9

Although further seams of coal are anticipated beneath the Bastion Mine coal, they are expected to be present at depths greater than 100m bgl.

Prior to 1872 there was no legal requirement to maintain or deposit records of coal mining with the relevant authorities. In this regard, workings (and, in particular, shallow workings) were often not recorded prior to this date. Early workings using more primitive techniques were mostly targeted at areas where higher quality resources were easily accessible (i.e. shallow) and of significant thickness. As techniques improved, deeper workings in more geologically challenging conditions became feasible. Given that the Higher Florida, Lower Florida and Cheshire Mine seams are shown to sub-crop beneath the Superficial strata on site (with rockhead

likely at less than 10m bgl), unrecorded workings could have been feasible in these seams and cannot be discounted.

The risk of former underground mine workings resulting in residual mining settlement/subsidence is a function of a number of factors. These include the depth and original thickness of the seam, the extracted thickness, the method and extent of extraction, the nature of the roof materials and the thickness of overlying Solid and Superficial strata. Instability at the surface can arise when voids within and above mined horizons collapse and migrate to the surface, creating either a relatively narrow crown hole or a wider area of general subsidence. The potential for crown holes is significantly reduced where there are no significant voids following abandonment of workings, such as long wall mining which allows progressive controlled collapse as mining advances. The zone of influence of areas of subsidence is also related to where the depth in relation to the size of the void exceeds a certain ratio and where the nature of the materials above the worked horizon is competent such as a thick band of sandstone.

As a basic rule of thumb, where the thickness of rock cover is less than ten times the seam or workings thickness (e.g., roadways can be thicker than a seam) there is potential for void migration at surface to occur. The thickness of Made Ground and Superficial strata at the site would mitigate some crown hole collapse but for initial assessment purposes, this has been ignored.

Although there are no recorded workings in the coal seams which are shown to potentially sub-crop near surface across the site, it is considered possible that unrecorded workings in these seams could have occurred prior to the requirement to maintain mine abandonment records from 1872. Published seam thicknesses for the Higher Florida seam is indicated to be potentially greater than 2m and up to 0.8m thickness for the Lower Florida and Cheshire Mine coal seams. Considering that these seams are expected to be present directly beneath a relatively thin layer of Superficial strata across the site, there may be insufficient cover to prevent the risk of void migration to surface or general aerial subsidence occurring as a result of any unrecorded workings in these seams.

4.5.2 Mine Entries

There are two abandoned mine entries shown to be located approximately 50m east and north of the site with Coal Authority references 345391-012 and 346391-010, with mine entry 346391-010 noted to have been treated under the supervision of Knowsley Borough Council in 1984. There is no available treatment recorded of the abandoned mine entry 345391-012. Notwithstanding this, the site is not expected to be within the influencing distance of these mine entries.

4.5.3 Coal Mining Geology (Faults/Fractures/Fissures)

A geological fault is shown on the 1:50,000 scale BGS map, directly beneath/ immediately west of the site, striking N-S and with a downthrow towards the east. Although a zone of increased fracturing would typically be expecting across areas of faulting, the published data indicates that only the far south-western corner of the site may be impacted, with the anticipated coal measures stratigraphy across most of the site unaffected.

4.5.4 Record of Past Mine Gas Emissions or Potential

The Coal Authority report states that there are no records of mine gas emissions requiring action by the Coal Authority within the boundary of or within 500m of the site.

4.5.5 Recorded Coal Mining Surface Hazard

The Coal Authority indicates that they have no record of remedial works, by or on behalf of the Coal Authority within 50m of the site.

4.5.6 Surface Mining (Opencast Workings)

The Coal Authority indicates that there was an unlicensed opencast site located approximately 300m northeast of the site, although further details and operational dates are not given.

4.6 Conclusions

The shallowest recorded workings beneath the site relate to coal workings in the Plodder seam at 147m depth and last worked in 1895 with a published extraction thickness of 240cm. Considering the depth of these workings and the anticipated depth of Solid strata beneath the site (<10m bgl) there is considered to be sufficient rock cover above these recorded workings across the site to prevent the risk of void migration to surface or general aerial subsidence occurring.

Given that the Cheshire Mine, Lower Florida and Higher Florida coal seams outcrop on site and are anticipated at depths of less than 30m bgl, unrecorded workings are considered likely. An intrusive investigation is recommended across the site to assess the nature of any potential shallow mine workings, alongside proving the thicknesses and nature of the Made Ground, the depth to bedrock and the anticipated Solid stratigraphy. Provisional borehole depths are anticipated to be up to 30m bgl.

5.0 CONCEPTUAL SITE MODEL

In developing a Conceptual Site Model for the site, pollutant linkages are determined by identifying likely sources of contamination from previous and current site uses, possible targets such as site users, neighbouring site users and Controlled Waters and linkages between them. The potential sources, receptors and pathways are defined in the following sections:

On-site Sources

- No significant potential sources of contamination have been identified by the walkover or desk study searches. However, some localised Made Ground, i.e. particularly in the vicinity of the historical backfilled pond, in the south-western corner may contain elevated concentrations of contaminants such as asbestos, heavy metals, petroleum hydrocarbons and polycyclic aromatic hydrocarbons (PAHs);
- Made Ground may be a source of hazardous ground gases such as methane and carbon dioxide;
- Ground gas associated with the historic pond previously shown in the southwest of the site;

- Made Ground and some natural strata can be sources of elevated sulphates;
- Mine gas if any shallow workings are present.

Off-site Sources

- Made Ground associated with the railway embankment along the northern site boundary.
- Potential hydrocarbon contamination associated with the railway line to the north of the site.
- Elevated ground gases (methane, carbon dioxide) associated with historical landfill c.55 to the northeast.

Receptors

- End users (Human Health);
- Groundwater (Secondary 'A' Aquifer);
- Buried concrete (Building Materials);
- Water supply services (Building Materials).

Prescot Brook is culverted and therefore not considered to be a key receptor.

Pathways

- Direct contact, ingestion & inhalation (dust) of contaminated soils.
- Migration and inhalation of vapours, mine gas or ground gas via accumulation within structures via floor slab joints/cracks and services penetrations;
- Direct contact with buried concrete/water supply services;
- Leaching and/or migration through permeable soils (granular horizons in Made Ground).

Source/Pathway/Receptor Linkage and Assessed Risk

Source-pathway-receptor (SPR) linkages are tabulated below together with the qualitatively assessed risk. The risk to ground workers and construction workers is not included here due to the short-term exposure times that they will be subject to and the assumption that good hygiene practices will be adopted on site and the appropriate use of relevant PPE/RPE will be adhered to when exposed to potentially contaminated soils.

Source	Pathway	Receptor	Risk*
Potential contaminants within Made Ground or resulting from historical site usage.	Inhalation, ingestion, dermal contact.	End users	Low
	Migration and Leaching	Secondary 'A' Aquifer	Low
	Direct Contact	Water supply pipes	Low
Ground gas from Made Ground (including backfilled pond) and historical landfill c55m to the northeast	Migration into buildings, service ducts etc.	End users	Low- Medium

Source	Pathway	Receptor	Risk*
Mine gas	Migration into buildings, service ducts etc.	End users	Low
Elevated sulphates in Made ground	Direct contact, leaching and contact with groundwater	Buried concrete	Low-medium

*** Definition of Risk Categories**
Negligible - Contaminants that might have unacceptable impact on key receptors, are unlikely to be present, or, no pathway is envisaged.
Low Risk: Contaminants may be present but are unlikely to be at levels to have unacceptable impact on key receptors, or pathways are likely to be minimal.
Medium Risk: Contaminants are probably present and might have an unacceptable impact on key receptors. Pathways may also be present therefore remedial measures may be necessary to reduce the risks.
High Risk – Contaminants probably or certainly present and pathways are probably also present. Therefore, contaminants are likely to have an unacceptable impact on key receptors and remedial measures are likely to be necessary to reduce the risks to acceptable levels.

6.0 GEOENVIRONMENTAL ASSESSMENT

Based on the available information, there is considered to be a low risk with regard to human health.

The risk to Controlled Waters (Secondary 'A' Aquifer) will depend on the presence, nature and concentrations of any mobile contaminants within soil and groundwater beneath the site. However, given the anticipated absence of significant contamination and likely presence of cohesive Glacial Till beneath the site, the risk is considered to be low and remedial actions are considered unlikely to be necessary to protect groundwater and surface water.

Elevated concentrations of sulphates may be expected in the Coal Measures strata and overlying Made Ground/Superficial soils and as such, there is considered to be a low to medium risk to buried concrete.

7.0 GEOTECHNICAL ASSESSMENT

Where only shallow Made Ground is encountered (e.g., <2.5m), conventional spread or trench fill foundations founded within competent glacial soils are likely to be suitable. However, where significant thicknesses of Made Ground are encountered, or foundations on cohesive soils are in close proximity to proposed or existing trees, deeper foundations are likely to be required.

Ground bearing slabs may be feasible where only a thin layer of Made Ground is present, however, where deep Made Ground or shrinkable soils are present, removal and re-engineering may be required to allow the use of ground bearing slabs.

Considering the possible presence of unrecorded shallow coal workings beneath the site, reinforced foundations capable of resisting residual mining related movement and possible loss of support may be required. Ring beam foundations, pads linked to beams, rafts or semi-raft type foundations would typically be adopted in such circumstances dependent on the outcome of a site-specific investigation of the solid geology and outcome of a possible drilling and grouting programme. Foundations may need to be designed to span at least 3m and cantilever at least 1.5m.

Soakaway drainage is unlikely to be a viable option for the discharge of surface water considering the anticipated presence of cohesive Glacial Till across the site.

8.0 RECOMMEDATIONS

It is recommended that a ground investigation is undertaken to confirm the initial conceptual model, to derive parameters for foundation design and to investigate for potential shallow coal seams/workings.

A series of boreholes and trial pits are considered appropriate across the site. This would enable soil samples to be taken for subsequent laboratory testing to determine engineering properties and inform foundation design. In addition, deeper rotary open-hole and cored boreholes to 30m bgl are recommended to assess the nature of any potential shallow mine workings, alongside proving the thicknesses and nature of the Made Ground, the depth to bedrock and the anticipated Solid stratigraphy. A Coal Authority permit will be required for the investigation of coal seams (and future grouting if necessary). Any future drilling and grouting would also need to be undertaken in accordance with an appropriate specification and the works subsequently validated by site inspections.

Selected trial pits and possibly some shallow boreholes should be targeted to the historical pond in the south-western part of the site and any other areas of possible deeper Made Ground.

Engineering laboratory testing including soil classification, strength testing, rock testing and BRE Special Digest 1 concrete classification tests should be carried out to aid foundation design. Routine chemical testing to include a suite of heavy metals, polyaromatic hydrocarbons, phenols, TPH, pH, asbestos screen and soil organic matter should also be carried out on selected soil samples.

Boreholes should be installed with standpipes to enable groundwater and ground/mine gas monitoring.

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WA3 2AN

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GENERAL NOTES

A) The assessment made in this report is based on the site terrain and ground conditions revealed by the various field investigations undertaken and also any other relevant data for the site including previous site investigation reports (if available) and desk study data. There may be special conditions appertaining to the site, however, which have not been revealed by the investigation and which have not, therefore, been taken into account in the report. The assessment may be subject to amendment in the light of additional information becoming available. It must be recognised that many of the Environmental Searches obtained during the course of the desk study are often lengthy. Applied Geology have, where appropriate and in the interests of simplicity, only reproduced the summary of the searches within the report. A full copy of all the search data is held at the Applied Geology office and is available for inspection if required.

B) Where any data supplied by the Client or other external source, including that from previous site investigations, has been used it has been assumed that the information is correct. No responsibility can be accepted by Applied Geology for inaccuracies within this data.

C) Whilst the report may express an opinion on possible configurations of strata between or beyond the exploratory locations, or on the possible presence of features based on either visual, verbal or published evidence this is for guidance only and no liability can be accepted for the accuracy.

D) Comments on groundwater (and landfill gas) conditions are based on observations made during the course of the present and past investigations or with reference to published data unless otherwise stated. It should be noted, however, that groundwater (and landfill gas) levels vary due to seasonal (or atmospheric conditions) or other effects.

E) The copyright of this report and other plans and documents prepared by Applied Geology is owned by Applied Geology and no such report, plan or document may be reproduced, published or adapted without the written consent of Applied Geology. Complete copies of the report may, however, be made and distributed by the Client as an expedient in dealing with matters related to its submission.

F) This report is prepared and written in the context of the proposals stated in the introduction to the report and should not be used in a differing context. Furthermore, new information, improved practices and legislation may necessitate an alteration to the report in whole or in part after its submission. Therefore with any change in circumstances or after the expiry of one year from the date of the report, the report should be referred to Applied Geology for re-assessment and if necessary, re-appraisal.

G) The survey was conducted and this report was prepared for the sole internal use and reliance of the Client. This report shall not be relied upon or transferred to any other parties without the express written authorisation of Applied Geology. If an unauthorised third party comes into possession of this report they rely on it at their peril and Applied Geology owes them no duty of care and skill.

H) Ground conditions should be monitored during the construction of the works and the recommendations of the report re-evaluated in the light of this data by the supervising geotechnical or geo-environmental engineers.

I) Unless specifically stated, the investigation has not taken into account the possible effects of mineral extraction.

J) The economic viability of the proposals referred to in the report, or of the solutions put forward to any problems encountered, depends on very many factors in addition to geotechnical considerations and hence its evaluation is outside the scope of this report.

K) Applied Geology operates as a Consultancy and does not operate it's own laboratory for soil testing, this work being sub contracted to known and respected, generally UKAS accredited, laboratories. Applied Geology can therefore not be held responsible for the testing carried out.

APPENDIX A



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WA3 2AN
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email:admin@appliedgeology.co.uk

Drawn By:	Checked By:	Paper Size:
KM	HS	A4
Scale:	Date:	NGR:
NTS	22.08.2023	345780,391251
Drawing No:		Revision:
AG3533-23-01		0

Client:
DOGS TRUST

Project:
DOGS TRUST MERSEYSIDE,
WHISTON LANE, HUYTON

Title:
SITE LOCATION PLAN

KEY

Refer to Landscape Architect drawings for exact specification.

- ⬜ Brushed Finish Concrete.
  NBS - E41/120
- 🟩 Artificial Grass
  NBS - Q26-350
- 🟨 Sand
  NBS - Q26-330
- 🟩 Grass / natural planting.
  Refer to landscape plan for further detail.
- 🟥 Hogging / gravel walking path.
  Refer to landscape plan for further detail.
  NBS - Q23/120
- ▨ Loose Gravel
  Refer to landscape plan for further detail.
  NBS - Q23/160
- ▥ Natural Stone Gabion (Retaining Structure)
- ⬛ Road / Tarmac.
  Details to be progressed during detailed design stage.
  Refer to Civils for specification
- 🟦 V - Ditch. Refer to Civil Engineer's & Landscape Architect's layout.
- ❂ Indicative tree location. Refer to Landscape Architect's layout.
- ● Existing Tree location to be retained. Recommended action: No repair required.
- FH Proposed Fire Hydrant Locations.



Due to exisitng tree line, paddocks may have to move around corner.

Intake Drop off

Maintenance Shed

Grass free run with mounds and swales. Grass not synthetic, to keep biodiversity area up

Proposed rain garden.

Pedestrian bollards placed at junction, spaced to allow maintenace vehicles to pass through, but not full sized vehicles.

External seating / planting to be introduced to courtyard.

Vehicle access gate controlled by VNPR / Reception.

Exisiting car park to be reconfigured to introduce new road along site perimeter.

Improvement works to exisiting grass free run. Could introduce drainage swales, meadow grass sections for enrichment etc.and improve biodiversity

Possible location for attenuation basin, with series of 'V' ditches feeding in excess grey water.

Planting / screening for TBA run serentiy

Grass free run with mounds and swales. Grass not synthetic, to keep biodiversity area up

Possible location for attenuation basin, with series of 'V' ditches feeding in excess grey water.

Existing reception building converted to Vet Prep / Puppy.

Existing incoming services building to be retained.

5 0 5 10 15 20 25
SCALE 1: 500 m

This drawing must not be scaled.
Figured dimensions and levels to be used.
Any inaccuracies must be notified to the architect.
Detail drawings and large scale drawings take precedence over smaller drawings.

A1

THIS DRAWINGS IS COPYRIGHT ©

Rev:			Chk'd:
A	Combined Booked & TBA building split into two seperate buildings - JS	10.03.23	
B	Site plan amended following development of buildings. Additional grass areas indicated on plan-JS	22.03.23	
C	Site plan amended to vehickle tracking feedback. Proposed Fire Hydrant locations shown - JS	29.03.23	

STATUS

S2 - Issued for Information

powelldobson
ARCHITECTS

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PDA Job No: 22013

ORIGINATOR	VOLUME	LEVEL	TYPE	ROLE	NUMBER	REV
PDA -	EX	- 00	- GA -	A -	(90) 9000	C

Contract: Dogs Trust
Merseyside Rehoming Centre
Title: Site Plan

Scale: 1 : 500
Date: 07.03.23
Drawn: JS
Checked: OSRH

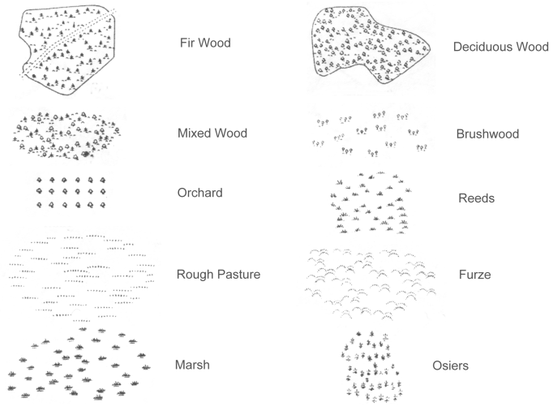
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F:\Union Square Projects\22013 Dogs Trust, Merseyside Centre\0 - PDA Drawings\4 - Model\2 - Revit\00-Site Plan\22013_PDA_A_EX_External Site (TBA BO Split).rvt

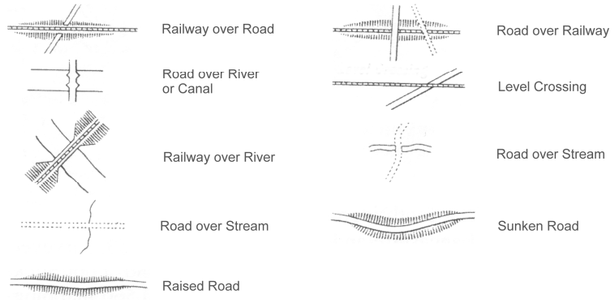
APPENDIX B

County Series 1:10,560 scale

VEGETATION



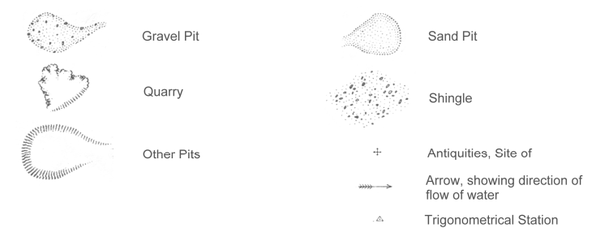
ROADS



RAILWAYS



GENERAL FEATURES



BOUNDARIES



National Grid 1:10,000 scale

HEIGHTS (METRES)

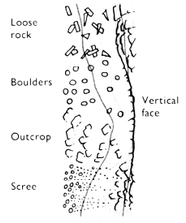
Values are given in metres above mean sea level at Newlyn.

Surface heights determined by: ground survey • 163m; air survey

Bench marks and their values are shown on large scale maps, and bench mark lists containing fuller and possibly later levelling information are obtainable from the Director General, Ordnance Survey.

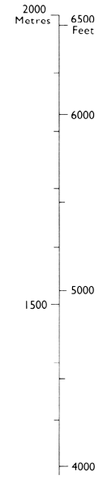
Contours are at 5 metres vertical interval.

ROCK FEATURES



CONVERSION SCALE

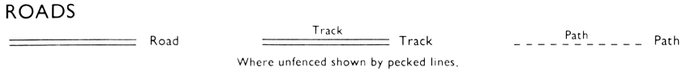
Metres - Feet



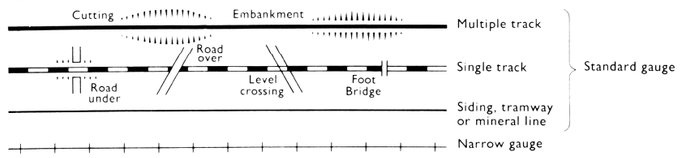
ABBREVIATIONS

BP,BS	Boundary Post or Stone	PO	Post Office
Ch	Church	PC	Public Convenience
CH	Club House	PH	Public House
F Sta	Fire Station	S	Stone
FB	Foot Bridge	Spr	Spring
Fn	Fountain	TCB	Telephone Call Box
GP	Guide Post	TCP	Telephone Call Post
MP,MS	Mile Post or Stone	TH	Town Hall
P	Pole or Post	W	Well
Pol Sta	Police Station	Y	Youth hostel

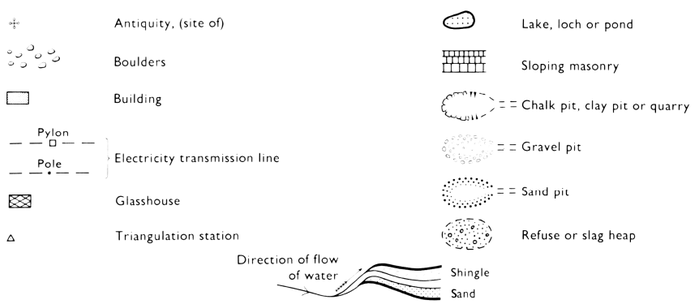
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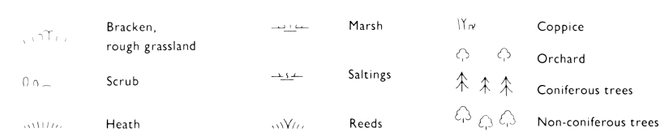
RAILWAYS



GENERAL FEATURES



VEGETATION



In some areas bracken ( ) and rough grassland ( ) are shown separately.

GroundSure

Historical Map Pack Legend

County Series & National Grid

1:10,560 scale

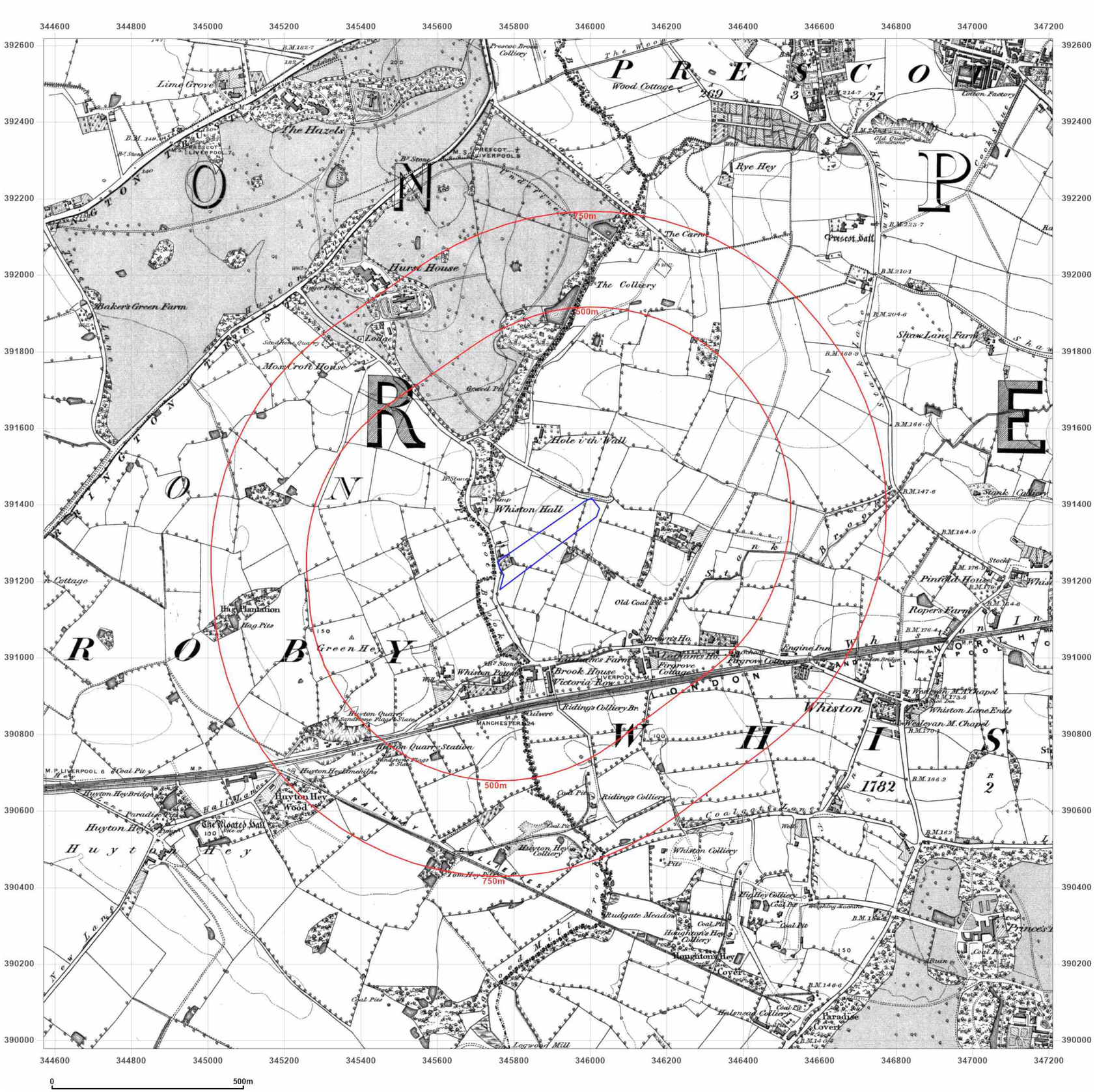
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Map Name: County Series

Map date: **1850**

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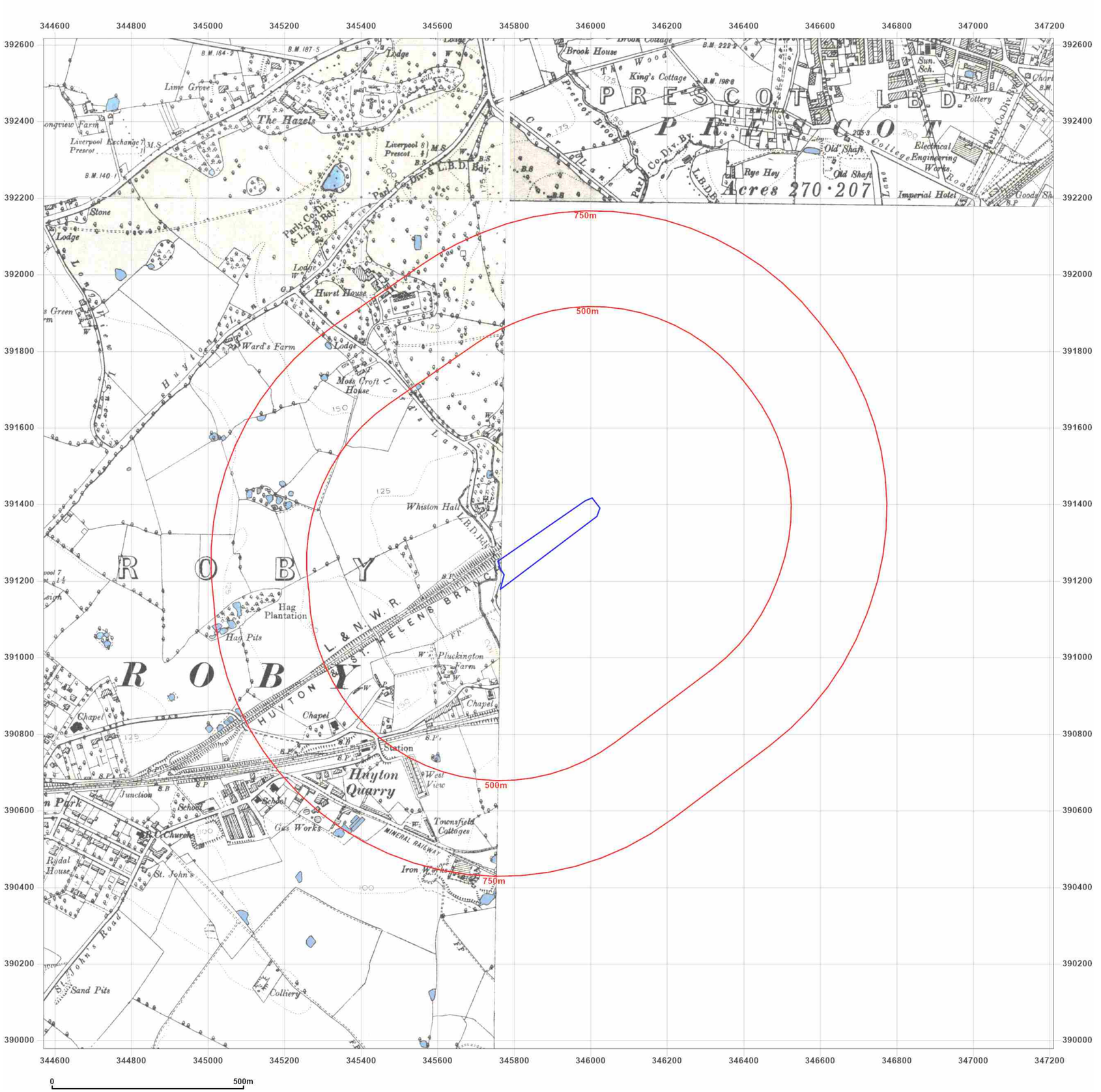
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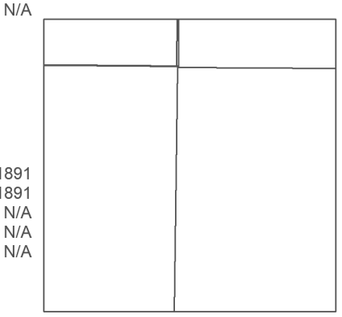
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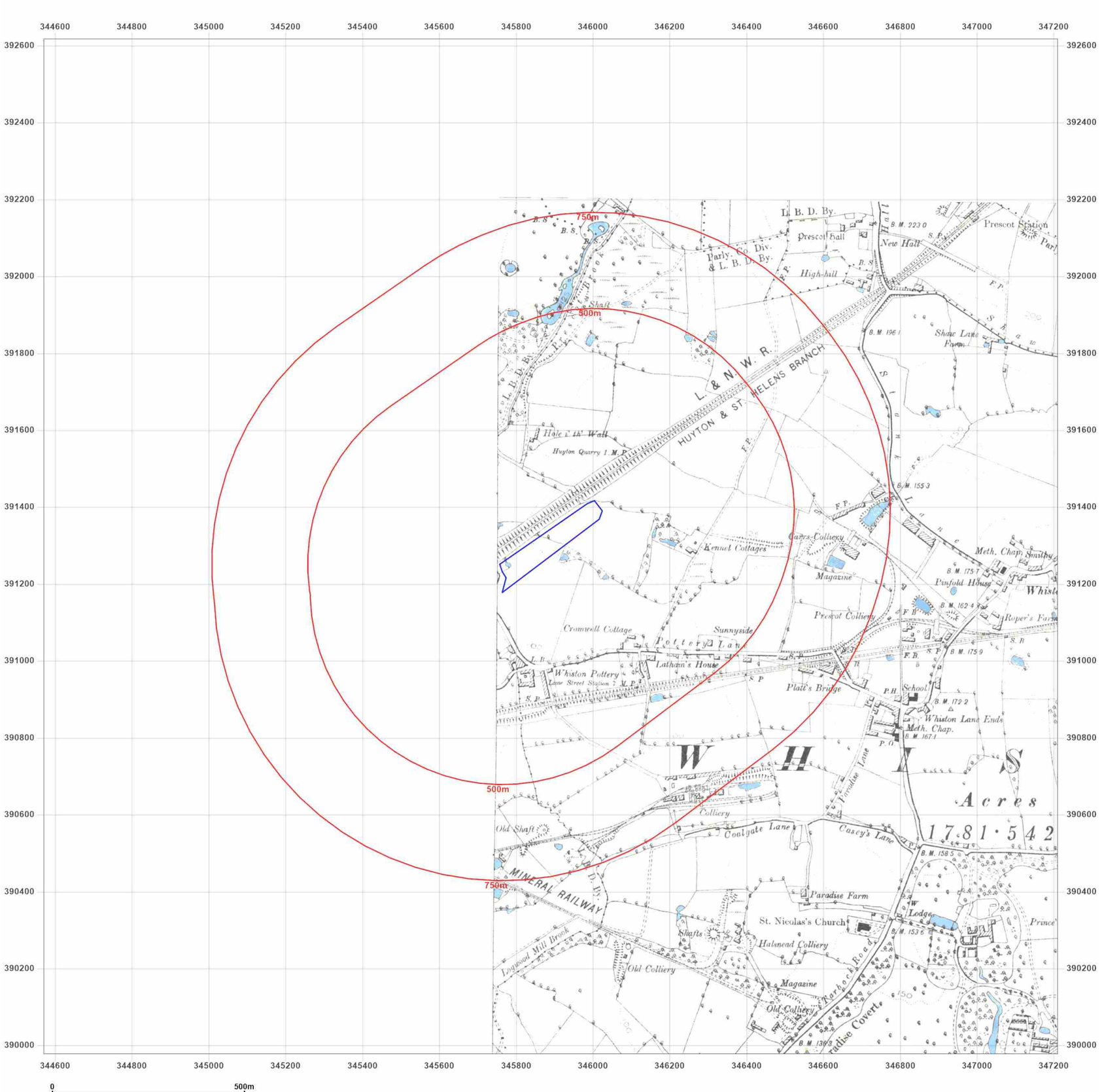
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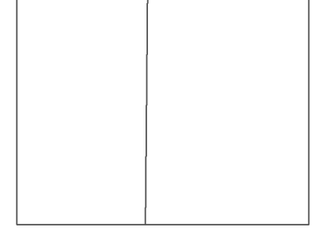
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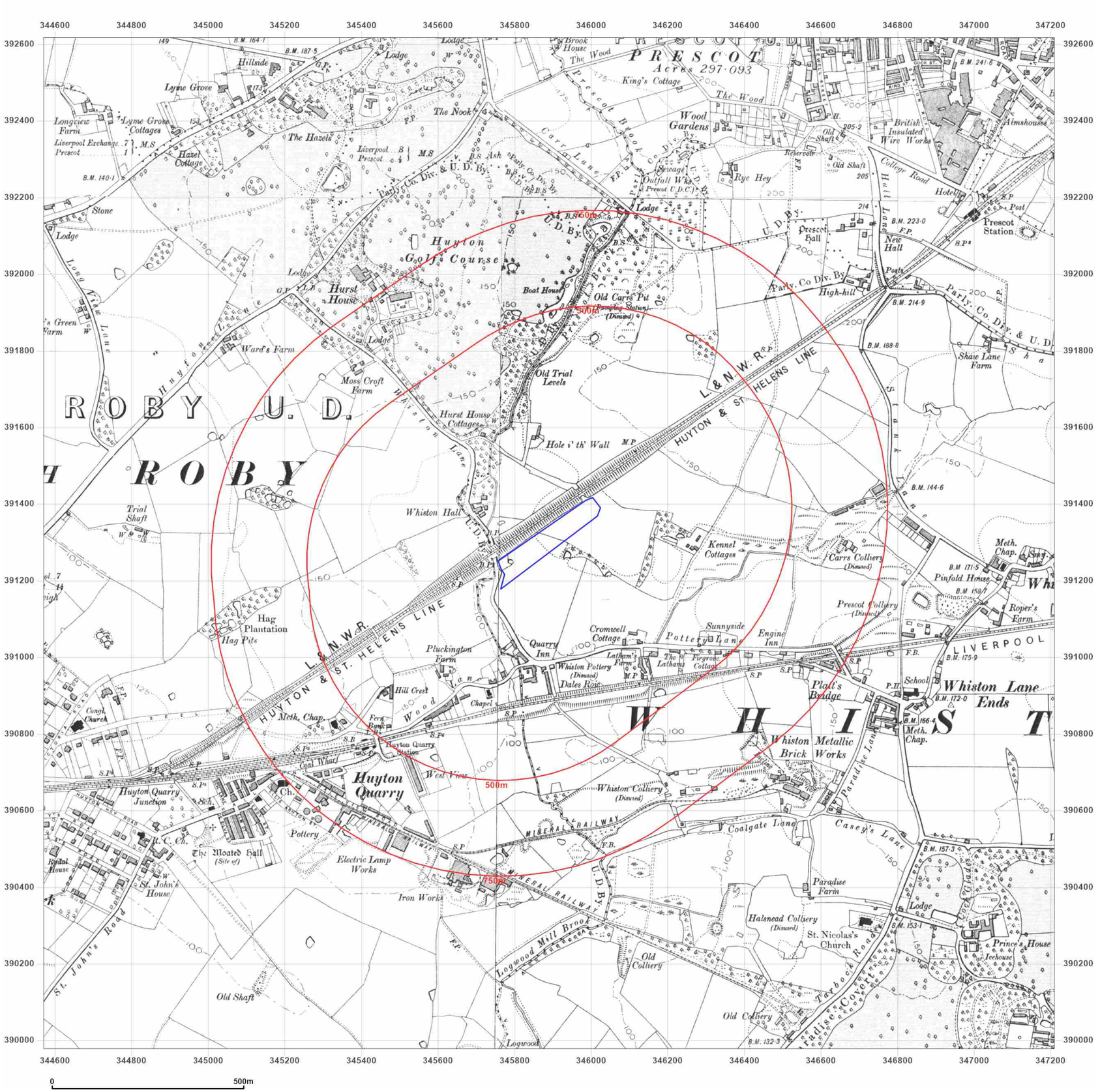
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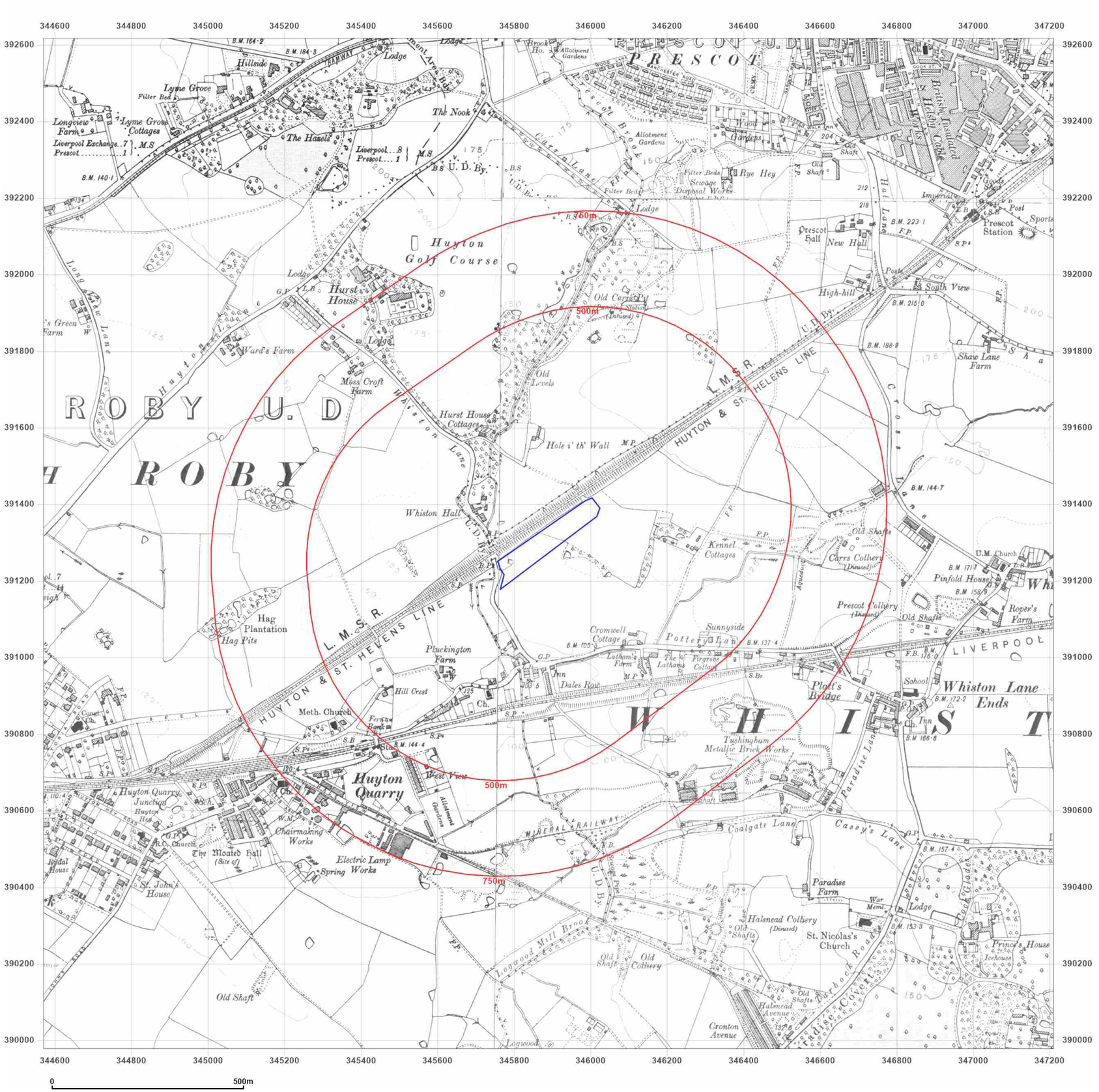
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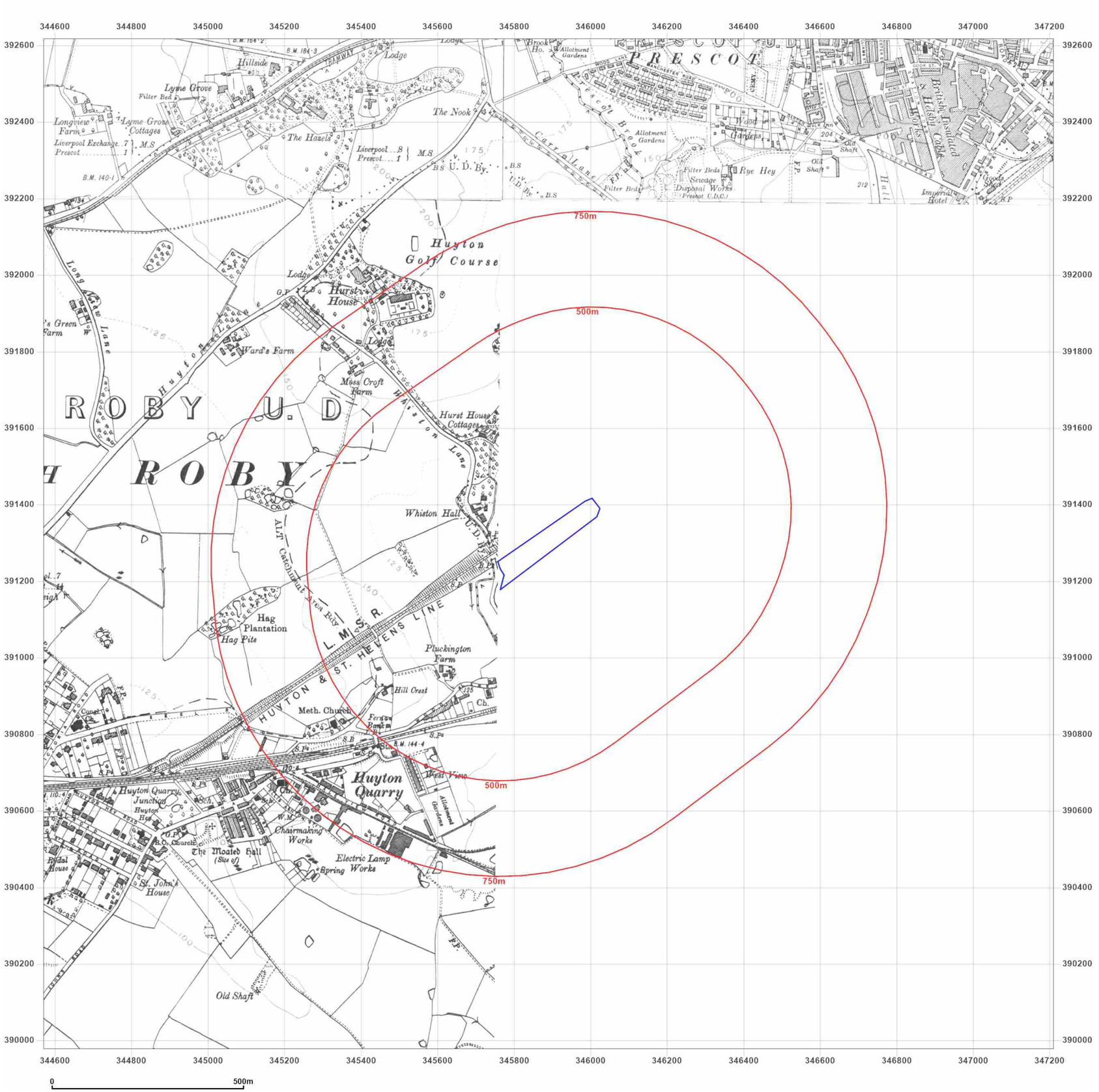
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Report Ref: GS-G8O-PTH-NNK-7AV
Grid Ref: 345889, 391297

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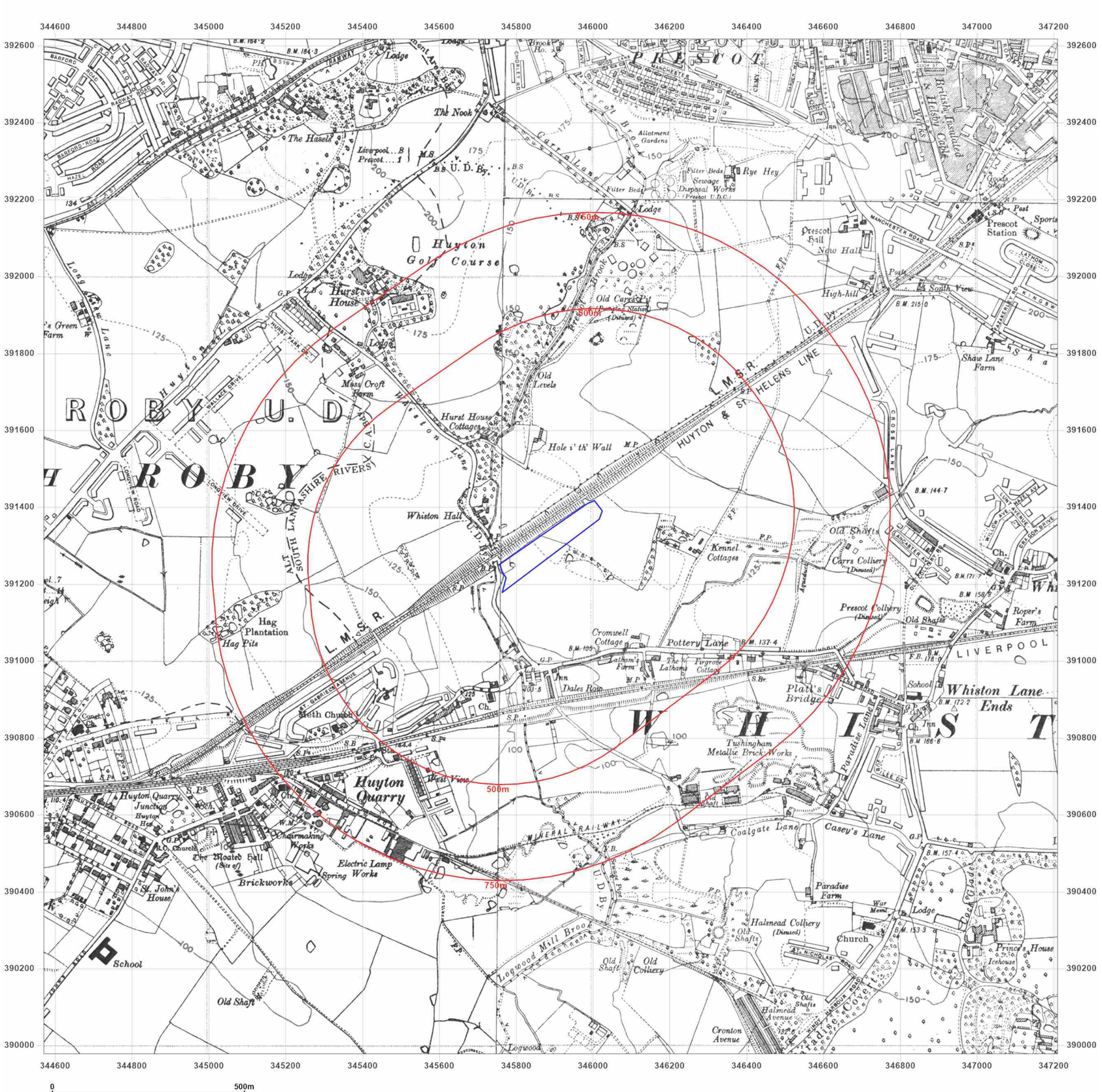
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Groundsure INSIGHTS

Site Details:

345882,391304

Client Ref: AG3533-23
Report Ref: GS-G8O-PTH-NNK-7AV
Grid Ref: 345889, 391297

Map Name: County Series

Map date: **1938**

Scale: 1:10,560

Printed at: 1:10,560

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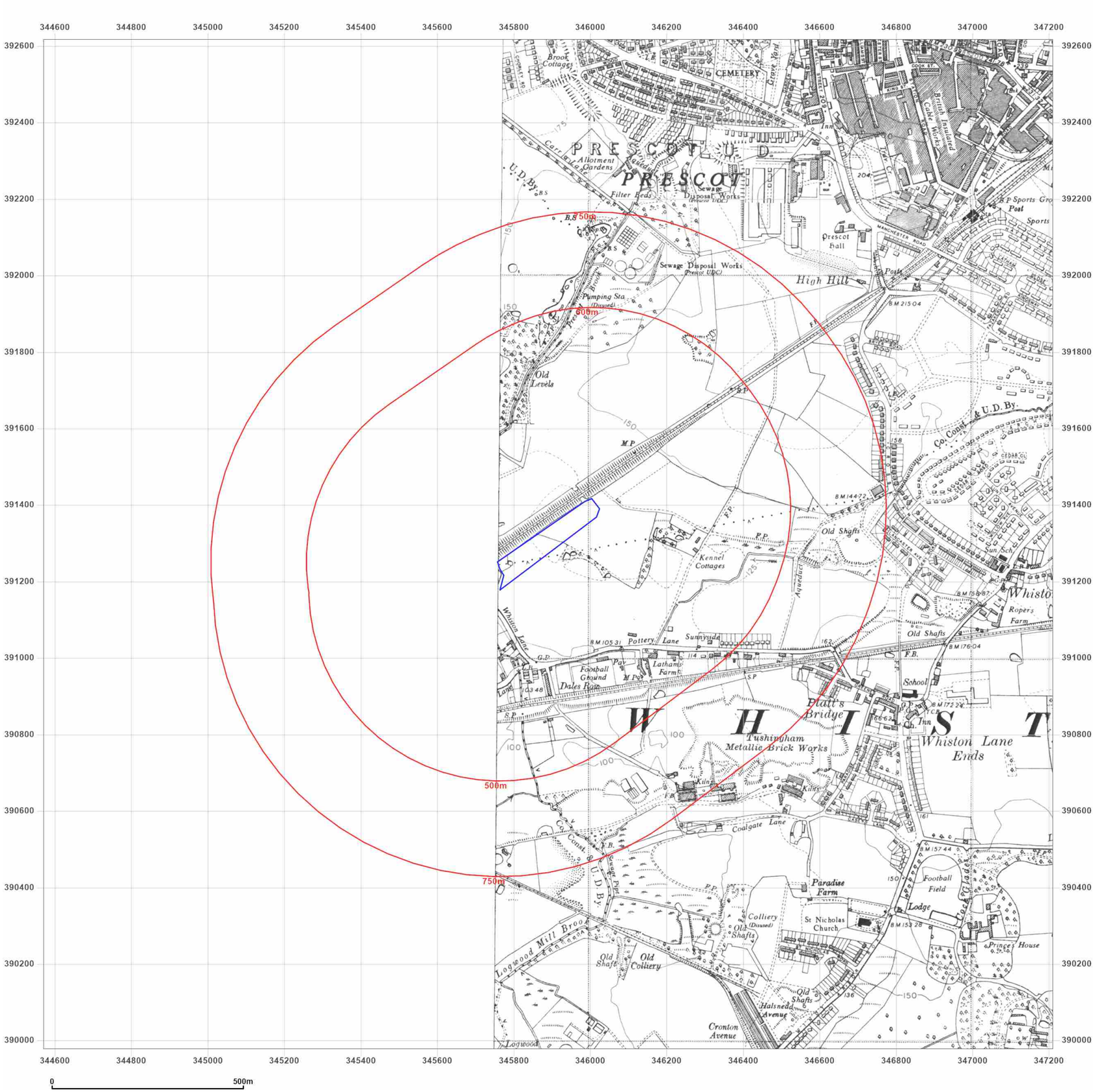
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Groundsure INSIGHTS

Site Details:

345882,391304

Client Ref: AG3533-23
Report Ref: GS-G8O-PTH-NNK-7AV
Grid Ref: 345889, 391297

Map Name: County Series

Map date: **1947-1950**

Scale: 1:10,560

Printed at: 1:10,560

N
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Surveyed 1847
Revised 1950
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1846
Revised 1947
Edition N/A
Copyright N/A
Levelled N/A

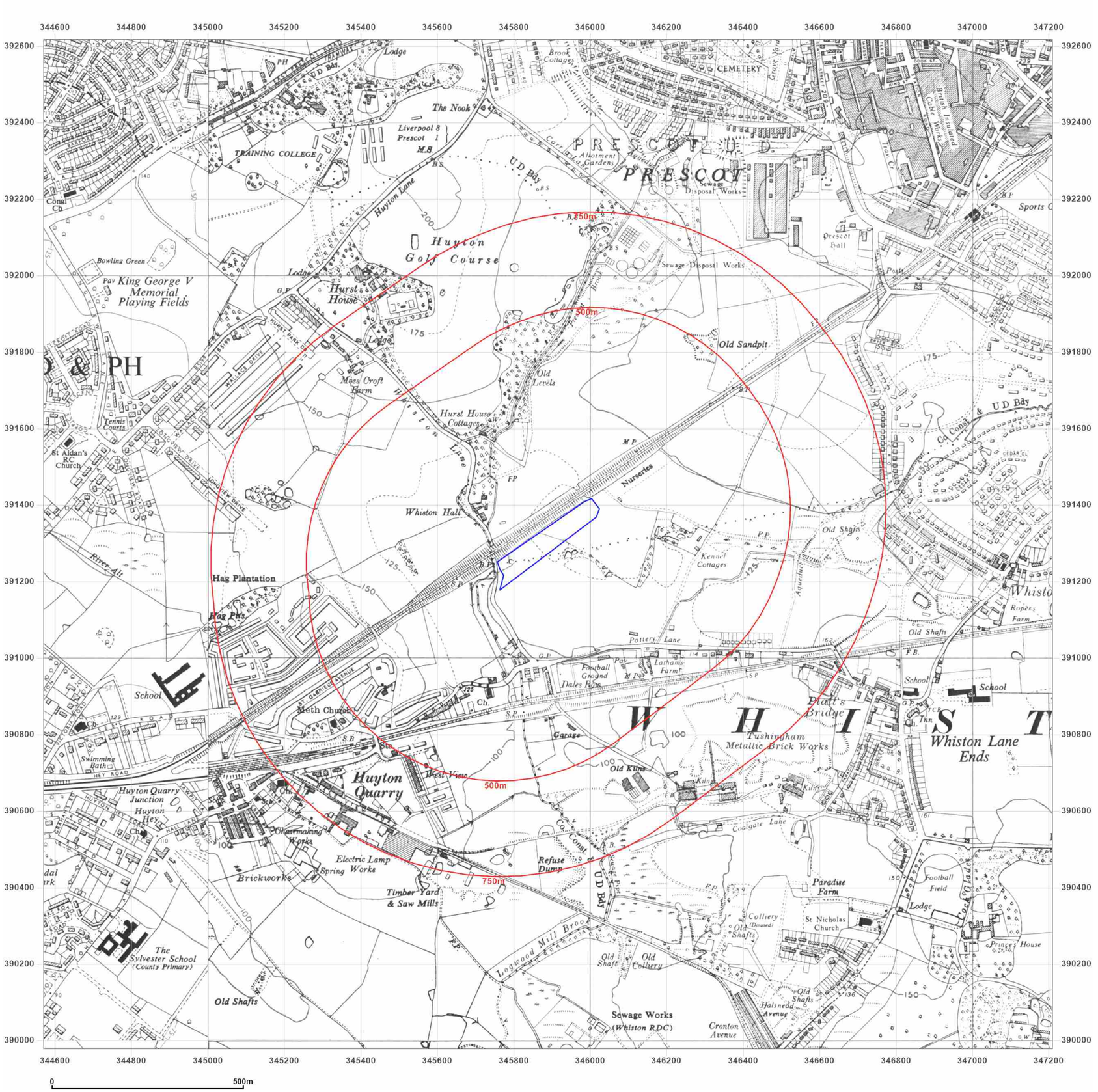
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Groundsure INSIGHTS

Site Details:

345882,391304

Client Ref: AG3533-23
Report Ref: GS-G8O-PTH-NNK-7AV
Grid Ref: 345889, 391297

Map Name: Provisional
Map date: **1955-1956**
Scale: 1:10,560
Printed at: 1:10,560

N
W E
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Surveyed 1954
Revised 1955
Edition N/A
Copyright 1956
Levelled N/A

Surveyed 1947
Revised 1955
Edition 1956
Copyright N/A
Levelled N/A

Surveyed 1954
Revised 1955
Edition N/A
Copyright 1956
Levelled N/A

Surveyed N/A
Revised 1955
Edition N/A
Copyright 1955
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Site Details:

345882,391304

Client Ref: AG3533-23
Report Ref: GS-G8O-PTH-NNK-7AV
Grid Ref: 345889, 391297

Map Name: Provisional

Map date: **1965-1967**

Scale: 1:10,560

Printed at: 1:10,560

N
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Surveyed 1965
Revised 1965
Edition N/A
Copyright N/A
Levelled N/A

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

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

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

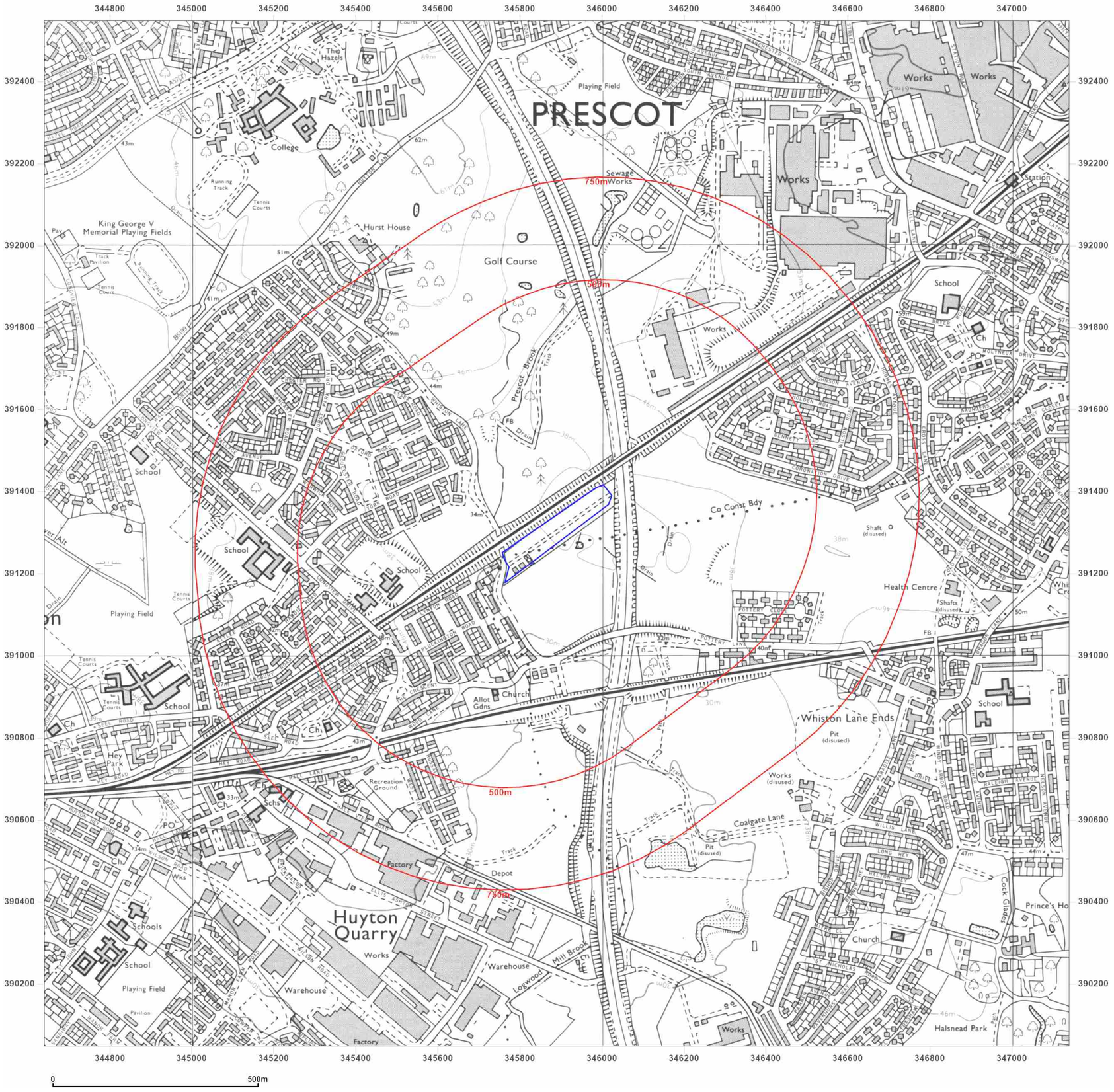
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Site Details:

345882,391304

Client Ref: AG3533-23
Report Ref: GS-G8O-PTH-NNK-7AV
Grid Ref: 345889, 391297

Map Name: National Grid

Map date: **1978**

Scale: 1:10,000

Printed at: 1:10,000

N
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Surveyed 1975
Revised 1977
Edition N/A
Copyright 1978
Levelled 1955

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

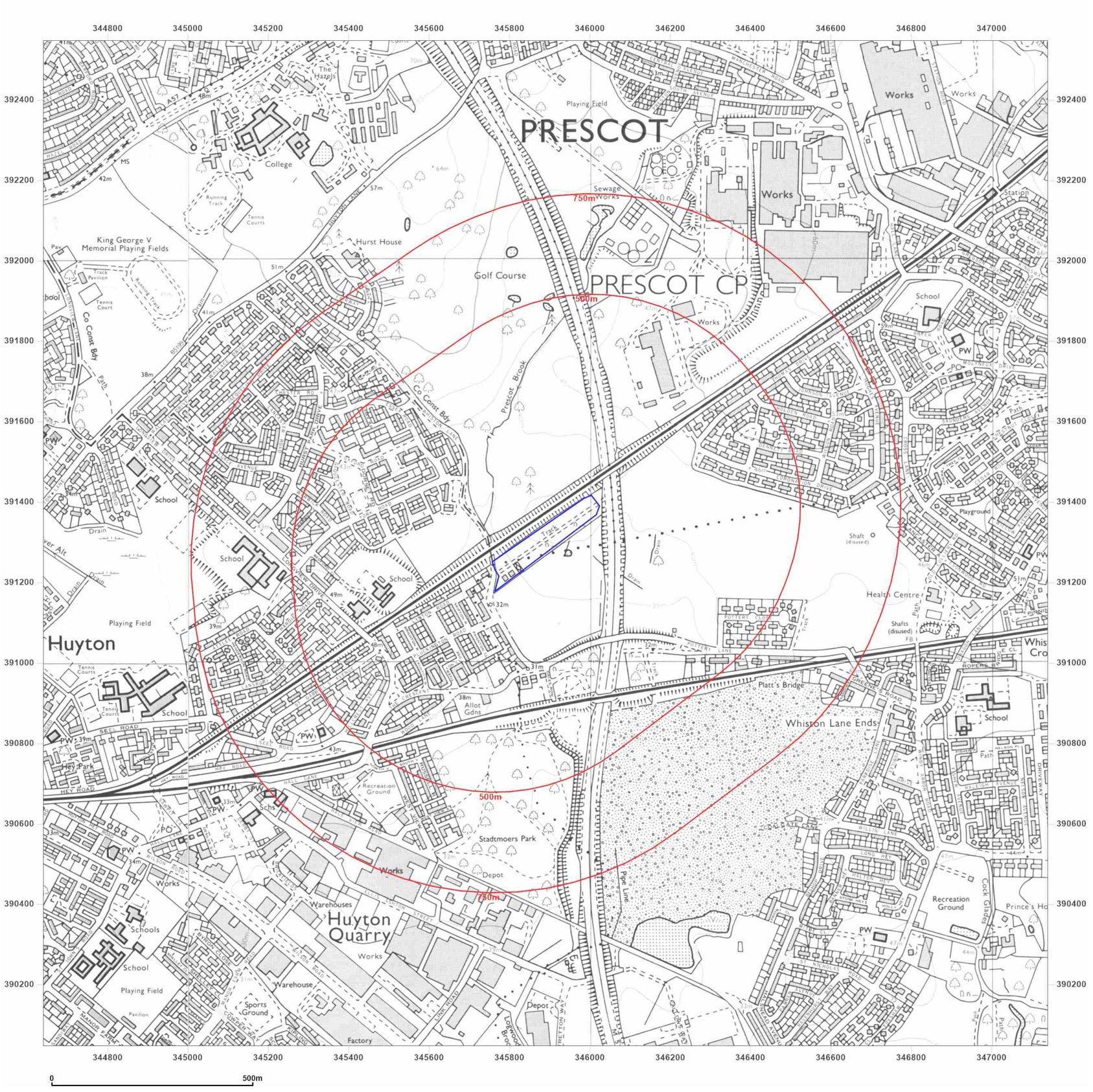
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Site Details:

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Client Ref: AG3533-23
Report Ref: GS-G8O-PTH-NNK-7AV
Grid Ref: 345889, 391297

Map Name: National Grid

Map date: **1989-1990**

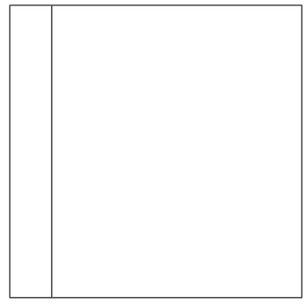
Scale: 1:10,000

Printed at: 1:10,000

N
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Surveyed 1987
Revised 1989
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1989
Revised 1990
Edition N/A
Copyright N/A
Levelled N/A



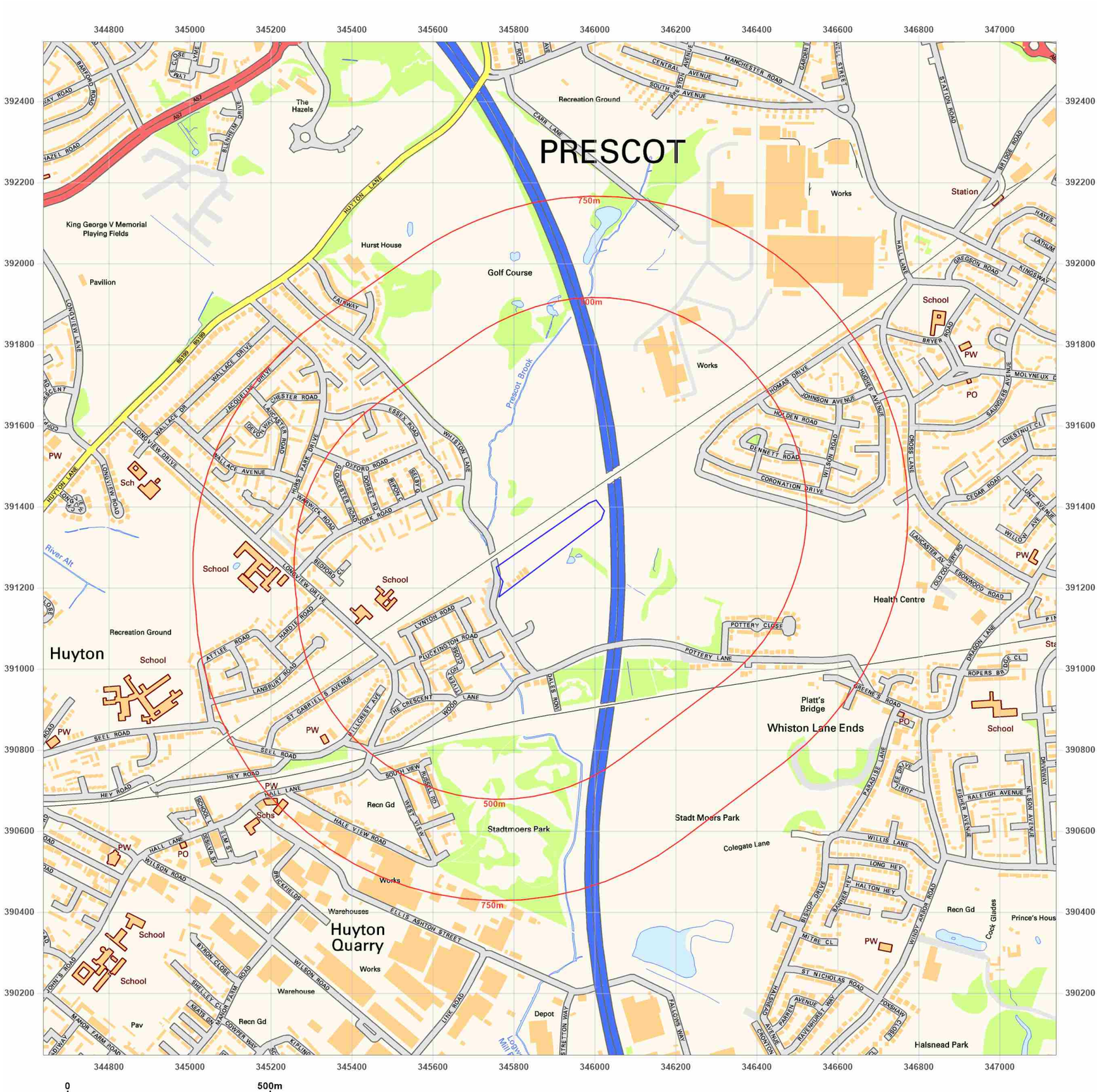
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Production date: 09 August 2023

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Site Details:

345882,391304

Client Ref: AG3533-23
Report Ref: GS-G8O-PTH-NNK-7AV
Grid Ref: 345889, 391297

Map Name: National Grid

Map date: **2001**

Scale: 1:10,000

Printed at: 1:10,000

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2001

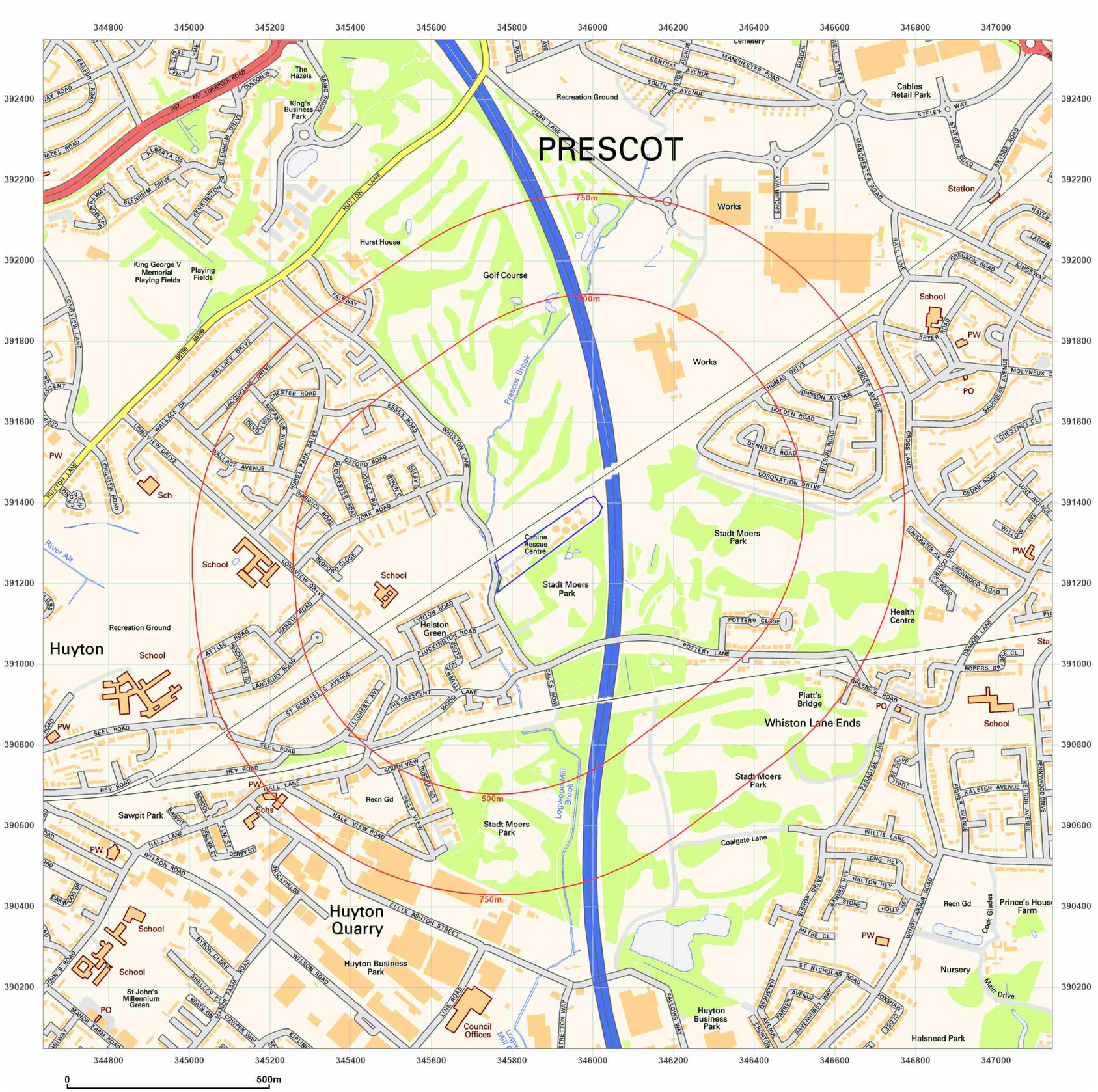
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Site Details:

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Client Ref: AG3533-23
Report Ref: GS-G8O-PTH-NNK-7AV
Grid Ref: 345889, 391297

Map Name: National Grid

Map date: **2010**

Scale: 1:10,000

Printed at: 1:10,000

N W E S

2010

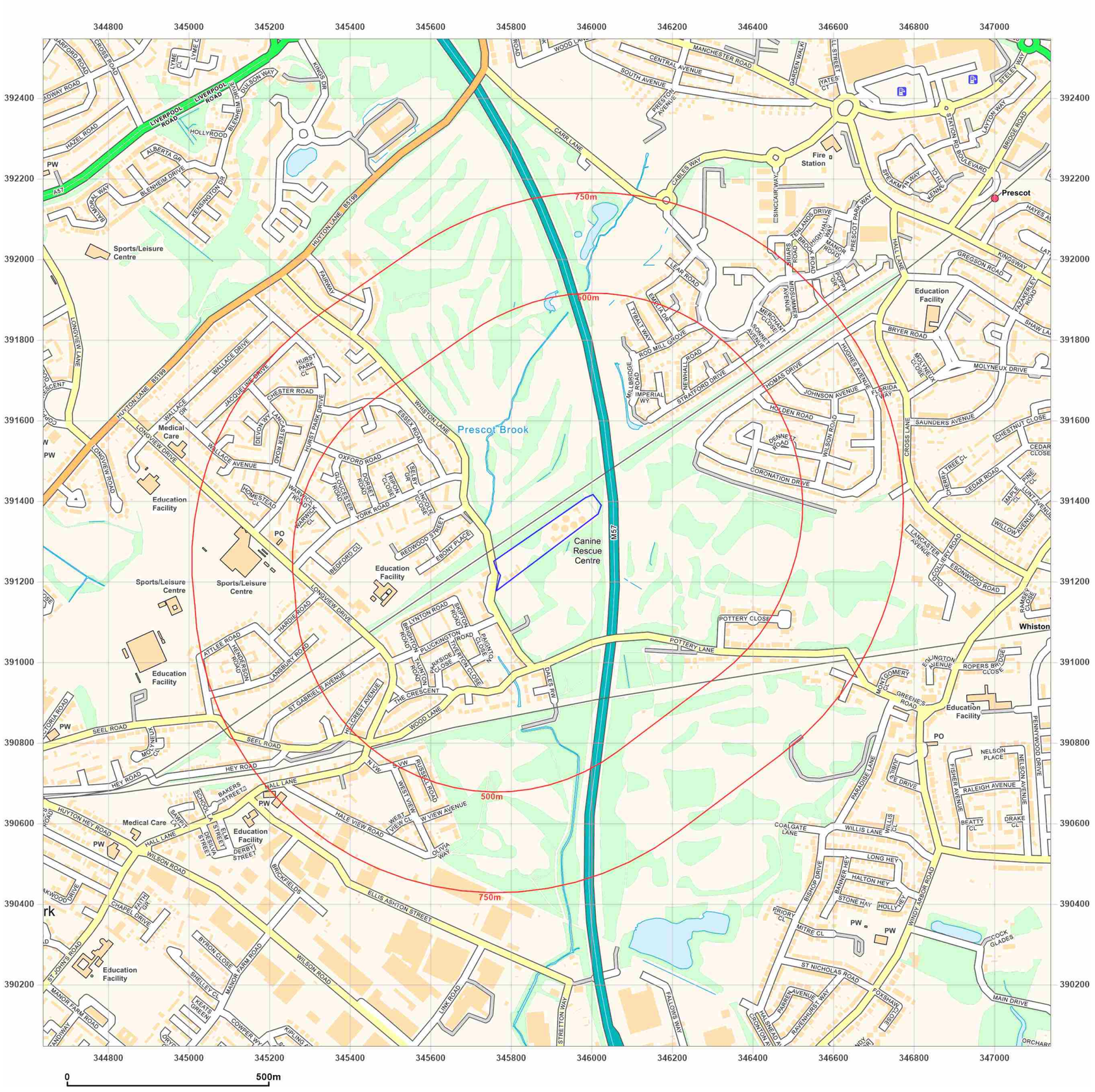
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Site Details:

345882,391304

Client Ref: AG3533-23
Report Ref: GS-G8O-PTH-NNK-7AV
Grid Ref: 345889, 391297

Map Name: National Grid

Map date: **2023**

Scale: 1:10,000

Printed at: 1:10,000

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2023

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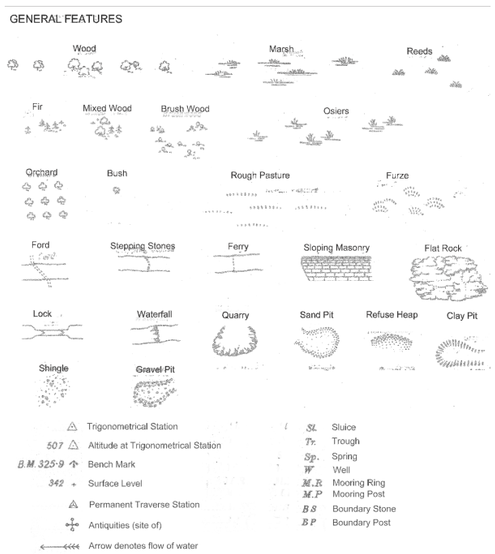
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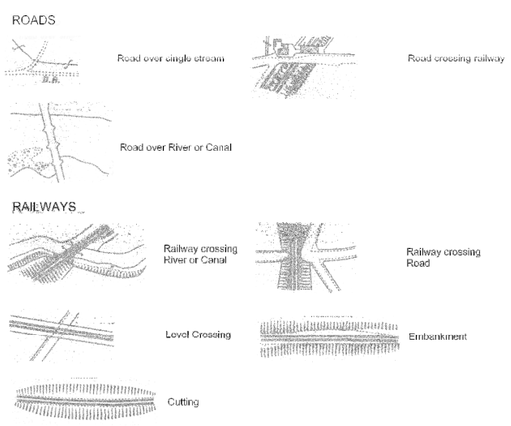
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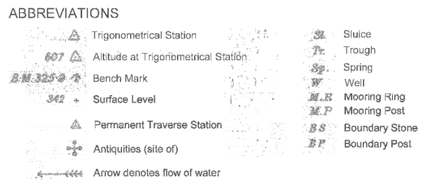
Production date: 09 August 2023

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

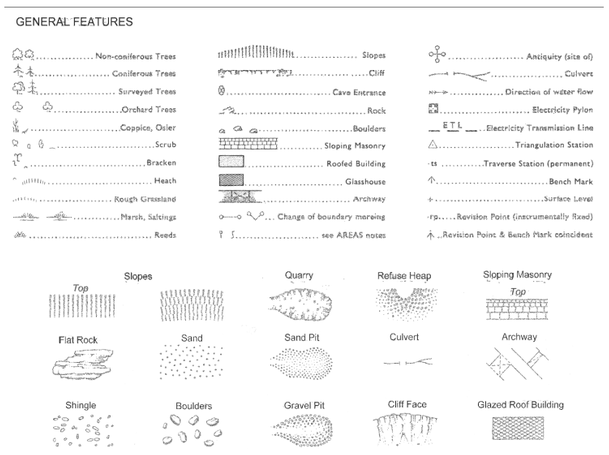
County Series 1:2,500 scale

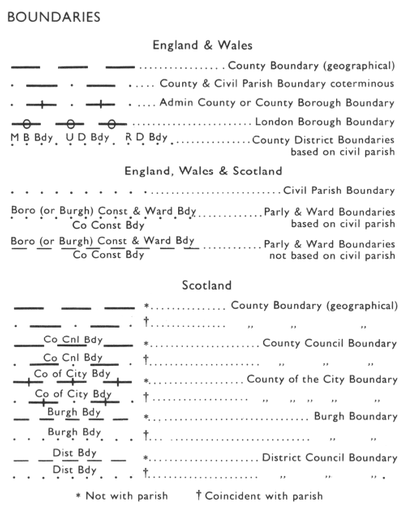


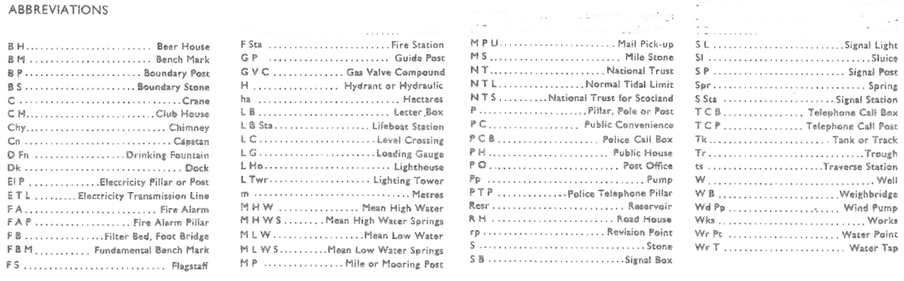




National Grid 1:2,500 / 1:1,250 scale







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Historical Map Pack Legend

County Series

1:1,250 scale

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County Series & National Grid

1:2,500 scale

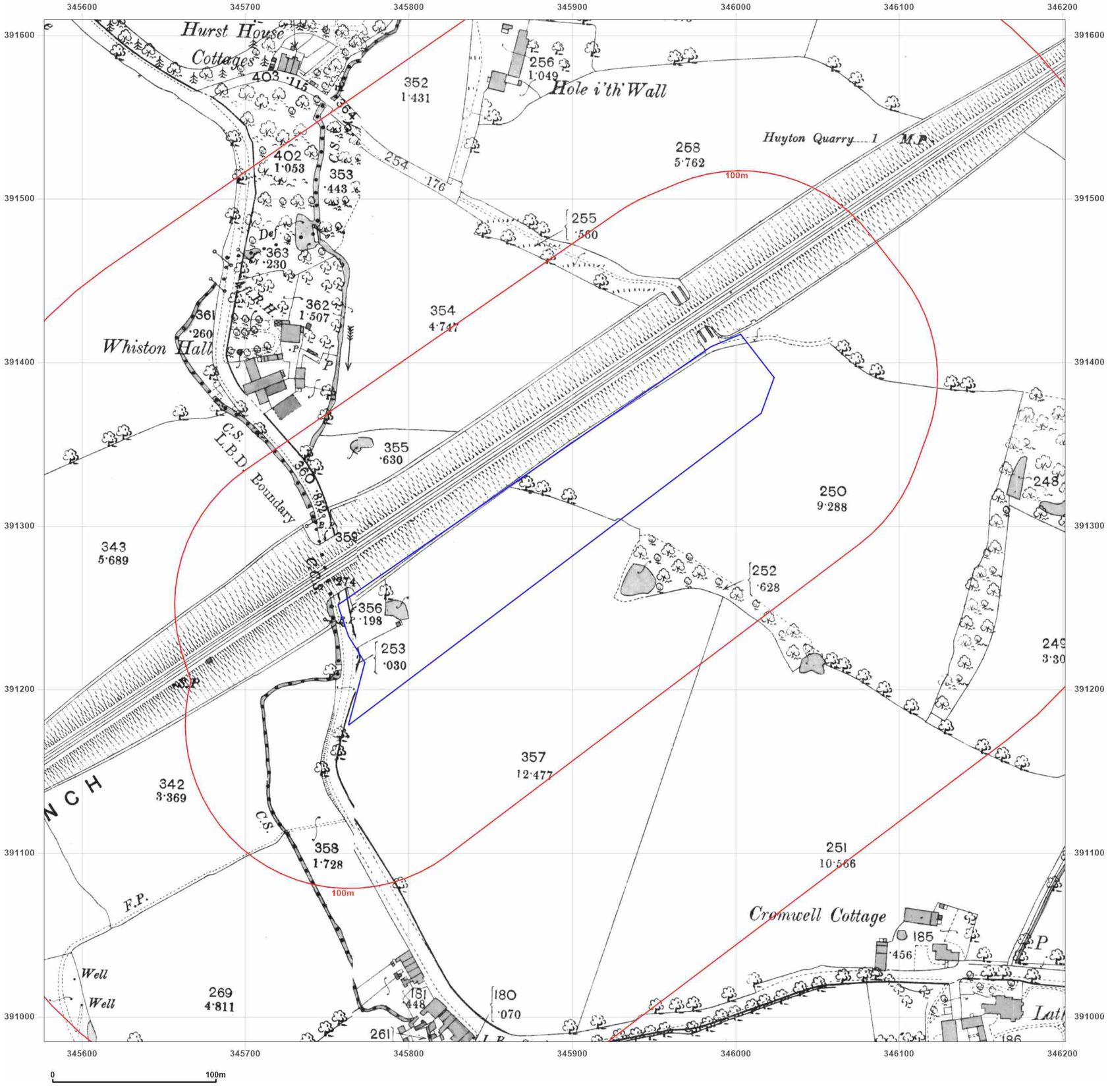
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Tel 08444159000

groundsureinsight@groundsure.com
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Site Details:

345882,391304

Client Ref: AG3533-23
Report Ref: GS-G8O-PTH-NNK-7AV
Grid Ref: 345889, 391297

Map Name: County Series

Map date: **1892**

Scale: 1:2,500

Printed at: 1:2,500

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

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

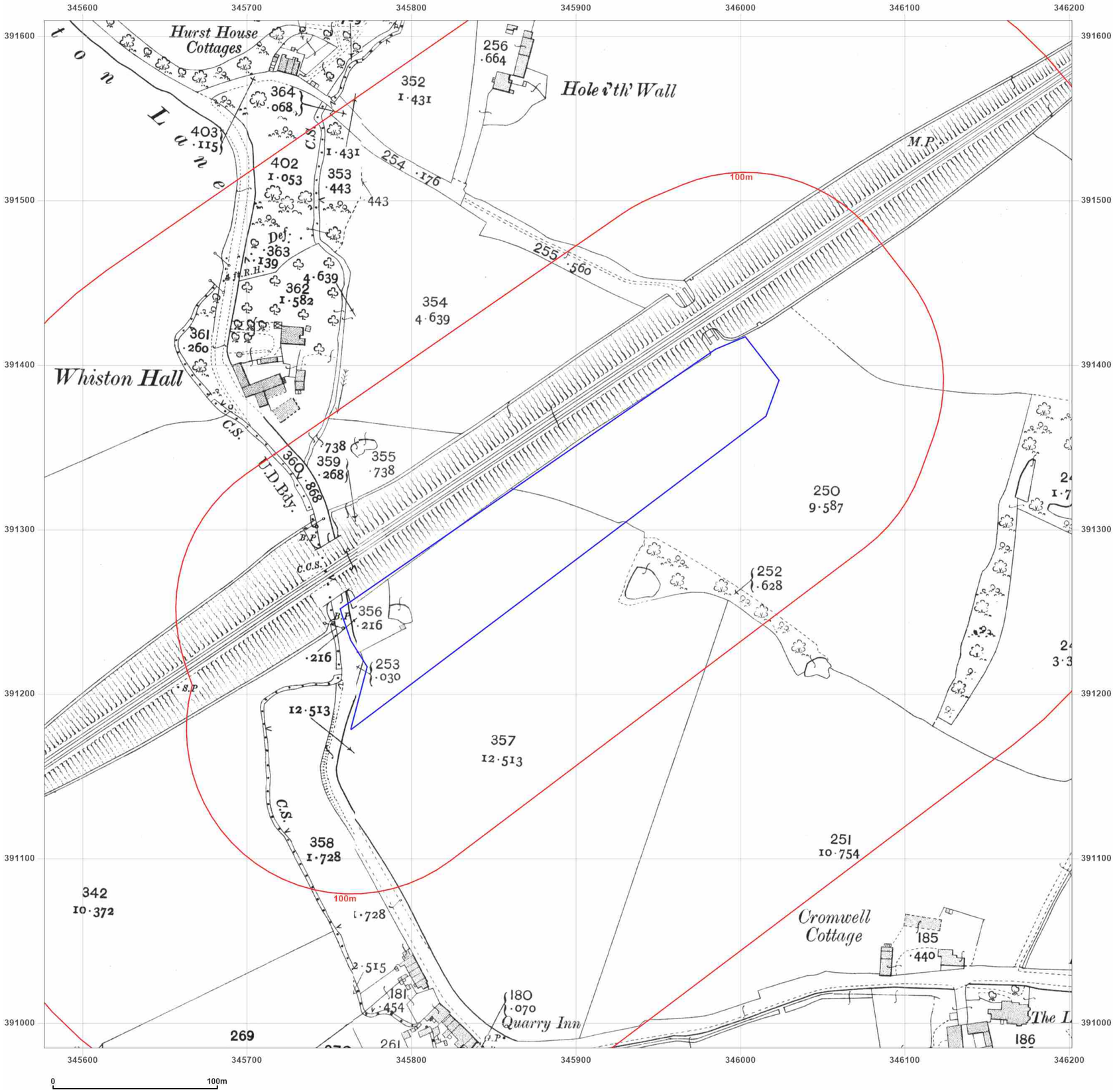
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Site Details:

345882,391304

Client Ref: AG3533-23
Report Ref: GS-G8O-PTH-NNK-7AV
Grid Ref: 345889, 391297

Map Name: County Series

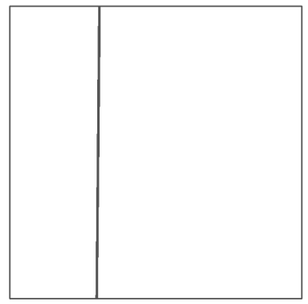
Map date: **1907**

Scale: 1:2,500

Printed at: 1:2,500

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



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

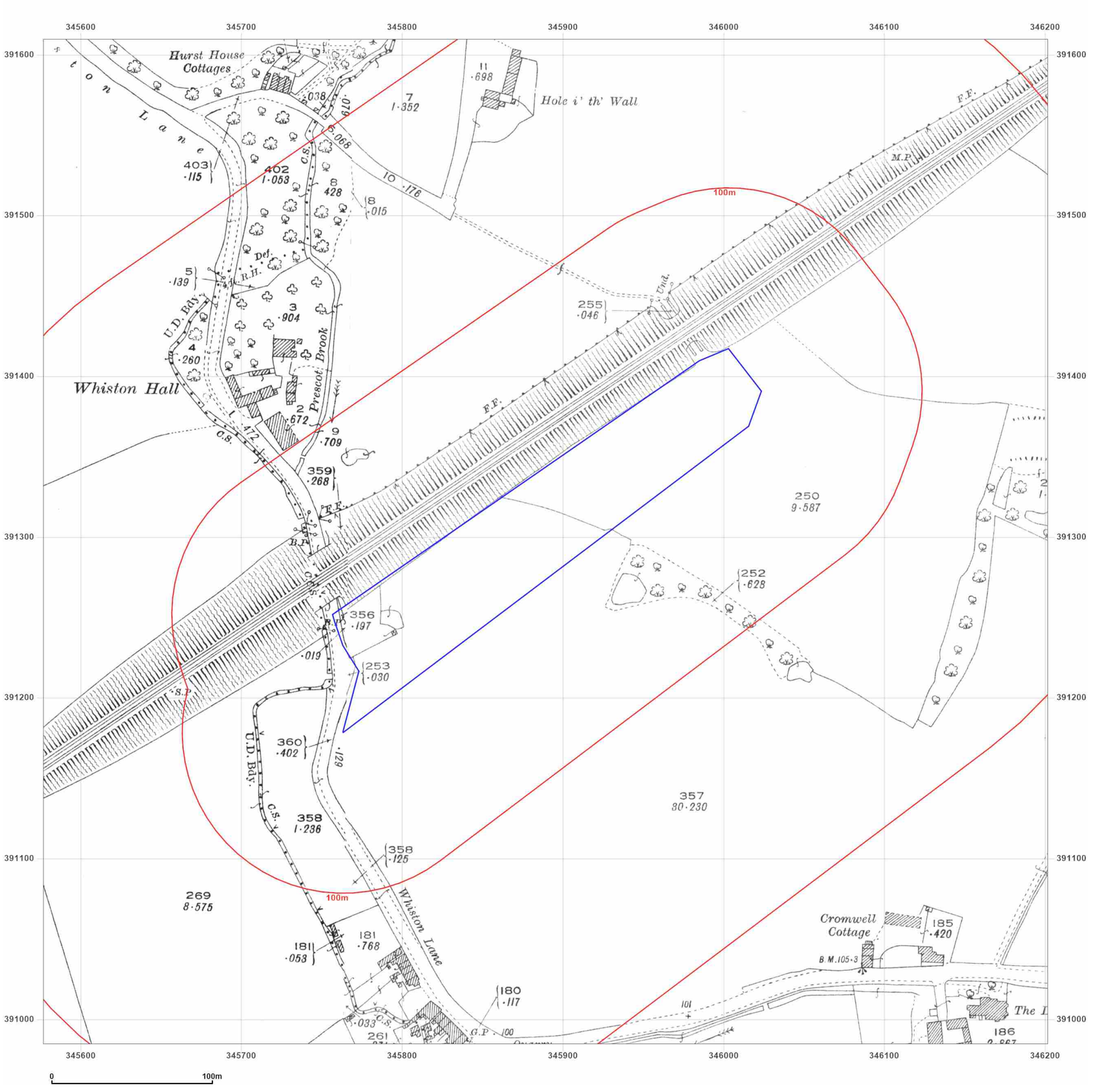
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Groundsure INSIGHTS

Site Details:

345882,391304

Client Ref: AG3533-23
Report Ref: GS-G8O-PTH-NNK-7AV
Grid Ref: 345889, 391297

Map Name: County Series

Map date: **1927**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1927
Revised 1927
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1927
Revised 1927
Edition N/A
Copyright N/A
Levelled N/A

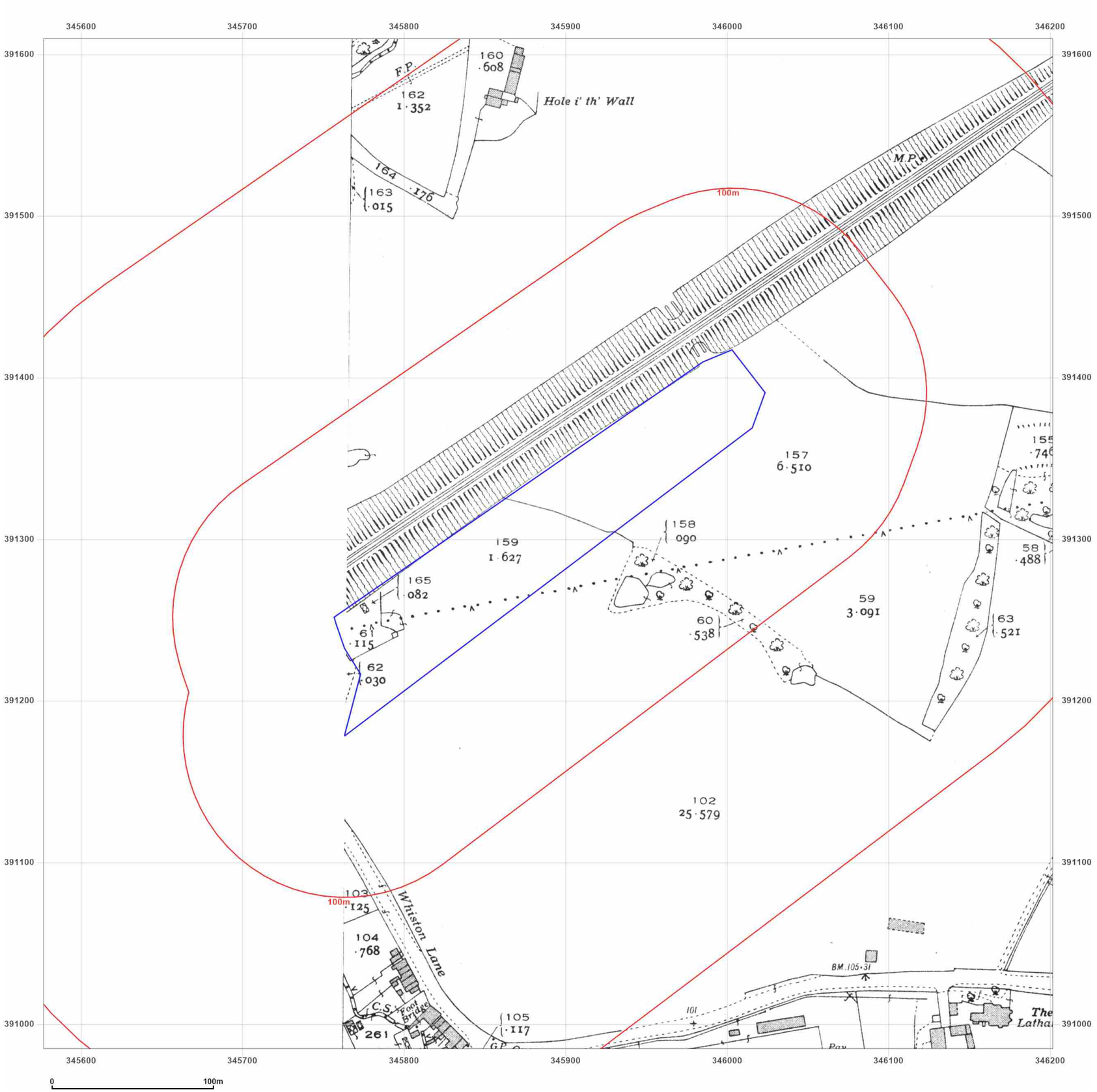
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Groundsure INSIGHTS

Site Details:

345882,391304

Client Ref: AG3533-23
Report Ref: GS-G8O-PTH-NNK-7AV
Grid Ref: 345889, 391297

Map Name: County Series

Map date: **1937**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1937
Revised 1937
Edition N/A
Copyright N/A
Levelled N/A

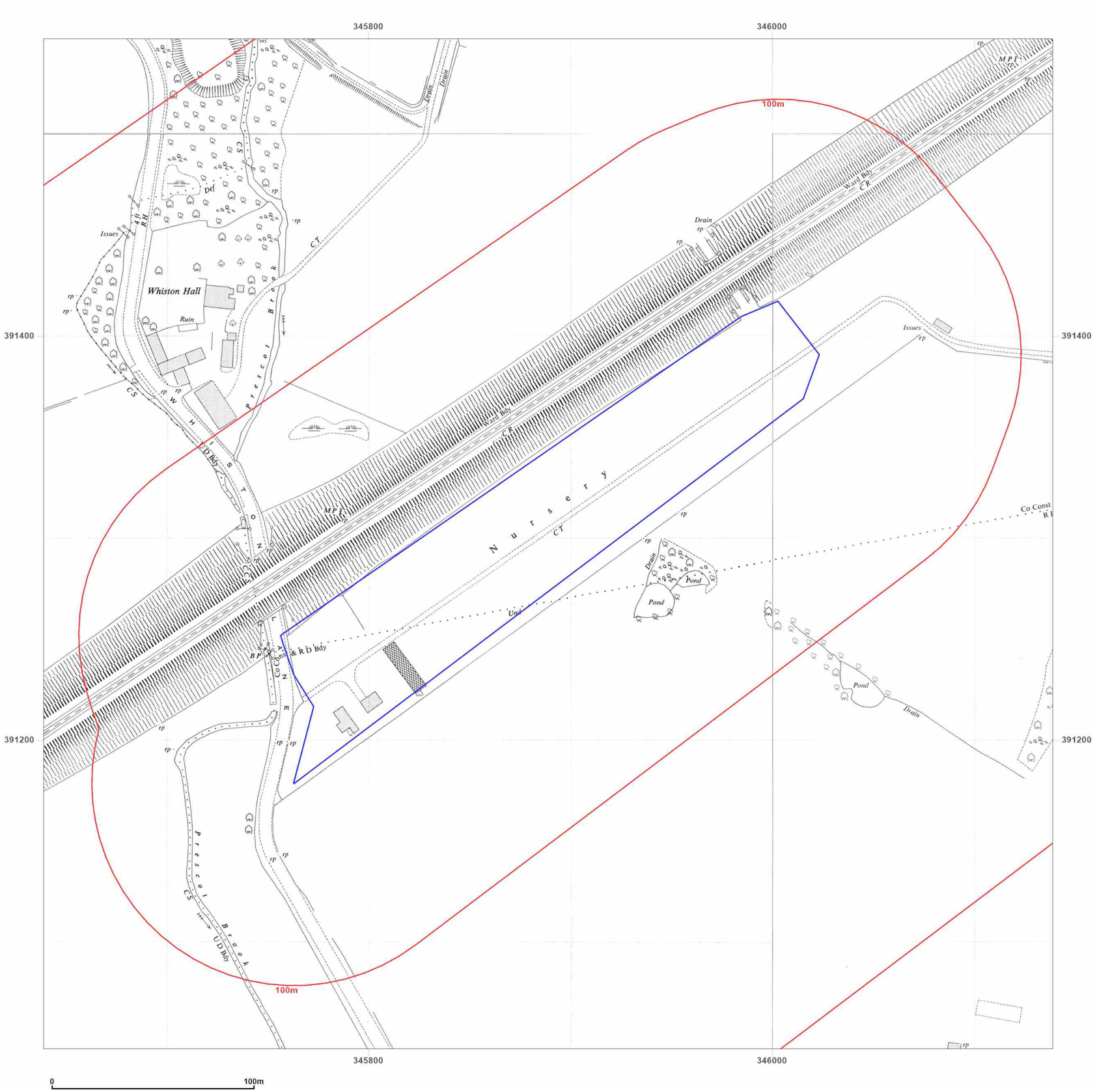
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Site Details:

345882,391304

Client Ref: AG3533-23
Report Ref: GS-G8O-PTH-NNK-7AV
Grid Ref: 345889, 391297

Map Name: National Grid

Map date: **1954-1955**

Scale: 1:1,250

Printed at: 1:2,000

N
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Surveyed 1954
Revised 1954
Edition N/A
Copyright N/A
Levelled 1926

Surveyed 1955
Revised 1955
Edition N/A
Copyright N/A
Levelled 1926

Surveyed 1954
Revised 1954
Edition N/A
Copyright N/A
Levelled 1926

Surveyed 1955
Revised 1955
Edition N/A
Copyright N/A
Levelled 1926

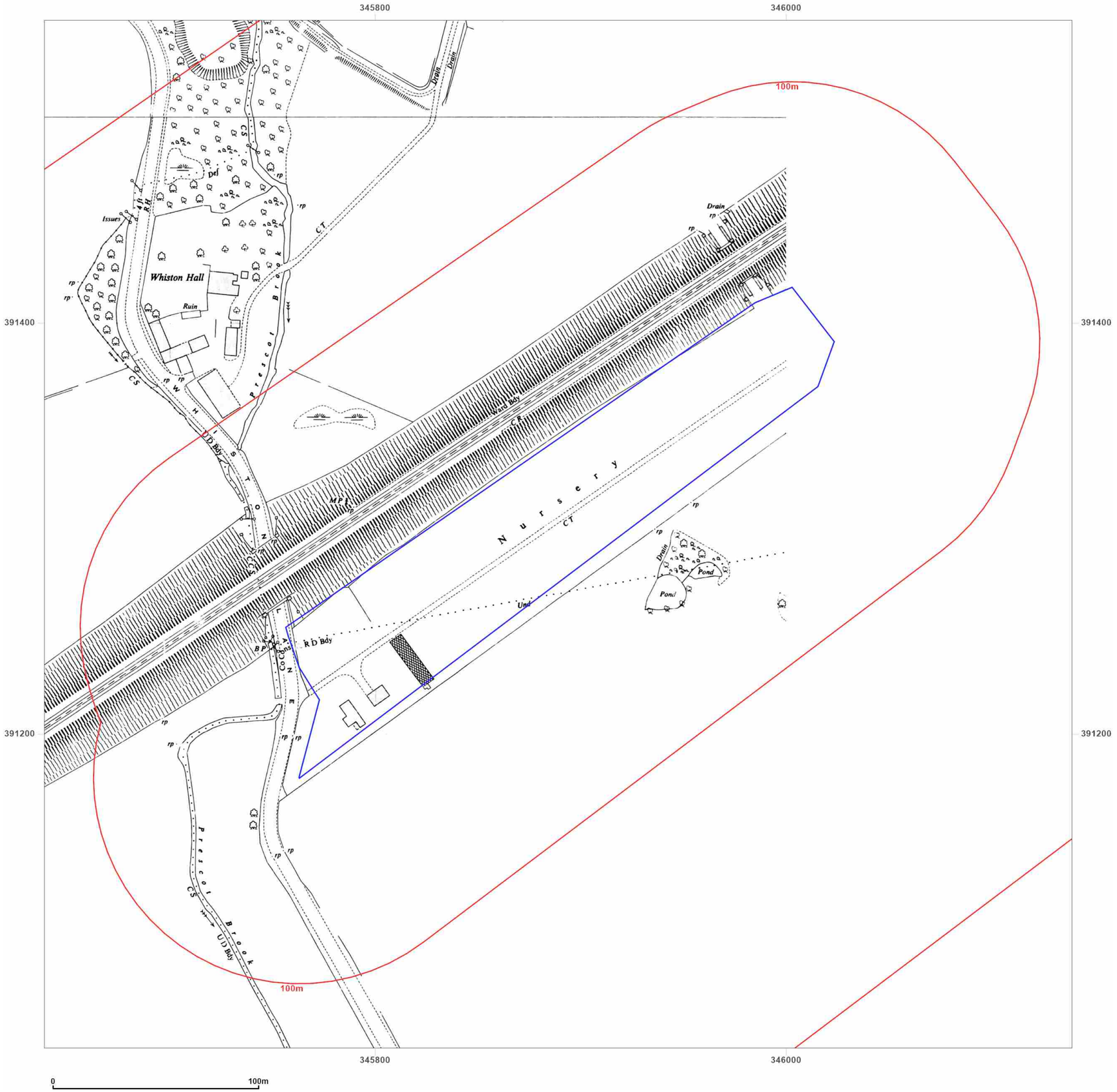
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Groundsure INSIGHTS

Site Details:

345882,391304

Client Ref: AG3533-23
Report Ref: GS-G8O-PTH-NNK-7AV
Grid Ref: 345889, 391297

Map Name: National Grid

Map date: **1955**

Scale: 1:1,250

Printed at: 1:2,000

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

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

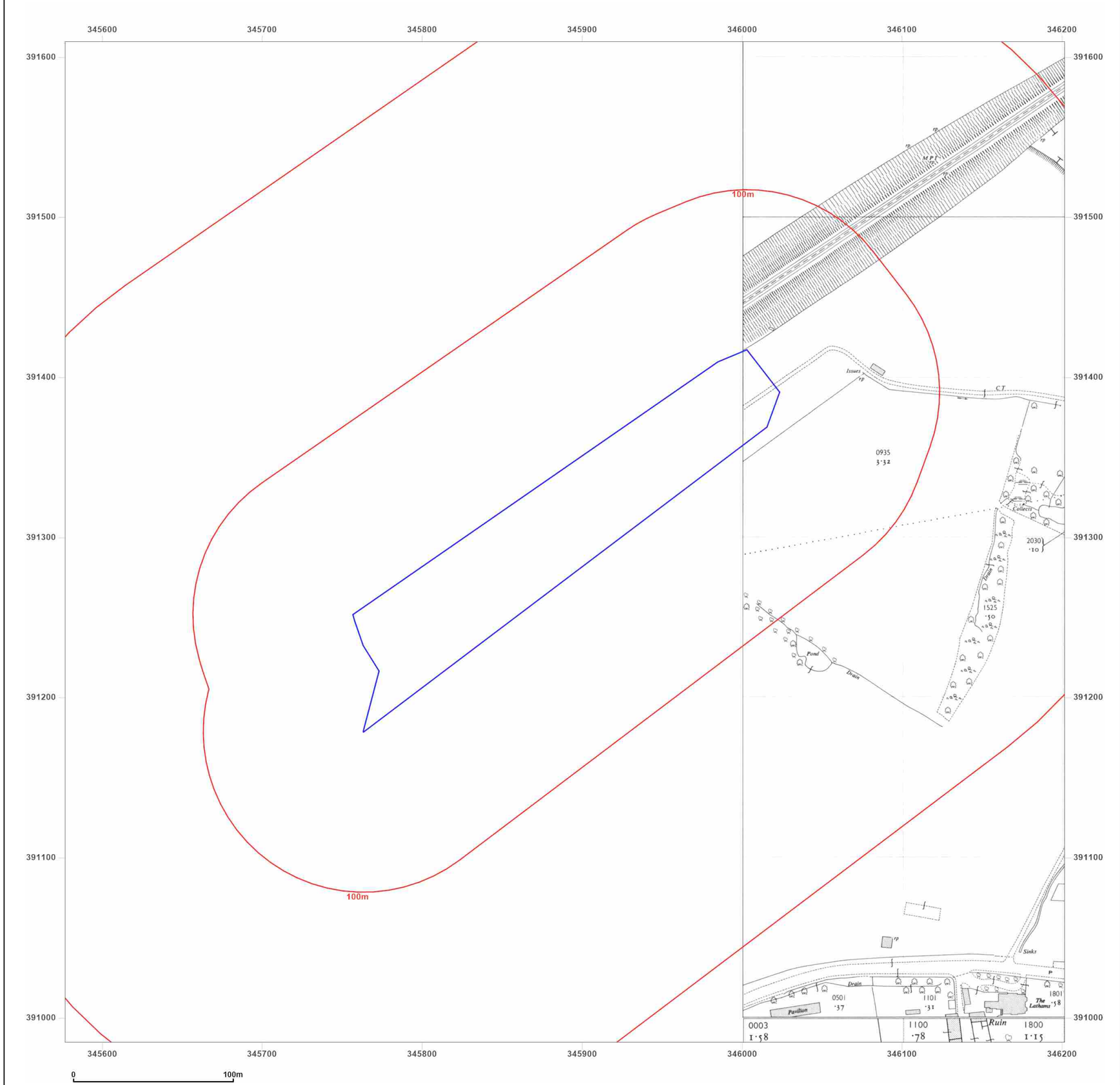
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Groundsure INSIGHTS

Site Details:

345882,391304

Client Ref: AG3533-23
Report Ref: GS-G8O-PTH-NNK-7AV
Grid Ref: 345889, 391297

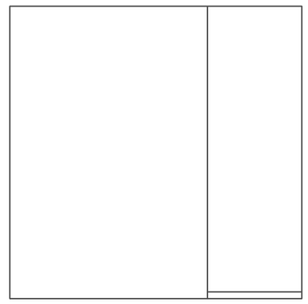
Map Name: National Grid

Map date: **1956-1959**

Scale: 1:2,500

Printed at: 1:2,500

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Surveyed 1955
Revised 1955
Edition 1956
Copyright N/A
Levelled 1926

Surveyed 1958
Revised 1958
Edition N/A
Copyright 1959
Levelled 1926

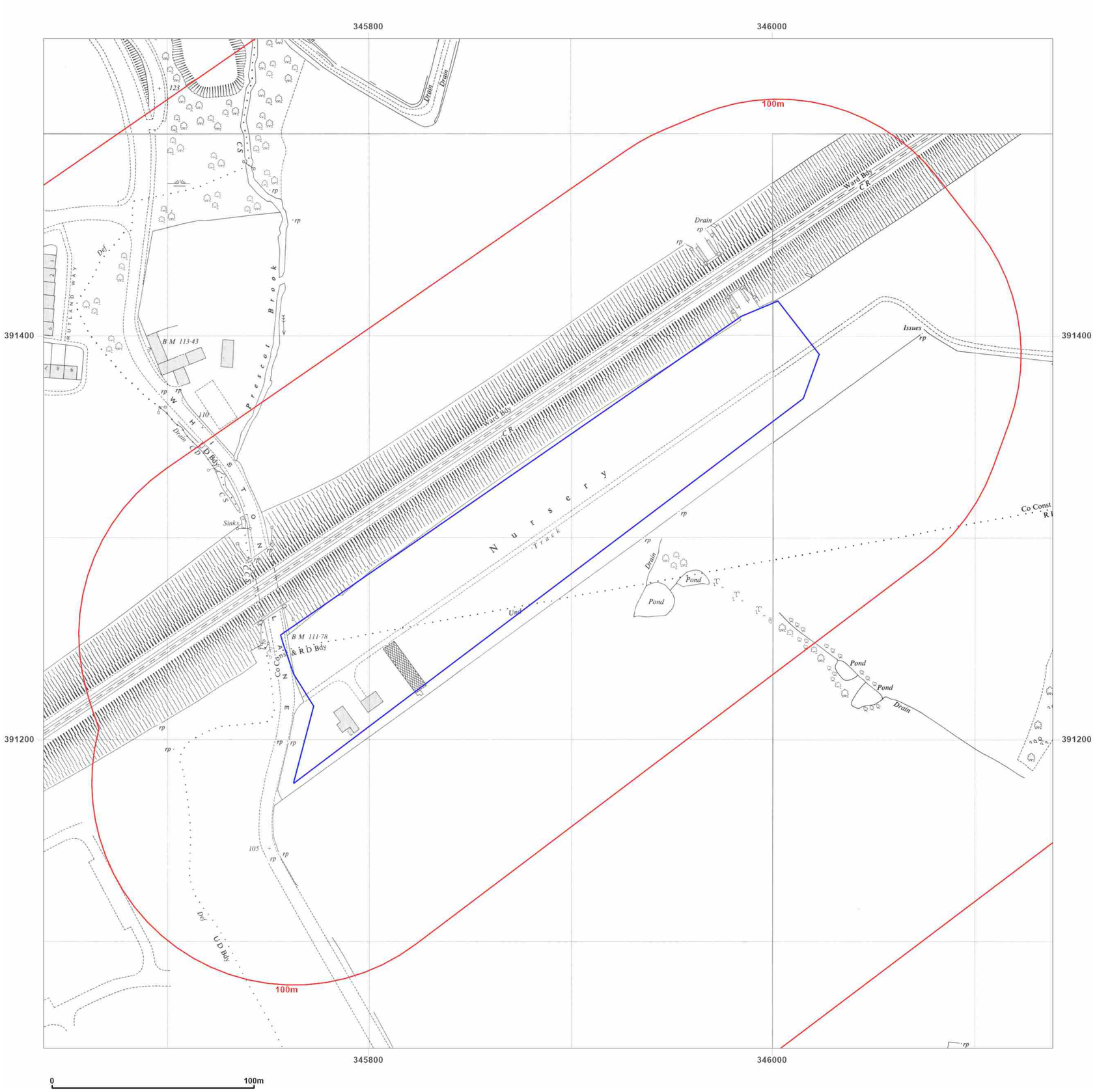
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Site Details:

345882,391304

Client Ref: AG3533-23
Report Ref: GS-G8O-PTH-NNK-7AV
Grid Ref: 345889, 391297

Map Name: National Grid

Map date: **1961-1966**

Scale: 1:1,250

Printed at: 1:2,000

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Surveyed 1954
Revised 1966
Edition N/A
Copyright 1966
Levelled 1957

Surveyed 1954 Revised 1966 Edition N/A Copyright 1966 Levelled 1957	Surveyed 1955 Revised 1960 Edition N/A Copyright 1961 Levelled 1957

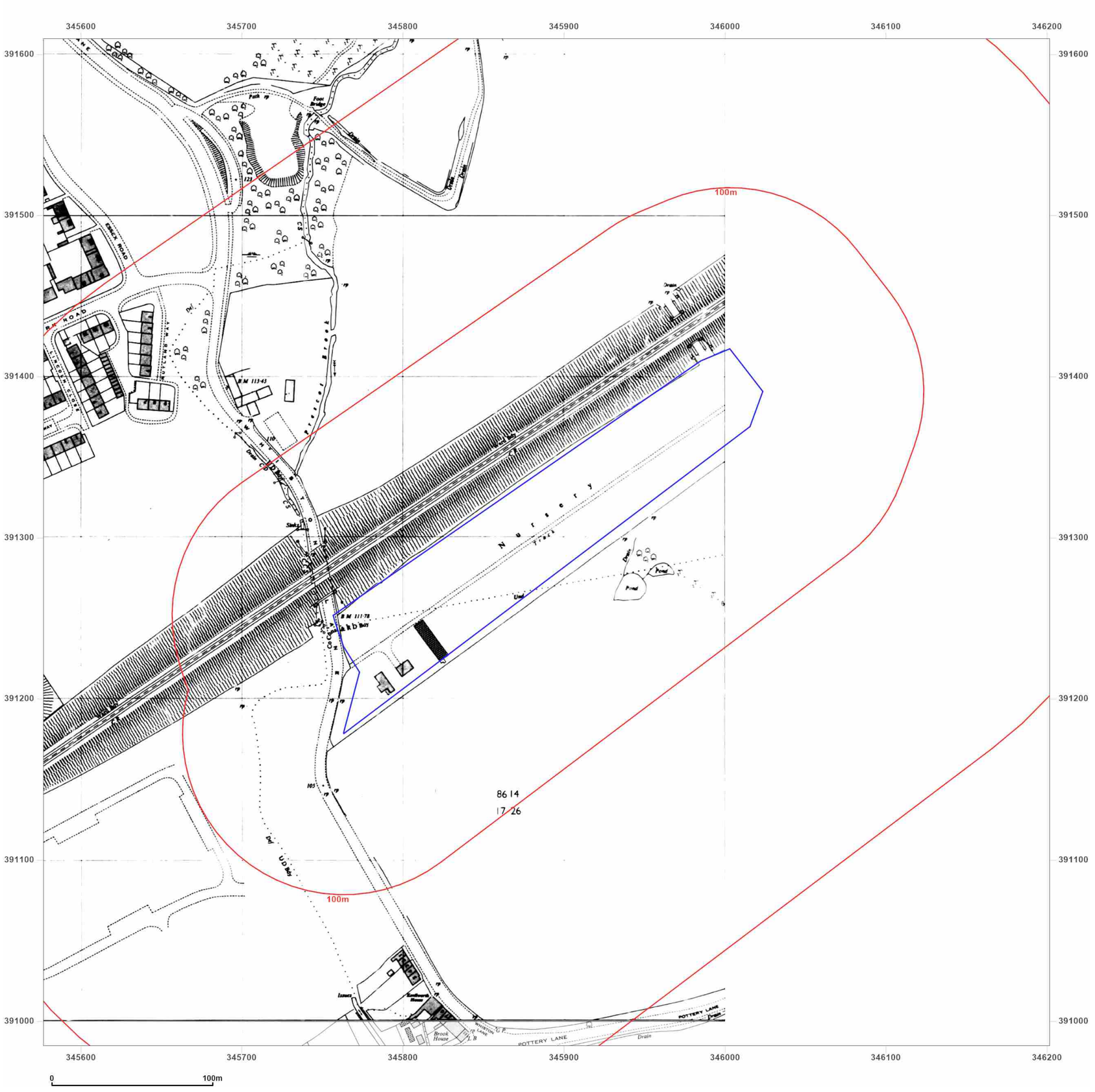
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Site Details:

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Client Ref: AG3533-23
Report Ref: GS-G8O-PTH-NNK-7AV
Grid Ref: 345889, 391297

Map Name: National Grid

Map date: **1967-1970**

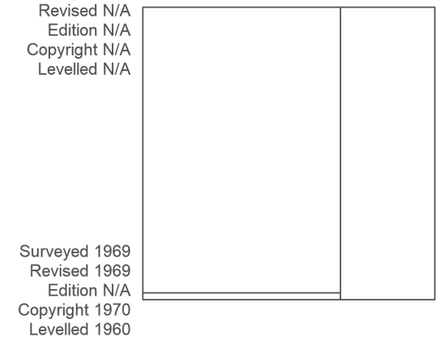
Scale: 1:2,500

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Revised 1969
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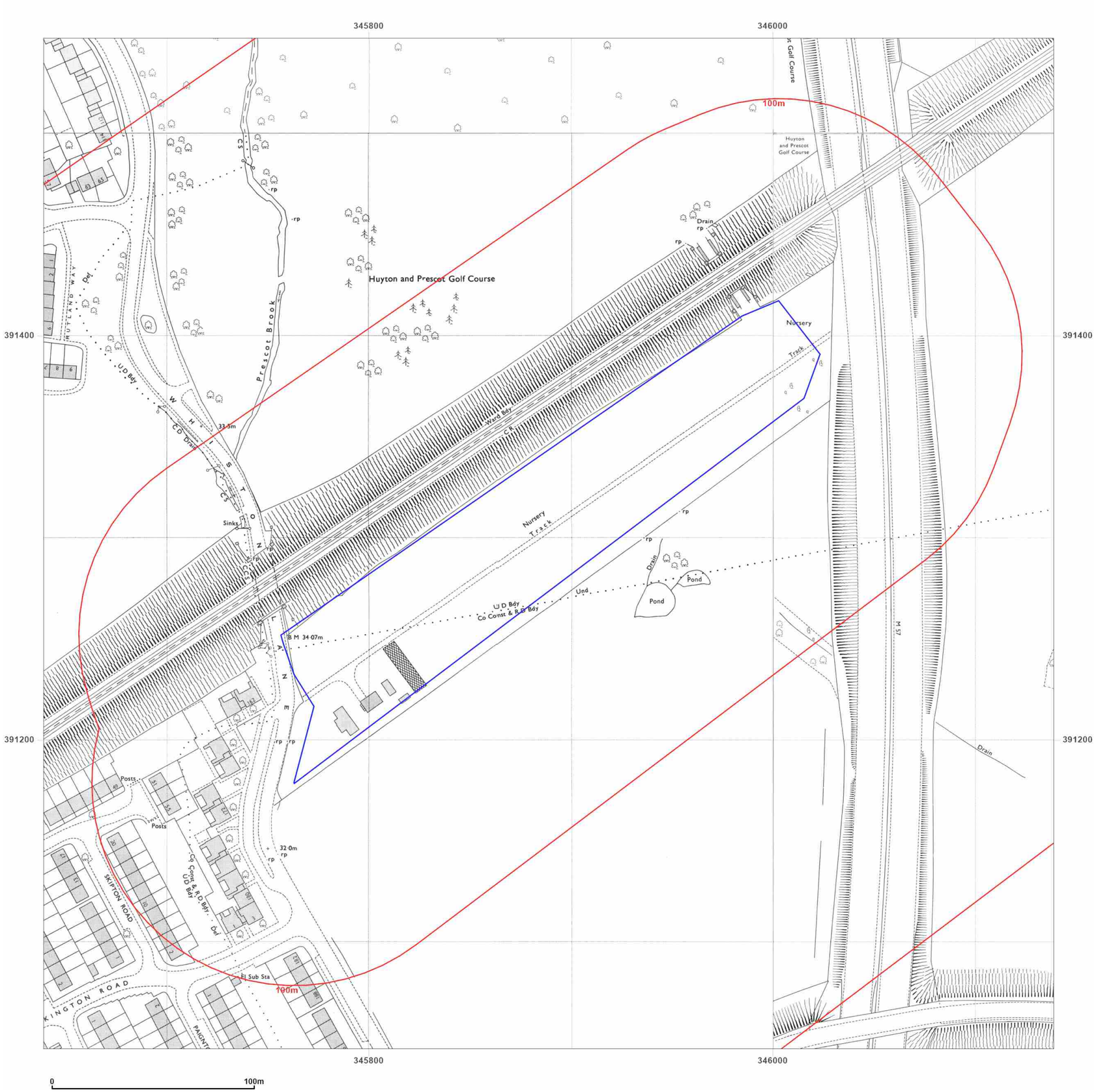
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Groundsure INSIGHTS

Site Details:

345882,391304

Client Ref: AG3533-23
Report Ref: GS-G8O-PTH-NNK-7AV
Grid Ref: 345889, 391297

Map Name: National Grid

Map date: **1972-1977**

Scale: 1:1,250

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Groundsure INSIGHTS

Site Details:

345882,391304

Client Ref: AG3533-23
Report Ref: GS-G8O-PTH-NNK-7AV
Grid Ref: 345889, 391297

Map Name: National Grid

Map date: **1993**

Scale: 1:1,250

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Groundsure INSIGHTS

Site Details:

345882,391304

Client Ref: AG3533-23
Report Ref: GS-G8O-PTH-NNK-7AV
Grid Ref: 345889, 391297

Map Name: National Grid

Map date: **1994**

Scale: 1:1,250

Printed at: 1:2,000

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Site Details:

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Client Ref: AG3533-23
Report Ref: GS-G8O-PTH-NNK-7AV
Grid Ref: 345889, 391297

Map Name: National Grid

Map date: **1994**

Scale: 1:1,250

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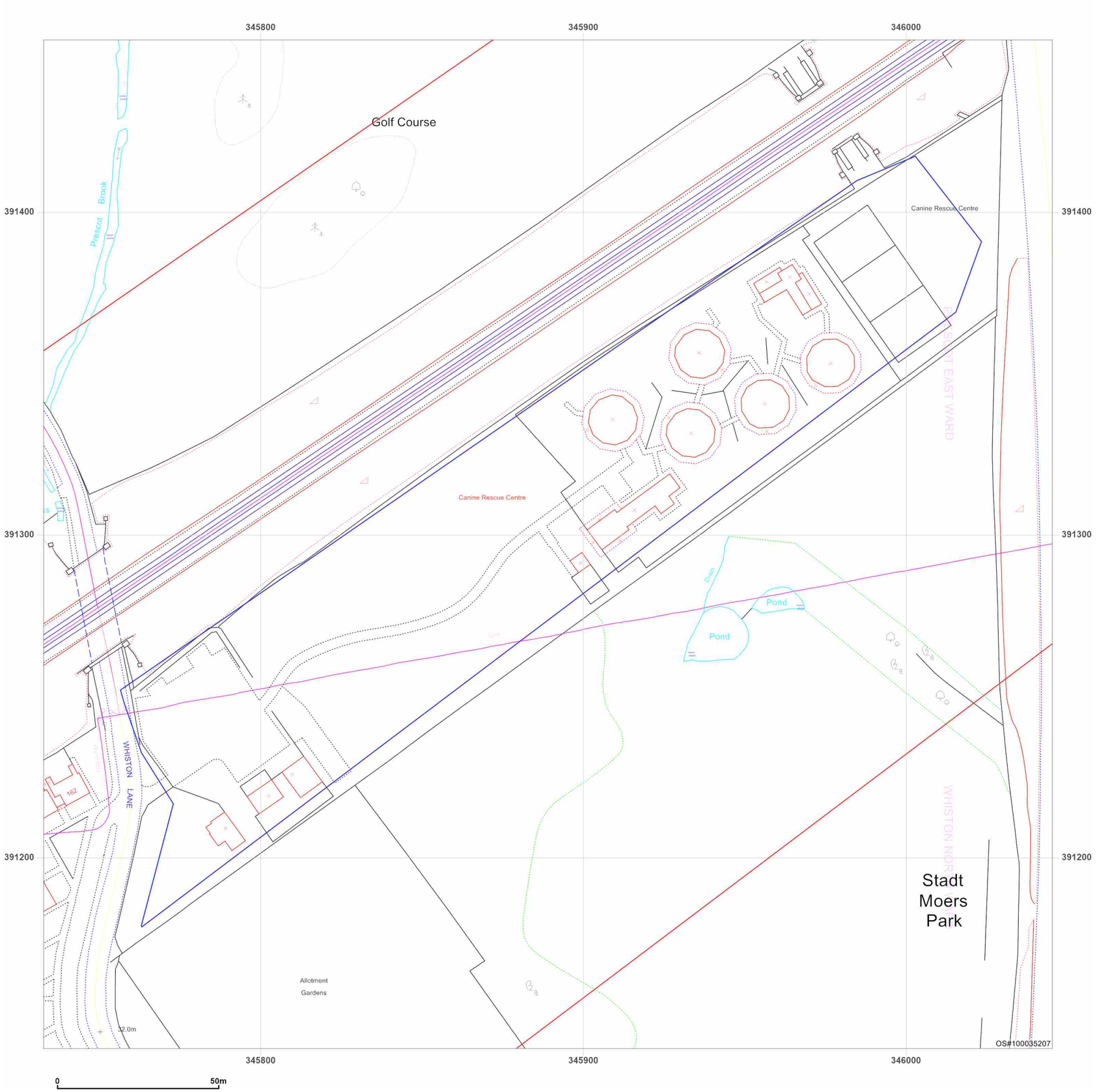
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Site Details:

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Client Ref: AG3533-23
Report Ref: GS-G8O-PTH-NNK-7AV
Grid Ref: 345889, 391297

Map Name: LandLine
Map date: **2003**
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Groundsure LOCATION INTELLIGENCE

Enviro+Geo Insight

345882,391304,

Order Details

Date: 09/08/2023

Your ref: AG3533-23

Our Ref: GS-P9T-XQC-2UV-G35

Site Details

Location: 345780 391251

Area: 1.73 ha

Authority: Knowsley Metropolitan Borough Council ↗



Summary of findings p. 2 >

OS MasterMap site plan p.13 >

Aerial image p. 9 >

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info@groundsure.com ↗
01273 257 755

Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
14 >	1.1 >	Historical industrial land uses >	1	3	11	54	-
17 >	1.2 >	Historical tanks >	0	0	1	2	-
18 >	1.3 >	Historical energy features >	0	0	3	9	-
18	1.4	Historical petrol stations	0	0	0	0	-
19 >	1.5 >	Historical garages >	0	0	0	2	-
19	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
20 >	2.1 >	Historical industrial land uses >	1	3	12	67	-
24 >	2.2 >	Historical tanks >	0	0	2	6	-
24 >	2.3 >	Historical energy features >	0	0	6	26	-
26	2.4	Historical petrol stations	0	0	0	0	-
26 >	2.5 >	Historical garages >	0	0	0	4	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
27	3.1	Active or recent landfill	0	0	0	0	-
27 >	3.2 >	Historical landfill (BGS records) >	0	0	1	1	-
28	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
28 >	3.4 >	Historical landfill (EA/NRW records) >	0	0	2	2	-
29	3.5	Historical waste sites	0	0	0	0	-
29	3.6	Licensed waste sites	0	0	0	0	-
29 >	3.7 >	Waste exemptions >	2	0	2	1	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
31 >	4.1 >	Recent industrial land uses >	0	0	2	-	-
32	4.2	Current or recent petrol stations	0	0	0	0	-
32	4.3	Electricity cables	0	0	0	0	-
32	4.4	Gas pipelines	0	0	0	0	-
32	4.5	Sites determined as Contaminated Land	0	0	0	0	-

32 >	4.6 >	Control of Major Accident Hazards (COMAH) >	0	0	1	0	-
33	4.7	Regulated explosive sites	0	0	0	0	-
33	4.8	Hazardous substance storage/usage	0	0	0	0	-
33 >	4.9 >	Historical licensed industrial activities (IPC) >	0	0	0	3	-
34 >	4.10 >	Licensed industrial activities (Part A(1)) >	0	0	0	5	-
35 >	4.11 >	Licensed pollutant release (Part A(2)/B) >	0	0	0	2	-
35	4.12	Radioactive Substance Authorisations	0	0	0	0	-
35 >	4.13 >	Licensed Discharges to controlled waters >	0	0	5	6	-
37 >	4.14 >	Pollutant release to surface waters (Red List) >	0	0	0	5	-
38	4.15	Pollutant release to public sewer	0	0	0	0	-
38 >	4.16 >	List 1 Dangerous Substances >	0	0	0	2	-
39 >	4.17 >	List 2 Dangerous Substances >	0	0	0	7	-
39 >	4.18 >	Pollution Incidents (EA/NRW) >	0	0	2	2	-
40	4.19	Pollution inventory substances	0	0	0	0	-
40	4.20	Pollution inventory waste transfers	0	0	0	0	-
40	4.21	Pollution inventory radioactive waste	0	0	0	0	-

Page	Section	Hydrogeology >	On site	0-50m	50-250m	250-500m	500-2000m
41 >	5.1 >	Superficial aquifer >	Identified (within 500m)				
42 >	5.2 >	Bedrock aquifer >	Identified (within 500m)				
43 >	5.3 >	Groundwater vulnerability >	Identified (within 50m)				
44	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
44	5.5	Groundwater vulnerability- local information	None (within 0m)				
45	5.6	Groundwater abstractions	0	0	0	0	0
46 >	5.7 >	Surface water abstractions >	0	0	0	0	2
46	5.8	Potable abstractions	0	0	0	0	0
47	5.9	Source Protection Zones	0	0	0	0	-
47	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

Page	Section	Hydrology >	On site	0-50m	50-250m	250-500m	500-2000m
48 >	6.1 >	Water Network (OS MasterMap) >	0	3	12	-	-

50 >	6.2 >	Surface water features >	0	1	9	-	-
50 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
50 >	6.4 >	WFD Surface water bodies >	0	1	0	-	-
51 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-
Page	Section	River and coastal flooding >	On site	0-50m	50-250m	250-500m	500-2000m
52 >	7.1 >	Risk of flooding from rivers and the sea >	High (within 50m)				
53	7.2	Historical Flood Events	0	0	0	-	-
53	7.3	Flood Defences	0	0	0	-	-
53	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
53	7.5	Flood Storage Areas	0	0	0	-	-
54 >	7.6 >	Flood Zone 2 >	Identified (within 50m)				
55 >	7.7 >	Flood Zone 3 >	Identified (within 50m)				
Page	Section	Surface water flooding >					
56 >	8.1 >	Surface water flooding >	1 in 30 year, Greater than 1.0m (within 50m)				
Page	Section	Groundwater flooding >					
58 >	9.1 >	Groundwater flooding >	Low (within 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
59	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
60	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
60	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
60	10.4	Special Protection Areas (SPA)	0	0	0	0	0
60	10.5	National Nature Reserves (NNR)	0	0	0	0	0
61	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
61 >	10.7 >	Designated Ancient Woodland >	0	0	0	0	2
61	10.8	Biosphere Reserves	0	0	0	0	0
61	10.9	Forest Parks	0	0	0	0	0
62	10.10	Marine Conservation Zones	0	0	0	0	0
62 >	10.11 >	Green Belt >	1	0	0	0	2
62	10.12	Proposed Ramsar sites	0	0	0	0	0

62	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
63	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
63	10.15	Nitrate Sensitive Areas	0	0	0	0	0
63 >	10.16 >	Nitrate Vulnerable Zones >	1	0	0	1	3
64 >	10.17 >	SSSI Impact Risk Zones >	1	-	-	-	-
65	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
66	11.1	World Heritage Sites	0	0	0	-	-
66	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
66	11.3	National Parks	0	0	0	-	-
66	11.4	Listed Buildings	0	0	0	-	-
67	11.5	Conservation Areas	0	0	0	-	-
67	11.6	Scheduled Ancient Monuments	0	0	0	-	-
67	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
68 >	12.1 >	Agricultural Land Classification >	Urban (within 250m)				
69	12.2	Open Access Land	0	0	0	-	-
69 >	12.3 >	Tree Felling Licences >	0	5	9	-	-
70	12.4	Environmental Stewardship Schemes	0	0	0	-	-
70	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations >	On site	0-50m	50-250m	250-500m	500-2000m
71 >	13.1 >	Priority Habitat Inventory >	0	3	9	-	-
72	13.2	Habitat Networks	0	0	0	-	-
72	13.3	Open Mosaic Habitat	0	0	0	-	-
72	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	Geology 1:10,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
74 >	14.1 >	10k Availability >	Identified (within 500m)				
75	14.2	Artificial and made ground (10k)	0	0	0	0	-
76	14.3	Superficial geology (10k)	0	0	0	0	-

76	14.4	Landslip (10k)	0	0	0	0	-
77	14.5	Bedrock geology (10k)	0	0	0	0	-
77	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
78 >	15.1 >	50k Availability >	Identified (within 500m)				
79	15.2	Artificial and made ground (50k)	0	0	0	0	-
79	15.3	Artificial ground permeability (50k)	0	0	-	-	-
80 >	15.4 >	Superficial geology (50k) >	1	0	0	0	-
81 >	15.5 >	Superficial permeability (50k) >	Identified (within 50m)				
81	15.6	Landslip (50k)	0	0	0	0	-
81	15.7	Landslip permeability (50k)	None (within 50m)				
82 >	15.8 >	Bedrock geology (50k) >	3	1	3	5	-
83 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
84 >	15.10 >	Bedrock faults and other linear features (50k) >	5	2	4	15	-
Page	Section	**Boreholes >**	On site	0-50m	50-250m	250-500m	500-2000m
86 >	16.1 >	BGS Boreholes >	0	0	2	-	-
Page	Section	**Natural ground subsidence >**					
87 >	17.1 >	Shrink swell clays >	Very low (within 50m)				
88 >	17.2 >	Running sands >	Very low (within 50m)				
89 >	17.3 >	Compressible deposits >	Negligible (within 50m)				
90 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
91 >	17.5 >	Landslides >	Low (within 50m)				
93 >	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
95 >	18.1 >	BritPits >	0	0	0	8	-
97 >	18.2 >	Surface ground workings >	0	5	13	-	-
98 >	18.3 >	Underground workings >	0	0	0	7	42
100	18.4	Underground mining extents	0	0	0	0	-
100 >	18.5 >	Historical Mineral Planning Areas >	0	0	0	2	-

101	18.6	Non-coal mining	0	0	0	0	0
101	18.7	JPB mining areas	None (within 0m)				
101	18.8	The Coal Authority non-coal mining	0	0	0	0	-
102	18.9	Researched mining	0	0	0	0	-
102	18.10	Mining record office plans	0	0	0	0	-
102	18.11	BGS mine plans	0	0	0	0	-
102 >	**18.12 >**	**Coal mining >**	Identified (within 0m)				
103	18.13	Brine areas	None (within 0m)				
103	18.14	Gypsum areas	None (within 0m)				
103	18.15	Tin mining	None (within 0m)				
103	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m
104	19.1	Natural cavities	0	0	0	0	-
104	19.2	Mining cavities	0	0	0	0	0
104	19.3	Reported recent incidents	0	0	0	0	-
104	19.4	Historical incidents	0	0	0	0	-
105	19.5	National karst database	0	0	0	0	-
Page	Section	**Radon >**					
106 >	**20.1 >**	**Radon >**	Less than 1% (within 0m)				
Page	Section	**Soil chemistry >**	On site	0-50m	50-250m	250-500m	500-2000m
108 >	**21.1 >**	**BGS Estimated Background Soil Chemistry >**	4	1	-	-	-
108	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
109	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
110	22.1	Underground railways (London)	0	0	0	-	-
110	22.2	Underground railways (Non-London)	0	0	0	-	-
111	22.3	Railway tunnels	0	0	0	-	-
111	22.4	Historical railway and tunnel features	0	0	0	-	-
111	22.5	Royal Mail tunnels	0	0	0	-	-

111	22.6	Historical railways	0	0	0	-	-
111 >	**22.7 >**	**Railways >**	0	10	4	-	-
112	22.8	Crossrail 1	0	0	0	0	-
112	22.9	Crossrail 2	0	0	0	0	-
113	22.10	HS2	0	0	0	0	-

Recent aerial photograph



Capture Date: 22/04/2019

Site Area: 1.73ha

Recent site history - 2015 aerial photograph



Capture Date: 11/06/2015

Site Area: 1.73ha

Recent site history - 2005 aerial photograph



Capture Date: 02/09/2005

Site Area: 1.73ha

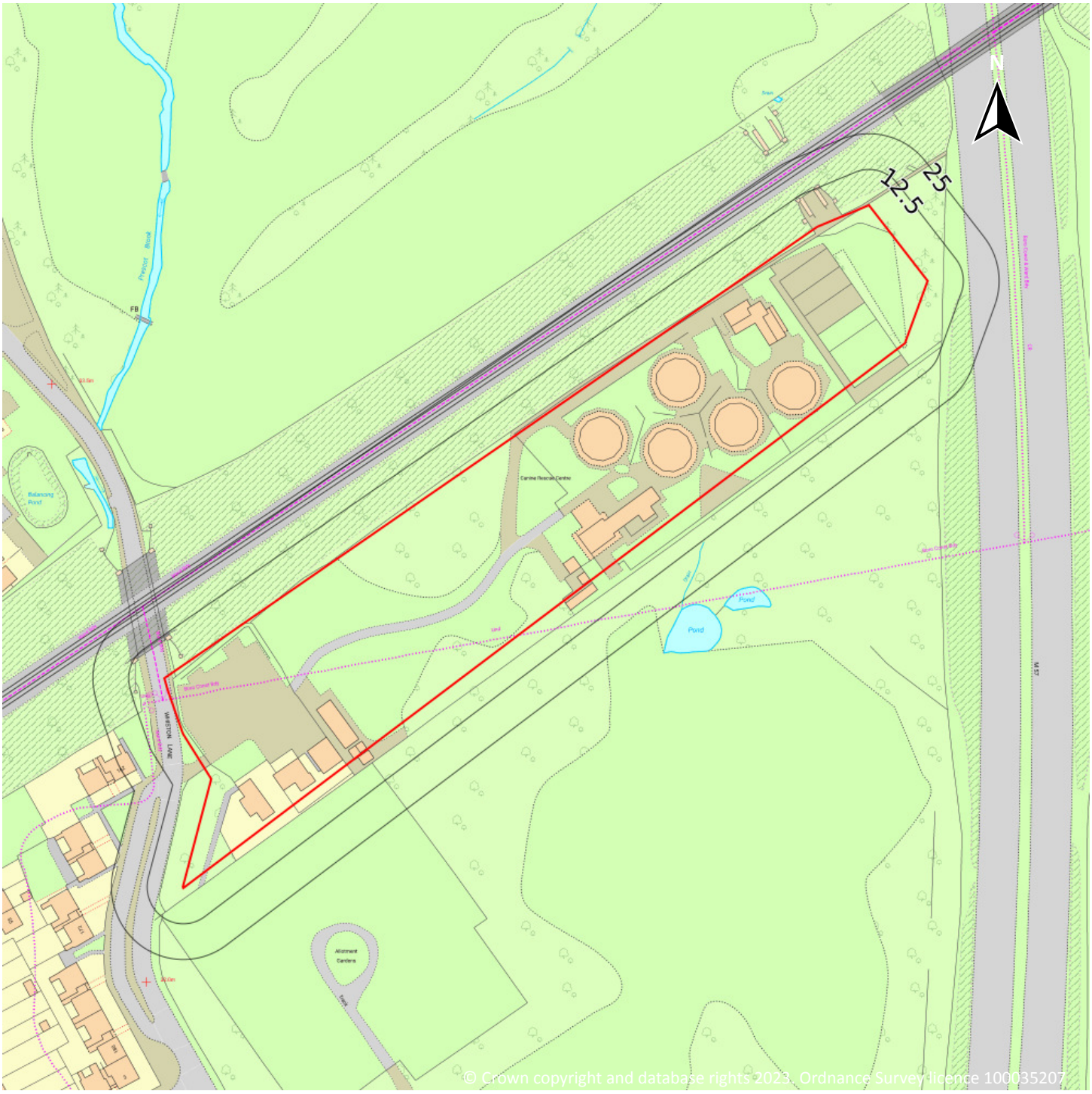
Recent site history - 2000 aerial photograph



Capture Date: 21/07/2000

Site Area: 1.73ha

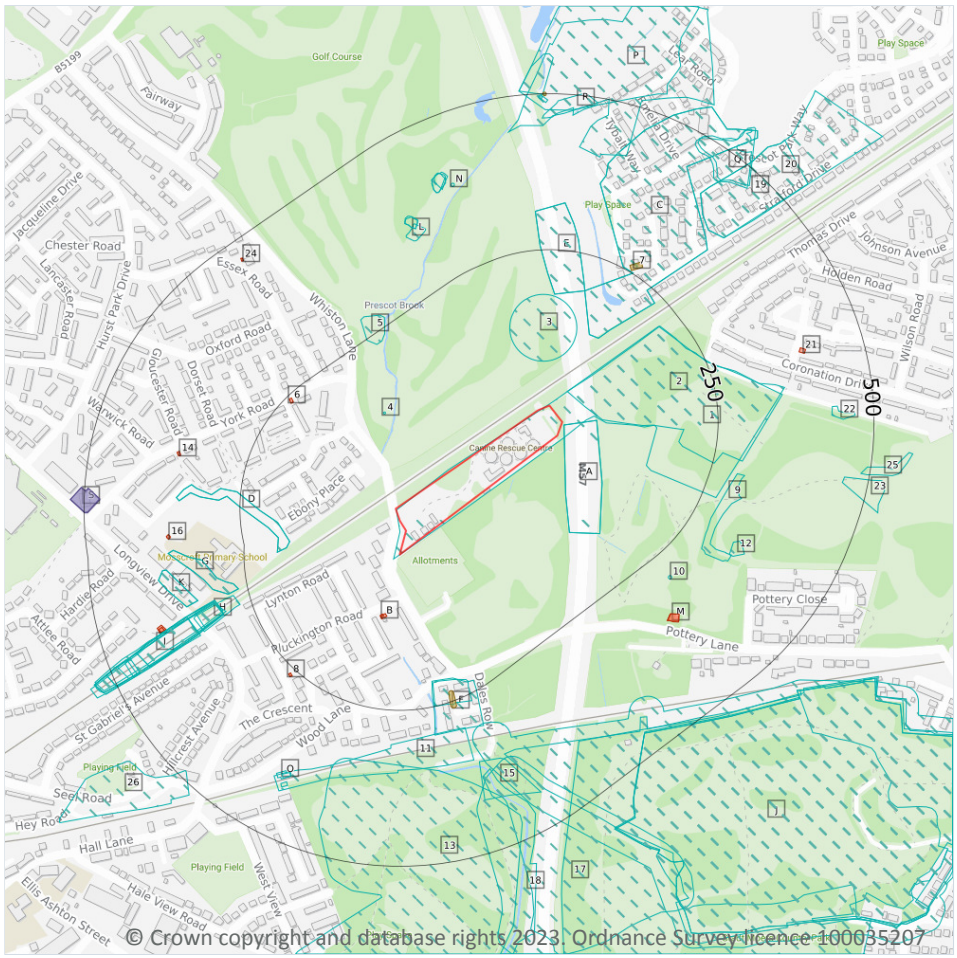
OS MasterMap site plan



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Site Area: 1.73ha

1 Past land use



1.1 Historical industrial land uses

Records within 500m	69

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

Features are displayed on the Past land use map on **page 14 >**

ID	Location	Land use	Dates present	Group ID
1	**On site**	**Nursery**	**1966**	**831808**

ID	Location	Land use	Dates present	Group ID
A	4m NE	Cuttings	1990	851913
A	4m NE	Cuttings	1975	989109
2	36m NE	Nurseries	1955	843922
3	72m NE	Unspecified Quarry	1891	816623
C	131m NE	Unspecified Works	1990	893602
C	131m NE	Unspecified Works	1975	985650
4	135m NW	Pump	1851	826857
D	178m W	Unspecified Ground Workings	1990	898621
D	178m W	Unspecified Ground Workings	1975	951522
E	179m NE	Cuttings	1975	851638
E	179m NE	Cuttings	1990	860588
F	210m S	Disused Pottery	1906	827372
F	212m S	Pottery	1851	818630
5	234m NW	Unspecified Heap	1975	803295
G	265m SW	Unspecified Ground Workings	1975	905465
G	265m SW	Unspecified Ground Workings	1990	953502
H	269m SW	Cuttings	1891	933054
9	280m E	Unspecified Ground Workings	1966 - 1975	871545
10	288m SE	Old Coal Pit	1851	834086
11	294m S	Railway Sidings	1891	979851
I	294m SW	Cuttings	1938	968970
I	298m SW	Cuttings	1955	913990
I	298m SW	Cuttings	1906 - 1925	901480
H	298m SW	Cuttings	1990	977177
I	298m SW	Cuttings	1966 - 1975	868854
I	299m SW	Cuttings	1925	875713
J	302m S	Brick Works	1955	850733
12	330m E	Unspecified Pit	1966	839694

ID	Location	Land use	Dates present	Group ID
K	332m SW	Unspecified Pit	1975	868618
K	332m SW	Unspecified Pit	1990	886533
L	335m N	Gravel Pit	1851	807786
13	335m S	Unspecified Disused Workings	1966	842253
I	345m SW	Cuttings	1891	919648
I	347m SW	Cuttings	1990	944471
L	351m N	Old Trial Levels	1906	811687
L	351m N	Unspecified Old Levels	1925 - 1947	948159
15	356m S	Garage	1955	844119
J	361m S	Unspecified Works	1966	938571
17	367m S	Unspecified Works	1966	950790
18	373m S	Cuttings	1990	795646
19	380m NE	Unspecified Heap	1975	882340
20	380m NE	Unspecified Heap	1990	925686
N	384m N	Unspecified Old Level	1955	808420
N	384m N	Old Trial Levels	1906	811688
N	384m N	Unspecified Old Levels	1925 - 1947	946432
N	386m N	Unspecified Pit	1955	839692
O	391m SW	Railway Building	1891 - 1906	850417
O	391m SW	Railway Building	1851	863806
P	407m N	Colliery	1851	798242
O	407m SW	Railway Building	1851	819909
J	412m S	Refuse Heap	1990	962218
22	433m E	Unspecified Ground Workings	1966	799853
Q	449m NE	Unspecified Pit	1947	839690
Q	454m NE	Old Sand Pit	1955	834203
I	458m SW	Cuttings	1990	857748
23	459m E	Unspecified Heap	1966	803296

ID	Location	Land use	Dates present	Group ID
R	461m N	Disused Pumping Station	1925	977423
I	463m SW	Cuttings	1966 - 1975	977176
J	464m SE	Metallic Brick Works	1938	802234
J	465m SE	Brick Works	1947	857105
J	465m SE	Brick Works	1925	971266
P	474m N	Disused Pumping Station	1938	910493
I	478m SW	Cuttings	1990	848594
R	486m N	Disused Pumping Station	1947	980200
25	486m E	Refuse Heap	1966	828766
26	489m SW	Sandstone Flags and Slate Quarry	1851	821266
R	492m N	Disused Pumping Station	1906	908796
R	499m N	Unspecified Heap	1938	940412

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m	3

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

Features are displayed on the Past land use map on **page 14 >**

ID	Location	Land use	Dates present	Group ID
F	233m S	Tanks	1892 - 1907	144883
7	253m NE	Tanks	1976	105833
R	497m N	Unspecified Tank	1954 - 1977	135730

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m	12

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

Features are displayed on the Past land use map on **page 14 >**

ID	Location	Land use	Dates present	Group ID
B	98m SW	Electricity Substation	1994	73159
B	100m SW	Electricity Substation	1972	79882
6	237m W	Electricity Substation	1972 - 1994	76882
8	259m SW	Electricity Substation	1977 - 1993	76708
M	337m SE	Electricity Substation	1955 - 1976	77374
M	338m SE	Electricity Substation	1955 - 1994	82543
14	355m W	Electricity Substation	1974 - 1997	83523
16	364m W	Electricity Substation	1974 - 1997	66149
I	394m SW	Electricity Substation	1954	72510
21	396m E	Electricity Substation	1994	61507
I	397m SW	Electricity Substation	1954 - 1997	65301
24	466m NW	Electricity Substation	1977 - 1994	64669

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

1.5 Historical garages

Records within 500m	2

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

Features are displayed on the Past land use map on **page 14 >**

ID	Location	Land use	Dates present	Group ID
S	475m W	Garage	1974	23791
S	475m W	Garage	1994 - 1997	24739

This data is sourced from Ordnance Survey / Groundsure.

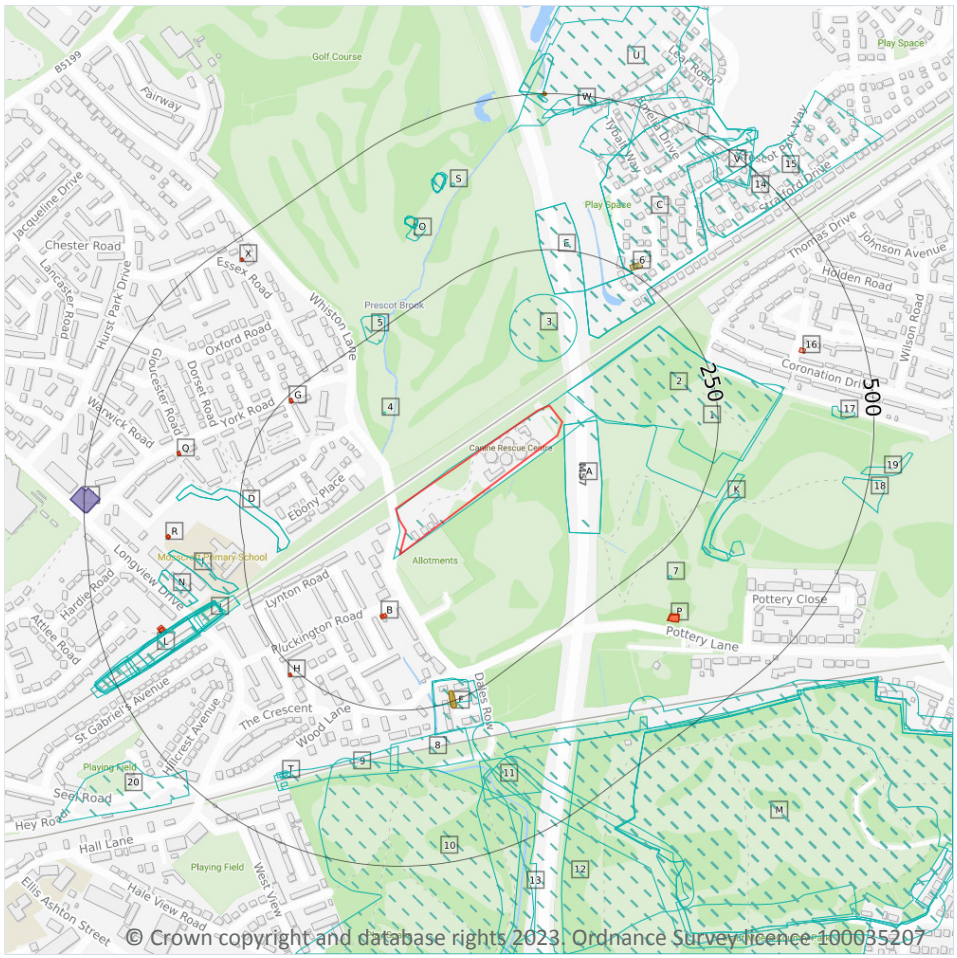
1.6 Historical military land

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



2.1 Historical industrial land uses

Records within 500m	83

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 20 >**

ID	Location	Land Use	Date	Group ID
1	**On site**	**Nursery**	**1966**	**831808**
A	4m NE	Cuttings	1975	989109
A	4m NE	Cuttings	1990	851913

ID	Location	Land Use	Date	Group ID
2	36m NE	Nurseries	1955	843922
3	72m NE	Unspecified Quarry	1891	816623
C	131m NE	Unspecified Works	1975	985650
C	131m NE	Unspecified Works	1990	893602
C	131m NE	Unspecified Works	1990	893602
4	135m NW	Pump	1851	826857
D	178m W	Unspecified Ground Workings	1975	951522
D	178m W	Unspecified Ground Workings	1990	898621
E	179m NE	Cuttings	1975	851638
E	179m NE	Cuttings	1990	860588
F	210m S	Disused Pottery	1906	827372
F	212m S	Pottery	1851	818630
5	234m NW	Unspecified Heap	1975	803295
I	265m SW	Unspecified Ground Workings	1975	905465
I	265m SW	Unspecified Ground Workings	1990	953502
J	269m SW	Cuttings	1891	933054
K	280m E	Unspecified Ground Workings	1966	871545
K	282m E	Unspecified Ground Workings	1975	871545
7	288m SE	Old Coal Pit	1851	834086
8	294m S	Railway Sidings	1891	979851
L	294m SW	Cuttings	1938	968970
L	298m SW	Cuttings	1955	913990
L	298m SW	Cuttings	1925	901480
L	298m SW	Cuttings	1906	901480
J	298m SW	Cuttings	1990	977177
L	298m SW	Cuttings	1975	868854
L	298m SW	Cuttings	1966	868854
L	299m SW	Cuttings	1925	875713

ID	Location	Land Use	Date	Group ID
M	302m S	Brick Works	1955	850733
9	307m S	Railway Sidings	1891	979851
K	330m E	Unspecified Pit	1966	839694
N	332m SW	Unspecified Pit	1975	868618
N	332m SW	Unspecified Pit	1990	886533
O	335m N	Gravel Pit	1851	807786
10	335m S	Unspecified Disused Workings	1966	842253
L	345m SW	Cuttings	1891	919648
L	347m SW	Cuttings	1990	944471
O	351m N	Unspecified Old Levels	1947	948159
O	351m N	Unspecified Old Levels	1925	948159
O	351m N	Old Trial Levels	1906	811687
O	353m N	Unspecified Old Levels	1938	948159
O	353m N	Unspecified Old Levels	1938	948159
11	356m S	Garage	1955	844119
M	361m S	Unspecified Works	1966	938571
12	367m S	Unspecified Works	1966	950790
13	373m S	Cuttings	1990	795646
14	380m NE	Unspecified Heap	1975	882340
15	380m NE	Unspecified Heap	1990	925686
S	384m N	Unspecified Old Level	1955	808420
S	384m N	Unspecified Old Levels	1947	946432
S	384m N	Unspecified Old Levels	1925	946432
S	384m N	Old Trial Levels	1906	811688
S	386m N	Unspecified Old Levels	1938	946432
S	386m N	Unspecified Old Levels	1938	946432
S	386m N	Unspecified Pit	1955	839692
T	391m SW	Railway Building	1891	850417

ID	Location	Land Use	Date	Group ID
T	391m SW	Railway Building	1851	863806
T	391m SW	Railway Building	1906	850417
U	407m N	Colliery	1851	798242
T	407m SW	Railway Building	1851	819909
M	412m S	Refuse Heap	1990	962218
17	433m E	Unspecified Ground Workings	1966	799853
V	449m NE	Unspecified Pit	1947	839690
V	454m NE	Old Sand Pit	1955	834203
L	458m SW	Cuttings	1990	857748
18	459m E	Unspecified Heap	1966	803296
W	461m N	Disused Pumping Station	1925	977423
L	463m SW	Cuttings	1975	977176
L	463m SW	Cuttings	1966	977176
M	464m SE	Metallic Brick Works	1938	802234
M	465m SE	Brick Works	1947	857105
M	465m SE	Brick Works	1925	971266
U	474m N	Disused Pumping Station	1938	910493
L	478m SW	Cuttings	1990	848594
W	486m N	Disused Pumping Station	1947	980200
19	486m E	Refuse Heap	1966	828766
20	489m SW	Sandstone Flags and Slate Quarry	1851	821266
W	492m N	Disused Pumping Station	1906	908796
W	499m N	Unspecified Heap	1938	940412
W	499m N	Unspecified Heap	1938	940412

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	8

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 20 >**

ID	Location	Land Use	Date	Group ID
F	233m S	Tanks	1892	144883
F	233m S	Tanks	1907	144883
6	253m NE	Tanks	1976	105833
W	497m N	Unspecified Tank	1966	135730
W	497m N	Unspecified Tank	1954	135730
W	497m N	Unspecified Tank	1977	135730
W	498m N	Unspecified Tank	1954	135730
W	498m N	Unspecified Tank	1966	135730

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m	32

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 20 >**

ID	Location	Land Use	Date	Group ID
B	98m SW	Electricity Substation	1994	73159
B	98m SW	Electricity Substation	1994	73159
B	100m SW	Electricity Substation	1972	79882
G	237m W	Electricity Substation	1994	76882
G	237m W	Electricity Substation	1994	76882
G	238m W	Electricity Substation	1972	76882

ID	Location	Land Use	Date	Group ID
H	259m SW	Electricity Substation	1977	76708
H	259m SW	Electricity Substation	1993	76708
H	259m SW	Electricity Substation	1988	76708
P	337m SE	Electricity Substation	1955	77374
P	337m SE	Electricity Substation	1976	77374
P	338m SE	Electricity Substation	1955	82543
P	339m SE	Electricity Substation	1994	82543
P	339m SE	Electricity Substation	1994	82543
Q	355m W	Electricity Substation	1974	83523
Q	356m W	Electricity Substation	1997	83523
Q	356m W	Electricity Substation	1994	83523
Q	356m W	Electricity Substation	1994	83523
R	364m W	Electricity Substation	1974	66149
R	364m W	Electricity Substation	1997	66149
R	364m W	Electricity Substation	1994	66149
R	364m W	Electricity Substation	1994	66149
L	394m SW	Electricity Substation	1954	72510
16	396m E	Electricity Substation	1994	61507
L	397m SW	Electricity Substation	1997	65301
L	397m SW	Electricity Substation	1994	65301
L	397m SW	Electricity Substation	1994	65301
L	397m SW	Electricity Substation	1954	65301
L	397m SW	Electricity Substation	1974	65301
X	466m NW	Electricity Substation	1994	64669
X	466m NW	Electricity Substation	1994	64669
X	467m NW	Electricity Substation	1977	64669

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	4

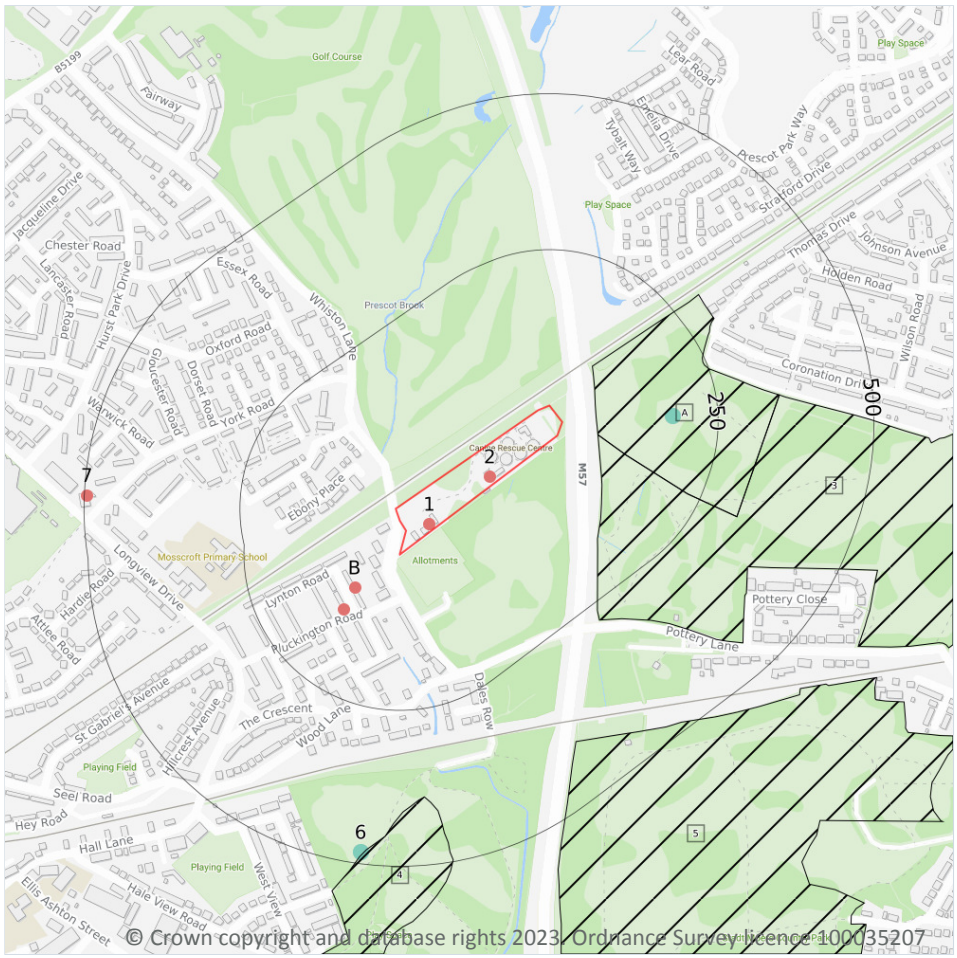
Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 20 >**

ID	Location	Land Use	Date	Group ID
Y	475m W	Garage	1974	23791
Y	475m W	Garage	1994	24739
Y	475m W	Garage	1994	24739
Y	475m W	Garage	1997	24739

This data is sourced from Ordnance Survey / Groundsure.

3 Waste and landfill



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	2

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.

Features are displayed on the Waste and landfill map on **page 27 >**

ID	Location	Address	BGS Number	Risk	Waste Type
A	177m E	Whiston Tip, Pottery Lane, Prescot, M'Side	626	No risk to aquifer	N/A
6	483m S	West View Tip, Huyton Quarry, Liverpool, M'Side	197	No risk to aquifer	N/A

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	**4**

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.

Features are displayed on the Waste and landfill map on **page 27 >**

ID	Location	Details		
A	54m NE	Site Address: Whiston Tip, Knowsley, Merseyside Licence Holder Address: -	Waste Licence: - Site Reference: GDO M088 Waste Type: Industrial, Commercial, Household, Liquid sludge Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: Whiston Rural District Council, Prescot Urban District Council, Huyton U District Council Licence Holder: Whiston Rural District Council - Prescot Urban District Council - Huyton Urban District Council First Recorded - Last Recorded: 01/01/1973
3	60m E	Site Address: Whiston Tip, Knowsley, Merseyside Licence Holder Address: -	Waste Licence: - Site Reference: 088 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: - Licence Holder: Whiston Rural District Council - Prescot Urban District Council - Huyton Urban District Council First Recorded - Last Recorded: -

ID	Location	Details		
4	390m S	Site Address: West View Tip, Knowsley, Merseyside Licence Holder Address: -	Waste Licence: - Site Reference: GDO M194 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: Hoyton with Roby Urban District Council Licence Holder: - First Recorded 31/01/1971 Last Recorded: 01/01/1978
5	409m S	Site Address: Coalgate Lane Landfill Site, Ellis Ashton Street, Huyton, Knowsley, Merseyside Licence Holder Address: -	Waste Licence: - Site Reference: R13/01, GDO 017, GDO M019, GDO 020 Waste Type: Inert, Industrial, Commercial, Household, Liquid sludge Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: Huyton Urban District Council and Merseyside County Council Licence Holder: Huyton Urban District Council and Merseyside County Council First Recorded 01/01/1972 Last Recorded: 01/01/1983

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	**5**

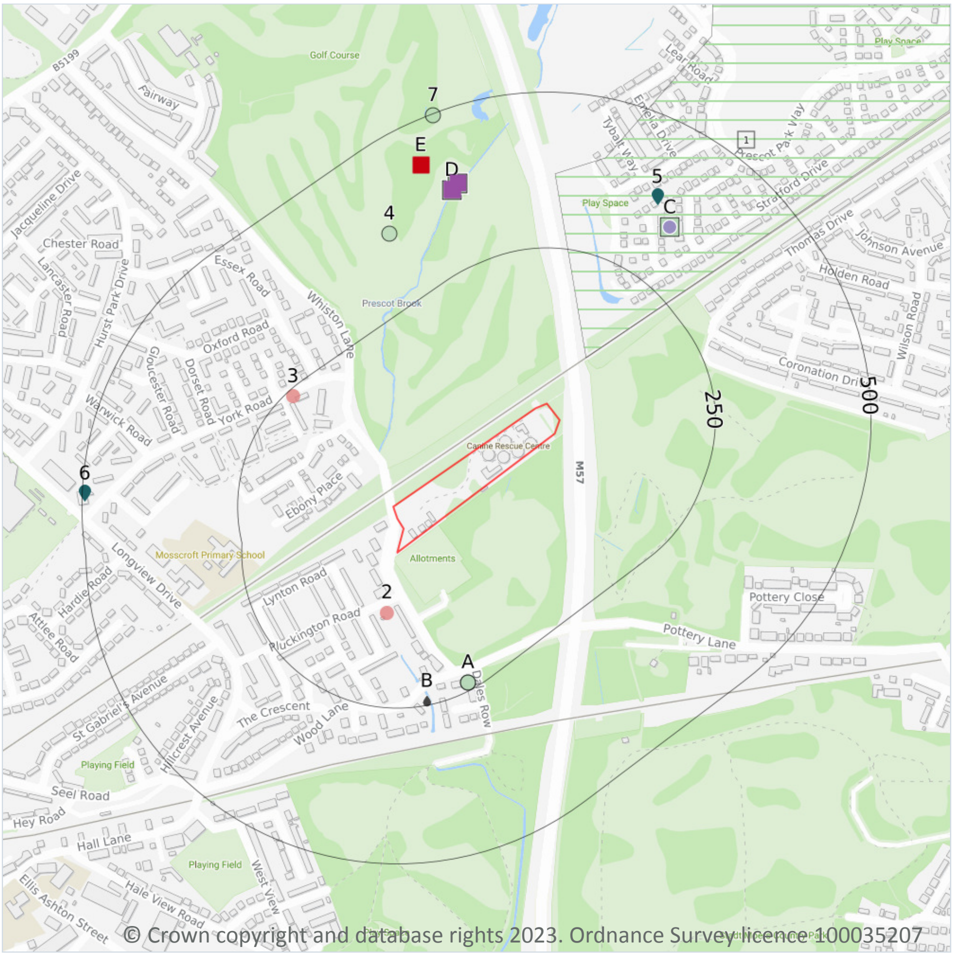
Activities involving the storage, treatment, use or disposal of waste that are exempt from needing a permit. Exemptions have specific limits and conditions that must be adhered to.

Features are displayed on the Waste and landfill map on **page 27 >**

ID	Location	Site	Reference	Category	Sub-Category	Description
1	**On site**	**Willow Grange (Bellway Homes Development), Whiston Lane, Huyton, L36 6HP**	**WEX168756**	**Using waste exemption**	**Not on a farm**	**Use of waste in construction**
2	**On site**	**OLD BRIDGE NURSERIES, WHISTON LANE, HUYTON, LIVERPOOL, L36 6HP**	**WEX278179**	**Treating waste exemption**	**Not on a farm**	**Sorting and de-naturing of controlled drugs for disposal**
B	91m SW	Mill Street, Prescott, Liverpool, L36 6HA	WEX165716	Using waste exemption	Not on a farm	Use of waste in construction
B	127m SW	Shakespeare North, Mill Street, Prescott, Liverpool, L36 6HA	WEX301722	Using waste exemption	Not on a Farm	Use of waste in construction
7	496m W	79 Longview Drive Liverpool Knowsley L36 6EB	EPR/RF0302FN /A001	Treating waste exemption	Non-Agricultural Waste Only	Sorting and de-naturing of controlled drugs for disposal

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
Control of Major Accident Hazards
Historical licensed industrial activities
Part A(1) industrial activities
Licensed pollutant release (Part A(2)/B)
Licensed Discharges to controlled waters
Pollutant release to surface waters
List 1 Dangerous Substances
List 2 Dangerous Substances
Pollution Incidents (EA/NRW)

4.1 Recent industrial land uses

Records within 250m	**2**

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on page 31 >

ID	Location	Company	Address	Activity	Category
2	98m SW	Electricity Sub Station	Merseyside, L36	Electrical Features	Infrastructure and Facilities
3	240m NW	Electricity Sub Station	Merseyside, L36	Electrical Features	Infrastructure and Facilities

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m	0

Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m	0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m	0

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 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.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m	1

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 31 >**

ID	Location	Company	Address	Operational status	Tier
1	97m NE	Bicc Metals Ltd	Bicc Metals Ltd, Carr Lane, Prescott, L34 1PD	Historical NIHHS Site	-

This data is sourced from the Health and Safety Executive.

4.7 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.

4.8 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.

4.9 Historical licensed industrial activities (IPC)

Records within 500m	3

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.

Features are displayed on the Current industrial land use map on **page 31 >**

ID	Location	Details	
C	344m NE	Operator: Pirelli Cables Ltd Address: PO Box 21, Carr Lane, Prescot, L34 1PD Process: Non-ferrous Metals Permit Number: AS1827	Original Permit Number: IPCAIRAPP Date Approved: 27-10-1995 Effective Date: 3-11-1995 Status: Superseded By Variation
C	344m NE	Operator: Pirelli Cables Ltd Address: PO Box 21, Carr Lane, Prescot, L34 1PD Process: Non-ferrous Metals Permit Number: AZ3232	Original Permit Number: IPCMINVAR Date Approved: 6-8-1998 Effective Date: 13-8-1998 Status: Superseded By Variation
C	344m NE	Operator: Pirelli Cables Ltd Address: PO Box 21, Carr Lane, Prescot, L34 1PD Process: Non-ferrous Metals Permit Number: BE0473	Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Revoked - Now Ippc

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

4.10 Licensed industrial activities (Part A(1))

Records within 500m	5

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 31 >**

ID	Location	Details	
C	344m NE	Operator: PRYSMIAN CABLES AND SYSTEMS LIMITED Installation Name: Prysmian Cables & Systems Ltd Rod Rollers Unit Process: NON-FERROUS METALS; MELTING WITH CAPACITY >4T/D LEAD/CADMIUM OR 20T/D OTHERS Permit Number: BL4354IS Original Permit Number: BL4354IS	EPR Reference: EPR/BL4354IS Issue Date: 05/06/2007 Effective Date: 05/06/2007 Last date noted as effective: 25/05/2023 Status: Surrendered
C	344m NE	Operator: PIRELLI CABLES LTD Installation Name: - Process: NON-FERROUS METALS; MELTING WITH CAPACITY >4T/D LEAD/CADMIUM OR 20T/D OTHERS Permit Number: BL4354 Original Permit Number: BL4354	EPR Reference: - Issue Date: 03/12/2002 Effective Date: 03/12/2002 Last date noted as effective: 01/10/2004 Status: SUPERSEDED BY PAS
C	344m NE	Operator: Pirelli UK Ltd Installation Name: PRESCOT ROD ROLLERS UNIT Process: NON-FERROUS METALS; MELTING WITH CAPACITY >4T/D LEAD/CADMIUM OR 20T/D OTHERS Permit Number: CP3037PE Original Permit Number: BL4354IS	EPR Reference: - Issue Date: 05/10/2004 Effective Date: 11/10/2004 Last date noted as effective: 21/03/2023 Status: Superceded
C	344m NE	Operator: Prysmian Cables and Systems Ltd Installation Name: Prysmian Cables & Systems Ltd Rod Rollers Unit Process: NON-FERROUS METALS; MELTING WITH CAPACITY >4T/D LEAD/CADMIUM OR 20T/D OTHERS Permit Number: PP3834MF Original Permit Number: BL4354IS	EPR Reference: - Issue Date: - Effective Date: 05/06/2007 Last date noted as effective: 21/03/2023 Status: Surrender Effective
C	344m NE	Operator: Prysmian Cables and Systems Ltd Installation Name: Prysmian Cables & Systems Ltd Rod Rollers Unit Process: NON-FERROUS METALS; MELTING WITH CAPACITY >4T/D LEAD/CADMIUM OR 20T/D OTHERS Permit Number: QP3833LT Original Permit Number: BL4354IS	EPR Reference: - Issue Date: 31/10/2005 Effective Date: 31/10/2005 Last date noted as effective: 21/03/2023 Status: Superceded

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

4.11 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 31 >**

ID	Location	Address	Details	
5	376m NE	Bicc Components Ltd, Hall Lane, Huyton, L34 5YR	Process: Other Metal Processes Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
6	495m W	Longview Service Station, Longview Drive, Huyton, L36 6EB	Process: Unloading of Petrol into Storage at Service Stations 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.

4.12 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.

4.13 Licensed Discharges to controlled waters

Records within 500m	11

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

Features are displayed on the Current industrial land use map on **page 31 >**

ID	Location	Address	Details	
B	243m S	MOLYNEUX DRIVE CSO 24009, 116 MOLYNEUX DRIVE, PRESCOT, MERSEYSIDE, L35 5DD`	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016993826 Permit Version: 2 Receiving Water: PRESCOT BROOK	Status: VARIED UNDER EPR 2010 Issue date: 18/06/2018 Effective Date: 18/06/2018 Revocation Date: -

ID	Location	Address	Details	
B	243m S	MOLYNEUX DRIVE CSO 24009, 116 MOLYNEUX DRIVE, PRESCOT, MERSEYSIDE, L35 5DD`	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01KNW0021 Permit Version: 1 Receiving Water: -	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 01/04/1991 Revocation Date: 31/12/1994
B	243m S	MOLYNEUX DRIVE CSO 24009, 116 MOLYNEUX DRIVE, PRESCOT, MERSEYSIDE, L35 5DD`	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01KNW0021 Permit Version: 2 Receiving Water: PRESCOT BROOK	Status: CONSENT REVOKED OR REVISED - NEW CONSENT ISSUED (37(1)) Issue date: 01/01/1995 Effective Date: 01/01/1995 Revocation Date: 06/02/2006
B	243m S	MOLYNEUX DRIVE CSO 24009, 116 MOLYNEUX DRIVE, PRESCOT, MERSEYSIDE, L35 5DD`	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01KNW0002 Permit Version: 1 Receiving Water: PRESCOT BROOK	Status: REVOKED - UNSPECIFIED Issue date: 01/01/1995 Effective Date: 01/01/1995 Revocation Date: 25/01/2006
B	243m S	MOLYNEUX DRIVE CSO 24009, 116 MOLYNEUX DRIVE, PRESCOT, MERSEYSIDE, L35 5DD`	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016993826 Permit Version: 1 Receiving Water: PRESCOT BROOK	Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 07/02/2006 Effective Date: 07/02/2006 Revocation Date: 17/06/2018
D	375m N	HALL LANE & CARR LANE, PRESCOT, MERSEYSIDE	Effluent Type: TRADE DISCHARGES - PROCESS EFFLUENT - NOT WATER COMPANY Permit Number: 016990199 Permit Version: 1 Receiving Water: PRESCOT BROOK	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 01/04/1980 Revocation Date: 31/05/1983
D	375m N	HALL LANE & CARR LANE, PRESCOT, MERSEYSIDE	Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: 016990199 Permit Version: 3 Receiving Water: PRESCOT BROOK	Status: SURRENDERED UNDER EPR 2010 Issue date: 07/11/1986 Effective Date: 07/11/1986 Revocation Date: 06/10/2011
D	375m N	HALL LANE & CARR LANE, PRESCOT, MERSEYSIDE	Effluent Type: TRADE DISCHARGES - PROCESS EFFLUENT - NOT WATER COMPANY Permit Number: 016990199 Permit Version: 2 Receiving Water: PRESCOT BROOK	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 01/06/1983 Revocation Date: 06/11/1986
D	380m N	CARR LANE, PRESCOT, MERSEYSIDE	Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: 016990198 Permit Version: 3 Receiving Water: PRESCOT BROOK	Status: SURRENDERED UNDER EPR 2010 Issue date: 12/04/1988 Effective Date: 12/04/1988 Revocation Date: 06/10/2011

ID	Location	Address	Details	
D	380m N	CARR LANE, PRESCOT, MERSEYSIDE	Effluent Type: TRADE DISCHARGES - PROCESS EFFLUENT - NOT WATER COMPANY Permit Number: 016990198 Permit Version: 2 Receiving Water: PRESCOT BROOK	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 01/06/1983 Revocation Date: 11/04/1988
D	380m N	CARR LANE, PRESCOT, MERSEYSIDE	Effluent Type: TRADE DISCHARGES - PROCESS EFFLUENT - NOT WATER COMPANY Permit Number: 016990198 Permit Version: 1 Receiving Water: PRESCOT BROOK	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 01/04/1980 Revocation Date: 31/05/1983

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

4.14 Pollutant release to surface waters (Red List)

Records within 500m	**5**

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

Features are displayed on the Current industrial land use map on **page 31 >**

ID	Location	Address	Details	
D	375m N	PIRELLI CABLES LIMITED, HALL LANE & CARR LANE, PRESCOT, MERSEYSIDE	Permit Number: 016990199 Permit Version: 3 Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Discharge Type: Forging and Pressing	Effluent Type: TRADE DISCHARGES - PROCESS EFFLUENT - NOT WATER COMPANY Catchment: - Approval Date: 07/11/1986
D	375m N	PRYSMIAN CABLES & SYSTEMS LTD, HALL LANE & CARR LANE, PRESCOT, MERSEYSIDE	Permit Number: 016990199 Permit Version: 3 Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Discharge Type: Forging and Pressing	Effluent Type: TRADE DISCHARGES - PROCESS EFFLUENT - NOT WATER COMPANY Catchment: - Approval Date: 07/11/1986
D	375m N	PRYSMIAN CABLES & SYSTEMS, HALL LANE & CARR LANE, PRESCOT, MERSEYSIDE	Permit Number: 016990199 Permit Version: 3 Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Discharge Type: Forging and Pressing	Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Catchment: - Approval Date: 07/11/1986

ID	Location	Address	Details	
D	375m N	PRESCOT BUSINESS PARK LIMITED, HALL LANE & CARR LANE, PRESCOT, MERSEYSIDE	Permit Number: 016990199 Permit Version: 3 Status: SURRENDERED UNDER EPR 2010 Discharge Type: Forging and Pressing	Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Catchment: - Approval Date: 07/11/1986
D	380m N	PIRELLI CABLES LIMITED, CARR LANE, PRESCOT, MERSEYSIDE	Permit Number: 016990198 Permit Version: 3 Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Discharge Type: Forging and Pressing	Effluent Type: TRADE DISCHARGES - PROCESS EFFLUENT - NOT WATER COMPANY Catchment: - Approval Date: 12/04/1988

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

4.15 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.

4.16 List 1 Dangerous Substances

Records within 500m	**2**

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.

Features are displayed on the Current industrial land use map on **page 31 >**

ID	Location	Name	Status	Receiving Water	Authorised Substances
E	432m N	Bicc Prescot Merseyside - Components	Active	-	-
E	432m N	Bicc Prescot Merseyside - Components	Active	Ditton Brook, Mersey Estuary	Cadmium

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

4.17 List 2 Dangerous Substances

Records within 500m **7**

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.

Features are displayed on the Current industrial land use map on **page 31 >**

ID	Location	Name	Status	Receiving Water	Authorised Substances
C	345m NE	Bicc Rod & Wire Ltd, Carr Lane	Not Active	Mersey Estuary	Copper
D	375m N	Pirelli	Active	Prescot Brook	Chromium, Copper, Lead, Nickel, Zinc
D	381m N	Pirelli	Active	Prescot Brook	Chromium, Copper, Lead, Nickel, Zinc
D	381m N	Prysmian Cables And Systems - Outlet 1	Active	Prescot Brook	Chromium, Copper, Lead, Nickel, Zinc
D	381m N	Prysmian Cables And Systems - Outlet 2	Active	Prescot Brook	Chromium, Copper, Lead, Nickel, Zinc
D	381m N	Prysmian Cables And Systems - Outlet 3	Active	Prescot Brook	Chromium, Copper, Lead, Nickel, Zinc
D	381m N	Prysmian Cables And Systems - Outlet 4	Active	Prescot Brook	Chromium, Copper, Lead, Nickel, Zinc

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

4.18 Pollution Incidents (EA/NRW)

Records within 500m **4**

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 31 >**

ID	Location	Details	
A	237m S	Incident Date: 02/02/2002 Incident Identification: 56008 Pollutant: Oils and Fuel Pollutant Description: Petrol	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
A	237m S	Incident Date: 02/02/2002 Incident Identification: 56008 Pollutant: Oils and Fuel Pollutant Description: Petrol	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

ID	Location	Details	
4	364m N	Incident Date: 24/01/2002 Incident Identification: 54292 Pollutant: Contaminated Water Pollutant Description: Chemically Contaminated Run-Off	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
7	497m N	Incident Date: 20/07/2001 Incident Identification: 17725 Pollutant: Contaminated Water Pollutant Description: Other Contaminated Water	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

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

4.19 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.

4.20 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.

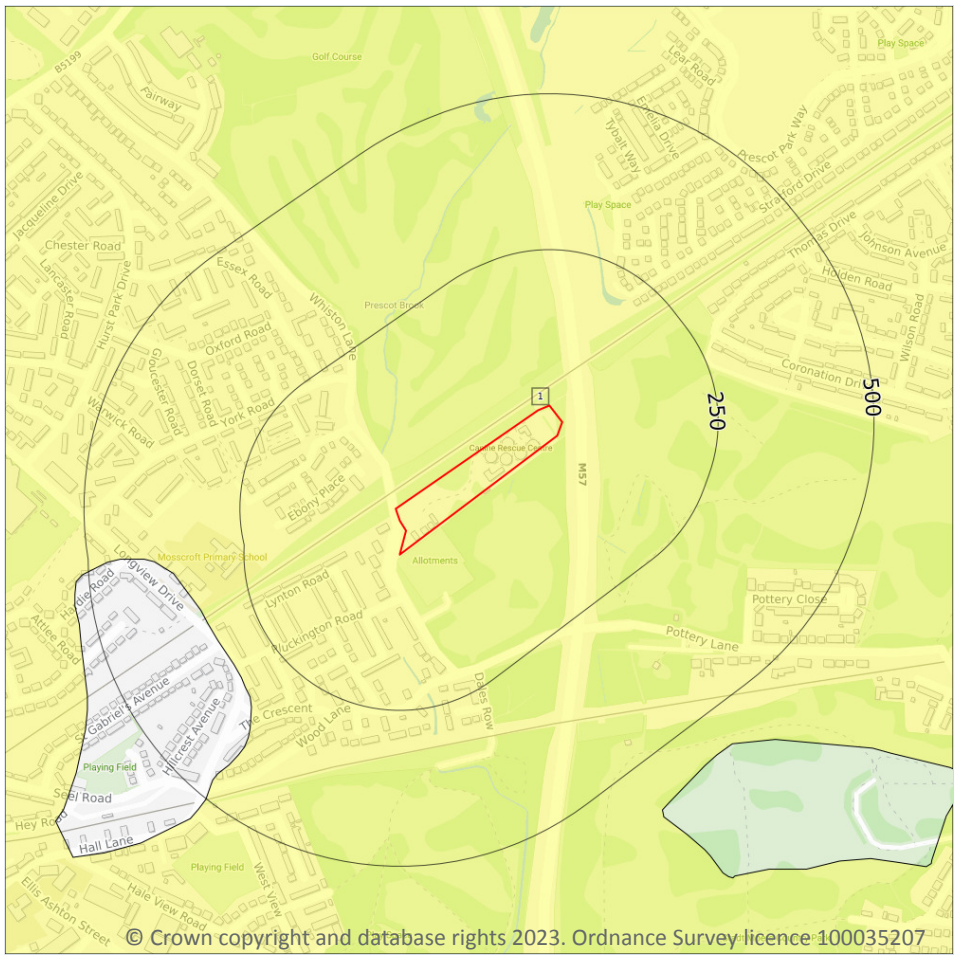
4.21 Pollution inventory radioactive waste

Records within 500m	0

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

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

5 Hydrogeology - Superficial aquifer



Site Outline

Search buffers in metres (m)

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

5.1 Superficial aquifer

Records within 500m	1

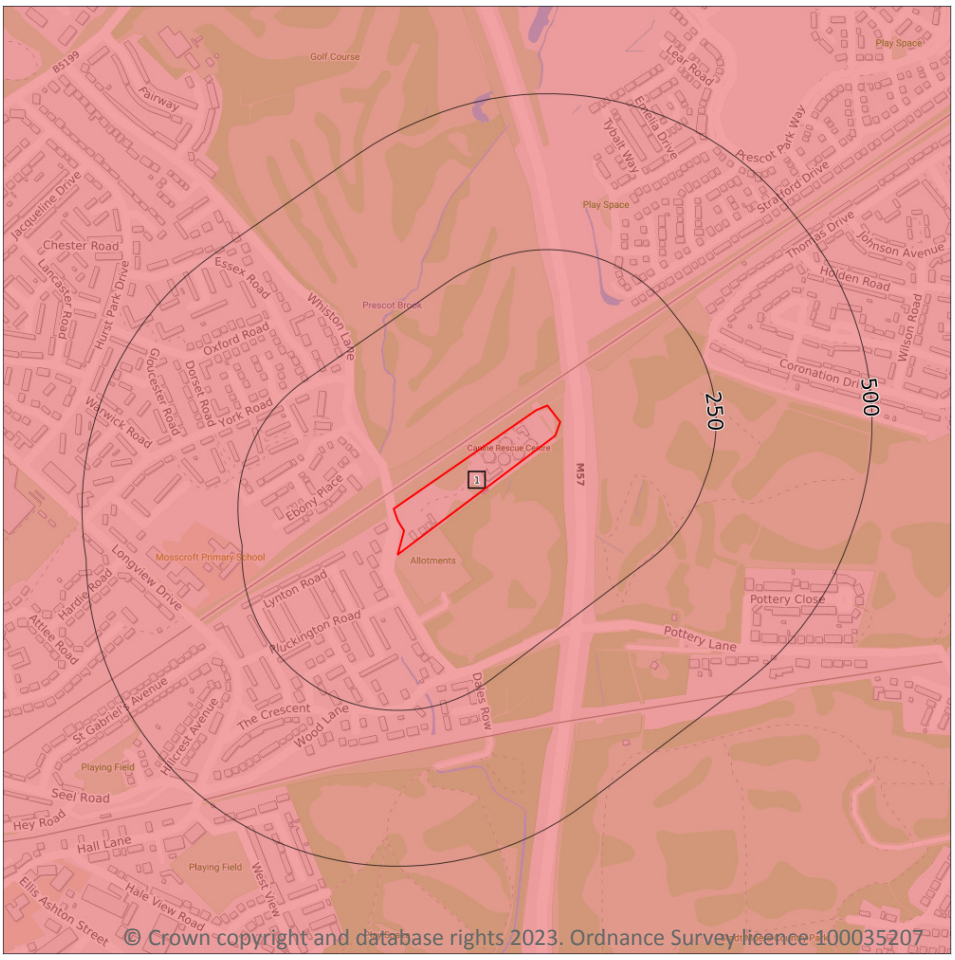
Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on **page 41 >**

ID	Location	Designation	Description
1	**On site**	**Secondary Undifferentiated**	**Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type**

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

Bedrock aquifer



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5.2 Bedrock aquifer

Records within 500m	1

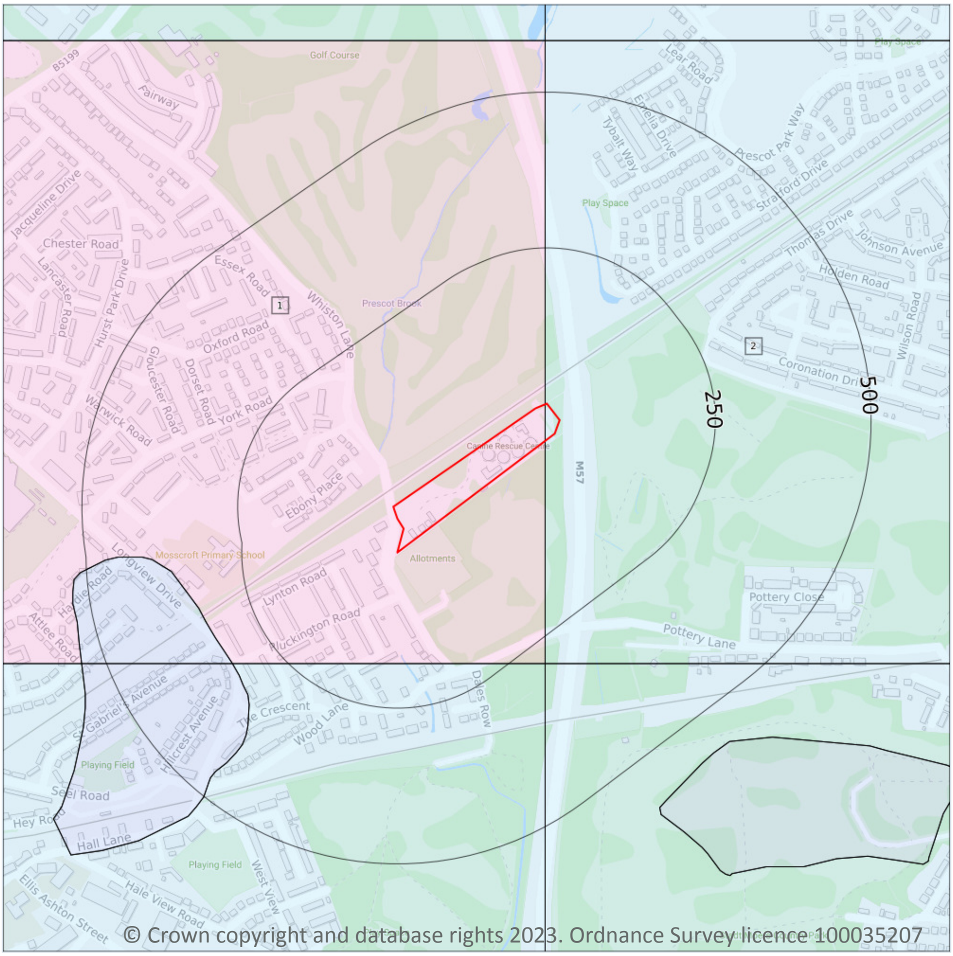
Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on **page 42 >**

ID	Location	Designation	Description
1	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

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

Groundwater vulnerability



Site Outline

Search buffers in metres (m)

Superficial vulnerability

- Principal superficial aquifer, high vulnerability
- Secondary superficial aquifer, high vulnerability
- Principal superficial aquifer, medium vulnerability
- Secondary superficial aquifer, medium vulnerability
- Principal superficial aquifer, low vulnerability
- Secondary superficial aquifer, low vulnerability

Bedrock vulnerability

- Principal bedrock aquifer, high vulnerability
- Secondary bedrock aquifer, high vulnerability
- Principal bedrock aquifer, medium vulnerability
- Secondary bedrock aquifer, medium vulnerability
- Principal bedrock aquifer, low vulnerability
- Secondary bedrock aquifer, low vulnerability

Other information

- Unproductive aquifer
- Soluble rock risk
- Local information

5.3 Groundwater vulnerability

Records within 50m	2

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 43 >

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	**Summary Classification: Secondary superficial aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer**	**Leaching class: Low Infiltration value: 40-70% Dilution value: 300-550mm/year**	**Vulnerability: Medium Aquifer type: Secondary Thickness: 3-10m Patchiness value: >90% Recharge potential: Low**	**Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures**
2	On site	**Summary Classification: Secondary superficial aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer**	**Leaching class: Low Infiltration value: <40% Dilution value: 300-550mm/year**	**Vulnerability: Low Aquifer type: Secondary Thickness: 3-10m Patchiness value: >90% Recharge potential: Low**	**Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures**

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

5.4 Groundwater vulnerability- soluble rock risk

Records on site	0

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.

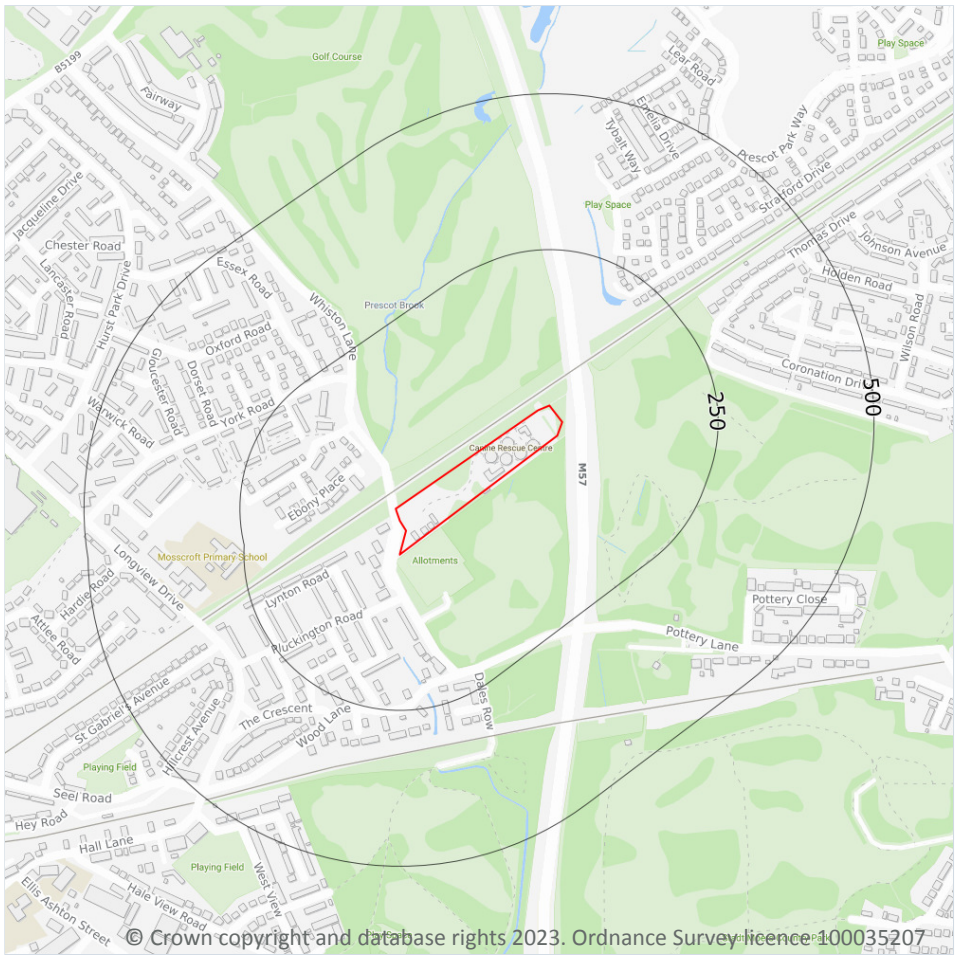
5.5 Groundwater vulnerability- local information

Records on site	0

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

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

Abstractions and Source Protection Zones



Site Outline

Search buffers in metres (m)

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

5.6 Groundwater abstractions

Records within 2000m	0

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.

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

5.7 Surface water abstractions

Records within 2000m	2

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.

Features are displayed on the Abstractions and Source Protection Zones map on **page 45 >**

ID	Location	Details	
-	1286m N	Status: Historical Licence No: 2569028003 Details: Spray Irrigation - Direct Direct Source: "Surface, Non-Tidal - North West Region" Point: "LOGWOOD MILL BROOK AT LH'S PREMISES, PRESCOT, MERSEYSIDE" Data Type: Point Name: JAMES WHITAKER & SONS NURSERYMEN LTD Easting: 345900 Northing: 392700	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 04/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/03/1999 Version End Date: -
-	1286m N	Status: Historical Licence No: 2569028003 Details: Spray Irrigation - Direct Direct Source: Surface, Non-Tidal - North West Region Point: LOGWOOD MILL BROOK AT LH'S PREMISES, PRESCOT, MERSEYSIDE Data Type: Point Name: JAMES WHITAKER & SONS NURSERYMEN LTD Easting: 345900 Northing: 392700	Annual Volume (m^3): 772.82 Max Daily Volume (m^3): 77.282 Original Application No: - Original Start Date: 04/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/03/1999 Version End Date: -

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

5.8 Potable abstractions

Records within 2000m	0

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.

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

5.9 Source Protection Zones

Records within 500m	0

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

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

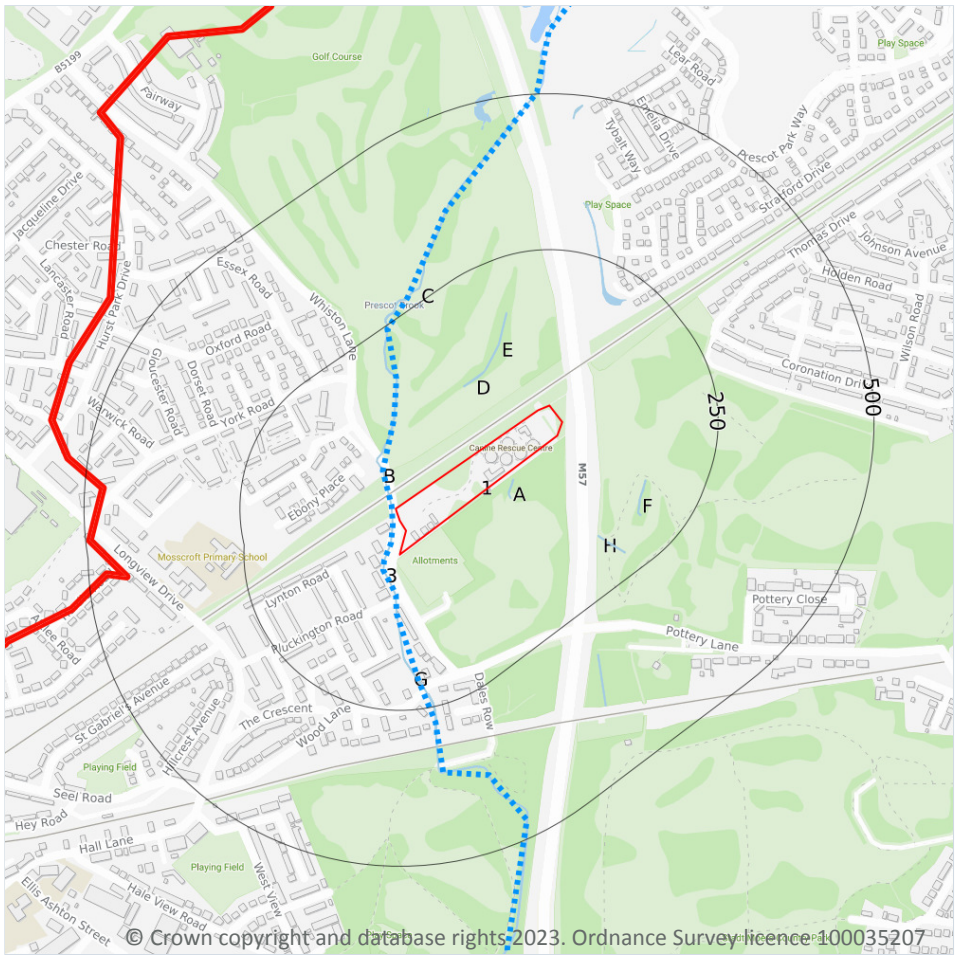
5.10 Source Protection Zones (confined aquifer)

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



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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	15

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 48 >**

ID	Location	Type of water feature	Ground level	Permanence	Name
3	6m W	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Prescot Brook

ID	Location	Type of water feature	Ground level	Permanence	Name
A	13m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
A	27m SE	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	53m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Prescot Brook
B	80m W	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Prescot Brook
C	85m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Prescot Brook
D	98m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	100m N	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
E	102m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
F	158m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
G	164m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Prescot Brook
H	167m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
H	184m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
G	210m S	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Prescot Brook

ID	Location	Type of water feature	Ground level	Permanence	Name
G	228m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Prescot Brook

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m	10

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

Features are displayed on the Hydrology map on **page 48 >**

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site	1

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

Features are displayed on the Hydrology map on **page 48 >**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
A	**On site**	**River**	**Prescot Brook (Logwood Mill Brook)**	**GB112069060710**	**Ditton**	**Mersey Lower**

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

6.4 WFD Surface water bodies

Records identified	1

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 48 >**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
2	6m W	River	Prescot Brook (Logwood Mill Brook)	GB112069060710 ↗	Poor	Fail	Poor	2019

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

6.5 WFD Groundwater bodies

Records on site	**1**

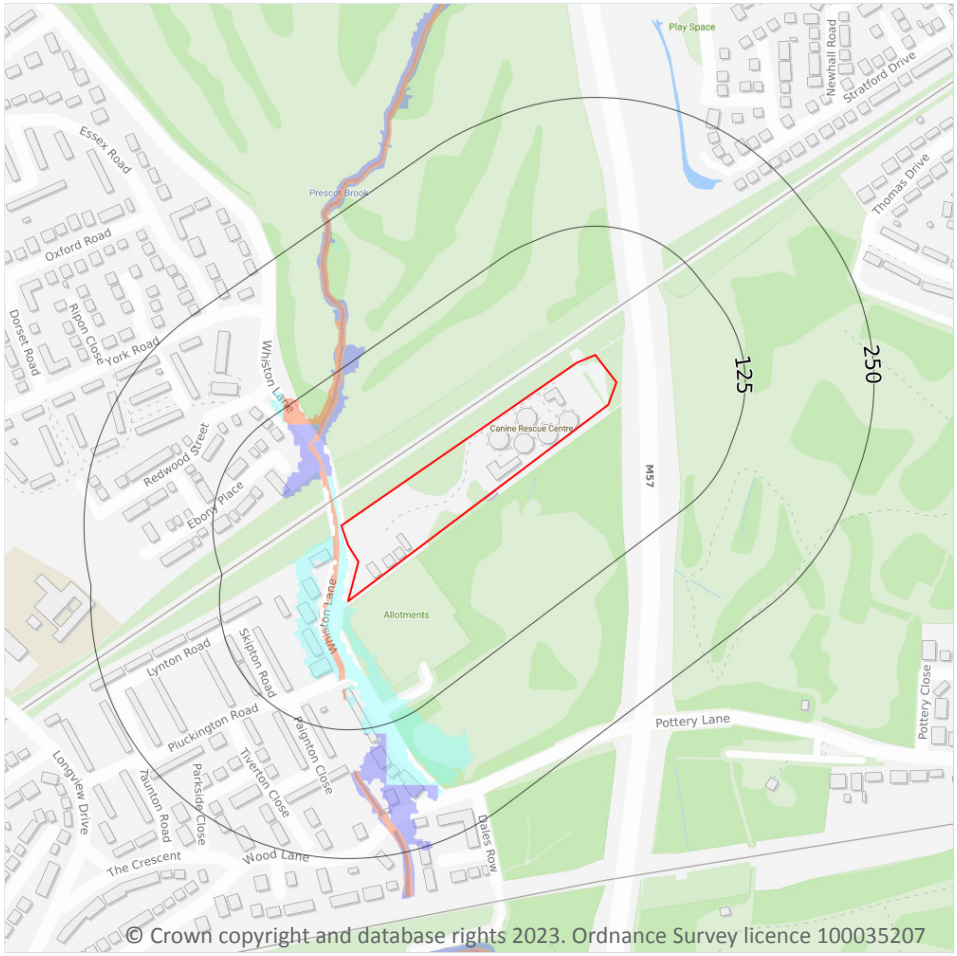
Groundwater bodies are also covered by the Directive and the same regime of objectives and reporting detailed in the previous section is in place. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each groundwater body listed.

Features are displayed on the Hydrology map on **page 48 >**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
1	**On site**	**Sankey and Glaze Carboniferous aquifers**	GB41202G100100 ↗	**Poor**	**Poor**	**Good**	**2019**

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

7 River and coastal flooding



Site Outline

Search buffers in metres (m)

River and coastal flooding:

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

7.1 Risk of flooding from rivers and the sea

Records within 50m	9

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

Features are displayed on the River and coastal flooding map on **page 52 >**

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

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.

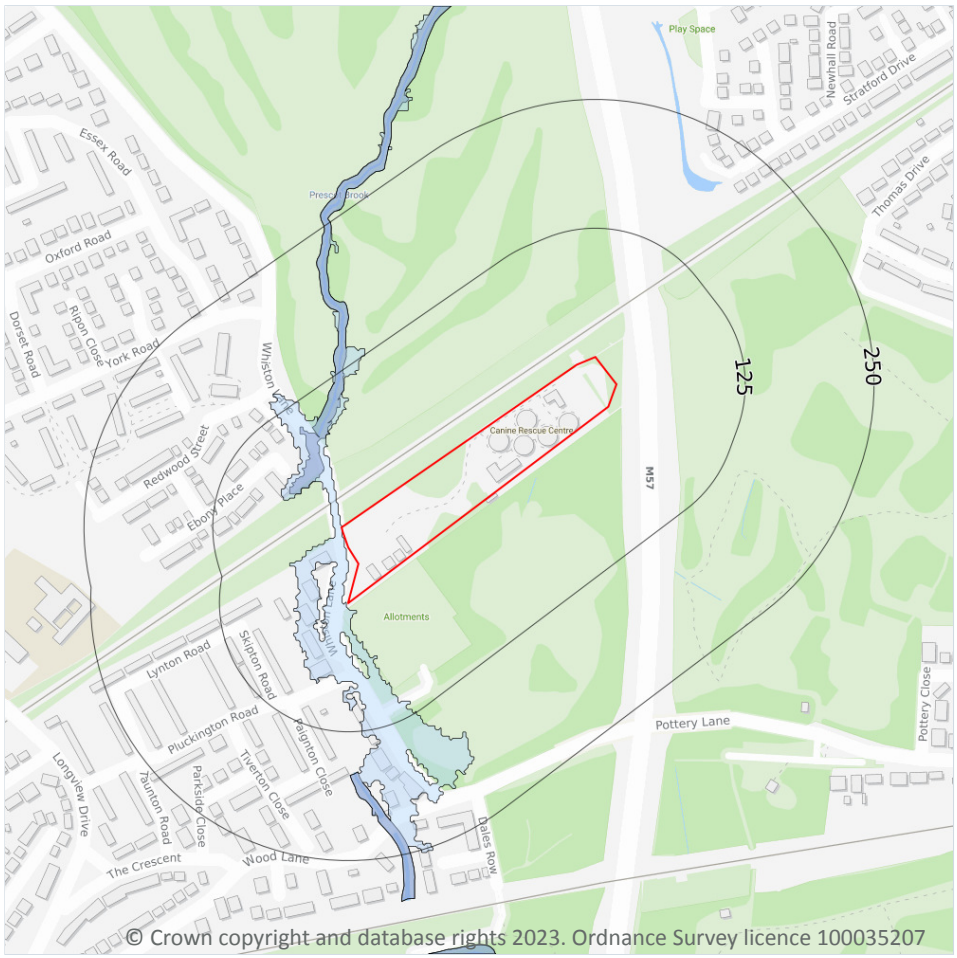
7.5 Flood Storage Areas

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



Site Outline

Search buffers in metres (m)

Flood zone 2

Flood zone 3

7.6 Flood Zone 2

Records within 50m	1

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.

Features are displayed on the River and coastal flooding map on **page 52 >**

Location	Type
On site	**Zone 2 - (Fluvial /Tidal Models)**

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

7.7 Flood Zone 3

Records within 50m	1

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

Features are displayed on the River and coastal flooding map on **page 52 >**

Location	Type
50m W	Zone 3 - (Fluvial /Tidal Models)

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

8 Surface water flooding



8.1 Surface water flooding

Highest risk on site	**1 in 30 year, 0.3m - 1.0m**
Highest risk within 50m	**1 in 30 year, Greater than 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 56 >**

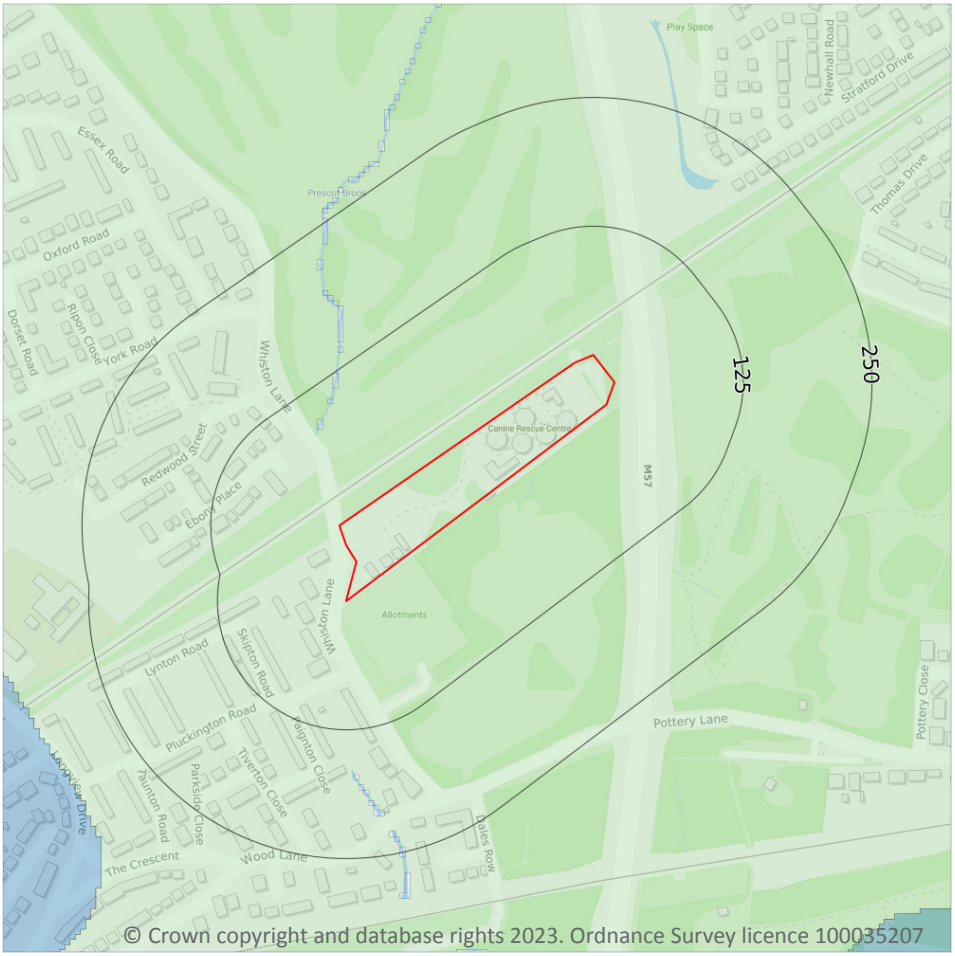
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

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 0.3m and 1.0m

This data is sourced from Ambiental Risk Analytics.

9 Groundwater flooding



Site Outline

Search buffers in metres (m)

- High
- Moderate - High
- Moderate
- Low
- Negligible

9.1 Groundwater flooding

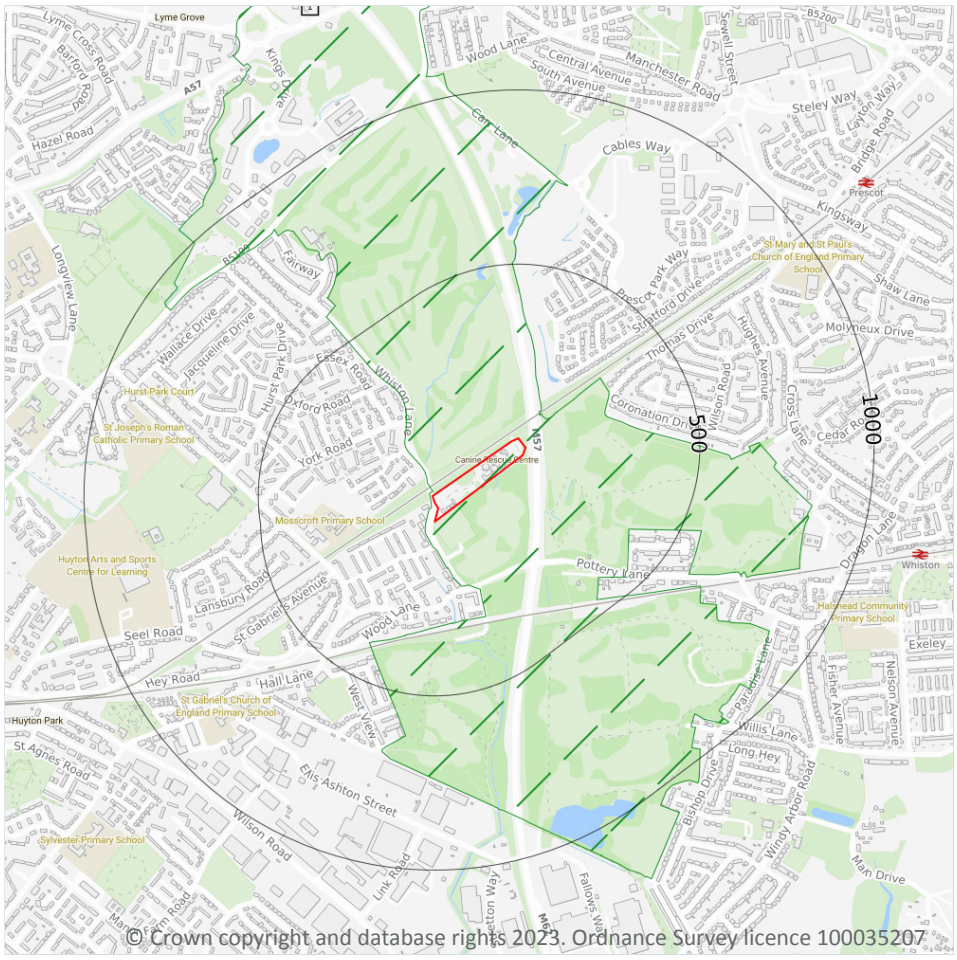
Highest risk on site	**Low**
Highest risk within 50m	**Low**

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 58 >**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations



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Site Outline

Search buffers in metres (m)

Designated Ancient Woodland

Green Belt

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m	0

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

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

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m	0

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

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

10.3 Special Areas of Conservation (SAC)

Records within 2000m	0

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

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

10.4 Special Protection Areas (SPA)

Records within 2000m	0

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

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

10.5 National Nature Reserves (NNR)

Records within 2000m	0

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

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

10.6 Local Nature Reserves (LNR)

Records within 2000m	0

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

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

10.7 Designated Ancient Woodland

Records within 2000m	2

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.

Features are displayed on the Environmental designations map on **page 59 >**

ID	Location	Name	Woodland Type
-	1801m SE	The Old Wood	Ancient & Semi-Natural Woodland
-	1955m SE	The Old Wood	Ancient & Semi-Natural Woodland

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	3

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

Features are displayed on the Environmental designations map on **page 59 >**

ID	Location	Name	Local Authority name
1	**On site**	**Merseyside and Greater Manchester**	**Knowsley**
-	1395m S	Merseyside and Greater Manchester	Knowsley
-	1870m E	Merseyside and Greater Manchester	St. Helens

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

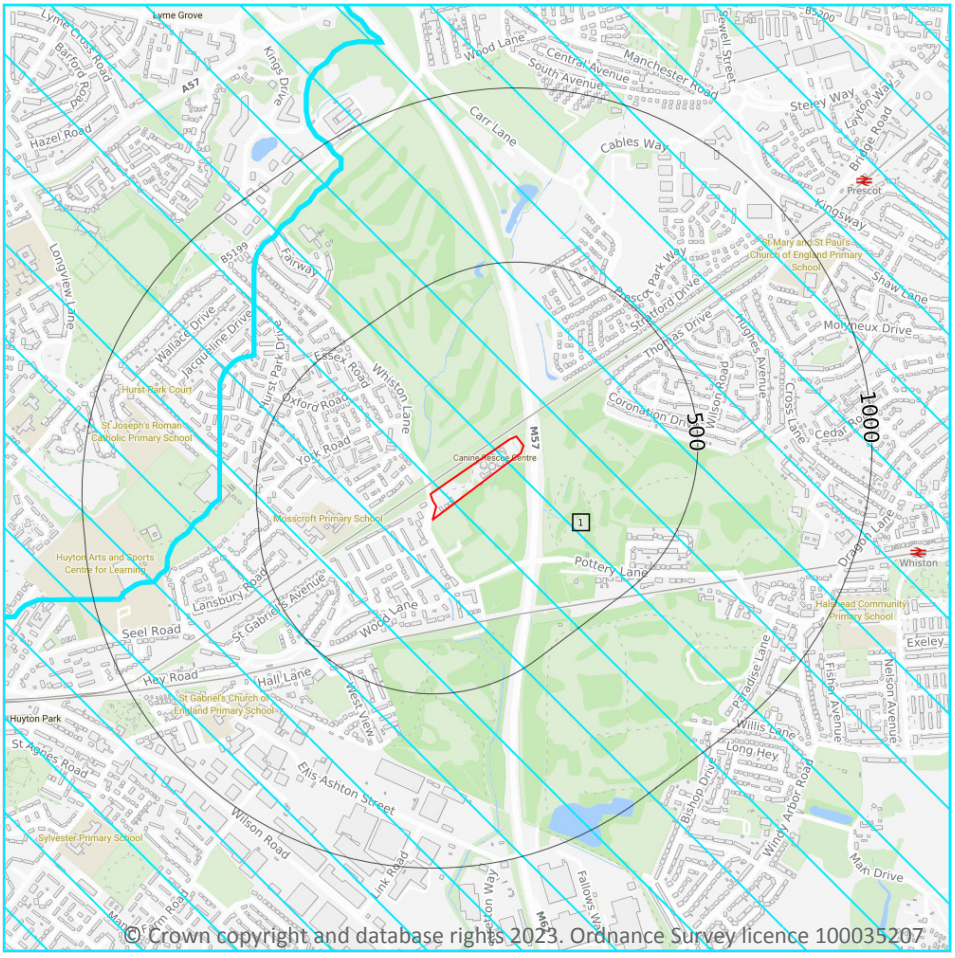
Records within 2000m	5

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	**Dittton Brook (Halewood to Mersey Estuary) NVZ**	**Surface Water**	**640**	**Existing**
385m SW	ALT NVZ	Surface Water	642	Existing
1664m W	ALT NVZ	Surface Water	642	Existing
1768m W	Dittton Brook (Halewood to Mersey Estuary) NVZ	Surface Water	640	Existing
1926m NE	Sankey Brook (Black Bk to Mersey) NVZ	Surface Water	639	Existing

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

SSSI Impact Zones and Units



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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 64 >**

ID	Location	Type of developments requiring consultation
1	On site	**Infrastructure - Airports, helipads and other aviation proposals. Wind and Solar - Solar schemes with footprint > 0.5ha, all wind turbines. Air pollution - Livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 4000m². Combustion - General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Waste - Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill. Discharges - Any discharge of water or liquid waste of more than 20m³/day to ground (ie to seep away) or to surface water, such as a beck or stream.**

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.

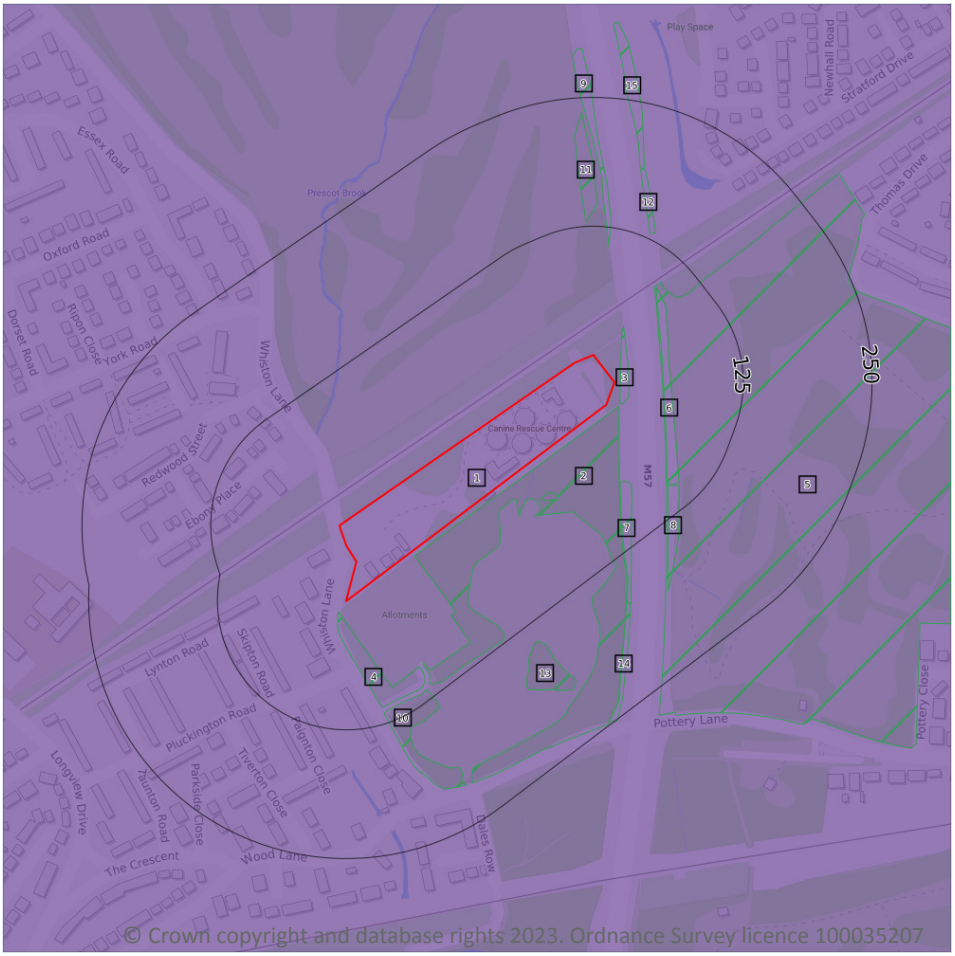
11.7 Registered Parks and Gardens

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 68 >**

ID	Location	Classification	Description
1	**On site**	**Urban**	-

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	14

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.

Features are displayed on the Agricultural designations map on **page 68 >**

ID	Location	Description	Reference	Application date
2	5m SW	Selective Fell/Thin (Unconditional)	010/146/11-12	02/12/2011
3	6m NE	Selective Fell/Thin (Unconditional)	018/366/15-16	-
4	13m SW	Selective Fell/Thin (Unconditional)	010/146/11-12	02/12/2011
5	46m NE	Selective Fell/Thin (Unconditional)	010/120/09-10	17/12/2009
6	48m NE	Selective Fell/Thin (Unconditional)	018/366/15-16	-
7	68m E	Selective Fell/Thin (Unconditional)	018/366/15-16	-
8	99m E	Selective Fell/Thin (Unconditional)	018/366/15-16	-
9	107m NE	Selective Fell/Thin (Unconditional)	018/366/15-16	-
10	113m S	Selective Fell/Thin (Unconditional)	010/146/11-12	02/12/2011
11	129m NE	Selective Fell/Thin (Unconditional)	018/366/15-16	-
12	130m NE	Selective Fell/Thin (Unconditional)	018/366/15-16	-
13	143m S	Selective Fell/Thin (Unconditional)	010/146/11-12	02/12/2011
14	165m SE	Selective Fell/Thin (Unconditional)	018/366/15-16	-
15	187m NE	Selective Fell/Thin (Unconditional)	018/366/15-16	-

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.

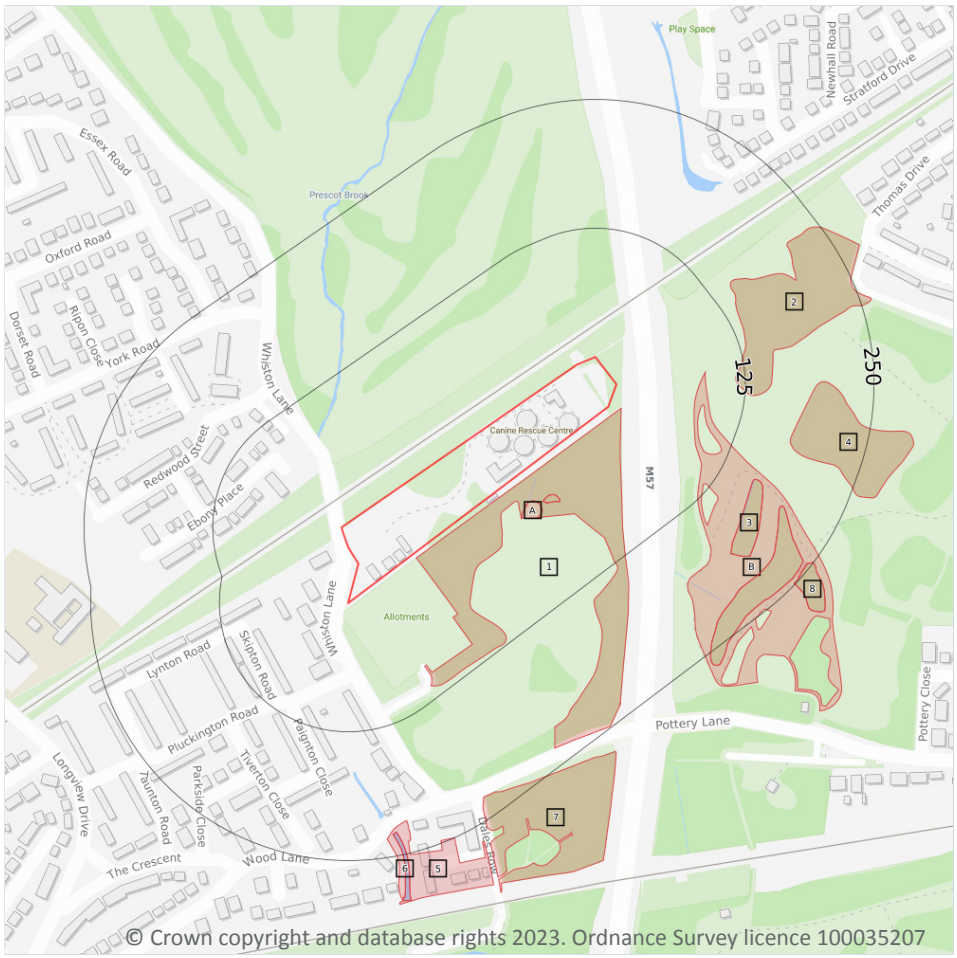
12.5 Countryside Stewardship Schemes

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	12

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 71 >**

ID	Location	Main Habitat	Other habitats
1	5m SW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
A	27m SE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
A	34m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
B	78m E	No main habitat but additional habitats present	Additional: DWOOD (INV 50%)

ID	Location	Main Habitat	Other habitats
2	116m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
3	158m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
4	177m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
B	193m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
5	219m S	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
6	227m S	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
7	230m S	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
8	246m 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	**0**

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.

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

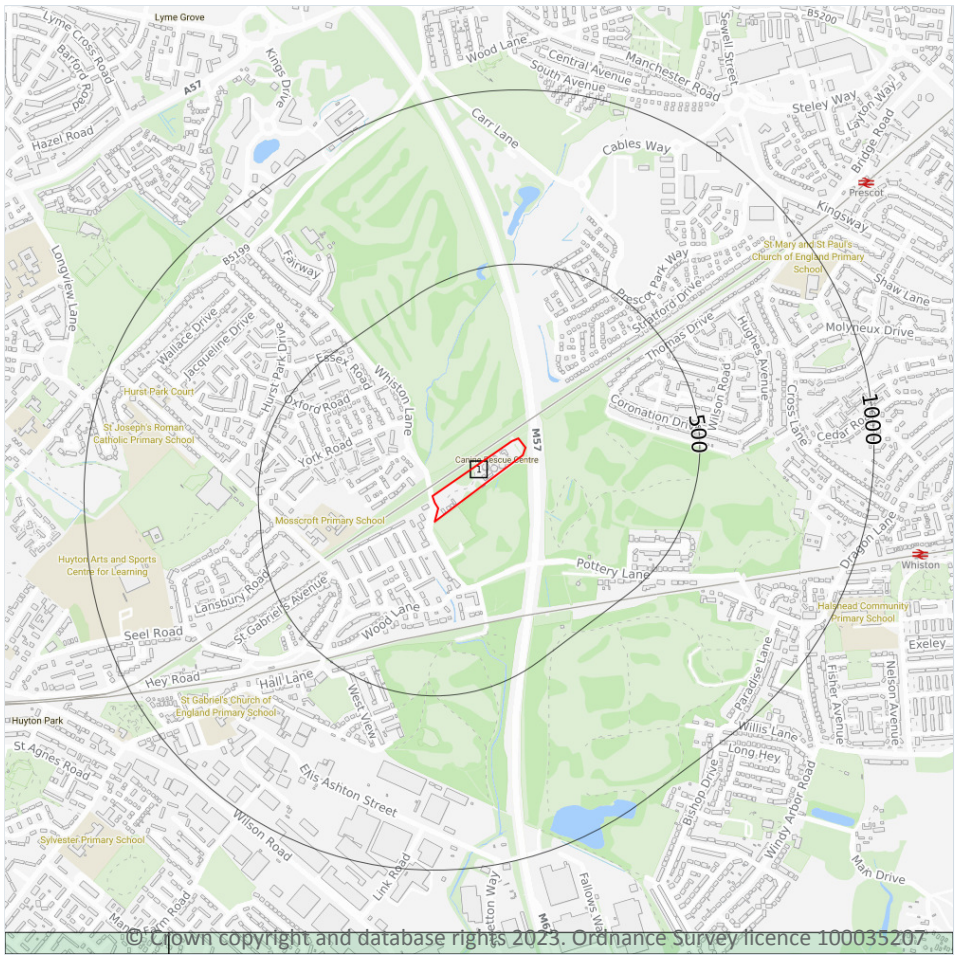
Records within 250m	**0**

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



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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 74 >**

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



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 78 >**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**No coverage**	**Full**	**Full**	**No coverage**	**EW097_runcorn_v4**

This data is sourced from the British Geological Survey.

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

15.2 Artificial and made ground (50k)

Records within 500m	0

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.

This data is sourced from the British Geological Survey.

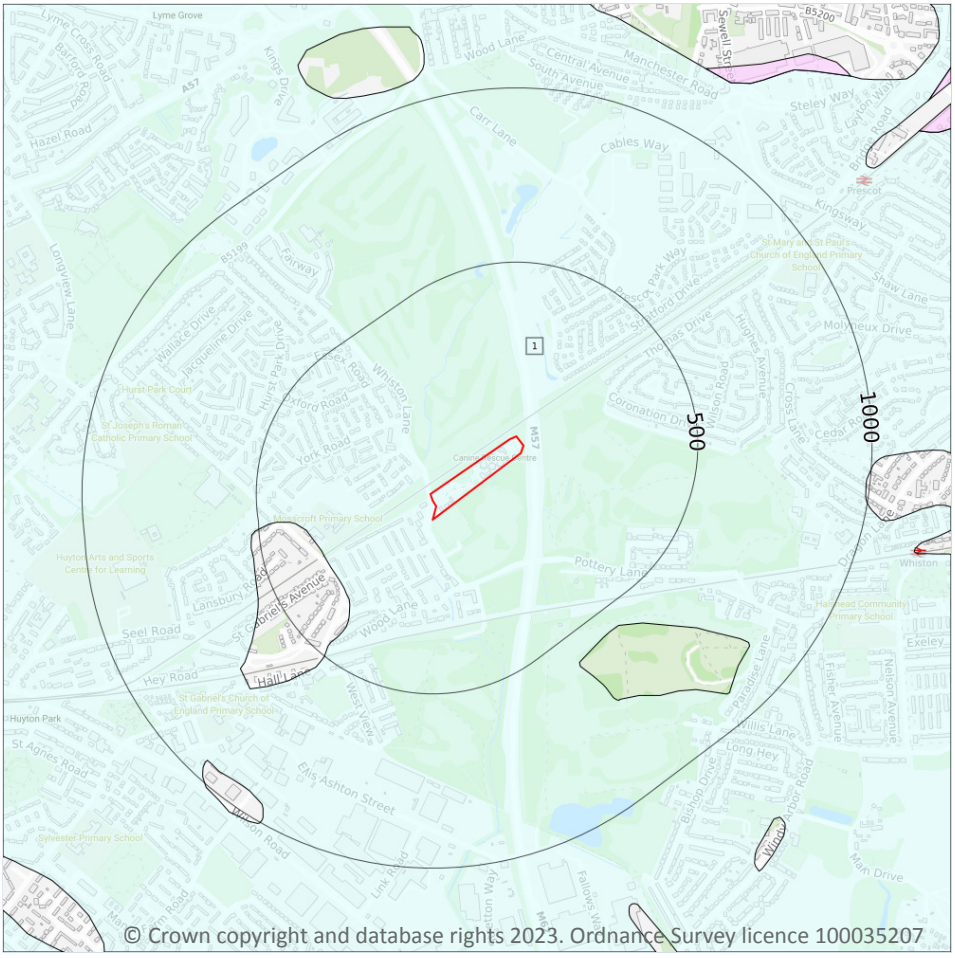
15.3 Artificial ground permeability (50k)

Records within 50m	0

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

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (50k)

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

15.4 Superficial geology (50k)

Records within 500m **1**

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

Features are displayed on the Geology 1:50,000 scale - Superficial map on **page 80 >**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**TILLD-DMTN**	**TILL, DEVENSIAN**	**DIAMICTON**

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m	1

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

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

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

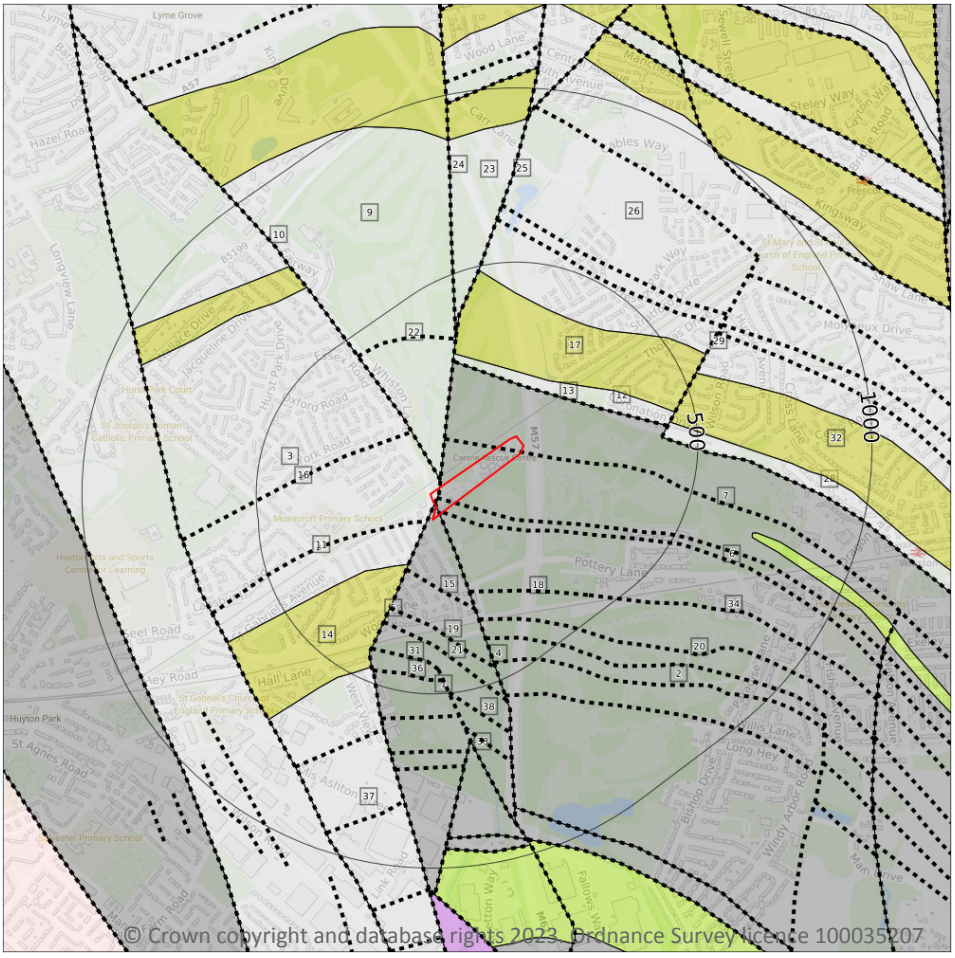
15.7 Landslip permeability (50k)

Records within 50m	0

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

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (50k)

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

15.8 Bedrock geology (50k)

Records within 500m	12

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 82 >**

ID	Location	LEX Code	Description	Rock age
1	On site	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
2	On site	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN

ID	Location	LEX Code	Description	Rock age
3	**On site**	**PLCM-MDSS**	**PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE**	**WESTPHALIAN**
9	17m W	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
12	144m NE	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
14	146m SW	PLCM-SDST	PENNINE LOWER COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
17	180m NE	RHR-SDST	RAVENHEAD ROCK - SANDSTONE	WESTPHALIAN
23	330m N	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
26	370m NE	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
28	397m E	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
32	425m E	RHR-SDST	RAVENHEAD ROCK - SANDSTONE	WESTPHALIAN
37	458m SW	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN

This data is sourced from the British Geological Survey.

15.9 Bedrock 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 bedrock (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Fracture**	**Moderate**	**Low**
On site	**Fracture**	**Moderate**	**Low**

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m	26

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.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 82 >**

ID	Location	Category	Description
4	**On site**	**FAULT**	**Fault, observed**
5	**On site**	**FAULT**	**Fault, inferred, displacement unknown**
6	**On site**	**ROCK**	**Coal seam, inferred**
7	**On site**	**ROCK**	**Coal seam, inferred**
8	**On site**	**ROCK**	**Coal seam, inferred**
10	17m W	FAULT	Fault, inferred
11	18m SW	ROCK	Coal seam, inferred
13	144m NE	FOSSIL_HORIZON	Marine band
15	162m SW	ROCK	Coal seam, inferred
16	177m NW	ROCK	Coal seam, inferred
18	232m S	ROCK	Coal seam, inferred
19	282m SW	ROCK	Coal seam, inferred
20	315m S	ROCK	Coal seam, inferred
21	326m SW	ROCK	Coal seam, inferred
22	327m N	ROCK	Coal seam, inferred
24	330m N	FAULT	Fault, inferred
25	330m N	FAULT	Fault, inferred
27	373m S	ROCK	Coal seam, inferred
29	397m E	FAULT	Fault, observed
30	397m E	FOSSIL_HORIZON	Marine band
31	400m S	ROCK	Coal seam, inferred
33	430m S	FAULT	Fault, observed
34	443m SE	ROCK	Coal seam, inferred

ID	Location	Category	Description
35	446m S	ROCK	Coal seam, inferred
36	448m S	ROCK	Coal seam, inferred
38	499m S	ROCK	Coal seam, inferred

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	2

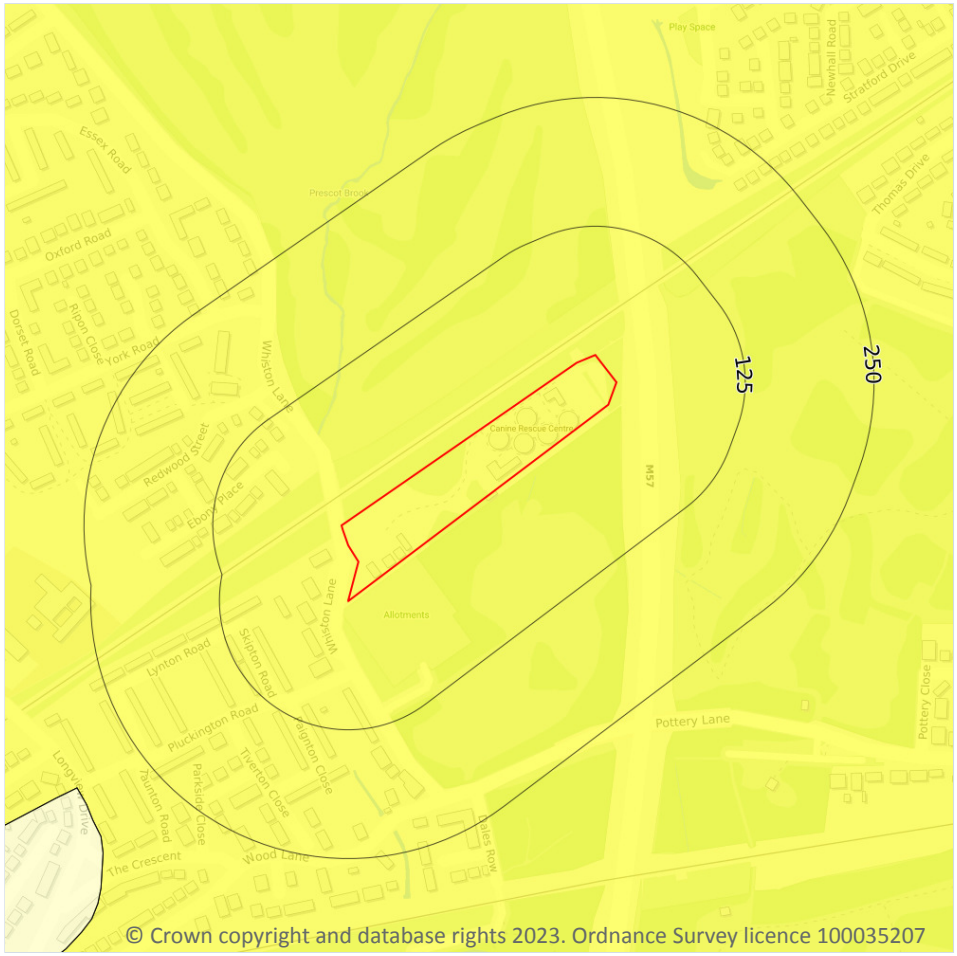
The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several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

Features are displayed on the Boreholes map on **page 86 >**

ID	Location	Grid reference	Name	Length	Confidential	Web link
A	239m NE	346246 391478	Stadt Moers Country Park, Knowsley BH202	-	Y	N/A
A	244m NE	346256 391465	Stadt Moers Country Park, Knowsley TP12	-	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	1

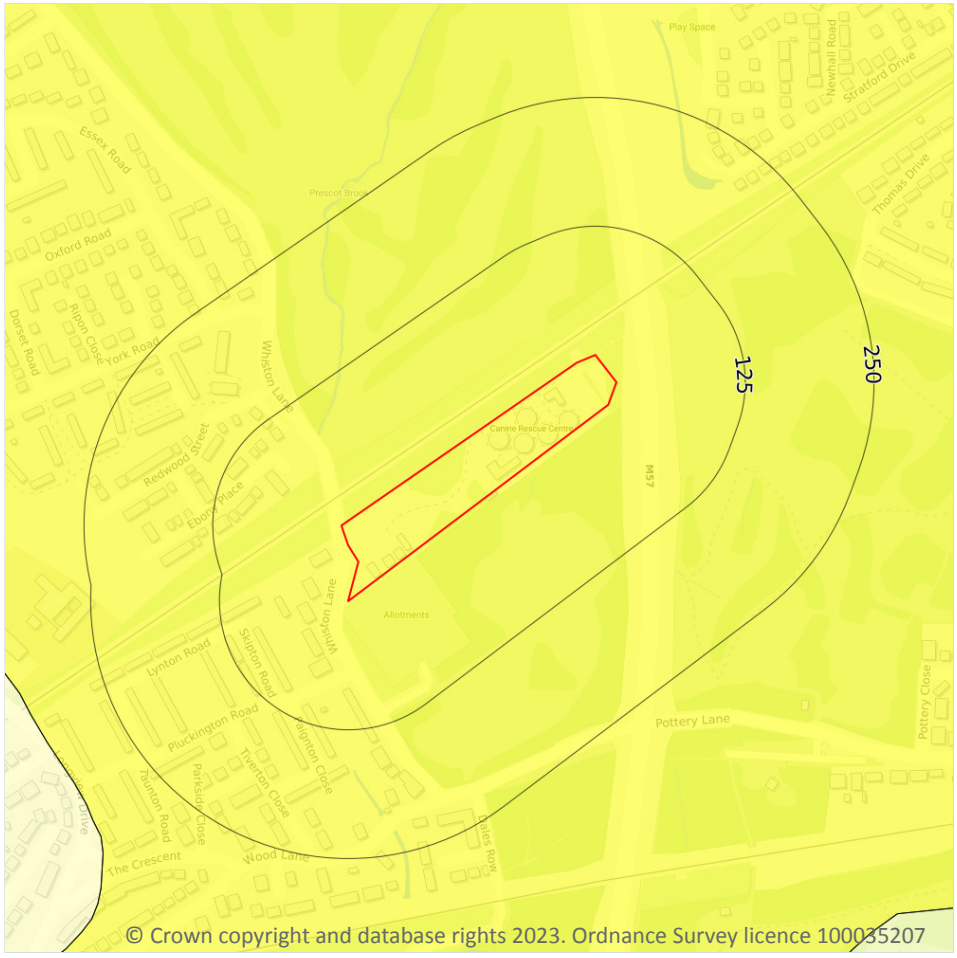
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and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

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 87 >**

Location	Hazard rating	Details
On site	**Very low**	**Ground conditions predominantly low plasticity.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Running sands



Site Outline

Search buffers in metres (m)

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

17.2 Running sands

Records within 50m	1

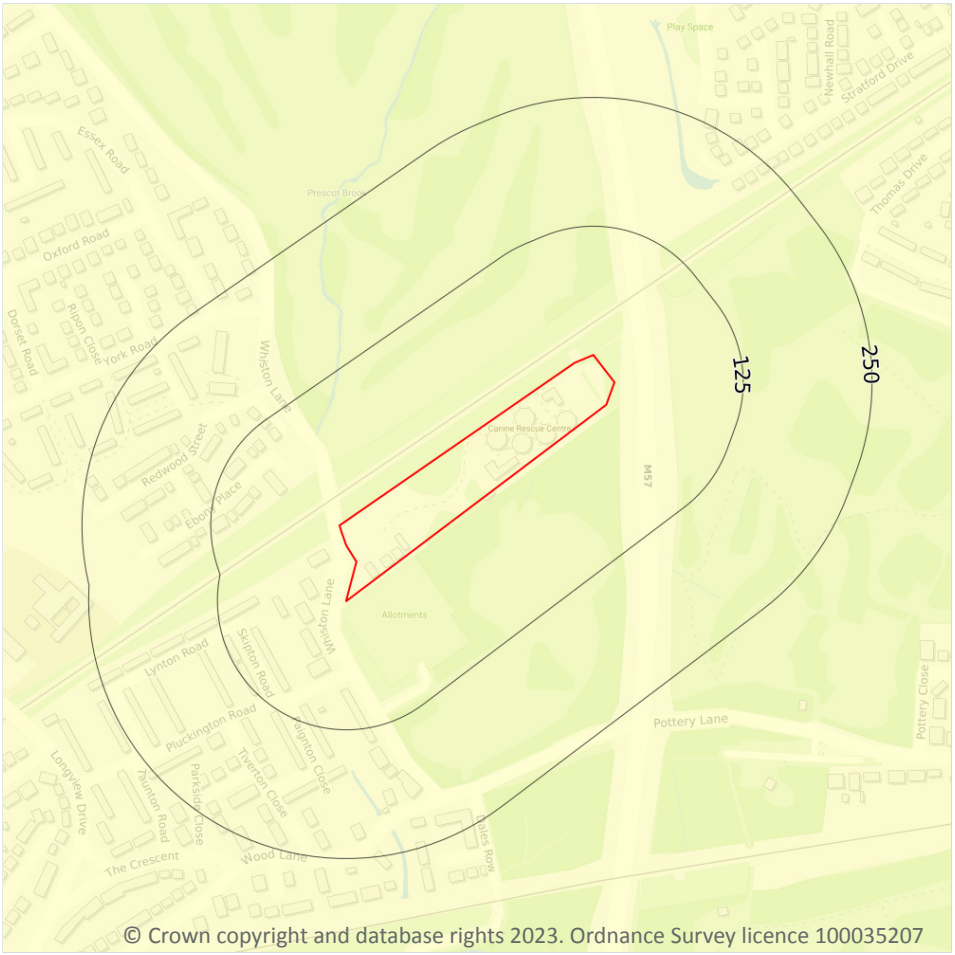
The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

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

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

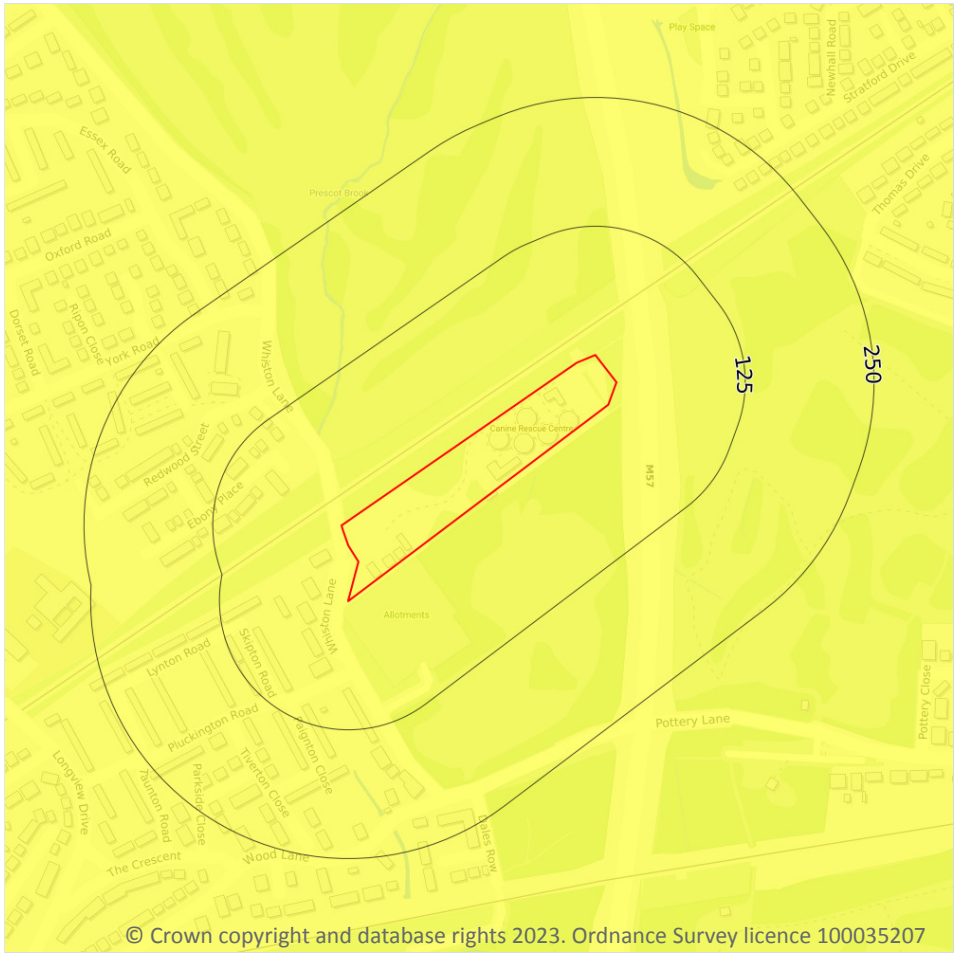
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 89 >**

Location	Hazard rating	Details
On site	**Negligible**	**Compressible strata are not thought to occur.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Collapsible deposits



17.4 Collapsible deposits

Records within 50m	1

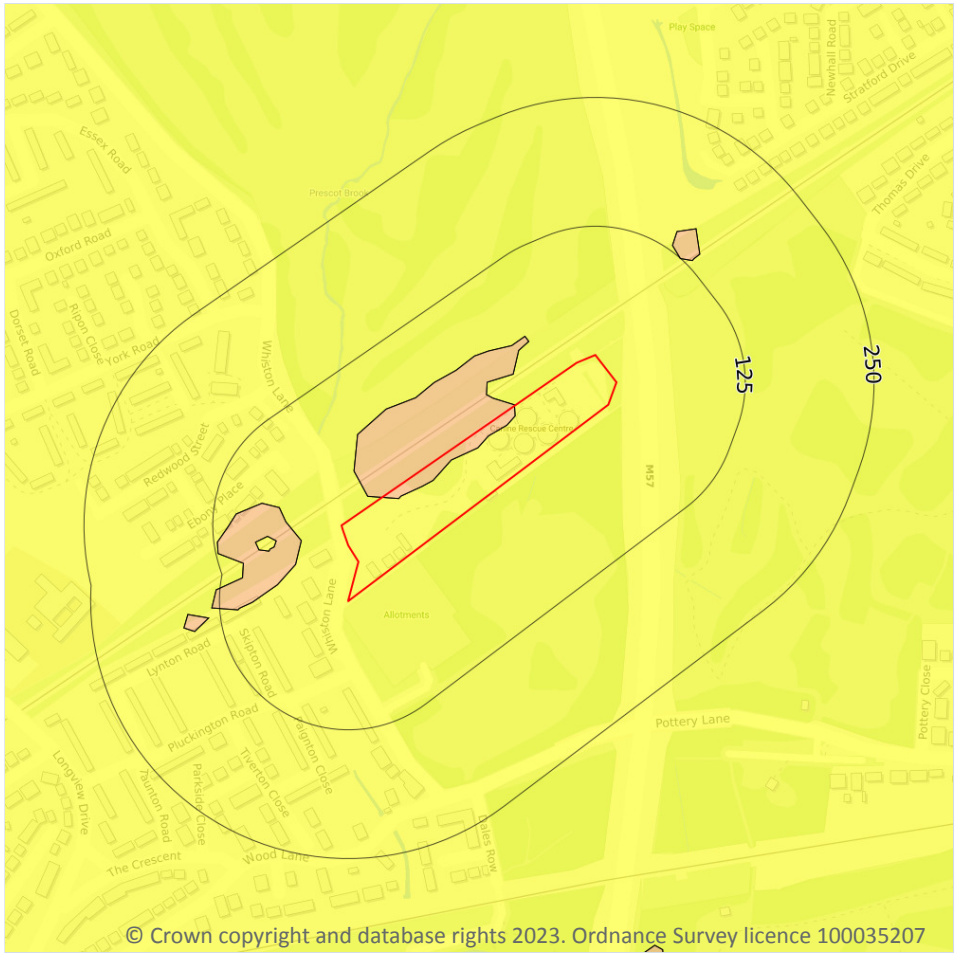
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 90 >**

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



17.5 Landslides

Records within 50m	3

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.

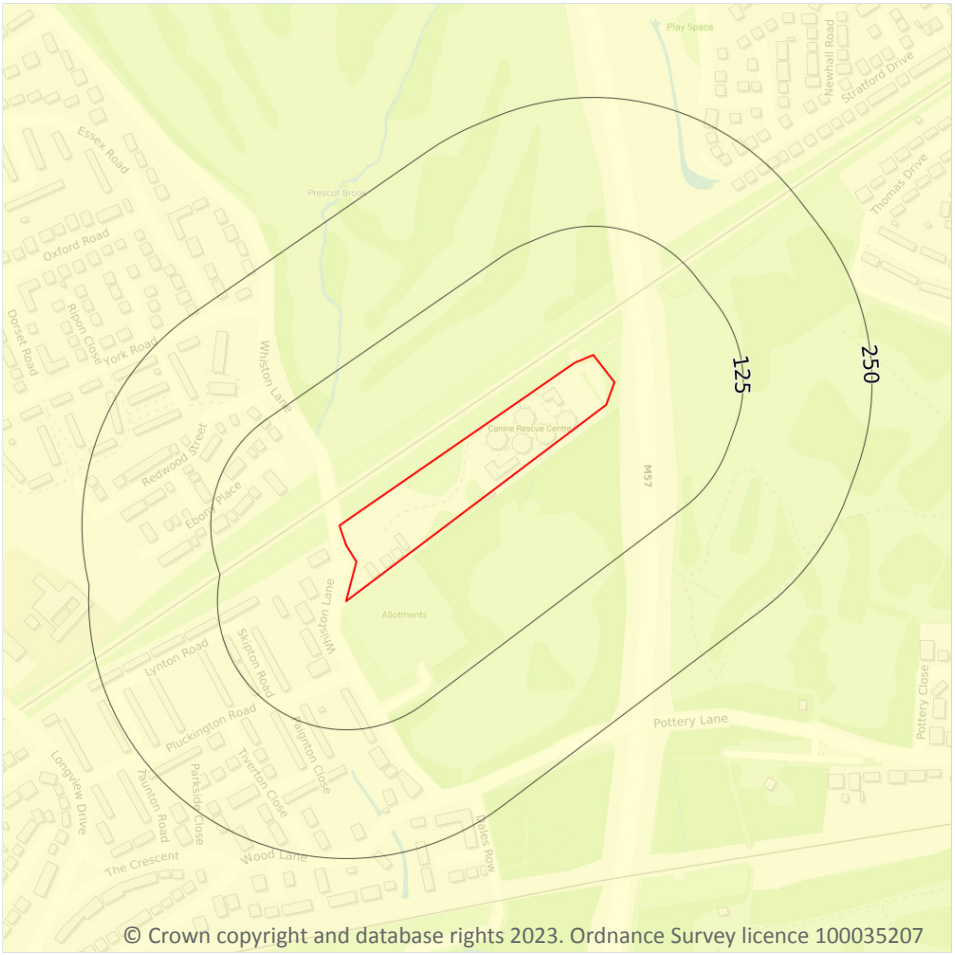
Features are displayed on the Natural ground subsidence - Landslides map on **page 91 >**

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.**

Location	Hazard rating	Details
On site	**Low**	**Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.**
42m W	Low	Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Ground dissolution of soluble rocks



17.6 Ground dissolution of soluble rocks

Records within 50m	1

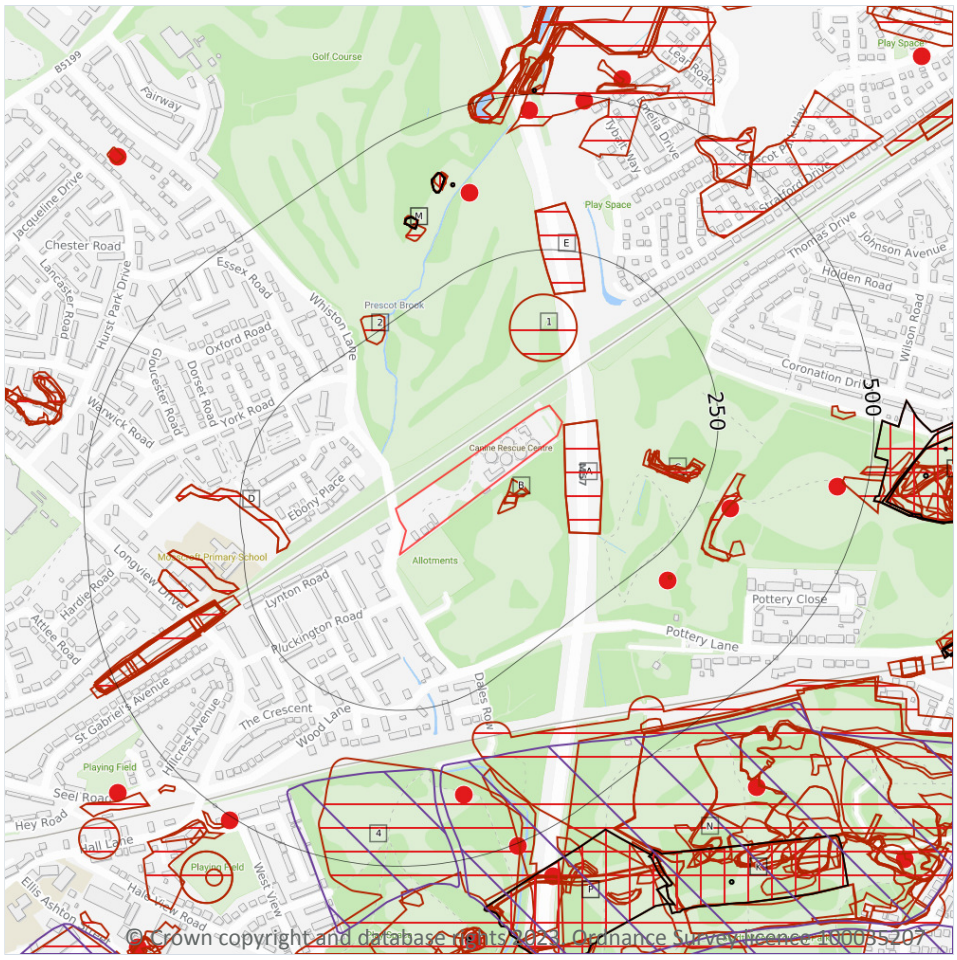
The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 93 >**

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



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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	8

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.

Features are displayed on the Mining and ground workings map on **page 95 >**

ID	Location	Details	Description
I	291m SE	Name: Brown's House Pit Address: Whiston Cross, Whiston, PRESCOT, Merseyside Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
H	300m E	Name: Kennel Cottages Pit Address: Whiston Cross, Whiston, PRESCOT, Merseyside Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
O	364m N	Name: Prescot Brook Levels Address: PRESCOT, Merseyside Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
7	398m S	Name: Pottery Lane Mine Address: Whiston Lane Ends, Whiston, PRESCOT, Merseyside Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
S	453m E	Name: Kennel Cottages Pit Address: Whiston Cross, Whiston, PRESCOT, Merseyside Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

ID	Location	Details	Description
T	473m N	Name: Old Carrs Colliery Pit Address: PRESCOT, Merseyside Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
10	491m N	Name: Old Carrs Colliery Pit Address: PRESCOT, Merseyside Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
T	497m N	Name: Old Carrs Pit Address: PRESCOT, Merseyside Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m **18**

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 95 >**

ID	Location	Land Use	Year of mapping	Mapping scale
A	4m NE	Cuttings	1975	1:10000
A	4m NE	Cuttings	1990	1:10000
B	12m E	Pond	1966	1:10560
B	24m SE	Pond	1955	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
B	29m SE	Pond	1851	1:10560
1	72m NE	Unspecified Quarry	1891	1:10560
C	144m E	Ponds	1891	1:10560
C	149m E	Ponds	1966	1:10560
C	154m E	Ponds	1938	1:10560
C	155m E	Ponds	1947	1:10560
C	155m E	Ponds	1925	1:10560
C	155m E	Ponds	1906	1:10560
C	158m E	Ponds	1955	1:10560
D	178m W	Unspecified Ground Workings	1975	1:10000
D	178m W	Unspecified Ground Workings	1990	1:10000
E	179m NE	Cuttings	1975	1:10000
E	179m NE	Cuttings	1990	1:10000
2	234m NW	Unspecified Heap	1975	1:10000

This is data is sourced from Ordnance Survey/Groundsure.

18.3 Underground workings

Records within 1000m	**49**

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

Features are displayed on the Mining and ground workings map on **page 95 >**

ID	Location	Land Use	Year of mapping	Mapping scale
M	351m N	Unspecified Old Levels	1947	1:10560
M	351m N	Unspecified Old Levels	1925	1:10560
M	351m N	Old Trial Levels	1906	1:10560
O	384m N	Unspecified Old Level	1947	1:10560
O	384m N	Unspecified Old Levels	1947	1:10560
O	384m N	Unspecified Old Levels	1925	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
O	384m N	Old Trial Levels	1906	1:10560
T	503m N	Unspecified Shaft	1891	1:10560
U	505m E	Colliery	1891	1:10560
U	528m E	Disused Colliery	1906	1:10560
U	536m E	Colliery	1925	1:10560
P	550m S	Disused Colliery	1906	1:10560
U	586m E	Unspecified Old Shafts	1947	1:10560
U	614m E	Unspecified Old Shafts	1947	1:10560
K	623m SE	Colliery	1891	1:10560
W	624m S	Unspecified Old Shaft	1891	1:10560
-	648m E	Unspecified Disused Shaft	1966	1:10560
-	653m E	Unspecified Old Shafts	1947	1:10560
-	653m E	Unspecified Old Shafts	1925	1:10560
-	656m E	Unspecified Old Shafts	1947	1:10560
-	674m E	Unspecified Old Shafts	1947	1:10560
-	674m E	Unspecified Old Shafts	1925	1:10560
-	676m E	Unspecified Disused Shaft	1966	1:10560
-	677m E	Unspecified Old Shafts	1947	1:10560
-	679m E	Unspecified Disused Shaft	1975	1:10000
-	679m E	Unspecified Disused Shaft	1990	1:10000
AL	701m E	Colliery	1891	1:10560
AL	708m E	Disused Colliery	1925	1:10560
K	737m SE	Unspecified Old Shaft	1925	1:10560
-	831m E	Disused Colliery	1906	1:10560
-	852m E	Unspecified Disused Shafts	1990	1:10000
-	870m E	Unspecified Old Shafts	1947	1:10560
-	870m E	Unspecified Old Shafts	1925	1:10560
-	872m E	Unspecified Old Shafts	1947	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
-	920m E	Unspecified Disused Shafts	1990	1:10000
-	925m S	Disused Colliery	1947	1:10560
-	925m S	Disused Colliery	1925	1:10560
-	930m E	Unspecified Old Shafts	1925	1:10560
-	931m E	Unspecified Old Shafts	1925	1:10560
-	934m S	Old Colliery	1947	1:10560
-	934m S	Old Colliery	1947	1:10560
-	934m S	Old Colliery	1925	1:10560
-	934m S	Old Colliery	1906	1:10560
-	934m S	Old Colliery	1891	1:10560
-	954m S	Unspecified Disused Mine	1966	1:10560
-	969m S	Colliery	1891	1:10560
-	972m SE	Disused Colliery	1906	1:10560
-	976m SE	Unspecified Disused Mine	1966	1:10560
-	997m E	Unspecified Old Shafts	1947	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground mining extents

Records within 500m	0

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

This data is sourced from Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m	2

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.

Features are displayed on the Mining and ground workings map on **page 95 >**

ID	Location	Site Name	Mineral	Type	Planning Status	Planning Status Date
N	345m S	Whiston	Clay, shale, bricks	Surface mineral working	Valid	7/7/47,25/9/52
4	346m S	Whiston	Clay, shale, bricks	Surface mineral working	Valid	7/7/47,25/9/52

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	1

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

Location	Details
On site	**The site is located within a coal mining area as defined by the Coal Authority. A Consultants Coal Mining Report is recommended to further assess coal mining issues at the site. This can be ordered directly through Groundsure or your preferred search provider.**

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.

19.5 National karst database

Records within 500m	0

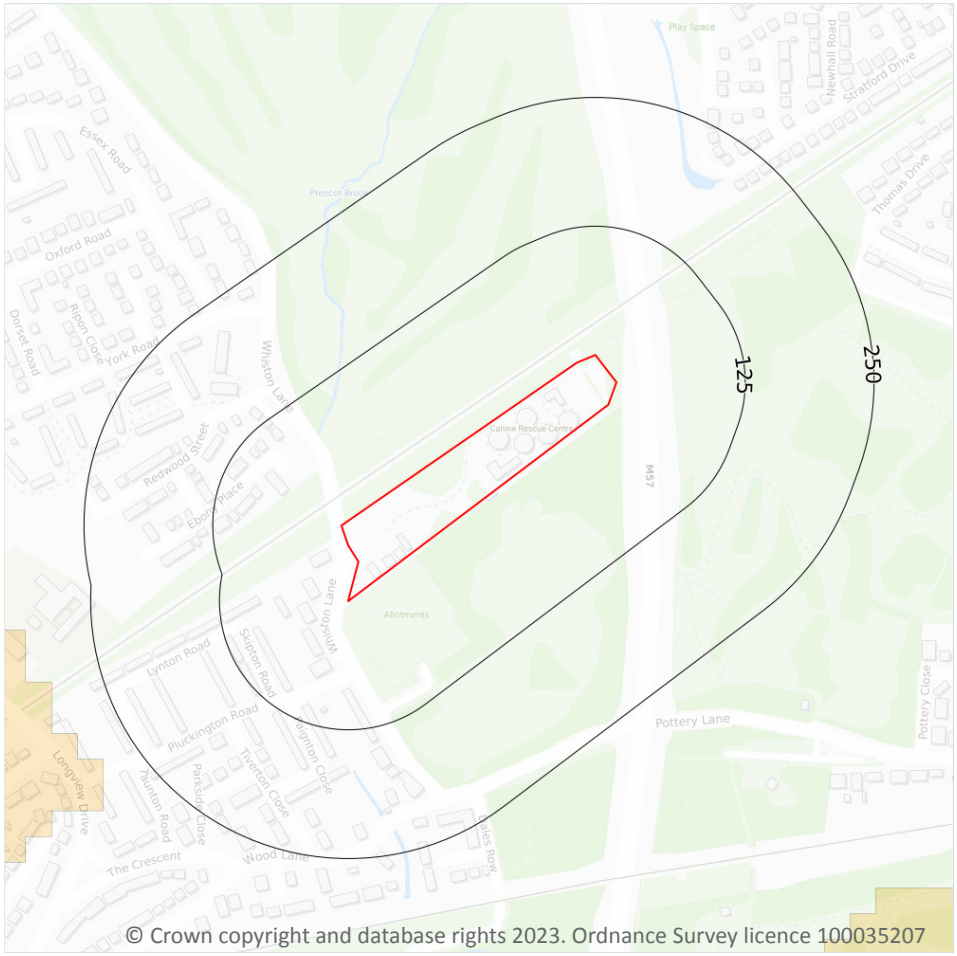
This is a comprehensive database of national karst information gathered from a wide range of sources. BGS have collected data on five main types of karst feature: Sinkholes, stream links, caves, springs, and incidences of associated damage to buildings, roads, bridges and other engineered works.

Since the database was set up in 2002 data covering most of the evaporite karst areas of the UK have now been added, along with data covering about 60% of the Chalk, and 35% of the Carboniferous Limestone outcrops. Many of the classic upland karst areas have yet to be included. Recorded so far are: Over 800 caves, 1300 stream sinks, 5600 springs, 10,000 sinkholes.

The database is not yet complete, and not all records have been verified. The absence of data does not mean that karst features are not present at a site. A reliability rating is included with each record.

This data is sourced from the British Geological Survey.

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 106 >**

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	5

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

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	**15 - 25 mg/kg**	**No data**	**100 - 200 mg/kg**	**60 - 120 mg/kg**	**2.2 - 3.0 mg/kg**	**90 - 120 mg/kg**	**15 - 30 mg/kg**
On site	**15 - 25 mg/kg**	**No data**	**300 - 600 mg/kg**	**240 - 360 mg/kg**	**2.2 - 3.0 mg/kg**	**90 - 120 mg/kg**	**15 - 30 mg/kg**
On site	**15 - 25 mg/kg**	**No data**	**100 - 200 mg/kg**	**60 - 120 mg/kg**	**2.2 - 3.0 mg/kg**	**90 - 120 mg/kg**	**15 - 30 mg/kg**
On site	**15 - 25 mg/kg**	**No data**	**100 - 200 mg/kg**	**60 - 120 mg/kg**	**2.2 - 3.0 mg/kg**	**90 - 120 mg/kg**	**15 - 30 mg/kg**
17m W	15 - 25 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	2.2 - 3.0 mg/kg	90 - 120 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 km^2).

This data is sourced from the British Geological Survey.

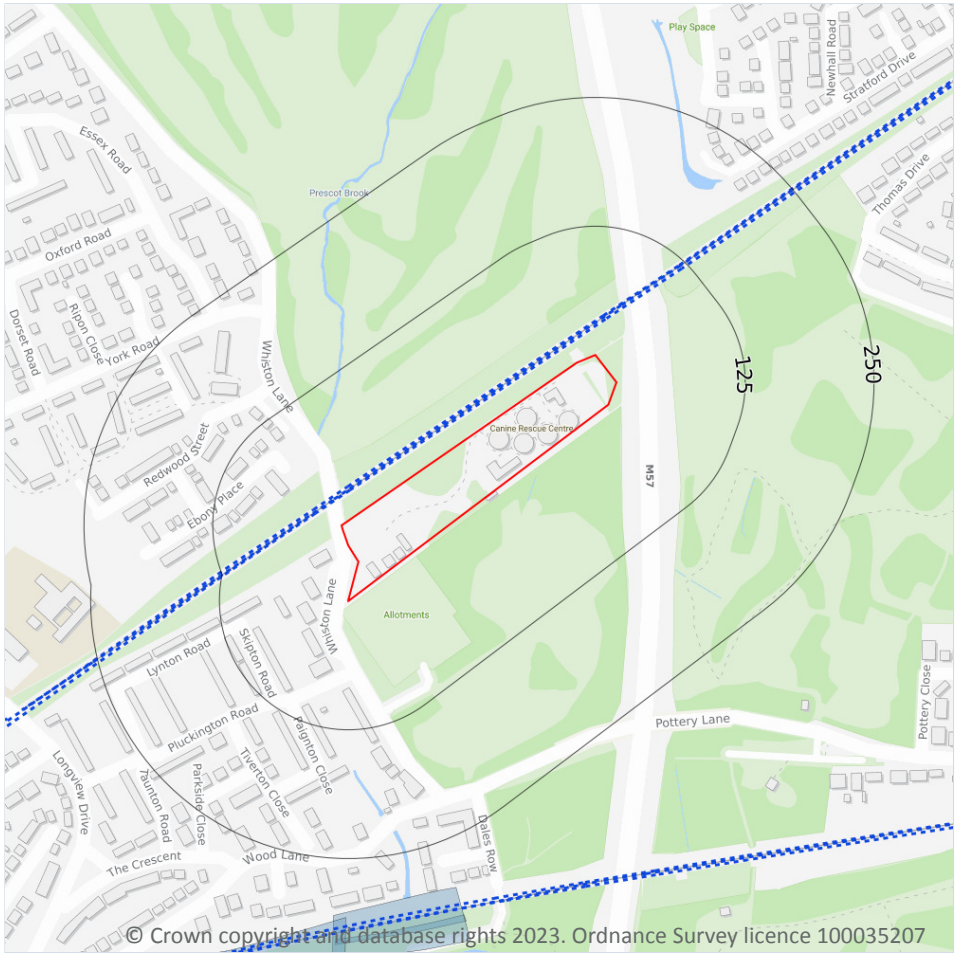
21.3 BGS Measured Urban Soil Chemistry

Records within 50m	0

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

This data is sourced from the British Geological Survey.

22 Railway infrastructure and projects



Site Outline

Search buffers in metres (m)

- Crossrail 1 Stations
- Crossrail 1 Route
- 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	0

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.

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	14

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

Features are displayed on the Railway infrastructure and projects map on **page 110 >**

Location	Name	Type
20m NE	Liverpool to Wigan Line	rail
22m NE	Not given	Multi Track
24m W	Liverpool to Wigan Line	rail
24m NE	Liverpool to Wigan Line	rail
25m W	Not given	Multi Track
28m W	Liverpool to Wigan Line	rail
28m W	Liverpool to Wigan Line	rail
31m W	Liverpool to Wigan Line	rail
36m NE	Liverpool to Wigan Line	rail
39m NE	Liverpool to Wigan Line	rail
54m NE	Not given	Multi Track
119m NE	Liverpool to Wigan Line	rail
119m NE	Liverpool to Wigan Line	rail
120m NE	Not given	Multi Track

This data is sourced from Ordnance Survey and OpenStreetMap.

22.8 Crossrail 1

Records within 500m	**0**

The Crossrail railway project links 41 stations over 100 kilometres from Reading and Heathrow in the west, through underground sections in central London, to Shenfield and Abbey Wood in the east.

This data is sourced from publicly available information by Groundsure.

22.9 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.

22.10 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 ↗.

Terms and conditions

Groundsure's Terms and Conditions can be accessed at this link: https://www.groundsure.com/terms-and-conditions-april-2023/ ↗.

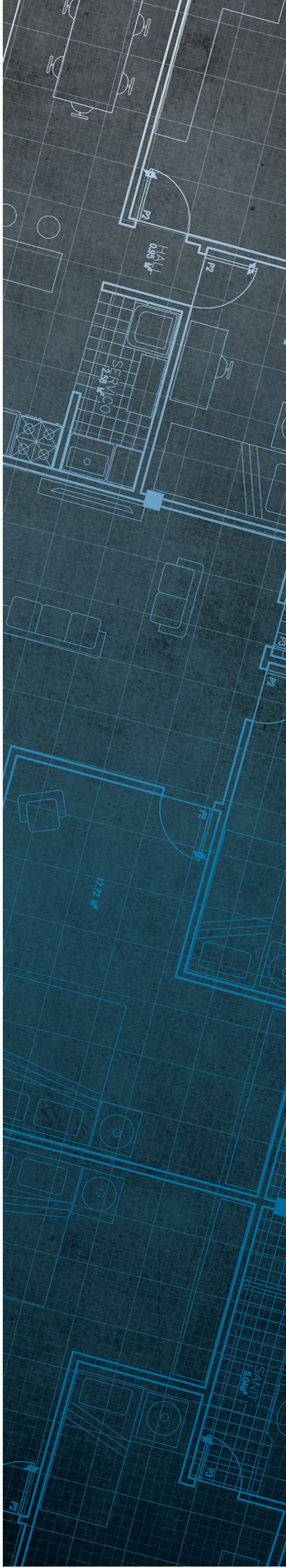
The Coal Authority

Consultants

Coal Mining Report

Old Bridge Nurseries
Whiston Lane
Huyton
Knowsley
L36 6HP

Date of enquiry:	**9 August 2023**
Date enquiry received:	**9 August 2023**
Issue date:	**9 August 2023**
Our reference:	**51003371852001**
Your reference:	**AG3533-23**



Consultants

Coal Mining Report

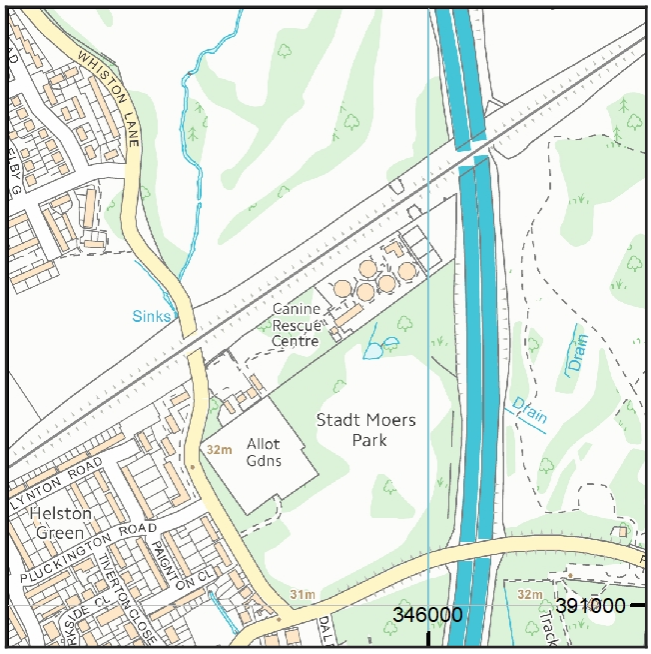
This report is based on and limited to the records held by the Coal Authority at the time the report was produced.

Client name

Applied Geology Ltd

Enquiry address

Old Bridge Nurseries
Whiston Lane
Huyton
Knowsley
L36 6HP



Approximate position of property

Map data

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NG18 4RG

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@coalauthority
/company/the-coal-authority
/thecoalauthority
/thecoalauthority

Section 1 – Mining activity and geology

Past underground mining

Colliery	Seam	Mineral	Coal Authority reference	Depth (m)	Direction to working	Dipping rate of seam worked (degrees)	Dipped direction of seam worked	Extraction thickness (cm)	Year last mined
unnamed	PLODDER	Coal	300D	147	Beneath Property	9.5	South	240	1895
unnamed	TRENCHERBONE	Coal	3009	151	North	9.5	South	80	1894
unnamed	SIR JOHN	Coal	300E	155	Beneath Property	9.3	South-West	60	1895
unnamed	RUSHY PARK	Coal	300F	225	Beneath Property	9.4	South	130	1885
unnamed	ARLEY	Coal	300K	343	North-East	9.4	South-West	70	1895

Probable unrecorded shallow workings

Yes.

Spine roadways at shallow depth

No spine roadway recorded at shallow depth.

Mine entries

Entry type	Reference	Grid reference	Treatment description	Mineral	Conveyancing details
Shaft	345391-012	345960 391450		Coal	
Shaft	346391-010	346087 391388	This shaft was located in 1984 and is presumed to have been treated by Knowsley Borough Council	Coal	

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Abandoned mine plan catalogue numbers

The following abandoned mine plan catalogue numbers intersect with some, or all, of the enquiry boundary:

3466	NW830	5578
NW67	3671	NW849
4441	3612	NW822

Our records show we have more plans than those shown above which could affect the enquiry boundary.

Please contact us on 0345 762 6848 to determine the exact abandoned mine plans you require based on your needs.

Outcrops

Seam name	Mineral	Seam workable	Distance to outcrop (m)	Direction to outcrop	Bearing of outcrop
HIGHER FLORIDA	Coal	Yes	Within	N/A	110
HIGHER PIGEON HOUSE (PIGEON HOUSE)	Coal	Yes	Within	N/A	100
HIGHER PIGEON HOUSE (PIGEON HOUSE)	Coal	Yes	Within	N/A	101
LOWER FLORIDA	Coal	Yes	Within	N/A	110

Geological faults, fissures and breaklines

Please refer to the 'Summary of findings' map (on separate sheet) for details of any geological faults, fissures or breaklines either within or intersecting the enquiry boundary.

Faults under or close to the property recorded.

Opencast mines

Please refer to the “Summary of findings” map (on separate sheet) for details of any opencast areas within 500 metres of the enquiry boundary.

Coal Authority managed tips

None recorded within 500 metres of the enquiry boundary.

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Section 2 – Investigative or remedial activity

Please refer to the 'Summary of findings' map (on separate sheet) for details of any activity within the area of the site boundary.

Site investigations
None recorded within 50 metres of the enquiry boundary.

Remediated sites
None recorded within 50 metres of the enquiry boundary.

Coal mining subsidence
The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 metres of the enquiry boundary, since 31 October 1994.

There is no current Stop Notice delaying the start of remedial works or repairs to the property.

The Coal Authority is not aware of any request having been made to carry out preventive works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991.

Mine gas
None recorded within 500 metres of the enquiry boundary.

Mine water treatment schemes
None recorded within 500 metres of the enquiry boundary.

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Section 3 – Licensing and future mining activity

Future underground mining
None recorded.

Coal mining licensing
None recorded within 200 metres of the enquiry boundary.

Court orders
None recorded.

Section 46 notices
No notices have been given, under section 46 of the Coal Mining Subsidence Act 1991, stating that the land is at risk of subsidence.

Withdrawal of support notices
The property is not in an area where a notice to withdraw support has been given.

The property is not in an area where a notice has been given under section 41 of the Coal Industry Act 1994, cancelling the entitlement to withdraw support.

Payments to owners of former copyhold land
The property is not in an area where a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

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Section 4 – Further information

The following potential risks have been identified and as part of your risk assessment should be investigated further.

Future development

If development proposals are being considered, technical advice relating to both the investigation of coal and former coal mines and their treatment should be obtained before beginning work on site. All proposals should apply specialist engineering practice required for former mining areas. No development should be undertaken that intersects, disturbs or interferes with any coal or coal mines without first obtaining the permission of the Coal Authority.

MINE GAS: Please note, if there are no recorded instances of mine gas within 500m of the enquiry boundary, this does not mean that mine gas is not present within the vicinity. The Coal Authority Mine Gas data is limited to only those sites where a Mine Gas incident has been recorded. Developers should be aware that the investigation of coal seams, mine workings or mine entries may have the potential to generate and/or displace underground gases. Associated risks both to the development site and any neighbouring land or properties should be fully considered when undertaking any ground works. The need for effective measures to prevent gases migrating onto any land or into any properties, either during investigation or remediation work, or after development must also be assessed and properly addressed. In these instances, the Coal Authority recommends that a more detailed Gas Risk Assessment is undertaken by a competent assessor.

Development advice

The site is within an area of historical coal mining activity. Should you require advice and/or support on understanding the mining legacy, its risks to your development or what next steps you need to take, please contact us.

For further information on specific site or ground investigations in relation to any issues raised in Section 4, please call us on 0345 762 6848 or email us at groundstability@coal.gov.uk.

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Section 5 – Data definitions

The datasets used in this report have limitations and assumptions within their results. For more guidance on the data and the results specific to the enquiry boundary, please **call us on 0345 762 6848** or **email us at groundstability@coal.gov.uk.**

Past underground coal mining

Details of all recorded underground mining relative to the enquiry boundary. Only past underground workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination, will be included.

Probable unrecorded shallow workings

Areas where the Coal Authority believes there to be unrecorded coal workings that exist at or close to the surface (less than 30 metres deep).

Spine roadways at shallow depth

Connecting roadways either, working to working, or, surface to working, both in-seam and cross measures that exist at or close to the surface (less than 30 metres deep), either within or within 10 metres of the enquiry boundary.

Mine entries

Details of any shaft or adit either within, or within 100 metres of the enquiry boundary including approximate location, brief treatment details where known, the mineral worked from the mine entry and conveyance details where the mine entry has previously been sold by the Authority or its predecessors British Coal or the National Coal Board.

Abandoned mine plan catalogue numbers

Plan numbers extracted from the abandoned mines catalogue containing details of coal and other mineral abandonment plans deposited via the Mines Inspectorate in accordance with the Coal Mines Regulation Act and Metalliferous Mines Regulation Act 1872. A maximum of 9 plan extents that intersect with the enquiry boundary will be included. This does not infer that the workings and/or mine entries shown on the abandonment plan will be relevant to the site/property boundary.

Outcrops

Details of seam outcrops will be included where the enquiry boundary intersects with a conjectured or actual seam outcrop location (derived by either the British Geological Survey or the Coal Authority) or intersects with a defined 50 metres buffer on the coal (dip) side of the outcrop. An indication of whether the Coal Authority believes the seam to be of sufficient thickness and/or quality to have been worked will also be included.

Geological faults, fissures and breaklines

Geological disturbances or fractures in the bedrock. Surface fault lines (British Geological Survey derived data) and fissures and breaklines (Coal Authority derived data) intersecting with the enquiry boundary will be included. In some circumstances faults, fissures or breaklines have been known to contribute to surface subsidence damage as a consequence of underground coal mining.

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Opencast mines
Opencast coal sites from which coal has been removed in the past by opencast (surface) methods and where the enquiry boundary is within 500 metres of either the licence area, site boundary, excavation area (high wall) or coaling area.

Coal Authority managed tips
Locations of disused colliery tip sites owned and managed by the Coal Authority, located within 500 metres of the enquiry boundary.

Site investigations
Details of site investigations within 50 metres of the enquiry boundary where the Coal Authority has received information relating to coal mining risk investigation and/or remediation by third parties.

Remediated sites
Sites where the Coal Authority has undertaken remedial works either within or within 50 metres of the enquiry boundary following report of a hazard relating to coal mining under the Coal Authority's Emergency Surface Hazard Call Out procedures.

Coal mining subsidence
Details of alleged coal mining subsidence claims made since 31 October 1994 either within or within 50 metres of the enquiry boundary. Where the claim relates to the enquiry boundary confirmation of whether the claim was accepted, rejected or whether liability is still being determined will be given. Where the claim has been discharged, whether this was by repair, payment of compensation or a combination of both, the value of the claim, where known, will also be given.

Details of any current 'Stop Notice' deferring remedial works or repairs affecting the property/site, and if so the date of the notice.

Details of any request made to execute preventative works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991. If yes, whether any person withheld consent or failed to comply with any request to execute preventative works.

Mine gas
Reports of alleged mine gas emissions received by the Coal Authority, either within or within 500 metres of the enquiry boundary that subsequently required investigation and action by the Coal Authority to mitigate the effects of the mine gas emission. Please note, if there are no recorded instances of mine gas reported, this does not mean that mine gas is not present within the vicinity. The Coal Authority Mine Gas data is limited to only those sites where a Mine Gas incident has been recorded.

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Mine water treatment schemes
Locations where the Coal Authority has constructed or operates assets that remove pollutants from mine water prior to the treated mine water being discharged into the receiving water body.

These schemes are part of the UK's strategy to meet the requirements of the Water Framework Directive. Schemes fall into 2 basic categories: Remedial – mitigating the impact of existing pollution or Preventative – preventing a future pollution incident.

Mine water treatment schemes generally consist of one or more primary settlement lagoons and one or more reed beds for secondary treatment. A small number are more specialised process treatment plants.

Future underground mining
Details of all planned underground mining relative to the enquiry boundary. Only those future workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination will be included.

Coal mining licensing
Details of all licenses issued by the Coal Authority either within or within 200 metres of the enquiry boundary in relation to the under taking of surface coal mining, underground coal mining or underground coal gasification.

Court orders
Orders in respect of the working of coal under the Mines (Working Facilities and Support) Acts of 1923 and 1966 or any statutory modification or amendment thereof.

Section 46 notices
Notice of proposals relating to underground coal mining operations that have been given under section 46 of the Coal Mining Subsidence Act 1991.

Withdrawal of support notices
Published notices of entitlement to withdraw support and the date of the notice. Details of any revocation notice withdrawing the entitlement to withdraw support given under Section 41 of the Coal Industry Act 1994.

Payment to owners of former copyhold land
Relevant notices which may affect the property and any subsequent notice of retained interests in coal and coal mines, acceptance or rejection notices and whether any compensation has been paid to a claimant.

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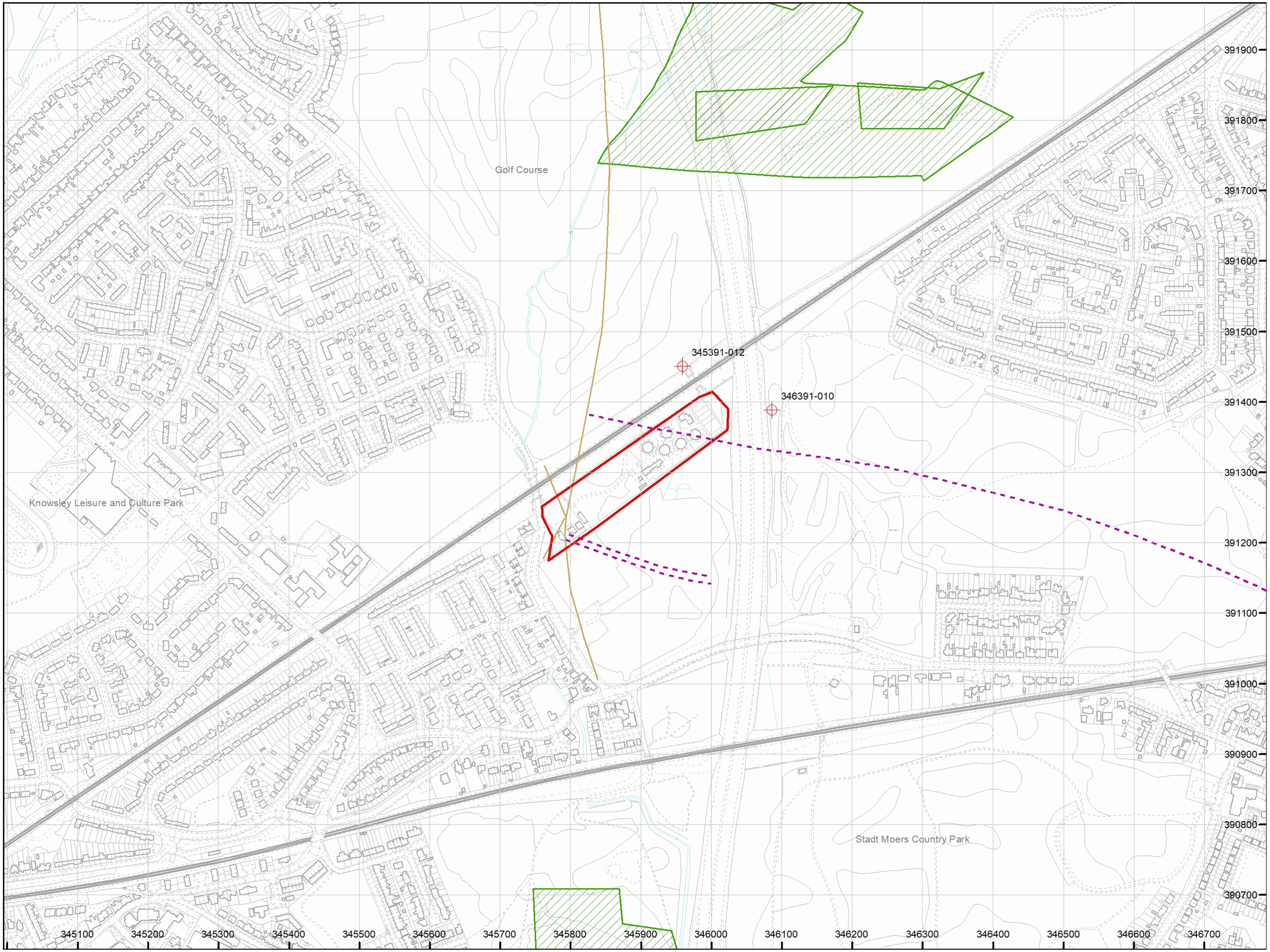
Summary of findings

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The map highlights any specific surface or subsurface features within or near to the boundary of the site.

Key

- Approximate position of the enquiry boundary shown
- Disused mine shaft
- Outcrop (Conjectured)
- Geological faults
- Unlicensed opencast site



How to contact us
0345 762 6848 (UK)
+44 (0)1623 637 000 (International)
www.groundstability.com

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ARLEY MINE

PRESCOT COLLIERY

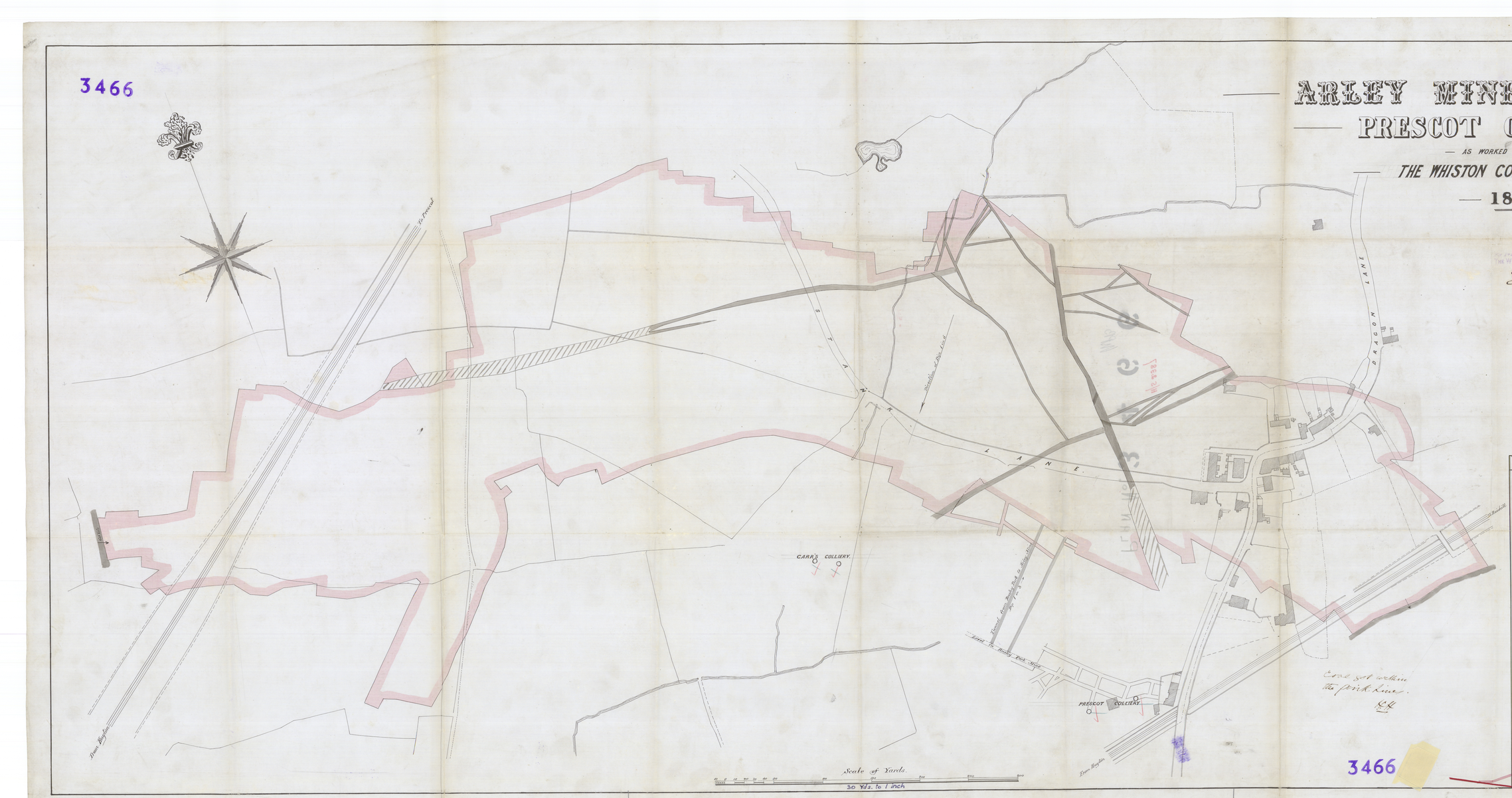
— AS WORKED BY —

THE WHISTON COLLIERIES Co LIMTD.

1896.

THE WHISTON COLLIERIES CO. LIMITED.
General Manager

18th June 1896.



SECTION.

NAME or MINE	Thickness Ft	Thickness In	Depths from Surface Yds	Depths from Surface Ft	Depths from Surface In
Surface					
TENLANDS	10	0	60	0	5
BASTIANS.	3	0	90	2	5
ROGER	3	0	136	1	2
MAIN DELF.	11	0	186	2	5
RUSHY PARK.	4	2	270	2	6
TUNNEL					
ARLEY MINE	2	4	326	0	0

Coal not within the print Lines.

EH

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PLAN

OF THE

BASTIAN MINE

at the

CARRS COLLIERY

Belonging to

H. R. D'A. WELLS ESQ.

NW830
9611

J. W. WILSON & SON, SURVEYORS, GATESHEAD. 1891.