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DESK STUDY/PRELIMINARY RISK ASSESSMENT AND COAL MINING RISK ASSESSMENT REPORT

35 Wilson Road
Huyton
Liverpool
L36 6AE



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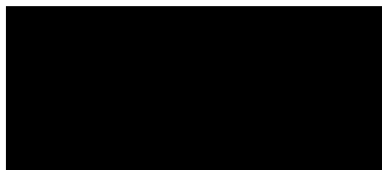
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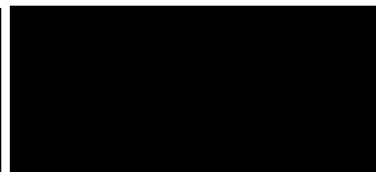
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EXECUTIVE SUMMARY

Linden Hill – Capital Assets – ALX Limited ('The client') commissioned Jomas Associates Ltd to undertake a desk study and preliminary risk assessment at 35 Wilson Road, Huyton, Liverpool, L36 6AE. The principal objectives of the study were as follows:

- To determine the nature and where possible the extent of contaminants potentially present at the site;
- To establish the presence of significant contaminant linkages, in accordance with the procedures set out within the Environment Agency (EA) report R&D CLR11 and relevant guidance within the National Planning Policy Framework (NPPF);
- To assess whether the site is safe and suitable for the purpose for which it is intended, or can be made so by remedial action;
And;
- Present a desk-based review of readily available information on potential coal mining issues which are relevant to the site;
- Use that information to identify and assess risks to the proposed development from the coal mining legacy, including the cumulative impact of issues.

It should be noted that the table below is an executive summary of the findings of this report and is for briefing purposes only. Reference should be made to the main report for detailed information and analysis.

Desk Study	
Current Site Use	Large warehouse unit adjoined with 2-storey offices. The remainder of site is used to store vehicles including caravans, cars and trailers.
Proposed Site Use	Demolition of existing structures and the construction of new light industrial/commercial units
Site History	A review of earliest available (1850) historical maps indicates that the site was comprised of farm structures in the centre of the site, including a corn mill and agricultural land and a watercourse (Logwood Mill Brook) running through the site. By 1891, the brook is shown to have been diverted to along the eastern boundary of site. There are no significant changes to the site until 1960s where a tank is shown by the western boundary of the site whilst also having a couple of the structures in the centre of site be removed. A new water course is also shown traversing through the centre of site. By the maps dated late 1970s, the site appears to have been completely redeveloped for industrial use and has had a warehouse structure constructed and 2No. smaller structures in the northwest, including a canning factory. The site then stays the same until the most recent map dated 2022, where it is recorded that the 2 structures in the northwest have been demolished and the tanks are no longer shown. However, during Jomas' site walkover in January 2022, an above ground fuel tank was noted to be present in the central northern area of site. From the earliest available map (1850), the surrounding area was mostly agricultural land with numerous mining operations including collieries, coal pits and shafts within

Desk Study	
	1km of site, but primarily focussed >400m north of site. These mining features generally become “old” and “disused” by the early 20th century. From the maps dated 1925-1927 a sewage works had been constructed directly adjacent to the east boundary of site. The town to the west had continued developing and its industrial area has grown to include more works such as the electric lamp works. There was no more significant change until the mid-20th century, except for small residential expansion roughly 1km to the Northeast in the map dated 1937. From 1955 the industrial district in the western town saw more development and spread to the within 200m northwest of site. The town to the northeast also saw industrial development. The map dated 1975 showed that the industrial district of the western town had expanded and surrounded the site boundary on all sides, with several factories, warehouses and works, whilst a motorway and motorway intersection (M57 and A5080) had been constructed to the east of the site. From then there were no significant changes around site other than some redevelopment of properties in the town around the site as well as a new road coming out of the motorway intersection.
Geological Setting and Coal Mining History	The British Geological Survey indicates that the site is directly underlain by superficial deposits of Devensian Till. In the west of site, these superficial deposits are underlain by solid deposits of the Pennine Lower Coal Measures Formation in the west of site. A geological fault traverses north-south approximately through the centre-east of site, with the downthrow side to the west. East of the fault are solid deposits of the Etruria Formation. Although artificial deposits are not reported within the site boundary, given the identified site history a thickness of Made Ground should be expected. Trial pit records from on-site indicate 1.30-3.05m thickness of Made Ground overlying some possible alluvial deposits and weathered mudstone (clay) to the base of trial pits between 2.90m and 3.10m bgl. Whilst no evidence of old mine working was explicitly mentioned in these records, it is noted that “rotting wood” and “concrete blocks” were recovered from TP7 at depths of 2.5m and 2.9m bgl respectively. 2No. borehole records were located approximately 226m north-east of site, from a ground investigation by Geotechnical Engineering Ltd in June 1993. BGS maps indicate these were drilled in a location underlain by Pennine Middle Coal Measures Formation. Ground conditions generally comprised interbedded sandstone, mudstone and siltstone, weathered to a very stiff clay near the surface. Bedding planes were generally noted to be sub-horizontal; within borehole ref SJ49SE231, mudstone at 7.60-11.46m was reported to be dipping at moderate angles of 15°-30°. Within one borehole, a coal seam was reported at 11.46-12.95m bgl; in the other borehole a coal seam was reported at 15.77-16.00m bgl. Historical Ordnance Survey maps revealed no obvious evidence of mining activity taking place on site; the site is shown to have comprised mainly agricultural land and farm

Desk Study	
	buildings, until the site was developed into the existing industrial estate during the late-1980s and early-1990s. However, on the map dated 1850, coal pits are shown within proximity to site, the nearest being ~100m west of site and several collieries are shown >400m north/north-east of site. Shafts and old shafts (presumed to be coal) are also shown on historic OS maps; the nearest of which is shown approximately 350m north-east of site, associated with an old unnamed colliery. By the map dated 1906, all collieries are labelled as old/disused.
Environmental Setting	The superficial deposits (Till) underlying the site are identified as a Secondary Undifferentiated Aquifer with the underlying solid deposits both identified as Secondary A Aquifers. The site is not located within a source protection zone. A SPZ3 is located 226m south-east of site. There are no active groundwater, surface water or potable water abstractions reported within 1.3km of the site. A watercourse (Logwood Mill Brook) runs along the eastern site boundary. This means that the eastern edge of the site falls within an EA Flood Zone 3.
Potential Sources	• Potential for contaminated ground associated with previous/existing site uses (S1): ◦ Corn Mill ◦ Canning Factory ◦ Warehouse • Potential for Made Ground associated with previous development operations – on site (S2) • Historic tank on western boundary (1960s-2000s) (S3) • Historic tank on north-east of warehouse building (1970s-1980s) (S4) • Current above ground fuel tank in central northern area of the site (S5) • Electricity sub-station in west of site (dating from 1970s) (S6) • Current and previous industrial uses – off site (S7): ◦ Sewage works 5m east (1920s-1960) ◦ Various warehouses, depots, factories and works (1960s-present) • Potential asbestos containing materials within existing buildings – on site (S8) • Potential asbestos impacted soils from demolition of previous buildings – on site (S9) • Potential ground gas generation from coal deposits/workings, refuse heap 300-400m north (S10)
Potential Receptors	• Construction workers (R1) • Maintenance workers (R2) • Neighbouring site users (R3) • Future site users (R4) • Building foundations and on site buried services (water mains, electricity and sewer) (R5) • Controlled waters (R6): ◦ Secondary Undifferentiated Aquifer within superficial deposits of Till ◦ Secondary A Aquifer within solid deposits of Pennine Lower Coal Measures Formation ◦ Logwood Mill Brook along eastern boundary of site

Desk Study	
Preliminary Risk Assessment	The risk estimation matrix indicates a moderate risk. Due to the potential presence of asbestos containing materials, an asbestos survey should be undertaken, with any asbestos containing materials found, removed under suitably controlled conditions. There should be no risk to end users from asbestos if the potential asbestos containing materials are removed by suitably qualified and experienced specialists under controlled conditions. It is recommended that an intrusive investigation is undertaken to clarify potential risks to the identified receptors, and assess the extent of made ground soils present at the site. A preliminary investigation may comprise a series of window sampler holes or trial pits. Soil gas monitoring should be undertaken due to potential ground gas generation from coal deposits/workings; an historic refuse heap 300-400m north, and the potential for hydrocarbon contamination associated with the historic/current industrial land use of the surrounding area. This should be undertaken in accordance with CIRIA C665
Preliminary Coal Mining Risk Assessment	There is no direct evidence of shallow workings being present on site, however, the site is within a Coal Authority “Development High Risk Area” and given that coal reportedly subcrops on site (Tenlands, Ravenhead Main Delf [Wigan Four Feet]) and close to site (Bastions Mine [Trencherbone]), it is considered possible that unrecorded shallow workings, surface workings and/or mine entries could be present at the site. It is recommended that a programme of rotary boreholes, trial pits and trial trenches are undertaken to evaluate the potential risks identified. Prior written permission from the Coal Authority is required for any intrusive activities which will disturb or enter any coal seams, coal workings or coal mine entries. Subject to the outcome of the investigation, it is likely that the site could be made safe and stable for redevelopment by measures potentially including grouting of shallow underground workings, spanning/designing around surface workings, capping of identified shafts/bell pits and incorporation of gas protection measures into buildings, if necessary.

1 INTRODUCTION

1.1 Terms of Reference

1.1.1 Linden Hill – Capital Assets – ALX Limited (“The Client”) has commissioned Jomas Associates Ltd, to assess the risk of contamination posed by the ground conditions, and to undertake a coal mining risk assessment, at a site referred to as 35 Wilson Road, Huyton, Liverpool, L36 6AE, prior to redevelopment of the site.

1.1.2 To this end a desk based assessment has been undertaken in accordance with Jomas Associates Limited’s proposal dated 22nd December 2021.

1.2 Proposed Development

1.2.1 The proposed development is to comprise the demolition of existing structures and the construction of new light industrial/commercial units.

1.2.2 A plan of the proposed development is included in Appendix 1.

1.2.3 For the purposes of the contamination risk assessment, the proposed development is classified as ‘commercial’.

1.2.4 For the purpose of geotechnical assessment, it is considered that the project could be classified as a Geotechnical Category (GC) 2 site in accordance with BS EN 1997 Part 1.

1.3 Objectives

1.3.1 The objectives of the Desk Study/Preliminary Risk Assessment were as follows:

- To present a description of the present site status, based upon the published geology, hydrogeology and hydrology of the site and surrounding area;
- To review readily available historical information (i.e., Ordnance Survey maps and database search information) for the site and surrounding areas, with respect to potentially contaminative land uses;
- To provide an assessment of the environmental sensitivity at the site and the surrounding area, in relation to any suspected or known contamination which may significantly affect the site and the proposed development;
- To assess the potential presence of significant pollutant linkages, in accordance with the procedures set out within Part IIA of the Environmental Protection Act 1990, associated statutory guidance and current best practice including the EA report R&D CLR 11;
- To identify and assess geotechnical issues that may affect the site.

1.3.2 The objectives of this Coal Mining Risk Assessment is to:

- Present a desk-based review of readily available information on the coal mining issues which are relevant to the site

- Use that information to identify and assess risks to the proposed development from the coal mining legacy, including the cumulative impact of issues
- To set out appropriate mitigation measures, if coal mining legacy issues potentially affect the site, including necessary remedial works, and thereby demonstrate to the Local Planning Authority and other relevant parties that the application site is, or can be made, safe and stable to meet the requirements of national planning policy with regard to development on potentially unstable land

1.4 Scope of Works

1.4.1 The following tasks were undertaken to achieve the objectives listed above:

- A walkover survey of the site;
- A desk study, which included the review of third party historical Ordnance Survey maps and an environmental database report (attached in Appendix 2 and Appendix 3);
- Review of British Geological Survey (BGS) records and maps;
- Review of Coal Authority report and mine abandonment plans
- The compilation of this report, which collects and discusses the above data, and presents an assessment of the site conditions, conclusions and recommendations.

1.5 Sources of Information

1.5.1 The following sources of information have been used to inform this Coal Mining Risk Assessment.

- Ordnance Survey historical maps
- The Coal Authority – CON29M Coal Mining Report for Land At: 345755, 389978, Wilson Road, Liverpool – ref: 61002909197001 - October 2020
- The Coal Authority – Consultants Coal Mining Report for 35, Wilson Road, Huyton, L36 6AE, Merseyside – ref: 51002863807001 – January 2022
- British Geological Survey – GeoIndex Onshore:
<http://mapapps2.bgs.ac.uk/geoindex/home.html> (See Section 3)
- British Geological Survey - The BGS Lexicon of Named Rock Units:
<https://www.bgs.ac.uk/lexicon/> (See Section 3)
- Coal Authority “*Coal Seams with A History of Spontaneous Combustion*”.
- Coal Authority (2017) “*Risk Based Approach to Development Management – Guidance for Developers*” v4
- Coal Authority - Interactive Map Viewer:
<http://mapapps2.bgs.ac.uk/coalauthority/home.html>

- British Geological Survey – Geological Survey of England and Wales
1:63,360/1:50,000 geological map series. Sheet 97 (Runcorn); first published
1957, republished 1980 at 1:50,000 scale.

1.5.2 In addition, a coal working abandonment plan has been procured from the Coal Authority: plan ref. NW835 (Halsnead Colliery and London Delph Seam).

1.6 Limitations

1.6.1 Jomas Associates Ltd has prepared this report for the sole use of Linden Hill – Capital Assets – ALX Limited in accordance with the generally accepted consulting practices and for the intended purposes as stated in the agreement under which this work was completed. This report may not be relied upon by any other party without the explicit written agreement of Jomas Associates Limited. No other third-party warranty, expressed or implied, is made as to the professional advice included in this report. This report must be used in its entirety.

1.6.2 The records search was limited to information available from public sources; this information is changing continually and frequently incomplete. Unless Jomas Associates Limited has actual knowledge to the contrary, information obtained from public sources or provided to Jomas Associates Limited by site personnel and other information sources, have been assumed to be correct. Jomas Associates Limited does not assume any liability for the misinterpretation of information or for items not visible, accessible or present on the subject property at the time of this study.

1.6.3 Whilst effort has been made to ensure the accuracy of the data supplied, and analysis derived from it, there may be conditions at the site that have not been disclosed by the investigation, and could not therefore be taken into account. As with any site, there may be differences in soil conditions between exploratory hole positions. Furthermore, it should be noted that groundwater conditions may vary due to seasonal and other effects and may at times be significantly different from those measured by the investigation. No liability can be accepted for any such variations in these conditions.

1.6.4 Any reports provided to Jomas Associates Limited have been reviewed in good faith. Jomas Associates Limited cannot be held liable for any errors or omissions in these reports, or for any incorrect interpretation contained within them.

1.6.5 This investigation and report has been carried out in accordance with the relevant standards and guidance in place at the time of the works. Future changes to these may require a re-assessment of the recommendations made within this report.

1.6.6 *Our investigations exclude surveys to identify the presence of injurious and invasive weeds.*

1.6.7 ***This report is not an engineering design and the figures and calculations contained in the report should be used by the Structural Engineer, taking note that variations may apply, depending on variations in design loading, in techniques used, and in site conditions. Our recommendations should therefore not supersede the Engineer's design.***

2 SITE SETTING

2.1 Site Information

2.1.1 The site location plan is appended to this report in Figure 1, Appendix 1.

Table 2.1: Site Information

Name of Site	-
Address of Site	35 Wilson Road Huyton L36 6AE
Approx. National Grid Ref.	345752, 389969
Site Area (Approx.)	4.06ha
Site Occupation	Mixed business and medical
Local Authority	Knowsley Council

2.2 Walkover Survey

2.2.1 A site walkover survey was undertaken by Jomas Associates on 12th January 2022.

Table 2.2: Site Description

Area	Item	Details
On-site:	Current Uses:	The site is occupied by a large warehouse building and adjoined with 2-storey offices. The remainder of site is used to store vehicles including caravans, cars and trailers.
	Evidence of historic uses:	There was no evidence of historic uses of the site.
	Surfaces:	Much of the site is hard cover either by the buildings or by car parking areas and roadways. There are few small areas of shrubs and grass growing around the boundaries. The hard cover is predominantly crushed 'hardcore', with the north-western area and warehouse footprint underlain by concrete slabs.
	Vegetation:	Patches of shrubs and grasses across around the boundaries of site.
	Topography/Slope Stability:	Overall, there are no significant slopes or changes in levels. A man-made ramp and loading bay are present leading into the warehouse— approximately 1m high.

Area	Item	Details
	Drainage:	Drainage channel along front of northern warehouse wall. Pooling in areas of damaged hardstanding. The site appears to be connected to normal drainage facilities. No marshy ground noted.
	Services:	The site is active and connected to usual services.
	Controlled waters:	No controlled waters were noted on site. A brook is present along the eastern boundary.
	Tanks:	1 current above ground fuel tank towards the centre of the northern area of the site. 1 known area of previous tanks in north western area of the site.
Neighbouring land:	North:	Industrial buildings.
	East:	Large car parking area and industrial buildings.
	South:	Industrial buildings.
	West:	Wilson Road and industrial buildings.

2.2.2 Key features noted during the walkover are shown on a site walkover plan in Appendix 1.

2.3 Historical Mapping Information

2.3.1 The historical development of the site and its surrounding areas was evaluated following the review of a number of Ordnance Survey historic maps, procured from GroundSure, and provided in Appendix 3 of this report.

2.3.2 A summary produced from the review of the historical map is given in Table 2.3 below. Distances are taken approximately from the site boundary.

Table 2.3: Historical Development

Dates and Scale of Map	Relevant Historical Information	
	On Site	Off Site
1849-1850 1:10,560	The site appears to be mostly used for agricultural purposes with buildings in the centre of site labelled "Logwood Farm" and "Logwood Mill (corn)". There also appears to be marshy ground in the north of the site. A small watercourse (Logwood Mill Brook) runs from the north to the south-east of site.	An area 100-250m north-west of the site is occupied by woodland with 6 small water bodies and 3 small coal pits . Given the angular shape of the ponds, it is likely they are infilled man-made excavations. 400m to the North is the "Huyton Hey Colliery " with coal pits . "Houghton Hey Colliery " is 500m north-east and "Halsnead Colliery " is 650m east of the site. "Whiston Colliery " and "Hig Hey Colliery " are shown 600-700m north-east. "Huyton Quarry" (sandstone and slate) shown 750m north-west of site. There are multiple small bodies of water within a 500m radius around site in each direction. Railway 300m north of site traversing broadly north-west to south-east. It appears to be purpose built to service the collieries and joins the main railway 750m north of site. Tiles Works 500m south of site. The land surrounding site is predominantly fields/agricultural land. Coal mining and collieries are generally situated >400m north and north-east of site.
1891-1892 1:2,500 1:10,560	The farm has been renamed Logwood Mill Farm. Logwood Mill Brook is now shown to follow the eastern boundary of the site, although an administrative boundary still follows the old brook route through the site. The brook is shown to be flowing in a south-easterly direction.	Iron works 350m north of the site. Unnamed colliery 500m west. Most previously identified collieries north/north-east of site are now labelled as "old colliery". Old shaft 450 north. Shafts 500m north-east. Several small waterbodies in proximity to the site are no longer shown – likely infilled . Gasworks 700m northwest.
1904-1907 1:2,500 1:10,560	The farm has been renamed Logwood Farm	Two old shafts 550m west of site. Electric lamp works 500m north-west of the site. Directly Northeast 800m from site is a new brickworks development.

Dates and Scale of Map	Relevant Historical Information	
	On Site	Off Site
1925-1927 1:2,500 1:10,560	No significant change.	Directly adjacent to the east side of site is a sewage works with tanks and filter/settling beds . Old shaft 350m north-east of site. Iron works no longer shown 350m north. 750m Northwest of site the area has developed into a larger industrial district . 500m East of the site the mineral railway has been extended and continues south-east. Directly Northeast 750m from site the brickworks have extended.
1937-1938 1:2,500 1:10,560	No significant change.	The sewage works directly to the East adjacent to the site boundary has developed further and installed a fourth filter bed. 550-600m Northeast of the site is a new brickworks .
1947 1:10,560	No significant change. Incomplete mapping in western half.	There has been residential development 600-850m East of site. Incomplete mapping in western half
1955-1960 1:1,250 1:2,500 1:10,560	There is another watercourse now starting 50m outside the north-western boundary of site and running through the centre of site.	Factories shown >100m north-west of site. Refuse dump 300-400m north. The town to the West of site 800m away has had continued residential development.
1963-1968 1:1,250 1:2,500 1:10,560	There is a tank against the western boundary of site. Some of the structures in the centre of site appear to have been removed but the mapping is incomplete for this era.	The sewage works to the east is no longer shown. There has been more development of the industrial district directly adjacent to the Northwest boundary of site with several large works and factories present. There is a tank 50m to the Northwest of the site by a bakery and another tank located directly North 200m from site. The residential development has continued 250m West of the site boundary.
1970-1975 1:2,500	No significant change. Incomplete mapping.	No significant change. Incomplete mapping.

Dates and Scale of Map	Relevant Historical Information	
	On Site	Off Site
1975-1979 1:1,250 1:2,500 1:10,000	The site has been entirely redeveloped. A large warehouse is present in the south of site – this resembles the present day building on site. A tank is shown on the north-west edge of this building. A small building labelled as a Canning Factory is shown in the north of site. An electricity substation is shown close to the western boundary of site. The watercourse previously flowing through site appears to have been culverted.	There is a garage directly adjacent to the Southern boundary of site. Two works are also shown 100m south of site. The areas surrounding site to the north, west and south are dominated by warehouses, depots, factories and works . A motorway and intersection (M57, M62 and A5080) has been constructed in the 500-750m range Southeast of the site, it leads off Northwest 100-150m from the Northeast site boundary, to East and to the West. The Eastern residential district to the East of site has been developed and is now 750m from the boundary.
1980-1984 1:1,250 1:2,500	No significant change.	Directly South of the site boundary 60m, 200m and 300m there are sub-stations. The surrounding industrial area has expanded. There is a tank 90m North of the site boundary. There are 2 tanks and a sub-station 150m Northeast. There is a tank 250-300m North of the site boundary. There are tanks 300-350m Northwest of the site boundary.
1987-1993 1:1,250 1:10,000	No significant change.	Directly adjacent to the East boundary are 2 sub-stations. There are multiple tanks 100m North of the site boundary. There are multiple tanks and a sub-station Northeast, 150-200m of site. All surrounding residential and industrial areas have been developed and expanded and now fully encompass the site boundary. There are unnamed works 400m Southwest of the site boundary.
1994 1:1,250	No significant change.	No significant change.
2001-03 1:1,250 1:10,000	No significant change.	The motorway intersection now extends South (M57).
2010 1:10,000	No significant change.	There has been some redevelopment of buildings and roads around the site, however nothing significant.
2022 1:10,000	2 of the structures in the northwest are gone.	The intersection to the Southeast has been extended upon. No other significant changes.

Potentially polluting/contaminating uses/activities shown in **bold**

2.3.3

Aerial photographs supplied as part of the GroundSure Enviro+GeoInsight report range from 2000 to 2019. These show no significant changes to the site and surrounding area throughout this time period.

2.4 Past Land Use

2.4.1 Groundsure provide some information on past land use on and in the vicinity of the site. Table 2.4 below summarises the information provided, which is presented in further detail in the Enviro+Geoinsight in Appendix 2. Where the identified features have appeared on more than one map they have been counted multiple times and therefore the reported numbers may be higher than the actual count.

Table 2.4: Past Land Use

Type of Use	On site	Off-site (within 500m of site, unless stated otherwise)	Potential to Impact Site*
Historical Industrial Land Uses	5No. entries for: Corn Mill (1851) Unspecified Warehouse and Unspecified Works (1975/1989)	144No. entries; nearest reported for: Sewage works 5-9m east/north-east; Unspecified works 10m south; Unspecified depot and tanks 13-19m north-east/east.	✓
Historical Tanks	7No. entries for: Unspecified Tank (1968/94)	47No. entries; nearest reported for: Unspecified tanks 5-9m south -east; Settling tanks 21m east.	✓
Historical Energy Features	3No. entries for: Electricity sub-station (1982-97)	38No. entries; nearest reported for: Electricity sub-station 22-28m east; Gas governor 46m south.	✓
Historical Petrol Stations	None reported	None reported	X
Historical Garages	4No. entries for: Garage (1982-97)	2No. entries; nearest reported for: Garage 419m south.	✓
Historical Military Land	None reported	None reported	X

* From a land contamination/site development perspective

2.5 Landfill, Waste and Potentially Infilled Surface Ground Workings

2.5.1 The Groundsure Enviro+Geoinsight Report provides information on active and historical landfills and waste sites. It also provides information on historical land uses identified from Ordnance Survey mapping that involved ground excavation at the surface; these features may or may not have been subsequently infilled. The following section summarises the information collected from the available sources.

Table 2.5: Landfill, Waste and Potentially Infilled Ground Surface Workings

Type of Consent/Authorisation	On site	Off-site (within 500m of site, unless stated otherwise)	Potential to Impact Site*
Active or Recent Landfill	None reported	None reported	X
Historical Landfill	None reported	6No. entries; nearest reported 88m north-west for inert waste.	✓
Historical Waste Sites	None reported	11No. entries; nearest reported 24m south-east for waste recycling centre.	✓
Licensed Waste Sites	None reported	21No. entries; nearest reported 42m east for "75kte HCl Waste TS + treatment".	✓
Waste Exemptions	None reported	35No. entries; nearest reported 82m north-west for "storage of waste in a secure place", "Repair or refurbishment of	X

Type of Consent/Authorisation	On site	Off-site (within 500m of site, unless stated otherwise)	Potential to Impact Site*
		WEEE", and "Treatment of waste toner cartridges by sorting, dismantling, cleaning or refilling"	
Potentially Infilled Surface Ground Workings	None reported	26No. entries within 250m, including: Sewage works 5-9m north-east/east Unspecified heap 89m west Pond 128m south-east Unspecified quarry 182m north Coal pits 201m west	✓

* From a land contamination/site development perspective

2.6 Current Industrial Land Use

2.6.1 The Groundsure Enviro+Geoinsight Report also provides information on various records relating to current industrial land use on and in the vicinity of the site. The following section summarises the information collected from the available sources.

Table 2.6: Current Industrial Land Use

Type of Consent/Authorisation	On site	Off-site (within 500m of site, unless stated otherwise)	Potential to Impact Site*
Recent Industrial Land Uses	4No. entries for: Electricity sub-station Container/storage Tank Business Park	47No. entries within 250m. Nearest uses include: Recycling centre 22m south Gas governor station 52m south Truck repair/servicing 77m west Works 80m west Tank 89m north-east	✓
Current or Recent Petrol Stations	None reported	1No. entry for an active petrol station 446m south.	X
High Voltage Electricity Cables	None reported	None reported	X
High Pressure Gas Pipelines	None reported	None reported	X
Sites Determined as Contaminated Land	None reported	None reported	X
Control of Major Accident Hazards (COMAH) and Notification of Installations Handling Hazardous Substances (NIHHS) Sites	None reported	1No. entry for an historical NIHHS site (BASF Printing Systems) 145m north-east.	X
Regulated Explosive Sites	None reported	None reported	X
Hazardous Substance Storage/Usage	None reported	2No. entries, nearest reported for Lombard Shipping & Forwarding 170m north-west.	X
Historical Licensed Industrial Activities	None reported	5No. entries, all reported 372m south east for inorganic chemical processes.	X
Licensed Industrial Activities	None reported	12No. entries, nearest reported 42m east for disposal of non-hazardous	X

Type of Consent/Authorisation	On site	Off-site (within 500m of site, unless stated otherwise)	Potential to Impact Site*
		waste involving physicochemical treatment.	
Licensed Pollutant Release	None reported	10No. entries, nearest reported 76m west for waste oil burner (revoked).	X
Radioactive Substance Authorisations	None reported	None reported	X
Licensed Discharge to Controlled Waters	None reported	15No. entries, nearest reported 2m east for sewage discharges - sewer storm overflow – discharging into Logwood Mill Brook.	X
Pollutant Release to Surface Waters (Red List)	None reported	None reported	X
Pollutant Release to Public Sewer	None reported	None reported	X
List 1 and List 2 Dangerous Substances	None reported	3No. entries for List 1 Dangerous Substances, nearest reported 242m south-east for cadmium.	X
Pollution Incidents	None reported	12No. incidents, nearest reported 25m south-east for “other” pollutant causing a Category 2 (significant) impact on land in 2001.	X
Pollution Inventory Substances	None reported	None reported	X
Pollution Inventory Waste Transfers	None reported	None reported	X
Pollution Inventory Radioactive Waste	None reported	None reported	X

* From a land contamination/site development perspective

2.7 Tunnels and Railways

2.7.1 The Groundsure Enviro+Geosight Report provides information on railway tunnels and railways on and within the vicinity of the site, as summarised in the table below.

Table 2.7: Tunnels and Railways

Feature	On site	Off-site (within 250m of site, unless stated otherwise)	Potential to Impact Site*
Underground Railways (London)	None reported	None reported	X
Underground Railways (Non-London)	None reported	None reported	X
Railway Tunnels	None reported	None reported	X
Historical Railway and Tunnel Features	None reported	None reported	X
Royal Mail Tunnels	None reported	None reported	X

Feature	On site	Off-site (within 250m of site, unless stated otherwise)	Potential to Impact Site*
Railways, Crossrail and HS2	None reported	None reported	X

* From a land contamination/site development perspective

2.8 Planning Information

2.8.1 A review of the local authority's planning portal was undertaken on 27/01/2022 at <https://planapp.knowsley.gov.uk>

2.8.2 However, a website error meant that some documents could not be viewed online or downloaded. Subsequently, Jomas made a request to Knowsley Council to provide this information, as well as for other information relating to contamination on the site and surrounding areas. A copy of the correspondence is included in Appendix 6. A response is pending.

Planning application ref. 19/00094/FUL

2.8.3 Planning application ref. 19/00094/FUL refers to "Land Adjacent to D Evans Electrical, Wilson Road, Huyton, Knowsley, L36 6JF" located approximately 100m to the south of Jomas' study site.

2.8.4 The application was for "Erection of 2No. blocks of four business units (use class b1a) and associated external works and parking arrangements".

2.8.5 Several reports associated with the planning application were downloaded from the planning portal, these are summarised below:

Table 2.8: Reports Relating to Planning Application ref. 19/00094/FUL

Title	Author	Reference	Date
Coal Mining Report Land on, Wilson Road, Knowsley, L36 6JF	The Coal Authority	00045259-06	September 2006
Mine entry data sheet	The Coal Authority	51000933207001	July 2015
Phase I and Phase II Geo-Environmental Site Assessment Land off Wilson Road, Huyton, Liverpool, Merseyside, L36 6AD	e3p	11-152-R01	August 2018
Remediation & Enabling Works Strategy Land off Wilson Road, Huyton, Liverpool, Merseyside, L36 6AD	e3p	11-152-R02	September 2018

2.8.6 The salient points of these reports in the context of the subject site are summarised below.

Coal Mining Report ref: 00045259-06 (September 2006)

- 2.8.7 The report states that the site is within the likely zone of influence on the surface from workings in 1 seam of coal at 70m depth, the last date of working being 1876, but that ground movement should be now have ceased.
- 2.8.8 A shaft (ref. 345398-008) was reported approximately 5-10 east of the site [~115m south of Jomas' study site]. The shaft was searched for in 1969 but no evidence of it was found.

Mine entry data sheet ref: 51000933207001 (July 2015)

- 2.8.9 This document confirms the information detailed above regarding Shaft 345398-008.
- 2.8.10 In addition, the shaft is reported to have been associated with Tarbock Colliery.
- 2.8.11 Other details such as abandonment date, depth of shaft, and diameter of shaft are reported as 'Unknown'.

Phase I and Phase II Geo-Environmental Site Assessment ref: 11-152-R01 (August 2018)

- 2.8.12 The Phase I part of the report identified Made Ground and hazardous ground gases as potential sources of contamination. Further assessment of the risks to human health was recommended, though the risk to controlled water receptors (Secondary A aquifer, and Logwood Mill Brook) were considered low.
- 2.8.13 In terms of historic coal mining, the report identified the Rushy Park seam outcrops underlying the northern portion of the site, traversing E to W; and The Higher Florida (or Pemberton Five Foot Mine) outcrops underlying the southern portion of the site, traversing E to W. Several coal pits and collieries were identified on review of historical OS maps dating 1849-50. The nearest of which related to coal pits 300m and 450m north of site.
- 2.8.14 A Coal Mining Risk Assessment was undertaken and concluded that there was a high risk of unrecorded coal mining at shallow depth. It was recommended that a series of rotary open holes be completed across the site to determine the presence of any coal on site and understand the nature of any coal workings. Furthermore, a probing exercise was recommended to be undertaken in the locality of the nearby mine shaft.
- 2.8.15 An intrusive ground investigation was undertaken in June/July 2018. The table below summarises the information.

Table 2.9: Salient Report Information (11-152-R01)

	Summary Information
Brief scope	Five window sample boreholes drilled to depths of between 2.7-4.0m bgl. Three rotary boreholes drilled to depths of 30m bgl. Installation of five gas/groundwater monitoring wells to depths of between 3.0-4.0m bgl. Three return visits to monitor gas and groundwater within installed wells. Chemical and geotechnical laboratory testing.
Ground conditions	Made Ground, to depths ranging between 1.1m and 2.1m bgl, underlain by stiff to very stiff gravelly and/or sandy CLAY with occasionally localised and discontinuous sand bands, considered to represent Glacial till up to a proven depth of 4.0m bgl. These deposits were underlain by Pennine Middle Coal Measures, recovered as grey SILTSTONE and SANDSTONE from 2.7-4.0m bgl to the base of the deepest boreholes at 30m bgl. Groundwater strikes were recorded at depths ranging between 2.2m and 3.0m bgl in the window sampler boreholes and between 18.0m and 19.0m bgl in the rotary boreholes. Groundwater was recorded at depths ranging between 1.30m and 3.04m during return monitoring.
Geo-environmental findings	9No. soil samples were tested for concentrations of a range of contaminants including heavy metals, PAH and TPH. No samples were found to exceed GAC for a commercial end use. In addition, 5No. samples were tested for asbestos ID, with no asbestos detected. A significant risk of harm to human health was not identified. Following leachate analysis, it was concluded that site poses a very low risk to the controlled water receptors. A ground gas risk assessment concluded the site as CS2 and gas protection was recommended.
Geotechnical findings	Shallow foundations were recommended in the form of pads formed at least 450mm into the natural stiff to very stiff CLAY, to provide an allowable bearing pressure of between 95-195kN/m². A ground bearing floor slab was recommended given the commercial nature of the proposed development. The underlying clay was determined to be of low to medium volume change potential and heave precautions were recommended. Concrete classification of DS1, AC1s was recommended.
Recommended additional work	The following was recommended: • Remediation & Enabling Works Strategy; • Foundations to be designed by suitably qualified Structural Engineer; • Geotechnical Earthworks Compaction Specification (Infrastructure)

- 2.8.16 Within the 3No. rotary boreholes, rockhead was encountered at between 2.7m and 4.0m bgl. No coal or evidence of mining activity (e.g. voids or workings) was reported.
- 2.8.17 It was therefore concluded that any coal seams which exist are in excess of 30m below the site and would not cause a subsidence risk due to adequate rock cover above these seams; an exceedance of 10 x Seam Thickness. The Rushy Park and Higher Florida seams are understood to have a workable thickness of no greater than 5 feet (1.52m).
- 2.8.18 Although the shaft could not be investigated due to obstructions, a worst-case scenario was assumed in terms of location, depth and a 14m build stand-off was recommended.

Planning application ref. 17/00786/FUL

- 2.8.19 Planning application ref. 17/00786/FUL refers to “Land at Fallows Way, Whiston, Knowsley” located approximately 300m to the north-east of Jomas’ study site.
- 2.8.20 The application was for “Construction of coach depot comprising 1No. building with repair workshop, associated office accommodation, driver sleeping areas and staff facilities; 57 space coach parking area, 97No. car parking spaces; vehicle refuelling, washing, servicing and waste disposal areas, together with vehicular entrance/egress, security fencing and lighting; and other associated works”.
- 2.8.21 Several reports associated with the planning application were downloaded from the planning portal, these are summarised below:

Table 2.10: Reports Relating to Planning Application ref. 19/00094/FUL

Title	Author	Reference	Date
Site On Fallows Way, Prescott, L35 1RZ Geotechnical And Ground Contamination Investigation Report	e-geo Solutions Ltd	E0922.GGCI.R1	July 2017
CON29M Non-residential Mining Report E4 - Land for Development, Fallows Way, Whiston, Prescott, Merseyside, L35 1RZ	The Coal Authority	51001695880001	November 2017

- 2.8.22 The salient points of these reports in the context of the subject site are summarised below.

CON29M Non-residential Mining Report ref: 51001695880001 (November 2017)

- 2.8.23 The report states that the site is in an area that could be affected by underground mining in 13 seams of coal at 70m to 430m depth, and last worked in 1903, but that ground movement due to coal mining activity should have stopped.
- 2.8.24 A shaft (ref. 346390-016) was reported on site. The shaft was capped at rockhead by Knowsley Borough Council.

Geotechnical And Ground Contamination Investigation Report ref: E0922.GGCI.R1 (July 2017)

- 2.8.25 The report notes that the site is within a coal mining area and that there is evidence of past surface mining within 100m north of site.
- 2.8.26 An intrusive ground investigation was undertaken in June/July 2018. The table below summarises the information.

Table 2.11: Salient Report Information (E0922.GGCI.R1)

	Summary Information
Brief scope	Five window sample boreholes drilled to depths of 4.5m bgl. Five dynamic probe holes to 6.7m adjacent to the window sample boreholes. Chemical laboratory testing.
Ground conditions	Made Ground, to depths generally ranging between 2.0m and 3.5m bgl, underlain by firm light brown and light grey mottled slightly gravely slightly sandy silty CLAY up to a proven depth of 4.5m bgl. Made Ground was encountered to the base (4.5m) of one exploratory hole. No groundwater was encountered in any of the boreholes during drilling.
Geo-environmental findings	7No. soil samples were tested for concentrations of a range of contaminants including heavy metals, PAH and TPH. No samples were found to exceed GAC for a commercial end use. In addition, 2No. samples were tested for asbestos ID, with no asbestos detected. A significant risk of harm to human health was not identified. It was concluded that the ground materials did not contain any parameters which would be classed as contaminated.
Geotechnical findings	Traditional shallow strip/pad foundations were not recommended due to deep made ground encountered. Options were given for trench-fill, raft and piled foundations. Suspended floor slabs were recommended due to thickness of made ground. Concrete classification of DS1, AC1s was recommended.

2.8.27 No further assessment regarding coal mining was reported. It is noted that fragments of coal were prevalent in the made ground from three boreholes.

3 GEOLOGICAL & ENVIRONMENTAL SETTING

- 3.1.1 The following section summarises the principal environmental resources (geological, hydrogeological and hydrological) of the site and its surroundings.
- 3.1.2 The data discussed herein is generally based on the information given within the Enviro+Geoinsight Report and published information provided by the Environment Agency.
- 3.1.3 Reference has been made to the British Geological Survey online records as well as the BGS geological memoir for map sheet 67 (Runcorn).

3.2 Solid and Drift Geology

- 3.2.1 The British Geological Survey indicates that the site is directly underlain by superficial deposits of Devensian Till (diamicton).
- 3.2.2 The BGS describes Till as;
“...unsorted and unstratified drift, generally overconsolidated, deposited directly by and underneath a glacier without subsequent reworking by water from the glacier. It consists of a heterogenous mixture of clay, sand, gravel, and boulders varying widely in size and shape.”
- 3.2.3 These superficial deposits predominantly overlie solid deposits of Pennine Lower Coal Measures Formation in the west of site.
- 3.2.4 The BGS describes the Pennine Lower Coal Measures Formation as:
“interbedded grey mudstone, siltstone and pale grey sandstone, commonly with mudstones containing marine fossils in the lower part, and more numerous and thicker coal seams in the upper part.”
- 3.2.5 A geological fault traverses north-south approximately though the centre-east of site, with the downthrow side to the west. East of the fault are solid deposits of the Etruria Formation.
- 3.2.6 The BGS describes the Etruria Formation as:
“Red, purple, brown, ochreous, green, grey and commonly mottled mudstone, with lenticular sandstones and conglomerates referred to as 'espleys'. Common pedogenic horizons, but coal seams are rare. Subordinate, lenticular sandstones and conglomerates commonly consist mostly of volcanic and lithic clasts.”
- 3.2.7 Although artificial deposits are not reported within the site boundary, given the identified site history a thickness of Made Ground should be expected.
- 3.2.8 An inferred outcrop of coal is also noted to traverse east-west through the centre of site from the fault line to just beyond the site boundary at another fault.

- 3.2.9 This off-site fault is located just to the west of the site boundary and is broadly parallel with the other fault on site and also has its downthrown side to the west. West of the off-site fault are further deposits of Pennine Lower Coal Measures Formation. These strata are shown to broadly dip to the south-west at an angle of 50°.
- 3.2.10 The BGS map sheet 67 indicates that the coal outcrop on site is the Tenlands, Ravenhead Main Delf. Approximately 10m north of this feature is another coal outcrop – Bastions Mine. The geological cross-section shows Bastions Mine as underlying Tenlands, Ravenhead Main Delf.
- 3.2.11 An extract of the map sheet 67 geological map showing the site location is provided in Appendix 1.

3.3 British Geological Survey (BGS) Borehole Data

- 3.3.1 As part of the assessment, publicly available BGS borehole records were obtained and reviewed from the surrounding area.
- 3.3.2 The nearest such records were located on-site from a ground investigation by Strata Surveys Ltd in May 1989. Relevant extracts have been included in Appendix 4.
- 3.3.3 The investigation comprised 10No. machine excavated trial pits undertaken in the north-eastern half of Jomas' study site.
- 3.3.4 The ground conditions comprised Made Ground 1.30m to 3.05m thick. This was underlain by sandy gravelly clay with wood fragments and plant remains (referred to as "alluvial deposits") within TP1 and TP2 to 3.60m and 3.30m bgl respectively. In TP3-10 the Made Ground was underlain by "weathered mudstone" generally comprising grey orange and red silty sandy clay with medium fine gravel of mudstone to the base of trial pits between 2.90m and 3.10m bgl.
- 3.3.5 Groundwater seepage was reported in TP1, TP2 and TP4 at depths of 3.2m, 2.8m and 2.6m bgl respectively.
- 3.3.6 Whilst no evidence of old mine working was explicitly mentioned in these records, it is noted that "rotting wood" and "concrete blocks" were recovered from TP7 at depths of 2.5m and 2.9m bgl respectively.
- 3.3.7 In addition, 2No. borehole records were located approximately 226m north-east of site, from a ground investigation by Geotechnical Engineering Ltd in June 1993. BGS maps indicate these were drilled in a location underlain by Pennine Middle Coal Measures Formation. Relevant extracts have been included in Appendix 4.
- 3.3.8 The investigation comprised drilling two boreholes by cable percussive to between 4.21-4.28m bgl, followed by rotary water flush diamond core drilling to completion at 14.00m and 19.57m bgl.
- 3.3.9 Ground conditioned generally comprised interbedded sandstone, mudstone and siltstone, weathered to a very stiff clay near the surface. Bedding planes were

generally noted to be sub-horizontal; within borehole ref SJ49SE231, mudstone at 7.60-11.46m was reported to be dipping at moderate angles of 15°-30°.

3.3.10 Within borehole ref SJ49SE231, a coal seam was reported at 11.46-12.95m bgl.

3.3.11 Within borehole ref SJ49SE232, a coal seam was reported at 15.77-16.00m bgl.

3.4 Coal Authority Data

3.4.1 The site lies within a Coal Mining Reporting Area and the Coal Authority online interactive mapping service (<http://mapapps2.bgs.ac.uk/coalauthority/home.html>) indicates that parts of the site lie within a “Development High Risk Area”.

CON29M Report

3.4.2 A CON29M report has been obtained from the Coal Authority by the client and provided to Jomas, this is included in Appendix 2. The whole report should be referred to for all information but the salient points relating to the site in the context of the proposed development are presented below.

3.4.3 The property is in a surface area that could be affected by underground mining in 6 seams of coal at 110m to 290m depth, and last worked in 1898.

3.4.4 The property is not within a surface area that could be affected by present underground mining.

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

3.4.6 There are no recorded coal mine entries known to the Coal Authority within, or within 20 metres, of the boundary of the property.

3.4.7 The Coal Authority is not aware of any damage due to geological faults or other lines of weakness that have been affected by coal mining.

3.4.8 The Coal Authority has no record of a mine gas emission requiring action.

Consultants Coal Mining Report

3.4.9 A site-specific Coal Authority Consultants Coal Mining Report – ref: 51002863807001 (January 2022) was obtained from the Coal Authority by Jomas, this is included in Appendix 2. The whole report should be referred to for all information but the salient points relating to the site in the context of the proposed development are presented below.

Table 3.1: Historical Coal Working Beneath the Site

Colliery	Seam	Depth (m bgl)	Dipping Rate and Direction of Seam Worked	Extraction Thickness (cm)	Date of last working
Unnamed	London Delph (Bin)	110	11.3° – South-West	180	1880
Cronton	Crombouke	131	11.3° – South	190	1883
Unamed	St. Helens Yard	151	11.3° – South-West	90	1870
Unnamed	Lower Florida	164	11.3° – South-West	120	1862
Unnamed	Wigan Four Feet	290	11.2° – South	160	1898

- 3.4.10 The report notes there are probably unrecorded shallow workings.
- 3.4.11 The report indicates that there are no known spine roads connecting roadways that exist at shallow depth (less than 30 metres deep).
- 3.4.12 The Coal Authority has provided details of all known mine entries (shafts and adits) known to it within 100m from the site. Two shafts are identified and their locations are shown on the plan provided as part of the Coal Authority report (see Appendix 2) and summarised in the table below.

Table 3.2: Shafts Beneath or in Close Proximity to the Site

Coal Authority Reference	Grid Reference	Approximate Location	Comments
345389-002	345559, 389962	~95m west of Jomas' study site	None
345389-023	345668, 389760	~80m south-west of Jomas' study site	This shaft was found during development and was capped with a 3m square RC raft at rockhead. It is thought that the shaft was then conveyed to Capital @ Counties Ltd in 1973 but we have no confirmation that this is so.

- 3.4.13 The CA report confirms that there are no known opencast mine workings within 500m of the site.
- 3.4.14 The Coal Authority has provided details of coal seams outcropping / subcropping on and within close proximity of the site. The two subcrops are shown on the plan provided as part of the Coal Authority report (see Appendix 2) and details summarised in the table below.

Table 3.3: CA Subcrops for Study Site

Seam Name	Location	Bearing of Outcrop	Seam Workable?
Wigan Four Feet*	On-site	251	Yes
Trencherbone**	9.6m north-west of Jomas' study site	74	Yes

**Old BGS mapping refers to this seam as "Tenlands, Ravenhead Main Delf"*

***Old BGS mapping refers to this seam as "Bastions Mine"*

(See Section 3.2)

Coal Authority Liaison and Abandonment Plans

- 3.4.15 In light of the above, the Coal Authority were contacted to enquire about any further information, including mine abandonment plans, that they may have for the site.
- 3.4.16 No shallow coal working abandonment plans could be provided by the Coal Authority. Therefore, Jomas procured the plans detailing the shallowest available records from the Coal Authority (for London Delph see Table 3.1). Plan ref. NW835 details the Felcroft Mine at the Halsnead Colliery and is provided in Appendix 2.
- 3.4.17 By overlaying this map with the historic OS map dated 1850, it can be seen that the nearest known mine workings to Jomas' study site are 50m to the north-west and were completed in 1883. This is the latest date shown on the plan. Online research from the local council website (<http://archives.knowsley.gov.uk/whiston/history-of-whiston>), indicate Halsnead Colliery closed in 1895, so there is the potential for workings to have extended beyond what is shown on the plan.

Spontaneous Combustion

- 3.4.18 The Coal Authority has produced and published a table that lists coal seams which have been known to suffer from occurrences of spontaneous combustion and are consequently regarded as at 'high risk' of succumbing to spontaneous combustion when being entered, worked or disturbed. This list has been derived from accounts and reports into incidents of spontaneous combustion within workings.
- 3.4.19 Coal Seams in Lancashire with a history of spontaneous combustion include: High Florida, Lower Florida, Trencherbone and where roof coal is left.
- 3.4.20 The Trencherbone seam is reported to subcrop 9.6m north-west of Jomas' study site, and may be present under the site.

3.5 Hydrogeology & Hydrology

- 3.5.1 General information about the hydrogeology of the site was obtained from the EnviroInsight and / or the DEFRA "MAGIC" website.

Groundwater Vulnerability

- 3.5.2 The EA operates a classification system to categorise the importance of groundwater resources (aquifers) and their sensitivity to contamination. Aquifers were formerly classified as major, minor and non-aquifers, based on the amenity value of the resource. A major aquifer is a significant resource capable of producing large quantities of water suitable for potable supply. Minor aquifers produce water in varying quantities or qualities, and if utilised are of local importance. Non aquifers are low permeability strata, which contain no significant exploitable groundwater and have very limited capacity to transmit contaminants.
- 3.5.3 Since 1 April 2010, the EA's Groundwater Protection Policy uses aquifer designations that are consistent with the Water Framework Directive. This comprises;
- **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;
 - **Secondary B** - predominantly lower permeability layers which may store and yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers.
 - **Secondary Undifferentiated** - has been assigned in cases where it has not been possible to attribute either category A or B to a rock type. In most cases, this means that the layer in question has previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type.
 - **Principal Aquifer** – this is a formation with a high primary permeability, supplying large quantities of water for public supply abstraction.
 - **Unproductive Strata** - These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow.

Source Protection Zones (SPZ)

- 3.5.4 In terms of aquifer protection, the EA generally adopts a three-fold classification of SPZs for public water supply abstraction wells.
- Zone I - or 'Inner Protection Zone' is located immediately adjacent to the groundwater source and is based on a 50-day travel time. It is designed to protect against the effects of human activity and biological/chemical contaminants that may have an immediate effect on the source.
 - Zone II - or 'Outer Protection Zone' is defined by a 400-day travel time to the source. The travel time is designed to provide delay and attenuation of slowly degrading pollutants.
 - Zone III - or 'Total Catchment' is the total area needed to support removal of water from the borehole, and to support any discharge from the borehole.

Hydrology

- 3.5.5 The hydrology of the site and the area covers water abstractions, rivers, streams, other water bodies and flooding.
- 3.5.6 The Environment Agency defines a floodplain as the area that would naturally be affected by flooding if a river rises above its banks, or high tides and stormy seas cause flooding in coastal areas.
- 3.5.7 There are two different kinds of area shown on the Flood Map for Planning. They can be described as follows:
- Areas that could be affected by flooding, either from rivers or the sea, if there were no flood defences. This area could be flooded:
- from the sea by a flood that has a 0.5 per cent (1 in 200) or greater chance of happening each year;
 - or from a river by a flood that has a 1 per cent (1 in 100) or greater chance of happening each year.
- (For planning and development purposes, this is the same as Flood Zone 3, in England only.)
- The additional extent of an extreme flood from rivers or the sea. These outlying areas are likely to be affected by a major flood, with up to a 0.1 per cent (1 in 1000) chance of occurring each year.
- (For planning and development purposes, this is the same as Flood Zone 2, in England only.)
- 3.5.8 These two areas show the extent of the natural floodplain if there were no flood defences or certain other manmade structures and channel improvements.
- 3.5.9 Outside of these areas flooding from rivers and the sea is very unlikely. There is less than a 0.1 per cent (1 in 1000) chance of flooding occurring each year. The majority of England and Wales falls within this area. (For planning and development purposes, this is the same as Flood Zone 1, in England only.)
- 3.5.10 Some areas benefit from flood defences and these are detailed on Environment Agency mapping.
- 3.5.11 Flood defences do not completely remove the chance of flooding, however, and can be overtopped or fail in extreme weather conditions.

Table 3.4: Summary of Hydrogeology & Hydrology

Feature		On Site	Off Site	Potential Receptor?
Aquifer	Superficial:	Secondary Undifferentiated – Till, Devensian	Secondary A aquifer 400m south-east	✓

Feature	On Site	Off Site	Potential Receptor?
Abstractions	Solid:	Secondary A – Pennine Lower Coal Measures Formation and Etruria Formation Principal aquifer 224m south-east	✓
	Groundwater	None 3No entries within 2000m; all reported for historical and active potable water supplies 1967m south-west of site.	X
	Surface water	None 4No. entries within 2000m; nearest reported as historical abstractions 1084m south-east for spray irrigation. Nearest active abstraction reported 1379m south for spray irrigation	X
	Potable	None 3No entries within 2000m; all reported for historical and active potable water supplies 1967m south-west of site.	X
Source Protection Zone	None	Zone 3 reported 226m south-east of site	X
Surface Water Features	None	9No. entries for water networks, most associated with “Logwood Mill Brook” watercourse running along the eastern site boundary. Only other surface water feature within 500m of site is “Tushingham's Lake” ~275m north-east	✓
Flood Risk	EA Flood Zone 2	Yes (Eastern border of site only)	-
	EA Flood Zone 3	Yes (Eastern border of site only)	-
	RoFRaS	Medium	High within 50m
	Flood Defences	There are no areas benefiting from Flood Defences within 250m of the study site.	
	Surface Water Flood Risk	Highest risk on site is: “1 in 30 year, 0.1m-0.3m”	Highest risk within 50m of site is: “1 in 30 year, >1.0m”
	Groundwater Flood Risk	Low	Low

3.6 Sensitive Land Uses

- 3.6.1 The site is located within a Nitrate Vulnerable Zone.
- 3.6.2 A Nitrate Vulnerable Zone (NVZ) is a conservation designation of the Environment Agency for areas of land that drain into nitrate polluted waters, or waters which could become polluted by nitrates. Nitrate Vulnerable Zones were introduced by the UK government in response to the EU mandate that all EU countries must reduce the nitrate in Drinking Water to a maximum of 50 mg/l.
- 3.6.3 The NVZs cover large areas of land that have been identified as exceeding or being at risk of exceeding 50 mg NO₃/l.
- 3.6.4 The Old Wood Designated Ancient Woodland area is 986m East of the site.
- 3.6.5 The Merseyside and Greater Manchester is located 275m north-east and 288m east of the site.
- 3.6.6 No other sensitive land use was identified within 1000m of the site.

3.7 Radon

- 3.7.1 As reported, the site is not within a Radon affected area, as less than 1% of properties are above the action level.
- 3.7.2 Consequently, no radon protective measures are necessary in the construction of new dwellings or extensions as described in publication BR211 (BRE, 2015).

4 POSSIBLE GEOLOGICAL HAZARDS

4.1 Database Information Review

4.1.1 The following are brief findings extracted from the GroundSure Enviro+Geosight Report, that relate to factors that may have a potential impact upon the engineering of the proposed development.

Table 4.1: Geological Hazards

Potential Hazard	Site check Hazard Rating	Details	Further Action Required?
Shrink swell clays	Very Low	Ground conditions predominantly low plasticity.	No
Running sands	Very Low	Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.	No
Compressible deposits	Negligible	Compressible strata are not thought to occur.	No
Collapsible Deposits	Very low	Deposits with potential to collapse when loaded and saturated are unlikely to be present.	No
Landslides	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.	No
Ground dissolution soluble rocks	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.	No
Coal mining	The site is located within a coal mining area as defined by the Coal Authority.		Yes – Coal Mining Risk Assessment
Non-coal mining	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered		No

4.1.2 In addition, the GeoInsight report notes the following:

- 5No. BritPits are reported within 500m of the site. Nearest reported 314m north-east of the site for Cronton Colliery Pit having mined deep coal. The operational status is ceased.
- 26No. surface ground working features are reported within 250m of the site. Nearest reported 5-9m north-east/east of the site for Sewage Works.
- 53No. underground working features are reported within 1000m of the site. Nearest reported 271m north east of the site for an Old Colliery.
- 4No. historical mineral planning areas are reported within 500m of the site. All are for clay, shale and bricks with “valid” status. Nearest reported 27m north west of the site.

- 4.1.3 Existing hardstanding and foundations will need to be removed and grubbed out ahead of the development. This may require the use of hydraulic breaking.
- 4.1.4 The clearance of the site, including removal of foundations and services is likely to increase the depth of Made Ground on the site.
- 4.1.5 Foundations should not be formed within Made Ground or organic rich material (e.g. alluvium) due to the unacceptable risk of total and differential settlement.
- 4.1.6 Foundations must be designed so as not to load nor undermine adjacent boundary walls and buildings.
- 4.1.7 The presence of Made Ground derived from demolition material may be a source of elevated sulphate, associated with plaster from the previous structures. If such levels are noted then sulphate resistant concrete may be required.
- 4.1.8 The resultant thickness of Made Ground and the potential for clays beneath the proposed footprint may mean that a suspended floor slab would be required.
- 4.1.9 A geological fault traverses broadly north-south through the centre-east of site, with the downthrow side to the west. West of the fault are solid deposits of Pennine Lower Coal Measures Formation; east of the fault are solid deposits of the Etruria Formation.
- 4.1.10 Within the UK, faults tend to be more of a shatter zone rather than a planar / linear feature. The different inferred locations are likely to result in a larger zone where rock strength may be reduced and provide a larger zone that could act as a pathway for gases sourced from the underground coal.
- 4.1.11 Depending on the amount of rock shattering experienced along fault line, foundations may require reinforcing and movement joints incorporated into the structure.
- 4.1.12 A geotechnical investigation is recommended to inform foundation design. Permission for a ground investigation may have to be sought from the Coal Authority.

5 QUALITATIVE RISK ASSESSMENT

5.1 Legislative Framework

5.1.1 A qualitative risk assessment has been prepared for the site, based on the information collated. This highlights the potential sources, pathways and receptors. Intrusive investigations will be required to confirm the actual site conditions and risks.

5.1.2 Under Part IIA of the Environmental Protection Act 1990, the statutory definition of contaminated land is:

"land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land, that:

(a) significant harm is being caused or there is a significant possibility of such harm being caused; or

(b) significant pollution of controlled waters is being caused, or there is significant possibility of such pollution being caused."

5.1.3 The Statutory Guidance provided in the DEFRA Circular 04/2012 lists the following categories of significant harm to **human health**:

- death; life threatening diseases (e.g. cancers); other diseases likely to have serious impacts on health; serious injury; birth defects; and impairment of reproductive functions.

5.1.4 Other health effects may also be considered by the local authority to constitute significant harm with a wide range of conditions that may or may not constitute significant harm (alone or in combination) including: physical injury; gastrointestinal disturbances; respiratory tract effects; cardio-vascular effects; central nervous system effects; skin ailments; effects on organs such as the liver or kidneys; or a wide range of other health impacts.

5.1.5 In deciding whether or not land is contaminated land on grounds of significant possibility of significant harm to human health there are four categories to be considered. Categories 1 and 2 would encompass land which is capable of being determined as contaminated land on grounds of significant possibility of significant harm to human health. Categories 3 and 4 would encompass land which is not capable of being determined on such grounds.

5.1.6 For non-human receptors the following types of harm should be considered to be significant harm:

Ecological System Effects

- Harm which results in an irreversible adverse change, or in some other substantial adverse change, in the functioning of the ecological system within any substantial part of that location; or
- Harm which significantly affects any species of special interest within that location and which endangers the long-term maintenance of the population of that species at that location.

- In the case of European sites, harm should also be considered to be significant harm if it endangers the favourable conservation status of natural habitats at such locations or species typically found there. In deciding what constitutes such harm, the local authority should have regard to the advice of Natural England and to the requirements of the Conservation of Habitats and Species Regulations 2010.

Property Effects

- Crops: A substantial diminution in yield or other substantial loss in their value resulting from death, disease or other physical damage. For domestic pets, death, serious disease or serious physical damage. For other property in this category, a substantial loss in its value resulting from death, disease or other serious physical damage.
- Buildings: Structural failure, substantial damage or substantial interference with any right of occupation. The local authority should regard substantial damage or substantial interference as occurring when any part of the building ceases to be capable of being used for the purpose for which it is or was intended. In the case of a scheduled Ancient Monument, substantial damage should also be regarded as occurring when the damage significantly impairs the historic, architectural, traditional, artistic or archaeological interest by reason of which the monument was scheduled.

- 5.1.7 Contaminated land will only be identified when a 'pollutant linkage' has been established.
- 5.1.8 A 'pollutant linkage' is defined in Part IIA as:
"A linkage between a contaminant Source and a Receptor by means of a Pathway".
- 5.1.9 Therefore, this report presents an assessment of the potential pollutant linkages that may be associated with the site, in order to determine whether additional investigations are required to assess their significance.
- 5.1.10 In accordance with the National Planning Policy Framework, where development is proposed, the developer is responsible for ensuring that the development is safe and suitable for use for the purpose for which it is intended, or can be made so by remedial action. In particular, the developer should carry out an adequate investigation to inform a risk assessment to determine:
- whether the land in question is already affected by contamination through source – pathway – receptor pollutant linkages and how those linkages are represented in a conceptual model;
 - whether the development proposed will create new linkages, e.g. new pathways by which existing contaminants might reach existing or proposed receptors and whether it will introduce new vulnerable receptors; and
 - what action is needed to break those linkages and avoid new ones, deal with any unacceptable risks and enable development and future occupancy of the site and neighbouring land.

- 5.1.11 A potential developer will need to satisfy the Local Authority that unacceptable risk from contamination will be successfully addressed through remediation without undue environmental impact during and following the development.

5.2 Conceptual Site Model

- 5.2.1 On the basis of the information summarised above, a conceptual site model (CSM) has been developed for the site. The CSM is used to guide the investigation activities at the site and identifies potential contamination sources, receptors (both on and off-site) and exposure pathways that may be present. The identification of such potential “pollutant linkages” is a key aspect of the evaluation of potentially contaminated land.
- 5.2.2 The site investigation is then undertaken in order to prove or disprove the presence of these potential source-pathway-receptor linkages. Under current legislation an environmental risk is only deemed to exist if there are proven linkages between all three elements (source, pathway and receptor).
- 5.2.3 This part of the report lists the potential sources, pathways and receptors at the site, and assesses based on current and future land use, whether pollution linkages are possible.
- 5.2.4 Potential pollutant linkages identified at the site are detailed below:

Table 5.1: Potential Sources, Pathways and Receptors

Source(s)	Pathway(s)	Receptor(s)
- Potential for contaminated ground associated with previous/existing site uses (S1): - o Corn Mill - o Canning Factory - o Warehouse - Potential for Made Ground associated with previous development operations – on site (S2) - Historic tank on western boundary (1960s-2000s) (S3) - Historic tank on north-east of warehouse building (1970s-1980s) (S4) - Current above ground fuel tank in central northern area of the site (S5) - Electricity sub-station in west of site (dating from 1970s) (S6) - Current and previous industrial uses – off site (S7): - o Sewage works 5m east (1920s-1960) - o Various warehouses, depots, factories and works (1960s-present) - Potential asbestos containing materials within existing buildings – on site (S8) - Potential asbestos impacted soils from demolition of previous buildings – on site (S9) - Potential ground gas generation from coal deposits/workings, refuse heap 300-400m north (S10)	- Ingestion and dermal contact with contaminated soil (P1) - Inhalation or contact with potentially contaminated dust and vapours (P2) - Leaching through permeable soils, migration within the vadose zone (i.e., unsaturated soil above the water table) and/or lateral migration within surface water, as a result of cracked hardstanding or via service pipe/corridors and surface water runoff. (P3) - Horizontal and vertical migration of contaminants within groundwater (P4) - Accumulation and Migration of Soil Gases (P5) - Permeation of water pipes and attack on concrete foundations by aggressive soil conditions (P6)	- Construction workers (R1) - Maintenance workers (R2) - Neighbouring site users (R3) - Future site users (R4) - Building foundations and on site buried services (water mains, electricity and sewer) (R5) - Controlled waters (R6): - o Secondary Undifferentiated Aquifer within superficial deposits of Till - o Secondary A Aquifer within solid deposits of Pennine Lower Coal Measures Formation - o Logwood Mill Brook along eastern boundary of site

5.3 Qualitative Risk Estimation

5.3.1 Based on information previously presented in this report, a qualitative risk estimation was undertaken.

5.3.2 For each potential pollutant linkage identified in the conceptual model, the potential risk can be evaluated, based on the following principle:

Overall contamination risk = Probability of event occurring x Consequence of event occurring

5.3.3 In accordance with CIRIA C552, the consequence of a risk occurring has been classified into the following categories:

- Severe
- Medium
- Mild
- Minor

5.3.4 The probability of a risk occurring has been classified into the following categories:

- High Likelihood
- Likely
- Low Likelihood
- Unlikely

5.3.5 This relationship can be represented graphically as a matrix (Table 5.2).

Table 5.2: Overall Contamination Risk Matrix

		Consequence			
		Severe	Medium	Mild	Minor
Probability	High Likelihood	Very High Risk	High Risk	Moderate Risk	Low Risk
	Likely	High Risk	Moderate Risk	Moderate Risk	Low Risk
	Low Likelihood	Moderate Risk	Moderate Risk	Low Risk	Very Low Risk
	Unlikely	Low Risk	Low Risk	Very Low Risk	Very Low Risk

5.3.6 The risk assessment process is based on guidance provided in CIRIA C552 (2001) *Contaminated Land Risk Assessment – A Guide to Good Practice*. Further information including definitions of descriptive terms used in the risk assessment process is included in Appendix 4.

5.3.7 The degree of risk is based on a combination of the potential sources and the sensitivity of the environment. The risk classifications can be cross checked with reference to Table A4.4 in Appendix 4.

5.3.8 Hazard assessment was also carried out, the outcome of which could be:

- Urgent Action (UA) required to break existing source-pathway-receptor link.
- Ground Investigation (GI) required to gather more information
- Watching Brief there is no evidence of potential contamination but the possibility of it exists and so the site should be monitored for local and olfactory evidence of contamination.
- No action required (NA)

5.3.9 The preliminary risk assessment for the site is presented in Table 5.3 below.

SECTION 5

QUALITATIVE RISK ASSESSMENT

Table 5.3: Preliminary Risk Assessment for the Site

Sources	Pathways (P)	Receptors	Consequence of Impact	Probability of Impact	Risk Estimation	Hazard Assessment
• Potential for contaminated ground associated with previous/existing site uses (S1): ○ Corn Mill ○ Canning Factory ○ Warehouse • Potential for Made Ground associated with previous development operations – on site (S2) • Historic tank on western boundary (1960s-2000s) (S3) • Historic tank on north-east of warehouse building (1970s-1980s) (S4) • Current above ground fuel tank in central northern area of the site (S5) • Electricity sub-station in west of site (dating from 1970s) (S6) • Current and previous industrial uses – off site (S7): ○ Sewage works 5m east (1920s-1960) ○ Various warehouses, depots, factories and works (1960s-present) • Potential asbestos containing materials within existing buildings – on site (S8) • Potential asbestos impacted soils from demolition of previous buildings – on site (S9) • Potential ground gas generation from coal deposits/workings, refuse heap 300-400m north (S10)	• Ingestion and dermal contact with contaminated soil (P1) • Inhalation or contact with potentially contaminated dust and vapours (P2) • Permeation of water pipes and attack on concrete foundations by aggressive soil conditions (P6)	• Construction workers (R1) • Maintenance workers (R2) • Neighbouring site users (R3) • Future site users (R4) • Building foundations and on site buried services (water mains, electricity and sewer) (R5)	Medium	Likely	Moderate	GI – Ground Investigation
	• Accumulation and migration of soil gases (P5)		Severe for Asbestos	Low	Moderate	
				Severe	Low	
		• Leaching through permeable soils, migration within the vadose zone (i.e., unsaturated soil above the water table) and/or lateral migration within surface water, as a result of cracked hardstanding or via service pipe/corridors and surface water runoff. (P3) • Horizontal and vertical migration of contaminants within groundwater (P4)	• Neighbouring site users (R3) • Building foundations and on site buried services (water mains, electricity and sewer) (R5) • Controlled waters (R6): ○ Secondary Undifferentiated Aquifer within superficial deposits of Till ○ Secondary A Aquifer within solid deposits of Pennine Lower Coal Measures Formation ○ Logwood Mill Brook along eastern boundary of site	Medium	Low	

- 5.3.10 It should be noted that the identification of potential pollutant linkages does not necessarily signify that the site is unsuitable for its current or proposed land use. It does however act as a way of focussing data collection at the site in accordance with regulatory guidance in CLR 11.

5.4 Outcome of Risk Assessment

- 5.4.1 The risk estimation matrix indicates a moderate risk as defined above.
- 5.4.2 It is understood that the proposed development comprises the demolition of the existing structures and the construction of new light industrial/commercial units.
- 5.4.3 Due to the potential presence of asbestos containing materials within the existing buildings on site, an asbestos survey should be undertaken, with any asbestos containing materials found, and removed under suitably controlled conditions. There should be no risk to end users from asbestos within the fabric of the existing building if the potential asbestos containing materials are removed by suitably qualified and experienced specialists under controlled conditions.
- 5.4.4 A review of earliest available (1850) historical maps indicates that the site was comprised of farm structures in the centre of the site, including a corn mill and agricultural land and a watercourse (Logwood Mill Brook) running through the site. By 1891, the brook is shown to have been diverted to along the eastern boundary of site. There were no significant changes to the site until 1960s where a tank is shown by the western boundary of the site whilst also having a couple of the structures in the centre of site be removed. A new water course is also shown traversing through the centre of site. By the maps dated late 1970s, the site appears to have been completely redeveloped for industrial use and has had a warehouse structure constructed and 2No. smaller structures in the northwest, including a canning factory. The site then stays the same until the most recent map dated 2022, where it is recorded that the 2 structures in the northwest have been demolished and the tanks are no longer shown. However, during Jomas' site walkover in January 2022, an above ground fuel tank was noted to be present in the central northern area of site.
- 5.4.5 From the earliest available map (1850), the surrounding area was mostly agricultural land with numerous mining operations including collieries, coal pits and shafts within 1km of site, but primarily focussed >400m north of site. These mining features generally become "old" and "disused" by the early 20th century. From the maps dated 1925-1927 a sewage works has been constructed directly adjacent to the east boundary of site. The town to the west has continued developing and its industrial area has grown to include more works such as the electric lamp works. There is no more significant change until the mid-20th century, except for small residential expansion roughly 1km to the Northeast in the map dated 1937. From 1955 the industrial district in the western town saw more development and spread to the within 200m northwest of site. The town to the northeast also saw industrial development. The map dated 1975, the industrial district of the western town has now expanded and surrounds the site boundary on all sides, with several factories, warehouses and works, whilst a motorway and motorway intersection (M57 and

A5080) have been constructed to the east of the site. From here there is no significant changes around site other than some redevelopment of properties in the town around the site as well as a new road coming off of the motorway intersection.

5.4.6 It is recommended that an intrusive investigation is undertaken to clarify potential risks to the identified receptors, and assess the extent of Made Ground soils present at the site.

5.4.7 A preliminary investigation may comprise a series of window sampler holes or trial pits.

5.4.8 Soil gas monitoring should be undertaken due to potential ground gas generation from coal deposits/workings; an historic refuse heap 300-400m north, and the potential for hydrocarbon contamination associated with the historic/current industrial land use of the surrounding area. This should be undertaken in accordance with CIRIA C665.

5.5 List of Key Contaminants

5.5.1 The possible contamination implications for both on-site and off-site sources have been assessed based on the information presented in the report. This has been achieved using guidance publications by the Environment Agency, together with other sources.

5.5.2 In the case of the site uses identified as part of the desk study research, reference to DoE industry profiles would not indicate a specific use reference, although reference has been made to the miscellaneous industries profile.

5.5.3 Based on recommendations within the guidance publications, an initial soil and water chemical testing suite would need to consider a range of contaminants as follows:

- *Metals*: cadmium, chromium, copper, lead, mercury, nickel, zinc;
- *Semi-metals and non-metals*: arsenic, boron, sulphur;
- *Inorganic chemicals*: cyanide, nitrate, sulphate and sulphide;
- *Organic chemicals*: aromatic hydrocarbons, aliphatic hydrocarbons, petroleum hydrocarbons, phenol, polyaromatic hydrocarbons, Volatile Organic Compounds, Polychlorinated biphenyls;
- *Others*: pH, Asbestos.

6 COAL MINING RISK ASSESSMENT

6.1 Introduction

- 6.1.1 The site has been determined by the Coal Authority as lying within a “Development High Risk Area”.
- 6.1.2 The Development High Risk Area is the part of the coal mining reporting area which contains one or more recorded coal mining related features which have the potential for instability or a degree of risk to the surface from the legacy of coal mining operations.
- 6.1.3 The Development High Risk Areas covers approximately 15% of the coalfield; it contains specific recorded coal mining legacy risks which pose a public safety risk and/or ground instability risk to the surface. The combination of features included in this composite area includes mine entries; shallow coal workings (recorded and probable); recorded coal mining related hazards; recorded mine gas sites; fissures and breaklines and previous surface mining sites.
- 6.1.4 Unless the development in this defined area fulfils at least one of the conditions within the Coal Authority ‘Exemptions List’, (Section 2 of Coal Authority (2017) “Risk Based Approach to Development Management – Guidance for Developers” v4), neither the “Type of Application” or the “Nature of Development” would exempt the need for a desk based Coal Mining Risk Assessment and the consequential need for the LPA to consult the Coal Authority.
- 6.1.5 Consequently, a Coal Mining Risk Assessment in accordance with the Coal Authority (2017) “Risk Based Approach to Development Management – Guidance for Developers v4” has been undertaken.

6.2 Summary of Salient Information

Site History

- 6.2.1 Historical Ordnance Survey maps revealed no obvious evidence of mining activity taking place on site; the site is shown to have comprised mainly agricultural land and farm buildings, until the site was developed into the existing industrial estate during the late-1980s and early-1990s.
- 6.2.2 No obvious cracks were noted on hardstanding surfaces, walls or buildings during a site walkover that might be considered evidence of mining-related subsidence.
- 6.2.3 However, on the map dated 1850, coal pits are shown within proximity to site, the nearest being ~100m west of site and several collieries are shown >400m north/north-east of site. Shafts and old shafts (presumed to be coal) are also shown on historic OS maps; the nearest of which is shown approximately 350m north-east of site, associated with an old unnamed colliery. By the map dated 1906, all collieries are labelled as old/disused. In the present day, the area is occupied by a large park.

Geological Ground Model

- 6.2.4 Geological maps indicate that the site is directly underlain by superficial deposits of Devensian Till, which in turn is predominantly underlain by coal-bearing strata of the Pennine Lower Coal Measures Formation (interbedded mudstone, siltstone and sandstone). In the east of site, on the upthrow side of a geological fault, the Till is underlain by Etruria Formation (mudstone with lenticular sandstones and conglomerates). Coal seams are rare within the Etruria Formation.
- 6.2.5 An inferred subcrop of coal is also noted to traverse east-west through the centre of site from the fault line to just beyond the site boundary at another fault. The BGS indicates this coal seam to be the Tenlands, Ravenhead Main Delf. However, the Coal Authority refers to this seam as Wigan Four Feet.
- 6.2.6 Deposits of Pennine Lower Coal Measures Formation dipping 50° to the south-west are shown on the downthrow side of the fault on the western boundary of site. Whilst it is likely that the deposits underlying the site are of the same orientation, the faults in proximity to site make this difficult to predict.
- 6.2.7 The mapping indicates the site to potentially be underlain by another coal seam (BGS: Bastions Mine / Coal Authority: Trencherbone) which subcrops 150m north of site and underlies the Tenlands, Ravenhead Main Delf [Wigan Four Feet].
- 6.2.8 Information obtained from BGS archives identified previously trial pits were undertaken in the north-east of site. Whilst no evidence of old mine working was explicitly mentioned in these records, it is noted that “rotting wood” and “concrete blocks” were recovered from TP7 at depths of 2.5m and 2.9m bgl respectively.

6.3 Coal Authority – Risk Assessment Table

- 6.3.1 The following table is provided within Section 3 of the Coal Authority document - “Risk Based Approach to Development Management – Guidance for Developers” v4 (2017) to ensure a comprehensive and uniform assessment of the risks posed by historic and current coal workings around the country.

Table 3.1: Coal Authority Risk Assessment Table.

Coal Mining Issue	Y / N / ?	Risk Assessment
Underground coal mining (recorded at shallow depths)	N	No evidence of shallow underground mining has been recorded.
Underground coal mining (probable at shallow depths)	Y	The presence of unrecorded mine workings associated with shallow workable coal on the site is probable and further investigation is recommended.
Mine entries (shafts and adits)	N	Two shafts have been identified within 100m of site. One ~80m south-west of site has been capped at rockhead. The other ~95m west of site is unknown. However, it is possible that unrecorded mine entries/bell pits could be present beneath the site.

Coal Mining Issue	Y / N / ?	Risk Assessment
Coal mining geology (faults/fissures)	Y	A fault is inferred to cross through the site. Such features intercepting coal workings may exacerbate any movement.
Record of past mine gas emissions or potential	N	The Coal Authority has no record of a mine gas emission requiring action. However, all mine workings pose a potential gas risk which should be considered in any future investigations and development.
Recorded coal mining surface hazard	N	None reported.
Surface mining (opencast workings)	N	No current, historic or currently proposed open cast mine workings within 500m of the site.

6.4 Summary of Risks Identified

Shallow Underground Workings

- 6.4.1 Geotechnical hazards associated with underground workings may be typified by a propagating collapse of the roof of a worked seam upwards towards ground level, presenting at the surface and resulting in surficial subsidence, in a process known as “crownholing”.
- 6.4.2 Given the age of workings, they are likely to have been carried out using the pillar and stall extraction methodology, or by “stoping” where steeply dipping. These workings can potentially collapse a significant time after mining has ceased, depending on several factors including the depth of the workings, the geometry of the workings, the overlying rock mass characteristics, changes to the groundwater regime and surface loading.
- 6.4.3 There is a possibility that unrecorded workings might exist on site, within the Tenlands, Ravenhead Main Delf [Wigan Four Feet] and Bastions Mine [Trencherbone] coal seams.
- 6.4.4 A ground investigation is recommended to evaluate the potential risk.
- 6.4.5 Within CIRIA C758D, and UK best practice, it is noted that a good quality rock cover thickness approximately 10 times that of the accumulated extracted thickness of coal is usually required above a mining void, to be sufficient to prevent the void from migrating to and affecting the surface.
- 6.4.6 However, when scoping the investigation, the possibility of workings in multiple seams should be considered when deciding on borehole depths.

Potential Surface Workings

- 6.4.7 Coal is often highly weathered and less valuable at the outcrop but, due to socio-economic reasons, or to “chase” down to find more intact coal, these seams may have been worked from near the ground surface in the past.
- 6.4.8 Recorded and unrecorded surface workings are considered to be a potential geotechnical hazard as they are often backfilled with mine waste and/or generic made ground. Backfilled materials do not present a suitable founding stratum due to low and variable bearing properties, which may lead to unacceptable levels of total/differential settlement.
- 6.4.9 There is a possibility that unrecorded surface workings could be present at the subcrop of the Tenlands, Ravenhead Main Delf seam [Wigan Four Feet].
- 6.4.10 A ground investigation is recommended to evaluate the potential risk.

Mine entries

- 6.4.11 Mine shafts that have not been securely capped at bedrock level are considered to be potential geotechnical hazards. Historically, mine shafts were often backfilled with biogenic materials, such as railway sleepers, in addition to mine waste. The decomposition of biogenic materials can lead to collapse, which may present at the opening of the shaft. This typically can occur if the drainage regime is changed, i.e. if the shaft experiences an increase in water, promoting rotting of any biogenic materials and/ or softening of other backfill materials, or if the shaft is loaded above bedrock level, i.e. by building foundations, or by lateral support removal caused during earthworks, causing the weathered soils/timber/masonry forming the shaft collar to collapse.
- 6.4.12 No direct evidence of shafts or mine entries is recorded on site.
- 6.4.13 However, it is possible that unrecorded mine entries/bell pits could be present beneath the site.
- 6.4.14 A ground investigation is recommended to evaluate the potential risk.
- 6.4.15 It may be possible to combine this with a geophysical investigation in order to better target the ground investigation in this regard, though the presence of hardscaping and development across the entire site may restrict the efficacy of such techniques.

6.5 Recommendations and Mitigation Strategy

Recommended Actions

- 6.5.1 It is recommended that a programme of rotary boreholes, trial pits and trial trenches are undertaken to evaluate the potential risks identified above.

- 6.5.2 The potential use of geophysical investigation techniques should be explored, which may enable a more refined and targeted approach to the intrusive investigation.
- 6.5.3 Ground gas monitoring is also recommended given the potential for historic mine workings. This should be carried out in accordance with the recommendations provided in CIRIA C758D, CIRIA C665, BS 8576 and BS 10175.
- 6.5.4 Prior written permission from the Coal Authority is required for intrusive activities which will disturb or enter any coal seams, coal workings or coal mine entries (shafts and adits). Further information can be obtained from the Coal Authority web site.

Potential Mitigation Strategy

- 6.5.5 If shallow coal seams are found to be open or are shown to be filled with very loose material, the workings may require infilling with grout to prevent major ground movements developing due to their future collapse or migration to the surface, in order to make the site safe and stable for redevelopment.
- 6.5.6 If significant made ground is encountered, i.e. possibly as a result of backfilled unrecorded surface workings, it may be possible to design foundations to span these materials. Otherwise, this could potentially either be subjected to ground improvement or the proposed development layout could be revised to avoid placing buildings and other structures that may be sensitive to excessive settlement in such areas.
- 6.5.7 Any mine shafts/bell pit entries encountered are likely to require treatment by capping with reinforced concrete at bedrock level, possibly supplemented by grouting of the shaft beforehand.
- 6.5.8 Gas protection measures could potentially be incorporated into the ground floor design of proposed new buildings if deemed necessary by a gas risk assessment.
- 6.5.9 Proposed mitigation measures would necessarily be refined after the ground investigation has been completed and the risks to the proposed development subsequently evaluated.

7

REFERENCES

- BRE Report BR211; Radon: Guidance on protective measures for new buildings, 2015
- Code of Practice for Ground Investigations BS5930: 2015
- CL:AIRE; Petroleum Hydrocarbons in Groundwater, 2017
- Environment Agency (2004) *Model procedures for the management of land contamination*. CLR11. Bristol: Environment Agency
- Groundsure Enviro+Geoinsight Report Ref JOMAS-8424362 January 2022
- Investigation of Potentially Contaminated Sites – Code of Practice BS10175: 2011
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<http://mapapps2.bgs.ac.uk/coalauthority/home.html>
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- Coal Authority “Coal Seams with A History Of Spontaneous Combustion”
- Coal Authority – CON29M Coal Mining Report for Land At: 345755, 389978, Wilson Road, Liverpool – ref: 61002909197001 - October 2020
- Coal Authority – Consultants Coal Mining Report for 35, Wilson Road, Huyton, L36 6AE, Merseyside – ref: 51002863807001 – January 2022

APPENDICES

APPENDIX 1 – FIGURES

APPENDIX 2 – GROUNDSURE REPORT

APPENDIX 3 – OS HISTORICAL MAPS

APPENDIX 4 – QUALITATIVE RISK ASSESSMENT METHODOLOGY

APPENDIX 5 – BGS BOREHOLE RECORDS

APPENDIX 6 – COAL AUTHORITY DATA

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APPENDICES

APPENDIX 1 – FIGURES

PROJECT NAME	Wilson Road	CLIENT	Linden Hill - Capital Assets - ALX Limited
TITLE	Site Location Plan	PROJECT NO.	P4131J2476
DATE	February 2022	FIGURE NO.	1



PROJECT NAME	Wilson Road	CLIENT	Linden Hill - Capital Assets - ALX Limited
TITLE	Constraints Plan	PROJECT NO.	P4131J2476
DATE	January 2022	FIGURE NO.	2



FIGURE 3 - PROPOSED DEVELOPMENT PLAN



Figured dimensions only are to be used. All dimensions to be checked onsite. Differences between drawings and between drawings and specification or bills of quantities to be reported to the PRC Group.

The copyright of the drawings and designs contained therein remains vested in the PRC Group.

Revisions: Drawn / Chd: Date:
P1 Preliminary Issue MAS 29.07.2020

ACCOMMODATION SCHEDULE		
	GIA (m2)	GIA (Sq.Ft)
UNIT 1 (10% Offices)	1,860	20,000
UNIT 2 (10% Offices)	1,860	20,000
UNIT 3 (10% Offices)	1,860	20,000
UNIT 4 (10% Offices)	1,860	20,000
UNIT 5 (10% Offices)	1,860	20,000
UNIT 6 (10% Offices)	1,860	20,000
UNIT 7 (10% Offices)	1,860	20,000
UNIT 8 (10% Offices)	1,860	20,000
UNIT 9 (10% Offices)	1,860	20,000
UNIT 10 (10% Offices)	1,860	20,000
UNIT 11 (10% Offices)	1,860	20,000
UNIT 12 (10% Offices)	2,790	30,000
TOTAL (B2/B8)	23,250	250,000
B1(a)	2,325	25,000

Site area = 4.32Ha
Development to site area = 59% coverage

Preliminary Issue

Client:
Linden Hill Capital Management
Project:
35 Wilson Road, Liverpool
24 Church St. West,
Woking, Surrey,
GU24 6HT
01483 494 350
info@prc-group.com
www.prc-group.com



Drawing Title:
Sketch Option 01

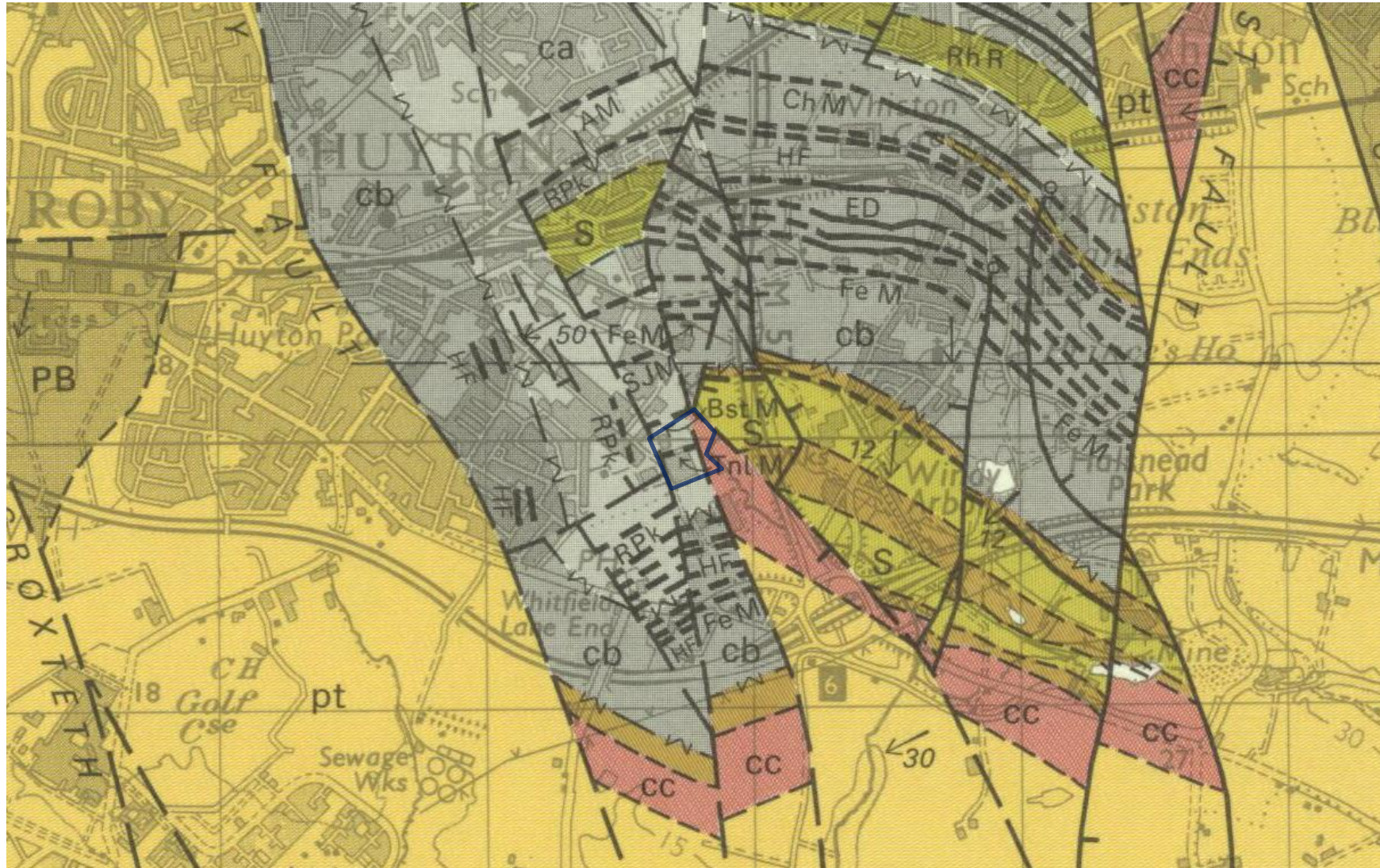
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Date: 07/28/20

Job No: 11287
Stage_Drawing No: SKE-001
Rev: P1

Issue Status:
Construction ☐ Preliminary ☒
Information ☐ Approval ☐
Tender ☐
Offices
Woking
London
Milton Keynes
Warsaw

PRC Architecture & Planning
29/07/2020 23:27:14

PROJECT NAME	Wilson Road	CLIENT	Linden Hill - Capital Assets - ALX Ltd
TITLE	Extract of BGS Sheet 97 (Runcorn) showing approximate site boundary in blue	PROJECT NO.	P4131J2476
DATE	February 2022	FIGURE NO.	4



APPENDIX 2 – GROUNDSURE REPORT

35, WILSON ROAD, HUYTON, L36 6AE

Order Details

Date: 04/01/2022
Your ref: P4131J2476-1
Our Ref: JOMAS-8424362
Client: Jomas Associates Ltd

Site Details

Location: 345752 389969
Area: 4.06 ha
Authority: [Knowsley Metropolitan Borough Council](#)



Summary of findings

p. 2 **Aerial image**

p. 8

OS MasterMap site plan

p.13 groundsure.com/insightuserguide

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	5	10	32	102	-
20	1.2	Historical tanks	7	7	12	28	-
22	1.3	Historical energy features	3	6	12	20	-
24	1.4	Historical petrol stations	0	0	0	0	-
24	1.5	Historical garages	3	1	0	2	-
25	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
26	2.1	Historical industrial land uses	5	13	37	117	-
33	2.2	Historical tanks	7	14	22	68	-
37	2.3	Historical energy features	5	14	30	47	-
41	2.4	Historical petrol stations	0	0	0	0	-
41	2.5	Historical garages	5	1	0	3	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
42	3.1	Active or recent landfill	0	0	0	0	-
42	3.2	Historical landfill (BGS records)	0	0	0	0	-
43	3.3	Historical landfill (LA/mapping records)	0	0	0	2	-
43	3.4	Historical landfill (EA/NRW records)	0	0	1	3	-
44	3.5	Historical waste sites	0	6	4	1	-
47	3.6	Licensed waste sites	0	6	11	4	-
54	3.7	Waste exemptions	0	0	27	8	-
Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
58	4.1	Recent industrial land uses	4	2	45	-	-
62	4.2	Current or recent petrol stations	0	0	0	1	-
62	4.3	Electricity cables	0	0	0	0	-
62	4.4	Gas pipelines	0	0	0	0	-
62	4.5	Sites determined as Contaminated Land	0	0	0	0	-



62	4.6	<u>Control of Major Accident Hazards (COMAH)</u>	0	0	1	0	-
63	4.7	Regulated explosive sites	0	0	0	0	-
63	4.8	<u>Hazardous substance storage/usage</u>	0	0	1	1	-
64	4.9	<u>Historical licensed industrial activities (IPC)</u>	0	0	0	5	-
64	4.10	<u>Licensed industrial activities (Part A(1))</u>	0	2	0	10	-
67	4.11	<u>Licensed pollutant release (Part A(2)/B)</u>	0	0	5	5	-
68	4.12	Radioactive Substance Authorisations	0	0	0	0	-
68	4.13	<u>Licensed Discharges to controlled waters</u>	0	9	1	5	-
71	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
71	4.15	Pollutant release to public sewer	0	0	0	0	-
71	4.16	<u>List 1 Dangerous Substances</u>	0	0	2	1	-
72	4.17	List 2 Dangerous Substances	0	0	0	0	-
72	4.18	<u>Pollution Incidents (EA/NRW)</u>	0	1	9	2	-
73	4.19	Pollution inventory substances	0	0	0	0	-
74	4.20	Pollution inventory waste transfers	0	0	0	0	-
74	4.21	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
75	5.1	<u>Superficial aquifer</u>	Identified (within 500m)				
77	5.2	<u>Bedrock aquifer</u>	Identified (within 500m)				
79	5.3	<u>Groundwater vulnerability</u>	Identified (within 50m)				
80	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
80	5.5	Groundwater vulnerability- local information	None (within 0m)				
81	5.6	<u>Groundwater abstractions</u>	0	0	0	0	3
82	5.7	<u>Surface water abstractions</u>	0	0	0	0	4
84	5.8	<u>Potable abstractions</u>	0	0	0	0	3
85	5.9	<u>Source Protection Zones</u>	0	0	1	0	-
85	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
86	6.1	<u>Water Network (OS MasterMap)</u>	0	5	4	-	-



87	<u>6.2</u>	<u>Surface water features</u>	0	1	1	-	-
88	<u>6.3</u>	<u>WFD Surface water body catchments</u>	1	-	-	-	-
88	<u>6.4</u>	<u>WFD Surface water bodies</u>	1	0	0	-	-
88	<u>6.5</u>	<u>WFD Groundwater bodies</u>	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
90	<u>7.1</u>	<u>Risk of flooding from rivers and the sea</u>	High (within 50m)				
91	7.2	Historical Flood Events	0	0	0	-	-
91	7.3	Flood Defences	0	0	0	-	-
91	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
91	7.5	Flood Storage Areas	0	0	0	-	-
92	<u>7.6</u>	<u>Flood Zone 2</u>	Identified (within 50m)				
93	<u>7.7</u>	<u>Flood Zone 3</u>	Identified (within 50m)				
Page	Section	Surface water flooding					
94	<u>8.1</u>	<u>Surface water flooding</u>	1 in 30 year, Greater than 1.0m (within 50m)				
Page	Section	Groundwater flooding					
96	<u>9.1</u>	<u>Groundwater flooding</u>	Low (within 50m)				
Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
97	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
98	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
98	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
98	10.4	Special Protection Areas (SPA)	0	0	0	0	0
98	10.5	National Nature Reserves (NNR)	0	0	0	0	0
99	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
99	<u>10.7</u>	<u>Designated Ancient Woodland</u>	0	0	0	0	2
99	10.8	Biosphere Reserves	0	0	0	0	0
99	10.9	Forest Parks	0	0	0	0	0
100	10.10	Marine Conservation Zones	0	0	0	0	0
100	<u>10.11</u>	<u>Green Belt</u>	0	0	0	2	2
100	10.12	Proposed Ramsar sites	0	0	0	0	0



100	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
101	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
101	10.15	Nitrate Sensitive Areas	0	0	0	0	0
101	10.16	<u>Nitrate Vulnerable Zones</u>	1	0	0	0	3
102	10.17	<u>SSSI Impact Risk Zones</u>	1	-	-	-	-
103	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
104	11.1	World Heritage Sites	0	0	0	-	-
104	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
104	11.3	National Parks	0	0	0	-	-
104	11.4	Listed Buildings	0	0	0	-	-
105	11.5	Conservation Areas	0	0	0	-	-
105	11.6	Scheduled Ancient Monuments	0	0	0	-	-
105	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
106	12.1	<u>Agricultural Land Classification</u>	Grade 2 (within 250m)				
107	12.2	Open Access Land	0	0	0	-	-
107	12.3	<u>Tree Felling Licences</u>	0	0	7	-	-
108	12.4	Environmental Stewardship Schemes	0	0	0	-	-
108	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
109	13.1	<u>Priority Habitat Inventory</u>	0	0	2	-	-
110	13.2	Habitat Networks	0	0	0	-	-
110	13.3	<u>Open Mosaic Habitat</u>	0	0	1	-	-
110	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
111	14.1	<u>10k Availability</u>	Identified (within 500m)				
112	14.2	Artificial and made ground (10k)	0	0	0	0	-
113	14.3	<u>Superficial geology (10k)</u>	1	0	0	1	-



114	14.4	Landslip (10k)	0	0	0	0	-
115	14.5	<u>Bedrock geology (10k)</u>	2	4	3	2	-
116	14.6	<u>Bedrock faults and other linear features (10k)</u>	3	4	9	8	-
Page	Section	Geology 1:50,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
118	15.1	<u>50k Availability</u>	Identified (within 500m)				
119	15.2	Artificial and made ground (50k)	0	0	0	0	-
119	15.3	Artificial ground permeability (50k)	0	0	-	-	-
120	15.4	<u>Superficial geology (50k)</u>	1	0	0	1	-
121	15.5	<u>Superficial permeability (50k)</u>	Identified (within 50m)				
121	15.6	Landslip (50k)	0	0	0	0	-
121	15.7	Landslip permeability (50k)	None (within 50m)				
122	15.8	<u>Bedrock geology (50k)</u>	4	2	7	7	-
124	15.9	<u>Bedrock permeability (50k)</u>	Identified (within 50m)				
124	15.10	<u>Bedrock faults and other linear features (50k)</u>	4	4	11	25	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
127	16.1	<u>BGS Boreholes</u>	10	4	27	-	-
Page	Section	Natural ground subsidence					
130	17.1	<u>Shrink swell clays</u>	Very low (within 50m)				
131	17.2	<u>Running sands</u>	Very low (within 50m)				
132	17.3	<u>Compressible deposits</u>	Negligible (within 50m)				
133	17.4	<u>Collapsible deposits</u>	Very low (within 50m)				
134	17.5	<u>Landslides</u>	Very low (within 50m)				
135	17.6	<u>Ground dissolution of soluble rocks</u>	Negligible (within 50m)				
Page	Section	Mining, ground workings and natural cavities	On site	0-50m	50-250m	250-500m	500-2000m
137	18.1	Natural cavities	0	0	0	0	-
138	18.2	<u>BritPits</u>	0	0	0	5	-
139	18.3	<u>Surface ground workings</u>	0	6	20	-	-
140	18.4	<u>Underground workings</u>	0	0	0	18	35
142	18.5	<u>Historical Mineral Planning Areas</u>	0	1	1	2	-



<u>143</u>	<u>18.6</u>	<u>Non-coal mining</u>	2	0	0	0	1
143	18.7	Mining cavities	0	0	0	0	0
144	18.8	JPB mining areas	None (within 0m)				
<u>144</u>	<u>18.9</u>	<u>Coal mining</u>	Identified (within 0m)				
144	18.10	Brine areas	None (within 0m)				
144	18.11	Gypsum areas	None (within 0m)				
144	18.12	Tin mining	None (within 0m)				
145	18.13	Clay mining	None (within 0m)				
Page	Section	Radon					
<u>146</u>	<u>19.1</u>	<u>Radon</u>	Less than 1% (within 0m)				
Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m
<u>147</u>	<u>20.1</u>	<u>BGS Estimated Background Soil Chemistry</u>	6	4	-	-	-
148	20.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
148	20.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
149	21.1	Underground railways (London)	0	0	0	-	-
149	21.2	Underground railways (Non-London)	0	0	0	-	-
149	21.3	Railway tunnels	0	0	0	-	-
149	21.4	Historical railway and tunnel features	0	0	0	-	-
149	21.5	Royal Mail tunnels	0	0	0	-	-
150	21.6	Historical railways	0	0	0	-	-
150	21.7	Railways	0	0	0	-	-
150	21.8	Crossrail 1	0	0	0	0	-
150	21.9	Crossrail 2	0	0	0	0	-
150	21.10	HS2	0	0	0	0	-



Recent aerial photograph

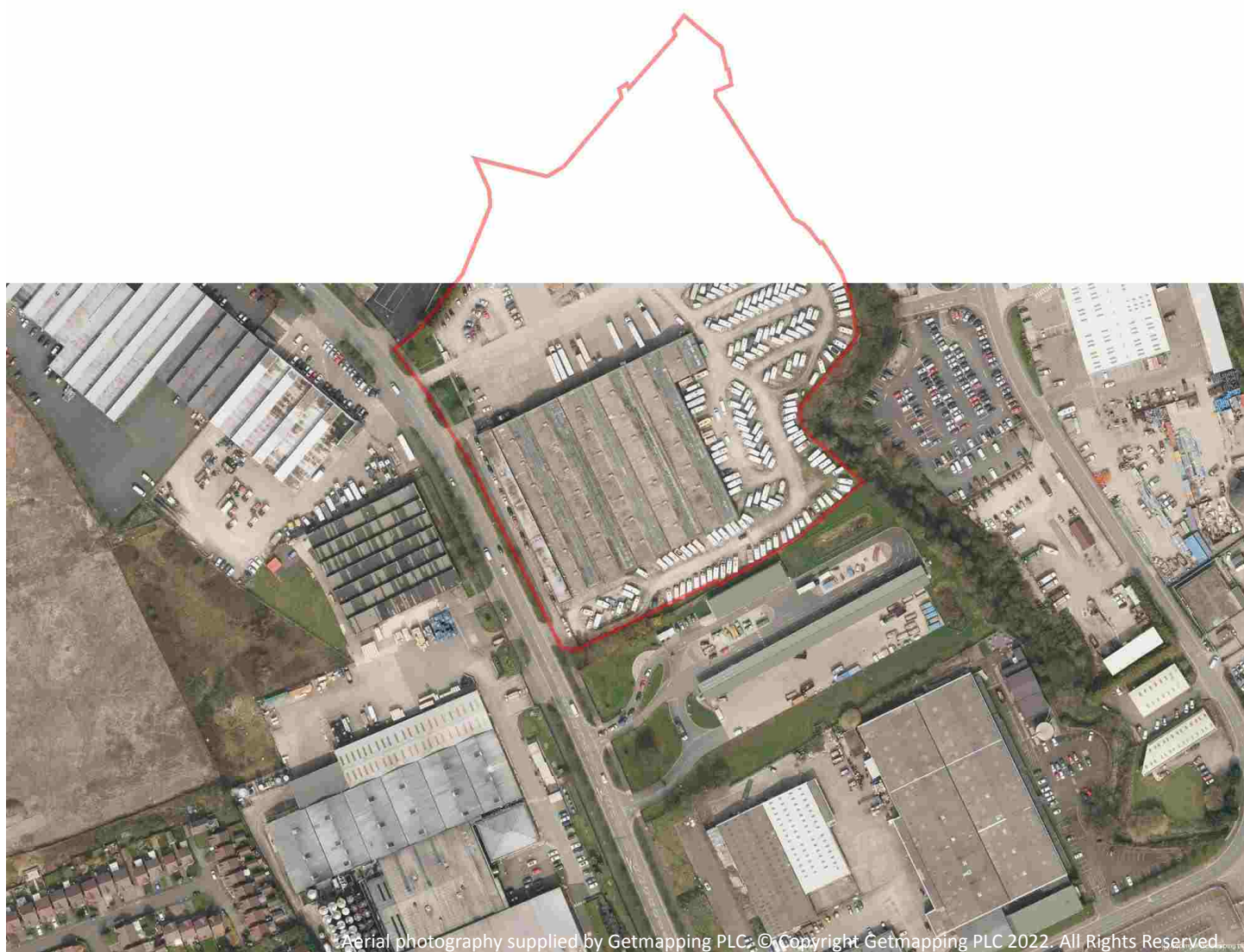


Capture Date: 22/04/2019

Site Area: 4.06ha



Recent site history - 2016 aerial photograph



Capture Date: 21/04/2016

Site Area: 4.06ha



Recent site history - 2009 aerial photograph



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Capture Date: 24/06/2009

Site Area: 4.06ha



Recent site history - 2005 aerial photograph



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Capture Date: 02/09/2005

Site Area: 4.06ha



Recent site history - 2000 aerial photograph



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Capture Date: 21/07/2000

Site Area: 4.06ha



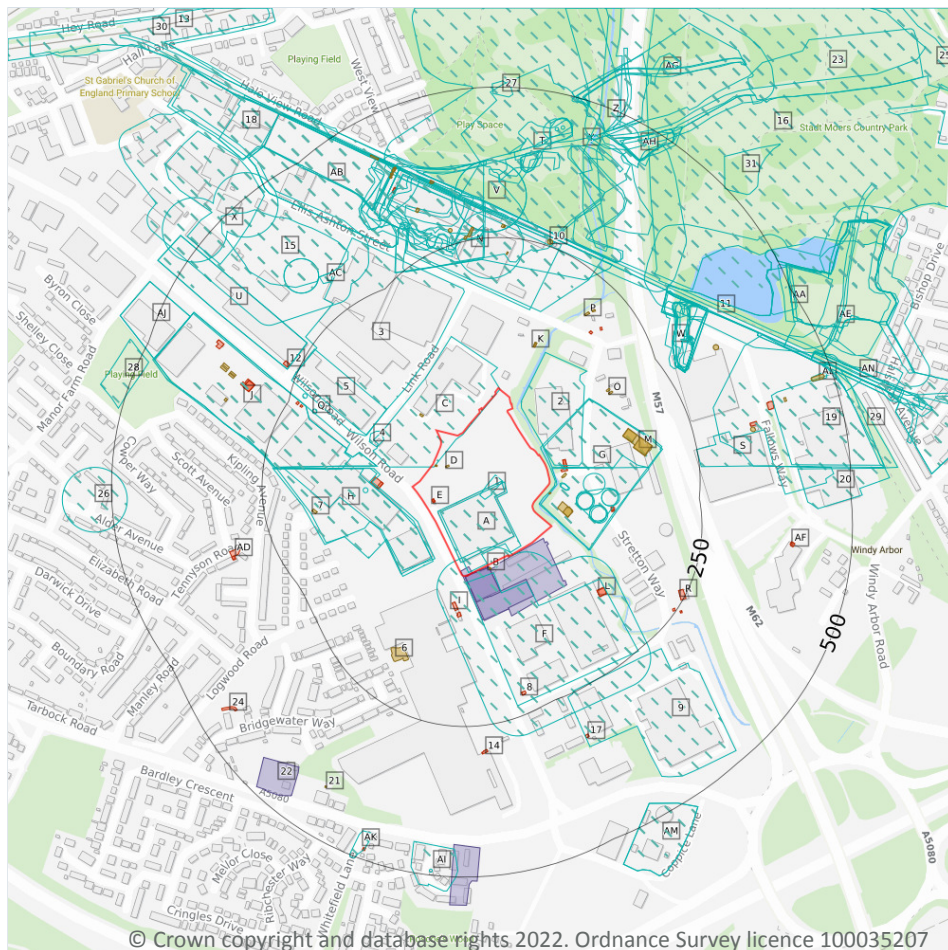
OS MasterMap site plan



Site Area: 4.06ha



1 Past land use



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

1.1 Historical industrial land uses

Records within 500m

149

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	Corn Mill	1851	823124



ID	Location	Land use	Dates present	Group ID
A	On site	Unspecified Warehouse	1989	934162
A	On site	Unspecified Warehouse	1975	987780
C	On site	Unspecified Warehouse	1975	807172
F	On site	Unspecified Works	1975	945342
G	5m NE	Sewage Works	1925 - 1947	966970
G	8m E	Sewage Works	1950	870370
G	9m E	Sewage Works	1955	959491
F	10m S	Unspecified Works	1989	934148
2	13m NE	Unspecified Depot	1990	818270
G	17m E	Unspecified Tanks	1938	973630
G	19m E	Unspecified Tanks	1950	887271
H	26m SW	Unspecified Commercial/Industrial	1989	918977
H	31m SW	Unspecified Commercial/Industrial	1975	950037
H	32m SW	Unspecified Commercial/Industrial	1967	942003
G	51m SE	Unspecified Tanks	1938	815135
G	51m SE	Unspecified Tank	1947	849069
G	51m SE	Unspecified Tank	1925	899371
G	54m SE	Unspecified Tank	1950	948197
G	56m E	Unspecified Tank	1947 - 1950	857500
G	66m E	Unspecified Tank	1947	853971
G	66m E	Unspecified Tank	1925	909267
G	68m E	Unspecified Tank	1950	879671
J	69m NW	Unspecified Factory	1975	889546
J	69m NW	Unspecified Factory	1990	928277
H	74m W	Coal Pit	1851	808456
3	85m NW	Unspecified Works	1975	875478
4	89m W	Unspecified Heap	1966	803345
G	90m E	Unspecified Tank	1947 - 1950	915977



ID	Location	Land use	Dates present	Group ID
G	90m E	Unspecified Tank	1925	988346
5	90m NW	Unspecified Factory	1966	821341
J	113m NW	Unspecified Factory	1966	891030
N	140m N	Unspecified Depot	1975	961971
N	145m NE	Unspecified Depot	1990	910233
N	182m N	Unspecified Quarry	1906	934563
Q	201m W	Coal Pits	1851	802131
N	204m N	Timber Yard and Saw Mill	1955	826725
N	211m N	Unspecified Mill	1966	810244
N	216m N	Iron Works	1906	889004
N	218m N	Iron Works	1891	846158
Q	222m W	Coal Pits	1851	802130
N	231m N	Unspecified Ground Workings	1906	904043
N	235m N	Unspecified Ground Workings	1891	960123
N	240m N	Unspecified Ground Workings	1925 - 1938	954430
N	242m N	Unspecified Ground Workings	1955	990672
9	248m SE	Unspecified Works	1989	938212
S	249m E	Unspecified Warehouse	1990	807173
T	251m NE	Unspecified Disused Workings	1966	842253
N	251m N	Railway Sidings	1906	916677
U	259m NW	Unspecified Commercial/Industrial	1975	796697
U	259m NW	Unspecified Works	1966	907728
V	260m N	Unspecified Quarry	1947	864888
V	260m N	Unspecified Quarry	1925	921136
W	263m NE	Unspecified Ground Workings	1891	882807
X	264m NW	Unspecified Works	1966	978443
11	264m NE	Railway Sidings	1906	936496
Y	265m NE	Railway Sidings	1851	959646



ID	Location	Land use	Dates present	Group ID
W	270m NE	Old Colliery	1938	857053
W	271m NE	Unspecified Ground Workings	1947	920125
W	271m NE	Old Colliery	1891 - 1925	930422
W	271m NE	Unspecified Ground Workings	1925	954182
W	271m NE	Old Colliery	1947	954771
W	271m NE	Unspecified Ground Workings	1906	984867
Y	271m NE	Refuse Heap	1947	828769
T	272m N	Colliery	1851	897691
Y	273m NE	Refuse Dump	1955	806807
W	274m NE	Unspecified Ground Workings	1955	884489
W	274m NE	Old Colliery	1955	968166
W	275m NE	Unspecified Heaps	1938	861017
W	277m NE	Unspecified Disused Mine	1966	810942
W	277m NE	Unspecified Ground Workings	1966	893547
13	280m N	Railway Sidings	1891	924318
Z	285m NE	Cuttings	1990	795646
S	291m E	Unspecified Works	1975	976939
AA	291m NE	Disused Colliery	1955	946509
AB	292m NW	Unspecified Works	1966	873615
AB	292m NW	Unspecified Works	1990	950861
AB	292m NW	Unspecified Factory	1966 - 1975	969058
N	298m N	Mineral Railway Sidings	1938	834012
AC	302m NW	Unspecified Pit	1966	960973
W	310m E	Unspecified Old Shaft	1925 - 1947	933601
W	310m NE	Unspecified Disused Shaft	1966	812950
W	311m NE	Unspecified Heap	1966	803344
AC	312m NW	Unspecified Quarry	1990	854655
AC	312m NW	Unspecified Quarry	1975	908063



ID	Location	Land use	Dates present	Group ID
W	313m E	Unspecified Old Shaft	1955	872971
AE	315m NE	Disused Colliery	1925	879683
AE	315m NE	Disused Colliery	1947	956965
15	315m NW	Unspecified Pit	1966	845345
16	317m NE	Refuse Heap	1990	962218
Y	320m NE	Unspecified Ground Workings	1966	799822
N	322m N	Railway Sidings	1955	896484
N	329m NW	Pits	1851	794106
N	333m NW	Unspecified Ground Workings	1906	969063
T	341m N	Unspecified Ground Workings	1966	799823
T	343m N	Refuse Heap	1851	828767
AB	360m NW	Electric Lamp Works	1906 - 1938	851119
T	361m N	Unspecified Heap	1906	957262
T	361m N	Unspecified Heap	1925	973338
AB	361m NW	Electric Lamp Works	1925	846896
18	363m NW	Electric Lamp Works	1955	872339
T	364m N	Unspecified Heap	1938	959829
T	390m N	Refuse Heap	1851	828768
19	392m E	Unspecified Works	1990	964460
20	413m E	Unspecified Works	1989	934284
T	417m N	Unspecified Heap	1891 - 1906	888571
T	425m N	Unspecified Heap	1938	975807
23	433m NE	Railway Sidings	1891	853428
X	437m NW	Unspecified Tank	1966	904633
AG	437m NE	Unspecified Works	1966	950790
T	438m N	Unspecified Old Shaft	1891	806156
Z	439m N	Railway Sidings	1891	906767
AE	442m NE	Mineral Railway Sidings	1891	834013



ID	Location	Land use	Dates present	Group ID
AE	442m NE	Colliery	1851 - 1891	873412
AG	442m NE	Disused Colliery	1906	822317
T	443m N	Coal Pit	1851	808455
AH	444m NE	Unspecified Heap	1925	916108
AH	444m NE	Refuse Heap	1906	922796
AH	444m NE	Unspecified Heap	1947	952651
AH	445m NE	Unspecified Heap	1955	896043
AH	446m NE	Refuse Heap	1966	857891
AI	449m S	Tile Works	1851	811560
AJ	450m NW	Unspecified Warehouse	1975	855684
AJ	450m NW	Unspecified Warehouse	1990	963868
25	451m NE	Railway Sidings	1906	972574
AA	452m NE	Unspecified Heap	1955	803338
X	452m NW	Unspecified Warehouse	1990	807171
AK	453m S	Smithy	1891	843198
AG	460m NE	Colliery	1851	937956
AL	465m E	Unspecified Tanks	1975	815134
AM	472m SE	Unspecified Depot	1989	925297
AM	472m SE	Unspecified Depot	1975	925987
26	474m W	Unspecified Old Shaft	1950	985464
AN	474m E	Railway Sidings	1947	879950
AN	474m E	Railway Sidings	1925	982477
AN	475m E	Railway Sidings	1938	880766
AE	477m NE	Disused Colliery	1906	921785
AE	480m NE	Disused Colliery	1938	947601
AE	480m NE	Disused Colliery	1938	956293
AE	482m NE	Unspecified Disused Mine	1966	810940
27	484m N	Unspecified Heap	1966	803336



ID	Location	Land use	Dates present	Group ID
28	484m NW	Colliery	1891	798239
AG	488m N	Unspecified Ground Workings	1906	943178
AI	490m S	Unspecified Tank	1851	824616
AG	492m N	Unspecified Ground Workings	1925	980473
29	492m E	Railway Sidings	1955	888193
AG	493m N	Unspecified Ground Workings	1947 - 1955	958639
30	497m NW	Railway Sidings	1955	905446
31	498m NE	Colliery	1851	798240

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m

54

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

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

ID	Location	Land use	Dates present	Group ID
D	On site	Unspecified Tank	1987	112544
D	On site	Unspecified Tank	1977	126818
D	On site	Unspecified Tank	1994	135551
D	On site	Unspecified Tank	1984	140560
D	On site	Unspecified Tank	1969	144293
D	On site	Unspecified Tank	1968	147506
D	On site	Unspecified Tank	1987	147889
B	5m SE	Unspecified Tank	1993 - 1996	133589
B	7m SE	Unspecified Tank	1992	112543
G	9m SE	Unspecified Tank	1927 - 1937	138396



ID	Location	Land use	Dates present	Group ID
G	21m E	Settling Tank	1927 - 1937	133556
G	29m NE	Tanks	1937	105835
G	30m NE	Settling Tanks	1927	108655
C	32m NW	Unspecified Tank	1968 - 1987	140637
K	89m NE	Unspecified Tank	1984 - 1987	137805
K	90m NE	Tanks	1994	105836
M	137m E	Settling Tanks	1927	122956
M	137m E	Settling Tanks	1937	147519
M	148m E	Settling Tanks	1937	126633
O	153m NE	Tanks	1994	105839
6	154m SW	Tanks	1996 - 1997	130050
O	154m NE	Tanks	1994	105838
7	164m W	Unspecified Tank	1989 - 1993	143604
P	185m NE	Unspecified Tank	1977 - 1994	126529
P	198m NE	Unspecified Tank	1977 - 1994	126456
N	222m N	Unspecified Tank	1968 - 1969	148531
N	253m N	Tanks	1968 - 1994	149066
10	253m N	Unspecified Tank	1994	112555
N	255m N	Tanks	1968 - 1994	140269
N	266m N	Unspecified Tank	1977	112556
N	267m N	Unspecified Tank	1984 - 1987	134558
N	268m N	Tanks	1994	105834
N	271m N	Unspecified Tank	1892	112554
N	321m NW	Tanks	1984 - 1994	128882
W	339m NE	Unspecified Tank	1994	112550
J	340m NW	Cooling Tank	1956	137956
S	344m E	Unspecified Tank	1987 - 1994	131812
J	345m W	Unspecified Tank	1980	112547



ID	Location	Land use	Dates present	Group ID
J	347m W	Unspecified Tank	1980	112546
N	357m N	Tanks	1984 - 1994	138798
J	359m W	Unspecified Tank	1980	112549
J	361m W	Unspecified Tank	1980	112548
N	391m NW	Tanks	1956 - 1987	128398
N	392m NW	Unspecified Tank	1956 - 1969	137571
N	395m NW	Tanks	1956 - 1987	133265
N	395m NW	Unspecified Tank	1956 - 1969	148629
N	398m NW	Tanks	1956 - 1977	149041
N	399m NW	Unspecified Tank	1956 - 1969	129744
N	399m NW	Tanks	1984 - 1987	135231
N	402m NW	Unspecified Tank	1956 - 1969	128237
S	410m E	Unspecified Tank	1973	112545
21	417m SW	Unspecified Tank	1927	112541
N	428m NW	Tanks	1956 - 1993	138247
AL	463m E	Tanks	1973	105837

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m

41

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

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

ID	Location	Land use	Dates present	Group ID
E	On site	Electricity Substation	1992	69240
E	On site	Electricity Substation	1993 - 1997	75056



ID	Location	Land use	Dates present	Group ID
E	On site	Electricity Substation	1982	77915
G	22m E	Electricity Substation	1993 - 1997	82215
G	28m E	Electricity Substation	1992 - 1994	68566
G	28m E	Electricity Substation	1987	73647
I	46m S	Gas Governor	1992 - 1997	77708
H	49m W	Electricity Substation	1982 - 1992	74285
H	50m W	Electricity Substation	1993 - 1997	74849
I	60m S	Electricity Substation	1992 - 1997	72408
G	103m E	Electricity Substation	1992	70254
G	104m E	Electricity Substation	1993 - 1997	77082
L	130m SE	Electricity Substation	1992 - 1997	78944
L	131m SE	Electricity Substation	1982	77789
P	171m NE	Electricity Substation	1977 - 1987	66813
P	188m NE	Electricity Substation	1994	61506
8	214m SE	Electricity Substation	1982 - 1993	75863
Q	226m W	Gas Governor	1994	83905
Q	232m W	Electricity Substation	1994	65487
R	236m SE	Electricity Substation	1993 - 1997	85444
R	244m SE	Electricity Substation	1989 - 1992	81066
R	256m SE	Gas Governor	1992 - 1997	74213
12	267m NW	Electricity Substation	1956 - 1994	71591
14	290m S	Electricity Substation	1982 - 1997	64193
AD	303m W	Electricity Substation	1993 - 1996	76202
J	311m W	Electricity Substation	1980	64974
J	311m W	Electricity Substation	1956	71864
J	311m W	Electricity Substation	1956	69520
AD	318m W	Electricity Substation	1989	71679
17	323m SE	Electricity Substation	1992 - 1997	75507



ID	Location	Land use	Dates present	Group ID
S	346m E	Electricity Substation	1987 - 1994	69708
N	356m N	Electricity Substation	1956	70815
N	367m NW	Electricity Substation	1968 - 1994	71388
N	368m NW	Electricity Substation	1984 - 1987	80851
J	381m W	Electricity Substation	1980 - 1994	73322
S	381m E	Electricity Substation	1987 - 1994	79877
AF	397m E	Electricity Substation	1993 - 1997	83317
AF	398m E	Electricity Substation	1992	85413
24	435m SW	Electricity Substation	1996	61628
AK	480m S	Electricity Substation	1982	66963
AK	481m S	Electricity Substation	1956	65981

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m

0

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

This data is sourced from Ordnance Survey / Groundsure.

1.5 Historical garages

Records within 500m

6

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

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



ID	Location	Land use	Dates present	Group ID
B	On site	Garage	1982	21978
B	On site	Garage	1982	22780
B	On site	Garage	1993 - 1997	26136
B	0m SE	Garage	1992	23768
22	419m SW	Garage	1956 - 1982	26161
AI	446m S	Garage	1982	20211

This data is sourced from Ordnance Survey / Groundsure.

1.6 Historical military land

Records within 500m

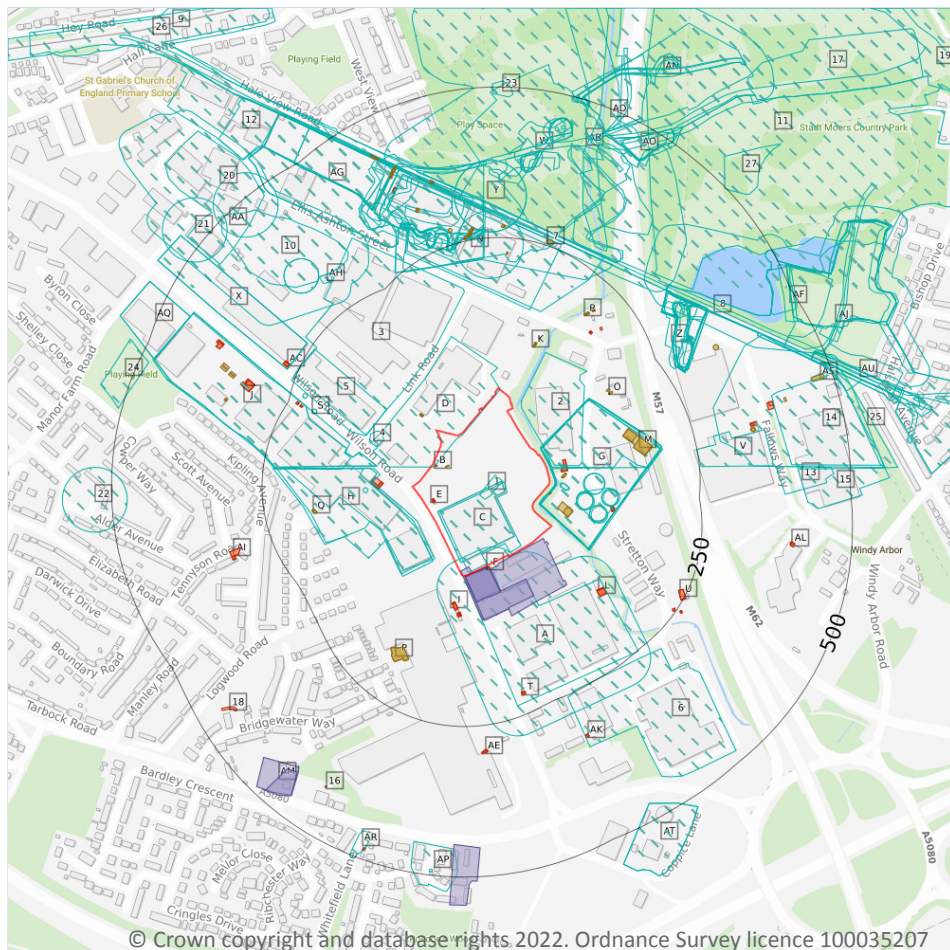
0

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

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



2 Past land use - un-grouped



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

2.1 Historical industrial land uses

Records within 500m

172

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 26**

ID	Location	Land Use	Date	Group ID
1	On site	Corn Mill	1851	823124
A	On site	Unspecified Works	1975	945342
C	On site	Unspecified Warehouse	1975	987780



ID	Location	Land Use	Date	Group ID
C	On site	Unspecified Warehouse	1989	934162
D	On site	Unspecified Warehouse	1975	807172
G	5m NE	Sewage Works	1947	966970
G	5m NE	Sewage Works	1925	966970
G	7m E	Sewage Works	1938	966970
G	7m E	Sewage Works	1938	966970
G	8m E	Sewage Works	1950	870370
G	9m E	Sewage Works	1955	959491
A	10m S	Unspecified Works	1989	934148
2	13m NE	Unspecified Depot	1990	818270
G	17m E	Unspecified Tanks	1938	973630
G	19m E	Unspecified Tanks	1950	887271
H	26m SW	Unspecified Commercial/Industrial	1989	918977
H	31m SW	Unspecified Commercial/Industrial	1975	950037
H	32m SW	Unspecified Commercial/Industrial	1967	942003
G	51m SE	Unspecified Tanks	1938	815135
G	51m SE	Unspecified Tank	1947	849069
G	51m SE	Unspecified Tank	1925	899371
G	54m SE	Unspecified Tank	1950	948197
G	56m E	Unspecified Tank	1947	857500
G	58m E	Unspecified Tank	1950	857500
G	66m E	Unspecified Tank	1947	853971
G	66m E	Unspecified Tank	1925	909267
G	68m E	Unspecified Tank	1950	879671
J	69m NW	Unspecified Factory	1975	889546
J	69m NW	Unspecified Factory	1990	928277
H	74m W	Coal Pit	1851	808456
3	85m NW	Unspecified Works	1975	875478



ID	Location	Land Use	Date	Group ID
4	89m W	Unspecified Heap	1966	803345
G	90m E	Unspecified Tank	1947	915977
G	90m E	Unspecified Tank	1925	988346
5	90m NW	Unspecified Factory	1966	821341
G	92m E	Unspecified Tank	1950	915977
J	113m NW	Unspecified Factory	1966	891030
N	140m N	Unspecified Depot	1975	961971
N	145m NE	Unspecified Depot	1990	910233
N	182m N	Unspecified Quarry	1906	934563
S	201m W	Coal Pits	1851	802131
N	204m N	Timber Yard and Saw Mill	1955	826725
N	211m N	Unspecified Mill	1966	810244
N	216m N	Iron Works	1906	889004
N	218m N	Iron Works	1891	846158
S	222m W	Coal Pits	1851	802130
N	231m N	Unspecified Ground Workings	1906	904043
N	235m N	Unspecified Ground Workings	1891	960123
N	240m N	Unspecified Ground Workings	1925	954430
N	242m N	Unspecified Ground Workings	1955	990672
N	243m N	Unspecified Ground Workings	1925	954430
N	244m N	Unspecified Ground Workings	1938	954430
N	244m N	Unspecified Ground Workings	1938	954430
6	248m SE	Unspecified Works	1989	938212
V	249m E	Unspecified Warehouse	1990	807173
W	251m NE	Unspecified Disused Workings	1966	842253
N	251m N	Railway Sidings	1906	916677
X	259m NW	Unspecified Commercial/Industrial	1975	796697
X	259m NW	Unspecified Works	1966	907728

ID	Location	Land Use	Date	Group ID
Y	260m N	Unspecified Quarry	1947	864888
Y	260m N	Unspecified Quarry	1925	921136
Z	263m NE	Unspecified Ground Workings	1891	882807
AA	264m NW	Unspecified Works	1966	978443
8	264m NE	Railway Sidings	1906	936496
AB	265m NE	Railway Sidings	1851	959646
Z	270m NE	Old Colliery	1938	857053
Z	270m NE	Old Colliery	1938	857053
Z	271m NE	Unspecified Ground Workings	1947	920125
Z	271m NE	Unspecified Ground Workings	1925	954182
Z	271m NE	Unspecified Ground Workings	1906	984867
Z	271m NE	Old Colliery	1947	954771
Z	271m NE	Old Colliery	1925	930422
Z	271m NE	Old Colliery	1906	930422
Z	271m NE	Old Colliery	1891	930422
AB	271m NE	Refuse Heap	1947	828769
W	272m N	Colliery	1851	897691
AB	273m NE	Refuse Dump	1955	806807
Z	274m NE	Unspecified Ground Workings	1955	884489
Z	274m NE	Old Colliery	1955	968166
Z	275m NE	Unspecified Heaps	1938	861017
Z	275m NE	Unspecified Heaps	1938	861017
Z	277m NE	Unspecified Disused Mine	1966	810942
Z	277m NE	Unspecified Ground Workings	1966	893547
9	280m N	Railway Sidings	1891	924318
AD	285m NE	Cuttings	1990	795646
V	291m E	Unspecified Works	1975	976939
AF	291m NE	Disused Colliery	1955	946509



ID	Location	Land Use	Date	Group ID
AG	292m NW	Unspecified Factory	1975	969058
AG	292m NW	Unspecified Works	1990	950861
AG	292m NW	Unspecified Works	1966	873615
N	298m N	Mineral Railway Sidings	1938	834012
AH	302m NW	Unspecified Pit	1966	960973
Z	310m E	Unspecified Old Shaft	1947	933601
Z	310m E	Unspecified Old Shaft	1925	933601
Z	310m NE	Unspecified Disused Shaft	1966	812950
Z	310m E	Unspecified Old Shaft	1938	933601
Z	310m E	Unspecified Old Shaft	1938	933601
Z	311m NE	Unspecified Heap	1966	803344
AH	312m NW	Unspecified Quarry	1975	908063
AH	312m NW	Unspecified Quarry	1990	854655
Z	313m E	Unspecified Old Shaft	1955	872971
AJ	315m NE	Disused Colliery	1947	956965
AJ	315m NE	Disused Colliery	1925	879683
10	315m NW	Unspecified Pit	1966	845345
11	317m NE	Refuse Heap	1990	962218
AB	320m NE	Unspecified Ground Workings	1966	799822
N	322m N	Railway Sidings	1955	896484
N	329m NW	Pits	1851	794106
N	333m NW	Unspecified Ground Workings	1906	969063
W	341m N	Unspecified Ground Workings	1966	799823
W	343m N	Refuse Heap	1851	828767
AG	360m NW	Electric Lamp Works	1925	851119
AG	360m NW	Electric Lamp Works	1906	851119
W	361m N	Unspecified Heap	1906	957262
W	361m N	Unspecified Heap	1925	973338



ID	Location	Land Use	Date	Group ID
AG	361m NW	Electric Lamp Works	1925	846896
12	363m NW	Electric Lamp Works	1955	872339
AG	363m NW	Electric Lamp Works	1938	851119
W	364m N	Unspecified Heap	1938	959829
W	364m N	Unspecified Heap	1938	959829
13	378m E	Unspecified Works	1975	976939
W	390m N	Refuse Heap	1851	828768
14	392m E	Unspecified Works	1990	964460
15	413m E	Unspecified Works	1989	934284
W	417m N	Unspecified Heap	1906	888571
W	421m N	Unspecified Heap	1891	888571
W	425m N	Unspecified Heap	1938	975807
W	425m N	Unspecified Heap	1938	975807
17	433m NE	Railway Sidings	1891	853428
AA	437m NW	Unspecified Tank	1966	904633
AN	437m NE	Unspecified Works	1966	950790
W	438m N	Unspecified Old Shaft	1891	806156
AD	439m N	Railway Sidings	1891	906767
AJ	442m NE	Colliery	1891	873412
AJ	442m NE	Mineral Railway Sidings	1891	834013
AN	442m NE	Disused Colliery	1906	822317
W	443m N	Coal Pit	1851	808455
AO	444m NE	Unspecified Heap	1947	952651
AO	444m NE	Unspecified Heap	1925	916108
AO	444m NE	Refuse Heap	1906	922796
AO	445m NE	Unspecified Heap	1955	896043
AO	446m NE	Refuse Heap	1966	857891
AP	449m S	Tile Works	1851	811560



ID	Location	Land Use	Date	Group ID
AQ	450m NW	Unspecified Warehouse	1975	855684
AQ	450m NW	Unspecified Warehouse	1990	963868
19	451m NE	Railway Sidings	1906	972574
AF	452m NE	Unspecified Heap	1955	803338
20	452m NW	Unspecified Warehouse	1990	807171
AR	453m S	Smithy	1891	843198
AN	460m NE	Colliery	1851	937956
AS	465m E	Unspecified Tanks	1975	815134
21	468m NW	Unspecified Tank	1966	904633
AT	472m SE	Unspecified Depot	1975	925987
AT	472m SE	Unspecified Depot	1989	925297
22	474m W	Unspecified Old Shaft	1950	985464
AU	474m E	Railway Sidings	1947	879950
AU	474m E	Railway Sidings	1925	982477
AU	475m E	Railway Sidings	1938	880766
AJ	477m NE	Disused Colliery	1906	921785
AJ	480m NE	Disused Colliery	1938	947601
AJ	480m NE	Disused Colliery	1938	956293
AJ	482m NE	Unspecified Disused Mine	1966	810940
23	484m N	Unspecified Heap	1966	803336
24	484m NW	Colliery	1891	798239
AN	488m N	Unspecified Ground Workings	1906	943178
AP	490m S	Unspecified Tank	1851	824616
AN	492m N	Unspecified Ground Workings	1925	980473
25	492m E	Railway Sidings	1955	888193
AN	493m N	Unspecified Ground Workings	1955	958639
26	497m NW	Railway Sidings	1955	905446
27	498m NE	Colliery	1851	798240



ID	Location	Land Use	Date	Group ID
AN	500m N	Unspecified Ground Workings	1947	958639

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	111
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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 26**

ID	Location	Land Use	Date	Group ID
B	On site	Unspecified Tank	1994	135551
B	On site	Unspecified Tank	1977	126818
B	On site	Unspecified Tank	1968	147506
B	On site	Unspecified Tank	1969	144293
B	On site	Unspecified Tank	1984	140560
B	On site	Unspecified Tank	1987	147889
B	On site	Unspecified Tank	1987	112544
F	5m SE	Unspecified Tank	1996	133589
F	5m SE	Unspecified Tank	1993	133589
F	7m SE	Unspecified Tank	1992	112543
G	9m SE	Unspecified Tank	1927	138396
G	9m SE	Unspecified Tank	1937	138396
G	21m E	Settling Tank	1927	133556
G	21m E	Settling Tank	1937	133556
G	29m NE	Tanks	1937	105835
G	30m NE	Settling Tanks	1927	108655
D	32m NW	Unspecified Tank	1969	140637
D	33m NW	Unspecified Tank	1977	140637
D	33m NW	Unspecified Tank	1968	140637



ID	Location	Land Use	Date	Group ID
D	33m NW	Unspecified Tank	1984	140637
D	33m NW	Unspecified Tank	1987	140637
K	89m NE	Unspecified Tank	1984	137805
K	89m NE	Unspecified Tank	1987	137805
K	90m NE	Tanks	1994	105836
M	137m E	Settling Tanks	1927	122956
M	137m E	Settling Tanks	1937	147519
M	148m E	Settling Tanks	1937	126633
O	153m NE	Tanks	1994	105839
P	154m SW	Tanks	1996	130050
P	154m SW	Tanks	1997	130050
O	154m NE	Tanks	1994	105838
Q	164m W	Unspecified Tank	1989	143604
Q	164m W	Unspecified Tank	1993	143604
R	185m NE	Unspecified Tank	1984	126529
R	185m NE	Unspecified Tank	1987	126529
R	186m NE	Unspecified Tank	1977	126529
R	186m NE	Unspecified Tank	1994	126529
R	198m NE	Unspecified Tank	1984	126456
R	198m NE	Unspecified Tank	1987	126456
R	199m NE	Unspecified Tank	1977	126456
R	199m NE	Unspecified Tank	1994	126456
N	222m N	Unspecified Tank	1968	148531
N	222m N	Unspecified Tank	1969	148531
N	253m N	Tanks	1977	149066
N	253m N	Tanks	1968	149066
N	253m N	Tanks	1984	149066
N	253m N	Tanks	1987	149066



ID	Location	Land Use	Date	Group ID
7	253m N	Unspecified Tank	1994	112555
N	254m N	Tanks	1994	149066
N	255m N	Tanks	1977	140269
N	255m N	Tanks	1968	140269
N	256m N	Tanks	1969	140269
N	256m N	Tanks	1984	140269
N	256m N	Tanks	1987	140269
N	256m N	Tanks	1994	140269
N	266m N	Unspecified Tank	1977	112556
N	267m N	Unspecified Tank	1984	134558
N	267m N	Unspecified Tank	1987	134558
N	268m N	Tanks	1994	105834
N	271m N	Unspecified Tank	1892	112554
N	321m NW	Tanks	1984	128882
N	321m NW	Tanks	1987	128882
N	321m NW	Tanks	1994	128882
Z	339m NE	Unspecified Tank	1994	112550
J	340m NW	Cooling Tank	1956	137956
J	340m NW	Cooling Tank	1956	137956
V	344m E	Unspecified Tank	1994	131812
J	345m W	Unspecified Tank	1980	112547
V	345m E	Unspecified Tank	1987	131812
J	347m W	Unspecified Tank	1980	112546
N	357m N	Tanks	1994	138798
N	357m N	Tanks	1984	138798
N	357m N	Tanks	1987	138798
J	359m W	Unspecified Tank	1980	112549
J	361m W	Unspecified Tank	1980	112548



ID	Location	Land Use	Date	Group ID
N	391m NW	Tanks	1956	128398
N	391m NW	Tanks	1977	128398
N	391m NW	Tanks	1968	128398
N	392m NW	Tanks	1984	128398
N	392m NW	Tanks	1987	128398
N	392m NW	Unspecified Tank	1959	137571
N	392m NW	Unspecified Tank	1969	137571
N	392m NW	Unspecified Tank	1956	137571
N	395m NW	Tanks	1956	133265
N	395m NW	Tanks	1977	133265
N	395m NW	Tanks	1968	133265
N	395m NW	Tanks	1984	133265
N	395m NW	Tanks	1987	133265
N	395m NW	Unspecified Tank	1959	148629
N	395m NW	Unspecified Tank	1969	148629
N	395m NW	Unspecified Tank	1956	148629
N	398m NW	Tanks	1956	149041
N	398m NW	Tanks	1977	149041
N	398m NW	Tanks	1968	149041
N	399m NW	Unspecified Tank	1959	129744
N	399m NW	Unspecified Tank	1969	129744
N	399m NW	Unspecified Tank	1956	129744
N	399m NW	Tanks	1984	135231
N	399m NW	Tanks	1987	135231
N	402m NW	Unspecified Tank	1959	128237
N	402m NW	Unspecified Tank	1969	128237
N	402m NW	Unspecified Tank	1956	128237
V	410m E	Unspecified Tank	1973	112545

ID	Location	Land Use	Date	Group ID
16	417m SW	Unspecified Tank	1927	112541
N	428m NW	Tanks	1993	138247
N	429m NW	Tanks	1969	138247
N	429m NW	Tanks	1956	138247
N	429m NW	Tanks	1977	138247
N	429m NW	Tanks	1956	138247
N	429m NW	Tanks	1988	138247
AS	463m E	Tanks	1973	105837

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m

96

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 26**

ID	Location	Land Use	Date	Group ID
E	On site	Electricity Substation	1996	75056
E	On site	Electricity Substation	1997	75056
E	On site	Electricity Substation	1982	77915
E	On site	Electricity Substation	1992	69240
E	On site	Electricity Substation	1993	75056
G	22m E	Electricity Substation	1996	82215
G	22m E	Electricity Substation	1997	82215
G	22m E	Electricity Substation	1993	82215
G	28m E	Electricity Substation	1994	68566
G	28m E	Electricity Substation	1987	73647
G	28m E	Electricity Substation	1992	68566
I	46m S	Gas Governor	1996	77708



ID	Location	Land Use	Date	Group ID
I	46m S	Gas Governor	1997	77708
I	46m S	Gas Governor	1993	77708
I	47m S	Gas Governor	1992	77708
H	49m W	Electricity Substation	1992	74285
H	50m W	Electricity Substation	1996	74849
H	50m W	Electricity Substation	1997	74849
H	50m W	Electricity Substation	1993	74849
H	57m W	Electricity Substation	1982	74285
I	60m S	Electricity Substation	1996	72408
I	60m S	Electricity Substation	1997	72408
I	62m S	Electricity Substation	1992	72408
I	64m S	Electricity Substation	1993	72408
G	103m E	Electricity Substation	1992	70254
G	104m E	Electricity Substation	1996	77082
G	104m E	Electricity Substation	1997	77082
G	104m E	Electricity Substation	1993	77082
L	130m SE	Electricity Substation	1996	78944
L	130m SE	Electricity Substation	1997	78944
L	130m SE	Electricity Substation	1993	78944
L	131m SE	Electricity Substation	1982	77789
L	131m SE	Electricity Substation	1992	78944
R	171m NE	Electricity Substation	1984	66813
R	171m NE	Electricity Substation	1987	66813
R	172m NE	Electricity Substation	1977	66813
R	188m NE	Electricity Substation	1994	61506
T	214m SE	Electricity Substation	1982	75863
T	214m SE	Electricity Substation	1993	75863
T	215m SE	Electricity Substation	1982	75863



ID	Location	Land Use	Date	Group ID
T	215m SE	Electricity Substation	1992	75863
S	226m W	Gas Governor	1994	83905
S	226m W	Gas Governor	1994	83905
S	232m W	Electricity Substation	1994	65487
S	232m W	Electricity Substation	1994	65487
U	236m SE	Electricity Substation	1997	85444
U	236m SE	Electricity Substation	1993	85444
U	244m SE	Electricity Substation	1989	81066
U	244m SE	Electricity Substation	1992	81066
U	256m SE	Gas Governor	1997	74213
U	256m SE	Gas Governor	1993	74213
U	257m SE	Gas Governor	1992	74213
AC	267m NW	Electricity Substation	1956	71591
AC	267m NW	Electricity Substation	1956	71591
AC	267m NW	Electricity Substation	1980	71591
AC	267m NW	Electricity Substation	1980	71591
AC	267m NW	Electricity Substation	1994	71591
AC	267m NW	Electricity Substation	1994	71591
AE	290m S	Electricity Substation	1996	64193
AE	290m S	Electricity Substation	1997	64193
AE	290m S	Electricity Substation	1993	64193
AE	291m S	Electricity Substation	1992	64193
AE	291m S	Electricity Substation	1982	64193
AI	303m W	Electricity Substation	1996	76202
AI	303m W	Electricity Substation	1993	76202
J	311m W	Electricity Substation	1980	64974
J	311m W	Electricity Substation	1980	64974
J	311m W	Electricity Substation	1956	71864



ID	Location	Land Use	Date	Group ID
J	311m W	Electricity Substation	1956	69520
AI	318m W	Electricity Substation	1989	71679
AK	323m SE	Electricity Substation	1996	75507
AK	323m SE	Electricity Substation	1997	75507
AK	323m SE	Electricity Substation	1993	75507
AK	324m SE	Electricity Substation	1992	75507
V	346m E	Electricity Substation	1994	69708
V	346m E	Electricity Substation	1987	69708
N	356m N	Electricity Substation	1956	70815
N	357m N	Electricity Substation	1956	70815
N	367m NW	Electricity Substation	1977	71388
N	367m NW	Electricity Substation	1968	71388
N	367m NW	Electricity Substation	1969	71388
N	368m NW	Electricity Substation	1994	71388
N	368m NW	Electricity Substation	1984	80851
N	368m NW	Electricity Substation	1987	80851
J	381m W	Electricity Substation	1980	73322
J	381m W	Electricity Substation	1980	73322
V	381m E	Electricity Substation	1987	79877
J	382m W	Electricity Substation	1994	73322
J	382m W	Electricity Substation	1994	73322
V	384m E	Electricity Substation	1994	79877
AL	397m E	Electricity Substation	1997	83317
AL	397m E	Electricity Substation	1993	83317
AL	398m E	Electricity Substation	1992	85413
18	435m SW	Electricity Substation	1996	61628
AR	480m S	Electricity Substation	1982	66963
AR	481m S	Electricity Substation	1956	65981

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

9

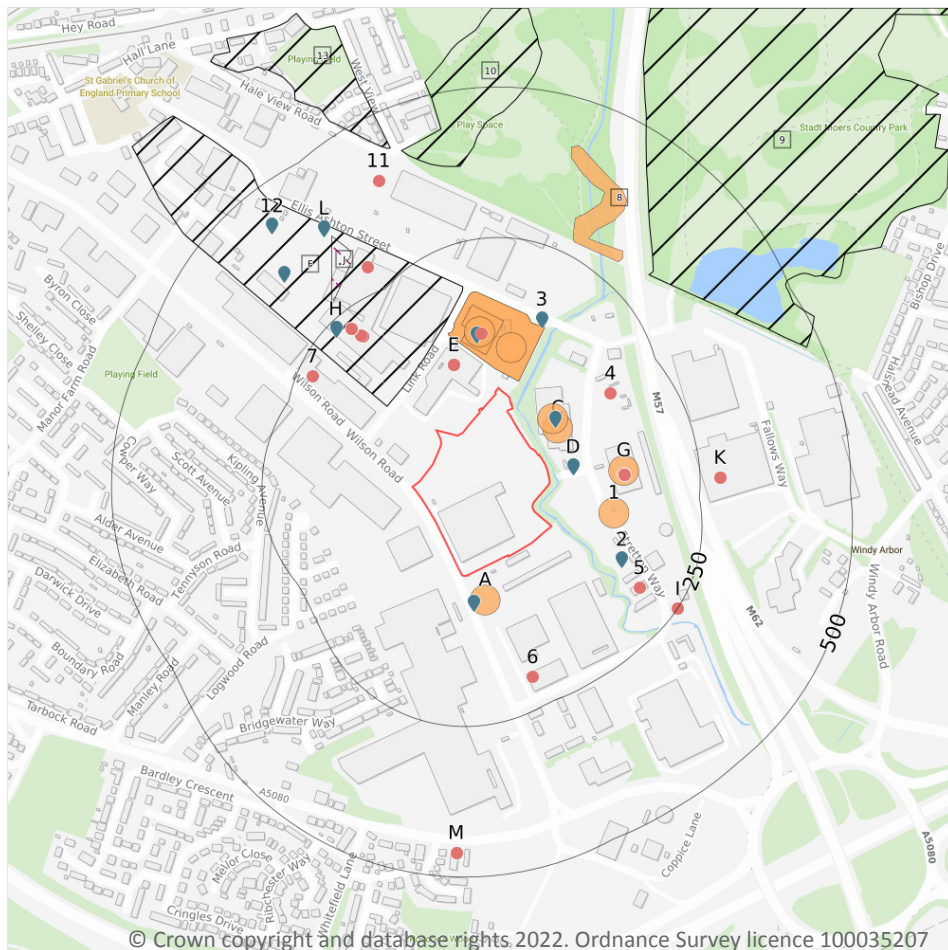
Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 26**

ID	Location	Land Use	Date	Group ID
F	On site	Garage	1982	21978
F	On site	Garage	1993	26136
F	On site	Garage	1996	26136
F	On site	Garage	1997	26136
F	On site	Garage	1982	22780
F	0m SE	Garage	1992	23768
AM	419m SW	Garage	1982	26161
AM	427m SW	Garage	1956	26161
AP	446m S	Garage	1982	20211

This data is sourced from Ordnance Survey / Groundsure.

3 Waste and landfill



- Site Outline
- Search buffers in metres (m)
- Historical landfill (EA/NRW)
- Historical landfill (LA/OS)
- Historical waste sites
- Licensed waste sites
- Waste exemptions

3.1 Active or recent landfill

Records within 500m

0

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

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

3.2 Historical landfill (BGS records)

Records within 500m

0

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

This data is sourced from the British Geological Survey.



3.3 Historical landfill (LA/mapping records)

Records within 500m

2

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

Features are displayed on the Waste and landfill map on **page 42**

ID	Location	Site address	Source	Data type
J	275m NW	Refuse Tip	1967 mapping	Polygon
J	318m NW	Refuse Tip	1969 mapping	Polygon

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 42**

ID	Location	Details		
F	88m NW	Site Address: Brickfields, Knowsley, Merseyside Licence Holder Address: -	Waste Licence: - Site Reference: GDO M209 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: Tushingham Metallic Brick Works Licence Holder: Tushingham Metallic Brick Works First Recorded - Last Recorded: -
9	308m NE	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



ID	Location	Details		
10	373m N	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
13	437m NW	Site Address: Huyton Quarry, Knowsley, Merseyside Licence Holder Address: -	Waste Licence: - Site Reference: GDO M087 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: - Licence Holder: - First Recorded 01/10/1971 Last Recorded: -

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

3.5 Historical waste sites

Records within 500m

11

Waste site records derived from Local Authority planning records and high detail historical mapping.
 Features are displayed on the Waste and landfill map on **page 42**

ID	Location	Address	Further Details	Date
A	24m SE	Site Address: Former Hayden Drysys, Internati, Wilson Road, Thorburn International, LIVERPOOL, Merseyside, L36 6AD	Type of Site: Waste Recycling Centre Planning application reference: 10/00153/FUL Description: Scheme comprises formation of a household waste recycling centre comprising of 1 office building, covered collection area & 1 storage building, together with construction of car parking & new vehicular access landscaping, boundary treatments & associated works. Construction - pitched roof; roller shutter, steel doors; portal frame; black top surfacing, concrete paving, fencing, grp liners, lighting columns, planting, Tarmac surfacing site works. An application (ref: 10/00153/FUL) for detailed planning permission was granted by Knowsley B.C. The start date and contract period are for guideline only. Barhale Construction Plc has been awarded the main contract and work has commenced on site. Data source: Historic Planning Application Data Type: Point	28/11/2011



ID	Location	Address	Further Details	Date
B	25m NE	Site Address: N/A	Type of Site: Refuse Destructor Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1984
B	25m NE	Site Address: N/A	Type of Site: Refuse Destructor Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1987
C	28m NE	Site Address: Orchid Environmental MWDA Trea, Stretton Way, Huyton, Knowsley, LIVERPOOL, Merseyside, L36 6JF	Type of Site: Waste Recycling Facility Planning application reference: 09/00409/FUL Description: Scheme comprises change of use of and external alterations to building to form extended waste recycling facility resulting in increase of waste processed from 50,000 tonnes/year to 120,000 tonnes/year, change of use of factory unit to form associated offices/maintenance workshop, construction of car parking and associated works - amended description. Construction - automatic, roller shutter doors; external refurbishment; black top surfacing, fencing, hardcore, turfing/grass site works. An application (ref: 09/00409/FUL) for detailed planning permission was granted by Knowsley B.C. Project value, start date and contract period are for guideline only. This scheme is now complete. Data source: Historic Planning Application Data Type: Point	-
C	32m NE	Site Address: Stretton Way, Stretton Way, Huyton Ind. Estate, Huyton, LIVERPOOL, Merseyside, L36 6JF	Type of Site: Waste Transfer Station (C/U) Planning application reference: APP/97/00600 Description: Change of use from storage to waste transfer station for the sorting and processing of non-toxic/non hazardous waste to generate re-usable materials. An application (ref: APP/97/00600) for Detailed Planning permission was submitted to Knowsley B. on 24th October 1997. Data source: Historic Planning Application Data Type: Point	-



ID	Location	Address	Further Details	Date
B	45m N	Site Address: Ellis Ashton Street, Huyton Waste Transfer Station, Ellis Ashton Street, Huyton, LIVERPOOL, Merseyside, L36 6BN	Type of Site: Waste Transfer Station (Alterations) Planning application reference: 98/00012 Description: Alterations to provide improved facilities for mixed and segregated waste, provision of storage areas and alterations to access roads. An application (ref: 98/00012) for Detailed Planning permission was submitted to Knowsley B.C. on 22nd January 1998 . Data source: Historic Planning Application Data Type: Point	-
B	58m N	Site Address: N/A	Type of Site: Refuse Destructor Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1994
B	73m N	Site Address: Ashton Street, Ashton Street, Huyton, LIVERPOOL, Merseyside	Type of Site: Waste Transfer Station Planning application reference: 98/00187 Description: Waste transfer station with car parking and skip storage area. An application (ref: 98/00187) for Outline Planning permission was submitted to Knowsley B.C. on 9th April 1998. Data source: Historic Planning Application Data Type: Point	-
1	80m E	Site Address: Orchid Environmental MWDA Trea, Stretton Way, & W H Smith News, Liverpool, Merseyside, L36 6JF	Type of Site: Waste Transfer Station Planning application reference: 12/00669/COU Description: Scheme comprises change of use of from distribution depot (use class B8) to waste reception building, together with external alterations, construction of double weighbridge and gatehouse, temporary modular building, relocation of car parking and associated works. Data source: Historic Planning Application Data Type: Point	04/03/2013



ID	Location	Address	Further Details	Date
G	99m E	Site Address: Fleet Removals Of Liverpool, Stretton Way, LIVERPOOL, Merseyside, L36 6JF	Type of Site: Waste Treatment & Transfer Facilities Planning application reference: 06/00990/FUL Description: Scheme comprises change of use and extension to form waste treatment and transfer facility with associated visitor centre, together with construction of car parking, installation of weighbridge and associated works. Construction - black top surfacing s e works. An application (ref: 06/00990/FUL) for detailed planning permission was granted by Knowsley B.C. Planning decision obtained Data source: Historic Planning Application Data Type: Point	-
8	273m NE	Site Address: N/A	Type of Site: Refuse Dump Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1947

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

3.6 Licensed waste sites

Records within 500m	21
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Active or recently closed waste sites under Environment Agency/Natural Resources Wales regulation.

Features are displayed on the Waste and landfill map on **page 42**

ID	Location	Details		
D	42m E	Site Name: Stretton Way Site Address: Stretton Way, Huyton Ind Est, Huyton, Merseyside, L36 6JF Correspondence Address: -	Type of Site: 75kte HCl Waste TS + treatment Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: FCC004 EPR reference: EA/EPR/JB3633RP/A001 Operator: F C C Recycling (U K) Limited Waste Management licence No: 104504 Annual Tonnage: 74999	Issue Date: 23/07/2012 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued



ID	Location	Details		
D	42m E	Site Name: Arpley 2 Site Address: Stretton Way, Huyton Ind Est, Huyton, Merseyside, L36 6JF Correspondence Address: -	Type of Site: Household, Commercial & Industrial Waste T Stn Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: FCC004 EPR reference: EA/EPR/JB3633RP/V002 Operator: F C C Recycling (U K) Limited Waste Management licence No: 104504 Annual Tonnage: 120000	Issue Date: 23/07/2012 Effective Date: - Modified: 18/12/2012 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified
D	42m E	Site Name: Arpley 2 Site Address: Arpley 2, Stretton Way, Huyton Ind Est, Huyton, Merseyside, L36 6JF Correspondence Address: -	Type of Site: Household, Commercial & Industrial Waste T Stn Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: FCC004 EPR reference: EA/EPR/JB3633RP/V003 Operator: F C C Recycling (U K) Limited Waste Management licence No: 104504 Annual Tonnage: 120000	Issue Date: 23/07/2012 Effective Date: - Modified: 08/06/2016 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: To PPC
D	42m E	Site Name: Arpley 2 Site Address: Arpley 2, Stretton Way, Huyton Ind Est, Huyton, Merseyside, L36 6JF Correspondence Address: -	Type of Site: Household, Commercial & Industrial Waste T Stn Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: FCC004 EPR reference: EA/EPR/JB3633RP/V003 Operator: F C C Recycling (U K) Limited Waste Management licence No: 104504 Annual Tonnage: 120000	Issue Date: 23/07/2012 Effective Date: - Modified: 08/06/2016 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: To PPC

ID	Location	Details		
A	47m S	Site Name: Huyton H W R C Site Address: Huyton Ind Est, Wilson Road, Huyton, Knowsley, Merseyside, L36 6AD Correspondence Address: -	Type of Site: 75kte Non-hazardous & hazardous HWA Site Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: VEO167 EPR reference: EA/EPR/DB3833DK/A001 Operator: Veolia E S Merseyside & Halton Ltd Waste Management licence No: 103677 Annual Tonnage: 74999	Issue Date: 12/12/2011 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued
A	47m S	Site Name: Huyton H W R C Site Address: Huyton Ind Est, Wilson Road, Huyton, Knowsley, Merseyside, L36 6AD Correspondence Address: -	Type of Site: 75kte Non-hazardous & hazardous HWA Site Size: >= 25000 tonnes 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: VEO167 EPR reference: EA/EPR/DB3833DK/A001 Operator: Veolia E S Merseyside & Halton Ltd Waste Management licence No: 103677 Annual Tonnage: 74999	Issue Date: 12/12/2011 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued
C	60m NE	Site Name: M W D A Treatment Facility Site Address: M W D A Treatment Facility, Stretton Way, Huyton, Nr Liverpool, Merseyside, L36 6JF Correspondence Address: Market Place, Adlington, Nr Chorley, Lancashire, PR7 4EZ	Type of Site: Physical Treatment Facility Size: >= 25000 tonnes 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: FAI011 EPR reference: - Operator: Fairport Engineering Ltd Waste Management licence No: 50487 Annual Tonnage: 0	Issue Date: 10/05/2007 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued



ID	Location	Details		
C	60m NE	Site Name: Materials Recycling And Recovery Centre Site Address: Land/premises At, Stretton Way, Huyton, Liverpool, Merseyside, L36 6JF Correspondence Address: -	Type of Site: Physical Treatment Facility Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: ORC009 EPR reference: EA/EPR/DP3794ST/V004 Operator: Orchid Environmental Ltd Waste Management licence No: 50487 Annual Tonnage: 49999	Issue Date: 10/05/2007 Effective Date: 14/01/2009 Modified: 24/09/2010 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified
C	60m NE	Site Name: Materials Recycling And Recovery Centre Site Address: Land/premises At, Stretton Way, Huyton, Liverpool, Merseyside, L36 6JF Correspondence Address: -	Type of Site: Physical Treatment Facility Size: >= 25000 tonnes 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: ORC009 EPR reference: EA/EPR/DP3794ST/V004 Operator: Orchid Environmental Ltd Waste Management licence No: 50487 Annual Tonnage: 49999	Issue Date: 10/05/2007 Effective Date: 14/01/2009 Modified: 24/09/2010 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified
B	95m N	Site Name: Huyton Waste Transfer Station & Waste Reception Centre Site Address: Ellis Ashton Street, Huyton, Liverpool, Merseyside, L36 6BJ Correspondence Address: Huyton Waste Transfer Station, Ellis Ashton Street, Huyton, Liverpool, Merseyside, L36 6BJ	Type of Site: Special Waste Transfer Station Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MWA006 EPR reference: - Operator: Mersey Waste Holdings Ltd Waste Management licence No: 53645 Annual Tonnage: 6250	Issue Date: 15/09/1995 Effective Date: - Modified: 22/03/2002 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified

ID	Location	Details		
B	95m N	Site Name: Huyton W T S / H W R C Site Address: Ellis Ashton Street, Huyton, Liverpool, Merseyside, L36 6BJ Correspondence Address: Port Of Liverpool Buildings, 2nd Floor, Pierhead, Liverpool, Merseyside, L3 1BY	Type of Site: Household, Commercial & Industrial Waste T Stn Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MWA006 EPR reference: - Operator: Mersey Waste Holdings Ltd Waste Management licence No: 53645 Annual Tonnage: 6250	Issue Date: 15/09/1995 Effective Date: - Modified: 20/07/2006 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified
2	129m SE	Site Name: Stretton Way Bulking Station Site Address: Stretton Way Depot, Stretton Way, Huyton, Knowsley, Merseyside, L36 6JF Correspondence Address: -	Type of Site: 75kte HCI Waste Transfer Station Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: KNO020 EPR reference: EA/EPR/EP3491LE/A001 Operator: Knowsley Metropolitan Borough Council Waste Management licence No: 101122 Annual Tonnage: 0	Issue Date: 03/11/2009 Effective Date: - Modified: - Surrendered Date: Jun 19 2015 12:00AM Expiry Date: - Cancelled Date: - Status: Surrendered
3	134m NE	Site Name: Huyton Waste Transfer Station Site Address: Huyton W T S, Ellis Ashton Street, Huyton Ind Est, Liverpool, Merseyside, L36 6BN Correspondence Address: -	Type of Site: Household, Commercial & Industrial Waste T Stn Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: VEO092 EPR reference: EA/EPR/EP3695SH/V006 Operator: Veolia Environmental Services Merseyside & Halton Ltd Waste Management licence No: 53645 Annual Tonnage: 500000	Issue Date: 15/09/1995 Effective Date: 11/11/2009 Modified: 15/05/2013 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified



ID	Location	Details		
H	237m NW	Site Name: Link Recycling Limited Site Address: Unit 1, 2 & 3, The Lombard Centre, Link Road, Huyton, Merseyside, L36 6AP Correspondence Address: -	Type of Site: 75kte Materials Recycling Facility Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: LRL101 EPR reference: EA/EPR/CB3806XX/A001 Operator: Link Recycling Limited Waste Management licence No: 402341 Annual Tonnage: 75000	Issue Date: 22/07/2015 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued
H	237m NW	Site Name: Restart Recycling Ltd Site Address: Units 1-3 The Lombard Centre, Link Road, Huyton, Liverpool, Merseyside, L36 6AP Correspondence Address: -	Type of Site: 75kte WEEE Treatment Facility Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: RRL004 EPR reference: EA/EPR/AB3603LX/A001 Operator: Restart Recycling Limited Waste Management licence No: 400736 Annual Tonnage: 74999	Issue Date: 04/11/2013 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Revoked
H	237m NW	Site Name: Restart Recycling Ltd Site Address: Units 1-3 The Lombard Centre, Link Road, Huyton, Liverpool, Merseyside, L36 6AP Correspondence Address: -	Type of Site: 75kte WEEE Treatment Facility Size: >= 25000 tonnes 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: RRL004 EPR reference: EA/EPR/AB3603LX/A001 Operator: Restart Recycling Limited Waste Management licence No: 400736 Annual Tonnage: 74999	Issue Date: 04/11/2013 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Revoked
H	237m NW	Site Name: Link Recycling Limited Site Address: Unit 1, 2 & 3, The Lombard Centre, Link Road, Huyton, Merseyside, L36 6AP Correspondence Address: -	Type of Site: 75kte Materials Recycling Facility Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: LRL101 EPR reference: EA/EPR/CB3806XX/A001 Operator: Link Recycling Limited Waste Management licence No: 402341 Annual Tonnage: 75000	Issue Date: 22/07/2015 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued



ID	Location	Details		
F	362m NW	Site Name: Mainsway Ltd Site Address: Ellis Ashton Street, Huyton, Merseyside, L36 6AH Correspondence Address: Keith Lewis, Pearl Environmental Ltd, 13, Middleton Road, Reddish, Stockport, SK5 6SG	Type of Site: Household, Commercial & Industrial Waste T Stn Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MAI002 EPR reference: - Operator: Mainsway Ltd Waste Management licence No: 50376 Annual Tonnage: 0	Issue Date: 01/04/2005 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued
L	383m NW	Site Name: Mainsway Ltd Site Address: Land/premises At, Ellis Ashton Street, Huyton, Merseyside, L36 6AH Correspondence Address: -	Type of Site: Household, Commercial & Industrial Waste T Stn Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MAI002 EPR reference: EA/EPR/ZP3294CU/A001 Operator: Mainsway Ltd Waste Management licence No: 50376 Annual Tonnage: 75000	Issue Date: 01/04/2005 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued
L	383m NW	Site Name: Mainsway Ltd Site Address: Land/premises At, Ellis Ashton Street, Huyton, Merseyside, L36 6AH Correspondence Address: -	Type of Site: Household, Commercial & Industrial Waste T Stn Size: >= 25000 tonnes 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MAI002 EPR reference: EA/EPR/ZP3294CU/A001 Operator: Mainsway Ltd Waste Management licence No: 50376 Annual Tonnage: 75000	Issue Date: 01/04/2005 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued



ID	Location	Details		
12	435m NW	Site Name: Huyton Quarry Salvage Site Address: Huyton Industrial Estate, Ellis Ashton Street, Huyton, Liverpool, Merseyside, L36 6BW Correspondence Address: -	Type of Site: ELV Facility Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: WIL204 EPR reference: EA/EPR/FP3694CW/A001 Operator: Willis Peter James Waste Management licence No: 50354 Annual Tonnage: 2500	Issue Date: 10/08/2005 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Suspended

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

3.7 Waste exemptions

Records within 500m	35
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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 42**

ID	Location	Site	Reference	Category	Sub-Category	Description
E	82m NW	UNIT 1 The Lombard Centre Link Road Huyton LIVERPOOL L36 6AP	EPR/ZH0814D E/A001	Storing waste exemption	Non-Agricultural Waste Only	Storage of waste in a secure place
E	82m NW	Unit 1 & 2 The Lombard Centre Link Road Huyton Liverpool L36 6AP	EA/EPR/VP368 6VG/A001	Treating waste exemption	Non-Agricultural Waste Only	Repair or refurbishment of WEEE
E	82m NW	UNIT 1 The Lombard Centre Link Road Huyton LIVERPOOL L36 6AP	EPR/GH0073J N/A001	Treating waste exemption	Non-Agricultural Waste Only	Treatment of waste toner cartridges by sorting, dismantling, cleaning or refilling
B	94m N	Link Recycling LTD Ellis Ashton Street, Ellis Ashton Street, Liverpool, Liverpool, L366bj	WEX137630	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
G	123m E	Riverside House Stretton Way LIVERPOOL L36 6JF	EPR/GF0235A U/A001	Storing waste exemption	Non-Agricultural Waste Only	Storage of waste in a secure place



ID	Location	Site	Reference	Category	Sub-Category	Description
G	123m E	Knowsley Metropolitan Borough Council Stretton Way LIVERPOOL L36 6JF	EPR/EF0001MP/A001	Treating waste exemption	Non-Agricultural Waste Only	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
G	124m E	-	WEX261078	Treating waste exemption	Not on a farm	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
G	124m E	STRETTON WAY, LIVERPOOL, L36 6JF	WEX121161	Treating waste exemption	Not on a farm	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
G	124m E	Knowsley Depot, Stretton Way, Huyton, Knowsley, Merseyside, L36 6JF	WEX076561	Storing waste exemption	Not on a farm	Storage of waste in a secure place
G	124m E	Locker Freight Ltd, Stretton Way, Huyton, Liverpool, L366JF	WEX137591	Storing waste exemption	Not on a farm	Storage of waste in a secure place
4	156m NE	Contracting Site	WEX263314	Storing waste exemption	Not on a farm	Storage of waste in a secure place
5	178m SE	STRETTON WAY, LIVERPOOL, L36 6JF	WEX089643	Storing waste exemption	Not on a farm	Storage of waste in a secure place
H	198m NW	Units 1-3 The Lombard Centre Link Road LIVERPOOL L36 6AP	EPR/DF0403GU/A001	Storing waste exemption	Non-Agricultural Waste Only	Storage of waste in a secure place
H	198m NW	Units 1-3 The Lombard Centre Link Road LIVERPOOL L36 6AP	EPR/DF0403GU/A001	Treating waste exemption	Non-Agricultural Waste Only	Recovery of textiles
H	198m NW	Units 1-3 The Lombard Centre Link Road LIVERPOOL L36 6AP	EPR/DF0403GU/A001	Treating waste exemption	Non-Agricultural Waste Only	Preparatory treatments (baling, sorting, shredding etc)
H	198m NW	Units 1-3 The Lombard Centre Link Road LIVERPOOL L36 6AP	EPR/DF0403GU/A001	Treating waste exemption	Non-Agricultural Waste Only	Recovery of scrap metal
6	200m SE	Huyton HWRC, Huyton Industrial Estate, Wilson Road, Huyton, L36 6AD	WEX175384	Storing waste exemption	Not on a farm	Storage of waste in a secure place



ID	Location	Site	Reference	Category	Sub-Category	Description
H	201m NW	Unit 5 The Park Spring Lane South Malvern WR14 1AT	EA/EPR/VP368 6WK/A001	Treating waste exemption	Non-Agricultural Waste Only	Repair or refurbishment of WEEE
H	219m NW	-	WEX269258	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
H	219m NW	-	WEX269259	Storing waste exemption	Not on a farm	Storage of waste in a secure place
H	219m NW	-	WEX269260	Storing waste exemption	Not on a farm	Storage of waste in a secure place
H	219m NW	-	WEX269261	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
H	219m NW	UNIT 1-3, LINK ROAD, HUYTON, LIVERPOOL, L36 6AP	WEX128635	Storing waste exemption	Not on a farm	Storage of waste in a secure place
H	219m NW	UNIT 1-3, LINK ROAD, HUYTON, LIVERPOOL, L36 6AP	WEX128683	Storing waste exemption	Not on a farm	Storage of waste in a secure place
H	219m NW	UNIT 1-3, LINK ROAD, HUYTON, LIVERPOOL, L36 6AP	WEX128624	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
H	219m NW	UNIT 1-3, LINK ROAD, HUYTON, LIVERPOOL, L36 6AP	WEX128685	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
7	225m NW	11A-11B, WILSON ROAD, LIVERPOOL, L36 6AN	WEX246359	Storing waste exemption	Not on a farm	Storage of waste in a secure place
I	251m SE	-	WEX237679	Disposing of waste exemption	Not on a farm	Burning waste in the open
I	251m SE	STRETTON WAY, LIVERPOOL, L36 6JF	WEX093799	Disposing of waste exemption	Not on a farm	Burning waste in the open
K	283m E	Batleys Cash & Carry Venture Park Industrial Estate Windy Arbor Road Liverpool L35 1RZ	EPR/EE5249CW/A001	Storing waste exemption	Non-Agricultural Waste Only	Storage of waste in a secure place
K	283m E	Batleys Cash & Carry Venture Park Industrial Estate Windy Arbor Road Liverpool L35 1RZ	EPR/EE5249CW/A001	Treating waste exemption	Non-Agricultural Waste Only	Preparatory treatments (baling, sorting, shredding etc)

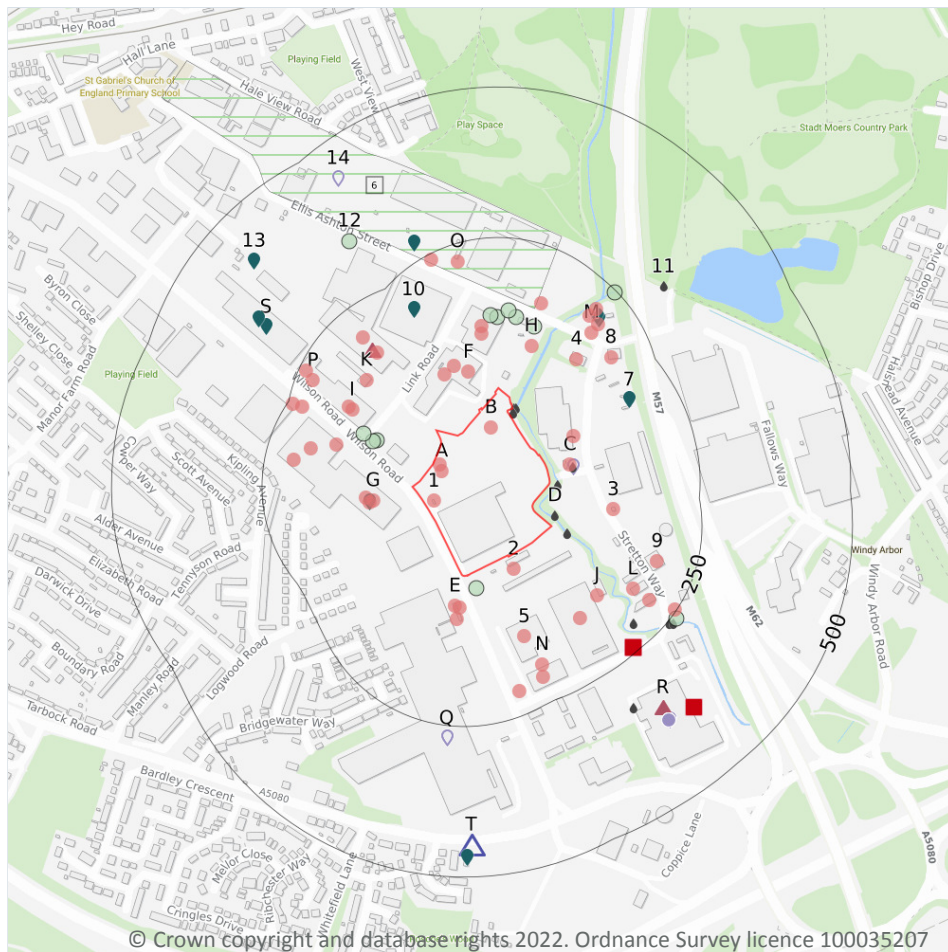


ID	Location	Site	Reference	Category	Sub-Category	Description
J	293m NW	Carbon I.T Recycling Ltd, The Big Padlock, Unit 3, Office 10, L36 6BJ	WEX036881	Storing waste exemption	Not on a farm	Storage of waste in a secure place
11	397m NW	jk pallets ltd Ellis Ashton Street LIVERPOOL L36 6BN	EPR/SF0503XE /A001	Disposing of waste exemption	Non- Agricultura l Waste Only	Burning waste in the open
M	461m S	Tarbock Motorway Maintenance Compound, Coppice Lane, Prescott, Merseyside, L35 1QY	WEX168997	Storing waste exemption	Not on a farm	Storage of waste in secure containers
M	461m S	Tarbock Motorway Maintenance Compound, Coppice Lane, Prescott, Merseyside, L35 1QY	WEX168997	Storing waste exemption	Not on a farm	Storage of waste in a secure place

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



4 Current industrial land use



- Site Outline
- Search buffers in metres (m)
- Recent industrial land uses
- ▲ Current or recent petrol stations
- Control of Major Accident Hazards
- ▲ Hazardous substance storage/usage
- Historical licensed industrial activities
- Part A(1) industrial activities
- Licensed pollutant release (Part A(2)/B)
- Licensed Discharges to controlled waters
- List 1 Dangerous Substances
- Pollution Incidents (EA/NRW)

4.1 Recent industrial land uses

Records within 250m

51

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 58**

ID	Location	Company	Address	Activity	Category
1	On site	Electricity Sub Station	Merseyside, L36	Electrical Features	Infrastructure and Facilities
A	On site	Easystorage	35, Wilson Road, Liverpool, Merseyside, L36 6AE	Container and Storage	Transport, Storage and Delivery
A	On site	Tank	Merseyside, L36	Tanks (Generic)	Industrial Features



ID	Location	Company	Address	Activity	Category
B	On site	Huyton Business Park	Merseyside, L36	Business Parks and Industrial Estates	Industrial Features
2	22m S	Public Recycling Facility	Merseyside, L36	Recycling Centres	Infrastructure and Facilities
C	39m E	Electricity Sub Station	Merseyside, L36	Electrical Features	Infrastructure and Facilities
E	52m S	Gas Governor Station	Merseyside, L36	Gas Features	Infrastructure and Facilities
E	54m S	Gas Governor	Merseyside, L36	Gas Features	Infrastructure and Facilities
F	56m NW	Link Recycling	Unit 2-3 The Lombard Centre, Link Road, Huyton, Liverpool, Merseyside, L36 6AP	Construction and Tool Hire	Hire Services
C	65m NE	Electricity Sub Station	Merseyside, L36	Electrical Features	Infrastructure and Facilities
G	69m W	North West Trucks Services Ltd	Wilson Road, Liverpool, Merseyside, L36 6AJ	New Vehicles	Motoring
E	73m S	Electricity Sub Station	Merseyside, L36	Electrical Features	Infrastructure and Facilities
G	77m W	North West Trucks	Wilson Road, Liverpool, Merseyside, L36 6AJ	Vehicle Repair, Testing and Servicing	Repair and Servicing
G	80m W	Works	Merseyside, L36	Unspecified Works Or Factories	Industrial Features
F	81m NW	A R K Travel LLP	Link Road Depot, Link Road, Huyton, Liverpool, Merseyside, L36 6AP	Vehicle Hire and Rental	Hire Services
F	82m NW	Mac Services	Link Road Depot, Link Road, Huyton, Liverpool, Merseyside, L36 6AP	Vehicle Repair, Testing and Servicing	Repair and Servicing
H	89m NE	Tank	Merseyside, L36	Tanks (Generic)	Industrial Features
H	94m N	Cemex UK	Ellis Ashton Street, Liverpool, Merseyside, L36 6BJ	Concrete Products	Industrial Products
3	106m E	Electricity Sub Station	Merseyside, L36	Electrical Features	Infrastructure and Facilities
H	107m N	Refuse Destructor	Merseyside, L36	Refuse Disposal Facilities	Infrastructure and Facilities



ID	Location	Company	Address	Activity	Category
4	128m NE	Pine Precision Engineering Ltd	10, Stretton Way, Liverpool, Merseyside, L36 6JF	Precision Engineers	Engineering Services
5	133m SE	Works	Merseyside, L36	Unspecified Works Or Factories	Industrial Features
J	136m SE	Electricity Sub Station	Merseyside, L36	Electrical Features	Infrastructure and Facilities
K	143m NW	Factory	Merseyside, L36	Unspecified Works Or Factories	Industrial Features
I	144m W	Spromek Ltd	Unit 11g, Wilson Road, Liverpool, Merseyside, L36 6AN	General Construction Supplies	Industrial Products
I	145m NW	No 1 Discount Sheds Factory	Unit 18, Wilson Road, Liverpool, Merseyside, L36 6JG	Garden Goods	Consumer Products
J	148m SE	Works	Merseyside, L36	Unspecified Works Or Factories	Industrial Features
I	151m W	Factory	Merseyside, L36	Unspecified Works Or Factories	Industrial Features
H	157m NE	J K Pallets Ltd	Ellis Ashton Street, Liverpool, Merseyside, L36 6BN	Packaging	Industrial Products
K	162m NW	SIG Interiors	Lombard Centre, Link Road, Huyton, Liverpool, Merseyside, L36 6AP	Building and Component Suppliers	Construction Services
L	170m SE	R L T Marine Lamp Sales	Riverside House, Stretton Way, Liverpool, Merseyside, L36 6JF	Lampshades and Lighting	Consumer Products
M	174m NE	Electricity Sub Station	Merseyside, L36	Electrical Features	Infrastructure and Facilities
I	181m W	Mersey Vent Ltd	14a Interchange Motorway Industrial Estate, Wilson Road, Liverpool, Merseyside, L36 6JG	Air and Water Filtration	Industrial Products
8	181m E	Heritage Boiler Steam Services Ltd	20, Stretton Way, Liverpool, Merseyside, L36 6JF	Ovens and Furnaces	Industrial Products
9	185m E	Cemex Asphalt Liverpool	Stretton Way, Liverpool, Merseyside, L36 6JF	Road Maintenance Equipment	Industrial Products
N	187m S	Blu-sky UK Ltd	Unit 5 The Woodlands Centre, Wilson Road, Liverpool, Merseyside, L36 6AD	Seals, Tapes, Taps and Valves	Industrial Products



ID	Location	Company	Address	Activity	Category
M	190m NE	Tank	Merseyside, L36	Tanks (Generic)	Industrial Features
M	191m NE	Works	Merseyside, L36	Unspecified Works Or Factories	Industrial Features
K	197m NW	Lombard Shipping & Forwarding Ltd	Lombard Centre, Link Road, Huyton, Liverpool, Merseyside, L36 6AP	Distribution and Haulage	Transport, Storage and Delivery
I	203m W	Hogans Butchers Ltd	Unit 13c Interchange Motorway Industrial Estate, Wilson Road, Liverpool, Merseyside, L36 6JG	Fish, Meat and Poultry Products	Foodstuffs
L	203m SE	Fleet Factors Ltd	1-2, Stretton Way, Liverpool, Merseyside, L36 6JF	Vehicle Parts and Accessories	Motoring
M	205m NE	Tank	Merseyside, L36	Tanks (Generic)	Industrial Features
N	207m SE	D J Auto Repair Centre Ltd	The Woodlands Centre, Wilson Road, Liverpool, Merseyside, L36 6AD	Vehicle Repair, Testing and Servicing	Repair and Servicing
N	210m SE	Electricity Sub Station	Merseyside, L36	Electrical Features	Infrastructure and Facilities
O	221m N	Electricity Sub Station	Merseyside, L36	Electrical Features	Infrastructure and Facilities
P	221m W	Factory	Merseyside, L36	Unspecified Works Or Factories	Industrial Features
P	227m W	Gas Governor Station	Merseyside, L36	Gas Features	Infrastructure and Facilities
P	239m NW	North West Plant Hire & Sales Ltd	Unit 11/c 3, Wilson Road, Liverpool, Merseyside, L36 6AN	Construction and Tool Hire	Hire Services
O	241m NW	Electricity Sub Station	Merseyside, L36	Electrical Features	Infrastructure and Facilities
P	243m NW	Electricity Sub Station	Merseyside, L36	Electrical Features	Infrastructure and Facilities
L	247m SE	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

1

Open, closed, under development and obsolete petrol stations.

Features are displayed on the Current industrial land use map on **page 58**

ID	Location	Company	Address	LPG	Status
T	446m S	ESSO	Cronton Road, Tarbock, Prescot, Merseyside, L35 1QY	No	Open

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 58**

ID	Location	Company	Address	Operational status	Tier
6	145m NE	Basf Printing Systems Ltd	Basf Printing Systems Ltd, Ellis Ashton Steet, Huyton, Liverpool, L36 6BN	Historical NIHHS Site	-

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

Records within 500m	0
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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	2
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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.

Features are displayed on the Current industrial land use map on **page 58**

ID	Location	Details	
K	170m NW	Application reference number: No Details Application status: Approved Application date: No Details Address: Lombard Shipping & Forwarding Ltd, Link Road, Huyton, Liverpool, Merseyside, England, L36 6AP	Details: No Details Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified
R	349m SE	Application reference number: 06/00312/HAZ Application status: Pending Application date: 06/04/2006 Address: Goodrich Actuation Systems, Stretton Way, Huyton, Knowsley, L36 6JE	Details: Application For Hazardous Substances Consent For The Storage And Use Of Category 1 (very Toxic) And Category 2 (toxic) Substances Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified

This data is sourced from Local Authority records.



4.9 Historical licensed industrial activities (IPC)

Records within 500m

5

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 58**

ID	Location	Details	
R	372m SE	Operator: Goodrich Actuation Systems Ltd Address: Stretton Way, Liverpool, Merseyside, L36 6JE Process: Inorganic Chemical Processes Permit Number: BX9285	Original Permit Number: IPCMINVAR Date Approved: - Effective Date: - Status: Valid
R	372m SE	Operator: Goodrich Actuation Systems Ltd Address: Stretton Way, Liverpool, Merseyside, L36 6JE Process: Inorganic Chemical Processes Permit Number: AO2426	Original Permit Number: IPCAPP Date Approved: 5-12-1994 Effective Date: 12-12-1994 Status: Superseded By Variation
R	372m SE	Operator: Goodrich Actuation Systems Ltd Address: Stretton Way, Liverpool, Merseyside, L36 6JE Process: Inorganic Chemical Processes Permit Number: AZ8005	Original Permit Number: IPCMINVAR Date Approved: 24-9-1997 Effective Date: 1-10-1997 Status: Superseded By Variation
R	372m SE	Operator: Goodrich Actuation Systems Ltd Address: Stretton Way, Liverpool, Merseyside, L36 6JE Process: Inorganic Chemical Processes Permit Number: BE1364	Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Superseded By Variation
R	372m SE	Operator: Goodrich Actuation Systems Ltd Address: Stretton Way, Liverpool, Merseyside, L36 6JE Process: Inorganic Chemical Processes Permit Number: BY0437	Original Permit Number: IPCMINVAR Date Approved: 16-6-2004 Effective Date: 17-6-2004 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

12

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 58**



ID	Location	Details	
C	42m E	Operator: FCC RECYCLING (UK) LIMITED Installation Name: ARPLEY 2 - EPR/LP3139RK Process: DISPOSAL OF > 50 T/D NON-HAZARDOUS WASTE (> 100 T/D IF ONLY AD) INVOLVING PHYSICO-CHEMICAL TREATMENT Permit Number: CP3638DW Original Permit Number: LP3139RK	EPR Reference: - Issue Date: 15/11/2016 Effective Date: 15/11/2016 Last date noted as effective: 01/07/2021 Status: EFFECTIVE
C	42m E	Operator: FCC RECYCLING (UK) LIMITED Installation Name: ARPLEY2 EPR/JB3633RP Process: DISPOSAL OF > 50 T/D NON-HAZARDOUS WASTE (> 100 T/D IF ONLY AD) INVOLVING PHYSICO-CHEMICAL TREATMENT Permit Number: LP3139RK Original Permit Number: LP3139RK	EPR Reference: - Issue Date: 08/06/2016 Effective Date: 08/06/2016 Last date noted as effective: 01/07/2021 Status: SUPERCEDED
Q	271m S	Operator: HALEWOOD INTERNATIONAL LIMITED Installation Name: HALEWOOD INTERNATIONAL LIMITED Process: CREATED BY IED - TREATMENT AND PROCESSING (OTHER THAN PACKAGING) OF ANIMAL OR VEGETABLE RAW MATERIALS (OTHER THAN MILK ONLY) WITH FINISHED PRODUCT CAPACITY GREATER THAN FORMULA SHOWN IN REGS Permit Number: MP3137JY Original Permit Number: MP3137JY	EPR Reference: - Issue Date: 07/04/2020 Effective Date: 07/04/2020 Last date noted as effective: 01/07/2021 Status: EFFECTIVE
Q	271m S	Operator: HALEWOOD INTERNATIONAL LIMITED Installation Name: HALEWOOD INTERNATIONAL LIMITED Process: DISPOSAL OF > 50 T/D NON-HAZARDOUS WASTE (> 100 T/D IF ONLY AD) INVOLVING BIOLOGICAL TREATMENT Permit Number: MP3137JY Original Permit Number: MP3137JY	EPR Reference: - Issue Date: 07/04/2020 Effective Date: 07/04/2020 Last date noted as effective: 01/07/2021 Status: EFFECTIVE
Q	271m S	Operator: HALEWOOD INTERNATIONAL LIMITED Installation Name: HALEWOOD INTERNATIONAL LIMITED Process: DISPOSAL OF > 50 T/D NON-HAZARDOUS WASTE (> 100 T/D IF ONLY AD) INVOLVING PHYSICO-CHEMICAL TREATMENT Permit Number: MP3137JY Original Permit Number: MP3137JY	EPR Reference: - Issue Date: 07/04/2020 Effective Date: 07/04/2020 Last date noted as effective: 01/07/2021 Status: EFFECTIVE
R	372m SE	Operator: GOODRICH ACTUATION SYSTEMS LTD Installation Name: HUYTON SURFACE TREATMENT EPR/BX4232IA Process: SURFACE TREATING METALS AND PLASTICS; ELECTROLYTIC/CHEMICAL >30 CU M Permit Number: BX4232IA Original Permit Number: BX4232IA	EPR Reference: - Issue Date: 27/01/2005 Effective Date: 27/01/2005 Last date noted as effective: 01/07/2021 Status: SUPERCEDED



ID	Location	Details	
R	372m SE	Operator: GOODRICH ACTUATION SYSTEMS LTD Installation Name: HUYTON SURFACE TREATMENT EPR/BX4232IA Process: THE MANUFACTURE OF DYESTUFFS, PRINTING INK AND COATING MATERIALS: MANUFACTURING POWDER > 200 T /12 MONTHS Permit Number: BX4232IA Original Permit Number: BX4232IA	EPR Reference: - Issue Date: 27/01/2005 Effective Date: 27/01/2005 Last date noted as effective: 01/07/2021 Status: SUPERCEDED
R	372m SE	Operator: GOODRICH ACTUATION SYSTEMS LTD Installation Name: HUYTON SURFACE TREATMENT EPR/BX4232IA Process: SURFACE TREATING METALS AND PLASTICS; ELECTROLYTIC/CHEMICAL >30 CU M Permit Number: SP3034WK Original Permit Number: BX4232IA	EPR Reference: - Issue Date: - Effective Date: 02/09/2015 Last date noted as effective: 01/07/2021 Status: SURRENDER EFFECTIVE
R	372m SE	Operator: GOODRICH ACTUATION SYSTEMS LTD Installation Name: HUYTON SURFACE TREATMENT EPR/BX4232IA Process: THE MANUFACTURE OF DYESTUFFS, PRINTING INK AND COATING MATERIALS: MANUFACTURING POWDER > 200 T /12 MONTHS Permit Number: SP3034WK Original Permit Number: BX4232IA	EPR Reference: - Issue Date: - Effective Date: 02/09/2015 Last date noted as effective: 01/07/2021 Status: SURRENDER EFFECTIVE
R	372m SE	Operator: GOODRICH ACTUATION SYSTEMS LTD Installation Name: HUYTON SURFACE TREATMENT EPR/BX4232IA Process: SURFACE TREATING METALS AND PLASTICS; ELECTROLYTIC/CHEMICAL >30 CU M Permit Number: XP3937CW Original Permit Number: BX4232IA	EPR Reference: - Issue Date: 20/09/2012 Effective Date: 20/09/2012 Last date noted as effective: 01/07/2021 Status: SUPERCEDED
R	372m SE	Operator: GOODRICH ACTUATION SYSTEMS LTD Installation Name: HUYTON SURFACE TREATMENT EPR/BX4232IA Process: THE MANUFACTURE OF DYESTUFFS, PRINTING INK AND COATING MATERIALS: MANUFACTURING POWDER > 200 T /12 MONTHS Permit Number: XP3937CW Original Permit Number: BX4232IA	EPR Reference: - Issue Date: 20/09/2012 Effective Date: 20/09/2012 Last date noted as effective: 01/07/2021 Status: SUPERCEDED
14	438m NW	Operator: CJ & LM DAVIES LTD Installation Name: THE VINNALS POULTRY SITE Process: INTENSIVE FARMING; > 40,000 POULTRY Permit Number: HP3630DX Original Permit Number: HP3630DX	EPR Reference: - Issue Date: 21/12/2016 Effective Date: 21/12/2016 Last date noted as effective: 01/07/2021 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

10

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 58**

ID	Location	Address	Details	
G	76m W	North West Truck, Unit 22, Wilson Road, Huyton Ind Est, L36 6AJ	Process: Waste Oil Burner 0.4 MW Status: Revoked Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
7	174m NE	Local Asphalt Liverpool (RMC Roadstone), Stretton Way, Huyton Industrial Estate, L36 6JF	Process: Roadstone Coating Processes Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
10	192m NW	Basf Ltd, Ellis Ashton St, Liverpool, L36 6BN	Process: Coating Processes Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
M	197m NE	Tilcon Ltd, Ellis Ashton Street, Liverpool, L36 6BJ	Process: Perlite Processes Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
M	198m NE	Tarmac (Concrete), Ellis Ashton Street, Huyton Industrial Estate, L36 6BJ	Process: Use of Bulk Cement Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
O	278m NW	Knowsley Mbc, Link Rd, Knowsley, L36 6AP	Process: Timber Manufacture Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
S	331m NW	Bicc Connollys Ltd, Ellis Ashton St, Huyton, L36 6BW	Process: Coating Processes Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified



ID	Location	Address	Details	
S	349m NW	Tricolour Printing Brickfields, Huyton Ind Est, Huyton, Liverpool, Merseyside, L33 6HY	Process: Printing Status: Revoked Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
13	413m NW	Mainsway Ltd., Brickfields, Huyton Business Park, Huyton, Merseyside, L36 6HY.	Process: Use of Bulk Cement Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Date of enforcement: No Enforcements Comment: No Enforcements
T	467m S	Tesco, Woodlands Service Station, Cronton Road, Huyton, L35 1QY	Process: Unloading of Petrol into Storage at Service Stations Status: Current 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

15

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 58**

ID	Location	Address	Details	
B	2m E	LINK ROAD COMBINED SEWER OVERFLOW, LINK ROAD, HUYTON, LIVERPOOL, MERSEYSIDE, L36 6AP	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01KNW0009 Permit Version: 4 Receiving Water: LOGWOOD MILL BROOK VIA SWS	Status: VARIED UNDER EPR 2010 Issue date: 13/11/2019 Effective Date: 13/11/2019 Revocation Date: -



ID	Location	Address	Details	
B	5m E	LINK ROAD COMBINED SEWER OVERFLOW, LINK ROAD, HUYTON, LIVERPOOL, MERSEYSIDE, L36 6AP	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01KNW0009 Permit Version: 3 Receiving Water: LOGWOOD MILL BROOK	Status: VARIED UNDER EPR 2010 Issue date: 22/03/2016 Effective Date: 22/03/2016 Revocation Date: 12/11/2019
B	6m NE	LINK ROAD COMBINED SEWER OVERFLOW, LINK ROAD, HUYTON, LIVERPOOL, MERSEYSIDE, L36 6AP	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01KNW0009 Permit Version: 1 Receiving Water: LOGWOOD MILL BROOK	Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: - Effective Date: 01/01/1995 Revocation Date: 02/09/2010
B	6m NE	LINK ROAD COMBINED SEWER OVERFLOW, LINK ROAD, HUYTON, LIVERPOOL, MERSEYSIDE, L36 6AP	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01KNW0009 Permit Version: 2 Receiving Water: LOGWOOD MILL BROOK	Status: VARIED UNDER EPR 2010 Issue date: 03/09/2010 Effective Date: 03/09/2010 Revocation Date: 21/03/2016
C	13m E	WHISTON ECCLESTON COUNCIL CAR PARK, STRETTON WAY, KNOWSLEY, ., ., L36 6JF	Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: EPRWP3724GT Permit Version: 1 Receiving Water: LOGWOOD MILL BROOK	Status: SURRENDERED UNDER EPR 2010 Issue date: 20/09/2012 Effective Date: 25/10/2012 Revocation Date: 13/03/2014
D	17m NE	WHISTON PARK (ECCLESTON PK) CSO, STRETTON WAY, HUYTON, KNOWSLEY, MERSEYSIDE, L36 6JF	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016983003 Permit Version: 3 Receiving Water: LONGWOOD MILL BROOK	Status: VARIED UNDER EPR 2010 Issue date: 23/03/2020 Effective Date: 23/03/2020 Revocation Date: -
D	28m SE	WHISTON PARK (ECCLESTON PK) CSO, STRETTON WAY, HUYTON, KNOWSLEY, MERSEYSIDE, L36 6JF	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016983003 Permit Version: 1 Receiving Water: LONGWOOD MILL BROOK	Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: 08/08/1995 Effective Date: 08/08/1995 Revocation Date: 30/11/2013



ID	Location	Address	Details	
D	28m SE	WHISTON PARK (ECCLESTON PK) CSO, STRETTON WAY, HUYTON, KNOWSLEY, MERSEYSIDE, L36 6JF	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016983003 Permit Version: 2 Receiving Water: LONGWOOD MILL BROOK	Status: VARIED UNDER EPR 2010 Issue date: 29/11/2013 Effective Date: 01/12/2013 Revocation Date: 22/03/2020
C	42m E	BUITONI FOODS LTD, WILSON ROAD, HUYTON, MERSEYSIDE	Effluent Type: TRADE DISCHARGES - COOLING WATER Permit Number: 016990405 Permit Version: 1 Receiving Water: LOGWOOD MILL BROOK	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 13/01/1983 Revocation Date: 24/10/1988
L	211m SE	STRETTON WAY WW NTWK PS, S/O ELECTRIC SUB STATION, STRETTON WAY, LIVERPOOL, MERSEYSIDE, L36 6JF	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: 016982144 Permit Version: 1 Receiving Water: LOGWOOD MILL BROOK	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: - Effective Date: 01/01/1900 Revocation Date: -
L	253m SE	STRETTON WAY WW NTWK PS, S/O ELECTRIC SUB STATION, STRETTON WAY, LIVERPOOL, MERSEYSIDE, L36 6JF	Effluent Type: MISCELLANEOUS DISCHARGES - EMERGENCY DISCHARGES Permit Number: 016990465 Permit Version: 1 Receiving Water: LOGWOOD MILL BROOK	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 04/01/1984 Revocation Date: 30/06/1991
L	253m SE	STRETTON WAY WW NTWK PS, S/O ELECTRIC SUB STATION, STRETTON WAY, LIVERPOOL, MERSEYSIDE, L36 6JF	Effluent Type: MISCELLANEOUS DISCHARGES - EMERGENCY DISCHARGES Permit Number: 016990465 Permit Version: 2 Receiving Water: LOGWOOD MILL BROOK	Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: - Effective Date: 01/07/1991 Revocation Date: 09/06/2016
L	258m SE	STRETTON WAY WW NTWK PS, S/O ELECTRIC SUB STATION, STRETTON WAY, LIVERPOOL, MERSEYSIDE, L36 6JF	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: 016990465 Permit Version: 3 Receiving Water: LOGWOOD MILL BROOK	Status: VARIED UNDER EPR 2010 Issue date: 10/06/2016 Effective Date: 10/06/2016 Revocation Date: -



ID	Location	Address	Details	
11	314m NE	WHISTON VENTURE PARK, KNOWLSLEY, MERSEYSIDE	Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: 016921163 Permit Version: 1 Receiving Water: LOGWOOD MILL BROOK	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 01/11/1994 Revocation Date: 01/11/1994
R	321m SE	WHISTON INDUSTRIAL ESTATE, ELLIS ASHTON STREET, TARBOCK, MERSEYSIDE	Effluent Type: TRADE DISCHARGES - PROCESS EFFLUENT - NOT WATER COMPANY Permit Number: 016990366 Permit Version: 1 Receiving Water: DITTON BROOK	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: - Effective Date: 22/05/1982 Revocation Date: -

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

4.14 Pollutant release to surface waters (Red List)

Records within 500m	0
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Discharges of specified substances under the Environmental Protection (Prescribed Processes and Substances) Regulations 1991.

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

4.15 Pollutant release to public sewer

Records within 500m	0
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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	3
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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 58**

ID	Location	Name	Status	Receiving Water	Authorised Substances
L	242m SE	Lucas Aerospace Ltd	Active	-	-
L	242m SE	Trs Aeronautical Systems	Active	Stw Partcons	Cadmium



ID	Location	Name	Status	Receiving Water	Authorised Substances
R	383m SE	Lucas Aerospace Engine Control Ststems	Active	Stw Partcons	Cadmium, Trichloroethylene

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

4.17 List 2 Dangerous Substances

Records within 500m	0
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Discharges of substances identified on List II of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

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

4.18 Pollution Incidents (EA/NRW)

Records within 500m	12
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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 58**

ID	Location	Details	
E	25m SE	Incident Date: 09/05/2001 Incident Identification: 4977 Pollutant: Other Pollutant Pollutant Description: Other	Water Impact: Category 4 (No Impact) Land Impact: Category 2 (Significant) Air Impact: Category 4 (No Impact)
I	97m NW	Incident Date: 25/06/2003 Incident Identification: 168695 Pollutant: Other Pollutant Pollutant Description: Other	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
I	100m NW	Incident Date: 04/05/2001 Incident Identification: 4382 Pollutant: Other Pollutant Pollutant Description: Other	Water Impact: Category 4 (No Impact) Land Impact: Category 2 (Significant) Air Impact: Category 4 (No Impact)
H	117m N	Incident Date: 10/05/2001 Incident Identification: 5190 Pollutant: Other Pollutant Pollutant Description: Other	Water Impact: Category 4 (No Impact) Land Impact: Category 2 (Significant) Air Impact: Category 4 (No Impact)
H	117m NE	Incident Date: 13/05/2004 Incident Identification: 236347 Pollutant: Other Pollutant Pollutant Description: Other	Water Impact: Category 4 (No Impact) Land Impact: Category 2 (Significant) Air Impact: Category 2 (Significant)

ID	Location	Details	
I	119m NW	Incident Date: 09/05/2001 Incident Identification: 4926 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified	Water Impact: Category 4 (No Impact) Land Impact: Category 2 (Significant) Air Impact: Category 4 (No Impact)
H	121m N	Incident Date: 06/11/2003 Incident Identification: 200290 Pollutant: Other Pollutant Pollutant Description: Other	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
H	122m N	Incident Date: 11/05/2004 Incident Identification: 235941 Pollutant: Other Pollutant Pollutant Description: Other	Water Impact: Category 4 (No Impact) Land Impact: Category 2 (Significant) Air Impact: Category 2 (Significant)
H	130m N	Incident Date: 08/09/2004 Incident Identification: 265261 Pollutant: Other Pollutant Pollutant Description: Other	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
M	246m NE	Incident Date: 27/10/2015 Incident Identification: 1383783 Pollutant: General Biodegradable Materials and Wastes Pollutant Description: Food and Drink	Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
L	257m SE	Incident Date: 22/04/2002 Incident Identification: 74310 Pollutant: Other Pollutant Pollutant Description: Other	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
12	346m NW	Incident Date: 25/02/2003 Incident Identification: 139343 Pollutant: General Biodegradable Materials and Wastes Pollutant Description: Other General Biodegradable Material or Waste	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) 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

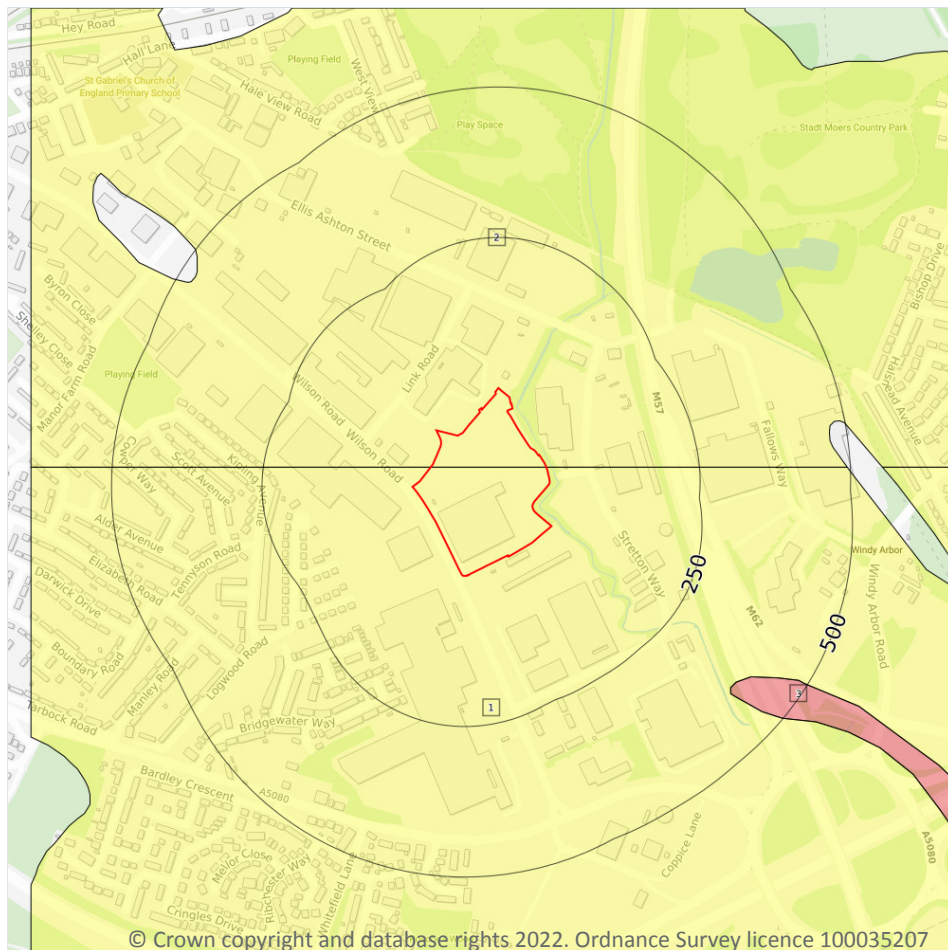
0

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

3

Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on **page 75**

ID	Location	Designation	Description
1	On site	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
2	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

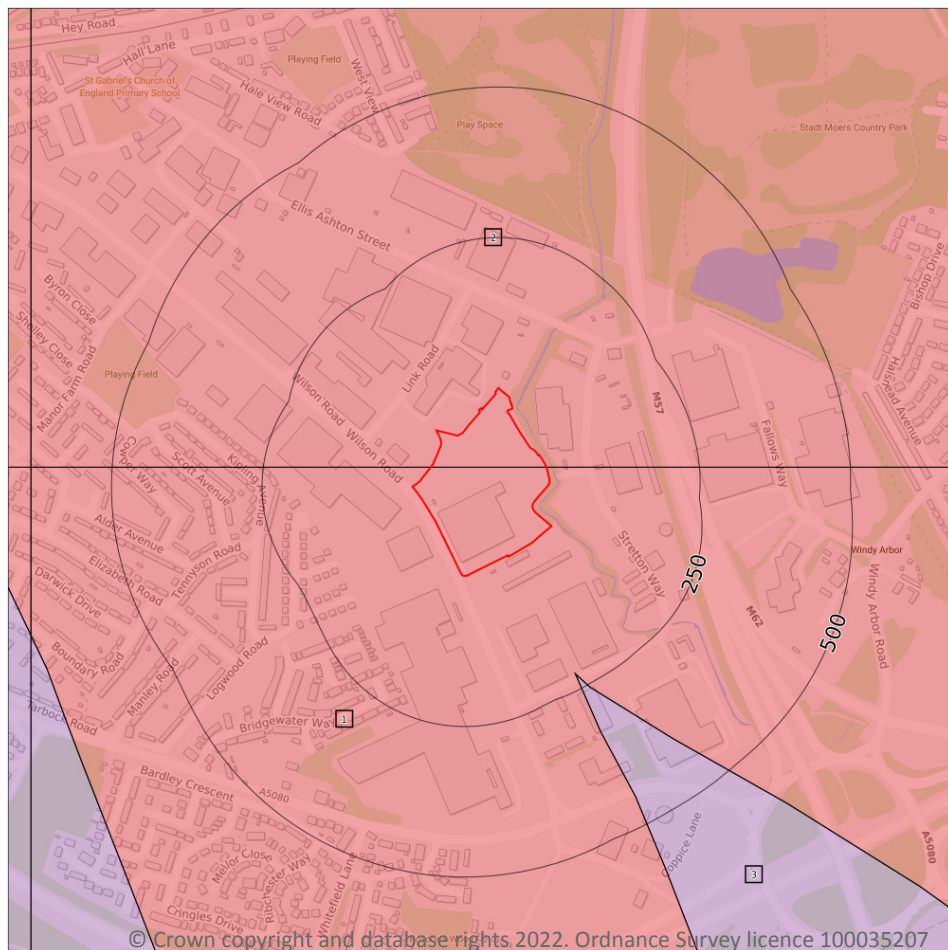


ID	Location	Designation	Description
3	400m SE	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

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



Bedrock aquifer



- Site Outline**
- Search buffers in metres (m)**
- Principal
 - Secondary A
 - Secondary B
 - Secondary Undifferentiated
 - Unproductive

5.2 Bedrock aquifer

Records within 500m

3

Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on **page 77**

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
2	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

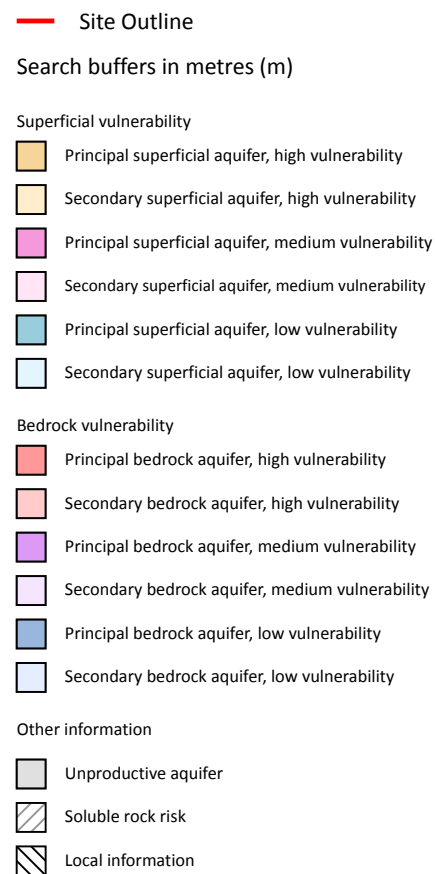
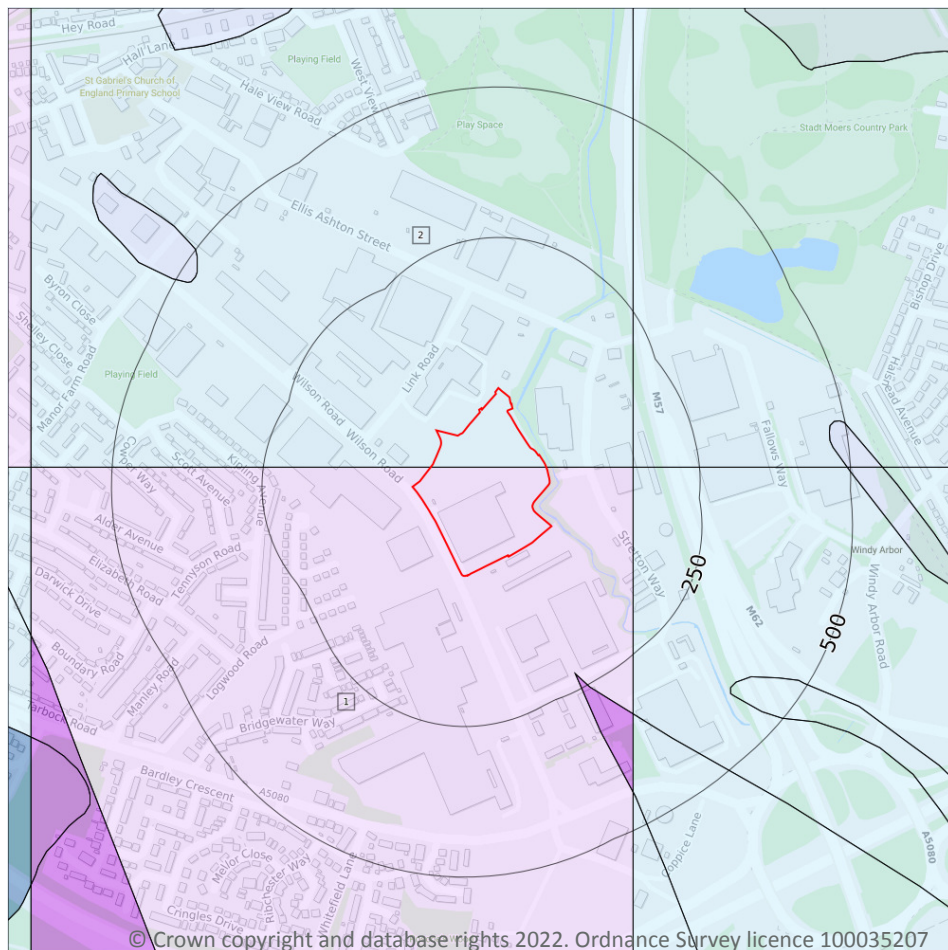


ID	Location	Designation	Description
3	224m SE	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers

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



Groundwater vulnerability



5.3 Groundwater vulnerability

Records within 50m

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 79**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Secondary bedrock aquifer - Medium 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: <3m Patchiness value: <90% Recharge potential: Low	Vulnerability: Medium 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: <3m 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
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

3

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

Features are displayed on the Abstractions and Source Protection Zones map on **page 81**



ID	Location	Details	
-	1967m SW	Status: Historical Licence No: 2569028012 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: "BOREHOLES (3) AT NETHERLEY PUMPING STATION, LIVERPOOL" Data Type: Point Name: UNITED UTILITIES WATER PLC Easting: 344600 Northing: 388200	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 23/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 01/09/2001 Version End Date: -
-	1967m SW	Status: Historical Licence No: 2569028012 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: BOREHOLES (3) AT NETHERLEY PUMPING STATION, LIVERPOOL Data Type: Point Name: UNITED UTILITIES WATER PLC Easting: 344600 Northing: 388200	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 23/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 01/09/2001 Version End Date: -
-	1967m SW	Status: Active Licence No: 2569028012 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: BOREHOLES X 3 AT NETHERLEY PUMPING STATION LIVERPOOL Data Type: Point Name: United Utilities Water Ltd Easting: 344600 Northing: 388200	Annual Volume (m ³): 4,127,000 Max Daily Volume (m ³): 11,400 Original Application No: - Original Start Date: 23/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 01/09/2001 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m

4

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 81**



ID	Location	Details	
-	1084m SE	Status: Historical Licence No: 2569028018 Details: Spray Irrigation - Direct Direct Source: "Surface, Non-Tidal - North West Region" Point: "OCHRE & DOG CLOG BRKS, TARBOCK HALL FARM, TARBOCK, PRESCOT" Data Type: Line Name: T H CRITCHLEY & SON Easting: 346600 Northing: 389100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 13/05/1976 Expiry Date: - Issue No: 100 Version Start Date: 01/04/1993 Version End Date: -
-	1084m SE	Status: Historical Licence No: 2569028018 Details: Spray Irrigation - Direct Direct Source: Surface, Non-Tidal - North West Region Point: OCHRE & DOG CLOG BRKS, TARBOCK HALL FARM, TARBOCK, PRESCOT Data Type: Line Name: T H CRITCHLEY & SON Easting: 346600 Northing: 389100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 13/05/1976 Expiry Date: - Issue No: 100 Version Start Date: 01/04/1993 Version End Date: -
-	1084m SE	Status: Historical Licence No: 2569028018 Details: Spray Irrigation - Direct Direct Source: Surface, Non-Tidal - North West Region Point: OCHRE AND DOG CLOG BROOKS TARBOCK HALL FARM PRESCOT Data Type: Line Name: T H CRITCHLEY & SON Easting: 346600 Northing: 389100	Annual Volume (m ³): 2098 Max Daily Volume (m ³): 636 Original Application No: - Original Start Date: 13/05/1976 Expiry Date: - Issue No: 100 Version Start Date: 01/04/1993 Version End Date: -
-	1379m S	Status: Active Licence No: 2569028018 Details: Spray Irrigation - Direct Direct Source: Surface, Non-Tidal - North West Region Point: OCHRE AND DOG CLOG BROOKS TARBOCK HALL FARM PRESCOT Data Type: Line Name: BELPOOL DEVELOPMENTS LTD Easting: 346400 Northing: 388600	Annual Volume (m ³): 2,098 Max Daily Volume (m ³): 636 Original Application No: - Original Start Date: 13/05/1976 Expiry Date: - Issue No: 102 Version Start Date: 31/01/2011 Version End Date: -

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



5.8 Potable abstractions

Records within 2000m

3

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

Features are displayed on the Abstractions and Source Protection Zones map on **page 81**

ID	Location	Details	
-	1967m SW	Status: Historical Licence No: 2569028012 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: "BOREHOLES (3) AT NETHERLEY PUMPING STATION, LIVERPOOL" Data Type: Point Name: UNITED UTILITIES WATER PLC Easting: 344600 Northing: 388200	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 23/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 01/09/2001 Version End Date: -
-	1967m SW	Status: Historical Licence No: 2569028012 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: BOREHOLES (3) AT NETHERLEY PUMPING STATION, LIVERPOOL Data Type: Point Name: UNITED UTILITIES WATER PLC Easting: 344600 Northing: 388200	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 23/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 01/09/2001 Version End Date: -
-	1967m SW	Status: Active Licence No: 2569028012 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: BOREHOLES X 3 AT NETHERLEY PUMPING STATION LIVERPOOL Data Type: Point Name: United Utilities Water Ltd Easting: 344600 Northing: 388200	Annual Volume (m ³): 4,127,000 Max Daily Volume (m ³): 11,400 Original Application No: - Original Start Date: 23/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 01/09/2001 Version End Date: -

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



5.9 Source Protection Zones

Records within 500m**1**

Source Protection Zones define the sensitivity of an area around a potable abstraction site to contamination. Features are displayed on the Abstractions and Source Protection Zones map on **page 81**

ID	Location	Type	Description
1	226m SE	3	Total catchment

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

5.10 Source Protection Zones (confined aquifer)

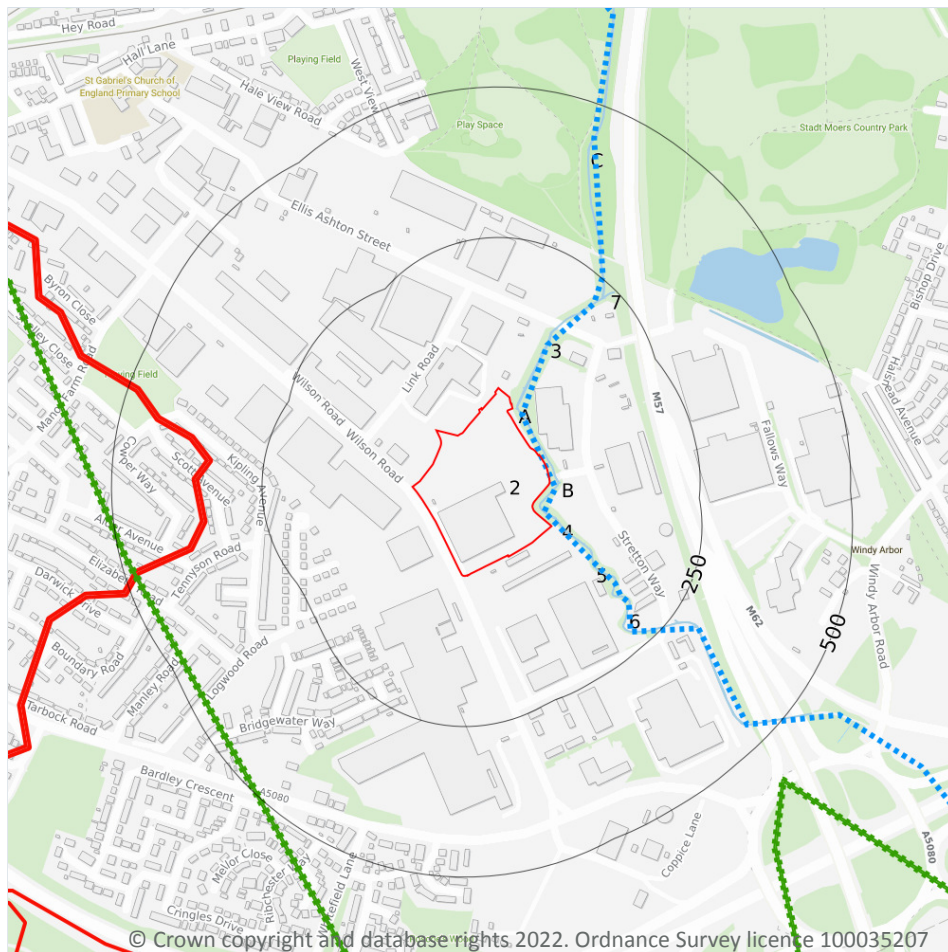
Records within 500m**0**

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

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



6 Hydrology



- Site Outline
- Search buffers in metres (m)
- Water Network (OS MasterMap)
- Surface water features (wider than 5m)
- Surface water features (narrower than 5m)
- WFD River, canal and surface water transfer water bodies
- WFD Lake water bodies
- WFD Transitional and coastal water bodies
- WFD Surface water body catchments boundaries
- WFD Groundwater body boundaries

6.1 Water Network (OS MasterMap)

Records within 250m

9

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 86**

ID	Location	Type of water feature	Ground level	Permanence	Name
A	5m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-



ID	Location	Type of water feature	Ground level	Permanence	Name
A	7m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Logwood Mill Brook
3	8m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Logwood Mill Brook
4	9m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Logwood Mill Brook
B	14m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
5	97m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
6	98m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Logwood Mill Brook
7	225m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	225m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Logwood Mill Brook

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m

2

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 86**

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 86**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
2	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 86**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
1	On site	River	Prescot Brook (Logwood Mill Brook)	<u>GB112069060710</u>	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 86**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
A	On site	Sankey and Glaze Carboniferous aquifers	<u>GB41202G100100</u>	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

8

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 90**



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

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

7.2 Historical Flood Events

Records within 250m	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 90**

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.

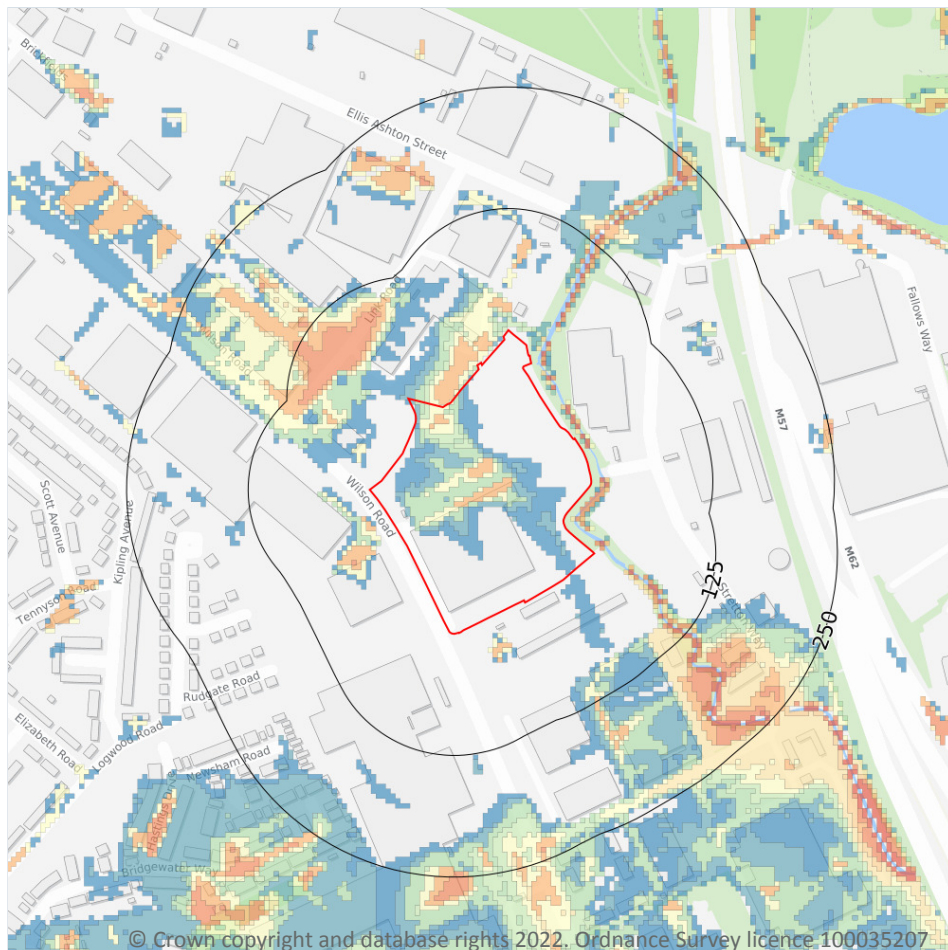
Features are displayed on the River and coastal flooding map on **page 90**

Location	Type
On site	Zone 3 - (Fluvial Models)

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



8 Surface water flooding



— Site Outline

Search buffers in metres (m)

1 in 1000 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 250 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 100 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 30 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

8.1 Surface water flooding

Highest risk on site

1 in 30 year, 0.1m - 0.3m

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 94**

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

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

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

This data is sourced from Ambiantal 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

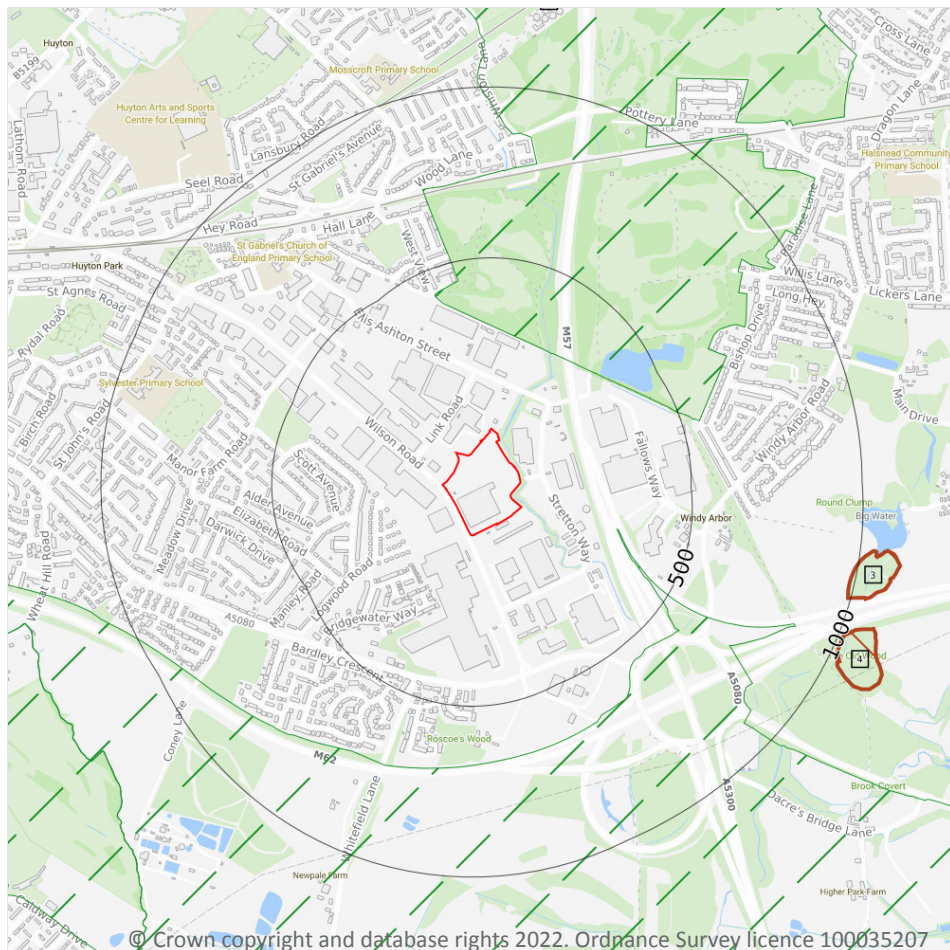
Low

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 96**

This data is sourced from Ambiantal Risk Analytics.

10 Environmental designations



- 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 97**

ID	Location	Name	Woodland Type
3	986m E	The Old Wood	Ancient & Semi-Natural Woodland
4	1015m E	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**4**

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

Features are displayed on the Environmental designations map on **page 97**

ID	Location	Name	Local Authority name
1	275m NE	Merseyside and Greater Manchester	Knowsley
2	288m E	Merseyside and Greater Manchester	Knowsley
5	1247m SW	Merseyside and Greater Manchester	Liverpool
-	1931m 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

4

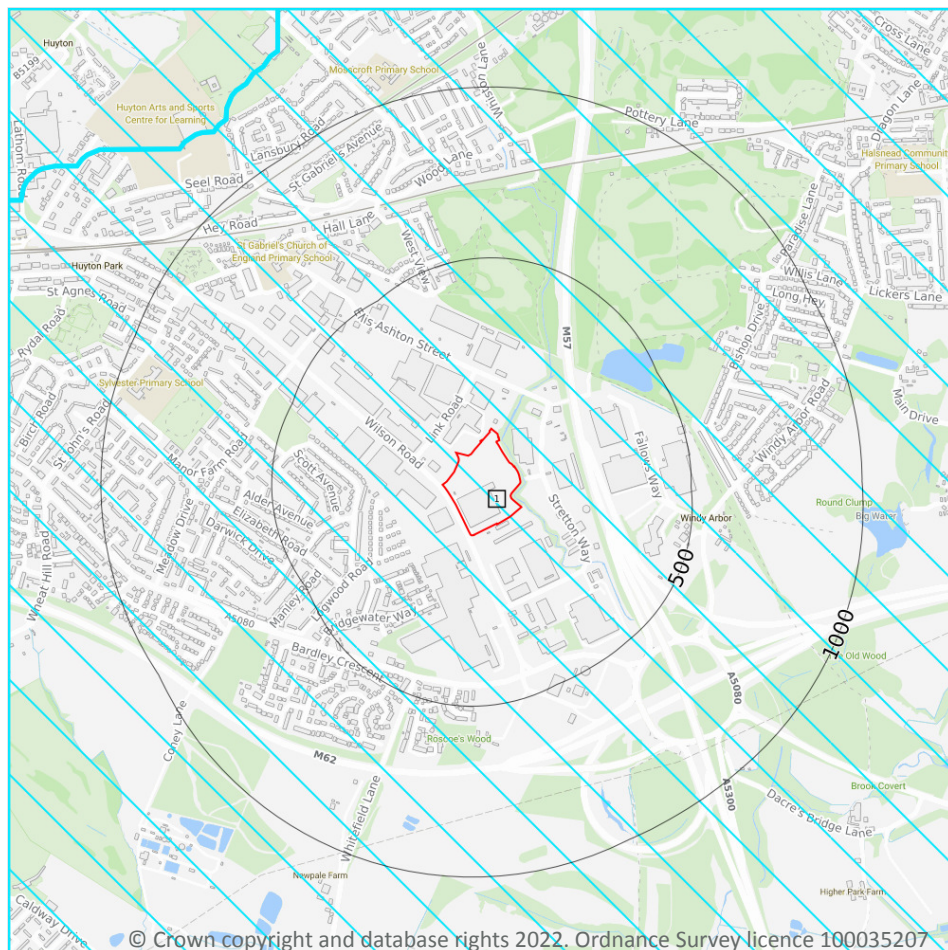
Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

Location	Name	Type	NVZ ID	Status
On site	Dittton Brook (Halewood to Mersey Estuary) NVZ	Surface Water	S640	Existing
835m N	ALT NVZ	Surface Water	S642	Existing
1542m W	Dittton Brook (Halewood to Mersey Estuary) NVZ	Surface Water	S640	Existing
1666m NW	ALT NVZ	Surface Water	S642	Existing

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



SSSI Impact Zones and Units



- Site Outline
- Search buffers in metres (m)
- ▨ SSSI Impact Risk Zones
- SSSI Units
- Not recorded
- Favourable
- Unfavourable - Recovering
- Unfavourable - No change
- Unfavourable - Declining
- Partially destroyed
- Destroyed

10.17 SSSI Impact Risk Zones

Records on site

1

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

Features are displayed on the SSSI Impact Zones and Units map on **page 102**

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

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

11 Visual and cultural designations

11.1 World Heritage Sites

Records within 250m

0

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

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

11.2 Area of Outstanding Natural Beauty

Records within 250m

0

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

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

11.3 National Parks

Records within 250m

0

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

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

11.4 Listed Buildings

Records within 250m

0

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



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

11.5 Conservation Areas

Records within 250m

0

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

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

11.6 Scheduled Ancient Monuments

Records within 250m

0

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

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

11.7 Registered Parks and Gardens

Records within 250m

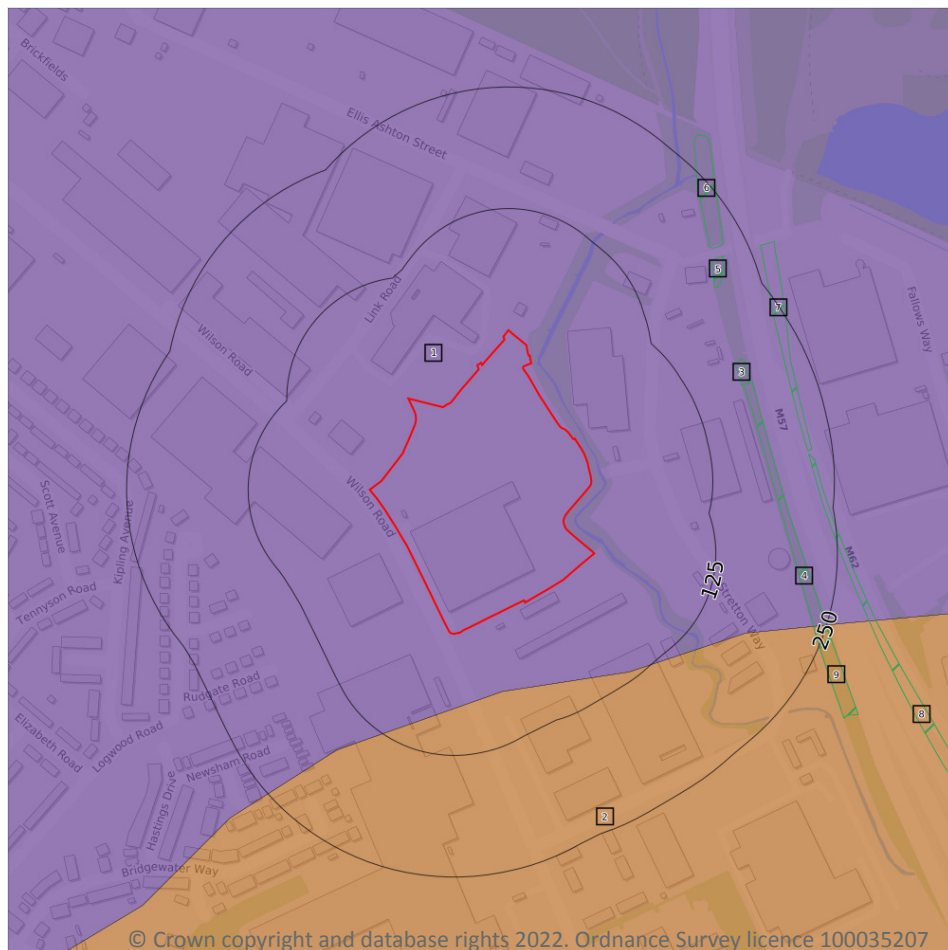
0

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

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



12 Agricultural designations



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

12.1 Agricultural Land Classification

Records within 250m

2

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

Features are displayed on the Agricultural designations map on **page 106**

ID	Location	Classification	Description
1	On site	Urban	-

ID	Location	Classification	Description
2	72m S	Grade 2	Very good quality agricultural land. Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural and horticultural crops can usually be grown but on some land in the grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1.

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	7
----------------------------	----------

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 106**

ID	Location	Description	Reference	Application date
3	177m NE	Selective Fell/Thin (Unconditional)	018/366/15-16	-
4	178m E	Selective Fell/Thin (Unconditional)	018/366/15-16	-
5	202m E	Selective Fell/Thin (Unconditional)	018/366/15-16	-
6	213m NE	Selective Fell/Thin (Unconditional)	018/366/15-16	-
7	221m E	Selective Fell/Thin (Unconditional)	018/366/15-16	-
8	225m E	Selective Fell/Thin (Unconditional)	018/366/15-16	-
9	242m E	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

2

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 109**

ID	Location	Main Habitat	Other habitats
1	174m E	No main habitat but additional habitats present	Additional: DWOOD (INV 50%)
3	228m E	No main habitat but additional habitats present	Additional: DWOOD (INV 50%)

This data is sourced from Natural England.



13.2 Habitat Networks

Records within 250m

0

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

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m

1

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

Features are displayed on the Habitat designations map on **page 109**

ID	Location	Site reference	Identification confidence	Primary source	Secondary source	Tertiary source
2	213m W	NLUD Ref: 430500009	Low	National Land Use Database - Previously Developed Land	UK Perspectives Aerial Photography	-

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

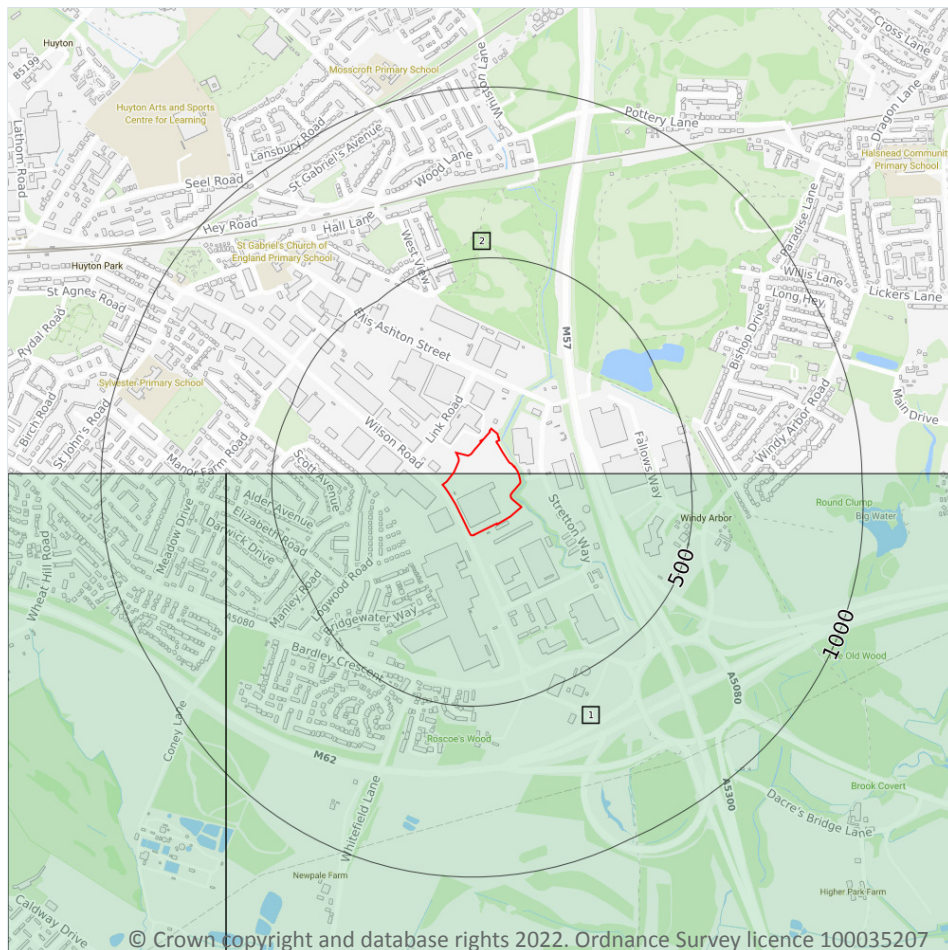
Records within 250m

0

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

This data is sourced from Natural England.

14 Geology 1:10,000 scale - Availability



— Site Outline
Search buffers in metres (m)

- Full coverage
- Partial coverage
- No coverage

14.1 10k Availability

Records within 500m

2

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 111**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	No coverage	Full	Full	No coverage	SJ48NE
2	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

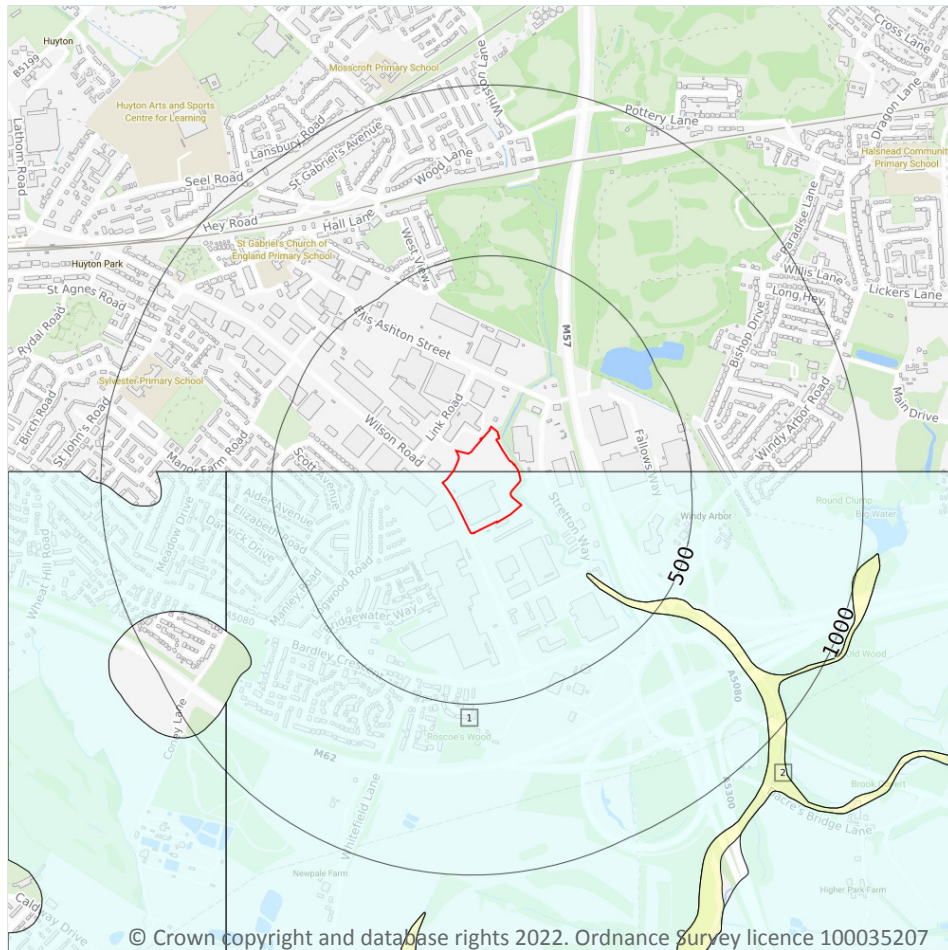
0

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



Site Outline

Search buffers in metres (m)

Landslip (10k)

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

14.3 Superficial geology (10k)

Records within 500m

2

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

Features are displayed on the Geology 1:10,000 scale - Superficial map on **page 113**

ID	Location	LEX Code	Description	Rock description
1	On site	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
2	278m SE	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel

This data is sourced from the British Geological Survey.



14.4 Landslip (10k)

Records within 500m

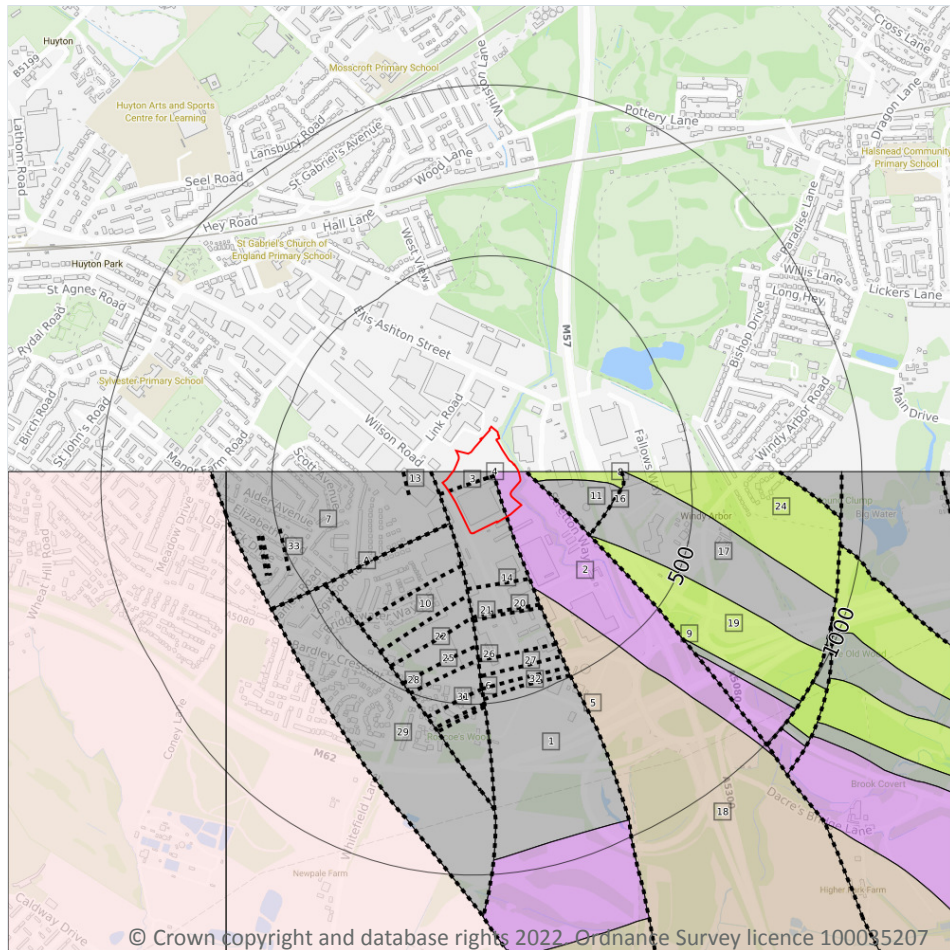
0

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

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Bedrock



— Site Outline

Search buffers in metres (m)

.... Bedrock faults and other linear features (10k)

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

14.5 Bedrock geology (10k)

Records within 500m

11

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

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 115**

ID	Location	LEX Code	Description	Rock age
1	On site	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsvian Sub-age - Duckmantian Sub-age
2	On site	ETM-MDSC	Etruria Formation - Mudstone, Sandstone And Conglomerate	Westphalian Age

ID	Location	LEX Code	Description	Rock age
7	20m W	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
8	21m E	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
10	43m SW	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
11	47m E	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
17	219m SE	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
18	220m SE	KNSF-SDST	Kinnerton Sandstone Formation - Sandstone	Early Triassic Epoch
19	223m SE	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
24	303m E	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
29	423m SW	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovia Sub-age - Duckmantian Sub-age

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m

24

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.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 115**

ID	Location	Category	Description
3	On site	ROCK	Coal seam, inferred (None)
4	On site	ROCK	Coal seam, observed (None)
5	On site	FAULT	Normal fault, inferred; crossmarks on downthrow side
6	20m W	FAULT	Normal fault, inferred; crossmarks on downthrow side
9	21m E	FAULT	Normal fault, inferred; crossmarks on downthrow side
A	43m SW	FAULT	Normal fault, inferred; crossmarks on downthrow side

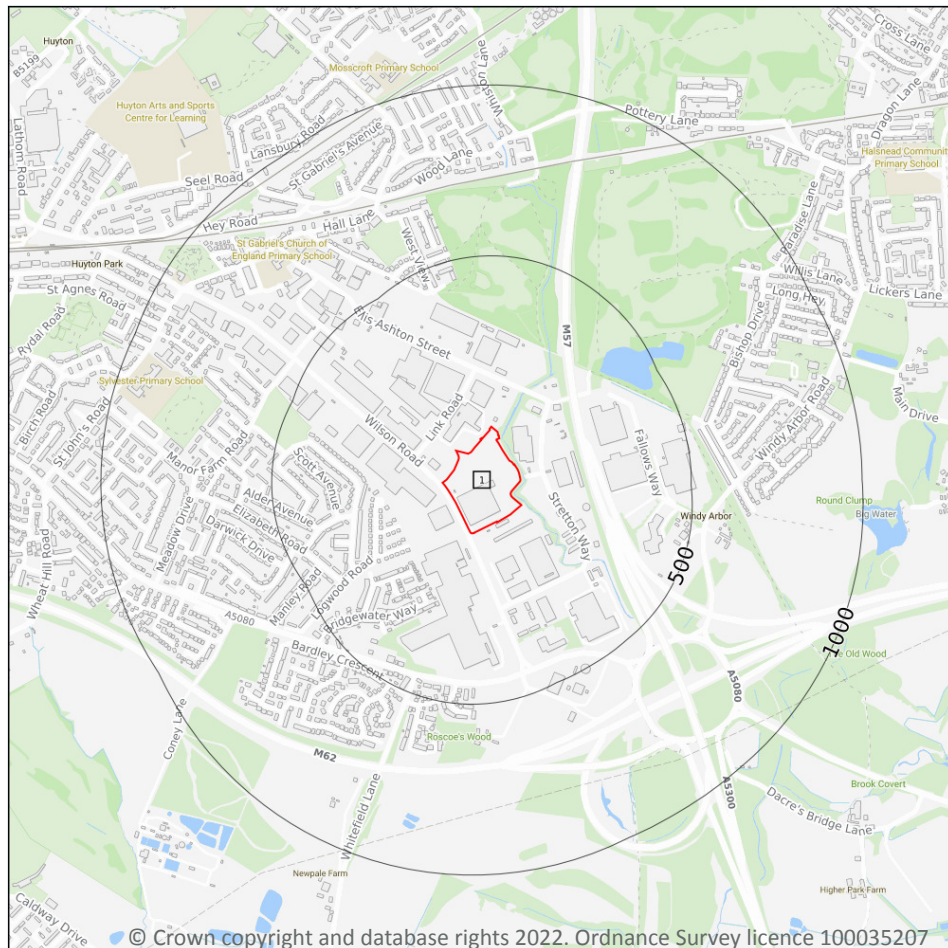


ID	Location	Category	Description
A	43m SW	FAULT	Normal fault, inferred; crossmarks on downthrow side
12	99m S	ROCK	Coal seam, inferred (None)
13	104m W	ROCK	Coal seam, inferred (None)
14	158m S	ROCK	Coal seam, inferred (None)
15	182m S	ROCK	Coal seam, inferred (None)
16	219m SE	FAULT	Normal fault, observed; crossmark on downthrow side
20	239m S	ROCK	Coal seam, inferred (None)
21	240m S	ROCK	Coal seam, inferred (None)
22	247m S	ROCK	Coal seam, inferred (None)
23	250m S	ROCK	Coal seam, inferred (None)
25	329m S	ROCK	Coal seam, inferred (None)
26	369m S	ROCK	Coal seam, inferred (None)
27	412m S	ROCK	Coal seam, inferred (None)
28	423m SW	FAULT	Normal fault, inferred; crossmarks on downthrow side
30	446m S	ROCK	Coal seam, inferred (None)
31	457m S	ROCK	Coal seam, inferred (None)
32	468m S	ROCK	Coal seam, inferred (None)
33	495m W	ROCK	Coal seam, observed (None)

This data is sourced from the British Geological Survey.



15 Geology 1:50,000 scale - Availability



— Site Outline

Search buffers in metres (m)

□ Geological map tile

15.1 50k Availability

Records within 500m

1

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

Features are displayed on the Geology 1:50,000 scale - Availability map on **page 118**

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

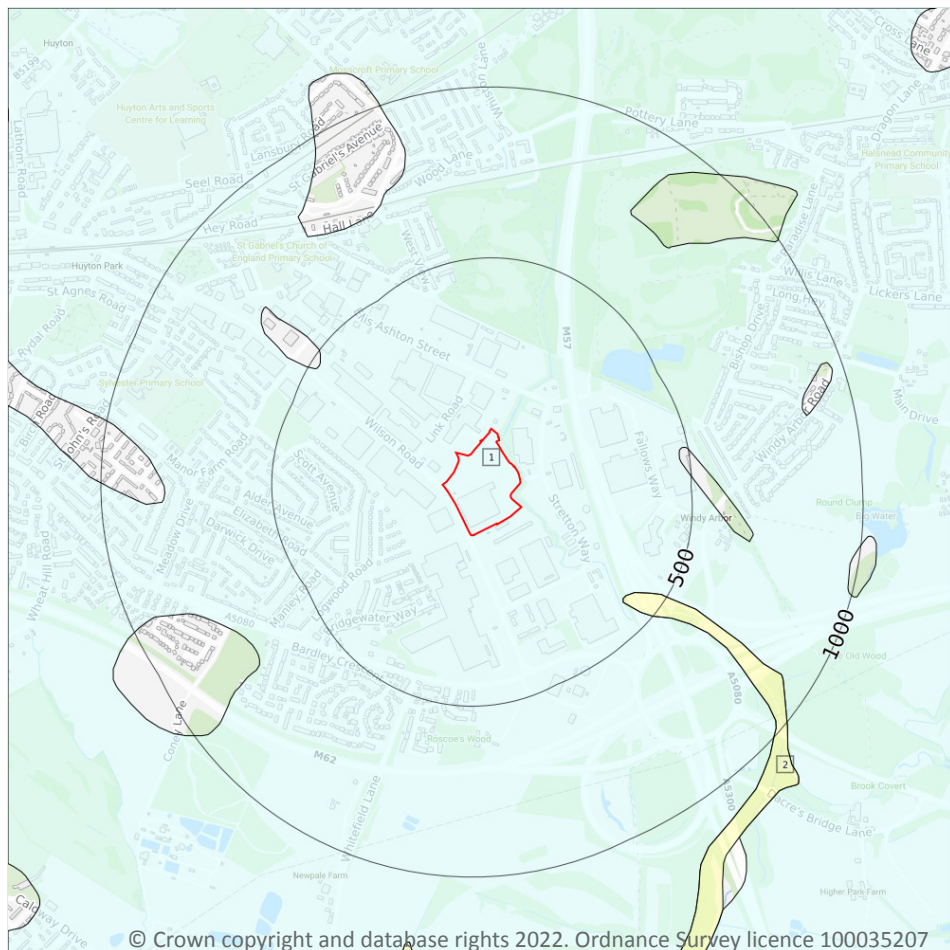
0

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

2

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

Features are displayed on the Geology 1:50,000 scale - Superficial map on **page 120**

ID	Location	LEX Code	Description	Rock description
1	On site	TILLD-DMTN	TILL, DEVANSIAN	DIAMICTON
2	400m SE	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL

This data is sourced from the British Geological Survey.



15.5 Superficial permeability (50k)

Records within 50m**2**

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

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

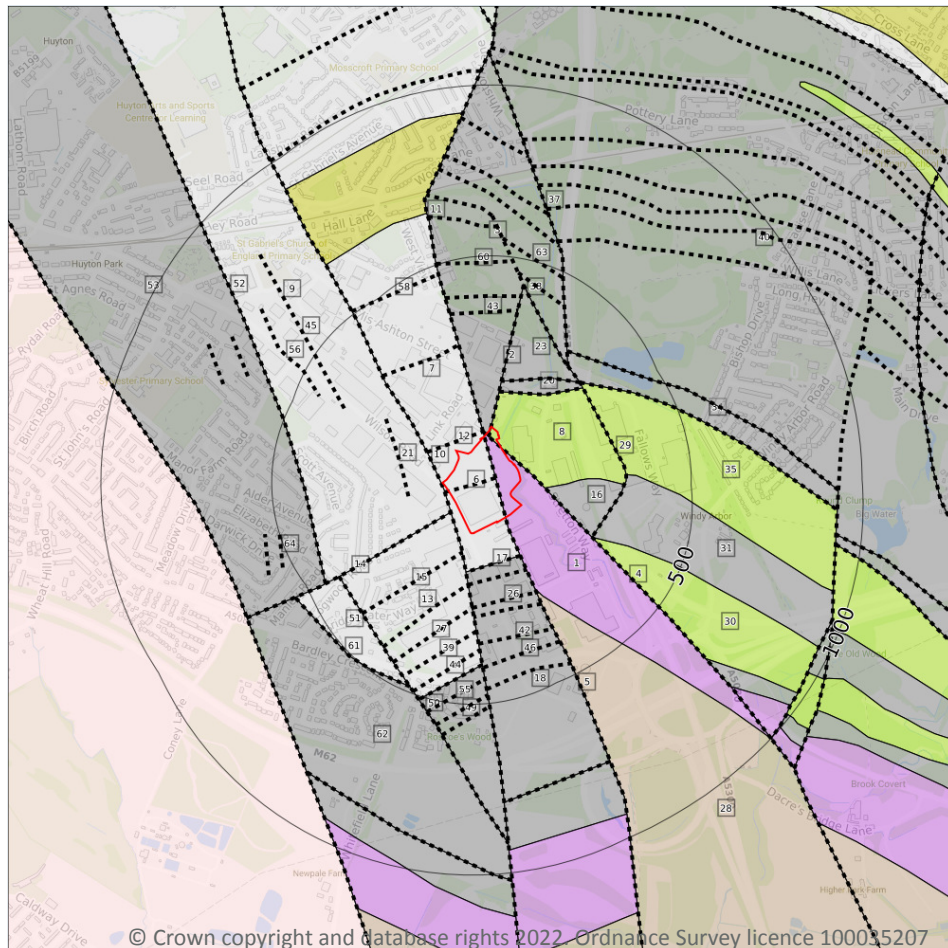
Records within 50m**0**

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

20

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 122**

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



ID	Location	LEX Code	Description	Rock age
7	On site	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
8	On site	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
9	4m SW	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
13	25m SW	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
16	75m E	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
18	103m S	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
20	105m N	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
23	137m N	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
28	224m SE	KNSF-SDST	KINNERTON SANDSTONE FORMATION - SANDSTONE	-
30	227m SE	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
31	227m SE	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
34	280m NE	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
35	280m NE	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
40	312m NE	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
49	385m S	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
51	394m SW	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
53	398m W	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
62	483m SW	PMCM-MDSS	PENNINE MIDDLE 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

7

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
On site	Fracture	High	Moderate
On site	Fracture	Moderate	Low
On site	Fracture	Moderate	Low
On site	Fracture	Moderate	Low
28m E	Fracture	High	Moderate

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m

44

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 122**

ID	Location	Category	Description
2	On site	FAULT	Fault, inferred
4	On site	FAULT	Fault, inferred
5	On site	FAULT	Fault, inferred
6	On site	ROCK	Coal seam, inferred
10	4m SW	FAULT	Fault, inferred
11	12m NW	FAULT	Fault, inferred, displacement unknown
12	12m NW	ROCK	Coal seam, inferred
14	25m SW	FAULT	Fault, inferred



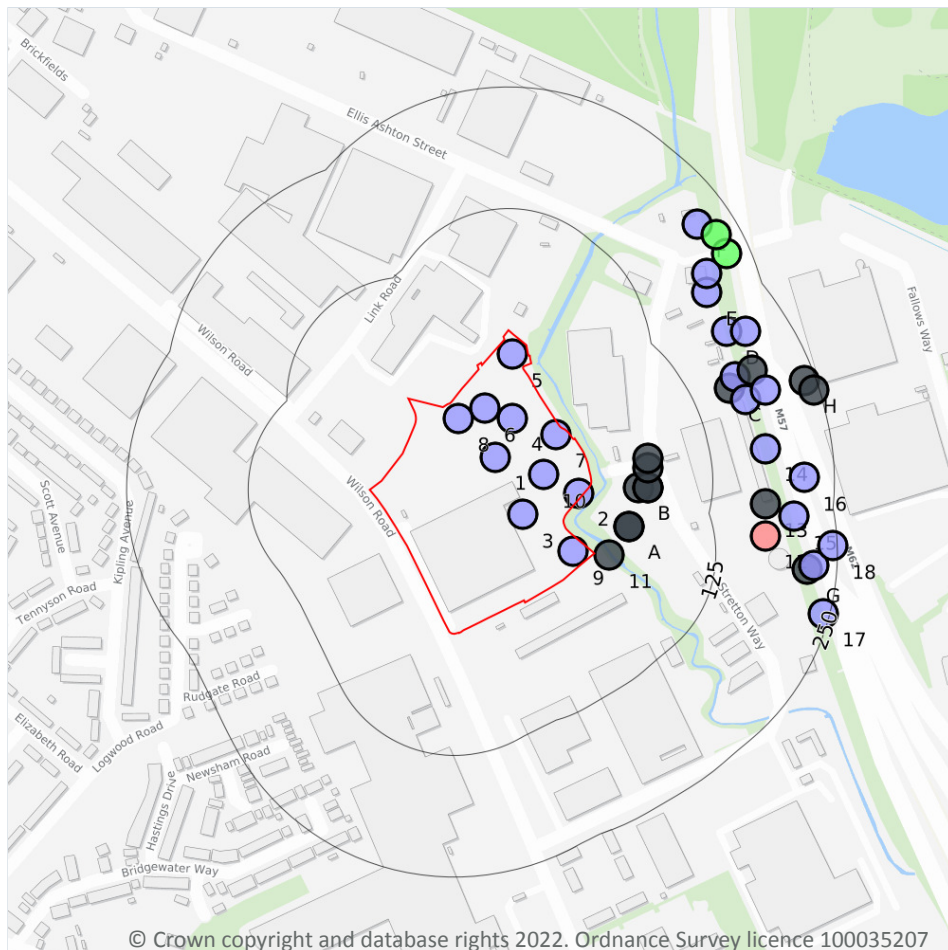
ID	Location	Category	Description
15	62m SW	ROCK	Coal seam, inferred
17	103m S	FOSSIL_HORIZON	Marine band
19	105m N	ROCK	Coal seam, inferred
21	106m W	ROCK	Coal seam, inferred
22	137m N	FOSSIL_HORIZON	Marine band
24	142m S	ROCK	Coal seam, inferred
25	151m S	ROCK	Coal seam, inferred
26	211m S	ROCK	Coal seam, inferred
27	218m S	ROCK	Coal seam, inferred
29	227m SE	FAULT	Fault, observed
32	240m S	ROCK	Coal seam, inferred
33	256m NW	ROCK	Coal seam, inferred
36	282m NE	ROCK	Coal seam, inferred
37	282m NE	FAULT	Fault, observed
38	282m NE	FAULT	Fault, observed
39	287m S	ROCK	Coal seam, inferred
41	312m NE	FOSSIL_HORIZON	Marine band
42	321m S	ROCK	Coal seam, inferred
43	336m N	ROCK	Coal seam, inferred
44	342m S	ROCK	Coal seam, inferred
45	350m W	FAULT	Fault, inferred
46	379m S	ROCK	Coal seam, inferred
47	382m N	ROCK	Coal seam, inferred
48	385m S	FOSSIL_HORIZON	Marine band
50	394m SW	FAULT	Fault, inferred, displacement unknown
52	398m W	FOSSIL_HORIZON	Marine band
54	411m NE	ROCK	Coal seam, inferred
55	428m S	ROCK	Coal seam, inferred

ID	Location	Category	Description
56	431m W	FAULT	Fault, inferred, displacement unknown
57	435m S	ROCK	Coal seam, inferred
58	470m NW	ROCK	Coal seam, inferred
59	475m S	ROCK	Coal seam, inferred
60	481m N	ROCK	Coal seam, inferred
61	483m SW	FOSSIL_HORIZON	Marine band
63	483m NE	ROCK	Coal seam, inferred
64	499m W	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

41

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 127**

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	On site	345763 390001	WILSON ROAD HUYTON TP1	3.6	N	15641352
2	On site	345848 389964	WILSON ROAD HUYTON TP6	3.1	N	15641366
3	On site	345791 389942	WILSON ROAD HUYTON TP8	2.9	N	15641376



ID	Location	Grid reference	Name	Length	Confidential	Web link
4	On site	345780 390041	WILSON ROAD HUYTON TP4	3.1	N	15641360
5	On site	345780 390107	WILSON ROAD HUYTON TP3	3.0	N	15641358
6	On site	345752 390051	WILSON ROAD HUYTON TP10	3.05	N	15641364
7	On site	345825 390024	WILSON ROAD HUYTON TP5	3.0	N	15641362
8	On site	345725 390041	WILSON ROAD HUYTON TP2	3.3	N	15641356
9	On site	345843 389904	WILSON ROAD HUYTON TP7	3.05	N	15641375
10	On site	345812 389983	WILSON ROAD HUYTON TP9	3.1	N	15641377
11	16m E	345880 389900	W E P OVERFLOW IMPROVEMENT SITE HUYTON 4	-	Y	N/A
A	45m NE	345900 389930	W E P OVERFLOW IMPROVEMENT SITE HUYTON 3A	-	Y	N/A
A	45m NE	345900 389930	W E P OVERFLOW IMPROVEMENT SITE HUYTON 3	-	Y	N/A
B	49m E	345910 389970	W E P OVERFLOW IMPROVEMENT SITE HUYTON TP 2	-	Y	N/A
B	59m E	345920 389970	W E P OVERFLOW IMPROVEMENT SITE HUYTON 2	-	Y	N/A
B	59m E	345920 389970	W E P OVERFLOW IMPROVEMENT SITE HUYTON 2A	-	Y	N/A
B	60m E	345920 389990	W E P OVERFLOW IMPROVEMENT SITE HUYTON TP 1	-	Y	N/A
B	62m E	345920 390000	W E P OVERFLOW IMPROVEMENT SITE HUYTON 1	-	Y	N/A
C	164m NE	346003 390072	M62 J6 Ground Investigation BW3	-	Y	N/A
C	174m NE	346009 390084	MER 0153 STRETTON WAY LIVERPOOL 1	2.6	N	20236915
C	175m E	346020 390060	M62 IMPROVEMENT JUNCTION 6 TO 7	4.0	N	165868
12	177m E	346040 389920	TARBOCK COLLIERY	57.91	N	164201
13	180m E	346040 389953	M62 J6 Ground Investigation BW4	-	Y	N/A
14	182m E	346040 390010	M62 IMPROVEMENT JUNCTION 6 TO 7	3.5	N	165869
D	191m NE	346000 390130	M62 IMPROVEMENT JUNCTION 6 TO 7	3.7	N	165867
C	193m NE	346027 390090	M62 J6 Ground Investigation WS1	-	Y	N/A
E	193m E	345980 390170	M62 IMPROVEMENT JUNCTION 6 TO 7	9.1	N	165862

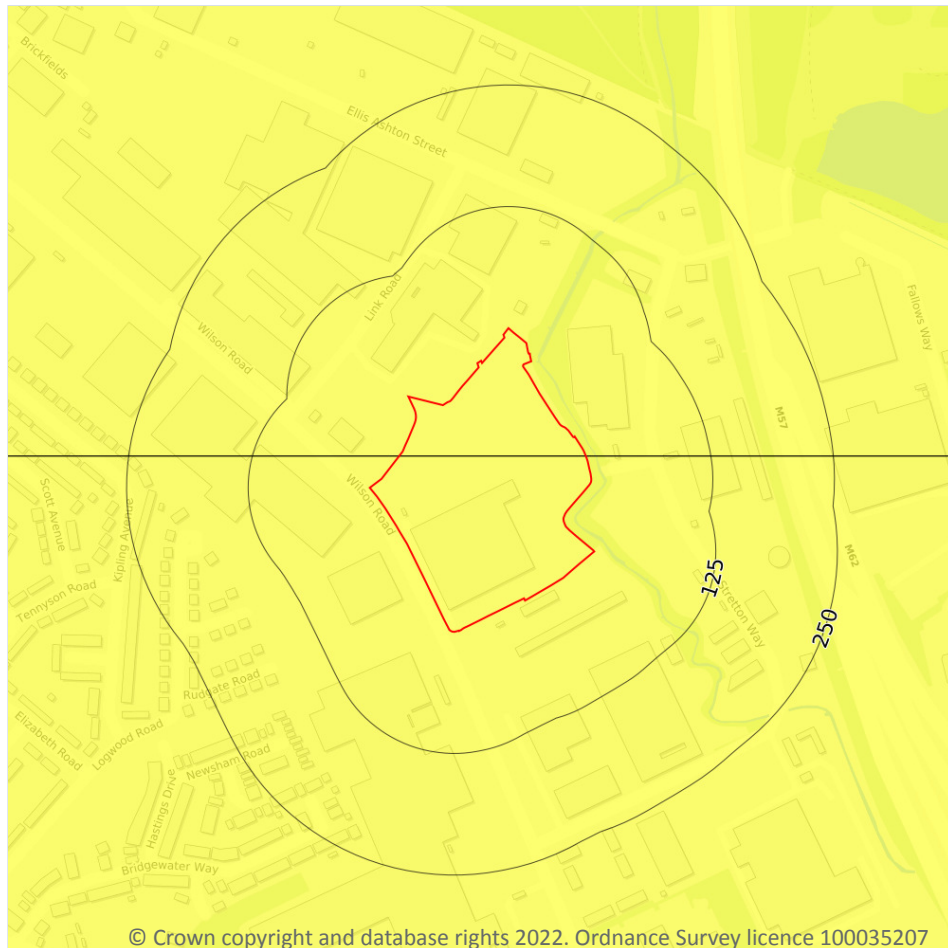


ID	Location	Grid reference	Name	Length	Confidential	Web link
C	197m E	346040 390070	M62 IMPROVEMENT JUNCTION 6 TO 7	4.3	N	165864
E	200m E	345980 390190	M62 IMPROVEMENT JUNCTION 6 TO 7	3.7	N	165866
D	207m NE	346020 390130	M62 IMPROVEMENT JUNCTION 6 TO 7	5.09	N	165863
15	209m E	346070 389940	M62 IMPROVEMENT JUNCTION 6 TO 7	2.5	N	164108
F	215m NE	345970 390240	M62 IMPROVEMENT JUNCTION 6 TO 7	3.8	N	165865
16	219m E	346080 389980	M62 IMPROVEMENT JUNCTION 6 TO 7	3.91	N	164064
G	219m E	346083 389886	M62 J6 Ground Investigation WS2	-	Y	N/A
F	226m NE	346000 390210	M62 IMPROVEMENT JUNCTION 6 TO 7	19.57	N	165861
G	226m E	346090 389890	M62 IMPROVEMENT JUNCTION 6 TO 7	3.5	N	164109
F	226m NE	345990 390230	M62 IMPROVEMENT JUNCTION 6 TO 7	14.0	N	165860
H	238m E	346080 390080	WHISTON ENTERPRISE PARK HUYTON TP3	-	Y	N/A
17	244m E	346100 389840	M62 IMPROVEMENT JUNCTION 6 TO 7	3.5	N	164110
H	244m E	346090 390070	WHISTON ENTERPRISE PARK HUYTON 3	-	Y	N/A
18	246m E	346110 389910	M62 IMPROVEMENT JUNCTION 6 TO 7	5.0	N	164065

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).

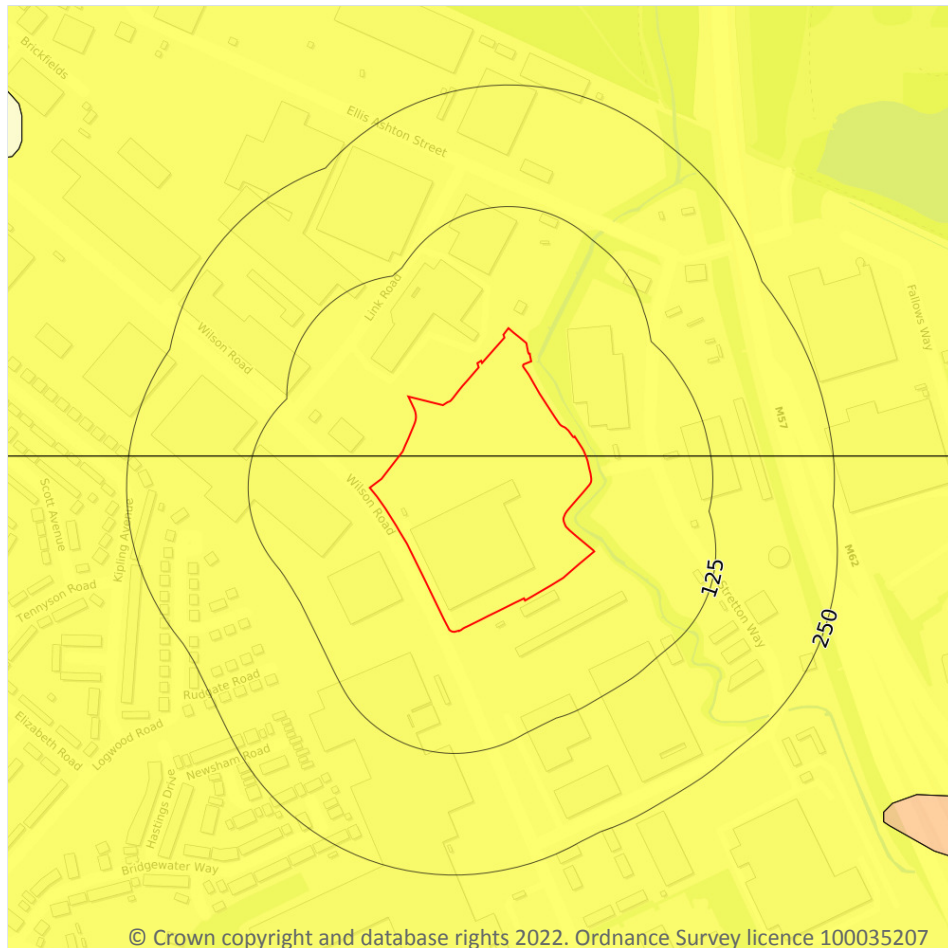
Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 130**

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 131**

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.

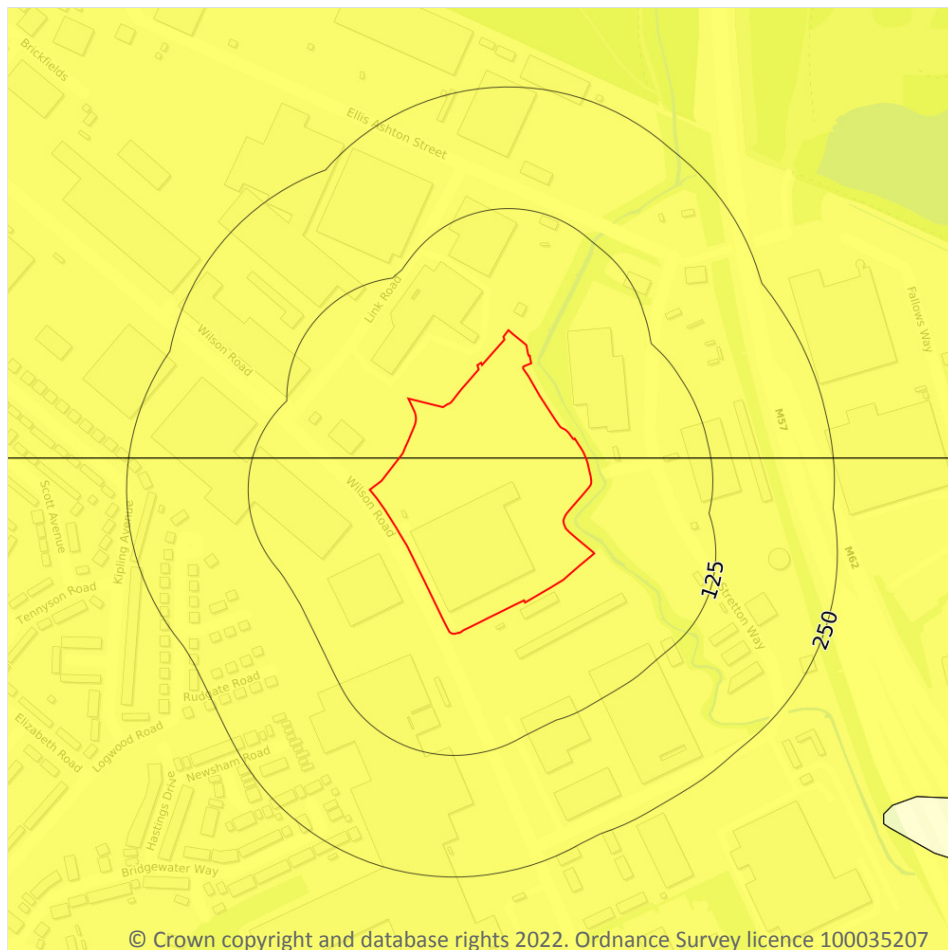
Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 132**

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



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

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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.

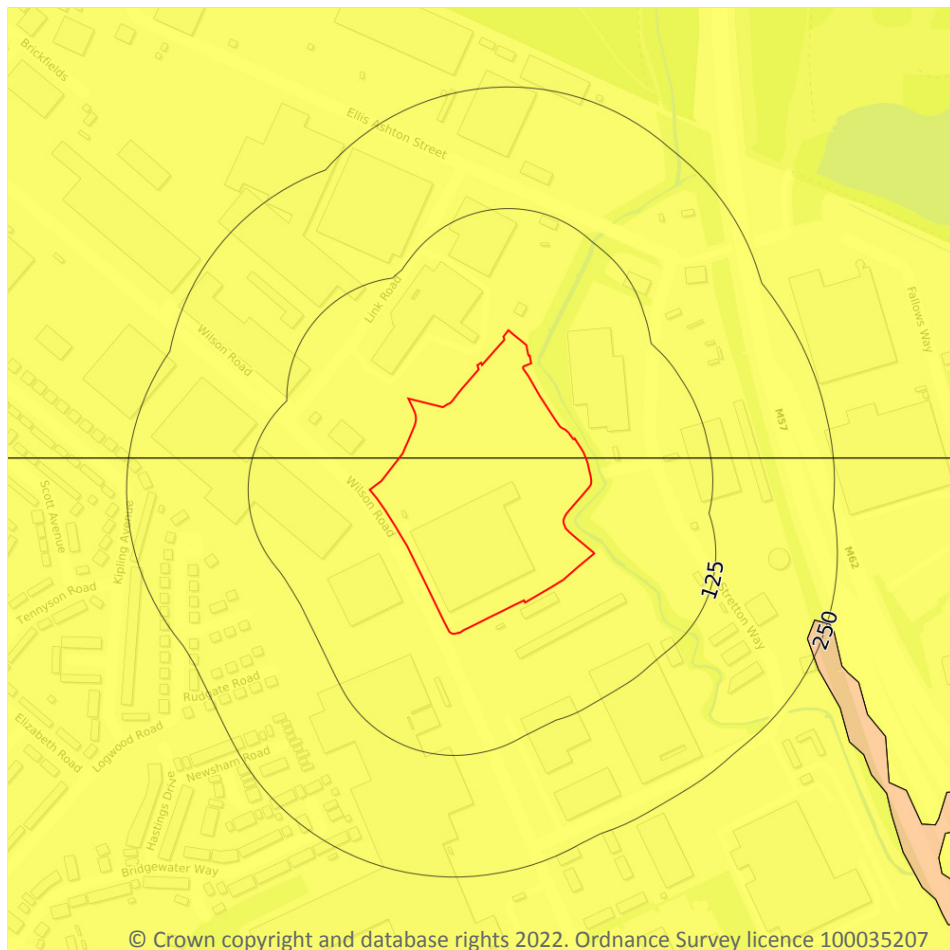
Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 133**

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Landslides



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.5 Landslides

Records within 50m

1

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

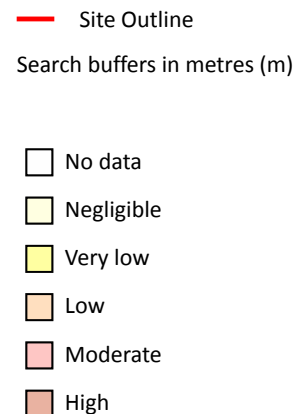
Features are displayed on the Natural ground subsidence - Landslides map on **page 134**

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Ground dissolution of soluble rocks



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.

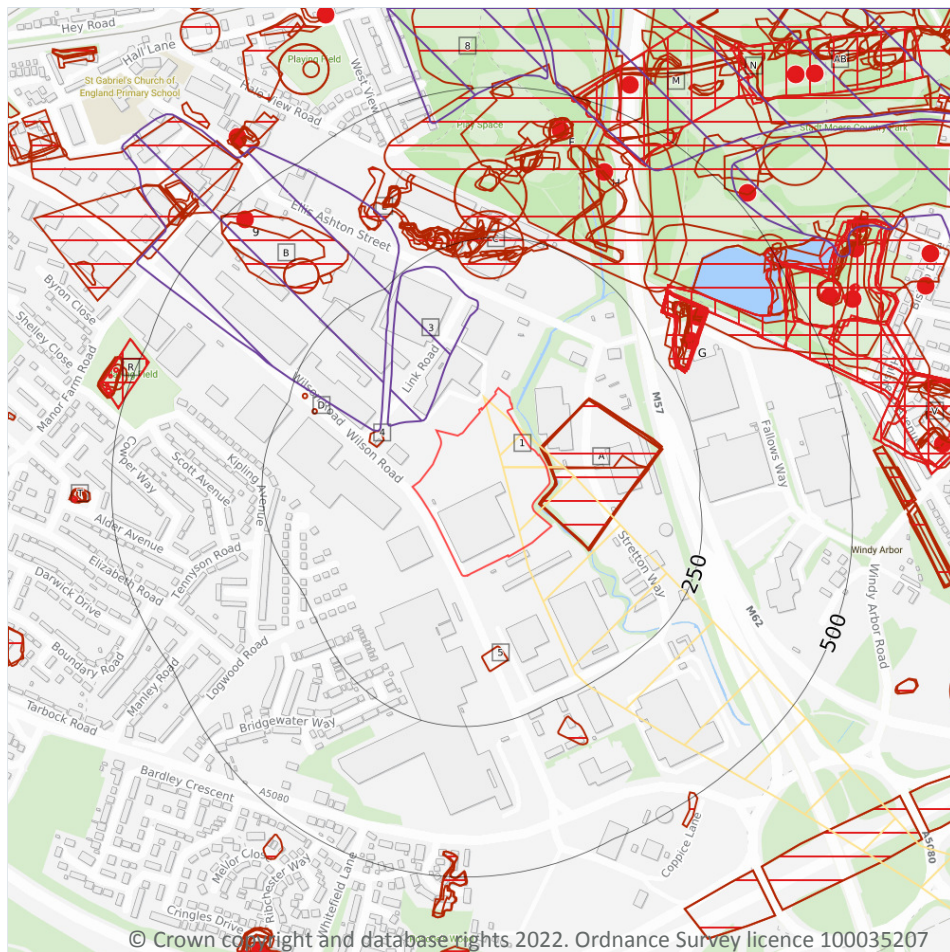
Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 135**

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, ground workings and natural cavities



- Site Outline
- Search buffers in metres (m)
- Natural cavities (Area)
- Natural cavities (Point)
- BritPits
- Surface ground workings
- Underground workings
- Historical Mineral Planning Areas
- Mining Cavities
- 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 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.

18.2 BritPits

Records within 500m

5

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, ground workings and natural cavities map on **page 137**

ID	Location	Details	Description
G	314m NE	Name: Cronton Colliery Pit 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
G	340m NE	Name: Cronton Colliery Pit 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
H	400m NE	Name: Huyton Hey Colliery Address: Huyton Quarry, HUYTON-WITH-ROBY, 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
F	439m N	Name: Huyton Hey Colliery Address: Huyton Quarry, HUYTON-WITH-ROBY, 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
9	473m NW	Name: Huyton Quarry Brickworks Address: Huyton Quarry, HUYTON-WITH-ROBY, Merseyside Commodity: Clay & Shale Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site 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.

18.3 Surface ground workings

Records within 250m	26
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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, ground workings and natural cavities map on **page 137**

ID	Location	Land Use	Year of mapping	Mapping scale
A	5m NE	Sewage Works	1947	1:10560
A	5m NE	Sewage Works	1925	1:10560
A	7m E	Sewage Works	1938	1:10560
A	7m E	Sewage Works	1938	1:10560
A	8m E	Sewage Works	1950	1:10560
A	9m E	Sewage Works	1955	1:10560
4	89m W	Unspecified Heap	1966	1:10560
5	128m SE	Pond	1851	1:10560
C	182m N	Unspecified Quarry	1906	1:10560
D	201m W	Coal Pits	1851	1:10560
C	211m N	Ponds	1966	1:10560
C	213m N	Pond	1891	1:10560
C	213m N	Pond	1851	1:10560
C	215m N	Ponds	1925	1:10560
D	222m W	Coal Pits	1851	1:10560
C	223m N	Ponds	1955	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
C	224m N	Pond	1906	1:10560
C	224m N	Pond	1925	1:10560
C	228m N	Pond	1891	1:10560
C	231m N	Unspecified Ground Workings	1906	1:10560
E	235m N	Unspecified Ground Workings	1891	1:10560
C	240m N	Unspecified Ground Workings	1925	1:10560
C	242m N	Unspecified Ground Workings	1955	1:10560
C	243m N	Unspecified Ground Workings	1925	1:10560
C	244m N	Unspecified Ground Workings	1938	1:10560
C	244m N	Unspecified Ground Workings	1938	1:10560

This data is sourced from Ordnance Survey/Groundsure.

18.4 Underground workings

Records within 1000m

53

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, ground workings and natural cavities map on **page 137**

ID	Location	Land Use	Year of mapping	Mapping scale
G	271m NE	Old Colliery	1947	1:10560
G	271m NE	Old Colliery	1925	1:10560
G	271m NE	Old Colliery	1906	1:10560
G	271m NE	Old Colliery	1891	1:10560
G	274m NE	Old Colliery	1947	1:10560
G	277m NE	Unspecified Disused Mine	1966	1:10560
G	310m E	Unspecified Old Shaft	1947	1:10560
G	310m E	Unspecified Old Shaft	1925	1:10560
G	310m NE	Unspecified Disused Shaft	1966	1:10560
G	313m E	Unspecified Old Shaft	1947	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
K	315m NE	Disused Colliery	1947	1:10560
K	315m NE	Disused Colliery	1925	1:10560
F	438m N	Unspecified Old Shaft	1891	1:10560
K	442m NE	Colliery	1891	1:10560
M	442m NE	Disused Colliery	1906	1:10560
K	477m NE	Disused Colliery	1906	1:10560
K	482m NE	Unspecified Disused Mine	1966	1:10560
R	484m NW	Colliery	1891	1:10560
R	522m W	Unspecified Old Shafts	1947	1:10560
R	525m W	Unspecified Old Shaft	1925	1:10560
R	525m W	Unspecified Old Shaft	1906	1:10560
R	526m W	Unspecified Old Shafts	1947	1:10560
R	532m W	Unspecified Old Shafts	1947	1:10560
K	535m NE	Unspecified Old Shaft	1947	1:10560
V	543m E	Old Colliery	1891	1:10560
V	556m E	Old Colliery	1906	1:10560
T	558m W	Unspecified Old Shaft	1925	1:10560
T	558m W	Unspecified Old Shaft	1906	1:10560
K	567m NE	Unspecified Shafts	1891	1:10560
K	577m NE	Unspecified Old Shafts	1947	1:10560
K	577m NE	Unspecified Old Shafts	1925	1:10560
K	579m NE	Unspecified Old Shaft	1947	1:10560
K	580m NE	Unspecified Disused Shaft	1966	1:10560
K	585m NE	Unspecified Old Shafts	1947	1:10560
K	585m NE	Unspecified Old Shafts	1925	1:10560
K	587m NE	Unspecified Old Shaft	1947	1:10560
K	587m NE	Unspecified Disused Shaft	1966	1:10560
AB	633m NE	Colliery	1891	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
V	650m E	Unspecified Disused Shafts	1966	1:10560
V	666m E	Unspecified Old Shaft	1947	1:10560
V	668m E	Unspecified Old Shafts	1947	1:10560
V	668m E	Unspecified Old Shafts	1925	1:10560
V	670m E	Unspecified Old Shaft	1947	1:10560
V	670m E	Unspecified Disused Shafts	1966	1:10560
-	702m E	Unspecified Old Shafts	1947	1:10560
-	702m E	Unspecified Old Shafts	1925	1:10560
-	704m E	Unspecified Old Shaft	1947	1:10560
-	706m E	Unspecified Disused Shafts	1966	1:10560
AB	731m NE	Unspecified Old Shaft	1925	1:10560
-	738m E	Unspecified Old Shafts	1947	1:10560
-	738m E	Unspecified Old Shafts	1925	1:10560
-	742m E	Unspecified Old Shaft	1947	1:10560
-	743m E	Unspecified Disused Shafts	1966	1:10560

This data is sourced from Ordnance Survey/Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m

4

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, ground workings and natural cavities map on **page 137**

ID	Location	Site Name	Mineral	Type	Planning Status	Planning Status Date
3	27m NW	Huyton	Clay, shale, bricks	Surface mineral working	Valid	31/5/48,12/5/50
B	93m W	Huyton	Clay, shale, bricks	Surface mineral working	Valid	31/5/48,12/5/50



ID	Location	Site Name	Mineral	Type	Planning Status	Planning Status Date
N	444m NE	Whiston	Clay, shale, bricks	Surface mineral working	Valid	7/7/47,25/9/52
8	453m N	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

3

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 137**

ID	Location	Name	Commodity	Class	Likelihood
1	On site	Not available	Vein Mineral	A	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered
2	On site	Not available	Vein Mineral	A	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered
-	917m S	Not available	Vein Mineral	A	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered

This data is sourced from the British Geological Survey.

18.7 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.



18.8 JPB mining areas

Records on site	0
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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.

18.9 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.

18.10 Brine areas

Records on site	0
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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.

18.11 Gypsum areas

Records on site	0
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Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.12 Tin mining

Records on site	0
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Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.



18.13 Clay mining

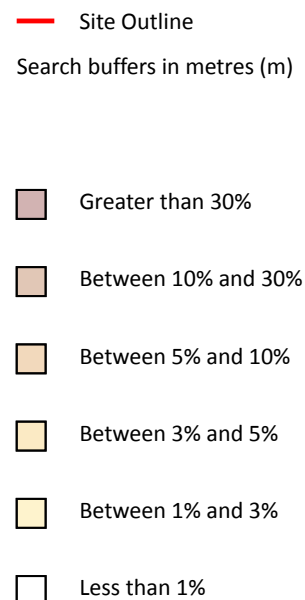
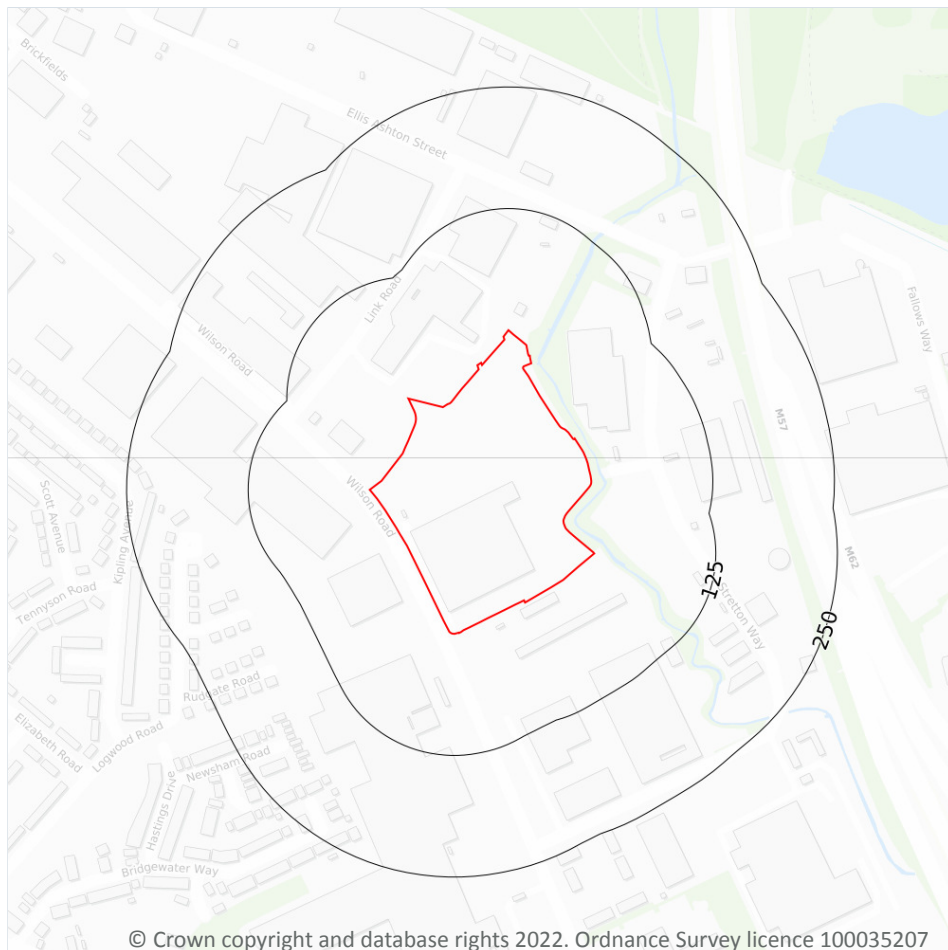
Records on site	0
-----------------	---

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 Radon



19.1 Radon

Records on site

1

Estimated percentage of dwellings exceeding the Radon Action Level. This data is the highest resolution radon dataset available for the UK and is produced to a 75m level of accuracy to allow for geological data accuracy and a 'residential property' buffer. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain. The data was derived from both geological assessments and long term measurements of radon in more than 479,000 households.

Features are displayed on the Radon map on **page 146**

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

This data is sourced from the British Geological Survey and Public Health England.



20 Soil chemistry

20.1 BGS Estimated Background Soil Chemistry

Records within 50m

10

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km². In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km²; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	200 - 300 mg/kg	120 - 240 mg/kg	1.8 - 2.2 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	200 - 300 mg/kg	120 - 240 mg/kg	1.8 - 2.2 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	200 - 300 mg/kg	120 - 240 mg/kg	1.8 - 2.2 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	200 - 300 mg/kg	120 - 240 mg/kg	1.8 - 2.2 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
4m W	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
25m SW	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
28m E	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
38m NW	15 - 25 mg/kg	No data	200 - 300 mg/kg	120 - 240 mg/kg	1.8 - 2.2 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.



20.2 BGS Estimated Urban Soil Chemistry

Records within 50m

0

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km²).

This data is sourced from the British Geological Survey.

20.3 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 km².

This data is sourced from the British Geological Survey.



21 Railway infrastructure and projects

21.1 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.

21.2 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.

21.3 Railway tunnels

Records within 250m	0
---------------------	---

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

21.4 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.

21.5 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.

21.6 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.

21.7 Railways

Records within 250m	0
---------------------	---

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

This data is sourced from Ordnance Survey and OpenStreetMap.

21.8 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.

21.9 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.

21.10 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>.

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APPENDIX 3 – OS HISTORICAL MAPS

Site Details:

35, WILSON ROAD, HUYTON,
L36 6AE

Client Ref: P4131J2476-1
Report Ref: JOMAS-8424360
Grid Ref: 345749, 389975

Map Name: County Series
Map date: 1849-1850
Scale: 1:10,560
Printed at: 1:10,560



Surveyed 1847
Revised N/A
Edition 1850
Copyright N/A
Levelled N/A

Surveyed 1846
Revised N/A
Edition 1849
Copyright N/A
Levelled N/A



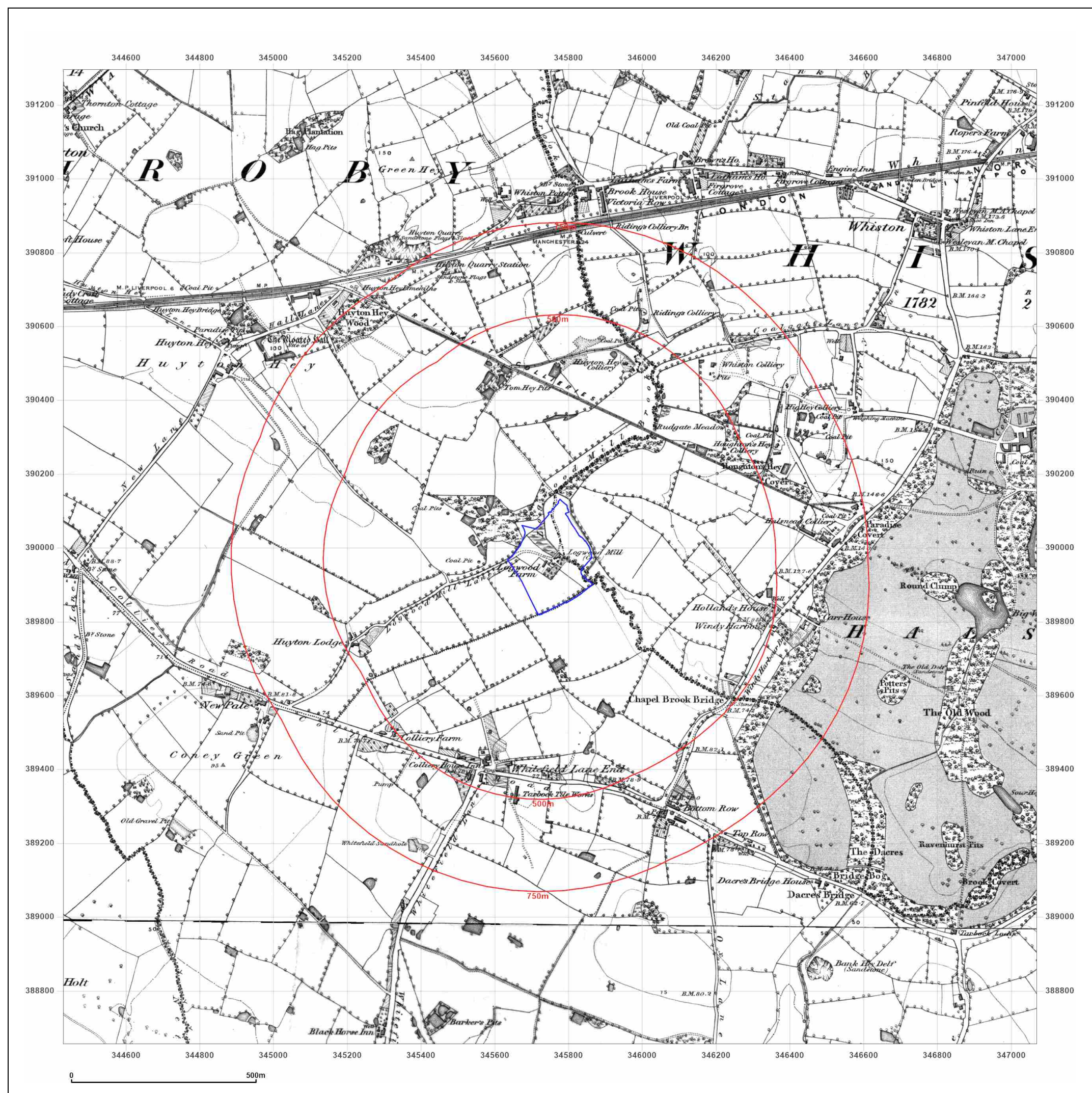
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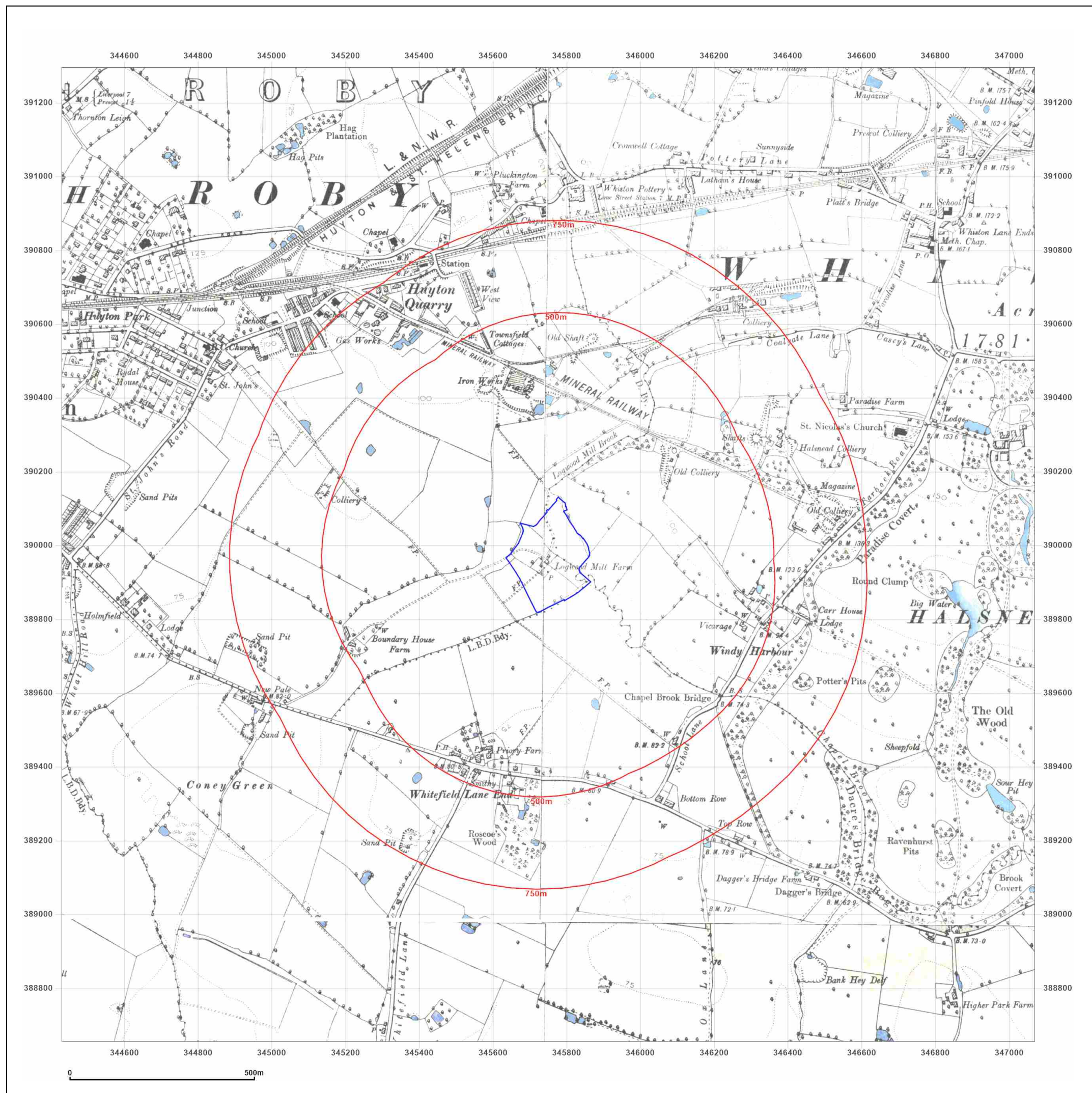


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Production date: 04 January 2022

Map legend available at:
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Site Details:

35, WILSON ROAD, HUYTON,
L36 6AE

Client Ref: P4131J2476-1
Report Ref: JOMAS-8424360
Grid Ref: 345749, 389975

Map Name: County Series

Map date: 1891

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1891
Revised 1891
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1891
Revised 1891
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1891
Revised 1891
Edition N/A
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Site Details:

35, WILSON ROAD, HUYTON,
L36 6AE

Client Ref: P4131J2476-1
Report Ref: JOMAS-8424360
Grid Ref: 345749, 389975

Map Name: County Series

Map date: 1904-1906

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1891 Revised 1906 Edition N/A Copyright N/A Levelled N/A		Surveyed 1891 Revised 1906 Edition N/A Copyright N/A Levelled N/A
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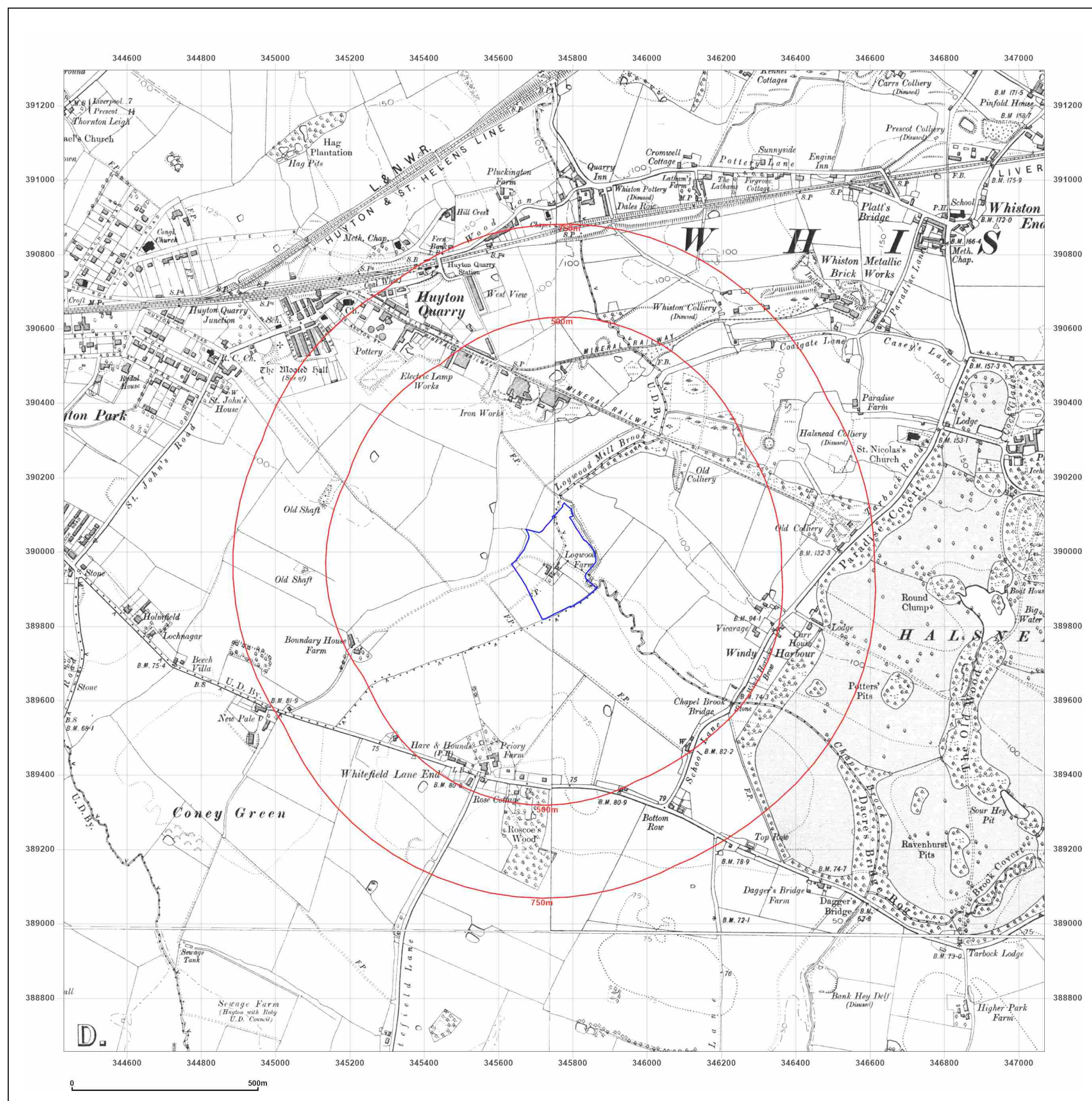


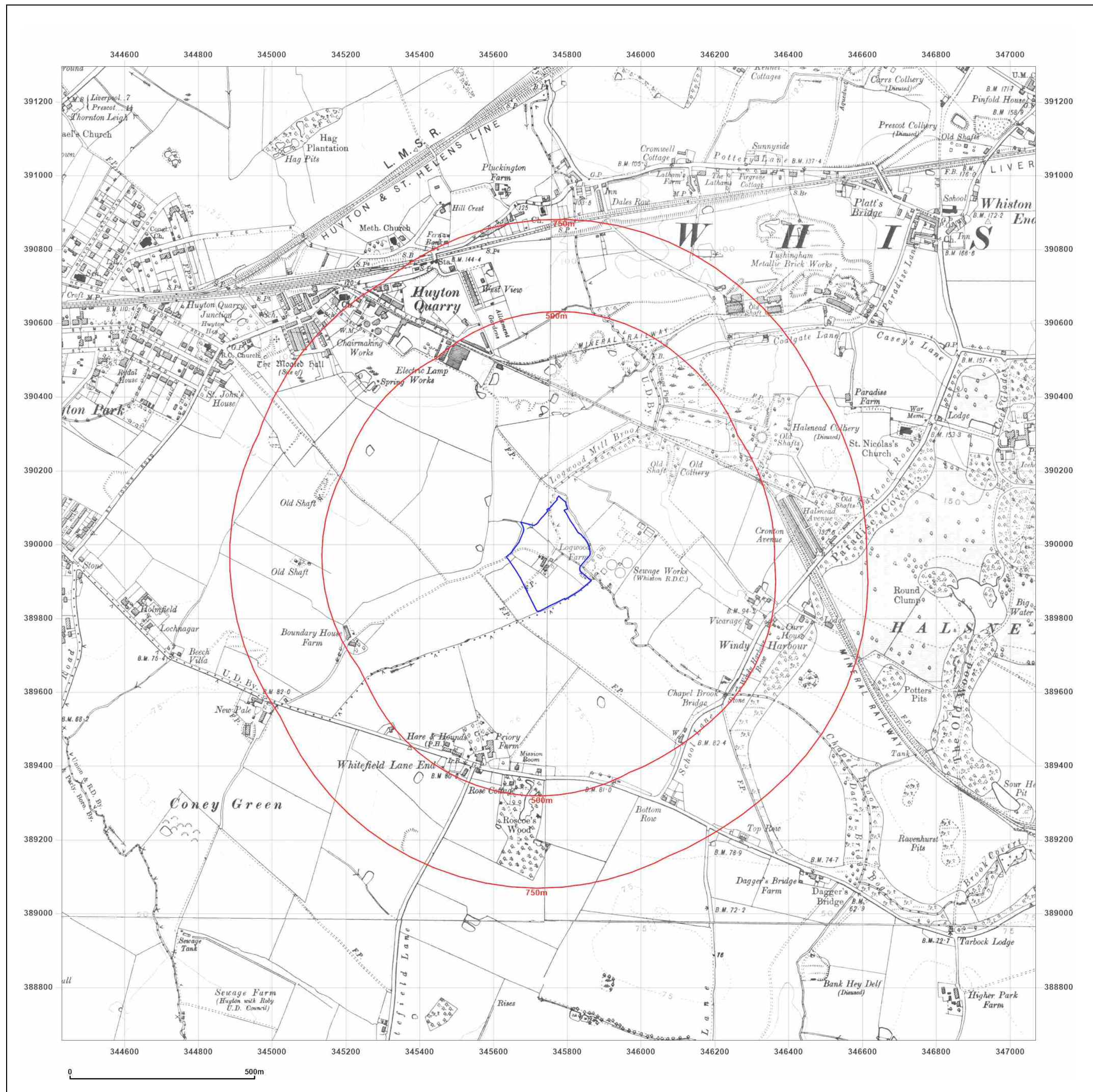
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Site Details:

35, WILSON ROAD, HUYTON,
L36 6AE

Client Ref: P4131J2476-1
Report Ref: JOMAS-8424360
Grid Ref: 345749, 389975

Map Name: County Series

Map date: 1925

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1848
Revised 1925
Edition N/A
Copyright N/A
Levelled N/A

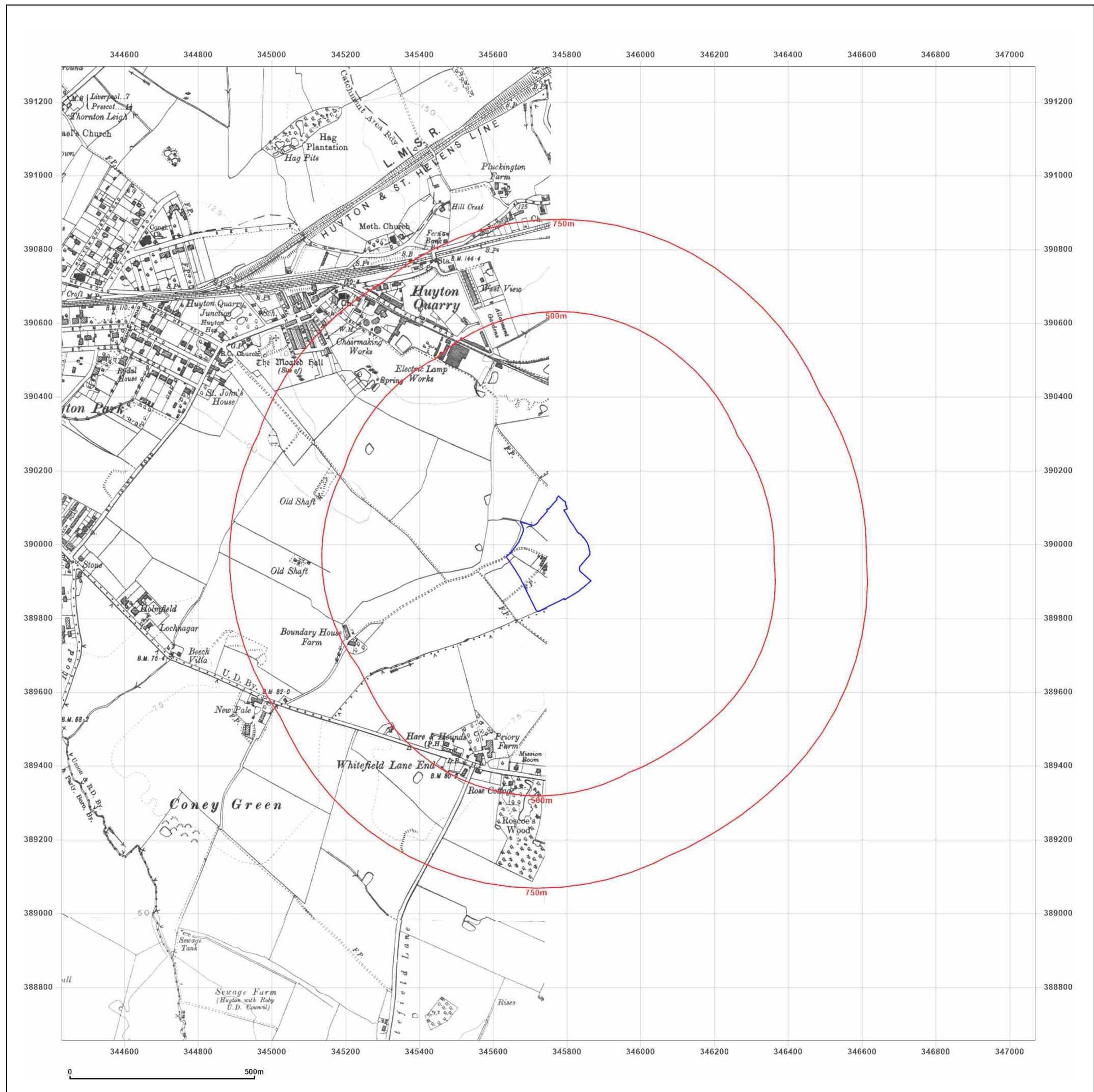
Surveyed 1846
Revised 1925
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1846
Revised 1925
Edition N/A
Copyright N/A
Levelled N/A

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Client Ref: P4131J2476-1
Report Ref: JOMAS-8424360
Grid Ref: 345749, 389975

Map Name: County Series

Map date: 1925

Scale: 1:10,560

Printed at: 1:10,560



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Edition N/A
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Surveyed 1846
Revised 1925
Edition N/A
Copyright N/A
Levelled N/A

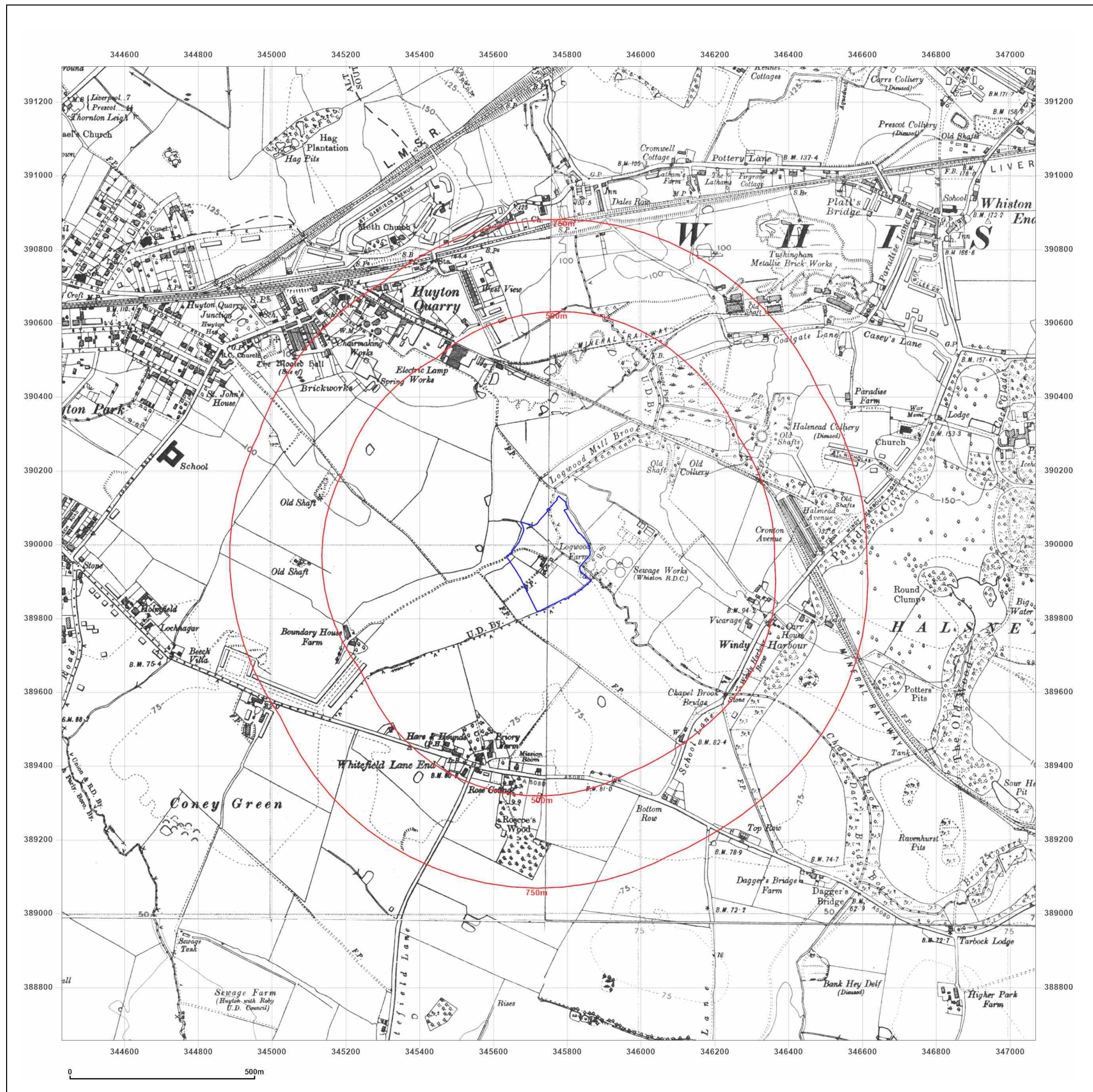


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Site Details:

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L36 6AE

Client Ref: P4131J2476-1
Report Ref: JOMAS-8424360
Grid Ref: 345749, 389975

Map Name: County Series

Map date: 1938

Scale: 1:10,560

Printed at: 1:10,560



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Revised 1938
Edition 1938
Copyright N/A
Levelled N/A

Surveyed 1846
Revised 1938
Edition 1938
Copyright N/A
Levelled N/A

Surveyed 1846
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A

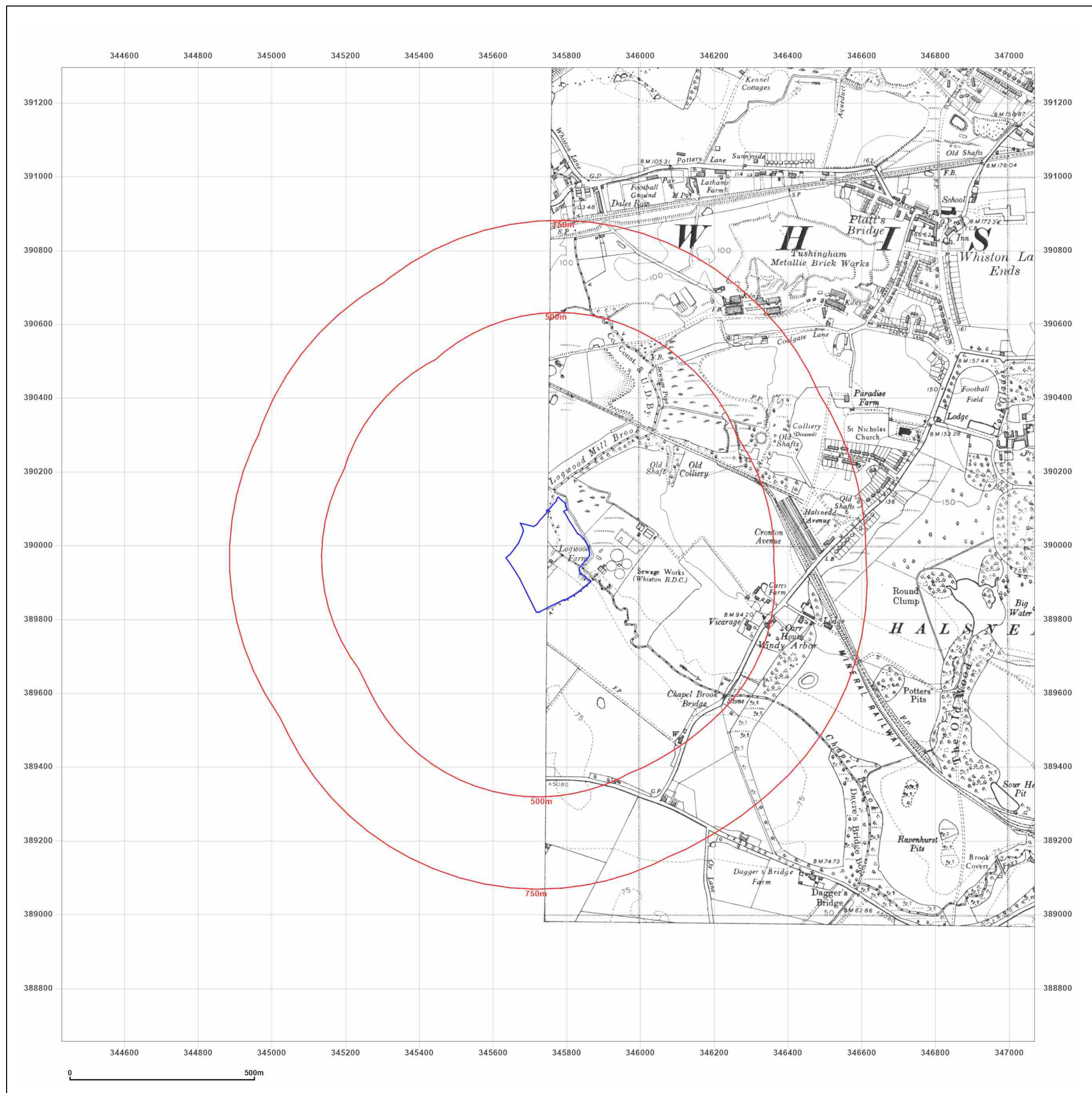


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L36 6AE

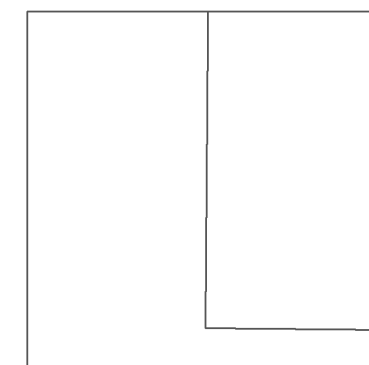
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Report Ref: JOMAS-8424360
Grid Ref: 345749, 389975

Map Name: County Series

Map date: 1947

Scale: 1:10,560

Printed at: 1:10,560



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

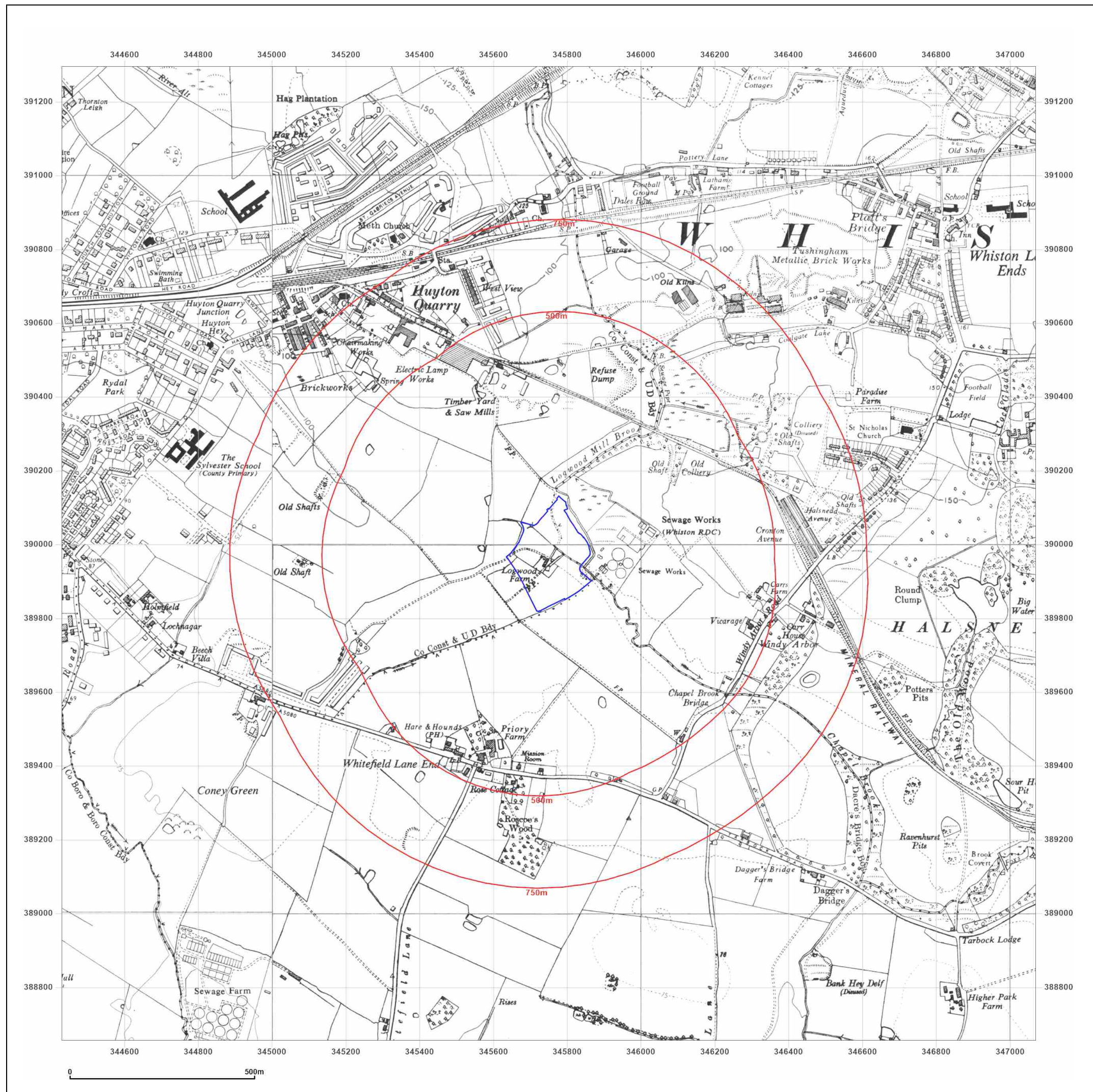


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L36 6AE

Client Ref: P4131J2476-1
Report Ref: JOMAS-8424360
Grid Ref: 345749, 389975

Map Name: Provisional

Map date: 1955-1956

Scale: 1:10,560

Printed at: 1:10,560



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
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Revised 1955
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Client Ref: P4131J2476-1
Report Ref: JOMAS-8424360
Grid Ref: 345749, 389975

Map Name: Provisional

Map date: 1965-1967

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1965
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Edition N/A
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Levelled N/A

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

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

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

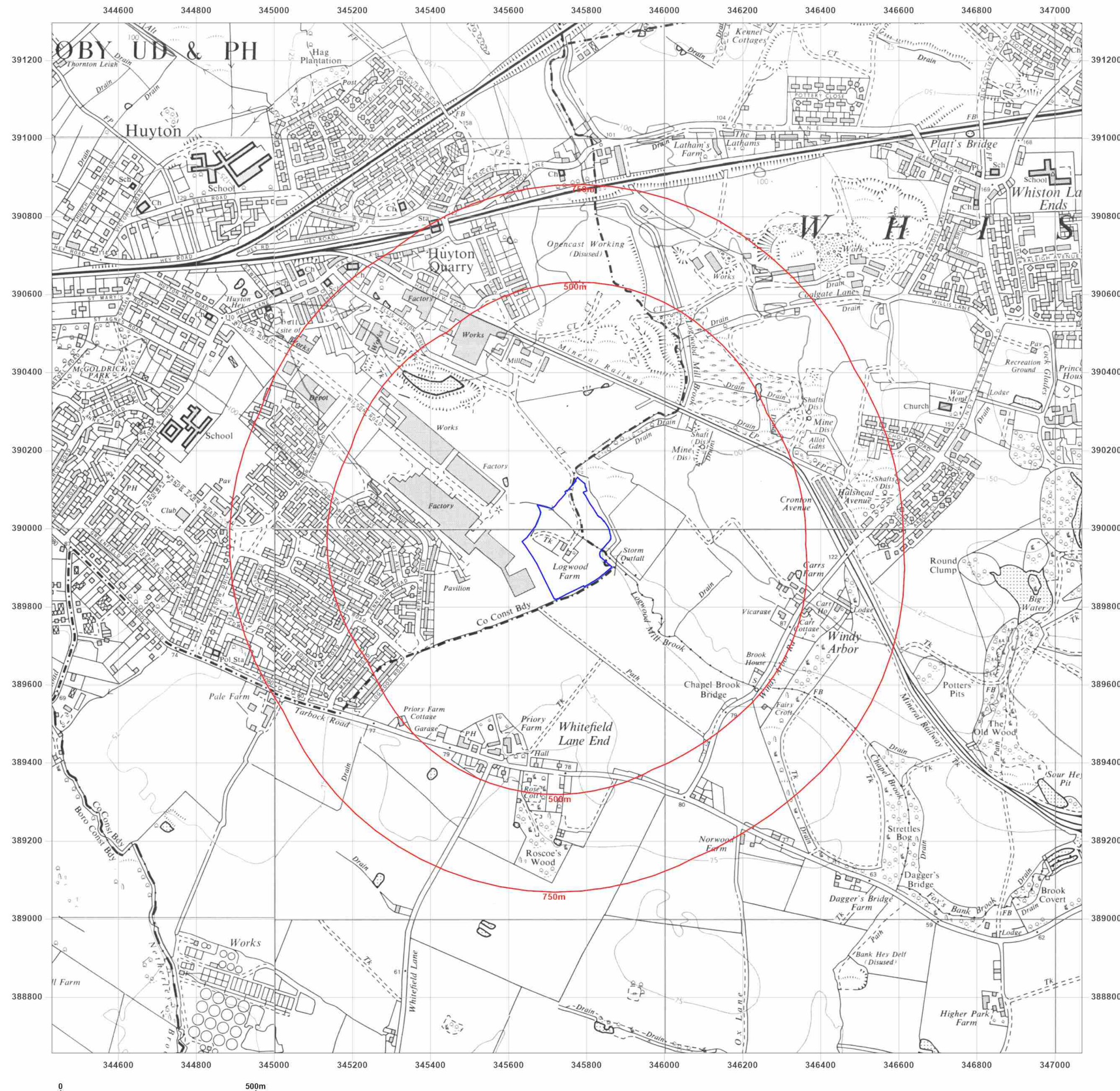


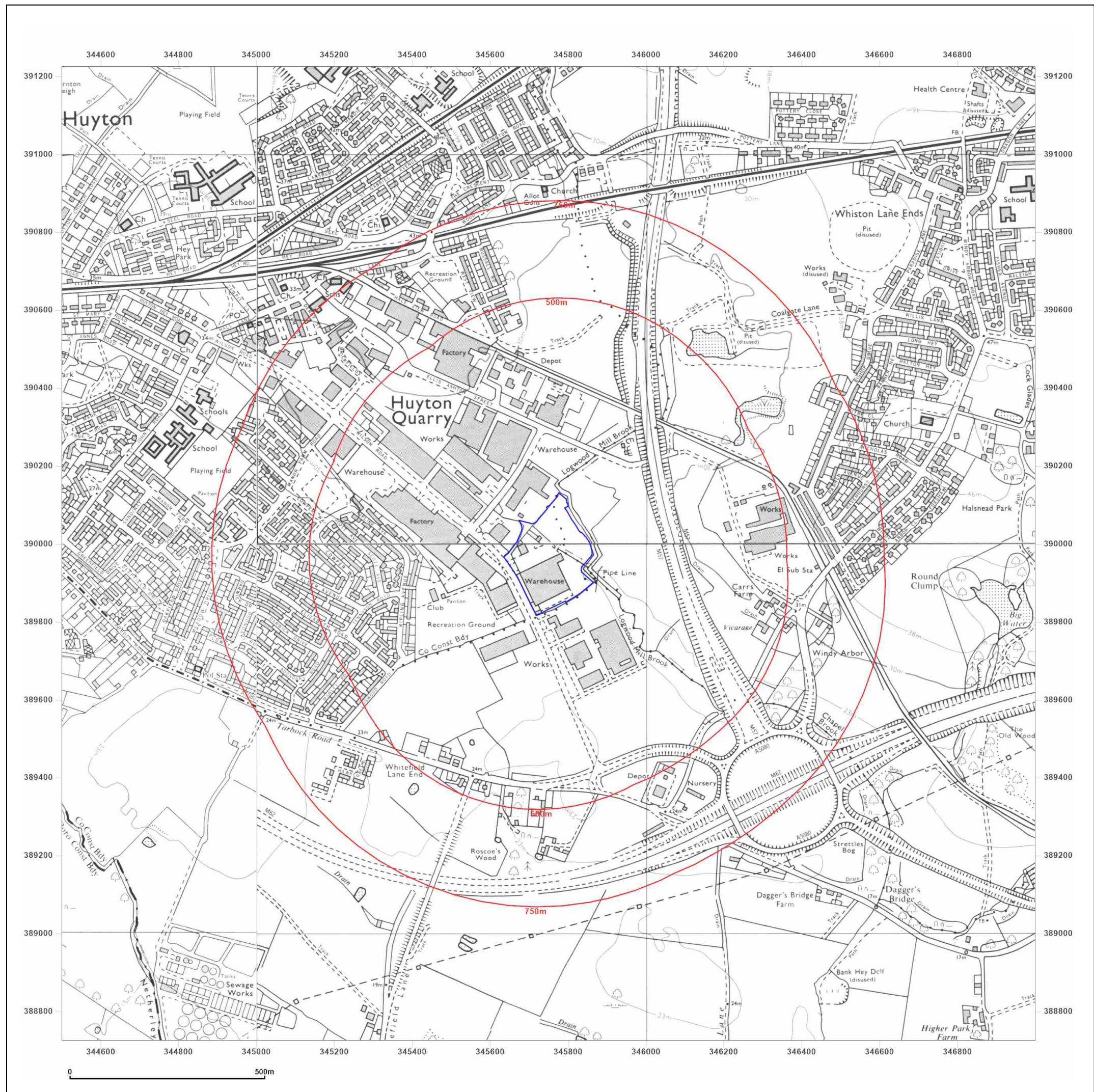
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L36 6AE

Client Ref: P4131J2476-1
Report Ref: JOMAS-8424360
Grid Ref: 345749, 389975

Map Name: National Grid

Map date: 1974-1978

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1975
Revised 1977
Edition N/A
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Levelled 1955

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

Surveyed 1973
Revised 1974
Edition N/A
Copyright 1974
Levelled 1955

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

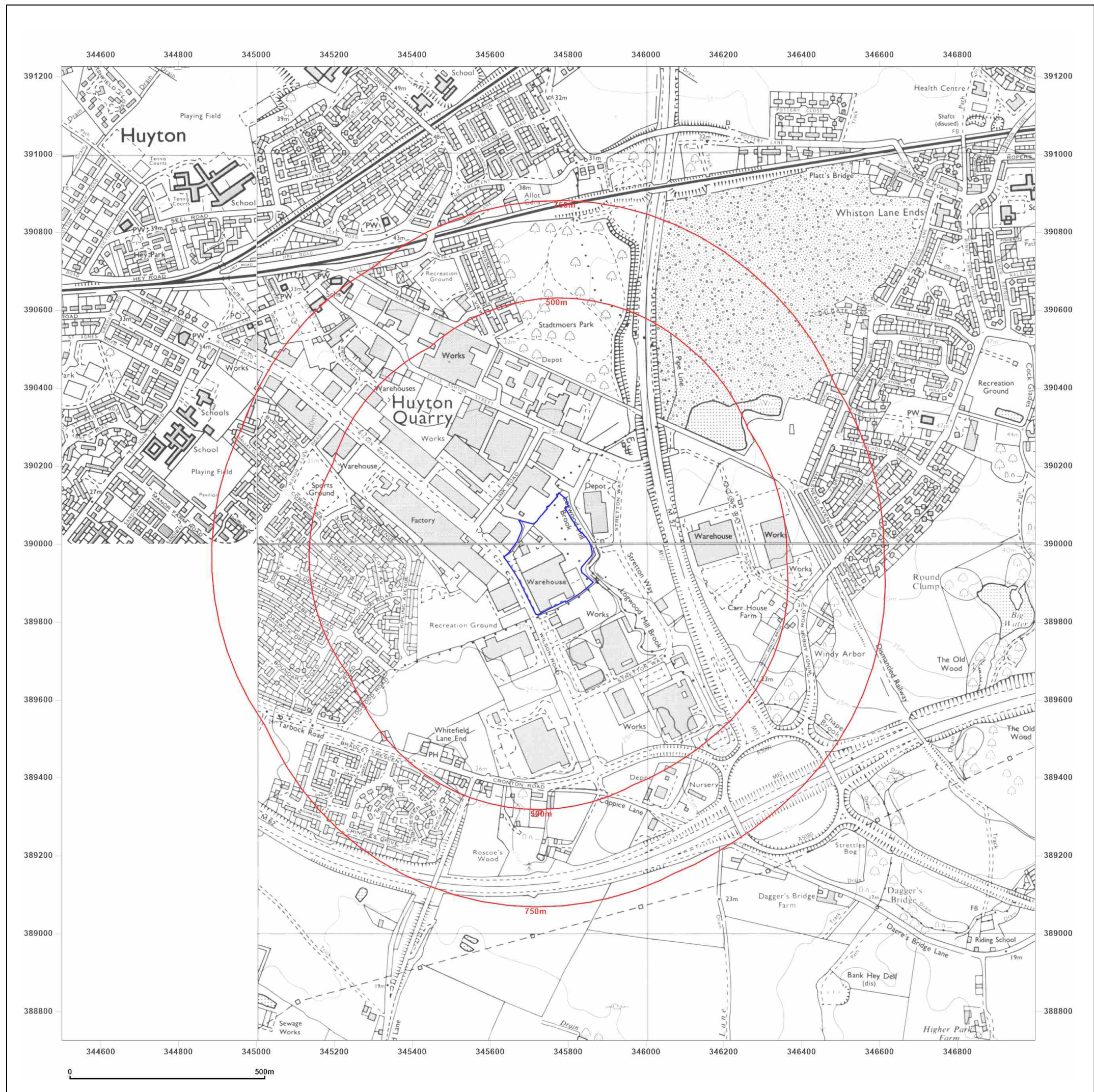


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Client Ref: P4131J2476-1
Report Ref: JOMAS-8424360
Grid Ref: 345749, 389975

Map Name: National Grid

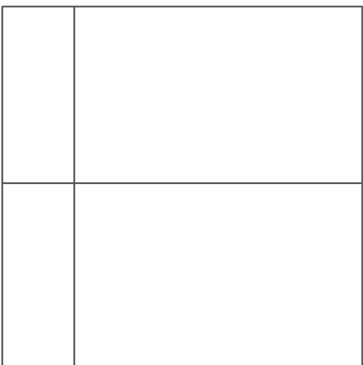
Map date: 1989-1990

Scale: 1:10,000

Printed at: 1:10,000



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



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Edition N/A
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Surveyed 1986
Revised 1989
Edition N/A
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Client Ref: P4131J2476-1
Report Ref: JOMAS-8424360
Grid Ref: 345749, 389975

Map Name: National Grid

Map date: 2001

Scale: 1:10,000

Printed at: 1:10,000



2001

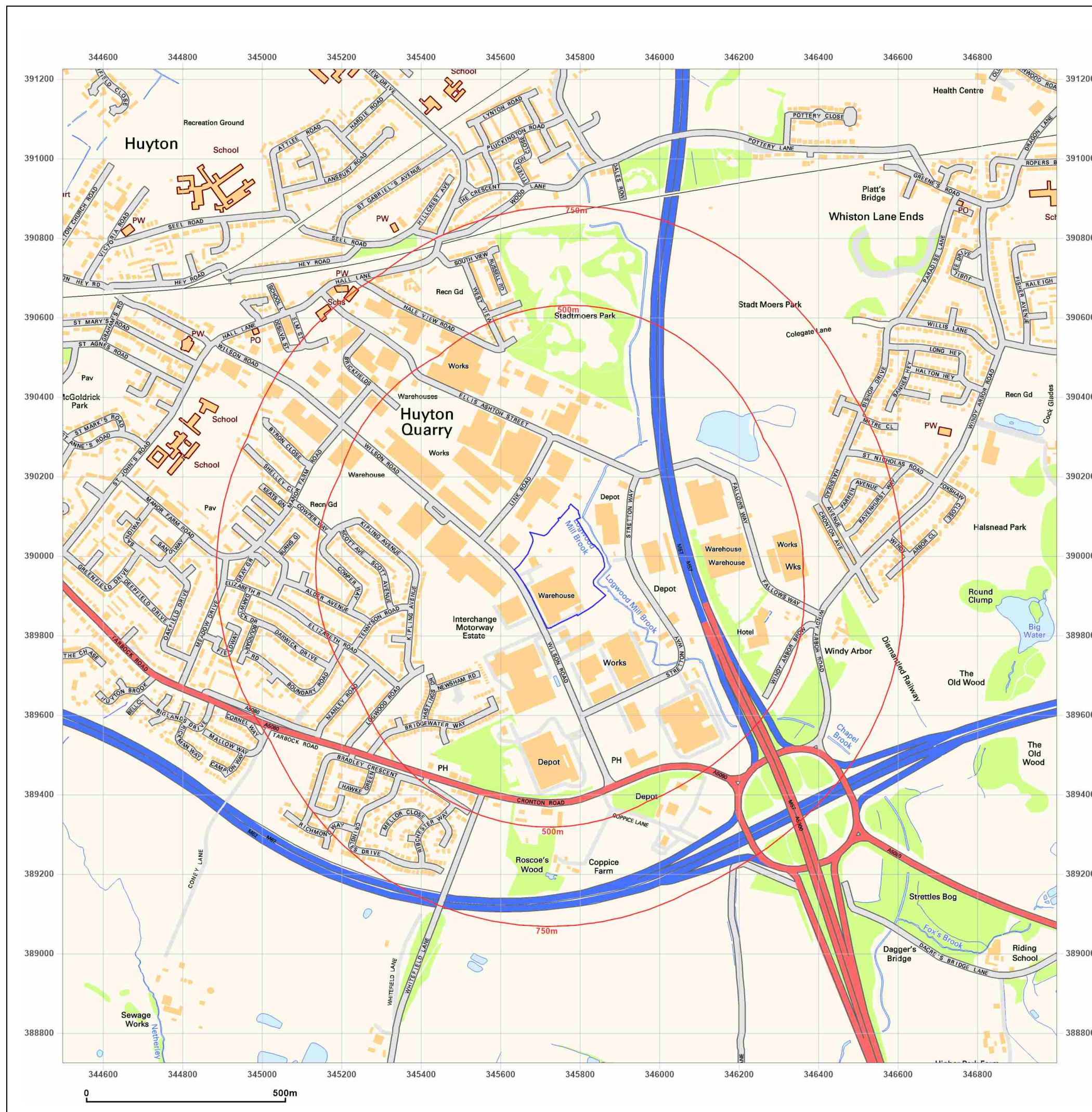


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L36 6AE

Client Ref: P4131J2476-1
Report Ref: JOMAS-8424360
Grid Ref: 345749, 389975

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000



2010

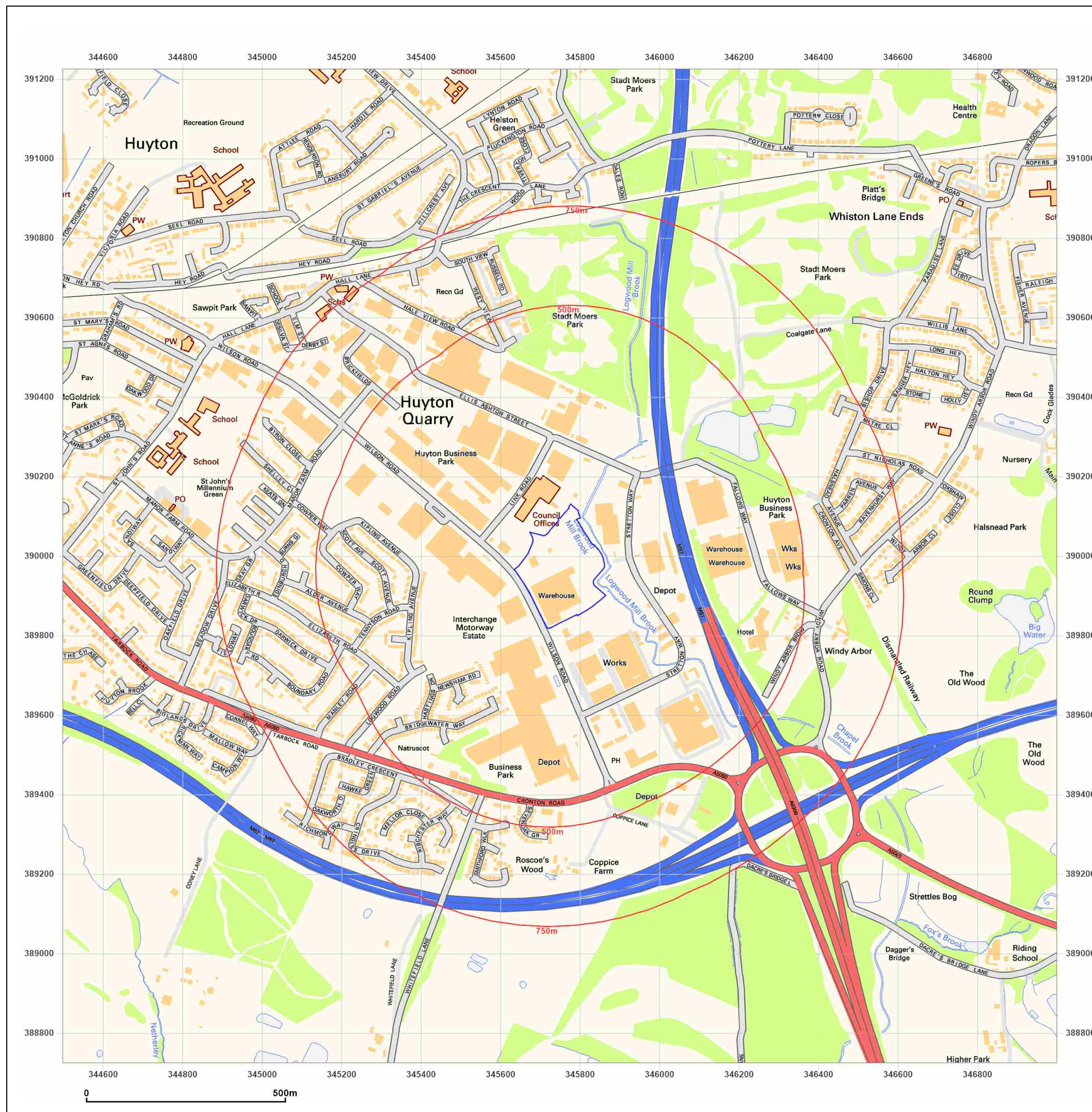


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Site Details:

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L36 6AE

Client Ref: P4131J2476-1
Report Ref: JOMAS-8424360
Grid Ref: 345749, 389975

Map Name: National Grid

Map date: 2022

Scale: 1:10,000

Printed at: 1:10,000



2022

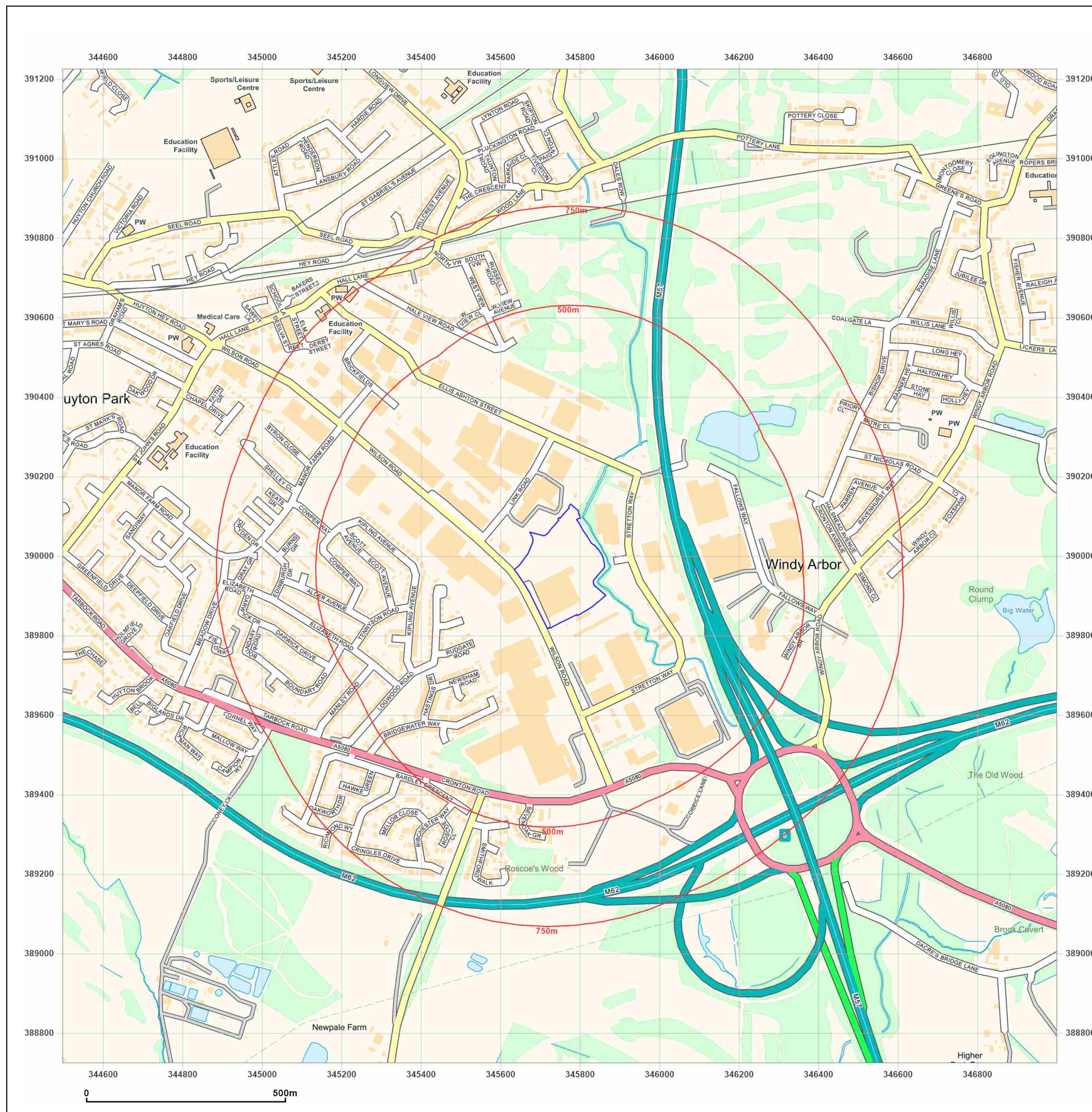


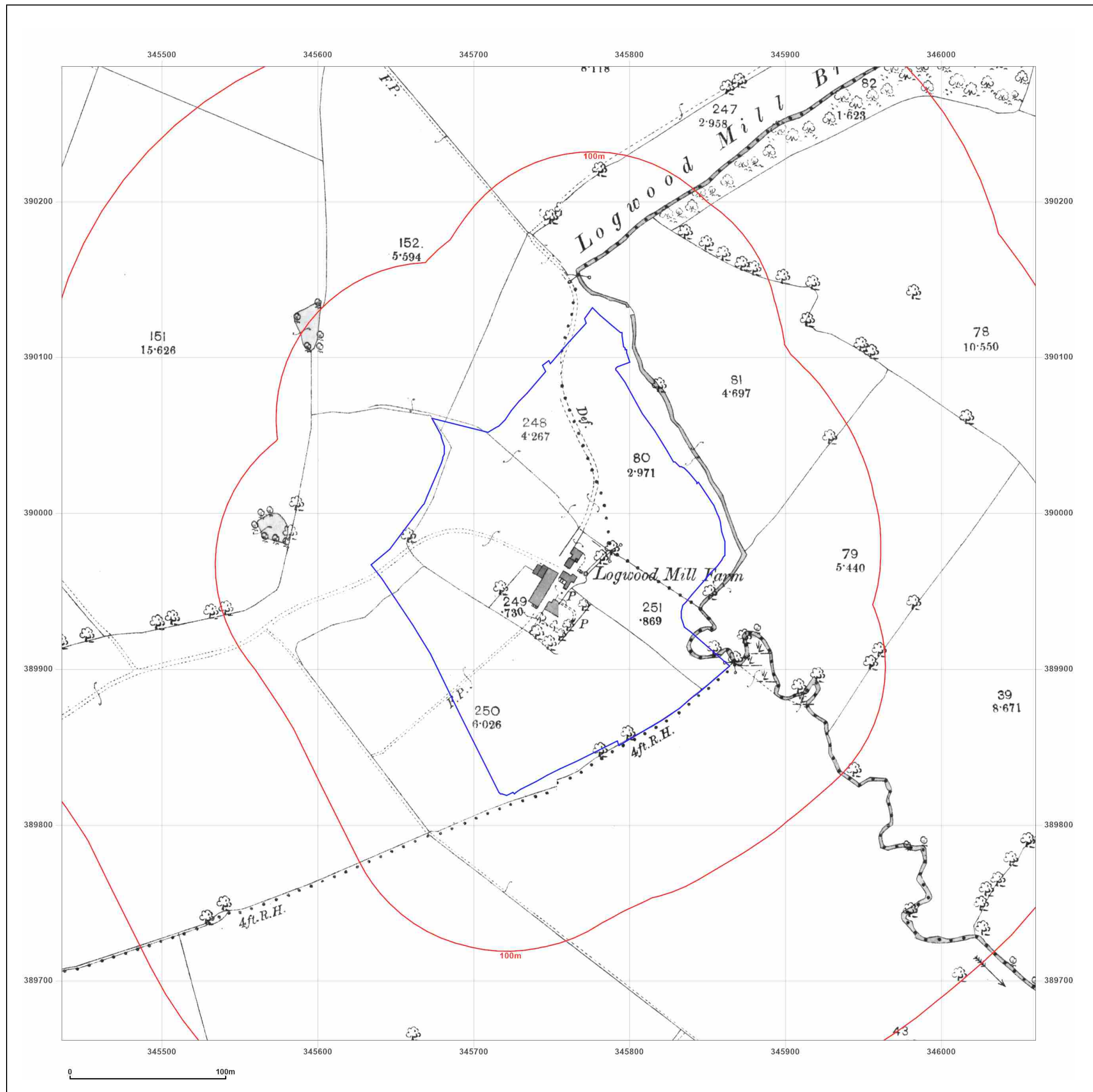
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Map legend available at:
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Site Details:

35, WILSON ROAD, HUYTON,
L36 6AE

Client Ref: P4131J2476-1
Report Ref: JOMAS-8424360_2500
Grid Ref: 345748, 389974

Map Name: County Series

Map date: 1892

Scale: 1:2,500

Printed at: 1:2,500



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

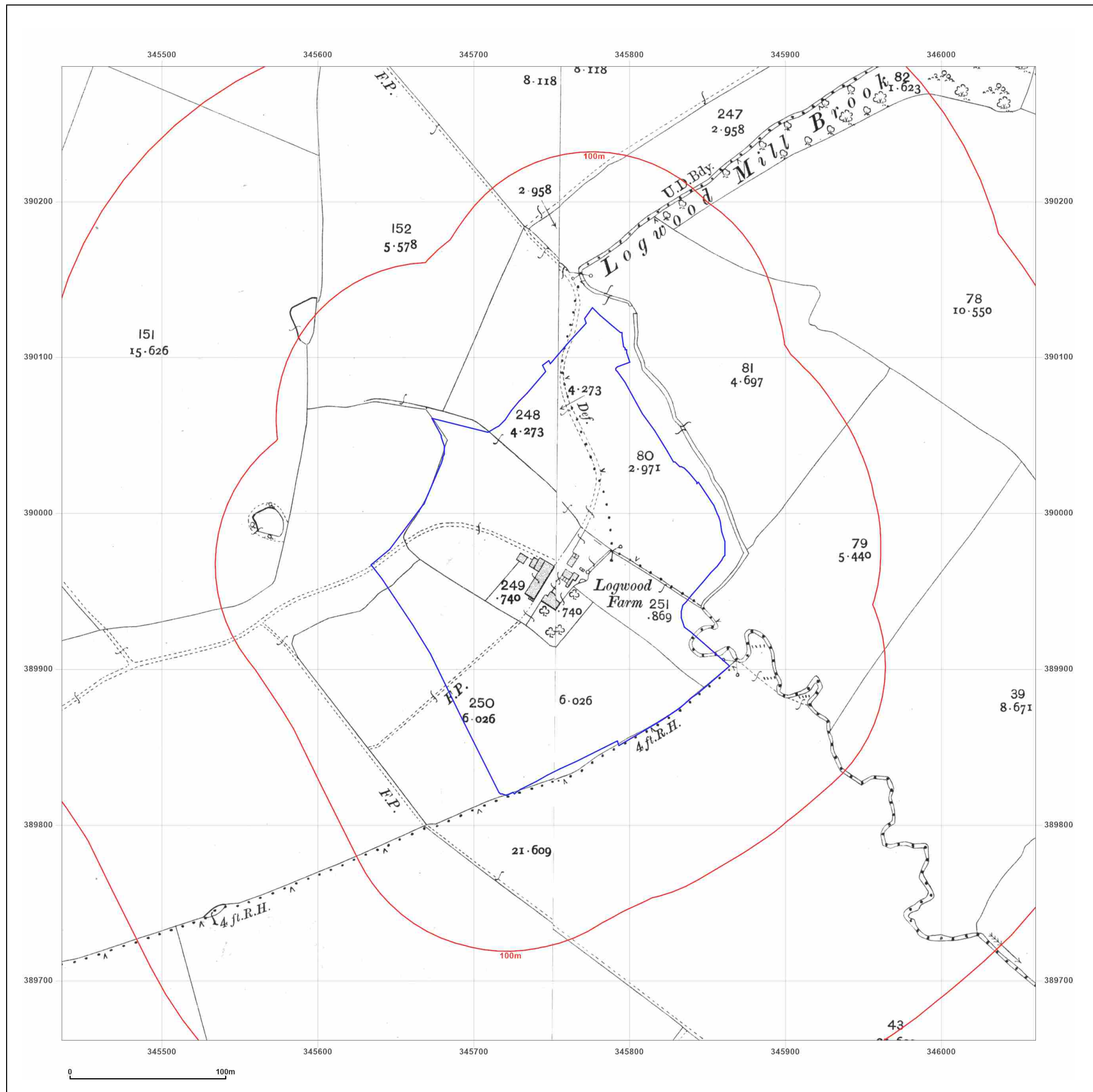


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Production date: 04 January 2022

Map legend available at:
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Site Details:

35, WILSON ROAD, HUYTON,
L36 6AE

Client Ref: P4131J2476-1
Report Ref: JOMAS-8424360_2500
Grid Ref: 345748, 389974

Map Name: County Series

Map date: 1907

Scale: 1:2,500

Printed at: 1:2,500



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Revised 1907
Edition N/A
Copyright N/A
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Surveyed 1907
Revised 1907
Edition N/A
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Site Details:

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L36 6AE

Client Ref: P4131J2476-1
Report Ref: JOMAS-8424360_2500
Grid Ref: 345748, 389974

Map Name: County Series

Map date: 1927

Scale: 1:2,500

Printed at: 1:2,500



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

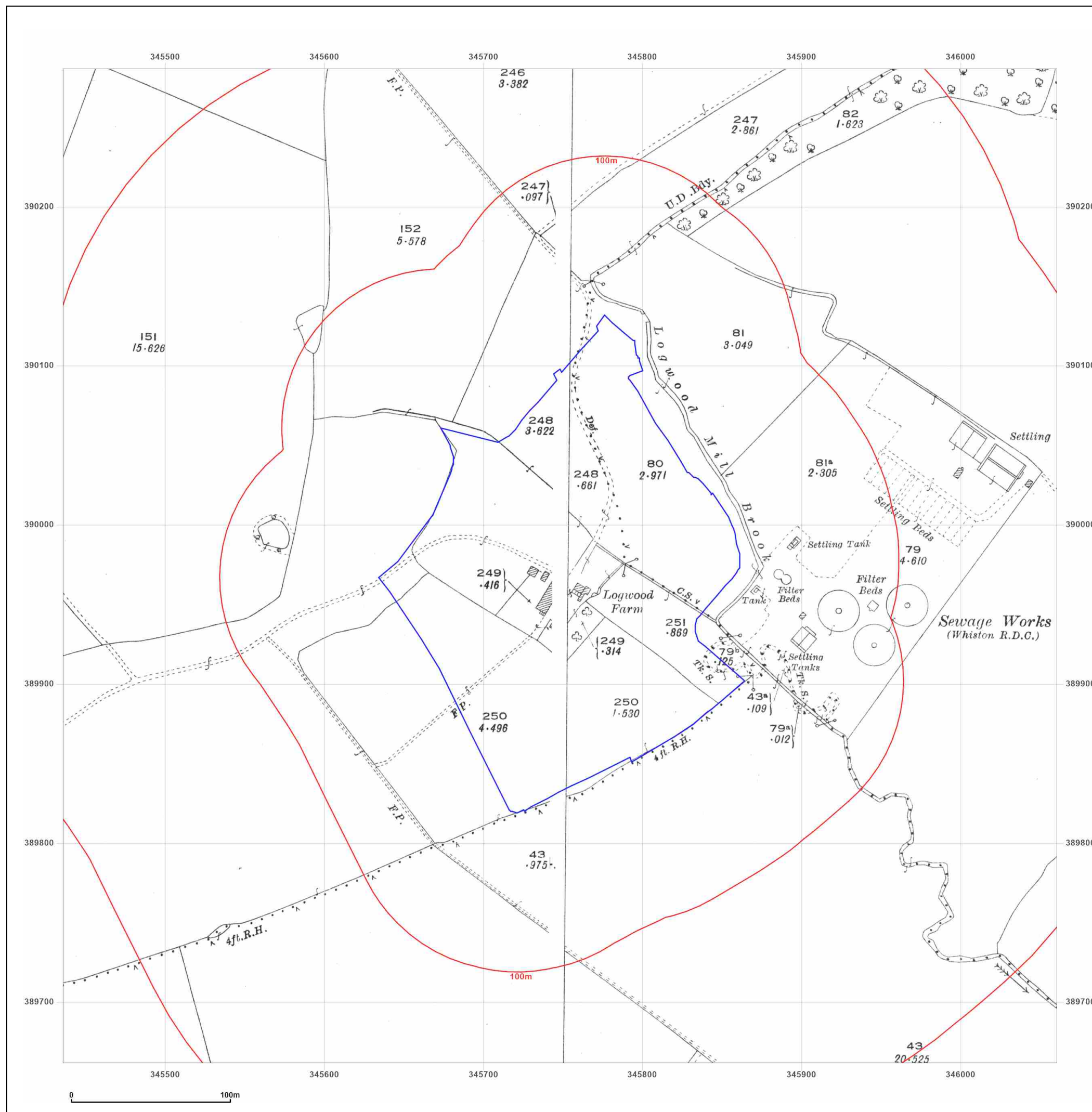


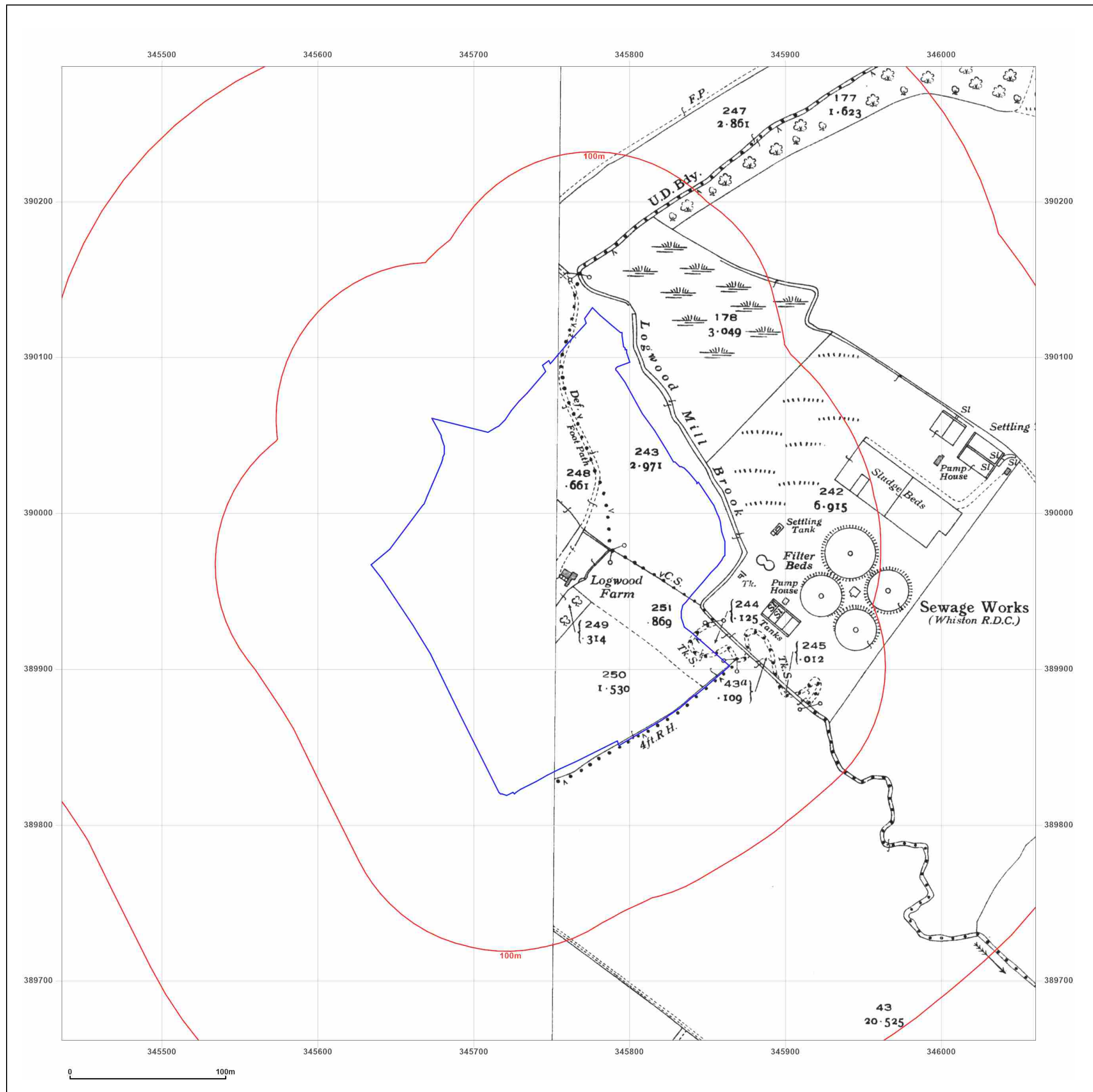
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Site Details:

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L36 6AE

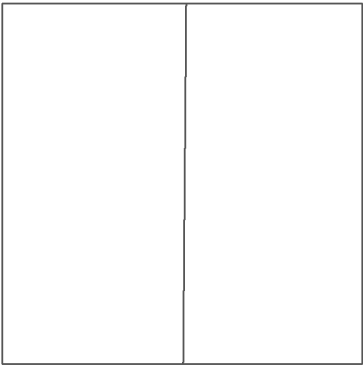
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Grid Ref: 345748, 389974

Map Name: County Series

Map date: 1937

Scale: 1:2,500

Printed at: 1:2,500



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

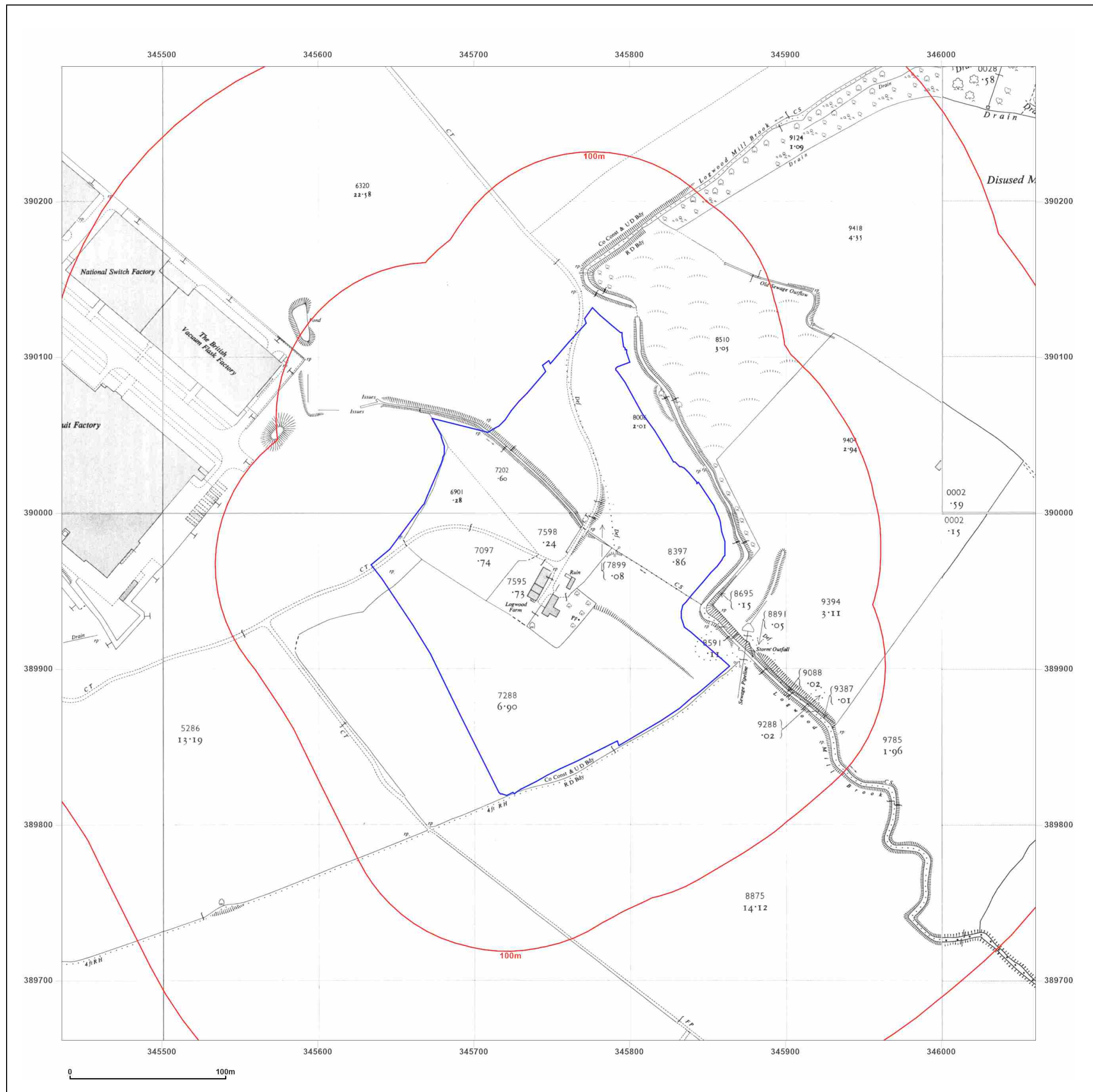


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Site Details:

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L36 6AE

Client Ref: P4131J2476-1
Report Ref: JOMAS-8424360_2500
Grid Ref: 345748, 389974

Map Name: National Grid

Map date: 1957-1959

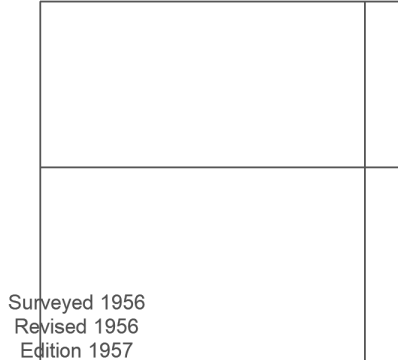
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Printed at: 1:2,500



Surveyed 1956
Revised 1956
Edition N/A
Copyright 1957
Levelled 1926

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



Surveyed 1956
Revised 1956
Edition 1957
Copyright N/A
Levelled 1926

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

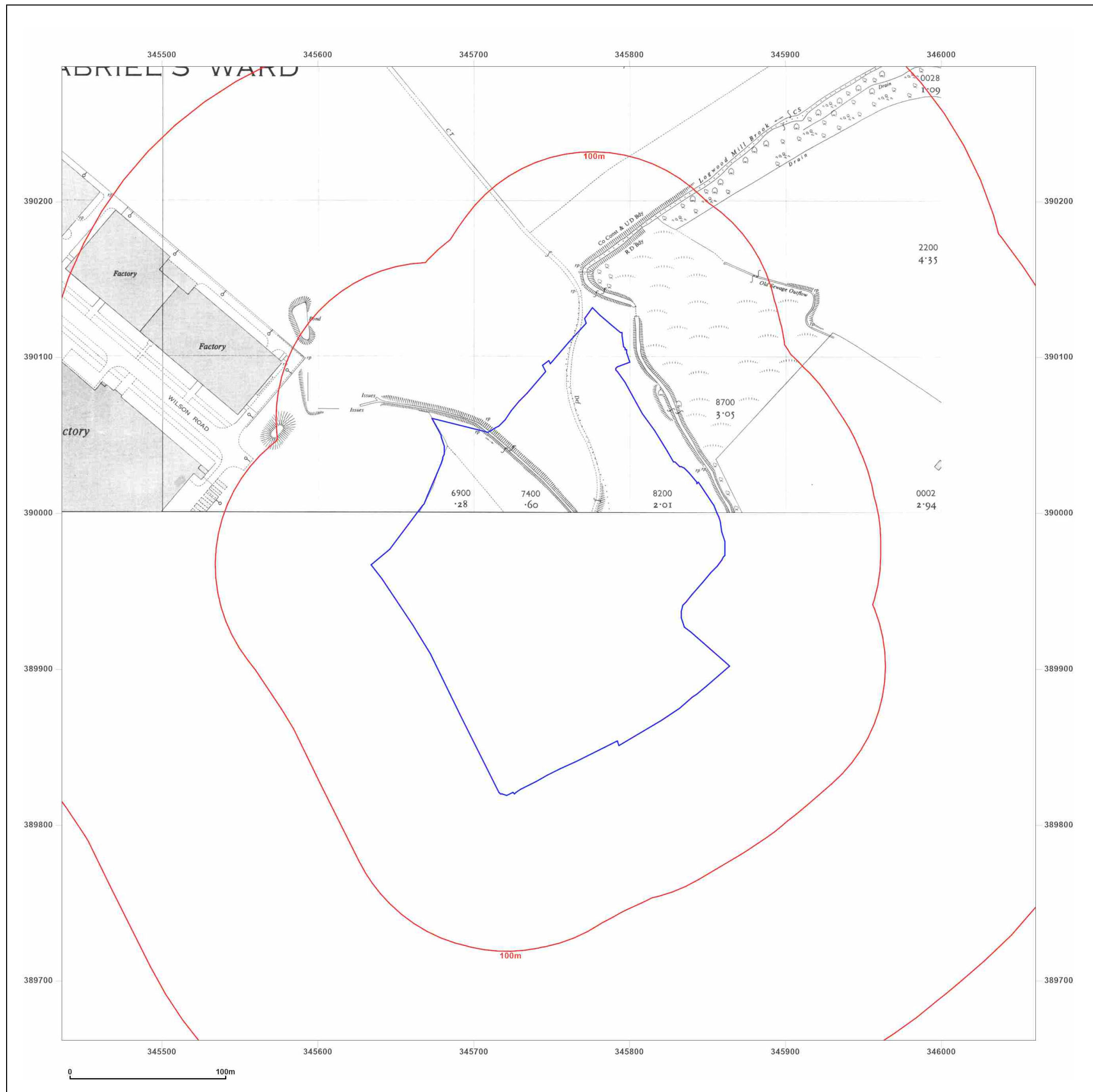


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Site Details:

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L36 6AE

Client Ref: P4131J2476-1
Report Ref: JOMAS-8424360_2500
Grid Ref: 345748, 389974

Map Name: National Grid

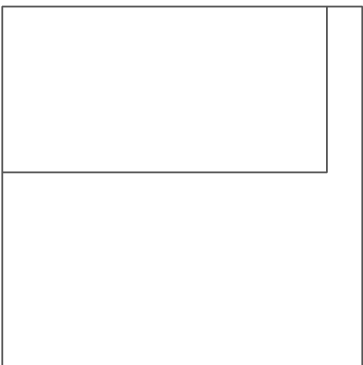
Map date: 1960

Scale: 1:2,500

Printed at: 1:2,500



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Edition 1960
Copyright 1960
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Site Details:

35, WILSON ROAD, HUYTON,
L36 6AE

Client Ref: P4131J2476-1
Report Ref: JOMAS-8424360_2500
Grid Ref: 345748, 389974

Map Name: National Grid

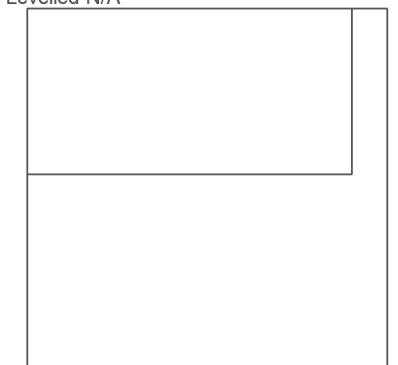
Map date: 1970

Scale: 1:2,500

Printed at: 1:2,500



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Revised N/A
Edition N/A
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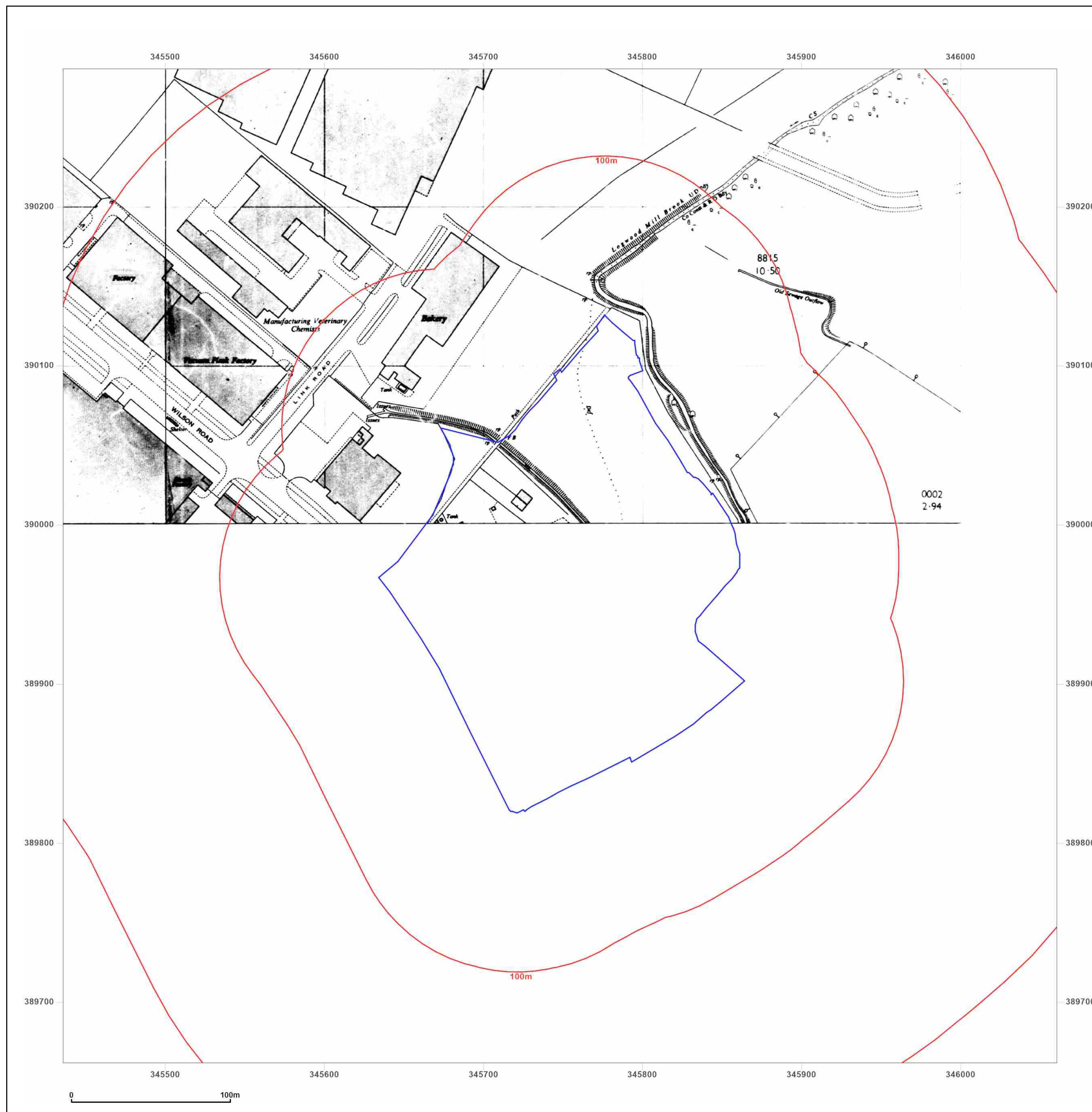


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Site Details:

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L36 6AE

Client Ref: P4131J2476-1
Report Ref: JOMAS-8424360_2500
Grid Ref: 345748, 389974

Map Name: National Grid

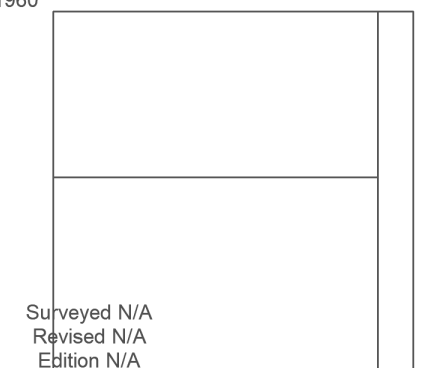
Map date: 1970-1975

Scale: 1:2,500

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Revised N/A
Edition N/A
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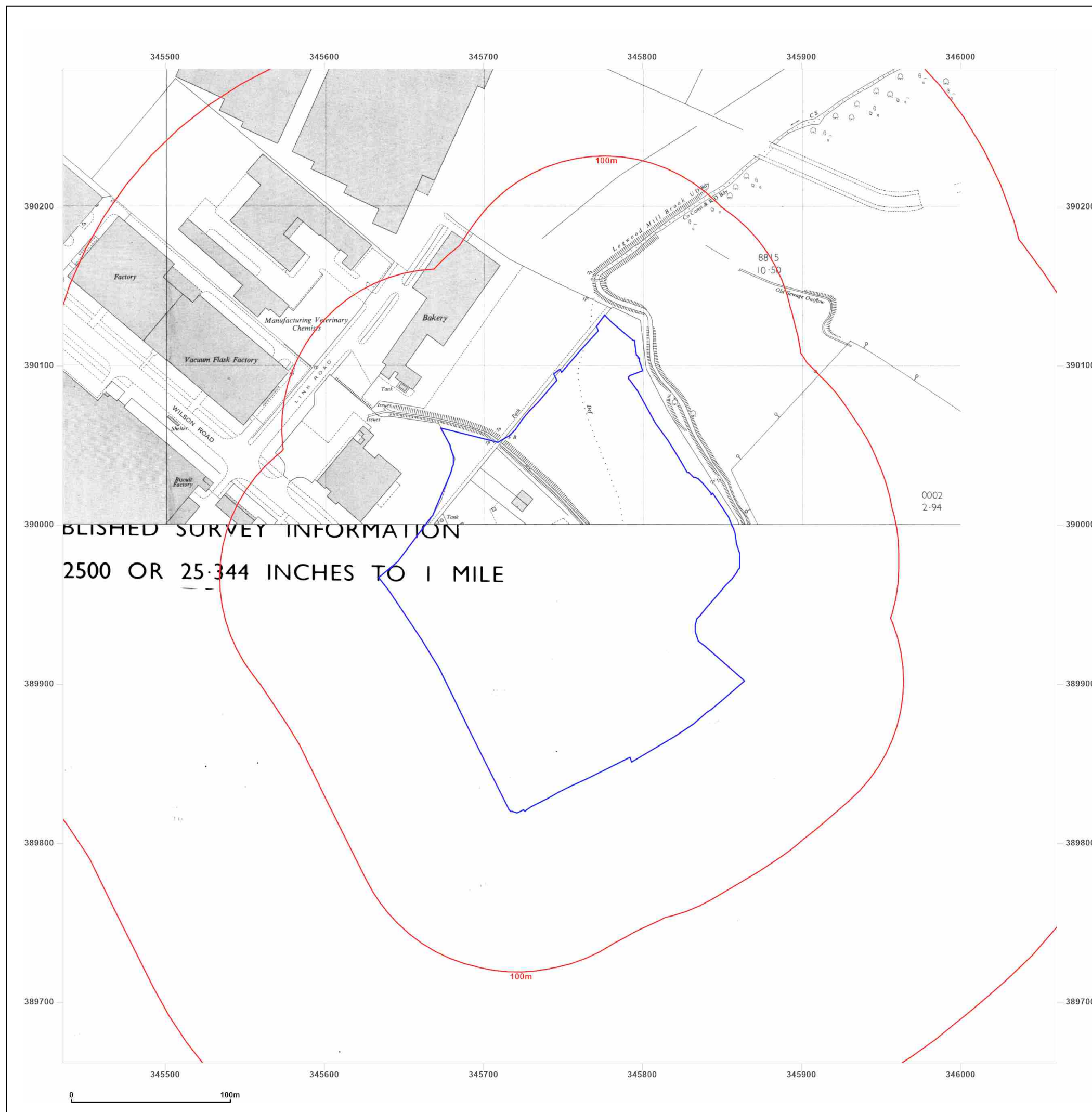


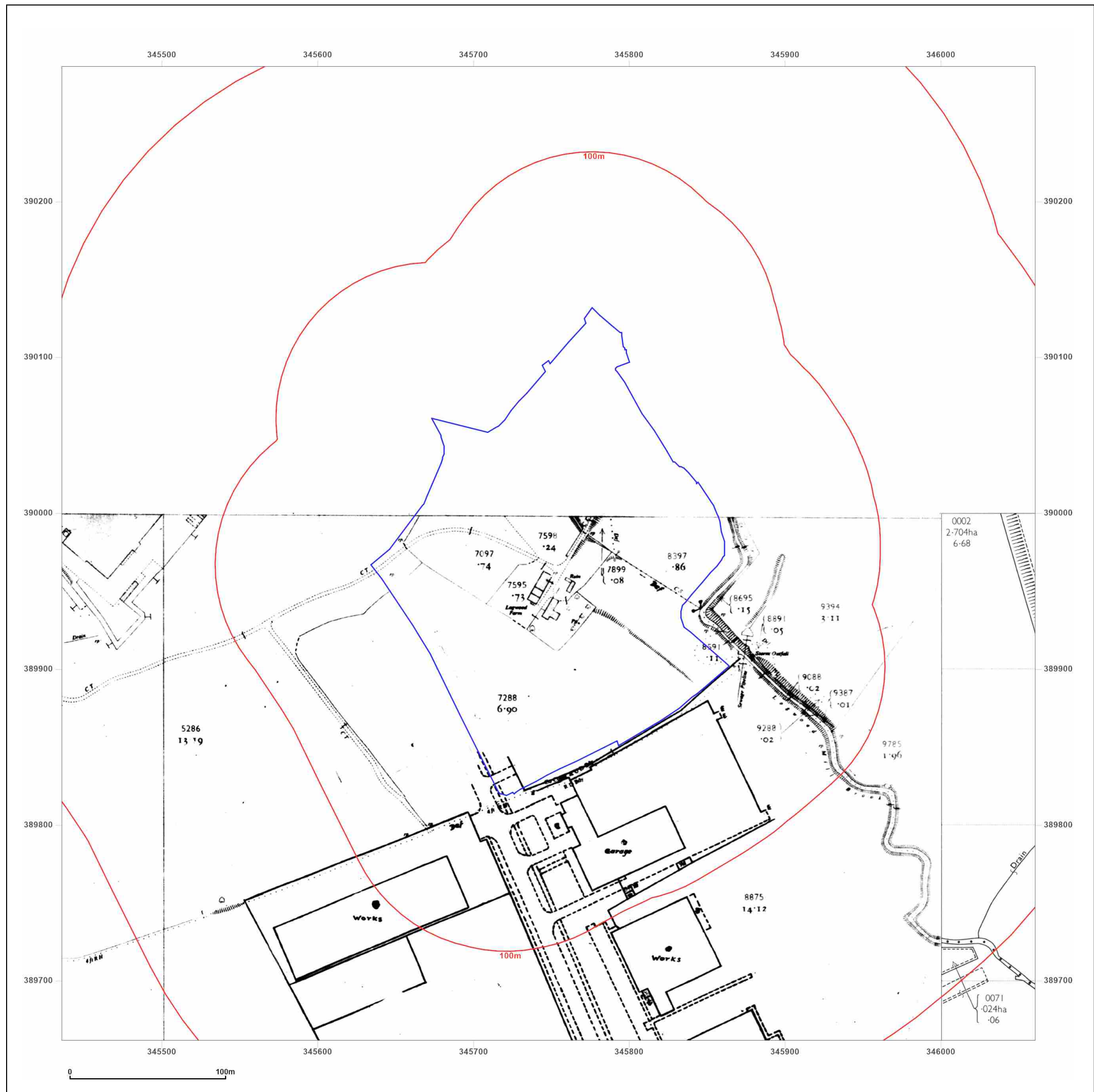
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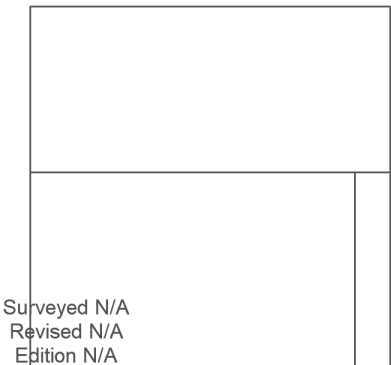
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Report Ref: JOMAS-8424360_2500
Grid Ref: 345748, 389974

Map Name: National Grid

Map date: 1976-1979

Scale: 1:2,500

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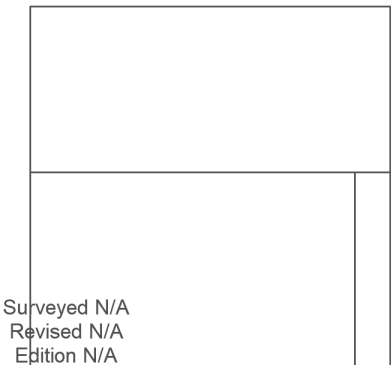
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Report Ref: JOMAS-8424360_2500
Grid Ref: 345748, 389974

Map Name: National Grid

Map date: 1982-1984

Scale: 1:2,500

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Site Details:

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L36 6AE

Client Ref: P4131J2476-1
Report Ref: JOMAS-8424360_1250_1_1
Grid Ref: 345749, 389725

Map Name: National Grid

Map date: 1956

Scale: 1:1,250

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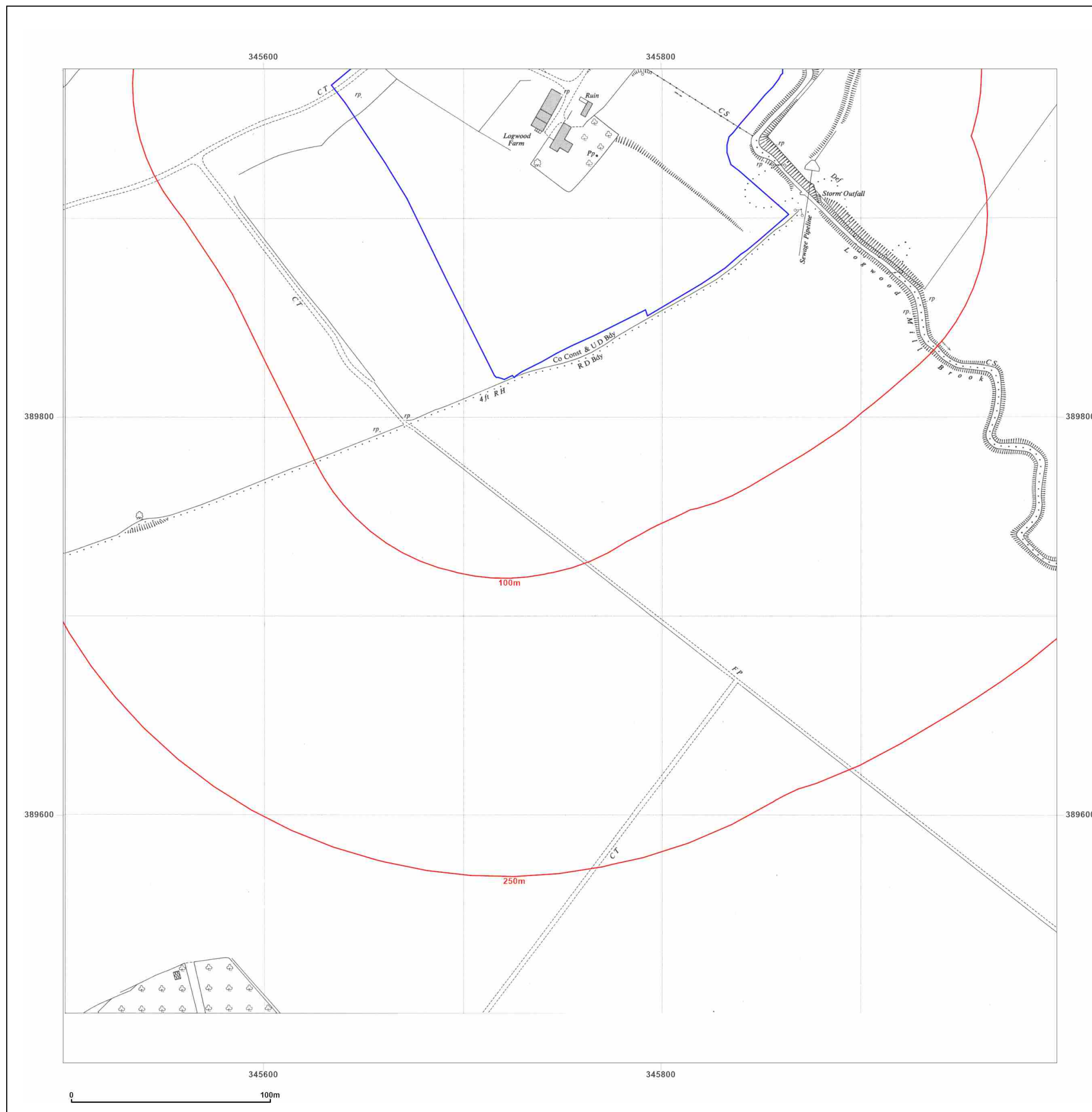


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Site Details:

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L36 6AE

Client Ref: P4131J2476-1
Report Ref: JOMAS-8424360_1250_1_1
Grid Ref: 345749, 389725

Map Name: National Grid

Map date: 1976-1977

Scale: 1:1,250

Printed at: 1:2,000



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L36 6AE

Client Ref: P4131J2476-1
Report Ref: JOMAS-8424360_1250_1_1
Grid Ref: 345749, 389725

Map Name: National Grid

Map date: 1982-1984

Scale: 1:1,250

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Client Ref: P4131J2476-1
Report Ref: JOMAS-8424360_1250_1_1
Grid Ref: 345749, 389725

Map Name: National Grid

Map date: 1992-1993

Scale: 1:1,250

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Client Ref: P4131J2476-1
Report Ref: JOMAS-8424360_1250_1_1
Grid Ref: 345749, 389725

Map Name: National Grid

Map date: 1989-1993

Scale: 1:1,250

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Client Ref: P4131J2476-1
Report Ref: JOMAS-8424360_1250_1_1
Grid Ref: 345749, 389725

Map Name: National Grid

Map date: 1956

Scale: 1:1,250

Printed at: 1:2,000



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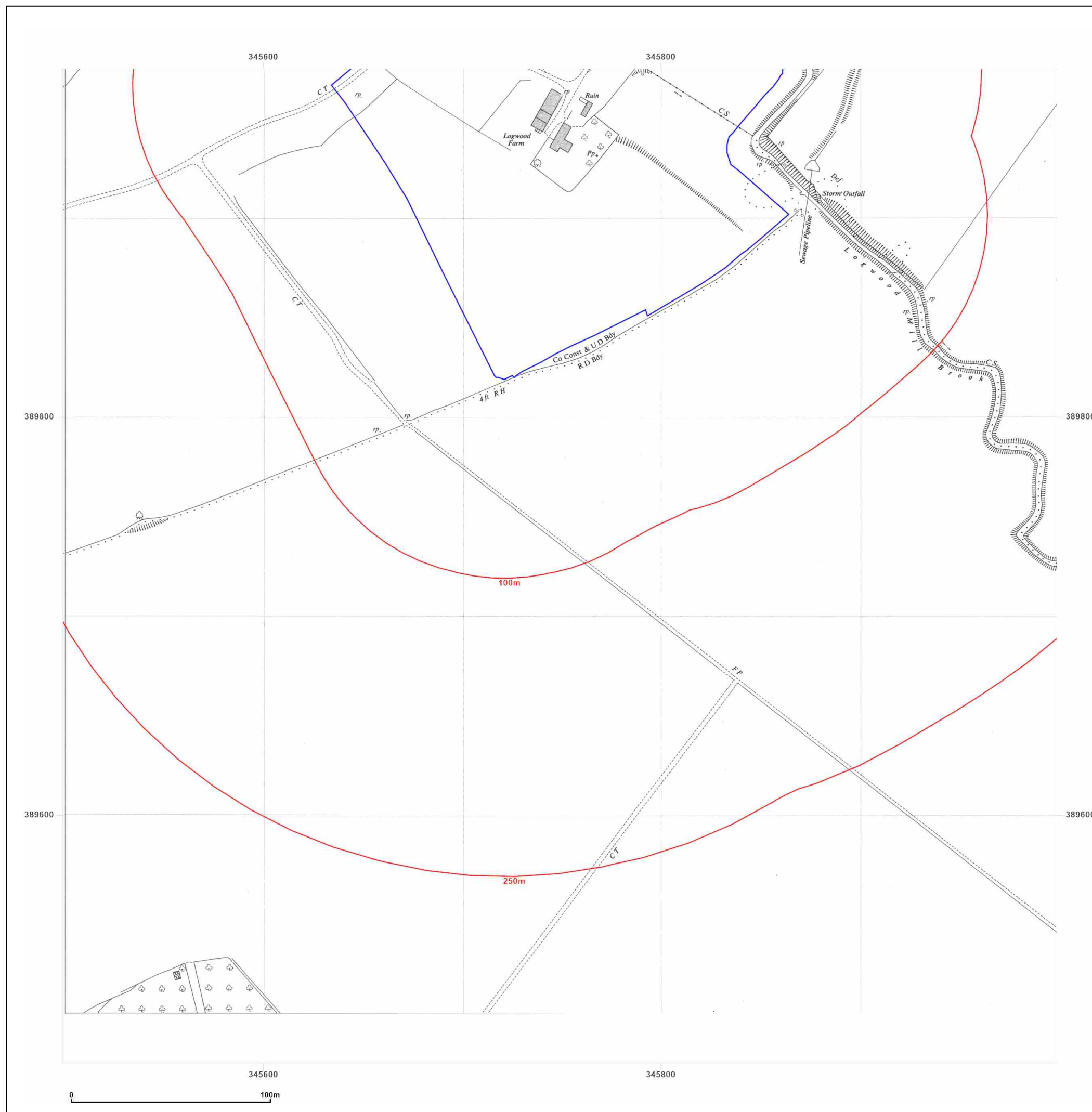


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Site Details:

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L36 6AE

Client Ref: P4131J2476-1
Report Ref: JOMAS-8424360_1250_1_1
Grid Ref: 345749, 389725

Map Name: National Grid

Map date: 1976-1977

Scale: 1:1,250

Printed at: 1:2,000



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L36 6AE

Client Ref: P4131J2476-1
Report Ref: JOMAS-8424360_1250_1_1
Grid Ref: 345749, 389725

Map Name: National Grid

Map date: 1982-1984

Scale: 1:1,250

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Client Ref: P4131J2476-1
Report Ref: JOMAS-8424360_1250_1_1
Grid Ref: 345749, 389725

Map Name: National Grid

Map date: 1992-1993

Scale: 1:1,250

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L36 6AE

Client Ref: P4131J2476-1
Report Ref: JOMAS-8424360_1250_1_1
Grid Ref: 345749, 389725

Map Name: National Grid

Map date: 1989-1993

Scale: 1:1,250

Printed at: 1:2,000



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Client Ref: P4131J2476-1
Report Ref: JOMAS-8424360_Landline_1_2
Grid Ref: 345749, 390125

Map Name: LandLine

Map date: 2003

Scale: 1:1,250

Printed at: 1:1,250



2003

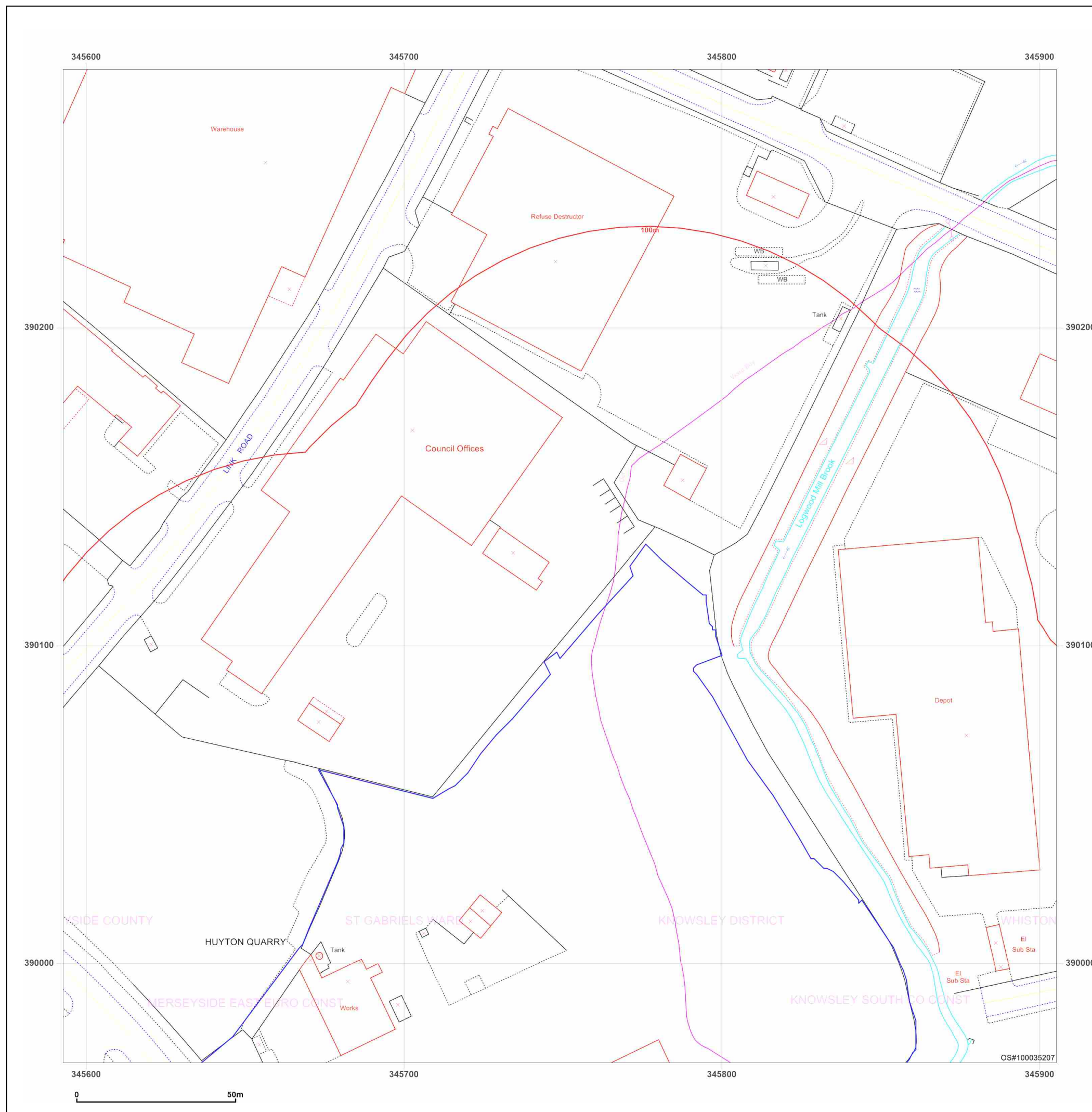


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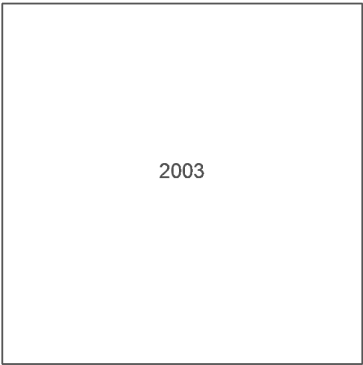
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Report Ref: JOMAS-8424360_Landline_1_1
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Map Name: LandLine

Map date: 2003

Scale: 1:1,250

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APPENDIX 4 – QUALITATIVE RISK ASSESSMENT METHODOLOGY

QUALITATIVE RISK ASSESSMENT METHODOLOGY

The following Contaminated Land Risk Assessment methodology is based on CIRIA C552 (2001) *Contaminated Land Risk Assessment – A Guide to Good Practice*, in order to quantify potential risk via **risk estimation** and **risk evaluation**, which can be adopted at the Phase I stage. This will then determine an overall risk category which can be used to identify likely actions. This methodology uses qualitative descriptors and therefore is a qualitative approach.

The methodology requires the classification of:

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

The potential consequences of contamination risks occurring at this site are classified in accordance with Table A4.1 below, which is adapted from the CIRIA guidance.

Table A4.1: Classification of Consequence

Classification	Definition of Consequence
Severe	• Short-term (acute) risks to human health. • Short-term risk of pollution of sensitive water resource or ecosystem. • Catastrophic damage to crops/buildings/property/infrastructure, including off-site soils.
Medium	• Medium/long-term (chronic) risks to human health. • Medium/long-term risk of pollution of sensitive water resource or ecosystem. • Significant damage to crops/buildings/property/infrastructure (on or off-site). • Contamination of off-site soils.
Mild	• Easily preventable, permanent health effects on humans. • Pollution of non-sensitive water resources. • Localised damage to crops/buildings/property/infrastructure (on or off-site).
Minor	• Easily preventable, non-permanent health effects on humans, or no effects. • Minor, low-level and localised contamination of on-site soils. • Easily repairable damage to crops/buildings/property/infrastructure.

The probability of contamination risks occurring at this site will be classified in accordance with Table A4.2 below which is also adapted from the CIRIA guidance. Note that for each category, it is assumed that a pollution linkage exists. Where a pollution linkage does not exist, the likelihood is zero, as is the risk.

Table A4.2: Classification of Probability

Classification	Definition of Probability
High Likelihood	Circumstances are such that an event appears very likely in the short-term or almost inevitable in the long-term; or there is already evidence that such an event has occurred.
Likely	Circumstances are such that such an event is not inevitable, but is possible in the short-term and is likely over the long-term.
Low Likelihood	Circumstances are such that it is by no means certain that an event would occur even over a longer period, and it is less likely in the short-term.
Unlikely	Circumstances are such that it is improbable that an event would occur even in the very long-term.

For each possible pollution linkage (source-pathway-receptor) identified, the potential risk can be evaluated, as presented in Table A3.3. Based upon this, CIRIA C552 presents definitions of the risk categories, together with the investigatory and remedial actions that are likely to be necessary in each case, as in Table A3.4. These risk categories apply to each possible pollutant linkage, and not simply to each hazard/source of contamination or sensitive receptor.

Table A4.3: Overall Contamination Risk Matrix

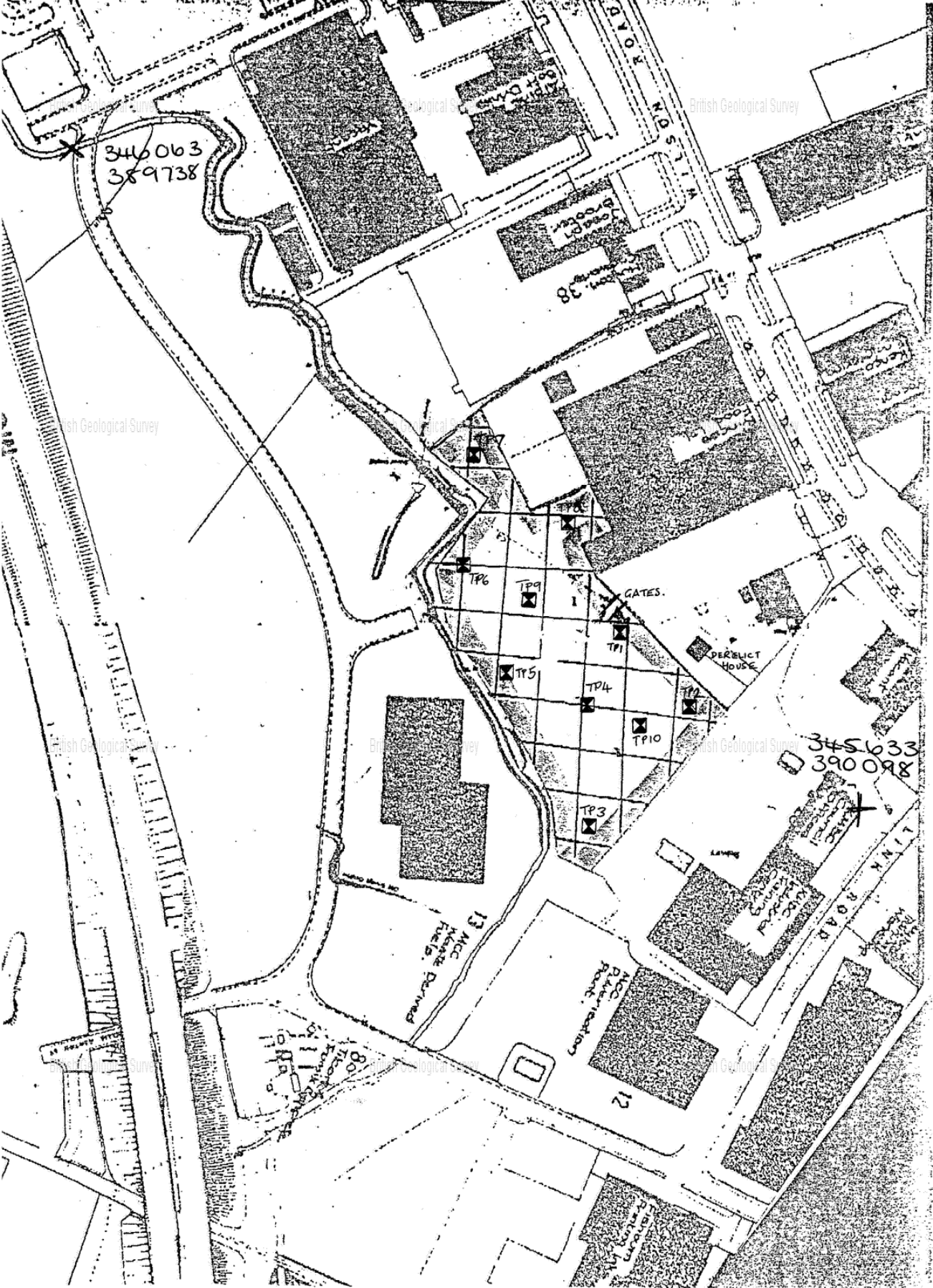
		Consequence			
		Severe	Medium	Mild	Minor
Probability	High likelihood	Very high risk	High risk	Moderate risk	Low risk
	Likely	High risk	Moderate risk	Moderate risk	Low risk
	Low likelihood	Moderate risk	Moderate risk	Low risk	Very low risk
	Unlikely	Low risk	Low risk	Very low risk	Very low risk

Table A4.4: Definition of Risk Categories and Likely Actions Required

Risk Category	Definition and likely actions required
Very high	• Severe harm to a defined receptor is very likely, or has already occurred. • The risk is likely to result in a substantial liability. • Urgent investigation (if not already undertaken) is likely to be required. • Urgent remediation is likely to be required.
High	• Harm to a defined receptor is likely. • The risk, if realised, may result in a substantial liability. • Urgent investigation (if not already undertaken) is likely to be required. • Remediation is likely to be required in the long term, possibly sooner.
Moderate	• Harm to a defined receptor is possible, but severe harm is unlikely. • Investigation is likely to be required to clarify the level of potential liability and risk. • Some remediation may be required in the longer term
Low	• Harm to a defined receptor is possible, but is likely to be mild at worst. • Liabilities could theoretically arise, but are unlikely. • Further investigation is not required at this stage • Remediation is unlikely to be required.
Very low	• Harm to a defined receptor is unlikely, and would be minor at worst. • No liabilities are likely to arise. • Further investigation is not required at this stage • Remediation is very unlikely to be required.

APPENDIX 5 – BGS BOREHOLE RECORDS

389-05-04 08:42 TEL 051 236 2569 MASON OWEN & PARTNERS L/POOL 009 P02



2/2

STRATA SURVEYS LTD., HOLMES CHAPEL ROAD, MIDDLEWICH, CHESHIRE. CW10 0JB Telephone: 0606 84 4637 Fax: 0606 84 6657					Trial Pit No. : 2 Sheet No. 1 Of 1. Depth 0 to 4 metres. Dates : 16 May 89				
Job Number : 4918 Location: Wilson Road, Huyton Client : Brian Moorehead					Equipment and Methods Mechanical Excavator 34572S 390041				
Description of Strata	Red. Level	Legend	Thick-ness	Depth m	Sample Depths	Sample Types	NMC	Cu	Remarks
MADE GROUND Grassed over dark brown clayey sandy gravelly fill with brick and wood fragments and household debris		[Cross-hatch pattern]	(1.80)	0.00 1.30 1.80		D 1 D 2			
Soft to firm brown friable sandy gravelly CLAY with occasional wood fragments		[Horizontal dashes]	(0.70)	2.50		D 3			
Soft orange brown silty CLAY with occasional medium fine gravel and plant fragments		[X marks]	(0.50)	3.00		D 4		V 19	
Soft damp black becoming grey silty CLAY with plant remains (river alluvium)		[X marks]	(0.30)	3.30					2.80m Slight water seepage
----- End Of Trial Pit									
Key Sample Types U Undisturbed D Disturbed B Bulk Disturbed W Water In-Situ Tests V Vane Test Pb Plate Bearing Test CBR In-Situ CBR Test					General Remarks Slight water seepage at 2.80m Sides of trial pit unstable				
Sketch/Plan									

STRATA SURVEYS LTD., HOLMES CHAPEL ROAD, MIDDLEWICH, CHESHIRE. CW10 0JB Telephone: 0606 84 4637 Fax: 0606 84 6657					Trial Pit No. : 3 Sheet No. 1 Of 1. Depth 0 to 4 metres. Dates : 16 May 89				
Job Number : 4918 Location: Wilson Road, Huyton Client : Brian Moorehead					Equipment and Methods Mechanical Excavator 345780 390107				
Description of Strata	Red. Level	Legend	Thick-ness	Depth m	Sample Depths	Sample Types	NMC	Cu	Remarks
MADE GROUND Grassed over dark brown clayey sandy gravelly fill with wood and brick fragments		[Cross-hatch pattern]	(1.40)	0.00 1.40					
Firm grey becoming orange brown silty sandy CLAY with coarse medium fine gravel		[Dotted pattern]	(0.50)	1.40 1.70 1.70 - 1.80 1.80 - 2.00	2.15	D U D D 1 1 2 3			
Firm to stiff red brown occasionally grey silty sandy CLAY with coarse medium fine gravel		[Dotted pattern]	(0.80)	1.90 2.00					
Stiff grey CLAY with coarse medium fine gravel of mudstone fragments (highly weathered mudstone) ----- End Of Trial Pit		[Dotted pattern]	(0.30)	2.70 3.00	2.80	D 4			
Key Pp Pocket Penetrometer Sample Types U Undisturbed D Disturbed B Bulk Disturbed W Water In-Situ Tests V Vane Test Pb Plate Bearing Test CBR In-Situ CBR Test					General Remarks No water encountered Sides of trial pit stable				
Sketch/Plan									

STRATA SURVEYS LTD., HOLMES CHAPEL ROAD, MIDDLEWICH, CHESHIRE. CW10 0JB Telephone: 0606 84 4637 Fax: 0606 84 6657						Trial Pit No. : 4 Sheet No. 1 Of 1. Depth 0 to 4 metres. Dates : 16 May 89			
Job Number : 4918 Location: Wilson Road, Huyton Client : Brian Moorehead						Equipment and Methods Mechanical Excavator 345780 390041			
Description of Strata	Red. Level	Legend	Thick-ness	Depth m	Sample Depths	Sample Types	NMC	Cu	Remarks
MADE GROUND Grassed over dark brown clayey sandy gravelly fill with brick wood fragments and household debris			(1.30)	0.00					
Firm to stiff grey mottled brown silty CLAY with coarse medium fine gravel			(0.55)	1.30				V 80	
Firm to stiff orange brown very sandy silty CLAY with medium fine gravel			(0.45)	1.85					
Stiff red brown becoming grey mottled orange occasionally sandy silty CLAY with coarse medium fine gravel (possible highly weathered mudstone)			(0.80)	2.30	2.40	D 1			2.60m Slight water seepage
----- End Of Trial Pit				3.10					
Key Pp Pocket Penetrometer Sample Types U Undisturbed D Disturbed B Bulk Disturbed W Water In-Situ Tests V Vane Test Pb Plate Bearing Test CBR In-Situ CBR Test						General Remarks Slight water seepage at 2.60m Sides of trial pit stable			
Sketch/Plan									

STRATA SURVEYS LTD., HOLMES CHAPEL ROAD, MIDDLEWICH, CHESHIRE. CW10 0JB Telephone: 0606 84 4637 Fax: 0606 84 6657					Trial Pit No. : 5 Sheet No. 1 Of 1. Depth 0 to 4 metres. Dates : 16 May 89				
Job Number : 4918 Location: Wilson Road, Huyton Client : Brian Moorehead					Equipment and Methods Mechanical Excavator 345825 390024				
Description of Strata	Red. Level	Legend	Thick-ness	Depth m	Sample Depths	Sample Types	NMC	Cu	Remarks
MADE GROUND Grassed over dark brown clayey sandy gravelly fill with wood and brick fragments		[Cross-hatch pattern]	(1.40)	0.00					
Firm grey brown silty sandy CLAY with medium fine gravel and wood fragments		[Stippled pattern]	(0.40)	1.40	1.60	D 1			
Firm to stiff grey and orange sandy silty CLAY with medium fine gravel		[Stippled pattern]	(1.20)	1.80	1.95	D 2			
----- End Of Trial Pit				3.00					
Key Pp Pocket Penetrometer Sample Types U Undisturbed D Disturbed B Bulk Disturbed W Water In-Situ Tests V Vane Test Pb Plate Bearing Test CBR In-Situ CBR Test					General Remarks No water encountered Sides of trial pit stable				
Sketch/Plan									

STRATA SURVEYS LTD., HOLMES CHAPEL ROAD, MIDDLEWICH, CHESHIRE. CW10 0JB Telephone: 0606 84 4637 Fax: 0606 84 6657					Trial Pit No. : 6 Sheet No. 1 Of 1. Depth 0 to 4 metres. Dates : 16 May 89									
Job Number : 4918 Location: Wilson Road, Huyton Client : Brian Moorehead					Equipment and Methods Mechanical Excavator 345848 389964									
Description of Strata	Red. Level	Legend	Thick-ness	Depth m	Sample Depths	Sample Types	NMC	Cu	Remarks					
MADE GROUND Grassed over dark brown clayey sandy gravelly fill with brick and wood fragments			(2.90)	0.00	1.28 - 1.73	U 1		V 80						
Stiff grey occasionally mottled orange silty CLAY with occasional medium fine gravel (possible highly weathered mudstone) ----- End Of Trial Pit			(0.20)	2.90 3.10	2.60 2.95	D 1 D 2								
Key Sample Types U Undisturbed D Disturbed B Bulk Disturbed W Water In-Situ Tests V Vane Test Pb Plate Bearing Test CBR In-Situ CBR Test					Pp Pocket Penetrometer Progress / Water Levels — Borehole Depth ▽ Water Level ▽ Water Strike					General Remarks No water encountered Sides of trial pit stable				
Sketch/Plan														

STRATA SURVEYS LTD., HOLMES CHAPEL ROAD, MIDDLEWICH, CHESHIRE. CW10 0JB Telephone: 0606 84 4637 Fax: 0606 84 6657						Trial Pit No. : 7 Sheet No. 1 Of 1. Depth 0 to 4 metres. Dates : 16 May 89					
Job Number : 4918 Location: Wilson Road, Huyton Client : Brian Moorehead						Equipment and Methods Mechanical Excavator 345843 389904					
Description of Strata	Red. Level	Legend	Thick-ness	Depth m	Sample Depths	Sample Types	NMC	Cu	Remarks		
MADE GROUND Grassed over dark brown clayey sandy gravelly fill with brick wood fragments becoming black damp clayey fill with rotting wood from 2.50m with concrete blocks at 2.90m			(3.05)	0.00 1.10 2.70 3.05		D 1 D 2		V 96			
Grey CLAY (possible highly weathered mudstone) at the base of the pit - - / End Of Trial Pit			(0.00)								
Key Sample Types U Undisturbed D Disturbed B Bulk Disturbed W Water In-Situ Tests V Vane Test Pb Plate Bearing Test CBR In-Situ CBR Test						Pp Pocket Penetrometer Progress / Water Levels — Borehole Depth ▾ Water Level ▽ Water Strike				General Remarks No water encountered Sides of trial pit slightly unstable	
Sketch/Plan											

STRATA SURVEYS LTD., HOLMES CHAPEL ROAD, MIDDLEWICH, CHESHIRE. CW10 0JB Telephone: 0606 84 4637 Fax: 0606 84 6657						Trial Pit No. : 8 Sheet No. 1 Of 1 Depth 0 to 4 metres. Dates : 16 May 89				
Job Number : 4918 Location: Wilson Road, Huyton Client : Brian Moorehead						Equipment and Methods Mechanical Excavator 345791 389942				
Description of Strata	Red. Level	Legend	Thick-ness	Depth m	Sample Depths	Sample Types	NMC	Cu	Remarks	
MADE GROUND Grassed over dark brown sandy gravelly fill with wood and brick fragments. Layer of black rotting plant debris from 1.20m to 1.25m and below dark grey damp sandy silty clay fill with brick fragments			(2.80)	0.00						
				2.20		D 1		V 64		
			(0.10)	2.80		D 2		V 30		
Stiff grey mottled orange slightly silty CLAY with medium fine gravel (possible highly weathered mudstone). End Of Trial Pit				2.85						
Key Pp Pocket Penetrometer Sample Types U Undisturbed D Disturbed B Bulk Disturbed W Water In-Situ Tests V Vane Test Pb Plate Bearing Test CBR In-Situ CBR Test						General Remarks No water encountered Sides of trial pit stable				
Sketch/Plan										

STRATA SURVEYS LTD., HOLMES CHAPEL ROAD, MIDDLEWICH, CHESHIRE. CW10 0JB Telephone: 0606 84 4637 Fax: 0606 84 6657					Trial Pit No. : 9 Sheet No. 1 Of 1 Depth 0 to 4 metres. Dates : 16 May 89				
Job Number : 4918 Location: Wilson Road, Huyton Client : Brian Moorehead					Equipment and Methods 34812 Mechanical Excavator 389983				
Description of Strata	Red. Level	Legend	Thick-ness	Depth m	Sample Depths	Sample Types	NMC	Cu	Remarks
MADE GROUND Grassed over dark brown clayey sandy gravelly fill with wood brick fragments and household debris becoming red brown from 1.15m and black from 1.60m			(2.50)	1.15		D 1		V 50	
Stiff grey mottled orange slightly silty CLAY with occasional medium fine gravel (possible highly weathered mudstone)			(0.60)	2.50					
End Of Trial Pit				3.10					
Key Pp Pocket Penetrometer Sample Types Progress / Water Levels U Undisturbed — Borehole Depth D Disturbed ▽ Water Level B Bulk Disturbed ▽ Water Strike W Water					General Remarks No water encountered Sides of trial pit stable				
In-Situ Tests V Vane Test Pb Plate Bearing Test CBR In-Situ CBR Test									
Sketch/Plan									

STRATA SURVEYS LTD., HOLMES CHAPEL ROAD, MIDDLEWICH, CHESHIRE. CW10 0JB Telephone: 0606 84 4637 Fax: 0606 84 6657					Trial Pit No. : 10 Sheet No. 1 Of 1. Depth 0 to 4 metres. Dates : 16 May 89				
Job Number : 4918 Location: Wilson Road, Huyton Client : Brian Moorehead					Equipment and Methods Mechanical Excavator 345752 3900S1				
Description of Strata	Red. Level	Legend	Thick-ness	Depth m	Sample Depths	Sample Types	NMC	Cu	Remarks
MADE GROUND Grassed over clayey sandy gravelly fill with brick fragments			(1.30)	0.00					
Firm orange brown very sandy silty CLAY with medium fine gravel			(0.70)	1.10 1.30 1.40		D 1 D 2			
Firm to stiff red brown sandy silty CLAY with medium fine gravel			(0.95)	2.00 2.10		D 3			
Stiff grey mottled orange CLAY with medium fine gravel of mudstone fragments (highly weathered mudstone) ----- End Of Trial Pit			(0.10)	2.95 3.05					
Key Pp Pocket Penetrometer Sample Types U Undisturbed D Disturbed B Bulk Disturbed W Water In-Situ Tests V Vane Test Pb Plate Bearing Test CBR In-Situ CBR Test					General Remarks No water encountered Sides of trial pit stable				
Sketch/Plan									

Geotechnical Engineering Limited

BOREHOLE LOGSJ49SE 231
4599 9023

CLIENT DEPARTMENT OF TRANSPORT

BH **BE03RG**

British Geological Survey

SITE M62 IMPROVEMENT, JUNCTION 6 TO 7

British Geological Survey

Sheet 1 of 2

Start Date 15/06/1993

End Date 22/06/1993

Scale 1 : 50

Ground Level (mOD) 27.27

Easting 7055

Northing 15242

Depth (m) 14.00

sample no.	type	depth (m) from	depth (m) to	TCR	SCR	RQD	FI	SPT type & N value	instrument	description	depth (m)	level (mOD)	legend
1B		0.35	1.50							TOPSOIL: dark brown sandy silt with some fine roots and some subrounded fine to medium gravel, and plastic, pot and brick. Very stiff to hard reddish brown very silty, very sandy CLAY with some subangular to subrounded fine to medium gravel and some laminae and pockets of grey sand	0.30	26.97	
2U		1.50	1.95										
3B		2.15	2.50										
4U		2.50	2.95										
5D		2.95	3.15								3.10	24.17	
6D		3.15	3.53							Weak grey silty fine grained SANDSTONE, highly weathered, with some micaceous and carbonaceous laminae recovered as angular fine to coarse gravel			
7B		3.15	4.00										
8D		4.00	4.21								4.00	23.27	
		4.11	5.01	95	49	8				Very weak grey thickly laminated SILTSTONE, slightly to moderately weathered with extremely to very closely spaced subhorizontal smooth, planar bedding planes with medium spaced medium beds of strong fine to medium grained sandstone, slightly weathered with siltstone, micaceous and carbonaceous laminae. 4.11-4.50m completely weathered to clay			
		4.11	4.50				N/A						
		4.50	6.40				35						
		5.61	7.11	100	30	0							
		6.40	7.80				133			Moderately weak to moderately strong dark grey very thinly bedded very sandy SILTSTONE slightly weathered with closely spaced rough planar bedding planes subhorizontal becoming 30° below 6.58m with many rounded lithic fragments of light grey sandstone upto 3mm thick	6.40	20.87	
		7.11	8.66	97	45	7							
		7.80	10.74				63			Moderately weak to moderately strong dark grey very thinly bedded very silty MUDSTONE slightly weathered with very closely to closely spaced smooth planar bedding planes dipping 15°-20°. 7.60-7.75m subvertical smooth planar joint 7.88-7.91m iron stone band 8.34-8.43m subvertical smooth planar joint 9.00-9.28m subvertical smooth planar joint 9.50-9.65m iron stone band with 2 parallel subvertical rough planar joint 10.74-10.76m iron stone band 10.76-11.23m non intact	7.60	19.67	
		8.66	9.68	86	21	8							
		9.68	11.23	81	46	0							
remarks: additional borehole information is given on separate sheets										CONTRACT 2723N	FIGURE 1/8		

CBF1L11

Geotechnical Engineering Limited

BOREHOLE LOG

SJ49 SE 231



CLIENT DEPARTMENT OF TRANSPORT

BH BE03RG

British Geological Survey

SITE M62 IMPROVEMENT, JUNCTION 6 TO 7

British Geological Survey

Sheet 2 of 2

Start Date 15/06/1993

End Date 22/06/1993

Scale 1 : 50

Ground Level (mOD) 27.27

Easting 7055

Northing 15242

Depth (m) 14.00

sample no. type	depth (m) from to	core TCR SCR RQD FI	SPT type & N value	instru- ment	description	depth (m)	level (mOD)	legend
	10.74 11.23		N/A					
	11.23 12.73	69	26	7		11.23	16.04	
	11.23 11.46		58		Moderately weak to moderately strong black carbonaceous MUDSTONE slightly weathered to fresh with very closely to closely spaced smooth planar bedding planes dipping 15-20°.	11.46	15.81	
	11.46 12.95		N/A		Very weak black thickly laminated COAL slightly weathered with some slickensided surfaces and white calcareous deposit			
	12.73 14.00	124	91	76		12.95	14.32	
	12.95 14.00		66		Strong to very strong brownish grey silty fine grained micaceous SANDSTONE, slightly weathered with some silty patches and many becoming rare with depth fossil plant remains 12.40-12.60m grades from sandy micaceous siltstone slightly weathered 12.89-13.08m subvertical rough planar joint 13.70-14.00m subvertical to vertical rough undulating joint Borehole completed at 14.00m	14.00	13.27	
remarks: additional borehole information is given on separate sheets						CONTRACT 2723N		FIGURE 1/9

CBF-1L11

Geotechnical Engineering Limited

BOREHOLE RECORDS

SJ49SE 231



CLIENT DEPARTMENT OF TRANSPORT

BH BE03RG

SITE M62 IMPROVEMENT, JUNCTION 6 TO 7

ENGINEER

GEL Contract Personnel

Manager: A.Binns

Borehole logged by: P.Dell-Jones

Driller: D.Strong, D.Orme

Log approved by: W.Fitzpatrick

Methods

Equipment: Cable tool percussive (shell and auger boring) from base of hand dug trial pit at 1.00m to 4.21m, using 150mm diameter casing and tools, then continued by rotary water flush diamond core drilling using 128mm barrel to produce 90mm core in geoline

Casing: liner to completion at 14.00m

Diameter:

Piezometer: Slotted pipe was installed from 1.50-0.70m, with grout from 14.00-1.50m, pea gravel from 1.50-0.70m, sand from 0.70-0.50m, cement from 0.50m to G.L. with vandal proof cover from 0.50m to G.L and lockable stopcock cover at surface.

Date: 22/08/93

Groundwater strike

depth of strike (m)	depth of casing (m)	date of strike	time of strike	depth water rose to (m)	time to rise (mins)	depth sealed by casing (m)	flow remarks
---------------------	---------------------	----------------	----------------	-------------------------	---------------------	----------------------------	--------------

Note: Periodic groundwater depth readings are given in Borehole Progress below. Readings from piezometers are given on a separate sheet.

Borehole Progress

date	time	depth of borehole (m)	depth of casing (m)	depth of water (m)
15/06/93	13.00	0.00		
15/06/93	18.00	4.21	3.50	2.41
21/06/93	14.00	4.21	4.11	0.50
21/06/93	17.00	5.61	4.11	0.63
22/06/93	8.00	5.61	4.00	1.27
22/06/93	18.00	14.00	4.00	1.11

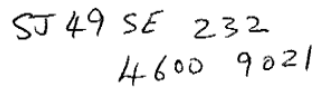
Depth related remarks

depth (m)	remarks
4.11	Shell and auger boring complete

general remarks:

CONTRACT 2723N	FIGURE 1/10
-------------------	----------------

BOREHOLE LOG



BH BE04R

Sheet 1 of 2

Scale 1 : 50

Depth (m) 19.57

C6F1L11

Depth (m) 19.57

C6F1L11

Geotechnical Engineering Limited

BOREHOLE RECORDS

SJ 49 SE 232



CLIENT DEPARTMENT OF TRANSPORT

BH **BE04R**

SITE M62 IMPROVEMENT, JUNCTION 6 TO 7

ENGINEER

GEL Contract Personnel

Manager: A.Binns

Borehole logged by: P.Dell-Jones

Driller: D.Strong, M.Buxton

Log approved by: W.Fitzpatrick

Methods

Equipment: Cable tool percussive (shell and auger boring) from base of hand dug trial pit at 1.00m to 4.28m, using 150mm diameter casing and tools, then continued by rotary water flush diamond core drilling using 128mm barrel to produce 90mm core in geoline liner to completion at 19.57m.

Casing:

Diameter:

Piezometer:

Backfill:

Date:

Groundwater strike

depth of strike (m)	depth of casing (m)	date of strike	time of strike	depth water rose to (m)	time to rise (mins)	depth sealed by casing (m)	flow remarks
---------------------	---------------------	----------------	----------------	-------------------------	---------------------	----------------------------	--------------

Note: Periodic groundwater depth readings are given in Borehole Progress below. Readings from piezometers are given on a separate sheet.

Borehole Progress

date	time	depth of borehole (m)	depth of casing (m)	depth of water (m)
16/6/93	8.00	0.00		
16/6/93	18.00	4.28	3.70	2.40
17/6/93	8.00	4.28	3.70	2.90
17/6/93	18.00	13.90	3.70	1.20
18/6/93	8.00	13.90	3.70	2.60
18/6/93	17.00	19.57	3.70	1.00

Depth related remarks

depth (m)	remarks
4.28	Shell and auger boring complete

general remarks:

CONTRACT
2723NFIGURE
1/13

APPENDIX 6 – COAL AUTHORITY DATA



The Coal
Authority

CON29M

coal mining report

LAND AT: 345755, 389978, WILSON ROAD, LIVERPOOL, ***



Known or potential coal mining risks

Past underground coal mining	Page 4
Future underground coal mining	Page 4
Mine entries	Page 5



Further action

No further reports from the Coal Authority are required. Further information on any next steps can be found in our Professional opinion.

For more information on our reports please visit
www.groundstability.com



Professional opinion

According to the official mining information records held by the Coal Authority at the time of this search, evidence of, or the potential for, coal mining related features have been identified. In view of the coal mining circumstances we would recommend that any planned or future development should follow detailed technical advice before beginning work on site. Please see **page 3** for further details on **Future development**.

Your reference: **SB/LIN47/1**
Our reference: **61002909197001**
Date: **2 October 2020**

Client name:
NLIS

If you require any further assistance please
contact our experts on:
0345 762 6848
groundstability@coal.gov.uk



The Law
Society

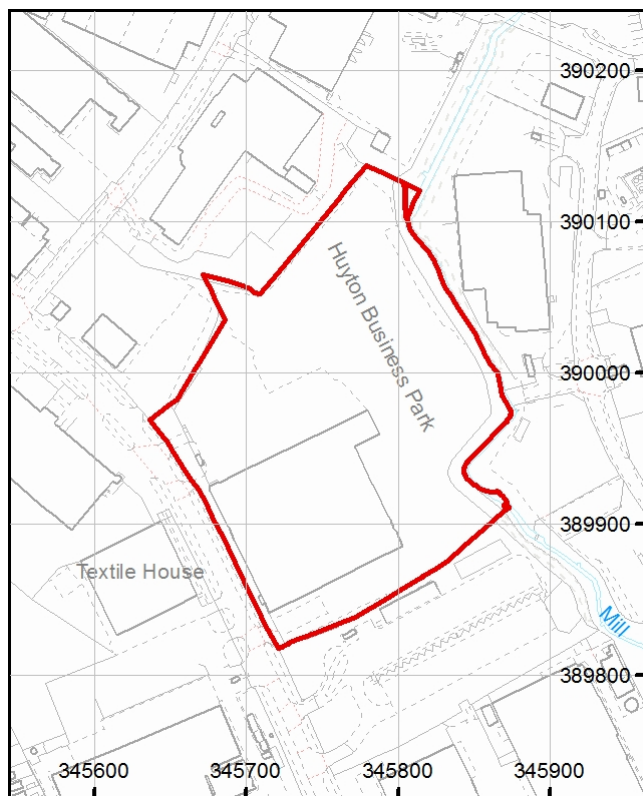
Enquiry boundary

Key

Approximate position of enquiry boundary shown



We can confirm that the location is
on the coalfield



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This report is prepared in accordance with the latest Law Society's Guidance Notes 2018, the User Guide 2018 and the Coal Authority's Terms and Conditions applicable at the time the report was produced.



Accessibility

If you would like this information in an alternative format, please contact our communications team on 0345 762 6848 or email communications@coal.gov.uk.

Professional opinion



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. 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.

If you are looking to develop, or undertake works, within a coal mining development high risk area your Local Authority planning department may require a Coal Mining Risk Assessment to be undertaken by a qualified mining geologist or engineer. Should you require any additional information then please contact the Coal Authority on **0345 762 6848** or email **cmra@coal.gov.uk**.

Detailed findings

Information provided by the Coal Authority in this report is compiled in response to the Law Society's CON29M Coal Mining enquiries. The said enquiries are protected by copyright owned by the Law Society of 113 Chancery Lane, London WC2A 1PL.

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1 Past underground coal mining

The property is in a surface area that could be affected by underground mining in 6 seams of coal at 110m to 290m depth, and last worked in 1898.

Any movement in the ground due to coal mining activity associated with these workings should have stopped by now.

In addition the property is in an area where the Coal Authority believes there is coal at or close to the surface. This coal may have been worked at some time in the past. The potential presence of coal workings at or close to the surface should be considered, particularly prior to any site works or future development activity, as ground movement could still be a risk. Your attention is drawn to the Professional opinion sections of the report.

2 Present underground coal mining

The property is not within a surface area that could be affected by present underground mining.

3 Future underground coal mining

The property is not in an area where the Coal Authority has received an application for, and is currently considering whether to grant a licence to remove or work coal by underground methods.

The property is not in an area where a licence has been granted to remove or otherwise work coal using underground methods.

The property is not in an area likely to be affected from any planned future underground coal mining.

However, reserves of coal exist in the local area which could be worked at some time in the future.

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

4 Mine entries

There are no recorded coal mine entries known to the Coal Authority within, or within 20 metres, of the boundary of the property.

This information is based on the information that the Coal Authority has at the time of this enquiry.

Based on the Coal Authority's knowledge of the mining circumstances at the time of this enquiry, there may be unrecorded mine entries in the local area that do not appear on Coal Authority records.

5 Coal mining geology

The Coal Authority is not aware of any damage due to geological faults or other lines of weakness that have been affected by coal mining.

6 Past opencast coal mining

The property is not within the boundary of an opencast site from which coal has been removed by opencast methods.

7 Present opencast coal mining

The property does not lie within 200 metres of the boundary of an opencast site from which coal is being removed by opencast methods.

8 Future opencast coal mining

There are no licence requests outstanding to remove coal by opencast methods within 800 metres of the boundary.

The property is not within 800 metres of the boundary of an opencast site for which a licence to remove coal by opencast methods has been granted.

9 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.

10 Mine gas

The Coal Authority has no record of a mine gas emission requiring action.

11 Hazards related to coal mining

The property has not been subject to remedial works, by or on behalf of the Coal Authority, under its Emergency Surface Hazard Call Out procedures.

12 Withdrawal of support

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.

13 Working facilities order

The property is not in an area where an order has been made, under the provisions of the Mines (Working Facilities and Support) Acts 1923 and 1966 or any statutory modification or amendment thereof.

14 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.

Statutory cover



Coal mining subsidence

In the unlikely event of any coal mining related subsidence damage, the Coal Authority or the mine operator has a duty to take remedial action in respect of subsidence caused by the withdrawal of support from land or property in connection with lawful coal mining operations.

When the works are the responsibility of the Coal Authority, our dedicated public safety and subsidence team will manage the claim. The house or land owner ("the owner") is covered for these works under the terms of the Coal Mining Subsidence Act 1991 (as amended by the Coal Industry Act 1994). Please note, this Act does not apply where coal was worked or gotten by virtue of the grant of a gale in the Forest of Dean, or any other part of the Hundred of St. Briavels in the county of Gloucester.

If you believe your land or property is suffering from coal mining subsidence damage and you need more information on what to do next, please use the following link to our website which sets out what your rights are and what you need to consider before making a claim.

www.gov.uk/government/publications/coal-mining-subsidence-damage-notice-form



Coal mining hazards

Our public safety and subsidence team provide a 24 hour a day, 7 days a week hazard reporting service, to help protect the public from hazards caused by past coal workings, such as a mine shaft or shallow working collapse. To report any hazards please call **01623 646 333**. Further information can be found on our website: www.gov.uk/coalauthority.

Glossary



Key terms

adit - horizontal or sloped entrance to a mine

coal mining subsidence - ground movement caused by the removal of coal by underground mining

Coal Mining Subsidence Act 1991 - the Act setting out the duties of the Coal Authority to repair damage caused by coal mining subsidence

coal mining subsidence damage - damage to land, buildings or structures caused by the removal of coal by underground mining

coal seams - bed of coal of varying thickness

future opencast coal mining - a licence granted, or licence application received, by the Coal Authority to excavate coal from the surface

future underground coal mining - a licence granted, or licence application received, by the Coal Authority to excavate coal underground. Although it is unlikely, remaining coal reserves could create a possibility for future mining, which would be licensed by the Coal Authority

mine entries - collective name for shafts and adits

payments to owners of former copyhold land - historically, copyhold land gave rights to coal to the copyholder. Legislation was set up to allow others to work this coal, but they had to issue a notice and pay compensation if a copyholder came forward

shaft - vertical entry into a mine

site investigation - investigations of coal mining risks carried out with the Coal Authority's permission

stop notice - a delay to repairs because further coal mining subsidence damage may occur and it would be unwise to carry out permanent repairs

subsidence claim - a formal notice of subsidence damage to the Coal Authority since it was established on 31 October 1994

withdrawal of support - a historic notice informing landowners that the coal beneath their property was going to be worked

working facilities orders - a court order which gave permission, restricted or prevented coal mine workings



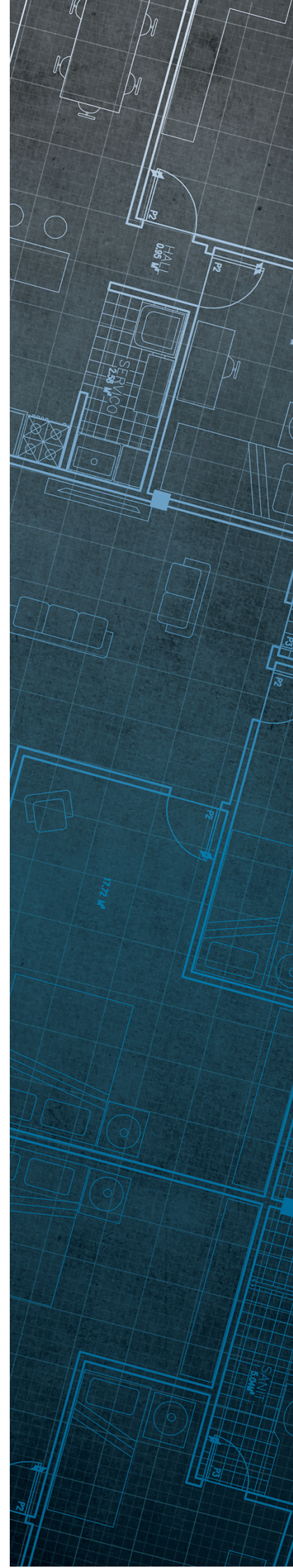
The Coal
Authority

Consultants Coal Mining Report

35, Wilson Road, Huyton, L36 6ae
Merseyside

Date of enquiry:	5 January 2022
Date enquiry received:	5 January 2022
Issue date:	5 January 2022

Our reference:	51002863807001
Your reference:	JOMAS-8424361



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

GROUNDSURE LIMITED

Enquiry address

35, Wilson Road, Huyton, L36 6ae
Merseyside

How to contact us

0345 762 6848 (UK)
+44 (0)1623 637 000 (International)

200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

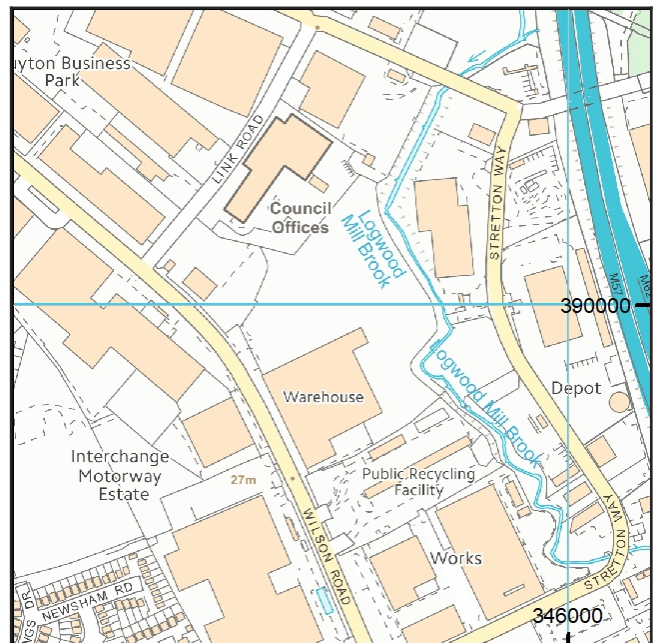
www.groundstability.com

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 /thecoalauthority

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Approximate position of property



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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	LONDON DELPH (BIN)	Coal	302G	110	East	11.3	South-West	180	1880
CRONTON	CROMBOUK E	Coal	302Q	131	East	11.3	South	190	1883
unnamed	ST. HELENS YARD	Coal	302T	151	North-East	11.3	South-West	90	1870
unnamed	LOWER FLORIDA	Coal	303A	164	North-East	11.3	South-West	120	1862
unnamed	WIGAN FOUR FEET	Coal	303W	290	North-East	11.2	South	160	1898

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	345389-002	345559 389962		Coal	
Shaft	345389-023	345668 389760	This shaft was found during development was capped with a 3m square RC raft at rockhead. It is thought that the shaft was then conveyed to Capital @ Counties Ltd. In 1973 but we have no confirmation that this is so	Coal	

Abandoned mine plan catalogue numbers

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

NW803	13866	NW833
NW832	2739	16820
NW836	PO0	NW835

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
TRENCHERBONE	Coal	Yes	9.6	North-West	251
WIGAN FOUR FEET	Coal	Yes	Within	N/A	74

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.

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

Distance to site investigation (m)	Direction
21.0	South-West

See Section 4 for further information.

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.

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.

Section 4 – Further information

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

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.

Site investigations

The site is within an area of previous interest. It is close to where the Coal Authority has received information relating to past site investigations.

The site requires further investigation and may influence how you approach your risk assessment.

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.

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.

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.

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.

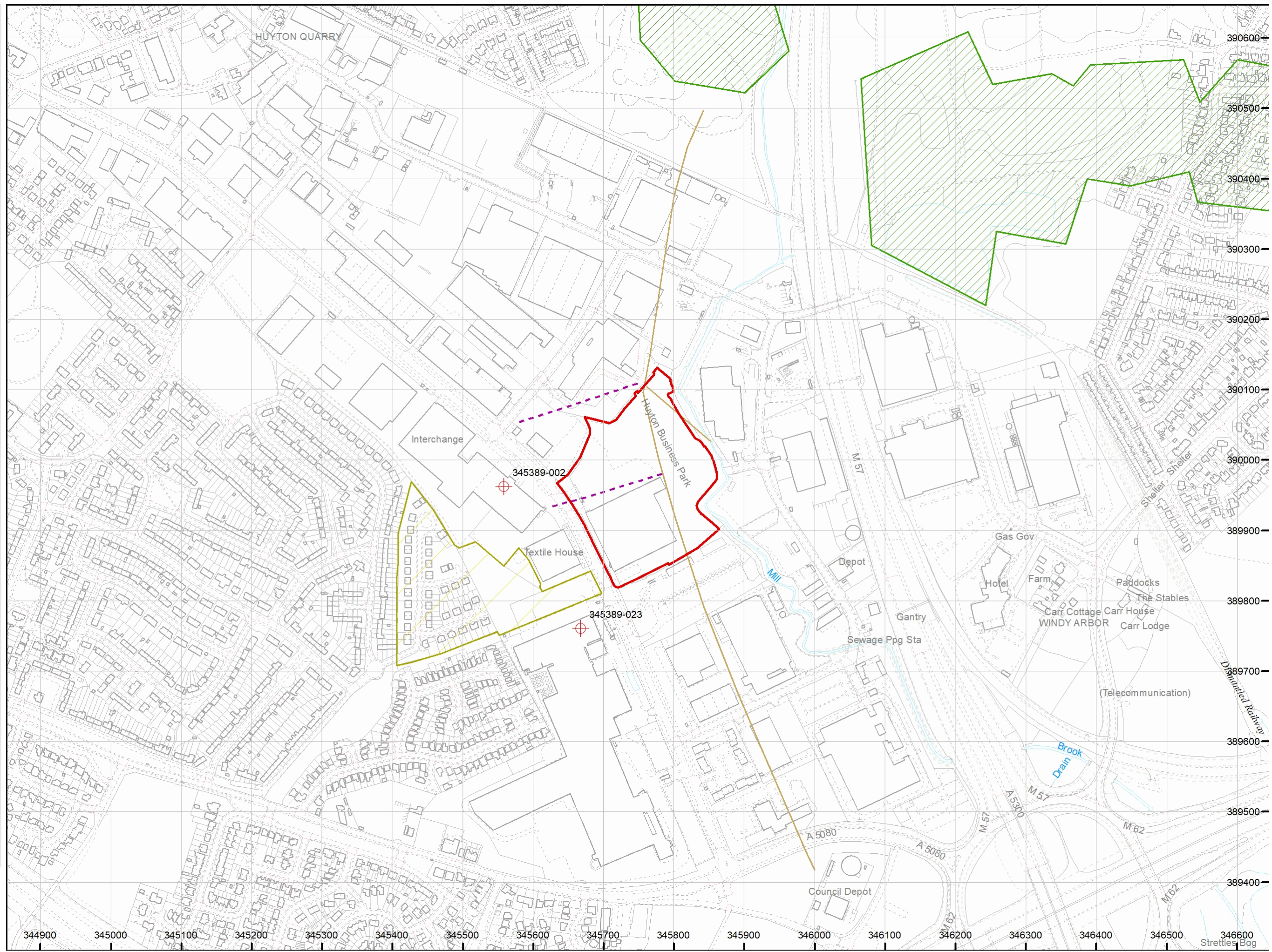
The map highlights any specific surface or subsurface features within or near to the boundary of the site.

Key

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

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PLAN
OF THE **FELCROFT MINE** AT THE
HALSNEAD COLLIERY
WORKING BY
Richard Willis Esqr.



32 Yds to one Inch

Scale of Measure Chains
Inches 0 1 2 3 4 5 6 7 8 9 10 Chains

NW835

NW835

97/1

[illegible]

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