

**REPORT ON
DESK STUDY AND
COAL MINING RISK ASSESSMENT
AT
LAND TO THE NORTH OF
BIRCH BUSINESS PARK,
HEYWOOD**



REPORT STATUS SHEET

Client:	Yeargate Ltd
Report Title:	Report on Desk Study and Coal Mining Risk Assessment at Land to the North of Birch Business Park, Heywood
Report Number:	AG3696-25-AT96
Report Status:	Validated Issue 1
Date:	July 2025



		Date	Signed for and on behalf of Applied Geology Limited
Report Author	H Spencer BSc (Hons) MSc FGS Lead Project Geologist	31/07/2025	
Checked	P Gabrielle BSc (Hons) FGS Regional Director	31/07/2025	
Authorised	S Day BSc (Hons) MSc CGeol FGS SiLC Director 	31/07/2025	

CONTENTS

1.0	INTRODUCTION.....	1
2.0	SITE DESCRIPTION AND PROPOSALS	2
2.1	Site Description.....	2
2.2	Site Proposals.....	4
3.0	DESK STUDY INFORMATION	4
3.1	Desk Study Findings.....	4
3.2	Preliminary Coal Mining Risk Assessment.....	8
3.3	Planning Portal Searches	10
4.0	CONCEPTUAL SITE MODEL.....	11
5.0	CONCLUSIONS AND RECOMMENDATIONS	13

GENERAL NOTES

APPENDICES

APPENDIX A

DRAWINGS & FIGURES

- Site Location Plan, Dwg No AG3696-25-01
- Conceptual Site Model, Dwg No AG3696-25-02
- Proposed Layout Option 7 Drawing, Horizon Fletcher-Rae Dwg No PR1772-HFR-AV-XX-DR-A-9111 Rev P1
- Topographical Survey, Powers UK Ltd, Dwg No FP6779

APPENDIX B

DESK STUDY DATA

- Groundsure Enviro+Geo Insight Report
- Groundsure MapInsight Historical OS Maps
- Mining Remediation Authority Consultants Coal Mining Report

1.0 INTRODUCTION

An area of vacant land to the North of Birch Business Park, Heywood is being considered for redevelopment by Yeargate Ltd, (the Client). The proposals for the site comprise construction of 2No. warehouses for B2/B8 usage, with associated areas of parking/loading bays, associated infrastructure and areas of peripheral soft landscaping.

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

- Permit formulation of an opinion, as to the potential for hazardous substances or conditions to exist on, at or near the site at levels or in a situation likely to warrant mitigation or consideration appropriate to the intended end use proposed by the Client as stated above;
- Establish likely geological conditions and potential geotechnical constraints to aid safe and economic development design;
- Identify site-specific coal mining risks and set out the proposed mitigation strategy to show that the site can be made safe and stable for the proposed development; and
- Support a future Planning Application.

The terms of reference/brief for the works were mutually developed between WSP UK Ltd (the Client's Planning Consultant) and Applied Geology and are outlined in our proposal and estimate AG25-9112let001 dated 9th May 2025. The report should be read in conjunction with the General Notes at the end of the report text.

More specifically, the services provided are summarised below and detailed in the following Sections.

- A site inspection and walkover survey to identify indicators (as defined in later sections) of the existence of hazardous substances or conditions on and in the vicinity of the site.
- A review of the following sources to provide data on likely ground conditions, geohazards and features which may affect development and to obtain information about the potential for hazardous substances to exist at and in the vicinity of the site:
 - GroundSure – GeoInsight & EnviroInsight environmental databases.
 - GroundSure – MapInsight historical maps.
 - British Geological Survey (BGS) - published information & on-line borehole database Historical Maps.
 - Mining Remediation Authority Consultants Coal Mining Report (Ref. 51003509287001, dated July 2025).
 - Online aerial images.
 - Rochdale Borough Council Online Planning Portal (July 2025).
- Assessment and reporting of the results of the works.

2.0 SITE DESCRIPTION AND PROPOSALS

2.1 Site Description

The site is located across a plot of vacant land to the northern side of Birch Business Park, Heywood, approximately 2.2km southwest of Heywood town centre. The Ordnance Survey grid reference for the approximate centre of the site is 384313, 408720 as shown on the Site Location Plan, Drawing No AG3696-25-01, in Appendix A.

The site is roughly rectangular in plan shape, (tapering to a point at the eastern end) with dimensions of approximately 330m by 125m (covering an area of approximately 3.9ha). Topographically, the site can generally be divided into two portions, the western and central portion, which falls steadily from approximately 127m AOD in the west to 124m AOD towards the east, and the eastern portion, which falls from approximately 124m AOD in the west to 118m AOD towards the east. The two portions are separated by a relatively sharp (3-4m) contrast in elevation, where the central and western parts of the site slope down to the eastern part. A Topographical Survey drawing (Ref. FP6779 dated May 2024 by Powers UK Ltd) was provided by the Planning Consultant, a copy of which is included in Appendix A.

A site inspection/walkover was undertaken by Applied Geology on 9th July 2025. Access to the site was obtained through a locked 2m high metal gate, located at the southwestern corner of the site, via Birch Business Park.

At the time of inspection, the site comprised a vacant plot of land. The ground surface across the western and central portions of the site were laid to crushed and compacted materials, generally comprising concrete, brick and sandstone, whilst the eastern portion of the site was vegetated with grasses and young trees. Reeds, rushes, and other plant species generally indicative of marshy conditions/waterlogged ground were noted in the northeastern and southeastern parts of the site.

Two mounds of spoil were located in the western portion of the site. The larger mound measured approximately 20m by 18m, with a maximum height of around 2m above the surrounding ground level. The smaller mound (located to the north of the first mound), measured approximately 15m by 10m, with a maximum height of approximately 1.3m above surrounding ground level. The larger mound generally comprised dark brown gravelly sand with gravel of brick, sandstone and concrete, while the smaller mound predominantly comprised reddish-brown sand.

The crushed and compacted materials across the relatively higher western and central parts of the site and the mounds are understood to have been generated during various phases of relatively recent construction across the wider Birch Business Park.

An area of burnt ground was observed at the surface to the south of the spoil mounds. Some waste materials including wood, concrete, rubber tyres, plastic and brick, with several panels of security fencing were noted at the southwestern corner of the site.

A pond was present adjacent to the western corner of the site.

The site was bounded to the north, east and west by agricultural land and to the south by Birch Business Park.



View north across the western portion of the site



View west towards Birch Business Park across the central portion of the site.



View east across the eastern portion of the site



Larger mound of spoil located in the western portion of the site.



Smaller mound of spoil located in the western portion of the site.



Area of waste material noted at southwestern part of the site.



An area of burnt ground in the western part of the site.



View northwest towards the pond adjacent to the western site boundary.

Himalayan balsam was noted along the eastern boundary of the site.

It should however be noted that Applied Geology Limited does not provide agricultural surveys or specialist surveys for the detection of invasive plant series (such as Japanese Knotweed) or protected species of wildlife. Whilst no Japanese Knotweed was noted, it is recommended that if required, separate investigation by specialists be undertaken to confirm this aspect.

2.2 Site Proposals

The proposals for the site comprise construction of 2No warehouses (Unit A and Unit B), for B2/B8 usage, and areas of parking/loading bays, infrastructure, and some areas of peripheral soft landscaping. At this stage, the proposals indicate that Unit A will have a footprint of 160.10m² and Unit B will have a footprint of 150.16m².

Although no detailed proposals are available at the time of writing, an earthworks operation is anticipated to facilitate the development and achieve the desired levels across the site.

The proposals are shown on the Proposed Site Layout Option 7 drawing produced by Horizon Fletcher-Rae: Dwg Ref. PR1772-HFR-AV-XX-DR-A-9111 Rev P1, dated July 2024. A copy of the drawing is presented in Appendix A.

3.0 DESK STUDY INFORMATION

3.1 Desk Study Findings

The desk study findings are summarised below with the full Groundsure Report (Report Ref. GS-WF2-WWW-XQI-T2P, dated July 2025) and Historical Ordnance Survey Maps included in Appendix B.

Site History	1848-1851: The site is shown to be occupied by three fields/agricultural land. A small rectangular structure labelled 'Crow Fields' is shown in the southwestern corner. A brook forms the eastern and northern site boundary. Two ponds are shown off-site, immediately west of the western site boundary. A cluster of small ponds are also shown on and immediately adjacent to the eastern tip/boundary of the site. Old sandstone quarries are shown approximately 80m to the north and 400m to the northwest of the site. Barlow's Coal Pits are also shown approximately 480m to the northwest of the site.
--------------	---

	• 1890-1891: The structure previously labelled Crow Fields is no longer shown in the southwestern corner of the site, and the site is shown to be occupied by a single agricultural field. The two ponds shown immediately west of the site are now shown to comprise three relatively smaller ponds. The cluster of ponds on/immediately adjacent to the eastern end/boundary are now shown to comprise a single pond. • 1907-1910: No significant changes are shown across the site. • 1923-1928: No significant changes are shown across the site. The ponds immediately to the west of the site boundary are now shown to be occupied by marshland. • 1930-1975: No significant changes are shown across the site. • 1981-1982: Several large buildings and associated access roads (generally concurrent with the current layout of Birch Business Park) are shown immediately south of the site. The pond on/adjacent to the eastern site boundary is no longer shown. • 1992: No significant changes are shown across the site. • 2000: Available aerial images show a rectangular warehouse unit (generally concurrent with the present-day layout of existing Unit W) and associated yard immediately west of the site. A pond is also visible in the area of marshland immediately west of the site. • 2001: No significant changes are shown across the site. The area to the south of the site is labelled as Birch Industrial Estate. • 2003: No significant changes are shown across the site. • 2003: Available aerial images show some small stockpiles and possibly some construction materials across the western part of the site. • 2005: Available aerial images show the western and central parts of the site to be stripped of vegetation, with many stockpiles apparent. • 2011: Available aerial images show the site to be clear of vegetation and stockpiles are no longer shown. • 2015-2019: Based on available aerial images, the western and central parts of the site are shown to be occupied by features that may indicate the presence of stockpiles. Also, an access track is shown in the southwestern portion of the site. • 2020: Available aerial images show the western and central parts of the site to be stripped of vegetation. • 2021: Available aerial images show the western and central portions of the site to be occupied by several stockpiles and localised areas of waterlogged ground. The eastern portion of the site is shown to remain vegetated. • 2022: Available aerial images indicate that the western and central portions of the site may have been plateaued/levelled, with the stockpiles and waterlogged ground no longer visible. • 2023-2025: Available aerial images show two stockpiles as observed during the recent walkover) on the western portion of the site.
Anticipated Geology and Ground Conditions	• The Published BGS 1:50,000 scale map (sheet no. 85), BGS 1:10,560 scale map (County Series map, Lancashire Sheet 88 SW) and BGS digital Geological Map of Great Britain indicate that the site is predominantly underlain by Superficial strata comprising Glacial Till, with Glaciofluvial Sheet Deposits and Lacustrine Deposits shown across the eastern boundary of the site. Head deposits and Glaciofluvial Ice Contact Deposit are also shown across the wider area and as such may also be expected beneath the site. • The Superficial strata are shown to be underlain by Solid strata of the Pennine Lower Coal Measures Formation. • Two geological faults trending NW-SE (both with a downthrow towards the southwest) are shown adjacent to the western site boundary, converging close to the southwestern corner of the site. • The Lower Foot Coal (with a published seam thickness of between 0.30m and 0.80m) and the Lower Mountain Coal (with a published seam thickness of between 0.20m and 1.30m), both trending SW-NE, are shown to sub-crop beneath the Superficial strata along the northern site boundary and across the centre of the site respectively. The Bassy Coal (with a published thickness of between 0.10m and 1.20m) is also shown

	to sub-crop beneath Superficial strata approximately 100m northwest of the northern site boundary. All three coal seams are shown to dip towards the southeast, at 10 degrees. Whilst the Lower Foot and Lower Mountain Coal seams are expected to be present directly beneath the Superficial strata, the Bassy coal may also be expected at shallow depths of less than 30m below ground level (bgl) across the site, based on a dip of 10 degrees. • There are no BGS archive borehole records available within 250m of the site. • The Groundsure Report shows that Made Ground (artificial deposits) are likely to be present across much of the western part of the site, which is expected to be associated with the various phases of stockpiled materials identified on available historical mapping/ aerial images from 2003. The report also indicates worked ground adjacent to the western boundary of the site, associated with the existing pond.
Radon	• The 1km Indicative Radon Atlas for England and Wales indicates that the site is situated in a radon affected area, with 10-30% of homes above the Action Level. On this basis, radon protection measures would usually be considered necessary for new properties. However, it should be noted that the Radon Potential dataset used and presented in the Groundsure Report indicates that the site is situated in an area where <1% of properties are above the Action Level (i.e., no radon protection measures typically required). Also, the strata present beneath the site are expected to comprise Superficial glacial soils and Solid strata of the Pennine Lower Coal Measures Formation, with are both typically considered to contain a lower content of radon generating constituents. The Indicative Radon Atlas for England and Wales is based on 1km grid squares and applies the highest radon potential to every property within the 1km grid square, therefore potentially indicating higher readings for certain properties. The data used in the Groundsure report is known as the Radon Potential dataset, the definitive map of radon affected areas, created jointly by the British Geological Survey and UK Health Security Agency. It uses long-term radon measurements made in over 560,000 homes in England, Wales and Scotland, combined with geological data and is considered to be property specific.
Mining/Quarrying	• The site is located in the Mining Remediation Authority Consultation Area. • A Mining Remediation Authority Consultants Coal Mining Report obtained for the site (ref 51003509287001), dated July 2025, indicates that the site is not located within the zone of likely physical influence at surface from past recorded underground coal workings. However, the site is noted to be in an area of probable unrecorded shallow workings. • As indicated on the published BGS mapping, the Mining Remediation Authority Consultants Coal Mining Report also indicates that there are two outcrops of coal beneath the site, identified as the Lower Foot Coal and Lower Mountain Coal seams. • Further discussion relating to coal mining legacy and an assessment of coal mining risk is included in Section 3.2 below. • There is a single BritPit (British Pits) database record for the historical surface extraction of sandstone at Three Land End, approximately 110m to the north of the site. A further two BritPits records are shown at 363m to the northwest (historical sandstone extraction) and 417m to the southeast (historical sand extraction). • The Groundsure Report indicates a single surface ground working at the location of the existing pond immediately adjacent to the western site boundary, indicated by historical mapping to have been present since at least 1851. • The site is not in an area considered to be at risk of natural cavity formation.
Hydrology	• The nearest surface water feature is an unnamed brook adjacent to the eastern site boundary. • There are two recorded pollution incidents to Controlled Waters within 250m of the site, both relating to Category 3 (minor impact to water) incidents. One incident is located 102m to the north (pollutant unknown)

	occurring in 2002 and the second is located 104m to the southwest (organic chemicals/products – dyes/inks) occurring in 2003. • There is a single recorded historical licensed discharge to Controlled Waters located 227m to the southeast of the site, issued to Unit K at Birch Industrial Estate (permit no. 016991177), relating to sewage discharges/ treated effluent into Whittle Brook. • The site is located in a Water Framework Directive (WFD) surface water body catchment related to Whittle Brook (Irwell). • There are no surface water abstractions within 500m of the site. • The site is not shown to be at risk of flooding from rivers and the sea, with a less than 1 in 1000 chance of flooding in any given year. However, the eastern part of the site is shown to have a 1 in 30-year chance of surface water flooding between 0.3m and 1m in any given year.
Hydrogeology	• The Superficial strata, including Glacial Till, Glaciofluvial Sheet Deposits and Lacustrine Deposits (across the eastern and southeastern parts of the site) are designated 'Secondary (undifferentiated) Aquifers and of high vulnerability. The Solid strata of the Pennine Lower Coal Measures Formation underlying the site is a designated 'Secondary A' Aquifer and of low vulnerability. • There are no groundwater abstractions within 500m of the site. • The site is not located within a Groundwater Source Protection Zone. • The majority of the site is shown to be located in an area considered to be at low risk of groundwater flooding, however, the eastern boundary is shown to be at moderate risk of groundwater flooding.
Other Environmental data	• There are no recorded active/recent or historical landfills within 500m of the site. • There is a single historical waste site shown within 250m of the site, relating to the infilling of a redundant quarry to restore land for agricultural use and construction of an access road at 78m to the north of the site. • There are four active licensed waste sites within 500m of the site, all located at Harehill Farm Equestrian Centre at 394m to the north of site, relating to the deposition of waste to land as a recovery operation, issued in March 2012 to P Casey Enviro Ltd and Russells South Heywood Limited. • There are twenty recorded waste exemptions within 500m of the site, eight of which are located at 150m to the west, at a farm and relates to the storage of sludge. • There are four historical industrial land uses within 250m of the site, the closest relating to an old sandstone quarry at 105m to the north. • There are ten current industrial land usages within 250m of the site. Of relevance to the site is a vehicle repair, testing and servicing building 105m to the south. • There is a single recorded pollution incident at 104m to the southwest, relating to a Category 3 (minor impact to land) from organic chemicals/products (dyes/inks) occurring in 2003. • There are no historical energy features shown within 250m of the site. • There are no current or recent petrol stations recorded within 500m of the site. • There are no Environment Agency Recorded Pollution Incidents recorded within 250m of the site. • There are no records for a Part A(1), Part A(2)/B licensed pollutant release, or current COMAH sites with 500m of the site. • There are no records of IPC Authorised Activities within 500m of the site boundary. • The Groundsure Report indicates that the site is located within a SSSI Impact zone. • The site is not located within a Nitrate Vulnerable Zone. • There are no environmentally sensitive ecological designations shown within 500m of the site.
Geohazards	• The risk of shrink-swell of clays, compressible deposits, running sands, collapsible deposits, landslides, and ground dissolution of soluble rocks are all considered to be negligible to low.

Railways and tunnels	There are no existing or historical railways or tunnels shown to be present within 250m of the site.
Unexploded Ordnance (UXO) Risk	Current data indicates that the wider area of Birch Business Park is considered to be at low risk of encountering UXO. However, due to evidence suggesting that the site may have formerly formed part of an RAF satellite facility, Applied Geology previously commissioned a preliminary UXO risk assessment as part of ground investigations undertaken across the wider area of Birch Business Park. The assessment identified the site as being at low risk of encountering UXO and concluded that no further action was necessary to mitigate the risk of encountering UXO.

3.2 Preliminary Coal Mining Risk Assessment

Coal Mining History

Reference to the Mining Remediation Authority Interactive Map Viewer indicates that the site is located in the Mining Remediation Authority Consultation Area.

The entire site and wider areas (to the east and the west) are shown to lie in an area of probable unrecorded shallow workings and, as such, is located within the Mining Remediation Authority Designated Development High Risk Area. A Mining Remediation Authority Consultants Coal Mining Report (ref: 51003509287001), dated July 2025, was obtained for the site and is included in Appendix B. The pertinent data are discussed in further detail below.

The Consultants Coal Mining Report indicates that the site is not within the likely zone of influence at the surface from known/recorded underground workings, with the Interactive Map Viewer indicating the nearest recorded underground workings approximately 1450m east of the site (reported as being shallow workings, i.e. less than 30m bgl).

The site is however located in an area where the Mining Remediation Authority believe that the Lower Mountain coal seam and Lower Foot coal seam are at or close to the surface. As such, the site (and much of the surrounding area) is shown to be located in an area of probable unrecorded shallow workings and also located in the Mining Remediation Authority designated Development High Risk area.

The Mining Remediation Authority has not received a damage notice or claim for the site or any property within 50m of the site boundary since records began in October 1994.

There are no recorded instances of mine gas emission within 500m of the site boundary. However, it should be noted that this does not mean that mine gas is not present within the vicinity of the site, since the Mining Remediation Authority Mine gas data is limited to only those sites where a mine gas incident has been recorded.

There are no records within 500m of the site for recorded opencast mine or Mining Remediation Authority managed tips.

The site is not located within an area likely to be affected by any planned future underground coal mining and also not within 200m of a boundary for which the Mining Remediation Authority is determining to grant a license to extract coal.

Mine Abandonment Plans

A search of Mining Remediation Authority Mine Abandonment Plans was undertaken on 8th July 2025 and the Mining Remediation Authority advised that no mine abandonment plans relevant to the currently proposed development were available.

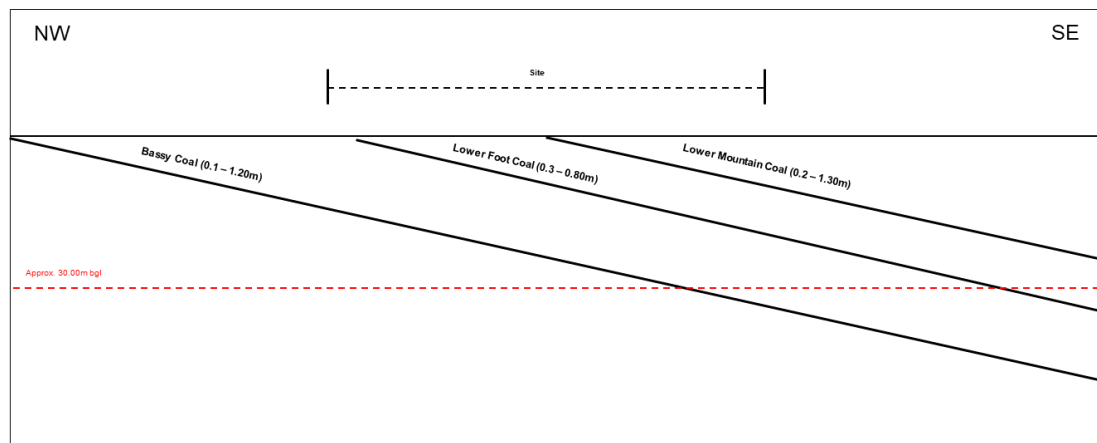
Mine Entries

There are no recorded abandoned mine entries shown within 100m of the site boundary. Based on the Mining Remediation Authority Interactive Map Viewer, the closest recorded mine entries are shown greater than 250m north of the site.

Identification and Assessment of Site-Specific Coal Mining Risks

As noted above, the available Mining Remediation Authority data indicate that the site is located in an area of probable unrecorded shallow workings. Based on the published BGS data, the Lower Mountain Coal, the Lower Foot Coal and the Bassy Coal are expected to be present at shallow depths beneath the site and as such, any unrecorded shallow workings would likely relate to these seams.

A schematic section of the anticipated coal seam stratigraphy beneath the site, based on the 1:50,000 scale and the 1:10,560 scale Geological Maps, is shown below (not to scale):



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

less than ten times the seam thickness, there is potential for void migration to surface to occur.

Taking into account the identified depths and published thicknesses of coal and the presence of potential workings, the site surface is considered to be at potential risk of crown hole development in the event that localised unrecorded workings may have taken place, primarily in the Lower Mountain Coal and Lower Foot Coal seams and to a lesser extent, in the Bassy Coal, prior to records being required (circa 1872).

In addition to this, currently unidentified mine entries may also be present across the site which could also pose a significant risk to the proposed development.

The site is not considered to be at risk from workings in any other coal seams.

3.3 Planning Portal Searches

A review of the Rochdale Borough Council Planning Portal was made on 8th July 2025. A historical Planning Application of relevance to the site was identified (Application Ref: 20/01488/DOC), relating to the redevelopment of land to the north and west of the site.

Preliminary Coal Mining Risk Assessment - WYG Environment Planning Transport Ltd, Report Ref A117337/PCMRA V2, May and November 2020

The Preliminary Coal Mining Risk Assessment was undertaken to assist with the development of land to the north of the subject site. The southern extent of the development boundary encroached onto the northern boundary of the subject site.

Drawings included in the report indicate that the entire subject site is located within a Mining Remediation Authority designated Development High Risk Area.

The report describes a previous investigation by E3P in July 2019. Two boreholes (RB101-RB102) undertaken during the E3P investigation are considered relevant to the subject site, located immediately to the north and in the eastern corner of the subject site respectively.

RB101 and RB102 encountered granular Made Ground to 3.0m and 4.0m bgl respectively, directly onto Solid strata comprising sandstone, over mudstone from 15.5m and 16.8m bgl. Mudstone was proven to the base of the boreholes at 26.0m and 30.0m bgl. No evidence of intact coal, lost flush, voids or broken ground was reported.

Although the presence of coal and/or evidence of workings was not reported during the previous E3P investigation, the WYG report concluded that there was insufficient evidence to determine whether coal and/or associated workings were present beneath the site and that there was a high risk of land instability due to coal mining legacy. The report recommended that additional ground investigations be carried out to further examine the deeper Solid strata and to refine the preliminary coal mining risk assessment.

Refined Coal Mining Risk Assessment - WYG Environment Planning Transport Ltd,
Report Ref A117337/RCMRA V2, November 2020

The report presents an update to the above referenced Preliminary Coal Mining Risk Assessment, based on the results of supplementary ground investigation.

The supplementary ground investigation was undertaken by WYG Environment Planning Transport Ltd in July 2020. Of relevance to the subject site, boreholes RBH401 and RBH402 were located in the eastern corner and immediately to the north respectively. RBH402, located to the eastern corner of the subject site recorded cohesive Made Ground to 3.9m bgl, directly underlain by Solid strata comprising sandstone, with mudstone encountered from 7.35m bgl and proven to the base of the borehole at 30.0m bgl. RBH401, located immediately north of the subject site recorded granular Made Ground to 4.0m bgl, onto natural Superficial strata described as sandy clay (considered likely to represent Glacial Till). The Superficial strata were underlain by Solid strata comprising mudstone from 7.5m bgl, proven to the base of the borehole at 30m bgl.

Although traces of coal were reported in the mudstone in RBH401 between 18.2m and 19.5m bgl and in the mudstone in RBH402 from 15.65m bgl to the base of the hole, no clear evidence for the presence of significant coal seams or associated workings was reported.

With reference to the relatively small area of land investigated, to the eastern corner and immediately north of the subject site, the report concluded that no evidence of coal seams or mine workings was recorded within 30m of ground level and that this area was considered to be at low risk of instability at surface from coal mining legacy. Subsequently, no further investigation or remediation measures were considered necessary.

Recommendations

Based on the available data for the site, an intrusive investigation to prove the depth to bedrock, confirm the anticipated stratigraphy and in particular the presence of anticipated coal seams and/or the presence and nature of any shallow workings to minimum depths of 35m bgl is considered necessary across the site.

4.0 CONCEPTUAL SITE MODEL

In developing a Conceptual Site Model for the site, pollutant linkages are determined by identifying likely sources of contamination from previous and current site uses, possible targets such as site users, neighbouring site users and Controlled Waters and linkages between them. The Conceptual Site Model is presented in Appendix A as Drawing No AG3696-25-02 and the potential sources, receptors and pathways are defined in the following sections:

Sources

- Made Ground on site (including stockpiles and possible infilled ponds on/ adjacent to the eastern site boundary) associated with construction-related crushed materials generated from the wider development of Birch Business Park may contain elevated concentrations of contaminants such as asbestos, heavy metals, petroleum hydrocarbons and polycyclic aromatic hydrocarbons

(PAHs), Volatile Organic Compounds (VOCs) and other forms of localised contamination.

- Elevated ground gases (methane, carbon dioxide) associated with Made Ground on site and other gases (including hydrogen sulphide and carbon monoxide) associated with shallow unrecorded underground workings. Ground gases associated with localised potentially organic natural lacustrine deposits may also be present along the eastern and southeastern boundary.
- Elevated sulphate concentrations in Made Ground or underlying natural strata could be a risk to buried concrete.
- Possible elevated concentrations of hydrocarbons, associated with the areas of burnt ground located in the western part of the site.

Pathways

Generic pathways, potentially linking the above sources and receptors, to be considered are as follows:

- Human ingestion and dermal contact;
- Human inhalation of dust or vapours;
- Human inhalation of ground gas via accumulation within structures via floor slab joints/cracks and services penetrations;
- Leaching and/or migration through permeable soils (granular Made Ground, Glaciofluvial Sheet Deposits and Lacustrine Deposits and via granular horizons within Glacial Till into the Secondary 'A' Aquifer);
- Direct contact with buried concrete/water supply services.

Receptors

- Commercial/Industrial End users (Human Health);
- Secondary 'A' Aquifer – Pennine Lower Coal Measures Formation and Secondary (Undifferentiated) Aquifers – Glacial Till and localised Glaciofluvial Sheet Deposits and Lacustrine Deposits (Controlled Waters);
- Surface water features (pond to west and brook/stream to the east of the site) (Controlled Waters);
- Buried foundation/substructure concrete (Building Materials);
- Water supply services (Building Materials).

Source/Pathway/Receptor Linkage and Assessed Risk

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

Source	Pathway	Receptor	Risk*
Potential contaminants (e.g. heavy metals, hydrocarbons, asbestos) within Made Ground	Inhalation, ingestion, dermal contact.	End users	Low
	Migration and Leaching	Secondary Aquifers, off-site pond and brook/stream	Low-medium
	Direct Contact	Water supply pipes	Low
Ground gas from Made Ground /localised lacustrine deposits (CH ₄ , CO ₂ , VOCs)	Migration into buildings and any excavations	End users	Low-medium
Gases associated with historical shallow mine workings (CH ₄ , CO ₂ , CO and H ₂ S)	Inhalation/explosion	End users	Low
Elevated sulphates in Made ground or natural soils	Direct contact, leaching and contact with groundwater	Buried concrete	Low-medium
Localised hydrocarbons associated with areas of burnt ground in the western part of the site.	Ingestion, Dermal Contact	End Users	Low
	Direct contact	Water supply services	Low

*** Definition of Risk Categories**

Negligible - Contaminants that might have unacceptable impact on key receptors, are unlikely to be present, or, no pathway is envisaged.

Low Risk: Contaminants may be present but are unlikely to be at levels to have unacceptable impact on key receptors, or pathways are likely to be minimal.

Medium Risk: Contaminants are probably present and might have an unacceptable impact on key receptors. Pathways may also be present therefore remedial measures may be necessary to reduce the risks.

High Risk – Contaminants probably or certainly present and pathways are probably also present. Therefore, contaminants are likely to have an unacceptable impact on key receptors and remedial measures are likely to be necessary to reduce the risks to acceptable levels.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The desk study has indicated the potential for some contamination to be present across the site, due to the presence of Made Ground associated with construction-derived materials, generated as part of the wider Birch Business Park development. This may include heavy metals, asbestos and hydrocarbons. However, given that the currently proposed end use comprises commercial/industrial warehouse units with limited areas of soft landscaping, any plausible pathways to human health (inhalation, ingestion and dermal contact) would be mostly broken due to the presence of hardstanding across most of the site. Significant remedial actions to mitigate human health risk are therefore considered unlikely to be required. However, the potential presence of hazardous ground gases remains a risk.

The risk to Controlled Waters (Secondary undifferentiated and Secondary A aquifers/ off-site Surface Water Features) will depend on the ground conditions and the presence, nature and concentrations of any mobile contaminants within soil and groundwater beneath the site. However, given the current proposals for large parts of the site to be covered by hardstanding, extensive remedial actions are considered unlikely to be necessary to protect groundwater, though some actions may be needed

if (in particular) sources of hydrocarbons are identified in soil or groundwater during the ground investigation or subsequently during development.

As discussed in the above Sections, it is expected that some cut-fill will be required to facilitate the development and achieve the desired levels across the site, although no detailed drawings are available at the time of writing this report. Subject to detailed cut-fill requirements, a number of foundation solutions may be considered suitable, including an earthworks solution, ground improvement or piling and shallow foundations, where the natural strata are present at shallow depth.

Considering the potential for shallow coal seams and possible workings across the site, reinforced foundations capable of resisting residual mining related movement and possible loss of support also cannot be discounted at this stage.

Depending on proposed floor slab loadings, settlement criteria, and the cut-fill requirements, a ground bearing floor slab on re-engineered fill may be feasible, subject to an appropriate Earthwork Specification. Alternatively, where ground improvement is considered suitable, the treatment of shallow soils could be extended beneath the footprint of the warehouse units in order that a ground bearing slab could be adopted.

Where buried concrete foundations are planned, a consideration must be made in regard to the potentially elevated sulphate levels in the Made Ground and the natural strata.

It is recommended that a ground investigation is undertaken to confirm the conceptual site model derived from the Phase 1 Desk Study, to derive geotechnical soil parameters to permit foundation design and to assess the shallow mining risk. In addition, localised deep investigation to assess the potential presence of shallow, unrecorded coal workings to a minimum depth of 35m below ground level (bgl) is considered warranted across the site, particularly beneath the proposed building footprints and across the central and western areas.

A series of machine excavated trial pits, driven continuous sampling and cable percussive boreholes to inform foundation design and also deeper rotary boreholes to investigate the nature of anticipated coal seams and if present unrecorded workings beneath the site are considered appropriate. This would enable samples to be taken for subsequent contamination analysis and geotechnical testing to include in situ and laboratory testing to determine engineering properties. Selected boreholes should be installed with standpipes to enable groundwater and gas monitoring.

Engineering laboratory testing including soil classification, strength testing and BRE Special Digest 1 concrete classification tests should be carried out to aid foundation design. Considering the likely cut-fill requirements, a suite of preliminary earthworks testing should also be undertaken as part of the intrusive investigation to assess the suitability of the soils for re-use.

Chemical testing should include a suite of heavy metals, polycyclic aromatic hydrocarbons, phenols, TPH, pH, asbestos screen and soil organic matter on selected samples of soil and Made Ground recovered during the ground investigation and the results assessed against relevant screening criteria. Leachate testing should also be undertaken on samples of the Made Ground soils. Additional specific

investigation may be considered warranted dependent on visual and olfactory evidence encountered during the fieldwork.

Dependent on findings during ground investigation, further rotary drilling to investigate coal workings may be required prior may be considered necessary. A drilling and grouting exercise may also be required prior to development of the site where evidence of shallow coal workings are encountered.

**Applied Geology Limited
Suite 19, Lowton Business Park
Newton Road
Lowton St. Mary's
Warrington
WA3 2AN**

Tel: 01925 738599

GENERAL NOTES

- A) The assessment made in this report is based on the site terrain and ground conditions revealed by the various field investigations undertaken and also any other relevant data for the site including previous site investigation reports (if available) and desk study data. There may be special conditions appertaining to the site, however, which have not been revealed by the investigation and which have not, therefore, been taken into account in the report. The assessment may be subject to amendment in the light of additional information becoming available. It must be recognised that many of the Environmental Searches obtained during the course of the desk study are often lengthy. Applied Geology have, where appropriate and in the interests of simplicity, only reproduced the summary of the searches within the report. A full copy of all the search data is held at the Applied Geology office and is available for inspection if required.
- B) Where any data supplied by the Client or other external source, including that from previous site investigations, has been used it has been assumed that the information is correct. No responsibility can be accepted by Applied Geology for inaccuracies within this data.
- C) Whilst the report may express an opinion on possible configurations of strata between or beyond the exploratory locations, or on the possible presence of features based on either visual, verbal or published evidence this is for guidance only and no liability can be accepted for the accuracy.
- D) Comments on groundwater (and landfill gas) conditions are based on observations made during the course of the present and past investigations or with reference to published data unless otherwise stated. It should be noted, however, that groundwater (and landfill gas) levels vary due to seasonal (or atmospheric conditions) or other effects.
- E) The copyright of this report and other plans and documents prepared by Applied Geology is owned by Applied Geology and no such report, plan or document may be reproduced, published or adapted without the written consent of Applied Geology. Complete copies of the report may, however, be made and distributed by the Client as an expedient in dealing with matters related to its submission.
- F) This report is prepared and written in the context of the proposals stated in the introduction to the report and should not be used in a differing context. Furthermore, new information, improved practices and legislation may necessitate an alteration to the report in whole or in part after its submission. Therefore with any change in circumstances or after the expiry of one year from the date of the report, the report should be referred to Applied Geology for re-assessment and if necessary, re-appraisal.
- G) The survey was conducted and this report was prepared for the sole internal use and reliance of the Client. This report shall not be relied upon or transferred to any other parties without the express written authorisation of Applied Geology. If an unauthorised third party comes into possession of this report they rely on it at their peril and Applied Geology owes them no duty of care and skill.
- H) Ground conditions should be monitored during the construction of the works and the recommendations of the report re-evaluated in the light of this data by the supervising geotechnical or geo-environmental engineers.
- I) Unless specifically stated, the investigation has not taken into account the possible effects of mineral extraction.
- J) The economic viability of the proposals referred to in the report, or of the solutions put forward to any problems encountered, depends on very many factors in addition to geotechnical considerations and hence its evaluation is outside the scope of this report.
- K) Applied Geology operates as a Consultancy and does not operate its own laboratory for soil testing, this work being sub contracted to known and respected, generally UKAS accredited, laboratories. Applied Geology can therefore not be held responsible for the testing carried out.

APPENDIX A



Reproduced from the Ordnance Survey Map with permission of the Controller of His Majesty's Stationery Office, Crown Copyright* LICENCE No: AC0000850102

APPLIED GEOLOGY

Suite 19, Lowton Business Park
 Newton Road
 Lowton St. Mary's Tel: 01925 738599
 Warrington email: admin@appliedgeology.co.uk
 WA3 2AN

Client:

YEARGATE LTD

Project:

LAND TO THE NORTH OF BIRCH
 BUSINESS PARK, HEYWOOD

Drawn By:

KM

Checked By:

HS

Paper Size:

A4

Scale:

NTS

Date:

30.07.2025

NGR:

384313 408720

Title:

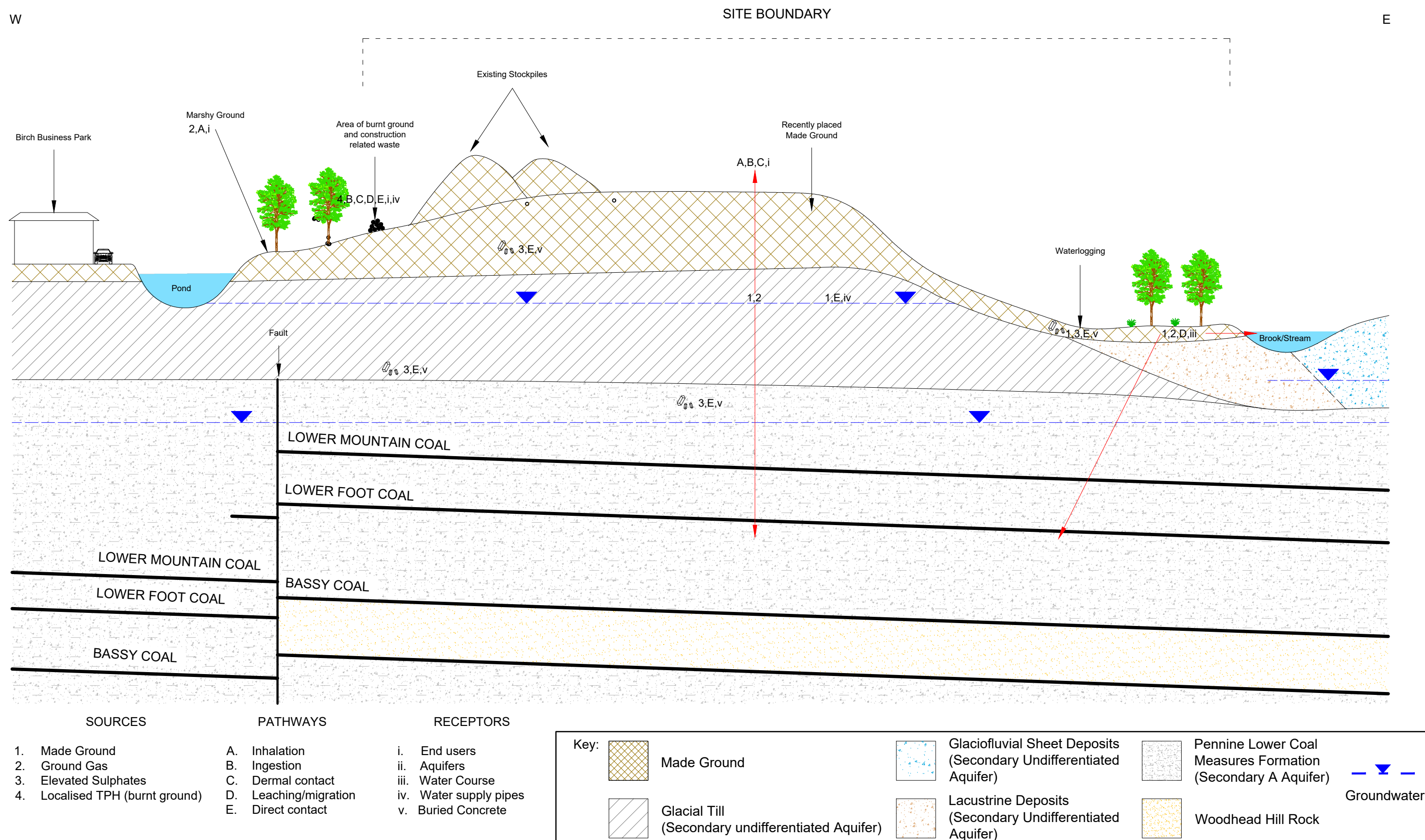
SITE LOCATION PLAN

Drawing No:

AG3696-25-01

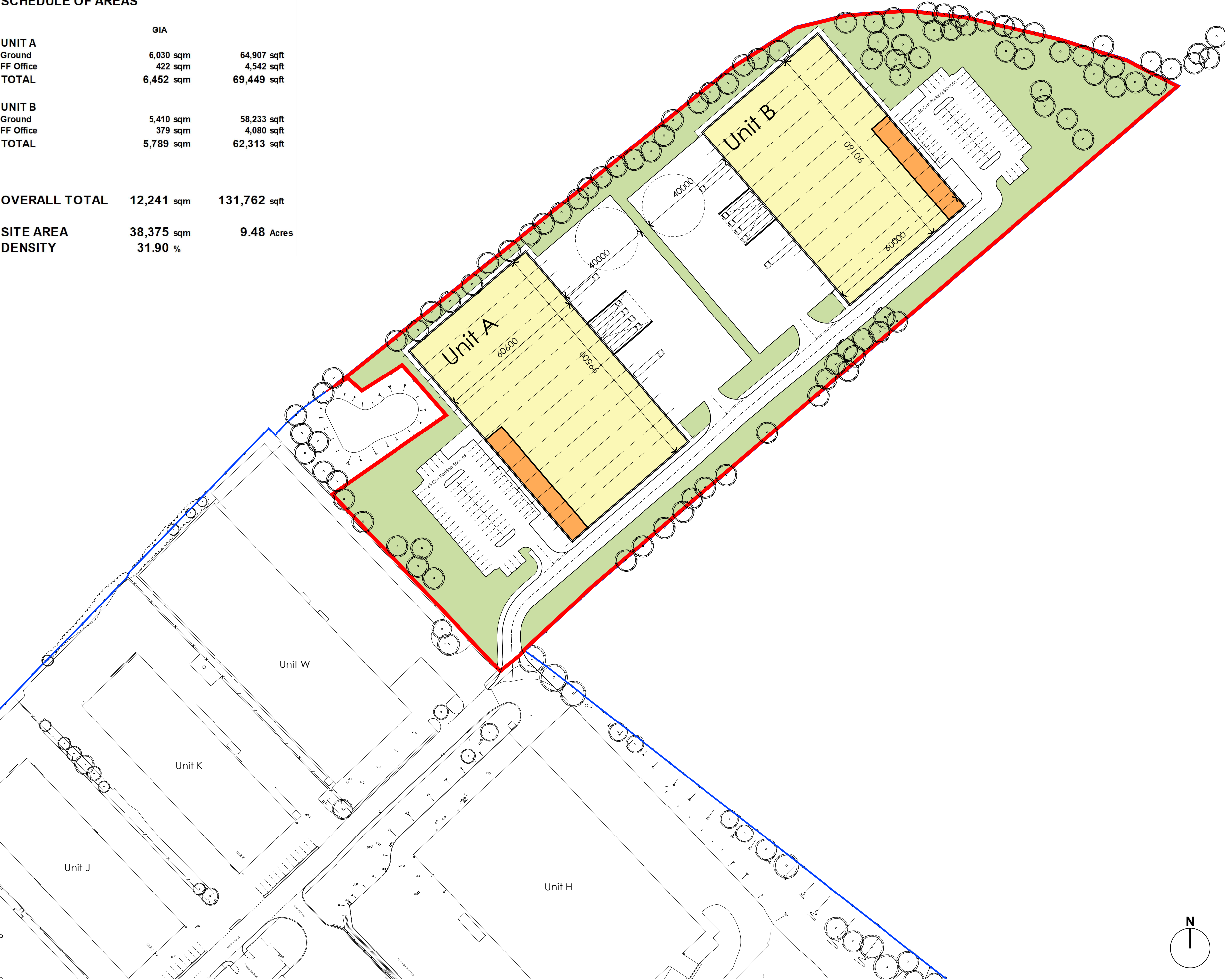
Revision:

0



SCHEDULE OF AREAS

	GIA	
UNIT A		
Ground	6,030 sqm	64,907 sqft
FF Office	422 sqm	4,542 sqft
TOTAL	6,452 sqm	69,449 sqft
UNIT B		
Ground	5,410 sqm	58,233 sqft
FF Office	379 sqm	4,080 sqft
TOTAL	5,789 sqm	62,313 sqft
OVERALL TOTAL		
	12,241 sqm	131,762 sqft
SITE AREA		
	38,375 sqm	9.48 Acres
DENSITY	31.90 %	



General Notes:

This drawing is the property of Fletcher-Rae (UK) Limited and copyright is reserved by them. The drawing is not to be copied, reproduced or re-distributed either in whole or in part without the prior written consent of Fletcher-Rae (UK) Limited.

The originator shall have no responsibility for any liability, loss, cost, damage or expense arising from or relating to any use of this document other than for its intended purpose on this project.

This drawing shall be read in conjunction with all other relevant drawings, specifications and associated documentation. Any discrepancies, errors or omissions are to be reported to the originator before proceeding with work.

All dimensions are to be checked on site by the contractor prior to proceeding with any work. This drawing shall not be scaled to ascertain any dimensions. Work to figured dimensions only.

DISCLAIMER
When this drawing is issued in CAD, it is an uncontrolled version issued for information only, to enable the recipient to prepare their own documents/ drawings for which they are solely responsible.

SOFTWARE INTEROPERABILITY
Fletcher-Rae (UK) Limited prepared this drawing using Autodesk AutoCAD.

Fletcher-Rae (UK) Limited does not accept liability for any loss or degradation of any information held in the drawing resulting from the translation from the original file format to any other file format or from the recipients reading of it in any other programme.

Hazard Identification		
Ref	Hazard	Date

WORK IN
PROGRESS

P1	First Issue	AL	17.07.24	BB
Rev	Revision Details	Drawn	Date	Chck'd

Project No. PR1772
Suitability S0 Work in Progress
Status S

Client:
Yeagate

Project:
The Field, Birch Business
Park

Sheet Name:
Proposed Site Layout
Option 7

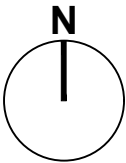
Drawing No.	Rev.
PR1772-HFR- AV-XX-DR-A-9111	P1
Drawn By AL	Scale 1:1000@A2
Created 17.07.24	

HORIZON

fletcher | rae

Level 12, Tower 12, 18-22 Bridge Street, Manchester, M3 3BZ

t +44 (0) 161 242 1140
w www.fletcher-rae.com
e info@fletcher-rae.com



APPENDIX B

County Series 1:10,560 scale

VEGETATION



Fir Wood



Deciduous Wood



Mixed Wood



Brushwood



Orchard



Reeds



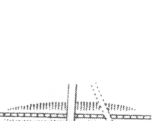
Rough Pasture



Furze

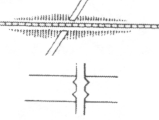


Marsh

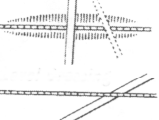


Osiers

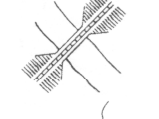
ROADS



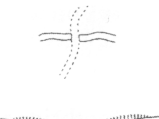
Railway over Road



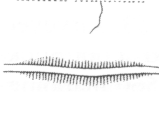
Road over Railway



Road over River or Canal



Level Crossing



Railway over River



Road over Stream

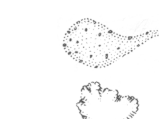


Road over Stream



Sunken Road

RAILWAYS



Double Lines of Railway



Single Lines of Railway and Tramway

GENERAL FEATURES



Gravel Pit



Sand Pit



Quarry



Shingle



Other Pits



Antiquities, Site of

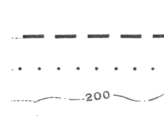


Arrow, showing direction of flow of water



Trigonometrical Station

BOUNDARIES



County Boundary



Parish Boundary



Contours



Parliamentary Division Boundary



Union Boundary



Rural District Boundary

National Grid 1:10,000 scale

HEIGHTS (METRES)

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

Surface heights determined by ground survey 163m
air survey 164m

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

Contours are at 5 metres vertical interval.

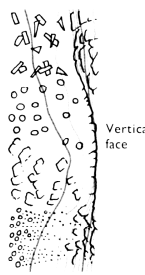
ROCK FEATURES

Loose rock

Boulders

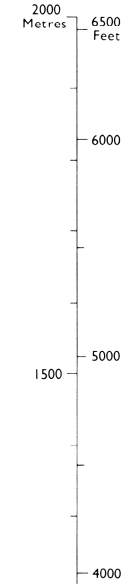
Outcrop

Scree



CONVERSION SCALE

Metres - Feet

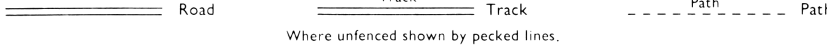


ABBREVIATIONS

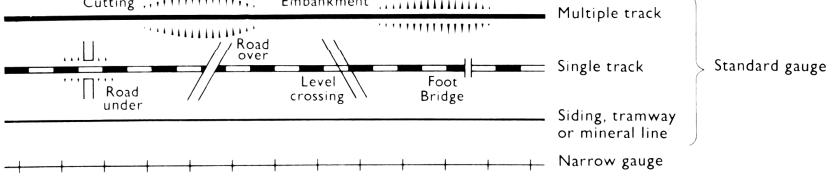
BP,BS	Boundary Post or Stone
Ch	Church
CH	Club House
F Sta	Fire Station
FB	Foot Bridge
Fn	Fountain
GP	Guide Post
MP,MS	Mile Post or Stone
P	Pole or Post
Pol Sta	Police Station

PO	Post Office
PC	Public Convenience
PH	Public House
S	Stone
Spr	Spring
TCB	Telephone Call Box
TCP	Telephone Call Post
TH	Town Hall
W	Well
Y	Youth hostel

ROADS



RAILWAYS



GENERAL FEATURES

Antiquity, (site of)

Boulders

Building

Pylon

Pole

Glasshouse

Triangulation station

Direction of flow of water

Shingle

Sand

Lake, loch or pond

Sloping masonry

= Chalk pit, clay pit or quarry

= Gravel pit

= Sand pit

Refuse or slag heap

VEGETATION

Bracken, rough grassland

Scrub

Heath

Marsh

Saltings

Reeds

Coppice

Orchard

Coniferous trees

Non-coniferous trees

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



GroundSure

Historical Map Pack Legend

County Series & National Grid 1:10,560 scale

Information present on these legends is sourced from the same Ordnance Survey mapping as the maps used in this product.

If you have a query regarding any of the maps provided please contact GroundSure's technical helpline. We will endeavour to answer any queries you may have.

Technical Helpline

Tel 08444159000

groundsurreinsight@groundsurre.com
www.groundsure.com

Site Details:

AG3696-25

Client Ref:

AG3696-25

Report Ref:

GS-G4H-IBE-6EC-DE2

Grid Ref:

384334, 408703

Map Name:

County Series

Map date:

1890-1891

Scale:

1:10,560

Printed at:

1:10,560

N

W

E

S

Surveyed 1891 Revised 1891 Edition N/A Copyright N/A Levelled N/A		Surveyed 1890 Revised 1890 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 Copyright N/A Levelled N/A

Powered by



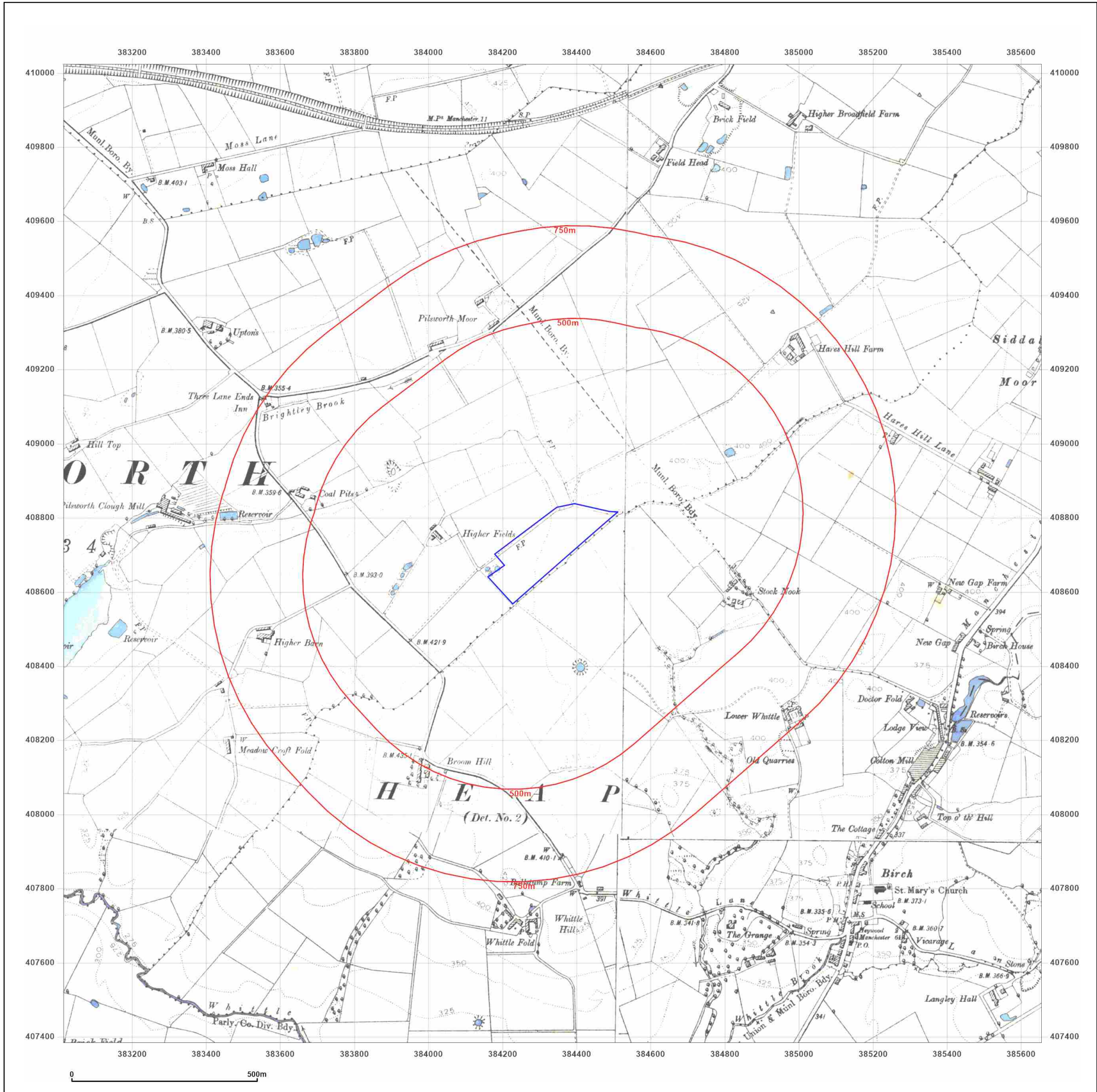
Produced by

Groundsure Insights

T: 08444 159000

E: info@groundsure.com

W: www.groundsure.com



Site Details:

AG3696-25

Client Ref: AG3696-25
Report Ref: GS-G4H-IBE-6EC-DE2
Grid Ref: 384334, 408703

Map Name: County Series

Map date: 1907-1908

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1844
Revised 1908
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1844
Revised 1907
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1844
Revised 1907
Edition N/A
Copyright N/A
Levelled N/A

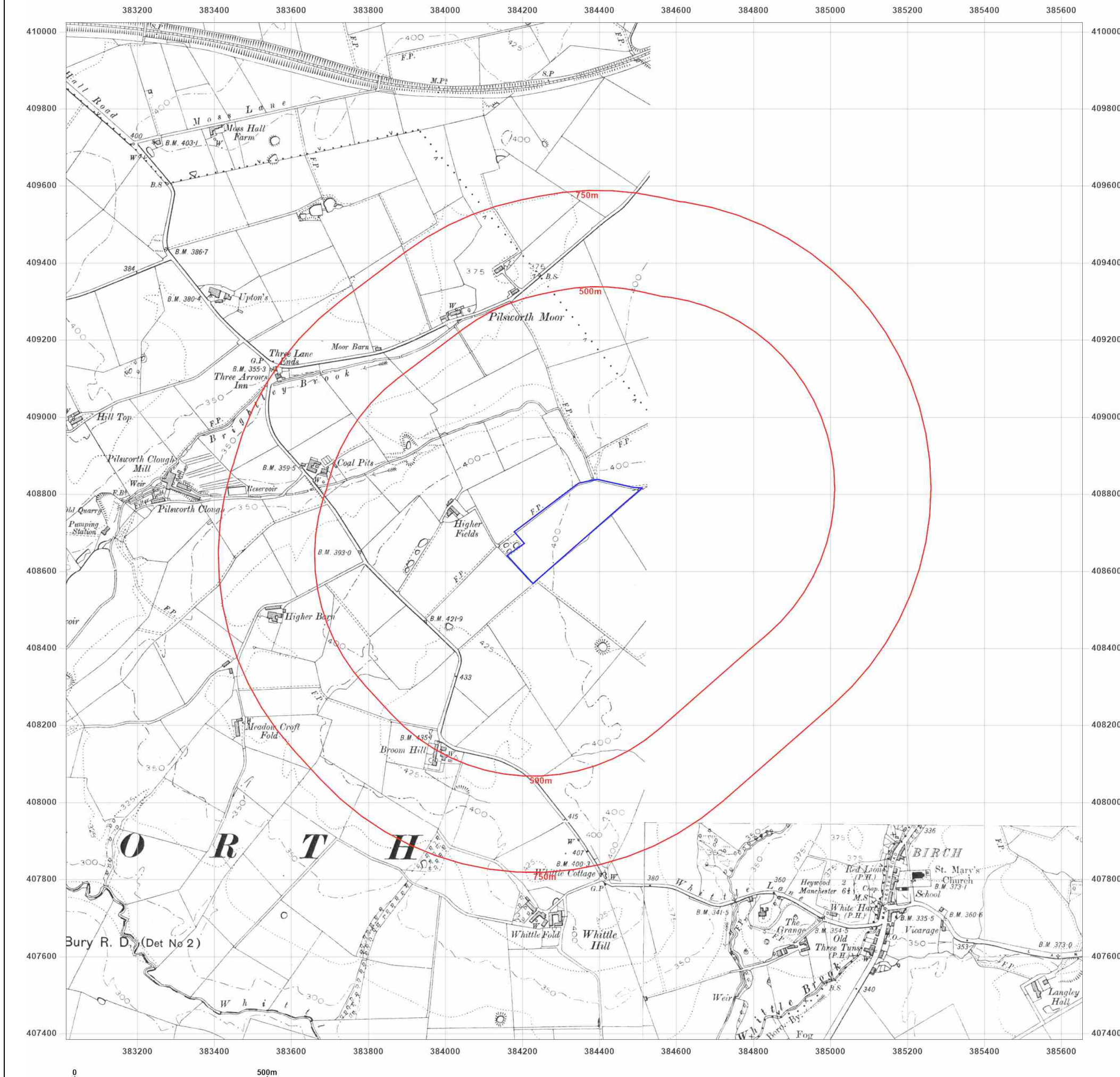


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 02 July 2025

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



Site Details:

AG3696-25

Client Ref: AG3696-25
Report Ref: GS-G4H-IBE-6EC-DE2
Grid Ref: 384334, 408703

Map Name: County Series
Map date: 1923-1928
Scale: 1:10,560
Printed at: 1:10,560

N
W E
S

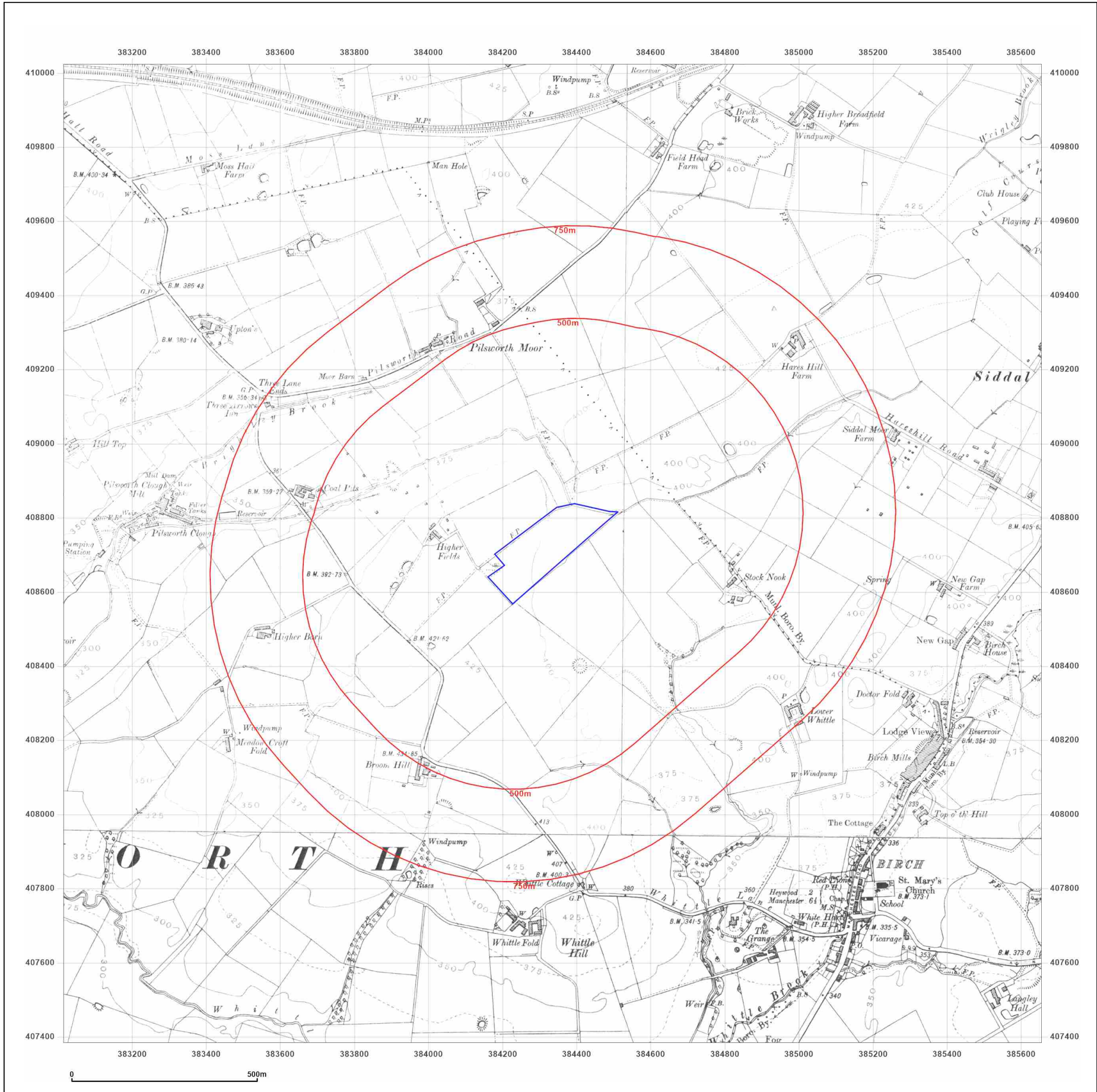
Surveyed 1844
Revised 1928
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1848
Revised 1928
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1844
Revised 1923
Edition N/A
Copyright N/A
Levelled N/A



Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com



Site Details:

AG3696-25

Client Ref: AG3696-25
Report Ref: GS-G4H-IBE-6EC-DE2
Grid Ref: 384334, 408703

Map Name: County Series

Map date: 1938

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1844
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1848
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1844
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1844
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A

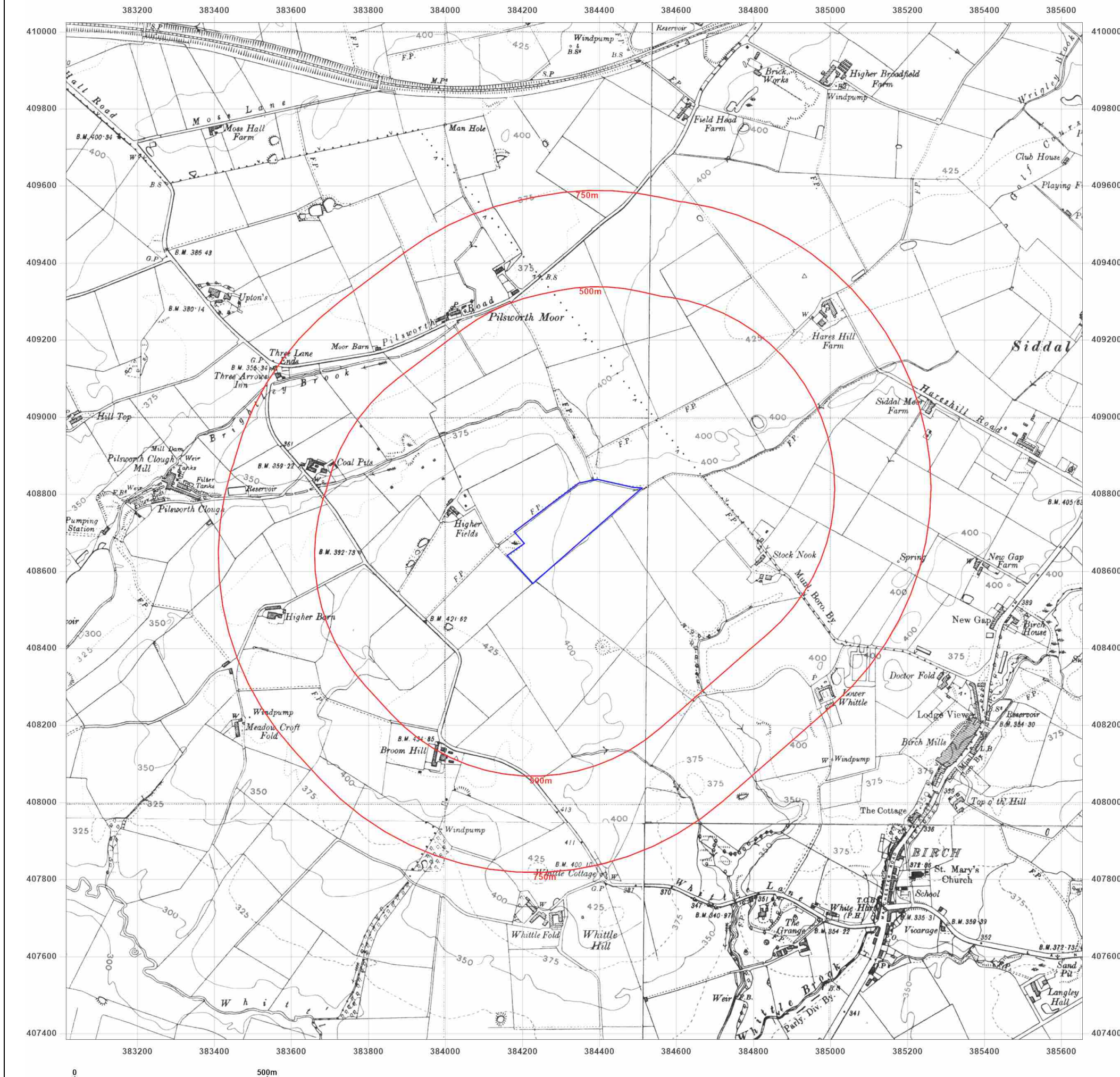


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 02 July 2025

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



Site Details:

AG3696-25

Client Ref: AG3696-25
Report Ref: GS-G4H-IBE-6EC-DE2
Grid Ref: 384334, 408703

Map Name: Provisional

Map date: 1955-1956

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1949
Revised 1949
Edition N/A
Copyright 1956
Levelled N/A

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

Surveyed 1949
Revised 1955
Edition 1955
Copyright N/A
Levelled N/A

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

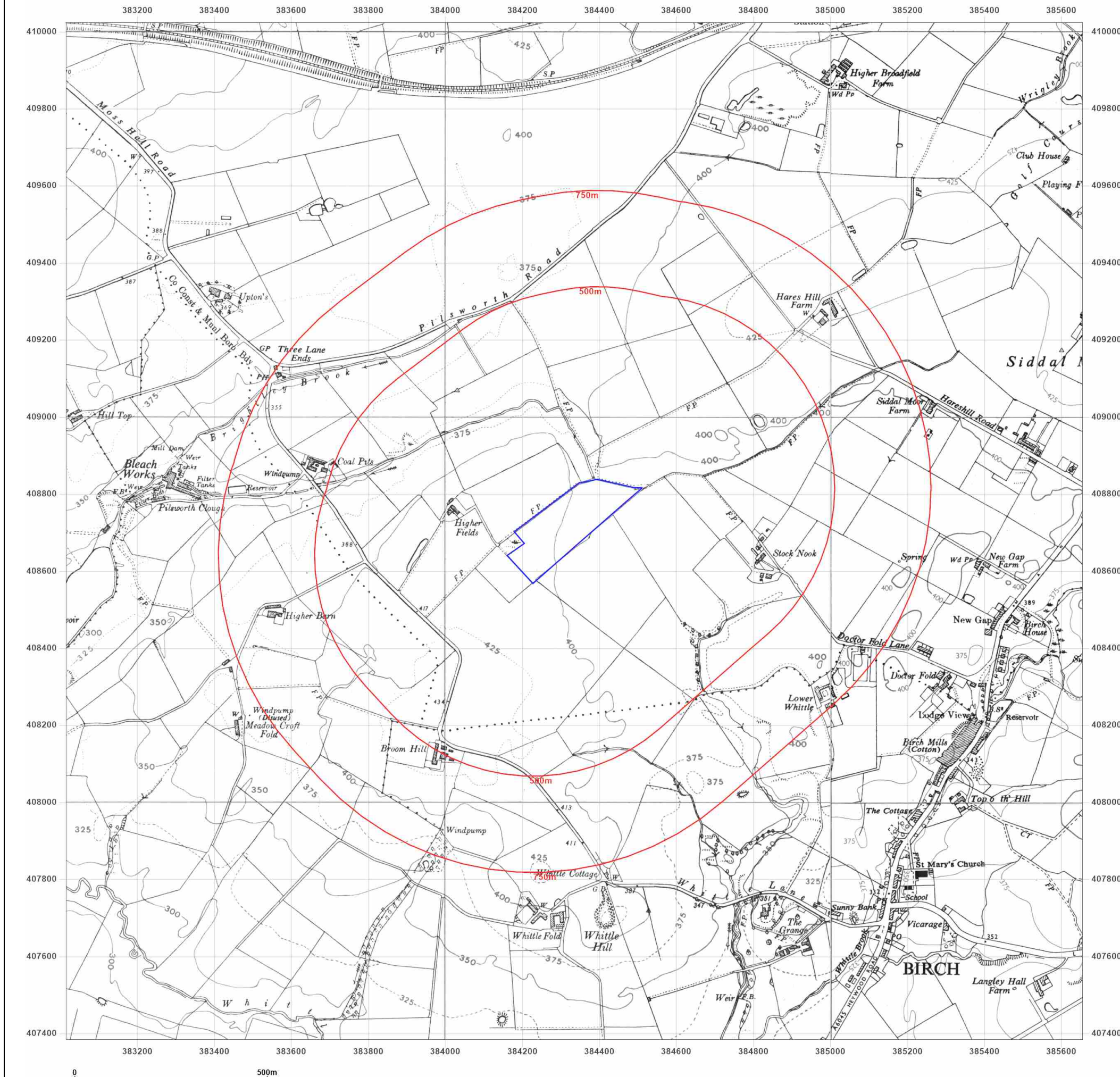


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 02 July 2025

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



Site Details:

AG3696-25

Client Ref: AG3696-25
Report Ref: GS-G4H-IBE-6EC-DE2
Grid Ref: 384334, 408703

Map Name: Provisional

Map date: 1965-1968

Scale: 1:10,560

Printed at: 1:10,560



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

Surveyed 1968
Revised 1968
Edition N/A
Copyright N/A
Levelled N/A

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

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

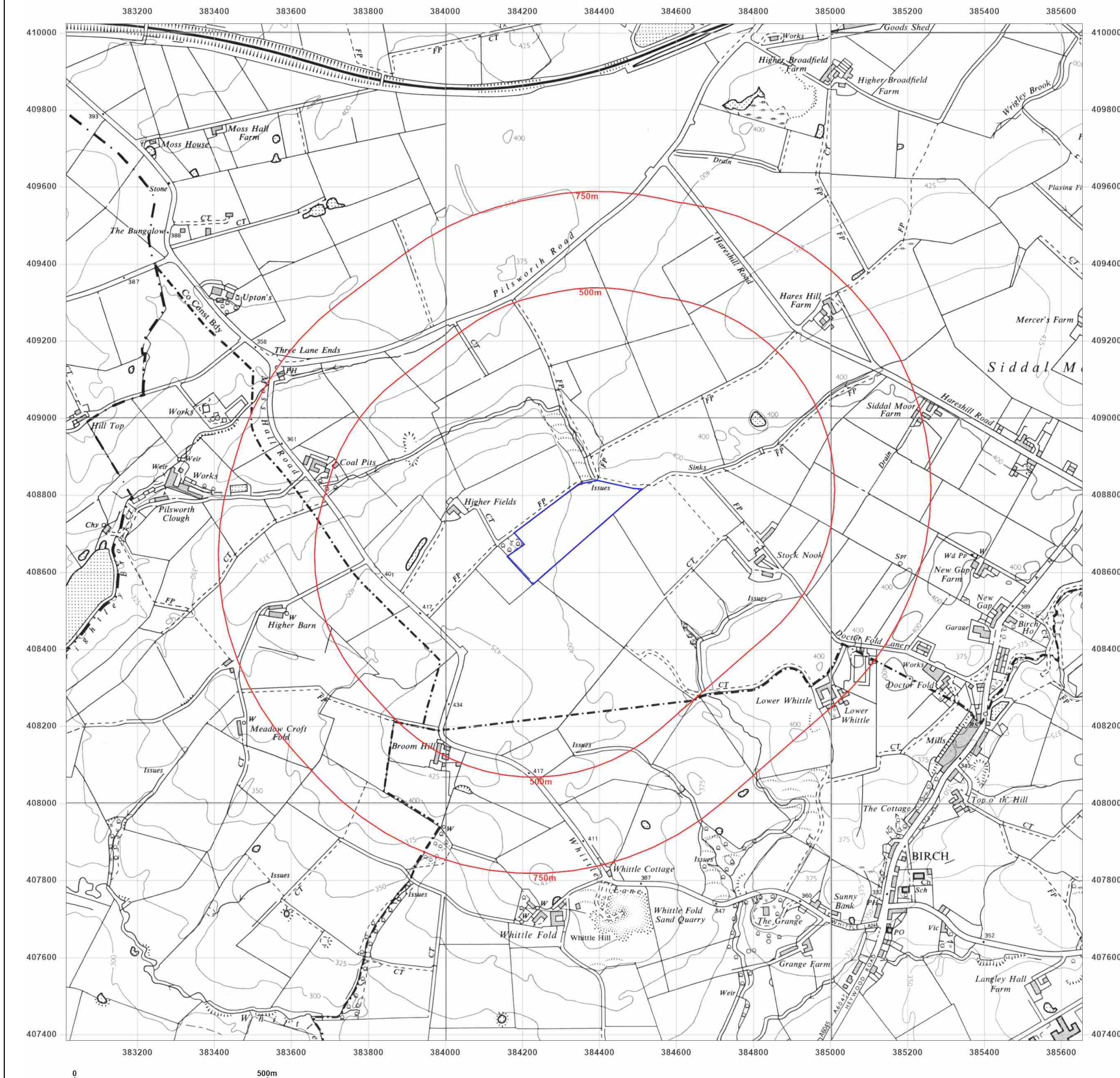


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 02 July 2025

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



Site Details:

AG3696-25

Client Ref: AG3696-25
Report Ref: GS-G4H-IBE-6EC-DE2
Grid Ref: 384334, 408703

Map Name: National Grid

Map date: 1974-1975

Scale: 1:10,000

Printed at: 1:10,000



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

Surveyed 1974
Revised 1975
Edition N/A
Copyright N/A
Levelled N/A

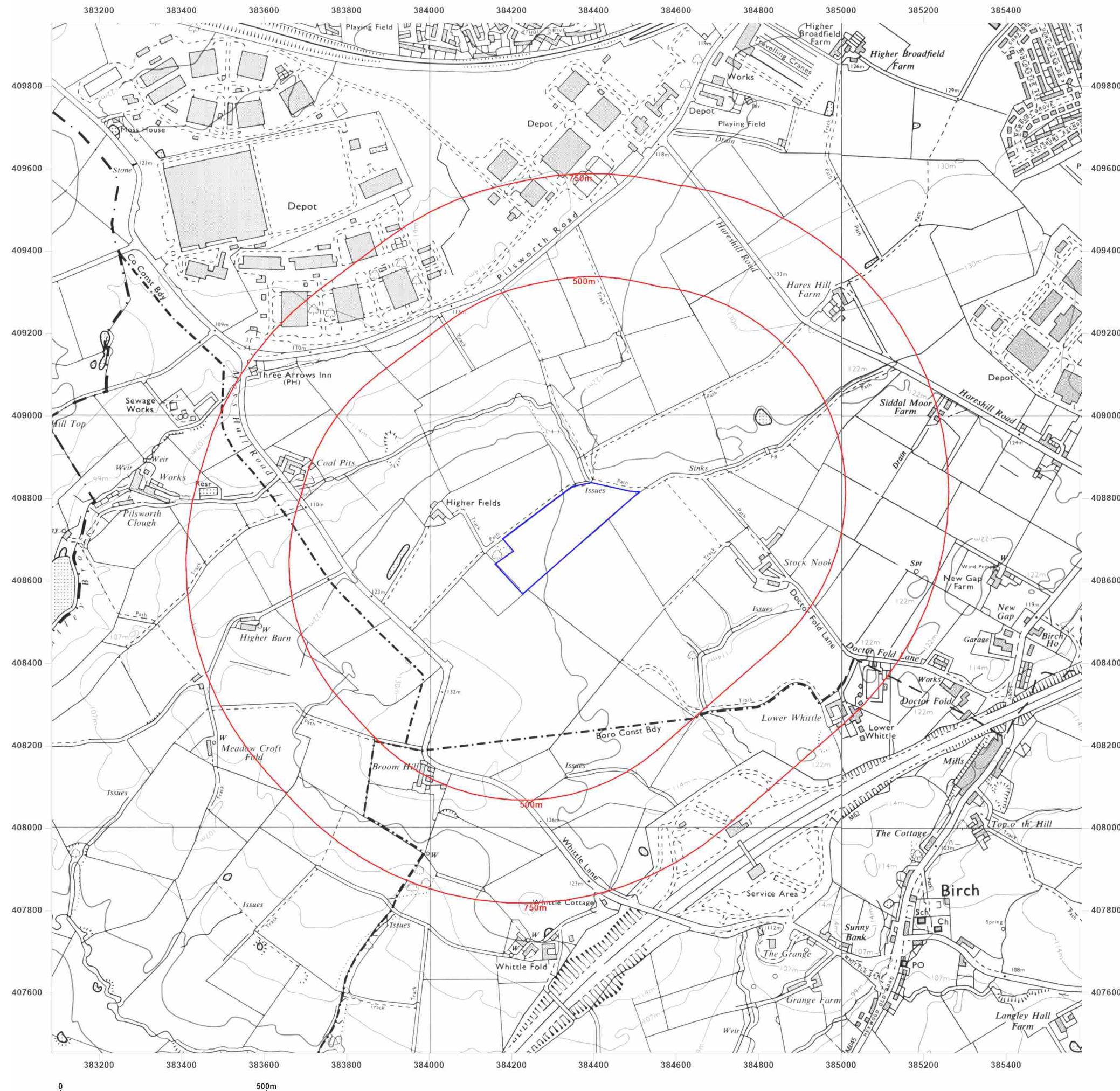


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 02 July 2025

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



Site Details:

AG3696-25

Client Ref: AG3696-25
Report Ref: GS-G4H-IBE-6EC-DE2
Grid Ref: 384334, 408703

Map Name: National Grid

Map date: 2001

Scale: 1:10,000

Printed at: 1:10,000



2001

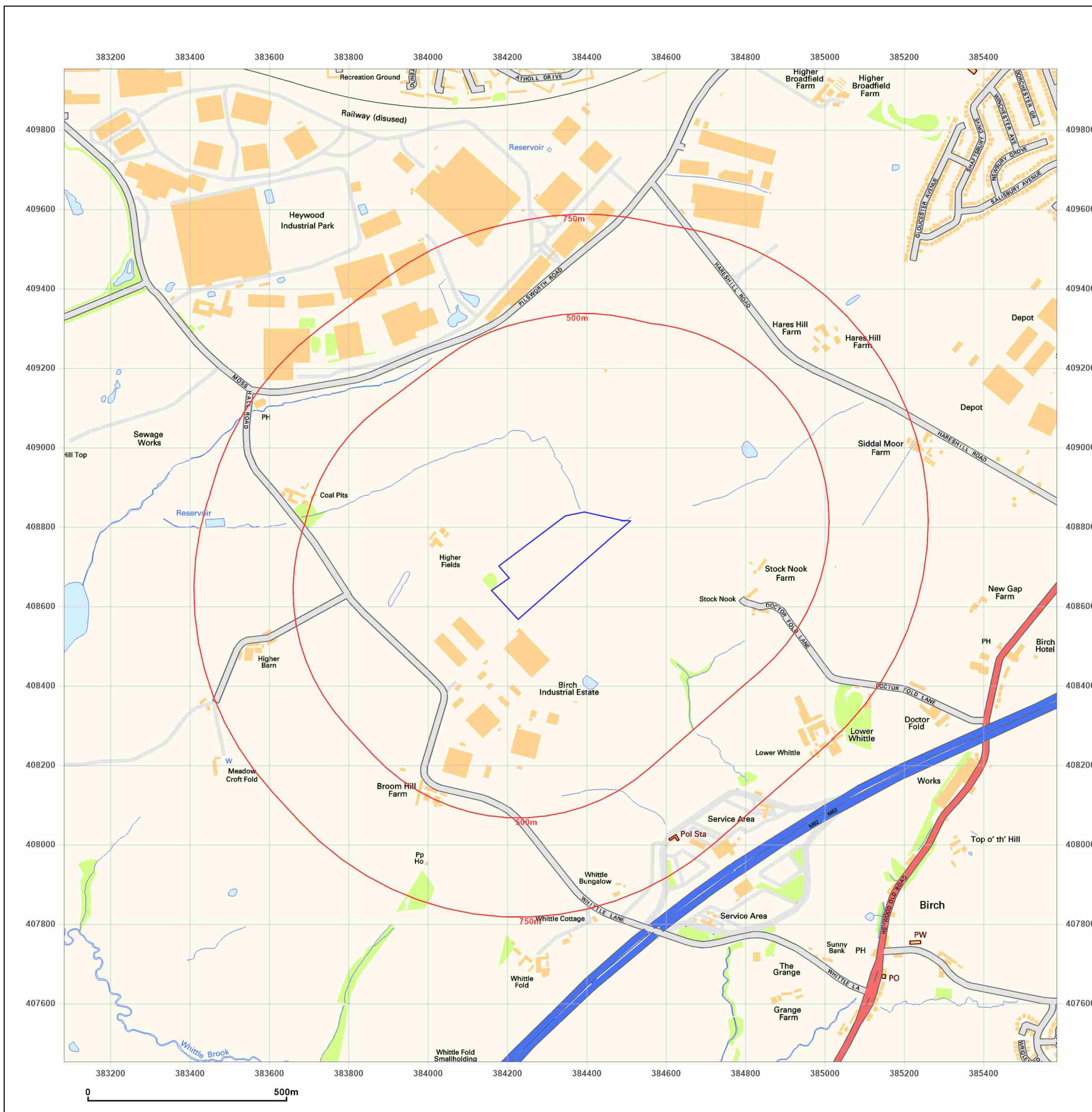


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 02 July 2025

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



Site Details:

AG3696-25

Client Ref: AG3696-25
Report Ref: GS-G4H-IBE-6EC-DE2
Grid Ref: 384334, 408703

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000



2010

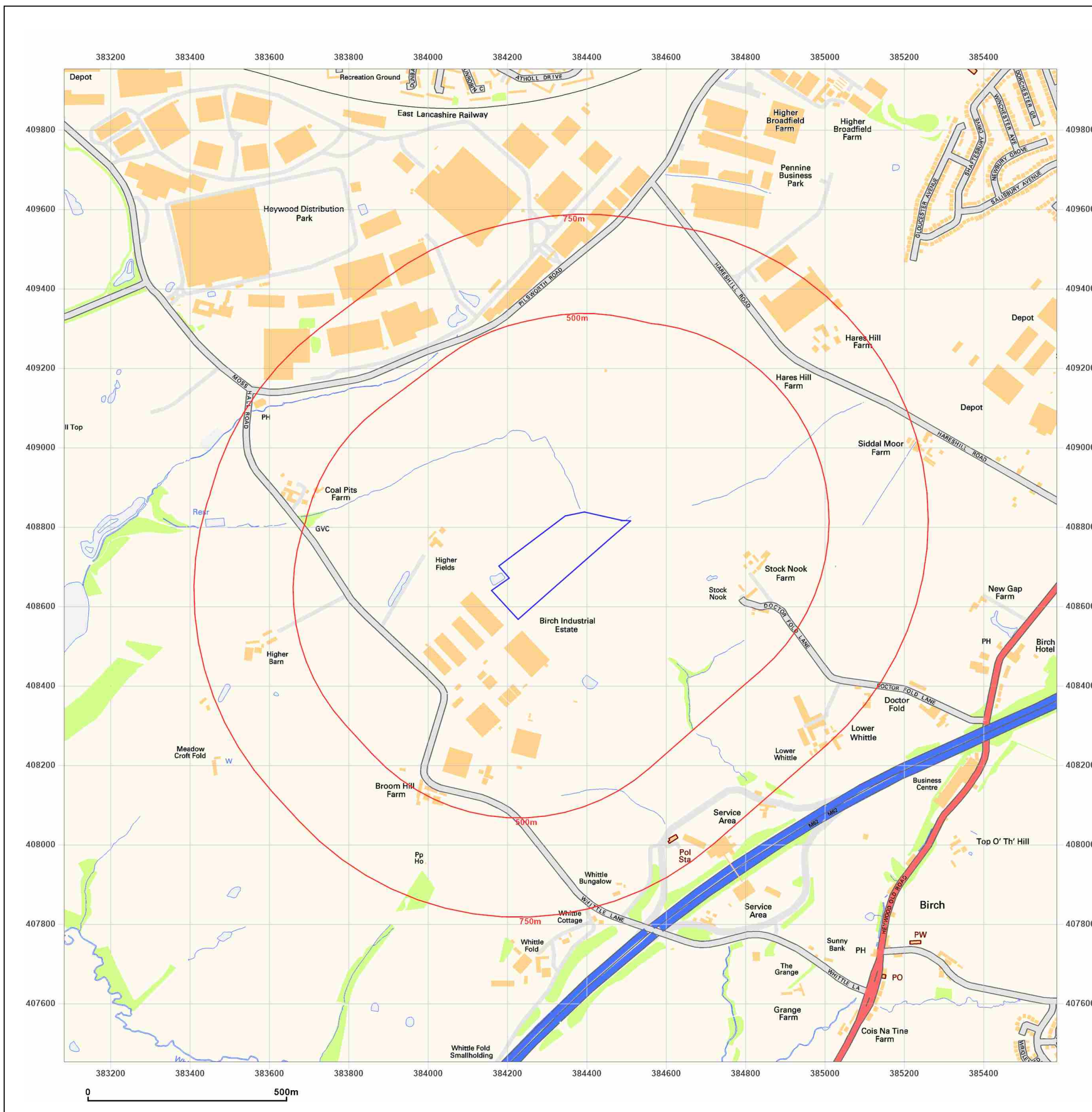


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 02 July 2025

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



Site Details:

AG3696-25

Client Ref: AG3696-25
Report Ref: GS-G4H-IBE-6EC-DE2
Grid Ref: 384334, 408703

Map Name: National Grid

Map date: 2025

Scale: 1:10,000

Printed at: 1:10,000



2025

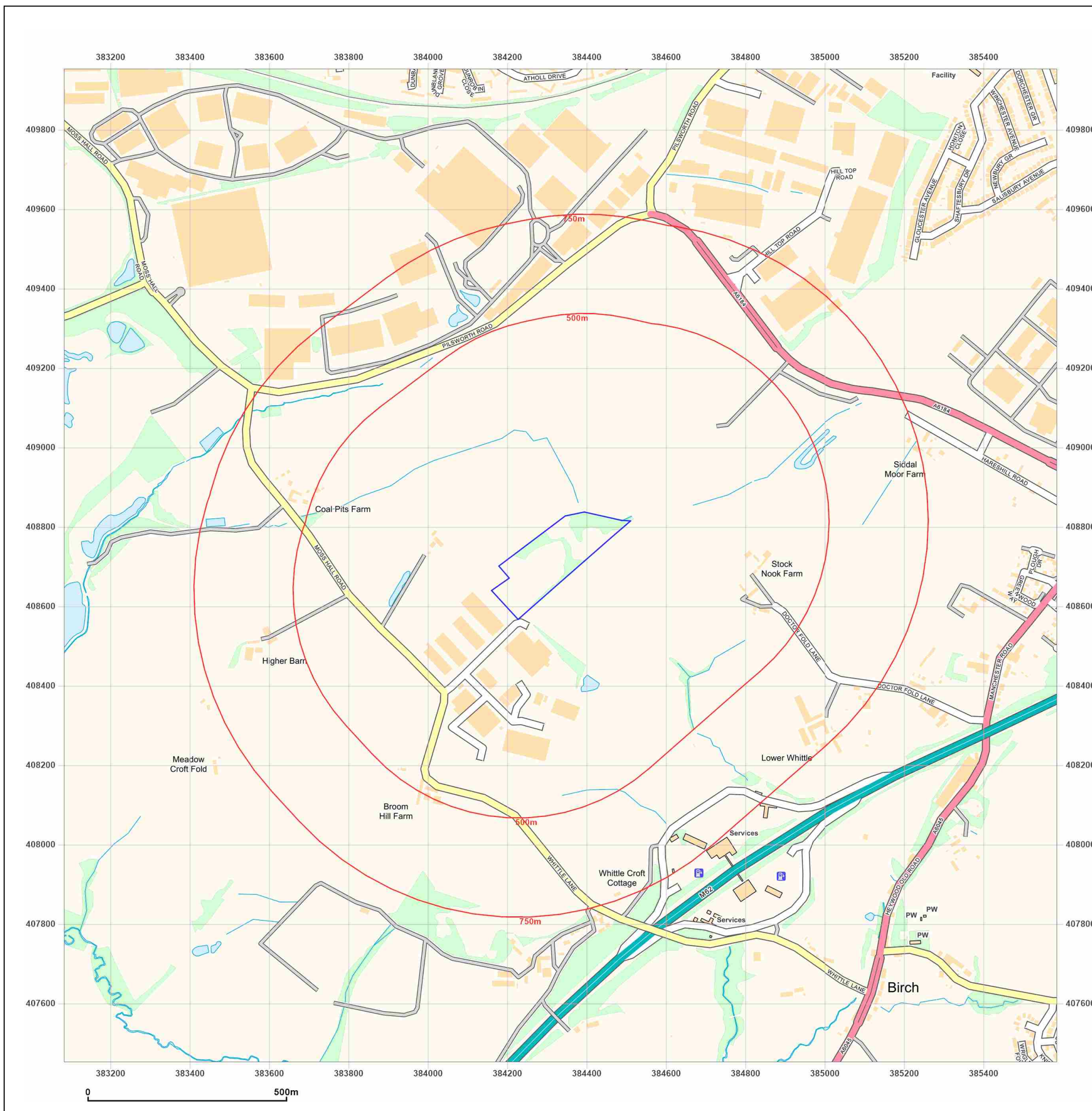


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 02 July 2025

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



County Series 1:2,500 scale

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



Historical Map Pack Legend

County Series
1:1,250 scale
~

County Series &
National Grid
1:2,500 scale

Information present on these legends is sourced from the same Ordnance Survey mapping as the maps used in this product.

If you have a query regarding any of the maps provided within this map pack, please contact GroundSure's technical helpline. We will endeavour to answer any queries you may have.

Technical Helpline:

Tel 08444159000

groundsureinsight@groundsure.com
www.groundsure.com

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

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

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

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

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

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

Site Details:

AG3696-25

Client Ref: AG3696-25
Report Ref: GS-G4H-IBE-6EC-DE2_2500
Grid Ref: 384334, 408703

Map Name: County Series

Map date: 1890

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1890
 Revised 1890
 Edition N/A
 Copyright N/A
 Levelled N/A

Surveyed 1890
 Revised 1890
 Edition N/A
 Copyright N/A
 Levelled N/A

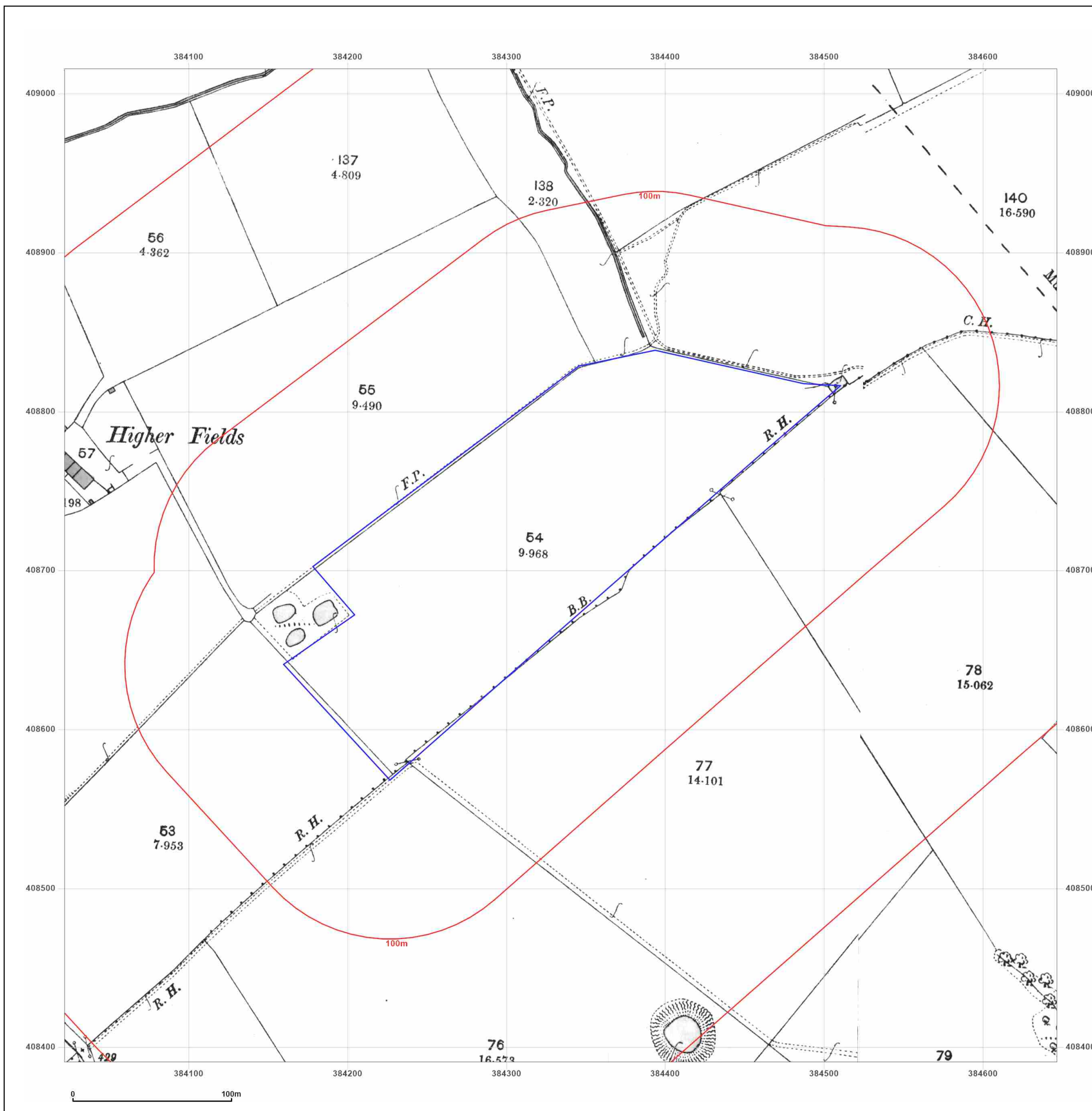


Produced by
 Groundsure Insights
 T: 08444 159000
 E: info@groundsure.com
 W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 02 July 2025

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



Site Details:

AG3696-25

Client Ref: AG3696-25
Report Ref: GS-G4H-IBE-6EC-DE2_2500
Grid Ref: 384334, 408703

Map Name: County Series

Map date: 1910

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1910
 Revised 1910
 Edition N/A
 Copyright N/A
 Levelled N/A

Surveyed 1910
 Revised 1910
 Edition N/A
 Copyright N/A
 Levelled N/A

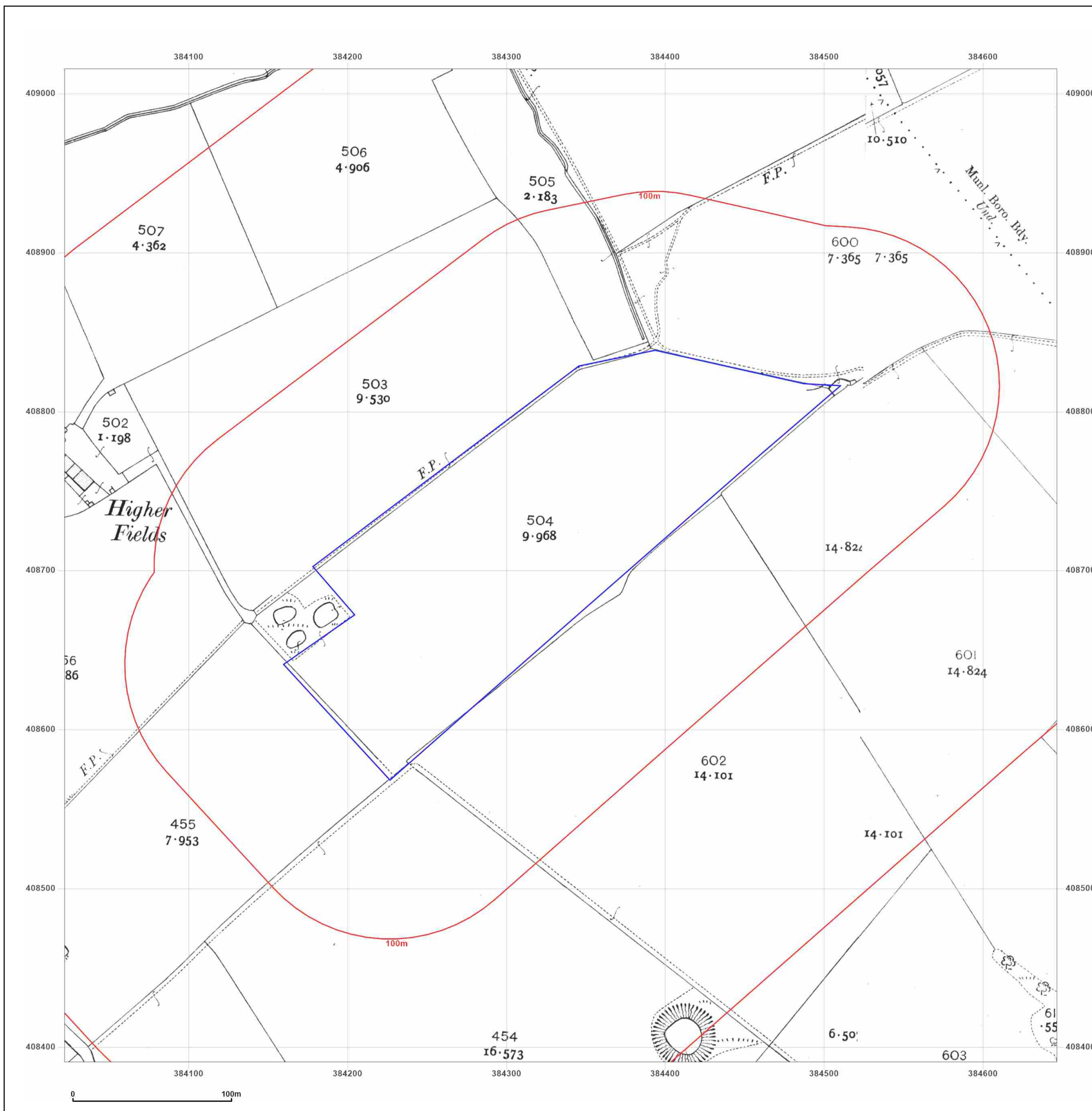


Produced by
 Groundsure Insights
 T: 08444 159000
 E: info@groundsure.com
 W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 02 July 2025

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



Site Details:

AG3696-25

Client Ref: AG3696-25
Report Ref: GS-G4H-IBE-6EC-DE2_2500
Grid Ref: 384334, 408703

Map Name: County Series

Map date: 1937-1939

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1939
 Revised 1939
 Edition N/A
 Copyright N/A
 Levelled N/A

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

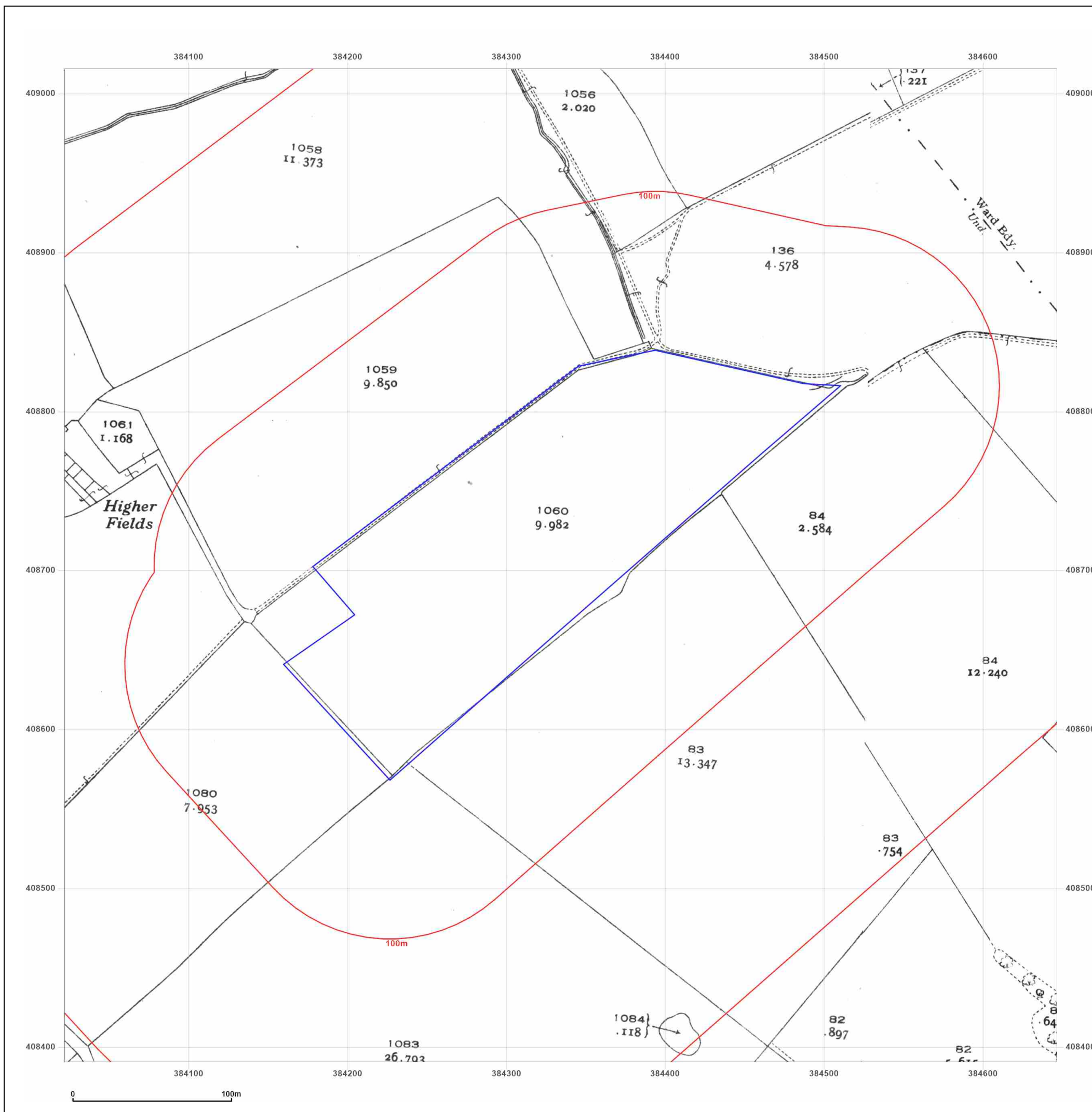


Produced by
 Groundsure Insights
 T: 08444 159000
 E: info@groundsure.com
 W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 02 July 2025

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



Site Details:

AG3696-25

Client Ref: AG3696-25
Report Ref: GS-G4H-IBE-6EC-DE2_2500
Grid Ref: 384334, 408703

Map Name: National Grid

Map date: 1956-1957

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1956
Revised 1956
Edition 1957
Copyright N/A
Levelled 1928

Surveyed 1956
Revised 1956
Edition N/A
Copyright N/A
Levelled 1927

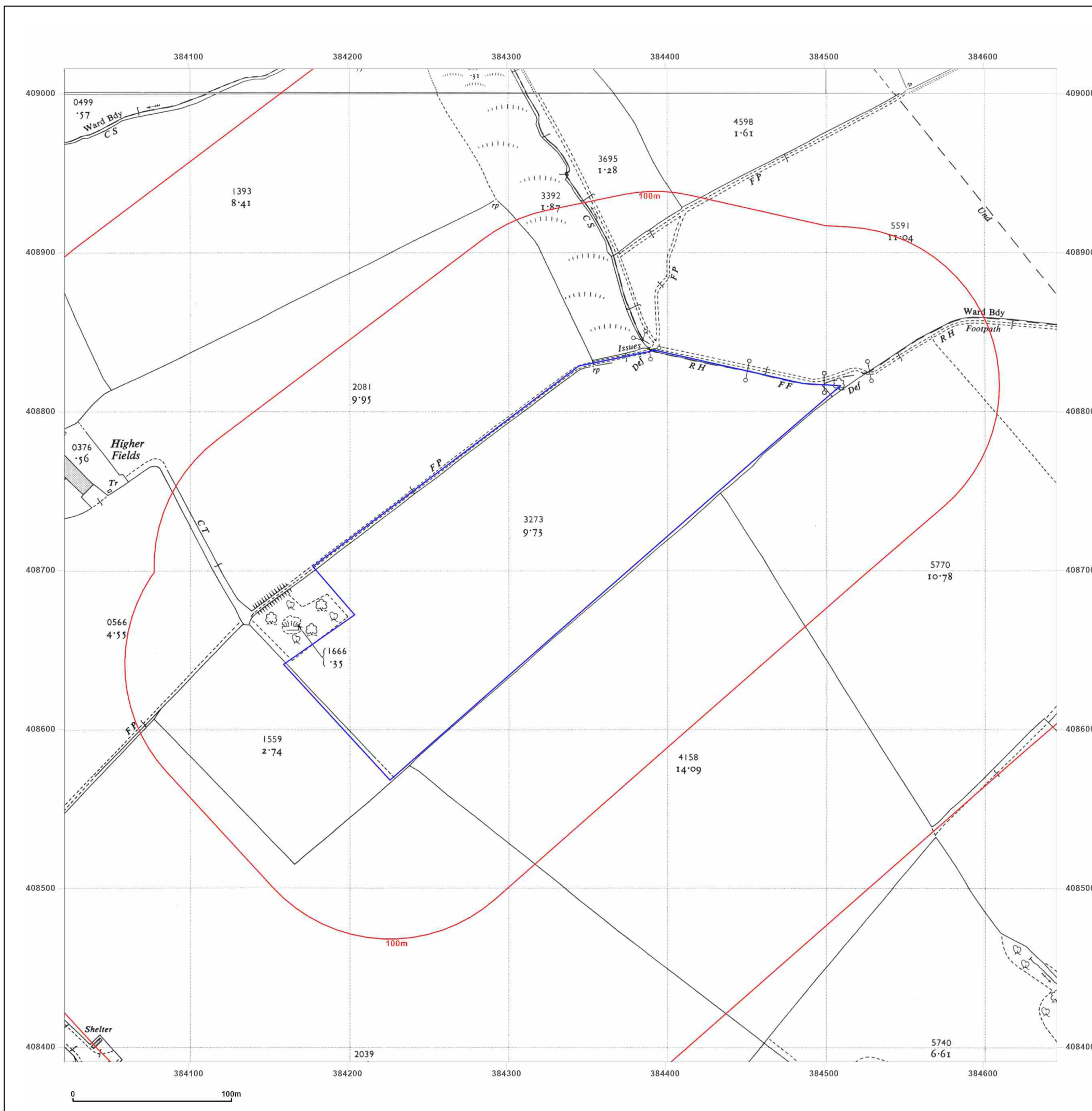


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 02 July 2025

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



Site Details:

AG3696-25

Client Ref: AG3696-25
Report Ref: GS-G4H-IBE-6EC-DE2_2500
Grid Ref: 384334, 408703

Map Name: National Grid

Map date: 1981

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1956
 Revised 1980
 Edition N/A
 Copyright 1981
 Levelled 1962



Produced by
 Groundsure Insights
 T: 08444 159000
 E: info@groundsure.com
 W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 02 July 2025

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



Site Details:

AG3696-25

Client Ref: AG3696-25
Report Ref: GS-G4H-IBE-6EC-DE2_2500
Grid Ref: 384334, 408703

Map Name: National Grid

Map date: 1992

Scale: 1:2,500

Printed at: 1:2,500



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



Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 02 July 2025

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



Site Details:

AG3696-25

Client Ref: AG3696-25

Report Ref: GS-G4H-IBE-6EC-DE2_Landline_1_1

Grid Ref: 384184, 408703

Map Name: LandLine

Map date: 2003

Scale: 1:1,250

Printed at: 1:1,250



2003

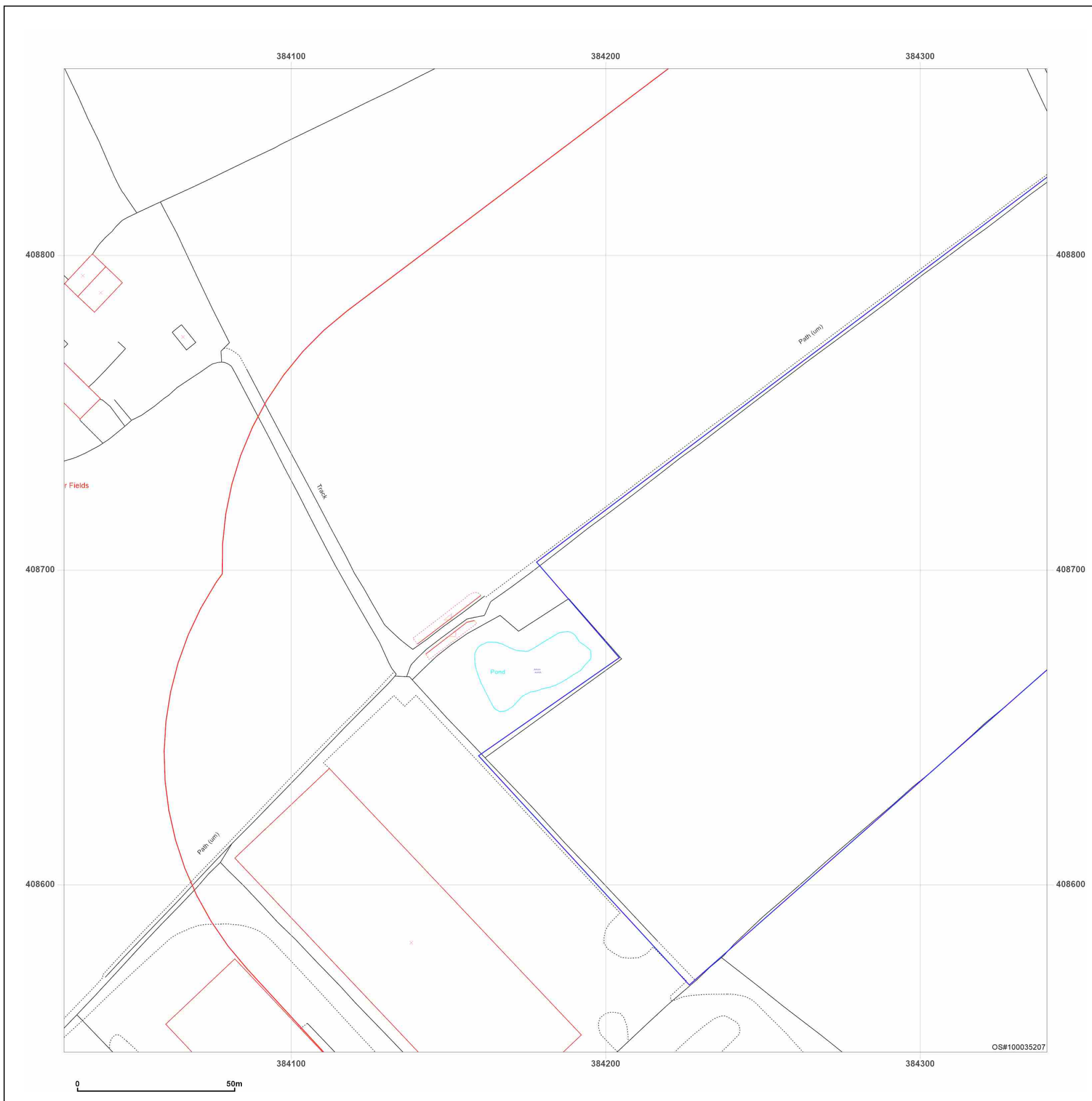


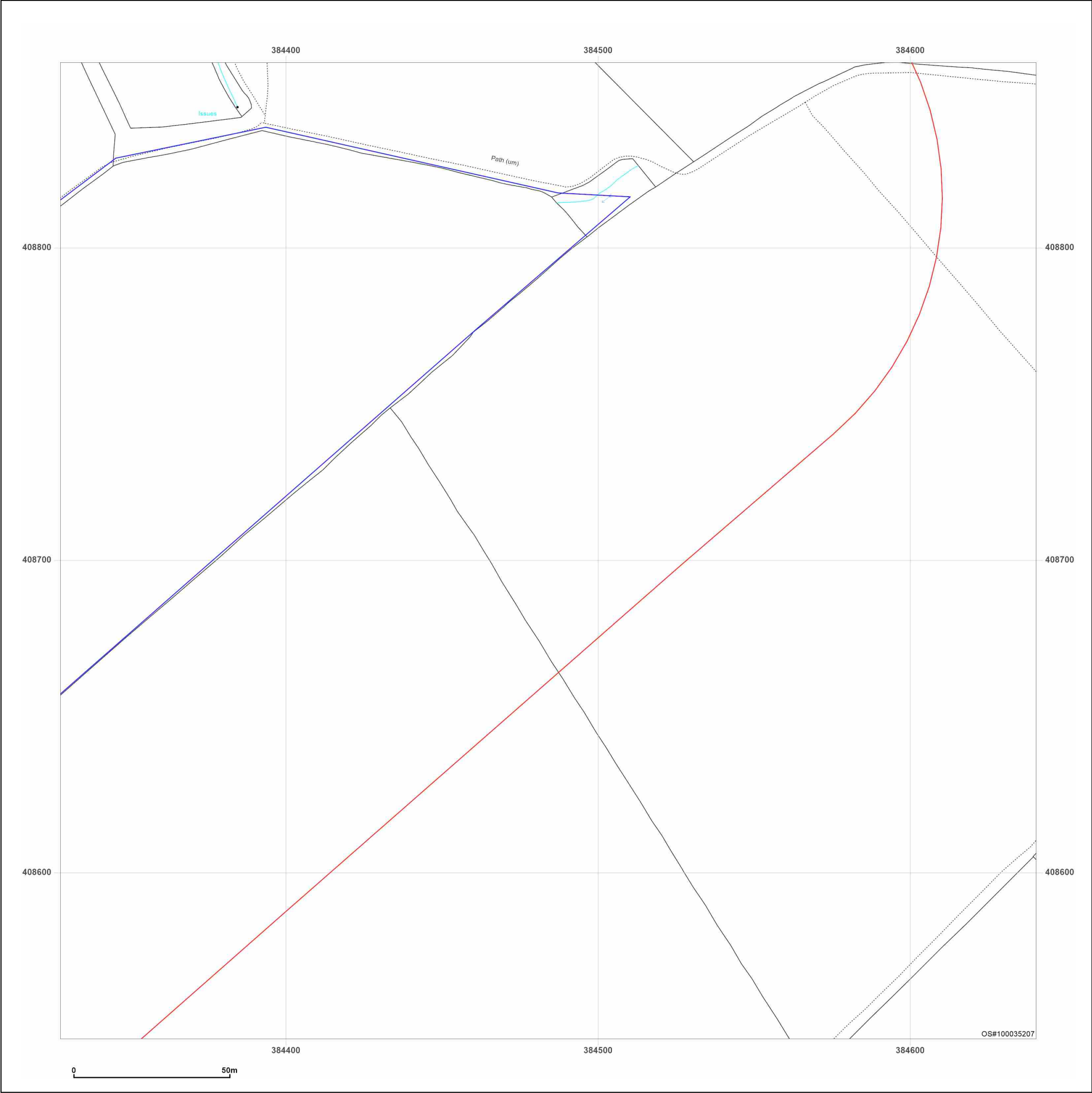
Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 02 July 2025

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





Site Details:

AG3696-25

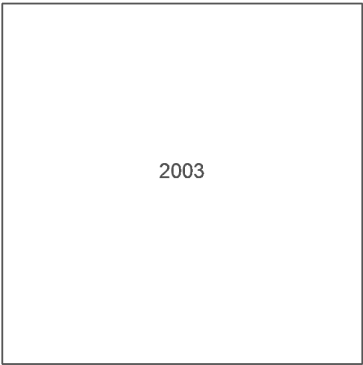
Client Ref: AG3696-25
Report Ref: GS-G4H-IBE-6EC-DE2_Landline_2_1
Grid Ref: 384484, 408703

Map Name: LandLine

Map date: 2003

Scale: 1:1,250

Printed at: 1:1,250

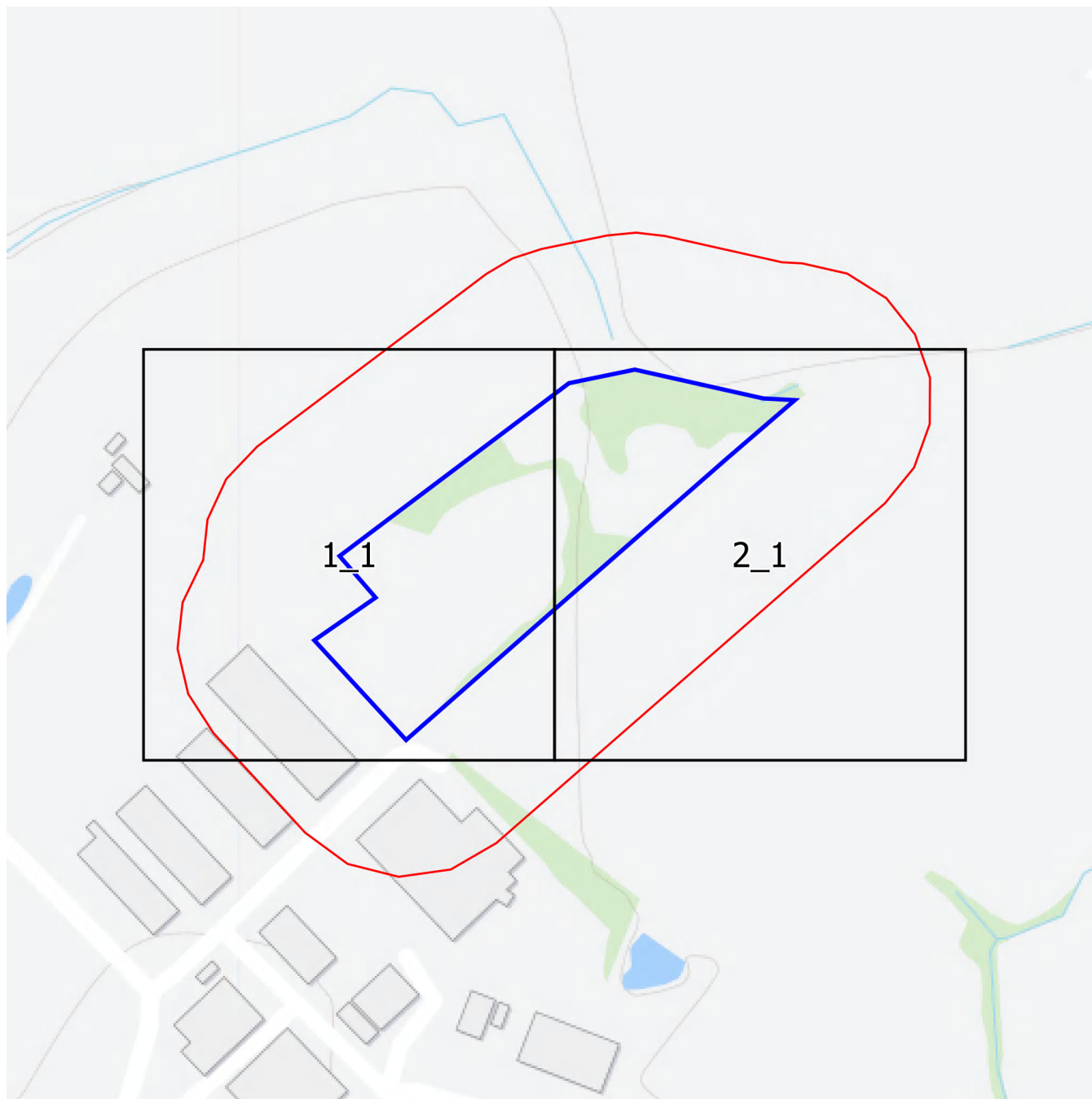


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

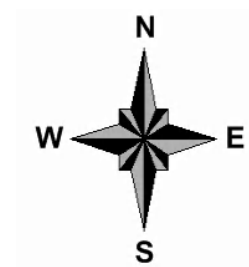
Production date: 02 July 2025

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



Groundsure
INSIGHTS

Landline Scale Grid Index





AG3696-25

Order Details

Date: 02/07/2025
Your ref: AG3696-25
Our Ref: GS-WF2-WWW-XQI-T2P

Site Details

Location: 384313 408720
Area: 3.9 ha
Authority: [Rochdale Metropolitan Borough Council](#) ↗



© Crown copyright and database rights 2025. Ordnance Survey licence 100035207

Summary of findings

[p. 2 >](#)

Aerial image

[p. 9 >](#)

OS MasterMap site plan

[p.14 >](#)

[Insight User Guide](#) ↗

Contact us with any questions at:

info@groundsure.com ↗

01273 257 755

Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
15 >	1.1 >	Historical industrial land uses >	0	0	3	9	-
16 >	1.2 >	Historical tanks >	0	0	1	3	-
17 >	1.3 >	Historical energy features >	0	0	0	1	-
17	1.4	Historical petrol stations	0	0	0	0	-
17	1.5	Historical garages	0	0	0	0	-
18	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
19 >	2.1 >	Historical industrial land uses >	0	0	4	21	-
20 >	2.2 >	Historical tanks >	0	0	2	4	-
21 >	2.3 >	Historical energy features >	0	0	0	2	-
21	2.4	Historical petrol stations	0	0	0	0	-
22	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
23	3.1	Active or recent landfill	0	0	0	0	-
23	3.2	Historical landfill (BGS records)	0	0	0	0	-
24	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
24	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
24 >	3.5 >	Historical waste sites >	0	0	1	0	-
24 >	3.6 >	Licensed waste sites >	0	0	0	4	-
26 >	3.7 >	Waste exemptions >	0	0	8	12	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
28 >	4.1 >	Recent industrial land uses >	0	0	10	-	-
29	4.2	National Geographic Database (NGD) - Current or recent tanks	0	0	0	-	-
29	4.3	Current or recent petrol stations	0	0	0	0	-
30	4.4	Electricity cables	0	0	0	0	-
30	4.5	Gas pipelines	0	0	0	0	-



30	4.6	Sites determined as Contaminated Land	0	0	0	0	-
30	4.7	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
30	4.8	Regulated explosive sites	0	0	0	0	-
31	4.9	Hazardous substance storage/usage	0	0	0	0	-
31	4.10	Historical licensed industrial activities (IPC)	0	0	0	0	-
31	4.11	Licensed industrial activities (Part A(1))	0	0	0	0	-
31	4.12	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-
31	4.13	Radioactive Substance Authorisations	0	0	0	0	-
32 >	4.14 >	<u>Licensed Discharges to controlled waters ></u>	0	0	1	2	-
32	4.15	Pollutant release to surface waters (Red List)	0	0	0	0	-
33	4.16	Pollutant release to public sewer	0	0	0	0	-
33	4.17	List 1 Dangerous Substances	0	0	0	0	-
33	4.18	List 2 Dangerous Substances	0	0	0	0	-
33 >	4.19 >	<u>Pollution Incidents (EA/NRW) ></u>	0	0	2	1	-
34	4.20	Pollution inventory substances	0	0	0	0	-
34	4.21	Pollution inventory waste transfers	0	0	0	0	-
34	4.22	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	<u>Hydrogeology ></u>	On site	0-50m	50-250m	250-500m	500-2000m
35 >	5.1 >	<u>Superficial aquifer ></u>	Identified (within 500m)				
37 >	5.2 >	<u>Bedrock aquifer ></u>	Identified (within 500m)				
39 >	5.3 >	<u>Groundwater vulnerability ></u>	Identified (within 50m)				
40	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
40	5.5	Groundwater vulnerability- local information	None (within 0m)				
41 >	5.6 >	<u>Groundwater abstractions ></u>	0	0	0	0	5
43 >	5.7 >	<u>Surface water abstractions ></u>	0	0	0	0	6
44	5.8	Potable abstractions	0	0	0	0	0
45	5.9	Source Protection Zones	0	0	0	0	-
45	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	<u>Hydrology ></u>	On site	0-50m	50-250m	250-500m	500-2000m



46 >	6.1 >	Water Network (OS MasterMap) >	2	3	1	-	-
47 >	6.2 >	Surface water features >	1	1	3	-	-
47 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
48 >	6.4 >	WFD Surface water bodies >	0	0	0	-	-
48 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
49	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
49	7.2	Historical Flood Events	0	0	0	-	-
49	7.3	Flood Defences	0	0	0	-	-
50	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
50	7.5	Flood Storage Areas	0	0	0	-	-
51	7.6	Flood Zone 2	None (within 50m)				
51	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding >					
52 >	8.1 >	Surface water flooding >	1 in 30 year, 0.3m - 1.0m (within 50m)				
Page	Section	Groundwater flooding >					
54 >	9.1 >	Groundwater flooding >	Moderate (within 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
55	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
56	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
56	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
56	10.4	Special Protection Areas (SPA)	0	0	0	0	0
56	10.5	National Nature Reserves (NNR)	0	0	0	0	0
57	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
57	10.7	Designated Ancient Woodland	0	0	0	0	0
57	10.8	Biosphere Reserves	0	0	0	0	0
57	10.9	Forest Parks	0	0	0	0	0
58	10.10	Marine Conservation Zones	0	0	0	0	0
58 >	10.11 >	Green Belt >	0	0	0	0	3



58	10.12	Proposed Ramsar sites	0	0	0	0	0
58	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
59	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
59	10.15	Nitrate Sensitive Areas	0	0	0	0	0
59	10.16	Nitrate Vulnerable Zones	0	0	0	0	0
60 >	<u>10.17 ></u>	<u>SSSI Impact Risk Zones ></u>	1	-	-	-	-
61	10.18	SSSI Units	0	0	0	0	0
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
62	11.1	World Heritage Sites	0	0	0	-	-
62	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
62	11.3	National Parks	0	0	0	-	-
62	11.4	Listed Buildings	0	0	0	-	-
63	11.5	Conservation Areas	0	0	0	-	-
63	11.6	Scheduled Ancient Monuments	0	0	0	-	-
63	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	<u>Agricultural designations ></u>	On site	0-50m	50-250m	250-500m	500-2000m
64 >	<u>12.1 ></u>	<u>Agricultural Land Classification ></u>	Grade 3 (within 250m)				
65	12.2	Open Access Land	0	0	0	-	-
65	12.3	Tree Felling Licences	0	0	0	-	-
65	12.4	Environmental Stewardship Schemes	0	0	0	-	-
65	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
66	13.1	Priority Habitat Inventory	0	0	0	-	-
66	13.2	Habitat Networks	0	0	0	-	-
66	13.3	Open Mosaic Habitat	0	0	0	-	-
66	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	<u>Geology 1:10,000 scale ></u>	On site	0-50m	50-250m	250-500m	500-2000m
67 >	<u>14.1 ></u>	<u>10k Availability ></u>	Identified (within 500m)				
68 >	<u>14.2 ></u>	<u>Artificial and made ground (10k) ></u>	2	2	1	4	-



70 >	14.3 >	Superficial geology (10k) >	4	1	1	7	-
71	14.4	Landslip (10k)	0	0	0	0	-
72 >	14.5 >	Bedrock geology (10k) >	3	0	6	11	-
74 >	14.6 >	Bedrock faults and other linear features (10k) >	4	0	13	13	-
Page	Section	Geology 1:50,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
76 >	15.1 >	50k Availability >	Identified (within 500m)				
77	15.2	Artificial and made ground (50k)	0	0	0	0	-
77	15.3	Artificial ground permeability (50k)	0	0	-	-	-
78 >	15.4 >	Superficial geology (50k) >	3	1	0	5	-
79 >	15.5 >	Superficial permeability (50k) >	Identified (within 50m)				
79	15.6	Landslip (50k)	0	0	0	0	-
80	15.7	Landslip permeability (50k)	None (within 50m)				
81 >	15.8 >	Bedrock geology (50k) >	3	0	6	10	-
82 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
83 >	15.10 >	Bedrock faults and other linear features (50k) >	3	0	8	8	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
85	16.1	BGS Boreholes	0	0	0	-	-
Page	Section	Natural ground subsidence >					
86 >	17.1 >	Shrink swell clays >	Very low (within 50m)				
87 >	17.2 >	Running sands >	Low (within 50m)				
89 >	17.3 >	Compressible deposits >	Negligible (within 50m)				
90 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
91 >	17.5 >	Landslides >	Very low (within 50m)				
92 >	17.6 >	Ground dissolution of soluble rocks >	Negligible (within 50m)				
Page	Section	Mining and ground workings >	On site	0-50m	50-250m	250-500m	500-2000m
94 >	18.1 >	BritPits >	0	0	1	2	-
95 >	18.2 >	Surface ground workings >	1	2	17	-	-
96 >	18.3 >	Underground workings >	0	0	0	7	0
97	18.4	Underground mining extents	0	0	0	0	-



97	18.5	Historical Mineral Planning Areas	0	0	0	0	-
97 >	18.6 >	Non-coal mining >	0	0	1	0	0
98	18.7	JPB mining areas	None (within 0m)				
98	18.8	The Coal Authority non-coal mining	0	0	0	0	-
98	18.9	Researched mining	0	0	0	0	-
99	18.10	Mining record office plans	0	0	0	0	-
99	18.11	BGS mine plans	0	0	0	0	-
99 >	18.12 >	Coal mining >	Identified (within 0m)				
99	18.13	Brine areas	None (within 0m)				
100	18.14	Gypsum areas	None (within 0m)				
100	18.15	Tin mining	None (within 0m)				
100	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m
101	19.1	Natural cavities	0	0	0	0	-
101	19.2	Mining cavities	0	0	0	0	0
101	19.3	Reported recent incidents	0	0	0	0	-
101	19.4	Historical incidents	0	0	0	0	-
Page	Section	Radon >					
103 >	20.1 >	Radon >	Less than 1% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
105 >	21.1 >	BGS Estimated Background Soil Chemistry >	3	0	-	-	-
105	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
105	21.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
106	22.1	Underground railways (London)	0	0	0	-	-
106	22.2	Underground railways (Non-London)	0	0	0	-	-
106	22.3	Railway tunnels	0	0	0	-	-
106	22.4	Historical railway and tunnel features	0	0	0	-	-
106	22.5	Royal Mail tunnels	0	0	0	-	-



107	22.6	Historical railways	0	0	0	-	-
107	22.7	Railways	0	0	0	-	-
107	22.8	Crossrail 2	0	0	0	0	-
107	22.9	HS2	0	0	0	0	-

Recent aerial photograph



Capture Date: 07/04/2023

Site Area: 3.9ha



Contact us with any questions at:

info@groundsure.com

01273 257 755

Date: 2 July 2025

Recent site history - 2019 aerial photograph



Capture Date: 23/05/2019

Site Area: 3.9ha



Contact us with any questions at:

info@groundsure.com

01273 257 755

Date: 2 July 2025

Recent site history - 2015 aerial photograph



Capture Date: 11/06/2015

Site Area: 3.9ha



Contact us with any questions at:

info@groundsure.com

01273 257 755

Date: 2 July 2025

Recent site history - 2011 aerial photograph



Capture Date: 01/05/2011

Site Area: 3.9ha



Contact us with any questions at:

info@groundsure.com

01273 257 755

Date: 2 July 2025

Recent site history - 2000 aerial photograph



Capture Date: 19/06/2000

Site Area: 3.9ha



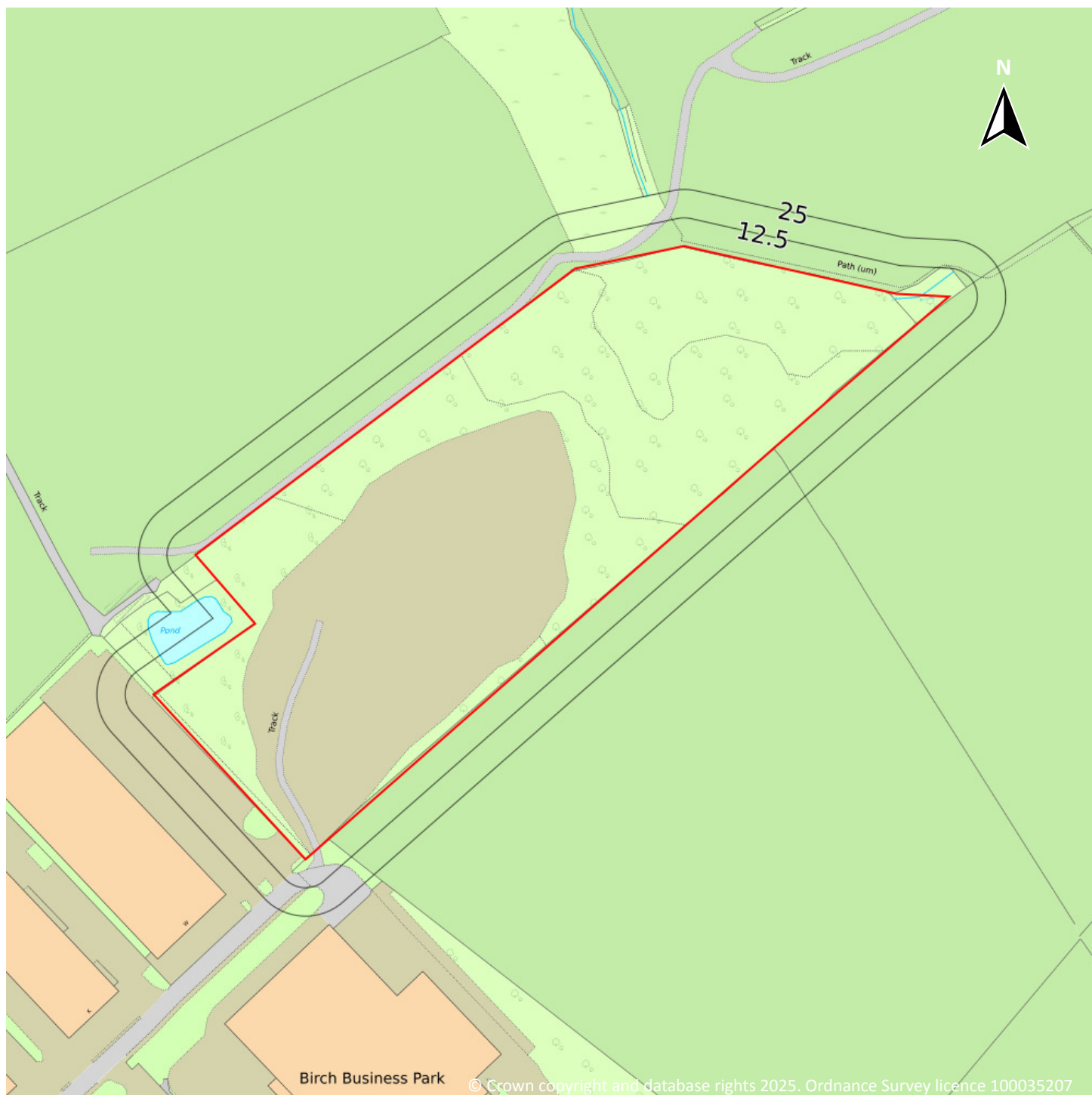
Contact us with any questions at:

info@groundsure.com

01273 257 755

Date: 2 July 2025

OS MasterMap site plan



Site Area: 3.9ha



Contact us with any questions at:

info@groundsure.com

01273 257 755

Date: 2 July 2025

1 Past land use



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

1.1 Historical industrial land uses

Records within 500m

12

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

Features are displayed on the Past land use map on [page 15 >](#)

ID	Location	Land use	Dates present	Group ID
1	105m N	Old Sandstone Quarry	1851	692074



ID	Location	Land use	Dates present	Group ID
A	223m SE	Unspecified Pit	1928 - 1938	746422
B	247m S	Unspecified Tank	1981	697478
C	308m NW	Unspecified Pit	1965 - 1981	712968
C	313m NW	Coal Pits	1891	746898
C	317m NW	Coal Pits	1908 - 1938	743922
C	337m NW	Coal Pits	1908 - 1938	736715
C	339m NW	Old Sandstone Quarry	1851	692073
C	343m NW	Unspecified Pit	1955 - 1981	746139
3	393m NW	Coal Pits	1955 - 1981	724524
4	413m SE	Sand Pit	1851	674126
5	497m SW	Pump	1851	682528

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m

4

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

Features are displayed on the Past land use map on [page 15 >](#)

ID	Location	Land use	Dates present	Group ID
B	249m S	Unspecified Tank	1981 - 1992	96180
A	259m SE	Tanks	1981 - 1992	99516
A	267m SE	Tanks	1981	93443
A	268m SE	Tanks	1992	92056

This data is sourced from Ordnance Survey / Groundsure.



1.3 Historical energy features

Records within 500m

1

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

Features are displayed on the Past land use map on [page 15 >](#)

ID	Location	Land use	Dates present	Group ID
2	274m S	Electricity Substation	1981 - 1992	64212

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

0

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

This data is sourced from Ordnance Survey / Groundsure.



1.6 Historical military land

Records within 500m

0

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

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



2 Past land use - un-grouped



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

2.1 Historical industrial land uses

Records within 500m

25

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 19](#) >

ID	Location	Land Use	Date	Group ID
1	105m N	Old Sandstone Quarry	1851	692074
A	223m SE	Unspecified Pit	1938	746422
A	223m SE	Unspecified Pit	1928	746422



ID	Location	Land Use	Date	Group ID
B	247m S	Unspecified Tank	1981	697478
D	308m NW	Unspecified Pit	1981	712968
D	308m NW	Unspecified Pit	1974	712968
D	308m NW	Unspecified Pit	1965	712968
D	313m NW	Coal Pits	1891	746898
D	317m NW	Coal Pits	1938	743922
D	317m NW	Coal Pits	1928	743922
D	317m NW	Coal Pits	1908	743922
D	337m NW	Coal Pits	1938	736715
D	337m NW	Coal Pits	1928	736715
D	337m NW	Coal Pits	1908	736715
D	339m NW	Old Sandstone Quarry	1851	692073
D	343m NW	Unspecified Pit	1981	746139
D	343m NW	Unspecified Pit	1974	746139
D	343m NW	Unspecified Pit	1965	746139
D	343m NW	Unspecified Pit	1955	746139
E	393m NW	Coal Pits	1981	724524
E	393m NW	Coal Pits	1974	724524
E	393m NW	Coal Pits	1965	724524
E	393m NW	Coal Pits	1955	724524
2	413m SE	Sand Pit	1851	674126
3	497m SW	Pump	1851	682528

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m

6

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 19 >](#)

ID	Location	Land Use	Date	Group ID
B	249m S	Unspecified Tank	1981	96180
B	250m S	Unspecified Tank	1992	96180
A	259m SE	Tanks	1981	99516
A	261m SE	Tanks	1992	99516
A	267m SE	Tanks	1981	93443
A	268m SE	Tanks	1992	92056

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m

2

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 19 >](#)

ID	Location	Land Use	Date	Group ID
C	274m S	Electricity Substation	1981	64212
C	278m S	Electricity Substation	1992	64212

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m

0

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

This data is sourced from Ordnance Survey / Groundsure.



2.5 Historical garages

Records within 500m

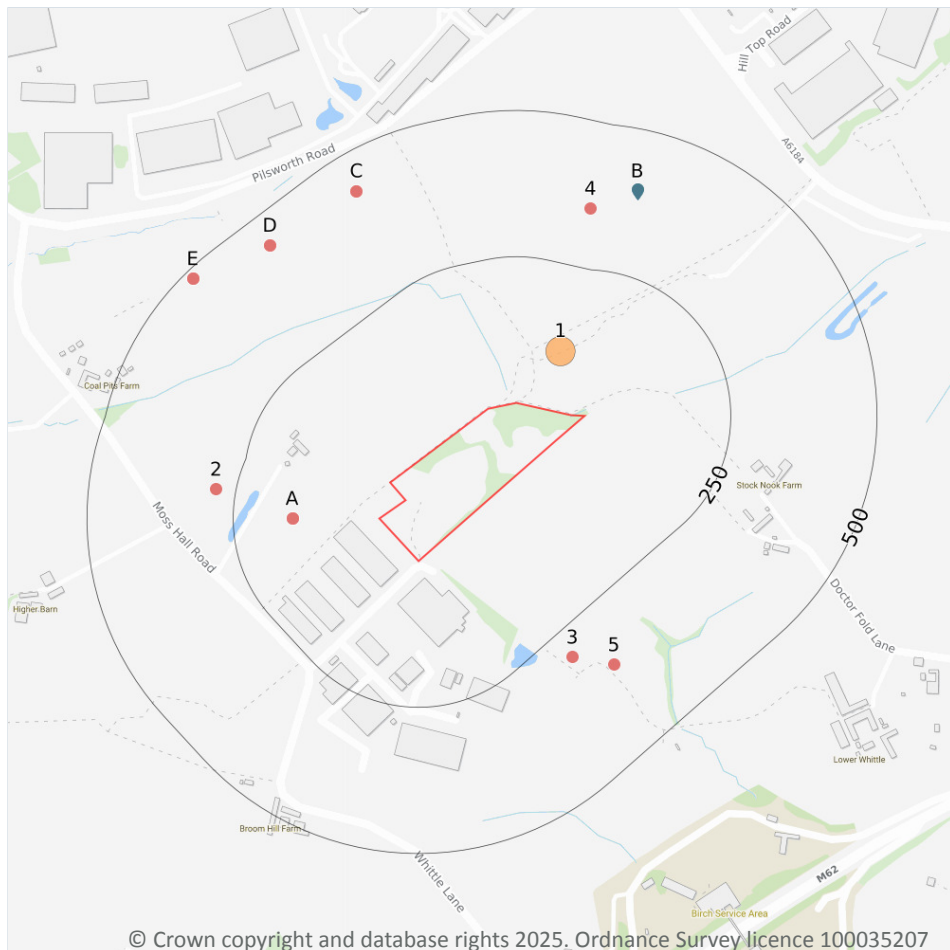
0

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

This data is sourced from Ordnance Survey / Groundsure.



3 Waste and landfill



- Site Outline
- Search buffers in metres (m)
- 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**0**

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

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

3.4 Historical landfill (EA/NRW records)

Records within 500m**0**

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

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

3.5 Historical waste sites

Records within 500m**1**

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 23 >](#)

ID	Location	Address	Further Details	Date
1	78m N	Site Address: Land Off, Whittle Lane, Heywood, Greater Manchester, OL10	Type of Site: Landfill Works (Refurb) Planning application reference: 13/00237/FUL Description: Scheme comprises infilling of redundant quarry to restore land for more beneficial agricultural use, including the construction of a new vehicular access to the site from whittle lane. Data source: Historic Planning Application Data Type: Point	-

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

3.6 Licensed waste sites

Records within 500m**4**

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

Features are displayed on the Waste and landfill map on [page 23 >](#)



ID	Location	Details		
B	394m N	Site Name: Hareshill Farm Equestrian Centre Site Address: Hareshill Farm Equestrian Centre, Hareshill Road, Pilsworth, Heywood, Lancashire, OL10 2TB Correspondence Address: -	Type of Site: Deposit of waste to land as a recovery operation Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: PCE006 EPR reference: EA/EPR/CB3738AC/A001 Operator: P Casey Enviro Ltd Waste Management licence No: 103489 Annual Tonnage: 306000	Issue Date: 08/03/2012 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued
B	394m N	Site Name: Hareshill Farm Site Address: - Correspondence Address: -	Type of Site: Deposit of waste to land as a recovery operation Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: PCE006 EPR reference: EA/EPR/KB3603LV/T001 Operator: Russells South Heywood Limited Waste Management licence No: 103489 Annual Tonnage: 306000	Issue Date: 08/03/2012 Effective Date: - Modified: 06/09/2021 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred
B	394m N	Site Name: Hareshill Farm Equestrian Centre Site Address: Hareshill Farm, Hareshill Road, Pilsworth, Heywood, Lancashire, OL10 2TB Correspondence Address: -	Type of Site: Deposit of waste to land as a recovery operation Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: PCE006 EPR reference: EA/EPR/KB3603LV/V003 Operator: P Casey Enviro Ltd Waste Management licence No: 103489 Annual Tonnage: 306000	Issue Date: 08/03/2012 Effective Date: - Modified: 07/06/2022 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified
B	394m N	Site Name: Hareshill Farm Equestrian Centre Site Address: Hareshill Farm, Hareshill Road, Pilsworth, Heywood, Lancashire, OL10 2TB Correspondence Address: -	Type of Site: Deposit of waste to land as a recovery operation Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: 645032 EPR reference: EA/EPR/KB3603LV Operator: Russells South Heywood Limited Waste Management licence No: 103489 Annual Tonnage: 306000	Issue Date: 08/03/2012 Effective Date: 11/02/2022 Modified: 08/03/2012 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued



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

3.7 Waste exemptions

Records within 500m	20
----------------------------	-----------

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 23 >](#)

ID	Location	Site	Reference	Category	Sub-Category	Description
A	150m W	-	WEX356548	Storing waste exemption	On a farm	Storage of sludge
A	150m W	-	WEX391711	Storing waste exemption	On a farm	Storage of sludge
A	150m W	-	WEX439011	Storing waste exemption	On a farm	Storage of sludge
A	150m W	-	WEX426460	Storing waste exemption	On a farm	Storage of sludge
A	150m W	-	WEX227640	Storing waste exemption	On a farm	Storage of sludge
A	150m W	-	WEX151549	Storing waste exemption	On a farm	Storage of sludge
A	150m W	-	WEX259862	Storing waste exemption	On a farm	Storage of sludge
A	150m W	-	WEX292468	Storing waste exemption	On a farm	Storage of sludge
2	284m W	-	WEX127088	Storing waste exemption	On a farm	Storage of sludge
3	298m SE	-	WEX410086	Using waste exemption	On a farm	Use of waste in construction
4	351m N	Hareshill Farm Hareshill Road Lancashire OI12 2tb	EPR/SE5545XS /A001	Storing waste exemption	Non-agricultural waste only	Storage of sludge
5	354m SE	Lower Whittle Farm Doctor Fold Lane Heywood Lancashire OI10 2qe	EPR/VE5746KJ /A001	Storing waste exemption	Non-agricultural waste only	Storage of sludge
C	434m NW	-	WEX227641	Storing waste exemption	On a farm	Storage of sludge
C	434m NW	-	WEX151550	Storing waste exemption	On a farm	Storage of sludge



ID	Location	Site	Reference	Category	Sub-Category	Description
D	447m NW	-	WEX274438	Using waste exemption	Not on a farm	Use of waste in construction
D	447m NW	-	WEX274438	Treating waste exemption	Not on a farm	Screening and blending of waste
E	485m NW	-	WEX227718	Storing waste exemption	On a farm	Storage of sludge
E	485m NW	-	WEX151544	Storing waste exemption	On a farm	Storage of sludge
E	485m NW	-	WEX112722	Storing waste exemption	On a farm	Storage of sludge
E	485m NW	-	WEX292470	Storing waste exemption	On a farm	Storage of sludge

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
- Licensed Discharges to controlled waters
- Pollution Incidents (EA/NRW)

4.1 Recent industrial land uses

Records within 250m

10

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on [page 28](#) >

ID	Location	Company	Address	Activity	Category
A	100m S	Birch Business Park	Greater Manchester, OL10	Business Parks and Industrial Estates	Industrial Features
A	105m S	M & S Commercial s Ltd	Unit 3 Birch Industrial Estate, Whittle Lane, Heywood, Greater Manchester, OL10 2SX	Vehicle Repair, Testing and Servicing	Repair and Servicing



ID	Location	Company	Address	Activity	Category
A	105m S	Delice de France	Unit H Birch Business Park, Whittle Lane, Heywood, Greater Manchester, OL10 2SX	Distribution and Haulage	Transport, Storage and Delivery
A	105m S	Archbold Logistics Ltd	Unit H Birch Business Park, Whittle Lane, Heywood, Greater Manchester, OL10 2SX	Distribution and Haulage	Transport, Storage and Delivery
3	164m W	Moss Hall	Moss Hall Road, Heywood, Greater Manchester, OL10 2RE	New Vehicles	Motoring
B	173m SW	Archbold Logistics	Birch Business Park, Whittle Lane, Heywood, Greater Manchester, OL10 2SX	Distribution and Haulage	Transport, Storage and Delivery
B	183m SW	Ital Logistics	Unit 1 Birch Business Park, Whittle Lane, Heywood, Greater Manchester, OL10 2SX	Distribution and Haulage	Transport, Storage and Delivery
C	204m SW	Mast (Telecommunication)	Greater Manchester, OL10	Telecommunications Features	Infrastructure and Facilities
C	210m SW	Pylon	Greater Manchester, OL10	Electrical Features	Infrastructure and Facilities
4	211m S	Suilvision Ltd	Unit E Birch Business Park, Whittle Lane, Heywood, Greater Manchester, OL10 2SX	Photographic and Optical Equipment	Household, Office, Leisure and Garden

This data is sourced from Ordnance Survey.

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

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

Current or recent tanks identified from the Ordnance Survey NGD.

This data is sourced from Ordnance Survey.

4.3 Current or recent petrol stations

Records within 500m	0
----------------------------	----------

Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.



4.4 Electricity cables

Records within 500m

0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.5 Gas pipelines

Records within 500m

0

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.6 Sites determined as Contaminated Land

Records within 500m

0

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

This data is sourced from Local Authority records.

4.7 Control of Major Accident Hazards (COMAH)

Records within 500m

0

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

This data is sourced from the Health and Safety Executive.

4.8 Regulated explosive sites

Records within 500m

0

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

This data is sourced from the Health and Safety Executive.



4.9 Hazardous substance storage/usage

Records within 500m

0

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

This data is sourced from Local Authority records.

4.10 Historical licensed industrial activities (IPC)

Records within 500m

0

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

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

4.11 Licensed industrial activities (Part A(1))

Records within 500m

0

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

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

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

Records within 500m

0

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

This data is sourced from Local Authority records.

4.13 Radioactive Substance Authorisations

Records within 500m

0

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

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

4.14 Licensed Discharges to controlled waters

Records within 500m

3

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 28 >](#)

ID	Location	Address	Details	
D	227m SE	UNITKBIRCHINDEST,HEYWOOD, GREATERMANCHESTER	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 016991177 Permit Version: 1 Receiving Water: WHITTLE BROOK	Status: LAPSED UNDER SCHEDULE 23 ENVIRONMENT ACT 1995 Issue date: - Effective Date: 02/09/1987 Revocation Date: 01/10/1996
D	270m SE	YEARGATELTD,BIRCHINDUSTRIA LPARK,WHITTLELANE,HEYWOOD ,GREATERMANCHESTER,OL102S X	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 016993303 Permit Version: 1 Receiving Water: SURF WTR DRN TO TRIB WHITTL BK	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 06/11/1998 Effective Date: 06/11/1998 Revocation Date: -
5	307m SE	LONDONCARRIERSLTD,BIRCH,HE YWOOD,LANCASHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 016990242 Permit Version: 1 Receiving Water: TRIB WHITTLE BROOK	Status: LAPSED UNDER SCHEDULE 23 ENVIRONMENT ACT 1995 Issue date: - Effective Date: 01/11/1980 Revocation Date: 01/10/1996

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

4.15 Pollutant release to surface waters (Red List)

Records within 500m

0

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

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



4.16 Pollutant release to public sewer

Records within 500m

0

Discharges of Special Category Effluents to the public sewer.

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

4.17 List 1 Dangerous Substances

Records within 500m

0

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

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

4.18 List 2 Dangerous Substances

Records within 500m

0

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

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

4.19 Pollution Incidents (EA/NRW)

Records within 500m

3

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 28](#) >

ID	Location	Details	
1	102m N	Incident Date: 22/07/2002 Incident Identification: 93563 Pollutant: Other Pollutant Pollutant Description: Other	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
2	104m SW	Incident Date: 22/09/2003 Incident Identification: 193616 Pollutant: Organic Chemicals/Products Pollutant Description: Dyes and Inks	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)



ID	Location	Details	
6	372m S	Incident Date: 05/11/2002 Incident Identification: 121012 Pollutant: Oils and Fuel Pollutant Description: Gas and Fuel Oils	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

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

4.20 Pollution inventory substances

Records within 500m	0
----------------------------	----------

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

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

4.21 Pollution inventory waste transfers

Records within 500m	0
----------------------------	----------

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

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

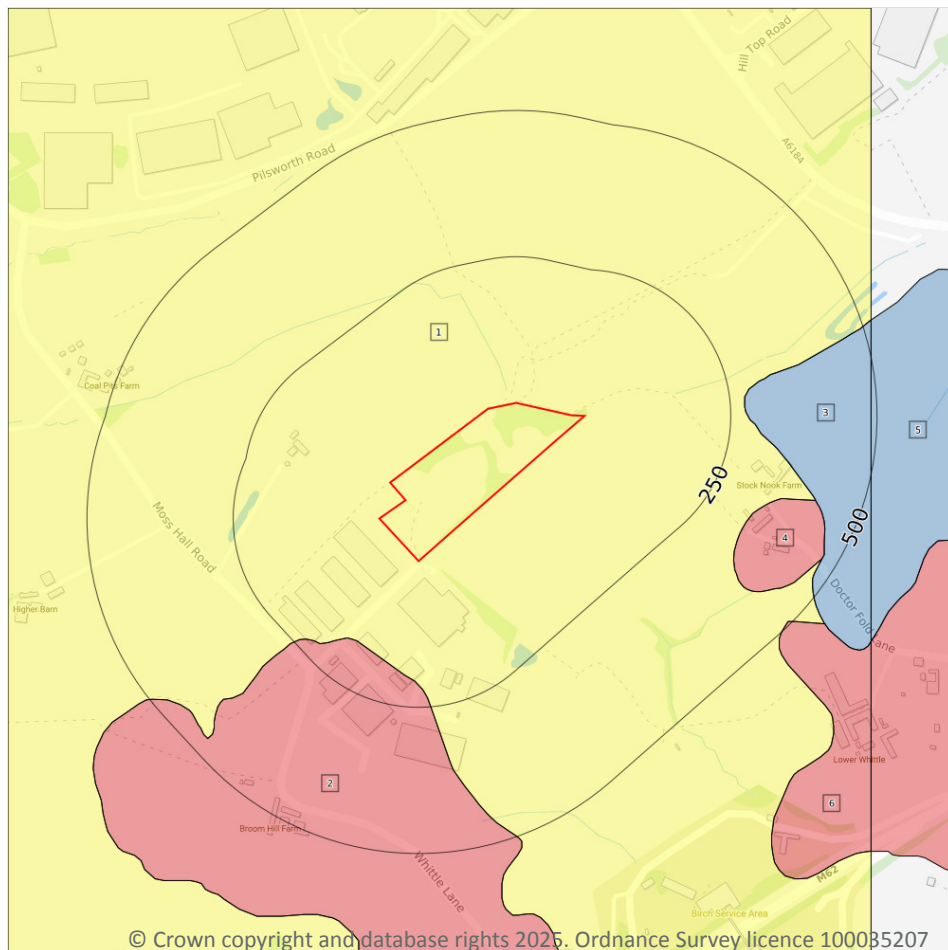
4.22 Pollution inventory radioactive waste

Records within 500m	0
----------------------------	----------

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

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

5 Hydrogeology - Superficial aquifer



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

5.1 Superficial aquifer

Records within 500m

6

Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on [page 35](#) >

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	172m SW	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

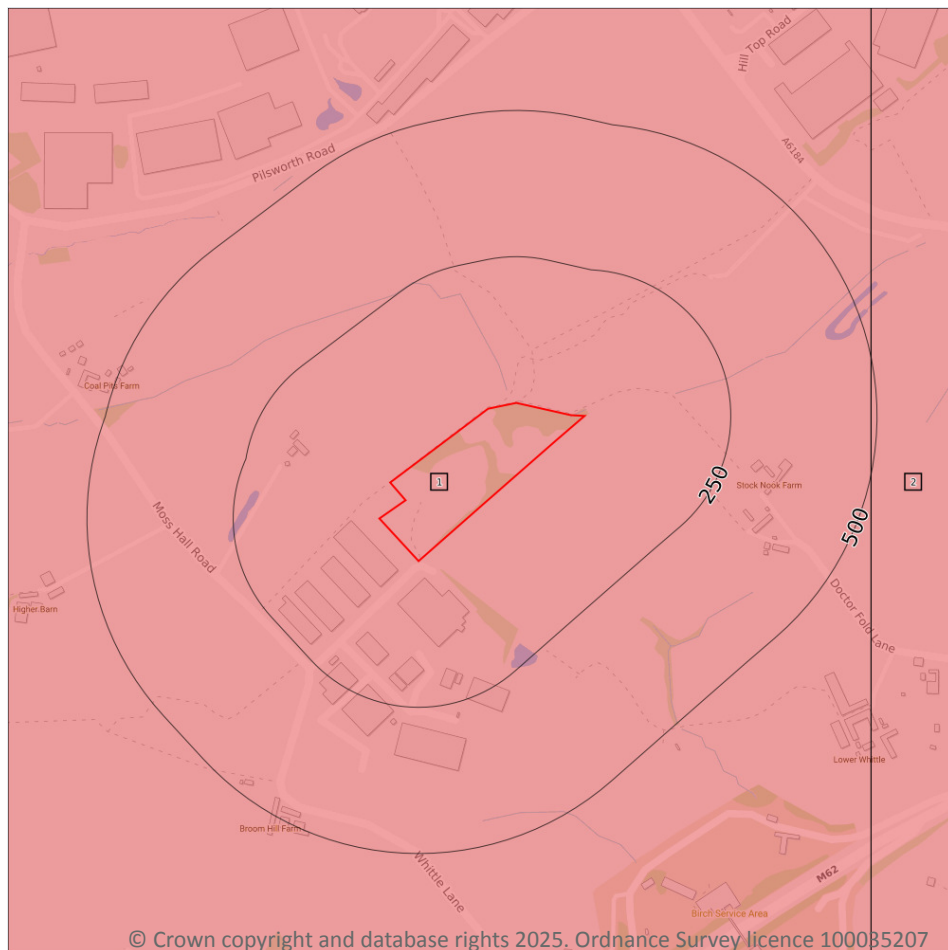


ID	Location	Designation	Description
3	274m E	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
4	330m SE	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
5	490m E	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
6	494m 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

2

Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on [page 37](#) >

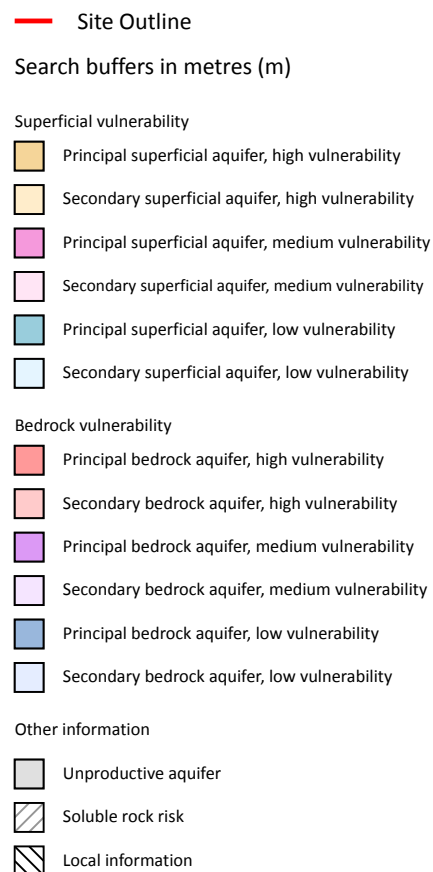
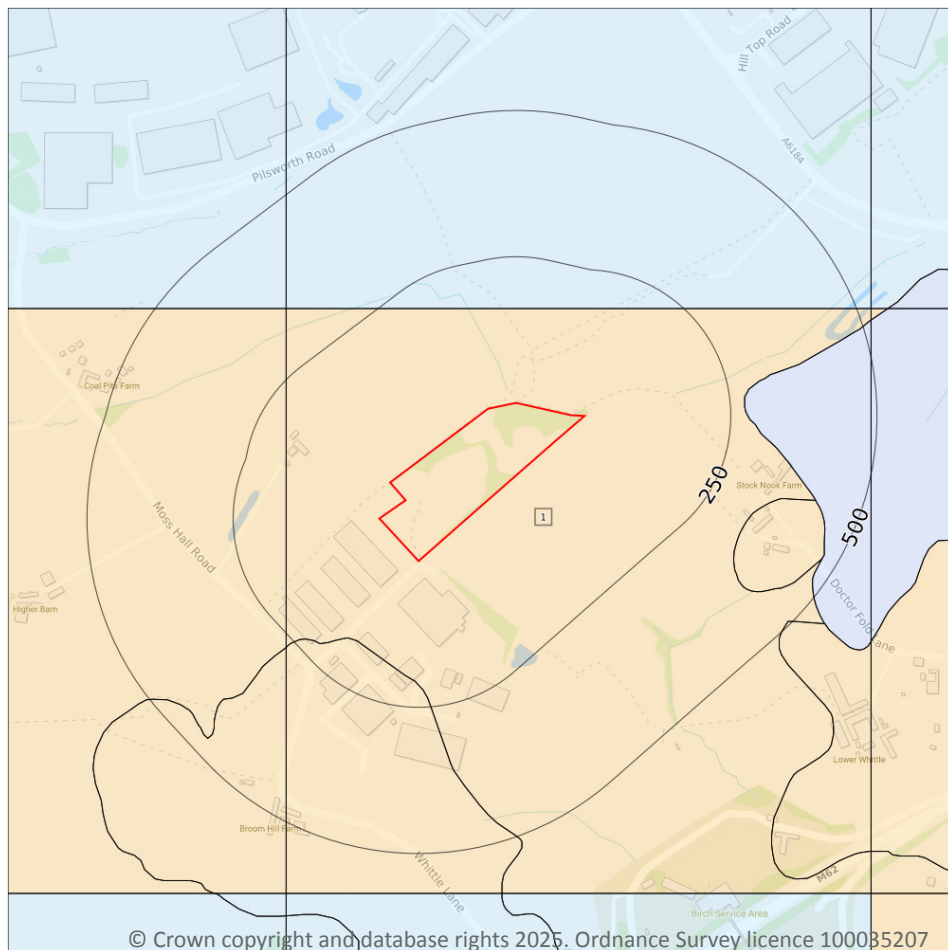
ID	Location	Designation	Description
1	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	490m E	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers



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



Groundwater vulnerability



5.3 Groundwater vulnerability

Records within 50m

1

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

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

Features are displayed on the Groundwater vulnerability map on [page 39](#) >



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

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

5.4 Groundwater vulnerability- soluble rock risk

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

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

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

5.5 Groundwater vulnerability- local information

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

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

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

Abstractions and Source Protection Zones



- Site Outline
- Search buffers in metres (m)
- Source Protection Zone 1
Inner catchment
- Source Protection Zone 2
Outer catchment
- Source Protection Zone 3
Total catchment
- Source Protection Zone 4
Zone of Special Interest
- Source Protection Zone 1c
Inner catchment - confined aquifer
- Source Protection Zone 2c
Outer catchment - confined aquifer
- Source Protection Zone 3c
Total catchment - confined aquifer
- Drinking water abstraction licences
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

5

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 41](#) >



ID	Location	Details	
-	923m NW	Status: Active Licence No: NW/069/0002/013 Details: Dewatering Direct Source: Ground Water - North West Region Point: SUMP 'B' AT PILSWORTH LANDFILL SITE, PILSWORTH ROAD, BURY Data Type: Poly4 Name: Viridor Waste Management Ltd Easting: 383250 Northing: 409380	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: NPS/NA/001648 Original Start Date: 31/03/2021 Expiry Date: 31/03/2027 Issue No: 1 Version Start Date: 31/03/2021 Version End Date: -
-	1520m SE	Status: Historical Licence No: 2569002247 Details: General Farming & Domestic Direct Source: Ground Water - North West Region Point: "BOREHOLE AT SIDDALL FOLD FARM,BIRCH" Data Type: Point Name: FLETCHER Easting: 385900 Northing: 408200	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 12/06/1991 Expiry Date: - Issue No: 100 Version Start Date: 12/06/1991 Version End Date: -
-	1520m SE	Status: Historical Licence No: 2569002247 Details: General Farming & Domestic Direct Source: Ground Water - North West Region Point: BOREHOLE AT SIDDALL FOLD FARM,BIRCH Data Type: Point Name: FLETCHER Easting: 385900 Northing: 408200	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 12/06/1991 Expiry Date: - Issue No: 100 Version Start Date: 12/06/1991 Version End Date: -
-	1520m SE	Status: Historical Licence No: 2569002247 Details: General Farming & Domestic Direct Source: Ground Water - North West Region Point: BOREHOLE AT SIDDALL FOLD FARM, BIRCH Data Type: Point Name: FLETCHER Easting: 385900 Northing: 408200	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 12/06/1991 Expiry Date: - Issue No: 100 Version Start Date: 12/06/1991 Version End Date: -
-	1836m W	Status: Active Licence No: NW/069/0002/013 Details: Dewatering Direct Source: Ground Water - North West Region Point: SUMP 'A' AT PILSWORTH LANDFILL SITE, PILSWORTH ROAD, BURY Data Type: Point Name: Viridor Waste Management Ltd Easting: 382340 Northing: 408890	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: NPS/NA/001648 Original Start Date: 31/03/2021 Expiry Date: 31/03/2027 Issue No: 1 Version Start Date: 31/03/2021 Version End Date: -



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

5.7 Surface water abstractions

Records within 2000m

6

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 41](#) >

ID	Location	Details	
-	1694m W	Status: Historical Licence No: 2569002088 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: "Surface, Non-Tidal - North West Region" Point: "BRIGHTLEY& WHITTLE BRKS @ THEIR CONFLUENCE, ABOVE WEIR, BURY" Data Type: Point Name: BORDEN CHEMICAL U K LTD Easting: 382500 Northing: 408300	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 16/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 16/05/1996 Version End Date: -
-	1694m W	Status: Historical Licence No: 2569002088 Details: General Washing/Process Washing Direct Source: "Surface, Non-Tidal - North West Region" Point: "BRIGHTLEY& WHITTLE BRKS @ THEIR CONFLUENCE, ABOVE WEIR, BURY" Data Type: Point Name: BORDEN CHEMICAL U K LTD Easting: 382500 Northing: 408300	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 16/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 16/05/1996 Version End Date: -
-	1694m W	Status: Historical Licence No: 2569002088 Details: Process water Direct Source: "Surface, Non-Tidal - North West Region" Point: "BRIGHTLEY& WHITTLE BRKS @ THEIR CONFLUENCE, ABOVE WEIR, BURY" Data Type: Point Name: BORDEN CHEMICAL U K LTD Easting: 382500 Northing: 408300	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 16/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 16/05/1996 Version End Date: -



ID	Location	Details	
-	1694m W	Status: Historical Licence No: 2569002088 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Surface, Non-Tidal - North West Region Point: BRIGHTLEY& WHITTLE BRKS @ THEIR CONFLUENCE, ABOVE WEIR, BURY Data Type: Point Name: HEXION SPECIALITY CHEMICALS UK TD Easting: 382500 Northing: 408300	Annual Volume (m ³): 118198 Max Daily Volume (m ³): 681.9 Original Application No: - Original Start Date: 16/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 01/07/2005 Version End Date: -
-	1694m W	Status: Historical Licence No: 2569002088 Details: General Washing/Process Washing Direct Source: Surface, Non-Tidal - North West Region Point: BRIGHTLEY& WHITTLE BRKS @ THEIR CONFLUENCE, ABOVE WEIR, BURY Data Type: Point Name: HEXION SPECIALITY CHEMICALS UK TD Easting: 382500 Northing: 408300	Annual Volume (m ³): 118198 Max Daily Volume (m ³): 681.9 Original Application No: - Original Start Date: 16/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 01/07/2005 Version End Date: -
-	1694m W	Status: Historical Licence No: 2569002088 Details: Process Water Direct Source: Surface, Non-Tidal - North West Region Point: BRIGHTLEY& WHITTLE BRKS @ THEIR CONFLUENCE, ABOVE WEIR, BURY Data Type: Point Name: HEXION SPECIALITY CHEMICALS UK TD Easting: 382500 Northing: 408300	Annual Volume (m ³): 118198 Max Daily Volume (m ³): 681.9 Original Application No: - Original Start Date: 16/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 01/07/2005 Version End Date: -

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

5.8 Potable abstractions

Records within 2000m

0

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

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



5.9 Source Protection Zones

Records within 500m

0

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

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

5.10 Source Protection Zones (confined aquifer)

Records within 500m

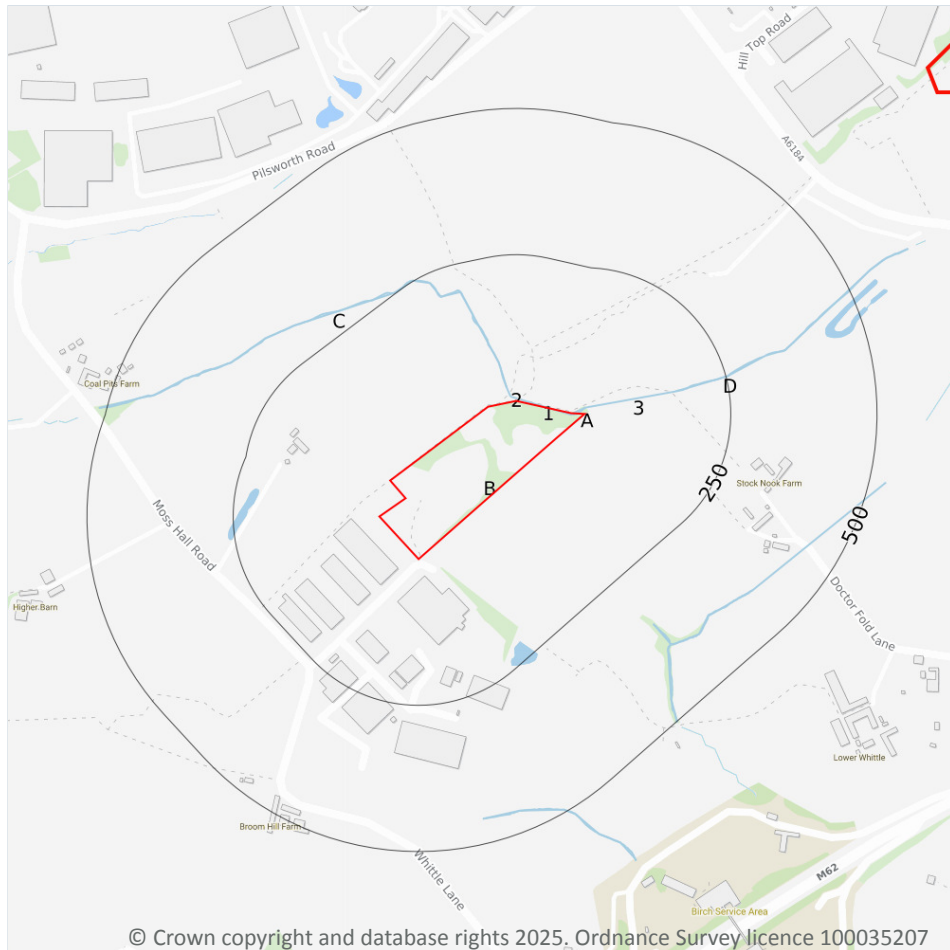
0

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

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



6 Hydrology



- 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

© Crown copyright and database rights 2025. Ordnance Survey licence 100035207

6.1 Water Network (OS MasterMap)

Records within 250m

6

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 46 >](#)

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



ID	Location	Type of water feature	Ground level	Permanence	Name
A	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
2	9m N	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
3	11m N	Inland river not influenced by normal tidal action.	Not provided	Watercourse contains water year round (in normal circumstances)	-
C	25m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	161m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m

5

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 46 >](#)

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 46 >](#)

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
B	On site	River	Whittle Brook (Irwell)	GB112069061250	Roch Irk Medlock	Irwell



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 46 >](#)

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	1262m SW	River	Whittle Brook (Irwell)	GB112069061250 ↗	Moderate	Fail	Moderate	2019

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

6.5 WFD Groundwater bodies

Records on site

1

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

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

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
B	On site	Northern Manchester Carboniferous Aquifers	GB41202G101800 ↗	Poor	Poor	Good	2019

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



7 River and coastal flooding

7.1 Risk of flooding from rivers and the sea

Records within 50m

0

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

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

7.2 Historical Flood Events

Records within 250m

0

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

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

7.3 Flood Defences

Records within 250m

0

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

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



7.4 Areas Benefiting from Flood Defences

Records within 250m

0

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

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

7.5 Flood Storage Areas

Records within 250m

0

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

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

River and coastal flooding - Flood Zones

7.6 Flood Zone 2

Records within 50m

0

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

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

7.7 Flood Zone 3

Records within 50m

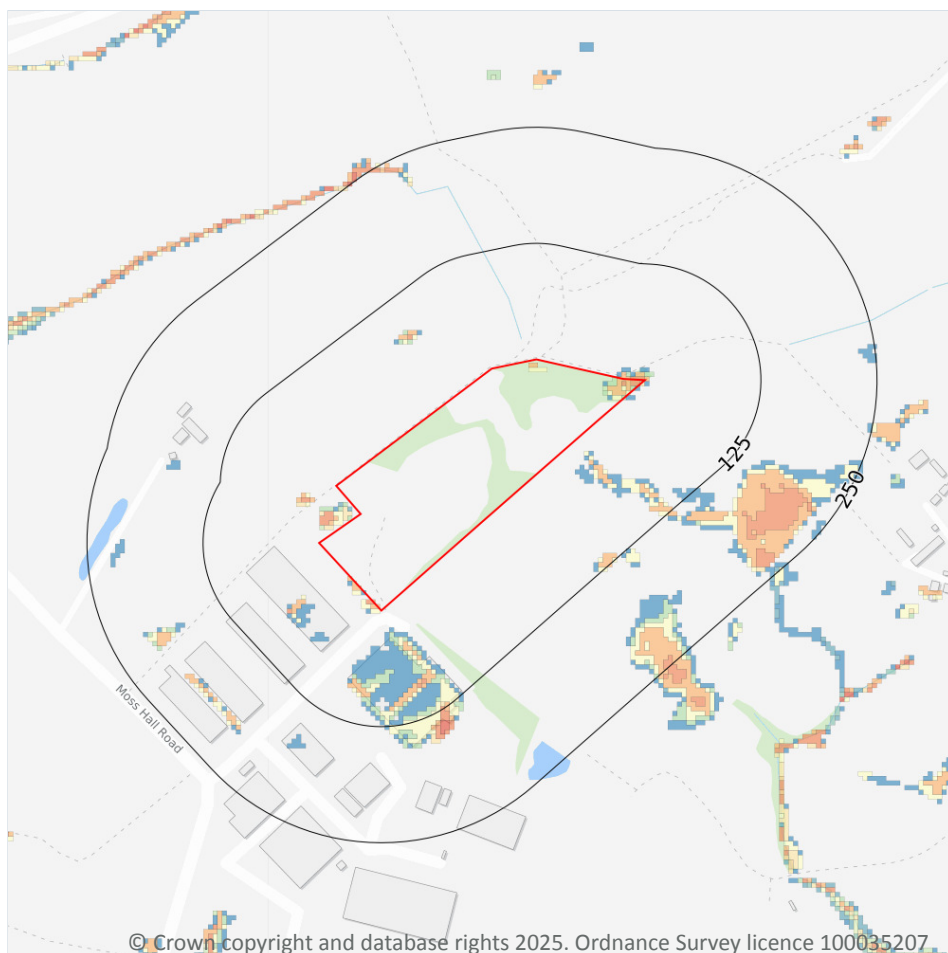
0

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

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



8 Surface water flooding



— Site Outline

Search buffers in metres (m)

1 in 1000 return period

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

1 in 250 return period

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

1 in 100 return period

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

1 in 30 return period

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

8.1 Surface water flooding

Highest risk on site

1 in 30 year, 0.3m - 1.0m

Highest risk within 50m

1 in 30 year, 0.3m - 1.0m

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

Features are displayed on the Surface water flooding map on [page 52 >](#)

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

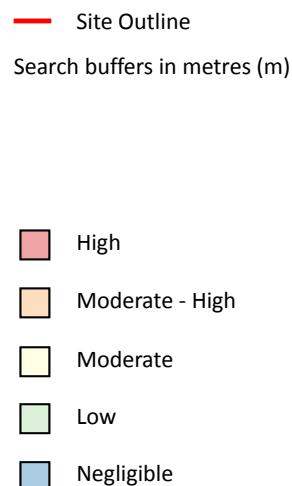
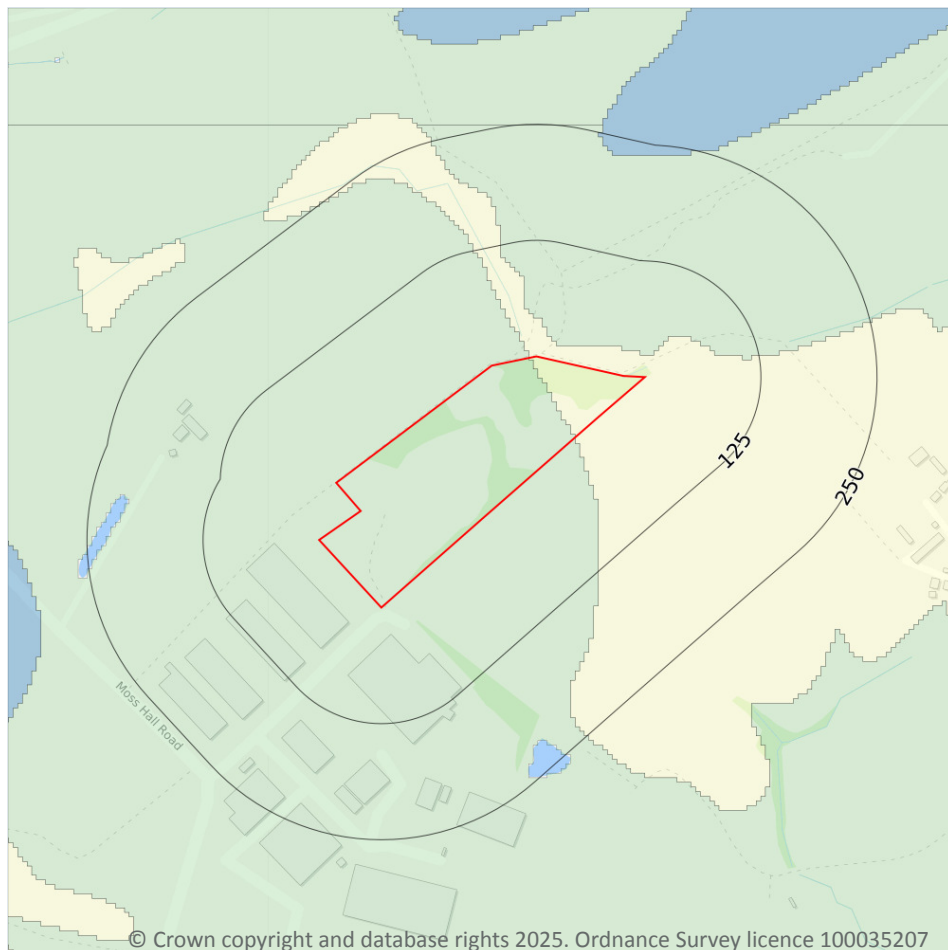
The table below shows the maximum flood depths for a range of return periods for the site.

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

This data is sourced from Ambiantal Risk Analytics.



9 Groundwater flooding



9.1 Groundwater flooding

Highest risk on site

Moderate

Highest risk within 50m

Moderate

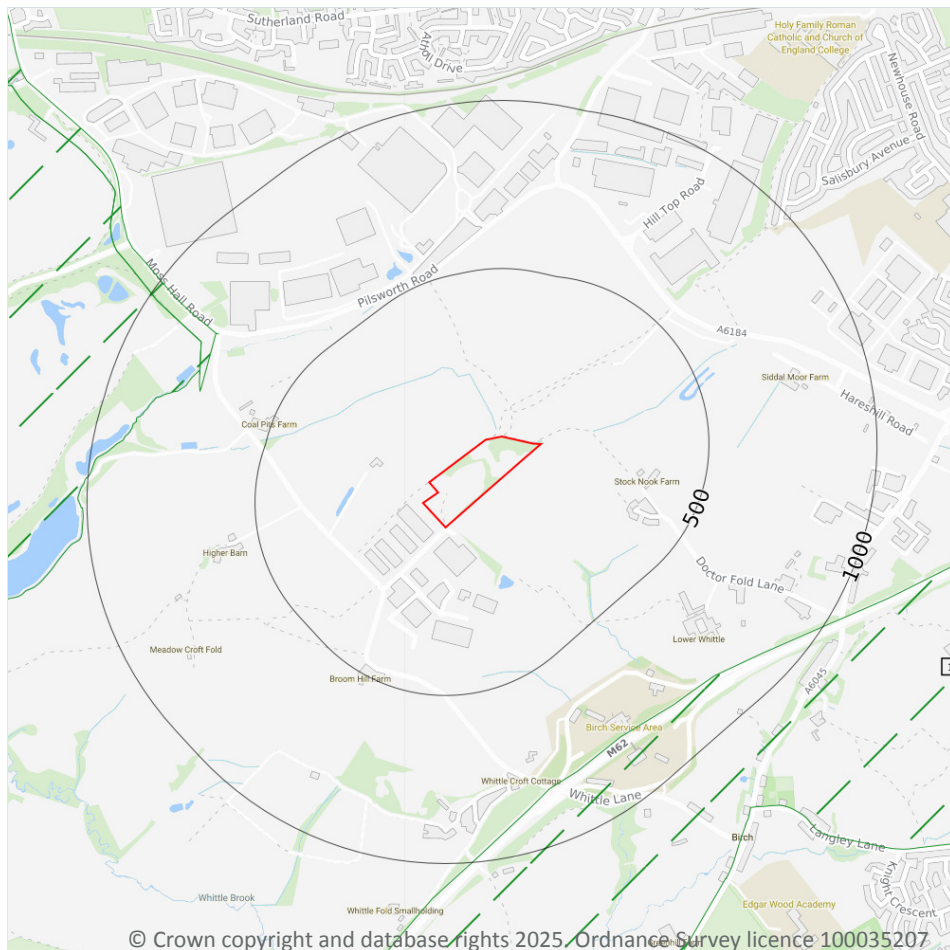
Groundwater flooding is caused by unusually high groundwater levels. It occurs when the water table rises above the ground surface or within underground structures such as basements or cellars. Groundwater flooding tends to exhibit a longer duration than surface water flooding, possibly lasting for weeks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

Features are displayed on the Groundwater flooding map on [page 54 >](#)

This data is sourced from Ambiantal Risk Analytics.



10 Environmental designations



- Site Outline
- Search buffers in metres (m)
- ▨ Green Belt

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

0

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

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



10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m

0

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

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

10.3 Special Areas of Conservation (SAC)

Records within 2000m

0

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

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

10.4 Special Protection Areas (SPA)

Records within 2000m

0

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

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

10.5 National Nature Reserves (NNR)

Records within 2000m

0

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

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



10.6 Local Nature Reserves (LNR)

Records within 2000m

0

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

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

10.7 Designated Ancient Woodland

Records within 2000m

0

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

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

10.8 Biosphere Reserves

Records within 2000m

0

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

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

10.9 Forest Parks

Records within 2000m

0

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

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m

0

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

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

10.11 Green Belt

Records within 2000m

3

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

Features are displayed on the Environmental designations map on [page 55 >](#)

ID	Location	Name	Local Authority name
1	734m W	Merseyside and Greater Manchester Green Belt	Rochdale
2	757m NW	Merseyside and Greater Manchester Green Belt	Bury
-	1325m S	Merseyside and Greater Manchester Green Belt	Bury

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

10.12 Proposed Ramsar sites

Records within 2000m

0

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

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m

0

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

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



10.14 Potential Special Protection Areas (pSPA)

Records within 2000m

0

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

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m

0

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

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

Records within 2000m

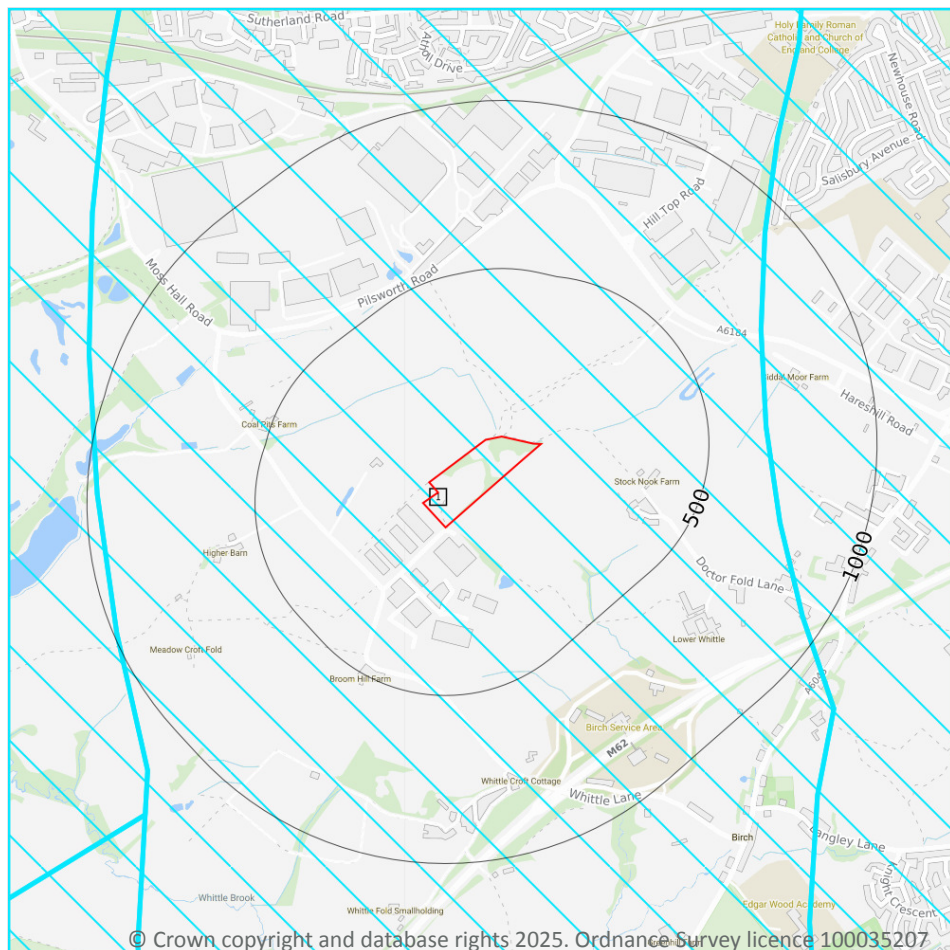
0

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

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



SSSI Impact Zones and Units



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

10.17 SSSI Impact Risk Zones

Records on site

1

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

Features are displayed on the SSSI Impact Zones and Units map on [page 60](#) >

ID	Location	Type of developments requiring consultation
1	On site	https://irz.geodata.org.uk/IRZ/step2.html?irzcode=0300000430000&notes=&location=387670,439176%20(IRZ%20polygon%20centre)

This data is sourced from Natural England.



10.18 SSSI Units

Records within 2000m

0

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

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



11 Visual and cultural designations

11.1 World Heritage Sites

Records within 250m

0

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

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

11.2 Area of Outstanding Natural Beauty

Records within 250m

0

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

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

11.3 National Parks

Records within 250m

0

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

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

11.4 Listed Buildings

Records within 250m

0

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



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

11.5 Conservation Areas

Records within 250m

0

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

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

11.6 Scheduled Ancient Monuments

Records within 250m

0

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

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

11.7 Registered Parks and Gardens

Records within 250m

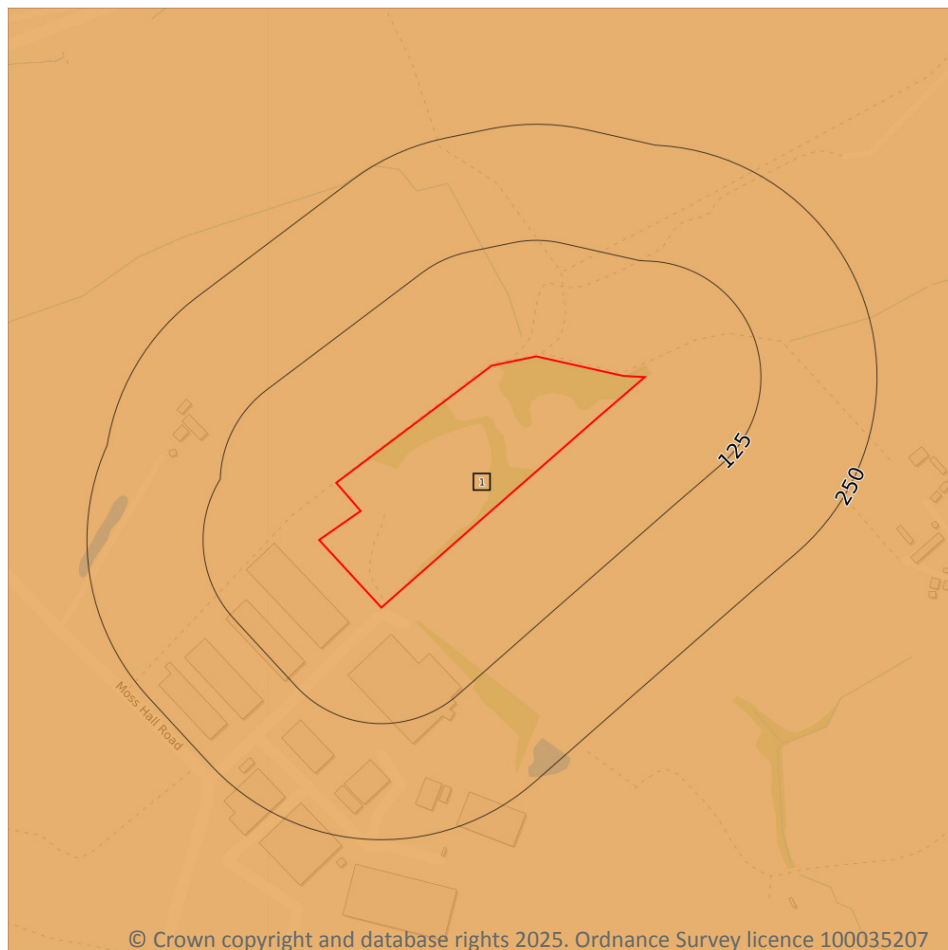
0

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

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



12 Agricultural designations



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

12.1 Agricultural Land Classification

Records within 250m

1

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

Features are displayed on the Agricultural designations map on [page 64](#) >

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

This data is sourced from Natural England.



12.2 Open Access Land

Records within 250m

0

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

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

12.3 Tree Felling Licences

Records within 250m

0

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

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m

0

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

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m

0

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

This data is sourced from Natural England.

13 Habitat designations

13.1 Priority Habitat Inventory

Records within 250m

0

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

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m

0

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

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m

0

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

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m

0

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

This data is sourced from Natural England.



14 Geology 1:10,000 scale - Availability



— Site Outline
Search buffers in metres (m)

- Full coverage
- Partial coverage
- No coverage

© Crown copyright and database rights 2025. Ordnance Survey licence 100035207

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.

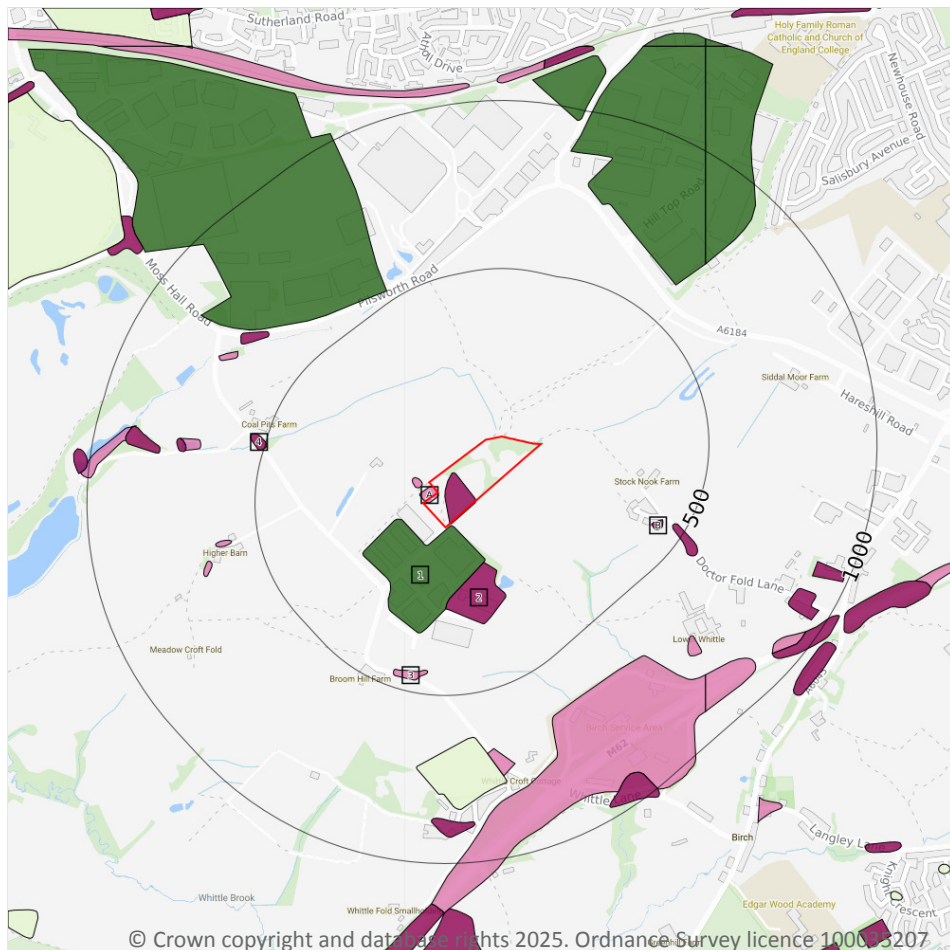
Features are displayed on the Geology 1:10,000 scale - Availability map on [page 67](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	SD80NW
2	490m E	Full	Full	Full	Full	SD80NE

This data is sourced from the British Geological Survey.



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



- Site Outline**
- Search buffers in metres (m)**
- Reclaimed ground
 - Made ground
 - Worked ground
 - Infilled ground
 - Disturbed ground
 - Landscaped ground

14.2 Artificial and made ground (10k)

Records within 500m

9

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

Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on [page 68](#) >

ID	Location	LEX Code	Description	Rock description
A	On site	WGR-VOID	Worked Ground (Undivided)	Void
A	On site	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
1	6m SE	LSGR-ARTDP	Landscaped Ground (Undivided)	Artificial Deposit
A	21m W	WGR-VOID	Worked Ground (Undivided)	Void

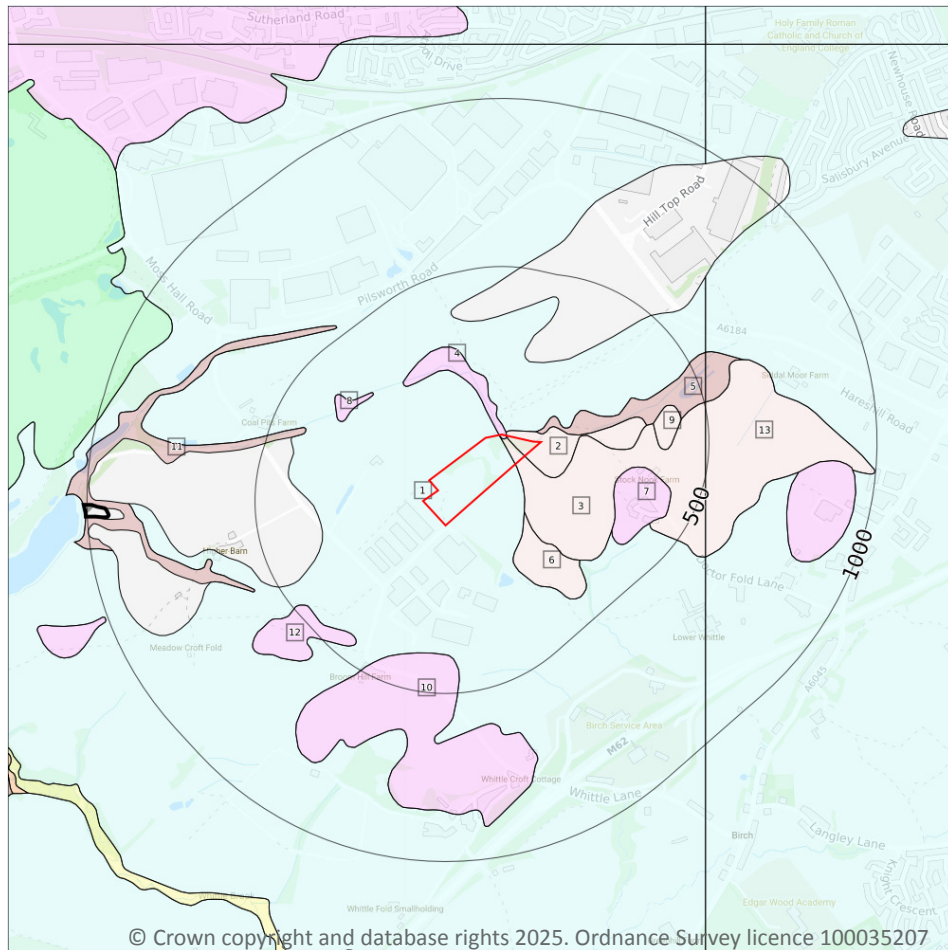


ID	Location	LEX Code	Description	Rock description
2	153m SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
B	406m SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
3	429m S	WGR-VOID	Worked Ground (Undivided)	Void
B	461m SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
4	495m W	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (10k)

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

14.3 Superficial geology (10k)

Records within 500m

13

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 70](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
2	On site	GLLDD-S	Glaciolacustrine Deposits, Devensian - Sand	Sand
3	On site	GLLDD-XCZ	Glaciolacustrine Deposits, Devensian - Clay And Silt	Clay And Silt



ID	Location	LEX Code	Description	Rock description
4	On site	GFSDDD-XSV	Glaciofluvial Sheet Deposits, Devensian - Sand And Gravel	Sand And Gravel
5	24m N	HEAD-XCZSV	Head - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
6	124m SE	GLLDD-S	Glaciolacustrine Deposits, Devensian - Sand	Sand
7	253m SE	GFICD-XSV	Glaciofluvial Ice Contact Deposits, Devensian - Sand And Gravel	Sand And Gravel
8	303m NW	GFSDDD-XSV	Glaciofluvial Sheet Deposits, Devensian - Sand And Gravel	Sand And Gravel
9	339m E	GLLDD-S	Glaciolacustrine Deposits, Devensian - Sand	Sand
10	382m S	GFICD-XSV	Glaciofluvial Ice Contact Deposits, Devensian - Sand And Gravel	Sand And Gravel
11	396m W	HEAD-XCZSV	Head - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
12	428m SW	GFICD-XSV	Glaciofluvial Ice Contact Deposits, Devensian - Sand And Gravel	Sand And Gravel
13	490m E	GLLDD-XCZ	Glaciolacustrine Deposits, Devensian - Clay And Silt	Clay And Silt

This data is sourced from the British Geological Survey.

14.4 Landslip (10k)

Records within 500m

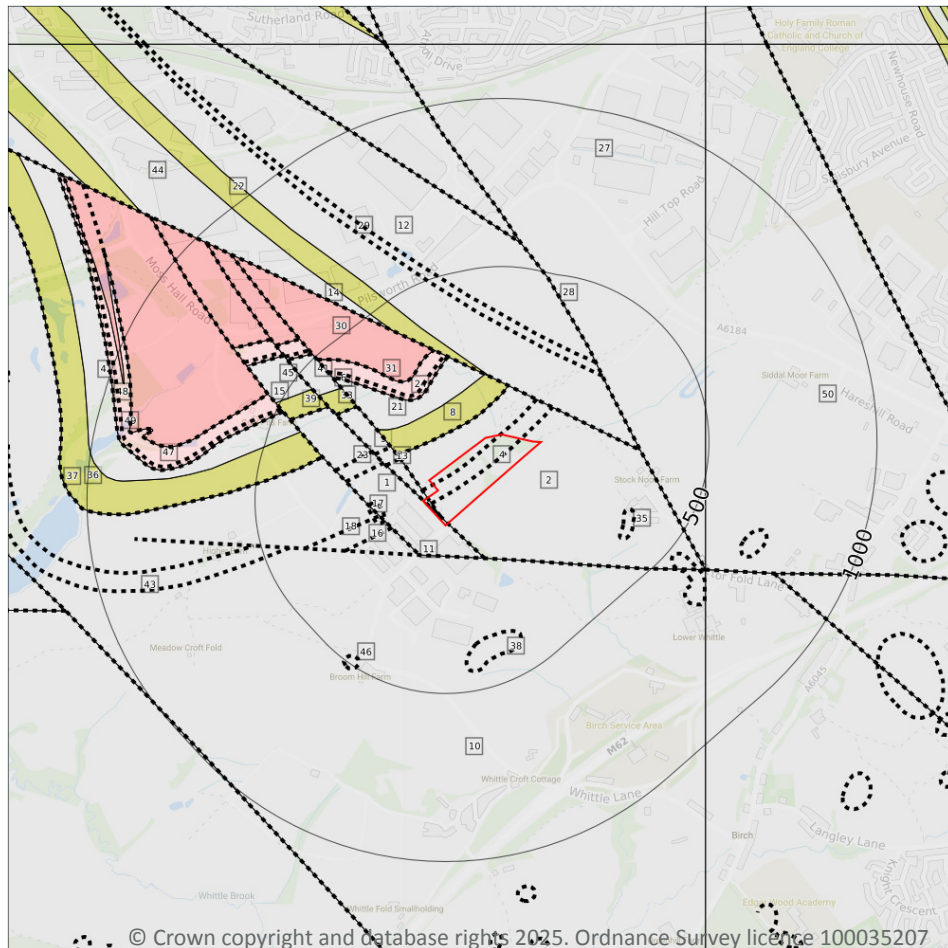
0

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

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Bedrock



— Site Outline

Search buffers in metres (m)

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

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

14.5 Bedrock geology (10k)

Records within 500m

20

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 72 >](#)

ID	Location	LEX Code	Description	Rock age
1	On site	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
2	On site	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age



ID	Location	LEX Code	Description	Rock age
3	On site	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
8	68m NW	WH-SDST	Woodhead Hill Rock - Sandstone	Langsettian Sub-age
10	92m S	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
12	108m NE	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
21	152m NW	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
22	176m N	HER-SDST	Helpet Edge Rock - Sandstone	Langsettian Sub-age
24	215m NW	ROSSE-MDSI	Rossendale Formation - Mudstone And Siltstone	Yeadonian Sub-age
27	252m NE	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
30	275m NW	RR-SDST	Rough Rock - Sandstone	Yeadonian Sub-age
33	307m NW	WH-SDST	Woodhead Hill Rock - Sandstone	Langsettian Sub-age
36	325m W	WH-SDST	Woodhead Hill Rock - Sandstone	Langsettian Sub-age
39	371m NW	WH-SDST	Woodhead Hill Rock - Sandstone	Langsettian Sub-age
41	379m NW	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
42	409m W	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
44	421m NW	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
45	441m NW	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
47	481m NW	ROSSE-MDSI	Rossendale Formation - Mudstone And Siltstone	Yeadonian Sub-age
50	490m E	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age

This data is sourced from the British Geological Survey.



14.6 Bedrock faults and other linear features (10k)

Records within 500m

30

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 72 >](#)

ID	Location	Category	Description
4	On site	ROCK	Coal seam, inferred
5	On site	ROCK	Coal seam, inferred
6	On site	FAULT	Normal fault, inferred; crossmarks on downthrow side
7	On site	FAULT	Normal fault, inferred; crossmarks on downthrow side
9	68m NW	ROCK	Coal seam, inferred coincident with bedrock geology boundary
11	92m S	FAULT	Normal fault, inferred; crossmarks on downthrow side
13	108m NW	ROCK	Coal seam, inferred
14	108m NE	FAULT	Normal fault, inferred; crossmarks on downthrow side
15	117m SW	FAULT	Normal fault, inferred; crossmarks on downthrow side
16	123m SW	ROCK	Coal seam, inferred
17	123m W	LANDFORM	Kettle hole; closed hollow
18	137m W	ROCK	Coal seam, inferred
19	145m W	ROCK	Coal seam, inferred
20	151m NW	ROCK	Coal seam, inferred
23	191m NW	ROCK	Coal seam, inferred
25	215m NW	FOSSIL_HORIZON	Fossil horizon, marine band coincident with bedrock geology boundary
26	229m NW	ROCK	Coal seam, inferred
28	252m NE	FAULT	Normal fault, inferred; crossmarks on downthrow side
29	256m NE	FOSSIL_HORIZON	Fossil horizon, marine band
31	275m NW	ROCK	Coal seam, inferred coincident with bedrock geology boundary
32	283m NE	ROCK	Coal seam, inferred
34	307m NW	ROCK	Coal seam, inferred coincident with bedrock geology boundary
35	324m SE	LANDFORM	Drumlin, form-line at base of mound



ID	Location	Category	Description
37	325m W	ROCK	Coal seam, inferred coincident with bedrock geology boundary
38	355m S	LANDFORM	Drumlin, form-line at base of mound
40	371m NW	ROCK	Coal seam, inferred coincident with bedrock geology boundary
43	420m W	ROCK	Coal seam, inferred
46	474m SW	LANDFORM	Kettle hole; closed hollow
48	481m NW	FOSSIL_HORIZON	Fossil horizon, marine band coincident with bedrock geology boundary
49	489m NW	ROCK	Coal seam, inferred

This data is sourced from the British Geological Survey.



15 Geology 1:50,000 scale - Availability



— Site Outline

Search buffers in metres (m)

□ Geological map tile

15.1 50k Availability

Records within 500m

1

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

Features are displayed on the Geology 1:50,000 scale - Availability map on [page 76](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	No coverage	Full	Full	No coverage	EW085_manchester_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

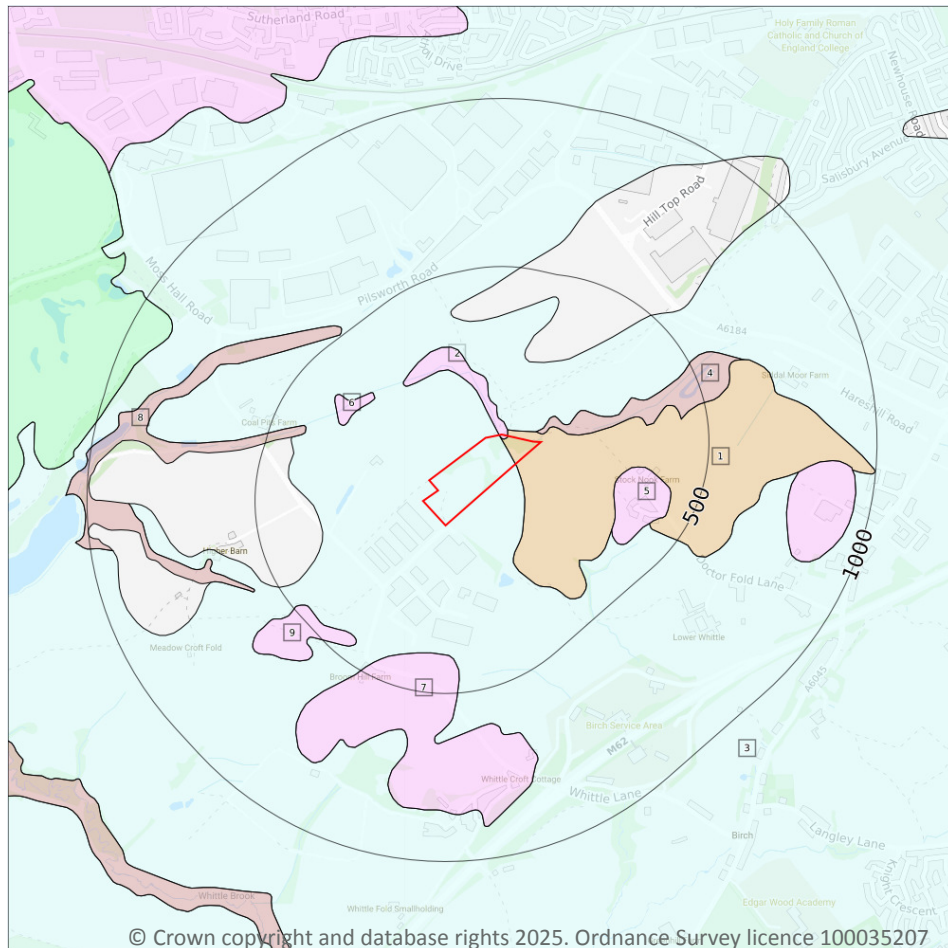
0

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

9

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 78](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	LDE-XSV	LACUSTRINE DEPOSITS	SAND AND GRAVEL
2	On site	GFSDD-XSV	GLACIOFLUVIAL SHEET DEPOSITS, DEVENSIAN	SAND AND GRAVEL
3	On site	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON



ID	Location	LEX Code	Description	Rock description
4	24m N	HEAD-XCZSV	HEAD	CLAY, SILT, SAND AND GRAVEL
5	252m SE	GFICD-XSV	GLACIOFLUVIAL ICE CONTACT DEPOSITS, DEVENSIAN	SAND AND GRAVEL
6	291m NW	GFSDDD-XSV	GLACIOFLUVIAL SHEET DEPOSITS, DEVENSIAN	SAND AND GRAVEL
7	382m S	GFICD-XSV	GLACIOFLUVIAL ICE CONTACT DEPOSITS, DEVENSIAN	SAND AND GRAVEL
8	395m W	HEAD-XCZSV	HEAD	CLAY, SILT, SAND AND GRAVEL
9	428m SW	GFICD-XSV	GLACIOFLUVIAL ICE CONTACT DEPOSITS, DEVENSIAN	SAND AND GRAVEL

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m

3

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	Intergranular	Very High	High
On site	Mixed	High	Low
24m N	Mixed	High	Very Low

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m

0

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

This data is sourced from the British Geological Survey.



15.7 Landslip permeability (50k)

Records within 50m

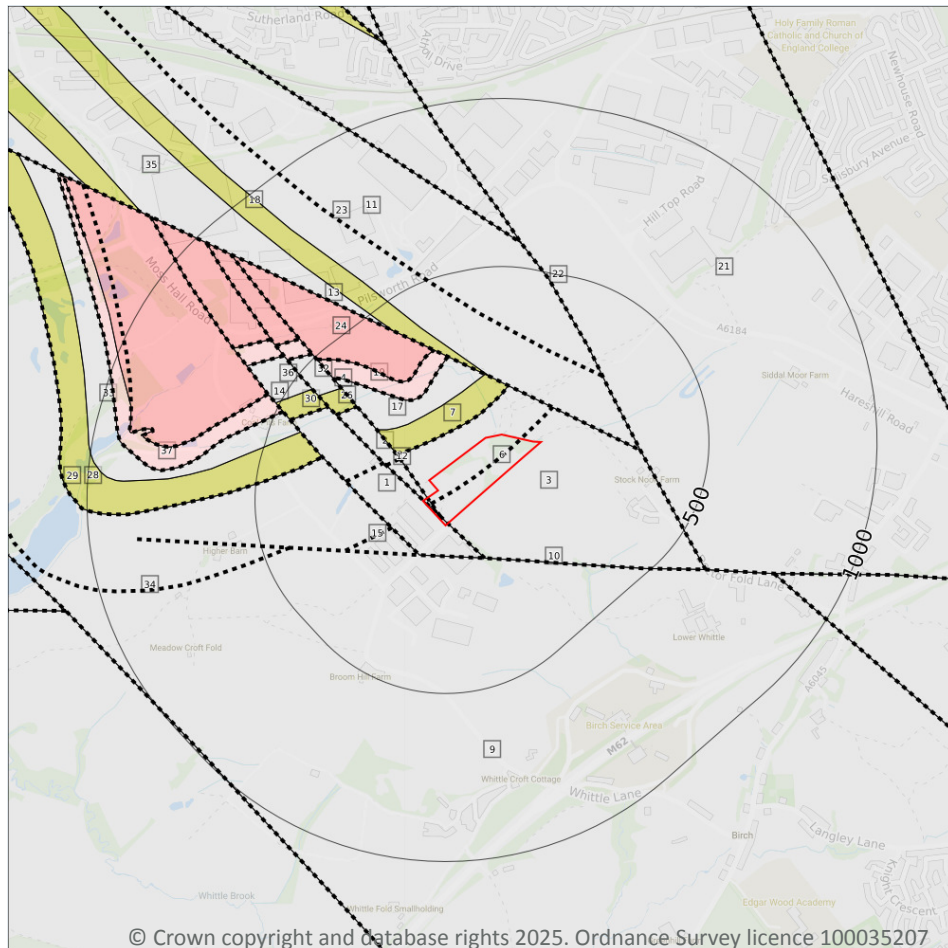
0

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

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

..... Bedrock faults and other linear features (50k)

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

15.8 Bedrock geology (50k)

Records within 500m

19

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

Features are displayed on the Geology 1:50,000 scale - Bedrock map on [page 81](#) >

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



ID	Location	LEX Code	Description	Rock age
3	On site	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
7	68m NW	WH-SDST	WOODHEAD HILL ROCK - SANDSTONE	WESTPHALIAN
9	92m S	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
11	108m NE	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
17	152m NW	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
18	176m N	HER-SDST	HELPET EDGE ROCK - SANDSTONE	WESTPHALIAN
19	214m NW	ROSSE-MDSI	ROSSENDALE FORMATION - MUDSTONE AND SILTSTONE	NAMURIAN
21	252m NE	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
24	275m NW	RR-SDST	ROUGH ROCK - SANDSTONE	NAMURIAN
26	307m NW	WH-SDST	WOODHEAD HILL ROCK - SANDSTONE	WESTPHALIAN
28	325m W	WH-SDST	WOODHEAD HILL ROCK - SANDSTONE	WESTPHALIAN
30	371m NW	WH-SDST	WOODHEAD HILL ROCK - SANDSTONE	WESTPHALIAN
32	379m NW	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
33	409m W	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
35	421m NW	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
36	441m NW	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
37	481m NW	ROSSE-MDSI	ROSSENDALE FORMATION - MUDSTONE AND SILTSTONE	NAMURIAN

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m

1

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



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

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m	19
----------------------------	-----------

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 81](#) >

ID	Location	Category	Description
4	On site	FAULT	Fault, inferred
5	On site	FAULT	Fault, inferred
6	On site	ROCK	Coal seam, inferred
8	68m NW	ROCK	Coal seam, inferred
10	92m S	FAULT	Fault, inferred
12	108m NW	ROCK	Coal seam, inferred
13	108m NE	FAULT	Fault, inferred
14	117m SW	FAULT	Fault, inferred
15	123m SW	ROCK	Coal seam, inferred
16	145m W	ROCK	Coal seam, inferred
20	214m NW	FOSSIL_HORIZON	Marine band
22	252m NE	FAULT	Fault, inferred
23	256m NE	FOSSIL_HORIZON	Marine band
25	275m NW	ROCK	Coal seam, inferred
27	307m NW	ROCK	Coal seam, inferred
29	325m W	ROCK	Coal seam, inferred
31	371m NW	ROCK	Coal seam, inferred
34	420m W	ROCK	Coal seam, inferred
38	481m NW	FOSSIL_HORIZON	Marine band



This data is sourced from the British Geological Survey.



16 Boreholes

16.1 BGS Boreholes

Records within 250m

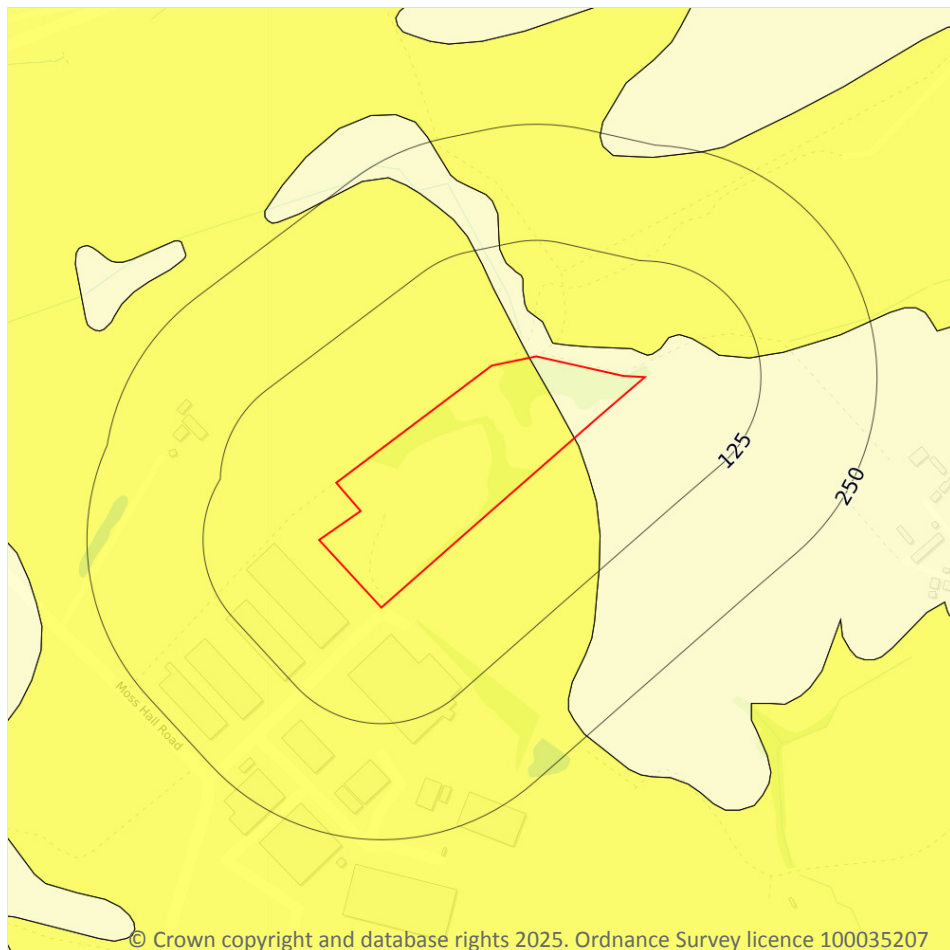
0

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

This data is sourced from the British Geological Survey.



17 Natural ground subsidence - Shrink swell clays



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

17.1 Shrink swell clays

Records within 50m

2

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

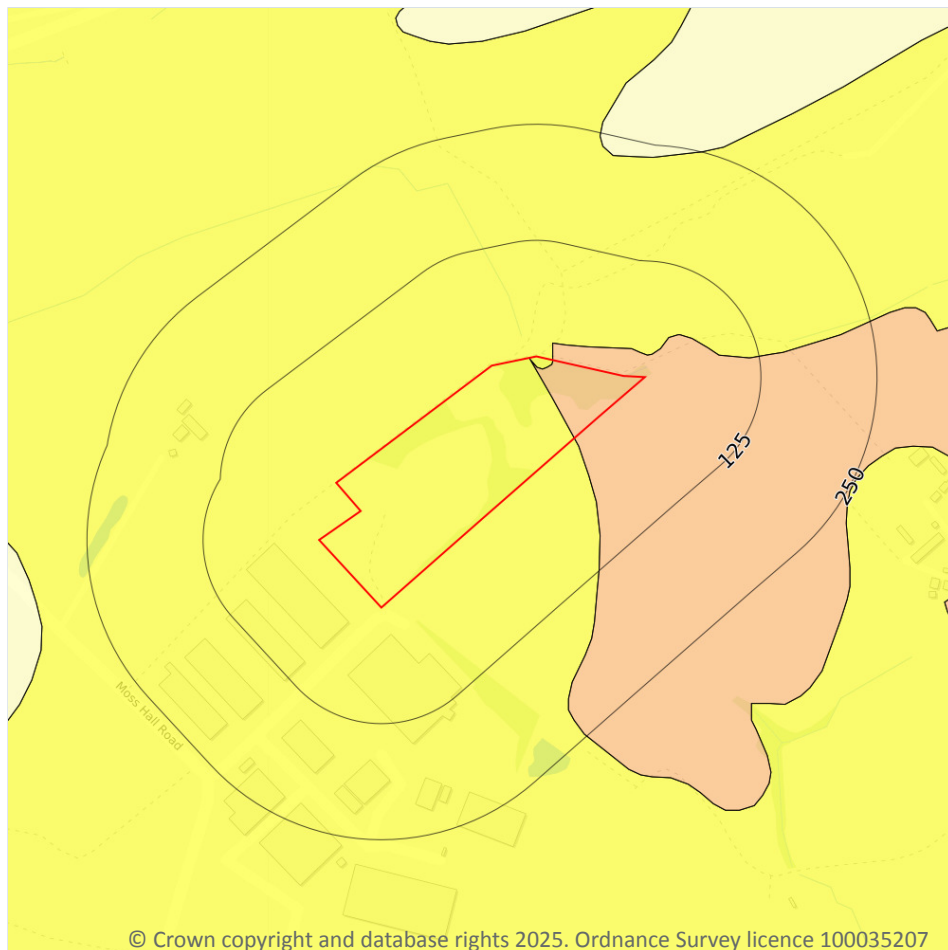
Features are displayed on the Natural ground subsidence - Shrink swell clays map on [page 86 >](#)

Location	Hazard rating	Details
On site	Negligible	Ground conditions predominantly non-plastic.
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

2

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 87 >](#)

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.

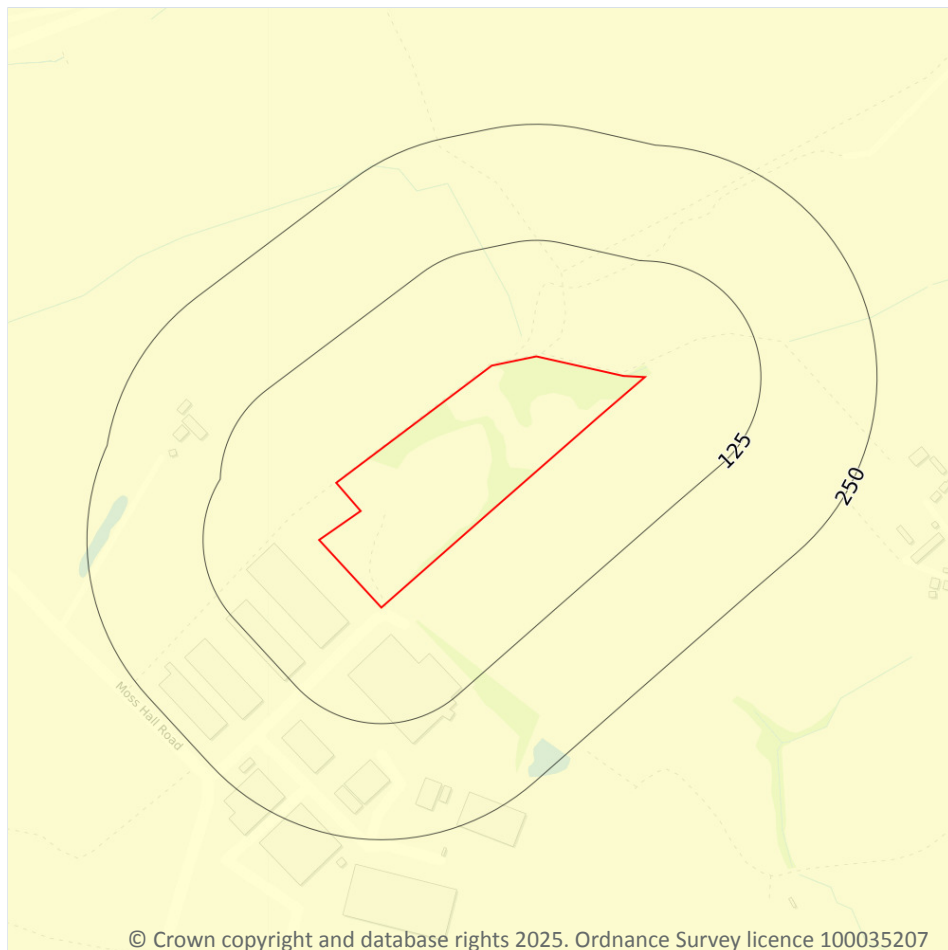


Location	Hazard rating	Details
On site	Low	Running sand conditions may be present. Constraints may apply to land uses involving excavation or the addition or removal of water.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Compressible deposits



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

© Crown copyright and database rights 2025. Ordnance Survey licence 100035207

17.3 Compressible deposits

Records within 50m

1

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

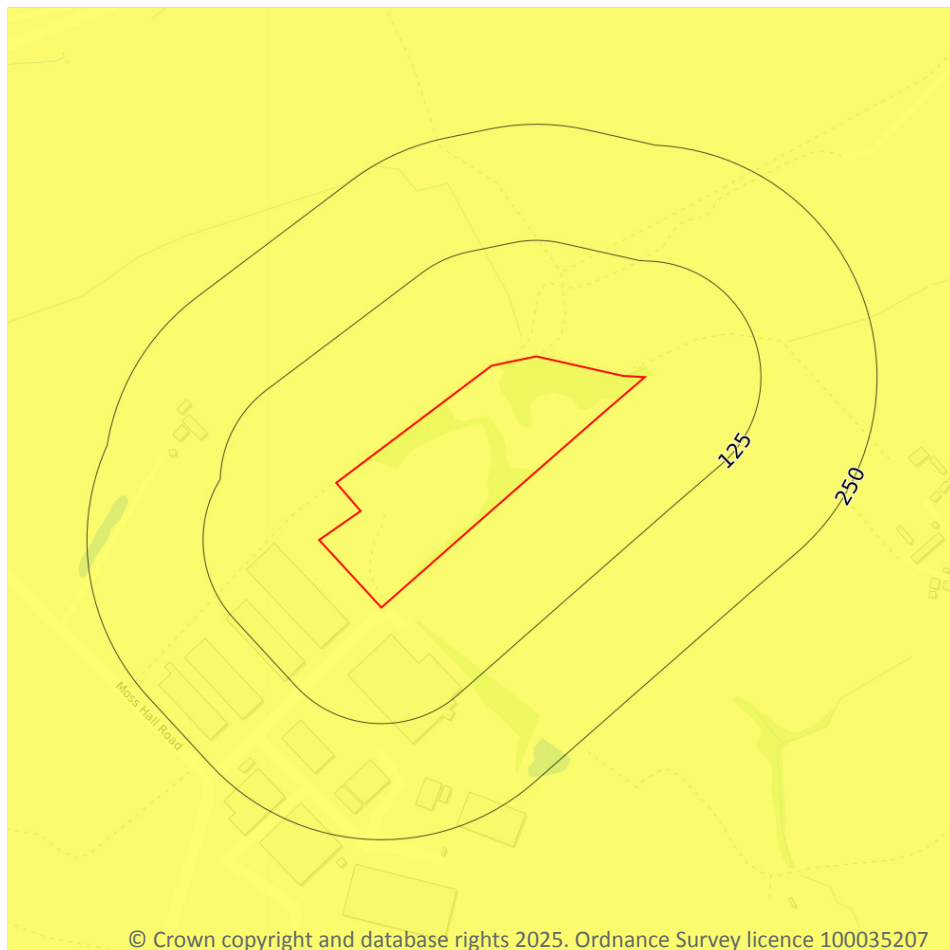
Features are displayed on the Natural ground subsidence - Compressible deposits map on [page 89](#) >

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Collapsible deposits



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

© Crown copyright and database rights 2025. Ordnance Survey licence 100035207

17.4 Collapsible deposits

Records within 50m

1

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

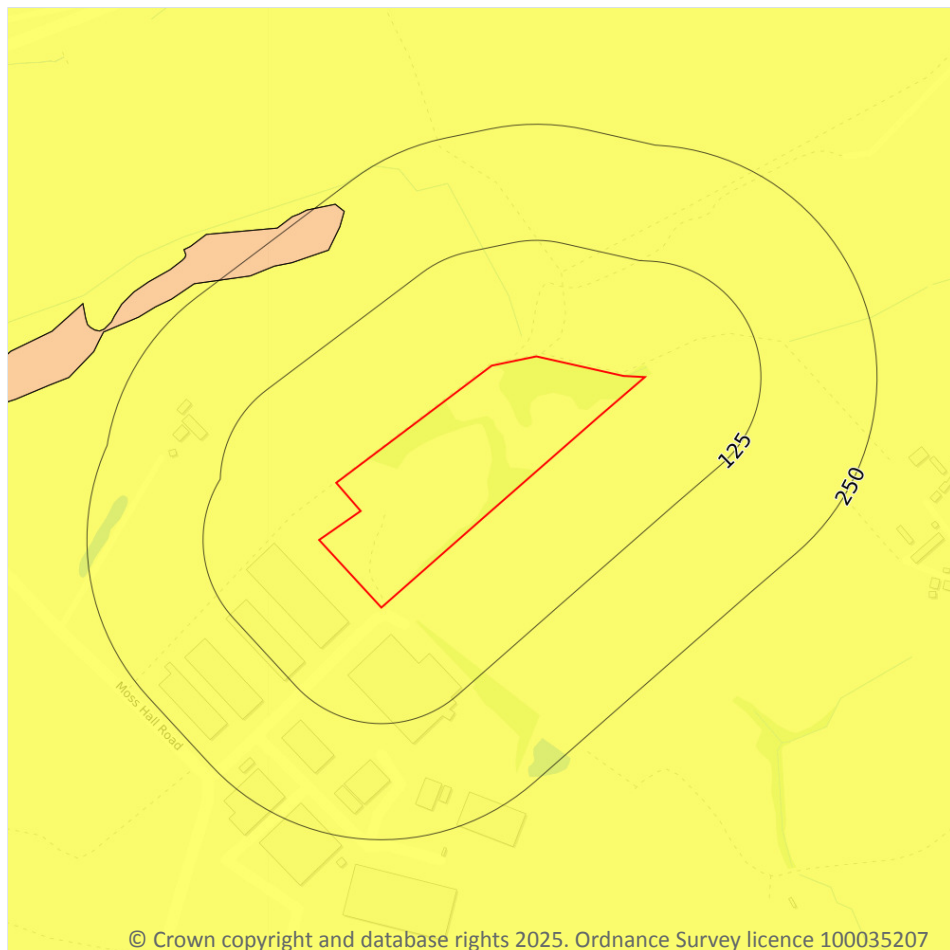
Features are displayed on the Natural ground subsidence - Collapsible deposits map on [page 90 >](#)

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Landslides



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

© Crown copyright and database rights 2025. Ordnance Survey licence 100035207

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.

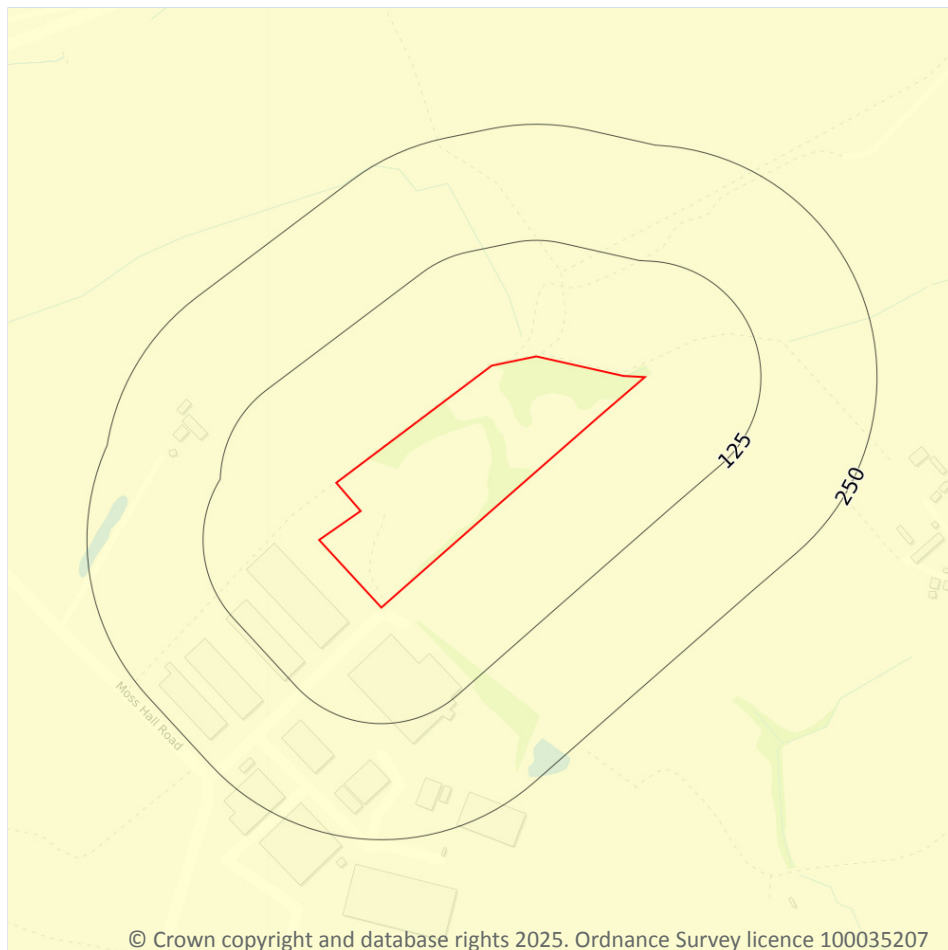
Features are displayed on the Natural ground subsidence - Landslides map on [page 91](#) >

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Ground dissolution of soluble rocks



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

17.6 Ground dissolution of soluble rocks

Records within 50m

1

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

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on [page 92](#) >

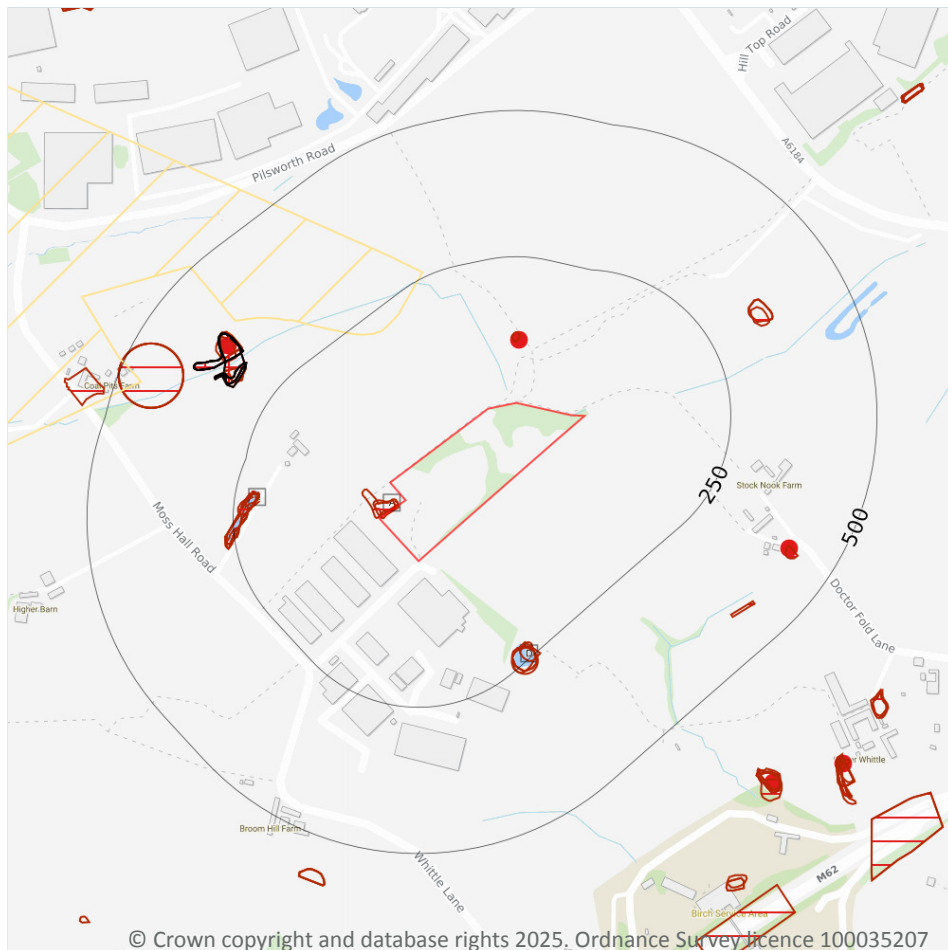
Location	Hazard rating	Details
On site	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.



This data is sourced from the British Geological Survey.



18 Mining and ground workings



- Site Outline
- Search buffers in metres (m)
- BritPits
- Surface ground workings
- Underground workings
- Underground mining extents
- Historical mineral planning areas
- TCA non-coal mining
- Non Coal Mining
- Sporadic underground mining of restricted extent possible
- Localised small scale underground mining possible
- Small scale mining possible
- Underground mining known or likely within or in close proximity
- Underground mining known within or in very close proximity

18.1 BritPits

Records within 500m

3

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

Features are displayed on the Mining and ground workings map on [page 94](#) >

ID	Location	Details	Description
B	108m N	Name: Three Land Ends Address: Darn Hill, HEYWOOD, Lancashire Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
E	363m NW	Name: Three Land Ends Address: Darn Hill, HEYWOOD, Lancashire Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
H	417m SE	Name: Doctor's Moss Address: Siddall Moor, HEYWOOD, Lancashire Commodity: Sand Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m

20

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

Features are displayed on the Mining and ground workings map on [page 94](#) >

ID	Location	Land Use	Year of mapping	Mapping scale
A	On site	Ponds	1891	1:10560
A	On site	Ponds	1851	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
A	2m NW	Ponds	1908	1:10560
B	105m N	Old Sandstone Quarry	1851	1:10560
C	207m W	Ponds	1891	1:10560
C	210m W	Pond	1981	1:10000
C	210m W	Pond	1974	1:10000
C	210m W	Pond	1965	1:10560
C	210m W	Pond	1955	1:10560
C	210m W	Ponds	1938	1:10560
C	210m W	Ponds	1928	1:10560
C	210m W	Ponds	1908	1:10560
C	212m W	Pond	1851	1:10560
D	223m SE	Pond	1851	1:10560
D	223m SE	Unspecified Pit	1928	1:10560
D	223m SE	Pond	1908	1:10560
D	223m SE	Unspecified Pit	1938	1:10560
D	224m SE	Pond	1981	1:10000
D	226m SE	Pond	1891	1:10560
C	241m W	Ponds	1891	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.3 Underground workings

Records within 1000m

7

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

Features are displayed on the Mining and ground workings map on [page 94 >](#)

ID	Location	Land Use	Year of mapping	Mapping scale
E	313m NW	Coal Pits	1891	1:10560
E	317m NW	Coal Pits	1938	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
E	317m NW	Coal Pits	1928	1:10560
E	317m NW	Coal Pits	1908	1:10560
E	337m NW	Coal Pits	1938	1:10560
E	337m NW	Coal Pits	1928	1:10560
E	337m NW	Coal Pits	1908	1:10560

This data is sourced from Ordnance Survey/Groundsure.

18.4 Underground mining extents

Records within 500m

0

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

This data is sourced from Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m

0

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

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m

1

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

Features are displayed on the Mining and ground workings map on [page 94 >](#)



ID	Location	Name	Commodity	Class	Likelihood
1	216m NW	Not available	Vein Mineral	A	Underground mine workings are uncommon, although the geology is similar to that worked elsewhere. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.

This data is sourced from the British Geological Survey.

18.7 JPB mining areas

Records on site

0

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

This data is sourced from Johnson Poole and Bloomer.

18.8 The Coal Authority non-coal mining

Records within 500m

0

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

This data is sourced from The Coal Authority.

18.9 Researched mining

Records within 500m

0

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

This data is sourced from Groundsure.



18.10 Mining record office plans

Records within 500m

0

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

This data is sourced from Groundsure.

18.11 BGS mine plans

Records within 500m

0

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

This data is sourced from Groundsure.

18.12 Coal mining

Records on site

1

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

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

This data is sourced from the Coal Authority.

18.13 Brine areas

Records on site

0

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

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



18.14 Gypsum areas

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

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.15 Tin mining

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

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

18.16 Clay mining

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

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

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



19 Ground cavities and sinkholes

19.1 Natural cavities

Records within 500m

0

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

This data is sourced from Stantec UK Ltd.

19.2 Mining cavities

Records within 1000m

0

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

This data is sourced from Stantec UK Ltd.

19.3 Reported recent incidents

Records within 500m

0

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

This data is sourced from Groundsure.

19.4 Historical incidents

Records within 500m

0

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

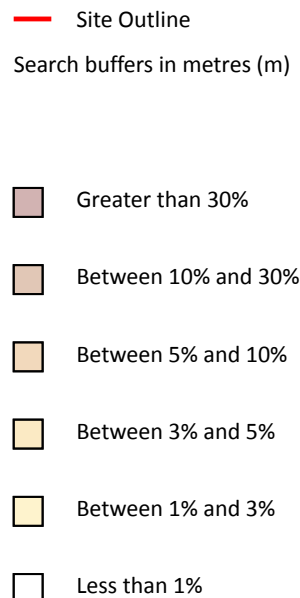
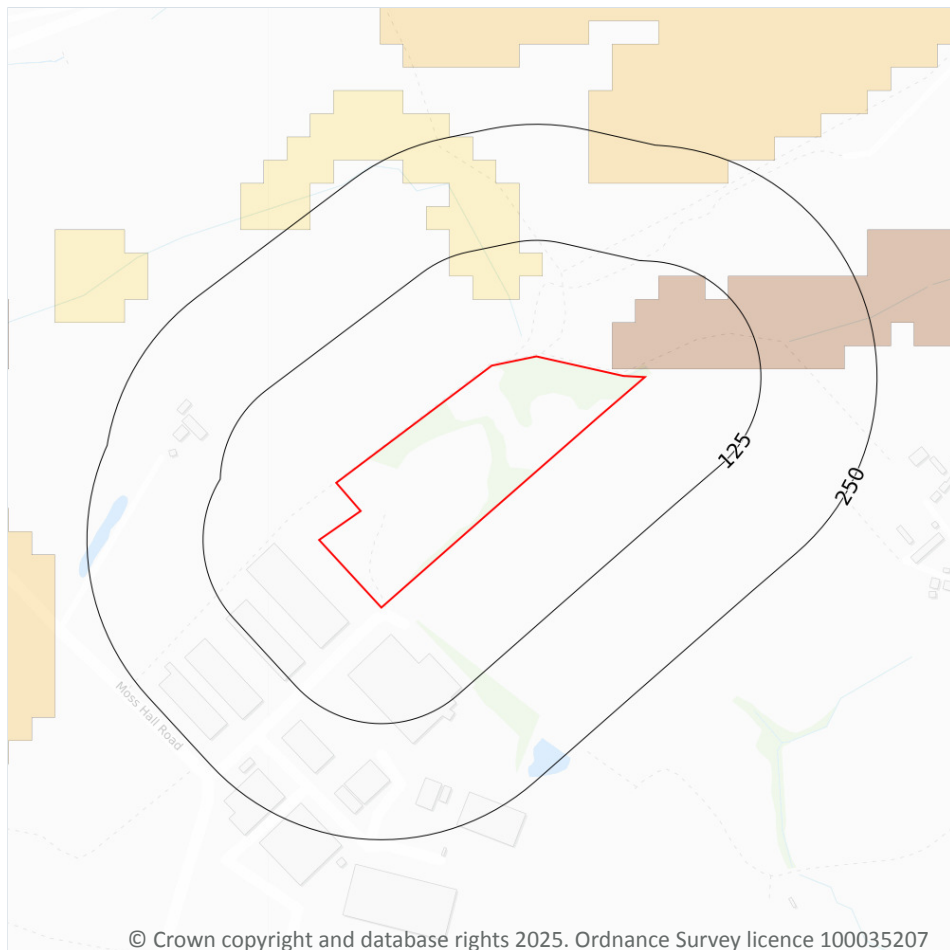
Not all 'holes' noted on Ordnance Survey mapping will necessarily be present within this dataset.



This data is sourced from Groundsure.



20 Radon



© Crown copyright and database rights 2025. Ordnance Survey licence 100035207

20.1 Radon

Records on site

1

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

Features are displayed on the Radon map on [page 103](#) >

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



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



21 Soil chemistry

21.1 BGS Estimated Background Soil Chemistry

Records within 50m

3

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 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	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	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

21.2 BGS Estimated Urban Soil Chemistry

Records within 50m

0

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

This data is sourced from the British Geological Survey.

21.3 BGS Measured Urban Soil Chemistry

Records within 50m

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.



22 Railway infrastructure and projects

22.1 Underground railways (London)

Records within 250m

0

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

This data is sourced from publicly available information by Groundsure.

22.2 Underground railways (Non-London)

Records within 250m

0

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

This data is sourced from publicly available information by Groundsure.

22.3 Railway tunnels

Records within 250m

0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

22.4 Historical railway and tunnel features

Records within 250m

0

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

This data is sourced from Ordnance Survey/Groundsure.

22.5 Royal Mail tunnels

Records within 250m

0

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



This data is sourced from Groundsure/the Postal Museum.

22.6 Historical railways

Records within 250m

0

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

This data is sourced from OpenStreetMap.

22.7 Railways

Records within 250m

0

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

This data is sourced from Ordnance Survey and OpenStreetMap.

22.8 Crossrail 2

Records within 500m

0

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

This data is sourced from publicly available information by Groundsure.

22.9 HS2

Records within 500m

0

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

This data is sourced from HS2 Ltd.



Data providers

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

Terms and conditions

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





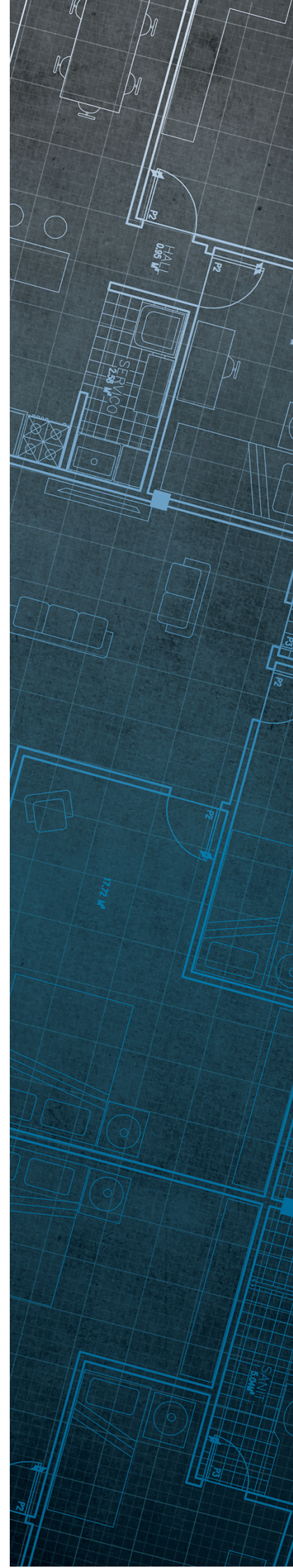
The Coal
Authority

Consultants Coal Mining Report

Birch Business Park
Heywood
Greater Manchester

Date of enquiry: 2 July 2025
Date enquiry received: 2 July 2025
Issue date: 2 July 2025

Our reference: 51003509287001
Your reference: AG3696-25



Consultants

Coal Mining Report

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

Client name

APPLIED GEOLOGY LTD

Enquiry address

Birch Business Park
Heywood
Greater Manchester

How to contact us

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

200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

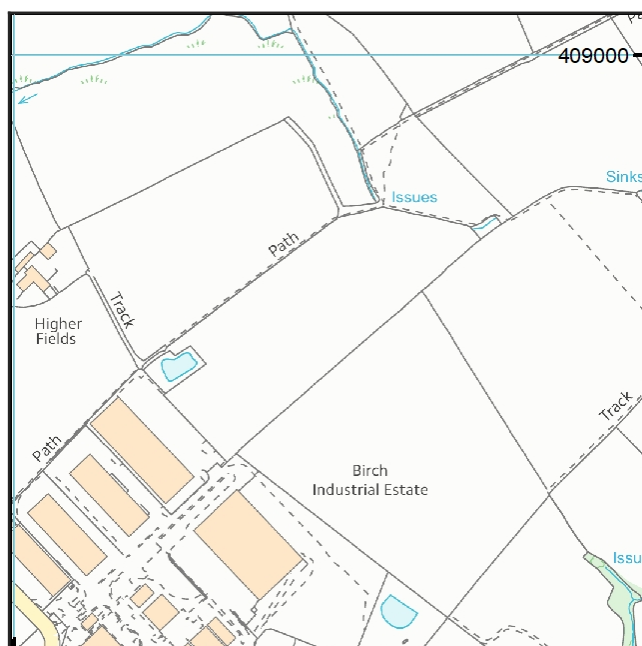
www.groundstability.com

 @coalauthority

 /company/the-coal-authority

 /thecoalauthority

 /thecoalauthority



Approximate position of property



Reproduced by permission of Ordnance Survey on behalf of HMSO. © Crown copyright and database right 2018. All rights reserved.

Ordnance Survey Licence number: AC0000820577

Section 1 – Mining activity and geology

Past underground mining

No past mining recorded.

Probable unrecorded shallow workings

Yes.

Spine roadways at shallow depth

No spine roadway recorded at shallow depth.

Mine entries

None recorded within 100 metres of the enquiry boundary.

Abandoned mine plan catalogue numbers

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

16820		
-------	--	--

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
LOWER FOOT	Coal	Yes	Within	N/A	58
LOWER MOUNTAIN	Coal	Yes	Within	N/A	41

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

None recorded 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
Within	N/A
Within	N/A

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.

Future development

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

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

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. Please note, if there are no recorded instances of mine gas reported, this does not mean that mine gas is not present within the vicinity. The Coal Authority Mine Gas data is limited to only those sites where a Mine Gas incident has been recorded.

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.