JNP GROUP

CONSULTING ENGINEERS

Phase I Geoenvironmental Report

Project: Land Adjacent to 67 Chapel Gate,
Scholes,
Holmfirth,
HD9 1SX

Client: EcoHolmes Community Land Trust

Reference: B24367-JNP-XX-XX-RP-G-1001

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FOR AND ON BEHALF OF JNP GROUP

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Contents

EXECUTIVE SUMMARY

Site location	Land adjacent to 67 Chapel Gate, Scholes, Holmfirth, HD9 1SX	
Development scheme	Ten affordable two-storey residential properties with private gardens.	
NGR	415861, 407155	
Current use	On-site: Disused overgrown quarry with public footpath running through.	Off-site: Residential and agricultural.
Historical use And UXO	The site was undeveloped agricultural land in 1854 and was then quarried by 1888. The shape and size of the quarry did not change from 1888 until 1965-1970, when the topography of the north-western corner of the site changed, with a slope shown falling south-east into the centre of the site; this may represent the site being partially filled with road chippings – as per the local anecdotal evidence. The site then remained the same until the present day. In 1854, the surrounding area was mostly occupied by small agricultural fields, with several small villages around the north and east of the site, including residential properties and several inns and mills. There were also several quarries – most of which were labelled as sandstone quarries – immediately north of the site, and between 300m to 750m south and west of the site. By 1888 there were several new mill ponds 250m north of the site, and along Dean Dike, 250m to 400m east of the site. The area around the site largely remained the same until the present day. A low UXO risk has been identified at the site.	
Geology	Rough Rock (sandstone) – Rossendale Formation.	
Hydrogeology	Secondary A Aquifer.	
Hydrology	The Dean Dike / New Mill Dike runs south-west to north-east 270m south-east of the site.	

1 INTRODUCTION

1.1 General

1.1.1 JNP Group was instructed by the client to undertake a desk study of:

Land Adjacent to 67 Chapel Gate,
Scholes,
Holmfirth,
HD9 1SX

hereinafter referred to as 'the site'. This report is subject to the limitations presented in Appendix A.

1.1.2 It is understood that EcoHolmes are seeking planning permission for ten affordable low-energy residential properties with private gardens at the site.

1.1.3 All comments given are based on the understanding that the proposed redevelopment will be as detailed above.

1.2 Objectives

1.2.1 The scope of work comprised non-intrusive (desk-based) research only. This report contains details of the site, development of an initial conceptual model, and a preliminary risk assessment regarding contaminated land issues.

1.3 Methodology

1.3.1 This report has been compiled in accordance with the on-line Land contamination: risk management (LCRM) guidance produced by the Environment Agency (June 2019). This can be found on the UK government website: https://www.gov.uk/guidance/land-contamination-how-to-manage-the-risks.

1.3.2 Regarding geotechnical aspects, reference is also made to the requirements of BS EN 1997, Eurocode 7, Geotechnical Design, and associated standards.

2 SITE DESCRIPTION

2.1.1 The site is located off Chapelgate, in Scholes, Holmfirth, approximately 2km south-east of Holmfirth town centre (see Figure 1 Key Plan). The centre of the site is located at National Grid Reference 415861, 407155. The site covers an area of approximately 0.37 hectares.

2.1.2 An engineer from JNP Group visited the site on 13th January 2022, the weather was sunny. There was some pooling of rainwater in the centre of the site. Photos of the site during the site walkover are included within Appendix B.

2.1.3 The boundaries of the site were Chapelgate and Dean Bridge Lane to the north and east, agricultural field boundary fences to the south and west, and a residential property garden fence in the north-western corner of the site.

2.1.4 Adjacent land uses were residential to the north, residential and agricultural to the east, agricultural to the south and west, ad residential to the north-west.

2.1.5 The site generally sloped down from all directions into the centre of the site. The southern and western portions of the site were topographically several metres higher than the centre of the site, with exposed vertical rock faces in a 'C' shape around the western and southern margins of the site.

2.1.6 Ground coverage across the site was entirely softstanding, except for where exposed bedrock was visible.

2.1.7 There were no buildings on the site, and there was no visible evidence of any former buildings.

2.1.8 The margins of the site were very overgrown with trees, shrubs, etc., but the centre of the site was largely open and free of dense vegetation.

2.1.9 The site was in a generally good condition, with no excessive fly-tipping.

2.1.10 No invasive species were noted during the site work. However, JNP Group recommend that a specialist ecologist or arboreal consultant be consulted regarding this.

2.1.11 The surrounding land uses are summarised in Table 2.1 below.

Table 2.1 Surrounding Land Use

Direction	Land Use
North	Road infrastructure, residential.
East	Residential, agricultural land.
South	Agricultural land.
West	Agricultural land.

3 GEOLOGY, HYDROGEOLOGY AND HYDROLOGY

3.1 Geology

3.1.1 The geology of the site has been determined by reference to the 1:50,000 scale British Geological Survey (BGS) online Geoindex Tool (**http://mapapps2.bgs.ac.uk/geoindex/home.html**) as well as to the BGS 1:50,000 Series published geological map, Sheet 86 Glossop (Solid and Drift, dated 2012), accessed via the website (**http://www.bgs.ac.uk/data/maps/home.html**); these were both accessed on 14/01/2022.

3.1.2 No recorded artificial or made ground is indicated at the site, however, from the site walkover, and looking at the previous use of the site (quarry later infilled with road chippings), it is suspected that there will be a thickness of road chippings or other artificial deposits across the site.

3.1.3 No recorded superficial geology is indicated to be present at the site.

3.1.4 The underlying "bedrock" geology is indicated to be the Rough Rock of the Rossendale Formation, which is described by the BGS as "coarse-grained feldspathic sandstone, cross-bedded", and shown to dip around 3˚ to 6˚ to the north-east.

3.1.5 There is a north-west to south-east trending normal fault 260m north-east of the site, with the downthrown fault block on the north-eastern side of the fault.

3.1.6 The following Table 3.1 summarises the risk potentials of a range of geological hazards at the site as identified in a site-specific Groundsure Report which has been obtained and is included in **Error! Reference source not found.**C.

Table 3.1 Geological Hazards

Hazard	Risk
Shrinking or swelling clay	Very low
Landslide ground	Low
Ground dissolution	Negligible
Compressible soils	Negligible
Collapsible soils	Very low
Running sand	Negligible

3.1.7 Based upon the above, none of these geological hazards are considered to pose a constraint to the proposed development.

3.2 BGS Borehole Records

3.2.1 There are no publicly available borehole records within 250m of the site

3.3 Radon

3.3.1 The Groundsure Report states that the Health Protection Agency identified between 1% and 3% of homes above the action level. The British Geological Survey Information Services Group indicates that no radon protection measures are necessary for the intended development at the site.

3.3.2 Reference to BRE211 'Radon: guidance on protective measures for new dwellings' indicates that the site does not lie within an area where geological information indicates that basic radon protection may be required. Therefore, this confirms that no radon protection measures are necessary for the proposed development.

3.4 Background Soil Chemical Concentrations

3.4.1 From a review of the Groundsure Report and the UK Soil Observatory map viewer (http://mapapps2.bgs.ac.uk/ukso/home.html) the following range of background metallic soil concentrations are anticipated at the site:

- Arsenic 15 mg/kg
- Barium 203mg/kg
- Cadmium 1.8mg/kg
- Chromium 60-90mg/kg
- Copper 36mg/kg
- Lead 100mg/kg
- Nickel 15mg/kg
- Vanadium 76mg/kg
- Zinc 88mg/kg

3.4.2 Therefore, naturally elevated concentrations of the foregoing elements are not anticipated at the site or within close proximity.

3.5 Mining, Mineral Extraction and Natural Cavities

- Surface ground workings within 250m of the site:
  - The site was a sandstone quarry, named Town Quarry, and is shown on the historical maps from 1888.
  - There was a quarry 46m north-west of the site from at least 1854.
  - There was a sandstone quarry 74m north-east of the site from 1854.
  - There were ponds 163m north, 226m south-east, and 226m north of the site.
  - There was a quarry 247m north-west of the site from 1888.
- Historical underground workings within 1km of the site:
  - 846m east of the site: disused colliery, 1951.
  - 933m east of the site: disused colliery, 1904.
- Coal mining has occurred within 1 km of the site. The site is located within a coal mining are as defined by the Coal Authority. However, the geological maps indicate that there are no coal seams workable within 1km of the ground surface at the site.
- Non-coal mining for a 'vein mineral' may have occurred at the site and within close proximity.

- There are no non-coal mining cavities located within 1km of the site.
- There are no natural cavities located within 1km of the site.
- No brine or gypsum extraction has occurred within 1km of the site.
- No tin or clay mining areas are located within 1km of the site.

3.6 Hydrogeology

3.6.1 The Aquifer Maps contained in the Groundsure Report indicates that the site is underlain by a Secondary-A Aquifer. The aquifer status refers to the Rossendale Formation.

3.6.2 The Environment Agency define a Secondary-A Aquifer as:

"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."

3.6.3 The Groundsure Report lists no currently active licensed groundwater abstractions within 1km of the site. However, the historical maps and current OS maps indicate that there is a well (White Well) 30m to the east of the site.

3.6.4 The site's proximity to groundwater Source Protection Zones (SPZs) was determined by reference to Defra's Magic Map website (https://magic.defra.gov.uk/). These zones show the risk of contamination of major licensed groundwater abstractions from any activities that might cause pollution in the area, with the closer the activity, the greater the associated risk. The maps show four main zones (inner, outer, total catchment and special interest) to a groundwater source.

3.6.5 There are no source protection zones indicated to be present within 1km of the site.

3.6.6 Note that not all abstractions are licensed and not all licensed abstractions have a SPZ. Abstractions could therefore still be at risk, and it is an offence to cause pollution to a controlled water anyway, whether contributing to an abstraction or not.

3.6.7 According to the Groundsure Report, the site is at negligible risk of groundwater flooding.

3.7 Hydrology

3.7.1 The nearest surface water feature is New Mill Dike, which flows in a north-easterly direction and is located 225m south-east of the site. New Mill Dike is classified by the EA as a 'River'.

3.7.2 River quality data from the publicly available River Basin Management Plans implemented by the Water Framework Directive (http://environment.data.gov.uk/catchment-planning/) indicates that this section of the New Mill Dike recorded a chemical quality of Fail in 2019, an ecological quality of Moderate in 2019, and an overall river quality of Moderate in 2019.

3.7.3 According to the Groundsure Report, the site does not lie in area considered by the Environment Agency to be at risk of fluvial flooding.

3.7.4 The highest risk of surface water flooding is 1 in 30 year, 0.3m – 1.0m, in the depression in the centre of the site.

3.7.5 The Groundsure Report lists no currently active licensed surface water abstractions within 1km of the site.

3.8 Pollution Incidents to Controlled Waters

3.8.1 Records held by the Environment Agency identified two pollution incidents to controlled waters within 1km of the site:

- 417m north of the site in June 2005. The pollutant was described as 'inert materials and wastes – soils and clay'. The water impact was Category 1 (Major).
- 484m north-east of the site in April 2002. The pollutant was described as 'oils and fuel – gas and fuel oils'. The water impact was Category 3 (Minor).

3.9 Discharge Consents

3.9.1 The Groundsure Report identifies one licensed discharge consents within 1km of the site:

- 416m north-east of the site, issued in March 2005, to discharge sewer storm overflow into a tributary of Jackson Bridge Dike. A revocation date is not supplied so the consent is assumed to be current.

4 SITE HISTORY

4.1 Historical Mapping

4.1.1 The history of the site and the surrounding area has been determined from a review of historical map extracts, obtained as part of the Groundsure report. Copies of these extracts are included in Appendix C. The historical land uses on site and in close proximity to the site are summarised as follows in Table 4.1:

Table 4.1 Site Historical Summary

Date	On-site Historical Land Use	Off-site Historical Land Use
1854	The site appears to have been an open field, with a boundary wall/fence running east to west through the centre of the site.	Most of the land around the site was divided into small agricultural fields. The site was surrounded to the north and east by small villages – Paris, Scholes, Jackson Bridge, Hepworth, etc, containing residential properties and several Inns. There was a well around 30m east of the site. Dean Dike flowed south-west to north-east around 250m south-east of the site, towards New Mill Dike. There were three woollen mills around 400m east-north-east to north-north-east of the site, and there were several quarries immediately north of the site, and between 300m to 750m south and west of the site.
1888	Most of the site was taken up by a quarry, which extends across the northern half and central portion of the site. The headwall of the quarry is in the southern portion of the site.	There were three new mill ponds associated with the mills 250m north of the site, and two other mill ponds along the length of Dean Dike between 250m and 400m east of the site.
1933	No significant changes.	No significant changes.
1948	No significant changes.	No significant changes.
1955	No significant changes.	No significant changes.
1965-1970	The topography across the north-western corner of the site changed, with a slope shown falling into the centre of the site.	No significant changes.
1980	No significant changes.	No significant changes.
2001	No significant changes.	No significant changes.
2010	No significant changes.	No significant changes.
2022	No significant changes.	No significant changes.

4.2 Unexploded Ordnance Review

4.2.1 Whilst JNP Group are not experts on this, according to online mapping provided by Zetica (https://zeticauxo.com/downloads-and-resources/risk-maps/) the site lies with an area of Low risk of unexploded ordnance (UXO).

4.3 Site Historical Summary

4.3.1 The site was undeveloped agricultural land in 1854 and was then quarried by 1888. The shape and size of the quarry did not change from 1888 until 1965-1970, when the topography of the north-western corner of the site changed, with a slope shown falling south-east into the centre of the site; this may represent the site being partially filled with road chippings – as per the local anecdotal evidence. The site then remained the same until the present day.

4.3.2 In 1854, the surrounding area was mostly occupied by small agricultural fields, with several small villages around the north and east of the site, including residential properties and several inns and mills. There were also several quarries – most of which were labelled as sandstone quarries – immediately north of the site, and between 300m to 750m south and west of the site. By 1888 there were several new mill ponds 250m north of the site, and along Dean Dike, 250m to 400m east of the site. The area around the site largely remained the same until the present day.

5 INFORMATION HELD BY STATUTORY AUTHORITIES

5.1 Summary

5.1.1 This section details any relevant information held in the registers maintained by statutory bodies as identified in the Groundsure Report (Appendix C).

Table 5.1 Statutory Information Summary

	On-Site	0-250m	250-500m	Details
Waste				
Waste Management Facilities	0	0	0	None recorded within 500m of the site.
Landfills	0	0	0	None recorded within 500m of the site.
Historical Landfills	0	0	0	None recorded within 500m of the site.
Environmental Permits, Incidents and Registers				
Part A(1) and IPPC Authorised Activities	0	0	0	None recorded within 500m of the site.
Part A(2) and Part B Activities and Enforcements	0	0	1	486m east: waste oil burner 0.4MW – historical permit.
COMAH & NIHHS Sites	0	0	0	None recorded within 500m of the site.
Industrial and Contaminative Premises				
Fuel Sites	0	0	0	None recorded within 500m of the site
Historical and contemporary industrial data	2	4	10	On site: gravel pit, 1955. On site: unspecified quarry, 1888 – 1980. 46m north-west: unspecified quarry, 1854 – 1970. 74m north-east: sandstone quarry, 1854. 201m north: unspecified mills, 1888 – 1948. 247m north-west: unspecified quarry, 1854 – 1970.

5.2 Environmentally Sensitive Areas

5.2.1 The sensitive land use map within the Groundsure Report indicates:

- Designated Ancient Woodland:
  - 274m south: Morton Wood.
  - 997m south-east: Rakes Wood.
- Green belt: on site.

6 UK CONTAMINATED LAND LEGISLATIVE FRAMEWORK

6.1 General

6.1.1 Given that the site is being assessed with the potential for future development, the most applicable appraisal relates to the requirements of the Planning Regime as described in the National Planning Policy Framework.

6.1.2 In order to proceed with an assessment of contamination issues it is essential that there is compliance with UK guidance as detailed in the on-line Land contamination: risk management (LCRM) guidance produced by the Environment Agency (June 2019). This can be found on the UK government website: https://www.gov.uk/guidance/land-contamination-how-to-manage-the-risks.

6.1.3 Part IIA of the Environmental Protection Act, 1990, which was enacted by Section 57 of the Environment Act 1995, and the associated Contaminated Land (England) Regulations 2000 (SI 2000/227), was introduced on 1 April 2000. It created a new statutory regime for the identification and remediation of land where contamination poses an unacceptable risk to human health and the environment. The guidance was subject to a review by DEFRA in 2012, and a revision was published.

6.1.4 Part IIA provides a statutory definition of contaminated land:

6.1.5 *"any land which appears to the Local Authority in whose area it is situated to be in such a condition by reason of substances in, on or under the land, that significant harm is being caused, or that there is a significant possibility of significant harm being caused, or that pollution of controlled waters is being or is likely to be caused".*

6.1.6 Controlled waters are considered to be all groundwaters, inland surface waters, and estuarine and coastal waters.

6.1.7 To determine whether land falls under the Part IIA definition of contaminated land, the site should be evaluated in the context of a risk-based framework. The assessment of contaminated land is typically a two-phase process, which is initially based on a qualitative assessment of the likelihood of complete pollution linkages, with a quantitative element that seeks to determine the degree and the significance of the harm. Land is only defined as 'Contaminated Land' if a "significant pollutant linkage" is present.

6.1.8 A pollutant linkage must comprise the following:

Source - a contaminant at a concentration capable of causing adverse health or environmental effects.

Receptor - there must be a receptor (e.g. human, controlled waters, ecological, or property) present, which may be at risk of harm or impact from the source.

Pathway - there must be an exposure pathway through which the receptor comes into contact with the contamination source.

6.1.9 Each of these elements can exist independently, but they create risk only when they are linked together, so that a particular contaminant affects a particular receptor, through a particular pathway.

6.1.10 The responsible authority then needs to consider whether the identified pollution linkage:

- is resulting in significant harm being caused to the receptor in the pollutant linkage.
- presents a significant possibility of significant harm being caused to that receptor.
- is resulting in the pollution of controlled waters, which constitute the receptor; or is likely to result in such pollution.

6.1.11 If a pollutant linkage is demonstrated, then the Part IIA legislation provides powers for remedial action to be enforced by the Local Authority in whose area the contaminated land is situated.

6.1.12 In addition, JNP Group has undertaken a preliminary risk assessment based on the probability of receptor exposure to the identified source and the consequences of such exposure.

6.1.13 Risk management, which can include site surfacing, formal management systems, legal requirements; is then considered to provide an overall residual risk. The categories of environmental risk used by JNP Group are given in the table that follows.

Table 6.1 Risk Matrix

Environmental Risks		
HIGH		Issues within this category likely to provide a significant cost or liability. Further detailed investigation may be required to clarify the risk.
MEDIUM		It is possible that issues within this category may provide a cost or liability. Further investigation may be required to clarify the risk.
LOW		It is unlikely that issues within this category will provide a significant cost or liability. Basic investigation may be required to clarify the risk.
NONE		No source – pathway – receptor linkage present.

7 CONCEPTUAL SITE MODEL AND PRELIMINARY RISK ASSESSMENT

7.1 General

7.1.1 This section uses information from field observations and all the data sources presented herein to provide a conceptual model and qualitative assessment of the potential risks posed to human health and environmental receptors from potential on-site and off-site sources of contamination. The assessment is presented as a 'source-pathway-receptor' model in accordance with Part IIA of the Environmental Protection Act 1990.

7.1.2 The conceptual site model has been developed assuming that the site will be redeveloped for residential housing with private gardens.

7.2 Potential Sources of Contamination

7.2.1 Potential On-Site Sources of Contamination

- The earliest available maps show the site was a sandstone quarry from the late 19th century and has not been developed since. Local anecdotal evidence suggests that the quarry was later partially infilled with road chippings, and the historical maps indicate that the topography of the site changed slightly between 1955 and 1965, which could be a result of this infilling. However, there is nothing to suggest the original depth of the quarry, and the thickness of any infill material.
- Heavy metals, hydrocarbons, and soil gas associated with limited made ground materials may be present due to the quarry being partially infilled with imported and site generated fill materials – particularly given the potential composition of the infill material (road chippings, containing coal tar), which may cause significantly elevated concentrations of hydrocarbons to be present.
- Based upon guidance given in CL:AIRE research bulletin RB17 (CL:AIRE 2012), as likely depth of the infilled ground is unlikely to be greater than 5.00m, and the soil atmosphere is likely to be aerobic and of small area, the former quarry is unlikely to generate significant volumes of ground gas. RB17 indicates that even where ground gas is present from made ground and recycled soils, it generally does not pose a risk. In addition, RB17 indicates that based upon available case studies, sites where fill is >30 years old, the gassing regime results in a characteristic situation 1 classification, where gas protection measures are not required. The likely date of infilling was between 1955 and 1965, so if the pit was backfilled or partially backfilled, it was over 50 years ago.

7.2.2 Potential Off-Site Sources of Contamination

- There are several disused quarries around the site, which may have been infilled or partially infilled. The material used to infill these quarries is unknown and should therefore be considered a potential source of hazardous land gas. However, based on the age of the quarries, and the likely age of the fill, JNP Group considers the risk of ground gas generation to be low. In addition, JNP Group consider that material used would have most likely to have been inert, with a low organic content, such as recycled soils, or rubble rather than domestic waste, chemical or industrial waste.
- Based upon guidance given in CL:AIRE research bulletin RB17 (CL:AIRE 2012), as likely depth of the infilled ground is unlikely to be greater than 5m, and the soil atmosphere

is likely to be aerobic and of small area, the former quarries are unlikely to generate significant volumes of ground gas. RB17 indicates that even where ground gas is present from made ground and recycled soils, it generally does not pose a risk. In addition, RB17 indicates that based upon available case studies, sites where fill is > 30 years old, the gassing regime results in a characteristic situation 1 classification, where gas protection measures are not required. The quarry 70m north-west of the site does not change shape from 1893, although it does appear to be partially infilled by 1976-1977 – if it was infilled or partially infilled, it was over 40 years ago.

- There are no other potential off-site sources of contamination that could impact on ground conditions at the site. The site is surrounded by residential properties and agricultural fields. In addition, all the mills to the north, north-east, and east of the site are topographically and hydrologically downgradient of the site, and as such should not have had any impact on the site.

7.3 Receptors

7.3.1 The site is to be redeveloped for residential housing with private gardens. In addition, the site overlies a Secondary-A Aquifer (Rossendale Formation). The primary receptors, considered to be potentially at risk from any identified contamination are as follows:

Human Health

- Construction workers during the redevelopment phase.
- Residential end users.

Controlled Waters

- The Rossendale Formation beneath the site is classified as a Secondary-A Aquifer. Although there are no licensed groundwater abstractions or source protection zones within 1km of the site, there is a well indicated to be present 30m to the east of the site, hydrogeologically and hydrologically downgradient of the site. Therefore, JNP Group considers groundwater to be a sensitive receptor.
- The nearest controlled surface water is 229m to the south-east of the site. It is a sensitive receptor because it is hydrologically downgradient from the site.

Ecological

- The site is located within an area of green belt.
- Given the site setting sensitive species are considered unlikely to be present at the site (subject to any ecological survey undertaken).

Property / Infrastructure

- Concrete vulnerability to aggressive ground conditions.
- Build-up of gases with potential for explosion.
- Water supply pipework.

7.4 Pathways

7.4.1 Potential contaminant migration pathways considered relevant to the site are:

Human Health

- Ingestion of contaminated soils and dust particles.
- Direct physical contact with near surface soils and contaminated dust particles.
- Inhalation of wind-blown contaminated dust.
- Inhalation of vapours and gases, migrating vertically into the atmosphere.
- Inhalation of vapours and gases, migrating vertically into buildings and confined spaces.
- Consumption of vegetables cultivated in contaminated soils.
- Consumption of soil attached to vegetables cultivated in contaminated soils.
- Consumption of contaminated potable water.

Controlled Waters

- Leaching of contaminants in made ground / natural ground into groundwater.
- Lateral migration of contaminated groundwater into the New Mill Dike.
- Vertical migration of contaminated shallow groundwater impacting deeper groundwater in the aquifer sequence.
- Run-off of site-derived contamination into the New Mill Dike during construction.

Ecological

- Migration of contamination through groundwater and subsequent uptake by plant roots.
- Direct contact between ecological receptors and contaminated surface water.
- Direct contact between ecological receptors and contaminated soils.
- Ingestion of contaminated soils/surface waters by ecological receptors.
- Inhalation of vapours or wind-blown dust by ecological receptors.

Property

- Direct physical contact with near surface soils.
- Migration of vapours and gases into buildings and confined spaces.

7.5 Pollutant Linkages

7.5.1 A 'pollutant linkage' describes the relationship between a contaminant, a pathway and a receptor, a 'pollutant' being the contaminant in a pollutant linkage. A contaminant, pathway and receptor must all be present for a pollutant linkage to exist, which forms the basis for determination that a piece of land is Contaminated Land. Potential sources, pathways and receptors have been assessed. The following Tables summarise the significant pollutant linkages potentially active at the site.

Table 7.1 Potential Source-Pathway-Receptor Linkages for Human Health Risk Assessment

Source	Pathway	Receptor
Contaminated soils and waters	Ingestion of soil	On-site female child: 0 - 6 yrs old
		On-site construction worker
	Ingestion of household dust	On-site female child: 0 - 6 yrs old
	Ingestion of contaminated vegetables	On-site female child: 0 - 6 yrs old
	Ingestion of soil attached to vegetables	On-site female child: 0 - 6 yrs old
	Dermal contact	On-site female child: 0 - 6 yrs old
		On-site construction worker
	Dermal contact with household dust	On-site female child: 0 - 6 yrs old
	Inhalation of fugitive soil dust	On-site construction worker
		On-site female child: 0 - 6 yrs old
	Inhalation of fugitive household dust	On-site female child: 0 - 6 yrs old
	Inhalation of vapours in outdoor air	On-site female child: 0 - 6 yrs old
		On-site construction worker
	Inhalation of vapours in indoor air	On-site female child: 0 - 6 yrs old
	Consumption of contaminated potable water	On-site female child: 0 - 6 yrs old
Ground gas and landfill gas	Vertical and lateral migration	End users

Table 7.2 Source Pathway Receptor Linkages for Controlled Waters Risk Assessment

Source	Pathway	Receptor
Contaminated soils	Leaching mechanisms	Groundwater stored in the Rossendale Formation
	Runoff during construction works	New Mill Dike
Contaminated groundwater	Vertical migration	Groundwater stored in the Rossendale Formation
	Lateral and vertical migration (baseflow)	New Mill Dike

Table 7.3 Potential Source-Pathway-Receptor Linkages for Ecological Risk Assessment

Source	Pathway	Receptor
Contaminated soils and waters	Migration of contamination through groundwater and subsequent uptake by plant roots;	Ecological receptors
	Direct contact between ecological receptors and contaminated surface water;	

Source	Pathway	Receptor
	Direct contact between ecological receptors and contaminated soils;	
	Ingestion of contaminated soils/surface waters by ecological receptors;	
	Inhalation of vapours or wind-blown dust by ecological receptors.	
Ground gas and landfill gas	Inhalation of gases	

Table 7.4 Potential Source-Pathway-Receptor Linkages for Property Risk Assessment

Source	Pathway	Receptor
Contaminated soils	Contact with contaminated soils	Concrete
		Water supply pipe materials
Ground gas and landfill gas	Vertical and lateral migration and accumulation in voids	Residential housing / Commercial properties

7.6 Preliminary Risk Assessment

7.6.1 From the information obtained from the desk study JNP Group has undertaken a preliminary risk assessment.

Table 7.2 Preliminary Risk Assessment

Risk Receptor	Risk		Justification
HUMAN HEALTH	MEDIUM		Historical land use as a quarry, suspected to be partially infilled with road chippings, suggests potential sources of contamination present on site. Potential for direct contact / inhalation of vapours or gases with residential receptors.
GROUNDWATER	MEDIUM		The site is located on productive strata (Secondary Aquifer) and is not within a SPZ, although there is a well 30m east of the site.
SURFACE WATER	MEDIUM		The nearest surface water course is located 270m to the south-west, hydrologically downgradient of the site.
ECOLOGY	NONE		Based on the assumption that there are no sensitive/ protected species on site (subject to any ecological survey undertaken).
PROPERTY & INFRASTRUCURE	MEDIUM		Historic land use as a partially infilled quarry suggests potential sources of contamination present on site. Potential sources of vapours or gases on-site or migration of gases may occur form off-site sources.

7.6.2 In line with BS ISO 18400-202:2018 based on the conceptual site model as above the site is considered to be probably contaminated.

8 CONCLUSIONS OF DESK STUDY & RECOMMENDATIONS

8.1 Conclusions

8.1.1 The desk-based research has identified that:

- The geological succession below the site comprises the Rough Rock sandstone of the Rossendale Formation.
- It identifies that the site has an historic potentially contaminative use as a partially infilled quarry.

Potential On-Site Sources of Contamination:

- The earliest available maps show the site was a sandstone quarry from the late 19th century and has not been developed since. Local anecdotal evidence suggests that the quarry was later partially infilled with road chippings, and the historical maps indicate that the topography of the site changed slightly between 1955 and 1965, which could be a result of this infilling. However, there is nothing to suggest the original depth of the quarry, and the thickness of any infill material.
- Heavy metals, hydrocarbons, and soil gas associated with limited made ground materials may be present due to the quarry being partially infilled with imported and site generated fill materials – particularly given the potential composition of the infill material (road chippings, containing coal tar), which may cause significantly elevated concentrations of hydrocarbons to be present.
- Based upon guidance given in CL:AIRE research bulletin RB17 (CL:AIRE 2012), as likely depth of the infilled ground is unlikely to be greater than 5.00m, and the soil atmosphere is likely to be aerobic and of small area, the former quarry is unlikely to generate significant volumes of ground gas. RB17 indicates that even where ground gas is present from made ground and recycled soils, it generally does not pose a risk. In addition, RB17 indicates that based upon available case studies, sites where fill is >30 years old, the gassing regime results in a characteristic situation 1 classification, where gas protection measures are not required. The likely date of infilling was between 1955 and 1965, so if the pit was backfilled or partially backfilled, it was over 50 years ago.

Potential Off-Site Sources of Contamination:

- There are several disused quarries around the site, which may have been infilled or partially infilled. The material used to infill these quarries is unknown and should therefore be considered a potential source of hazardous land gas. However, based on the age of the quarries, and the likely age of the fill, JNP Group considers the risk of ground gas generation to be low. In addition, JNP Group consider that material used would have most likely to have been inert, with a low organic content, such as recycled soils, or rubble rather than domestic waste, chemical or industrial waste.
- Based upon guidance given in CL:AIRE research bulletin RB17 (CL:AIRE 2012), as likely depth of the infilled ground is unlikely to be greater than 5m, and the soil atmosphere is likely to be aerobic and of small area, the former quarries are unlikely to generate significant volumes of ground gas. RB17 indicates that even where ground gas is present from made ground and recycled soils, it generally does not pose a risk. In addition, RB17

indicates that based upon available case studies, sites where fill is > 30 years old, the gassing regime results in a characteristic situation 1 classification, where gas protection measures are not required. The quarry 70m north-west of the site does not change shape from 1893, although it does appear to be partially infilled by 1976-1977 – if it was infilled or partially infilled, it was over 40 years ago.

- There are no other potential off-site sources of contamination that could impact on ground conditions at the site. The site is surrounded by residential properties and agricultural fields. In addition, all the mills to the north, north-east, and east of the site are topographically and hydrologically downgradient of the site, and as such should not have had any impact on the site.

8.1.2 No radon protection measures are required.

8.1.3 The site is not in an area predicted to be at risk of fluvial flooding. The centre of the site has a surface water flooding risk of 1 in 30 year, 0.3m – 1.0m.

8.1.4 Based on information contained within desk study or from the previous investigation, it is the opinion of JNP Group that the potential site conditions provide a MEDIUM to LOW environmental risk and hence further investigation and assessment is required.

8.2 Recommendations

8.2.1 Based on the conclusions from the desk study and the intended redevelopment of the site JNP Group recommends that the following intrusive works are undertaken:

- One day of dynamic sampling boreholes (to target depths of 5m bgl) with representative sampling and in-situ testing.
- Three gas and groundwater monitoring standpipe installations with 6 monitoring visits over 3 months.
- Engineering laboratory testing of recovered soil samples, including testing to identify volume change potential of any cohesive material, and concrete classification.
- Chemical laboratory testing of soil samples. The testing should comprise an extensive suite of contaminants, particularly those associated with road chippings/asphalt, including metals, Total Petroleum Hydrocarbons, and Polycyclic Aromatic Hydrocarbons.

8.2.2 The site lies with an area of Low risk of unexploded ordnance (UXO).

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FIGURES / DRAWINGS

Figure 1

Site Location Plan

Project:

38 Dovehouse Lane, Solihull, B91 2EB

Project No:

S11584

Appendix A LIMITATIONS

INTRODUCTION

This report is confidential and has been prepared solely for the benefit of the client and those parties with whom a warranty agreement has been executed, or with whom an assignment has been agreed. Should any third party wish to use or rely upon the contents of the report, written approval must be sought from JNP Group; a charge may be levied against such approval. JNP Group accepts no responsibility or liability for the consequences of this document being used for any purpose or project other than for which it was commissioned, and: this document to any third party with whom and agreement has not been executed.

Any comments given within this report are based on the understanding that the proposed works to be undertaken will be as described in the introduction and the information referred to and provided by others and will be assumed to be correct and will not have been checked by JNP Group and JNP Group will not accept any liability or responsibility for any inaccuracy in such information.

Any deviation from the recommendations or conclusions contained in this report should be referred to JNP Group in writing for comment and JNP Group reserve the right to reconsider their recommendations and conclusions contained within. JNP Group will not accept any liability or responsibility for any changes or deviations from the recommendations noted in this report without prior consultation and our full approval.

The details contained within this report reflect the site conditions prevailing at the time of investigation. JNP Group warrants the accuracy of this report up to and including that date. Additional information, improved practice or changes in legislation may necessitate this report having to be reviewed in whole or in part after that date. If necessary, this report should be referred back to JNP Group for re-assessment and, if necessary, re-appraisal.

This report is only valid when used in its entirety. Any information or advice included in the report should not be relied upon until considered in the context of the whole report. Whilst this report and the opinion made herein are correct to the best of JNP Group' belief, JNP Group cannot guarantee the accuracy or completeness of any information provided by third parties.

The report represents the finding and opinions of experience geotechnical and geo-environmental engineers. JNP Group does not provide legal advice and the advice of lawyers may also be required.

It should be noted that the following were not included as part of the agreed scope of works with the client: detailed ecological surveys and assessment.

JNP Group has provided advice and made recommendations based on the findings of the work undertaken, however this is subject to the approval / acceptance by the relevant Regulatory Authorities.

Objectives

The work undertaken to provide the basis of this report comprised a study of available documented information from a variety of sources (including the Client), together with (where appropriate) a brief walk over inspection of the site. The opinions given in this report have been dictated by the finite data on which they are based and are relevant only to the purpose for which the report was commissioned. The information reviewed should not be considered exhaustive and has been accepted in good faith as providing true and representative data pertaining to site conditions. Should additional information become available which may affect the opinions expressed in this report, JNP Group reserves the right to review such information and, if warranted, to modify the opinions

accordingly. It should be noted that any risks identified in this report are perceived risks based on the information reviewed; actual risks can only be assessed following a physical investigation of the site.

Appendix B PHOTO DOCUMENT

Photo 1: Looking north across site from top of quarry headwall along southern margin of site.

Photo 2: Looking north-west along quarry headwall along southern margin of site.

Photo 3: Looking north across flat central portion of site.

Photo 4: Looking south at quarry headwall, overgrown with vegetation.

Photo 5: Looking west at quarry headwall, overgrown with vegetation.

Photo 6: Looking north-west at quarry headwall, overgrown with vegetation, and spoil head in western portion of flat central area.

Photo 7: Looking east across centre of site, showing pooling of surface water in the centre.

Photo 8: Looking south-east across boundary wall in south-eastern corner of the site.

Photo 9: Looking west across centre of site from eastern margin, with quarry headwall visible in the background, and residential properties along Chapelgate beyond.

Photo 10: Looking north-east along footpath running into the site from Chapelgate in the north-eastern corner of the site.

Photo 11: Looking south across site from the northern margin, showing flat central area, spoil heap (back right), and quarry head wall along the southern and western margins of the site.

Appendix C GROUNDSURE REPORT

Groundsure
LOCATION INTELLIGENCE

Enviro+Geo Insight

415861 , 407157

Order Details

Date: 13/01/2022

Your ref: G1380

Our Ref: GS-8445247

Client: JNP Group - Sheffield

Site Details

Location: 415862 407150

Area: 0.37 ha

Authority: Kirklees Council

Contact us with any questions at:
info@groundsure.com
08444 159 000

Summary of findings

Page	Section	Past land use	On site	0-50m	50-250m	250-500m	500-2000m
13	1.1	Historical industrial land uses	5	5	8	23	-
15	1.2	Historical tanks	0	0	0	0	-
15	1.3	Historical energy features	0	0	0	6	-
16	1.4	Historical petrol stations	0	0	0	0	-
16	1.5	Historical garages	0	0	0	0	-
16	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
17	2.1	Historical industrial land uses	7	5	10	25	-
19	2.2	Historical tanks	0	0	0	0	-
19	2.3	Historical energy features	0	0	0	18	-
20	2.4	Historical petrol stations	0	0	0	0	-
21	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
22	3.1	Active or recent landfill	0	0	0	0	-
22	3.2	Historical landfill (BGS records)	0	0	0	0	-
23	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
23	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
23	3.5	Historical waste sites	0	0	0	0	-
23	3.6	Licensed waste sites	0	0	0	0	-
23	3.7	Waste exemptions	0	0	0	13	-
Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
25	4.1	Recent industrial land uses	0	0	2	-	-
26	4.2	Current or recent petrol stations	0	0	0	0	-
26	4.3	Electricity cables	0	0	0	0	-
26	4.4	Gas pipelines	0	0	0	0	-
26	4.5	Sites determined as Contaminated Land	0	0	0	0	-

26	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
27	4.7	Regulated explosive sites	0	0	0	0	-
27	4.8	Hazardous substance storage/usage	0	0	0	0	-
27	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
27	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
27	**4.11**	**Licensed pollutant release (Part A(2)/B)**	0	0	0	1	-
28	4.12	Radioactive Substance Authorisations	0	0	0	0	-
28	**4.13**	**Licensed Discharges to controlled waters**	0	0	0	2	-
29	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
29	4.15	Pollutant release to public sewer	0	0	0	0	-
29	4.16	List 1 Dangerous Substances	0	0	0	0	-
29	4.17	List 2 Dangerous Substances	0	0	0	0	-
29	**4.18**	**Pollution Incidents (EA/NRW)**	0	0	0	2	-
30	4.19	Pollution inventory substances	0	0	0	0	-
30	4.20	Pollution inventory waste transfers	0	0	0	0	-
30	4.21	Pollution inventory radioactive waste	0	0	0	0	-

Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
31	5.1	Superficial aquifer	None (within 500m)				
32	**5.2**	**Bedrock aquifer**	Identified (within 500m)				
33	**5.3**	**Groundwater vulnerability**	Identified (within 50m)				
34	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
34	5.5	Groundwater vulnerability- local information	None (within 0m)				
35	**5.6**	**Groundwater abstractions**	0	0	0	0	39
44	**5.7**	**Surface water abstractions**	0	0	0	0	12
47	**5.8**	**Potable abstractions**	0	0	0	0	1
48	5.9	Source Protection Zones	0	0	0	0	-
48	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
49	**6.1**	**Water Network (OS MasterMap)**	0	1	5	-	-

50	6.2	Surface water features	0	1	5	-	-
50	6.3	WFD Surface water body catchments	1	-	-	-	-
51	6.4	WFD Surface water bodies	0	0	1	-	-
51	6.5	WFD Groundwater bodies	1	-	-	-	-

Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
52	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
52	7.2	Historical Flood Events	0	0	0	-	-
52	7.3	Flood Defences	0	0	0	-	-
53	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
53	7.5	Flood Storage Areas	0	0	0	-	-
54	7.6	Flood Zone 2	None (within 50m)				
54	7.7	Flood Zone 3	None (within 50m)				

Page	Section	Surface water flooding	
55	8.1	Surface water flooding	1 in 30 year, 0.3m - 1.0m (within 50m)

Page	Section	Groundwater flooding	
57	9.1	Groundwater flooding	Negligible (within 50m)

Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
58	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
59	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
59	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
59	10.4	Special Protection Areas (SPA)	0	0	0	0	0
59	10.5	National Nature Reserves (NNR)	0	0	0	0	0
60	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
60	10.7	Designated Ancient Woodland	0	0	0	1	2
60	10.8	Biosphere Reserves	0	0	0	0	0
61	10.9	Forest Parks	0	0	0	0	0
61	10.10	Marine Conservation Zones	0	0	0	0	0
61	10.11	Green Belt	1	0	0	0	0
61	10.12	Proposed Ramsar sites	0	0	0	0	0

62	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
62	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
62	10.15	Nitrate Sensitive Areas	0	0	0	0	0
62	10.16	Nitrate Vulnerable Zones	0	0	0	0	0
63	**10.17**	**SSSI Impact Risk Zones**	1	-	-	-	-
64	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
65	11.1	World Heritage Sites	0	0	0	-	-
66	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
66	11.3	National Parks	0	0	0	-	-
66	**11.4**	**Listed Buildings**	0	0	3	-	-
67	11.5	Conservation Areas	0	0	0	-	-
67	11.6	Scheduled Ancient Monuments	0	0	0	-	-
67	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
68	**12.1**	**Agricultural Land Classification**	Grade 4 (within 250m)				
69	12.2	Open Access Land	0	0	0	-	-
69	12.3	Tree Felling Licences	0	0	0	-	-
69	12.4	Environmental Stewardship Schemes	0	0	0	-	-
70	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
71	**13.1**	**Priority Habitat Inventory**	0	0	8	-	-
72	13.2	Habitat Networks	0	0	0	-	-
72	**13.3**	**Open Mosaic Habitat**	1	0	0	-	-
72	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	Geology 1:10,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
74	**14.1**	**10k Availability**	Identified (within 500m)				
75	**14.2**	**Artificial and made ground (10k)**	1	1	1	3	-
77	**14.3**	**Superficial geology (10k)**	0	0	1	0	-

78	14.4	Landslip (10k)	0	0	0	2	-
79	14.5	Bedrock geology (10k)	1	1	4	3	-
80	14.6	Bedrock faults and other linear features (10k)	0	0	2	1	-
Page	Section	Geology 1:50,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
81	15.1	50k Availability	Identified (within 500m)				
82	15.2	Artificial and made ground (50k)	0	0	0	0	-
82	15.3	Artificial ground permeability (50k)	0	0	-	-	-
83	15.4	Superficial geology (50k)	0	0	0	0	-
83	15.5	Superficial permeability (50k)	None (within 50m)				
83	15.6	Landslip (50k)	0	0	0	0	-
83	15.7	Landslip permeability (50k)	None (within 50m)				
84	15.8	Bedrock geology (50k)	1	1	4	2	-
85	15.9	Bedrock permeability (50k)	Identified (within 50m)				
85	15.10	Bedrock faults and other linear features (50k)	0	0	2	1	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
86	16.1	BGS Boreholes	0	0	0	-	-
Page	Section	Natural ground subsidence					
87	17.1	Shrink swell clays	Very low (within 50m)				
88	17.2	Running sands	Negligible (within 50m)				
89	17.3	Compressible deposits	Negligible (within 50m)				
90	17.4	Collapsible deposits	Very low (within 50m)				
91	17.5	Landslides	Low (within 50m)				
93	17.6	Ground dissolution of soluble rocks	Negligible (within 50m)				
Page	Section	Mining, ground workings and natural cavities	On site	0-50m	50-250m	250-500m	500-2000m
94	18.1	Natural cavities	0	0	0	0	-
95	18.2	BritPits	1	0	1	2	-
96	18.3	Surface ground workings	7	5	23	-	-
97	18.4	Underground workings	0	0	0	0	3
98	18.5	Historical Mineral Planning Areas	0	0	0	0	-

98	**18.6**	**Non-coal mining**	1	0	0	0	1
98	18.7	Mining cavities	0	0	0	0	0
99	18.8	JPB mining areas	None (within 0m)				
99	**18.9**	**Coal mining**	Identified (within 0m)				
99	18.10	Brine areas	None (within 0m)				
99	18.11	Gypsum areas	None (within 0m)				
99	18.12	Tin mining	None (within 0m)				
100	18.13	Clay mining	None (within 0m)				

Page	Section	Radon
101	**19.1**	**Radon**	Between 1% and 3% (within 0m)

Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m
103	**20.1**	**BGS Estimated Background Soil Chemistry**	1	0	-	-	-
103	20.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
103	20.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-

Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
104	21.1	Underground railways (London)	0	0	0	-	-
104	21.2	Underground railways (Non-London)	0	0	0	-	-
104	21.3	Railway tunnels	0	0	0	-	-
104	21.4	Historical railway and tunnel features	0	0	0	-	-
104	21.5	Royal Mail tunnels	0	0	0	-	-
105	21.6	Historical railways	0	0	0	-	-
105	21.7	Railways	0	0	0	-	-
105	21.8	Crossrail 1	0	0	0	0	-
105	21.9	Crossrail 2	0	0	0	0	-
105	21.10	HS2	0	0	0	0	-

Recent aerial photograph

Capture Date: 29/06/2018

Site Area: 0.37ha

Recent site history - 2012 aerial photograph

Capture Date: 26/03/2012

Site Area: 0.37ha

Recent site history - 2011 aerial photograph

Capture Date: 28/09/2011

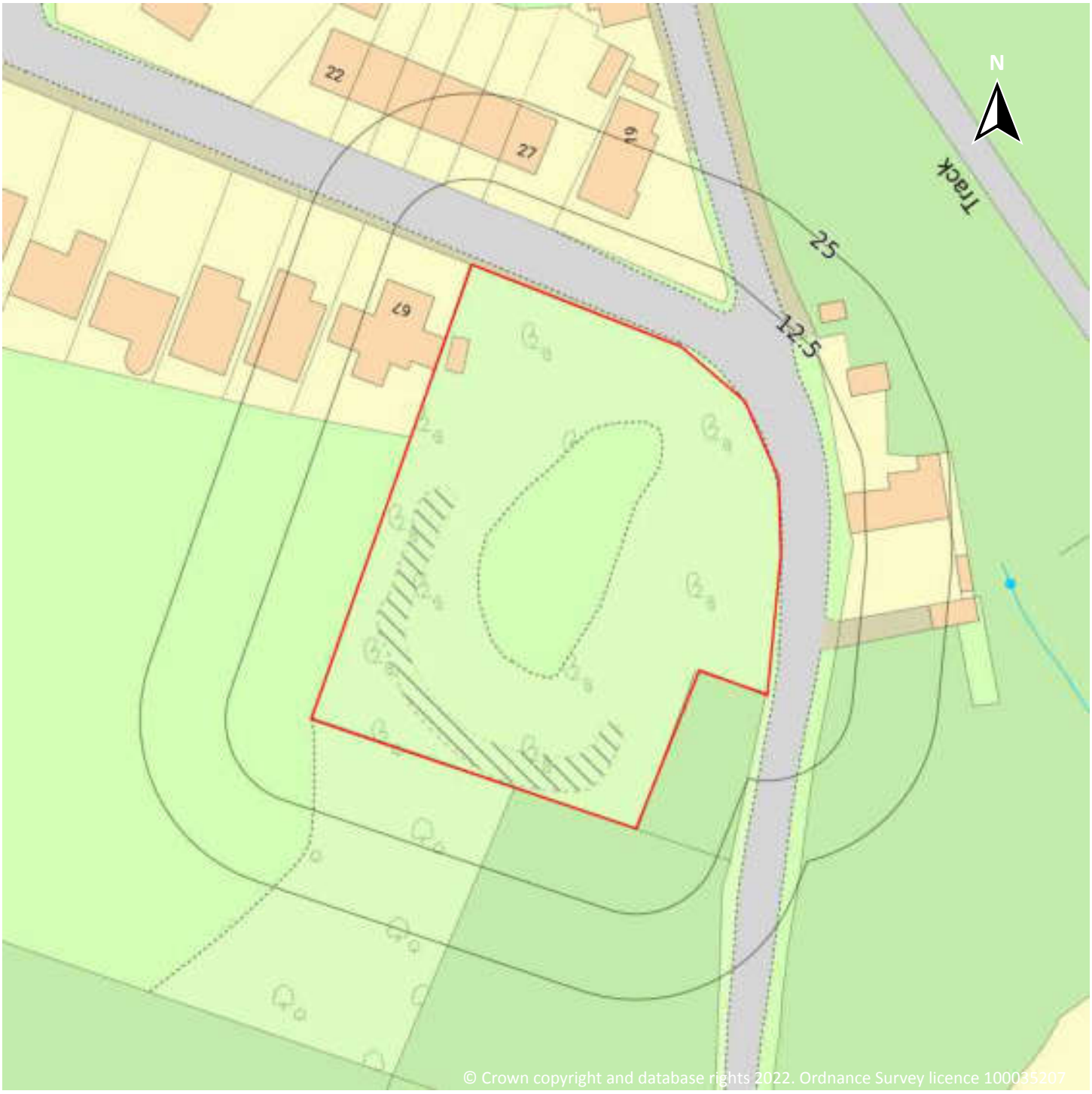
Site Area: 0.37ha

Recent site history - 2000 aerial photograph

Capture Date: 05/08/2000

Site Area: 0.37ha

OS MasterMap site plan



Site Area: 0.37ha

1 Past land use

Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical energy features

1.1 Historical industrial land uses

Records within 500m	41

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 13**

ID	Location	Land use	Dates present	Group ID
A	**On site**	**Gravel Pit**	**1955**	**1418784**

ID	Location	Land use	Dates present	Group ID
A	**On site**	**Unspecified Quarry**	**1888 - 1904**	**1461953**
A	**On site**	**Unspecified Quarry**	**1948**	**1472250**
A	**On site**	**Unspecified Quarry**	**1933**	**1491782**
A	**On site**	**Unspecified Quarry**	**1970 - 1980**	**1507911**
B	39m NW	Unspecified Pit	1970	1451832
B	46m NW	Unspecified Quarry	1933	1458708
B	46m NW	Unspecified Quarry	1955	1493047
B	47m NW	Unspecified Quarry	1948	1496404
B	47m NW	Unspecified Quarry	1904	1496625
B	52m NW	Sandstone Quarry	1854	1450979
1	74m NE	Sandstone Quarry	1854	1450980
C	201m N	Unspecified Mills	1888 - 1904	1529556
C	201m N	Unspecified Mills	1948	1534970
C	205m N	Unspecified Mills	1933	1549207
D	247m NW	Unspecified Quarry	1948	1467525
D	247m NW	Unspecified Quarry	1888 - 1904	1526344
D	248m NW	Unspecified Quarry	1933	1536908
D	252m NW	Unspecified Pit	1970	1451776
D	256m NW	Sandstone Quarry	1854	1450990
E	287m NE	Unspecified Mill	1970	1421210
E	287m NE	Unspecified Mills	1955	1537582
G	318m E	Unspecified Mill	1955	1516090
G	319m E	Unspecified Mill	1933	1549167
3	351m SW	Sandstone Quarry	1854	1450989
H	359m N	Gasometer	1904	1420665
H	359m N	Unspecified Tank	1888	1433352
E	369m N	Woollen Mill	1854	1431151
E	377m N	Gasometer	1854	1420666

ID	Location	Land use	Dates present	Group ID
5	407m E	Unspecified Mill	1970 - 1980	1513395
I	416m NE	Chimney	1970	1448224
J	448m E	Unspecified Mill	1948	1499918
K	449m S	Unspecified Quarry	1933	1523123
K	451m S	Unspecified Pit	1888	1451831
K	452m S	Unspecified Quarry	1904	1487517
K	452m S	Unspecified Quarry	1948	1514231
J	455m E	Woollen Mill	1854	1431157
K	457m S	Sandstone Quarry	1854	1450981
J	462m E	Unspecified Mill	1888 - 1904	1543765
K	479m S	Unspecified Heap	1888	1415106
K	481m S	Cuttings	1955	1409775

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m	6

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

Features are displayed on the Past land use map on **page 13**

ID	Location	Land use	Dates present	Group ID
2	310m NE	Electricity Substation	1984 - 1992	145783
F	314m N	Electricity Substation	1978 - 1997	141322
F	314m N	Electricity Substation	1975	140965
4	374m W	Electricity Substation	1975 - 1997	134991
I	407m NE	Electricity Substation	1984 - 1992	144092
E	417m N	Electricity Substation	1984 - 1992	135925

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

1.5 Historical garages

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

1.6 Historical military land

Records within 500m	0

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

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

2 Past land use - un-grouped

Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical energy features

2.1 Historical industrial land uses

Records within 500m	47

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 17**

ID	Location	Land Use	Date	Group ID
A	**On site**	**Unspecified Quarry**	**1948**	**1472250**
A	**On site**	**Unspecified Quarry**	**1904**	**1461953**
A	**On site**	**Unspecified Quarry**	**1888**	**1461953**

ID	Location	Land Use	Date	Group ID
A	**On site**	**Unspecified Quarry**	**1980**	**1507911**
A	**On site**	**Unspecified Quarry**	**1970**	**1507911**
A	**On site**	**Gravel Pit**	**1955**	**1418784**
A	**On site**	**Unspecified Quarry**	**1933**	**1491782**
B	39m NW	Unspecified Pit	1970	1451832
B	46m NW	Unspecified Quarry	1933	1458708
B	46m NW	Unspecified Quarry	1955	1493047
B	47m NW	Unspecified Quarry	1948	1496404
B	47m NW	Unspecified Quarry	1904	1496625
B	52m NW	Sandstone Quarry	1854	1450979
1	74m NE	Sandstone Quarry	1854	1450980
C	201m N	Unspecified Mills	1948	1534970
C	201m N	Unspecified Mills	1904	1529556
C	201m N	Unspecified Mills	1888	1529556
C	205m N	Unspecified Mills	1933	1549207
D	247m NW	Unspecified Quarry	1948	1467525
D	247m NW	Unspecified Quarry	1904	1526344
D	247m NW	Unspecified Quarry	1888	1526344
D	248m NW	Unspecified Quarry	1933	1536908
D	252m NW	Unspecified Pit	1970	1451776
D	256m NW	Sandstone Quarry	1854	1450990
E	287m NE	Unspecified Mill	1970	1421210
E	287m NE	Unspecified Mills	1955	1537582
H	318m E	Unspecified Mill	1955	1516090
H	319m E	Unspecified Mill	1933	1549167
2	351m SW	Sandstone Quarry	1854	1450989
I	359m N	Gasometer	1904	1420665
I	359m N	Unspecified Tank	1888	1433352

ID	Location	Land Use	Date	Group ID
E	369m N	Woollen Mill	1854	1431151
E	377m N	Gasometer	1854	1420666
K	407m E	Unspecified Mill	1970	1513395
K	409m E	Unspecified Mill	1980	1513395
L	416m NE	Chimney	1970	1448224
K	448m E	Unspecified Mill	1948	1499918
M	449m S	Unspecified Quarry	1933	1523123
M	451m S	Unspecified Pit	1888	1451831
M	452m S	Unspecified Quarry	1948	1514231
M	452m S	Unspecified Quarry	1904	1487517
K	455m E	Woollen Mill	1854	1431157
M	457m S	Sandstone Quarry	1854	1450981
K	462m E	Unspecified Mill	1904	1543765
K	462m E	Unspecified Mill	1888	1543765
M	479m S	Unspecified Heap	1888	1415106
M	481m S	Cuttings	1955	1409775

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	**0**

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'.

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m	**18**

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 17**

ID	Location	Land Use	Date	Group ID
F	310m NE	Electricity Substation	1984	145783
F	311m NE	Electricity Substation	1992	145783
G	314m N	Electricity Substation	1978	141322
G	314m N	Electricity Substation	1980	141322
G	314m N	Electricity Substation	1988	141322
G	314m N	Electricity Substation	1988	141322
G	314m N	Electricity Substation	1975	140965
G	315m N	Electricity Substation	1997	141322
J	374m W	Electricity Substation	1975	134991
J	375m W	Electricity Substation	1997	134991
J	375m W	Electricity Substation	1978	134991
J	375m W	Electricity Substation	1980	134991
J	375m W	Electricity Substation	1988	134991
J	375m W	Electricity Substation	1988	134991
L	407m NE	Electricity Substation	1984	144092
L	409m NE	Electricity Substation	1992	144092
E	417m N	Electricity Substation	1984	135925
E	418m N	Electricity Substation	1992	135925

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.

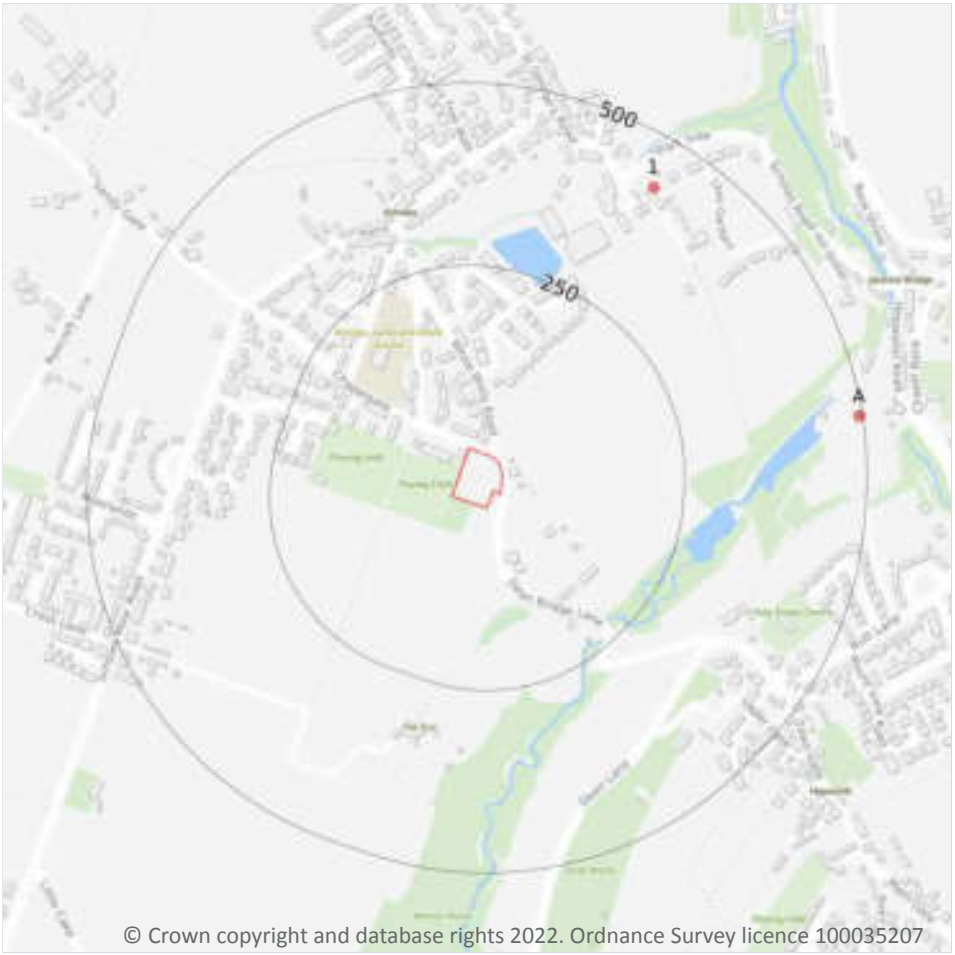
2.5 Historical garages

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)

Waste exemptions

3.1 Active or recent landfill

Records within 500m	0

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

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

3.2 Historical landfill (BGS records)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

3.3 Historical landfill (LA/mapping records)

Records within 500m	0

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

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

3.4 Historical landfill (EA/NRW records)

Records within 500m	0

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

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

3.5 Historical waste sites

Records within 500m	0

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

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

3.6 Licensed waste sites

Records within 500m	0

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

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

3.7 Waste exemptions

Records within 500m	13

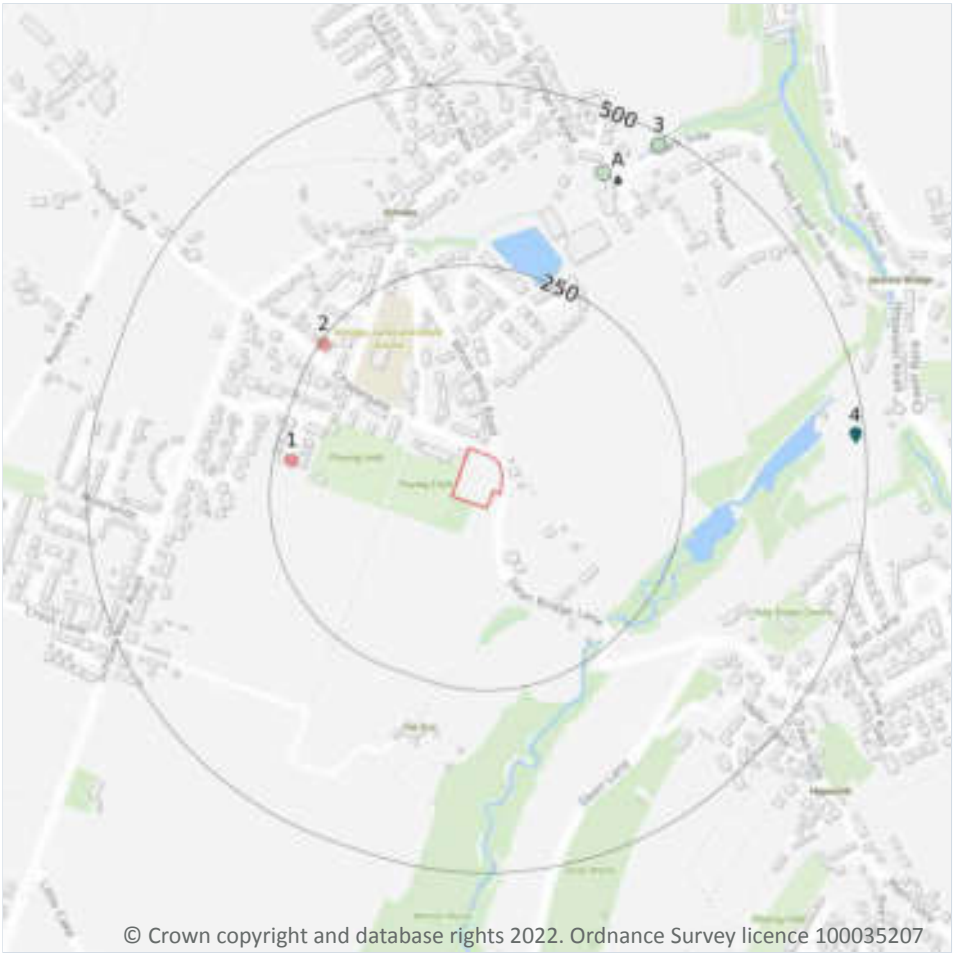
Activities involving the storage, treatment, use or disposal of waste that are exempt from needing a permit. Exemptions have specific limits and conditions that must be adhered to.

Features are displayed on the Waste and landfill map on **page 22**

ID	Location	Site	Reference	Category	Sub-Category	Description
1	430m NE	Leas Farm Park Side HOLMFIRTH HD9 1UF	EPR/TE5854YT/A001	Disposing of waste exemption	Agricultural Waste Only	Burning waste in the open
A	495m E	Dobroyd Mills HOLMFIRTH HD9 1AF	EPR/QH0013RS/A001	Storing waste exemption	Non-Agricultural Waste Only	Storage of waste in secure containers
A	495m E	Dobroyd Mills HOLMFIRTH HD9 1AF	EPR/QH0013RS/A001	Storing waste exemption	Non-Agricultural Waste Only	Storage of waste in a secure place
A	495m E	Dobroyd Mills HOLMFIRTH HD9 1AF	EPR/QH0013RS/A001	Treating waste exemption	Non-Agricultural Waste Only	Sorting mixed waste
A	495m E	Dobroyd Mills HOLMFIRTH HD9 1AF	EPR/QH0013RS/A001	Treating waste exemption	Non-Agricultural Waste Only	Manual treatment of waste
A	495m E	Dobroyd Mills HOLMFIRTH HD9 1AF	EPR/QH0013RS/A001	Treating waste exemption	Non-Agricultural Waste Only	Recovery of textiles
A	495m E	Dobroyd Mills HOLMFIRTH HD9 1AF	EPR/QH0013RS/A001	Treating waste exemption	Non-Agricultural Waste Only	Preparatory treatments (baling, sorting, shredding etc)
A	495m E	Dobroyd Mills HOLMFIRTH HD9 1AF	EPR/QH0013RS/A001	Treating waste exemption	Non-Agricultural Waste Only	Screening and blending of waste
A	495m E	Dobroyd Mills HOLMFIRTH HD9 1AF	EPR/QH0013RS/A001	Treating waste exemption	Non-Agricultural Waste Only	Recovery of scrap metal
A	495m E	Dobroyd Mills HOLMFIRTH HD9 1AF	EPR/QH0013RS/A001	Using waste exemption	Non-Agricultural Waste Only	Use of waste in construction
A	495m E	Dobroyd Mills HOLMFIRTH HD9 1AF	EPR/QH0013RS/A001	Using waste exemption	Non-Agricultural Waste Only	Use of waste in the construction of entertainment or educational installations etc
A	495m E	Dobroyd Mills HOLMFIRTH HD9 1AF	EPR/QH0013RS/A001	Using waste exemption	Non-Agricultural Waste Only	Use of waste for a specified purpose
A	495m E	Dobroyd Mills HOLMFIRTH HD9 1AF	EPR/QH0013RS/A001	Using waste exemption	Non-Agricultural Waste Only	Use of waste to manufacture finished goods

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 pollutant release (Part A(2)/B)

Licensed Discharges to controlled waters

Pollution Incidents (EA/NRW)

4.1 Recent industrial land uses

Records within 250m	**2**

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 25**

ID	Location	Company	Address	Activity	Category
1	225m W	Ran Publishing	31, Oak Tree Avenue, Scholes, Holmfirth, West Yorkshire, HD9 1SD	Published Goods	Industrial Products
2	245m NW	Able Packaging Ltd	Denecroft, Chapelgate, Scholes, Holmfirth, West Yorkshire, HD9 1SX	Rubber, Silicones and Plastics	Industrial Products

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m	0

Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m	0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m	0

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 Sites determined as Contaminated Land

Records within 500m	0

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

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m	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.

4.7 Regulated explosive sites

Records within 500m	0

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

This data is sourced from the Health and Safety Executive.

4.8 Hazardous substance storage/usage

Records within 500m	0

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

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m	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.

4.10 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.

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

Records within 500m	1

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

Features are displayed on the Current industrial land use map on **page 25**

ID	Location	Address	Details	
4	486m E	R N Golden Ltd, Dabroyd Workshops, Jackson Bridge, Huddersfield, HD7 7EY	Process: Waste Oil Burner 0.4 MW Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m	**0**

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

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

4.13 Licensed Discharges to controlled waters

Records within 500m	**2**

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

Features are displayed on the Current industrial land use map on **page 25**

ID	Location	Address	Details	
A	416m NE	ST GEORGE'S ROAD CSO, ST GEORGE'S ROAD, SCHOLES, NEAR HOLMFIRTH, WEST YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: WRA8432 Permit Version: 1 Receiving Water: TRIB OF JACKSON BRIDGE DIKE	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 18/03/2005 Effective Date: 18/03/2005 Revocation Date: -
A	416m NE	ST GEORGE'S ROAD CSO, ST GEORGE'S ROAD, SCHOLES, NEAR HOLMFIRTH, WEST YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: WADC1364 Permit Version: 1 Receiving Water: TRIB OF JACKSON BROOK DYKE	Status: REVOKED (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 18/09/1989 Effective Date: 18/09/1989 Revocation Date: 17/03/2005

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

4.14 Pollutant release to surface waters (Red List)

Records within 500m	0

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

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

4.15 Pollutant release to public sewer

Records within 500m	0

Discharges of Special Category Effluents to the public sewer.

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

4.16 List 1 Dangerous Substances

Records within 500m	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.

4.17 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.

4.18 Pollution Incidents (EA/NRW)

Records within 500m	2

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

Features are displayed on the Current industrial land use map on **page 25**

ID	Location	Details	
A	417m N	Incident Date: 14/06/2005 Incident Identification: 320129 Pollutant: Inert Materials and Wastes Pollutant Description: Soils and Clay	Water Impact: Category 1 (Major) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
3	484m NE	Incident Date: 22/04/2002 Incident Identification: 73555 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.

4.19 Pollution inventory substances

Records within 500m	0

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

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

4.20 Pollution inventory waste transfers

Records within 500m	0

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

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

4.21 Pollution inventory radioactive waste

Records within 500m	0

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

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

5 Hydrogeology - Superficial aquifer

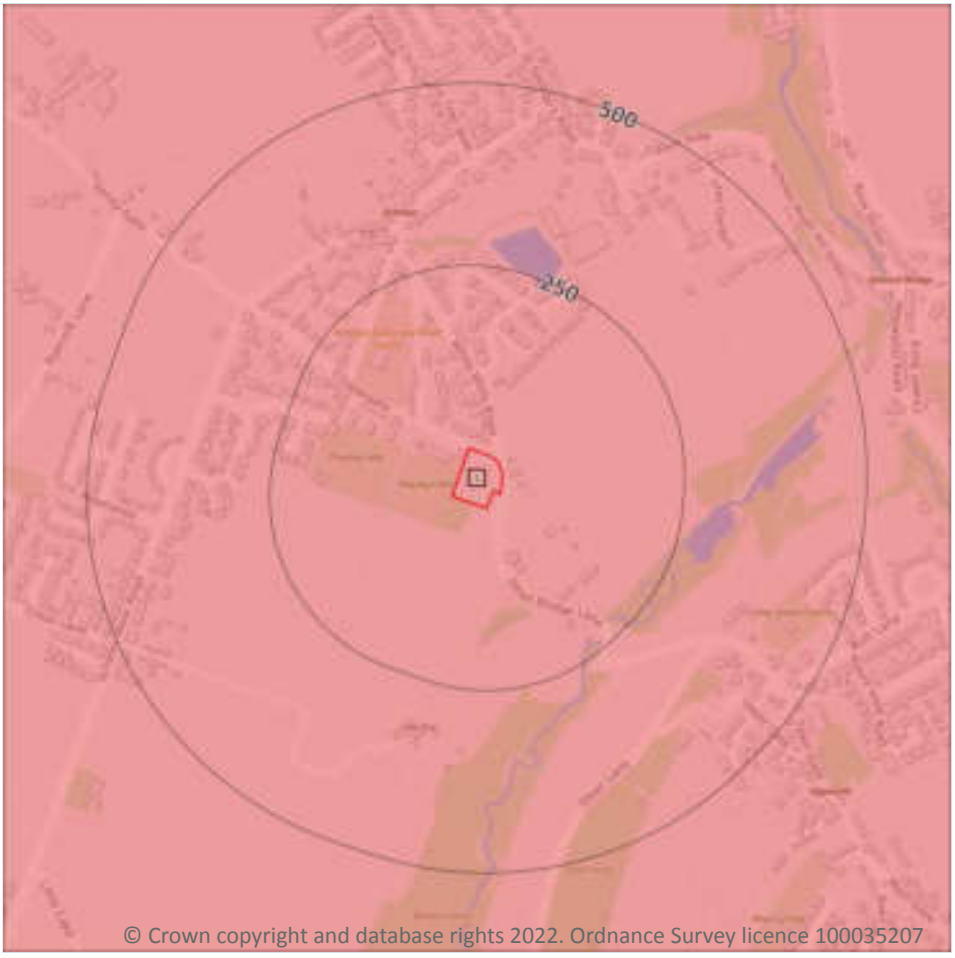
5.1 Superficial aquifer

Records within 500m	0

Aquifer status of groundwater held within superficial geology.

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

Bedrock aquifer



Site Outline

Search buffers in metres (m)

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

5.2 Bedrock aquifer

Records within 500m	1

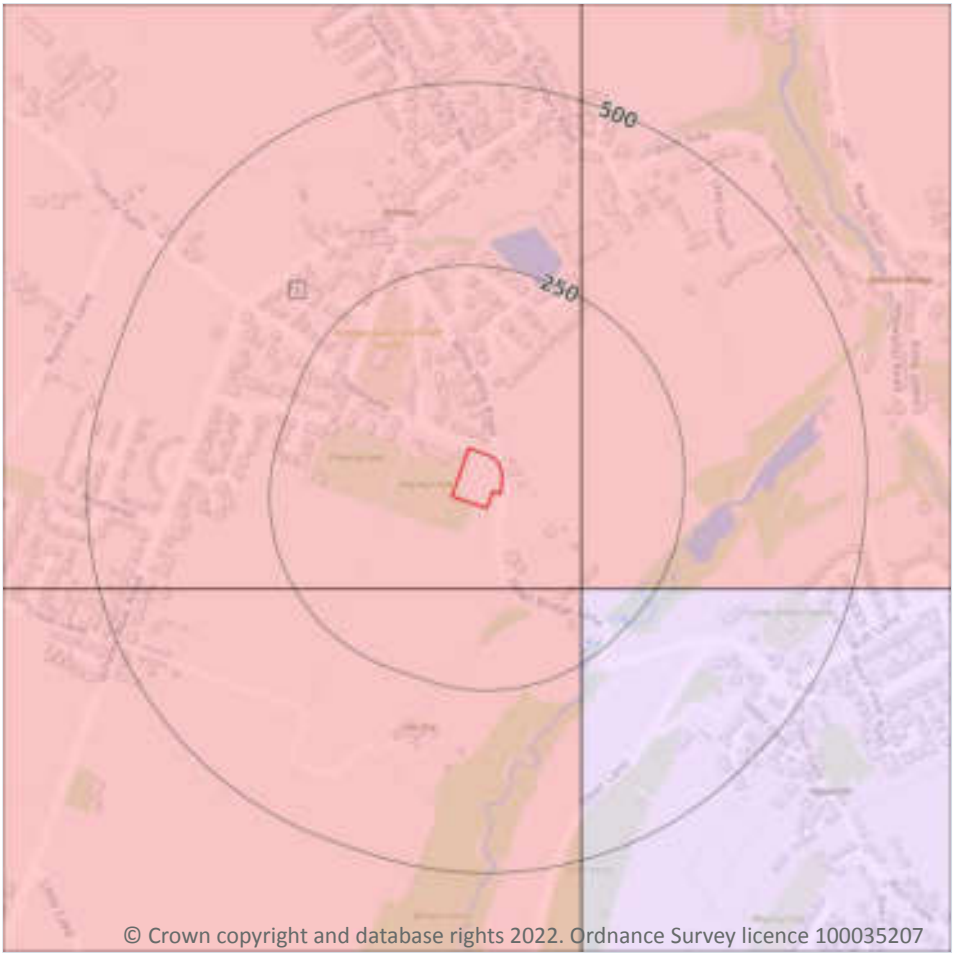
Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on **page 32**

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

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

Groundwater vulnerability



Site Outline

Search buffers in metres (m)

Superficial vulnerability

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

Bedrock vulnerability

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

Other information

- Unproductive aquifer
- Soluble rock risk
- Local information

5.3 Groundwater vulnerability

Records within 50m	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 33**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	**On site**	**Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer**	**Leaching class: High Infiltration value: >70% Dilution value: >550mm/year**	**Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data**	**Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures**

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

5.4 Groundwater vulnerability- soluble rock risk

Records on site	**0**

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

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

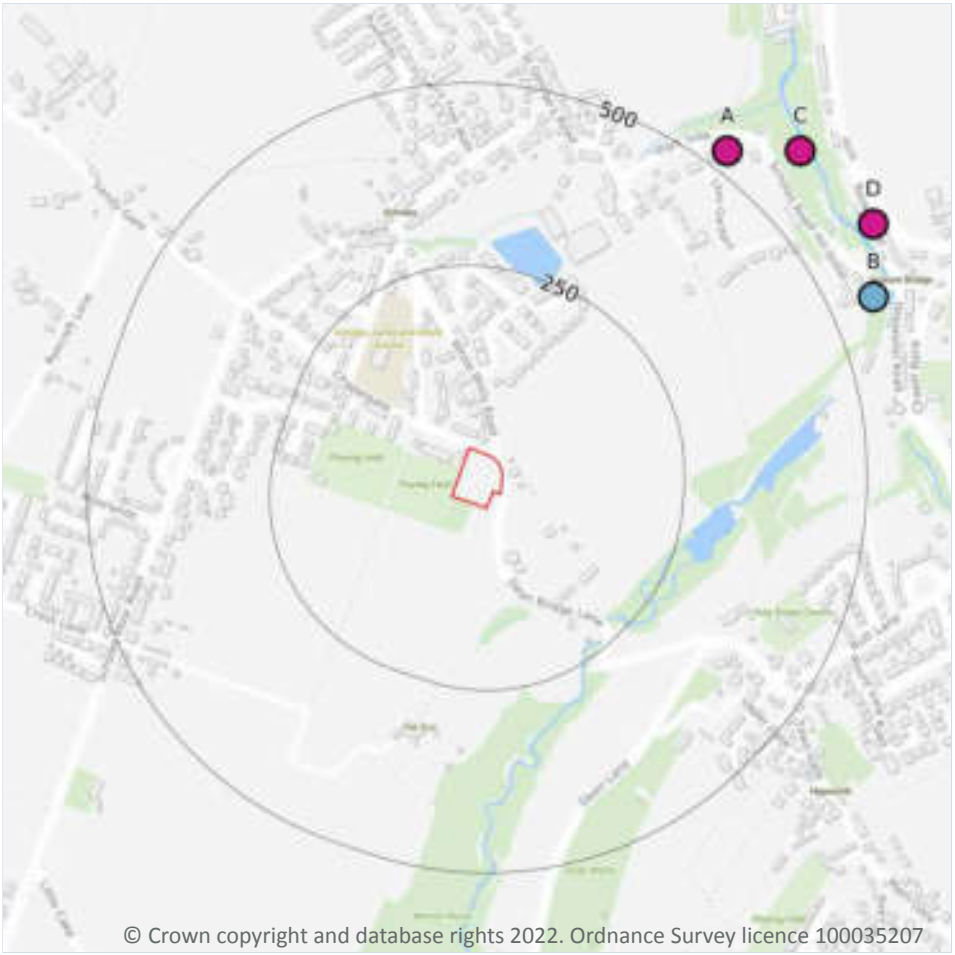
5.5 Groundwater vulnerability- local information

Records on site	**0**

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

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

Abstractions and Source Protection Zones



Site Outline

Search buffers in metres (m)

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

5.6 Groundwater abstractions

Records within 2000m	39

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 35**

ID	Location	Details	
A	528m NE	Status: Historical Licence No: 2/27/10/050 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE Data Type: Point Name: COPLEY MARSHALL & CO LTD Easting: 416200 Northing: 407600	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/01/1966 Version End Date: -
A	528m NE	Status: Historical Licence No: 2/27/10/050 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE - MILLSTONE GRIT - NEW MILL Data Type: Point Name: COPLEY MARSHALL & CO LTD Easting: 416200 Northing: 407600	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/01/1966 Version End Date: -
C	594m NE	Status: Historical Licence No: 2/27/10/050 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE Data Type: Point Name: COPLEY MARSHALL & CO LTD Easting: 416300 Northing: 407600	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/01/1966 Version End Date: -
C	594m NE	Status: Historical Licence No: 2/27/10/050 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE - MILLSTONE GRIT - NEW MILL Data Type: Point Name: COPLEY MARSHALL & CO LTD Easting: 416300 Northing: 407600	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/01/1966 Version End Date: -

ID	Location	Details	
D	609m NE	Status: Historical Licence No: 2/27/10/050 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE Data Type: Point Name: COPLEY MARSHALL & CO LTD Easting: 416400 Northing: 407500	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/01/1966 Version End Date: -
D	609m NE	Status: Historical Licence No: 2/27/10/050 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE - MILLSTONE GRIT - NEW MILL Data Type: Point Name: COPLEY MARSHALL & CO LTD Easting: 416400 Northing: 407500	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/01/1966 Version End Date: -
-	788m NE	Status: Historical Licence No: 2/27/10/051 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: SPRING Data Type: Point Name: COPLEY MARSHALL & CO LTD Easting: 416200 Northing: 407900	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/01/1966 Version End Date: -
-	788m NE	Status: Historical Licence No: 2/27/10/051 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: SPRING - NEW MILL Data Type: Point Name: COPLEY MARSHALL & CO LTD Easting: 416200 Northing: 407900	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/01/1966 Version End Date: -

ID	Location	Details	
-	880m N	Status: Historical Licence No: 2/27/10/051 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: SPRING Data Type: Point Name: COPLEY MARSHALL & CO LTD Easting: 416200 Northing: 408000	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/01/1966 Version End Date: -
-	880m N	Status: Historical Licence No: 2/27/10/051 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: SPRING - NEW MILL Data Type: Point Name: COPLEY MARSHALL & CO LTD Easting: 416200 Northing: 408000	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/01/1966 Version End Date: -
-	889m NE	Status: Historical Licence No: 2/27/10/099 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: SPRING Data Type: Line Name: SHAW Easting: 416400 Northing: 407900	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 28/04/1966 Expiry Date: - Issue No: 100 Version Start Date: 28/04/1966 Version End Date: -
-	889m NE	Status: Historical Licence No: 2/27/10/099 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: SPRING - NEW MILL Data Type: Line Name: SHAW Easting: 416400 Northing: 407900	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 28/04/1966 Expiry Date: - Issue No: 100 Version Start Date: 28/04/1966 Version End Date: -
-	1016m SW	Status: Historical Licence No: 2/27/10/075 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: -- GRAVITY Data Type: Point Name: GARLICK Easting: 414900 Northing: 406700	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 26/05/1966 Expiry Date: - Issue No: 100 Version Start Date: 26/05/1966 Version End Date: -

ID	Location	Details	
-	1016m SW	Status: Historical Licence No: 2/27/10/075 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: SPRING Data Type: Point Name: GARLICK Easting: 414900 Northing: 406700	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 26/05/1966 Expiry Date: - Issue No: 100 Version Start Date: 26/05/1966 Version End Date: -
-	1025m S	Status: Historical Licence No: 2/27/10/100 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: WELL X2 Data Type: Line Name: HALL Easting: 415700 Northing: 406100	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 26/05/1966 Expiry Date: - Issue No: 100 Version Start Date: 26/05/1966 Version End Date: -
-	1025m S	Status: Historical Licence No: 2/27/10/100 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: WELL X2 - MILLSTONE GRIT - HEPWORTH Data Type: Line Name: HALL Easting: 415700 Northing: 406100	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 26/05/1966 Expiry Date: - Issue No: 100 Version Start Date: 26/05/1966 Version End Date: -
-	1263m SE	Status: Historical Licence No: 2/27/10/086 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: -- BOREHOLE Data Type: Point Name: SMITH Easting: 416370 Northing: 405950	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 28/04/1966 Expiry Date: - Issue No: 100 Version Start Date: 28/04/1966 Version End Date: -
-	1263m SE	Status: Historical Licence No: 2/27/10/086 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: BOREHOLE - MILLSTONE GRIT - HEPWORTH Data Type: Point Name: SMITH Easting: 416370 Northing: 405950	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 28/04/1966 Expiry Date: - Issue No: 100 Version Start Date: 28/04/1966 Version End Date: -

ID	Location	Details	
-	1412m S	Status: Historical Licence No: 2/27/10/104 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: SPRING Data Type: Point Name: BOOTH Easting: 415800 Northing: 405700	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 30/06/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/01/1970 Version End Date: -
-	1412m S	Status: Historical Licence No: 2/27/10/104 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: SPRING - HEPWORTH Data Type: Point Name: BOOTH Easting: 415800 Northing: 405700	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 30/06/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/01/1970 Version End Date: -
-	1428m W	Status: Historical Licence No: 2/27/10/080 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: WELLS X3 Data Type: Point Name: BATTYE Easting: 414400 Northing: 407000	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 28/04/1966 Expiry Date: - Issue No: 100 Version Start Date: 28/04/1966 Version End Date: -
-	1428m W	Status: Historical Licence No: 2/27/10/080 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: WELLS X3 - MILLSTONE GRIT - CARTWORTH MOOR Data Type: Point Name: BATTYE Easting: 414400 Northing: 407000	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 28/04/1966 Expiry Date: - Issue No: 100 Version Start Date: 28/04/1966 Version End Date: -
-	1478m N	Status: Historical Licence No: 2/27/10/056 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE Data Type: Point Name: BOWER ROEBUCK & CO LTD Easting: 416300 Northing: 408600	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/01/1966 Version End Date: -

ID	Location	Details	
-	1478m N	Status: Historical Licence No: 2/27/10/056 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE - MILLSTONE GRIT - NEW MILL Data Type: Point Name: BOWER ROEBUCK & CO LTD Easting: 416300 Northing: 408600	Annual Volume (m^3): 19321 Max Daily Volume (m^3): 77.27 Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2008 Version End Date: -
-	1511m N	Status: Historical Licence No: 2/27/10/057 Details: Boiler Feed Direct Source: GROUNDWATERS Point: SPRINGS Data Type: Point Name: BOWER ROEBUCK & CO LTD Easting: 416400 Northing: 408600	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/01/1966 Version End Date: -
-	1511m N	Status: Historical Licence No: 2/27/10/057 Details: Boiler Feed Direct Source: GROUNDWATERS Point: SPRINGS - GLENDALE MILLS Data Type: Point Name: BOWER ROEBUCK & CO LTD Easting: 416400 Northing: 408600	Annual Volume (m^3): 3683 Max Daily Volume (m^3): 104.54 Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/01/1966 Version End Date: -
-	1609m NW	Status: Active Licence No: 2/27/10/083 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE - MILLSTONE GRIT - RIBBLEDEN DYEWORKS Data Type: Point Name: HOLMFIRTH DYERS LTD Easting: 414400 Northing: 407900	Annual Volume (m^3): 90,920 Max Daily Volume (m^3): 363.68 Original Application No: - Original Start Date: 28/04/1966 Expiry Date: - Issue No: 101 Version Start Date: 13/03/2000 Version End Date: -

ID	Location	Details	
-	1645m N	Status: Historical Licence No: 2/27/10/004 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE Data Type: Point Name: MOORHOUSE & BROOK LTD Easting: 416200 Northing: 408800	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 01/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 01/12/1965 Version End Date: -
-	1645m N	Status: Historical Licence No: 2/27/10/004 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE - MILLSTONE GRIT - NEW MILL Data Type: Point Name: MOORHOUSE & BROOK LTD Easting: 416200 Northing: 408800	Annual Volume (m^3): 34095 Max Daily Volume (m^3): 136.38 Original Application No: - Original Start Date: 01/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 01/12/1965 Version End Date: -
-	1662m SW	Status: Historical Licence No: 2/27/10/084 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: SPRING Data Type: Point Name: TAYLOR Easting: 414600 Northing: 406000	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 28/04/1966 Expiry Date: - Issue No: 100 Version Start Date: 28/04/1966 Version End Date: -
-	1662m SW	Status: Historical Licence No: 2/27/10/084 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: SPRING - HADE EDGE Data Type: Point Name: TAYLOR Easting: 414600 Northing: 406000	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 28/04/1966 Expiry Date: - Issue No: 100 Version Start Date: 28/04/1966 Version End Date: -
-	1697m N	Status: Historical Licence No: 2/27/10/102 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: WELL Data Type: Point Name: BROADHEAD Easting: 415330 Northing: 408810	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 26/05/1966 Expiry Date: - Issue No: 100 Version Start Date: 26/05/1966 Version End Date: -

ID	Location	Details	
-	1697m N	Status: Historical Licence No: 2/27/10/102 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: WELL - MILLSTONE GRIT - HOLMFIRTH Data Type: Point Name: BROADHEAD Easting: 415330 Northing: 408810	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 26/05/1966 Expiry Date: - Issue No: 100 Version Start Date: 26/05/1966 Version End Date: -
-	1737m SW	Status: Historical Licence No: 2/27/10/085 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: WELL Data Type: Point Name: TAYLOR Easting: 414500 Northing: 406000	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 28/04/1966 Expiry Date: - Issue No: 100 Version Start Date: 28/04/1966 Version End Date: -
-	1737m SW	Status: Historical Licence No: 2/27/10/085 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: WELL - MILLSTONE GRIT - HADE EDGE HOLMFIRTH Data Type: Point Name: TAYLOR Easting: 414500 Northing: 406000	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 28/04/1966 Expiry Date: - Issue No: 100 Version Start Date: 28/04/1966 Version End Date: -
-	1840m S	Status: Historical Licence No: 2/27/10/074 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: SPRING Data Type: Point Name: DENTON Easting: 416200 Northing: 405300	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 17/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 17/03/1966 Version End Date: -
-	1840m S	Status: Historical Licence No: 2/27/10/074 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: SPRING - HEPWORTH Data Type: Point Name: DENTON Easting: 416200 Northing: 405300	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 17/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 17/03/1966 Version End Date: -

ID	Location	Details	
-	1860m W	Status: Historical Licence No: 2/27/10/037 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: WELL X3 Data Type: Point Name: MAZUREK Easting: 414000 Northing: 407500	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 13/12/1966 Version End Date: -
-	1860m W	Status: Historical Licence No: 2/27/10/037 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: WELL X3 - MILLSTONE GRIT - HOLMFIRTH Data Type: Point Name: MAZUREK Easting: 414000 Northing: 407500	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 13/12/1966 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m	**12**

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 35**

ID	Location	Details	
B	561m NE	Status: Historical Licence No: 2/27/10/049 Details: General use relating to Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: DEAN DYKE Data Type: Point Name: COPLEY MARSHALL & CO LTD Easting: 416400 Northing: 407400	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/01/1966 Version End Date: -

ID	Location	Details	
B	561m NE	Status: Historical Licence No: 2/27/10/049 Details: General use relating to Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: DEAN DYKE Data Type: Point Name: COPLEY MARSHALL & CO LTD Easting: 416400 Northing: 407400	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/01/1966 Version End Date: -
-	834m NE	Status: Historical Licence No: 2/27/10/049 Details: General use relating to Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: JACKSON BRIDGE DYKE Data Type: Point Name: COPLEY MARSHALL & CO LTD Easting: 416300 Northing: 407900	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/01/1966 Version End Date: -
-	834m NE	Status: Historical Licence No: 2/27/10/049 Details: General use relating to Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: JACKSON BRIDGE DYKE Data Type: Point Name: COPLEY MARSHALL & CO LTD Easting: 416300 Northing: 407900	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/01/1966 Version End Date: -
-	1423m SW	Status: Historical Licence No: 2/27/10/112 Details: Potable Water Supply - Direct Direct Source: SURFACE WATER Point: BOSHAW WHAMS RESERVOIR Data Type: Line Name: YORKSHIRE WATER SERVICES LTD Easting: 415100 Northing: 405900	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 03/08/1977 Expiry Date: - Issue No: 100 Version Start Date: 03/08/1977 Version End Date: -

ID	Location	Details	
-	1423m SW	Status: Active Licence No: 2/27/10/112 Details: Transfer Between Sources (Pre Water Act 2003) Direct Source: SURFACE WATER Point: BOSHAW WHAMS RESERVOIR Data Type: Line Name: Yorkshire Water Services Ltd Easting: 415100 Northing: 405900	Annual Volume (m^3): 55,000 Max Daily Volume (m^3): 450 Original Application No: - Original Start Date: 03/08/1977 Expiry Date: - Issue No: 100 Version Start Date: 10/03/2016 Version End Date: -
-	1438m W	Status: Historical Licence No: 2/27/10/082 Details: Process water Direct Source: SURFACE WATER Point: RIVER RIBBLE - TRIBUTARY OF RIVER HOLME-RIBBLEDEN Data Type: Point Name: HOLMFIRTH DYERS LTD Easting: 414500 Northing: 407700	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 28/04/1966 Expiry Date: - Issue No: 102 Version Start Date: 17/04/2002 Version End Date: -
-	1438m W	Status: Active Licence No: 2/27/10/082 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: RIVER RIBBLE - TRIBUTARY OF RIVER HOLME-RIBBLEDEN Data Type: Point Name: HOLMFIRTH DYERS LTD Easting: 414500 Northing: 407700	Annual Volume (m^3): 85,000 Max Daily Volume (m^3): 355 Original Application No: - Original Start Date: 28/04/1966 Expiry Date: - Issue No: 103 Version Start Date: 07/01/2015 Version End Date: -
-	1753m W	Status: Historical Licence No: 2/27/10/053 Details: General use relating to Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: SPRING Data Type: Point Name: WESTWOOD YARNS LTD Easting: 414100 Northing: 406800	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 03/05/1991 Version End Date: -

ID	Location	Details	
-	1753m W	Status: Active Licence No: 2/27/10/053 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: SPRING - HOLMFIRTH Data Type: Point Name: WESTWOOD YARNS LTD Easting: 414100 Northing: 406800	Annual Volume (m^3): 9,092 Max Daily Volume (m^3): 45.46 Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2008 Version End Date: -
-	1833m W	Status: Historical Licence No: 2/27/10/052 Details: General Use Relating To Secondary Category (Low Loss) Direct Source: SURFACE WATER Point: RIVER RIBBLE - TRIBUTARY OF RIVER HOLME - HOLMFIRTH Data Type: Point Name: WESTWOOD YARNS LTD Easting: 414100 Northing: 406500	Annual Volume (m^3): 295496 Max Daily Volume (m^3): 1130 Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 101 Version Start Date: 12/10/2006 Version End Date: -
-	1833m W	Status: Historical Licence No: 2/27/10/052 Details: Process Water Direct Source: SURFACE WATER Point: RIVER RIBBLE - TRIBUTARY OF RIVER HOLME - HOLMFIRTH Data Type: Point Name: WESTWOOD YARNS LTD Easting: 414100 Northing: 406500	Annual Volume (m^3): 295496 Max Daily Volume (m^3): 1130 Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 101 Version Start Date: 12/10/2006 Version End Date: -

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

5.8 Potable abstractions

Records within 2000m	**1**

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

Features are displayed on the Abstractions and Source Protection Zones map on **page 35**

ID	Location	Details	
-	1423m SW	Status: Historical Licence No: 2/27/10/112 Details: Potable Water Supply - Direct Direct Source: SURFACE WATER Point: BOSHAW WHAMS RESERVOIR Data Type: Line Name: YORKSHIRE WATER SERVICES LTD Easting: 415100 Northing: 405900	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 03/08/1977 Expiry Date: - Issue No: 100 Version Start Date: 03/08/1977 Version End Date: -

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.

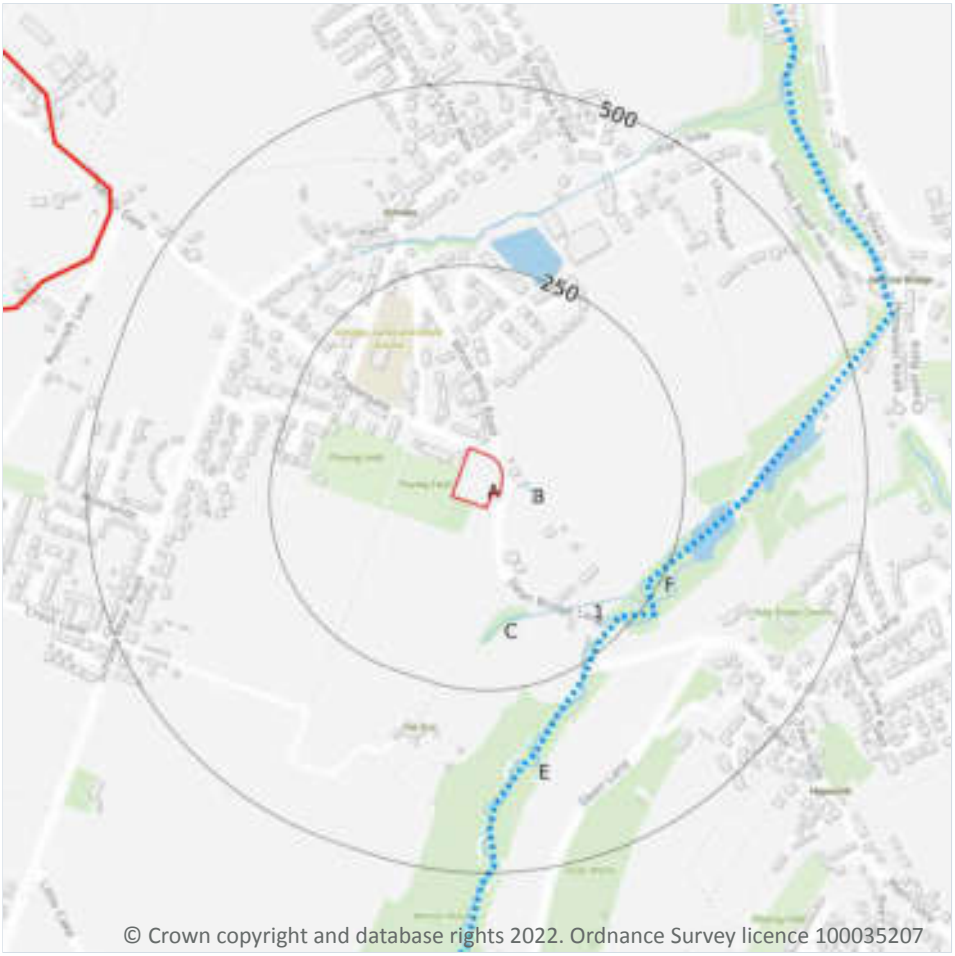
5.10 Source Protection Zones (confined aquifer)

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

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 49**

ID	Location	Type of water feature	Ground level	Permanence	Name
B	32m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
C	154m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
1	159m S	Inland river not influenced by normal tidal action.	Not provided	Watercourse contains water year round (in normal circumstances)	-
E	225m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Dean Dike
F	229m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Dean Dike
F	245m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Dean Dike

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m	**6**

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 49**

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 49**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
A	**On site**	**River**	**New Mill Dike from Source to River Holme**	**GB104027057610**	**Colne and Holme**	**Aire and Calder**

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 49**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
2	235m SE	River	New Mill Dike from Source to River Holme	GB104027057610	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 49**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
A	**On site**	**Aire & Calder Carb Limestone / Millstone Grit / Coal Measures.**	**GB40402G700400**	**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.

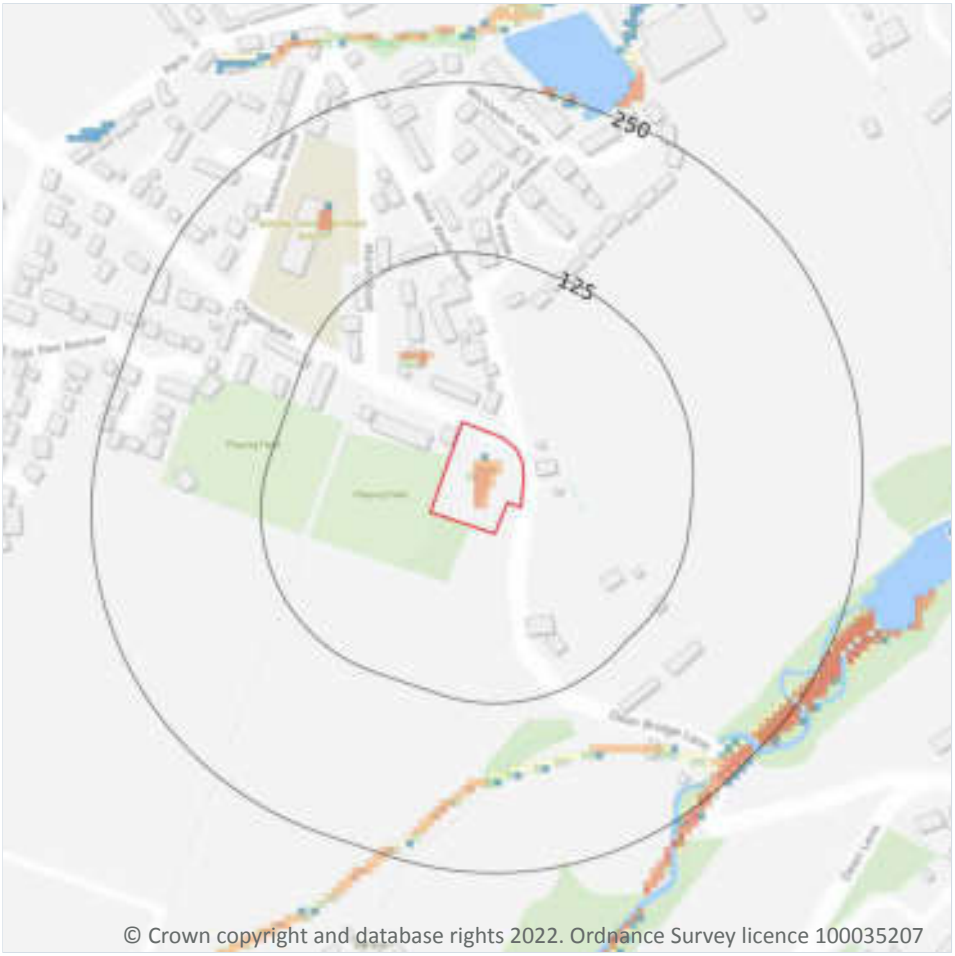
7.7 Flood Zone 3

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 55**

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

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

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

This data is sourced from Ambiental Risk Analytics.

9 Groundwater flooding

Site Outline

Search buffers in metres (m)

High

Moderate - High

Moderate

Low

Negligible

9.1 Groundwater flooding

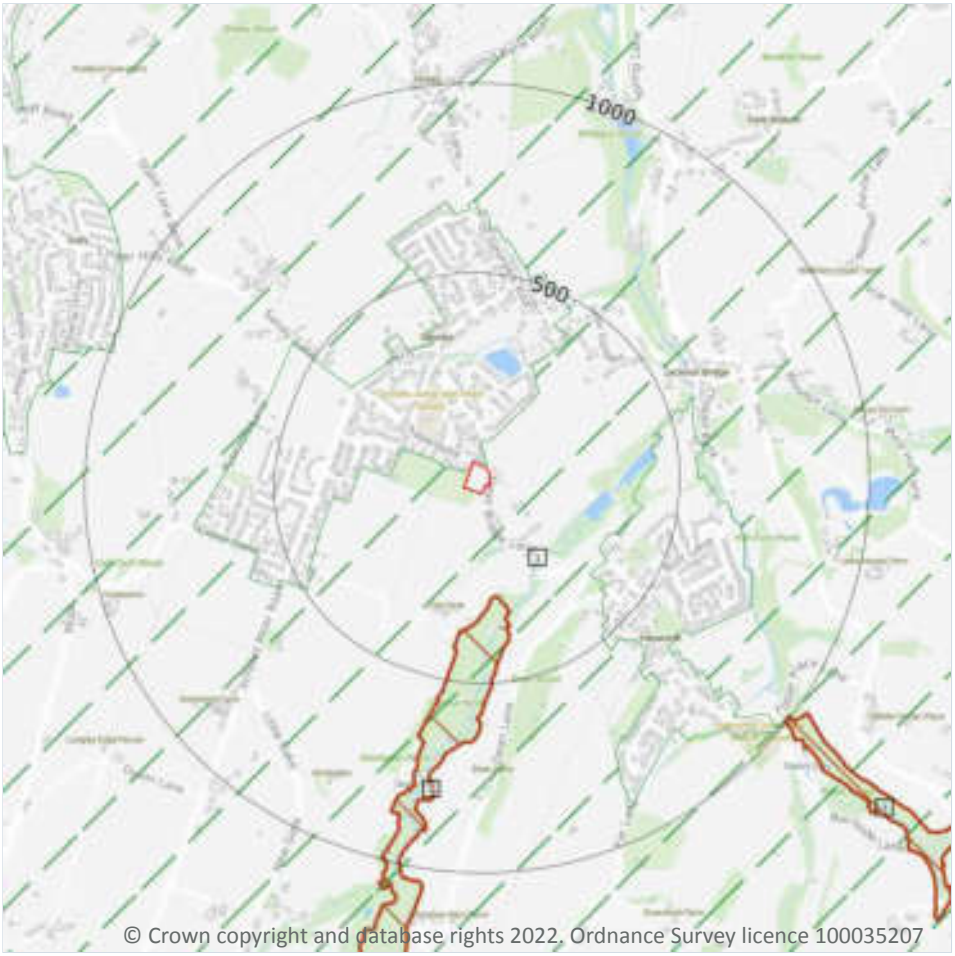
Highest risk on site	**Negligible**
Highest risk within 50m	**Negligible**

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 57**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations



Site Outline

Search buffers in metres (m)

Designated Ancient Woodland

Green Belt

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m	0

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

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

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m	0

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

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

10.3 Special Areas of Conservation (SAC)

Records within 2000m	0

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

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

10.4 Special Protection Areas (SPA)

Records within 2000m	0

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

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

10.5 National Nature Reserves (NNR)

Records within 2000m	0

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

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

10.6 Local Nature Reserves (LNR)

Records within 2000m	0

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

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

10.7 Designated Ancient Woodland

Records within 2000m	3

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

Features are displayed on the Environmental designations map on **page 58**

ID	Location	Name	Woodland Type
2	274m S	Morton Wood	Ancient & Semi-Natural Woodland
3	997m SE	Rakes Wood	Ancient & Semi-Natural Woodland
-	1915m NE	Holme House Wood	Ancient & Semi-Natural Woodland

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

10.8 Biosphere Reserves

Records within 2000m	0

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

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

10.9 Forest Parks

Records within 2000m	0

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

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m	0

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

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

10.11 Green Belt

Records within 2000m	1

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

Features are displayed on the Environmental designations map on **page 58**

ID	Location	Name	Local Authority name
1	**On site**	**South and West Yorkshire**	**Kirklees**

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.

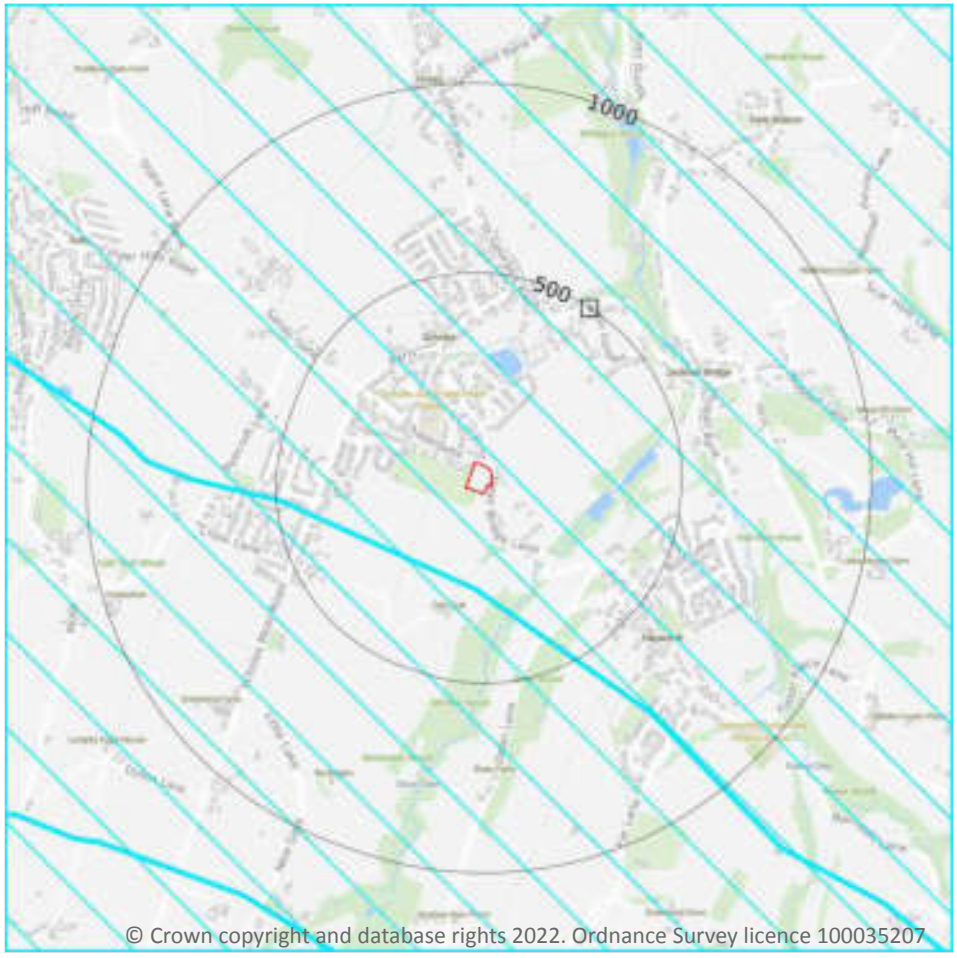
10.16 Nitrate Vulnerable Zones

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 63**

ID	Location	Type of developments requiring consultation
1	**On site**	**Infrastructure - Airports, helipads and other aviation proposals. Minerals, Oil and Gas - Oil & gas exploration/extraction. Air pollution - Any industrial/agricultural development that could cause air pollution (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 750m², manure stores > 3500t). Combustion - General combustion processes >50mw energy input. incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.**

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

Site Outline

Search buffers in metres (m)

Listed buildings

Conservation areas

Conservation areas - no data

National Parks

Areas of Outstanding Natural Beauty

Registered parks and gardens

Scheduled Monuments

World Heritage Sites

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	3

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.

Features are displayed on the Visual and cultural designations map on **page 65**

ID	Location	Name	Grade	Reference Number	Listed date
1	119m NW	2, 3, Marsh Road, Holme Valley, Kirklees, HD9	II	1313565	04/08/1983
2	134m NW	Scholes Methodist Chapel, Holme Valley, Kirklees, HD9	II	1313583	04/08/1983
3	233m N	Ward Boundary Stone At Junction Of Marsh Road, Holme Valley, Kirklees, HD9	II	1229403	04/08/1983

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

11.5 Conservation Areas

Records within 250m	0

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

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

11.6 Scheduled Ancient Monuments

Records within 250m	0

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

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

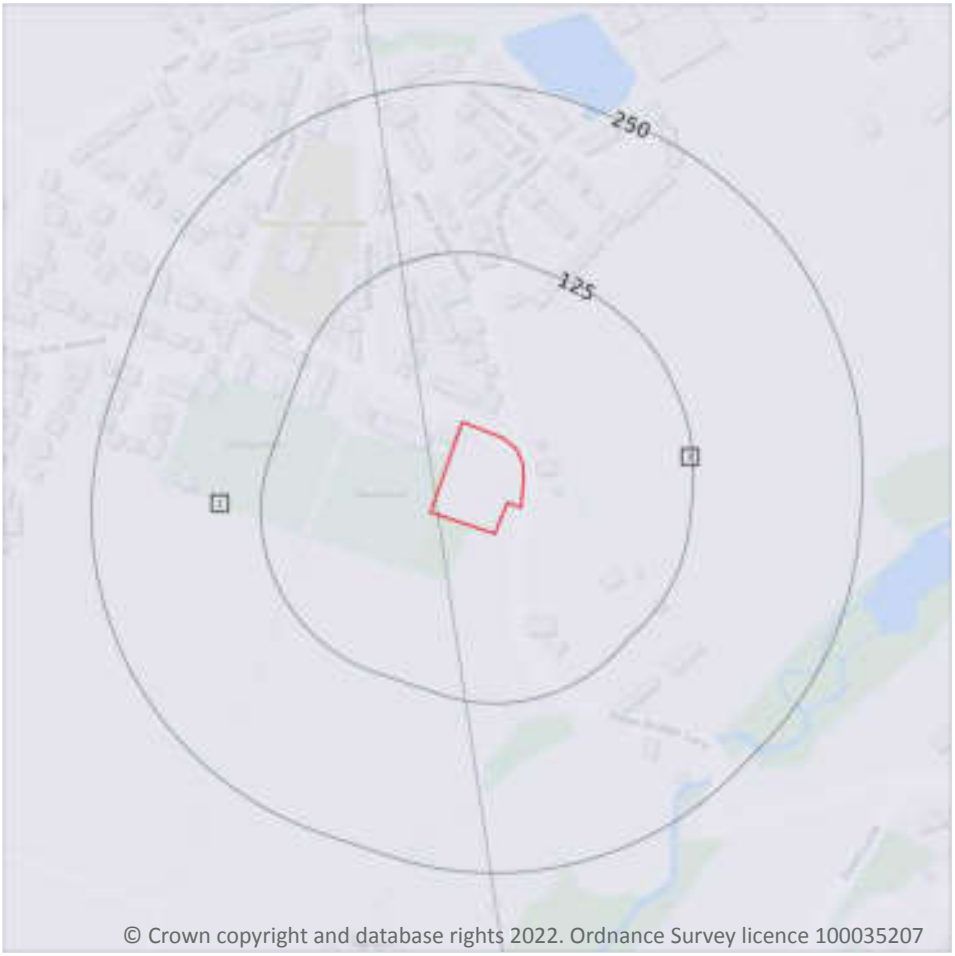
11.7 Registered Parks and Gardens

Records within 250m	0

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

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

12 Agricultural designations



Site Outline

Search buffers in metres (m)

- Grade 1 - excellent quality
- Grade 2 - very good quality
- Grade 3 - good to moderate quality
- Grade 3a - good quality
- Grade 3b - moderate quality
- Grade 4 - poor quality
- Grade 5 - very poor quality
- Non-agricultural land
- Urban land
- Exclusion land
- Tree felling licences
- Open Access land

12.1 Agricultural Land Classification

Records within 250m	2

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

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

ID	Location	Classification	Description
1	On site	Grade 4	**Poor quality agricultural land. Land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.**

ID	Location	Classification	Description
2	**On site**	**Grade 4**	**Poor quality agricultural land. Land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.**

This data is sourced from Natural England.

12.2 Open Access Land

Records within 250m	**0**

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

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

12.3 Tree Felling Licences

Records within 250m	**0**

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

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m	**0**

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

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m	0

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

This data is sourced from Natural England.

13 Habitat designations

Site Outline

Search buffers in metres (m)

Priority Habitat Inventory
Open Mosaic Habitat
Limestone Pavement Orders

Habitat Networks

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

13.1 Priority Habitat Inventory

Records within 250m	**8**

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

Features are displayed on the Habitat designations map on **page 71**

ID	Location	Main Habitat	Other habitats
2	85m SE	Traditional orchard	Main habitat: TORCH (INV > 50%)
3	219m SE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
4	219m SE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
5	228m SE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

ID	Location	Main Habitat	Other habitats
A	228m SE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
6	231m SE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
A	231m SE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
7	242m S	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m	**0**

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

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m	**1**

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

Features are displayed on the Habitat designations map on **page 71**

ID	Location	Site reference	Identification confidence	Primary source	Secondary source	Tertiary source
1	**On site**	**BRITPITS ref: 98013**	**Low**	**British Geological Survey BRITPITS database**	**UK Perspectives Aerial Photography**	**-**

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

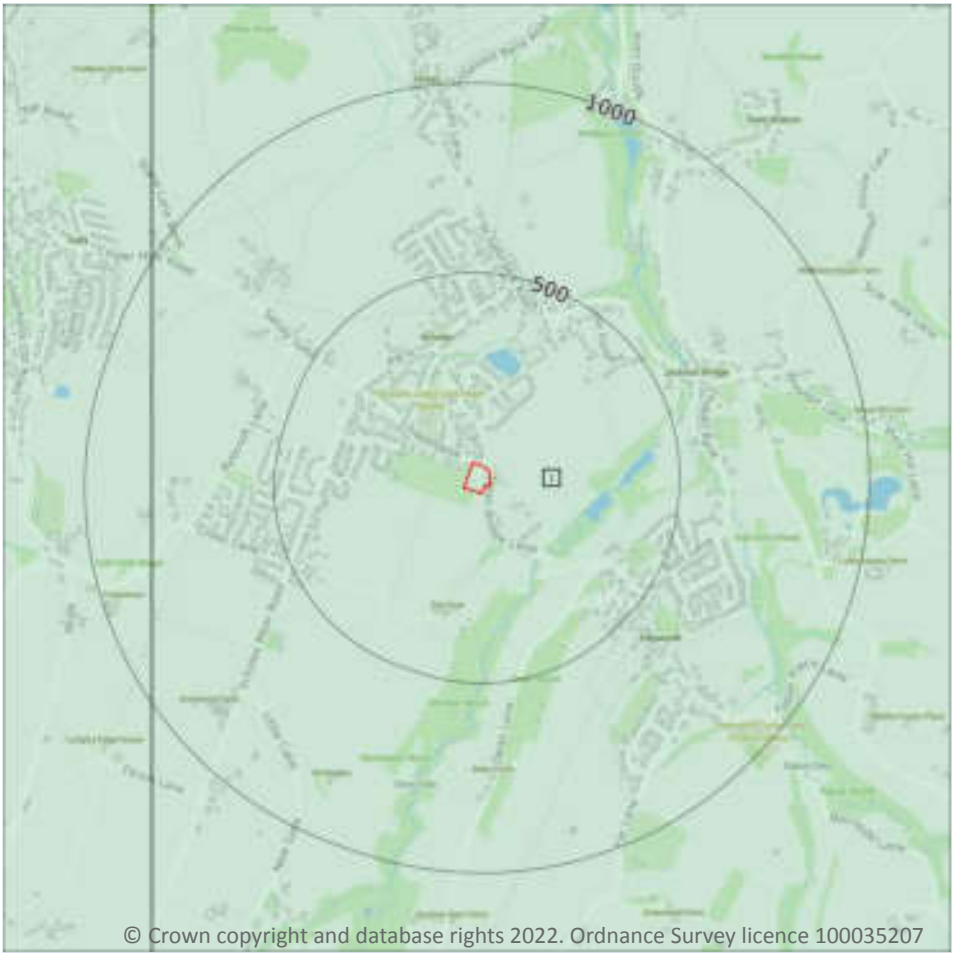
Records within 250m	**0**

Limestone pavements are outcrops of limestone where the surface has been worn away by natural means over millennia. These rocks have the appearance of paving blocks, hence their name. Not only do they have geological interest, they also provide valuable habitats for wildlife. These habitats are threatened due to their removal for use in gardens and water features. Many limestone pavements have been designated as SSSIs which affords them some protection. In addition, Section 34 of the Wildlife and Countryside Act 1981 gave

them additional protection via the creation of Limestone Pavement Orders, which made it a criminal offence to remove any part of the outcrop. The associated Limestone Pavement Priority Habitat is part of the UK Biodiversity Action Plan priority habitat in England.

This data is sourced from Natural England.

14 Geology 1:10,000 scale - Availability



Site Outline

Search buffers in metres (m)

Full coverage

Partial coverage

No coverage

14.1 10k Availability

Records within 500m	1

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

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

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**Full**	**SE10NE**

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	6

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.

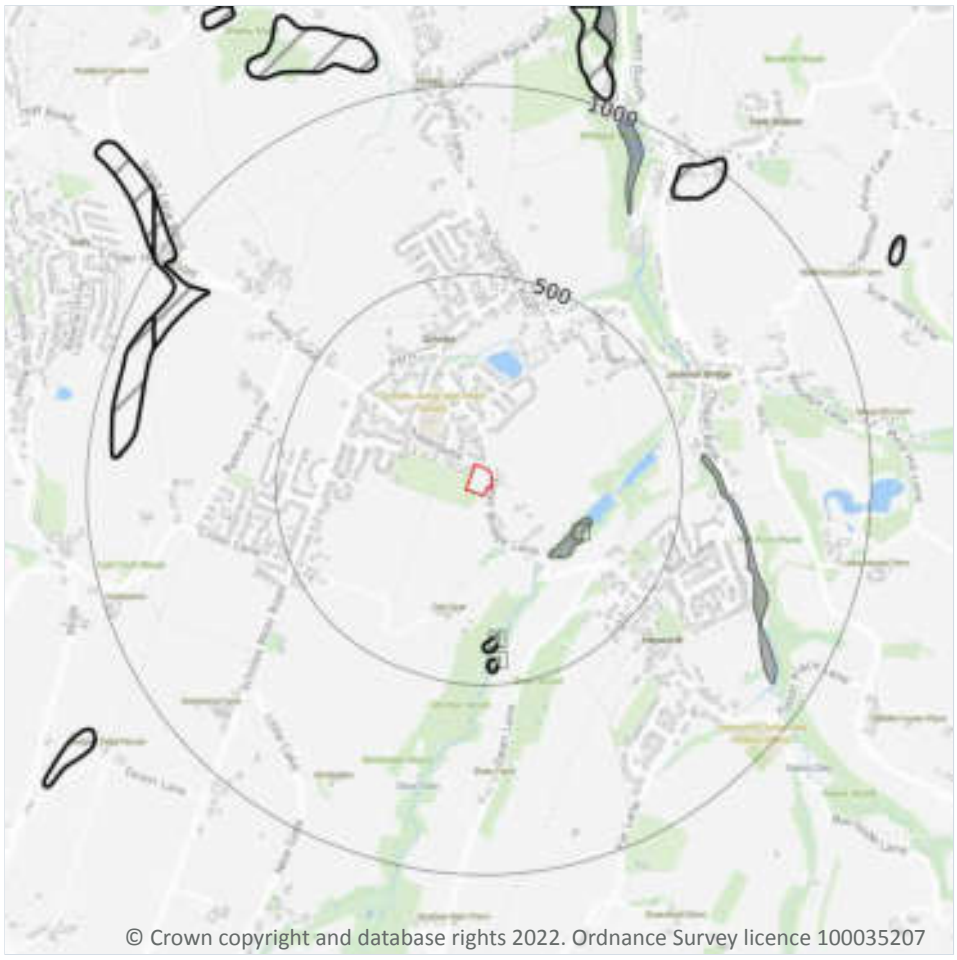
Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on **page 75**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**WGR-VOID**	**Worked Ground (Undivided)**	**Void**
2	39m NW	WGR-VOID	Worked Ground (Undivided)	Void
3	237m NW	WMGR-ARTDP	Infilled Ground	Artificial Deposit
4	277m N	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

ID	Location	LEX Code	Description	Rock description
5	304m E	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
6	331m SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (10k)

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

14.3 Superficial geology (10k)

Records within 500m	1

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

Features are displayed on the Geology 1:10,000 scale - Superficial map on **page 77**

ID	Location	LEX Code	Description	Rock description
1	229m SE	ALV-CZ	Alluvium - Silty Clay	Clay, Silty

This data is sourced from the British Geological Survey.

14.4 Landslip (10k)

Records within 500m	**2**

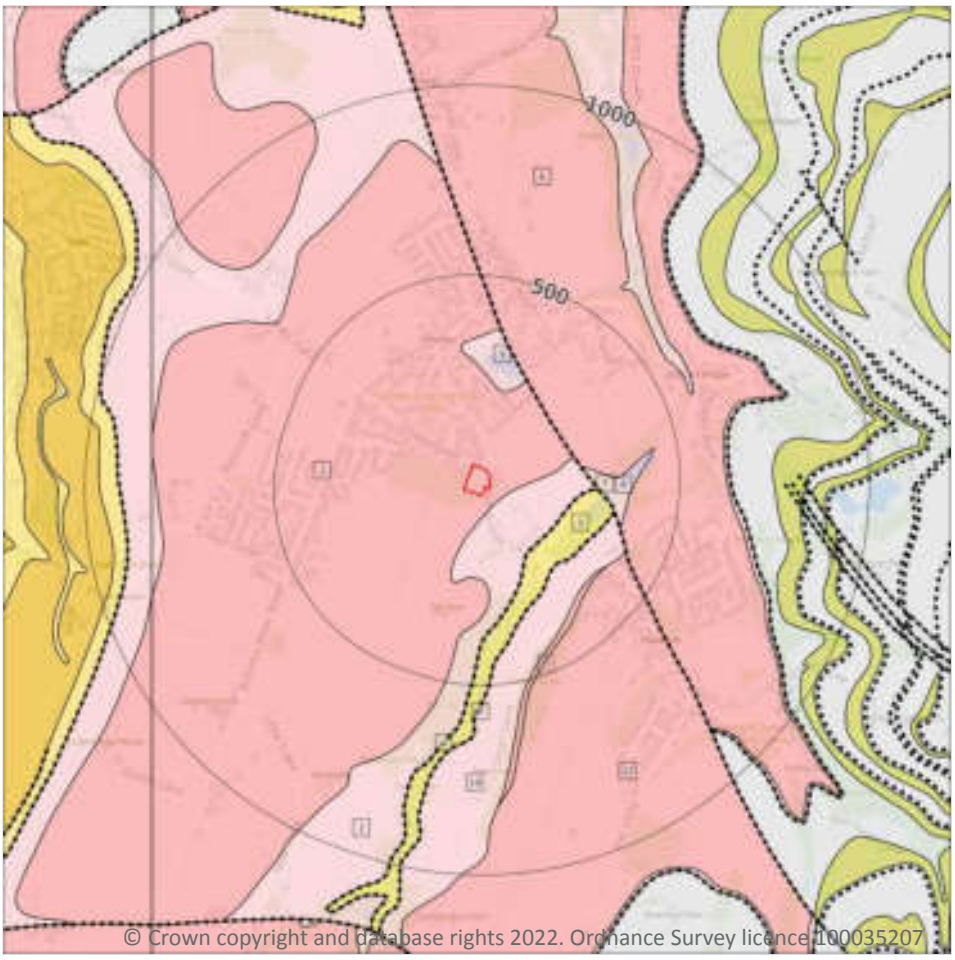
Mass movement deposits on BGS geological maps at 1:10,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

Features are displayed on the Geology 1:10,000 scale - Superficial map on **page 77**

ID	Location	LEX Code	Description	Rock description
2	370m S	SLIP-UKNOWN	Landslide Deposits	Unknown/unclassified Entry
3	433m S	SLIP-UKNOWN	Landslide Deposits	Unknown/unclassified Entry

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	9

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 79**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**RR-SDST**	**Rough Rock - Sandstone**	**Yeadonian Sub-age**
2	39m SE	ROSSE-MDSI	Rossendale Formation - Mudstone And Siltstone	Yeadonian Sub-age
3	191m SE	MARSD-MDSI	Marsden Formation - Mudstone And Siltstone	Marsdenian Sub-age

ID	Location	LEX Code	Description	Rock age
5	208m N	ROSSE-MDSI	Rossendale Formation - Mudstone And Siltstone	Yeadonian Sub-age
6	211m NE	RR-SDST	Rough Rock - Sandstone	Yeadonian Sub-age
8	240m E	ROSSE-MDSI	Rossendale Formation - Mudstone And Siltstone	Yeadonian Sub-age
10	267m SE	ROSSE-MDSI	Rossendale Formation - Mudstone And Siltstone	Yeadonian Sub-age
11	356m SE	RF-SDST	Rough Rock Flags - Sandstone	Yeadonian Sub-age
12	366m SE	RR-SDST	Rough Rock - Sandstone	Yeadonian Sub-age

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m	**3**

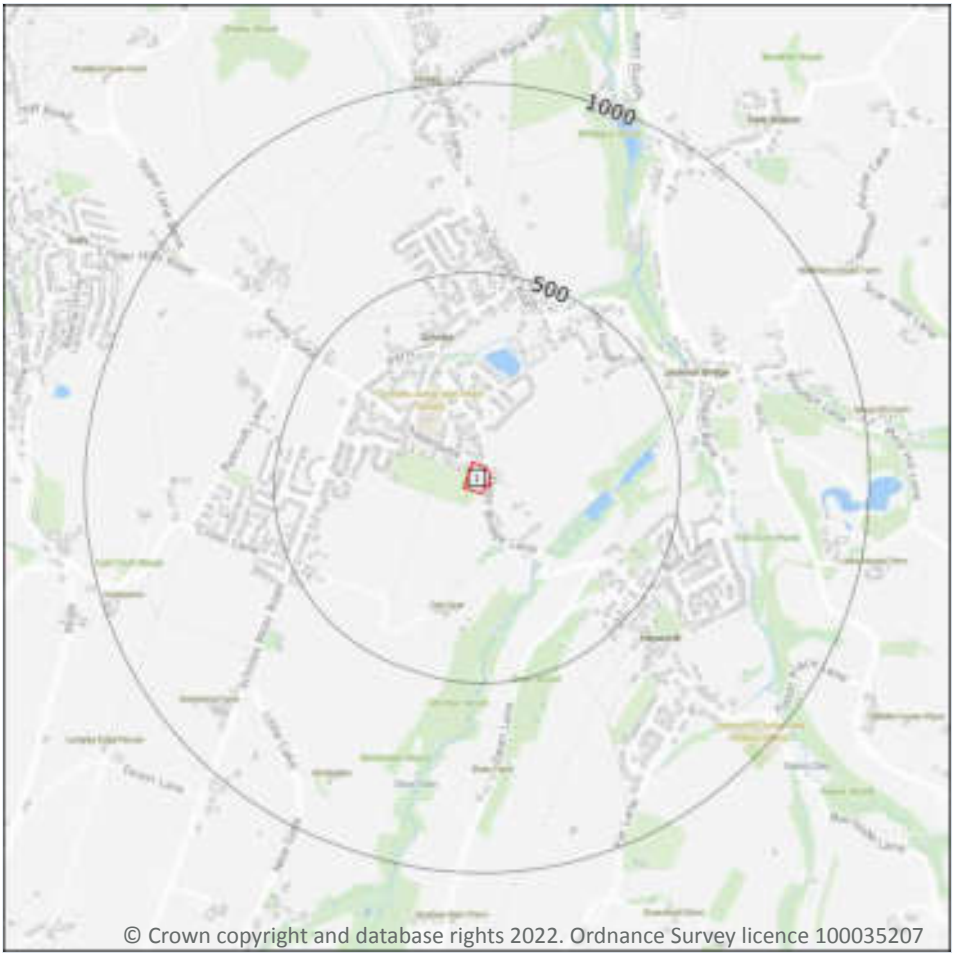
Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 79**

ID	Location	Category	Description
4	191m SE	FOSSIL_HORIZON	Fossil horizon, marine band ()
7	211m NE	FAULT	Normal fault, inferred; crossmarks on downthrow side
9	267m SE	FOSSIL_HORIZON	Fossil horizon, marine band ()

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 81**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**Full**	**EW086_glossop_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

15.4 Superficial geology (50k)

Records within 500m	0

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.

This data is sourced from the British Geological Survey.

15.5 Superficial 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 superficial deposits (the zone between the land surface and the water table).

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.

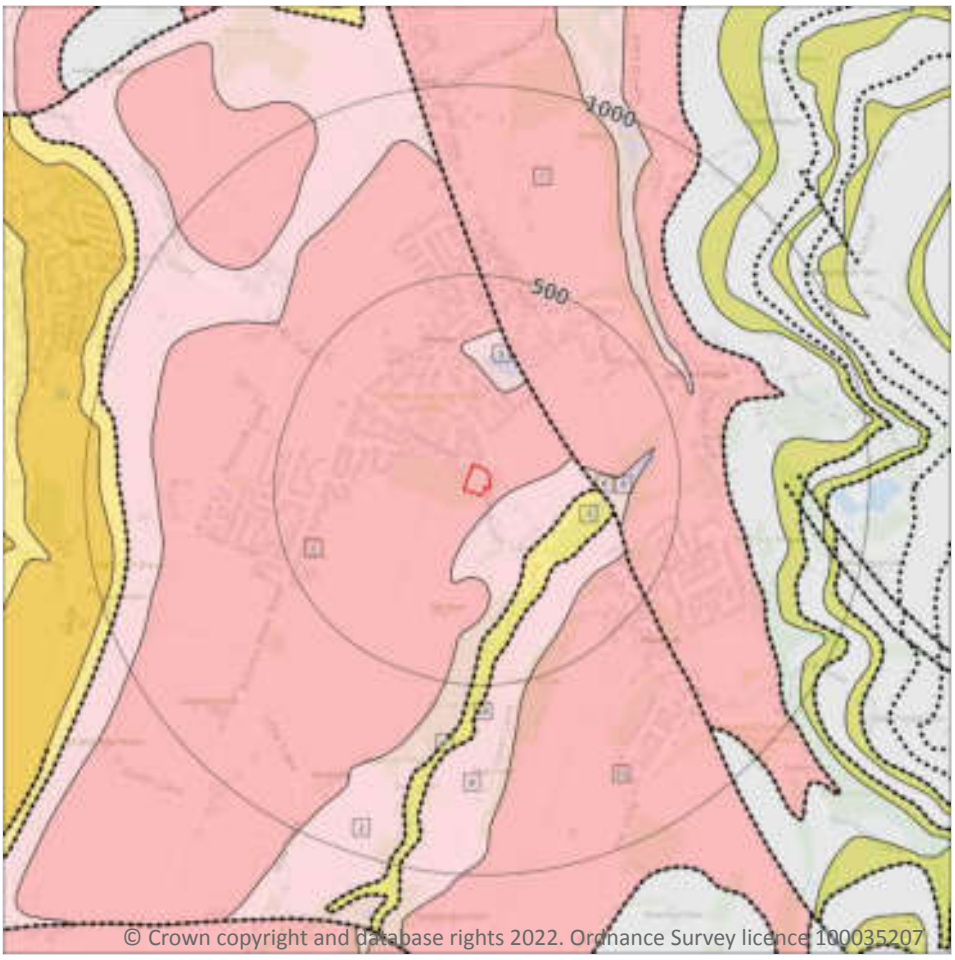
15.7 Landslip permeability (50k)

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 **8**

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 84**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**RR-SDST**	**ROUGH ROCK - SANDSTONE**	**NAMURIAN**
2	39m SE	ROSSE-MDSI	ROSSENDALE FORMATION - MUDSTONE AND SILTSTONE	NAMURIAN
3	192m SE	MARSD-MDSI	MARSDEN FORMATION - MUDSTONE AND SILTSTONE	NAMURIAN

ID	Location	LEX Code	Description	Rock age
5	208m N	ROSSE-MDSI	ROSSENDALE FORMATION - MUDSTONE AND SILTSTONE	NAMURIAN
7	210m NE	RR-SDST	ROUGH ROCK - SANDSTONE	NAMURIAN
8	240m E	ROSSE-MDSI	ROSSENDALE FORMATION - MUDSTONE AND SILTSTONE	NAMURIAN
9	267m SE	ROSSE-MDSI	ROSSENDALE FORMATION - MUDSTONE AND SILTSTONE	NAMURIAN
11	356m SE	RR-SDST	ROUGH ROCK - SANDSTONE	NAMURIAN

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m	**2**

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Fracture**	**High**	**Moderate**
39m S	Fracture	Low	Low

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m	**3**

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 84**

ID	Location	Category	Description
4	192m SE	FOSSIL_HORIZON	Marine band
6	210m NE	FAULT	Fault, inferred
10	267m SE	FOSSIL_HORIZON	Marine band

This data is sourced from the British Geological Survey.

16 Boreholes

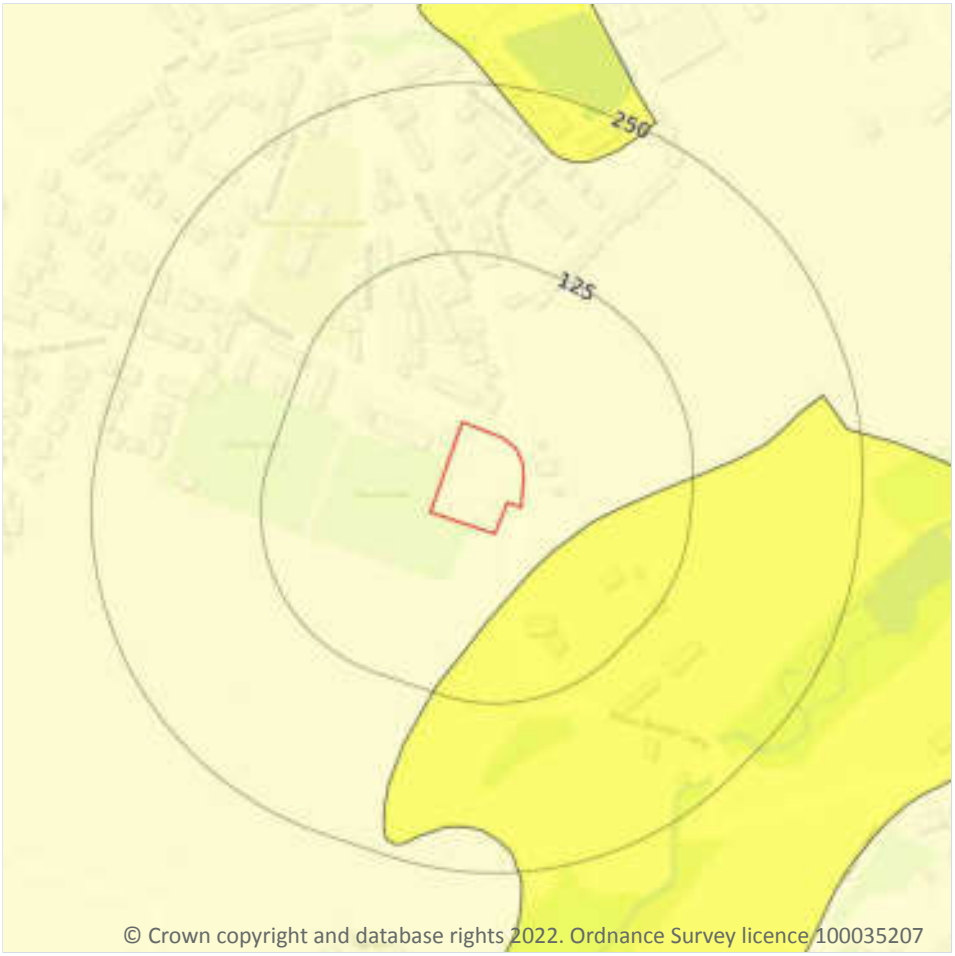
16.1 BGS Boreholes

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

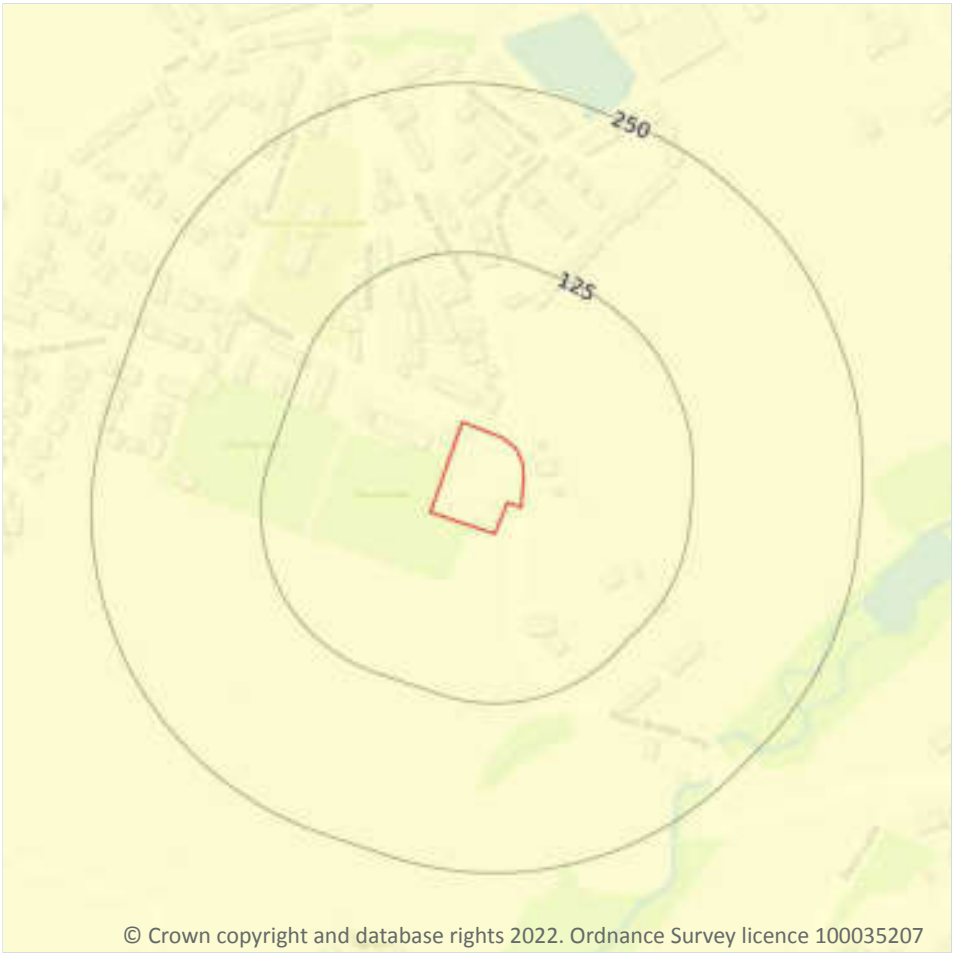
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and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

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

Location	Hazard rating	Details
On site	**Negligible**	**Ground conditions predominantly non-plastic.**
39m SE	Very low	Ground conditions predominantly low plasticity.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Running sands



Site Outline

Search buffers in metres (m)

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

17.2 Running sands

Records within 50m	1

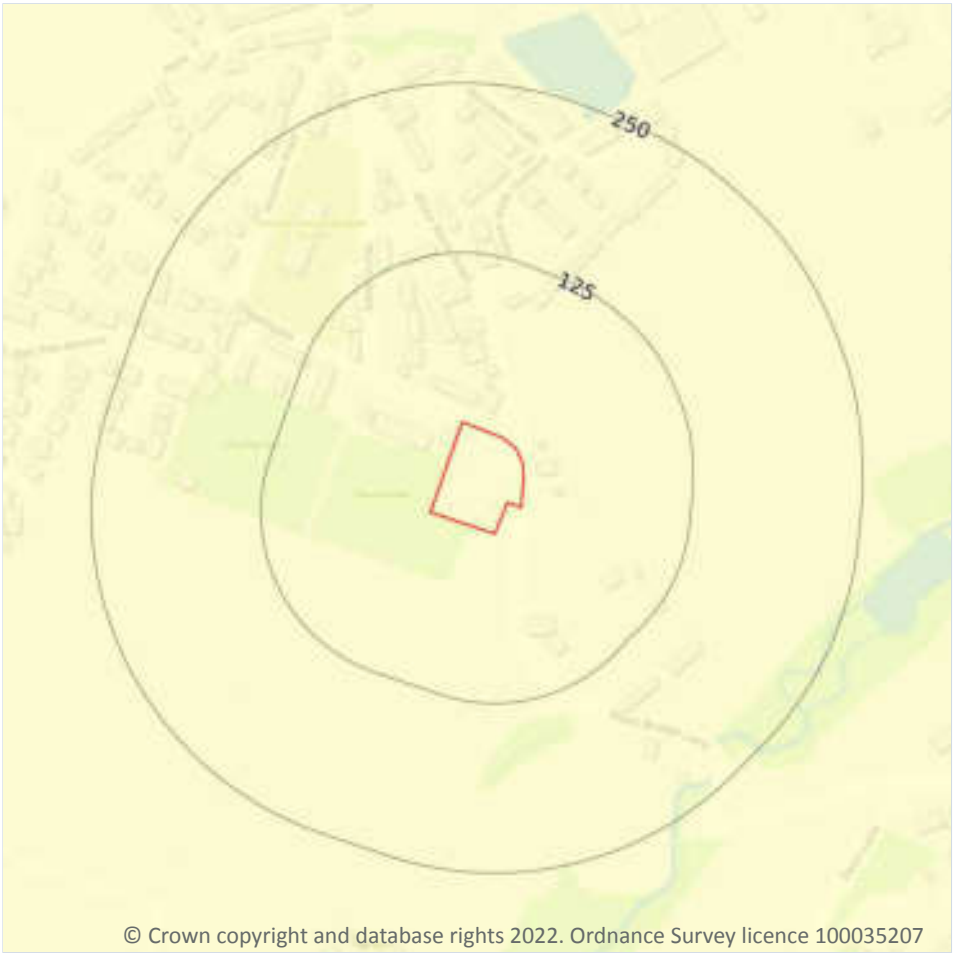
The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

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

Location	Hazard rating	Details
On site	**Negligible**	**Running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on lands use due to running conditions.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Compressible deposits



Site Outline

Search buffers in metres (m)

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

17.3 Compressible deposits

Records within 50m	1

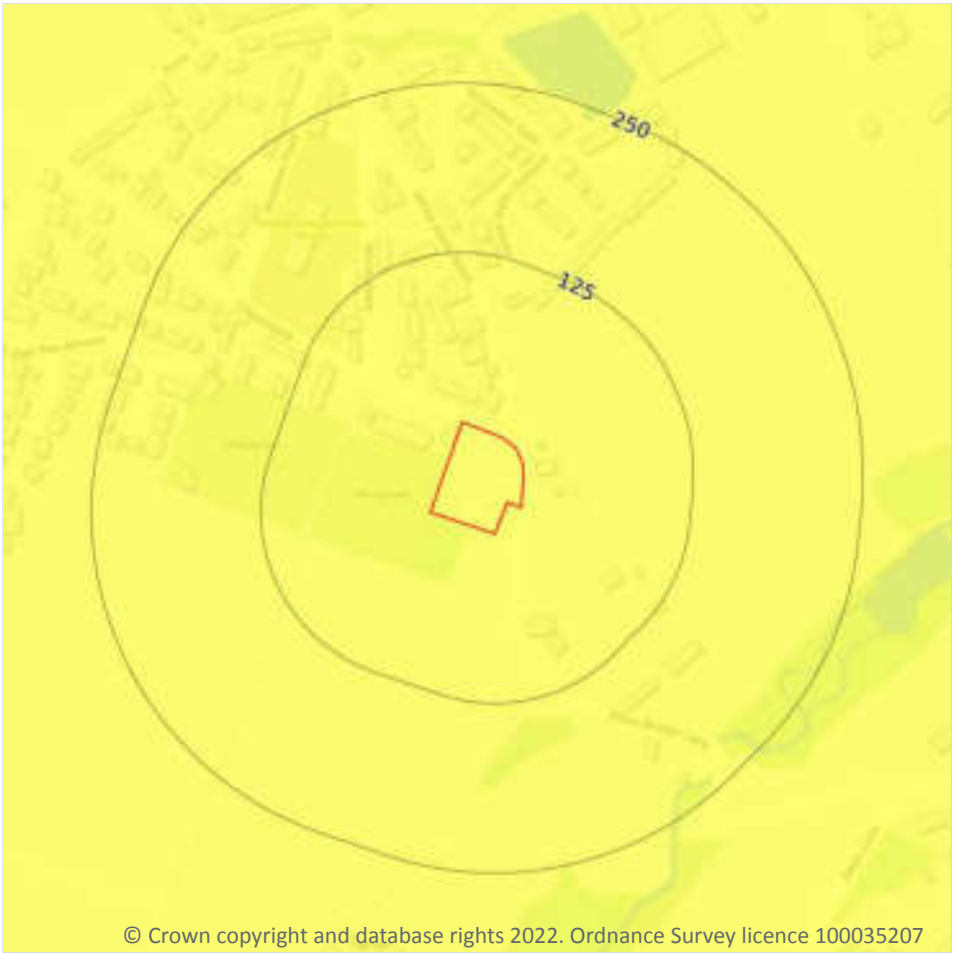
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

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

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

This data is sourced from the British Geological Survey.

Natural ground subsidence - Collapsible deposits



Site Outline

Search buffers in metres (m)

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

17.4 Collapsible deposits

Records within 50m	1

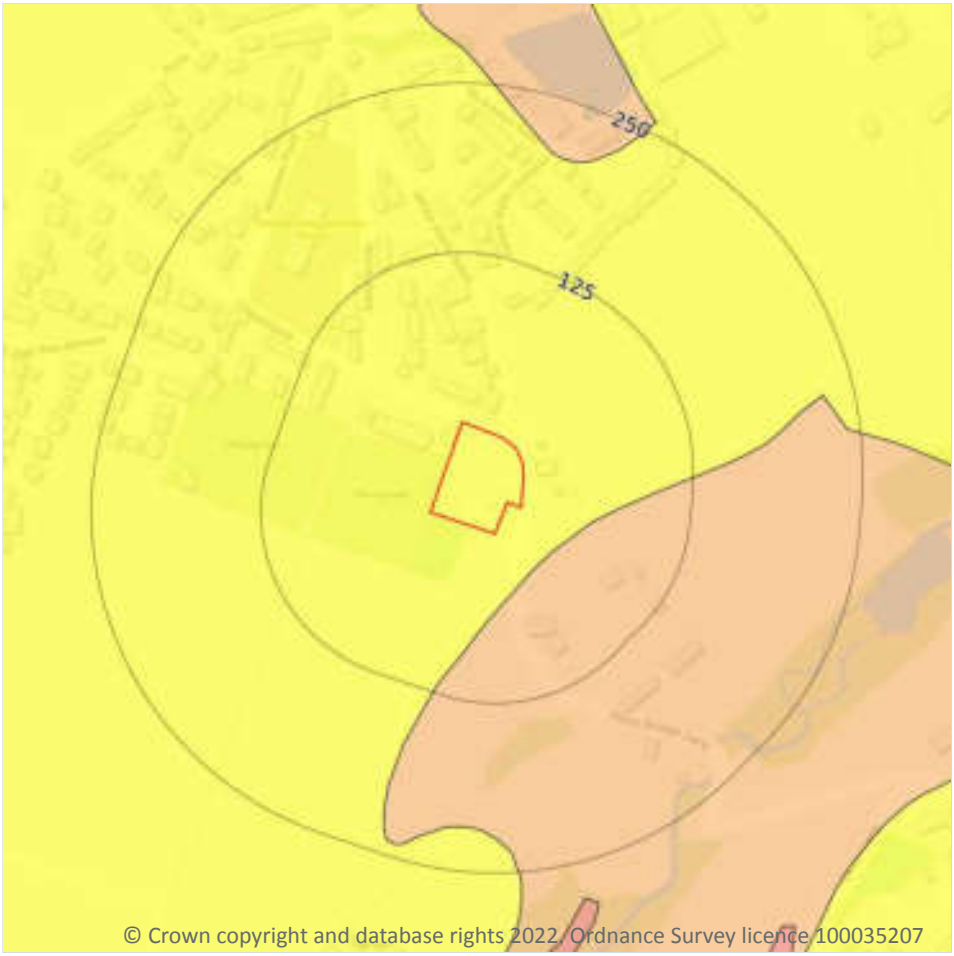
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

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

17.5 Landslides

Records within 50m	2

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

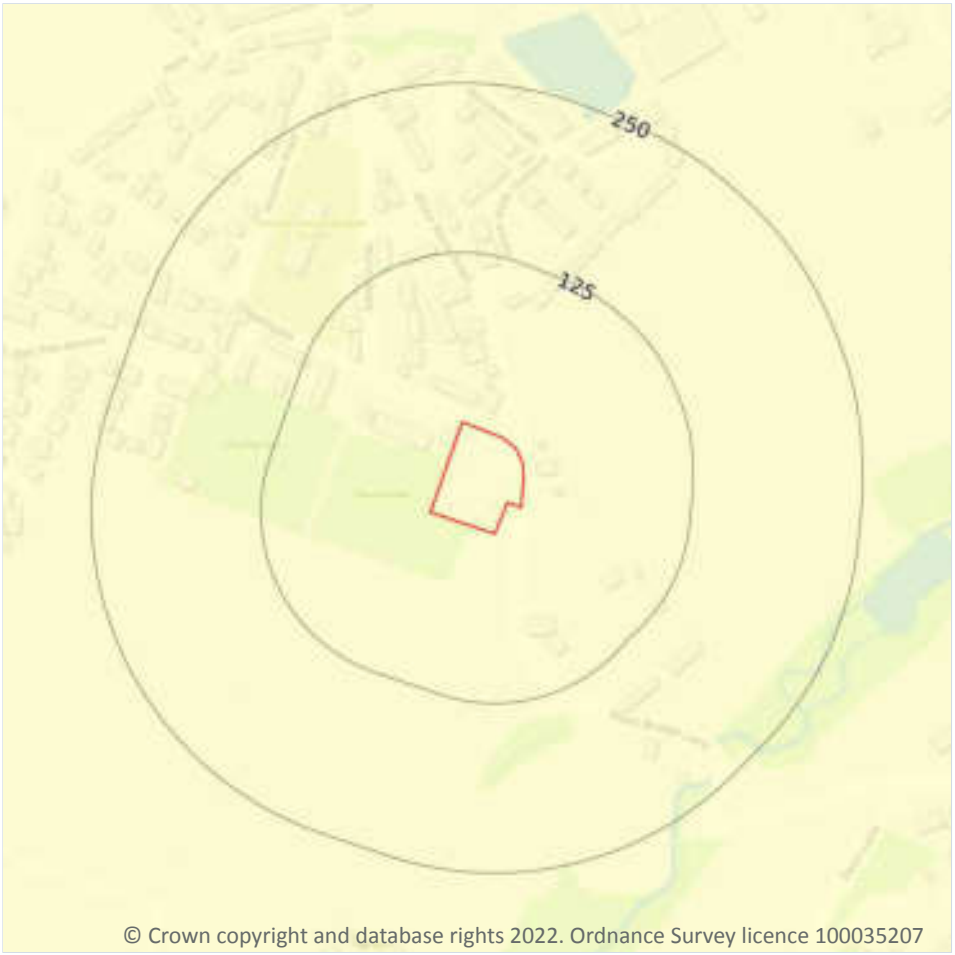
Features are displayed on the Natural ground subsidence - Landslides map on **page 91**

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

Location	Hazard rating	Details
39m SE	Low	Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Ground dissolution of soluble rocks



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

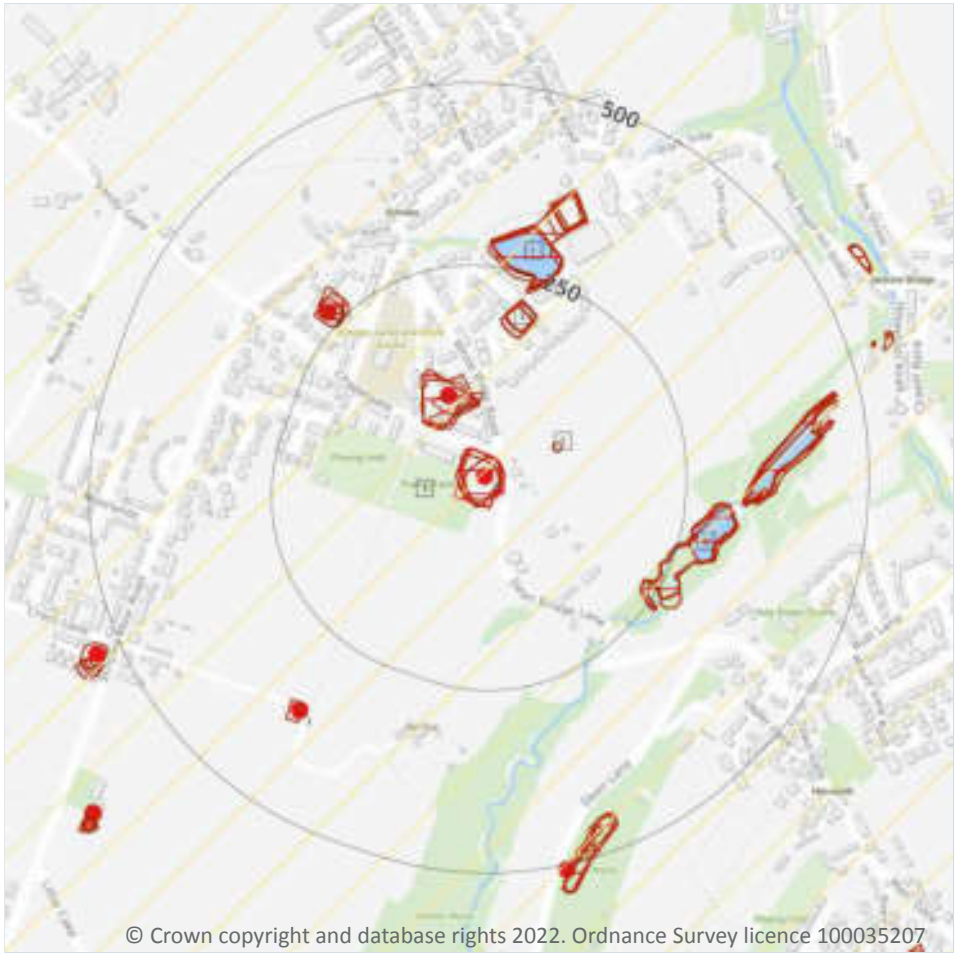
The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

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

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

This data is sourced from the British Geological Survey.

18 Mining, ground workings and natural cavities



Site Outline

Search buffers in metres (m)

Natural cavities (Area)

Natural cavities (Point)

BritPits

Surface ground workings

Underground workings

Historical Mineral Planning Areas

Mining Cavities

Non Coal Mining

Sporadic underground mining of restricted extent possible

Localised small scale underground mining possible

Small scale mining possible

Underground mining known or likely within or in close proximity

Underground mining known within or in very close proximity

18.1 Natural cavities

Records within 500m	0

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

This data is sourced from Stantec UK Ltd.

18.2 BritPits

Records within 500m	**4**

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 94**

ID	Location	Details	Description
A	**On site**	**Name: Town Quarry** **Address: Scholes, HOLMFIRTH, West Yorkshire** **Commodity: Sandstone** **Status: Ceased**	**Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site** **Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority**
B	78m NW	Name: Chapel Gate Address: Scholes, HOLMFIRTH, West Yorkshire Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
F	270m NW	Name: Paris Address: Scholes, LEEDS, West Yorkshire Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
I	361m SW	Name: Morton Wood Quarry Address: Scholes, HOLMFIRTH, West Yorkshire Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

This data is sourced from the British Geological Survey.

18.3 Surface ground workings

Records within 250m	**35**

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 94**

ID	Location	Land Use	Year of mapping	Mapping scale
A	**On site**	**Unspecified Quarry**	**1980**	**1:10000**
A	**On site**	**Unspecified Quarry**	**1970**	**1:10560**
A	**On site**	**Gravel Pit**	**1955**	**1:10560**
A	**On site**	**Unspecified Quarry**	**1948**	**1:10560**
A	**On site**	**Unspecified Quarry**	**1904**	**1:10560**
A	**On site**	**Unspecified Quarry**	**1888**	**1:10560**
A	**On site**	**Unspecified Quarry**	**1933**	**1:10560**
B	39m NW	Unspecified Pit	1970	1:10560
B	46m NW	Unspecified Quarry	1933	1:10560
B	46m NW	Unspecified Quarry	1955	1:10560
B	47m NW	Unspecified Quarry	1948	1:10560
B	47m NW	Unspecified Quarry	1904	1:10560
B	52m NW	Sandstone Quarry	1854	1:10560
2	74m NE	Sandstone Quarry	1854	1:10560
C	163m N	Water Body	1948	1:10560
C	163m N	Water Body	1904	1:10560
C	163m N	Pond	1888	1:10560
C	173m N	Pond	1970	1:10560
C	173m N	Water Body	1955	1:10560
C	174m N	Water Body	1933	1:10560
D	226m SE	Water Body	1933	1:10560
E	226m N	Ponds	1888	1:10560
D	228m SE	Water Body	1948	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
D	228m SE	Water Body	1904	1:10560
E	231m N	Water Body	1980	1:10000
E	231m N	Water Body	1970	1:10560
E	231m N	Water Body	1955	1:10560
E	232m N	Water Body	1948	1:10560
E	232m N	Water Body	1904	1:10560
D	232m SE	Water Body	1955	1:10560
E	235m N	Water Body	1933	1:10560
F	247m NW	Unspecified Quarry	1948	1:10560
F	247m NW	Unspecified Quarry	1904	1:10560
F	247m NW	Unspecified Quarry	1888	1:10560
F	248m NW	Unspecified Quarry	1933	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground workings

Records within 1000m	**3**

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 94**

ID	Location	Land Use	Year of mapping	Mapping scale
-	846m E	Disused Colliery	1951	1:10560
-	933m E	Disused Colliery	1948	1:10560
-	933m E	Colliery	1904	1:10560

This is data is sourced from Ordnance Survey/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	2

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 94**

ID	Location	Name	Commodity	Class	Likelihood
1	**On site**	**Not available**	**Vein Mineral**	**A**	**Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered**
-	823m W	Not available	Vein Mineral	A	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered

This data is sourced from the British Geological Survey.

18.7 Mining cavities

Records within 1000m	0

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

This data is sourced from Stantec UK Ltd.

18.8 JPB mining areas

Records on site	0

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

This data is sourced from Johnson Poole and Bloomer.

18.9 Coal mining

Records on site	1

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

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

This data is sourced from the Coal Authority.

18.10 Brine areas

Records on site	0

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

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

18.11 Gypsum areas

Records on site	0

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.12 Tin mining

Records on site	0

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

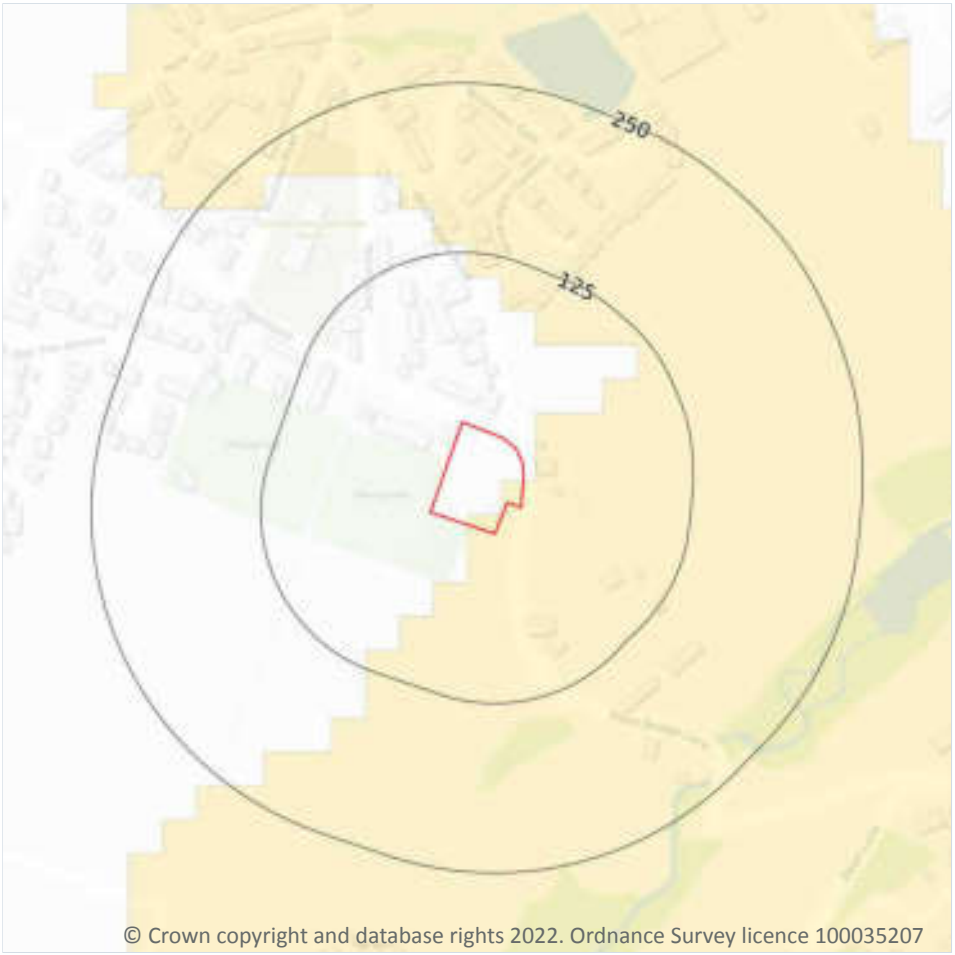
18.13 Clay mining

Records on site	0

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

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

19 Radon



Site Outline

Search buffers in metres (m)

Greater than 30%

Between 10% and 30%

Between 5% and 10%

Between 3% and 5%

Between 1% and 3%

Less than 1%

19.1 Radon

Records on site	2

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

Features are displayed on the Radon map on **page 101**

Location	Estimated properties affected	Radon Protection Measures required
On site	**Between 1% and 3%**	**None**
On site	**Less than 1%**	**None****

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

20 Soil chemistry

20.1 BGS Estimated Background Soil Chemistry

Records within 50m	1

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

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

This data is sourced from the British Geological Survey.

20.2 BGS Estimated Urban Soil Chemistry

Records within 50m	0

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

This data is sourced from the British Geological Survey.

20.3 BGS Measured Urban Soil Chemistry

Records within 50m	0

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

This data is sourced from the British Geological Survey.

21 Railway infrastructure and projects

21.1 Underground railways (London)

Records within 250m	0

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

This data is sourced from publicly available information by Groundsure.

21.2 Underground railways (Non-London)

Records within 250m	0

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

This data is sourced from publicly available information by Groundsure.

21.3 Railway tunnels

Records within 250m	0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

21.4 Historical railway and tunnel features

Records within 250m	0

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

This data is sourced from Ordnance Survey/Groundsure.

21.5 Royal Mail tunnels

Records within 250m	0

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

This data is sourced from Groundsure/the Postal Museum.

21.6 Historical railways

Records within 250m	0

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

This data is sourced from OpenStreetMap.

21.7 Railways

Records within 250m	0

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

This data is sourced from Ordnance Survey and OpenStreetMap.

21.8 Crossrail 1

Records within 500m	0

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

This data is sourced from publicly available information by Groundsure.

21.9 Crossrail 2

Records within 500m	0

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

This data is sourced from publicly available information by Groundsure.

21.10 HS2

Records within 500m	0

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

This data is sourced from HS2 ltd.

Data providers

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

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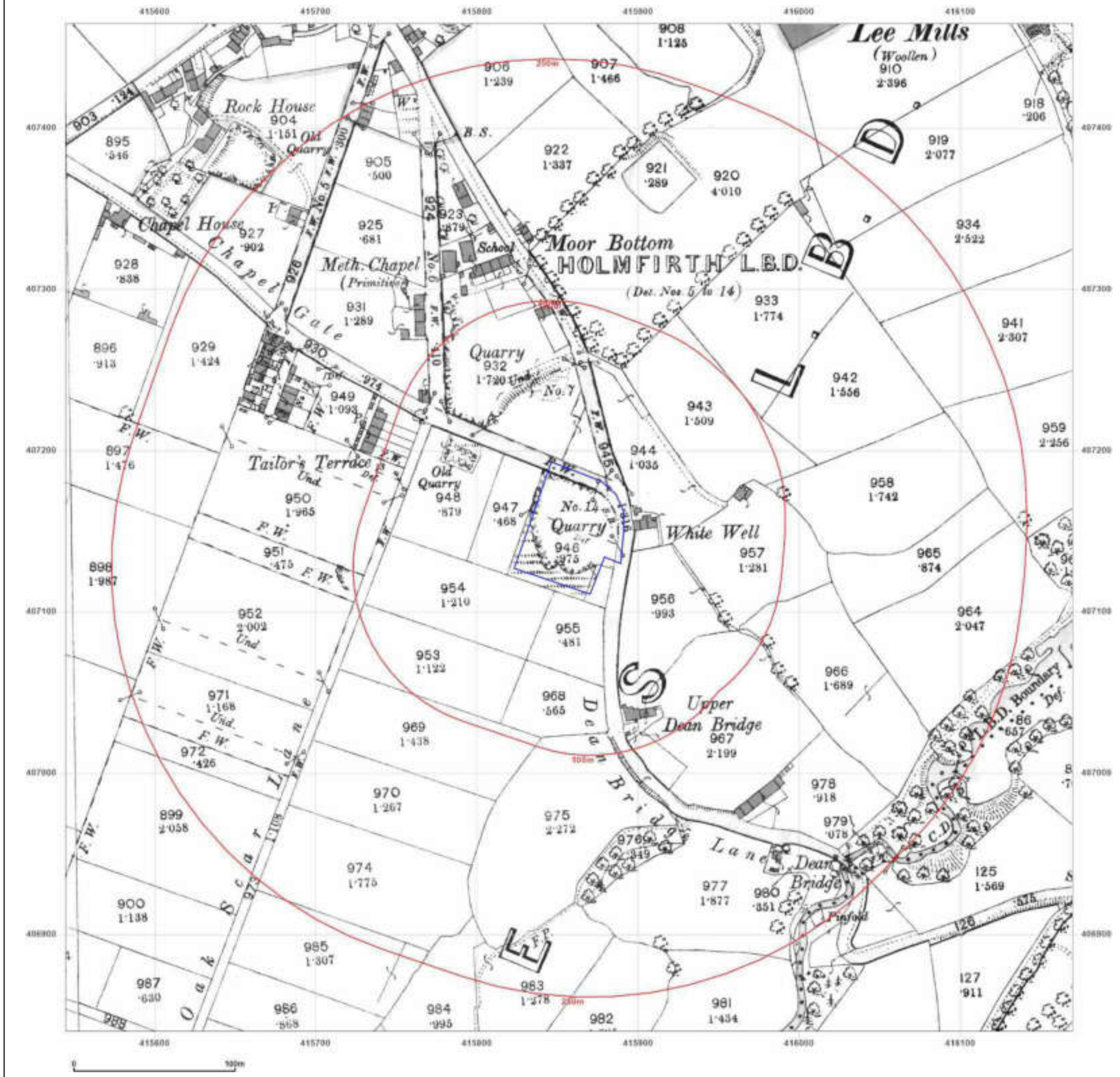

Groundsure INSIGHTS

Site Details:

415861 , 407157

Client Ref: G1380
Report Ref: GS-8445246
Grid Ref: 415857, 407152

Map Name: County Series

Map date: **1893**

Scale: 1:2,500

Printed at: 1:2,500

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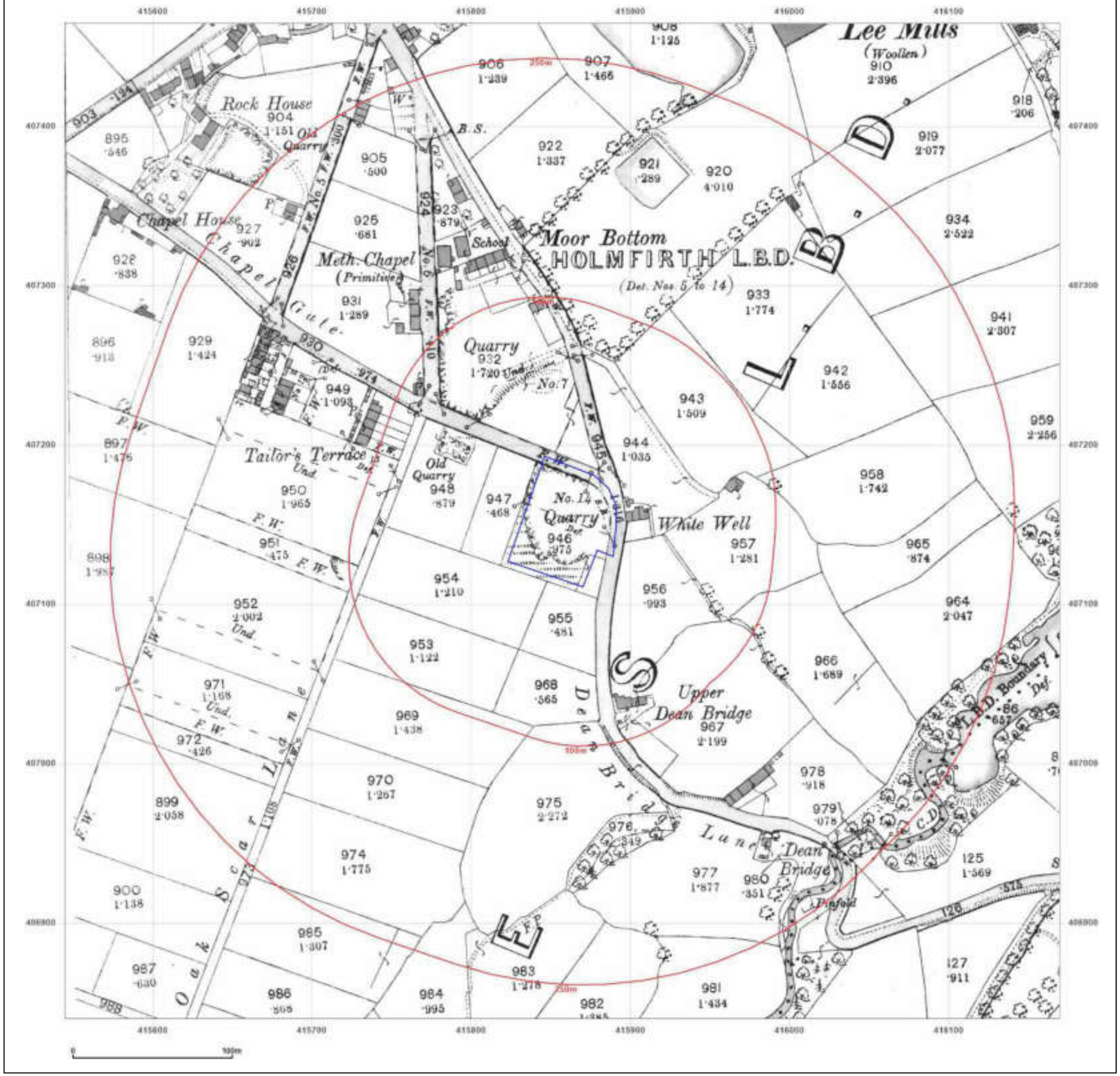

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Site Details:

415861 , 407157

Client Ref: G1380
Report Ref: GS-8445246
Grid Ref: 415857, 407152

Map Name: County Series

Map date: **1893**

Scale: 1:2,500

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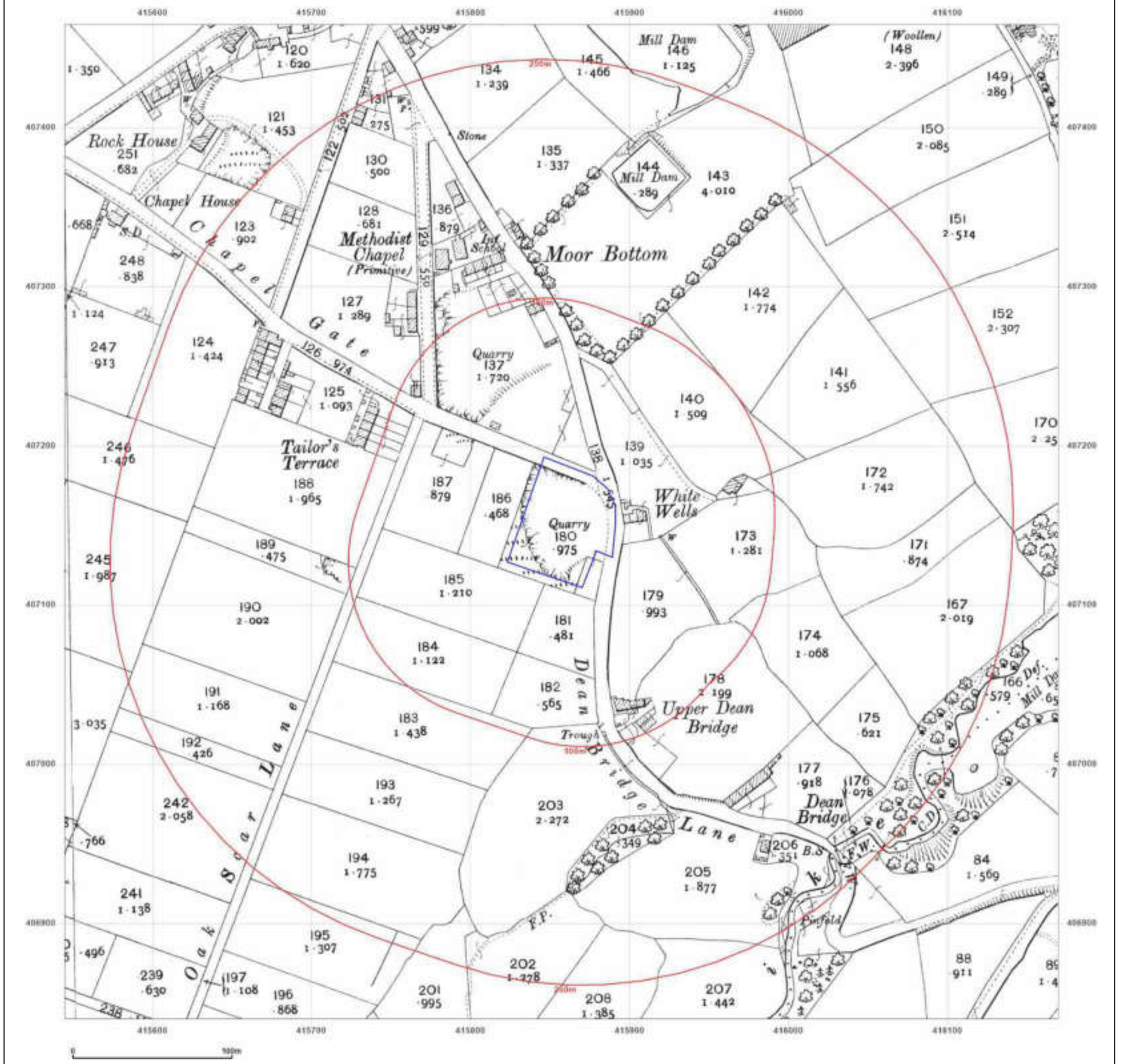

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Site Details:

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Client Ref: G1380
Report Ref: GS-8445246
Grid Ref: 415857, 407152

Map Name: County Series

Map date: **1905**

Scale: 1:2,500

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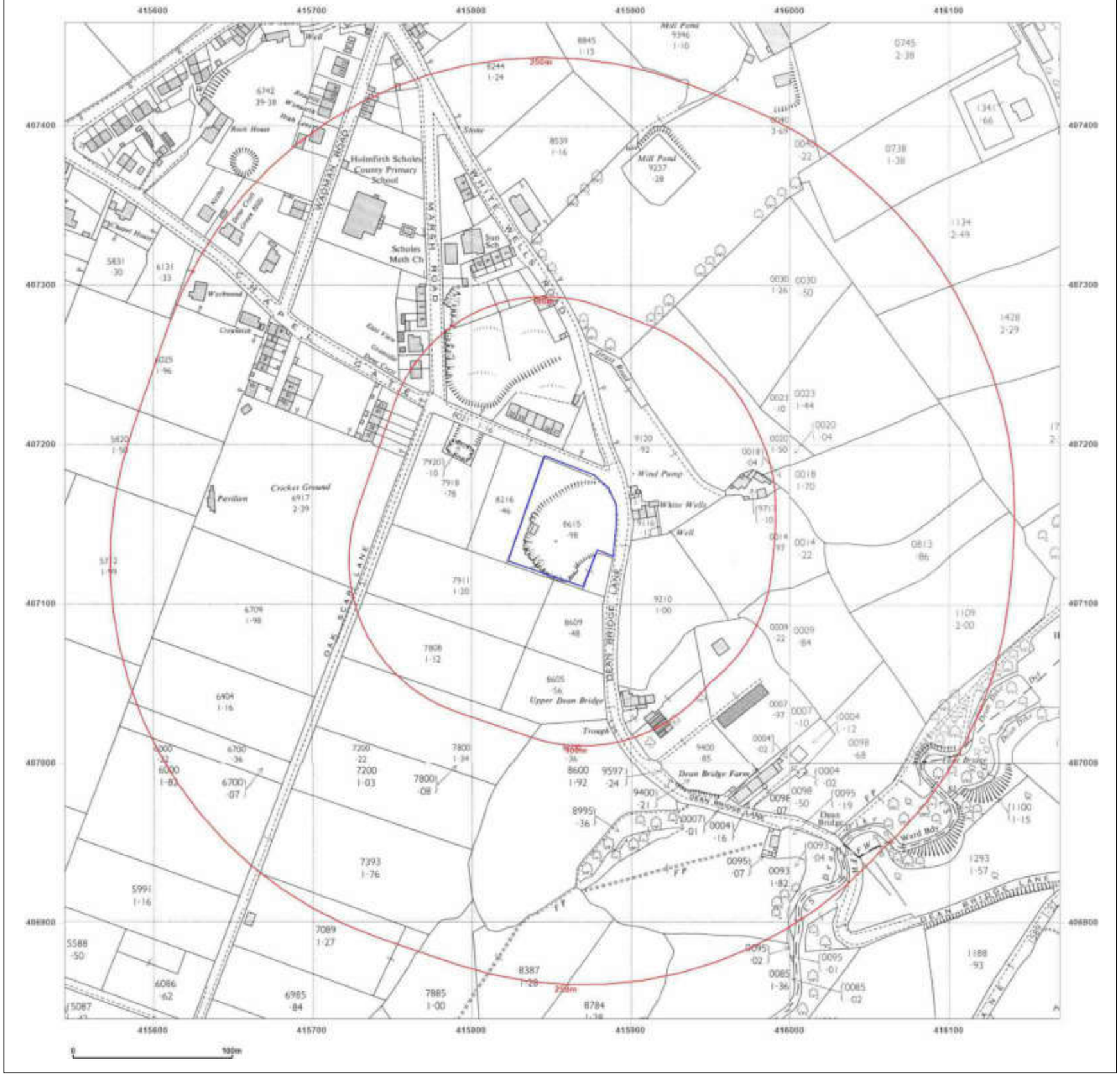

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Site Details:

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Client Ref: G1380
Report Ref: GS-8445246
Grid Ref: 415857, 407152

Map Name: National Grid

Map date: **1964**

Scale: 1:2,500

Printed at: 1:2,500

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Copyright 1964
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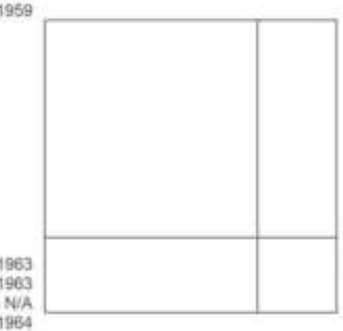

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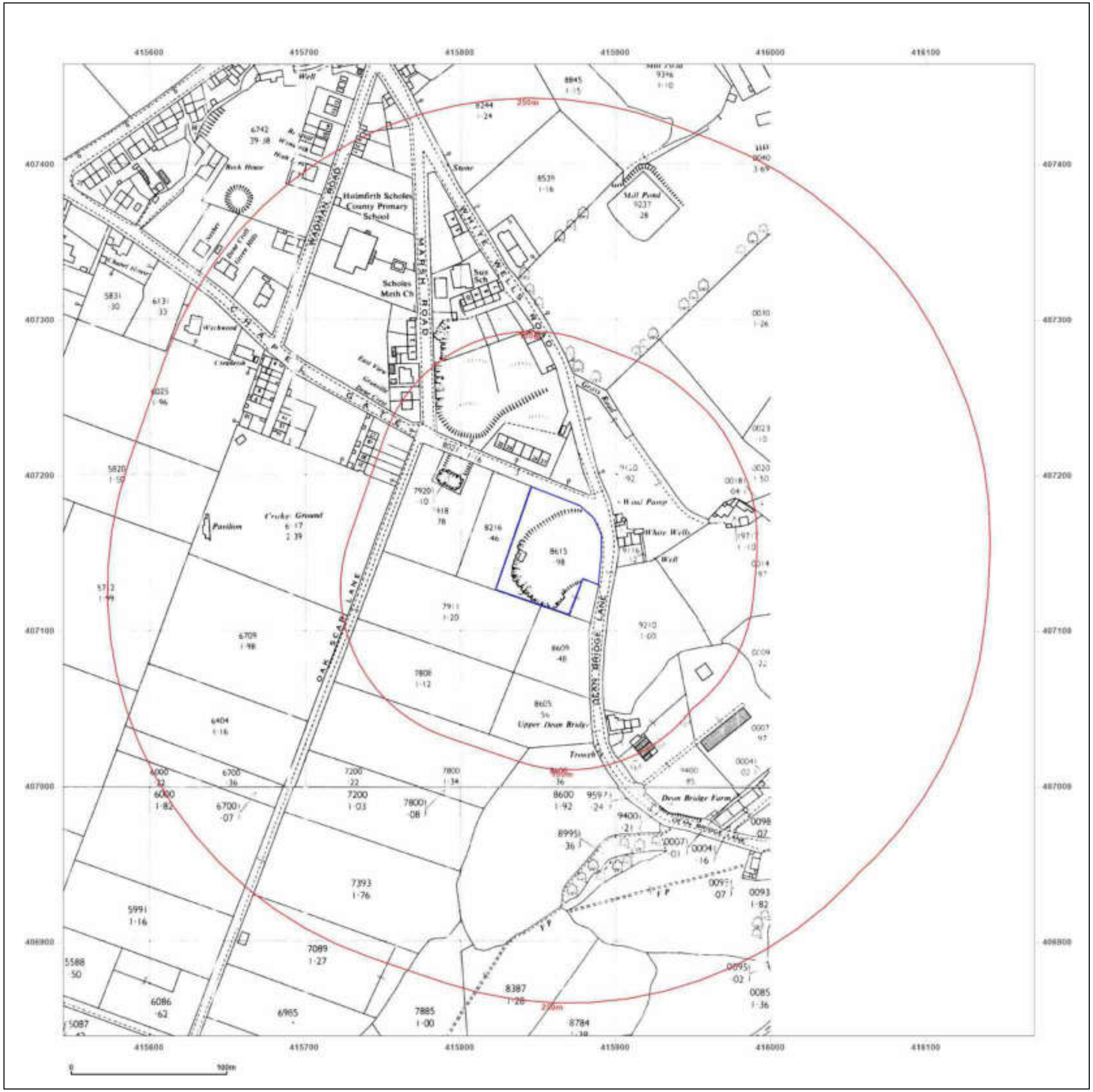

Groundsure INSIGHTS

Site Details:

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Client Ref: G1380
Report Ref: GS-8445246
Grid Ref: 415857, 407152

Map Name: National Grid

Map date: **1964**

Scale: 1:2,500

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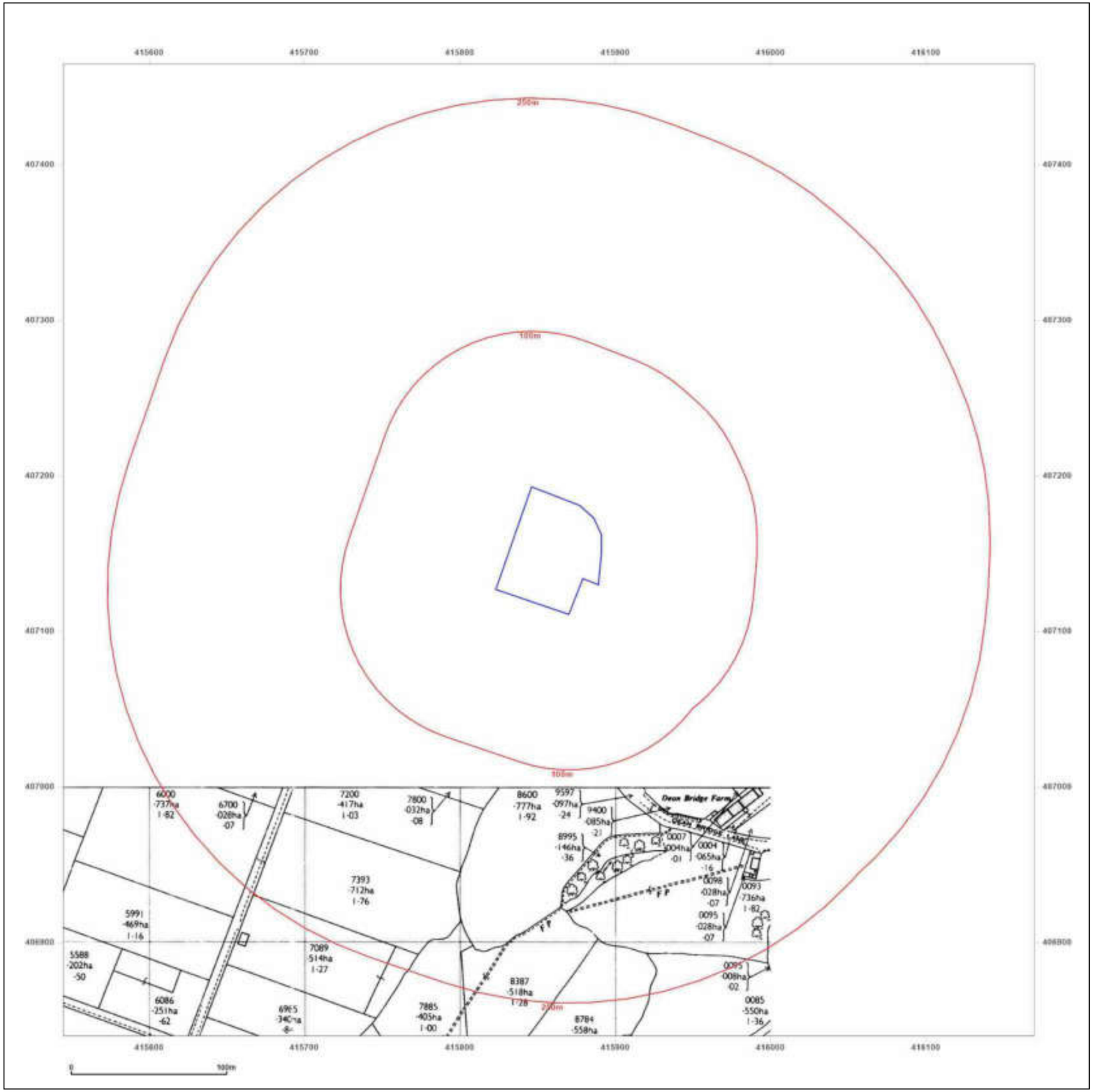

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Site Details:

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Client Ref: G1380
Report Ref: GS-8445246
Grid Ref: 415857, 407152

Map Name: National Grid

Map date: **1964**

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Site Details:

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Report Ref: GS-8445246
Grid Ref: 415857, 407152

Map Name: National Grid

Map date: **1976-1977**

Scale: 1:2,500

Printed at: 1:2,500

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Revised 1975
Edition N/A
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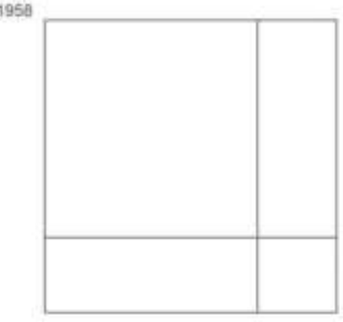
Levelled 1958



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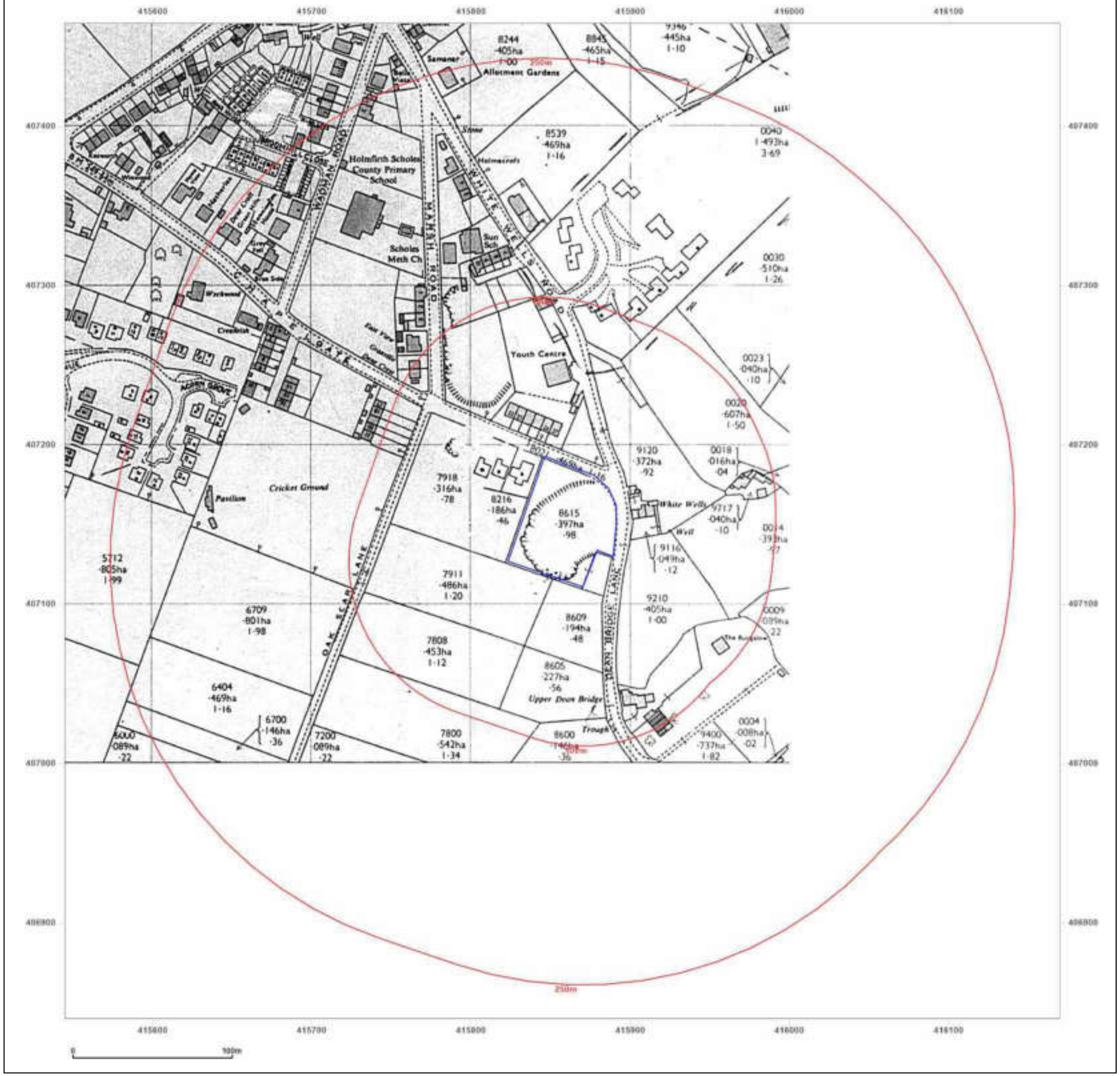

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Site Details:

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Client Ref: G1380
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Grid Ref: 415857, 407152

Map Name: National Grid

Map date: **1978**

Scale: 1:2,500

Printed at: 1:2,500

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Revised 1978
Edition N/A
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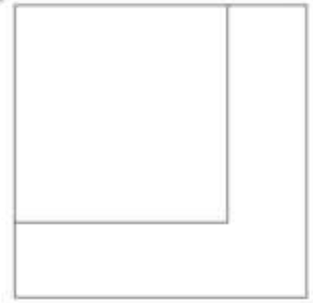

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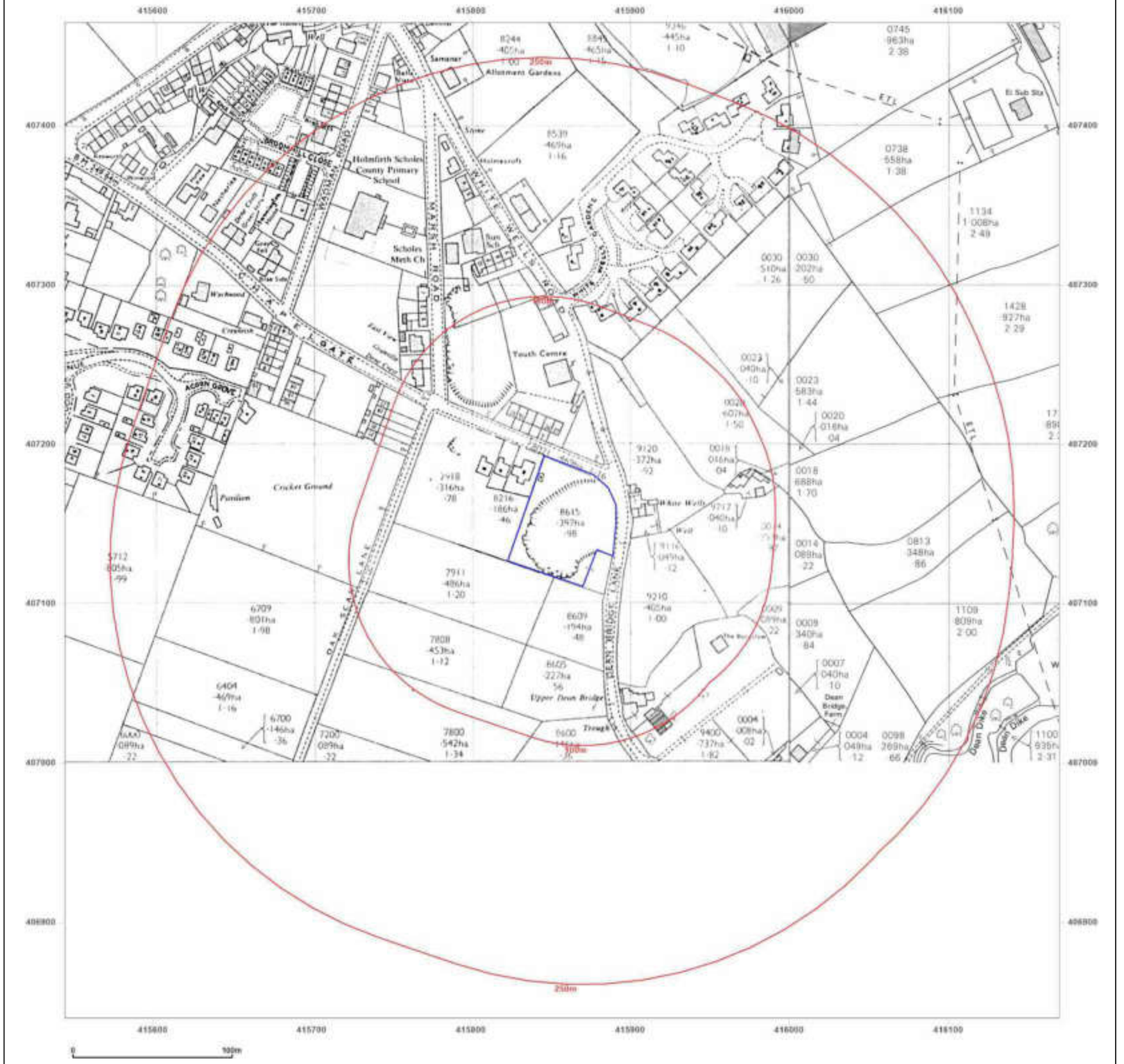

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Site Details:

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Client Ref: G1380
Report Ref: GS-8445246
Grid Ref: 415857, 407152

Map Name: National Grid

Map date: **1980-1985**

Scale: 1:2,500

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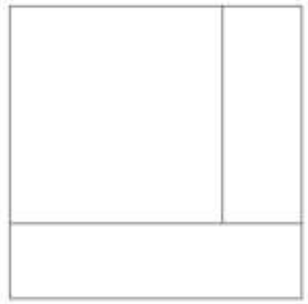

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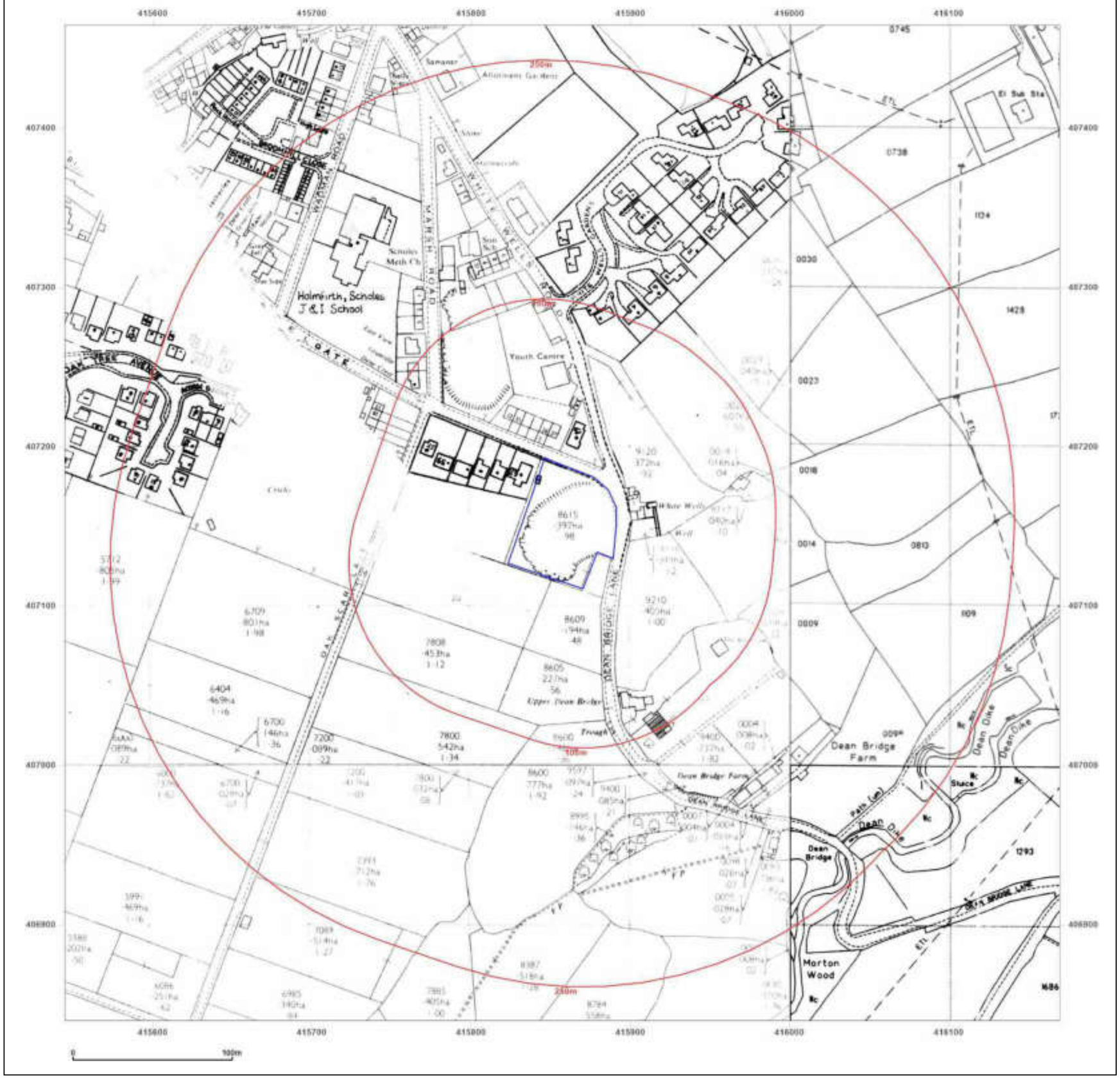

Groundsure INSIGHTS

Site Details:

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Client Ref: G1380
Report Ref: GS-8445246
Grid Ref: 415857, 407152

Map Name: National Grid

Map date: **1988-1992**

Scale: 1:2,500

Printed at: 1:2,500

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Site Details:

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Report Ref: GS-8445246
Grid Ref: 415857, 407152

Map Name: National Grid

Map date: **1988-1992**

Scale: 1:2,500

Printed at: 1:2,500

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Production date: 13 January 2022

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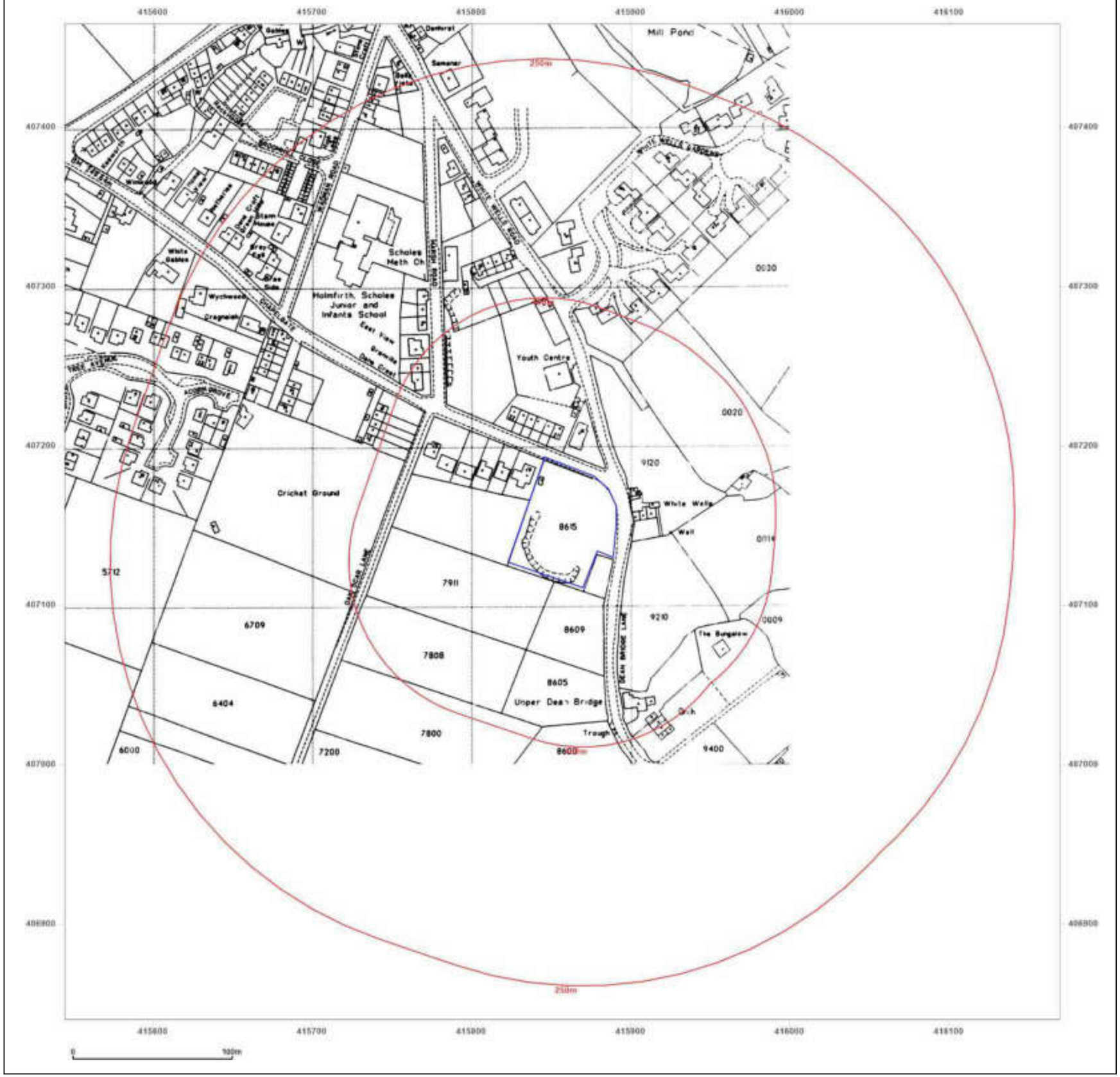
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Groundsure INSIGHTS

Site Details:

415861 , 407157

Client Ref: G1380
Report Ref: GS-8445246
Grid Ref: 415857, 407152

Map Name: National Grid

Map date: **1992**

Scale: 1:2,500

Printed at: 1:2,500

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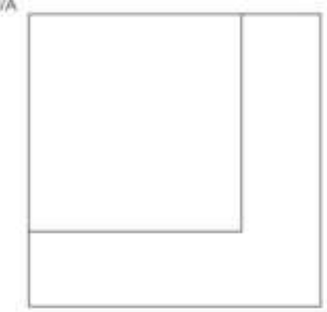
Surveyed N/A
Revised N/A
Edition N/A
Copyright 1992
Levelled N/A



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Production date: 13 January 2022

Map legend available at:
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Groundsure INSIGHTS

Site Details:

415861 , 407157

Client Ref: G1380
Report Ref: GS-8445246
Grid Ref: 415857, 407152

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

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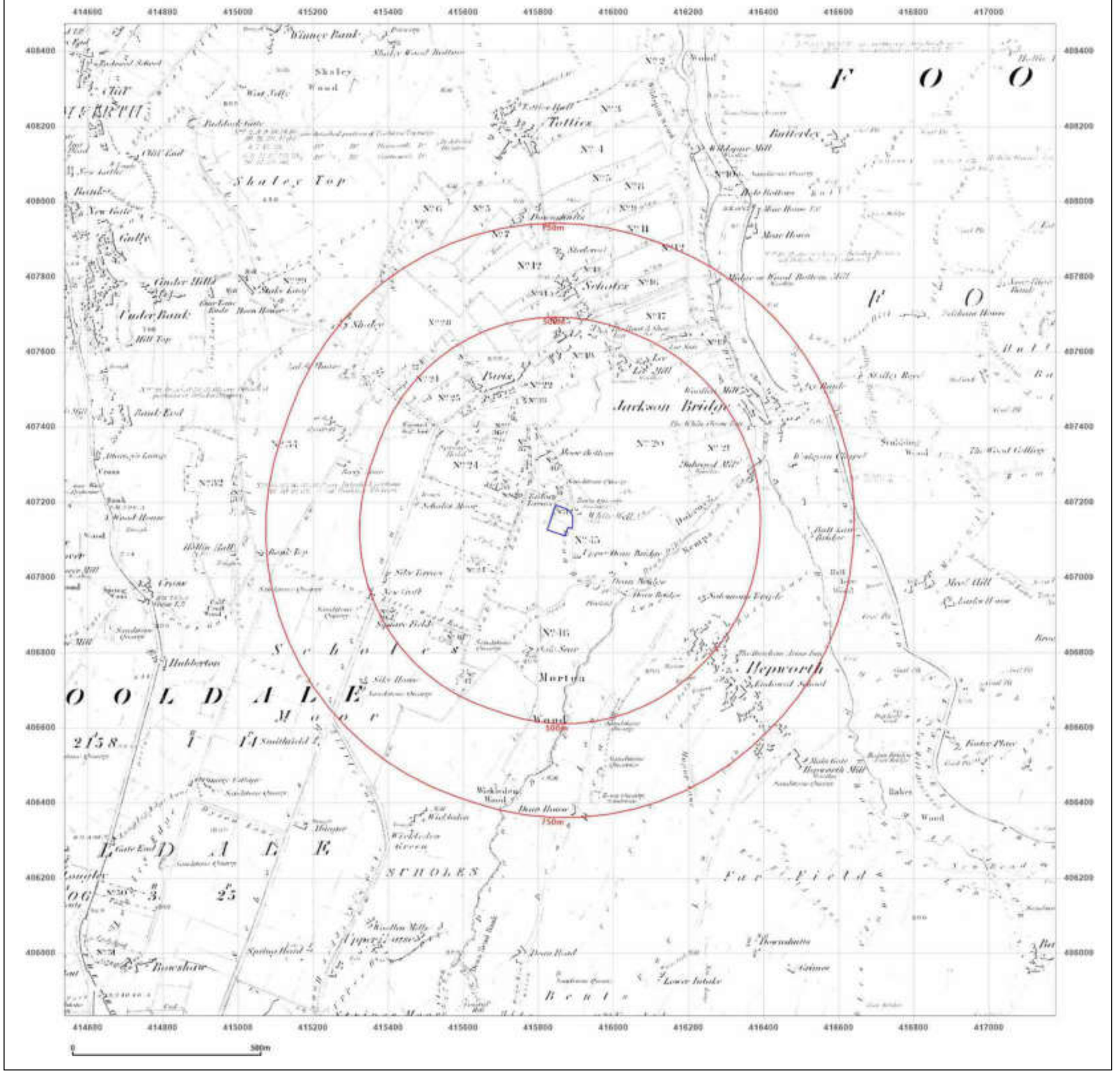

Groundsure INSIGHTS

Site Details:

415861 , 407157

Client Ref: G1380
Report Ref: GS-8445246
Grid Ref: 415857, 407152

Map Name: County Series

Map date: **1854**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1854
Revised N/A
Edition 1854
Copyright N/A
Levelled N/A

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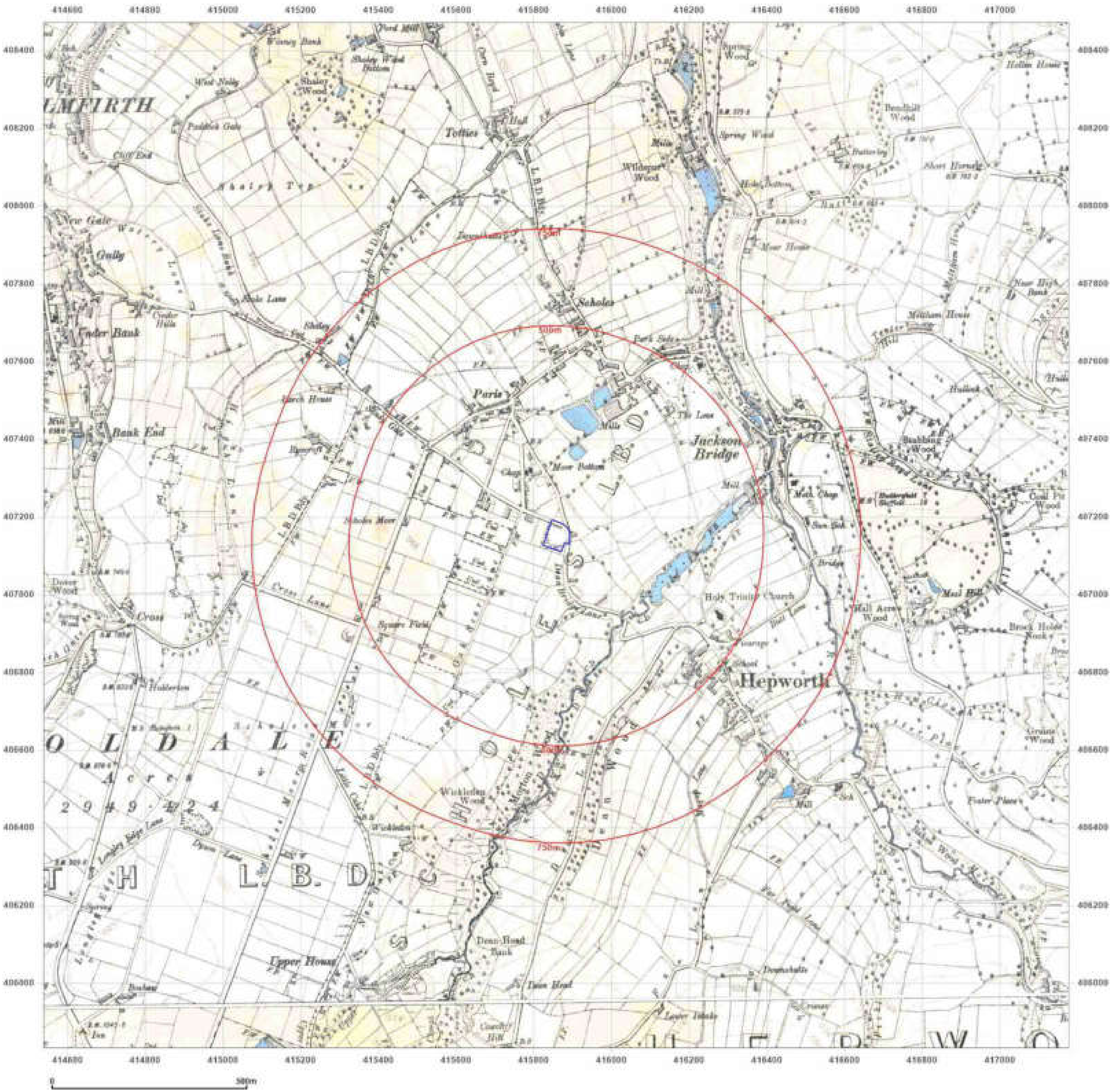

Groundsure INSIGHTS

Site Details:

415861 , 407157

Client Ref: G1380
Report Ref: GS-8445246
Grid Ref: 415857, 407152

Map Name: County Series

Map date: **1888**

Scale: 1:10,560

Printed at: 1:10,560

N
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Surveyed 1888
Revised 1888
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1888
Revised 1888
Edition N/A
Copyright N/A
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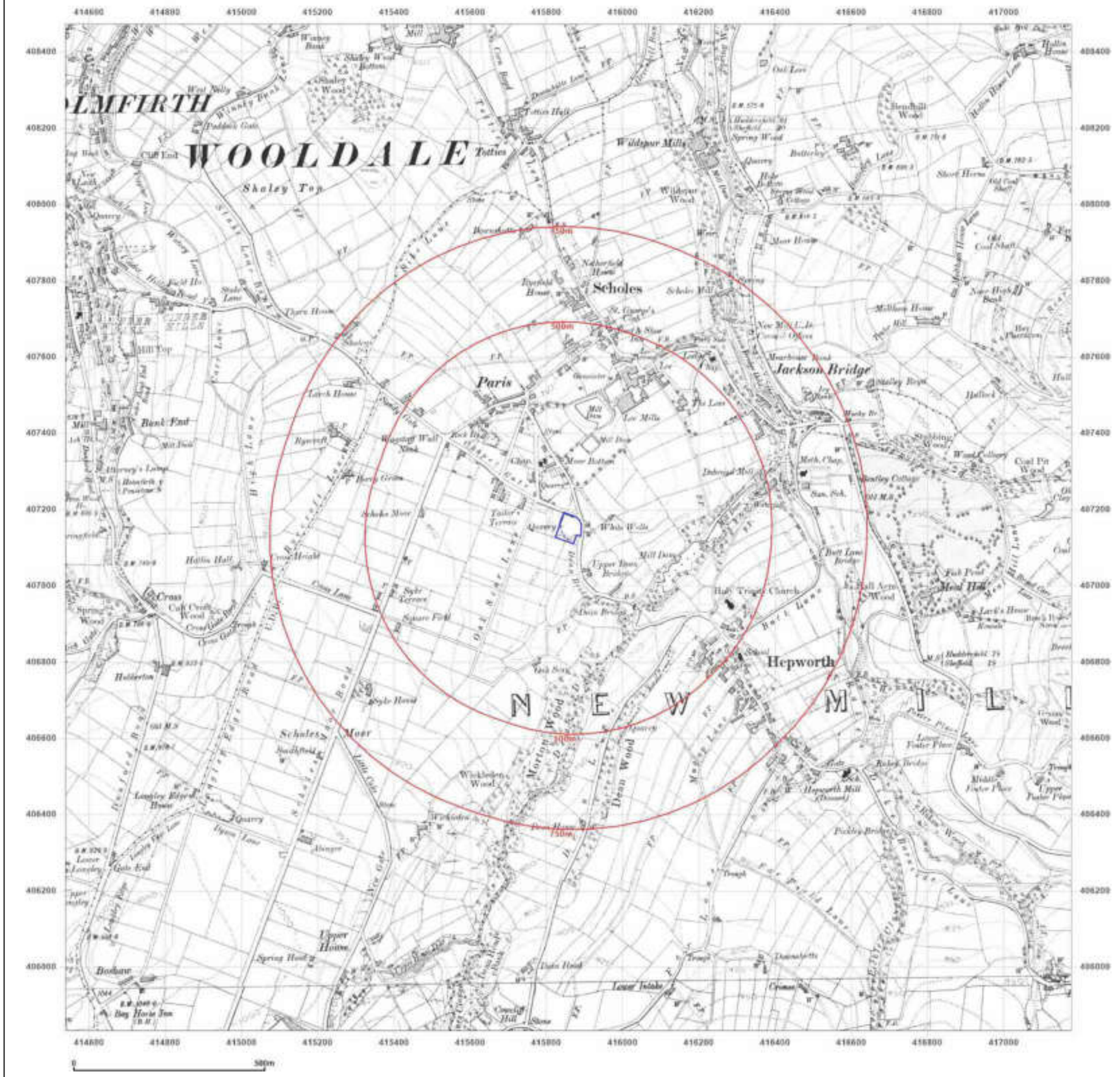

Groundsure INSIGHTS

Site Details:

415861 , 407157

Client Ref: G1380
Report Ref: GS-8445246
Grid Ref: 415857, 407152

Map Name: County Series

Map date: **1904-1906**

Scale: 1:10,560

Printed at: 1:10,560

N
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Surveyed 1888
Revised 1904
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1888
Revised 1906
Edition 1906
Copyright N/A
Levelled N/A

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Production date: 13 January 2022

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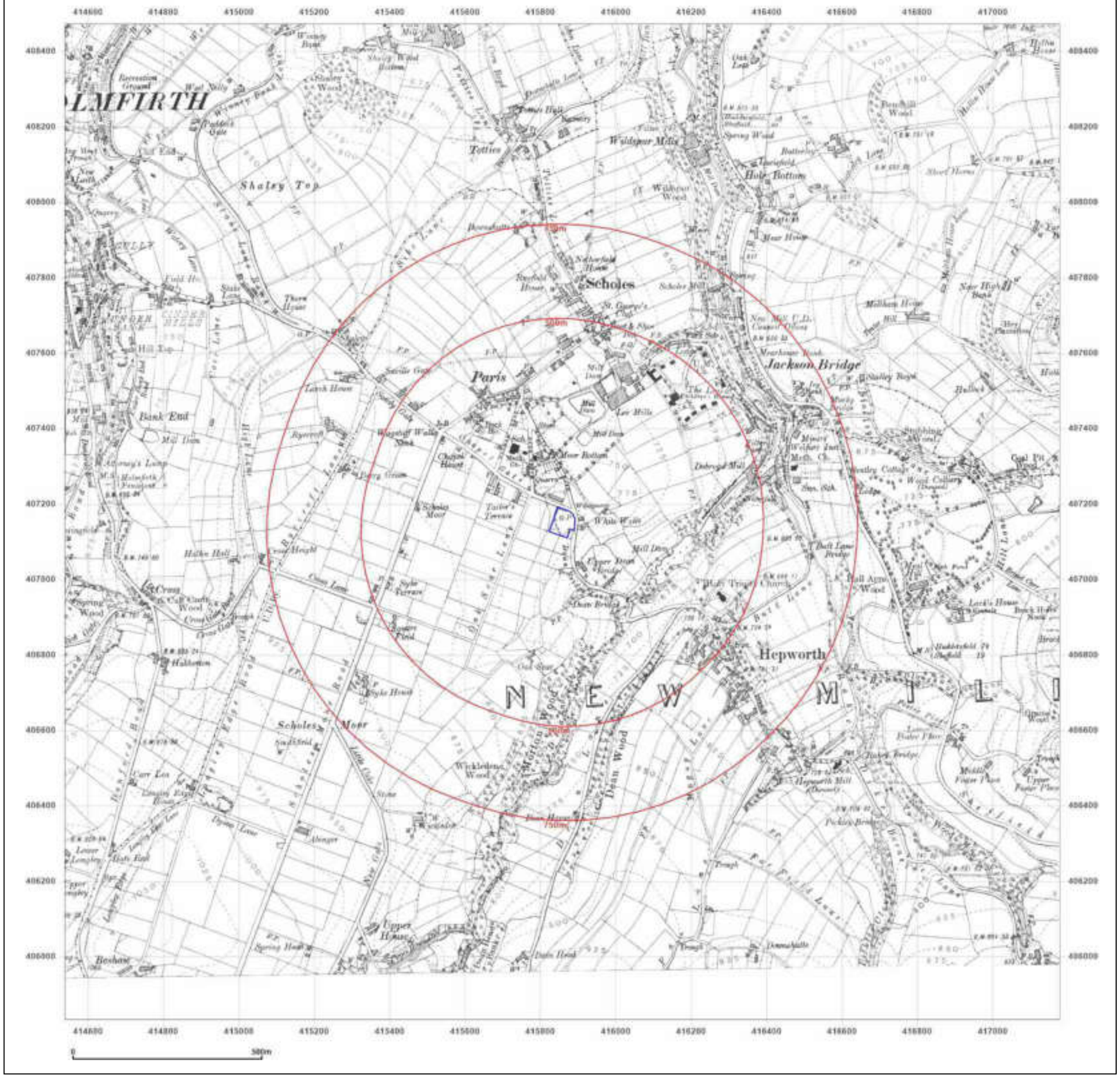

Groundsure INSIGHTS

Site Details:

415861 , 407157

Client Ref: G1380
Report Ref: GS-8445246
Grid Ref: 415857, 407152

Map Name: County Series

Map date: **1933**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1851
Revised 1933
Edition 1933
Copyright N/A
Levelled N/A

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Production date: 13 January 2022

Map legend available at:
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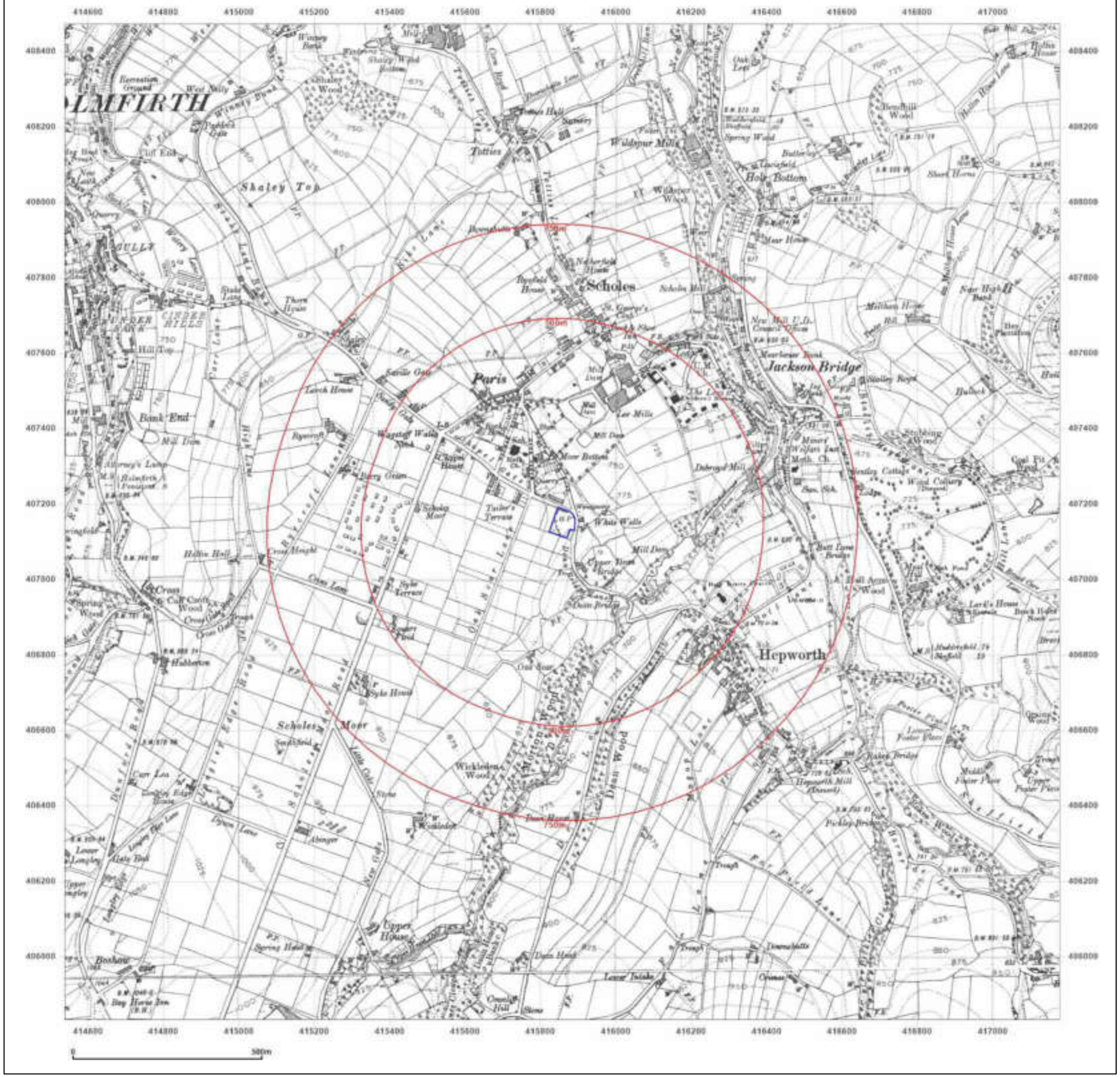

Groundsure INSIGHTS

Site Details:

415861 , 407157

Client Ref: G1380
Report Ref: GS-8445246
Grid Ref: 415857, 407152

Map Name: County Series

Map date: **1948**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1851
Revised 1948
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1851
Revised 1948
Edition N/A
Copyright N/A
Levelled N/A

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Production date: 13 January 2022

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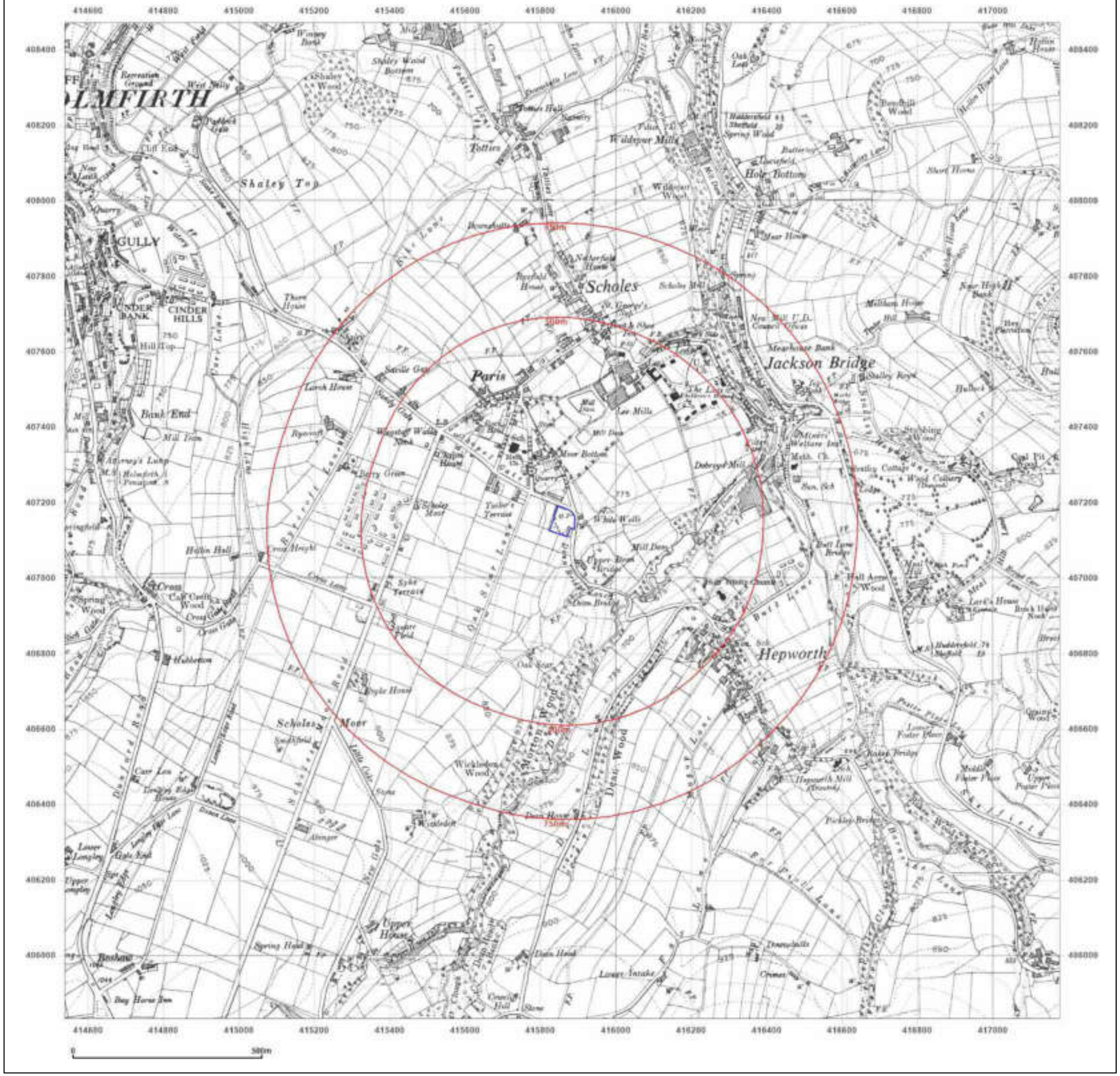

Groundsure INSIGHTS

Site Details:

415861 , 407157

Client Ref: G1380
Report Ref: GS-8445246
Grid Ref: 415857, 407152

Map Name: Provisional

Map date: **1955**

Scale: 1:10,560

Printed at: 1:10,560

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

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

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Production date: 13 January 2022

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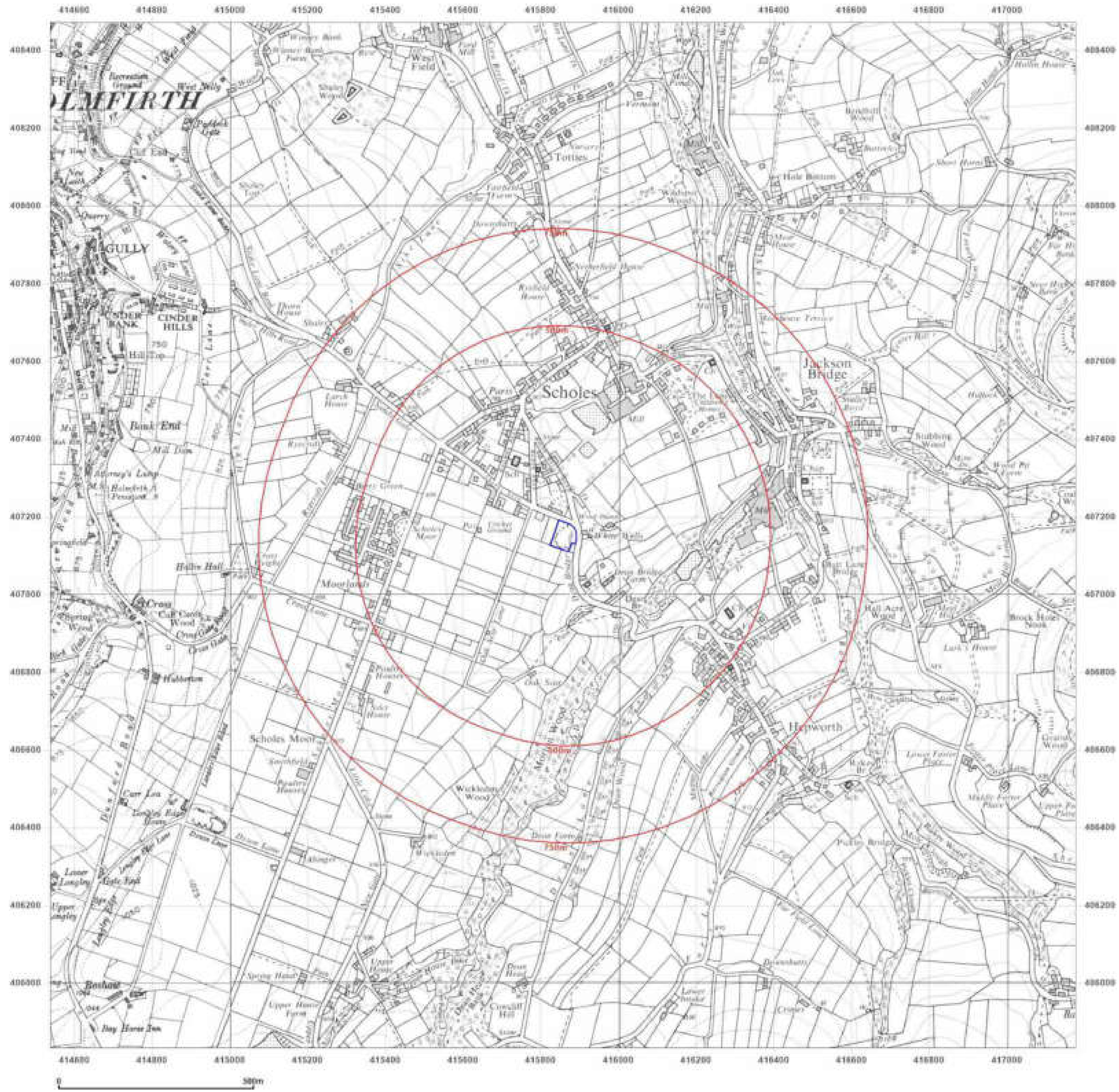

Site Details:

415861 , 407157

Client Ref: G1380
Report Ref: GS-8445246
Grid Ref: 415857, 407152

Map Name: Provisional

Map date: **1965-1970**

Scale: 1:10,560

Printed at: 1:10,560

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

Surveyed 1968
Revised 1970
Edition N/A
Copyright N/A
Levelled N/A

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Production date: 13 January 2022

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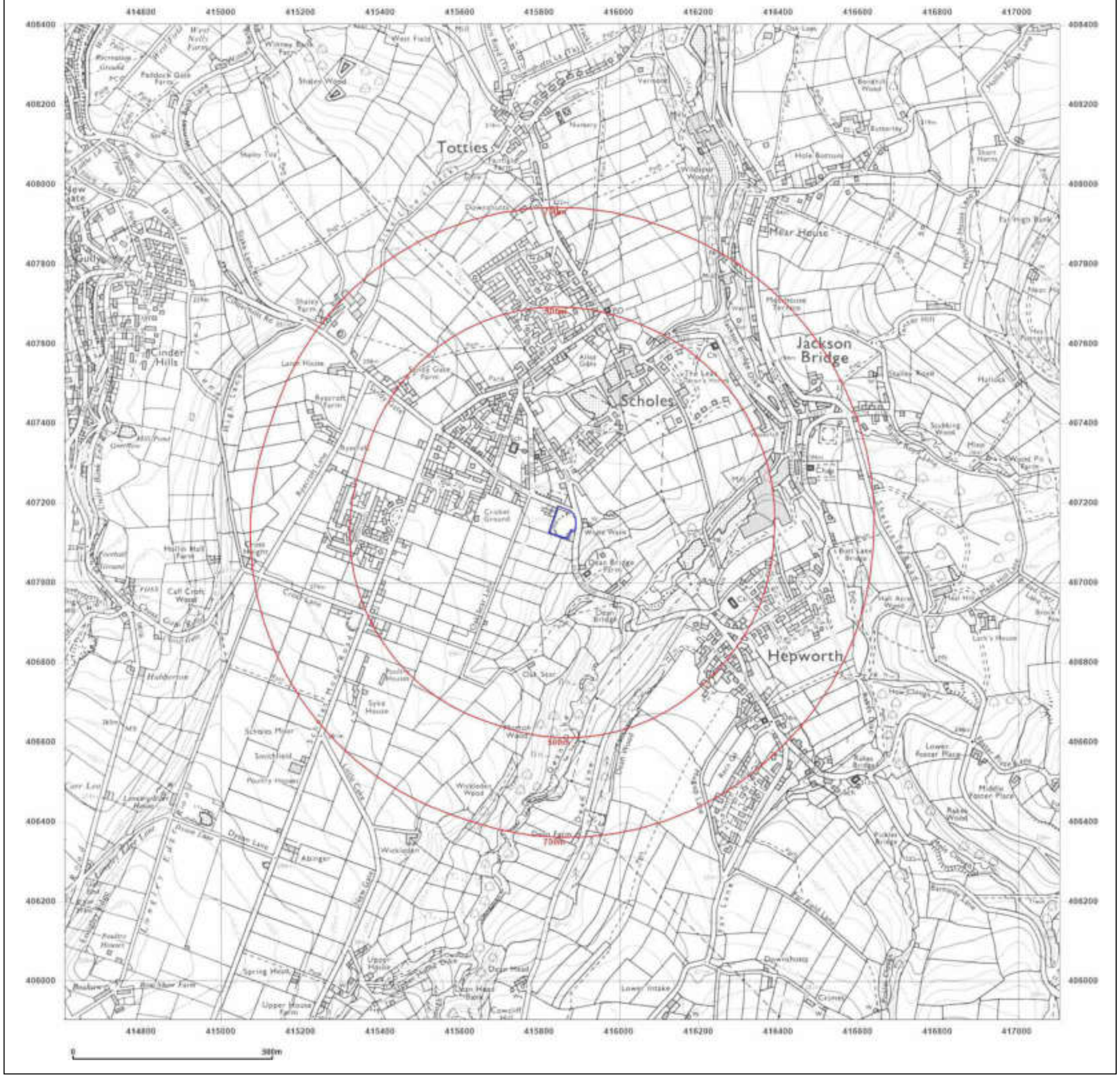

Groundsure INSIGHTS

Site Details:

415861 , 407157

Client Ref: G1380
Report Ref: GS-8445246
Grid Ref: 415857, 407152

Map Name: National Grid

Map date: **1980**

Scale: 1:10,000

Printed at: 1:10,000

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Surveyed 1978
Revised 1980
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1976
Revised 1980
Edition N/A
Copyright N/A
Levelled N/A

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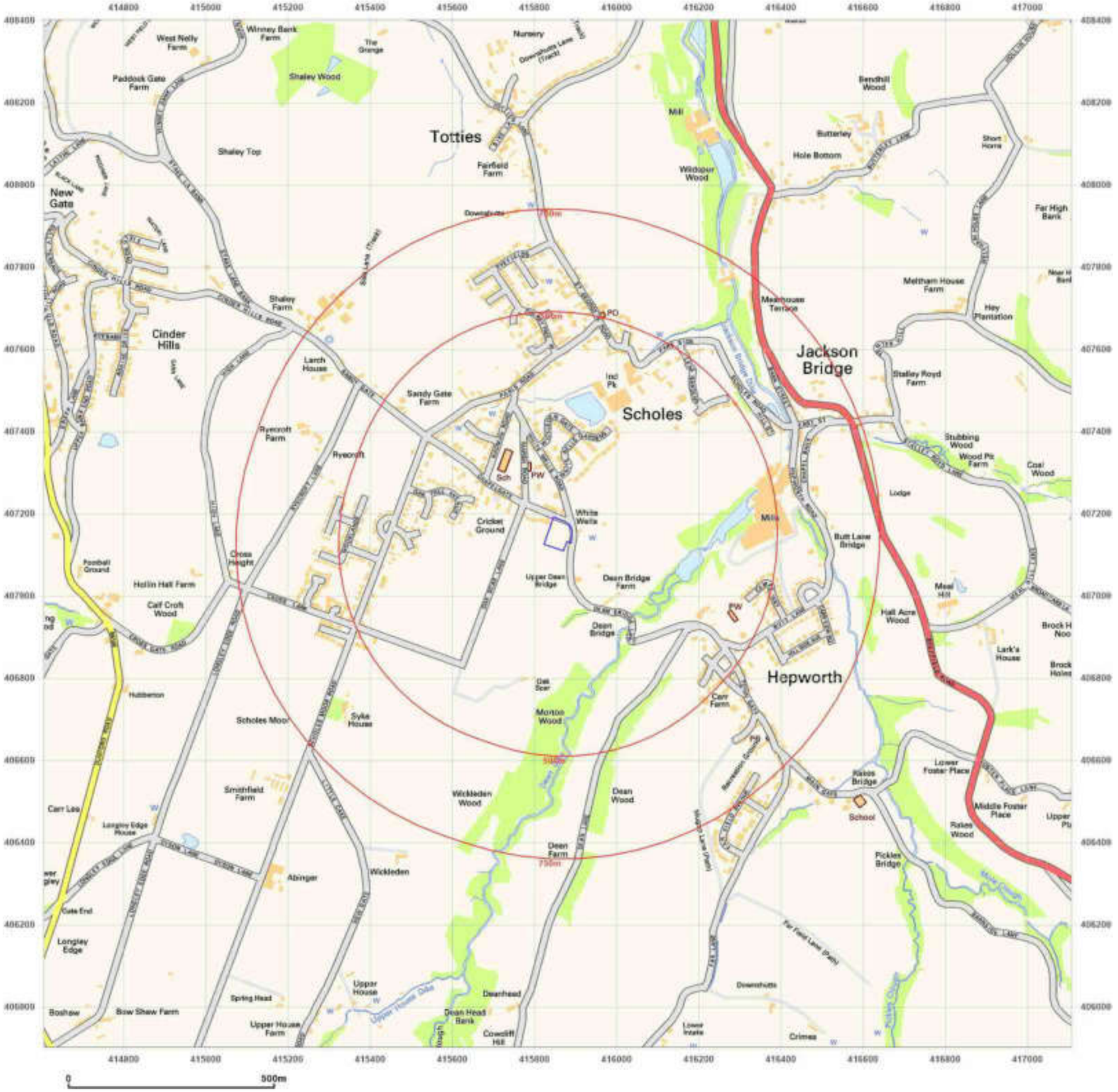

Groundsure INSIGHTS

Site Details:

415861 , 407157

Client Ref: G1380
Report Ref: GS-8445246
Grid Ref: 415857, 407152

Map Name: National Grid

Map date: **2001**

Scale: 1:10,000

Printed at: 1:10,000

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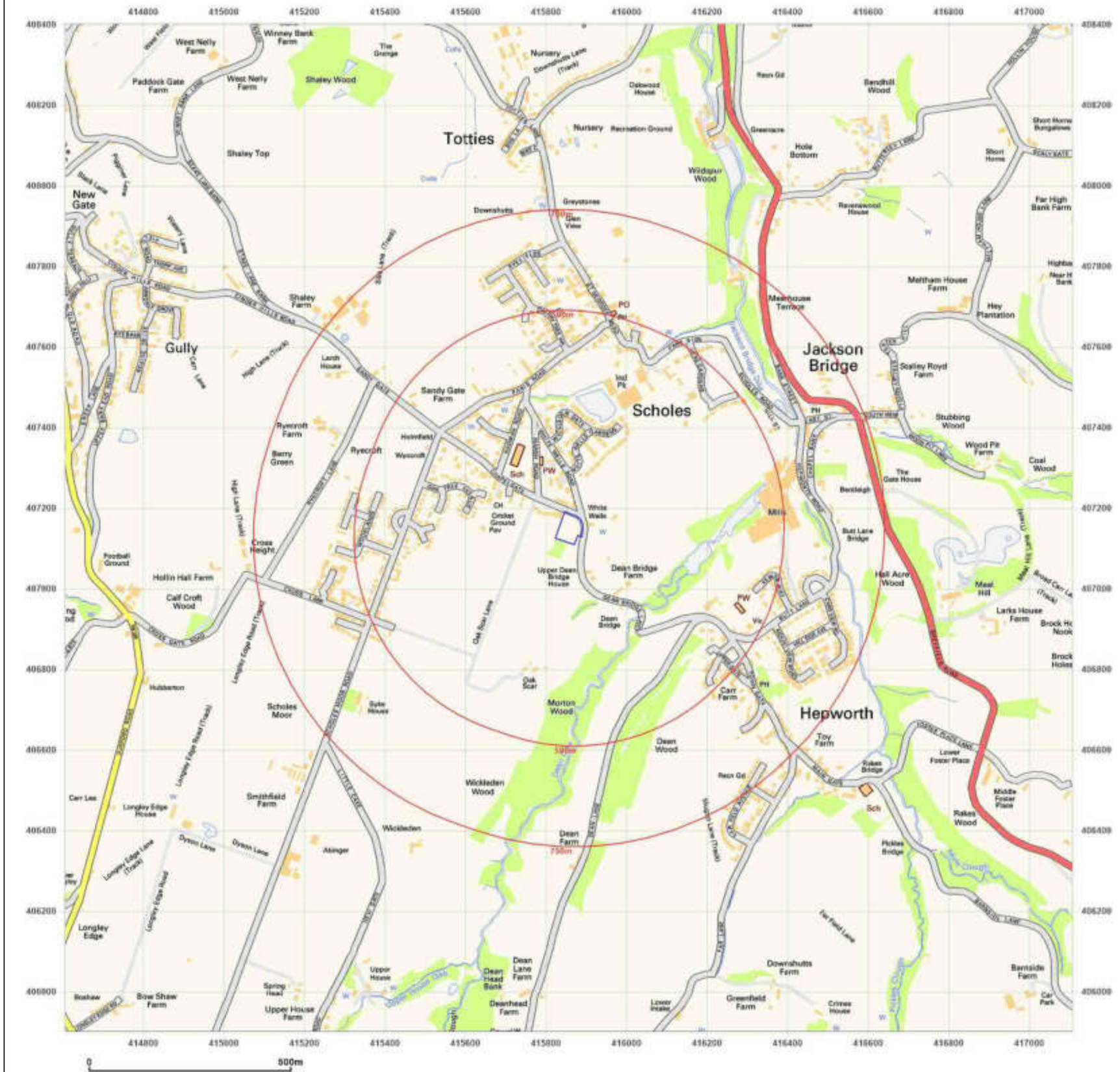

Groundsure INSIGHTS

Site Details:

415861 , 407157

Client Ref: G1380
Report Ref: GS-8445246
Grid Ref: 415857, 407152

Map Name: National Grid

Map date: **2010**

Scale: 1:10,000

Printed at: 1:10,000

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2010

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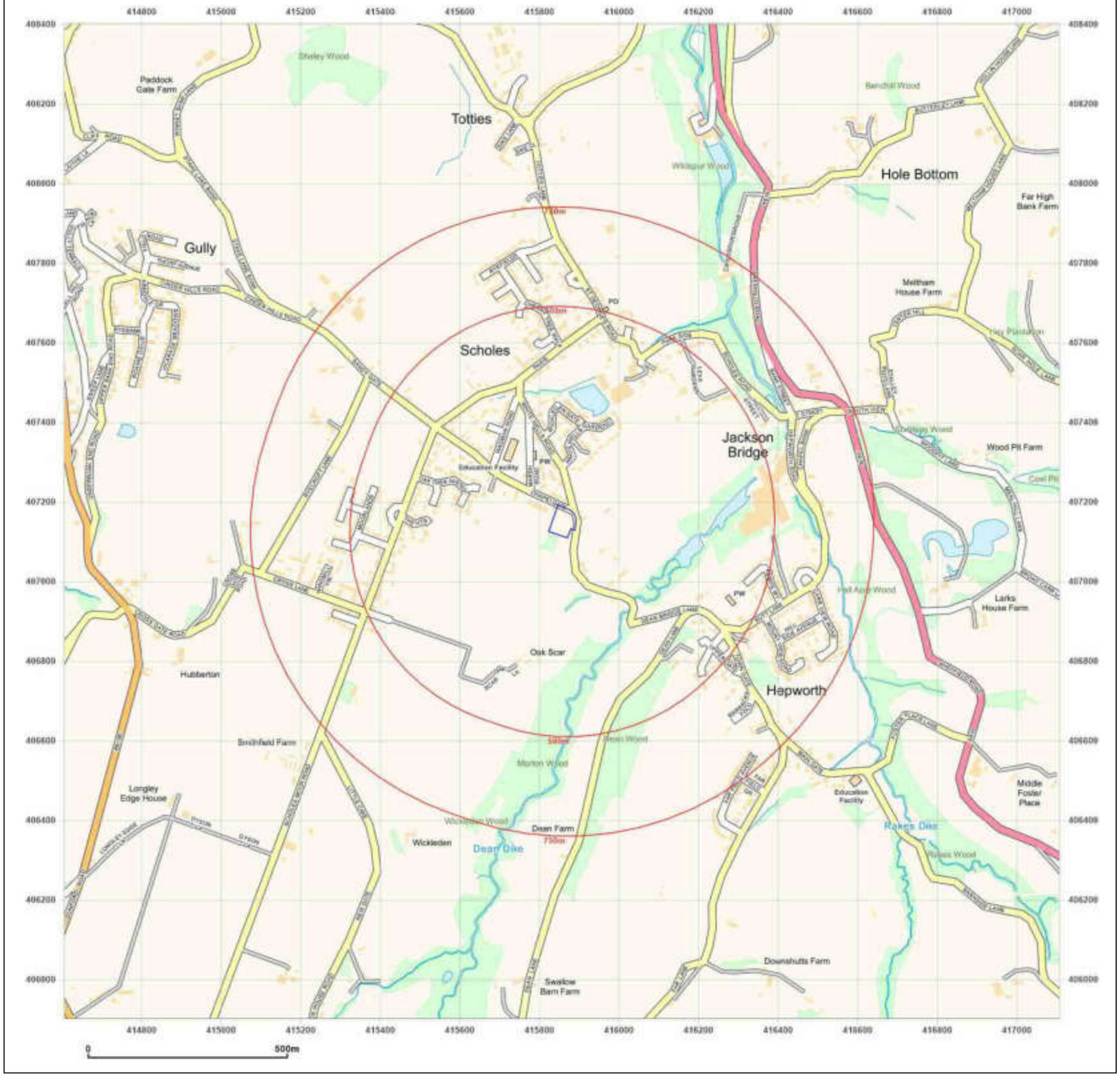

Groundsure INSIGHTS

Site Details:

415861 , 407157

Client Ref: G1380
Report Ref: GS-8445246
Grid Ref: 415857, 407152

Map Name: National Grid

Map date: **2022**

Scale: 1:10,000

Printed at: 1:10,000

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2022

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