ARENA GEO

Phase 1 & Coal Mining Risk Assessments

Caretakers House, Bank End Primary School

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Prepared for Barker Associates Limited

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1 INTRODUCTION

1.1 Terms of Reference

Arena Geo Limited was appointed by Barker Associates Limited to complete a combined Phase 1 and Coal Mining Risk Assessment at the caretakers house for Worsbrough Bank End Primary School, Underwood Avenue, Worsbrough Dale, Barnsley S70 4AZ. Planning approval is being sought for the demolition of the existing building to make way for a new play area and additional car parking spaces (refer to the proposed site layout in Appendix F).

1.2 Scope of Work Undertaken

The scope of work undertaken during desk study and geotechnical assessment included the following:

- Review of all environmental data from regulatory authority database information including the Environment Agency (to obtain information of public water abstractions/discharges, pollution incidents, landfill sites, industrial processes, surface watercourses within influencing distance of the site) and the Coal Authority (to obtain information of any mining history, subsidence or mine entries on the site);
- Review of historical maps from Groundsure, to develop a history of the former uses of the site;
- Review of online mapping and logs available on the British Geological Survey and Ordnance Survey, to determine the geological, hydrological and hydrogeological setting and profile of the site;
- Production of a desk study assessment, to include an overview of potential geo-environmental and geotechnical risks during site redevelopment and future operation;
- Provide a preliminary conceptual site model; and
- Make recommendations for a Phase 2 ground investigation based on the findings of the Phase 1 risk assessment.

1.3 Limitations

This report is subject to the limitations presented in Appendix A.

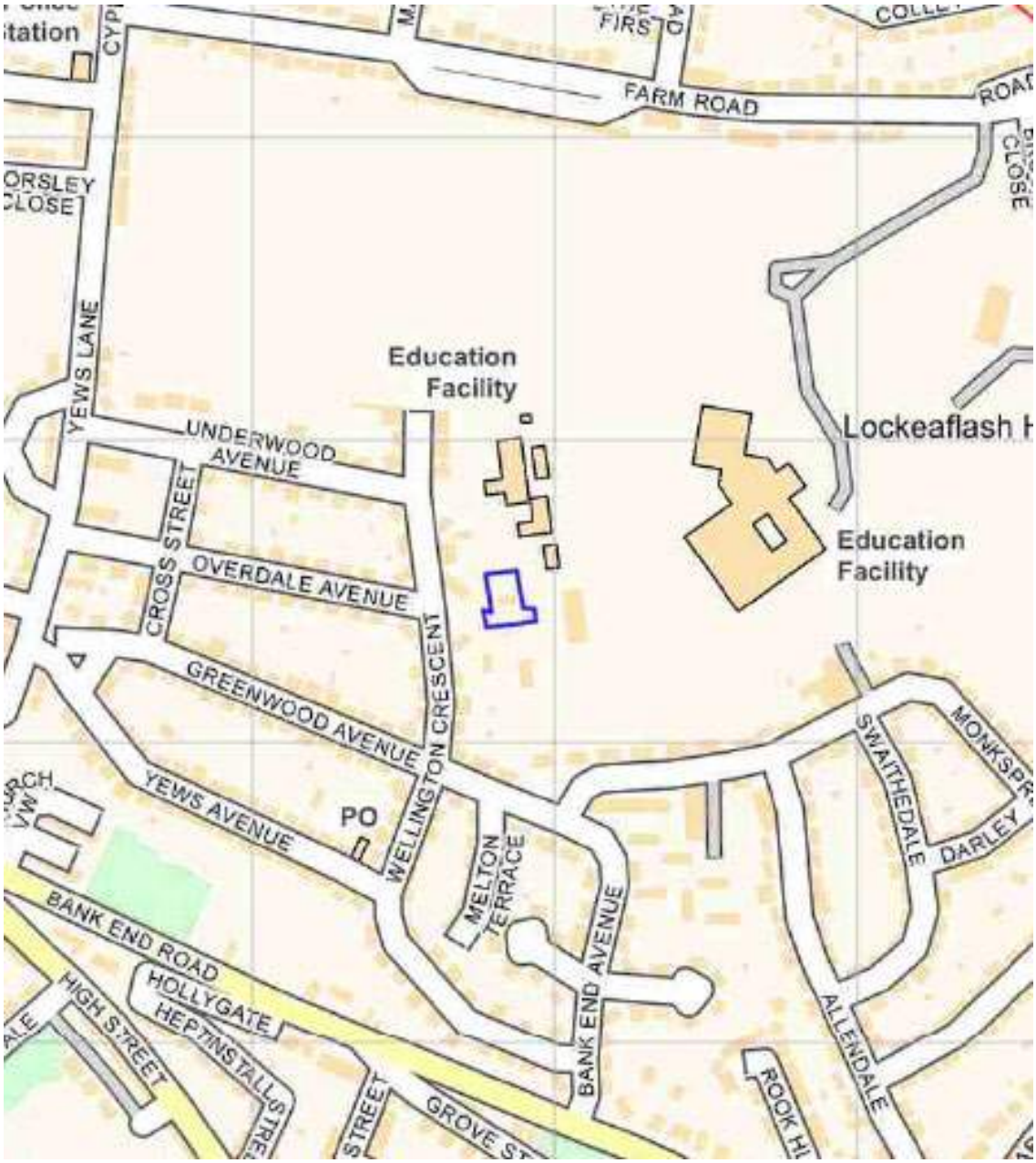
2 SITE DESCRIPTION

Table 2.1 outlines the site location, topography and current site use, as determined from Ordnance Survey mapping. The site location is also shown in Figure 2.1.

Table 2.1 - Site Details

Data	Information	
Address:	Caretakers house, Worsbrough Bank End Primary School, Underwood Avenue, Worsbrough Dale, Barnsley S70 4AZ	
Area:	Approximately 0.08ha.	
Current Site Use:	Caretakers house for adjacent primary school.	
Grid Reference:	Centre of site is located approximately at NGR 436168,404493	
Topography:	Unknown.	
Elevation:	Approximately 113m AOD.	
Surrounding Land Use	North	Playground of Worsborough Bank End Primary School
	East	Day care centre
	South	Car park
	West	Residential – Wellington Close

Figure 2.1 Site Location



3 ENVIRONMENTAL SETTING AND COAL MINING RISK ASSESSMENT

3.1 Environmental searches

The site's setting with respect to geology, hydrogeology and hydrology is summarised in Table 3.1. The Groundsure Enviro Insight report is presented in Appendix B.

Table 3.1 Geology, Hydrogeology and Hydrology

Data	Information
Made Ground	The Groundsure Enviro Insight Report indicates the site is not underlain by artificial or made ground. Four areas of made ground are shown 100 - 250m north of the site.
Mapped Superficial geology	No superficial deposits are shown within the site boundaries.
Mapped Solid Geology	The published geology shows the solid geology is the Woolley Edge Rock, comprising sandstone, of Westphalian Age. The Pennine Middle Coal Measures outcrop 100 north of the site. No geological faults are shown on or near the site.
Aquifer classification	The bedrock is designated a Secondary A Aquifer.
Historical Borehole Log Review	There are no BGS borehole records within 250m radius of the site.
Surface watercourses	The are no water courses within a 250m radius of the site.
Surface water abstractions	There are no surface water abstraction licenses within a 250m radius of the site.
Flood risk	The Environment Agency does not consider the site to be at risk of flooding (Flood Zone 1). The site has a Negligible risk of groundwater flooding.
Groundwater Abstractions	There are no groundwater abstraction licenses within a 250m radius of the site.
Source Protection Zones (SPZs)	The site is not within a SPZ.
Pollution Incidents	There are no recorded pollution incidents on site.
Ecological Constraints	Not reviewed.
Archaeological Constraints	Not reviewed.
Landfill and Waste Disposal Sites	There are no active or historical landfills within a 250m radius of the site.

Data	Information	
Unexploded Ordnance (UXO)	Information obtained from Zetica with regards to the presence of UXO on site indicates a Low UXO hazard level for the site. In accordance with CIRIA C681, no further assessment is required.	
Radon Risk[1]	The Groundsure Enviro Insight report (Appendix B) indicates that the site is within an area where between 3% and 5% of houses are affected. In accordance with BRE 211, basic radon gas protection measures are required for any buildings.	
Natural Hazards Findings	Shrink swell	Negligible
	Running sands	Negligible
	Compressible ground	Negligible
	Collapsible deposits	Very low
	Landslides	Very low
	Ground dissolution of soluble rocks	Negligible

3.2 Coal Mining Risk Assessment

The site is within the Coal Mining Reporting Area and a therefore a coal mining risk assessment is required. A CON29M Residential Mining Report is presented in Appendix C and is summarised below in Table 3.2.

Table 3.2 Summary of CON29M findings

Information	
Past Underground Mining	The property is in a surface area that could be affected by underground mining in 6 seams of coal at 190m to 510m depth, and last worked in 1971.
Present Underground Mining	None
Future Underground Mining	No plans to grant licences but there are coal reserves at depth.
Mine Entries	None within 20m
Coal Mining Geology	None
Past opencast mining	None
Present opencast mining	None
Future opencast mining	None
Coal mining subsidence	None
Mine gas	None
Hazards related to coal mining	None

[1] A controlling factor in the source and distribution of radon, and associated risk, is geology. Variations in the underlying geology of a site can greatly influence the percentage of homes found within an action level and the type of measures that may be required in the construction of new dwellings and extensions. High levels of radon in the UK can be associated with shales rich in organic material, granites, phosphatic rocks and ironstones.

Based on the above findings, the site is assessed as **not** being at risk from surface subsidence related to the workings of the seams depths of 190m to 510m. Although there are recorded exceptions, the general principles are that either: a maximum void migration for worked seams is 10 x seam thickness; or a minimum safe cover of competent rock of 30m above pillar and stall workings (Waltham, 2009). At 190m depth, both of these guidelines have been met and therefore it is considered that the mine workings are too deep to be influenced by the development. In accordance with CIRIA 758D, it is considered that the coal mining legacy risks are low and that consultation with the Mining Remediation Authority (formerly the Coal Authority) is not required.

3.3 Mine Gas Risk Assessment

Within the document "Good Practice for Risk Assessment for Coal Mine Gas Emissions" produced by CL:AIRE (Contaminated Land : Application in Real Environments) in October 2021 guidance there is a flow chart and a decision support tool for mine gas risk assessment with specific considerations for mine gas assessment (Figure 13.1, CL:AIRE 2021).

Following this process, the assessment can be summarised as follows:

Undertake Preliminary investigation (Desk Study)
The available geological information indicates that the solid geology consists of the bedrock of the Wolley Edge Rock comprising sandstone. No geological faults are shown. There are no recorded boreholes within a 50m radius.

The criterial statements for a Negligible Risk Zone are met in terms of proximity of distance of mine entries, lack of geological faults and being outside the area of past or probable shallow workings (the CON29M report states that the property is not within a surface area that could be affected by past underground mining). There are six seams worked at depths of between 190m and 510m beneath the site, which is in excess of the 150m depth of workings for the site to be designated as Low risk.

Therefore, despite the site being within the coalfield area, given the geological and mining setting the site is within a **Negligible Risk Zone** for mine gases. As a consequence, following the CL:AIRE (2021) decision tool, no mitigations for mine gases are required.

4 SITE HISTORY

A review of the historical development of the site and surrounding area has been undertaken, in terms of land uses which may have caused contamination at the site. The review is presented in Table 4.1; all stated distances are approximate. The historical mapping was purchased from Groundsure, and is included within Appendix D.

Table 4.1 Historical Map Review

Date	On-Site Observations	Off-Site Observations
1855	The site is shown within a larger field. No buildings or earthworks are shown within the present-day site boundaries.	The immediate surrounding land use is fields for either agricultural or livestock purposes. Mining is evident in the wider area. Approximately 350m west of the site is Yews Lane Quarries for sandstone, and 500m south of the site is another sandstone quarry and the Darley Main Colliery. 300m south of the site is the village of Worsborough Dale.
1892	No significant changes.	The aforementioned sandstone quarries and colliery are no longer shown.
1906	No significant changes.	No significant changes.
1931	No significant changes.	Significant residential development is shown 500m north-east of the site at Kendray.
1938	No significant changes.	Immediately west of the site, a new residential estate is shown with the present-day neighbouring roads.
1948	No significant changes.	No significant changes.
1960	The site is shown as developed with the Bank End Community Hall overlapping the south-east corner of the site. Tennis courts are shown overlapping the northern boundary of the site and a new access road is shown overlapping the south of the site.	Development of leisure facilities in the form of a community hall, bowling green and tennis courts has taken place immediately to the north, east and south of the site. Playing fields formed by cut and fill are shown 100m north of the site. Significant residential development has taken place to the south of the site with the creation of the present-day housing estates.
1977	The caretakers house is shown as a rectangular building the middle of the site.	An electricity sub-station is shown along the western boundary of the site. To the north and east is the Worsbrough Bank End primary school. Playing fields and an allotment are shown further east. Two residential properties are shown to the south of the site in the location of the former bowling green.
1987	No significant changes	No significant changes
1993	No significant changes.	No significant changes.
2003	No significant changes.	No significant changes.

Date	On-Site Observations	Off-Site Observations
2010	The Bank End Community Hall that partially overlapped the south-east corner of the site is no longer shown.	The present-day daycare centre is shown east of the site.
2025	No significant changes.	No significant changes.

The historical land-uses can be summarised as follows:

- The site and immediate environs was part of an open field until sometime between the publication of the 1948 and 1960 maps.
- The site was part of a wider development for leisure facilities including tennis courts, a bowling green, playfields and a community hall.
- The Worsbrough Bank End primary school was built sometime between the publication of the 1960 and 1977 maps. The caretaker building is shown.
- The Bank End Community Hall that partially overlapped the south-east corner of the site was demolished sometime between the publication of the 2003 and 2010 maps.
- There is no evidence of significant mining on site, but sandstone quarries and collieries were shown 350m to 500m from the site in the earliest maps.
- There is no evidence of industrial site uses on site or in the immediate surrounding area.
- An electricity sub-station was built along the western boundary of the site, sometime between the publication of the 1966 and 1977 maps. Use of polychlorinated biphenyls (PCBs) have historically been used in some electrical substations. The use of PCBs was phased out in the 1970s and banned outright in the UK in 1976. As the substation construction may predate this time, the risk of PCBs can not be dismissed. PCBs do not degrade but as they have low solubility, they do not travel far from their source.

5 WALKOVER SURVEY

The purpose of a site walkover is to validate information presented within earlier sections of this report and identify additional potential sources of contamination not apparent from the desk-based review. Photographs were taken and a representative sample are presented below. A summary of observations is presented in Table 5.1 below:

Table 5.1: Site Visit Observations

Item	Comments
Current site use	Former caretakers residence, with a brick-built bungalow with felt roof and garden to the rear (Plate 1).
Surface covering, condition	Outside of the building footprints, predominantly covered in long grass and brambles with some areas of hardstanding: around the perimeter of the building is a narrow concrete path; there are two small areas of asphalt hardstanding to the rear of the property (Plate 4). The garden area was uneven. Within the planning boundaries is the asphalt covered road, and the asphalt play ground to the north (Plate 7). Both were in good condition.
Site topography	The bungalow and garden are generally level, presumably cut into the natural topography which falls from west to east and south to north. The land to the west of the site with the sub-station is approximately 1.5m higher (Plate 3). There are no retaining walls but there is a small cut slope between the sub-station and the bungalow. This was also observed to the north of the site (Plate 8).
Watercourses or ponds	None observed on site or in the surrounding area.
Trees	There are a few mature trees on site. An 8m high deciduous tree (possible maple) is in the south-east corner of the site (Plate 1). An 5m high deciduous tree (possible sycamore) is present along the western boundary of the site (Plate 3).
North boundary	Playground of the Worsbrough Bank End Primary School (Plate 7). To the immediate north-west is a climbing frame on higher ground (Plate 8). Like the bungalow, the playground appears to have been cut below the original ground level.
Western boundary	Electricity sub-station (Plate 2) and cut slope (Plate 3). Further west are residential gardens of Wellington Crescent.
Southern boundary	There is a car park to the south of the site. To the south-west of the site, there is a small garage for auto repairs (Plates 9 and 10). Some evidence of oil leaks were apparent, but the concrete hardstanding present throughout appears to be in good condition.
Eastern boundary	A daycare centre called Central Family Hub.
Buildings and structures	There is the existing caretakers bungalow. The building is unoccupied. Although it was not accessed during the visit, on inspection through the windows it has been used for storing school furniture and other school-related materials (Plates 5 and 6).

Item	Comments
Ground filling or raising, fly-tipping	None observed.
Mains sewer connection or soakaways	None observed.
Dust and noise	None observed.
Abandoned equipment (other than mentioned above)	None observed.
Visible emissions (air, water, land)	None observed.
Evidence of possible instability	None apparent.
Invasive plant species	None observed.
Miscellaneous	None.
Off-site observations	South of the car park the base of the former residential properties is still present and fenced off with signage “Dangerous structure” (Plate 11 and 12). It is unknown why these were not fully demolished and redeveloped.

In summary there was one extra specific land quality issue that was identified during the walkover survey: the nearby mechanics with potential for hydrocarbon leaks which is 15 to 20m from the boundary of the site.

Plate 1: Existing bungalow

Plate 2: Electricity sub-station to west of site

Plate 3: Cut slope between bungalow and sub-station

Plate 4: Rear garden area with small hardstanding to right of picture

Plate 5: Inside bungalow

Plate 6: Inside bungalow

Plate 7: Playground north of site

Plate 8: Cut slope north-west of site with climbing frame

Plate 9: Garage to south-west of site

Plate 10: Garage to south-west of site

Plate 11: Fenced off area south of car park

Plate 12: Floors of former properties in fenced off area

6 PRELIMINARY CONCEPTUAL SITE MODEL

6.1 Introduction

In accordance with Environment Agency (EA) Land Contamination Risk Management (LCRM) guidance (2020, revised July 2023), the information from the desk study and site investigation should be used to generate a preliminary risk assessment. The purpose of this is to develop a Preliminary Conceptual Site Model (CSM) to establish whether there are any potentially unacceptable risks present and determine the action required to provide any further information to refine the model.

The assessment presents an evaluation of the potential risks posed, should contaminants be present in the soil or groundwater beneath the site.

In the context of the Environmental Protection Act 1990 (EPA90), associated April 2012 statutory guidance (DEFRA, 2012), and other non-statutory guidance (EA, 2004) a preliminary (contaminated land) risk assessment should focus on whether the land at a subject site meets the statutory definition of Contaminated Land. Part IIA of the EPA90 defines Contaminated Land as:

- *"any land which appears to the local authority in whose area it is situated to be in such condition, by reason of substances in, on or under the land, that:*
- *significant harm is being caused or there is a significant possibility of such harm being caused; or*
- *Significant pollution of controlled waters is being caused, or there is a significant possibility of such pollution being caused.*

The standard procedure for assessing contaminated land, as outlined in the above guidance involves the development of a Conceptual Site Model (CSM) comprising the assessment of linkages between potential contaminants, pathways and receptors.

Based on the information available from the desk study the potential contaminant linkages between sources and receptors are discussed below.

Risks from land contamination are assessed through the identification and evaluation of pollutant linkages (contaminant-pathway-receptor relationships) as described in guidance

published the Department for Environment, Food & Rural Affairs (DEFRA) and the Environment Agency. When assessing potential pollutant linkages, definitions used in the associated statutory guidance to support Part IIA have been used. These definitions can be summarised as:

- *Source (Contaminant) – is a substance which is in, on or under the land and which has the potential to cause harm or to cause pollution of the water environment;*
- *Pathway – is one or more routes or means by, or through, which a receptor is/or might be affected by a contaminant; and*
- *Receptor – is something that could be adversely affected by a contaminant, for example a person, an organism, an ecosystem, property, or the Water Environment. The various types of receptors that are relevant under the Part IIA regime are explained in the statutory guidance.*

In accordance with current guidance, a tiered approach to this assessment has been taken with the findings of this report constituting a preliminary risk assessment. The adopted approach involves the development of a Preliminary Conceptual Site Model (PCSM) to summarise the sources of contamination, potential migration/exposure pathways and potential receptors that may exist at the site and could be associated with significant levels of risk.

Table 6.1 presents an assessment of the potential severity of each linkage and the probability of each linkage occurring, to arrive at an overall risk rating for each linkage. Severity, probability and overall risk have been assessed in accordance with guidance in CIRIA report C552, “Contaminated Land Risk Assessment, A Guide for Good Practice”. A summary of the guidance in C552 is included as Appendix E.

6.2 Preliminary Conceptual Site Model

Through a review of available historical and published information (e.g. geological, hydrogeological and hydrological information), potential sources of contamination and associated contaminants were identified and/or discounted. Those sources/contaminants that are not discounted are then considered in relation to the source-pathway-receptor relationship.

It should be noted that under current health and safety legislation, construction and maintenance workers are required to carry out appropriate risk assessments and instigate appropriate mitigating measures to protect themselves, other human receptors and the environment from contamination which may be present. Such risks must be adequately mitigated by the measures required under current legislation, specifically the Construction Design Management (CDM) Regulations which requires that potential risks to human health and the environment from construction activities are appropriately identified and all necessary steps taken to eliminate / manage that risk. On this basis, it been assumed that personal protective equipment (PPE) and health and safety best practices will be adopted during the construction works and acute risks to construction workers / site visitors have therefore not been considered as part of this assessment.

Table 6.1 Potential Contaminant Linkages

Source	Pathway	Receptor	Risk / Work needed
Potential contaminants in soil/groundwater on-site, originating from the following **on-site** sources: • Possible demolition material from the former community hall and made ground of unknown provenance. • Made ground or natural strata containing hazardous ground gases Possible contaminants include: • Asbestos • Heavy metals • Polycyclic aromatic hydrocarbons (PAHs) • Petroleum hydrocarbons • Methane, carbon dioxide and radon.	Inhalation, ingestion and dermal contact with contaminants in soil and soil derived dust.	Human Health – future site users (school children and workers)	Probability : Low Severity : Medium **Risk Rating: Moderate /Low** Site unlikely to be contaminated based on former use of both recreational and then school buildings. There are no on-site mining or industrial uses shown in the historical maps or walkover survey. However, the proposed development has sensitive receptors (school children) and with the garden area there is the potential pathway of contact with localised demolition material, which will most likely be inert. Ground investigation including chemical testing of any made ground soils should be undertaken to confirm the absence or presence of contamination at the site.
	Inhalation of asbestos fibres.		Probability : Low Severity : Severe **Risk Rating : Moderate** There is the potential for asbestos fibres to be present from previous demolition of former building. Ground investigation works including asbestos testing of any made ground soils should be undertaken to confirm the absence or presence

			of asbestos within soils at the site. However, likely to be more of a risk for groundworkers than for future site users.
	Migration of hazardous gases (including methane and carbon dioxide) into confined spaces/buildings and accumulation leading to explosion or asphyxiation.		Probability : Unlikely Severity : Minor **Risk Rating : Very Low** The coal mine gas risk assessment says Negligible risk of mine gases. Excluding radon (see below) no sources of ground gas have been identified and as the site proposals do not include confined spaces or enclosed building, this risk is dismissed.
	Migration of radon gas into confined spaces/buildings and accumulation leading to explosion or asphyxiation.		Probability : Likely Severity : Minor **Risk Rating : Low** The site is within an area where between 3% and 5% of properties are above the Action level. If the site proposals included enclosed buildings or confined spaces, then basic radon gas protection measures would be necessary. However, as this is an open air playground, this risk is dismissed, and no radon gas protection measures are required.

	Direct contact of foundations / services with aggressive soils and or groundwater. Chemical attack to buried structures.	Human Health – future site users (school children and workers) Property – potential future structures and water pipes	Probability : Unlikely Severity : Minor **Risk Rating : Very Low** The proposed development presents a low risk of damage to future structures a result of concrete attack. The development does include a new water source sink that may require a UKWIR assessment on soil samples. Alternatively the use of barrier pipe could avoid the expensive testing suites.
	Leaching to groundwater in bedrock and superficial soils as a result of construction works. Surface water run-off.	Controlled Waters Bedrock – Secondary A Aquifer	Probability : Unlikely Severity : Medium **Risk Rating : Low** The site is not in a source protection zone, there are no nearby groundwater abstractions.

Potential contaminants in soil / groundwater **<u>off-site</u>**, originating from the following off-site sources: • Made ground or natural strata containing hazardous ground gases • Car park • Garage • Electricity sub-station Possible contaminants include: • Methane, carbon dioxide and radon. • Polycyclic aromatic hydrocarbons (PAHs) • Petroleum hydrocarbons • PCBs	Migration of gases into confined spaces/buildings and accumulation leading to explosion or asphyxiation.	<u>Human Health</u> – Future site users (school children and workers)	Probability : Unlikely Severity : Minor **Risk Rating : Very Low** The coal mine gas risk assessment says Negligible risk of mine gases and radon gas risk only relevant for enclosed buildings. As the site proposals do not include confined spaces or enclosed building, this risk is dismissed.
	Inhalation, ingestion and dermal contact with contaminants in soil and soil derived dust.		Probability : Low Severity : Medium **Risk Rating : Moderate/ Low** Hydrocarbon leaks entering the ground from cars using the nearby car park are unlikely to be significant. Leaks from the nearby mechanics could migrate onto site given the short distance (15 to 20m) and the potential permeable bedrock. PCBs do not travel far from source, but given proximity risk can not be dismissed. Ground investigation should include chemical testing to confirm the absence or presence of contamination at the site.

7 COMMENTS AND RECOMMENDATIONS

7.1 General

Barker Associates are proposing to develop the site to demolish the existing caretakers bungalow and provide a new outdoor play area for pre-school children, as well as a new car parking area.

7.2 Geo-environmental

- Part of the site is be developed for a new play area for pre-school children. Therefore, this assessment focuses on potential risks to both young children and workers. The proposed car park does not present a contamination risk.
- The site is a low risk of contamination based on its site history. However, outside the site boundaries, the nearby garage and electricity sub-station do present a Moderate/Low risk of off-site sources migrating onto site, particularly as the topography falls from south-west to north-east and the underlying geology may be permeable.
- Given the sensitive nature of receptors that will use the site, and a probable pathway which includes a garden area where pre-school children are likely to come into contact with the underlying soil, then it is recommended that a ground investigation is undertaken to obtain some representative shallow soils for chemical analysis and a generic qualitative risk assessment. This should include some headspace screens to assess the potential for hydrocarbon contamination.
- Whilst the site is in a radon gas affected area, the risk of hazardous ground gases is dismissed as the site proposals do not include confined spaces or enclosed buildings. The coal mine gas risk assessment concludes the site in within a negligible risk zone of hazardous mine gases.
- There is a Low risk to controlled waters (groundwater) from on-site sources, so consultation with the Environment Agency should not be necessary.

7.3 Geotechnical

- The light loads from the site proposals are unlikely to require ground investigation for geotechnical purposes.

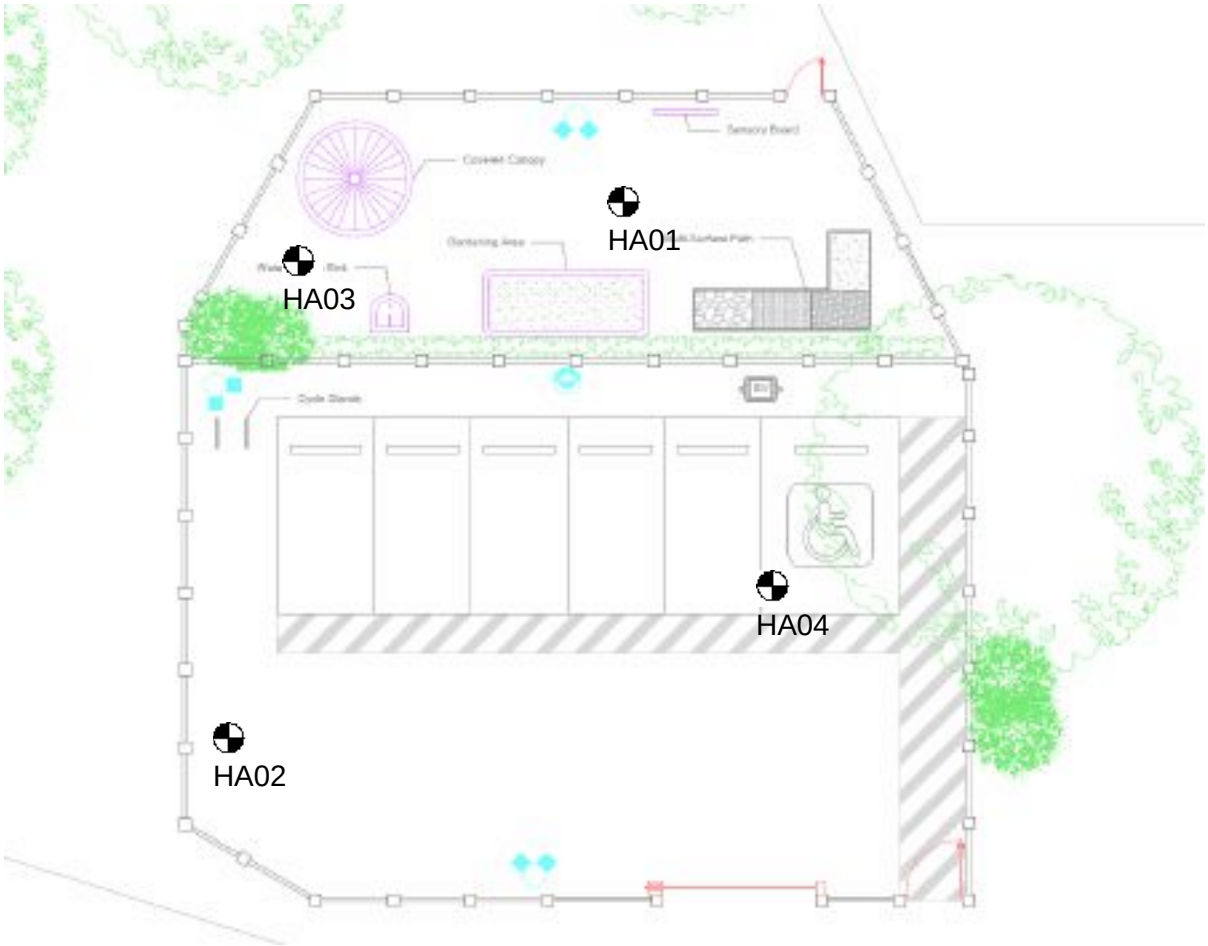
- The BGS databases indicates that site is underlain by the Woolley Edge Rock comprising sandstone. The Sandstone may be weathered to residual sand soils at shallow depths.
- There are some trees on site that may be retained, and any site proposals are likely to include new planting. However, the sand soils likely to be present beneath the site are not prone to tree influence or seasonal shrink or swell.

7.4 Outline Recommendations for Further Investigation

The below ground investigation is recommended for geo-environmental risk management:

- A full Phase 2 intrusive ground investigation is not considered necessary given the site proposals do not include buildings that impart higher net loads on the ground than existing.
- As future site users are the most sensitive receptor – pre-school children with low body mass – and the proposals do include a garden area, then the risk of a pathway between receptors and contaminated soil can not be fully discounted.
- It is recommended that a ground investigation to obtain representative soil samples across the site for contamination testing purposes. From the preliminary conceptual site model, this should include PCBs, hydrocarbons, PAHs and asbestos screens. The sample tested for PCBs should be from the exploratory hole nearest the sub-station (hand auger HA02).
- To minimise expense, this could be done using shallow hand dug pits with hand auger follow on to determine the depth of made ground and obtain soil samples for testing, as shown in Figure 7.1.
- The use of a photo-ion detector for head space screening could also minimise relatively expensive laboratory testing suites.
- A percolation test to BRE 365 may be required to provide information for sustainable surface water drainage if there is a relevant planning condition.
- A TRRL dynamic cone penetrometer test may be required for the new car park area to provide a CBR value for pavement design (hand augers HA02 and HA04).

Figure 7.1 – Proposed Phase 2 Exploratory Hole Plan



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APPENDIX A - LIMITATIONS STATEMENT

1. The observations described in this report were made under the conditions stated herein. The conclusions were based solely upon the services described and not on scientific tasks or procedures beyond the scope of described services or the time and budgetary constraints imposed by the client.

2. The findings, conclusions and recommendations in this report are based on information concerning the site made available to Arena Geo Limited. Conditions in many of the areas reviewed are subject to change, so the environmental status at any given time could differ from the status at the time of our evaluation.

3. In preparing this report, Arena Geo Limited has relied on certain information provided by Government or local officials and other third parties referenced herein, and on information contained in the files of local agencies available at the time of our review. We did not attempt to independently verify the accuracy or completeness of all information reviewed or received during the course of the study.

4. The purpose of this study was to render an opinion as to the presence of potential contamination with regard to the setting of the site, within the limits of the scope of work outlined in our proposal. We did not attempt to assess the compliance of present or past owners or operations at the site with all laws and regulations, environmental or otherwise.

5. Where analyses have been conducted by an outside laboratory, Arena Geo Limited has relied on the data provided and has not conducted an independent evaluation of the reliability of these data.

6. We did not undertake any specific ecological survey as part of this report. Except when noted in the text of this report, no information is offered about the ecological value of the site, or about species present on or near the site.

7. The groundwater and ground gas conditions entered on the various records are those observed during subsequent monitoring. Groundwater is subject to seasonal variation or changes in local drainage conditions. Ground gas levels may vary depending on variations in weather conditions particularly barometric pressure. Rates of decomposition / degradation of organic matter in the underlying soils can also affect the generation of ground gases.

8. The opinions expressed in this report are based on the ground conditions revealed by investigation, together with an assessment of the site and of laboratory test results. Whilst opinions may be expressed relating to sub-soil conditions in parts of the site not investigated, for example between borehole positions, these are only for guidance and no liability can be accepted for their accuracy

9. The content of this report represents the professional opinion of experienced geotechnical and environmental specialists. Arena Geo Limited does not provide associated legal advice and appropriate legal advice should be sought if required.

10. The lack of evidence of the presence of hazardous materials, voids or obstructive features at the subject property does not guarantee the absence of such materials/features, rather it indicates only that none was found as a result of the services provided.

11. This report is for the exclusive use of Barker Associates, and their exclusive agents. No warranties or guarantees are expressed or should be inferred by any third parties. Any such party relies upon the report at their risk.

APPENDIX B – GROUNDSURE ENVIRO INSIGHT REPORT

Groundsure
LOCATION INTELLIGENCE

Enviro+Geo Insight

CARETAKERS HOUSE, BANK END PRIMARY SCHOOL, UNDERWOOD AVENUE, WORSBROUGH DALE, BARNSLEY, S70 4AZ

Order Details

Date: 08/04/2025

Your ref: 251012

Our Ref: GS-BSB-7V3-88O-PKQ

Site Details

Location: 436168 404493

Area: 0.08 ha

Authority: Barnsley Metropolitan Borough Council ↗

Contact us with any questions at:
info@groundsure.com ↗
01273 257 755

Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
15 >	1.1 >	Historical industrial land uses >	0	0	6	17	-
16	1.2	Historical tanks	0	0	0	0	-
17 >	1.3 >	Historical energy features >	1	0	2	4	-
17	1.4	Historical petrol stations	0	0	0	0	-
18	1.5	Historical garages	0	0	0	0	-
18	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped >	On site	0-50m	50-250m	250-500m	500-2000m
19 >	2.1 >	Historical industrial land uses >	0	0	12	21	-
21	2.2	Historical tanks	0	0	0	0	-
21 >	2.3 >	Historical energy features >	2	0	4	10	-
22	2.4	Historical petrol stations	0	0	0	0	-
22	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
23	3.1	Active or recent landfill	0	0	0	0	-
23	3.2	Historical landfill (BGS records)	0	0	0	0	-
24	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
24 >	3.4 >	Historical landfill (EA/NRW records) >	0	0	0	1	-
24	3.5	Historical waste sites	0	0	0	0	-
24	3.6	Licensed waste sites	0	0	0	0	-
25	3.7	Waste exemptions	0	0	0	0	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
26 >	4.1 >	Recent industrial land uses >	0	1	3	-	-
27	4.2	Current or recent petrol stations	0	0	0	0	-
27	4.3	Electricity cables	0	0	0	0	-
27	4.4	Gas pipelines	0	0	0	0	-
27	4.5	Sites determined as Contaminated Land	0	0	0	0	-

27	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
28	4.7	Regulated explosive sites	0	0	0	0	-
28	4.8	Hazardous substance storage/usage	0	0	0	0	-
28	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
28	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
28	4.11	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-
29	4.12	Radioactive Substance Authorisations	0	0	0	0	-
29 >	**4.13 >**	**Licensed Discharges to controlled waters >**	0	0	2	0	-
29	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
30	4.15	Pollutant release to public sewer	0	0	0	0	-
30	4.16	List 1 Dangerous Substances	0	0	0	0	-
30	4.17	List 2 Dangerous Substances	0	0	0	0	-
30	4.18	Pollution Incidents (EA/NRW)	0	0	0	0	-
30	4.19	Pollution inventory substances	0	0	0	0	-
31	4.20	Pollution inventory waste transfers	0	0	0	0	-
31	4.21	Pollution inventory radioactive waste	0	0	0	0	-

Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
32	5.1	Superficial aquifer	None (within 500m)				
33 >	**5.2 >**	**Bedrock aquifer >**	Identified (within 500m)				
35 >	**5.3 >**	**Groundwater vulnerability >**	Identified (within 50m)				
36	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
36	5.5	Groundwater vulnerability- local information	None (within 0m)				
37 >	**5.6 >**	**Groundwater abstractions >**	0	0	0	0	2
38 >	**5.7 >**	**Surface water abstractions >**	0	0	0	0	11
41	5.8	Potable abstractions	0	0	0	0	0
41	5.9	Source Protection Zones	0	0	0	0	-
42	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

Page	Section	**Hydrology >**	On site	0-50m	50-250m	250-500m	500-2000m
43	6.1	Water Network (OS MasterMap)	0	0	0	-	-

43	6.2	Surface water features	0	0	0	-	-
44 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
44 >	6.4 >	WFD Surface water bodies >	0	0	0	-	-
45 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
46	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
46	7.2	Historical Flood Events	0	0	0	-	-
46	7.3	Flood Defences	0	0	0	-	-
47	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
47	7.5	Flood Storage Areas	0	0	0	-	-
48	7.6	Flood Zone 2	None (within 50m)				
48	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding >					
49 >	8.1 >	Surface water flooding >	1 in 30 year, 0.3m - 1.0m (within 50m)				
Page	Section	Groundwater flooding >					
51 >	9.1 >	Groundwater flooding >	Negligible (within 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
52 >	10.1 >	Sites of Special Scientific Interest (SSSI) >	0	0	0	0	4
53	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
53	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
53	10.4	Special Protection Areas (SPA)	0	0	0	0	0
54	10.5	National Nature Reserves (NNR)	0	0	0	0	0
54 >	10.6 >	Local Nature Reserves (LNR) >	0	0	0	0	3
54 >	10.7 >	Designated Ancient Woodland >	0	0	0	0	4
55	10.8	Biosphere Reserves	0	0	0	0	0
55	10.9	Forest Parks	0	0	0	0	0
55	10.10	Marine Conservation Zones	0	0	0	0	0
55 >	10.11 >	Green Belt >	1	0	0	0	1
56	10.12	Proposed Ramsar sites	0	0	0	0	0

56	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
56	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
56	10.15	Nitrate Sensitive Areas	0	0	0	0	0
57 >	10.16 >	Nitrate Vulnerable Zones >	1	0	0	0	1
58 >	10.17 >	SSSI Impact Risk Zones >	2	-	-	-	-
60 >	10.18 >	SSSI Units >	0	0	0	0	4
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
62	11.1	World Heritage Sites	0	0	0	-	-
62	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
62	11.3	National Parks	0	0	0	-	-
62	11.4	Listed Buildings	0	0	0	-	-
63	11.5	Conservation Areas	0	0	0	-	-
63	11.6	Scheduled Ancient Monuments	0	0	0	-	-
63	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
64 >	12.1 >	Agricultural Land Classification >	Grade 3 (within 250m)				
65	12.2	Open Access Land	0	0	0	-	-
65	12.3	Tree Felling Licences	0	0	0	-	-
65	12.4	Environmental Stewardship Schemes	0	0	0	-	-
65	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations >	On site	0-50m	50-250m	250-500m	500-2000m
66 >	13.1 >	Priority Habitat Inventory >	0	0	1	-	-
67	13.2	Habitat Networks	0	0	0	-	-
67	13.3	Open Mosaic Habitat	0	0	0	-	-
67	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
68 >	14.1 >	10k Availability >	Identified (within 500m)				
69 >	14.2 >	Artificial and made ground (10k) >	0	0	5	1	-
71	14.3	Superficial geology (10k)	0	0	0	0	-

71	14.4	Landslip (10k)	0	0	0	0	-
72 >	14.5 >	Bedrock geology (10k) >	1	0	4	11	-
73 >	14.6 >	Bedrock faults and other linear features (10k) >	0	0	2	8	-
Page	Section	Geology 1:50,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
75 >	15.1 >	50k Availability >	Identified (within 500m)				
76 >	15.2 >	Artificial and made ground (50k) >	0	0	4	1	-
77	15.3	Artificial ground permeability (50k)	0	0	-	-	-
78	15.4	Superficial geology (50k)	0	0	0	0	-
78	15.5	Superficial permeability (50k)	None (within 50m)				
78	15.6	Landslip (50k)	0	0	0	0	-
78	15.7	Landslip permeability (50k)	None (within 50m)				
79 >	15.8 >	Bedrock geology (50k) >	1	0	4	6	-
80 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
80 >	15.10 >	Bedrock faults and other linear features (50k) >	0	0	2	7	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
82	16.1	BGS Boreholes	0	0	0	-	-
Page	Section	Natural ground subsidence >					
83 >	17.1 >	Shrink swell clays >	Negligible (within 50m)				
84 >	17.2 >	Running sands >	Negligible (within 50m)				
85 >	17.3 >	Compressible deposits >	Negligible (within 50m)				
86 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
87 >	17.5 >	Landslides >	Very low (within 50m)				
88 >	17.6 >	Ground dissolution of soluble rocks >	Negligible (within 50m)				
Page	Section	Mining and ground workings >	On site	0-50m	50-250m	250-500m	500-2000m
90 >	18.1 >	BritPits >	0	0	0	3	-
91 >	18.2 >	Surface ground workings >	0	0	12	-	-
92 >	18.3 >	Underground workings >	0	0	0	0	8
92	18.4	Underground mining extents	0	0	0	0	-
93	18.5	Historical Mineral Planning Areas	0	0	0	0	-

93 >	18.6 >	Non-coal mining >	0	0	1	2	12
95	18.7	JPB mining areas	None (within 0m)				
95	18.8	The Coal Authority non-coal mining	0	0	0	0	-
95	18.9	Researched mining	0	0	0	0	-
96	18.10	Mining record office plans	0	0	0	0	-
96	18.11	BGS mine plans	0	0	0	0	-
96 >	18.12 >	Coal mining >	Identified (within 0m)				
96	18.13	Brine areas	None (within 0m)				
97	18.14	Gypsum areas	None (within 0m)				
97	18.15	Tin mining	None (within 0m)				
97	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m
98	19.1	Natural cavities	0	0	0	0	-
98	19.2	Mining cavities	0	0	0	0	0
98	19.3	Reported recent incidents	0	0	0	0	-
98	19.4	Historical incidents	0	0	0	0	-
Page	Section	Radon >					
100 >	20.1 >	Radon >	Between 3% and 5% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
102 >	21.1 >	BGS Estimated Background Soil Chemistry >	2	0	-	-	-
102	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
102	21.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
103	22.1	Underground railways (London)	0	0	0	-	-
103	22.2	Underground railways (Non-London)	0	0	0	-	-
103	22.3	Railway tunnels	0	0	0	-	-
103	22.4	Historical railway and tunnel features	0	0	0	-	-
103	22.5	Royal Mail tunnels	0	0	0	-	-
104	22.6	Historical railways	0	0	0	-	-

104	22.7	Railways	0	0	0	-	-
104	22.8	Crossrail 2	0	0	0	0	-
104	22.9	HS2	0	0	0	0	-

Recent aerial photograph

Capture Date: 19/04/2021

Site Area: 0.08ha

Recent site history - 2018 aerial photograph

Capture Date: 01/07/2018

Site Area: 0.08ha

Recent site history - 2013 aerial photograph

Capture Date: 07/06/2013

Site Area: 0.08ha

Recent site history - 2009 aerial photograph

Capture Date: 11/09/2009

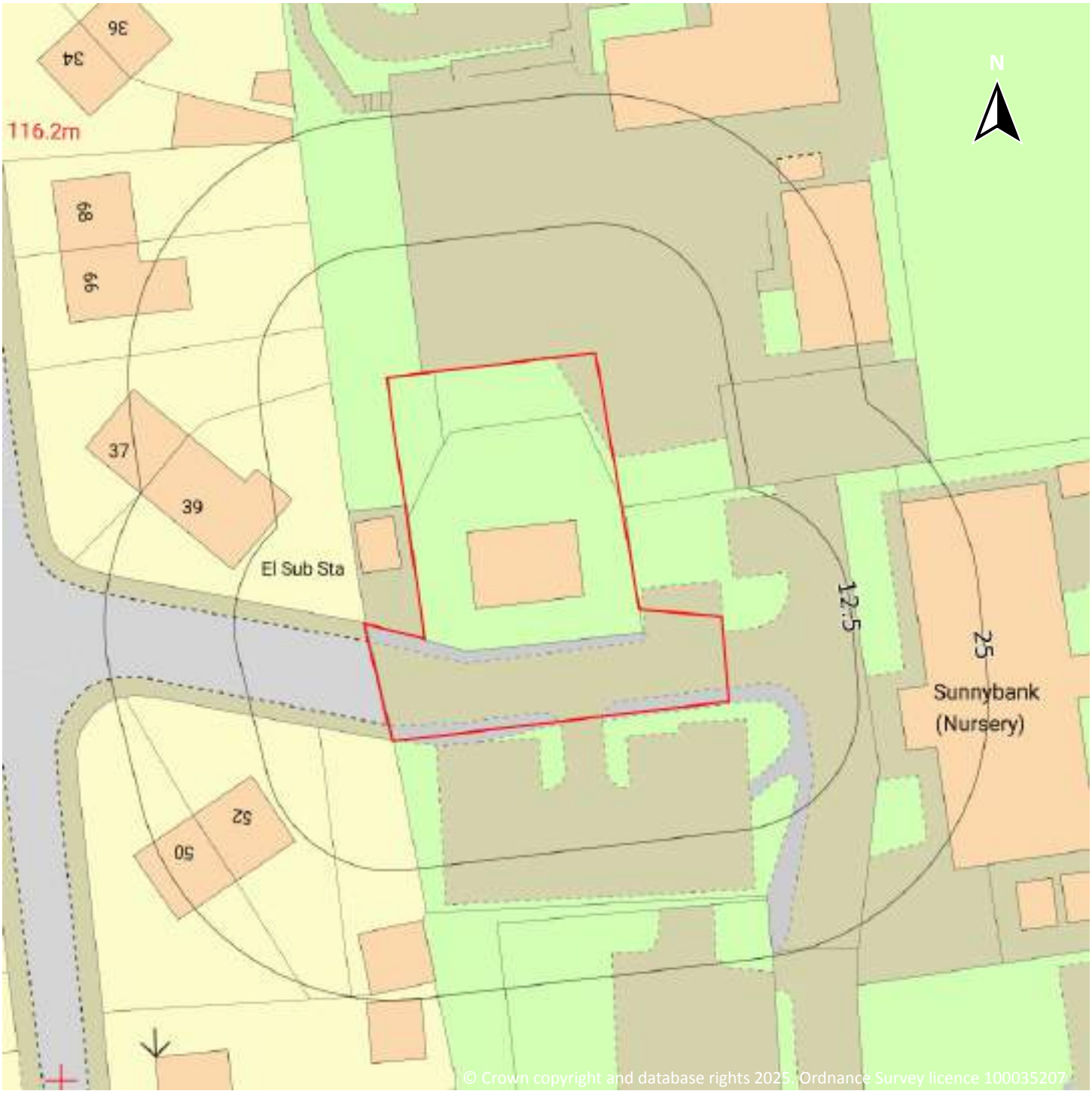
Site Area: 0.08ha

Recent site history - 1999 aerial photograph

Capture Date: 10/07/1999

Site Area: 0.08ha

OS MasterMap site plan



Site Area: 0.08ha

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	23

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

Features are displayed on the Past land use map on **page 15 >**

ID	Location	Land use	Dates present	Group ID
A	95m N	Unspecified Ground Workings	1977 - 1987	1496388

ID	Location	Land use	Dates present	Group ID
A	100m N	Unspecified Ground Workings	1966	1482792
2	127m NE	Unspecified Heap	1966 - 1987	1483190
3	162m NW	Unspecified Ground Workings	1966 - 1987	1497557
6	232m NE	Unspecified Pit	1966	1581454
7	233m NE	Unspecified Pit	1977 - 1987	1566763
B	268m NE	Unspecified Pit	1987	1452916
B	268m NE	Unspecified Ground Workings	1966 - 1977	1541224
9	314m W	Sandstone Quarries	1850	1471621
10	331m NW	Unspecified Pit	1977 - 1987	1560371
C	375m W	Unspecified Quarry	1948	1488411
C	376m W	Unspecified Quarry	1938	1516831
C	376m W	Unspecified Quarry	1904	1573200
C	377m W	Unspecified Quarry	1890	1524921
C	378m W	Sandstone Quarries	1850	1471620
D	381m S	Unspecified Ground Workings	1977 - 1987	1575094
D	391m S	Sandstone Quarry	1850	1444908
11	403m E	Unspecified Heap	1966	1468712
C	423m W	Unspecified Heap	1951	1468713
13	446m S	Colliery	1850	1469155
E	461m W	Cemetery	1987	1535477
E	471m W	Cemetery	1951	1503784
E	475m W	Cemetery	1966 - 1977	1579843

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	7

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 15 >**

ID	Location	Land use	Dates present	Group ID
1	**On site**	**Electricity Substation**	**1975 - 1993**	**159890**
4	162m S	Electricity Substation	1975 - 1993	161578
5	169m E	Electricity Substation	1975 - 1993	157843
8	297m N	Electricity Substation	1973 - 1993	147378
12	404m SE	Electricity Substation	1975 - 1993	161564
14	454m NW	Electricity Substation	1978 - 1993	157959
15	479m W	Electricity Substation	1977 - 1993	149187

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	33

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 10,560 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 19 >**

ID	Location	Land Use	Date	Group ID
B	95m N	Unspecified Ground Workings	1977	1496388
B	95m N	Unspecified Ground Workings	1987	1496388
B	100m N	Unspecified Ground Workings	1966	1482792

ID	Location	Land Use	Date	Group ID
C	127m NE	Unspecified Heap	1966	1483190
C	127m NE	Unspecified Heap	1977	1483190
C	127m NE	Unspecified Heap	1987	1483190
D	162m NW	Unspecified Ground Workings	1966	1497557
D	162m NW	Unspecified Ground Workings	1977	1497557
D	162m NW	Unspecified Ground Workings	1987	1497557
1	232m NE	Unspecified Pit	1966	1581454
G	233m NE	Unspecified Pit	1977	1566763
G	233m NE	Unspecified Pit	1987	1566763
H	268m NE	Unspecified Ground Workings	1966	1541224
H	268m NE	Unspecified Ground Workings	1977	1541224
H	268m NE	Unspecified Pit	1987	1452916
2	314m W	Sandstone Quarries	1850	1471621
J	331m NW	Unspecified Pit	1977	1560371
J	331m NW	Unspecified Pit	1987	1560371
K	375m W	Unspecified Quarry	1948	1488411
K	376m W	Unspecified Quarry	1938	1516831
K	376m W	Unspecified Quarry	1904	1573200
K	377m W	Unspecified Quarry	1890	1524921
K	378m W	Sandstone Quarries	1850	1471620
L	381m S	Unspecified Ground Workings	1977	1575094
L	381m S	Unspecified Ground Workings	1987	1575094
L	391m S	Sandstone Quarry	1850	1444908
3	403m E	Unspecified Heap	1966	1468712
K	423m W	Unspecified Heap	1951	1468713
4	446m S	Colliery	1850	1469155
O	461m W	Cemetery	1987	1535477
O	471m W	Cemetery	1951	1503784

ID	Location	Land Use	Date	Group ID
O	475m W	Cemetery	1966	1579843
O	475m W	Cemetery	1977	1579843

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	**16**

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

Features are displayed on the Past land use - un-grouped map on **page 19 >**

ID	Location	Land Use	Date	Group ID
A	**On site**	**Electricity Substation**	**1975**	**159890**
A	**On site**	**Electricity Substation**	**1993**	**159890**
E	162m S	Electricity Substation	1975	161578
E	163m S	Electricity Substation	1993	161578
F	169m E	Electricity Substation	1975	157843
F	170m E	Electricity Substation	1993	157843
I	297m N	Electricity Substation	1993	147378
I	297m N	Electricity Substation	1973	147378
M	404m SE	Electricity Substation	1975	161564
M	405m SE	Electricity Substation	1993	161564
N	454m NW	Electricity Substation	1978	157959

ID	Location	Land Use	Date	Group ID
N	454m NW	Electricity Substation	1993	157959
N	455m NW	Electricity Substation	1985	157959
P	479m W	Electricity Substation	1977	149187
P	479m W	Electricity Substation	1993	149187
P	480m W	Electricity Substation	1977	149187

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m	**0**

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

This data is sourced from Ordnance Survey / Groundsure.

2.5 Historical garages

Records within 500m	**0**

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

This data is sourced from Ordnance Survey / Groundsure.

3 Waste and landfill

Site Outline

Search buffers in metres (m)

Historical landfill (EA/NRW)

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	1

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

Features are displayed on the Waste and landfill map on **page 23 >**

ID	Location	Details		
1	433m NW	Site Address: Highfield Farm, Knowle Road, Barnsley Licence Holder Address: Highfield Farm, Knowle Road, Barnsley	Waste Licence: Yes Site Reference: WD20 B311, 4400/B311, 20B311(78) Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 16/01/1981 Licence Surrender: -	Operator: R J Norman Licence Holder: R J Norman First Recorded 31/01/1981 Last Recorded: 31/12/1983

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

3.5 Historical waste sites

Records within 500m	0

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

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

3.6 Licensed waste sites

Records within 500m	0

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

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

3.7 Waste exemptions

Records within 500m	0

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.

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

4 Current industrial land use

Site Outline

Search buffers in metres (m)

Recent industrial land uses

Licensed Discharges to controlled waters

4.1 Recent industrial land uses

Records within 250m	4

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 26 >**

ID	Location	Company	Address	Activity	Category
1	6m W	Electricity Sub Station	South Yorkshire, S70	Electrical Features	Infrastructure and Facilities
2	167m E	Electricity Sub Station	South Yorkshire, S70	Electrical Features	Infrastructure and Facilities
3	170m S	Electricity Sub Station	South Yorkshire, S70	Electrical Features	Infrastructure and Facilities

ID	Location	Company	Address	Activity	Category
4	199m E	Electricity Sub Station	South Yorkshire, S70	Electrical Features	Infrastructure and Facilities

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m	0

Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m	0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m	0

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 Sites determined as Contaminated Land

Records within 500m	0

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

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m	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	0

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

This data is sourced from Local Authority records.

4.12 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 26 >**

ID	Location	Address	Details	
A	88m N	BANKENDAVENUECSO,BANKENDAVENUE(OPPNO73,WORSBROUGH,BARNSLEY,SOUTHYORKSHIRE,S70 4QN	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: WRA9240 Permit Version: 1 Receiving Water: DOB SIKE	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 03/09/2007 Effective Date: 03/09/2007 Revocation Date: 08/08/2019
A	88m N	BANKENDAVENUECSO,BANKENDAVENUE(OPPNO73,WORSBROUGH,BARNSLEY,SOUTHYORKSHIRE,S70 4QN	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: WRA9240 Permit Version: 2 Receiving Water: DOB SIKE	Status: VARIED UNDER EPR 2010 Issue date: 09/08/2019 Effective Date: 09/08/2019 Revocation Date: -

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

4.14 Pollutant release to surface waters (Red List)

Records within 500m	0

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	0

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

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	2

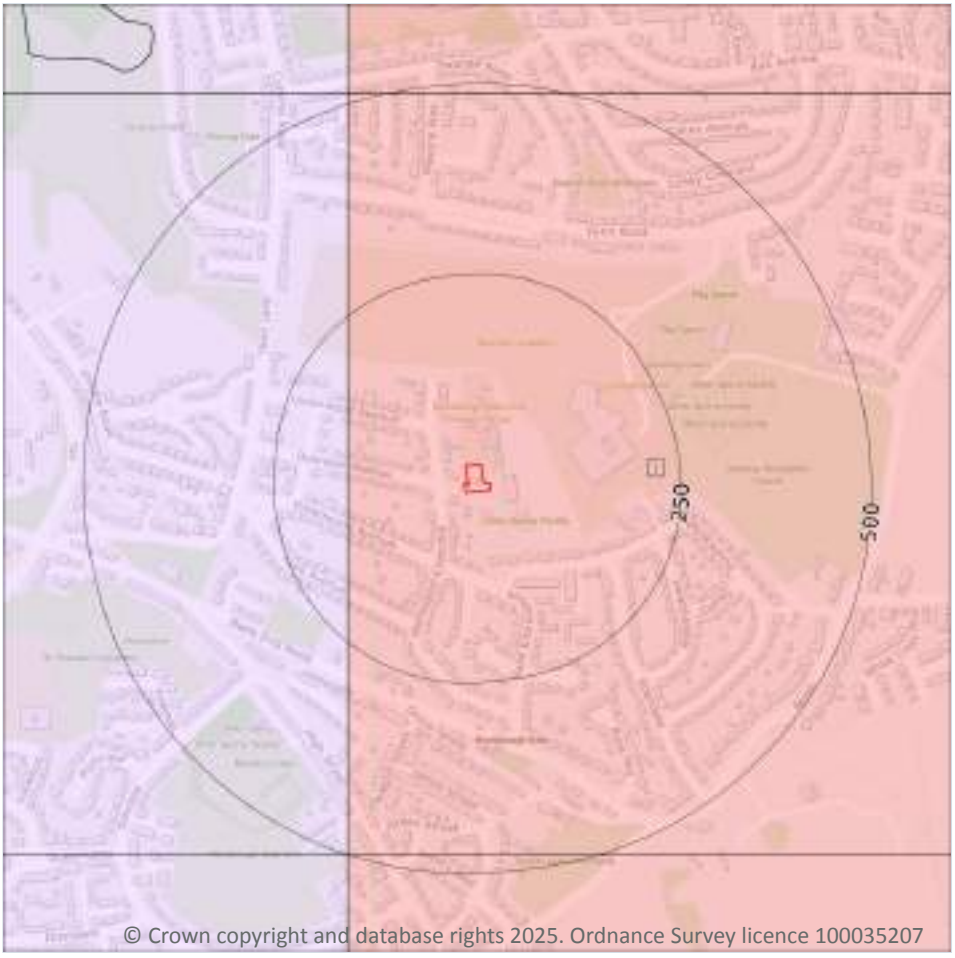
Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on **page 33 >**

ID	Location	Designation	Description
1	**On site**	**Secondary A**	**Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers**
2	487m N	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

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

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 35 >**

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: <40% Dilution value: <300mm/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	2

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 37 >**

ID	Location	Details	
-	1888m NE	Status: Historical Licence No: 2/27/08/124 Details: General Washing/Process Washing Direct Source: GROUNDWATERS Point: WELL - SUPERFICIAL DRIFT - STAIRFOOT Data Type: Point Name: C SOAR & SONS Easting: 437150 Northing: 406130	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 14/07/1999 Expiry Date: - Issue No: 100 Version Start Date: 14/07/1999 Version End Date: -
-	1888m NE	Status: Historical Licence No: 2/27/08/124 Details: General Washing/Process Washing Direct Source: GROUNDWATERS Point: WELL - SUPERFICIAL DRIFT - STAIRFOOT Data Type: Point Name: C SOAR & SONS Easting: 437150 Northing: 406130	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 14/07/1999 Expiry Date: - Issue No: 100 Version Start Date: 14/07/1999 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m	**11**

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 37 >**

ID	Location	Details	
-	1092m S	Status: Historical Licence No: 2/27/08/128 Details: Make-Up or Top Up Water Direct Source: SURFACE WATER Point: INLAND WATER - RIVER DOVE Data Type: Line Name: NUTTALL Easting: 436550 Northing: 403450	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 13/09/2002 Expiry Date: 31/03/2017 Issue No: 1 Version Start Date: 13/09/2002 Version End Date: -

ID	Location	Details	
-	1507m SW	Status: Historical Licence No: 2/27/08/129 Details: Spray Irrigation - Direct Direct Source: SURFACE WATER Point: INLAND WATER - RIVER DOVE Data Type: Line Name: WORSBROUGH BRIDGE SPORTS & DEVELOPMENT ASSOCIATION Easting: 435000 Northing: 403300	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 04/09/2002 Expiry Date: 31/03/2017 Issue No: 1 Version Start Date: 04/09/2002 Version End Date: -
-	1677m SW	Status: Active Licence No: 2/27/08/143/R01 Details: Milling & Water Power Other Than Electricity Generation Direct Source: SURFACE WATER Point: WORSBOROUGH MILL POND Data Type: Point Name: BARNSLEY METROPOLITAN BOROUGH COUNCIL Easting: 434947 Northing: 403313	Annual Volume (m^3): 174314 Max Daily Volume (m^3): 633 Original Application No: NPS/WR/033523 Original Start Date: 01/04/2017 Expiry Date: 31/03/2029 Issue No: 3 Version Start Date: 08/07/2020 Version End Date: -
-	1720m SW	Status: Historical Licence No: 2/27/08/118 Details: Milling & Water Power Other Than Electricity Generation Direct Source: SURFACE WATER Point: WORSBOROUGH MILL POND Data Type: Point Name: BARNSLEY METROPOLITAN BOROUGH COUNCIL Easting: 434900 Northing: 403300	Annual Volume (m^3): 45359 Max Daily Volume (m^3): 633 Original Application No: - Original Start Date: 04/07/1997 Expiry Date: 31/12/2007 Issue No: 102 Version Start Date: 01/08/2002 Version End Date: -
-	1720m SW	Status: Historical Licence No: 2/27/08/143 Details: Milling & Water Power Other Than Electricity Generation Direct Source: SURFACE WATER Point: WORSBOROUGH MILL POND Data Type: Point Name: BARNSLEY METROPOLITAN BOROUGH COUNCIL Easting: 434900 Northing: 403300	Annual Volume (m^3): 45359 Max Daily Volume (m^3): 1125 Original Application No: - Original Start Date: 14/02/2008 Expiry Date: 31/03/2017 Issue No: 1 Version Start Date: 14/02/2008 Version End Date: -

ID	Location	Details	
-	1749m SW	Status: Active Licence No: NE/027/0008/023 Details: Transfer Between Sources (Post Water Act 2003) Direct Source: SURFACE WATER Point: WORSBOROUGH RESERVOIR Data Type: Point Name: BARNSLEY METROPOLITAN BOROUGH COUNCIL Easting: 434862 Northing: 403299	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: NPS/WR/029960 Original Start Date: 25/07/2019 Expiry Date: 31/03/2029 Issue No: 1 Version Start Date: 25/07/2019 Version End Date: -
-	1749m SW	Status: Historical Licence No: NE/027/0008/019 Details: Transfer Between Sources (Post Water Act 2003) Direct Source: SURFACE WATER Point: WORSBOROUGH RESERVOIR Data Type: Point Name: BARNSLEY METROPOLITAN BOROUGH COUNCIL Easting: 434862 Northing: 403299	Annual Volume (m^3): 13789 Max Daily Volume (m^3): 492 Original Application No: - Original Start Date: 01/04/2017 Expiry Date: 31/03/2029 Issue No: 1 Version Start Date: 01/04/2017 Version End Date: -
-	1794m SW	Status: Historical Licence No: 2/27/08/118 Details: Milling & Water power other than electricity generation Direct Source: SURFACE WATER Point: WORSBOROUGH RESERVOIR Data Type: Point Name: BARNSLEY METROPOLITAN BOROUGH COUNCIL Easting: 434800 Northing: 403300	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 04/07/1997 Expiry Date: 31/12/2007 Issue No: 100 Version Start Date: 04/07/1997 Version End Date: -
-	1794m SW	Status: Historical Licence No: 2/27/08/118 Details: Lake & Pond Throughflow Direct Source: SURFACE WATER Point: WORSBOROUGH RESERVOIR Data Type: Point Name: BARNSLEY METROPOLITAN BOROUGH COUNCIL Easting: 434800 Northing: 403300	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 04/07/1997 Expiry Date: 31/12/2007 Issue No: 102 Version Start Date: 01/08/2002 Version End Date: -

ID	Location	Details	
-	1794m SW	Status: Historical Licence No: 2/27/08/118 Details: Make-Up Or Top Up Water Direct Source: SURFACE WATER Point: WORSBOROUGH RESERVOIR Data Type: Point Name: BARNSLEY METROPOLITAN BOROUGH COUNCIL Easting: 434800 Northing: 403300	Annual Volume (m^3): 45359 Max Daily Volume (m^3): 633 Original Application No: - Original Start Date: 04/07/1997 Expiry Date: 31/12/2007 Issue No: 102 Version Start Date: 01/08/2002 Version End Date: -
-	1794m SW	Status: Historical Licence No: 2/27/08/143 Details: General Use Relating To Secondary Category (Very Low Loss) Direct Source: SURFACE WATER Point: WORSBOROUGH RESERVOIR Data Type: Point Name: BARNSLEY METROPOLITAN BOROUGH COUNCIL Easting: 434800 Northing: 403300	Annual Volume (m^3): 45359 Max Daily Volume (m^3): 1125 Original Application No: - Original Start Date: 14/02/2008 Expiry Date: 31/03/2017 Issue No: 1 Version Start Date: 14/02/2008 Version End Date: -

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

5.8 Potable abstractions

Records within 2000m	0

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

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

5.9 Source Protection Zones

Records within 500m	0

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

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

5.10 Source Protection Zones (confined aquifer)

Records within 500m	0

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

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

6 Hydrology

Site Outline

Search buffers in metres (m)

Water Network (OS MasterMap)

Surface water features (wider than 5m)

Surface water features (narrower than 5m)

WFD River, canal and surface water transfer water bodies

WFD Lake water bodies

WFD Transitional and coastal water bodies

WFD Surface water body catchments boundaries

WFD Groundwater body boundaries

6.1 Water Network (OS MasterMap)

Records within 250m	0

Detailed water network of Great Britain showing the flow and precise central course of every river, stream, lake and canal.

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m	0

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.

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 43 >**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
A	**On site**	**River**	**Dove from Source to River Dearne**	**GB104027057510**	**Dearne**	**Don and Rother**

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 43 >**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	970m S	River	Dove from Source to River Dearne	GB104027057510 ↗	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 43 >**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
A	**On site**	**Don & Rother Millstone grit & Coal Measures**	**GB40402G992300** ↗	**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	**Negligible**
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 49 >**

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	Negligible
1 in 250 year	Negligible
1 in 100 year	Negligible
1 in 30 year	Negligible

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 51 >**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations

Site Outline

Search buffers in metres (m)

Sites of Special Scientific Interest (SSSI)

Local Nature Reserves (LNR)

Designated Ancient Woodland

Green Belt

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m	4

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.

Features are displayed on the Environmental designations map on **page 52 >**

ID	Location	Name	Data source
3	974m S	Dearne Valley Wetlands	Natural England

ID	Location	Name	Data source
-	1821m SW	Dearne Valley Wetlands	Natural England
-	1959m E	Stairfoot Brickworks	Natural England
-	1968m SE	Dearne Valley Wetlands	Natural England

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	3

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

Features are displayed on the Environmental designations map on **page 52 >**

ID	Location	Name	Data source
A	907m S	Worsborough Country Park	Natural England
5	1472m SW	Worsborough Country Park	Natural England
-	1991m N	Dearne Valley Park	Natural England

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

10.7 Designated Ancient Woodland

Records within 2000m	4

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 52 >**

ID	Location	Name	Woodland Type
A	1104m SW	Unknown	Ancient & Semi-Natural Woodland
4	1431m SE	Wombwell Wood	Ancient & Semi-Natural Woodland
6	1544m SE	Wombwell Wood	Ancient Replanted Woodland
-	1773m SW	Unknown	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	2

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

Features are displayed on the Environmental designations map on **page 52 >**

ID	Location	Name	Local Authority name
1	**On site**	**South and West Yorkshire Green Belt**	**Barnsley**
2	520m W	South and West Yorkshire Green Belt	Barnsley

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

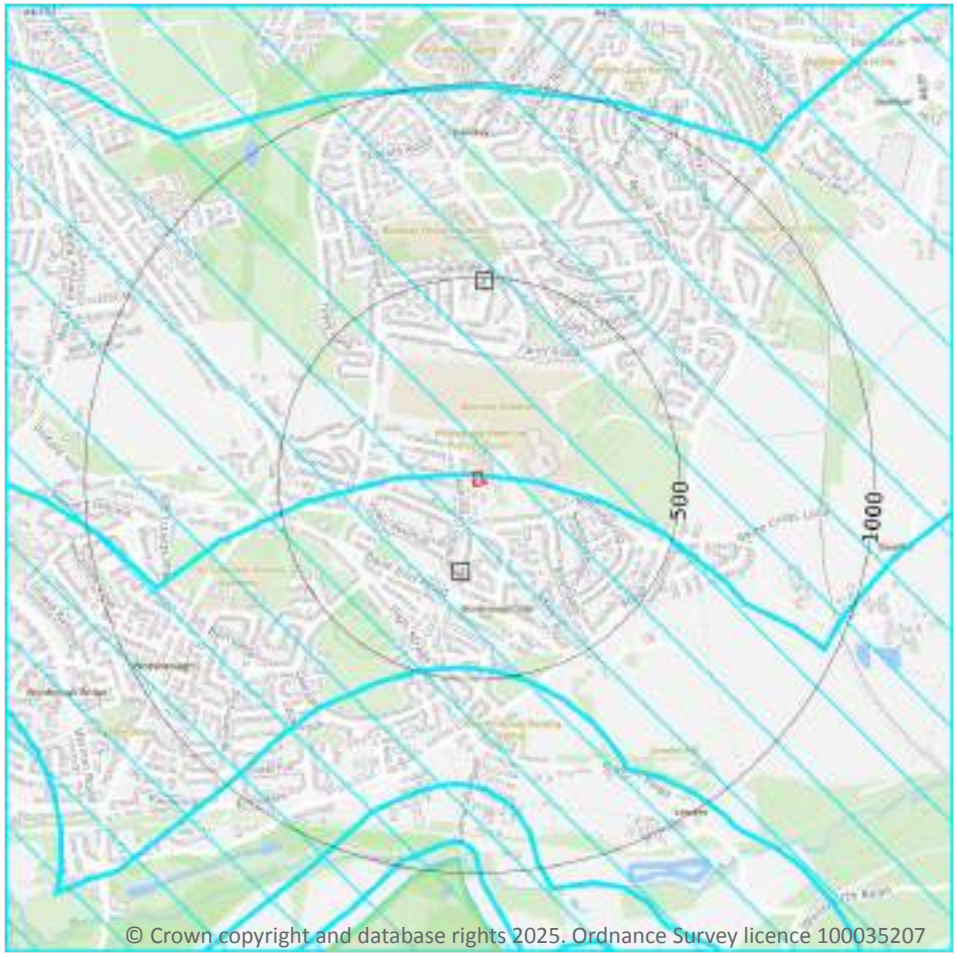
Records within 2000m	2

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

Location	Name	Type	NVZ ID	Status
On site	**River Dearne NVZ**	**Surface Water**	**278**	**Existing**
1468m N	River Dearne NVZ	Surface Water	278	Existing

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

SSSI Impact Zones and Units



Site Outline

Search buffers in metres (m)

SSSI Impact Risk Zones

SSSI Units

Not recorded

Favourable

Unfavourable - Recovering

Unfavourable - No change

Unfavourable - Declining

Partially destroyed

Destroyed

10.17 SSSI Impact Risk Zones

Records on site	2

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 58 >**

ID	Location	Type of developments requiring consultation
1	On site	**Infrastructure - Pipelines and underground cables, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals. Wind and Solar - Wind turbines. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction. Rural non-residential - Large non residential developments outside existing settlements/urban areas where net additional gross internal floorspace is > 1,000m² or footprint exceeds 0.2ha. Residential - Residential development of 100 units or more. Rural residential - Any residential development of 50 or more houses outside existing settlements/urban areas. Air pollution - Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t). Combustion - General combustion processes >20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Waste - Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill. Composting - Any composting proposal with more than 500 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management. Discharges - Any discharge of water or liquid waste of more than 2m³/day to ground (ie to seep away) or to surface water, such as a beck or stream. Water supply - Large infrastructure such as warehousing / industry where net additional gross internal floorspace is > 1,000m² or any development needing its own water supply .**
2	On site	**Infrastructure - Pipelines and underground cables, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction. Rural non-residential - Large non residential developments outside existing settlements/urban areas where footprint exceeds 1ha. Rural residential - Any residential development of 100 or more houses outside existing settlements/urban areas. Air pollution - Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t). Combustion - General combustion processes >20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Waste - Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill. Composting - Any composting proposal with more than 75000 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management. Discharges - Any discharge of water or liquid waste of more than 5m³/day to ground (ie to seep away) or to surface water, such as a beck or stream. Water supply - Large infrastructure such as warehousing / industry where total net additional gross internal floorspace following development is 1,000m² or more.**

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m	4

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.

Features are displayed on the SSSI Impact Zones and Units map on **page 58 >**

ID: 4
Location: 974m S
SSSI name: Dearne Valley Wetlands
Unit name: Barrow Colliery Site
Broad habitat: Broadleaved, Mixed And Yew Woodland - Lowland
Condition: Favourable
Reportable features:

Feature name	Feature condition	Date of assessment
Aggregations of breeding birds - Willow Tit, Poecile montanus	Favourable	01/03/2021
Assemblages of breeding birds - Scrub	Favourable	01/03/2021

ID: -
Location: 1821m SW
SSSI name: Dearne Valley Wetlands
Unit name: Worsbrough Reservoir
Broad habitat: Broadleaved, Mixed And Yew Woodland - Lowland
Condition: Favourable
Reportable features:

Feature name	Feature condition	Date of assessment
Aggregations of breeding birds - Willow Tit, Poecile montanus	Favourable	01/03/2021
Assemblages of breeding birds - Mixed	Favourable	01/03/2021
Assemblages of breeding birds - Scrub	Favourable	01/03/2021

ID: -
Location: 1959m E
SSSI name: Stairfoot Brickworks
Unit name: Embankment
Broad habitat: Earth Heritage
Condition: Unfavourable - Declining

Reportable features:

Feature name	Feature condition	Date of assessment
ED - Westphalian	Unfavourable - Declining	04/05/2023

ID: -
Location: 1968m SE
SSSI name: Dearne Valley Wetlands
Unit name: Railway Woodland
Broad habitat: Broadleaved, Mixed And Yew Woodland - Lowland
Condition: Favourable
Reportable features:

Feature name	Feature condition	Date of assessment
Aggregations of breeding birds - Willow Tit, Poecile montanus	Favourable	01/03/2021
Assemblages of breeding birds - Scrub	Favourable	01/03/2021

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

11 Visual and cultural designations

11.1 World Heritage Sites

Records within 250m	0

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

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

11.2 Area of Outstanding Natural Beauty

Records within 250m	0

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

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

11.3 National Parks

Records within 250m	0

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

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

11.4 Listed Buildings

Records within 250m	0

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

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

11.5 Conservation Areas

Records within 250m	0

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

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

11.6 Scheduled Ancient Monuments

Records within 250m	0

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

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

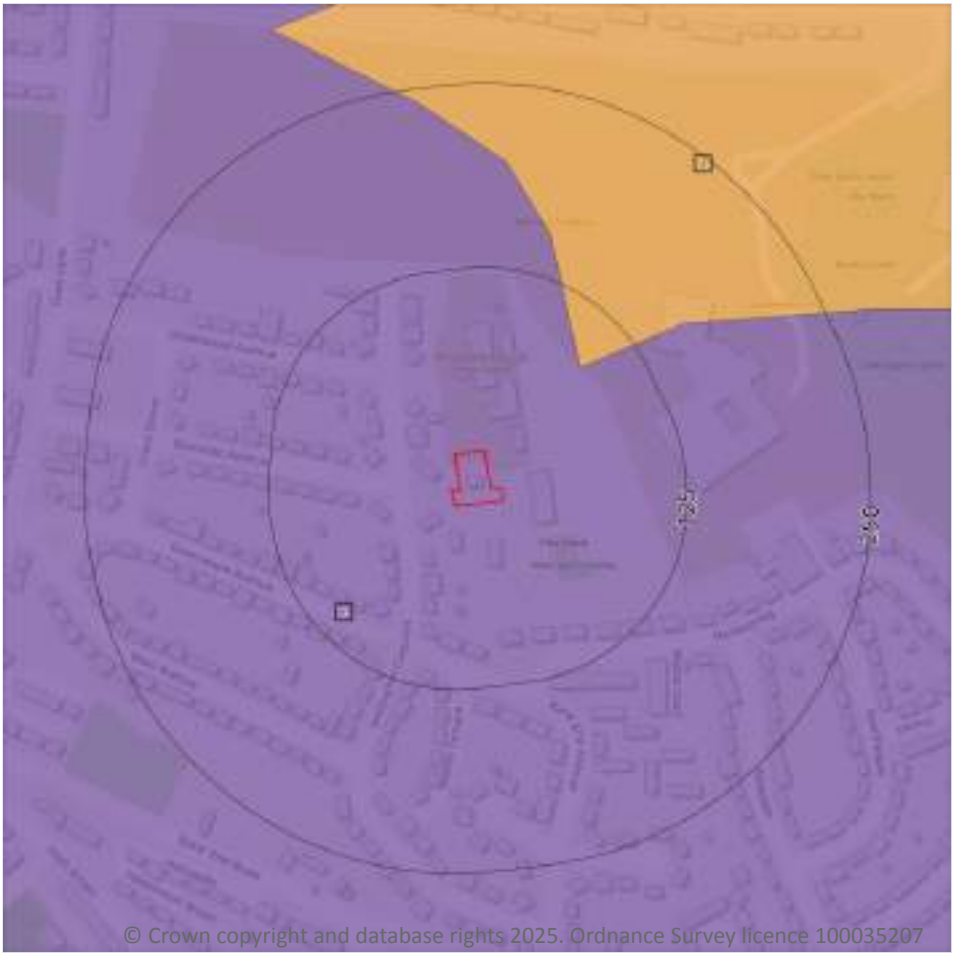
11.7 Registered Parks and Gardens

Records within 250m	0

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

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

12 Agricultural designations



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 64 >**

ID	Location	Classification	Description
1	**On site**	**Urban**	**Non-agricultural/no quality assigned**
2	86m NE	Grade 3	Good to moderate quality agricultural land. Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.

This data is sourced from Natural England.

12.2 Open Access Land

Records within 250m	0

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

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

12.3 Tree Felling Licences

Records within 250m	0

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

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m	0

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

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m	0

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

This data is sourced from Natural England.

13 Habitat designations

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	1

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 66 >**

ID	Location	Main Habitat	Other habitats
1	232m SW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m	0

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

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m	0

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

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m	0

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

This data is sourced from Natural England.

14 Geology 1:10,000 scale - Availability

Site Outline

Search buffers in metres (m)

Full coverage

Partial coverage

No coverage

14.1 10k Availability

Records within 500m	2

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

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 68 >**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**Full**	**SE30SE**
2	487m N	Full	Full	Full	No coverage	SE30NE

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 69 >**

ID	Location	LEX Code	Description	Rock description
1	103m N	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
2	112m NE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
3	171m NW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
4	243m E	WGR-VOID	Worked Ground (Undivided)	Void

ID	Location	LEX Code	Description	Rock description
5	249m NE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
6	352m E	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Superficial

14.3 Superficial geology (10k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

14.4 Landslip (10k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Bedrock

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 **16**

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

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 72 >**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**WE-SDST**	**Woolley Edge Rock - Sandstone**	**Duckmantian Sub-age**
2	99m N	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
4	144m NW	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age

ID	Location	LEX Code	Description	Rock age
5	168m NW	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
6	222m N	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
8	250m N	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
9	256m SW	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
10	265m N	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
12	286m NE	OR-SDST	Oaks Rock - Sandstone	Duckmantian Sub-age
15	305m N	OR-SDST	Oaks Rock - Sandstone	Duckmantian Sub-age
16	309m W	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
18	336m W	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
21	388m W	WE-SDST	Woolley Edge Rock - Sandstone	Duckmantian Sub-age
22	408m NW	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
25	485m W	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
26	487m N	OR-SDST	Oaks Rock - Sandstone	Duckmantian Sub-age

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m	**10**

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

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 72 >**

ID	Location	Category	Description
3	99m N	FAULT	Normal fault, inferred
7	222m N	FAULT	Normal fault, inferred

ID	Location	Category	Description
11	267m SW	ROCK	Coal seam, inferred
13	286m NE	FAULT	Normal fault, inferred
14	287m N	FOSSIL_HORIZON	Fossil horizon, marine band
17	333m SW	FOSSIL_HORIZON	Fossil horizon, marine band
19	336m W	ROCK	Coal seam, inferred
20	341m SW	ROCK	Coal seam, inferred
23	434m SW	ROCK	Coal seam, inferred
24	455m E	FAULT	Normal fault, inferred

This data is sourced from the British Geological Survey.

15 Geology 1:50,000 scale - Availability

Site Outline

Search buffers in metres (m)

Geological map tile

15.1 50k Availability

Records within 500m	1

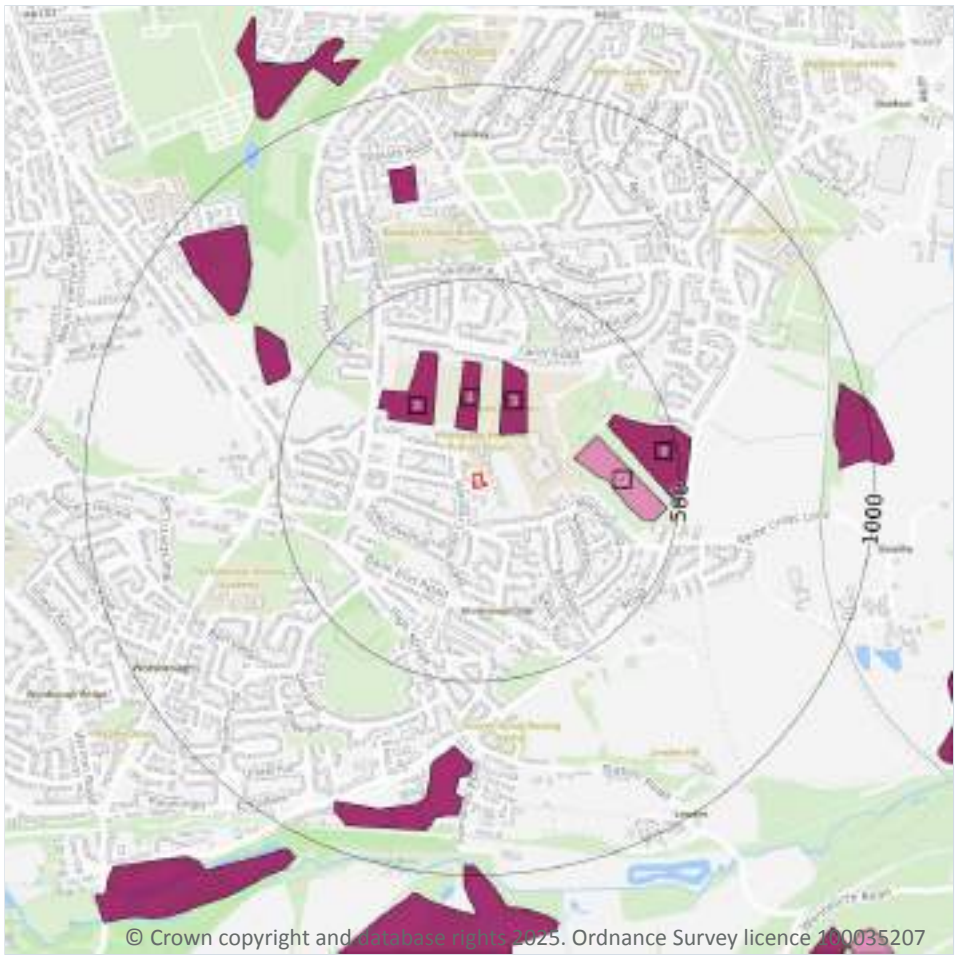
An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:50,000 scale - Availability map on **page 75 >**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**No coverage**	**Full**	**Full**	**Full**	**EW087_barnsley_v4**

This data is sourced from the British Geological Survey.

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



Site Outline

Search buffers in metres (m)

- Made ground
- Worked ground
- Infilled ground
- Disturbed ground
- Landscaped ground

15.2 Artificial and made ground (50k)

Records within 500m	5

Details of made, worked, infilled, disturbed and landscaped ground at 1:50,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:50,000 scale - Artificial and made ground map on **page 76 >**

ID	Location	LEX Code	Description	Rock description
1	109m N	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
2	111m NE	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
3	164m NW	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
4	237m E	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID

ID	Location	LEX Code	Description	Rock description
5	348m NE	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

This data is sourced from the British Geological Survey.

15.3 Artificial ground permeability (50k)

Records within 50m	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	11

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 79 >**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**WE-SDST**	**WOOLLEY EDGE ROCK - SANDSTONE**	**WESTPHALIAN**
2	99m N	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
4	146m NW	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN

ID	Location	LEX Code	Description	Rock age
5	184m NW	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
7	223m N	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
8	259m SW	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
10	285m NE	OR-SDST	OAKS ROCK - SANDSTONE	WESTPHALIAN
13	323m N	OR-SDST	OAKS ROCK - SANDSTONE	WESTPHALIAN
16	360m NW	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
17	384m W	WE-SDST	WOOLLEY EDGE ROCK - SANDSTONE	WESTPHALIAN
18	417m NW	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m **1**

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

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

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m **9**

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 79 >**

ID	Location	Category	Description
3	99m N	FAULT	Fault, inferred

ID	Location	Category	Description
6	223m N	FAULT	Fault, inferred
9	259m SW	ROCK	Coal seam, inferred
11	285m NE	FAULT	Fault, inferred
12	287m N	FOSSIL_HORIZON	Marine band
14	337m W	ROCK	Coal seam, inferred
15	344m SW	ROCK	Coal seam, inferred
19	435m SW	ROCK	Coal seam, inferred
20	455m E	FAULT	Fault, inferred

This data is sourced from the British Geological Survey.

16 Boreholes

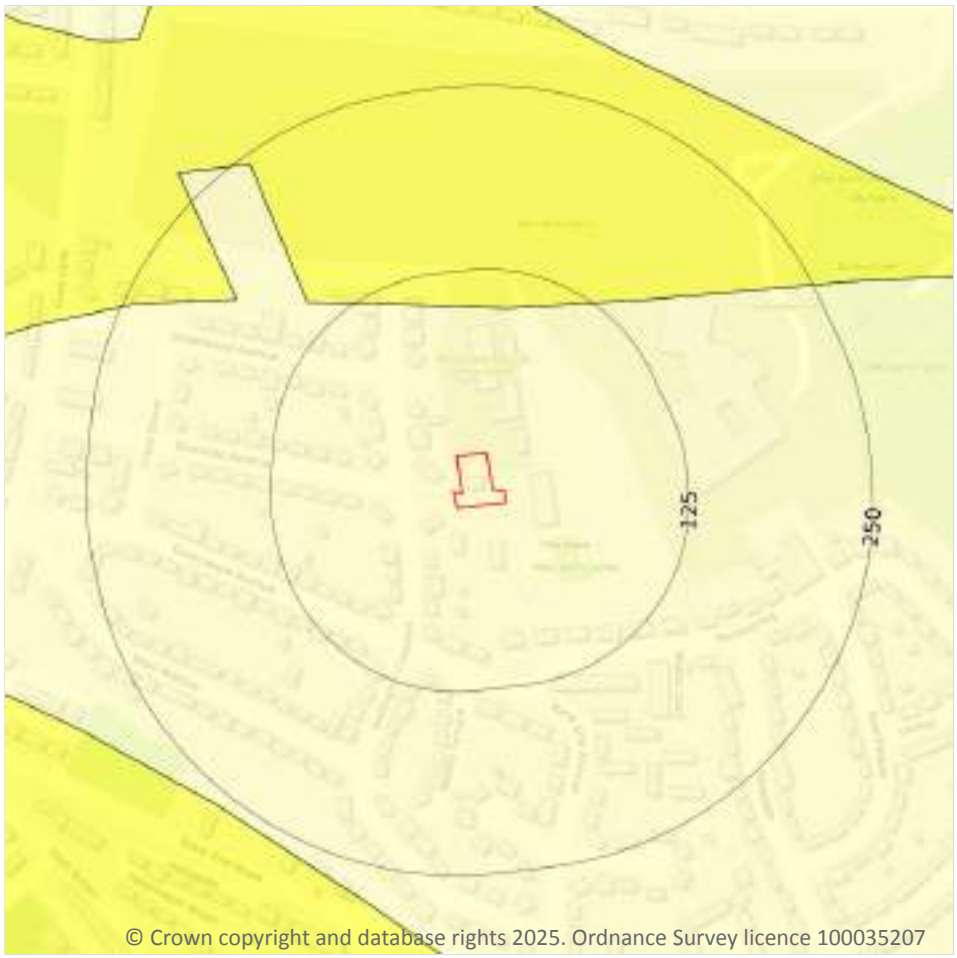
16.1 BGS Boreholes

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	1

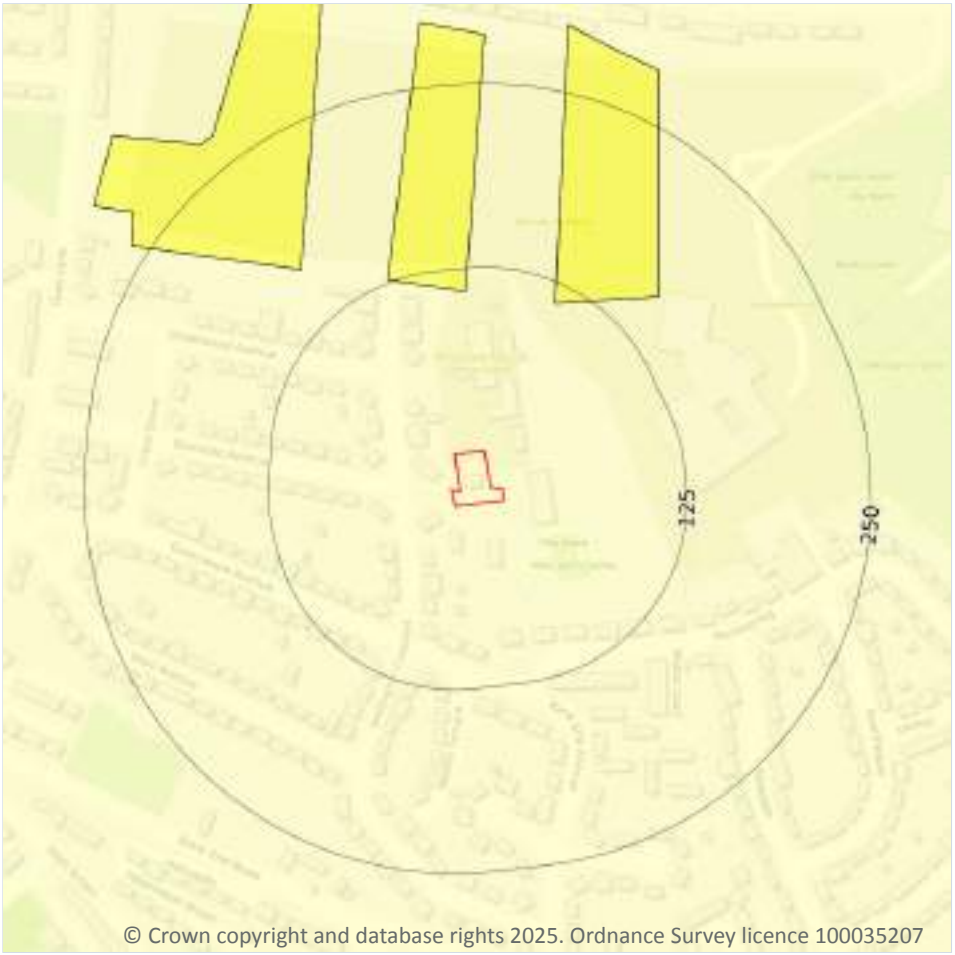
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and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

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 83 >**

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

This data is sourced from the British Geological Survey.

Natural ground subsidence - Running sands



Site Outline

Search buffers in metres (m)

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

17.2 Running sands

Records within 50m	1

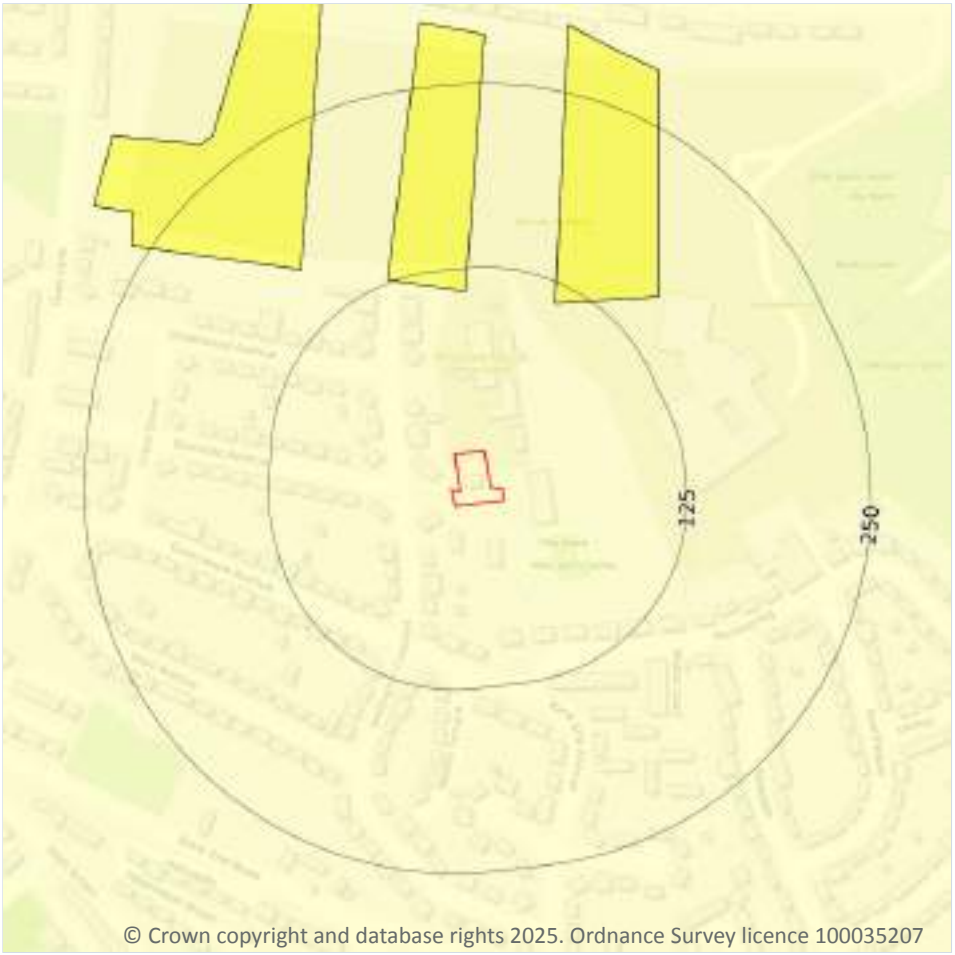
The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

Features are displayed on the Natural ground subsidence - Running sands map on **page 84 >**

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

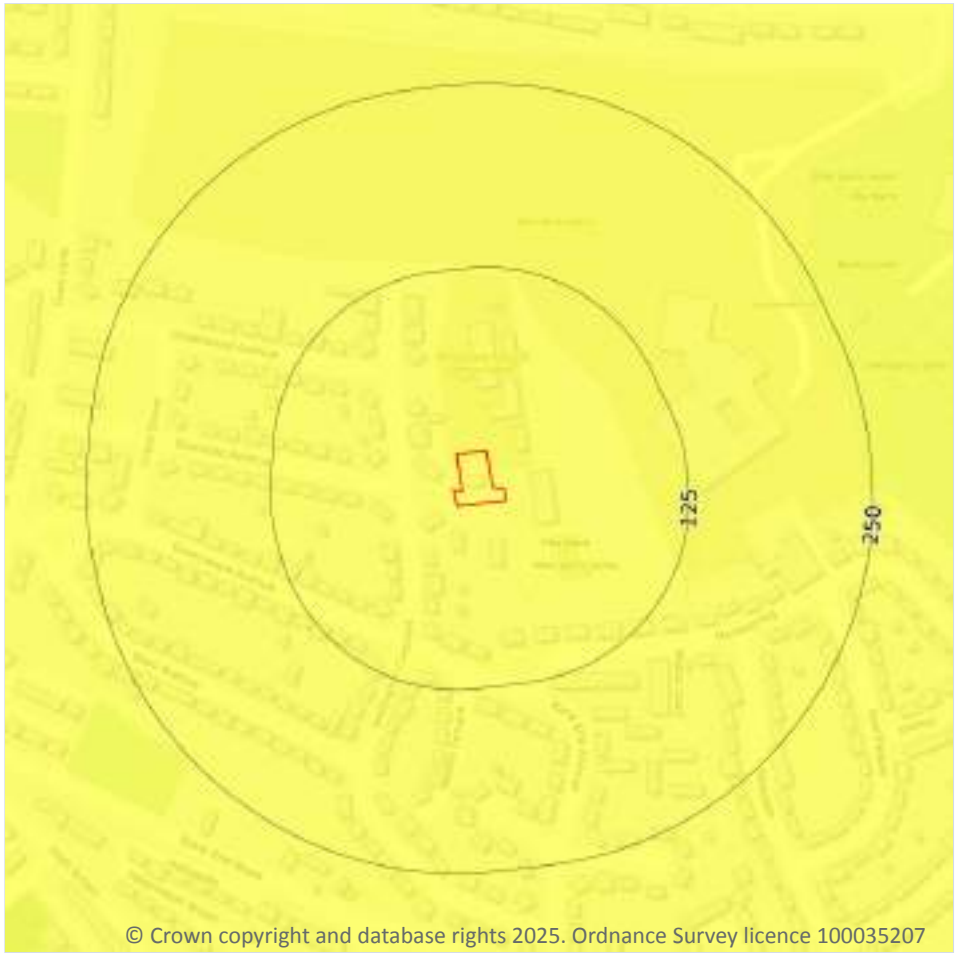
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 85 >**

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

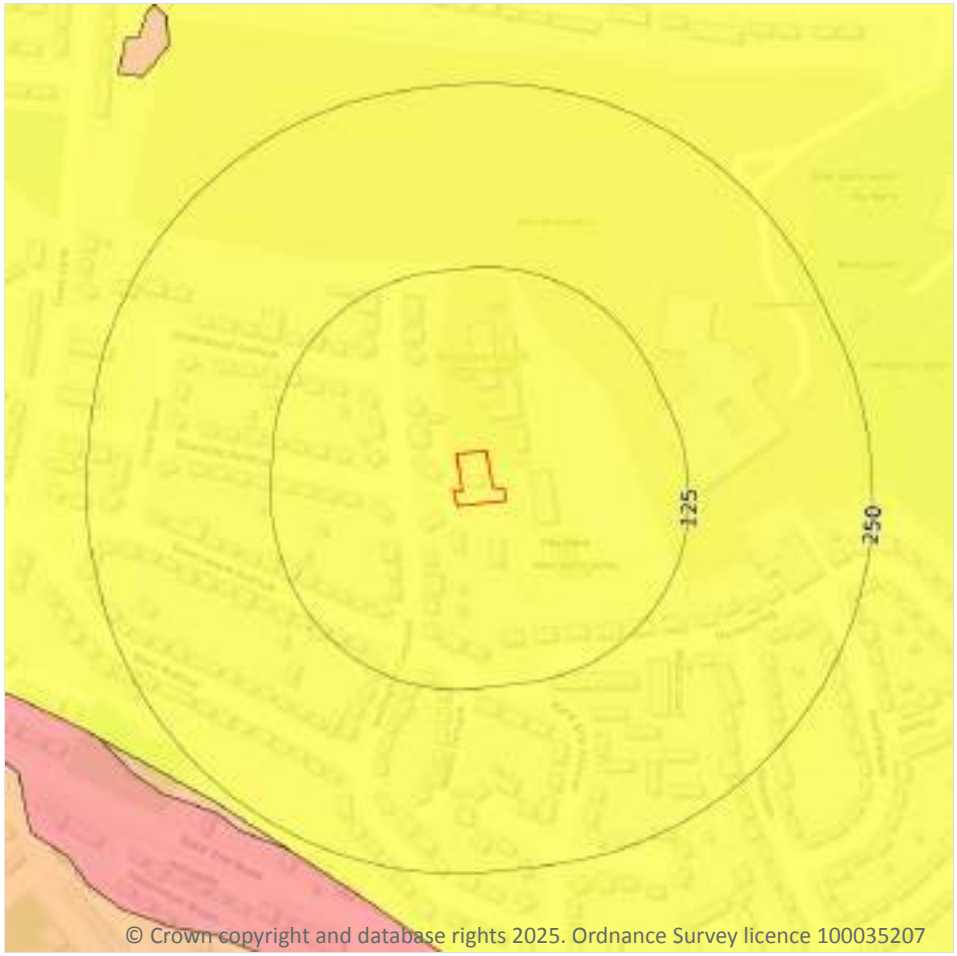
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 86 >**

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

This data is sourced from the British Geological Survey.

Natural ground subsidence - Landslides



Site Outline

Search buffers in metres (m)

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

17.5 Landslides

Records within 50m	1

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

Features are displayed on the Natural ground subsidence - Landslides map on **page 87 >**

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

This data is sourced from the British Geological Survey.

Natural ground subsidence - Ground dissolution of soluble rocks

Site Outline

Search buffers in metres (m)

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

17.6 Ground dissolution of soluble rocks

Records within 50m	1

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

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 88 >**

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

This data is sourced from the British Geological Survey.

18 Mining and ground workings

Site Outline

Search buffers in metres (m)

BritPits

Surface ground workings

Underground workings

Underground mining extents

Historical mineral planning areas

TCA non-coal mining

Non Coal Mining

Sporadic underground mining of restricted extent possible

Localised small scale underground mining possible

Small scale mining possible

Underground mining known or likely within or in close proximity

Underground mining known within or in very close proximity

18.1 BritPits

Records within 500m	3

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

Features are displayed on the Mining and ground workings map on **page 90 >**

ID	Location	Details	Description
F	344m W	Name: Yews Lane Quarries Address: WORSBROUGH, South 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
H	399m W	Name: Yews Lane Quarries Address: WORSBROUGH, South 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	404m S	Name: Darley Grove Quarry Address: WORSBROUGH, South 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.

18.2 Surface ground workings

Records within 250m **12**

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

Features are displayed on the Mining and ground workings map on **page 90 >**

ID	Location	Land Use	Year of mapping	Mapping scale
A	95m N	Unspecified Ground Workings	1977	1:10000
A	95m N	Unspecified Ground Workings	1987	1:10000
A	100m N	Unspecified Ground Workings	1966	1:10560
B	127m NE	Unspecified Heap	1966	1:10560
B	127m NE	Unspecified Heap	1977	1:10000
B	127m NE	Unspecified Heap	1987	1:10000
C	162m NW	Unspecified Ground Workings	1966	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
C	162m NW	Unspecified Ground Workings	1977	1:10000
C	162m NW	Unspecified Ground Workings	1987	1:10000
2	232m NE	Unspecified Pit	1966	1:10560
D	233m NE	Unspecified Pit	1977	1:10000
D	233m NE	Unspecified Pit	1987	1:10000

This is data is sourced from Ordnance Survey/Groundsure.

18.3 Underground workings

Records within 1000m	**8**

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

Features are displayed on the Mining and ground workings map on **page 90 >**

ID	Location	Land Use	Year of mapping	Mapping scale
-	810m SW	Air Shaft	1938	1:10560
-	810m SW	Air Shaft	1904	1:10560
-	927m NW	Unspecified Disused Shaft	1982	1:10000
-	933m NW	Unspecified Old Shafts	1938	1:10560
-	981m SE	Unspecified Level	1904	1:10560
-	988m S	Colliery	1890	1:10560
-	992m NW	Unspecified Old Shafts	1955	1:10560
-	1000m N	Colliery	1890	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground mining extents

Records within 500m	**0**

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

This data is sourced from Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m	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	15

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

Features are displayed on the Mining and ground workings map on **page 90 >**

ID	Location	Name	Commodity	Class	Likelihood
1	193m N	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
3	252m SW	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
5	484m SW	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
6	506m SE	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
-	612m S	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.

ID	Location	Name	Commodity	Class	Likelihood
-	637m W	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
11	638m NW	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
-	718m E	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
-	724m W	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
14	726m SW	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
15	740m NW	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
-	779m SE	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
-	860m S	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
-	886m W	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.

ID	Location	Name	Commodity	Class	Likelihood
-	977m W	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.

This data is sourced from the British Geological Survey.

18.7 JPB mining areas

Records on site	0

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

This data is sourced from Johnson Poole and Bloomer.

18.8 The Coal Authority non-coal mining

Records within 500m	0

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

This data is sourced from The Coal Authority.

18.9 Researched mining

Records within 500m	0

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

This data is sourced from Groundsure.

18.10 Mining record office plans

Records within 500m	0

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

This data is sourced from Groundsure.

18.11 BGS mine plans

Records within 500m	0

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

This data is sourced from Groundsure.

18.12 Coal mining

Records on site	1

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

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

This data is sourced from the Coal Authority.

18.13 Brine areas

Records on site	0

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

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

18.14 Gypsum areas

Records on site	0

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.15 Tin mining

Records on site	0

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

18.16 Clay mining

Records on site	0

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

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

19 Ground cavities and sinkholes

19.1 Natural cavities

Records within 500m	0

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

This data is sourced from Stantec UK Ltd.

19.2 Mining cavities

Records within 1000m	0

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

This data is sourced from Stantec UK Ltd.

19.3 Reported recent incidents

Records within 500m	0

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

This data is sourced from Groundsure.

19.4 Historical incidents

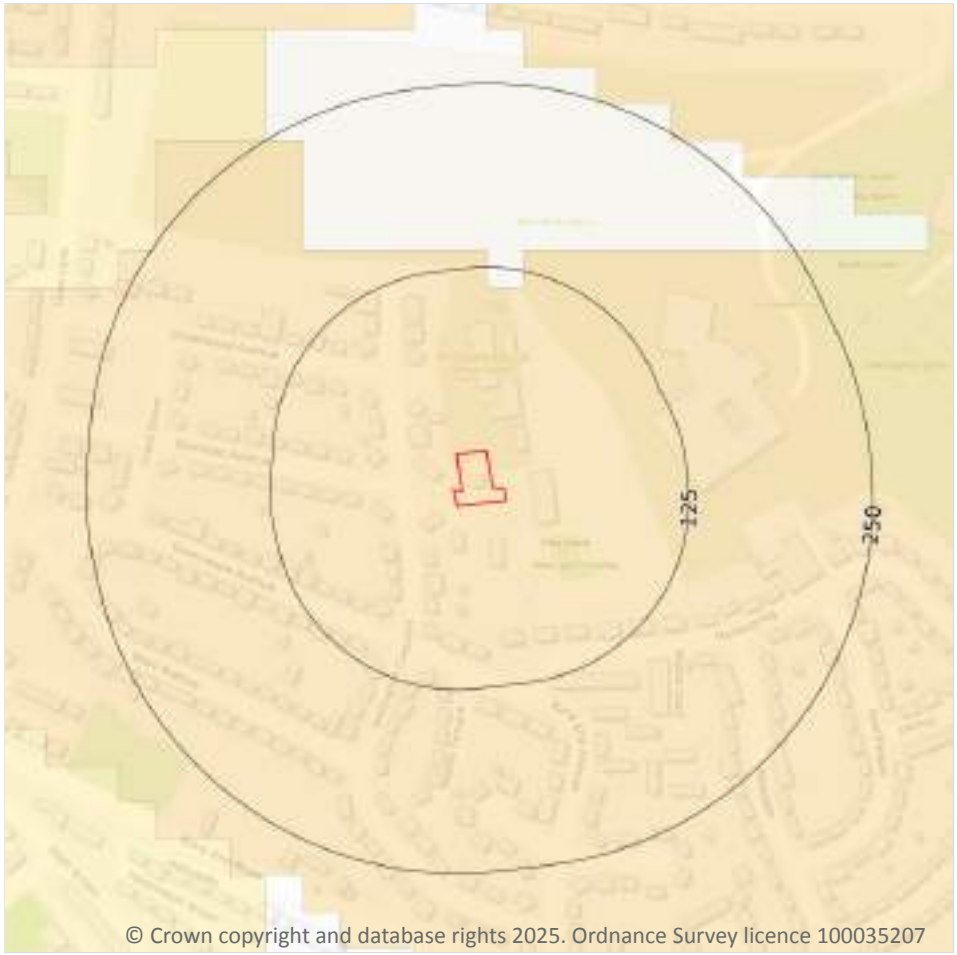
Records within 500m	0

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

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

This data is sourced from Groundsure.

20 Radon



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%

20.1 Radon

Records on site	1

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

Features are displayed on the Radon map on **page 100 >**

Location	Estimated properties affected	Radon Protection Measures required
On site	**Between 3% and 5%**	**Basic**

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

21 Soil chemistry

21.1 BGS Estimated Background Soil Chemistry

Records within 50m	2

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

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	**15 - 25 mg/kg**	**No data**	**100 - 200 mg/kg**	**60 - 120 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 - 25 mg/kg**	**No data**	**100 - 200 mg/kg**	**60 - 120 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**

This data is sourced from the British Geological Survey.

21.2 BGS Estimated Urban Soil Chemistry

Records within 50m	0

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

This data is sourced from the British Geological Survey.

21.3 BGS Measured Urban Soil Chemistry

Records within 50m	0

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

This data is sourced from the British Geological Survey.

22 Railway infrastructure and projects

22.1 Underground railways (London)

Records within 250m	0

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

This data is sourced from publicly available information by Groundsure.

22.2 Underground railways (Non-London)

Records within 250m	0

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

This data is sourced from publicly available information by Groundsure.

22.3 Railway tunnels

Records within 250m	0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

22.4 Historical railway and tunnel features

Records within 250m	0

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

This data is sourced from Ordnance Survey/Groundsure.

22.5 Royal Mail tunnels

Records within 250m	0

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

This data is sourced from Groundsure/the Postal Museum.

22.6 Historical railways

Records within 250m	0

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

This data is sourced from OpenStreetMap.

22.7 Railways

Records within 250m	0

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

This data is sourced from Ordnance Survey and OpenStreetMap.

22.8 Crossrail 2

Records within 500m	0

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

This data is sourced from publicly available information by Groundsure.

22.9 HS2

Records within 500m	0

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

This data is sourced from HS2 ltd.

Data providers

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

Terms and conditions

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

C – CON29M COAL MINING REPORT

The Coal Authority

CON29M
coal mining report

CARETAKERS HOUSE, WORSBROUGH BANK END PRIMARY SCHOOL, UNDERWOOD AVENUE, WORSBROUGH DALE, BARNSLEY, BARNSLEY, S70 4AZ

Known or potential coal mining risks

Further action

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

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

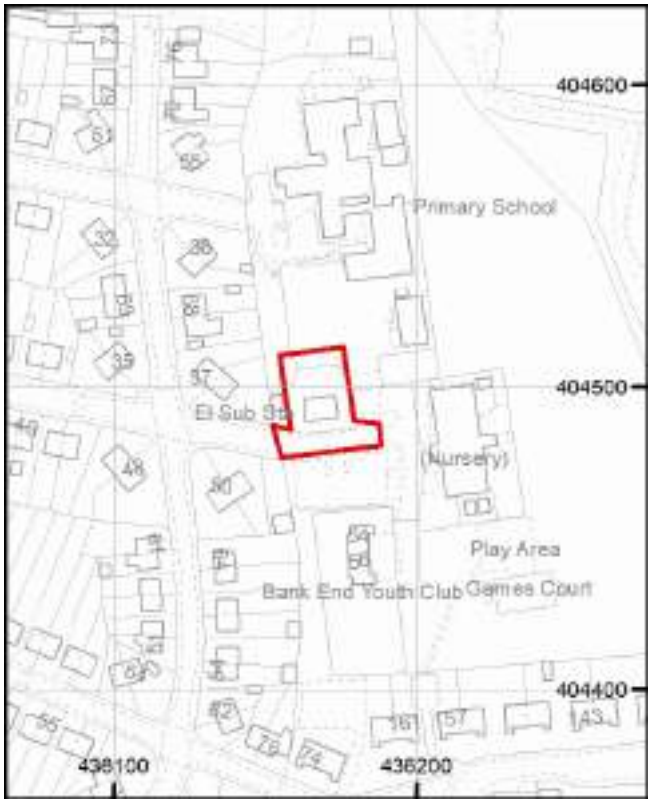
Professional opinion

According to the official mining information records held by the Coal Authority at the time of this search, evidence of, or the potential for, coal mining related features have been identified. It is unlikely that these features will impact on the stability of the enquiry boundary.

Enquiry boundary

Key

Approximate position of enquiry boundary shown



We can confirm that the location is **on the coalfield**

Map data

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

Accessibility

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

What if this information changes?

If this report is for a residential property, insurance is included to cover any loss in property value caused by any changes in the information contained in this report. Please see the attached certificate of insurance for the terms and conditions of this insurance. The insurance does not cover non-residential property or further action reports.

Professional opinion

Future development

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

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

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

Detailed findings

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

The Coal Authority owns the copyright in this report and the information used to produce this report is protected by our database rights. All rights are reserved and unauthorised use is prohibited. If we provide a report for you, this does not mean that copyright and any other rights will pass to you. However, you can use the report for your own purposes.

1 Past underground coal mining

The property is in a surface area that could be affected by underground mining in 6 seams of coal at 190m to 510m depth, and last worked in 1971.

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

2 Present underground coal mining

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

3 Future underground coal mining

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

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

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

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

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

4 Mine entries

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

5 Coal mining geology

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

6 Past opencast coal mining

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

7 Present opencast coal mining

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

8 Future opencast coal mining

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

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

9 Coal mining subsidence

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

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

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

10 Mine gas

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

11 Hazards related to coal mining

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

Statutory cover

Coal mining subsidence

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

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

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

Coal mining hazards

Our public safety and subsidence team provide a 24 hour a day, 7 days a week hazard reporting service, to help protect the public from hazards caused by past coal workings, such as a mine shaft or shallow working collapse. To report any hazards please call 0800 288 4242. Further information can be found on our website: www.gov.uk/coalauthority.

On behalf of the insurer

Coal Mining Report Insurance Policy Schedule

Policy number: 30465985

The insurer: Liberty Legal Indemnities – underwritten by Liberty Mutual Insurance Europe SE

Binding Authority contract number: RNMFP2503841

Property: CARETAKERS HOUSE, WORSBROUGH BANK END PRIMARY SCHOOL, UNDERWOOD AVENUE, WORSBROUGH DALE, BARNSLEY, BARNSLEY, S70 4AZ

Report reference number: 51003490562001

Limit of cover: £100,000.00

Dated: 8 April 2025

This policy and schedule shall be read together and any word or expression to which a specific meaning has been attached in either shall bear such meaning wherever it may appear.

Where a Coal Mining Report has been obtained in connection with a sale of the property, cover is provided for the benefit of a purchaser and their lender; in the case of a re-mortgage or where the existing owner chooses to obtain a Coal Mining Report, cover is provided for the benefit of the owner and their lender.

The policy offers protection against loss sustained by the owner of the property if any new problems or adverse entries are revealed in a subsequent Coal Mining Report which were not revealed by the original report to which the policy was attached.

The insured shall at all times comply with the requirements of the Conditions of this Policy.

Coal Mining Report Terms and Conditions can be viewed online at this link:
https://www.groundstability.com//insurance/terms/20190404/terms.html

Glossary

Key terms

adit - horizontal or sloped entrance to a mine

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

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

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

coal seams - bed of coal of varying thickness

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

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

mine entries - collective name for shafts and adits

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

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

shaft - vertical entry into a mine

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

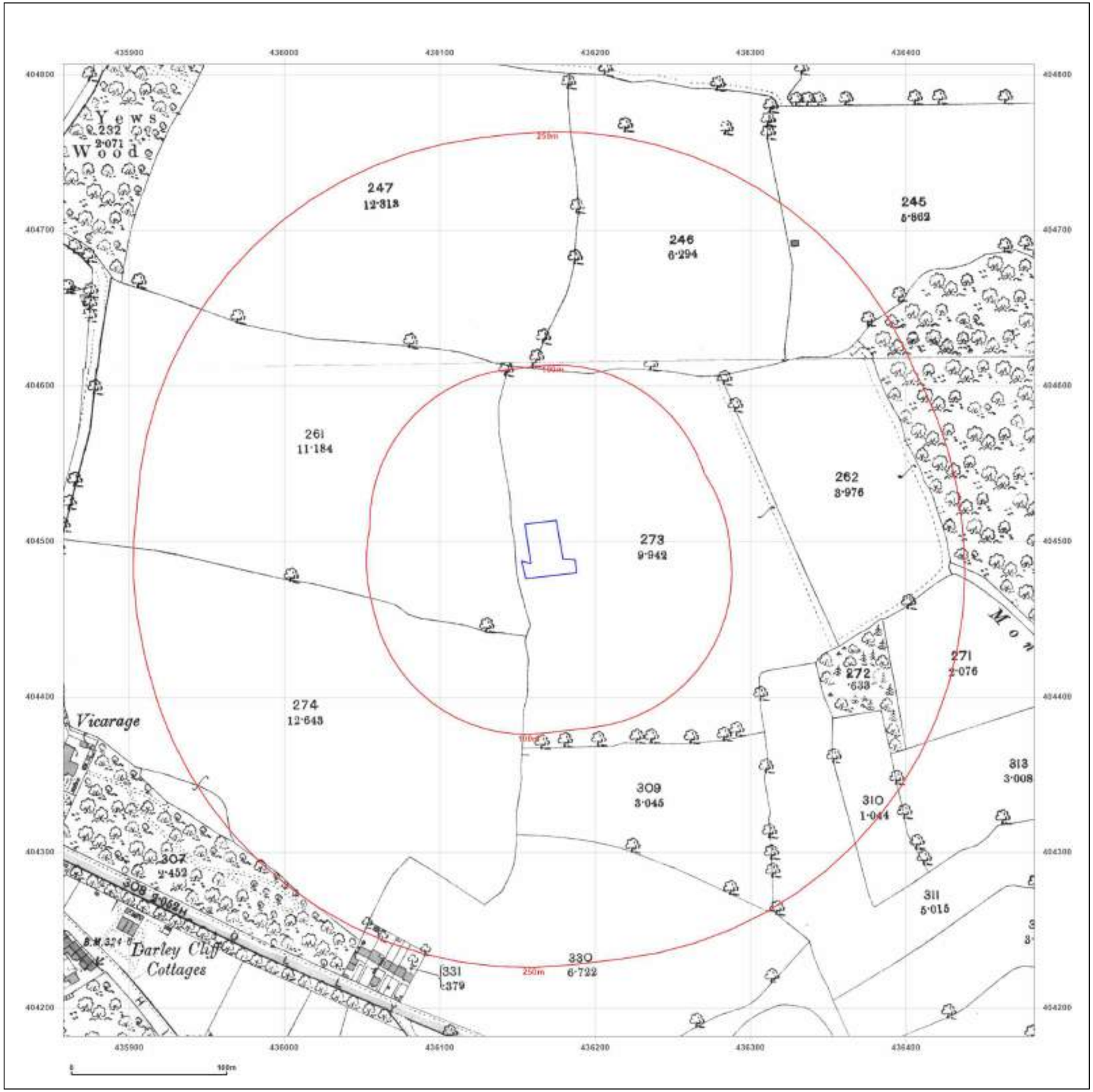
stop notice - a delay to repairs because further coal mining subsidence damage may occur and it would be unwise to carry out permanent repairs

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

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

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

APPENDIX D - HISTORICAL MAPS



Groundsure INSIGHTS

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CARETAKERS HOUSE, BANK END PRIMARY SCHOOL,
UNDERWOOD AVENUE,
WORSBROUGH DALE,
BARNSLEY, S70 4AZ

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Report Ref: GS-NJE-O5U-7Q2-KDC
Grid Ref: 436170, 404494

Map Name: County Series

Map date: **1892**

Scale: 1:2,500

Printed at: 1:2,500

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

Surveyed 1892
Revised 1892
Edition N/A
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Map legend available at:
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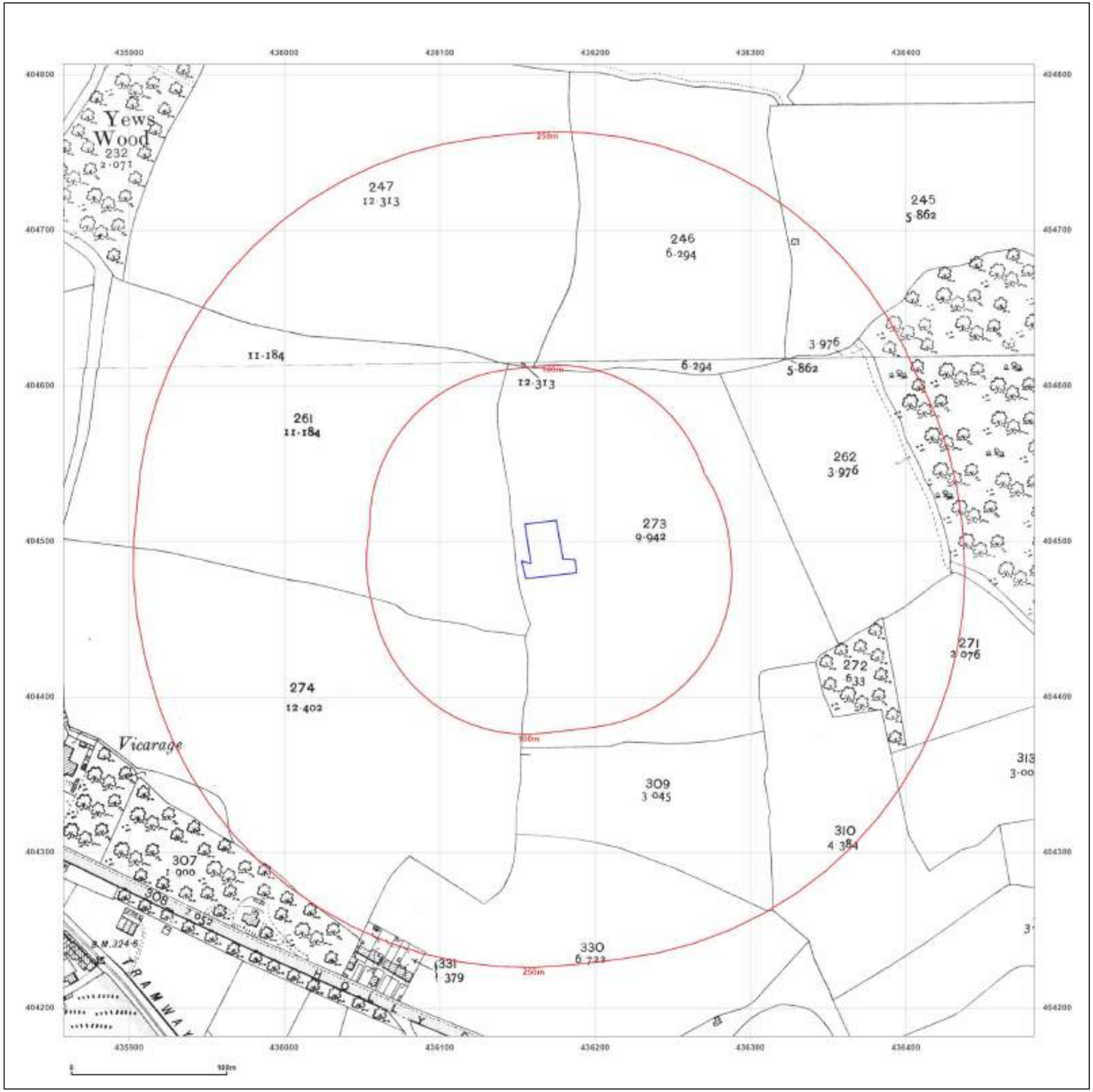

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BARNSLEY, S70 4AZ

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Map Name: County Series

Map date: **1906**

Scale: 1:2,500

Printed at: 1:2,500

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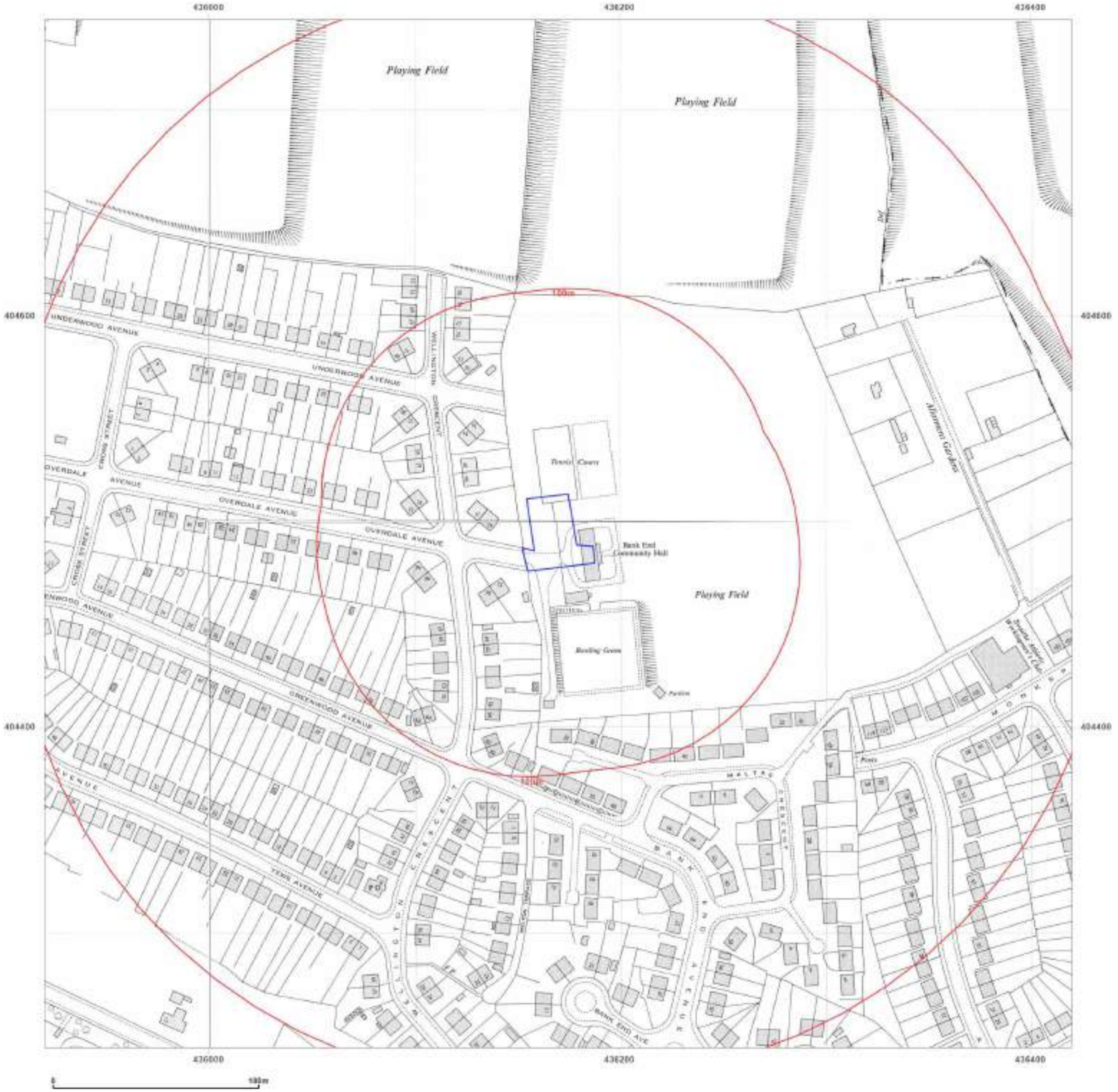

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WORSBROUGH DALE,
BARNSLEY, S70 4AZ

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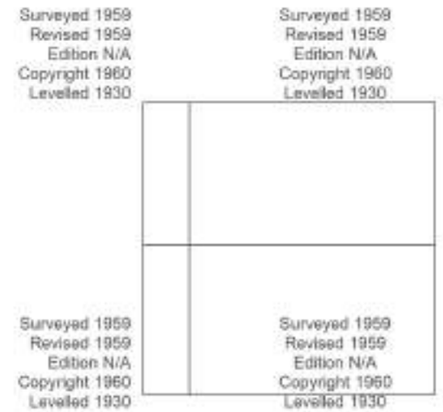

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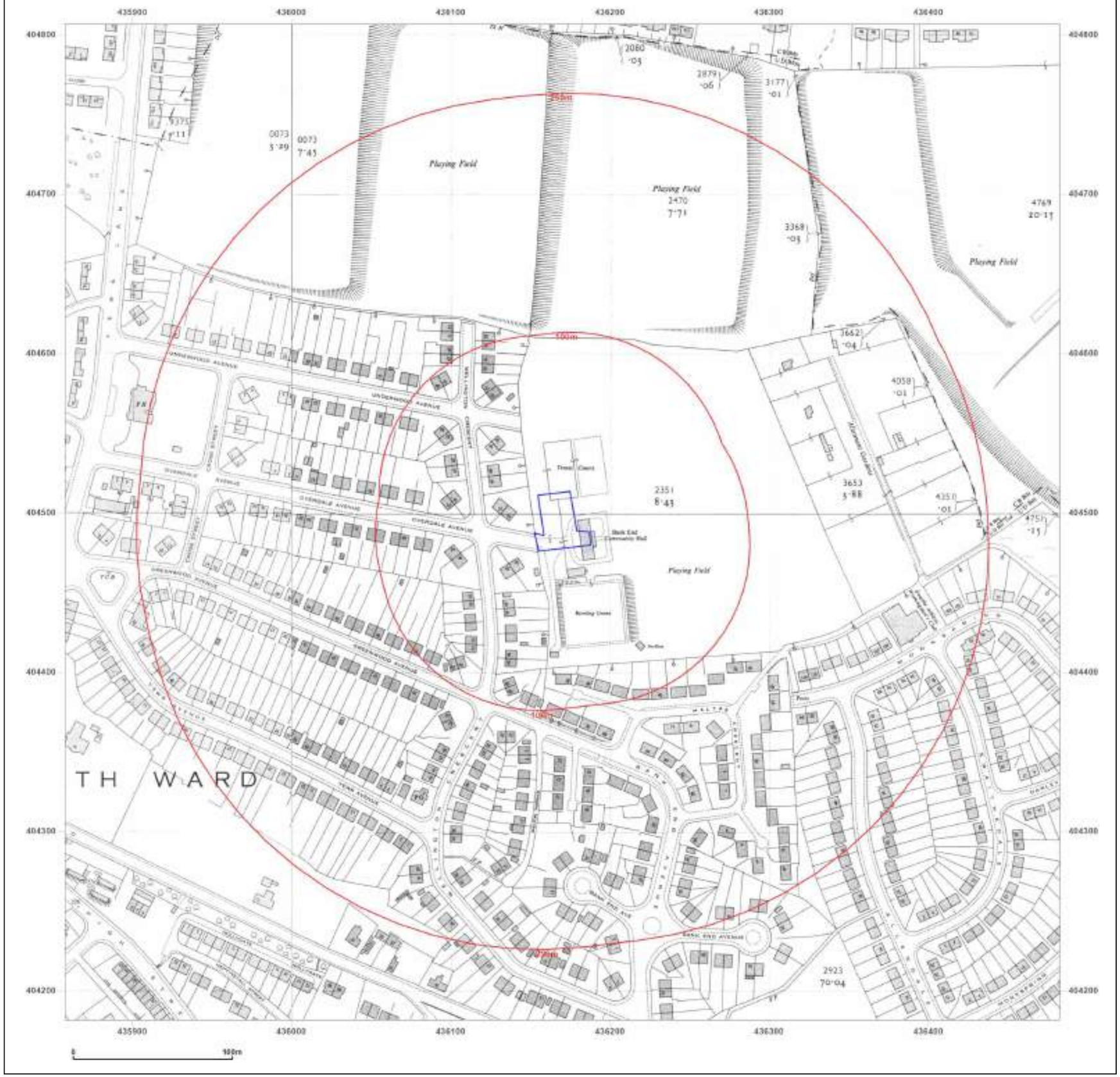

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WORSBROUGH DALE,
BARNSLEY, S70 4AZ

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Map date: **1961-1962**

Scale: 1:2,500

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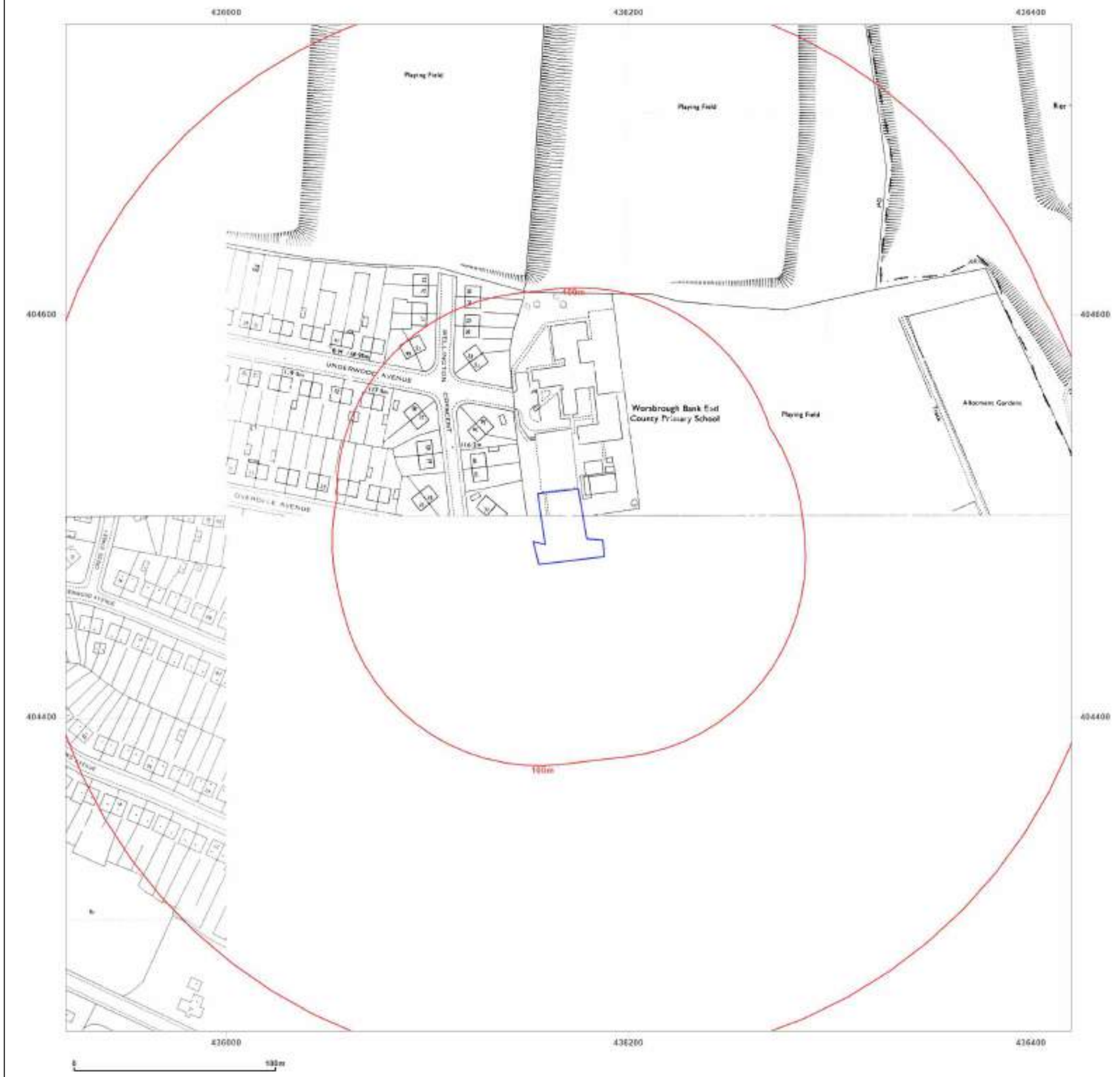

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BARNSLEY, S70 4AZ

Client Ref: 251012
Report Ref: GS-NJE-O5U-7Q2-KDC
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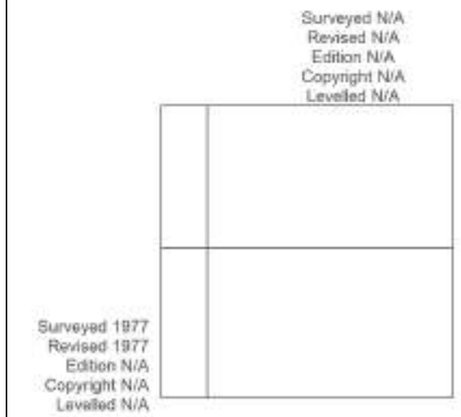

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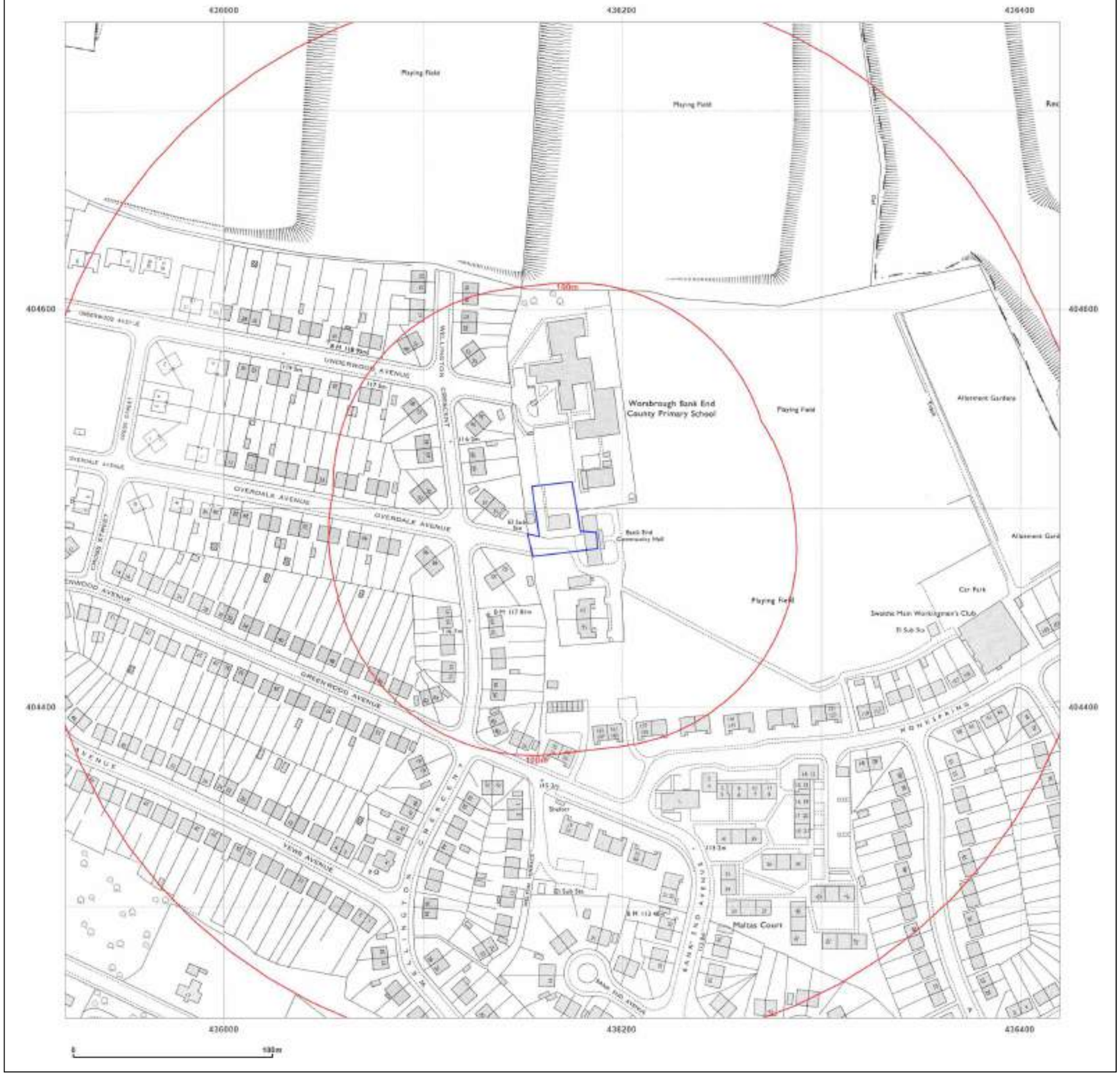

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BARNSLEY, S70 4AZ

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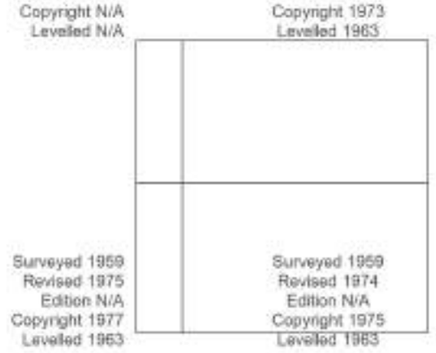

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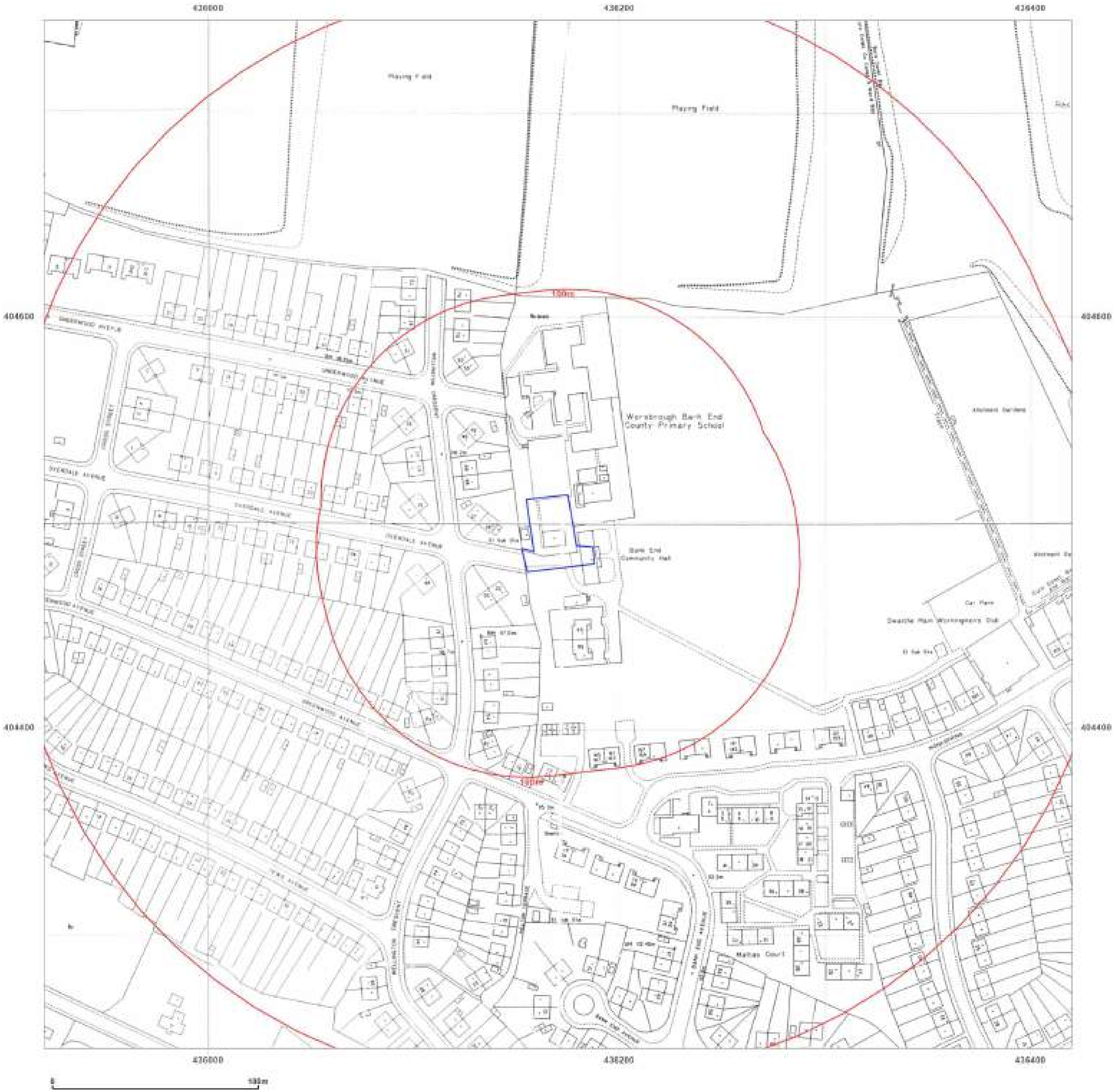

Groundsure INSIGHTS

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END PRIMARY SCHOOL,
UNDERWOOD AVENUE,
WORSBROUGH DALE,
BARNSLEY, S70 4AZ

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Grid Ref: 436170, 404494

Map Name: National Grid

Map date: **1993**

Scale: 1:1,250

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

Surveyed 1993
Revised 1993
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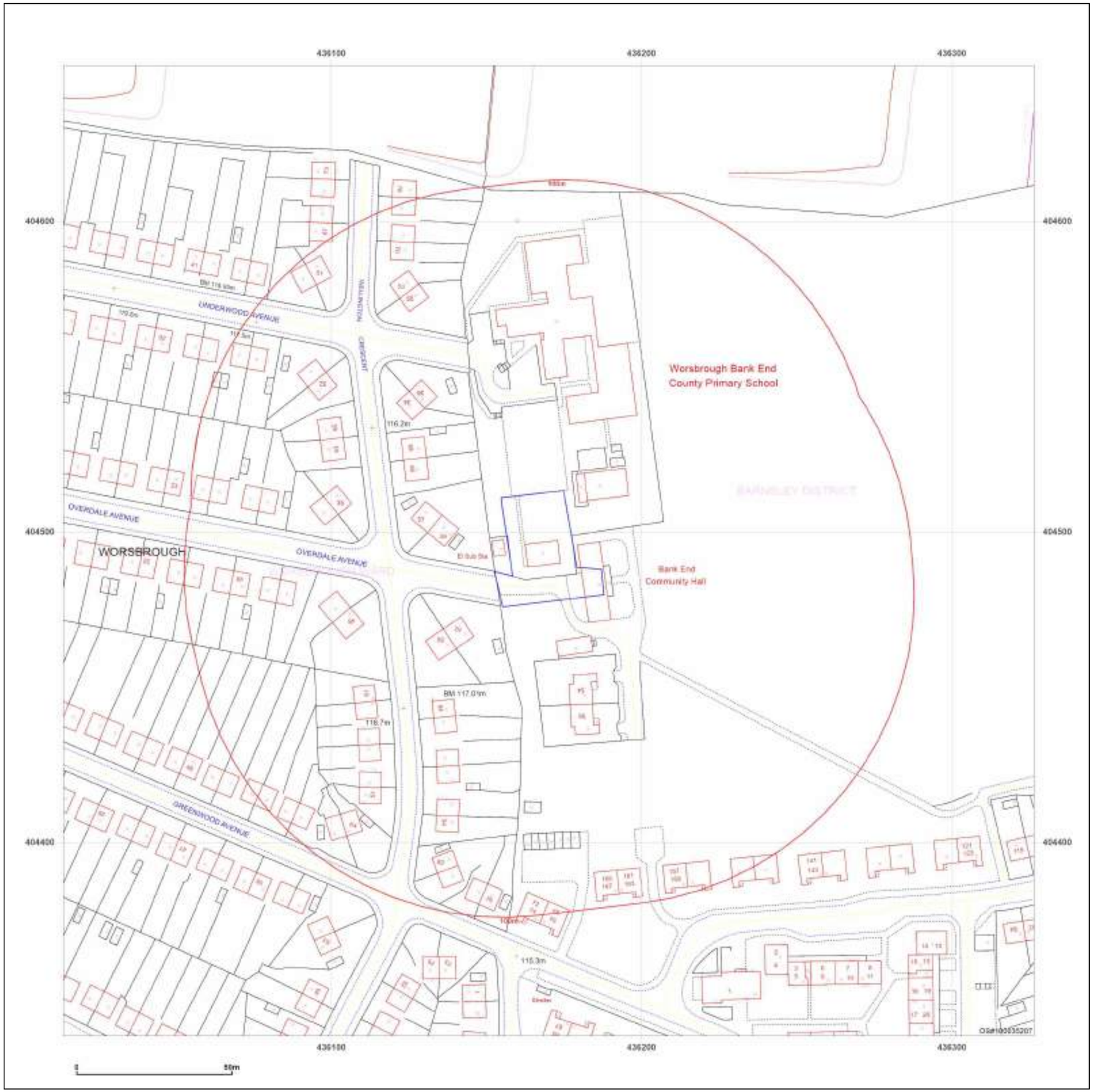

Groundsure INSIGHTS

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BARNSLEY, S70 4AZ

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Grid Ref: 436170, 404494

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

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Site Details:

CARETAKERS HOUSE, BANK END PRIMARY SCHOOL,
UNDERWOOD AVENUE,
WORSBROUGH DALE,
BARNSLEY, S70 4AZ

Client Ref: 251012
Report Ref: GS-NJE-O5U-7Q2-KDC
Grid Ref: 436170, 404494

Map Name: County Series
Map date: **1854-1855**
Scale: 1:10,560
Printed at: 1:10,560

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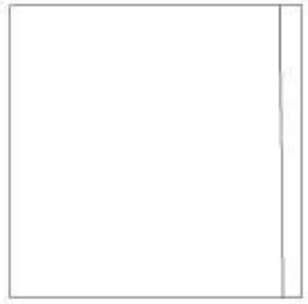
Surveyed 1851
Revised N/A
Edition 1855
Copyright N/A
Levelled N/A

Surveyed 1850
Revised N/A
Edition 1854
Copyright N/A
Levelled N/A



Powered by OS

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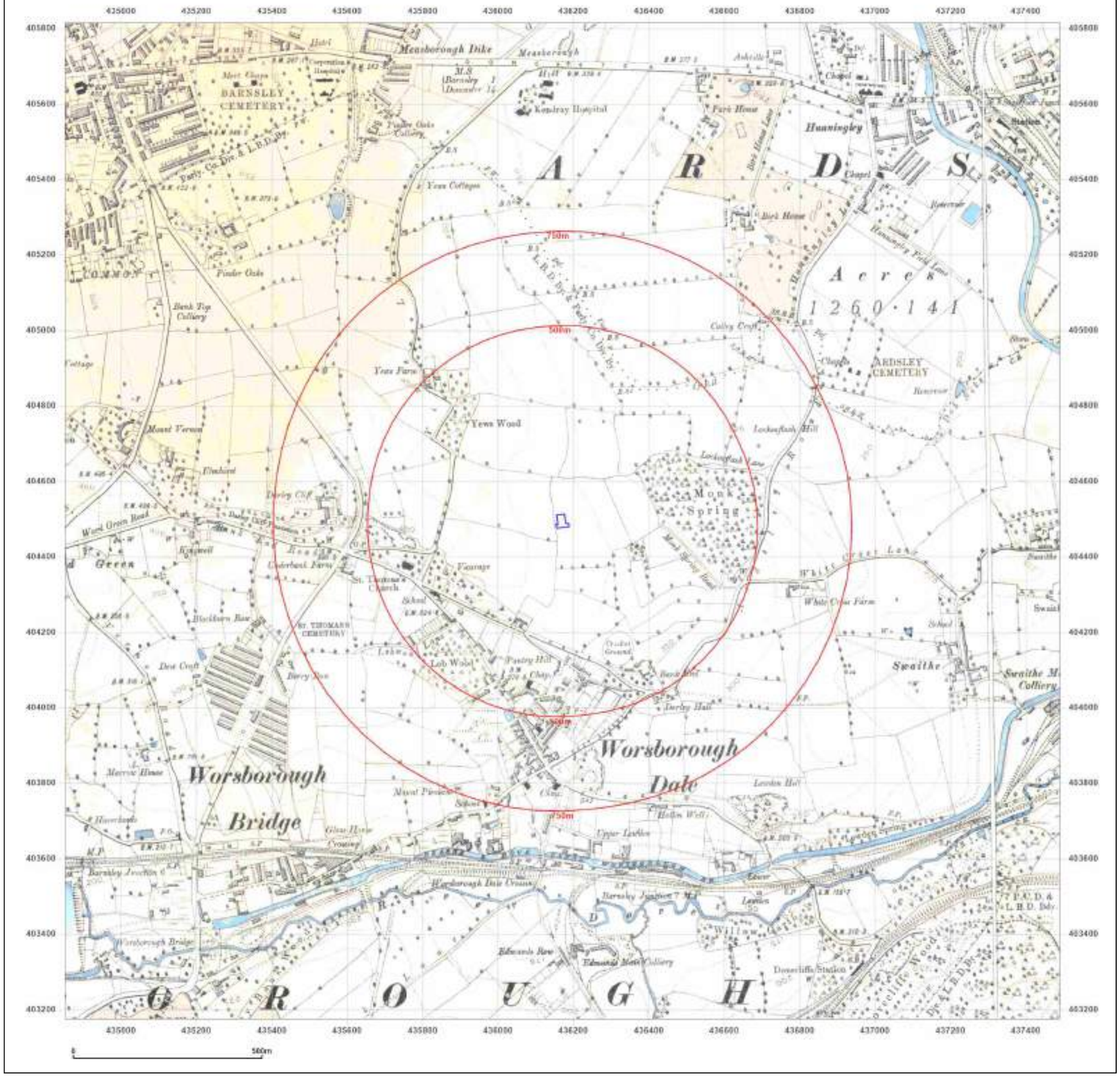
W: www.groundsure.com

Production date: 08 April 2025

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



Groundsure INSIGHTS

Site Details:

CARETAKERS HOUSE, BANK END PRIMARY SCHOOL,
UNDERWOOD AVENUE,
WORSBROUGH DALE,
BARNSLEY, S70 4AZ

Client Ref: 251012
Report Ref: GS-NJE-O5U-7Q2-KDC
Grid Ref: 436170, 404494

Map Name: County Series

Map date: **1890-1894**

Scale: 1:10,560

Printed at: 1:10,560

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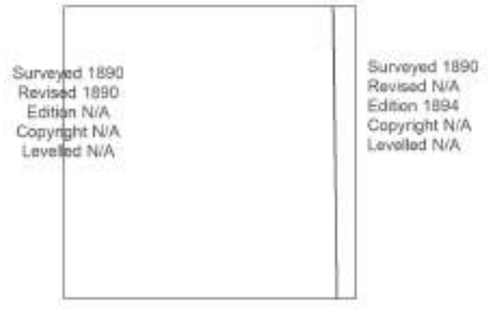

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W: www.groundsure.com

Production date: 08 April 2025

Map legend available at:
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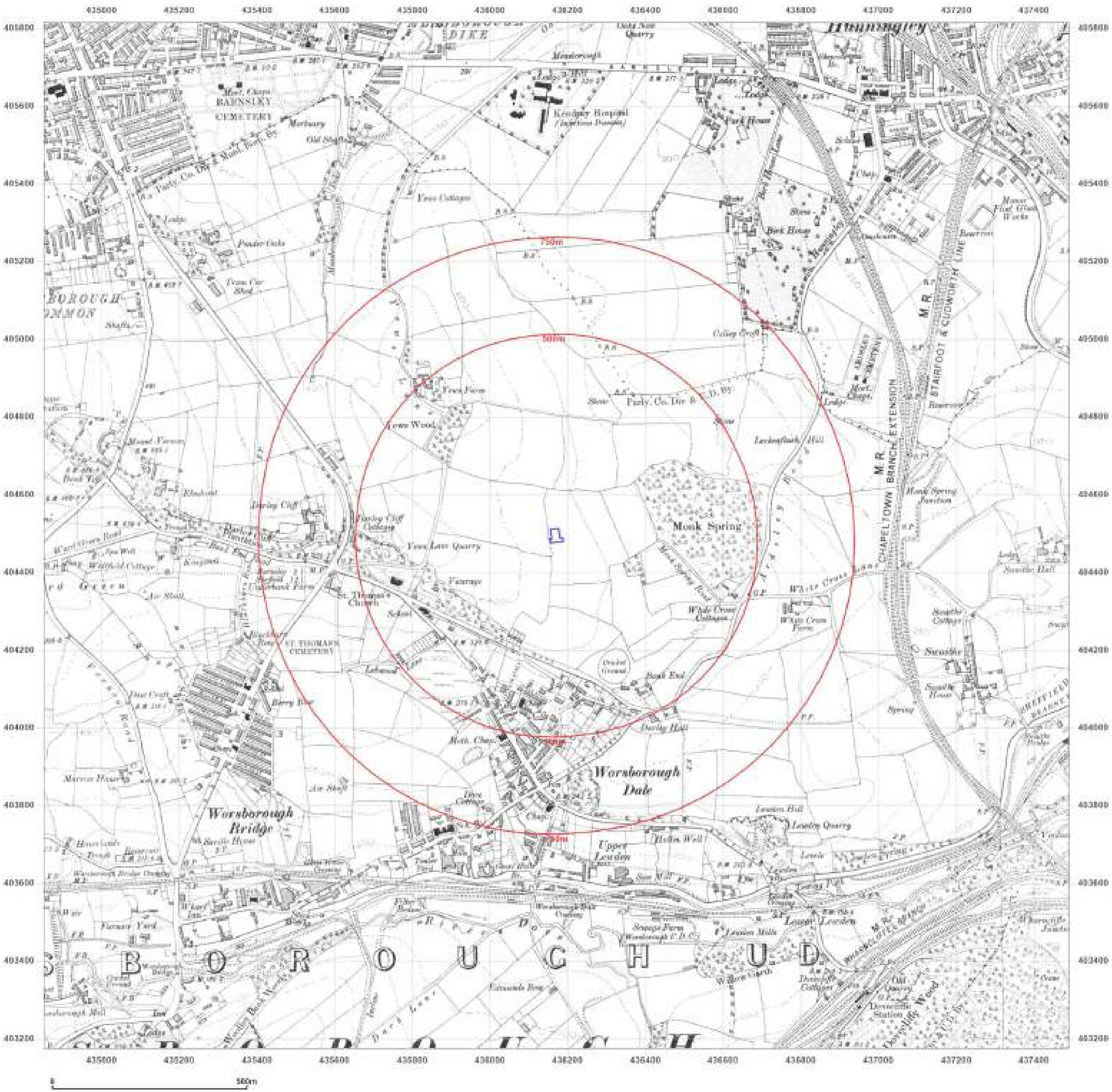

Site Details:

CARETAKERS HOUSE, BANK END PRIMARY SCHOOL, UNDERWOOD AVENUE, WORSBROUGH DALE, BARNSLEY, S70 4AZ

Client Ref: 251012
Report Ref: GS-NJE-O5U-7Q2-KDC
Grid Ref: 436170, 404494

Map Name: County Series

Map date: **1904**

Scale: 1:10,560

Printed at: 1:10,560

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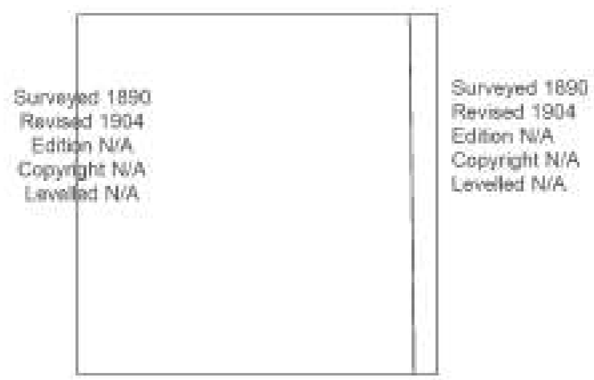

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W: www.groundsure.com

Production date: 08 April 2025

Map legend available at:
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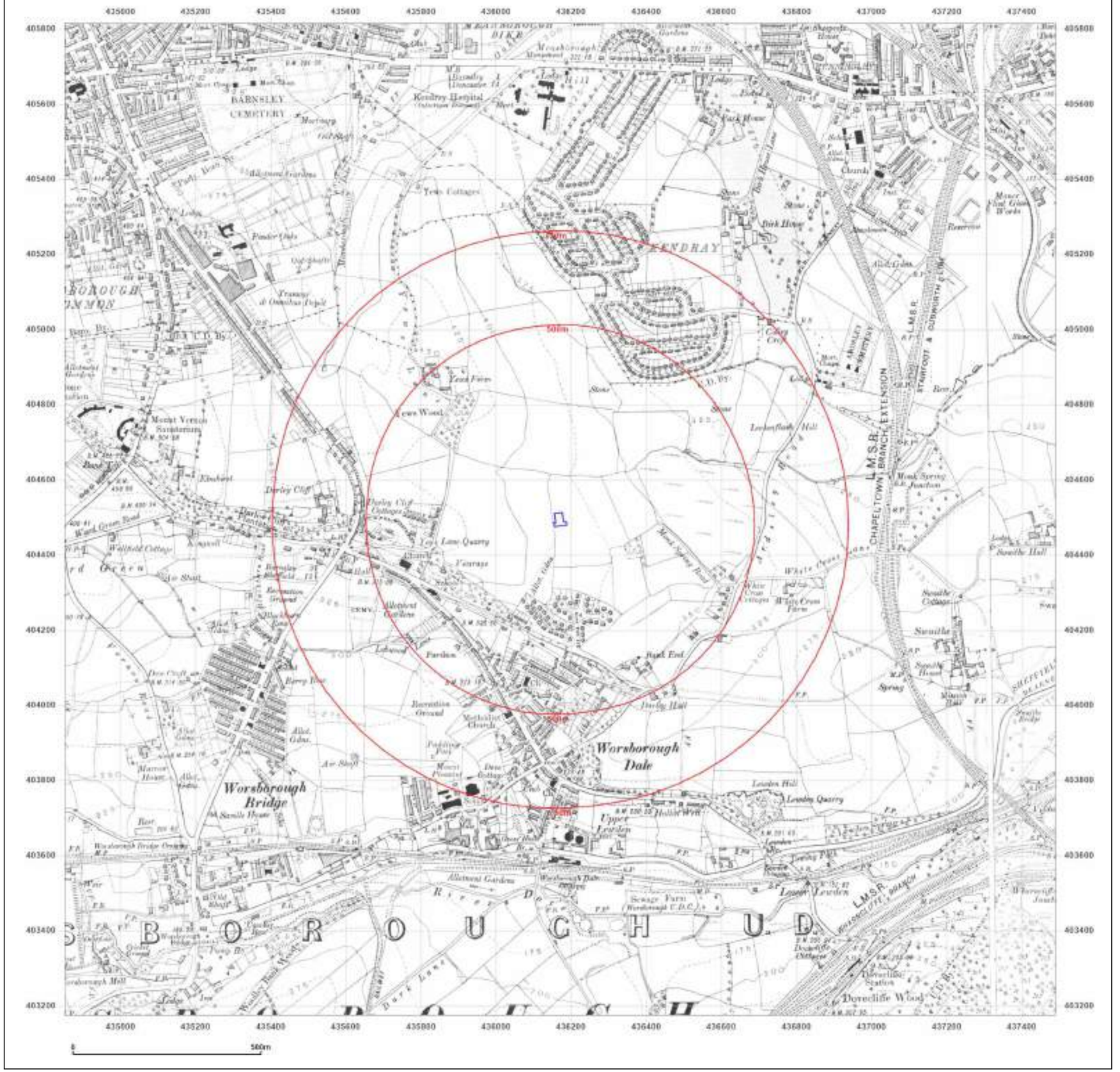

Groundsure INSIGHTS

Site Details:

CARETAKERS HOUSE, BANK END PRIMARY SCHOOL,
UNDERWOOD AVENUE,
WORSBROUGH DALE,
BARNSLEY, S70 4AZ

Client Ref: 251012
Report Ref: GS-NJE-O5U-7Q2-KDC
Grid Ref: 436170, 404494

Map Name: County Series

Map date: **1929-1931**

Scale: 1:10,560

Printed at: 1:10,560

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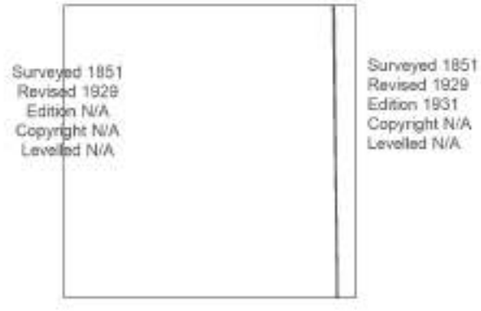

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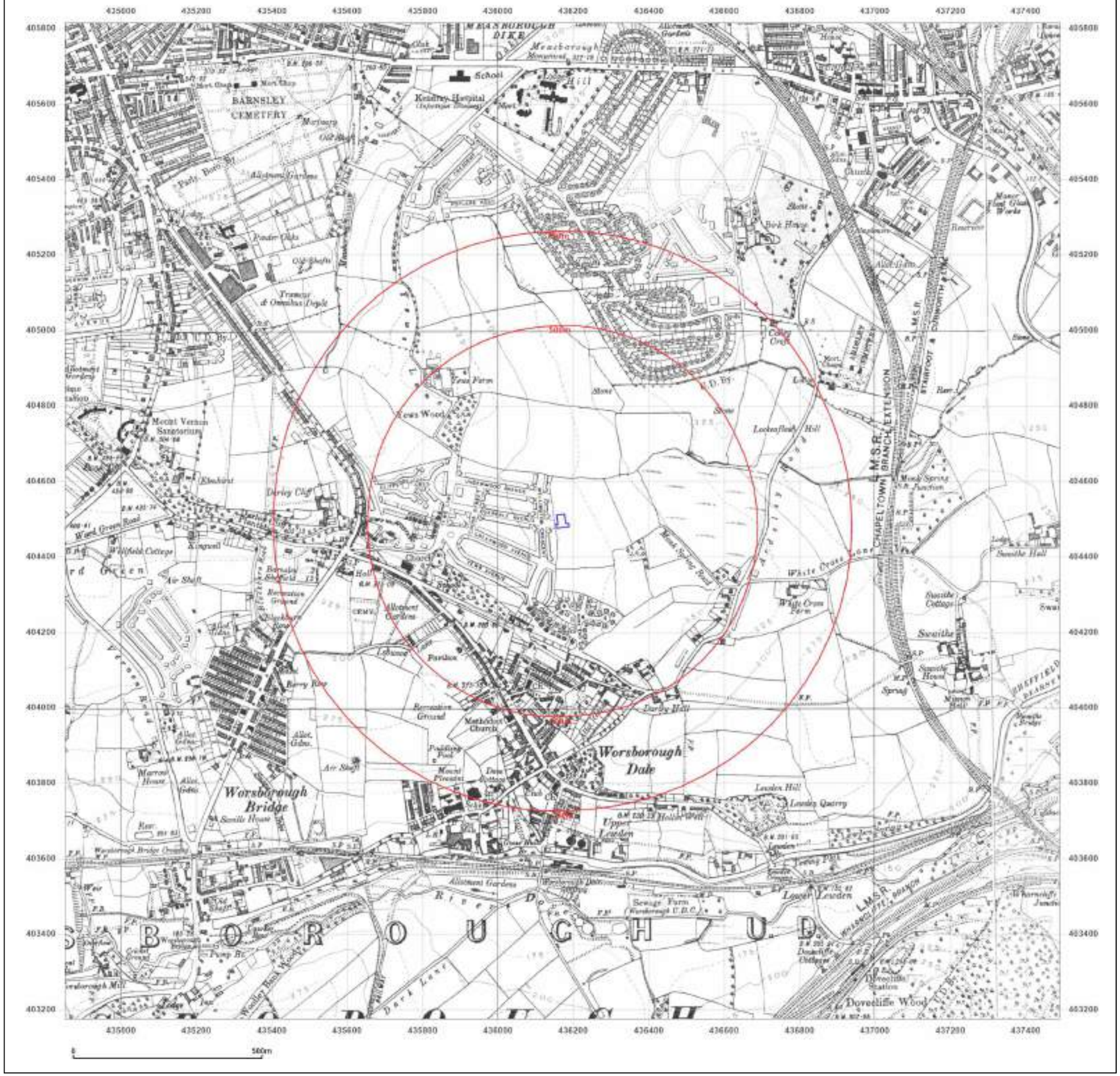

Groundsure INSIGHTS

Site Details:

CARETAKERS HOUSE, BANK END PRIMARY SCHOOL,
UNDERWOOD AVENUE,
WORSBROUGH DALE,
BARNSLEY, S70 4AZ

Client Ref: 251012
Report Ref: GS-NJE-O5U-7Q2-KDC
Grid Ref: 436170, 404494

Map Name: County Series

Map date: **1938**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1851
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1851
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A

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Site Details:

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END PRIMARY SCHOOL,
UNDERWOOD AVENUE,
WORSBROUGH DALE,
BARNSLEY, S70 4AZ

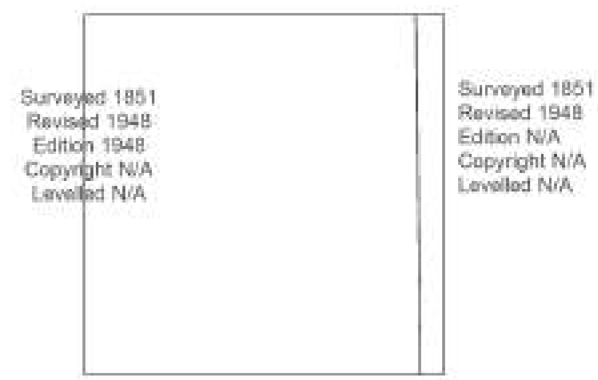
Client Ref: 251012
Report Ref: GS-NJE-O5U-7Q2-KDC
Grid Ref: 436170, 404494

Map Name: County Series

Map date: **1948**

Scale: 1:10,560

Printed at: 1:10,560



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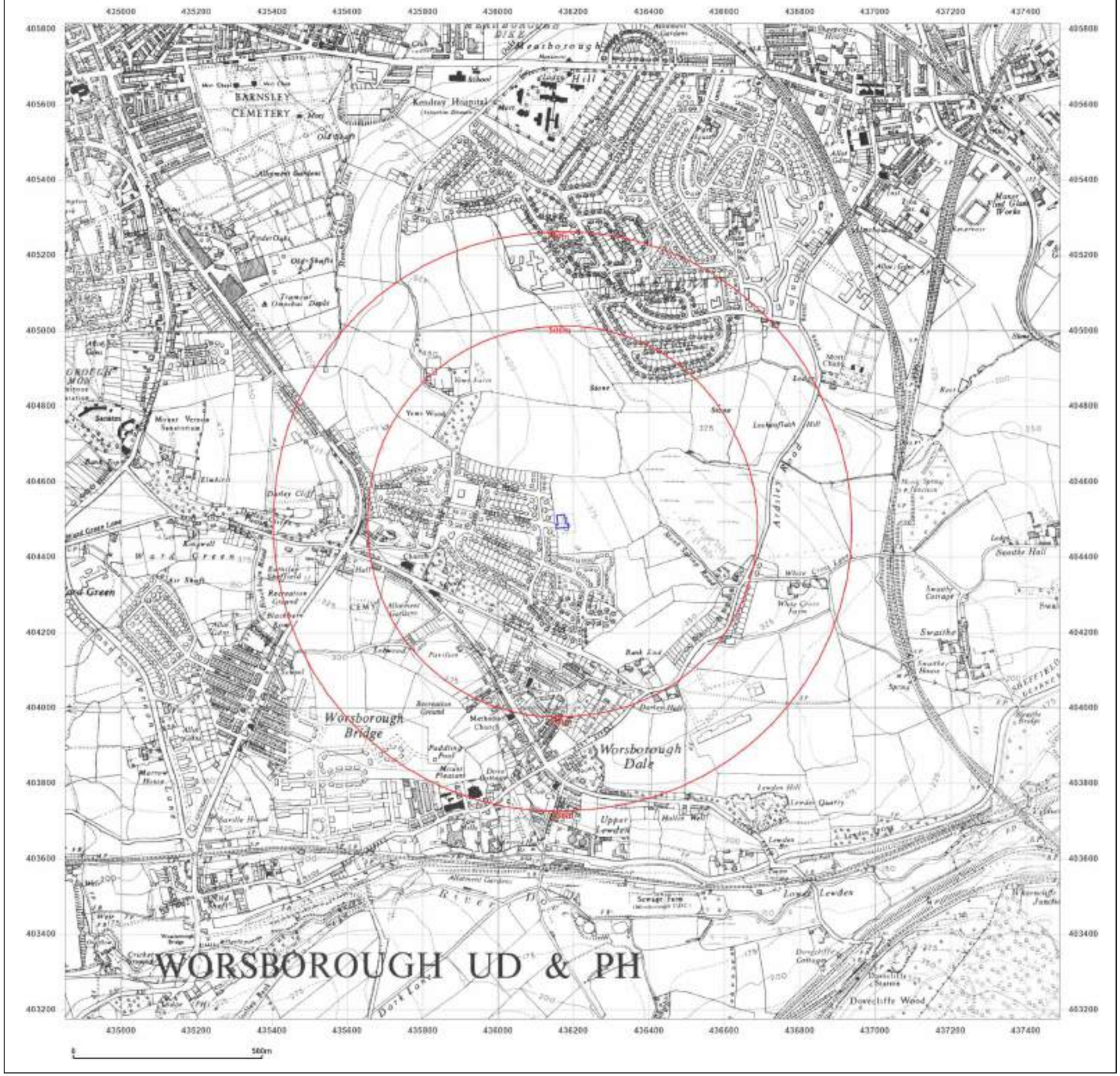
Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Groundsure INSIGHTS

Site Details:

CARETAKERS HOUSE, BANK END PRIMARY SCHOOL,
UNDERWOOD AVENUE,
WORSBROUGH DALE,
BARNSLEY, S70 4AZ

Client Ref: 251012
Report Ref: GS-NJE-O5U-7Q2-KDC
Grid Ref: 436170, 404494

Map Name: Provisional
Map date: **1951-1956**
Scale: 1:10,560
Printed at: 1:10,560

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

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

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

Surveyed 1951
Revised 1951
Edition N/A
Copyright N/A
Levelled N/A

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Production date: 08 April 2025

Map legend available at:
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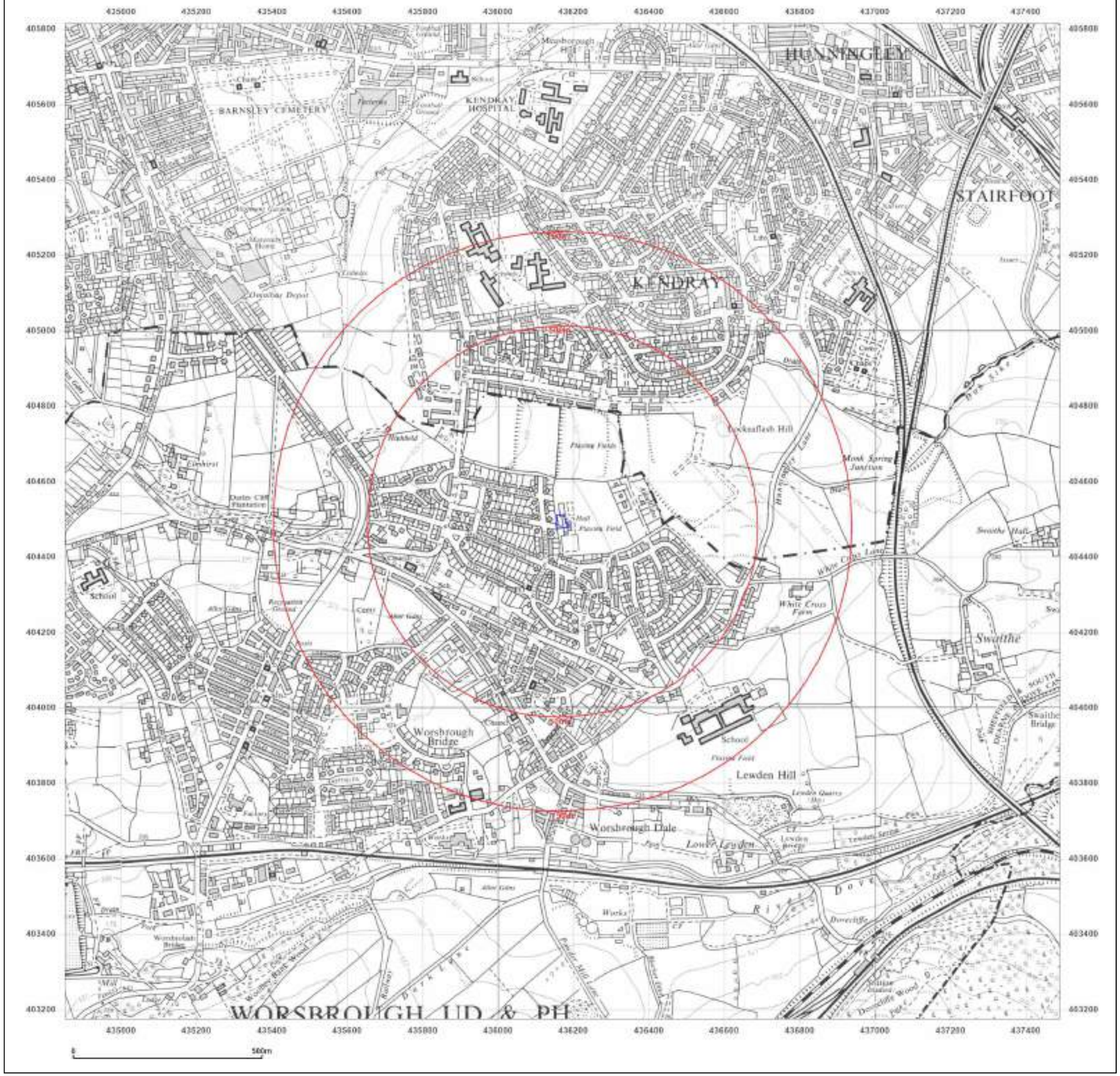

Groundsure INSIGHTS

Site Details:

CARETAKERS HOUSE, BANK END PRIMARY SCHOOL,
UNDERWOOD AVENUE,
WORSBROUGH DALE,
BARNSLEY, S70 4AZ

Client Ref: 251012
Report Ref: GS-NJE-O5U-7Q2-KDC
Grid Ref: 436170, 404494

Map Name: Provisional
Map date: **1965-1966**
Scale: 1:10,560
Printed at: 1:10,560

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

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

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

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

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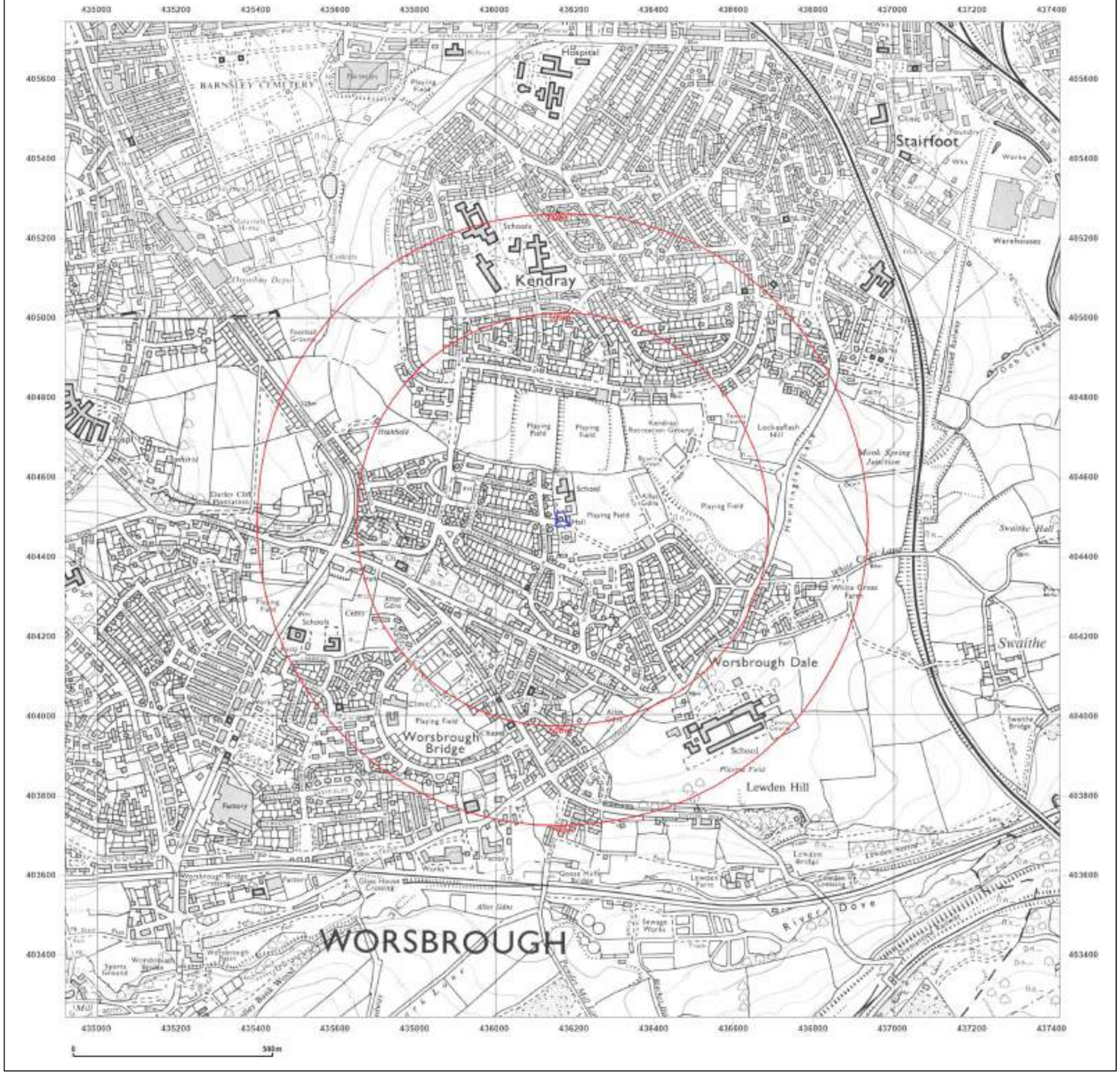

Groundsure INSIGHTS

Site Details:

CARETAKERS HOUSE, BANK END PRIMARY SCHOOL,
UNDERWOOD AVENUE,
WORSBROUGH DALE,
BARNSLEY, S70 4AZ

Client Ref: 251012
Report Ref: GS-NJE-O5U-7Q2-KDC
Grid Ref: 436170, 404494

Map Name: National Grid

Map date: **1973-1977**

Scale: 1:10,000

Printed at: 1:10,000

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

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

Surveyed 1973
Revised 1977
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1976
Revised 1977
Edition N/A
Copyright N/A
Levelled N/A

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Map legend available at:
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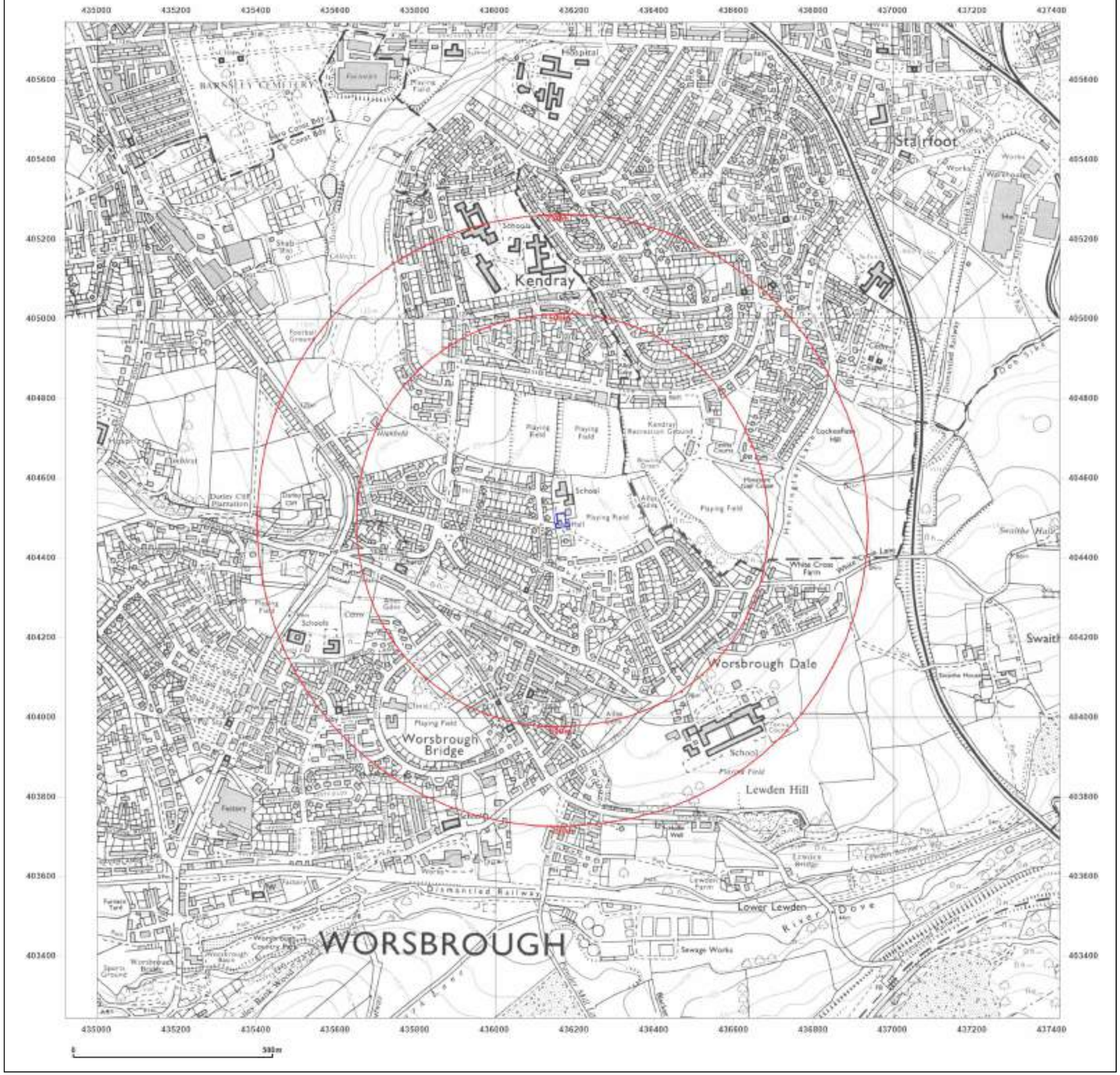

Groundsure INSIGHTS

Site Details:

CARETAKERS HOUSE, BANK END PRIMARY SCHOOL,
UNDERWOOD AVENUE,
WORSBROUGH DALE,
BARNSLEY, S70 4AZ

Client Ref: 251012
Report Ref: GS-NJE-O5U-7Q2-KDC
Grid Ref: 436170, 404494

Map Name: National Grid

Map date: **1982-1987**

Scale: 1:10,000

Printed at: 1:10,000

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Surveyed 1982
Revised 1982
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1981
Revised 1982
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1988
Revised 1987
Edition N/A
Copyright N/A
Levelled N/A

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Production date: 08 April 2025

Map legend available at:
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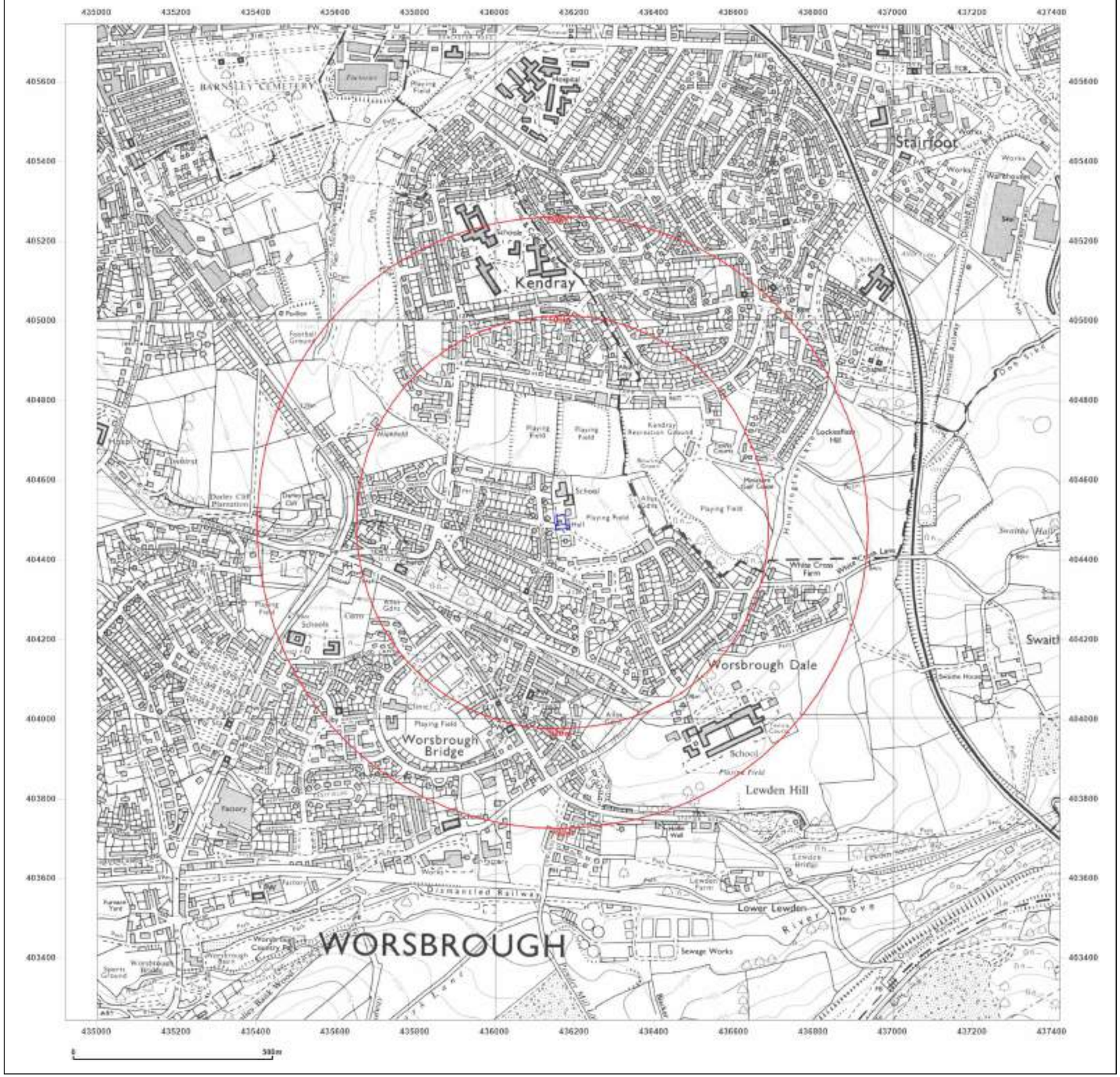

Groundsure INSIGHTS

Site Details:

CARETAKERS HOUSE, BANK END PRIMARY SCHOOL,
UNDERWOOD AVENUE,
WORSBROUGH DALE,
BARNSLEY, S70 4AZ

Client Ref: 251012
Report Ref: GS-NJE-O5U-7Q2-KDC
Grid Ref: 436170, 404494

Map Name: National Grid

Map date: **1987-1992**

Scale: 1:10,000

Printed at: 1:10,000

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Surveyed 1981
Revised 1992
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1998
Revised 1987
Edition N/A
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Site Details:

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WORSBROUGH DALE,
BARNSLEY, S70 4AZ

Client Ref: 251012
Report Ref: GS-NJE-O5U-7Q2-KDC
Grid Ref: 436170, 404494

Map Name: National Grid
Map date: **2001**
Scale: 1:10,000
Printed at: 1:10,000

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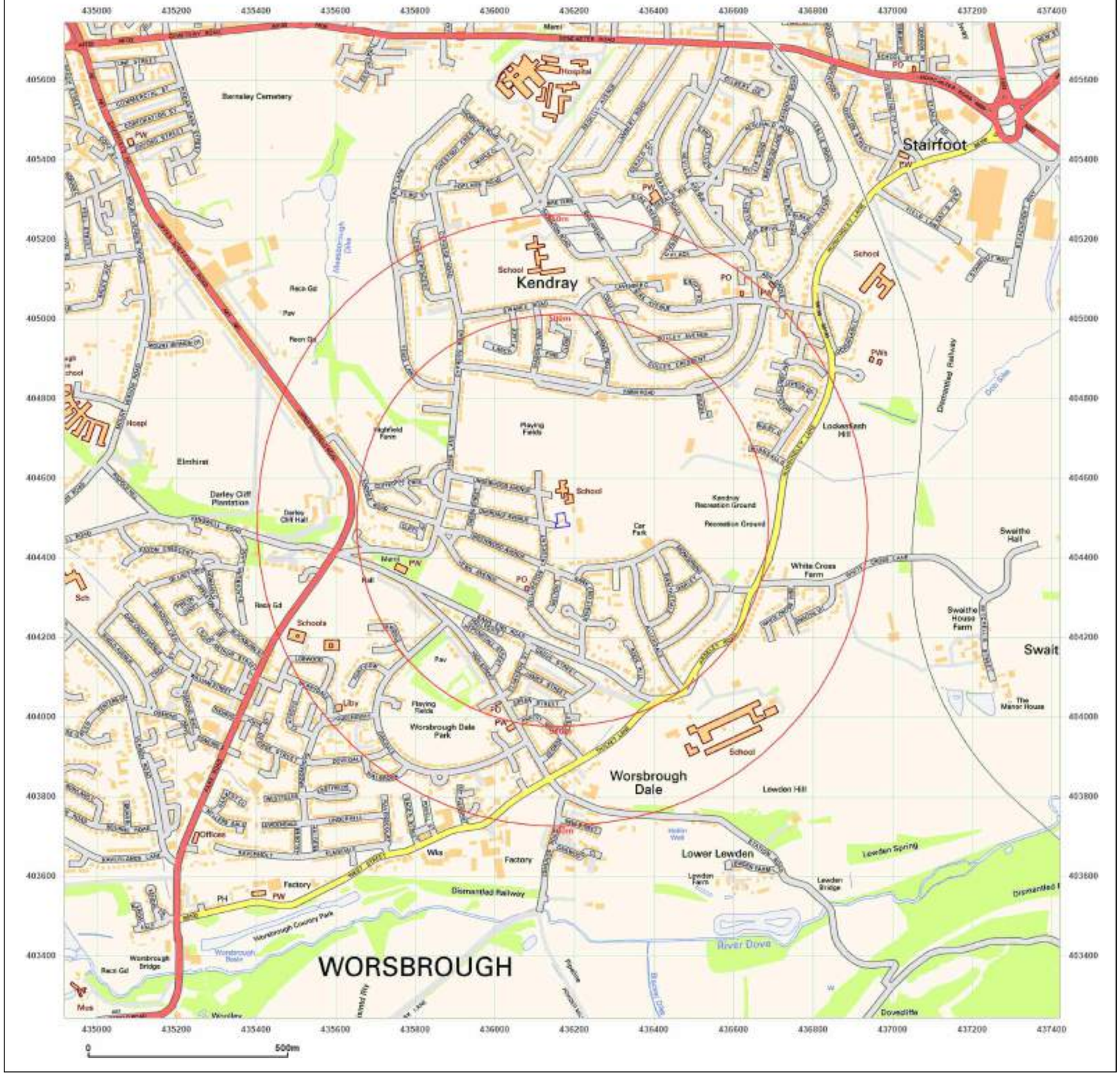

Groundsure INSIGHTS

Site Details:

CARETAKERS HOUSE, BANK END PRIMARY SCHOOL,
UNDERWOOD AVENUE,
WORSBROUGH DALE,
BARNSLEY, S70 4AZ

Client Ref: 251012
Report Ref: GS-NJE-O5U-7Q2-KDC
Grid Ref: 436170, 404494

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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Production date: 08 April 2025

Map legend available at:
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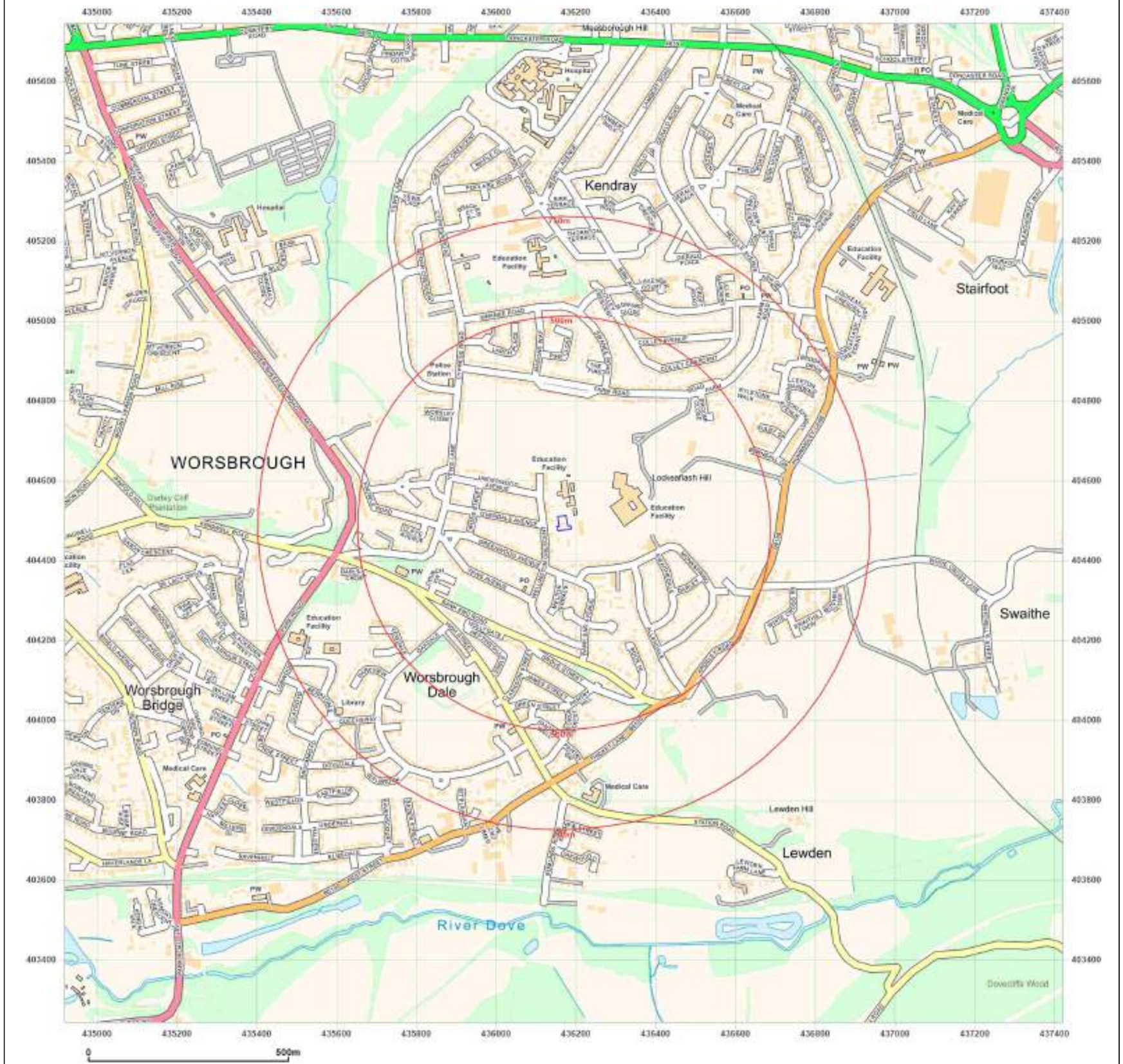

Groundsure INSIGHTS

Site Details:

CARETAKERS HOUSE, BANK END PRIMARY SCHOOL,
UNDERWOOD AVENUE,
WORSBROUGH DALE,
BARNSLEY, S70 4AZ

Client Ref: 251012
Report Ref: GS-NJE-O5U-7Q2-KDC
Grid Ref: 436170, 404494

Map Name: National Grid
Map date: **2025**
Scale: 1:10,000
Printed at: 1:10,000

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2025

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APPENDIX E – SEVERITY AND PROBABILITY OF RISK IN CONCEPTUAL SITE MODELS (after CIRIA552, Tables 6.3 to 6.5)

This report draws on guidance presented in CIRIA report 552, "Contaminated Land Risk Assessment, A Guide for Good Practice", wherein the "severity" term in the Conceptual Site Model is classified with reference to the sensitivity of the hazard and the receptor, as follows:

Severity Category	Description	Examples
Severe	Acute risk to human health likely to result in "significant harm" as defined in EPA90, catastrophic damage to buildings or property, acute risk of major pollution of controlled waters, acute risk of harm to ecosystems (as defined in Contaminated Land Regulations 2006)	High cyanide concentrations at the surface of a recreation area Major spillage into controlled waters Explosion, causing building collapse
Medium	Chronic risk to human health likely to result in "significant harm" as defined in EPA90, chronic pollution of sensitive controlled waters, significant change at a sensitive ecosystems or species, significant damage to buildings or structures	Contaminant concentrations at a site in excess of SGVs, GAC or similar screening values Leaching of contaminants to sensitive aquifer Death of a species within a nature reserve
Mild	Pollution of non-sensitive waters, significant damage to buildings, structures, services or crops, damage to sensitive buildings, structures, services or the environment, which nonetheless result in "significant harm"	Pollution to (former) non-aquifer or to non-controlled surface watercourse. Damage to building rendering it unsafe to occupy (e.g. foundation or structural damage)
Minor	Harm, not necessarily resulting in "significant harm" but probably requiring expenditure to resolve or financial loss. Non-permanent risks to human health that are easily mitigated, e.g. by wearing PPE. Easily-repairable damage to structures or services	Contaminant concentrations requiring the wearing of PPE during site work, but no other long-term mitigation. Discolouration of concrete

The likelihood of an event (probability) considers both the presence of hazard and receptor and the integrity of the pathway between hazard and receptor, and is assessed as follows:

Category	There is a pollution linkage and:
High	Event is likely in the short term and almost inevitable over the long term. Or there is evidence of actual harm at/to the receptor
Likely	Event is possible in the short term and likely over the long term
Low	Event is unlikely in the short term and possible over the long term
Unlikely	Event is unlikely, even in the long term

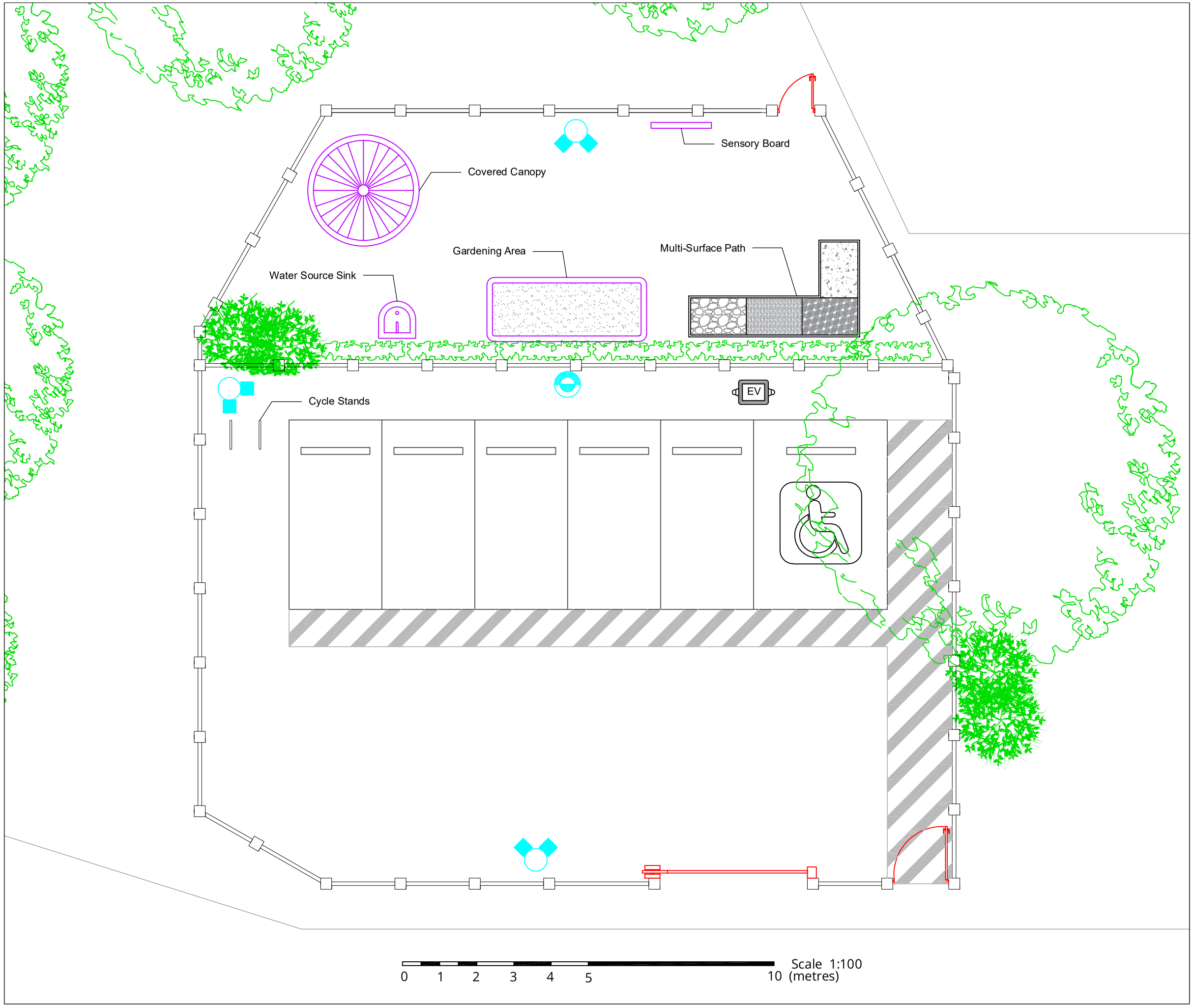
Potential severity and probability have been assessed in the following matrix, to give an overall risk rating:

	Severity			
Probability	Severe	Medium	Mild	Minor
High	Very high	High	Moderate	Moderate/low
Likely	High	Moderate	Moderate/low	Low
Low	Moderate	Moderate/low	Low	Very low
Unlikely	Moderate/low	Low	Very low	Very low

The above risk categories are likely to result in the following actions:

- Very high: urgent intervention / investigation needed; remediation likely to be required
- High: urgent intervention / investigation needed, remediation possibly required in short term and probably required in long term
- Moderate: investigation needed to clarify and refine risk; remediation may be required over the long term
- Low: it is possible that harm could arise to a receptor, but if realised, such harm is likely to be, at worst, mild
- Very low: it is possible that harm could arise to a receptor, but if realised, such harm is unlikely to be severe.

APPENDIX F – PROPOSED SITE LAYOUT



NOTES:
DRAWINGS ARE INDICATIVE ONLY. DO NOT SCALE FROM THIS DRAWING. ALL LEVELS, ANGLES AND DIMENSIONS TO BE CHECKED ON SITE PRIOR TO COMMENCEMENT OF WORKS.

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT STRUCTURAL ENGINEERS AND MECHANICAL AND ELECTRICAL ENGINEERS DRAWINGS, DETAILS AND SPECIFICATIONS.

Revisions:

REVISION A

Twin Head LED Floodlight

CCTV Camera 360°

EV Twin EV Charging Point

Barker

Client
United Learning Trust

Project P24-0663
Bank End Primary School -
Caretakers Lodge Option Appraisals

Location
Bank End Primary School -
Caretakers House

Drawing Title
Layout Proposal - Option B

Barker Associates
Trigate 210-222
Hagley Road West
Oldbury
Birmingham B68 0NP