Land off Hay Green Court

Phase I Desk Study Report

July 2025

Document Control

Project:	Land off Hay Green Court Phase I Desk Study Report
Client:	Windmill Homes (Yorkshire) Ltd
Job Number:	RBG469

Prepared and Issued by Ross Blake BSc MSc FGS, Engineer. Signed:

Issue	Date	Status
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Disclaimer

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1.0 Introduction

RB Geotechnical was commissioned by the client to carry out a Phase I Desk Study at Land off Hay Green Court in Birdwell, Barnsley, relating to the proposed residential development of two detached properties.

1.1 Aims and Scope

The principal aims of this Phase I Desk Study is to interpret information pertaining to the site, obtained during a desk-based review of available data for the site.

The scope of this study is as follows:

- To provide general information on the site such as location and description;
- To discuss the geology, hydrogeology and hydrology at, and in the vicinity of, the site;
- To summarise the environmental setting of the site; e.g., landfills, permits and sensitive land uses;
- To summarise potential geotechnical risks associated with the site;
- To provide a preliminary summary of potential coal mining risks to the site;
- To discuss and summarise any historical development that have occurred at the site and in the surrounding area;
- To assess potential contamination issues pertaining to the site with consideration of the site's historic use;
- To develop an initial conceptual model linking sources of potential contamination with pathways and receptors; and
- To provide a preliminary risk assessment for the current and proposed end use of the site.

Please note that this Phase I Desk Study excludes an assessment of risks arising from asbestos, unexploded ordnance and/or invasive species.

1.2 Terms and Conditions

This report has been prepared for the client in support of a planning application for the proposed residential development on the Land off Hay Green Court in Birdwell, Barnsley.

1.3 Sources of information

Information on the site layout and current land use of the site is mainly based on information collected from online sources and photos from other sources.

An environmental database search was undertaken by GroundSure to provide supplementary Environmental information for the site and surrounding area. This was collated into an Insight Report by Ground Sure and as such the potential for further data to exist cannot be ruled out.

The existing database and other sources of which this study is based comprise:

- GroundSure EnviroInsight Report, Land Adjacent to Heather Cottage, 4th July 2025 - Appendix A
- GroundSure 1:10,000 Historical Maps, Land Adjacent to Heather Cottage, 4th July 2025 - Appendix B
- GroundSure 1:2,500 Historical Maps, Land Adjacent to Heather Cottage, 4th July 2025 - Appendix B
- Environment Agency website (www.environment-agency.gov.uk);
- British Geological Survey (BGS) Geoindex website (www.bgs.ac.uk/geoindex)
- Coal Authority Interactive Viewer (www.mapapps2.bgs.ac.uk/coalauthority/home.html)

Although every effort has been made to ensure the accuracy of the information contained herein, no checks have been carried out to ensure the accuracy of information obtained from third parties and no liability can be accepted for any errors or misinterpretation of the third-party information where it has been incorporated into this report.

2.0 Site Details

2.1 Site Location and Description

The 0.12ha sized site is off Hay Green Lane in Birdwell, Barnsley. It is accessed through metal gates off Hay Green Lane to the North, along a private paved road (Hay Green Court), which feeds three other properties on Hay Green Court. The area of the proposed building development currently comprises grass, bushes and trees.

The National Grid Reference for the centre of the site is 434749, 401364.

2.2 Proposed Development Plan

The grass area at the Southern end of Hay Green Court, is to have two detached dwellings constructed, each with private driveways and back gardens. The proposed development plan is shown in Appendix C.

3.0 Site History

3.1 History of site and surrounding area

Information relating to the historical development of the site and the surrounding area has been obtained from Historical Ordnance Survey Maps (1:10,000 and 1:2,500). These are presented in Appendix B.

Table 4.1 Summary of on-site and surrounding area history

Map	On-Site Features	Surrounding Area
1855	The site is shown to be the gardens of Hay Green House (the building of which is adjacent to the East of the site)	The surrounding area is largely shown as agricultural land.
1855 – 1893	The site remains unchanged	Hay Green Plantation is shown to the North of the site in addition to allotments.
1893 – 1929	The site now has a small building in the centre and in the South East.	A row of houses is shown to the West of the site, in addition to large allotment gardens from approximately 50m to the West.
1929 – 1966	The site remains unchanged.	The surrounding area remains largely unchanged.
1966 –	The site remains unchanged.	The land to the North has undergone largescale

Map	On-Site Features	Surrounding Area
1977		residential development
1977 – 2003	The site is now clear of all buildings.	The surrounding area remains largely unchanged.
2003 – present day	The site remains unchanged	The surrounding area remains largely unchanged.

4.0 Geology, Hydrogeology and Hydrology

4.1 Geology

Information relating to the geology of the site has primarily been sourced from the EnviroInsight Report and the BGS Geoindex website.

4.1.1 Made Ground

According to the published geological maps and information on the BGS GeoIndex website, the site is not shown to be underlain by Made Ground.

4.1.2 Superficial Deposits

The site is not mapped as being underlain by superficial deposits.

4.1.3 Solid Geology

Geological maps indicate that the site is underlain by bedrock of the Pennine Middle Coal Measures, Mudstone, Siltstone and Sandstone.

4.1.4 BGS Boreholes

There are no historical BGS boreholes carried out. However an intrusive investigation was carried out adjacent to the site in 2020, with ground conditions of weathered coal measures (sandy gravelly silty clay, with sandstone and mudstone fragments), extending to depths of around 2.0m, underlain by intact bedrock of Sandstone.

4.1.5 Faults and Seams

A fault is mapped running through the North of the site in a North East to South West direction. The nearest coal seam is mapped 83m to the West. No other faults or seams are mapped within 250m of the site boundary.

4.1.6 Radon

The EnviroInsight Report indicates that the property is within a Radon Affected Area, with between 1% and 3% of properties affected. No Radon Protection Measures will however be required.

4.2 Hydrogeology

4.2.1 Aquifers

The underlying Bedrock is classified as being a Secondary A Aquifer, which is a rock with permeable layers that are capable of supporting water supplies at a local rather than strategic scale.

4.2.2 Groundwater, Surface Water and Potable Water Abstraction Licences

The EnviroInsight Report indicates that there are no Surface Water, Groundwater or Potable Water abstractions situated within 500m of the site boundary.

4.2.3 Licensed Discharges

There are four recorded Licensed Discharges to controlled waters mapped within 500m of the site boundary, all associated with sewage discharges.

4.2.4 Pollution Incidents to Controlled Waters

The EnviroInsight Report shows no significant pollution incidents to controlled water within 250m of the site boundary.

4.3 Hydrology

No water networks are mapped within 250m of the site boundary.

4.3.1 Flood Risk

The EnviroInsight Report states that the site is not situated within either a Zone 2 Fluvial/Tidal Model or Zone 3 Fluvial Model floodplain. The site is classified as being at a **LOW** Risk of flooding from Rivers or Sea, with a **NEGLIGIBLE** Risk of Surface Water flooding, and **NEGLIGIBLE** Risk of Groundwater flooding.

4.3.2 Source Protection Zones

The site is not located within a Source Protection Zone.

5.0 Environmental Setting

5.1 Waste Treatment and Disposal

5.1.1 Landfill Sites

There are no historical or currently active landfill sites mapped within 250m of the site boundary.

5.1.2 Other Waste Sites

There are no other waste sites mapped within 250m of the site boundary.

5.2 Regulatory Permits, Incidents and Registers

5.2.1 Control of Major Hazard Sites /Notification of Installations Handling Substances

The EnviroInsight Report indicates there are no Control of Major Hazard sites (COMAH) or Notification of Installations Handling Substances (NIHHS) within 250m of the site boundary.

5.2.2 Hazardous Substance Storage/Usage

There are no records of Hazardous substance storage/usage within 500m of the site boundary.

5.3 Potentially Infilled Land

Infilled land is mapped 94m to the South of the site, possibly associated with historical allotments.

5.4 Sensitive Land Uses

The site itself is within a Nitrate Vulnerable Zone, with another 634m to the West. A site of special scientific interest (SSSI), is mapped 462m to the East, Designated Ancient Woodland is mapped from 520m to the East, 634m to the South West, 696m to the West, 709m to the North West, 959m to the West and 994m to the North West and Green Belt Land is mapped 196m to the West. , 529m to the West at Fawler Copse, 546m to the North and 677m to the West. The site is situated within an SSSI Impact Risk Zone but due to the proposed development Natural England do not need to be consulted.

5.5 Visual and Cultural Designations

A listed building is mapped 212m to the North East of the site. There are no other Visual or Cultural Designations within 250m of the site boundary.

5.6 Agricultural Designations

The site is in Grade 3 Land, which is defined as being good to moderate quality agricultural land. No other Agricultural Designations are mapped within 250m of the site boundary.

5.7 Habitat Designations

Deciduous Woodland is mapped 18m to the North East of the site. No other Habitat Designations are mapped within 250m of the site boundary.

6.0 Potentially Contaminative Sites

6.1 Potentially Contaminative Land Uses

Historical potentially contaminated land uses within 250m of the site boundary have been identified as a smithy 206m to the North West from 1891. Current potentially contaminative land uses have been identified within 250m of the site boundary as a sub-station 9m to the West and petrol station 137m to the West.

7.0 Geotechnical Assessment

7.1 Natural Hazards

The EnviroInsight Report states that the site has a **Negligible** risk of Running Sands, Compressible Deposits and Ground Dissolution of Soluble Rocks and a **Very Low** risk of Shrink Swell Clays, Collapsible Deposits and Landslides.

8.0 Mining

The site is within a Coal Mining Area. Upon inspecting the Coal Authority Online Interactive Viewer, it is evident that the site is in a Development High Risk Area. An intrusive mining investigation is known to have taken place on the land adjacent to the South of the site, and no risks of unrecorded mine workings was encountered.

The site is in a Non-Coal Mining Area, with Iron Ore as the commodity.

9.0 Conceptual Site Model

9.1 Introduction

A preliminary **Conceptual Site Model** (CSM) has been developed for the site, to assess any constraints on the proposed development arising from contamination which may be present. The CSM describes the relationship between contamination which may be present from past and current activities, both on and off site, along with potential receptors of that contamination.

The site has been assessed in line with current UK guidelines and follows the procedures set out in the Environmental Agency 'Land Contamination Risk Management' (LCRM) web pages which are accessible via the government website.

LCRM provides the technical framework for structured decision making about land contamination and builds on previous work carried out under the Contaminated Land Research Programme of the former Department of the Environment. LCRM has adopted and refined the methodology and terminology that has been used in contaminated land risk assessment for a number of years.

LCRM defines the three essential elements to any risk:

- **A contaminant source** - a substance that is in, on or under land and has the potential to cause harm or to cause pollution of controlled waters;
- **A receptor** – in general terms, something that could be adversely affected by a contaminant, such as people, an ecological system, property or a water body; and
- **A pathway** - a route or means by which a receptor can be exposed to or affected by a contaminant.

Each of these elements can exist independently, but they create a risk only where they are linked together, so that a particular contaminant affects a particular receptor through a particular pathway. This kind of linked combination of source-pathway-receptor is described as a **Potential Pollutant Linkage (PPL)**.

It should be noted that at this preliminary stage, the assessment is based only on a desk-based study. A quantitative assessment of the potential risk is not possible at this stage of the assessment.

This report presents a Preliminary Conceptual Site Model and Preliminary Risk Assessments for the site, based on a **Residential** end use.

9.2 Potential Contamination Sources

9.2.1 On Site Sources

On-site sources of contamination have been identified as potential soil contamination associated with old buildings on the site which have since been demolished (primarily in South East corner of site).

9.2.2 Off Site Sources

Possible off-site sources of contamination have also been identified as potential ground gases associated with coal seams close to the site. However, intrusive investigation carried out adjacent to the site, confirms no presence of ground gases.

9.3 Potential Receptors

9.3.1 Human Receptors

Based on the proposed use of the site, on-site receptors include:

- Current site users;
- New Residents;
- Construction workers involved in the proposed development. Note that potential contamination risks to construction workers will be mitigated by appropriate risk assessments and mitigation measures required by Control of Substances Hazardous to Health (COSHH) and Construction, Design and Management (CDM) regulations.

9.3.2 Controlled Waters Receptors

The following on-site controlled waters receptors include:

- Groundwater within the underlying Aquifers.

9.3.3 Buildings Receptors

The proposed new buildings are a potential receptor.

9.4 Potential Pathways

9.4.1 On-Site Human Receptors

Potential pathways to future human receptors on site include:

- Dermal contact or ingestion with contaminated soils;
- Inhalation of contaminants in soil derived dust;
- Migration and inhalation of gases and vapours outdoors or indoors;
- Contamination of drinking water pipes by contaminated soils/water leading to the ingestion of contaminated drinking water.

9.4.2 Controlled Waters

Potential pathways to on-site controlled water receptors (groundwater) include:

- Leaching of contaminants and/or migration of contaminants from the unsaturated zone of soils to groundwater (Aquifers) in natural strata;
- Vertical migration of contaminants in shallow groundwater to deeper strata and aquifers;
- Lateral migration of impacted water through service conduits, drainage systems and possible perched groundwater pathways to surface water receptors.

9.4.3 Buildings

Potential pathways from off-site sources to the on-site property receptor include:

- Migration and accumulation of ground gas or vapours in buildings or structures.

9.5 Preliminary Risk Assessment

Based on the stated potential sources of contaminants identified and the receptors and pathways described, an assessment of the environmental risks has been made with reference to the significance and degree of risk. This assessment is based on consideration of whether the source contamination can reach a receptor and hence whether it is of a major or minor significance.

A preliminary Conceptual Site Model (CSM) of the Potential Pollutant Linkages (PPL) has been developed based on the information derived from this desk study for the site. This CSM has been used to identify potentially Relevant PPLs for the current and proposed end uses which have been assessed qualitatively using CIRIA 552 guidance, as described in Table 9.1 and Table 9.2.

Table 9.1 Classification of Consequence

Consequence	Criteria
Severe	Short term (acute) risk to Human Health likely to result in "significant harm" as defined by the Environmental Protection Act 1990, Part IIa. Short term risk of pollution of sensitive water resource. Catastrophic damage to buildings / property
Moderate	Chronic damage to Human Health likely, over a long term, to result in "significant harm" as defined by the Environmental Protection Act 1990, Part IIa. Pollution of sensitive water resources
Mild	Health effects to Human Health that are unlikely to result in "significant harm" as defined by the Environmental Protection Act 1990, Part IIa. Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services. Damage to sensitive buildings / structures / services or the environment
Negligible	Non-permanent health effects to Human Health that are unlikely to result in "significant harm" as defined by the Environmental Protection Act 1990, Part IIa. Those that are easily prevented by means such as personal protective clothing. Harm, although not necessarily significant harm, which may result in a financial loss, or expenditure to resolve.

Table 9.2 Classification of Probability

Probability	Criteria
Almost Certain	Circumstances are such that an event either appears very likely in the short term and almost inevitable over the long term or there is evidence of currently harm occurring
Likely	Circumstances are such that an event, whilst not inevitable, is possible in the short term and is likely to occur over the long term
Unlikely	Circumstances are such that it is possible an event could occur, but it is by no means certain to occur even over a longer period, and it is less likely in the shorter term
Very Unlikely	Pollutant linkage may be present, but the circumstances under which harm would occur are improbable even in the medium to long term
Extremely Unlikely	Pollutant linkage may be present, but the circumstances under which harm would occur are highly improbable even in the long term

Once the consequence and probability have been classified, these can then be compared to produce a risk category (using Table 9.3), ranging from **Very High Risk** to **Very Low Risk,** with the definitions summarised in Table 9.4.

Table 9.3 Comparison of Consequence against Probability

Consequence / Probability	Severe	Moderate	Mild	Negligible
Almost Certain	Very High Risk	High Risk	Moderate Risk	Low Risk
Likely	High Risk	Moderate Risk	Moderate/ Low Risk	Low Risk
Unlikely	Moderate Risk	Moderate/ Low Risk	Low Risk	Very Low Risk
Very Unlikely	Low Risk	Low Risk	Very Low Risk	Very Low Risk
Extremely Unlikely	Very Low Risk	Very Low Risk	Very Low Risk	Very Low Risk

Table 9.4 Description of the Classified Risks and Likely Action Required

Risk	Criteria
Very High	There is a high probability that severe harm could arise to a designated receptor from an identified hazard at the site without appropriate remediation action
High	Harm is likely to arise to a designated receptor from an identified hazard at the site without appropriate remediation action.
Moderate	It is possible that without appropriate remediation action, harm could arise to a designated receptor. It is relatively unlikely that any such harm would be severe, and if any harm were to occur it is more likely that such harm would be relatively mild
Low	It is possible that harm could arise to a designated receptor from an identified hazard. It is likely that, at works, if any harm were to be realised, any such effects would be mild.
Very Low	There is very low possibility that harm could arise to the receptor, but it is likely that this harm, if realised, would be mild at worst

In accordance with CLR11, professional judgement has been employed to evaluate the risk on a qualitative basis using available information.

A summary of the pollution linkages identified during the desk study are provided in Table 9.5.

Table 9.5 Conceptual Site Model of Potential Pollutant Linkages

Source	Receptor	Pathway	Risk	Discussion
Contaminants in soil, soil derived dust, surface water run-off, groundwater, and as vapours/ground gas	New Residents	• Dermal contact or ingestion contaminants in soil-derived dust and entrained surface water run-off from areas where soil is exposed at the surface or where excavation takes place and in shallow groundwater in the natural strata if excavation takes place below the water table. • Inhalation of contaminants in soil derived dust from areas where soil is exposed at the surface of where excavation takes place. • Inhalation of soil and water derived vapours and ground gas outdoors • Inhalation of soil derived, and water derived vapours and ground gas indoors where it may have accumulated in buildings and enclosed spaces.	Moderate/Low	A potential risk of soil contamination exists in proposed soft landscaped garden areas, associated with historical construction and demolition of buildings. This could result in contaminated Made Ground being present.
	Construction Workers	• Dermal contact or ingestion contaminants in soil-derived dust and entrained surface water run-off from areas where soil is exposed at the surface or where excavation takes place and in shallow groundwater in the natural strata if excavation takes place below the water table. • Inhalation of contaminants in soil derived dust from areas where soil is exposed at the surface of where excavation takes place.	Low	Construction workers will wear necessary PPE during the development works, thus reducing any risk of contact with potential contaminants.
Contaminants in Soil	Groundwater within the underlying soils and bedrock (Aquifer)	• Leaching of contaminants and/or migration of free phase contaminants from the unsaturated zone soils to groundwater in the natural strata • Vertical migration of contaminants in shallow groundwater to deeper strata and aquifer	Low	The aquifer is likely to be at a depth that will not be affected by potential soil contaminants
Contaminants in soil, surface water runoff, groundwater and as vapours/ground gas	Surface Water	• Lateral migration of contaminants and/or migration of free phase contaminants present in the Made Ground via groundwater to surface water discharge • Lateral migration of contaminants and/or migration of free phase contaminants present in the Made Ground and entrained in surface water runoff	Low	No surface water features on the site are deemed to present a risk to future human usage.
Contaminants in soil, groundwater and as vapours/ground gas	Building	• Accumulation of soil and water derived vapours/and or ground gas in enclosed spaces	Low	No ground gases likely to be present
Contaminants in soil	Water Supply Routes	• Migration of heavy metal contaminants into newly placed water supply routes	Low	No other contamination risks identified.

10.0 Conclusions and Recommendations

The site is proposed to have two new residential dwellings constructed on site, each with private driveways and back gardens.

Historically the site has had small buildings once present and now no longer present. The site has mainly been open grassland.

Potential on-site sources of contamination were identified as possible contaminants associated with building demolition (in the South West corner), which could affect any proposed new soft landscaped garden areas.

A small-scale intrusive investigation is therefore recommended in order to obtain shallow soil samples targeting the areas of proposed soft landscaping, to allow for soil contamination testing to be carried out.

In summary, on the basis of the above listed contaminant sources it is concluded that:

- Contaminants are possibly present in, on or under the land at the site from either on-site or off-site sources in the form of ground gases; and
- Future on site receptors to any form of contamination have been identified as the construction workers, residents, the new buildings, surface water and the groundwater.

A qualitative risk assessment of the identified potential pathways of contamination to the site have been summarised in Table 9.5. The following risks have been designated:

- Future Human Receptors –Moderate/Low Risk
- Construction Workers –Low Risk
- Groundwater –Low Risk
- Surface Water –Low Risk
- New Buildings – Low Risk

- Utilities – Low Risk

Based on the review of all available historical data, it has been established that overall, a **MODERATE/LOW** risk of potential pollutant linkage to the site exists, due to the potential for on-site sources of soil contamination in proposed soft landscaped areas.

11.0 References

- BS 5930: (2015) Code of Practice for Site Investigations. British Standards Institution.
- BS 10175: (2011) Code of Practice for the Investigation of Potentially Contaminated Sites. British Standard Institution.
- CIRIA 552: (2001) Contaminated Land Risk Assessment, A guide to good practice.

APPENDIX A – GROUNDSURE REPORT

Groundsure LOCATION INTELLIGENCE

Enviro+Geo Insight

LAND ADJACENT TO HEATHER COTTAGE, HAY GREEN LANE, BIRDWELL, BARNSLEY, S70 5XD

Order Details

Date: 04/07/2025

Your ref: RBG469

Our Ref: GS-FXF-S15-4HT-XLB

Site Details

Location: 434749 401364

Area: 0.12 ha

Authority: Barnsley Metropolitan Borough Council ↗

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

Certified B Corporation

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	1	18	-
16	1.2	Historical tanks	0	0	0	0	-
17 >	1.3 >	Historical energy features >	0	0	3	4	-
17	1.4	Historical petrol stations	0	0	0	0	-
17 >	1.5 >	Historical garages >	0	0	3	3	-
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	1	24	-
20	2.2	Historical tanks	0	0	0	0	-
21 >	2.3 >	Historical energy features >	0	0	4	5	-
21	2.4	Historical petrol stations	0	0	0	0	-
22 >	2.5 >	Historical garages >	0	0	5	4	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
23	3.1	Active or recent landfill	0	0	0	0	-
23	3.2	Historical landfill (BGS records)	0	0	0	0	-
24	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
24	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
24	3.5	Historical waste sites	0	0	0	0	-
24	3.6	Licensed waste sites	0	0	0	0	-
24 >	3.7 >	Waste exemptions >	0	0	2	3	-
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	National Geographic Database (NGD) - Current or recent tanks	0	0	0	-	-
27	4.3	Current or recent petrol stations	0	0	0	0	-
27	4.4	Electricity cables	0	0	0	0	-
27	4.5	Gas pipelines	0	0	0	0	-

28	4.6	Sites determined as Contaminated Land	0	0	0	0	-
28	4.7	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
28	4.8	Regulated explosive sites	0	0	0	0	-
28	4.9	Hazardous substance storage/usage	0	0	0	0	-
28	4.10	Historical licensed industrial activities (IPC)	0	0	0	0	-
29	4.11	Licensed industrial activities (Part A(1))	0	0	0	0	-
29 >	4.12 >	Licensed pollutant release (Part A(2)/B) >	0	0	0	2	-
29	4.13	Radioactive Substance Authorisations	0	0	0	0	-
29 >	4.14 >	Licensed Discharges to controlled waters >	0	0	0	4	-
30	4.15	Pollutant release to surface waters (Red List)	0	0	0	0	-
31	4.16	Pollutant release to public sewer	0	0	0	0	-
31	4.17	List 1 Dangerous Substances	0	0	0	0	-
31	4.18	List 2 Dangerous Substances	0	0	0	0	-
31 >	4.19 >	Pollution Incidents (EA/NRW) >	0	0	0	4	-
32	4.20	Pollution inventory substances	0	0	0	0	-
32	4.21	Pollution inventory waste transfers	0	0	0	0	-
32	4.22	Pollution inventory radioactive waste	0	0	0	0	-

Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
33	5.1	Superficial aquifer	None (within 500m)				
34 >	5.2 >	Bedrock aquifer >	Identified (within 500m)				
36 >	5.3 >	Groundwater vulnerability >	Identified (within 50m)				
37	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
37	5.5	Groundwater vulnerability- local information	None (within 0m)				
38 >	5.6 >	Groundwater abstractions >	0	0	0	0	1
39 >	5.7 >	Surface water abstractions >	0	0	0	0	16
43	5.8	Potable abstractions	0	0	0	0	0
43	5.9	Source Protection Zones	0	0	0	0	-
44	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

Page	Section	Hydrology >	On site	0-50m	50-250m	250-500m	500-2000m

45	6.1	Water Network (OS MasterMap)	0	0	0	-	-
45	6.2	Surface water features	0	0	0	-	-
46 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
46 >	6.4 >	WFD Surface water bodies >	0	0	0	-	-
47 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
48	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
48	7.2	Historical Flood Events	0	0	0	-	-
48	7.3	Flood Defences	0	0	0	-	-
49	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
49	7.5	Flood Storage Areas	0	0	0	-	-
50	7.6	Flood Zone 2	None (within 50m)				
50	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding >					
51 >	8.1 >	Surface water flooding >	1 in 100 year, 0.3m - 1.0m (within 50m)				
Page	Section	Groundwater flooding >					
53 >	9.1 >	Groundwater flooding >	Negligible (within 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
54 >	10.1 >	Sites of Special Scientific Interest (SSSI) >	0	0	0	1	5
55	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
55	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
55	10.4	Special Protection Areas (SPA)	0	0	0	0	0
56	10.5	National Nature Reserves (NNR)	0	0	0	0	0
56 >	10.6 >	Local Nature Reserves (LNR) >	0	0	0	0	3
56 >	10.7 >	Designated Ancient Woodland >	0	0	0	0	18
57	10.8	Biosphere Reserves	0	0	0	0	0
57	10.9	Forest Parks	0	0	0	0	0
58	10.10	Marine Conservation Zones	0	0	0	0	0
58 >	10.11 >	Green Belt >	0	0	1	0	0

58	10.12	Proposed Ramsar sites	0	0	0	0	0
58	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
59	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
59	10.15	Nitrate Sensitive Areas	0	0	0	0	0
59 >	10.16 >	Nitrate Vulnerable Zones >	1	0	0	0	1
60 >	10.17 >	SSSI Impact Risk Zones >	2	-	-	-	-
61 >	10.18 >	SSSI Units >	0	0	0	1	2
Page	Section	Visual and cultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
63	11.1	World Heritage Sites	0	0	0	-	-
64	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
64	11.3	National Parks	0	0	0	-	-
64 >	11.4 >	Listed Buildings >	0	0	1	-	-
65	11.5	Conservation Areas	0	0	0	-	-
65	11.6	Scheduled Ancient Monuments	0	0	0	-	-
65	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
66 >	12.1 >	Agricultural Land Classification >	Grade 3 (within 250m)				
67	12.2	Open Access Land	0	0	0	-	-
67	12.3	Tree Felling Licences	0	0	0	-	-
67	12.4	Environmental Stewardship Schemes	0	0	0	-	-
67	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations >	On site	0-50m	50-250m	250-500m	500-2000m
68 >	13.1 >	Priority Habitat Inventory >	0	1	0	-	-
69	13.2	Habitat Networks	0	0	0	-	-
69	13.3	Open Mosaic Habitat	0	0	0	-	-
69	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
70 >	14.1 >	10k Availability >	Identified (within 500m)				
71 >	14.2 >	Artificial and made ground (10k) >	0	0	1	4	-

73	14.3	Superficial geology (10k)	0	0	0	0	-
73	14.4	Landslip (10k)	0	0	0	0	-
74 >	14.5 >	Bedrock geology (10k) >	2	2	6	11	-
76 >	14.6 >	Bedrock faults and other linear features (10k) >	1	0	3	9	-
Page	Section	Geology 1:50,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
77 >	15.1 >	50k Availability >	Identified (within 500m)				
78 >	15.2 >	Artificial and made ground (50k) >	0	0	1	3	-
79	15.3	Artificial ground permeability (50k)	0	0	-	-	-
80	15.4	Superficial geology (50k)	0	0	0	0	-
80	15.5	Superficial permeability (50k)	None (within 50m)				
80	15.6	Landslip (50k)	0	0	0	0	-
80	15.7	Landslip permeability (50k)	None (within 50m)				
81 >	15.8 >	Bedrock geology (50k) >	2	3	2	8	-
82 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
83 >	15.10 >	Bedrock faults and other linear features (50k) >	1	0	3	9	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
84	16.1	BGS Boreholes	0	0	0	-	-
Page	Section	Natural ground subsidence >					
85 >	17.1 >	Shrink swell clays >	Very low (within 50m)				
87 >	17.2 >	Running sands >	Negligible (within 50m)				
88 >	17.3 >	Compressible deposits >	Negligible (within 50m)				
89 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
90 >	17.5 >	Landslides >	Very low (within 50m)				
91 >	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
93 >	18.1 >	BritPits >	0	1	6	1	-
96	18.2	Surface ground workings	0	0	0	-	-
96 >	18.3 >	Underground workings >	0	0	0	5	3
97	18.4	Underground mining extents	0	0	0	0	-

97	18.5	Historical Mineral Planning Areas	0	0	0	0	-
97 >	18.6 >	Non-coal mining >	2	3	4	13	50
106	18.7	JPB mining areas	None (within 0m)				
106	18.8	The Coal Authority non-coal mining	0	0	0	0	-
106	18.9	Researched mining	0	0	0	0	-
106	18.10	Mining record office plans	0	0	0	0	-
107	18.11	BGS mine plans	0	0	0	0	-
107 >	18.12 >	Coal mining >	Identified (within 0m)				
107	18.13	Brine areas	None (within 0m)				
107	18.14	Gypsum areas	None (within 0m)				
107	18.15	Tin mining	None (within 0m)				
108	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m
109	19.1	Natural cavities	0	0	0	0	-
109	19.2	Mining cavities	0	0	0	0	0
109	19.3	Reported recent incidents	0	0	0	0	-
109	19.4	Historical incidents	0	0	0	0	-
Page	Section	Radon >					
111 >	20.1 >	Radon >	Between 1% and 3% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
113 >	21.1 >	BGS Estimated Background Soil Chemistry >	2	3	-	-	-
113	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
114	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
115	22.1	Underground railways (London)	0	0	0	-	-
115	22.2	Underground railways (Non-London)	0	0	0	-	-
115	22.3	Railway tunnels	0	0	0	-	-
115	22.4	Historical railway and tunnel features	0	0	0	-	-
115	22.5	Royal Mail tunnels	0	0	0	-	-

116	22.6	Historical railways	0	0	0	-	-
116	22.7	Railways	0	0	0	-	-
116	22.8	Crossrail 2	0	0	0	0	-
116	22.9	HS2	0	0	0	0	-

Recent aerial photograph

Capture Date: 19/04/2021

Site Area: 0.12ha

Recent site history - 2018 aerial photograph

Capture Date: 01/07/2018

Site Area: 0.12ha

Recent site history - 2012 aerial photograph

Capture Date: 28/05/2012

Site Area: 0.12ha

Recent site history - 2009 aerial photograph

Capture Date: 11/09/2009

Site Area: 0.12ha

Recent site history - 1999 aerial photograph

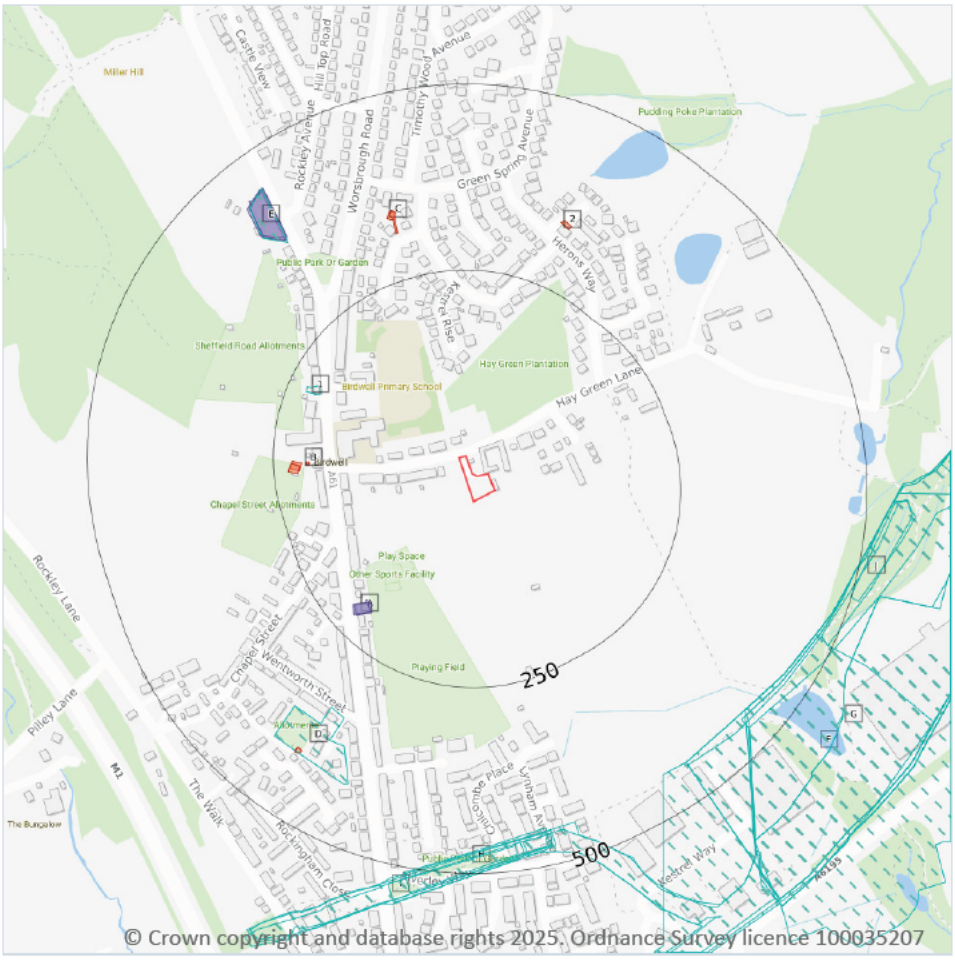
Capture Date: 10/07/1999

Site Area: 0.12ha

OS MasterMap site plan

Site Area: 0.12ha

1 Past land use



1.1 Historical industrial land uses

Records within 500m	19

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

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

ID	Location	Land use	Dates present	Group ID
1	206m NW	Smithy	1891	1455151

ID	Location	Land use	Dates present	Group ID
D	336m SW	Unspecified Works	1965 - 1977	1542695
E	370m NW	Garage	1977	1449034
F	444m SE	Railway Sidings	1951 - 1966	1522019
G	444m SE	Colliery	1977	1566297
G	448m SE	Colliery	1951 - 1966	1553364
H	449m S	Railway Sidings	1965	1545047
F	452m S	Railway Sidings	1938 - 1948	1529812
F	452m SE	Disused Workings	1987	1455230
G	452m SE	Colliery	1938	1539749
G	453m SE	Colliery	1903	1549793
I	453m S	Cuttings	1948	1485031
I	454m S	Cuttings	1956	1507106
F	457m S	Railway Sidings	1903	1494500
H	459m S	Cuttings	1938	1554503
I	466m S	Cuttings	1903	1531276
F	467m SE	Colliery	1948	1529409
J	481m SE	Unspecified Pit	1977 - 1987	1521182
J	499m E	Unspecified Heap	1966	1468913

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
B	202m W	Electricity Substation	1970	143739
B	211m W	Electricity Substation	1996	155486
B	214m W	Electricity Substation	1990	155929
C	313m N	Electricity Substation	1996	153743
C	332m N	Electricity Substation	1970 - 1990	155439
2	334m NE	Electricity Substation	1970	144002
D	406m SW	Electricity Substation	1996	143729

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	6

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original 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	191m SW	Central Garage	1996	49782
A	193m SW	Central Garage	1960 - 1970	51535
A	196m SW	Garage	1990	52216
E	374m NW	Garage	1970	51258
E	374m NW	Garage	1990	49841
E	376m NW	Garage	1996	51786

This data is sourced from Ordnance Survey / Groundsure.

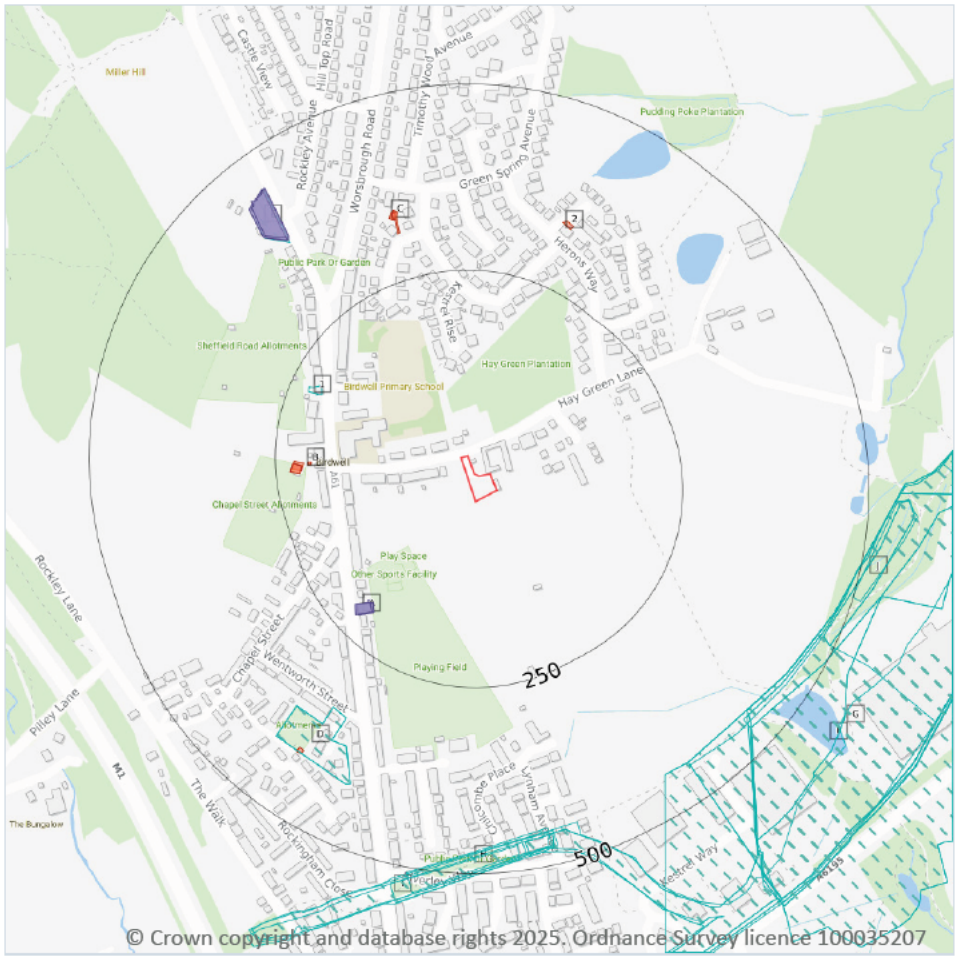
1.6 Historical military land

Records within 500m	0

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

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

2 Past land use - un-grouped



2.1 Historical industrial land uses

Records within 500m	25

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

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

ID	Location	Land Use	Date	Group ID
1	206m NW	Smithy	1891	1455151
D	336m SW	Unspecified Works	1977	1542695
D	336m SW	Unspecified Works	1965	1542695

ID	Location	Land Use	Date	Group ID
E	370m NW	Garage	1977	1449034
F	444m SE	Railway Sidings	1966	1522019
F	444m SE	Railway Sidings	1951	1522019
G	444m SE	Colliery	1977	1566297
G	448m SE	Colliery	1966	1553364
G	448m SE	Colliery	1951	1553364
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F	452m S	Railway Sidings	1948	1529812
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G	452m SE	Colliery	1938	1539749
G	453m SE	Colliery	1903	1549793
I	453m S	Cuttings	1948	1485031
I	454m S	Cuttings	1956	1507106
F	457m S	Railway Sidings	1938	1529812
F	457m S	Railway Sidings	1903	1494500
H	459m S	Cuttings	1938	1554503
I	466m S	Cuttings	1903	1531276
F	467m SE	Colliery	1948	1529409
F	467m SE	Colliery	1948	1529409
J	481m SE	Unspecified Pit	1977	1521182
J	481m SE	Unspecified Pit	1987	1521182
J	499m E	Unspecified Heap	1966	1468913

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	9

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
B	202m W	Electricity Substation	1970	143739
B	211m W	Electricity Substation	1996	155486
B	214m W	Electricity Substation	1990	155929
B	214m W	Electricity Substation	1990	155929
C	313m N	Electricity Substation	1996	153743
C	332m N	Electricity Substation	1990	155439
C	332m N	Electricity Substation	1970	155439
2	334m NE	Electricity Substation	1970	144002
D	406m SW	Electricity Substation	1996	143729

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

2.5 Historical garages

Records within 500m	9

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

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

ID	Location	Land Use	Date	Group ID
A	191m SW	Central Garage	1996	49782
A	193m SW	Central Garage	1970	51535
A	193m SW	Central Garage	1960	51535
A	196m SW	Garage	1990	52216
A	196m SW	Garage	1990	52216
E	374m NW	Garage	1970	51258
E	374m NW	Garage	1990	49841
E	374m NW	Garage	1990	49841
E	376m NW	Garage	1996	51786

This data is sourced from Ordnance Survey / Groundsure.

3 Waste and landfill

3.1 Active or recent landfill

Records within 500m	0

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

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

3.2 Historical landfill (BGS records)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

3.3 Historical landfill (LA/mapping records)

Records within 500m	0

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

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

3.4 Historical landfill (EA/NRW records)

Records within 500m	0

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

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

3.5 Historical waste sites

Records within 500m	0

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

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

3.6 Licensed waste sites

Records within 500m	0

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

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

3.7 Waste exemptions

Records within 500m	5

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

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

ID	Location	Site	Reference	Category	Sub-Category	Description
A	239m SW	148, Sheffield Road, Birdwell, Barnsley, S70 5td	WEX151398	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal

ID	Location	Site	Reference	Category	Sub-Category	Description
A	239m SW	148, Sheffield Road, Birdwell, Barnsley, S70 5td	WEX310761	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal
A	257m SW	Pharmacy Wise Birdwell, 148 Â€“ 150 Sheffield Road, Birdwell, S70 5td	WEX003154	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal
A	257m SW	148, Sheffield Road, Birdwell, Barnsley, S70 5td	WEX448472	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal
1	346m SW	38, Wentworth Street, Birdwell, Barnsley, S70 5un	WEX037432	Disposing of waste exemption	Not on a farm	Burning waste in the open

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

4 Current industrial land use

Site Outline

Search buffers in metres (m)

Recent industrial land uses

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

Licensed Discharges to controlled waters

Pollution Incidents (EA/NRW)

4.1 Recent industrial land uses

Records within 250m	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	9m W	Electricity Sub Station	South Yorkshire, S70	Electrical Features	Infrastructure and Facilities
2	137m W	Texaco	Sheffield Road, Birdwell, Barnsley, South Yorkshire, S70 5XB	Petrol and Fuel Stations	Road and Rail

ID	Location	Company	Address	Activity	Category
3	197m SW	G P Fume Extraction Services Ltd	Birdwell Medical Centre 113-115, Sheffield Road, Birdwell, Barnsley, South Yorkshire, S70 5TA	Air and Water Filtration	Industrial Products
4	203m W	Electricity Sub Station	South Yorkshire, S70	Electrical Features	Infrastructure and Facilities

This data is sourced from Ordnance Survey.

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

Records within 250m	0

Current or recent tanks identified from the Ordnance Survey NGD.

This data is sourced from Ordnance Survey.

4.3 Current or recent petrol stations

Records within 500m	0

Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

4.4 Electricity cables

Records within 500m	0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.5 Gas pipelines

Records within 500m	0

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.6 Sites determined as Contaminated Land

Records within 500m	0

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

This data is sourced from Local Authority records.

4.7 Control of Major Accident Hazards (COMAH)

Records within 500m	0

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

This data is sourced from the Health and Safety Executive.

4.8 Regulated explosive sites

Records within 500m	0

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

This data is sourced from the Health and Safety Executive.

4.9 Hazardous substance storage/usage

Records within 500m	0

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

This data is sourced from Local Authority records.

4.10 Historical licensed industrial activities (IPC)

Records within 500m	0

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

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

4.11 Licensed industrial activities (Part A(1))

Records within 500m	0

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

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

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

Records within 500m	2

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

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

ID	Location	Address	Details	
6	287m NW	Jay's Cleaner, 1a Worsbrough Road, Birdwell, Barnsley, S70 5QR	Process: Dry Cleaning Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified
10	487m NW	Hilltop Service Station, Sheffield Road, Birdwell, Barnsley, S70 5XB	Process: Unloading of Petrol into Storage at Service Stations Status: Current Permit Permit Type: Part B	Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified

This data is sourced from Local Authority records.

4.13 Radioactive Substance Authorisations

Records within 500m	0

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

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

4.14 Licensed Discharges to controlled waters

Records within 500m	4

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	
8	308m N	BIRDWELLSEWAGEPUMPINGSTATION,PLOVERDRIVE,YORKSHIREWATER,X	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - NOT WATER COMPANY Permit Number: C4953 Permit Version: 1 Receiving Water: CULVERTED TRIB SHORT WOOD DIKE	Status: TRANSFERRED FROM COPA 1974 Issue date: 29/01/1988 Effective Date: 29/01/1988 Revocation Date: 12/03/2001
9	398m N	BIRDWELLSEWAGEPUMPINGSTATION,PLOVERDRIVE,YORKSHIREWATER,X	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: C4953 Permit Version: 2 Receiving Water: CULVERTED TRIB SHORT WOOD DIKE	Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 13/03/2001 Effective Date: 13/03/2001 Revocation Date: -
B	500m N	GREENSPRINGAVENUECSO,OPP19 GREENSPRINGAVENUE,BIRDWELL,BARNSLEY,SOUTHYORKSHIRE,S70 5SD	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: C5340 Permit Version: 2 Receiving Water: TRIBUTARY OF SHORT WOOD DIKE	Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 28/03/2003 Effective Date: 28/03/2003 Revocation Date: 30/03/2018
B	500m N	GREENSPRINGAVENUECSO,OPP19 GREENSPRINGAVENUE,BIRDWELL,BARNSLEY,SOUTHYORKSHIRE,S70 5SD	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: C5340 Permit Version: 1 Receiving Water: TRIBUTARY OF SHORT WOOD DIKE	Status: TRANSFERRED FROM COPA 1974 Issue date: 30/08/1988 Effective Date: 30/08/1988 Revocation Date: 27/03/2003

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

4.15 Pollutant release to surface waters (Red List)

Records within 500m	0

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

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

4.16 Pollutant release to public sewer

Records within 500m	0

Discharges of Special Category Effluents to the public sewer.

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

4.17 List 1 Dangerous Substances

Records within 500m	0

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

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

4.18 List 2 Dangerous Substances

Records within 500m	0

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

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

4.19 Pollution Incidents (EA/NRW)

Records within 500m	4

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

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

ID	Location	Details	
5	254m NW	Incident Date: 17/11/2003 Incident Identification: 201966 Pollutant: Specific Waste Materials Pollutant Description: Household Waste	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
7	302m W	Incident Date: 05/08/2001 Incident Identification: 22065 Pollutant: Oils and Fuel Pollutant Description: Petrol	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

ID	Location	Details	
A	324m NW	Incident Date: 20/09/2001 Incident Identification: 31736 Pollutant: Oils and Fuel Pollutant Description: Diesel	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
A	324m NW	Incident Date: 20/09/2001 Incident Identification: 31736 Pollutant: Oils and Fuel Pollutant Description: Diesel	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)

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

4.20 Pollution inventory substances

Records within 500m	0

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

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

4.21 Pollution inventory waste transfers

Records within 500m	0

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

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

4.22 Pollution inventory radioactive waste

Records within 500m	0

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

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

5 Hydrogeology - Superficial aquifer

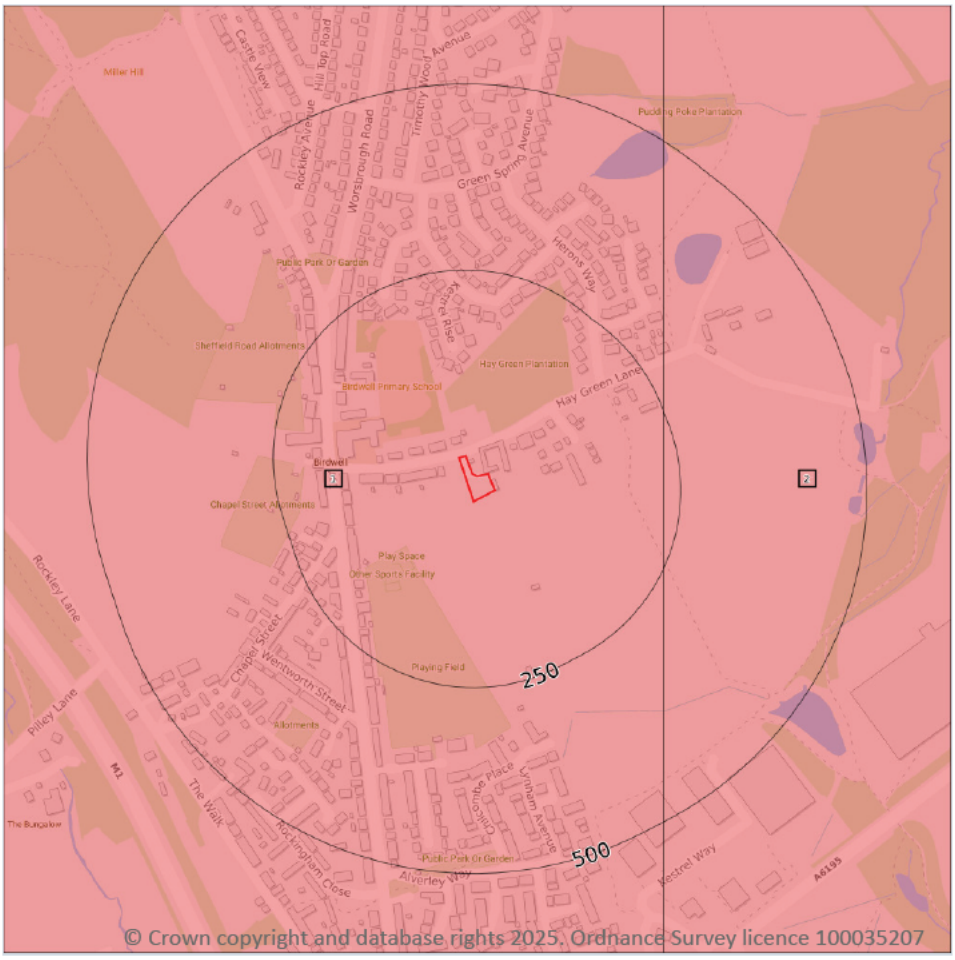
5.1 Superficial aquifer

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



5.2 Bedrock aquifer

Records within 500m	2

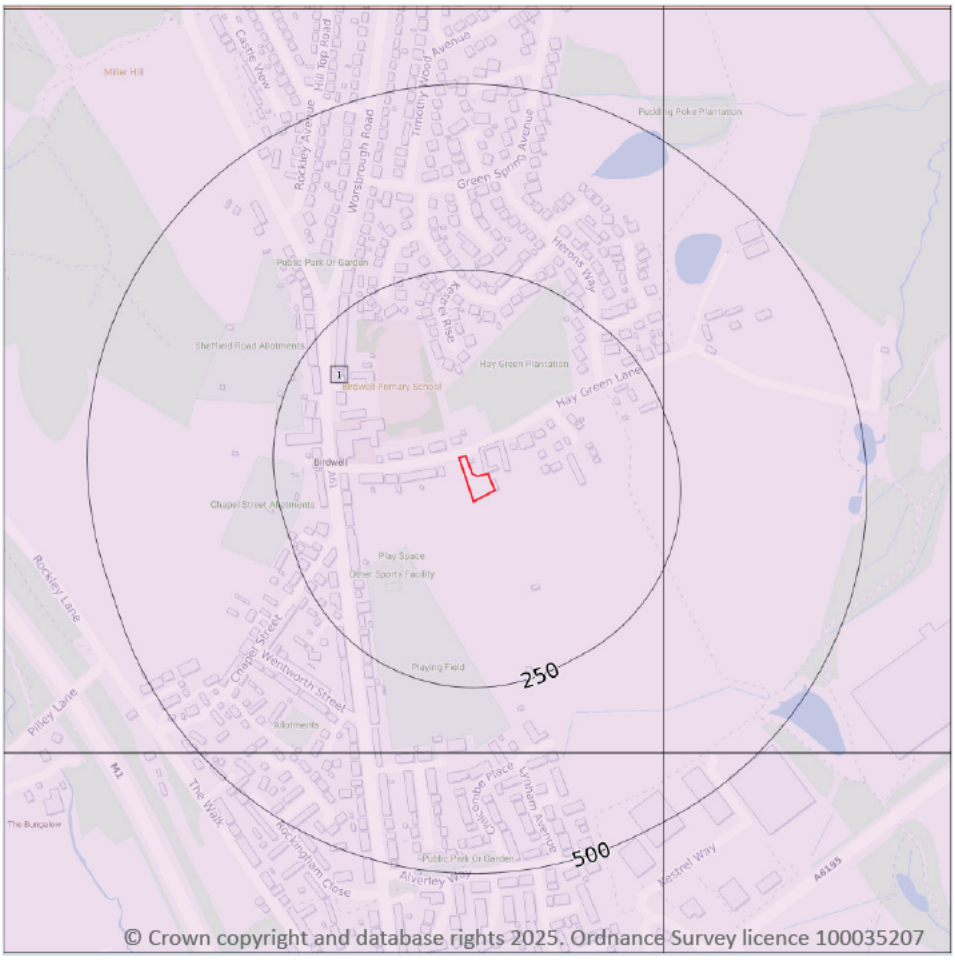
Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on page 34 >

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	226m E	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

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

Groundwater vulnerability



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 36 >

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	**Summary Classification: Secondary bedrock aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer**	**Leaching class: Low Infiltration value: <40% Dilution value: 300-550mm/year**	**Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data**	**Vulnerability: Medium 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.

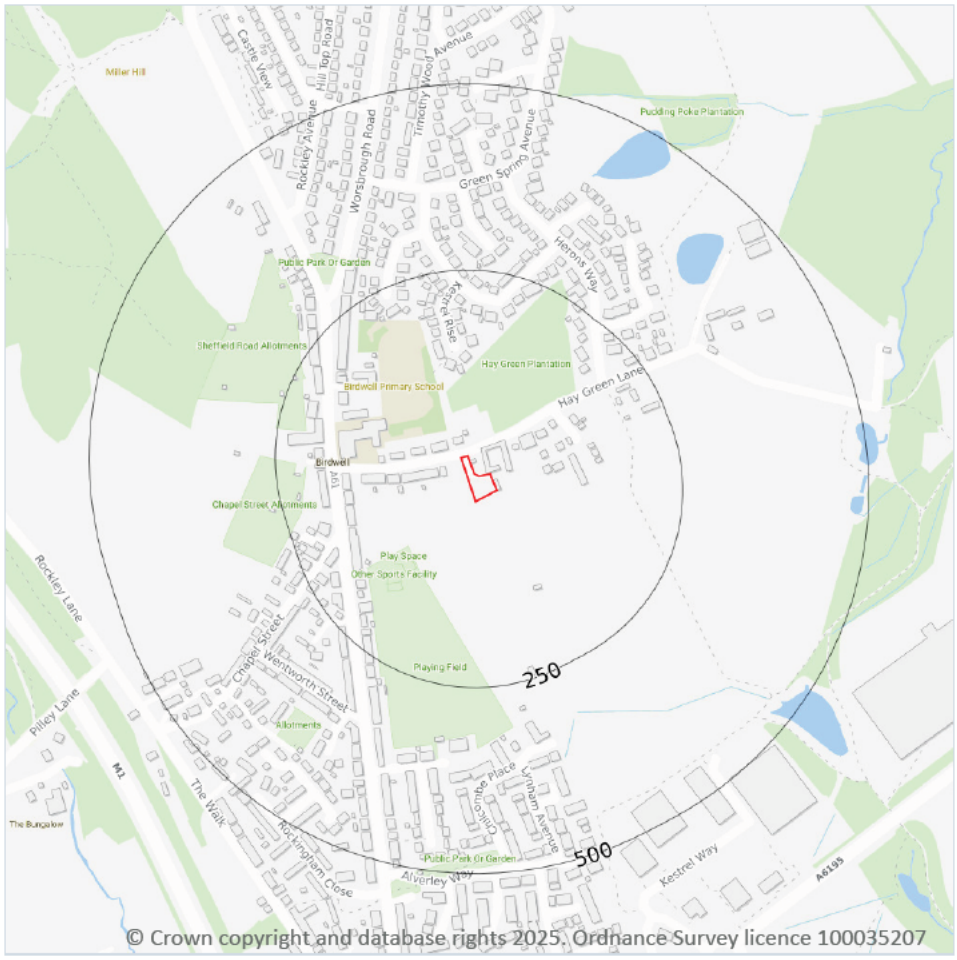
5.5 Groundwater vulnerability- local information

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	1

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 38 >

ID	Location	Details	
-	1203m N	Status: Historical Licence No: 2/27/08/040 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: WELL - COAL MEASURES - WORSBOROUGH Data Type: Point Name: BROWN Easting: 434800 Northing: 402600	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 27/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 27/01/1966 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m	16

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 38 >

ID	Location	Details	
-	1366m NW	Status: Historical Licence No: 2/27/08/025 Details: Spray Irrigation - Direct Direct Source: SURFACE WATER Point: DYKE X4 - WORSBOROUGH Data Type: Point Name: HODGSON Easting: 433500 Northing: 402000	Annual Volume (m^3): 2728 Max Daily Volume (m^3): 159.11 Original Application No: - Original Start Date: 14/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 14/12/1965 Version End Date: -
-	1440m N	Status: Historical Licence No: 2/27/08/118 Details: Lake & Pond Throughflow Direct Source: SURFACE WATER Point: ROCKLEY DIKE Data Type: Point Name: BARNSLEY METROPOLITAN BOROUGH COUNCIL Easting: 434400 Northing: 402800	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	
-	1440m N	Status: Historical Licence No: 2/27/08/118 Details: Make-Up Or Top Up Water Direct Source: SURFACE WATER Point: ROCKLEY DIKE Data Type: Point Name: BARNSLEY METROPOLITAN BOROUGH COUNCIL Easting: 434400 Northing: 402800	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: -
-	1440m N	Status: Historical Licence No: 2/27/08/143 Details: General Use Relating To Secondary Category (Very Low Loss) Direct Source: SURFACE WATER Point: ROCKLEY DIKE Data Type: Point Name: BARNSLEY METROPOLITAN BOROUGH COUNCIL Easting: 434400 Northing: 402800	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: -
-	1449m N	Status: Active Licence No: NE/027/0008/022 Details: Transfer Between Sources (Post Water Act 2003) Direct Source: SURFACE WATER Point: ROCKLEY DIKE Data Type: Point Name: BARNSLEY METROPOLITAN BOROUGH COUNCIL Easting: 434416 Northing: 402813	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: NPS/WR/029959 Original Start Date: 25/07/2019 Expiry Date: 31/03/2029 Issue No: 1 Version Start Date: 25/07/2019 Version End Date: -
-	1449m N	Status: Historical Licence No: NE/027/0008/018 Details: Transfer Between Sources (Post Water Act 2003) Direct Source: SURFACE WATER Point: ROCKLEY DIKE Data Type: Point Name: BARNSLEY METROPOLITAN BOROUGH COUNCIL Easting: 434416 Northing: 402813	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: -

ID	Location	Details	
-	1902m N	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: -
-	1902m N	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: -
-	1902m N	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: -
-	1902m N	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: -

ID	Location	Details	
-	1904m N	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: -
-	1904m N	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: -
-	1908m N	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: -
-	1908m N	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	
-	1919m N	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: -
-	1926m N	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: -

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 45 >

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
1	**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 45 >

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	506m E	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 45 >

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
2	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.

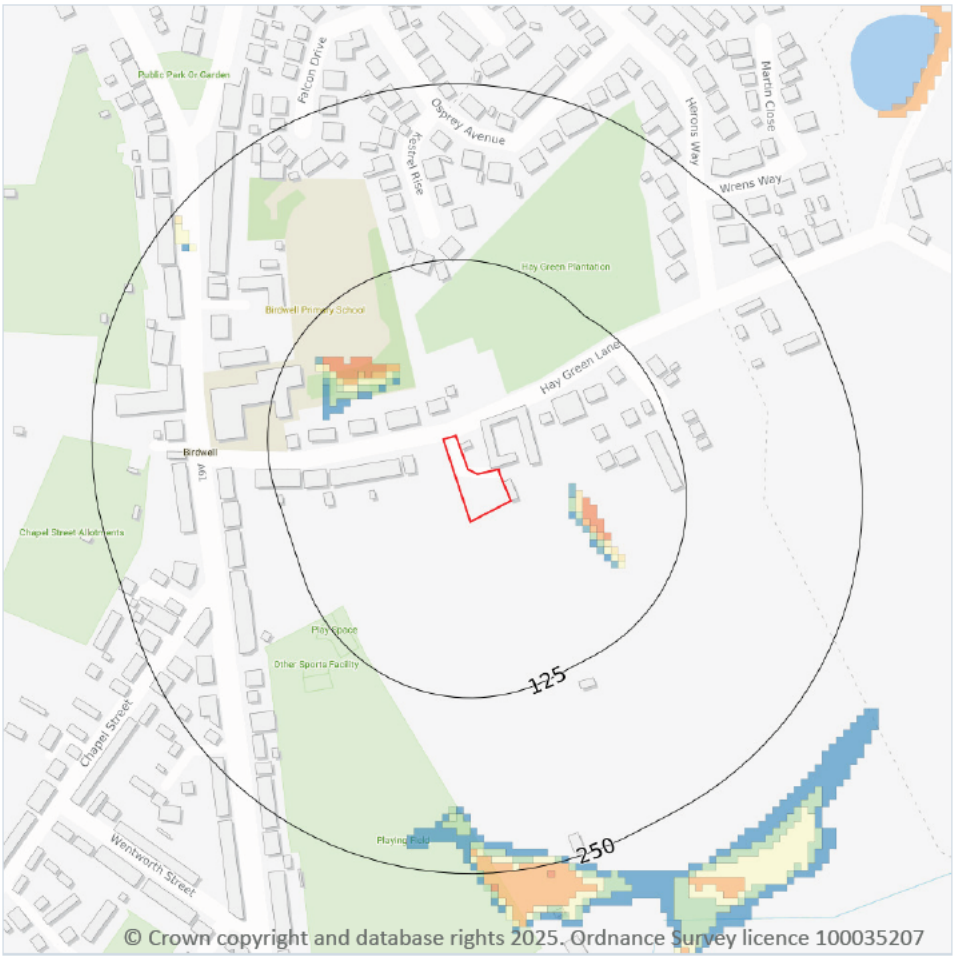
7.7 Flood Zone 3

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



8.1 Surface water flooding

Highest risk on site	**Negligible**
Highest risk within 50m	**1 in 100 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 51 >

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

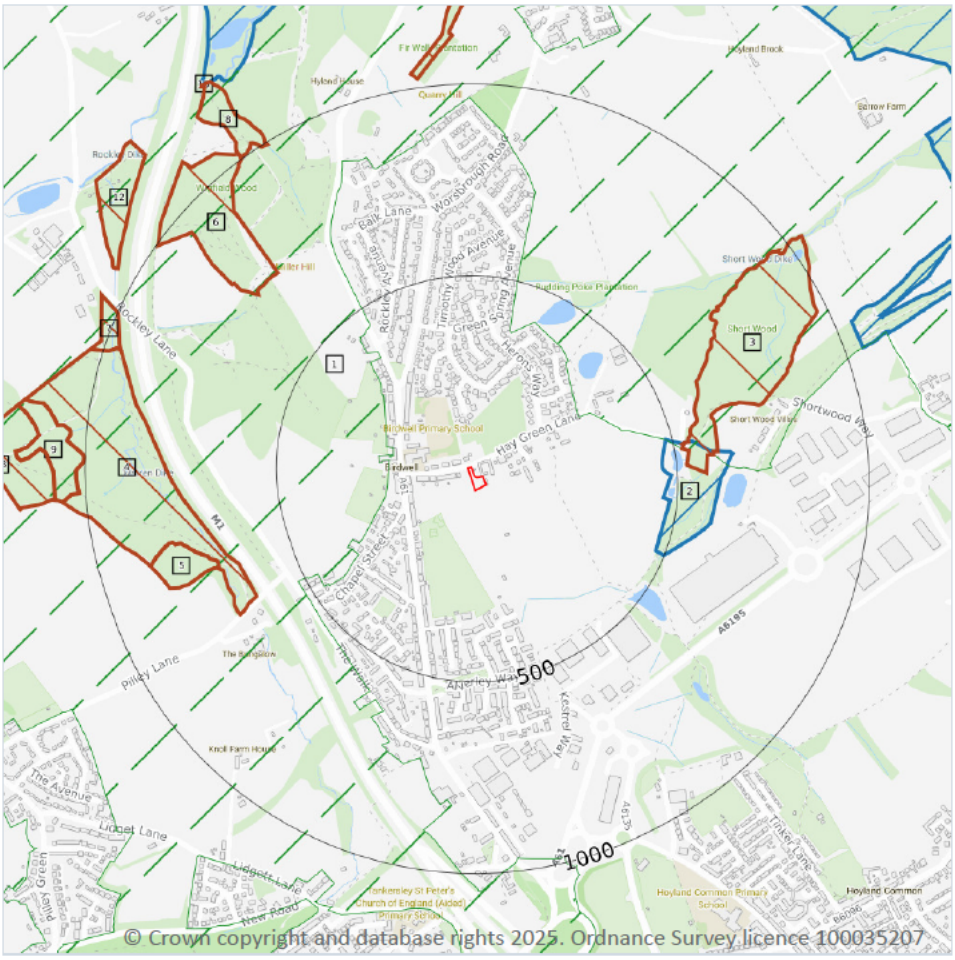
Highest risk on site	**Negligible**
Highest risk within 50m	**Negligible**

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 53 >**

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	6

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 54 >

ID	Location	Name	Data source
2	462m E	Dearne Valley Wetlands SSSI	Natural England

ID	Location	Name	Data source
11	1044m NE	Dearne Valley Wetlands SSSI	Natural England
14	1188m NW	Dearne Valley Wetlands SSSI	Natural England
15	1213m NW	Dearne Valley Wetlands SSSI	Natural England
-	1336m N	Dearne Valley Wetlands SSSI	Natural England
19	1461m NE	Dearne Valley Wetlands SSSI	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 54 >

ID	Location	Name	Data source
-	1335m SW	Potter Holes Plantation	Natural England
-	1350m N	Worsborough Country Park	Natural England
-	1444m N	Worsborough Country 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	18

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 54 >

ID	Location	Name	Woodland Type
3	520m E	Short Wood	Ancient & Semi-Natural Woodland
4	634m SW	The Old Park	Ancient Replanted Woodland
5	696m W	The Old Park	Ancient & Semi-Natural Woodland
6	709m NW	Unknown	Ancient Replanted Woodland

ID	Location	Name	Woodland Type
7	959m W	The Old Park	Ancient & Semi-Natural Woodland
8	994m NW	Wigfield Wood	Ancient & Semi-Natural Woodland
9	1002m W	The Old Park	Ancient & Semi-Natural Woodland
10	1023m N	Unknown	Ancient & Semi-Natural Woodland
12	1051m NW	Unknown	Ancient & Semi-Natural Woodland
13	1081m W	The Old Park	Ancient Replanted Woodland
-	1578m NW	Unknown	Ancient & Semi-Natural Woodland
-	1683m N	Unknown	Ancient & Semi-Natural Woodland
-	1753m W	Broom Royd Wood	Ancient Replanted Woodland
-	1840m W	Broom Royd Wood	Ancient & Semi-Natural Woodland
-	1899m S	Bull Wood	Ancient & Semi-Natural Woodland
-	1902m W	Unknown	Ancient Replanted Woodland
-	1949m NW	Ivas Wood	Ancient & Semi-Natural Woodland
-	1975m W	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	1

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

Features are displayed on the Environmental designations map on page 54 >

ID	Location	Name	Local Authority name
1	196m 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

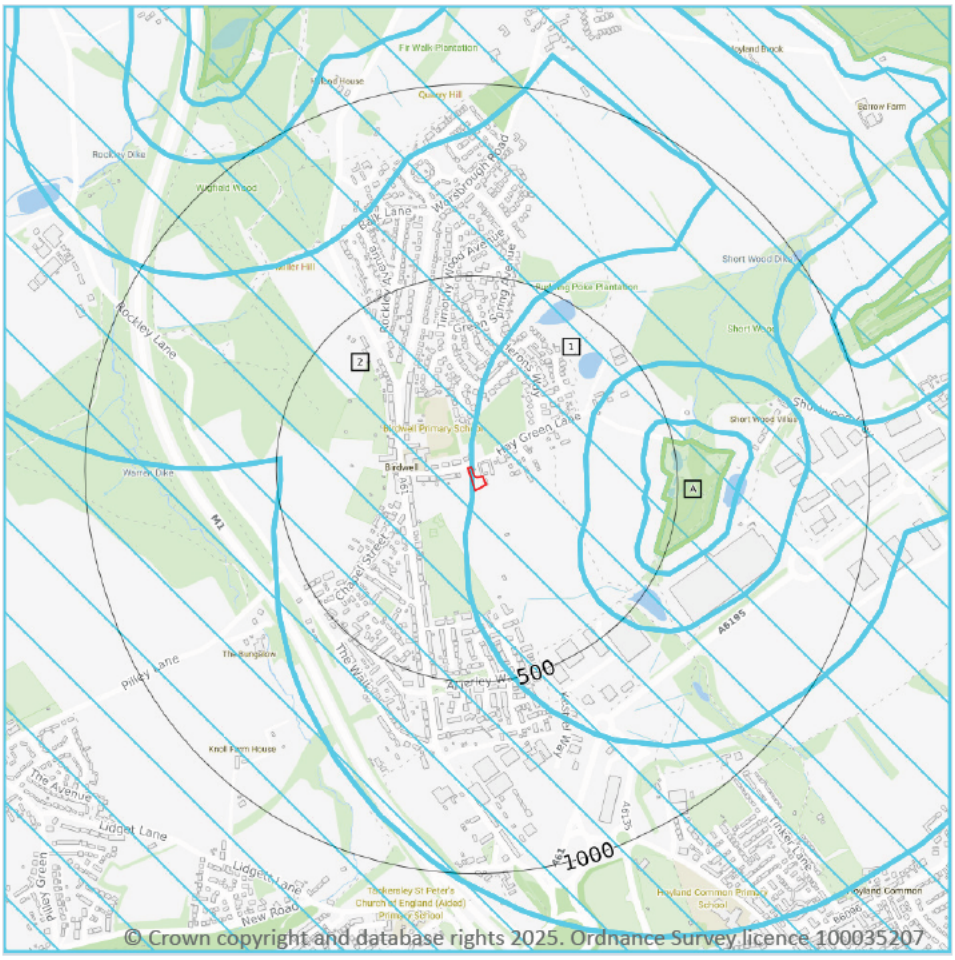
Records within 2000m	2

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**
634m W	River Dearne NVZ	Surface Water	278	Existing

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

SSSI Impact Zones and Units



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 60 >

ID	Location	Type of developments requiring consultation
1	On site	https://irz.geodata.org.uk/IRZ/step2.html?irzcode=0111242211121&notes=&location=434631,402438%20(IRZ%20polygon%20centre)
2	On site	https://irz.geodata.org.uk/IRZ/step2.html?irzcode=0121254322231&notes=&location=437860,402604%20(IRZ%20polygon%20centre)

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m	3

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 60 >

ID: A
Location: 462m E
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: 7
Location: 1044m NE
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

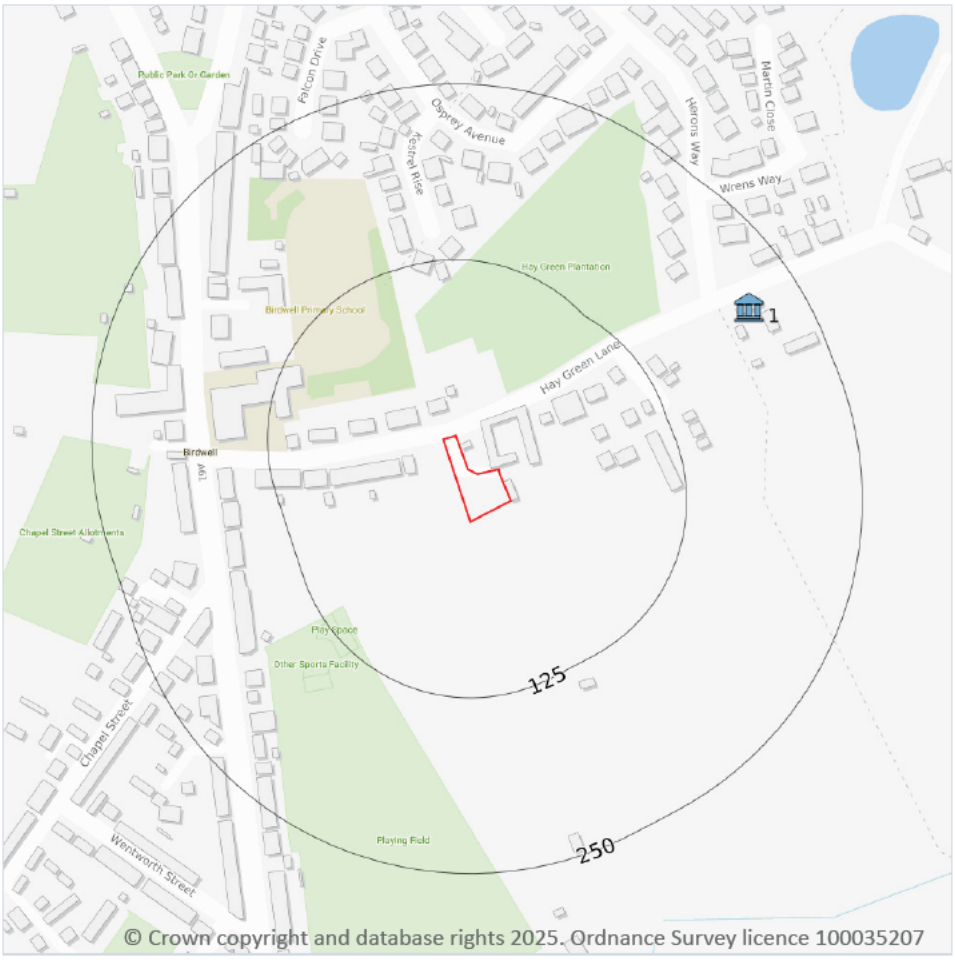
ID: 9
Location: 1188m NW
SSSI name: Dearne Valley Wetlands
Unit name: Worsbrough Reservoir
Broad habitat: Broadleaved, Mixed And Yew Woodland - Lowland
Condition: Favourable

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

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

11 Visual and cultural designations



Site Outline

Search buffers in metres (m)

Listed buildings

Conservation areas

Conservation areas - no data

National Parks

Areas of Outstanding Natural Beauty

Registered parks and gardens

Scheduled Monuments

World Heritage Sites

11.1 World Heritage Sites

Records within 250m	0

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

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

11.2 Area of Outstanding Natural Beauty

Records within 250m	0

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

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

11.3 National Parks

Records within 250m	0

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

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

11.4 Listed Buildings

Records within 250m	1

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

Features are displayed on the Visual and cultural designations map on **page 63 >**

ID	Location	Name	Grade	Reference Number	Listed date
1	212m NE	Barn Opposite Junction With Herons Way	II	1315079	04/12/1986

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

11.5 Conservation Areas

Records within 250m	0

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

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

11.6 Scheduled Ancient Monuments

Records within 250m	0

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

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

11.7 Registered Parks and Gardens

Records within 250m	0

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

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

12 Agricultural designations

Site Outline

Search buffers in metres (m)

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

12.1 Agricultural Land Classification

Records within 250m	2

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

Features are displayed on the Agricultural designations map on page 66 >

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

ID	Location	Classification	Description
2	223m SW	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.

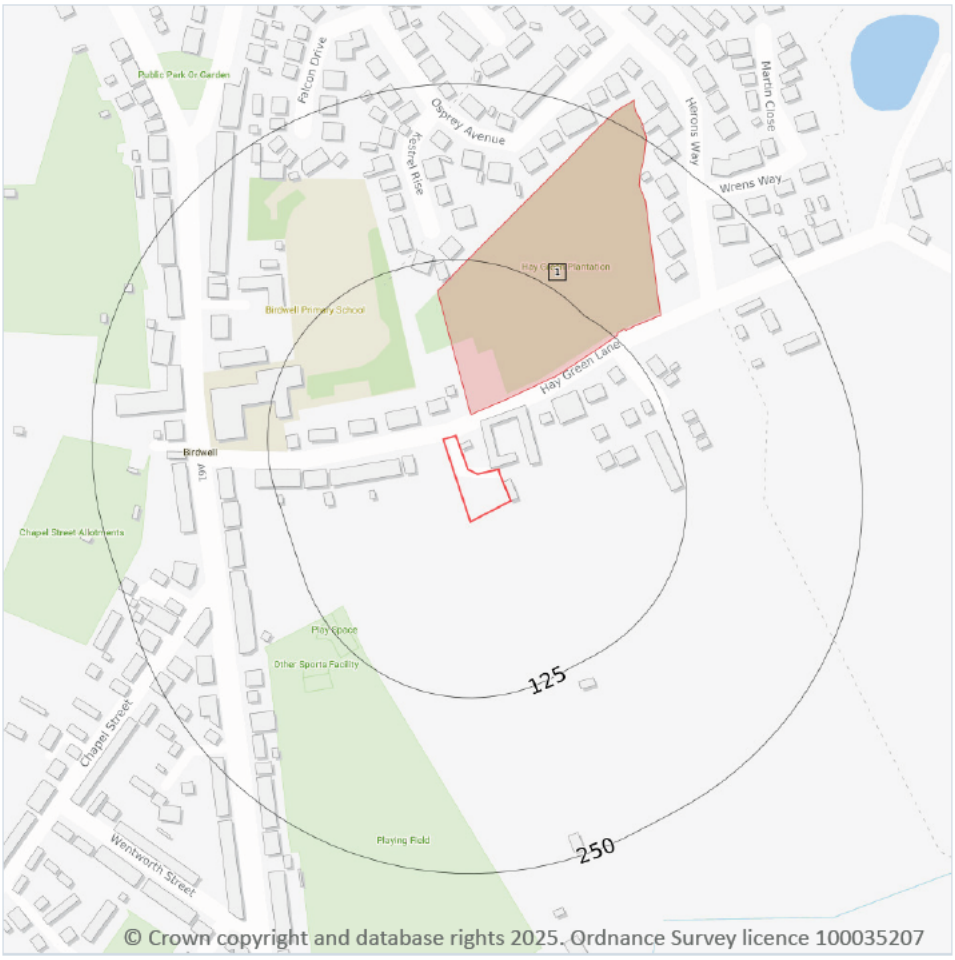
12.5 Countryside Stewardship Schemes

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 68 >

ID	Location	Main Habitat	Other habitats
1	18m NE	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

14.1 10k Availability

Records within 500m	2

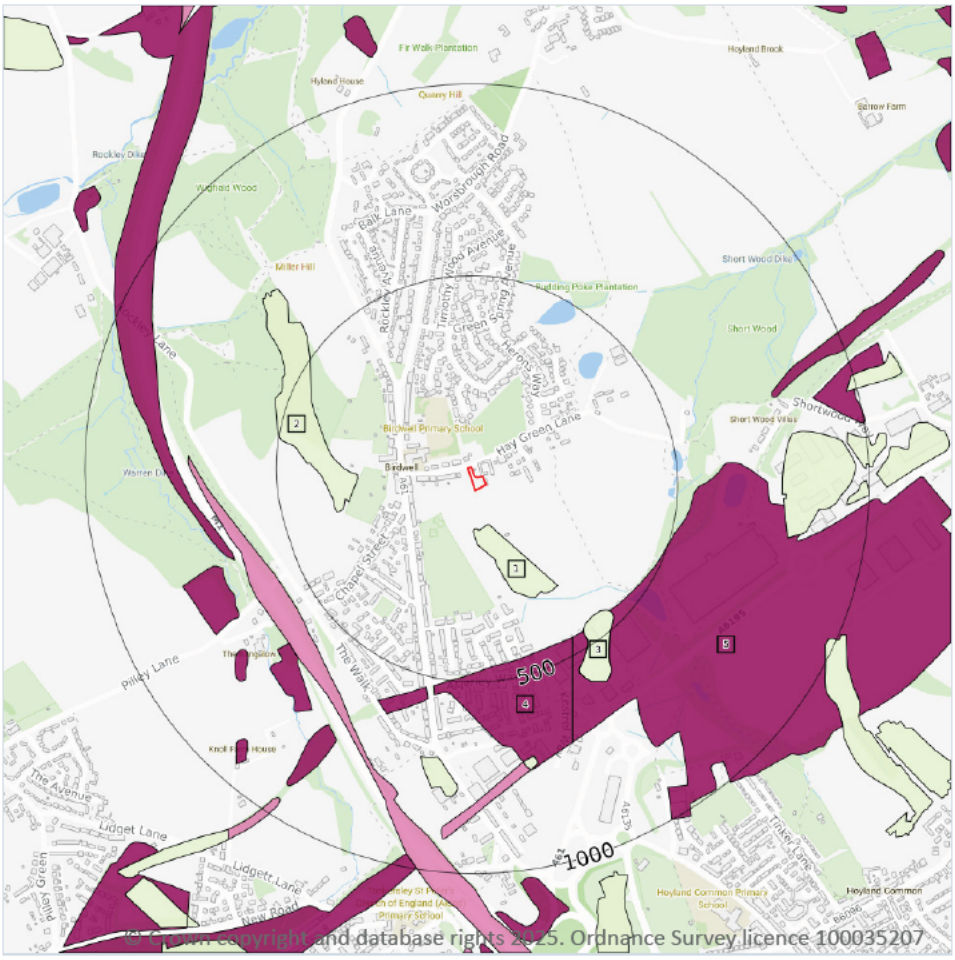
An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on page 70 >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**Full**	**SE30SW**
2	226m E	Full	Full	Full	Full	SE30SE

This data is sourced from the British Geological Survey.

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



14.2 Artificial and made ground (10k)

Records within 500m	5

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 71 >

ID	Location	LEX Code	Description	Rock description
1	94m S	WMGR-ARTDP	Infilled Ground	Artificial Deposit
2	289m W	WMGR-ARTDP	Infilled Ground	Artificial Deposit
3	441m SE	WMGR-ARTDP	Infilled Ground	Artificial Deposit
4	451m S	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

ID	Location	LEX Code	Description	Rock description
5	458m SE	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.

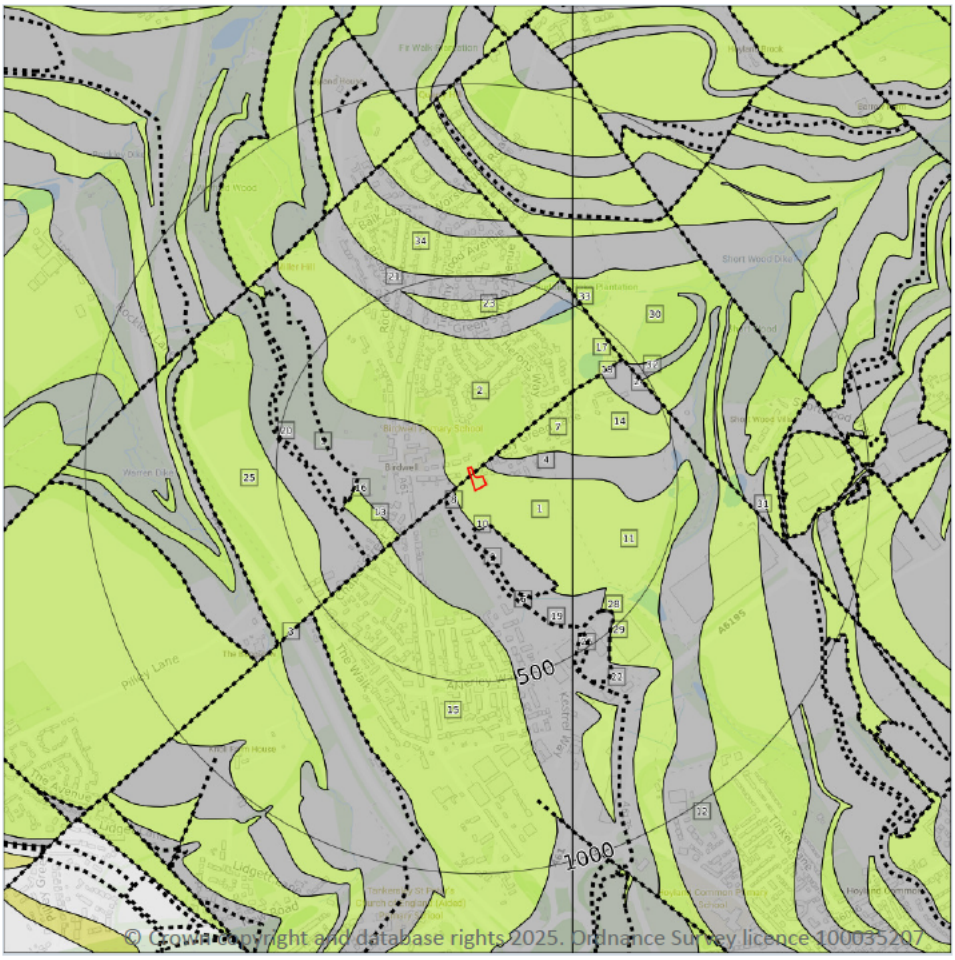
14.4 Landslip (10k)

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	21

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 74 >

ID	Location	LEX Code	Description	Rock age
1	On site	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
2	On site	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age

ID	Location	LEX Code	Description	Rock age
4	25m NE	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
5	43m W	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
6	51m W	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
7	66m NE	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
11	226m E	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
12	227m E	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
13	229m SW	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
14	240m E	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
15	262m SW	HMR-SDST	Haigh Moor Rock - Sandstone	Duckmantian Sub-age
17	323m NE	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
21	335m N	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
22	368m SE	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
23	386m N	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
24	404m NE	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
25	428m W	HMR-SDST	Haigh Moor Rock - Sandstone	Duckmantian Sub-age
30	476m NE	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
32	477m NE	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
33	494m NE	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
34	499m N	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m	13

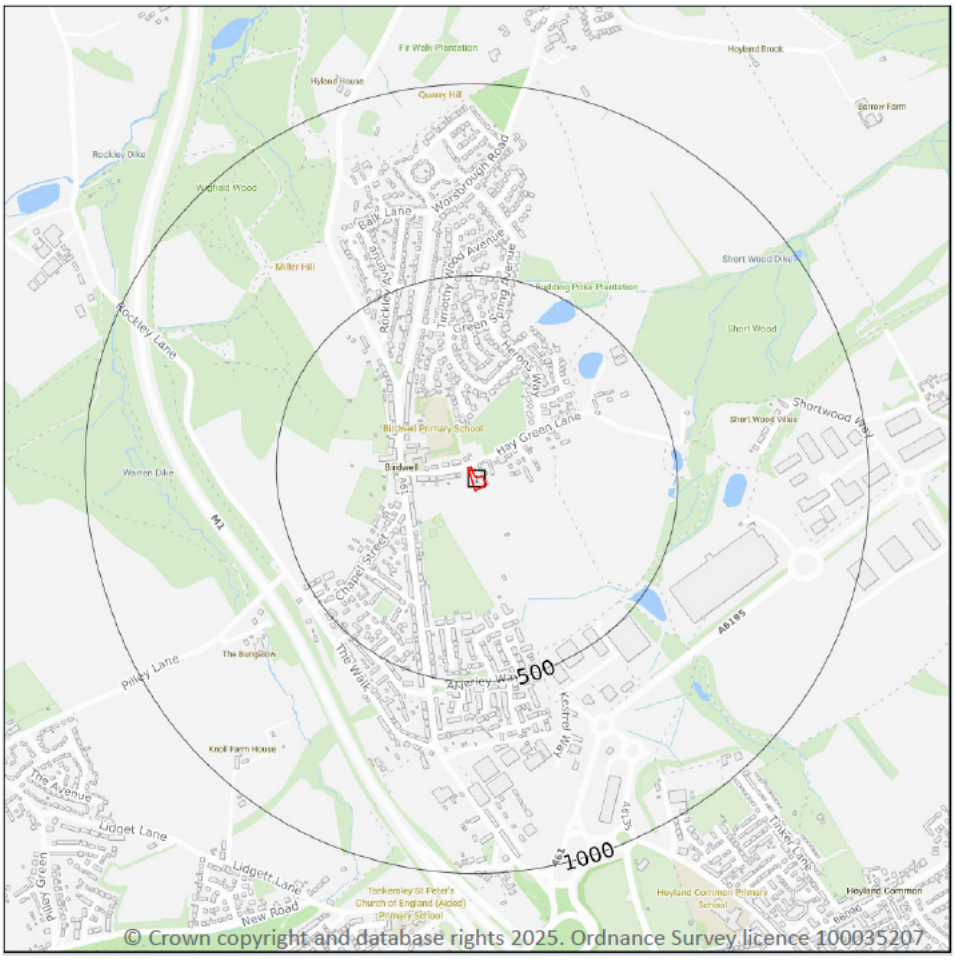
Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

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

ID	Location	Category	Description
3	**On site**	**FAULT**	**Normal fault, inferred**
8	80m W	ROCK	Coal seam, inferred
9	89m SW	ROCK	Coal seam, observed
10	94m S	ROCK	Coal seam, observed
16	289m W	ROCK	Coal seam, observed
18	323m NE	FAULT	Normal fault, inferred
19	332m SE	ROCK	Coal seam, inferred
20	334m SW	ROCK	Coal seam, observed
26	433m SE	ROCK	Coal seam, inferred
27	441m SE	ROCK	Coal seam, observed
28	444m SE	ROCK	Coal seam, inferred coincident with both bedrock geology boundary and Artificial geology boundary
29	461m SE	ROCK	Coal seam, inferred coincident with both bedrock geology boundary and Artificial geology boundary
31	476m NE	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

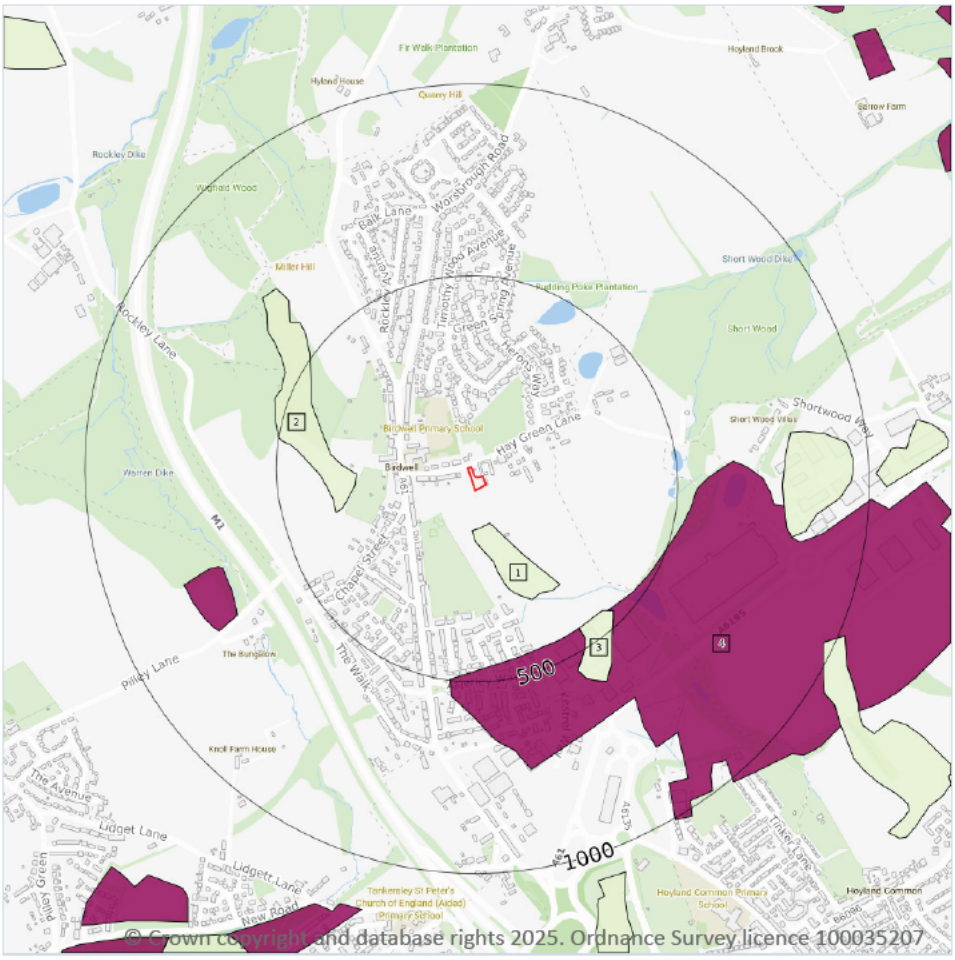
An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:50,000 scale - Availability map on page 77 >

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	4

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 78 >

ID	Location	LEX Code	Description	Rock description
1	93m SE	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
2	291m W	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
3	445m SE	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
4	445m SE	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.

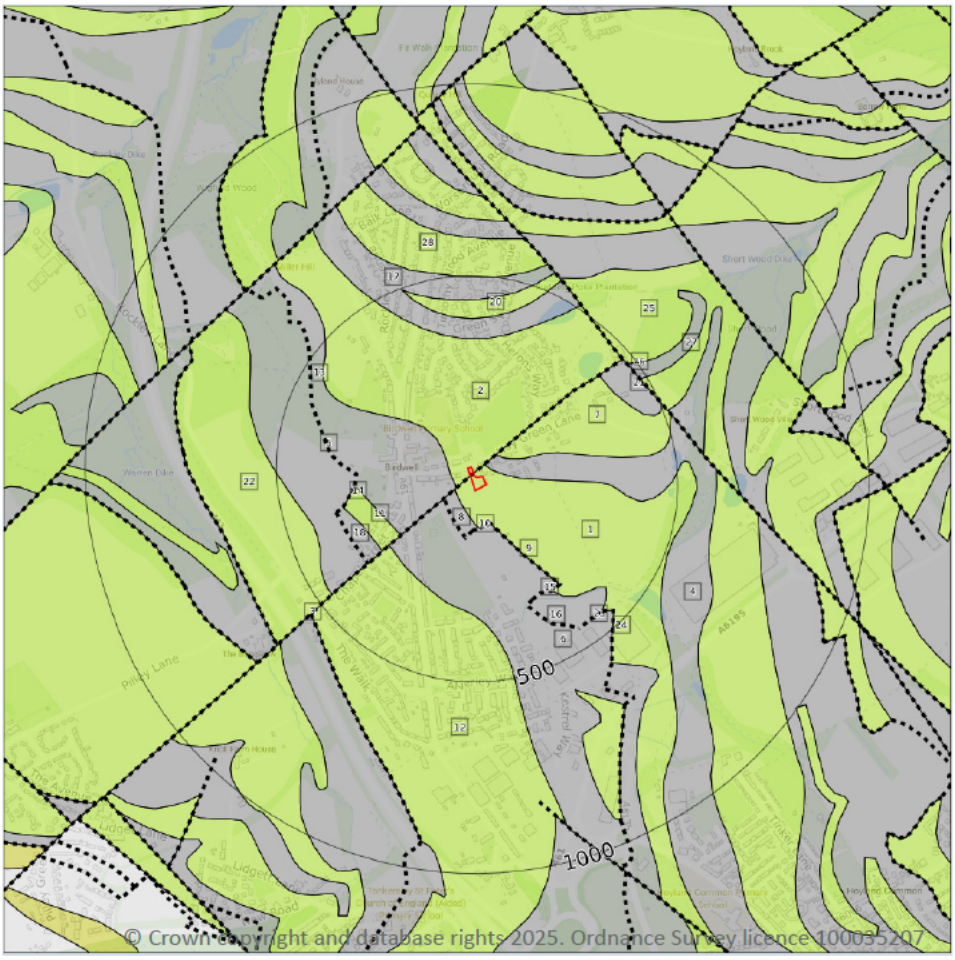
15.7 Landslip permeability (50k)

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	15

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

Features are displayed on the Geology 1:50,000 scale - Bedrock map on page 81 >

ID	Location	LEX Code	Description	Rock age
1	On site	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
2	On site	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN

ID	Location	LEX Code	Description	Rock age
4	27m NE	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
5	43m W	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
6	48m SW	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
7	67m NE	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
11	227m SW	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
12	266m SW	HMR-SDST	HAIGH MOOR ROCK - SANDSTONE	WESTPHALIAN
17	335m N	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
20	388m N	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
21	402m NE	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
22	429m W	HMR-SDST	HAIGH MOOR ROCK - SANDSTONE	WESTPHALIAN
25	476m NE	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
27	477m NE	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
28	497m N	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m	3

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Fracture**	**High**	**Moderate**
27m NE	Fracture	Moderate	Low

Location	Flow type	Maximum permeability	Minimum permeability
43m W	Fracture	Moderate	Low

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m	13

Linear features at the ground or bedrock surface at 1:50,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on page 81 >

ID	Location	Category	Description
3	**On site**	**FAULT**	**Fault, inferred**
8	83m W	ROCK	Coal seam, inferred
9	93m SE	ROCK	Coal seam, inferred
10	99m S	ROCK	Coal seam, inferred
13	291m W	ROCK	Coal seam, inferred
14	298m W	ROCK	Coal seam, inferred
15	316m SE	ROCK	Coal seam, inferred
16	321m SE	ROCK	Coal seam, inferred
18	339m SW	ROCK	Coal seam, inferred
19	342m W	ROCK	Coal seam, inferred
23	445m SE	ROCK	Coal seam, inferred
24	447m SE	ROCK	Coal seam, inferred
26	476m NE	FAULT	Fault, inferred

This data is sourced from the British Geological Survey.

16 Boreholes

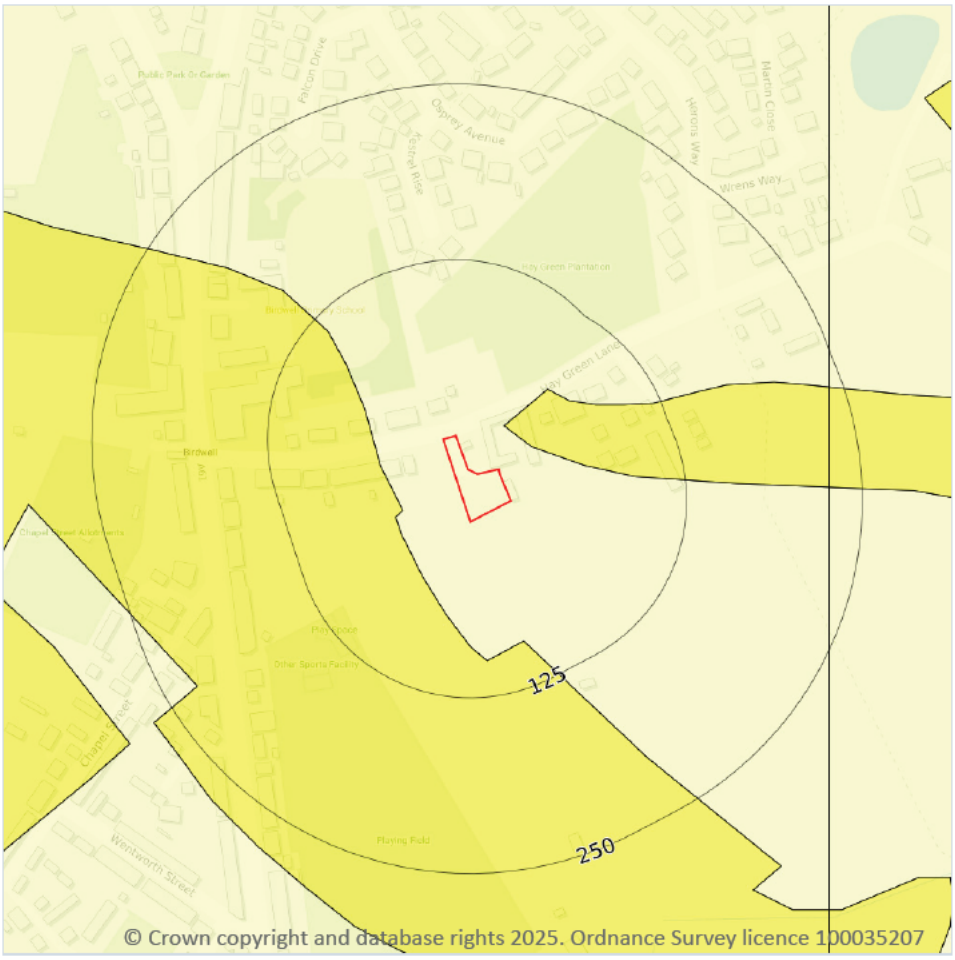
16.1 BGS Boreholes

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	3

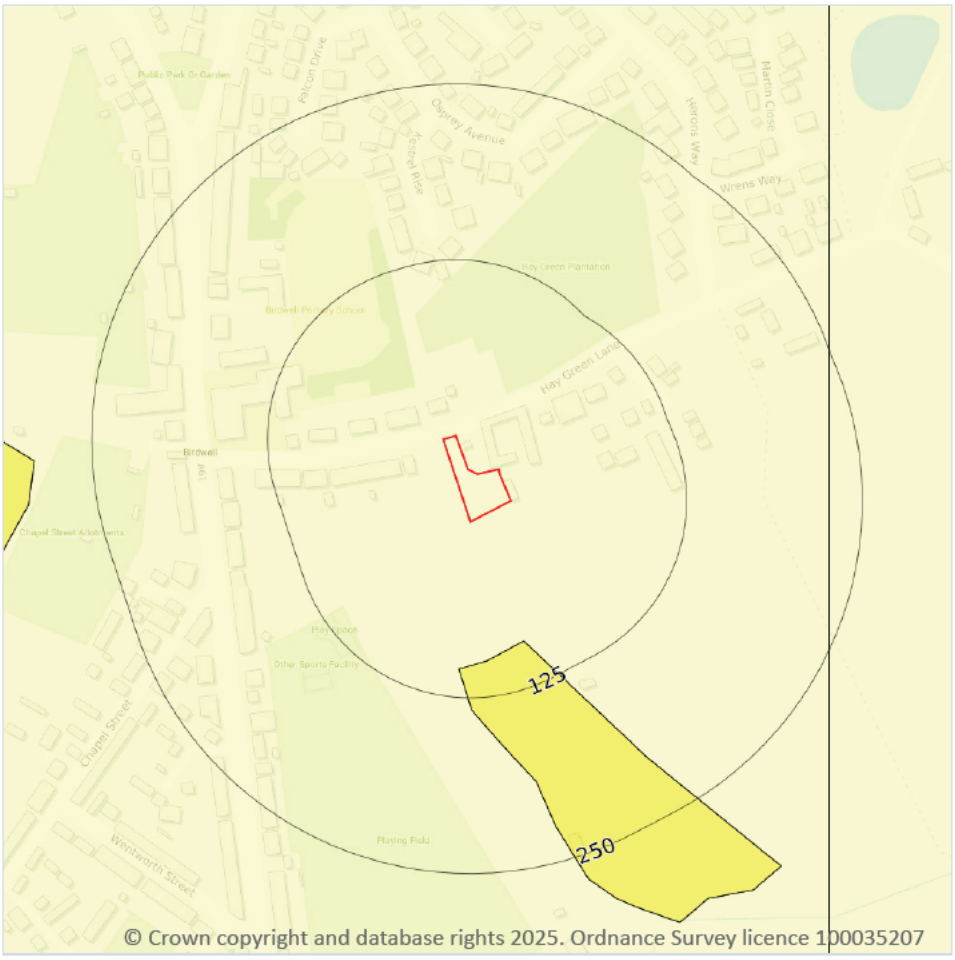
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and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

Features are displayed on the Natural ground subsidence - Shrink swell clays map on page 85 >

Location	Hazard rating	Details
On site	**Negligible**	**Ground conditions predominantly non-plastic.**
27m NE	Very low	Ground conditions predominantly low plasticity.
43m W	Very low	Ground conditions predominantly low plasticity.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Running sands



Site Outline

Search buffers in metres (m)

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

17.2 Running sands

Records within 50m	1

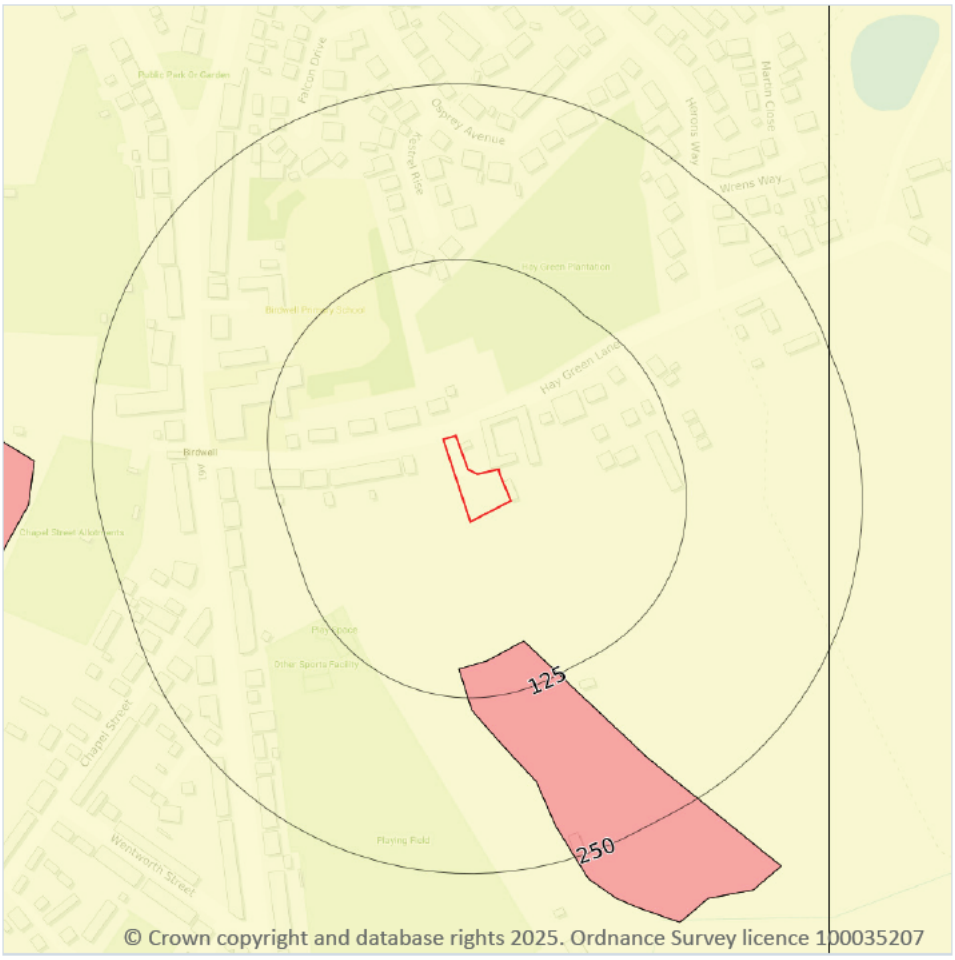
The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

Features are displayed on the Natural ground subsidence - Running sands map on page 87 >

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

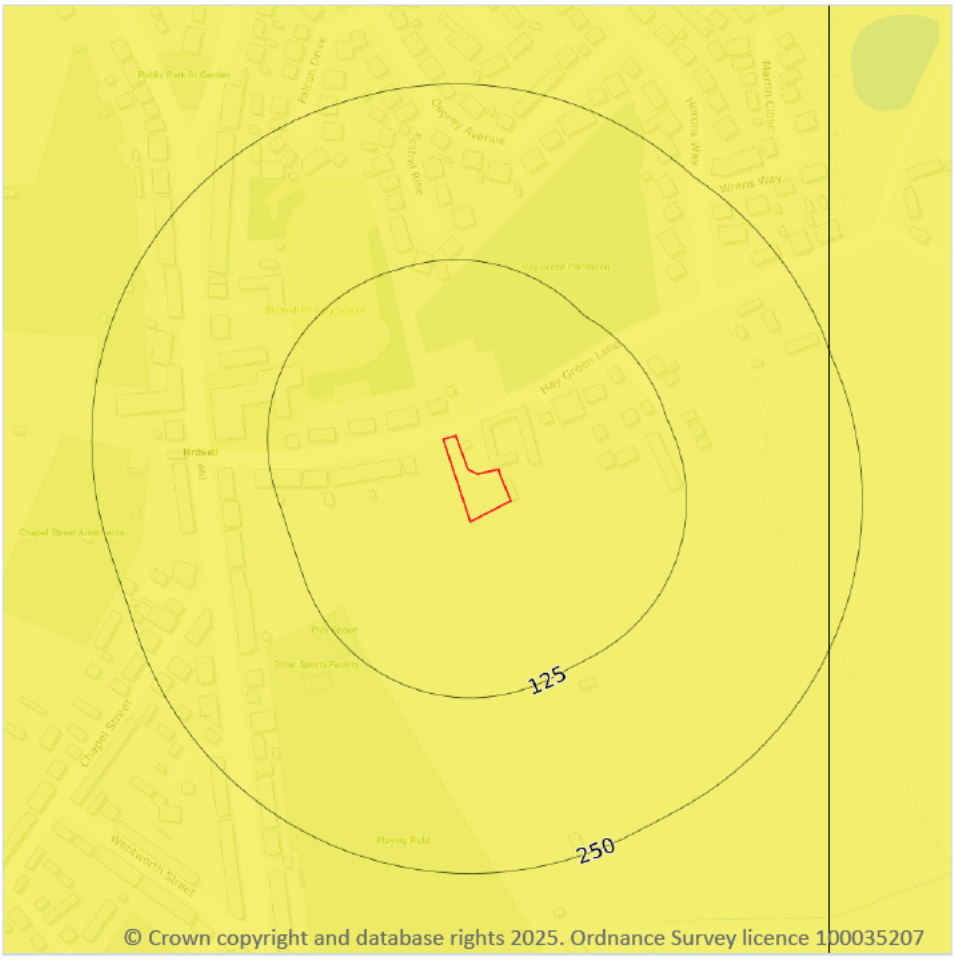
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on page 88 >

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

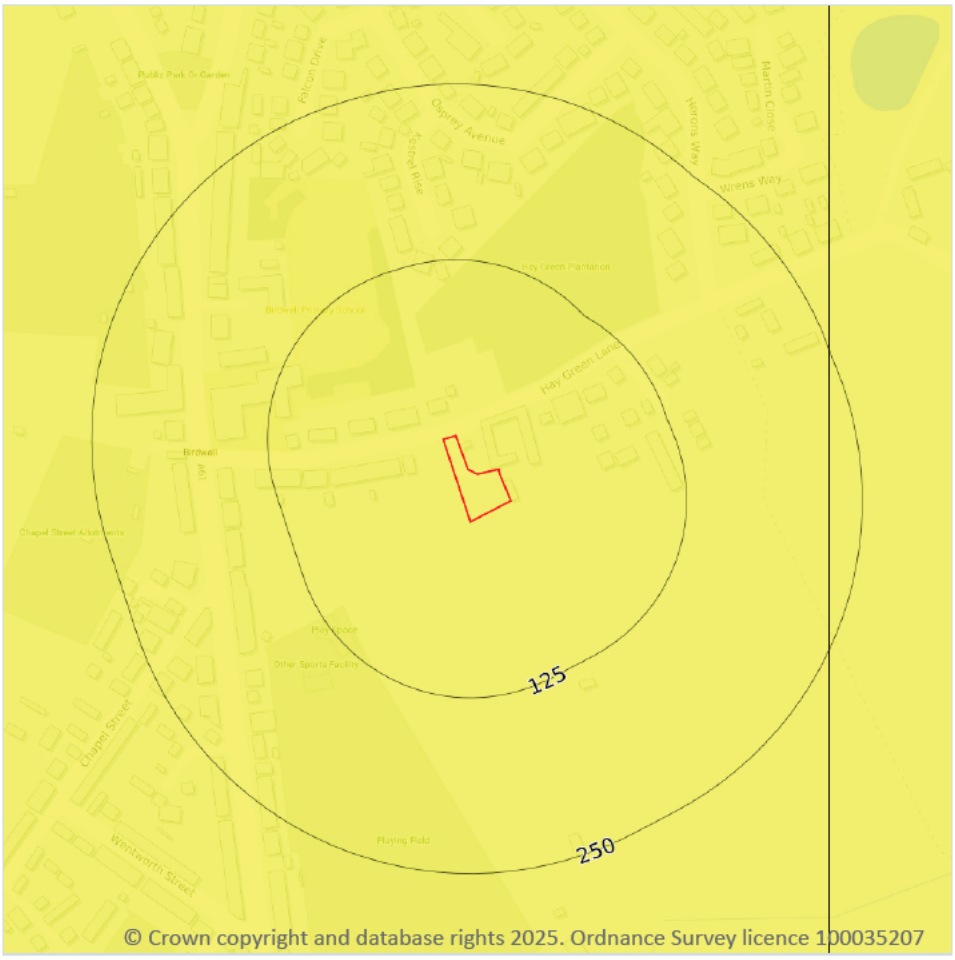
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

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

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

This data is sourced from the British Geological Survey.

Natural ground subsidence - Landslides



17.5 Landslides

Records within 50m	1

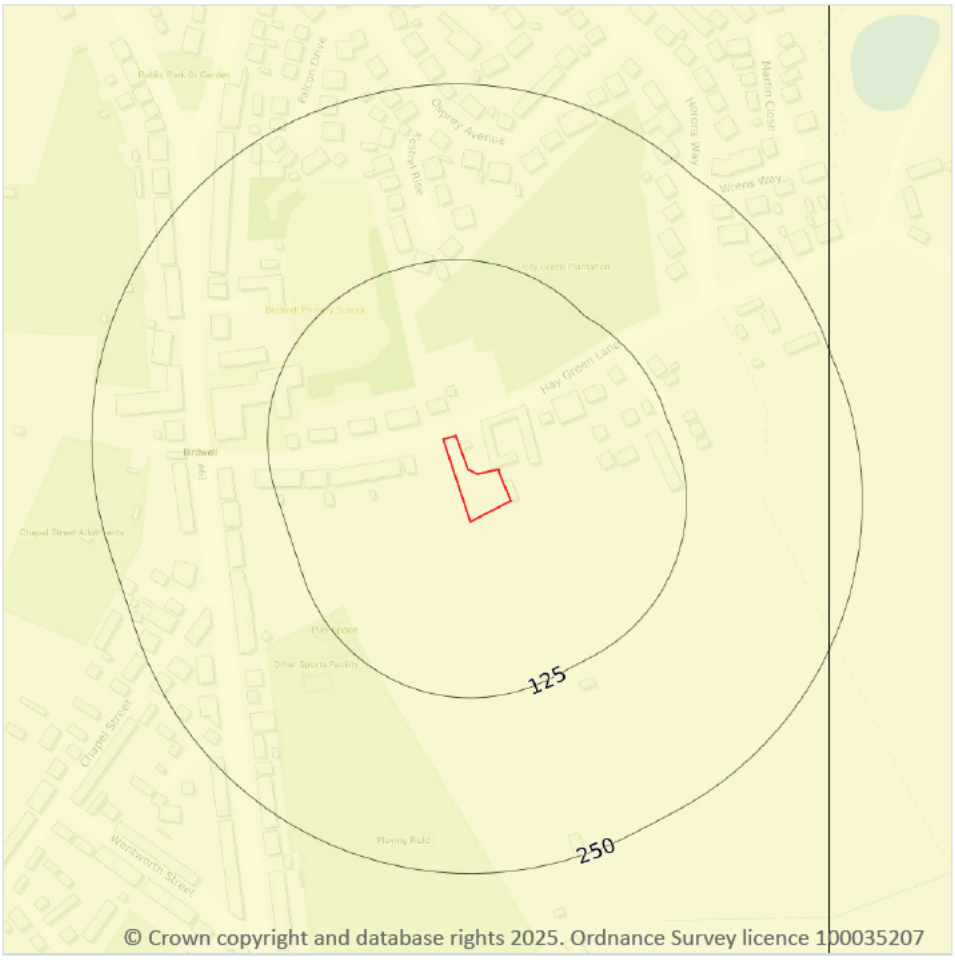
The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

Features are displayed on the Natural ground subsidence - Landslides map on page 90 >

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

This data is sourced from the British Geological Survey.

Natural ground subsidence - Ground dissolution of soluble rocks



17.6 Ground dissolution of soluble rocks

Records within 50m	1

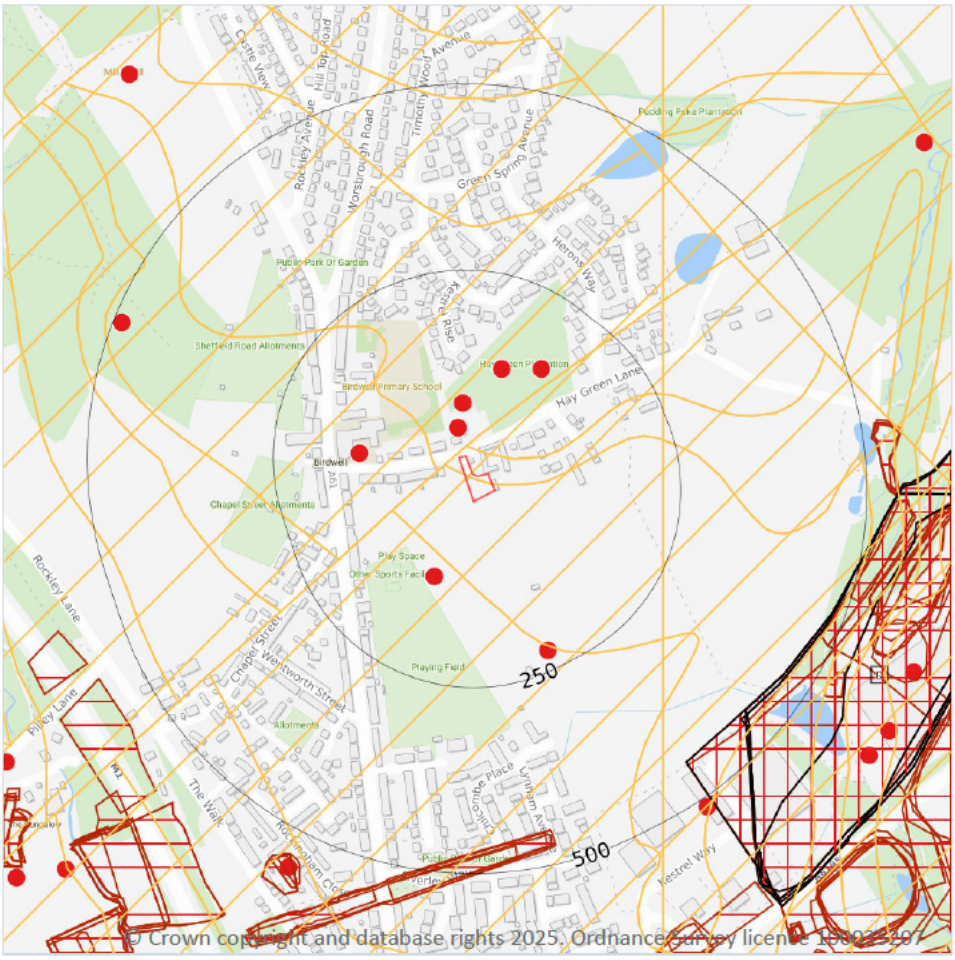
The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on page 91 >

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	8

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

Features are displayed on the Mining and ground workings map on page 93 >

ID	Location	Details	Description
A	40m N	Name: Hay Green Lane Quarries Address: Hay Green Lane, Birdwell, WORSBROUGH, South Yorkshire Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
A	72m N	Name: Hay Green Lane Quarries Address: Hay Green Lane, Birdwell, WORSBROUGH, South Yorkshire Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
6	114m SW	Name: Hay Green Coal Workings Address: Hay Green Lane, Birdwell, WORSBROUGH, South Yorkshire Commodity: Coal, Surface Mined Status: Ceased	Type: Working is wholly underground, access by shaft, adit, drift or incline. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun' Ee' - Scots). May also be locally termed `Quarry' or `Underground Quarry' when referring to sites extracting building stone (e.g. in Dorset and Wiltshire). The location given is that of the mine entrance and may be approximate for older sites shown on contemporaneous mapping by the Geological Survey used as the source document. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
7	126m N	Name: Hay Green Lane Quarries Address: Hay Green Lane, Birdwell, WORSBROUGH, South Yorkshire Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.

ID	Location	Details	Description
8	135m W	Name: Hay Green Lane Coal Pit Address: Hay Green Lane, Birdwell, WORSBROUGH, South Yorkshire Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit, drift or incline. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun' Ee' - Scots). May also be locally termed `Quarry' or `Underground Quarry' when referring to sites extracting building stone (e.g. in Dorset and Wiltshire). The location given is that of the mine entrance and may be approximate for older sites shown on contemporaneous mapping by the Geological Survey used as the source document. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
9	155m NE	Name: Hay Green Lane Quarries Address: Hay Green Lane, Birdwell, WORSBROUGH, South Yorkshire Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
11	224m SE	Name: Hay Green OCCS Address: Hay Green Lane, Birdwell, WORSBROUGH, South Yorkshire Commodity: Coal, Surface Mined Status: Ceased	Type: Working is wholly underground, access by shaft, adit, drift or incline. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun' Ee' - Scots). May also be locally termed `Quarry' or `Underground Quarry' when referring to sites extracting building stone (e.g. in Dorset and Wiltshire). The location given is that of the mine entrance and may be approximate for older sites shown on contemporaneous mapping by the Geological Survey used as the source document. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.

ID	Location	Details	Description
25	489m W	Name: Wigfield OCCS Address: Birdwell, WORSBROUGH, South Yorkshire Commodity: Coal, Surface Mined Status: Ceased	Type: Working is wholly underground, access by shaft, adit, drift or incline. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun' Ee' - Scots). May also be locally termed `Quarry' or `Underground Quarry' when referring to sites extracting building stone (e.g. in Dorset and Wiltshire). The location given is that of the mine entrance and may be approximate for older sites shown on contemporaneous mapping by the Geological Survey used as the source document. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m	0

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.

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 93 >

ID	Location	Land Use	Year of mapping	Mapping scale
D	444m SE	Colliery	1977	1:10000
D	448m SE	Colliery	1966	1:10560
D	448m SE	Colliery	1951	1:10560
D	452m SE	Colliery	1938	1:10560
D	453m SE	Colliery	1903	1:10560
D	531m SE	Colliery	1891	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
-	735m SW	Air Shaft	1956	1:10560
-	752m E	Unspecified Workings	1987	1:10000

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	72

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 93 >

ID	Location	Name	Commodity	Class	Likelihood
1	**On site**	**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
2	**On site**	**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	6m 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.
4	12m 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.
5	33m 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.
B	83m 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.
10	197m 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.
12	226m 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.
C	236m 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.
13	258m NE	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
14	298m 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	302m 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.
16	309m 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.
17	331m NE	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.
18	370m 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.
19	424m 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.
20	442m NE	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.
21	442m NE	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.
22	463m NE	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
23	477m 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.
24	481m 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.
26	494m 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.
27	500m NE	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.
28	505m NE	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.
29	508m NE	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.
30	510m 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.
33	543m 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.
J	551m 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.

ID	Location	Name	Commodity	Class	Likelihood
35	556m 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.
J	567m 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.
37	573m 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.
38	588m 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.
39	595m 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.
-	627m 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.
-	627m 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.
44	649m 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.
-	649m 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.

ID	Location	Name	Commodity	Class	Likelihood
46	656m 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.
-	666m 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.
48	671m 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.
-	678m NE	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.
-	698m 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.
53	702m 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.
54	727m 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.
-	734m 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.
57	742m 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.

ID	Location	Name	Commodity	Class	Likelihood
58	749m NE	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.
59	750m NE	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.
-	757m 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.
-	766m 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.
-	784m 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.
-	805m 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.
-	805m 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.
-	829m 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.
-	829m 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
-	835m 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.
-	840m 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.
-	855m 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.
-	859m NE	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 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.
-	862m 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.
-	865m NE	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.
-	874m 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.
-	889m 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.

ID	Location	Name	Commodity	Class	Likelihood
-	898m 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.
-	899m 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.
-	899m 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.
-	912m 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.
-	924m 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.
-	944m 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.
-	990m 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.
-	993m 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

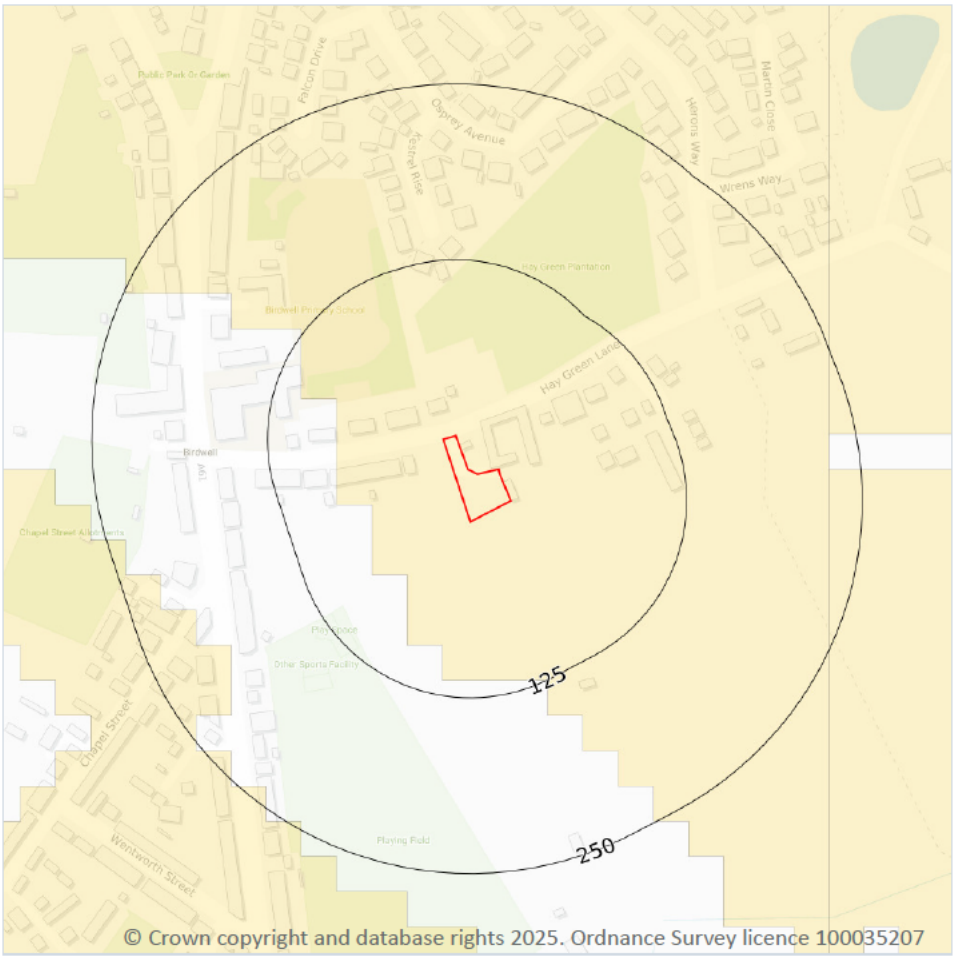
Records within 500m	0

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



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 111 >

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

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

21 Soil chemistry

21.1 BGS Estimated Background Soil Chemistry

Records within 50m	5

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

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	**15 - 25 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 - 25 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
6m NW	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
12m N	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
33m W	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

21.2 BGS Estimated Urban Soil Chemistry

Records within 50m	0

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

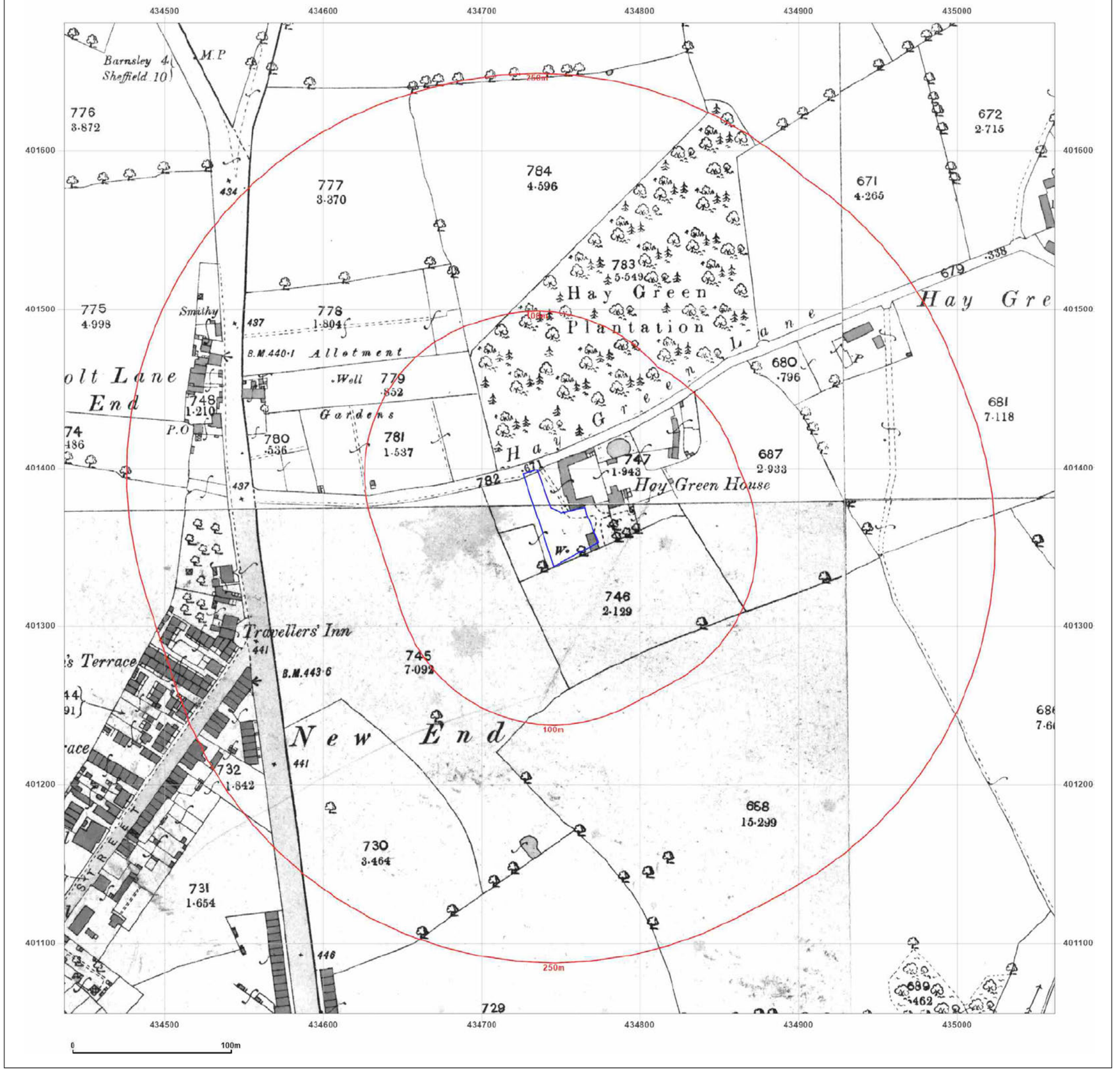
Data providers

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/ ↗.

APPENDIX B – HISTORICAL OS MAPS



Groundsure INSIGHTS

Site Details:

LAND ADJACENT TO HEATHER COTTAGE, HAY GREEN LANE, BIRDWELL, BARNSLEY, S70 5XD

Client Ref: RBG469
Report Ref: GS-6QE-FE6-Z3K-B6J
Grid Ref: 434749, 401368

Map Name: County Series
Map date: **1893**
Scale: 1:2,500
Printed at: 1:2,500

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Surveyed 1893
Revised 1893
Edition N/A
Copyright N/A
Levelled N/A

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Produced by
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W: www.groundsure.com

Production date: 04 July 2025

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

Groundsure INSIGHTS

Site Details:

LAND ADJACENT TO HEATHER COTTAGE, HAY GREEN LANE, BIRDWELL, BARNSLEY, S70 5XD

Client Ref: RBG469
Report Ref: GS-6QE-FE6-Z3K-B6J
Grid Ref: 434749, 401368

Map Name: County Series
Map date: **1905-1906**
Scale: 1:2,500
Printed at: 1:2,500

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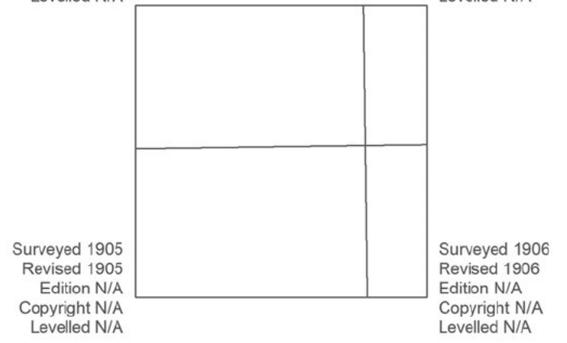
Surveyed 1906
Revised 1906
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1905
Revised 1905
Edition N/A
Copyright N/A
Levelled N/A



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Edition N/A
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Revised 1906
Edition N/A
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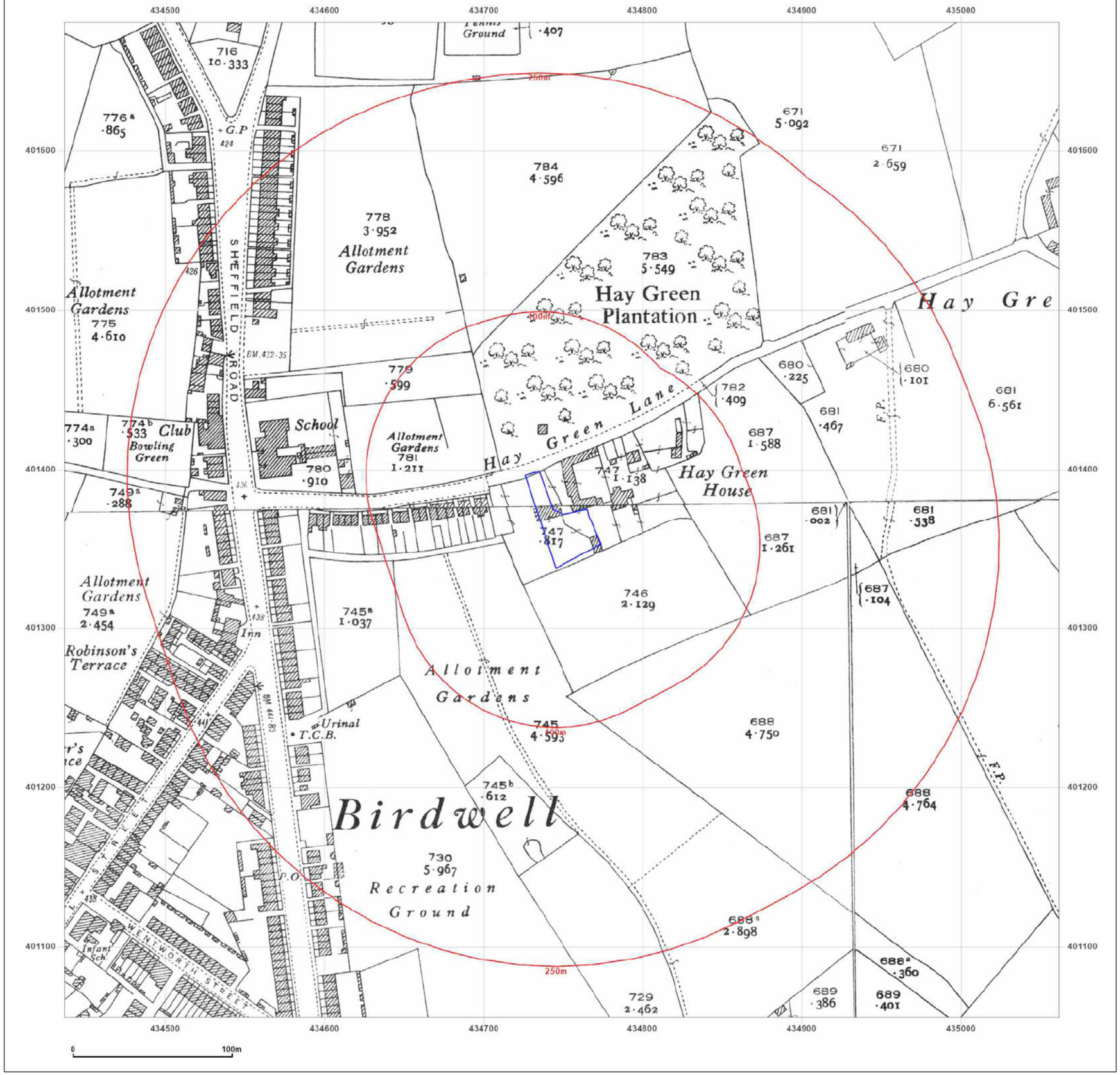
Production date: 04 July 2025

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



Groundsure INSIGHTS

Site Details:

LAND ADJACENT TO HEATHER COTTAGE, HAY GREEN LANE, BIRDWELL, BARNSLEY, S70 5XD

Client Ref: RBG469
Report Ref: GS-6QE-FE6-Z3K-B6J
Grid Ref: 434749, 401368

Map Name: County Series
Map date: **1931**
Scale: 1:2,500
Printed at: 1:2,500

N
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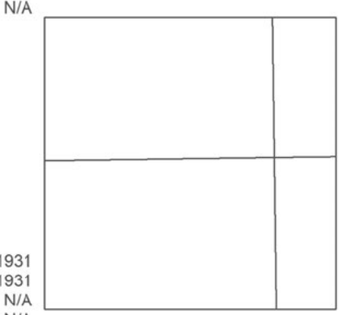
Surveyed 1931
Revised 1931
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1931
Revised 1931
Edition N/A
Copyright N/A
Levelled N/A



Surveyed 1931
Revised 1931
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1931
Revised 1931
Edition N/A
Copyright N/A
Levelled N/A

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Groundsure INSIGHTS

Site Details:

LAND ADJACENT TO HEATHER COTTAGE, HAY GREEN LANE, BIRDWELL, BARNSLEY, S70 5XD

Client Ref: RBG469
Report Ref: GS-6QE-FE6-Z3K-B6J
Grid Ref: 434749, 401368

Map Name: National Grid
Map date: **1960**
Scale: 1:2,500
Printed at: 1:2,500

N
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Surveyed 1960
Revised 1960
Edition N/A
Copyright N/A
Levelled N/A

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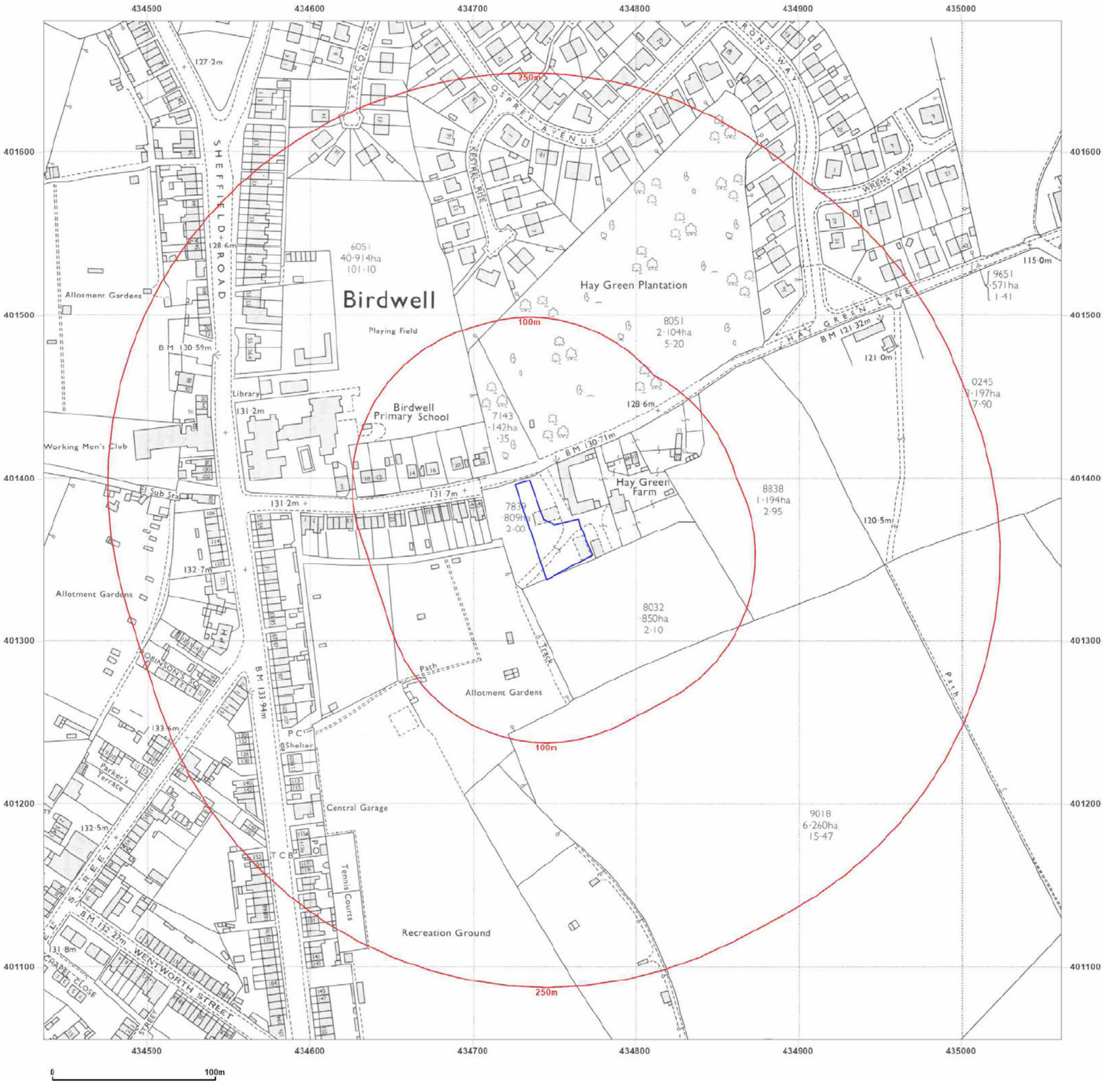

Groundsure INSIGHTS

Site Details:

LAND ADJACENT TO HEATHER COTTAGE, HAY GREEN LANE, BIRDWELL, BARNSLEY, S70 5XD

Client Ref: RBG469
Report Ref: GS-6QE-FE6-Z3K-B6J
Grid Ref: 434749, 401368

Map Name: National Grid
Map date: **1970**
Scale: 1:2,500
Printed at: 1:2,500

N
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Surveyed 1960
Revised 1970
Edition N/A
Copyright N/A
Levelled N/A

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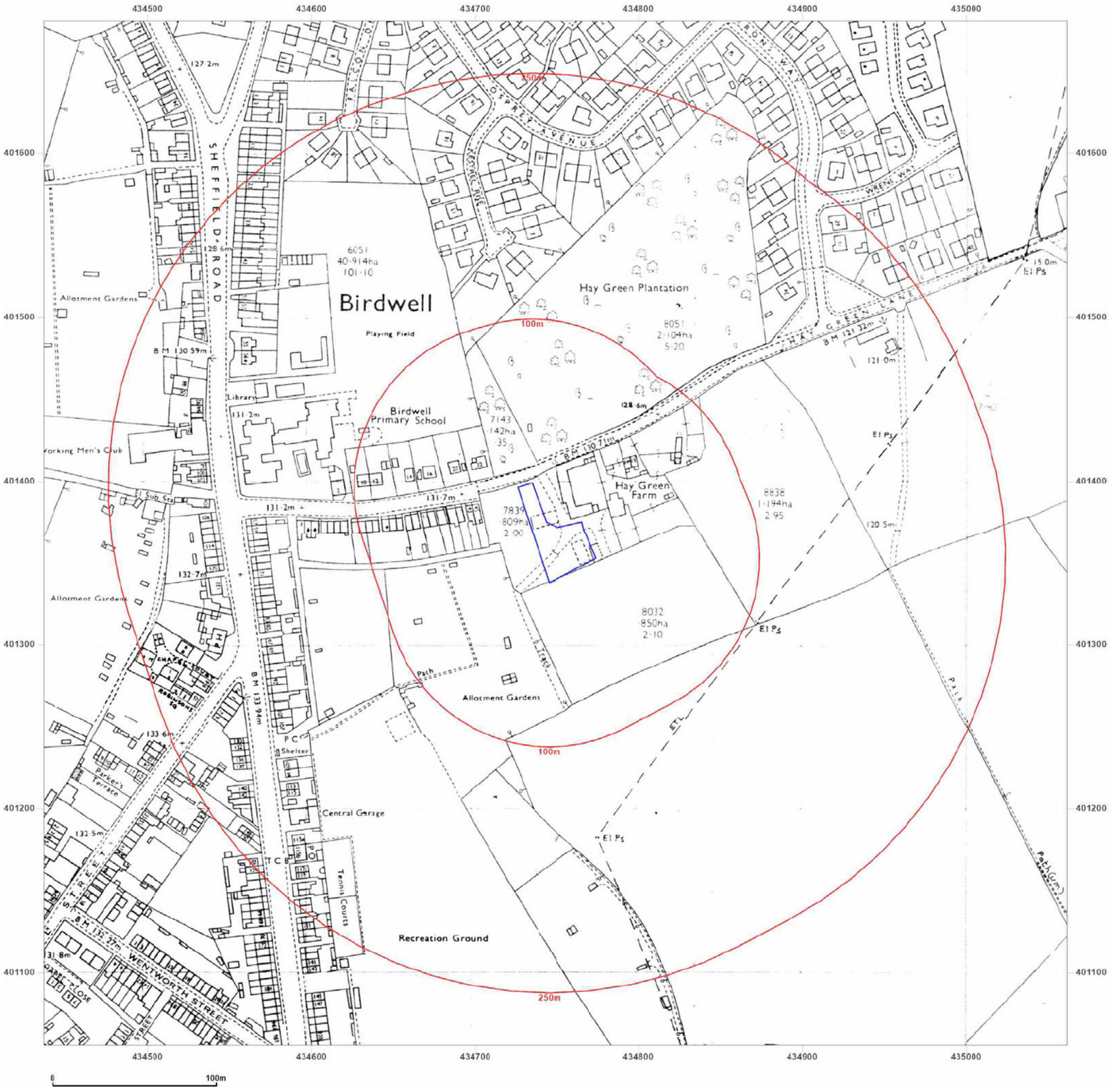

Groundsure INSIGHTS

Site Details:

LAND ADJACENT TO HEATHER COTTAGE, HAY GREEN LANE, BIRDWELL, BARNSLEY, S70 5XD

Client Ref: RBG469
Report Ref: GS-6QE-FE6-Z3K-B6J
Grid Ref: 434749, 401368

Map Name: National Grid
Map date: **1988-1990**
Scale: 1:2,500
Printed at: 1:2,500

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Surveyed N/A	Surveyed 1963
Revised N/A	Revised 1988
Edition N/A	Edition N/A
Copyright 1990	Copyright 1988
Levelled N/A	Levelled 1963

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Site Details:

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Client Ref: RBG469
Report Ref: GS-6QE-FE6-Z3K-B6J
Grid Ref: 434749, 401368

Map Name: National Grid
Map date: **1988-1990**
Scale: 1:2,500
Printed at: 1:2,500

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Surveyed N/A	Surveyed 1963
Revised N/A	Revised 1988
Edition N/A	Edition N/A
Copyright 1990	Copyright 1988
Levelled N/A	Levelled 1963

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Production date: 04 July 2025

Map legend available at:
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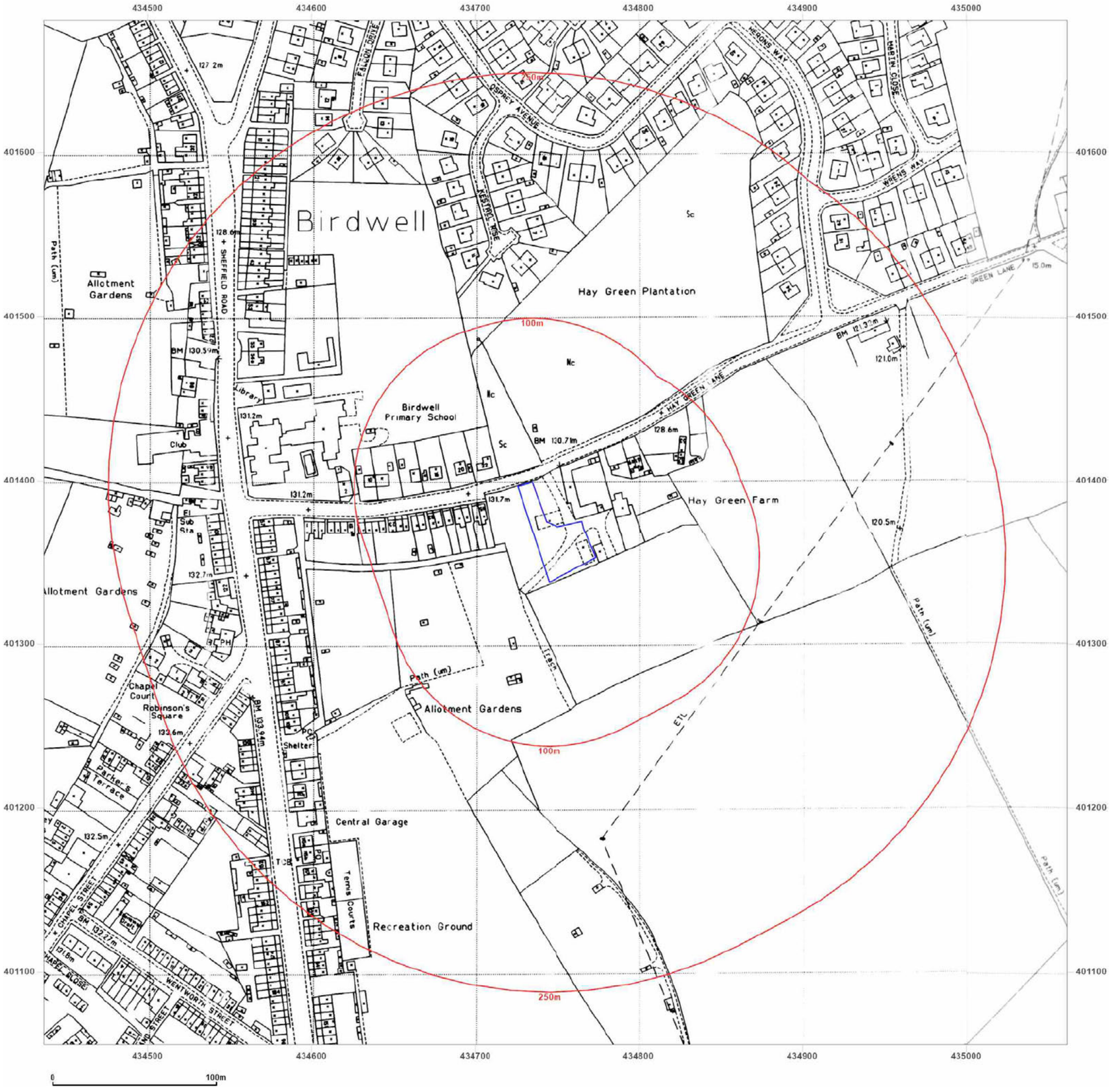

Groundsure INSIGHTS

Site Details:

LAND ADJACENT TO HEATHER COTTAGE, HAY GREEN LANE, BIRDWELL, BARNSLEY, S70 5XD

Client Ref: RBG469
Report Ref: GS-6QE-FE6-Z3K-B6J
Grid Ref: 434749, 401368

Map Name: National Grid
Map date: **1993**
Scale: 1:2,500
Printed at: 1:2,500

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

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Site Details:

LAND ADJACENT TO HEATHER COTTAGE, HAY GREEN LANE, BIRDWELL, BARNSLEY, S70 5XD

Client Ref: RBG469
Report Ref: GS-6QE-FE6-Z3K-B6J
Grid Ref: 434749, 401368

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

N
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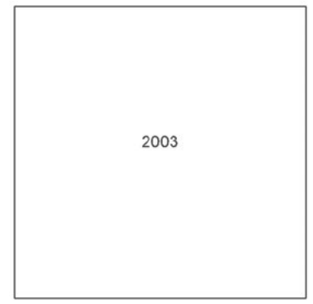

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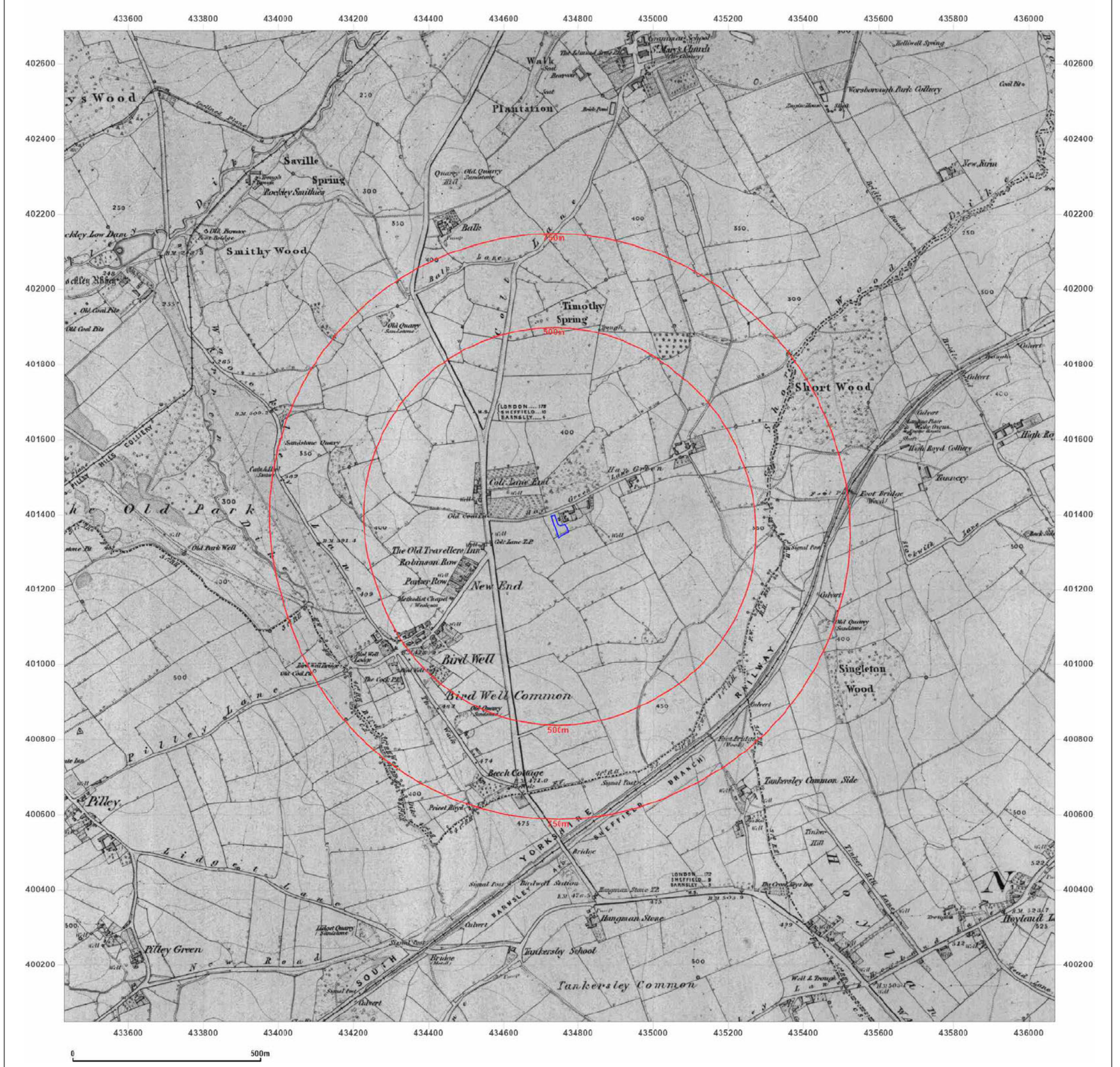

Groundsure INSIGHTS

Site Details:

LAND ADJACENT TO HEATHER
COTTAGE, HAY GREEN LANE,
BIRDWELL, BARNSLEY, S70 5XD

Client Ref:	RBG469
Report Ref:	GS-6QE-FE6-Z3K-B6J
Grid Ref:	434749, 401368
Map Name:	County Series
Map date:	**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

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Map legend available at:
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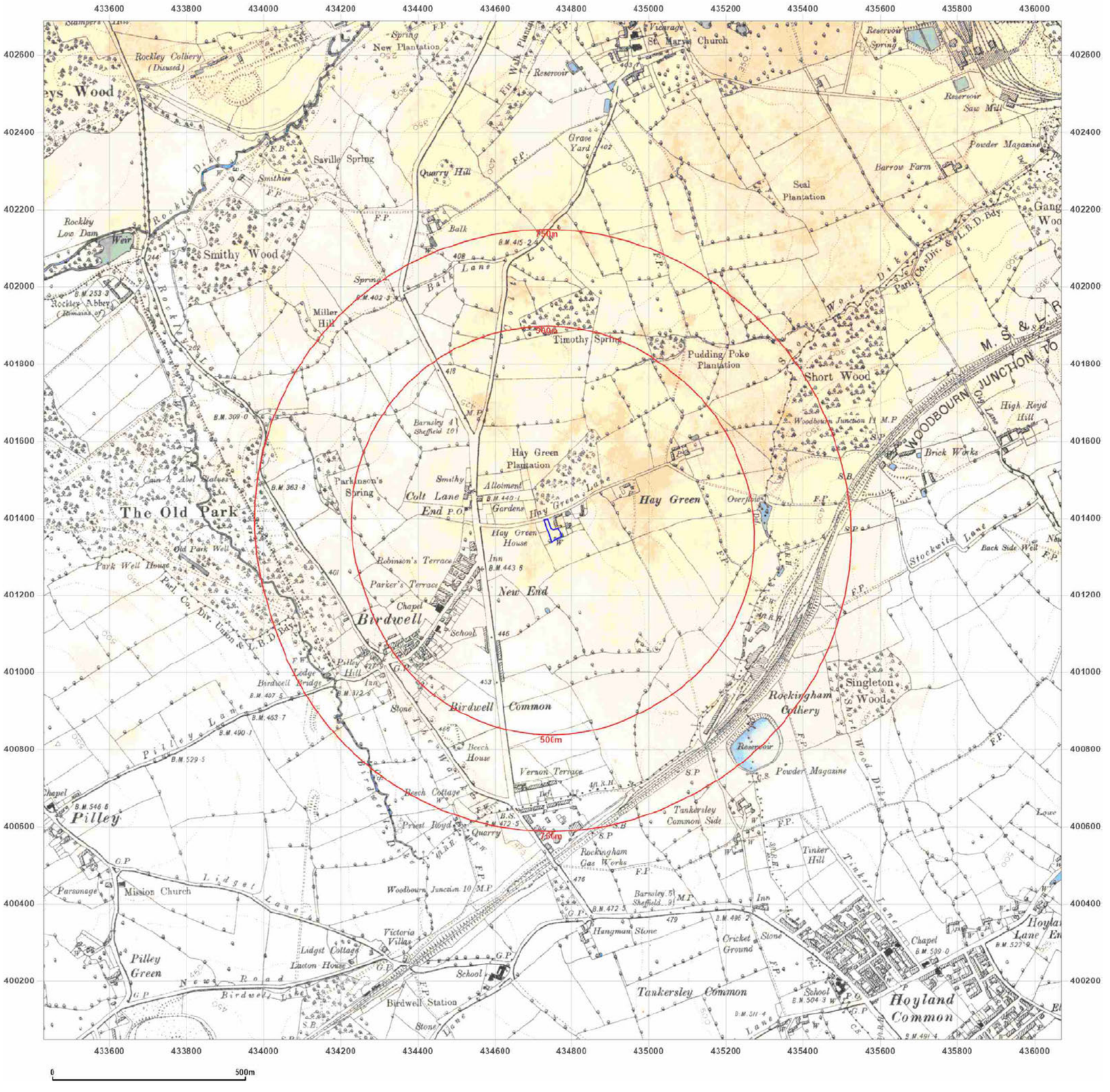

Groundsure INSIGHTS

Site Details:

LAND ADJACENT TO HEATHER COTTAGE, HAY GREEN LANE, BIRDWELL, BARNSLEY, S70 5XD

Client Ref: RBG469
Report Ref: GS-6QE-FE6-Z3K-B6J
Grid Ref: 434749, 401368

Map Name: County Series
Map date: **1891**
Scale: 1:10,560
Printed at: 1:10,560

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

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Production date: 04 July 2025

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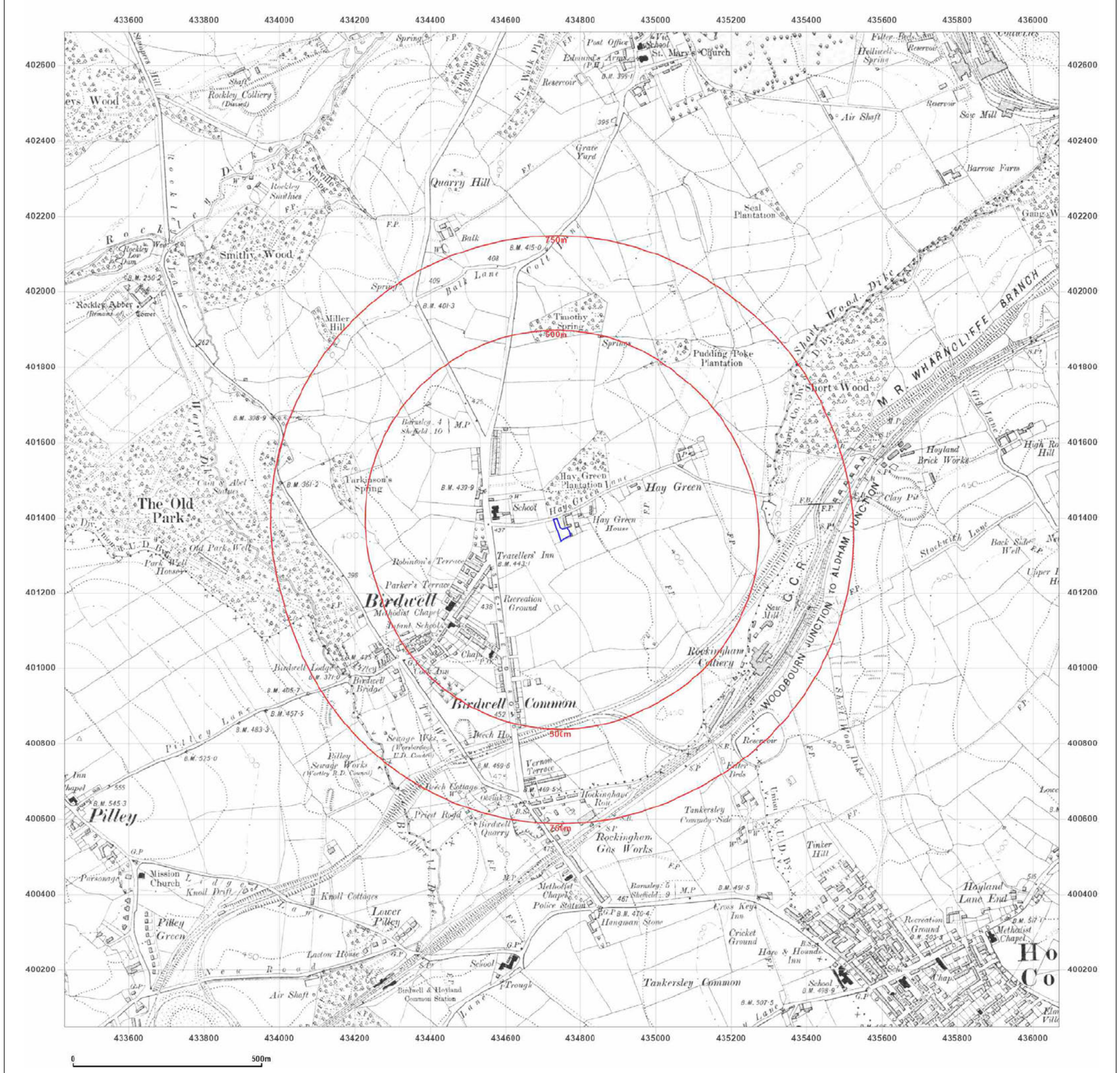

Groundsure INSIGHTS

Site Details:

LAND ADJACENT TO HEATHER COTTAGE, HAY GREEN LANE, BIRDWELL, BARNSLEY, S70 5XD

Client Ref: RBG469
Report Ref: GS-6QE-FE6-Z3K-B6J
Grid Ref: 434749, 401368

Map Name: County Series

Map date: **1903**

Scale: 1:10,560

Printed at: 1:10,560

N
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Surveyed 1891
Revised 1903
Edition N/A
Copyright N/A
Levelled N/A

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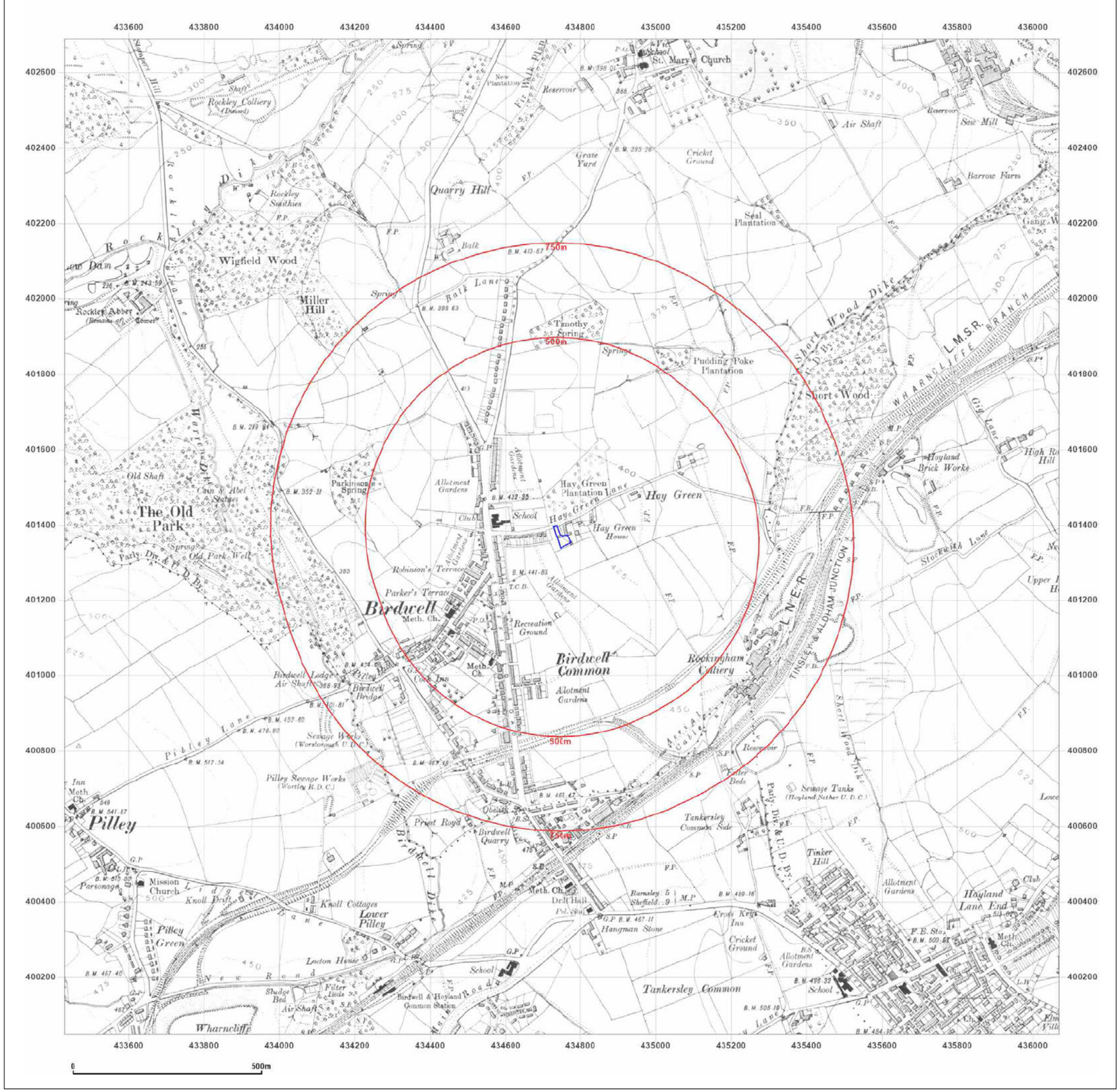

Groundsure INSIGHTS

Site Details:

LAND ADJACENT TO HEATHER COTTAGE, HAY GREEN LANE, BIRDWELL, BARNSLEY, S70 5XD

Client Ref: RBG469
Report Ref: GS-6QE-FE6-Z3K-B6J
Grid Ref: 434749, 401368

Map Name: County Series

Map date: **1929**

Scale: 1:10,560

Printed at: 1:10,560

N
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Surveyed 1851
Revised 1929
Edition N/A
Copyright N/A
Levelled N/A

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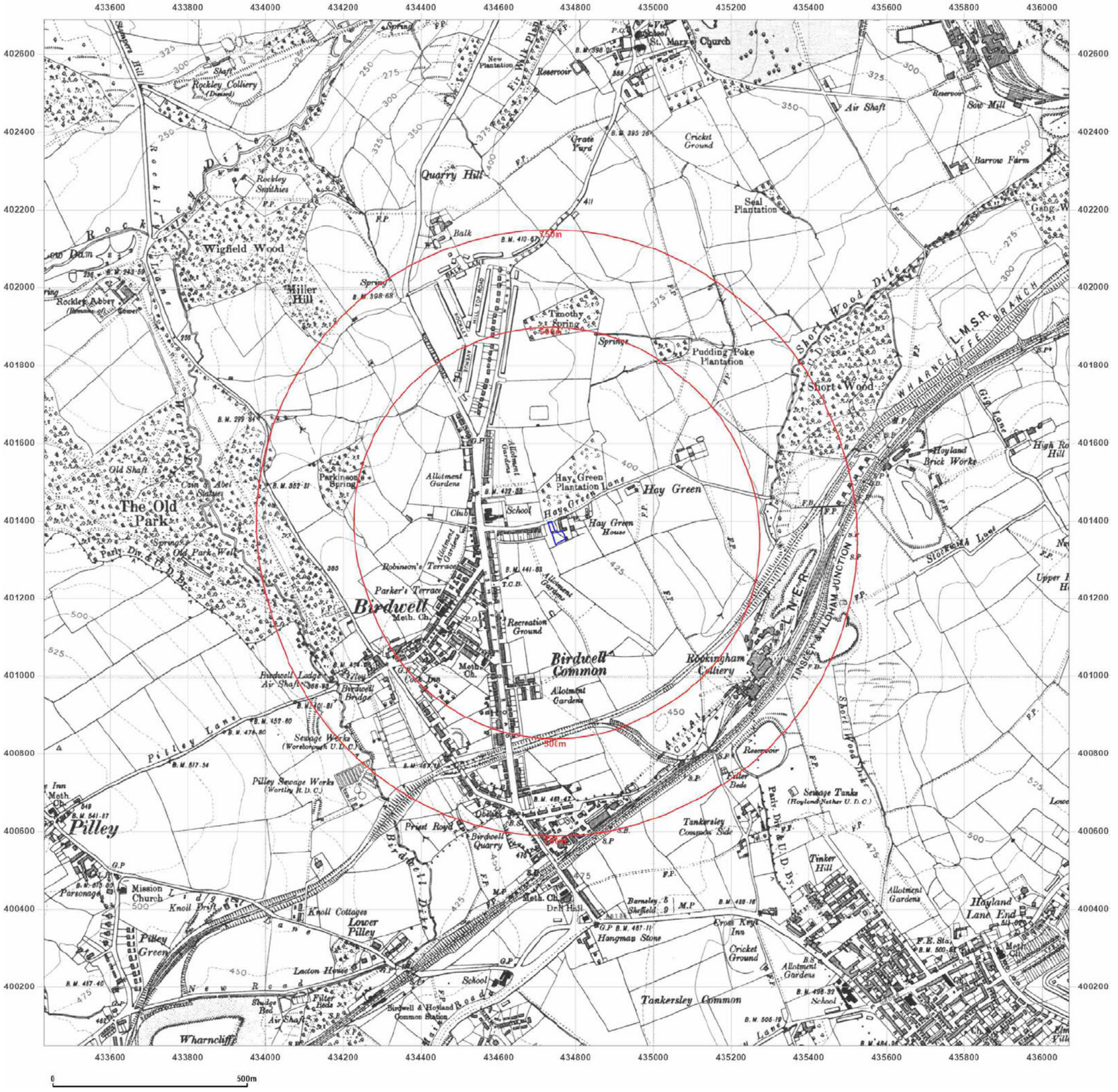

Groundsure INSIGHTS

Site Details:

LAND ADJACENT TO HEATHER COTTAGE, HAY GREEN LANE, BIRDWELL, BARNSLEY, S70 5XD

Client Ref: RBG469
Report Ref: GS-6QE-FE6-Z3K-B6J
Grid Ref: 434749, 401368

Map Name: County Series
Map date: **1938**
Scale: 1:10,560
Printed at: 1:10,560

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

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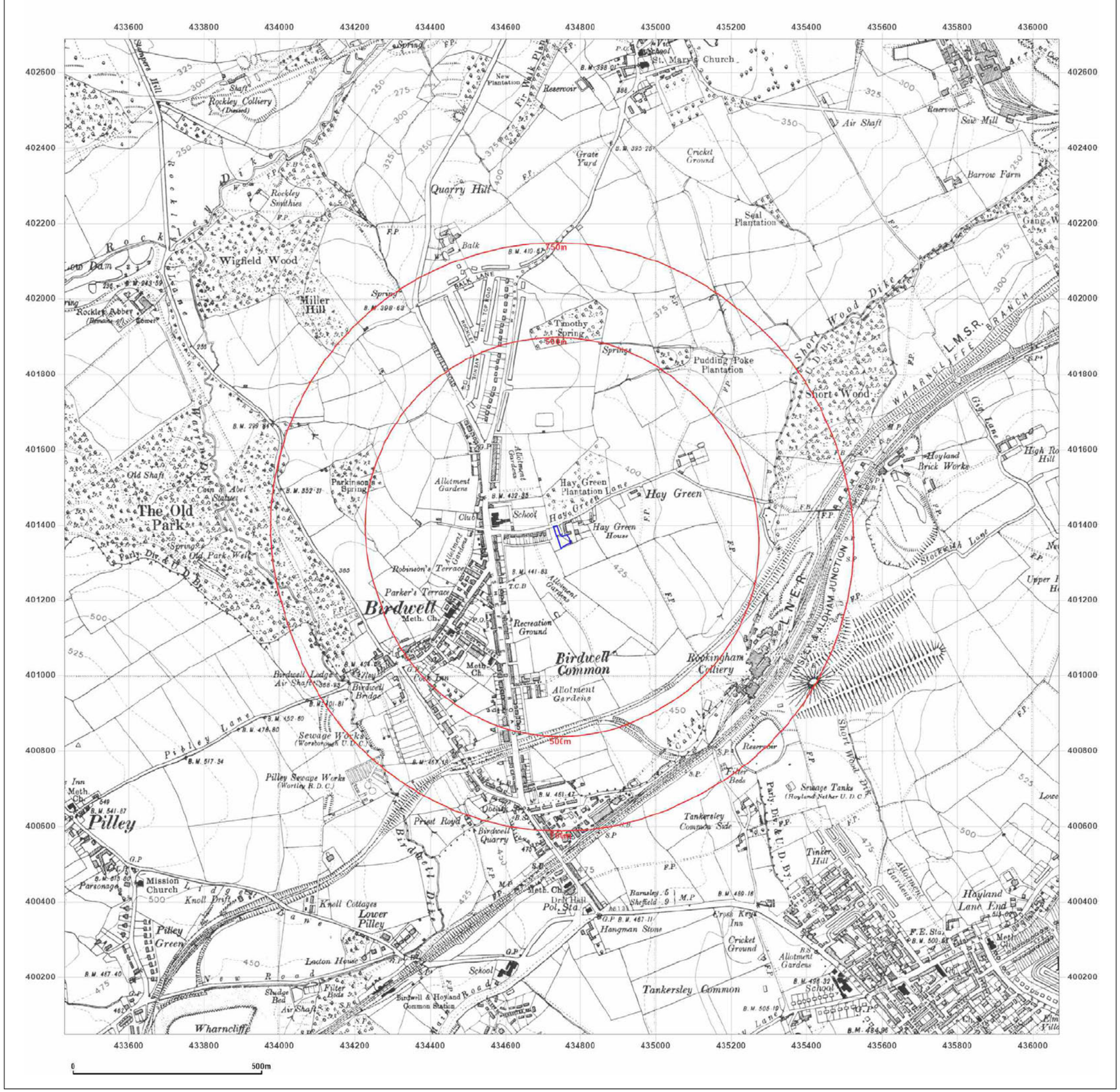

Groundsure INSIGHTS

Site Details:

LAND ADJACENT TO HEATHER COTTAGE, HAY GREEN LANE, BIRDWELL, BARNSLEY, S70 5XD

Client Ref: RBG469
Report Ref: GS-6QE-FE6-Z3K-B6J
Grid Ref: 434749, 401368

Map Name: County Series

Map date: **1948**

Scale: 1:10,560

Printed at: 1:10,560

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

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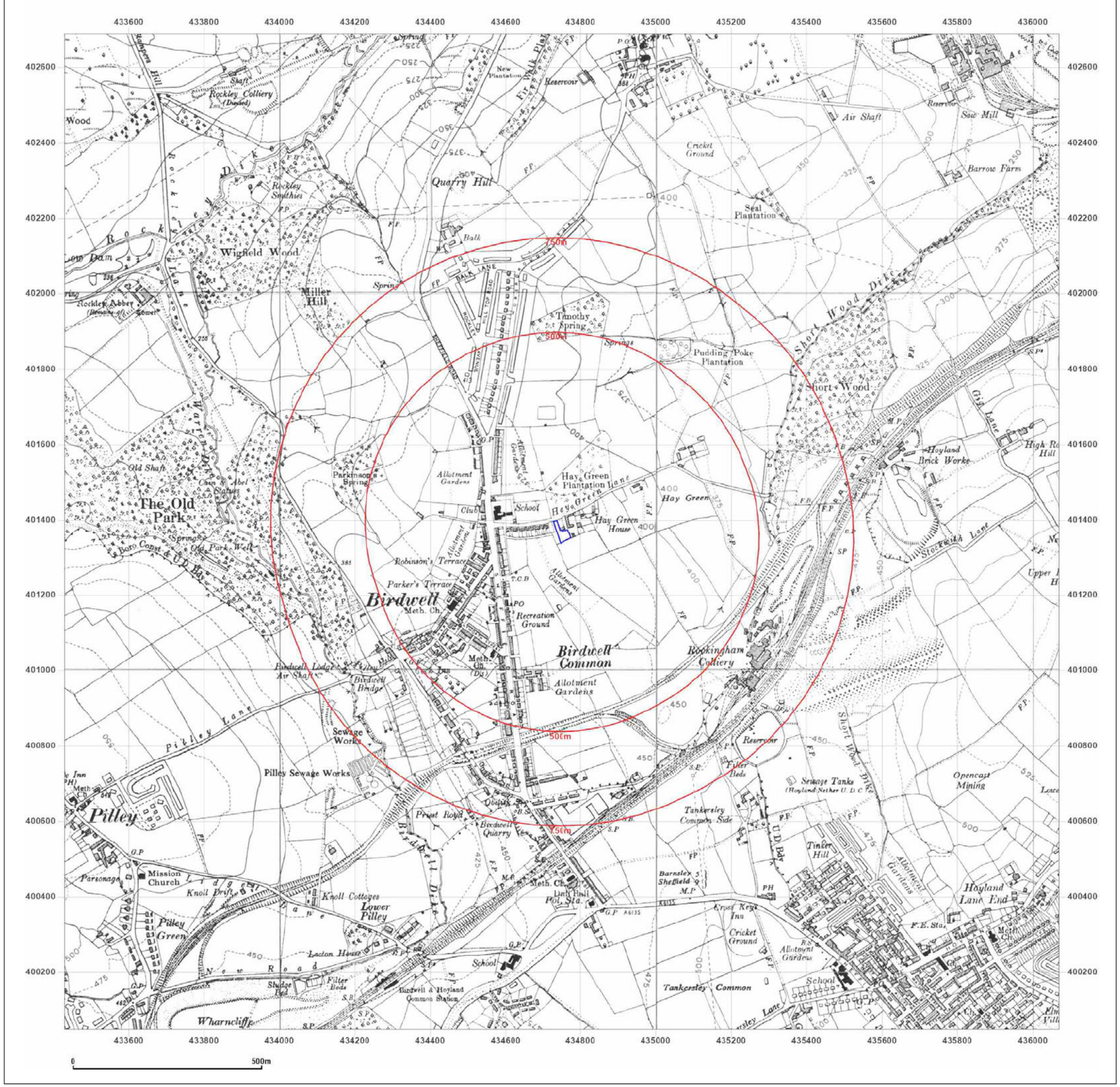

Groundsure INSIGHTS

Site Details:

LAND ADJACENT TO HEATHER COTTAGE, HAY GREEN LANE, BIRDWELL, BARNSLEY, S70 5XD

Client Ref: RBG469
Report Ref: GS-6QE-FE6-Z3K-B6J
Grid Ref: 434749, 401368

Map Name: Provisional

Map date: **1951-1956**

Scale: 1:10,560

Printed at: 1:10,560

N
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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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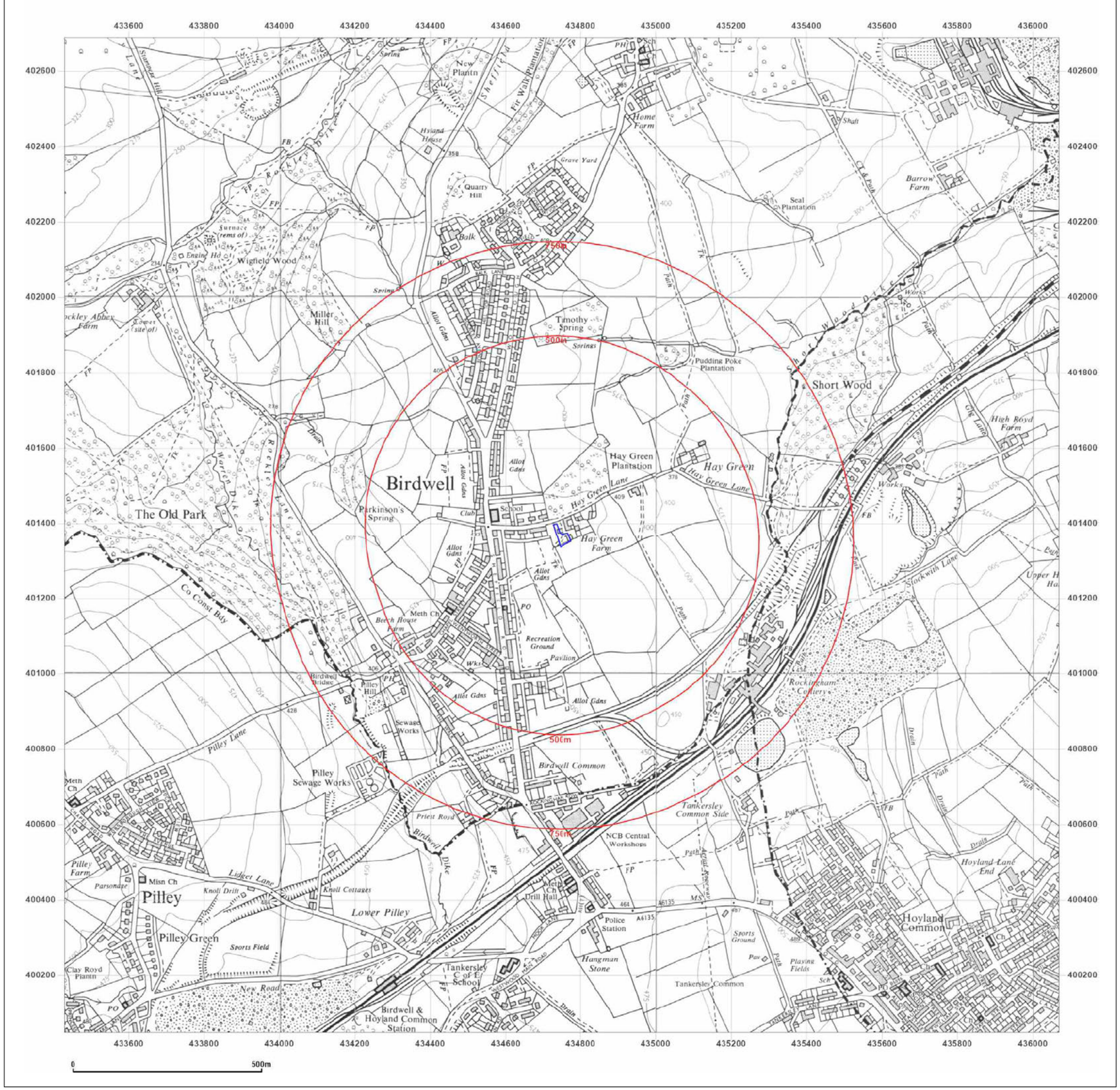

Groundsure INSIGHTS

Site Details:

LAND ADJACENT TO HEATHER COTTAGE, HAY GREEN LANE, BIRDWELL, BARNSLEY, S70 5XD

Client Ref: RBG469
Report Ref: GS-6QE-FE6-Z3K-B6J
Grid Ref: 434749, 401368

Map Name: Provisional

Map date: **1965-1966**

Scale: 1:10,560

Printed at: 1:10,560

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

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

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Groundsure INSIGHTS

Site Details:

LAND ADJACENT TO HEATHER COTTAGE, HAY GREEN LANE, BIRDWELL, BARNSLEY, S70 5XD

Client Ref: RBG469
Report Ref: GS-6QE-FE6-Z3K-B6J
Grid Ref: 434749, 401368

Map Name: National Grid

Map date: **1977**

Scale: 1:10,000

Printed at: 1:10,000

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

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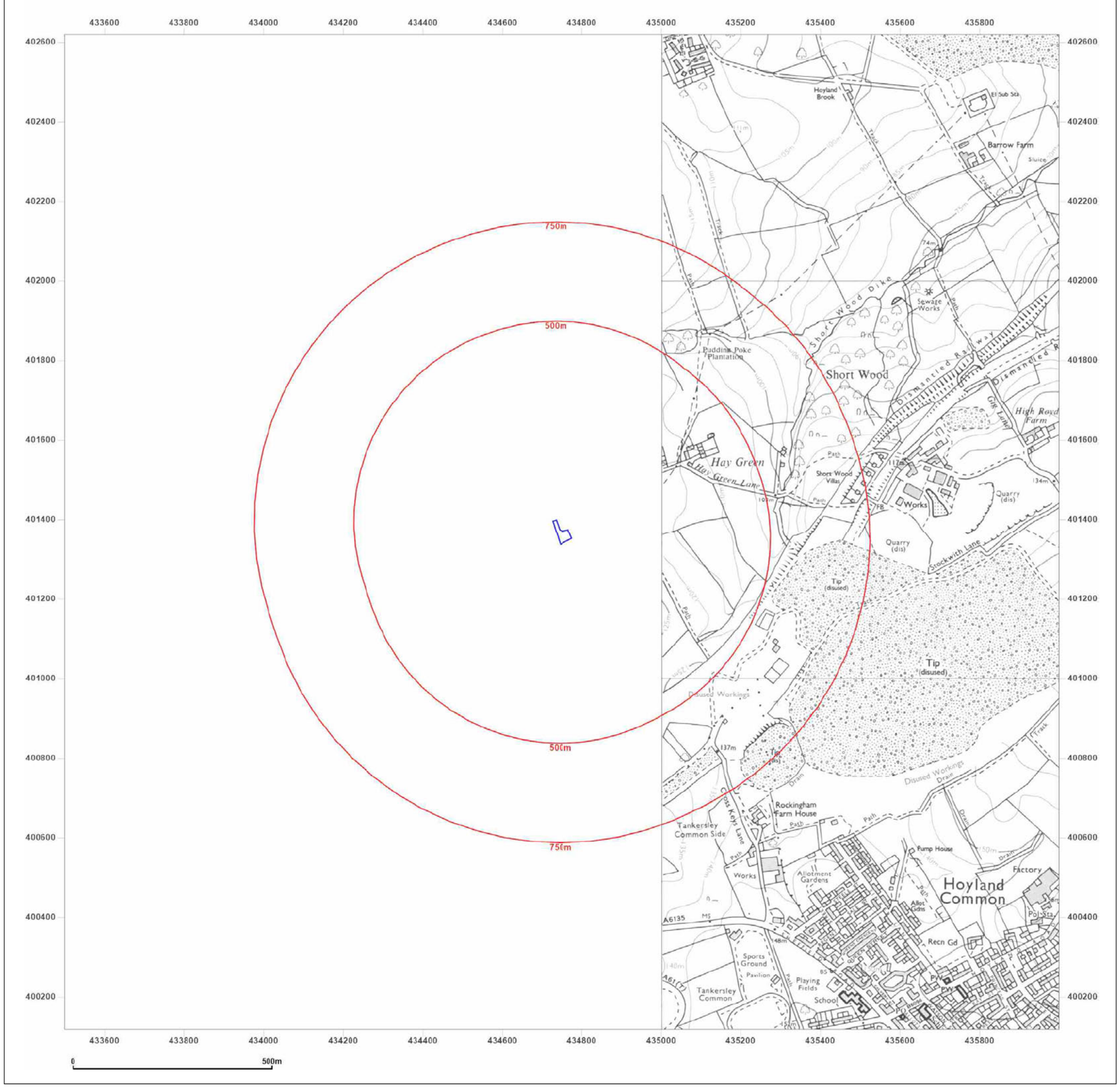

Groundsure INSIGHTS

Site Details:

LAND ADJACENT TO HEATHER COTTAGE, HAY GREEN LANE, BIRDWELL, BARNSLEY, S70 5XD

Client Ref: RBG469
Report Ref: GS-6QE-FE6-Z3K-B6J
Grid Ref: 434749, 401368

Map Name: National Grid
Map date: **1987**
Scale: 1:10,000
Printed at: 1:10,000

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Surveyed 1986
Revised 1987
Edition N/A
Copyright N/A
Levelled N/A

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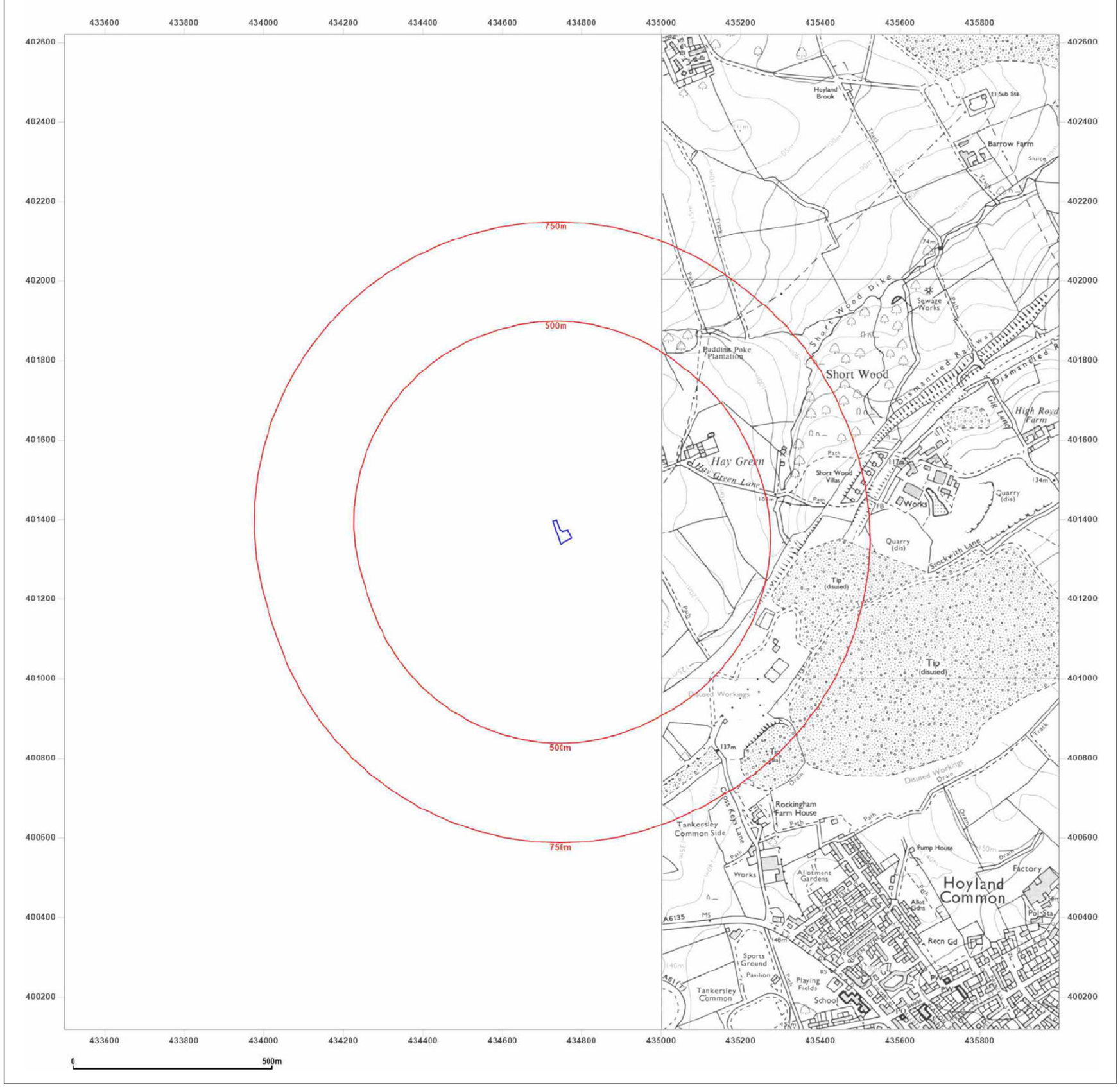

Site Details:

LAND ADJACENT TO HEATHER COTTAGE, HAY GREEN LANE, BIRDWELL, BARNSLEY, S70 5XD

Client Ref: RBG469
Report Ref: GS-6QE-FE6-Z3K-B6J
Grid Ref: 434749, 401368

Map Name: National Grid
Map date: **1987**
Scale: 1:10,000
Printed at: 1:10,000

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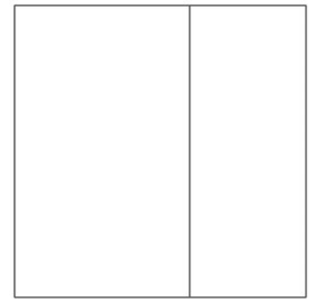
Surveyed 1986
Revised 1987
Edition N/A
Copyright N/A
Levelled N/A



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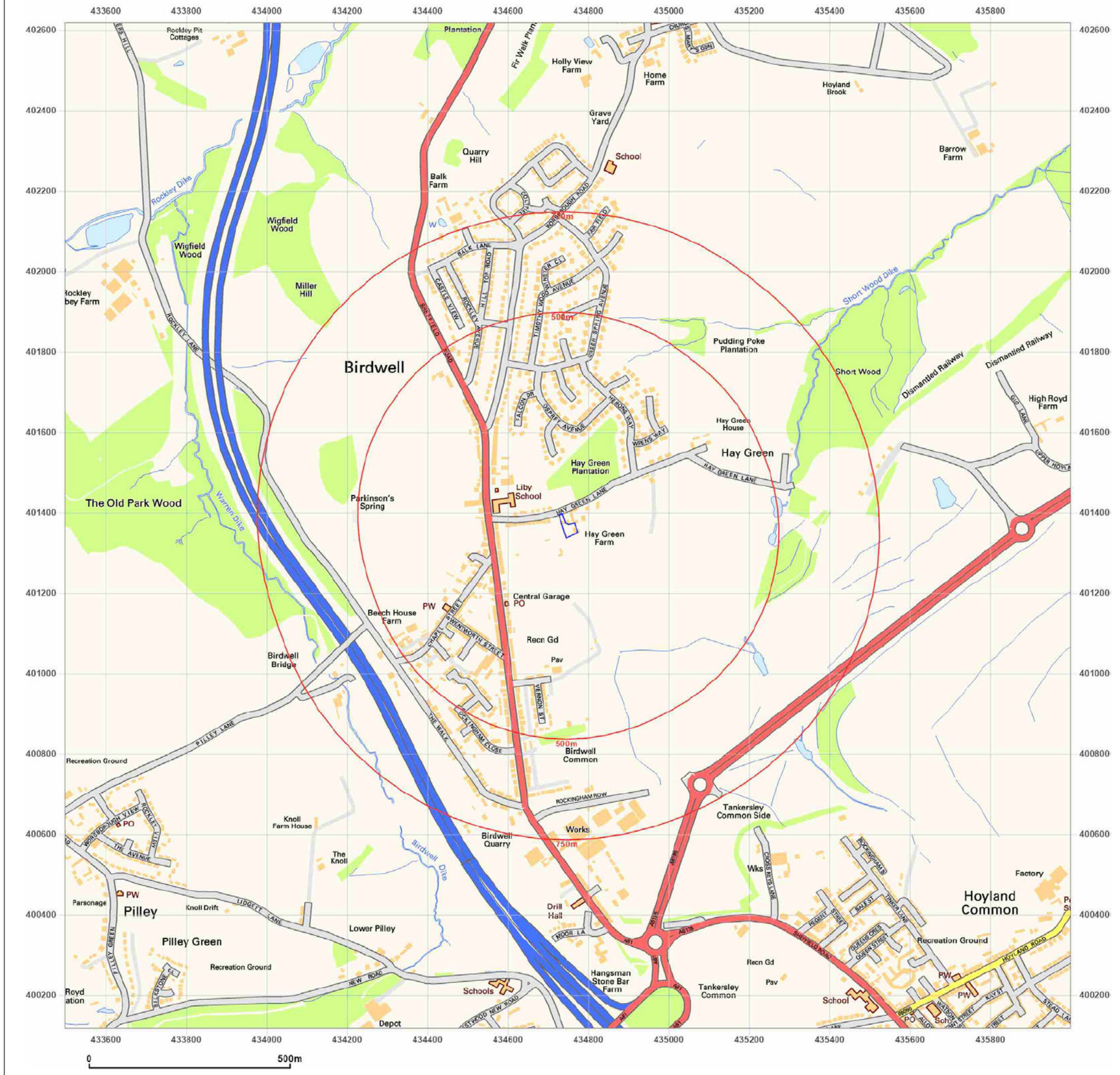

Groundsure INSIGHTS

Site Details:

LAND ADJACENT TO HEATHER COTTAGE, HAY GREEN LANE, BIRDWELL, BARNSLEY, S70 5XD

Client Ref: RBG469
Report Ref: GS-6QE-FE6-Z3K-B6J
Grid Ref: 434749, 401368

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

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2001

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Production date: 04 July 2025

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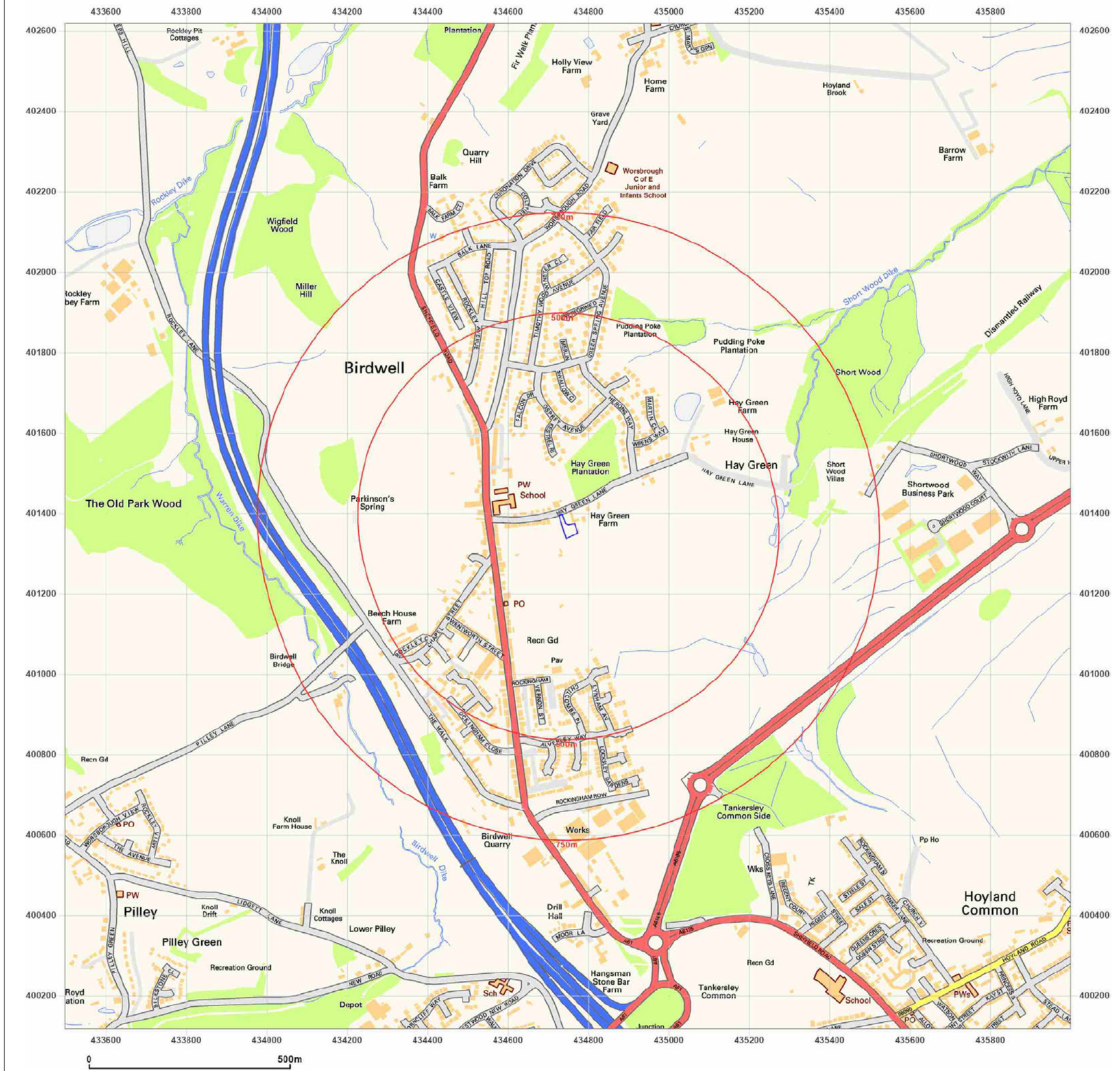

Groundsure INSIGHTS

Site Details:

LAND ADJACENT TO HEATHER COTTAGE, HAY GREEN LANE, BIRDWELL, BARNSLEY, S70 5XD

Client Ref: RBG469
Report Ref: GS-6QE-FE6-Z3K-B6J
Grid Ref: 434749, 401368

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: 04 July 2025

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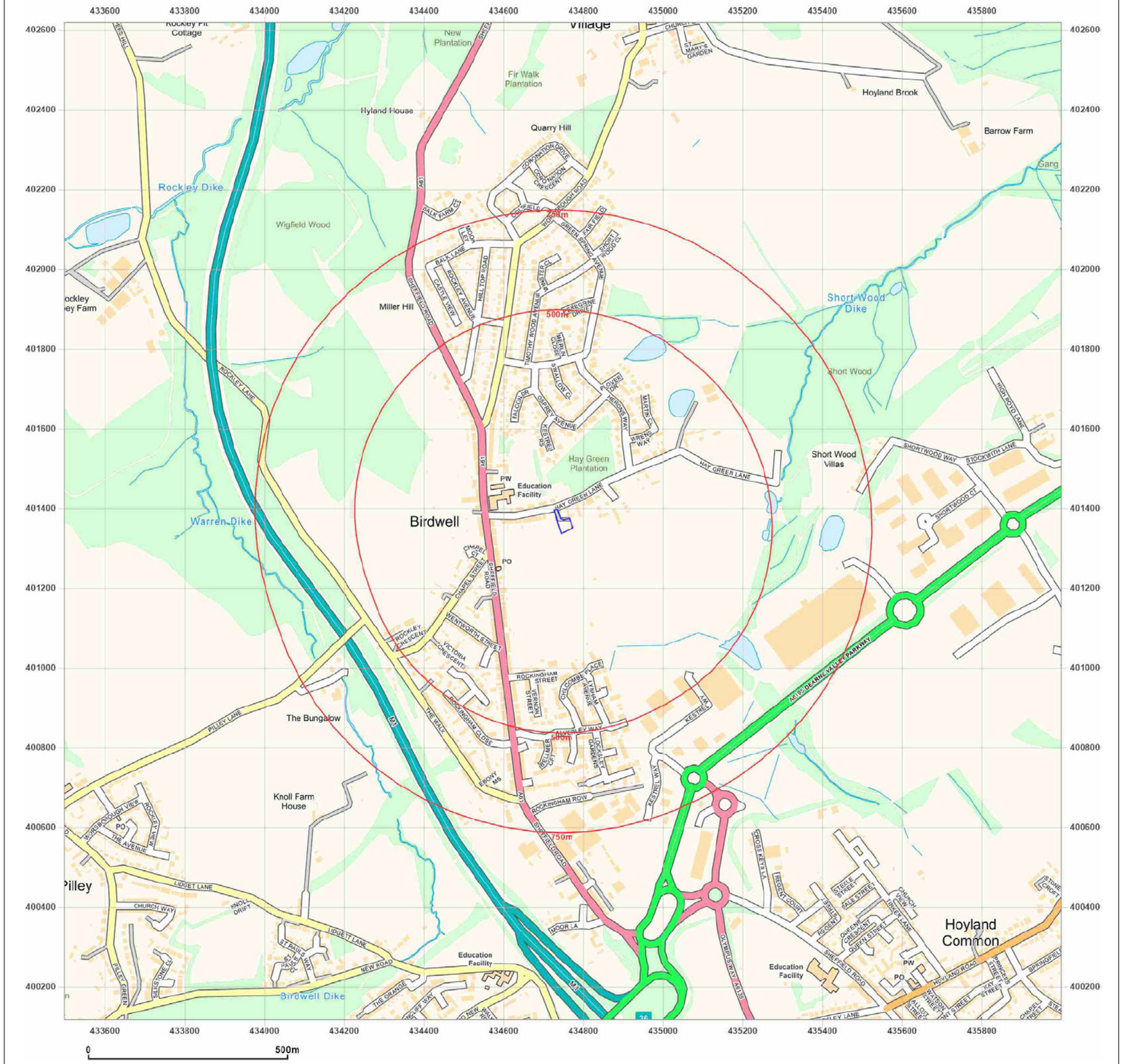

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Site Details:

LAND ADJACENT TO HEATHER COTTAGE, HAY GREEN LANE, BIRDWELL, BARNSLEY, S70 5XD

Client Ref: RBG469
Report Ref: GS-6QE-FE6-Z3K-B6J
Grid Ref: 434749, 401368

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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Production date: 04 July 2025

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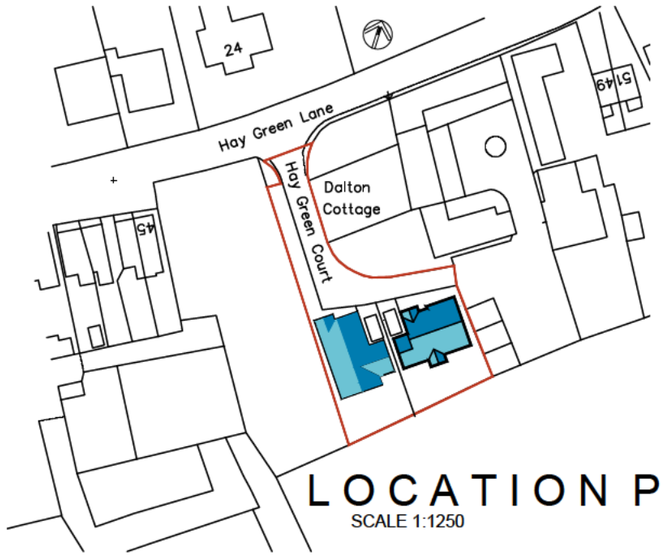
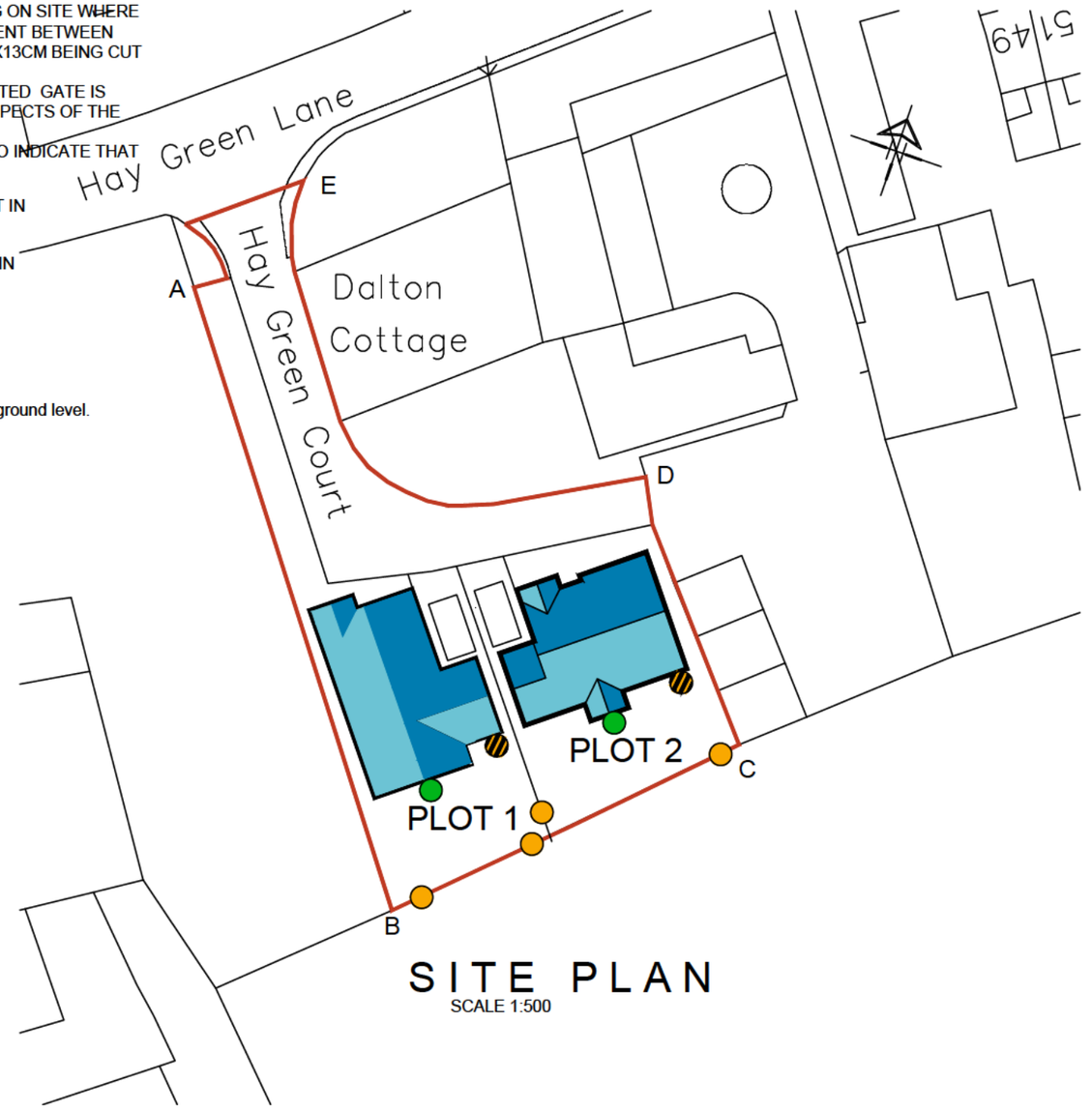
APPENDIX C – PROPOSED DEVELOPMENT PLAN



LOCATION PLAN
SCALE 1:1250

HEDGEHOG HIGHWAYS WILL BE INCLUDED WITHIN ALL FENCING ON SITE WHERE IT IS REASONABLY PRACTICABLE TO DO SO, TO ALLOW MOVEMENT BETWEEN GARDENS. THIS WILL ENTAIL A SMALL GAP APPROXIMATELY 13X13CM BEING CUT INTO EITHER THE BOTTOM OF THE FENCE .
ALL GATES WILL ALSO BE RAISED; THE MINIMUM SIZE FOR A LIFTED GATE IS 15CM. THIS WILL ENSURE THAT ACCESS CAN REMAIN TO ALL ASPECTS OF THE SITE.
EACH ACCESS WILL BE MARKED WITH AN APPROPRIATE SIGN TO INDICATE THAT IT NEEDS TO BE RETAINED AND UNOBSTRUCTED.

- HABIBAT 001 BAT BOX FOR BRICKWORK/STONEWORK BUILT IN BETWEEN 2500-5500MM ABOVE GROUND LEVEL. AS MANUFACTURERS RECOMMENDATIONS
- HABIBAT SWIFT BOX FOR BRICKWORK/STONEWORK BUILT IN BETWEEN 2500-5500MM ABOVE GROUND LEVEL AS MANUFACTURERS RECOMMENDATIONS
- HABIBAT HEDGHOW HIGHWAY TO BE INSTALLED WITH SUITABLE HOLES IN FENCE.
- HABIBAT BEE BRICK TO BE INSTALLED Boxes should be installed between 1000mm and 5500mm above ground level. AS MANUFACTURERS RECOMMENDATIONS



SITE PLAN
SCALE 1:500

METHOD STATEMENT - CONSTRUCTION OF NEW DWELLINGS AT HEY GREEN COURT, BIRDWELL, BARNSLEY

SECTION 1 - ACCESS TO SITE FOR CONSTRUCTION TRAFFIC:
Access to the site will be directly from Hey Green Court, a private drive leading from Hey Green Lane.

SECTION 2 - THE PARKING OF VEHICLES OF SITE OPERATIVES AND VISITORS
- Limited parking will be available within the curtilage of the site. If necessary, operatives and visitors will be directed to suitable 'on street' parking areas.

SECTION 3 - DEMARCATION OF THE SITE/SECURITY HOARDING
- The site area will be secured by a perimeter fence to prevent unauthorized access. Lockable gates to each site entrance to be secured at the end of each work day.

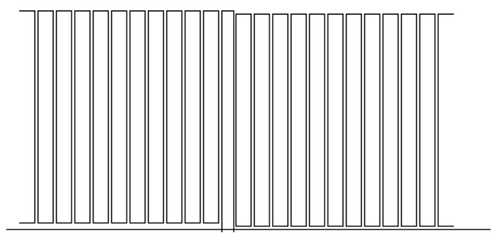
SECTION 4 - DELIVERIES TO SITE &THE LOADING AND UNLOADING OF PLANT & MATERIALS
- All deliveries to site shall be guided in by a banksman wearing a Hi Vis vest to ensure safe access on to site from the highway.
- Where possible all deliveries to be unloaded within the site.
- All deliveries leaving site shall be guided out by a banksman wearing a Hi Vis vest and ensuring safe departure paying attention to members of the public and other traffic.

SECTION 5 - MEASURES TO CONTROL DUST & DIRT
- During dry periods of weather the site will be monitored for high levels of dust and, if required, will be controlled using sprinkler/hose pipe systems.
- Any mud and dirt transferred onto the road will be brushed and cleaned off daily to ensure the surrounding roads are kept as clean as possible.
- The banksman escorting vehicles out of the site will do a visual check of the road and footpath for dirt and take action if required.
- The Builder will inspect all vehicles and wash off any mud / debris to ensure they are clean & safe before driving onto the public highway.

SECTION 6 - NOISE LEVELS DURING CONSTRUCTION
- Noise from plant will be kept to a minimum by using modern well maintained plant, incorporating appropriate silences etc.
- Site operatives will be reminded of the importance of being considerate to neighbouring properties and members of the public during the course of their work, keeping noise to a minimum.

SECTION 7 - NEIGHBOURING PROPERTIES
- The site foreman will liaise with neighbouring properties to ensure a good working relationship.

SECTION 8 - STORAGE OF MATERIALS & PLANT ON SITE
- Materials will be stored on site in a safe and tidy manner
- Plant will have a designated parking area.
- Waste materials will be removed to a skip and taken off site to keep the site safe and looking tidy.



SCREEN FENCE TYPE A

1800MMOR 2000MM HIGH AND STEPPED TO SUIT SITE CONTOURS
TIMBER POSTS 125X25MM DARK STAINED TIMBER, FEATHER EDGED

PROPOSED BOUNDARY TREATMENTS
A-B EXISTING HEDGE RETAINED
B-C FENCE TYPE A
C-D EXISTING BOUNDARY TREATMENTSAND GATES RETAINED OR REPLACE WITH FENCE TYPE A . ALL SUBJECT TO ADJOINING OWNERS PERMISSION
D-E EXISITNG BOUNDARY WALLS/FENCES AND HEDGES TO BE RETAINED
FENCING BETWEEN REAR GARDENS TO BE 1800MM HIGH TYPE A FENCE
NO BOUNDARY TREATMENT PROPOSED TO SITE FRONTAGE

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Project. RESIDENTIAL DEVELOPMENT AT HAY GREEN COURT, BIRDWELL, BARNSLEY		Client. MR DAVID CHAMBERS	
Drawing Title. SITE PLAN		Date. DEC 2014	Scale. 1:500 @ A3
		Ref. 24–151	Dwg. No. 01 / Rev. A

Date	Suffix	Description	Date	Suffix	Description
27-02-25	A	UPDATED FOR PLANNING APPLICATION			