Environmental Geotechnical Specialists

RGS

PHASE 1 ENVIRONMENTAL **DESK STUDY** & COAL MINING **RISK ASSESSMENT**

REPORT

job number	C3999/23/E/6054
date	11.04.2024
site address	Leak Hall Road, Denby Dale, Huddersfield, West Yorkshire, HD8 8QU
written by	S. Hale
checked by	R. Palmer
issued by	S. Hale

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Contents

Appendices	
1.	Site Plans
2.	Groundsure Reports
3.	Historical Maps
4.	Photographs
5	Consultants Coal Mining Report

Report on a Phase One Desk Study and Coal Mining Risk Assessment

Location:	Leak Hall Road Denby Dale, Huddersfield, West Yorkshire, HD8 8QU
For:	Fiona Willis
Consultant:	Robert Halstead Chartered Surveyors & Town Planners
Report No.	C3999/23/E/6054 Report date: April 2024

For and on behalf of **Rogers Geotechnical Services Ltd**

Steven Hale BSc FGS Geo-environmental Technician	**Rob Palmer** MSc FGS ACIEH Engineering Director

1. Introduction

The site is currently comprised of an open agricultural land. The site is approximately 0.39 hectares in size and its National Grid reference is centred around 422902 408836.

It is understood that the development proposals currently comprise the erection of between 10 and 15 residential dwellings with assumed driveways, access roads and soft landscaping. In order to assist with this decision-making process, and any planning and construction aspects of the development, a phase one environmental desk study has been commissioned and is the subject of this report.

In accordance with issued guidance, a site walkover was conducted on the 3rd April 2024 and the following observations were made:

General site description/current site use
The site is currently comprised of an overgrown and unmaintained field with a small disused structure to the northern side.

Site boundaries/access
The site is accessible from Leak Hall Lane to the north of the site. The remaining boundaries are surrounded by residential dwellings and gardens to the east, south east and north west with fields to the west and south west.

Topography
Topography slopes slightly downwards towards Leak Hall Crescent to the south east.

Surface cover of site
At the time of the walkover the surface of the site was covered in overgrown grass and brambles.

Visible evidence of contamination/ contaminative sources
None present.

Presence of vegetation and wildlife
Overgrown grass and brambles with some small trees.

Services
The status of underground services is unknown. Phone lines were noted to be present within the site at the time of the walkover.

Site neighbours
Residential dwellings and gardens are present to the east, south east and north west with fields to the west and south west.

In order to ensure that the site is fully characterised and to comply with the Environment Act 1995[1], a Phase One Desk Study and Coal Mining Risk Assessment has been commissioned by the consultant on behalf of Fiona Willis. The desk study is intended to assess the environmental impact of historical, current and future factors on the development. This report will present the data obtained and provide a conceptual ground model and preliminary risk assessment as well as discussing the scope of any intrusive investigation that may be required. This report does not consider ecological impacts (e.g. bats) or botanical risks (e.g. Japanese Knotweed).

2. Review and Summary of Published Data

As a part of this desk study the following data has been considered.

- Site Plans - Appendix 1
- Groundsure Reports - Appendix 2
- Historical maps - Appendix 3
- Photographs - Appendix 4
- Consultants Mining Report - Appendix 5

The data obtained from the above-mentioned sources has been summarised below[2].

[1]S57 of the Environment Act 1995 inserted the contaminated land regime into the Environmental Protection Act 1990 (Part 2A). The regime **'provides a risk-based approach to the identification and remediation of land where contamination poses an unacceptable risk to human health or the environment'** See http://www.environment-agency.gov.uk/research/planning/40405.aspx. This places a duty on local authorities to inspect their areas for contaminated land and require its remediation using the 'suitable for use' approach. Much of this duty is discharged via the planning regime under the Town and Country Planning Act 1990 as historical land contamination is a 'material planning consideration.' The local authorities are required to secure the removal of unacceptable risks via remediation of the land, to therefore ensure the site is suitable for its new use. This is fulfilled via completion of a Phase One Environmental Desk Study, Phase Two Intrusive Investigation, Phase Three Remediation Strategy and Phase Four Validation Report. Therefore, as a minimum, once a site has been developed it should not be capable of being designated as 'contaminated land' under Part 2A of the Environmental Protection Act 1990, as inserted by the Environment Act 1995 (see also PPS 23 Planning and Pollution Control Section 8)

[2] This report is a summary only and reference must be made in full to the information provided in the Groundsure Report.

2.1 Historical Land Use

Table 1: Historical Land Use[3]

HISTORICAL MAPPING SUMMARY		
Map Dates	**On site**	**Within 250m**
1854	The site appears to be comprised of a field of unknown use with a small structure present to the north side.	Residential dwellings – 10m N & NW Well – 10m SW
1891 – 1893	Site remains unchanged.	Reservoir – 245m S
1903 – 1906	Site remains unchanged.	Surrounding land use remains largely unchanged.
1929 – 1933	Site remains unchanged.	Well no longer appears. Spring – 5m S
1948 – 1955	Site remains unchanged.	Residential dwellings – 25m SE
1959 – 1967	Site remains unchanged.	Ground working – 125m W
1969 – 1970	Site remains unchanged.	Ground working is no longer present. Residential dwellings now present – 10m E Electrical Sub Station – 145m NE Reservoir located 245m S has been infilled.
1978 – 2003	Site remains unchanged.	Surrounding land use remains largely unchanged.
2010 – 2024	Small structure to the north of the site no longer appears on the map, however, it was noted to still be present during the walkover.	Surrounding land use remains largely unchanged.

NB. All distances given are approximate only.

2.2 Published Geology and Geological Hazards

Table 2: Geological Data for the Site

BGS MAPPING DATA			
Strata Type	**Strata Name[4]**	**Previous Name[4]**	**Description[5]**
Superficial Geology	None	-	None indicated.
Solid Geology	Penistone Flags	-	Named sandstone member of the Pennine Lower Coal Measures Formation.
	Pennine Lower Coal Measures Formation	Lower Coal Measures Formation	Interbedded grey mudstone, siltstone and pale grey sandstone, commonly with mudstones containing marine fossils in the lower part, and more numerous and thicker coal seams in the upper part.
GEOLOGICAL FEATURES			
Type	**Location**	**Features**	**Comments**
Mining Activity	On site	Coal mining	The study site is located within the specified search distance of an identified mining area.
Linear Features	8m S, 44m S & 167m S	Coal Seam	Anticipated to affect the proposed development

[3] See Appendix 3

[4] Sources: British Geological Survey (NERC) Map Sheets 86; Glossop; Solid and Drift Edition, and Geology of Britain Viewer [*online resource from www.bgs.ac.uk*]

[5] Sources: British Geological Survey (NERC) Lexicon of Named Rock Units [*online resource from www.bgs.ac.uk*]

Landslip Deposits	No data	No data	Not indicated to present on site or within the surrounding area.
BGS BOREHOLE DATA			
Reference[6]	**Location**	**Strata Description**	**Depth**
		None within 250m.	
NATURAL GROUND SUBSIDENCE & HAZARDS[7]			
Type		**Risk Rating**	
Potential for shrinking or swelling clay ground stability		Negligible.	
Potential for running sand ground stability		Negligible.	
Potential for compressible ground stability		Negligible.	
Potential for collapsible ground stability hazards		Very Low.	
Potential for landslide ground stability		Very Low.	
Potential for ground dissolution stability		Negligible.	
Radon		The property is in a lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). No radon protective measures are necessary.	

2.3 Construction Issues

2.3.1 Foundation Construction

On the basis of the prevailing geology and assuming no areas of significantly filled ground are be present, it is anticipated that a shallow foundation solution may be used at this site. It should be appreciated that an intrusive investigation will be required to validate this opinion.

2.3.2 Site Won Materials

It would appear that residual cohesive soil is likely to be encountered at shallow depth over much of the site. This material is likely to be relatively difficult to re-engineer as a construction material. However, depending on the results of laboratory testing, it may possible to modify/stabilise the soil using lime and/or cement to form a suitable sub-base replacement for pavements and hard standings.

2.3.3 Disposal of Site Materials

If made ground is present then contamination/WAC testing will be required to establish the nature of the underlying soil before disposal to a licensed landfill site. However, it is anticipated that the naturally occurring soils would not be significantly contaminated, thus would probably be accepted by a waste disposal site catering for inert material.

[6] http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html
[7] See Groundsure report

2.4. Coal Mining

The Groundsure Report states that the site is within an area that may be affected by coal mining. A Coal Authority Mining Report has therefore been obtained that is included in appendix 5 of this report and may be summarised as follows:

Table 3: Summary of the Consultant's Coal Mining Report

Has the report highlighted evidence or potential of:			
Ref	**Mining Feature**	**Yes/No**	**Comments**
1	Underground Coal Mining	No	-
2	Probable Unrecorded Shallow Workings	No	No further details given.
3	Spine Roadways at Shallow Depth	No	No spine roadway recorded at shallow depth.
4	Mine Entries	Yes	Two mine shafts located within the vicinity of the site that were located via trenching. Both mine shafts were recorded to have been discovered filled.
5	Abandoned mine plans	Yes	Plans of abandoned mine workings below the site are suggested to be available by the Coal Authority.
6	Outcrops	No	No outcrops recorded.
7	Geological Faults	No	No faults, fissures or breaklines recorded.
8	Opencast Mines	Yes	One unlicensed opencast site recorded approximately 400 metres south west of the site.
9	Coal Authority Managed Tips	No	None recorded within 500 metres of the enquiry boundary.
10	Site Investigations	Yes	One recorded 2.5 metres to the south west of the site.
11	Remediated Sites	No	None recorded within 50 metres of the enquiry boundary.
12	Coal Mining Subsidence	No	The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 metres of the enquiry boundary, since 31st October 1994. There is no current Stop Notice delaying the start of remedial works or repairs to the property. The Coal Authority is not aware of any request having been made to carry out preventive works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991.
13	Mine Gas	No	None recorded within 500 metres of the enquiry boundary.
14	Mine Water Treatment Schemes	No	None recorded within 500 metres of the enquiry boundary.
15	Future underground mining	No	For further information please see section 3 of the Consultant's Coal Mining Report (ref 51003414910001).
16	Coal mining licensing	No	
17	Court orders	No	
18	Section 46 notices	No	
19	Withdrawal of support notices	No	
20	Payments to owners of former copyhold land	No	

2.5 Waste Management and Gas Monitoring

Table 4: Landfill Data and Artificial Ground, Recorded and Anticipated			
ENVIRONMENT AGENCY, LOCAL AUTHORITY, BGS & HISTORIC LANDFILLS			
Waste Type	**Location**	**Comments**	**Monitoring Requirement**
Active Landfill	-	None recorded within 250m	-
Historic Landfill	-	None recorded within 250m	-
Historic waste sites	-	None recorded within 250m	-
Licenced waste sites	-	None recorded within 250m	-
Waste Exemptions	66m SE 188m SW 232m SE	Disposing of waste exemption Disposing of waste exemption Storing and treating waste exemptions	N
MADE GROUND & INFILLED GROUNDWORKINGS			
Description	**Location**	**Comments**	**Monitoring Requirement**
Records of Potentially Infilled Features	128m W	Unspecified Ground Workings	N
	138m SE	Refuse Heap	N
	151m S	Unspecified Pit	N
	156m S	Saw Pit	N
	245m S	Reservoir	N

2.6 Hydrogeology, Hydrology

Table 5: Ground/Controlled Water Sensitivity and Flooding		
ENVIRONMENT AGENCY AQUIFER DESIGNATION[8]		
Strata	**Designation**	**Description**
Solid Geology 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.
GROUNDWATER SENSITIVITY[9]		
Description	**Location**	**Details**
Source Protection Zone[10]	-	None recorded within 250m.
Abstraction Licences	-	None recorded within 250m.
Discharge Consents	-	None recorded within 250m.

[8] See Appendix 2

[9] See Appendix 2

Records of Part A(2) and Part B Activities and Enforcements	-	None recorded within 250m.
CONTROLLED WATERS[10]		
Description	**Location**	**Details**
River Network Entries	5m S 105m NE, 183m NE, 211m N & 214m N	Spring Pringle Dike
Surface Water Features	Within 25m	7 surface water features recorded within 250m of the site. No further details given.

2.7 Sensitive Land Use

Table 6: Sensitive Land Uses within 250m		
REGISTERED SENSITIVE LAND USES [11]		
Description	**Location**	**Details**
Green Belt	1m N	Kirklees
Nitrate Vulnerable Zones	On site	River Dearne NVZ

2.8 Industrial Land Use and Potential Sources of Contamination

In order for a conceptual site model and preliminary risk assessment to be completed the historical maps and Groundsure data requires analysis to identify any past or present activities on the site and in the area that may have the potential to cause contamination on the site. Guidance has been issued by the Environment Agency, NHBC and Chartered Institute of Environmental Health.[12] Within this document, annex 3 provides examples of important contaminants that are associated with individual uses of land. This data assists in the formulation of any chemical testing regime.

Those that we consider potentially contaminative according to the guidance are given below:

Table 7: Potentially Contaminative Sources		
HISTORICAL		
Land Use	**Location**	**Classification**
Ground Working Reservoir	125m W 245m S	Artificial/Made Ground
CURRENT		
Electrical Sub Station	145m NE	Unspecified works/factories/features.

[10] See Appendix 2

[11] See Appendix 2

[12] Guidance for the Safe Development of Housing on Land Affected by Contamination, R&D Publication 66: 2008 Volume 1 and 2.

3. Preliminary Qualitative Risk Assessment

The potential of contamination hazards on the land has been identified and the risks associated with them are assessed in the following preliminary risk assessment in accordance with industry practice and the 'suitable for use' approach. This has been conducted using the source-pathway-receptor approach. This method dictates that there must be a risk contaminant produced at a 'source' in sufficient concentration to cause harm and there must be a 'pathway' for the contaminant to reach an identifiable 'receptor' for the linkage to be proved and a contamination hazard to be considered present. Not all substances are contaminants and not all contaminants are considered to be a risk. Indeed DEFRA and The Environment Agency state that **'a contaminant is a substance which has the potential to cause harm, while a risk itself is considered to exist if such a substance is present in sufficient concentration to cause harm and a pathway exists for a receptor to be exposed to the substance.**'

R&D Publication 66: 2008 states that the groups at risk of harm (receptors) can be identified by the following categorisation:

1. Humans: site personnel, end users, visitors and adjacent land users.
2. The water environment – receptors: groundwater, surface water, coastal waters and artificial drainage.
3. Ecosystems: plants and animals.
4. Construction/building materials/services

In order to complete a conceptual site model and therefore a preliminary risk assessment, an appraisal of the sources of contamination, potential and actual, on and in the area of the site has therefore been completed with reference to this pollution linkage.[13]

3.1 Conceptual Ground Model & Preliminary Qualitative Risk Assessment

It is understood that the development proposals currently comprise the erection of between 10 and 15 residential dwellings. In view of the sensitivity of the end users it is considered that the soil screening values (SSVs) for a residential with plant uptake end use should be employed. The preliminary risk assessment has been evaluated with reference to the following ratings and definitions:

N/A - A source-pathway-receptor linkage is not considered to exist and therefore a risk assessment is not required.

Low - A pollution linkage is unlikely and/or the likelihood of harm occurring is low and of minor consequence.

Moderate - The linkage exists but further field or laboratory data is required to confirm that the contaminant has reached the receptor and the levels of contaminant are harmful.

High - The linkage exists and the available data indicates that significant harm may be caused and remedial action could be necessary.

[13]This assessment has been based on the information as to the proposed development that has been provided by the client. If the plans should change, the assessment should be re-evaluated.

Table 8: Conceptual Site Model and Preliminary Qualitative Risk Assessment				
CONCEPTUAL SITE MODEL			**PRELIMINARY RISK ASSESSMENT**	
Pathways	**Receptor**	**Linkage Present?**	**Risk Rating**	**Notes**
Direct contact/dermal absorption/soil ingestion	Operative	Yes – operatives and end users are likely to come in contact with the soil, however, limited sources of contamination have been identified.	Low	Should evidence of contamination be observed on site, then testing may be required to reach a firm conclusion.
	End User		Low	
	Neighbours	Yes – immediate neighbours are present, however, limited sources of contamination have been identified.	Low	
Inhalation of Dust/Vapours	Operative	Yes – contact with soil likely during works, however, limited sources of contamination have been identified.	Low	Should evidence of contamination be observed on site, then testing may be required to reach a firm conclusion.
	End User	Yes – dust may be produced by the end users, however, limited sources of contamination have been identified.	Low	
	Neighbours	Yes – neighbouring properties present and possible inhalation of dust during the works, however, limited sources of contamination have been identified.	Low	
Ingestion of fruit/vegetables and/or waters	Operative	No – no edible plants or contained water sources in the area of the proposed new works.	N/A	Should evidence of contamination be observed on site, then testing may be required to reach a firm conclusion.
	End User	Yes – soft landscaping likely to be proposed as part of the new development, however, limited sources of contamination have been identified.	Low	
	Neighbours	Yes – limited sources of contamination have been identified.	Low	
Migration of hazardous gases via permeable strata	Operative	Yes – shallow coal workings are unlikely present beneath the site and limited sources of gas are present.	Low	Should a significant thickness of organic or made ground be uncovered then a programme of monitoring is recommended but is suggested to be limited to four readings over one month in the first instance.
	End User		Low	
	Neighbours	Yes – immediate neighbours are present. However, there are limited sources of gas present to the site.	Low	

Spillage/loss/run off direct to receiving water	Controlled Waters	Yes – receiving waters are present within 250m, however, limited sources of contamination have been identified.	Low	Receiving waters within 250m and a Secondary A aquifer underlies the site. Should evidence of contamination be observed on site, then testing may be required to reach a firm conclusion.
Migration via permeable unsaturated strata	Controlled Waters	Yes – there is a Secondary A aquifer beneath the site, however, limited sources of contamination have been identified.	Low	
Run off via drainage/sewers etc	Controlled Waters	Yes – limited sources of contamination have been identified.	Low	
Direct contact with contaminated soils	Plants	Yes – some soft landscaping areas are likely to be present as part of the proposed development.	Low	Should evidence of contamination be observed on site, then testing may be required to reach a firm conclusion.
Uptake via root system			Low	
Direct contact with contaminated soils	Building Materials	Yes – limited sources of contamination have been identified.	Low	Should evidence of contamination be observed on site, then testing may be required to reach a firm conclusion.
Direct contact with contaminated groundwater				
Migration of mine gas via permeable strata	Operative	Yes – in an area affected by coal mining activity, however, shallow worked seams are unlikely to be present.	Low	No further action required. Refer to Section 4 below.
	End User			
Exposure to Radon	Operative	No – not in a radon affected area.	N/A	The property is in a lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). BR211 states that no radon protective measures are necessary.
	End User			
Mining Instability	End User	Yes – in an area affected by coal mining activity, however, shallow worked seams are unlikely to be present.	Low	Please see section 4 for further information.
Unexploded Ordinance (UXO) Risk	Operative	Yes – the Zetica[14] online maps indicate that the site is at low risk from UXO.	Low	Unlikely to be affected by UXO.

[14] Pre-desk study assessment [*online resource from www.zeticauxo.com*].

Notes:

1. The above data and table is a qualitative assessment of the probable risks identified at this site, based on the information made available to us from the client, third party professional data and walkover survey.

2. Should any additional or new data come to light, the risk assessment should be revisited and any necessary changes made to any recommendations resulting from this study.

3. Where further testing is recommended as part of the risk assessment, this is in order to provide a quantitative assessment of any contamination issues. It should at all times be considered that uncertainties may remain, and therefore any testing regime and ground investigation philosophy should be ready to accommodate any necessary alterations should any data come to light or it become evident that it has not been previously considered.

4. Coal Mining Risk Assessment

4.1 Geological Appraisal

On the basis of the information revealed from the Geology of Britain Viewer, it is noted that the site is situated within the Penistone Flags named sandstone member of the Pennine Lower Coal Measures Formation. The regional solid geology shows a degree of dip towards the south of 10°.

There are two notable coal seams that are shown to outcrop within the local area. Information regarding these seams are summarised as follows. Additionally, a coal seam that is not indicated to outcrop but is anticipated beneath the site is also summarised:

Table 9: Summary of Coal Seams Within the Vicinity of the Site

Seam Name	Seam thickness	Outcrop distance from site	Anticipated depth below site
Whinmoor (Cumberworth Thick) Coal	1.3m	20m SW	Not anticipated to underlie the site.
Cumberworth Thin	0 – 0.4m	50m SW	Not anticipated to underlie the site.
Penistone Green Coal	0 – 0.1m	Does not outcrop within the vicinity of the site.	Approximately 40m

In this instance, it is expected that due to the dip angle and topography of the site, the Whinmoor (Cumberworth Thick) Coal and Cumberworth Thin will have been weathered out across the site. As such, the Whinmoor (Cumberworth Thick) Coal and Cumberworth Thin seams are noted to approximately outcrop at 183m and 177m Above Ordnance Datum (AOD) respectively. It should be appreciated that the site itself lies consistently at around 177m AOD. These figures allow for the use of the Generalised Vertical Section (GSV) to approximate the depth of the next coal seam. Stratigraphically, the next seam within the sequence is the Penistone Green Coal which should be present approximately 40m below the Cumberworth Thin.

4.2 Risk Assessment

The risk to the stability of the proposed residential development has been evaluated from the data obtained and with reference to the following ratings and definitions:

Low - The possibility of instability is unlikely therefore no further action is necessary.

Moderate - The possibility of instability is likely and further investigation or remedial action may be required.

High - The possibility of instability is highly likely and further investigation or remedial action will be necessary.

Table 10: Development Specific Risk Assessment			
Item	**Risk attributed to**	**Coal Seam(s) Considered**	**Risk Rating**
4.3	Shallow coal workings	Penistone Green Coal	Low
4.4	Coal workings at depth	The Coal Authority report indicates that the property is not within a surface area that could affected by past underground mining.	Low
4.5	Mine gas	Shallow coal workings are not expected to be present.	Low
4.6	Mine shafts	Two shafts identified by the Consultant Coal Mining Report.	Low

4.3 Risks Posed by Shallow Coal Workings

On the basis of all of the information provided above, the Penistone Green Coal could be present over 30m below the surface at the site. Additionally, this seam is noted to be of limited thickness meaning it would not be economical to extract at its present depth. Despite the evidence, should workings be present within this seam then guidance available from both the NHBC and the CIRIA publication, SP32 - *construction over abandoned mine workings,* suggests that competent overburden thickness above a coal seam should be greater than 10 times the thickness of a seam plus seam thickness in order that the collapse of workings would pose a low risk to surface structures.

On this basis, assuming a maximum thickness of the coal seams, the table below suggests the thickness of competent overburden required above the seam to mitigate instability at the surface.

Table 11: Required Thickness of Competent Overburden			
Seam Name	**Seam thickness**	**Anticipated depth below site**	**Required thickness of competent overburden**
Penistone Green Coal	0 – 0.1m	Approximately 40m	1.1m

Due to the thin nature of the seam and its apparent depth, it is highly unlikely that this seam would have been worked. Therefore, a low risk rating has been assigned to this seam, and further investigation is not required.

4.4 Risks Posed by Coal Workings at Depth

In regard to deeper mining which could affect the site, the property is not identified by the Coal Authority to be within a surface area that could be affected by past underground mining.

4.5 Risks Posed by Mine Gas

This assessment has identified that it is unlikely that there is potential for shallow mine workings to be present beneath the proposed development. The Consultants Coal Mining Report has not reported any incidents of mine gas within the vicinity of the development also. As such, a low risk rating has been assigned.

4.6 Risks Posed by Mine Shafts

The Consultants Coal Mining Report makes reference to two shafts within close proximity to the site (~50m S, and ~100m SE).

In the context of the guidance given by CIRIA SP32 – *Construction over abandoned mine workings* it should be appreciated that the minimum distance for siting structures from open or poorly filled shafts depends primarily on the nature and thickness of the surface deposits. This would presumably be on the basis that a significant ground collapse within intact rock would be improbable, therefore the crater associated with a collapse shaft would be located within the soils above the rock.

It is reasoned that due to these shafts being found to be filled and that there is sufficient standoff distance between the development and the shafts, such that the risks posed by shaft collapse can be considered low.

5. Intrusive Investigation

5.1 Site Investigation Philosophy

The information from the Phase 1 Desk Study shows that there limited possible sources of contamination on the site and in the surrounding area. In view of the above, it is not considered necessary to undertake an intrusive *geo-environmental* investigation. However, it is recommended that a geotechnical ground investigation be completed in order to obtain geotechnical information, as this will facilitate the safe design of the foundations for the proposed development.

It is also incumbent upon the developer to carefully inspect any exposed soil during the ground-works phase of the contract. Should any contamination become evident or organic made ground be revealed, it is recommended that a pragmatic approach be adopted, with observational techniques being employed at each stage of the work. In the unlikely event that contamination is revealed, work should stop in the affected area and chemical testing be undertaken to evaluate the risk of harm to the receptors. In the event that this occurs it is recommended that the following testing regime be implemented on soil samples:

- **Metals** – Cd, Cr, Cu, Hg, Ni, Pb, Zn, V.
- **Semi Metals and Non Metals** – As, Se, Free Cyanide and Phenols.
- **Hydrocarbons –** Polycyclic aromatic hydrocarbons (PAH's) 16 EPA, Total petroleum hydrocarbons (TPH CWG)
- **Others** – pH, Organic Content.

5.2 Geotechnical Assessment

It is recommended that a site investigation is undertaken to aid in foundation design. A site investigation report can often to be required by planning authorities and insurance providers in order to finalise designs. The following investigation strategy could be considered:

Sampling Method

It is anticipated that a windowless sampling drilling rig will be able to gain sufficient data in regard to the near surface soils. Such equipment should be able to undertake Standard Penetration Testing (SPT) and/or Dynamic Probing.

Soakaway Design

Should soakaway data be required for drainage design, trialpits could be excavated and infiltration tests conducted. Alternatively, these tests could be undertaken within boreholes.

Geotechnical Testing

An allowance for geotechnical testing of the soils and rock should be included in any ground investigation.

CBR Testing

Insitu CBR testing could be undertaken in order to provide parameters for pavement design.

As soon is as practicable, and prior to the above, this Phase 1 report should be forwarded to the relevant authorities, in order to ensure they have sufficient time to review and discuss any issues.

6. References

- British Standards Institution (2015 + A1: 2020), BS 5930: *Code of practice for ground investigations*, B.S.I., London.
- British Standards Institution (2011) +A1:2013, BS 10175: *Investigation of potentially contaminated sites – Code of Practice,* British Standards Institute.
- British Standards Institution (2013), BS 8576 Guidance on Investigations for Ground Gas – Permanent Gases and Volatile Organic Compounds.
- Department for Environment, Food and Rural Affairs and the Environment Agency, DEFRA R&D Publications, Environment Agency, Bristol.
- CLR 2, 1994, *Guidance on preliminary site inspection of contaminated land*, Volume 1.
- CLR 4, 1994, *Sampling Strategies for contaminated land*.
- R&D Publication 66: 2008 Guidance for the Safe Development of Housing on Land Affected by Contamination.
- CIRIA Report C665 (2007), Assessing risks posed by ground gasses in buildings.
- The Environment Agency: Groundwater source protection.

Appendix 1

Site Plans


Leak Hall Ln
Leak Hall Ln
Leak Hall Ln
Leak Hall
Hillside
Hillside
Hillside
Leak Hall Cres
Sapphire Blinds
Blinds shop
18
20
27
25
23
19
17
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5A
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Appendix 2

Groundsure Reports

Groundsure LOCATION INTELLIGENCE

Enviro+Geo Insight

LEAK HALL LANE, DENBY DALE, HUDDERSFIELD, HD8 8QU

Order Details

Date: 02/04/2024

Your ref: C3999_23_E_6054_PO-2937

Our Ref: GS-IM1-H9O-29R-M52

Site Details

Location: 422902 408836

Area: 0.39 ha

Authority: Kirklees 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	11	72	-
19 >	1.2 >	Historical tanks >	0	0	1	13	-
19 >	1.3 >	Historical energy features >	0	0	4	10	-
20	1.4	Historical petrol stations	0	0	0	0	-
21 >	1.5 >	Historical garages >	0	0	0	1	-
21	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
22 >	2.1 >	Historical industrial land uses >	0	0	14	92	-
26 >	2.2 >	Historical tanks >	0	0	2	26	-
28 >	2.3 >	Historical energy features >	0	0	8	23	-
29	2.4	Historical petrol stations	0	0	0	0	-
29 >	2.5 >	Historical garages >	0	0	0	4	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
30	3.1	Active or recent landfill	0	0	0	0	-
30	3.2	Historical landfill (BGS records)	0	0	0	0	-
31	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
31 >	3.4 >	Historical landfill (EA/NRW records) >	0	0	0	2	-
31	3.5	Historical waste sites	0	0	0	0	-
32	3.6	Licensed waste sites	0	0	0	0	-
32 >	3.7 >	Waste exemptions >	0	0	10	11	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
35 >	4.1 >	Recent industrial land uses >	0	0	2	-	-
36 >	4.2 >	Current or recent petrol stations >	0	0	0	1	-
36	4.3	Electricity cables	0	0	0	0	-
36	4.4	Gas pipelines	0	0	0	0	-
36	4.5	Sites determined as Contaminated Land	0	0	0	0	-

36	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
37	4.7	Regulated explosive sites	0	0	0	0	-
37	4.8	Hazardous substance storage/usage	0	0	0	0	-
37	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
37	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
37 >	**4.11 >**	**Licensed pollutant release (Part A(2)/B) >**	0	0	0	2	-
38	4.12	Radioactive Substance Authorisations	0	0	0	0	-
38 >	**4.13 >**	**Licensed Discharges to controlled waters >**	0	0	0	1	-
38	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
39	4.15	Pollutant release to public sewer	0	0	0	0	-
39	4.16	List 1 Dangerous Substances	0	0	0	0	-
39	4.17	List 2 Dangerous Substances	0	0	0	0	-
39 >	**4.18 >**	**Pollution Incidents (EA/NRW) >**	0	0	1	3	-
40	4.19	Pollution inventory substances	0	0	0	0	-
40	4.20	Pollution inventory waste transfers	0	0	0	0	-
40	4.21	Pollution inventory radioactive waste	0	0	0	0	-

Page	Section	**Hydrogeology >**	On site	0-50m	50-250m	250-500m	500-2000m
41 >	**5.1 >**	**Superficial aquifer >**	Identified (within 500m)				
42 >	**5.2 >**	**Bedrock aquifer >**	Identified (within 500m)				
43 >	**5.3 >**	**Groundwater vulnerability >**	Identified (within 50m)				
44	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
44	5.5	Groundwater vulnerability- local information	None (within 0m)				
45 >	**5.6 >**	**Groundwater abstractions >**	0	0	0	0	12
48 >	**5.7 >**	**Surface water abstractions >**	0	0	0	0	8
51	5.8	Potable abstractions	0	0	0	0	0
51	5.9	Source Protection Zones	0	0	0	0	-
51	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

Page	Section	**Hydrology >**	On site	0-50m	50-250m	250-500m	500-2000m
52 >	**6.1 >**	**Water Network (OS MasterMap) >**	0	2	4	-	-

53 >	6.2 >	Surface water features >	0	2	5	-	-
53 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
54 >	6.4 >	WFD Surface water bodies >	0	0	0	-	-
54 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-

Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
55	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
55	7.2	Historical Flood Events	0	0	0	-	-
55	7.3	Flood Defences	0	0	0	-	-
56	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
56	7.5	Flood Storage Areas	0	0	0	-	-
57	7.6	Flood Zone 2	None (within 50m)				
57	7.7	Flood Zone 3	None (within 50m)				

Page	Section	Surface water flooding >	
58 >	8.1 >	Surface water flooding >	1 in 30 year, 0.3m - 1.0m (within 50m)

Page	Section	Groundwater flooding >	
60 >	9.1 >	Groundwater flooding >	Negligible (within 50m)

Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
61	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
62	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
62	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
62	10.4	Special Protection Areas (SPA)	0	0	0	0	0
62	10.5	National Nature Reserves (NNR)	0	0	0	0	0
63	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
63 >	10.7 >	Designated Ancient Woodland >	0	0	1	0	9
64	10.8	Biosphere Reserves	0	0	0	0	0
64	10.9	Forest Parks	0	0	0	0	0
64	10.10	Marine Conservation Zones	0	0	0	0	0
64 >	10.11 >	Green Belt >	0	1	0	0	2
65	10.12	Proposed Ramsar sites	0	0	0	0	0

65	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
65	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
65	10.15	Nitrate Sensitive Areas	0	0	0	0	0
66 >	10.16 >	Nitrate Vulnerable Zones >	1	0	0	0	1
67 >	10.17 >	SSSI Impact Risk Zones >	1	-	-	-	-
68	10.18	SSSI Units	0	0	0	0	0
Page	Section	**Visual and cultural designations >**	On site	0-50m	50-250m	250-500m	500-2000m
69	11.1	World Heritage Sites	0	0	0	-	-
70	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
70	11.3	National Parks	0	0	0	-	-
70 >	11.4 >	Listed Buildings >	0	0	1	-	-
71	11.5	Conservation Areas	0	0	0	-	-
71	11.6	Scheduled Ancient Monuments	0	0	0	-	-
71	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	**Agricultural designations >**	On site	0-50m	50-250m	250-500m	500-2000m
72 >	12.1 >	Agricultural Land Classification >	Grade 4 (within 250m)				
73	12.2	Open Access Land	0	0	0	-	-
73 >	12.3 >	Tree Felling Licences >	0	0	1	-	-
73	12.4	Environmental Stewardship Schemes	0	0	0	-	-
73 >	12.5 >	Countryside Stewardship Schemes >	0	1	0	-	-
Page	Section	**Habitat designations >**	On site	0-50m	50-250m	250-500m	500-2000m
75 >	13.1 >	Priority Habitat Inventory >	0	0	3	-	-
76	13.2	Habitat Networks	0	0	0	-	-
76	13.3	Open Mosaic Habitat	0	0	0	-	-
76	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
77 >	14.1 >	10k Availability >	Identified (within 500m)				
78 >	14.2 >	Artificial and made ground (10k) >	0	0	0	5	-
80 >	14.3 >	Superficial geology (10k) >	0	0	0	2	-

81	14.4	Landslip (10k)	0	0	0	0	-
82 >	14.5 >	Bedrock geology (10k) >	1	2	2	4	-
83 >	14.6 >	Bedrock faults and other linear features (10k) >	0	2	2	9	-
Page	Section	Geology 1:50,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
85 >	15.1 >	50k Availability >	Identified (within 500m)				
86 >	15.2 >	Artificial and made ground (50k) >	0	0	0	1	-
87	15.3	Artificial ground permeability (50k)	0	0	-	-	-
88 >	15.4 >	Superficial geology (50k) >	0	0	0	2	-
89	15.5	Superficial permeability (50k)	None (within 50m)				
89	15.6	Landslip (50k)	0	0	0	0	-
89	15.7	Landslip permeability (50k)	None (within 50m)				
90 >	15.8 >	Bedrock geology (50k) >	1	2	2	2	-
91 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
91 >	15.10 >	Bedrock faults and other linear features (50k) >	0	2	2	9	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
93	16.1	BGS Boreholes	0	0	0	-	-
Page	Section	Natural ground subsidence >					
94 >	17.1 >	Shrink swell clays >	Very low (within 50m)				
96 >	17.2 >	Running sands >	Negligible (within 50m)				
97 >	17.3 >	Compressible deposits >	Negligible (within 50m)				
98 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
99 >	17.5 >	Landslides >	Very low (within 50m)				
100 >	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
102 >	18.1 >	BritPits >	0	0	0	2	-
103 >	18.2 >	Surface ground workings >	0	0	14	-	-
104 >	18.3 >	Underground workings >	0	0	0	1	10
104	18.4	Underground mining extents	0	0	0	0	-
105 >	18.5 >	Historical Mineral Planning Areas >	0	0	1	2	-

105 >	18.6 >	Non-coal mining >	0	0	0	0	1
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 >	2	1	3	1	-
107 >	18.10 >	Mining record office plans >	0	1	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)				
108	18.14	Gypsum areas	None (within 0m)				
108	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	-
110 >	19.2 >	Mining cavities >	0	0	1	0	2
110	19.3	Reported recent incidents	0	0	0	0	-
110	19.4	Historical incidents	0	0	0	0	-
111	19.5	National karst database	0	0	0	0	-
Page	Section	Radon >					
112 >	20.1 >	Radon >	Less than 1% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
114 >	21.1 >	BGS Estimated Background Soil Chemistry >	2	1	-	-	-
114	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 1	0	0	0	0	-
116	22.9	Crossrail 2	0	0	0	0	-
116	22.10	HS2	0	0	0	0	-

Recent aerial photograph

Capture Date: 30/05/2021

Site Area: 0.39ha

Recent site history - 2018 aerial photograph

Capture Date: 29/06/2018

Site Area: 0.39ha

Recent site history - 2012 aerial photograph

Capture Date: 26/03/2012

Site Area: 0.39ha

Recent site history - 2000 aerial photograph

Capture Date: 21/09/2000

Site Area: 0.39ha

Recent site history - 1999 aerial photograph

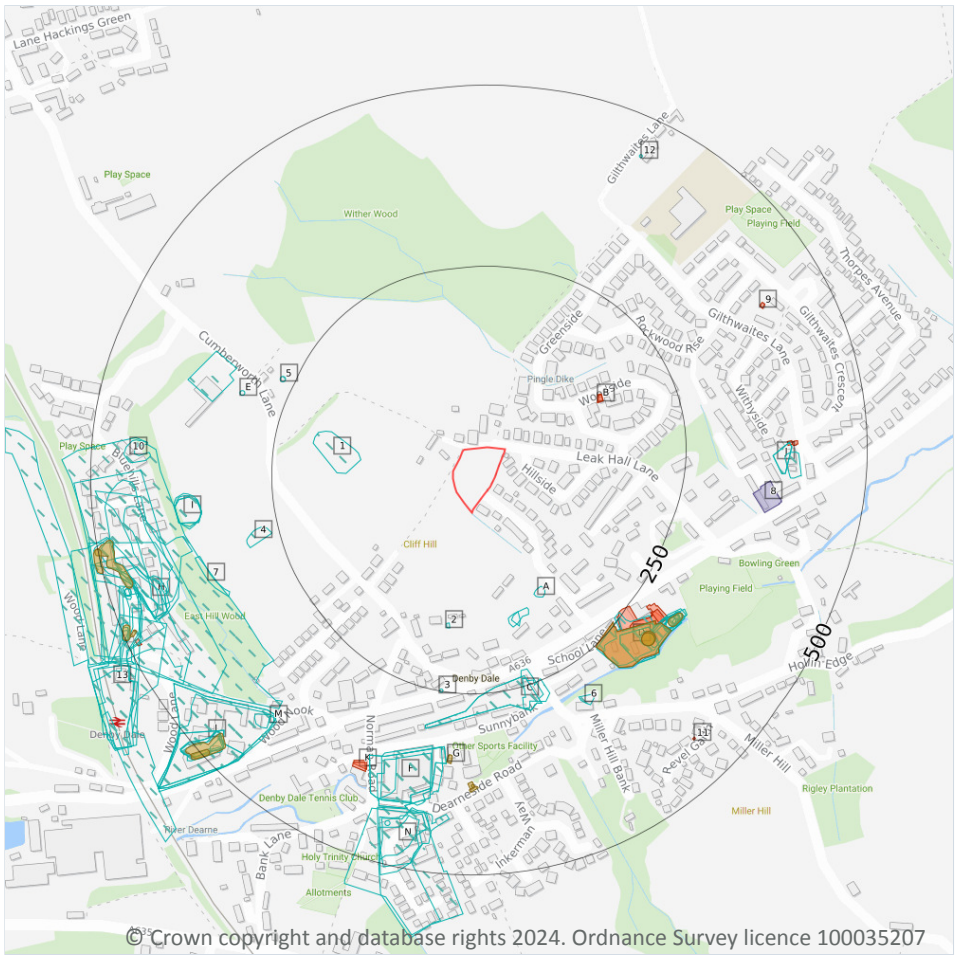
Capture Date: 10/07/1999

Site Area: 0.39ha

OS MasterMap site plan

Site Area: 0.39ha

1 Past land use



Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

Historical energy features

Historical garages

1.1 Historical industrial land uses

Records within 500m	83

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	128m W	Unspecified Ground Workings	1967	1412229

ID	Location	Land use	Dates present	Group ID
A	138m SE	Refuse Heap	1932	1510445
A	151m S	Unspecified Pit	1951	1552077
A	151m S	Unspecified Pit	1932	1551022
2	156m S	Saw Pit	1850	1440475
C	228m S	Unspecified Mills	1891 - 1904	1521512
C	236m S	Unspecified Commercial/Industrial	1948	1410998
C	239m S	Corn Mill	1850	1433093
D	244m SE	Dye Works	1891	1442657
3	247m S	Unspecified Pump	1850	1456506
D	249m SE	Unspecified Depot	1967	1428480
4	260m W	Coal Pit	1850	1420007
5	263m NW	Unspecified Pump	1850	1456505
D	265m SE	Unspecified Commercial/Industrial	1948	1476894
D	265m SE	Gas Works	1891 - 1904	1539695
D	288m SE	Unspecified Tank	1967 - 1983	1555330
6	294m SE	Unspecified Ground Workings	1951	1412228
D	296m SE	Unspecified Commercial/Industrial	1932	1549326
D	299m SE	Unspecified Commercial/Industrial	1951	1458815
D	302m SE	Unspecified Tanks	1932	1514688
D	304m SE	Unspecified Tanks	1967	1544781
D	304m SE	Unspecified Tanks	1951	1479008
D	305m SE	Gasometer	1891 - 1904	1485757
D	307m SE	Unspecified Tanks	1948	1545743
E	307m W	Unspecified Old Shaft	1903	1418298
D	309m SE	Gasometer	1891	1420670
D	312m SE	Unspecified Tank	1904	1433382
F	325m S	Unspecified Commercial/Industrial	1983	1411009
F	325m S	Unspecified Mill	1951 - 1967	1504874

ID	Location	Land use	Dates present	Group ID
F	326m S	Unspecified Mill	1904 - 1932	1483616
F	327m S	Unspecified Mill	1891	1546149
E	328m W	Unspecified Works	1967 - 1983	1472213
F	337m S	Unspecified Mill	1948	1542037
H	340m SW	Unspecified Works	1967 - 1983	1499052
7	342m SW	Unspecified Ground Workings	1951	1412230
I	350m W	Unspecified Pit	1948	1463220
I	350m W	Unspecified Pit	1891 - 1903	1511805
I	351m W	Unspecified Pit	1933	1553337
I	351m W	Unspecified Heap	1951	1415163
J	370m E	Unspecified Quarry	1948	1428019
J	370m E	Unspecified Old Quarry	1904	1440830
H	373m W	Unspecified Disused Tip	1983	1420093
J	387m E	Sandstone Quarry	1850	1451558
L	389m SW	Brick Works	1951	1513243
L	389m SW	Unspecified Works	1967 - 1983	1531324
H	391m SW	Unspecified Works	1948 - 1951	1518199
L	391m SW	Brick Works	1933	1463867
M	393m SW	Smithy	1850	1456937
M	393m SW	Unspecified Pit	1891	1451879
H	402m W	Refuse Heap	1967	1516697
H	405m W	Unspecified Works	1933	1461078
N	415m S	Unspecified Mill	1891	1535002
N	418m S	Unspecified Mill	1932	1547727
10	418m W	Refuse Heap	1967	1436620
N	418m S	Unspecified Mill	1951 - 1983	1475632
H	420m W	Refuse Heap	1951	1525488
H	422m W	Sand Pit	1948	1411140

ID	Location	Land use	Dates present	Group ID
N	422m S	Unspecified Mill	1948	1494328
H	427m W	Refuse Heap	1933	1536417
N	427m S	Unspecified Mill	1904	1478542
H	428m SW	Unspecified Works	1903	1554638
H	439m SW	Railway Sidings	1967	1501364
N	441m S	Unspecified Tank	1948	1433378
H	441m W	Refuse Heap	1903	1556454
12	444m NE	Unspecified Pump	1850	1456504
L	455m SW	Brick Works	1948	1461444
L	455m SW	Brick Works	1903	1509723
H	459m W	Railway Sidings	1948	1549692
H	460m W	Railway Sidings	1903	1504909
L	461m SW	Unspecified Tanks	1951	1477855
L	461m SW	Unspecified Tanks	1967	1501625
H	462m W	Unspecified Tanks	1967 - 1983	1491199
L	463m SW	Unspecified Tanks	1948	1529945
13	463m W	Railway Sidings	1951	1501061
H	464m W	Railway Sidings	1933	1535974
L	465m SW	Unspecified Tanks	1933	1556367
H	470m W	Unspecified Tank	1951	1497731
H	470m W	Unspecified Tank	1933 - 1948	1503401
H	471m W	Unspecified Tanks	1903	1425800
L	487m SW	Unspecified Tanks	1891 - 1903	1541980
H	488m SW	Unspecified Tanks	1967 - 1983	1498008
H	491m SW	Unspecified Tanks	1948 - 1951	1518142
H	492m SW	Unspecified Tanks	1933	1507903

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m	14

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'.

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

ID	Location	Land use	Dates present	Group ID
D	246m SE	Gasholder Station	1970 - 1979	237632
D	290m SE	Gasholder	1970 - 1979	237682
D	290m SE	Unspecified Tank	1959	223450
D	307m SE	Tanks	1959	230456
G	335m S	Unspecified Tank	1958 - 1971	246657
G	371m S	Unspecified Tank	1970 - 1971	246301
G	375m S	Unspecified Tank	1995	243620
G	378m S	Unspecified Tank	1958 - 1988	240317
L	460m SW	Tanks	1959	230459
H	464m W	Tanks	1959	235533
H	482m SW	Unspecified Tank	1958 - 1988	236583
H	487m SW	Tanks	1959	230457
L	490m SW	Unspecified Tanks	1891	233083
H	496m W	Tanks	1958 - 1988	239323

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m	14

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	143m NE	Electricity Substation	1970 - 1996	135422
B	144m NE	Electricity Substation	1979	143814
D	245m SE	Gas Works Yard	1979 - 1994	140137
D	246m SE	Gasholder Station	1970 - 1979	138565
D	268m SE	Gas Works Yard	1970	146760
D	283m SE	Gas Governor	1994 - 1996	135539
D	290m SE	Gasholder	1970 - 1979	135320
K	371m S	Electricity Substation	1995	141216
K	375m S	Electricity Substation	1958 - 1988	140533
J	390m E	Electricity Substation	1994 - 1996	141336
J	397m E	Electricity Substation	1970 - 1979	143539
9	403m NE	Electricity Substation	1969 - 1993	144688
11	436m SE	Electricity Substation	1996	129065
H	483m SW	Electricity Substation	1958 - 1988	138596

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	1

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
8	348m E	Garage	1970 - 1996	44915

This data is sourced from Ordnance Survey / Groundsure.

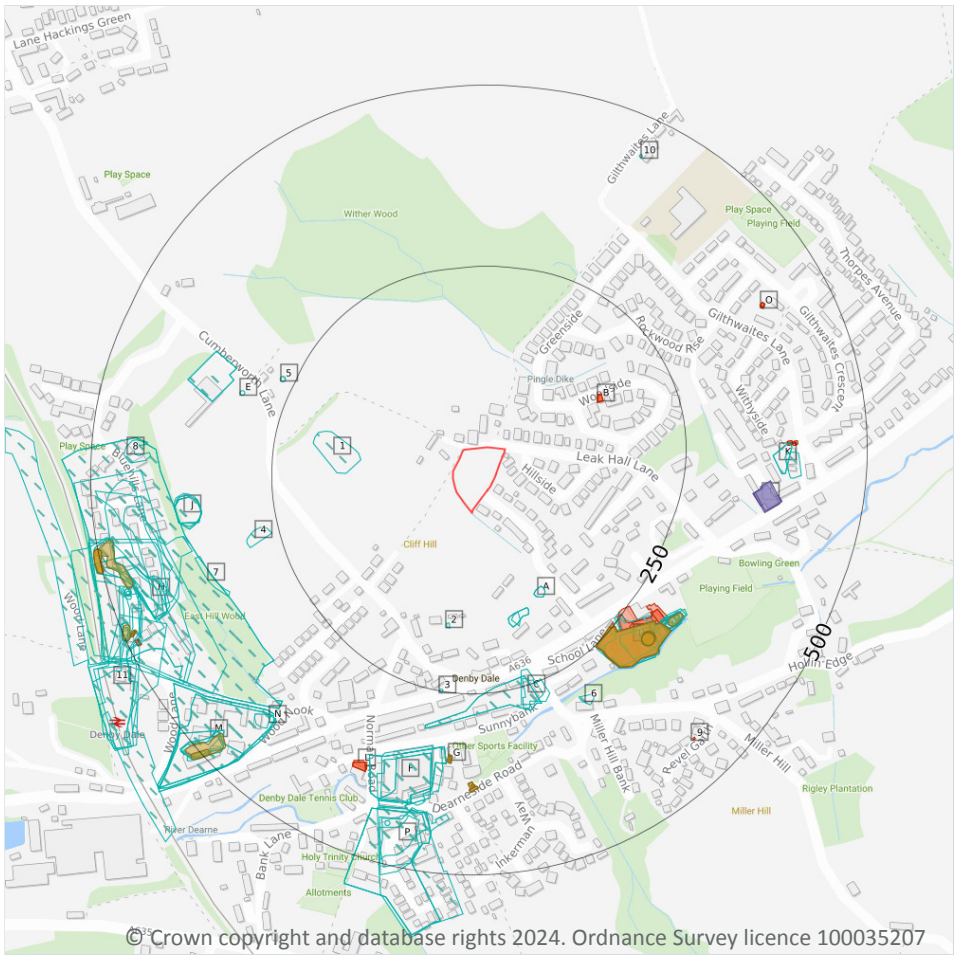
1.6 Historical military land

Records within 500m	0

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

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

2 Past land use - un-grouped



Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

Historical energy features

Historical garages

2.1 Historical industrial land uses

Records within 500m	106

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 22 >**

ID	Location	Land Use	Date	Group ID
1	128m W	Unspecified Ground Workings	1967	1412229
A	138m SE	Refuse Heap	1932	1510445
A	138m SE	Refuse Heap	1932	1510445

ID	Location	Land Use	Date	Group ID
A	151m S	Unspecified Pit	1951	1552077
A	151m S	Unspecified Pit	1932	1551022
A	151m S	Unspecified Pit	1932	1551022
2	156m S	Saw Pit	1850	1440475
C	228m S	Unspecified Mills	1891	1521512
C	236m S	Unspecified Commercial/Industrial	1948	1410998
C	236m S	Unspecified Mills	1904	1521512
C	239m S	Corn Mill	1850	1433093
D	244m SE	Dye Works	1891	1442657
3	247m S	Unspecified Pump	1850	1456506
D	249m SE	Unspecified Depot	1967	1428480
4	260m W	Coal Pit	1850	1420007
5	263m NW	Unspecified Pump	1850	1456505
D	265m SE	Unspecified Commercial/Industrial	1948	1476894
D	265m SE	Gas Works	1904	1539695
D	288m SE	Unspecified Tank	1983	1555330
D	288m SE	Unspecified Tank	1967	1555330
6	294m SE	Unspecified Ground Workings	1951	1412228
D	296m SE	Unspecified Commercial/Industrial	1932	1549326
D	296m SE	Gas Works	1891	1539695
D	299m SE	Unspecified Commercial/Industrial	1951	1458815
D	302m SE	Unspecified Tanks	1932	1514688
D	304m SE	Unspecified Tanks	1967	1544781
D	304m SE	Unspecified Tanks	1951	1479008
D	305m SE	Gasometer	1891	1485757
D	307m SE	Gasometer	1904	1485757
D	307m SE	Unspecified Tanks	1948	1545743
E	307m W	Unspecified Old Shaft	1903	1418298

ID	Location	Land Use	Date	Group ID
D	309m SE	Gasometer	1891	1420670
D	312m SE	Unspecified Tank	1904	1433382
F	325m S	Unspecified Mill	1951	1504874
F	325m S	Unspecified Commercial/Industrial	1983	1411009
F	325m S	Unspecified Mill	1967	1504874
F	326m S	Unspecified Mill	1932	1483616
F	327m S	Unspecified Mill	1891	1546149
E	328m W	Unspecified Works	1983	1472213
E	328m W	Unspecified Works	1967	1472213
F	337m S	Unspecified Mill	1948	1542037
F	337m S	Unspecified Mill	1904	1483616
H	340m SW	Unspecified Works	1983	1499052
H	340m SW	Unspecified Works	1967	1499052
7	342m SW	Unspecified Ground Workings	1951	1412230
J	350m W	Unspecified Pit	1948	1463220
J	350m W	Unspecified Pit	1903	1511805
J	350m W	Unspecified Pit	1891	1511805
J	351m W	Unspecified Pit	1933	1553337
J	351m W	Unspecified Pit	1933	1553337
J	351m W	Unspecified Heap	1951	1415163
K	370m E	Unspecified Quarry	1948	1428019
K	370m E	Unspecified Old Quarry	1904	1440830
H	373m W	Unspecified Disused Tip	1983	1420093
K	387m E	Sandstone Quarry	1850	1451558
M	389m SW	Brick Works	1951	1513243
M	389m SW	Unspecified Works	1983	1531324
M	389m SW	Unspecified Works	1967	1531324
H	391m SW	Unspecified Works	1951	1518199

ID	Location	Land Use	Date	Group ID
M	391m SW	Brick Works	1933	1463867
M	391m SW	Brick Works	1933	1463867
N	393m SW	Smithy	1850	1456937
N	393m SW	Unspecified Pit	1891	1451879
H	402m W	Refuse Heap	1967	1516697
H	405m W	Unspecified Works	1933	1461078
H	413m SW	Unspecified Works	1948	1518199
P	415m S	Unspecified Mill	1891	1535002
P	418m S	Unspecified Mill	1932	1547727
8	418m W	Refuse Heap	1967	1436620
P	418m S	Unspecified Mill	1951	1475632
P	418m S	Unspecified Mill	1983	1475632
P	418m S	Unspecified Mill	1967	1475632
H	420m W	Refuse Heap	1951	1525488
H	422m W	Sand Pit	1948	1411140
P	422m S	Unspecified Mill	1948	1494328
H	427m W	Refuse Heap	1933	1536417
H	427m W	Refuse Heap	1933	1536417
P	427m S	Unspecified Mill	1904	1478542
H	428m SW	Unspecified Works	1903	1554638
H	439m SW	Railway Sidings	1967	1501364
P	441m S	Unspecified Tank	1948	1433378
H	441m W	Refuse Heap	1903	1556454
10	444m NE	Unspecified Pump	1850	1456504
M	455m SW	Brick Works	1948	1461444
M	455m SW	Brick Works	1903	1509723
H	459m W	Railway Sidings	1948	1549692
H	460m W	Railway Sidings	1903	1504909

ID	Location	Land Use	Date	Group ID
M	461m SW	Unspecified Tanks	1951	1477855
M	461m SW	Unspecified Tanks	1967	1501625
H	462m W	Unspecified Tanks	1983	1491199
H	462m W	Unspecified Tanks	1967	1491199
M	463m SW	Unspecified Tanks	1948	1529945
11	463m W	Railway Sidings	1951	1501061
H	464m W	Railway Sidings	1933	1535974
M	465m SW	Unspecified Tanks	1933	1556367
H	470m W	Unspecified Tank	1951	1497731
H	470m W	Unspecified Tank	1948	1503401
H	470m W	Unspecified Tank	1933	1503401
H	471m W	Unspecified Tanks	1903	1425800
M	487m SW	Unspecified Tanks	1891	1541980
H	488m SW	Unspecified Tanks	1983	1498008
H	488m SW	Unspecified Tanks	1967	1498008
H	491m SW	Unspecified Tanks	1951	1518142
H	491m SW	Unspecified Tanks	1948	1518142
H	492m SW	Unspecified Tanks	1933	1507903
M	493m SW	Unspecified Tanks	1903	1541980

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	**28**

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

Features are displayed on the Past land use - un-grouped map on **page 22 >**

ID	Location	Land Use	Date	Group ID
D	246m SE	Gasholder Station	1970	237632

ID	Location	Land Use	Date	Group ID
D	247m SE	Gasholder Station	1979	237632
D	290m SE	Gasholder	1979	237682
D	290m SE	Unspecified Tank	1959	223450
D	290m SE	Gasholder	1970	237682
D	307m SE	Tanks	1959	230456
G	335m S	Unspecified Tank	1971	246657
G	337m S	Unspecified Tank	1970	246657
G	337m S	Unspecified Tank	1958	246657
G	371m S	Unspecified Tank	1971	246301
G	372m S	Unspecified Tank	1970	246301
G	375m S	Unspecified Tank	1995	243620
G	375m S	Unspecified Tank	1995	243620
G	378m S	Unspecified Tank	1958	240317
G	378m S	Unspecified Tank	1986	240317
G	378m S	Unspecified Tank	1988	240317
M	460m SW	Tanks	1959	230459
H	464m W	Tanks	1959	235533
H	482m SW	Unspecified Tank	1971	236583
H	482m SW	Unspecified Tank	1970	236583
H	483m SW	Unspecified Tank	1958	236583
H	483m SW	Unspecified Tank	1986	236583
H	483m SW	Unspecified Tank	1988	236583
H	487m SW	Tanks	1959	230457
M	490m SW	Unspecified Tanks	1891	233083
H	496m W	Tanks	1958	239323
H	496m W	Tanks	1986	239323
H	496m W	Tanks	1988	239323

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m	31

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 22 >**

ID	Location	Land Use	Date	Group ID
B	143m NE	Electricity Substation	1970	135422
B	143m NE	Electricity Substation	1996	135422
B	143m NE	Electricity Substation	1994	135422
B	144m NE	Electricity Substation	1979	143814
D	245m SE	Gas Works Yard	1979	140137
D	246m SE	Gas Works Yard	1994	140137
D	246m SE	Gasholder Station	1970	138565
D	247m SE	Gasholder Station	1979	138565
D	268m SE	Gas Works Yard	1970	146760
D	283m SE	Gas Governor	1996	135539
D	283m SE	Gas Governor	1994	135539
D	290m SE	Gasholder	1979	135320
D	290m SE	Gasholder	1970	135320
L	371m S	Electricity Substation	1995	141216
L	375m S	Electricity Substation	1958	140533
L	375m S	Electricity Substation	1986	140533
L	375m S	Electricity Substation	1988	140533
K	390m E	Electricity Substation	1996	141336
K	390m E	Electricity Substation	1994	141336
K	397m E	Electricity Substation	1970	143539
K	399m E	Electricity Substation	1979	143539
O	403m NE	Electricity Substation	1993	144688
O	404m NE	Electricity Substation	1980	144688

ID	Location	Land Use	Date	Group ID
O	404m NE	Electricity Substation	1983	144688
O	404m NE	Electricity Substation	1969	144688
9	436m SE	Electricity Substation	1996	129065
H	483m SW	Electricity Substation	1970	138596
H	483m SW	Electricity Substation	1971	138596
H	485m SW	Electricity Substation	1958	138596
H	485m SW	Electricity Substation	1986	138596
H	485m SW	Electricity Substation	1988	138596

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	**4**

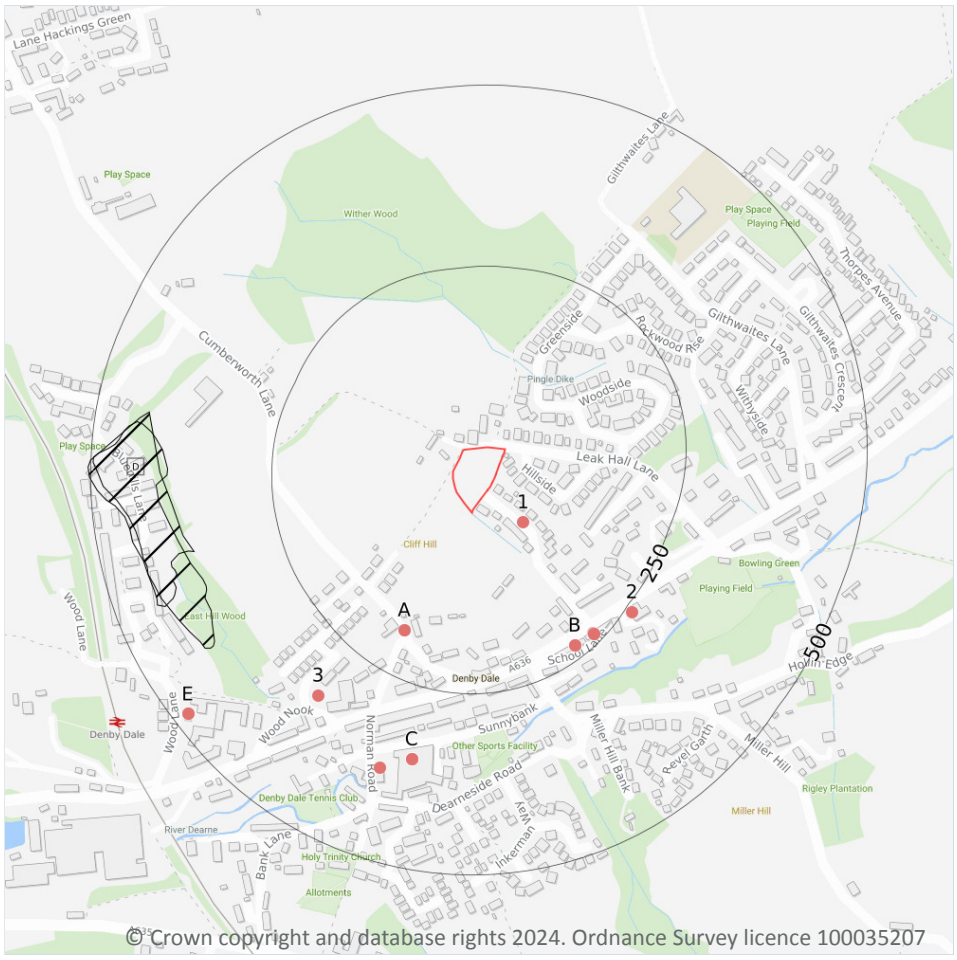
Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 22 >**

ID	Location	Land Use	Date	Group ID
I	348m E	Garage	1994	44915
I	348m E	Garage	1996	44915
I	349m E	Garage	1970	44915
I	350m E	Garage	1979	44915

This data is sourced from Ordnance Survey / Groundsure.

3 Waste and landfill



Site Outline

Search buffers in metres (m)

Historical landfill (EA/NRW)

Waste exemptions

3.1 Active or recent landfill

Records within 500m	0

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

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

3.2 Historical landfill (BGS records)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

3.3 Historical landfill (LA/mapping records)

Records within 500m	0

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

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

3.4 Historical landfill (EA/NRW records)

Records within 500m	2

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

Features are displayed on the Waste and landfill map on **page 30 >**

ID	Location	Details		
D	368m SW	Site Address: Bromley Works, Denby Dale Licence Holder Address: -	Waste Licence: Yes Site Reference: 4700/WDL0160 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 22/12/1983 Licence Surrender: -	Operator: - Licence Holder: Naylor Brothers (Clayware) Limited First Recorded 31/12/1983 Last Recorded: -
D	370m W	Site Address: Bromley Works, Denby Dale, Huddersfield, West Yorkshire Licence Holder Address: -	Waste Licence: Yes Site Reference: 4400/W1158 Waste Type: - Environmental Permitting Regulations (Waste) Reference: YQ3/L/NAY001 Licence Issue: 22/12/1983 Licence Surrender: 27/09/1999	Operator: - Licence Holder: Naylor Brothers (Clayware) Limited First Recorded - Last Recorded: -

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	21

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 30 >**

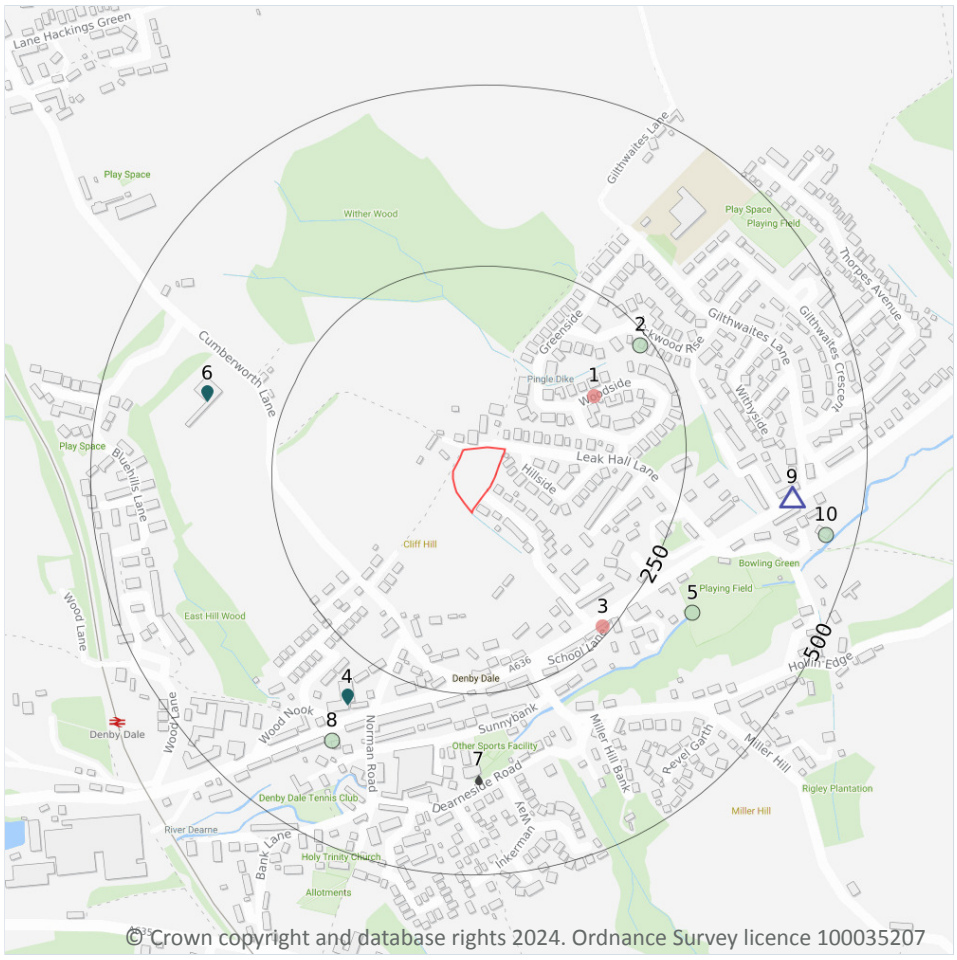
ID	Location	Site	Reference	Category	Sub-Category	Description
1	66m SE	-	WEX272520	Disposing of waste exemption	Not on a farm	Burning waste in the open
A	188m SW	-	WEX276923	Disposing of waste exemption	Not on a farm	Disposal by incineration
A	188m SW	-	WEX276923	Disposing of waste exemption	Not on a farm	Burning waste in the open
B	232m SE	315, WAKEFIELD ROAD, DENBY DALE, HUDDERSFIELD, HD8 8RX	WEX096815	Storing waste exemption	Not on a farm	Storage of waste in secure containers
B	232m SE	315, WAKEFIELD ROAD, DENBY DALE, HUDDERSFIELD, HD8 8RX	WEX096815	Storing waste exemption	Not on a farm	Storage of waste in a secure place
B	232m SE	315, WAKEFIELD ROAD, DENBY DALE, HUDDERSFIELD, HD8 8RX	WEX239312	Storing waste exemption	Not on a farm	Storage of waste in a secure place
B	232m SE	315, WAKEFIELD ROAD, DENBY DALE, HUDDERSFIELD, HD8 8RX	WEX239312	Storing waste exemption	Not on a farm	Storage of waste in secure containers
B	235m SE	315 Wakefield Road Huddersfield West Yorkshire HD8 8RX	EPR/PF0231DT/A001	Treating waste exemption	Non-Agricultural Waste Only	Sorting and de-naturing of controlled drugs for disposal

ID	Location	Site	Reference	Category	Sub-Category	Description
B	237m SE	-	WEX368211	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal
B	237m SE	-	WEX241619	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal
2	260m SE	315 Wakefield Road Huddersfield West Yorkshire HD8 8RX	EPR/QE5145VN/A001	Treating waste exemption	Non-Agricultural Waste Only	Sorting and de-naturing of controlled drugs for disposal
3	330m SW	WOOD NOOK FARM, WOOD NOOK, MELTHAM, HOLMFIRTH, HD9 4DU	WEX011168	Disposing of waste exemption	On a farm	Burning waste in the open
C	351m S	UNIT 8, SPRINGFIELD MILLS, NORMAN ROAD, DENBY DALE, HUDDERSFIELD, HD8 8TH	WEX301680	Using waste exemption	Not on a Farm	Burning of waste as a fuel in a small appliance
C	351m S	SPRINGFIELD MILLS, UNIT 8, NORMAN ROAD, DENBY DALE, HUDDERSFIELD, HD8 8TH	WEX273491	Using waste exemption	Not on a farm	Burning of waste as a fuel in a small appliance
C	351m S	SPRINGFIELD MILLS, UNIT 8, NORMAN ROAD, DENBY DALE, HUDDERSFIELD, HD8 8TH	WEX273491	Treating waste exemption	Not on a farm	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
C	351m S	SPRINGFIELD MILLS, UNIT 8, NORMAN ROAD, DENBY DALE, HUDDERSFIELD, HD8 8TH	WEX133530	Treating waste exemption	Not on a farm	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
C	351m S	SPRINGFIELD MILLS, UNIT 8, NORMAN ROAD, DENBY DALE, HUDDERSFIELD, HD8 8TH	WEX133530	Using waste exemption	Not on a farm	Burning of waste as a fuel in a small appliance
C	375m S	Unit 8 Springfield Mills Norman Road HUDDERSFIELD HD8 8TH	EPR/PF0002TD/A001	Using waste exemption	Non-Agricultural Waste Only	Burning of waste as a fuel in a small appliance
E	481m SW	-	WEX232662	Treating waste exemption	Not on a farm	Aerobic composting and associated prior treatment
E	481m SW	WESTLEIGH MEWS, WAKEFIELD ROAD, DENBY DALE, HUDDERSFIELD, HD8 8QD	WEX084323	Treating waste exemption	Not on a farm	Aerobic composting and associated prior treatment

ID	Location	Site	Reference	Category	Sub-Category	Description
E	481m SW	WESTLEIGH MEWS, WAKEFIELD ROAD, DENBY DALE, HUDDERSFIELD, HD8 8QD	WEX084323	Using waste exemption	Not on a farm	Spreading waste on non-agricultural land to confer benefit

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

4 Current industrial land use



Site Outline

Search buffers in metres (m)

Recent industrial land uses

Current or recent petrol stations

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

Licensed Discharges to controlled waters

Pollution Incidents (EA/NRW)

4.1 Recent industrial land uses

Records within 250m	2

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 35 >**

ID	Location	Company	Address	Activity	Category
1	143m NE	Electricity Sub Station	West Yorkshire, HD8	Electrical Features	Infrastructure and Facilities
3	240m SE	Denby Dale Stoves	301-303, Wakefield Road, Denby Dale, Huddersfield, West Yorkshire, HD8 8RX	Cookers and Stoves - Non Electrical	Consumer Products

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m	1

Open, closed, under development and obsolete petrol stations.

Features are displayed on the Current industrial land use map on **page 35 >**

ID	Location	Company	Address	LPG	Status
9	401m E	OBSOLETE	316, Wakefield Road, Denby Dale, Huddersfield, West Yorkshire, HD8 8SD	Not Applicable	Obsolete

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m	0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m	0

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 Sites determined as Contaminated Land

Records within 500m	0

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

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m	0

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

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

Records within 500m	0

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

This data is sourced from the Health and Safety Executive.

4.8 Hazardous substance storage/usage

Records within 500m	0

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

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m	0

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

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

4.10 Licensed industrial activities (Part A(1))

Records within 500m	0

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

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

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

Records within 500m	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 35 >**

ID	Location	Address	Details	
4	307m SW	Greenfeeds (1991) Ltd, Victoria Mill, Wakefield Rd, Denby Dale, Huddersfield, HD8 8RP	Process: Animal Feed Compound Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
6	356m W	Denby Dale Cast Products Ltd, 230 Cumberworth Lane, Denby Dale, Huddersfield, HD8 8PR	Process: Use of Bulk Cement Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m	**0**

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

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

4.13 Licensed Discharges to controlled waters

Records within 500m	**1**

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 35 >**

ID	Location	Address	Details	
7	368m S	DEARNESIDE ROAD CSO, DEARNESIDE ROAD (OPP NO.28), DENBY DALE, HUDDERSFIELD, WEST YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: WRA9264 Permit Version: 1 Receiving Water: RIVER DEARNE	Status: SURRENDERED UNDER EPR 2010 Issue date: 04/09/2007 Effective Date: 04/09/2007 Revocation Date: 27/03/2012

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

4.14 Pollutant release to surface waters (Red List)

Records within 500m	**0**

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

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

4.15 Pollutant release to public sewer

Records within 500m	0

Discharges of Special Category Effluents to the public sewer.

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

4.16 List 1 Dangerous Substances

Records within 500m	0

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

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

4.17 List 2 Dangerous Substances

Records within 500m	0

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

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

4.18 Pollution Incidents (EA/NRW)

Records within 500m	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 35 >**

ID	Location	Details	
2	235m NE	Incident Date: 23/07/2003 Incident Identification: 175924 Pollutant: Sewage Materials Pollutant Description: Crude Sewage	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
5	329m SE	Incident Date: 07/08/2001 Incident Identification: 22648 Pollutant: Oils and Fuel Pollutant Description: Diesel	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

ID	Location	Details	
8	369m SW	Incident Date: 16/06/2003 Incident Identification: 166257 Pollutant: Other Pollutant Pollutant Description: Other	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
10	458m E	Incident Date: 29/07/2003 Incident Identification: 177445 Pollutant: Oils and Fuel Pollutant Description: Diesel	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

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

4.19 Pollution inventory substances

Records within 500m	0

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

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

4.20 Pollution inventory waste transfers

Records within 500m	0

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

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

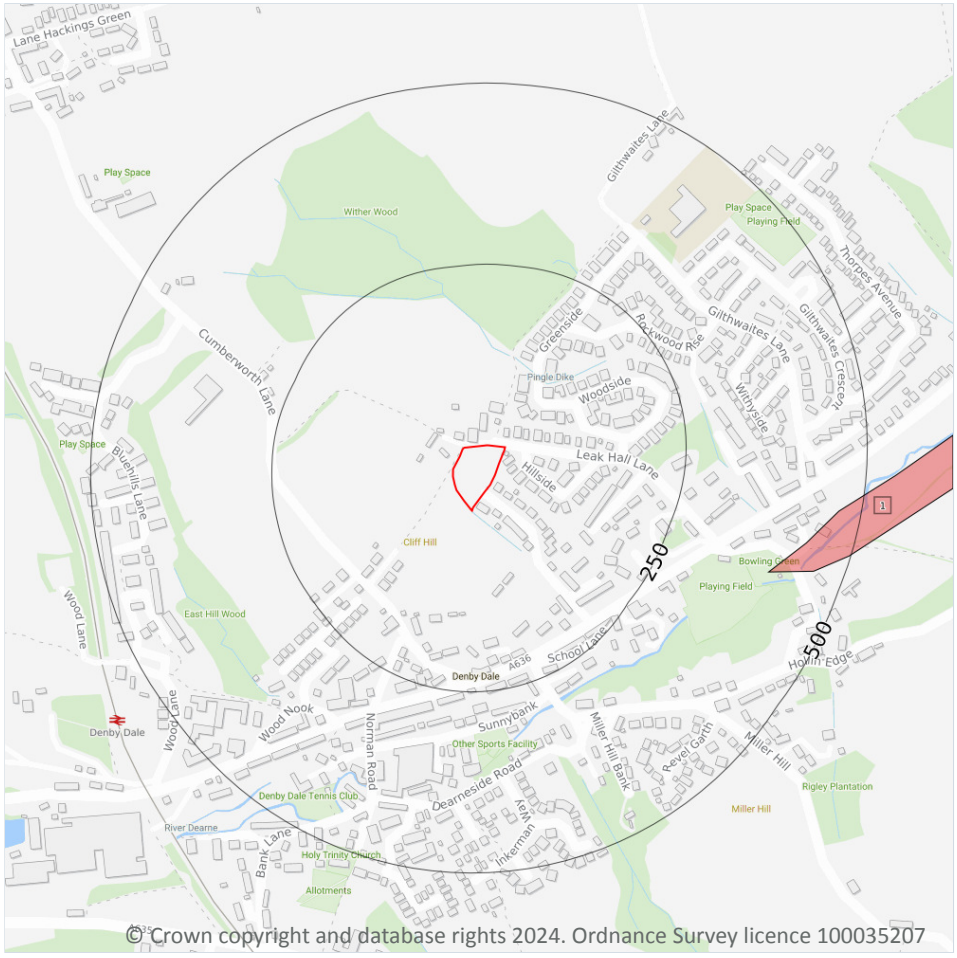
4.21 Pollution inventory radioactive waste

Records within 500m	0

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

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

5 Hydrogeology - Superficial aquifer



5.1 Superficial aquifer

Records within 500m	1

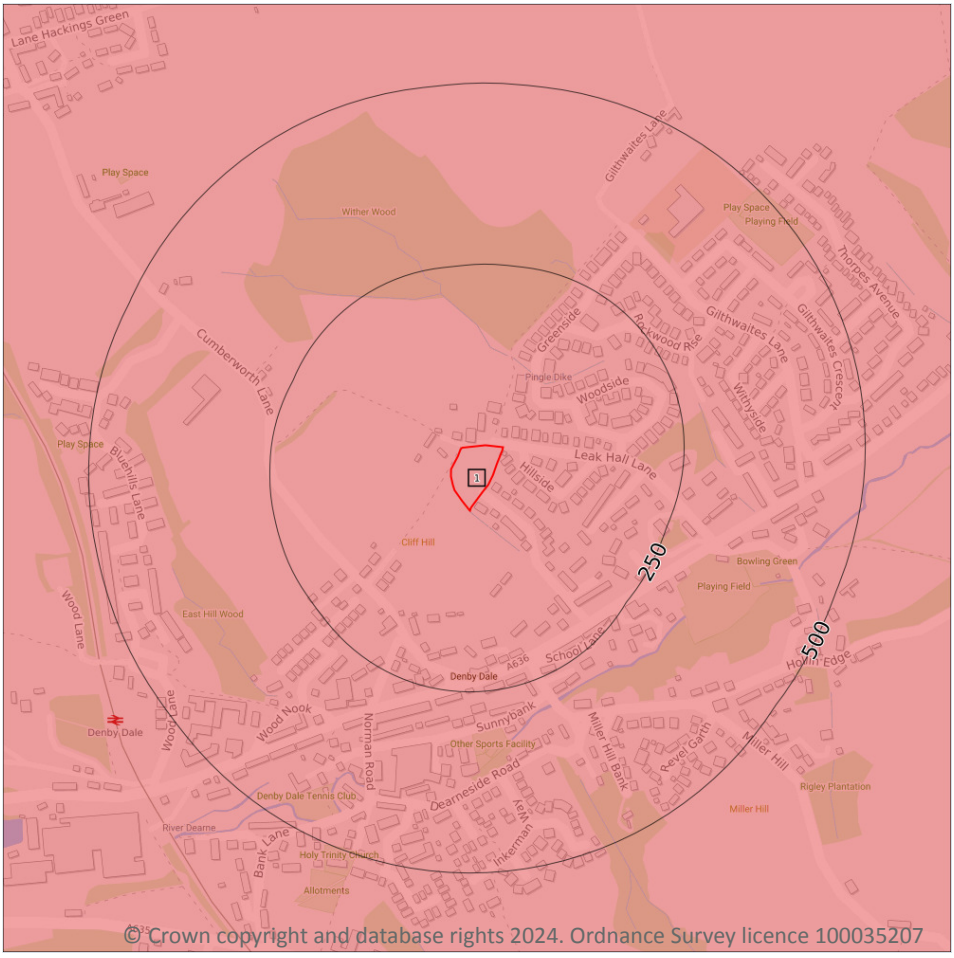
Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on **page 41 >**

ID	Location	Designation	Description
1	401m 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.

Bedrock aquifer



5.2 Bedrock aquifer

Records within 500m	1

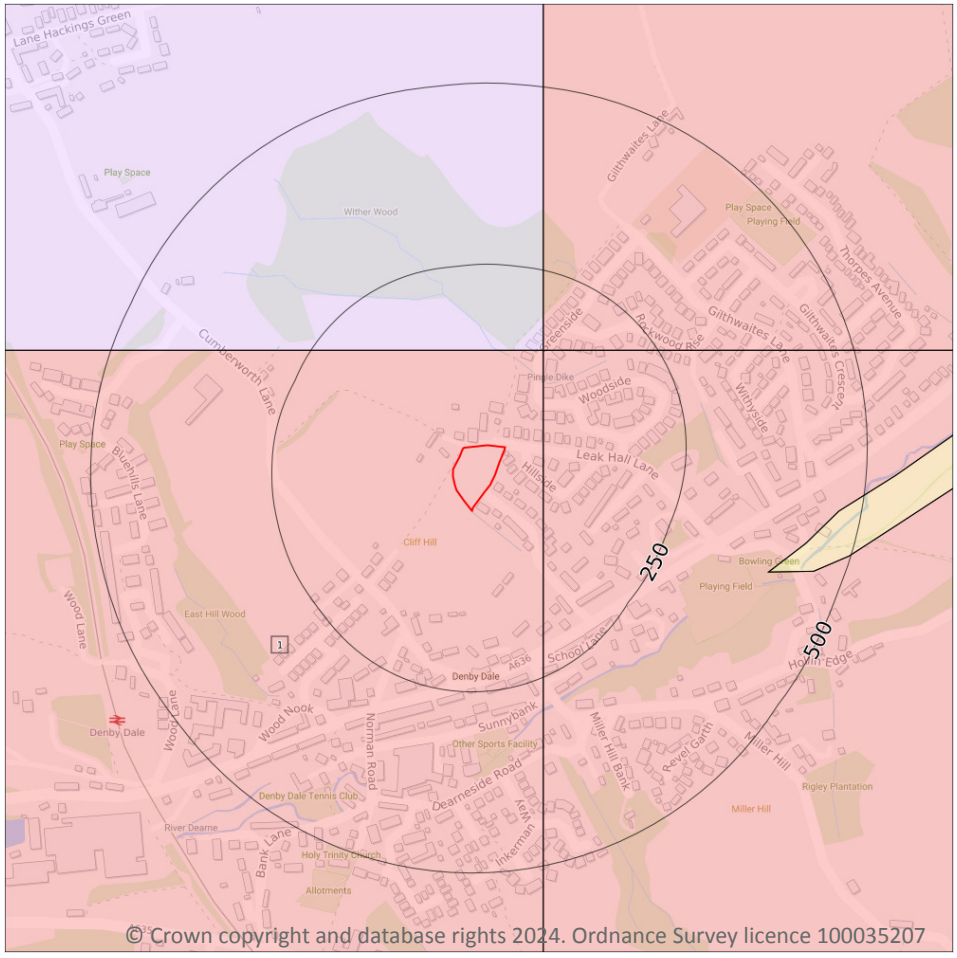
Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on **page 42 >**

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

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

Groundwater vulnerability



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 43 >**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	**Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer**	**Leaching class: High Infiltration value: >70% Dilution value: 300-550mm/year**	**Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data**	**Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures**

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

5.4 Groundwater vulnerability- soluble rock risk

Records on site	0

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

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

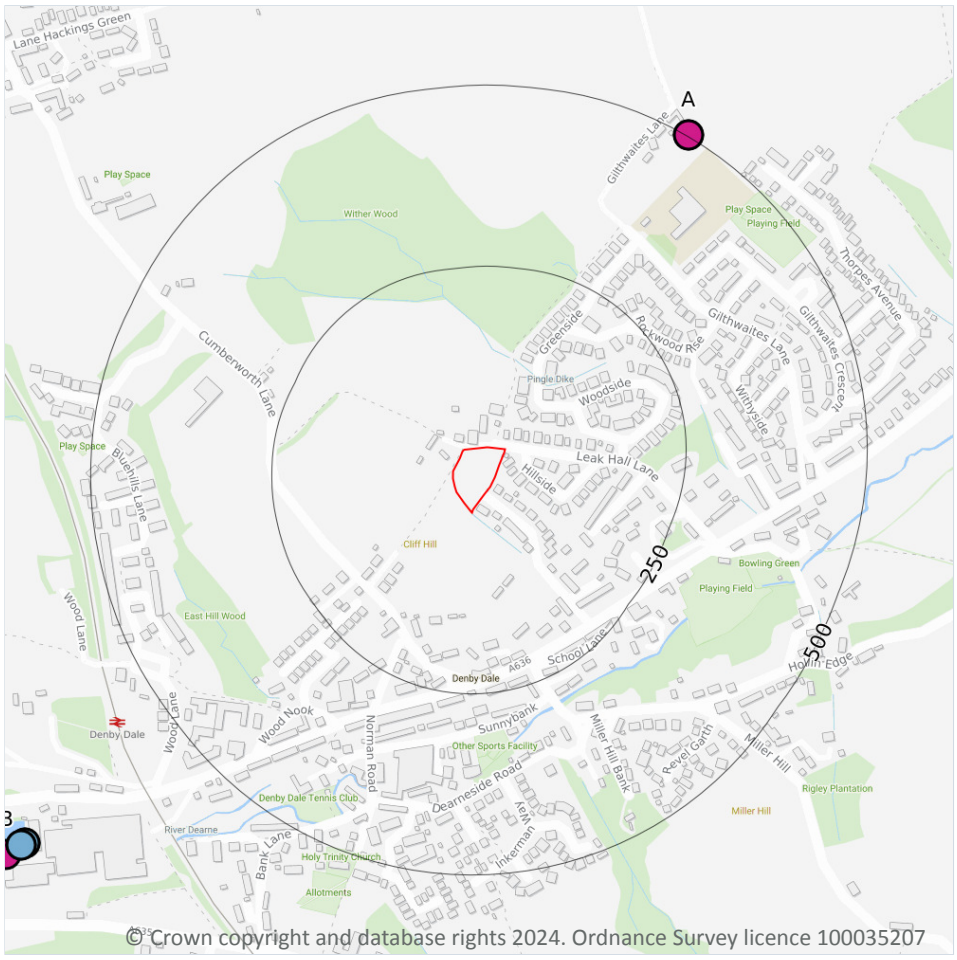
5.5 Groundwater vulnerability- local information

Records on site	0

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

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

Abstractions and Source Protection Zones



- Site Outline

Search buffers in metres (m)

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

5.6 Groundwater abstractions

Records within 2000m	12

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 45 >**

ID	Location	Details	
A	502m NE	Status: Historical Licence No: 2/27/08/005 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: WELL X2 Data Type: Point Name: SHAW Easting: 423200 Northing: 409300	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 14/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 25/01/1985 Version End Date: -
A	502m NE	Status: Historical Licence No: 2/27/08/005 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: WELL X2 - COAL MEASURES - DENBY DALE Data Type: Point Name: D M & J SHAW Easting: 423200 Northing: 409300	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 14/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 25/01/1985 Version End Date: -
B	796m SW	Status: Active Licence No: 2/27/08/144/R01 Details: Transfer Between Sources (Post Water Act 2003) Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - GREENMOOR ROCK - DENBY DALE Data Type: Point Name: HINCHCLIFFE & SONS LTD Easting: 422259 Northing: 408307	Annual Volume (m^3): 52000 Max Daily Volume (m^3): 500 Original Application No: NPS/WR/024657 Original Start Date: 01/04/2017 Expiry Date: 31/03/2029 Issue No: 1 Version Start Date: 01/04/2019 Version End Date: -
-	865m SW	Status: Historical Licence No: 2/27/08/121 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE Data Type: Point Name: HINCHCLIFFE & SONS LTD Easting: 422200 Northing: 408270	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 16/01/1998 Expiry Date: 31/12/2008 Issue No: 100 Version Start Date: 16/01/1998 Version End Date: -
-	865m SW	Status: Historical Licence No: 2/27/08/121 Details: Non-Evaporative Cooling Direct Source: GROUNDWATERS Point: BOREHOLE Data Type: Point Name: HINCHCLIFFE & SONS LTD Easting: 422200 Northing: 408270	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 16/01/1998 Expiry Date: 31/12/2008 Issue No: 100 Version Start Date: 16/01/1998 Version End Date: -

ID	Location	Details	
-	865m SW	Status: Historical Licence No: 2/27/08/121 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - DENBY DALE Data Type: Point Name: HINCHCLIFFE & SONS LTD Easting: 422200 Northing: 408270	Annual Volume (m^3): 52000 Max Daily Volume (m^3): 500 Original Application No: - Original Start Date: 16/01/1998 Expiry Date: 31/12/2008 Issue No: 100 Version Start Date: 16/01/1998 Version End Date: -
-	865m SW	Status: Historical Licence No: 2/27/08/121 Details: Non-Evaporative Cooling Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - DENBY DALE Data Type: Point Name: HINCHCLIFFE & SONS LTD Easting: 422200 Northing: 408270	Annual Volume (m^3): 52000 Max Daily Volume (m^3): 500 Original Application No: - Original Start Date: 16/01/1998 Expiry Date: 31/12/2008 Issue No: 100 Version Start Date: 16/01/1998 Version End Date: -
-	865m SW	Status: Historical Licence No: 2/27/08/144 Details: Non-Evaporative Cooling Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - GREENMOOR ROCK - DENBY DALE Data Type: Point Name: HINCHCLIFFE & SONS LTD Easting: 422200 Northing: 408270	Annual Volume (m^3): 52000 Max Daily Volume (m^3): 500 Original Application No: - Original Start Date: 01/01/2009 Expiry Date: 31/03/2017 Issue No: 1 Version Start Date: 01/01/2009 Version End Date: -
-	865m SW	Status: Historical Licence No: 2/27/08/144 Details: Process Water Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - GREENMOOR ROCK - DENBY DALE Data Type: Point Name: HINCHCLIFFE & SONS LTD Easting: 422200 Northing: 408270	Annual Volume (m^3): 52000 Max Daily Volume (m^3): 500 Original Application No: - Original Start Date: 01/01/2009 Expiry Date: 31/03/2017 Issue No: 1 Version Start Date: 01/01/2009 Version End Date: -

ID	Location	Details	
-	1314m NW	Status: Historical Licence No: 2/27/11/124 Details: General use relating to Secondary Category (High Loss) Direct Source: GROUNDWATERS Point: SPRING - COAL MEASURES - DAY HOLE WORKINGS Data Type: Point Name: HEPWORTH PIPE CO LTD Easting: 421800 Northing: 409600	Annual Volume (m^3): 6819 Max Daily Volume (m^3): 27.27 Original Application No: - Original Start Date: 26/05/1966 Expiry Date: - Issue No: 100 Version Start Date: 26/05/1966 Version End Date: -
-	1324m SE	Status: Historical Licence No: 2/27/05/179 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: BOREHOLE Data Type: Point Name: BUCKLEY Easting: 424100 Northing: 408200	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 31/08/1994 Expiry Date: - Issue No: 100 Version Start Date: 31/08/1994 Version End Date: -
-	1324m SE	Status: Historical Licence No: 2/27/05/179 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - DENBY DALE Data Type: Point Name: MESSRS H & S BUCKLEY Easting: 424100 Northing: 408200	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 31/08/1994 Expiry Date: - Issue No: 100 Version Start Date: 31/08/1994 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m	**8**

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 45 >**

ID	Location	Details	
B	767m SW	Status: Active Licence No: 2/27/08/052 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: RIVER DEARNE - RESERVOIR NEAR MUNCHCLIFFE BECK Data Type: Point Name: HINCHCLIFFE & SONS LTD Easting: 422284 Northing: 408322	Annual Volume (m^3): 68182 Max Daily Volume (m^3): 500 Original Application No: NPS/WR/024659 Original Start Date: 17/03/1966 Expiry Date: - Issue No: 102 Version Start Date: 24/01/2017 Version End Date: -
B	767m SW	Status: Active Licence No: 2/27/08/052 Details: Non-Evaporative Cooling Direct Source: SURFACE WATER Point: RIVER DEARNE - RESERVOIR NEAR MUNCHCLIFFE BECK Data Type: Point Name: HINCHCLIFFE & SONS LTD Easting: 422284 Northing: 408322	Annual Volume (m^3): 68182 Max Daily Volume (m^3): 500 Original Application No: NPS/WR/024659 Original Start Date: 17/03/1966 Expiry Date: - Issue No: 102 Version Start Date: 24/01/2017 Version End Date: -
B	771m SW	Status: Historical Licence No: 2/27/08/052 Details: General use relating to Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: RIVER DEARNE AND MUNCHCLIFFE BECK Data Type: Point Name: HINCHCLIFFE & SONS LTD Easting: 422280 Northing: 408320	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 17/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 24/12/1999 Version End Date: -
B	771m SW	Status: Historical Licence No: 2/27/08/052 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: RESERVOIR NEAR MUNCHCLIFFE BECK Data Type: Point Name: HINCHCLIFFE & SONS LTD Easting: 422280 Northing: 408320	Annual Volume (m^3): 68182 Max Daily Volume (m^3): 500 Original Application No: - Original Start Date: 17/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 24/12/1999 Version End Date: -

ID	Location	Details	
-	941m SW	Status: Active Licence No: NE/027/0008/017 Details: Transfer Between Sources (Post Water Act 2003) Direct Source: SURFACE WATER Point: MUNCHCLIFFE BECK TRANSFER Data Type: Point Name: HINCHCLIFFE & SONS LTD Easting: 422119 Northing: 408252	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: NPS/WR/025125 Original Start Date: 24/01/2017 Expiry Date: 31/03/2029 Issue No: 1 Version Start Date: 24/01/2017 Version End Date: -
-	977m SW	Status: Historical Licence No: 2/27/08/052 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: RIVER DEARNE AND MUNCHCLIFFE BECK Data Type: Point Name: HINCHCLIFFE & SONS LTD Easting: 422070 Northing: 408260	Annual Volume (m^3): 68182 Max Daily Volume (m^3): 500 Original Application No: - Original Start Date: 17/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 24/12/1999 Version End Date: -
-	987m SW	Status: Historical Licence No: 2/27/08/052 Details: General use relating to Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: RIVER DEARNE & MUNCHCLIFFE BK Data Type: Point Name: HINCHCLIFFE & SONS LTD Easting: 422100 Northing: 408200	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 17/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 24/12/1999 Version End Date: -
-	1069m SW	Status: Historical Licence No: 2/27/08/052 Details: General use relating to Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: RIVER DEARNE & MUNCHCLIFFE BK Data Type: Point Name: HINCHCLIFFE & SONS LTD Easting: 422000 Northing: 408200	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 17/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 24/12/1999 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.

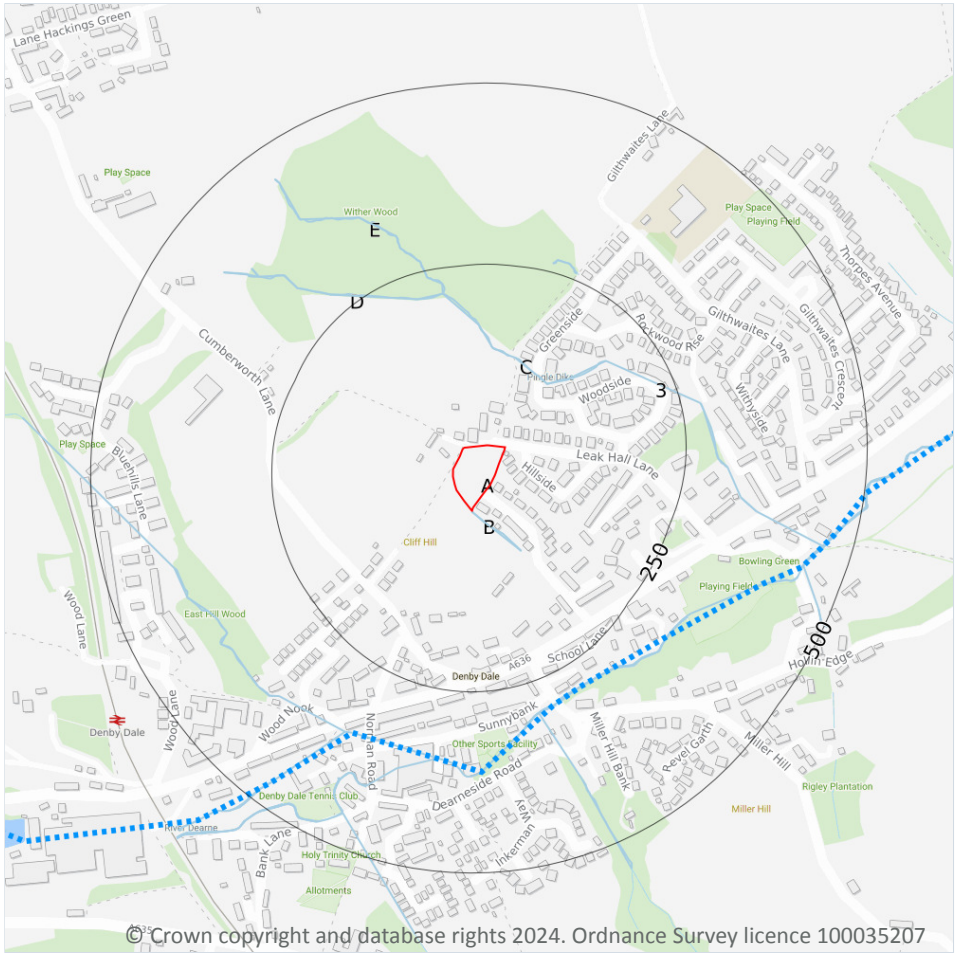
5.10 Source Protection Zones (confined aquifer)

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	6

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

Features are displayed on the Hydrology map on **page 52 >**

ID	Location	Type of water feature	Ground level	Permanence	Name
B	1m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
B	35m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	105m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Pingle Dike
3	183m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Pingle Dike
D	211m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	214m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Pingle Dike

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m	**7**

Covering rivers, streams and lakes (some overlap with OS MasterMap Water Network data in previous section) but additionally covers smaller features such as ponds. Rivers and streams narrower than 5m are represented as a single line. Lakes, ponds and rivers or streams wider than 5m are represented as polygons.

Features are displayed on the Hydrology map on **page 52 >**

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 52 >**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
A	**On site**	**River**	**Dearne from Source to Bentley Brook**	**GB104027063220**	**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 52 >**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
4	285m SE	River	Dearne from Source to Bentley Brook	GB104027063220 ↗	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 52 >**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
A	**On site**	**Don & Rother Millstone grit & Coal Measures**	**GB40402G992300 ↗**	**Poor**	**Poor**	**Good**	**2019**

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

7 River and coastal flooding

7.1 Risk of flooding from rivers and the sea

Records within 50m	0

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

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

7.2 Historical Flood Events

Records within 250m	0

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

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

7.3 Flood Defences

Records within 250m	0

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

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

7.4 Areas Benefiting from Flood Defences

Records within 250m	0

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

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

7.5 Flood Storage Areas

Records within 250m	0

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

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

River and coastal flooding - Flood Zones

7.6 Flood Zone 2

Records within 50m	0

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

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

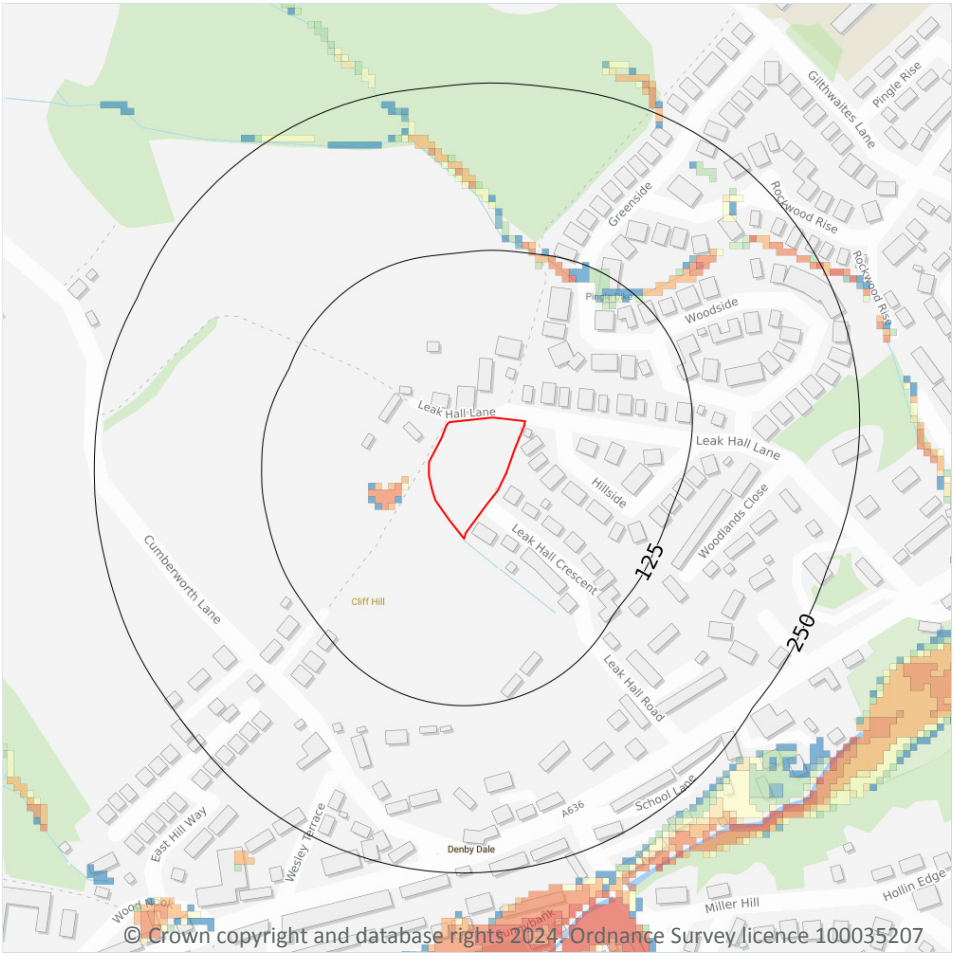
7.7 Flood Zone 3

Records within 50m	0

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

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

8 Surface water flooding



8.1 Surface water flooding

Highest risk on site	**Negligible**
Highest risk within 50m	**1 in 30 year, 0.3m - 1.0m**

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

Features are displayed on the Surface water flooding map on **page 58 >**

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

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

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

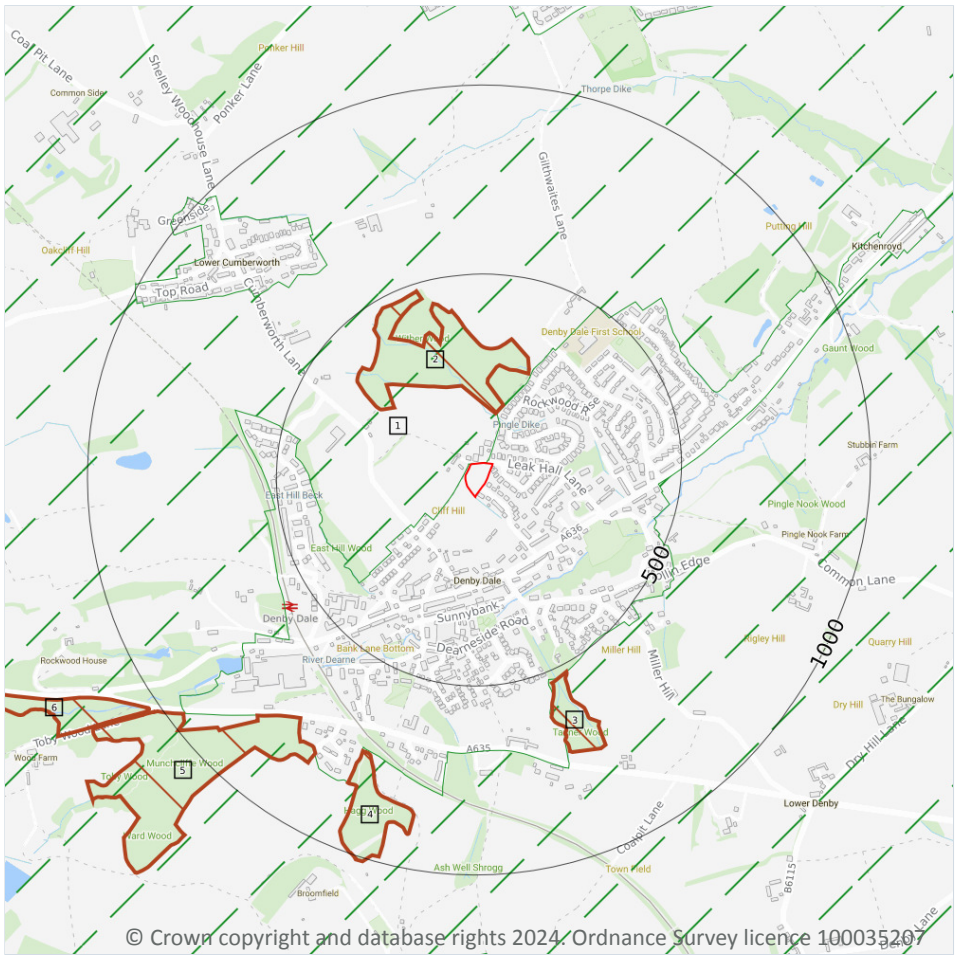
Highest risk on site	**Negligible**
Highest risk within 50m	**Negligible**

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 60 >**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations



10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m	0

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

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

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m	0

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

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

10.3 Special Areas of Conservation (SAC)

Records within 2000m	0

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

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

10.4 Special Protection Areas (SPA)

Records within 2000m	0

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

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

10.5 National Nature Reserves (NNR)

Records within 2000m	0

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

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

10.6 Local Nature Reserves (LNR)

Records within 2000m	0

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

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

10.7 Designated Ancient Woodland

Records within 2000m	10

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 61 >**

ID	Location	Name	Woodland Type
2	134m N	Wither Wood	Ancient Replanted Woodland
3	521m SE	Tanner Wood	Ancient & Semi-Natural Woodland
4	734m S	Hagg Wood	Ancient Replanted Woodland
5	746m SW	Munchcliffe And Ward Woods	Ancient Replanted Woodland
6	1027m SW	Munchcliffe And Ward Woods	Ancient Replanted Woodland
-	1550m E	Baycroft Wood	Ancient Replanted Woodland
-	1583m SW	New House, Green And Burn Woods	Ancient Replanted Woodland
-	1816m SE	Cuckold Carr	Ancient Replanted Woodland
-	1844m SE	Cuckold Carr	Ancient & Semi-Natural Woodland
-	1856m E	Bagden Wood	Ancient Replanted 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	3

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

Features are displayed on the Environmental designations map on **page 61 >**

ID	Location	Name	Local Authority name
1	1m N	South and West Yorkshire	Kirklees
-	1520m S	South and West Yorkshire	Barnsley
-	1621m S	South and West Yorkshire	Kirklees

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

10.12 Proposed Ramsar sites

Records within 2000m	0

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

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m	0

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

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

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m	0

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

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m	0

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

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

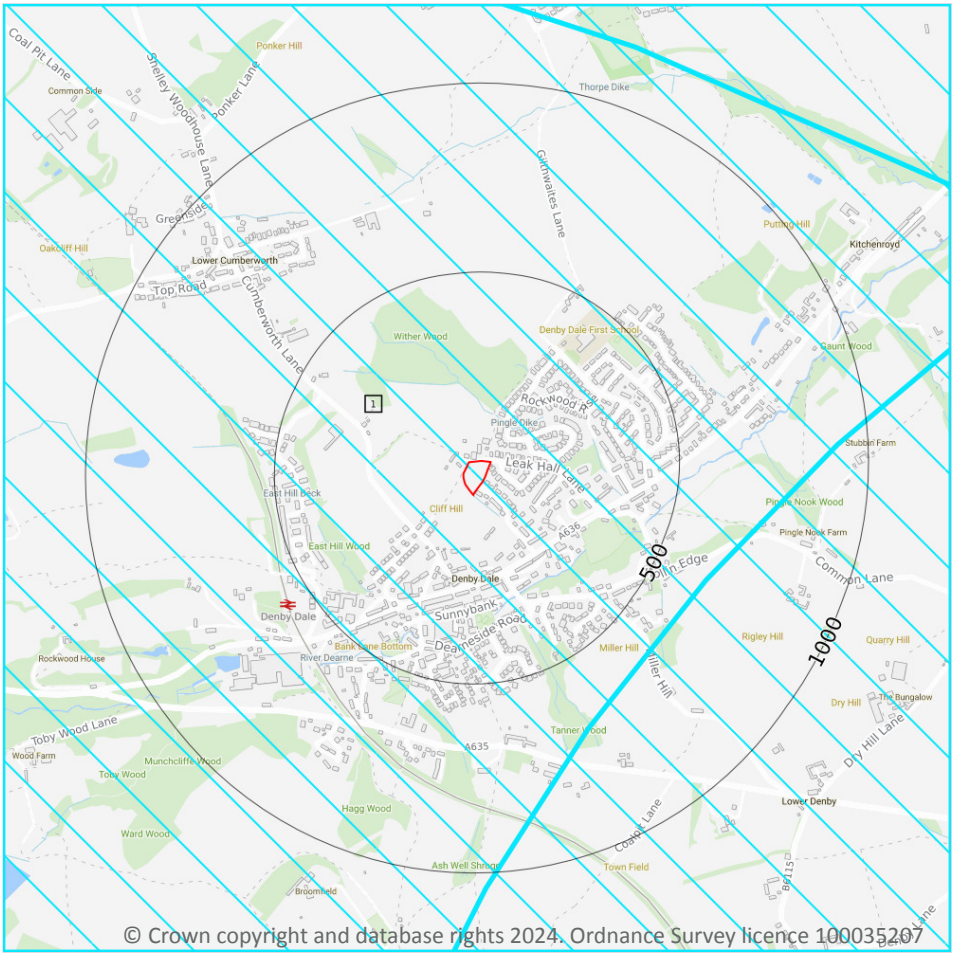
Records within 2000m	2

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**
1145m E	River Dearne NVZ	Surface Water	278	Existing

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

SSSI Impact Zones and Units



Site Outline

Search buffers in metres (m)

SSSI Impact Risk Zones

SSSI Units

- Not recorded
- Favourable
- Unfavourable - Recovering
- Unfavourable - No change
- Unfavourable - Declining
- Partially destroyed
- Destroyed

10.17 SSSI Impact Risk Zones

Records on site	1

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

Features are displayed on the SSSI Impact Zones and Units map on **page 67 >**

ID	Location	Type of developments requiring consultation
1	**On site**	**Infrastructure - Airports, helipads and other aviation proposals. Minerals, Oil and Gas - Oil & gas exploration/extraction. Air pollution - Livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 4000m². Combustion - General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.**

This data is sourced from Natural England.

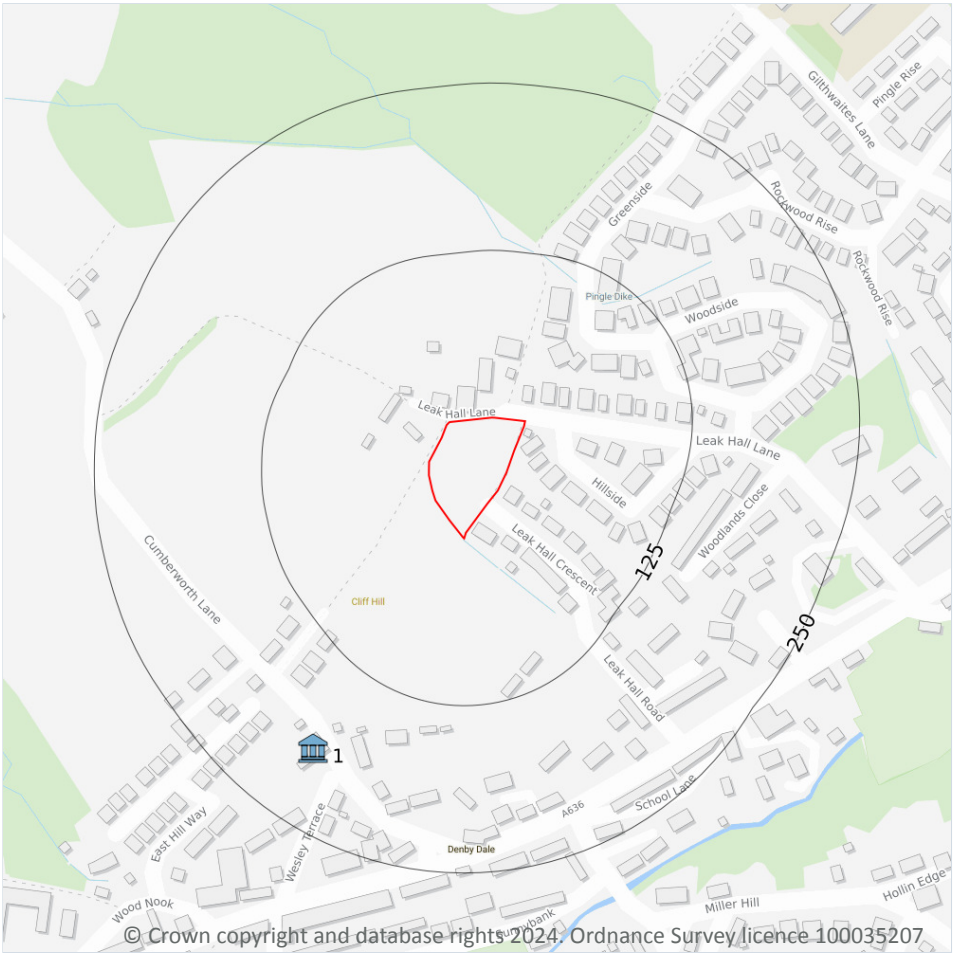
10.18 SSSI Units

Records within 2000m	**0**

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

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

11 Visual and cultural designations



Site Outline

Search buffers in metres (m)

Listed buildings

Conservation areas

Conservation areas - no data

National Parks

Areas of Outstanding Natural Beauty

Registered parks and gardens

Scheduled Monuments

World Heritage Sites

11.1 World Heritage Sites

Records within 250m	0

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

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

11.2 Area of Outstanding Natural Beauty

Records within 250m	0

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

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

11.3 National Parks

Records within 250m	0

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

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

11.4 Listed Buildings

Records within 250m	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 69 >**

ID	Location	Name	Grade	Reference Number	Listed date
1	193m SW	Denby Dale Wesleyan Methodist Church	II	1135295	30/04/1982

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

11.5 Conservation Areas

Records within 250m	0

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

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

11.6 Scheduled Ancient Monuments

Records within 250m	0

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

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

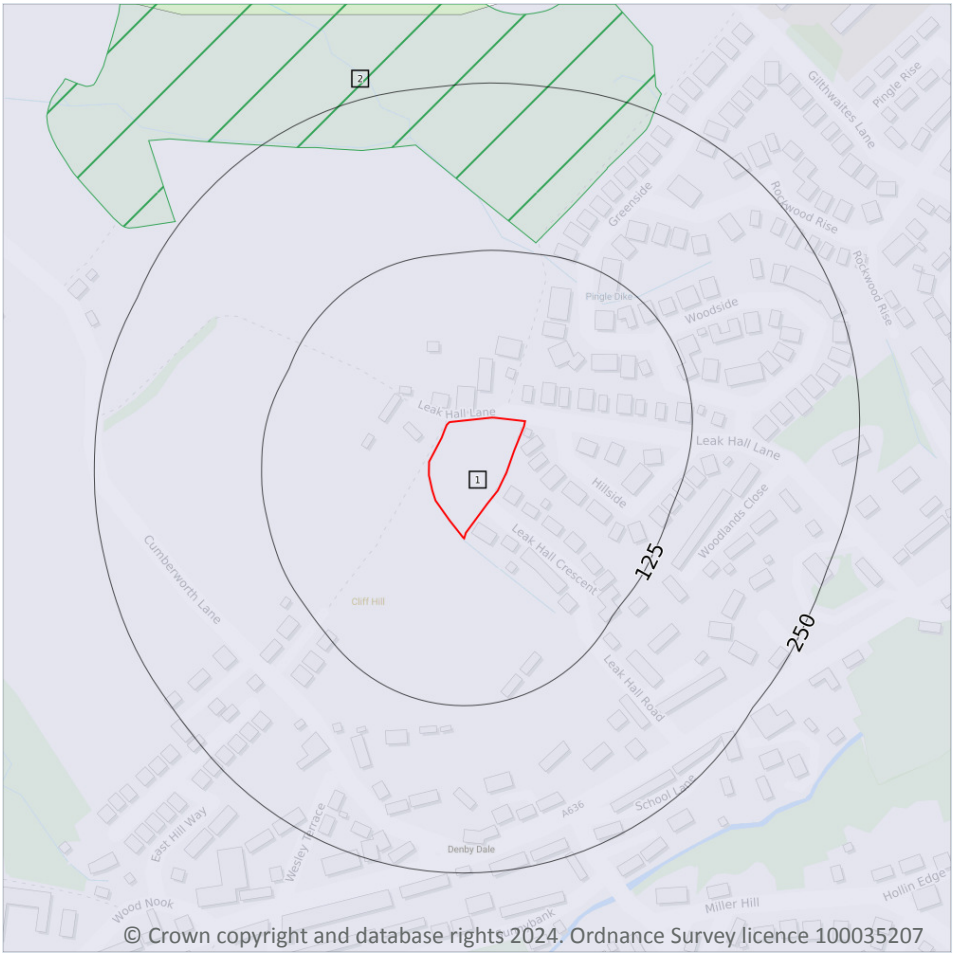
11.7 Registered Parks and Gardens

Records within 250m	0

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

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

12 Agricultural designations



Site Outline

Search buffers in metres (m)

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

12.1 Agricultural Land Classification

Records within 250m	1

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

Features are displayed on the Agricultural designations map on **page 72 >**

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

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	1

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

Features are displayed on the Agricultural designations map on **page 72 >**

ID	Location	Description	Reference	Application date
2	133m N	Selective Fell/Thin (Unconditional)	012/17/15-16	31/07/2015

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

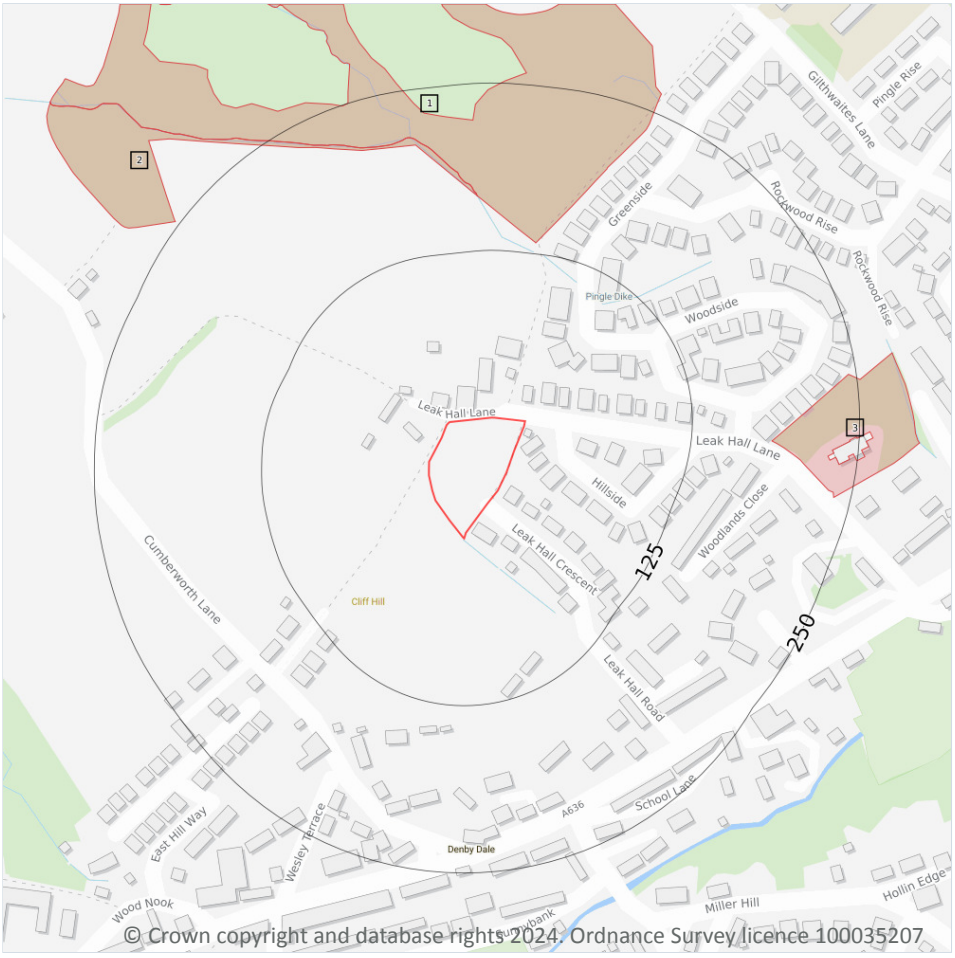
Records within 250m	1

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.

Location	Reference	Scheme	Start Date	End Date
49m NW	1460770	Countryside Stewardship (Middle Tier)	01/01/2023	31/12/2027

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	**3**

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 75 >**

ID	Location	Main Habitat	Other habitats
1	133m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
2	166m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
3	185m E	No main habitat but additional habitats present	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.

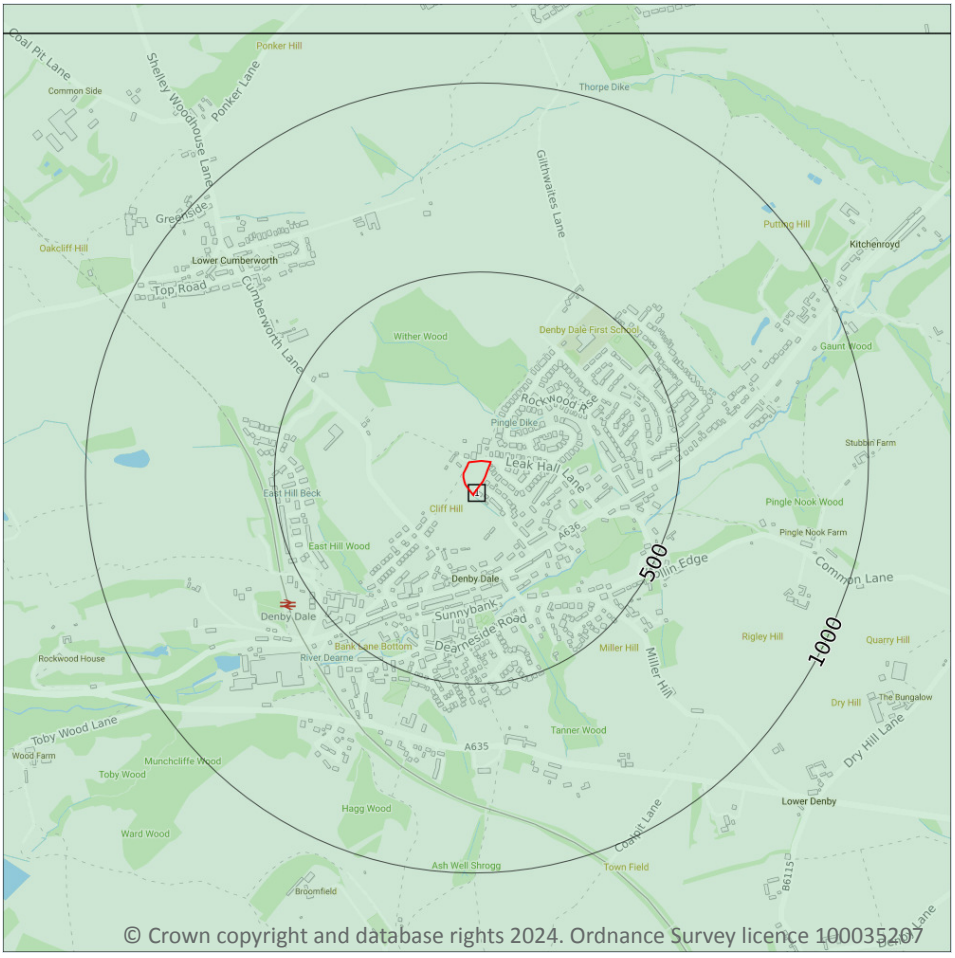
13.4 Limestone Pavement Orders

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	1

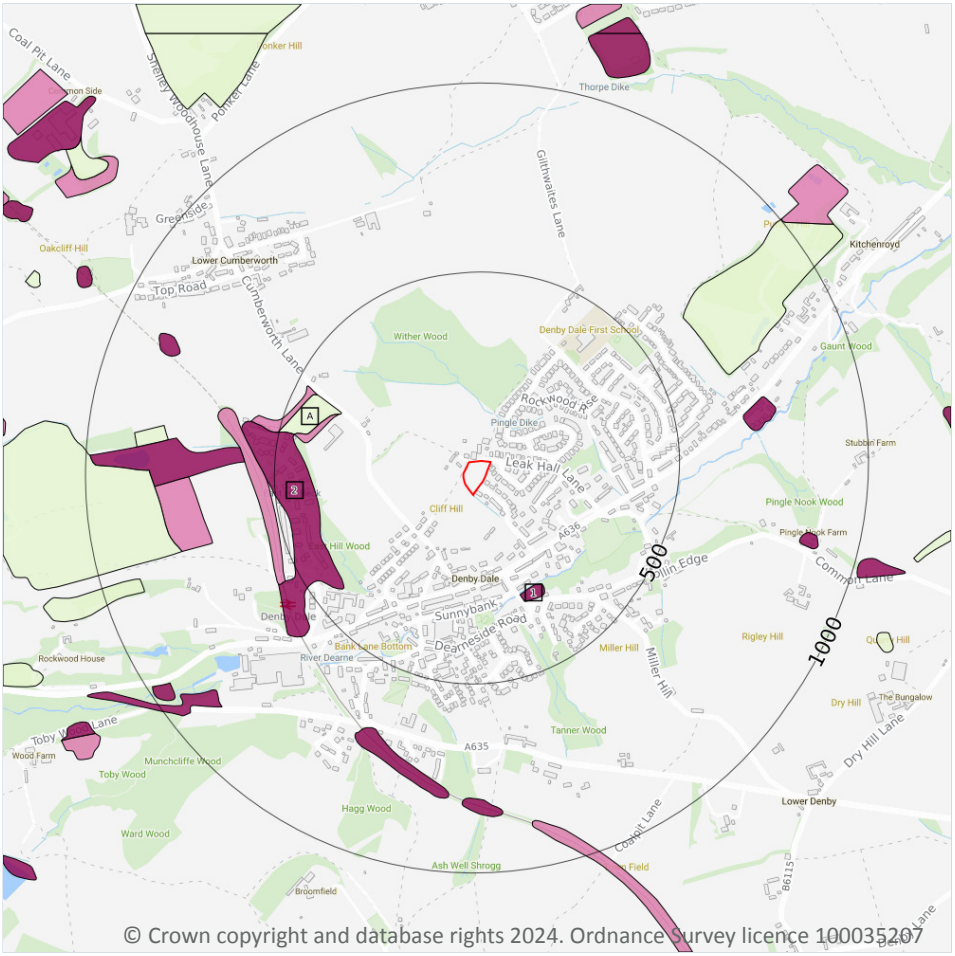
An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

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

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**Full**	**SE20NW**

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.

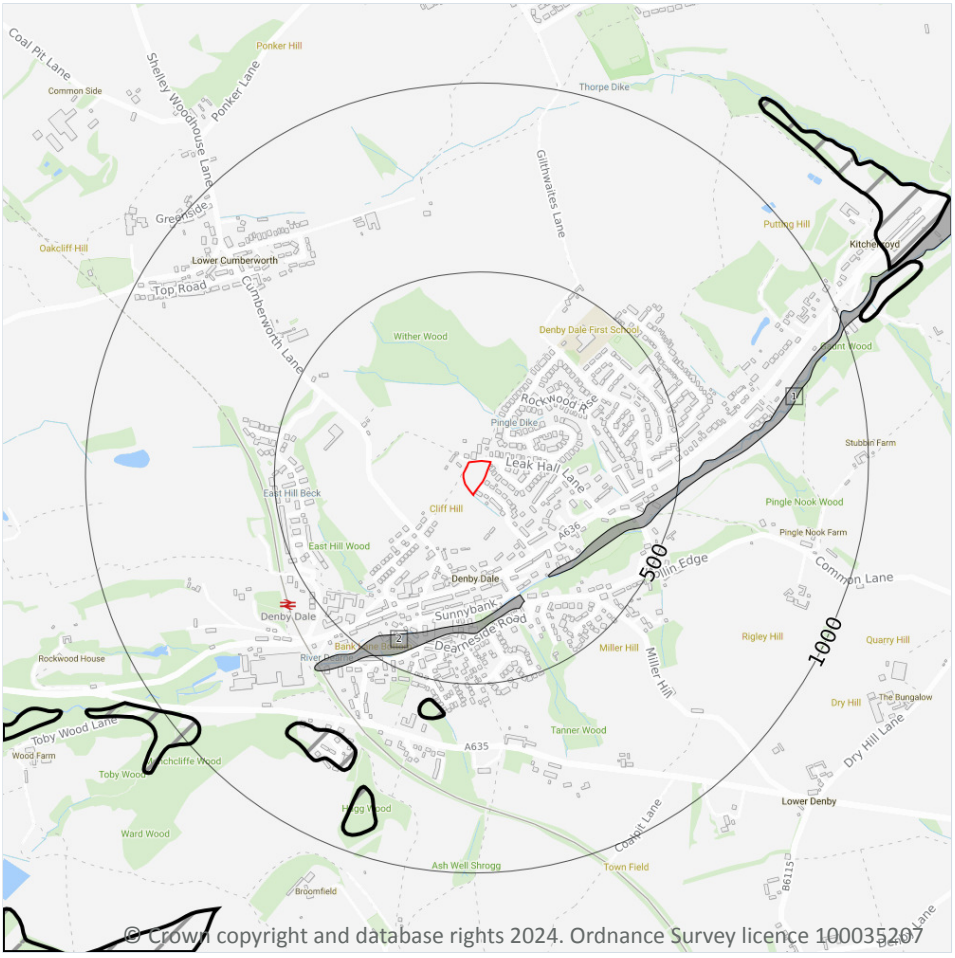
Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on **page 78 >**

ID	Location	LEX Code	Description	Rock description
1	287m SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
A	360m NW	WMGR-ARTDP	Infilled Ground	Artificial Deposit
A	364m NW	WGR-VOID	Worked Ground (Undivided)	Void
2	390m W	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

ID	Location	LEX Code	Description	Rock description
A	439m NW	WGR-VOID	Worked Ground (Undivided)	Void

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (10k)

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

14.3 Superficial geology (10k)

Records within 500m	2

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

Features are displayed on the Geology 1:10,000 scale - Superficial map on **page 80 >**

ID	Location	LEX Code	Description	Rock description
1	291m SE	ALV-CZ	Alluvium - Silty Clay	Clay, Silty
2	291m S	ALV-CZ	Alluvium - Silty Clay	Clay, Silty

This data is sourced from the British Geological Survey.

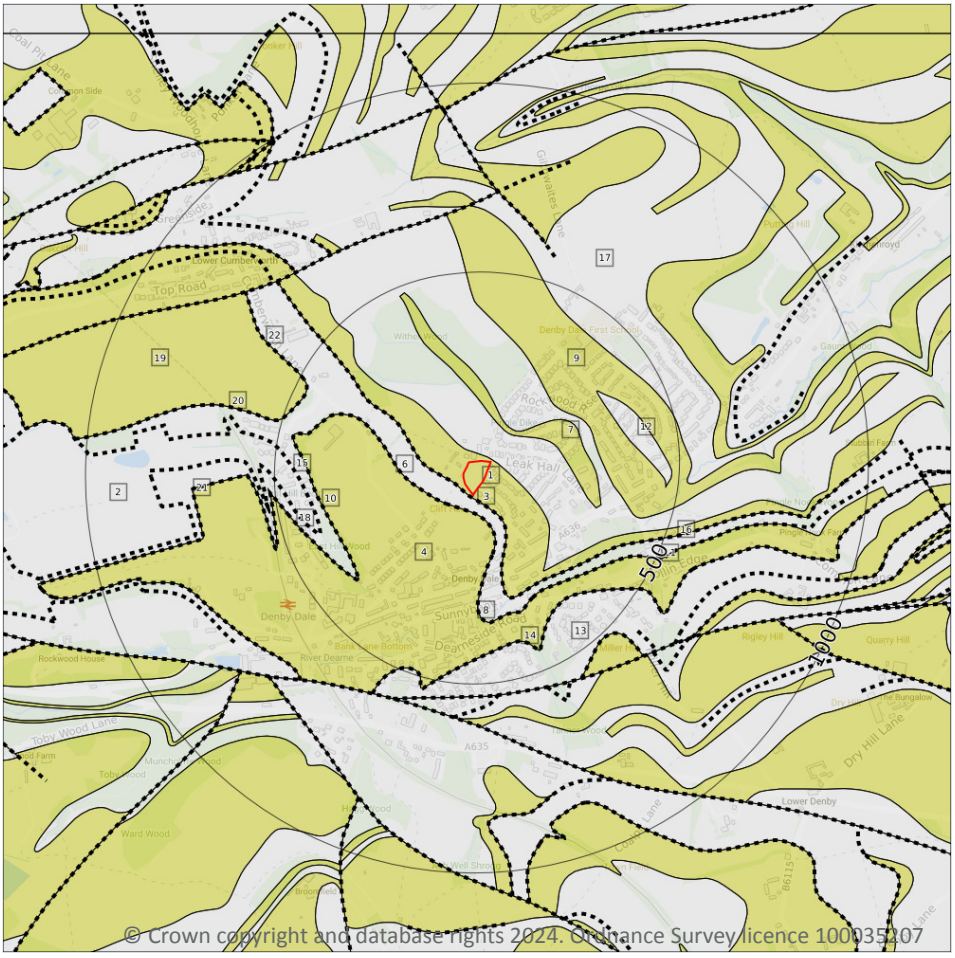
14.4 Landslip (10k)

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	9

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

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 82 >**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**PF-SDST**	**Penistone Flags - Sandstone**	**Langsettian Sub-age**
2	7m NE	PLCM-MDSI	Pennine Lower Coal Measures Formation - Mudstone And Siltstone	Langsettian Sub-age
4	44m S	PLCM-SDST	Pennine Lower Coal Measures Formation - Sandstone	Langsettian Sub-age

ID	Location	LEX Code	Description	Rock age
7	89m NE	PF-SDST	Penistone Flags - Sandstone	Langsettian Sub-age
9	226m NE	PF-SDST	Penistone Flags - Sandstone	Langsettian Sub-age
12	336m NE	PLCM-MDSI	Pennine Lower Coal Measures Formation - Mudstone And Siltstone	Langsettian Sub-age
13	366m SE	PLCM-MDSI	Pennine Lower Coal Measures Formation - Mudstone And Siltstone	Langsettian Sub-age
17	424m NE	PLCM-MDSI	Pennine Lower Coal Measures Formation - Mudstone And Siltstone	Langsettian Sub-age
19	468m NW	PLCM-SDST	Pennine Lower Coal Measures Formation - Sandstone	Langsettian Sub-age

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m **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.

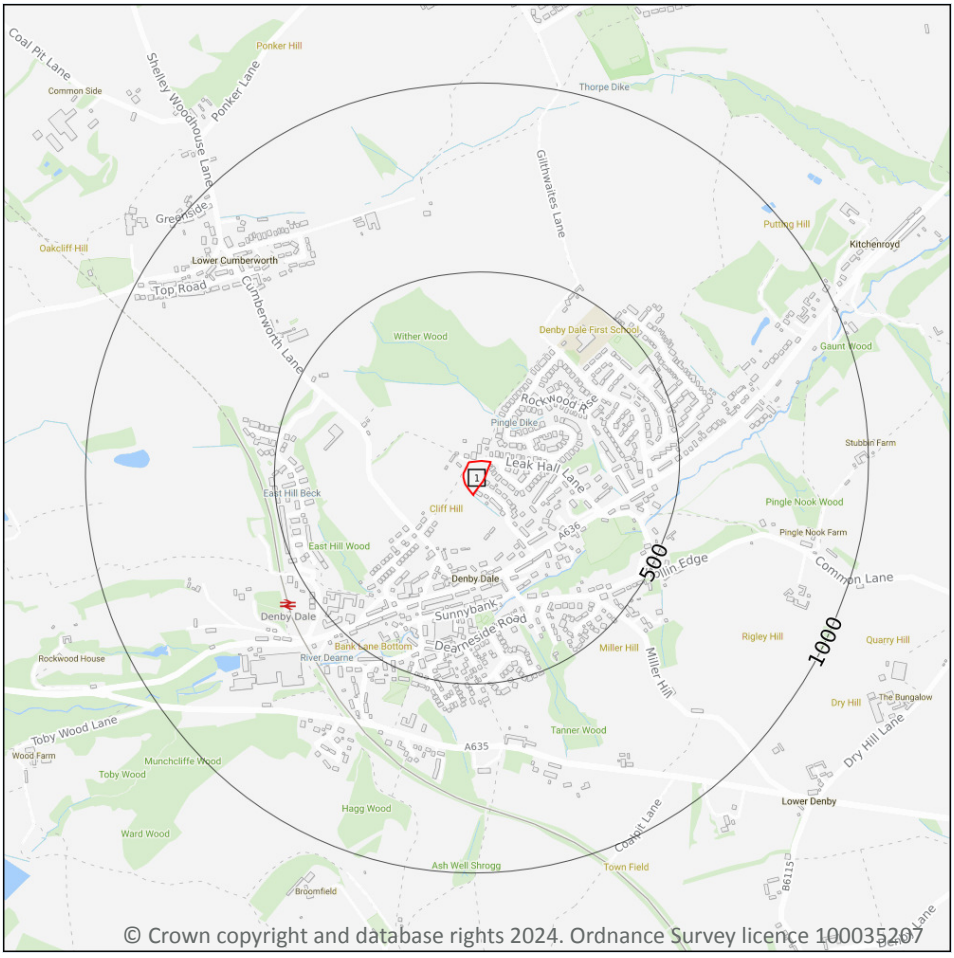
Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 82 >**

ID	Location	Category	Description
3	8m S	ROCK	Coal seam, inferred ()
5	44m S	ROCK	Coal seam, observed ()
6	72m SW	ROCK	Coal seam, inferred ()
8	167m S	ROCK	Coal seam, inferred ()
10	292m NW	ROCK	Coal seam, observed ()
11	310m SE	ROCK	Coal seam, observed ()
14	366m SE	ROCK	Coal seam, inferred ()
15	401m W	ROCK	Coal seam, observed ()
16	402m SE	ROCK	Coal seam, observed ()
18	444m W	ROCK	Coal seam, inferred ()
20	468m NW	ROCK	Coal seam, observed ()
21	475m W	ROCK	Coal seam, observed ()

ID	Location	Category	Description
22	488m NW	ROCK	Coal seam, inferred ()

This data is sourced from the British Geological Survey.

15 Geology 1:50,000 scale - Availability



15.1 50k Availability

Records within 500m	1

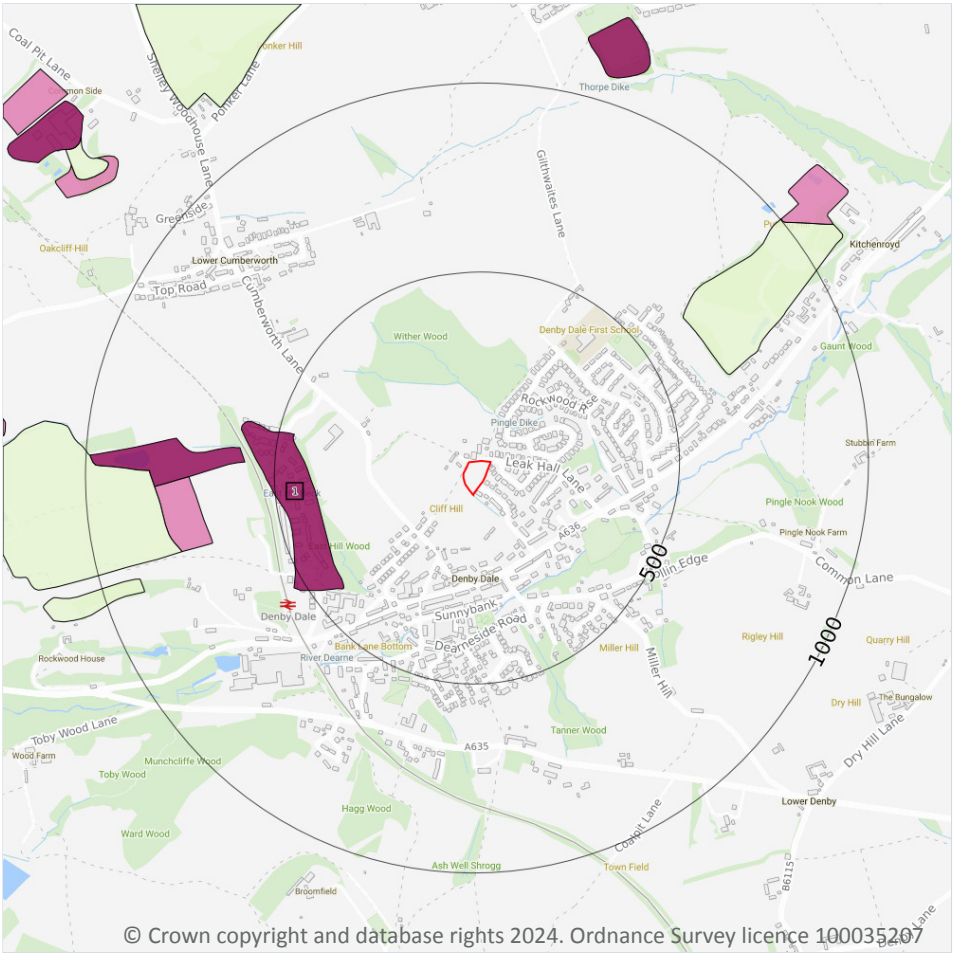
An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:50,000 scale - Availability map on **page 85 >**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**Full**	**EW086_glossop_v4**

This data is sourced from the British Geological Survey.

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



15.2 Artificial and made ground (50k)

Records within 500m	1

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 86 >**

ID	Location	LEX Code	Description	Rock description
1	389m W	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

This data is sourced from the British Geological Survey.

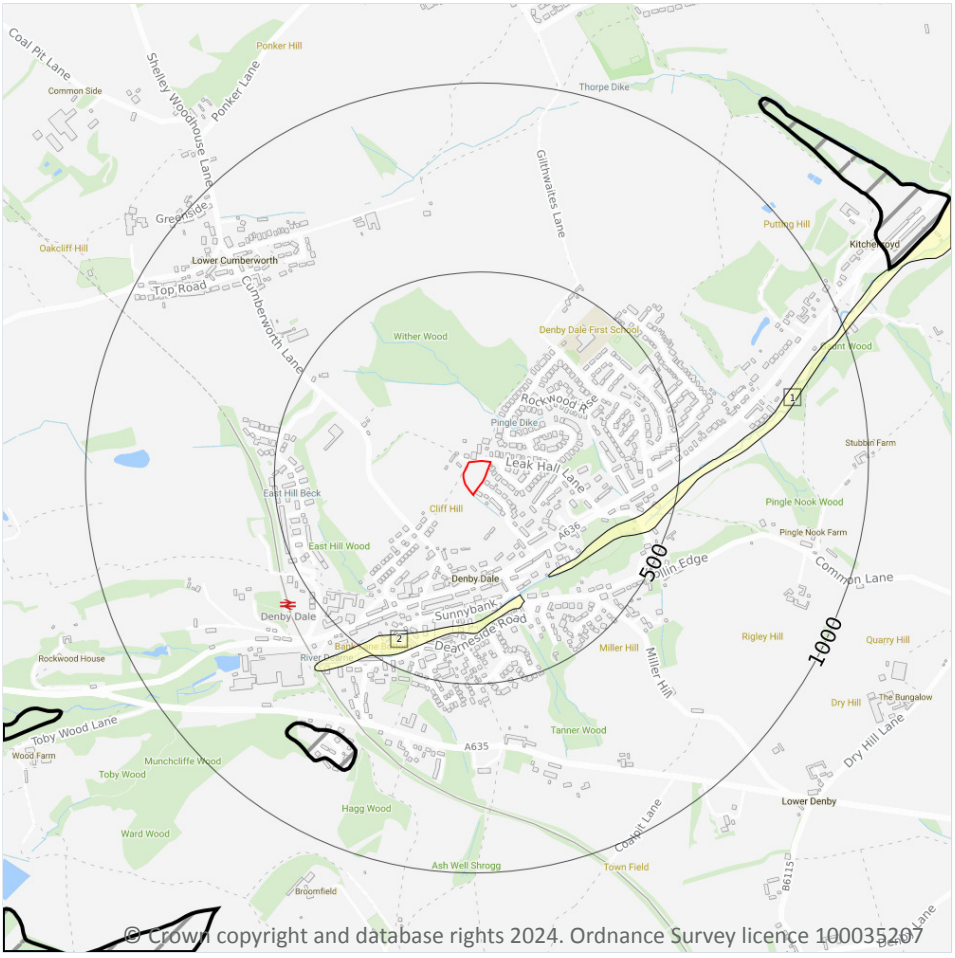
15.3 Artificial ground permeability (50k)

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



Site Outline

Search buffers in metres (m)

Landslip (50k)

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

15.4 Superficial geology (50k)

Records within 500m	2

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

Features are displayed on the Geology 1:50,000 scale - Superficial map on **page 88 >**

ID	Location	LEX Code	Description	Rock description
1	291m SE	ALV-XCZ	ALLUVIUM	CLAY AND SILT
2	291m S	ALV-XCZ	ALLUVIUM	CLAY AND SILT

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.

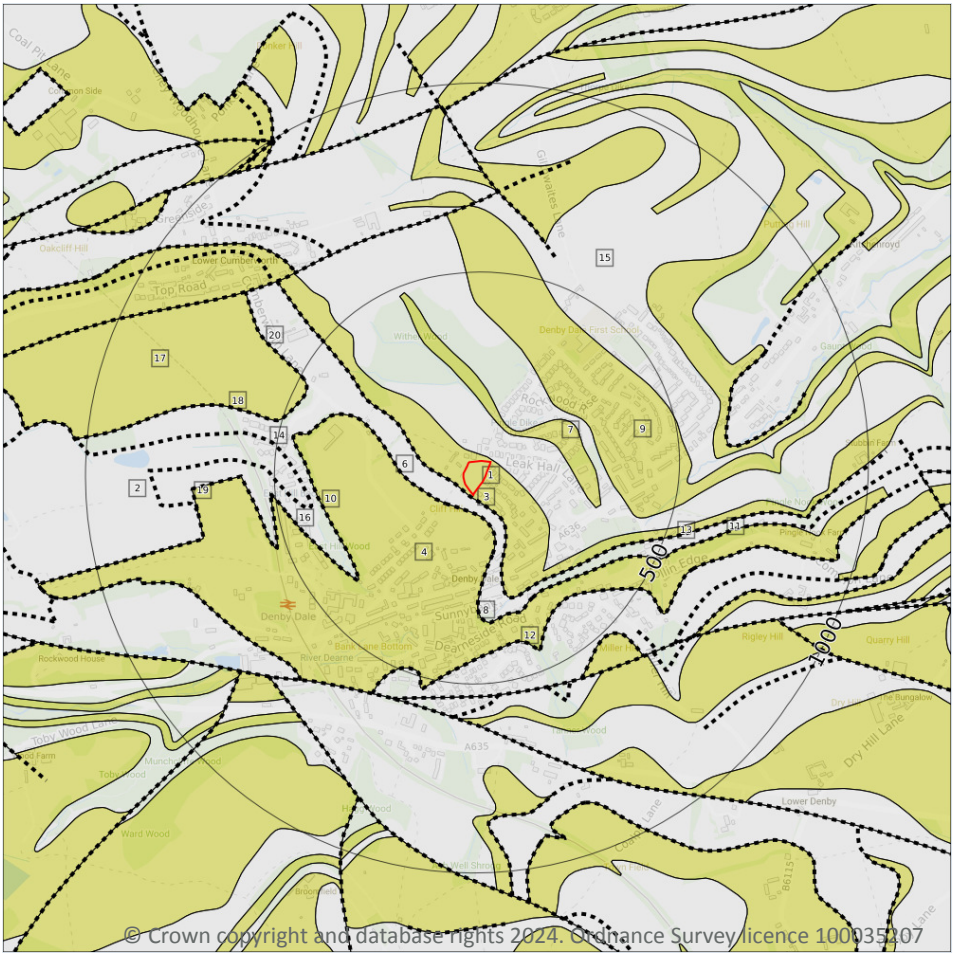
15.7 Landslip permeability (50k)

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 **7**

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 90 >**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**PF-SDST**	**PENISTONE FLAGS - SANDSTONE**	**WESTPHALIAN**
2	7m NE	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
4	45m S	PLCM-SDST	PENNINE LOWER COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN

ID	Location	LEX Code	Description	Rock age
7	89m NE	PF-SDST	PENISTONE FLAGS - SANDSTONE	WESTPHALIAN
9	226m NE	PF-SDST	PENISTONE FLAGS - SANDSTONE	WESTPHALIAN
15	424m NE	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
17	468m NW	PLCM-SDST	PENNINE LOWER 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**
7m NE	Fracture	Moderate	Low
45m S	Fracture	High	Moderate

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 90 >**

ID	Location	Category	Description
3	8m S	ROCK	Coal seam, inferred
5	45m S	ROCK	Coal seam, observed
6	72m SW	ROCK	Coal seam, inferred
8	166m S	ROCK	Coal seam, inferred

ID	Location	Category	Description
10	292m NW	ROCK	Coal seam, observed
11	310m SE	ROCK	Coal seam, observed
12	366m SE	ROCK	Coal seam, inferred
13	403m SE	ROCK	Coal seam, observed
14	409m W	ROCK	Coal seam, observed
16	445m W	ROCK	Coal seam, inferred
18	468m NW	ROCK	Coal seam, observed
19	475m W	ROCK	Coal seam, observed
20	488m NW	ROCK	Coal seam, inferred

This data is sourced from the British Geological Survey.

16 Boreholes

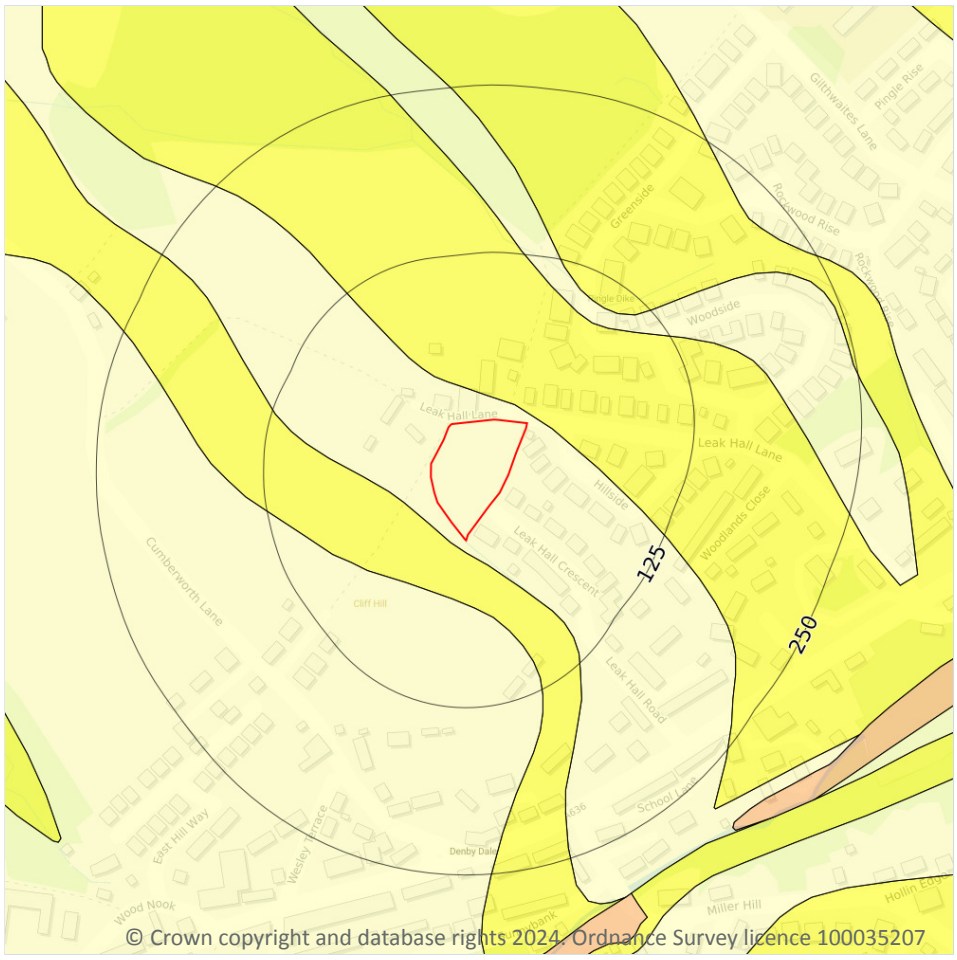
16.1 BGS Boreholes

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	4

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).

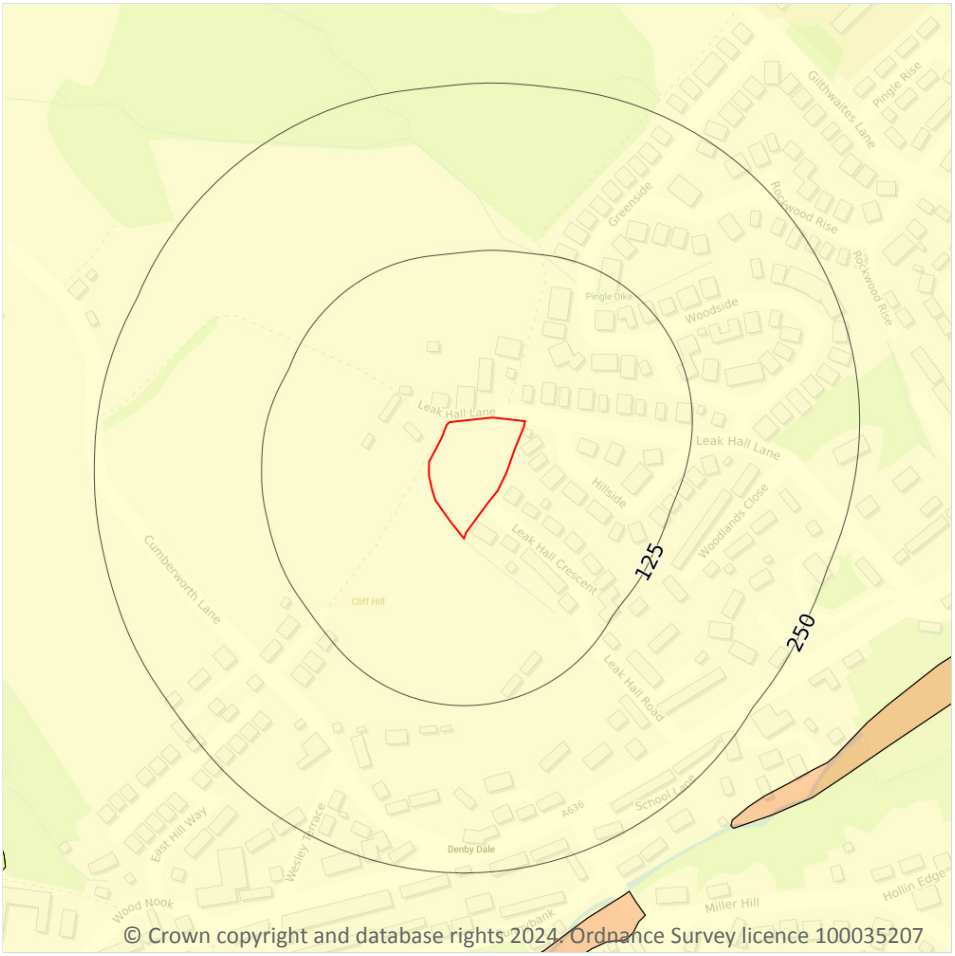
Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 94 >**

Location	Hazard rating	Details
On site	**Negligible**	**Ground conditions predominantly non-plastic.**
7m NE	Very low	Ground conditions predominantly low plasticity.
8m S	Very low	Ground conditions predominantly low plasticity.

Location	Hazard rating	Details
45m S	Negligible	Ground conditions predominantly non-plastic.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Running sands



Site Outline

Search buffers in metres (m)

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

17.2 Running sands

Records within 50m	1

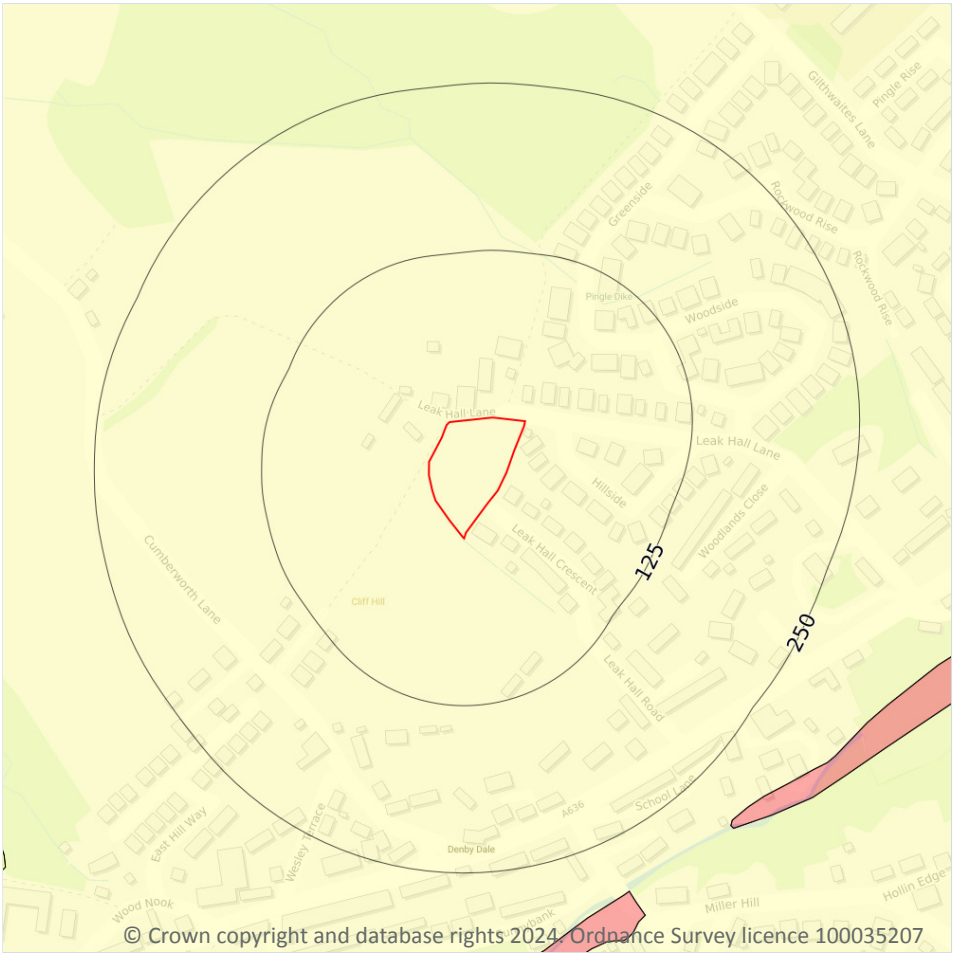
The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

Features are displayed on the Natural ground subsidence - Running sands map on **page 96 >**

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



17.3 Compressible deposits

Records within 50m	1

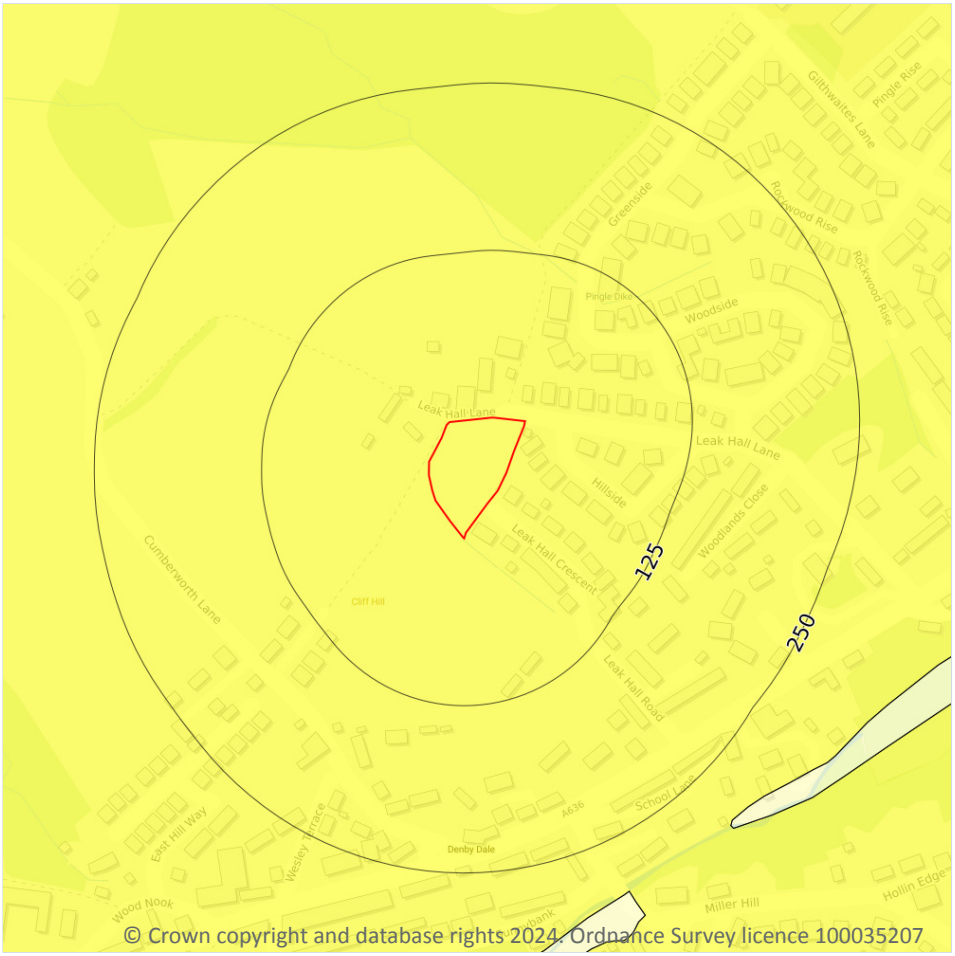
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 97 >**

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



17.4 Collapsible deposits

Records within 50m	1

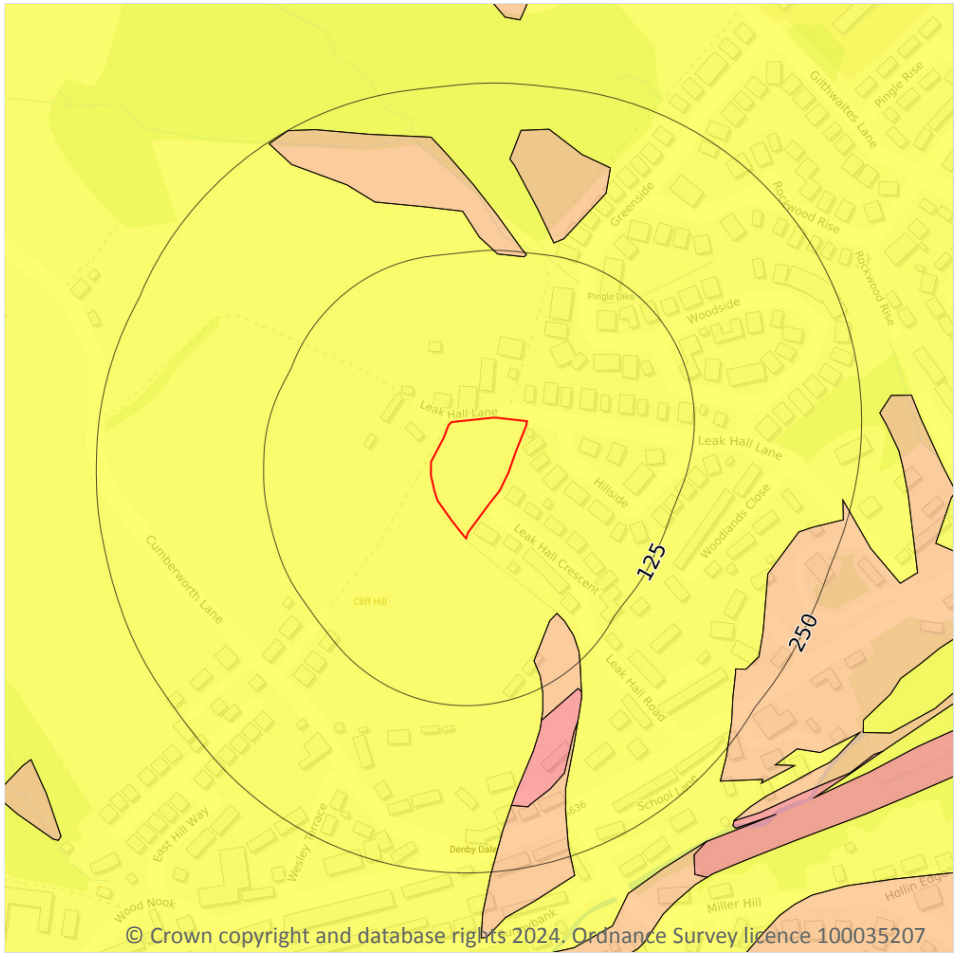
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 98 >**

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

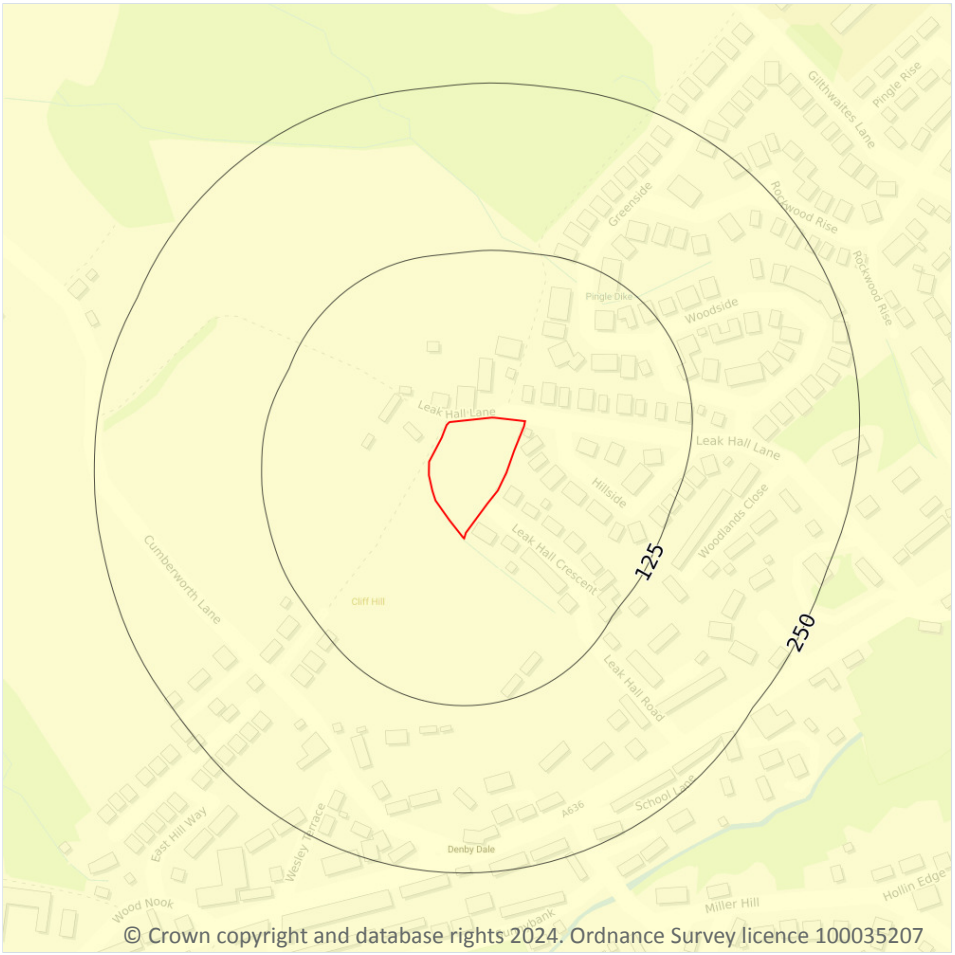
The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

Features are displayed on the Natural ground subsidence - Landslides map on **page 99 >**

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

This data is sourced from the British Geological Survey.

Natural ground subsidence - Ground dissolution of soluble rocks



Site Outline

Search buffers in metres (m)

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

17.6 Ground dissolution of soluble rocks

Records within 50m	1

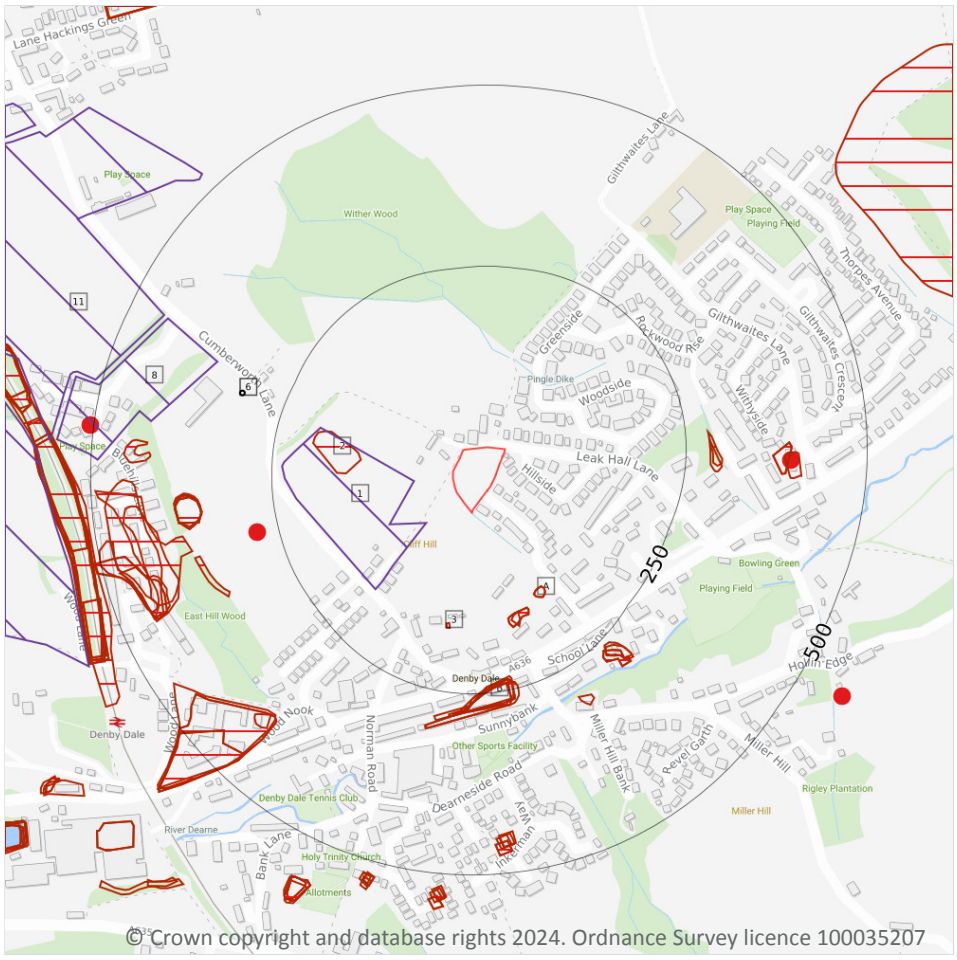
The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 100 >**

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



18.1 BritPits

Records within 500m	2

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 102 >**

ID	Location	Details	Description
4	279m W	Name: Cumberworth Lane Coal Pit Address: Denby Dale, HOLMFIRTH, West Yorkshire Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
F	395m E	Name: Giltthwaite Lane Address: Denby Dale, HUDDERSFIELD, West Yorkshire Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m **14**

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

Features are displayed on the Mining and ground workings map on **page 102 >**

ID	Location	Land Use	Year of mapping	Mapping scale
2	128m W	Unspecified Ground Workings	1967	1:10560
A	138m SE	Refuse Heap	1932	1:10560
A	138m SE	Refuse Heap	1932	1:10560
A	151m S	Unspecified Pit	1951	1:10560
A	151m S	Unspecified Pit	1932	1:10560
A	151m S	Unspecified Pit	1932	1:10560
3	156m S	Saw Pit	1850	1:10560
B	231m S	Pond	1891	1:10560
B	234m S	Reservoir	1932	1:10560
B	235m S	Reservoir	1951	1:10560
B	235m S	Pond	1967	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
B	239m S	Reservoir	1850	1:10560
B	240m S	Reservoir	1948	1:10560
B	240m S	Pond	1904	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.3 Underground workings

Records within 1000m	**11**

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 102 >**

ID	Location	Land Use	Year of mapping	Mapping scale
6	307m W	Unspecified Old Shaft	1903	1:10560
-	638m W	Tunnel	1948	1:10560
-	638m W	Tunnel	1903	1:10560
-	638m W	Tunnel	1891	1:10560
-	640m W	Tunnel	1951	1:10560
-	640m W	Tunnel	1983	1:10000
-	640m W	Tunnel	1967	1:10560
-	822m W	Unspecified Old Shaft	1903	1:10560
-	971m NW	Tunnel	1892	1:10560
-	979m NW	Tunnel	1948	1:10560
-	979m NW	Tunnel	1904	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground mining extents

Records within 500m	**0**

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

This data is sourced from Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m	3

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

Features are displayed on the Mining and ground workings map on **page 102 >**

ID	Location	Site Name	Mineral	Type	Planning Status	Planning Status Date
1	54m W	Lower Cumberworth	Fireclay	Working is wholly underground	Valid	Not available
8	359m NW	Bromleys East of Railway	Clay, fireclay	Working is wholly underground	Valid	Not available
11	453m NW	Lower Cumberworth	Fireclay	Working is wholly underground	Valid	Not available

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m	1

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

Features are displayed on the Mining and ground workings map on **page 102 >**

ID	Location	Name	Commodity	Class	Likelihood
-	824m W	Bromleys	Fireclay	D	Underground mining is considered likely to have occurred within or close to the area. The location, extent and nature of mining should be considered in any site investigation. Potential for difficult ground conditions should 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	7

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.

Location	Mineral type
On site	**Stone**
On site	**Stone**
37m W	Stone
116m NW	Stone
190m NW	Stone
206m W	Stone
458m W	Stone

This data is sourced from Groundsure.

18.10 Mining record office plans

Records within 500m	1

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.

Location	Mineral
3m S	Fireclay

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.

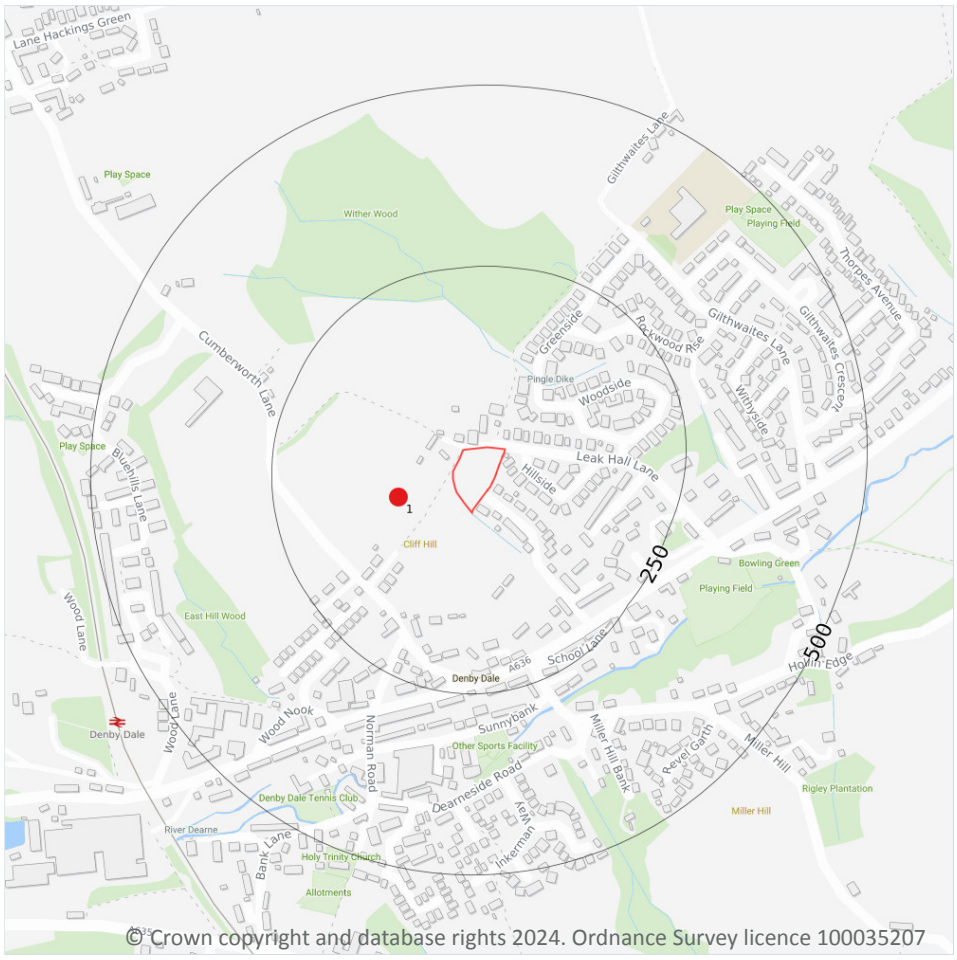
18.16 Clay mining

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



Site Outline

Search buffers in metres (m)

- Natural cavities (Area)
- Natural cavities (Point)
- Mining cavities
- Reported recent incidents
- Historical incidents
- BGS karst database (Point)
- BGS karst database (Line)
- BGS karst database (Area)

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	3

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.

Features are displayed on the Ground cavities and sinkholes map on **page 109 >**

ID	Location	Mine Address	Mineral	Data source	Publisher
1	79m W	Baml Royd, West Yorkshire	Fireclay	LISTING OF NEW MINERAL RECORDS OFFICE CATALOGUE.	UNPUBLISHED/DRAFT
-	695m W	Holly Mine, West Yorkshire	Fireclay	LISTING OF NEW MINERAL RECORDS OFFICE CATALOGUE.	UNPUBLISHED/DRAFT
-	778m W	Bromley, West Yorkshire	Fireclay	MINERIAL PLANNING RIGHTS APPLICATION RECORDS.	UNPUBLISHED

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.

19.5 National karst database

Records within 500m	0

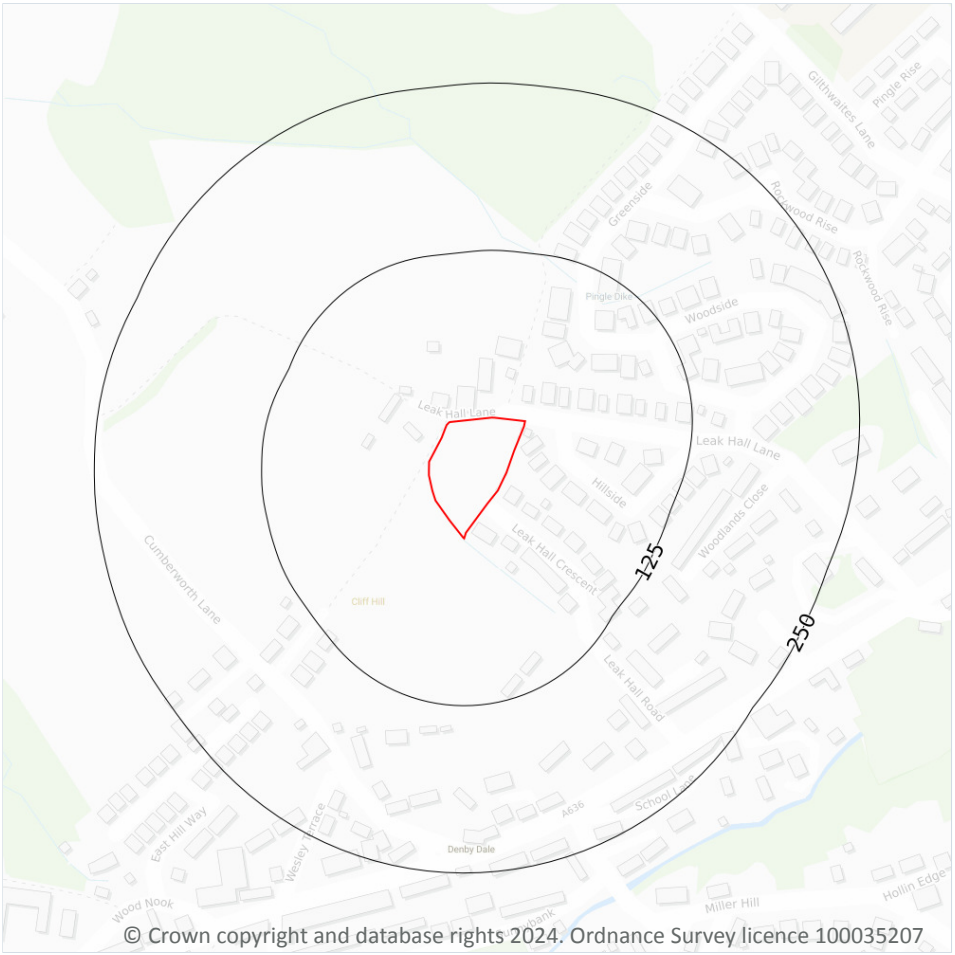
This is a comprehensive database of national karst information gathered from a wide range of sources. BGS have collected data on five main types of karst feature: Sinkholes, stream links, caves, springs, and incidences of associated damage to buildings, roads, bridges and other engineered works.

Since the database was set up in 2002 data covering most of the evaporite karst areas of the UK have now been added, along with data covering about 60% of the Chalk, and 35% of the Carboniferous Limestone outcrops. Many of the classic upland karst areas have yet to be included. Recorded so far are: Over 800 caves, 1300 stream sinks, 5600 springs, 10,000 sinkholes.

The database is not yet complete, and not all records have been verified. The absence of data does not mean that karst features are not present at a site. A reliability rating is included with each record.

This data is sourced from the British Geological Survey.

20 Radon



Site Outline

Search buffers in metres (m)

- Greater than 30%
- Between 10% and 30%
- Between 5% and 10%
- Between 3% and 5%
- Between 1% and 3%
- Less than 1%

20.1 Radon

Records on site	1

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

Features are displayed on the Radon map on **page 112 >**

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

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

21 Soil chemistry

21.1 BGS Estimated Background Soil Chemistry

Records within 50m	3

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 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**
5m NE	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 1

Records within 500m	0

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

This data is sourced from publicly available information by Groundsure.

22.9 Crossrail 2

Records within 500m	0

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

This data is sourced from publicly available information by Groundsure.

22.10 HS2

Records within 500m	0

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

This data is sourced from HS2 ltd.

Data providers

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

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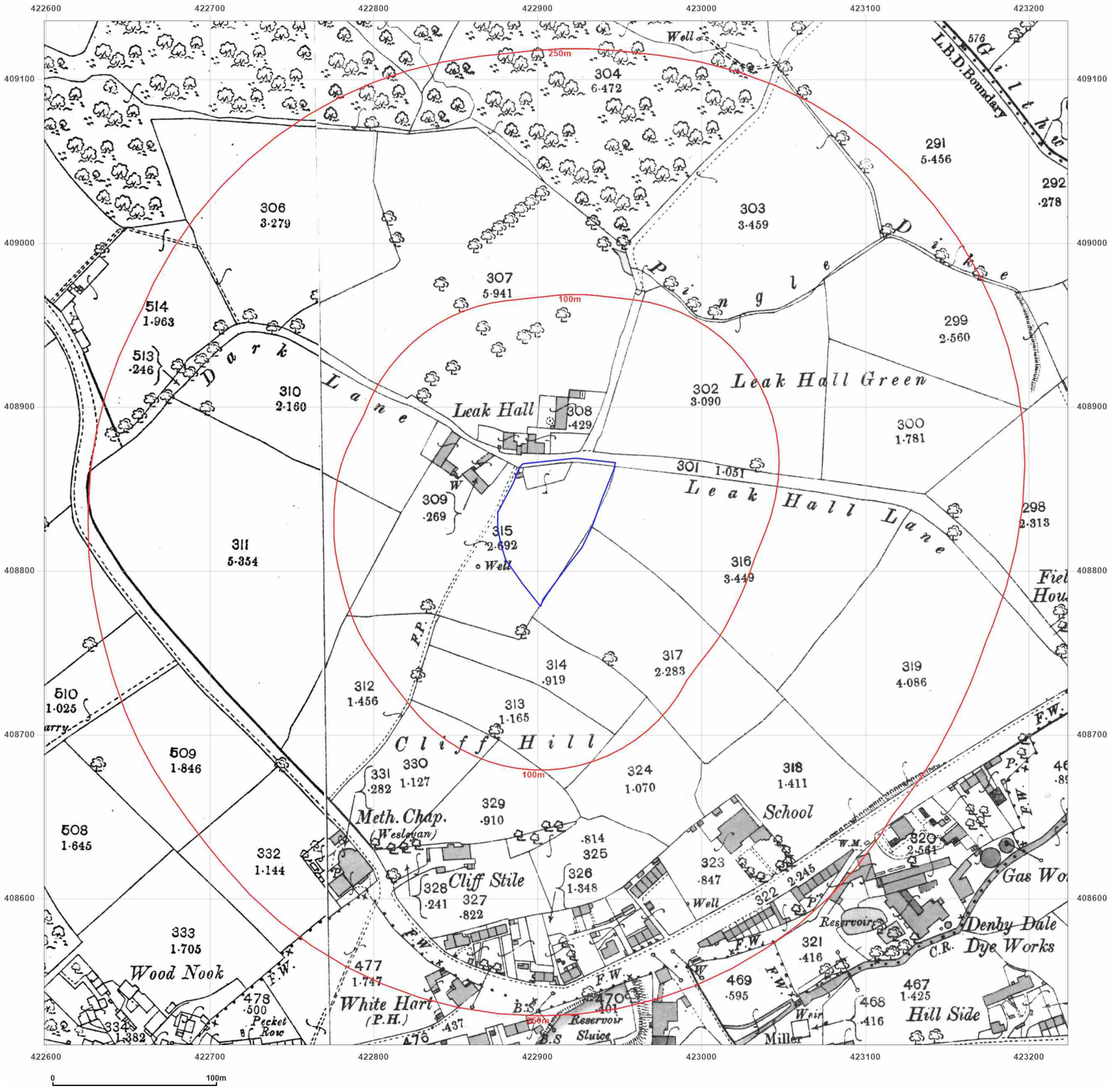
Groundsure's Terms and Conditions can be accessed at this link: www.groundsure.com/terms-and-conditions-april-2023/ ↗.

Appendix 3

Historical Maps



Groundsure INSIGHTS

Site Details:

LEAK HALL LANE, DENBY DALE,
HUDDERSFIELD, HD8 8QU

Client Ref: C3999_23_E_6054_PO-2937
Report Ref: GS-7K7-4UX-BTN-YYY
Grid Ref: 422911, 408823

Map Name: County Series

Map date: **1891-1893**

Scale: 1:2,500

Printed at: 1:2,500

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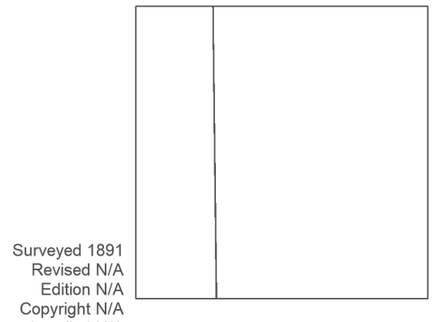

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Production date: 02 April 2024

Map legend available at:
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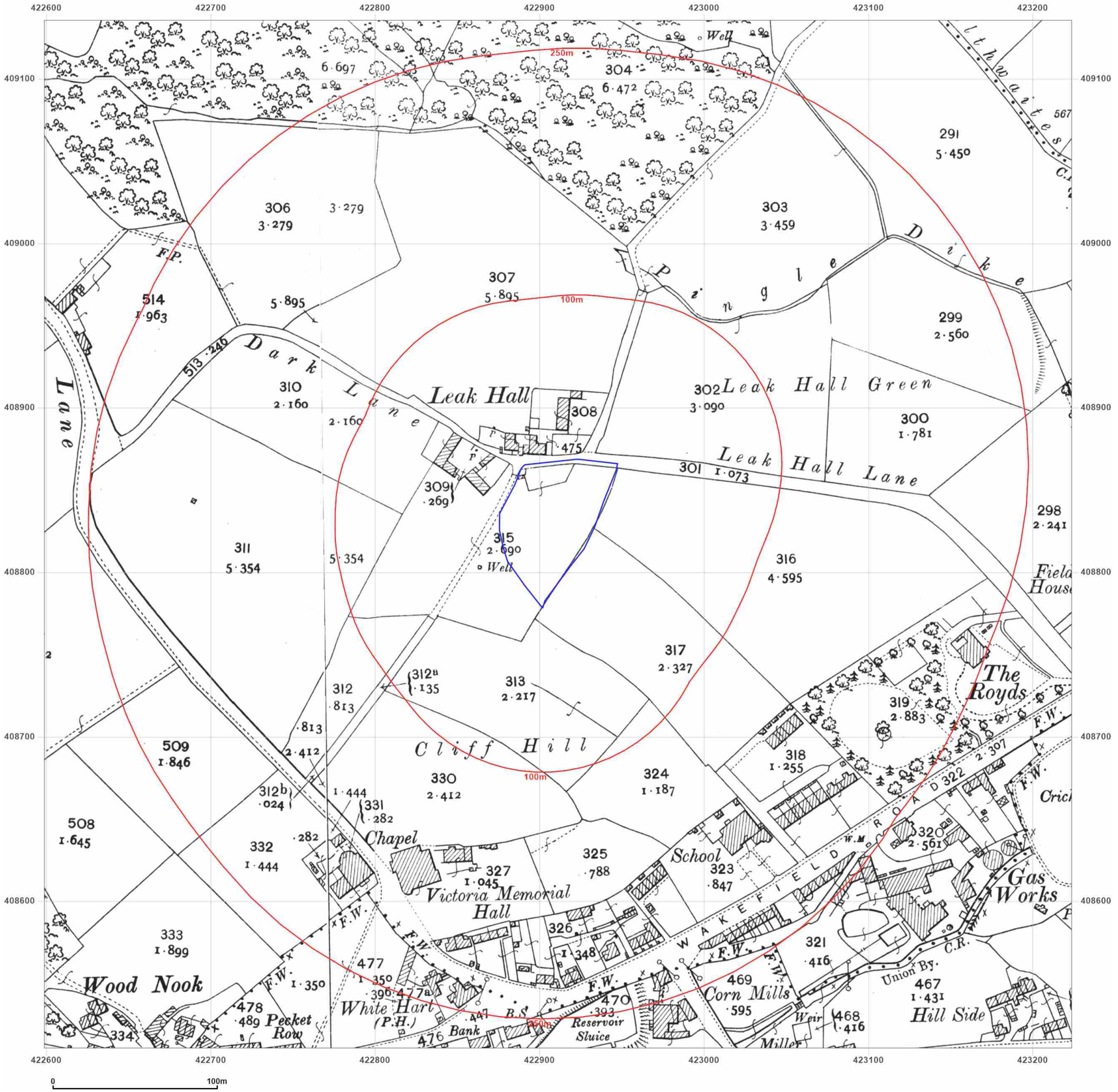

Groundsure INSIGHTS

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Grid Ref: 422911, 408823

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

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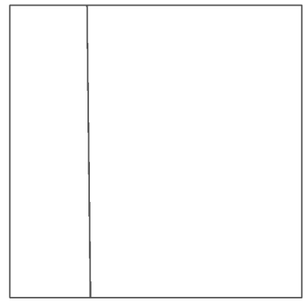

Surveyed 1906
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Edition N/A
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Revised 1906
Edition N/A
Copyright N/A
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Map legend available at:
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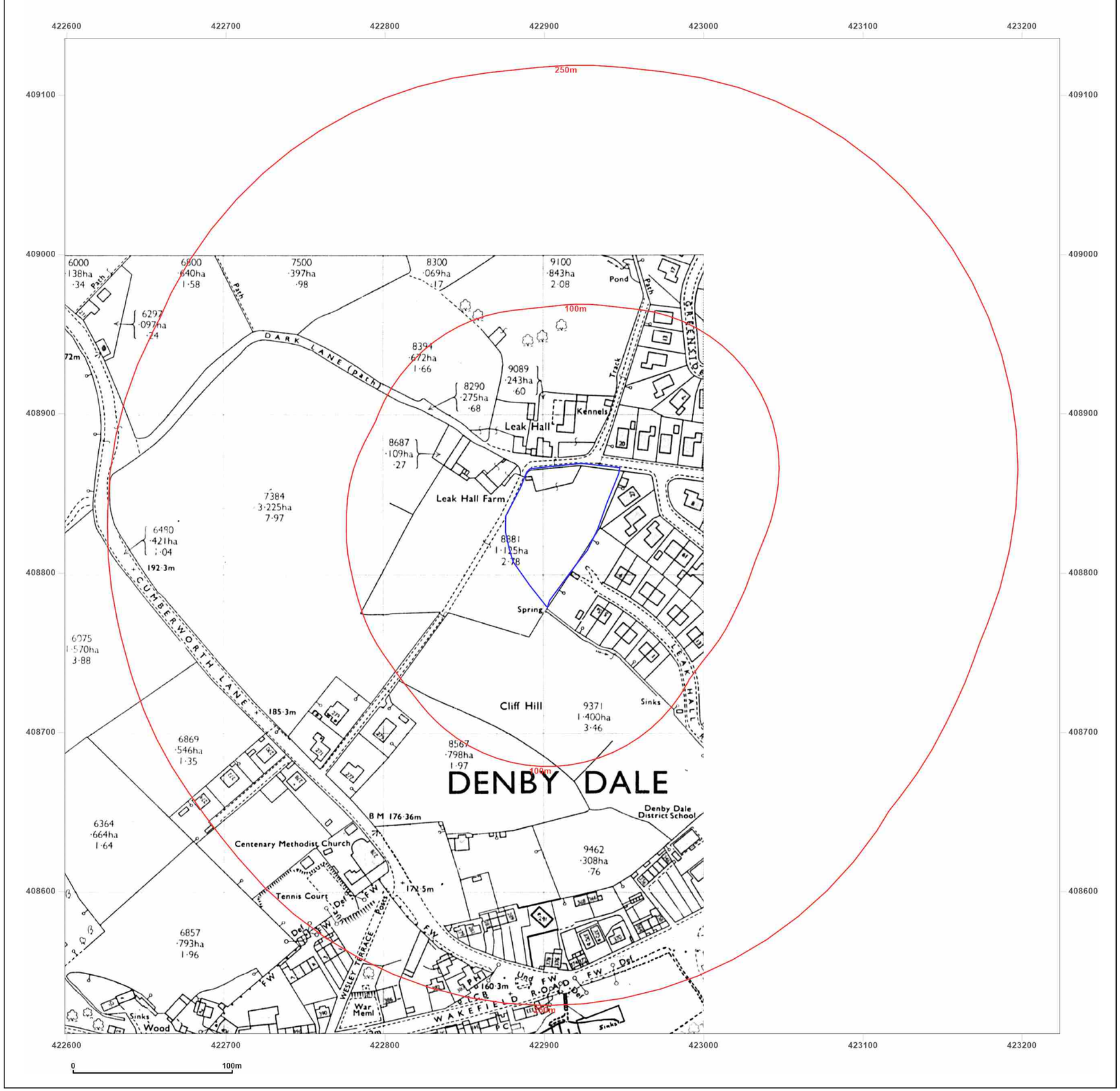

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Report Ref: GS-7K7-4UX-BTN-YYY
Grid Ref: 422911, 408823

Map Name: National Grid
Map date: **1958**
Scale: 1:2,500
Printed at: 1:2,500

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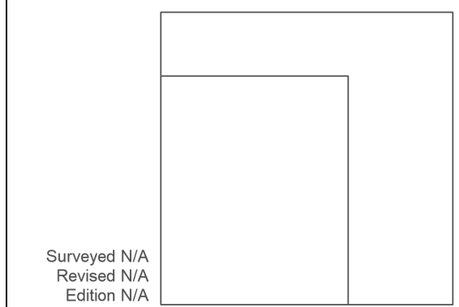

Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled 1958

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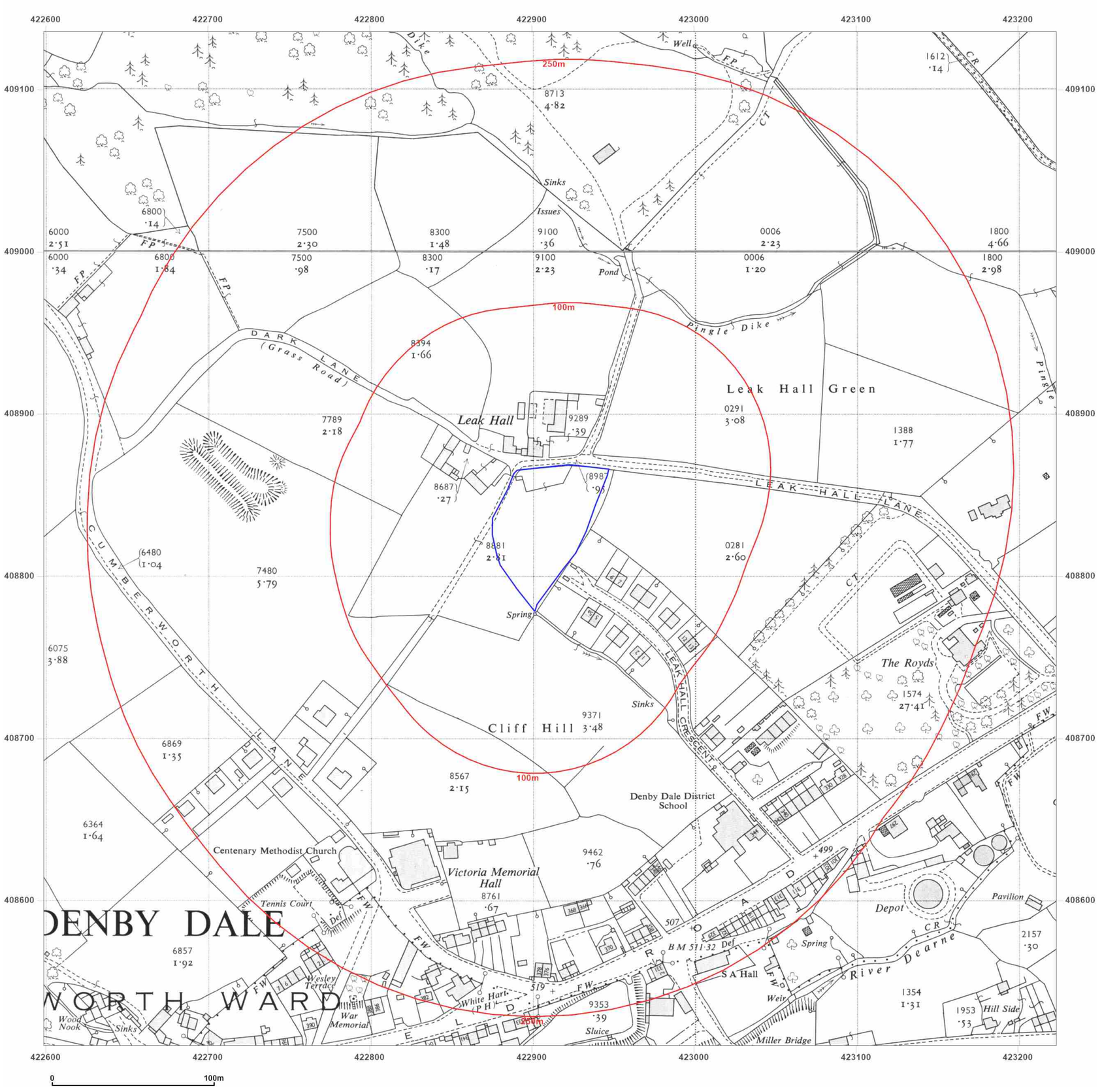

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HUDDERSFIELD, HD8 8QU

Client Ref: C3999_23_E_6054_PO-2937
Report Ref: GS-7K7-4UX-BTN-YYY
Grid Ref: 422911, 408823

Map Name: National Grid

Map date: **1959**

Scale: 1:2,500

Printed at: 1:2,500

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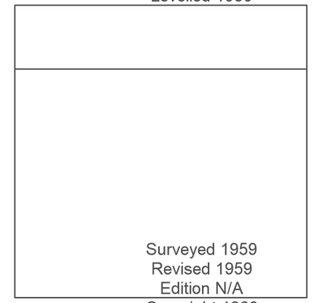
Surveyed 1959
Revised 1959
Edition N/A
Copyright 1960
Levelled 1930



Surveyed 1959
Revised 1959
Edition N/A
Copyright 1960
Levelled 1930

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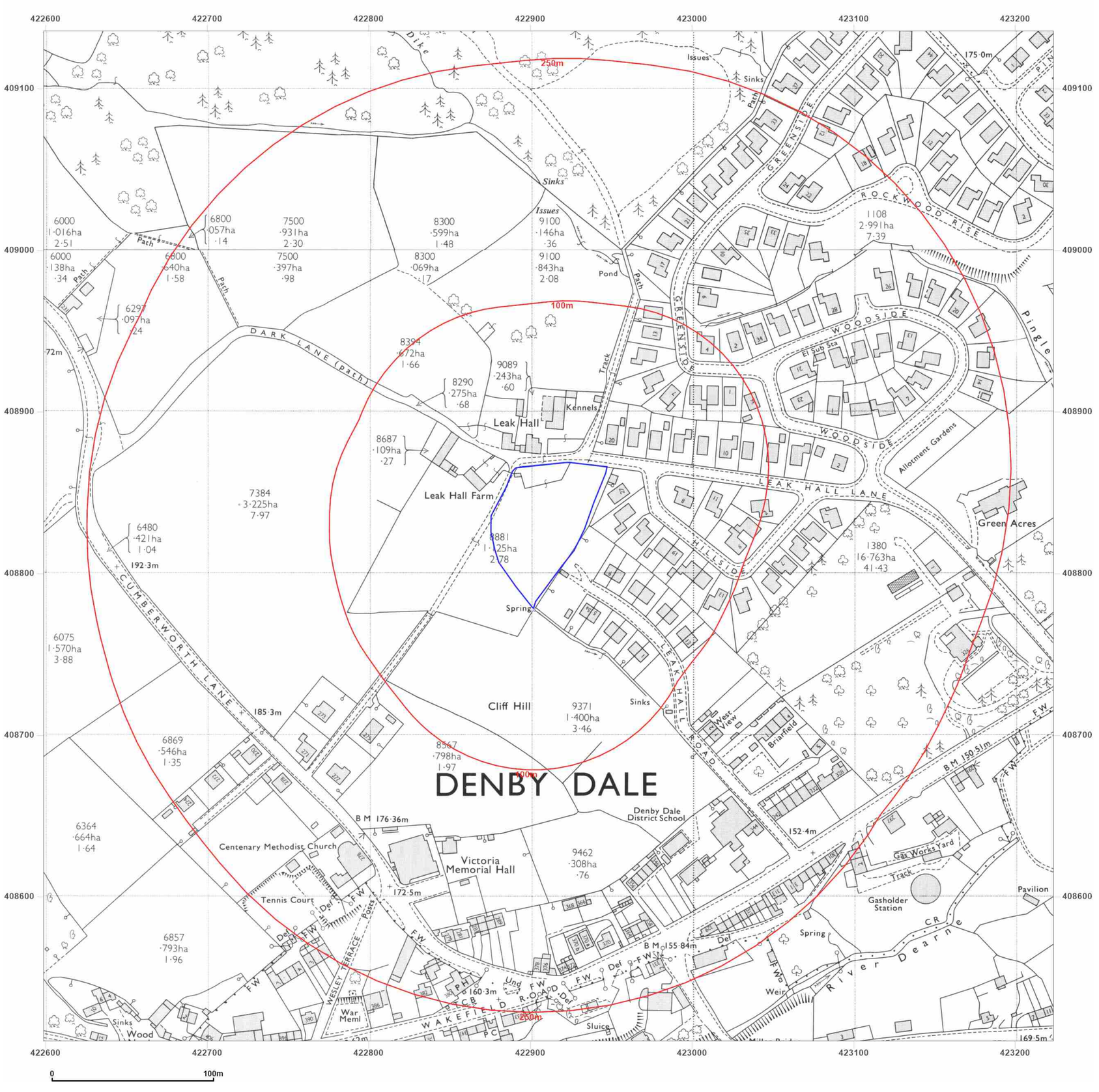

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Client Ref: C3999_23_E_6054_PO-2937
Report Ref: GS-7K7-4UX-BTN-YYY
Grid Ref: 422911, 408823

Map Name: National Grid

Map date: **1969-1970**

Scale: 1:2,500

Printed at: 1:2,500

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Revised 1969
Edition N/A
Copyright 1970
Levelled 1958

Surveyed 1970
Revised 1970
Edition N/A
Copyright 1971
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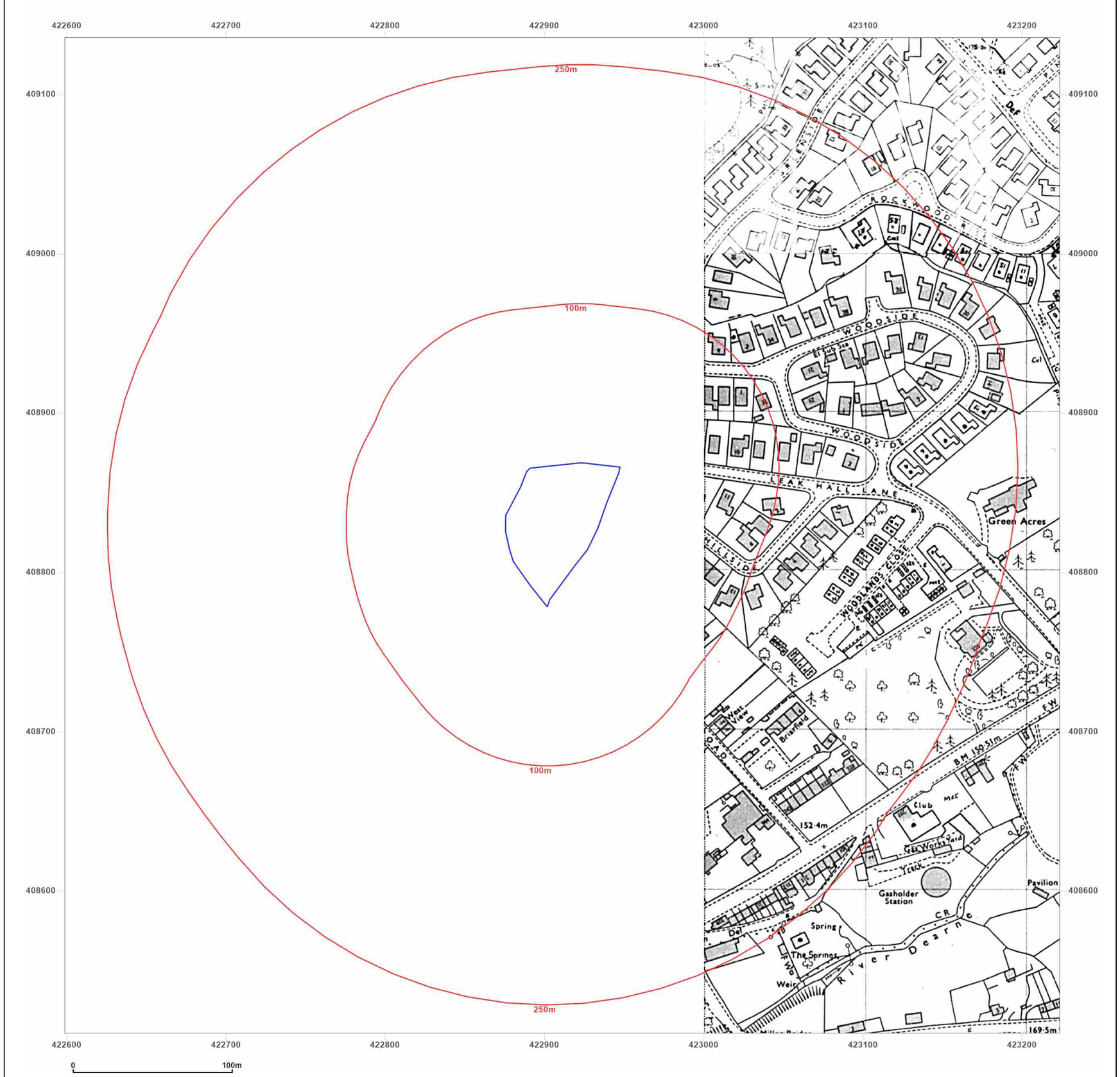

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Site Details:

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HUDDERSFIELD, HD8 8QU

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Report Ref: GS-7K7-4UX-BTN-YYY
Grid Ref: 422911, 408823

Map Name: National Grid

Map date: **1978-1979**

Scale: 1:2,500

Printed at: 1:2,500

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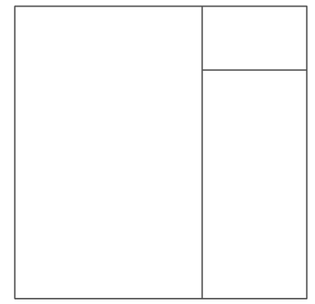

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Edition N/A
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Levelled N/A

Surveyed 1958
Revised 1979
Edition N/A
Copyright 1979
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Client Ref: C3999_23_E_6054_PO-2937
Report Ref: GS-7K7-4UX-BTN-YYY
Grid Ref: 422911, 408823

Map Name: National Grid

Map date: **1983-1986**

Scale: 1:2,500

Printed at: 1:2,500

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Surveyed 1983
Revised 1983
Edition N/A
Copyright 1985
Levelled 1958

Surveyed 1958
Revised 1986
Edition N/A
Copyright 1986
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Client Ref: C3999_23_E_6054_PO-2937
Report Ref: GS-7K7-4UX-BTN-YYY
Grid Ref: 422911, 408823

Map Name: National Grid
Map date: **1988-1993**
Scale: 1:2,500
Printed at: 1:2,500

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

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

Surveyed 1958
Revised 1988
Edition N/A
Copyright 1988
Levelled 1958

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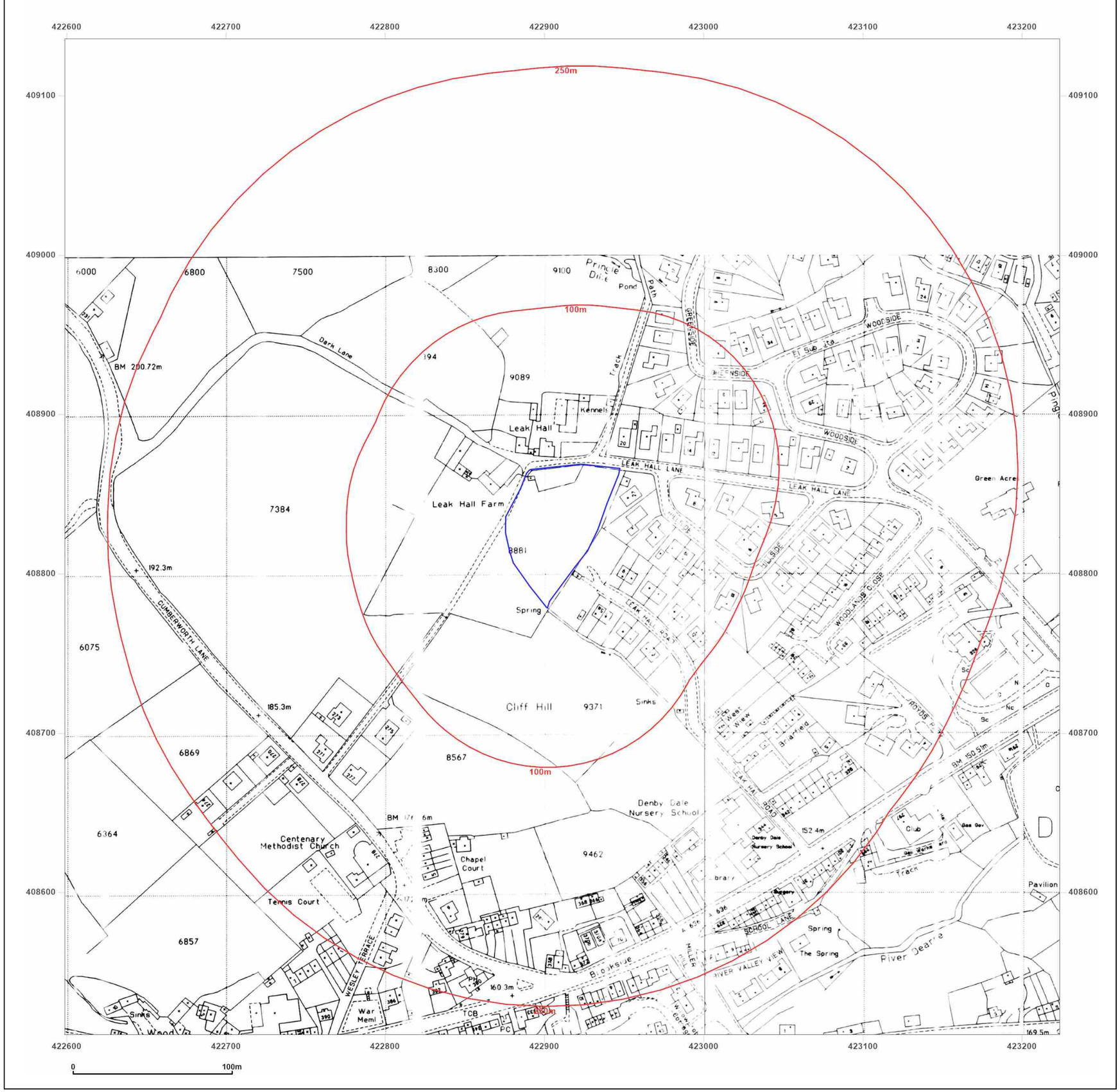

Groundsure INSIGHTS

Site Details:

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HUDDERSFIELD, HD8 8QU

Client Ref: C3999_23_E_6054_PO-2937
Report Ref: GS-7K7-4UX-BTN-YYY
Grid Ref: 422911, 408823

Map Name: National Grid

Map date: **1993-1994**

Scale: 1:2,500

Printed at: 1:2,500

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

Surveyed N/A
Revised N/A
Edition N/A
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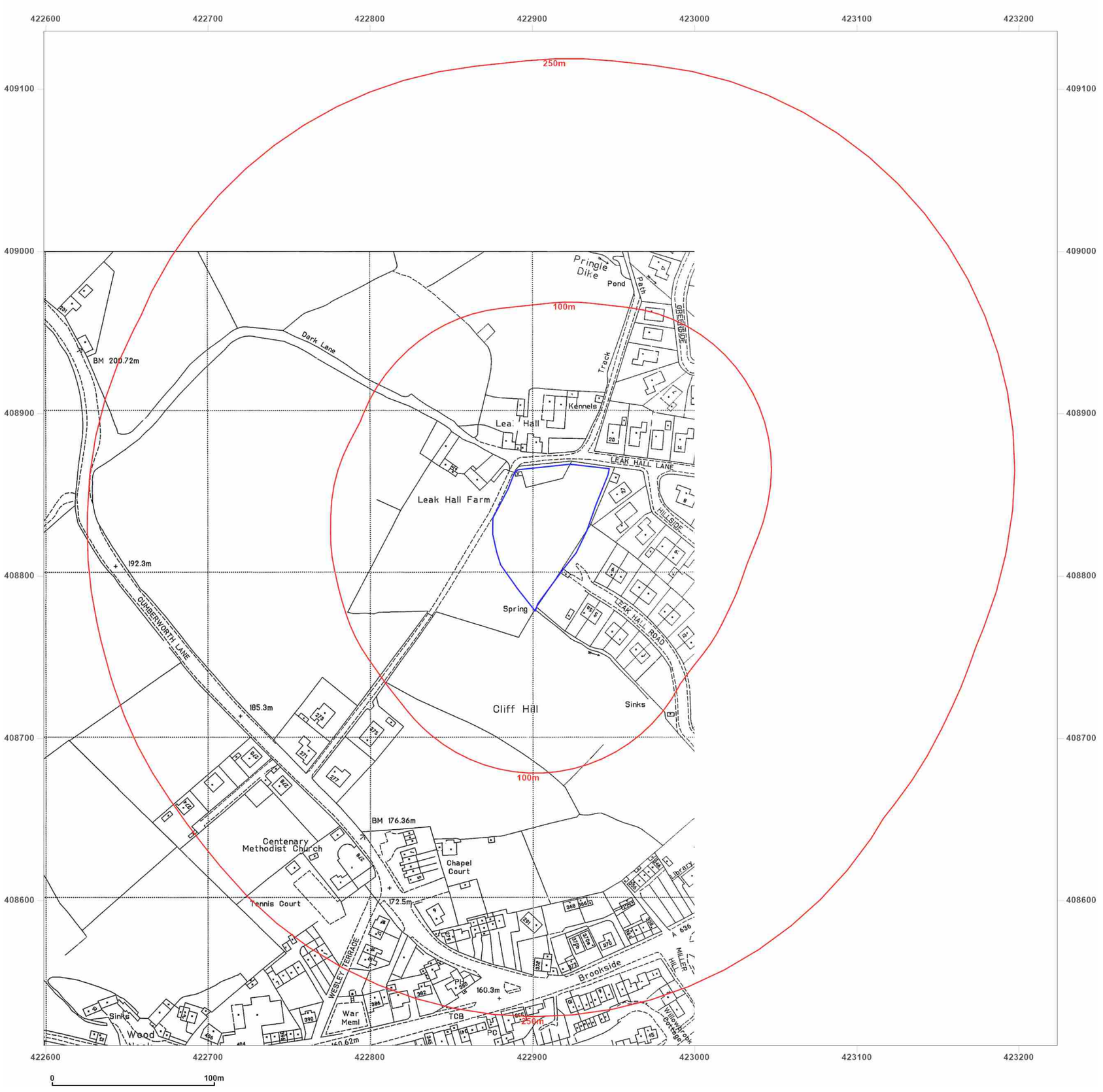

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Site Details:

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Report Ref: GS-7K7-4UX-BTN-YYY
Grid Ref: 422911, 408823

Map Name: National Grid

Map date: **1995**

Scale: 1:2,500

Printed at: 1:2,500

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

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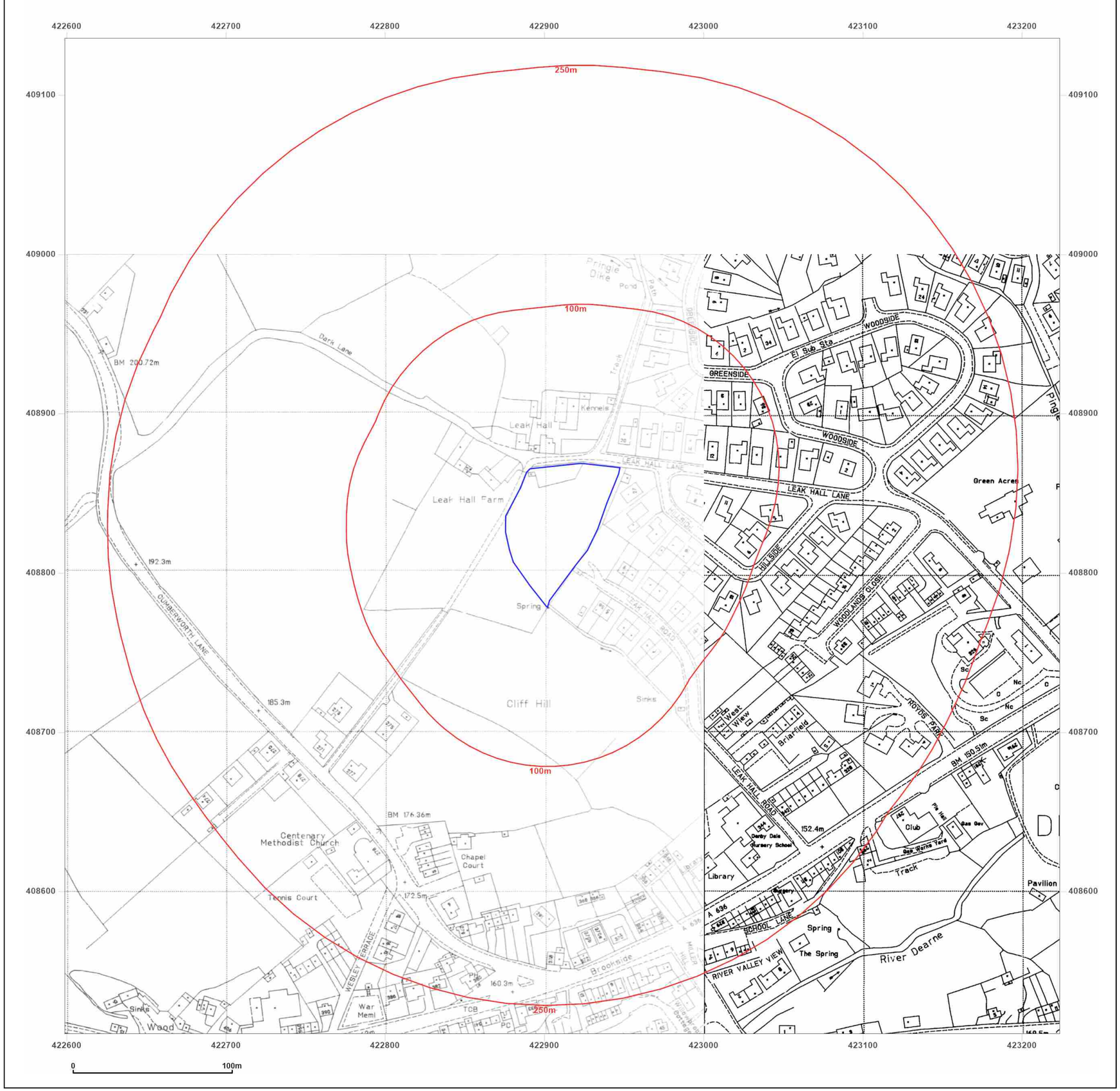

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Site Details:

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HUDDERSFIELD, HD8 8QU

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Report Ref: GS-7K7-4UX-BTN-YYY
Grid Ref: 422911, 408823

Map Name: National Grid

Map date: **1994-1995**

Scale: 1:2,500

Printed at: 1:2,500

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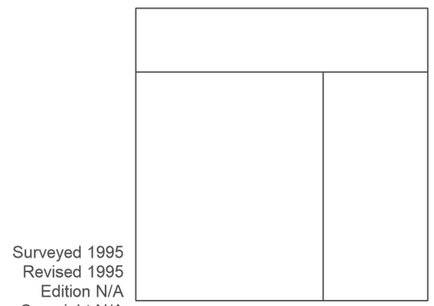

Surveyed 1995
Revised 1995
Edition N/A
Copyright N/A
Levelled N/A

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

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Client Ref: C3999_23_E_6054_PO-2937
Report Ref: GS-7K7-4UX-BTN-YYY
Grid Ref: 422911, 408823

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

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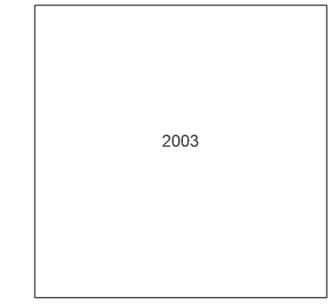

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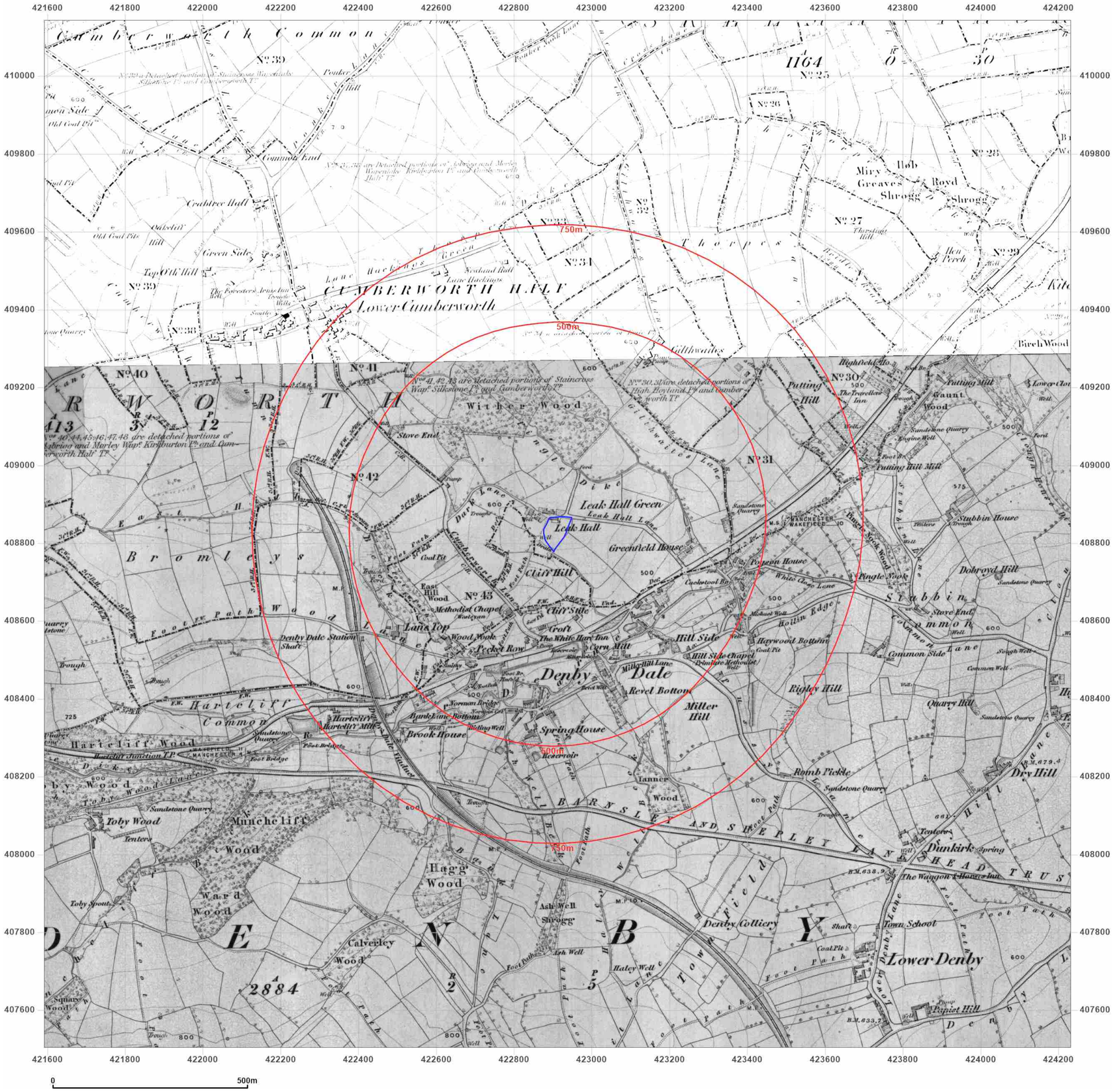

Groundsure INSIGHTS

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Client Ref: C3999_23_E_6054_PO-2937
Report Ref: GS-7K7-4UX-BTN-YYY
Grid Ref: 422911, 408823

Map Name: County Series

Map date: **1854**

Scale: 1:10,560

Printed at: 1:10,560

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

Surveyed 1850
Revised N/A
Edition 1854
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Map legend available at:
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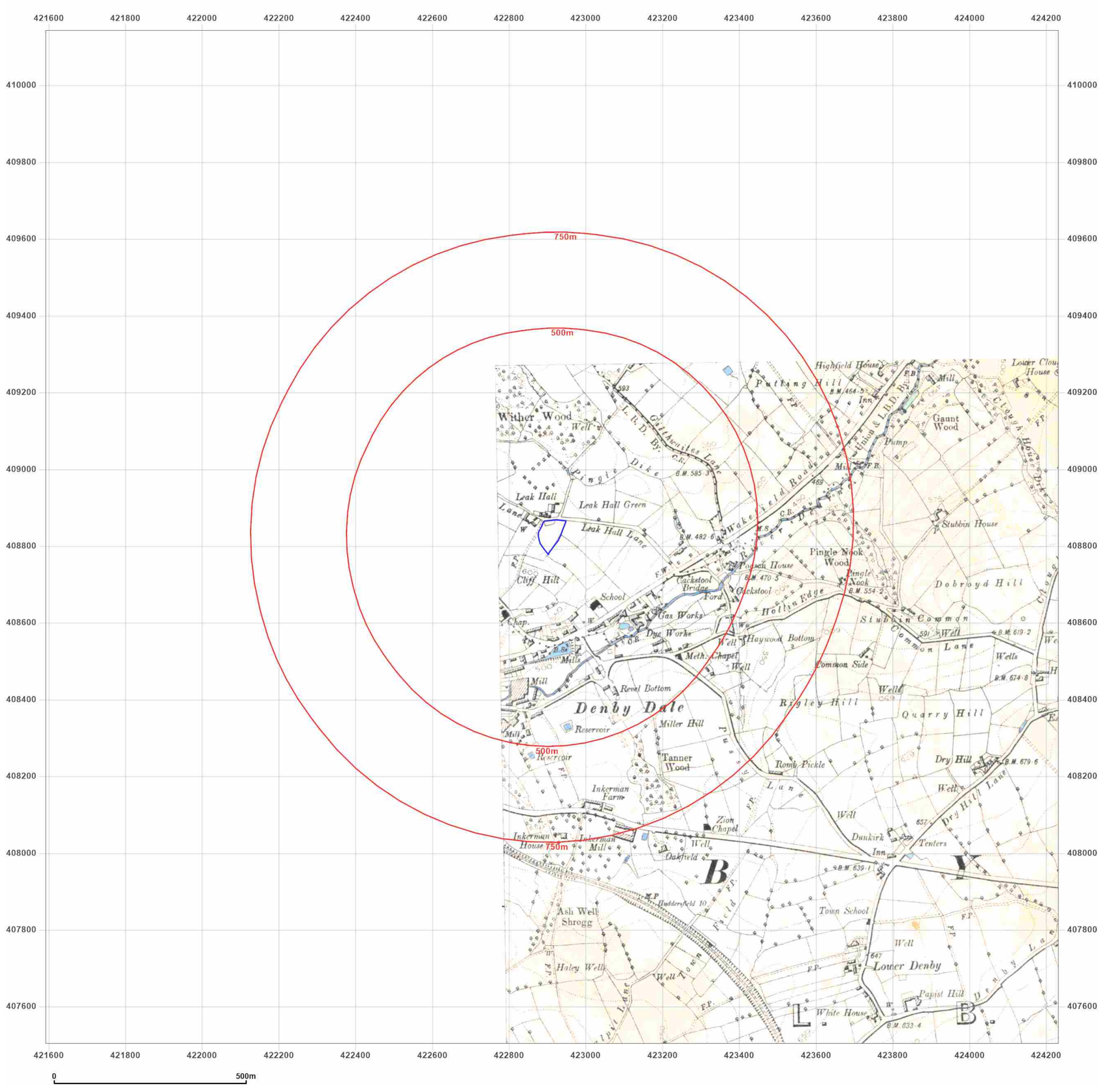

Groundsure INSIGHTS

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HUDDERSFIELD, HD8 8QU

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Report Ref: GS-7K7-4UX-BTN-YYY
Grid Ref: 422911, 408823

Map Name: County Series

Map date: **1891**

Scale: 1:10,560

Printed at: 1:10,560

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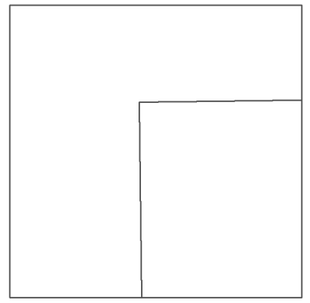

Surveyed 1891
Revised 1891
Edition N/A
Copyright N/A
Levelled N/A

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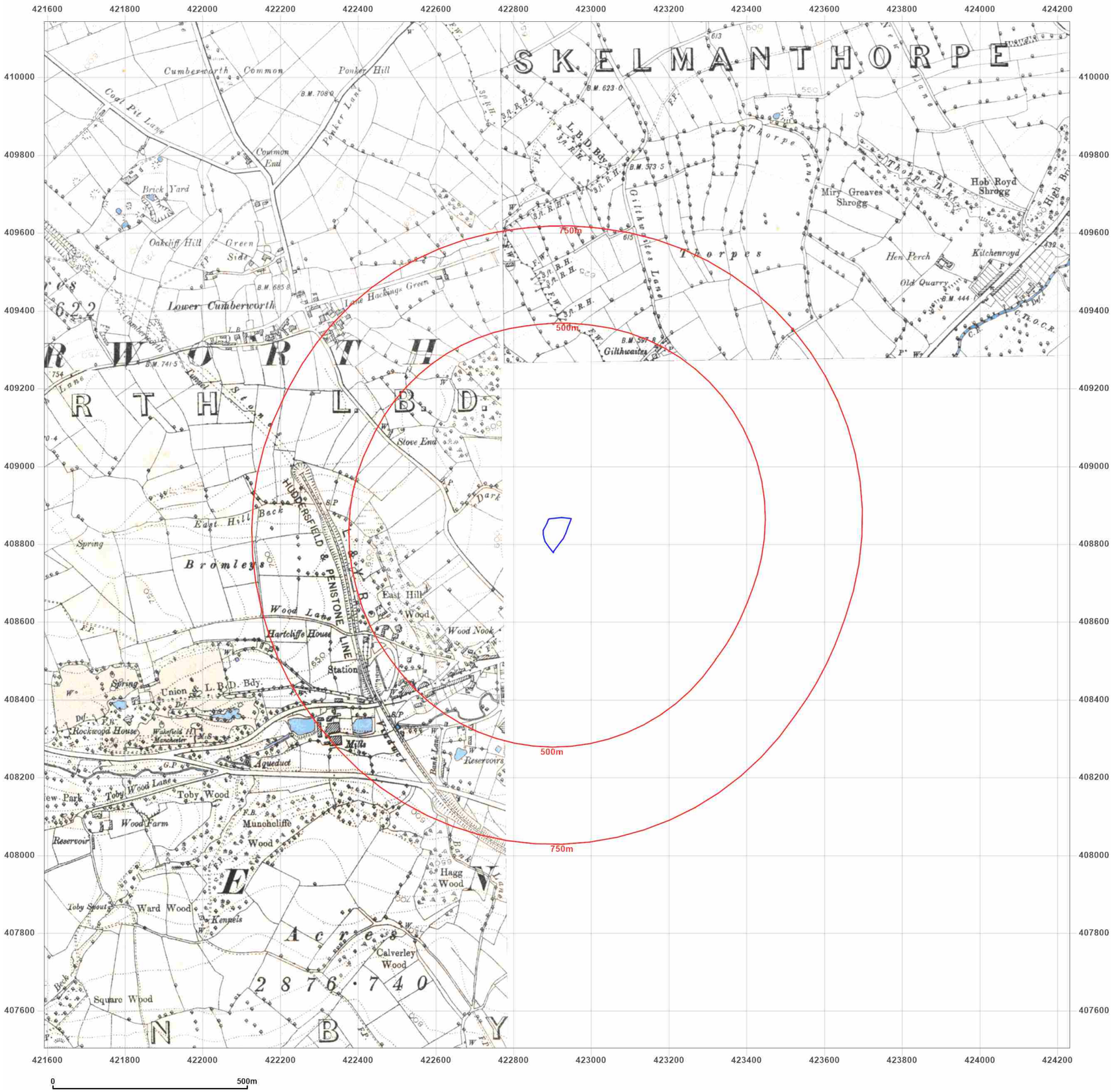

Groundsure INSIGHTS

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HUDDERSFIELD, HD8 8QU

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Report Ref: GS-7K7-4UX-BTN-YYY
Grid Ref: 422911, 408823

Map Name: County Series

Map date: **1891-1892**

Scale: 1:10,560

Printed at: 1:10,560

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Revised 1892
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1892
Revised 1892
Edition N/A
Copyright N/A
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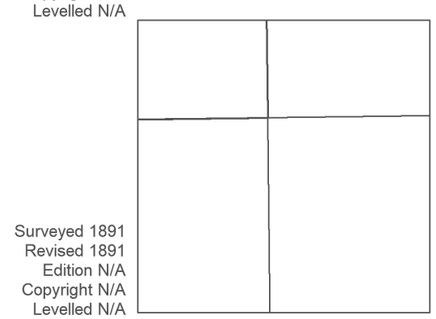

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Revised 1891
Edition N/A
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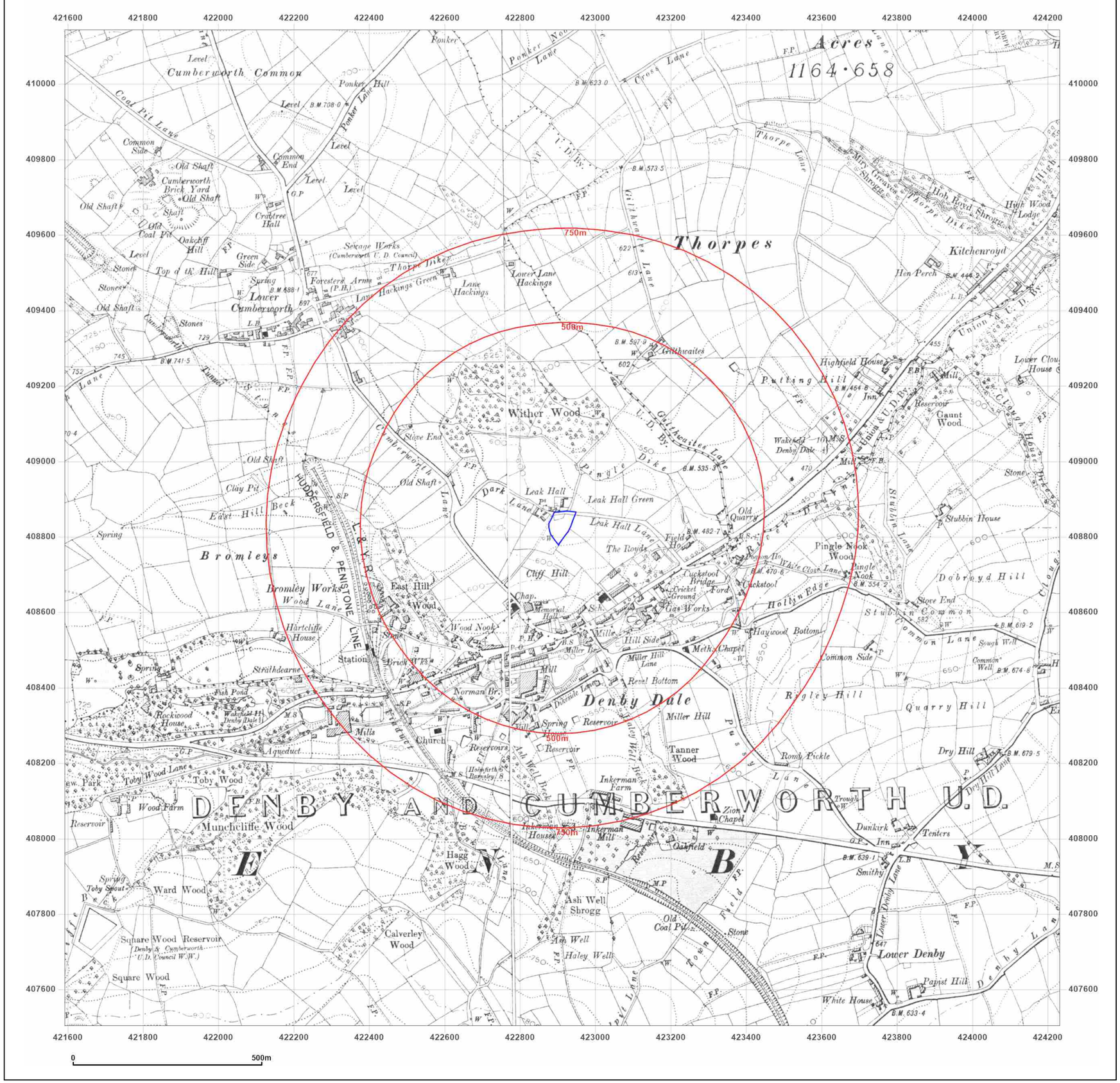

Groundsure INSIGHTS

Site Details:

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HUDDERSFIELD, HD8 8QU

Client Ref: C3999_23_E_6054_PO-2937
Report Ref: GS-7K7-4UX-BTN-YYY
Grid Ref: 422911, 408823

Map Name: County Series

Map date: **1903-1904**

Scale: 1:10,560

Printed at: 1:10,560

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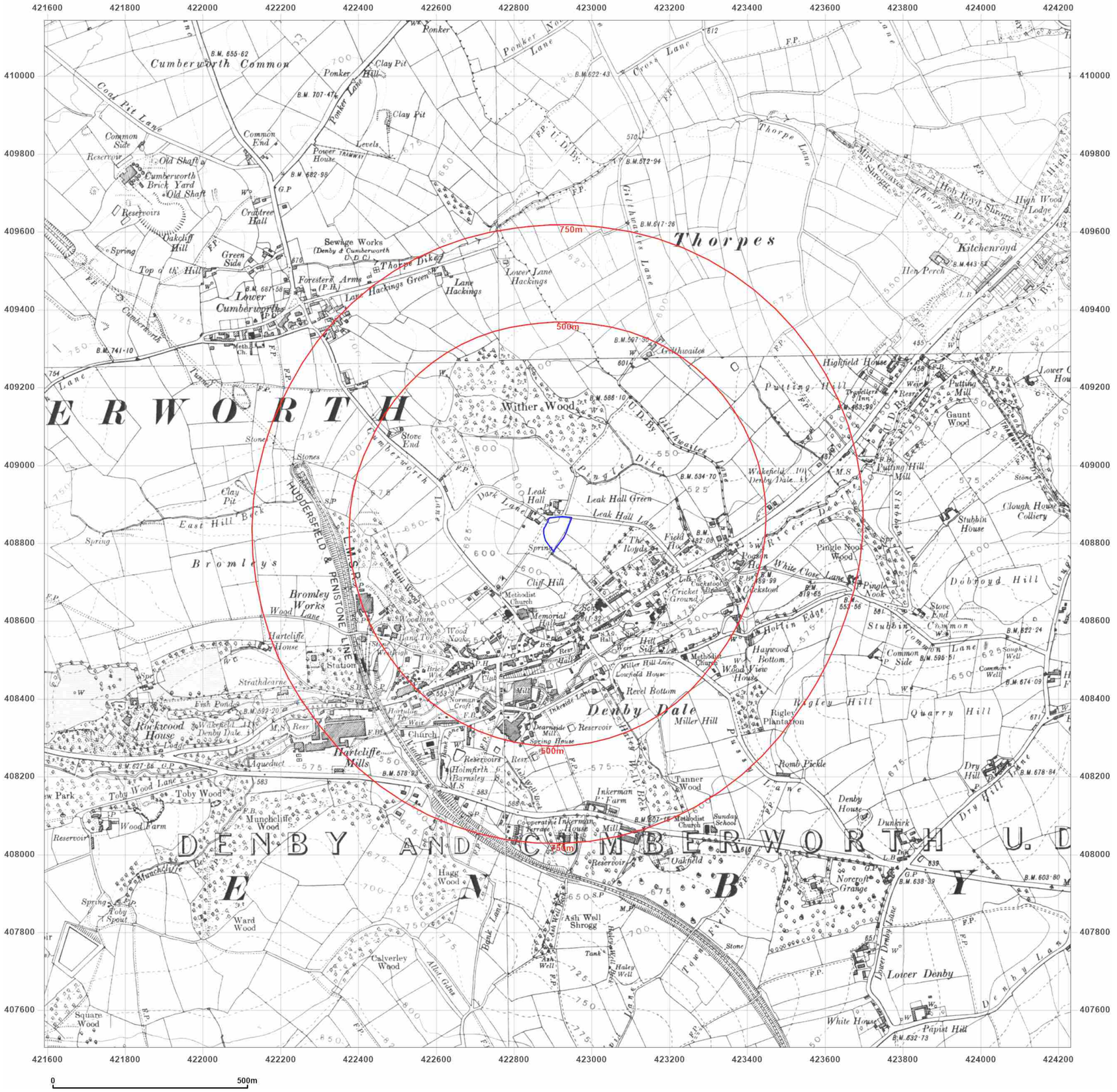

Groundsure INSIGHTS

Site Details:

LEAK HALL LANE, DENBY DALE,
HUDDERSFIELD, HD8 8QU

Client Ref: C3999_23_E_6054_PO-2937
Report Ref: GS-7K7-4UX-BTN-YYY
Grid Ref: 422911, 408823

Map Name: County Series

Map date: **1929-1933**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1851
Revised 1932
Edition 1932
Copyright N/A
Levelled N/A

Surveyed 1851
Revised 1929
Edition N/A
Copyright N/A
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Surveyed 1851
Revised 1933
Edition 1933
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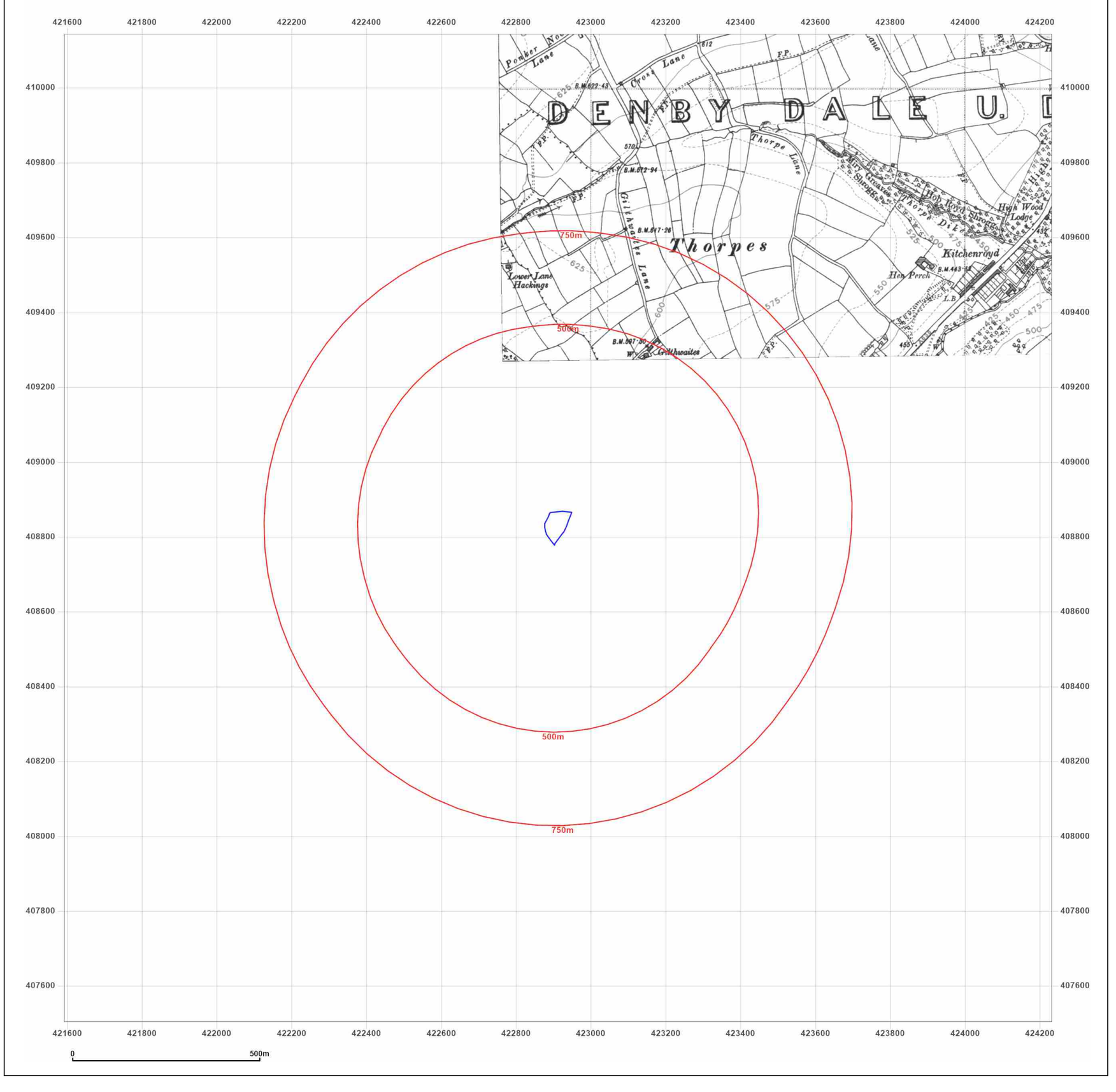

Groundsure INSIGHTS

Site Details:

LEAK HALL LANE, DENBY DALE, HUDDERSFIELD, HD8 8QU

Client Ref: C3999_23_E_6054_PO-2937
Report Ref: GS-7K7-4UX-BTN-YYY
Grid Ref: 422911, 408823

Map Name: County Series

Map date: **1938**

Scale: 1:10,560

Printed at: 1:10,560

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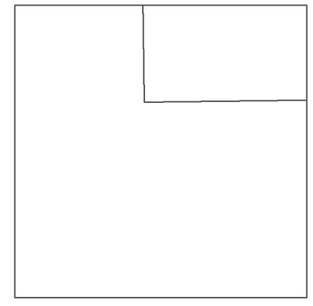
Surveyed 1851
Revised 1938
Edition 1938
Copyright N/A
Levelled N/A



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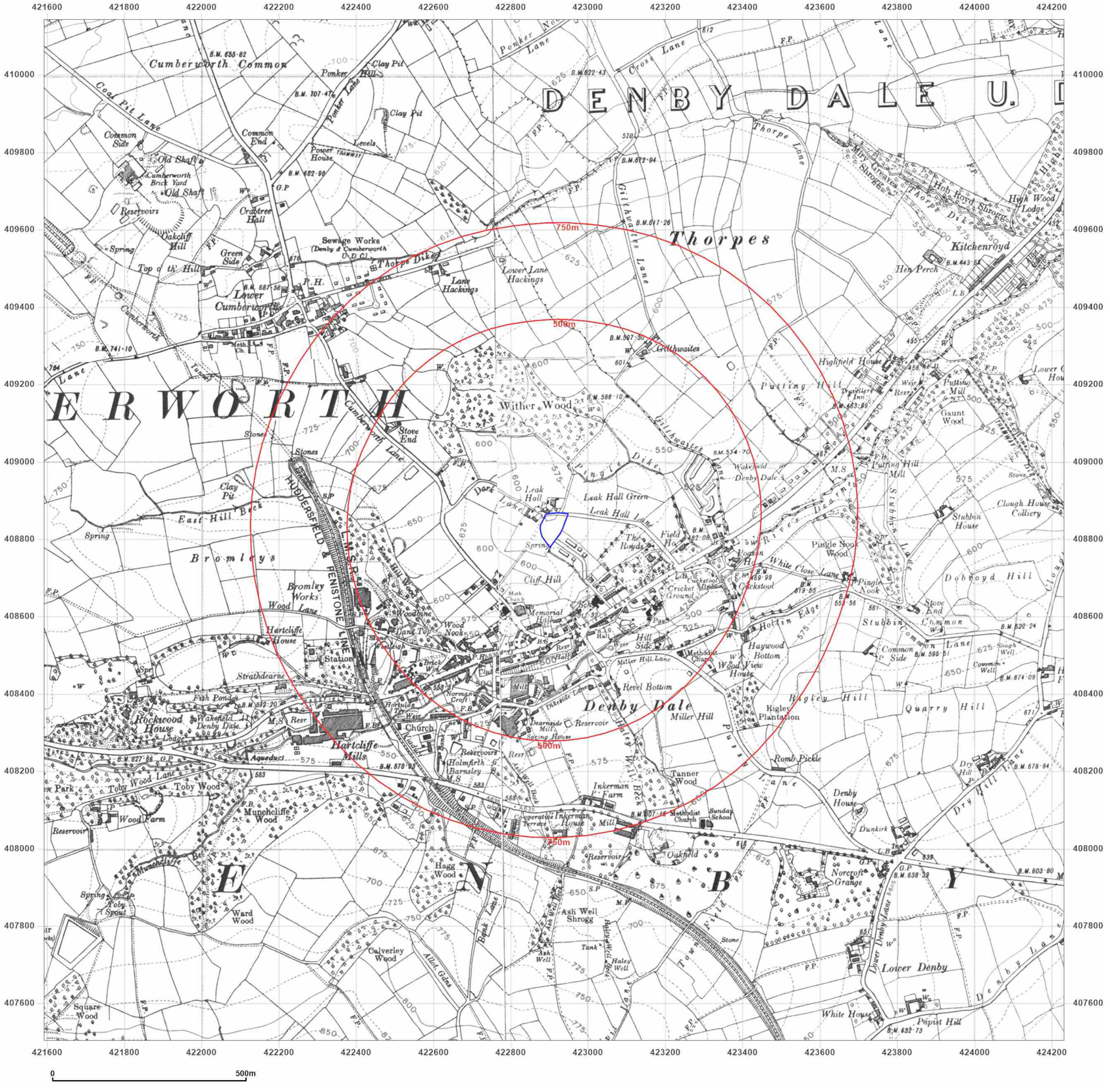

Groundsure INSIGHTS

Site Details:

LEAK HALL LANE, DENBY DALE,
HUDDERSFIELD, HD8 8QU

Client Ref: C3999_23_E_6054_PO-2937
Report Ref: GS-7K7-4UX-BTN-YYY
Grid Ref: 422911, 408823

Map Name: County Series

Map date: **1948**

Scale: 1:10,560

Printed at: 1:10,560

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Revised 1948
Edition N/A
Copyright N/A
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Edition N/A
Copyright N/A
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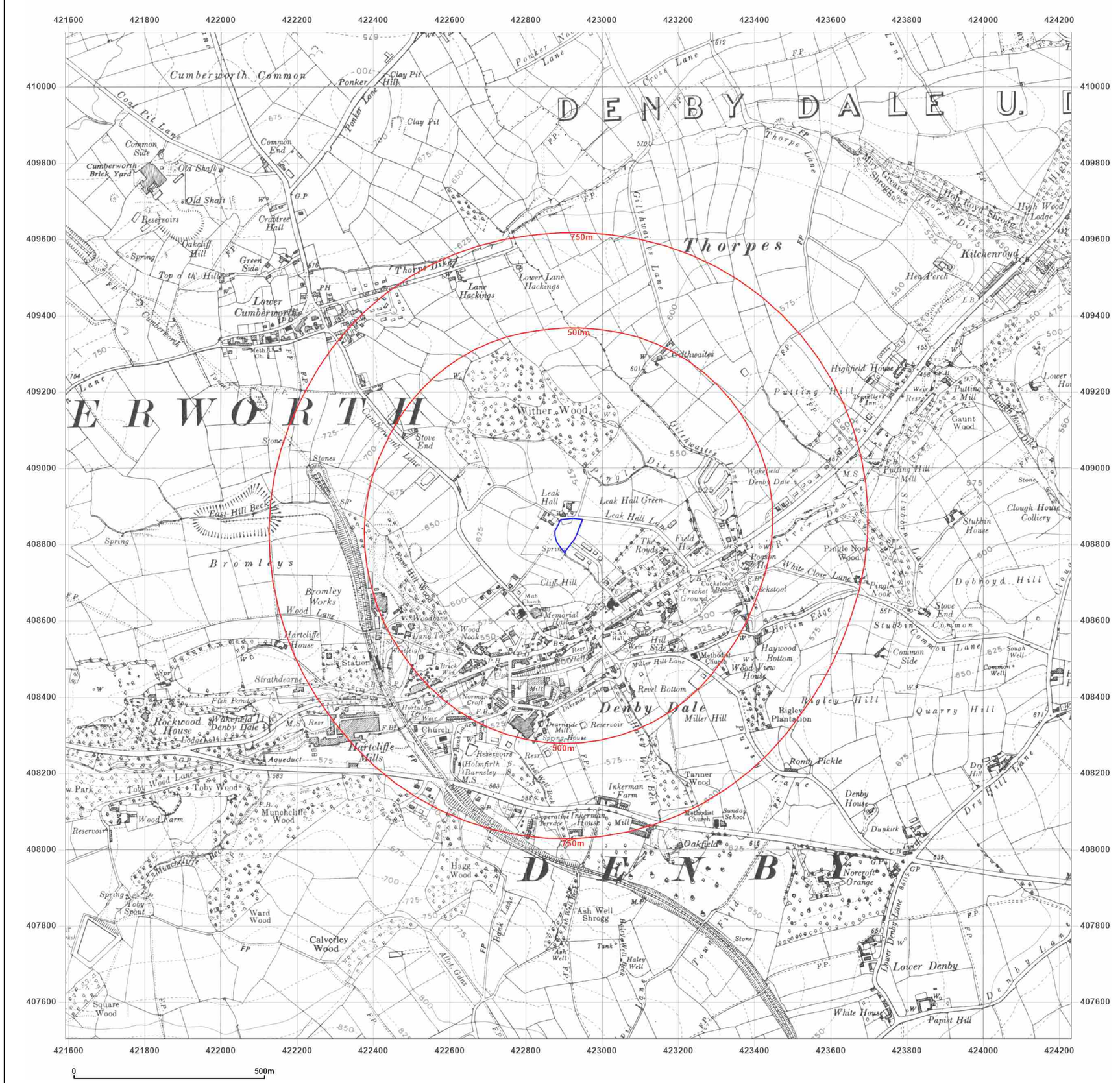

Site Details:

LEAK HALL LANE, DENBY DALE,
HUDDERSFIELD, HD8 8QU

Client Ref: C3999_23_E_6054_PO-2937
Report Ref: GS-7K7-4UX-BTN-YYY
Grid Ref: 422911, 408823

Map Name: Provisional

Map date: **1951-1955**

Scale: 1:10,560

Printed at: 1:10,560

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

Surveyed 1951
Revised 1951
Edition N/A
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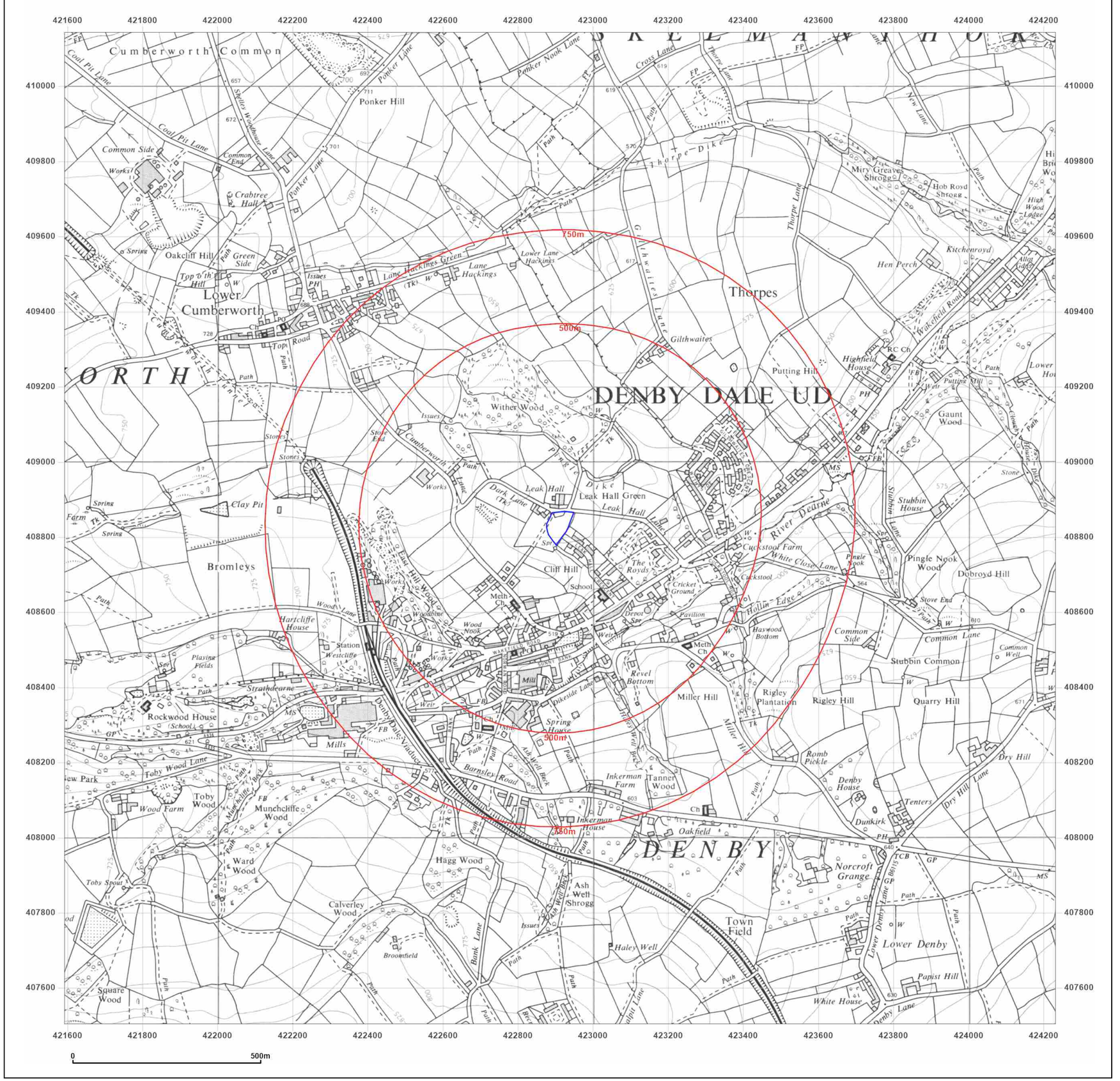

Groundsure INSIGHTS

Site Details:

LEAK HALL LANE, DENBY DALE,
HUDDERSFIELD, HD8 8QU

Client Ref: C3999_23_E_6054_PO-2937
Report Ref: GS-7K7-4UX-BTN-YYY
Grid Ref: 422911, 408823

Map Name: Provisional

Map date: **1967**

Scale: 1:10,560

Printed at: 1:10,560

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Revised 1967
Edition N/A
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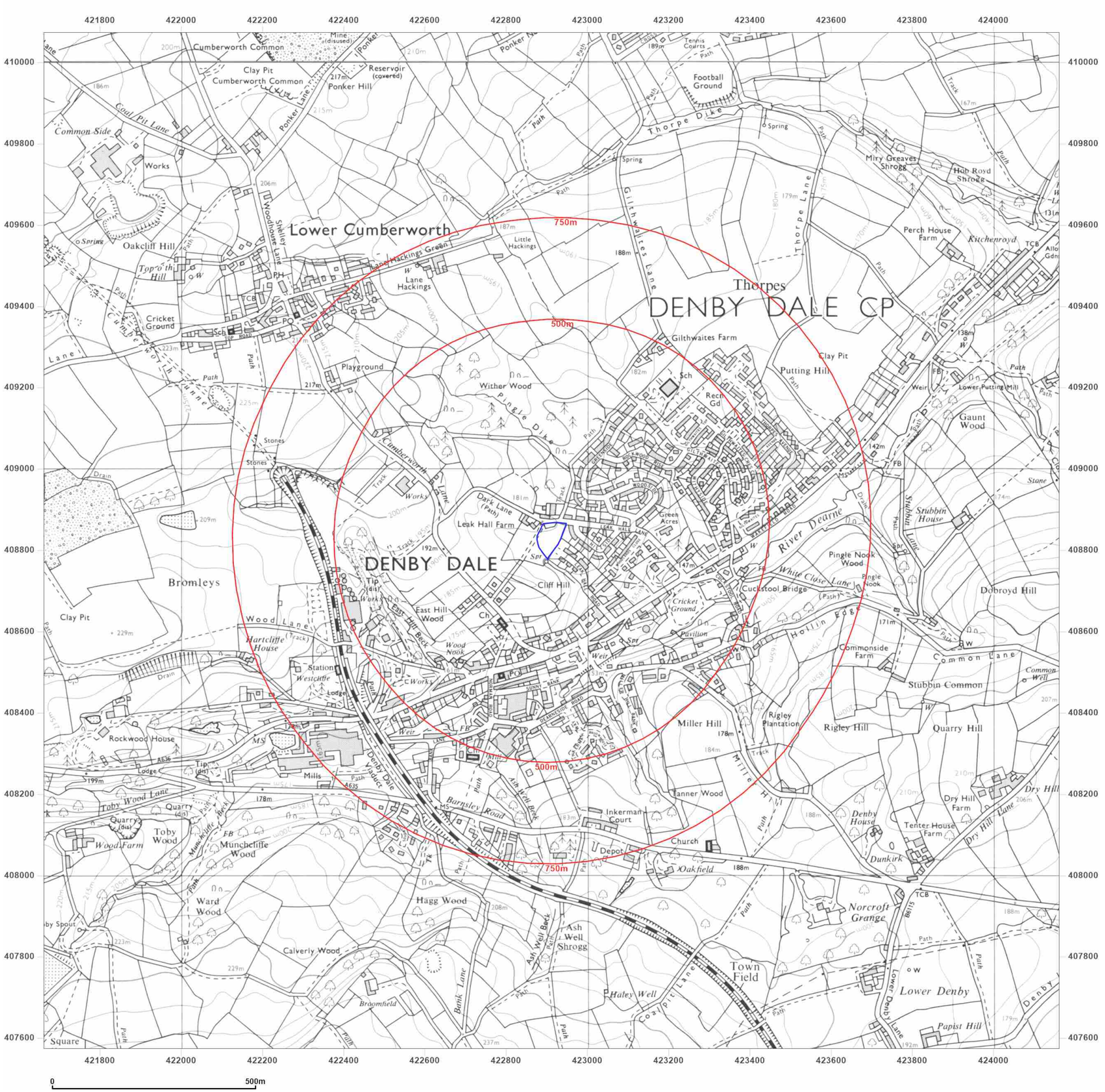

Groundsure INSIGHTS

Site Details:

LEAK HALL LANE, DENBY DALE,
HUDDERSFIELD, HD8 8QU

Client Ref: C3999_23_E_6054_PO-2937
Report Ref: GS-7K7-4UX-BTN-YYY
Grid Ref: 422911, 408823

Map Name: National Grid

Map date: **1979-1983**

Scale: 1:10,000

Printed at: 1:10,000

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Surveyed 1977
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Revised 1983
Edition N/A
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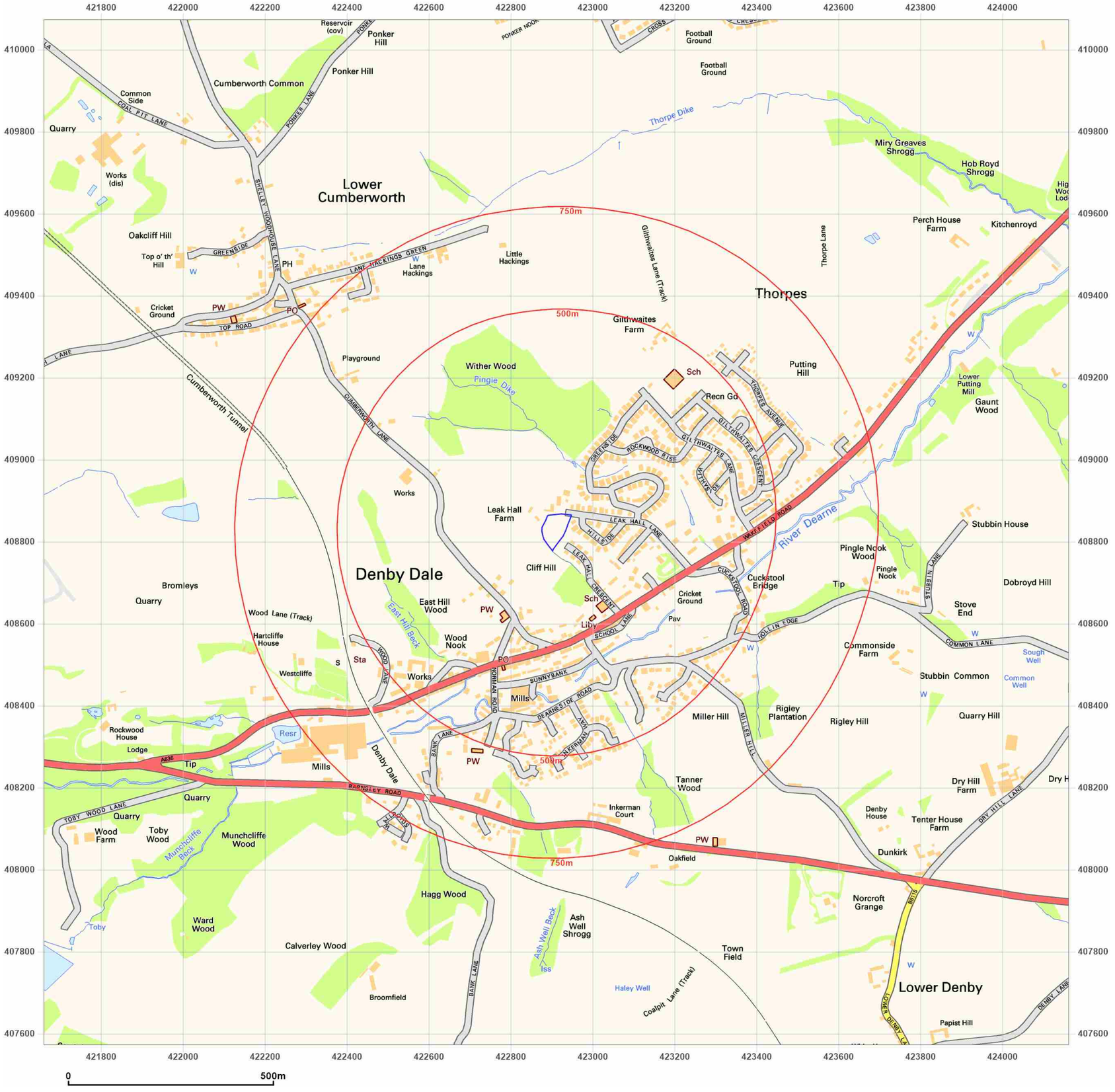

Groundsure INSIGHTS

Site Details:

LEAK HALL LANE, DENBY DALE,
HUDDERSFIELD, HD8 8QU

Client Ref: C3999_23_E_6054_PO-2937
Report Ref: GS-7K7-4UX-BTN-YYY
Grid Ref: 422911, 408823

Map Name: National Grid

Map date: **2001**

Scale: 1:10,000

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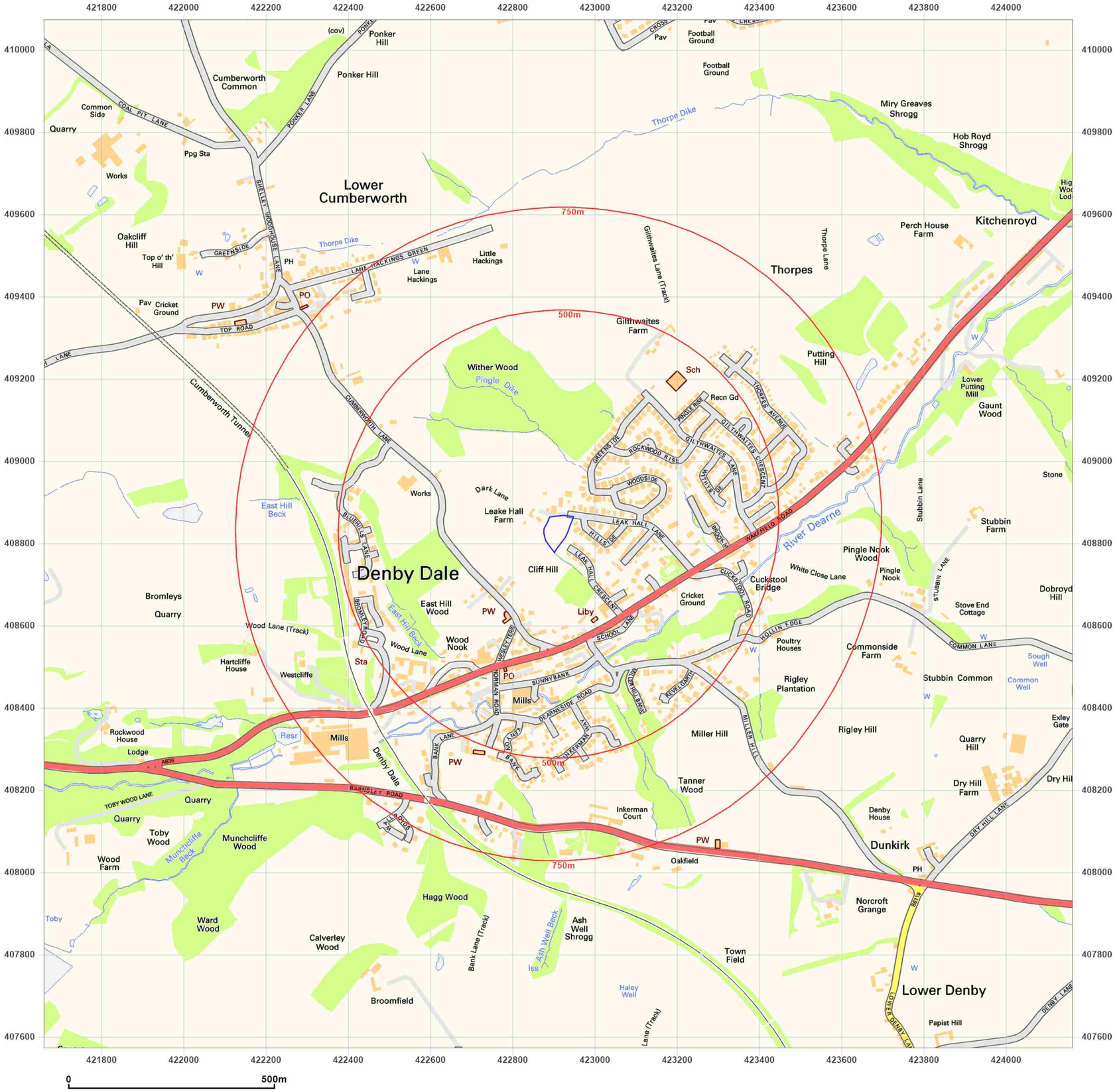

Groundsure INSIGHTS

Site Details:

LEAK HALL LANE, DENBY DALE, HUDDERSFIELD, HD8 8QU

Client Ref: C3999_23_E_6054_PO-2937
Report Ref: GS-7K7-4UX-BTN-YYY
Grid Ref: 422911, 408823

Map Name: National Grid

Map date: **2010**

Scale: 1:10,000

Printed at: 1:10,000

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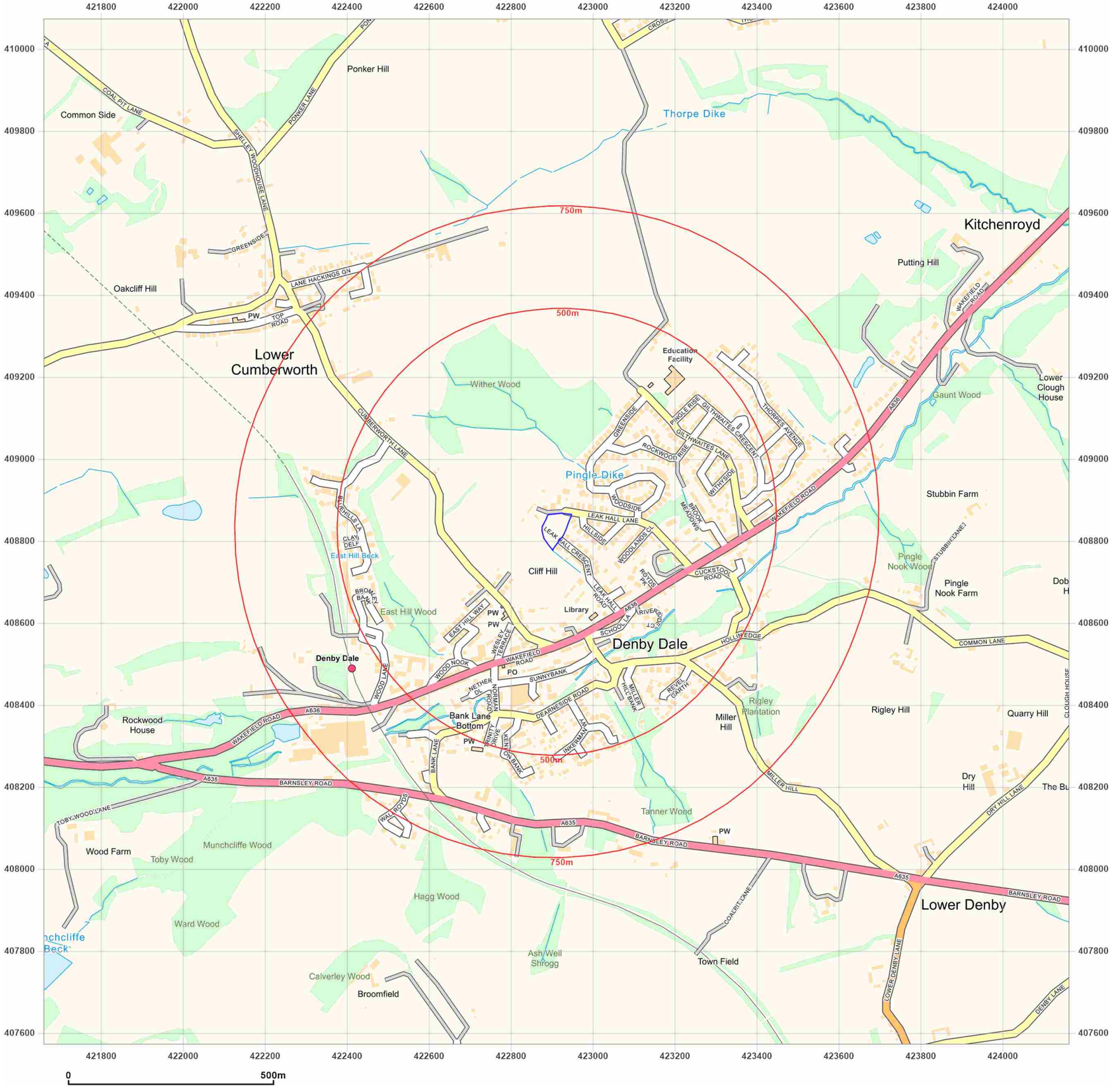

Groundsure INSIGHTS

Site Details:

LEAK HALL LANE, DENBY DALE, HUDDERSFIELD, HD8 8QU

Client Ref: C3999_23_E_6054_PO-2937
Report Ref: GS-7K7-4UX-BTN-YYY
Grid Ref: 422911, 408823

Map Name: National Grid

Map date: **2024**

Scale: 1:10,000

Printed at: 1:10,000

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Production date: 02 April 2024

Map legend available at:
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Appendix 4

Photographs

Photo 1: Image shows site facing westwards.

Photo 2: Image shows small structure and overhead phone line present to the north end of the site.

Photo 3: Image shows an area of the site to the southeast.

Photo 4: Image shows site facing eastwards.

Rogers Geotechnical Services Ltd

Offices 1 & 2, Barncliffe Business Park,
Near Bank, Shelley,
Huddersfield,

Job No: C3999/23/E/6054

Site: Leak Hall Road, Denby Dale, Huddersfield, West Yorkshire, HD8 8QU

Client: Fiona Willis

Appendix 5

Consultants Coal Mining Report

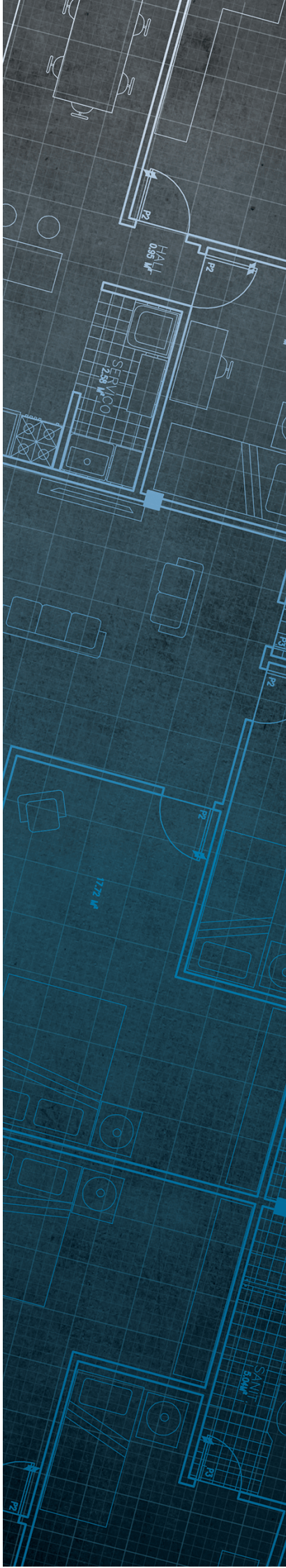
The Coal Authority

Consultants

Coal Mining Report

Leak Hall Lane
Denby Dale
Huddersfield
Kirklees
HD8 8QU

Date of enquiry:	**2 April 2024**
Date enquiry received:	**2 April 2024**
Issue date:	**2 April 2024**
Our reference:	**51003414910001**
Your reference:	**C/3999/23/E/6054**



Consultants
Coal Mining Report

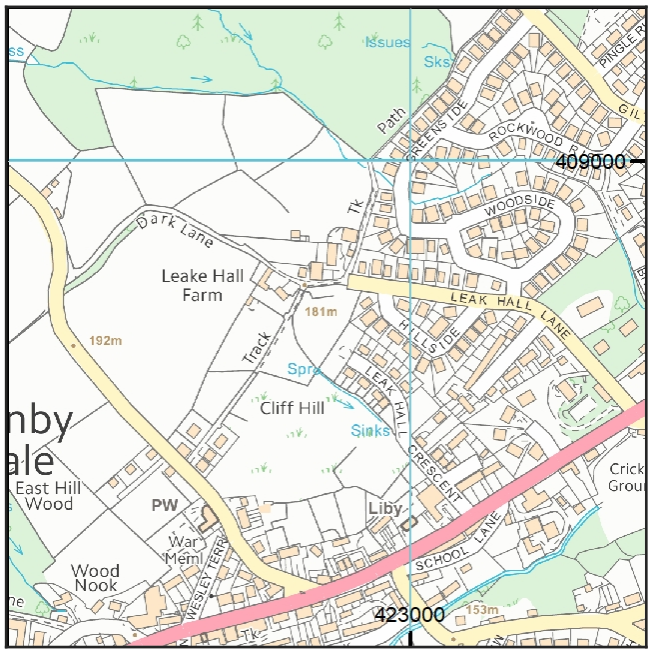
This report is based on and limited to the records held by the Coal Authority at the time the report was produced.

Client name

ROGERS GEOTECHNICAL SERVICES LTD

Enquiry address

Leak Hall Lane
Denby Dale
Huddersfield
Kirklees
HD8 8QU



Approximate position of property

How to contact us

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

200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

www.groundstability.com

@coalauthority
/company/the-coal-authority
/thecoalauthority
/thecoalauthority

Section 1 – Mining activity and geology

Past underground mining
No past mining recorded.

Probable unrecorded shallow workings
None.

Spine roadways at shallow depth
No spine roadway recorded at shallow depth.

Mine entries

Entry type	Reference	Grid reference	Treatment description	Mineral	Conveyancing details
Shaft	422408-015	422903 408741	Located by trenching in 2022 and found to be filled	Coal	
Shaft	422408-016	422945 408710	Located by trenching in 2018 and found to be filled	Coal	

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

SY244	OM12632	OM15177
PO0	SY253	9730
SY225	SY250	

Please contact us on 0345 762 6848 to determine the exact abandoned mine plans you require based on your needs.

Outcrops
No outcrops recorded.

Geological faults, fissures and breaklines
No faults, fissures or breaklines recorded.

Opencast mines
Please refer to the “Summary of findings” map (on separate sheet) for details of any opencast areas within 500 metres of the enquiry boundary.

Coal Authority managed tips
None recorded within 500 metres of the enquiry boundary.

Section 2 – Investigative or remedial activity

Please refer to the 'Summary of findings' map (on separate sheet) for details of any activity within the area of the site boundary.

Site investigations

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

See Section 4 for further information.

Remediated sites

None recorded within 50 metres of the enquiry boundary.

Coal mining subsidence

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

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

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

Mine gas

None recorded within 500 metres of the enquiry boundary.

Mine water treatment schemes

None recorded within 500 metres of the enquiry boundary.

Section 3 – Licensing and future mining activity

Future underground mining
None recorded.

Coal mining licensing
None recorded within 200 metres of the enquiry boundary.

Court orders
None recorded.

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

Withdrawal of support notices
The property is not in an area where a notice to withdraw support has been given.

The property is not in an area where a notice has been given under section 41 of the Coal Industry Act 1994, cancelling the entitlement to withdraw support.

Payments to owners of former copyhold land
The property is not in an area where a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

Section 4 – Further information

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

Future development

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

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

Site investigations

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

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

For further information on specific site or ground investigations in relation to any issues raised in Section 4, please call us on 0345 762 6848 or email us at groundstability@coal.gov.uk.

Section 5 – Data definitions

The datasets used in this report have limitations and assumptions within their results. For more guidance on the data and the results specific to the enquiry boundary, please **call us on 0345 762 6848** or **email us at groundstability@coal.gov.uk.**

Past underground coal mining

Details of all recorded underground mining relative to the enquiry boundary. Only past underground workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination, will be included.

Probable unrecorded shallow workings

Areas where the Coal Authority believes there to be unrecorded coal workings that exist at or close to the surface (less than 30 metres deep).

Spine roadways at shallow depth

Connecting roadways either, working to working, or, surface to working, both in-seam and cross measures that exist at or close to the surface (less than 30 metres deep), either within or within 10 metres of the enquiry boundary.

Mine entries

Details of any shaft or adit either within, or within 100 metres of the enquiry boundary including approximate location, brief treatment details where known, the mineral worked from the mine entry and conveyance details where the mine entry has previously been sold by the Authority or its predecessors British Coal or the National Coal Board.

Abandoned mine plan catalogue numbers

Plan numbers extracted from the abandoned mines catalogue containing details of coal and other mineral abandonment plans deposited via the Mines Inspectorate in accordance with the Coal Mines Regulation Act and Metalliferous Mines Regulation Act 1872. A maximum of 9 plan extents that intersect with the enquiry boundary will be included. This does not infer that the workings and/or mine entries shown on the abandonment plan will be relevant to the site/property boundary.

Outcrops

Details of seam outcrops will be included where the enquiry boundary intersects with a conjectured or actual seam outcrop location (derived by either the British Geological Survey or the Coal Authority) or intersects with a defined 50 metres buffer on the coal (dip) side of the outcrop. An indication of whether the Coal Authority believes the seam to be of sufficient thickness and/or quality to have been worked will also be included.

Geological faults, fissures and breaklines

Geological disturbances or fractures in the bedrock. Surface fault lines (British Geological Survey derived data) and fissures and breaklines (Coal Authority derived data) intersecting with the enquiry boundary will be included. In some circumstances faults, fissures or breaklines have been known to contribute to surface subsidence damage as a consequence of underground coal mining.

Opencast mines
Opencast coal sites from which coal has been removed in the past by opencast (surface) methods and where the enquiry boundary is within 500 metres of either the licence area, site boundary, excavation area (high wall) or coaling area.

Coal Authority managed tips
Locations of disused colliery tip sites owned and managed by the Coal Authority, located within 500 metres of the enquiry boundary.

Site investigations
Details of site investigations within 50 metres of the enquiry boundary where the Coal Authority has received information relating to coal mining risk investigation and/or remediation by third parties.

Remediated sites
Sites where the Coal Authority has undertaken remedial works either within or within 50 metres of the enquiry boundary following report of a hazard relating to coal mining under the Coal Authority's Emergency Surface Hazard Call Out procedures.

Coal mining subsidence
Details of alleged coal mining subsidence claims made since 31 October 1994 either within or within 50 metres of the enquiry boundary. Where the claim relates to the enquiry boundary confirmation of whether the claim was accepted, rejected or whether liability is still being determined will be given. Where the claim has been discharged, whether this was by repair, payment of compensation or a combination of both, the value of the claim, where known, will also be given.

Details of any current 'Stop Notice' deferring remedial works or repairs affecting the property/site, and if so the date of the notice.

Details of any request made to execute preventative works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991. If yes, whether any person withheld consent or failed to comply with any request to execute preventative works.

Mine gas
Reports of alleged mine gas emissions received by the Coal Authority, either within or within 500 metres of the enquiry boundary that subsequently required investigation and action by the Coal Authority to mitigate the effects of the mine gas emission. Please note, if there are no recorded instances of mine gas reported, this does not mean that mine gas is not present within the vicinity. The Coal Authority Mine Gas data is limited to only those sites where a Mine Gas incident has been recorded.

Mine water treatment schemes
Locations where the Coal Authority has constructed or operates assets that remove pollutants from mine water prior to the treated mine water being discharged into the receiving water body.

These schemes are part of the UK's strategy to meet the requirements of the Water Framework Directive. Schemes fall into 2 basic categories: Remedial – mitigating the impact of existing pollution or Preventative – preventing a future pollution incident.

Mine water treatment schemes generally consist of one or more primary settlement lagoons and one or more reed beds for secondary treatment. A small number are more specialised process treatment plants.

Future underground mining
Details of all planned underground mining relative to the enquiry boundary. Only those future workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination will be included.

Coal mining licensing
Details of all licenses issued by the Coal Authority either within or within 200 metres of the enquiry boundary in relation to the under taking of surface coal mining, underground coal mining or underground coal gasification.

Court orders
Orders in respect of the working of coal under the Mines (Working Facilities and Support) Acts of 1923 and 1966 or any statutory modification or amendment thereof.

Section 46 notices
Notice of proposals relating to underground coal mining operations that have been given under section 46 of the Coal Mining Subsidence Act 1991.

Withdrawal of support notices
Published notices of entitlement to withdraw support and the date of the notice. Details of any revocation notice withdrawing the entitlement to withdraw support given under Section 41 of the Coal Industry Act 1994.

Payment to owners of former copyhold land
Relevant notices which may affect the property and any subsequent notice of retained interests in coal and coal mines, acceptance or rejection notices and whether any compensation has been paid to a claimant.

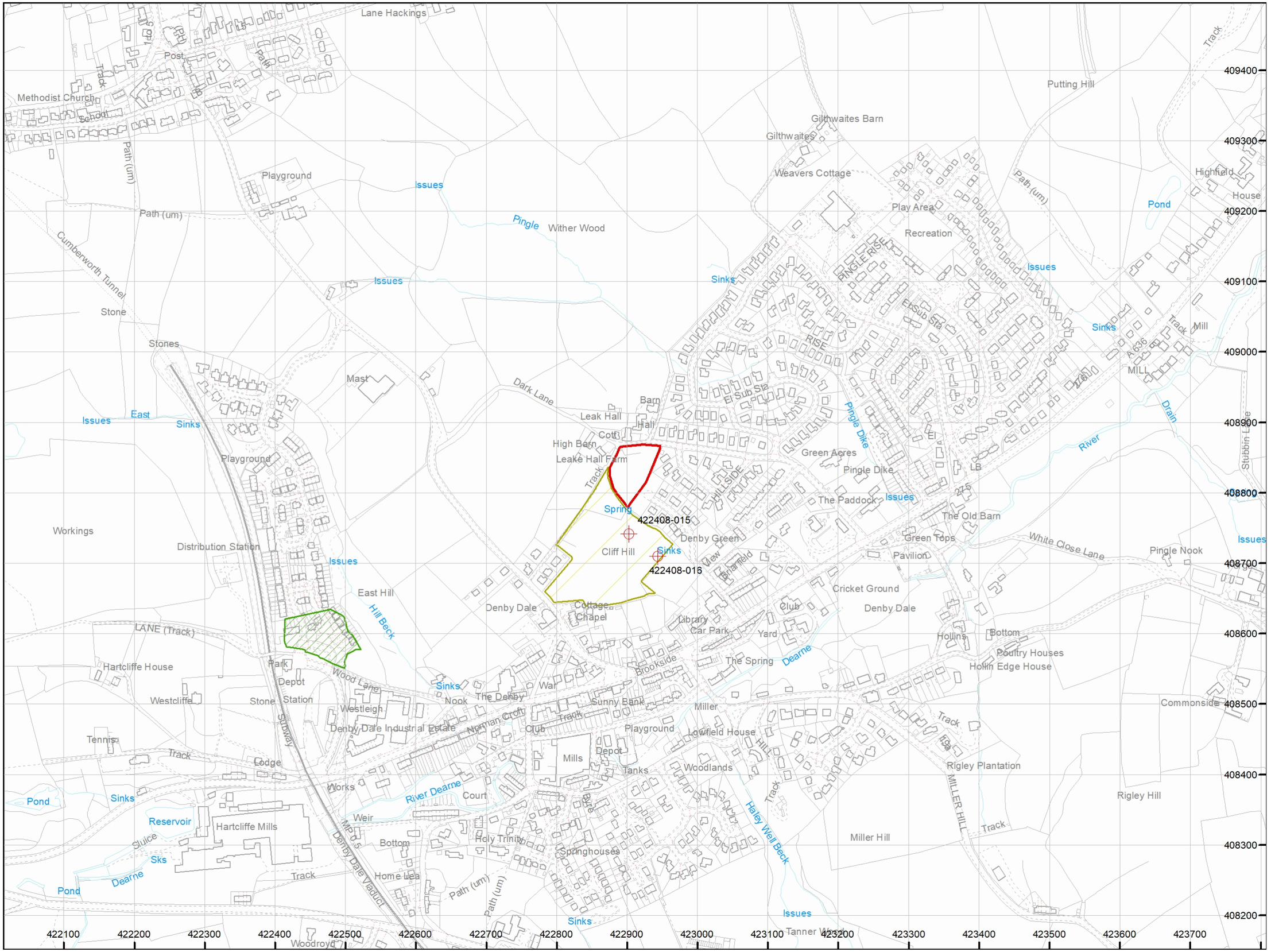
The Coal Authority

Summary of findings

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

Key

- Approximate position of the enquiry boundary shown
- Disused mine shaft
- Unlicensed opencast site
- Site investigations



How to contact us
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+44 (0)1623 637 000 (International)
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