

**BROMLEY FARM EXTENSION,
CUMBERWORTH LANE,
LOWER CUMBERWORTH,
WEST YORKSHIRE, HD8 8PD**



PHASE 1 PRELIMINARY GEO-ENVIRONMENTAL RISK ASSESSMENT

**Prepared by
SILKSTONE ENVIRONMENTAL LTD
For
WAVIN UK LTD**

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EXECUTIVE SUMMARY

Site Location	Between Upper and Lower Cumberworth, approximately 12km south east of Huddersfield town. Site coordinates 421716, 409084.
Proposed Development	Extraction of brick-shale and fireclay as an extension to the infilled Bromley Farm quarry.
Existing Features	Set in a rural area adjacent to restored quarries/landfills. The site primarily consists of grassed fields sloping from Cumberworth Lane towards East Hill Beck to the south east.
History	On site: Disused mine shaft in south eastern corner. Former Bromleys quarry extended into small field in the south western corner (described as spoil heap). Off site: Clay pits and unspecified pits within 100m. Unspecified heaps within 250m. Former sandstone quarry within 250m. Railway tunnel within 250m.
Anticipated Geology	Worked and / or infilled ground adjacent to and within the south western corner of the site, above 0.6m of boulder clay, underlain by Pennine Lower Coal Measures Formation of mudstones and siltstones with occasional thicker sandstones and coals.
Coal Mining	Coal Mining Report identifies risk from recorded and unrecorded mine entries and recorded and unrecorded shallow mine workings. Risk discounted due to nature of the proposed development (see section 2.6 and Coal Mining Risk Assessment).
Hydrogeology	The underlying bedrock is designated a Secondary A Aquifer. Groundwater in the aquifer has a medium to high vulnerability and surface soils have a low to high leaching class. The chemical quality of groundwater regionally is poor. There are six active EA licensed groundwater abstractions within 2km (nearest 690m SE).
Hydrology	The nearest surface water feature to the site is East Hill Beck (southern perimeter), which is a tributary of the River Dearne. The site is not located within 500m of Groundwater Protection Zone. There are three active EA licensed surface water abstractions within 2km (nearest 681m SE).
Flood Risk	The site is located within a Flood Zone 1 (low probability of flooding). A flood risk assessment has been stated as a requirement based on the size of the site (8.3ha).
Landfills	There are no currently active landfills within 250m, but there are four historic landfills within 250m, including two on site (SW corner and southern site boundary).
Ground Gas	Potential sources of ground gas (primarily methane and carbon dioxide) have been identified from historic landfills, shallow mine workings (on site), recorded disused mine shaft (on site), spoil heap (on site), former pits and infilled ground within 250m. Gas monitoring will be required as part of a Phase 2 site investigation.
Radon	The northern part of the site is located in a Radon Affected Area, but the radon levels are such that no radon protection measures required.
Ecology	Potential ecological receptors which may be at risk from the proposed extension include the area of Green Belt in which the site is located, four deciduous woodland Priority Habitat sites (on site, 32m SE, 121m E and 241m N), a habitat network (221m SW) and areas of ancient replanted woodland (498m E, 617-735m S and 698m SW).
Unexploded Ordnance	The site is located within an area of low risk from WWII unexploded ordnance (UXO).
Risk Overview	The overall level of environmental risk to human health and the wider environment from on and off-site sources in the context of the proposed quarry extension has been assessed to be Low to Moderate . The main risks relate to the following: • To quarry workers from potential contaminants within the south western corner of the site which formed part of an historic landfill; • To quarry workers from ground gas emissions from the historic landfill, shallow coal mining and a recorded mine shaft on site. • To the adjoining East Hill Beck from potential pollutants that could be released following disturbance of the historic landfill. • To the ecology associated with East Hill Beck and the Priority Habitat deciduous woodland extending along / adjoining sections of the southern site boundary.
Recommendations	• A phase 2 (intrusive) investigation involving window sampling boreholes to characterise the historic landfill within the south western corner of the site and around the recorded shaft in the south eastern corner, the recovery of representative soil and groundwater samples for appropriate contamination analysis and geotechnical testing, water sampling from the adjoining section of East Hill Beck and the completion of a programme of gas monitoring. • An ecological assessment of the site which should also include appropriate sections along East Hill Beck and adjoining area of Priority Habitat deciduous woodland. • A flood risk assessment of the site.

This Executive Summary should be read in conjunction with the entire report as it is only a brief account highlighting the key findings of the report.

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KEY REFERENCES

- A Land Contamination Risk Management, Environment Agency (April 2021).
- B Guiding Principles for Land Contamination, Environment Agency (March 2010).
- C Town and Country Planning Act 1990.
- D National Planning Policy Framework (July 2018).
- E Revised Statutory Guidance dated April 2012 implementing the contaminated land provisions under Part 2A of the Environmental Protection Act 1990.
- F CIRIA 665 '*Assessing Risks Posed by Hazardous Ground Gases to Buildings*' (2007).
- G BR 211 Radon, Guidance on protective measures for new buildings (including supplementary advice for extensions, conversions and refurbishment projects), BRE, 2015.
- H CIRIA Report C758D, Abandoned Mine Workings Manual, CIRIA, 2019.

1.0 INTRODUCTION

1.1 Brief

Silkstone Environmental Ltd (SEL) has prepared a Phase 1 Preliminary Geo-Environmental Risk Assessment (also known as a Desk Study) for Bromley Farm Extension at Upper Cumberworth, West Yorkshire (the site) following receipt of a purchase order (PO ref. 4501695306) from Wavin UK Ltd (the Client) dated 20th December 2022.

The site is located immediately north east of the existing, restored, Bromley Farm quarry and consists of a sloping area of open grassland dipping south eastwards towards East Hill Beck. The Client intends to extract brickshale and fireclay from the rocks which underlie the site and are in the process of preparing a Planning Application, to be submitted in January 2023.

The site is identified as a Minerals Area of Search (MAS3) under the Kirklees Local Plan and this report has been prepared to fulfil the requirement for a contamination report under this allocation and the planning application submission.

This report assesses the potential for historic contamination at the site which may adversely impact upon human health and/or the wider environment. Geotechnical issues have also been considered and a review made of the potential for instability at the surface from former coal mining legacy operations. The report has been compiled in general accordance with Refs. A & B as a 'Preliminary Risk Assessment', as defined therein. A Coal Mining Risk Assessment (CMRA) has previously been prepared for the site, which should also be referred to regarding coal mining legacy issues.

This preliminary assessment will highlight the potential requirement for further assessment via an intrusive investigation if considered appropriate. This has been determined based on the following:

- A review of the site history including previous surrounding land uses.
- Determination of the environmental setting by reference to geology, mining / quarrying, hydrology, flood risk, hydrogeology, risks associated with hazardous gases (such as radon, landfill gas, mine gas), proximity to infilled ground, permitted industrial processes and other activities such as Control of Major Accident Hazard (COMAH) and explosive sites.
- A description of the site from a site walkover and inspection.
- An assessment of anticipated ground conditions including potential contaminants.
- An assessment of anticipated foundation and engineering issues associated with any redevelopment.
- An inspection of historical and geological maps and information provided by the Local Planning Authority, Environment Agency, British Geological Survey and the Coal Authority, as appropriate.
- A risk assessment in the context of the site proposals based on an appraisal of the potential contamination sources, pathways and receptors in an outline conceptual site model.

This report follows the completion of a Coal Mining Risk Assessment report for the site prepared by SEL, report reference 22007/CMRA/0, dated 19th December 2022, which should be read alongside this report.

Conclusions are given alongside any further recommendations. No other site investigations are known, or have been made available to SEL.

1.2 Legislative and Regulatory Context

If land proposed to be developed is suspected of being contaminated either historically or by its current use, an investigation will be requested by the Local Authority under the Town and Country Planning Act (1990) (Ref. C) and the National Planning Policy Framework (Ref. D) to determine the level of risk and if remediation is necessary or whether there may be grounds for the land to be considered contaminated under Part 2A of the Environmental Protection Act 1990 (Ref. E). Under this regime investigations are carried out to determine if the current condition of the site is suitable for its proposed use.

1.3 Guidance and Information Sources Used Within This Report

This report has been produced in line with relevant guidance and best practice and in particular references A, B, C, D, E, F, G and H. This list includes all of the cited references. It is not exhaustive and comprises only the principal references used in conducting this risk assessment.

1.4 Report Limitations

The conclusions reached in this report are necessarily restricted to those which can be determined from available information and may be subject to amendment in the light of additional information becoming available or to changes in relevant legislation.

This report is strictly confidential to the party to whom it is addressed and may only be relied upon by that party or their other professional advisors, for the specific purpose to which it refers. Any third party using this report does so entirely at their own risk and SEL accepts no responsibility or liability for any costs, claims, damages or expenses (including consequential damages) as a result of this report or any part of its contents being used by any third party.

Except in connection with the specific purpose for which this report has been prepared, neither the whole nor any part of this report, nor any reference thereto, may be included in any published document, circular or statement, nor published in any way, nor disclosed orally to a third party, without the written approval from SEL of the form and context of such publication or disclosure. Such approval is required whether or not SEL are referred to by name and whether or not the report is combined with others.

SEL are unaware of any conflicts of interest in the preparation of this report.

2.0 ENVIRONMENTAL SETTING

2.1 Site Location

The site is located immediately south of Cumberworth Lane between Upper and Lower Cumberworth, West Yorkshire; approximately 12km south east of Huddersfield town centre. The site location is shown on Figure 1 in Appendix A, on which the site boundary is outlined red. The site layout is shown on Figure 2 (also included in Appendix A).

The National Grid Reference (NGR) for the centre of the site is 421716, 409084. The site is approximately 8.3ha in area and slopes to the south east from an approximate height of 232m Above Ordnance Datum (AOD) adjacent to Cumberworth Lane, to 213m AOD to the south east adjacent to East Hill Beck.

2.2 Historical Land Use

Information relating to the historical uses of the site and surrounding area has been determined from a review of the following:

- The large scale (1:1250 and 1:2500) and small scale (1:10,560 and 1:10,000) historical Ordnance Survey (OS) maps dating from 1854 to 2022 (Appendix B);
- Google Earth aerial imagery dated 2002 to 2023; and
- A Groundsure environmental data report for the site (Appendix C).

It is important to note that any date referred to in this section refers to the date a feature appears on the map, not necessarily the date the actual feature was first present. Additionally, the marked site boundary may appear to move with respect to successive editions. This is predominantly due to minor variations in the OS with time.

A summary of the features noted from the historical mapping is described below and some of the key maps are shown in Figure 3, Appendix A.

Within the Site

Earliest mapping (1854) shows the site to be rural, located within an area of open fields on land between Cumberworth Lane in the north and East Hill Beck in the south. With the exception of former coal mining issues described below, no significant change to the site has occurred .

With respect to mining legacy issues, an 'Old Shaft'¹ is identified on the 1906 map in the easternmost part of the site, but is absent on all other map extracts.

The 1983-85 and 1979-83 OS maps show activities associated with quarrying at the former Bromleys quarry, extended onto the southernmost part of the site (250m NE of Bromley Farm), where a small field appears to have been used for the storage of spoil, as part of the site's quarrying phase of activities. There is no documentary evidence on OS maps to indicate the spoil heap has been removed, nor evidence to indicate the field has been excavated for mineral.

¹ Also recorded by the Coal Authority as 422408-041 (see section 2.6).

Surrounding Area

Although earliest mapping (1854) shows the site located in a rural area, the later nineteenth and twentieth centuries saw substantial industrial development around the site.

With respect coal mining activities, old shafts/adits (154m N, 415m N, 463-465m N, 463m SE and 480m E) and old coal pits (387m N and 408-4123m N) indicate coal mining was active in the nineteenth century. Coal Authority records show coal was worked beneath the site until the early/mid twentieth century, but no collieries are evidenced on OS maps.

Clay pits (8-13m E, 100m SE and 102m SW) and unspecified pits (57-60m N, 85-87m N, 114m E, 365-367m N, 414m N and 433-434m E) are commonly shown on maps. These pits extracted brickshale/fireclay and would have extracted incidental coal from two coal seams, which lie in close association with the main mineral. Brickworks, which processed the brickshale/fireclay are present in the area (255-258m N, 352-357m N and 407m E).

Unspecified heaps, probably associated with clay/coal pits, are present throughout the area (103-109m E, 141-149m N, 158-170m N, 241-249m N, 258-260m N, 287-290m N, 381-405m N, 424-434m N and 460-464m N).

Sandstone quarries (120m N, 348m S and 423m SE) are occasionally shown, but these activities were generally small scale and had ceased by the late nineteenth century.

Other significant industrial activities local to the area include refuse heaps / tips adjoining the site to the south and located 340-346m E and 376-389m SE, unspecified works/ground workings (260m N, 266m E, 297m SE, 323m N, 354-363m SE, 436m N and 493m SE), a railway tunnel (95-103m E and 162m N) and railway sidings (70m SE, 342m N, 385m SE, 419-427m N, 448m SE, 463-468m SE and 499m SE).

2.3 Site Description

A site inspection was carried out by a SEL representative on 15th December 2022 in dry sunny weather. A photographic log of site features is presented as Appendix C of this report

The site is bounded to the north by Cumberworth Lane, to the west and south by the former Bromley Farm and Bromleys quarries and to the east by stand off from Lower Cumberworth. A hedgerow with immature and mature trees screens the site from Lower Cumberworth.

The site primarily consists of grassed fields sloping to the south/south east, towards East Hill Beck. The highest point (232m AOD) is located in the north west, where the proposed access road enters the site. The lowest point (213m) is located adjacent to East Hill Beck in the easternmost part of the site.

The only property adjacent to the site is Lane Side Farm, located on Cumberworth Lane to the north west.

A mound is located approximately 150m east of the site, the location of which does not correspond with the location of any recorded mine entries.

OS maps indicate a small area in the south west corner of the site was formerly used as a spoil heap on Bromleys, but there is no evidence to indicate this area has been extracted for mineral.

There was no evidence of vegetation dieback, discoloured ground, or the seepage of odorous/discoloured liquids, nor was there any obvious evidence of significant potential sources of contamination, or the presence of invasive non-native plant species such as Japanese knotweed.

2.4 Geology

An assessment of the artificial ground, superficial and solid (bedrock) geology relating to the site has been gained from British Geological Survey (BGS) and other sources and is summarised in the following Table and as shown in Figure 4, Appendix A:

Table 1: Geological Summary

Maps / Publications Referenced	BGS 1:50,000 Sheet 86 (Glossop), Bedrock and Superficial dated 2012. BGS Geology of Britain Viewer, BGS lexicon of named rock units and BGS Onshore Geoindex webpages. Borehole records (see Section 2.7). Historical mapping (Appendix B). Groundsure Geo Insight Report (Appendix C). Coal Authority Consultants Coal Mining Report. Coal Authority Interactive Viewer website.
Artificial Ground	Worked ground (Bromley Farm quarry) immediately west/south west of site. Infilled ground (Bromley's quarry) on site (SW corner) and immediately south of site.
Superficial Deposits & Landslips	Boulder clay 0.6m thick present on site. No landslips recorded adjacent to site.
Solid Geology (Bedrock)	Pennine Lower Coal Measures Formation: mudstones and siltstones with occasional thicker sandstones, lying stratigraphically between the Cumberworth Thick (or Whinmoor) coal seam roof strata and the Cumberworth Thin seam..
Dip of Solid Strata	Mainly 1-2° dip to NE, 5° to the north at the north end of the site (based on mining records).
Faults	ENE/WSW trending fault crossing northern part of the site (<5m throw).
Coal Seams / Mining / Quarrying Natural Cavities etc	BGS records Cumberworth Thick (Whinmoor) and Cumberworth Thin coal seams outcropped on site. Site within Development High Risk Area (DHRA) in terms of coal mining legacy.. Site affected by recorded shallow mine workings in Cumberworth Thick and Cumberworth Thin coal seams. Potential unrecorded shallow mine workings. Shaft 422408-041 on site. Mine entries adjacent to site. Potential for unrecorded mine entries. No surface mining activities on site. Bromley Farm clay/brickshale workings (W) and Bromleys clay/brickshale quarry (S/SE) adjacent to site, both now infilled.

According to the Soilscales on-line viewer from the Cranfield Soil and AgriFood Institute, supported by DEFRA², the natural soils within the area of the site are freely draining slightly acid loamy soils (Soilscale 6).

Artificial ground has been identified in the south western corner of the site, extending beyond the site to the immediate west/south west of the proposed Bromley Farm quarry (worked ground, now infilled with inert waste) and infilled ground immediately to the south/south east at Bromleys quarry (now backfilled).

On-line records indicate bedrock present on site consists of Pennine Lower Coal Measures Formation strata, comprising mudstones, siltstones and sandstones with occasional coals, Langsettian (Westphalian A) in age, lying stratigraphically around and below the Cumberworth Thick (Whinmoor) coal seam. The mudstones and seatearth mudstones of this sequence of rocks have been extensively worked in the past at Bromleys and Bromley Farm quarries, for their fireclay and brickshale.

The BGS records an east south east/west south west trending fault, crosses the northernmost part of the site, down-throwing strata to the north by <5m. This will be excavated as part of the quarrying process and should not present significant geotechnical stability risks to the site under normal circumstances.

2.5 Background Soil Contamination

The Groundsure environmental data report records the BGS estimated background soil chemistry with particular reference to concentrations of arsenic, cadmium, chromium, nickel and lead. Reference has also been made to the on-line BGS maps on 'Contaminant distribution in soil' for arsenic, cadmium, copper, nickel and lead dated 2013.

SEL have compared the contaminant values from both datasets against levels of concern for human health currently applicable in the UK for residential use with home grown produce to provide an indication of natural background soil contamination levels:

	Estimated On Site	Max (Res)³
Arsenic (As)	15-35mg/kg	37mg/kg
Cadmium (Cd)	<1.8mg/kg	22mg/kg
Copper (Cu)	21.6-64.2mg/kg	2400mg/kg
Chromium (Cr)	60-90mg/kg	910mg/kg
Nickel (Ni)	15-30mg/kg	130mg/kg
Lead (Pb)	47.1-100mg/kg	200mg/kg

It should be noted that these are estimated background levels for the area and should not be relied upon as reflecting the actual chemical status of soils on site, which can only be determined by site specific sampling and testing.

² <http://www.landis.org.uk/soilscales/>

³ Guidance values taken from LQM/CIEM S4ULS 2015 & DEFRA C4SL 2014

2.6 Mining, Coal Mining Legacy Risk and Ground Stability

As the site lies within an identified Coal Mining Reporting Area (also known as CON29M Coal and Brine Consultation area), a Consultants Coal Mining Report (CCMR) was obtained for the site, a copy of which is presented as Appendix E.

The conclusions in this section are taken from a Coal Mining Risk Assessment report (CMRA) of the site, prepared for the client by SEL in December 2022 which should be read in conjunction with this report. Coal mining risk is summarised in Figures 5 to 8, Appendix A.

Table 2 summarises the potential risk associated with coal mining legacy issues and has been compiled based on The Coal Authority document entitled 'Risk based approach to development management - Guidance for Developers' (Version 4, 2017).

Table 2: Summary of Potential Risks Associated with Coal Mining

Coal Mining Issue	Coal Mining Risk		Risk Assessment
	Yes	No	
Past recorded underground coal mining at greater than 30m deep		✓	
Past shallow recorded underground coal mining (<30m deep)		✓	Cumberworth Thick (Whinmoor) and Cumberworth Thin (Low Whinmoor) seams worked at shallow depths. Risk discounted in CMRA.
Past shallow unrecorded underground coal mining (<30m deep)		✓	Risk discounted in CMRA.
Present underground coal mining		✓	
Future underground coal mining.		✓	Although The Coal Authority identifies the potential for future underground coal mining, under current economic, environmental and planning constraints, SEL consider this a negligible risk.
Recorded mine entries (shafts/adits)		✓	Recorded shaft on site (422408-041). Risk discounted in CMRA.
Unrecorded mine entries (shafts/adits)		✓	Potential hazard based on past occurrences in the Huddersfield area. Risk discounted in CMRA.
Coal mining geology (fissures etc)		✓	
Past opencast (surface) coal mining		✓	
Present/future opencast coal mining		✓	
Coal mining subsidence		✓	
Record of past mine gas emissions		✓	
Recorded surface hazards related to coal mining		✓	

The CCMR identified the following on-site coal mining legacy issues:

- The site is within a Coal Authority designated Development High Risk Area (DHRA) in terms of coal mining legacy risk.
- A recorded mine shaft (422408-041) is on site.
- Potential for unrecorded shallow mine entries.
- Recorded shallow mine workings in two coal seams (Cumberworth Thick [Whinmoor] and Cumberworth Thin [Low Whinmoor] seams).
- Potential for unrecorded shallow mine workings.
- Potential for future coal mining.

The Coal Authority, as a Statutory Consultee in the planning process, has the right to object to surface development it considers may be at risk from coal mining legacy issues. The burden of discounting risk is placed on the developer.

The client intends to extract fireclay and brickshale from the mudstone horizons which lie below the Cumberworth Thick and Cumberworth Thin coal seams, by surface mining (quarrying) methods. The pavement of the quarry will be approximately 4.7m below the Cumberworth Thin seam. As such, all mine workings in these seams will be removed as part of the operational process, thereby negating the risk. Any mine entries encountered will also be excavated, negating their risk.

SEL have considered the potential for the future extraction of coal beneath the site. After consideration of the current economic, planning and governmental factors that affect coal mining in the UK, SEL consider the risk to be negligible.

Having reviewed coal mining legacy issues relating to the site, SEL consider that **all identified coal mining legacy issues have been negated in the Coal Mining Risk Assessment Report prepared by SEL in December 2022.**

Fireclays occur immediately below the Cumberworth Thick and Cumberworth Thin seams in this area and have been worked contemporaneously and in conjunction with the coals (joint coal/fireclay workings). Mitigation measures described above equally relate to fireclays worked by underground methods.

Regarding other non-coal mining activities, the Groundsure environmental data report (Appendix C) shows no records within 2km of the site.

There are two mining cavities (77m SE and 100m E) relating to the working of fireclay, but no natural cavities recorded within 500m of the site.

The BGS Britpits database of currently active and closed surface and underground mineral workings records seven workings within 250m of site. These include three within 100m (22m E [Bromleys Fireclay mine], 52m SW [Bromley Farm quarry] and 88m N [Oakhill quarry]).

There are sixty-nine surface ground workings recorded from the historical mapping within 250m of the site. These include one on site record (small field, SW corner of site). There are fourteen more records within 100m of the site including clay pits, unspecified pits/quarries and a pond.

There are eleven underground workings recorded from the historical mapping within 250m of the site, including one on site record (old shaft, eastern part of site). The ten off site records relate to a railway tunnel 95 to 162m east of the site.

With regard to natural ground stability hazards, the Geosight report (Appendix C) refers to six BGS defined natural ground stability hazard datasets which provide a hazard rating for ground subsidence arising from natural ground conditions. These are detailed in the following Table.

Table 3: Natural Ground Stability Hazards

Ground Condition	Hazard Potential	Comment
Shrink-Swell Clays	Negligible - Very Low	
Landslides	Very Low - Low	Low risk limited to minimal areas south western and south eastern perimeter.
Ground Dissolution of Soluble Rocks	Negligible	
Compressible Deposits	Negligible to moderate	Moderate risk limited to minimal area at west end of southern perimeter.
Collapsible Deposits	Very Low	
Running Sands	Negligible - Very Low	

2.7 Historical Borehole Data

The British Geological Survey (BGS) records seven historic boreholes within 100m of the site. Additionally the client has had six boreholes drilled in the area of interest which identified the geology summarised in the Table below.

Table 4: Borehole Records

Private Boreholes, Bromley Farm Extension		
Rock Description	Average Thk (m)	Depth to Top (m)
Topsoil	0.5	0.0
Boulder Clay	0.6	0.5
Rockhead at 1.1m		
Sandstone	1.7	1.1
Cumberworth Thick (Whinmoor) Seam	1.6	2.8
Mudstone (Kitson Top Brickshale)	10.7	3.0
Cumberworth Thin (Low Whinmoor) Seam	0.3	13.8
Seatearth Mudstone (Kitson Bottom Fireclay)	2.5	16.3
Mudstone(Kitson Bottom Brickshale)	2.2	18.5
Proposed Base of Excavation		
Sandstone	3.3	21.8
Mudstone	9.5	31.3

2.8 Hydrogeology

There are no superficial aquifers within 250m of the site. The onsite bedrock geology is designated as a Secondary (A) aquifer. Formerly known as minor aquifers, secondary (A) aquifers are defined as containing 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.

With respect to groundwater vulnerability, the bedrock aquifer beneath the site is described as having a medium to high groundwater vulnerability with a flow mechanism of well-connected fractures and is overlain by soils of low to high leaching class with an infiltration value of <40% to >70%.

The Environment Agency's (EA's) on-line Catchment Data Explorer map shows the site to be in the Don and Rother Millstone Grit and Coal Measures operational catchment of the Humber GW Groundwater Management Area, where the chemical quality of bedrock groundwater between 2013 and 2019 has been classified as 'Poor'. The reason for the poor status is stated as being due to mining and quarrying.

Groundwater protection zones are zones designated in England and Wales by the EA as major groundwater sources (from wells, boreholes and springs) used for drinking water supply. The site is not located within 500m of a groundwater Source Protection Zone either with respect to potable abstraction sites, or with respect to a confined aquifer.

There are six active EA licensed groundwater abstractions relating to three companies recorded within 2km, the details of which are summarised in Table 5.

Table 5: Active Licensed Groundwater Abstractions

License Holder (& Licence No.)	Location	Purpose	Point	Expiry Date
Hinchcliffe & Son	690m SE	Transfer Between Sources	Borehole – Coal Measures – Greenmoor Rock – Denby Dale	13/03/29
Penmoor UK Ltd	1405m W	Water Bottling	Borehole – Lower Coal Measures - Shepley	-
Marshall's Mono Ltd	1476m W	Dewatering	Sovereign Quarry, Upper Cumberworth	31/03/27
Penmoor UK Ltd	1511m W	Water Bottling	Borehole – Lower Coal Measures - Shepley	-
Penmoor UK Ltd	1858m W	Water Bottling	Borehole – Lower Coal Measures - Shepley	-
Penmoor UK Ltd	1880m W	Water Bottling	Borehole – Lower Coal Measures - Shepley	-

There are fifteen recorded potable groundwater abstractions (for drinking water supply) licenced by the EA within 2km of the site, four of which are active. All active licences relate to water bottling by Penmoor UK Ltd listed above.

Based on the information reviewed above, the sensitivity of groundwater as a receptor to any potential contamination at this location is considered to be of moderate significance.

2.9 Hydrology

The nearest surface water feature to the site is East Hill Beck which flows along the central section of the southern site boundary in an easterly direction before flowing south for a short distance and then east again via a large pond to point beyond the railway before flowing south and joining the River Dearne approximately 895m south east.

The EA's on-line Catchment Data Explorer map shows that the site is located within two Management Catchment Areas. The majority of the site is located in the Dearne operational catchment of the Don and Rother management area (Dearne from Source to Bentley Brook), which has a moderate ecological classification (2013-2019) and fail chemical classification for 2019.

The northernmost part of the site is located in the Colney and Holme operational catchment of the Aire and Calder management area (Fenay Beck from Source to River Colne), which has a moderate ecological classification and fail chemical classification for 2019.

There are three active EA licensed surface water abstractions within 2km of the site, the details of which are summarised in the Table below.

Table 6: Active Licensed Surface Water Abstractions

License Holder (& Licence No.)	Location	Purpose	Point	Expiry Date
Hinchcliffe & Sons Ltd	681m SE	Non-evaporative cooling	River Dearne – reservoir near Munchcliffe Beck	-
Hinchcliffe & Sons Ltd	681m SE	General use relating to secondary category	River Dearne – reservoir near Munchcliffe Beck	-
Hinchcliffe & Sons Ltd	711m SE	Transfer Between Sources	Munchcliffe Beck transfer	31/03/2029

There are no recorded potable surface water abstractions licenced by the EA within 2km of the site.

There are six EA licensed discharge consents (relating to two locations) to controlled waters located within 250m of the site, none of which remain active. These are summarised in Table 7.

Table 7: EA Licensed Discharges to Controlled Waters

Site Name, Address & (Permit number)	Location	Effluent Type	Receiving Waters	Active/Historic
Kitson Quarry, Upper Cumberworth, Denby Dale, Huddersfield HD8 8PD.	118-125m S	Trade discharges – Site drainage/contaminated surface water (not waste)	Land adjacent to site & tributary of East Hill Beck	Historic
Bromley Farm Landfill, Upper Cumberworth.	137m S	Trade discharges - unspecified	East Hill Beck	Historic

The following discharges of List 1 and List 2 dangerous substances regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015, have been identified with 250m of the site (Table 8).

Table 8: List 1 and List 2 Dangerous Substances

Site Name	Location	Authorised Substances	Receiving Waters	Status
List 1 Dangerous Substances				
Bromley Farm Landfill Surface Water, Wakefield	92m S	Mercury,(other), cadmium	Dearne, Don	Not active
Bromley Farm Landfill Site Drainage	137m S	Mercury,(other), cadmium	Dearne, Any, Don	Not active
List 2 Dangerous Substances				
Bromley Farm Landfill Site	119m S	Iron	River Dearne	Not active
Bromley Farm Landfill Site Drainage	137m S	Chromium, copper, iron, lead, zinc	River Dearne	Not active

There are no EA recorded pollution incidents within 250m of the site which have had an impact on water.

Based on the information reviewed above, the level of sensitivity of surface water resources to any potential contamination that may arise from the site as a result of the proposals is considered to be reasonably significant due to the gradient of the site falling towards East Hill Beck.

2.10 Flood Risk

Rivers and the Sea

The EA Flood Map for Planning on the Gov.UK website records the site as being within a Flood Zone 1 flood plain with a low probability of flooding. A copy of the EA Flood Map for Planning (Rivers and Sea) is provided in Appendix F⁴.

A review of the EA map of long term risk of flooding from rivers and the sea available on the Gov.UK website indicates the site is in an area with a 'Very low risk', which means that each year the chance of flooding is less than 0.1%.

The site is not located within 50m of a Flood Zone 2 or Flood Zone 3 and there are no records of flood defences, areas benefitting from flood defences or areas benefitting from flood storage within 250m of the site.

Surface Water (Pluvial)

The EA map showing the long-term risk from surface water (pluvial) flooding (also viewed on the Gov.UK website) identifies nearly all of the site as being at 'Very low risk' (with a <0.1% chance), with two isolated small areas of the site at 'Low' to 'High risk' (0.1->3.3% chance) on the south eastern boundary of the site.

Flooding from surface water is difficult to predict as rainfall location and volume are difficult to forecast. In addition, local features can greatly affect the chance and severity of flooding. The environmental data report (Appendix C) identifies the highest risk of surface water flooding on site to be 1 in 250 years.

Groundwater

With respect to groundwater flooding, that is, the potential for the water table to rise to above ground level or within underground structures such as basements or cellars, the environmental data report identifies the site to be located in an area of 'Negligible' risk.

Reservoirs

The EA map showing the flood risk from reservoirs on the Gov.UK website shows that the site is not located in an area of risk should a reservoir fail and release the water it holds.

⁴ Reproduced under Open Government Licence <https://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/>

Flood Risk Assessment

Regulators are entitled to require a standalone flood risk assessment for a site in addition to this Phase 1 Preliminary Risk Assessment should they consider it necessary. Although the site is located within a Flood Zone 1 (low probability of flooding) which under normal circumstances would not require a flood risk assessment, the client will need to prepare an assessment due to the size of the site (8.3ha).

2.11 Landfills and Licenced Waste Management Facilities

The influencing distance of a gassing landfill is dependent on a number of variables, including the type of waste, geology, hydrogeology, site engineering etc. Therefore, owing to the specific nature of each of these factors, it is not possible to guarantee that a site is not within the influencing distance of a known landfill site. However, it is normal practice to consider a 250m consultation zone around the property.

The Groundsure environmental data report (Appendix C) includes EA, BGS, DoE and Local Authority and other records and shows there are no currently active landfills within a 250m radius of the site, although there are four recorded historic landfills relating to two locations (Table 9).

Table 9: Recorded Landfill Sites

Site Name, Address (& Operator)	Info Source	Location	Accepted Waste Types	First Input Date	Last Input Date
Not given.	1994 map	On site (SW boundary)	Refuse Tip	N/A	N/A
Bromley Farm Quarry, Upper Cumberworth, Denby Dale, West Yorkshire. (W W M Hepworth Landfill Ltd)	EA	On site (SW corner)	Inert, industrial, commercial & household.	31/12/82	31/12/90
Bromley Farm Quarry, Upper Cumberworth, Denby Dale. (West Yorkshire Waste Management Ltd)	EA	24m SW	Not stated	N/A	N/A
Bromley Farm Quarry, Upper Cumberworth, Denby Dale, West Yorkshire. (West Yorkshire Waste Management Ltd)	EA	111m S	Inert, industrial, commercial & household.	N/A	N/A

One historical waste site has been identified from Local Authority planning records within 250m of the site. This was a planning application submitted in September 1995 for a recycling centre / waste site for a location 101m south at Bromley Farm Landfill, Barnsley Road, Upper Cumberworth.

With respect to other waste sites, the review has identified seven records (relating to two locations) of EA licenced waste treatment, transfer or disposal sites that are active or recently closed within 250m of the site (Table 10).

Table 10: EA Licenced & Other Waste Sites

Site Name, Address (& Operator)	Location	Type of Site	Issue Date	Status
Bromley Farm HWRC, Barnsley Road, Upper Cumberworth, Huddersfield. (Sita (Kirklees) Ltd)	141m S	Household Waste Amenity (Size 25,000 tonnes; Annual tonnage 15,000) EPR ref: FP3795ZD/V004	08/03/96	05/08/11 Modified
Bromley Farm HWRC, Barnsley Road, Upper Cumberworth, Huddersfield. (Sita (Kirklees) Ltd)	141m S	Household Waste Amenity (Size 25,000 tonnes, Annual tonnage 7,499) EPR ref: FP3795ZD/A001	08/03/96	Issued
Bromley Farm HWRC, Barnsley Road, Upper Cumberworth, Huddersfield. (Sita (Kirklees) Ltd)	141m S	Household Waste Amenity (Size 25,000 tonnes, Annual tonnage 15,000) EPR ref: FP3795ZD/V004	08/03/96	05/08/11 Modified
Bromley Farm HWRC, Barnsley Road, Upper Cumberworth, Huddersfield. (SUEZ Recycling & Recovery Kirklees Ltd)	141m S	Household Waste Amenity (Size 25,000 tonnes, Annual tonnage 15,000) EPR ref: FP3795ZD/V006	08/03/96	05/09/17 Modified
Bromley Farm Quarry, Barnsley Lane, Upper Cumberworth, Huddersfield. (Wavin Ltd)	193m SW	Deposit of Waste to Land as a Recovery Operation (Size 25,000 tonnes, Annual tonnage 50,000) EPR ref: WP3096EM/A001	09/05/13	Issued
Bromley Farm Quarry, Barnsley Lane, Upper Cumberworth, Huddersfield. (Braithwaite Excavations Ltd)	193m SW	Deposit of Waste to Land as a Recovery Operation (Size >75,000 tonnes, Annual tonnage 100,000) EPR ref: DB3002MD/V002	09/05/13	07/03/17 Modified
Bromley Farm Quarry Barnsley Lane, Upper Cumberworth, Huddersfield. (Braithwaite Excavations Ltd)	193m SW	Deposit of Waste to Land as a Recovery Operation (Size 25,000 tonnes, Annual tonnage 100,000) EPR ref: DB3002MD/V002	09/05/13	07/03/17 Modified

The environmental data report identifies six recorded waste exemptions for activities involving the storage, treatment, use or disposal of waste that are exempt from requiring a permit, within 250m of the site. All these were for the storage of waste. Four of the records relate to two locations on site, these being on the northern boundary and central western part of the site and for the purpose of storing sludge on a farm.

The two waste exemptions located beyond the site were 124m to the north west, relating to the storage of sludge on a farm and 141m to the south (Bromley Farm) relating to the storage of agricultural and non-agricultural waste in a secure place.

2.12 Ground Gases

CIRIA Report C665 (Ref. F) identifies potential sources of hazardous ground gases (principally methane and carbon dioxide) that may be generated from infilled land and other sources and provides guidance on assessing the risks from these features. It is normal practice within the industry that where potentially infilled land occurs within 250m of a site, it should be assessed for risk from ground gas.

Potentially gas generating sources that have been identified within 250m of the site include the following:

- Three historic landfill sites for inert, industrial, commercial and household waste (on site, 24m SW & 111m S);
- Shallow recorded mine workings (on site and surrounding areas);
- Recorded mine entries (on site SE and surrounding area);
- Refuse tip (on site, southern perimeter and adjoining SW);
- Spoil heap (on site SW corner);
- Former clay/unspecified pits (8-13m east, 5-60m north and 85-87m north);
- Infilled clay pits (west and south perimeters).

Having reviewed the factors described above, it is considered that ground gas monitoring would be required as part of any Phase 2 site investigation.

Regarding radon gas, reference to the Gov.UK radon maps website⁵ shows that whilst the majority site is not located within a Radon Affected Area (<1% homes above the action level), the northernmost part of the site is located within a Radon Affected Area. This is because the highest radon potential within the one kilometre grid square in which this part of the site is located (determined by the percentage of homes above the radon action level) is 1-3%. Reference to radon guidance report BR 211 (Ref. G) indicates that no radon protection measures are required for new development in this area.

2.13 Air Quality

Section 82 of the Environment Act 1995 requires every Local Authority to review the air quality within its area and section 83 requires them to designate an Air Quality Management Area (AQMA) where air quality objectives put in place to protect human health and the environment are not being achieved, or are not likely to be achieved, as set out in the Air Quality (England) Regulations 2000.

The revised NPPF (Ref. D) requires AQMAs and Clean Air Zones to be taken into account in planning policies and decisions.

Reference to the on-line interactive map of Air Quality Management Areas managed by Defra⁶ shows that the site lies within Kirklees AQMA, which has 10 declared areas for Nitrogen Dioxide (NO₂) or Particulate Matter (PM₁₀), none of which are located within 250m of the site.

⁵ <https://www.ukradon.org/information/ukmaps>

⁶ <https://uk-air.defra.gov.uk/aqma/maps>

2.14 Other Potentially Significant Information Relating to the Site

Reference has been made to the Groundsure environmental data report (Appendix C), from which SEL has screened out the historical uses, current industrial uses and permit authorisations within a 250m radius and these are summarised below.

The report identifies three records on the Recent industrial land uses database within 250m. These include a recycling reclamation and disposal site operated by SITA UK Ltd (139m S) and two unspecified quarries (176m SW and 229m SE).

A review of Historical industrial land uses database from 1:10,000/10,560 scale mapping has identified seventy four records within 250m of the site. These include two on site (refuse heap and unspecified old shaft) and eighteen within 100m, notably clay pits (8-13m E), unspecified pits/quarries (57-87m N), railway sidings 70m SE) and a railway tunnel (95-99m E).

There are two List 1 Dangerous Substance authorisations within 250m, these being Bromley Farm Landfill (92m S) regulated for the drainage of surface water into the Rivers Dearne and Don (authorised for mercury and cadmium) and Bromley Farm Landfill (137m S) regulated for site drainage into the Rivers Dearne and Don (authorised for mercury and cadmium). Additionally there are two List 2 Dangerous Substance authorisations within 250m, these being Bromley Farm Landfill (119m S) authorised for iron and Bromley Farm Landfill (137m S) authorised for chromium, zinc, copper, lead. None of these authorisations are active.

The environmental data report records no historic military land within 500m of the review area. Inspection of the Zetica unexploded ordnance (UXO) risk maps web page identifies the site to be located within a zone of low risk from WWII unexploded ordnance (see Appendix G).

2.15 Environmental Designations

Reference has been made to the Groundsure environmental data report (Appendix C) which has identified the following environmental designations within 1km of the site (Table 11).

Table 11: Environmental Designations

Designation	Location	Name
Green Belt	On site	South and West Yorkshire
Nitrate Vulnerable Zone	On Site	River Dearne NV2 (Surface Water ID278)
Ancient Replanted Woodland	498m E	Wither Wood
	617&735m S	Munchcliffe & Ward Woods
	698m SW	Newhouse Green and Burn Woods

The review area is located within an SSSI Impact Risk Zone.

2.16 Habitat Designations

The environmental data report identifies five habitat designations within 250m, the details of which are summarised in the following Table.

Table 12: Habitat Designations

Designation	Location	Main Habitat
Priority Habitat Inventory	On site	Deciduous woodland
Priority Habitat Inventory	32m SE	Deciduous woodland
Priority Habitat Inventory	121m E	Deciduous woodland
Priority Habitat Inventory	241m N	Deciduous woodland
Habitat Network	221m SW	Network Enhancement Zone 1

2.17 Visual and Cultural Designations

The Groundsure environmental data report has not identified any visual and cultural designations within 250m of the site (Table 13).

Table 13: Visual and Cultural Designations

Designation	Location	Name
Listed Building	83m W	Lane Side House-

2.18 Agricultural Designations

In the environmental data report the site and wider surrounding areas is classified as 'Grade 4' (poor quality agricultural land). This is land with severe limitations which significantly affect crop yield, cultivations or harvesting. It is mainly suited to grass with occasional arable crops.

3.0 CONCEPTUAL SITE MODEL AND PRELIMINARY RISK ASSESSMENT

3.1 Potential Pollutant Linkages

To determine the potential for a pollutant linkage to be present, the preliminary risk assessment process involves the identification of potential sources, pathways and receptors. A pollutant linkage can only be present if all three of these factors are involved. In this model there must be a **source** of contamination present (normally a contaminant or pollutant), with a **pathway** representing a route for the contaminant to migrate within the environment towards a **receptor** which may be susceptible to impact from the contamination. A receptor can be a natural feature such as surface or groundwater and humans, but may also include ecological systems and property.

This approach is in accordance with the contaminated land provisions under Part 2A of the Environmental Protection Act 1990. Under the 2014 revised Statutory Guidance implementing these provisions (Ref. E), land is defined as being contaminated if:

- Significant harm is being caused or there is a significant possibility of such harm being caused to human health, or relevant non-human (ecological or property), receptor; and / or
- Significant pollution of controlled waters is being caused, or there is a significant possibility of significant pollution of controlled waters being caused.

The Conceptual Site Model for this assessment is based on the use of the site for a quarry extension for the extraction of fireclay and brickshale.

3.2 Potential Sources of Contamination

Potential sources of contamination and associated contaminants which may be present on site are shown in Table 14.

Table 14: Potential Sources of Contamination

Potential Sources	Potential Contaminants
On Site	
Recorded/unrecorded shallow mine workings. Recorded/unrecorded mine entries. Historic inert, industrial, commercial, household landfill (SW corner). Refuse / spoil heap (SW corner). Past agricultural practices.	Metals / metalloids including As, Cd, Cr, Cu, Ni, Pb, Hg, Zn, Se. Inorganic compounds (cyanide, thiocyanate). Polycyclic aromatic hydrocarbons (PAHs). Phenols. Petroleum Hydrocarbons (TPHs). Volatile and semi-volatile organic compounds (VOC & SVOCs). Polychlorinated biphenyls (PCBs). Pesticides. Ground gas (methane and carbon dioxide).
Off Site	
Infilled /worked ground (W&S perimeter). Refuse tip (adj. SW). Historic landfill (adj. SW, 24m SW, 111m S, 141m S). Former clay/unspecified pits (8-13m E & 5-60m N). Railway sidings & tunnel (70m SE & 95-99m E). List 1& List 2 Dangerous Substance authorisations (92m E, 119m S, 137m S). Household waste recycling centre (139m S). Quarries (176m SW, 229m SE). Recorded/unrecorded shallow mine workings. Recorded/unrecorded mine entries.	

3.3 Potential Pathways

The potential pathways representing the routes by which contaminants may migrate or harm be caused are listed as follows:

- Ingestion and inhalation of soil / water / dust;
- Dermal contact with soil / water / dust;
- Emission, migration and / or inhalation of gases and vapours;
- Migration / leaching of contaminants through soil / groundwater;
- Migration of contaminants via air (wind);
- Volatisation of contaminants to indoor or outdoor air;
- Surface water runoff;
- Service pipes;
- Physical disturbance;
- Ground instability / differential settlement.

3.4 Receptors

3.4.1 Human Health

Chronic Risks

The chronic risks to human health take into account those risks to end users of the site (future residents) and neighbouring occupants.

Acute Risks

Acute risks are considered with respect to construction workers / engineers on site.

NB: During any intrusive ground works appropriate health and safety measures should be adopted to protect site workers from any potential risks associated with contamination

In the ground. This should include the use of the appropriate personal protective equipment necessary and a general awareness of any possible risks to safety and human health on site.

3.4.2 Controlled Waters

Groundwater

The chemical quality of bedrock groundwater regionally is poor and there are no groundwater Source Protection Zones within 500m, but bedrock groundwater is of medium to high vulnerability. There are six active groundwater abstraction licences within 2km, the nearest being 690m to the south east. Four of the abstractions are for potable (drinking water) supply, but the nearest of these is 1405m to the west. Groundwater is considered a moderately sensitive receptor to potential contamination.

Surface Water

The level of sensitivity of surface water resources to any potential contamination that may arise as a result of the development is considered to be of reasonable significance, due to the proximity of the nearest surface water course (East Hill Beck) located along part of the southern site boundary and the slope of the site towards this water feature. There are also three active surface water abstraction licences within 2km, the nearest being 681m to the south east.

3.4.3 Non-Human Receptors

Ecological Systems

Potential ecological receptors include the area of Green Belt in which the site is located, four deciduous woodland Priority Habitat sites (on site, 32m SE, 121m E and 241m N), a habitat network (221m SW) and areas of ancient replanted woodland (498m E, 617-735m S and 698m SW).

Property (buildings / structures / crops / livestock)

Property receptors include the following:

- Existing agricultural fields on site and within the surrounding area;
- Isolated residential dwellings / farms, the nearest being Lane Side Farm adjoining Cumberworth Lane to the west;
- Small groups of residential dwellings along Cumberworth Lane 292m south west and on the edge of Lower Cumberworth approximately 257m east and 187m south east;
- Local road infrastructure and utilities.

3.5 Outline Conceptual Site Model

Based on all the information determined from previous sections of this report, the outline Conceptual Site Model (CSM) identifies the potential pollutant linkages which may exist on the site and is presented as Table 15.

Table 15: Outline Conceptual Site Model

Potential Pollutant (Source)	Potential Linkage (Pathway)	Receptor
On Site: Recorded/unrecorded shallow mine workings. Recorded/unrecorded mine entries. Historic inert, industrial, commercial, household landfill (SW corner). Refuse / spoil heap (SW corner). Past agricultural practices. Off Site: Infilled /worked ground. Refuse tip. Historic landfills Former clay/unspecified pits. Railway sidings & tunnel. List 1& List 2 Dangerous Substance authorisations. Household waste recycling centre. Quarries. Recorded/unrecorded shallow mine workings. Recorded/unrecorded mine entries.	Emission, migration and inhalation of gases / vapours. Inhalation of soil, water or dust. Dermal contact with / ingestion of contaminated soil, water, dust. Migration / leaching, runoff and percolation through soils and rock joints. Volatilisation of contaminants to indoor or outdoor air. Service pipes. Physical disturbance and migration of contaminated soil and dust via wind. Ground instability / differential settlement.	Quarry workers (and visitors). Neighbouring occupants (residents and farm workers) Transient public (pedestrians on footpath alongside Cumberworth Road & public footpath 42m NE). Groundwater in Secondary A Aquifer. Surface watercourse (S perimeter). Ecology (Ancient Replanted Woodland, Priority Habitat sites, Habitat Network & Green Belt). Property (existing fields, surrounding residential properties, road infrastructure).

3.6 Preliminary Environmental Risk Assessment

This section aims to expand the outline CSM to assess the level of risk for each potential pollutant linkage.

Risk is a combination of the 'probability' (likelihood) of an event occurring and the magnitude of its 'consequence' (severity). Therefore, in order to assess risk, both the probability and the consequence of an event must be taken into account. SEL has adopted guidance provided by CIRIA C552⁷, for use in the production of risk assessments for contaminated land and a simple guide to this process is provided in Appendix H.

The risk categories that are ultimately determined as the basis for assessing the likelihood of the site being described as contaminated, are provided with their respective definitions in Table 16.

⁷ CIRIA C552 Contaminated land risk assessment. A guide to good practice, CIRIA 2001

Table 16: Risk Classification Definitions from CIRIA C552

Risk Rating	Definition
Very High	There is a high probability that severe harm could arise to a designated receptor from an identified hazard, OR there is evidence that severe harm to a designated receptor is currently happening. This risk, if realised, is likely to result in a substantial liability. Urgent investigation and remediation are likely to be required.
High	Harm is likely to arise to a designated receptor from an identified hazard. Realisation of the risk is likely to present a substantial liability. Urgent investigation is required and remedial works may be necessary in the short term and are likely over the longer term.
Moderate	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that such harm would be severe, or if any harm were to occur it is more likely that the harm would be mild. Investigation is normally required to clarify the risk and to determine the potential liability. Some remedial works may be required in the longer term.
Low	It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild.
Very Low	There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe.

The pollutant linkages from the outline CSM and resulting risks are now considered in Table 17.

Table 17: Preliminary Environmental Risk Assessment

Receptor	Potential Pollutant Linkage	Estimated Degree of Risk to Receptor
Site Occupants (Quarry Workers, Contractors, Visitors)	Migration and inhalation of ground gas (methane & carbon dioxide).	Low/Moderate
	Migration and inhalation of radon gas.	Low
	Inhalation of soil, water or dust.	Low-Moderate*
	Dermal contact with/ ingestion of contaminated soil / water / dust.	Low-Moderate*
	Volatisation of contaminants to indoor or outdoor air.	Low
	Physical disturbance (unexploded WWII UXO).	Low
	Physical disturbance / ground instability (unrecorded mine entries).	Low
Pedestrians	Migration of airborne particles and inhalation (of soil or dust).	Low**
	Migration of airborne particles and dermal contact (with soil or dust).	Low**
Neighbouring Occupants	Migration / leaching / runoff.	Low**
	Inhalation of soil, water or dust.	Low**
	Dermal contact with/ingestion of contaminated soil/water/dust.	Low**
Surface Water	Migration / leaching / runoff.	Low-Moderate**
Groundwater	Migration / leaching / runoff.	Low**
Ecological Systems	Migration / leaching / runoff / wind (dust)	Low-Moderate**
Property (Land & Buildings)	Migration, accumulation and ignition of methane.	Low
	Migration / leaching / runoff.	Low **
	Ground instability / differential settlement (recorded shallow coal mining)	Low

* Assumes basic PPE is used (including gloves and long sleeved overalls).

** Assumes good site construction practice, including, relevant reports, control of runoff / spillages and dust control.

In this preliminary qualitative risk assessment, an overall **Low to Moderate** risk has been attributed for the site.

4.0 CONCLUSIONS AND RECOMMENDATIONS

This Phase 1 Preliminary Geo-Environmental Risk Assessment report has involved a review of the available data for the study area in the context of the proposed quarry extension for the extraction of brickshale and fireclay within the site.

The assessment has derived the overall level of risk to human health and the wider environment from on and off-site sources to be **Low to Moderate**. The risks mainly relate to the following:

- To quarry workers from potential contaminants within the south western corner of the site which formed part of an historic landfill (for inert, industrial, commercial and household waste);
- To quarry workers from ground gas emissions from the historic landfill, shallow coal mining and a recorded mine shaft on site.
- To the adjoining East Hill Beck from potential pollutants that could be released following disturbance of the historic landfill (SW corner).
- To potential ecological habitats extending across the site and sections of East Hill Beck and the Priority Habitat deciduous woodland extending along / adjoining the southern site boundary.

It is recommended that a Phase 2 intrusive site investigation is undertaken to assess the potential contamination, ground gas and ground stability risks within that part of the proposed quarry extension which has previously been subjected to historical tipping (south western corner). The location near the old shaft in the south eastern corner of the site should also be included in the investigation.

The objectives of the investigation should be as follows:

- Assessment of contamination and ground gas risks associated with the proposed quarry extension.
- Provide geotechnical data to characterise ground conditions and assess slope stability to inform site design.
- Clarify the outline Conceptual Site Model.
- Clarify the Preliminary Environmental Risk Assessment.
- Provide data for any remedial work that may be required.

Phase 2 Geo-Environmental Site Investigation

The Phase 2 (intrusive) site investigation should include:

- Dynamic (window) sampling within the site boundary to facilitate the installation of gas monitoring wells and provide geotechnical information relating to the underlying soils including ground bearing information to inform quarry design (Standard Penetration Tests).
- Recovery of representative soil samples for appropriate contamination analysis and geotechnical testing.
- Groundwater encountered within the monitoring wells and surface water from the adjoining section of East Hill Beck (upstream, mid-point and downstream) should also be sampled and tested for potential contaminants.

- The completion of a programme of gas monitoring involving visits at approximate two weekly intervals until the completion of 6 visits⁸.

Ecology

The nearest potential ecological receptors are the Green Belt land in which the site is located and an area of Priority Habitat deciduous woodland adjoining a section of the southern site boundary. It is therefore recommended that these are considered further by the completion of an ecological assessment which should also include appropriate sections along East Hill Beck.

Coal Mining Legacy Issues

SEL prepared a Coal Mining Risk Assessment Report (CMRA) for the site in December 2022). The Coal Authority is a statutory consultee in the planning process and has the right to object to any surface development it considers may be at risk from legacy coal mining issues. The burden of discounting risk is placed on the developer.

The site is located within a Coal Authority designated Development High Risk Area (DHRA), due to the presence of recorded/potential unrecorded shallow mine workings and recorded/potential unrecorded mine entries.

The Client intends to extract fireclay and brickshale from the mudstone horizons which lie below the Cumberworth Thick and Cumberworth Thin coal seams, by surface mining (quarrying) methods. The pavement of the quarry will be approximately 4.7m below the Cumberworth Thin seam. As such, all shallow mine workings in these seams will be removed as part of the operational process, thereby negating the risk. Any mine entries encountered will also be excavated, negating their risk.

Radon Gas

The site is located within a Radon Affected Area, with the maximum radon potential ranging between 1 and 3%, but no radon protection measures are required for any new buildings.

Flood Risk

The site is located within a Flood Zone 1 (low probability of flooding). Under normal circumstances, a flood risk assessment would not be required on the site. However, a standalone flood risk assessment will be required due to the size of the site being more than 1ha.

Other Factors

Should the use of plastic pipes or other materials be proposed for underground services as part of the redevelopment works, it should be noted that soil sampling requirements can vary between different service providers. For this reason, prior to fully commissioning any ground investigation, it is recommended that the Client agrees any additional sampling requirements that may be required with each service provider. This is particularly important for proposed water supply pipes.

⁸ Gas monitoring visits to include a minimum of 2 visits under optimal monitoring conditions of low and falling atmospheric pressure.

Prior to intrusive site investigations, records of services should be obtained to accurately locate the existing services on site in order to prevent damage by the use of excavation equipment during intrusive investigations.

APPENDIX A

FIGURES

Figure 1: Site Location.

Figure 2: Site Layout.

Figure 3: Ordnance Survey Search – Site History.

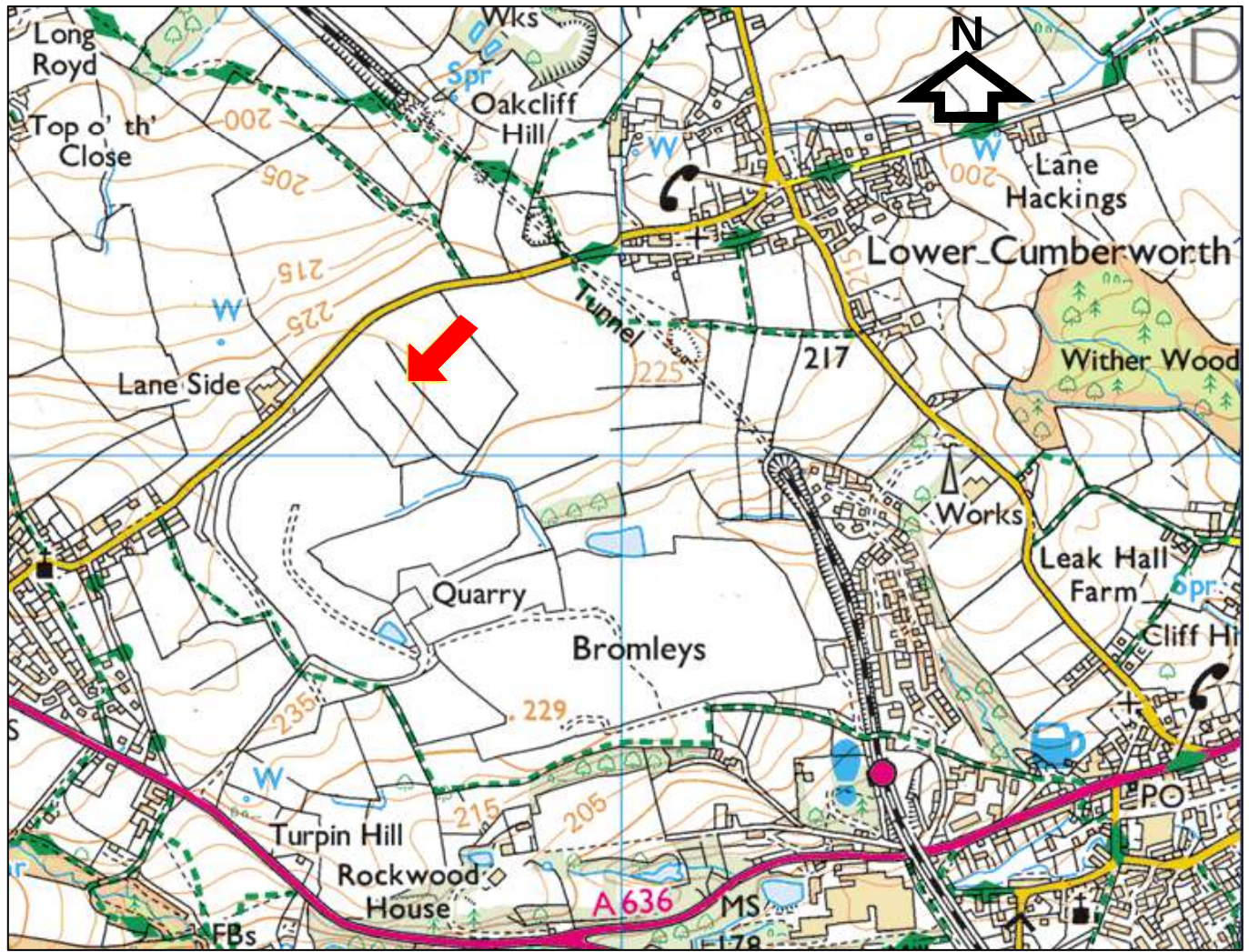
Figure 4: British Geological Survey Search - Site Geology.

Figure 5: Coal Authority Search - Development High Risk Areas (DHRA).

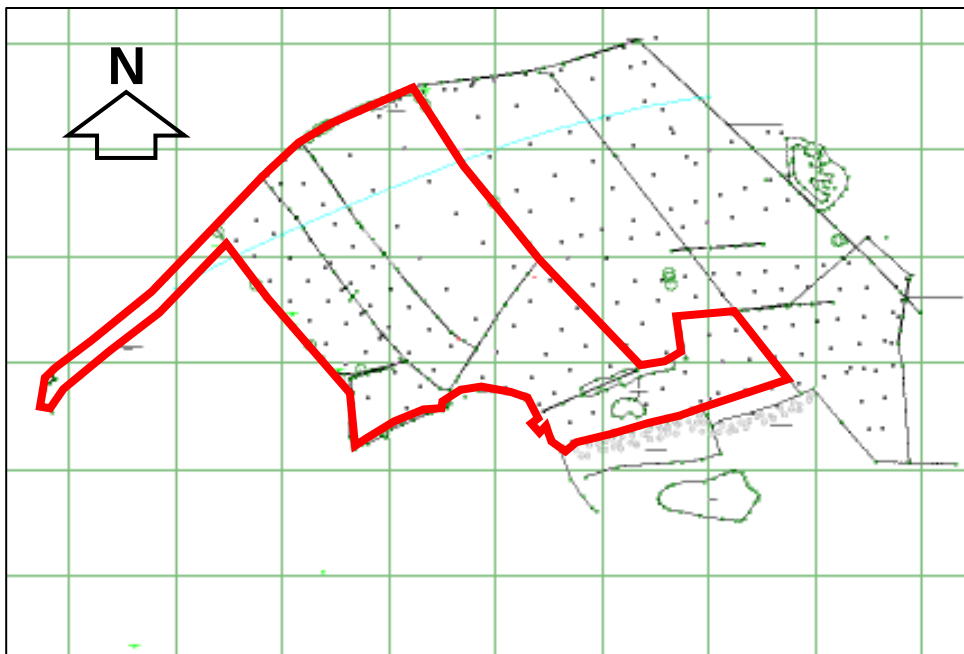
Figure 6: Coal Authority Search – Recorded Past Shallow Mine Workings.

Figure 7: Coal Authority Search – Recorded Mine Entries (Shafts and Adits).

Figure 8: Coal Authority Search – Recorded Past Surface (opencast) Mining.



Site Location



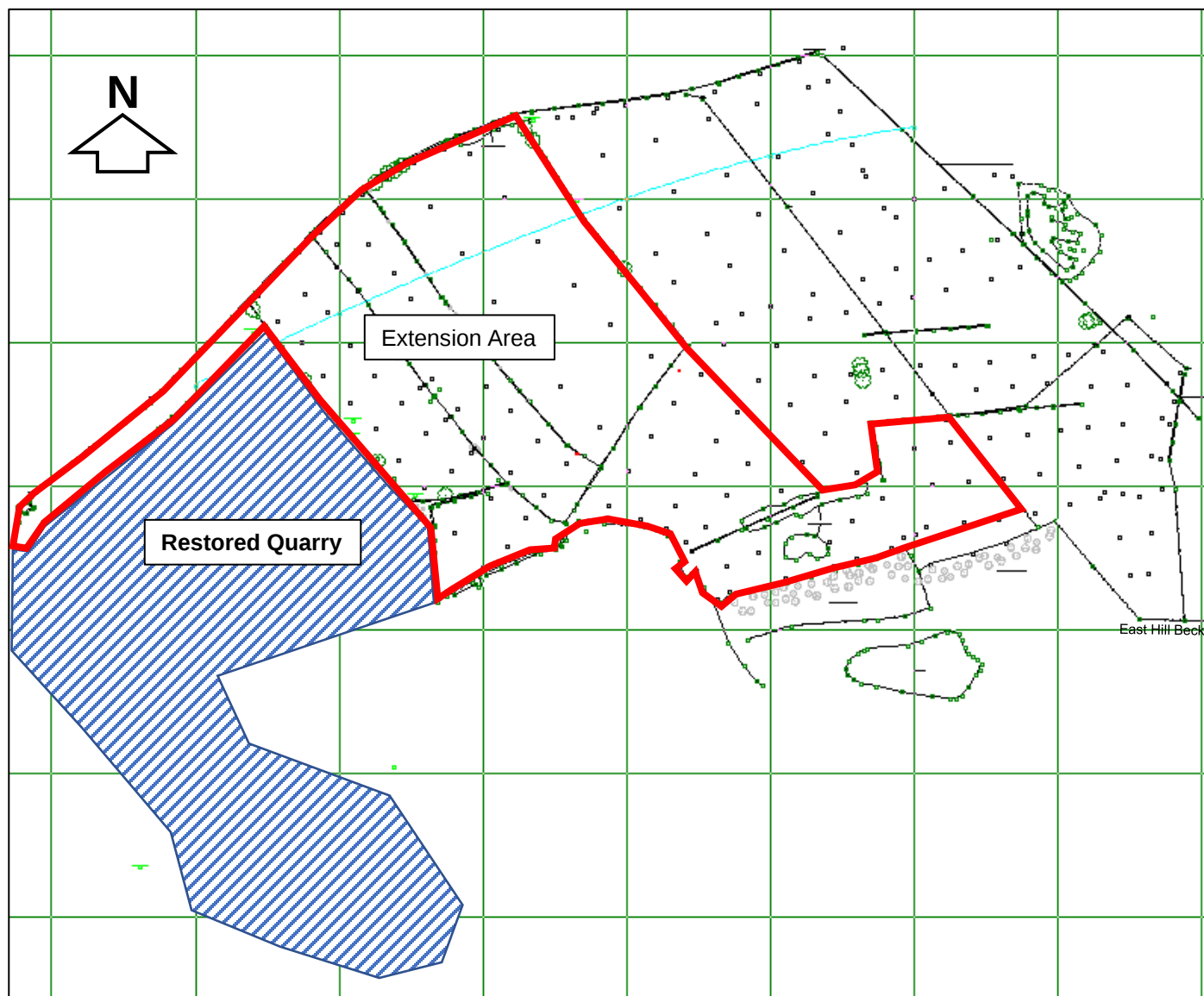
Ref: 22007

Bromley Farm Quarry,
Lower Cumberworth,
West Yorkshire,
HD8 8PD

FIGURE 1:

SITE LOCATION

(421716, 409084)



Site Location

Ref: 22007

**Bromley Farm Quarry,
Lower Cumberworth,
West Yorkshire,
HD8 8PD**

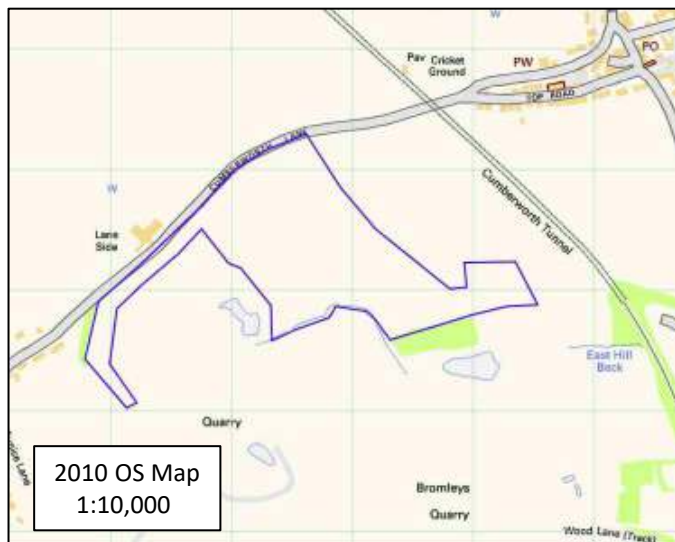
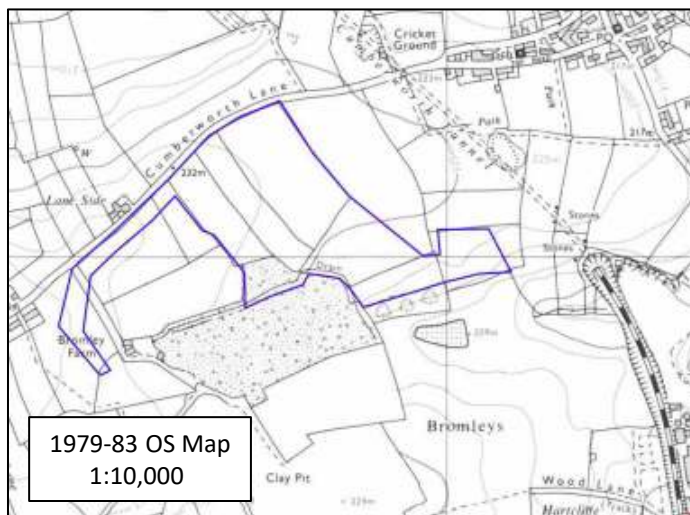
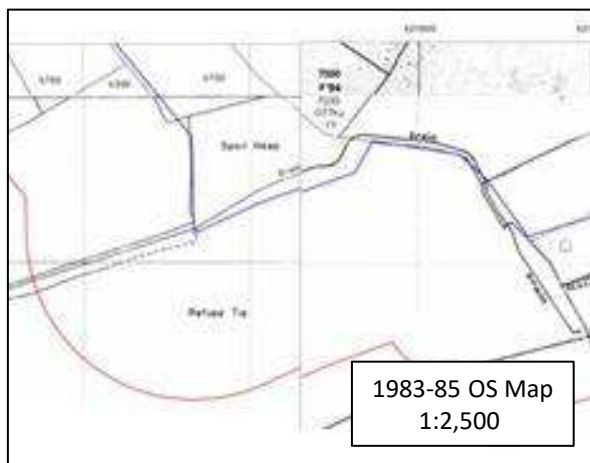
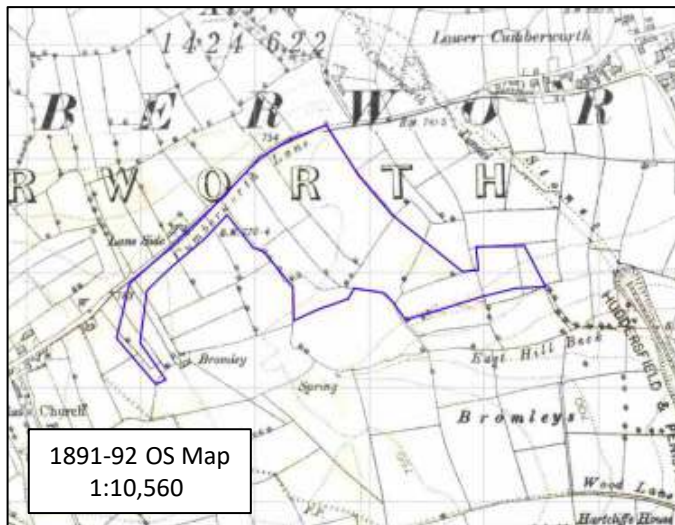
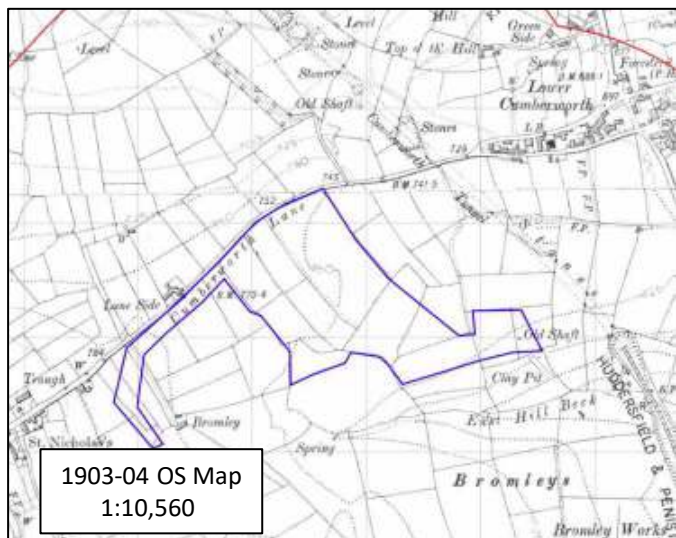
The area of interest lies immediately north east of the former Bromley Farm quarry and mainly comprises green fields.

Hepworth Wavin Ltd (the Client), propose to develop a new quarry north east of the former Bromley Farm quarry which is now restored. The Client intends to extract fireclay and brickshale from the Coal Measure rocks which lie beneath the site.

FIGURE 2:

SITE LAYOUT

(421716, 409084)



Ref: 22007

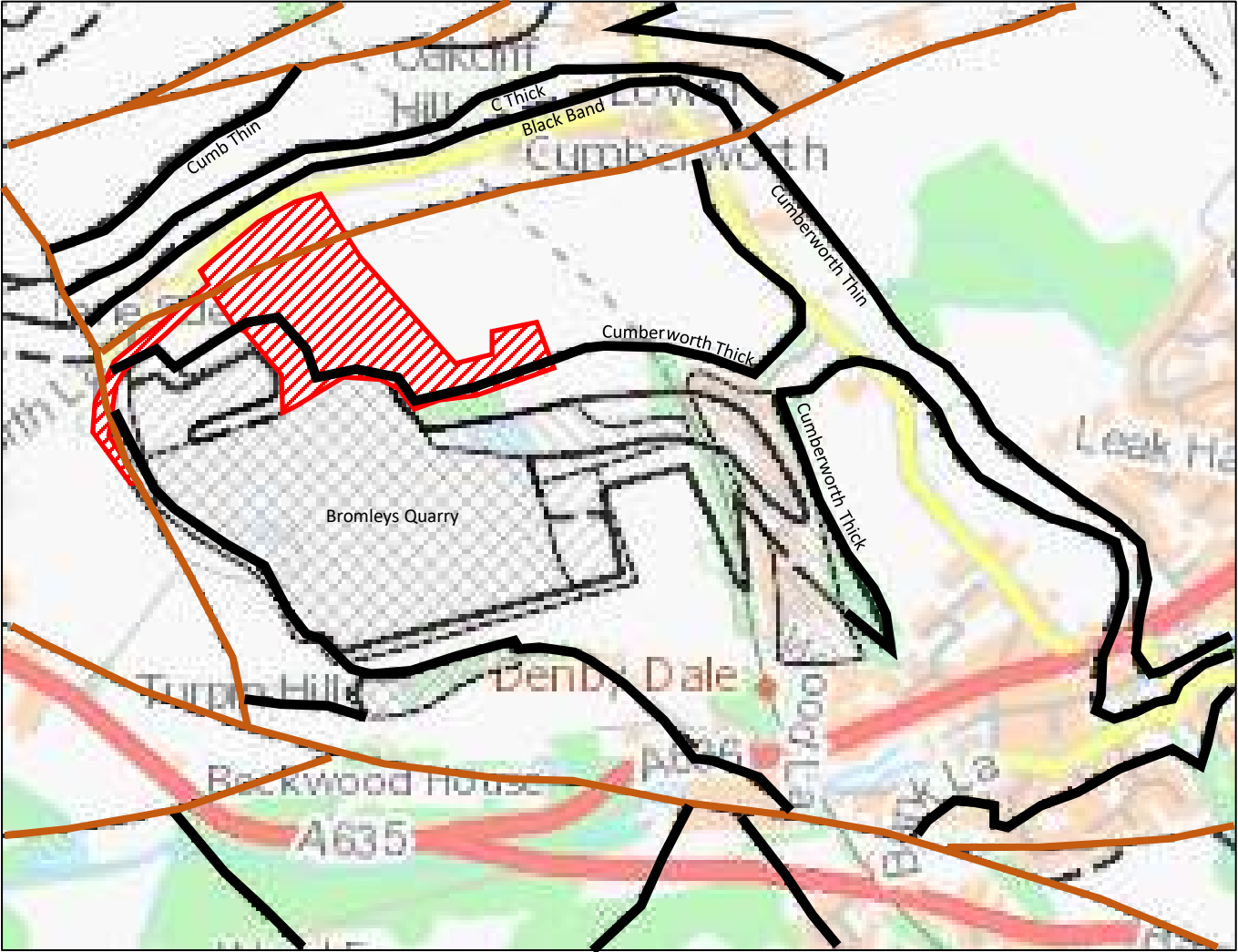
Bromley Farm Quarry,
Lower Cumberworth,
West Yorkshire,
HD8 8PD

FIGURE 3:

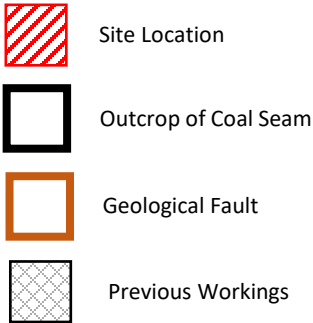
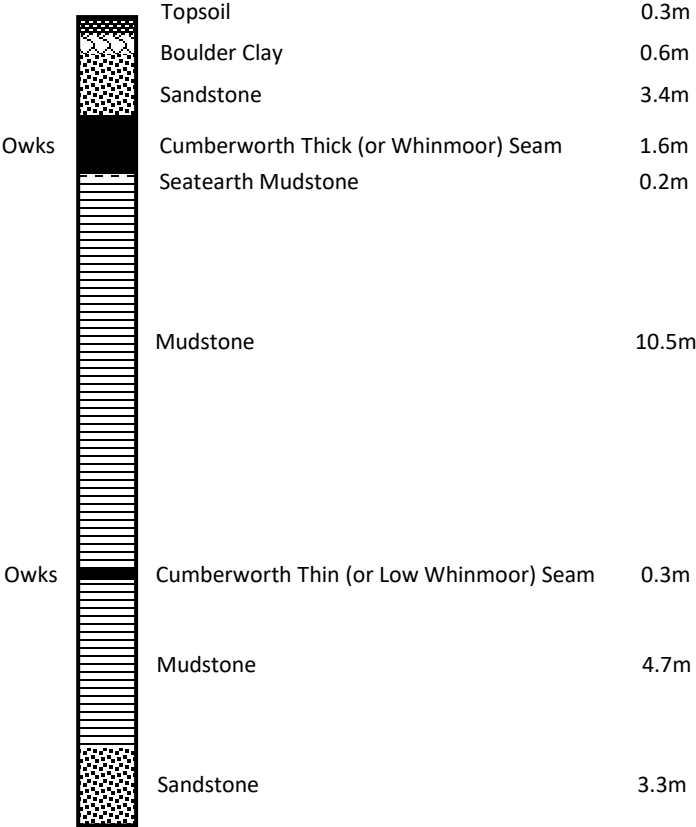
ORDNANCE SURVEY SEARCH

SITE HISTORY

(421716, 409084)



GENERALISED VERTICAL SECTION



Ref: 22007

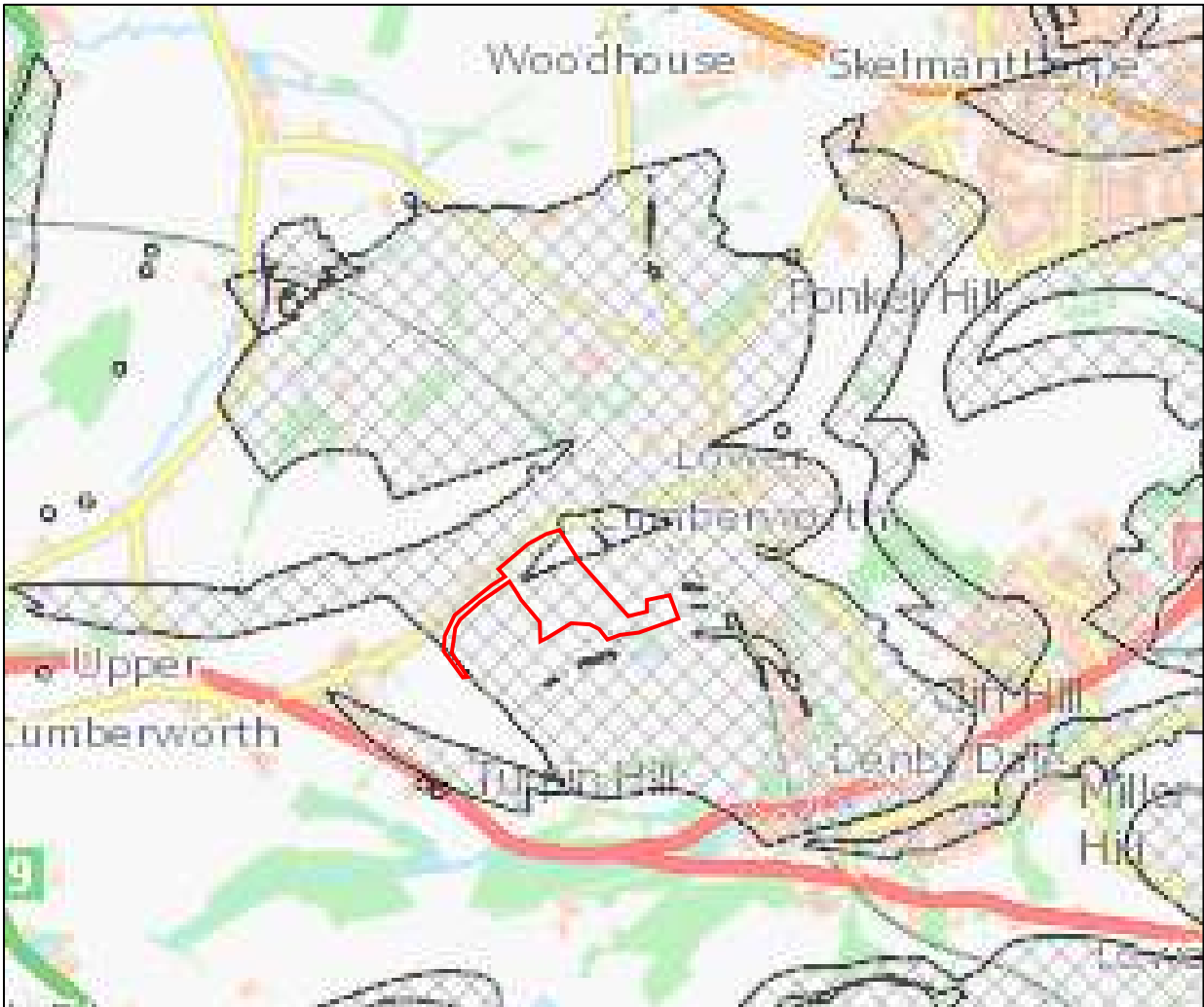
**Bromley Farm Quarry,
Lower Cumberworth,
West Yorkshire,
HD8 8PD**

FIGURE 4:

BRITISH GEOLOGICAL SURVEY SEARCH

SITE GEOLOGY

(421716, 409084)



Site Location



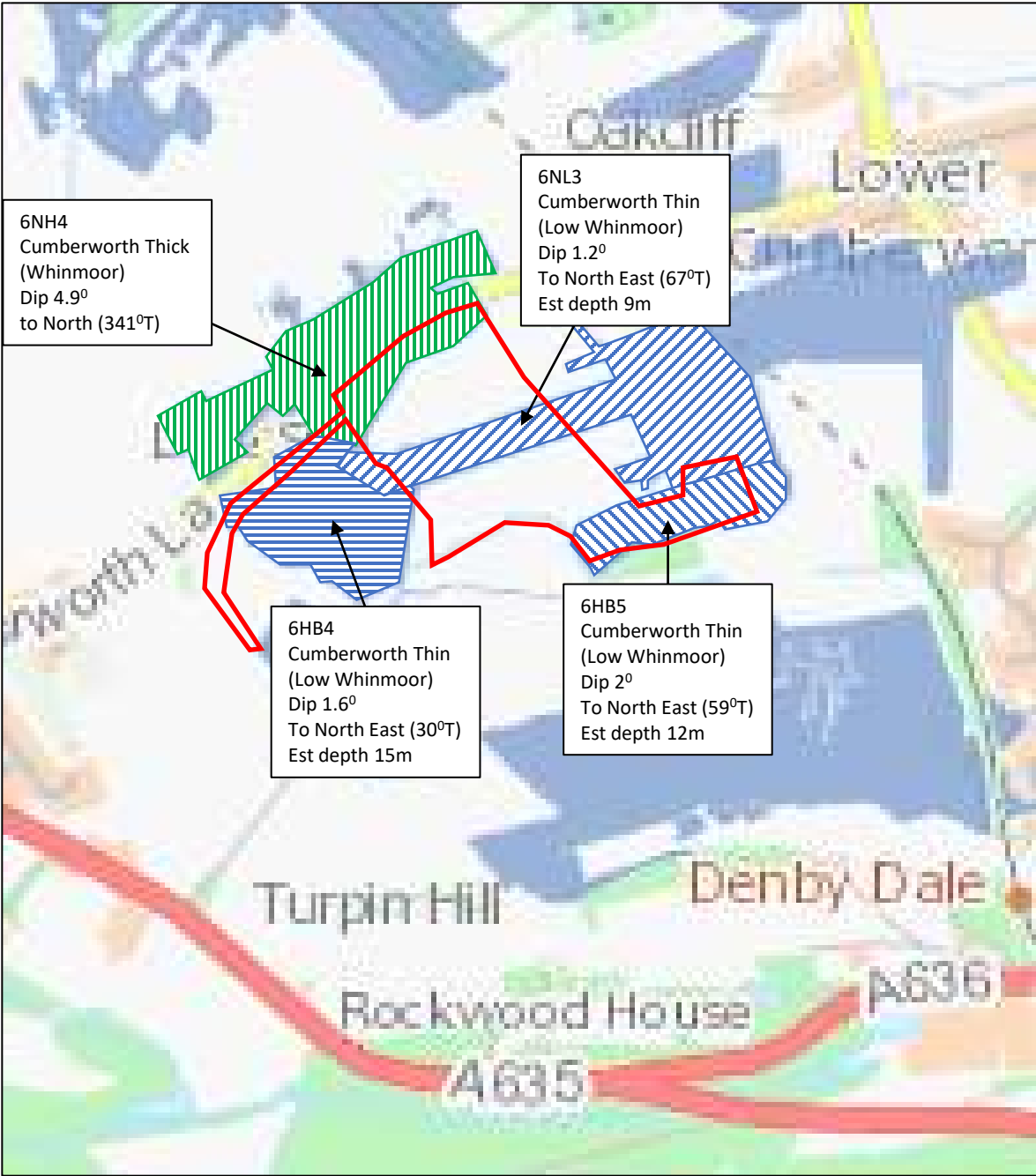
Development High Risk Area

The Coal Authority defines a Development High Risk Area (DHRA) as the part of a coal mining Reporting area that has one or more recorded coal mining features, which have the potential for instability, or a degree of risk, to the surface from the legacy of past coal mining activities

Ref: 22007

**Bromley Farm Quarry,
Lower Cumberworth,
West Yorkshire,
HD8 8PD**

FIGURE 5:
COAL AUTHORITY SEARCH
DEVELOPMENT HIGH RISK AREAS
(421716, 409084)



Site Location



Recorded Workings (undifferentiated)



Recorded Workings in Cumberworth Thick (Whinmoor) Seam



Recorded Workings in Cumberworth Thin (Low Whinmoor) Seam



Ref: 22007

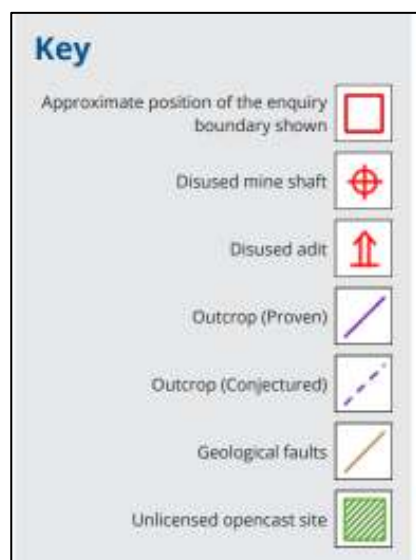
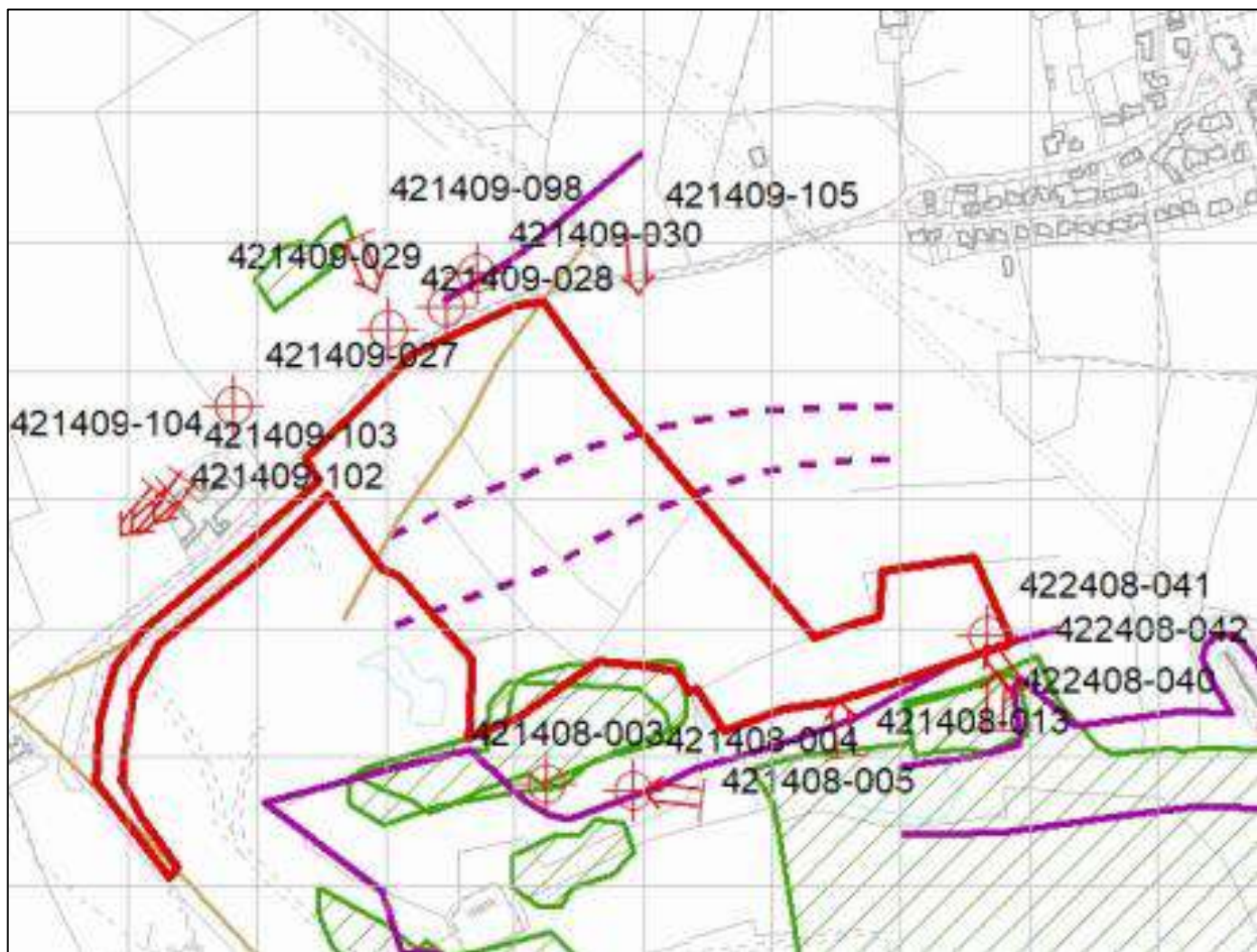
**Bromley Farm Quarry,
Lower Cumberworth,
West Yorkshire,
HD8 8PD**

FIGURE 6:

COAL AUTHORITY SEARCH

**RECORDED PAST SHALLOW
MINE WORKINGS**

(421716, 409084)



Ref: 22007

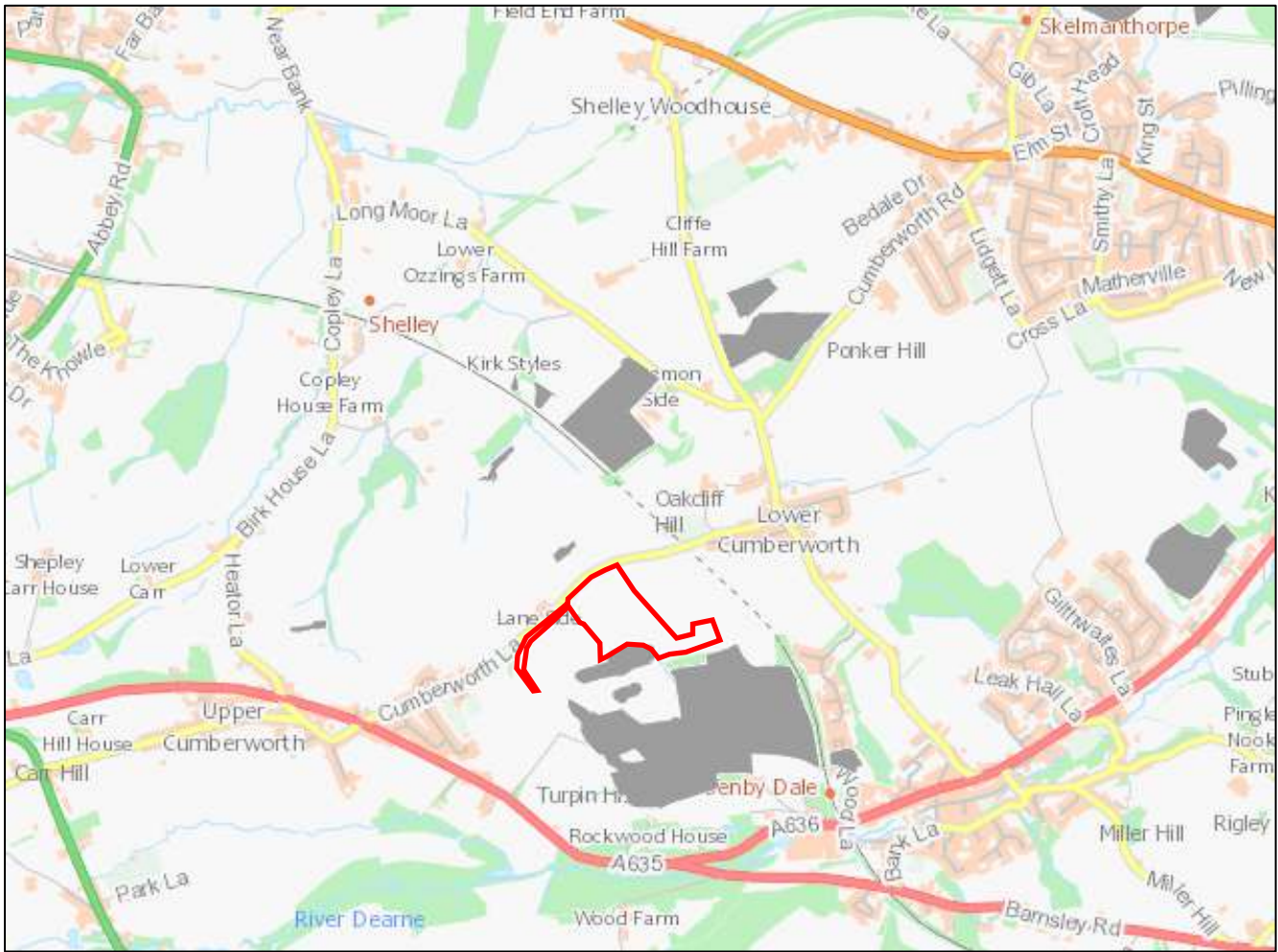
**Bromley Farm Quarry,
Lower Cumberworth,
West Yorkshire,
HD8 8PD**

FIGURE 7:

COAL AUTHORITY SEARCH

**RECORDED MINE ENTRIES
(SHAFTS & ADITS)**

(421716, 409084)



Ref: 22007

Bromley Farm Quarry,
Lower Cumberworth,
West Yorkshire,
HD8 8PD

FIGURE 8:

COAL AUTHORITY SEARCH

RECORDED PAST SURFACE (OPENCAST)
MINING

(421716, 409084)



Site Location



Recorded Past Surface Mining

APPENDIX B

Historical Maps

Small Scale Ordnance Survey Maps (1:10,560 and 1:10,000 scales).

Large Scale Ordnance Survey Maps Index.

Large Scale Ordnance Survey Maps (1:500, 1:1250 and 1:2500 scales).

Site Details:

BROMLEY FARM,
CUMBERWORTH LANE, UPPER
CUMBERWORTH,
HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240
Grid Ref: 421732, 409032

Map Name: County Series

Map date: 1854

Scale: 1:10,560

Printed at: 1:10,560



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

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

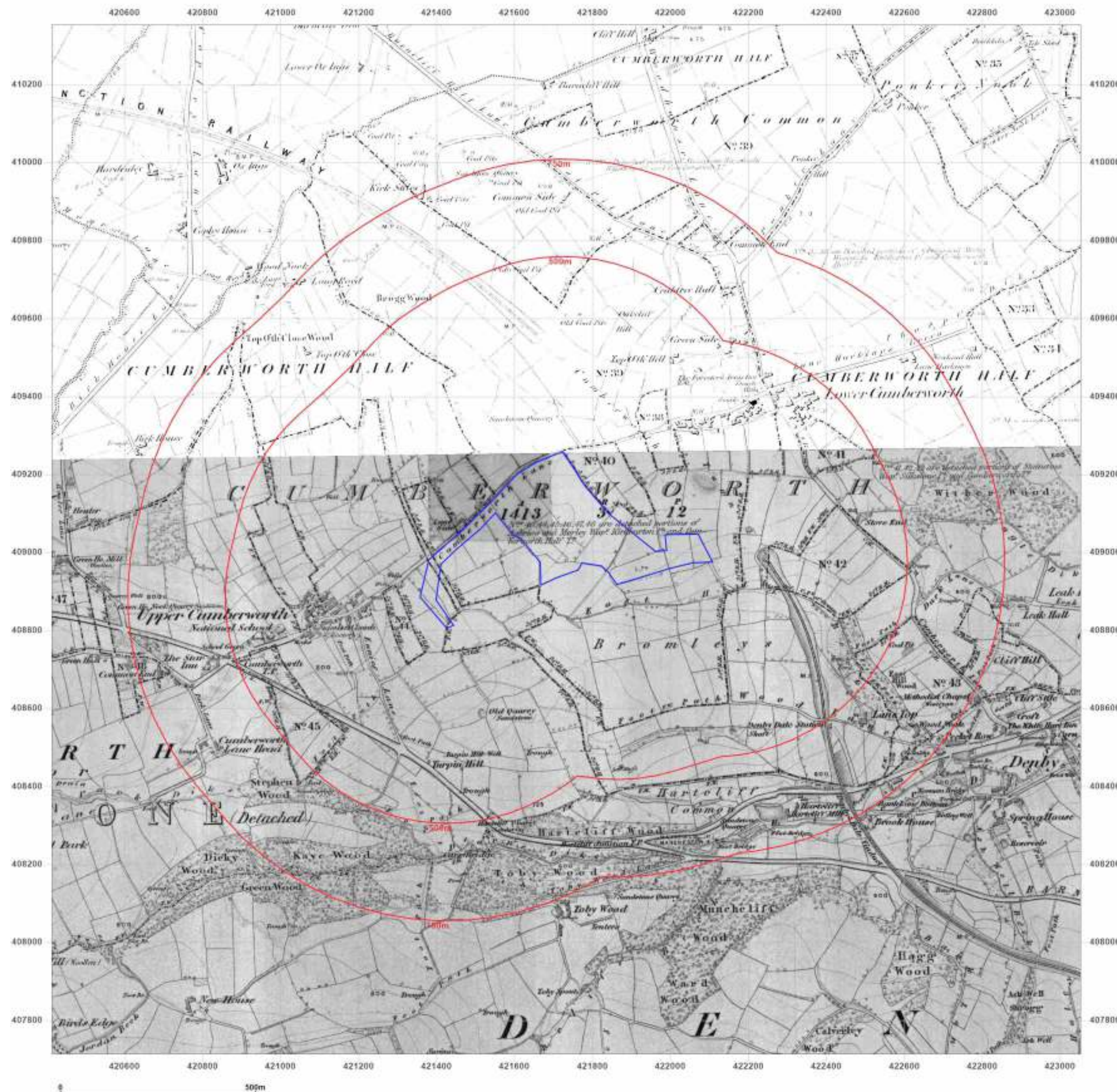


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CUMBERWORTH,
HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240
Grid Ref: 421732, 409032

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

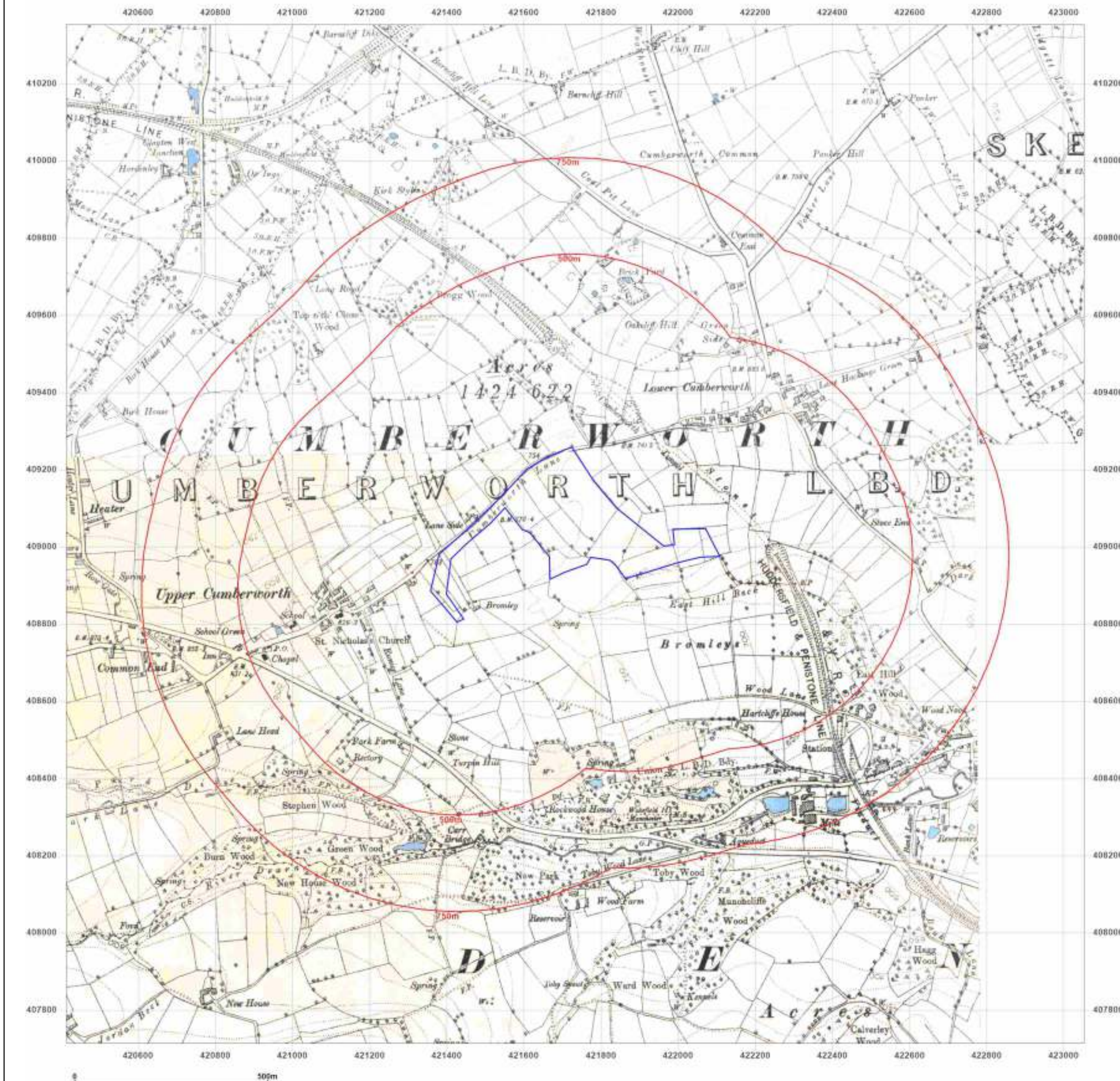


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HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240
Grid Ref: 421732, 409032

Map Name: County Series

Map date: 1903-1904

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1892
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Revised 1904
Edition N/A
Copyright N/A
Levelled N/A

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

Surveyed 1891
Revised 1904
Edition N/A
Copyright N/A
Levelled N/A

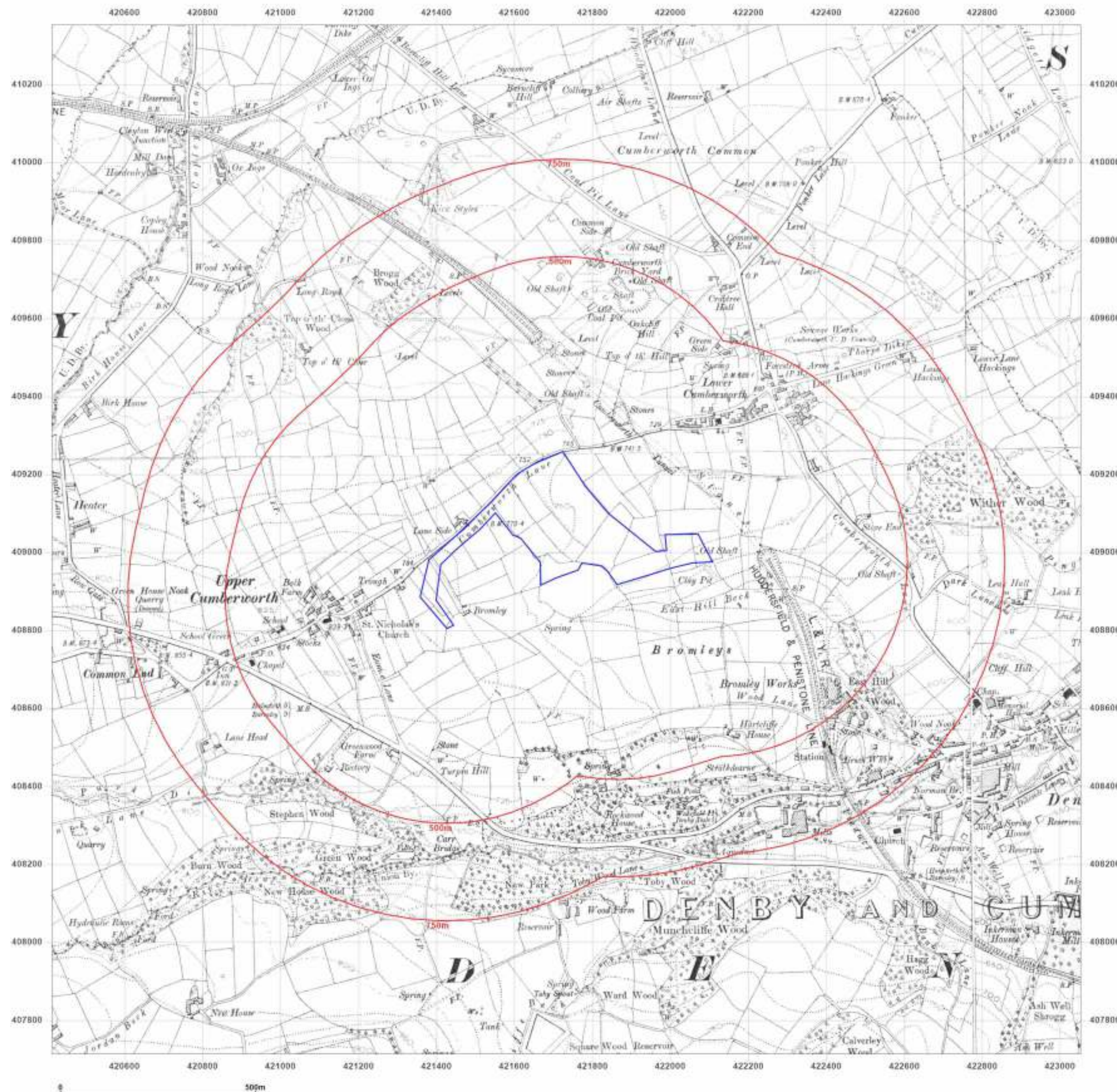


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HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240
Grid Ref: 421732, 409032

Map Name: County Series

Map date: 1929-1933

Scale: 1:10,560

Printed at: 1:10,560



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

Surveyed 1851
Revised 1932
Edition 1932
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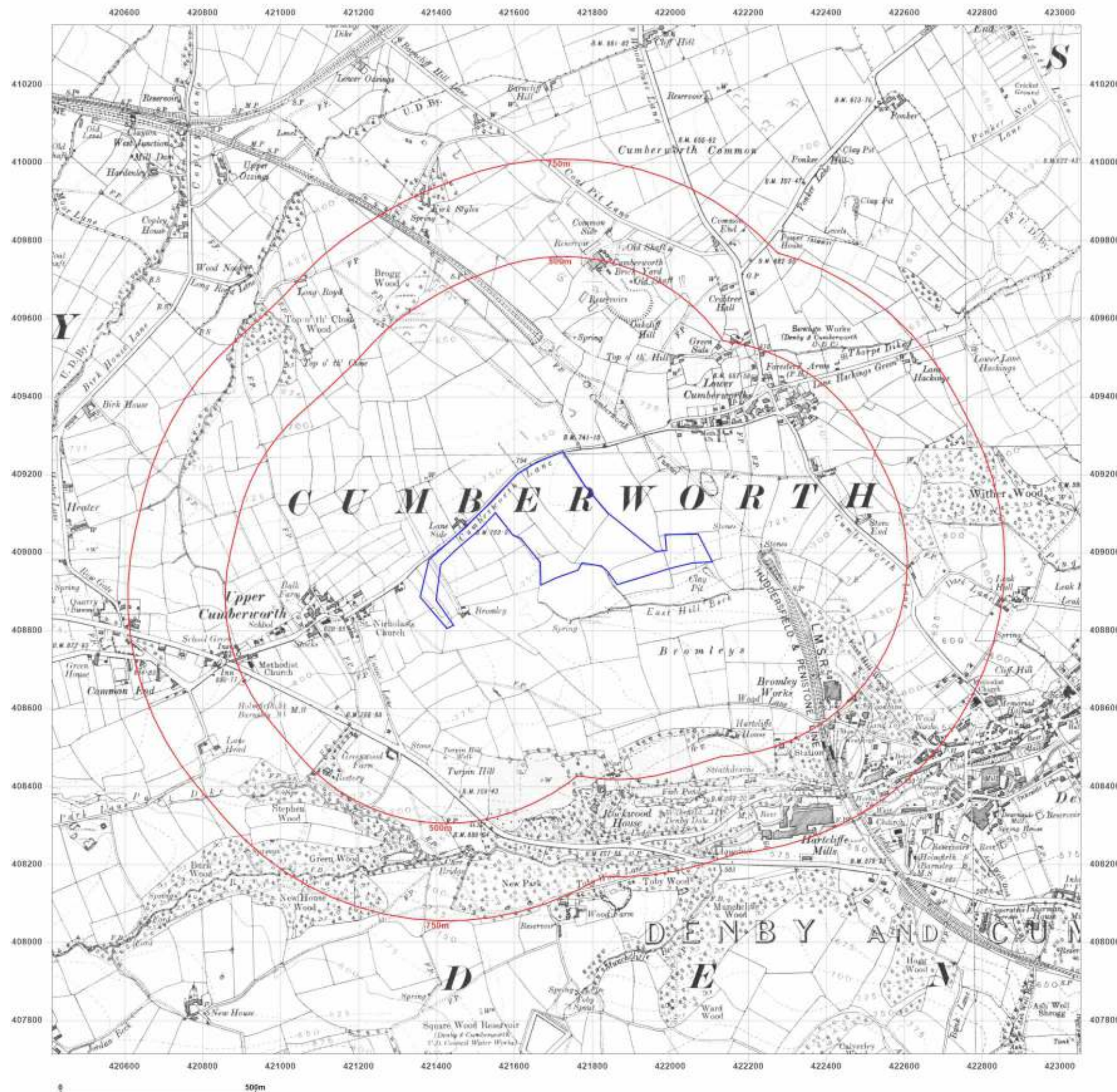


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HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240
Grid Ref: 421732, 409032

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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Revised 1948
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Copyright N/A
Levelled N/A

Surveyed 1851
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Copyright N/A
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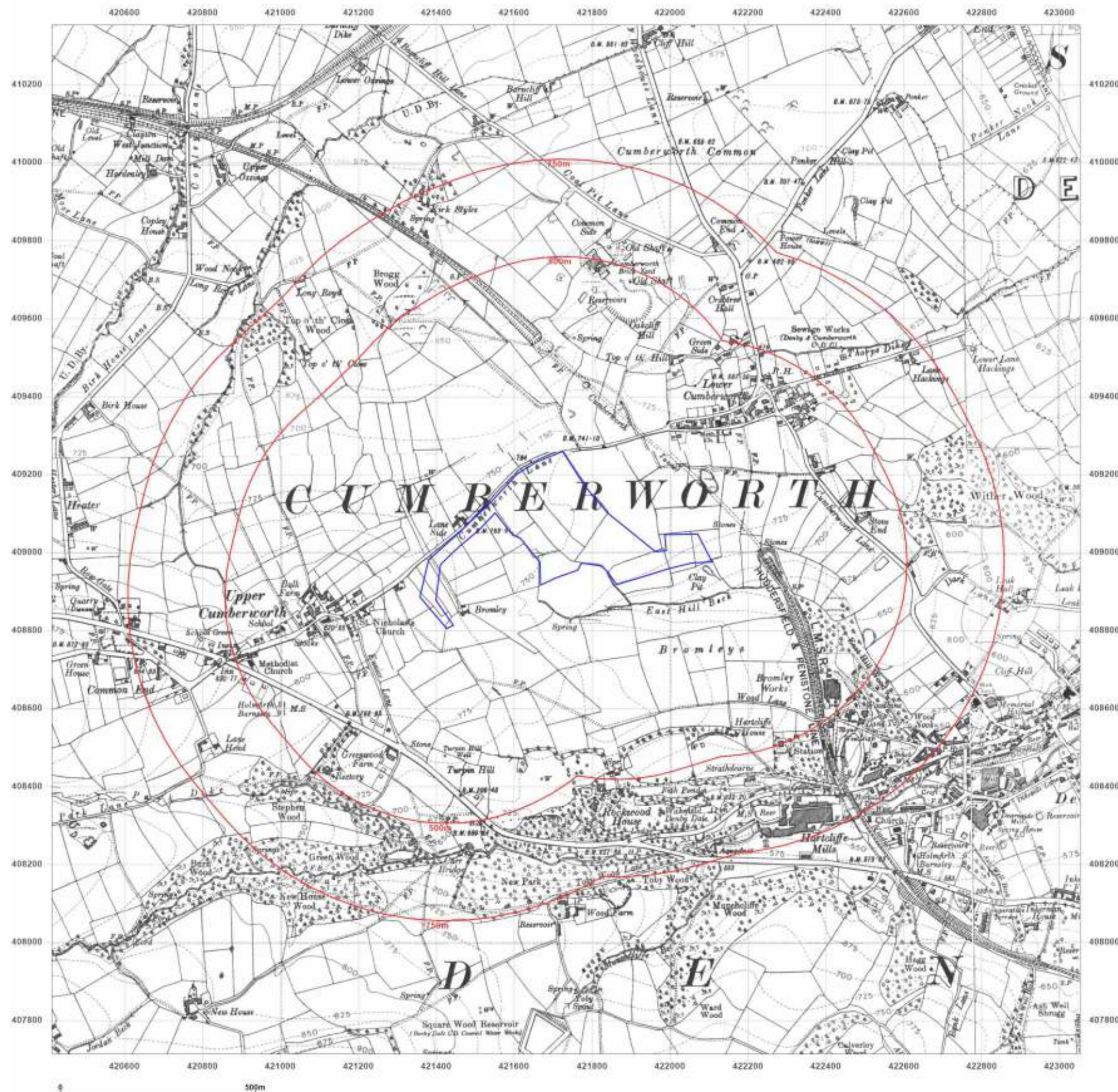


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CUMBERWORTH,
HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240
Grid Ref: 421732, 409032

Map Name: Provisional

Map date: 1951-1955

Scale: 1:10,560

Printed at: 1:10,560



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Revised 1955
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Revised 1951
Edition N/A
Copyright N/A
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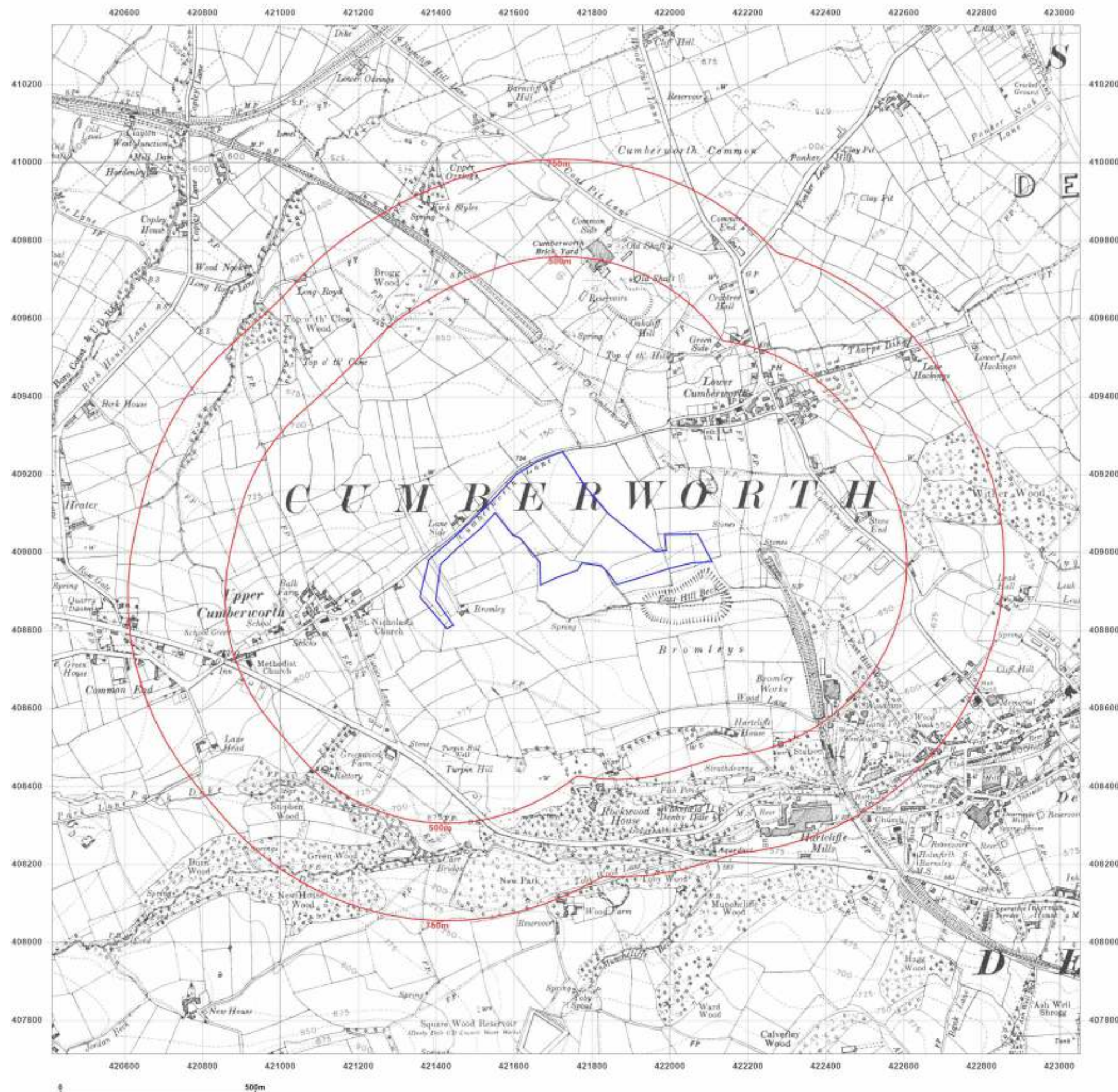


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CUMBERWORTH,
HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240
Grid Ref: 421732, 409032

Map Name: Provisional

Map date: 1967

Scale: 1:10,560

Printed at: 1:10,560



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

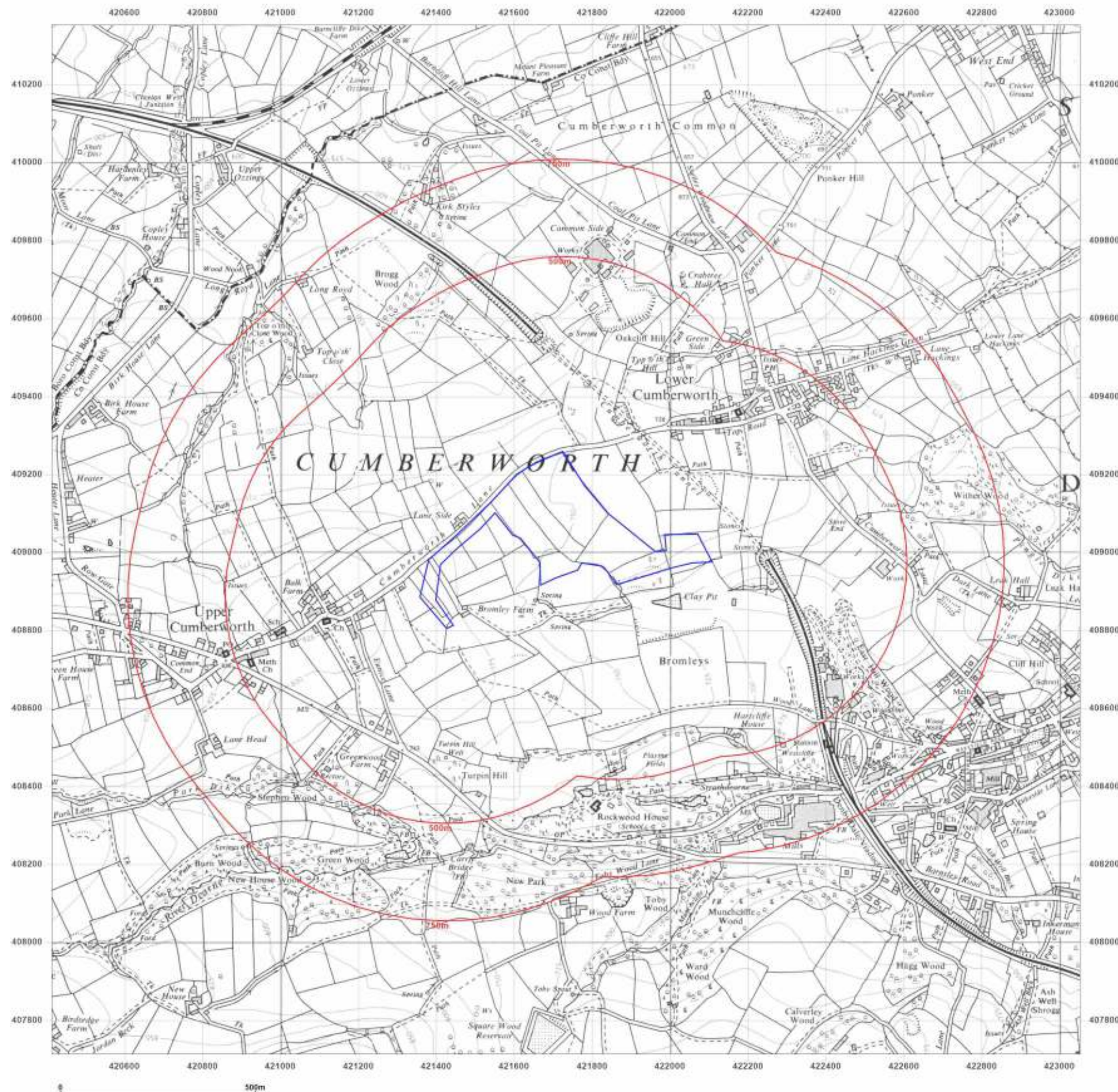


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HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240
Grid Ref: 421732, 409032

Map Name: National Grid

Map date: 1979-1983

Scale: 1:10,000

Printed at: 1:10,000



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Revised 1979
Edition N/A
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Revised 1983
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Copyright N/A
Levelled N/A

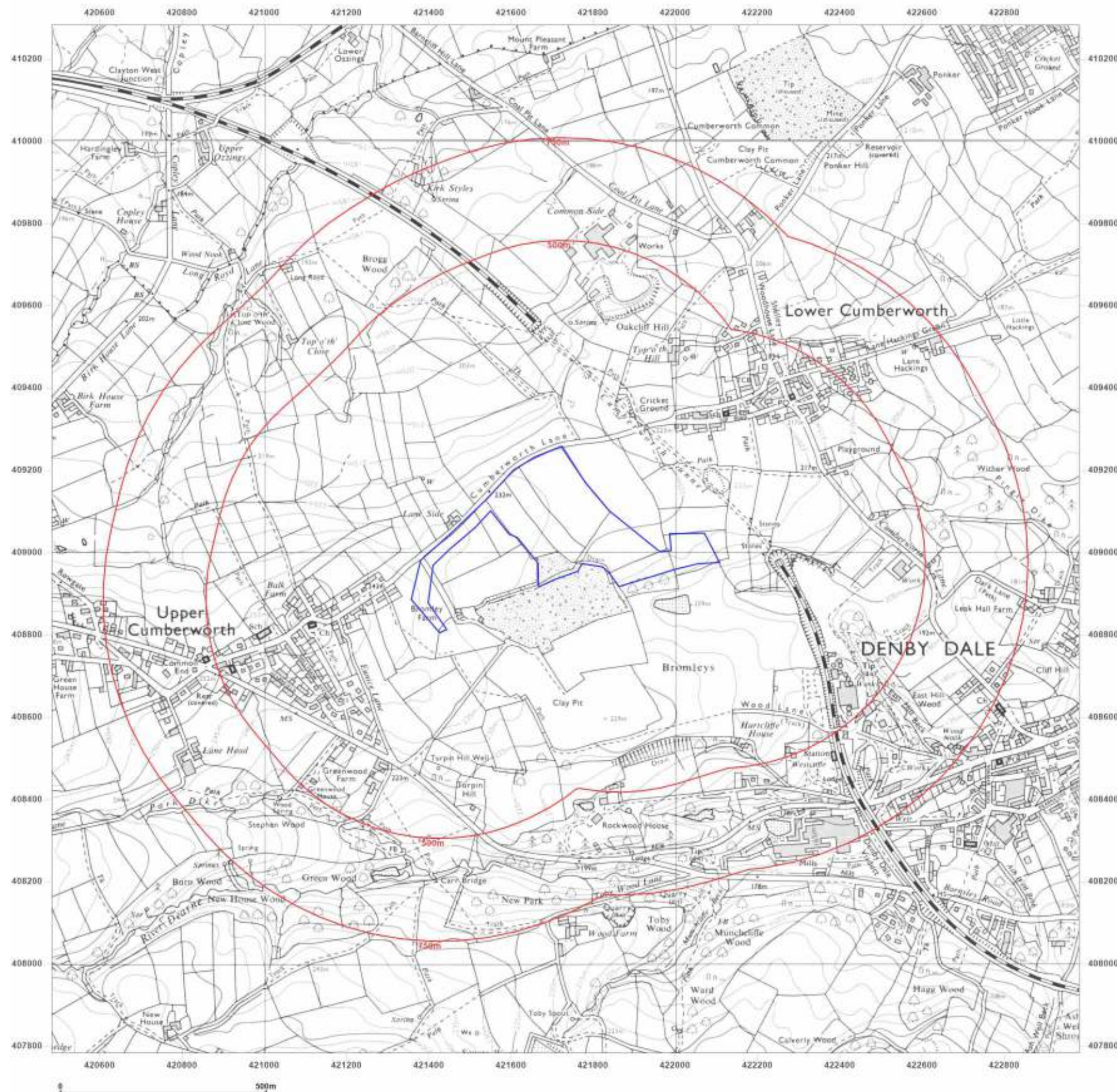


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CUMBERWORTH,
HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240
Grid Ref: 421732, 409032

Map Name: National Grid

Map date: 2001

Scale: 1:10,000

Printed at: 1:10,000

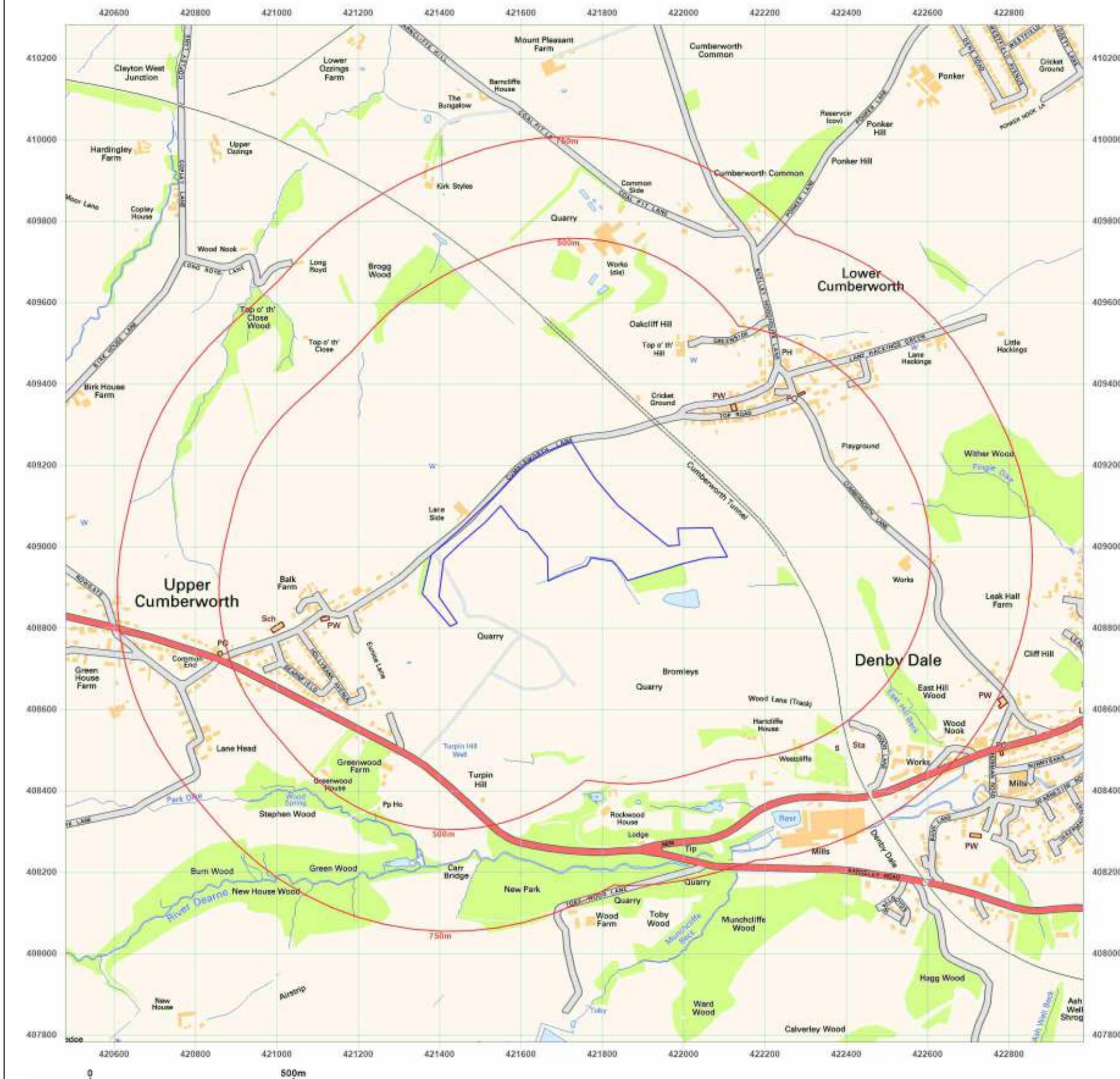


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CUMBERWORTH,
HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240
Grid Ref: 421732, 409032

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000

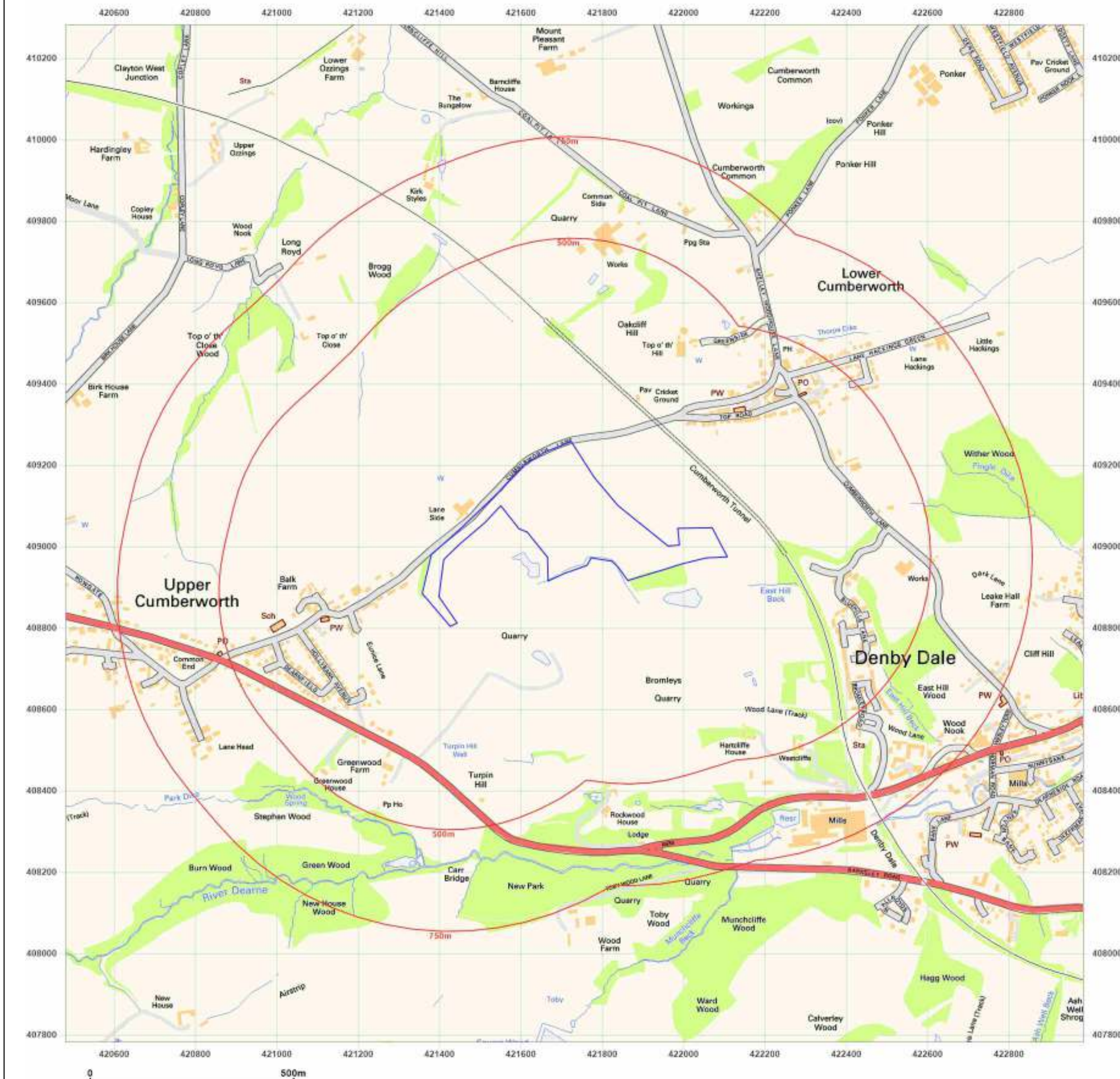


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CUMBERWORTH,
HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240
Grid Ref: 421732, 409032

Map Name: National Grid

Map date: 2022

Scale: 1:10,000

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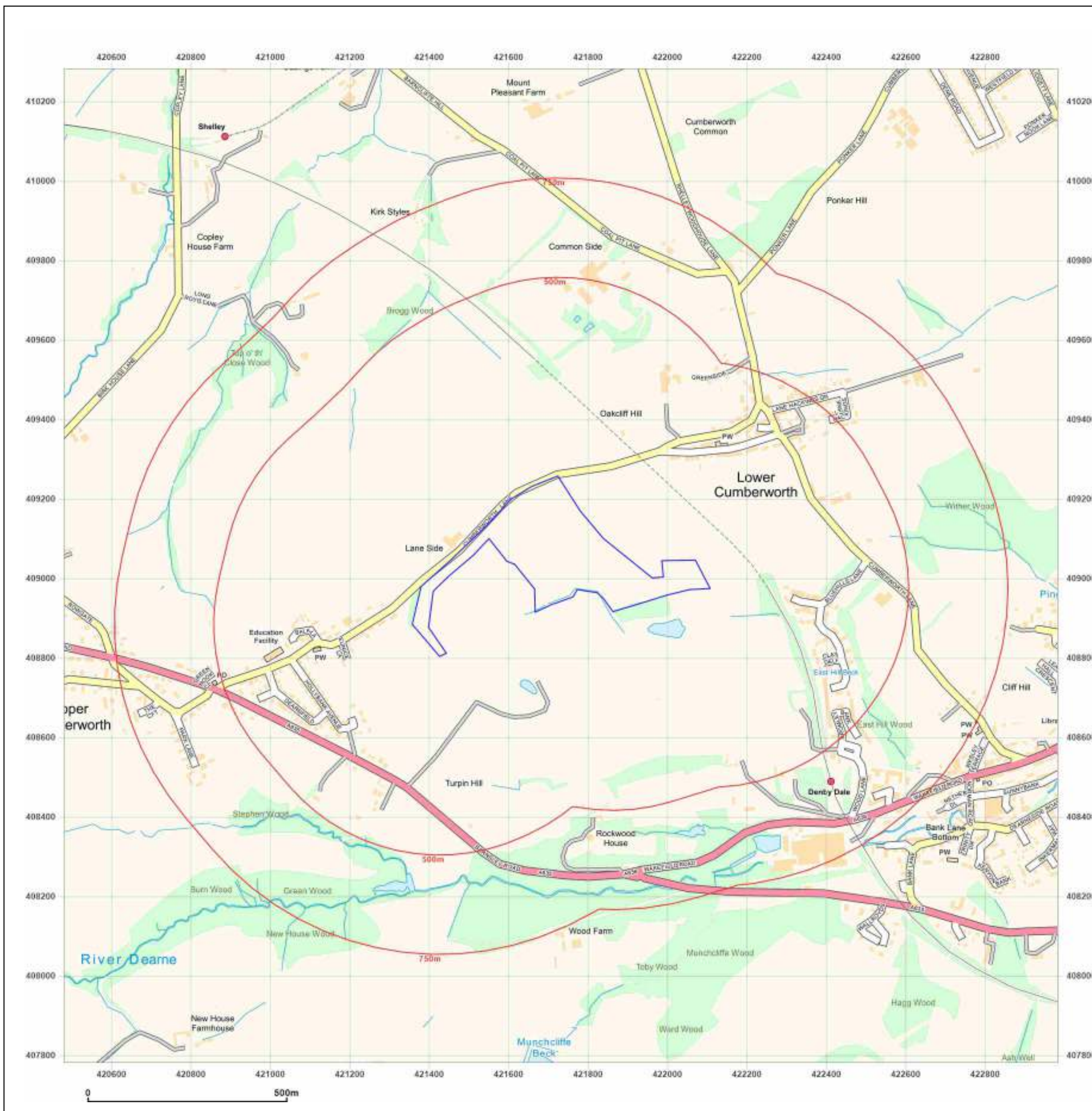


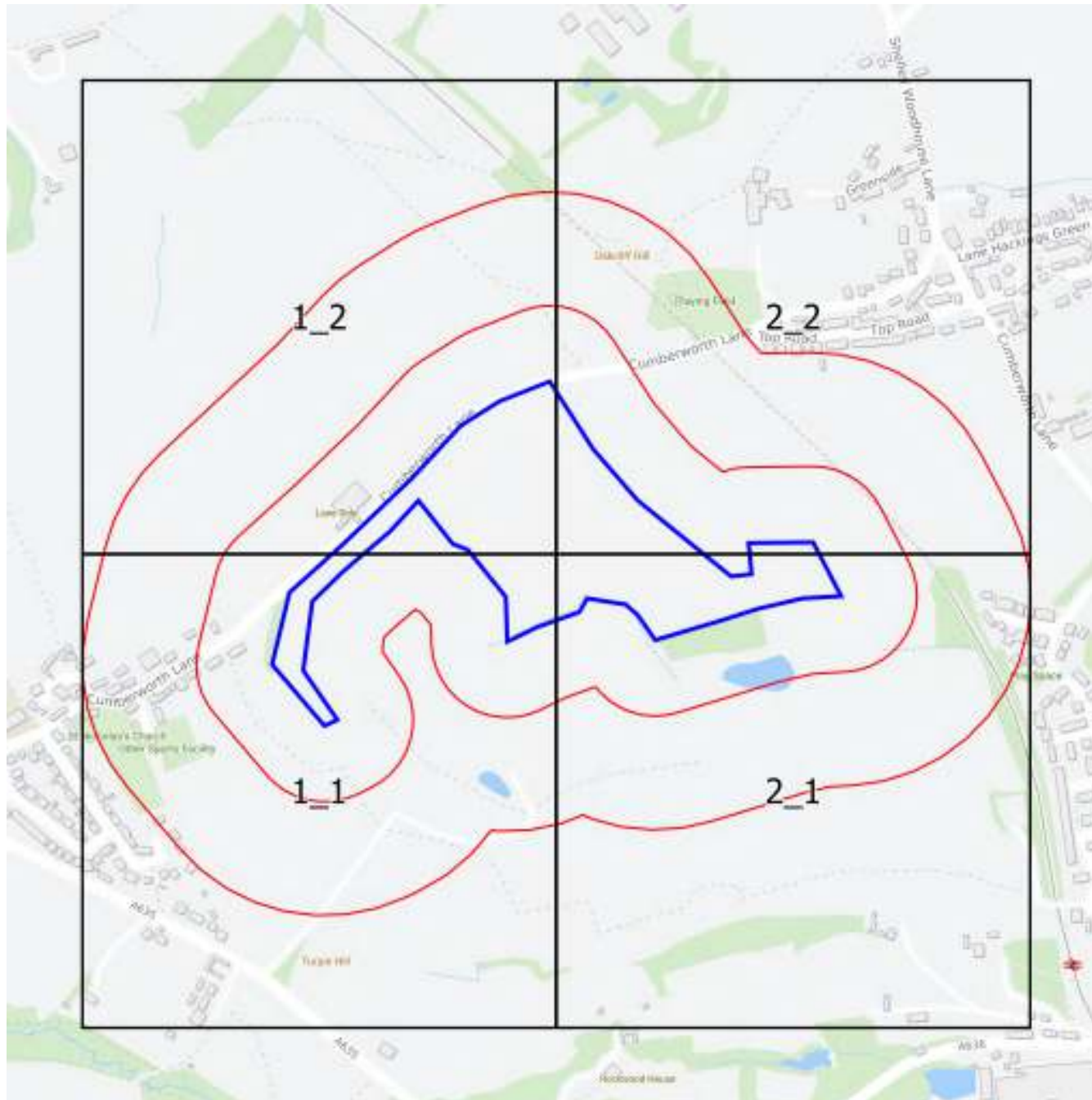
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1:2,500 Scale Grid Index



Site Details:

BROMLEY FARM,
CUMBERWORTH LANE, UPPER
CUMBERWORTH,
HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240_LS_2_2
Grid Ref: 422043, 409343

Map Name: County Series

Map date: 1891-1893

Scale: 1:2,500

Printed at: 1:2,500



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



Surveyed 1891
Revised N/A
Edition N/A
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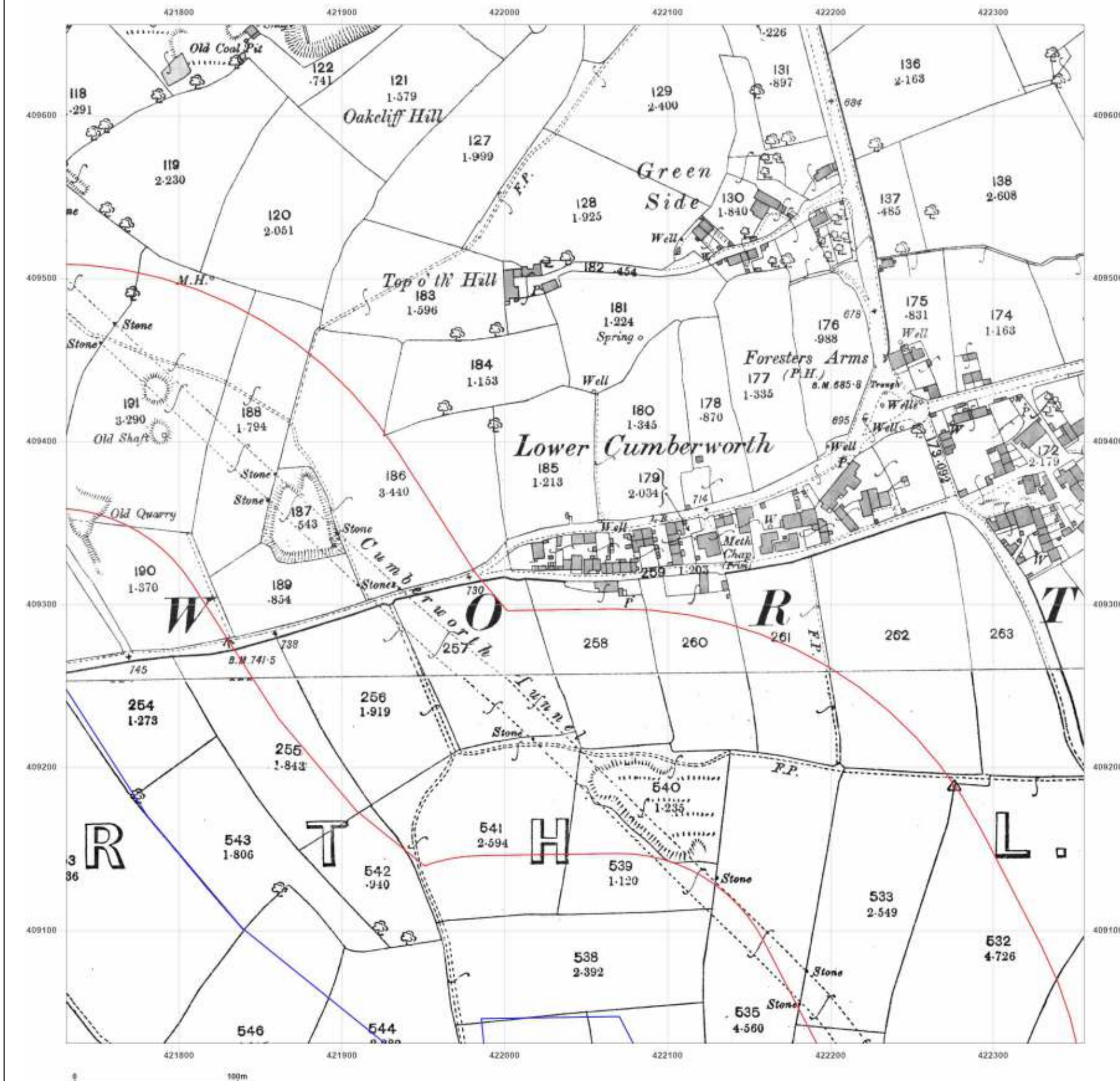


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CUMBERWORTH LANE, UPPER
CUMBERWORTH,
HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240_LS_2_2
Grid Ref: 422043, 409343

Map Name: County Series

Map date: 1906

Scale: 1:2,500

Printed at: 1:2,500



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Edition N/A
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Levelled N/A



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

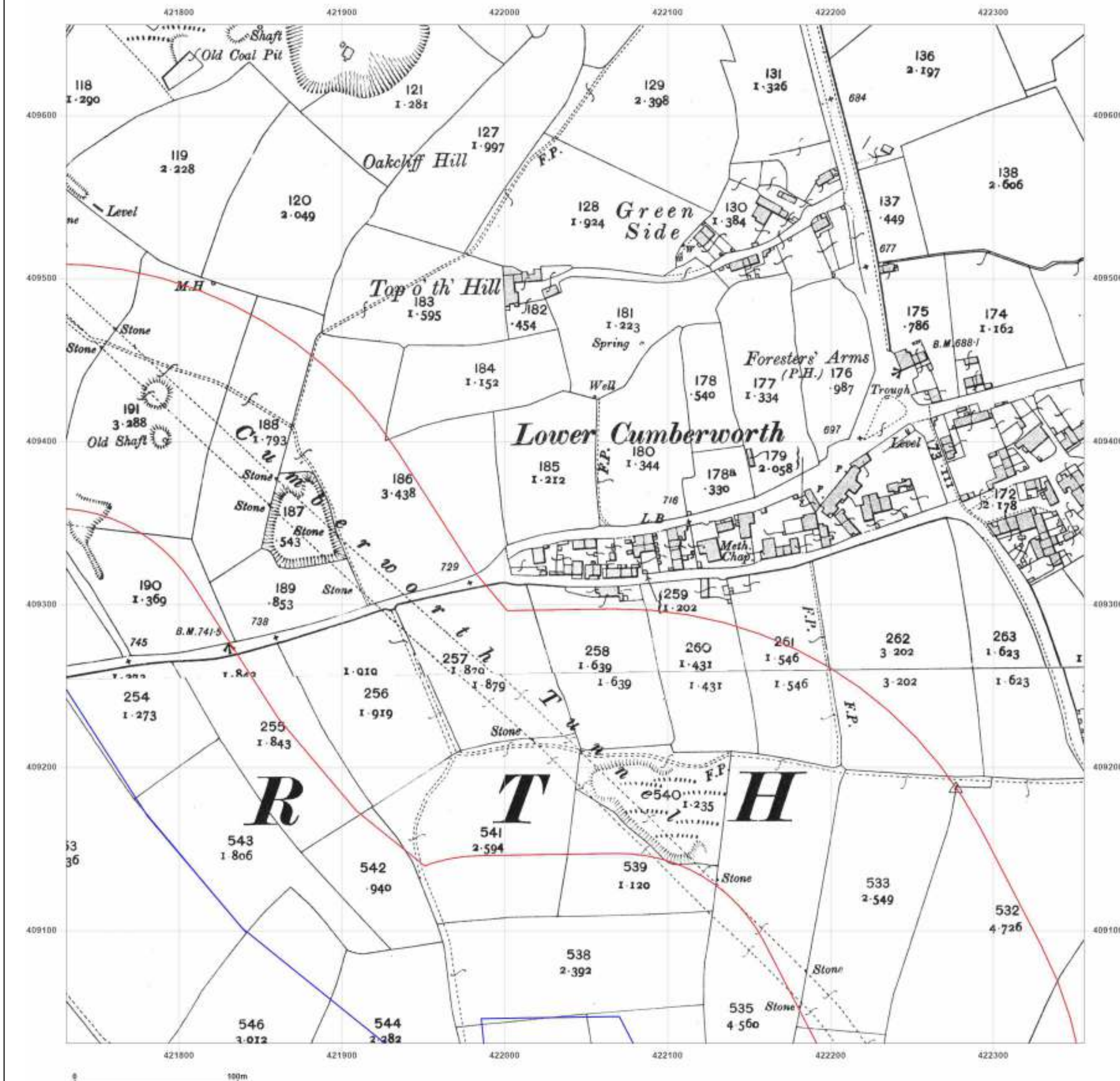


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Site Details:

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CUMBERWORTH,
HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240_LS_2_2
Grid Ref: 422043, 409343

Map Name: County Series

Map date: 1913

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1913
Revised 1913
Edition N/A
Copyright N/A
Levelled N/A

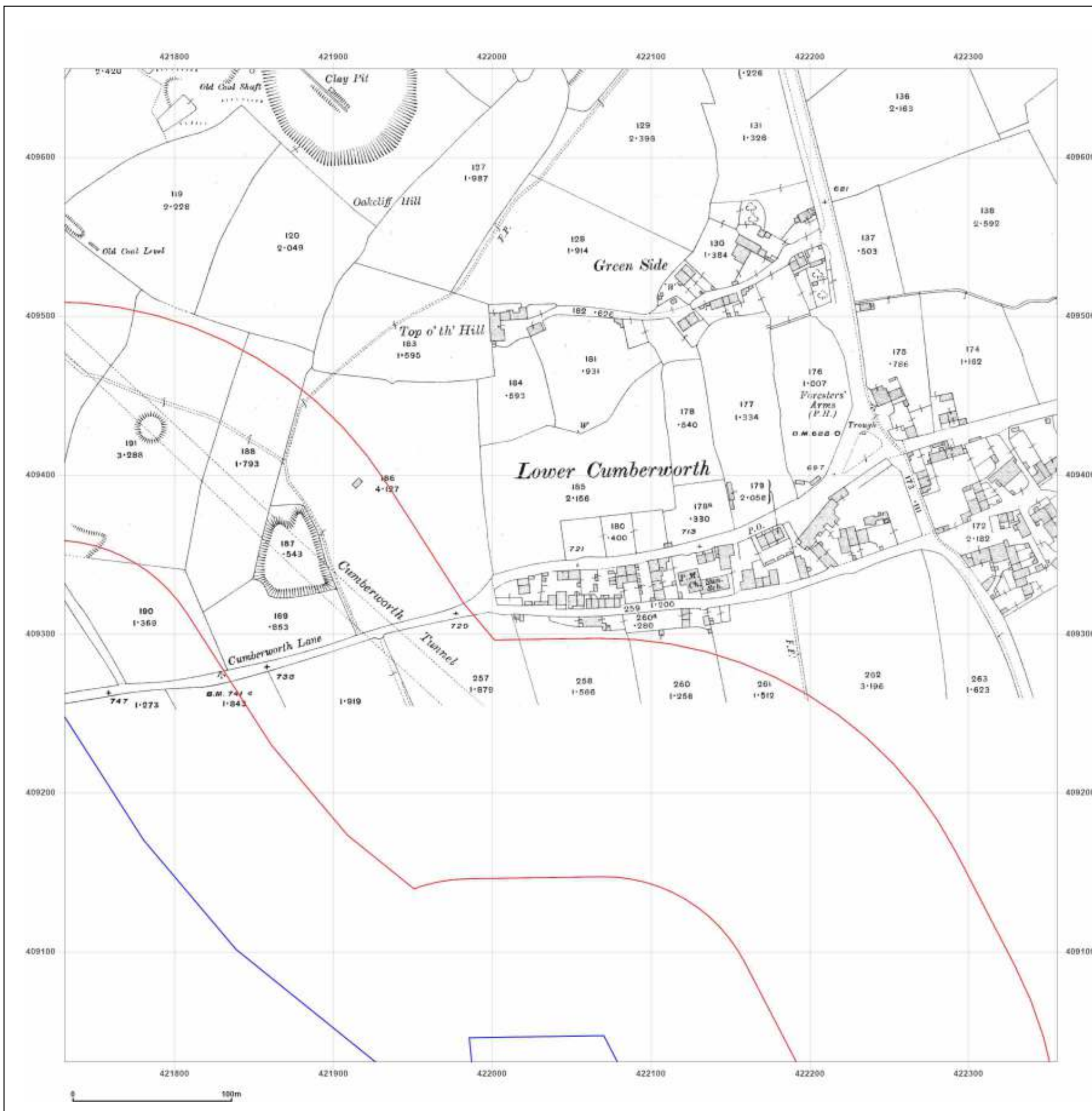


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Site Details:

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CUMBERWORTH LANE, UPPER
CUMBERWORTH,
HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240_LS_2_2
Grid Ref: 422043, 409343

Map Name: National Grid

Map date: 1959

Scale: 1:2,500

Printed at: 1:2,500



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

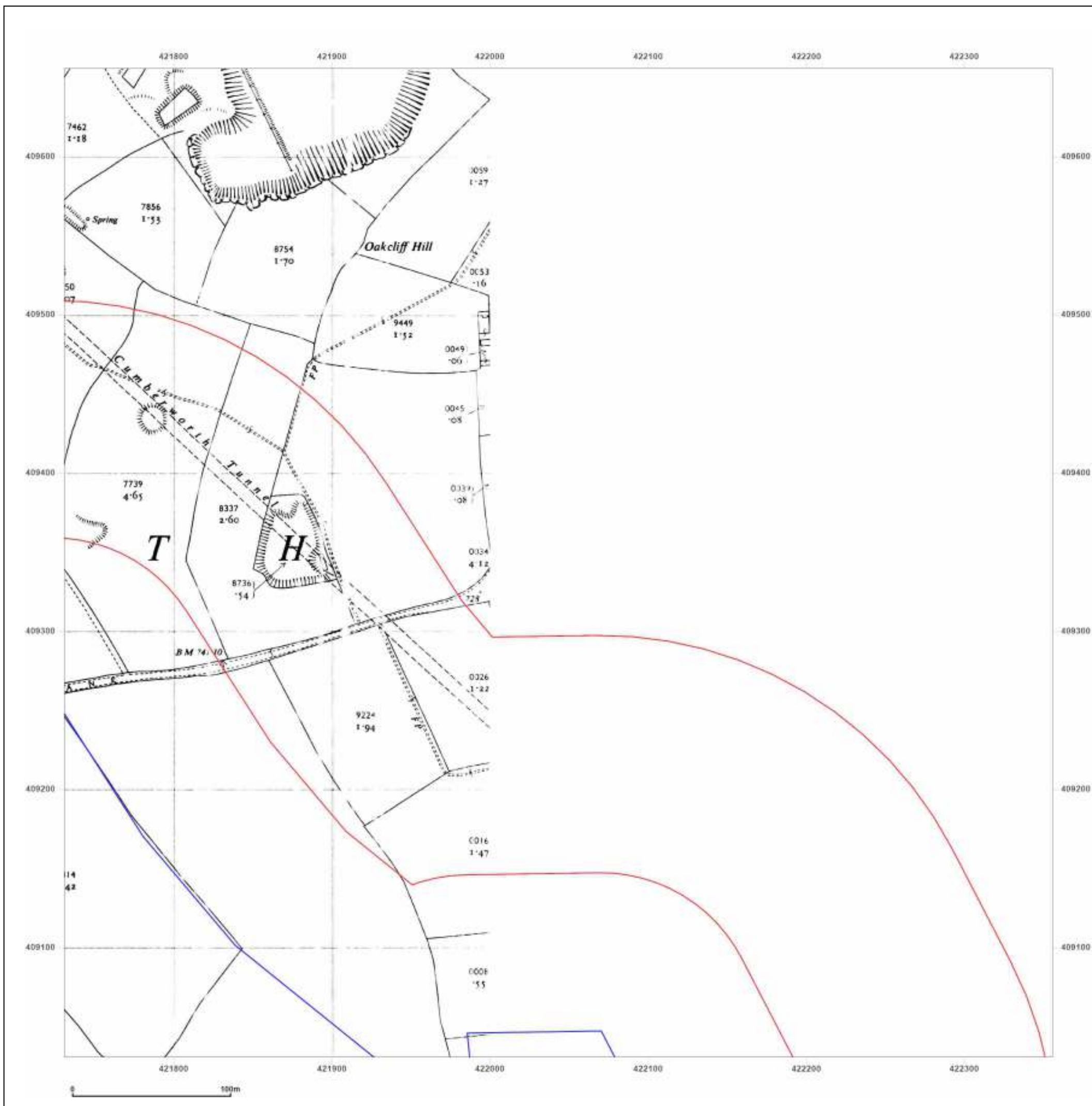


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Site Details:

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CUMBERWORTH LANE, UPPER
CUMBERWORTH,
HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240_LS_2_2
Grid Ref: 422043, 409343

Map Name: National Grid

Map date: 1959-1960

Scale: 1:2,500

Printed at: 1:2,500



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

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

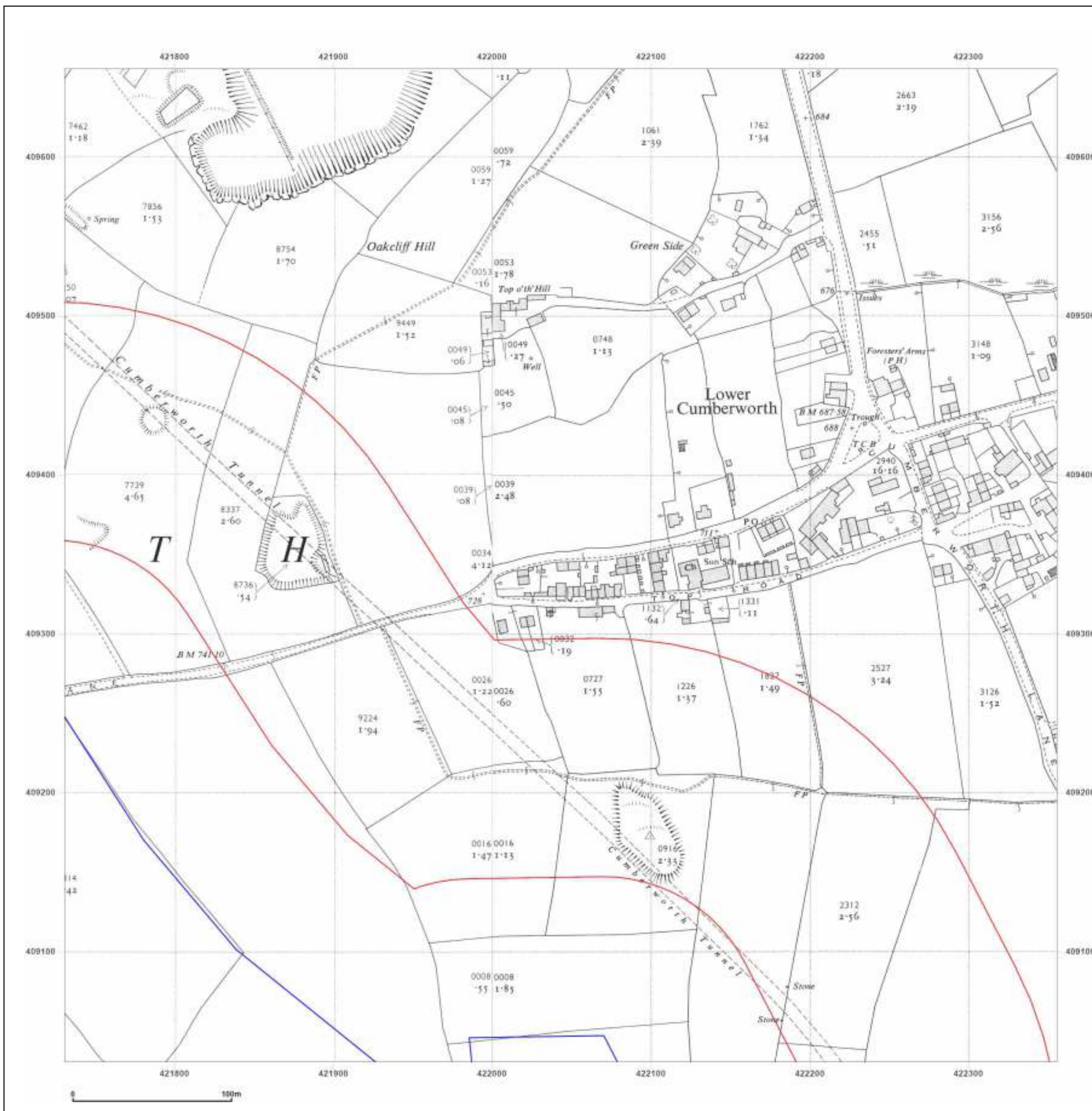


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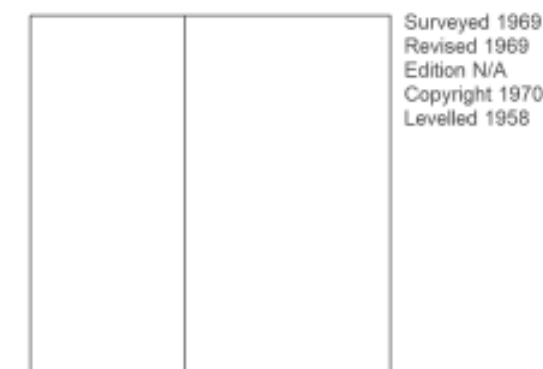
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Report Ref: GS-9257240_LS_2_2
Grid Ref: 422043, 409343

Map Name: National Grid

Map date: 1970

Scale: 1:2,500

Printed at: 1:2,500

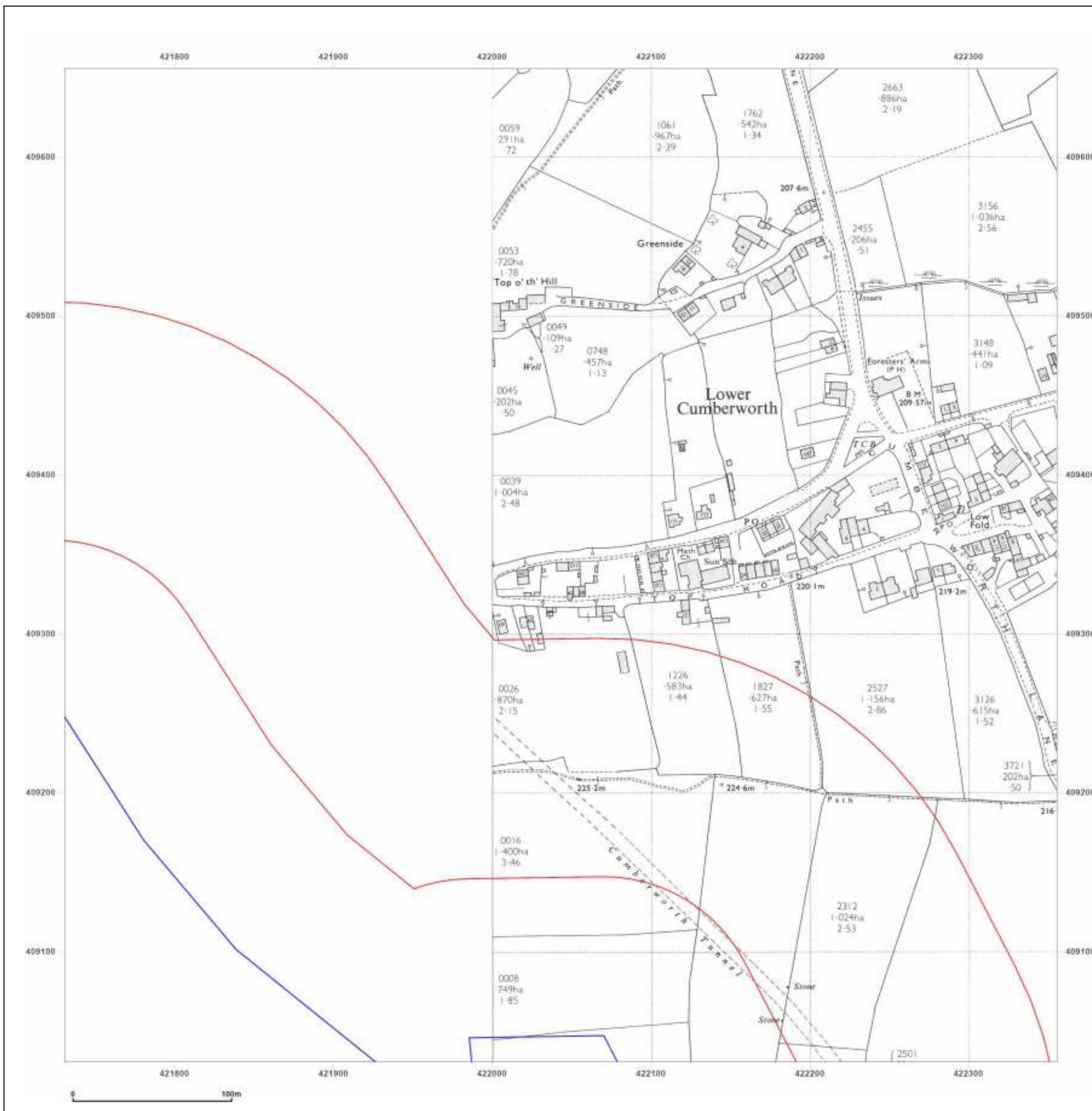


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HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240_LS_2_2
Grid Ref: 422043, 409343

Map Name: National Grid

Map date: 1985

Scale: 1:2,500

Printed at: 1:2,500



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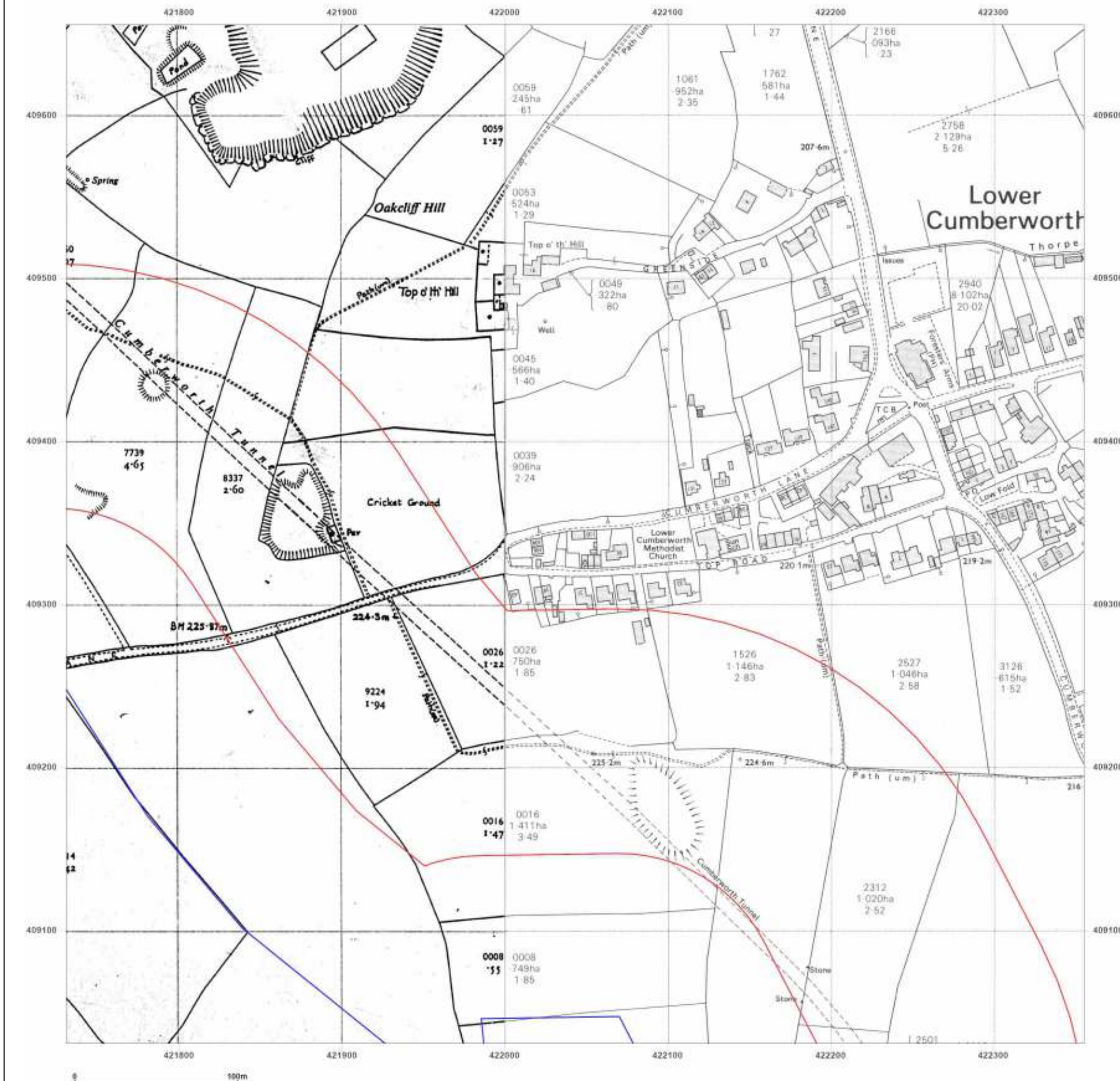


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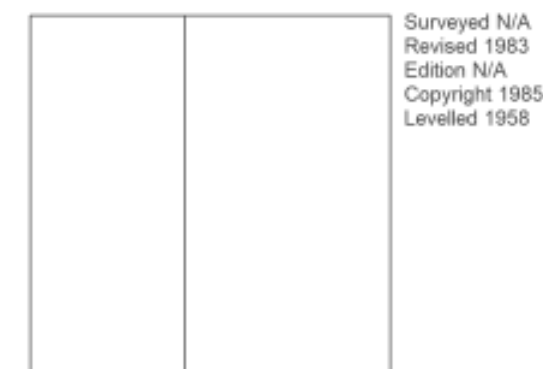
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Grid Ref: 422043, 409343

Map Name: National Grid

Map date: 1985

Scale: 1:2,500

Printed at: 1:2,500

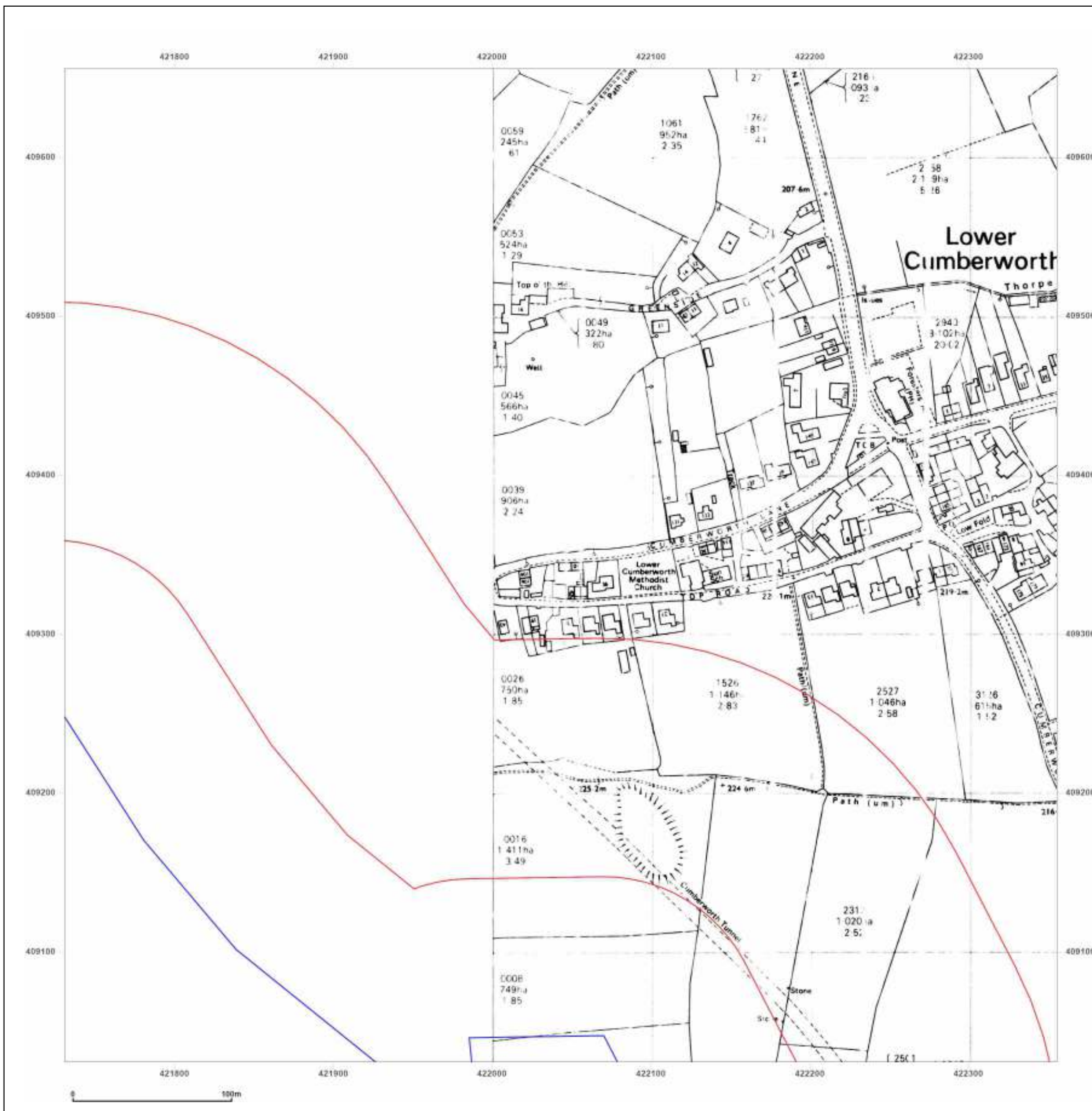


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CUMBERWORTH,
HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240_LS_2_2
Grid Ref: 422043, 409343

Map Name: National Grid

Map date: 1993

Scale: 1:2,500

Printed at: 1:2,500



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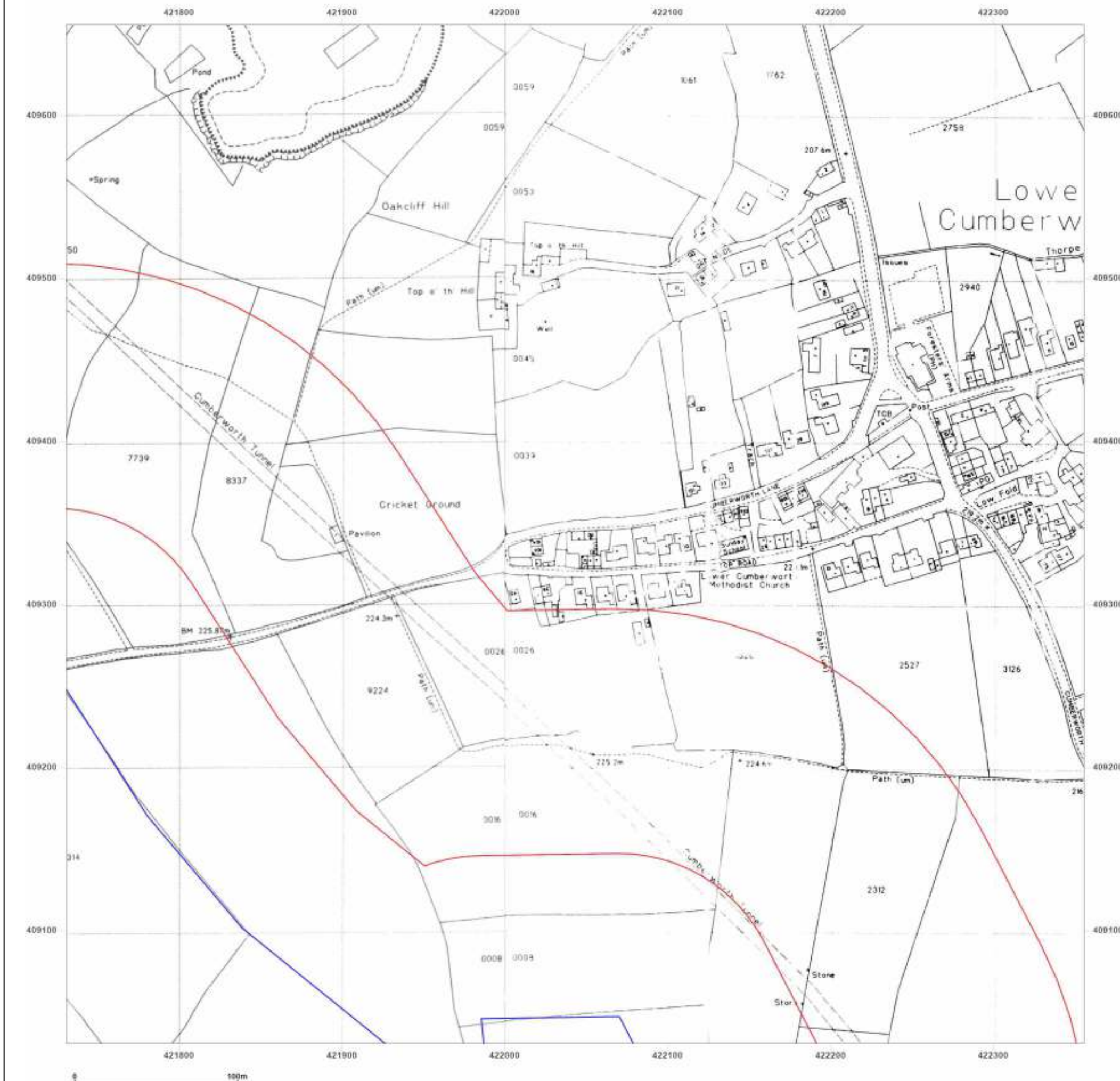


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CUMBERWORTH,
HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240_LS_1_2
Grid Ref: 421418, 409343

Map Name: County Series

Map date: 1891-1893

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1893
Revised 1893
Edition N/A
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Surveyed 1891
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

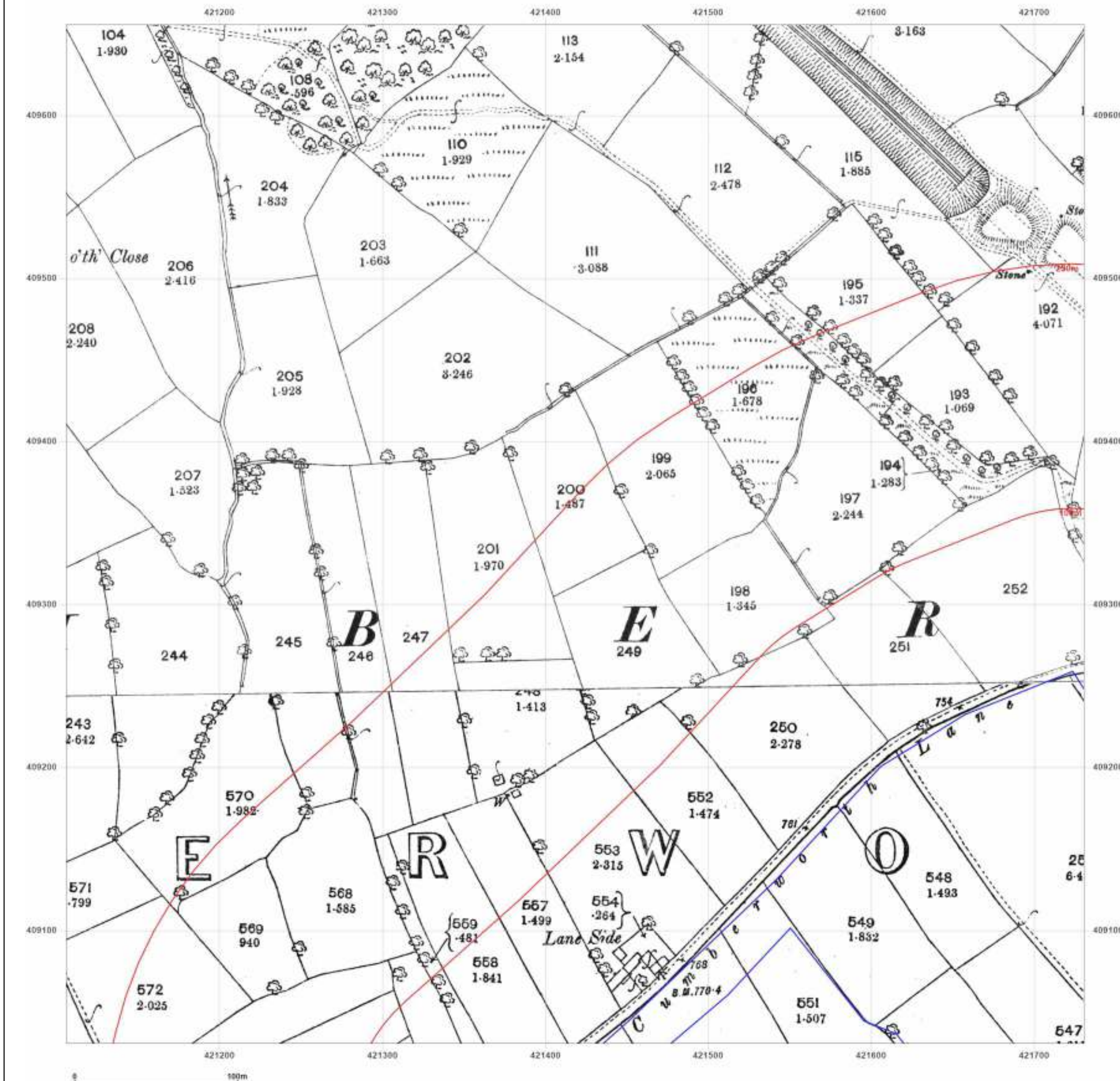


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CUMBERWORTH,
HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240_LS_1_2
Grid Ref: 421418, 409343

Map Name: County Series

Map date: 1906

Scale: 1:2,500

Printed at: 1:2,500



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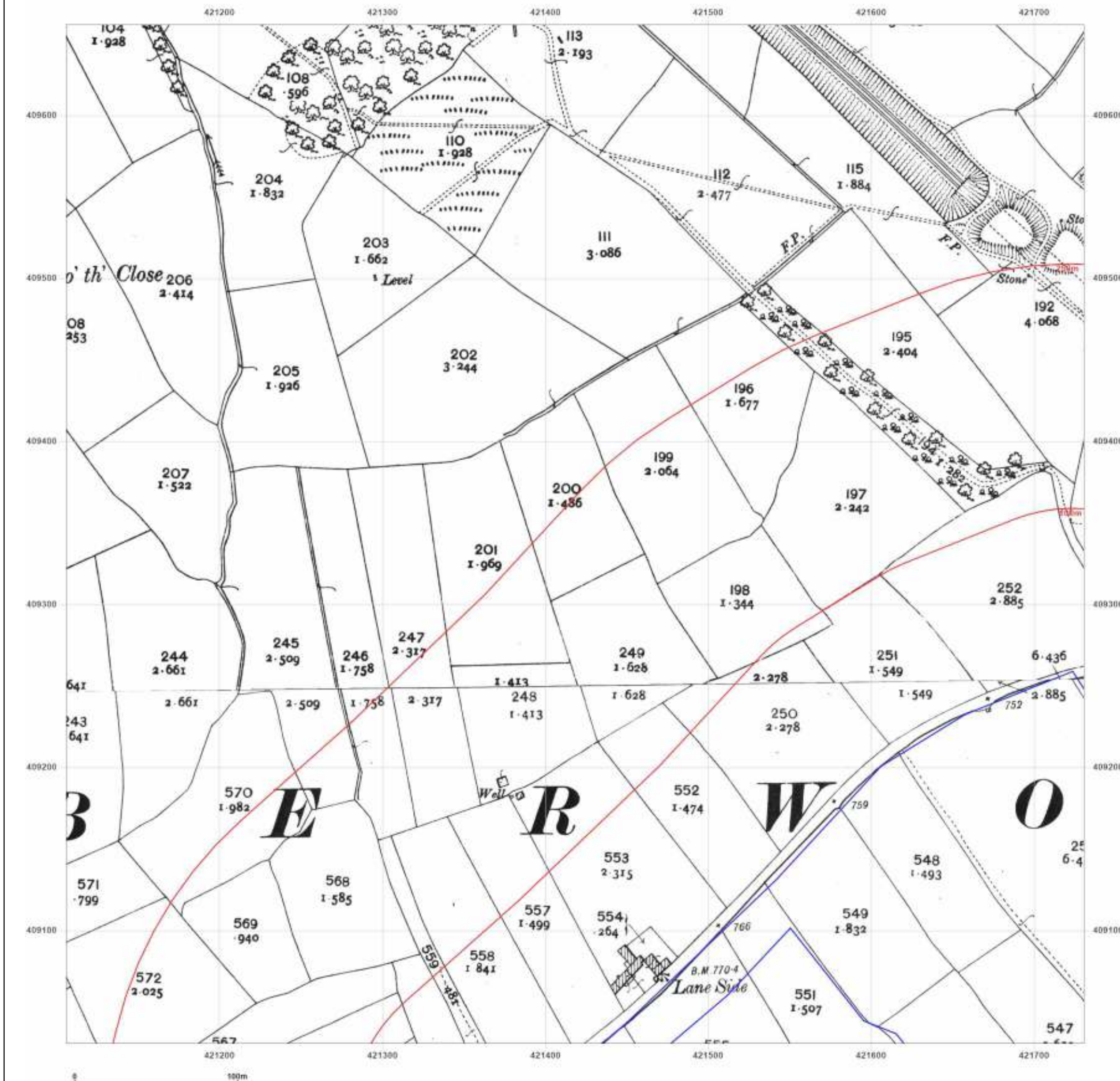


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CUMBERWORTH,
HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240_LS_1_2
Grid Ref: 421418, 409343

Map Name: County Series

Map date: 1913

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1913
Revised 1913
Edition N/A
Copyright N/A
Levelled N/A

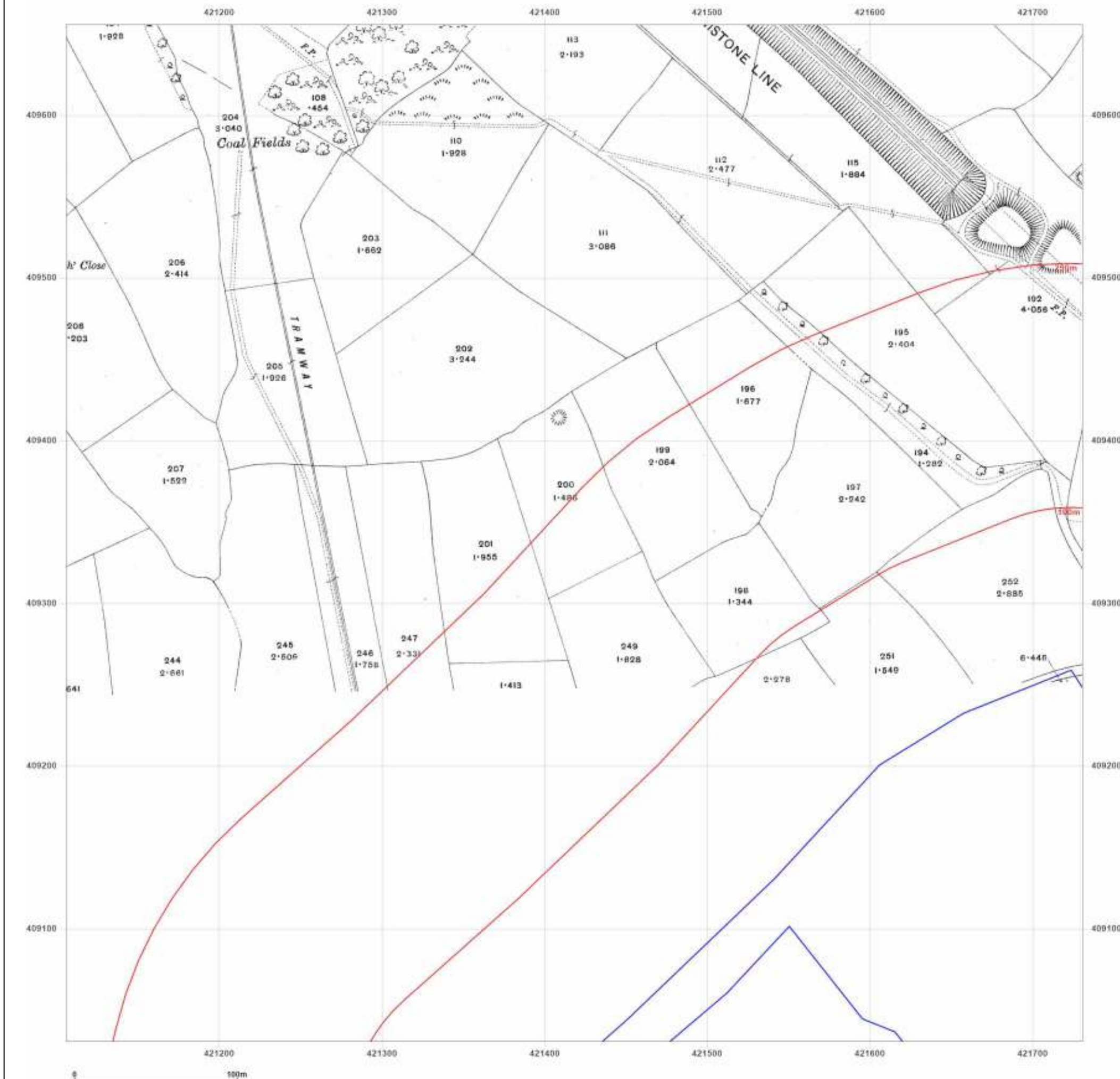


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CUMBERWORTH,
HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240_LS_1_2
Grid Ref: 421418, 409343

Map Name: National Grid

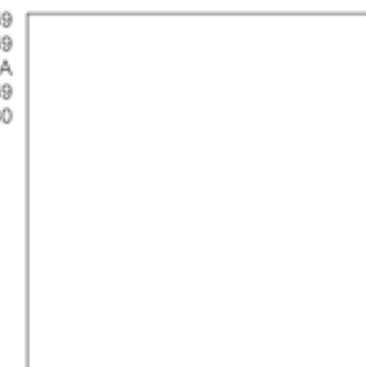
Map date: 1959

Scale: 1:2,500

Printed at: 1:2,500



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

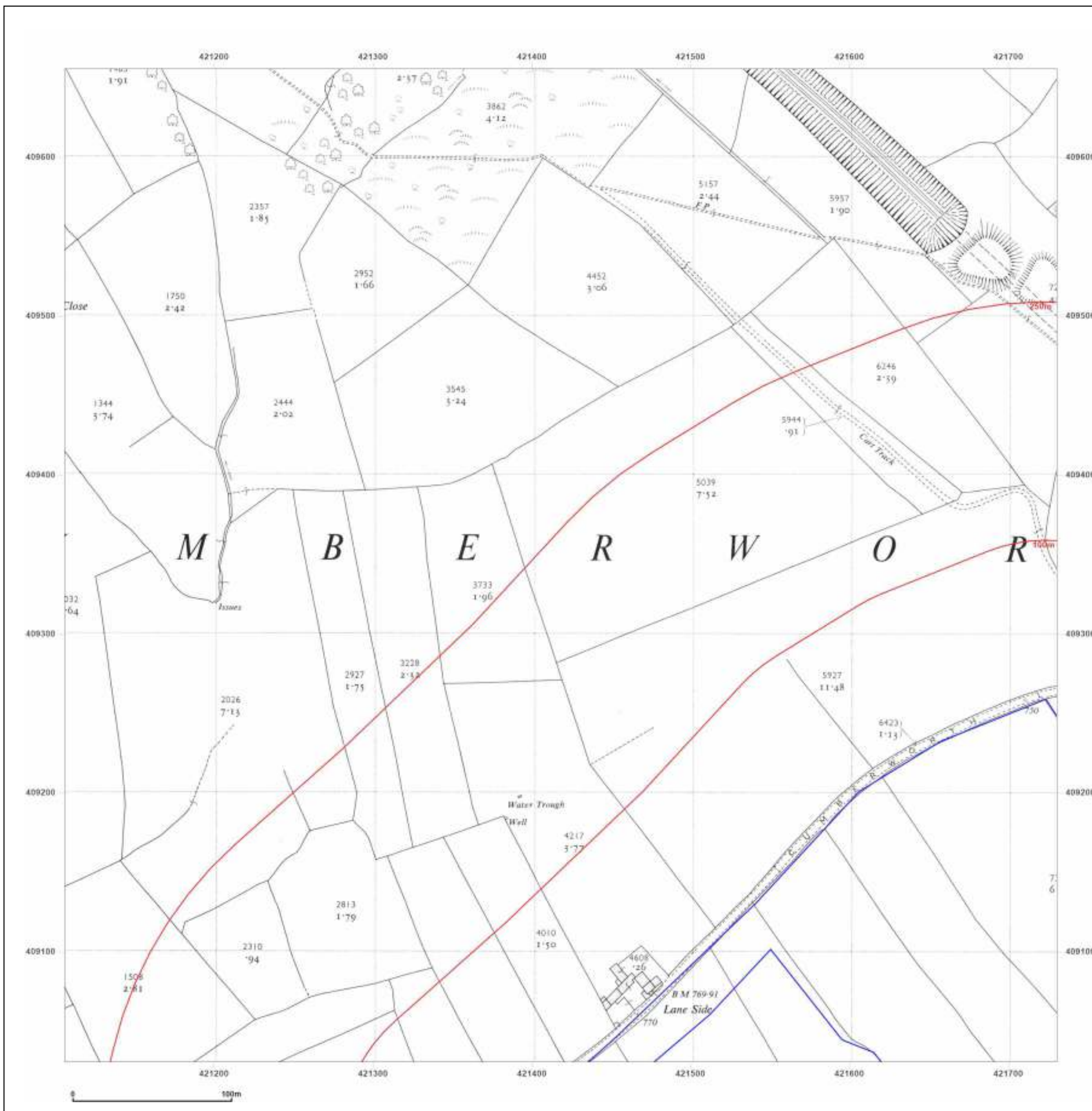


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HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240_LS_1_2
Grid Ref: 421418, 409343

Map Name: National Grid

Map date: 1959

Scale: 1:2,500

Printed at: 1:2,500



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

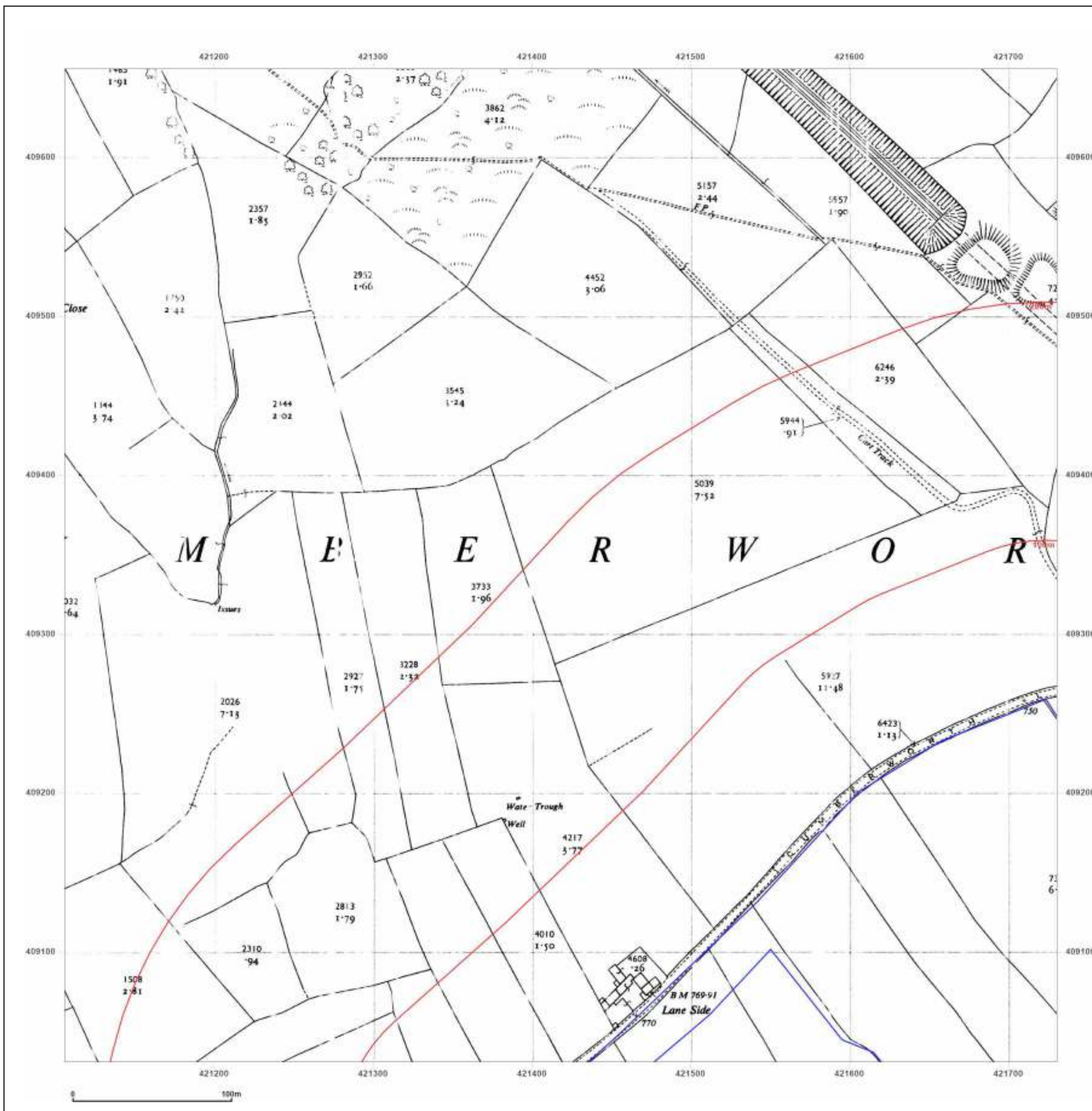


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CUMBERWORTH,
HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240_LS_1_2
Grid Ref: 421418, 409343

Map Name: National Grid

Map date: 1985

Scale: 1:2,500

Printed at: 1:2,500



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

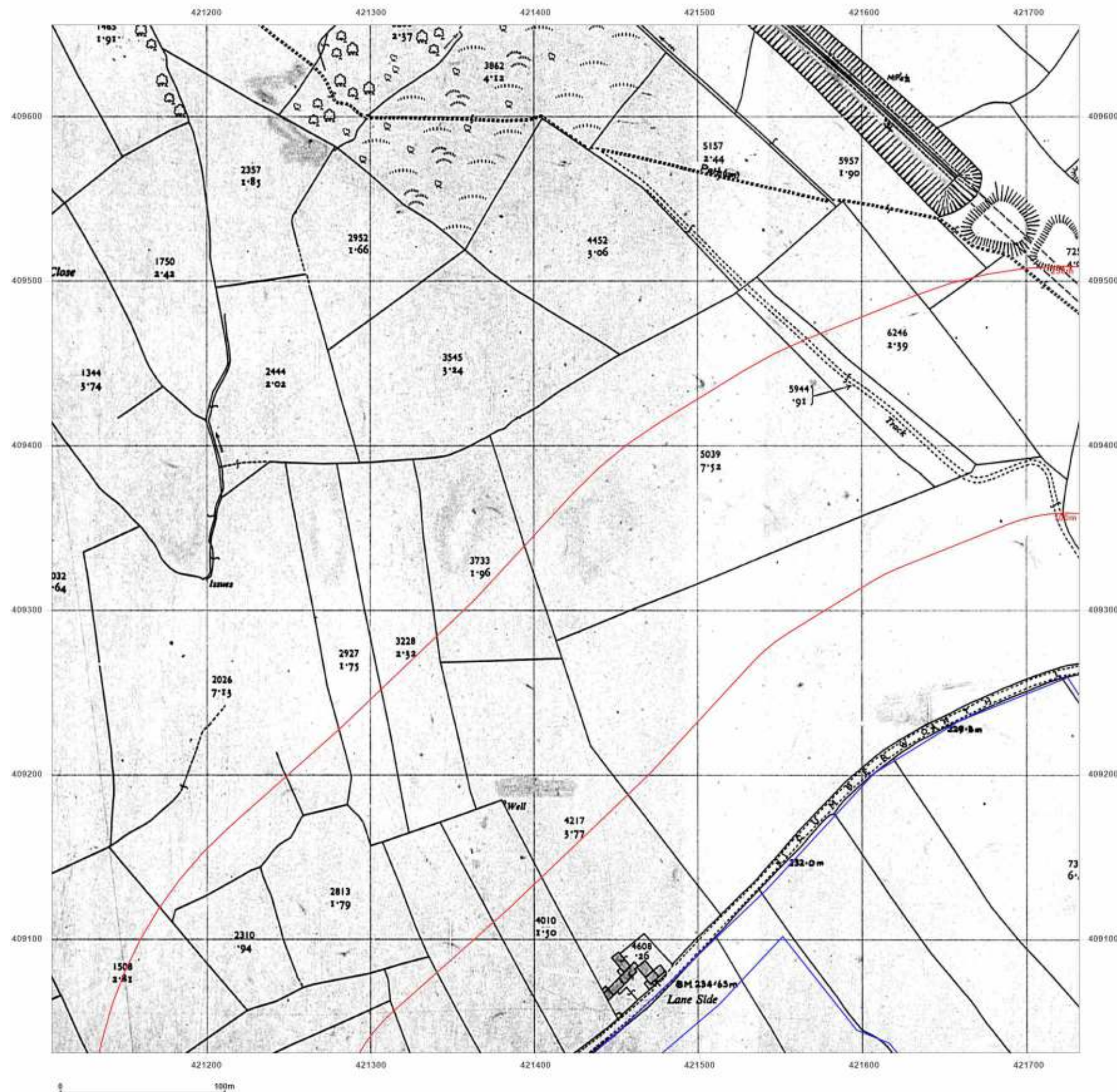


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CUMBERWORTH,
HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240_LS_1_2
Grid Ref: 421418, 409343

Map Name: National Grid

Map date: 1993

Scale: 1:2,500

Printed at: 1:2,500



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

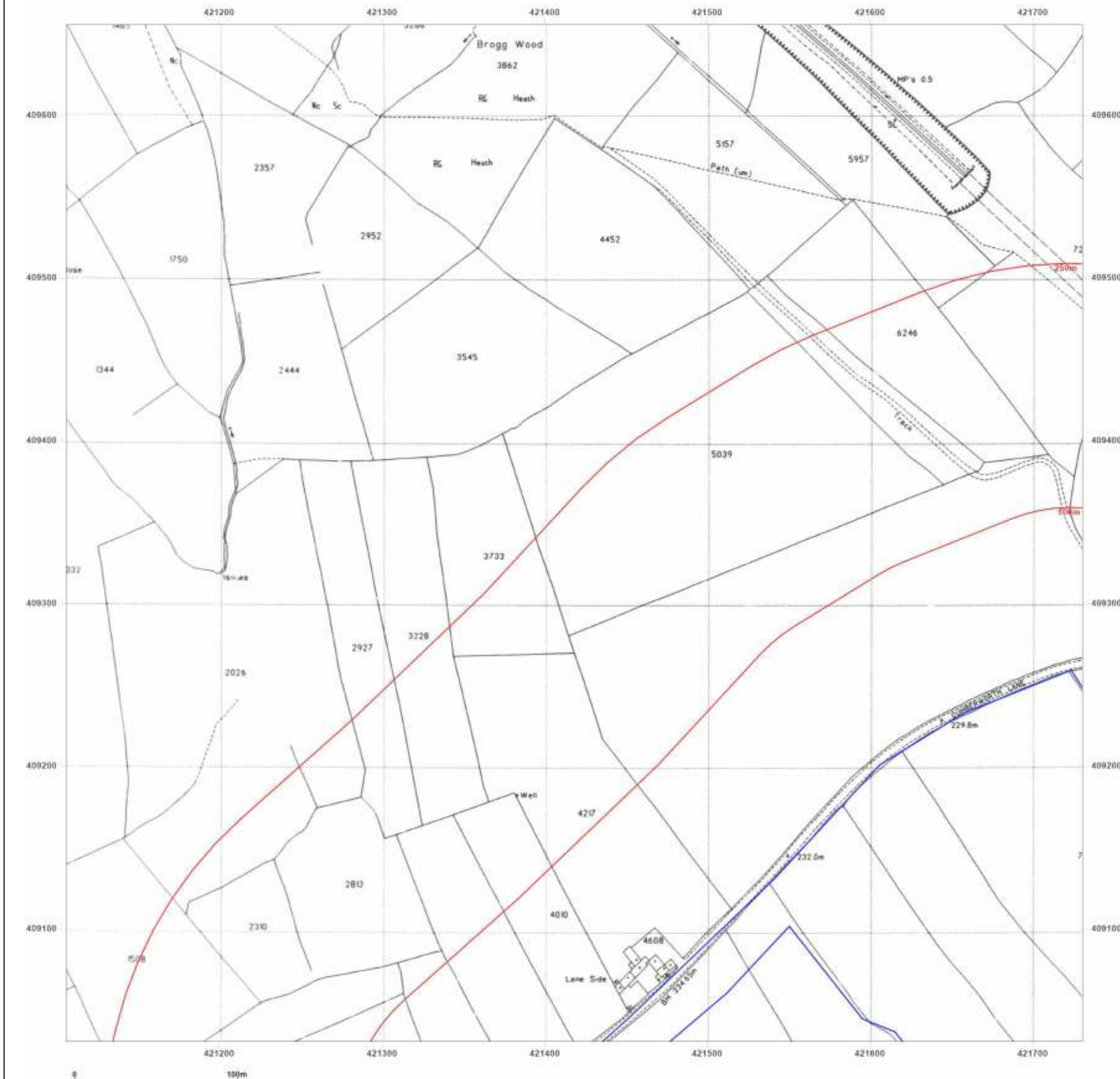


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CUMBERWORTH,
HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240_LS_2_1
Grid Ref: 422043, 408718

Map Name: County Series

Map date: 1891

Scale: 1:2,500

Printed at: 1:2,500



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

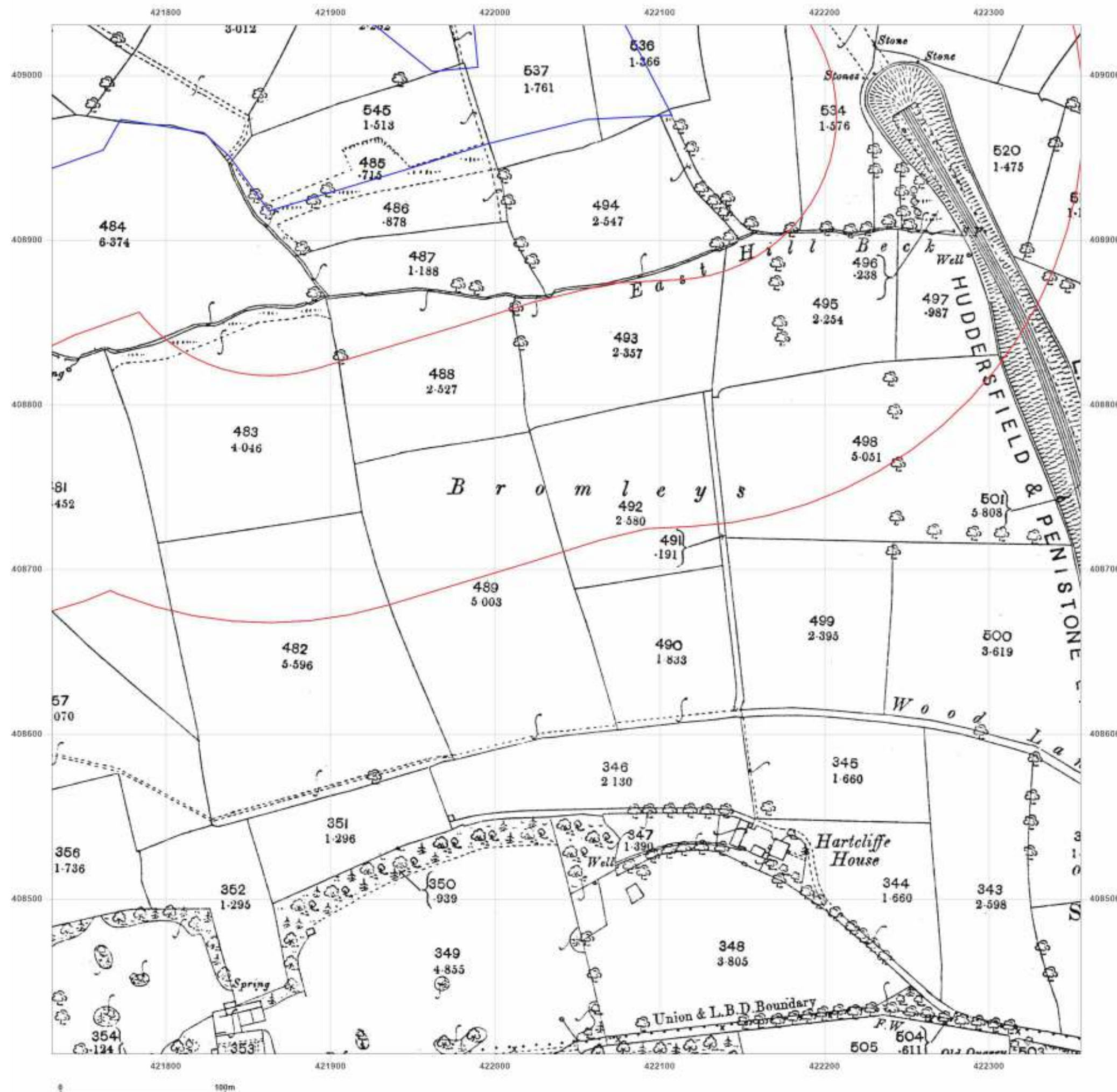


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CUMBERWORTH,
HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240_LS_2_1
Grid Ref: 422043, 408718

Map Name: County Series

Map date: 1906

Scale: 1:2,500

Printed at: 1:2,500



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

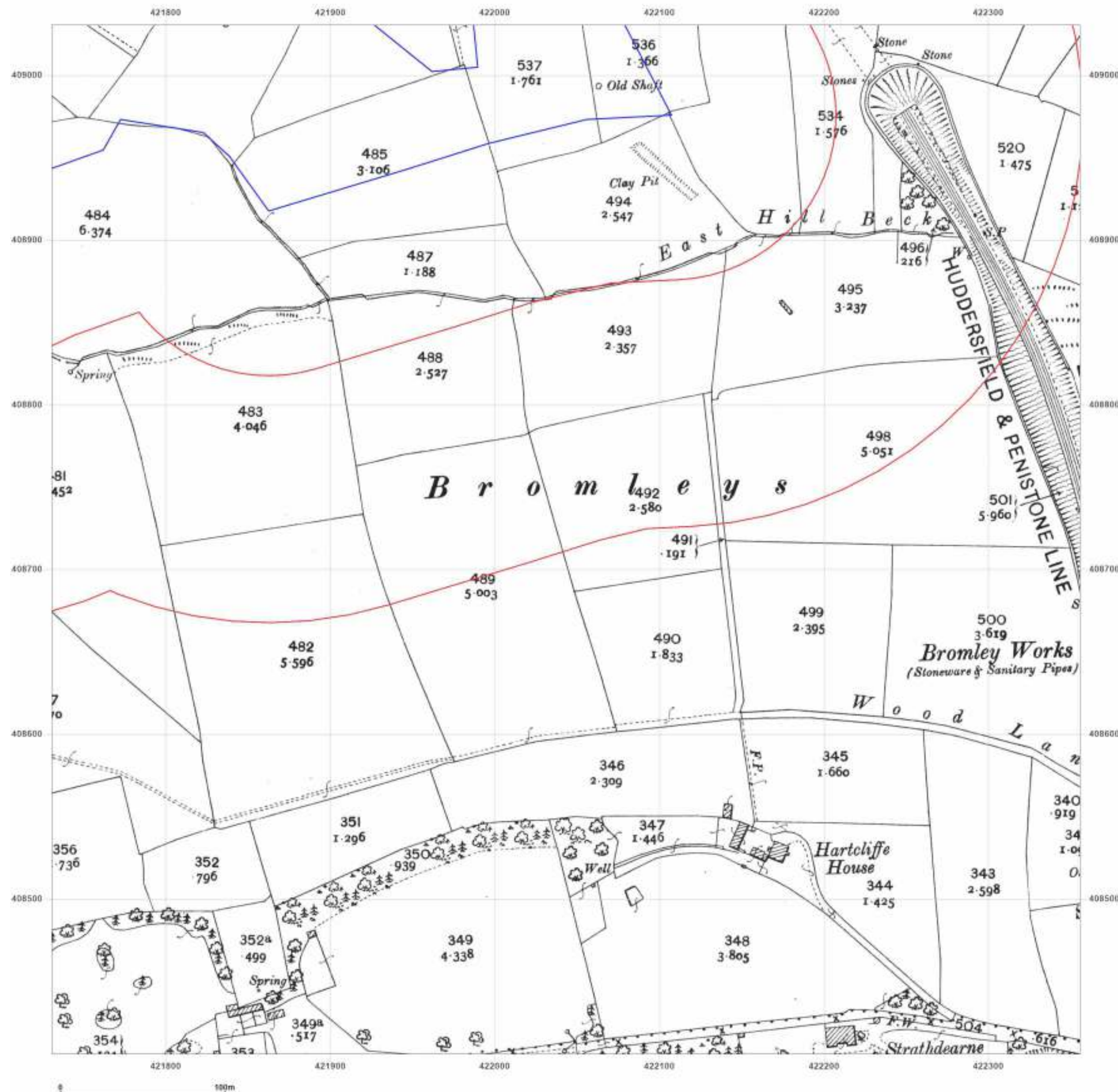


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HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240_LS_2_1
Grid Ref: 422043, 408718

Map Name: National Grid

Map date: 1958-1960

Scale: 1:2,500

Printed at: 1:2,500



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

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

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

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

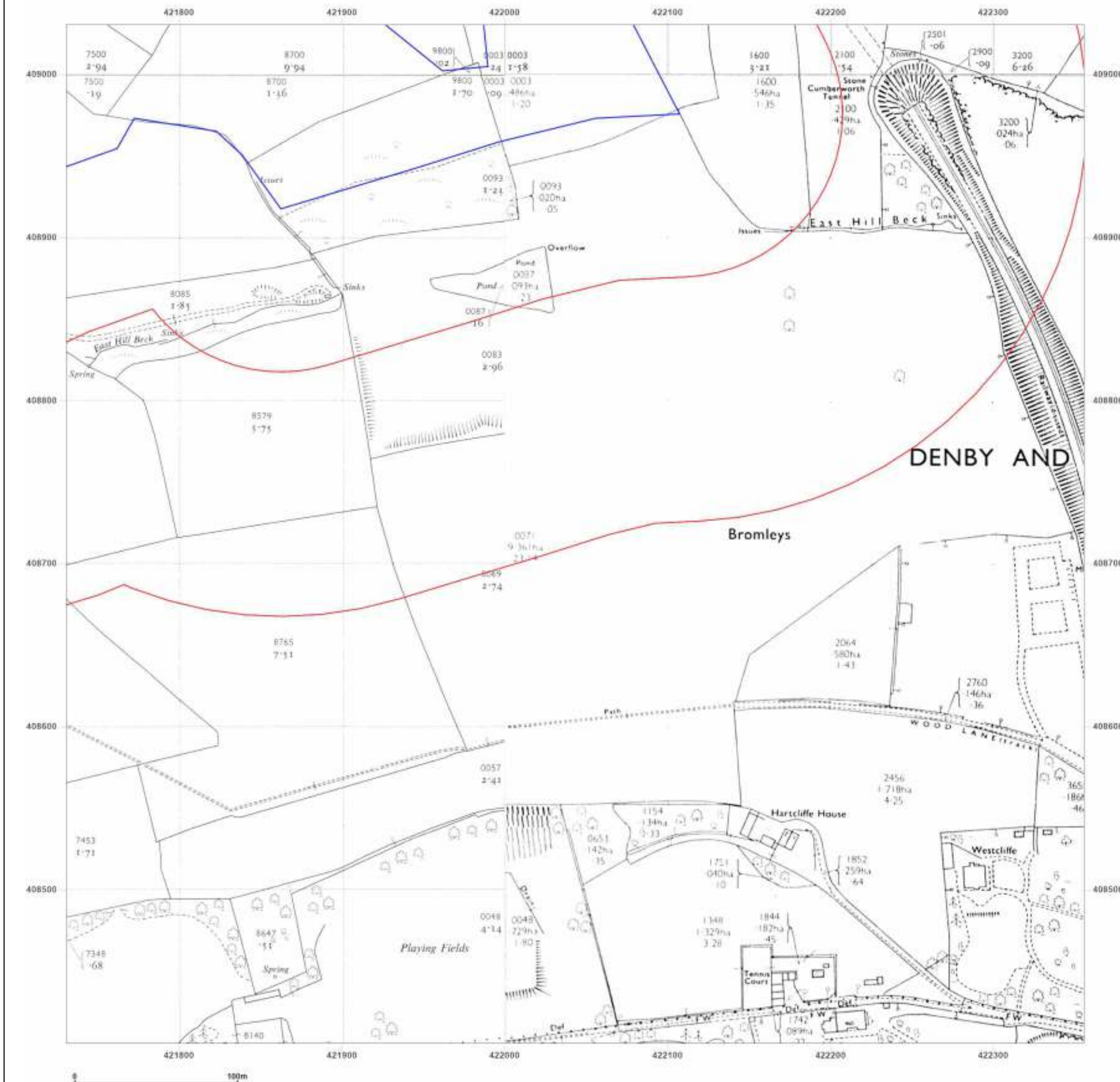


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CUMBERWORTH,
HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240_LS_2_1
Grid Ref: 422043, 408718

Map Name: National Grid

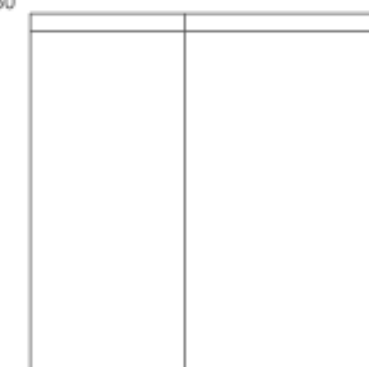
Map date: 1959-1960

Scale: 1:2,500

Printed at: 1:2,500



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



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

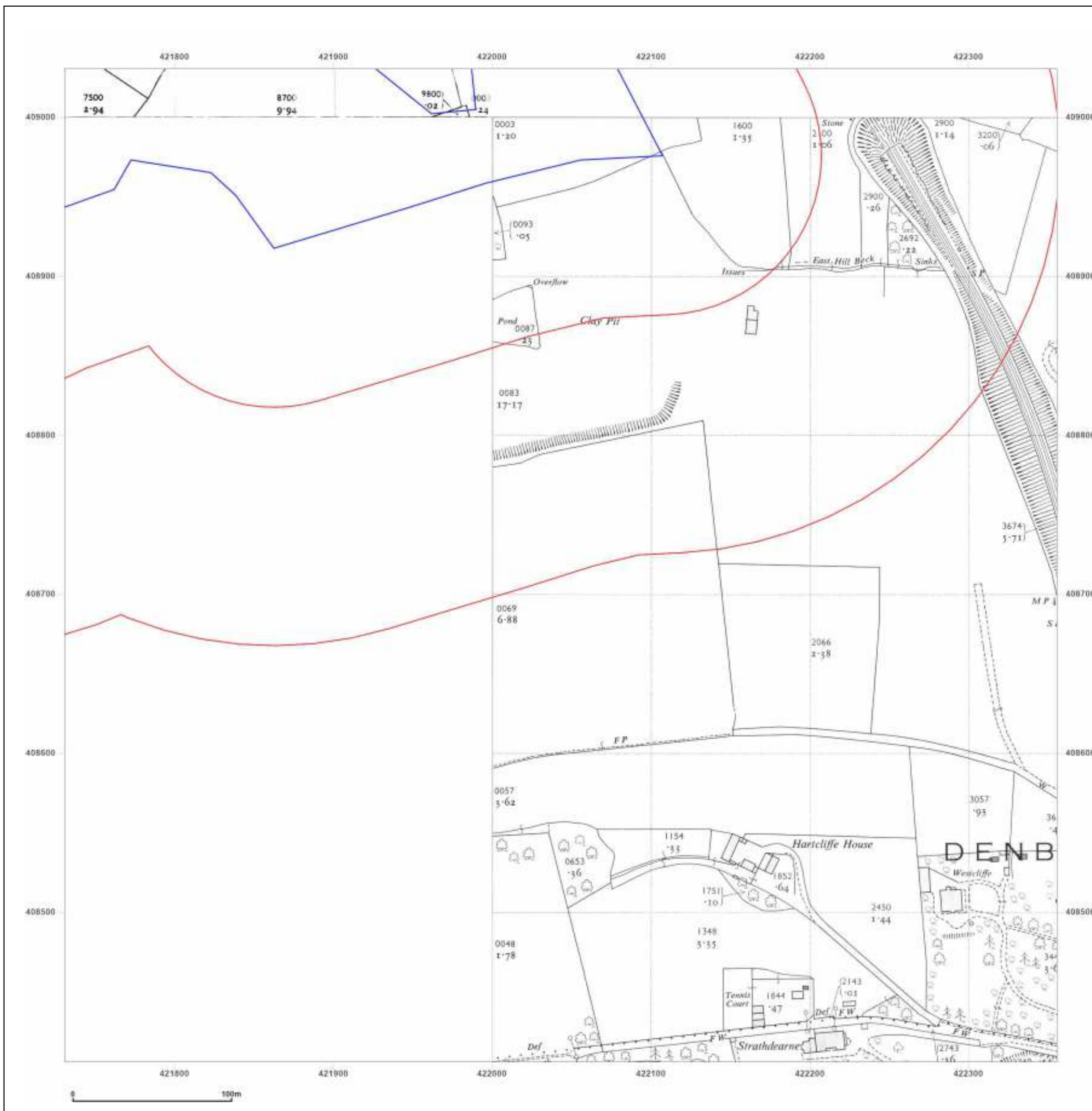


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CUMBERWORTH,
HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240_LS_2_1
Grid Ref: 422043, 408718

Map Name: National Grid

Map date: 1970-1972

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1969
Revised 1969
Edition N/A
Copyright 1970
Levelled 1958

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

Surveyed 1970
Revised 1970
Edition N/A
Copyright 1971
Levelled 1958

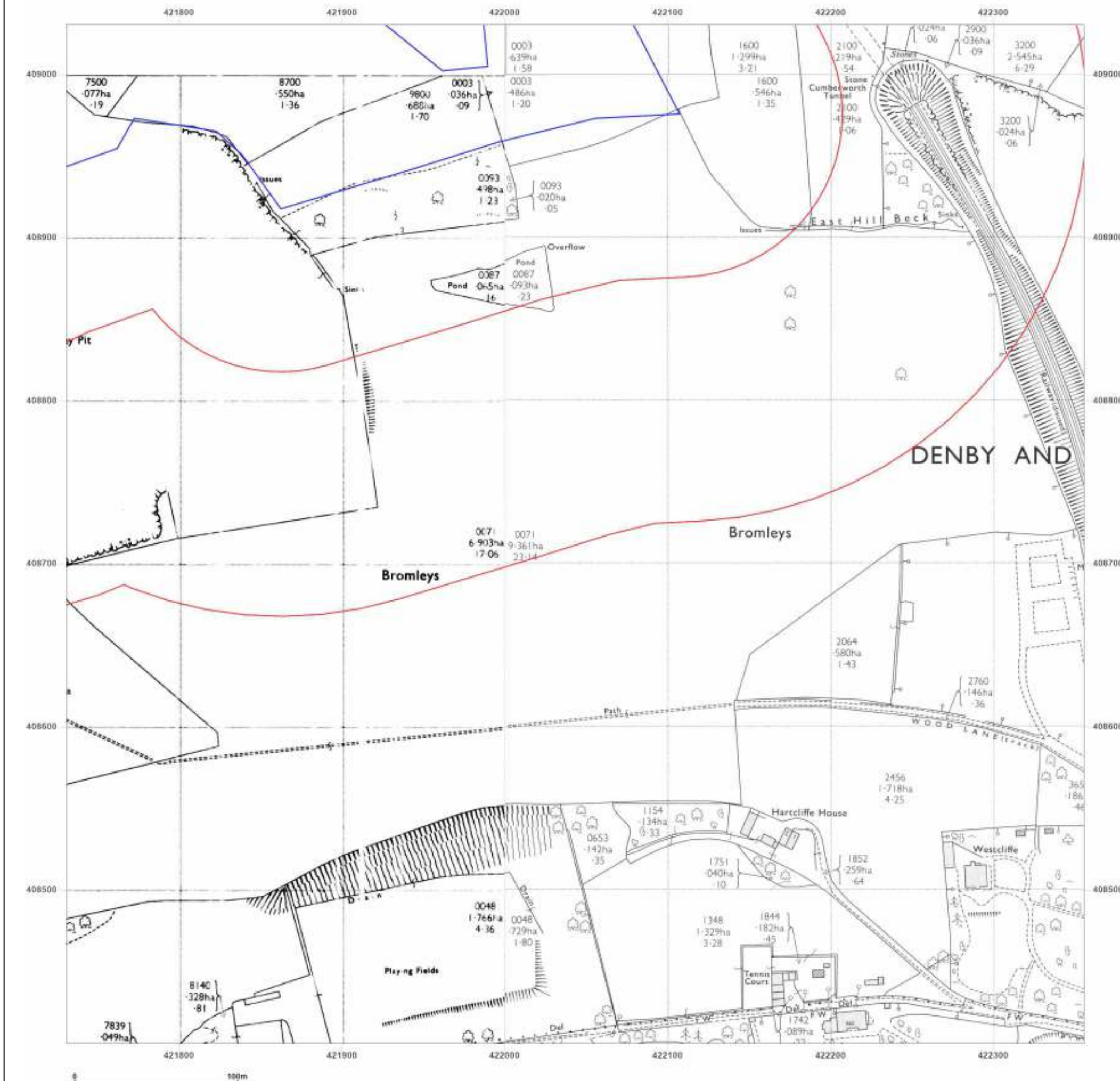


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CUMBERWORTH,
HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240_LS_2_1
Grid Ref: 422043, 408718

Map Name: National Grid

Map date: 1983-1986

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1958
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Edition N/A
Copyright 1985
Levelled 1958

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

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

Surveyed 1958
Revised 1986
Edition N/A
Copyright 1986
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HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240_LS_2_1
Grid Ref: 422043, 408718

Map Name: National Grid

Map date: 1985-1988

Scale: 1:2,500

Printed at: 1:2,500



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

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

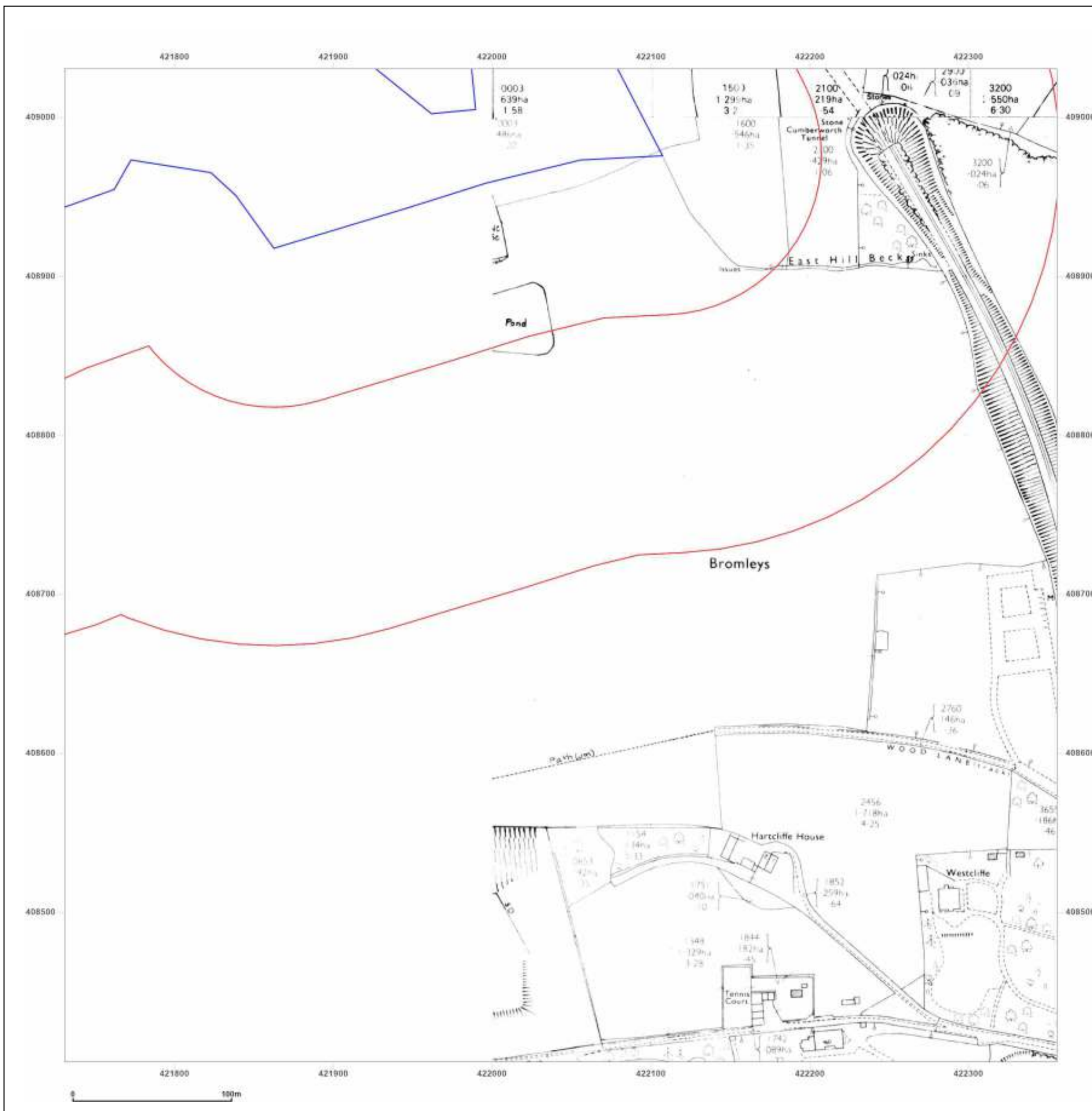


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Client Ref: 22007
Report Ref: GS-9257240_LS_2_1
Grid Ref: 422043, 408718

Map Name: National Grid

Map date: 1993

Scale: 1:2,500

Printed at: 1:2,500



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

Surveyed N/A
Revised N/A
Edition N/A
Copyright 1993
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Surveyed N/A
Revised N/A
Edition N/A
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HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240_LS_2_1
Grid Ref: 422043, 408718

Map Name: National Grid

Map date: 1994-1995

Scale: 1:2,500

Printed at: 1:2,500



Surveyed N/A
Revised N/A
Edition N/A
Copyright 1994
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Surveyed 1995
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HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240_LS_2_1
Grid Ref: 422043, 408718

Map Name: National Grid

Map date: 1994-1995

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1994
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Edition N/A
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Levelled N/A

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Revised N/A
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CUMBERWORTH,
HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240_LS_1_1
Grid Ref: 421418, 408718

Map Name: County Series

Map date: 1891

Scale: 1:2,500

Printed at: 1:2,500



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

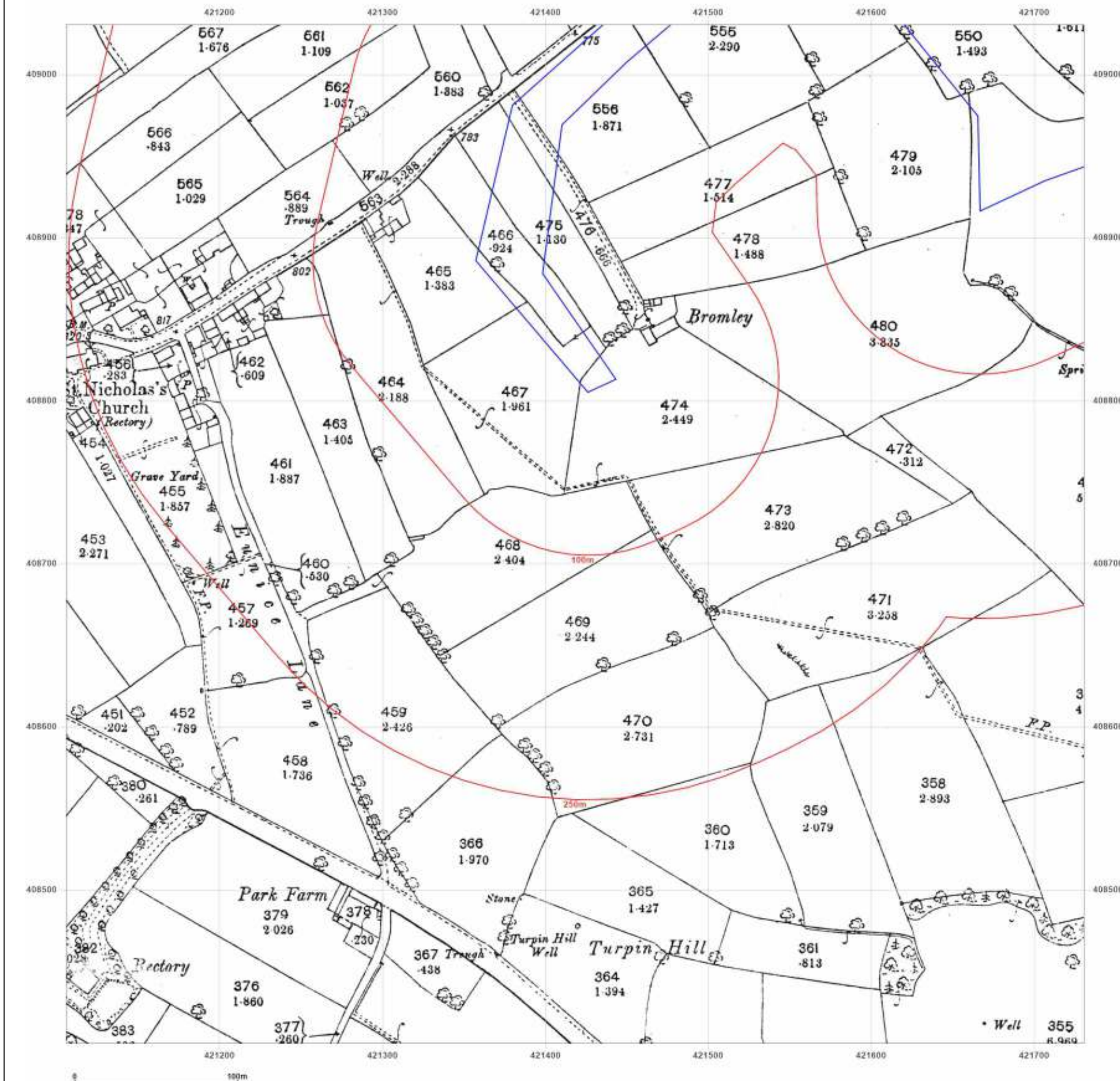


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CUMBERWORTH,
HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240_LS_1_1
Grid Ref: 421418, 408718

Map Name: County Series

Map date: 1906

Scale: 1:2,500

Printed at: 1:2,500



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

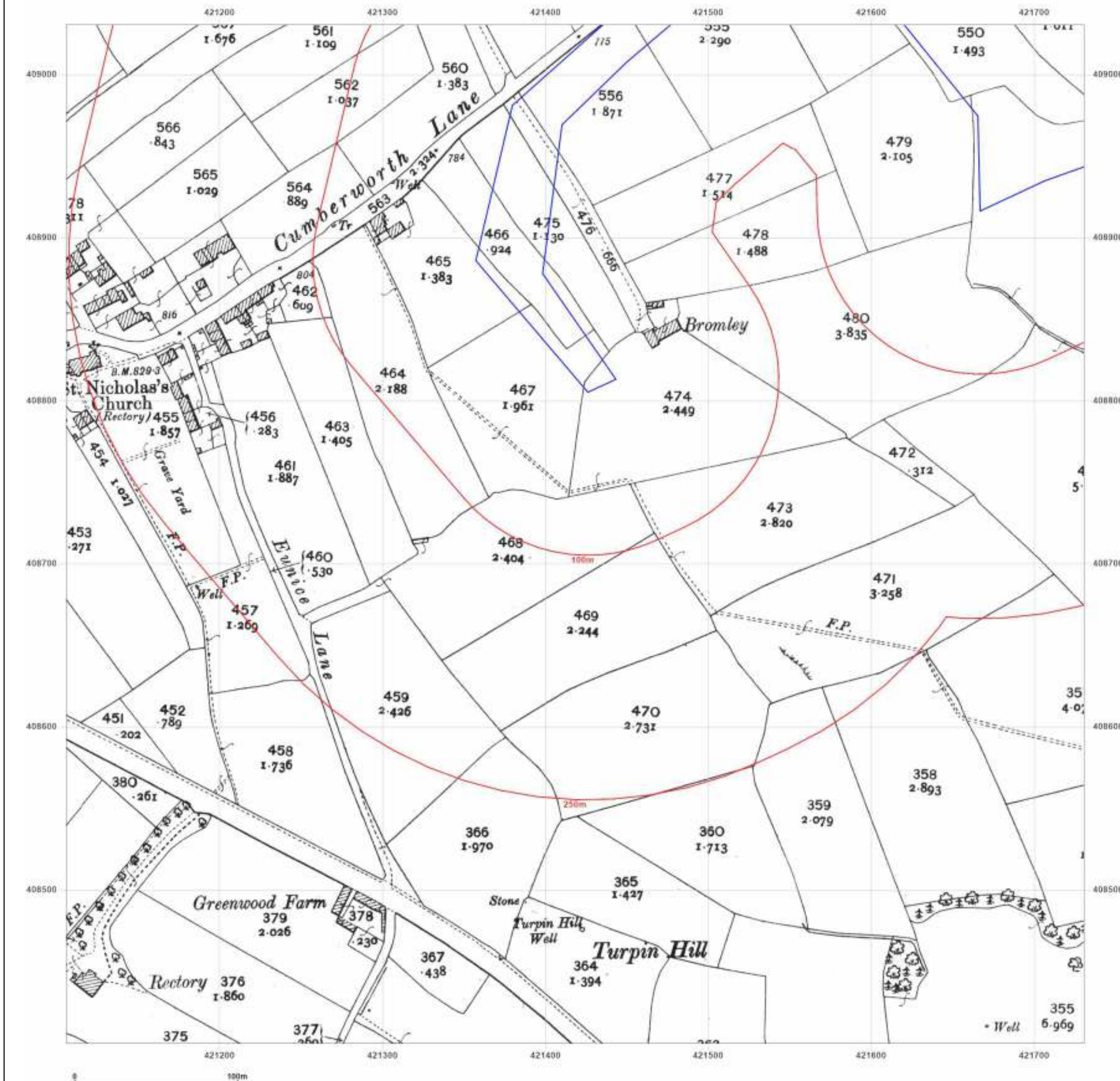


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CUMBERWORTH,
HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240_LS_1_1
Grid Ref: 421418, 408718

Map Name: National Grid

Map date: 1959-1960

Scale: 1:2,500

Printed at: 1:2,500



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Revised 1959
Edition N/A
Copyright 1959
Levelled 1930

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Revised 1959
Edition N/A
Copyright 1960
Levelled 1930

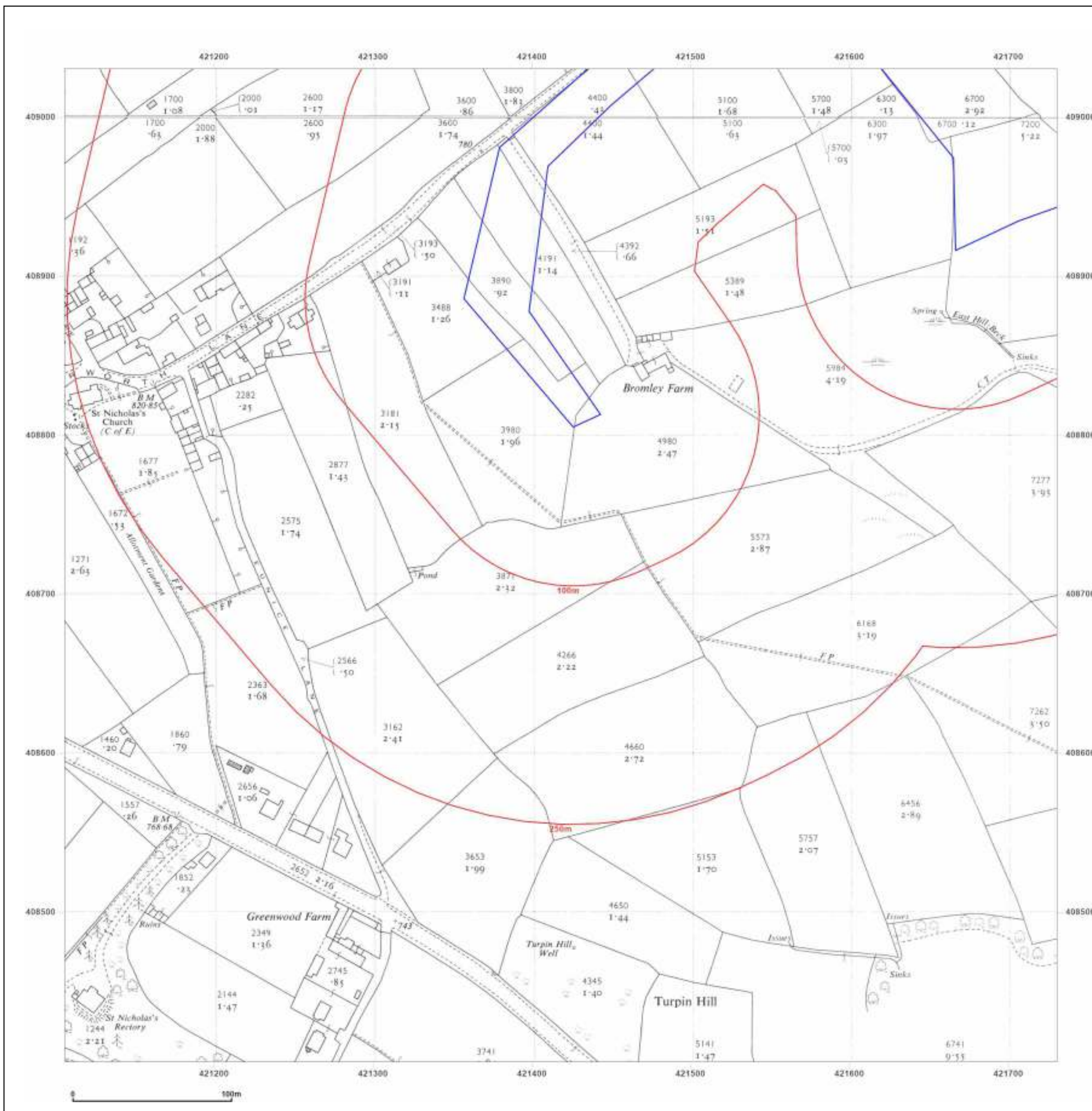


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Site Details:

BROMLEY FARM,
CUMBERWORTH LANE, UPPER
CUMBERWORTH,
HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240_LS_1_1
Grid Ref: 421418, 408718

Map Name: National Grid

Map date: 1972

Scale: 1:2,500

Printed at: 1:2,500



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

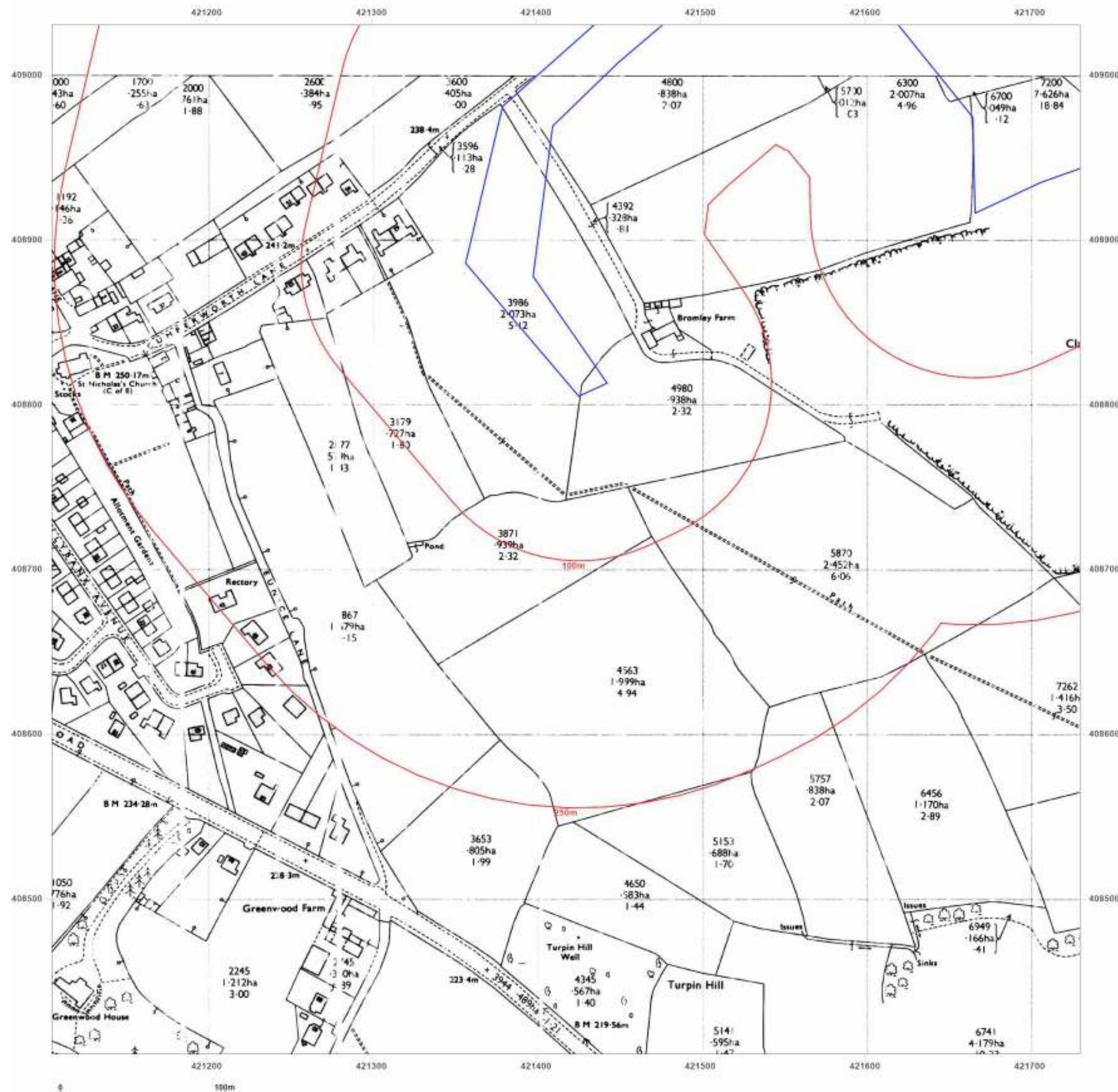


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HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240_LS_1_1
Grid Ref: 421418, 408718

Map Name: National Grid

Map date: 1983-1985

Scale: 1:2,500

Printed at: 1:2,500



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Site Details:

BROMLEY FARM,
CUMBERWORTH LANE, UPPER
CUMBERWORTH,
HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240_LS_1_1
Grid Ref: 421418, 408718

Map Name: National Grid

Map date: 1993

Scale: 1:2,500

Printed at: 1:2,500



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

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

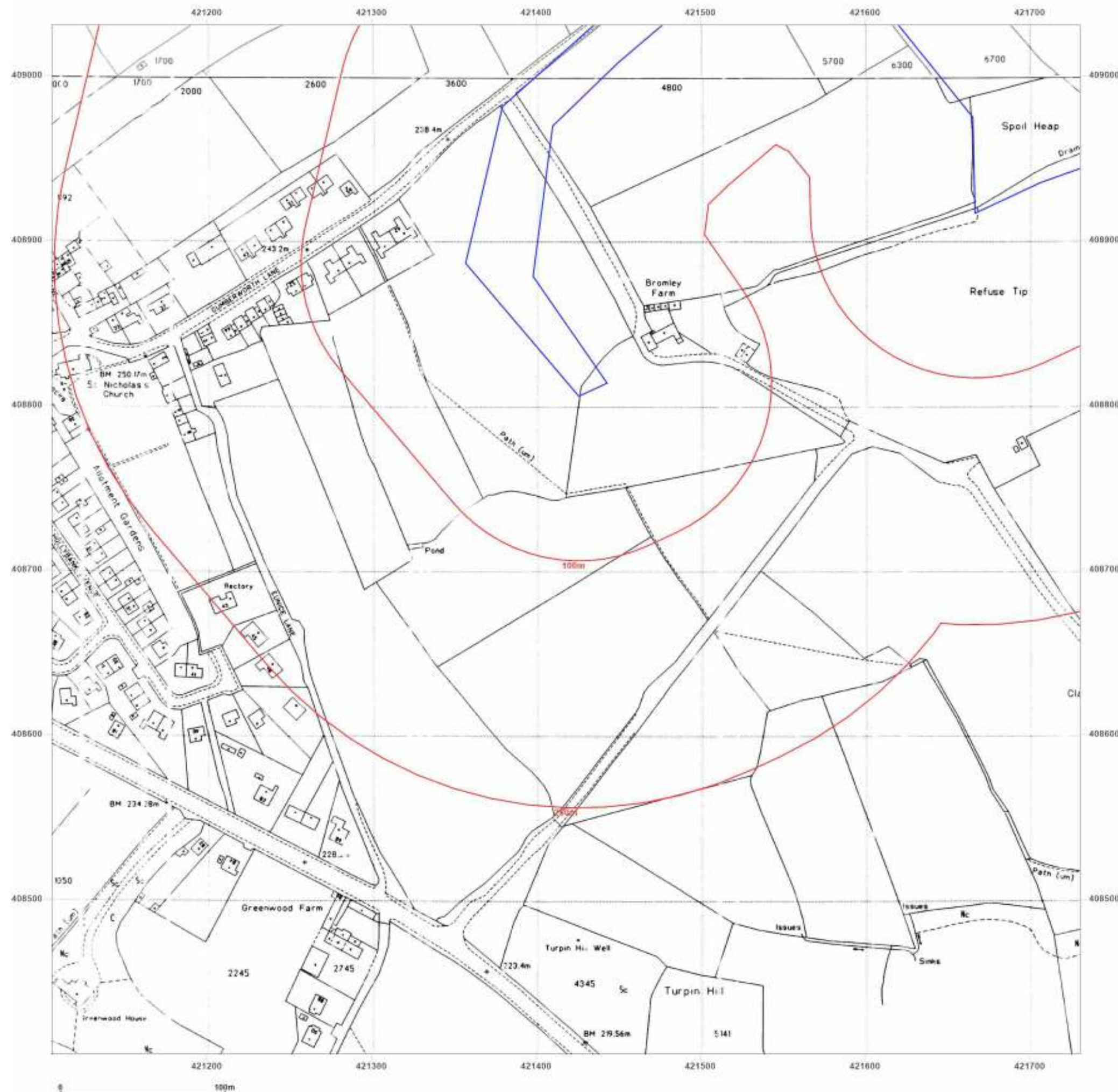


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Site Details:

BROMLEY FARM,
CUMBERWORTH LANE, UPPER
CUMBERWORTH,
HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240_LS_1_1
Grid Ref: 421418, 408718

Map Name: National Grid

Map date: 1994

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1994
Revised 1994
Edition N/A
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Levelled N/A

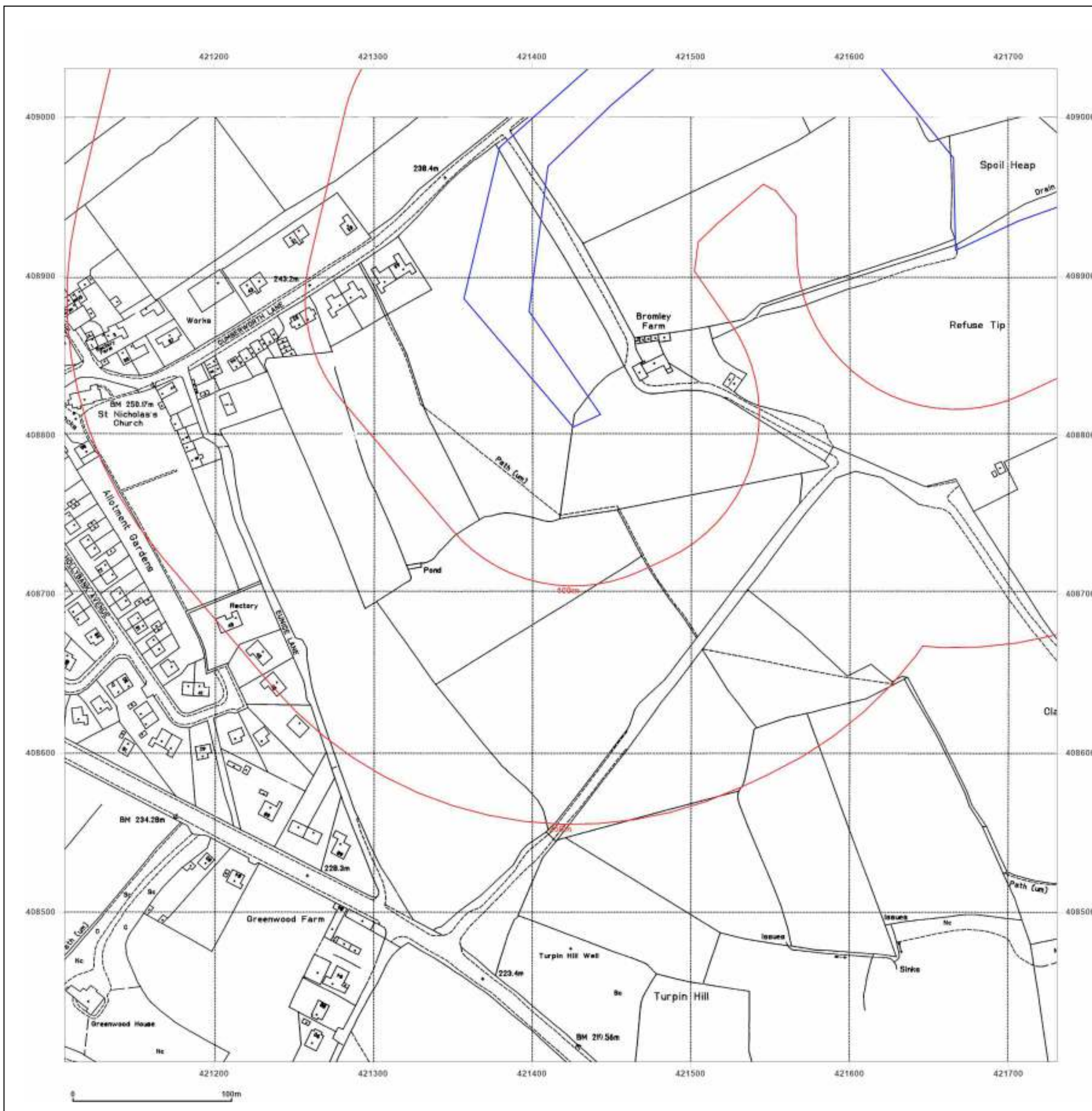


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Site Details:

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CUMBERWORTH LANE, UPPER
CUMBERWORTH,
HUDDERSFIELD, HD8 8PD

Client Ref: 22007
Report Ref: GS-9257240_LS_1_1
Grid Ref: 421418, 408718

Map Name: National Grid

Map date: 1994

Scale: 1:2,500

Printed at: 1:2,500



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Edition N/A
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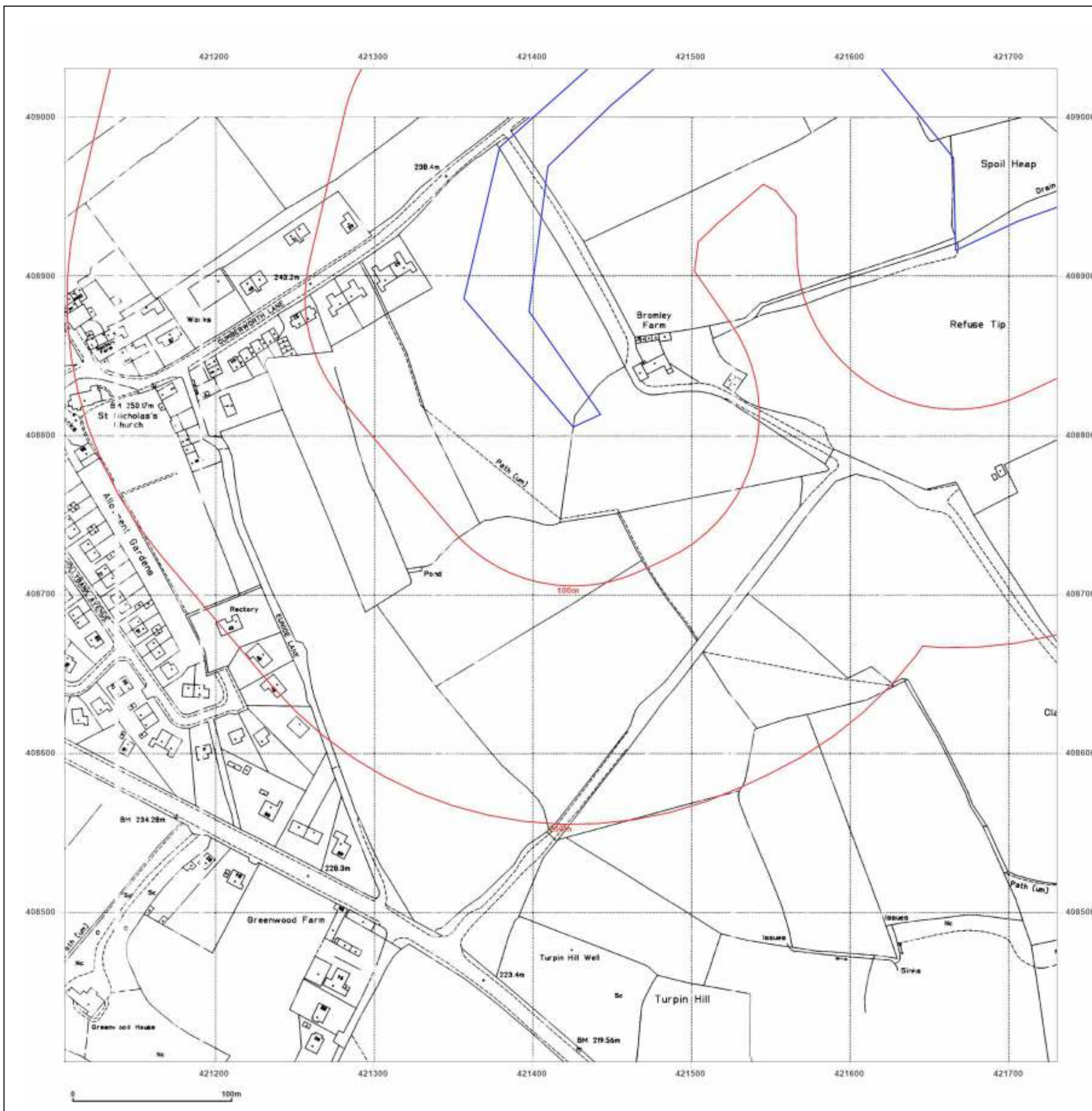


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APPENDIX C

Environmental Data Report

Groundsure Enviro Insight Report.

Groundsure Geo Insight Report.

BROMLEY FARM QUARRY, BARNSELY ROAD, UPPER CUMBERWORTH, HUDDERSFIELD, HD8 8PD

Order Details

Date: 12/01/2023

Your ref: 22007

Our Ref: GS-9294164

Site Details

Location: 421716 409084

Area: 8.34 ha

Authority: [Kirklees Council](#)



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Summary of findings

p. 2

Aerial image

p. 6

OS MasterMap site plan

p.10

groundsure.com/insightuserguide

Contact us with any questions at:

info@groundsure.com

08444 159 000

Summary of findings

Page	Section	Past land use	On site	0-50m	50-250m	250-500m	500-2000m
11	1.1	Historical industrial land uses	2	4	39	82	-
16	1.2	Historical tanks	0	0	0	9	-
17	1.3	Historical energy features	0	0	0	1	-
17	1.4	Historical petrol stations	0	0	0	0	-
18	1.5	Historical garages	0	0	0	0	-
18	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped	On site	0-50m	50-250m	250-500m	500-2000m
19	2.1	Historical industrial land uses	2	4	68	120	-
27	2.2	Historical tanks	0	0	0	16	-
27	2.3	Historical energy features	0	0	0	2	-
28	2.4	Historical petrol stations	0	0	0	0	-
28	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
29	3.1	Active or recent landfill	0	0	0	0	-
29	3.2	Historical landfill (BGS records)	0	0	0	0	-
30	3.3	Historical landfill (LA/mapping records)	1	0	0	0	-
30	3.4	Historical landfill (EA/NRW records)	1	1	1	4	-
32	3.5	Historical waste sites	0	0	1	0	-
32	3.6	Licensed waste sites	0	0	7	2	-
35	3.7	Waste exemptions	4	0	2	1	-
Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
37	4.1	Recent industrial land uses	0	0	3	-	-
38	4.2	Current or recent petrol stations	0	0	0	0	-
38	4.3	Electricity cables	0	0	0	0	-
38	4.4	Gas pipelines	0	0	0	0	-
38	4.5	Sites determined as Contaminated Land	0	0	0	0	-



38	<u>4.6</u>	<u>Control of Major Accident Hazards (COMAH)</u>	0	0	0	1	-
39	4.7	Regulated explosive sites	0	0	0	0	-
39	4.8	Hazardous substance storage/usage	0	0	0	0	-
39	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
39	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
40	<u>4.11</u>	<u>Licensed pollutant release (Part A(2)/B)</u>	0	0	0	1	-
40	4.12	Radioactive Substance Authorisations	0	0	0	0	-
40	<u>4.13</u>	<u>Licensed Discharges to controlled waters</u>	0	0	6	0	-
41	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
41	4.15	Pollutant release to public sewer	0	0	0	0	-
42	<u>4.16</u>	<u>List 1 Dangerous Substances</u>	0	0	2	0	-
42	<u>4.17</u>	<u>List 2 Dangerous Substances</u>	0	0	2	0	-
42	4.18	Pollution Incidents (EA/NRW)	0	0	0	0	-
43	4.19	Pollution inventory substances	0	0	0	0	-
43	4.20	Pollution inventory waste transfers	0	0	0	0	-
43	4.21	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	Geology (basic)					
44	5.1	Superficial geology (625k)	None (within 500m)				
44	<u>5.2</u>	<u>Bedrock geology (625k)</u>	Identified (within 500m)				
Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
45	6.1	Superficial aquifer	None (within 500m)				
46	<u>6.2</u>	<u>Bedrock aquifer</u>	Identified (within 500m)				
47	<u>6.3</u>	<u>Groundwater vulnerability</u>	Identified (within 50m)				
48	6.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
48	6.5	Groundwater vulnerability- local information	None (within 0m)				
49	<u>6.6</u>	<u>Groundwater abstractions</u>	0	0	0	1	27
56	<u>6.7</u>	<u>Surface water abstractions</u>	0	0	0	0	12
59	<u>6.8</u>	<u>Potable abstractions</u>	0	0	0	0	15
63	6.9	Source Protection Zones	0	0	0	0	-



63	6.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
64	<u>7.1</u>	<u>Water Network (OS MasterMap)</u>	1	0	6	-	-
65	<u>7.2</u>	<u>Surface water features</u>	1	0	3	-	-
65	<u>7.3</u>	<u>WFD Surface water body catchments</u>	2	-	-	-	-
66	<u>7.4</u>	<u>WFD Surface water bodies</u>	0	0	0	-	-
66	<u>7.5</u>	<u>WFD Groundwater bodies</u>	2	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
68	8.1	Risk of flooding from rivers and the sea	None (within 50m)				
68	8.2	Historical Flood Events	0	0	0	-	-
68	8.3	Flood Defences	0	0	0	-	-
69	8.4	Areas Benefiting from Flood Defences	0	0	0	-	-
69	8.5	Flood Storage Areas	0	0	0	-	-
70	8.6	Flood Zone 2	None (within 50m)				
70	8.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding					
71	<u>9.1</u>	<u>Surface water flooding</u>	1 in 30 year, 0.1m - 0.3m (within 50m)				
Page	Section	Groundwater flooding					
73	<u>10.1</u>	<u>Groundwater flooding</u>	Negligible (within 50m)				
Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
74	11.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
75	11.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
75	11.3	Special Areas of Conservation (SAC)	0	0	0	0	0
75	11.4	Special Protection Areas (SPA)	0	0	0	0	0
75	11.5	National Nature Reserves (NNR)	0	0	0	0	0
76	11.6	Local Nature Reserves (LNR)	0	0	0	0	0
76	<u>11.7</u>	<u>Designated Ancient Woodland</u>	0	0	0	1	6
76	11.8	Biosphere Reserves	0	0	0	0	0
77	11.9	Forest Parks	0	0	0	0	0



77	11.10	Marine Conservation Zones	0	0	0	0	0
77	11.11	<u>Green Belt</u>	1	0	0	0	2
77	11.12	Proposed Ramsar sites	0	0	0	0	0
78	11.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
78	11.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
78	11.15	Nitrate Sensitive Areas	0	0	0	0	0
78	11.16	<u>Nitrate Vulnerable Zones</u>	1	0	0	0	1
80	11.17	<u>SSSI Impact Risk Zones</u>	1	-	-	-	-
81	11.18	SSSI Units	0	0	0	0	0
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
82	12.1	World Heritage Sites	0	0	0	-	-
83	12.2	Area of Outstanding Natural Beauty	0	0	0	-	-
83	12.3	National Parks	0	0	0	-	-
83	12.4	<u>Listed Buildings</u>	0	0	1	-	-
84	12.5	Conservation Areas	0	0	0	-	-
84	12.6	Scheduled Ancient Monuments	0	0	0	-	-
84	12.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
85	13.1	<u>Agricultural Land Classification</u>	Grade 4 (within 250m)				
86	13.2	Open Access Land	0	0	0	-	-
86	13.3	Tree Felling Licences	0	0	0	-	-
86	13.4	Environmental Stewardship Schemes	0	0	0	-	-
86	13.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
87	14.1	<u>Priority Habitat Inventory</u>	1	1	2	-	-
88	14.2	<u>Habitat Networks</u>	0	0	1	-	-
88	14.3	Open Mosaic Habitat	0	0	0	-	-
88	14.4	Limestone Pavement Orders	0	0	0	-	-

Recent aerial photograph



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Capture Date: 30/05/2021

Site Area: 8.34ha



Recent site history - 2018 aerial photograph



Capture Date: 29/06/2018

Site Area: 8.34ha



Recent site history - 2012 aerial photograph



Capture Date: 26/03/2012

Site Area: 8.34ha



Recent site history - 1999 aerial photograph

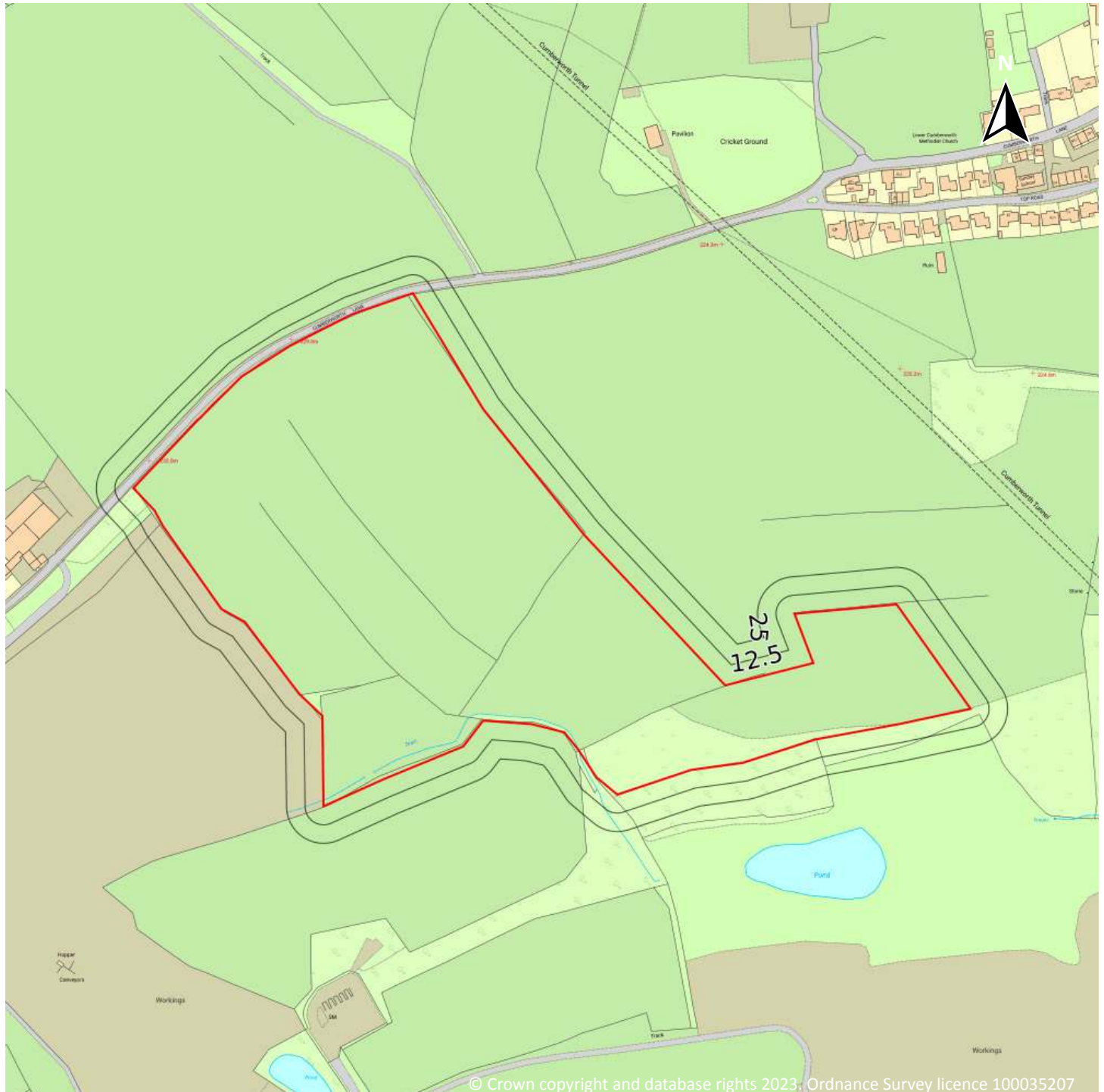


Capture Date: 10/09/1999

Site Area: 8.34ha

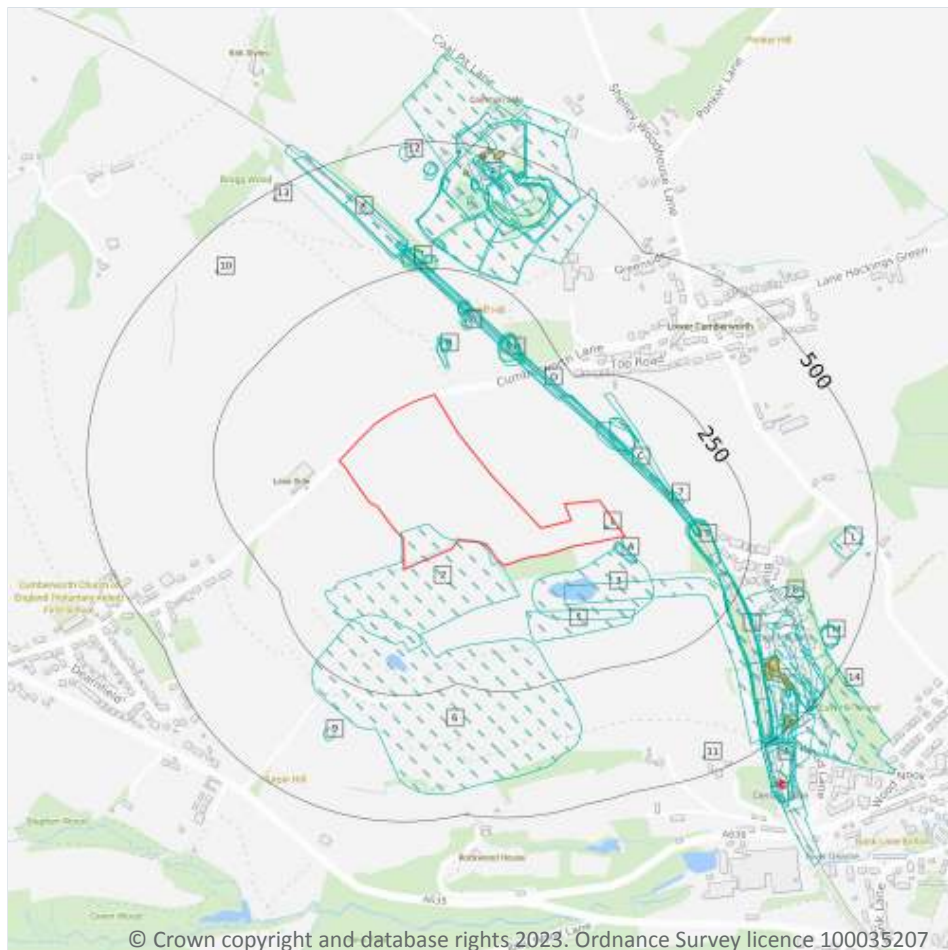


OS MasterMap site plan



Site Area: 8.34ha

1 Past land use



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

1.1 Historical industrial land uses

Records within 500m

127

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 11**

ID	Location	Land use	Dates present	Group ID
1	On site	Unspecified Old Shaft	1903	1418297



ID	Location	Land use	Dates present	Group ID
2	On site	Refuse Heap	1983	1436612
A	8m E	Clay Pit	1948	1504920
A	8m E	Clay Pit	1903	1509904
3	12m E	Unspecified Pit	1951	1451880
A	13m E	Clay Pit	1933	1503478
B	57m N	Unspecified Quarry	1892	1428021
B	60m N	Unspecified Pit	1904	1513860
4	70m SE	Railway Sidings	1951	1501061
B	85m N	Unspecified Pit	1948 - 1983	1535941
B	87m N	Unspecified Pit	1932	1507881
C	95m E	Tunnel	1850 - 1948	1537164
D	95m E	Tunnel	1891 - 1904	1537954
D	99m E	Tunnel	1932 - 1933	1537595
5	100m SE	Clay Pit	1967	1436231
6	102m SW	Clay Pit	1983	1436230
D	103m E	Tunnel	1951 - 1983	1552030
C	103m E	Unspecified Heap	1933	1540959
C	106m E	Unspecified Heap	1850	1541904
C	109m E	Unspecified Heap	1951 - 1983	1484040
7	114m E	Unspecified Pit	1850	1451881
C	119m E	Unspecified Heap	1948	1482209
E	119m E	Cuttings	1850	1497175
E	126m E	Cuttings	1933	1544610
F	127m E	Cuttings	1891 - 1903	1471674
F	127m E	Cuttings	1951 - 1983	1529311
F	128m E	Cuttings	1948	1541947
G	141m N	Unspecified Heap	1892	1415162
H	148m N	Unspecified Heap	1892	1512730



ID	Location	Land use	Dates present	Group ID
G	148m N	Unspecified Heaps	1904	1439514
H	149m N	Unspecified Heap	1904	1500632
H	149m N	Unspecified Heap	1948	1504992
G	154m N	Unspecified Old Shaft	1904	1418296
H	158m N	Unspecified Heap	1951 - 1983	1493082
H	159m N	Unspecified Heap	1932	1466763
G	162m N	Tunnel	1948	1510407
G	164m N	Unspecified Heap	1892	1471605
G	167m N	Unspecified Heap	1948 - 1983	1516835
G	170m N	Unspecified Heap	1932	1548524
E	201m E	Cuttings	1951	1518557
E	203m E	Cuttings	1948	1552520
E	220m E	Cuttings	1967 - 1983	1530464
E	225m E	Cuttings	1891 - 1903	1512209
I	241m N	Unspecified Heaps	1904 - 1948	1547359
I	249m N	Unspecified Heap	1892	1555151
J	255m N	Brick Yard	1932 - 1948	1473378
J	258m N	Brick Yard	1951	1480182
I	258m N	Unspecified Heap	1951 - 1983	1470636
J	260m N	Unspecified Works	1967 - 1983	1544378
I	260m N	Unspecified Heap	1951 - 1983	1520199
E	266m E	Unspecified Works	1967 - 1983	1499052
K	281m N	Cuttings	1892	1486451
I	281m N	Unspecified Level	1904	1440237
K	285m N	Cuttings	1904 - 1967	1539277
I	287m N	Unspecified Heap	1904 - 1948	1551274
K	287m N	Cuttings	1983	1547328
I	290m N	Unspecified Heap	1951	1520919



ID	Location	Land use	Dates present	Group ID
E	297m SE	Unspecified Works	1948 - 1951	1518199
J	323m N	Unspecified Ground Workings	1967 - 1983	1504013
E	327m SE	Unspecified Disused Tip	1983	1420093
8	340m E	Refuse Heap	1967	1436620
J	342m N	Railway Sidings	1967	1555529
E	346m E	Refuse Heap	1951	1525488
9	348m SW	Old Sandstone Quarry	1850	1421967
J	352m N	Brick Yard	1892	1483759
E	354m SE	Unspecified Works	1903	1554638
J	357m N	Brick Yard	1904	1462458
E	363m SE	Unspecified Works	1933	1461078
J	365m N	Unspecified Pit	1948	1500208
J	365m N	Unspecified Pit	1932	1518333
J	367m N	Unspecified Pit	1951	1515483
E	374m SE	Unspecified Tanks	1967 - 1983	1491199
E	376m SE	Refuse Heap	1967	1516697
E	380m SE	Refuse Heap	1903	1556454
J	381m N	Unspecified Heap	1904	1415177
E	385m SE	Railway Sidings	1903	1504909
J	387m N	Old Coal Pit	1904	1442998
E	389m SE	Refuse Heap	1933	1536417
J	393m N	Unspecified Heap	1892 - 1904	1516312
J	405m N	Unspecified Heap	1892 - 1904	1482454
L	407m E	Unspecified Works	1967 - 1983	1472213
J	408m N	Unspecified Pit	1892	1522909
J	412m N	Unspecified Pit	1932	1470805
J	412m N	Old Coal Pit	1904	1460074
J	412m N	Old Coal Pit	1948	1510937



ID	Location	Land use	Dates present	Group ID
E	414m SE	Unspecified Tanks	1903	1425799
J	414m N	Unspecified Pit	1951	1518781
J	415m N	Unspecified Old Shaft	1904	1418295
J	415m N	Unspecified Shaft	1904	1425307
E	418m SE	Cuttings	1891 - 1903	1529379
J	419m N	Railway Sidings	1948	1482241
J	423m N	Railway Sidings	1951	1525265
E	423m SE	Sand Pit	1948	1411140
J	424m N	Unspecified Heap	1892	1494529
J	427m N	Railway Sidings	1932	1549221
M	430m E	Unspecified Heap	1951	1415163
10	432m NW	Unspecified Level	1904	1440238
M	433m E	Unspecified Pit	1933	1553337
M	434m E	Unspecified Pit	1948	1463220
M	434m E	Unspecified Pit	1891 - 1903	1511805
J	434m N	Unspecified Heap	1904 - 1948	1522437
J	436m N	Unspecified Ground Workings	1951	1412231
J	438m N	Unspecified Tank	1967	1433372
E	440m SE	Unspecified Tanks	1903	1425800
E	444m SE	Unspecified Tank	1951	1497731
E	444m SE	Unspecified Tank	1933 - 1948	1503401
E	448m SE	Railway Sidings	1948	1549692
J	460m N	Unspecified Heap	1948	1467049
J	460m N	Unspecified Heap	1904	1519544
J	463m N	Unspecified Old Shaft	1904 - 1948	1530634
11	463m SE	Unspecified Shaft	1850	1425308
E	463m SE	Railway Sidings	1967	1501364
12	464m N	Unspecified Heap	1892 - 1904	1514712

ID	Location	Land use	Dates present	Group ID
J	465m N	Unspecified Old Shaft	1951	1552442
E	468m SE	Railway Sidings	1933	1535974
E	475m SE	Unspecified Tanks	1967 - 1983	1498008
J	477m N	Unspecified Tank	1904	1541352
J	477m N	Unspecified Tank	1948	1471837
J	477m N	Unspecified Tanks	1932	1425797
J	480m N	Unspecified Tank	1951 - 1967	1518291
E	480m SE	Unspecified Tanks	1948 - 1951	1518142
L	480m E	Unspecified Old Shaft	1903	1418298
13	480m NW	Unspecified Levels	1904	1440491
J	481m N	Unspecified Tanks	1967	1425798
E	484m SE	Unspecified Tanks	1933	1507903
14	493m SE	Unspecified Ground Workings	1951	1412230
E	499m SE	Railway Sidings	1891	1550939

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m

9

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

Features are displayed on the Past land use map on **page 11**

ID	Location	Land use	Dates present	Group ID
E	376m SE	Tanks	1958 - 1988	239323
E	377m SE	Tanks	1959	235533
J	441m N	Unspecified Tank	1959	223410
J	474m N	Unspecified Tank	1913 - 1959	238267



ID	Location	Land use	Dates present	Group ID
J	476m N	Unspecified Tank	1906	242438
E	479m SE	Tanks	1959	230457
J	482m N	Tanks	1959	230449
J	490m N	Unspecified Tank	1913	223409
E	492m SE	Unspecified Tank	1958 - 1988	236583

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m

1

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

Features are displayed on the Past land use map on **page 11**

ID	Location	Land use	Dates present	Group ID
J	482m N	Electricity Substation	1985 - 1993	135570

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m

0

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

This data is sourced from Ordnance Survey / Groundsure.



1.5 Historical garages

Records within 500m

0

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

This data is sourced from Ordnance Survey / Groundsure.

1.6 Historical military land

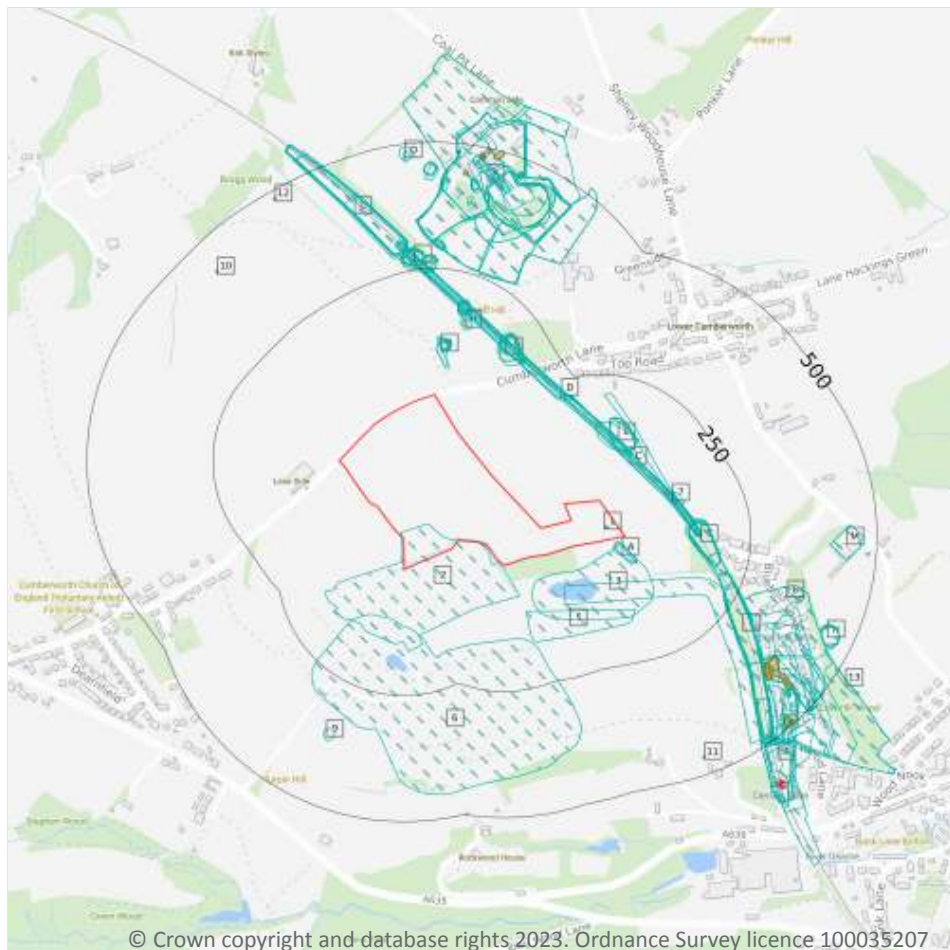
Records within 500m

0

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

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

2 Past land use - un-grouped



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

2.1 Historical industrial land uses

Records within 500m

194

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

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

ID	Location	Land Use	Date	Group ID
1	On site	Unspecified Old Shaft	1903	1418297
2	On site	Refuse Heap	1983	1436612
A	8m E	Clay Pit	1948	1504920

ID	Location	Land Use	Date	Group ID
A	8m E	Clay Pit	1903	1509904
3	12m E	Unspecified Pit	1951	1451880
A	13m E	Clay Pit	1933	1503478
B	57m N	Unspecified Quarry	1892	1428021
B	60m N	Unspecified Pit	1904	1513860
4	70m SE	Railway Sidings	1951	1501061
B	85m N	Unspecified Pit	1948	1535941
B	87m N	Unspecified Pit	1932	1507881
B	87m N	Unspecified Pit	1932	1507881
B	90m N	Unspecified Pit	1951	1535941
B	90m N	Unspecified Pit	1983	1535941
B	90m N	Unspecified Pit	1967	1535941
C	95m E	Tunnel	1948	1537164
C	95m E	Tunnel	1903	1537954
C	95m E	Tunnel	1891	1537954
C	99m E	Tunnel	1933	1537595
5	100m SE	Clay Pit	1967	1436231
6	102m SW	Clay Pit	1983	1436230
D	103m E	Tunnel	1983	1552030
D	103m E	Tunnel	1967	1552030
D	103m E	Tunnel	1951	1552030
E	103m E	Unspecified Heap	1933	1540959
E	103m E	Unspecified Heap	1933	1540959
E	106m E	Unspecified Heap	1850	1541904
E	109m E	Unspecified Heap	1951	1484040
E	109m E	Unspecified Heap	1983	1484040
E	109m E	Unspecified Heap	1967	1484040
7	114m E	Unspecified Pit	1850	1451881



ID	Location	Land Use	Date	Group ID
E	119m E	Unspecified Heap	1948	1482209
F	119m E	Cuttings	1850	1497175
C	121m E	Tunnel	1850	1537164
F	126m E	Cuttings	1933	1544610
G	127m E	Cuttings	1903	1471674
G	127m E	Cuttings	1891	1471674
G	127m E	Cuttings	1983	1529311
G	127m E	Cuttings	1967	1529311
G	127m E	Cuttings	1951	1529311
G	128m E	Cuttings	1948	1541947
H	141m N	Unspecified Heap	1892	1415162
I	148m N	Unspecified Heap	1892	1512730
H	148m N	Unspecified Heaps	1904	1439514
I	149m N	Unspecified Heap	1948	1504992
I	149m N	Unspecified Heap	1904	1500632
H	154m N	Unspecified Old Shaft	1904	1418296
I	158m N	Unspecified Heap	1951	1493082
I	158m N	Unspecified Heap	1983	1493082
I	158m N	Unspecified Heap	1967	1493082
I	159m N	Unspecified Heap	1932	1466763
I	159m N	Unspecified Heap	1932	1466763
H	159m N	Tunnel	1892	1537954
H	162m N	Tunnel	1904	1537954
H	162m N	Tunnel	1948	1510407
H	164m N	Unspecified Heap	1892	1471605
H	167m N	Tunnel	1932	1537595
H	167m N	Unspecified Heap	1948	1516835
H	170m N	Unspecified Heap	1932	1548524

ID	Location	Land Use	Date	Group ID
H	170m N	Unspecified Heap	1932	1548524
H	173m N	Unspecified Heap	1951	1516835
H	173m N	Unspecified Heap	1983	1516835
H	173m N	Unspecified Heap	1967	1516835
F	201m E	Cuttings	1951	1518557
F	203m E	Cuttings	1948	1552520
F	220m E	Cuttings	1983	1530464
F	220m E	Cuttings	1967	1530464
F	225m E	Cuttings	1903	1512209
F	225m E	Cuttings	1891	1512209
J	241m N	Unspecified Heaps	1932	1547359
J	241m N	Unspecified Heaps	1932	1547359
J	244m N	Unspecified Heaps	1948	1547359
J	244m N	Unspecified Heaps	1904	1547359
J	249m N	Unspecified Heap	1892	1555151
K	255m N	Brick Yard	1932	1473378
K	255m N	Brick Yard	1932	1473378
K	258m N	Brick Yard	1951	1480182
J	258m N	Unspecified Heap	1951	1470636
J	258m N	Unspecified Heap	1983	1470636
J	258m N	Unspecified Heap	1967	1470636
K	260m N	Unspecified Works	1983	1544378
K	260m N	Unspecified Works	1967	1544378
J	260m N	Unspecified Heap	1951	1520199
J	260m N	Unspecified Heap	1983	1520199
J	260m N	Unspecified Heap	1967	1520199
F	266m E	Unspecified Works	1983	1499052
F	266m E	Unspecified Works	1967	1499052

ID	Location	Land Use	Date	Group ID
L	281m N	Cuttings	1892	1486451
J	281m N	Unspecified Level	1904	1440237
L	285m N	Cuttings	1932	1539277
L	287m N	Cuttings	1948	1539277
L	287m N	Cuttings	1904	1539277
J	287m N	Unspecified Heap	1932	1551274
J	287m N	Unspecified Heap	1932	1551274
L	287m N	Cuttings	1983	1547328
L	288m N	Cuttings	1951	1539277
L	288m N	Cuttings	1967	1539277
J	290m N	Unspecified Heap	1951	1520919
J	291m N	Unspecified Heap	1948	1551274
J	291m N	Unspecified Heap	1904	1551274
F	297m SE	Unspecified Works	1951	1518199
K	300m N	Brick Yard	1948	1473378
K	323m N	Unspecified Ground Workings	1983	1504013
K	323m N	Unspecified Ground Workings	1967	1504013
F	327m SE	Unspecified Disused Tip	1983	1420093
8	340m E	Refuse Heap	1967	1436620
K	342m N	Railway Sidings	1967	1555529
F	346m E	Refuse Heap	1951	1525488
9	348m SW	Old Sandstone Quarry	1850	1421967
K	352m N	Brick Yard	1892	1483759
F	354m SE	Unspecified Works	1903	1554638
K	357m N	Brick Yard	1904	1462458
F	360m SE	Unspecified Works	1948	1518199
F	363m SE	Unspecified Works	1933	1461078
K	365m N	Unspecified Pit	1948	1500208

ID	Location	Land Use	Date	Group ID
K	365m N	Unspecified Pit	1932	1518333
K	365m N	Unspecified Pit	1932	1518333
K	367m N	Unspecified Pit	1951	1515483
F	374m SE	Unspecified Tanks	1983	1491199
F	374m SE	Unspecified Tanks	1967	1491199
F	376m SE	Refuse Heap	1967	1516697
F	380m SE	Refuse Heap	1903	1556454
K	381m N	Unspecified Heap	1904	1415177
F	385m SE	Railway Sidings	1903	1504909
K	387m N	Old Coal Pit	1904	1442998
F	389m SE	Refuse Heap	1933	1536417
F	389m SE	Refuse Heap	1933	1536417
K	393m N	Unspecified Heap	1892	1516312
K	400m N	Unspecified Heap	1904	1516312
K	405m N	Unspecified Heap	1892	1482454
M	407m E	Unspecified Works	1983	1472213
M	407m E	Unspecified Works	1967	1472213
K	408m N	Unspecified Pit	1892	1522909
K	412m N	Unspecified Pit	1932	1470805
K	412m N	Unspecified Pit	1932	1470805
K	412m N	Unspecified Heap	1904	1482454
K	412m N	Old Coal Pit	1948	1510937
K	412m N	Old Coal Pit	1904	1460074
F	414m SE	Unspecified Tanks	1903	1425799
K	414m N	Unspecified Pit	1951	1518781
K	415m N	Unspecified Old Shaft	1904	1418295
K	415m N	Unspecified Shaft	1904	1425307
F	418m SE	Cuttings	1903	1529379

ID	Location	Land Use	Date	Group ID
F	418m SE	Cuttings	1891	1529379
K	419m N	Railway Sidings	1948	1482241
K	423m N	Railway Sidings	1951	1525265
F	423m SE	Sand Pit	1948	1411140
K	424m N	Unspecified Heap	1892	1494529
K	427m N	Railway Sidings	1932	1549221
N	430m E	Unspecified Heap	1951	1415163
10	432m NW	Unspecified Level	1904	1440238
N	433m E	Unspecified Pit	1933	1553337
N	433m E	Unspecified Pit	1933	1553337
N	434m E	Unspecified Pit	1948	1463220
N	434m E	Unspecified Pit	1903	1511805
N	434m E	Unspecified Pit	1891	1511805
K	434m N	Unspecified Heap	1932	1522437
K	434m N	Unspecified Heap	1932	1522437
K	435m N	Unspecified Heap	1948	1522437
K	435m N	Unspecified Heap	1904	1522437
K	436m N	Unspecified Ground Workings	1951	1412231
K	438m N	Unspecified Tank	1967	1433372
F	440m SE	Unspecified Tanks	1903	1425800
F	444m SE	Unspecified Tank	1951	1497731
F	444m SE	Unspecified Tank	1948	1503401
F	447m SE	Unspecified Tank	1933	1503401
F	448m SE	Railway Sidings	1948	1549692
K	460m N	Unspecified Heap	1948	1467049
K	460m N	Unspecified Heap	1904	1519544
K	463m N	Unspecified Old Shaft	1948	1530634
K	463m N	Unspecified Old Shaft	1904	1530634



ID	Location	Land Use	Date	Group ID
11	463m SE	Unspecified Shaft	1850	1425308
F	463m SE	Railway Sidings	1967	1501364
K	464m N	Unspecified Old Shaft	1932	1530634
K	464m N	Unspecified Old Shaft	1932	1530634
O	464m N	Unspecified Heap	1892	1514712
K	465m N	Unspecified Old Shaft	1951	1552442
O	468m N	Unspecified Heap	1904	1514712
F	468m SE	Railway Sidings	1933	1535974
F	475m SE	Unspecified Tanks	1983	1498008
F	475m SE	Unspecified Tanks	1967	1498008
K	477m N	Unspecified Tank	1904	1541352
K	477m N	Unspecified Tank	1948	1471837
K	477m N	Unspecified Tanks	1932	1425797
K	480m N	Unspecified Tank	1951	1518291
K	480m N	Unspecified Tank	1967	1518291
F	480m SE	Unspecified Tanks	1951	1518142
M	480m E	Unspecified Old Shaft	1903	1418298
12	480m NW	Unspecified Levels	1904	1440491
F	481m SE	Unspecified Tanks	1948	1518142
K	481m N	Unspecified Tanks	1967	1425798
F	484m SE	Unspecified Tanks	1933	1507903
13	493m SE	Unspecified Ground Workings	1951	1412230
F	499m SE	Railway Sidings	1891	1550939

This data is sourced from Ordnance Survey / Groundsure.



2.2 Historical tanks

Records within 500m

16

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

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

ID	Location	Land Use	Date	Group ID
F	376m SE	Tanks	1958	239323
F	376m SE	Tanks	1986	239323
F	376m SE	Tanks	1988	239323
F	377m SE	Tanks	1959	235533
K	441m N	Unspecified Tank	1959	223410
K	474m N	Unspecified Tank	1913	238267
K	476m N	Unspecified Tank	1906	242438
F	479m SE	Tanks	1959	230457
K	480m N	Unspecified Tank	1959	238267
K	482m N	Tanks	1959	230449
K	490m N	Unspecified Tank	1913	223409
F	492m SE	Unspecified Tank	1958	236583
F	492m SE	Unspecified Tank	1986	236583
F	492m SE	Unspecified Tank	1988	236583
F	493m SE	Unspecified Tank	1970	236583
F	494m SE	Unspecified Tank	1971	236583

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m

2

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



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

ID	Location	Land Use	Date	Group ID
K	482m N	Electricity Substation	1993	135570
K	482m N	Electricity Substation	1985	135570

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m

0

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

This data is sourced from Ordnance Survey / Groundsure.

2.5 Historical garages

Records within 500m

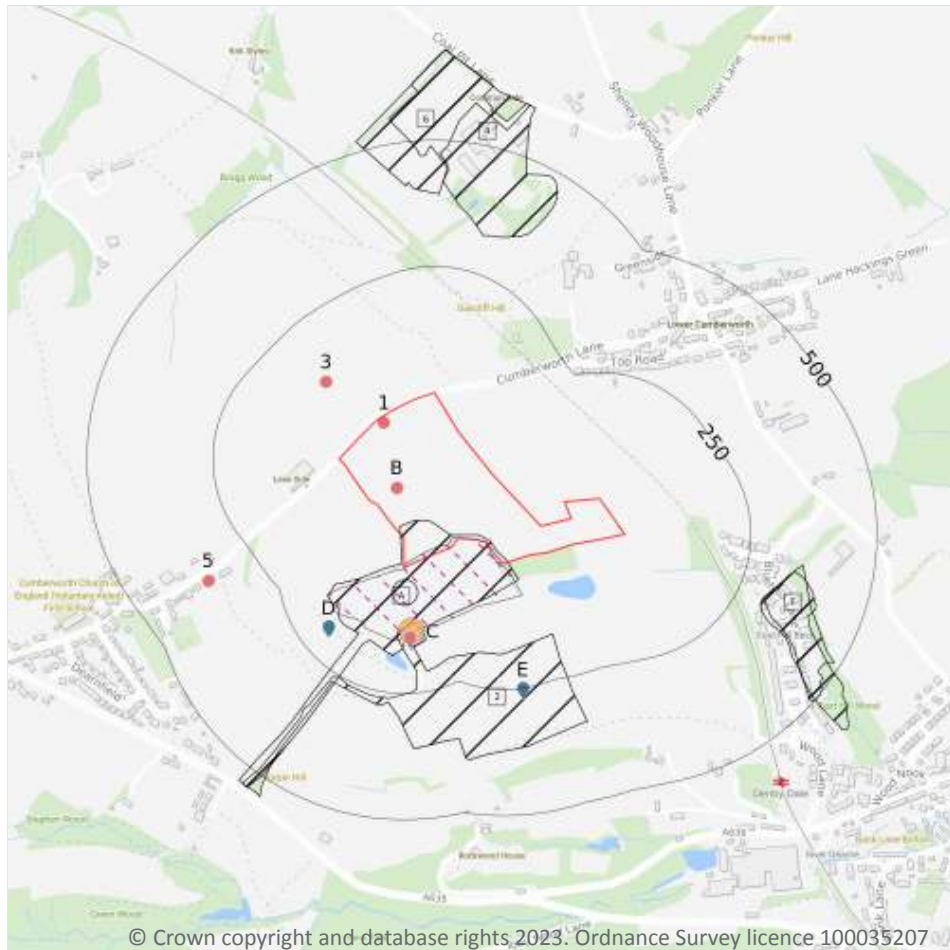
0

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

This data is sourced from Ordnance Survey / Groundsure.



3 Waste and landfill



- Site Outline
- Search buffers in metres (m)
- Historical landfill (EA/NRW)
- Historical landfill (LA/OS)
- Historical waste sites
- Licensed waste sites
- Waste exemptions

3.1 Active or recent landfill

Records within 500m

0

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

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

3.2 Historical landfill (BGS records)

Records within 500m

0

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

This data is sourced from the British Geological Survey.



3.3 Historical landfill (LA/mapping records)

Records within 500m

1

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

Features are displayed on the Waste and landfill map on **page 29**

ID	Location	Site address	Source	Data type
A	On site	Refuse Tip	1994 mapping	Polygon

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

3.4 Historical landfill (EA/NRW records)

Records within 500m

7

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 29**

ID	Location	Details		
A	On site	Site Address: Bromley Farm Quarry, Upper Cumberworth, Denby Dale, West Yorkshire Licence Holder Address: 626 Chiswick High Road, London	Waste Licence: Yes Site Reference: 4700/WDL0289, 4700_0289_818, 4400(98) Waste Type: Inert, Industrial, Commercial, Household Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 26/01/1982 Licence Surrender: 30/04/1994	Operator: - Licence Holder: W W M Hepworth Landfill Limited First Recorded 31/12/1982 Last Recorded: 31/12/1990
A	24m SW	Site Address: Bromley Farm Quarry, Upper Cumberworth, Denby Dale Licence Holder Address: -	Waste Licence: - Site Reference: 4700/WDL1260 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: - Licence Holder: West Yorkshire Waste Management Limited First Recorded - Last Recorded: -



ID	Location	Details		
2	111m S	Site Address: Bromley Farm Quarry, Upper Cumberworth, Denby Dale, West Yorkshire Licence Holder Address: Chantry House, 123 Kirkgate, Wakefield	Waste Licence: - Site Reference: 4700/WDL/1087, WY144, 4700/1087 Waste Type: Inert, Industrial, Commercial, Household Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: West Yorkshire Waste Management Limited Licence Holder: West Yorkshire Waste Management Limited First Recorded: - Last Recorded: -
F	301m E	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: -
F	303m E	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: -
4	325m N	Site Address: Land at Cumberworth Pipe Limited, Coal Pit Lane, Cumberworth Licence Holder Address: Coal Pit Lane, Cumberworth, near Huddersfield	Waste Licence: Yes Site Reference: 4400/0379 Waste Type: Inert, Industrial, Commercial Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 04/08/1983 Licence Surrender: 30/04/1994	Operator: Hargreaves Clearwaste Services Licence Holder: Cumberworth Pipe Limited First Recorded 31/12/1983 Last Recorded: 31/12/1992
6	393m N	Site Address: Coal Pit Lane Landfill, Coal Pit Lane, Upper Denby, Huddersfield, West Yorkshire Licence Holder Address: Scapegoat Hill, Huddersfield, West Yorkshire	Waste Licence: Yes Site Reference: - Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 05/05/2006 Licence Surrender: 03/01/2020	Operator: Blackthorn Recycling Limited Licence Holder: Blackthorn Recycling 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

1

Waste site records derived from Local Authority planning records and high detail historical mapping. Features are displayed on the Waste and landfill map on **page 29**

ID	Location	Address	Further Details	Date
C	101m S	Site Address: Bromley Farm Landfill, Barnsley Road, Upper Cumberworth, HUDDERSFIELD, West Yorkshire, HD8 8	Type of Site: Re-Cycling Centre/Waste Site Planning application reference: 95/62/92581/E0 Description: An application (ref: 95/62/92581/E0) for Detailed Planning permission was submitted to Kirklees B.C. on 14th September 1995. Data source: Historic Planning Application Data Type: Point	-

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

3.6 Licensed waste sites

Records within 500m

9

Active or recently closed waste sites under Environment Agency/Natural Resources Wales regulation. Features are displayed on the Waste and landfill map on **page 29**

ID	Location	Details		
C	141m S	Site Name: Bromley Farm H W R C Site Address: Bromley Farm H W R C, Barnsley Road, Upper Cumberworth, Huddersfield, West Yorkshire, HD8 8PD Correspondence Address: -	Type of Site: Household Waste Amenity Site Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: ING001 EPR reference: EA/EPR/FP3795ZD/V004 Operator: Sita (Kirklees) Limited Waste Management licence No: 61061 Annual Tonnage: 15000	Issue Date: 08/03/1996 Effective Date: - Modified: 05/08/2011 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified



ID	Location	Details		
C	141m S	Site Name: Bromley Farm H W S Site Address: Land/premises At, Barnsley Road, Upper Cumberworth, Huddersfield, West Yorkshire, HD8 8PD Correspondence Address: -	Type of Site: Household Waste Amenity Site Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: ING001 EPR reference: EA/EPR/FP3795ZD/A001 Operator: Sita (kirklees) Limited Waste Management licence No: 61061 Annual Tonnage: 7499	Issue Date: 08/03/1996 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued
C	141m S	Site Name: Bromley Farm H W R C Site Address: Bromley Farm H W R C, Barnsley Road, Upper Cumberworth, Huddersfield, West Yorkshire, HD8 8PD Correspondence Address: -	Type of Site: Household Waste Amenity Site Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: ING001 EPR reference: EA/EPR/FP3795ZD/V004 Operator: Sita (Kirklees) Ltd Waste Management licence No: 61061 Annual Tonnage: 15000	Issue Date: 08/03/1996 Effective Date: - Modified: 05/08/2011 Surrendered Date: 0 Expiry Date: - Cancelled Date: - Status: Modified
C	141m S	Site Name: Bromley Farm H W R C Site Address: Bromley Farm H W R C, Barnsley Road, Upper Cumberworth, Huddersfield, West Yorkshire, HD8 8PD Correspondence Address: -	Type of Site: Household Waste Amenity Site Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: ING001 EPR reference: EA/EPR/FP3795ZD/V006 Operator: Suez Recycling And Recovery Kirklees Limited Waste Management licence No: 61061 Annual Tonnage: 15000	Issue Date: 08/03/1996 Effective Date: - Modified: 05/09/2017 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified
D	193m SW	Site Name: Bromley Farm Quarry Site Address: Bromley Farm Quarry, Barnsley Lane, Upper Cumberworth, South Yorkshire, HD8 8PD Correspondence Address: -	Type of Site: Deposit of waste to land as a recovery operation Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SIL050 EPR reference: EA/EPR/WP3096EM/A001 Operator: Wavin Limited Waste Management licence No: 102620 Annual Tonnage: 50000	Issue Date: 09/05/2013 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued



ID	Location	Details		
D	193m SW	Site Name: Bromley Farm Quarry Site Address: Bromley Farm Quarry, Barnsley Lane, Upper Cumberworth, South Yorkshire, HD8 8PD Correspondence Address: -	Type of Site: Deposit of waste to land as a recovery operation Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: BRA153 EPR reference: EA/EPR/DB3002MD/V002 Operator: Braithwaite Excavations Limited Waste Management licence No: 102620 Annual Tonnage: 100000	Issue Date: 09/05/2013 Effective Date: 16/06/2015 Modified: 07/03/2017 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified
D	193m SW	Site Name: Bromley Farm Quarry Site Address: Bromley Farm Quarry, Barnsley Lane, Upper Cumberworth, South Yorkshire, HD8 8PD Correspondence Address: -	Type of Site: Deposit of waste to land as a recovery operation Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: BRA153 EPR reference: EA/EPR/DB3002MD/V002 Operator: Braithwaite Excavations Limited Waste Management licence No: 102620 Annual Tonnage: 100000	Issue Date: 09/05/2013 Effective Date: 16/06/2015 Modified: 07/03/2017 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified
E	253m S	Site Name: - Site Address: Bromley Works, Denby Dale, Huddersfield, West Yorkshir Correspondence Address: -	Type of Site: Landfill taking other wastes Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: NAY001 EPR reference: EA/EPR/UP3695ZT/S002 Operator: Naylor Bros (Clayware) Ltd Waste Management licence No: 60993 Annual Tonnage: 100000	Issue Date: 22/12/1983 Effective Date: - Modified: - Surrendered Date: Sep 27 1999 12:00AM Expiry Date: - Cancelled Date: - Status: Surrendered



ID	Location	Details		
E	253m S	Site Name: - Site Address: Bromley Works, Denby Dale, Huddersfield, West Yorkshir Correspondence Address: -	Type of Site: Landfill taking other wastes Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: NAY001 EPR reference: EA/EPR/UP3695ZT/S002 Operator: Naylor Bros (Clayware) Ltd Waste Management licence No: 60993 Annual Tonnage: 100000	Issue Date: 22/12/1983 Effective Date: - Modified: - Surrendered Date: Sep 27 1999 12:00AM Expiry Date: - Cancelled Date: - Status: Surrendered

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

3.7 Waste exemptions

Records within 500m	7
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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 29**

ID	Location	Site	Reference	Category	Sub-Category	Description
1	On site	-	WEX105081	Storing waste exemption	On a farm	Storage of sludge
B	On site	-	WEX258496	Storing waste exemption	On a Farm	Storage of sludge
B	On site	-	WEX299548	Storing waste exemption	On a Farm	Storage of sludge
B	On site	-	WEX158117	Storing waste exemption	On a Farm	Storage of sludge
3	124m NW	-	WEX258495	Storing waste exemption	On a Farm	Storage of sludge
C	141m S	Bromley Farm Household Waste Recycling Centre Barnsley Road Huddersfield West Yorkshire HD8 8PD	EPR/PE5851A Q/A001	Storing waste exemption	Both agricultural and non-agricultural waste	Storage of waste in a secure place

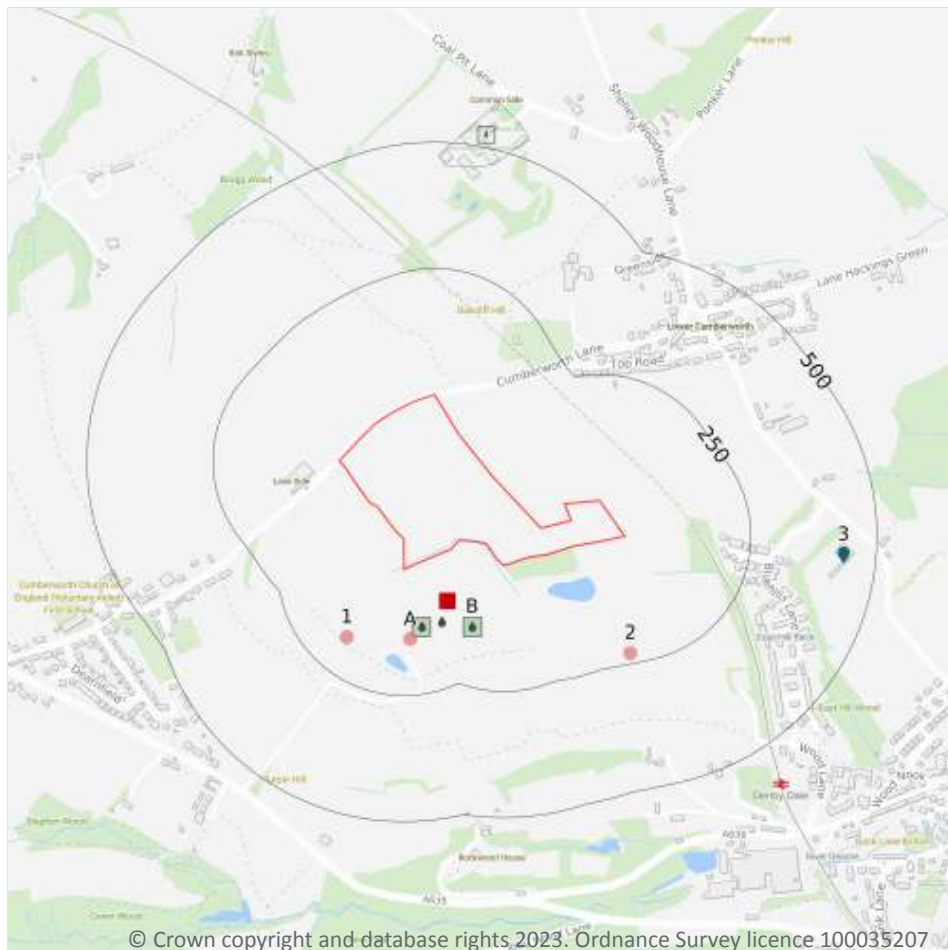


ID	Location	Site	Reference	Category	Sub-Category	Description
5	354m W	Bromley Farm Household Waste Recycling Centre, Barnsley Road, Upper Cumberworth, Huddersfield, HD8 8PD	WEX013223	Storing waste exemption	Not on a farm	Storage of waste in a secure place

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
- Control of Major Accident Hazards
- Licensed pollutant release (Part A(2)/B)
- Licensed Discharges to controlled waters
- List 1 Dangerous Substances
- List 2 Dangerous Substances

4.1 Recent industrial land uses

Records within 250m

3

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 37**

ID	Location	Company	Address	Activity	Category
A	139m S	SITA UK Ltd	Bromley Farm Household Waste Recycling Centre, Barnsley Road, Upper Cumberworth, Huddersfield, West Yorkshire, HD8 8NN	Recycling, Reclamation and Disposal	Recycling Services
1	176m SW	Quarry	West Yorkshire, HD8	Unspecified Quarries Or Mines	Extractive Industries



ID	Location	Company	Address	Activity	Category
2	229m SE	Workings	West Yorkshire, HD8	Unspecified Quarries Or Mines	Extractive Industries

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m	0
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Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

4.3 Electricity cables

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

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

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

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 Sites determined as Contaminated Land

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

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

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m	1
----------------------------	----------

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.

Features are displayed on the Current industrial land use map on **page 37**

ID	Location	Company	Address	Operational status	Tier
4	454m N	Hepworth Clay Products Ltd	Hepworth Clay Products Ltd, Coal Pit Lane, Lower Cumberworth, Huddersfield, HD8 8PL	Historical NIHHS Site	-

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

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

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

This data is sourced from the Health and Safety Executive.

4.8 Hazardous substance storage/usage

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

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

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

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

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

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

4.10 Licensed industrial activities (Part A(1))

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

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

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

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

Records within 500m

1

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

Features are displayed on the Current industrial land use map on **page 37**

ID	Location	Address	Details	
3	435m E	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

6

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 37**

ID	Location	Address	Details	
A	118m S	KITSON QUARRY, UPPER CUMBERWORTH, DENBY DALE, HUDDERSFIELD, WEST YORKSHIRE, HD8 8PD	Effluent Type: TRADE DISCHARGES - UNSPECIFIED Permit Number: C4894 Permit Version: 1 Receiving Water: DITCH TO RIVER DEARNE	Status: REVOKED - UNSPECIFIED Issue date: 09/12/1987 Effective Date: 09/12/1987 Revocation Date: 31/08/1994
A	118m S	KITSON QUARRY, UPPER CUMBERWORTH, DENBY DALE, HUDDERSFIELD, WEST YORKSHIRE, HD8 8PD	Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: C4893 Permit Version: 1 Receiving Water: LAND ADJACENT TO THE SITE	Status: TRANSFERRED FROM COPA 1974 Issue date: 09/12/1987 Effective Date: 09/12/1987 Revocation Date: 25/07/2012

ID	Location	Address	Details	
A	118m S	KITSON QUARRY, UPPER CUMBERWORTH, DENBY DALE, HUDDERSFIELD, WEST YORKSHIRE, HD8 8PD	Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: C4893 Permit Version: 2 Receiving Water: LAND ADJACENT TO THE SITE	Status: SURRENDERED UNDER EPR 2010 Issue date: 26/07/2012 Effective Date: 26/07/2012 Revocation Date: 30/09/2014
A	125m S	KITSON QUARRY, UPPER CUMBERWORTH, DENBY DALE, HUDDERSFIELD, WEST YORKSHIRE, HD8 8PD	Effluent Type: TRADE DISCHARGES - SITE DRAINAGE (CONTAM SURFACE WATER, NOT WASTE SIT Permit Number: C5121 Permit Version: 3 Receiving Water: TRIBUTARY OF EAST HILL BECK	Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 15/06/2005 Effective Date: 15/06/2005 Revocation Date: -
A	125m S	KITSON QUARRY, UPPER CUMBERWORTH, DENBY DALE, HUDDERSFIELD, WEST YORKSHIRE, HD8 8PD	Effluent Type: TRADE DISCHARGES - SITE DRAINAGE (CONTAM SURFACE WATER, NOT WASTE SIT Permit Number: C5121 Permit Version: 2 Receiving Water: TRIBUTARY OF EAST HILL BECK	Status: TRANSFERRED FROM COPA 1974 Issue date: 05/07/1988 Effective Date: 05/07/1988 Revocation Date: 14/06/2005
B	137m S	BROMLEY FARM LANDFILL SITE-SITE DRA, INAGE TO EAST HILL BECK	Effluent Type: TRADE DISCHARGES - UNSPECIFIED Permit Number: 3814 Permit Version: 1 Receiving Water: EAST HILL BECK	Status: REVOKED - UNSPECIFIED Issue date: 29/08/1984 Effective Date: 29/08/1984 Revocation Date: 19/07/1994

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

2

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.

Features are displayed on the Current industrial land use map on **page 37**

ID	Location	Name	Status	Receiving Water	Authorised Substances
A	92m S	Bromley Farm Landfill Site Surface Water, Wakefield	Not Active	Dearne, Don	Mercury (other), Cadmium
B	137m S	Bromley Farm Landfill Site Site Drainage	Not Active	Dearne, Any, Don	Mercury (other), Cadmium

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

4.17 List 2 Dangerous Substances

Records within 500m

2

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.

Features are displayed on the Current industrial land use map on **page 37**

ID	Location	Name	Status	Receiving Water	Authorised Substances
A	119m S	Bromley Farm Landfill Site	Not Active	River Dearne	Iron
B	137m S	Bromley Farm Landfill Site - Site Drainage	Not Active	River Dearne	Chromium, Copper, Iron, Lead, Zinc

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

4.18 Pollution Incidents (EA/NRW)

Records within 500m

0

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

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



4.19 Pollution inventory substances

Records within 500m**0**

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

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

4.20 Pollution inventory waste transfers

Records within 500m**0**

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

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

4.21 Pollution inventory radioactive waste

Records within 500m**0**

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

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

5 Geology (basic)

5.1 Superficial geology (625k)

Records within 500m**0**

Generalised geology data based on BGS's published poster maps of the UK (North and South). Superficial related themes digitised from 1977 first edition Quaternary map (North and South).

This data is sourced from the British Geological Survey.

5.2 Bedrock geology (625k)

Records within 500m**1**

Generalised geology data based on BGS's published poster maps of the UK (North and South). Bedrock related themes created through generalisation of 1:50,000 data.

Location	Lex code	Description	Rock type
On site	PSLCM-MSCI	PENNINE LOWER COAL MEASURES FORMATION AND SOUTH WALES LOWER COAL MEASURES FORMATION (UNDIFFERENTIATED)	MUDSTONE, SILTSTONE, SANDSTONE, COAL, IRONSTONE AND FERRICRETE

This data is sourced from the British Geological Survey.



6 Hydrogeology - Superficial aquifer

6.1 Superficial aquifer

Records within 500m

0

Aquifer status of groundwater held within superficial geology.

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



Bedrock aquifer



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

6.2 Bedrock aquifer

Records within 500m

1

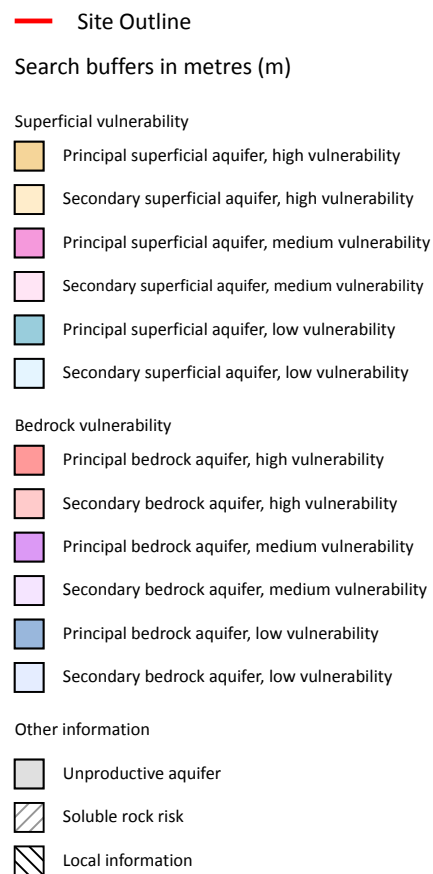
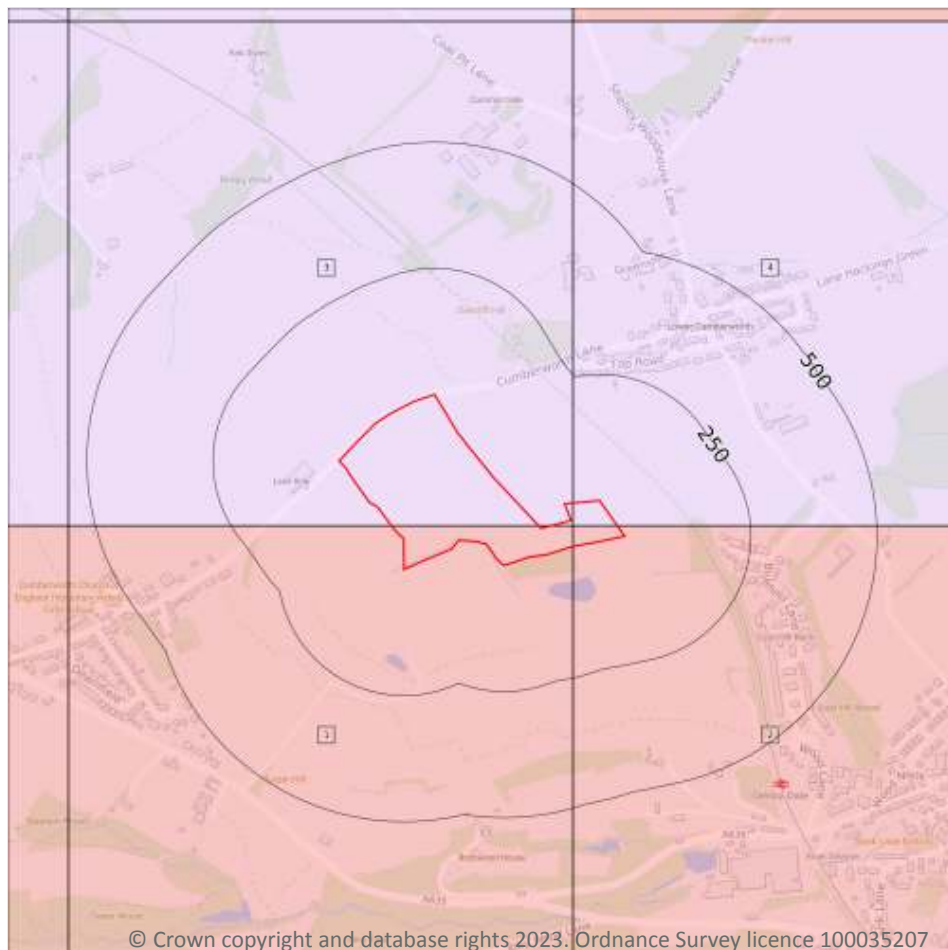
Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on [page 46](#)

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



6.3 Groundwater vulnerability

Records within 50m

4

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 47**

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
2	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
3	On site	Summary Classification: Secondary bedrock aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: 300- 550mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data	Vulnerability: Medium Aquifer type: Secondary Flow mechanism: Well connected fractures
4	On site	Summary Classification: Secondary bedrock aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: 300- 550mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data	Vulnerability: Medium Aquifer type: Secondary Flow mechanism: Well connected fractures

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

6.4 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.

6.5 Groundwater vulnerability- local information

Records on site

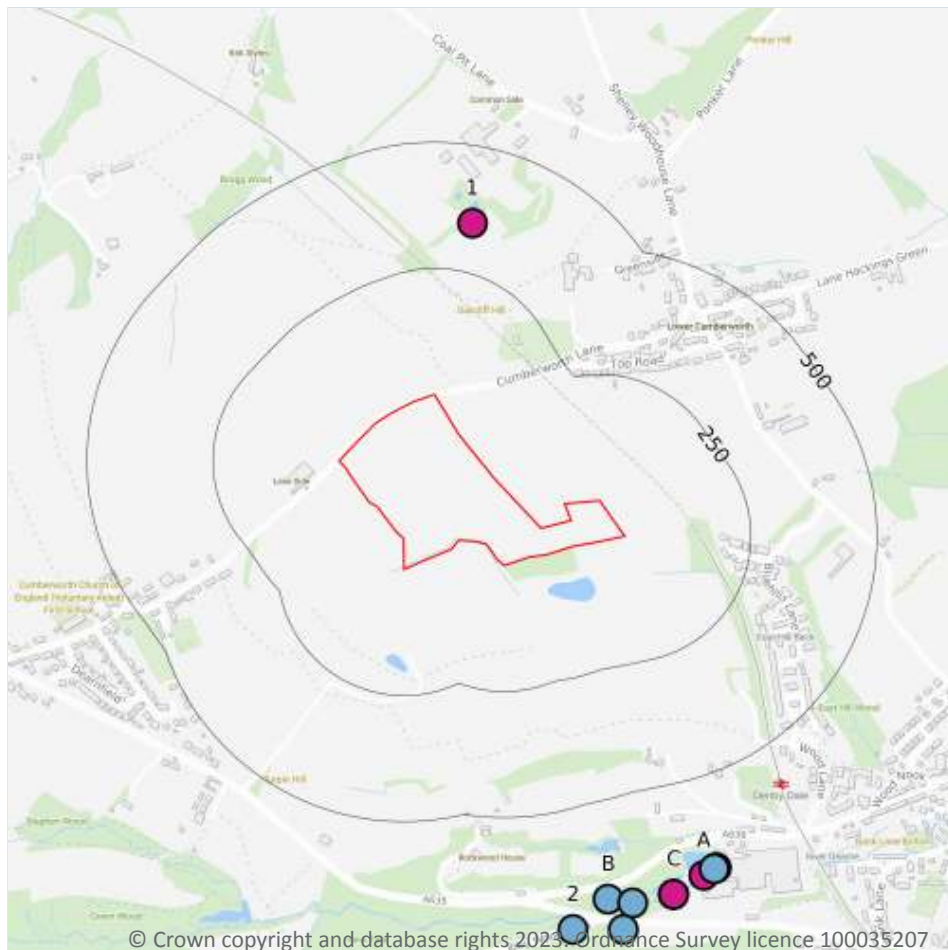
0

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

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



Abstractions and Source Protection Zones



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

6.6 Groundwater abstractions

Records within 2000m

28

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 49**

ID	Location	Details	
1	347m N	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: -
A	690m SE	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): 52,000 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: -
C	714m SE	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: -
C	714m SE	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	
C	714m SE	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: -
C	714m SE	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: -
C	714m SE	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: -
C	714m SE	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: -
-	1143m E	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: -



ID	Location	Details	
-	1143m E	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: -
-	1405m W	Status: Active Licence No: 2/27/11/030 Details: Water Bottling Direct Source: GROUNDWATERS Point: BOREHOLE - D - S2 - LOWER COAL MEASURES - SHEPLEY Data Type: Point Name: PENMOOR UK LTD Easting: 420150 Northing: 409360	Annual Volume (m ³): 96,000 Max Daily Volume (m ³): 263 Original Application No: NPS/WR/034660 Original Start Date: 14/12/1965 Expiry Date: - Issue No: 106 Version Start Date: 06/12/2021 Version End Date: -
-	1476m W	Status: Active Licence No: NE/027/0006/030 Details: Dewatering Direct Source: GROUNDWATERS Point: SOVEREIGN QUARRY, UPPER CUMBERWORTH, HUDDERSFIELD Data Type: Poly4 Name: Marshalls Mono Ltd Easting: 419436 Northing: 408891	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: NPS/NA/001159 Original Start Date: 26/03/2021 Expiry Date: 31/03/2027 Issue No: 1 Version Start Date: 26/03/2021 Version End Date: -
-	1511m W	Status: Active Licence No: 2/27/11/030 Details: Water Bottling Direct Source: GROUNDWATERS Point: BOREHOLE - B - S2 - LOWER COAL MEASURES - SHEPLEY Data Type: Point Name: PENMOOR UK LTD Easting: 420026 Northing: 409089	Annual Volume (m ³): 96,000 Max Daily Volume (m ³): 263 Original Application No: NPS/WR/034660 Original Start Date: 14/12/1965 Expiry Date: - Issue No: 106 Version Start Date: 06/12/2021 Version End Date: -
-	1536m W	Status: Historical Licence No: 2/27/11/189 Details: Water Bottling Direct Source: GROUNDWATERS Point: BOREHOLE-COAL MEASURES-SHEPLEY Data Type: Point Name: SHEPLEY SPRING LTD Easting: 420000 Northing: 409090	Annual Volume (m ³): 122640 Max Daily Volume (m ³): 336 Original Application No: - Original Start Date: 23/01/2004 Expiry Date: 31/03/2015 Issue No: 1 Version Start Date: 23/01/2004 Version End Date: -



ID	Location	Details	
-	1619m W	Status: Historical Licence No: 2/27/11/189 Details: Water Bottling Direct Source: GROUNDWATERS Point: BOREHOLE-COAL MEASURES-SHEPLEY Data Type: Point Name: SHEPLEY SPRING LTD Easting: 419940 Northing: 409400	Annual Volume (m ³): 122640 Max Daily Volume (m ³): 336 Original Application No: - Original Start Date: 23/01/2004 Expiry Date: 31/03/2015 Issue No: 1 Version Start Date: 23/01/2004 Version End Date: -
-	1751m S	Status: Historical Licence No: 2/27/08/079 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: WELL X2 Data Type: Point Name: PELL Easting: 421300 Northing: 407200	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 30/06/1966 Expiry Date: - Issue No: 100 Version Start Date: 13/07/1966 Version End Date: -
-	1751m S	Status: Historical Licence No: 2/27/08/079 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: WELL X2 - COAL MEASURES - HIGH FLATTS Data Type: Point Name: PELL Easting: 421300 Northing: 407200	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 30/06/1966 Expiry Date: - Issue No: 100 Version Start Date: 13/07/1966 Version End Date: -
-	1817m W	Status: Historical Licence No: 2/27/11/030 Details: Water Bottling Direct Source: GROUNDWATERS Point: BOREHOLE - LOWER COAL MEASURES - EASTFIELD MILLS SHEPLEY Data Type: Point Name: PENMOOR UK LIMITED Easting: 419840 Northing: 409780	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 14/12/1965 Expiry Date: - Issue No: 101 Version Start Date: 01/07/2000 Version End Date: -
-	1817m W	Status: Historical Licence No: 2/27/11/030 Details: Water Bottling Direct Source: GROUNDWATERS Point: BOREHOLE - LOWER COAL MEASURES - SHEPLEY Data Type: Point Name: PENMOOR UK LTD Easting: 419840 Northing: 409780	Annual Volume (m ³): 77000 Max Daily Volume (m ³): 211 Original Application No: - Original Start Date: 14/12/1965 Expiry Date: - Issue No: 103 Version Start Date: 21/02/2011 Version End Date: -



ID	Location	Details	
-	1817m W	Status: Historical Licence No: 2/27/11/030 Details: Water Bottling Direct Source: GROUNDWATERS Point: BOREHOLE - S2 - LOWER COAL MEASURES - SHEPLEY Data Type: Point Name: PENMOOR UK LTD Easting: 419840 Northing: 409780	Annual Volume (m ³): 77,000 Max Daily Volume (m ³): 211 Original Application No: - Original Start Date: 14/12/1965 Expiry Date: - Issue No: 104 Version Start Date: 20/02/2019 Version End Date: -
-	1858m W	Status: Active Licence No: 2/27/11/030 Details: Water Bottling Direct Source: GROUNDWATERS Point: BOREHOLE - A - S1 - LOWER COAL MEASURES - SHEPLEY Data Type: Point Name: PENMOOR UK LTD Easting: 419810 Northing: 409816	Annual Volume (m ³): 96,000 Max Daily Volume (m ³): 263 Original Application No: NPS/WR/034660 Original Start Date: 14/12/1965 Expiry Date: - Issue No: 106 Version Start Date: 06/12/2021 Version End Date: -
-	1859m W	Status: Historical Licence No: 2/27/11/030 Details: Water Bottling Direct Source: GROUNDWATERS Point: BOREHOLE - LOWER COAL MEASURES - EASTFIELD MILLS SHEPLEY Data Type: Point Name: PENMOOR UK LIMITED Easting: 419810 Northing: 409820	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 14/12/1965 Expiry Date: - Issue No: 101 Version Start Date: 01/07/2000 Version End Date: -
-	1859m W	Status: Historical Licence No: 2/27/11/030 Details: Water Bottling Direct Source: GROUNDWATERS Point: BOREHOLE - LOWER COAL MEASURES - SHEPLEY Data Type: Point Name: PENMOOR UK LTD Easting: 419810 Northing: 409820	Annual Volume (m ³): 77000 Max Daily Volume (m ³): 211 Original Application No: - Original Start Date: 14/12/1965 Expiry Date: - Issue No: 103 Version Start Date: 21/02/2011 Version End Date: -



ID	Location	Details	
-	1859m W	Status: Historical Licence No: 2/27/11/030 Details: Water Bottling Direct Source: GROUNDWATERS Point: BOREHOLE - S1 - LOWER COAL MEASURES - SHEPLEY Data Type: Point Name: PENMOOR UK LTD Easting: 419810 Northing: 409820	Annual Volume (m ³): 77,000 Max Daily Volume (m ³): 211 Original Application No: - Original Start Date: 14/12/1965 Expiry Date: - Issue No: 104 Version Start Date: 20/02/2019 Version End Date: -
-	1880m W	Status: Active Licence No: 2/27/11/030 Details: Water Bottling Direct Source: GROUNDWATERS Point: BOREHOLE - C - S3 - LOWER COAL MEASURES - SHEPLEY Data Type: Point Name: PENMOOR UK LTD Easting: 419782 Northing: 409806	Annual Volume (m ³): 96,000 Max Daily Volume (m ³): 263 Original Application No: NPS/WR/034660 Original Start Date: 14/12/1965 Expiry Date: - Issue No: 106 Version Start Date: 06/12/2021 Version End Date: -
-	1887m W	Status: Historical Licence No: 2/27/11/030 Details: Water Bottling Direct Source: GROUNDWATERS Point: BOREHOLE - LOWER COAL MEASURES - EASTFIELD MILL SHEPLEY Data Type: Point Name: PENMOOR UK LIMITED Easting: 419780 Northing: 409820	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 14/12/1965 Expiry Date: - Issue No: 101 Version Start Date: 01/07/2000 Version End Date: -
-	1887m W	Status: Historical Licence No: 2/27/11/030 Details: Water Bottling Direct Source: GROUNDWATERS Point: BOREHOLE - LOWER COAL MEASURES - SHEPLEY Data Type: Point Name: PENMOOR UK LTD Easting: 419780 Northing: 409820	Annual Volume (m ³): 77000 Max Daily Volume (m ³): 211 Original Application No: - Original Start Date: 14/12/1965 Expiry Date: - Issue No: 103 Version Start Date: 21/02/2011 Version End Date: -

ID	Location	Details	
-	1887m W	Status: Historical Licence No: 2/27/11/030 Details: Water Bottling Direct Source: GROUNDWATERS Point: BOREHOLE - S3 - LOWER COAL MEASURES - SHEPLEY Data Type: Point Name: PENMOOR UK LTD Easting: 419780 Northing: 409820	Annual Volume (m ³): 77,000 Max Daily Volume (m ³): 211 Original Application No: - Original Start Date: 14/12/1965 Expiry Date: - Issue No: 104 Version Start Date: 20/02/2019 Version End Date: -

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

6.7 Surface water abstractions

Records within 2000m	12
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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 49**

ID	Location	Details	
A	681m SE	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): 68,182 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: -
A	681m SE	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): 68,182 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: -

ID	Location	Details	
A	682m SE	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: -
A	682m SE	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: -
B	692m S	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: -
B	711m SE	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: -



ID	Location	Details	
2	734m S	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: -
3	758m S	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: -
-	1809m 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: 420127 Northing: 407960	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: -
-	1815m 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: 420120 Northing: 407960	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	
-	1864m 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: 420100 Northing: 407900	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: -
-	1881m 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: 419900 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.

6.8 Potable abstractions

Records within 2000m	15
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Licensed potable water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on **page 49**

ID	Location	Details	
-	1405m W	Status: Active Licence No: 2/27/11/030 Details: Water Bottling Direct Source: GROUNDWATERS Point: BOREHOLE - D - S2 - LOWER COAL MEASURES - SHEPLEY Data Type: Point Name: PENMOOR UK LTD Easting: 420150 Northing: 409360	Annual Volume (m ³): 96,000 Max Daily Volume (m ³): 263 Original Application No: NPS/WR/034660 Original Start Date: 14/12/1965 Expiry Date: - Issue No: 106 Version Start Date: 06/12/2021 Version End Date: -

ID	Location	Details	
-	1511m W	Status: Active Licence No: 2/27/11/030 Details: Water Bottling Direct Source: GROUNDWATERS Point: BOREHOLE - B - S2 - LOWER COAL MEASURES - SHEPLEY Data Type: Point Name: PENMOOR UK LTD Easting: 420026 Northing: 409089	Annual Volume (m ³): 96,000 Max Daily Volume (m ³): 263 Original Application No: NPS/WR/034660 Original Start Date: 14/12/1965 Expiry Date: - Issue No: 106 Version Start Date: 06/12/2021 Version End Date: -
-	1536m W	Status: Historical Licence No: 2/27/11/189 Details: Water Bottling Direct Source: GROUNDWATERS Point: BOREHOLE-COAL MEASURES-SHEPLEY Data Type: Point Name: SHEPLEY SPRING LTD Easting: 420000 Northing: 409090	Annual Volume (m ³): 122640 Max Daily Volume (m ³): 336 Original Application No: - Original Start Date: 23/01/2004 Expiry Date: 31/03/2015 Issue No: 1 Version Start Date: 23/01/2004 Version End Date: -
-	1619m W	Status: Historical Licence No: 2/27/11/189 Details: Water Bottling Direct Source: GROUNDWATERS Point: BOREHOLE-COAL MEASURES-SHEPLEY Data Type: Point Name: SHEPLEY SPRING LTD Easting: 419940 Northing: 409400	Annual Volume (m ³): 122640 Max Daily Volume (m ³): 336 Original Application No: - Original Start Date: 23/01/2004 Expiry Date: 31/03/2015 Issue No: 1 Version Start Date: 23/01/2004 Version End Date: -
-	1817m W	Status: Historical Licence No: 2/27/11/030 Details: Water Bottling Direct Source: GROUNDWATERS Point: BOREHOLE - LOWER COAL MEASURES - EASTFIELD MILLS SHEPLEY Data Type: Point Name: PENMOOR UK LIMITED Easting: 419840 Northing: 409780	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 14/12/1965 Expiry Date: - Issue No: 101 Version Start Date: 01/07/2000 Version End Date: -
-	1817m W	Status: Historical Licence No: 2/27/11/030 Details: Water Bottling Direct Source: GROUNDWATERS Point: BOREHOLE - LOWER COAL MEASURES - SHEPLEY Data Type: Point Name: PENMOOR UK LTD Easting: 419840 Northing: 409780	Annual Volume (m ³): 77000 Max Daily Volume (m ³): 211 Original Application No: - Original Start Date: 14/12/1965 Expiry Date: - Issue No: 103 Version Start Date: 21/02/2011 Version End Date: -



ID	Location	Details	
-	1817m W	Status: Historical Licence No: 2/27/11/030 Details: Water Bottling Direct Source: GROUNDWATERS Point: BOREHOLE - S2 - LOWER COAL MEASURES - SHEPLEY Data Type: Point Name: PENMOOR UK LTD Easting: 419840 Northing: 409780	Annual Volume (m ³): 77,000 Max Daily Volume (m ³): 211 Original Application No: - Original Start Date: 14/12/1965 Expiry Date: - Issue No: 104 Version Start Date: 20/02/2019 Version End Date: -
-	1858m W	Status: Active Licence No: 2/27/11/030 Details: Water Bottling Direct Source: GROUNDWATERS Point: BOREHOLE - A - S1 - LOWER COAL MEASURES - SHEPLEY Data Type: Point Name: PENMOOR UK LTD Easting: 419810 Northing: 409816	Annual Volume (m ³): 96,000 Max Daily Volume (m ³): 263 Original Application No: NPS/WR/034660 Original Start Date: 14/12/1965 Expiry Date: - Issue No: 106 Version Start Date: 06/12/2021 Version End Date: -
-	1859m W	Status: Historical Licence No: 2/27/11/030 Details: Water Bottling Direct Source: GROUNDWATERS Point: BOREHOLE - LOWER COAL MEASURES - EASTFIELD MILLS SHEPLEY Data Type: Point Name: PENMOOR UK LIMITED Easting: 419810 Northing: 409820	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 14/12/1965 Expiry Date: - Issue No: 101 Version Start Date: 01/07/2000 Version End Date: -
-	1859m W	Status: Historical Licence No: 2/27/11/030 Details: Water Bottling Direct Source: GROUNDWATERS Point: BOREHOLE - LOWER COAL MEASURES - SHEPLEY Data Type: Point Name: PENMOOR UK LTD Easting: 419810 Northing: 409820	Annual Volume (m ³): 77000 Max Daily Volume (m ³): 211 Original Application No: - Original Start Date: 14/12/1965 Expiry Date: - Issue No: 103 Version Start Date: 21/02/2011 Version End Date: -

ID	Location	Details	
-	1859m W	Status: Historical Licence No: 2/27/11/030 Details: Water Bottling Direct Source: GROUNDWATERS Point: BOREHOLE - S1 - LOWER COAL MEASURES - SHEPLEY Data Type: Point Name: PENMOOR UK LTD Easting: 419810 Northing: 409820	Annual Volume (m ³): 77,000 Max Daily Volume (m ³): 211 Original Application No: - Original Start Date: 14/12/1965 Expiry Date: - Issue No: 104 Version Start Date: 20/02/2019 Version End Date: -
-	1880m W	Status: Active Licence No: 2/27/11/030 Details: Water Bottling Direct Source: GROUNDWATERS Point: BOREHOLE - C - S3 - LOWER COAL MEASURES - SHEPLEY Data Type: Point Name: PENMOOR UK LTD Easting: 419782 Northing: 409806	Annual Volume (m ³): 96,000 Max Daily Volume (m ³): 263 Original Application No: NPS/WR/034660 Original Start Date: 14/12/1965 Expiry Date: - Issue No: 106 Version Start Date: 06/12/2021 Version End Date: -
-	1887m W	Status: Historical Licence No: 2/27/11/030 Details: Water Bottling Direct Source: GROUNDWATERS Point: BOREHOLE - LOWER COAL MEASURES - EASTFIELD MILL SHEPLEY Data Type: Point Name: PENMOOR UK LIMITED Easting: 419780 Northing: 409820	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 14/12/1965 Expiry Date: - Issue No: 101 Version Start Date: 01/07/2000 Version End Date: -
-	1887m W	Status: Historical Licence No: 2/27/11/030 Details: Water Bottling Direct Source: GROUNDWATERS Point: BOREHOLE - LOWER COAL MEASURES - SHEPLEY Data Type: Point Name: PENMOOR UK LTD Easting: 419780 Northing: 409820	Annual Volume (m ³): 77000 Max Daily Volume (m ³): 211 Original Application No: - Original Start Date: 14/12/1965 Expiry Date: - Issue No: 103 Version Start Date: 21/02/2011 Version End Date: -

ID	Location	Details	
-	1887m W	Status: Historical Licence No: 2/27/11/030 Details: Water Bottling Direct Source: GROUNDWATERS Point: BOREHOLE - S3 - LOWER COAL MEASURES - SHEPLEY Data Type: Point Name: PENMOOR UK LTD Easting: 419780 Northing: 409820	Annual Volume (m ³): 77,000 Max Daily Volume (m ³): 211 Original Application No: - Original Start Date: 14/12/1965 Expiry Date: - Issue No: 104 Version Start Date: 20/02/2019 Version End Date: -

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

6.9 Source Protection Zones

Records within 500m	0
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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.

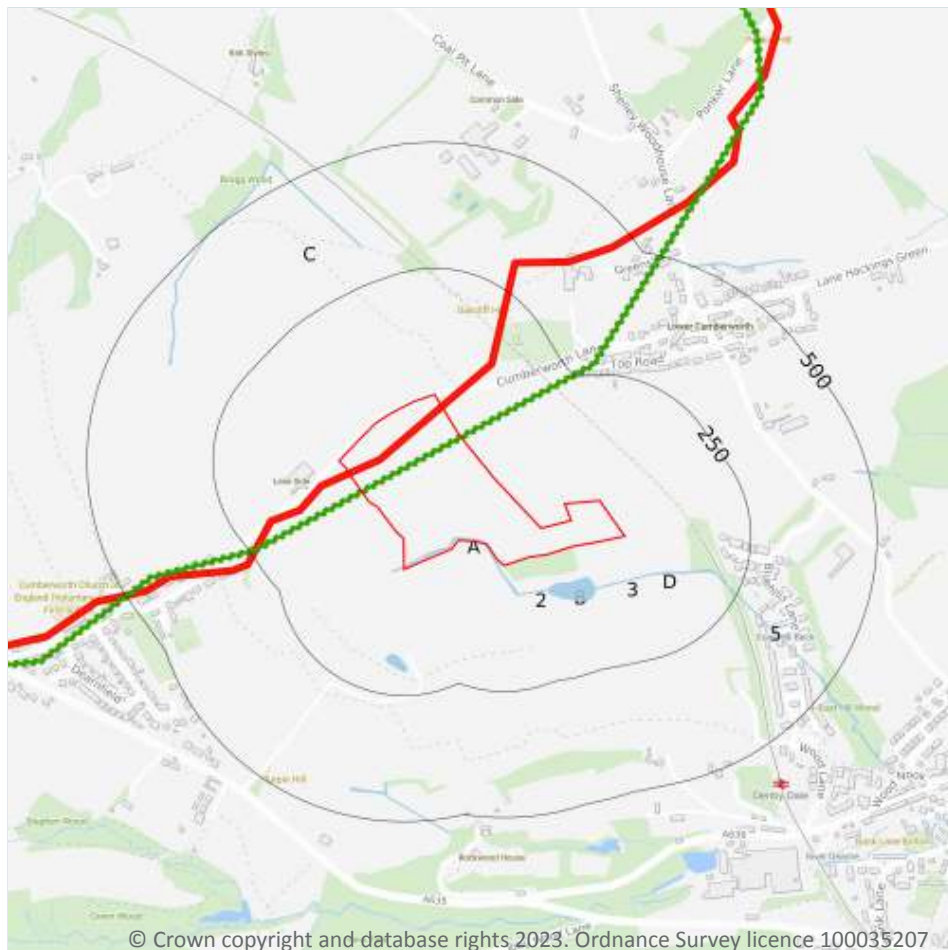
6.10 Source Protection Zones (confined aquifer)

Records within 500m	0
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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.

7 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

7.1 Water Network (OS MasterMap)

Records within 250m

7

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 64**

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



ID	Location	Type of water feature	Ground level	Permanence	Name
2	64m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	70m SE	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
3	86m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	East Hill Beck
D	93m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	East Hill Beck
D	110m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	East Hill Beck
5	192m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	East Hill Beck

This data is sourced from the Ordnance Survey.

7.2 Surface water features

Records within 250m

4

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 64**

This data is sourced from the Ordnance Survey.

7.3 WFD Surface water body catchments

Records on site

2

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 64**



ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
B	On site	River	Dearne from Source to Bentley Brook	GB104027063220	Dearne	Don and Rother
C	On site	River	Fenay beck from Source to River Colne	GB104027063340	Colne and Holme	Aire and Calder

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

7.4 WFD Surface water bodies

Records identified	2
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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 64**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	654m SE	River	Dearne from Source to Bentley Brook	GB104027063220	Moderate	Fail	Moderate	2019
-	708m W	River	Fenay beck from Source to River Colne	GB104027063340	Moderate	Fail	Moderate	2019

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

7.5 WFD Groundwater bodies

Records on site	2
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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 64**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
B	On site	Don & Rother Millstone grit & Coal Measures	<u>GB40402G992300</u>	Poor	Poor	Good	2019
C	On site	Aire & Calder Carb Limestone / Millstone Grit / Coal Measures.	<u>GB40402G700400</u>	Poor	Poor	Good	2019

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



8 River and coastal flooding

8.1 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.

8.2 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.

8.3 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.



8.4 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.

8.5 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

8.6 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.

8.7 Flood Zone 3

Records within 50m

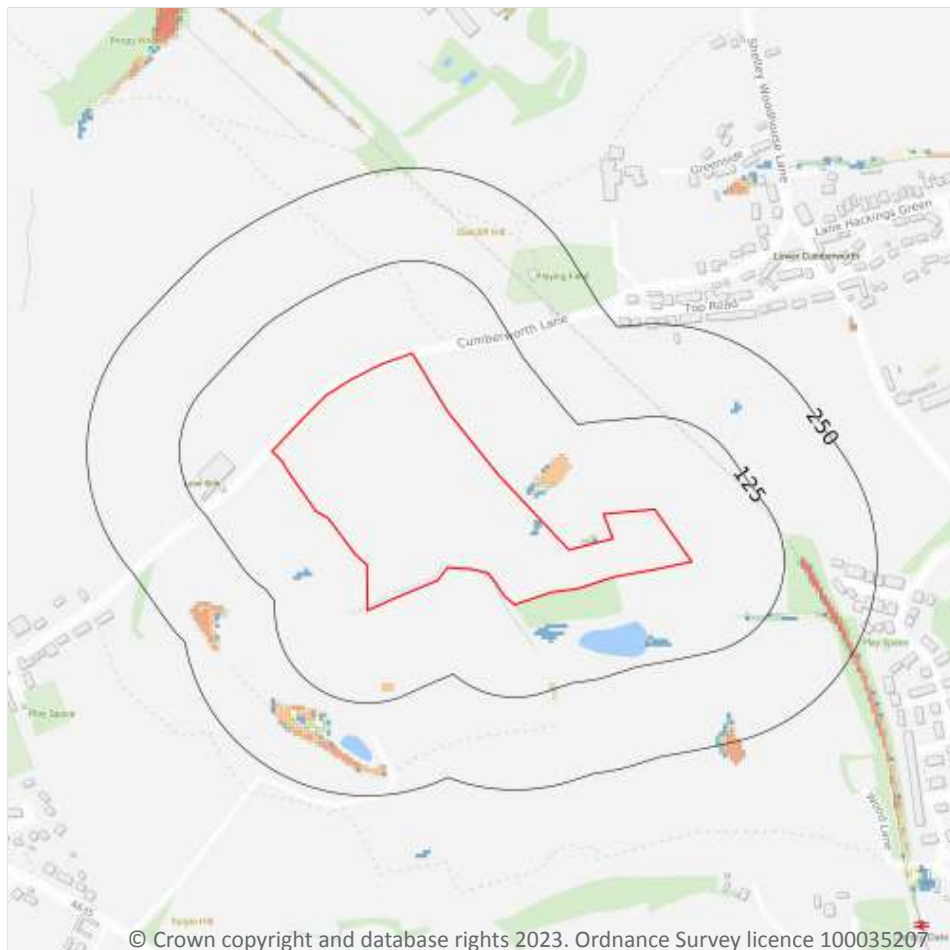
0

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.



9 Surface water flooding



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— Site Outline

Search buffers in metres (m)

1 in 1000 return period

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

1 in 250 return period

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

1 in 100 return period

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

1 in 30 return period

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

9.1 Surface water flooding

Highest risk on site

1 in 250 year, 0.3m - 1.0m

Highest risk within 50m

1 in 30 year, 0.1m - 0.3m

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 71**

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

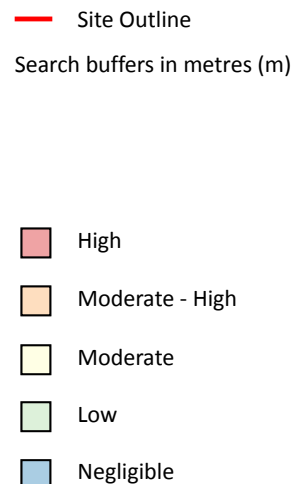
The table below shows the maximum flood depths for a range of return periods for the site.

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

This data is sourced from Ambiental Risk Analytics.



10 Groundwater flooding



10.1 Groundwater flooding

Highest risk on site

Negligible

Highest risk within 50m

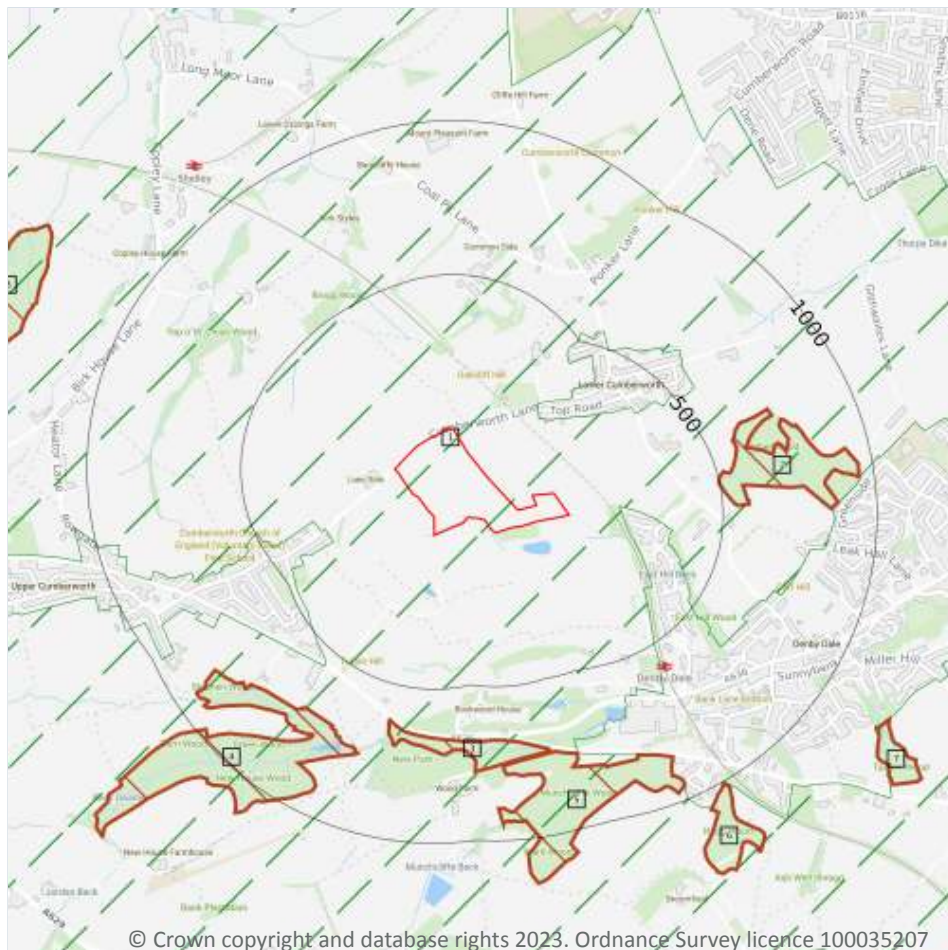
Negligible

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 73**

This data is sourced from Ambiantal Risk Analytics.

11 Environmental designations



- Site Outline
- Search buffers in metres (m)
- Designated Ancient Woodland
- Green Belt

11.1 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.

11.2 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.

11.3 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.

11.4 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.

11.5 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.

11.6 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.

11.7 Designated Ancient Woodland

Records within 2000m

7

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 74**

ID	Location	Name	Woodland Type
2	498m E	Wither Wood	Ancient Replanted Woodland
3	617m S	Munchcliffe And Ward Woods	Ancient Replanted Woodland
4	698m SW	New House, Green And Burn Woods	Ancient Replanted Woodland
5	735m S	Munchcliffe And Ward Woods	Ancient Replanted Woodland
6	1006m SE	Hagg Wood	Ancient Replanted Woodland
7	1218m SE	Tanner Wood	Ancient & Semi-Natural Woodland
8	1283m NW	Yew Tree Wood	Ancient Replanted Woodland

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

11.8 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.



11.9 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.

11.10 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.

11.11 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 74**

ID	Location	Name	Local Authority name
1	On site	South and West Yorkshire	Kirklees
-	1961m SE	South and West Yorkshire	Kirklees
-	1970m SE	South and West Yorkshire	Barnsley

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

11.12 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.



11.13 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.

11.14 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.

11.15 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.

11.16 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

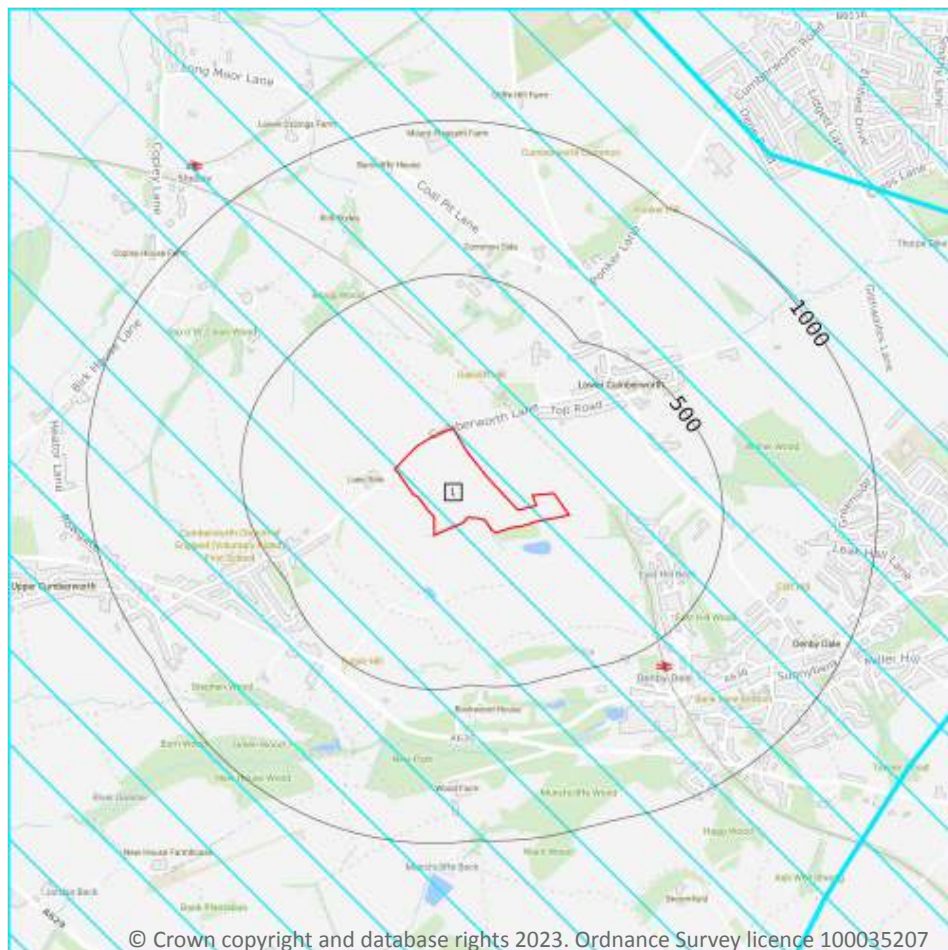


Location	Name	Type	NVZ ID	Status
1989m E	River Dearne NVZ	Surface Water	278	Existing

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

11.17 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 80**

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.

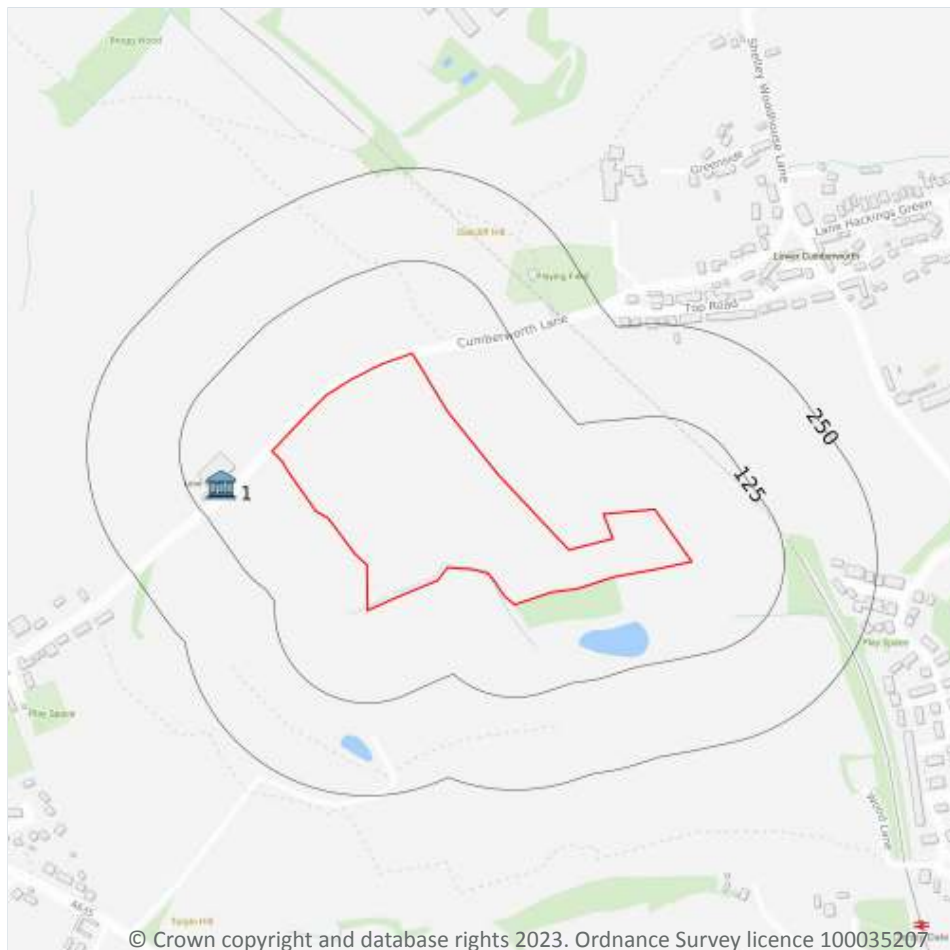
11.18 SSSI Units

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.

12 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

12.1 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.

12.2 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.

12.3 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.

12.4 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 82**

ID	Location	Name	Grade	Reference Number	Listed date
1	83m W	Lane Side House To East of Group, Denby Dale, Kirklees, HD8	II	1135296	15/08/1985

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



12.5 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.

12.6 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.

12.7 Registered Parks and Gardens

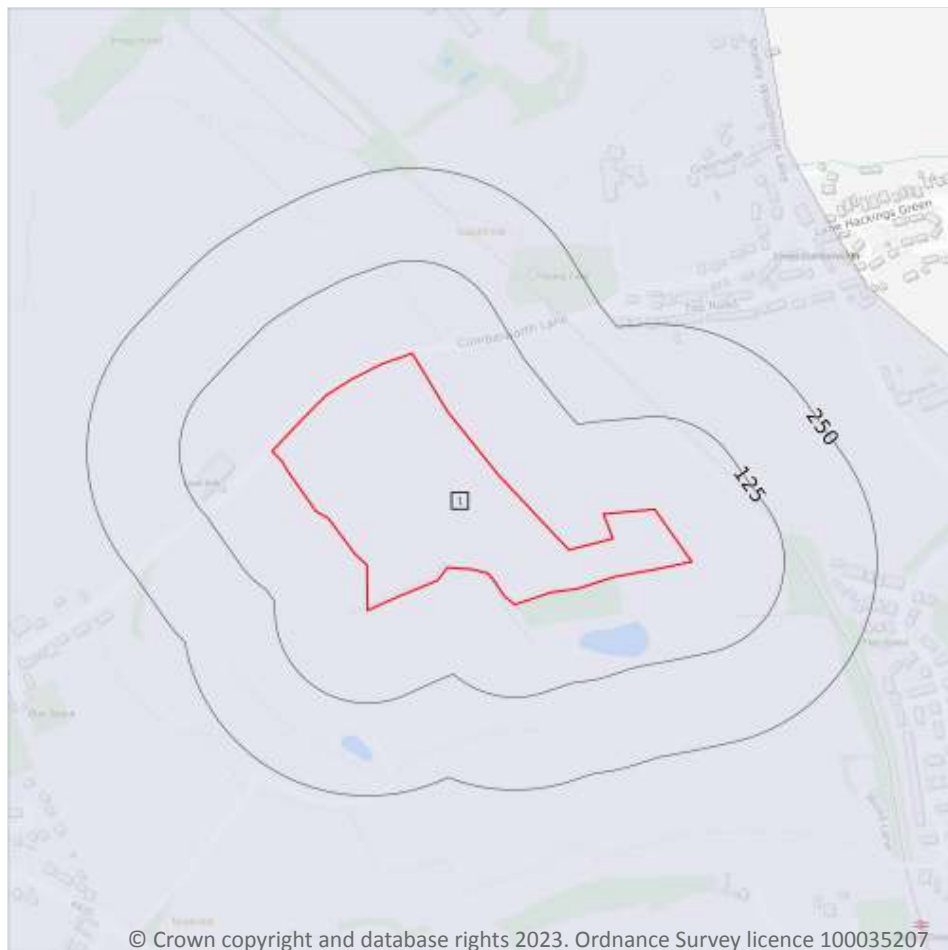
Records within 250m

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.

13 Agricultural designations



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- 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

13.1 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 85**

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.

13.2 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.

13.3 Tree Felling Licences

Records within 250m

0

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

This data is sourced from the Forestry Commission.

13.4 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.

13.5 Countryside Stewardship Schemes

Records within 250m

0

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

This data is sourced from Natural England.



14 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

14.1 Priority Habitat Inventory

Records within 250m

4

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 87**

ID	Location	Main Habitat	Other habitats
A	On site	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
A	32m SE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
1	121m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
3	241m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%); Additional: LDAGR (INV 50%)

This data is sourced from Natural England.

14.2 Habitat Networks

Records within 250m

1

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.

Features are displayed on the Habitat designations map on **page 87**

ID	Location	Type	Habitat
2	221m SW	Network Enhancement Zone 1	Not specified

This data is sourced from Natural England.

14.3 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.

14.4 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.



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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BROMLEY FARM QUARRY, BARNSLEY ROAD, UPPER CUMBERWORTH, HUDDERSFIELD, HD8 8PD

Order Details

Date: 12/01/2023

Your ref: 22007

Our Ref: GS-9294165

Site Details

Location: 421716 409084

Area: 8.34 ha

Authority: [Kirklees Council](#)



Summary of findings

p. 2 **Aerial image**

p. 5

OS MasterMap site plan

p. 9 groundsure.com/insightuserguide

Contact us with any questions at:

info@groundsure.com

08444 159 000

Summary of findings

Page	Section	Geology 1:10,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
10	1.1	10k Availability	Identified (within 500m)				
11	1.2	Artificial and made ground (10k)	2	2	8	8	-
13	1.3	Superficial geology (10k)	0	0	0	0	-
13	1.4	Landslip (10k)	0	0	0	0	-
14	1.5	Bedrock geology (10k)	3	0	14	11	-
16	1.6	Bedrock faults and other linear features (10k)	6	2	23	27	-
Page	Section	Geology 1:50,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
19	2.1	50k Availability	Identified (within 500m)				
20	2.2	Artificial and made ground (50k)	2	1	2	5	-
21	2.3	Artificial ground permeability (50k)	1	1	-	-	-
22	2.4	Superficial geology (50k)	0	0	0	0	-
22	2.5	Superficial permeability (50k)	None (within 50m)				
22	2.6	Landslip (50k)	0	0	0	0	-
22	2.7	Landslip permeability (50k)	None (within 50m)				
23	2.8	Bedrock geology (50k)	3	0	13	10	-
25	2.9	Bedrock permeability (50k)	Identified (within 50m)				
25	2.10	Bedrock faults and other linear features (50k)	6	2	19	25	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
28	3.1	BGS Boreholes	0	4	8	-	-
Page	Section	Natural ground subsidence					
30	4.1	Shrink swell clays	Very low (within 50m)				
31	4.2	Running sands	Very low (within 50m)				
33	4.3	Compressible deposits	Moderate (within 50m)				
35	4.4	Collapsible deposits	Very low (within 50m)				
36	4.5	Landslides	Low (within 50m)				
38	4.6	Ground dissolution of soluble rocks	Negligible (within 50m)				



Page	Section	Mining, ground workings and natural cavities	On site	0-50m	50-250m	250-500m	500-2000m
39	5.1	Natural cavities	0	0	0	0	-
40	5.2	<u>BritPits</u>	0	1	6	15	-
44	5.3	<u>Surface ground workings</u>	1	4	56	-	-
46	5.4	<u>Underground workings</u>	1	0	10	12	14
48	5.5	<u>Historical Mineral Planning Areas</u>	1	2	3	1	-
49	5.6	Non-coal mining	0	0	0	0	0
49	5.7	<u>Mining cavities</u>	0	0	2	0	3
49	5.8	JPB mining areas	None (within 0m)				
50	5.9	<u>Coal mining</u>	Identified (within 0m)				
50	5.10	Brine areas	None (within 0m)				
50	5.11	Gypsum areas	None (within 0m)				
50	5.12	Tin mining	None (within 0m)				
50	5.13	Clay mining	None (within 0m)				
Page	Section	Radon					
51	6.1	<u>Radon</u>	Less than 1% (within 0m)				
Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m
53	7.1	<u>BGS Estimated Background Soil Chemistry</u>	12	5	-	-	-
54	7.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
54	7.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
55	8.1	Underground railways (London)	0	0	0	-	-
55	8.2	Underground railways (Non-London)	0	0	0	-	-
56	8.3	<u>Railway tunnels</u>	0	0	1	-	-
56	8.4	<u>Historical railway and tunnel features</u>	0	0	32	-	-
57	8.5	Royal Mail tunnels	0	0	0	-	-
58	8.6	Historical railways	0	0	0	-	-
58	8.7	<u>Railways</u>	0	0	4	-	-
58	8.8	Crossrail 1	0	0	0	0	-



58	8.9	Crossrail 2	0	0	0	0	-
59	8.10	HS2	0	0	0	0	-



Recent aerial photograph



Aerial photography supplied by Getmapping PLC. © Copyright Getmapping PLC 2023. All Rights Reserved.

Capture Date: 30/05/2021

Site Area: 8.34ha



Recent site history - 2018 aerial photograph



Capture Date: 29/06/2018

Site Area: 8.34ha



Recent site history - 2012 aerial photograph



Capture Date: 26/03/2012

Site Area: 8.34ha

Recent site history - 1999 aerial photograph

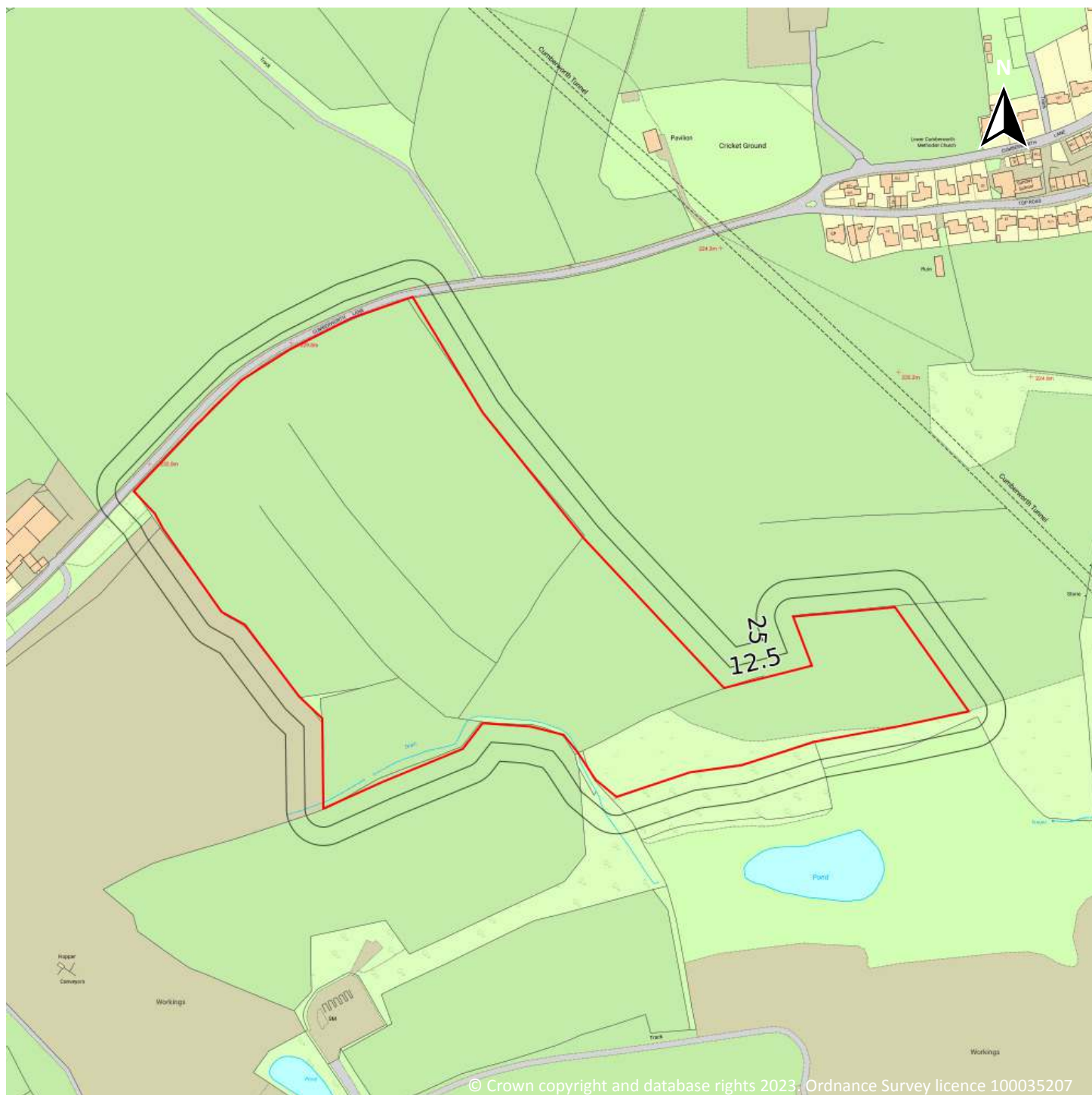


Capture Date: 10/09/1999

Site Area: 8.34ha



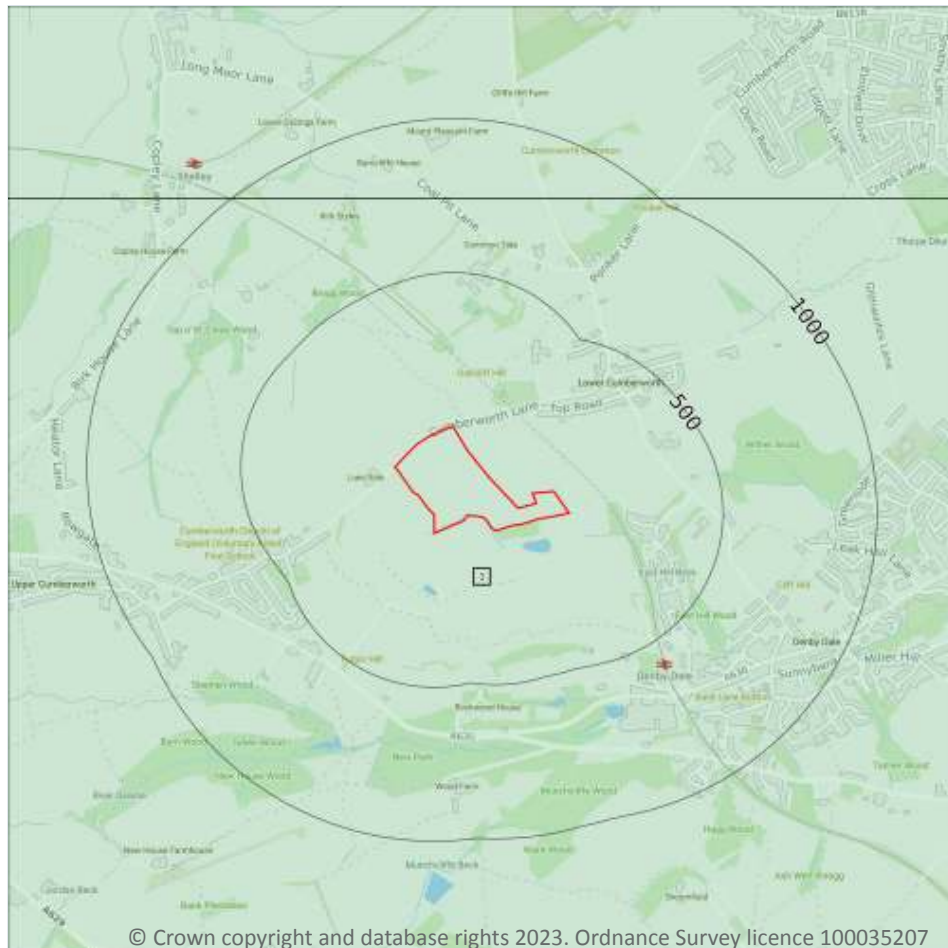
OS MasterMap site plan



Site Area: 8.34ha



1 Geology 1:10,000 scale - Availability



— Site Outline
Search buffers in metres (m)

- Full coverage
- Partial coverage
- No coverage

1.1 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.

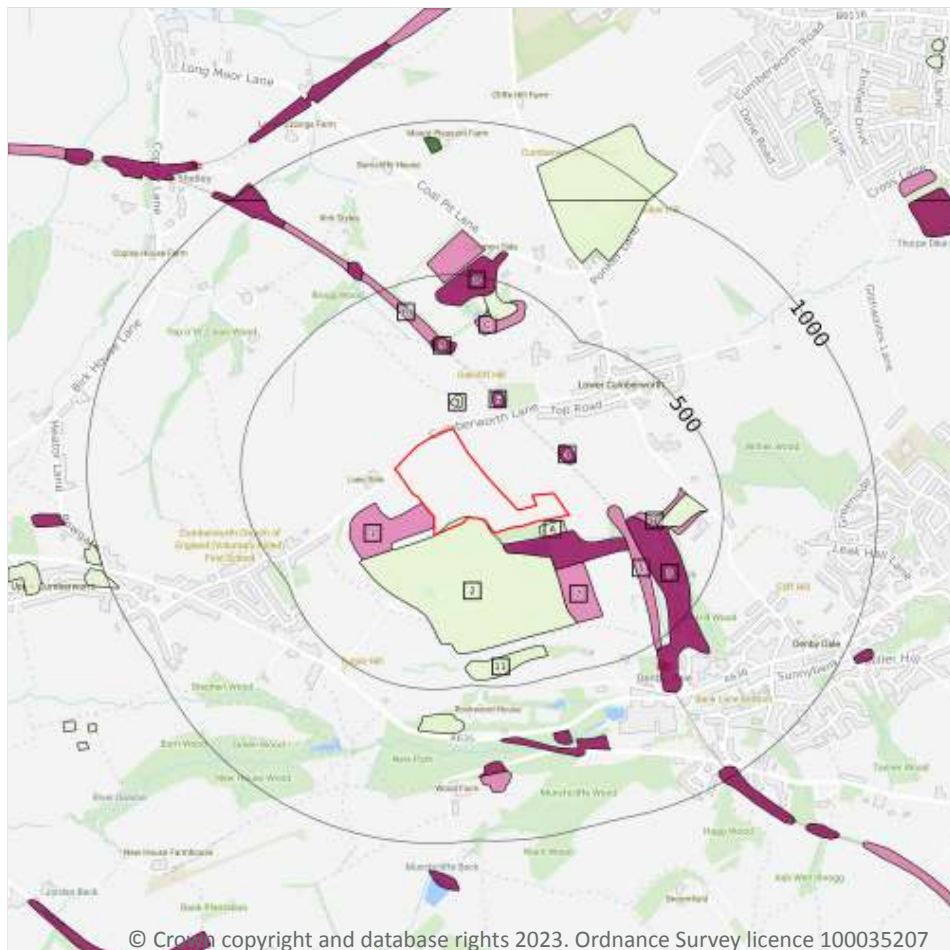
Features are displayed on the Geology 1:10,000 scale - Availability map on **page 10**

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



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

1.2 Artificial and made ground (10k)

Records within 500m

20

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 11**

ID	Location	LEX Code	Description	Rock description
1	On site	WGR-VOID	Worked Ground (Undivided)	Void
2	On site	WMGR-ARTDP	Infilled Ground	Artificial Deposit
A	12m E	WMGR-ARTDP	Infilled Ground	Artificial Deposit
A	43m SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

ID	Location	LEX Code	Description	Rock description
3	69m N	WMGR-ARTDP	Infilled Ground	Artificial Deposit
4	107m E	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
5	123m E	WGR-VOID	Worked Ground (Undivided)	Void
6	152m N	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
7	159m SE	WGR-VOID	Worked Ground (Undivided)	Void
8	188m E	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
B	211m E	WGR-VOID	Worked Ground (Undivided)	Void
9	242m N	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
B	284m E	WMGR-ARTDP	Infilled Ground	Artificial Deposit
10	290m N	WGR-VOID	Worked Ground (Undivided)	Void
C	321m N	WGR-VOID	Worked Ground (Undivided)	Void
B	328m E	WGR-VOID	Worked Ground (Undivided)	Void
C	379m N	WMGR-ARTDP	Infilled Ground	Artificial Deposit
11	389m S	WMGR-ARTDP	Infilled Ground	Artificial Deposit
D	399m N	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
D	472m N	WGR-VOID	Worked Ground (Undivided)	Void

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Superficial

1.3 Superficial geology (10k)

Records within 500m

0

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

This data is sourced from the British Geological Survey.

1.4 Landslip (10k)

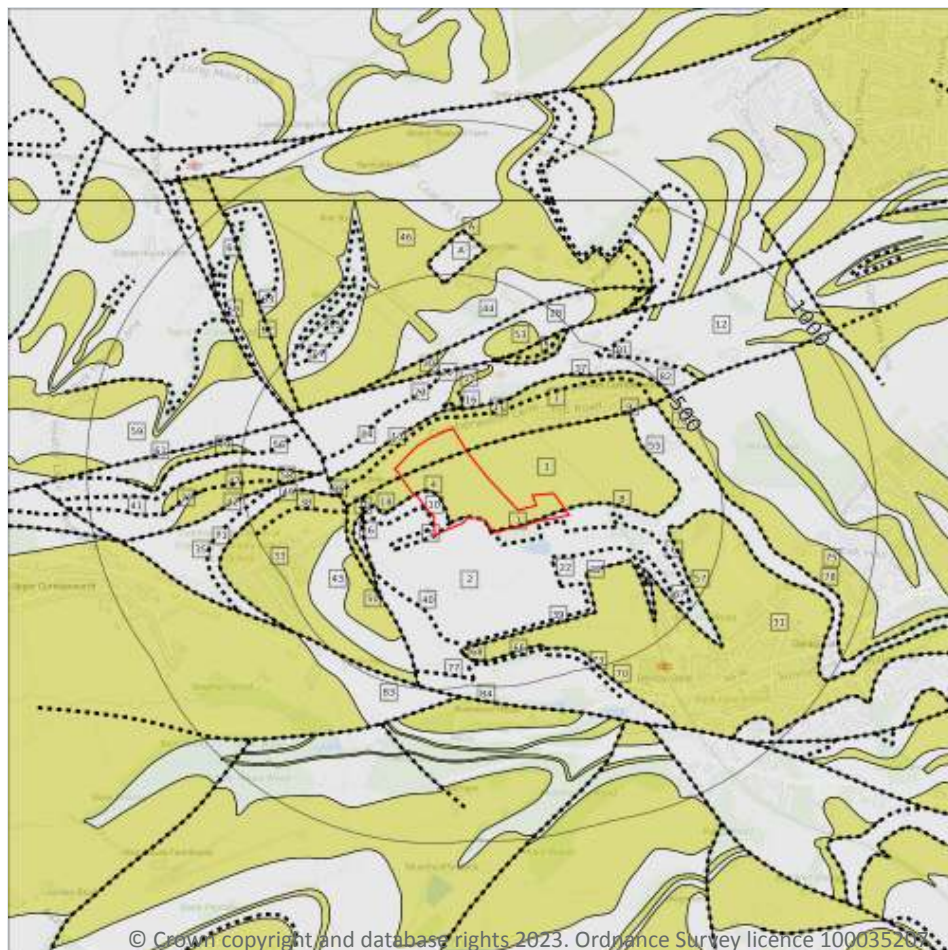
Records within 500m

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.

1.5 Bedrock geology (10k)

Records within 500m

28

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 14**

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



ID	Location	LEX Code	Description	Rock age
12	58m NW	PLCM-MDSI	Pennine Lower Coal Measures Formation - Mudstone And Siltstone	Langsettian Sub-age
15	69m N	PF-SDST	Penistone Flags - Sandstone	Langsettian Sub-age
20	136m W	PLCM-SDST	Pennine Lower Coal Measures Formation - Sandstone	Langsettian Sub-age
26	172m W	PLCM-MDSI	Pennine Lower Coal Measures Formation - Mudstone And Siltstone	Langsettian Sub-age
28	186m N	PLCM-MDSI	Pennine Lower Coal Measures Formation - Mudstone And Siltstone	Langsettian Sub-age
30	192m N	PLCM-SDST	Pennine Lower Coal Measures Formation - Sandstone	Langsettian Sub-age
31	193m SE	PLCM-SDST	Pennine Lower Coal Measures Formation - Sandstone	Langsettian Sub-age
33	198m W	PLCM-SDST	Pennine Lower Coal Measures Formation - Sandstone	Langsettian Sub-age
35	201m W	PLCM-MDSI	Pennine Lower Coal Measures Formation - Mudstone And Siltstone	Langsettian Sub-age
41	224m W	PLCM-MDSI	Pennine Lower Coal Measures Formation - Mudstone And Siltstone	Langsettian Sub-age
43	234m W	PLCM-MDSI	Pennine Lower Coal Measures Formation - Mudstone And Siltstone	Langsettian Sub-age
44	239m NW	PLCM-MDSI	Pennine Lower Coal Measures Formation - Mudstone And Siltstone	Langsettian Sub-age
46	241m NW	PLCM-SDST	Pennine Lower Coal Measures Formation - Sandstone	Langsettian Sub-age
47	248m W	PLCM-SDST	Pennine Lower Coal Measures Formation - Sandstone	Langsettian Sub-age
50	254m SW	PLCM-SDST	Pennine Lower Coal Measures Formation - Sandstone	Langsettian Sub-age
51	259m N	PLCM-SDST	Pennine Lower Coal Measures Formation - Sandstone	Langsettian Sub-age
53	263m N	PLCM-SDST	Pennine Lower Coal Measures Formation - Sandstone	Langsettian Sub-age
59	360m W	PLCM-MDSI	Pennine Lower Coal Measures Formation - Mudstone And Siltstone	Langsettian Sub-age
62	363m NW	PLCM-SDST	Pennine Lower Coal Measures Formation - Sandstone	Langsettian Sub-age
64	380m NW	PLCM-MDSI	Pennine Lower Coal Measures Formation - Mudstone And Siltstone	Langsettian Sub-age
65	387m NW	PLCM-MDSI	Pennine Lower Coal Measures Formation - Mudstone And Siltstone	Langsettian Sub-age
75	438m E	PF-SDST	Penistone Flags - Sandstone	Langsettian Sub-age
79	458m W	PF-SDST	Penistone Flags - Sandstone	Langsettian Sub-age



ID	Location	LEX Code	Description	Rock age
A	472m N	PLCM-MDSI	Pennine Lower Coal Measures Formation - Mudstone And Siltstone	Langsettian Sub-age
83	480m SW	PLCM-MDSI	Pennine Lower Coal Measures Formation - Mudstone And Siltstone	Langsettian Sub-age

This data is sourced from the British Geological Survey.

1.6 Bedrock faults and other linear features (10k)

Records within 500m

58

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 14**

ID	Location	Category	Description
4	On site	ROCK	Coal seam, inferred ()
5	On site	ROCK	Coal seam, inferred ()
6	On site	ROCK	Coal seam, observed ()
7	On site	ROCK	Coal seam, inferred ()
8	On site	ROCK	Coal seam, observed ()
9	On site	FAULT	Normal fault, inferred; crossmarks on downthrow side
10	7m SW	ROCK	Coal seam, observed ()
11	37m N	ROCK	Coal seam, inferred ()
13	58m NW	ROCK	Coal seam, observed ()
14	62m N	ROCK	Coal seam, inferred ()
16	69m N	ROCK	Coal seam, observed ()
17	76m N	ROCK	Coal seam, observed ()
18	88m W	ROCK	Coal seam, observed ()
19	113m N	ROCK	Coal seam, observed ()
21	136m W	FAULT	Normal fault, observed; crossmark on downthrow side
22	139m SE	ROCK	Coal seam, inferred ()
23	142m NW	ROCK	Coal seam, observed ()



ID	Location	Category	Description
24	146m NW	ROCK	Coal seam, inferred ()
25	160m N	ROCK	Coal seam, inferred ()
27	172m W	ROCK	Coal seam, observed ()
29	186m N	FAULT	Normal fault, inferred; crossmarks on downthrow side
32	193m SE	ROCK	Coal seam, observed ()
34	198m W	FAULT	Normal fault, inferred; crossmarks on downthrow side
36	201m W	ROCK	Coal seam, inferred ()
37	203m NE	ROCK	Coal seam, observed ()
38	207m W	ROCK	Coal seam, inferred ()
39	216m SE	ROCK	Coal seam, observed ()
40	219m SW	ROCK	Coal seam, inferred ()
42	224m W	FAULT	Normal fault, inferred; crossmarks on downthrow side
45	239m NW	FAULT	Normal fault, inferred; crossmarks on downthrow side
48	248m W	ROCK	Coal seam, observed ()
49	254m W	ROCK	Coal seam, observed ()
52	259m N	ROCK	Coal seam, observed ()
54	291m N	ROCK	Coal seam, inferred ()
55	322m E	ROCK	Coal seam, inferred ()
56	325m W	ROCK	Coal seam, observed ()
57	325m E	ROCK	Coal seam, observed ()
58	349m W	ROCK	Coal seam, inferred ()
60	360m W	FAULT	Normal fault, inferred; crossmarks on downthrow side
61	360m W	FAULT	Normal fault, inferred; crossmarks on downthrow side
63	363m NW	FAULT	Normal fault, inferred; crossmarks on downthrow side
66	389m S	ROCK	Coal seam, observed ()
67	396m SE	ROCK	Coal seam, inferred ()
68	397m S	ROCK	Coal seam, inferred ()
69	404m SE	ROCK	Coal seam, observed ()

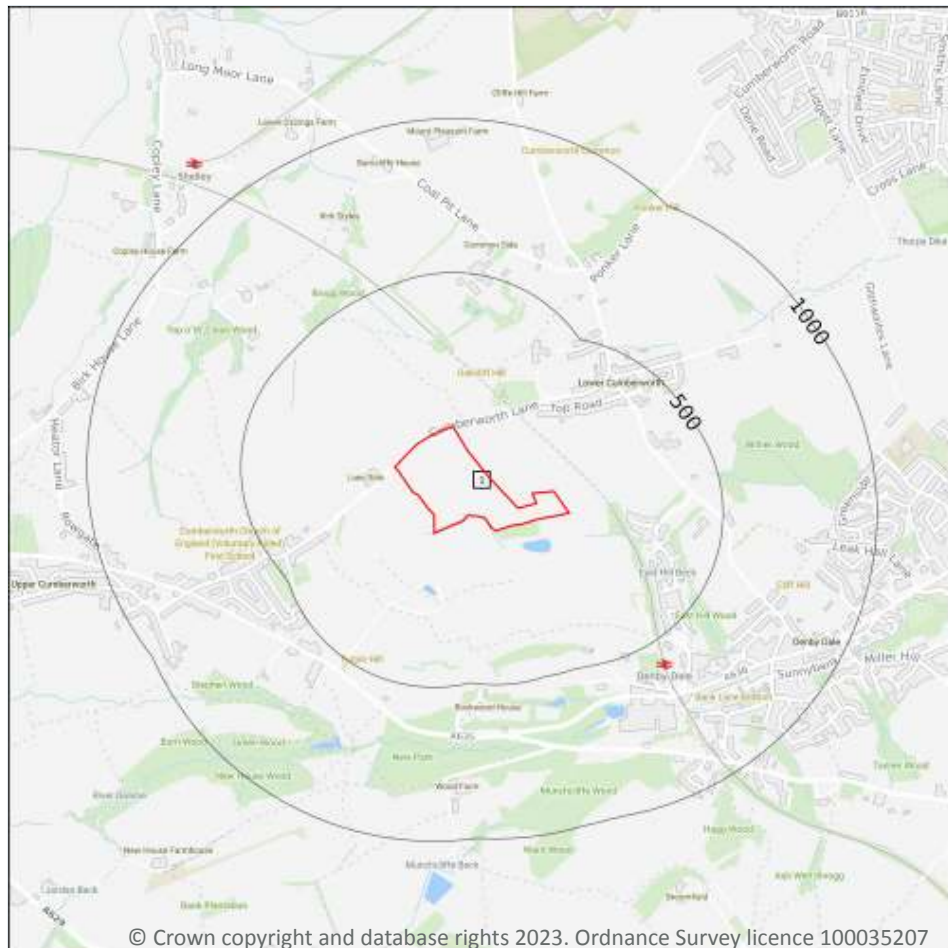


ID	Location	Category	Description
70	405m SE	ROCK	Coal seam, inferred ()
71	409m W	ROCK	Coal seam, inferred ()
72	416m W	ROCK	Coal seam, observed ()
73	426m SE	ROCK	Coal seam, inferred ()
74	434m NW	ROCK	Coal seam, inferred ()
76	438m E	ROCK	Coal seam, observed ()
77	444m S	ROCK	Coal seam, inferred ()
78	450m E	ROCK	Coal seam, inferred ()
80	465m NW	ROCK	Coal seam, inferred ()
81	468m NE	ROCK	Coal seam, inferred ()
A	472m N	ROCK	Coal seam, observed ()
82	477m NE	ROCK	Coal seam, inferred ()
84	480m SW	FAULT	Normal fault, inferred; crossmarks on downthrow side

This data is sourced from the British Geological Survey.



2 Geology 1:50,000 scale - Availability



— Site Outline

Search buffers in metres (m)

□ Geological map tile

2.1 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.

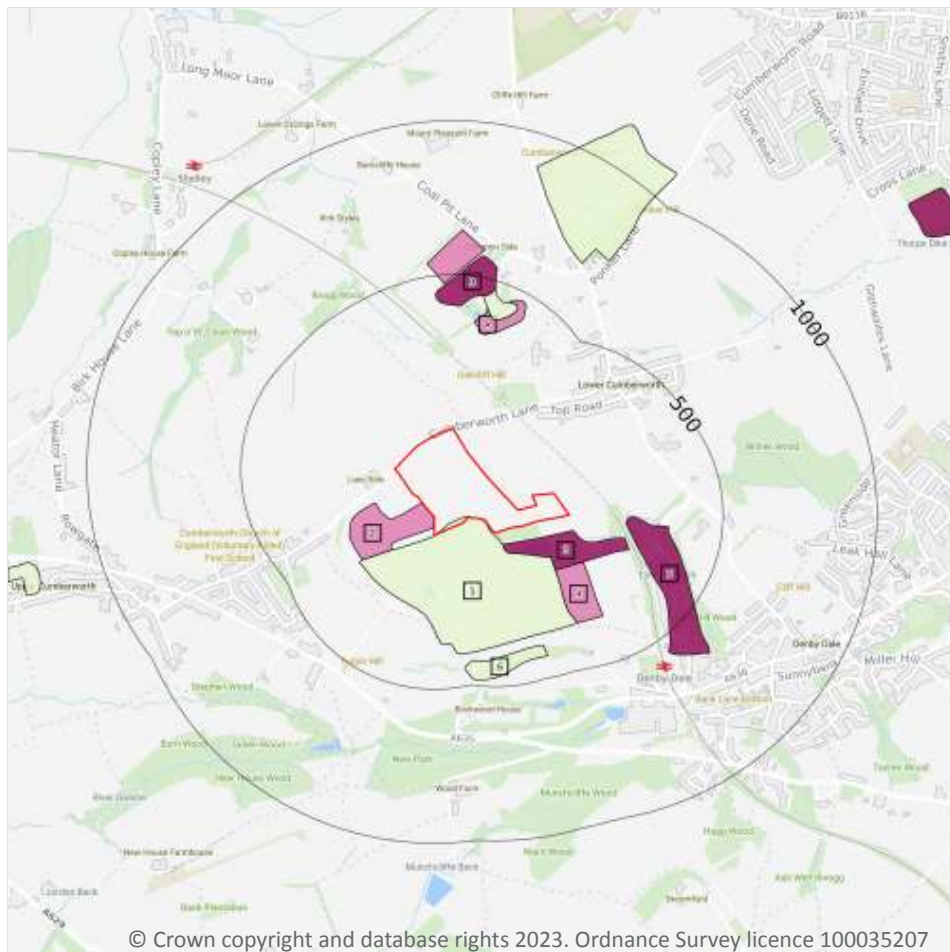
Features are displayed on the Geology 1:50,000 scale - Availability map on **page 19**

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



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

2.2 Artificial and made ground (50k)

Records within 500m

10

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 20**

ID	Location	LEX Code	Description	Rock description
1	On site	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
2	On site	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID
3	43m SE	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
4	159m SE	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID



ID	Location	LEX Code	Description	Rock description
5	187m E	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
A	322m N	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID
A	379m N	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
6	389m S	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
B	399m N	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
B	472m N	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID

This data is sourced from the British Geological Survey.

2.3 Artificial ground permeability (50k)

Records within 50m

2

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	Mixed	Very High	Low
43m SE	Mixed	Very High	Low

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Superficial

2.4 Superficial geology (50k)

Records within 500m

0

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

This data is sourced from the British Geological Survey.

2.5 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.

2.6 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.

2.7 Landslip permeability (50k)

Records within 50m

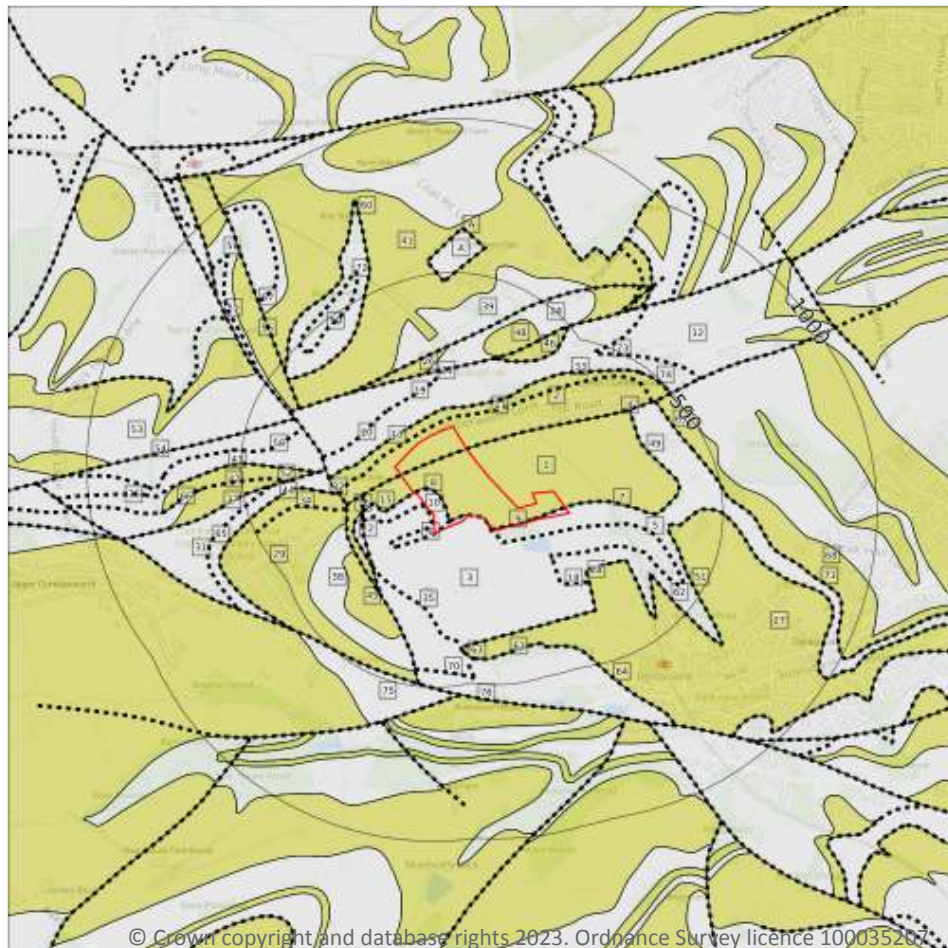
0

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.

2.8 Bedrock geology (50k)

Records within 500m

26

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 23**

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

ID	Location	LEX Code	Description	Rock age
3	On site	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
12	58m NW	PLCM-MDSI	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE AND SILTSTONE	WESTPHALIAN
16	136m W	PLCM-SDST	PENNINE LOWER COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
22	173m W	PLCM-MDSI	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE AND SILTSTONE	WESTPHALIAN
24	186m N	PLCM-MDSI	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE AND SILTSTONE	WESTPHALIAN
26	192m N	PLCM-SDST	PENNINE LOWER COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
27	193m SE	PLCM-SDST	PENNINE LOWER COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
29	198m W	PLCM-SDST	PENNINE LOWER COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
31	201m W	PLCM-MDSI	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE AND SILTSTONE	WESTPHALIAN
36	225m W	PLCM-MDSI	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE AND SILTSTONE	WESTPHALIAN
38	233m W	PLCM-MDSI	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE AND SILTSTONE	WESTPHALIAN
39	239m NW	PLCM-MDSI	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE AND SILTSTONE	WESTPHALIAN
41	241m NW	PLCM-SDST	PENNINE LOWER COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
42	248m W	PLCM-SDST	PENNINE LOWER COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
45	255m SW	PLCM-SDST	PENNINE LOWER COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
46	259m N	PLCM-SDST	PENNINE LOWER COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
48	263m N	PLCM-SDST	PENNINE LOWER COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
53	360m W	PLCM-MDSI	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE AND SILTSTONE	WESTPHALIAN



ID	Location	LEX Code	Description	Rock age
56	363m NW	PLCM-SDST	PENNINE LOWER COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
58	380m NW	PLCM-MDSI	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE AND SILTSTONE	WESTPHALIAN
59	387m NW	PLCM-MDSI	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE AND SILTSTONE	WESTPHALIAN
68	439m E	PF-SDST	PENISTONE FLAGS - SANDSTONE	WESTPHALIAN
A	472m N	PLCM-MDSI	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE AND SILTSTONE	WESTPHALIAN
75	480m SW	PLCM-MDSI	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE AND SILTSTONE	WESTPHALIAN

This data is sourced from the British Geological Survey.

2.9 Bedrock permeability (50k)

Records within 50m	2
---------------------------	----------

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

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

This data is sourced from the British Geological Survey.

2.10 Bedrock faults and other linear features (50k)

Records within 500m	52
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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 23**

ID	Location	Category	Description
4	On site	FAULT	Fault, inferred
5	On site	ROCK	Coal seam, observed



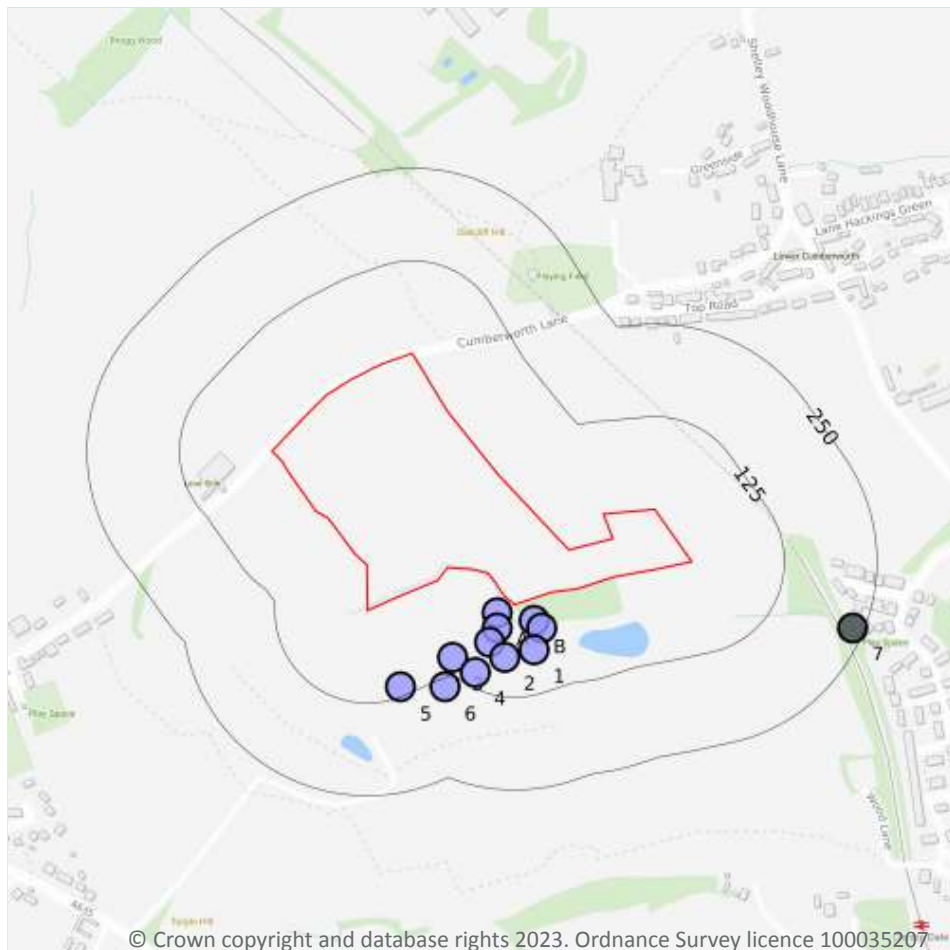
ID	Location	Category	Description
6	On site	ROCK	Coal seam, inferred
7	On site	ROCK	Coal seam, observed
8	On site	ROCK	Coal seam, inferred
9	On site	ROCK	Coal seam, inferred
10	7m SW	ROCK	Coal seam, observed
11	25m NW	ROCK	Coal seam, inferred
13	58m NW	ROCK	Coal seam, observed
14	62m N	ROCK	Coal seam, inferred
15	88m W	ROCK	Coal seam, observed
17	136m W	FAULT	Fault, observed
18	139m SE	ROCK	Coal seam, inferred
19	142m NW	ROCK	Coal seam, observed
20	146m NW	ROCK	Coal seam, inferred
21	160m N	ROCK	Coal seam, inferred
23	173m W	ROCK	Coal seam, observed
25	186m N	FAULT	Fault, inferred
28	193m SE	ROCK	Coal seam, observed
30	198m W	FAULT	Fault, inferred
32	201m W	ROCK	Coal seam, inferred
33	203m NE	ROCK	Coal seam, observed
34	207m W	ROCK	Coal seam, inferred
35	219m SW	ROCK	Coal seam, inferred
37	225m W	FAULT	Fault, inferred
40	239m NW	FAULT	Fault, inferred
43	248m W	ROCK	Coal seam, observed
44	254m W	ROCK	Coal seam, observed
47	259m N	ROCK	Coal seam, observed
49	322m E	ROCK	Coal seam, inferred

ID	Location	Category	Description
50	325m W	ROCK	Coal seam, observed
51	326m E	ROCK	Coal seam, observed
52	349m W	ROCK	Coal seam, inferred
54	360m W	FAULT	Fault, inferred
55	360m W	FAULT	Fault, inferred
57	363m NW	FAULT	Fault, inferred
60	387m NW	ROCK	Coal seam, inferred
61	389m S	ROCK	Coal seam, observed
62	397m SE	ROCK	Coal seam, inferred
63	397m S	ROCK	Coal seam, inferred
64	405m SE	ROCK	Coal seam, inferred
65	409m W	ROCK	Coal seam, inferred
66	416m W	ROCK	Coal seam, observed
67	421m S	ROCK	Coal seam, observed
69	439m E	ROCK	Coal seam, observed
70	445m S	ROCK	Coal seam, inferred
71	450m E	ROCK	Coal seam, inferred
72	457m NW	ROCK	Coal seam, inferred
73	468m NE	ROCK	Coal seam, inferred
A	472m N	ROCK	Coal seam, observed
74	477m NE	ROCK	Coal seam, inferred
76	480m SW	FAULT	Fault, inferred

This data is sourced from the British Geological Survey.



3 Boreholes



— Site Outline
Search buffers in metres (m)

- Confidential
- 0 - 10m
- 10 - 30m
- 30m+
- Unknown

3.1 BGS Boreholes

Records within 250m

12

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.

Features are displayed on the Boreholes map on **page 28**

ID	Location	Grid reference	Name	Length	Confidential	Web link
A	24m SE	421840 408910	BROMLEY FARM WASTE SITE 1	9.0	N	56268
B	29m SE	421890 408900	BROMLEY FARM WASTE SITE TP1	3.0	N	56278
A	39m SE	421840 408890	BROMLEY FARM WASTE SITE 2	9.0	N	56269

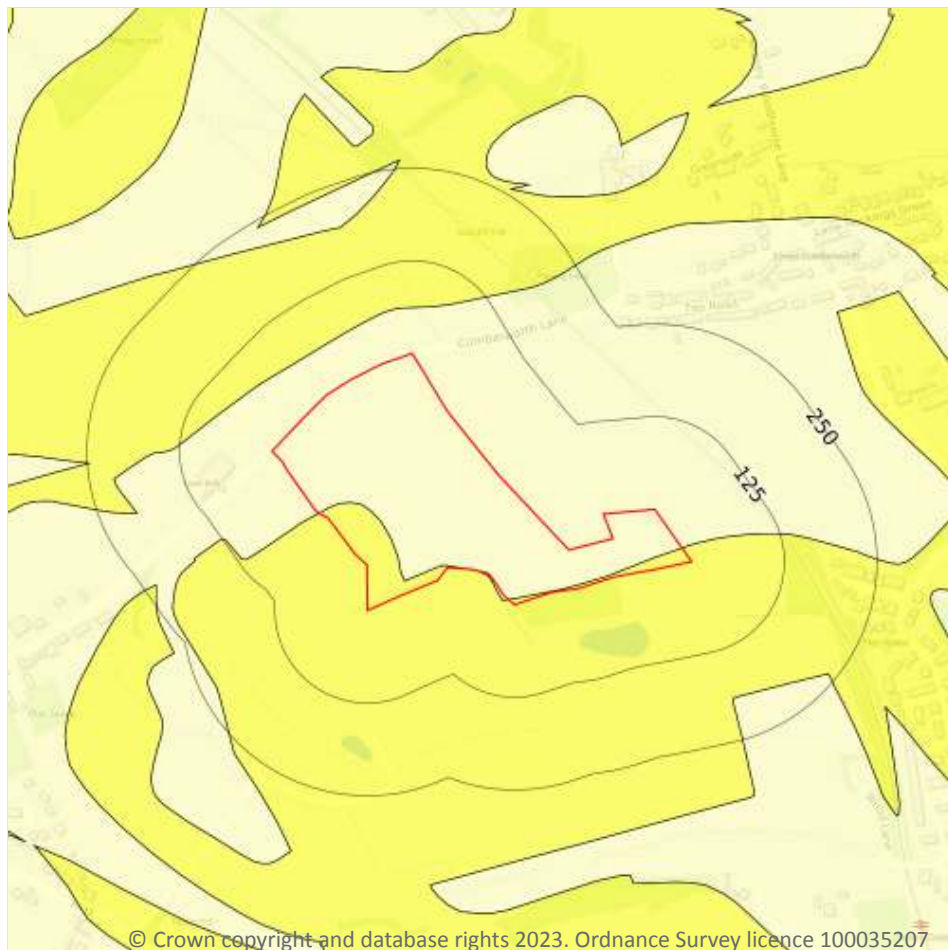


ID	Location	Grid reference	Name	Length	Confidential	Web link
B	41m SE	421900 408890	BROMLEY FARM WASTE SITE TP2	4.0	N	56279
A	61m S	421830 408870	BROMLEY FARM WASTE SITE 3	9.0	N	56270
1	67m SE	421890 408860	BROMLEY FARM WASTE SITE TP3	3.0	N	56280
2	73m S	421850 408850	BROMLEY FARM WASTE SITE TP4	3.0	N	56281
3	104m S	421780 408850	BROMLEY FARM WASTE SITE 4	7.0	N	56271
4	106m S	421810 408830	BROMLEY FARM WASTE SITE TP5	2.0	N	56282
5	113m S	421710 408810	BROMLEY FARM WASTE SITE 5	7.0	N	56272
6	137m S	421770 408810	BROMLEY FARM WASTE SITE TP6	2.0	N	56283
7	235m E	422320 408890	BROMLEY PARK SITE B DENBY DALE A1	-	Y	N/A

This data is sourced from the British Geological Survey.



4 Natural ground subsidence - Shrink swell clays



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

4.1 Shrink swell clays

Records within 50m

2

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

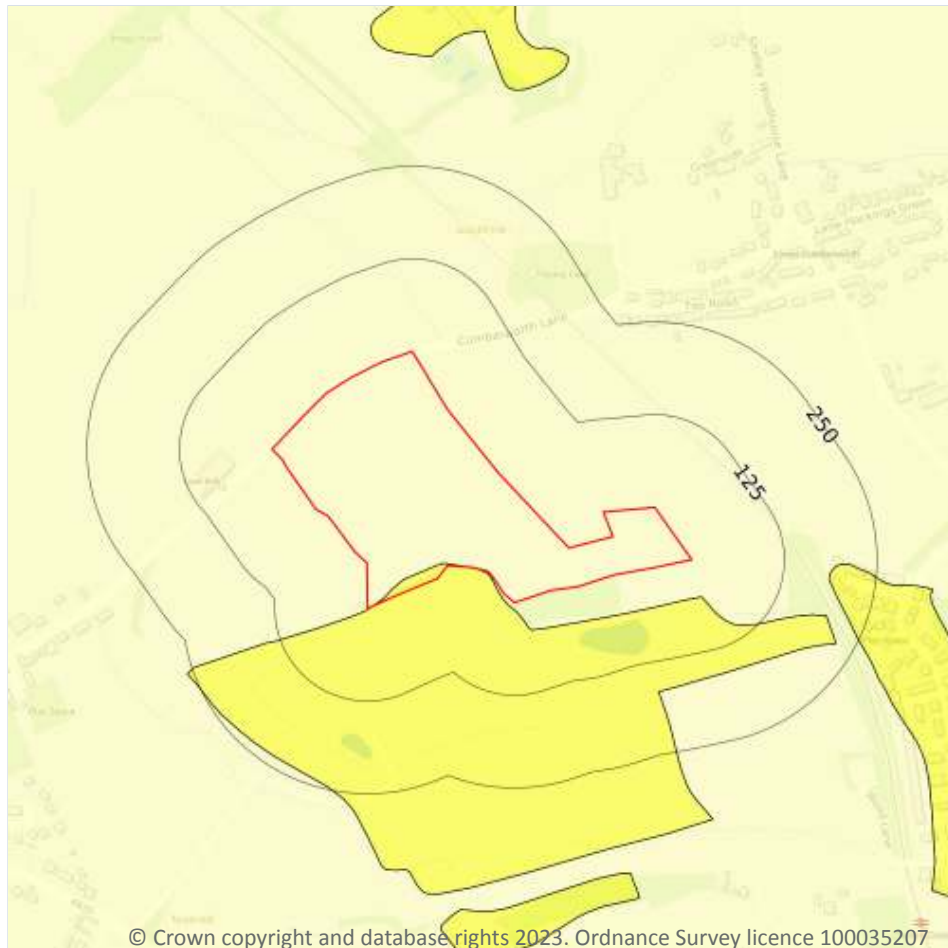
Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 30**

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Running sands



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

4.2 Running sands

Records within 50m

2

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

Features are displayed on the Natural ground subsidence - Running sands map on **page 31**

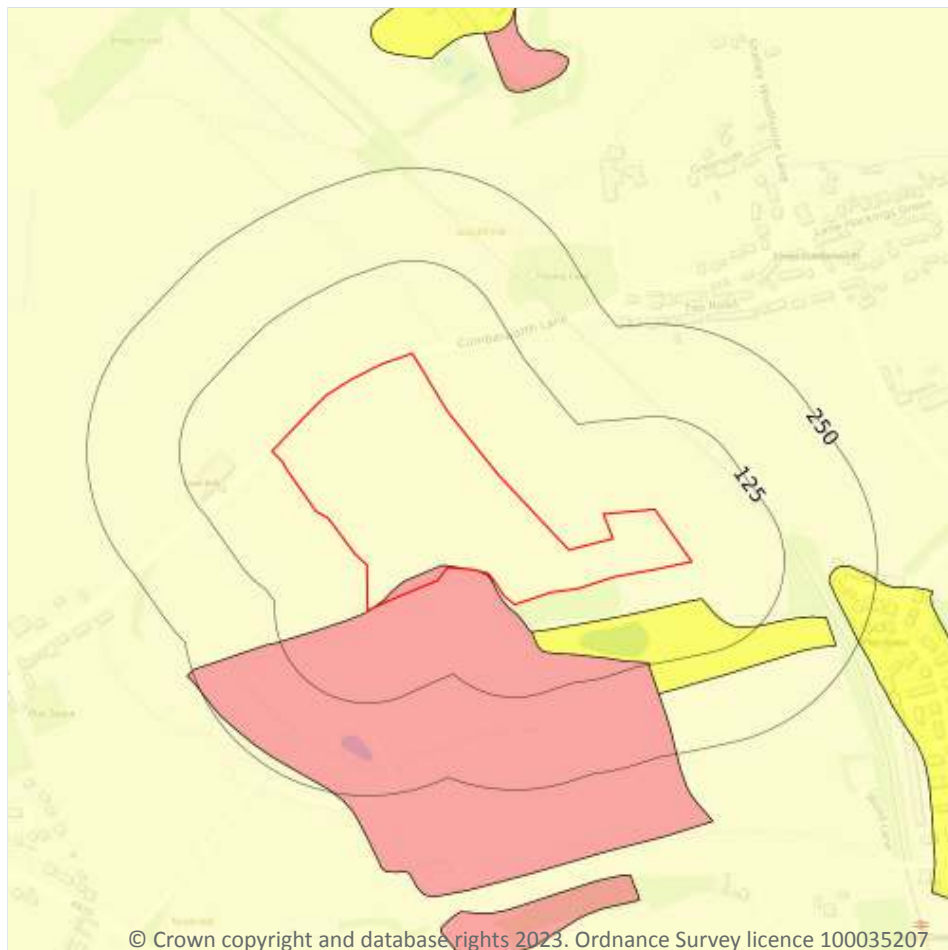
Location	Hazard rating	Details
On site	Negligible	Running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on lands use due to running conditions.

Location	Hazard rating	Details
On site	Very low	Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Compressible deposits



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

4.3 Compressible deposits

Records within 50m

3

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 33**

Location	Hazard rating	Details
On site	Negligible	Compressible strata are not thought to occur.
On site	Moderate	Compressibility and uneven settlement hazards are probably present. Land use should consider specifically the compressibility and variability of the site.

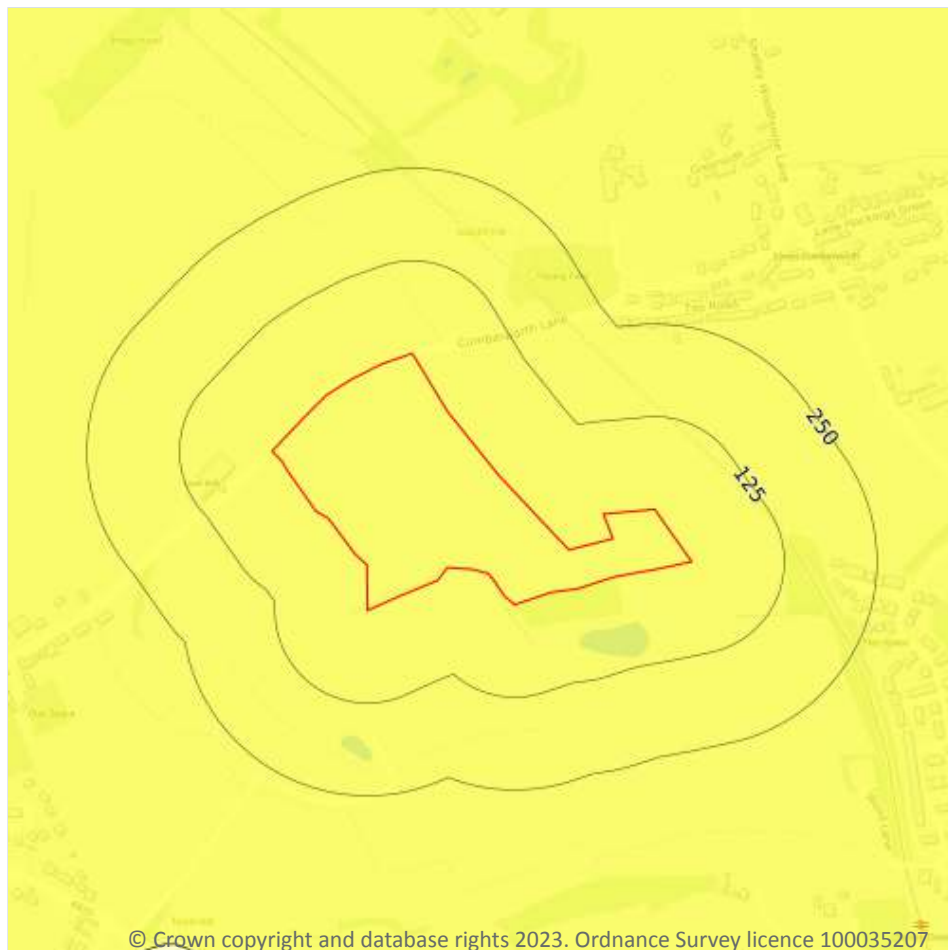


Location	Hazard rating	Details
43m SE	Very low	Compressibility and uneven settlement problems are not likely to be significant on the site for most land uses.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Collapsible deposits



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

4.4 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.

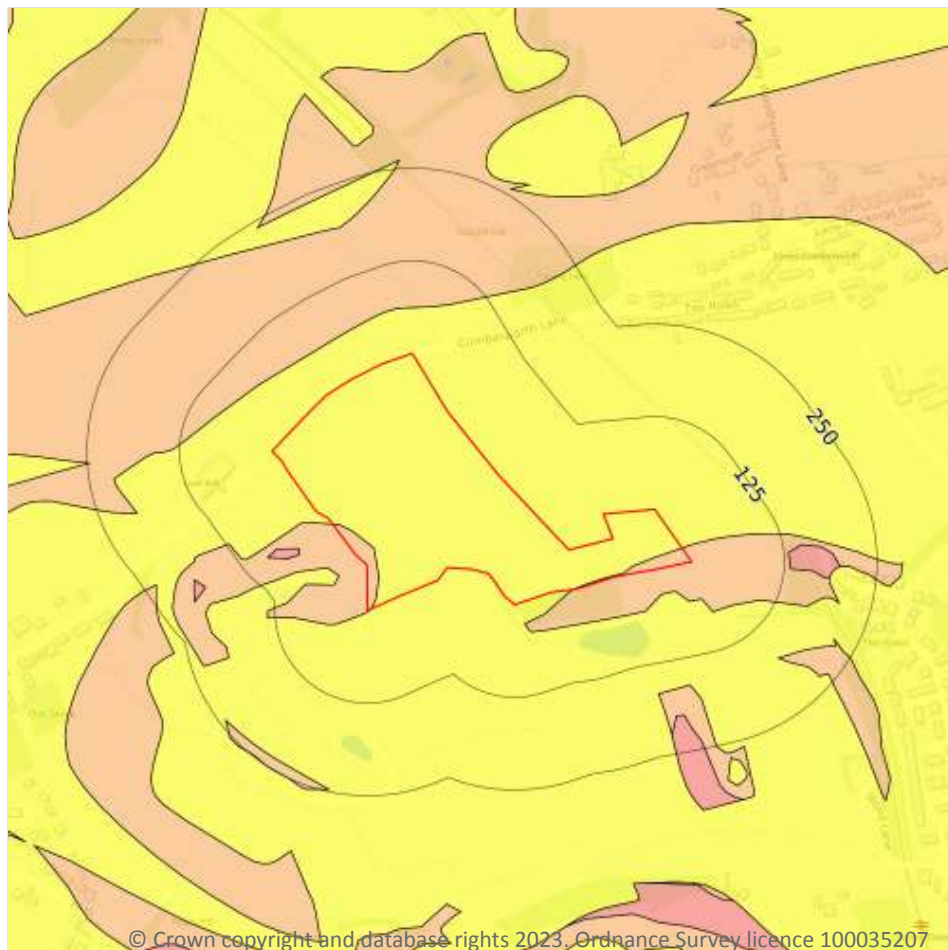
Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 35**

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Landslides



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

4.5 Landslides

Records within 50m

2

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

Features are displayed on the Natural ground subsidence - Landslides map on **page 36**

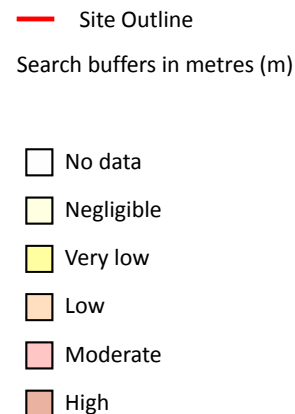
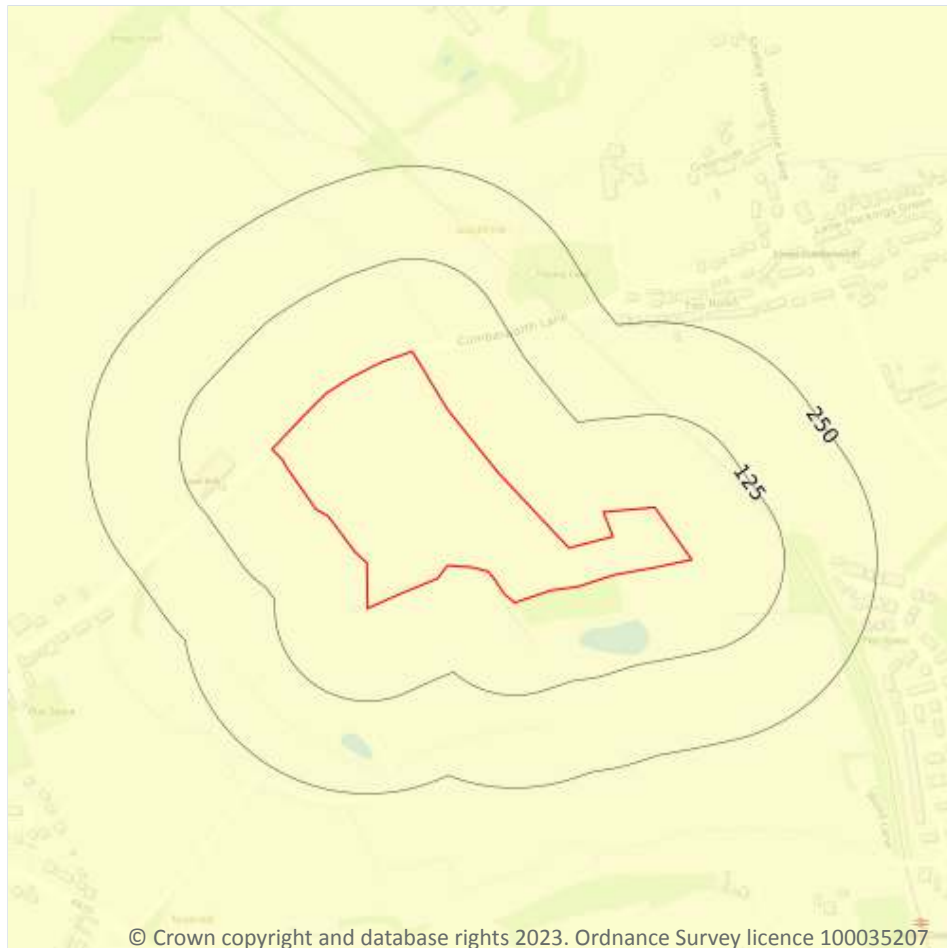
Location	Hazard rating	Details
On site	Very low	Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Ground dissolution of soluble rocks



4.6 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.

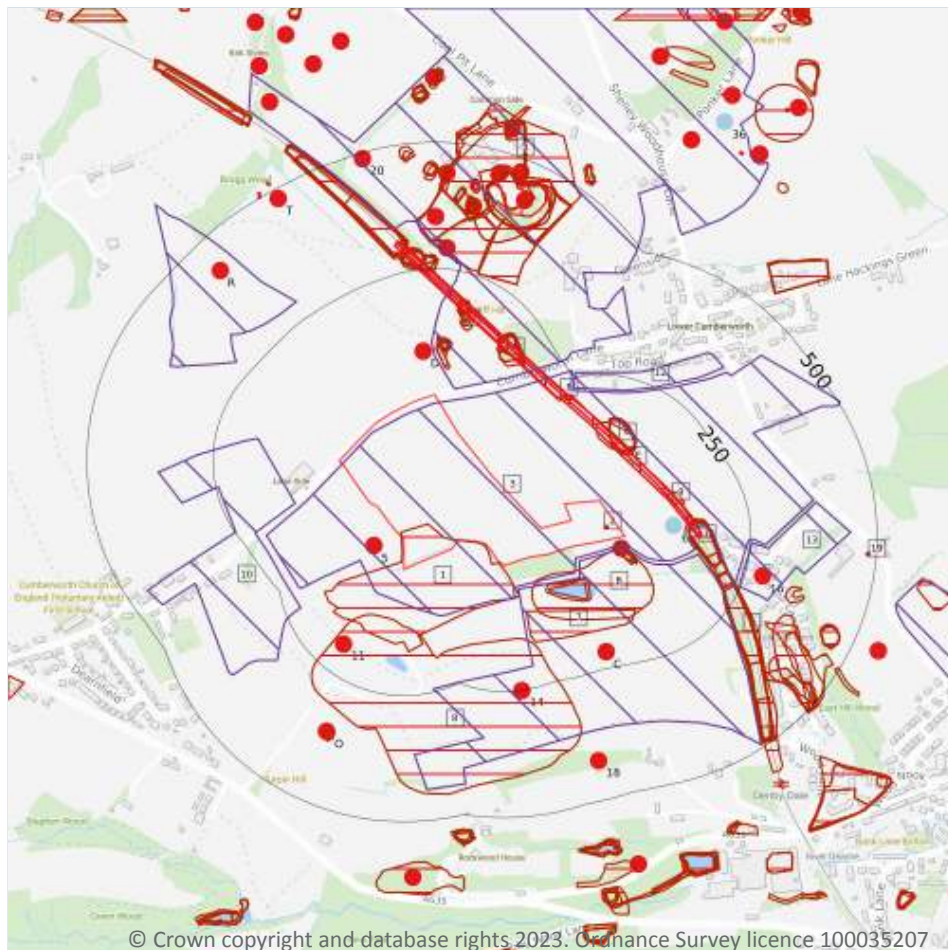
Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 38**

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.



5 Mining, ground workings and natural cavities



- Site Outline
- Search buffers in metres (m)
- Natural cavities (Area)
- Natural cavities (Point)
- BritPits
- Surface ground workings
- Underground workings
- Historical Mineral Planning Areas
- Mining Cavities
- Non Coal Mining
- Sporadic underground mining of restricted extent possible
- Localised small scale underground mining possible
- Small scale mining possible
- Underground mining known or likely within or in close proximity
- Underground mining known within or in very close proximity

5.1 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.

5.2 BritPits

Records within 500m

22

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 39**

ID	Location	Details	Description
A	21m E	Name: Bromleys Fireclay Mine Address: Denby Dale, HUDDERSFIELD, West Yorkshire Commodity: Fireclay 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
5	52m SW	Name: Bromley Quarry Address: Upper Cumberworth, HUDDERSFIELD, West Yorkshire Commodity: Clay & Shale 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
D	88m N	Name: Oakcliff Hill Address: Lower Cumberworth, 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
11	190m SW	Name: Bromley Quarry Address: Upper Cumberworth, HUDDERSFIELD, West Yorkshire Commodity: Clay & Shale 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
C	217m SE	Name: Bromleys Quarry Address: Denby Dale, HUDDERSFIELD, West Yorkshire Commodity: Clay & Shale Status: Active	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which is actively extracting mineral products, or in the case of wharfs and rail depots, is actively handing minerals



ID	Location	Details	Description
C	217m SE	Name: Bromleys Quarry Address: Denby Dale, HUDDERSFIELD, West Yorkshire Commodity: Fireclay Status: Active	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which is actively extracting mineral products, or in the case of wharfs and rail depots, is actively handing minerals
14	249m S	Name: Bromleys Quarry Address: Denby Dale, HUDDERSFIELD, West Yorkshire Commodity: Clay & Shale 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
16	283m E	Name: Bromleys, East of Railway Address: Denby Dale, HUDDERSFIELD, West Yorkshire Commodity: Clay & Shale 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
L	290m N	Name: Oakcliff Hill Mine Address: Lower Cumberworth, HUDDERSFIELD, 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
L	315m N	Name: Oakcliff Hill Pits Address: Lower Cumberworth, HUDDERSFIELD, 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
L	351m N	Name: Oakcliff Hill Pits Address: Lower Cumberworth, HUDDERSFIELD, 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

ID	Location	Details	Description
O	356m SW	Name: Turpin Hill Address: Upper Cumberworth, 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
L	356m N	Name: Oakcliff Hill Pits Address: Lower Cumberworth, HUDDERSFIELD, 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
L	381m N	Name: Oakcliff Hill Coal Pit Address: Lower Cumberworth, HUDDERSFIELD, 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
18	420m SE	Name: Bromleys Fireclay Mine Address: Lower Cumberworth, HUDDERSFIELD, West Yorkshire Commodity: Clay & Shale 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
L	423m N	Name: Cumberworth Brick Yard Shaft Address: Lower Cumberworth, HUDDERSFIELD, West Yorkshire Commodity: Mineral 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



ID	Location	Details	Description
R	431m NW	Name: Brogg Wood Mines Address: Lower Cumberworth, HUDDERSFIELD, West Yorkshire Commodity: Mineral 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
L	440m N	Name: Lower Cumberworth Address: Lower Cumberworth, HUDDERSFIELD, West Yorkshire Commodity: Clay & Shale 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
L	458m N	Name: Addy's Address: Lower Cumberworth, HUDDERSFIELD, West Yorkshire Commodity: Clay & Shale 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
L	472m N	Name: Cumberworth Brick Yard Shaft Address: Lower Cumberworth, HUDDERSFIELD, West Yorkshire Commodity: Mineral 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
T	480m NW	Name: Brogg Wood Mines Address: Lower Cumberworth, HUDDERSFIELD, West Yorkshire Commodity: Mineral 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



ID	Location	Details	Description
20	489m N	Name: Common Side Coal Pits Address: Lower Cumberworth, HUDDERSFIELD, 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

This data is sourced from the British Geological Survey.

5.3 Surface ground workings

Records within 250m	61
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Historical land uses identified from Ordnance Survey mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled.

Features are displayed on the Mining, ground workings and natural cavities map on **page 39**

ID	Location	Land Use	Year of mapping	Mapping scale
1	On site	Refuse Heap	1983	1:10000
A	8m E	Clay Pit	1948	1:10560
A	8m E	Clay Pit	1903	1:10560
B	12m E	Unspecified Pit	1951	1:10560
A	13m E	Clay Pit	1933	1:10560
D	57m N	Unspecified Quarry	1892	1:10560
B	58m SE	Pond	1983	1:10000
D	60m N	Unspecified Pit	1904	1:10560
B	67m SE	Pond	1967	1:10560
D	85m N	Unspecified Pit	1948	1:10560
D	87m N	Unspecified Pit	1932	1:10560
D	87m N	Unspecified Pit	1932	1:10560
D	90m N	Unspecified Pit	1951	1:10560
D	90m N	Unspecified Pit	1983	1:10000
D	90m N	Unspecified Pit	1967	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
7	100m SE	Clay Pit	1967	1:10560
8	102m SW	Clay Pit	1983	1:10000
G	103m E	Unspecified Heap	1933	1:10560
G	103m E	Unspecified Heap	1933	1:10560
G	106m E	Unspecified Heap	1850	1:10560
G	109m E	Unspecified Heap	1951	1:10560
G	109m E	Unspecified Heap	1983	1:10000
G	109m E	Unspecified Heap	1967	1:10560
9	114m E	Unspecified Pit	1850	1:10560
G	119m E	Unspecified Heap	1948	1:10560
H	119m E	Cuttings	1850	1:10560
H	126m E	Cuttings	1933	1:10560
I	127m E	Cuttings	1903	1:10560
I	127m E	Cuttings	1891	1:10560
I	127m E	Cuttings	1951	1:10560
I	127m E	Cuttings	1983	1:10000
I	127m E	Cuttings	1967	1:10560
I	128m E	Cuttings	1948	1:10560
J	141m N	Unspecified Heap	1892	1:10560
K	148m N	Unspecified Heap	1892	1:10560
J	148m N	Unspecified Heaps	1904	1:10560
K	149m N	Unspecified Heap	1948	1:10560
K	149m N	Unspecified Heap	1904	1:10560
K	158m N	Unspecified Heap	1951	1:10560
K	158m N	Unspecified Heap	1983	1:10000
K	158m N	Unspecified Heap	1967	1:10560
K	159m N	Unspecified Heap	1932	1:10560
K	159m N	Unspecified Heap	1932	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
J	164m N	Unspecified Heap	1892	1:10560
J	167m N	Unspecified Heap	1948	1:10560
J	170m N	Unspecified Heap	1932	1:10560
J	170m N	Unspecified Heap	1932	1:10560
J	173m N	Unspecified Heap	1951	1:10560
J	173m N	Unspecified Heap	1983	1:10000
J	173m N	Unspecified Heap	1967	1:10560
H	201m E	Cuttings	1951	1:10560
H	203m E	Cuttings	1948	1:10560
H	220m E	Cuttings	1983	1:10000
H	220m E	Cuttings	1967	1:10560
H	225m E	Cuttings	1903	1:10560
H	225m E	Cuttings	1891	1:10560
L	241m N	Unspecified Heaps	1932	1:10560
L	241m N	Unspecified Heaps	1932	1:10560
L	244m N	Unspecified Heaps	1948	1:10560
L	244m N	Unspecified Heaps	1904	1:10560
L	249m N	Unspecified Heap	1892	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

5.4 Underground workings

Records within 1000m

37

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 39**

ID	Location	Land Use	Year of mapping	Mapping scale
2	On site	Unspecified Old Shaft	1903	1:10560
E	95m E	Tunnel	1948	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
E	95m E	Tunnel	1903	1:10560
E	95m E	Tunnel	1891	1:10560
F	103m E	Tunnel	1951	1:10560
F	103m E	Tunnel	1983	1:10000
F	103m E	Tunnel	1967	1:10560
J	154m N	Unspecified Old Shaft	1904	1:10560
J	159m N	Tunnel	1892	1:10560
J	162m N	Tunnel	1904	1:10560
J	162m N	Tunnel	1948	1:10560
L	281m N	Unspecified Level	1904	1:10560
L	387m N	Old Coal Pit	1904	1:10560
L	412m N	Old Coal Pit	1948	1:10560
L	412m N	Old Coal Pit	1904	1:10560
L	415m N	Unspecified Old Shaft	1904	1:10560
L	415m N	Unspecified Shaft	1904	1:10560
R	432m NW	Unspecified Level	1904	1:10560
L	463m N	Unspecified Old Shaft	1948	1:10560
L	463m N	Unspecified Old Shaft	1904	1:10560
L	465m N	Unspecified Old Shaft	1951	1:10560
19	480m E	Unspecified Old Shaft	1903	1:10560
T	480m NW	Unspecified Levels	1904	1:10560
T	500m NW	Unspecified Levels	1904	1:10560
T	512m NW	Unspecified Levels	1904	1:10560
V	537m N	Unspecified Old Shaft	1948	1:10560
V	537m N	Unspecified Old Shaft	1904	1:10560
V	542m N	Unspecified Old Shaft	1951	1:10560
AG	708m NE	Unspecified Level	1904	1:10560
AJ	742m NE	Unspecified Level	1904	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
AP	796m NE	Unspecified Level	1904	1:10560
AQ	823m NE	Unspecified Level	1904	1:10560
-	833m N	Unspecified Level	1904	1:10560
41	894m NE	Unspecified Disused Mine	1979	1:10000
-	911m N	Colliery	1904	1:10560
-	922m N	Air Shafts	1904	1:10560
-	929m N	Air Shafts	1904	1:10560

This data is sourced from Ordnance Survey/Groundsure.

5.5 Historical Mineral Planning Areas

Records within 500m

7

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, ground workings and natural cavities map on **page 39**

ID	Location	Site Name	Mineral	Type	Planning Status	Planning Status Date
3	On site	Lower Cumberworth	Fireclay	Working is wholly underground	Valid	Not available
C	22m E	Bromleys	Clay, fireclay	Working is wholly underground	Valid	Not available
4	40m N	Ponker Hill	Fireclay, brickearth	Mineral working is partly on the surface and partly underground	Valid	Not available
10	118m W	Lower Cumberworth	Fireclay	Working is wholly underground	Refused	Not available
12	221m NE	Lower Cumberworth	Fireclay	Working is wholly underground	Refused	14/4/55
13	246m E	Bromleys East of Railway	Clay, fireclay	Working is wholly underground	Valid	Not available
15	283m NW	Ponker Hill	Fireclay	Working is wholly underground	Refused	Not available

This data is sourced from the British Geological Survey.



5.6 Non-coal mining

Records within 1000m

0

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).

This data is sourced from the British Geological Survey.

5.7 Mining cavities

Records within 1000m

5

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 Mining, ground workings and natural cavities map on **page 39**

ID	Location	Mine Address	Mineral	Data source	Publisher
A	77m SE	Bromley, West Yorkshire	Fireclay	MINERIAL PLANNING RIGHTS APPLICATION RECORDS.	UNPUBLISHED
6	100m E	Holly Mine, West Yorkshire	Fireclay	LISTING OF NEW MINERAL RECORDS OFFICE CATALOGUE.	UNPUBLISHED/D RAFT
-	720m E	Baml Royd, West Yorkshire	Fireclay	LISTING OF NEW MINERAL RECORDS OFFICE CATALOGUE.	UNPUBLISHED/D RAFT
36	788m NE	Ponker Hill, West Yorkshire	Fireclay	LISTING OF NEW MINERAL RECORDS OFFICE CATALOGUE.	UNPUBLISHED/D RAFT
-	964m W	Cumberworth Upper, West Yorkshire	Fireclay	LISTING OF NEW MINERAL RECORDS OFFICE CATALOGUE.	UNPUBLISHED/D RAFT

This data is sourced from Stantec UK Ltd.

5.8 JPB mining areas

Records on site

0

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

This data is sourced from Johnson Poole and Bloomer.

5.9 Coal mining

Records on site	1
-----------------	---

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

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

This data is sourced from the Coal Authority.

5.10 Brine areas

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

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

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

5.11 Gypsum areas

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

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

5.12 Tin mining

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

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

5.13 Clay mining

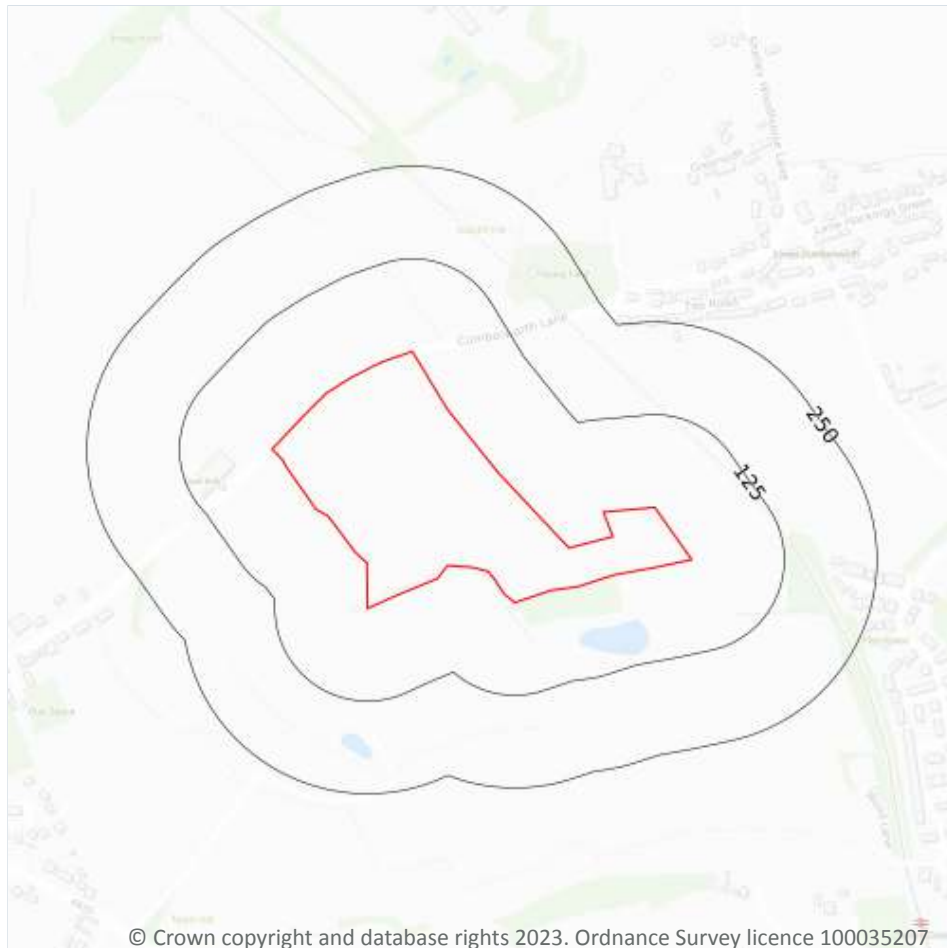
Records on site	0
-----------------	---

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

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



6 Radon



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— 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%

6.1 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 51**

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.



7 Soil chemistry

7.1 BGS Estimated Background Soil Chemistry

Records within 50m

17

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km². In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km²; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 - 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
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
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
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
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
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	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg



Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
7m SE	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
21m E	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
21m E	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
36m W	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
37m W	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

7.2 BGS Estimated Urban Soil Chemistry

Records within 50m

0

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

This data is sourced from the British Geological Survey.

7.3 BGS Measured Urban Soil Chemistry

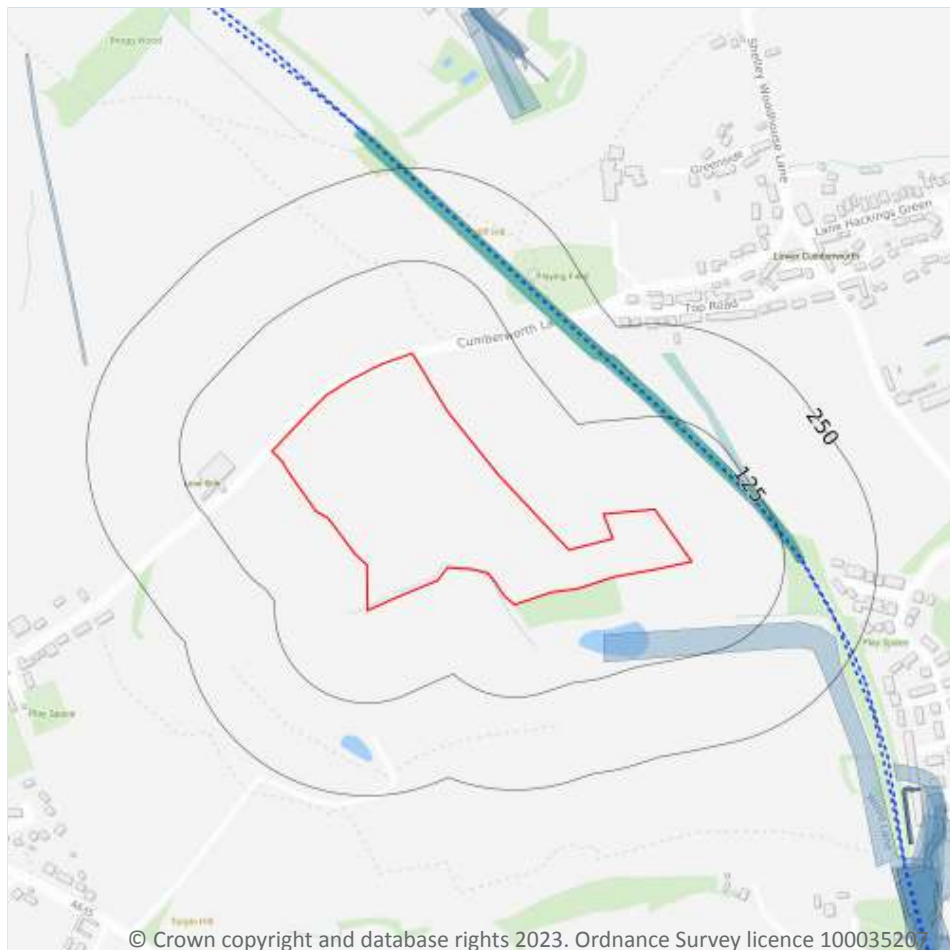
Records within 50m

0

The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km².

This data is sourced from the British Geological Survey.

8 Railway infrastructure and projects



- Site Outline
- Search buffers in metres (m)
- C1 Crossrail 1 Stations
- Crossrail 1 Route
- C2 Crossrail 2 Stations
- Crossrail 2 Route
- Crossrail 2 Worksites
- Crossrail 2 Safeguarding
- Crossrail 2 Headhouses
- Railway stations
- Active railways
- Active tunnels
- Abandoned railways
- Historic railways
- Historic tunnels
- Underground stations
- Underground Lines
- Royal Mail tunnels
- HS2 optimised route
- HS2 Stations
- HS2 Depots
- HS2 Surface Safeguarding
- HS2 Subsurface Safeguarding

8.1 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.

8.2 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.

8.3 Railway tunnels

Records within 250m

1

Railway tunnels taken from contemporary Ordnance Survey mapping.

Features are displayed on the Railway infrastructure and projects map on **page 55**

Location	Type
104m E	Railway Tunnel

This data is sourced from the Ordnance Survey.

8.4 Historical railway and tunnel features

Records within 250m

32

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.

Features are displayed on the Railway infrastructure and projects map on **page 55**

Location	Land Use	Year of mapping	Mapping scale
70m SE	Railway Sidings	1951	10560
95m E	Tunnel	1948	10560
95m E	Tunnel	1903	10560
95m E	Tunnel	1891	10560
96m E	Tunnel	1891	2500
99m E	Tunnel	1933	10560
99m E	Tunnel	1996	2500
99m E	Tunnel	1970	-
101m E	Tunnel	1969	2500
101m E	Tunnel	1959	2500
101m E	Tunnel	1983	2500
103m E	Tunnel	1951	10560
103m E	Tunnel	1983	10000



Location	Land Use	Year of mapping	Mapping scale
103m E	Tunnel	1967	10560
121m E	Tunnel	1850	10560
131m E	Tunnel	1971	2500
131m E	Tunnel	1995	2500
131m E	Tunnel	1959	2500
131m E	Tunnel	1970	2500
131m E	Tunnel	1986	2500
131m E	Tunnel	1988	2500
131m E	Tunnel	1958	2500
159m N	Tunnel	1892	10560
162m N	Tunnel	1913	2500
162m N	Tunnel	1906	2500
162m N	Tunnel	1893	2500
162m N	Tunnel	1904	10560
162m N	Tunnel	1948	10560
167m N	Tunnel	1932	10560
169m N	Tunnel	1985	2500
170m N	Tunnel	1959	2500
170m N	Tunnel	1993	2500

This data is sourced from Ordnance Survey/Groundsure.

8.5 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.



8.6 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.

8.7 Railways

Records within 250m**4**

Currently existing railway lines, including standard railways, narrow gauge, funicular, trams and light railways. Features are displayed on the Railway infrastructure and projects map on **page 55**

Location	Name	Type
103m E	Penistone Line	rail
148m E	Not given	Single Track
149m E	Penistone Line	rail
153m E	Not given	Single Track

This data is sourced from Ordnance Survey and OpenStreetMap.

8.8 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.

8.9 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.



8.10 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>.

Terms and conditions

Groundsure's Terms and Conditions can be accessed at this link: <https://www.groundsure.com/terms-and-conditions-jan-2020/>.



APPENDIX D

Photographic Record

Photo Reference	Description
A	Restored Bromley Farm quarry on western perimeter of site.
B	Fields on western part of the site.
C	Fields on eastern part of the site.
D	Vegetation screening on eastern perimeter of site.
E	Mound 100m east of the site.
F	Lane Side Farm located beyond north western corner of site.
G	Former Bromley Farm quarry (south end), now civic recycling centre.
H	Former Bromleys quarry, now dormant.
I	Google Earth view of former Bromleys quarry.

/

Location of Photographs



Site Location

Ref: 22007

**Bromley Farm Quarry,
Lower Cumberworth,
West Yorkshire,
HD8 8PD.**

LOCATION OF PHOTOGRAPHS

{421500, 409000}

Photo A: Restored Bromley Farm quarry on western perimeter of site.



Photo B: Fields on western part of the site.



Photo C: Fields on eastern part of the site.



Photo D: Vegetation screening on eastern perimeter of site.



Photo E: Mound 100m east of the site.



Photo F: Lane Side Farm located beyond north western corner of site.



Photo G: Former Bromley Farm quarry (south end), now civic recycling centre.



Photo H: Former Bromleys quarry, now dormant.



Photo I: Google Earth view of former Bromleys quarry.



APPENDIX E

Consultants Coal Mining Report



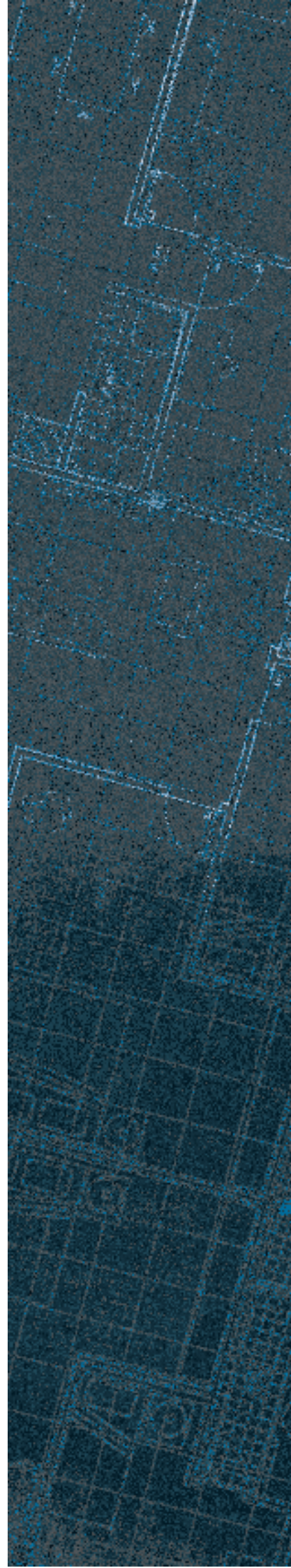
The Coal
Authority

Consultants Coal Mining Report

Bromley Farm
85 Cumberworth Lane
Upper Cumberworth
Huddersfield
Kirklees
HD8 8PD

Date of enquiry:	13 December 2022
Date enquiry received:	13 December 2022
Issue date:	13 December 2022

Our reference:	51003329947001
Your reference:	21007



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

SILKSTONE ENVIRONMENTAL LTD

Enquiry address

Bromley Farm
85 Cumberworth Lane
Upper Cumberworth
Huddersfield
Kirklees
HD8 8PD

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Nottinghamshire
NG18 4RG

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 @coalauthority

 /company/the-coal-authority

 /thecoalauthority

 /thecoalauthority



Approximate position of property



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Section 1 – Mining activity and geology

Past underground mining

Colliery	Seam	Mineral	Coal Authority reference	Depth (m)	Direction to working	Dipping rate of seam worked (degrees)	Dipped direction of seam worked	Extraction thickness (cm)	Year last mined
unnamed	WHINMOOR	Coal	6NH4	7	Beneath Property	4.9	North	168	1926
unnamed	LOW WHINMOOR	Coal	6HB3	9	Beneath Property	2.1	North-East	170	1955
unnamed	LOW WHINMOOR	Coal	6NL3	9	Beneath Property	1.2	North-East	170	1944
BROMLEY	LOW WHINMOOR	Coal	6HB5	12	Beneath Property	2.0	North-East	152	1923
unnamed	LOW WHINMOOR	Coal	6NA3	13	Beneath Property	1.6	North-East	170	1957
unnamed	LOW WHINMOOR	Coal	6HB4	15	Beneath Property	1.6	North-East	170	1948
unnamed	LOW WHINMOOR	Coal	6Z2K	17	Beneath Property	2.8	South	170	1936
unnamed	LOW WHINMOOR	Coal	6NK3	17	North-West	1.3	North-East	168	1928
unnamed	LOW WHINMOOR	Coal	6HPM	18	Beneath Property	0.0	East	170	1943

Probable unrecorded shallow workings

Yes.

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	421408-003	421726 408878		Fireclay	
Shaft	421408-004	421794 408872		Fireclay	
Adit	421408-005	421841 408868		Fireclay	
Adit	421408-013	421956 408904		Coal	
Shaft	421409-027	421483 409172		Coal	
Shaft	421409-028	421603 409231		Coal	
Shaft	421409-029	421648 409249		Coal	
Shaft	421409-030	421672 409275		Coal	
Adit	421409-098	421575 409300		Coal	
Adit	421409-102	421420 409103		Coal	
Adit	421409-103	421431 409104		Coal	
Adit	421409-104	421442 409115		Coal	
Adit	421409-105	421793 409301		Coal	
Adit	422408-040	422071 408924		Coal	
Shaft	422408-041	422069 408994		Coal	
Adit	422408-042	422092 408955		Coal	

Abandoned mine plan catalogue numbers

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

4540	SY234	SY223
M181	NE894	5568
7801	17149	SY70

Our records show we have more plans than those shown above which could affect the enquiry boundary.

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

Outcrops

Seam name	Mineral	Seam workable	Distance to outcrop (m)	Direction to outcrop	Bearing of outcrop
LOW WHINMOOR	Coal	Yes	28.9	South	35
LOW WHINMOOR	Coal	Yes	Within	N/A	74
TOP BEESTON	Coal	Yes	27.2	North-West	237
WHINMOOR	Coal	Yes	8.6	South	59
WHINMOOR	Coal	Yes	Within	N/A	68
WHINMOOR	Coal	Yes	Within	N/A	74

Geological faults, fissures and breaklines

Please refer to the 'Summary of findings' map (on separate sheet) for details of any geological faults, fissures or breaklines either within or intersecting the enquiry boundary.

Faults under or close to the property recorded.

Opencast mines

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

None recorded within 50 metres of the enquiry boundary.

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.

Development advice

The site is within an area of historical coal mining activity. Should you require advice and/or support on understanding the mining legacy, its risks to your development or what next steps you need to take, please contact us.

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.

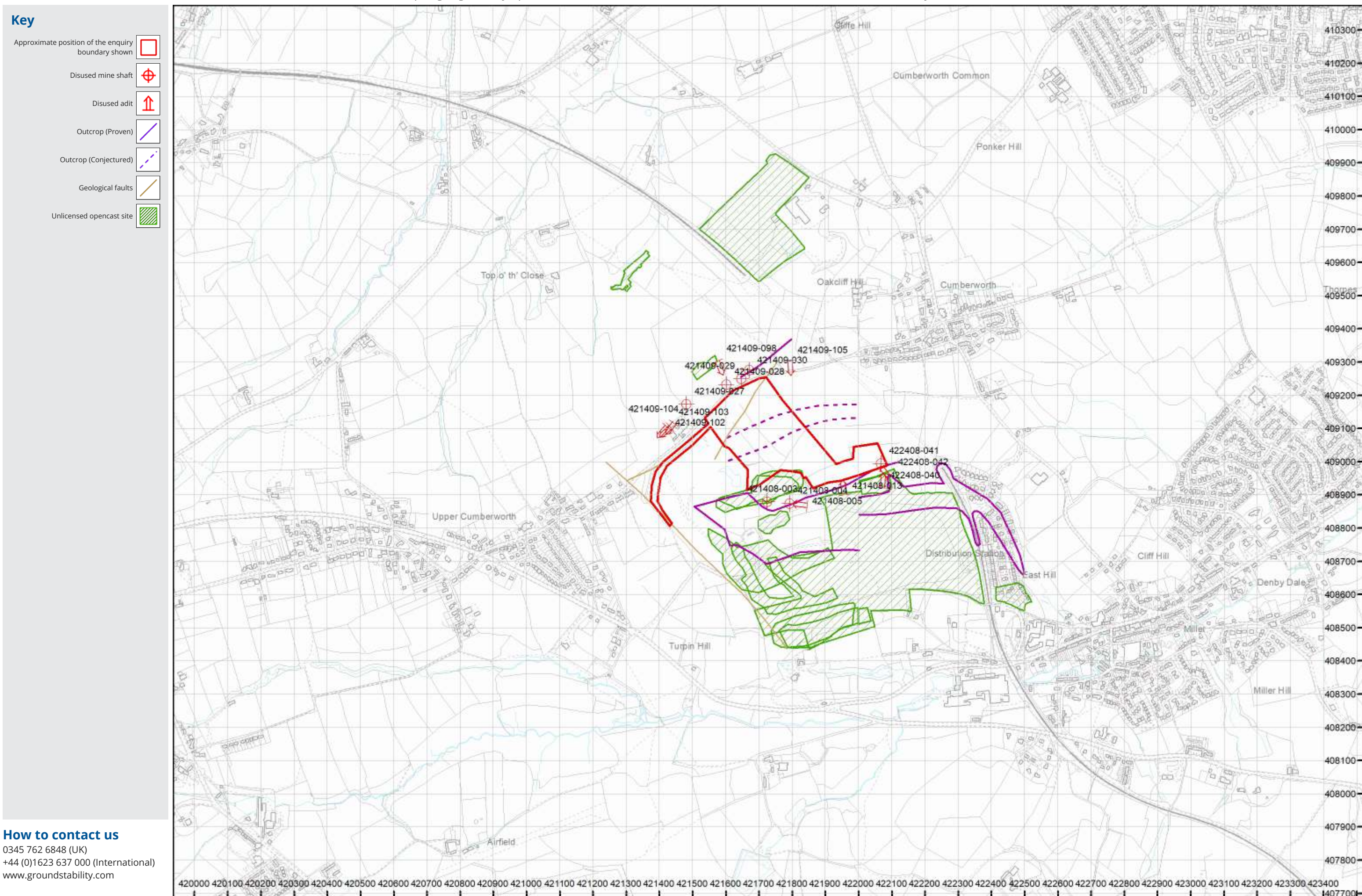
Withdrawal of support notices

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



APPENDIX F

Environment Agency Flood Map for Planning (Rivers and Sea)

APPENDIX G

Unexploded Bomb Risk Information

Unexploded Bomb Risk Map

UNEXPLODED BOMB RISK MAP



SITE LOCATION

Map Centre: 421641,409075



LEGEND

-  **High:** Areas indicated as having a bombing density of 50 bombs per 1000acre or higher.
-  **Moderate:** Areas indicated as having a bombing density of 15 to 49 bombs per 1000acre.
-  **Low:** Areas indicated as having 15 bombs per 1000acre or less.

- | | | |
|--|--|--|
|  military |  industry |  UXO find |
|  transport |  dock |  Luftwaffe targets |
|  utilities |  Bombing decoy |  other |

How to use your Unexploded Bomb (UXB) risk map?

The map indicates the potential for Unexploded Bombs (UXB) to be present as a result of World War Two (WWII) bombing.

You can incorporate the map into your preliminary risk assessment* for potential Unexploded Ordnance (UXO) for a site. Using this map, you can make an informed decision as to whether more in-depth detailed risk assessment* is necessary.

What do I do if my site is in a moderate or high risk area?

Generally, we recommend that a detailed UXO desk study and risk assessment is undertaken for sites in a moderate or high UXB risk area.

Similarly, if your site is near to a designated Luftwaffe target or bombing decoy then additional detailed research is recommended.

More often than not, this further detailed research will conclude that the potential for a significant UXO hazard to be present on your site is actually low.

Never plan site work or undertake a risk assessment using these maps alone. More detail is required, particularly where there may be a source of UXO from other military operations which are not reflected on these maps.

If my site is in a low risk area, do I need to do anything?

If both the map and other research confirms that there is a low potential for UXO to be present on your site then, subject to your own comfort and risk tolerance, works can proceed with no special precautions.

A low risk really means that there is no greater probability of encountering UXO than anywhere else in the UK.

If you are unsure whether other sources of UXO may be present, you can ask for one of our **pre-desk study assessments (PDSA)**

If I have any questions, who do I contact?

tel: **+44 (0) 1993 886682**

email: **uxo@zetica.com**

web: **www.zeticauxo.com**

The information in this UXB risk map is derived from a number of sources and should be used in conjunction with the accompanying notes on our website: (<https://zeticauxo.com/downloads-and-resources/risk-maps/>)

Zetica cannot guarantee the accuracy or completeness of the information or data used and cannot accept any liability for any use of the maps. These maps can be used as part of a technical report or similar publication, subject to acknowledgment. The copyright remains with Zetica Ltd.

It is important to note that this map is not a UXO risk assessment and should not be reported as such when reproduced.

*Preliminary and detailed UXO risk assessments are advocated as good practice by industry guidance such as CIRIA C681 'Unexploded Ordnance (UXO), a guide for the construction industry'.

APPENDIX H

Guide to the Risk Assessment Process Under CIRIA C552

The estimation of 'probability; and 'consequence' are made based on the following classifications:

The **probability** (likelihood) of a risk being realised can be classified as follows:

- **High Likelihood:** There is a pollution linkage and an event that either appears very likely in the short term and almost inevitable over the longer term, or there is evidence at the receptor of harm or pollution;
- **Likely:** There is a pollution linkage and all the elements are present and in the right place, which means that it is probable that an event will occur or circumstances are such that the event is not inevitable, but possible in the short term and likely over the long term;
- **Low Likelihood:** There is a pollution linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period such an event would take place and it is less likely in the shorter term;
- **Unlikely:** There is a pollution linkage, but circumstances are such that it is improbable that an event would occur even in the very long term.

The **consequence** (severity) of a risk being realised can be classified as follows:

- **Severe:** Short-term (acute) risk to human health likely to result in 'significant harm' as defined by the Environmental Protection Act 1990, Part 2A. Short-term risk of pollution of sensitive water resources. Catastrophic damage to buildings / property. Short-term risk to a particular ecosystem, or organism forming part of such ecosystem;
- **Medium:** Chronic damage to human health ('significant harm' as defined in 'Draft Circular on Contaminated Land', DETR 2000). Pollution of sensitive water resources. A significant change in a particular ecosystem;
- **Mild:** Pollution of non-sensitive water resources. Significant damage to buildings, structures and services ('significant harm' as defined in 'Draft Circular on Contaminated Land', DETR 2000). Damage to sensitive buildings / structures / services. Significant damage to crops. Damage to the environment;
- **Minor:** Harm, although not necessarily significant harm, which may result in a financial loss, or expenditure to resolve. Non-permanent human health effects to human health (easily prevented by means such as personal protective clothing, etc). Easily repairable effects of damage to buildings, structures and services.

Once the probability of an event occurring and its consequence have been classified, a risk category can be assigned from the Table below.

Risk Classification Matrix from CIRIA C552

Probability	Consequence			
	Severe	Medium	Mild	Minor
High Likelihood	Very high	High	Moderate	Moderate / Low
Likely	High	Moderate	Moderate / Low	Low
Low Likelihood	Moderate	Moderate / Low	Low	Very Low
Unlikely	Moderate / Low	Low	Very Low	Very Low

The definitions of the risk categories within the above Table are provided in section 3.6 of the report.