

Coal Mining Risk Assessment

LONGFIELD HOUSE, THURGOLAND HALL FOLD, THURGOLAND

Project Ref: GUK-0826-03

For: Mr G. Eaton

CLIENT:

Mr G. Eaton

PROJECT:

Residential Development

SITE REFERENCE:

**Longfield House
Thurgoland Hall Fold
Thurgoland
South Yorkshire**

REPORT REFERENCE:

GUK-0826-03/Rp-001



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GE/LH/LP/A4/01	LOCATION PLAN
0826-03-001	BEDROCK GEOLOGY (1:50,000)
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APPENDIX A:	ENVIRO+GEOINSIGHT REPORT
APPENDIX B:	CONSULTANTS COAL MINING REPORT

1 INTRODUCTION

1.1 Appointment

Groundsmiths (UK) Ltd ('Groundsmiths') were commissioned by Mr G. Eaton (the 'Client') to provide professional services in relation to the preliminary assessment of risks associated with coal mining legacy affecting land at Longfield House, Thurgoland Hall Fold, Thurgoland, South Yorkshire (herein referred to as the 'Site').

Groundsmiths have prepared this report (the 'Report') for the sole use of the Client that commissioned it, in accordance with the agreement under which our services are performed. No other warranty, expressed or implied, is made as to the professional advice or commentary included in this Report. Any unauthorised third party relying upon or otherwise using the information presented does so entirely at their own risk and is excluded from any warranty, duty of care, or duty of skill.

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1.2 Development Proposals

It is understood that the proposed development comprises the construction of a new residential dwelling within the north-western part of the wider Longfield House landholding, necessitating the replacement of an existing single-storey outbuilding. The proposed development area and associated access are shown on the appended location plan (Ref. GE/LH/LP/A4/01, October 2024).

This Report has therefore been prepared to identify and assess any potential risks associated with historic coal mining and other mineral extraction activities that may affect the Site and to provide an initial appraisal of whether such risks are likely to materially influence the proposed development or can be appropriately addressed through further investigation and, where necessary, remedial measures.

The assessment presented herein is based upon a review of available geological records, historic mapping, third-party data sources, and mining-related information obtained from the MRA ^[1].

1.3 DHR or DLR?

The MRA is a statutory consultee on planning applications for development within defined coal mining areas in England, Scotland, and Wales. They have specific statutory responsibilities associated with, for example, the licensing of coal mining operations, the handling of subsidence claims, providing information on coal mining, and in managing the environmental legacy of coal mining activities.

The MRA adopts a risk-based approach to development management ^[2], whereby sites are categorised as either 'Development High Risk' or 'Development Low Risk':

- **Development High Risk (DHR)** areas cover approximately 15% of the coalfield and refer to those areas where specific recorded coal mining legacy is present or suspected which poses a risk to public safety and/or ground stability (e.g. mine entries, shallow recorded or probable workings, coal opencast sites etc), and
- **Development Low Risk (DLR)** areas cover approximately 85% of the coalfield and refer to those areas where historic coal mining activity has taken place at sufficient depth that it poses only a low risk to new development.

Where built development lies within a Development High Risk area, the MRA ordinarily requires the submission of a Coal Mining Risk Assessment (subject to any exemptions that may apply). Although there is no equivalent statutory requirement for development within a Development Low Risk area, planning authorities and other interested parties may nevertheless require a documented assessment to demonstrate that potential coal mining constraints have been appropriately considered. In either case, the assessment is prepared in accordance with the general principles of preliminary risk assessment adopted by the MRA in order to:

- Determine the potential ground-related hazards and risks associated with any historic coal mining legacy and other mineral workings, and
- Demonstrate to the LPA that the application Site is safe, or can be made safe, having regard to the requirements of the National Planning Policy Framework (the 'NPPF') ^[3], notably Paragraphs 196(a) ¹ and 197 (*Ground Conditions and Pollution*) which state (*in relation to mining legacy*) that planning policies and decisions should ensure that:

Para.196: a) a site is suitable for its proposed use taking account of ground conditions and any risks arising from land instability and contamination. This includes risks arising from natural hazards or former activities such as mining, and any proposals for mitigation including land remediation (as well as potential impacts on the natural environment arising from that remediation), and

Para.197: *Where a site is affected by contamination or land stability issues, responsibility for securing a safe development rests with the developer and/or landowner.*

Based upon available information, Groundsmiths indicate that the Site assessed herein lies within a defined area of Development High Risk (DHR). This determination is based principally upon information provided by the MRA, including the Consultants Coal Mining Report ^[4] and interactive database ^[5], together with other available geological information sources where appropriate ^[6].

¹ Paragraph 196(b) refers to post-remedial activities and the land not being capable of being determined as contaminated land under Part IIA of the Environmental Protection Act, whilst 196(c) requires the provision of adequate site investigation information, prepared by competent persons, to inform all assessments.

For the purposes of this assessment, the initial risk level for the Site is determined as being:

INITIAL RISK LEVEL DETERMINATION: HIGH

1.4 Objectives

Notwithstanding the above risk determination and the requirement to identify any potential mining legacy (e.g. underground mine workings, mine entries, mine gases...) relevant to the Site, the general objectives of this Report were also to provide information about the anticipated:

- nature of any underlying artificial deposits;
- nature of any underlying superficial deposits;
- nature of the bedrock geology;
- presence of any geological instability such as landslip, faults, or other linear features;
- need for any investigative works required to quantify any mining legacy risks, be they associated with historic coal and/or other mineral working; and
- an indication of the scope of any remedial works that may be required to mitigate mining legacy risks.

1.5 Scope of Works

The assessment undertaken within the context of this Report comprised a review of the following sources of information:

- British Geological Survey ('BGS') 1:50,000 and 1:10,000 scale series geological mapsheets ^[7,8]
- Groundsure Enviro+GeoInsight Report (Appendix A) ^[9]
- BGS Onshore GeoIndex records database ^[10]
- MRA Consultants Coal Mining Report (Appendix B)
- MRA interactive database and associated mine entry records
- Geological texts and records ^[11,12,13,14]

1.6 Previous Reports

Groundsmiths are not aware of any previous intrusive ground investigation reports relating directly to the Site.

1.7 Limitations of Study

This Report has been compiled subject to the limitations detailed in Section 7 and any other limitations stated separately in the body text.

No intrusive ground investigation works have been undertaken as part of this assessment. Should further investigation and/or remedial works be required to address mining-related hazards identified herein, such works would need to be undertaken in accordance with current technical guidance and, where applicable, the permitting requirements of the MRA.

2 SITE SETTING

The assessment given herein follows a review of currently available published geological records, third party data, and mining-related information obtained from the MRA.

2.1 General Details

A general summary of the Site's setting is given in Table 2.1, below.

Table 2.1 - General Site Details

National Grid Reference	The National Grid Reference (NGR) for the Site is indicated to be 428678mE 401477mN.
Ground Elevations	Available information indicates that the Site lies at an elevation of approximately 245-246m AOD.
Site Layout & Adjacent Development	The Site comprises an irregularly shaped parcel of land consisting of an existing access track leading to a single-storey outbuilding with associated gravel parking/hardstanding and an area of grass. The grassed area, located to the north of the outbuilding, has recently been enclosed by fencing to separate the proposed development area from the remainder of the Client's wider landholding at Longfield House, which lies immediately to the east. Open agricultural land adjoins the Site beyond drystone walling to the north and west. Yorkshire Water infrastructure and an area of scrubland containing a pond are present immediately to the south, beyond which lies the established residential area of Thurgoland.

2.2 Anticipated Geological Conditions

A summary of the salient geological data for the Site and immediate surrounding area is given in Table 2.2, below and overleaf. Reference should be made to the appended Groundsure report for a full account.

Table 2.2 - General Geological Conditions

Artificial Deposits	BGS geological mapping at both the 1:10,000 and 1:50,000 scales record the presence of artificial ground, classified as Infilled Ground (Artificial Deposit), within the northern part of the Site. The mapped feature forms part of a more extensive area of artificial ground extending beyond the Site's boundary to the north. Available geological records do not provide details regarding the composition, thickness, or age of the mapped deposits. Accordingly, the nature and precise extent of any artificial materials within the Site are not known on the basis of available published information at this time.
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Superficial Geology	No superficial deposits are indicated to be present beneath the Site.
Bedrock Geology	The bedrock geology is indicated to comprise deposits of the Pennine Lower Coal Measures Formation (see Figures 0826-03-001 and 0826-03-002). This formation is typically characterised by a cyclical sequence of interbedded mudstone, siltstone, and sandstone, together with numerous coal seams and associated seatearth horizons. Available geological and mining records indicate that the Coal Measures strata in the vicinity of the Site dip broadly north-eastwards at approximately 5°. Local variation in the orientation and condition of the strata may nevertheless be present, particularly in areas affected by former opencast mining activity.
Bedrock Faults & Linear Features	Review of the available BGS geological mapping indicates an inferred bedrock fault, of unknown displacement, crossing the access track within the south-eastern part of the Site. The fault is not mapped within the proposed development area. Further inferred faults are mapped within the surrounding area, reflecting the locally faulted nature of the Coal Measures succession. Several coal seam outcrops are mapped within and adjacent to the Site, including the Black Band Coal, the mapped outcrop of which crosses through the western part of the Site. The disposition and potential significance of the individual coal seams are considered further in the mining assessment presented herein.
BGS Records	Review of the available BGS borehole records indicates that no boreholes of relevance to the assessment have been identified in the vicinity of the Site. An historic borehole record identified within the wider surrounding area provides general information regarding the local Coal Measures succession, but does not materially assist in defining ground conditions beneath the Site.
Natural Cavities	There are no records of any natural cavities within at least 500m.
Mining Cavities	There are no records of any mining cavities (e.g. crown holes) within at least 1km.
Reported Incidents (Sinkholes)	There are no reported incidents of sinkholes dating back to 2014 within at least 500m.
Historic Incidents (Sinkholes)	There are no reported incidents of sinkholes dating back to the 1840s within at least 500m.
Underground Mining Extents	The Groundsure dataset records no underground mining extents within at least 500m. Coal mining records obtained separately from the MRA are considered in Section 3.
Historic Mineral Planning Areas	No historic mineral planning areas are recorded within at least 500m of the Site.
Non-coal Mining	There are no records of any non-coal mining within at least 1km.
Natural Ground Subsidence Hazards (within 50m)	Review of the available Groundsure data indicates that the Site is at very low risk from shrink-swell clay soils, running sands, and collapsible deposits, and at negligible risk from the dissolution of soluble rocks. A moderate risk is identified in respect of compressible deposits, indicating that compressibility and/or uneven settlement hazards may be present across part of the Site.

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	The potential for compressible and variable ground conditions should therefore be considered within the remit of an intrusive ground investigation. Potential instability associated with historic coal mining, opencast activity, and artificial ground is considered separately within this assessment.
Bedrock Permeability	Within naturally occurring, undisturbed bedrock, permeability is indicated to be variable, ranging from low to high. Groundwater movement would be expected to occur predominantly via secondary porosity through fissures, joints and other fractures. Groundwater movement within areas affected by former mining or opencast activity may differ due to disturbance of the natural strata and the potential presence of more permeable pathways.
Landslip	In providing a preliminary assessment of risk associated with potential landslip, consultation was made with the data presented by Groundsure at the 1:10,000 and 1:50,000 scales. Information presented within the Groundsure report indicates that no mapped landslip deposits are recorded within 500m of the Site. The Site is classified as being at very low risk from landslide hazards, with slope instability problems considered unlikely to occur, although the potential for instability within adjacent areas to impact upon the Site should be considered. On the basis of the available information and the generally level to gently sloping nature of the proposed development area, significant natural slope instability is not considered likely to represent a material constraint to the proposed development.
Brine	The Site does not lie within a brine pumping area.
Radon	The Site lies within an area where <1% of properties are estimated to exceed the UK radon Action Level. On this basis, no radon protective measures are required for the proposed development in accordance with current Building Regulations guidance.

3 IDENTIFICATION AND ASSESSMENT OF SITE-SPECIFIC COAL MINING & MINERAL WORKING RISKS

Consideration has been given to the historic mining legacy relating to the Site and the immediate surrounding area. Potential mining risks that could have a negative impact on the proposed development have been assessed, utilising third-party and other published information where available.

3.1 Consultants Coal Mining Report

Salient information obtained from the MRA, as indicated in the appended Consultants Coal Mining Report, may be summarised as follows:

- Recorded underground coal mining is identified beneath the Site within the Whinmoor Coal at a depth of 20m bgl. The recorded workings comprise an extraction thickness of 0.71m, with the seam indicated to dip at 4.1° towards the north-east. The last recorded date of working was 1853;
- Probable unrecorded shallow workings (at less than 30m depth) are identified;
- The mapped outcrop of the Whinmoor Coal is identified 32.9m to the south and 40.6m to the south-west of the Site. The MRA identifies the seam as workable;
- Four recorded mine entries, comprising shafts, are identified within 100m of the Site. Treatment details for each of the shafts are recorded as unknown. No mine entries are recorded within the Site's boundary;
- A geological fault is identified as intersecting the Site's access track. There are, however, no recorded fissures or breaklines;
- Former opencast coal mining areas (denoted as green hatched areas) are identified within the northern part of the development area;
- No shallow-depth spine roadways are identified;
- No records relating to coal mining subsidence claims within 50m of the Site are identified;
- No mine water treatment schemes are recorded within 500m of the Site;
- No records relating to remediation works undertaken within 50m of the Site are identified; and
- No records of mine gas incidents within 500m of the Site are identified.

3.2 Non-Coal Mineral Workings

No records relating to non-coal mineral workings beneath the Site or within the immediate surrounding area have been identified.

3.3 Mining Legacy & Legacy Risk

The Site is underlain by deposits of the Pennine Lower Coal Measures Formation, comprising an interbedded sequence of mudstone, siltstone, and sandstone containing numerous coal seams. Available geological and mining information indicates that the strata dip generally north-eastwards at approximately 4° to 5°. The Black Band Coal represents the shallowest identified coal seam affecting the proposed development area, with its mapped outcrop passing approximately through the western/central part of the proposed building footprint.

The Whinmoor Coal occurs below the Black Band Coal in the local stratigraphic succession, with its mapped outcrop situated further to the south-west and the seam dipping beneath the Site towards the north-east.

The MRA records underground working of the Whinmoor Coal beneath the Site at 20m bgl, with a recorded extraction thickness of 0.71m and a seam dip of approximately 4.1° towards the north-east. However, the reported depth does not readily reconcile with the mapped position of the Whinmoor outcrop and the indicated seam dip. The outcrop lies approximately 33m to 41m south-west of the proposed development area and appears to occur at a broadly similar ground elevation. At the recorded dip, this geometry would suggest a considerably shallower position for the seam beneath at least part of the Site than the reported 20m depth. The reason for this discrepancy cannot be established from the available records and may reflect the location to which the recorded working depth relates, limitations in the historic mapping, local structural variation, or other mining-related disturbance. Consequently, the actual depth and disposition of the Whinmoor Coal and its associated workings beneath the Site remain uncertain.

The MRA additionally identifies the Site as lying within an area of probable unrecorded shallow coal workings at less than 30m depth. By their nature, the location, depth, extent, and condition of such workings cannot be established from desk-based information alone. The discrepancy between the recorded working depth and the geological geometry is therefore particularly relevant, as the possibility that the Whinmoor Coal and/or associated workings occur at materially shallower depth beneath parts of the proposed development cannot presently be discounted.

In considering the potential significance of the underground workings, reference has been made to CIRIA C758 *Abandoned Mine Workings Manual* ^[15]. This describes an empirical rule of thumb whereby workings beneath both residential and commercial development have historically been treated where there is less than approximately 10 times the aggregate height of the mine workings as competent rock cover. CIRIA notes that this relationship requires appropriate evaluation and risk assessment and that collapsed, fractured, or broken ground above workings should not be regarded as competent rock.

The available desk-based information is insufficient to apply this relationship with confidence. The actual depth of the workings beneath the proposed development is uncertain, the thickness of competent rock cover has not been established, and the recorded extraction thickness of 0.71m does not necessarily represent the present aggregate height of the workings. Artificial surficial materials, weathered, or weak Coal Measures strata and any fractured or collapsed ground above the workings may materially reduce the competent cover present, whilst deterioration or roof collapse may have increased the effective working height. The potential for instability associated with the Whinmoor workings must therefore be determined from Site-specific ground investigation rather than from the nominal 20m recorded depth alone.

A separate mining legacy relates to former opencast extraction of the Black Band Coal. Historic records indicate that the Site lies within the former licensed area of the Birkfield Opencast Coal Site (OCCS). Review of the 1948 Birkfield abandonment plan (Ref. NE95) indicates that the basal extent of Black Band Coal extraction terminates immediately north of the proposed development area. Recorded levels at the southern margin indicate an original ground level of

approximately 806ft (245m AOD) and a base of working level of 791ft (241m AOD), corresponding to an excavation depth of about 15ft (4.5m).

Importantly, the mapped extent of Black Band Coal extraction represents the position of working at the base of the excavation and does not define the surface position of the former opencast margin. The associated southern highwall/batter would likely have extended laterally beyond the basal working limit towards original ground level. It is therefore credible, at this stage, to assume that the former excavation and subsequent backfill extend southwards beneath part of the proposed development area. The position and geometry of the former opencast margin cannot be established from the historic information presently available as that level of detail is not provided.

This possibility is consistent with BGS geological mapping, which records infilled ground (artificial deposit) within the northern part of the Site and extending farther northwards. The origin, thickness, and precise extent of these deposits are not defined by the published mapping, although their distribution is consistent with the potential presence of disturbed and/or backfilled ground associated with former opencast activity. The MRA's large plot (appended as part of the Consultants Report) also shows additional opencast boundaries/features crossing the proposed development area. These cannot presently be reconciled with the 1948 Birkfield plan and it is unclear whether they represent site or licence boundaries, excavation/highwall limits, coaling areas, or separate phases of opencast activity.

Four recorded mine shafts are present within 100m of the Site, although none are identified within the proposed development area. No shallow-depth spine roadways are recorded and the mapped geological fault intersects the access track rather than the proposed development area. These features are therefore not presently considered to represent principal mining-related constraints to the proposed development.

Taking the available evidence as a whole, the principal mining-related uncertainties affecting the Site comprise the actual depth, disposition, and condition of the Whinmoor Coal and associated underground workings, the potential presence of additional unrecorded shallow workings, and the uncertain position and geometry of the southern margin of the former Birkfield opencast excavation. In particular, the recorded 20m depth to Whinmoor workings cannot presently be reconciled with the mapped seam geometry and should not be relied upon as demonstrating that the workings are sufficiently remote from surface to present a low stability risk. These uncertainties cannot be satisfactorily resolved from the available desk-based information and require further Site-specific investigation. The identified mining considerations and their implications for the proposed development are summarised in Tables 3.1 and 3.2 below and overleaf.

Table 3.1 - Summary of Mining Legacy

Mining Feature	Yes	No	Unknown	Comment
On-Site coal crop	x			The Black Band Coal is mapped as cropping through the proposed development area.

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Mining Feature	Yes	No	Unknown	Comment
Recorded underground coal mine workings <30m bgl beneath the Site	x			Whinmoor Coal workings are recorded at a depth of 20m bgl by the MRA.
Recorded underground coal mine workings <30m bgl on adjacent land	x			Extensive recorded Whinmoor Coal workings are present within the surrounding area on the basis of MRA abandonment plans dating back to 1860 (Thurgoland Colliery).
Probable unrecorded underground coal mine workings at <30m bgl beneath the Site	x			Probable unrecorded shallow workings are identified by the MRA.
Recorded or probable unrecorded underground ore mining beneath the Site or adjacent land		x		No evidence of historic ore or other mineral workings beneath the Site or adjacent land has been identified at this time.
Mine entries (shafts and adits) on, or within 100m of the Site	x			Four recorded mine shafts are identified within 100m of the Site, but none are recorded on-Site.
Recorded MRA mining surface (opencast) workings hazards on-Site or within influencing distance	x			Site lies within the former Birkfield OCCS area; the Black Band Coal was worked from opencast immediately north of the proposed development area, potentially encroaching southwards.
Records of coal mining related subsidence		x		None identified by the MRA within 50m of the Site.
Spontaneous combustion ('sponcom') of coal seams	x			Review of published MRA guidance ^[16] indicates that the Beeston Coal is recorded as having a history of spontaneous combustion within the Yorkshire Coalfield. The Black Band and Whinmoor Coals are locally correlated with the Top and Low Beeston Coals, respectively.
Records of mine gas emissions requiring action by the MRA		x		None identified by the MRA within 500m of the Site.
Geological weakness	x			A mapped geological fault crosses the Site's access track.
Remediation work to sites or mine entries		x		None identified by the MRA within 50m of the Site.

Table 3.2 - Qualitative Mining Risk Evaluation

Mining Feature	Risk Level	Comment
On-Site coal crop	High	The Black Band Coal is mapped as cropping approximately through the western/central part of the proposed building footprint. The seam is therefore anticipated at or close to rockhead and may have been subject to historic disturbance or extraction.
Recorded underground coal mine workings <30m bgl beneath the Site	High	The MRA records workings in the Whinmoor Coal beneath the Site at 20m bgl, with a recorded extraction thickness of 0.71m. However, this depth does not readily reconcile with the mapped crop position, local ground elevations and recorded seam dip, which suggest that the seam may occur at appreciably shallower depth beneath parts of the Site.
Recorded underground coal mine workings <30m bgl on adjacent land	Moderate	Recorded Whinmoor Coal workings extend across the surrounding area. Their significance to the Site is principally associated with the uncertainty regarding the depth and disposition of the same worked seam beneath the proposed development.
Probable unrecorded underground coal mine workings at <30m bgl beneath the Site	High	The MRA identifies the potential for probable unrecorded coal workings at less than 30m depth beneath the Site but does not attribute these workings to a particular seam. The shallow succession includes the Black Band Coal, which crops through the proposed development area, and the underlying Whinmoor Coal, which is known to have been historically worked. The available records do not establish whether the probable unrecorded workings relate to either of these seams, or to other locally developed coal horizons within the succession.
Recorded or probable unrecorded underground ore mining beneath the Site or adjacent land	Negligible	No evidence of historic ore or other non-coal mineral workings beneath the Site or adjacent land has been identified from the available records.
Mine entries (shafts and adits) on, or within 100m of the Site	Low	Four recorded mine shafts are identified within 100m of the Site, although none lie within the proposed development area and their treatment status is unknown. Given the history of shallow mining within the locality and the MRA identification of probable unrecorded shallow workings, the possibility of associated unrecorded mine entries cannot be entirely discounted. No evidence has, however, been identified to indicate the presence of such a feature within the proposed development area at this time.
Recorded MRA mining surface (opencast) workings hazards on-Site or within influencing distance	High	The Site lies within the former Birkfield OCCS area. The 1948 abandonment plan indicates that basal extraction of the Black Band Coal terminated immediately north of the proposed development area; however, the associated highwall/batter and subsequent backfill may extend southwards beneath the Site. Additional opencast boundaries/features shown by the MRA cannot presently be reconciled with the historic plan.
Records of coal mining related subsidence	Low	The MRA records no coal mining subsidence claims within 50m of the Site. This does not, however, remove the potential for instability associated with the shallow mining features identified herein.

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Mining Feature	Risk Level	Comment
Spontaneous combustion ('sponcom') of coal seams	Low	The Black Band and Whinmoor Coals are locally correlated with the Top and Low Beeston Coals, respectively. The Beeston Coal is identified as having a history of spontaneous combustion within the Yorkshire Coalfield. No Site-specific evidence of spontaneous combustion has been identified, although shallow coal may be encountered or disturbed during development.
Records of mine gas emissions requiring action by the MRA	Low	No mine gas incidents requiring action are recorded by the MRA within 500m of the Site. However, this does not preclude the potential presence or migration of ground gases associated with coal-bearing strata, mine workings, artificial ground or opencast backfill. Potential ground gas should therefore be assessed separately as part of a wider geo-environmental investigation.
Geological weakness	Very Low	A mapped geological fault crosses the Site access track but does not intersect the proposed development area. No other recorded fissures or breaklines affect the Site. The fault is therefore not presently considered a principal constraint to the proposed dwelling.

Based upon the available information, the worst-case mining legacy risk level for the Site is considered to be HIGH.

This determination principally reflects the mapped outcrop of the Black Band Coal within the proposed development area, recorded underground workings in the Whinmoor Coal reported by the MRA at less than 30m depth, the potential for probable unrecorded shallow workings, and the uncertain extent of former opencast excavation and associated backfill relating to the Birkfield OCCS.

The depth and condition of the underground workings and competent rock cover above them remain uncertain, whilst the former opencast highwall/batter may extend beneath part of the proposed development area. Accordingly, these mining-related uncertainties require Site-specific intrusive investigation to establish the actual ground conditions and determine whether mining remediation and/or specific engineering measures are required to ensure that the Site is safe and stable for the proposed development.

4 MITIGATION

Further Works

On the basis of the available geological, mining, and historic information, a Site-specific intrusive investigation targeted at coal mining legacy is considered necessary prior to development. The principal uncertainties relate to the mapped outcrop of the Black Band Coal within the proposed development area, recorded underground workings in the Whinmoor Coal reported by the MRA at less than 30m depth, the potential for probable unrecorded shallow workings, and the uncertain southern extent of former opencast excavation and associated backfill relating to the Birkfield OCCS.

The available desk-based information is not sufficient to establish the actual depth, disposition, or condition of the relevant coal seams and workings beneath the Site. In particular, the reported depth to the Whinmoor Coal workings does not readily reconcile with the mapped outcrop position, local ground elevations, and recorded seam dip. Furthermore, whilst the 1948 opencast abandonment information indicates that basal extraction of the Black Band Coal terminated immediately north of the proposed development area, the associated highwall/batter and subsequent backfill may extend farther south and potentially beneath part of the proposed building footprint.

Accordingly, intrusive investigation will be required to establish a Site-specific geological and mining ground model and determine whether the identified mining legacy represents an unacceptable ground stability risk to the proposed development. The investigation should be designed to:

- a) establish the nature and thickness of any made ground, opencast backfill, and other disturbed near-surface materials, together with the depth to and condition of the underlying natural Coal Measures strata;
- b) establish the position and nature of the southern margin of the former Birkfield OCCS, including the presence and extent of any former highwall/batter and associated disturbed ground beneath the proposed development area;
- c) establish the presence, depth, thickness, and condition of the Black Band and Whinmoor Coals beneath the proposed development area, including clarification of the apparent discrepancy between the reported depth of the Whinmoor Coal workings and the position indicated by the mapped geological information, local ground elevations, and recorded seam dip;
- d) determine the presence, depth, extent, and condition of recorded and/or unrecorded underground mine workings associated with these or other coal seams encountered within the shallow succession, and obtain sufficient information to determine the requirement for, and where necessary inform the design of, appropriate remedial treatment;
- e) establish the nature and thickness of the strata overlying any shallow mine workings identified, including the thickness and condition of competent rock cover, to allow the potential for mining-related instability to be appropriately assessed; and

f) investigate the shallow groundwater regime and identify any groundwater conditions relevant to mining-related ground stability.

The investigation should comprise an appropriate combination of shallow investigation and rotary drilling targeted at the identified mining legacy, with the final scope and exploratory locations developed prior to commencement of the works having regard to the proposed development layout, anticipated geological succession, and identified mining constraints. Rotary investigation should extend to sufficient depth to characterise the shallow Coal Measures succession and investigate coal seams and associated workings potentially capable of influencing the proposed development. The investigation of the former opencast margin should similarly be sufficient to establish the transition between undisturbed natural ground and any opencast excavation, backfill, or associated disturbed ground that may extend beneath the proposed development area.

All investigation works shall be undertaken in accordance with the general requirements of BS5930 ^[17], BS10175 ^[18], BS EN 1997-1 ^[19] and BS EN 1997-2 ^[20]. All intrusive works shall be logged on-Site by a competent engineer, with standard strata descriptions of the soils and rock encountered being in general accordance with BS EN ISO 14688-1 ^[21], BS EN ISO 14688-2 ^[22] and BS EN ISO 14689 ^[23].

Any intrusive investigation specifically intended to investigate coal seams, mine workings, or other coal mining legacy will need to be undertaken in accordance with the requirements of the MRA, including obtaining the appropriate permit prior to commencement.

The findings of the investigation should be used to refine the geological and mining ground model and determine whether the Site is safe and stable for the proposed development in its investigated condition or whether mining remediation and/or specific engineering measures are required.

Contingency Remedial Measures

The requirement for mining remediation cannot be determined from the available desk-based information and should therefore be established following completion of the intrusive investigation.

Where shallow underground mine workings, voids, broken or inadequately supported workings, insufficient competent rock cover, opencast backfill, unstable highwall conditions or other mining-related ground instability are identified, their significance should be assessed having regard to the proposed development and prevailing guidance. Remediation should only be undertaken where the investigation demonstrates that the identified conditions represent an unacceptable level of risk to the proposed development.

Depending upon the conditions identified, remedial measures could include treatment of shallow underground mine workings by drilling and pressure grouting, excavation and replacement of shallow coal or disturbed materials, treatment of any mine entry subsequently identified, engineered treatment of opencast backfill and/or former highwall transition zone, and/or the adoption of appropriate foundation or structural solutions.

Where treatment of underground coal mine workings or other coal mining legacy is required, a standalone *Treatment of Mine Workings Specification* would need to be prepared defining the nature, extent, and methodology of the proposed works. The specification should be developed having regard to the findings of the intrusive investigation, the proposed development and current MRA and other relevant UK guidance.

Any works requiring access to, disturbance of or treatment of coal or former coal mine workings will require the appropriate MRA permissions and permits prior to commencement.

Following completion of any mining remediation, appropriate validation should be undertaken to demonstrate that the specified treatment has been completed and that the remediation objectives have been achieved. A suitable Validation Report would thereafter need to be prepared for submission to the relevant regulatory authorities in support of the proposed development.

Ground Gas & Radon Protection

No records of mine gas emissions requiring action by the MRA have been identified within 500m of the Site. The absence of recorded incidents does not, however, demonstrate the absence of a potential ground gas hazard and should not be used to mitigate the need for an appropriate assessment of ground gas through the wider geo-environmental investigation.

The Site is underlain by coal-bearing strata and is potentially affected by shallow underground mine workings, near-surface coal, artificial ground, and former opencast backfill, each of which may influence the generation, accumulation, and/or migration of ground gases. Accordingly, an appropriate programme of ground gas monitoring should be incorporated into an intrusive ground investigation to characterise the ground gas regime and determine whether gas protection measures are required as part of the proposed development.

The findings should be assessed in accordance with BS8485 ^[24] and other relevant current guidance to determine the appropriate Characteristic Situation and the requirement, if any, for ground gas protection measures.

Where the subsequent ground gas risk assessment identifies a requirement for protection measures, these should be specified in accordance with BS8485 and documented within an appropriate LCRM: Stage 3 Remedial Strategy. The design, installation, inspection, and verification of any gas protection system should be undertaken in accordance with the requirements of the LPA, including the Yorkshire and Lincolnshire Pollution Advisory Group ('YALPAG') *Verification Requirements for Gas Protection Systems* ^[25], together with CIRIA C735 ^[26] and other relevant current guidance. An appropriate Verification Report would subsequently need to demonstrate that the specified protection measures had been installed and verified in accordance with the approved strategy.

The Site lies within an area where <1% of properties are estimated to exceed the UK radon Action Level ^[27] and, accordingly, radon protective measures are not required for the proposed development in accordance with current Building Regulations guidance.

5 REGULATORY APPROVAL

This Report has been compiled in accordance with good practice guidance for the investigation, assessment, and management of land that may be affected by mining legacy and associated ground stability hazards.

The recommendations presented are considered reasonable on the basis of the available information and the assessment of the Site undertaken by Groundsmiths. However, it remains the responsibility of the Client to ensure that the Site poses no significant risk to any sensitive receptor(s) and remains suitable for the proposed end-use and assessment framework adopted in this Report.

Should additional information subsequently become available, including the findings of the recommended intrusive ground investigation, that materially affects the findings or professional opinions presented herein, the assessment should be reviewed accordingly.

The recommended investigation and any subsequent treatment of coal seams, mine workings, or other coal mining legacy should be undertaken in accordance with the applicable requirements of the MRA, including obtaining any necessary permits prior to commencement. Where investigation identifies a requirement for mining remediation or other engineering measures, the resulting proposals should be submitted to the relevant regulatory authorities for approval, where required, prior to implementation.

Works undertaken cannot be guaranteed to gain approval by the LPA, MRA, Building Control and/or any warranty provider. Accordingly, a copy of this Report, together with subsequent investigation, remediation, and verification documentation where applicable, should be made available to the relevant organisations for comment and approval prior to undertaking any irrecoverable works associated with the Site.

6 INFORMATION SOURCES

The following references have been cited in the production of this Report:

- 1 Mining Remediation Authority (2026). <http://www.groundstability.com>.
- 2 Mining Remediation Authority (2025). <https://www.gov.uk/guidance/planning-applications-coal-mining-risk-assessments>.
- 3 Ministry of Housing, Communities & Local Government (2024; amended 7th February 2025). National Planning Policy Framework. <https://www.gov.uk/government/publications/national-planning-policy-framework--2>, 12th December.
- 4 Mining Remediation Authority (2026). Consultants Coal Mining Report. Longfield House, Thurgoland, South Yorkshire. Ref. 51003589776001, dated 21st August.
- 5 Mining Remediation Authority (2026). <https://datamine-cauk.hub.arcgis.com>.
- 6 The Coal Authority (2015). Barnsley District (B) – Development Risk, Specific Risk & Surface Coal Resource Plans. 1:50,000 scale.
- 7 British Geological Survey (2008). Barnsley. England and Wales Sheet 87. Bedrock and Superficial Deposits. 1:50,000 (Keyworth, Nottingham: British Geological Survey).
- 8 British Geological Survey (2005). SE20SE. Solid & Drift. 1:10,000 (Keyworth, Nottingham: British Geological Survey).
- 9 Groundsure (2026). Enviro+GeoInsight Report. Longfield House, Thurgoland. Ref No. EMS-1124017_1408072, dated 21st August.
- 10 UKRI (2026). <http://www.bgs.ac.uk/map-viewers/geoindex-onshore>.
- 11 Eden, R.A., Stevenson, I.P. and Edwards, W. (1957). Memoirs of the Geological Survey of Great Britain. Geology of the Country around Sheffield. HMSO.
- 12 Edwards, W. (1951). Memoirs of the Geological Survey of England and Wales. The Concealed Coalfield of Yorkshire and Nottinghamshire. 3rd Edition. HMSO.
- 13 Mitchell, G.H., Stephens, J.V., Bromehead, C.E.N., Wray, D.A. and Crookhall, R. (1947). Memoirs of the Geological Survey of Great Britain. Geology of the Country around Barnsley. HMSO.
- 14 Lake, R.D. and Hough, E. (ed) (2006). The Pennine Lower and Middle Coal Measures formations of the Barnsley District. British Geological Survey Internal Report IR/06/135, 47pp.
- 15 Parry, D. and Chiverrell, C. (eds) (2019). Abandoned Mine Workings Manual. C758D. CIRIA, London, UK (ISBN: 978-0-86017-765-4).
- 16 Mining Remediation Authority (2025). *Coal Seams with a History of Spontaneous Combustion*. <https://www.gov.uk/government/publications/coal-seams-with-a-history-of-spontaneous-combustion>. 4th August.
- 17 BS 5930 (2015+A1:2020). Code of Practice for Ground Investigations.
- 18 BS 10175 (2011+A2:2017). Investigation of Potentially Contaminated Sites. Code of practice.
- 19 BS EN 1997-1 (2004+A1:2013). Eurocode 7. Geotechnical Design. General Rules.
- 20 BS EN 1997-2 (2007). Eurocode 7. Geotechnical Design. Ground Investigation and Testing.

-
- 21 BS EN ISO 14688-1 (2002+A1:2013). Geotechnical Investigation and Testing — Identification and Classification of Soil — Part 1: Identification and Description.
 - 22 BS EN ISO 14688-2 (2017). Geotechnical Investigation and Testing. Identification and Classification of Soil. Principles for a Classification.
 - 23 BS EN ISO 14689 (2003). Geotechnical Investigation and Testing. Identification, Description and Classification of Rock. Part 1: Identification and Description.
 - 24 BS8485 (2015+A1:2019) Code of Practice for the Design of Protective Measures for Methane and Carbon Dioxide Ground Gases for New Buildings.
 - 25 Yorkshire and Lincolnshire Pollution Advisory Group (YALPAG), *Verification Requirements for Gas Protection Systems – Technical Guidance for Developers, Landowners and Consultants*, Version 1.1.
 - 26 CIRIA C735 (2014). Good Practice on the Testing and Verification of Protection Systems for Buildings against Hazardous Ground Gases.
 - 27 Building Research Establishment (BRE) (2023). *BR 211: Radon – Guidance on protective measures for new buildings (including supplementary advice for extensions, conversions and refurbishment projects)*. Sixth Edition. BRE, Watford. ISBN 978-1-84806-486-7.

7 REPORTING LIMITS

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The opinions provided in this Report are given in good faith and are subject to the limitations and constraints imposed by the methods and information sources described. Information, where stated, has been obtained from a variety of sources. Groundsmiths assumes that third party data is reliable but cannot independently confirm this as the validity and accuracy of this information is outside our control. No guarantee can therefore be given as to the completeness of the information gathered during the study and no responsibility is accepted for errors or omissions in the third party information used. Groundsmiths' professional judgement and experience is however used to ensure that uncertainties are reduced to a level appropriate to the Site, the purpose of the assessment and the resources devoted to it by the Client.

Whilst every effort has been made to carry out an assessment that enables a realistic preliminary characterisation of the Site with respect to mining legacy and associated ground stability hazards, the possibility of significant variation in actual ground conditions existing cannot be discounted. The findings and opinions presented in this Report are relevant to the time this assessment was undertaken but should not necessarily be relied upon to represent conditions at a substantially later date. Further information, intrusive ground investigation, construction activities, or the passage of time may reveal conditions that were not indicated in the presented data and therefore could not have been considered in the preparation of this Report. Where such information might impact upon stated opinions, Groundsmiths reserve the right to modify the opinions expressed in this Report.

Where opinions expressed in this Report are based on current available guidelines and legislation, no liability can be accepted for the effects of any future changes to such guidelines and legislation. New information or improved practices and changes in legislation may require reinterpretation of the Report as a whole, or in part.

The mining legacy and associated ground stability hazards identified within this Report are based upon the available desk-based information and remain subject to confirmation by intrusive ground investigation. The presence, extent, and condition of mining features may vary from that indicated by the available records. Should previously unrecorded or unexpected mining or mineral extraction features be identified during future intrusive investigation or groundworks, the recommendations of Section 4 should be followed.

The conclusions and recommendations presented in this Report are based upon a site-specific desk study assessment utilising third-party documentary information and published datasets, published geological records, and mining-related datasets, as appropriate. They are, however, limited to those that could be reasonably made at the time the assessment was undertaken. Where assessments of Site areas affected in particular ways are given, these are approximate.

This Report does not constitute an archaeological, contamination, ecological, geotechnical design, or arboriculturalist / invasive plant species survey. Any comment given in relation to these is for information only. Further assessments to assess these may be required as part of any planning condition and should therefore be undertaken by suitably qualified experts as required.

Groundsmiths reserve the right to edit and / or retract any conclusion or recommendation made in this Report should any further information, with respect to the Site, become available.

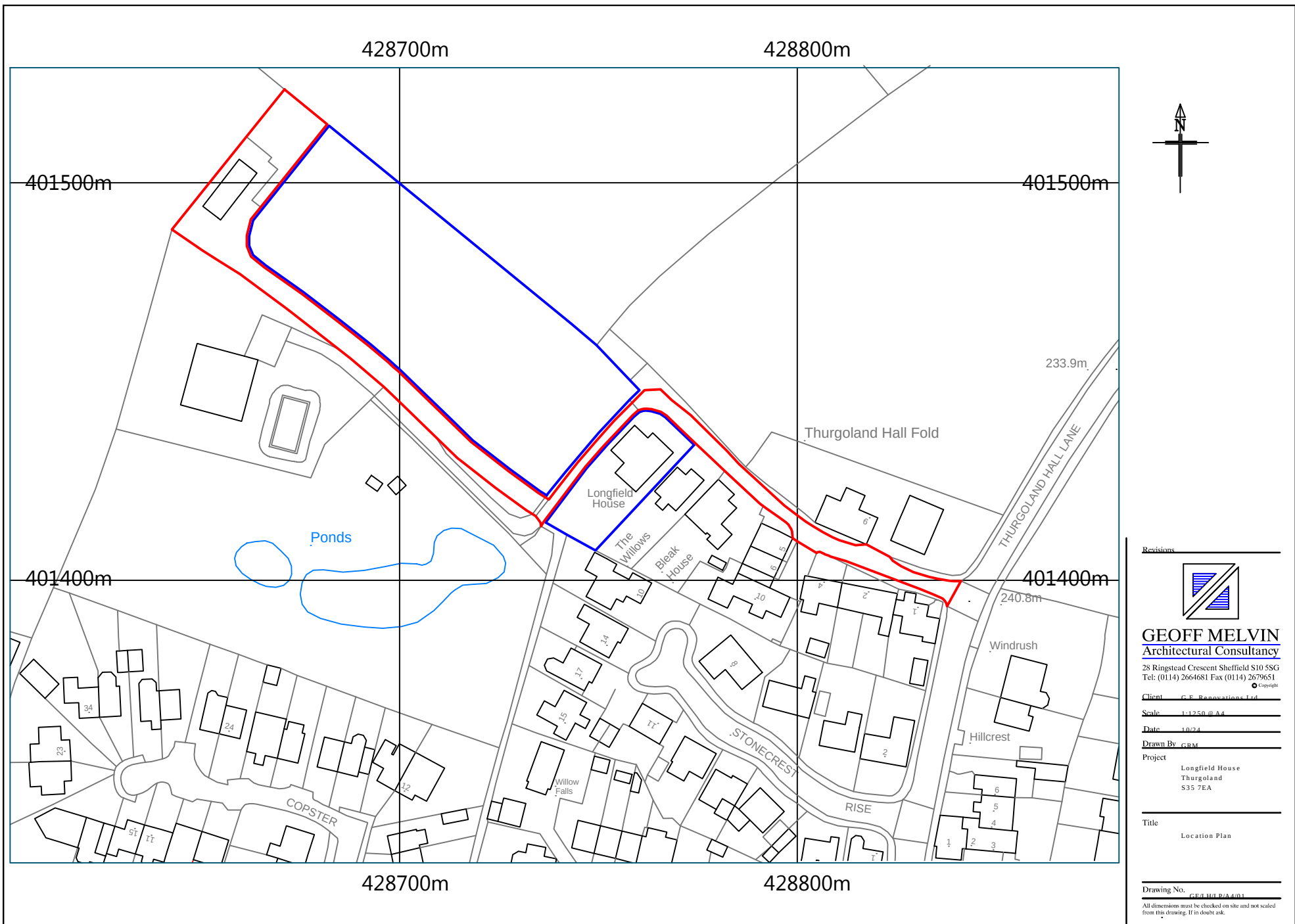
Groundsmiths disclaim any obligation to update the Report for events taking place after the time during which the assessment was carried out.

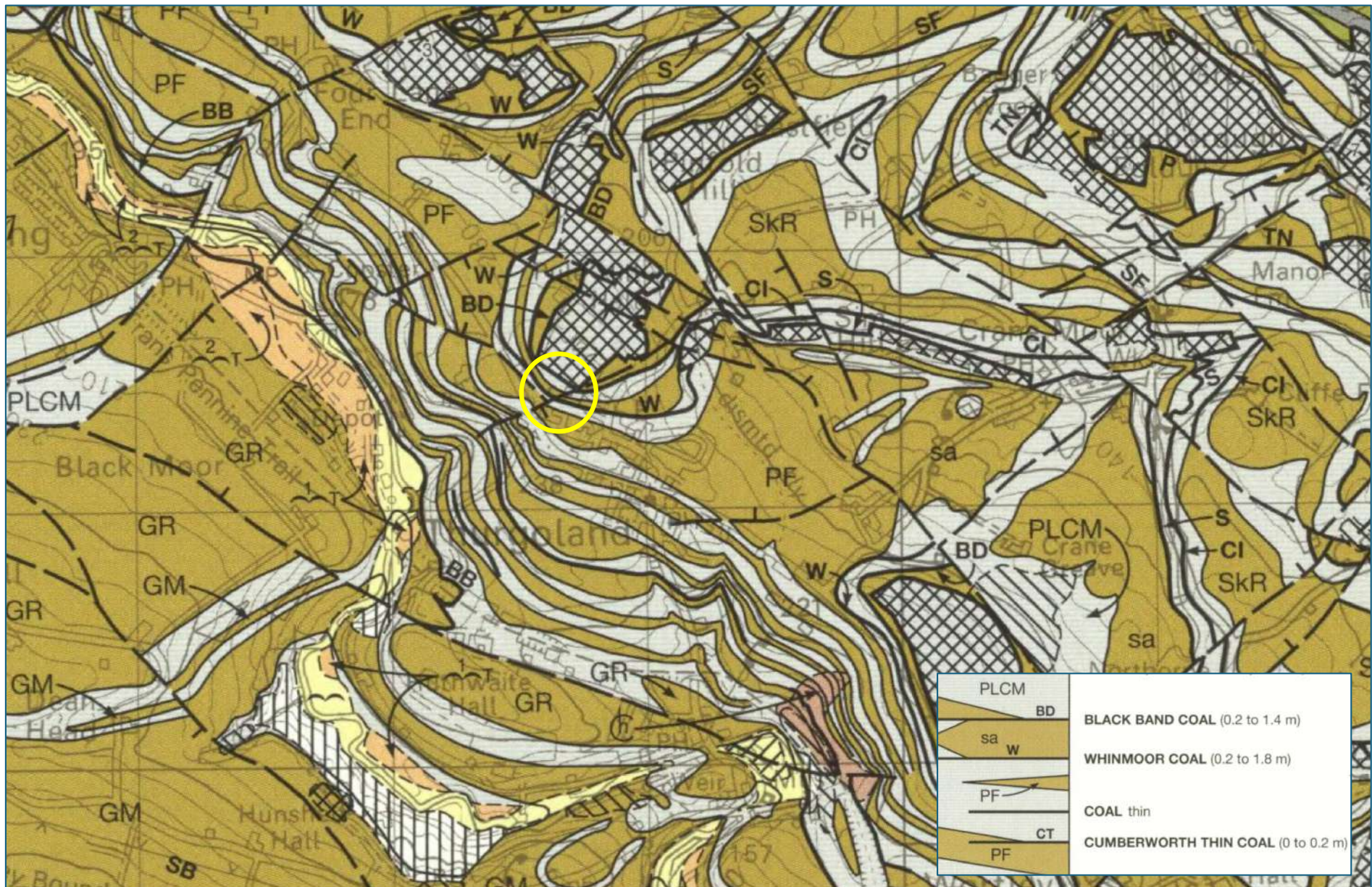
Groundsmiths do not provide or purport to provide legal advice. Should the Client require such advice then that of lawyers should be sought.

Groundsmiths accept no responsibility if any findings given in this Report are not implemented by the Client or their Agents.

Groundsmiths accept no responsibility where any further works required by the LPA, the MRA, Building Control, or any other regulatory or statutory authority in the discharge of their respective functions are not implemented by the Client or their Agents.

FIGURES & DRAWINGS





Source: British Geological Survey. Sheet 87, Barnsley (2008).
Bedrock & Superficial.

Project: Longfield House, Thurgoland

Client: Mr G. Eaton

Drawing: Bedrock Geology (1:50,000 scale)

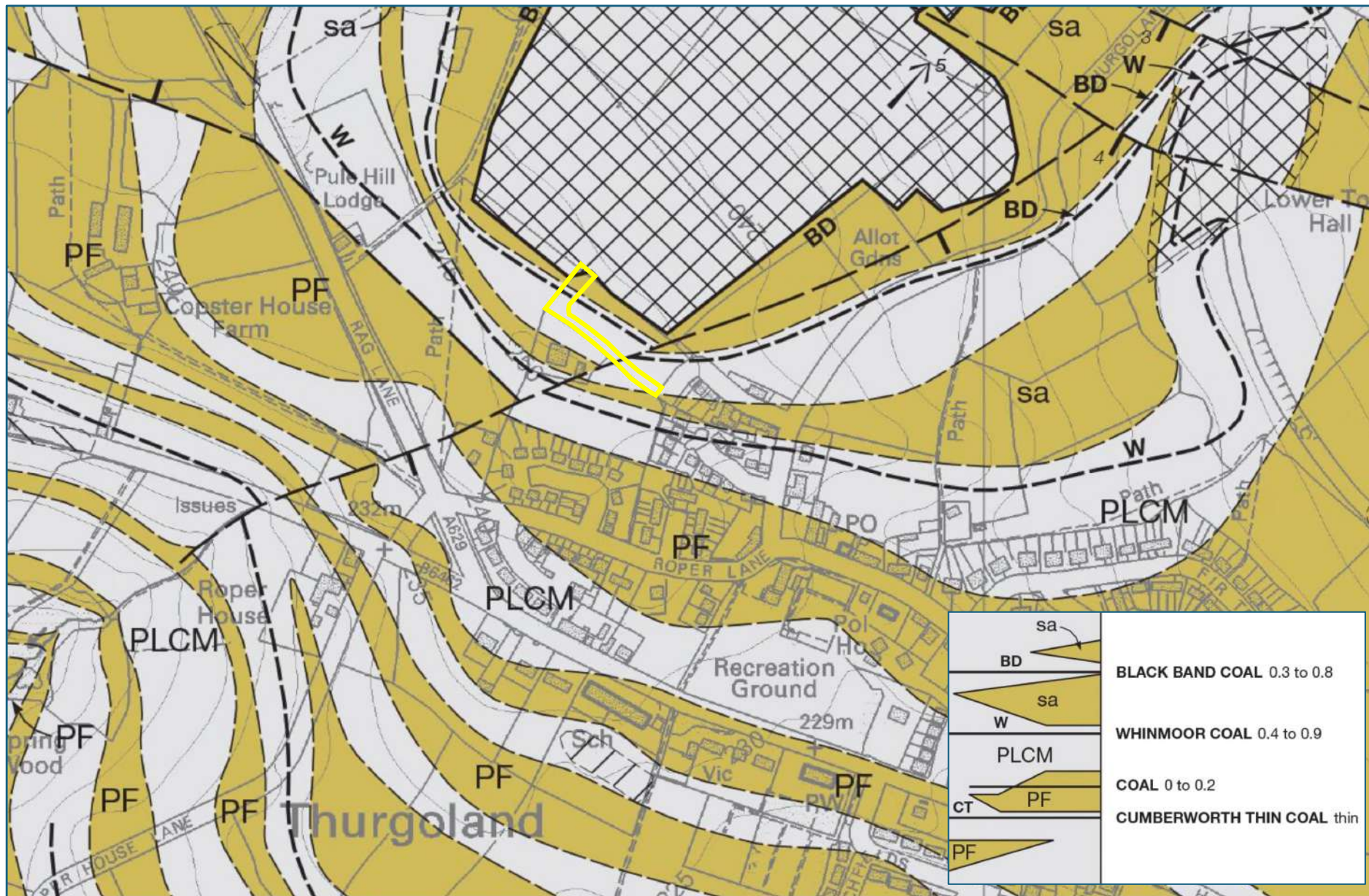
Drawn/Checked: AJS

Project No: 0826-03

Drawing No: 001

Date: Aug. 2026

GROUNDSMITHS
GEOTECHNICAL ENGINEERS



Source: British Geological Survey. SE20SE (2005). Solid & Drift.

Project: Longfield House, Thurgoland

Client: Mr G. Eaton

Drawing: Bedrock Geology (1:10,000 scale)

Drawn/Checked: AJS

Project No: 0826-03

Drawing No: 002

Date: Aug. 2026

GROUNDSMITHS
GEOTECHNICAL ENGINEERS

APPENDIX A

Enviro+GeolInsight Report

Longfield House, Thurgoland

Order Details

Date: 21/08/2026
Your ref: EMS_1124017_1416432
Our Ref: EMS-1124017_1408072

Site Details

Location: 428678 401477
Area: 0.12 ha
Authority: [Barnsley Metropolitan Borough Council](#) ↗

Site plan



Quick Links

Summary of findings [p. 2 >](#)
OS MasterMap site plan [p.14 >](#)
Aerial image [p. 9 >](#)

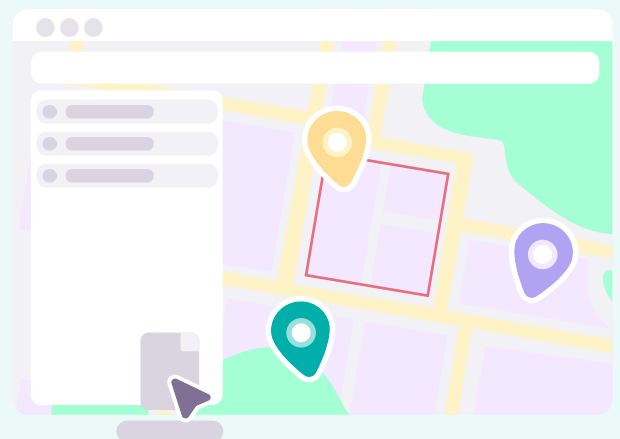
[Insight User Guide](#) ↗

Interrogate this site with GIS data!

Insight data can also be purchased in GIS format to visualise and analyse the data

- Map and interpret 130+ datasets across 170 years
- Generate insights and visuals quickly
- Geopackage format allows easy load into several GIS applications

Access to Groundsure Insight GIS data is purchased on a 12 month licence.



Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
15 >	1.1 >	Historical industrial land uses >	0	0	1	3	-
16	1.2	Historical tanks	0	0	0	0	-
16	1.3	Historical energy features	0	0	0	0	-
16	1.4	Historical petrol stations	0	0	0	0	-
17	1.5	Historical garages	0	0	0	0	-
17	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
18 >	2.1 >	Historical industrial land uses >	0	0	1	5	-
19	2.2	Historical tanks	0	0	0	0	-
19	2.3	Historical energy features	0	0	0	0	-
19	2.4	Historical petrol stations	0	0	0	0	-
19	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
20	3.1	Active or recent landfill	0	0	0	0	-
20	3.2	Historical landfill (BGS records)	0	0	0	0	-
21	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
21	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
21	3.5	Historical waste sites	0	0	0	0	-
21	3.6	Licensed waste sites	0	0	0	0	-
21 >	3.7 >	Waste exemptions >	0	0	1	0	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
23 >	4.1 >	Recent industrial land uses >	0	0	3	-	-
24	4.2	National Geographic Database (NGD) - Current or recent tanks	0	0	0	-	-
24	4.3	Current or recent petrol stations	0	0	0	0	-
24	4.4	Sites determined as Contaminated Land	0	0	0	0	-
24	4.5	Control of Major Accident Hazards (COMAH)	0	0	0	0	-



25	4.6	Regulated explosive sites	0	0	0	0	-
25	4.7	Hazardous substance storage/usage	0	0	0	0	-
25	4.8	Historical licensed industrial activities (IPC)	0	0	0	0	-
25	4.9	Licensed industrial activities (Part A(1))	0	0	0	0	-
25	4.10	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-
26	4.11	Radioactive Substance Authorisations	0	0	0	0	-
26 >	4.12 >	<u>Licensed Discharges to controlled waters ></u>	0	0	0	1	-
26	4.13	Pollutant release to surface waters (Red List)	0	0	0	0	-
26	4.14	Pollutant release to public sewer	0	0	0	0	-
27	4.15	List 1 Dangerous Substances	0	0	0	0	-
27	4.16	List 2 Dangerous Substances	0	0	0	0	-
27	4.17	Pollution Incidents (EA/NRW)	0	0	0	0	-
27	4.18	Pollution inventory substances	0	0	0	0	-
27	4.19	Pollution inventory waste transfers	0	0	0	0	-
28	4.20	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
29	5.1	Superficial aquifer	None (within 500m)				
30 >	5.2 >	<u>Bedrock aquifer ></u>	Identified (within 500m)				
31 >	5.3 >	<u>Groundwater vulnerability ></u>	Identified (within 50m)				
32	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
32	5.5	Groundwater vulnerability- local information	None (within 0m)				
33 >	5.6 >	<u>Groundwater abstractions ></u>	0	0	0	0	2
34 >	5.7 >	<u>Surface water abstractions ></u>	0	0	0	0	3
35	5.8	Potable abstractions	0	0	0	0	0
35	5.9	Source Protection Zones	0	0	0	0	-
35	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	Hydrology >	On site	0-50m	50-250m	250-500m	500-2000m
36	6.1	Water Network (OS NGD)	0	0	0	-	-
36 >	6.2 >	<u>Surface water features ></u>	0	2	0	-	-



37 >	6.3 >	WFD Surface water body catchments >	2	-	-	-	-
37 >	6.4 >	WFD Surface water bodies >	0	0	0	-	-
38 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
39	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
39	7.2	Historical Flood Events	0	0	0	-	-
39	7.3	Flood Defences	0	0	0	-	-
40	7.4	Flood Storage Areas	0	0	0	-	-
41	7.5	Flood Zone 2	None (within 50m)				
41	7.6	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding					
42	8.1	Surface water flooding	Negligible (within 50m)				
Page	Section	Groundwater flooding >					
43 >	9.1 >	Groundwater flooding >	Negligible (within 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
44	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
45	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
45	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
45	10.4	Special Protection Areas (SPA)	0	0	0	0	0
45	10.5	National Nature Reserves (NNR)	0	0	0	0	0
46	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
46 >	10.7 >	Designated Ancient Woodland >	0	0	0	1	52
48	10.8	Biosphere Reserves	0	0	0	0	0
48	10.9	Forest Parks	0	0	0	0	0
48	10.10	Marine Conservation Zones	0	0	0	0	0
49 >	10.11 >	Green Belt >	1	0	0	0	1
49	10.12	Proposed Ramsar sites	0	0	0	0	0
49	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
49	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0



50	10.15	Nitrate Sensitive Areas	0	0	0	0	0
50 >	10.16 >	Nitrate Vulnerable Zones >	1	0	0	0	0
51 >	10.17 >	SSSI Impact Risk Zones >	1	-	-	-	-
52	10.18	SSSI Units	0	0	0	0	0
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
53	11.1	World Heritage Sites	0	0	0	-	-
53	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
53	11.3	National Parks	0	0	0	-	-
53	11.4	Listed Buildings	0	0	0	-	-
54	11.5	Conservation Areas	0	0	0	-	-
54	11.6	Scheduled Ancient Monuments	0	0	0	-	-
54	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
55 >	12.1 >	Agricultural Land Classification >	Grade 4 (within 250m)				
56	12.2	Open Access Land	0	0	0	-	-
56	12.3	Tree Felling Licences	0	0	0	-	-
56	12.4	Environmental Stewardship Schemes	0	0	0	-	-
56 >	12.5 >	Countryside Stewardship Schemes >	0	0	1	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
57	13.1	Priority Habitat Inventory	0	0	0	-	-
57	13.2	Habitat Networks	0	0	0	-	-
57	13.3	Open Mosaic Habitat	0	0	0	-	-
57	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	Geology 1:10,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
58 >	14.1 >	10k Availability >	Identified (within 500m)				
59 >	14.2 >	Artificial and made ground (10k) >	1	0	0	5	-
61	14.3	Superficial geology (10k)	0	0	0	0	-
61	14.4	Landslip (10k)	0	0	0	0	-
62 >	14.5 >	Bedrock geology (10k) >	5	4	10	22	-



64 >	14.6 >	Bedrock faults and other linear features (10k) >	3	3	1	12	-
Page	Section	Geology 1:50,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
66 >	15.1 >	50k Availability >	Identified (within 500m)				
67 >	15.2 >	Artificial and made ground (50k) >	1	0	0	1	-
68 >	15.3 >	Artificial ground permeability (50k) >	1	0	-	-	-
69	15.4	Superficial geology (50k)	0	0	0	0	-
69	15.5	Superficial permeability (50k)	None (within 50m)				
69	15.6	Landslip (50k)	0	0	0	0	-
69	15.7	Landslip permeability (50k)	None (within 50m)				
70 >	15.8 >	Bedrock geology (50k) >	4	4	11	20	-
72 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
73 >	15.10 >	Bedrock faults and other linear features (50k) >	2	4	5	18	-
Page	Section	Boreholes >	On site	0-50m	50-250m	250-500m	500-2000m
75 >	16.1 >	BGS Boreholes >	0	0	14	-	-
Page	Section	Natural ground subsidence >					
77 >	17.1 >	Shrink swell clays >	Very low (within 50m)				
79 >	17.2 >	Running sands >	Very low (within 50m)				
81 >	17.3 >	Compressible deposits >	Moderate (within 50m)				
83 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
84 >	17.5 >	Landslides >	Very low (within 50m)				
85 >	17.6 >	Ground dissolution of soluble rocks >	Negligible (within 50m)				
Page	Section	Mining and ground workings >	On site	0-50m	50-250m	250-500m	500-2000m
87 >	18.1 >	BritPits >	0	0	1	0	-
88	18.2	Surface ground workings	0	0	0	-	-
88 >	18.3 >	Underground workings >	0	0	0	0	9
89	18.4	Underground mining extents	0	0	0	0	-
89	18.5	Historical Mineral Planning Areas	0	0	0	0	-
89	18.6	Non-coal mining	0	0	0	0	0
89	18.7	JPB mining areas	None (within 0m)				



90	18.8	The Coal Authority non-coal mining	0	0	0	0	-
90	18.9	Researched mining	0	0	0	0	-
90	18.10	Mining record office plans	0	0	0	0	-
90	18.11	BGS mine plans	0	0	0	0	-
91 >	18.12 >	Coal mining >	Identified (within 0m)				
91	18.13	Brine areas	None (within 0m)				
91	18.14	Gypsum areas	None (within 0m)				
91	18.15	Tin mining	None (within 0m)				
91	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m
92	19.1	Natural cavities	0	0	0	0	-
92	19.2	Mining cavities	0	0	0	0	0
92	19.3	Reported recent incidents	0	0	0	0	-
92	19.4	Historical incidents	0	0	0	0	-
Page	Section	Radon >					
94 >	20.1 >	Radon >	Less than 1% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
96 >	21.1 >	BGS Estimated Background Soil Chemistry >	3	5	-	-	-
97	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
97	21.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
98	22.1	Underground railways (London)	0	0	0	-	-
98	22.2	Underground railways (Non-London)	0	0	0	-	-
98	22.3	Railway tunnels	0	0	0	-	-
98	22.4	Historical railway and tunnel features	0	0	0	-	-
98	22.5	Royal Mail tunnels	0	0	0	-	-
99	22.6	Historical railways	0	0	0	-	-
99	22.7	Railways	0	0	0	-	-
99	22.8	Crossrail 2	0	0	0	0	-



Recent aerial photograph

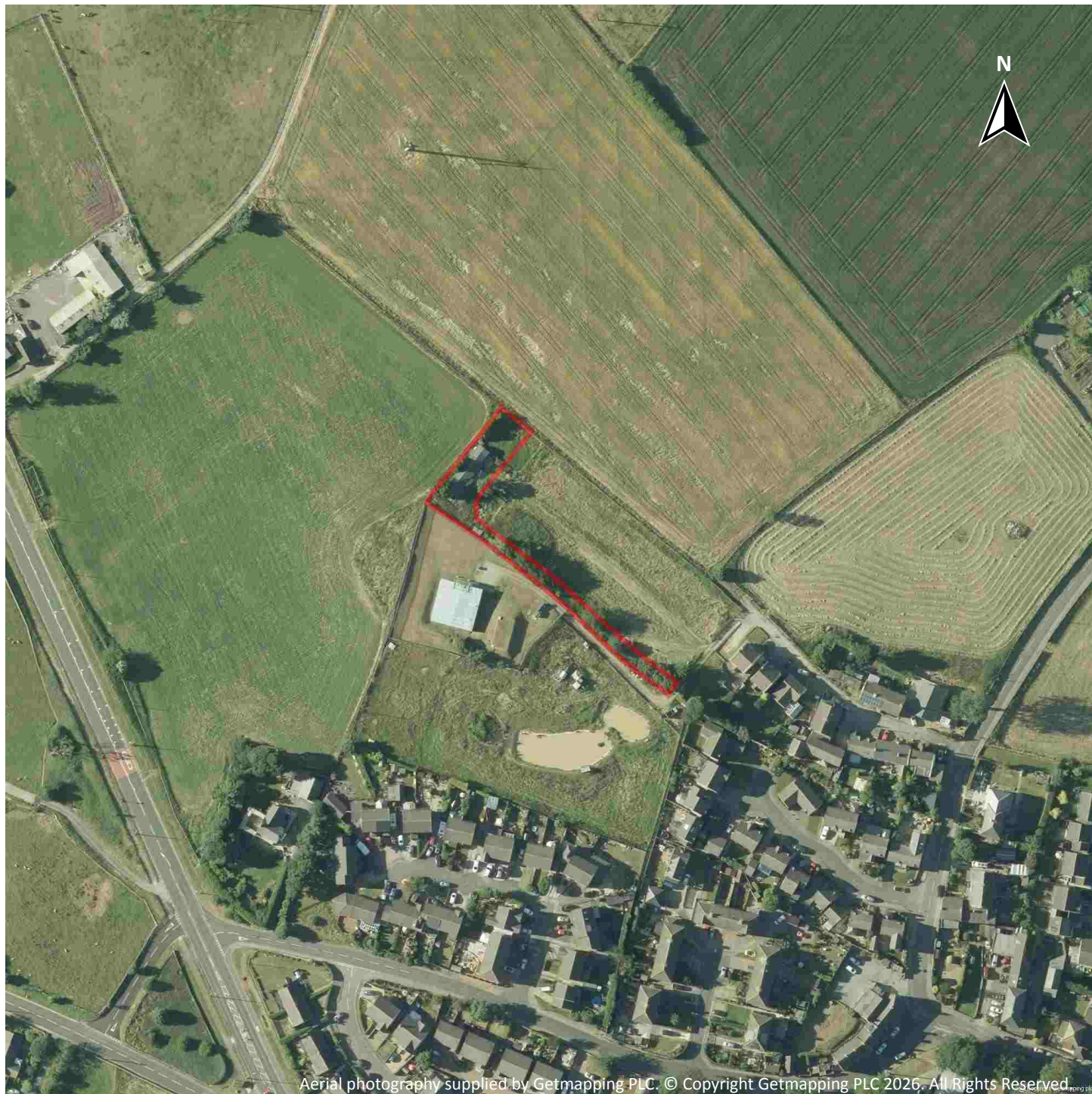


Capture Date: 30/05/2021

Site Area: 0.12ha



Recent site history - 2018 aerial photograph



Capture Date: 27/06/2018

Site Area: 0.12ha



Recent site history - 2012 aerial photograph



Capture Date: 28/05/2012

Site Area: 0.12ha



Recent site history - 2009 aerial photograph



Capture Date: 11/09/2009

Site Area: 0.12ha



Recent site history - 1999 aerial photograph

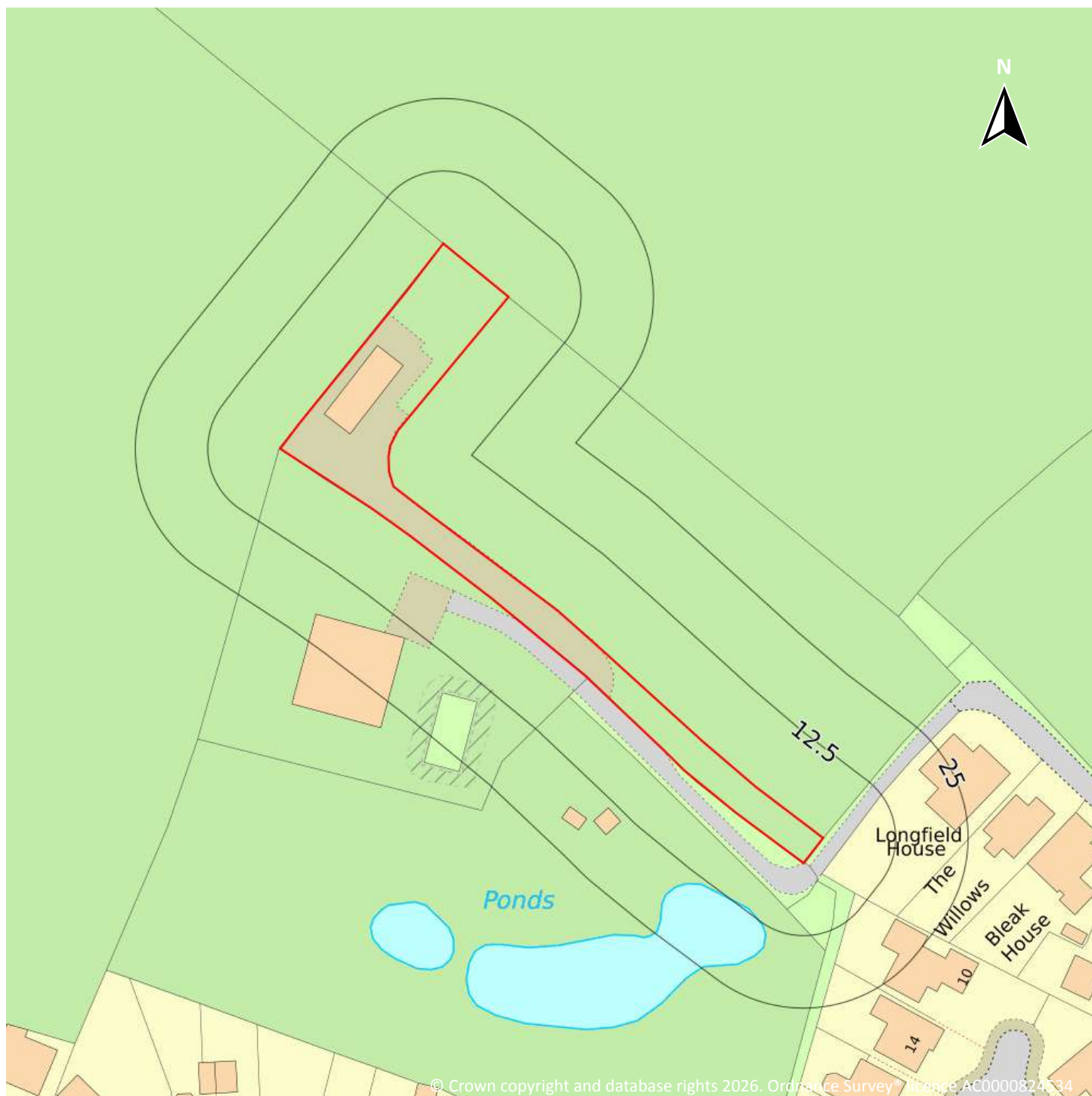


Capture Date: 10/07/1999

Site Area: 0.12ha



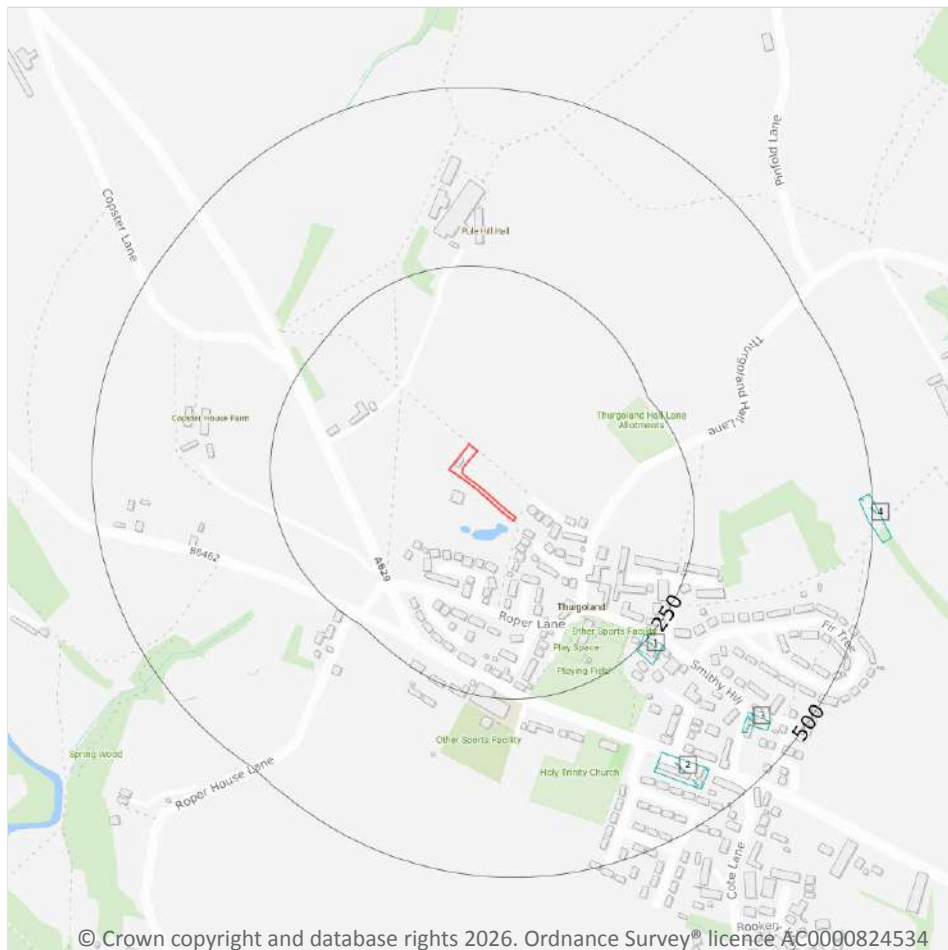
OS MasterMap site plan



Site Area: 0.12ha



1 Past land use



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

1.1 Historical industrial land uses

Records within 500m

4

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

Features are displayed on the Past land use map on [page 15 >](#)

ID	Location	Land use	Dates present	Group ID
1	243m SE	Police Station	1987	1481058



ID	Location	Land use	Dates present	Group ID
2	386m SE	Unspecified Depot	1987	1445566
3	425m SE	Smithy	1891 - 1903	1549533
4	481m E	Cuttings	1932 - 1951	1516871

This data is sourced from Ordnance Survey® / Groundsure.

1.2 Historical tanks

Records within 500m

0

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

This data is sourced from Ordnance Survey® / Groundsure.

1.3 Historical energy features

Records within 500m

0

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'.

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.



[illegible]

— Site Outline

Search buffers in metres (m)

 Historical industrial land uses

Records within 500m 6

Features are displayed on the Past land use - un-grouped map on [page 18](#) >

ID	Location	Land Use	Date	Group ID
1	243m SE	Police Station	1987	1481058
2	386m SE	Unspecified Depot	1987	1445566
A	425m SE	Smithy	1903	1549533

ID	Location	Land Use	Date	Group ID
A	425m SE	Smithy	1891	1549533
B	481m E	Cuttings	1932	1516871
B	483m E	Cuttings	1951	1516871

This data is sourced from Ordnance Survey® / Groundsure.

2.2 Historical tanks

Records within 500m

0

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

This data is sourced from Ordnance Survey® / Groundsure.

2.3 Historical energy features

Records within 500m

0

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'.

This data is sourced from Ordnance Survey® / Groundsure.

2.4 Historical petrol stations

Records within 500m

0

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

This data is sourced from Ordnance Survey® / Groundsure.

2.5 Historical garages

Records within 500m

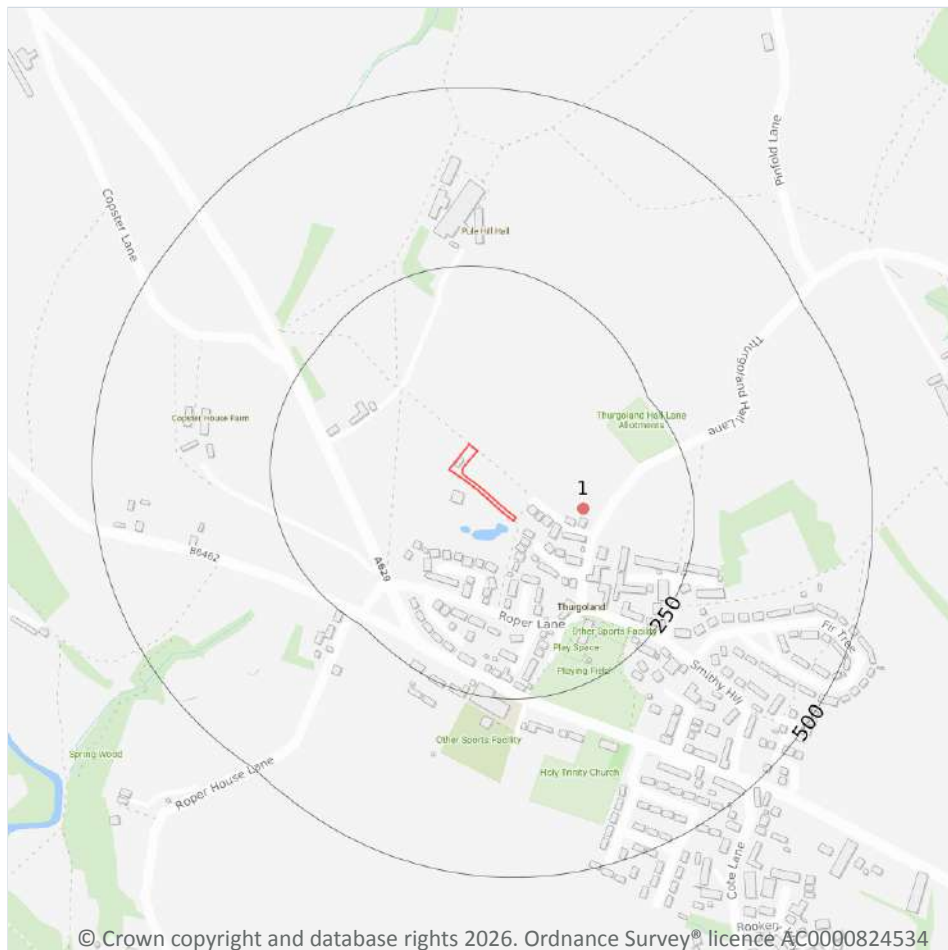
0

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

This data is sourced from Ordnance Survey® / Groundsure.



3 Waste and landfill



- Site Outline
- Search buffers in metres (m)
- Waste exemptions

3.1 Active or recent landfill

Records within 500m

0

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

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

3.2 Historical landfill (BGS records)

Records within 500m

0

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

This data is sourced from the British Geological Survey.



3.3 Historical landfill (LA/mapping records)

Records within 500m**0**

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

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

3.4 Historical landfill (EA/NRW records)

Records within 500m**0**

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

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

3.5 Historical waste sites

Records within 500m**0**

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

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

3.6 Licensed waste sites

Records within 500m**0**

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

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

3.7 Waste exemptions

Records within 500m**1**

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 20](#) >

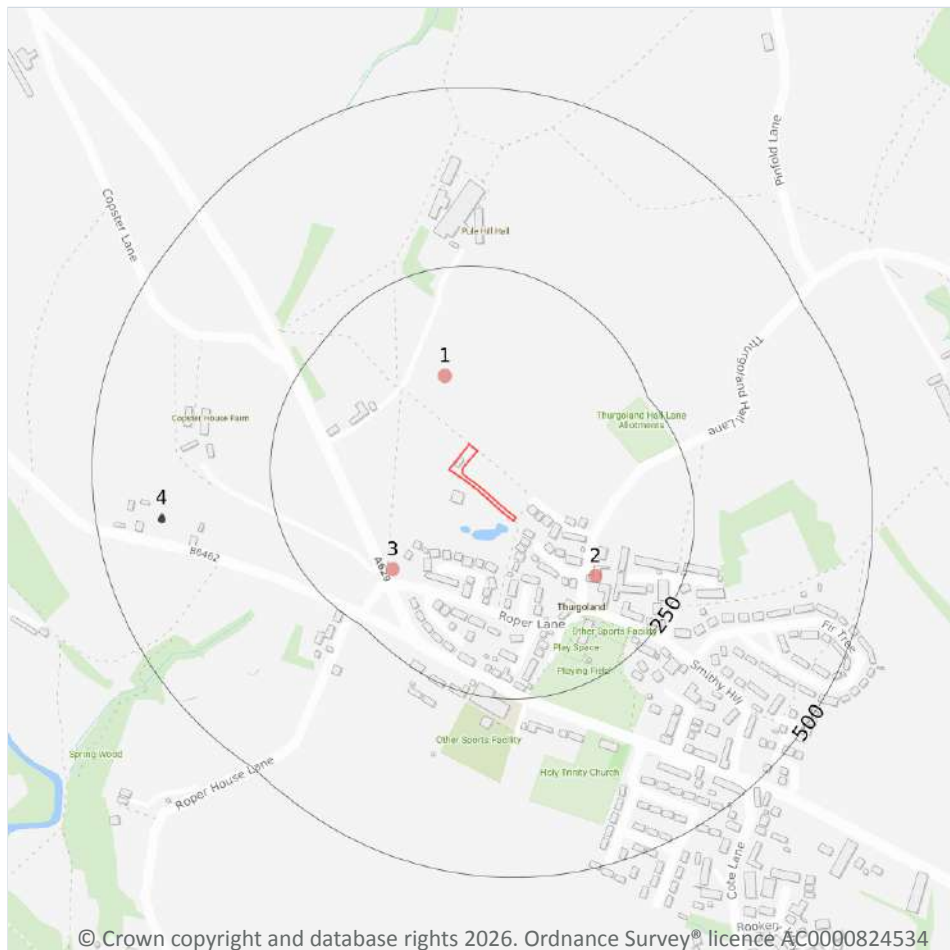
ID	Location	Site	Reference	Category	Sub-Category	Description
1	94m E	9 Thurgoland Hall Fold Sheffield Barnsley S35 7ea	EPR/UF0007VZ /A001	Disposing of waste exemption	Non-agricultural waste only	Burning waste in the open



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



4 Current industrial land use



- Site Outline
- Search buffers in metres (m)
- Recent industrial land uses
- Licensed Discharges to controlled waters

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 23 >](#)

ID	Location	Company	Address	Activity	Category
1	102m N	Wind Turbine	South Yorkshire, S35	Energy Production	Industrial Features
2	138m SE	J B Burkinshaw & Son	Hall Cliffe, Thurgoland Hall Lane, Thurgoland, Barnsley, South Yorkshire, S35 7AA	Vehicle Repair, Testing and Servicing	Repair and Servicing



ID	Location	Company	Address	Activity	Category
3	160m SW	Electricity Sub Station	South Yorkshire, S35	Electrical Features	Infrastructure and Facilities

This data is sourced from Ordnance Survey®.

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

Records within 250m	0
----------------------------	----------

Current or recent tanks identified from the Ordnance Survey® NGD.

This data is sourced from Ordnance Survey®.

4.3 Current or recent petrol stations

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

Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

4.4 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.

4.5 Control of Major Accident Hazards (COMAH)

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

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

This data is sourced from the Health and Safety Executive.

4.6 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.

4.7 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.

4.8 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.

4.9 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.

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

Records within 500m

0

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

This data is sourced from Local Authority records.



4.11 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.

4.12 Licensed Discharges to controlled waters

Records within 500m

1

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

Features are displayed on the Current industrial land use map on [page 23](#) >

ID	Location	Address	Details	
4	409m W	BANK BARN, THURGOLAND BANK, THURGOLAND, SHEFFIELD, SOUTH YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: WRA8957 Permit Version: 1 Receiving Water: GROUNDWATER VIA SOAKAWAY	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 27/06/2006 Effective Date: 27/06/2006 Revocation Date: 27/06/2018

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

4.13 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.

4.14 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.



4.15 List 1 Dangerous Substances

Records within 500m**0**

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

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

4.16 List 2 Dangerous Substances

Records within 500m**0**

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

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

4.17 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.

4.18 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.

4.19 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.



4.20 Pollution inventory radioactive waste

Records within 500m

0

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

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



5 Hydrogeology - Superficial aquifer

5.1 Superficial aquifer

Records within 500m

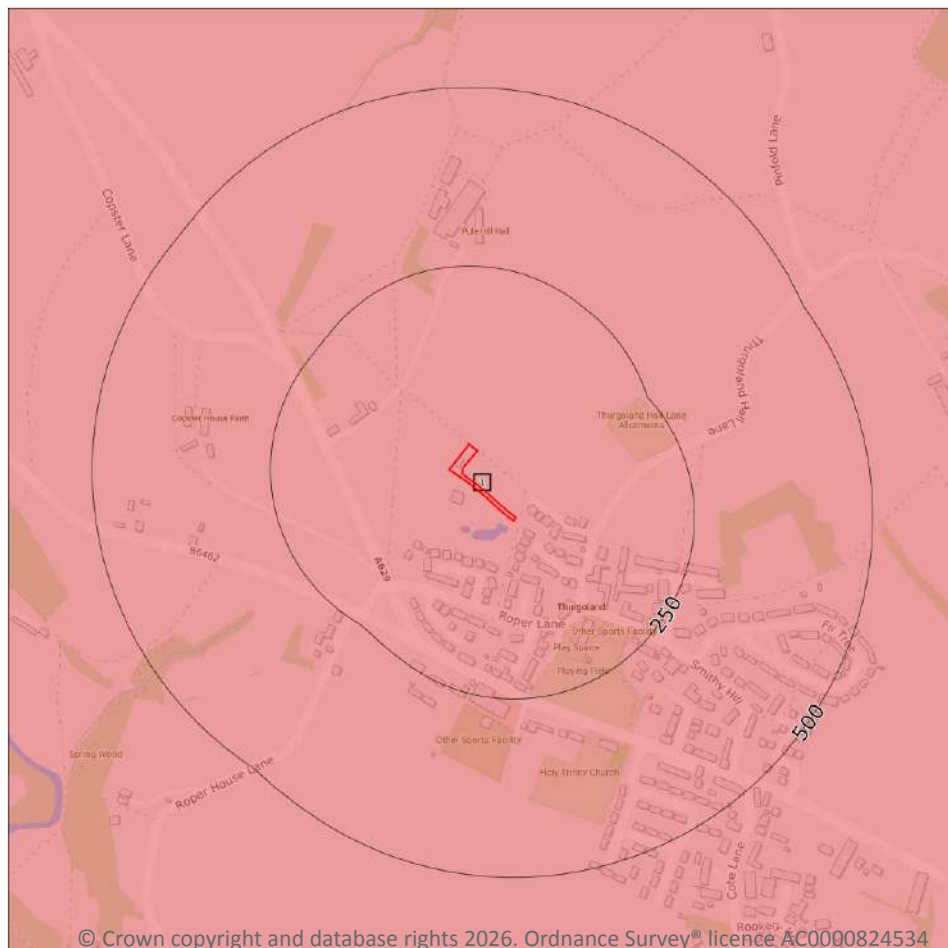
0

Aquifer status of groundwater held within superficial geology.

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



Bedrock aquifer



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

5.2 Bedrock aquifer

Records within 500m

1

Aquifer status of groundwater held within bedrock geology.

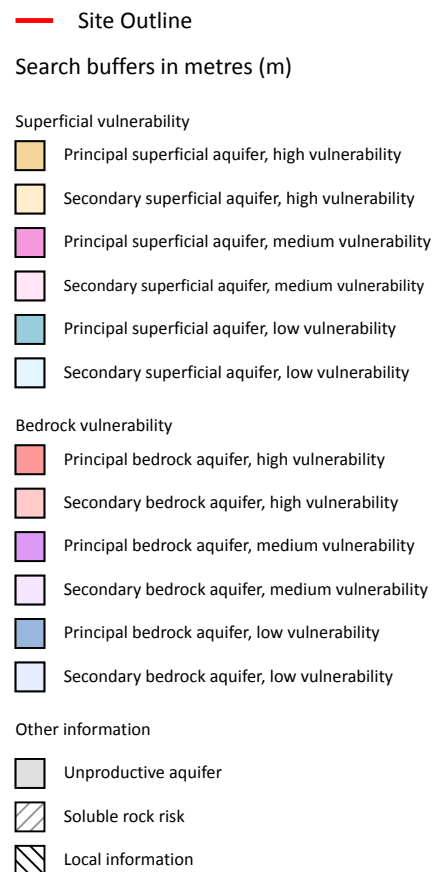
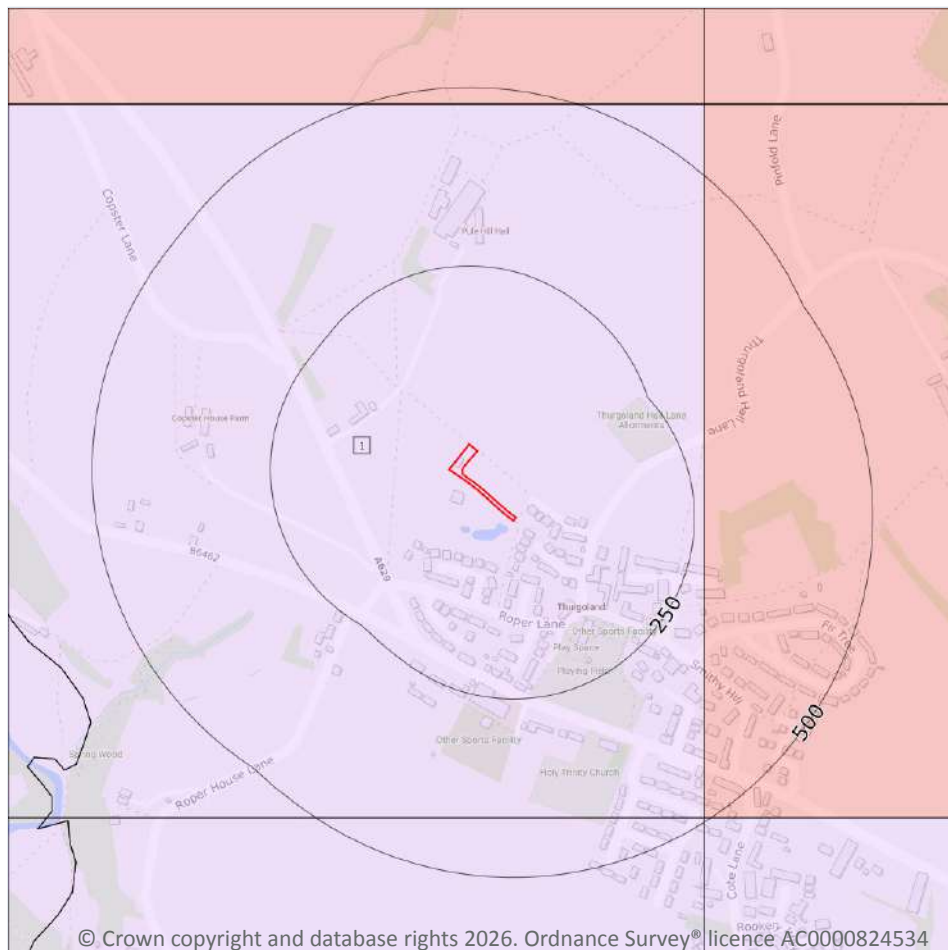
Features are displayed on the Bedrock aquifer map on [page 30](#) >

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

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



Groundwater vulnerability



5.3 Groundwater vulnerability

Records within 50m

1

An assessment of the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties within a one kilometre square grid. Groundwater vulnerability is described as High, Medium or Low as follows:

- High - Areas able to easily transmit pollution to groundwater. They are likely to be characterised by high leaching soils and the absence of low permeability superficial deposits.
- Medium - Intermediate between high and low vulnerability.
- Low - Areas that provide the greatest protection from pollution. They are likely to be characterised by low leaching soils and/or the presence of superficial deposits characterised by a low permeability.

Features are displayed on the Groundwater vulnerability map on [page 31](#) >

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Secondary bedrock aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: 300- 550mm/year	Vulnerability: - Aquifer type: - Thickness: 3-10m Patchiness value: <90% Recharge potential: No Data	Vulnerability: Medium Aquifer type: Secondary Flow mechanism: Well connected fractures

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

5.4 Groundwater vulnerability- soluble rock risk

Records on site

0

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

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

5.5 Groundwater vulnerability- local information

Records on site

0

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

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

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

33

ID	Location	Details	
-	1921m SW	Status: Historical Licence No: 2/27/05/144 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: GRAVITY Data Type: Point Name: PLANT Easting: 427060 Northing: 400400	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: 15/02/1968 Version End Date: -
-	1921m SW	Status: Historical Licence No: 2/27/05/144 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: SPRING - OXSPRING Data Type: Point Name: PLANT Easting: 427060 Northing: 400400	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: 15/02/1968 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m

3

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 33 >](#)

ID	Location	Details	
-	1095m SW	Status: Active Licence No: NE/027/0005/034 Details: Transfer Between Sources (Post Water Act 2003) Direct Source: SURFACE WATER Point: RIVER DON AT CHEESEBOTTOM Data Type: Point Name: Yorkshire Water Services Ltd Easting: 427933 Northing: 400655	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: NPS/WR/037948 Original Start Date: 16/11/2023 Expiry Date: 31/03/2041 Issue No: 1 Version Start Date: 16/11/2023 Version End Date: -



ID	Location	Details	
-	1138m SW	Status: Active Licence No: 2/27/05/201/R01 Details: Hydroelectric Power Generation Direct Source: SURFACE WATER Point: RIVER DON - THE OLD MILL - THURGOLAND Data Type: Point Name: ROLLINSON Easting: 427900 Northing: 400626	Annual Volume (m ³): 10249200 Max Daily Volume (m ³): 28080 Original Application No: NPS/WR/021584 Original Start Date: 01/04/2017 Expiry Date: 31/03/2029 Issue No: 1 Version Start Date: 01/04/2019 Version End Date: -
-	1149m SW	Status: Historical Licence No: 2/27/05/201 Details: Hydroelectric Power Generation Direct Source: SURFACE WATER Point: RIVER DON - THE OLD MILL - THURGOLAND Data Type: Point Name: ROLLINSON Easting: 427890 Northing: 400620	Annual Volume (m ³): 10249200 Max Daily Volume (m ³): 28080 Original Application No: - Original Start Date: 04/09/2007 Expiry Date: 31/03/2017 Issue No: 2 Version Start Date: 05/03/2008 Version End Date: -

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

5.8 Potable abstractions

Records within 2000m	0
-----------------------------	----------

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

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

5.9 Source Protection Zones

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

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

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

5.10 Source Protection Zones (confined aquifer)

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

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

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



Features are displayed on the Hydrology map on [page 36 >](#)

This data is sourced from the Ordnance Survey®.

6.3 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 36 >](#)

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
1	On site	River	Rockley Dike from Source to River Dove	GB104027057480	Dearne	Don and Rother
2	On site	River	Dodworth Dyke from Source to River Dove	GB104027057520	Dearne	Don and Rother

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

6.4 WFD Surface water bodies

Records identified	2
---------------------------	----------

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 36 >](#)

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	672m E	River	Rockley Dike from Source to River Dove	GB104027057480 ↗	No longer applicable	Does not require assessment	Moderate	2022
-	941m NE	River	Dodworth Dyke from Source to River Dove	GB104027057520 ↗	No longer applicable	Does not require assessment	Good	2022



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

6.5 WFD Groundwater bodies

Records on site

1

Groundwater bodies are also covered by the Directive and the same regime of objectives and reporting detailed in the previous section is in place. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each groundwater body listed.

Features are displayed on the Hydrology map on [page 36 >](#)

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

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



7 River and coastal flooding

7.1 Risk of flooding from rivers and the sea

Records within 50m**0**

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

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

7.2 Historical Flood Events

Records within 250m**0**

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

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

7.3 Flood Defences

Records within 250m**0**

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

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



7.4 Flood Storage Areas

Records within 250m

0

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

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



River and coastal flooding - Flood Zones

7.5 Flood Zone 2

Records within 50m

0

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

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

7.6 Flood Zone 3

Records within 50m

0

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

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



8 Surface water flooding

8.1 Surface water flooding

Highest risk on site

Negligible

Highest risk within 50m

Negligible

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.

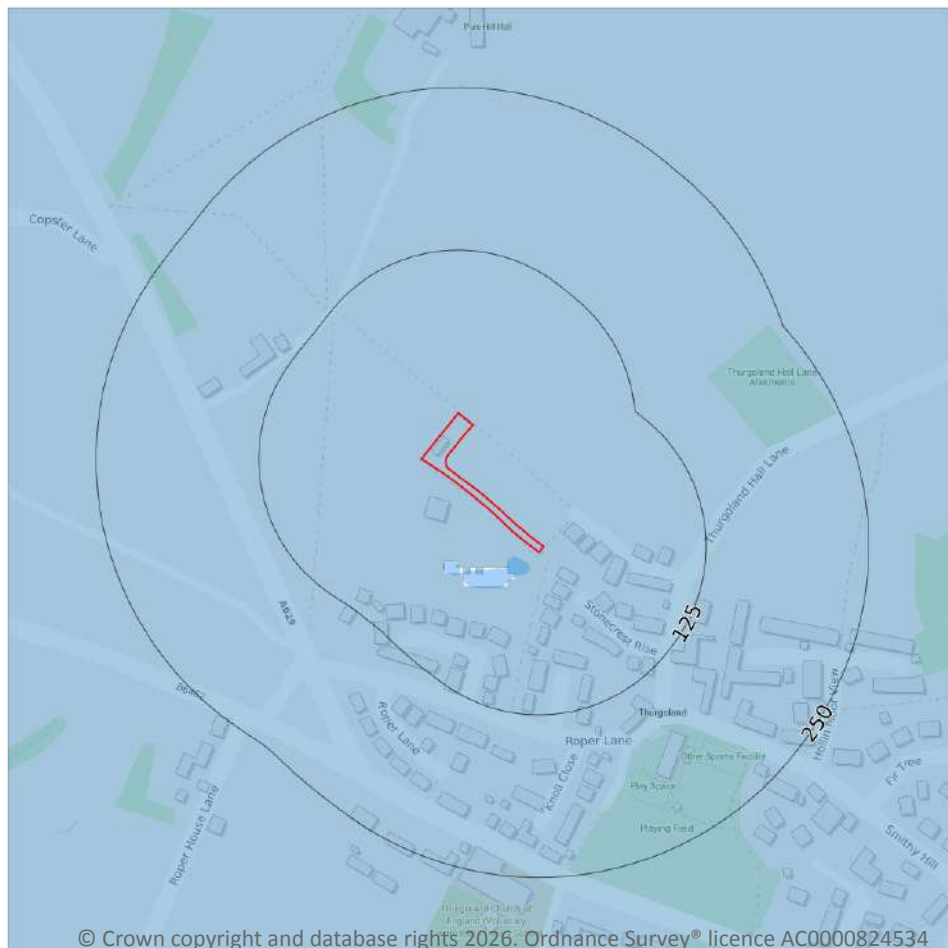
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site. The table below shows the maximum flood depths for a range of return periods for the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

Return period	Maximum modelled depth
1 in 1000 year	Negligible
1 in 250 year	Negligible
1 in 100 year	Negligible
1 in 30 year	Negligible

This data is sourced from Ambiental Risk Analytics.



9 Groundwater flooding



- Site Outline
- Search buffers in metres (m)
- High
 - Moderate - High
 - Moderate
 - Low
 - Negligible

9.1 Groundwater flooding

Highest risk on site

Negligible

Highest risk within 50m

Negligible

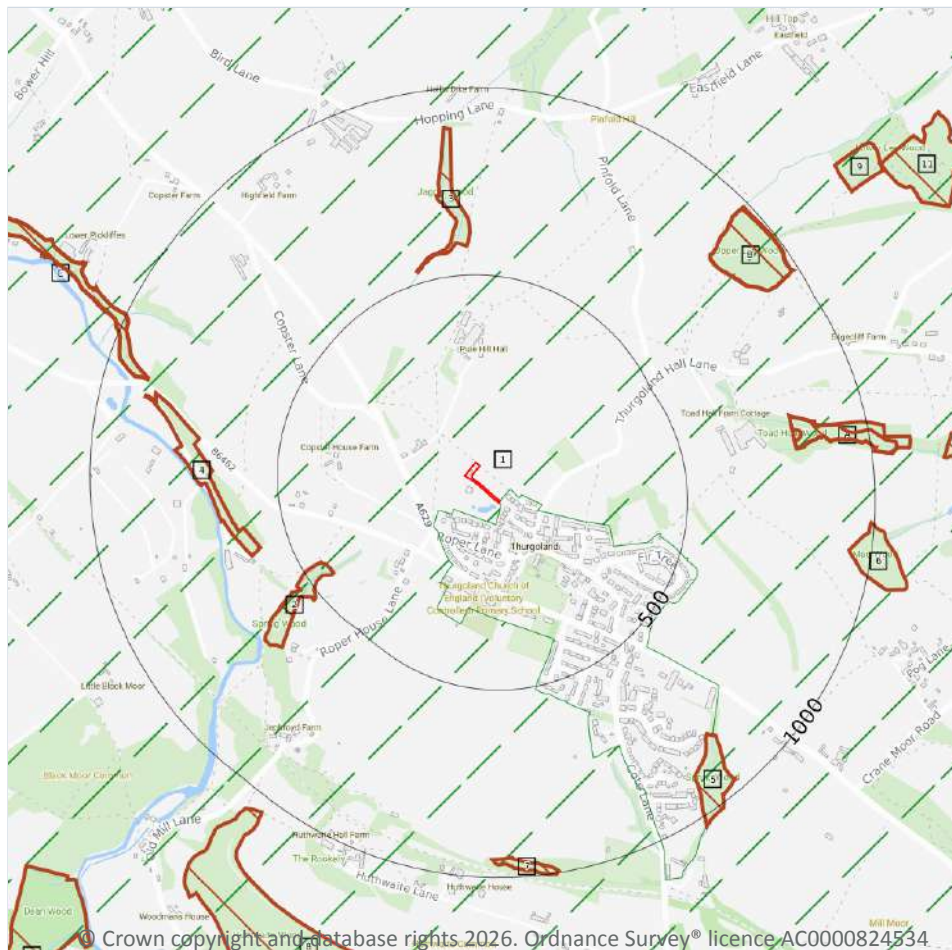
Groundwater flooding is caused by unusually high groundwater levels. It occurs when the water table rises above the ground surface or within underground structures such as basements or cellars. Groundwater flooding tends to exhibit a longer duration than surface water flooding, possibly lasting for weeks or months, and as a result it can cause significant damage to property. This risk assessment is based on a 1 in 100 year return period and a 5m Digital Terrain Model (DTM).

Features are displayed on the Groundwater flooding map on [page 43](#) >

This data is sourced from Ambient Risk Analytics.



10 Environmental designations



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

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

0

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

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

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m**0**

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

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

10.3 Special Areas of Conservation (SAC)

Records within 2000m**0**

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

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

10.4 Special Protection Areas (SPA)

Records within 2000m**0**

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

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

10.5 National Nature Reserves (NNR)

Records within 2000m**0**

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

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

10.6 Local Nature Reserves (LNR)

Records within 2000m

0

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

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

10.7 Designated Ancient Woodland

Records within 2000m

53

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 44](#) >

ID	Location	Name	Woodland Type
2	436m SW	Spring Wood	Ancient & Semi-Natural Woodland
3	530m N	Jagger Wood	Ancient & Semi-Natural Woodland
4	578m W	Thurgoland Bank	Ancient Replanted Woodland
A	802m E	Unknown	Ancient & Semi-Natural Woodland
A	802m E	Unknown	Ancient & Semi-Natural Woodland
B	824m NE	Upper Lee Wood	Ancient Replanted Woodland
B	825m NE	Upper Lee Wood	Ancient Replanted Woodland
5	830m SE	Spring Wood	Ancient & Semi-Natural Woodland
C	883m W	Unknown	Ancient & Semi-Natural Woodland
C	886m W	Unknown	Ancient & Semi-Natural Woodland
6	941m E	Mag Wood	Ancient & Semi-Natural Woodland
7	947m S	Unknown	Ancient & Semi-Natural Woodland
8	1040m SW	Huthwaite Wood	Ancient & Semi-Natural Woodland
D	1190m E	Unknown	Ancient Replanted Woodland
9	1233m NE	Lower Lee Wood	Ancient & Semi-Natural Woodland
-	1251m E	Unknown	Ancient & Semi-Natural Woodland



ID	Location	Name	Woodland Type
10	1260m S	Huthwaite Wood	Ancient & Semi-Natural Woodland
-	1268m E	Unknown	Ancient & Semi-Natural Woodland
-	1270m E	Unknown	Ancient Replanted Woodland
11	1337m NE	Lower Lee Wood	Ancient Replanted Woodland
-	1422m NE	Unknown	Ancient & Semi-Natural Woodland
-	1489m S	Stones Wood	Ancient & Semi-Natural Woodland
-	1491m S	Stones Wood	Ancient & Semi-Natural Woodland
13	1496m SW	Dean Wood	Ancient & Semi-Natural Woodland
-	1507m NE	Short Wood	Ancient & Semi-Natural Woodland
-	1510m NE	Unknown	Ancient Replanted Woodland
-	1511m NE	Unknown	Ancient Replanted Woodland
-	1512m SE	Forge Wood	Ancient & Semi-Natural Woodland
-	1589m S	Wier Wood	Ancient & Semi-Natural Woodland
-	1593m S	Wier Wood	Ancient & Semi-Natural Woodland
-	1615m NE	Monkey Foot Plantation	Ancient Replanted Woodland
-	1615m N	Calfhall Wood	Ancient & Semi-Natural Woodland
-	1615m N	Calfhall Wood	Ancient & Semi-Natural Woodland
-	1617m NE	Tom Royd Wood	Ancient & Semi-Natural Woodland
-	1632m NE	Bagger Wood	Ancient & Semi-Natural Woodland
-	1633m NE	Bagger Wood	Ancient & Semi-Natural Woodland
-	1641m NE	Tom Royd Wood	Ancient & Semi-Natural Woodland
-	1692m NE	Bagger Wood	Ancient Replanted Woodland
-	1692m NE	Bagger Wood	Ancient Replanted Woodland
-	1727m SW	Dean Wood	Ancient & Semi-Natural Woodland
-	1735m NW	Oxspring Rocher	Ancient & Semi-Natural Woodland
-	1736m NW	Unknown	Ancient & Semi-Natural Woodland
-	1755m S	Forge Rocher Wood	Ancient Replanted Woodland
-	1756m S	Forge Rocher Wood	Ancient Replanted Woodland



ID	Location	Name	Woodland Type
-	1758m S	Hey Crook Common	Ancient & Semi-Natural Woodland
-	1759m S	Hey Crook Common	Ancient & Semi-Natural Woodland
-	1764m E	Ayton Wood	Ancient Replanted Woodland
-	1765m E	Ayton Wood	Ancient Replanted Woodland
-	1838m N	Stubbin Wood	Ancient Replanted Woodland
-	1840m N	Stubbin Wood	Ancient Replanted Woodland
-	1847m W	Oxspring Rocher	Ancient & Semi-Natural Woodland
-	1881m E	Spring Wood	Ancient Replanted Woodland
-	1882m E	Spring Wood	Ancient Replanted Woodland

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

10.8 Biosphere Reserves

Records within 2000m

0

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

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

10.9 Forest Parks

Records within 2000m

0

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

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m

0

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

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



10.11 Green Belt

Records within 2000m

2

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

Features are displayed on the Environmental designations map on [page 44 >](#)

ID	Location	Name	Local Authority name
1	On site	South and West Yorkshire Green Belt	Barnsley
-	1844m W	South and West Yorkshire Green Belt	Barnsley

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

10.12 Proposed Ramsar sites

Records within 2000m

0

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

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m

0

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

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

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m

0

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

This data is sourced from Natural England.



10.15 Nitrate Sensitive Areas

Records within 2000m

0

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

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

Records within 2000m

1

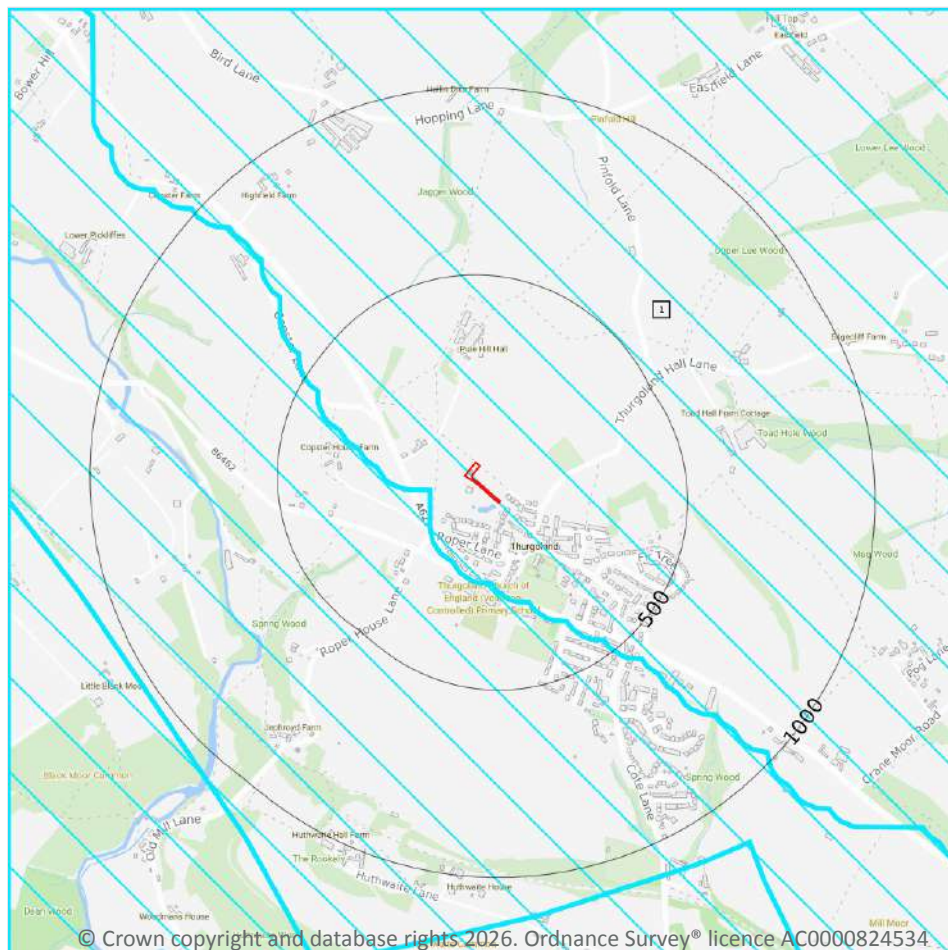
Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

Location	Name	Type	NVZ ID	Status
On site	River Dearne NVZ	Surface Water	278	Existing

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



SSSI Impact Zones and Units



- Site Outline
- Search buffers in metres (m)
- SSSI Impact Risk Zones
- SSSI Units
- Not recorded
- Favourable
- Unfavourable - Recovering
- Unfavourable - No change
- Unfavourable - Declining
- Partially destroyed
- Destroyed

10.17 SSSI Impact Risk Zones

Records on site

1

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

Features are displayed on the SSSI Impact Zones and Units map on [page 51](#) >

ID	Location	Type of developments requiring consultation
1	On site	https://irz.geodata.org.uk/IRZ/step2.html?irzcode=0303000530050&notes=&location=429833,403625%20(IRZ%20polygon%20centre)

This data is sourced from Natural England.



10.18 SSSI Units

Records within 2000m

0

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

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



11 Visual and cultural designations

11.1 World Heritage Sites

Records within 250m

0

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

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

11.2 Area of Outstanding Natural Beauty

Records within 250m

0

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

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

11.3 National Parks

Records within 250m

0

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

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

11.4 Listed Buildings

Records within 250m

0

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



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

11.5 Conservation Areas

Records within 250m

0

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

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

11.6 Scheduled Ancient Monuments

Records within 250m

0

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

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

11.7 Registered Parks and Gardens

Records within 250m

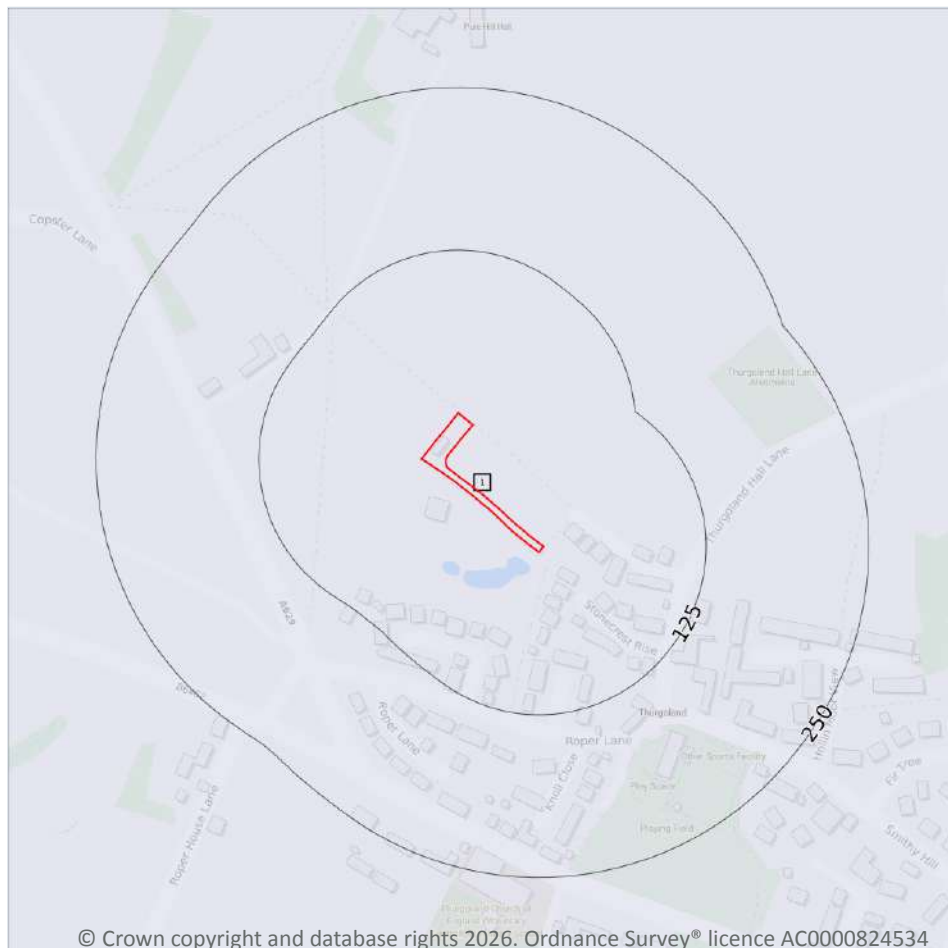
0

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

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



12 Agricultural designations



- Site Outline
- Search buffers in metres (m)
- Grade 1 - excellent quality
- Grade 2 - very good quality
- Grade 3 - good to moderate quality
- Grade 3a - good quality
- Grade 3b - moderate quality
- Grade 4 - poor quality
- Grade 5 - very poor quality
- Non-agricultural land
- Urban land
- Exclusion land
- Tree felling licences
- Open Access land

12.1 Agricultural Land Classification

Records within 250m

1

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

Features are displayed on the Agricultural designations map on [page 55](#) >

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



This data is sourced from Natural England.

12.2 Open Access Land

Records within 250m

0

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

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

12.3 Tree Felling Licences

Records within 250m

0

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

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m

0

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

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m

1

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

Location	Reference	Scheme	Start Date	End Date
246m E	136380	Countryside Stewardship (Higher Tier)	01/06/2024	31/05/2027

This data is sourced from Natural England.



13 Habitat designations

13.1 Priority Habitat Inventory

Records within 250m

0

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

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m

0

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

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m

0

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

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m

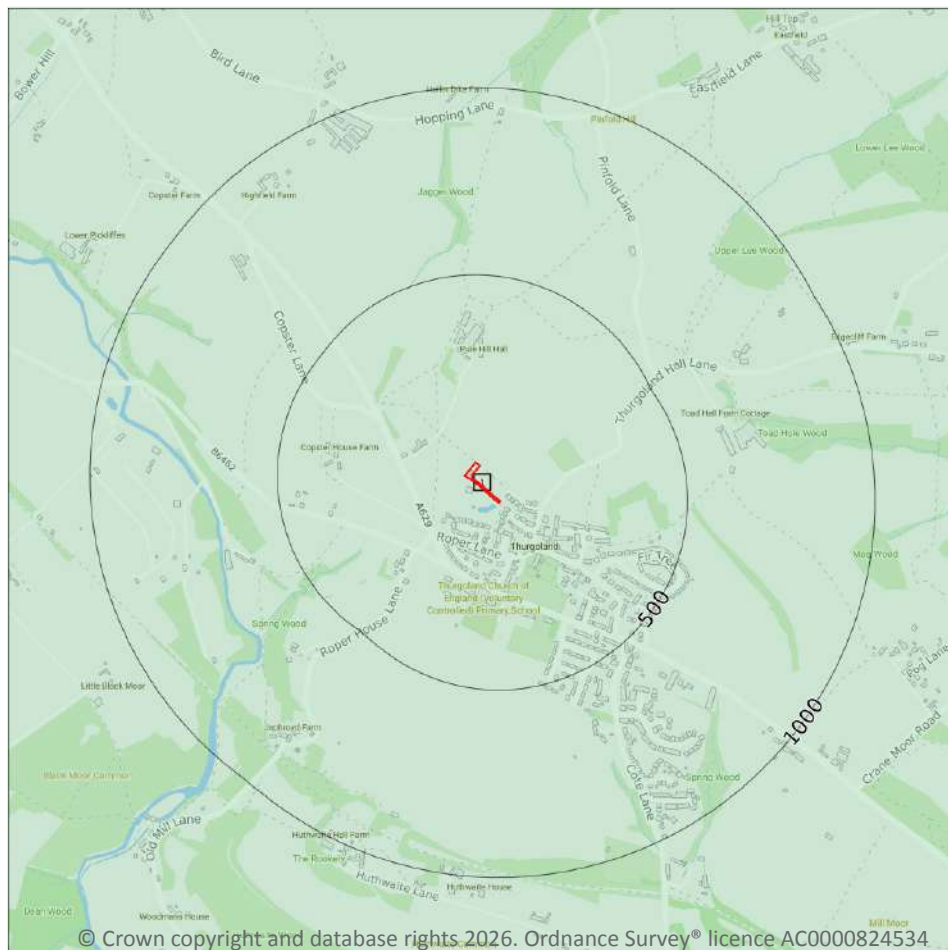
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Limestone pavements are outcrops of limestone where the surface has been worn away by natural means over millennia. These rocks have the appearance of paving blocks, hence their name. Not only do they have geological interest, they also provide valuable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

This data is sourced from Natural England.



14 Geology 1:10,000 scale - Availability



- Site Outline
- Search buffers in metres (m)
- Full coverage
 - Partial coverage
 - No coverage

14.1 10k Availability

Records within 500m

1

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

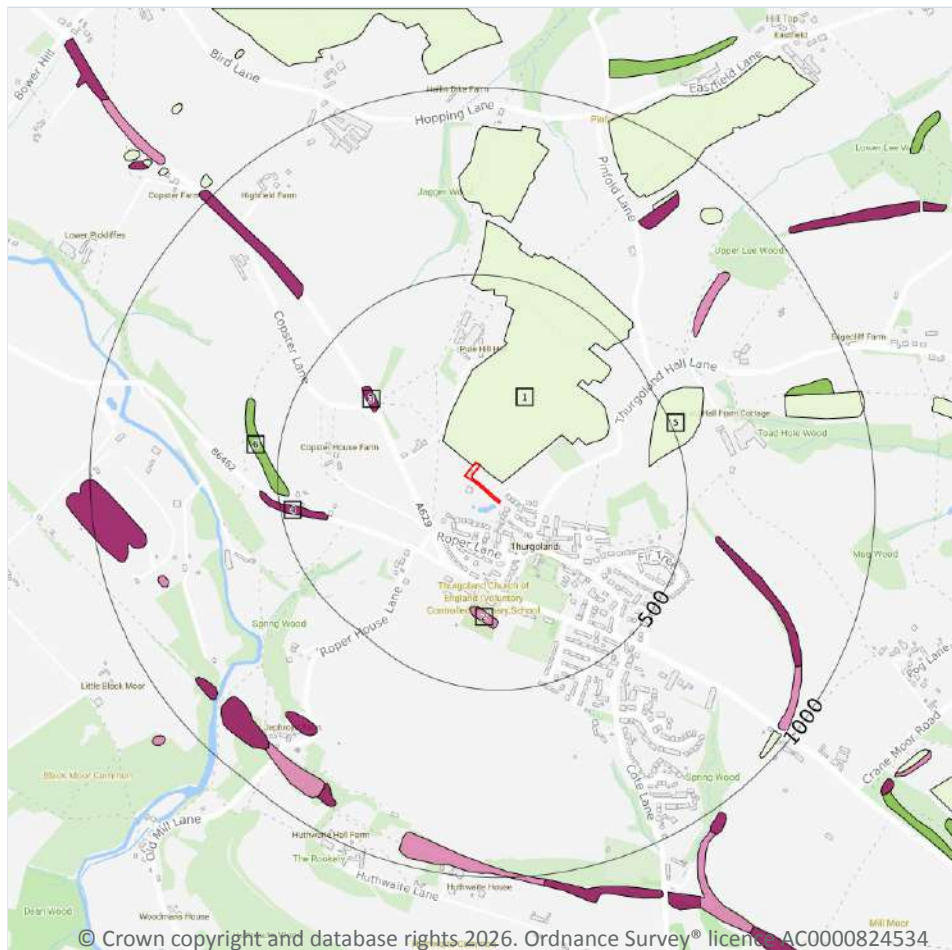
Features are displayed on the Geology 1:10,000 scale - Availability map on [page 58](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	SE20SE

This data is sourced from the British Geological Survey.



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



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

14.2 Artificial and made ground (10k)

Records within 500m

6

Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on [page 59](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	WMGR-ARTDP	Infilled Ground	Artificial deposit
2	284m S	WGR-VOID	Worked Ground (Undivided)	Void
3	292m NW	MGR-ARTDP	Made Ground (Undivided)	Artificial deposit
4	380m W	MGR-ARTDP	Made Ground (Undivided)	Artificial deposit



ID	Location	LEX Code	Description	Rock description
5	408m E	WMGR-ARTDP	Infilled Ground	Artificial deposit
6	472m W	DDGR-ARTGR	Disturbed Ground (Undivided)	Artificially modified ground

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Superficial

14.3 Superficial geology (10k)

Records within 500m

0

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

This data is sourced from the British Geological Survey.

14.4 Landslip (10k)

Records within 500m

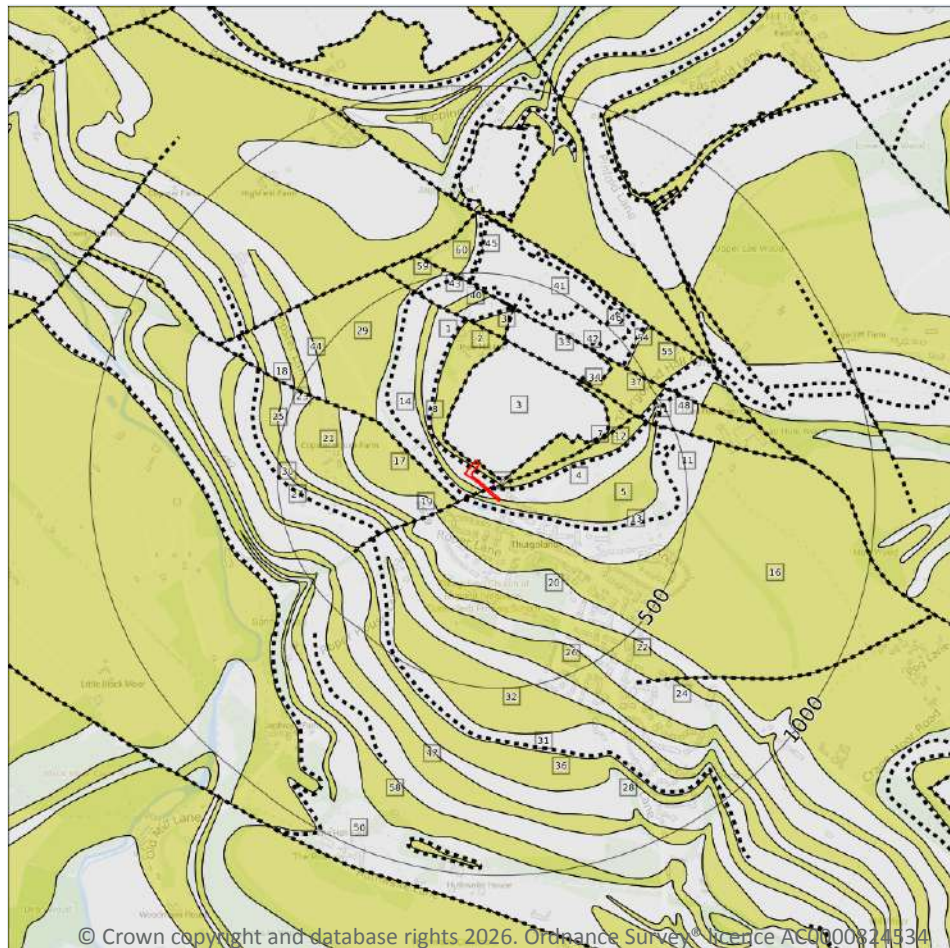
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Mass movement deposits on BGS geological maps at 1:10,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Bedrock



— Site Outline

Search buffers in metres (m)

.... Bedrock faults and other linear features (10k)

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

14.5 Bedrock geology (10k)

Records within 500m

41

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 62](#) >

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



ID	Location	LEX Code	Description	Rock age
4	On site	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian
5	On site	PLCM-SDST	Pennine Lower Coal Measures Formation-Sandstone	Westphalian
10	10m SW	PLCM-SDST	Pennine Lower Coal Measures Formation-Sandstone	Westphalian
11	12m S	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian
12	18m NE	PLCM-SDST	Pennine Lower Coal Measures Formation-Sandstone	Westphalian
14	29m SW	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian
16	56m S	PF-SDST	Penistone Flags-Sandstone	Westphalian
17	67m SW	PF-SDST	Penistone Flags-Sandstone	Westphalian
19	112m SW	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian
20	130m SW	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian
21	179m SW	PF-SDST	Penistone Flags-Sandstone	Westphalian
22	186m SW	PF-SDST	Penistone Flags-Sandstone	Westphalian
23	202m SW	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian
24	217m SW	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian
25	241m SW	PF-SDST	Penistone Flags-Sandstone	Westphalian
26	245m SW	PF-SDST	Penistone Flags-Sandstone	Westphalian
27	256m SW	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian
28	260m SW	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian
29	273m NW	PF-SDST	Penistone Flags-Sandstone	Westphalian
32	302m SW	PF-SDST	Penistone Flags-Sandstone	Westphalian
33	320m NE	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian
35	329m N	PLCM-SDST	Pennine Lower Coal Measures Formation-Sandstone	Westphalian
36	344m SW	PF-SDST	Penistone Flags-Sandstone	Westphalian



ID	Location	LEX Code	Description	Rock age
37	347m NE	PLCM-SDST	Pennine Lower Coal Measures Formation-Sandstone	Westphalian
38	368m N	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian
40	395m N	PLCM-SDST	Pennine Lower Coal Measures Formation-Sandstone	Westphalian
41	406m NE	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian
43	415m N	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian
44	416m NW	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian
47	427m SW	PF-SDST	Penistone Flags-Sandstone	Westphalian
48	429m NE	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian
50	440m SW	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian
51	444m NE	PLCM-SDST	Pennine Lower Coal Measures Formation-Sandstone	Westphalian
53	463m NW	PF-SDST	Penistone Flags-Sandstone	Westphalian
55	467m NE	PLCM-SDST	Pennine Lower Coal Measures Formation-Sandstone	Westphalian
58	475m SW	PF-SDST	Penistone Flags-Sandstone	Westphalian
59	477m N	PF-SDST	Penistone Flags-Sandstone	Westphalian
60	492m N	PF-SDST	Penistone Flags-Sandstone	Westphalian

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m

19

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 62](#) >

ID	Location	Category	Description
6	On site	FAULT	Fault, inferred, displacement unknown

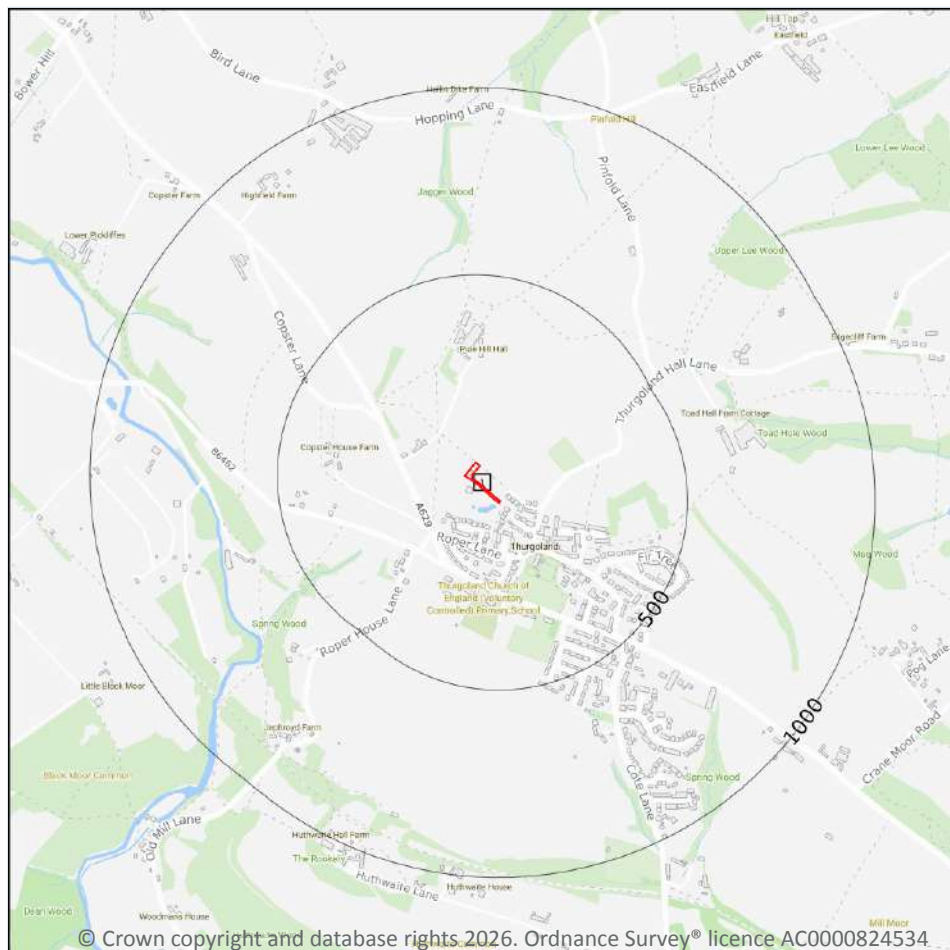


ID	Location	Category	Description
7	On site	ROCK	Coal seam, observed
8	On site	ROCK	Coal seam, inferred
9	7m NE	ROCK	Coal seam, inferred
13	25m S	ROCK	Coal seam, inferred
15	44m SW	ROCK	Coal seam, inferred
18	67m SW	FAULT	Fault, inferred, displacement unknown
30	281m SW	ROCK	Coal seam, inferred
31	299m SW	ROCK	Coal seam, inferred
34	320m NE	FAULT	Fault, inferred, displacement unknown
39	371m N	ROCK	Coal seam, inferred
42	406m NE	FAULT	Fault, inferred, displacement unknown
45	420m N	ROCK	Coal seam, observed
46	420m N	ROCK	Coal seam, observed
49	432m NE	ROCK	Coal seam, inferred
52	458m NE	ROCK	Coal seam, inferred
54	465m NE	ROCK	Coal seam, inferred
56	469m N	ROCK	Coal seam, inferred
57	474m N	ROCK	Coal seam, inferred

This data is sourced from the British Geological Survey.



15 Geology 1:50,000 scale - Availability



— Site Outline

Search buffers in metres (m)

□ Geological map tile

15.1 50k Availability

Records within 500m

1

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

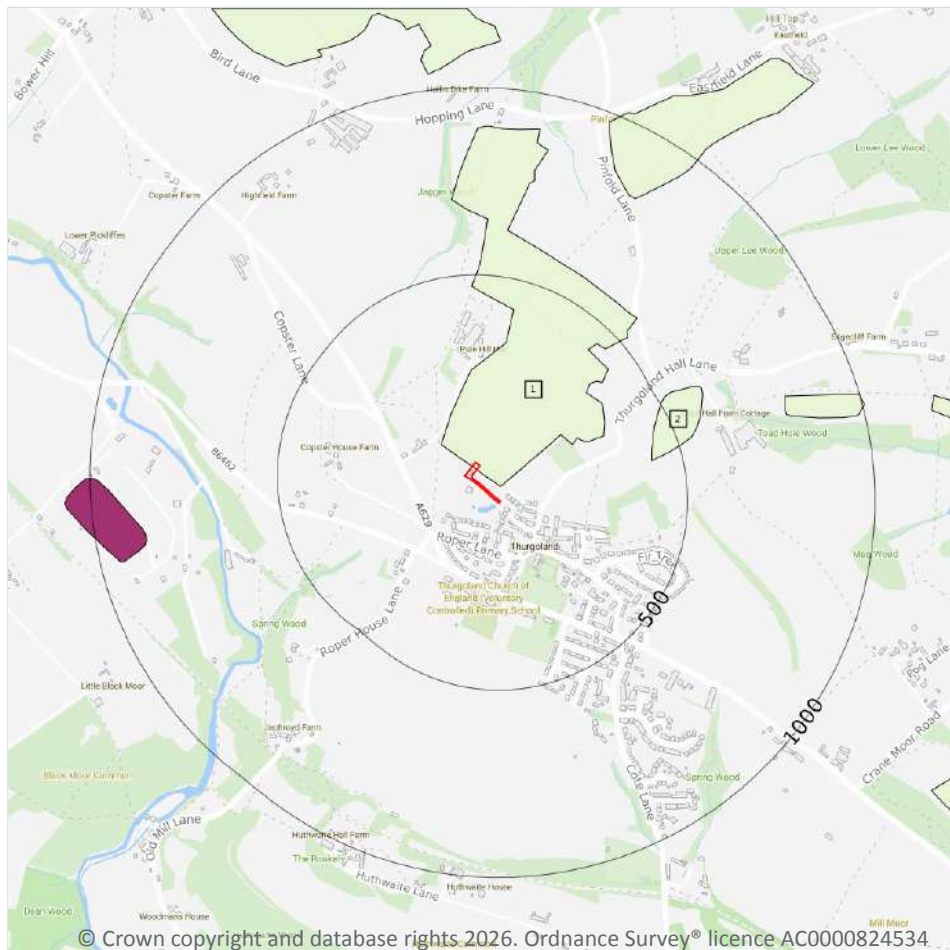
Features are displayed on the Geology 1:50,000 scale - Availability map on [page 66](#) >

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

This data is sourced from the British Geological Survey.



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



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

15.2 Artificial and made ground (50k)

Records within 500m

2

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 67](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	WMGR-ARTDP	Infilled Ground	Artificial deposit
2	418m E	WMGR-ARTDP	Infilled Ground	Artificial deposit

This data is sourced from the British Geological Survey.



15.3 Artificial ground permeability (50k)

Records within 50m**1**

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of 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

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Superficial

15.4 Superficial geology (50k)

Records within 500m

0

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

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m

0

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

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m

0

Mass movement deposits on BGS geological maps at 1:50,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.

15.7 Landslip permeability (50k)

Records within 50m

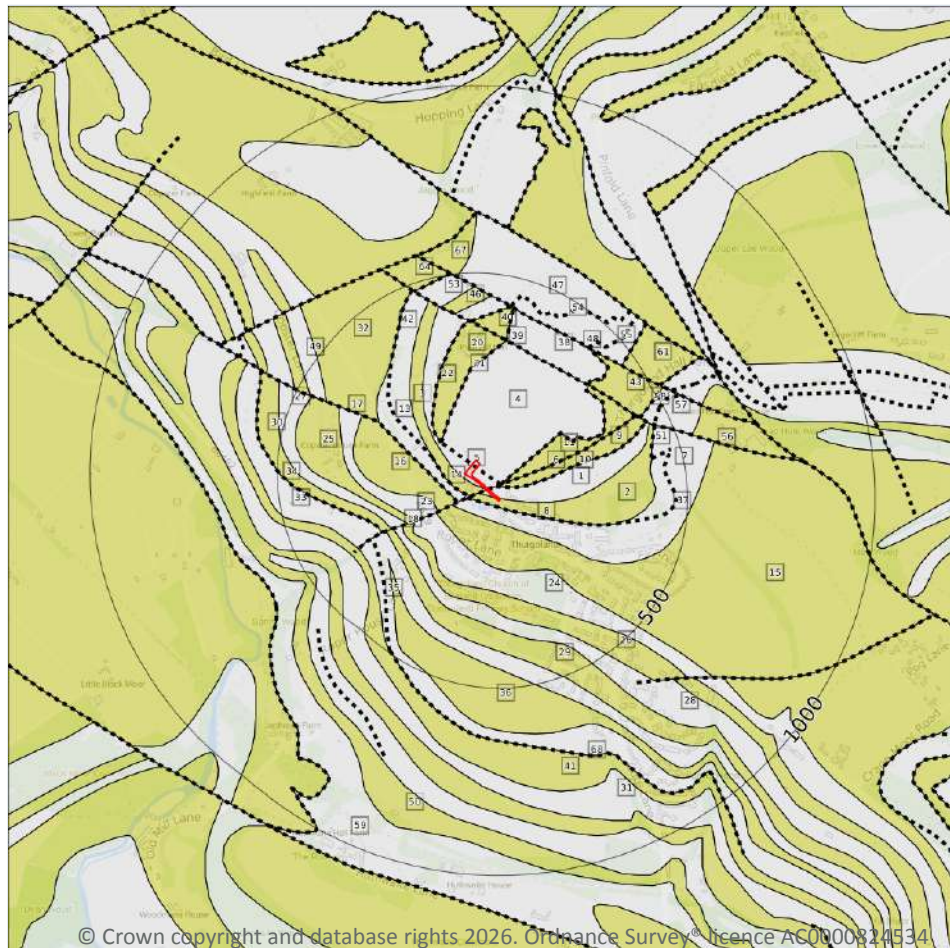
0

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

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Bedrock



— Site Outline

Search buffers in metres (m)

.... Bedrock faults and other linear features (50k)

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

15.8 Bedrock geology (50k)

Records within 500m

39

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 70](#) >

ID	Location	LEX Code	Description	Rock age
1	On site	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, siltstone and sandstone	Westphalian
2	On site	PLCM-SDST	Pennine Lower Coal Measures Formation-Sandstone	Westphalian
3	On site	PLCM-SDST	Pennine Lower Coal Measures Formation-Sandstone	Westphalian



ID	Location	LEX Code	Description	Rock age
4	On site	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, siltstone and sandstone	Westphalian
7	18m S	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, siltstone and sandstone	Westphalian
9	18m NE	PLCM-SDST	Pennine Lower Coal Measures Formation-Sandstone	Westphalian
11	31m NE	PLCM-SDST	Pennine Lower Coal Measures Formation-Sandstone	Westphalian
13	40m SW	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, siltstone and sandstone	Westphalian
15	57m S	PF-SDST	Penistone Flags-Sandstone	Westphalian
16	67m SW	PF-SDST	Penistone Flags-Sandstone	Westphalian
20	101m NW	PLCM-SDST	Pennine Lower Coal Measures Formation-Sandstone	Westphalian
23	113m SW	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, siltstone and sandstone	Westphalian
24	130m SW	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, siltstone and sandstone	Westphalian
25	175m SW	PF-SDST	Penistone Flags-Sandstone	Westphalian
26	183m SW	PF-SDST	Penistone Flags-Sandstone	Westphalian
27	202m SW	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, siltstone and sandstone	Westphalian
28	217m SW	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, siltstone and sandstone	Westphalian
29	241m SW	PF-SDST	Penistone Flags-Sandstone	Westphalian
30	246m SW	PF-SDST	Penistone Flags-Sandstone	Westphalian
31	260m SW	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, siltstone and sandstone	Westphalian
32	268m NW	PF-SDST	Penistone Flags-Sandstone	Westphalian
33	270m SW	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, siltstone and sandstone	Westphalian
36	308m SW	PF-SDST	Penistone Flags-Sandstone	Westphalian
38	319m NE	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, siltstone and sandstone	Westphalian
40	330m N	PLCM-SDST	Pennine Lower Coal Measures Formation-Sandstone	Westphalian
41	347m SW	PF-SDST	Penistone Flags-Sandstone	Westphalian



ID	Location	LEX Code	Description	Rock age
43	359m NE	PLCM-SDST	Pennine Lower Coal Measures Formation-Sandstone	Westphalian
44	371m N	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, siltstone and sandstone	Westphalian
46	396m N	PLCM-SDST	Pennine Lower Coal Measures Formation-Sandstone	Westphalian
47	406m NE	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, siltstone and sandstone	Westphalian
49	416m NW	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, siltstone and sandstone	Westphalian
50	417m SW	PF-SDST	Penistone Flags-Sandstone	Westphalian
53	419m N	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, siltstone and sandstone	Westphalian
57	430m NE	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, siltstone and sandstone	Westphalian
59	450m SW	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, siltstone and sandstone	Westphalian
61	461m NE	PLCM-SDST	Pennine Lower Coal Measures Formation-Sandstone	Westphalian
63	463m NW	PF-SDST	Penistone Flags-Sandstone	Westphalian
64	479m N	PF-SDST	Penistone Flags-Sandstone	Westphalian
67	492m N	PF-SDST	Penistone Flags-Sandstone	Westphalian

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m

3

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	Fracture	Moderate	Low
On site	Fracture	High	Moderate
18m NE	Fracture	High	Moderate

This data is sourced from the British Geological Survey.



15.10 Bedrock faults and other linear features (50k)

Records within 500m

29

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 70 >](#)

ID	Location	Category	Description
5	On site	ROCK	Coal seam, inferred
6	On site	FAULT	Fault, inferred, crossmark on downthrow side, throw in metres
8	18m S	ROCK	Coal seam, inferred
10	18m NE	ROCK	Coal seam, inferred
12	31m NE	ROCK	Coal seam, inferred
14	40m SW	ROCK	Coal seam, inferred
17	67m SW	FAULT	Fault, inferred, crossmark on downthrow side, throw in metres
18	73m SW	FAULT	Fault, inferred, crossmark on downthrow side, throw in metres
19	97m NW	ROCK	Coal seam, inferred
21	101m NW	ROCK	Coal seam, inferred
22	101m NW	ROCK	Coal seam, inferred
34	270m SW	ROCK	Coal seam, inferred
35	300m SW	ROCK	Coal seam, inferred
37	317m E	ROCK	Coal seam, inferred
39	319m NE	FAULT	Fault, inferred, displacement unknown
42	347m NW	ROCK	Coal seam, inferred
45	371m N	ROCK	Coal seam, inferred
48	406m NE	FAULT	Fault, inferred, displacement unknown
51	418m E	ROCK	Coal seam, inferred
52	418m E	ROCK	Coal seam, inferred
54	422m N	ROCK	Coal seam, inferred
55	424m NE	ROCK	Coal seam, inferred
56	424m NE	FAULT	Fault, inferred, displacement unknown

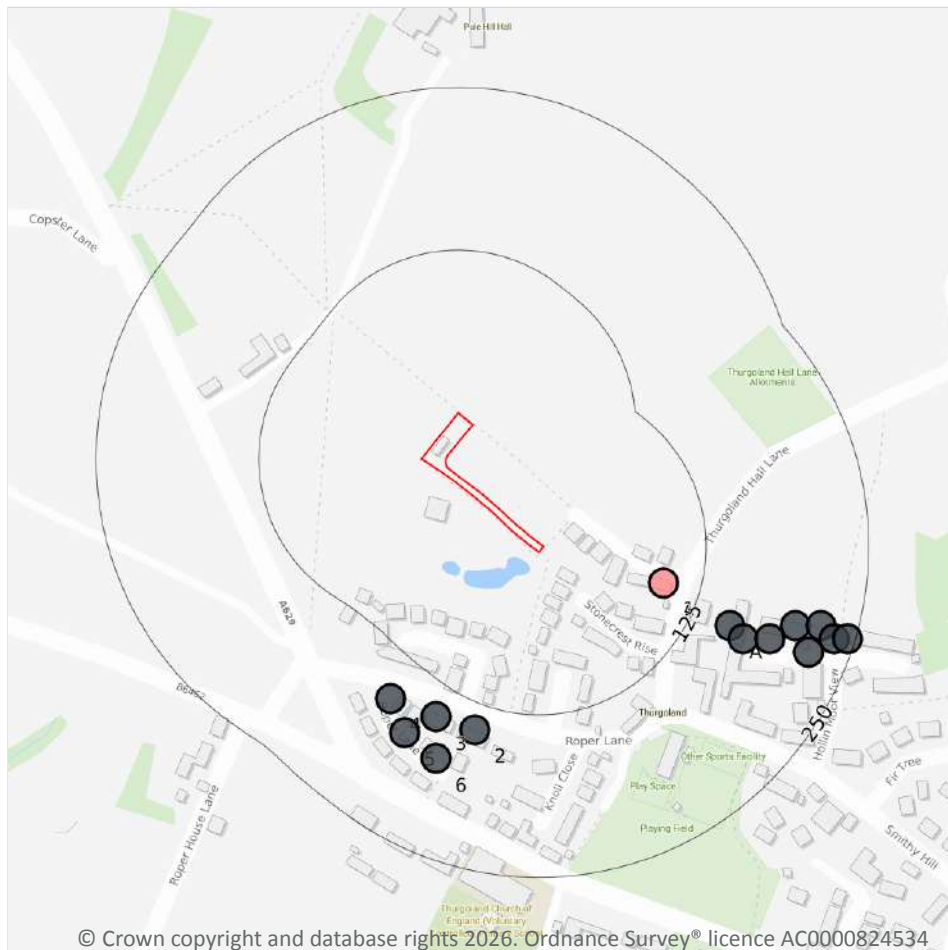


ID	Location	Category	Description
58	430m NE	ROCK	Coal seam, inferred
60	456m NE	ROCK	Coal seam, inferred
62	461m NE	ROCK	Coal seam, inferred
65	479m N	ROCK	Coal seam, inferred
66	490m NE	ROCK	Coal seam, inferred
68	495m SW	ROCK	Coal seam, inferred

This data is sourced from the British Geological Survey.



16 Boreholes



- Site Outline**
- Search buffers in metres (m)**
- Confidential
 - 0 - 10m
 - 10 - 30m
 - 30m+
 - Unknown

16.1 BGS Boreholes

Records within 250m

14

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 75 >](#)

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	97m E	428829 401393	THURGOLAND BH	53.1	N	56328 ↗
2	145m S	428684 401280	ROPER LANE THURGOLAND TP 3	-	Y	N/A
3	149m SW	428654 401290	ROPER LANE THURGOLAND TP 2	-	Y	N/A

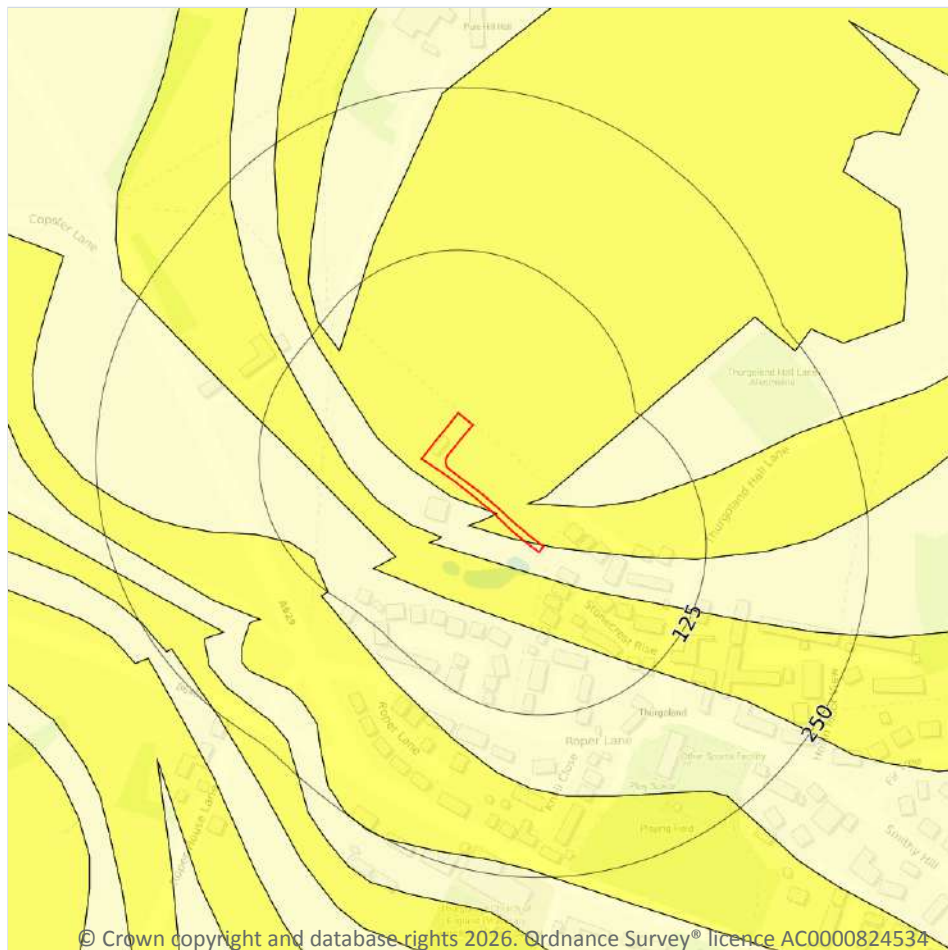


ID	Location	Grid reference	Name	Length	Confidential	Web link
A	156m SE	428880 401360	ROPER LANE THURGOLAND 1	-	Y	N/A
4	159m SW	428619 401304	ROPER LANE THURGOLAND TP 1	-	Y	N/A
A	169m SE	428890 401350	ROPER LANE THURGOLAND 2	-	Y	N/A
5	173m SW	428630 401278	ROPER LANE THURGOLAND TP 5	-	Y	N/A
6	177m SW	428654 401258	ROPER LANE THURGOLAND TP 4	-	Y	N/A
A	187m E	428910 401350	ROPER LANE THURGOLAND 3	-	Y	N/A
A	203m E	428930 401360	ROPER LANE THURGOLAND 4	-	Y	N/A
A	219m E	428940 401340	ROPER LANE THURGOLAND 5	-	Y	N/A
A	222m E	428950 401360	ROPER LANE THURGOLAND 6	-	Y	N/A
A	234m E	428960 401350	ROPER LANE THURGOLAND 7	-	Y	N/A
A	244m E	428970 401350	ROPER LANE THURGOLAND 8	-	Y	N/A

This data is sourced from the British Geological Survey.



17 Natural ground subsidence - Shrink swell clays



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

17.1 Shrink swell clays

Records within 50m

3

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

Features are displayed on the Natural ground subsidence - Shrink swell clays map on [page 77 >](#)

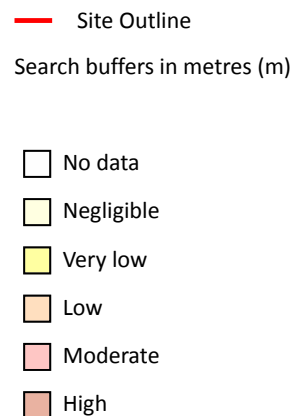
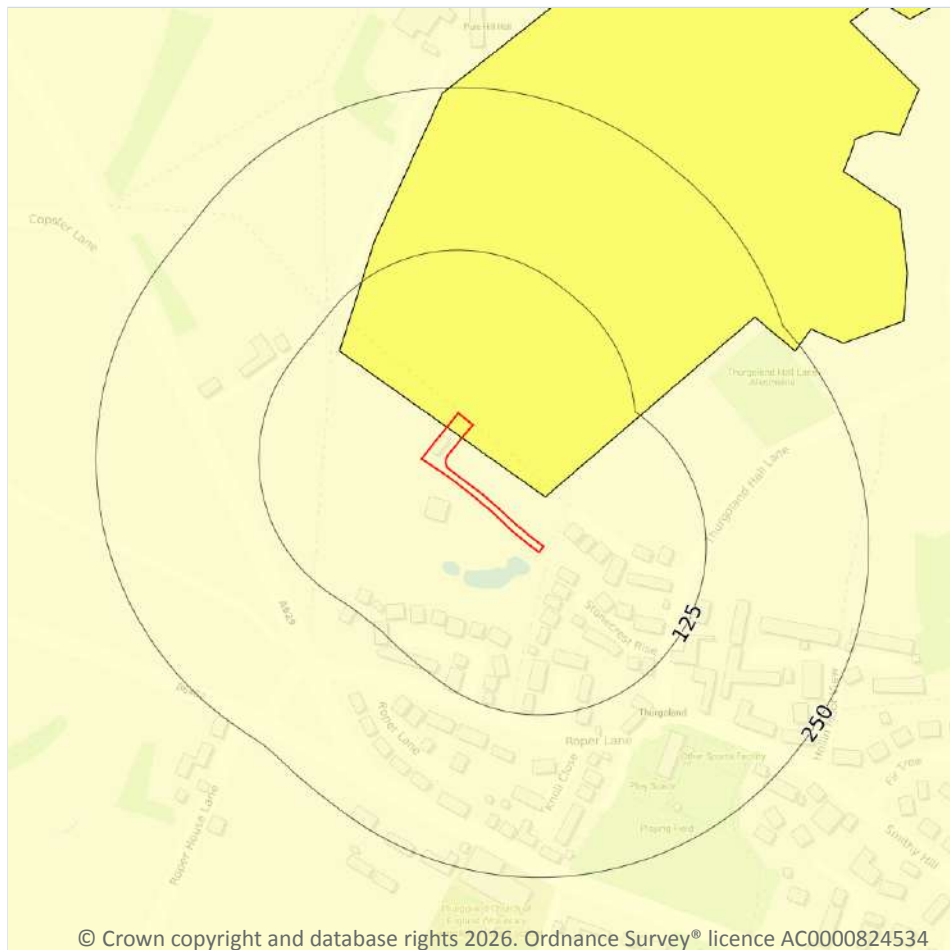
Location	Hazard rating	Details
On site	Negligible	Ground conditions predominantly non-plastic.
On site	Very low	Ground conditions predominantly low plasticity.
18m NE	Negligible	Ground conditions predominantly non-plastic.



This data is sourced from the British Geological Survey.



Natural ground subsidence - Running sands



17.2 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 79 >](#)

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.

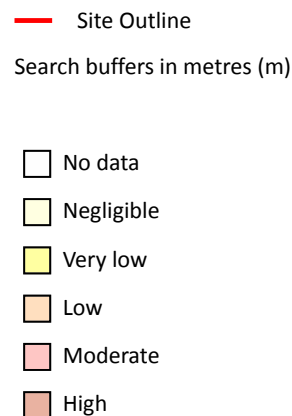
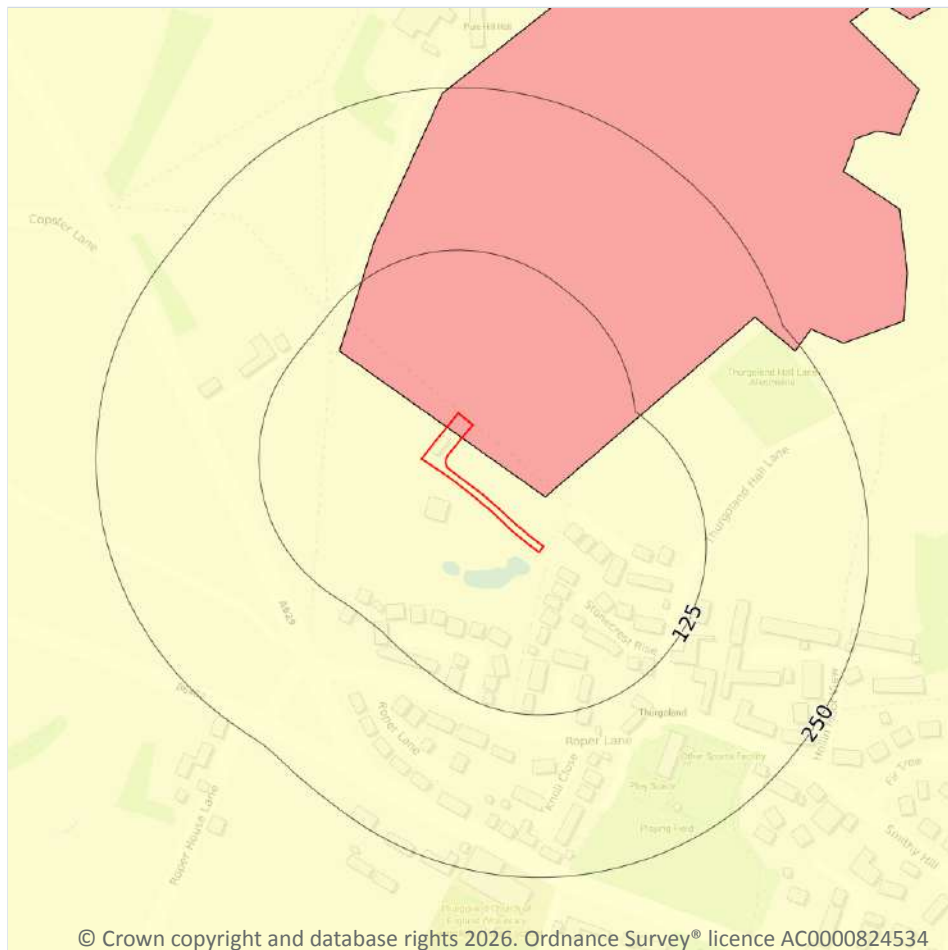


Location	Hazard rating	Details
On site	Very low	Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Compressible deposits



17.3 Compressible deposits

Records within 50m

2

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 81](#) >

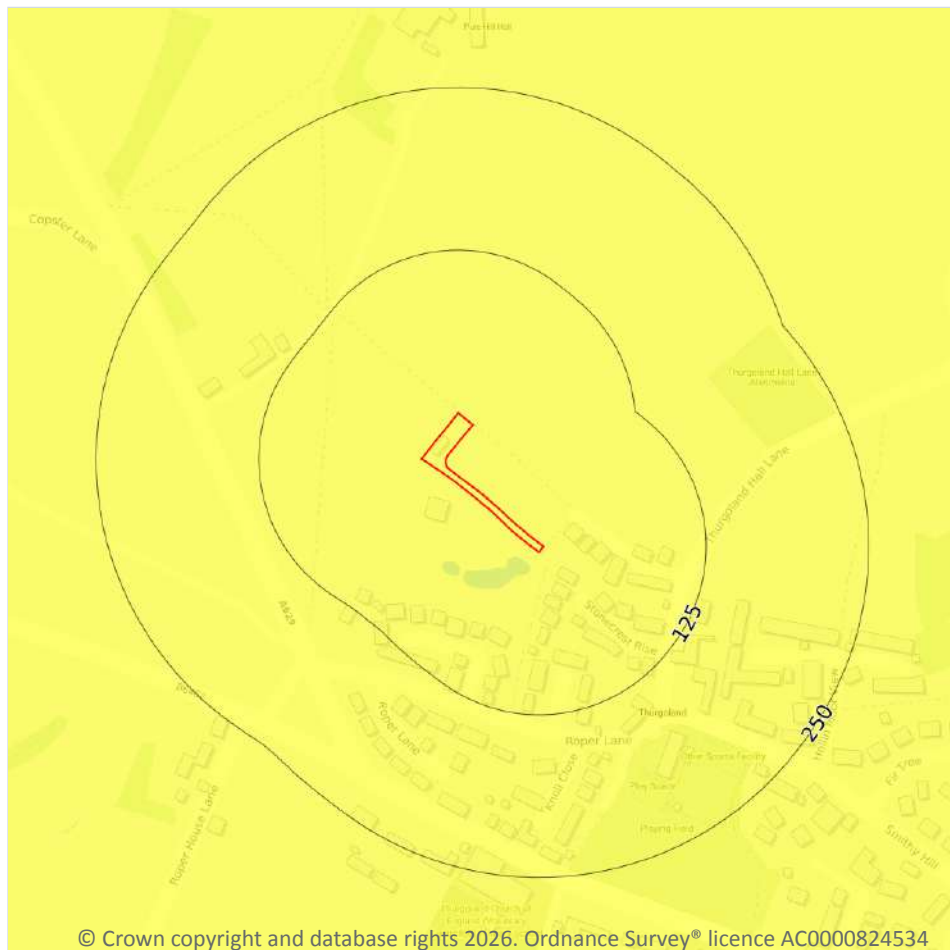
Location	Hazard rating	Details
On site	Negligible	Compressible strata are not thought to occur.
On site	Moderate	Compressibility and uneven settlement hazards are probably present. Land use should consider specifically the compressibility and variability of the site.



This data is sourced from the British Geological Survey.



Natural ground subsidence - Collapsible deposits



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

17.4 Collapsible deposits

Records within 50m

1

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

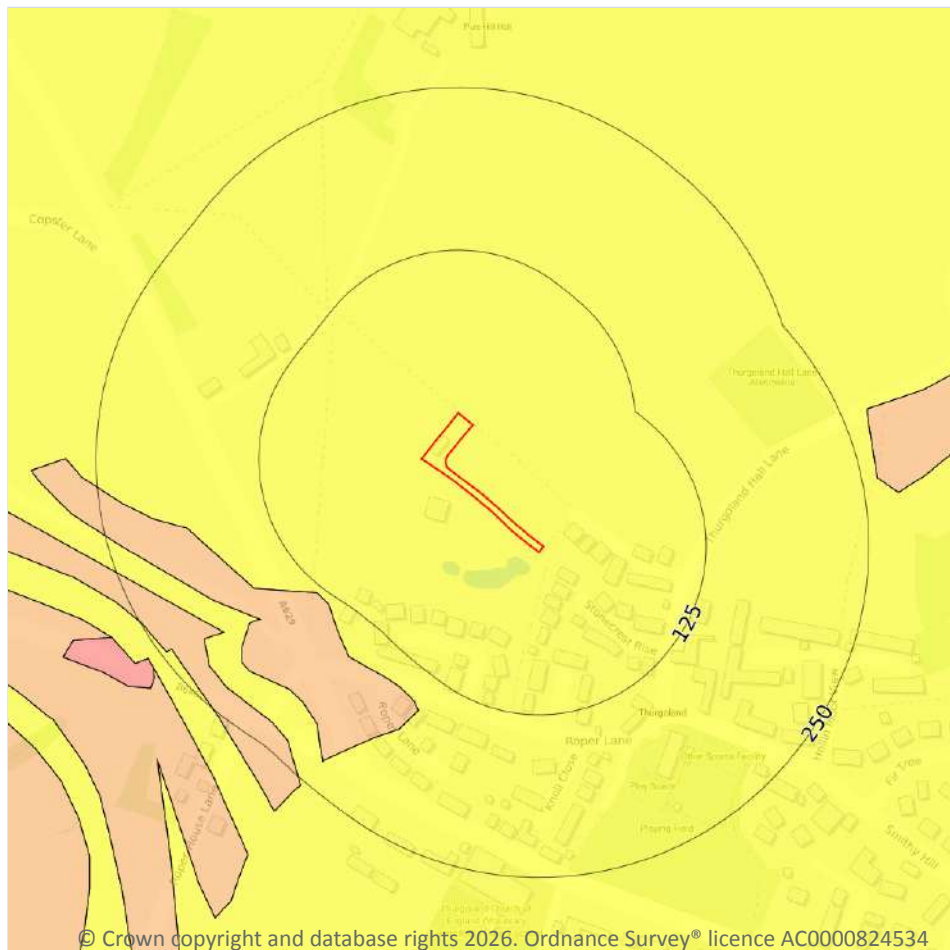
Features are displayed on the Natural ground subsidence - Collapsible deposits map on [page 83](#) >

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Landslides



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

17.5 Landslides

Records within 50m

1

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

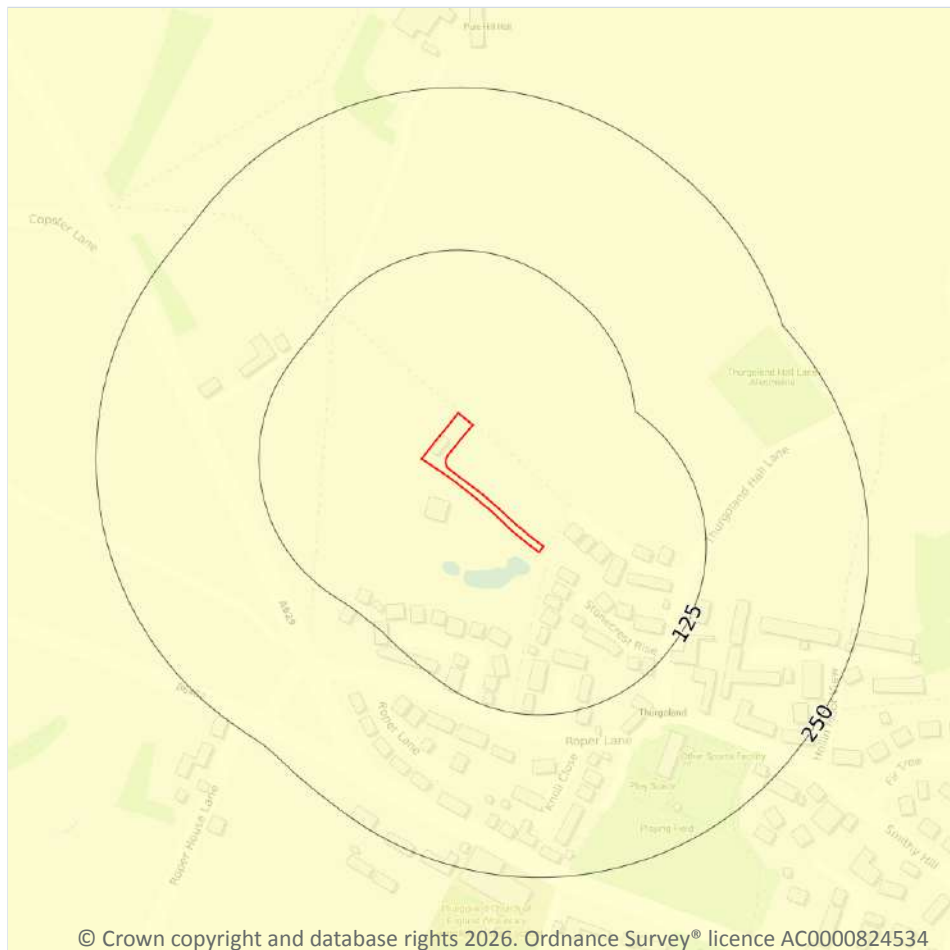
Features are displayed on the Natural ground subsidence - Landslides map on [page 84](#) >

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Ground dissolution of soluble rocks



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

17.6 Ground dissolution of soluble rocks

Records within 50m

1

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

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on [page 85](#)

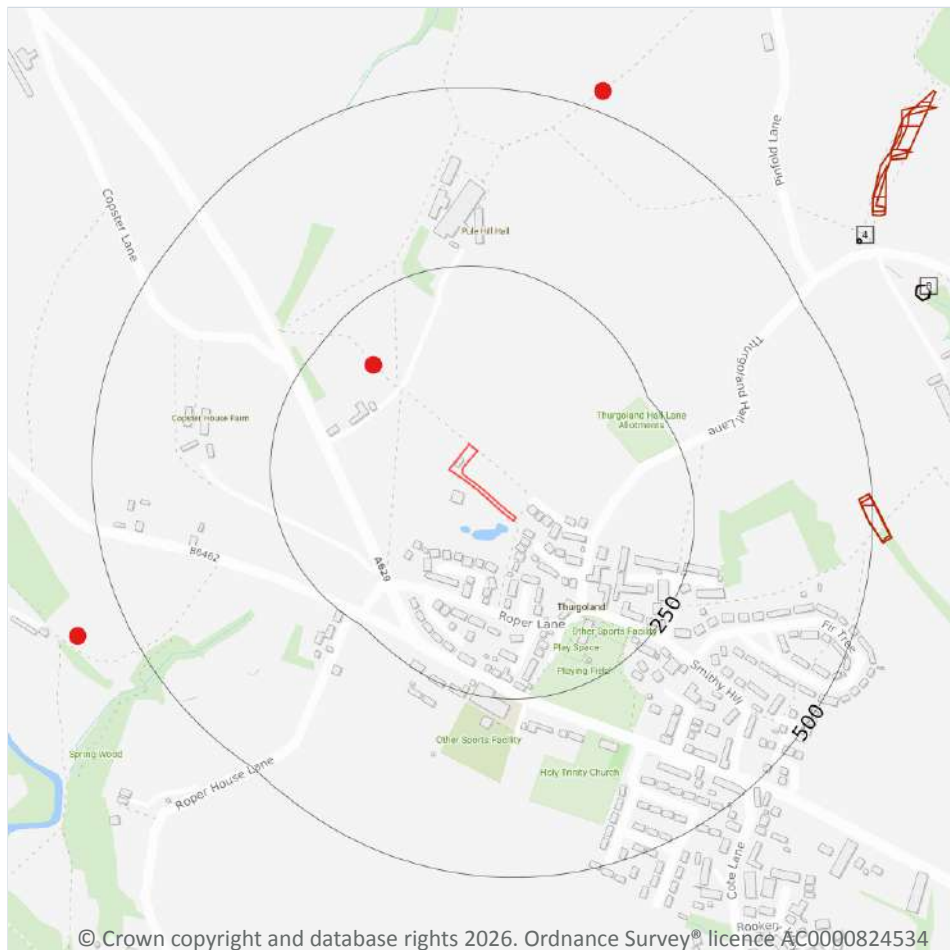
Location	Hazard rating	Details
On site	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.



This data is sourced from the British Geological Survey.



18 Mining and ground workings



- Site Outline
- Search buffers in metres (m)
- BritPits
- Surface ground workings
- Underground workings
- Underground mining extents
- Historical mineral planning areas
- TCA non-coal mining
- Non Coal Mining
 - Sporadic underground mining of restricted extent possible
 - Localised small scale underground mining possible
 - Small scale mining possible
 - Underground mining known or likely within or in close proximity
 - Underground mining known within or in very close proximity

18.1 BritPits

Records within 500m

1

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

Features are displayed on the Mining and ground workings map on [page 87 >](#)

ID	Location	Details	Description
1	174m NW	Name: California Colliery Address: Thurgoland, PENISTONE, South Yorkshire Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit, drift or incline. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun' Ee' - Scots). May also be locally termed 'Quarry' or 'Underground Quarry' when referring to sites extracting building stone (e.g. in Dorset and Wiltshire). The location given is that of the mine entrance and may be approximate for older sites shown on contemporaneous mapping by the Geological Survey used as the source document. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m

0

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

This is data is sourced from Ordnance Survey®/Groundsure.

18.3 Underground workings

Records within 1000m

9

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

Features are displayed on the Mining and ground workings map on [page 87 >](#)

ID	Location	Land Use	Year of mapping	Mapping scale
4	608m NE	Unspecified Old Shaft	1903	1:10560
B	641m NE	Old Coal Pit	1903	1:10560
-	897m SW	Tunnel	1965	1:10560
-	897m SW	Tunnel	1987	1:10000
-	897m SW	Tunnel	1951	1:10560
-	898m SW	Tunnel	1932	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
-	898m SW	Tunnel	1903	1:10560
-	898m SW	Tunnel	1891	1:10560
-	906m SW	tunnel	1987	1:10000

This data is sourced from Ordnance Survey®/Groundsure.

18.4 Underground mining extents

Records within 500m

0

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

This data is sourced from Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m

0

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

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m

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.

18.7 JPB mining areas

Records on site

0

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

This data is sourced from Johnson Poole and Bloomer.



18.8 The Coal Authority non-coal mining

Records within 500m

0

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

This data is sourced from The Coal Authority.

18.9 Researched mining

Records within 500m

0

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

This data is sourced from Groundsure.

18.10 Mining record office plans

Records within 500m

0

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

This data is sourced from Groundsure.

18.11 BGS mine plans

Records within 500m

0

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

This data is sourced from Groundsure.



18.12 Coal mining

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

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

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

This data is sourced from the Coal Authority.

18.13 Brine areas

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

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

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

18.14 Gypsum areas

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

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.15 Tin mining

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

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

18.16 Clay mining

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

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

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

19 Ground cavities and sinkholes

19.1 Natural cavities

Records within 500m

0

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

This data is sourced from Stantec UK Ltd.

19.2 Mining cavities

Records within 1000m

0

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

This data is sourced from Stantec UK Ltd.

19.3 Reported recent incidents

Records within 500m

0

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

This data is sourced from Groundsure.

19.4 Historical incidents

Records within 500m

0

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

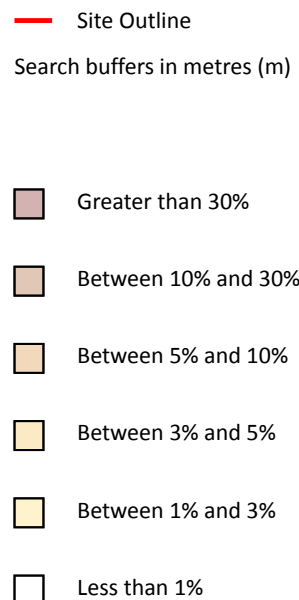
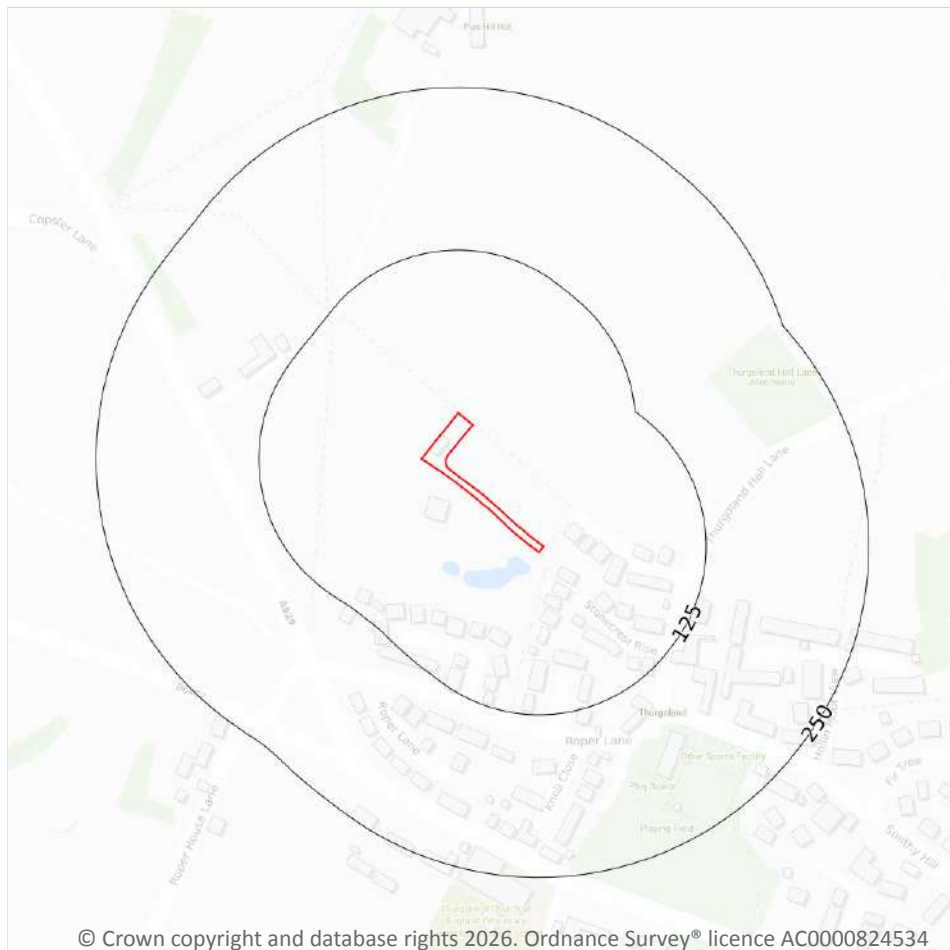
Not all 'holes' noted on Ordnance Survey® mapping will necessarily be present within this dataset.



This data is sourced from Groundsure.



20 Radon



20.1 Radon

Records on site

1

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

Features are displayed on the Radon map on [page 94](#) >

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



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



21 Soil chemistry

21.1 BGS Estimated Background Soil Chemistry

Records within 50m

8

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 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 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 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
4m SW	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
19m S	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
20m NW	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
35m SW	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
48m SW	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.



21.2 BGS Estimated Urban Soil Chemistry

Records within 50m

0

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

This data is sourced from the British Geological Survey.

21.3 BGS Measured Urban Soil Chemistry

Records within 50m

0

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

This data is sourced from the British Geological Survey.



22 Railway infrastructure and projects

22.1 Underground railways (London)

Records within 250m**0**

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

This data is sourced from publicly available information by Groundsure.

22.2 Underground railways (Non-London)

Records within 250m**0**

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

This data is sourced from publicly available information by Groundsure.

22.3 Railway tunnels

Records within 250m**0**

Railway tunnels taken from contemporary Ordnance Survey® mapping.

This data is sourced from the Ordnance Survey®.

22.4 Historical railway and tunnel features

Records within 250m**0**

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

This data is sourced from Ordnance Survey®/Groundsure.

22.5 Royal Mail tunnels

Records within 250m**0**

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



This data is sourced from Groundsure/the Postal Museum.

22.6 Historical railways

Records within 250m

0

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

This data is sourced from OpenStreetMap.

22.7 Railways

Records within 250m

0

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

This data is sourced from Ordnance Survey® and OpenStreetMap.

22.8 Crossrail 2

Records within 500m

0

Crossrail 2 is a proposed railway linking the national rail networks in Surrey and Hertfordshire via an underground tunnel through London. Please note that the Crossrail 2 project has been temporarily suspended. It is possible funding will be received in the future, but there is no guarantee of this.

This data is sourced from publicly available information by Groundsure.

22.9 HS2

Records within 500m

0

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

This data is sourced from HS2 Ltd.



Data providers

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

Terms and conditions

Groundsure's Terms and Conditions can be accessed at this link: www.groundsure.com/terms-conditions-april-2026/ ↗.



APPENDIX B

Consultants Coal Mining Report

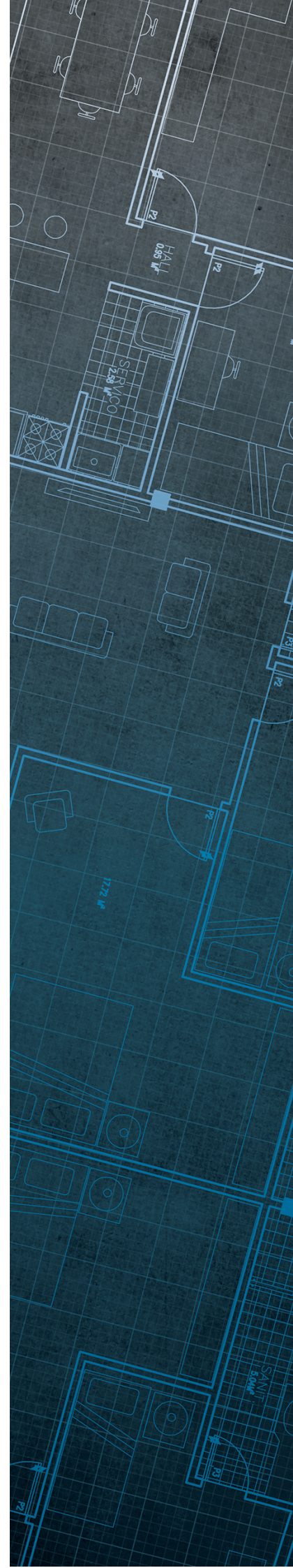


The Coal
Authority

Consultants Coal Mining Report

Longfield House, Thurgoland
South Yorkshire

Date of enquiry:	21 August 2026
Date enquiry received:	21 August 2026
Issue date:	21 August 2026
Our reference:	51003589776001
Your reference:	GUK-0826-03



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

Groundsmiths (UK) Ltd

Enquiry address

Longfield House, Thurgoland
South Yorkshire

How to contact us

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

200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

reports@miningremediation.gov.uk



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	6YCR	20	Beneath Property	4.1	North-East	71	1853

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	428401-007	428639 401586	Treatment details unknown.*	Coal	
Shaft	428401-009	428789 401436	Treatment details unknown.*	Coal	
Shaft	428401-020	428747 401482	Treatment details unknown.*	Coal	
Shaft	428401-021	428754 401443	Treatment details unknown.*	Coal	

*For your information, before the coal industry was nationalised in 1947, there was no requirement for a mine operator to record mine entry treatment details when a mine was abandoned.

Therefore, it is not unusual for us to have no treatment details for many of the 176,000 recorded mine entries on our database. Despite this lack of information, please be assured that the fact we have no treatment recorded does not necessarily mean that the mine entries were left untreated when abandoned.

Abandoned mine plan catalogue numbers

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

SY34	SY115	R388C
PO0	SY155	569
NE95	SY109	

For assistance in identifying the specific abandoned mine plans relevant to your requirements, **please contact us at InformationManagers@MiningRemediation.gov.uk**.

Outcrops

Seam name	Mineral	Seam workable	Distance to outcrop (m)	Direction to outcrop	Bearing of outcrop
WHINMOOR	Coal	Yes	32.9	South	111
WHINMOOR	Coal	Yes	40.6	South-West	330

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.

Fault 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 email us at reports@miningremediation.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 **email us at reports@miningremediation.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.

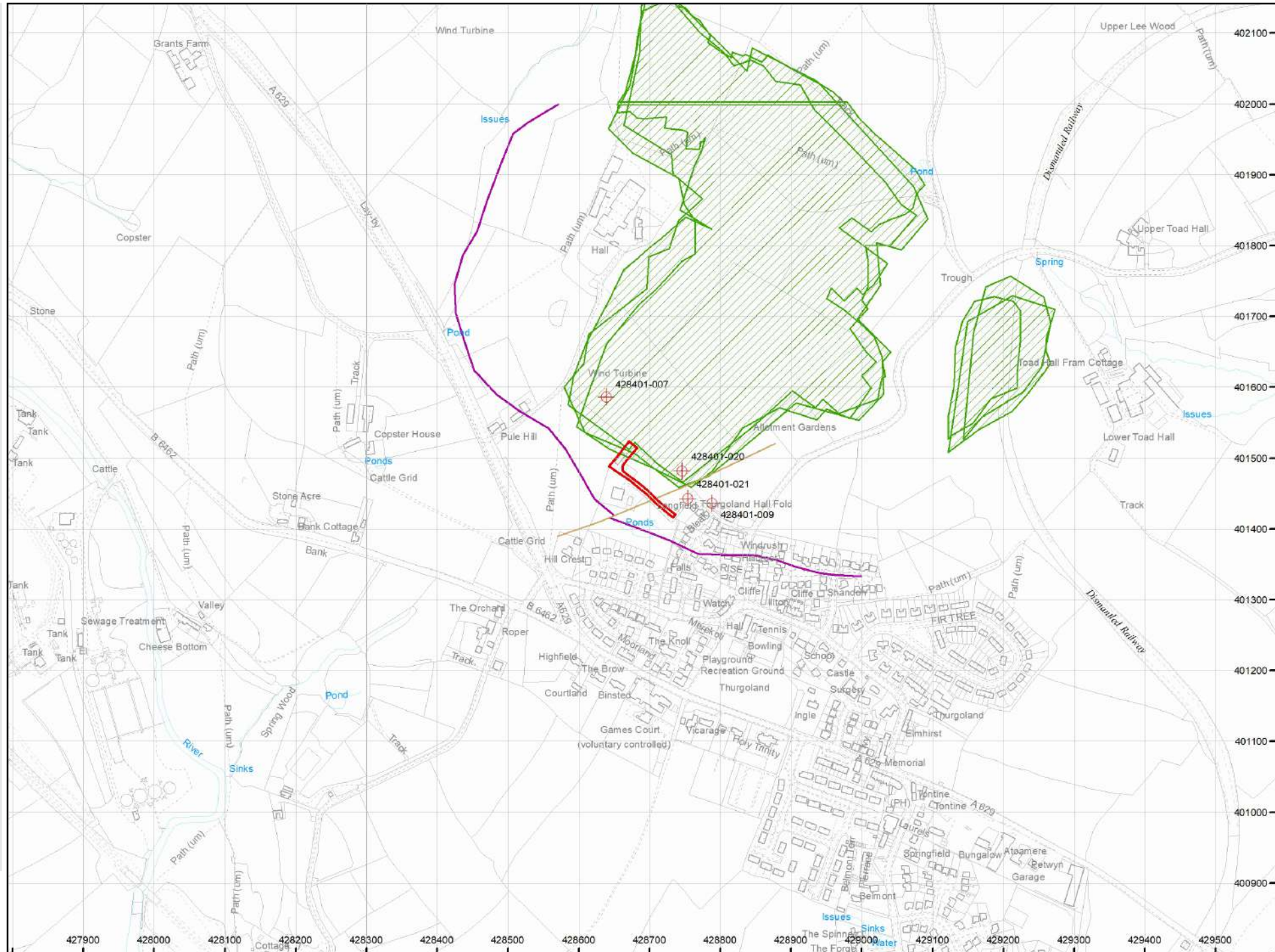
Payment to owners of former copyhold land

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.

Key

- Approximate position of the enquiry boundary shown 
- Disused mine shaft 
- Outcrop (Proven) 
- Geological faults 
- Unlicensed opencast site 



How to contact us

0345 762 6848 (UK)
+44 (0)1623 637 000 (International)
reports@miningremediation.gov.uk

