Environmental Geotechnical Specialists

RGS



## COAL MINING

# RISK ASSESSMENT REPORT

| | |
|---|---|
| job number | C5219/25/E/8008 |
| date | 10.06.25 |
| site address | The Cottage<br>Lower Quarry<br>Huddersfield<br>HD2 1FN |
| written by | R. Palmer |
| checked by | I. Sakoor |
| issued by | R. Palmer |

Please consider the environment before printing this report.

# Contents



# Appendices

# Report on a Coal Mining Risk Assessment

| | | | |
|---|---|---|---|
| Location: | The Cottage<br>Lower Quarry Road, Huddersfield, West Yorkshire, HD2 1FN | | |
| For: | GCA Holdings Ltd | | |
| Consultants: | Northern Design Partnership | | |
| Report No. | C5219/25/E/8008 | Report date: | June 2025 |

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


| | |
|---|---|
| **Rob Palmer** MSc FGS ACIEH<br>Engineering Director | **Imran Sakoor** BEng FGS<br>Geo-environmental Engineer |


## 1. Introduction

It is understood that the site is to be developed by the construction of a detached house, a standalone garage and cottage. As part of the planning application at the site, a Coal Mining Risk Assessment has been requested by the planning authority. Consequently, a desktop study was commissioned in order to assess the risk to the development from coal mining. This report presents the findings of the study.

## 2. Geological Desk Study

The geological desk study has been undertaken using the following sources of information.

- British Geological Survey map sheets (1:50,000 and 1:10,000) [1].
- British Geological Survey *Onshore Geoindex*[2].
- Consultants Mining Report[3].
- British Geological Survey *Borehole Records*[4].
- Proposed Site Plan (Project 2325) – Drawing no 05 (See Appendix 1).

[1] Sources: British Geological Survey (NERC) Map Sheets SE12SE & 77; Huddersfield Solid and Drift Editions
[2] Sources: British Geological Survey (NERC) GeoIndex Onshore [*online resource from www.bgs.ac.uk*]
[3] Coal Authority Reference: 51003502658001 dated 3rd June 2025.
[4] Sources: British Geological Survey (NERC) Borehole Records [*online resource from* http://www.bgs.ac.uk//]

## 2.1 British Geological Survey Maps and Viewer

The appropriate map sheet for the site and the Onshore Geoindex has been examined and the following table presents the indicated geology:

**Table 1: Geological Data for the Site**

| Strata Type | Strata Name[5] | Previous Name[6] | Description[6] |
|---|---|---|---|
| Superficial Geology | Head | - | Head is poorly sorted and poorly stratified, angular rock debris and/or clayey hillwash and soil creep, mantling a hillslope and deposited by solifluction and gelifluction processes. |
| Solid Geology | Clifton Rock | - | Named sandstone member within the Pennine Lower Coal Measures Formation.<br><br>The Clifton Rock consist of up to three leaves of fine-grained cross-bedded or ripple cross-laminated sandstone and includes a thin coal. |
| | Pennine Lower Coal Measures Formation | Lower Coal Measures | Undifferentiated strata. Interbedded grey mudstone, siltstone and pale grey sandstone, commonly with mudstones containing marine fossils in the lower part, and more numerous and thicker coal seams in the upper part. |

It should be appreciated that the site is situated within a heavily faulted area. The site is located upon a northwest-southeast trending fault. There are also two other faults that are present immediately north and west of the site. The fault which intersects the site is downthrown to the south. As a result, the geology beneath the north/north-eastern and remaining sections of the site is indicated to vary. Indeed, the site is situated upon both undifferentiated strata of the Pennine Lower Coal Measures Formation and also the Clifton Rock (named sandstone member).

The Clifton Rock is shown to outcrop on the southern side of the fault. This sandstone member is indicated to be present within the west and southeast corners of the site. The remaining areas comprise undifferentiated strata of the Pennine Lower Coal Measures Formation.

The degree of displacement of the solid geology on either side of the fault is difficult to gauge. Despite the geological data indicating that the strata on the south of the fault has been downthrown, the undifferentiated strata on the northern side of the fault appears to be older in terms of stratigraphy. Indeed, within the fault block on the northern side of the fault, the Better Bed and Grenoside Rock are indicated to outcrop, albeit a significant distance to the north of the site. Nonetheless, both of these features are stratigraphically older than the Clifton Rock. It is noted that the Clifton Rock is not present to the north of the fault.

However, it is evident that significant quarrying has taken place to the west and north-west of the site and the quarrying appears to have targeted the Clifton Rock. As such, the current outcrops in the surrounding areas may not be a true reflection of stratigraphy.

It should be noted that there are no coal seam outcrops within the fault block on which the site positioned, or within other fault blocks within close proximity of the site. The solid geology within the local area dips at shallow angles (around 10°) towards the north-east.

[5] Sources: British Geological Survey (NERC) Map Sheets 77; Huddersfield; Solid and Drift Edition, and GeoIndex Onshore [*online resource from www.bgs.ac.uk*]
[6] Sources: British Geological Survey (NERC) Lexicon of Named Rock Units [*online resource from www.bgs.ac.uk*]

## 2.2 Coal Authority Mines Report

As part of this study a Consultants Coal Mining Report has been obtained. The report is presented as Appendix 2 and for the purposes of discussion has been summarised below:

**Table 2: Summary of the Consultant's Coal Mining Report**

| Has the report highlighted evidence or potential of: | | | |
|---|---|---|---|
| **Ref** | **Mining Feature** | **Yes/No** | **Comments** |
| 1 | Underground Coal Mining | Yes | Better Bed – 58m depth – beneath site – 0.56m thickness – last worked 1854. |
| 2 | Probable Unrecorded Shallow Workings | Yes | - |
| 3 | Spine Roadways at Shallow Depth | No | No spine roadway recorded at shallow depth. |
| 4 | Mine Entries | Yes | Shaft – Reference: 416421-008 – Located 65m northwest.<br><br>Adit – Reference: 417421-001 – Located 90m northeast. |
| 5 | Abandoned mine plans | Yes | Plans of abandoned mine workings below the site are suggested to be available by the Coal Authority. |
| 6 | Outcrops | No | No outcrops recorded. |
| 7 | Geological Faults | Yes | Two geological faults present intersecting to the centre of the site. |
| 8 | Opencast Mines | No | None recorded within 500 metres of the enquiry boundary. |
| 9 | Coal Authority Managed Tips | No | None recorded within 500 metres of the enquiry boundary. |
| 10 | Site Investigations | No | None recorded within 50 metres of the enquiry boundary |
| 11 | Remediated Sites | No | None recorded within 50 metres of the enquiry boundary. |
| 12 | Coal Mining Subsidence | No | The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 metres of the enquiry boundary, since 31st October 1994. There is no current Stop Notice delaying the start of remedial works or repairs to the property. The Coal Authority is not aware of any request having been made to carry out preventive works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991. |
| 13 | Mine Gas | No | None recorded within 500 metres of the enquiry boundary. |
| 14 | Mine Water Treatment Schemes | No | None recorded within 500 metres of the enquiry boundary. |
| 15 | Future underground mining | No | For further information please see section 3 of the Consultant's Coal Mining Report (ref 51003502658001). |
| 16 | Coal mining licensing | No | |
| 17 | Court orders | No | |
| 18 | Section 46 notices | No | |
| 19 | Withdrawal of support notices | No | |
| 20 | Payments to owners of former copyhold land | No | |

It should be noted that the position and orientation of the faults present on the Coal Authority maps differ to those present on the British Geological Survey maps. In addition, given the stratigraphy of the solid geology at surface, it is anticipated that any workings present at 58m depth would target the Black Bed coal, rather than the Better Bed coal, which is anticipated to be present at significant depths beneath the Crow Coal (75m to 100m beneath).

## 2.3 Geological Survey Borehole Records

The British Geological Survey (NERC) keeps borehole records from across Britain which are available for public viewing through their website[7]. As part of this study, the records in the area around the site have been reviewed in order to assist in establishing the geological conditions.

Based upon records provided by the British Geological Survey (NERC) the following table has been produced as a summary for the most applicable features of note in relation to this study:

**Table 3: Borehole Records - Notable Geological Features**

| Borehole ID | Approx. Distance | Depth of Borehole | Fault Block | Notable Features |
|---|---|---|---|---|
| SE12SE118[7] | 100m SW | 19.0m | Same as Site<br><br>Positioned on Clifton Rock | Made Ground – 0.8m thickness.<br><br>Head Deposits (recorded as Glacial Till) – 1.7m thickness to 2.5m depth.<br><br>Mudstone to 18.86m depth.<br><br>Coal – 0.51m thickness to 19.37m depth. (Crow?) |
| SE12SE119[8] | 100m NW | 20.3m | North of Site<br><br>Positioned on Head deposits then Undifferentiated Strata | Head Deposits (recorded as Glacial Till) to 10.8m depth.<br><br>Alluvium (recorded as Glacial Till) – 5.8m thickness to 16.6m depth.<br><br>Mudstone to 20.25m (Borehole termination). |
| SE12SE121[9] | 240m NW | 45.0m | North of Site<br><br>Positioned on Head deposits then Undifferentiated Strata | Head Deposits (recorded as Glacial Till) to 8.7m depth.<br><br>Alluvium (recorded as Glacial Till) to 13.05m depth.<br><br>Mudstone/Siltstone/Sandstone to 45.0m (Borehole termination). |
| SE12SE115[10] | 350m SW | 34.0m | West of Site<br><br>Positioned on Clifton Rock | Made Ground – 6.3m thickness.<br><br>Head Deposits (recorded as Glacial Till) – 0.9m thickness to 7.2m depth.<br><br>Mudstone to 14.22m depth.<br><br>Sandstone to 16.41m depth.<br><br>Mudstone to 17.40m depth.<br><br>Sandstone to 22.90m depth.<br><br>Mudstone to 24.51m depth.<br><br>Coal – 0.18m thickness to 24.69m depth. (Crow?)<br><br>Mudstone/Siltstone/Sandstone to 34.24m depth.<br><br>Coal – 0.36m thickness to 34.60m. (Black Bed) |

[7] Sources: British Geological Survey Borehole Scan SE12SE118 https://api.bgs.ac.uk/sobi-scans/v1/borehole/scans/items/43656
[8] Sources: British Geological Survey Borehole Scan SE12SE119 https://api.bgs.ac.uk/sobi-scans/v1/borehole/scans/items/43657
[9] Sources: British Geological Survey Borehole Scan SE12SE121 https://api.bgs.ac.uk/sobi-scans/v1/borehole/scans/items/43659
[10] Sources: British Geological Survey Borehole Scan SE12SE115 https://api.bgs.ac.uk/sobi-scans/v1/borehole/scans/items/43653

# 3. Risk Assessment

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

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

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

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

**Table 4: Development specific risk assessment**

| Item | Risk of Instability | Coal Seam(s) Considered | Risk Rating |
|---|---|---|---|
| 1 | Shallow coal seams | Crow Coal | Low |
| | | Black Bed Coal | Low |
| 2 | Coal workings at depth | The property is in a surface area that could be affected by underground mining in 1 seam of coal at 58m depth, and last worked in 1854. Any movement in the ground due to coal mining activity should have stopped. | Low |

On the basis of all of the information provided above, it is evident that the geology shall be variable beneath the site. However, with reference to the plans presented in Appendix 1, it is anticipated that the majority of the proposed development will be present within the fault block to the south of the fault which intersects the site.

As demonstrated in *Table 3: Borehole Records - Notable Geological Features*, boreholes have been drilled for the nearby landfill, therefore geological records are available for the local area. Borehole SE12SE118 was sunk within the same fault block as the site. This borehole identifies that a coal seam can be expected at around 18m depth, with a thickness of 0.5m. Given the southern section of the site is positioned on the Clifton Rock, with reference to the generalised vertical section on the published geological map, it is reasoned that the recorded coal seam at 18m depth represents the Crow Coal. The solid geology on the northern side of the fault is represented in boreholes SE12SE119 and SE12SE121, with greater credence given to the latter record as it was drilled to a greater depth. Indeed, the superficial soils should be discounted on these two records as the superficial soils are not recorded to be present beneath the site itself. This therefore means that only 4m of solid geology have been observed in SE12SE119, whereas 32m of solid geology have been recorded in SE12SE121. Within the latter record, no coal seams have been recorded within the solid geology.

The Consultant's Coal Mining Report indicates that workings are present at 58m beneath the site within the Better Bed. As discussed above, there appears to be discrepancies in either the depth or the naming of the seam. In any event, the workings are present at significant depths.

In view of the above, it is not anticipated that any shallow coal seams shall be present beneath the northern section of the site. However, the Crow Coal is anticipated to be present within 30m of the site surface within the southern section where the majority of the development is to take place.

The possibility of this seam being worked below the site cannot be ruled out. Historic coal mining activity is evident in the nearby area, and therefore it is considered that if coal was known to be close to ground level it could have been removed illicitly via shallow mining methods with relative ease.

It may be noted that guidance available from both the NHBC and the CIRIA publication, SP32 - *construction over abandoned mine workings,* suggests that competent overburden thickness above a coal seam should be greater than 10 times the thickness of a seam plus seam thickness in order that the collapse of workings would pose a low risk to surface structures.

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

**Table 5: Required Thickness of Competent Overburden**

| Seam Name | Seam Thickness | Anticipated Depth below Site | Required Thickness of Competent Overburden |
|---|---|---|---|
| Crow Coal | 0.5m | 18m | 5.5m |

Based on the above information, it is considered that there will be a sufficient thickness of competent overburden above the Crow Coal seam on both sides of the fault in order to prevent the risk of instability posed by the presence of any illicit workings. Therefore, a low risk rating has been assigned to this this seam, and no further investigation is recommended to prove or disprove the presence of illicit mining activity within seam.

The Consultants Coal Mining Report has not reported any incidents of mine gas within the vicinity of the development. As such, the risks posed by the migration of mine gas can be considered low, even if workings are indeed present. In any event, given the close proximity of the landfill to the site, it is anticipated that a regime of ground gas monitoring shall be required as part of any contaminated land planning condition. Therefore, any latent mine gas risks can be assessed during any future monitoring programme.

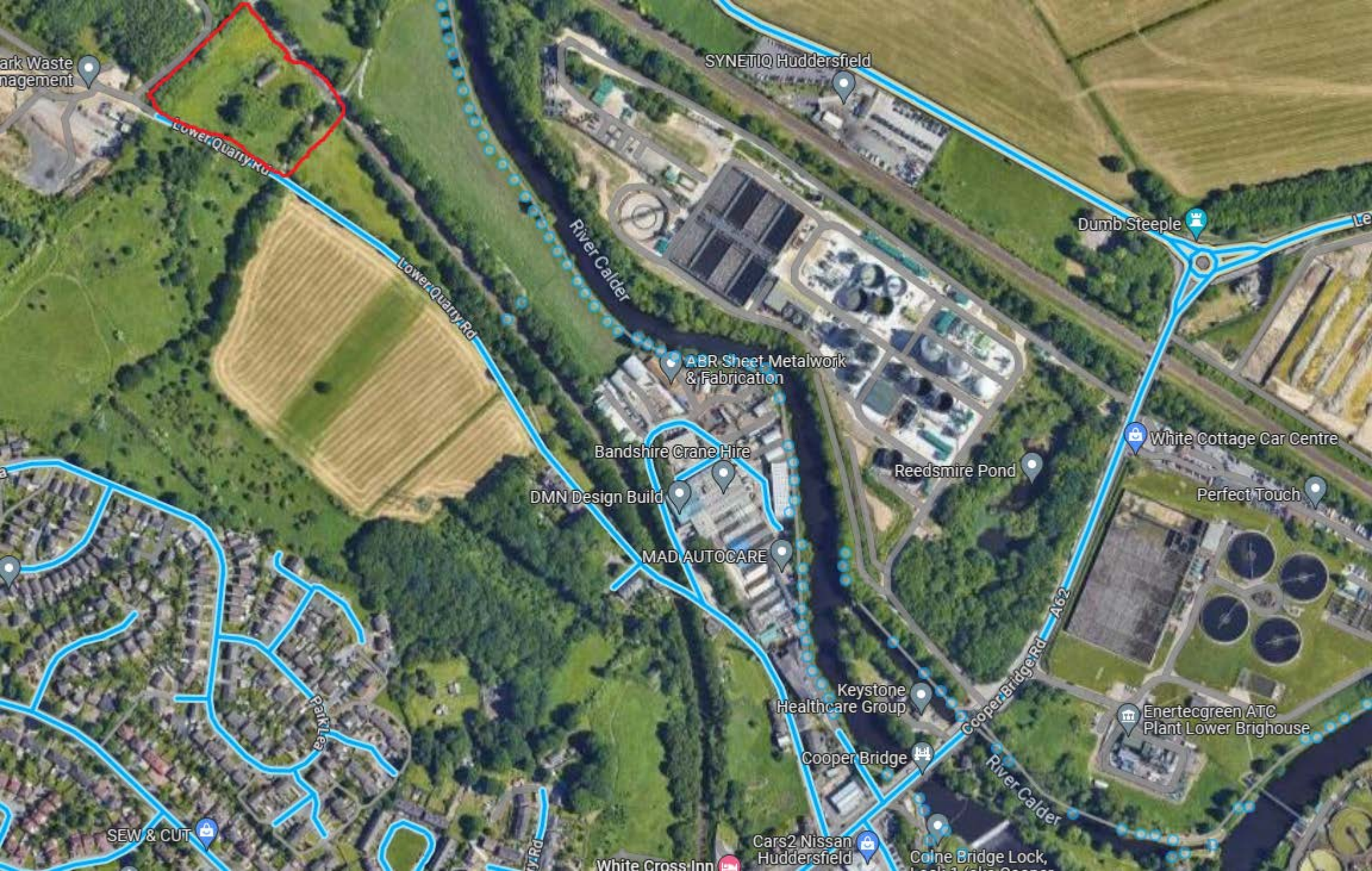
# 4. Conclusions

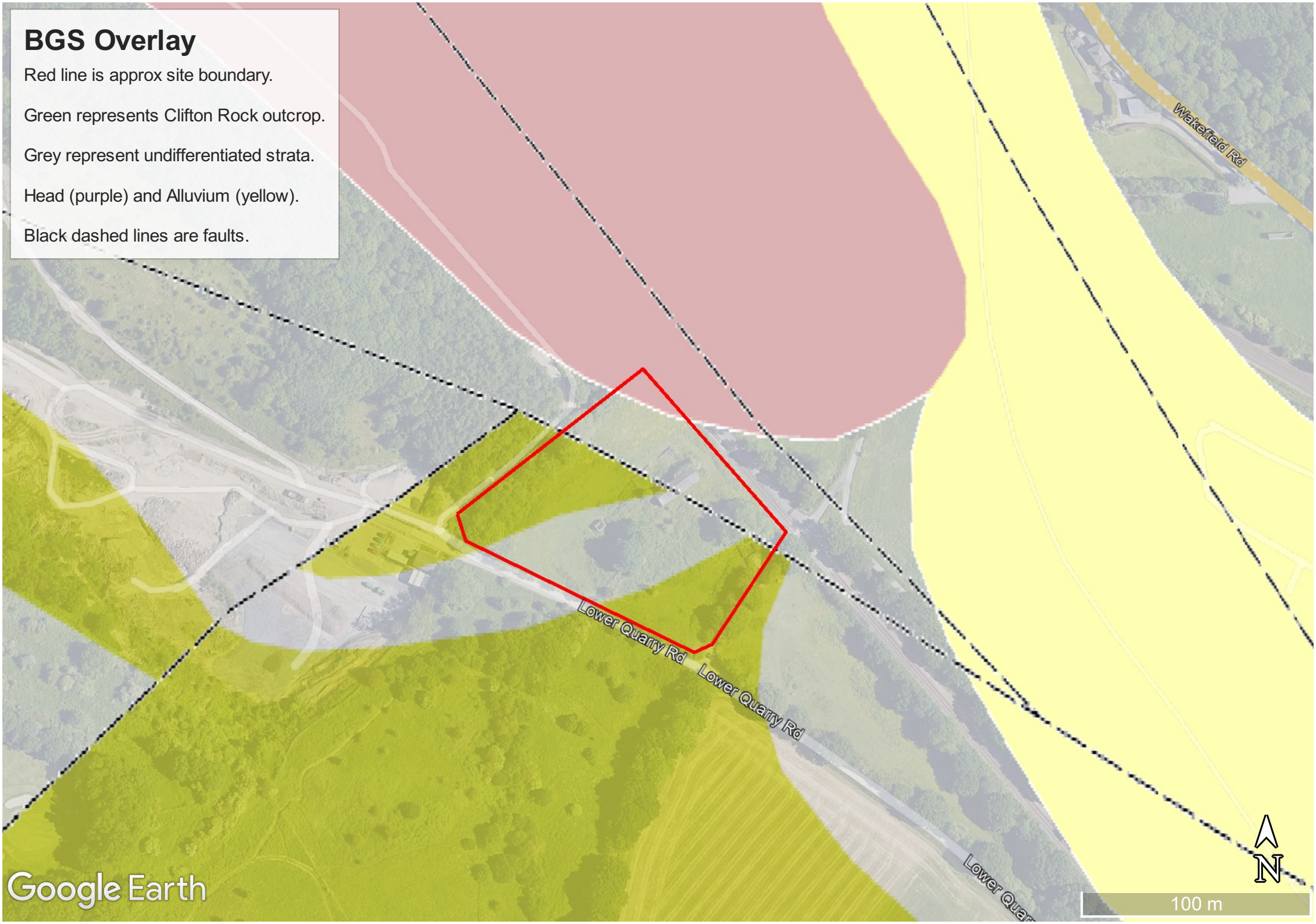
The data reviewed suggests that coal could be present within shallow depths (<30m) of the site surface. However, the estimated depth and associated thickness of the coal seam means that even if worked, sufficient competent overburden shall be present to prevent instability at the surface. Given the limited thickness of the seam, and as the workings would likely be illicit, it is unlikely that any faults would reactivate were collapse to occur. As such, it is considered that no further investigation is required.

This assessment should be issued to the local authority for review as they are the final arbiters on such matters.

# Appendix 1

## Site Plan


SYNETIQ Huddersfield
Lower Quarry Rd
River Calder
Dumb Steeple
ABR Sheet Metalwork & Fabrication
White Cottage Car Centre
Bandshire Crane Hire
Reedsmire Pond
DMN Design Build
Perfect Touch
MAD AUTOCARE
A62
Cooper Bridge Rd
Keystone Healthcare Group
Enertecgreen ATC Plant Lower Brighouse
Cooper Bridge
River Calder
Park Lea
SEW & CUT
Cars2 Nissan Huddersfield
White Cross Inn
Colne Bridge Lock,


BGS Overlay
Red line is approx site boundary.
Green represents Clifton Rock outcrop.
Grey represent undifferentiated strata.
Head (purple) and Alluvium (yellow).
Black dashed lines are faults.
Wakefield Rd
Lower Quarry Rd
Lower Quarry Rd
Lower Quarry Rd
N
Google Earth
100 m


IF IN ANY DOUBT PLEASE ASK THE ARCHITECT FOR CLARIFICATION.

DO NOT SCALE FROM DRAWING. ALL DIMENSIONS TO BE CHECKED ON SITE



northern design partnership

Chartered Architects
The Chapel, Millmoor Road,
Meltham, Holmfirth, HD9 5JU

www.northerndesignpartnership.co.uk
Instagram: @northerndesignp
Telephone: (01484) 854848

| | |
|---|---|
| client | GCA HOLDINGS LTD |
| project | BRADLEY HALL FARM<br>LOWER QUARRY ROAD<br>BRADLEY<br>HUDDERSFIELD |
| drawing | PROPOSED SITE PLAN |

| revision | notes | date | drawn |
|---|---|---|---|
| * | * | * | * |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| scale : | 1:250 AT A1 | 02.24 | PB |

| project no. | drawing no. | revision |
|---|---|---|
| 2325 | 05 | |

# Appendix 2

## Consultants Mining Report

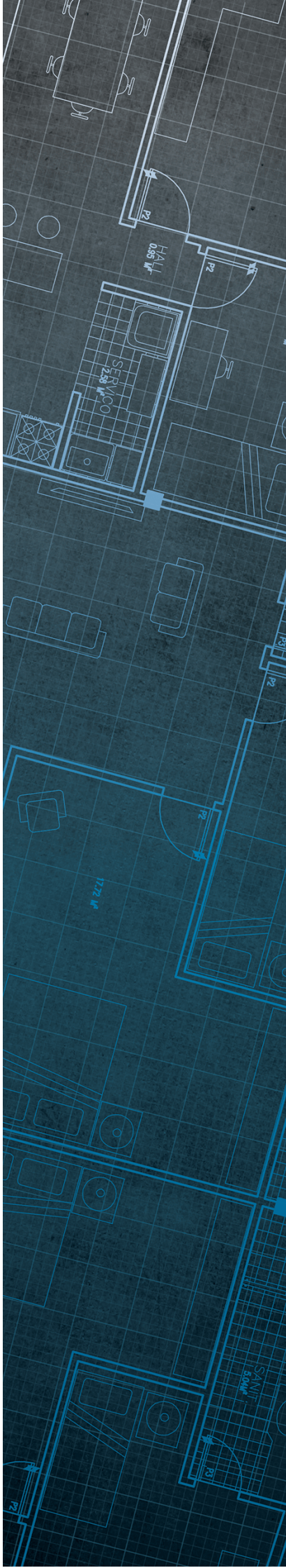
The Coal Authority

# Consultants

## Coal Mining Report

Bradley Hall Farm
Lower Quarry Road
Bradley
Huddersfield
Kirklees
HD2 1FN

| | |
|---|---|
| Date of enquiry: | **3 June 2025** |
| Date enquiry received: | **3 June 2025** |
| Issue date: | **3 June 2025** |
| Our reference: | **51003502658001** |
| Your reference: | **C/5219/25/E/8008 - PO-3361** |



# Consultants
# Coal Mining Report

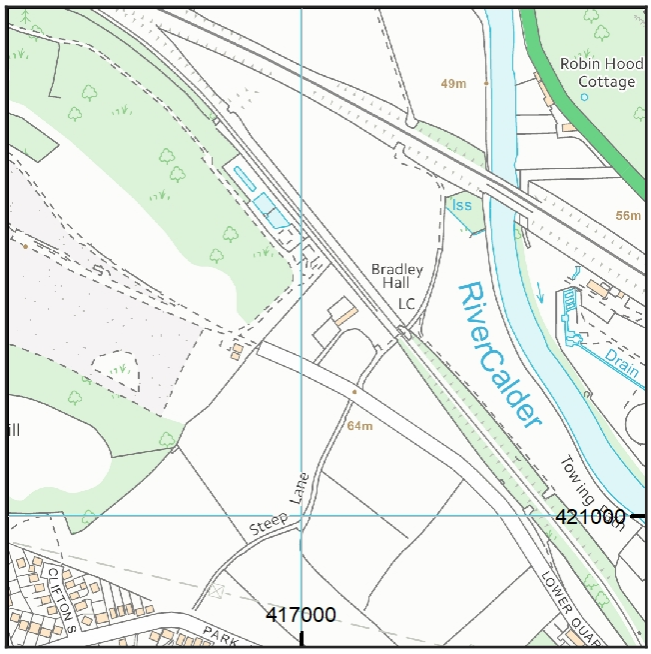
This report is based on and limited to the records held by the Coal Authority at the time the report was produced.

**Client name**

ROGERS GEOTECHNICAL SERVICES LTD

**Enquiry address**

Bradley Hall Farm
Lower Quarry Road
Bradley
Huddersfield
Kirklees
HD2 1FN




Approximate position of property



**How to contact us**

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

200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

www.groundstability.com

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

# Section 1 – Mining activity and geology

## Past underground mining

| 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 | BETTER BED | Coal | 5UOU | 58 | Beneath Property | 2.5 | North-East | 56 | 1854 |

## 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 | 416421-008 | 416924 421223 | Treatment details unknown.* | Coal | |
| Adit | 417421-001 | 417104 421319 | 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:

| | | |
|---|---|---|
| FGB273 | M134 | PO0 |
| M417 | 1799 | 11045 |
| 1262 | | |

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

## Outcrops

No outcrops recorded.

## Geological faults, fissures and breaklines

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

Faults under or close to the property recorded.

## Opencast mines

None recorded within 500 metres of the enquiry boundary.

## Coal Authority managed tips

None recorded within 500 metres of the enquiry boundary.

# Section 2 – Investigative or remedial activity

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

### Site investigations
None recorded within 50 metres of the enquiry boundary.

### Remediated sites
None recorded within 50 metres of the enquiry boundary.

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

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

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

### Mine gas
None recorded within 500 metres of the enquiry boundary.

### Mine water treatment schemes
None recorded within 500 metres of the enquiry boundary.

# Section 3 – Licensing and future mining activity

### Future underground mining
None recorded.

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

### Court orders
None recorded.

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

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

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

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

# Section 4 – Further information

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

### Future development

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

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

### Development advice

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

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

# Section 5 – Data definitions

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

### Past underground coal mining

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

### Probable unrecorded shallow workings

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

### Spine roadways at shallow depth

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

### Mine entries

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

### Abandoned mine plan catalogue numbers

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

### Outcrops

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

### Geological faults, fissures and breaklines

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

The Coal Authority

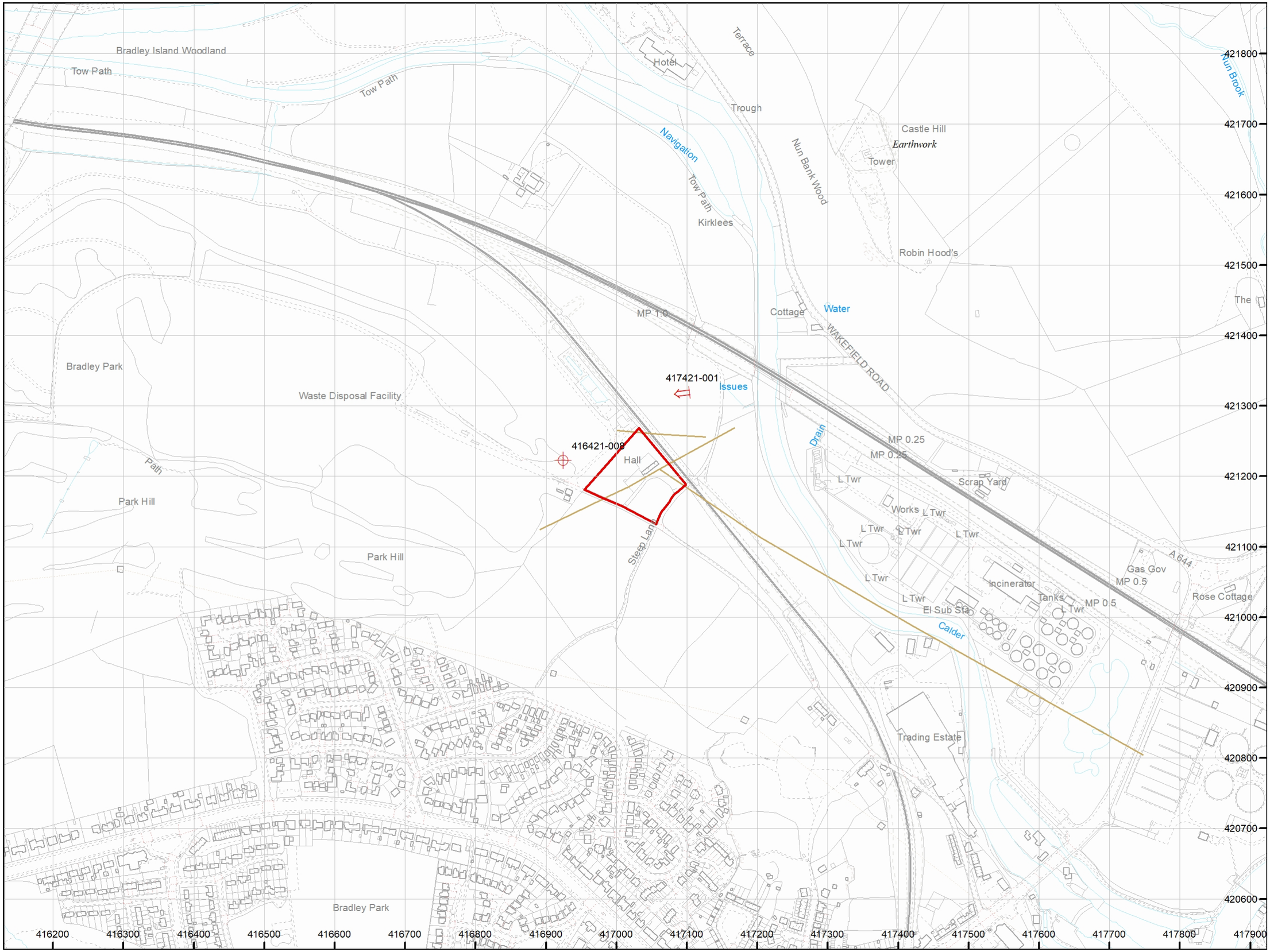
# Summary of findings



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

## Key

- Approximate position of the enquiry boundary shown
- Disused mine shaft
- Disused adit
- Geological faults




**How to contact us**
0345 762 6848 (UK)
+44 (0)1623 637 000 (International)
www.groundstability.com