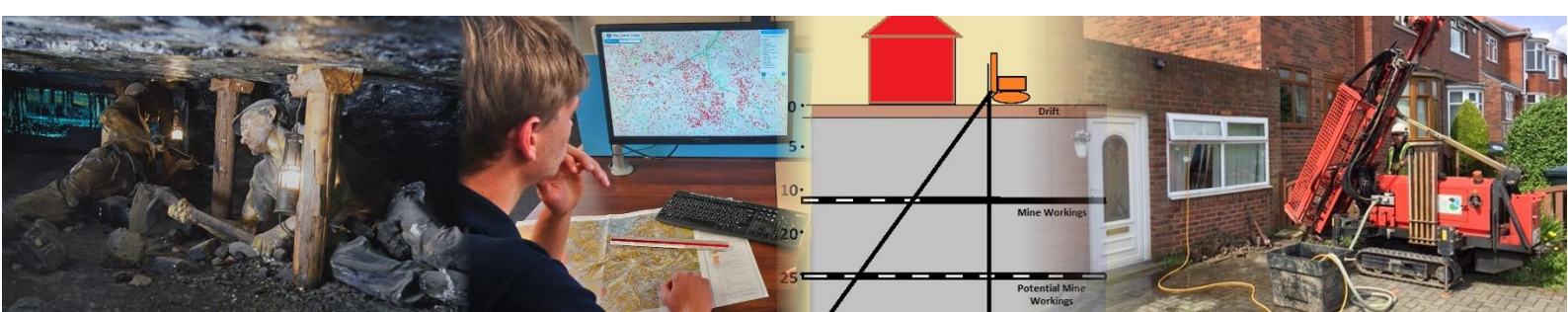




GEOLOGICAL  
GEOTECHNICAL  
GEOENVIRONMENTAL  
CONSULTANCY  
DRILLING & DATA ACQUISITION



## GEOINVESTIGATE LIMITED

### Coal Mining Risk Assessment (CMRA)

|                    |                                                 |
|--------------------|-------------------------------------------------|
| <b>LOCATION</b>    | Rob Royd Farm Shop, Genn Lane, Barnsley S70 6NW |
|                    |                                                 |
| <b>ISSUE DATE</b>  | November 2018                                   |
|                    |                                                 |
| <b>FOR</b>         | Robert White c/o Dan Cole                       |
|                    |                                                 |
| <b>CLIENT REF.</b> |                                                 |
|                    |                                                 |
| <b>OUR REF.</b>    | G18414                                          |

Prepared by

Jason Pratt BSc(Hons)  
Geo-environmental Engineer

Checked by

Ross Nicolson BSc(Hons) MSc(Eng) CEng MIMMM  
Principal Geotechnical Engineer

## SUMMARY FINDINGS – MITIGATION REQUIRED

The outcome of the CMRA report presented below is that **exploratory drilling is required** to investigate possible surface and shallow underground mine workings beneath this site. In the meantime **this outcome should not prevent your project getting planning permission** conditional upon the work being carried out now, or at a later date but before site construction begins.

## WHAT TO DO NEXT

**Obtain quotes** for the intrusive site investigation works. The cost of the SI works should be a **“lump sum” fixed price** and include supervision by a competent person & a final report. Geoinvestigate can provide advice and assistance with helping you find suitable site investigation & drilling contractors. Call us on 01642 713779 or email [enquiries@geoinvestigate.co.uk](mailto:enquiries@geoinvestigate.co.uk) This CMRA identifies the nature of the coal mining hazards beneath your site and the scope of safe SI works needed to investigate them further.

## 1. CMRA INTRODUCTION

**Site Location and Description:** The approximate centre of this site is at National Grid Reference E 433900 N 404812 with an elevation of approximately 146m to 149m AOD. The boundary shown RED on the Coal Authority (CA) report provided in Appendix A corresponds with the planning application.

The property occupies a terraced slope rising some 3m to the northeast. The lower terrace next to the road is currently occupied by Rob Royd Farm shop, a single storey commercial structure together with a large area of hardstanding/parking, access track and grassy field to the east and south, a site image of which is presented in appendix B. It is proposed to erect an extension to the Farm shop to provide extra restaurant/café area. 2 existing dwellings are present in close proximity to the site.

A brief, limited inspection of buildings, roads and walls in the vicinity of the site using Google Street View found no obvious visible surface evidence indicative of mining subsidence.

The OS map record dating back to 1855 shows the site area as undeveloped and probably agricultural land at this early date. At various dates between 1855 and 1931 Victoria Colliery, Houndhill Colliery and Prince Albert Colliery, spoil heaps and old shafts are shown in the vicinity of the site with Houndhill Colliery nearest the development. The maps also show a distant quarry and brickworks. The site remained undeveloped up to the establishment of the Farm Shop sometime after 1978.

The map record provides no evidence that the site itself has been subject to past surface mining, clay, sand or gravel pitting or stone quarrying though historical coal mining activity has occurred nearby.

**Description & Layout of Proposed Development:** It is proposed to erect a restaurant/café extension to the existing building as shown in Appendix C.

**Risk Methodology Applied:** This document and the risk assessment methodology adopted herein is based on CA publication RISK BASED APPROACH TO DEVELOPMENT MANAGEMENT - GUIDANCE FOR DEVELOPERS Version 3, 2014 and Version 4 - 2017. The template contained therein is adopted with minor amendments made by Geoinvestigate Limited.

## 2. SOURCES OF INFORMATION USED TO INFORM THIS REPORT

- An up-to-date Coal Mining Report from the CA dated 12 November 2018 ref. 51001967344001
- Geological information from the British Geological Survey (BGS) Sheet 87 Barnsley at 1:50,000 scale
- The Coal Authority's online interactive map viewer
- A site history based on limited Ordnance Survey map records of the area dating back to 1855
- BGS historic borehole logs
- Google Street View and Satellite imagery
- Other web sourced information

### 3. ASSESSMENT OF SITE SPECIFIC COAL MINING ISSUES

The table below summarises the potential risks associated with coal mining legacy for the proposed development site, identified from list sources of information.

| Coal Mining Issues                         | Yes | No | Risk Assessment/Remarks                                                                                                                                                                                                                                                  |
|--------------------------------------------|-----|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Past underground coal mining               | Yes |    | <i>The CA report notes 5 levels of coal mine working below site, the shallowest being at 61m depth with an extraction thickness of 267cm. It is our opinion that this working lies too deep to impact surface ground stability within the development area.</i>          |
| Probable unrecorded shallow workings       | Yes |    | <i>According to the CA report the site is within an area of probable shallow unrecorded working.</i>                                                                                                                                                                     |
| Spine roadways at shallow depth            |     | No | <i>None recorded.</i>                                                                                                                                                                                                                                                    |
| Mine entries                               |     | No | <i>Four shafts (433404-001, 433404-031, 433404-005 and 433404-006) are present 50m west, 65m northeast, 55m north and 57m north respectively. These are considered far enough away from the site to not affect ground surface stability within the development area.</i> |
| Outcrops                                   | Yes |    | <i>The CA report identifies outcrop of the Kents Thin coal seam within the site with a further outcrop of the Kent Thick coal seam 48.4m west of the site. Both seams are workable.</i>                                                                                  |
| Geological faults, fissures and breaklines | Yes |    | <i>The CA report notes a geological fault across the southern end of the site. The plotted fault position lies to the east of the new building and not beneath it.</i>                                                                                                   |
| Opencast Mines                             |     | No | <i>The CA record 2 areas of unlicensed opencast site, one 330m east and one 520m southwest of the site. This activity is considered too distant to affect the site.</i>                                                                                                  |
| Coal mining subsidence                     |     | No | <i>According to the CA there has been no subsidence claim at the property itself or within 50m of it since October 1994.</i>                                                                                                                                             |
| Mine Gas                                   |     | No | <i>None recorded within 500m of site.</i>                                                                                                                                                                                                                                |

**Note:** For those coal mining issues above identified as “yes” a more detailed discussion and assessment are made of the risks to the application site and the proposed development.

1. According to the CAs online interactive map, the site is located within a Development High Risk Area (DHRA) corresponding with coal outcrop.
2. According to the CA report 5 levels of recorded mine working are present beneath the site. The shallowest of these is within the Barnsley Coal at 61m depth with an extraction thickness of 267cm. In our opinion this working and other recorded past working beneath it lie too deep to affect surface ground stability within the development area.
3. According to the CA report there are also probable unrecorded shallow workings below the site.
4. The CA define Probable Unrecorded Shallow Workings as “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)”
5. The location of the site is shown on the extract of the BGS geology map presented in Appendix D. The vertical geology column is shown below the map. The tentative elevation of the site is shown relative to the column and coal seams.
6. The geology column shows several coal seam horizons between site level and the Barnsley Coal Seam in which the CA report records working. These shallower coal seams include the Kent Thin Coal, Kent’s Thick Coal, Barnsley Rider Coal, Warren House Coal and two thin unnamed seams. The geology column indicates that all of these seams may not be present at this locality.
7. Drift depth beneath site is unknown.
8. BGS log SE30SW165 records drift to 5.20m followed by mudstone. Log SE30SW143 records drift to 0.40m. Based on the foregoing information and the cut terraced hillside position of the site bedrock would be expected at or near surface or within 5m depth of the surface. The positions of these boreholes are shown on the geology map. Their logs are not included in this report.
9. The CA report gives strata and coal seam dip of 6 deg. east.
10. Projecting the Kents Thick Coal seam eastward from outcrop over a distance of 85m under the new building gives a depth of circa 11m.
11. As the Kents Thin Coal outcrops at the western end of the site it might be expected to underlie the new building at or near surface within very shallow depth. Alternatively as the geology column indicates that the vertical

separation between the Kents Thick and the Kents Thin seams is 18m and the Thick in para 10 is estimated to lie at 10m depth then the Thin may not be found within the site but at a higher position on the hillside to the northeast of the site. This however is speculation.

12. UK Coal Resource for New Exploitation Technologies Report CR/04/015N indicates possible thicknesses of 0.46m - 0.69m and 1.86m respectively for the Kent's Thin and Thick seams. Both are workable.
13. Given the presence of minable coal outcrop within the site and another minable seam possibly at very shallow to shallow depth below the site it is our opinion there is potentially significant risk from very shallow outcrop working and shallow underground coal mining legacy beneath this development. In addition, mine workings may occur over several seams below the Kent's Thick coal seam.
14. The occurrence of multiple very shallow and shallow coal seams at this locality may explain the presence of opencast mining some 300m to the east of the site. This however is speculation.
15. In summary this CMRA has identified the possible presence of very shallow and shallow mine working beneath the site. This could significantly impact ground stability within the development area.
16. Whether coal mining legacy will impact the stability of the new development area depends on drift depth/bedrock depth, and mine working depth & thickness, all of which require to be established beneath this site. Exploratory drilling will be required to do this.
17. The risk of encountering hidden or unrecorded mine shafts within the property is considered LOW but not negligible because of the presence shallow coal seams beneath the site.
18. Hazardous gases associated with underground coal seams and workings are unlikely to pose significant risk to the development in this instance because; firstly, typically across the UK coalfields gas is rarely a problem and secondly with regard to this property there is no record of a site specific mine gas problem.
19. However, given the possible occurrence of shallow mine workings beneath the property it is our opinion that the gas risk in this instance should be raised to **MODERATE until proven otherwise** by drilling and gas monitoring.
20. Further exploratory coal legacy drilling together with gas monitoring and perhaps other mitigation measures may be required to properly assess ground stability, mine gas hazards, drift depth and other concerns at this site and make it safe for development.

#### 4. MITIGATION STRATEGY PROPOSED

##### **MITIGATION RESPONSE**

1. To properly determine the coal mining risk at this site it is proposed to drill a minimum of 3 boreholes to target depths up to 30m (but not necessarily reaching 30m) to locate possible mine workings within shallow depth below the new development as well as drift and bedrock depth.
2. Borehole depths and numbers will be subject to adjustment by the supervising Competent Person on-site and depending on the geological conditions encountered (namely depth to rock head, seam thickness and ratio of rock cover to seam thickness) found during drilling.
3. If mine shafts are found during the intrusive site exploration works or during the subsequent construction groundworks, then appropriate remedial action can be taken plus the CA should be notified.
4. If mine workings are clearly confirmed to be absent, or beyond an influencing depth of the surface development it is unlikely that ground treatment/stabilisation by injection grouting or special foundation design measures will be required in respect of coal mining legacy.
5. The requirement for gas protection measures and the level of gas protection will be determined by a risk assessment based on a source - pathway - receptor model. This will depend on the gas concentrations found during follow on coal legacy drilling together with the configuration of the site geology - particularly the nature and thickness of the drift/soil cover and the presence (or potential) for fissures or other pathways to exist.
6. A second specialist report will be required on the findings of the coal drilling investigation finalising the scope of the mitigation measures needed (if any) to safeguard the development from coal mining related ground instability and hazardous mine gases.
7. **On the basis of the work to date, we are of the opinion that the mining stability and mine gas risks posed by the strata beneath this site from coal mining legacy can be mitigated by routinely adopted measures and should not preclude the planning permission being registered.**

## The Coal Authority Permit

A Coal Authority Permit needs to be obtained (ahead of) further intrusive exploratory drilling or excavation/trenching work (if carried out) which will disturb or enter any coal seams or coal mine workings present beneath the site. A standard permit can take 4 to 6 weeks to obtain, less for an expedited permit.

### 6.2.7 Table of Risks for Different Drilling Scenarios

| Situation                                                                                                                                                                                         | Air flush | Mist flush   | Foam flush   | Water flush | Mud flush | Additional controls                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|--------------|--------------|-------------|-----------|-------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>Unworked coal or coal workings</li><li>High or unknown risk of hazardous gases being present / created</li><li>Occupied property within risk area</li></ul> | HIGH      | HIGH / MED'M | HIGH / MED'M | LOW         | LOW       | <ul style="list-style-type: none"><li>Monitoring at rig and other open holes.</li><li>Seal boreholes as soon as possible.</li></ul> |

**Drill Flush to be used when drilling:** Permit application must state **WATER only drill flush**, as mud though safe is too messy.

**Other precautions:** Gas monitoring to be carried out during drilling. Boreholes to be sealed as soon as possible.

## 5. CONCLUSION

The Coal Authority has identified the development site as falling within a Development High Risk Area (DHRA) corresponding with presence of workable coal seam outcrop within the site.

According to the Coal Authority the site falls within an area of probable shallow unrecorded mine working.

The CA define Probable Unrecorded Shallow Workings as “Areas where the Coal Authority believes there to be unrecorded coal workings that exist at or close to the surface” (i.e. less than 30 metres deep).

This CMRA has identified several levels of possible mine workings at very shallow and shallow depth beneath the development area. Such probable shallow working is likely to significantly impact surface ground stability within new development area

Therefore, it is our opinion that exploratory drilling is required to establish at what depth coal seams and mine workings occur beneath the site and what their condition is as well as to accurately establish drift/bedrock depth, rock cover thickness and coal seam/mine working thickness and depth beneath the new development.

Gas monitoring must be carried out during drilling.

The likelihood of encountering hidden unrecorded mine shafts within the site is LOW but not negligible because of probable shallow mining.

If mine shafts are discovered during drilling or subsequently during the ground works, the appropriate remedial action can be taken then as well as notifying the Coal Authority.

A safe method of sinking boreholes which will reduce the risk to drill operators and the public has been assessed. A Coal Authority Permit will be required before drilling takes place. This must state that only WATER FLUSH will be used for drilling. The CA permit must also cover surface excavation/trenching to locate mine shafts or coal outcrop if these activities are also carried out.

Depending on the outcome of the additional coal mining legacy investigation it may be necessary to stabilise coal seams/mine workings using routine drilling and grouting techniques and/or adopt special foundation design measures and perhaps install gas protection measures.

If drilling confirms that hazardous mine gas is absent and that either no coal or mine working exists beneath the site, or shallow workings are present, but rock cover is of adequate thickness no further investigation or mitigation would be required.

In conclusion we see no reason why Planning Permission should not be granted in the interim and that these works form a condition on the planning approval.

**Appendices:**

- A. CA Report dated 12 November 2018 ref. 51001967344001
- B. Site Image
- C. Proposed Development Layout
- D. Extracts of BGS Solid Geology Map, Sheet 87 Barnsley at 1:50,000

Other historical OS maps, borehole logs, site images and photographs have not been included because it was considered that they did not provide significant useful additional information.

APPENDIX A  
COAL AUTHORITY REPORT



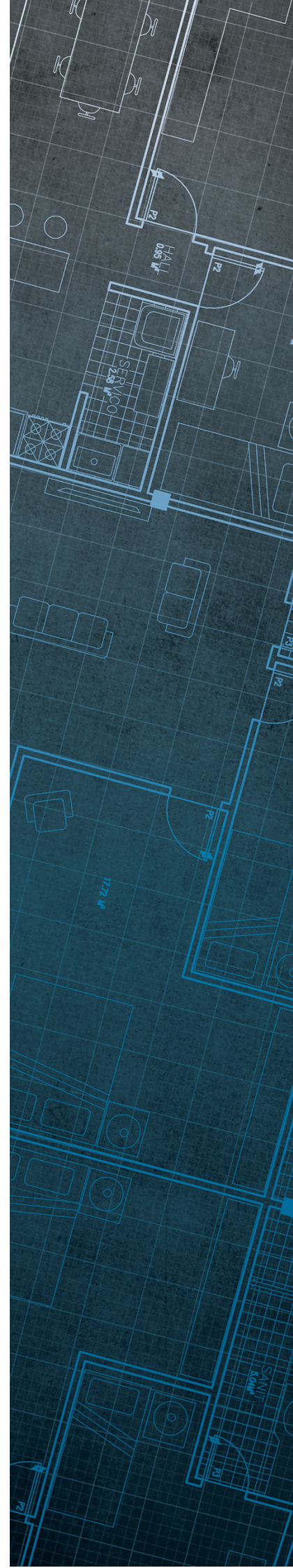
The Coal  
Authority

# Consultants Coal Mining Report

Rob Royd Farm Shop  
Genn Lane  
Ward Green  
Barnsley  
S70 6NW

|                        |                  |
|------------------------|------------------|
| Date of enquiry:       | 12 November 2018 |
| Date enquiry received: | 12 November 2018 |
| Issue date:            | 12 November 2018 |

|                 |                |
|-----------------|----------------|
| Our reference:  | 51001967344001 |
| Your reference: | G18414         |



# 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

GEOINVESTIGATE

### Enquiry address

Rob Royd Farm Shop  
Genn Lane  
Ward Green  
Barnsley  
S70 6NW

### How to contact us

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

200 Lichfield Lane  
Mansfield  
Nottinghamshire  
NG18 4RG

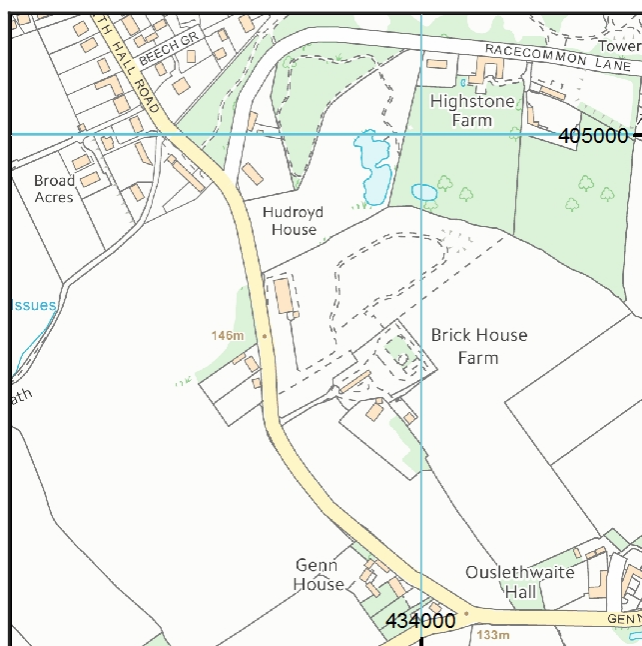
[www.groundstability.com](http://www.groundstability.com)

 @coalauthority

 /company/the-coal-authority

 /thecoalauthority

 /thecoalauthority



Approximate position of property



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# Section 1 – Mining activity and geology

## Past underground mining

| Colliery  | Seam           | Mineral | Coal Authority reference | Depth (m) | Direction to working | Dipping rate of seam worked (degrees) | Dipped direction of seam worked | Extraction thickness (cm) | Year last mined |
|-----------|----------------|---------|--------------------------|-----------|----------------------|---------------------------------------|---------------------------------|---------------------------|-----------------|
| unnamed   | BARNSELEY      | Coal    | 64EW                     | 61        | Beneath Property     | 6.0                                   | East                            | 267                       | 1917            |
| unnamed   | BARNSELEY      | Coal    | 64EZ                     | 63        | Beneath Property     | 6.3                                   | East                            | 267                       | 1857            |
| unnamed   | BARNSELEY      | Coal    | 64G0                     | 84        | South-East           | 6.8                                   | North-East                      | 297                       | 1879            |
| unnamed   | BARNSELEY      | Coal    | 6Z85                     | 87        | East                 | 5.3                                   | North-East                      | 250                       | 1927            |
| unnamed   | BARNSELEY      | Coal    | 6Z87                     | 89        | North-East           | 7.6                                   | East                            | 250                       | 1927            |
| DODWORTH  | TOP FENTON     | Coal    | 6478                     | 269       | West                 | 7.0                                   | East                            | 89                        | 1949            |
| BARROW    | TOP FENTON     | Coal    | 64F6                     | 281       | South-East           | 5.6                                   | East                            | 90                        | 1957            |
| DODWORTH  | PARKGATE       | Coal    | 64FA                     | 284       | South-West           | 6.9                                   | East                            | 178                       | 1946            |
| DODWORTH  | PARKGATE       | Coal    | 64FC                     | 290       | North-West           | 6.6                                   | East                            | 178                       | 1955            |
| BARROW    | TOP FENTON     | Coal    | 6Z8G                     | 291       | East                 | 6.1                                   | East                            | 107                       | 1959            |
| BARROW    | PARKGATE       | Coal    | 64FB                     | 295       | Beneath Property     | 5.1                                   | East                            | 128                       | 1964            |
| DODWORTH  | MIDDLETON MAIN | Coal    | 64FJ                     | 297       | South-West           | 6.6                                   | East                            | 140                       | 1961            |
| DODWORTH  | PARKGATE       | Coal    | 6IEE                     | 307       | North                | 6.9                                   | East                            | 86                        | 1955            |
| BARNSELEY | PARKGATE       | Coal    | 6Z8L                     | 312       | East                 | 5.7                                   | East                            | 128                       | 1965            |
| BARROW    | MIDDLETON MAIN | Coal    | 64FH                     | 320       | South                | 5.2                                   | East                            | 140                       | 1940            |
| BARROW    | PARKGATE       | Coal    | 64IA                     | 330       | North-East           | 5.6                                   | East                            | 180                       | 1967            |
| BARROW    | MIDDLETON MAIN | Coal    | 6Z8Q                     | 334       | North-East           | 5.7                                   | East                            | 140                       | 1941            |
| BARROW    | MIDDLETON MAIN | Coal    | 64FI                     | 345       | North-East           | 8.1                                   | East                            | 140                       | 1941            |
| BARROW    | MIDDLETON MAIN | Coal    | 64IF                     | 348       | North-East           | 6.5                                   | East                            | 140                       | 1941            |
| ROB ROYD  | SILKSTONE      | Coal    | 64FL                     | 364       | Beneath Property     | 5.5                                   | East                            | 167                       | 1908            |
| ROB ROYD  | SILKSTONE      | Coal    | 6IEI                     | 379       | North                | 6.7                                   | East                            | 167                       | 1915            |
| ROB ROYD  | SILKSTONE      | Coal    | 64FK                     | 381       | South-West           | 7.1                                   | North-East                      | 167                       | 1912            |

| 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 |
|---------------|-----------|---------|--------------------------|-----------|----------------------|---------------------------------------|---------------------------------|---------------------------|-----------------|
| BARNSELY MAIN | SILKSTONE | Coal    | XOI                      | 387       | Beneath Property     | 7.5                                   | East                            | 170                       | 1971            |
| BARNSELY      | SILKSTONE | Coal    | 6Z8W                     | 398       | East                 | 5.3                                   | East                            | 200                       | 1971            |
| BARNSELY MAIN | SILKSTONE | Coal    | 64IL                     | 415       | North-East           | 5.5                                   | East                            | 183                       | 1972            |
| BARNSELY MAIN | SILKSTONE | Coal    | 64IM                     | 427       | North-East           | 11.2                                  | West                            | 183                       | 1906            |

### 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      | 433404-001 | 433781 404793  |                       | Coal    |                      |
| Shaft      | 433404-005 | 433865 404944  |                       | Coal    |                      |
| Shaft      | 433404-006 | 433870 404941  |                       | Coal    |                      |
| Shaft      | 433404-031 | 433955 404909  |                       | Coal    |                      |

### Abandoned mine plan catalogue numbers

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

|       |       |        |
|-------|-------|--------|
| SY23  | 1143  | NE1009 |
| NE565 | 12461 | SY209  |
| 1676  | SY206 | NE1075 |

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

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

## Outcrops

| Seam name  | Mineral | Seam workable | Distance to outcrop (m) | Direction to outcrop | Bearing of outcrop |
|------------|---------|---------------|-------------------------|----------------------|--------------------|
| KENT THICK | Coal    | Yes           | 48.4                    | West                 | 165                |
| KENTS THIN | Coal    | Yes           | Within                  | N/A                  | 162                |
| KENTS THIN | Coal    | Yes           | Within                  | N/A                  | 180                |

## 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 in an area where a notice to withdraw support was given in 1953.

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.

### **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](mailto: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](mailto: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.

### **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**

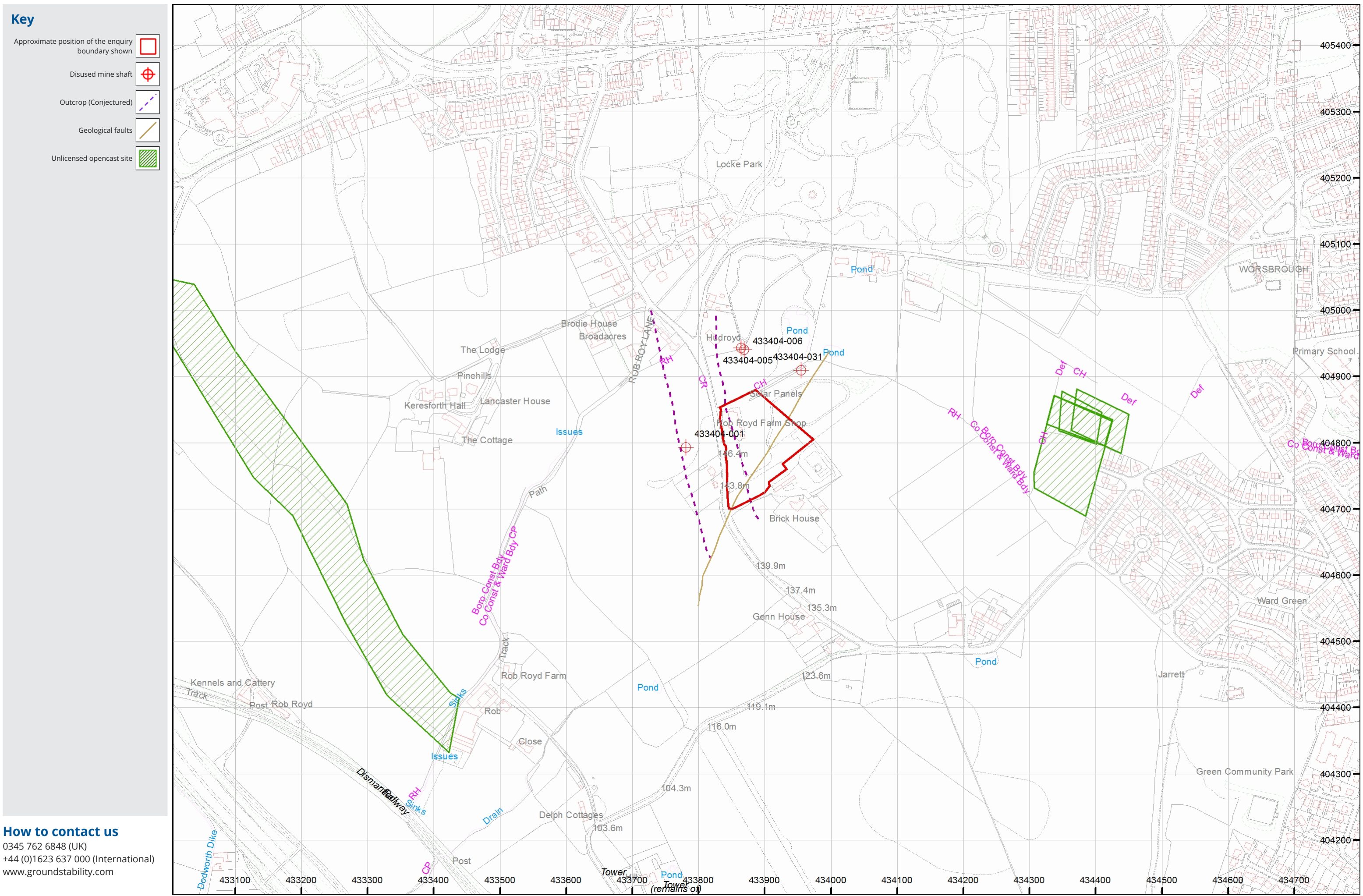
Relevant notices which may affect the property and any subsequent notice of retained interests in coal and coal mines, acceptance or rejection notices and whether any compensation has been paid to a claimant.

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## VAT receipt

|                            |                                                                                                                                                 |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Issued by</b>           | The Coal Authority<br>200 Lichfield Lane<br>Mansfield<br>Nottinghamshire<br>NG18 4RG                                                            |
| <b>Tax point date</b>      | 12 November 2018                                                                                                                                |
| <b>Issued to</b>           | GEOINVESTIGATE<br>TERRY DICKEN INDUSTRIAL ESTATE<br>TERRY DICKEN INDUSTRIAL ESTATE,<br>ELLERBECK WAY<br>STOKESLEY<br>NORTH YORKSHIRE<br>TS9 7AE |
| <b>Property search for</b> | ROB ROYD FARM SHOP<br>GENN LANE<br>WARD GREEN<br>BARNESLEY<br>S70 6NW                                                                           |
| <b>Reference number</b>    | 51001967344001                                                                                                                                  |
| <b>Date of issue</b>       | 12 November 2018                                                                                                                                |
| <b>Cost</b>                | £106.79                                                                                                                                         |
| <b>VAT @ 20%</b>           | £21.36                                                                                                                                          |
| <b>Total received</b>      | £128.15                                                                                                                                         |
| <b>VAT registration</b>    | 598 5850 68                                                                                                                                     |

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



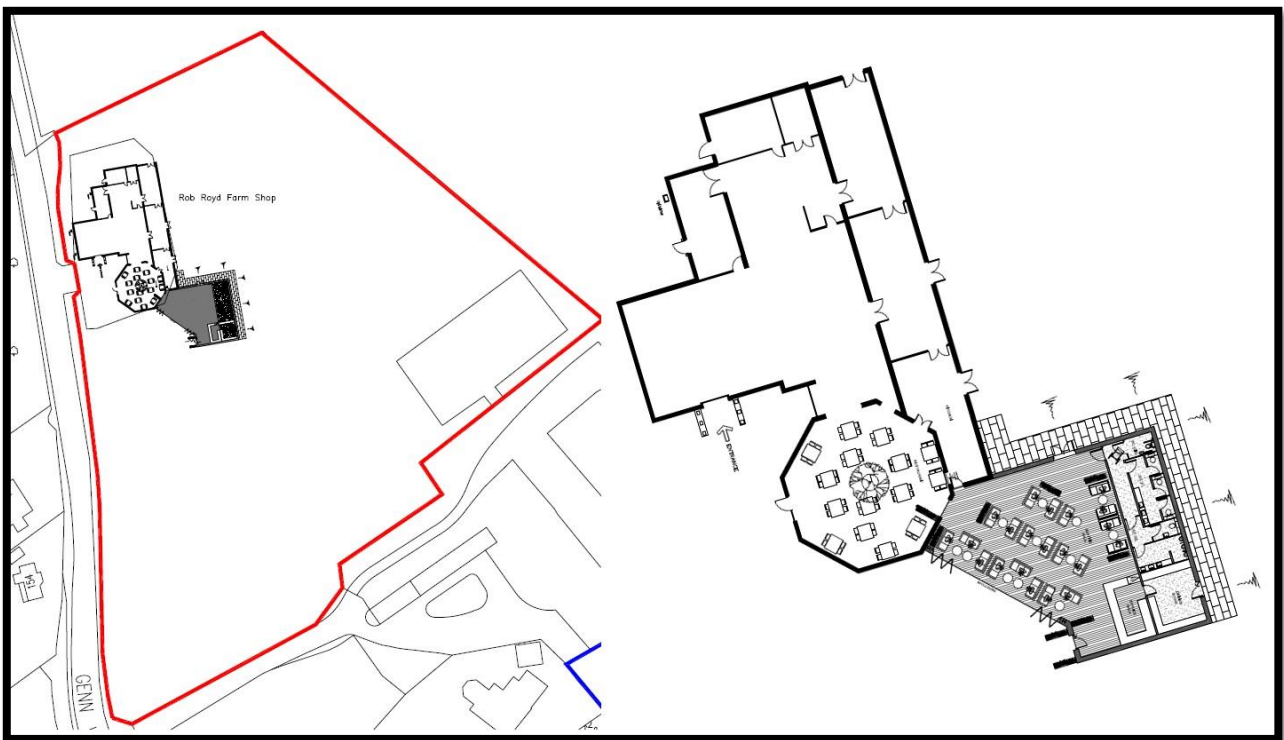
## APPENDIX B

### Site Image



## APPENDIX C

### Proposed Development Layout



## APPENDIX D

### EXTRACTS OF BGS GEOLOGY MAP

