



SOLUTIONS LIMITED

**COAL MINING RISK ASSESSMENT,
DESKTOP STUDY**

AT

3 EAST FOLD, SKELMANTHORPE

FOR

MR M. STEEL

Report Reference: 3632-23 CMRA

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QUALITY ASSURANCE

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1. INTRODUCTION

1.1 BACKGROUND AND INSTRUCTION

GeoEnviro Solutions Limited (GES) was instructed by Mr M. Steel (the Client) to produce a Preliminary Coal Mining Risk Assessment Report (CMRA) for the site located at 3 East Fold, Busker Lane, Skelmanthorpe, HD8 9EZ.

A site location plan is presented as GES Drawing No. 3632-23/01 in **Appendix 1**.

1.2 PROPOSED DEVELOPMENT

GES have not, at this stage, been provided with any proposed development plans, however, it is understood that the proposed development comprises the erection of a detached dwelling to the south of the existing property.

1.3 OBJECTIVES

The objectives of this CMRA report are to gain an understanding of any concerns of the regulatory authorities (Local Authority Planning, Building Control and the Coal Authority) regarding potential impacts of historical coal mining.

1.4 INFORMATION SOURCES

During the production of this report the following primary information sources have been utilised:

- BGS Open Geoscience online geological mapping tool.
- OS Open Data online mapping tool.
- Coal Authority Online interactive map.
- Coal Authority Consultants Coal Mining Report.

1.5 PREVIOUS INVESTIGATIONS

GES have not been provided with any previous investigation reports and are unaware that any have been carried out to date.

2. SITE LOCATION AND DESCRIPTION

2.1 SITE LOCATION

The site is located at 3 East Fold, Busker Lane, Skelmanthorpe, HD8 9EZ, at approximate National Grid Reference (NGR) 424330, 410347 (centre of the site).

2.2 SITE DESCRIPTION

At this stage, a site reconnaissance has not been carried out; the site description has been taken in part from Google Earth and Google Street View imagery.

The site comprises an irregular shaped piece of land with an approximate area of 0.3 Ha.

The topography of the site slopes gently towards the north.

A residential property is present in the centre of the site, with a driveway in the north of the site. The remainder of the site comprises grassed gardens with a number of mature trees.

An approximate distribution of the surface covering is given below in Table 2.1.

Table 2.1: Site Surface Covering

Type of Surface Cover	Distribution (%)
Soft Ground (grassed and landscaped areas)	70
Hardstanding	10
Roadways	0
Buildings	20
Water (ponds, streams)	0

The site is bounded by residential properties to the west with Skelmanthorpe beyond them, Busker Road to the north; to the south of East Fold lies open fields with larger, spread out, residential properties to the east.

Access to the site is via Buskers Road to the north.

Surrounding Area

The site is located in a semi-rural area. The current surrounding land use to the site is generally residential, with open farmland beyond.

The topography of the surrounding area generally slopes to the northeast.

3. BRITISH GEOLOGICAL SURVEY INFORMATION

3.1 SITE GEOLOGY

Mapping information derived from the BGS Geindex Onshore suggest that no Made Ground or superficial deposits underlie the site.

The site is recorded to be underlain by the Penistone Flags, a named sandstone unit of the Pennine Lower Coal Measures Formation (PLCM), which is generally described as *'interbedded grey mudstone, siltstone and pale grey sandstone and thicker coal seams in the upper part'* (BGS Lexicon Description).

A fault is recorded to run through the northern portion of the site, no throw direction or sense of movement is provided on the BGS 1:50,000 scale map (Sheet 86, Glossop, 2012).

A thin, unnamed coal seam is recorded approximately 300 m west of the site.

The Generalised Vertical Section (GVS) on the 1:50,000 scale geological map show that the Penistone Flags comprises several lenses of sandstone within the PLCM, locally with coal seams between the lenses.

Based on the mapped outcrop locations, the topography of the local area sloping down to the northeast and presuming that the stratigraphy of the site dips approximately 4° to the northeast, it is considered that the Black Band, Whinmoor and Cumberworth Thin coal seams are stratigraphically above the site.

This would leave the Penistone Green Coal (0.0 to 0.1 m thick) and Lower Penistone Coal (0.0 to 0.3 m thick) to potentially underlie the site at depth.

3.2 BOREHOLE RECORDS

Mapping information derived from the BGS Geindex indicates that there are no borehole records within 50 m of the site.

However, a BGS borehole (referenced SE21SW108) is located approximately 240 m southeast of the site, within the same fault block as the site. This borehole recorded topsoil and Made Ground from ground level to approximately 1.20 mbgl, overlying variably weathered mudstone to the end of the borehole at 21.34 mbgl.

Based on the available topographic maps, this borehole is located approximately 11 m below the site.

4. COAL AUTHORITY INFORMATION

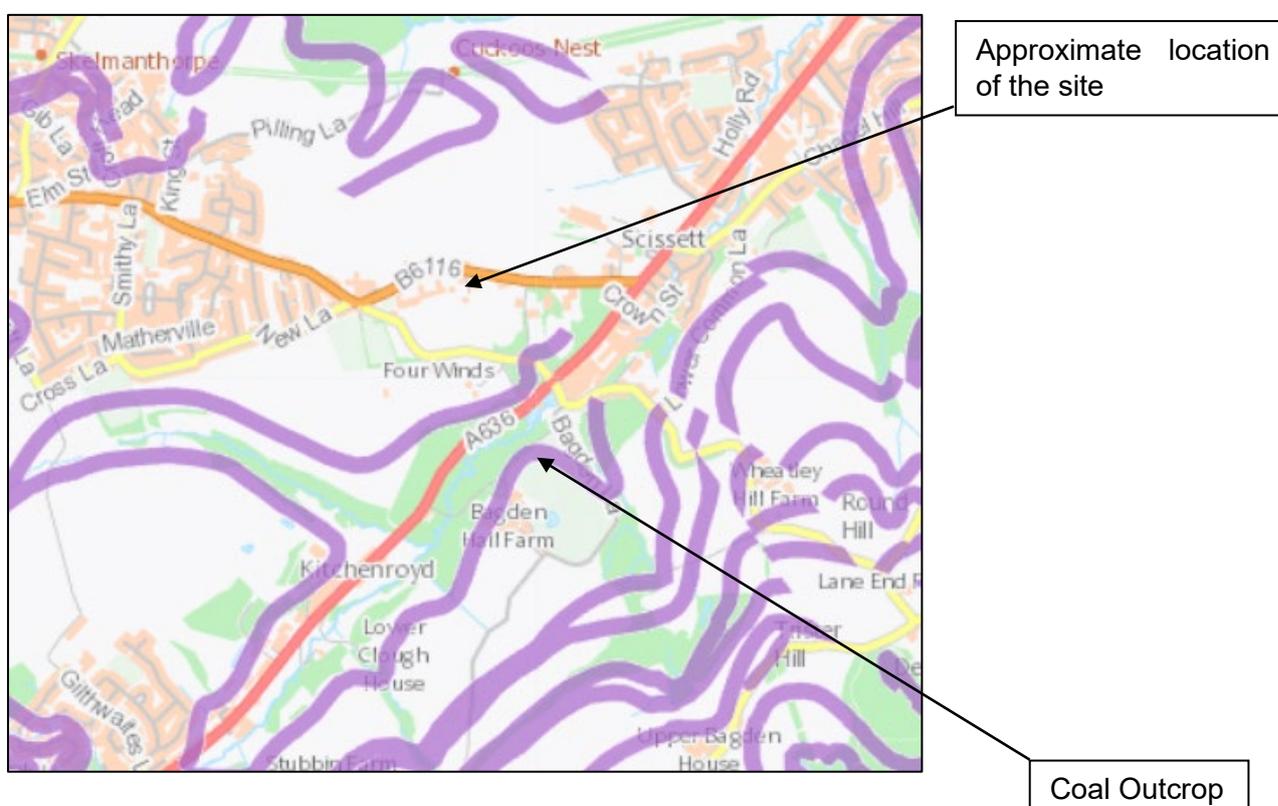
4.1 COAL AUTHORITY REPORT

A Coal Authority Consultants Report (CACR) has been commissioned from the Coal Authority. This report is provided in **Appendix 2** and summarized below, along with relevant plans from the Coal Authority Interactive Viewer

4.2 COAL OUTCROPS

The Coal Authority Interactive Viewer provides an indication as to the proximity of coal outcrops to the site, an excerpt is shown as Figure 4.1, below.

Figure 4.1: Approximate Location of Coal Outcrops



4.3 UNDERGROUND COAL MINING

Past

The CACR identifies no post underground mining is recorded beneath the site.

Mine Entries

The CACR identifies that there are no mine entries within 100 m of the site.

The Coal Authority Interactive Viewer provides an indication as to the proximity of recorded mine entries to the site, an excerpt of which is shown on Figure 4.2, overleaf.

Figure 4.2: Approximate Location of Mine Entries



Opencast Coal Mining

The Coal Authority Interactive Viewer provides an indication as to the proximity of opencast mining, an excerpt of which is shown on Figure 4.3, below.

Figure 4.3: Proximity of Opencast Mining



Coal Mining Subsidence

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

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

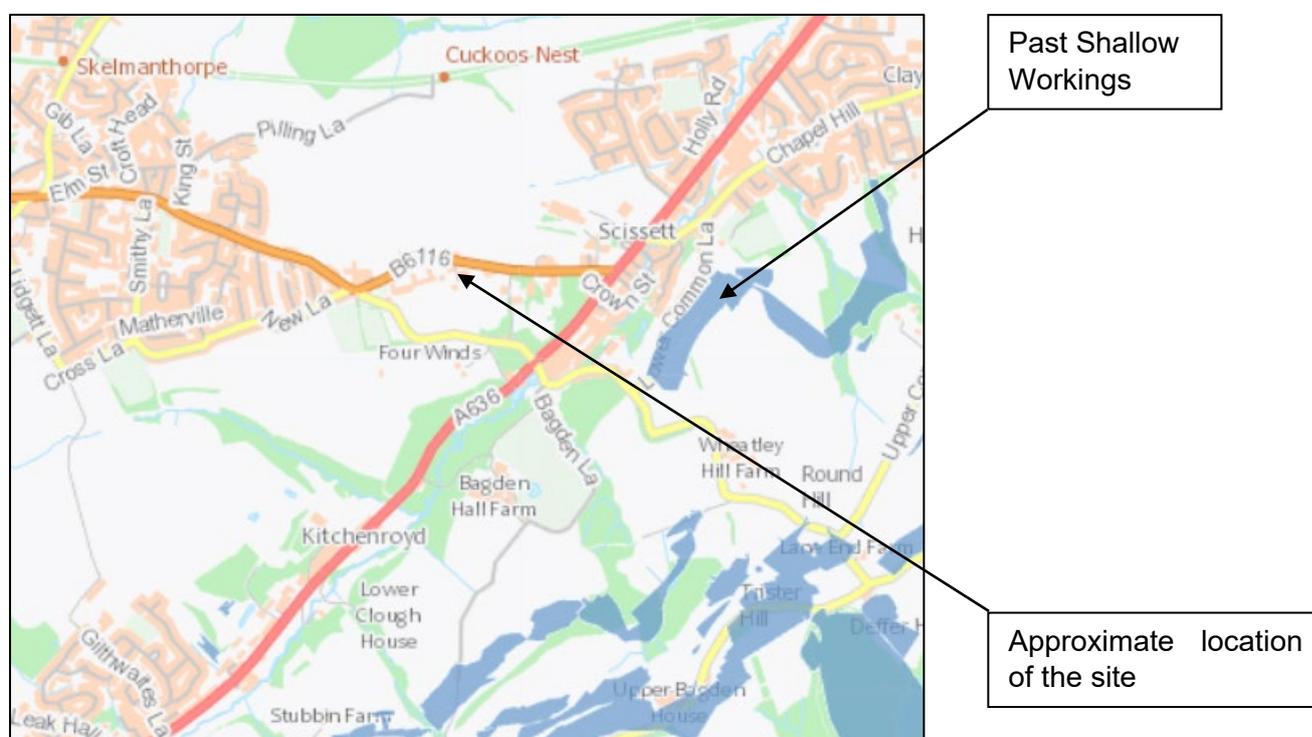
Mine Gas

There is no record of a mine gas emission requiring action by the Coal Authority within 500 m of the boundary of the enquiry.

4.4 SHALLOW MINING

Reference to Coal Authority Interactive Viewer provides an indication as to the areas where past shallow workings have taken place; an excerpt is shown on Figure 4.4, below:

Figure 4.4: Past Shallow Workings

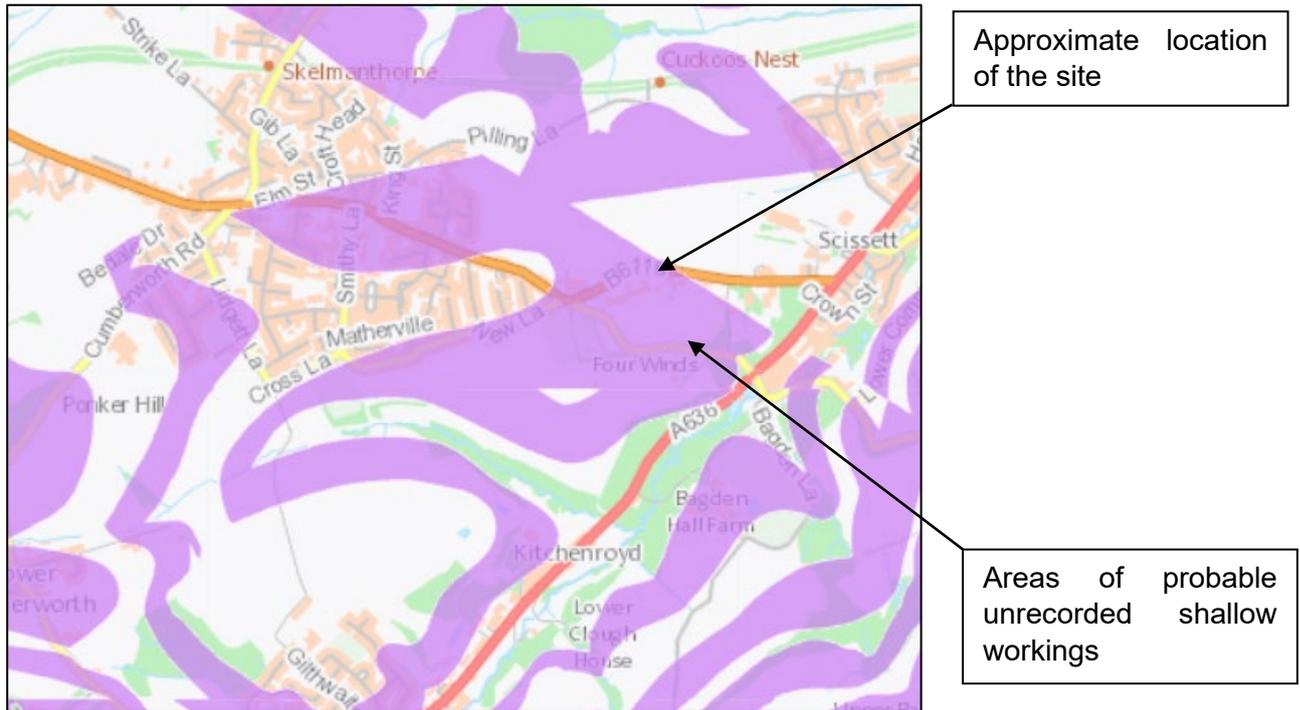


Probable Unrecorded Shallow Workings

The CACR identifies that probable unrecorded shallow workings are present within influencing distance of the site.

Reference to Coal Authority Interactive Viewer provides an indication as to the areas where unrecorded shallow workings are likely to have taken place; an excerpt is shown on Figure 4.5, overleaf.

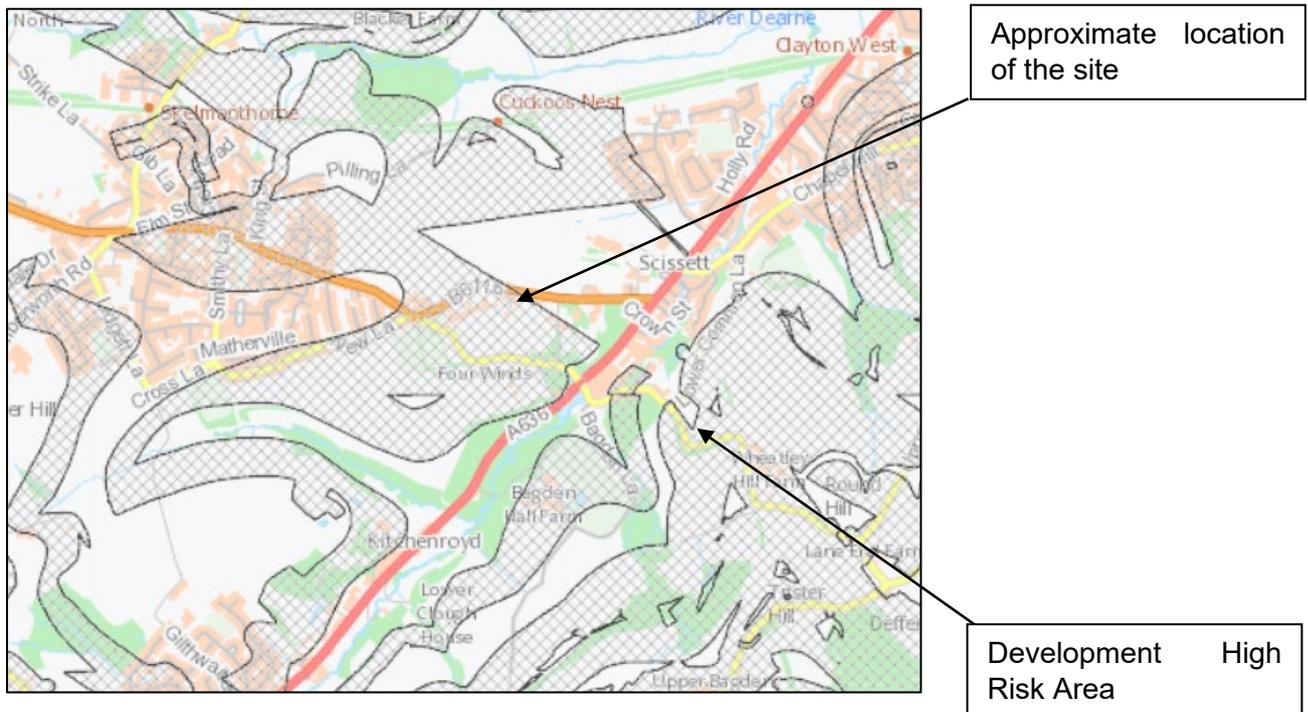
Figure 4.5: Probable Unrecorded Shallow Workings



4.5 DEVELOPMENTS RISKS

Reference to Coal Authority Interactive Viewer provides an indication as to those areas subject to a high risk to future developments from coal mining, and is shown on Figure 4.6, below.

Figure 4.6: Development High Risk Area



5. ASESMENT OF SITE SPECIFIC COAL MINING RISKS

Table 5.1 below summarises the potential risks associated with coal mining legacy for the proposed development site, identified from the preceding information.

Table 5.1: Coal Mining Risk Assessment,

Coal Mining Issue	Yes	No	Risk Assessment
Underground coal mining (recorded at shallow depths)		X	No underground coal mining is recorded beneath the site. Low risk.
Mine entries (shafts and adits)		X	No mine entry records within 100m from site boundary. Low risk.
Coal mining geology		X	The recorded geology suggests any coal seams within 30 m of the surface, in the vicinity of the site are likely to be <0.3 m in thickness. These seams are considered unlikely to have been worked, as they are at the limit of workable potential and no mine entries are recorded in the vicinity of the site. Low to moderate risk.
Record of past mine gas emission or potential		X	No record of past mine gas emissions/problems in vicinity of site. Low risk.
Recorded coal mining surface hazard		X	No hazard identified on site, however coal mining legacy noted in the immediate area. Low risk.
Surface mining (opencast workings)		X	No surface mining is recorded within the vicinity of the site. Low- Moderate risk.
Probable Unrecorded Shallow Workings	X		The site is recorded on the margin of an area of Probably Unrecorded Shallow Workings. Moderate risk.
Development Risks	X		The site is located on the margin of a Development High Risk Area. Moderate risk.

6. CONCLUSIONS

The CACR report confirms there are no records of workings to underly the site, however the site is on the margin of an area of probably unrecorded shallow workings and a development high risk area.

However, given the stratigraphic position of the site within the local area and the local borehole, it is considered that the site is at a low to moderate risk from the coal mining legacy.

At this stage, it is recommended that a watching brief be put in place during the site strip. During this work, if a mine entry is discovered or evidence of ground disturbance noted, the dimensions should be recorded, and the area cordoned off until appropriate investigation and remedial action can be taken.

In conclusion, we see no reason why Planning Permission should not be granted in the interim and that the watching brief forms a condition on the planning approval.

7. RELIANCE AND LIMITATIONS

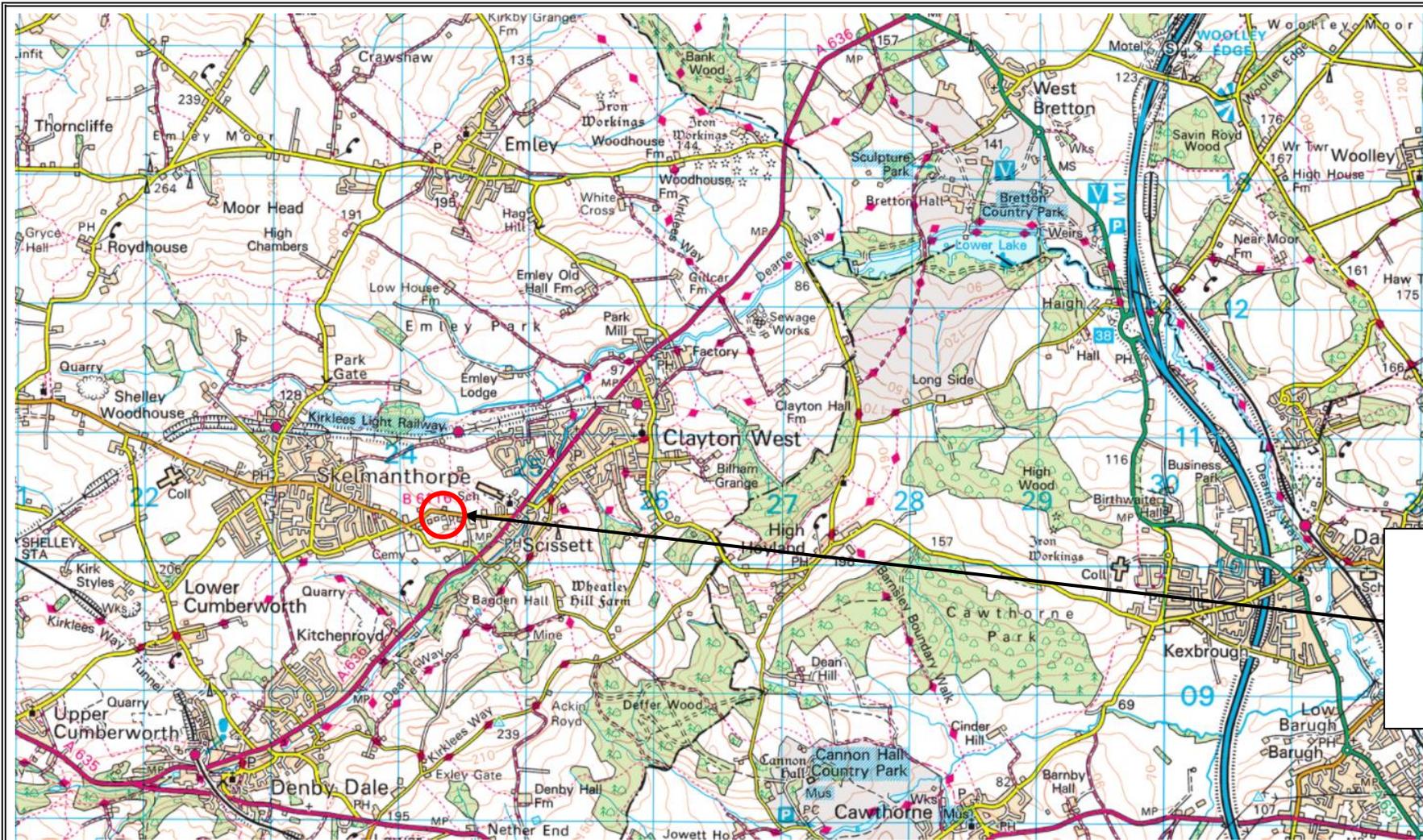
This report has been prepared by GES with all reasonable skill, care and diligence. The work undertaken to provide the basis of this report comprised a study of available documented information from a variety of sources, together with a site walkover inspection of the site.

The opinions given in this report have been dictated by the finite data on which are they based and are relevant only to the purpose for which the report was commissioned.

Information reviewed should not be considered exhaustive and accepted in good faith as providing true and representative data with respect to site conditions. Should additional information become available which may influence the opinion expressed in this report, GES reserves the right to review such information and, if warranted, to alter the opinions accordingly.

It should be noted that any risks identified in this report are perceived risks based on the information reviewed; actual risks can only be assessed following a physical investigation of the site. This report is a Coal Mining Risk Assessment and does not consider the geotechnical implications for the site, its redevelopment and proposed future use. Further advice should be sought on geotechnical investigation requirements for the proposed development.

APPENDIX 1
DRAWINGS AND PLANS



General
Site
Location



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 Unit 7 Springvale Works
 Brighouse
 West Yorkshire
 HD6 2RA
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 Email: info@geoenvirosolutions.com
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PROJECT NAME	3 East Fold, Skelmanthorpe	DRAWING NO.	3632-23/01	SCALE	N.T.S
PROJECT NUMBER	3632-23	DATE	May 2023	DRAWN BY	RC
TITLE	Site Location Plan				

APPENDIX 2
COAL AUTHORITY REPORT



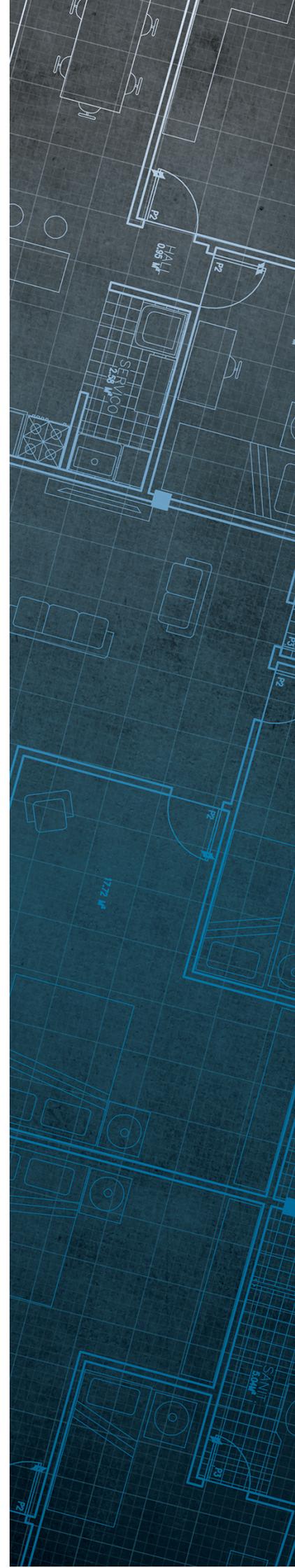
The Coal
Authority

Consultants Coal Mining Report

3, East Fold, Skelmanthorpe,
Huddersfield
West Yorkshire
HD8 9EZ

Date of enquiry: 4 May 2023
Date enquiry received: 4 May 2023
Issue date: 4 May 2023

Our reference: 51003353334001
Your reference: GS-6EA-OL7-YYV-K4E



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

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HD8 9EZ

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NG18 4RG

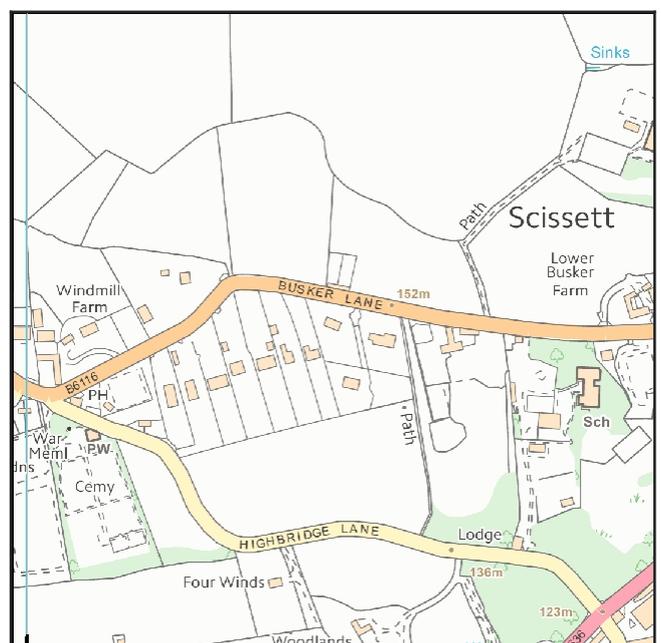
www.groundstability.com

 @coalauthority

 /company/the-coal-authority

 /thecoalauthority

 /thecoalauthority



Approximate position of property



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Section 1 – Mining activity and geology

Past underground mining

No past mining recorded.

Probable unrecorded shallow workings

Yes.

Spine roadways at shallow depth

No spine roadway recorded at shallow depth.

Mine entries

None recorded within 100 metres of the enquiry boundary.

Abandoned mine plan catalogue numbers

None available.

Outcrops

No outcrops recorded.

Geological faults, fissures and breaklines

No faults, fissures or breaklines recorded.

Opencast mines

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

Coal Authority managed tips

None recorded within 500 metres of the enquiry boundary.

Section 2 – Investigative or remedial activity

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

Site investigations

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

Based on the responses in this report, no further information has been highlighted.

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.

Section 5 – Data definitions

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

Past underground coal mining

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

Probable unrecorded shallow workings

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

Spine roadways at shallow depth

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

Mine entries

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

Abandoned mine plan catalogue numbers

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

Outcrops

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

Geological faults, fissures and breaklines

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

Opencast mines

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

Coal Authority managed tips

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

Site investigations

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

Remediated sites

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

Coal mining subsidence

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

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

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

Mine gas

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

Mine water treatment schemes

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

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

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

Future underground mining

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

Coal mining licensing

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

Court orders

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

Section 46 notices

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

Withdrawal of support notices

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

Payment to owners of former copyhold land

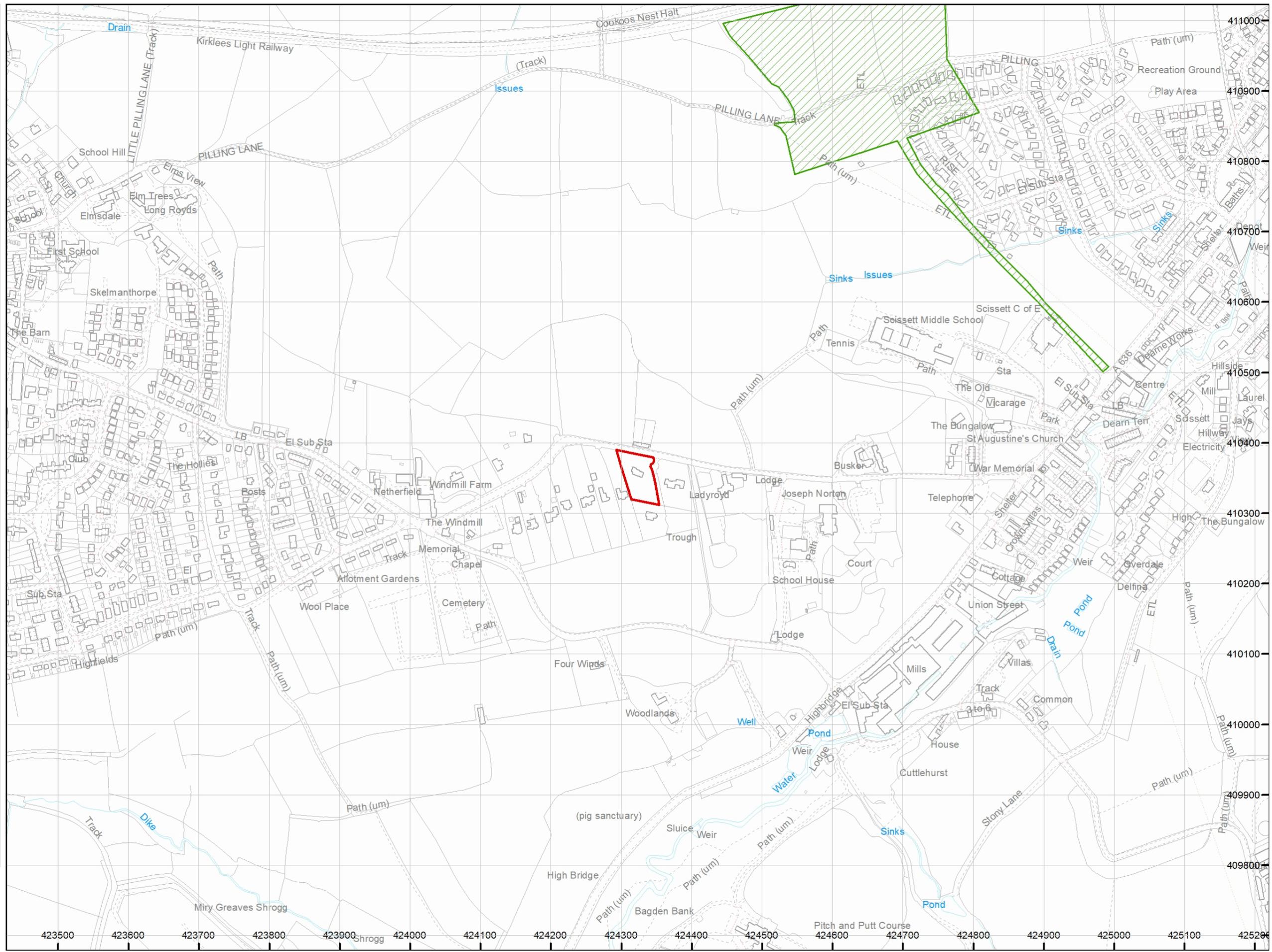
Relevant notices which may affect the property and any subsequent notice of retained interests in coal and coal mines, acceptance or rejection notices and whether any compensation has been paid to a claimant.

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

Key

- Approximate position of the enquiry boundary shown 
- Unlicensed opencast site 

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