



E22/7986/MD/L001

4 August 2022

FAO Martin Booker

Dear Sir,

Re: Proposed Development on land adjacent 4, Back Lane, Grange Moor

Further to instructions from Fibre Architects, we have conducted a coal mining risk assessment of the above site to confirm the likelihood of historical mine workings affecting the proposed development on land adjacent 4 Back Lane, Grange Moor

The purpose of the coal mining risk assessment is to review the current information available regarding the presence of coal and coal mining in the vicinity of the site and the potential for risks arising from this that would adversely affect the proposed development.

Once the information has been assessed, any further investigative works via intrusive methods can be specified if required and consideration of potential remedial and ground stabilisation works that may be needed. If no further works are required, justification will be made to the Local Planning Authority that the site is currently safe and stable with the regards to the proposed development.

The following sources of information have been used in the preparation of this report:

INFORMATION SOURCE	COMMENT
Coal Authority	Consultant's Mining Report
Coal Authority Online Services	Extracts from interactive map attached to rear of report.
Historic OS Plans	1850-1949
BGS Boreholes	None in immediate vicinity of site.
OTHER	N/A

The Consultant's Mining Report indicates workings in 5 seams of coal at depths of 47-237m below ground level in the vicinity of the site. Beneath the site, workings in the Top Beeston seam at a depth of 151m and last worked in 1946 are recorded. The Low Fenton coal seam is noted to outcrop 31.1m to the west and it states that there are probable shallow unrecorded workings beneath the site.

The Coal Authority Interactive Map Viewer shows a coal outcrop approximately 30m west of the development, with probable shallow workings from this extending below the northern half of the site. Historical shallow workings are indicated approximately 60m south of the site, and former opencast workings are indicated 90m west of the site. The northern half of the site is shown to be in a development high risk area.

The historical plans from 1850-1949 indicate the only development on site has been the construction of 4, Bank Lane and a greenhouse. 4, Bank Lane is shown from 1850 to the present day. In 1888, a colliery was shown approximately 80m west of the development. Ground works and a shaft associated with the colliery were still shown in 1904, however the colliery was labelled as a pumping station. A reduced

number of buildings were shown here in 1949. The site area has now been redeveloped for housing.

To conclude, we would make the following comments:

From the above, there is potentially shallow coal beneath the site. Historically, shallow coal seams may have been worked by private individuals since such workings are not recorded by the Coal Authority. There are recorded opencast and shallow coal workings in the vicinity of the site.

Recommendations

From the available information, there is a coal seam outcropping close to the site that has possibly been worked by private individuals.

We would therefore recommend that a rotary borehole investigation should be undertaken on site to depths of 30m, to ascertain the presence of shallow coal, potential unrecorded workings, and the configuration of the underlying strata. Even if no workings are proved, the depth and nature of any coal seams will need to be confirmed as these will affect the proposed foundation designs as coal is not a suitable founding material.

We would also recommend that the site should be stripped to the underlying natural strata. This strata should be examined for discolouration, or evidence that the outcropping coal in the vicinity of the site may have been worked, such as bellpits or shafts.

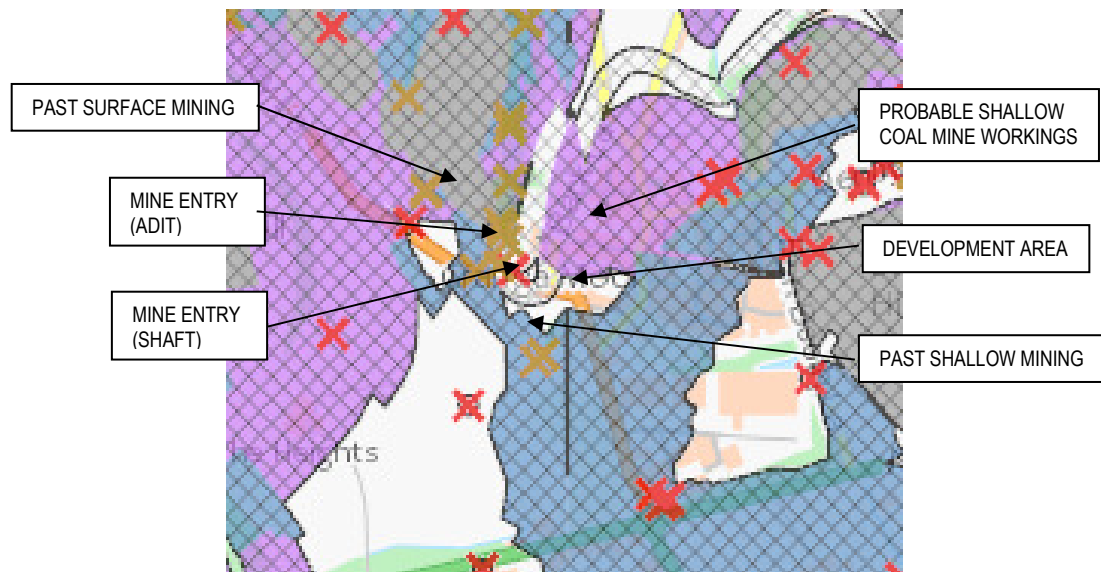
Due to the presence of workings in the vicinity of the site, there is a risk of ground gas migration affecting the site. We would therefore recommend that a minimum of three piezometers should be installed on site to monitor ground gas.

If any evidence of shallow mine-workings are encountered during the borehole works, an engineer should be consulted to agree a suitable remediation and ground stabilisation strategy before works continue on site.

As the intrusive investigation works will intersect, disturb or enter coal seams, coal mine workings or mine entries, written permission and a permit should be sought from the Coal Authority prior to any investigative works taking place. Due to the proximity of the adjacent residential properties, we would recommend that the drilling is undertaken using water flush methods.

Yours faithfully

MICHAEL DEAN BSc (Hons) HND



EXTRACT FROM THE INTERACTIVE COAL AUTHORITY MAP SHOWING SURFACE MINING, PAST SHALLOW COAL MINING WORKINGS AND PROBABLE SHALLOW MINE WORKINGS AT 4, BANK LANE, GRANGE MOOR.



EXTRACT FROM THE INTERACTIVE COAL AUTHORITY MAP SHOWING COAL OUTCROPS AND DEVELOPMENT HIGH RISK AREAS AT 4, BANK LANE, GRANGE MOOR.

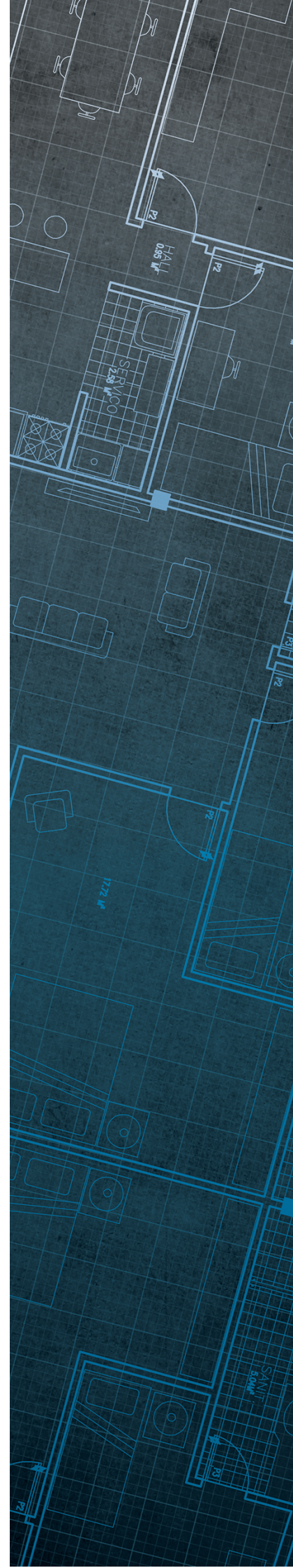


The Coal
Authority

Consultants Coal Mining Report

4 Back Lane
Grange Moor
Huddersfield
Kirklees
WF4 4EJ

Date of enquiry:	1 August 2022
Date enquiry received:	1 August 2022
Issue date:	1 August 2022
Our reference:	51003293816001
Your reference:	7986



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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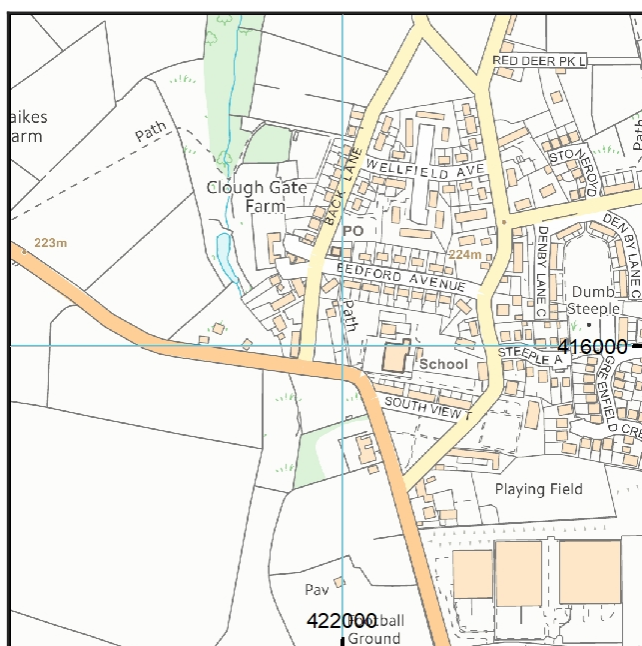
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Approximate position of property



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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	MIDDLETON MAIN	Coal	6Z2X	47	South-East	2.2	South-East	127	1910
unnamed	MIDDLETON MAIN	Coal	6GBJ	51	South	1.0	South-East	61	1939
unnamed	WHEATLEY LIME	Coal	6GBK	70	South-West	1.6	South-East	92	1918
unnamed	SILKSTONE	Coal	6Z33	99	South-East	2.0	East	71	1910
unnamed	SILKSTONE	Coal	6O4N	99	North-East	2.8	South-East	61	1863
unnamed	SILKSTONE	Coal	6GBP	101	West	1.8	South-East	69	1909
unnamed	SILKSTONE	Coal	6ZJI	101	West	1.9	East	69	1909
unnamed	SILKSTONE	Coal	6GBR	109	South	1.8	South-East	76	1902
unnamed	TOP BEESTON	Coal	6O4P	145	North-East	2.6	East	71	1939
unnamed	TOP BEESTON	Coal	6GBW	151	Beneath Property	1.4	South-East	74	1946
unnamed	BLACK BED	Coal	6ZJS	237	North-West	3.6	East	58	1950

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	421416-020	421883 416013	Found in 2017, filled with stone then covered with a reinforced concrete cap	Coal	

Abandoned mine plan catalogue numbers

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

9163	NE504	12066
M721	FGB724	13353
NE777	GCR21	FGB562

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

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

Outcrops

Seam name	Mineral	Seam workable	Distance to outcrop (m)	Direction to outcrop	Bearing of outcrop
LOW FENTON	Coal	Yes	31.1	West	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

Distance to site investigation (m)	Direction
26.7	West

See Section 4 for further information.

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

Distance to gas incident/remediation (m)	Direction
469.0	South
496.3	South-East

See Section 4 for further information.

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 1946.

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.

Site investigations

The site is within an area of previous interest. It is close to where the Coal Authority has received information relating to past site investigations.

The site requires further investigation and may influence how you approach your risk assessment.

Mine gas remedial works

The site is within an area of previous interest. It is close to where the Coal Authority has investigated and subsequently remediated the effects of mine or ground gas emissions following specific reported hazards.

The site requires further investigation and may influence your risk assessment. We recommend that you order the **Coal Authority Mine Gas Emission Report**, which will include more information about the hazard.

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.

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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