

GeoCon Site Investigations Ltd Arden House, Shepley Lane Industrial Estate, Marple, Greater Manchester. SK6 7JW

18th October 2024

FAO Nigel Kay C/O Alpha Design 7 Europe Way, Cockermouth, Cumbria, CA13 0RJ

Re: Phase II Report Addendum - Coal Mining Concerns on Land at Dalzell Street, Moor Row

Following the response of the Coal Authority's refusal to discharge Condition 10 with regards to potential former shallow coal mining, we have prepared this addendum report to support the discussion and findings contained within GeoCon Phase II site investigation report dated September 2024 (reference GSI2132 WG PII Report V1) and in response to the Coal Authority (CA) response dated 10th October 2024 (reference 4/24/2336/DOC).

This addendum includes a Coal Authority (CA) Consultants Mining Report, dated March 2024, for the site (reference 51003410128001; contained within Appendix A of this report).

The CA Consultants mining report stated that past underground mining was beneath the site, the shallowest worked seam is the Slatey at a depth of approximately 15.00m with an extraction of 1.44m (last mined in 1918). A further coal seam, the Upper Ten Quarters is at a depth of 16.00m with an extraction of 1.20m (last mined in 1912). Other worked seams are noted to be below the site but at significant depth as well as in the surrounding area.

Other salient information from the report is summarised as follows:

- Probable Unrecorded Shallow Workings (less than 30m): None.

- Mine Entries: None are recorded within c.100m of the site.

BUILDER'S

The response by the CA states that 'the site has been subject to recorded underground coal mining at shallow depth' and 'two seams of coal underlying the northeast and eastern part of the application site. The seams are indicated to underlie the site at depths of only 5m and 11m with extraction thicknesses of 1.44m and 1.22m.' This information contradicts the information provided by the CA in the provided Mining Report.

From the historical review completed within the Phase I Preliminary Risk Assessment report, the southern portion of the site is occupied by a railway and railways storage yard with warehouses located in the east portion of the site from the earliest mapping records available (1863) until dismantling undertaken by 1991.

Engineering Geologists







Registered in England and Wales: 6065824



As noted, no claims are recorded for subsidence and no visual signs of subsidence or settlement observed on existing concrete floor slabs still present on site during the site assessment; with high loadings associated with railway activities applied to the ground for over 120 years. It is noted immediately east from the site extents contained a retaining structure to support a bridge over the adjacent River Keekle valley, which has a 12m elevation change down to the river channel.

It is unlikely that shallow coal mining was undertaken in the immediate extents beneath the site, given the dates of mining of the named seams within the CA Consultant Mining Report and the potential impact on important infrastructure and subsequent lack of evidence of related subsidence. Therefore, a site investigation was undertaken to prove the risk and assess the ground conditions across the site.

Findings from site investigation observed an 11.00m of superficial drift deposits, in the southeast corner of the site (RO2), overlying mudstone to depths of 22.50m, where a 1.00m thick intact coal seam was encountered. Underlying this is mudstone to a depth of 36.00mbgl and a 3.00m thick intact coal seam present beneath this.

Following completion of RO2, RO3(b) was completed to understand the presence of shallow coal to the west of RO2. Superficial material was encountered to 12.00mbgl, overlying mudstone to a depth of 44.30mbgl where intact coal 1.20m thick was encountered. This confirmed the coal seam encountered in RO2 was dipping to the west and to depths that are not considered to represent a potential risk to any proposed development. Additionally, this indicates two points along the coal seam where the coal is intact.

Towards the northeastern extent of site (and directly north of RO2), RO5 encountered 13.50m of superficial drift deposits, overlying an interbedded limestone and sandstone to 20.00mbgl. Underlying this, mudstone interbedded with sandstone was proven to 45.00mbgl, with no coal or shallow mining features encountered throughout. This indicated that to the north of RO2 and in the northeastern portion of the site, the area highlighted as a risk by the CA, does not pose a risk to the development from shallow coal mining.

No other shallow coal was encountered across the remainder of the site and no shallow mining features were encountered beneath the development footprint.

Given the findings, if Coal Mining features are beneath the eastern fringes of the site, it is at a depth which does not pose a risk to the development.

Based on the above, the operations on the site historically and the encountered geology beneath the site from the findings of our Phase II site investigation, there is a very low risk to the development from shallow coal mining.

We reiterate that all rotary boreholes were monitored for gas emissions during the works, with no concentration recorded above that of background atmospheric levels. No other evidence of mine gases was observed during the three-month monitoring programme, with elevated gases localised to the western portion of the site in the footprint of glacial meltwater channel's alluvium. Therefore, the risk from mining related gas emissions is very low.

We consider that no further intrusive investigation work is considered necessary to further characterise below ground conditions in context of coal mining associated risks.













We have provided this addendum to address the concerns raised by the Coal Authority and are of the opinion that sufficient information has now been provided to discharge Condition 10 on the planning application for the site.

Yours sincerely

For and on behalf of GeoCon Site Investigations Ltd Liam Daley Principal Geoenvironmental Engineer

Document reference: GSI2132_LD_Addendum_181024

Appendix A - Coal Authority Consultant's Mining Report

















Registered in England and Wales: 6065824



Consultants Coal Mining Report

Land At Station Yard Moor Row Bigrigg Cumberland CA24 3JR

Date of enquiry: Date enquiry received: Issue date: 7 March 2024 7 March 2024 7 March 2024

Our reference: Your reference:

51003410128001 GEO2022-5470



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

Curtis Evans

Enquiry address

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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
MONTREAL	SLATEY	Coal	009R	15	Beneath Property	23.1	South-West	144	1918
MONTREAL	UPPER TEN QUARTERS	Coal	A05D	16	Beneath Property			120	1912
MONTREAL	UPPER TEN QUARTERS	Coal	009U	63	North	21.0	South-West	144	1894
MONTREAL	MAIN	Coal	00A9	104	Beneath Property	9.9	South-West	310	1918
unnamed	BRICK (BANNOCK)	Coal	00A3	121	Beneath Property	27.8	South	208	1918
unnamed	BRICK (BANNOCK)	Coal	00A2	141	North	18.4	South-West	208	1918
MONTREAL	MAIN	Coal	00AA	166	North-West	16.0	West	310	1918

Probable unrecorded shallow workings

None.

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

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

OM7065	NC176	om8476
17392	7304	

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

No faults, fissures or breaklines 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 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.

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.