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CONSULTANCY

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Date: 28th February 2023
Your ref: (S36 9LN).
My Ref: CMRA 00308

FOR THE ATTENTION OF TOM AGUS & ISABEL HOBSON

Dear Sir/Madam,

**COAL MINING RISK ASSESSMENT (CMRA) - FOR PROPOSED RESIDENTIAL
DEVELOPMENT AT STONELEA BUNGALOW, LEE LANE, MILLHOUSE GREEN,
SHEFFIELD S36 9LN**

Introduction

Planning permission is being sought for the demolition of the existing property and construction of a detached dwelling at the above named site, the location of which can be seen on the attached plan No. 00308/A in Appendix 1. The site is centred around national grid reference E: 421727 / N: 403207. A Coal Mining Risk Assessment is required for the proposals, in order to competently address the mining legacy for the site and determine what impact this may have had upon the land. The assessment is intended to be included as a supporting document to a future planning application to Barnsley MBC.

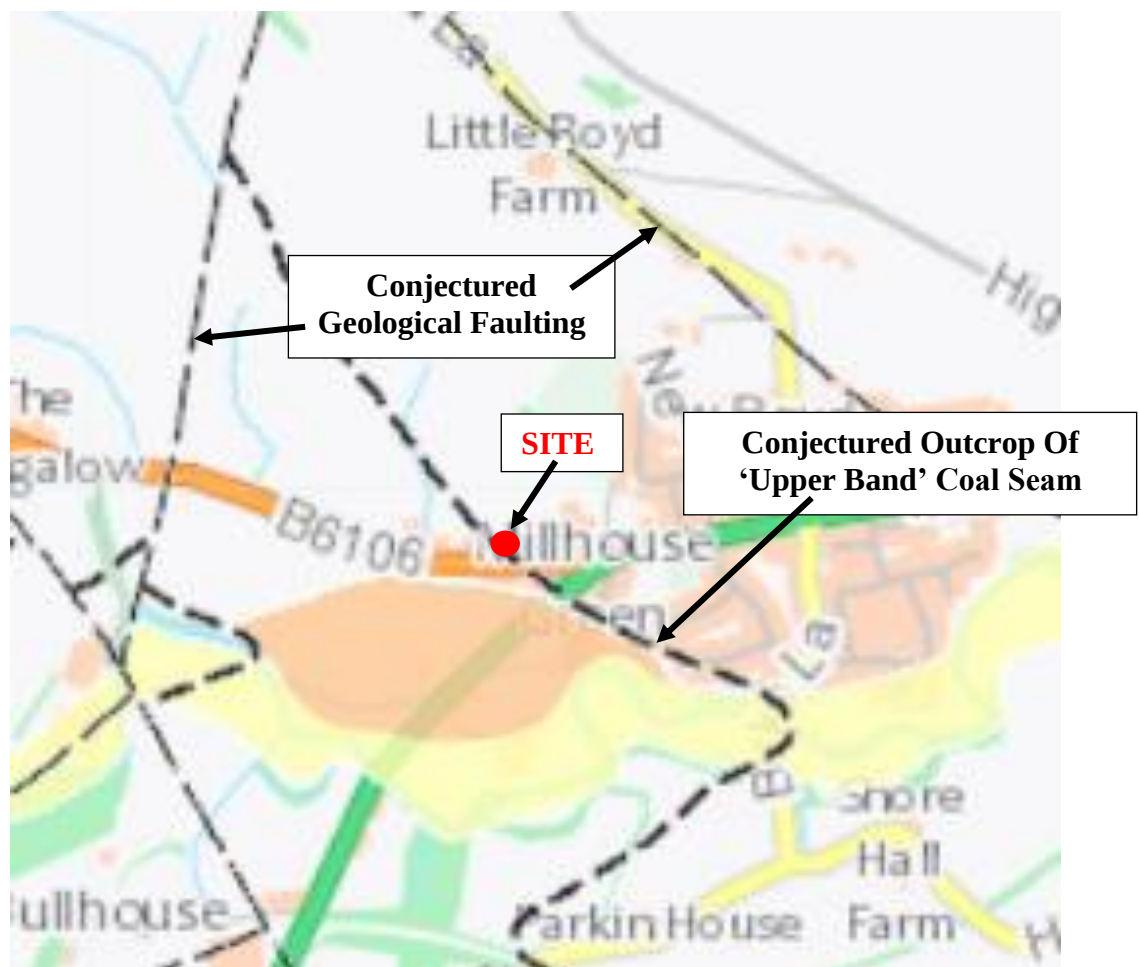
Scope of the Coal Mining Risk Assessment

The purpose of this Coal Mining Risk Assessment Report is to:

- Present a desk-based review of all available information on the coal mining issues which are relevant to the application site;
- Use that information to identify and assess the risks to the proposed development from coal mining legacy, including the cumulative impact of issues;
- Set out appropriate mitigation measures to address the coal mining legacy issues affecting the site, including any further works that may be necessary; and
- Demonstrate to the Local Planning Authority that the application site is, or can be made, safe and stable to meet the requirements of national planning policy with regard to development on unstable land.

Surface Geology (inc. any superficial deposits)

Records indicate the site to be located on mudstones and siltstones of the Lower Coal Measure series from the Carboniferous formation; and possibly the '80 Yard Rock' sandstone which will be present beneath the Upper Band coal seam as mentioned below. Strata will dip to the ENE at a steady rate of around 1 in 12 (5°) in this vicinity. No superficial deposits are indicated in the vicinity of the site itself. A summary of the surface geology is illustrated on the image below which is an extract from the BGS Onshore Interactive Viewer:



Fault Planes or Fissures

No geological faulting is known or conjectured within 350m of the site. No fissuring of bedrock is known in the vicinity, and given the fact that this site has never been undermined the likelihood of natural fissures that could have been opened out is very low.

Coal Seam Outcrops

As outlined on the extract image above from the BGS Onshore Interactive Viewer, the ‘Upper Band’ coal seam is conjectured to outcrop just to the south-west of the site, which would dip beneath the land to the ENE and therefore would be anticipated at very shallow depth (beneath surface soils) should the conjectured position be accurate. If the position is such that the outcrop is further eastwards then this coal will not be present beneath the site – in which case the bedrock would likely be the sandstone mentioned above.

Made Ground

No made ground is indicated in the vicinity of the site.

There will be a slight potential for discovering an element of made/infilled ground associated with historic ‘digging out’ of shallow coal or indeed clay (as mentioned below).

Opencast Coal Workings.

No opencast coal operations are known in this vicinity.

Underground Coal Workings - Deep

According to the records the site has never been affected by deep coal mining in the past and as no coalfields now exist, the site should remain stable from the deep coal mining perspective for the foreseeable future.

Underground Coal Workings - Shallow

No records of any shallow underground workings of the ‘Upper Band’ coal seam is known in these parts. Nearby information (particularly the ‘Oxpring’ boring around 6km away to the east) suggests that this seam was more renowned for clay deposits rather than coal – with up to around 1.5m of clay shown above a few inches of coal. Considering this the likelihood of any unrecorded workings being present in this seam is considered low. This position is consistent with the fact that the site does not fall within a Coal Authority area of ‘probable shallow coal workings’.

Mine Entries

No mine entries are known within 300m of the site itself and considering the geological and mining information the likelihood of any uncharted mine entries being present is considered low.

Fugitive Gases

As far as we are aware, no evidence of coal mining related fugitive gas emissions are known within 250m of the site and considering the geological and mining information the likelihood of any such occurrences is considered low.

Coal Mining Risk Assessment (based on the above).

Coal Seam / Coal Mining Issue	Risk Assessment (VeryHigh/High/Moderate/Low/VeryLow)
Underground coal mining (at shallow depths)	Low
Mine entries (shafts and adits)	Low
Geological faulting	Low
Geological fissures	Low
Fugitive gas emissions	Low
Surface mining (opencast workings)	Low to Moderate
Aggressive ground	Low to Moderate
Coal exposed / near foundation level	Moderate to High

Defined Risk Assessment

(Where 'Underground Coal Mining' above = Very High to Moderate)

Extent of known underground mining in this/these shallow coal seam/s in the wider vicinity	(Extensive / Much / Occasional / None Known) N/A
Intrusive Site Investigation of Coal Seam / Mines of Coal (given nature of proposals).	(Required / Recommended / Unnecessary)** N/A
Advised critical depth beneath foundation level to investigate considering geology and nature of the shallow coal/s*	N/A

Key:

** The critical depth is calculated according to Ciria C758D guidance which details that for the land to be regarded as stable from any voided mineworkings, then a suitable section of competent rock cover above the workings should be proved that is equal or greater than ten times the 'in-tact' coal seam thickness. The advised critical depth to investigate to in this report takes into account the available geological information, any nearby mining records and may include a contingency for the seam to be of a slightly greater thickness than anticipated. Due care and diligence should be employed on-site to ensure that sound information is gathered of the in-tact seam thickness, particularly if concluding that old workings are outside the critical depth of affecting stability for the proposed development.*

**** Where :**

Required	<i>Intrusive Site Investigation required of the shallow coal/s and/or mine entries to determine any necessary stabilisation works for the given development.</i>
Recommended	<i>Intrusive Site investigation recommended – given a lower level of risk in relation to the nature of proposed development some proposals may reduce the risk to an acceptable level via suitable design considerations.</i>
Unnecessary	<i>Intrusive Site Investigation deemed unnecessary – given geological/mining information.</i>

Coal Authority

Prior written permission from The Coal Authority is required for intrusive activities which will disturb or enter any coal seams, coal mine workings or coal mine entries (shafts and adits). Further information on The Coal Authority's permissions process can be found at:

www.coal.gov.uk/services/permissions/index.cfm

Information sources:

- *British Geological Survey Map Sheet SE 20 SW 1980 Edition*
- *British Geological Survey – Geology Of Britain Viewer*
- *Coal Authority Interactive Viewer and Mine Abandonment Plans*
- *Historical Mapping – old-maps.co.uk*

CONCLUSIONS

- 1) The site can be regarded as stable from the **Deep Coal Mining** perspective, and as no coal fields now remain this position should continue for the foreseeable future.
- 2) Given the **Shallow Coal Mining** position, no intrusive investigations to investigate the shallow coal would be deemed necessary in this instance and usual foundations can be considered with the appointed Building Control department should the development progress – *however, note nos. 3 & 4 below.*
- 3) Any coal exposed at the surface beneath surface soils/clays will require appropriate considerations for removal and blinding off to help prevent chemical attack on foundations and reduce the risk of spontaneous combustion risks.
- 4) A watching brief should be employed during future grounds works for any signs of made ground that may be associated with small scale ‘digging’ out of shallow coal/clay, or indeed any fissures of sandstone bedrock. Appropriate foundation design considerations may be required.

Note: should there be any uncertainty of actual conditions during future ground works Lyons CMC or indeed the Coal Authority themselves can be further consulted for on site assessment if necessary.

A suitably qualified and competent professional should be employed to use this report to determine the conditions on site, and ultimately advise on what action, if any, is necessary to safeguard the development. It should be noted that any future works to investigate any coal seam, mines of coal or associated mine entries will need the prior consent of the Coal Authority via their permitting procedure.

I trust that this satisfies your requirements, however please do not hesitate to contact myself at any time for further clarification or advice.

Yours Sincerely,



M. Lyons
Consultant Mining Engineer
BSc CSci MIMMM

Enc.

THIS COAL MINING RISK ASSESSMENT IS BASED ON AND LIMITED TO THE INFORMATION IN MY RECORD AT THE TIME THE ENQUIRY IS ANSWERED. It is based on my professional opinion in line with the guidelines set out in CIRIA C758D "Abandoned mine workings manual." The opinion may be overruled by Government Authorities decisions based on other information not in my record. If a site investigation is recommended then this risk assessment will be superseded by the factual findings of that investigation. All site investigation work should be carried out by a competent professional from which independent conclusions and recommendations for safe development should be provided. It should be noted that: no operation should be undertaken that intersects, disturbs or interferes with any coal or mines of coal without the permission of the Coal Authority. The investigation of coal seams/former mines of coal may have the potential to generate and/or displace underground gases; these risks both under and adjacent the site should be fully considered in any proposals both for personnel and public safety. Copyright in this CMRA belongs to M.A.Lyons. All rights are reserved and unauthorised use is prohibited. Copyright is not transferred to external parties by possession of this report, however, those for whom the report is compiled have the right to use it. If any unauthorised third party comes into possession of this report, they rely upon it entirely at their own risk and the author does not owe them any Duty of Care or Skill.

Appendix 1 – Location Plan No. 00308/A

(Not To Scale)

Site centred at O.S. 421727 / 403207

