

**Simon Elliott Associates  
C/O Development at:  
Land rear of 323 Barnsley Road  
Hoylandswaine  
Sheffield  
S36 7HA**

**LYONS CMC  
COAL MINING & GEOTECHNICAL  
CONSULTANCY**

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Date: 1<sup>st</sup> April 2021  
Your ref: (S36 7HA).  
My Ref: CMRA 00259

**FOR THE ATTENTION OF MR S. ELLIOTT**

Dear Sir,

**COAL MINING RISK ASSESSMENT (CMRA) - FOR PROPOSED RESIDENTIAL  
DEVELOPMENT AT LAND REAR OF 323 BARNSELEY ROAD, HOYLANDSWAINE,  
SHEFFIELD S36 7HA**

**Introduction**

Planning permission is being sought for residential development at the above named site, the location of which can be seen on the attached plan No. 00259/A in Appendix 1. The site is centred around national grid reference E: 426320 / N: 404748. 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.

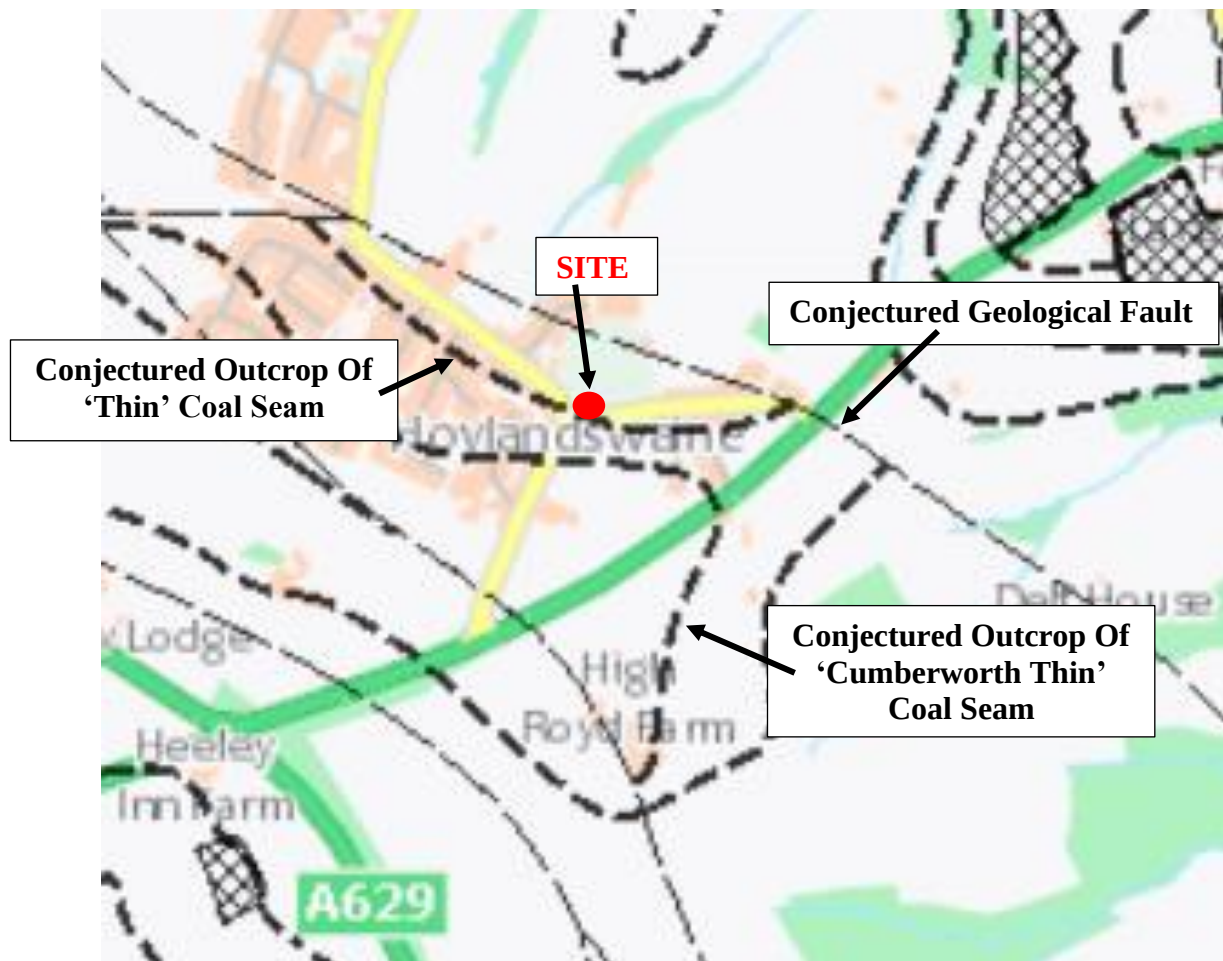
**Scope of the Coal Mining Risk Assessment**

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 shales and mudstones of the Lower Coal Measure series from the Carboniferous formation. 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

A geological fault trending in a WNW to ESE direction is conjectured to pass clear of the site by some 90m or so to the north as shown on the above image. As the geology is shown to be shales and mudstones no fissuring would be anticipated.

## **Coal Seam Outcrops**

As outlined on the extract image above from the BGS Onshore Interactive Viewer, a 'Thin' coal seam is conjectured to outcrop through the southern part of the site. Although the strata dips gently to the east-north-east, the lay of the land (quite steep incline to the west) means that the coal seam will be present beneath the land to the south-west of its outcrop position, following up the hillside. BGS records show that this coal is up to around 300mm in thickness and it may be encountered beneath the surface soils of the site, unless historically 'dug out', or indeed if the site is located on strata below this seam horizon.

The 'Cumberworth Thin' coal seam (higher up in the stratigraphical column) is shown to outcrop some 45m away to the south, which would not be expected beneath the site itself.

## **Made Ground**

No made ground is indicated in the vicinity. A slight potential will exist for historic small scale 'digging out' of coal should the seam be present at the surface – associated pockets of made ground could be encountered.

## **Opencast Coal Workings.**

No opencast coal operations are known within 50m of the site. *(Note from above: slight potential will exist for historic small scale 'digging out' of coal – associated pockets of made ground could be encountered).*

## **Underground Coal Workings - Deep**

No deep coal mining (over 50m deep) has taken place beneath the site 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 shallow workings are shown beneath the site and considering the mining and geological information no unrecorded workings would be anticipated. This is confirmed in that the Coal Authority do not have the site indicated as being within an area of 'Probable Shallow Coal Workings' on their interactive viewer.

## **Mine Entries**

No mine entries are known within 200m of the site and considering the mining and geological information none would be anticipated.

## 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 given the information such risks would be considered as low.

## Historical Records

According to the historical records, no nearby indications of any mining or quarrying activities are noted within the site itself or nearby.

### Coal Mining Risk Assessment (based on the above).

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

### 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)<br><b>N/A</b> |
| Intrusive Site Investigation of Coal Seam / Mines of Coal (given nature of proposals).                               | (Required / Recommended / Unnecessary)**<br><b>N/A</b>     |
| Advised critical depth beneath foundation level to investigate considering geology and nature of the shallow coal/s* | <b>N/A</b>                                                 |

**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 :**

|                    |                                                                                                                                                                                                                                      |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Required</b>    | <i>Intrusive Site Investigation <b>required</b> of the shallow coal/s and/or mine entries to determine any necessary stabilisation works for the given development.</i>                                                              |
| <b>Recommended</b> | <i>Intrusive Site investigation <b>recommended</b> – 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> |
| <b>Unnecessary</b> | <i>Intrusive Site Investigation deemed <b>unnecessary</b> – 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](http://www.coal.gov.uk/services/permissions/index.cfm)

**Information sources:**

- *British Geological Survey Map Sheet SE 20 SE 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 further works, such as intrusive investigations of any coal seam, would be considered necessary.
- 3) Any shallow coal, if encountered, would need removing to found off firm strata beneath and blinding off to help prevent spontaneous combustion risks. Similar considerations would be required should any made ground be encountered that may be associated with historic small scale 'digging out' of shallow coal, with foundations designed accordingly regarding any aggressive ground considerations.

***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*

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. 00259/A**  
**Scale 1:1250 (image@A4)**  
**Site centred at O.S. 426320 / 404748**

