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**CONSULTANCY**

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Email: [REDACTED]

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Date: 9<sup>th</sup> July 2025  
Your ref: (S71 1JH).  
My Ref: CMRA 00419

**FOR THE ATTENTION OF GARETH CROWLEY & ROB AGUS**

Dear Sirs,

**COAL MINING RISK ASSESSMENT (CMRA) - FOR PROPOSED RESIDENTIAL DEVELOPMENT AT 47 HONEYWELL LANE, BARNSELY S71 1JH**

**Introduction**

Planning permission is being considered for a new dwelling at the above named site, the location of which can be seen on the attached plan No. 00419/A in Appendix 1. The site is centred around national grid reference 434475E / 407303N. 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 Council.

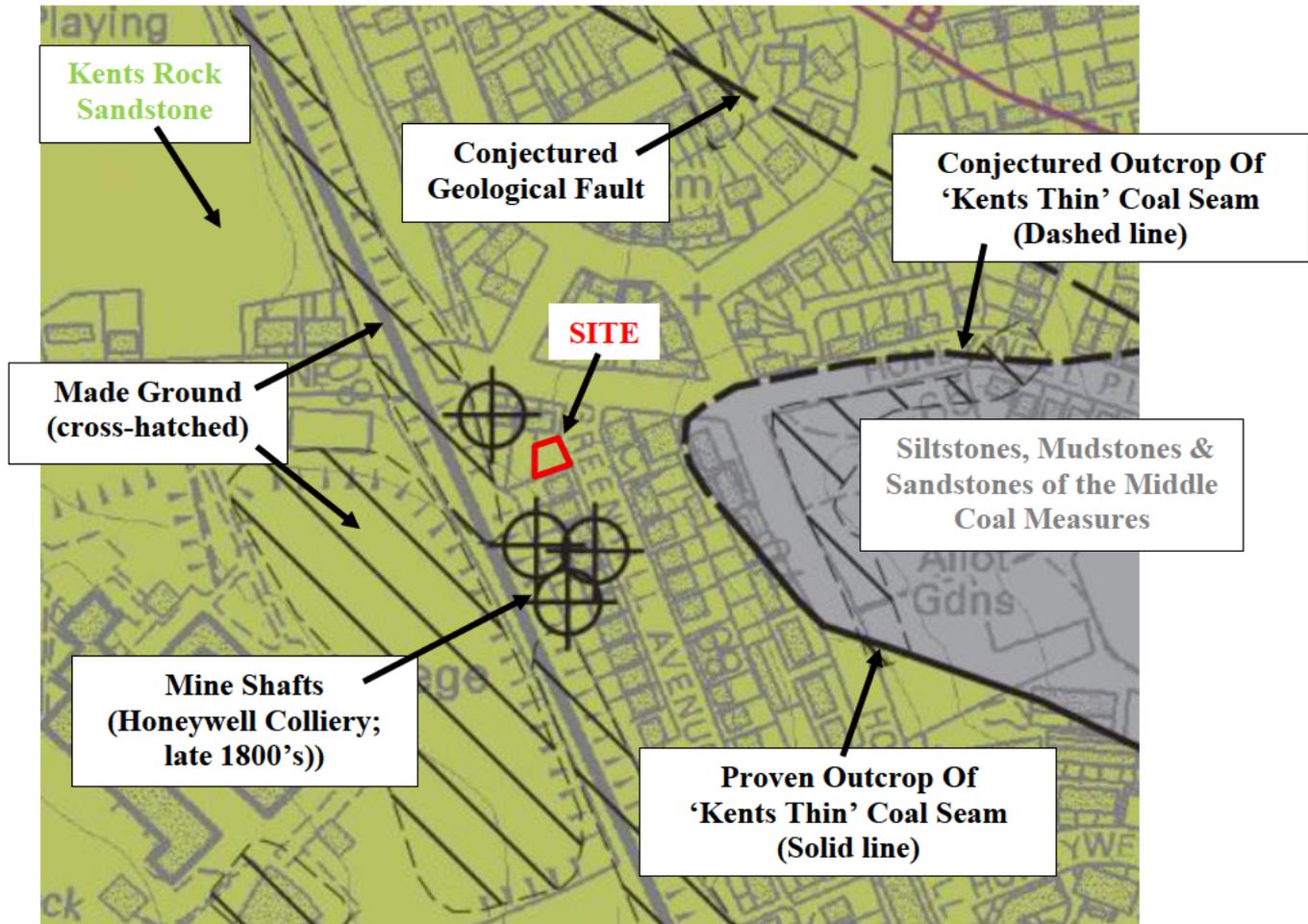
**Scope of the Coal Mining Risk Assessment**

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.
- The report will not consider other geotechnical or geo-environmental issues.

## Surface Geology (inc. any superficial deposits)

Records indicate the site to be located on the Kents Rock Sandstones of the Middle Coal Measure series from the Carboniferous formation. No superficial deposits are known in this vicinity; underlying strata is anticipated to dip gently to the east-north-east at around 4° (1 in 14). A summary of the surface geology is illustrated on the image below which is an extract from the BGS Sheet SE30NW 2005 Edition:



## Fault Planes or Fissures

Geological faulting is conjectured to pass clear of the site by over 150m away to the north-east as indicated above. No fissuring is known, although a slight potential will exist for such natural features being present within the Kents Rock sandstone, if encountered, that could have been 'opened' out by historic deep mining subsidence.

## **Coal Seam Outcrops**

As outlined on the 2005 BGS records above, the 'Kents Thin' coal seam (indicated as around 0.3m thickness in these parts) is conjectured to outcrop some 40m away to the east of the site. Given the lay of the land (quite steep incline westwards), this coal is likely to be at shallow depth beneath the site, below the Kents Rock Sandstone. The former and nearby 'Honeywell Colliery' of the late 1800's (some 30m south of the site) recorded the 'Kents Thick' coal seam at 25m deep at that location. The former 'Smithy Bridge' colliery, some 380m away to the north-north-east, proved the 'Kents Thin' coal seam as being 19m above the Kents Thick seam; along with seam thicknesses as: Kents Thick – 1.2m; Kents Thin – 0.3m.

Given the above detail it is considered likely that the Kents Thin coal seam will lie at circa 5m deep beneath the site itself. However, as this is somewhat based on conjecture a slight possibility will be present for the seam been shallower than anticipated, in which case it may be encountered within future excavation work beneath surface soils and/or any made ground.

## **Made Ground**

No made ground is known within the site; the closest is shown some 15m away to the west which will be associated with the railway embankment.

## **Opencast Coal Workings.**

No opencast coal operations are known within 250m of the site.

## **Underground Coal Workings - Deep**

Deep coal mining (over 30m deep) has taken place beneath the site in the Barnsley Coal seam from the former Honeywell Colliery in the mid to late 1800's at circa 100m deep. All settlement from those workings will be long complete 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**

According to the Mining Remediation Authorities (MRA) interactive viewer information the site lies partially within a referral area which appears to be in relation to the conjectured outcrop of the Kents Thin coal seam detailed above. The area is only outlined as a 'coal outcrop', and NOT an area of 'probable shallow coal mine workings'; which infers that the MRA do not anticipate any unrecorded shallow workings of the coal seams to be of effect. As detailed above, the Kents Thin seam has been proved to be only 0.3m thickness in these parts which will be why there are little known associated underground workings of this seam in the vicinity. Neither are there any known workings of the Kents Thick seam beneath the area, which, given its thickness, will be at a

depth that should not affect stability be it worked or otherwise. As such, the likelihood of any unrecorded shallow mining voids in this instance would be considered low.

### Mine Entries

The known mine entries in the area, associated with the former ‘Honeywell Colliery’ as detailed above, lie over 20m away from the site boundary. As such there will be no stability affects from those features, however note: the fugitive gas risk as detailed below.

It should be noted that a slight risk is always present in coal field areas of discovering mine entries of which there are no records; grey circular areas of fill material within natural ground/bedrock would be an indication of an old mine shaft for example.

### Fugitive Gases

As far as we are aware, no evidence of coal mining related fugitive gas emissions are known within 250m of the site. Given the information there will be some associated risks given the relatively shallow workable coal along with the nearby old mine shafts and potentially fissured bedrock that would create a pathway. These risks will increase if any shallow coal workings are present and even more so if any old mine entries are discovered.

### 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)	<b>Low</b>
Mine entries (shafts and adits)	<b>Low to Moderate</b>
Geological faulting	<b>Low</b>
Geological fissures	<b>Moderate</b>
Fugitive gas emissions	<b>Moderate</b>
Surface mining (opencast workings)	<b>Low</b>
Aggressive ground	<b>Moderate</b>
Coal exposed / near foundation level	<b>Moderate</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) <b>N/A</b>
Intrusive Site Investigation of Coal Seam / Mines of Coal (given nature of proposals).	(Required / Recommended / Unnecessary)** <b>N/A</b>
Advised critical depth beneath foundation/rock-head 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>

## Mining Remediation Authority

Prior written permission from The Mining Remediation (formerly 'Coal') Authority (MRA) 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 MRA'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 SE30NW 2005 Edition*
- *British Geological Survey – Geology Of Britain Viewer*
- *MRA 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) Regarding the **Shallow Coal Mining** position, no further intrusive investigation works for potential shallow mining voids would be deemed necessary in this instance (*as outlined in informative(s) nos. 1 & 2 in appendix 2*), with the associated risks considered low. However, future foundation work/designs should take into account the potential for coal being present beneath any surface soils and/or superficial deposits, with appropriate structural designs adopted.
- 3) Although unlikely, any coal exposed in future excavations will require appropriate considerations for removal and blinding off to help prevent chemical attack on foundations and reduce the risk of spontaneous combustion.
- 4) A watching brief should be adopted during future foundations works for any opened out geological fissures within sandstone bedrock; if encountered suitably designed/strengthened foundations may be required along with prior ground treatment/stabilisation works in sever instances.
- 5) The development should be clear from the closest known mine entries from a stability aspect so no associated investigations are deemed necessary (however note conclusion no. 6 below).

A watching brief should be employed during future ground works for any signs of unrecorded mine entries; grey circular areas with natural ground would be an indication of a mine shaft for example. If suspected the MRA (as owners) should be notified immediately for appropriate deliberations.

- 6) In terms of the fugitive gas risks, considering the nearby mine entries and possibly fissured sandstone bedrock, it would be prudent, in the absence of any further gas monitoring (*note informative no. 3 in appendix 2*), to include gas protection measures (such as a methane membrane and/or positive ventilation layers) within future foundation designs; which could also protect from radon issues if required. All usual safety precautions should be employed regarding possible fugitive gases in any deep excavation work taking place.

***Note: should there be any uncertainty of actual conditions during future ground works Lyons CMC or indeed the Mining Remediation 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 Mining Remediation 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.

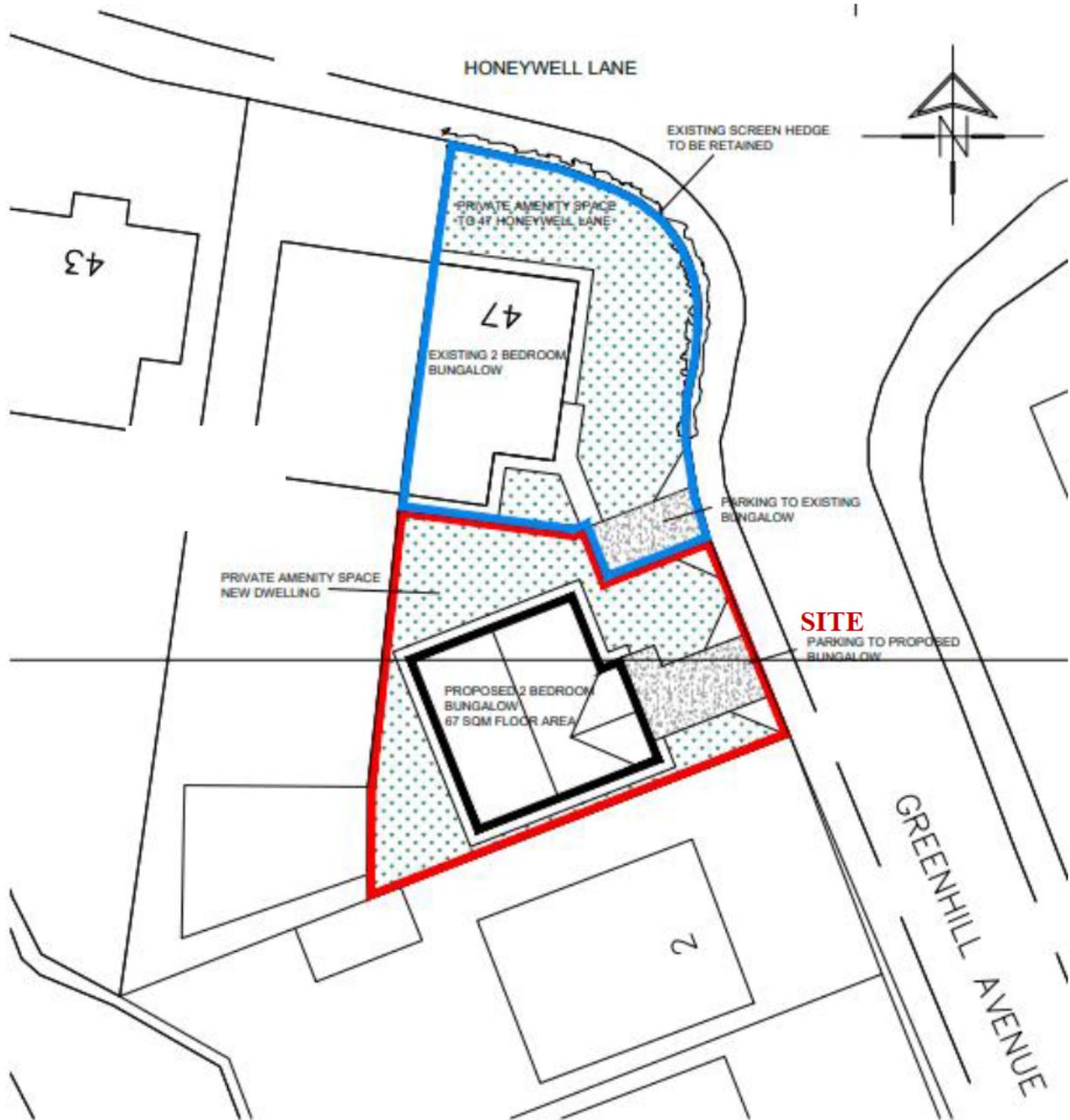
Yours Sincerely,

  
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. 00419/A**  
**(Not To Scale)**  
**Site centred at NGR: 434475E / 407303N**



## Appendix 2 – Informative(s)

- 1) The relatively recently revised CIRIA document titled ‘Abandoned Mine Workings Manual’, which replaced Special Publication 32 (1984), indicates that the use of empirical or ‘rule of thumb’ guides, as the design basis for treatment depth, has been successfully observed for many years for a wide range of abandoned mine workings and overlying rock/soil strata scenarios. As such, the guidance indicates that further design/ground stabilisation considerations will be required if there is less than 10 times the aggregate measured height of mine workings as competent rock cover above the workings.
- 2) For information, should the grouting of any mine workings be required, a 10:1 PFA/cement mix or similar would need to be injected into the workings and any other disturbed strata above it under pressure on an OS coordinated treatment grid approved by the Coal Authority (and Building Control/third-party Warranty provider as required). Specific proposals to treat any mine workings would need to be submitted in the form of a standalone ‘Specification’, with a separate permit to treat being obtained from the Coal Authority. The method of consolidation is dependent on the nature of the bedrock strata and the underground mining conditions encountered, although fissile strata, such as shales and mudstone deposits, do permit mining voids to migrate upwards to quite high levels. All grouting works would need to be supervised by a competent engineer, with a final validation report being produced to confirm what works were undertaken and whether they were successful or not.
- 3) Ground gas monitoring can be undertaken to confirm or discount the presence of an elevated gassing regime within the underlying soils. Elevated concentrations of mine gases (e.g. CO<sub>2</sub>, CH<sub>4</sub>) may be present within the coal seams, voids in or above any shallow mine workings, areas of made ground/opencast backfill, and in any permeable bedrock strata (and any organic rich surficial soils). The period of monitoring to be undertaken should be broadly completed in accordance with current guidance [BS8485]. Piezometers would need to be installed (during drilling works for example) to facilitate this.