

Mr G Ulliyott
Ivy House Farm
Chapel Road
Tankersley
Barnsley
S75 3AR

KRP/AJK/39589/001

BY EMAIL ONLY

20 February 2016

Dear Mr Ulliyott,

Proposed new Dwelling on Land Adjacent to Ivy House Farm, Pilley
Coal Mining Risk Assessment

Further to an instruction from Mr M. Booth at M Booth Design, We write to provide a risk assessment against the possibility of shallow coal mining affecting the site. The risk assessment is based on a review and our interpretation of geological maps, memoirs and Ordnance Survey maps, as well as a Coal Authority Mining Report specific to this site. We have not visited the site.

The Site

The site is located to the west of Chapel Road, in Pilley, South Yorkshire. The site is centred around Ordnance Survey national grid reference SK 334 006 (433431 400628), and the overall site area is around 0.06 hectares. The site currently comprises a grassed paddock. It is proposed to construct a single detached residential dwelling.

The historical maps on olds-maps.co.uk have been reviewed and show the site to be undeveloped previously, with the exception of a number of small sheds during the 1960s which were probably animal sheds and associated with the adjacent Ivy House Farm.

Geological Review

The geological map for the area, Sheet 282 NE (1:10,560 scale), shows the site to be underlain by strata of the Middle Coal Measures. Sandstone is indicated to underlie the site. No measured angles of dip are indicated by the geological map. However, using local borehole and shaft data, it is calculated that the strata dip at an angle of approximately 10° towards the north east. No alluvial or other recent deposits are indicated to cover the site. No faults or other lines of weakness are shown to cross the site although a fault is indicated to

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be present approximately 50 m north east of the site, running with a north west to south east trend parallel with Chapel Road.

The map conjectures the outcrop of the Joan Coal around 130 m south west of the site. Therefore, this is expected to be the shallowest seam of coal below the site. The seam is anticipated to lie at a depth of around 20 to 25 m bgl. A shaft to the east of Pilley encountered the Joan Coal, although the seam thickness was not recorded. Reference to the geological memoir for the area shows that throughout the Barnsley area, the thickness of the Joan Coal varies between 1 and 2 ft (0.3 and 0.6 m). Workings are not indicated to be widespread within this particular seam. Eastwood & Partners have previously carried out intrusive investigations at Ivy Farm to the north and west of this site. Rotary boreholes were drilled to a depth of 20 m bgl in 2007, which did not encounter any seams of coal. The Joan Coal therefore lies at a depth of at least 20 m bgl.

The next shallowest coal seam is expected to be the Flockton Thick Coal. This is recorded as being 14" (0.28 m) thick in a number of shallow shafts to the east of Wharncliffe Silkstone Colliery. The geological memoir states that this seam has been extensively worked all across the Barnsley region. The seam is expected to lie at approximately 29 m below the Joan Coal, meaning that the seam will lie at a depth of approximately 47 m below the site.

The Tankersley Ironstone band is also expected to be present below the site, lying between the Joan Coal and the Flockton Thick Coal. The ironstone has been widely worked in the Tankersley area. Both the historical maps and the geological maps shown old ironstone bell pits located 150 m west of the site. The ironstone is recorded as being several feet thick in the local area, with the band comprising 2.5 inches of ironstone over 3 feet of bind with ironstone balls, over 3 inches of ironstone. 19 feet of bind and black shale then separate the ironstone from the Flockton Thick Coal. It is therefore likely that the two thin ironstone seams and the ironstone containing bind between them has been worked, giving a maximum worked thickness of around 4 feet (1.2 m). From the geological stratagraphical sequence, it is expected that the Tankersley Ironstone lies approximately 17 m below the Joan Coal seam, and therefore can be expected at a depth of approximately 35 m below the site surface. This would seem to be confirmed by a shaft located on the eastern side of Chapel Road opposite the site (and slightly elevated above it) in which the ironstone was encountered at a depth of 40 m bgl. The position of the bell pits also tends to agree with this sequence. The ironstone was not encountered within the previous site investigation.

Coal Authority Mining Report

A Coal Authority mining report has been obtained for the site. A copy is appended to this letter. The report states that the site is within the zone of likely influence from workings in six seams of coal at depth of between 90 m and 250 m, and last worked in 1965. The report states that ground movements as a result of these workings should have stopped by now. The report also states that the site is within an area where the Coal Authority believe there to be coal at, or close to, surface, which could have undergone unrecorded workings in the past. This comment is thought to relate to the Joan Coal.

The site is also within the zone of likely influence of recorded workings within one seam of ironstone at around 30 m below ground level. This is likely to be within the Tankersley Ironstone.

The site is not within an area where workings are currently being undertaken, or where future underground workings are currently proposed.

There are no known coal mine entries within, or within 20 m of the boundary of the property. The Coal Authority state that the records may be incomplete. Consequently, there may exist in the local area mine entries of which the Coal Authority has no knowledge.

The site is not within the legal boundary of an opencast site from which coal has been removed by opencast methods. The site does not lie within 200 m of the boundary of an opencast site from which coal is or is proposed to be being removed by opencast methods.

The Coal Authority has not received any claims for mining related subsidence on the site since 31 October 1994, nor are there any records of any mine gas emissions which have required action by the Coal Authority.

The report does state that resources of coal remain beneath the site which could be worked in the future.

Risk Assessment

The Coal Authority report indicates that there are recorded coal and ironstone workings beneath the site at depths of between 30 m and 250 mbgl, and that another seam of coal is expected to be present at shallow depth. This considered to relate to the Joan Coal.

The geological maps indicate the Joan Coal to be at a depth of around 20 to 25 m below ground level, and previous drilling carried out on the adjacent farm did not encounter the seam within 20 m of surface. The seam is expected to be around 600 mm thick at most.

There will be in excess of ten times the seam thickness of competent bedrock present between the seam and the underside of the proposed foundations, and therefore a significant risk of ground movement caused by the collapse of old workings, if present, is unlikely to exist.

Workings within deeper coal seams, or within the Tankersley Ironstone are also unlikely to affect the proposed development.

It is therefore considered that the site will not be affected by shallow mine workings, and remedial measures such as drilling and grouting are not required.

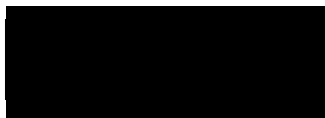
The future working of the remaining coal reserves beneath the site is considered to be very unlikely, given the demise of the UK coal mining industry. Any proposed workings in the future would be subject to planning permission, and any damage to existing properties caused by ground movement as a result of coal mining activities would be for the Coal Authority to correct.

Conclusion

The Joan Coal is expected to be the shallowest seam of coal below the site, at a depth of at least 20 mbgl. At this depth, no effects are expected to be felt at surface, and therefore it is concluded that the site is not at risk from the effects of shallow coal mining.

This risk assessment should be submitted to the regulators for their review.

Yours sincerely



K R Pursall

Enc. Coal Authority Mining Report

Copy: Mr M Booth – M Booth Design (by Email)



Issued by:

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Our reference: **51001097470001**
Your reference: **79481464_1|**
Date of your enquiry: **08 February 2016**
Date we received your enquiry: **08 February 2016**
Date of issue: **08 February 2016**

This report is for the property described in the address below and the attached plan.

Non-Residential Coal Authority Mining Report

IVY HOUSE FARM, CHAPEL ROAD, TANKERSLEY, BARNSELY, SOUTH YORKSHIRE

This report is based on and limited to the records held by, the Coal Authority, and the Cheshire Brine Subsidence Compensation Board's records, at the time we answer the search.

Coal mining	See comments below
Brine Compensation District	No

Information from the Coal Authority

Underground coal mining

Past

The property is in the likely zone of influence from workings in 6 seams of coal at 90m to 250m depth, and last worked in 1965.

Any ground movement from these coal workings should have stopped by now.

In addition the property is in an area where the Coal Authority believe there is coal at or close to the surface. This coal may have been worked at some time in the past. The potential presence of coal workings at or close to the surface should be considered prior to any site works or future development activity. Your attention is drawn to the Comments on Coal Authority Information section of the report.

The property is in the likely zone of influence from workings in 1 seam of ironstone at 30m depth, and last worked in 1850.

Present

The property is not in the likely zone of influence of any present underground coal workings.

Future

The property is not in an area for which the Coal Authority is determining whether to grant a licence to remove coal using underground methods.

The property is not in an area for which a licence has been granted to remove or otherwise work coal using underground methods.

The property is not in an area that is likely to be affected at the surface from any planned future workings.

However, reserves of coal exist in the local area which could be worked at some time in the future.

No notice of the risk of the land being affected by subsidence has been given under section 46 of the Coal Mining Subsidence Act 1991.

Mine entries

There are no known coal mine entries within, or within 20 metres of, the boundary of the property.

Records may be incomplete. Consequently, there may exist in the local area mine entries of which the Coal Authority has no knowledge.

Coal mining geology

The Authority is not aware of any evidence of damage arising due to geological faults or other lines of weakness that have been affected by coal mining.

Opencast coal mining

Past

The property is not within the boundary of an opencast site from which coal has been removed by opencast methods.

Present

The property does not lie within 200 metres of the boundary of an opencast site from which coal is being removed by opencast methods.

Future

The property is not within 800 metres of the boundary of an opencast site for which the Coal Authority is determining whether to grant a licence to remove coal by opencast methods.

The property is not within 800 metres of the boundary of an opencast site for which a licence to remove coal by opencast methods has been granted.

Coal mining subsidence

The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 metres, since 31st October 1994.

There is no current Stop Notice delaying the start of remedial works or repairs to the property.

The 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

There is no record of a mine gas emission requiring action by the Coal Authority within the boundary of the property.

Hazards related to coal mining

The property has not been subject to remedial works, by or on behalf of the Authority, under its Emergency Surface Hazard Call Out procedures.

Withdrawal of support

The property is not in an area for which a notice of entitlement to withdraw support has been published.

The property is not in an area for which a notice has been given under section 41 of the Coal Industry Act 1994, revoking the entitlement to withdraw support.

Working facilities orders

The property is not in an area for which an Order has been made under the provisions of the Mines (Working Facilities and Support) Acts 1923 and 1966 or any statutory modification or amendment thereof.

Payments to owners of former copyhold land

The property is not in an area for which a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

Comments on Coal Authority information

In view of the mining circumstances a prudent developer would seek appropriate technical advice before any works are undertaken.

Therefore 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 good engineering practice developed for mining areas. No development should be undertaken that intersects, disturbs or interferes with any coal or mines of coal without the permission of the Coal Authority. Developers should be aware that the investigation of coal seams/former mines of coal may have the potential to generate and/or displace underground gases and these risks both under and adjacent to the development should be fully considered in developing any proposals. The need for effective measures to prevent gases entering into public properties either during investigation or after development also needs to be assessed and properly addressed. This is necessary due to the public safety implications of any development in these circumstances.

Information from the Cheshire Brine Subsidence Compensation Board

The property lies outside the Cheshire Brine Compensation District.

Additional Remarks

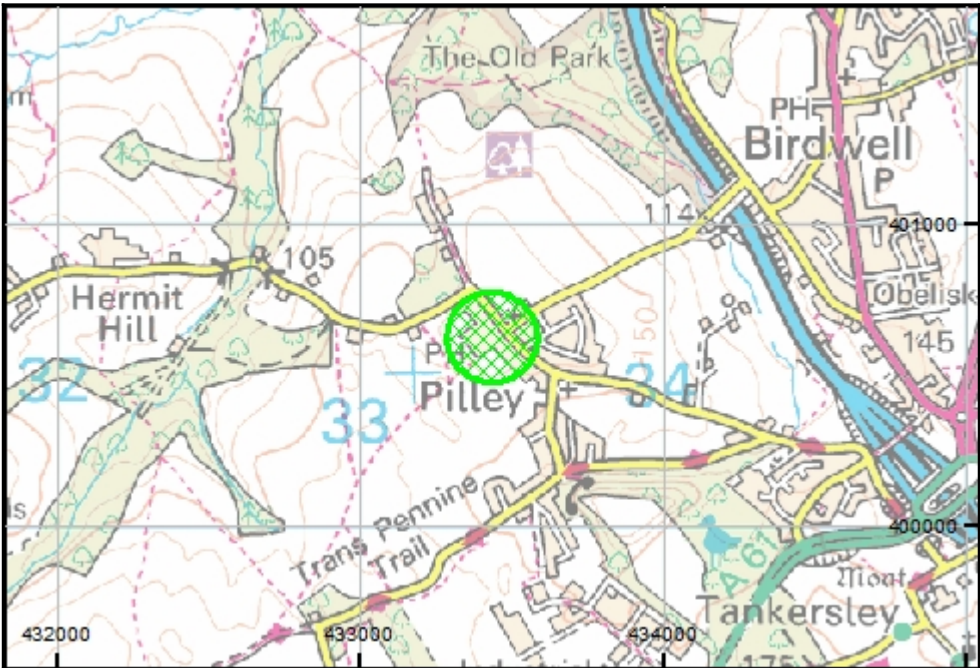
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Location map



Approximate position of property



Enquiry boundary

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Key

Approximate position of enquiry boundary shown

