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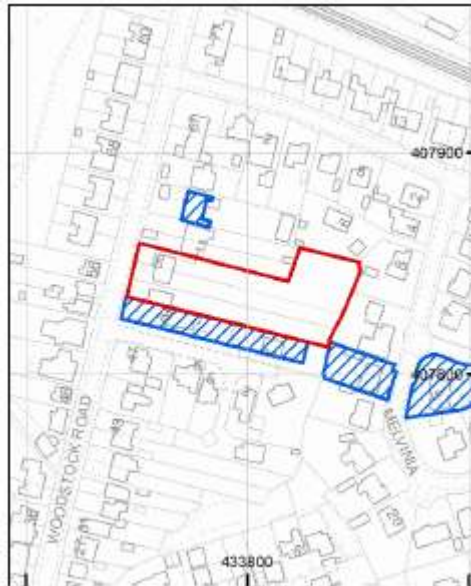
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Land at 51, 53 and 55 Woodstock Road

Coal Mining Risk Assessment

October 2019

Coal Mining Risk Assessment



Report Title	Land at 51, 53 and 55 Woodstock Road Coal Mining Risk Assessment	Site Address	51, 53 and 55 Woodstock Road, Barnsley, S75 1DX
Author	RB Geotechnical	Contamination / Geotechnical	Geotechnical
Work Stage	Coal Mining Risk Assessment	Report Date	October 2019
Brief Description of the Report Contents	A desk based assessment on the risks posed by coal mining to the site and the proposed new development		

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Document Control

Project: Land at 51, 53 and 55 Woodstock Road Coal Mining Risk Assessment
Client: Clayburn Properties Ltd
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Prepared and Issued by Ross Blake BSc MSc FGS, Engineer. Signed :



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APPENDICES

Appendix A	Coal Authority Coal Mining Report
Appendix B	Geological Map Extract
Appendix C	Site Walkover Photographs
Appendix D	Proposed Development Plan

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Disclaimer

This report was produced by **RB Geotechnical** for Clayburn Properties Ltd (The Client), for the specific purpose of a Coal Mining Risk Assessment for the proposed construction of six new residential properties on the land at 51, 53 and 55 Woodstock Road in Barnsley, South Yorkshire. This report may not be used by anyone else other than the client without their express permission. In any event, **RB Geotechnical** accepts no liability for any costs, liabilities or losses arising from the use of reliance upon the contents of this report by anyone other than the client.

1.0 INTRODUCTION

Clayburn Properties Ltd are to submit a planning application for the proposed construction of six new residential properties on the land situated on and behind that currently occupied by 51, 53 and 55 Woodstock Road.

RB Geotechnical was commissioned by the client to carry out a Coal Mining Risk Assessment of the proposed site, in order to satisfy the Coal Authority requirements.

Terms and Conditions

Although every effort has been made to ensure the accuracy of the information contained herein, no checks have been carried out to ensure the accuracy of information obtained from third parties and no liability can be accepted for any errors or misinterpretation of the third party information where it has been incorporated into this report.

This assessment is compliant with the 2017 Coal Authority Guidance '*Risk Based Approach to Development Management. Guidance for Developers. Version 4*', with this report structured as advised by this guidance. This report is concerned only with precautions related to potential mining issues.

Site Location and Description

The site is situated on Woodstock Road in Barnsley, South Yorkshire, at the land currently occupied by property numbers 51, 53 and 55 Woodstock, Road, in addition to the parcel of land situated to the East of these properties. The houses currently on site, are located in the West by Woodstock Road, with overgrown land, bushes and trees occupying the majority of the rest of the site. The surrounding area is occupied by houses.

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Site Walkover

RB Geotechnical carried out a site walkover on 30th October 2019. Photos from this site walkover are presented in Appendix C. The following was identified during this walkover:

- Access to the site is currently restricted for construction plant, by existing buildings and vastly overgrown weeds/bushes; and
- The current barn type building on site shows no evidence of subsidence or damage, which could be related to the unrecorded mine workings.

Proposed Development

The site is to have six new residential properties constructed, each with new private back gardens and driveways, in addition to a new access road, following demolition of property number 51. The proposed development plan is shown as Appendix D.

Scope of the Coal Mining Risk Assessment

The purpose of this Coal Mining Risk Assessment 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;
- Set out appropriate mitigation measures to address the coal mining legacy issues affecting the site, including any necessary remedial works and/or demonstrate how coal mining issues have influenced the proposed development;
- Demonstrate to the Coal 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.

2.0 SOURCES OF INFORMATION USED

The following information has been reviewed in this Risk Assessment, extracts from which are appended:

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- A Coal Authority Coal Mining Report Dated 30th October 2019 – Appendix A;
- Site Geological information obtained from the British Geological Survey Website (www.bgs.ac.uk).
Map extract in Appendix B;
- Site history based on historic Ordnance Survey mapping of the area Taken from website:
<http://old-maps.co.uk>. and
- Other online sources.

3.0 IDENTIFICATION AND ASSESSMENT OF SITE SPECIFIC COAL MINING RISKS

The table below summarises the potential risks associated with coal mining legacy for the proposed development site, identified from the listed sources above.

Coal Mining Issue	YES	NO	Risk Assessment Mitigation Strategy
Underground Coal Mining (Recorded at shallow depths)		X	
Underground Coal Mining (probable at shallow depths)	X		Intrusive Investigation Recommended
Mine entries (shafts and adits)		X	
Coal mining geology (fissures)		X	
Record of past mine gas emissions		X	

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Recorded coal mining surface hazard		X	
Surface mining (opencast workings)		X	

- The Coal Authority Interactive Viewer indicates that the site is in a 'Development High Risk Area' which means that the site is in an area where one or more recorded coal mining related features which have the potential for instability or a degree of risk to the surface from the legacy of coal mining operations. It also indicates that the site is in an area of Probable Shallow Coal Mine Workings, with coal outcrops situated adjacent to the West of the site.
- The Coal Authority (CA) report (included as Appendix A), indicates that the site is in an area that could be affected by underground mining in 8 seams of coal at depths from 70mbgl to 486mbgl, last worked as recently as 1986. The site is stated to be in an area where the Coal Authority believes there is coal at or close to the surface. There are no mine entries within 20m of the site boundary. No opencast mining is noted on or near to the site. There is however evidence of coal mining subsidence claims for nearby properties, some of which have been settled.
- The BGS GeoIndex shows the site to be underlain by bedrock of the Kent's Rock Sandstone. Geological maps (extract shown in Appendix B), show the nearest coal seam as the Kent's Thin Coal, which is noted to have a typical thickness ranging from 0.30m to 2.60m mapped outcropping close to the Western site boundary. The geological map also shows infilled land located adjacent to the South of the site. Two faults are mapped within 250m of the site boundary, located from approximately 180m to the North to 250m to the South.
- Historical maps show the site to be situated within open fields up until around 1931, when it is shown to have the houses that currently exist. A number of old collieries, coal pits and shafts are evident on the older historical maps within 250m of the site boundary, confirming the presence of mining activity nearby.

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- Upon inspecting the document 'Geology of the Barnsley District, a brief explanation of the geological map sheet 87, Barnsley, 2007, it is evident that the Kent's Thin and Kent's Thick Coal Seams (mapped adjacent to the site), were widely worked.

4.0 MITIGATION STRATEGY PROPOSED

Upon inspecting historical maps, there is clear evidence of mining activity in the close surrounding area. The site is noted to be within a Coal Authority 'Development High Risk Area', whereby the Coal Authority believe that a risk of unrecorded mine workings does exist. Geological maps show coal seams very close to the site, which are known to have been widely worked. RB Geotechnical therefore believes that an intrusive investigation will be required on the site to assess the underlying ground conditions for the potential presence of unrecorded mine workings

At this stage the following intrusive investigation works are recommended as a minimum:

- 6 No. Rotary Open Hole Boreholes to depths up to 30.0mbgl, to assess for potential mine workings across the site; and
- Machine excavated Trial Pits to assess for evidence of possible opencast mining or shallow at surface mining on the site.

The Coal Authority Permission

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

5.0 CONCLUSION

The Coal Authority report indicates that they believe the site is in an area where shallow coal mining is probable at shallow depths beneath the site, therefore, the site is classified as being of a High Risk Development.

Geological maps show Coal Seams outcropping close to the site, which are known to have been historically worked.

RB Geotechnical therefore believes that there is the potential for unrecorded mine workings beneath the site and it has therefore been deemed necessary to recommend that an intrusive investigation be carried out across the site to assess this possibility.