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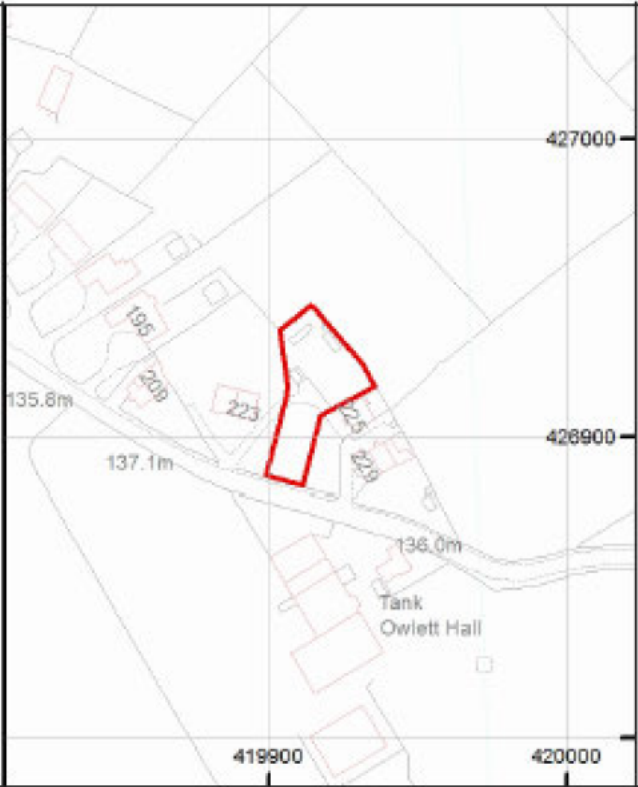
Land at 225 Drub Lane, Cleckheaton

Coal Mining Risk Assessment

January 2018

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RB Geotechnical

			
Report Title	Land at 225 Drub Lane, Coal Mining Risk Assessment	Site Address	225 Drub Lane, Cleckheaton, BD19 4BZ
Author	RB Geotechnical	Contamination / Geotechnical	Geotechnical
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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 225 Drub Lane, Coal Mining Risk Assessment

Client: Mr Simon Bould

Job Number: RBG054

Prepared and Issued by Ross Blake BSc MSc FGS, Engineer. Signed :

redacted

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APPENDICES

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

Disclaimer

This report was produced by **RB Geotechnical** for the client, for the specific purpose of a Coal Mining Risk Assessment for the proposed development of one detached property at the land situated beside 225 Drub Lane in Cleckheaton, West 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

Mr Simon Bould is to submit a planning application for the proposed development of a detached property with driveway and gardens on the land beside 225 Drub Lane in Cleckheaton.

RB Geotechnical was commissioned by Mr Simon Bould to carry out a Coal Mining Risk Assessment of the proposed site, in order to provide the Local Planning Authority with information on coal mining and an assessment of its impact on land stability.

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 approximately 200m to the South East of the small West Yorkshire village of Drum, on Drub Lane, BD19 4BZ. The site is accessed off Drub Lane to the South up towards the current bungalow of 225 Drub Lane. The South of the site currently comprises lawned gardens, with the North of the site used for storing chickens in another grassed area. A small rectangular Yorkshire stone building is situated along the Northern site boundary. The site is bounded by open fields to the North, residential properties to the East and West and Drub lane to the South.

Proposed Development

The proposed development is to comprise the construction of a detached house with driveway and private gardens. Proposed development plans are included in **Appendix A.**

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 Local 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:

- A Coal Mining Report Dated 24th January 2018 – Appendix B;
- Geological information obtained from the British Geological Survey Website (www.bgs.ac.uk). Map extract in Appendix C;
- Site history based on historic Ordnance Survey mapping of the area Taken from website: <http://old-maps.co.uk>. Map extract shown in Appendix D.
- Site Walkover carried out on 24th January 2018. Photos shown in Appendix E.
- 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	
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 o a degree of risk to the surface from the legacy of coal mining operations.

Coal Mining Risk Assessment

- The Coal Authority (CA) report (included as Appendix B), indicates that the site is in an area which could be affected by underground mining in two seams of coal at depths of 80mbgl to 130mbgl. Additionally, the Coal Authority believe that the site is in an area where there is coal at or close to the surface which may have been mined in the past
- The site is not in an area of present underground coal mining, nor are there any known mine entries within 20m of the site boundary. The CA report also states that the site is not within the boundary of an opencast site.
- Geological maps (extract shown in Appendix C), show the site to be underlain by a Mudstone, Sandstone and Siltstone of the Pennine Lower Coal Measures. A fault is mapped approximately 140m to the North of the site, trending in a North East to South West direction, with the site on the up-thrown side. A coal seam (Middleton Little Coal Seam) is mapped 80m to the South East of the site, and has a typical thickness of 0.20m to 0.90m.
- Historical maps show the site to remain as open undeveloped farm land up until the early 1900s when the site became first occupied by the small buildings still present today. Upon inspecting the earliest available historical map of 1854, there is evidence of coal pits and an old colliery situated within close vicinity of the site, indicating that it is in an area where coal mining in some form has taken place in the past. A historical map extract from 1854 is shown in Appendix D.
- Upon carrying out the site walkover and inspecting the existing building on the site and adjacent to the site, there was no evidence of structural damage or cracking. Full site walkover photographs are included in Appendix E.

4.0 MITIGATION STRATEGY PROPOSED

The evidence of historical mining activities close to the site, along with nearby outcrops of coal seams indicates that there is the potential for the site to be at risk from possible effects of unrecorded mine workings. Additionally the site is situated within what the Coal Authority has classed as being a 'High Risk Area'. RB Geotechnical therefore believes that an intrusive investigation will be required on the site to ensure that the site is not at risk of possible underground mine workings.

An Intrusive Investigation will be necessary on the site, to assess the extent of possible coal mining risks to the proposed development. At this stage the following intrusive investigation works are recommended as a minimum:

- 2 No. Rotary Open Hole Boreholes to depths up to 20.0mbgl, to assess for potential mine workings at depth in the proposed building footprint.

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 beneath the site, and therefore the site is classified as being of a High Risk Development.

Geological maps show coal seams and faults within close vicinity to the site, and historical maps show evidence of coal mining activity also within a close vicinity to the site.

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.