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Proposed Development at Whitley Lower

Coal Mining Risk Assessment

September 2020

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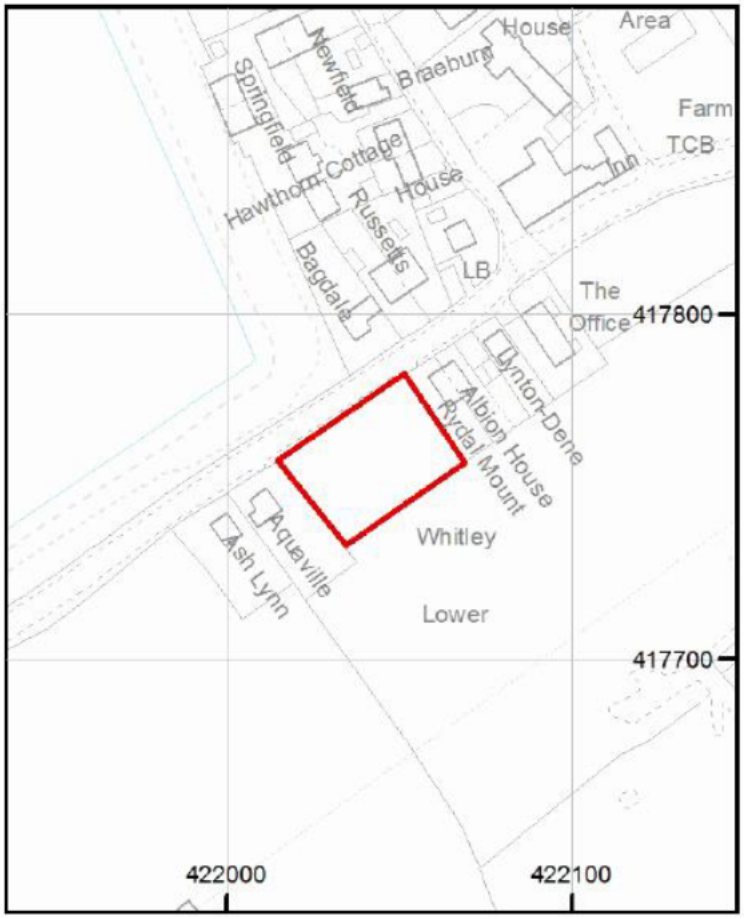

Report Title	Whitley Lower Coal Mining Risk Assessment	**Site Address**	Infill Development, Whitley Lower, WF12 0NB
Author	RB Geotechnical	**Contamination / Geotechnical**	Geotechnical
Work Stage	Coal Mining Risk Assessment	**Report Date**	September 2020
Brief Description of the Report Contents	A desk-based assessment on the risks posed by coal mining to the site and the proposed new development		

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Document Control

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Client:	Mr P. Collins
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Prepared and Issued by Ross Blake BSc MSc FGS, Engineer. Signed:

redacted

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Disclaimer

This report was produced by RB Geotechnical for Mr P. Collins (The Client), for the specific purpose of a Coal Mining Risk Assessment for the proposed new dwellings at Whitley Lower, 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

The client is to prepare an outline planning application for a proposed development of two residential dwellings at Whitley Lower in West Yorkshire.

RB Geotechnical was commissioned by the client to carry out a Coal Mining Risk Assessment of the proposed site, in order to assess the risk of possible unrecorded mining activities.

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 proposed development site is situated off Whitley Road in Dewsbury, West Yorkshire, at a currently undeveloped plot of grassland situated close to the junction with Scopsley Lane and Whitley Reservoir.

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The site is bounded to the North East and South West by fences of two properties. The Northern boundary is marked by a hedge and Whitley Road.

Proposed Development

Two new detached residential dwellings are proposed to be constructed on the site, each with private driveways and back gardens. The proposed development plans are shown in Appendix C.

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:

- A Coal Authority Coal Mining Report Dated 30th September 2020 – Appendix A;
- Site Geological information obtained from the British Geological Survey Website (www.bgs.ac.uk). Map extract in Appendix B;

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- Site history based on historic Ordinance Survey mapping of the area using 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 Required**
Mine entries (shafts and adits)		X	
Coal mining geology (fissures)		X	
Record of past mine gas emissions		X	
Recorded coal mining surface hazard		X	

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Surface mining (opencast workings)		**X**	
Coal at or Close to Surface which could have been mined in past	**X**		**Intrusive Investigation Recommended**

- 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 shows a number of coal seams within close proximity to the site itself, in addition to being noted as in an area of probable shallow coal mining.

- 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 1 coal seam at a depth of 80mbgl. Additionally, the site is in an area where the Coal Authority believe there is coal at or close to the surface, which may have been worked in the past. No mine entry points are mapped within 20m of the site boundary.

- The BGS GeoIndex shows the site to be underlain by bedrock of the Lepton Edge Sandstone Formation, typically a very fine grained, thinly bedded Sandstone. The nearest coal seams are mapped from 150m to the North West (Second Brown Metal Coal Seam, with a thickness of 0.00m to 1.00m) and 200m to the South (Middleton Little Coal, with a thickness of 0.20m to 0.90m). Faults are mapped from 70m to the South of the site and 100m to the North, trending in North to South directions. The Geo-Index indicates a number of historical boreholes situated from approximately 200m to the South of the site, with ground conditions found to generally comprise a 'flaggy sandstone' to depths of 6.0m to 8.0m.

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- Historical maps dating back to 1855 show the site to remain undeveloped throughout. During the late 1800s there is evidence of coal pits, collieries and shafts within the close surrounding area. up until the 1980s. Upon inspecting these maps, there was no evidence of mining or mine related operations in the local area. There is however the possibility of unrecorded mining activity in the area and even on the site itself prior to the date of the earliest available map;

- Upon inspecting the document 'Sheet Description of British Geological Map 77, Huddersfield' it has been established that the nearby coal seams are known to have been historically worked for household coal use.

4.0 MITIGATION STRATEGY PROPOSED

Coal seams are mapped outcropping close to the site, of which are known to have been widely worked in the past. The site is also noted as being within a 'Development High Risk Area' by the Coal Authority. 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 mine workings.

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

- 2 No. to 3 No. Rotary Open Hole Boreholes to depths up to 30.0mbgl, to assess for potential mine workings at depth.

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

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5.0 CONCLUSION

Upon inspecting all available data, including geological maps, memoirs and historical maps RB Geotechnical are of the opinion that further intrusive works will be required at this site to fully assess the true risk of potential mine workings beneath the site.