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Land off Windhill Lane

Coal Mining Risk Assessment

March 2021

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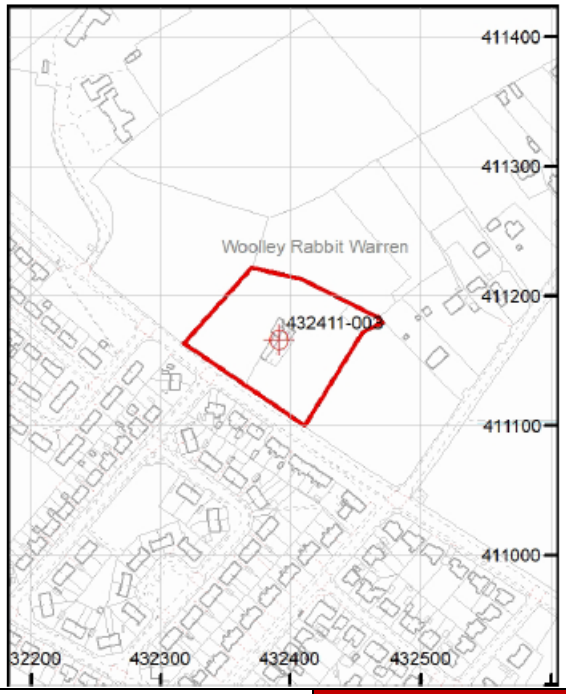

Report Title	Land off Windhill Lane Coal Mining Risk Assessment	**Site Address**	Land off Windhill Lane, Staincross, Barnsley, S75 5BH
Author	RB Geotechnical	**Contamination / Geotechnical**	Geotechnical
Work Stage	Coal Mining Risk Assessment	**Report Date**	March 2021
Brief Description of the Report Contents	A desk-based assessment on the risks posed by coal mining to the site and the proposed new development		

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Appendix A - Coal Authority Mining Report

Appendix B - Geological Map Extract

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Disclaimer

This report was produced by RB Geotechnical for Mr J. Sanderson (The Client), for the specific purpose of a Coal Mining Risk Assessment for the planning application related to the proposed redevelopment on the land off Windhill Lane in Staincross, Barnsley. 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 preparing a planning application for the proposed development of a new sound recording studio on the Land off Windhill Lane in Staincross, Barnsley.

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.

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Site Location and Description

The site is situated in the middle of a field opposite the junction of Keswick Road and Windhill Lane in Staincross, Barnsley. It is currently occupied by an old wooden stable, with access to the North East of Windhill Lane.

Proposed Development

The proposed development comprises demolition of the current stables, and construction of a new building for sound recording.

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 24th March 2021 – Appendix A;

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- Site Geological information obtained from the British Geological Survey Website (www.bgs.ac.uk). Map extract in Appendix B;
- 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		**Intrusive Investigation Recommended**
Underground Coal Mining (probable at shallow depths)		X	
Mine entries (shafts and adits)	X		**Intrusive Investigation Recommended**
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	
Coal at or Close to Surface which could have been mined in past		X	
Coal Seam Directly Beneath Site		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 shows that the site is in an of recorded shallow mine workings, with at least two coal seams outcropping beneath 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 seams of coal at shallow depths. Additionally, a mine entry is mapped on the site, directly beneath the current stables buildings. There are no records of what steps have been taken to treat this mine entry.

- The BGS GeoIndex and geological maps shows the site to be underlain by bedrock of the Pennine Middle Coal Measures, Sandstone, Mudstone and Siltstone. The nearest coal seams located within 50m of the site boundary are noted as the Meltonwood Coal (up to 2.30m thick), the Two-Foot

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Coal (Up to 2.10m thick) and the Abdy Coal (Up to 1.90m thick). A fault is mapped approximately 90m to the East of the site, trending in a North to South direction.

- Historical maps dating back to 1854 have been assessed in order to identify whether any coal mining activities have taken place on or close to the site. Upon viewing the maps, it is evident that the site was historically used for farming (labelled as Warren Farm), and even notes to have the 'old coal shaft' . A large colliery is also shown from approximately 500m to the North of the site.

- Geological Memoirs, notably 'Geology of the Barnsley District, 2007' indicates that the above noted coal seams adjacent to the site have all been known to have been widely worked using opencast and underground methods.

4.0 MITIGATION STRATEGY PROPOSED

The site is noted as being within a 'Development High Risk Area' by the Coal Authority, due to the presence of recorded shallow mine workings and likely coal at shallow depths. A large colliery was historically active relatively close to the site, with the nearby coal seams known to have been worked.

RB Geotechnical therefore believes that an intrusive investigation will be required on the site to assess for potential unrecorded mine workings which could affect the proposed new development.

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

- 3 No. Rotary Open Hole Boreholes to depths up to 30.0mbgl to assess for potential shallow mine workings; and

- Reduced Level Digs to assess for presence of historical mine shaft.

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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

Upon inspecting all available data, including geological maps 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.