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# Development at Land off Manchester Road, Millhouse Green

## Coal Mining Risk Assessment

## February 2021

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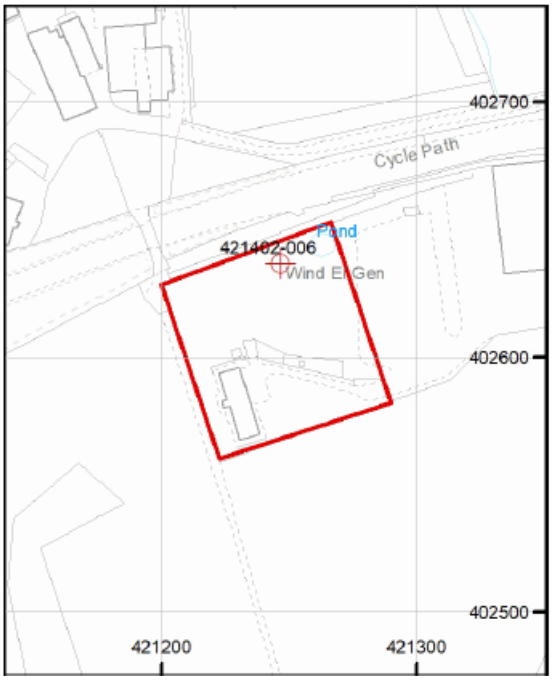


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| **Report Title** | Redevelopment at Millhouse Green Coal Mining Risk Assessment | **Site Address** | Land off Manchester Road, Millhouse Green, S36 9LQ |
| **Author** | RB Geotechnical | **Contamination / Geotechnical** | Geotechnical |
| **Work Stage** | Coal Mining Risk Assessment | **Report Date** | February 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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**Document Control**

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| **Project:** | Redevelopment at Millhouse Green Coal Mining Risk Assessment |
| **Client:** | Mr Dillingham |
| **Job Number:** | RBG222 |

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

| Issue | Date | Status |
|---|---|---|
| 001 | February 2021 | Final |

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Disclaimer

This report was produced by RB Geotechnical for Mr Dillingham (The Client), for the specific purpose of a Coal Mining Risk Assessment for the proposed re-development at the Land off Manchester Road in Millhouse Green 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

Mr Dillingham is in the process of submitting a planning application for proposed re-development at the Land off Manchester Road in Millhouse Green in Barnsley, South Yorkshire.

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 proposed development site is situated to the West of the existing warehouse buildings and the area of rough hardstanding with a small mound, off Manchester Road in Millhouse Green, situated to the West of

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Barnsley, South Yorkshire. The site is currently occupied by a large detached house, with a driveway and grassed gardens. The National Grid Reference for the centre of the site is 421251, 402618.

### Proposed Development

The site is intended for demolition of this large house, with two new residential dwellings built in its place.

### 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 25th February 2021 – 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 – Taken from Phase I Desk Study, March 2020.
- 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 | | **Intrusive Investigation Recommended** |
| Mine entries (shafts and adits) | X | | **Intrusive Investigation Recommended** |
| 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 | |

- 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 Recorded Shallow Coal Mine Workings, with coal outcrops mapped on 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 1 seam of shallow coal. The site is also stated to be in an area where a mine entry point is identified (in the North East of the site).

- The BGS GeoIndex shows the site to be underlain by bedrock of the Pennine Lower Coal Measures, Sandstone, Mudstone and Siltstone. Geological maps (extract shown in Appendix B), shows a coal seam (36 Yard Coal), mapped directly beneath the site. A fault is mapped running directly through the centre of the site, from East to West, with another fault mapped from approximately 50m to the East of the site, trending in a North to South direction.

- Historical maps show the site to be situated within the vicinity of Bullhouse Colliery, with airshafts shown on the site. A number of collieries and pits are mapped within 250m of the site boundary, throughout the historical maps.

- Upon inspecting online sources available, the Bullhouse Colliery was a busy colliery, where underground mining was carried out.

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## 4.0 MITIGATION STRATEGY PROPOSED

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. The site is known to be underlain by a coal seam which is known to have been worked, with a colliery historically mapped on the site itself. Additionally, a mine entry is mapped on the site, with another adjacent to the Western boundary. 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 and the mine entry point.

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 mine workings across the site; and
- 3 No. machine excavated reduced level digs to assess for potential mine entry point.

### 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 recorded at shallow depths beneath the site, therefore, the site is classified as being of a High-Risk Development.

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Geological maps show Coal Seams outcropping beneath the site in addition to a fault. Additionally, the site is located at an old coal mine.

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.