



**BROWNFIELD
SOLUTIONS LTD**

GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE

D MORGAN

Newhey Quarry, Rochdale

Coal Mining Risk Assessment

JMC/C4315/8856 Rev A

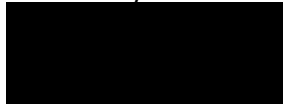
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DRAWINGS

Drawing Number	Rev	Title
C4315/01	-	Site Location Plan
C4315/02	-	Geological Map Extract
C4315/03	-	Coal Authority Interactive Viewer Extract

APPENDICIES

Appendix	Title
Appendix A	BGS Boreholes
Appendix B	Coal Authority Report

1.0 INTRODUCTION

1.1 Objectives

This report describes a Coal Mining Risk Assessment carried out by Brownfield Solutions Limited (BSL) for D Morgan on a site at the suspended Newhey Quarry.

The purpose and objectives of this Coal Mining Risk Assessment are as follows:

-
- Review of all available information on the coal mining issues which are relevant to the application site;
 - Identify and assess the risks to the proposed development from coal mining, including the cumulative impact of issues;
 - Recommend mitigation measures to address the coal mining issues affecting the site, including any necessary remedial works and/or demonstrate how coal mining issues have influenced the proposed development; and
 - Demonstrate to the Local Planning Authority that the application site is, or can be made, safe and stable to meet the requirements of national planning policy with regards to development on unstable land.
-

1.2 Proposed Development

The proposed development is for a residential end use comprising traditional low-rise housing, gardens and associated access roads.

It is understood the site will undergo regrading in order to mitigate against the risk from slope stability at the site. The extent of the works to be completed are unclear at this stage.

1.3 Previous Reports

This report should be read in conjunction with the following reports which have been produced at for the site:

-
- Robson Fletcher Consultants Ltd, Landfill Development Assessment, Report No. 16131/2, issued December 1994.
 - Robson Fletcher Consultants Ltd, Mineral Extraction Under Existing Planning Permission, Quarry Management Considerations, Slope Stability Assessment and Safe System of Work, Report No. UK94/16131/21f, issued January 1996.
 - Lees Roxburgh Consulting Engineers, Phase 1 Geo-environmental Assessment (Desk Study), Report Ref: 6400/R1, issued July 2019.
-

1.4 Limitations

The findings and opinions conveyed via this report are based on information obtained from a number of sources as detailed within this report, BSL have assumed this information is correct and reliable. Nevertheless, BSL cannot and does not guarantee the authenticity or reliability of the information it has relied upon.

This report has been prepared for the sole use and reliance of the Client, D Morgan. No other third parties may rely upon or reproduce the contents of this report without the written permission of Brownfield Solutions Ltd (BSL). If any unauthorised third party comes into possession of this report they rely on it at their own risk and BSL do not owe them any Duty of Care.

Any recommendations made in this report should be confirmed with the Regulatory Authorities prior to implementation to ensure compliance.

This assessment has been based on the proposed planning layouts provided. Any subsequent change to the planning layout may have an impact on the validity of recommendations made within this report. Furthermore, new information, changed practices or new legislation may necessitate revised interpretation of the report after the date of its submission.

There may be other conditions prevailing on the site which are outside the scope of work and have not been highlighted by this assessment and therefore have not been taken into account by this report. Responsibility cannot be accepted for such site conditions not revealed by the assessment.

The site plans enclosed in this report should not be scaled off. Any site boundary line depicted on plans does not imply legal ownership of land.

2.0 THE SITE

2.1 Location

The site is located off Huddersfield Road, on the north eastern outskirts of Newhey, circa 4.5km south east of Rochdale Town Centre. The site is centred on National Grid Reference 394080, 412010 as shown on the Site Location Plan, Drawing No. C4315/01.

2.2 Site Description

A walkover survey was carried out on the site on the 9th September 2019. The main site features and relevant potential issues identified during this survey are detailed below.

Feature	Description
Site Area	The site covers an area of 18.3 hectares.
Site Access	The main area of the quarry to the south of the development area can be accessed via a locked gated entrance off Huddersfield Road, followed by an asphalt road leading into the quarry. The upper fields above the quarry face can be accessed via Bradley Lane.
Current Land Use and Site Features	<p>The site is irregular in shape and currently comprises the suspended Newhey Quarry in the south of the site. Extensive workings have left an approximately 40-50m high cliff face at the northern edge of the quarrying activities.</p> <p>Along the southern areas of the quarry the site slopes down towards Huddersfield Road. The asphalt access road also slopes down towards the site entrance and very steeply toward a large pond on site.</p> <p>Two ponds are present within the quarry, one is located to the north of the asphalt road and the other is located in the central southern area of the quarry.</p> <p>A small brick building and manhole is also present in the centre of the quarry. Historical mapping describes the building as a 'Ruin' since 1955.</p> <p>Above the quarry to the north are grass covered fields with associated post, wire and stone fencing. The fields are primarily used for horse grazing. There are also two ponds located in the upper fields, one located in the centre of the fields and the other is located in the upper north eastern corner of the fields.</p>
Vegetation	There are various mature and semi mature trees are present on the slope along the southern boundary which is densely populated with primarily semi-mature trees within the main area of the quarry, including abundant birch and occasional oak trees.
Topography	<p>The site varies significantly in topography. As noted, there is a high cliff face approximately 40m in height, orientated east-west through the centre of the site. There is also a steep to gentle slope at the top of the cliff leading toward the fields.</p> <p>The southern boundary and access road slopes steeply towards Huddersfield Road. Due to this the access road becomes a higher elevation than the main quarry floor and therefore slope steeply towards the quarry/pond to north of the asphalt road.</p> <p>The fields in the north of the site show a gentle slope from the farm to the west of the site and slopes steeply towards the quarry cliff.</p>
Site Boundaries	External boundaries consist largely of post and wire fencing with stone walls in places with farm units located west directly adjacent to the site. The quarry is largely bordered by trees and fencing and residential dwellings in the south, east and west.
Surrounding Area	The surrounding area is generally residential to the south, east and west of the quarry, open fields and farmland. The M62 motorway is circa 250m north of the site.

3.0 SITE SETTING

3.1 Site History Summary

The site contained a brick works from the 1890s up until circa late 1970s, with associated buildings and kilns situated in the south western corner of the site. The quarry was extended from the south western corner out to the north and westward into the site over the next 80 years.

3.2 Geology

The following publications of the British Geological Survey (BGS) were examined in respect of the geology underlying the site:

- 1:50,000 Scale Geological Map Sheet 85 Manchester Solid and Drift Edition.
- British Geological Survey (BGS) Geology of Britain Map Viewer.
- 6-inch Geological Map Sheet 89 (Rochdale).
- Memoire of the Geology of Manchester Sheet 85.
- Coal Authority Interactive Map.
- Coal Authority Mine Abandonment Plans.

Made Ground

No made ground deposits are indicated to be on site.

Superficial Deposits

No superficial deposits are recorded at the site, although in the wider area there are deposits of Glacial Till (sandy and gravelly clays).

Solid Geology

The deeper solid geology underlying the superficial deposits is indicated to be part of the Pennine Lower Coal Measures, which typically comprises mudstone, siltstone, sandstone and coal seams.

The site appears to be located within a fault block according to the earlier maps (1930, 1975, Six inch extract). The unnamed faults are shown below and represented by a white line on drawing number C4315/02 Sheet 89 Six-Inch Geological Map Extract.

Fault Location	Trending	Downthrow
On site - north	East-West	South
On site - Western boundary	North-South	East
Immediately off site North Eastern boundary	North west-South East	North east

The latest geological map available (2010) no longer shows the fault across the north of the site, and the western fault, although it trends in the same direction, is now indicated to downthrow strata to the west. The fault along the eastern boundary is still present

Any movements associated with these faults should now have stopped.

An extract of the Six-Inch Geological Maps (Sheet 89) is shown on Drawing number C4315/02 shows an unnamed coal seam circa 200m to the north of the site. The direction of dip in this area is 5 degrees south which would place this coal seam circa 17.5m beneath northern boundary of the site, and circa 32m beneath the site towards the southern boundary. However, this does not take into account the topography of the area, the fault on site and the removal of material during quarrying activities and could

potentially be shallower across the southern portion of the site. This coal seam does not appear on any other geological maps.

Several coal seams are present towards the east of the site in a syncline and the direction and degree of dip varies in the area according to the geological records and the information below is based on a worst case scenario of the shallowest dip in the area which is interpreted to be 8 degrees.

Information from the Geological Memoir states this series only contains one coal seam of any real economic importance, which is the Lower Mountain Mine, considered to be a valuable coking coal and has been widely exploited in the past throughout the area. The seam varies in thickness over the eastern coalfield from 2ft 6 inches (0.80m) to less than 1 ft and is considered workable at no less than 14 inches (0.30m). This seam has been worked from the Butterworth Hall and Jubilee Collieries.

The Upper Mountain Mine is developed (i.e. assumed present) sporadically and over much of the area the coal is absent all together. In the Milnrow district the seam averages 1 foot (0.30m) and has been worked. This coal seam is absent from the Jubilee Colliery shaft which is located over 1km south of the site.

The Bassey Mine is very variable in this area in both thickness and quality, locally the seam is of good coal, 3 ft thick (0.90m) also known as Yard Mine. Here the seat-earth of the coal rests directly on the Woodhead Hill Rock.

The coal seams discussed above and the approximate depths beneath the site are shown in the table below.

Seam	Approximate Distance from Site (m)	Direction and Dip	Thickness (m)	Anticipated Depth (m)
Upper Mountain Mine (U.M.M)	230- 790	8 degrees NW	0.30	32-109
Lower Mountain Mine (L.M.M)	500 -1060		0.30 -0.80	70-147
Bassey Mine (B.M)	680-1240		0.90	95-172

The depths detailed are based on existing ground levels at the time of the production of the geological maps, they do not take into consideration a reduction in ground levels due to the quarrying that has been undertaken. Therefore, the anticipated depths of the coal seams/workings underlying the site may be shallower than what is detailed above.

BSL have also reviewed The Coal Authority Abandonment Plans for the collieries in the local area.

The Jubilee Colliery is located circa 750m south of the site and the plans state the seam worked was the Mountain Mine. The abandonment plans show the worked area extends to under the west of the site, last worked in September 1919. The Jubilee Pit is 108 yards (98.7m) deep and the second shaft is 105 yards (96m).

The Tunchill Colliery is located circa 750m north-north east of the site and the coal seam worked was the Mountain Mine (three quarters), interpreted to be the Lower Mountain Mine. The workings extend towards the eastern boundary of the site. No date was recorded on the workings closest to the site boundary.

3.3 BGS Boreholes

There are several BGS borehole records on site in addition to a number of boreholes situated off site, but within close proximity of the boundary. The holes were drilled on farmland beyond and to the north of the existing quarry face. The boreholes were drilled for the Newhey Brick Works in conjunction with the Department of Transport M62 in 1976. A summary of the ground conditions is presented in the table below.

Borehole Record	Depth Made ground/ Superficial Deposits (m)	Depth Bedrock (m)
SD91SW39	Topsoil 0.30m	Sandstone 3.66m Black shale with some brown siltstone bands 7.92m Dark grey mudstone 18.90m Black mudstone 21.34m Grey muddy sandstone with silty mudstone and siltstone bands 24.38m Massive sandstone 26.21m Wet-no recovery 29.87m
SD91SW44	None recorded	Yellowish sandstone 10.06m Black shaly mudstone 10.36m
SD91SW45	None recorded	Yellowish sandstone with some grey silty bands 10.67m Black shaly mudstone 10.97m
SD91SW46	None recorded	Yellowish sandstone with some grey silty bands 10.67m Black shaly mudstone 10.97m.
SD91SW43	None recorded	Yellowish sandstone to 9.30m Black shaly mudstone 9.75m
SD91SW42	None recorded	Yellowish sandstone 7.77m Black shaly mudstone 7.92m.
SD91SW40	Topsoil 0.30m	Sandstone 3.35m Black shale with brown silty bands 6.10m Blackish grey shaly mudstone 9.75m Grey mudstone with occasion brown silty bands 13.41m Black/Black and Grey mudstone 20.73m Grey mudstone 22.55m Wet-negligible recover 24.69m.
SD91SW41	None recorded	Yellowish sandstone with few brown siltstone bands 5.94m Black shaly mudstone 6.71m.
SD91SW48	None recorded	Yellowish sandstone 8.38m Black mudstone 9.14m
SD91SW47	None recorded	Yellowish sandstone 3.66 Black shaly mudstone with a brown siltstone band 5.18m
SD91SW49	None recorded	Grey muddy sandstone and siltstone 2.44m Yellowish sandstone 4.42m Black mudstone 4.88m Brown siltstone and grey silty mudstone 5.49m Black mudstone 6.10m
SD91SW50	None recorded	Yellowish sandstone 2.44m Grey silty mudstone 3.96m Brownish sandstone 7.62m Blackish mudstone 9.14m
SD91SW54	None recorded	Yellowish sandstone with few black mudstone bands 6.86m Black mudstone 7.32m
SD91SW53	None recorded	Yellowish and light grey sandstone with few mudstone bands 10.97m Blackish grey mudstone 11.89m Grey sandy mudstone 12.80m Blackish mudstone 13.41m.
SD91SW52	None recorded	Yellowish and light grey sandstone 18.29m Black mudstone 19.81m

Borehole Record	Depth Made ground/ Superficial Deposits (m)	Depth Bedrock (m)
SD91SW51 Offsite	None recorded	Yellowish sandstone with black mudstone bands 16.46m Wet-negligible recovery 18.59m Blackish mudstone 18.90m.

In summary, no recovery or negligible recovery has been encountered in 3 of the locations from 16.46m to 18.59m (2.13m) in BH51, 22.55m to 24.69m (2.14m) in BH40 and 26.21m to 29.87m (3.66m) in BH39. The reason given for no recovery is due to the strata being wet. These boreholes are situated to the north of the quarry face.

The approximate location of the BGS boreholes are shown on the Coal Authority Extract, Drawing No. C4315/03. The BGS Borehole Logs are presented in Appendix C.

3.4 Coal Authority Search

A search had previously been carried out with the Coal Authority (ref 51002151355001) at the property, which identified the presence of two mine entries which appeared to lie within the boundary of the site.

BSL contacted the Coal Authority with regards to the shafts shown on the site, as having studied the records provided for these shafts, it was apparent to BSL that the mine shafts did not appear to be located correctly. After an assessment of their records for the site and the surrounding collieries, the information provided was deemed incorrect by the Coal Authority and they confirmed that the mine entries do not exist as shown on site and were erroneously added to their data base historically.

A revised Coal Authority Search (ref 71005571150001) was undertaken, the main findings from which are presented below.

Highlighted from Coal Authority	Evidence	Issue	Details
Past Underground Mining		Yes	The property is in a surface area that could be affected by underground mining in 1 seam of coal at 160m to 250m depth, and last worked in 1903. Any movement in the ground due to coal mining activity should have stopped. The property is in an area where the Authority believe there is coal at or close to the surface (i.e. <30-40m depth) and may have been worked at some time in the past.
Present Underground Mining		No	
Future Underground Mining		Yes	The property is not in an area where the Coal Authority has plans to grant a licence, or a licence has been granted to remove coal using underground methods. The property is not in an area likely to be affected from any planned future underground coal mining. However, reserves of coal exist in the local area which could be worked at some time in the future. No notices have been given, under section 46 of the Coal Mining Subsidence Act 1991, stating that the land is at risk of subsidence.
Mine Entries		Yes	There no recorded mine entries on, or within 20 metres of, the site boundary. There may be unrecorded mine entries in the local area that do not appear on Coal Authority records.
Past, present and future opencast coal mining		No	

Highlighted from Coal Authority	Evidence	Issue	Details
Coal mining subsidence		No	
Mine gas		No	
Withdrawal of support		No	
Information from the Cheshire Brine Subsidence Compensation Board		No	

The revised Coal Authority search (ref 71005571150001) is provided in Appendix B.

The site is identified as a BGS recorded mineral site described variously as May Hill Quarry, New Hey, New Hey Brickworks and Wood Side with workings identified for common clay, shale and sandstone within the Pennine Lower Coal Measures Formation (centrally and to the south east) and sandstone within the Riddle Scout Rock. This last entry relates to the small quarry feature identified on historic mapping.

3.5 Coal Authority Interactive Map

The Coal Authority interactive map indicates a coal seam is present on site towards the north running from south west to north east. This coal seam is not present on geological mapping, and it is positioned in approximately the same location as the boundary between the Milnrow Sandstone (M.S) and the shaley mudstone (L.C.M) on the Six Inch Extract. The site is also shown to be area underlain by Probable Shallow Coal Mine Workings in relation to the seam indicated to be present on site.

BSL contacted The Coal Authority and they confirmed the seam present on site is not in the correct place, and this related to the unnamed seam to the north of the site.

There are two points located on the interactive map relating to working dates along the unknown coal seam which indicate the coal seam on site has been worked during the dates of 1880 and 1897. It is unclear if these dates will also apply to the unnamed seam to the north of the site. The site is located within the abandoned mines catalogue. Two mine shafts are indicated to be present towards the north east of the site. However, as detailed above, the Coal Authority have confirmed these are not present on site and no further consideration of these shafts is required.

Parts of the site are indicated to lie within the Development High Risk Area (the mine shafts, coal seam and areas of Probable Shallow Mine Workings). However, as discussed above, these areas are unlikely to still exist on site due to the Coal Authority re-assessment of the area. It is unclear at this stage if parts of the north of the site will now be considered a Development High Risk Area due to the unnamed coal seam to the north and possibility of probable shallow mine workings associated with this.

The site is also located in a Surface Coal Resource Area.

The location of the site in relation to the above points is shown on The Coal Authority Interactive Map Extract, on Drawing No. C4315/03.

4.0 RISK ASSESSMENT

4.1 Recorded Coal Workings

Information from the Coal Authority Report indicates the presence of mine workings within 160m of the surface. Based on the information from the Geological Memoir and the abandonment plans the coal seam worked is most likely to be the Lower Mountain Mine, however the Upper Mountain Mine is shallower.

An analysis of the available geological information including mapping and the Geological Memoir for this site indicates the shallowest coal seam is the Upper Mountain Mine and may be as shallow as 32m below the southern part of the site, however the depth is taken from the south east corner of the site where limited rock is likely to have been removed by quarrying activities.

As such, the depth to recorded mine workings within the Lower Mountain Mine coal seam is not considered to be shallow and is not considered to potentially impact the proposed development as substantial bedrock cover would exist over any workings.

CIRIA SP32 indicates that a void will not migrate to the surface where there is more than ten times the seam thickness of rock cover. Up to this depth, the void will begin to choke with rock from the roof, which is represented by broken ground. Beyond 10 times the seam thickness the rock will arch and prevent upwards migration of the void.

Based on CIRIA SP32 there is sufficient solid rock cover for the shallowest seam to prevent upward migration of collapses affecting the future development.

The risk to the proposed development is therefore considered to be **low** in relation to recorded coal workings.

4.2 Unrecorded Workings

The property is in an area where the Coal Authority believe there is coal at or close to the surface which may have been worked at some time in the past. No coal has been observed in the quarry face.

The Six-Inch Geological Map shows an outcrop is present to the north of the site. The direction and angle of dip in the immediate area surrounding this is indicated to be 5 degrees south which places the coal seam under the site at shallow depth.

Several of the boreholes which have previously been drilled at the site (Section 3.3) are located on the top of the quarry. In these boreholes no coal was encountered however no/negligible recovery was encountered in two of the boreholes drilled, no recovery was encountered from 26.21m to 29.87m (3.66m) in BH39, 22.55m to 24.69m (2.14m) in BH40 and 16.46m to 18.59m (2.13m) in BH51 (offsite). It is possible the no recovery could be attributed to broken ground or workings associated with this coal seam.

In addition, a significant amount of rock has been removed as part of quarrying activities on the southern portion of the site (circa 40-50m), which will reduce the thickness of rock cover in this area. As there are no superficial deposits indicated on site, it is considered possible that unrecorded workings may be present within this seam as it would generally be considered accessible at that depth using the equipment and technology available prior to records being kept (e.g. bell pits, room and pillar).

The risk from unrecorded mine workings is therefore considered to be **moderate**.

4.3 Recorded Mine Entries

The Coal Authority have amended their records and there are no records of recorded mine entries on site or within 20m of the site boundary. However, there are a number of recorded mine entries located between 50m and 500m of the site.

The risk from known mine entries is considered to be **very low**.

4.4 Unrecorded Mine Entries

Given the potential shallow depth of the coal seam, it is possible that un-recorded mine entries may exist on the site. The risk from unrecorded mine entries is therefore considered to be **moderate**.

4.5 Other Mining Issues

The Coal Authority does not have any records of coal related fissures. A fault runs through the eastern portion of the site; however, given the time since mining activities ceased in the coal seams identified to extend beneath the site, any further displacement along the fault related to coal mining is considered unlikely. Therefore, the risk from Coal Mining Geology is considered to the **low**.

The Coal Authority has no records for mine gas incidents/remediation in the vicinity of the site, therefore the risk is assessed as **low**.

The Coal Authority does not have any records of coal mining surface hazards at the site therefore the risk is **low**.

The Coal Authority report indicates that the site is not in the vicinity of an opencast site from which coal has been extracted. Therefore, the risk from opencast mining is considered to be **low**.

4.6 Summary

A summary of the assessment of the risks detailed above is presented in the table below. A moderate risk or greater should be considered as requiring further investigation or remedial action.

Coal Mining Issue	Documented or Potential Issue	Risk Assessment
Recorded Coal Workings	Yes	Low
Unrecorded Coal Workings	No	Moderate
Recorded Mine Entries	No	Very Low
Unrecorded Mine Entries	Yes	Moderate
Coal Mining Geology (fissures)	No	Low
Records of mine gas emissions	No	Low
Recorded coal mining surface hazard	No	Low
Surface mining (opencast workings)	No	Low

5.0 CONCLUSIONS AND RECOMMENDATION

5.1 Identified Coal Mining Issues

From the assessment carried out above, the risk from recorded and potential historic coal mining activities is generally considered low to moderate with regards to the proposed development at the site. Further investigation is recommended to confirm the presence or absence of the coal seam and probable shallow workings on site.

5.2 Recommendations

It is recommended that a series of rotary openholes to a maximum depth of 40m are drilled in the base of the quarry floor to confirm or otherwise the presence of potential shallow coal seams or workings (i.e seams within 30m of the surface of the quarry floor) within the seam that crops to the north and appears to dip southwards beneath the subject site.

Once information from boreholes is available, the mining risk should be re-assessed based on the available data by a suitably competent geotechnical engineer, such as BSL.

If evidence of potential influence from mine entries or coal workings is identified during construction, BSL should be consulted to provide suitable recommendations for remedial measures, if required.

5.3 Compliance

As part of the site lies within a High-Risk Development Area, the Coal Authority may be statutory consultee as part of the planning process or may be consulted by the Local Authority. The findings of this assessment should be confirmed with the Local Authority, and Coal Authority if necessary, prior to any irrevocable action at the site.

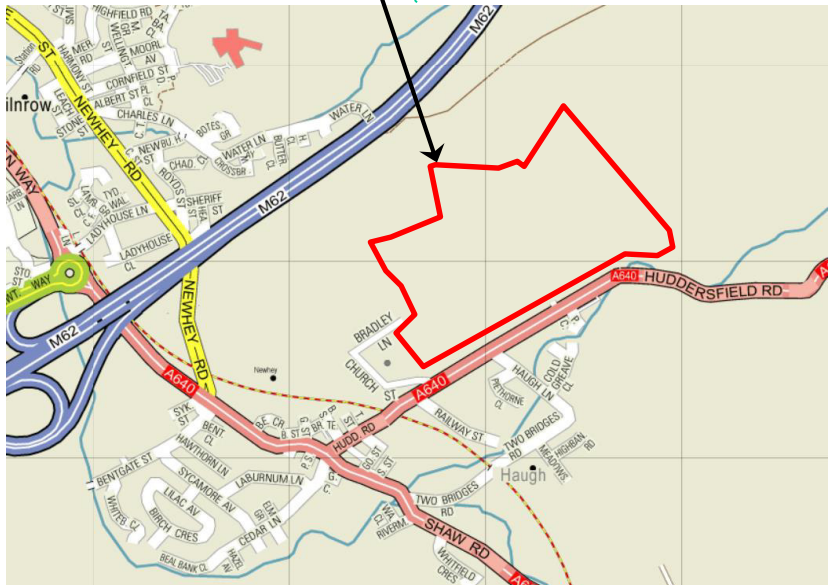
A permit will be required from the Coal Authority prior to commencement of any intrusive investigation that would enter a coal seam. This is unlikely to be required for a standard intrusive investigation for the proposed development as boreholes would not be expected to be advanced into bedrock.

DRAWINGS



SITE LOCATION


NEAREST POSTCODE: OL16 3QG



REV	DATE	DESCRIPTION	BY	CKD



BROWNFIELD SOLUTIONS LTD
CEO ENVIRONMENTAL ENGINEERING EXCELLENCE

CLIENT	 D MORGAN
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PROJECT TITLE	NEWHEY QUARRY, ROCHDALE
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DRAWING TITLE	SITE LOCATION PLAN
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DRAWING No.	REVISION	SCALE	DATE
C4315/01	-	NTS	15/11/19

DRAWN BY	CHECKED BY
SD	JMC



KEY


 APPROXIMATE SITE BOUNDARY

NOTES

1. ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE COMMENCING WORKS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ARCHITECT & ENGINEER FOR VERIFICATION. FIGURED DIMENSIONS ONLY ARE TO BE TAKEN FROM THIS DRAWING.
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEERS REPORTS. THIS DRAWING IS COPYRIGHT OF BSL.
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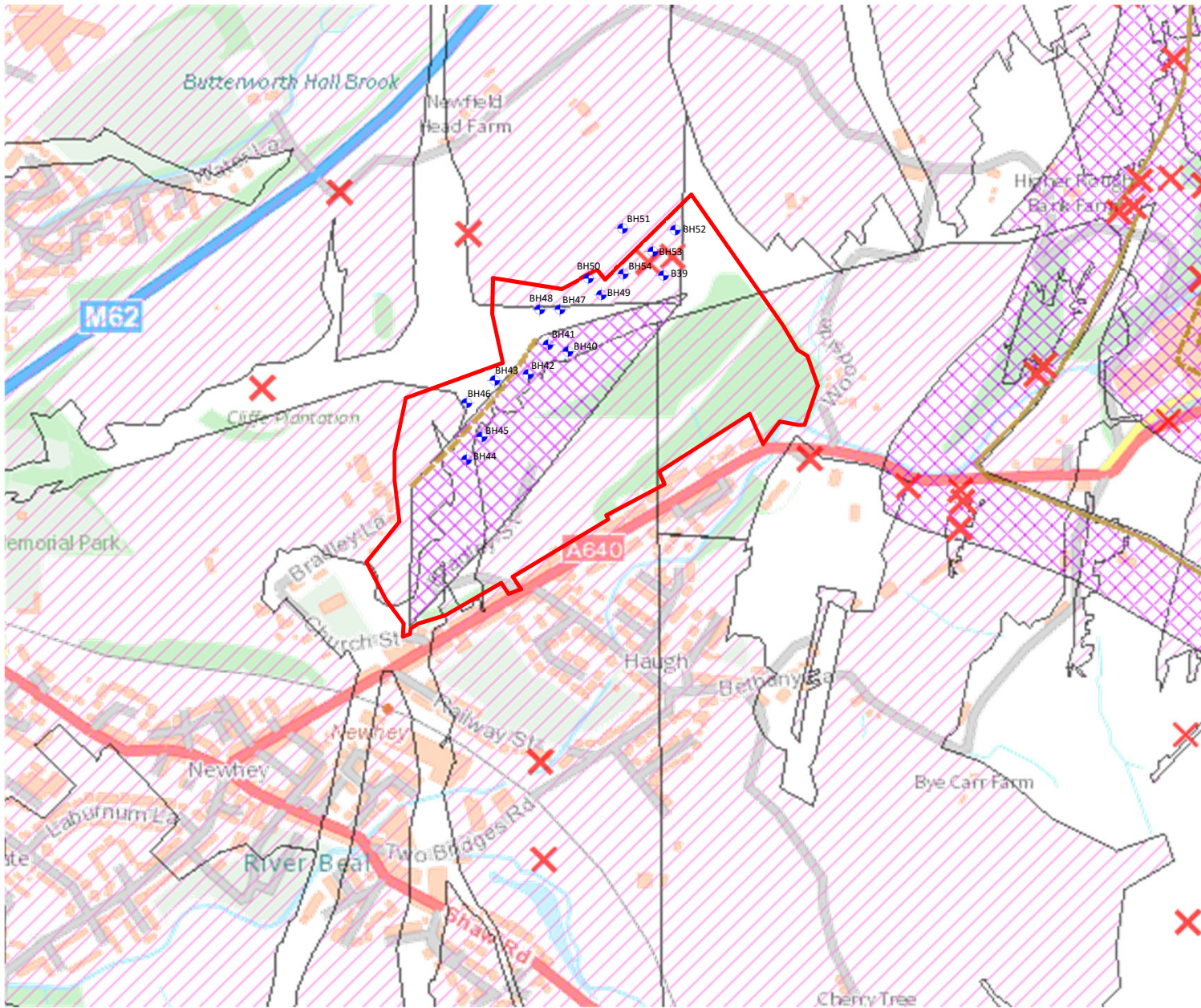


CLIENT  D MORGAN

PROJECT TITLE
NEWHEY QUARRY, ROCHDALE

DRAWING TITLE
SHEET 89 SIX-INCH GEOLOGICAL MAP EXTRACT

DRAWING No.	REVISION	SCALE	DATE
C4315/02	-	NTS	23/10/19
DRAWN BY JMC		CHECKED BY JMJ	



KEY

- APPROXIMATE SITE BOUNDARY
- MINE SHAFT
- OUTCROP
- PROBABLE SHALLOW MINE WORKING
- UNDERGROUND WORKING
- BHXX APPROXIMATE LOCATION OF BGS BOREHOLE

NOTES

1. ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE COMMENCING WORKS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ARCHITECT & ENGINEER FOR VERIFICATION. FIGURED DIMENSIONS ONLY ARE TO BE TAKEN FROM THIS DRAWING.
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PROJECT TITLE
NEWHEY QUARRY, ROCHDALE

DRAWING TITLE
COAL AUTHORITY EXTRACT

DRAWING No. C4315/03	REVISION -	SCALE NTS	DATE 23/10/19
DRAWN BY JMC		CHECKED BY JMJ	

NB: Mine shafts, coal seam and area of probable shallow mine workings on site are no longer present as confirmed by the Coal Authority

APPENDIX A

BGS Boreholes

SJ 91SW / 39-42

NEW HEY BRICKWORKS

APPENDIX 1

Borehole Data

New Hey Brick Co. Ltd February 1976

(m)

No 1 39 NGR 9419612208

Riddle Scout Rock

Sandstone(+1ft topsoil) to 12 ft. 3.66

Black shale with some brown siltst. bands 26 7.92

Dark grey mudstone 38 11.58

Blackish grey mudstone 62 18.90

Black mudstone 70 21.34

Grey muddy sandstone with silty mudstone and siltst. bands 80 24.38

OL upper leaf

Massive sandstone 86 26.21

Wet -no recovery probably mudstone 98 29.87

Hole abandoned

No 2 40 NGR 9406512102

Riddle Scout Rock

Sandstone(+1ft topsoil) to 11 ft 3.35

Black shale with brown silty bands 20 6.10

Blackish grey shaly mudstone 32 9.75

Grey mudstone with occasional brown silty bands 44 13.41

Black mudstone 56 17.07

Grey and black mudstone 68 20.73

Grey mudstone 74 22.53

Wet - negligible recovery. Hard silty mudstone? 81 24.69

No 3 41 NGR 9403812113

Riddle Scout Rock

Yellowish sandst. with a few brown siltstone bands 19.5 5.94

Black shaly mudstone 22 6.71

No 4 42 NGR 9400812074

Riddle Scout Rock

Yellowish sandstone 25.5 7.77

Black shaly mudstone 26 7.92

S/91 SW / 43-29

British Geological Survey

British Geological Survey

British Geological Survey
A1.2

Riddescont Rock

No 5 43 NGR 9396212062

(m)

Yellowish sandstone
Black shaly mudstone

30.5 9.30
32 9.75

British Geological Survey

British Geological Survey

British Geological Survey

No 6 44 NGR 9392511952

Yellowish sandstone
Black shaly mudstone

33 10.06
34 10.36

British Geological Survey

No 7 45 NGR 9394211985

British Geological Survey

Clayey buff-grey sandstone
Blackish grey silty mudstone

10 3.05
13 3.96

No 8 46 NGR 9392212032

Yellowish sandst. with some grey
silty bands
Black shaly mudstone

35 10.67
36 10.97

British Geological Survey

British Geological Survey

No 9 47 NGR 9405512160

Yellowish sandstone
Black shaly mudstone with a brown
siltstone band

12 3.66
17 5.18

British Geological Survey

No 10 48 NGR 9402612160

Yellowish sandstone
Black mudstone

27.5 8.38
30 9.14

British Geological Survey

British Geological Survey

British Geological Survey

No 11 49 NGR 9411012180

Grey muddy sandstone & siltstone
Yellowish sandstone
Black mudstone 16
Brown siltstone and grey silty
mudstone
Black mudstone

8 2.44
14.5 4.42
16 4.88
18 5.49
20 6.10

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

S) 91SW/50-54

British Geological Survey

British Geological Survey

British Geological Survey

A1.3

(M)

No 12 50 NGR 9409412204

Riddarout Rock Yellowish sandstone

8 2.44

Grey silty mudstone

13 3.96

? OL Brownish sandstone

British Geological Survey

25 7.62

Geological Survey

Blackish mudstone

30 9.14

No 13 51 NGR 9413912274

Yellowish sandstone with a few 6" black mudstone bands

54 16.46

Wet-negligible recovery. Sandstone?

61 18.59

Blackish mudstone

62 18.90

No 14 52 NGR 9421512270

Yellowish and light grey sandstone

60 18.29

Black mudstone

65 19.81

No 15 53 NGR 9418212240

Yellowish & lt. grey sandstone with a few mdst. bands

36 10.97

Blackish grey mudstone

39 11.89

Grey sandy mudstone

42 12.80

Blackish mudstone

44 13.41

No 16 54 NGR 9414312210

Yellowish sdst. with a few 6" black mudst. bands

22.5 ~~6.86~~

Black mudstone

24 7.32

++ All above records are in feet to base of unit

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

APPENDIX B

Coal Authority Search



The Coal
Authority

CON29M

coal mining report

HUDDERSFIELD ROAD, NEWHEY, ROCHDALE, GREATER MANCHESTER
OL16 3QG



Known or potential coal mining risks

Past underground coal mining	Page 4
Future underground coal mining	Page 4
Mine entries	Page 5



Further action

No further reports from the Coal Authority are required. Further information on any next steps can be found in our Professional opinion.

For more information on our reports please visit www.groundstability.com



Professional opinion

According to the official mining information records held by the Coal Authority at the time of this search, evidence of, or the potential for, coal mining related features have been identified. In view of the coal mining circumstances we would recommend that any planned or future development should follow detailed technical advice before beginning work on site. Please see **page 3** for further details on **Future development**.

Your reference:

Our reference: **71005571150001**

Date: **27 February 2020**

Client name:

**LANDMARK INFORMATION
GROUP LIMITED**

If you require any further assistance please
contact our experts on:

0345 762 6848

groundstability@coal.gov.uk

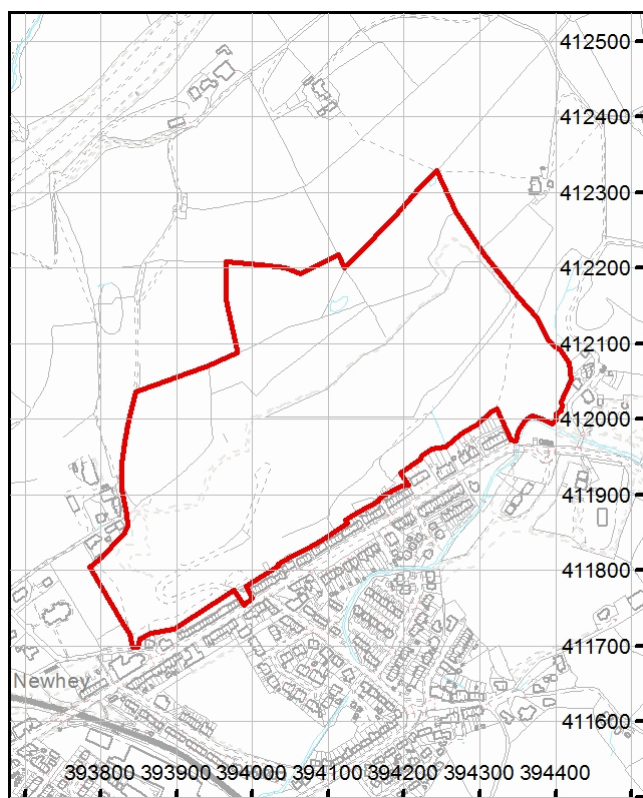


The Law
Society

Enquiry boundary

Key

Approximate position of enquiry boundary shown



We can confirm that the location is
on the coalfield



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This report is prepared in accordance with the latest Law Society's Guidance Notes 2018, the User Guide 2018 and the Coal Authority's Terms and Conditions applicable at the time the report was produced.



Accessibility

If you would like this information in an alternative format, please contact our communications team on 0345 762 6848 or email communications@coal.gov.uk.

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Professional opinion



Future development

If development proposals are being considered, technical advice relating to both the investigation of coal and former coal mines and their treatment should be obtained before beginning work on site. All proposals should apply specialist engineering practice required for former mining areas. No development should be undertaken that intersects, disturbs or interferes with any coal or coal mines without first obtaining the permission of the Coal Authority. Developers should be aware that the investigation of coal seams, mine workings or mine entries may have the potential to generate and/or displace underground gases. Associated risks both to the development site and any neighbouring land or properties should be fully considered when undertaking any ground works. The need for effective measures to prevent gases migrating onto any land or into any properties, either during investigation or remediation work, or after development must also be assessed and properly addressed.

If you are looking to develop, or undertake works, within a coal mining development high risk area your Local Authority planning department may require a Coal Mining Risk Assessment to be undertaken by a qualified mining geologist or engineer. Should you require any additional information then please contact the Coal Authority on **0345 762 6848** or email cmra@coal.gov.uk.

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Detailed findings

Information provided by the Coal Authority in this report is compiled in response to the Law Society's CON29M Coal Mining enquiries. The said enquiries are protected by copyright owned by the Law Society of 113 Chancery Lane, London WC2A 1PL.

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1 Past underground coal mining

The property is in a surface area that could be affected by underground mining in 1 seam of coal at 160m to 250m depth, and last worked in 1903.

Any movement in the ground due to coal mining activity associated with these workings should have stopped by now.

In addition the property is in an area where the Coal Authority believes there is coal at or close to the surface. This coal may have been worked at some time in the past. The potential presence of coal workings at or close to the surface should be considered, particularly prior to any site works or future development activity, as ground movement could still be a risk. Your attention is drawn to the Professional opinion sections of the report.

2 Present underground coal mining

The property is not within a surface area that could be affected by present underground mining.

3 Future underground coal mining

The property is not in an area where the Coal Authority has received an application for, and is currently considering whether to grant a licence to remove or work coal by underground methods.

The property is not in an area where a licence has been granted to remove or otherwise work coal using underground methods.

The property is not in an area likely to be affected from any planned future underground coal mining.

However, reserves of coal exist in the local area which could be worked at some time in the future.

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No notices have been given, under section 46 of the Coal Mining Subsidence Act 1991, stating that the land is at risk of subsidence.

4 Mine entries

There are no recorded coal mine entries known to the Coal Authority within, or within 20 metres, of the boundary of the property.

This information is based on the information that the Coal Authority has at the time of this enquiry.

Based on the Coal Authority's knowledge of the mining circumstances at the time of this enquiry, there may be unrecorded mine entries in the local area that do not appear on Coal Authority records.

5 Coal mining geology

The Coal Authority is not aware of any damage due to geological faults or other lines of weakness that have been affected by coal mining.

6 Past opencast coal mining

The property is not within the boundary of an opencast site from which coal has been removed by opencast methods.

7 Present opencast coal mining

The property does not lie within 200 metres of the boundary of an opencast site from which coal is being removed by opencast methods.

8 Future opencast coal mining

There are no licence requests outstanding to remove coal by opencast methods within 800 metres of the boundary.

The property is not within 800 metres of the boundary of an opencast site for which a licence to remove coal by opencast methods has been granted.

9 Coal mining subsidence

The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 metres of the enquiry boundary, since 31 October 1994.

There is no current Stop Notice delaying the start of remedial works or repairs to the property.

The Coal Authority is not aware of any request having been made to carry out preventive works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991.

10 Mine gas

The Coal Authority has no record of a mine gas emission requiring action.

11 Hazards related to coal mining

The property has not been subject to remedial works, by or on behalf of the Coal Authority, under its Emergency Surface Hazard Call Out procedures.

12 Withdrawal of support

The property is not in an area where a notice to withdraw support has been given.

The property is not in an area where a notice has been given under section 41 of the Coal Industry Act 1994, cancelling the entitlement to withdraw support.

13 Working facilities order

The property is not in an area where an order has been made, under the provisions of the Mines (Working Facilities and Support) Acts 1923 and 1966 or any statutory modification or amendment thereof.

14 Payments to owners of former copyhold land

The property is not in an area where a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

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Statutory cover



Coal mining subsidence

In the unlikely event of any coal mining related subsidence damage, the Coal Authority or the mine operator has a duty to take remedial action in respect of subsidence caused by the withdrawal of support from land or property in connection with lawful coal mining operations.

When the works are the responsibility of the Coal Authority, our dedicated public safety and subsidence team will manage the claim. The house or land owner ("the owner") is covered for these works under the terms of the Coal Mining Subsidence Act 1991 (as amended by the Coal Industry Act 1994). Please note, this Act does not apply where coal was worked or gotten by virtue of the grant of a gale in the Forest of Dean, or any other part of the Hundred of St. Briavels in the county of Gloucester.

If you believe your land or property is suffering from coal mining subsidence damage and you need more information on what to do next, please use the following link to our website which sets out what your rights are and what you need to consider before making a claim.

www.gov.uk/government/publications/coal-mining-subsidence-damage-notice-form



Coal mining hazards

Our public safety and subsidence team provide a 24 hour a day, 7 days a week hazard reporting service, to help protect the public from hazards caused by past coal workings, such as a mine shaft or shallow working collapse. To report any hazards please call **01623 646 333**. Further information can be found on our website: www.gov.uk/coalauthority.

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Glossary



Key terms

adit - horizontal or sloped entrance to a mine

coal mining subsidence - ground movement caused by the removal of coal by underground mining

Coal Mining Subsidence Act 1991 - the Act setting out the duties of the Coal Authority to repair damage caused by coal mining subsidence

coal mining subsidence damage - damage to land, buildings or structures caused by the removal of coal by underground mining

coal seams - bed of coal of varying thickness

future opencast coal mining - a licence granted, or licence application received, by the Coal Authority to excavate coal from the surface

future underground coal mining - a licence granted, or licence application received, by the Coal Authority to excavate coal underground. Although it is unlikely, remaining coal reserves could create a possibility for future mining, which would be licensed by the Coal Authority

mine entries - collective name for shafts and adits

payments to owners of former copyhold land - historically, copyhold land gave rights to coal to the copyholder. Legislation was set up to allow others to work this coal, but they had to issue a notice and pay compensation if a copyholder came forward

shaft - vertical entry into a mine

site investigation - investigations of coal mining risks carried out with the Coal Authority's permission

stop notice - a delay to repairs because further coal mining subsidence damage may occur and it would be unwise to carry out permanent repairs

subsidence claim - a formal notice of subsidence damage to the Coal Authority since it was established on 31 October 1994

withdrawal of support - a historic notice informing landowners that the coal beneath their property was going to be worked

working facilities orders - a court order which gave permission, restricted or prevented coal mine workings

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