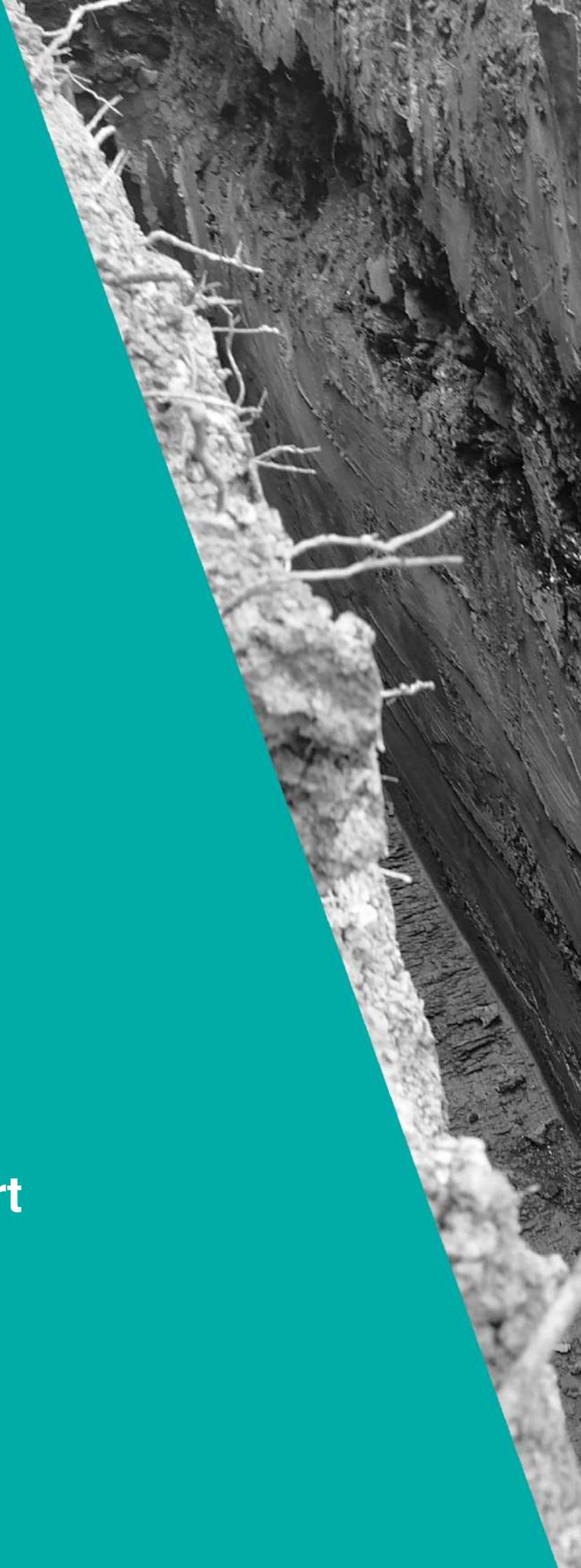


Shallow Mining Investigation Report

74 Wakefield Road, Lepton

Mr S. Carter-Waller

25/03/2025



Mr S. Carter-Waller
74 Wakefield Road,
Lepton
Huddersfield
HD8 0BL

49246-ECE-XX-XX-RP-C-0003

AJK

25 March 2025

Dear Stuart,

74 Wakefield Road, Lepton
Shallow Mining Investigation Report

We write to provide the results of a ground investigation recently undertaken at the above site by Eastwood Consulting Engineers Ltd (ECE) into potential historical coal mining which may have been undertaken at shallow depth below ground level.

The works have been carried out by Eastwood Consulting Engineers Limited behalf of Mr S. Carter-Waller. Any other parties using the information in this report do so at their own risk and any duty of care is excluded.

It is understood that the existing dwelling will be demolished, and a new house will be constructed on a similar footprint. The new building will be of conventional construction, and it is not expected that ground levels on the site will alter significantly. The external areas of the site will remain as private gardens with areas of hardstanding such as driveways being retained.

ECE have previously prepared a Phase 1 geotechnical and geo-environmental report for the site, reference 49246-ECE-XX-XX-RP-C-0001, which included a coal mining risk assessment. The Phase 1 report should be read in conjunction with this report.

Eastwood Consulting Engineers is a trading name of Eastwood and Partners (Consulting Engineers) Limited
Registered Office: St Andrew's House, 23 Kingfield Road, Sheffield, S11 9AS, Company No: 1835021, VAT Registration No: 738 2114 44

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The Site

The site is located to the south west of Wakefield Road, to the north west of Lepton. This is to the south east of Huddersfield, in West Yorkshire. The site has an area of approximately 0.15 hectares, and is centred on grid reference 418560 415760.

The main body of the site is approximately square in shape on plan, and is occupied by an existing dwelling, No. 74 Wakefield Road. This comprises a detached bungalow of masonry construction with a slate tiled roof. The area around the house is partly hard covered, as patio areas and paths, which are surfaced by flag stones and concrete. The remaining areas are soft landscaped as gardens, to the east and south of the house.

Historically, the current bungalow has occupied the site since at least 1855, with an extension added on the northern elevation by around 1930.

Mining Geology

Geological mapping indicates the site to be underlain by strata of the Pennine Lower Coal Measures Formation. A named sandstone bed (The Grenoside Sandstone) is shown to directly underlie the site. The strata are indicated to dip towards the south east. No angles of dip are recorded in the immediate vicinity of the site, but the area to the north is noted as dipping at 3°.

No superficial deposits are shown to be present.

No faults or other lines of weakness are indicated to cross the site at surface.

The shallowest seam of coal expected beneath the site is the Black Bed Coal, which is recorded to outcrop around 30 m west of the site. The outcrop location is at a lower elevation than the site level, by around 8 to 9 m. The seam may therefore lie at a depth of around 10 m below surface beneath the western side of the site.

The geological memoirs for Huddersfield and Halifax record the Black Bed seam to be of high economic importance. It records the seam thickness to be variable across the Huddersfield/Halifax area, however, with the seam being split in the area around Kirkburton and Highburton (circa 1.3 miles south east of the site). the thickness in this area is recorded as being around 21 inches (0.53 m) in total, comprising a 9-inch upper leaf, a 3-inch dirt parting and a 9-inch lower leaf of coal.

The memoirs do not record definitive workings in the seam in the Lepton area, but the presence of Cowmes Colliery just north of the site on historical mapping may indicate that localised working has been undertaken.

A Coal Authority (now Mining Remediation Authority) report was obtained as part of the Phase 1 investigation, and this stated that no recorded mine workings are present below the site. However, the site is in an area where the Coal Authority (now MRA) believe there could be unrecorded workings at shallow depth. This was considered to relate to the Black Bed Coal.

Due to the potential shallow depth of the Black bed Coal below the site, and the potential for the seam to have been mine din the past, it was recommended that a borehole investigation be undertaken to confirm the depth, thickness and state of the Black Bed Coal prior to the proposed residential development being undertaken.

Where mine workings are present, a potential risk of mine gas migration may also be presented, and therefore gas monitoring wells were to be installed if voided/backfilled mine workings were encountered in the boreholes.

Ground Investigation

The ground investigation works were undertaken on 24 February 2025, following receipt of a “Permit to Enter or Disturb Mining Remediation Authority Interests”, reference 29458.

The drilling works were undertaken by Sirius Drilling Limited, and comprised the undertaking of 3 rotary boreholes to depths of between 16 and 18 m below ground level. The boreholes targeted the footprint of the proposed house. Water flush was used to clean out the borehole during drilling.

BH1 and BH2 were located to the east of the current house, and recorded clay subsoil form surface to between 0.75 m and 1.0 m bgl, with sandstone/mudstone banded bedrock below to a depth of 16 m bgl, were both boreholes were terminated. BH2 encountered a loss of flush at 15.5 m, although no voids were recorded. This was potentially fracturing within the bedrock.

BH3 was located to the west of the property, where the Black Bed Coal was expected to be at its shallowest. 1 m of orange clay subsoil was present from surface, with bands of sandstone and mudstone below. A 600 mm thick coal seam was present between 16 m and 16.6 m bgl, which was found to be intact, and further mudstone was present below the seam to 18 m bgl. The coal is expected to be the Black Bed seam.

All boreholes were backfilled and sealed on completion.

Three gas monitoring wells were also drilled and installed with 1 m of plain pipe and 2 m of slotted pipe in each location, should gas monitoring be required in the future.

No gases were recorded during the drilling by the rig mounted monitor.

Risk Assessment

The Black Bed Coal was encountered in BH3 in the west of the site at a depth of 16 m bgl, and was found to be 0.6 m thick. The seam was not encountered in BH1 or BH2 in the east of the site, but the boreholes are likely to have been terminated just above the seam. However, given that the seam is 0.6 m thick where unworked, only 6 m of competent rock cover is considered to be required above the seam.

This cover is achieved in all three boreholes, and given that competent strata/rockhead was encountered at 1 m or less below surface in all locations, the foundation of the proposed house will be constructed at shallow depth, which maintains a sufficient thickness of competent cover.

Therefore, even if the loss of flush experienced in BH2 was due to workings just below the base of the borehole, there is not considered to be any significant risk of the void migrating to surface. Remedial works, such as drilling and grouting, are not considered to be necessary, and no additional precautions are required within the foundations of the proposed house, which will comprise traditional unreinforced strip footings within the weathered sandstone bedrock.

As mine workings are unlikely to be present beneath the property, and if they are, they lie at depth where there is a significant thickness of intact bedrock, including mudstone which will be impermeable, there is not considered to be any significant risk of mine gas migration up into the new property. Therefore, no additional precautions in relation to ground gas protection (gas resistant membranes etc) are considered to be required. It is expected that precast concrete beam and block floors with a ventilated void below will be used in any case, which will allow any low levels of gas which do permeate to surface to dissipate.

Conclusion

A borehole investigation was undertaken to determine the depth, thickness and condition of the Black bed coal beneath the site of a proposed dwelling. The seam was found to lie at a depth of at least 16 m below surface, and where found intact, it measured 0.6 m in thickness.

Therefore, even if workings are locally present in the seam, there is considered to be a sufficient thickness of competent rock cover above the coal, such that no effects will be felt at surface.

No significant risk of mine gas migration to surface is considered to be presented.

We trust that this will meet with your approval. This report should be submitted to the Local Authority planning department for review.

Yours sincerely,

Andrew Kerslake
Technical Director

Enc: MRA Permit ref: 29458
Borehole Logs BH1-BH3
Borehole location plan



Mining
Remediation
Authority

Permit to Enter or Disturb Mining Remediation Authority Interests

Permit 29458

Name and Address of Permit Holder:

Mr Stuart Carter-Waller
74 Wakefield Road,
Fenay Bridge
Huddersfield
HD8 0BL

Site Location:

74 Wakefield Road
Fenay Bridge
Huddersfield
HD8 0BL

This certificate hereby grants the above named Permit Holder a Permit to carry out:-

Ground investigation by three boreholes to 20m to determine presence of shallow mine workings within the Authority's interests at the identified site location above as shown on the Grant Permit Boundary (overleaf) for the period of **12 months** from the granted date shown below. *The granting of this Permit does not constitute advice given by the Authority in relation to the proposed operations. It is the Permit Holder's responsibility to obtain appropriate health, safety, environmental, technical and legal advice.*

Conditions:

- Manned entry (i.e.) into mine entries/workings) is strictly prohibited.
- Water flush
- Gas Monitoring CO, CH₄, CO₂, O₂, H₂S at borehole and rig
- Operators undertaking the work must be in possession of this certificate and the Permit boundary plan at the time of works
- Appropriate borehole sealing without delay and to withstand site level changes

..... Granted Date: 19/02/2025

For and on behalf of the Mining Remediation Authority

Nominated Representative: Jake Morris, Permitting Manager;

Mining Remediation Authority, Permitting Office, 200 Lichfield Lane, Mansfield, Notts, NG18 4RG



Mining
Remediation
Authority

Granted Permit Boundary

Permit Ref: 29458

Permit Boundary:



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The Mining Remediation Authority is the trading name of the Coal Authority ('TCA') established pursuant to Section 1 of the Coal Industry Act 1994, of 200 Lichfield Lane, Berry Hill, Mansfield, Nottinghamshire, NG18 4RG. The Coal Authority remains the legal name of the Authority

Rotary Core Log

Borehole No.

BH1

Sheet 1 of 2

Project Name: 74 Wakefield Road	Project No. 49246	Co-ords: -	Hole Type RO
Location: Lepton		Level: 139.50	Scale 1:50
Client: Mr S. Carter-Waller		Dates: 24/02/2025 -	Logged By Sirius

Well	Water Strikes	Depth (m)	Type / Fl	Coring			Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD					
							1.00	138.50		Orange CLAY.	
										Brown and grey SANDSTONE and MUDSTONE bands	1
											2
											3
											4
											5
											6
											7
											8
											9
											10

Continued on next sheet

Remarks

Rotary Core Log

Borehole No.

BH1

Sheet 2 of 2

Project Name: 74 Wakefield Road

Project No.
49246

Co-ords: -

Hole Type
RO

Location: Lepton

Level: 139.50

Scale
1:50

Client: Mr S. Carter-Waller

Dates: 24/02/2025 -

Logged By
Sirius

Well	Water Strikes	Depth (m)	Type / Fl	Coring			Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD					
							16.00	123.50			
										End of borehole at 16.00 m	

11
12
13
14
15
16
17
18
19
20

Remarks

Rotary Core Log

Borehole No.

BH2

Sheet 1 of 2

Project Name: 74 Wakefield Road	Project No. 49246	Co-ords: -	Hole Type RO
Location: Lepton		Level: 138.90	Scale 1:50
Client: Mr S. Carter-Waller		Dates: 24/02/2025 -	Logged By Sirius

Well	Water Strikes	Depth (m)	Type / Fl	Coring			Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD					
							0.75	138.15		Orange CLAY.	
										Brown and grey SANDSTONE and MUDSTONE bands	1
											2
											3
											4
											5
											6
											7
											8
											9
											10

Continued on next sheet

Remarks

Rotary Core Log

Borehole No.

BH2

Sheet 2 of 2

Project Name: 74 Wakefield Road

Project No.
49246

Co-ords: -

Hole Type
RO

Location: Lepton

Level: 138.90

Scale
1:50

Client: Mr S. Carter-Waller

Dates: 24/02/2025 -

Logged By
Sirius

Well	Water Strikes	Depth (m)	Type / Fl	Coring			Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD					
							16.00	122.90			
										End of borehole at 16.00 m	

Remarks

11
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Rotary Core Log

Borehole No.

BH3

Sheet 1 of 2

Project Name: 74 Wakefield Road	Project No. 49246	Co-ords: -	Hole Type RO
Location: Lepton		Level: 137.80	Scale 1:50
Client: Mr S. Carter-Waller		Dates: 24/02/2025 -	Logged By Sirius

Well	Water Strikes	Depth (m)	Type / Fl	Coring			Depth (m)	Level (m)	Legend	Stratum Description		
				TCR	SCR	RQD						
							1.00	136.80		Orange CLAY.		
										Brown and grey SANDSTONE and MUDSTONE bands	1	
												2
												3
												4
												5
												6
												7
												8
												9
											10	

Continued on next sheet

Remarks	
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Rotary Core Log

Borehole No.

BH3

Sheet 2 of 2

Project Name: 74 Wakefield Road

Project No.
49246

Co-ords: -

Hole Type
RO

Location: Lepton

Level: 137.80

Scale
1:50

Client: Mr S. Carter-Waller

Dates: 24/02/2025 -

Logged By
Sirius

Well	Water Strikes	Depth (m)	Type / Fl	Coring			Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD					
(Patterned)											
											11
											12
											13
											14
											15
							16.00	121.80		Black COAL.	16
							16.60	121.20		Grey MUDSTONE	17
							18.00	119.80		End of borehole at 18.00 m	18
											19
											20

Remarks



WAKEFIELD ROAD



Topographical Survey 1:100

EASTWOOD CONSULTING ENGINEERS
74 Wakefield Road, Lepton
Mr S. Carter-Waller
Borehole Location Plan 49246-SK1

 Location of borehole undertaken by ECE on 24 February 2025



Eastwood

CONSULTING ENGINEERS

St Andrew's House
23 Kingfield Road
Sheffield, S11 9AS

