Environmental
Geotechnical
Specialists

RGS

COAL MINING

RISK ASSESSMENT REPORT

job number	C4267/24/E/6535
date	09.05.24
site address	Land south of Wakefield Road Grange Moor Wakefield WF4 4BG
written by	R.A. Palmer
checked by	S. Alexander
issued by	R.A. Palmer

Please consider the environment before printing this report.

Constructionline
A UK GOVERNMENT CERTIFICATION SERVICE

QMS ISO 9001 : 2015 REGISTERED Cert No. 14123657

QMS ISO 14001 : 2015 REGISTERED Cert No. 14127804

QMS ISO 45001 : 2018 REGISTERED Cert No. 14130281

CITATION APPROVED HEALTH & SAFETY SYSTEMS Registered Member

UKAS United Kingdom Accreditation Service

<ENVIRONMENTAL><GEOTECHNICAL>

Contents

Appendices

Report on a Coal Mining Risk Assessment

Location:	Land south of Wakefield Road Grange Moor, Wakefield WF4 4BG		
For:	Gemma Whitehead		
Report No.	C4267/24/E/6535	Report date:	May 2024

For and on behalf of **Rogers Geotechnical Services Ltd**

Rob Palmer MSc FGS ACIEH
Engineering Director

Scott Alexander BSc FGS
Senior Geo-environmental Engineer

1. Introduction

It is understood that the site is to be developed by the construction of an agricultural building. Whilst plans are indicative as this stage, the building is to be situated in the northern section of the site, with an access route created in the north-western corner. As part of the planning application at the site, a Coal Mining Risk Assessment has been requested by the planning authority. Consequently, a desktop study was commissioned in order to assess the risk to the development from coal mining. This report presents the findings of the study.

2. Geological Desk Study

The geological desk study has been undertaken using the following sources of information.

- British Geological Survey (BGS) map sheet[1].
- British Geological Survey *Geology of Britain Viewer*[2].
- Coal Authority Consultants Coal Mining Report[3].
- British Geological Survey *Borehole Records*[4].

[1] Sources: British Geological Survey (NERC) Map Sheet 77; Huddersfield Solid and Drift Editions
[2] Sources: British Geological Survey (NERC) Geology of Britain Viewer [*online resource from www.bgs.ac.uk*]
[3] Coal Authority Reference: 51003418023001 dated 16th April 2024.
[4] Sources: British Geological Survey (NERC) Borehole Records [*online resource from* http://www.bgs.ac.uk//]

2.1 British Geological Survey Maps and Viewer

The appropriate map sheet for the site and the geology viewer has been examined and the following table presents the indicated geology:

Table 1: Geological Data for the Site

Strata Type	Strata Name[5]	Parent Unit[6]	Description
Artificial Geology	Made Ground	-	Made Ground is an area where the pre-existing (natural or artificial) land surface is raised by artificial deposits. The purpose of the made ground is unspecified.
Superficial Geology	None recorded	-	-
Solid Geology	Pennine Lower Coal Measures Formation	Pennine Coal Measures Group	Interbedded grey mudstone, siltstone and pale grey sandstone, commonly with mudstones containing marine fossils in the lower part, and more numerous and thicker coal seams in the upper part.

On the geological map, there is one dip indicator relevant to the site (i.e. within the same fault block) that suggests the solid geology beneath the site dips 2° to the east and south-east. The site is situated in an area where there are numerous deposits of made ground and infilled ground, possibly associated with colliery spoil and open-cast mining sites respectively. Indeed, the site is indicated to be present upon a large deposit of made ground that is present across the site and also extends approximately 200m to the west. There is no indication that this made ground is associated with a landfill[7]. British Geological Survey 1:10,000 SE21NW records this spoil as “Colliery Spoil Heap”. There is one local coal seam that is shown to outcrop on the site. Furthermore, two other seams are indicated to outcrop within the local area. These seams are summarised as follows:

Table 2: Summary of Coal Seams Within the Vicinity of the Site

Seam Name	Seam Thickness[5]*	Outcrop Distance from Site[5]*	Anticipated Depth Below Rockhead
Flockton Thin	0.3 to 0.8m	On Site (Northern boundary)	At or near to surface in the northern section of the site. Absent in the central and southern section.
1st Brown Metal	0 to 0.8m	1100m N	10m to 12m
2nd Brown Metal	0 to 1.0m	1300m N	20m to 25m

*All distances are given as approximations only. It should be noted that coal seam thicknesses vary over relatively short distances

In light of the above, and taking into account the regional structural geology and the topography of the area, the 1st and 2nd Brown Metal seams are anticipated to be present at depths of less than 30m below the surface of the site. It is also anticipated that the Flockton Thin could be present at the near surface, albeit this shall only be limited to the most northern section of the site. Indeed, the outcrop of the Flockton Thin may be present beneath the north-eastern corner of the proposed building footprint. Furthermore, the BGS 1:10,000 map SE21NW indicates that a further unnamed coal seam may be present between the Flockton Thin and 1st Brown Metal coal seams.

[5] Sources: British Geological Survey (NERC) Map Sheets 77; Huddersfield; Solid and Drift Edition, and Geology of Britain Viewer [*online resource from www.bgs.ac.uk*]
[6] Sources: British Geological Survey (NERC) Lexicon of Named Rock Units [*online resource from www.bgs.ac.uk*]
[7] Sources: Groundsure Datasets [*online resource from groundsure.io*]

2.2 Coal Authority Mines Report

As part of this study a Coal Authority Consultants Coal Mining Report has been obtained. The report is presented as Appendix 2 and for the purposes of discussion has been summarised below:

Table 3: Summary of the Consultant's Coal Mining Report

Has the report highlighted evidence or potential of:		
Mining Feature	**Yes/No**	**Comments**
Underground Coal Mining	Yes	Low Fenton – 20m depth – 0.61m thickness – last worked 1880. It should be appreciated that the Low Fenton is a localised term for the Brown Metal Coal seams in the Barnsley area. With reference to the generalised vertical section on the BGS Huddersfield map, it is anticipated that the Low Fenton is representative of the 2nd Brown Metal in this instance. Middleton Little – 59m depth – 0.64m thickness – last worked 1931. Middleton Main – 65m depth – 1.27m thickness – last worked 1909.
Probable Unrecorded Shallow Workings	Yes	This is likely associated with the Flockton Thin and 1st Brown Metal Coal.
Spine Roadways at Shallow Depth	No	No spine roadway recorded at shallow depth.
Mine Entries	Yes	Two mine entries indicated to be present on/within the application boundary. Ref 423415-002 Shaft – was filled in 1970 and capped in 1974. Grange Ash Colliery No.2 Shaft. Departure 0m. Diameter of 3.4m. Depth 141m. Ref 423415-004 no treatment details. Grange Ash Colliery Old Shaft. Departure 5m. Assumed diameter of 2.5m. Two other entries fall within 50m of the site boundary but will not affect the site.
Abandoned mine plans	Yes	Plans of abandoned mine workings below the site are suggested to be available by the Coal Authority.
Outcrops	Yes	Flockton Thin (Coal) within site boundary.
Geological Faults	No	No faults, fissures or breaklines recorded.
Opencast Mines	Yes	Unlicensed opencast site immediately present to the north-east.
Coal Authority Managed Tips	No	None recorded within 500 metres of the enquiry boundary.
Site Investigations	No	None recorded within 50 metres of the enquiry boundary
Remediated Sites	No	None recorded within 50 metres of the enquiry boundary.
Coal Mining Subsidence	No	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 31st 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.
Mine Gas	No	None recorded within 500 metres of the enquiry boundary.
Mine Water Treatment Schemes	No	None recorded within 500 metres of the enquiry boundary.
Withdrawal of support notices	Yes	The property is in an area where notices to withdraw support were given in 1944 and 1946.
Future underground mining	No	For further information please see section 3 of the Consultant's Coal Mining Report.
Coal mining licensing	No	
Court orders	No	

2.3 Geological Survey Borehole Records

The BGS (NERC) keeps borehole records from across Britain which are available for public viewing through their website[8]. As part of this study, the records in the area around the site have been reviewed in order to assist in establishing the geological conditions. The logs of the boreholes can be viewed through the BGS website however the most pertinent features are summarised below:

Table 4: Notable Geological Features

Borehole	Approx. Distance from Site	Depth of Borehole	Notable Features
SE21NW139[9]	470m NW Positioned on a similar strike to the site.	11m	Ash fill – 0.95m. Clay – 3.5m. Weathered mudstone – 5.6m. Weathered broken mudstone – 8.75m. Mudstone and sandstone, recorded to be broken – 11m.
SE11NW230[10]	650m NW	30m	Colliery waste – 7.0m. Clay – 8.5m. Mudstone and siltstone – 27.5m. Coal – 27.8m (0.3m thickness). Mudstone – 30m.
SE21NW431[11]	850m NW	24m	Colliery waste – 4.0m. Mudstone and siltstone – 22.0m. VOID (Coal workings) – 23.0m (1.0m thickness). Mudstone – 24.0m

It should be appreciated that there was limited borehole data within the immediate vicinity of the site. Nevertheless, some borehole scans were present a relatively short distance to the west on similar geology, albeit to the west of the Flockton Thin outcrop. The available scans have indicated one notable coal seam present within 30m of the surface. Based on the available geological data, it is anticipated that this seam may represent the 2nd Brown Metal Coal. Whilst found to be intact in one borehole record, the seam was revealed to be worked in another.

It should be appreciated that the 1st Brown Metal Coal appears to be absent in the records. Moreover, it should also be noted that the borehole scans have indicated ash fill and colliery waste, although these scans are positioned on a separate deposit of artificial geology.

[8] Sources: British Geological Survey (NERC) Onshore Geoindex [*online resource from https://mapapps2.bgs.ac.uk/geoindex/home.html*]
[9] Sources: BGS Borehole Scan SE21NW139 *online resource from https://api.bgs.ac.uk/sobi-scans/v1/borehole/scans/items/56771*
[10] Sources: BGS Borehole Scan SE11NW230 *online resource from https://api.bgs.ac.uk/sobi-scans/v1/borehole/scans/items/20302957*
[11] Sources: BGS Borehole Scan SE21NW431 *online resource from https://api.bgs.ac.uk/sobi-scans/v1/borehole/scans/items/20302954*

3. Risk Assessment

The risk to the stability of the proposed residential development has been evaluated from the data obtained and with reference to the following ratings and definitions:

Low - The possibility of instability is unlikely therefore no further action is necessary.

Moderate - The possibility of instability is likely and further investigation or remedial action may be required.

High - The possibility of instability is highly likely and further investigation or remedial action will be necessary.

Table 5: Development Specific Risk Assessment

Item	Risk attributed to	Feature(s) Considered	Risk Rating
3.1	Shallow coal workings	Flockton Thin Coal	Low to Moderate
		1st Brown Metal Coal	Low
		2nd Brown Metal Coal	Low
3.2	Coal workings at depth	Workings present at depths in excess of 59m.	Low
3.3	Mine gas	Shallow coal workings	Moderate
3.4	Mine shafts	Shaft 423415-002	Low to Moderate
		Shaft 423415-004	Low

3.1 Risks Posed by Shallow Coal Workings

On the basis of all of the information provided above, it anticipated that the 1st Brown Metal Coal and Flockton Thin Coal are likely to be absent beneath the majority of the site. The 1st Brown Metal Coal appears to be absent in the nearby borehole scans and is indicated to be impersistent on the geological map. However, the Flockton Thin may be present beneath the most north-eastern corner of the proposed building footprint. Indeed, with reference to the geological and mining plan presented in Appendix 1, it is evident that the building footprint shall encroach on to the outcrop of the Flockton Thin. If present, it is unlikely that this seam shall have been mined via underground mining methods, but rather day holes or bell pits from the surface or indeed may have been completely removed via surface opencast methods.

There is strong evidence to suggest that one coal seam, the 2nd Brown Metal Coal, shall have been worked within 30m of the surface at the site. The Coal Authority hold records suggesting this seam has been worked at a depth of 20m below the surface of the site. Moreover, the BGS borehole scans to the north-west of the site also indicate workings at similar depths.

It may be noted that guidance available from both the NHBC and the CIRIA publication, SP32 - *construction over abandoned mine workings,* suggests that competent overburden thickness above a coal seam should be greater than 10 times the thickness of a seam plus seam thickness in order that the collapse of workings would pose a low risk to surface structures.

On this basis, assuming a maximum thickness of the coal seams, the table below suggests the thickness of competent overburden required above each seam to mitigate instability at the surface.

Table 6: Required Thickness of Competent Overburden

Seam Name	Seam Thickness	Anticipated Depth Below Site	Required Thickness of Competent Overburden
Flockton Thin	0.3 to 1.4m	At or near to surface beneath the north-eastern corner of the building.	15m
1st Brown Metal	0 to 0.8m	10m to 12m	9m
2nd Brown Metal	0 to 1.0m	20m	11m

Based on the above information, it is considered that there will not be a sufficient thickness of competent overburden above the Flockton Thin coal seam in order to prevent the risk of instability posed by the presence of any illicit workings. It should be noted however that this coal seam is indicated to outcrop beneath the north-eastern corner of the development. Whilst the geological map may only have a certain degree of accuracy, it is possible that the coal seam, if present at the immediate near surface, will have been subject to weathering thus affecting the nature and grade of the coal. Notwithstanding this, the coal seam has been mined via open-cast methods a short distance to the north-east of the site. In view of this, a low to moderate risk rating has been assigned to this seam and further investigation is recommended to prove the absence/presence of this coal seam beneath the building footprint.

As highlighted previously, it is anticipated that the 1st Brown Metal Coal is absent beneath the site, or if present is not of an economically viable thickness for underground mining. As such, a low risk rating has been assigned.

Whilst there is evidence to suggest that the 2nd Brown Metal coal seam has been worked beneath the site, there will likely be a sufficient thickness of competent overburden above this coal seam such that the risk from the collapse of workings is low. Therefore, a low risk rating has been assigned to this seam.

3.2 Risks Posed by Coal Workings at Depth

In regard to deeper mining which could affect the site, the property is unlikely to be affected by collapse in workings at depth. The workings at depth are not of significant thicknesses, such that crown collapse would unlikely propagate to the surface. Moreover, there are limited faults mapped in the area, thus movement at the surface via fault reactivation is unlikely to occur.

3.3 Risks Posed by Mine Gas

This assessment has concluded that there is potential for shallow and deep mine workings to be present beneath the site, albeit the risks of instability posed by these features can be generally considered as low. Nonetheless, it should be appreciated the shallow mine workings represent a potential source of ground gas. As such, a moderate risk rating has been assigned, and a detailed ground gas risk assessment should be commissioned (usually undertaken as part of a Phase 1 Desk Study). Such assessments may stipulate that a regime of gas monitoring is undertaken to quantify the risks posed by mine gas. Alternatively, in a scenario where gas monitoring has not been considered, suitable gas protection measures may be required. It should be appreciated that such

measures could be designed in accordance with BS8485: 2015 +A1: 2019: *Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings.* It should be noted that in any event, the above will need to be agreed with the local authority prior to construction, as they are the final arbiters on these matters.

3.4 Risks Posed by Mine Shafts

The Consultants Mining Report refers to two shafts being present on or within the site boundary. The details of these shafts are outlined in Table 3 above.

With reference to the geological and mining plan presented in Appendix 1, it is evident that the building footprint shall not encroach over the shafts. The location of 423415-004 has a departure of 5m. Nonetheless, the building footprint and development as a whole remains away from the departure zone associated with this shaft. As such a low risk is assigned to this feature.

It should be noted that the location of 423415-002 is indicated to be accurate with a departure of 0m. Whilst this shaft is positioned away from the proposed building footprint, the shaft may be present beneath the proposed access and gated area. Notwithstanding this, the shaft is indicated to have been filled and capped, therefore likely represents a low risk to the development as only an access track shall be positioned over this shaft cap. It would be worthwhile confirming the location and capping of this mine shaft, however this is not considered to be a mandatory requirement. Nonetheless, the Coal Authority should be consulted on this matter. Therefore, a low to moderate risk has been assigned for this shaft until further notice.

3.5 Geotechnical Risks

The published geological map and nearby borehole scans have indicated that the site could be underlain by a significant thickness of made ground. There is limited evidence to advise on the competency and thickness of this fill beneath the site surface. Made ground can often be present in a weak and variable condition such that excessive total and or differential settlement could occur under moderately light loadings. As such it is recommended that a geotechnical investigation is undertaken to enable foundation design.

4. Conclusions

Clearly mining has taken place in the local area and beneath the site itself. However, it can be concluded that any illicit coal voids within shallow underground coal workings below the site pose minimal risk to future developments. Therefore, deep rotary boreholes sunk into underground mine workings are not considered necessary in this instance.

Notwithstanding this, there is potential for small scale surface workings to have taken place in the most northern section of the site. As such, a mining investigation is recommended and should be targeted towards the most north-eastern section of the proposed building footprint. In the first instance, it would be prudent to undertaken trial pits. However, if the placement of the made ground post-dates any historic workings, and the thickness of made ground is significant, it may be difficult to establish whether coal or near surface workings are present if the made ground extends beyond the depth reach of an excavator. As such, consideration could also be directed at windowless sample boreholes and dynamic probing. It should be appreciated that a mining investigation will need to be completed once a Coal Permit is obtained from the Coal Authority.

As outlined in section 3.5, it is recommended that a geotechnical investigation is undertaken. The thickness and competency of the fill and the level of rockhead should be established to enable foundation design. This could be completed as part of the mining investigation.

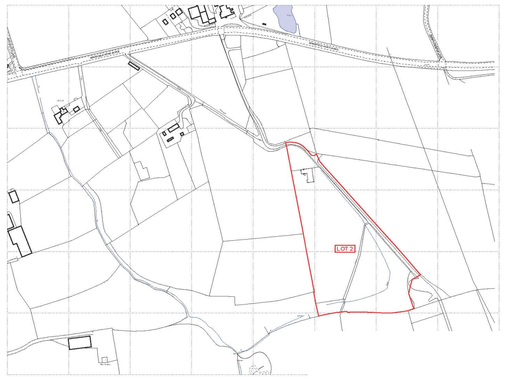
Furthermore, given the presence of underground mining in the area, and also considering the presence of made ground beneath the site surface, it is anticipated that the Local Authority shall request a ground gas risk assessment. Based on the evidence obtained during this coal mining risk assessment, it is considered that gas monitoring be completed as part of any mining and/or geotechnical investigation. Indeed, gas monitoring standpipes could be installed should a windowless sampling drilling rig be mobilised to site.

In any event, it is considered that approval should be sought with the Local Authority as to the efficacy of this approach.

It is of note that Rogers Geotechnical Services would be happy to assist in any further intrusive investigation that may be required and can apply for any relevant Coal Authority permits on behalf of the client.

Appendix 1

Site Plan



1 | Site Location
Scale: 1:5000

2 | Site Plan (Proposed)
Scale: 1:1000

LEGEND

- Existing Copse
- Existing Woodland
- ProposedCrataegus monogyna hedge (1116 No.)
- Existing Land Drain

NOTES

1. Drainage from barn roof to existing land drain

REVISIONS

REV	DESCRIPTION	DATE

REVISIONS

REV	DESCRIPTION	DATE

PRACTICE NOTES

Drawings based on Ordanance Survey and / or existing record drawings - design and drawing content subject to Site Survey, Structural Investigations, Planning and Statutory Requirements and Approvals.

This project is subject to CDM legislation. A planning supervisor should be appointed by the client. SMK Architecture's role on this project is that of 'Principle Designer' as defined in The Construction Design and Management Regulations 2015. The design has been prepared with regard for the need under CDM to specifically consider risks to health and safety. CDM affects the contractor's normal health and safety obligations when undertaking constructional operations. You are reminded of your duties under CDM and particularly to consider matters detailed in any Health and Safety Plan prepared specifically for this project. Professional advice should be sought if you are in any way unclear as to your obligations under CDM.

DRAWING NOTES

1. This drawing originates from CAD file: **198_000**
2. Drawing based on original survey executed by CSL Surveys
3. This drawing is not to be used for construction unless the drawing status is indicated 'Approved for Construction' and the drawing No. is prefixed with the letter 'C'
4. Do not scale from drawing.
5. All dimensions are in millimeters unless otherwise stated.
6. All dimensions shall be verified on site before proceeding with work.
7. Any discrepancies and / or aspects of the proposed design found not to be suitable shall be notified immediately before proceeding with work
8. This drawing is to be read in conjunction with all relevant structural, mechanical and electrical information. Recipients of drawings are to ensure that they are working to current revisions and that the revision has been approved for construction before works commence
9. Please note that any deviation from this drawing may invalidate statutory approvals and will invalidate PI insurance
10. All work is to be to the satisfactory of the Building Inspector. Any changes to be notified to SMK Architecture in advance of carrying out the work
11. This drawing to be read in conjunction with all SMK Architecture's drawings, schedules and specifications.
12. If this drawing exceeds the quantities taken in anyway, the designers are to be informed before the work is initiated.

LOCATION

STRUCTURAL ENGINEER	**PLANNING CONSULTANT**
CIVIL ENGINEER	**QUANTITY SURVEYOR**
SERVICES ENGINEER	**FIRE CONSULTANT**

CLIENT
Mr Harvey

SIMONMICHAEL KERSHAW ARCHITECTURE

DESIGNED	CHECKED	ORIGINAL SIZE
SMK	SMK	A1
	APPROVED	DATE
	SMK	29/04/2024

PROJECT
Land Adj. Wakefield Road, Grange Moor

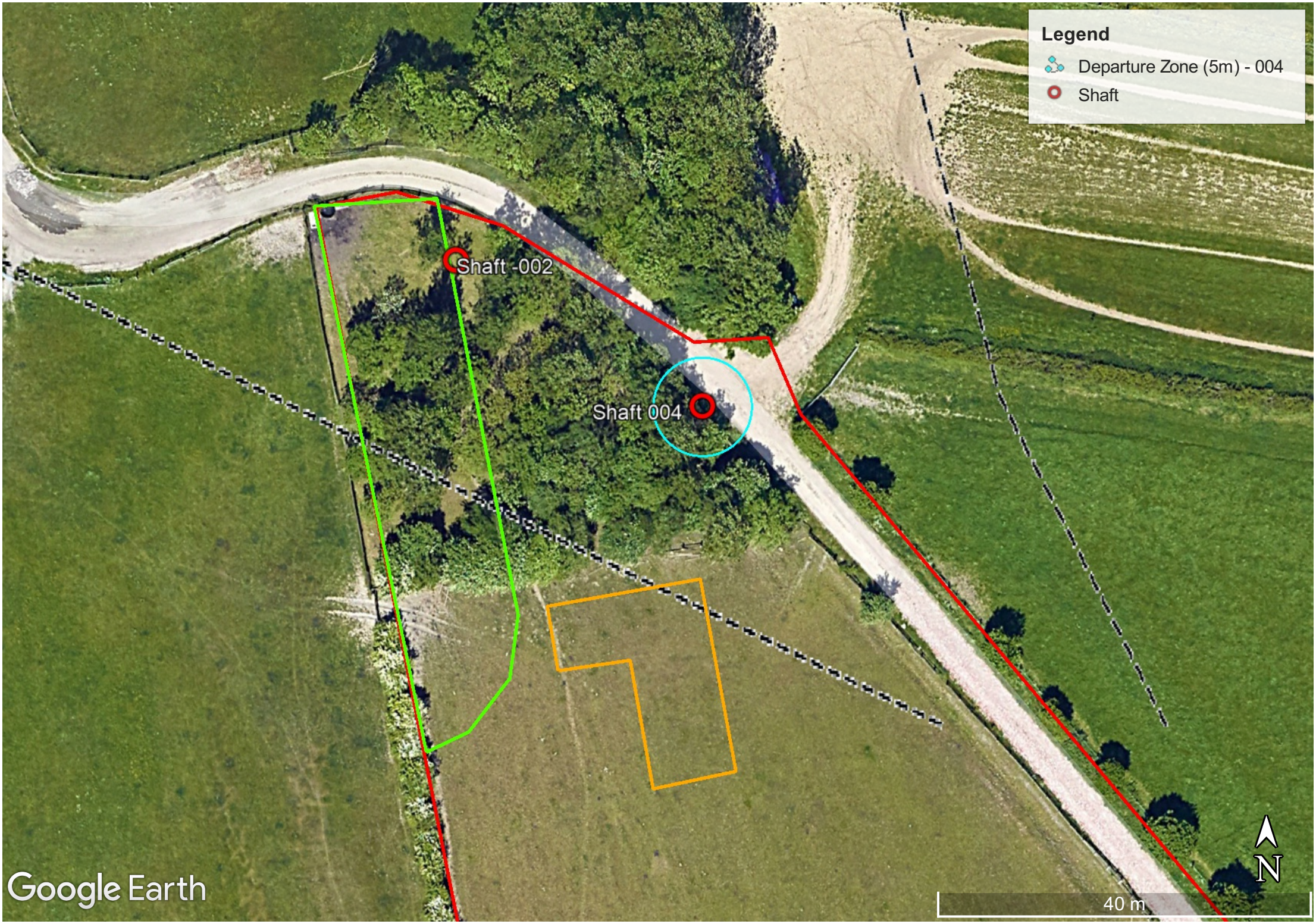
TITLE
Site Plan (Proposed)

STATUS
Preliminary Issue - Not for Construction

SCALE
As indicated @ A1

DWG No.
198_100

REV.
A


Legend
Departure Zone (5m) - 004
Shaft
Shaft -002
Shaft 004
Google Earth
N
40 m

Appendix 2

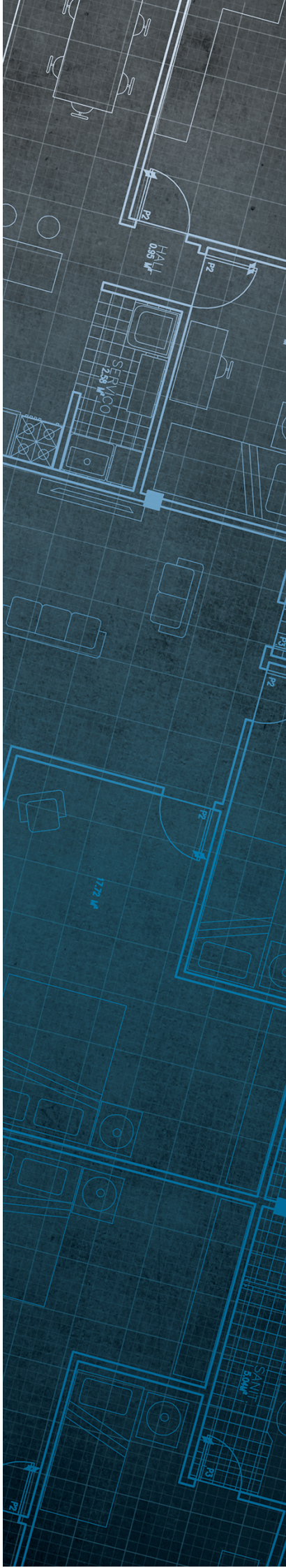
Coal Authority Report

The Coal Authority

Consultants

Coal Mining Report

Land South Of
Wakefield Road
Grange Moor
Huddersfield
Kirklees
WF4 4BG



Date of enquiry:	**16 April 2024**
Date enquiry received:	**16 April 2024**
Issue date:	**16 April 2024**
Our reference:	**51003418023001**
Your reference:	**C/4267/24/E/6535**

Consultants
Coal Mining Report

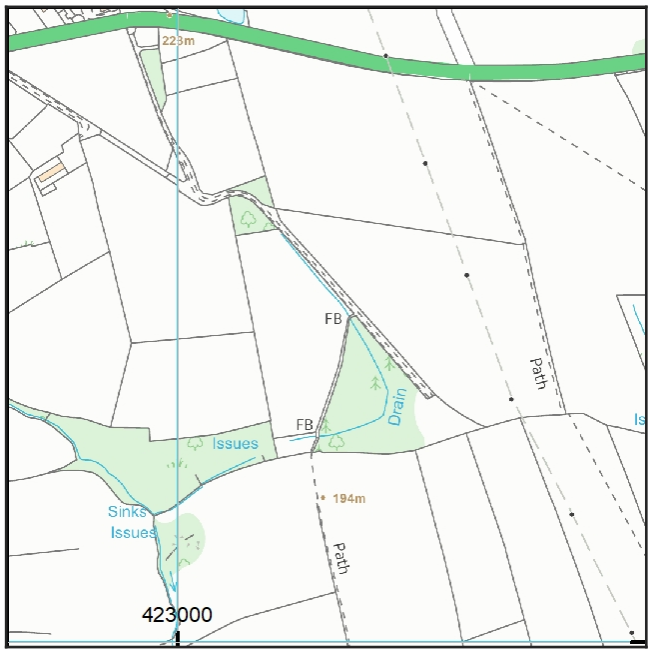
This report is based on and limited to the records held by the Coal Authority at the time the report was produced.

Client name

ROGERS GEOTECHNICAL SERVICES LTD

Enquiry address

Land South Of
Wakefield Road
Grange Moor
Huddersfield
Kirklees
WF4 4BG



Approximate position of property

How to contact us

0345 762 6848 (UK)
+44 (0)1623 637 000 (International)

200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

www.groundstability.com

@coalauthority
/company/the-coal-authority
/thecoalauthority
/thecoalauthority

Section 1 – Mining activity and geology

Past underground mining

Colliery	Seam	Mineral	Coal Authority reference	Depth (m)	Direction to working	Dipping rate of seam worked (degrees)	Dipped direction of seam worked	Extraction thickness (cm)	Year last mined
unnamed	LOW FENTON	Coal	6Z2P	20	Beneath Property	1.9	East	61	1860
unnamed	LOW FENTON	Coal	6Z2R	24	South	1.9	East	61	1862
unnamed	MIDDLETON LITTLE	Coal	6Z2W	59	Beneath Property	1.5	North-East	64	1931
unnamed	MIDDLETON MAIN	Coal	6Z2X	65	Beneath Property	2.2	South-East	127	1909
unnamed	WHEATLEY LIME	Coal	6Z31	83	Beneath Property	2.2	South-East	84	1931
unnamed	SILKSTONE	Coal	6Z33	117	Beneath Property	2.0	East	71	1965
unnamed	TOP BEESTON	Coal	6Z35	164	Beneath Property	2.1	South-East	74	1941

Probable unrecorded shallow workings

Yes.

Spine roadways at shallow depth

No spine roadway recorded at shallow depth.

Mine entries

Entry type	Reference	Grid reference	Treatment description	Mineral	Conveyancing details
Shaft	423415-001	423054 415498	was filled in 1970 and capped in 1974	Coal	
Shaft	423415-002	423070 415468	was filled in 1970 and capped in 1974	Coal	
Shaft	423415-003	423295 415225	was filled in 1990	Coal	
Shaft	423415-004	423096 415453		Coal	

Abandoned mine plan catalogue numbers

The following abandoned mine plan catalogue numbers intersect with some, or all, of the enquiry boundary:

14828	SCC19	NE622
NE502	BE41	PO0
NE950	GCR1	1822

Our records show we have more plans than those shown above which could affect the enquiry boundary.

Please contact us on 0345 762 6848 to determine the exact abandoned mine plans you require based on your needs.

Outcrops

Seam name	Mineral	Seam workable	Distance to outcrop (m)	Direction to outcrop	Bearing of outcrop
FLOCKTON THIN	Coal	Yes	Within	N/A	285

Geological faults, fissures and breaklines

No faults, fissures or breaklines recorded.

Opencast mines

Please refer to the “Summary of findings” map (on separate sheet) for details of any opencast areas within 500 metres of the enquiry boundary.

Coal Authority managed tips

None recorded within 500 metres of the enquiry boundary.

Section 2 – Investigative or remedial activity

Please refer to the 'Summary of findings' map (on separate sheet) for details of any activity within the area of the site boundary.

Site investigations
None recorded within 50 metres of the enquiry boundary.

Remediated sites
None recorded within 50 metres of the enquiry boundary.

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.

Mine gas
None recorded within 500 metres of the enquiry boundary.

Mine water treatment schemes
None recorded within 500 metres of the enquiry boundary.

Section 3 – Licensing and future mining activity

Future underground mining
None recorded.

Coal mining licensing
None recorded within 200 metres of the enquiry boundary.

Court orders
None recorded.

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

Withdrawal of support notices
The property is in an area where notices to withdraw support were given in 1944 and 1946.

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.

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.

Section 4 – Further information

The following potential risks have been identified and as part of your risk assessment should be investigated further.

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.

MINE GAS: Please note, if there are no recorded instances of mine gas within 500m of the enquiry boundary, this does not mean that mine gas is not present within the vicinity. The Coal Authority Mine Gas data is limited to only those sites where a Mine Gas incident has been recorded. 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. In these instances, the Coal Authority recommends that a more detailed Gas Risk Assessment is undertaken by a competent assessor.

Development advice

The site is within an area of historical coal mining activity. Should you require advice and/or support on understanding the mining legacy, its risks to your development or what next steps you need to take, please contact us.

For further information on specific site or ground investigations in relation to any issues raised in Section 4, please call us on 0345 762 6848 or email us at groundstability@coal.gov.uk.

Section 5 – Data definitions

The datasets used in this report have limitations and assumptions within their results. For more guidance on the data and the results specific to the enquiry boundary, please **call us on 0345 762 6848** or **email us at groundstability@coal.gov.uk.**

Past underground coal mining

Details of all recorded underground mining relative to the enquiry boundary. Only past underground workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination, will be included.

Probable unrecorded shallow workings

Areas where the Coal Authority believes there to be unrecorded coal workings that exist at or close to the surface (less than 30 metres deep).

Spine roadways at shallow depth

Connecting roadways either, working to working, or, surface to working, both in-seam and cross measures that exist at or close to the surface (less than 30 metres deep), either within or within 10 metres of the enquiry boundary.

Mine entries

Details of any shaft or adit either within, or within 100 metres of the enquiry boundary including approximate location, brief treatment details where known, the mineral worked from the mine entry and conveyance details where the mine entry has previously been sold by the Authority or its predecessors British Coal or the National Coal Board.

Abandoned mine plan catalogue numbers

Plan numbers extracted from the abandoned mines catalogue containing details of coal and other mineral abandonment plans deposited via the Mines Inspectorate in accordance with the Coal Mines Regulation Act and Metalliferous Mines Regulation Act 1872. A maximum of 9 plan extents that intersect with the enquiry boundary will be included. This does not infer that the workings and/or mine entries shown on the abandonment plan will be relevant to the site/property boundary.

Outcrops

Details of seam outcrops will be included where the enquiry boundary intersects with a conjectured or actual seam outcrop location (derived by either the British Geological Survey or the Coal Authority) or intersects with a defined 50 metres buffer on the coal (dip) side of the outcrop. An indication of whether the Coal Authority believes the seam to be of sufficient thickness and/or quality to have been worked will also be included.

Geological faults, fissures and breaklines

Geological disturbances or fractures in the bedrock. Surface fault lines (British Geological Survey derived data) and fissures and breaklines (Coal Authority derived data) intersecting with the enquiry boundary will be included. In some circumstances faults, fissures or breaklines have been known to contribute to surface subsidence damage as a consequence of underground coal mining.

Opencast mines
Opencast coal sites from which coal has been removed in the past by opencast (surface) methods and where the enquiry boundary is within 500 metres of either the licence area, site boundary, excavation area (high wall) or coaling area.

Coal Authority managed tips
Locations of disused colliery tip sites owned and managed by the Coal Authority, located within 500 metres of the enquiry boundary.

Site investigations
Details of site investigations within 50 metres of the enquiry boundary where the Coal Authority has received information relating to coal mining risk investigation and/or remediation by third parties.

Remediated sites
Sites where the Coal Authority has undertaken remedial works either within or within 50 metres of the enquiry boundary following report of a hazard relating to coal mining under the Coal Authority's Emergency Surface Hazard Call Out procedures.

Coal mining subsidence
Details of alleged coal mining subsidence claims made since 31 October 1994 either within or within 50 metres of the enquiry boundary. Where the claim relates to the enquiry boundary confirmation of whether the claim was accepted, rejected or whether liability is still being determined will be given. Where the claim has been discharged, whether this was by repair, payment of compensation or a combination of both, the value of the claim, where known, will also be given.

Details of any current 'Stop Notice' deferring remedial works or repairs affecting the property/site, and if so the date of the notice.

Details of any request made to execute preventative works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991. If yes, whether any person withheld consent or failed to comply with any request to execute preventative works.

Mine gas
Reports of alleged mine gas emissions received by the Coal Authority, either within or within 500 metres of the enquiry boundary that subsequently required investigation and action by the Coal Authority to mitigate the effects of the mine gas emission. Please note, if there are no recorded instances of mine gas reported, this does not mean that mine gas is not present within the vicinity. The Coal Authority Mine Gas data is limited to only those sites where a Mine Gas incident has been recorded.

Mine water treatment schemes
Locations where the Coal Authority has constructed or operates assets that remove pollutants from mine water prior to the treated mine water being discharged into the receiving water body.

These schemes are part of the UK's strategy to meet the requirements of the Water Framework Directive. Schemes fall into 2 basic categories: Remedial – mitigating the impact of existing pollution or Preventative – preventing a future pollution incident.

Mine water treatment schemes generally consist of one or more primary settlement lagoons and one or more reed beds for secondary treatment. A small number are more specialised process treatment plants.

Future underground mining
Details of all planned underground mining relative to the enquiry boundary. Only those future workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination will be included.

Coal mining licensing
Details of all licenses issued by the Coal Authority either within or within 200 metres of the enquiry boundary in relation to the under taking of surface coal mining, underground coal mining or underground coal gasification.

Court orders
Orders in respect of the working of coal under the Mines (Working Facilities and Support) Acts of 1923 and 1966 or any statutory modification or amendment thereof.

Section 46 notices
Notice of proposals relating to underground coal mining operations that have been given under section 46 of the Coal Mining Subsidence Act 1991.

Withdrawal of support notices
Published notices of entitlement to withdraw support and the date of the notice. Details of any revocation notice withdrawing the entitlement to withdraw support given under Section 41 of the Coal Industry Act 1994.

Payment to owners of former copyhold land
Relevant notices which may affect the property and any subsequent notice of retained interests in coal and coal mines, acceptance or rejection notices and whether any compensation has been paid to a claimant.

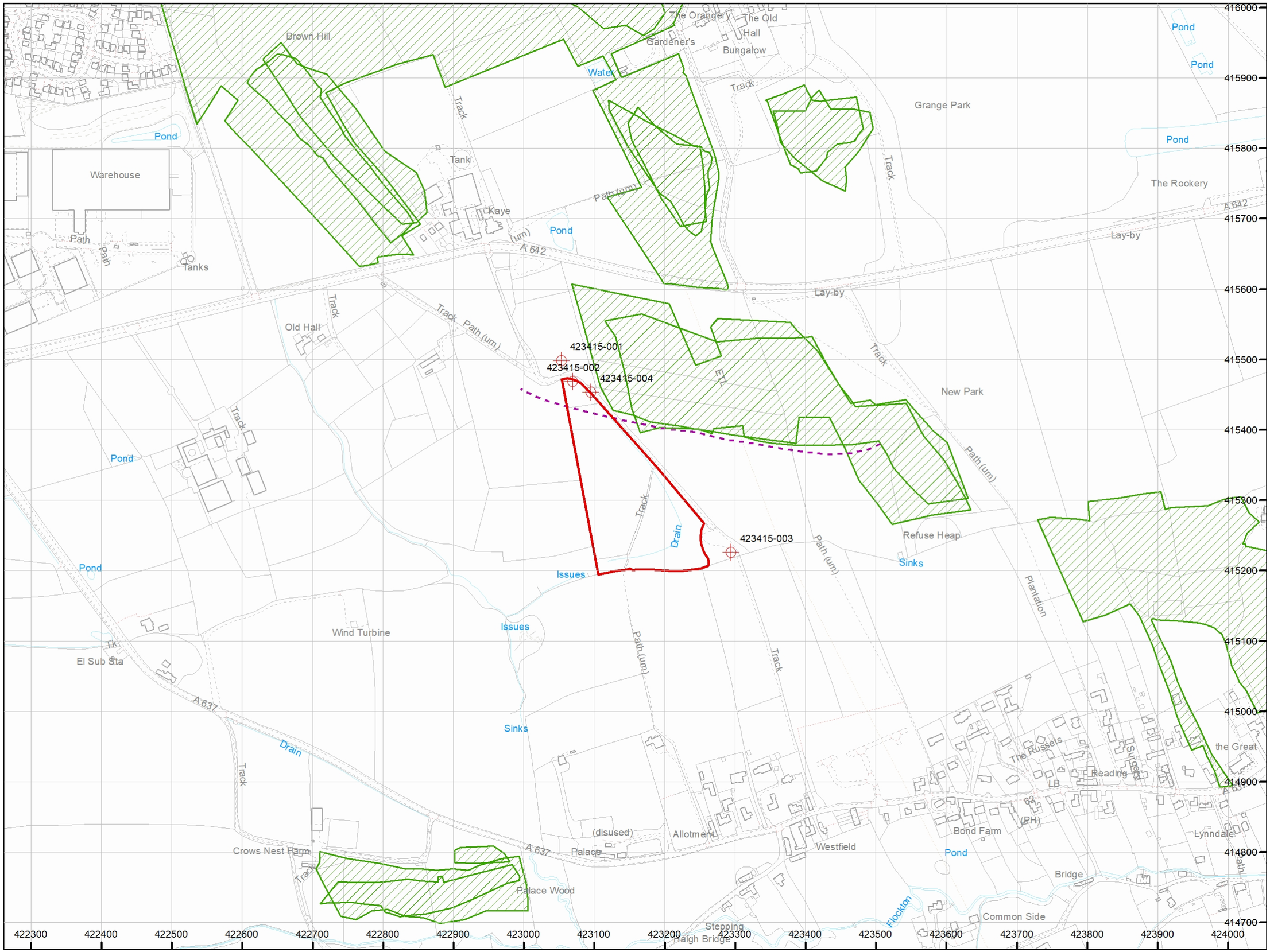
The Coal Authority

Summary of findings

The map highlights any specific surface or subsurface features within or near to the boundary of the site.

Key

- Approximate position of the enquiry boundary shown
- Disused mine shaft
- Outcrop (Conjectured)
- Unlicensed opencast site



How to contact us
0345 762 6848 (UK)
+44 (0)1623 637 000 (International)
www.groundstability.com