

Coal Mining Risk Assessment

LAND AT 87 KNOWLE LANE, SHEFFIELD

Project Ref: GUK-0124-03

For: Mr & Mrs Marsden



GROUNDSMITHS
GEOTECHNICAL ENGINEERS



CLIENT:

Mr & Mrs Marsden
% Ben Smith Architectural Studio

PROJECT:

Residential Development

SITE REFERENCE:

Land at 87 Knowle Lane
Sheffield

REPORT REFERENCE:

GUK-0124-03/Rp-001



Reproduced from Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office Crown copyright. Unauthorised reproduction infringes Crown copyright. Groundsmiths (UK) Ltd, AC0000855510 (2024).

DOCUMENT ISSUE:

Issue No.	Date	Status	Revision Change
V1	17 th January 2024	First Issue	-



CONTENTS

1	INTRODUCTION	4
1.1	Appointment.....	4
1.2	Development Proposals.....	4
1.3	DHR or DLR?.....	4
1.4	Objectives	6
1.5	Scope of Works	6
1.6	Previous Ground Investigation Reports.....	6
1.7	Limitations of Study	6
2	SITE SETTING	7
2.1	Details & Description	7
2.2	Anticipated Geological Conditions	7
3	IDENTIFICATION AND ASSESSMENT OF SITE SPECIFIC COAL MINING & OTHER MINERAL WORKING RISKS.....	10
3.1	Coal Authority Consultants Coal Mining Report.....	10
3.2	Seams of Interest.....	10
3.3	Summary of Mining Legacy.....	11
3.4	Risk Assessment.....	12
4	MITIGATION	14
5	REGULATORY APPROVAL	16
6	INFORMATION SOURCES.....	17
7	REPORTING LIMITS	18

TABLES

Table 2.1 - General Site Details	7
Table 2.2 - General Geological Conditions	7
Table 3.1 - Summary of Mining Legacy	11
Table 3.2 - Qualitative Mining Risk Evaluation.....	13

FIGURES & DRAWINGS

210.004/03 PROPOSED SITE PLAN

APPENDICES

APPENDIX A GEOINSIGHT REPORT
APPENDIX B: COAL AUTHORITY CONSULTANTS COAL MINING REPORT



1 INTRODUCTION

1.1 Appointment

Groundsmiths (UK) Ltd ('Groundsmiths') were appointed by Mr & Mrs Marsden (the 'Client') % Ben Smith Architectural Studio to compile a Coal Mining Risk Assessment ('CMRA') with respect to the proposed residential redevelopment of land located off at 87 Knowle Lane, Sheffield (herein referred to as the 'Site').

Groundsmiths have prepared this CMRA for the sole use of the Client that commissioned it in accordance with the agreement under which our services are performed. No other warranty, expressed or implied, is made as to the professional advice or commentary included in this document. Any unauthorised third parties using the information presented do so entirely at their own risk and are duly excluded from any warranty, duty of care or skill. No part of this CMRA shall be reproduced or redistributed without the prior written consent of Groundsmiths. However, it may be issued by the Client or their Agent to the Local Planning Authority (the 'LPA') to support the discharge of any pre-commencement or other such pre-occupancy condition as may be imposed under the Town and Country Planning Act 1990.

1.2 Development Proposals

The aim of this report is to present a preliminary assessment of the coal mining legacy to the Site, the indicative layout of which (Ref. 210.004/03, dated 20th June 2022) is appended for information. The assessment given herein therefore follows a review of currently available published geological records, third party data, and information obtained from the Coal Authority.

1.3 DHR or DLR?

The Coal Authority ^[1] is a statutory consultee on planning applications for development within defined coal mining areas in England, Scotland, and Wales. They have specific statutory responsibilities associated with, for example, the licensing of coal mining operations, the handling of subsidence claims, providing information on coal mining and in managing the environmental legacy of coal mining activities. The risk-based approach to development management adopted by the Coal Authority ^[2], with respect to planning applications, is centred around two spatial areas. These are referred to as 'Development High Risk' and 'Development Low Risk' and are defined in the following way:

- **Development High Risk** areas cover approximately 15% of the coalfield and refer to those areas where specific recorded coal mining legacy is present or suspected which poses a risk to public safety and/or ground stability (e.g. mine entries, shallow recorded or probable workings, coal opencast sites etc), and
- **Development Low Risk** areas cover approximately 85% of the coalfield and refer to those areas where historic coal mining activity has taken place at sufficient depth that it poses only a low risk to new development.

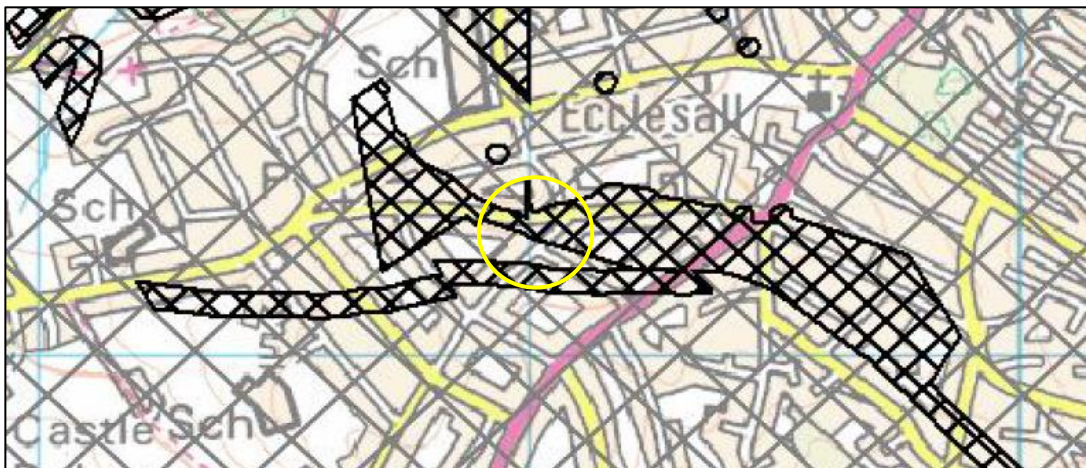


Where a development lies within a low risk area, guidance indicates that there is no requirement to submit a coal mining-related assessment to the Coal Authority¹ as part of any planning submission. However, where development lies within a high risk area, new development proposals (notwithstanding any exemptions that may apply) are required to assess potential coal mining legacy issues. In these instances, assessment is prepared in accordance with the general requirements of preliminary risk assessment as defined by the Coal Authority in order to:

- Determine the possible ground related hazards and risks associated with historic coal mining legacy and other mineral workings, and
- Demonstrate to the Local Planning Authority that the application Site is, or can be made, safe to meet the requirements of the National Planning Policy Framework ('NPPF')^[3], notably Paragraphs 183 and 184, which refer to the provision of adequate investigation information (prepared by competent persons) and the responsibility that is placed on the developer and/or landowner should a site be found to be affected by instability.

INITIAL RISK LEVEL DETERMINATION: DEVELOPMENT HIGH RISK

Available information suggests that the Site lies within or partly within a defined area of DHR. This is because it is located where there are records associated with mining legacy features or where The Coal Authority believe there to be mining legacy features which could have a potentially negative impact upon ground stability. This determination is based upon Coal Authority records, such as that presented on The Coal Authority's interactive database, following review of the Local Planning Authority District Development Risk, Specific Risk and Surface Coal Resource plans for Sheffield^[4], and/or other pertinent information sources^[5].



Source: The Coal Authority (2016). Sheffield District (B) – Development Risk

¹ Irrespective of the requirement of the Coal Authority, a mining risk assessment should be undertaken as part of a general due diligence exercise for any development when deciding to build in an area that may be affected by mining legacy. Other interested parties (e.g. the Local Authority, Building Control, a third party Warranty provider...) may also request one.



1.4 Objectives

Notwithstanding the above risk determination and the potential for mining legacy to affect the proposed development, the objectives of this CMRA were also to:

- Obtain general information about the nature of the bedrock soils likely to be encountered beneath the Site;
- Provide recommendations for any investigative works that may be required, and
- Provide preliminary recommendations for any remedial works they could be required.

1.5 Scope of Works

The assessment undertaken within the context of this CMRA comprised a review of the following sources of information:

- British Geological Survey ('BGS') Mapsheet 100. 1:50,000 scale series (solid & drift edition) geological mapsheet ^[6]
- BGS Mapsheet SK38SW. 1:10,000 scale series (solid & drift edition) geological mapsheet ^[7]
- GeoInsight Report (Appendix A) ^[8]
- BGS Onshore GeoIndex records database ^[9]
- Coal Authority Consultants Coal Mining Report (Appendix B) ^[10]
- Coal Authority interactive (planning) database ^[11]

1.6 Previous Ground Investigation Reports

Groundsmiths are not aware of any historically issued ground investigation data that relates to the proposed development Site or the immediate area surrounding it.

1.7 Limitations of Study

The assessment presented herein has been undertaken subject to the limitations detailed in Section 7 and any other limitations stated separately in the CMRA.

No intrusive ground investigation works have been undertaken as part of this assessment.



2 SITE SETTING

2.1 Details & Description

A general summary of the Site's setting is given in Table 2.1, below.

Table 2.1 - General Site Details

National Grid Reference	The National Grid Reference (NGR) for the Site is indicated to be 432031mE 384230mN.
Area of Development	The Site area assessed within the remit of this study is indicated to be approximately 0.03ha.
Land Use	The Site is understood to be residential. Development proposals are such that the proposed dwelling is to be constructed within the southern part of the garden curtilage.
Ground Elevations	Publicly available topographic data for the area indicates that the Site lies at approximately 213-215m AOD.

2.2 Anticipated Geological Conditions

A summary of salient geological data for the Site and surrounding area is given in Table 2.2, below and overleaf.

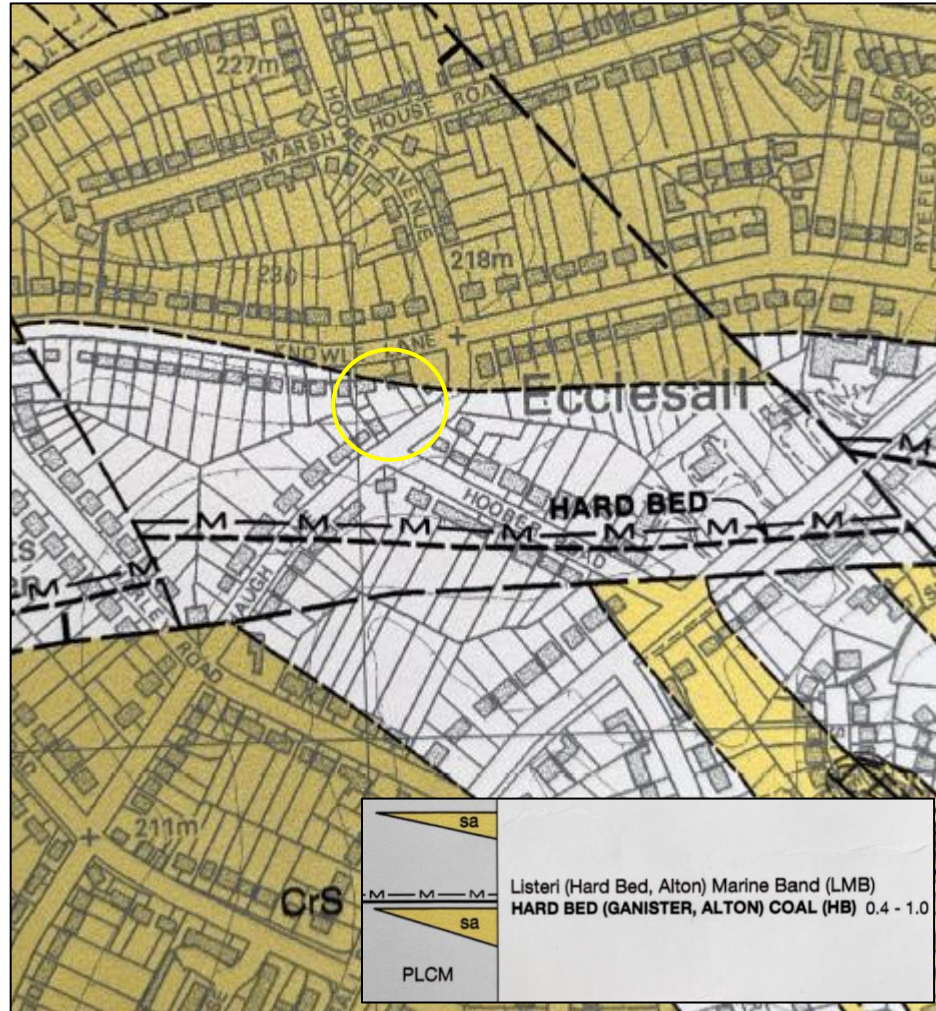
Table 2.2 - General Geological Conditions

BGS Borehole Records	There are no nearby BGS borehole records that may be referred to.
Bedrock Faults	The nearest recorded bedrock fault is conjectured to lie 115m to the south.
Coal	The inferred position of a coal seam (the Hard Bed) is recorded 80m to the south.
Infilled or Made Ground Deposits	There are no recorded areas of artificial deposit within at least 250m.
Superficial Geology	Records indicate there to be no superficial deposits present within at least 500m.
Radon	Between 1% and 3% of properties are estimated to exceed the Radon Action Level. No radon protective measures are indicated to be required in construction, although this should be confirmed with Building Control as they may have different requirements.
Solid Geology	The solid geology underlying the Site is indicated to comprise Pennine Lower Coal Measures ('PLCM') deposits. These consist of a cyclic sequence of deposition of interbedded and undifferentiated horizons of mudstone and siltstone with various named and unnamed sandstone bands, coal seams, their seathearts, and some ironstone rakes.

Table Contd./



Available BGS data suggests that the dip of the bedrock within the local area is about 5°, with this being broadly to the north-east. There will likely be some variation in this, however, given the presence of large-scale faulting.



Source: BGS (2011). Mapsheet SK38SW. Sheffield. 1:10,000 scale

The underlying solid strata will likely be present as weathered brown, yellow and grey sandy mudstones of varying strength with darker interbedded horizons of grey-black shales and coal. Furthermore, given the presence of various named sandstone units (e.g. the Crawshaw Sandstone), such deposits could also be expected to be encountered.

Natural Cavities

There are no records of any natural cavities within at least 500m.

Mining Cavities

There are no records of any mining cavities (e.g. crown holes) within at least 1km.

Non-coal Mining

Ganister (sandstone) and clay mining is indicated to the far north-west of the wider area, although there are no records to suggest that such working exists within at least 450m of the Site. The potential for difficult ground conditions to exist is not anticipated on the basis of available information.

Table Contd./



Bedrock Permeability	<p>Maximum bedrock permeability is indicated to be moderate. Any groundwater movement at depth would be via secondary porosity through fissures and other defined fractures.</p>
Natural Ground Subsidence Hazards within 50m	<p><u>Shrink swell clay soils</u>: Very low. <u>Running sands</u>: Negligible. <u>Compressible deposits</u>: Negligible. <u>Ground dissolution of soluble rocks</u>: Negligible. <u>Collapsible deposits</u>: Very low.</p>
Landslip	<p>In providing a preliminary assessment of risk associated with potential landslip, consultation was made with the data presented by GroundSure at the 1:10,000 and 1:50,000 scales.</p> <p>GeoInsight data indicates that there are no records of landslip associated with mass movement deposits within 500m of the Site. Furthermore, the hazard rating for slope instability (landslide potential) within 50m is indicated to be low. The GroundSure data also indicates that there are no records of landslip permeability (i.e. the estimated rate of vertical movement of water from the ground surface through the unsaturated zone of any landslip deposit) within 50m.</p> <p>Global slope instability problems are considered unlikely, although due consideration to potential problems associated with adjacent land should always be made.</p>
Brine	<p>The Site does not lie within a brine pumping area. No risk would be expected.</p>



3 IDENTIFICATION AND ASSESSMENT OF SITE SPECIFIC COAL MINING & OTHER MINERAL WORKING RISKS

With respect to the Site, consideration has been given to historic mining legacy that relates to the proposed development and that of the immediate surrounding area. Potential mining risks which could have a negative impact on development have been assessed, utilising third party and other published information where available.

3.1 Coal Authority Consultants Coal Mining Report

Salient information obtained from the Coal Authority, as indicated in the appended report, may be summarised as follows:

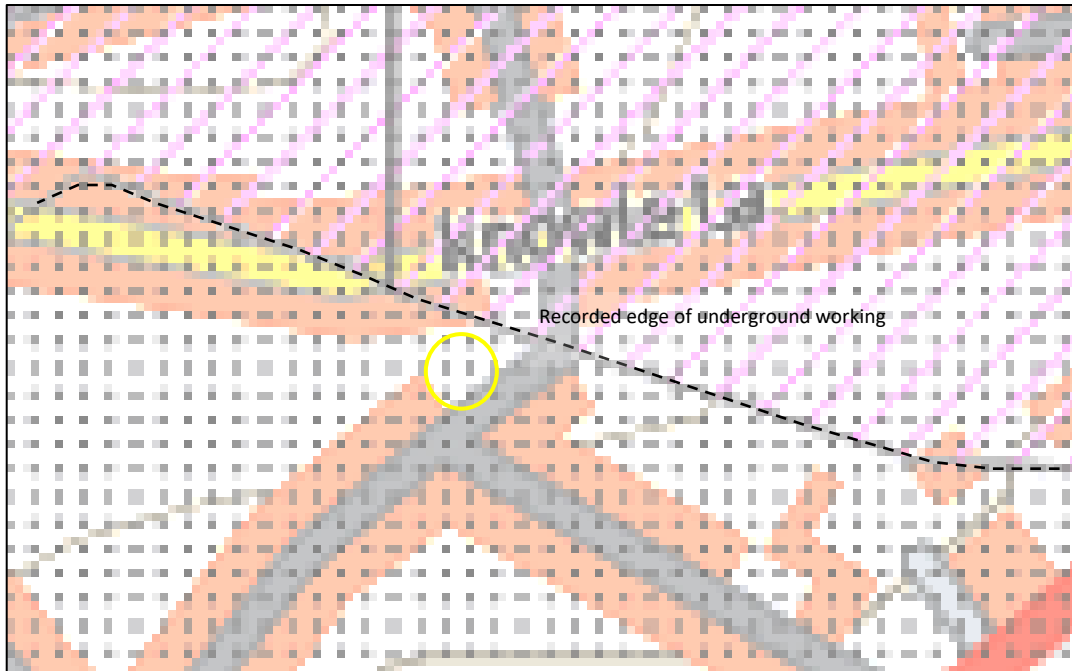
- Records indicate that the shallowest recorded past underground coal mining to the north of the Site (not beneath the Site) is related to c.1871 workings in the Halifax Hard seam with these being present from 31m bgl. The extraction thickness of the coal is reported to be 1.6m, with all works being undertaken from the former Dobbing Hill colliery.
- No probable unrecorded shallow workings are identified.
- No shallow-depth spine roads are identified.
- There are no recorded mine entries within 100m of the Site.
- There are no recorded on-Site geological faults, fissures, or breaklines.
- There are no records in relation to coal mining subsidence claims within 50m of the Site.
- There are no records in relation to opencast coal mine workings within 500m of the Site.
- There are no records of mine gas within 500m of the Site.
- There are no records of mine water treatment schemes within 500m of the Site, and
- There are no records relating to any remediation works having been carried out within 50m.

3.2 Seams of Interest

The shallowest seam of potential influence to underlie the Site, given the broadly north-easterly dip of the bedrock strata and the mapped positions of the nearby coals on available BGS plans, will be the Hard Bed. There is some difference in the reported nomenclature of this seam as some more recent texts refer to the Hard Bed as just that, others call it the Halifax Hard (which is what the Coal Authority's records report it as), and there are records of it being referred to as the Ganister, or Alton Coal, also. That aside, relatively little has been



written about this coal’s existence in the Bents Green area of Sheffield, but that which has indicates that the horizon was not only stratigraphically important, because of the *Gastrioceras Listeri* Marine Band that formed above the coal, but also economically important because of the ganister and fireclay that was present below it. Preliminary information suggested that the Site was located within or towards the southern edge of a defined Development High Risk area. Subsequent Coal Authority reporting, cited herein, and interrogation of perhaps more accurate on-line database information suggests however that it lies beyond (as indicated below).



Source: The Coal Authority (2024)

The Coal Authority report does not indicate the presence of any recorded working in the Hard Bed coal beneath the Site, nor does it identify any probable unrecorded working either. The nearest recorded working is mapped as being to the north (no distance prescribed), but from a depth of 31m. Notwithstanding the lack of recorded evidence of working beneath the Site, it is considered reasonable to assume that the depth to and indicated thickness of historical extraction would put the coal outside any zone of influence based on current guidance^[12]. Further to this, there are no records relating to gypsum, tin, and/or clay mining in the area of development.

3.3 Summary of Mining Legacy

A summary of the mining legacy for the Site is given in Table 3.1, below and overleaf.

Table 3.1 - Summary of Mining Legacy

Coal Mining Feature	Yes	No	Unknown	Comment
On-site coal crop		x		None recorded.

Table Contd./



Coal Mining Feature	Yes	No	Unknown	Comment
Recorded underground coal mine workings <30m bgl beneath the Site		x		The shallowest recorded workings are indicated to be from 31m bgl, but to the north.
Probable unrecorded underground coal mine workings at <30m bgl beneath the Site		x		The Coal Authority do not indicate the presence of potential unrecorded shallow workings.
Recorded underground ore mining at <30m bgl		x		None recorded.
Probable unrecorded underground ore mining at <30m bgl		x		None expected.
Mine entries (shafts and adits) on, or within 100m of the Site		x		None recorded.
Recorded Coal Authority mining surface (opencast) workings hazards		x		None recorded.
Records of coal mining related subsidence		x		None recorded.
Spontaneous combustion ('sponcom') of coal seams		x		None recorded.
Records of mine gas emissions requiring action by the Coal Authority		x		None recorded.
Geological weakness		x		None recorded.
Remediation work to sites or mine entries		x		None recorded.

3.4 Risk Assessment

Mining legacy features which could potentially impact upon the proposed development works at the Site are summarised in Table 3.2, overleaf, with this being based on information provided by the Coal Authority and that obtained from other geological sources.



Table 3.2 - Qualitative Mining Risk Evaluation

Coal Mining Feature	Risk Level	Comment
On-site coal crop	Negligible	The crop of the Hard Bed coal is indicated to be present at a distance of 80m to the south of the Site. There are no other indicated coals between this and the Site's position.
Recorded underground coal mine workings <30m bgl beneath the Site	Negligible	The Hard Bed coal is not recorded by the Coal Authority as having been worked beneath the Site.
Probable unrecorded underground coal mine workings at <30m bgl beneath the Site	Very Low	The potential for unrecorded working beneath the Site in the Hard Bed coal is considered to be very low on the basis of Coal Authority information. The Consultant's Report does not identify any probable working.
Recorded or probable underground ore mining at <30m bgl	Negligible	The potential for difficult ground conditions associated with ore mining is not anticipated on the basis of available information.
Recorded Coal Authority mining surface hazards (opencast workings)	Negligible	None recorded. The potential for difficult ground conditions is not expected.
Coal mining related subsidence	Negligible	No subsidence claims within at least 50m are indicated to have been made.
Mine entries (shafts and adits) on, or within 100m of the Site	Negligible	There are no recorded coal mine entries within at least 100m. It's considered reasonable to assume that there are no mine entries present within the boundary to the Site on the basis of available information.
Spontaneous combustion ('sponcom') of coal seams	Negligible	Coal is not expected to be present at founding depths. All usual precautions in development would need to be adhered to if any unforeseen shallow coal was encountered.
Records of mine gas emissions requiring action by the Coal Authority	Very Low to Negligible	Risk associated with mine gases is not expected. Where other fugitive ground gases may be present, these should be explored further as required to satisfy any other regulatory requirement.
Geological weakness	Very Low	No particular weakness due to faulting is anticipated, although ground conditions should be confirmed through a phase of limited investigation to facilitate foundation design.



4 MITIGATION

Coal

The Site has been identified as being present within an area that has a history of mining legacy, notably with this being associated with ancient underground extraction of coal from the Hard Bed seam. Recorded underground coal extraction is noted from a depth of 31m to the north.

The relatively recently revised CIRIA document titled 'Abandoned Mine Workings Manual', which replaced Special Publication 32 (1984), indicates that the use of empirical or 'rule of thumb' guides, as the design basis for treatment depth, has been successfully observed for many years for a wide range of abandoned mine workings and overlying rock/soil strata scenarios. As such, guidance indicates that mine workings are to be treated if there is less than 10 times the aggregate measured height of mine workings (not the thickness of the seam) as competent rock cover above the workings. The data available at this time suggests that it would be anticipated for there to be sufficient competent rock cover above the Hard Bed coal as the indicated seam thickness is mapped as being 0.9-1.0m, should any unrecorded workings be present, although this is considered a very low risk.

The underlying undisturbed natural ground conditions are expected to be intact mudstone, siltstone, and sandstone of the Pennine Lower Coal Measures.

Shafts and Adits

Although the potential for mine entries associated with ancient prospecting to be present on Site cannot be wholly discounted, it is considered reasonable to assume that such mining legacy is unlikely to be present within the confines of such a small area.

For information at this time, building over or within the influencing distance of a mine entry (i.e. shaft or adit) can be dangerous and has the potential for significant risks to both the development and Site end users if not undertaken appropriately. Should such features be encountered, investigation and treatment would be required, which may impact on the layout of the proposed development. Consultation with the Coal Authority would need to be made at all times as they own the majority of the coal mine entries. Additional information about the treatment of mine entries is given in the Abandoned Mine Workings Manual.

Further Mining Legacy Investigation Works

It is considered that the available information obtained from the Coal Authority and BGS does not allude to there being any significant risk to the proposed development, and it does not suggest that the completion of perhaps '*disproportionately expensive investigative works*' are needed in this instance. If more widespread workings had been identified and these were shallower than the recorded 31m, and the potential for problems was perceived to be higher, Groundsmiths would likely be mindful to request the completion of some further works to quantify the level of risk. On balance, it is considered better to ensure that a suitable and robust foundation solution is provided for the development so that this mitigates any potential mining-related issue that could potentially arise.



It is considered that no further works with respect to the potential for ground instability associated with mining legacy should be needed, unless other pertinent information to the contrary comes to light. Foundation design for the proposed scheme will need to be in accordance with that routinely adopted for where development is undertaken in former coal mining areas, with appropriate reinforcement being provided to the satisfaction of Building Control and/or a third party Warranty Provider. Notwithstanding an overall very low to negligible risk from mining legacy, where this is allowed for in construction it would be considered that the Site would be safe and therefore meet the requirements of the National Planning Policy Framework.

It's usual for foundations to be kept shallow in former mining areas so consultation should be made with a structural engineer in this regard. Ground conditions across the founding depth(s) should be confirmed as necessary to facilitate foundation design. Any specific requirements of Building Control and/or a Warranty Provider would need to be accommodated accordingly.

Radon & Ground Gas

The need for radon precautions in construction are not considered necessary on the basis of available information.

For information only at this time, and in accordance with BS8485 ^[13], the structure as proposed would be determined as 'Type A (High Risk)' as it will have small volume internal spaces that will be generally poorly ventilated. For ground gas, therefore, it would be considered prudent to allow for Characteristic Situation 2 gas precautions in construction until proven otherwise, or at least until the issue can be discussed with Building Control and/or a Warranty Provider to see if such measures need to be installed within the ground floor construction.

Specific remediation proposals and verification methodology for any gas protection measures that were found to be required would need to be submitted to the Local Planning Authority in the form of an LCRM Stage 3 Remedial Strategy.

The installation of all gas membranes and associated components to be used would need to be carried out in accordance with manufacturer requirements and / or any other guidance given ^[14,15]. Independent inspection of the membrane and componentry installation would also be required at the time, with relevant documentary and photographic evidence being provided to the Local Planning Authority in a final post-installation Validation Report.



5 REGULATORY APPROVAL

This report has been compiled in accordance with good practice guidance for the investigation, assessment and management of land that may be affected by ground stability hazards.

The recommendations presented are considered reasonable on the basis of available information and the assessment of the site as carried out by Groundsmiths. However, it remains the responsibility of the Client to ensure that the Site poses no significant risk to any sensitive receptor(s) and that it remains aligned with the proposed end-use and assessment framework adopted in this report.

If at any time in the future, additional information comes to light that puts into doubt the accuracy of the professional opinion or third party information presented herein, then it would be necessary to revisit the assessment presented herein.

Works undertaken cannot be guaranteed to gain approval by the Regulatory Authorities and / or your Warranty provider, so copies of this report should be made available to the relevant organisations for comment and approval, prior to undertaking any irrecoverable works associated with the Site.



6 INFORMATION SOURCES

The following references have been cited in the production of this report:

- 1 The Coal Authority (2024). <https://www2.groundstability.com>.
- 2 The Coal Authority (2023). <https://www.gov.uk/guidance/planning-applications-coal-mining-risk-assessments>.
- 3 Ministry of Housing, Communities & Local Government (2021). National Planning Policy Framework.
- 4 The Coal Authority (2016). Sheffield District (B) – Development Risk, Specific Risk & Surface Coal Resource Plans. 1:50,000 scale.
- 5 Eden, R.A., Stevenson, I.P. and Edwards, W. (1957). Memoirs of the Geological Survey of Great Britain. Geology of the Country around Sheffield. Explanation of one-inch geological mapsheet 100, New Series. HMSO.
- 6 British Geological Survey (2011). Sheffield. England and Wales Sheet 100. Bedrock and Superficial Deposits. 1:50,000 (Keyworth, Nottingham: British Geological Survey).
- 7 British Geological Survey (2011). Whirlow. England and Wales Sheet SK38SW. Bedrock and Superficial Deposits. 1:10,000 (Keyworth, Nottingham: British Geological Survey).
- 8 Groundsure (2024). GeoInsight Report. Land at 87 Knowle Lane, Sheffield. Ref No. EMS-918273_1170389, dated 16th January.
- 9 UKRI (2024). <http://www.bgs.ac.uk/map-viewers/geoindex-onshore>.
- 10 The Coal Authority (2024). Consultants Coal Mining Report. 87 Knowle Lane, Sheffield. Ref. 51003399411001, dated 16th January.
- 11 The Coal Authority (2024). <https://mapapps2.bgs.ac.uk/coalauthority/home.html>.
- 12 Parry, D. and Chiverrell, C. (eds) (2019). Abandoned Mine Workings Manual. C758D. CIRIA, London, UK (ISBN: 978-0-86017-765-4).
- 13 BS8485 (2015+A1:2019) Code of Practice for the Design of Protective Measures for Methane and Carbon Dioxide Ground Gases for New Buildings.
- 14 CIRIA C735 (2014). Good Practice on the Testing and Verification of Protection Systems for Buildings against Hazardous Ground Gases.
- 15 Yorkshire and Lincolnshire Pollution Advisory Group (2016). Verification Requirements for Gas Protection Systems. Technical Guidance for Developers, Landowners and Consultants. Version 1.1.



7 REPORTING LIMITS

Copyright © 2024 Groundsmiths (UK) Ltd. All rights reserved.

The opinions provided in this document are given in good faith and are subject to the limitations and constraints imposed by the methods and information sources described. Factual information, where stated, has been obtained from a variety of sources. Groundsmiths assumes that third party data is reliable but cannot independently confirm this as the validity and accuracy of this information is outside our control. No guarantee can therefore be given as to the completeness of the information gathered during the study and no responsibility is accepted for errors or omissions in the third party information used. Groundsmiths' professional judgement and experience is however used to ensure that uncertainties are reduced to a level appropriate to the Site, the purpose of the assessment and the resources devoted to it by the Client.

Whilst every effort has been made to carry out an assessment that enables a realistic preliminary characterisation of the Site, the possibility of significant variation in actual ground conditions existing cannot be discounted. The findings and opinions presented in this report are relevant to the time this assessment was undertaken but should not necessarily be relied upon to represent conditions at a substantially later date. Further information, ground investigation, construction activities or the passage of time may reveal conditions that were not indicated in the presented data and therefore could not have been considered in the preparation of this report. Where such information might impact upon stated opinions, Groundsmiths reserve the right to modify the opinions expressed in this report.

Where opinions expressed in this report are based on current available guidelines and legislation, no liability can be accepted for the effects of any future changes to such guidelines and legislation. New information or improved practices and changes in legislation may require reinterpretation of the report as a whole, or in part.

The conclusions and recommendations presented in this report are based on the site-specific assessment but utilising third party documentary information as appropriate. They are, however, limited to those that could be reasonably made at the time the assessment was undertaken. Where assessments of Site areas affected in particular ways are given, these are approximate.

This report does not constitute an archaeological, contamination, ecological or arboriculturalist / invasive plant species survey. Any comment given in relation to these is for information only. Further assessments to assess these may be required as part of any planning condition and should therefore be undertaken by suitably qualified experts as required.

Groundsmiths reserve the right to edit and / or retract any conclusion or recommendation made in this report should any further information, with respect to the Site, become available.

Groundsmiths disclaim any obligation to update the report for events taking place after the time during which the assessment was carried out.

Groundsmiths do not provide or purport to provide legal advice. Should the Clients require such advice then that of lawyers should be sought.

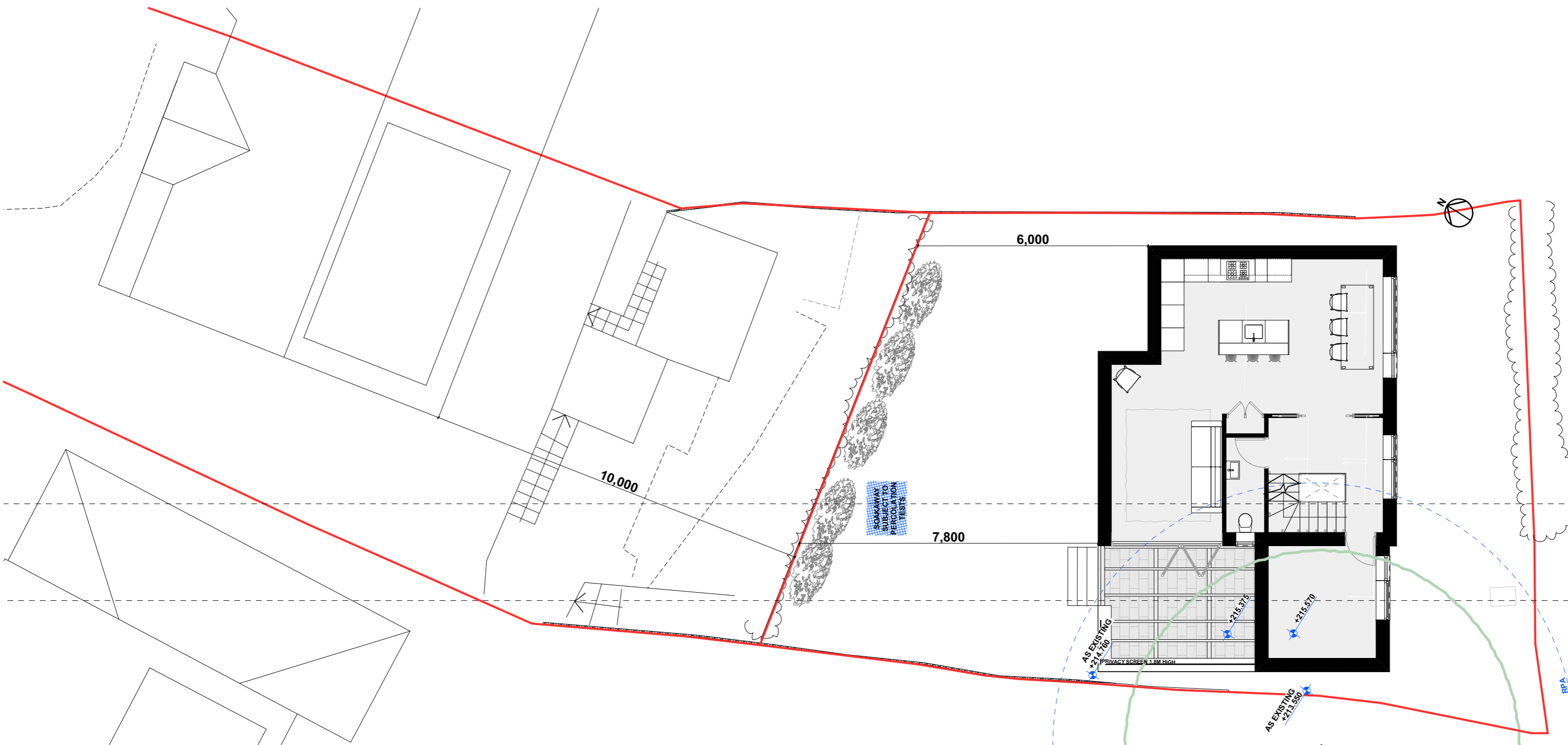
Groundsmiths accept no responsibility if any findings given in this report are not implemented by the Client or their agents.

Groundsmiths accept no responsibility if any further works, as requested by either the Local Planning Authority and/or The Coal Authority in the discharge of their duty of care, are not implemented by the Client or their agents.

This report could be reassigned to a third party if they require warranty in the event that the Site is sold at any time in the future. A fee would be applicable in this instance and should be discussed with Groundsmiths.



FIGURES & DRAWINGS



SITE PLAN
1:100



LOCATION PLAN
1:1250

PLANNING ISSUE	08/05/23
PRE APP	15/08/22
Issue	Date 20/06/22
CLIENT ISSUE	
Title	87 KNOWLE LANE SHEFFIELD S11 9SN
PROPOSED SITE PLAN	
PLANNING	
Client	MR & MRS MARSDEN
Drawing No.	Revision
210.004	03
Date	Scale
20/06/22	1:100 @ A3

Ben Smith
architectural studio

w. www.bensmitharchitectural.com
e. smithkavanagh@gmail.com
i. bensmith architectural
m. 07791 213 178



APPENDIX A
Geolnsight Report

Land at 87 Knowle Lane, Sheffield

Order Details

Date: 16/01/2024
Your ref: EMS_918273_1138299
Our Ref: EMS-918273_1170389

Site Details

Location: 432031 384230
Area: 0.03 ha
Authority: [Sheffield City Council](#) ↗



[Summary of findings](#)

[p. 2 >](#)

[Aerial image](#)

[p. 5 >](#)

[OS MasterMap site plan](#)

[p.10 >](#)

groundsure.com/insightuserguide ↗

Contact us with any questions at:

info@groundsure.com ↗

01273 257 755

Summary of findings

Page	Section	Geology 1:10,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
11 >	1.1 >	10k Availability >	Identified (within 500m)				
12 >	1.2 >	Artificial and made ground (10k) >	0	0	0	3	-
13	1.3	Superficial geology (10k)	0	0	0	0	-
13	1.4	Landslip (10k)	0	0	0	0	-
14 >	1.5 >	Bedrock geology (10k) >	1	1	7	6	-
15 >	1.6 >	Bedrock faults and other linear features (10k) >	0	0	7	5	-
Page	Section	Geology 1:50,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
17 >	2.1 >	50k Availability >	Identified (within 500m)				
18	2.2	Artificial and made ground (50k)	0	0	0	0	-
18	2.3	Artificial ground permeability (50k)	0	0	-	-	-
19	2.4	Superficial geology (50k)	0	0	0	0	-
19	2.5	Superficial permeability (50k)	None (within 50m)				
19	2.6	Landslip (50k)	0	0	0	0	-
19	2.7	Landslip permeability (50k)	None (within 50m)				
20 >	2.8 >	Bedrock geology (50k) >	1	1	7	6	-
21 >	2.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
22 >	2.10 >	Bedrock faults and other linear features (50k) >	0	0	5	3	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
23	3.1	BGS Boreholes	0	0	0	-	-
Page	Section	Natural ground subsidence >					
24 >	4.1 >	Shrink swell clays >	Very low (within 50m)				
25 >	4.2 >	Running sands >	Negligible (within 50m)				
26 >	4.3 >	Compressible deposits >	Negligible (within 50m)				
27 >	4.4 >	Collapsible deposits >	Very low (within 50m)				
28 >	4.5 >	Landslides >	Low (within 50m)				
30 >	4.6 >	Ground dissolution of soluble rocks >	Negligible (within 50m)				



Page	Section	Mining and ground workings >	On site	0-50m	50-250m	250-500m	500-2000m	
32 >	5.1 >	BritPits >	0	0	0	1	-	
33	5.2	Surface ground workings	0	0	0	-	-	
33 >	5.3 >	Underground workings >	0	0	0	0	9	
34	5.4	Underground mining extents	0	0	0	0	-	
34	5.5	Historical Mineral Planning Areas	0	0	0	0	-	
34 >	5.6 >	Non-coal mining >	0	0	0	0	3	
35	5.7	JPB mining areas	None (within 0m)					
35	5.8	The Coal Authority non-coal mining	0	0	0	0	-	
35	5.9	Researched mining	0	0	0	0	-	
35	5.10	Mining record office plans	0	0	0	0	-	
36	5.11	BGS mine plans	0	0	0	0	-	
36 >	5.12 >	Coal mining >	Identified (within 0m)					
36	5.13	Brine areas	None (within 0m)					
36	5.14	Gypsum areas	None (within 0m)					
36	5.15	Tin mining	None (within 0m)					
37	5.16	Clay mining	None (within 0m)					
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m	
38	6.1	Natural cavities	0	0	0	0	-	
38	6.2	Mining cavities	0	0	0	0	0	
38	6.3	Reported recent incidents	0	0	0	0	-	
38	6.4	Historical incidents	0	0	0	0	-	
39	6.5	National karst database	0	0	0	0	-	
Page	Section	Radon >						
40 >	7.1 >	Radon >	Between 1% and 3% (within 0m)					
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m	
42 >	8.1 >	BGS Estimated Background Soil Chemistry >	1	3	-	-	-	
42 >	8.2 >	BGS Estimated Urban Soil Chemistry >	1	3	-	-	-	
43	8.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-	

Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
44	9.1	Underground railways (London)	0	0	0	-	-
44	9.2	Underground railways (Non-London)	0	0	0	-	-
44	9.3	Railway tunnels	0	0	0	-	-
44	9.4	Historical railway and tunnel features	0	0	0	-	-
44	9.5	Royal Mail tunnels	0	0	0	-	-
45	9.6	Historical railways	0	0	0	-	-
45	9.7	Railways	0	0	0	-	-
45	9.8	Crossrail 1	0	0	0	0	-
45	9.9	Crossrail 2	0	0	0	0	-
45	9.10	HS2	0	0	0	0	-



Recent aerial photograph



Aerial photography supplied by Getmapping PLC. © Copyright Getmapping PLC 2024. All Rights Reserved.

Capture Date: 19/04/2021

Site Area: 0.03ha



Recent site history - 2018 aerial photograph

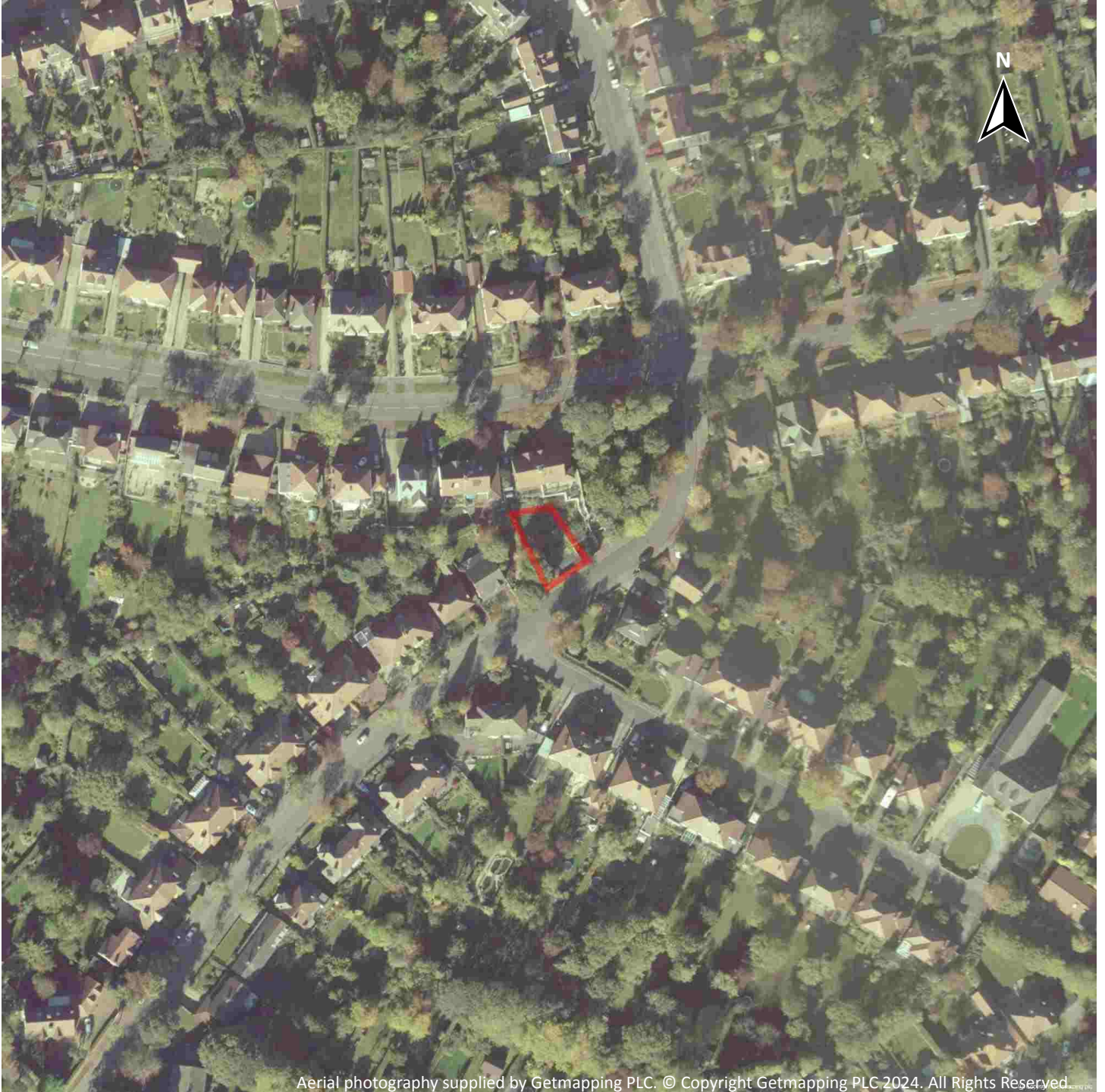


Capture Date: 27/06/2018

Site Area: 0.03ha



Recent site history - 2010 aerial photograph

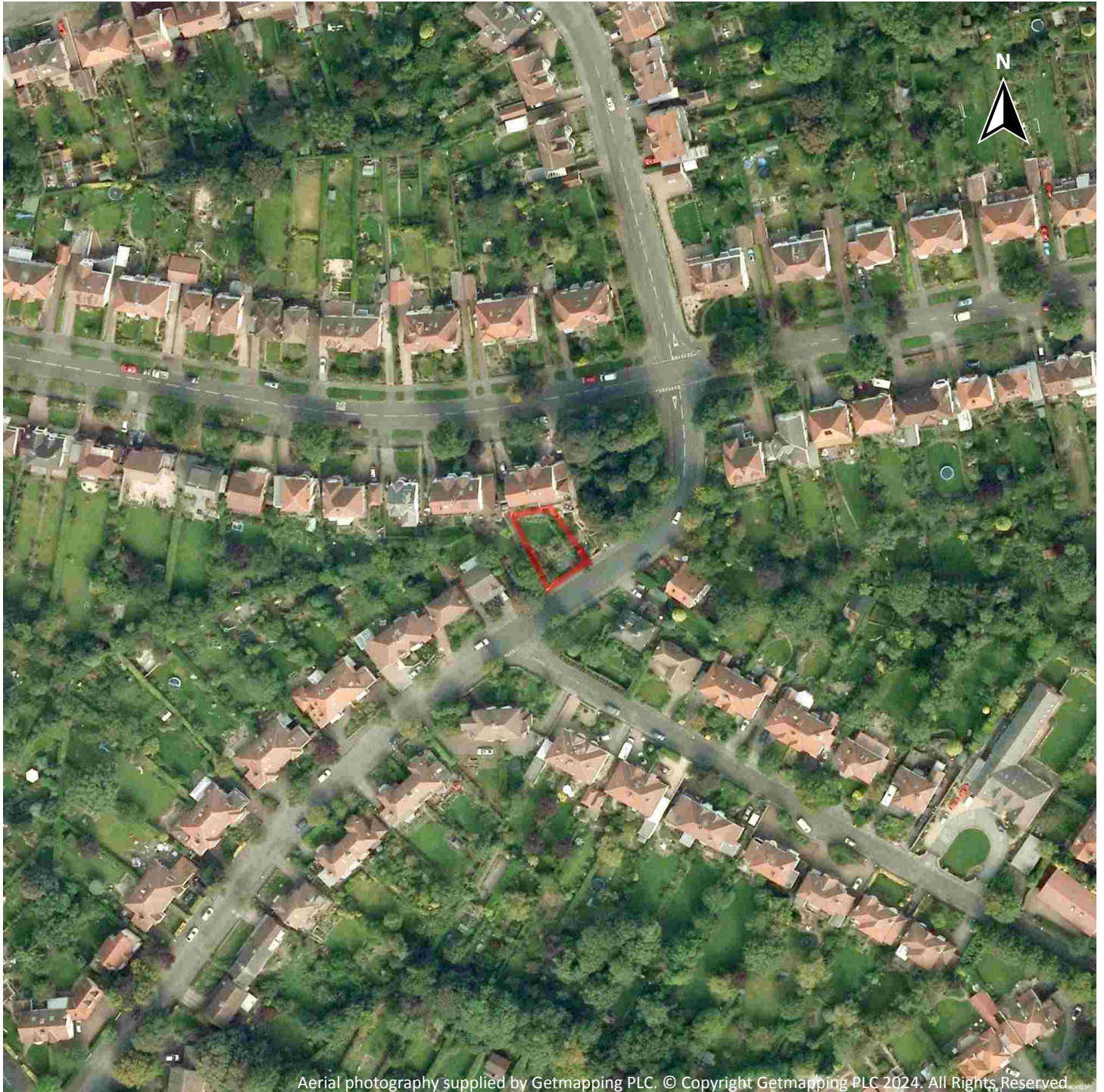


Capture Date: 20/10/2010

Site Area: 0.03ha



Recent site history - 2009 aerial photograph



Capture Date: 11/09/2009

Site Area: 0.03ha



Recent site history - 1999 aerial photograph



Capture Date: 17/11/1999

Site Area: 0.03ha



Contact us with any questions at:

info@groundsure.com

01273 257 755

Date: 16 January 2024

OS MasterMap site plan

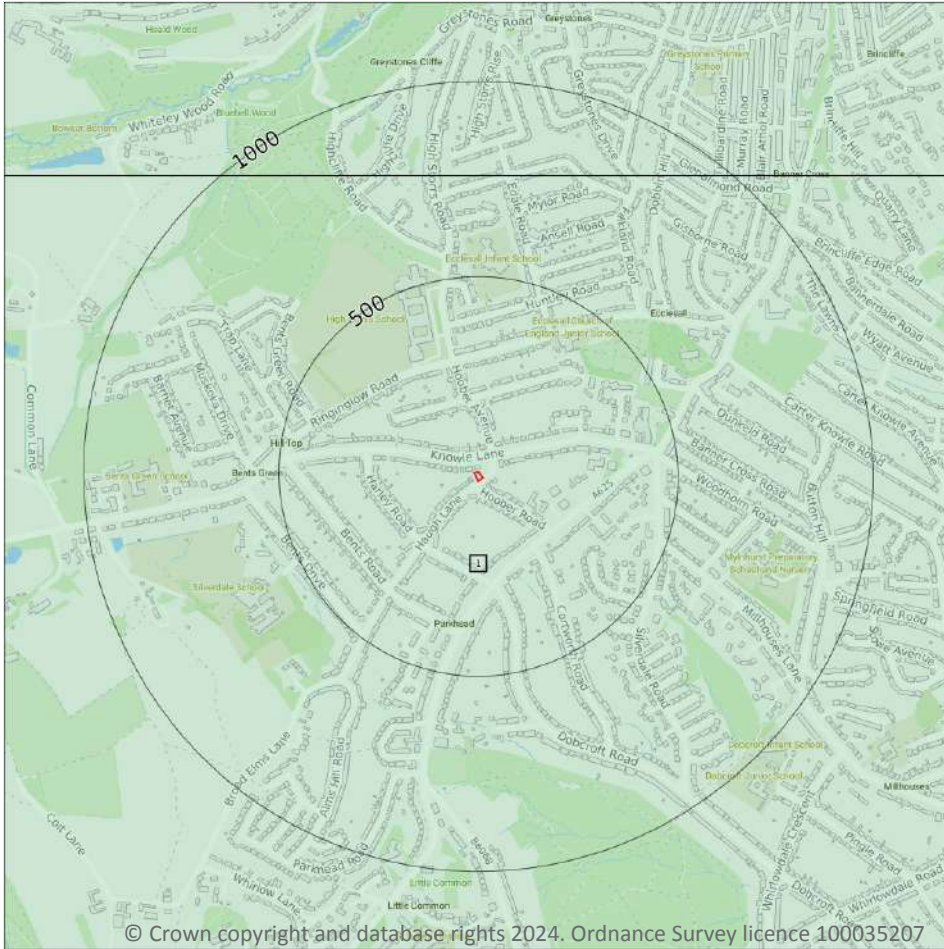


© Crown copyright and database rights 2024. Ordnance Survey licence 100035207

Site Area: 0.03ha



1 Geology 1:10,000 scale - Availability



— Site Outline

Search buffers in metres (m)

- Full coverage
- Partial coverage
- No coverage

1.1 10k Availability

Records within 500m

1

An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on [page 11](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	SK38SW

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Artificial and made ground



1.2 Artificial and made ground (10k)

Records within 500m

3

Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on [page 12](#) >

ID	Location	LEX Code	Description	Rock description
1	297m N	LSGR-UKNOWN	Landscaped Ground (Undivided)	Unknown/unclassified Entry
A	376m SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
A	380m SE	WMGR-ARTDP	Infilled Ground	Artificial Deposit

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Superficial

1.3 Superficial geology (10k)

Records within 500m

0

Superficial geological deposits at 1:10,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

This data is sourced from the British Geological Survey.

1.4 Landslip (10k)

Records within 500m

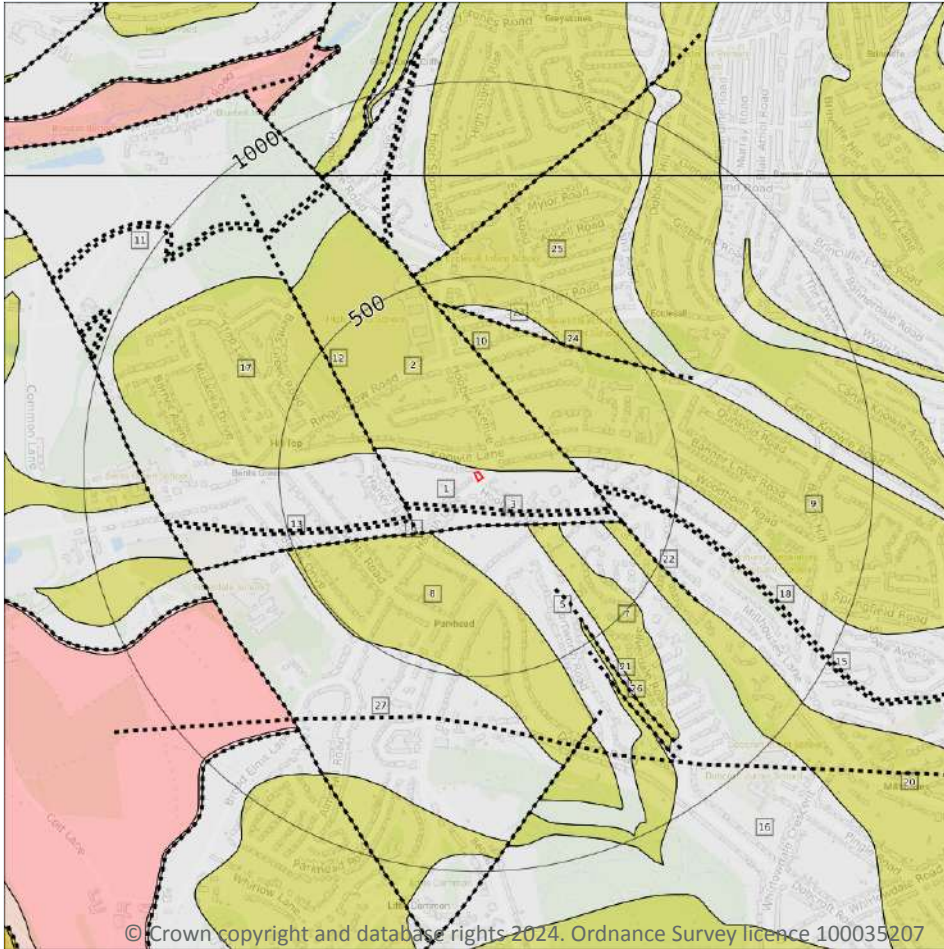
0

Mass movement deposits on BGS geological maps at 1:10,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Bedrock



- Site Outline
- Search buffers in metres (m)
- Bedrock faults and other linear features (10k)
- Bedrock geology (10k)
Please see table for more details.

1.5 Bedrock geology (10k)

Records within 500m

15

Bedrock geology at 1:10,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on [page 14](#) >

ID	Location	LEX Code	Description	Rock age
1	On site	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
2	9m N	LER-SDST	Loxley Edge Rock - Sandstone	Langsettian Sub-age
5	115m S	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age



ID	Location	LEX Code	Description	Rock age
7	165m SE	PLCM-SDST	Pennine Lower Coal Measures Formation - Sandstone	Langsettian Sub-age
8	180m SW	CRS-SDST	Crawshaw Sandstone - Sandstone	Langsettian Sub-age
9	196m NE	LER-SDST	Loxley Edge Rock - Sandstone	Langsettian Sub-age
11	196m W	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
15	222m E	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
16	228m SE	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
17	254m W	LER-SDST	Loxley Edge Rock - Sandstone	Langsettian Sub-age
20	324m E	PLCM-SDST	Pennine Lower Coal Measures Formation - Sandstone	Langsettian Sub-age
23	378m N	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
25	390m NE	LER-SDST	Loxley Edge Rock - Sandstone	Langsettian Sub-age
26	441m SE	PLCM-SDST	Pennine Lower Coal Measures Formation - Sandstone	Langsettian Sub-age
27	473m S	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age

This data is sourced from the British Geological Survey.

1.6 Bedrock faults and other linear features (10k)

Records within 500m

12

Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on [page 14](#) >

ID	Location	Category	Description
3	68m S	FOSSIL_HORIZON	Fossil horizon, marine band
4	80m S	ROCK	Coal seam, inferred
6	115m S	FAULT	Normal fault, inferred
10	196m NE	FAULT	Normal fault, inferred
12	196m W	FAULT	Normal fault, inferred

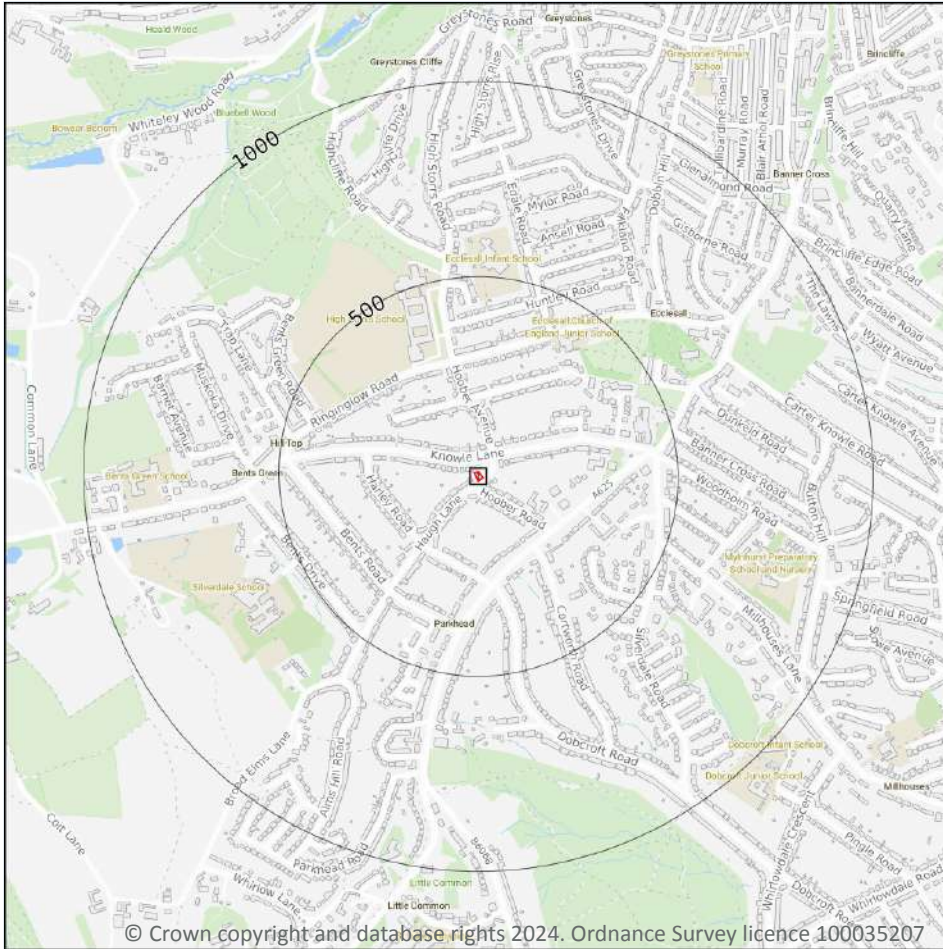


ID	Location	Category	Description
13	197m SW	FOSSIL_HORIZON	Fossil horizon, marine band
14	198m SW	ROCK	Coal seam, inferred
18	286m E	FOSSIL_HORIZON	Fossil horizon, marine band
19	295m E	ROCK	Coal seam, inferred
21	340m SE	FAULT	Normal fault, inferred
22	375m E	FAULT	Normal fault, inferred
24	378m N	FAULT	Normal fault, inferred

This data is sourced from the British Geological Survey.



2 Geology 1:50,000 scale - Availability



— Site Outline
Search buffers in metres (m)

□ Geological map tile

2.1 50k Availability

Records within 500m

1

An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:50,000 scale - Availability map on [page 17](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	No coverage	Full	Full	Full	EW100_sheffield_v4

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Artificial and made ground

2.2 Artificial and made ground (50k)

Records within 500m

0

Details of made, worked, infilled, disturbed and landscaped ground at 1:50,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

This data is sourced from the British Geological Survey.

2.3 Artificial ground permeability (50k)

Records within 50m

0

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any artificial deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Superficial

2.4 Superficial geology (50k)

Records within 500m

0

Superficial geological deposits at 1:50,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

This data is sourced from the British Geological Survey.

2.5 Superficial permeability (50k)

Records within 50m

0

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any superficial deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.

2.6 Landslip (50k)

Records within 500m

0

Mass movement deposits on BGS geological maps at 1:50,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.

2.7 Landslip permeability (50k)

Records within 50m

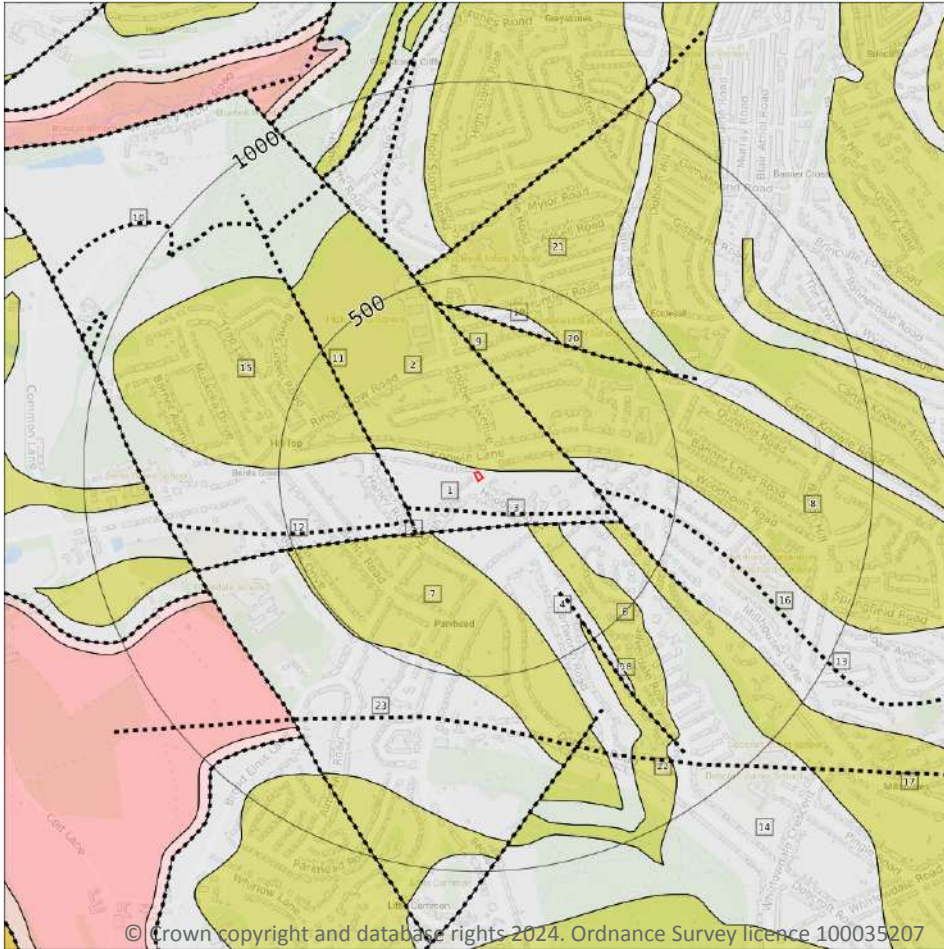
0

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any landslip deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Bedrock



- Site Outline
- Search buffers in metres (m)
- - - - Bedrock faults and other linear features (50k)
- Bedrock geology (50k)
Please see table for more details.

2.8 Bedrock geology (50k)

Records within 500m

15

Bedrock geology at 1:50,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on [page 20](#) >

ID	Location	LEX Code	Description	Rock age
1	On site	PLCM-MDSI	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE AND SILTSTONE	WESTPHALIAN
2	9m N	LER-SDST	LOXLEY EDGE ROCK - SANDSTONE	WESTPHALIAN
4	121m S	PLCM-MDSI	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE AND SILTSTONE	WESTPHALIAN



ID	Location	LEX Code	Description	Rock age
6	165m SE	PLCM-SDST	PENNINE LOWER COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
7	180m SW	CRS-SDST	CRAWSHAW SANDSTONE - SANDSTONE	WESTPHALIAN
8	196m NE	LER-SDST	LOXLEY EDGE ROCK - SANDSTONE	WESTPHALIAN
10	196m W	PLCM-MDSI	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE AND SILTSTONE	WESTPHALIAN
13	222m E	PLCM-MDSI	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE AND SILTSTONE	WESTPHALIAN
14	227m SE	PLCM-MDSI	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE AND SILTSTONE	WESTPHALIAN
15	255m W	LER-SDST	LOXLEY EDGE ROCK - SANDSTONE	WESTPHALIAN
17	324m E	PLCM-SDST	PENNINE LOWER COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
19	378m N	PLCM-MDSI	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE AND SILTSTONE	WESTPHALIAN
21	390m NE	LER-SDST	LOXLEY EDGE ROCK - SANDSTONE	WESTPHALIAN
22	441m SE	PLCM-SDST	PENNINE LOWER COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
23	472m S	PLCM-MDSI	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE AND SILTSTONE	WESTPHALIAN

This data is sourced from the British Geological Survey.

2.9 Bedrock permeability (50k)

Records within 50m

2

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of bedrock (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Fracture	Moderate	Low
8m N	Fracture	High	Moderate

This data is sourced from the British Geological Survey.



2.10 Bedrock faults and other linear features (50k)

Records within 500m

8

Linear features at the ground or bedrock surface at 1:50,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on [page 20 >](#)

ID	Location	Category	Description
3	80m S	ROCK	Coal seam, inferred
5	121m S	FAULT	Fault, inferred
9	196m NE	FAULT	Fault, inferred
11	196m W	FAULT	Fault, inferred
12	199m SW	ROCK	Coal seam, inferred
16	294m E	ROCK	Coal seam, inferred
18	340m SE	FAULT	Fault, inferred
20	378m N	FAULT	Fault, inferred

This data is sourced from the British Geological Survey.



3 Boreholes

3.1 BGS Boreholes

Records within 250m

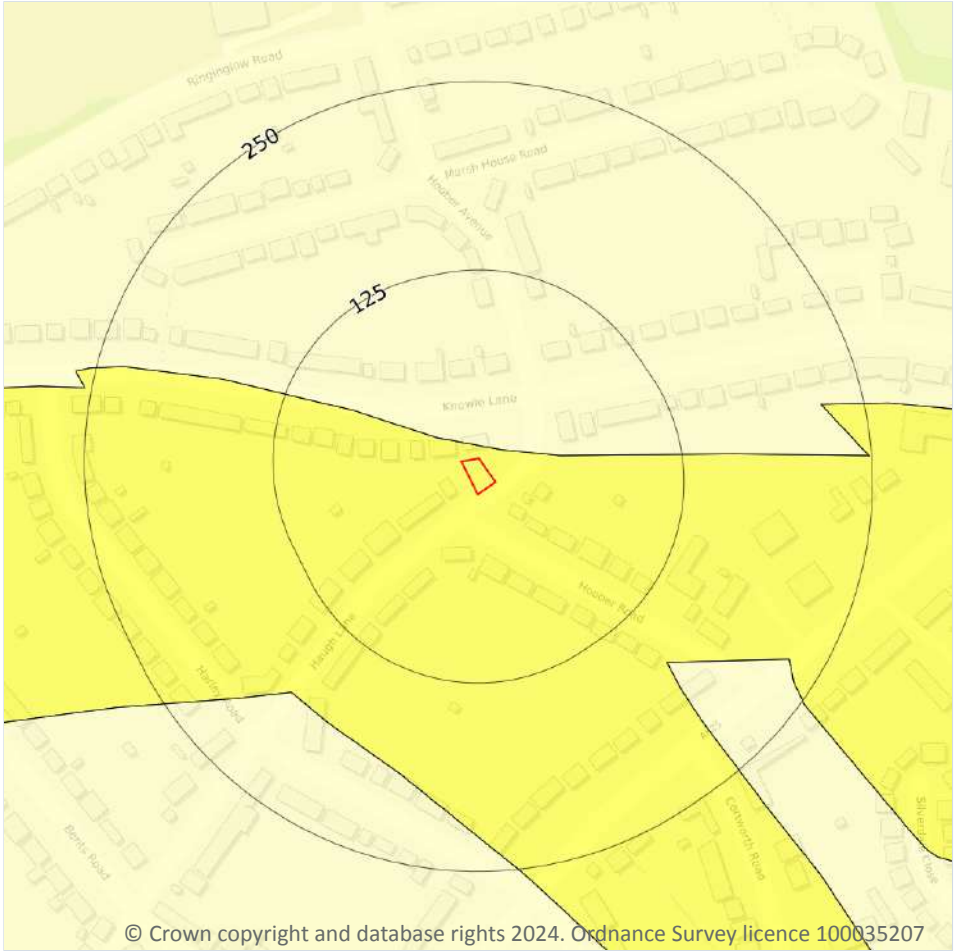
0

The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several thousand metres deep.

This data is sourced from the British Geological Survey.



4 Natural ground subsidence - Shrink swell clays



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

© Crown copyright and database rights 2024. Ordnance Survey licence 100035207

4.1 Shrink swell clays

Records within 50m 2

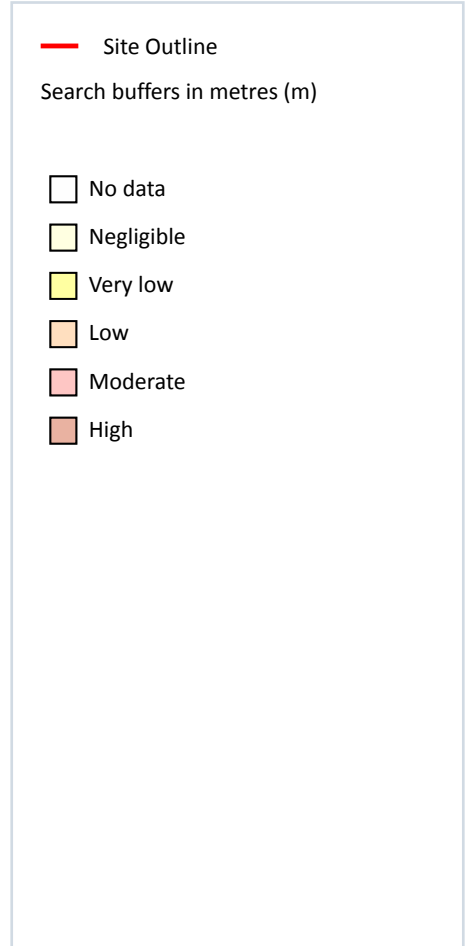
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and local drainage).

Features are displayed on the Natural ground subsidence - Shrink swell clays map on [page 24 >](#)

Location	Hazard rating	Details
On site	Very low	Ground conditions predominantly low plasticity.
9m N	Negligible	Ground conditions predominantly non-plastic.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Running sands



4.2 Running sands

Records within 50m

1

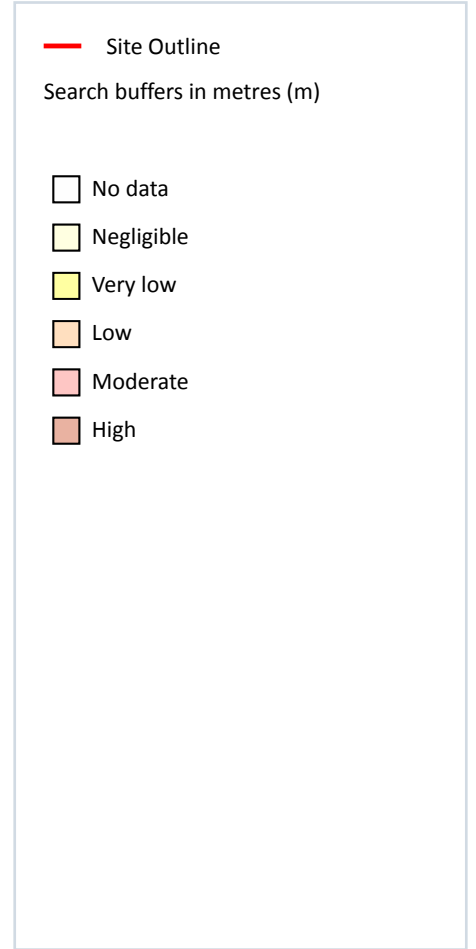
The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

Features are displayed on the Natural ground subsidence - Running sands map on [page 25 >](#)

Location	Hazard rating	Details
On site	Negligible	Running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on lands use due to running conditions.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Compressible deposits



4.3 Compressible deposits

Records within 50m

1

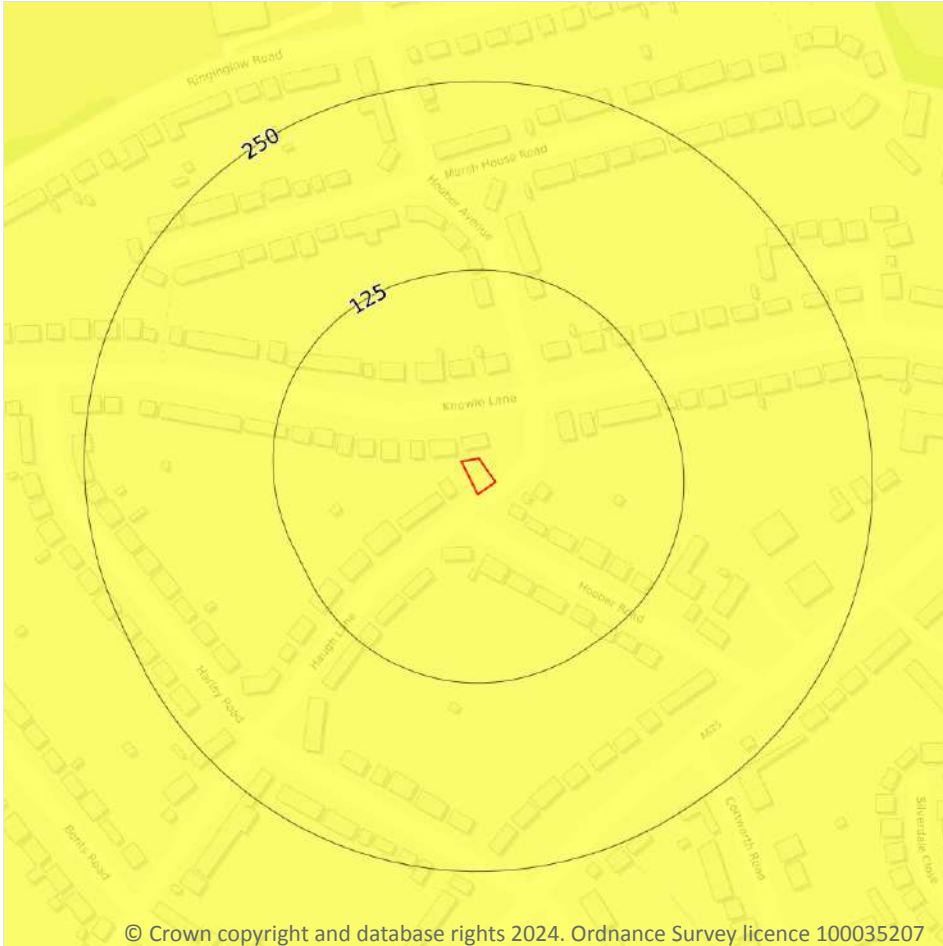
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on [page 26 >](#)

Location	Hazard rating	Details
On site	Negligible	Compressible strata are not thought to occur.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Collapsible deposits



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

© Crown copyright and database rights 2024. Ordnance Survey licence 100035207

4.4 Collapsible deposits

Records within 50m

1

The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

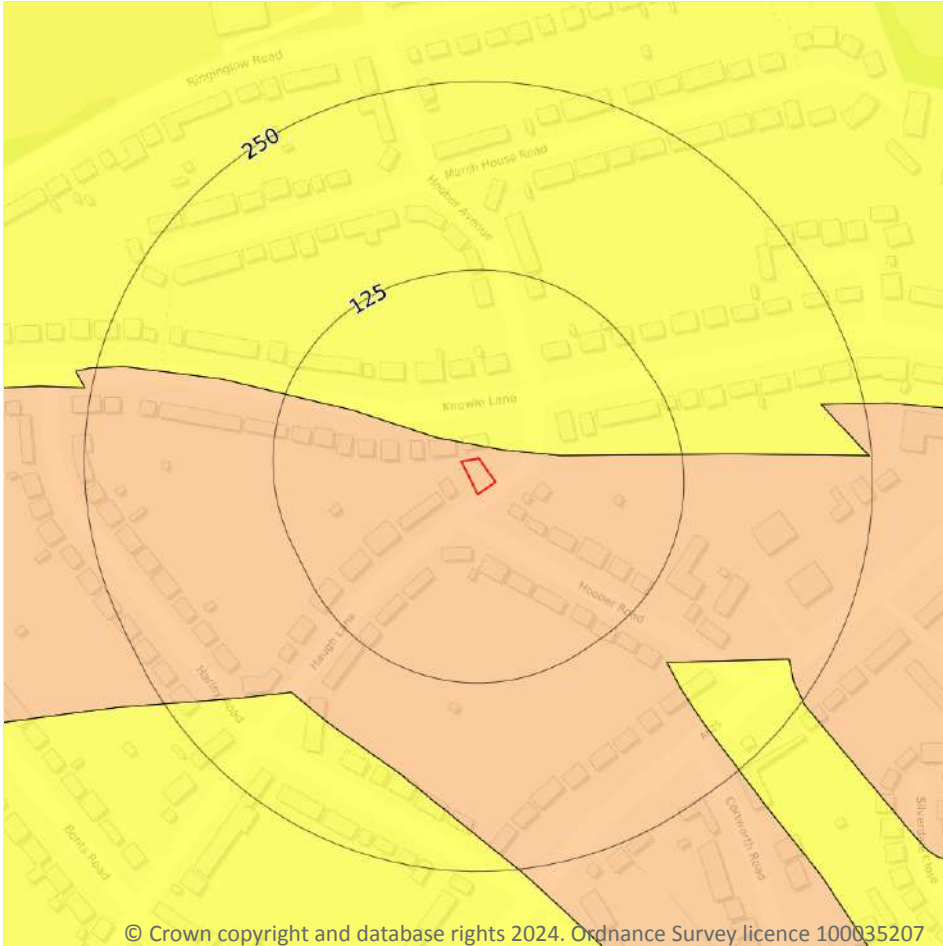
Features are displayed on the Natural ground subsidence - Collapsible deposits map on [page 27 >](#)

Location	Hazard rating	Details
On site	Very low	Deposits with potential to collapse when loaded and saturated are unlikely to be present.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Landslides



— Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

© Crown copyright and database rights 2024. Ordnance Survey licence 100035207

4.5 Landslides

Records within 50m

2

The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

Features are displayed on the Natural ground subsidence - Landslides map on [page 28 >](#)

Location	Hazard rating	Details
On site	Low	Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.



Location	Hazard rating	Details
9m N	Very low	Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Ground dissolution of soluble rocks



4.6 Ground dissolution of soluble rocks

Records within 50m

1

The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on [page 30](#) >

Location	Hazard rating	Details
On site	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.

This data is sourced from the British Geological Survey.



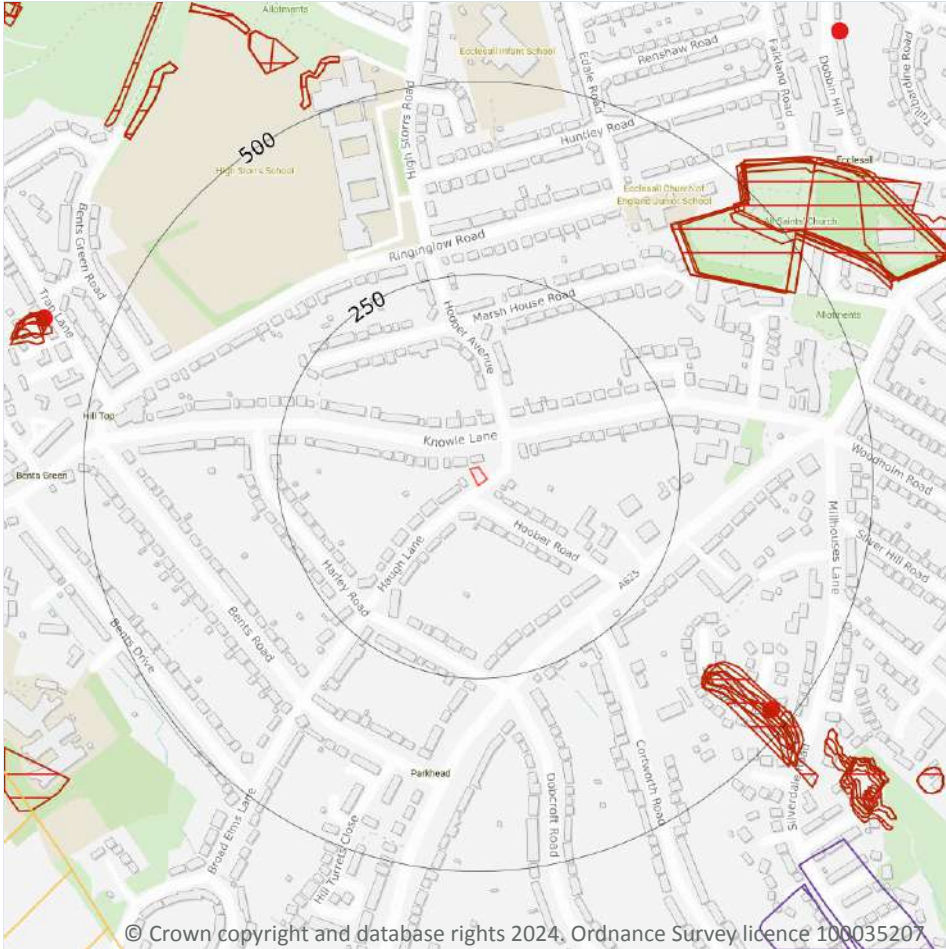
Contact us with any questions at:

info@groundsure.com ↗

01273 257 755

Date: 16 January 2024

5 Mining and ground workings



5.1 BritPits

Records within 500m

1

BritPits (an abbreviation of British Pits) is a database maintained by the British Geological Survey of currently active and closed surface and underground mineral workings. Details of major mineral handling sites, such as wharfs and rail depots are also held in the database.

Features are displayed on the Mining and ground workings map on [page 32](#) >

ID	Location	Details	Description
B	473m SE	Name: Holmwood Address: Parkhead, SHEFFIELD, South Yorkshire Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

This data is sourced from the British Geological Survey.

5.2 Surface ground workings

Records within 250m	0
----------------------------	----------

Historical land uses identified from Ordnance Survey mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled.

This is data is sourced from Ordnance Survey/Groundsure.

5.3 Underground workings

Records within 1000m	9
-----------------------------	----------

Historical land uses identified from Ordnance Survey mapping that indicate the presence of underground workings e.g. mine shafts.

Features are displayed on the Mining and ground workings map on [page 32 >](#)

ID	Location	Land Use	Year of mapping	Mapping scale
-	838m N	Unspecified Old Shafts	1924	1:10560
-	849m N	Unspecified Old Shafts	1924	1:10560
-	879m N	Unspecified Old Shafts	1924	1:10560
-	903m N	Unspecified Old Shafts	1924	1:10560
-	914m N	Unspecified Old Shafts	1920	1:10560
-	914m N	Unspecified Old Shafts	1924	1:10560
-	915m N	Unspecified Old Shafts	1924	1:10560
-	927m N	Unspecified Old Shafts	1924	1:10560
-	937m N	Unspecified Old Shafts	1920	1:10560

This is data is sourced from Ordnance Survey/Groundsure.



5.4 Underground mining extents

Records within 500m

0

This data identifies underground mine workings that could present a potential risk, including adits and seam workings. These features have been identified from BGS Geological mapping and mine plans sourced from the BGS and various collections and sources.

This data is sourced from Groundsure.

5.5 Historical Mineral Planning Areas

Records within 500m

0

Boundaries of mineral planning permissions for England and Wales. This data was collated between the 1940s (and retrospectively to the 1930s) and the mid 1980s. The data includes permitted, withdrawn and refused permissions.

This data is sourced from the British Geological Survey.

5.6 Non-coal mining

Records within 1000m

3

The potential for historical non-coal mining to have affected an area. The assessment is drawn from expert knowledge and literature in addition to the digital geological map of Britain. Mineral commodities may be divided into seven general categories - vein minerals, chalk, oil shale, building stone, bedded ores, evaporites and 'other' commodities (including ball clay, jet, black marble, graphite and chert).

Features are displayed on the Mining and ground workings map on [page 32 >](#)

ID	Location	Name	Commodity	Class	Likelihood
5	715m SW	Not available	Vein Mineral	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
-	725m SW	Not available	Vein Mineral	A	Underground mine workings are uncommon, although the geology is similar to that worked elsewhere. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
-	775m SW	Not available	Vein Mineral	A	Underground mine workings are uncommon, although the geology is similar to that worked elsewhere. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.

This data is sourced from the British Geological Survey.



5.7 JPB mining areas

Records on site

0

Areas which could be affected by former coal and other mining. This data includes some mine plans unavailable to the Coal Authority.

This data is sourced from Johnson Poole and Bloomer.

5.8 The Coal Authority non-coal mining

Records within 500m

0

This data provides an indication of the potential zone of influence of recorded underground non-coal mining workings. Any and all analysis and interpretation of Coal Authority Data in this report is made by Groundsure, and is in no way supported, endorsed or authorised by the Coal Authority. The use of the data is restricted to the terms and provisions contained in this report. Data reproduced in this report may be the copyright of the Coal Authority and permission should be sought from Groundsure prior to any re-use.

This data is sourced from The Coal Authority.

5.9 Researched mining

Records within 500m

0

This data indicates areas of potential mining identified from alternative or archival sources, including; BGS Geological paper maps, Lidar data, aerial photographs (from World War II onwards), archaeological data services, websites, Tithe maps, and various text/plans from collected books and reports. Some of this data is approximate and Groundsure have interpreted the resultant risk area and, where possible, specific areas of risk have been captured.

This data is sourced from Groundsure.

5.10 Mining record office plans

Records within 500m

0

This dataset is representative of Mining Record Office and/or plan extents held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.



5.11 BGS mine plans

Records within 500m

0

This dataset is representative of BGS mine plans held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

5.12 Coal mining

Records on site

1

Areas which could be affected by past, current or future coal mining.

Location	Details
On site	The site is located within a coal mining area as defined by the Coal Authority. A Consultants Coal Mining Report is recommended to further assess coal mining issues at the site. This can be ordered directly through Groundsure or your preferred search provider.

This data is sourced from the Coal Authority.

5.13 Brine areas

Records on site

0

The Cheshire Brine Compensation District indicates areas that may be affected by salt and brine extraction in Cheshire and where compensation would be available where damage from this mining has occurred. Damage from salt and brine mining can still occur outside this district, but no compensation will be available.

This data is sourced from the Cheshire Brine Subsidence Compensation Board.

5.14 Gypsum areas

Records on site

0

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

5.15 Tin mining

Records on site

0

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.



5.16 Clay mining

Records on site

0

Generalised areas that may be affected by kaolin and ball clay extraction.

This data is sourced from the Kaolin and Ball Clay Association (UK).



6 Ground cavities and sinkholes

6.1 Natural cavities

Records within 500m

0

Industry recognised national database of natural cavities. Sinkholes and caves are formed by the dissolution of soluble rock, such as chalk and limestone, gulls and fissures by cambering. Ground instability can result from movement of loose material contained within these cavities, often triggered by water.

This data is sourced from Stantec UK Ltd.

6.2 Mining cavities

Records within 1000m

0

Industry recognised national database of mining cavities. Degraded mines may result in hazardous subsidence (crown holes). Climatic conditions and water escape can also trigger subsidence over mine entrances and workings.

This data is sourced from Stantec UK Ltd.

6.3 Reported recent incidents

Records within 500m

0

This data identifies sinkhole information gathered from media reports and Groundsure's own records. This data goes back to 2014 and includes relative accuracy ratings for each event and links to the original data sources. The data is updated on a regular basis and should not be considered a comprehensive catalogue of all sinkhole events. The absence of data in this database does not mean a sinkhole definitely has not occurred during this time.

This data is sourced from Groundsure.

6.4 Historical incidents

Records within 500m

0

This dataset comprises an extract of 1:10,560, 1:10,000, 1:2,500 and 1:1,250 scale historical Ordnance Survey maps held by Groundsure, dating back to the 1840s. It shows shakeholes, deneholes and other 'holes' as noted on these maps. Dene holes are medieval chalk extraction pits, usually comprising a narrow shaft with a number of chambers at the base of the shaft. Shakeholes are an alternative name for suffusion sinkholes, most commonly found in the limestone landscapes of North Yorkshire but also extensively noted around the Brecon Beacons National Park.

Not all 'holes' noted on Ordnance Survey mapping will necessarily be present within this dataset.



This data is sourced from Groundsure.

6.5 National karst database

Records within 500m

0

This is a comprehensive database of national karst information gathered from a wide range of sources. BGS have collected data on five main types of karst feature: Sinkholes, stream links, caves, springs, and incidences of associated damage to buildings, roads, bridges and other engineered works.

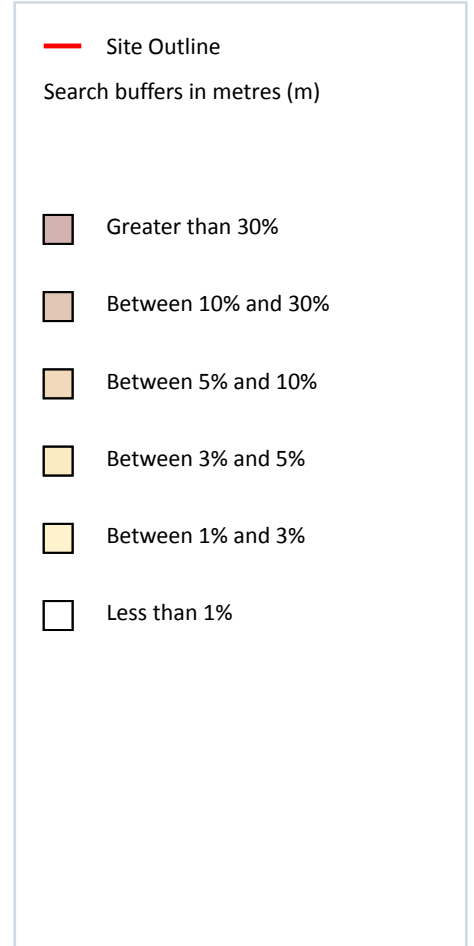
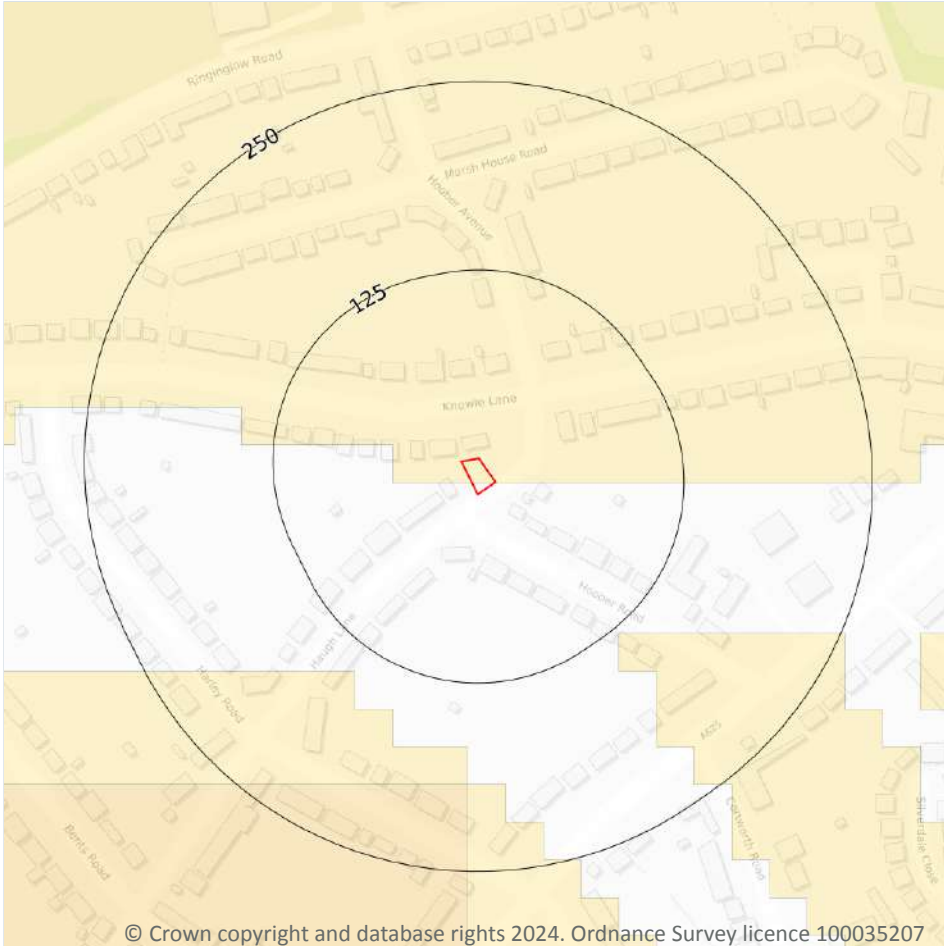
Since the database was set up in 2002 data covering most of the evaporite karst areas of the UK have now been added, along with data covering about 60% of the Chalk, and 35% of the Carboniferous Limestone outcrops. Many of the classic upland karst areas have yet to be included. Recorded so far are: Over 800 caves, 1300 stream sinks, 5600 springs, 10,000 sinkholes.

The database is not yet complete, and not all records have been verified. The absence of data does not mean that karst features are not present at a site. A reliability rating is included with each record.

This data is sourced from the British Geological Survey.



7 Radon



7.1 Radon

Records on site

2

The Radon Potential data classifies areas based on their likelihood of a property having a radon level at or above the Action Level in Great Britain. The dataset is intended for use at 1:50,000 scale and was derived from both geological assessments and indoor radon measurements (more than 560,000 records). A minimum 50m buffer should be considered when searching the maps, as the smallest detectable feature at this scale is 50m. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain (1:100,000 scale).

Features are displayed on the Radon map on [page 40 >](#)

Location	Estimated properties affected	Radon Protection Measures required
On site	Between 1% and 3%	None

Location	Estimated properties affected	Radon Protection Measures required
On site	Less than 1%	None

This data is sourced from the British Geological Survey and UK Health Security Agency.



8 Soil chemistry

8.1 BGS Estimated Background Soil Chemistry

Records within 50m

4

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km². In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km²; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 - 25 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
21m W	15 - 25 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
21m W	15 - 25 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
38m N	15 - 25 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

8.2 BGS Estimated Urban Soil Chemistry

Records within 50m

4

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km²).

Location	Arsenic (mg/kg)	Bioaccessible Arsenic (mg/kg)	Lead (mg/kg)	Bioaccessible Lead (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Nickel (mg/kg)	Tin (mg/kg)
On site	17	3	163	112	0.9	92	59	36	13
17m S	17	3	171	117	0.9	86	57	34	12



Location	Arsenic (mg/kg)	Bioaccessible Arsenic (mg/kg)	Lead (mg/kg)	Bioaccessible Lead (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Nickel (mg/kg)	Tin (mg/kg)
21m W	20	3.5	181	124	0.9	91	83	41	16
36m SW	19	3.3	190	131	1	87	75	38	14

This data is sourced from the British Geological Survey.

8.3 BGS Measured Urban Soil Chemistry

Records within 50m	0
---------------------------	----------

The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km².

This data is sourced from the British Geological Survey.

9 Railway infrastructure and projects

9.1 Underground railways (London)

Records within 250m 0

Details of all active London Underground lines, including approximate tunnel roof depth and operational hours.

This data is sourced from publicly available information by Groundsure.

9.2 Underground railways (Non-London)

Records within 250m 0

Details of the Merseyrail system, the Tyne and Wear Metro and the Glasgow Subway. Not all parts of all systems are located underground. The data contains location information only and does not include a depth assessment.

This data is sourced from publicly available information by Groundsure.

9.3 Railway tunnels

Records within 250m 0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

9.4 Historical railway and tunnel features

Records within 250m 0

Railways and tunnels digitised from historical Ordnance Survey mapping as scales of 1:1,250, 1:2,500, 1:10,000 and 1:10,560.

This data is sourced from Ordnance Survey/Groundsure.

9.5 Royal Mail tunnels

Records within 250m 0

The Post Office Railway, otherwise known as the Mail Rail, is an underground railway running through Central London from Paddington Head District Sorting Office to Whitechapel Eastern Head Sorting Office. The line is 10.5km long. The data includes details of the full extent of the tunnels, the depth of the tunnel, and the depth to track level.



This data is sourced from Groundsure/the Postal Museum.

9.6 Historical railways

Records within 250m	0
----------------------------	----------

Former railway lines, including dismantled lines, abandoned lines, disused lines, historic railways and razed lines.

This data is sourced from OpenStreetMap.

9.7 Railways

Records within 250m	0
----------------------------	----------

Currently existing railway lines, including standard railways, narrow gauge, funicular, trams and light railways.

This data is sourced from Ordnance Survey and OpenStreetMap.

9.8 Crossrail 1

Records within 500m	0
----------------------------	----------

The Crossrail railway project links 41 stations over 100 kilometres from Reading and Heathrow in the west, through underground sections in central London, to Shenfield and Abbey Wood in the east.

This data is sourced from publicly available information by Groundsure.

9.9 Crossrail 2

Records within 500m	0
----------------------------	----------

Crossrail 2 is a proposed railway linking the national rail networks in Surrey and Hertfordshire via an underground tunnel through London.

This data is sourced from publicly available information by Groundsure.

9.10 HS2

Records within 500m	0
----------------------------	----------

HS2 is a proposed high speed rail network running from London to Manchester and Leeds via Birmingham. Main civils construction on Phase 1 (London to Birmingham) of the project began in 2019, and it is currently anticipated that this phase will be fully operational by 2026. Construction on Phase 2a (Birmingham to Crewe) is anticipated to commence in 2021, with the service fully operational by 2027. Construction on Phase 2b (Crewe to Manchester and Birmingham to Leeds) is scheduled to begin in 2023 and be operational by 2033.

This data is sourced from HS2 Ltd.



Data providers

Groundsure works with respected data providers to bring you the most relevant and accurate information. To find out who they are and their areas of expertise see <https://www.groundsure.com/sources-reference> ↗.

Terms and conditions

Groundsure's Terms and Conditions can be accessed at this link: www.groundsure.com/terms-and-conditions-april-2023/ ↗.





APPENDIX B
Coal Authority Consultants Coal Mining Report



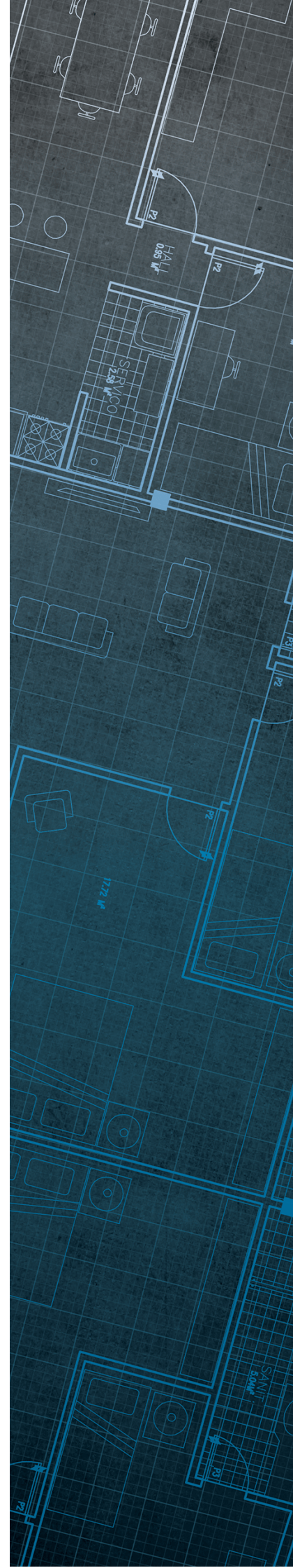
The Coal
Authority

Consultants Coal Mining Report

87 Knowle Lane
Sheffield
South Yorkshire

Date of enquiry: 16 January 2024
Date enquiry received: 16 January 2024
Issue date: 16 January 2024

Our reference: 51003399411001
Your reference: GUK-0124-03



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

Groundsmiths (UK) Ltd

Enquiry address

87 Knowle Lane
Sheffield
South Yorkshire

How to contact us

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

200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

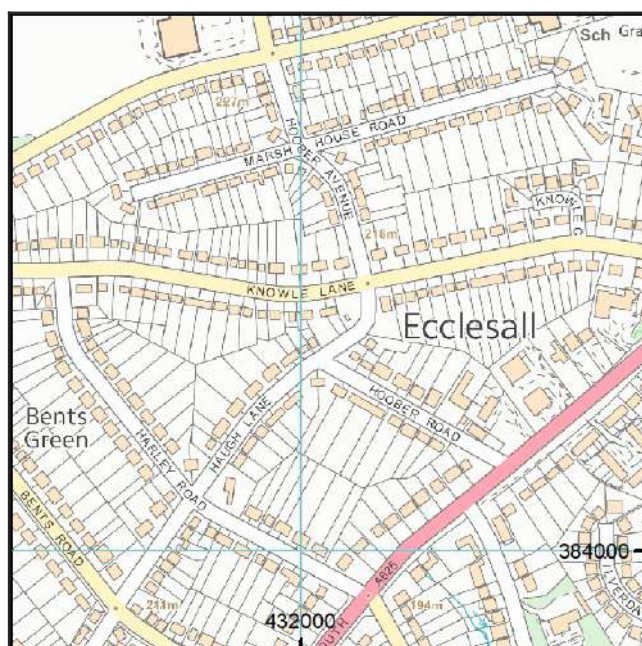
www.groundstability.com

 @coalauthority

 /company/the-coal-authority

 /thecoalauthority

 /thecoalauthority



Approximate position of property



Reproduced by permission of Ordnance Survey on behalf of HMSO. © Crown copyright and database right 2018. All rights reserved.

Ordnance Survey Licence number: 100020315

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
DOBBING HILL	HALIFAX HARD	Coal	4R4P	31	North	4.9	North-East	160	1871

Probable unrecorded shallow workings

None.

Spine roadways at shallow depth

No spine roadway recorded at shallow depth.

Mine entries

None recorded within 100 metres of the enquiry boundary.

Abandoned mine plan catalogue numbers

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

18177	PO0	
-------	-----	--

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

Outcrops

No outcrops recorded.

Geological faults, fissures and breaklines

No faults, fissures or breaklines recorded.

Opencast mines

None recorded 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 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.

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

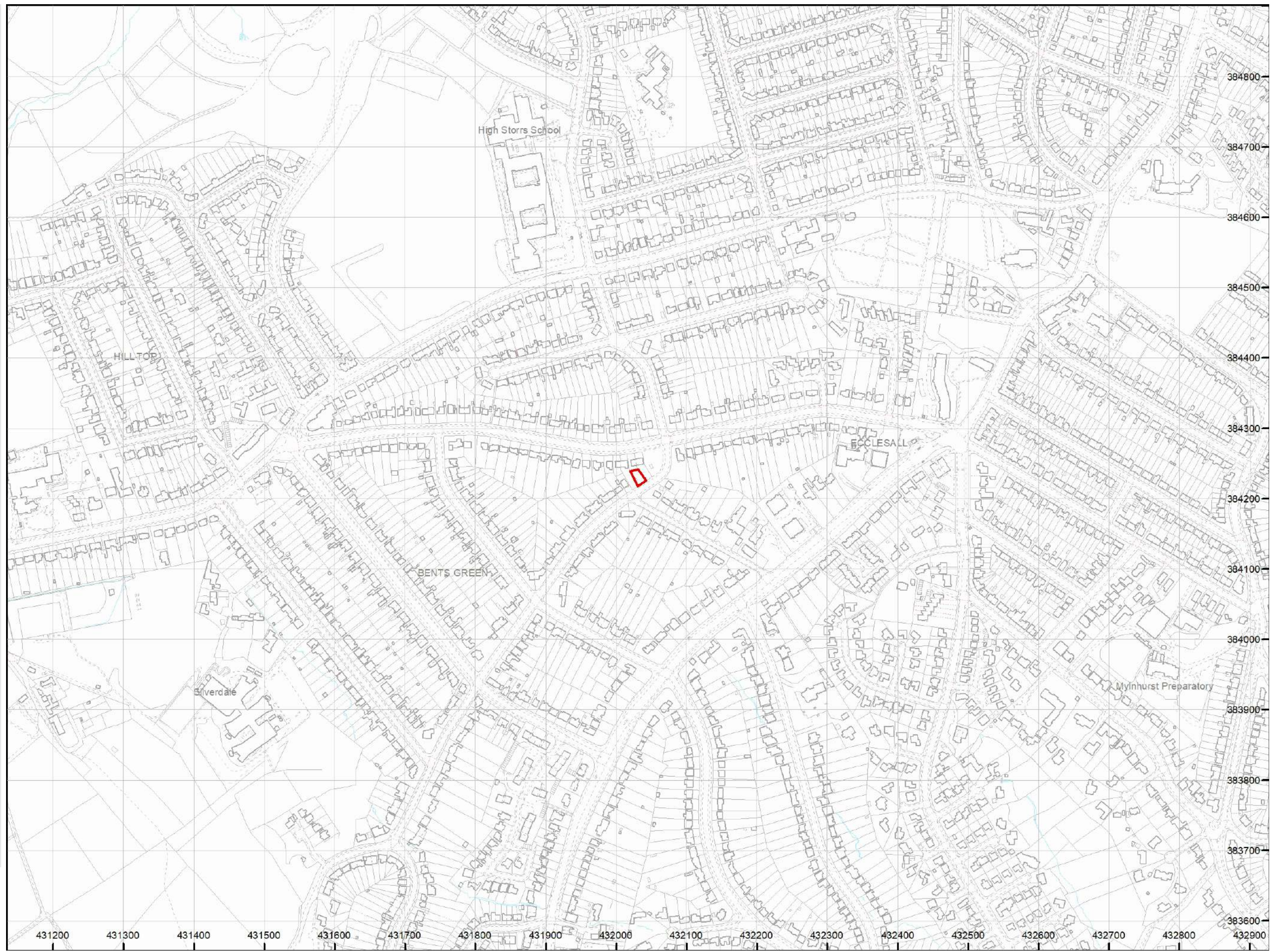
Relevant notices which may affect the property and any subsequent notice of retained interests in coal and coal mines, acceptance or rejection notices and whether any compensation has been paid to a claimant.

The 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 

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





GROUNDSMITHS
GEOTECHNICAL ENGINEERS