SMELT FARM, WREXHAM: COAL MINING RISK ASSESSMENT (CMRA)

GSL3505R01

VERSION 1

30 APRIL 2026

FINAL

Prepared for: Clwydian Planning

Prepared by: E Rowland

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This report has been prepared by GroundSolve Ltd with all reasonable care and diligence, within the best practice and guidance current at the time of issue within the proposed redline boundary and proposed Site end use as presented by the Client.

This report is confidential to the Client and GroundSolve Ltd accepts no responsibility whatsoever to third parties to whom this report is presented.

Version No.	Description of Issue / Revision	Date of Issue	Author	Reviewed & Approved By
X	FINAL	30/04/26	E Rowland	S Fishburne
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1 INTRODUCTION

1.1 Report Objectives

GroundSolve Ltd was commissioned by Clwydian Planning (the Client) to undertake a Coal Mining Risk Assessment (CMRA) at Smelt Farm, Wrexham (the "Site ").

This report assesses the ground-based risks, constraints, and liabilities associated with former coal workings to the proposed development of the Site.

1.2 Development Proposals

The proposed development comprises the conversion of an existing redundant agricultural outbuilding to form a single residential dwelling. No proposed development layout(s) has been provided to GroundSolve for review.

1.3 Legislative Context

The purpose of the Report is to present a desk-based review of all available information on the coal mining legacy relevant to the Site , and then, propose further investigation or mitigation measures that address the coal mining legacy. The report also sets out how the requirements of national planning policy with regard to development on unstable land are to be addressed.

This report has been devised to generally comply with the relevant principles and requirements of a range of guidance including:

- National Planning Policy Framework (HCA, February 2019).
- BS5930:2015: "Code of practice for Site investigations".
- The Mining Remediation Authority 'Risk based approach to development management. Guidance for developers" Version 5 – 2019.
- The Building Regulations 2010. Part C (HM Government 2013)
- Mining Remediation Authority: 2019: Guidance on Managing the Risk of Hazardous Gases when Drilling or Piling Near Coal. Version 2 (April 2019). Written and published in conjunction with AGS, BDA, HSE and FPS.

1.4 Scope of the Preliminary Coal Mining Risk Assessment

The purpose of this Preliminary Coal Mining Risk Assessment Report is to:

- Present a desk-based review of all available information on the coal mining issues which are relevant to the application Site .
- Use that information to identify and assess the risks to the proposed development from coal mining legacy, including the cumulative impact of issues.
- Set out appropriate mitigation measures to address the coal mining legacy issues affecting the Site , including any necessary remedial works and/or demonstrate how coal mining issues have influenced the proposed development.
- Demonstrate to the Local Planning Authority that the application Site is, or can be made, safe and stable to meet the requirements of national planning policy with regard to development on unstable land.

1.5 Sources of information

The following sources of information have been consulted and reviewed to assist in the preparation of this CMRA:

- Online British Geological Survey maps and data.
- British Geological Survey (BGS) Geological Mapping 1: 10,000 – Sheet SJ25SE Minera (Solid Edition)
- Mining Remediation Authority Interactive Map Viewer
- Mining Remediation Authority Consultant Coal Mining Report, Ref.:51003565100001
- British Geological Survey online borehole records
- GroundSolve Site walkover conducted 3rd April 2026.

1.6 Planning Status & Requirements

This report is designed to comply with the requirements of The National Planning Policy Framework (NPPF, 2019) and is intended to be used by the developer as part of the submission to gain planning for the works.

1.7 Previous Investigations

No third-party reports have been provided to GroundSolve Ltd for review.

2 SITE DETAILS AND DESCRIPTION

Table 2.1: Current Site Overview.

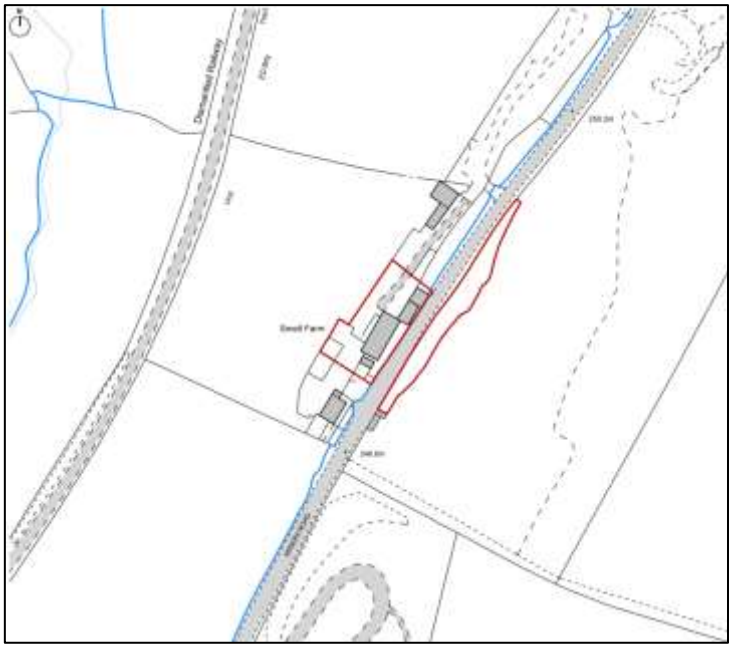
Site name	Smelt Farm.
Site address	Smelth Farm, Minera Road (Ffwrd Road), Ffrith, Wrexham, LL11 5LS. 
National Grid Reference (NGR)	Site entrance: 328216, 353615.
Approximate Site area	The Site boundary is split into two separate areas separated by Minera Road, with the combined area being approx. 0.2ha.
Site shape	The Site is irregular in shape.
General topography and ground levels	The Site area northwest of Minera Road is detailed on mapping as relatively level across the Site, situated at approx. 246mAOD. The area to the southeast of Minera Road in the existing woodland varies in level from approx. 254mAOD in the north falling to approx. 250mAOD in the south.

Table 2.2: Summary of Description of the Site and its Environs

Current Use:	The western Site area has both residential and agricultural land uses. The eastern Site area is currently established woodland.
Access	Via Minera Road.
Existing Buildings & Structures	The western Site area has a residential property as well as multiple agricultural outbuildings
Site Surface	There is dense woodland in the vegetation in the eastern Site area. The western Site area is currently a mixture of hardstanding (asphalt and concrete) as well as gravelled and soft landscaped areas.
Vegetation	Semi-mature broad-leaf trees, mixed hedgerows and vegetated undergrowth.
Storage Tanks	It is currently not known whether there are above and/or below ground storage tanks on Site.
Services	No service information has been provided to GSL however it is anticipated that services, including but not limited to gas, electricity, water and BT will supply the Site.
Asbestos	Publicly available historic aerial photographs accessible from the APU Welsh Government Aerial Photography map viewer details that the buildings on Site were present prior to the year 2000. As the use of asbestos was only banned in November 1999, there is the potential for asbestos containing materials to be present on Site. As such, a full refurbishment / demolition asbestos survey will be required prior to any works. During the site walkover it was noted that the roof of the barn is potentially made of corrugated asbestos cement sheets.
Waste Disposal/ Materials Storage	Farming equipment and products are stored within both the existing building and the wider western Site area. No uncontrolled waste disposal was noted during the Site walkover.
Surrounding Area	The Site is set in the rural northwest of Wrexham, predominantly surrounded by arable fields and woodland.
Local / Background Knowledge	No specific local knowledge has been provided to GSL; however, it is known that there the Site is set within an area of Wrexham of significant coal mining legacy.

3 PRELIMINARY CONCEPTUAL RISK ASSESSMENT

3.1 Site History

An assessment of the Site's historical usage has been completed. The Site has remained largely unchanged since earliest available public mapping. On the OS 6 Inch 1830-1880 mapping, the Site is detailed as Smelt Row with buildings present broadly in the location of current buildings and the woodland mapped in the east, which is still also present today. 2 No. shafts (coal) are mapped approx. 70m – 100m south of the Site . The layout of buildings on Site has changed slightly on mapping over time, however it is not considered a significant deviation from the Site's historic land use compared to present.

3.2 Site Geology

According to the BGS Geology of Britain Viewer and the relevant BGS Solid and Drift Sheets at a scale of 1:50,000 and 1:10,000, the following geological succession has been identified below in Table 3.1.

Table 3.1: Site Geology

Geology Type	Description
Superficial	Devensian-Diamicton Glacial Till.
Bedrock	Pennine Lower Coal Measures Formation and Pennine Middle Coal Measures Formation. Coal Seams(s) are mapped to be underlaying the Site as well as outcropping on Site .
Faults	Fault(s) are mapped underlying the Site .

An extract from the most recently published geological map showing the approximate Site location and key local geological features is presented below in with an extract of the relevant geological stratigraphic column.

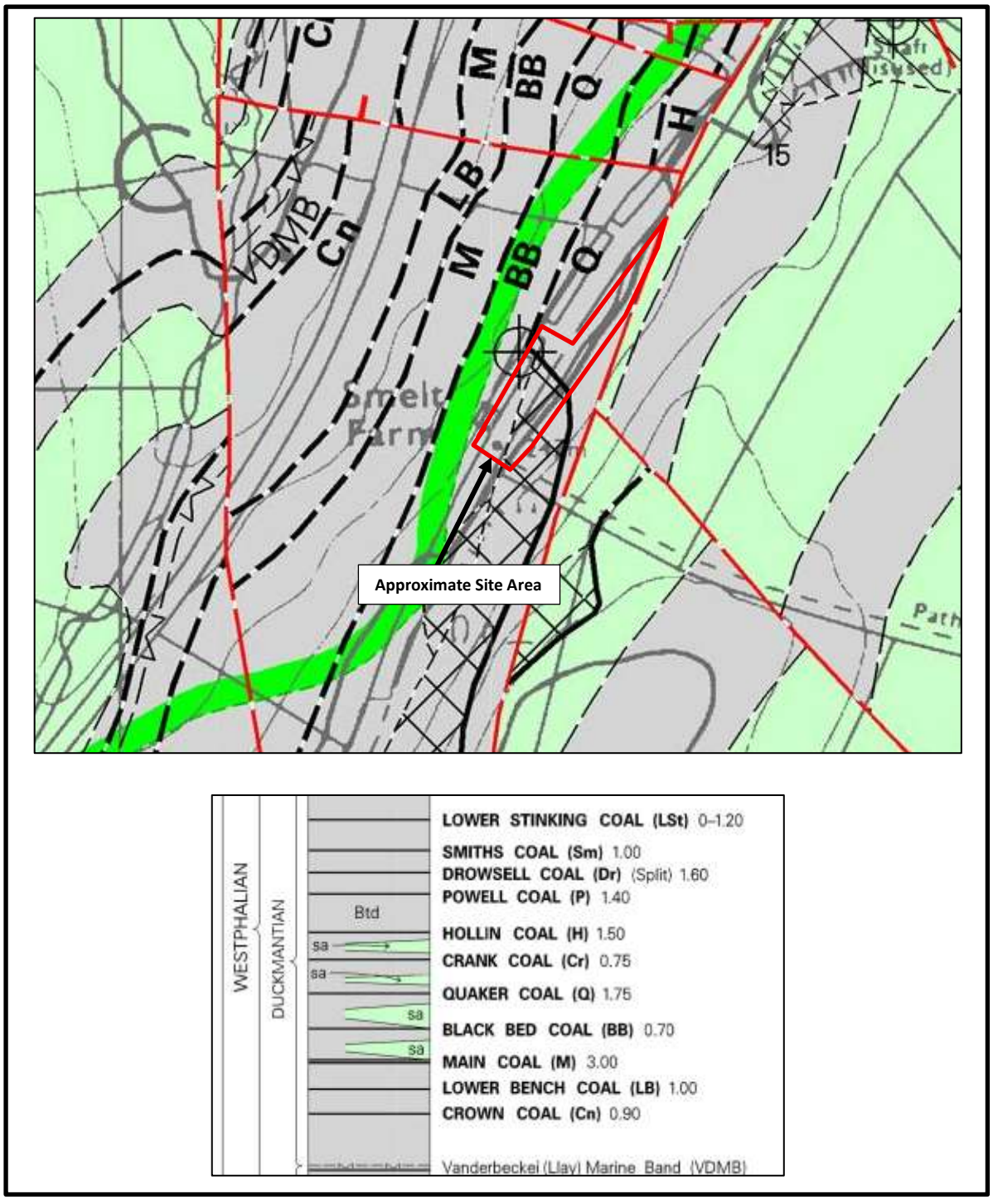


Figure 3.1: Extract of BGS 1:10,000 Sheet SJ25SE Geological Map with Stratigraphic Column

Information from the Mining Remediation Authority details the dip of strata beneath the property to be approx. 11° to the east, with the Two Yard Seam outcropping on Site.

3.3 Coal Mining Report

Based upon the information provided within the Consultants Coal Mining Report, (Ref.: 51003565100001), the following is of note:

- The Site is located within an area where probable unrecorded shallow workings are present.
- One coal seam (Two Yard seam) is shown to outcrop on Site.
- There is one mine shaft shown on Site, with three other shafts mapped between approx. 70m and 100m south.
- A fault is present in the east of the Site.
- Numerous historic licensed and unlicensed opencast mines are recorded within 500m of the Site.
- The Mining Remediation Authority has no records with regards to mine gas or mine water treatment schemes within 500m of the Site boundary.

A copy of the Consultants Coal Mining Report is presented in **Appendix C**.
A review from the Mining Remediation Authority website, also shows that the Site is located within a Coal Mining High Development Risk Area (hatched area).

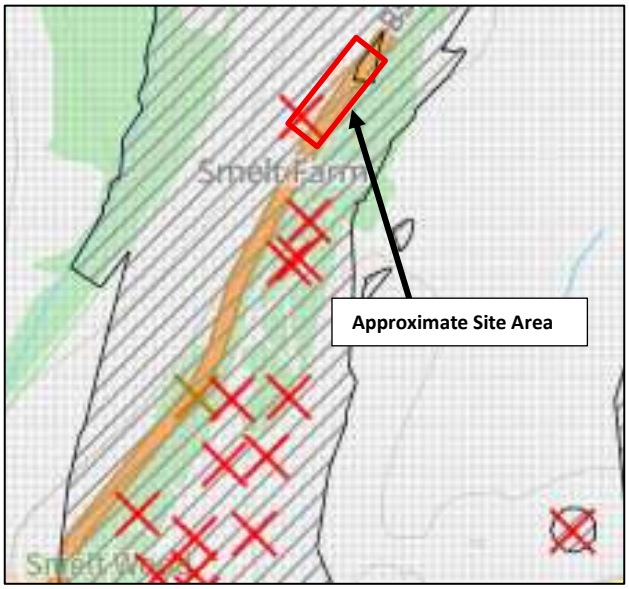


Figure 3.2: Extract of Mining Remediation Authority Viewer

4 IDENTIFICATION AND ASSESSMENT OF SITE-SPECIFIC COAL MINING RISK

4.1 Introduction

Identification and assessment of the Site's coal mining risks have been undertaken from existing desk-based information.

Assessing risks from coal mining is based upon guidance provided by the Mining Remediation Authority following a 'risk-based' approach implemented through PPG14.

4.2 Potential Coal Mining Issues

The potential risks to the development of the Site from historic coal workings and remediation to these features as identified within the Mining Remediation Authority Report are summarised below in **Table 4.1.**

Table 4.1: Potential Coal Mining Issues

Coal Mining Issues	Yes	No	Further Risk Assessment Required?
Past underground coal mining	✓	-	Yes
Probable unrecorded shallow workings	✓	-	Yes
Mine Entries (shafts and adits)	✓	-	Yes
Coal mining geology (faults, fissures and breaklines)	✓	-	Yes
Record of past mine gas emissions	X	-	No
Recorded coal mining surface hazard	✓	-	Yes
Surface mining (opencast workings)	✓	-	Yes

4.3 Detailed Discussion and Assessment Response

Probable Unrecorded Shallow Working

The Site is located within an area where probable unrecorded shallow workings are present. This coal may have been worked at some time in the past, prior to when mining operations had to be legally recorded. The potential presence of coal workings at or close to the surface should be considered, particularly prior to any Site works or future development activity as ground movement could still present a risk.

The Mining Remediation Authority has identified a potential coal outcrop on Site. The "Two Yard" seam is mapped within the Site boundary, and has a bearing of 201°. Past underground records indicate that the Two Yard seam has recorded workings east of the Site. The seam dips eastwards at approx. 11° at a depth of 44m bgl. The seam is considered workable on Site and constitutes a high risk of potential unrecorded shallow workings, especially as off-Site workings are recorded. The "Main Seam" is mapped to be present on Site at a depth of 40m bgl and is also historically recorded to have been worked.

Past Underground Coal Mining

The Consultants Coal Report details 3 No. records of past underground mining either on Site or within influencing distance to the Site:

- The Main Seam was worked at a depth of 40m bgl beneath the Site by the Brymbo Colliery (Mining Remediation Authority reference: A0PH). The seam is recorded to be 2.00m in thickness and detailed as last mined in 1869.
- The Two Yard Seam was worked at a depth of 44m bgl by an unnamed Colliery east of the Site (Mining Remediation Authority reference: 3U2H). The seam is recorded to be 1.50m in thickness and last worked in 1874.
- The Main Seam was worked at a depth of 136m bgl east of the Site by the Brymbo Colliery east of the Site (Mining Remediation Authority reference: 7H28). The seam is recorded to be 2.30m in thickness and last worked in 1931.

As past underground coal mining has been recorded, not only within close vicinity of the Site, but also on the Site itself, including at a relatively shallow depth of 40m bgl; it is considered that historic mining presents a risk to the Site in terms of future Site works or development as ground movement could still occur.

Mine Entries (Shafts and Adits)

A total of four mine entries (shafts) have been identified, with 1 No. present on Site and 3 No. within a close vicinity:

Shaft 328353-100

This shaft is recorded to be located on Site (grid reference: 328210, 353640). The location of the shaft seems to be just to the west of the existing barn buildings on Site, i.e. outside the existing building footprint. No treatment details are known. Prior to 1947 when the coal industry was nationalised there was no legal requirement for mine operators to record the details of shaft abandonment and treatment. However, as no treatment details are known, this presents a risk to the proposed Site. Although the shaft does not seem to be located underneath the existing building on Site, because it is only slightly to the west, the shaft's zone of influence will likely be present beneath the buildings. As such, the risk from the shaft is considered to be high and further investigation should be conducted to determine the exact location of the shaft, whether or not is has been sufficiently treated and any potential remedial requirements.

Shaft 328353-99

This shaft is located approx. 70m south of the Site within a historic area of opencast workings (grid reference: 328219, 353539). There are no details of any treatment, but it is likely that the shaft has been partially or totally removed due to being located within the opencast workings. As such it is not considered that this shaft presents a significant risk to the Site .

Shaft 328353-98

This shaft is located approx. 90m south of the Site within a historic area of opencast workings (grid reference: 328199, 353499). There are no details of any treatment, but it is likely that the shaft has been partially or totally removed due to being located within the opencast workings. As such it is not considered that this shaft presents a significant risk to the Site .

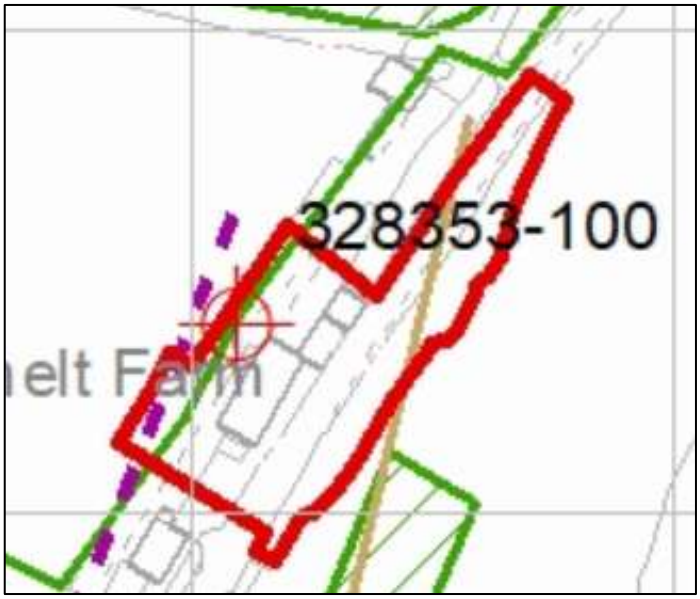
Shaft 328353-97

This shaft is located approx. 100m south of the Site within a historic area of opencast workings (grid reference: 328208, 353505). There are no details of any treatment, but it is likely that the shaft has been partially or totally removed due to being located within the opencast workings. As such it is not considered that this shaft presents a significant risk to the Site .

Coal Mining Geology (Faults, Fissures and Breaklines)

A geological fault is recorded in the east of the Site (brown line on **Figure 4.1** below). The fault's dip and displacement is unknown. Current development proposals do not indicate any construction in this area of Site, however, if development is to occur in this area, it would be recommended to undertake investigation as faults can create zones of weakened rock around their fault zone as well create as a pathway for migration of hazardous ground gas.

Figure 4.1: Extract from Mining Remediation Authority summary of findings detailing geological fault



Recorded Coal Mining Surface Hazards and Surface mining (opencast workings)

The western edge of the Site is shown to overlap with the eastern boundary of a licensed open cast mine. The southeast of the Site is adjacent to the northwestern boundary of an unlicensed opencast mine. No information is known regarding the nature of the backfill to the opencast mines. Backfilled opencast mines can present risk associated with poorly engineered fill and contamination. The opencast mine mapped in the west of the Site could present a risk in terms of differential settlement of buildings spanning the highwall as well as contamination. It would be recommended to undertake investigation to delineate the extent of the highwall within the Site boundary. As the opencast mine recorded to the southeast of the Site is unlicensed, if any development is proposed within this area of Site, it would be recommended to undertake investigation at the edge of the Site boundary to confirm that the mapping is correct and the opencast is not present on Site. Due to it being unlicensed, the extent of the opencast may not be wholly accurate. Surface hazards associated with opencast workings such as ground subsidence associated with the poorly engineered backfill may also present a risk to the Site.

Ground Gas and Spontaneous Combustion

The Consultants Coal Report indicates that mine gas has not been recorded within 500m of the enquiry boundary. However, as outlined above, investigation is recommended; therefore, it would be advisable that as part of any investigation works, ground gas monitoring wells within boreholes are installed to confirm the absence of any ground gas.

None of the coal seams outcropping on Site or present near to the Site have a specific risk of spontaneous combustion as with some named seams that occur in England or Scotland. However, Mining Remediation Authority Guidance “Coal

Seams with a History of Spontaneous Combustions (Aug 2025)" details that in Wales, all seams present a risk of spontaneous combustion if roof coal is left in situ. Therefore, as part of the above investigative works, if roof coal is identified within any workings, there will be a risk of spontaneous combustion within the seams on Site.

4.4 Summary of Risk

Based on the desk-based assessment of available geological, mining and Site specific information, the Site is considered to be at risk from the historic coal mining legacy both on the Site and within the immediate vicinity.

The principal risks to the Site are associated with the presence of a recorded mine shaft within the Site boundary, for which no treatment details are available, and the potential for unrecorded shallow workings associated with the Two Yard seam which outcrops on Site. In addition , historical underground coal mining has been recorded beneath and within close proximity to the Site at relatively shallow depths, which may present a risk of ground instability.

Secondary risks are associated with opencast workings adjacent to the Site and underlying the western edge of the Site. The nature and extent of the backfill in these is unknown. A mapped geological fault is present in the eastern part of the Site which may locally influence ground conditions.

These factors indicate a potential risk to the proposed residential development in terms of ground instability, differential settlement and possible ground collapse, particularly where structures may interact with untreated mine entries and their associated zone of influence or zones of weakened ground.

In order to suitably assess and mitigate these risks, it is recommended that a programme of intrusive ground investigation is undertaken. This should include works to confirm the location and condition of the on-Site mine shaft, assess the presence and extent of any shallow or unrecorded workings, and investigate the extent of any opencast backfill within the Site. The findings of such will inform the need for any remedial measures required prior to the redevelopment works proposed on Site, which may include shaft treatment, grouting of any shallow workings or design adaptations to ensure the Site can be developed safely and in accordance with current relevant guidance.

Following the full review of all the desk-based information, a risk register for the Site has been developed. The risk register definitions have been outlined in **Table 4.2** below, with the mitigations detailed in **Table 4.3**.

Table 4.2: Risk Register definitions

L = Likelihood		S = Severity		R = Risk Rating (L x S)	
1	Extremely unlikely	1	Minor (No detrimental or long-lasting impact on structures)	1 – 4	Low
2	Unlikely	2	Moderate (Disturbance or damage during and post construction phase which will require remediation)		

L = Likelihood		S = Severity		R = Risk Rating (L x S)	
3	Likely	3	Serious (Structure failure resulting in damage at large economic cost)	5 - 16	Medium
4	Extremely likely	4	Major (failure of ground and structure resulting in failure of the infrastructure, impacting the network and requiring expensive and time costly remediation)		
5	Almost Certain	5	Catastrophic (Explosions relating to mine gas, death caused by mine gas, ground failure impacting the public/on-site workers)	16 – 25	High

Table 4.3: Risk Matrix

Feature	Consequence	Risk Before Mitigation			Proposed Mitigation Measures	Risk After Mitigation		
		L	S	R		L	S	R
Mine Entry	Collapse of mine shaft and ground within its zone of influence	2	3	6	Ground investigation to investigate the location and condition of the shaft. If the shaft has been sufficiently treated and capped, then no further remedial works would be required. If the shaft is identified as untreated, then remedial works to grout and cap the shaft will be required.	2	2	4
Ground Conditions	Failure of ground arising from untreated, unrecorded ground workings	2	3	6	Ground investigation to determine the nature and extent of any potentially unrecorded and untreated ground workings. If workings are identified, then development and implementation of a drill and grout scheme to remediate and make stable the workings.	2	2	4
Ground Conditions	Opencast workings on and adjacent to the Site boundary causing potential contamination and ground instability from poorly engineered backfill	3	2	6	Ground investigation to determine the nature and extent of any opencast workings on the Site . Chemical sampling to assess the nature of any contamination presenting a risk to human health for the proposed end land use and subsequent remedial measures if required. If significant poorly consolidated Made Ground associated with the opencast backfill is identified, then excavation and replacement with a suitably engineered fill may be required mitigate against ground instability and differential settlement.	2	2	4
Ground Gas/Mine Gas	Ground gas migration from potential mine workings or fill associated with the opencast Made Ground.	2	5	10	Ground gas monitoring regime to determine the ground gas and potential retrofitting/installation of new ground gas protection measures if required.	1	1	2
Coal Seams	Spontaneous combustion of any remaining roof coal still in situ in worked seams beneath the Site or adjacent	1	5	5	Ground investigation to determine the nature and extent of any remaining roof coal as part of the above investigative works to clarify the nature of any potential workings beneath the Site. If roof coal is identified it will be associated with workings, and as such, a drill and grout scheme should be developed and implemented to treat the workings which would also address any roof coal exposed at a risk of spontaneous combustion and mitigate against it.	2	2	4
Geological fault	Ground instability associated with weakened rock across the fault zone.	2	3	6	None required currently as no construction works are anticipated to be required in the area that the fault is mapped. If development proposals change, investigation into the ground conditions in the vicinity of the fault will be required to ensure that any proposed development is designed accordingly to the risk (ground instability and ground gas migrating along the pathway of the fault).	1	1	2

5 REFERENCES

AGS: 2010: Electronic transfer of geotechnical and geoenvironmental data (Edition 4 including addendum 3, 2011). Association of Geotechnical and Geoenvironmental Specialists.

BRE Special Digest 1: 2005 Concrete in aggressive ground.

BS 1377 : 1990 : Methods of test for soils for civil engineering purposes. Published in nine parts. British Standards Institution.

BS 5930 : 2015 + A1:2020 : Code of practice for Site investigation. British Standards Institution.

BS 10175 : 2011 + A2:2017: Investigation of potentially contaminated Site s – Code of Practice. British Standards Institution

BS EN 1997-1: 2004 : Eurocode 7 – Geotechnical Design – Part 1: General rules. Including UK National Appendix of November 2007. British Standards Institution.

BS EN ISO 14688-1 : 2002 : Geotechnical investigation and testing – Identification and classification of soil – Part 1: Identification and description. British Standards Institution.

BS EN ISO 14688-2 : 2018 : Geotechnical investigation and testing – Identification and classification of soil – Part 2: Principles for a classification. British Standards Institution.

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BS EN ISO 22476-3 : 2005 : Geotechnical investigation and testing – Field Testing – Part 3: Standard penetration test

ISRM: 1981: Rock Characterisation, Testing and Monitoring – ISRM Suggested Methods (Ed E T Brown). Commission on Testing Methods, International Society for Rock Mechanics, Pergamon Press.

ISRM: 1985: Suggested method for determining point load strength. Commission on Testing Methods, International Society for Rock Mechanics, International Journal of Rock Mechanics, Mining Sciences and Geomechanics Abstracts, Vol. 22

Britain From Above - https://britainfromabove.org.uk/en/image/WPW060399

http://www.warstateandsociety.com/Bombing-Britain

https://www.epa.gov/pfas/basic-information-pfas

UK Maps of Radon, http://www.ukradon.org/information/ukmaps

Health and Safety Executive (2015) Construction (Design and Management) Regulations.

Mining Remediation Authority Interactive Map Viewer, http://mapapps2.bgs.ac.uk/coalauthority/home.html

Mining Remediation Authority: Coal seams with a history of spontaneous combustion August 2025

BGS Geology of Britain Viewer http://mapapps.bgs.ac.uk/geologyofbritain/home.html

BGS Maps Portal: BGS maps portal - British Geological Survey

6 DEFINITIONS

AOD	Above Ordnance Datum
bgl	Below ground level
BGS	British Geological Survey
BRE	Building Research Establishment
CBR	California Bearing Ratio (test)
COMAH	Control of Major Accident Hazards (regulations)
DQRA	Detailed Quantitative Risk Assessment
DWS	Drinking Water Standard
EQS	Environmental Quality Standard
GAC	Generic Assessment Criterion
GQA	General Quality Assessment (Environment Agency)
GQRA	Generic Quantitative Risk Assessment
GSV	Gas Screening Value
HCV	Health Criteria Value
IPPC	Integrated Pollution Prevention and Control (regulations)
NGR	National Grid Reference
NIHHS	Notification of Installations Handling Hazardous Substances (regulations)
OS	Ordnance Survey
ppm	Parts per million
ppmv	Parts per million by volume
SAC	Special Area of Conservation
SPZ	Source Protection Zone
SSAC	Site -Specific Assessment Criterion
SSSI	Site of Special Scientific Interest

APPENDIX A – DRAWINGS





SITE LOCATION

NEAREST POSTCODE: LL11 5LS

SITE ENTRANCE WHAT THREE WORDS /// puppy.bonkers.impulsive

Not to Scale

Site Location Plan: GSL3505-DR-001-V01	Drawn: ER	Checked: SF	Authorised: SF	GroundSolve Ltd Unit 1, 85 Station Road, Queensferry Flintshire CH5 2TB
	Date: Apr 2026	Date: Apr 2026	Date: Apr 2026	
Client: Clwydian Planning	**Project: Smelt Farm, Wrexham**			

GroundSolve Ltd
Consulting Geotechnical Engineers

Document No : GSL_IMSR009
Rev No: 1
Issue date: 03/01/2025

N

Dismantled Railway

Tract

ED Bdy

Und

250.2m

Smelt Farm

246.6m

MINERA ROAD

Drawing Key

- Site Boundary (2060m²)
- Owenrship Boundary
- Existing Buildings
- Existing Highway
- Existing Fence/Boundary

Clwydian Planning

55 Well Street, Ruthin
Denbighshire, LL15 1AF
www.clwydianplanning.co.uk
07738 291 642
mail@clwydianplanning.co.uk

Project. Smelt Farm, Minera Road, Ffrith, Wrexham, LL11 5LS

Drawing No. 28J.A001 | Revision. P02

Scale. 1:1000 | Paper Size. A3 | Date. 28.01.2026

Existing Site Location Plan

APPENDIX B – SITE WALKOVER PHOTOGRAPHS

Photo Descriptions

PHOTO NO.	DETAILS
1	Looking west from the barn, farming equipment present. Feature in the centre of the grass potentially associated with mine shaft as is in the mapped location of the shaft, however owner informed GSL that this was dug by himself.
2	View looking southwest from the barn
3	View looking south from the barn
4	Potential mine shaft feature in the location mapped as mine shaft, however owner informed GSL that this was ug by himself.



PHOTO 1



PHOTO 2



PHOTO 3



PHOTO 4

Photo Board

Drawn: ER	Checked: SF	Authorised: SF
Date: Apr 2026	Date: Apr 2026	Date: Apr 2026

Client: Clwydian Planning

Project: Smelt Farm

GroundSolve Ltd

Unit 1, 85 Station Road,
Queensferry Flintshire CH5 2TB

GroundSolve Ltd
Consulting Geotechnical Engineers

Document No : GSL_IMSR011
Rev No: 0
Issue date: 03/01/2025

Photo Descriptions

PHOTO NO.	DETAILS
5	Internal room of the barn
6	Internal room of the ban
7	View looking south from the barn
8	View looking southwest from the barn



PHOTO 1



PHOTO 2



PHOTO 3



PHOTO 4

Photo Board

Drawn: ER	Checked: SF	Authorised: SF
Date: Apr 2026	Date: Apr 2026	Date: Apr 2026

Client: Clwydian Planning

Project: Smelt Farm

GroundSolve Ltd
Unit 1, 85 Station Road,
Queensferry Flintshire CH5 2TB

GroundSolve Ltd
Consulting Geotechnical Engineers

Document No : GSL_IMSR011
Rev No: 0
Issue date: 03/01/2025

APPENDIX C – MINING REMEDIATION AUTHORITY CONSULTANTS COAL REPORT

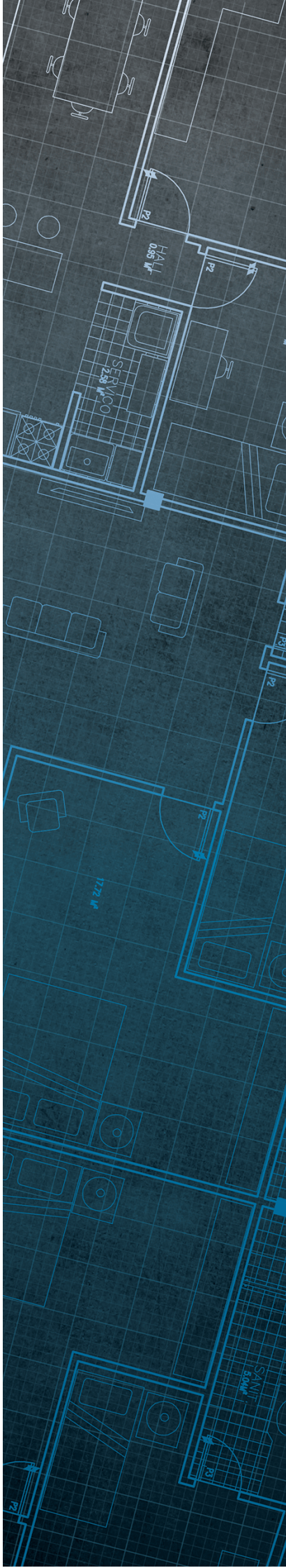
The Coal Authority

Consultants

Coal Mining Report

Smelt Farm, Minera Road, Ffrith,
Wrexham, Ll11 5ls
Wrexham

Date of enquiry:	**16 April 2026**
Date enquiry received:	**16 April 2026**
Issue date:	**16 April 2026**
Our reference:	**51003565100001**
Your reference:	**GS-2LC-CXL-P33-E3I**



Consultants
Coal Mining Report

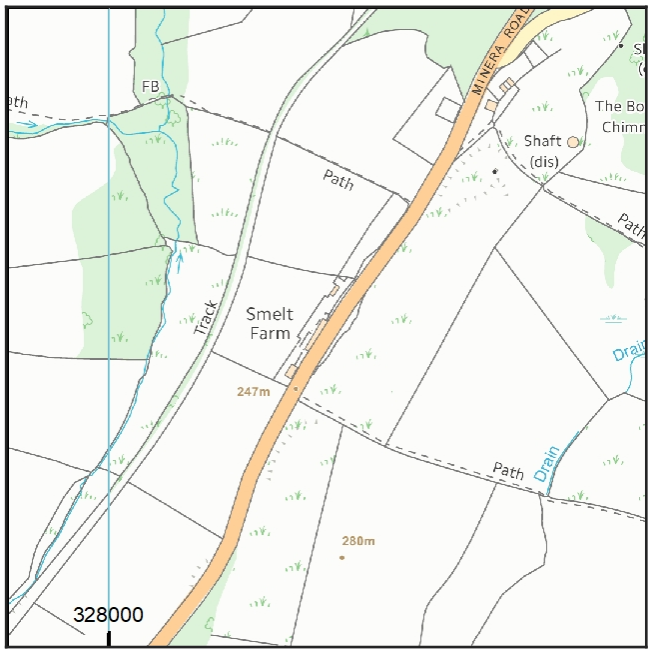
This report is based on and limited to the records held by the Coal Authority at the time the report was produced.

Client name

GROUNDSURE LIMITED

Enquiry address

Smelt Farm, Minera Road, Ffrith, Wrexham, Ll11 5ls
Wrexham



Approximate position of property

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NG18 4RG

reports@miningremediation.gov.uk

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
BRYMBO	MAIN	Coal	A0PH	40	Beneath Property			200	1869
unnamed	TWO YARD	Coal	3U2H	44	East	11.1	East	150	1874
BRYMBO	MAIN	Coal	7H28	136	East	11.0	East	230	1931

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	328353-097	328208 353505	This shaft is located in an area that has been worked by opencast mining operations. There are no details of any treatment but it is likely that the shaft has been partially or totally removed.	Coal	
Shaft	328353-098	328199 353499	This shaft is located in an area that has been worked by opencast mining operations. There are no details of any treatment but it is likely that the shaft has been partially or totally removed.	Coal	
Shaft	328353-099	328219 353539	This shaft is located in an area that has been worked by opencast mining operations. There are no details of any treatment but it is likely that the shaft has been partially or totally removed.	Coal	
Shaft	328353-100	328210 353640	Treatment details unknown.*	Coal	

*For your information, before the coal industry was nationalised in 1947, there was no requirement for a mine operator to record mine entry treatment details when a mine was abandoned. Therefore, it is not unusual for us to have no treatment details for many of the 176,000 recorded mine entries on our database. Despite this lack of information, please be assured that the fact we have no treatment recorded does not necessarily mean that the mine entry was left untreated when abandoned.

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Abandoned mine plan catalogue numbers

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

NW1484	NW1482	NW1486
7604	NW1425	17704
NW350	OM15245	NW1433

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

For assistance in identifying the specific abandoned mine plans relevant to your requirements, **please contact us at InformationManagers@MiningRemediation.gov.uk**.

Outcrops

Seam name	Mineral	Seam workable	Distance to outcrop (m)	Direction to outcrop	Bearing of outcrop
TWO YARD	Coal	Yes	Within	N/A	201

Geological faults, fissures and breaklines

Please refer to the 'Summary of findings' map (on separate sheet) for details of any geological faults, fissures or breaklines either within or intersecting the enquiry boundary.

Fault under or close to the property 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.

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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.

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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 email us at reports@miningremediation.gov.uk.

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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 **email us at reports@miningremediation.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.

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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.

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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.

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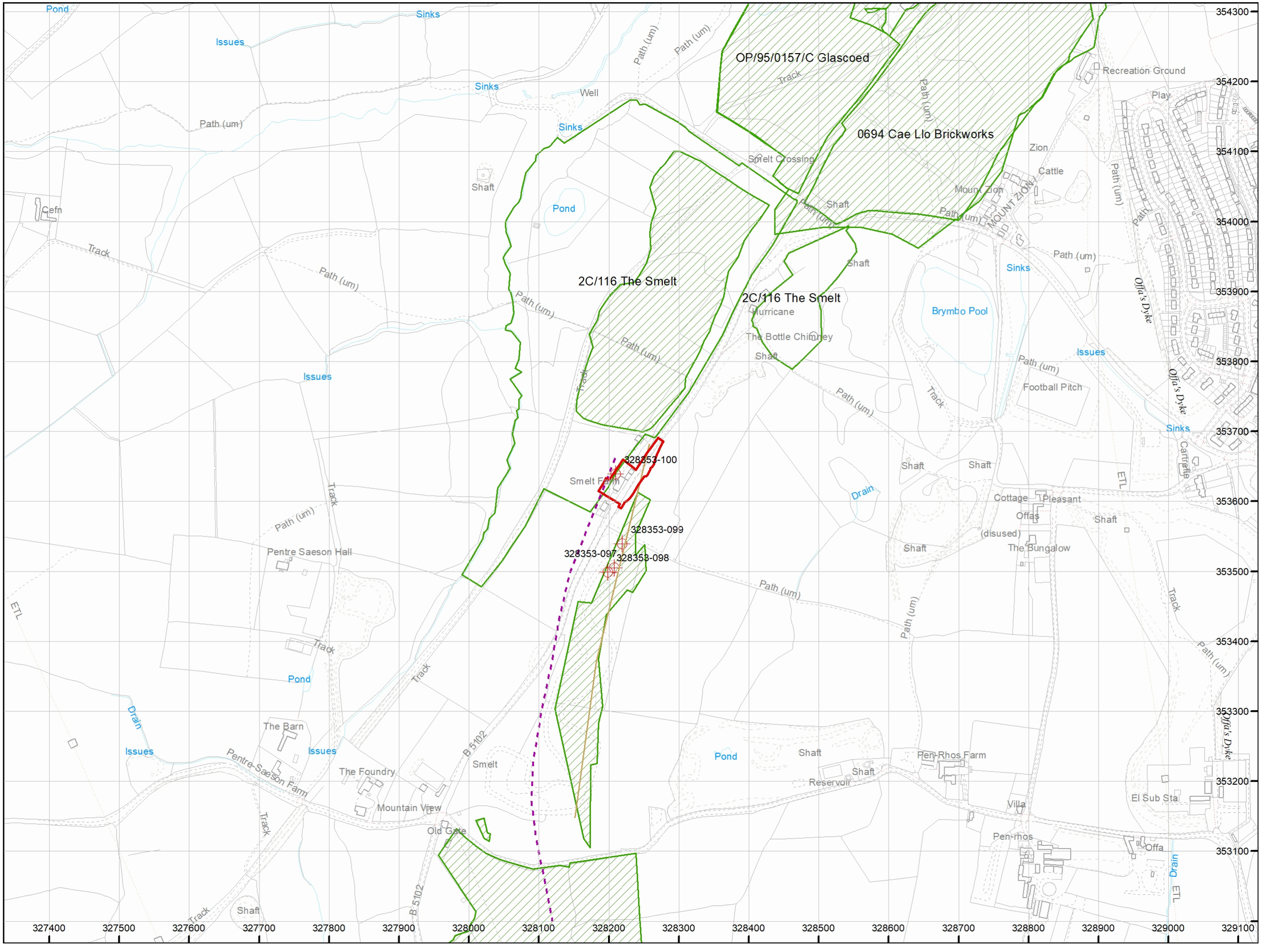
Summary of findings

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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)
- Geological faults
- Opencast mine licence area
- Unlicensed opencast site



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