

Coal Mining Risk Assessment

For development at: Twyn Glas Farm, Tredegar, NP22 3RH

For proposal: Construction of residential development consisting of 15No. dwellings

Assessment Summary

Assessment Result	MEDIUM RISK
Recommended Further Work	INTRUSIVE GROUND INVESTIGATION

The Coal Authority works to resolve the impacts of mining by growing its expertise, innovation, organisational capability and efficiency.

It manages the effects of past coal mining, including subsidence damage claims which are not the responsibility of licensed coal mine operators and is an executive non-departmental public body, sponsored by the Department of Business, Energy and Industrial Strategy. This report is valid for 90 days.

Limit of liability

This report is provided for the applicant and is in respect of the property identified on its face. Any conclusions or recommendations made are those based on information obtained for the report and our current knowledge and practices. The information and data set out in this report is based on information provided by or obtained from third parties which is held by the Coal Authority. Any limitations of the data are identified within the report. The Coal Authority does not accept liability for the accuracy of third party data. Should new data or information become available these results, conclusions and recommendations may require amending. The Authority is not and cannot be liable for any harm, loss or damage of whatever nature, including consequential loss, occasioned to any third party by the inaccuracy of the information set out in this report and any person seeking to rely upon it should if necessary undertake their own investigations and professional advice. The report should only be used in the stated context.

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Any advice provided in this report does not prejudice our position as a statutory consultee.

Version	Compiled	Checked	Date
1.1	PB	MTM	08/12/22

Section 1 – Description of site and proposed development

a) Site location and Description

The Coal Authority has been commissioned to prepare a Coal Mining Risk Assessment Report for a proposed development at Twyn Glas Farm, Tredegar, NP22 3RH (see Figure 1), in order to provide the Local Planning Authority with information on coal mining and an assessment of its impact on land stability.

The approximate site centre co-ordinates are E313744, N209420. The proposed development area requires access via Twyn Glas Farm. The site has an approximate elevation of 357-366m AOD.

Figure 1: Site location plan



b) Description and layout of proposed development

The Coal Authority understands that the developer plans to construct a residential development consisting of 15No. dwellings (see Appendix A).

c) Scope of coal mining risk assessment

The purpose of this 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.

Any works that intersect coal mine workings, mine entries or coal seams may have implications for mine gas, spontaneous combustion and surface collapse. Coal Authority permission is required prior to any such works taking place. Further detailed advice can be provided upon request.

The Coal Authority's adopted policies regarding building over or close to mine entries and managing gas risks can be viewed at:

www.gov.uk/government/publications/building-on-or-within-the-influencing-distance-of-mine-entries

www.gov.uk/government/publications/guidance-on-managing-the-risk-of-hazardous-gases

Section 2 – Sources of information used to inform this report

Source reviewed	Yes	No	Remarks
Coal mining report	X		Consultants Coal Mining Report (Appendix B)
Other mining records	X		Abandonment plans – SWR1701, SWR1704
Geological plans	X		OS geological sheet SO10NW (no date given), Geological Survey of England and Wales 1:50,000 geological map series, New Series sheet 232 – Abergavenny (1990)
BGS Boreholes	X		SO10NW21
Other	X		BGS GeoIndex

The above information sources have been used to provide an assessment of the potential mining risk within the remainder of the report.

Section 3 – Identification and assessment of site specific coal mining related risks

The Coal Authority's search of its detailed coal mining information identifies the following site specific coal mining legacy risks to the site.

Coal mining issue	Reported		Risk assessment	
	Yes	No	Rating	Comment
a) Underground coal mining (recorded at shallow depths)	X		Medium risk	Possible insufficient cover above recorded workings in the Lower Nine Foot (Bydylog) and the Five Foot Gellideg (Old) seam together with the presence of a spine roadway at shallow depths
b) Underground coal mining (probable at shallow depths)	X		Medium risk	Possible unrecorded workings in all coal, ironstone and fireclay horizons beneath the to the Lower Nine Foot (Bydylog), down to the Five Foot Gellideg (Old) seam
c) Mine entries (shafts and adits)	X		Low risk	Six recorded not considered to influence proposed development
d) Coal mining geology (faults and fissures)	X		Low risk	Fault recorded along development sites eastern boundary, locally displacing coal seams
e) Record of past mine gas emissions or potential		X	Medium risk	All mine workings pose a potential gas risk which should be considered in any future investigations and development
f) Recorded coal mining surface hazard		X	Low risk	None recorded
g) Surface mining (opencast workings)		X	Low risk	Sites recorded to the west of the development site boundary, not considered to be of influence

A desk based study of the coal mining information has been used to risk assess the coal mining features above. A summary of the risk posed by these features is summarised after thorough analysis of the information sources. Comment on each specific coal mining issue follows below:

a) Underground Coal Mining (recorded at shallow depths)

Coal mining at depths shallower than 30m beneath ground level can typically pose challenges to ground stability at the surface. The magnitude of this effect depends upon the exact depth of any workings, the thickness of competent rock cover and the extraction thickness of any coal mine workings.

The Coal Authority Consultants Coal Mining Report in Appendix B states that the development site is not in an area of recorded shallow coal mine workings.

The Consultants Report indicates that the site is underlain by, or is in proximity to, workings in five seams of coal from 46m to 99m below ground level (bgl). The shallowest of these is the Lower Nine Foot seam, recorded to have been worked beneath the development area at 46m bgl with an extraction thickness of 0.9m and last worked in 1876. The workings in the Lower Nine Foot seam are shown on abandonment plan SWR1704/2/2 however the plan does not show any seam levels in the vicinity of the site. The plan records the seam as the Bydylog coal, synonymous with the Lower Nine Foot, and shows the seam to be 2ft 11in (0.89m) thick. The seam is shown to be overlain by 19ft (5.79m) of 'mine ground' and underlain by 5ft 6in (1.68m) of fireclay.

The OS geological sheet records the Lower Nine Foot seam to outcrop approximately 65m north of the development site's northern boundary with abandonment plan SWR1704/2/2 appearing to show the seam worked to outcrop. It is therefore not known as to where the depth statement recorded in the Consultant's Coal Mining Report has been sourced. The OS geological sheet SO10NW records a dip of 8° south approximately 800m west of the site. Extrapolation of this dip below the site, assuming it remains constant, could potentially place the Lower Nine Foot seam as shallow as 8m below rockhead at the northern boundary and 36m below rockhead at the southern boundary.

The Lower Nine Foot seam is recorded in the Consultant's Coal Mining Report to be underlain by the Five Foot Gellideg seam, shown worked at 69m depth, last worked in 1887 and with a recorded extraction thickness of 1.8m. The workings in the Five Foot Gellideg are shown on abandonment plan SWR1701 however no seam levels are indicated in the vicinity of the site. The plan shows that the seam is also known as the Old Coal in the locality. Although a separation of 23m is recorded between the seams, it is not known where this is sourced from and other sources suggest this separation could be locally greater. It is also discussed within section 3b that multiple seams may be present between the Lower Nine Foot (Bydylog) coal and the Five Foot Gellideg (Old) coal that could be locally worked, potentially reducing rock cover above the Five Foot Gellideg seam.

The Consultants Coal Mining Report records the presence of a shallow spine roadway beneath the development site boundary which is considered to originate from mine entry 313209-012. As this entry is recorded 62m east of the development site boundary it is considered that the roadway will be within rock beneath the development site boundary however abandonment plan SWR1704 does not record a depth for this roadway below

the site. It is therefore considered this feature should also be investigated and treated if found to be present at shallow depths.

Consequently the risk to this development from underground coal mining (recorded at shallow depths) within the Lower Nine Feet (Bydylog) and the Five Foot Gellideg (Old) seams together with the presence of a spine roadway at shallow depths is considered to be medium.

b) Underground coal mining (probable at shallow depths)

Areas of probable shallow coal mine workings are identified as part of the Development High Risk Area for which no recorded plan exists, but where it is likely that workable coal at shallow depths has been mined before records were kept. The data has been estimated from available mining records by qualified mining surveyors. Since 1872 there has been a law that requires all coal mine operators to deposit working plans of the mine with the government following the cessation of operations. Prior to this date the plans were often destroyed or kept in private ownership.

Where the extraction of coal has occurred there is the potential for voids to remain long after mining has ceased. The depth of workings generally dictates the length of time that significant voids may remain, but other factors including the size of mine roof supports and the competency of overlying strata can influence the time for natural consolidation to occur. Waste material produced during mining was sometimes used to backfill abandoned sections of mine workings, therefore reducing the volume of open cavities or voids that remain. The method of backfilling workings is typically not recorded and cannot be relied upon as a satisfactory form of remediation.

The Coal Authority Consultants Coal Mining Report in Appendix B states that the development site is not in an area of probable shallow coal mine workings, however does record the 6ft Bottom Leaf and Caerau seams to outcrop within the development site and the Red Vein to outcrop 44m northwest of the development site boundary. All three outcrops are recorded to be locally workable and are orientated approximately NW-SE. These seams are not shown to outcrop on the available geological sheets.

The following two tables detail the seams recorded from the OS geological sheet SO10NW (no date given), Geological Survey of England and Wales 1:50,000 geological map series, New Series sheet 232 – Abergavenny (1990) and BGS borehole SO10NW21 (located 500m southeast of the site).

Seam	Thickness (m)	Distance from above seam (m)
Two Feet Nine	0 - 1	NA
Upper Four Feet	1	15
Lower Four Feet (Big)	1.5 - 1.8	4
Upper Six Feet	1	5
Lower Six Feet	0.8	3
Upper Nine Feet	Absent to 1	32
Lower Nine Feet	1	12

Bute	0.45	8
Amman Rider	0.3	9
Yard (Engine)	1.2	8
Seven Feet	0.75	10
Lower Seven Feet	1	15
Five Foot Gellideg	1.2	13
Gawr	0.65	44

1. *Data sourced from OS geological sheet SO10NW (also iterated on Geological Survey of England and Wales 1:50,000 geological map series, New Series sheet 232 – Abergavenny (1990))*

Seam	Thickness (m)	Distance from above seam (m)
Two Feet Nine (Elled)	0.84	Seam encountered at 33.05m.
Unnamed Coal	0.25	7.08
Unnamed Coal	0.36	2.62
?Four Feet (Upper Six Feet) (Big)	0.36	3.5
Six Feet (Yard/Threequarter)	2.97	4.04
Rhas Las (Bydylog)	0.84	37.87
Unnamed Coal	0.25	2.11
Bute	0.36	6.45
?? Rider	0.36	13.54
Yard (Engine)	1.98	9.15
Upper Seven Feet	0.08	2.66
Lower Seven Feet	0.66	5.84
Five Foot Gellideg (Old)	2.67	29.37

2. *Data sourced from Borehole SO10NW2.*

It is considered that the 6ft Bottom Leaf outcrop may correlate with the presence of the Lower Six Feet seam however the reason for this outcrop not being locally recorded is not known. The correlation between the Caerau and Red outcrops recorded within the Consultants Coal Mining Report is not known.

Given the uncertainty regarding the depth to the Lower Nine Feet (Bydylog) and the Five Foot Gellideg (Old) seams discussed in section 3a, it is considered that all seams between the Lower Nine Foot (Bydylog) and the Five Foot Gellideg (Old) seams may be locally present, workable and may have insufficient overlying rock cover. It is noted that multiple ironstone and fireclay horizons are also locally present that may be worked in isolation or with associated coal seams, further decreasing rock cover.

Although it may not be feasible to investigate or remediate all seams down to the base of the Five Foot Gellideg seam, depending on local seam depths and separations, the potential for all coal, ironstone and fireclay horizons beneath the to the Lower Nine Foot (Bydylog), down to the Five Foot Gellideg (Old) seam, must be considered and investigations should be undertaken to prove the condition of, or sufficient competent cover above, all seams. Accordingly the risk to the proposed development from unrecorded mine workings is considered to be medium.

c) Mine entries (shafts and adits)

The Coal Authority Consultants Coal Mining Report in Appendix B shows six mine entries are recorded within 100m of the development site, the source plans for which have been reviewed as part of this coal mining risk assessment. The results of this exercise are recorded in the table below:

Reference	Adit Orientation	Easting	Northing	Revised Easting	Revised Northing	Plot distance from site boundary	Source
313209-048	SW	313829	209529	NA	NA	98m NE	No source on rationalised plan' listed in Inferis
313209-012	WSW	313827	209486	313818	209481	62m E	Ab plan 982B. Superimposed on 1922 Edition 1/10560 OS Plan
313209-030	SW	313614	209372	NA	NA	93m W	Gwent Land Reclamation Joint Committee
313209-043	W	313685	209266	313675	209267	87m S	Ab plan SWR2023
313209-014	W	313676	209267	313660	209289	77m SW	Ab plans 982C SWR1705. Superimposed on 1922 Edition 1/10560 OS Plan
313209-015	W	313692	209253	313675	209265	90m S	Ab plans 982C SWR1705. Superimposed on 1922 Edition 1/10560 OS Plan

The Coal Authority seeks to ensure that development is avoided above, or within the zone of influence of, all mine entries where possible. The zone of influence can be calculated as the sum of the departure value (up to 10m to account for discrepancies in source material), plus the local depth to rockhead (discussed in 3d below as likely to be up to 6.1m), plus the entry radius (nominally assumed to be 1.25m unless proven otherwise). On the basis of the above the zone of influence for these entries can be assumed to be a distance of 17.35m from the recorded positions detailed above. Based on the distance of these entries from the site boundary, the risk to the development from recorded mine entries is considered to be low.

It is noted that the Consultants Coal Mining Report records the presence of a shallow spine roadway beneath the development site boundary which is considered to originate from mine entry 313209-012. The risk from this feature is discussed within section 3a.

The development site sits within a historical mining area and therefore there is a residual risk of unrecorded mine entries to be present on site. All site operatives should be made aware of this potential risk and a watching brief should be maintained during site works.

Consequently the risk to this development from mine entries (shafts and adits) is low.

d) Coal mining geology (faults and fissures)

The development site sits upon the South Wales Middle Coal Measures Formation, consisting of coal, sandstones, siltstones and mudstones. The closest BGS borehole to the site, SO10NW32 located 58m northeast of the site records surficial deposits to consist of unspecified drift with a typical thickness of up to 20ft (6.1m) in the local area.

The Consultant's Coal Mining Report records a fault to be present adjacent to the eastern boundary of the site, orientated approximately NW-SE with the OS geological sheet SO10NW recording the fault to downthrow to the northeast by between 30-64ft (9.14-19.51m), locally displacing coal seams.

Faults can act as pathways for gas and water, cause surface instability and result in dissimilar coal conditions/hazards due to their relative displacement of strata.

e) Record of past mine gas emissions or potential

There are no recorded past gas emissions recorded in the surrounding area, however, coal seams and coal mine workings pose a potential gas risk which should be considered in any future investigations and development. At development sites with shallow coal workings, probable shallow coal mine workings, or pathway features such as mine entries and geological disturbances on or nearby the site, the Coal Authority recommends that a more detailed gas risk assessment to be undertaken in accordance with relevant guidance.

No seam mentioned in this report is recorded as being prone to spontaneous combustion.

f) Recorded coal mining surface hazard

None recorded.

g) Surface mining (opencast workings)

The Coal Authority Consultants Coal Mining Report in Appendix B records two opencast sites to be present within 500m of the site boundary with the closest being 350m to the west. Due to the distance between the development site boundary and the opencast boundary it is not considered to be of influence to the proposed development. Consequently the risk to this development from surface mining (depth) is low.

Section 4 – Proposed mitigation strategy

a) Site investigation and/or remediation

Due to the presence of recorded shallow mine workings within the Lower Nine Feet (Bydylog) and the Five Foot Gellideg (Old) seams, the presence of a spine roadway at shallow depth and possible unrecorded shallow mine workings in all coal, ironstone and fireclay horizons beneath the to the Lower Nine Feet (Bydylog), down to the Five Foot Gellideg (Old) seam, an intrusive site investigation will be required.

The site investigations will need to be carried out by a competent contractor, taking into account the findings of this report. The results should be interpreted by a qualified and competent person so that an appropriate remedial strategy can be developed.

Guidance on drilling or piling through coal can be found at:

www.gov.uk/government/publications/guidance-on-managing-the-risk-of-hazardous-gases

Due to the difficulties in identifying coal related gas hazards, it may be prudent to consider completing a gas risk assessment for the development site. This may recommend basic gas protection measures within the foundation design, which are resistant to permanent gases (carbon dioxide, methane, carbon monoxide) and comparable to that suggested in BR211, as commonly used to protect against radon in residential properties.

Where development is proposed over areas of coal or past coal workings at shallow depth, developers should consider wherever possible removing any remnant shallow coal. This will enable the ground to be stabilised and remove a hazard prior to construction of any foundations associated with the development. Prior extraction of surface coal requires an Incidental Coal Agreement from the Coal Authority. Further information can be found at:

www.gov.uk/get-a-licence-for-coal-mining

Concrete, cements and renders may be susceptible to attack from elevated levels of sulfates in the ground. The Building Research Establishment reports that most cases of sulfate attack occur in and adjacent to coal field areas and related industrial centres. It would be prudent for the issue of sulfate attack to be considered during the foundation design to ensure they comply with the Building Regulations 2010.

You may also wish to refer to the Construction Industry Research and Information Association (CIRIA) publication Special Publication 32 "Construction over Abandoned Mine Workings".

b) Coal Authority permit

Any intrusive activities, including initial site investigation boreholes and any subsequent treatment of coal mine workings/coal mine entries for ground stability purposes require the prior written permission of the Coal Authority. Application forms for Coal Authority permission and further guidance on this matter can be obtained from the Coal Authority's website at:

www.gov.uk/get-a-permit-to-deal-with-a-coal-mine-on-your-property

Follow on services can be requested using the details in the contacts section.

Section 5 – Conclusions

This report has identified that the proposed development site has been subject to past coal mining activity, namely the presence of recorded shallow mine workings within the Lower Nine Feet (Bydylog) and the Five Foot Gellideg (Old) seams, the presence of a spine roadway at shallow depths and possible unrecorded shallow mine workings in all coal, ironstone and fireclay horizons beneath the to the Lower Nine Feet (Bydylog), down to the Five Foot Gellideg (Old) seam. As a result an intrusive site investigation will be required. The risk to the site from legacy mining features is medium.

Nevertheless, subject to the undertaking of appropriate site investigations and any potential necessary remedial measures as outlined in Section 4a of this report, the Coal Authority considers that the site may be made safe and stable for future development and the risk to the development reduced to low. The recorded coal mining legacy issues present within the site do not pose any particular implications for the layout of the proposed development.

The Coal Authority advises the developer undertake a detailed Gas Risk Assessment where proposed development occurs over shallow coal reserves as is the case here.

Section 6 – Contacts

Planning and Local Authority Liaison Service

Tel: 01623 637 119

Email: planningconsultation@coal.gov.uk

Website: www.gov.uk/planning-applications-coal-mining-risk-assessments

Surface Hazards Emergency Service

Tel: 0800 288 4242 (open 24 hours a day, 7 days a week)

24-hour number for reporting public safety hazards and incidents associated with coal mining

Mining Reports Service

To purchase site specific coal mining information go to our website;

www.groundstability.com

Licensing and Permitting Service

Email: permissions@coal.gov.uk

Tel: 01623 637 320

For permission to enter or disturb coal mine entries and coal seams.

Section 7 – Appendices

Appendix A – Plan showing proposed development layout



Appendix B – Non-Residential Coal Mining Consultants Report



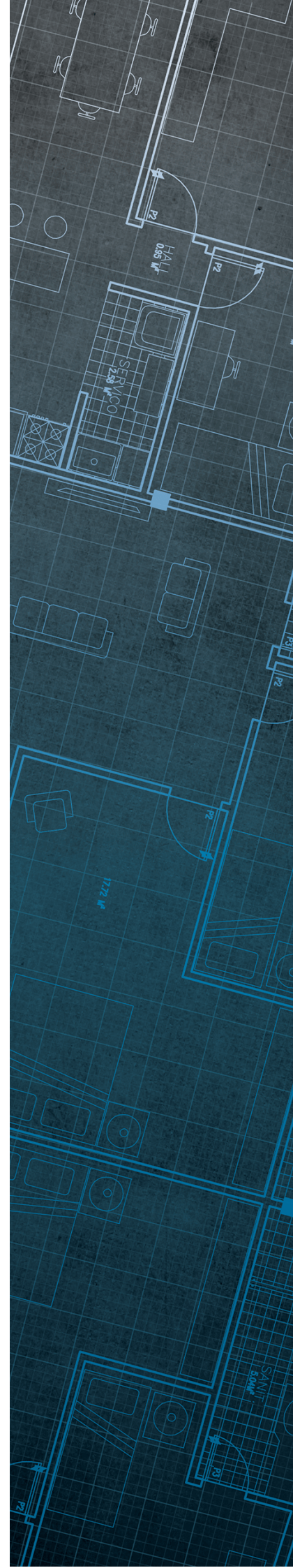
The Coal
Authority

Consultants Coal Mining Report

Twyn Glas Farm
Tredegar
NP22 3RH

Date of enquiry:	6 December 2022
Date enquiry received:	6 December 2022
Issue date:	6 December 2022

Our reference:	71009240752001
Your reference:	



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

CMRA THE COAL AUTHORITY

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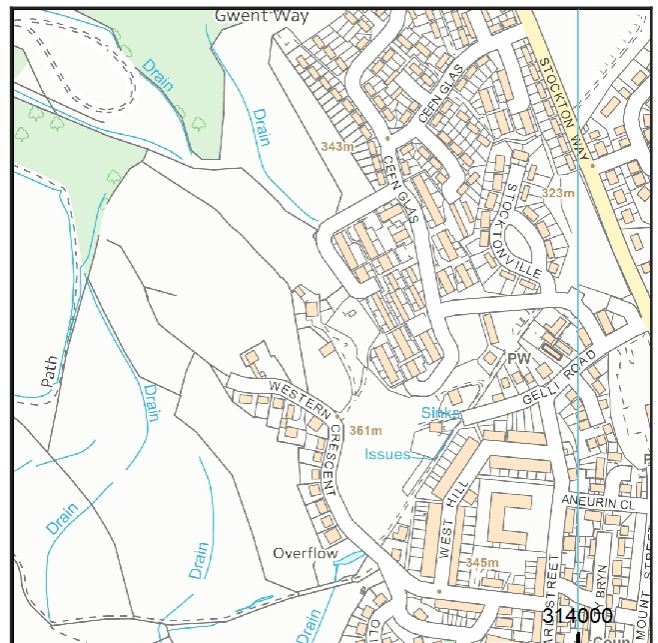
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Approximate position of property



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Section 1 – Mining activity and geology

Past underground mining

Colliery	Seam	Mineral	Coal Authority reference	Depth (m)	Direction to working	Dipping rate of seam worked (degrees)	Dipped direction of seam worked	Extraction thickness (cm)	Year last mined
unnamed	LOWER NINE FOOT	Coal	49IJ	46	Beneath Property	5.2	South	90	1876
unnamed	FIVE FOOT GELLIDEG	Coal	49IX	69	Beneath Property	3.2	South-East	180	1887
unnamed	LOWER 7FT BOTTOM LEAF	Coal	49IS	77	Beneath Property	3.2	South	140	1876
Unnamed	GARW RIDER IRONSTONE	Ironstone	46NL	90	Beneath Property	3.2	South-East	325	1886
Unnamed	FIVE FOOT GELLIDEG	Coal	49IY	91	North-East	3.2	South-East	165	1873
unnamed	GARW VEIN	Coal	49JI	99	Beneath Property	4.7	South	55	1860

Probable unrecorded shallow workings

None.

Spine roadways at shallow depth

Distance to spine roadway (m)	Direction to spine roadway
Within	N/A

Mine entries

Entry type	Reference	Grid reference	Treatment description	Mineral	Conveyancing details
Adit	313209-012	313818 209481		Coal	
Adit	313209-014	313660 209289		Coal	
Adit	313209-015	313675 209265		Coal	
Adit	313209-030	313614 209372	This adit was sealed in 1978. No other details are known.	Coal	
Adit	313209-043	313675 209267		Coal	
Adit	313209-048	313829 209529		Coal	

Abandoned mine plan catalogue numbers

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

SWR1691	712	SWR1699
SWR1706	SWR1692	2263
SWR3553	982	SWR1689

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

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

Outcrops

Seam name	Mineral	Seam workable	Distance to outcrop (m)	Direction to outcrop	Bearing of outcrop
6FT BOTTOM LEAF	Coal	Yes	Within	N/A	294
CAERAU	Coal	Yes	Within	N/A	291
RED VEIN	Coal	Yes	44.0	North-West	295

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.

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.

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.

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.

