



The Coal
Authority

Coal Mining Risk Assessment

Report Ref:

71009794135001

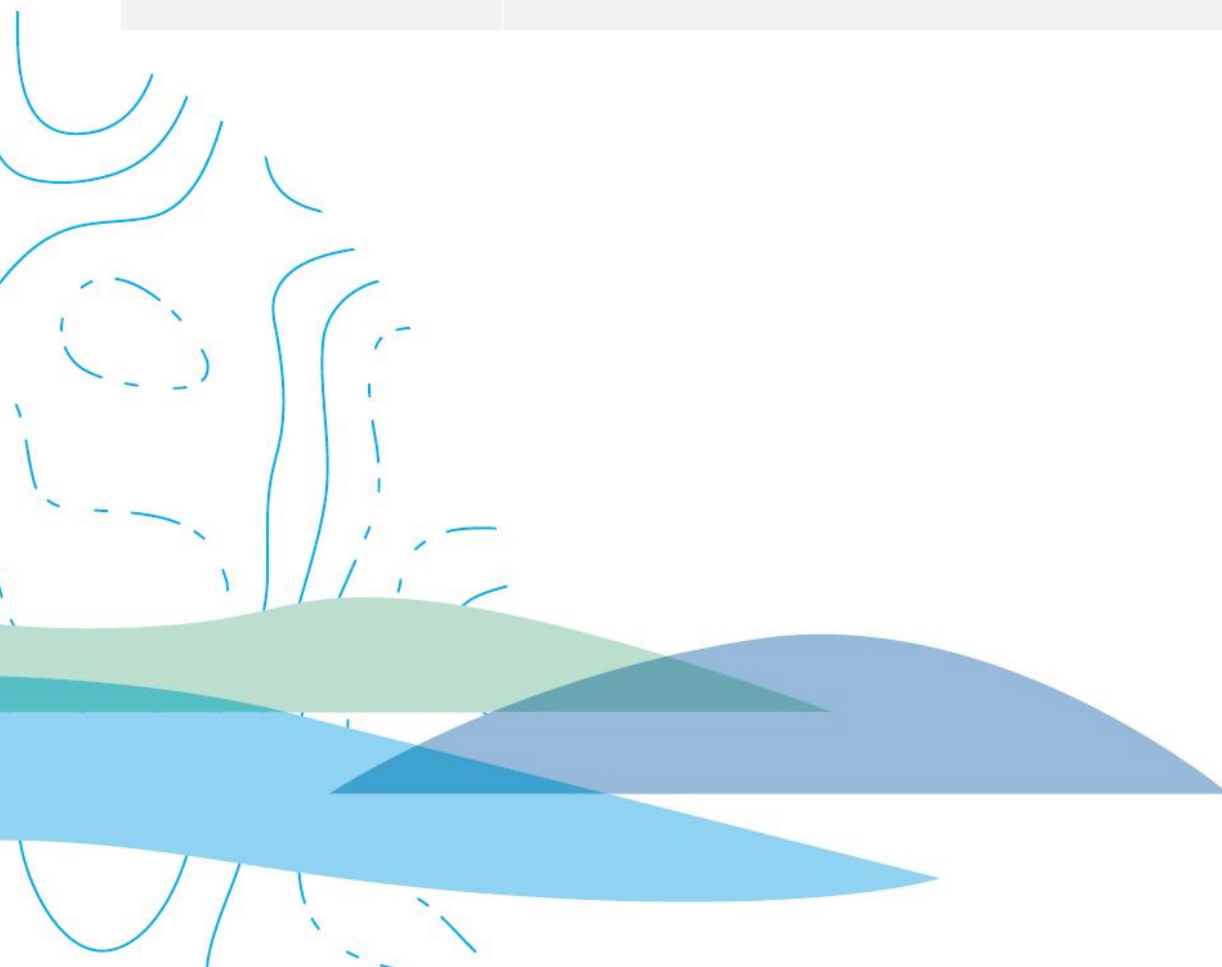
For development at:

Ynys Park, Cwmafan Road, Port Talbot, SA12 8RB

For proposal:

Construction of 3G sports pitch

Assessment result	LOW RISK / MEDIUM RISK / HIGH RISK
Recommended further work	ADVISORY COAL GAS RISK ASSESSMENT



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 for Energy Security and Net Zero. This report is valid for 90 days.

Limit of liability

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

Version	Compiled	Title	Checked	Date
1	PB	BEng, CEnv, MIMMM	HB	29 th Jan 24

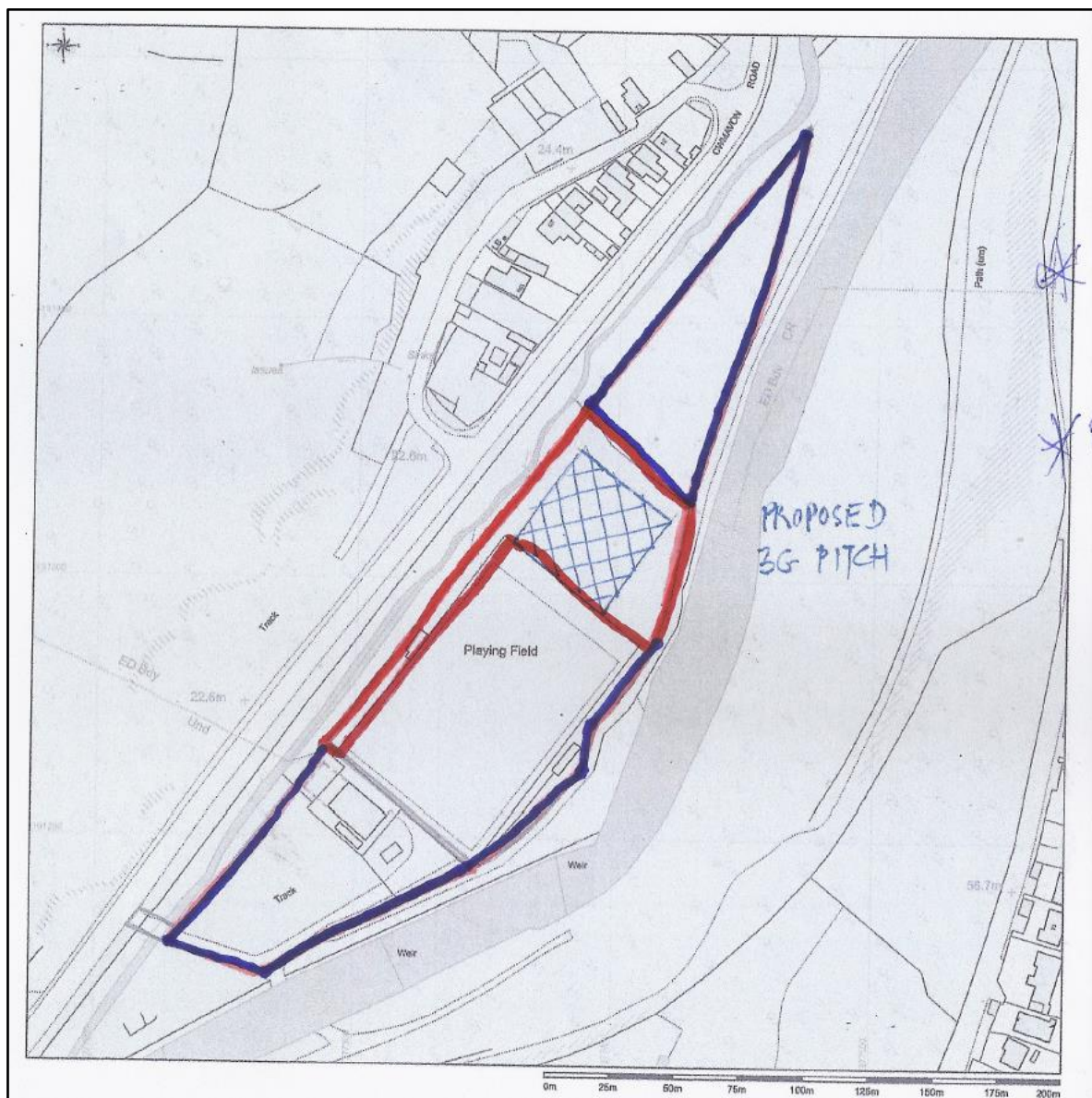
Section 1 – Description of site and proposed development

a) Site location and Description

The Coal Authority has been commissioned to prepare a Coal Mining Risk Assessment Report for a proposed development at Ynys Park, Cwmafan Road, Port Talbot, SA12 8RB (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 E277397, N191315. The proposed development area requires access via Cwmafan Road. The site has an approximate elevation of 24m AOD.

Figure 1: Site location plan



b) Description and layout of proposed development

The Coal Authority understands that the developer plans to construct a 3G sports pitch (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

[Microsoft Word - Coal Seams with a History of Spontaneous Combustion.docx
\(publishing.service.gov.uk\)](http://publishing.service.gov.uk/Microsoft%20Word%20-%20Coal%20Seams%20with%20a%20History%20of%20Spontaneous%20Combustion.docx)

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	
Geological Plans	X		OS geological sheet SS79SE (1970)
BGS Boreholes	X		SS79SE506
Other		X	

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

Based on all source information reviewed, the following site specific coal mining legacy risks are considered to affect the site:

Coal mining feature	Risk assessment	
	Rating	Comment
Recorded underground coal mining	Low risk	None recorded
Probable underground coal mining	Low risk	None recorded
Mine entries (shafts and adits)	Low risk	None recorded
Coal mining geology, faults and fissures	Low risk	None recorded
Reported or potential mine gas emission	Medium risk	Fault present within the development site boundary, locally displacing coal seams. All mine workings pose a potential gas risk which should be considered in any future investigations and development
Recorded coal mining surface hazards and historical claims	Low risk	None recorded
Surface mining (opencast workings)	Low risk	None recorded

Comment on each specific coal mining feature, based on a desk based review of sources listed in Section 2, are provided below:

a) Recorded and probable underground coal mining

Underground coal mining can pose challenges to ground stability. A widely regarded 'rule of thumb' of 10 times the extraction thickness of the seam(s) in competent rock cover is commonly considered appropriate, however a site-specific consideration of the risk must be adopted.

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.

It must be considered possible that where seams have been worked by underground methods, roadways may exist that could extend to greater than the height of the worked seam in order to facilitate access. A nominal roadway height of 1.5m is considered, where a seam is of a lesser thickness than this.

Where areas of probable shallow coal mine workings have been identified as part of the Development High Risk Area, it is likely that workable coal exists at shallow depths, however no records for workings exist. 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.

The Consultants Report in Appendix B states that the development site is not in an area of recorded shallow coal mine workings and that it is not in an area of probable shallow coal mine workings. The Consultants Coal Mining Report does record the Tillery Brithdir seam to outcrop 15.9m southwest of the development site boundary with the seam shown to be orientated approximately NE-SW and shown to be of a workable thickness in the locality.

The OS geological sheet SS79SE (1970) records the Tillery Brithdir outcrop to be locally known as the No.1 Rhondda Rider seam. It is noted that a fault is recorded to be present within the west of the development site boundary, orientated approximately north-south and downthrown to the west, with the No.1 Rhondda Rider seam outcropping to the south of the site to the west of this fault and to the north of the site boundary to the east of the fault. The sheet also records the Brithdir seam to outcrop 50m to the north of the site to the west of the fault. A dip of 15° north is recorded in the area.

A summary of the generalised vertical section from the OS geological sheet is shown below:

Seam	Thickness	Separation to seam above
Brithdir	Thin	N/A
No.1 Rhondda Rider	Thin	76m
Coal	Thin	12m
No.1 Rhondda	Thin	37m

Due to the location of the Brithdir outcrop to the west of the fault and the No.1 Rhondda Rider to the east it is considered that these seams will not be of influence to the proposed development,

Whilst the Brithdir seam is noted to have crop workings with abandonment plans for the area showing limited workings in the Rock Vach seam (an alternate name for the Brithdir) there is no evidence of workings taking place in the No.1 Rhondda Rider seam, likely due to its thin nature. Consequently it is considered likely that the seam is not locally worked.

The risk to the proposed development from probable underground mining is considered to be low.

b) Mine entries (shafts and adits)

The Consultants Report in Appendix B shows no mine entries are recorded within 100m of the development site.

The risk to the development from recorded mine entries is considered to be low.

Where workable coal exists very close to surface, the possibility of bell pits (very old, unlined mine entries) cannot be discounted.

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. Caution should be applied to any works/loading/vehicle movements in the zone of influence of mine entries.

c) Coal mining geology, faults and fissures

The development site sits upon the Rhondda Member Sandstone formation. The closest available BGS borehole to the site, SS79SE506 located 880m northeast of the development records surficial deposits to consist of made ground, sand and gravel to a depth of 6m overlying mudstone. Ground conditions at the development site may vary.

A fault is recorded to be present within the west of the development site boundary, orientated approximately north-south and downthrown to the west, 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.

Fissures are lines of weakness at surface which may have been caused by coal mining, usually by aerial subsidence associated with deep mining. No fissures are known to affect the development site.

d) Reported or potential mine gas emission

The Consultants Report in Appendix B indicates that there are no past gas emissions recorded in the surrounding area, however all 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.

e) Recorded coal mining surface hazard and historical claims

The Consultants Report in Appendix B shows no surface hazards or historical claims to exist in proximity to the development site.

f) Surface mining (opencast workings)

The Consultants Coal Mining Report in Appendix B does not record any coal surface extraction in proximity to the site, accordingly the risk to the proposed development is considered to be low.

Section 4 – Proposed mitigation strategy

a) Site investigation and/or remediation

After a thorough desk based review of the available evidence, it is not considered that the development site has been subject to coal mining legacy features that will influence the development. Accordingly, an intrusive site investigation will not be required. In the event that the site boundary and/or layout changes, this risk should be reconsidered.

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

Extensive coalfields exist across Great Britain and it is estimated that 25% of homes and businesses in the UK are located above former coal mines.

To understand the potential for mine water heat, and the Coal Authority and the British Geological Survey (BGS) released an interactive map showing estimated mine water temperatures within British Coalfields in 2020.

[Learn more about the interactive map that reveals heat stored in Britain's abandoned coal mines](#)

The occurrence of unrecorded mine entries across the whole of the site cannot be discounted and consequently in areas of new build development a watching brief should be maintained throughout the site works to identify this risk. As a result all site operatives should be made aware of this potential risk. Where mine entries exist close to the boundary the developer should be aware that this could complicate treatment if they straddle the boundary or works needed to treat them require access to land owned by third parties.

Should coal seams be found, at or near the depth of the development's foundations, they may pose a risk of spontaneous combustion if exposed to air or may act as pathways for ground gases to reach the development. A competent engineer should be consulted if coal is encountered in, or adjacent

to, the foundations of the proposed development.

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 C758 “Abandoned Mine Workings Manual”.

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.

c) Implications for development layout

The recorded coal mining legacy issues present within the site do not pose any particular implications for the layout of the proposed development.

Section 5 – Conclusions

This report has identified that the proposed development site is not known to have been subject to past coal mining activity. The risk to the site from legacy mining features is low.

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;

Website: www.groundstability.com

Licensing and Permitting Service

Tel: 01623 637 320

Email: permissions@coal.gov.uk

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

Heat and By-Product Innovation Team

Tel: 0300 3300 140

Email: minewaterheat@coal.gov.uk

Please contact us to find out more about opportunities in your area

Section 7 – Appendices

Appendix A – Plan showing proposed development layout



Appendix B –Consultants Coal Mining Report



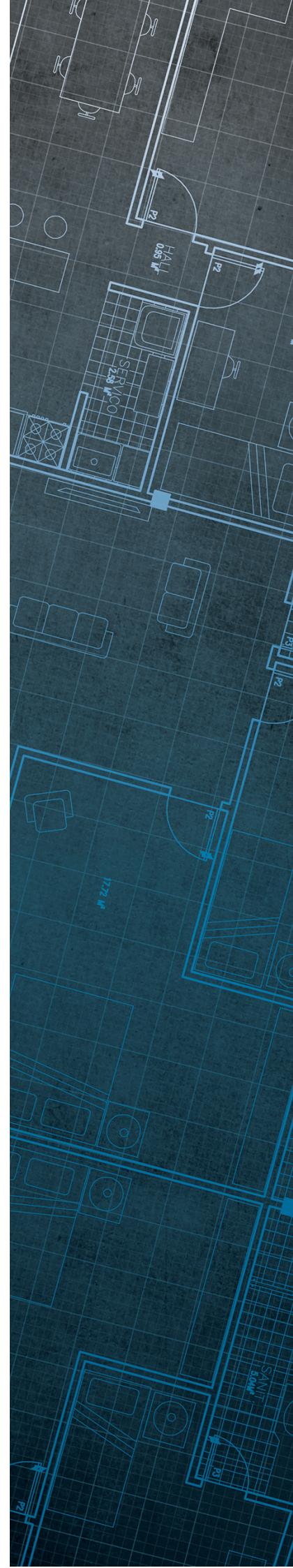
The Coal
Authority

Consultants Coal Mining Report

Ynys Park
Cwmafan Rd
Port Talbot
SA12 8RB

Date of enquiry:	30 January 2024
Date enquiry received:	30 January 2024
Issue date:	30 January 2024

Our reference:	71009794666001
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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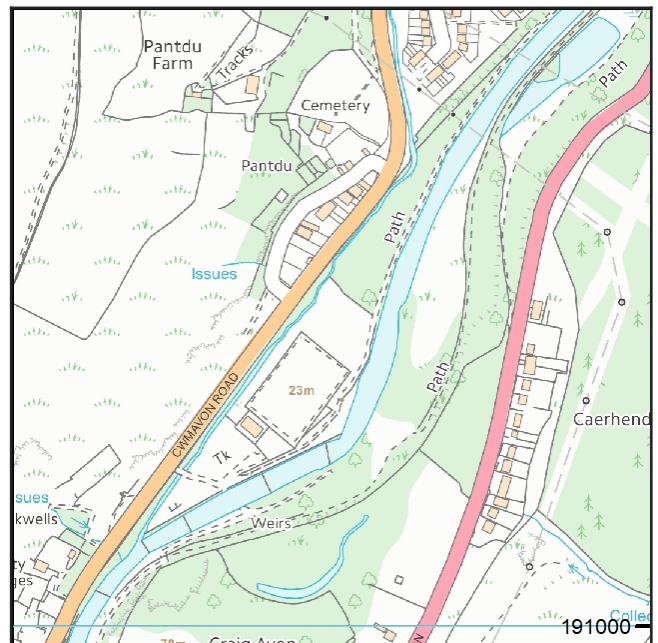
www.groundstability.com

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Approximate position of property



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Section 1 – Mining activity and geology

Past underground mining

No past mining recorded.

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:

12556	14048	
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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
TILLERY BRITHDIR	Coal	Yes	15.9	South-West	60

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

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

Based on the responses in this report, no further information has been highlighted.

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.

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.

