

Coal Mining Risk Assessment

For development at:

Land adjoining Hillcrest, Bethania Road, Acrefair, Wrexham,
LL14 3UD

For proposal:

Single residential dwelling

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.

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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	HB	PB	17/09/2021

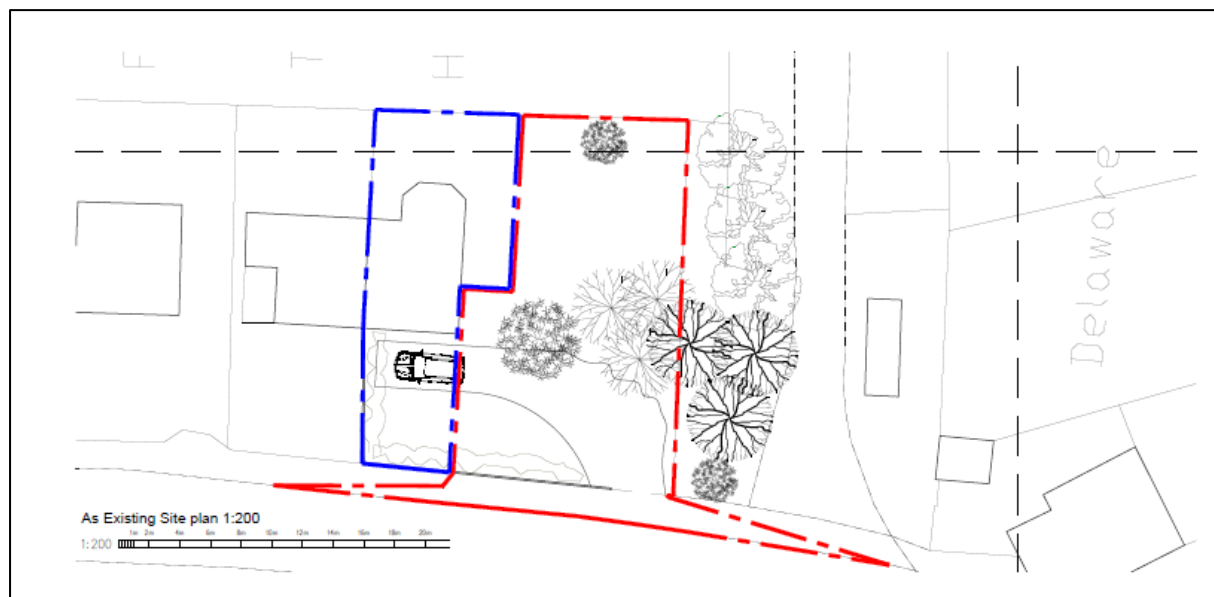
Section 1 – Description of site and proposed development

a) Site location and Description

The Coal Authority has been commissioned to prepare a Coal Mining Risk Assessment Report for a proposed development at land adjoining Hillcrest, Bethania Road, Acrefair, Wrexham, LL14 3UD (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 E328271, N343385. The proposed development area requires access via Bethania Road. The site has an approximate elevation of 144m AOD.

Figure 1: Site location plan



b) Description and layout of proposed development

The Coal Authority understands that the developer plans to construct a single residential dwelling with associated parking (see appendix A). It is understood that the dropped kerb in the west of the site (access to the existing dwelling) will need to be installed as part of the development, however the dropped kerb to the east (access to the new dwelling) is already in existence.

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 – 14893, NW1423, 16713
Geological plans	X		County Geological Sheet Denbighshire 35SW (1914), BGS 1:50,000 Geological Sheet Wrexham 121 (1993)
BGS Boreholes	X		SJ24SE685
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	Recorded shallow workings in what is suspected to be Main and Brassey seams
b) Underground coal mining (probable at shallow depths)	X		Medium risk	Potential for unrecorded shallow workings in the Quaker and Crank seams (and further unrecorded workings in the Main and Brassey seams)
c) Mine entries (shafts and adits)	X		Low risk	Eight mine entries within 100m of the development, not considered likely to impact on development
d) Coal mining geology (faults and fissures)		X	Medium risk	Great Cefn Fault recorded 60m east of site
e) Record of past mine gas emissions or potential		X	Medium risk	Roof coal in North Wales known to be liable to spontaneous combustion. 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	Closest opencast site 250m WNW of development

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 in an area of recorded shallow coal mine workings. The Consultants Report indicates that five seams of coal have been worked beneath or in proximity of the development site at depths of 19-133m bgl. The shallowest seam, the Pin seam, is recorded to have been worked beneath the site at 19m bgl, with an extraction thickness of 1.00m and last worked in 1868. The next seam recorded worked below the Pin seam is the Stone seam, recorded worked at 94m bgl to the north of the site, with an extraction thickness of 1.50m and last worked in 1868. The Consultants Report also records the Quaker seam to outcrop 38.6m west of the site, orientated NNE-SSW and indicated to be of workable thickness.

The County Geological Sheet Denbighshire 35SW (1914) records the Quaker seam to outcrop approximately 30m west of site, the Main seam to outcrop approximately 140m west of site and the Brassey seam to outcrop approximately 290m west of site. The BGS 1:50,000 Geological Sheet Wrexham 121 (1993) records the positions of the Quaker and Main seams in approximately the same position as the County Geological Sheet. A seam is also recorded on the BGS sheet at the same position as the aforementioned Brassey outcrop, however this seam is not labelled. All outcrops are orientated approximately NNE-SSW.

It is suspected that all of the recorded workings beneath the site are recorded on abandonment plan 14893. The seam nomenclature on this plan does not appear to tally in all cases with the seam names included within the Consultants Report, however the sheets recording the extent of workings beneath or close to the development site can be summarised as follows:

Sheet 1: Three Yard coal (suspected to be the Main coal) recorded worked in an area encompassing the development site

Sheet 2: Upper Yard coal (suspected to be the Brassey coal) recorded worked across development site. A water level in the Upper Yard is recorded at closest approximately 50m northwest of the development site (and also appears to be recorded on plan NW1423)

Sheet 5: Stone coal and ironstone seam recorded worked, however it is not clear if the limit of workings is to the north of the site boundary or if workings exist across the entire area

Sheet 6: Half Yard and Firedamp coals, however as with the Stone coal it is not clear if the entire site falls within an area delineated as having been worked

Sheet 7: Two Yard coal (suspected to be the Nant coal) recorded worked, however it is not clear if the limit of workings extends only into the immediate north of the site boundary or if workings exist across the entire area

Sheet 8: Lower Yard coal (suspected to be the Ruabon Yard coal) recorded worked, however it is not clear if the limit of workings extends only into the immediate north of the site boundary or if workings exist across the entire area

Sheet 9: Wall and Bench coal and ironstone recorded worked, however it is not clear if the limit of workings extends only into the northern portion of the site boundary or if workings exist across the entire area

Workings are also shown beneath the site on abandonment plan NW1423, and immediately south of the site on NW1503, however it is not clear which seam these relate to.

There is negligible evidence as to the depth or thickness of worked seams on the above abandonment plans.

A section on abandonment plan 16713 for the wider area records the following seams to have been encountered:

Seam	Thickness	Separation to seam above
Quaker	0.63m	N/A
Main	0.83m (two leaves)	35.63m
Brassey	1.72m (two leaves)	13.72m
Crank	0.66m	5.58m
Red	0.50m	16.77m

The only indication of the local dip is from figures in the Consultants Report indicating a rate of dip of 4.1-7.0° southeast for locally worked seams. Based on this and the distance to the mapped Quaker, Main and Brassey outcrops, these seams can be estimated to be present at approximately 2.1-3.6m (Quaker), 10.0-17.1m (Main) and 20.7-35.6m (Brassey) below rockhead at the development site. These estimates may suggest seam separations to be less than those on the above section.

It is considered possible that both the Main and Brassey seams may have been worked beneath all or part of the development site boundary and may (depending on local seam separations) have insufficient competent rock cover above them.

Accordingly, the risk to the proposed development from recorded shallow mine workings 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 in an area of probable shallow coal mine workings. As discussed in section 3a, the Consultants Report also records the Quaker seam to outcrop 38.6m west of the site, orientated NNE-SSW and indicated to be of workable thickness.

Local seam outcrops and sections discussed in 3a are indicative of the possibility that the Quaker seam may be present immediately below rockhead at the development site and is of a workable thickness.

The Main and Brassey seams are also suspected to be present at shallow depth, having been recorded to have been worked across all or part of the proposed development site. It is considered that further unrecorded workings in both of these seams could also be present outside of any areas of recorded workings.

The next seam recorded to exist below the Brassey seam on the section from abandonment plan 16713 is the Crank seam, again indicated to be of workable thickness and therefore considered likely to have been worked.

The possibility of roadways extending to greater than the height of a seam (nominally 1.5m) must be considered. It is therefore considered that insufficient competent rock cover could exist above any workings in the Quaker, Main, Brassey and Crank seams. Sufficient competent rock cover is considered likely to exist above the Red seam even if worked.

Accordingly the risk to the proposed development from unrecorded shallow mine workings is considered to be medium.

c) Mine entries (shafts and adits)

The Coal Authority Consultants Coal Mining Report in Appendix B shows eight mine entries (all shafts) are recorded within 100m of the development site. One entry is recorded to exist within 50m of the development site boundary; shaft 328343-446 (recorded best-plot co-ordinates are E328297, N343370) located approximately 6m ESE of the red line boundary provided, approximately 21m ESE of the closest area of the site where works are to be undertaken (driveway/parking area) and approximately 28m southeast of the edge of the proposed dwelling footprint. The source for this entry is described as 'Original source unknown obtained from former NCB shaft register'. Consequently it has not been possible to review or verify the recorded best-plot position for this entry. It must be considered that the current best-plot position locates the shaft immediately adjacent to Bethania Road to the south and a historical railway line immediately adjacent to the west. It is also evident from review of historical OS plans that the buildings adjacent to the east of this position have been in existence for a considerable length of time. It is therefore likely that the shaft does not plot at its current location, however it will not be possible to better refine this plotted position due to the absence of a source 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 3c below as likely to be up to 6.80m), plus the entry radius (nominally assumed to be 1.25m unless proven otherwise). On the basis of the above the zone of influence for the local entries can be assumed to be a distance of 18.05m from the recorded positions detailed in the Consultants Report.

On the basis of the information available, it is not considered likely that any recorded entries will exist within the site boundary and it is also considered unlikely that the zone of influence for local entries will encroach on any areas of proposed development. If ground conditions are found to differ during the undertaking of investigation works at the site from those locally recorded (specifically if rockhead is found to be more than 9.75m bgl) then the potential for the zone of influence of mine shaft 328343-446 to encroach on the development site boundary should be reconsidered. However at this time and on the basis of available evidence the risk to the proposed development from recorded mine entries is considered to be low.

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.

d) Coal mining geology (Faults and fissures)

The development site sits upon the Pennine Lower Coal Measures Formation. There is limited indication as to the likely thickness of superficial deposits at the development site. The closest BGS borehole record to the site (SJ24SE685, located approximately 580m

southwest of the proposed development) records made ground and clay to a depth of 6.80m, overlying mudstone rockhead, however local ground conditions at the development site may vary.

The Great Cefn Fault is mapped to exist approximately 60m east of the development site boundary, orientated approximately northeast-southwest and downthrown to the southeast.

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.

It is noted in 3a above that water levels are also recorded to exist in close proximity to the site.

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.

Coal seams in North Wales where roof coal has been left are known to be liable to spontaneous combustion, therefore precautions should be taken in case of such an incident during all ground works at the site.

f) Recorded coal mining surface hazard

None recorded.

g) Surface mining (opencast workings)

The Consultants Coal Mining Report in Appendix B indicates the closest opencast site boundary to the proposed development to be located approximately 250m WNW of the development site. Due to the distance of this site from the proposed development the risk is considered to be low.

Section 4 – Proposed mitigation strategy

a) Site investigation and/or remediation

Due to the presence of recorded shallow mine workings in what is suspected to be the Main and Brassey seams and the potential for unrecorded shallow mine workings in the Quaker and Crank seams (in addition to the potential for further unrecorded shallow workings in the Main and Brassey seams), an intrusive site investigation will be required.

Coal seams in North Wales where roof coal has been left are known to be liable to spontaneous combustion, therefore precautions should be taken in case of such an incident during all ground works at the site.

It is understood from the Consultants Coal Mining Report in Appendix B that previous site investigations had been undertaken in the vicinity of the site. It may be prudent to attempt to obtain their findings for review as part of the further site investigations for this proposed development.

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

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 coal mining legacy issues outlined in this report (specifically the presence of nearby recorded mine entries) are not considered, on the basis of the available evidence, to have an impact on the proposed layout outlined in Appendix A. However, if the depth to rockhead at the development site is found to differ from that recorded in the area (specifically if it is found to be greater than 9.75m bgl) then the risk to the proposed development from the zone of influence of local mine entries should be reconsidered.

Section 5 – Conclusions

This report has identified that the proposed development site has been subject to past coal mining activity, namely recorded shallow workings in what is suspected to be the Main and Brassey seams and the potential for unrecorded shallow workings in the Quaker and Crank seams (in addition to the potential for further unrecorded shallow workings in the Main and Brassey seams). 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

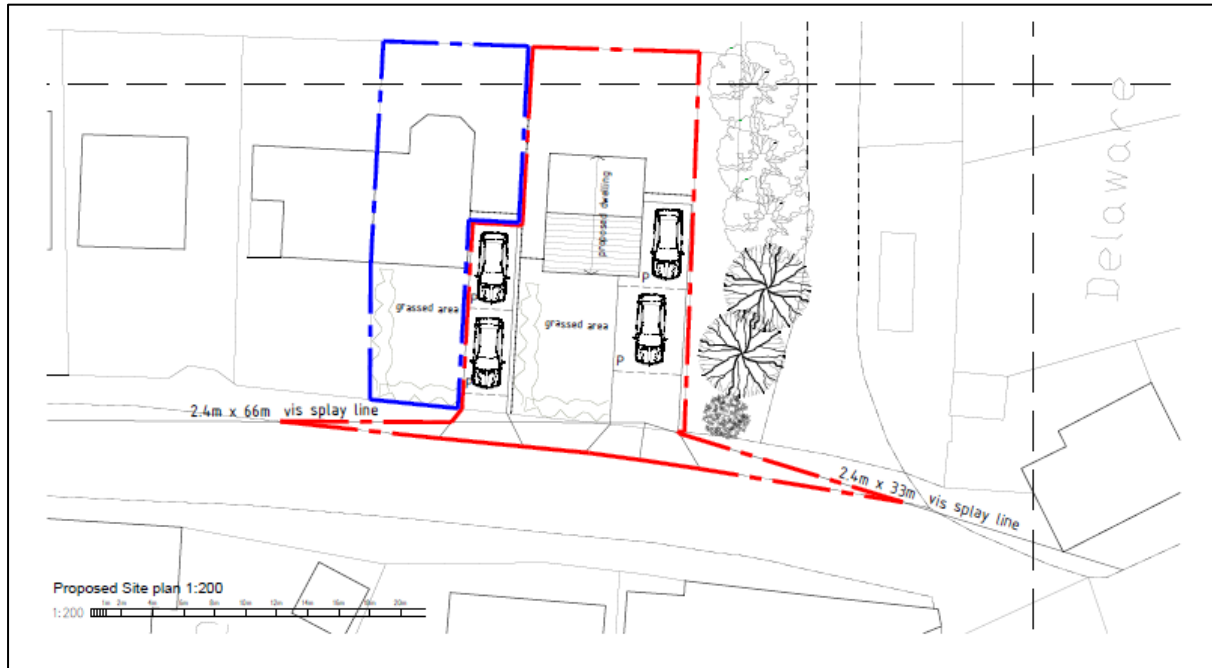
Email: permissions@coal.gov.uk

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



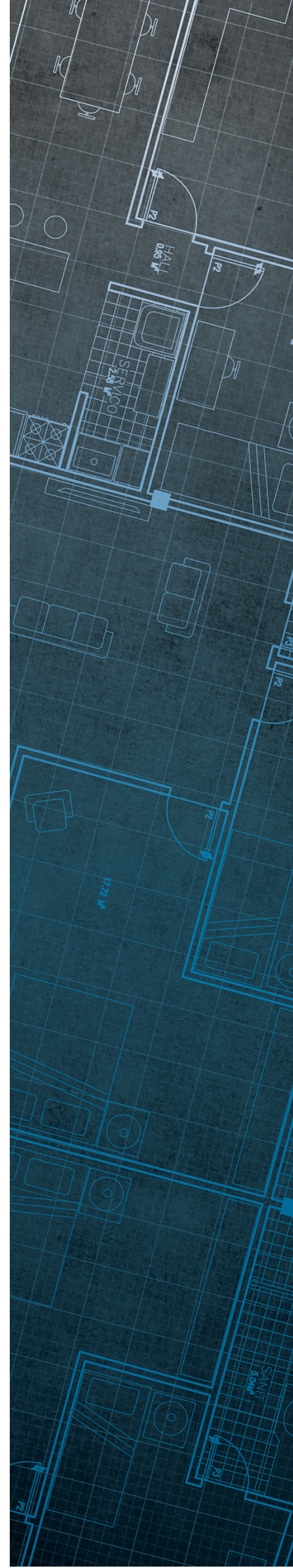
The Coal
Authority

Consultants Coal Mining Report

Land Adjoining Hillcrest
Bethania Road
Acrefair
Wrexham
LL14 3UD

Date of enquiry:	22 September 2021
Date enquiry received:	22 September 2021
Issue date:	22 September 2021

Our reference:	71008091474001
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

THE COAL AUTHORITY

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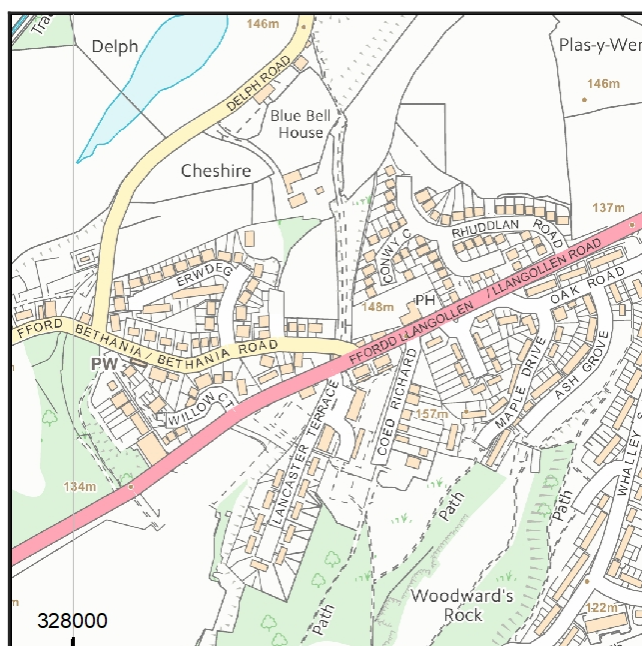
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Approximate position of property



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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	PIN	Coal	384B	19	Beneath Property	4.1	South-East	100	1868
unnamed	STONE	Coal	38VL	94	North	7.0	South-East	150	1868
unnamed	NANT (SOFT 5 QTRS)	Coal	38WJ	121	Beneath Property	7.0	South-East	100	1868
unnamed	RUABON YARD (SOFT 5 QTRS)	Coal	382O	122	Beneath Property	7.0	South-East	100	1868
unnamed	WALL AND BENCH	Coal	380O	133	Beneath Property	7.0	South-East	110	1868

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	328343-168	328208 343451	This entry was filled to an unknown specification at an unknown date. It was capped with a 4.8m x 4.8m concrete slab to NCB specification and finished with Hardstop in 1974.	Coal	
Shaft	328343-169	328163 343404	This entry was filled to an unknown specification at an unknown date. It was capped with a 3.66m x 3.66m concrete slab to NCB specification and finished with Hardstop in 1974.	Coal	
Shaft	328343-170	328183 343317	This entry was searched for in 2002 by NKC Geotech Ltd but was not located.	Coal	
Shaft	328343-171	328260 343322		Coal	
Shaft	328343-314	328379 343341	This entry was located in August 1976 and drilled to a depth of 21 metres. We have no further details of any treatment afforded to this shaft.	Coal	
Shaft	328343-439	328297 343298		Coal	
Shaft	328343-446	328297 343370		Coal	
Shaft	328343-447	328238 343302		Coal	

Abandoned mine plan catalogue numbers

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

NW1411	NW1503	16713
0	NW1423	PO0
14893		

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
QUAKER	Coal	Yes	38.6	West	12

Geological faults, fissures and breaklines

No faults, fissures or breaklines recorded.

Opencast mines

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

Coal Authority managed tips

None recorded within 500 metres of the enquiry boundary.

Section 2 – Investigative or remedial activity

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

Site investigations

Distance to site investigation (m)	Direction
27.3	North-East
7.2	South

See Section 4 for further information.

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.

Site investigations

The site is within an area of previous interest. It is close to where the Coal Authority has received information relating to past site investigations.

The site requires further investigation and may influence how you approach your risk assessment.

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.

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