

# Coal Mining Risk Assessment

**For development at:**

Plot 1 Station Road, Shotts, North Lanarkshire, ML7 4BA

**For proposal:**

To construct a 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.

#### 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	HB	PB	03/02/20

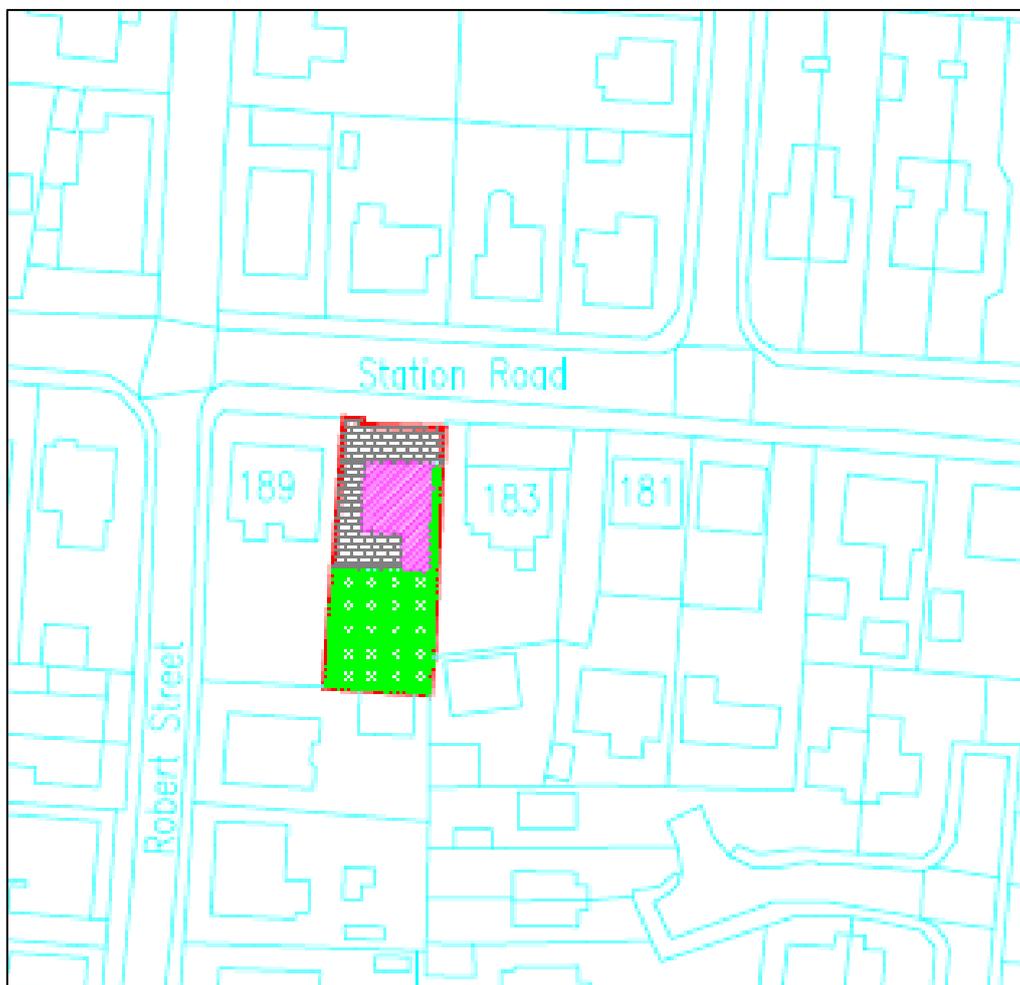
## Section 1 – Description of site and proposed development

### a) Site location and Description

The Coal Authority has been commissioned to prepare a Coal Mining Risk Assessment Report for a proposed development at Plot 1 Station Road, Shotts, North Lanarkshire, ML7 4BA (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 E287113, N659902. The proposed development area requires access via Station Road. The site has an approximate elevation of 219m 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 detached residential dwelling (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](http://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](http://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 – 3777 ‘Calderhead Colliery’
Geological plans	X		County Geological Sheet Lanarkshire 13NW (1921), British Geological Survey 1:50,000 Geological Sheet Falkirk (1997)
BGS Boreholes	X		NS85NE239, NS85NE313, NS86SE331/1
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	Low risk	Recorded workings beneath site considered unlikely to pose a risk
b) Underground coal mining (probable at shallow depths)	X		Medium risk	Potential for unrecorded shallow workings in the Upper Drumgray (Shotts Furnace) seam. Mid Drumgray seam may also be present at shallow depth
c) Mine entries (shafts and adits)		X	Low risk	None recorded
d) Coal mining geology (faults and fissures)		X	Medium risk	Numerous local faults, closest may be present within or adjacent to eastern boundary of site
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	None recorded

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 shows that the development site is not in an area of recorded shallow coal mine workings. The Consultants Report indicates that three seams of coal have been worked beneath, or in proximity to, the development site. The shallowest seam, the Lower Drumgray, is recorded to have been worked at a depth of 34m bgl to the west of the development site.

The workings in the Lower Drumgray seam (referred to locally as the Shotts Smithy coal) are recorded on abandonment plan 3777 (Sheet 1) for Calderhead Colliery. It is suspected that these workings do encroach within the western extent of the site boundary. No levels are provided for the workings in proximity to the development site. The Dykehead No.4 Pit, located approximately 135m NNW of the proposed development site, records 24 fathoms (43.8m) to the (Shotts) Smithy coal. The County Geological Sheet Lanarkshire 13NW (1921) shows local rates of dips in the Shotts Gas coal to be between 1 in 12 (4.7°) and 1 in 20 (2.8°) NW, locally. Considering the steepest of these dips and the distance between the shaft and the development site, the Shotts Smithy coal can be estimated to be approximately 11m shallower at the development site, however the No.4 Pit is also shown to be beyond a fault shown to downthrow to the east by 13ft (3.9m), resulting in a cumulative shallower depth of 14.9m. Ground elevation is also shown to reduce and superficial deposits shown to thicken to the south. Consequently the amount of competent rock cover is estimated to be approximately 20.3-22.8m above the Lower Drumgray (Shotts Smithy) seam at the proposed development site. A section of 'working' on abandonment plan 3777 records 2in 'sclit' (slaty coal), 21in coal and 1-2in 'daugh' (soft fireclay), totalling up to 25in (0.63m) of extraction, however roadways may exist which may be greater than the height of the seam, in the order of 1.5m.

BGS borehole record NS85NE239, located approximately 155m southwest of site, records ' "COAL" No recovery, possible waste pavement' from 15.88-16.18m. Whilst this horizon thickness is at the limit of what would be considered workable (0.3m), similar comments are seen at a similar depth in borehole logs further to the west and based on the local regional dips recorded it is suspected that this could be representative of the worked horizon of the Shotts Smithy coal.

The next seam recorded to have been worked below the Shotts Smithy seam is the Shotts Gas seam. Abandonment plan 3777 records the Shotts Gas seam to have been encountered at a depth of 30 fathoms (54.8m) in the Dykehead No.4 Pit, a separation of 11m to the overlying Shotts Smithy seam. A section of 'working' on the abandonment plan records 1ft 1in to 2ft 9in (0.33-0.83m) 'Gas coal' overlying 2in to 11in (0.05-0.27m) 'Free coal', amounting to a maximum of 1.1m, however as discussed above, roadways may exist which may be greater than the height of the seam, in the order of 1.5m. Based on the seam separation, the Shotts Gas seam can be estimated to be present at approximately 31.3-33.8m below rockhead at the proposed development site.

Based on the above it is considered that sufficient competent cover will exist above recorded mine workings beneath the site and accordingly the risk to the proposed development is considered to be low.

#### 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 shows that the development site is in an area of probable shallow coal mine workings.

The County Geological Sheet Lanarkshire 13NW (1921) records the outcrop of the Shotts Furnace coal to outcrop approximately 17m south of the proposed development site. Based on the local rates of dip recorded and discussed in 3a above, the Shotts Furnace seam may be present at approximately 0.8-1.4m below rockhead at the southern extent of the proposed development site. Abandonment plan 3777 records the Shotts Furnace seam to have been encountered at a depth of 10 fathoms (18.2m) in the Dykehead No.4 Pit. Based on seam separations recorded in this shaft, the Shotts Furnace seam can be expected to be present approximately 25.6m above the Shotts Smithy seam, further confirming that it is likely to be present at or below rockhead beneath the proposed development.

Abandonment plan 3777 records the Shotts Furnace seam to have been worked around the Dykehead No.4 Pit but only between the two northwest-southeast trending faults discussed above. This in itself is suspicious, raising the question as to whether the coal was of superior, rather than inferior, quality between the faults, or whether the faults themselves posed logistical problems to extracting the seam outside of the fault block. However the questions must also be asked as to whether the seam has indeed been worked elsewhere in the locality, including from outcrop, but was not recorded on abandonment plans. The County Geological Sheet does record mine entries present at or close to the outcrop to the west of the site and also records areas where the outcrop

position has been proven. The Shotts Furnace is recorded on plan 3777 to have a total thickness of up to 72in (1.8m), comprising multiple horizons of blaes (clay with ironstone), musselband ironstone, coal and fireclay.

The current BGS 1:50,000 geological mapping of the area and the 1:50,000 Geological Sheet Falkirk (1997) appears to show a configuration of fault and outcrop positions which differs from the older geological sheet and abandonment plans. A WNW-ESE fault is shown to be present approximately 15m southwest of the development site and a further WNW-ESE fault approximately 35m north of the development site (throw rate and direction unknown). An outcrop is shown to be present approximately 100m south east of the site between the faults, orientated approximately northeast-southwest. The outcrop is not labelled, however it is suspected to possibly represent the Upper Drumgray (Shotts Furnace) seam. If this seam is the Shotts Furnace seam, the estimated depth beneath the site will be slightly greater than that based upon the County Geological Sheet outcrop position (approximately 4.8- 8.2m below rockhead).

The Mid Drumgray seam is recorded on the generalised vertical sections (GVS) of the local geological sheets to be present between the Upper and Lower Drumgray seams. The County Geological Sheet records this seam to have a thickness of 2ft (0.6m) and is shown to be approximately 9 fathoms (16.4m) below the Upper Drumgray and 5 fathoms (9.1m) above the Lower Drumgray.

Based on evidence that the Upper Drumgray (Shotts Furnace) seam has been worked in the local area and may be present at or below rockhead, the risk to the proposed development from unrecorded shallow workings in this seam is considered to be medium. It may also be prudent to prove whether the Mid Drumgray seam is present beneath the site and whether it is been worked, as this may impact upon the amount of competent rock cover above deeper worked seams.

#### c) Mine entries (shafts and adits)

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

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 Scottish Lower Coal Measures Formation. BGS borehole record NS86SE331/1 located approximately 160m northwest of the proposed development site records 7ft (2.1m) of soil, sandy clay and boulder clay, overlying a further 7ft (2.1m) of 'soft sandy fakes' (shaley, slatey strata) before sandstone was encountered at a depth of 14ft (4.2m). Borehole record NS85NE313 located approximately 270m southwest of the proposed development records 4.6m of made

ground overlying soft mudstone. Local ground conditions at the development site may vary.

Local abandonment plans and geological sheets indicate a number of faults to be present in the local area. The County Geological Sheet Lanarkshire 13NW indicate the presence of two northwest-southeast faults to the east of the site; it is suspected that the westernmost fault may be present within or immediately adjacent to the northeastern corner of the site, whilst the second is recorded to be present approximately 60m northeast of the site. The western fault is shown to downthrow to the east and the eastern fault is shown to downthrow to the west. Two faults are shown in approximately the same position on abandonment plan 3777, however the easternmost fault is shown to be closer to the development site (approximately 35m east of the northeastern corner). Both faults are indicated to have a throw of approximately 13ft (3.9m).

At odds with the above records, the current BGS 1:50,000 geological mapping of the area does not record the two northwest-southeast trending faults close to the northeast of the site, however it does record a WNW-ESE trending fault approximately 15m southwest of the development site and a further WNW-ESE fault approximately 35m north of the development site. The direction or rate of throw is not recorded.

Whilst the records for local faulting are disparate, it should be considered possible that faulting has occurred adjacent to or within the development site boundary and that these faults may act as a conduit, potentially for ground gases and water.

#### e) Record of past mine gas emissions or potential

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

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.

#### f) Recorded coal mining surface hazard

None recorded.

#### g) Surface mining (opencast workings)

None recorded.

## Section 4 – Proposed mitigation strategy

### a) Site investigation and/or remediation

Due to the likely presence of unrecorded shallow mine workings in the Upper Drumgray (Shotts Furnace) seam, an intrusive site investigation will be required to prove the condition of, or sufficient competent cover above, this seam. Whilst there is limited evidence to suggest that the Mid Drumgray seam is locally present, it would be prudent to prove whether the Mid Drumgray seam is locally present and to prove its condition, to confirm whether this will have any implication on the competent cover present above deeper seams.

Consideration should be given to the presence of a fault that may exist within or adjacent to the northeastern site boundary, during the course of investigations.

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](http://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](http://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](http://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, including the potential for unrecorded shallow workings in the Upper Drumgray (Shotts Furnace) seam, which may impact on the stability of the proposed development. The Mid Drumgray seam may also be present at shallow depth beneath the site. 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](mailto:planningconsultation@coal.gov.uk)

Website: [www.gov.uk/planning-applications-coal-mining-risk-assessments](http://www.gov.uk/planning-applications-coal-mining-risk-assessments)

### **Surface Hazards Emergency Service**

Tel: 01623 646 333 (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](http://www.groundstability.com)

### **Licensing and Permitting Service**

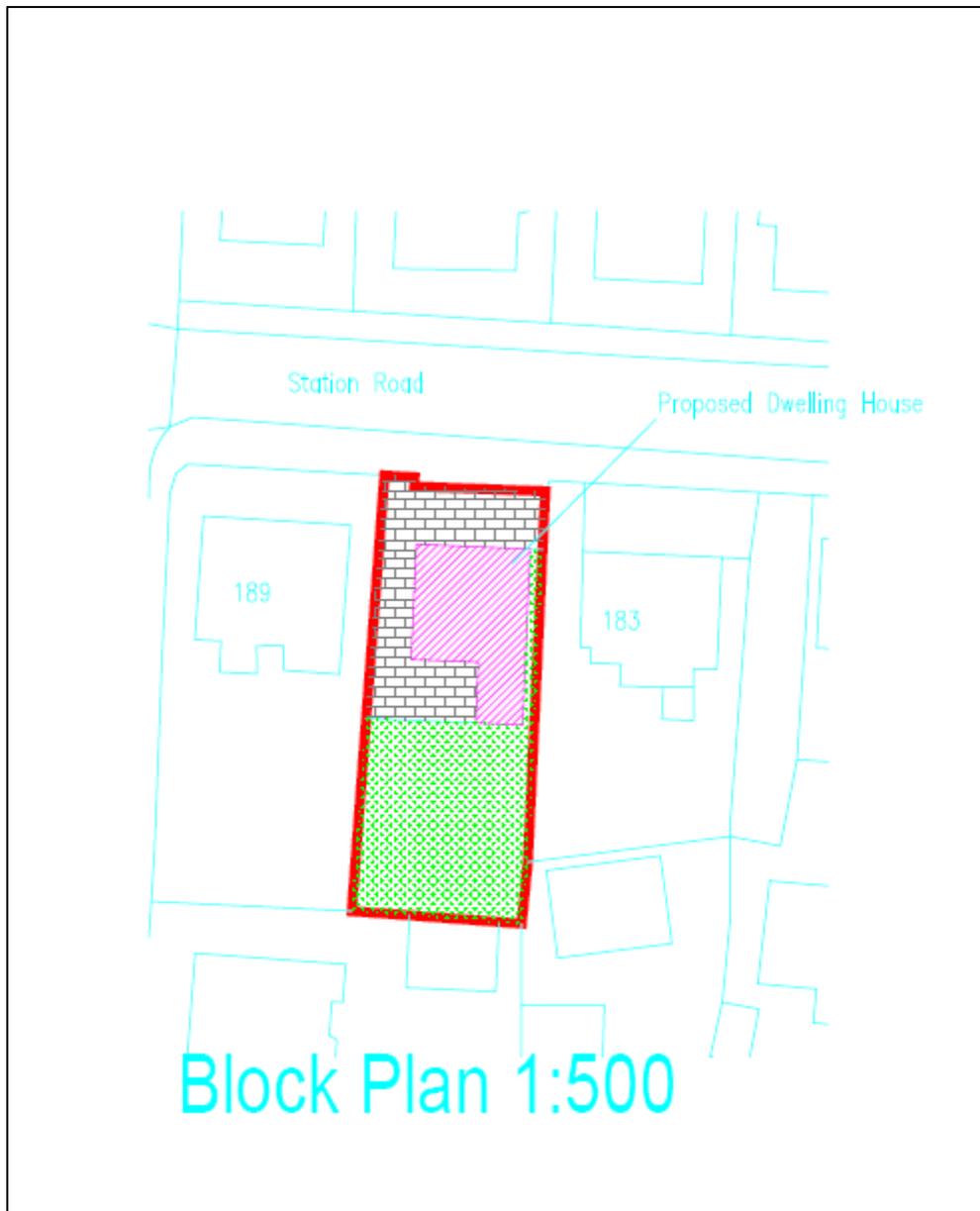
Email: [permissions@coal.gov.uk](mailto:permissions@coal.gov.uk)

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



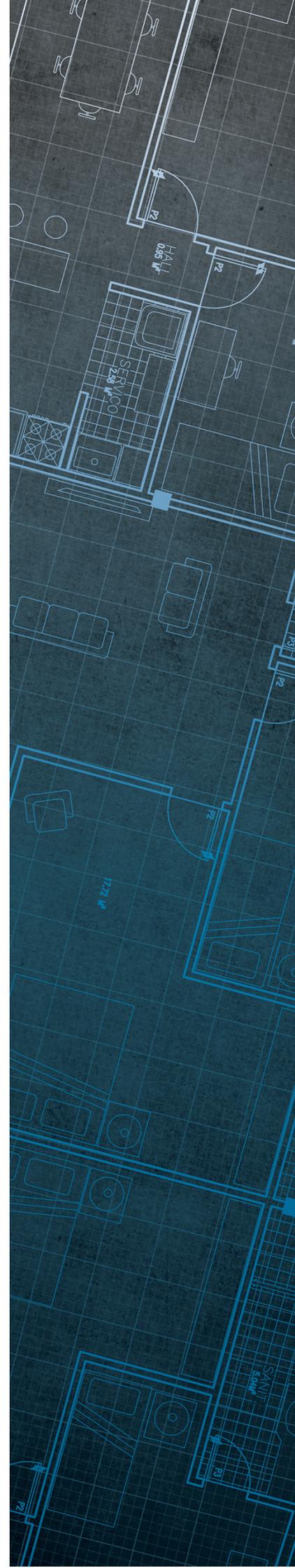
The Coal  
Authority

# Consultants Coal Mining Report

Plot 1 Station Road  
Shotts  
North Lanarkshire  
ML7 4BA

Date of enquiry: 4 February 2020  
Date enquiry received: 4 February 2020  
Issue date: 4 February 2020

Our reference: 71005560644001  
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

## Enquiry address

Plot 1 Station Road  
Shotts  
North Lanarkshire  
ML7 4BA

## How to contact us

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

200 Lichfield Lane  
Mansfield  
Nottinghamshire  
NG18 4RG

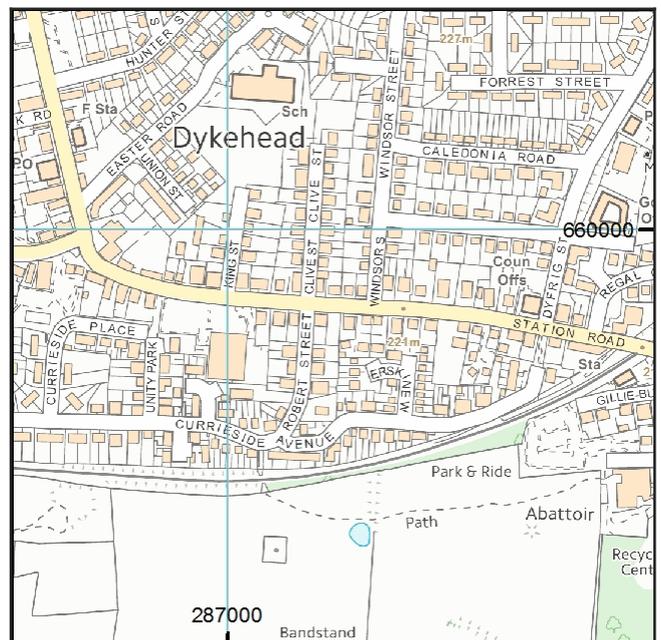
[www.groundstability.com](http://www.groundstability.com)

 @coalauthority

 /company/the-coal-authority

 /thecoalauthority

 /thecoalauthority



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
CALDERHEAD	LOWER DRUMGRAY	Coal	6A8Y	34	West	1.0	South-West	58	1893
CALDERHEAD	SHOTTS GAS	Coal	6A9G	46	Beneath Property	2.0	North-West	76	1893
NORTHFIELD	ARMADALE MAIN	Coal	6A9R	78	West	2.9	North-West	79	1948

## Probable unrecorded shallow workings

Yes.

## 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:

S3526	S2083	3777
S2087	S2576	S380/2/3
S3489	S5112	S2417

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
UPPER DRUMGRAY	Coal	Yes	16.1	South	278

**Geological faults, fissures and breaklines**

No faults, fissures or breaklines recorded.

**Opencast mines**

None recorded within 500 metres of the enquiry boundary.

**Coal Authority managed tips**

None recorded within 500 metres of the enquiry boundary.

## Section 2 – Investigative or remedial activity

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

### Site investigations

None recorded within 50 metres of the enquiry boundary.

### Remediated sites

None recorded within 50 metres of the enquiry boundary.

### Coal mining subsidence

The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 metres of the enquiry boundary, since 31 October 1994.

There is no current Stop Notice delaying the start of remedial works or repairs to the property.

The Coal Authority is not aware of any request having been made to carry out preventive works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991.

### Mine gas

None recorded within 500 metres of the enquiry boundary.

### Mine water treatment schemes

None recorded within 500 metres of the enquiry boundary.

## Section 3 – Licensing and future mining activity

### Future underground mining

None recorded.

### Coal mining licensing

None recorded within 200 metres of the enquiry boundary.

### Court orders

None recorded.

### Section 46 notices

No notices have been given, under section 46 of the Coal Mining Subsidence Act 1991, stating that the land is at risk of subsidence.

### Withdrawal of support notices

The property is not in an area where a notice to withdraw support has been given.

The property is not in an area where a notice has been given under section 41 of the Coal Industry Act 1994, cancelling the entitlement to withdraw support.

### Payments to owners of former copyhold land

The property is not in an area where a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

## Section 4 – Further information

The following potential risks have been identified and as part of your risk assessment should be investigated further.

### **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](mailto: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](mailto: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.

**Key**

- Approximate position of the enquiry boundary shown 
- Outcrop (Conjectured) 

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**How to contact us**

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