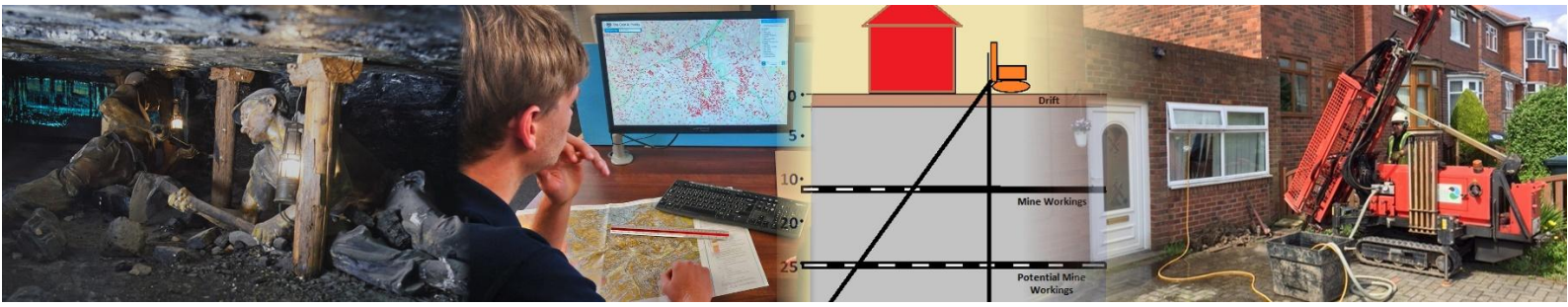
GEOLOGICAL
GEOTECHNICAL
GEOENVIRONMENTAL
CONSULTANCY
DRILLING & DATA ACQUISITION



GEOINVESTIGATE LIMITED

Coal Mining Risk Assessment (CMRA)

LOCATION	Oxford Road, Gomersal BD19 4JS
ISSUE DATE	7 April 2026
FOR	Angela Swift (Gomersal) Ltd
CLIENT REF.	
OUR REF.	G26117

Prepared by

Jonathan Jones BSc (Hons),
Assistant Geotechnical Engineer

Checked by

Ross Nicolson BSc (Hons) MSc (Eng) CEng MIMMM
Principal Geotechnical Engineer

1. CMRA INTRODUCTION & COAL MINING HAZARDS

1.1 Site Location and Description

The approximate centre of the site lies at E420897, N426377 with surface ground height around 135m AOD at the east end of the property rising to 140m at the west where the former Gomersal First School is located. The school is currently closed. The boundary shown in RED on the Coal Authority (CA) report provided in Appendix A corresponds with the planning application area.

The site is currently occupied by a largely undeveloped area of rough, overgrown land, bounded by hedgerow and trees located to the rear of the former Gomersal First School building. Previously the development area was school playing field. Site photos and LiDAR imagery are provided in Appendix B. The first phase of development involves the erection of an 84 bedroom care home with garden areas, access road and parking, as per the development plan in Appendix C. Further future care home development may extend west to the school and Oxford Road.

A large area reserved for landscaping is indicated on the development plan at the far east end of the site where a mine shaft is located, presumably to exclude this mine entry and its zone of influence from public access and the remainder of the development. LiDAR imagery in Appendix B indicates the ground surface in this area is somewhat uneven possibly arising from the presence of mine spoil associated with the mine shaft.

1.2 Historical Maps

Historical OS mapping from the mid-1850s shows the site to be undeveloped farmland with coal pits in the distant surrounding area but not identified within or adjacent to the property. Gomersal School was erected in 1912. A water well is shown towards the school and the west end of the development area. Water wells can, in some instances, be misidentified as mineshafts.

The historical map record provides no evidence of surface mining activity, clay, sand or gravel pitting or stone quarrying within the site though the CA report in Appendix A identifies a mine shaft at the far east end of the property and a further shaft offsite to the east of it.

1.3 Anticipated Geology

The location of the property is shown on the extracts of British Geological Survey (BGS) 1:50,000 and 1:10,000 geology maps (Sheet 77 Huddersfield & Sheet SE22NW) both presented in Appendix D. These maps together with the BGS's online GeoIndex platform show the development area underlain by little or no thickness of superficial cover, in turn underlain by Lower Coal Measures Formation bedrock lying at or near surface, comprising mudstones, siltstones, and sandstones with subordinate coal horizons.

The site is shown to be immediately underlain by Lepton Edge (sandstone) Rock (LER).

Outcrop of the Middleton Little (ML) Coal is located on lower ground to the east of the property. Its outcrop height is about 118m placing this coal at a depth of between 17m to 22m below the development area, assuming the seam exhibits sub-horizontal dip i.e. close to zero degrees. According to the BGS map the thickness of the ML Coal ranges from 0.3m to 0.9m in thickness.

The tentative elevation of the site relative to the vertical geology column is shown below the map.

Unfortunately, there are no BGS borehole logs available within the site or adjacent to it that might otherwise cast light on the coal mining geology beneath the development area. Several logs including SE22NW/266 some 200m to the south of the site record bedrock depth < 1.5m.

1.4 Mine Workings

The Coal Authority (CA) report in Appendix A identifies recorded underground mine workings in the Whinmoor Coal beneath the site at a depth of 139m dipping SE at 0.8° and last mined in 1953. In Geoinvestigate's opinion, these workings lie too deep to impact surface ground stability in the development area.

In addition, the CA report places the site in an area of **NO** probable shallow coal mine workings. The CA define Probable Unrecorded Shallow Workings as "Areas where the Coal Authority believes there to be unrecorded coal workings that exist at or close to the surface" (i.e., less than 30m).

Section 1.3 of Geoinvestigate's CMRA calculates the Middleton Little Coal seam, lying 17m to 22m below the development area, with a covering of > 15m thickness of Lepton Edge Rock sandstone above it.

While the CA report finds the Middleton Little Coal is unlikely to have been worked, AI gave the following unverified response to the question "**Was the Middleton Little Coal seam mine underground at Gomersal?"**

Answer. "*Yes, the Middleton Little coal seam (also known as the Green Lane seam) was mined underground in the Gomersal area. While major local pits like Gomersal Colliery primarily focused on the Beeston and Silkstone (Blocking) seams, historical records and modern risk assessments confirm the presence and extraction of the Middleton Little seam in the wider Gomersal and Cleckheaton district. In Gomersal, the Middleton Little seam typically ranges from 0.3 to 0.9 metres in thickness. It sits approximately 15–18 metres below the Third Brown Metal seam. Underground mining in this seam within the Kirklees/Gomersal district included both recorded and unrecorded shallow workings, often utilizing pillar and stall methods".*

In Geoinvestigate's opinion, in the unlikely event that the Middleton Little Coal has been mined beneath the property there is more than adequate thickness of rock cover above it to safeguard the proposed development against upward mine void migration resulting in surface crown hole subsidence and collapse. Therefore, Geoinvestigate considers the site to be stable and safe regarding coal mining hazard, though the developer may wish to check this favourable outcome by limited drilling investigation.

1.5 Mine Shafts

The Coal Authority report identifies two nearby recorded mine shafts (420426-016 and 421426-015). Neither shaft is treated, though they may have been haphazardly infilled. Shaft 420426-016 lies within the site boundary some 25m to 35m from the care home, but will be excluded from the development area and public access by a fenced locked gated reserve with warning signage. The mine shaft reserve is shown on the development plan in Appendix C.

The calculated zones of influence (ZOI's) of the 2 shafts are shown in Appendix E, based on departure/positional uncertainty of 10m, assumed diameter of 2.5m and assumed superficial/bedrock depth of 1.5m resulting in a ZOI radius of 12.75m. As the ZOI of shaft 420426-016 falls does not extend beyond the reserve this mine entry does not pose a ground stability hazard to the development nor the public.

In Geoinvestigate opinion, the ZOI of shaft 420426-016 could be much reduced if the exact position of the shaft was found in which case the ZOI would shrink to radius 2.75m, however, this would require intrusive investigation to search for the shaft and to establish bedrock depth adjacent to it.

1.6 Geological Faults Fissures & Breaklines

The geological mapping and the CA report do not identify any faults, fissures, or breaklines within the site or within influencing distance of it.

1.7 Mine Gas

According to the CA report no mine gas incidents or remediation have been recorded within 500m of the enquiry boundary and typically on the UK coalfields mine gas risk to surface development is low. Circumstances where gas

risk increases include proximity (typically < 50m) to mine entries (adits and shafts), proximity to recorded mine gas incidents, where development is located above or adjacent to very shallow and shallow (< 30m) unflooded mine workings or roadway tunnels. In addition, increased mine gas risk, coal seams with a history of spontaneous combustion, natural or artificial pathways providing routes for gas migration e.g. permeable soil cover, pathways created by geological faults, mining induced breaklines/fractures, collapsed mine roof strata, mining subsidence, mining sinkholes/crown holes and unsealed boreholes.

This CMRA indicates that conditions are likely to exist within the site that could increase mine gas risk, namely the nearby mine shaft within 35m of the care home. However, the risk may be less considering no mine gas incidents have been reported at this locality and typically on the UKs coalfields surface mine gas is rarely a problem. Notwithstanding given the proximity of a mine shaft it is likely that longer gas monitoring in specially installed gas wells is required to further assess the mine gas risk to the care home.

2. RISK ASSESSMENT OF SITE-SPECIFIC COAL MINING ISSUES

The risk assessment methodology adopted in this section is based on CA publication RISK BASED APPROACH TO DEVELOPMENT MANAGEMENT - GUIDANCE FOR DEVELOPERS Version 3, 2014 and Version 4 - 2017. The template contained therein is broadly adopted in the table below with amendments made by Geoinvestigate Limited. The factual information it is based on, is derived mostly from the CA Consultants Coal Mining Report and additional desk study information including available historical maps, geological maps & memoirs, BGS boreholes, online articles etc. It is not an exhaustive desk study review. Therefore, if new information is released or found in the future, this CMRA may require updating.

The table also provides advice on next step mitigation and the likely planning decision.

RISK ASSESSMENT & MITIGATION		
Coal Mining Issues/Hazards	**Risk**	**Next Step Mitigation/Remarks**
Past underground coal mining	**YES**	At 139m. Too deep to impact surface stability
Probable unrecorded shallow workings	**N** **L**	Adequate rock cover against surface instability
Outcrop	**NONE**	
Spine roadways at shallow depth	**NONE**	
Mine entries	**YES (1)**	Mine shaft ZOI isolated within fenced reserve
Geological faults, fissures and breaklines	**NONE**	
Mine gas	**M**	Longer term monitoring in special gas wells
Opencast mines within 500m	**NONE**	
Coal mining subsidence claims within 50m	**NONE**	
Site investigations within 50m	**NONE**	
Likely Planning Decision	**Yes/No**	**Reason**
Is planning permission likely to be given with respect to coal mining legacy issues **CONDITIONAL** upon carrying out further intrusive investigation leading to possible building design mitigation at a future date but before construction begins?	**Yes**	Yes. Because of the implementation of a fenced reservation around mine shaft 420426-016 and the exclusion of its ZOI from the development area and public access the scheme is NOT impacted by known mine entry proximity hazard. Regarding the remaining possible mine gas risk to the proposed development identified in this CMRA as this **can be mitigated by further intrusive site investigation and if required thereafter by routine engineering solutions it should not preclude the granting of permission**

Assessed risk level – High, Medium Low. NONE/N

3. CMRA OUTCOME & RECOMMENDATIONS

This CMRA has NOT identified a shallow underground mining hazard to the development.

Regarding the presence within the site of mine shaft 420426-016 action has already been taken to remove this ground stability hazard from the development area by the implementation of a fenced reserve excluding public access to this mine entry and its ZOI. Consequently, it does not pose a hazard to this development. If required, the ZOI of this shaft could be reduced if the shaft is found though this would require further intrusive site investigation.

However, this CMRA has identified possible increased risk to the proposed development from mine gas associated with nearby mine shaft 420426-016. As a consequence, longer term gas monitoring in specially installed gas wells is required at the site to further assess this risk. However, as the gas risk can be mitigated by routine engineering solutions **planning permission should not in our opinion be withheld with respect to coal mining legacy issues** providing further assessment is carried out at a future date and the permission is **CONDITIONED** accordingly.

In Geoinvestigate's opinion shallow gas monitoring wells should be installed within the site adjacent to mine shaft 420426-016 to check for ground gas.

While this CMRA finds that underground mining is unlikely to pose a risk to surface ground stability, the developer **may wish** check this favourable outcome with a limited drilling investigation of 3 rotary open boreholes without core sample recovery to depths up to 30m (but not necessarily reaching 30m) to establish depth to the coal seam and any mine workings therein, beneath the site.

A Coal Authority Permit needs to be obtained (ahead of) further intrusive exploratory drilling. As per the table below Water Drill Flush to be used when drilling. The permit application must state **WATER ONLY DRILL FLUSH** for the safety of the public and drill crew**. Failure to do so may result in prosecution by the HSE and a hefty fine.**

Risks for Different Drilling Scenarios					
Air flush	Mist flush	Foam flush	Water flush	Mud flush	Additional controls
HIGH	HIGH / MED'M	HIGH / MED'M	LOW	LOW	• Monitoring at rig and other open holes. • Seal boreholes

Boreholes must be sealed on completion.

Gas monitoring MUST be carried out during drilling and may provide further indication of mine gas risk.

However, if the drilling investigation encounters shallow mine working longer term gas monitoring in specially installed gas wells may be required to further assess the ground gas risk.

Alternatively, longer term gas monitoring may be avoidable if the installation of precautionary gas protection measures are included in the design of the new buildings in line with "Characteristic Situation 2" (CS2) based upon the CIRIA 665 (revised) report – "Assessing the risks posed by hazardous ground gases to buildings". However, agreement will be required from the Local Planning Authority for this alternative proposal.

Appendices:

A. CA Consultants Coal Mining Report issued 24th March 2026 ref. 51003560467001
B. Site Photos & LiDAR Images
C. Proposed Development
D. Geology Map Extracts
E. Mine Shaft Overlay

APPENDIX A
COAL MINING REPORT

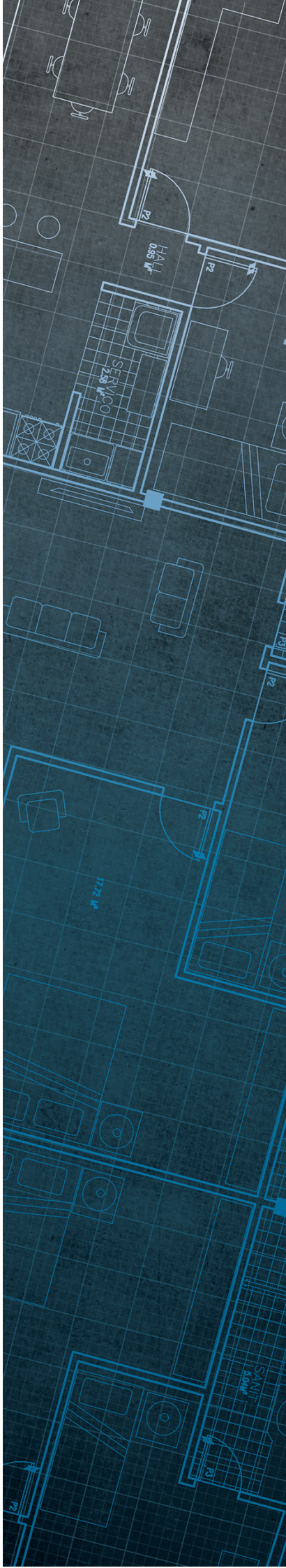
The Coal Authority

Consultants

Coal Mining Report

Oxford Road
Gomersal
Cleckheaton
Kirklees
BD19 4JS

Date of enquiry:	**24 March 2026**
Date enquiry received:	**24 March 2026**
Issue date:	**24 March 2026**
Our reference:	**51003560467001**
Your reference:	**G26117**



Consultants
Coal Mining Report

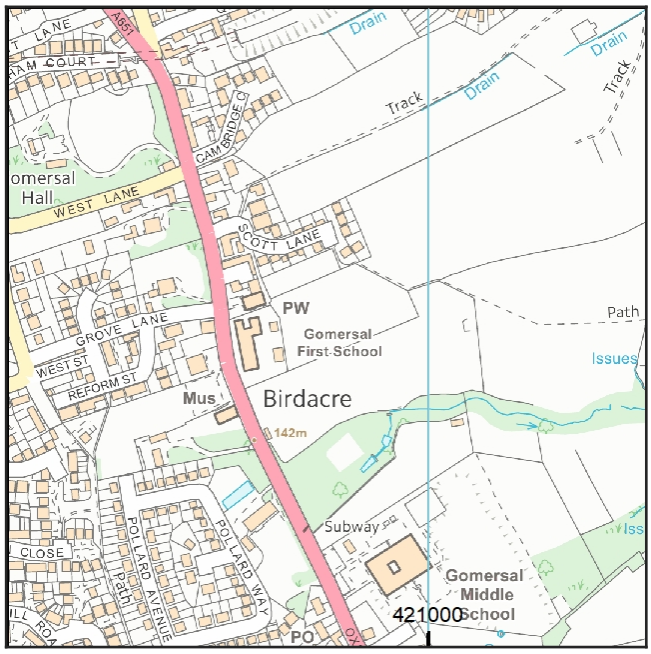
This report is based on and limited to the records held by the Coal Authority at the time the report was produced.

Client name

GEOINVESTIGATE

Enquiry address

Oxford Road
Gomersal
Cleckheaton
Kirklees
BD19 4JS



Approximate position of property

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Mansfield
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NG18 4RG

reports@miningremediation.gov.uk

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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	WHINMOOR	Coal	6Z1S	139	Beneath Property	0.8	South-East	71	1953

Probable unrecorded shallow workings

None.

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	420426-016	420957 426391	Treatment details unknown.*	Coal	
Shaft	421426-015	421015 426391	Treatment details unknown.*	Coal	

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

Abandoned mine plan catalogue numbers

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

3921	NE793	M49
PO0	NE794	4115
M31		

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

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Outcrops
No outcrops recorded.

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.

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Section 2 – Investigative or remedial activity

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

Site investigations
None recorded within 50 metres of the enquiry boundary.

Remediated sites
None recorded within 50 metres of the enquiry boundary.

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

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

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

Mine gas
None recorded within 500 metres of the enquiry boundary.

Mine water treatment schemes
None recorded within 500 metres of the enquiry boundary.

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Section 3 – Licensing and future mining activity

Future underground mining
None recorded.

Coal mining licensing
None recorded within 200 metres of the enquiry boundary.

Court orders
None recorded.

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

Withdrawal of support notices
The property is in an area where a notice to withdraw support was given in 1947.

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

Payments to owners of former copyhold land
The property is not in an area where a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

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Section 4 – Further information

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

Future development

If development proposals are being considered, technical advice relating to both the investigation of coal and former coal mines and their treatment should be obtained before beginning work on site. All proposals should apply specialist engineering practice required for former mining areas. No development should be undertaken that intersects, disturbs or interferes with any coal or coal mines without first obtaining the permission of the Coal Authority.

MINE GAS: Please note, if there are no recorded instances of mine gas within 500m of the enquiry boundary, this does not mean that mine gas is not present within the vicinity. The Coal Authority Mine Gas data is limited to only those sites where a Mine Gas incident has been recorded. Developers should be aware that the investigation of coal seams, mine workings or mine entries may have the potential to generate and/or displace underground gases. Associated risks both to the development site and any neighbouring land or properties should be fully considered when undertaking any ground works. The need for effective measures to prevent gases migrating onto any land or into any properties, either during investigation or remediation work, or after development must also be assessed and properly addressed. In these instances, the Coal Authority recommends that a more detailed Gas Risk Assessment is undertaken by a competent assessor.

Development advice

The site is within an area of historical coal mining activity. Should you require advice and/or support on understanding the mining legacy, its risks to your development or what next steps you need to take, please contact us.

For further information on specific site or ground investigations in relation to any issues raised in Section 4, please email us at reports@miningremediation.gov.uk.

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Section 5 – Data definitions

The datasets used in this report have limitations and assumptions within their results. For more guidance on the data and the results specific to the enquiry boundary, please **email us at reports@miningremediation.gov.uk.**

Past underground coal mining

Details of all recorded underground mining relative to the enquiry boundary. Only past underground workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination, will be included.

Probable unrecorded shallow workings

Areas where the Coal Authority believes there to be unrecorded coal workings that exist at or close to the surface (less than 30 metres deep).

Spine roadways at shallow depth

Connecting roadways either, working to working, or, surface to working, both in-seam and cross measures that exist at or close to the surface (less than 30 metres deep), either within or within 10 metres of the enquiry boundary.

Mine entries

Details of any shaft or adit either within, or within 100 metres of the enquiry boundary including approximate location, brief treatment details where known, the mineral worked from the mine entry and conveyance details where the mine entry has previously been sold by the Authority or its predecessors British Coal or the National Coal Board.

Abandoned mine plan catalogue numbers

Plan numbers extracted from the abandoned mines catalogue containing details of coal and other mineral abandonment plans deposited via the Mines Inspectorate in accordance with the Coal Mines Regulation Act and Metalliferous Mines Regulation Act 1872. A maximum of 9 plan extents that intersect with the enquiry boundary will be included. This does not infer that the workings and/or mine entries shown on the abandonment plan will be relevant to the site/property boundary.

Outcrops

Details of seam outcrops will be included where the enquiry boundary intersects with a conjectured or actual seam outcrop location (derived by either the British Geological Survey or the Coal Authority) or intersects with a defined 50 metres buffer on the coal (dip) side of the outcrop. An indication of whether the Coal Authority believes the seam to be of sufficient thickness and/or quality to have been worked will also be included.

Geological faults, fissures and breaklines

Geological disturbances or fractures in the bedrock. Surface fault lines (British Geological Survey derived data) and fissures and breaklines (Coal Authority derived data) intersecting with the enquiry boundary will be included. In some circumstances faults, fissures or breaklines have been known to contribute to surface subsidence damage as a consequence of underground coal mining.

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Opencast mines
Opencast coal sites from which coal has been removed in the past by opencast (surface) methods and where the enquiry boundary is within 500 metres of either the licence area, site boundary, excavation area (high wall) or coaling area.

Coal Authority managed tips
Locations of disused colliery tip sites owned and managed by the Coal Authority, located within 500 metres of the enquiry boundary.

Site investigations
Details of site investigations within 50 metres of the enquiry boundary where the Coal Authority has received information relating to coal mining risk investigation and/or remediation by third parties.

Remediated sites
Sites where the Coal Authority has undertaken remedial works either within or within 50 metres of the enquiry boundary following report of a hazard relating to coal mining under the Coal Authority's Emergency Surface Hazard Call Out procedures.

Coal mining subsidence
Details of alleged coal mining subsidence claims made since 31 October 1994 either within or within 50 metres of the enquiry boundary. Where the claim relates to the enquiry boundary confirmation of whether the claim was accepted, rejected or whether liability is still being determined will be given. Where the claim has been discharged, whether this was by repair, payment of compensation or a combination of both, the value of the claim, where known, will also be given.

Details of any current 'Stop Notice' deferring remedial works or repairs affecting the property/site, and if so the date of the notice.

Details of any request made to execute preventative works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991. If yes, whether any person withheld consent or failed to comply with any request to execute preventative works.

Mine gas
Reports of alleged mine gas emissions received by the Coal Authority, either within or within 500 metres of the enquiry boundary that subsequently required investigation and action by the Coal Authority to mitigate the effects of the mine gas emission. Please note, if there are no recorded instances of mine gas reported, this does not mean that mine gas is not present within the vicinity. The Coal Authority Mine Gas data is limited to only those sites where a Mine Gas incident has been recorded.

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Mine water treatment schemes
Locations where the Coal Authority has constructed or operates assets that remove pollutants from mine water prior to the treated mine water being discharged into the receiving water body.

These schemes are part of the UK's strategy to meet the requirements of the Water Framework Directive. Schemes fall into 2 basic categories: Remedial – mitigating the impact of existing pollution or Preventative – preventing a future pollution incident.

Mine water treatment schemes generally consist of one or more primary settlement lagoons and one or more reed beds for secondary treatment. A small number are more specialised process treatment plants.

Future underground mining
Details of all planned underground mining relative to the enquiry boundary. Only those future workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination will be included.

Coal mining licensing
Details of all licenses issued by the Coal Authority either within or within 200 metres of the enquiry boundary in relation to the under taking of surface coal mining, underground coal mining or underground coal gasification.

Court orders
Orders in respect of the working of coal under the Mines (Working Facilities and Support) Acts of 1923 and 1966 or any statutory modification or amendment thereof.

Section 46 notices
Notice of proposals relating to underground coal mining operations that have been given under section 46 of the Coal Mining Subsidence Act 1991.

Withdrawal of support notices
Published notices of entitlement to withdraw support and the date of the notice. Details of any revocation notice withdrawing the entitlement to withdraw support given under Section 41 of the Coal Industry Act 1994.

Payment to owners of former copyhold land
Relevant notices which may affect the property and any subsequent notice of retained interests in coal and coal mines, acceptance or rejection notices and whether any compensation has been paid to a claimant.

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The Coal Authority

Summary of findings

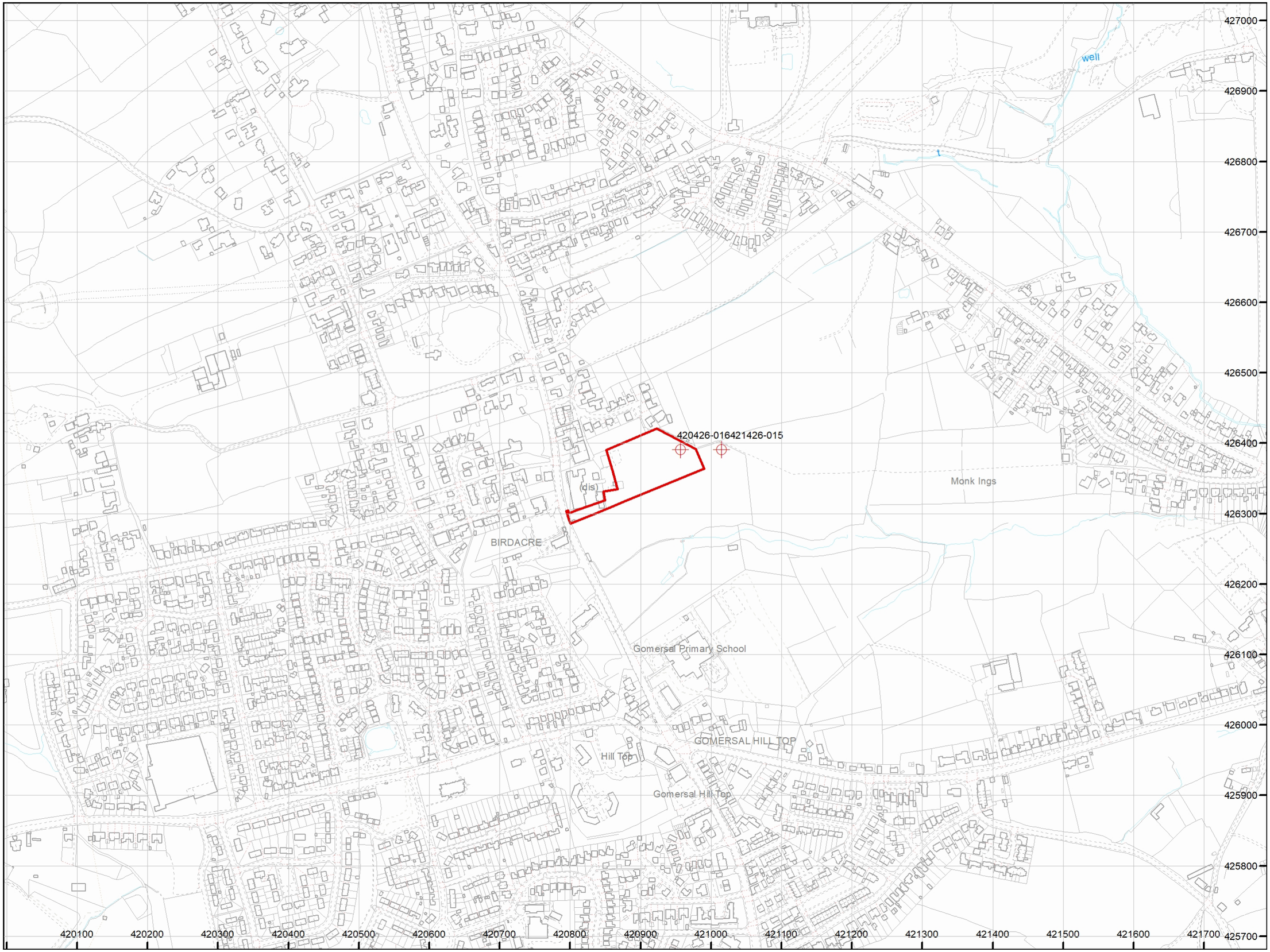
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The map highlights any specific surface or subsurface features within or near to the boundary of the site.

Key

Approximate position of the enquiry boundary shown

Disused mine shaft



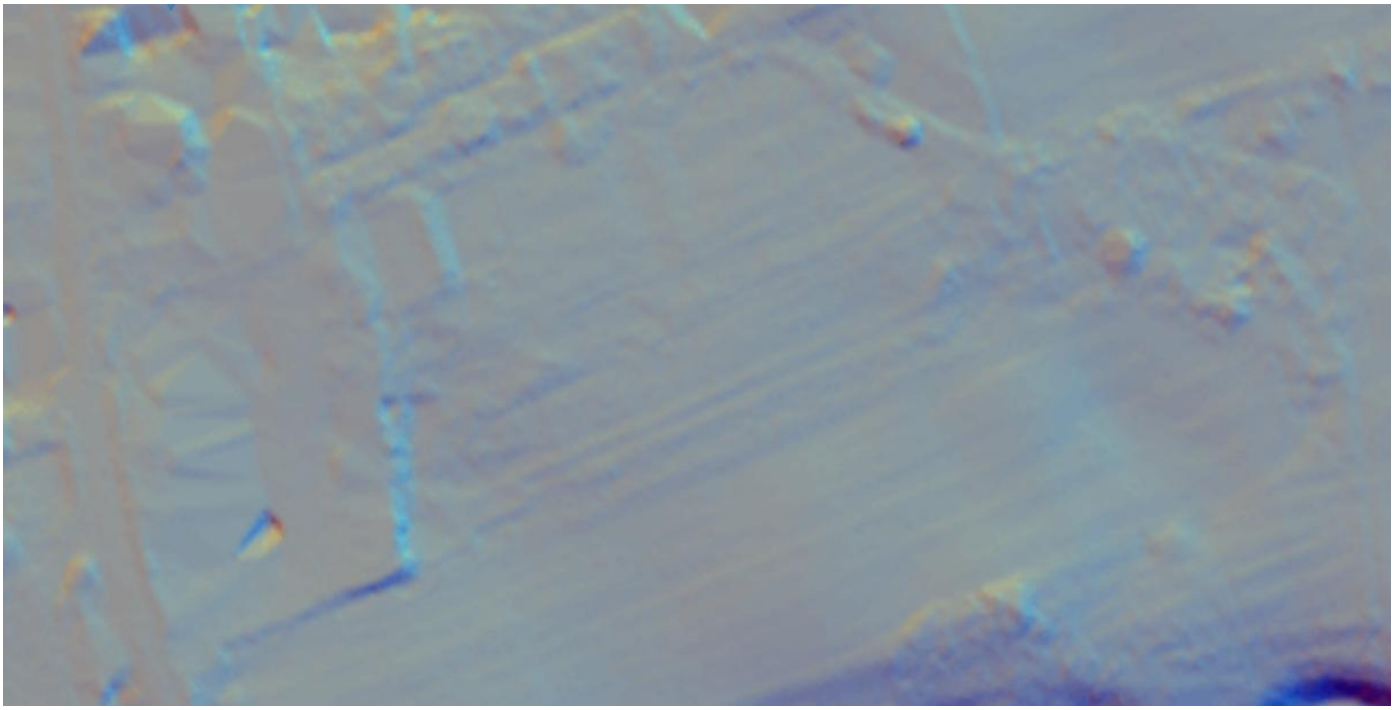
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+44 (0)1623 637 000 (International)
reports@miningremediation.gov.uk

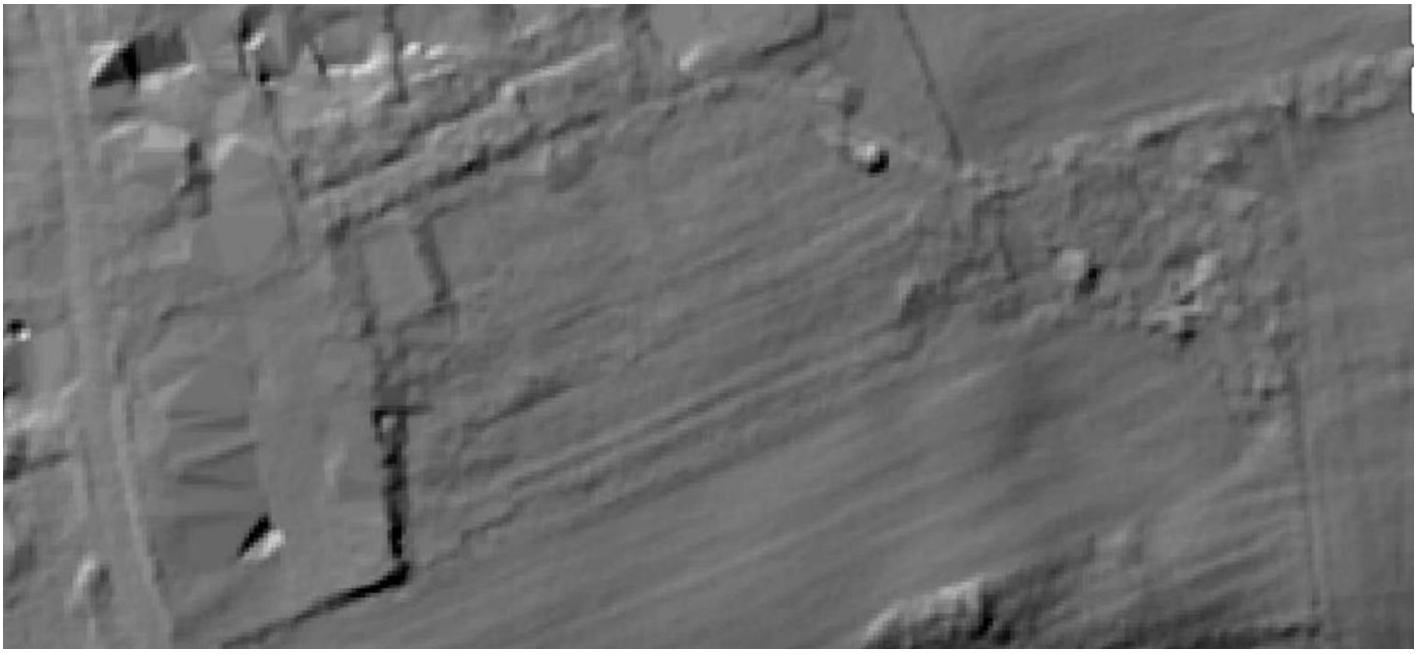
APPENDIX B
SITE PHOTOS & LiDAR IMAGES






BD19 4JS

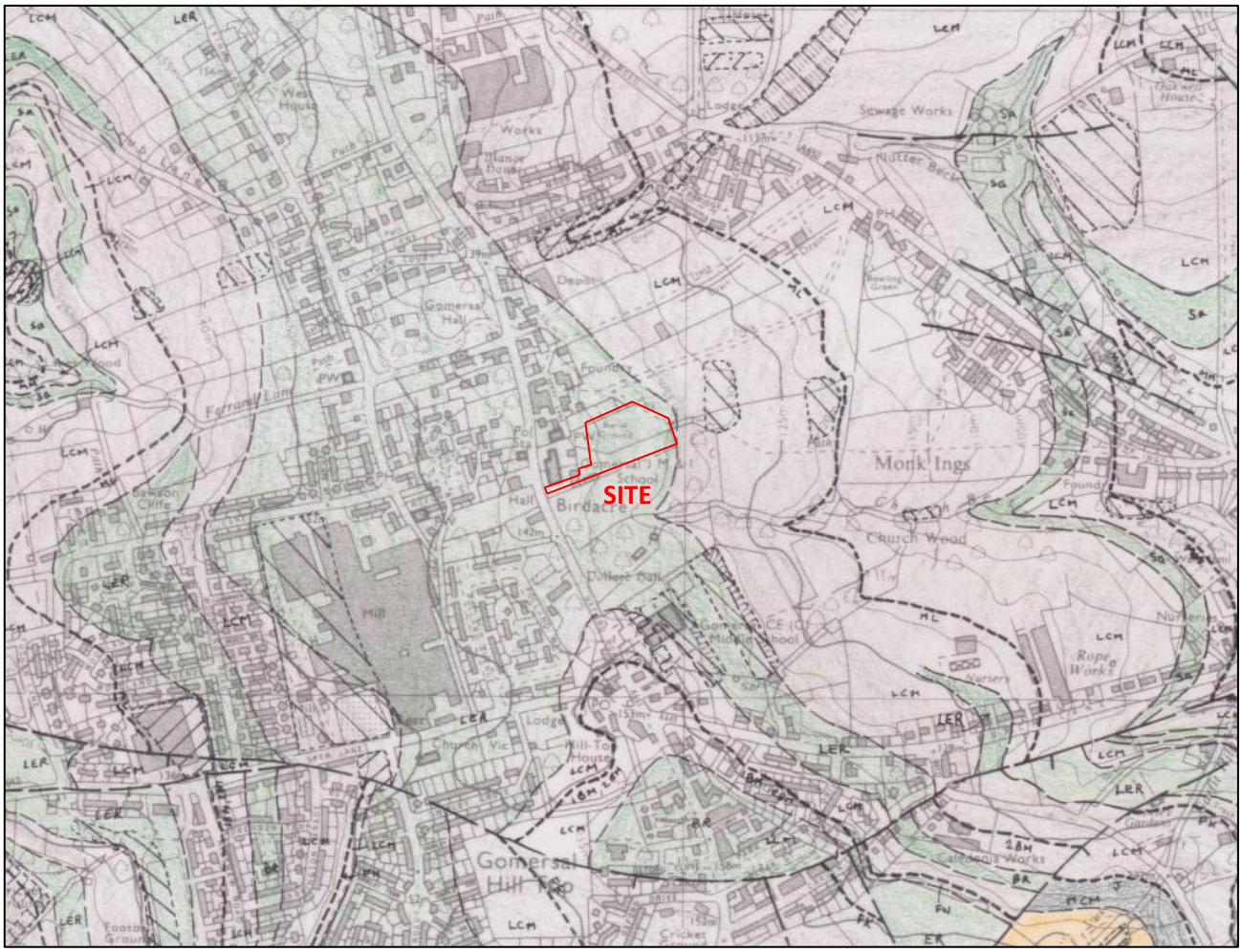




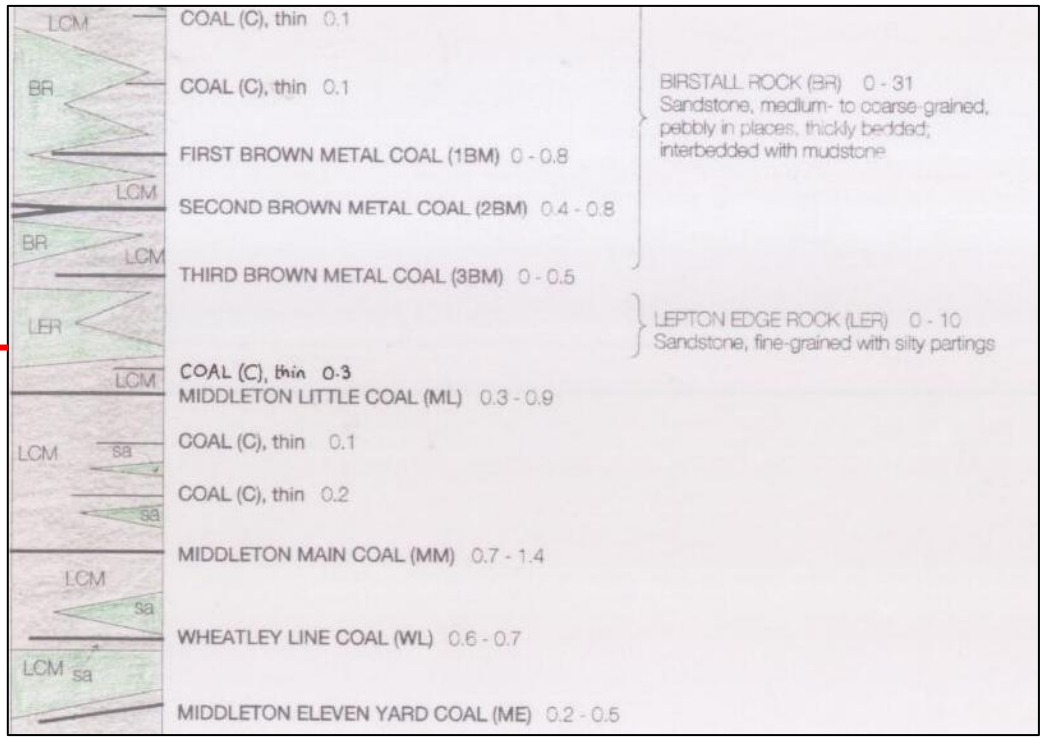
APPENDIX C
PROPOSED DEVELOPMENT



APPENDIX D
GEOLOGY MAP EXTRACTS

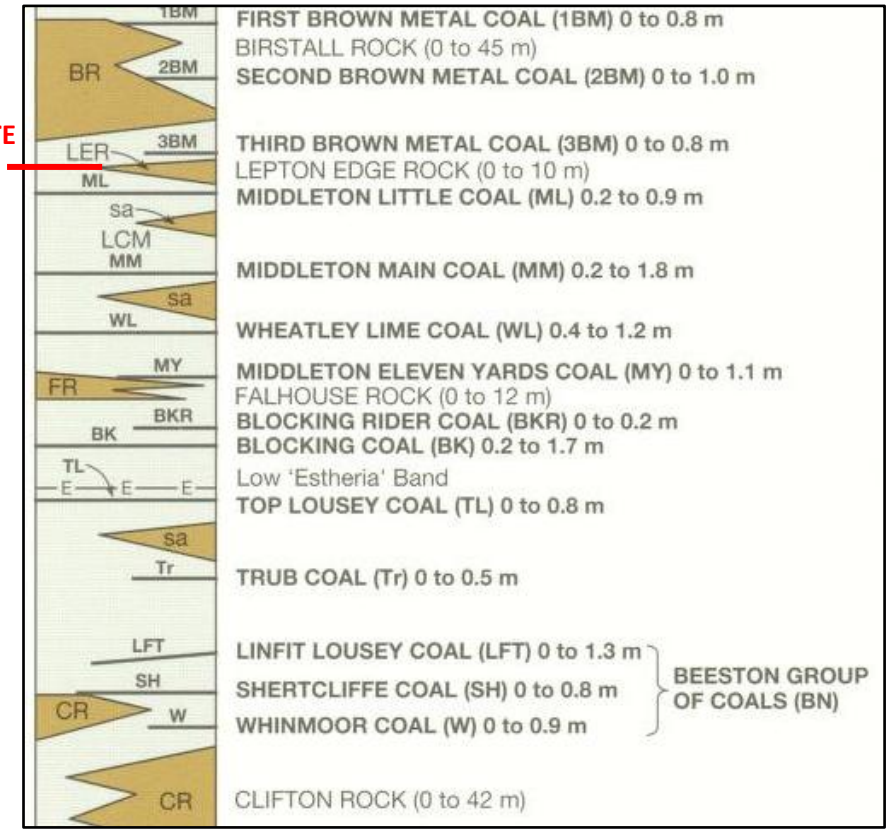


TENTATIVE SITE ELEVATION





TENTATIVE SITE ELEVATION



APPENDIX E
MINE SHAFT OVERLAYS



