



Bishop Auckland Bus Station and Surface Car Park

Coal Mining Risk Assessment

BL000034-JAC-XX-XX-AS-G-00001 | P02

08/12/22

Durham County Council



Bishop Auckland Bus Station and Surface Car Park

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1. Introduction

1.1 Background and Appointment

The Bishop Auckland High Street Fund is a vision for Bishop Auckland to become a world-class heritage destination. As part of the Fund the existing open-air bus station and surface car park will be replaced with an enclosed bus terminal and surface car park.

The site is defined as the area within the red line boundary, see Appendix A. The site is located within a Development High Risk Area as designated by The Coal Authority; therefore, a Coal Mining Risk Assessment (CMRA) must be undertaken prior to development. As a result, Jacobs have undertaken this CMRA on behalf of their client, Durham County Council. A Consultants Mining Report (Appendix B) was purchased from The Coal Authority to aid in this risk assessment.

1.2 Site Description

The site is located within Bishop Auckland, a small town in Country Durham, which is in the north-east of England approximately 14km south-west of Durham.

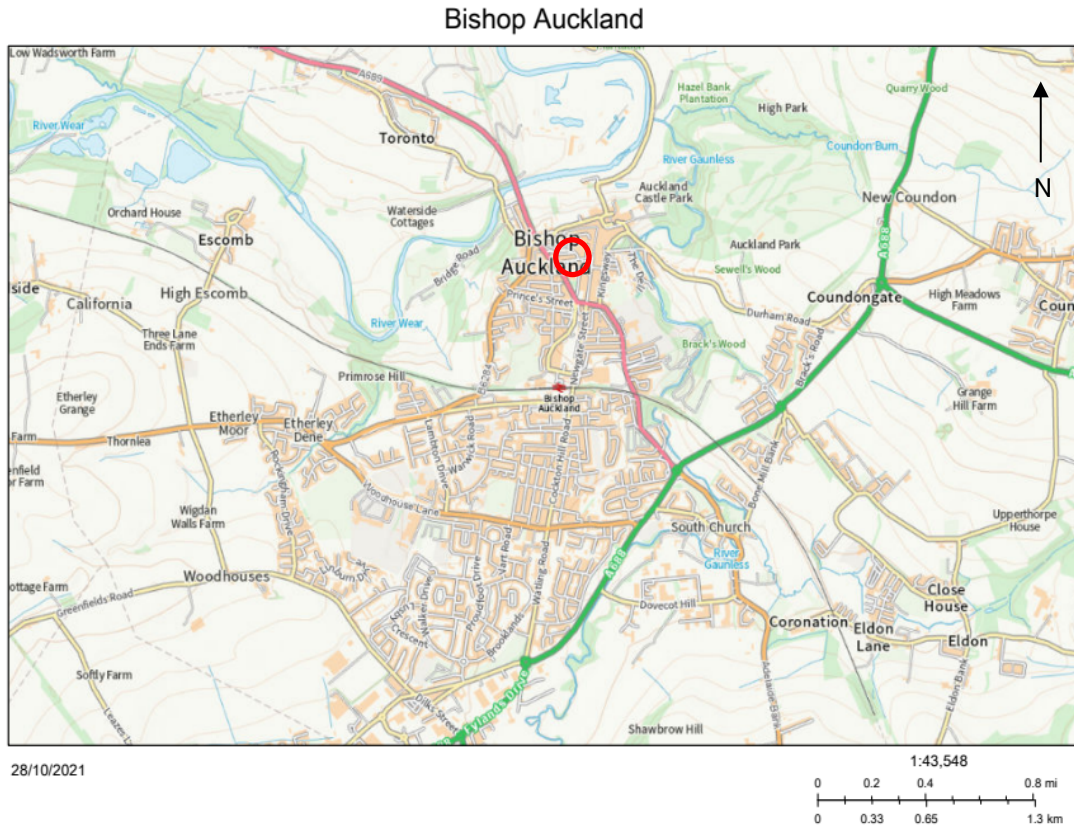
The site comprises a bus station with bus shelters and car park with associated small buildings including a refreshments kiosk, office and toilet facilities. Most of the site is laid to concrete hardstanding, brick pavers or asphalt-concrete surface.

Figure 1 shows the site location in relation to the UK and Figure 2 shows the site location within Bishop Auckland.

Figure 1 - Site location plan (UK)



Figure 2 - Site location plan (Bishop Auckland)

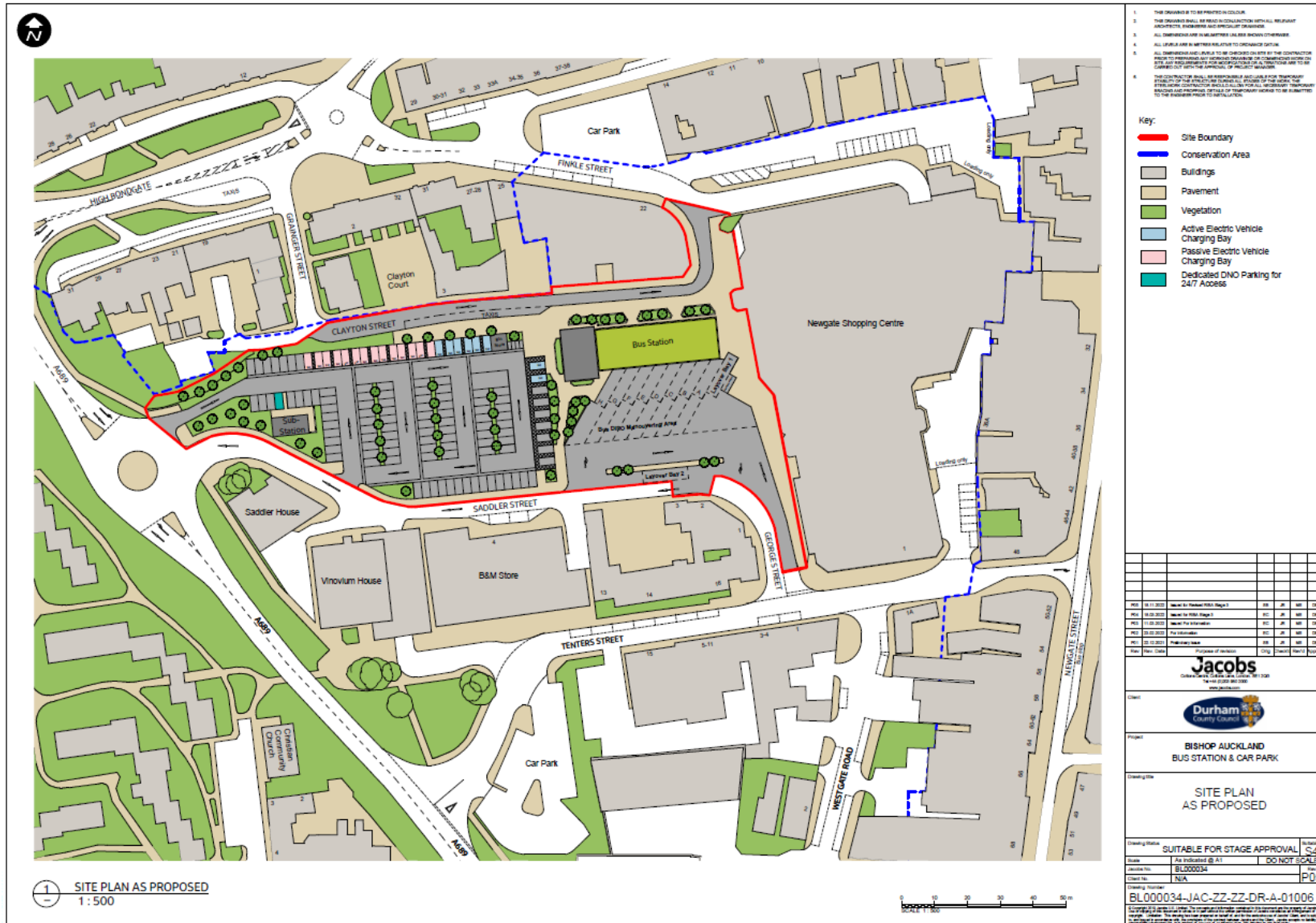


1.3 Proposed Works

The proposed development (Figure 3) comprises a two-storey bus terminal building (approximately 48m by 17m). A substation is also proposed in the western part of the site.

The anticipated foundation type for the bus station and substation is a shallow foundation. No deep foundation (piling) is proposed

Figure 3 - General arrangement plan



2. Limitations

- This risk assessment is applicable only for the land within the site boundary. Any additional proposed development outside of this area will require additional risk assessment pertaining to coal mining.
- The information sources listed in Section 3, which have been used as the basis of this risk assessment, are assumed to be accurate and correct.

3. Source of Information

The following information sources have been reviewed during the preparation of this risk assessment.

1. GeoIndex Onshore. [Online] 2021. <http://mapapps2.bgs.ac.uk/geoindex/home.html>.
2. BGS. Sheet NZ 22 NW (Scale 1:10,560).
3. BGS Lexicon. [Online] 2021. <https://webapps.bgs.ac.uk/lexicon/>.
4. Wolsingham Sheet 26 (Scale 1:50,000). [Online] BGS. <https://largeimages.bgs.ac.uk/iip/mapsportal.html?id=1001500>.
5. *Groundsure Report*. 2021.
6. Interactive Map Viewer / Coal Authority. [Online] BGS. <http://mapapps2.bgs.ac.uk/coalauthority/home.html>.
7. *Coal Authority Report-CON29M*. 2021.

Figure 1, Figure 2, Figure 8, Figure 10 and Figure 13 presented in this report were created using ArcGIS® software by Esri. ArcGIS® and ArcMap™ are the intellectual property of Esri and are used herein under license. Copyright © Esri. All rights reserved. For more information about Esri® software, please visit www.esri.com.

4. Review of sources

4.1 Geology

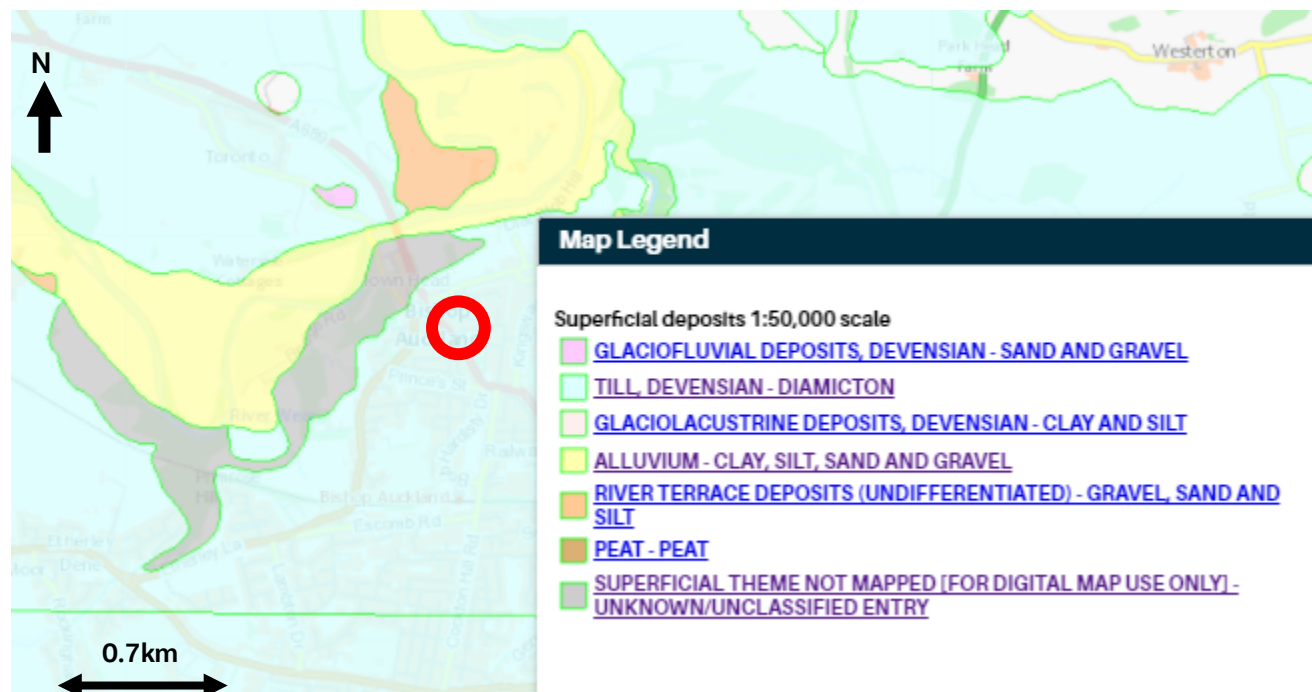
4.1.1 Artificial Ground/Made Ground

Artificial Ground is not marked by the British Geological Survey (BGS) GeoIndex (1) as being present on site. However, given current and historical development of the site and surrounding area, made ground is expected to be present. Historical borehole records from the ground investigation to support the construction of Bishop Auckland Bus Station in 1982 indicate made ground comprising ash and brick rubble as being present on site to a depth of 2.1mbgl. It is unknown if this was removed during construction of the current bus station.

4.1.2 Superficial deposits

An extract of the BGS GeoIndex (1), see (Figure 4), shows the site to be directly underlain by superficial deposits comprising Till, Devensian – diamicton. Till was formed during the Quaternary Period during periods of glaciation. It comprises a heterogenous mix of clay, sand, gravel, and boulders varying widely in size and shape (diamicton).

Figure 4 - Superficial geology



4.1.3 Bedrock

The superficial deposits are underlain by the Pennine Middle Coal Measures Formation which is part of the Westphalian Coal Measures (Figure 5) (2). This formation is described by the BGS (3) as approximately 200m thick containing interbedded grey mudstone, siltstone, pale grey sandstone and commonly coal seams, with a bed of mudstone containing marine fossils at the base, and several such marine fossil-bearing mudstones in the upper half of the unit which is a combination of Mudstone, Siltstone and Sandstone. The BGS (2) state that sedimentary bedrock formed approximately 310 to 318 million years in an environment previously dominated by swamps, estuaries, and deltas. Due to the depositional environment the formation has many coal seams that run throughout. The BGS (3) states that the Middle Coal Measures contain most of the workable coals, particularly in the lower section up to the High Main Coal. This is the thickest and most widely worked seam over much of the Northumberland and Durham Coalfield. It contains excellent quality coal and is locally over 2.5m in thickness. BGS sheet NZ 22 NW (2) and Figure 6 show the site to directly overlie the High Main coal seam. BGS sheet NZ 22 NW (2) and Figure 7 show the High Main coal seam is separated into two seams, both of which could be terminated by sandstone deposits within the coal measures. BGS sheet NZ 22 NW (2) and Figure 7 also state the thickness of the coal seams. The Top High Main is expected to be 15 to 45cm thick, and the Lower High Main is expected to be 53 to 71cm thick, much thinner than potentially more than 2.5m reported above. The Five-Quarter coal seam is expected to underlie the southern part of the site. Figure 7 shows this coal seam to be 61 to 173cm thick and thus thicker than the over lying High Main coal seam. Therefore, potentially, the Five-Quarter coal seam is more likely to have been worked in the area.

Figure 5 - Solid geology (extract of BGS Sheet 26, 1:50,000 scale)

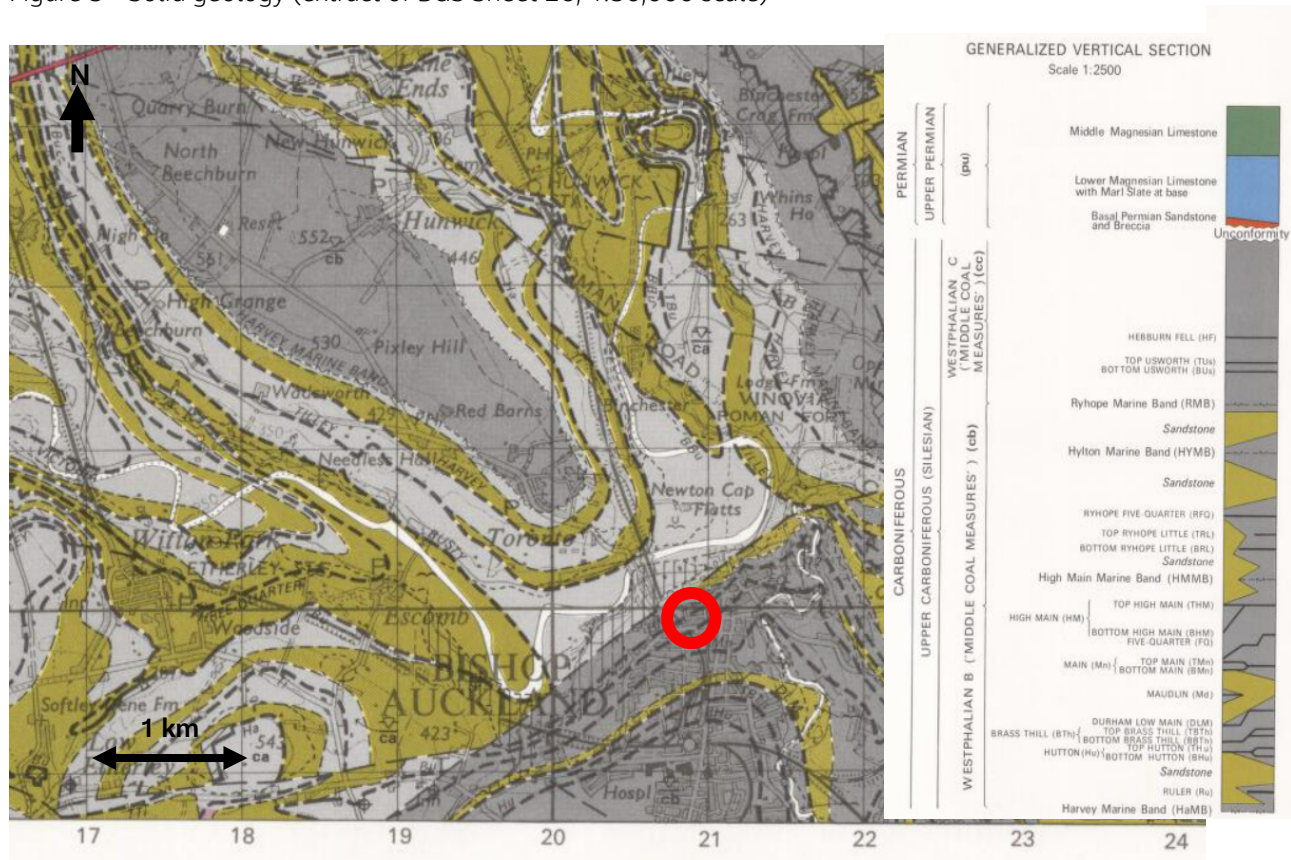


Figure 6 - Solid geology (extract of Sheet NZ 22 NW, 1:10,560 scale)

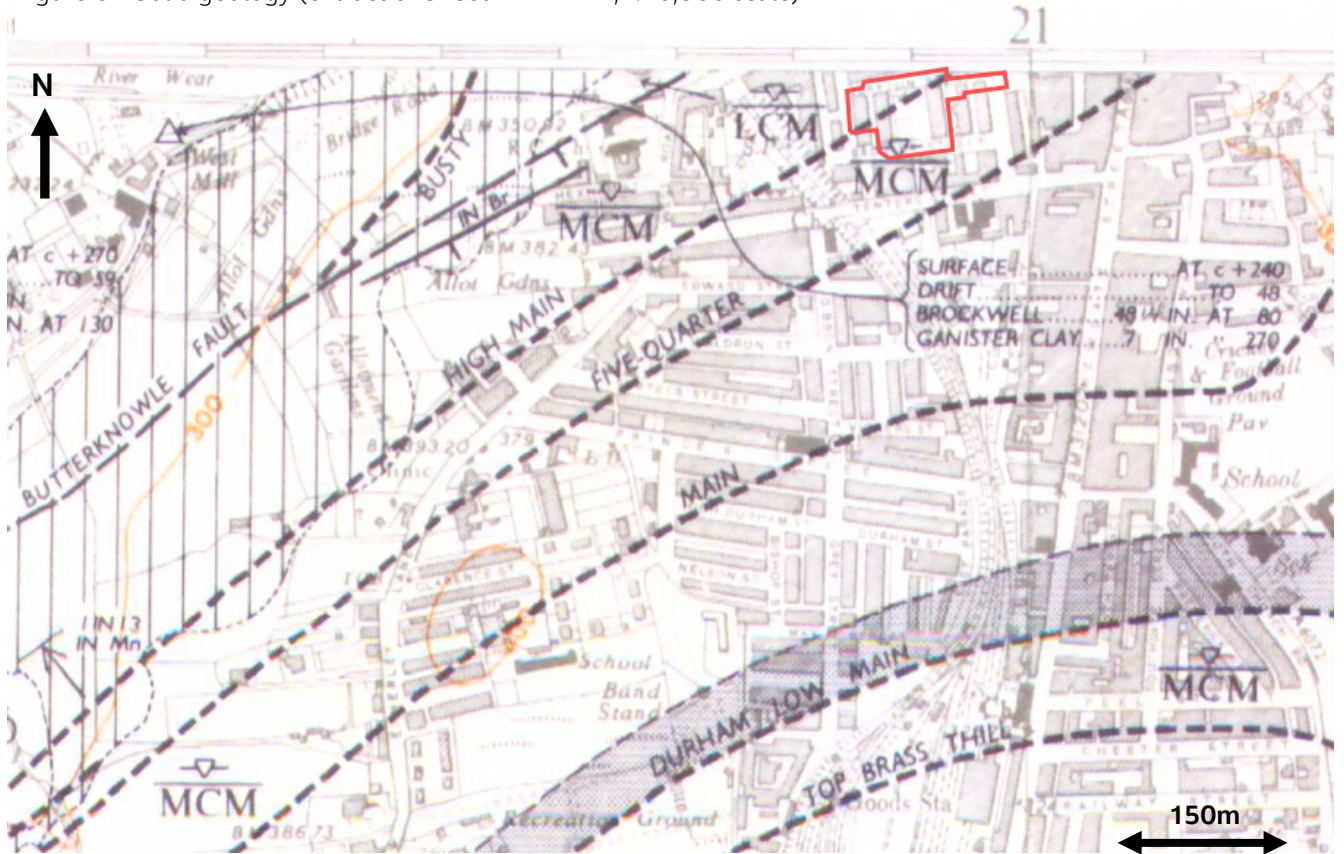
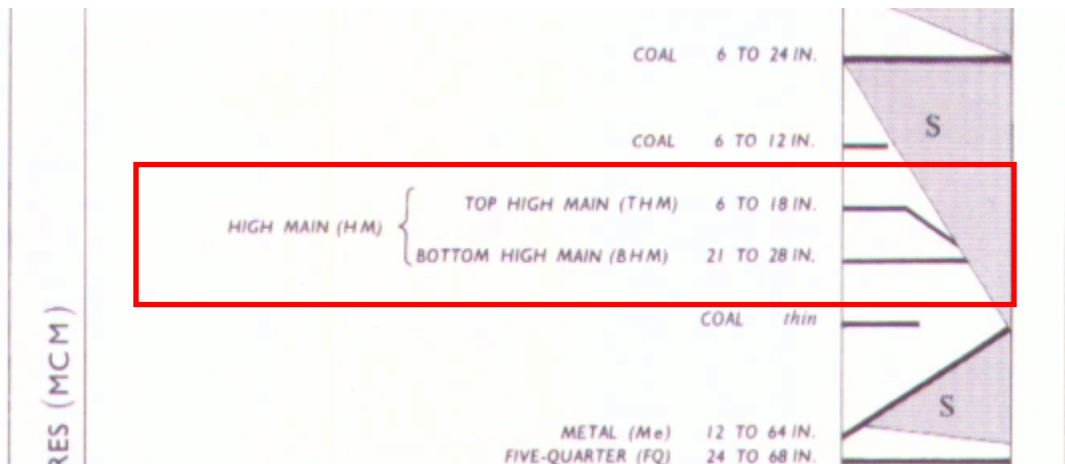


Figure 7 - Coal seam thickness (extract of Sheet NZ 22 NW)



4.2 Structural Geology

4.2.1 Faulting

The site is located approximately 70m south on the downthrown side of the Butterknowle Fault. The fault is a major normal fault which trends north-east south-west and dips to the south-east, see Figure 8. The southern, downthrown side of the fault, forms the northern limb of an anticline where bedrock (coal measures) dips to the north-west, see Figure 9 (4).

Figure 8 - Structural geology

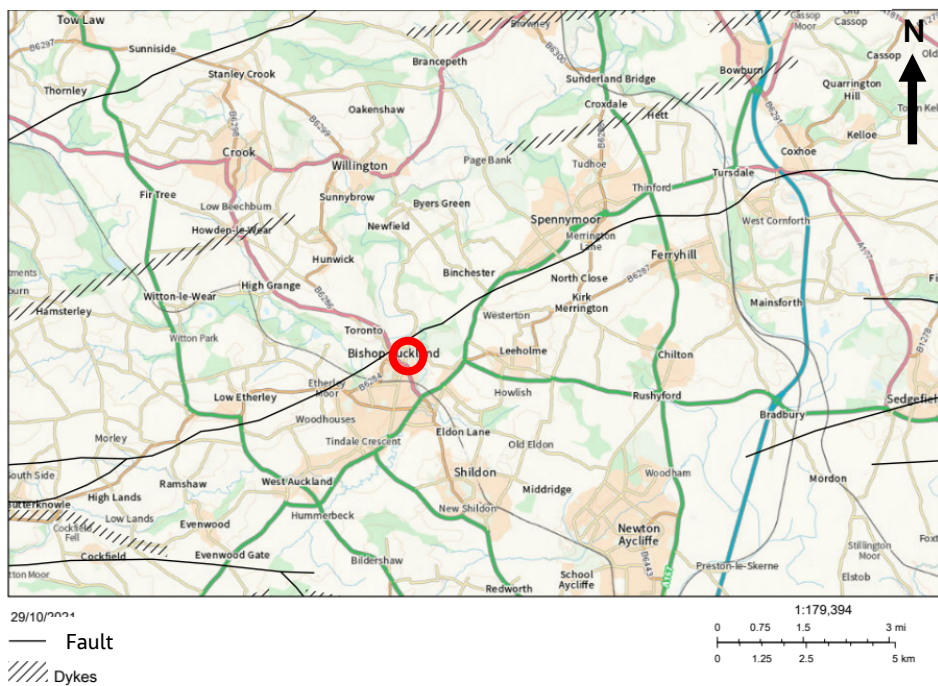
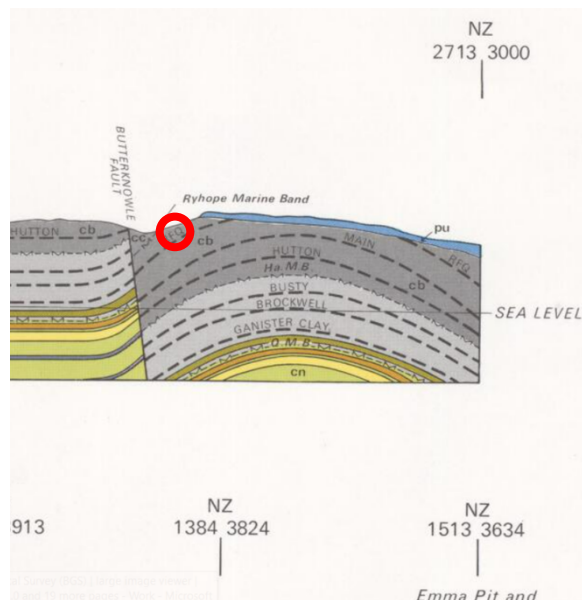


Figure 9 - Anticline formation (BGS sheet 26) (2)



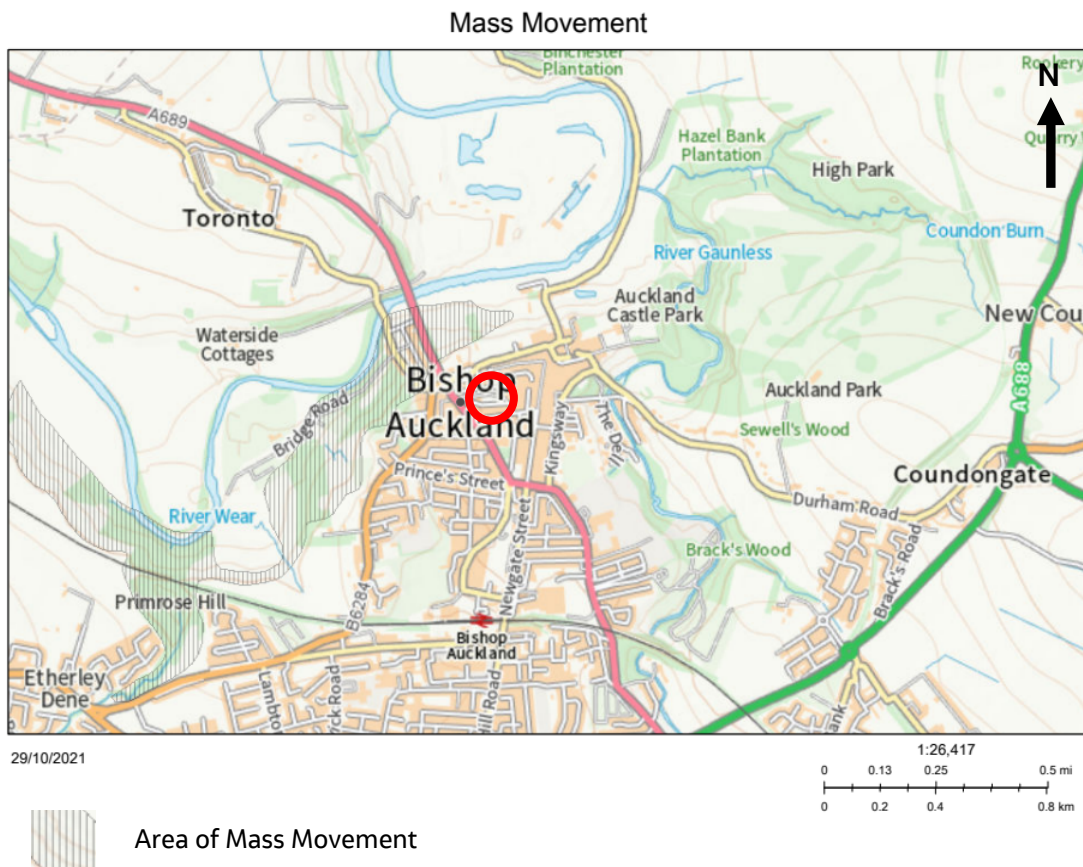
4.2.2 Bedrock angle of dip

A dip direction and angle of dip symbol is shown on the BGS sheet NZ 22 NW (2) approximately 1km south-west of the site. The dip of the High Main is given as 1 in 13 (4.4°). Applying this dip angle to the High Main and Five-Quarter coal seams, it is estimated that the Five-Quarter coal seam is approximately 7m below the High Main. The vertical stratigraphic column on the same map suggests the vertical distance between the two coal seams to be much further apart, approximately 25m. The stratigraphic column however is only a generalised section. The two coal seams are shown relatively close together in plan in proximity to the site than the remainder of the map. A vertical distance of 7m between the two coals seams is considered more realistic.

4.2.3 Area of mass movement

An area of mass movement has been recorded approximately 200m north of the site, see Figure 10. The BGS do not provide a lithological description of the material that has moved. The mass movement has occurred on sloping ground descending towards the River Wear.

Figure 10 - Mass movement



4.3 Historical Exploratory Holes

Six historical boreholes are located on site (1). Five extend 3mbgl and one 3.5mbgl. The location of these holes can be seen in Figure 11. A summary of the logs is provided in

Table 1.

Table 1 also includes historical boreholes immediately adjacent to the site, including BGS reference no. NZ22NW174 extending to 21mbgl. Alternating layers of sand, gravel, and clay to 11.4mbgl. "Boulder clay" is identified from 11.4 to 21mbgl (final depth not proven)

Deeper historical boreholes are also present approximately 60m east of the site extending to a maximum depth of 27.5mbgl terminating in "large gravel" (NZ22NW177, also included in Table 1).

The nearest historical exploratory hole to encounter bedrock is NZ23SW155 located approximately 180m north-west of the site, beyond the extent of Figure 11. Bedrock was encountered at 36.90mbgl (54.20mOD), equivalent to approximately 43mbgl at the site.

Figure 11 - Historical exploratory holes

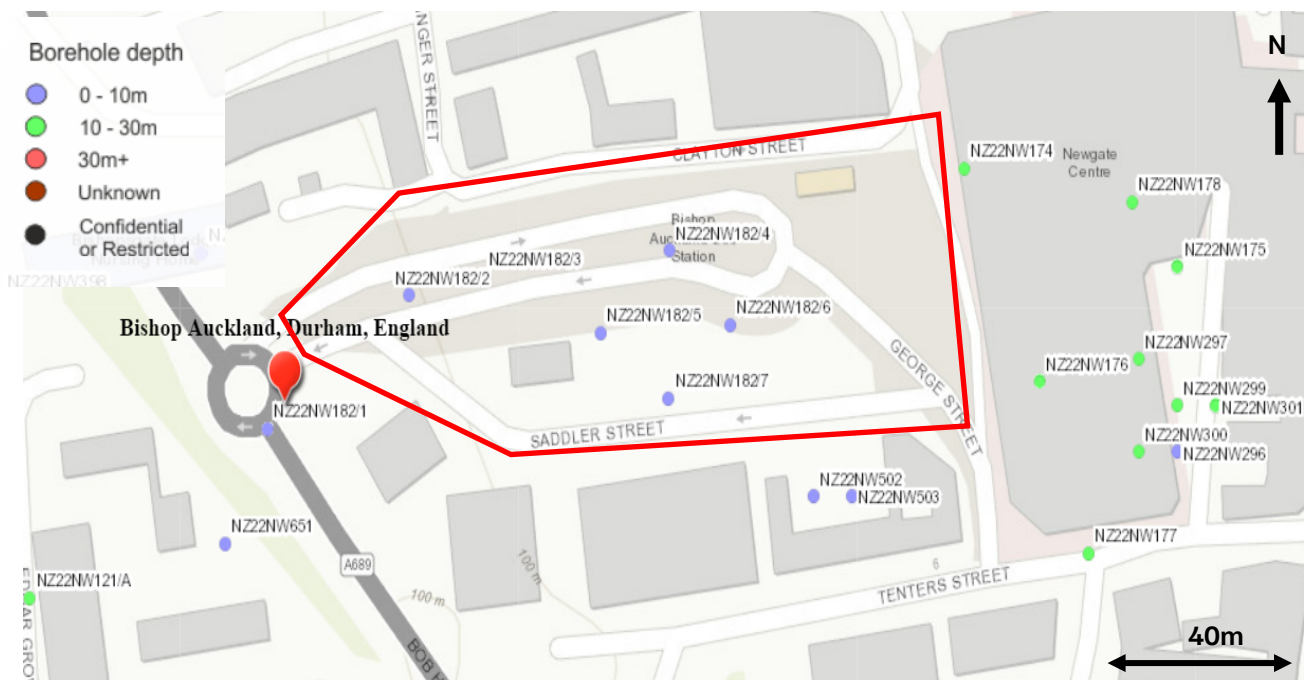


Table 1 - Historical borehole details

Borehole Reference	Distance from site	Easting	Northing	Length (meters)	Geological Description (mbgl)
NZ22NW182/2	Onsite	420,829	529,963	3.5	<ul style="list-style-type: none"> ▪ Dolomite and soil traces of brick rubble (made ground) ▪ 0.5 - 2.7m Sand-light brown with clay ▪ 2.7 - 3.5m Silty, sandy clay
NZ22NW182/3	"	420,848	529,967	3	<ul style="list-style-type: none"> ▪ Made ground ▪ 0.45 - 2.6m Silty sandy clay dark brown ▪ 2.6 - 3m Sand- dark brown with clay bands
NZ22NW182/4	"	420,897	529,973	3	<ul style="list-style-type: none"> ▪ 0 - 1.1m Ash/ brick rubble (made ground) ▪ N/a to 3m
NZ22NW182/5	"	420,879	529,955	3	<ul style="list-style-type: none"> ▪ Ash and brick rubble (made ground) ▪ 0.33 - 1m Sandy clay ▪ 1 - 2m Sand clay ▪ 2m - 3m Sand, dark brown with clay binder
NZ22NW182/6	"	420,913	529,957	3	<ul style="list-style-type: none"> ▪ 0.9m Ash and Brick rubble (made ground) ▪ 0.9 - 1m Sandy clay ▪ 1 - 3m Sand, dark brown with clay binder
NZ22NW182/7	"	420,897	529,941	3	<ul style="list-style-type: none"> ▪ 1.15m Ash and brick rubble (made Ground) ▪ 1.15 - 3m Sand -brown with a clay binder

Borehole Reference	Distance from site	Easting	Northing	Length (meters)	Geological Description (mbgl)
NZ22NW174	<10m east	420,974	529,991	21	<ul style="list-style-type: none"> ▪ 1.7m Made ground - ash, sand bricks and concrete ▪ 1.7 - 2.2m Yellow loamy sand ▪ 2.25 - 5m Yellow sand with occasional gravel ▪ 5 - 5.6m Brown laminated clay ▪ 5.6 - 7.9m Yellow sand ▪ 7.9 - 9.9m Brown fissured clay with gravel ▪ 9.9 - 11.4m Brown sand ▪ 11.4 - 15.3m Brown boulder clay ▪ 15.3 - 16m Brown sandy clay ▪ 16.3 - 21m Brown boulder clay ▪ Hole stopped due to not being able to pass boulder.
NZ22NW182/1	25m south-west	420,792	529,934	4	<ul style="list-style-type: none"> ▪ 0 - 0.27m Topsoil ▪ 0.27 - 0.95m Sandy clay ▪ 0.95 - 1.5m Sandy clay, very sandy ▪ 1.5 - 2.5m Sandy clay and dark brown stony, very sandy ▪ 2.5 - 4m Sand, light brown with dark brown binder
NZ22NW502	20m south	420,935	529,920	5	<ul style="list-style-type: none"> ▪ Tarmac on compact rubble subbase ▪ 0.40 – 2.20m Soft fairly loose brown slightly silty sand with a few small stones ▪ 2.20–5.00m Medium dense quite well graded sand and gravel
NZ22NW503	20m south	420,945	529,920	5	<ul style="list-style-type: none"> ▪ 0 – 0.10m Tarmac ▪ 0.10 – 0.30m Contaminated sandstone subbase ▪ 0.30 – 2.10m Soft fairly loose brown slightly silty sand with a few small stones ▪ 2.20 – 5.00m Medium dense quite well graded sand and gravel

Borehole Reference	Distance from site	Easting	Northing	Length (meters)	Geological Description (mbgl)
NZ22NW177	60m south-east	421,007	529,908	27.5	<ul style="list-style-type: none"> ▪ 0 – 1.45m Made up ground – soil and bricks ▪ 1.45 – 6.90m Yellow, occasionally loamy sand with gravel ▪ 6.90 – 7.40m Brown laminated clay ▪ 7.40 – 9.45m Brown loamy sand ▪ 9.45 – 17.65m Brown laminated clay with sand partings ▪ 17.65 – 18.40m Sand with large gravel ▪ 18.40 – 20.00m Brown fissured clay ▪ 20.00 – 24.00m Brown boulder clay ▪ 24.00 – 24.60m Sand with large gravel ▪ 24.60 – 26.50m Brown laminated clay with sand partings ▪ 26.50 – 27.50m Large gravel

4.4 Historical Land Use

An investigation into the previous land use was carried out and is displayed in the Groundsure report (5). A summary of the findings is listed below:

On site

1857:

The site is between George Street to the east and a railway cutting (of the Durham-Bishop Auckland Line) to the west, clayton street marks the north boundary of the site and saddler street the south. The western third of the site is developed as terrace buildings the remaining two thirds of the site is largely undeveloped land.

1897-1967:

The site is developed with terrace properties and a hall, except for a 40×80m undeveloped area in the centre of the site.

1975-1978

Some terrace properties in the west of the site have been demolished, the railway has been dismantled and the cutting infilled.

1984

All terrace buildings on the site have been demolished and replaced with the present-day bus station, the railway has been replaced with the A689, Bob Hardisty Drive.

1987-Present Day

No significant changes to the site.

Within 250m of the site

1857

The area surrounding the site is mixed use residential, commercial, and residential, there is urban development in all directions from the site with the exception of fields in the south and south-west. A marketplace is present 160m north-east of the site, the Durham-Bishop Auckland railway line is shown running north-south directly to the west of the site.

1897-1967

There has been further urban development of Bishop Auckland, particularly in the south-west where streets of terrace housing are now shown, a railway goods yard is shown from 70m south of the site.

From 1939 a Picture Theatre is shown directly to the south of the site.

1975-1978

The railway and railway goods yard have been demolished, a railway tunnel 40m north-west of the site appears to have been infilled.

1984

The Durham-Bishop Auckland railway has been replaced with the A689, Bob Hardisty Drive, south of High Bondgate.

1987-Present day

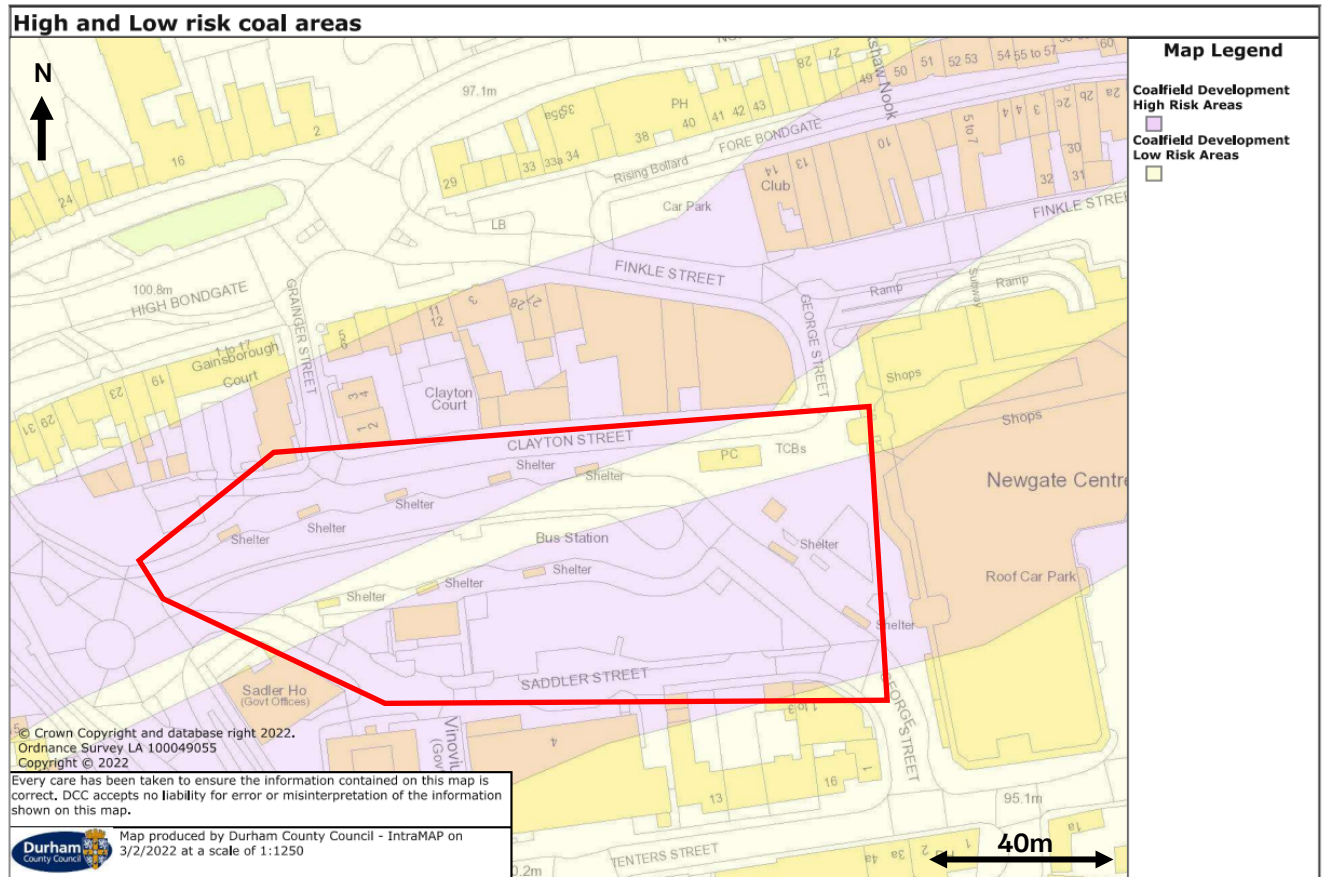
Little change to the surrounding area.

From 1995 the A689 is shown on the alignment of the former railway north of High Bondgate.

4.5 Records of Past Mining

An extract of Durham County Council’s GIS database, “IntraMAP”, see Figure 12, shows the location of what are likely to be inferred coal seam subcrops, similar to those provided in Figure 13, an extract of The Coal Authority’s interactive map (6).

Figure 12 - Durham CC IntraMAP



No mine shafts or other mine entries are recorded at the site in any of the reviewed sources of information. In the wider area, several disused mine shafts are recorded on both the historical mapping (5) and the BGS geological mapping (1) with the closest approximately 550m north of the site. Figure 13 shows the location of the mineshafts in relation to the site.

Figure 13 - Location of mine shafts and coal outcrops

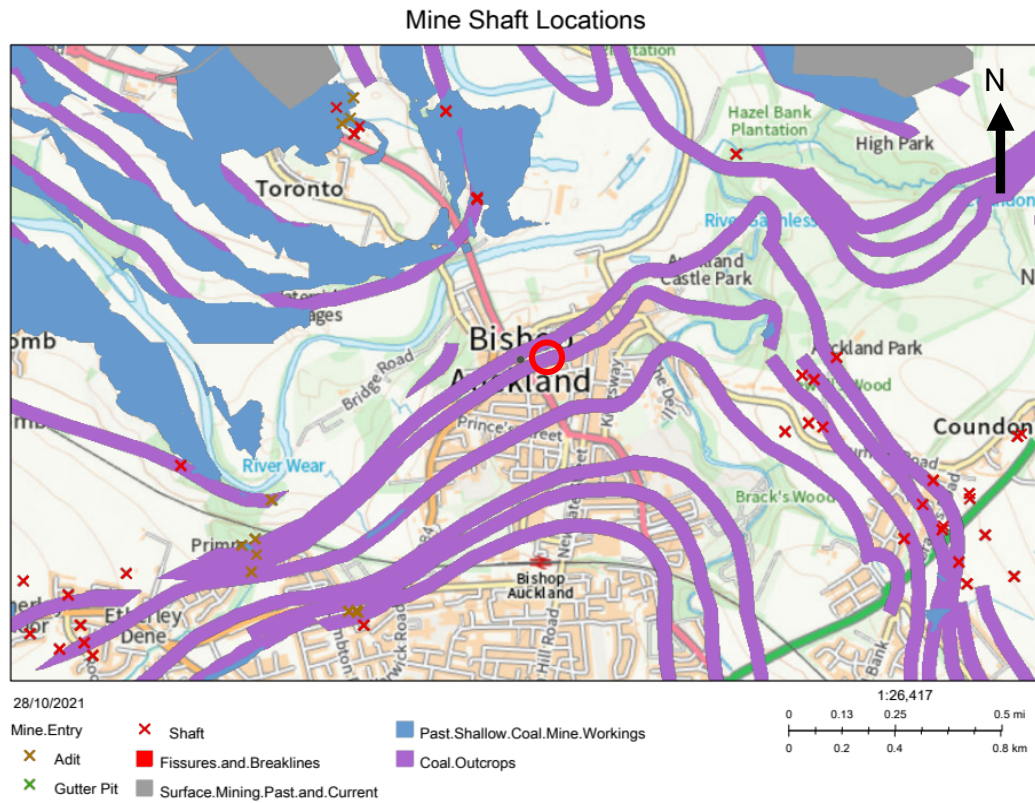


Figure 14, also an extract from The Coal Authority's interactive map (6), shows there are no recorded past or present shallow or near surface coal mine workings in proximity to the site.

Figure 14 - Surface and shallow mining



However, the site is in an area where The Coal Authority believe there is coal at or close to the surface, refer to The Coal Authority coal mining report in Appendix B (7). This coal may have been worked at some time in the past. The potential presence of coal workings at or close to the surface should be considered, particularly prior to any site works or future development activity, as ground movement could still be a risk.

The Coal Authority report (Appendix B) (7) also states the site is in a surface area that could be affected by underground mining in 1 seam of coal at a depth of 260mbgl. This coal seam was last worked in 1900 and any movement in the ground due to coal mining activity associated with these workings should have stopped by now.

4.6 Present or Future Mining

The Coal Authority report (Appendix B) (7) provides detail regarding present and future mining activities. In summary, the site is not affected by any current coal mining activities (underground or opencast) and there are no license requests (granted or outstanding) for future underground or opencast coal mining which affect the site. However, reserves of coal exist in the local area which could be worked at some time in the future.

5. Coal Mining Assessment

5.1 Presence of Shallow Coal and Mineworks

The site is not situated within an area of recorded "Past Shallow Coal Mine Workings". The locations of recorded shallow mineworking's are derived from abandoned mine plans under ownership of The Coal Authority. However, prior to 1872 there was no law requiring coal mine operators to deposit abandonment plans of the mine with the government following cessation of operations. As such, mining operations pre-dating 1872 are often without record therefore, the lack of recorded evidence is not confirmation that abandoned shallow coal mineworking's are not present beneath the site.

5.2 Risk of Ground Instability

Due to the thickness of the superficial deposits overlying the coal measures at the site, the likelihood of any historical mine workings occurring at the subcrop of the High Main Coal Seam or the Five-Quarter Coal Seam, prior to 1872 appears to be low. The Five -Quarter coal seam is anticipated to be present approximately 7m below rockhead and could have been mined in the past. Unrecorded extraction of coal is more common in areas where the coal seam is readily accessible, due to its depth below ground level. This is also an area which has been in residential occupancy for at least 200 years. There is an absence of any coal mine entries recorded in the area, and this is probably due to having in excess of 35m of superficial deposits locally. On the basis of the information available, the risk of ground instability at the surface is considered to be very low. Report CON29M produced by The Coal Authority also indicates that;

- 1) Any movement in the ground due to coal mining activity associated with the potential underground mining in coal seam at 260m should have stopped by now, and;
- 2) There has been no damage notice or claim to any property within 50m of the site boundary since 31 October 1994.

5.3 Estimated Depth of the Pennine Middle Coal Measures Formation

The nearest BGS historical exploratory hole, NZ23SW155 located approximately 180m north-west of the site, encountered the Pennine Middle Coal Measures Formation at 36mbgl (54.2mOD). This is equivalent to approximately 43mbgl at the site.

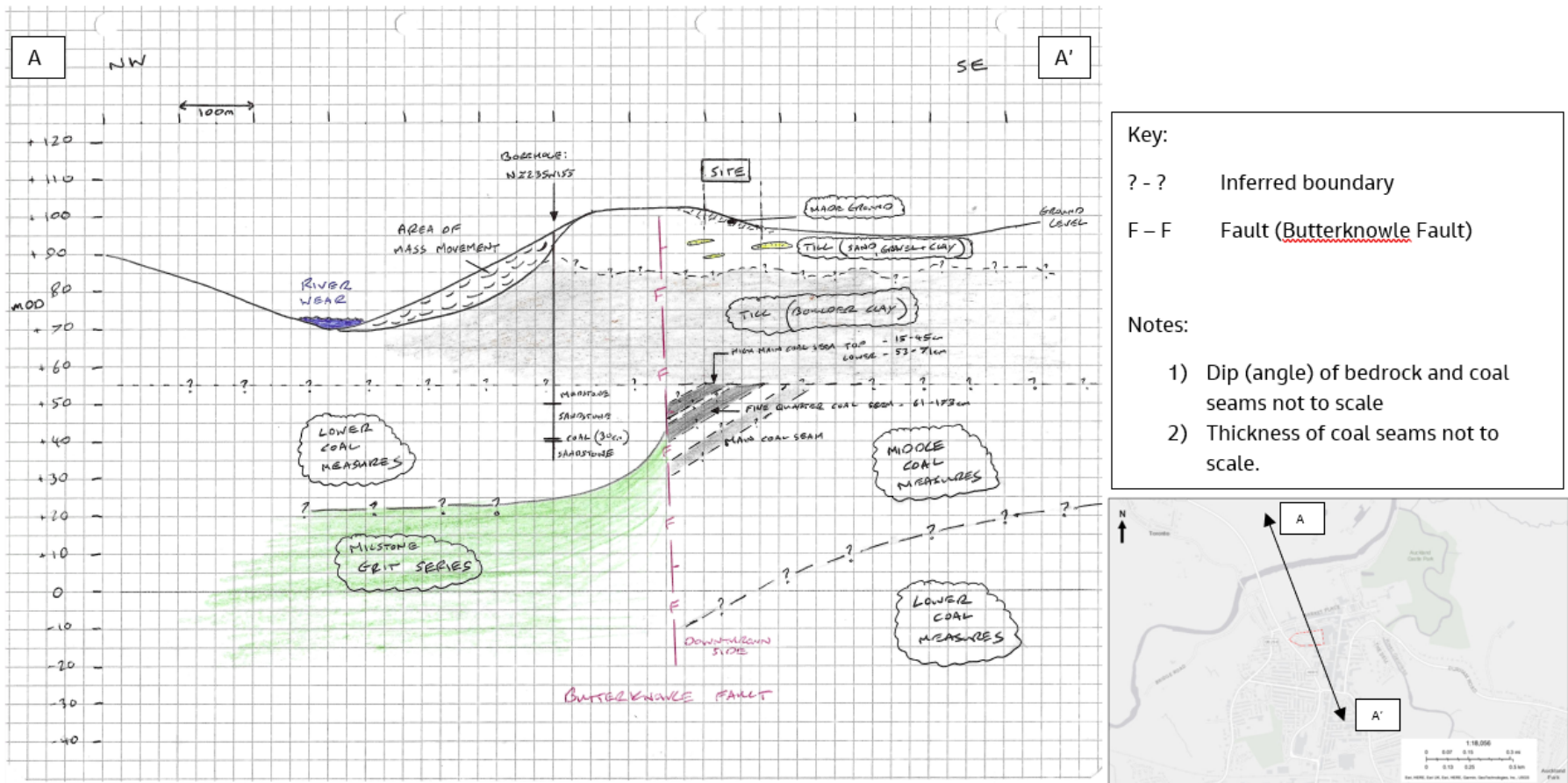
5.4 Bedrock Cover above Coal Seam

The High Main coal seam is shown at or close to bedrock surface, trending north-east south-west across the centre of the site (Figure 6). The High Main coal seam and Pennine Middle Coal Measure Formation dip to the north-west (Figure 9) at approximately 4°.

5.5 Geological Long Section

A schematic geological long section through the site and surrounding area is presented in Figure 15.

Figure 15 - Geological long section

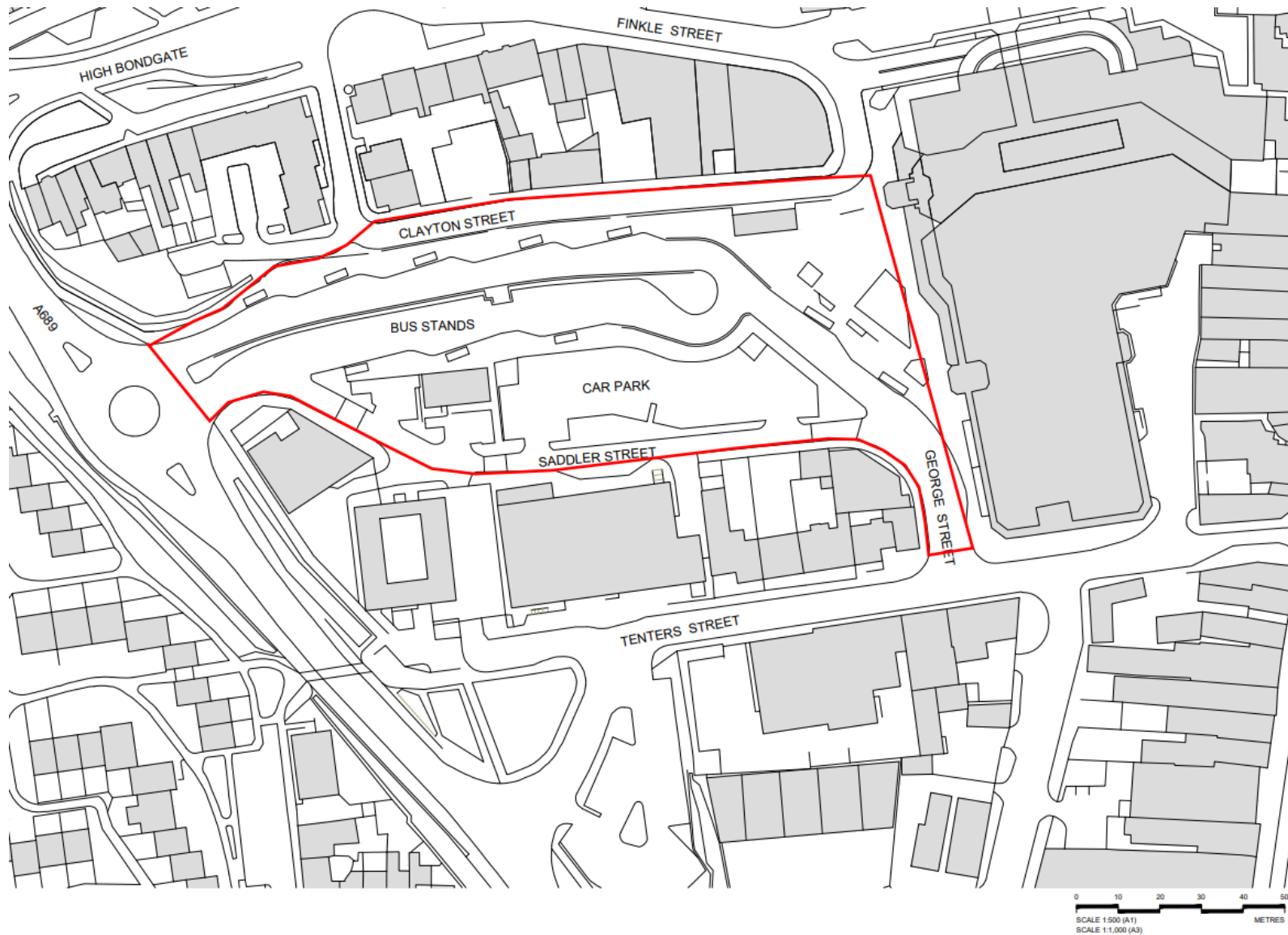


6. Proposed Mitigation Strategy

If coal seams are very close to rockhead, where rockhead is at depth, the likelihood of the coal being extracted is extremely low as the fractured rock is unstable for underground extraction. Coal close to rock head is also often of poor quality / weathered. Underground mining activities would normally terminate before getting close to rockhead. Generally coal is only extracted from the subcrop / outcrop where it is very close to the surface and the risk of collapse is lower. It is therefore considered that the likelihood of any shallow coal seams present beneath the site, actually having been mined in the past, is very low.

Given the lack of existing information on ground conditions at the site, it is recommended that an intrusive investigation is carried out prior to development of the land. This shall focus on the thickness and nature of the superficial deposits. Given that bedrock is anticipated to be in the order of 40m deep and deep foundations are not proposed, the accurate depth to rock head and an investigation into the presence of a workable coal seam is not considered necessary. The thickness and nature of the superficial geology onsite are to be investigated only.

Appendix A. Site boundary



Appendix B. CON29M-Non-residential Mining Report



The Coal
Authority

CON29M

coal mining report

BUS STATION, CLAYTON STREET, BISHOP AUCKLAND, DURHAM, DL14 7PJ



Known or potential coal mining risks

Past underground coal mining	Page 4
Future underground coal mining	Page 4
Mine entries	Page 5



Further action

No further reports from the Coal Authority are required. Further information on any next steps can be found in our Professional opinion.

For more information on our reports please visit www.groundstability.com



Professional opinion

According to the official mining information records held by the Coal Authority at the time of this search, evidence of, or the potential for, coal mining related features have been identified. In view of the coal mining circumstances we would recommend that any planned or future development should follow detailed technical advice before beginning work on site. Please see **page 3** for further details on **Future development**.

Your reference: **BL000034**
Our reference: **51002704468001**
Date: **29 October 2021**

Client name:
HALCROW GROUP LIMITED

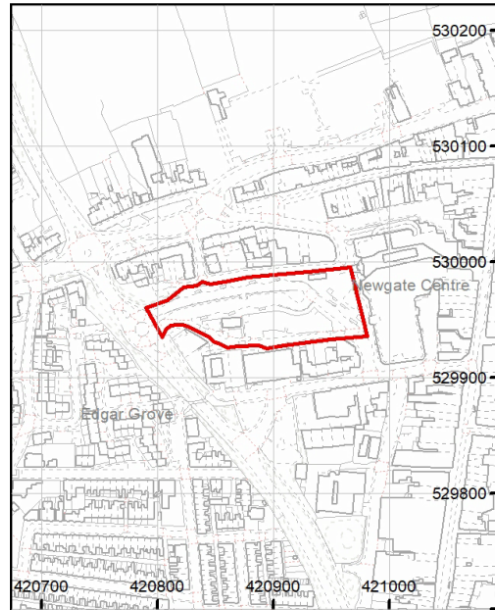
If you require any further assistance please contact our experts on:
0345 762 6848
groundstability@coal.gov.uk



Enquiry boundary

Key

Approximate position of enquiry boundary shown



We can confirm that the location is **on the coalfield**



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This report is prepared in accordance with the latest Law Society's Guidance Notes 2018, the User Guide 2018 and the Coal Authority's Terms and Conditions applicable at the time the report was produced.



Accessibility

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Professional opinion



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. 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.

If you are looking to develop, or undertake works, within a coal mining development high risk area your Local Authority planning department may require a Coal Mining Risk Assessment to be undertaken by a qualified mining geologist or engineer. Should you require any additional information then please contact the Coal Authority on **0345 762 6848** or email cmra@coal.gov.uk.

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Our reference: **51002704468001**
Date: **29 October 2021**

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Detailed findings

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1 Past underground coal mining

The property is in a surface area that could be affected by underground mining in 1 seam of coal at 260m depth, and last worked in 1900.

Any movement in the ground due to coal mining activity associated with these workings should have stopped by now.

In addition the property is in an area where the Coal Authority believes there is coal at or close to the surface. This coal may have been worked at some time in the past. The potential presence of coal workings at or close to the surface should be considered, particularly prior to any site works or future development activity, as ground movement could still be a risk. Your attention is drawn to the Professional opinion sections of the report.

2 Present underground coal mining

The property is not within a surface area that could be affected by present underground mining.

3 Future underground coal mining

The property is not in an area where the Coal Authority has received an application for, and is currently considering whether to grant a licence to remove or work coal by underground methods.

The property is not in an area where a licence has been granted to remove or otherwise work coal using underground methods.

The property is not in an area likely to be affected from any planned future underground coal mining.

However, reserves of coal exist in the local area which could be worked at some time in the future.

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

4 Mine entries

There are no recorded coal mine entries known to the Coal Authority within, or within 20 metres, of the boundary of the property.

This information is based on the information that the Coal Authority has at the time of this enquiry.

Based on the Coal Authority's knowledge of the mining circumstances at the time of this enquiry, there may be unrecorded mine entries in the local area that do not appear on Coal Authority records.

5 Coal mining geology

The Coal Authority is not aware of any damage due to geological faults or other lines of weakness that have been affected by coal mining.

6 Past opencast coal mining

The property is not within the boundary of an opencast site from which coal has been removed by opencast methods.

7 Present opencast coal mining

The property does not lie within 200 metres of the boundary of an opencast site from which coal is being removed by opencast methods.

8 Future opencast coal mining

There are no licence requests outstanding to remove coal by opencast methods within 800 metres of the boundary.

The property is not within 800 metres of the boundary of an opencast site for which a licence to remove coal by opencast methods has been granted.

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9 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.

10 Mine gas

The Coal Authority has no record of a mine gas emission requiring action.

11 Hazards related to coal mining

The property has not been subject to remedial works, by or on behalf of the Coal Authority, under its Emergency Surface Hazard Call Out procedures.

12 Withdrawal of support

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.

13 Working facilities order

The property is not in an area where an order has been made, under the provisions of the Mines (Working Facilities and Support) Acts 1923 and 1966 or any statutory modification or amendment thereof.

14 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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Statutory cover



Coal mining subsidence

In the unlikely event of any coal mining related subsidence damage, the Coal Authority or the mine operator has a duty to take remedial action in respect of subsidence caused by the withdrawal of support from land or property in connection with lawful coal mining operations.

When the works are the responsibility of the Coal Authority, our dedicated public safety and subsidence team will manage the claim. The house or land owner ("the owner") is covered for these works under the terms of the Coal Mining Subsidence Act 1991 (as amended by the Coal Industry Act 1994). Please note, this Act does not apply where coal was worked or gotten by virtue of the grant of a gale in the Forest of Dean, or any other part of the Hundred of St. Briavels in the county of Gloucester.

If you believe your land or property is suffering from coal mining subsidence damage and you need more information on what to do next, please use the following link to our website which sets out what your rights are and what you need to consider before making a claim.

www.gov.uk/government/publications/coal-mining-subsidence-damage-notice-form



Coal mining hazards

Our public safety and subsidence team provide a 24 hour a day, 7 days a week hazard reporting service, to help protect the public from hazards caused by past coal workings, such as a mine shaft or shallow working collapse. To report any hazards please call **01623 646 333**. Further information can be found on our website: www.gov.uk/coalauthority.

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Glossary



Key terms

adit - horizontal or sloped entrance to a mine

coal mining subsidence - ground movement caused by the removal of coal by underground mining

Coal Mining Subsidence Act 1991 - the Act setting out the duties of the Coal Authority to repair damage caused by coal mining subsidence

coal mining subsidence damage - damage to land, buildings or structures caused by the removal of coal by underground mining

coal seams - bed of coal of varying thickness

future opencast coal mining - a licence granted, or licence application received, by the Coal Authority to excavate coal from the surface

future underground coal mining - a licence granted, or licence application received, by the Coal Authority to excavate coal underground. Although it is unlikely, remaining coal reserves could create a possibility for future mining, which would be licensed by the Coal Authority

mine entries - collective name for shafts and adits

payments to owners of former copyhold land - historically, copyhold land gave rights to coal to the copyholder. Legislation was set up to allow others to work this coal, but they had to issue a notice and pay compensation if a copyholder came forward

shaft - vertical entry into a mine

site investigation - investigations of coal mining risks carried out with the Coal Authority's permission

stop notice - a delay to repairs because further coal mining subsidence damage may occur and it would be unwise to carry out permanent repairs

subsidence claim - a formal notice of subsidence damage to the Coal Authority since it was established on 31 October 1994

withdrawal of support - a historic notice informing landowners that the coal beneath their property was going to be worked

working facilities orders - a court order which gave permission, restricted or prevented coal mine workings

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