

# Coal Mining Risk Assessment

PERSEVERANCE STREET, BARNSELY

EXEMPLAR HEALTH CARE SERVICES LIMITED

23 June 2023

Exemplar Health Care Services Limited  
Ferham House  
Kimberworth Road  
Rotherham  
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48063-ECE-XX-XX-RP-0002  
SJE/CLC/RG

For the attention of Steve Rigby

23 June 2023

Dear Steve,

## **Perseverance Street, Barnsley - Coal Mining Risk Assessment**

We write to provide a risk assessment against the possibility of shallow coal mining affecting the above site. This risk assessment is based on a review and our interpretation of geological maps and memoirs, as well as a Consultants Coal Mining Report specific to this site.

It is proposed that the site will be developed with a three-story care home, with car park, and areas of communal soft landscaping.

### **The Site**

The approximately 0.27 hectare site is located on the west side of Perseverance Street, in the west of Barnsley, South Yorkshire. The site is centred on grid reference 433679, 406380.

The site is currently occupied by a private car park (formerly associated with Springfield House).

Overgrown vegetation is present around the site boundaries, and growing through the macadam surfacing. Access to the site is via a double gate off Perseverance Street in the south-east corner of the site.

A topographic survey shows that the site slopes down to the northwest at a gradient of approximately 1 in 20, from around 118.6 m AOD in the southeast, to around 115.6 m AOD in the northwest.

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Land to the north of the site is retained above the site, partially with a gabion stone wall, which is around 2.5 m high, and partially a brick wall, which is around 5 m high.

Historically, the site was initially agricultural land, first developed in the late 1800s, with two terraces of residential housing. By the 1980s, the residential properties were demolished, and the site was occupied by POS, then later a car park from 2008.

## **Geological Review**

The British Geological Survey (BGS) geological maps Sheet 87 (1:50,000), Sheet SE30NW (1:10,000) and the BGS Online Viewer have been consulted.

The solid geology beneath the site is expected to comprise deposits of the Pennine Middle Coal Measures, with the majority of the site shown to be underlain by interbedded mudstone/siltstone and sandstone, with an unnamed sandstone unit shown to outcrop below the southern 10% of the site. On the geological map SE30NW, shale is noted to have been formerly exposed in the stream on the northern boundary of the site.

No superficial deposits are shown to underlie the site.

The geological mapping shows the strata to be dipping at approximately 4 to 5° down to the east.

No faults or other lines of weakness are indicated to cross the site at the surface.

A BGS borehole (SE30NW901), located approximately 285 m to the east records 10 m of clay and flagstones, over shale and mudstone bedrock. A 0.9 m thick, unnamed, coal seam was recorded at a depth of around 82 m. Two further BGS boreholes (SE30NW555 & SE30NW20) associated with the Summer Lane Diary, located approximately 440 m northwest of the site, recorded approximately 1.2 m to 1.8 m of clay, over shale and mudstone bedrock. An unnamed coal seam, likely the Barnsley Rider coal seam, was encountered at depths of approximately 15 m and 25 m, with a thickness of approximately 0.2 to 0.5 m. Coal workings (around 2.3 m to 2.7 m thick), likely associated with the Barnsley coal seam were recorded at depths of approximately 36 m and 45 m. In a separate fault block, BGS boreholes located around 240 m southwest of the site record clay to 1.8 m, onto siltstone bedrock. A 2.5 m to 3.2 m thick coal seam, with workings, was encountered at depths of between 6 m to 7 m.

The shallowest coal seam anticipated to be encountered below the site is the Barnsley Rider coal seam. The Barnsley Rider coal seam was encountered at a depth of 15 m in a BGS borehole, located 440 m northwest of the site. Based on a dip of 4°, the Barnsley Rider Coal is anticipated to be present at a depth of around 35 m below the site. The Barnsley Rider Coal was recorded to be between 0.2 m and 0.6 m thick in the surrounding BGS boreholes, and the geological section. This is a thin coal seam, generally recorded to be of poor quality and is therefore not considered likely to have been worked.

The next named coal seam below the site is anticipated to be the Barnsley coal seam. The Barnsley coal seam was encountered at a depth of 36 m in a BGS borehole, located 440 m northwest of the site, and at a depth of 55 m at West Gawber Colliery, located 360 m northwest of the site. Based on a dip of 4°, the Barnsley coal seam is anticipated to be present at a depth of around 65 m below the site. The Barnsley coal seam is an economically significant coal seam, and was extensively worked throughout the region. It is recorded as between 2.3 m to 3.1 m thick, and workings within the Barnsley coal seam were encountered in BGS boreholes located 440 m northwest and 240 m southwest of the site.

## **Coal Authority Consultants Report**

A Consultants Coal Mining Report has been obtained for the site, and is appended.

The Coal Authority report states that the site is within the influence of one coal seam (Silkstone), at a depth of 309 m, and last worked in 1914.

The report states that the site is not within an area with probable unrecorded shallow workings.

No mine entries are recorded within 100 m of the property.

No coal outcrops, faults, fissures or break lines are recorded to cross the site.

There are no Coal Authority managed tips or opencast mine recorded within 500 m of the site.

The Coal Authority are not aware of any site investigations relating to the risk of coal mining or sites where remediation associated with coal mining has occurred within 50 m of the site.

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. 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.

The Coal Authority Report have no records of mine gas or mine water treatment schemes within 500 m of the site.

The property is not within an area where the Coal Authority has plans to grant a license to remove coal by underground methods. It is therefore unlikely the site will be affected by future underground mining.

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

## **Risk Assessment**

For there to be no significant risk to developments from voids caused by mining migrating to the surface, it is generally accepted that there should be ten times the seam thickness of competent ground above the workings and below the proposed foundation level.

The Barnsley Rider coal seam is recorded at a maximum thickness of 0.6 m, and the expected depth of the seam is around 35 m below the site, therefore if workings are present within this seam, there is likely sufficient competent strata (up to 6 m) above it.

The Barnsley coal seam is recorded at a maximum thickness of 3.1 m, and the expected depth of the seam is around 65 m below the site, therefore if workings are present within this seam, there is likely sufficient competent strata (up to 31 m) above it.

## **Conclusion**

It is considered that the site is not at significant risk of shallow coal mining. Precautions against the effects of shallow coal mining are therefore not considered to be required.

We trust the above is satisfactory. However, if you have any comments or queries, please do not hesitate to contact us.

Yours sincerely,



Steve English

Enc Consultants Coal Mining Report



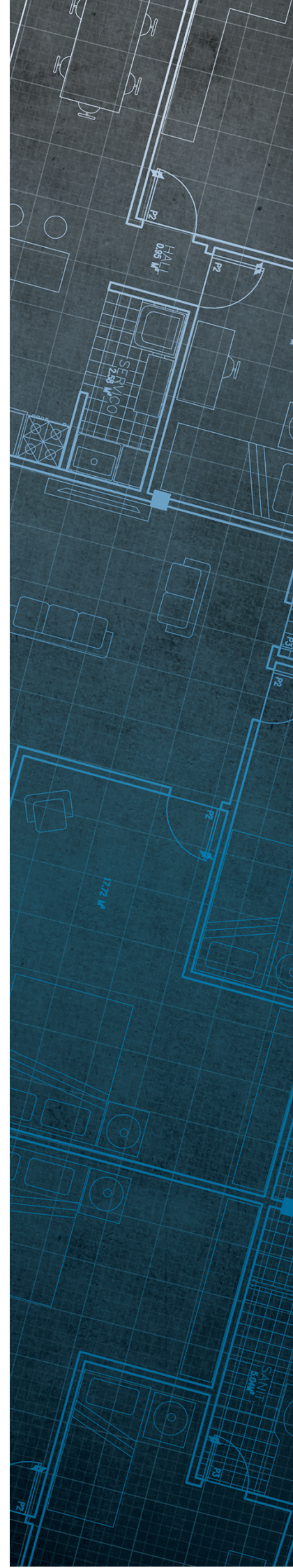
The Coal  
Authority

# Consultants Coal Mining Report

Site At 433600, 406300  
South Yorkshire

Date of enquiry: 2 June 2023  
Date enquiry received: 2 June 2023  
Issue date: 2 June 2023

Our reference: 51003358682001  
Your reference: 312169715\_1



# 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

NLIS Hub

## Enquiry address

Site At 433600, 406300  
South Yorkshire

## How to contact us

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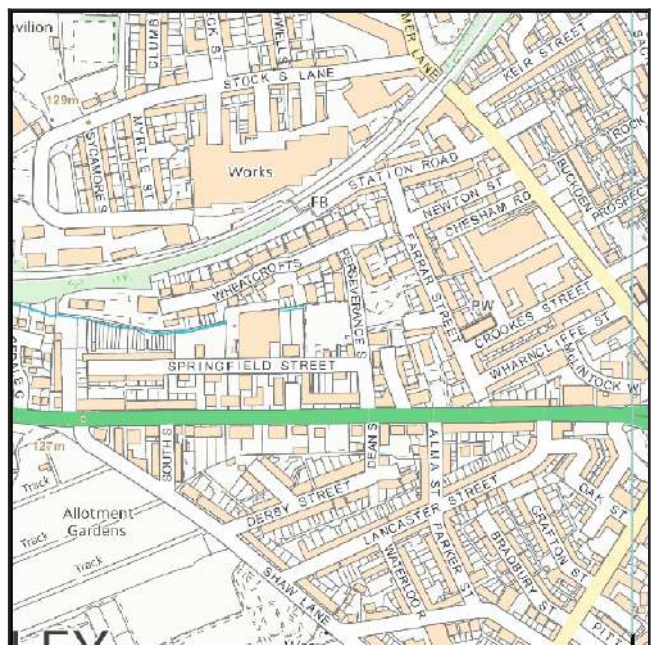
[www.groundstability.com](http://www.groundstability.com)

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Approximate position of property



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# Section 1 – Mining activity and geology

## Past underground mining

Colliery	Seam	Mineral	Coal Authority reference	Depth (m)	Direction to working	Dipping rate of seam worked (degrees)	Dipped direction of seam worked	Extraction thickness (cm)	Year last mined
ROB ROYD	SILKSTONE	Coal	6Z80	309	South-West	4.1	North-East	176	1914

## Probable unrecorded shallow workings

None.

## Spine roadways at shallow depth

No spine roadway recorded at shallow depth.

## Mine entries

None recorded within 100 metres of the enquiry boundary.

## Abandoned mine plan catalogue numbers

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

3792	12461	M158
SCC6	872	

**Please contact us on 0345 762 6848** to determine the exact abandoned mine plans you require based on your needs.

## 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.



## 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.

### 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 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. Please note, if there are no recorded instances of mine gas reported, this does not mean that mine gas is not present within the vicinity. The Coal Authority Mine Gas data is limited to only those sites where a Mine Gas incident has been recorded.

### **Mine water treatment schemes**

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

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

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

### **Future underground mining**

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

### **Coal mining licensing**

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

### **Court orders**

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

### **Section 46 notices**

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

### **Withdrawal of support notices**


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

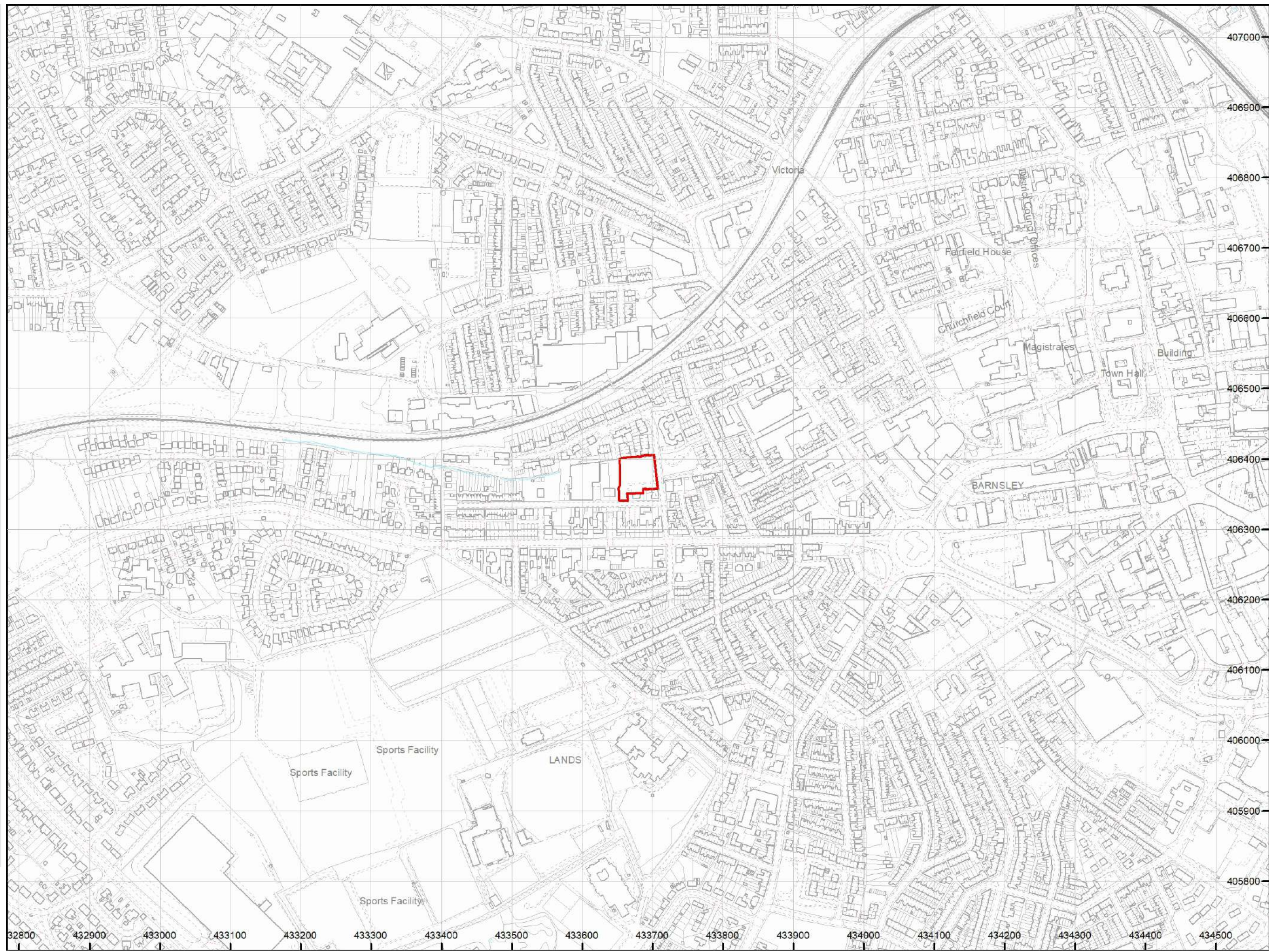
### **Payment to owners of former copyhold land**

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

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 



A black and white photograph of a soil profile, showing various layers of soil and roots. A teal diagonal shape is overlaid on the right side of the image.

# Eastwood

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