# Coal Mining Risk Assessment (CMRA)

# At

# Land at Devonshire Street Manchester

**Client: Jigsaw Homes Group**

**Reference: 33494-SUT-ZZ-00-RP-G-7601**

**Date: August 2023**


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# SUTCLIFFE INVESTIGATIONS

# Coal Mining Risk Assessment (CMRA)

## Document Control Sheet

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Issue: P01 Date: August 2023

Prepared by: Checked/Approved by:

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Revision History:

| Rev. | Date | Description | Prepared | Checked | Approved |
|---|---|---|---|---|---|
| P01 | August 2023 | Final Report | SH | DB | WGB |
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# Table of Contents


## 1 Introduction 2

1.1 Terms of Reference 2
1.2 Development Proposal & Legislative Context 2
1.3 Site Location and Setting 2
1.4 Site Description and Layout 3
1.5 Previous Studies & Third-Party Data 4

## 2 Preliminary Conceptual Risk Assessment 5

2.1 Site History 5
2.2 Site Geology 5
2.3 Coal Mining Report 5

## 3 Identification and Assessment of Site-Specific Coal Mining Risks 6

3.1 Introduction 6
3.2 Potential Coal Mining Issues 6
3.3 Risk Assessment and Mitigation Strategy 6

## 4 Conclusions and Recommendations 7

4.1 Summary of Risk 7

## Appendices A

Appendix A – Coal Authority Mining Report (51003368967001) A

## Drawings B

Drawing Ref. – 1326-002 - Existing Layout (DK-Architects) B
1326 – 100 Rev C – Proposed Site Plan C

# 1 Introduction

## 1.1 Terms of Reference

Sutcliffe Investigations was instructed by Jigsaw Homes Group (the “client”) to undertake a Coal Mining Risk Assessment for the site known as land at Devonshire Street, Manchester M12 4BB.

The location of the site is presented as Figure 1. The site is centred on Grid Reference (NGR) 385750, 396750 and is approximately 0.21ha in area.

A plan detailing the sites existing site layout is presented as Drawing Ref: 1326-002 produced by DK-Architects.

This report assesses the ground-based risks, constraints and liabilities associated with former coal workings to the proposed development of the site. This is required in support of the discharge of contaminated land planning conditions assigned to the site and to allow the design of economic foundation solutions.

## 1.2 Development Proposal & Legislative Context

### *Development Proposal*

The proposed development for the site is for twenty-four one bed unit apartments, two treatment rooms, an office, 14 car parking spaces and associated communal garden / soft landscaped areas. The proposed development is presented as Drawing Ref.: 1326-100 Rev C produced by DK-Architects.

### *Legislative Context*

The purpose of the Report is to present a desk-based review of all available information on the coal mining legacy relevant to the site, and then, propose further investigation or mitigation measures that address the coal mining legacy. The Report also sets out how the requirements of national planning policy with regard to development on unstable land are to be addressed.

This report has been written in general accordance with the Coal Mining Risk Assessment Model Report Template, January 2011 and intends to demonstrate to the Local Planning Authority (LPA) that the Site is, or can be, made safe and stable, to meet the requirements of the national planning policy with regard to Planning Policy Guidance Note 14 (PPG14) “Development on Unstable Land” DoE 1990.

## 1.3 Site Location and Setting

The site is located at Devonshire Street, Manchester M12 4BB, at National Grid Reference (NGR) 385750, 396750, the surrounding areas of the site comprise of mixed uses including undeveloped land, residential properties, a care facility building and commercial buildings.

A location plan and aerial photograph of the site are shown as *Figure 1 & 2*.

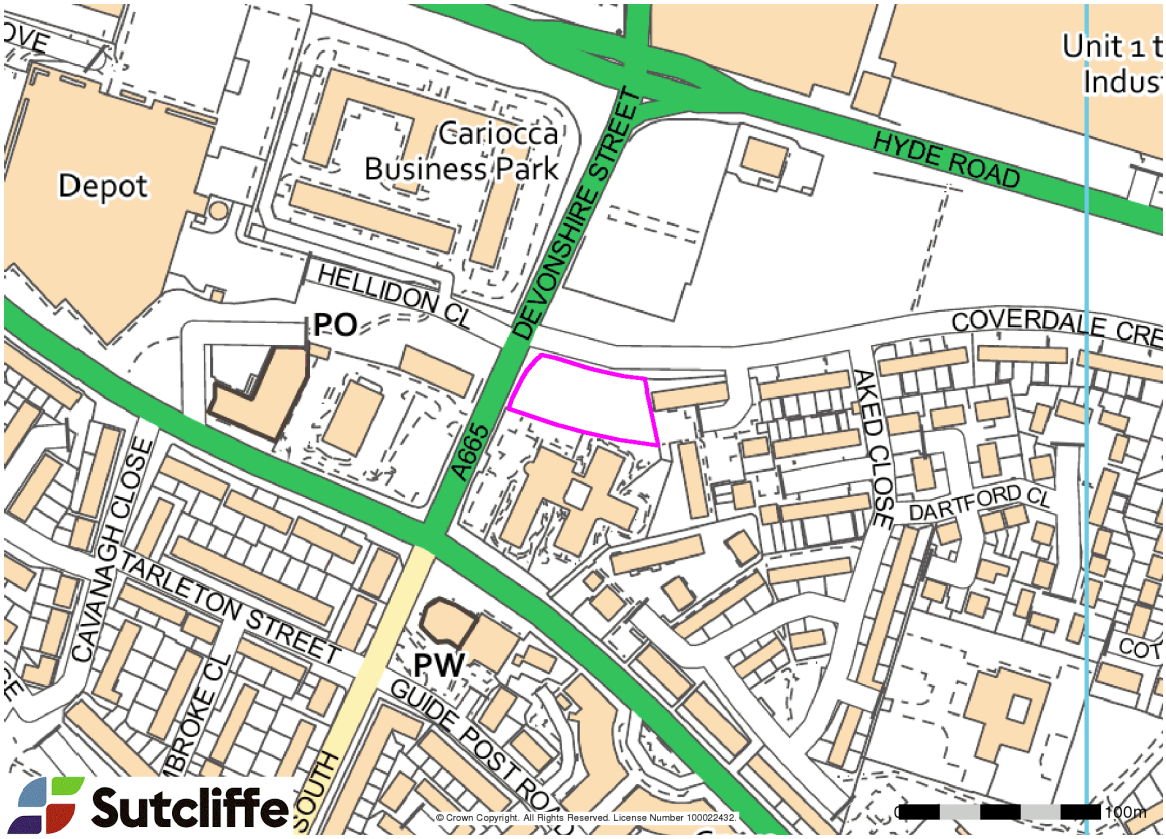



*Figure 1: General Location of Site*

## 1.4 Site Description and Layout

The site is almost rectangular in shape, 0.21ha in area and can be accessed via Coverdale Crescent to the north of the site where it appears a fence has been removed leaving just the posts. The site is relatively flat, undeveloped grassed parcel of land with some evidence of fly tipping. Mature trees are noted on the western boundary of the site along Devonshire Street and along the eastern boundary. A wooden fence is noted on the southern boundary.

*Figure 2: Aerial Photograph of the Site*

## 1.5 Previous Studies & Third-Party Data

This report should be read in conjunction with the previously completed reports and third-party data listed below:

- Sutcliffe Phase I PRA, July 2023
- Coal Authority Mining Report, Ref.: 51003368967001

# 2 Preliminary Conceptual Risk Assessment

## 2.1 Site History

The earliest available historical map dated (1848) indicated that a potential residential property was noted on the site however this feature was unclear due to the scale of the map. By 1851, the site was largely undeveloped with a residential property encroaching onto the south-western corner of the site. By 1893 the site had changed again with residential properties now noted across the site.

No further changes were noted on site until 1976, this map indicated previous on-site buildings had been demolished and replaced with a row of terraced houses on the southern portion of the site, with the northern portion remaining undeveloped and by 1995 the site again was once again undeveloped and has remained so to present day.

## 2.2 Site Geology

According to the BGS Geology of Britain Viewer and the relevant British Geological Survey (BGS) Solid and Drift Sheets at a scale of 1:50,000 the following geological succession has been identified below in *Table 2.1*.

Table 2.1: Site Geology

| Strata | Description | Age | Rock Type |
|---|---|---|---|
| Superficial Geology | Devensian Till | Devensian | Diamicton |
| Solid Geology | Chester Formation | Olenekian | Sandstone |

The site is within a coal mining area, however no further action is required to assess the risks associated with coal mining assets.

## 2.3 Coal Mining Report

Based upon the information provided within the Coal Authority report obtained by Sutcliffe the following is of note:

- No Past Underground Mining is noted below site.
- No Probable Unrecorded Shallow Workings are recorded.
- No Spine Roadways are recorded at shallow depth.
- There are no known coal mining entries on or within 50m of the site.
- No Abandoned Mine Catalogue Numbers are noted intersecting with the site boundary.
- No Outcrops are recorded onsite.
- No Opencast mines are recorded within 500m of the site boundary.
- No records of Coal Mining subsidence within 50m of the site boundary.
- There is no record of mine gas emissions recorded within 500m of the site boundary.

# 3 Identification and Assessment of Site-Specific Coal Mining Risks

## 3.1 Introduction

Identification and assessment of the Site's Coal Mining Risks has been undertaken from existing desk-based information.

Assessing risks from coal mining is based upon guidance provided by the Coal Authority following a 'risk-based' approach implemented through PPG 14.

## 3.2 Potential Coal Mining Issues

The potential risks to the development of the site from historic coal workings and remediation to these features as identified within the Coal Authority Report are summarised below in *Table 3.1.*

Table 3.1: Potential Coal Mining Issues

| Coal Mining Issues | Yes | No | Risk Assessment |
|---|---|---|---|
| Underground coal mining (recorded at shallow depths) | | ✓ | Not required |
| Underground coal mining (probable at shallow depths) | | ✓ | Not required |
| Mine Entries (shafts and adits) | | ✓ | Not required |
| Coal mining geology (fissures) | | ✓ | Not required |
| Record of past mine gas emissions | | ✓ | Not required |
| Recorded coal mining surface hazard | | ✓ | Not required |
| Surface mining (opencast workings) | | ✓ | Not required |

## 3.3 Risk Assessment and Mitigation Strategy

Based on the information obtained from this assessment, there is no significant risks from underground coal mining at shallow depths and no significant risk from mine entries. Additionally, there is no significant risk from coal mining geology, mine gas emissions, surface hazards or surface mining.

# 4 Conclusions and Recommendations

## 4.1 Summary of Risk

Although the site does fall within a coal mining area, there are no sources of risk to the development and no further works are required in respect to risk posed by coal.

# Appendix A – Coal Authority Mining Report (51003368967001)

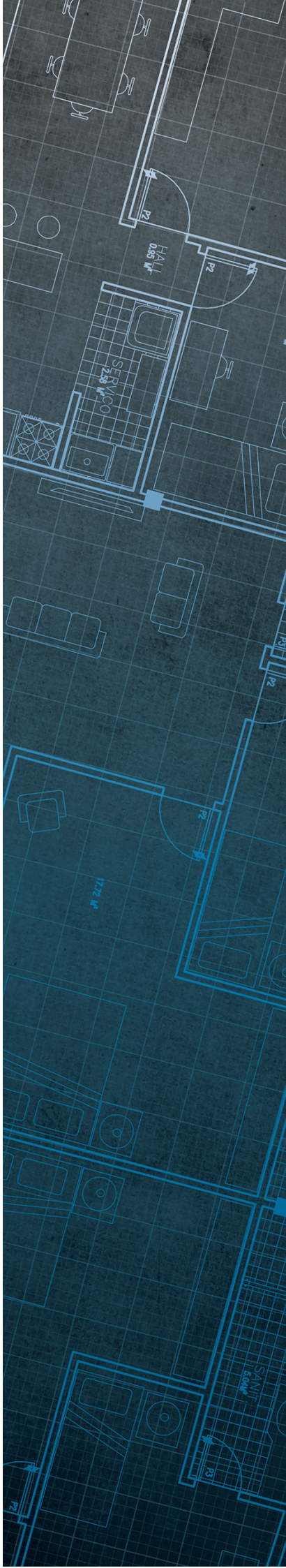
The Coal Authority

# Consultants

## Coal Mining Report

Devonshire Street
Manchester
Manchester
Lancashire
M12 4BB

| | |
|---|---|
| Date of enquiry: | **25 July 2023** |
| Date enquiry received: | **25 July 2023** |
| Issue date: | **25 July 2023** |
| Our reference: | **51003368967001** |
| Your reference: | **314704949_2** |



# Consultants

# Coal Mining Report

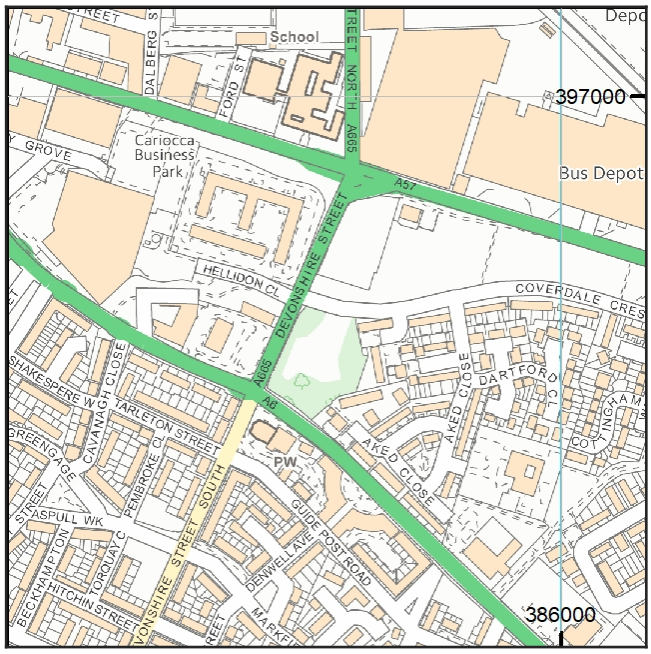
This report is based on and limited to the records held by the Coal Authority at the time the report was produced.

**Client name**

NLIS Hub

**Enquiry address**

Devonshire Street
Manchester
Manchester
Lancashire
M12 4BB




Approximate position of property

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# Section 1 – Mining activity and geology

### Past underground mining
No past mining recorded.

### 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
None available.

### 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 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.

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# Section 4 – Further information

Based on the responses in this report, no further information has been highlighted.

### 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.

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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 **call us on 0345 762 6848** or **email us at groundstability@coal.gov.uk.**

### Past underground coal mining

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

### Probable unrecorded shallow workings

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

### Spine roadways at shallow depth

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

### Mine entries

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

### Abandoned mine plan catalogue numbers

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

### Outcrops

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

### Geological faults, fissures and breaklines

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

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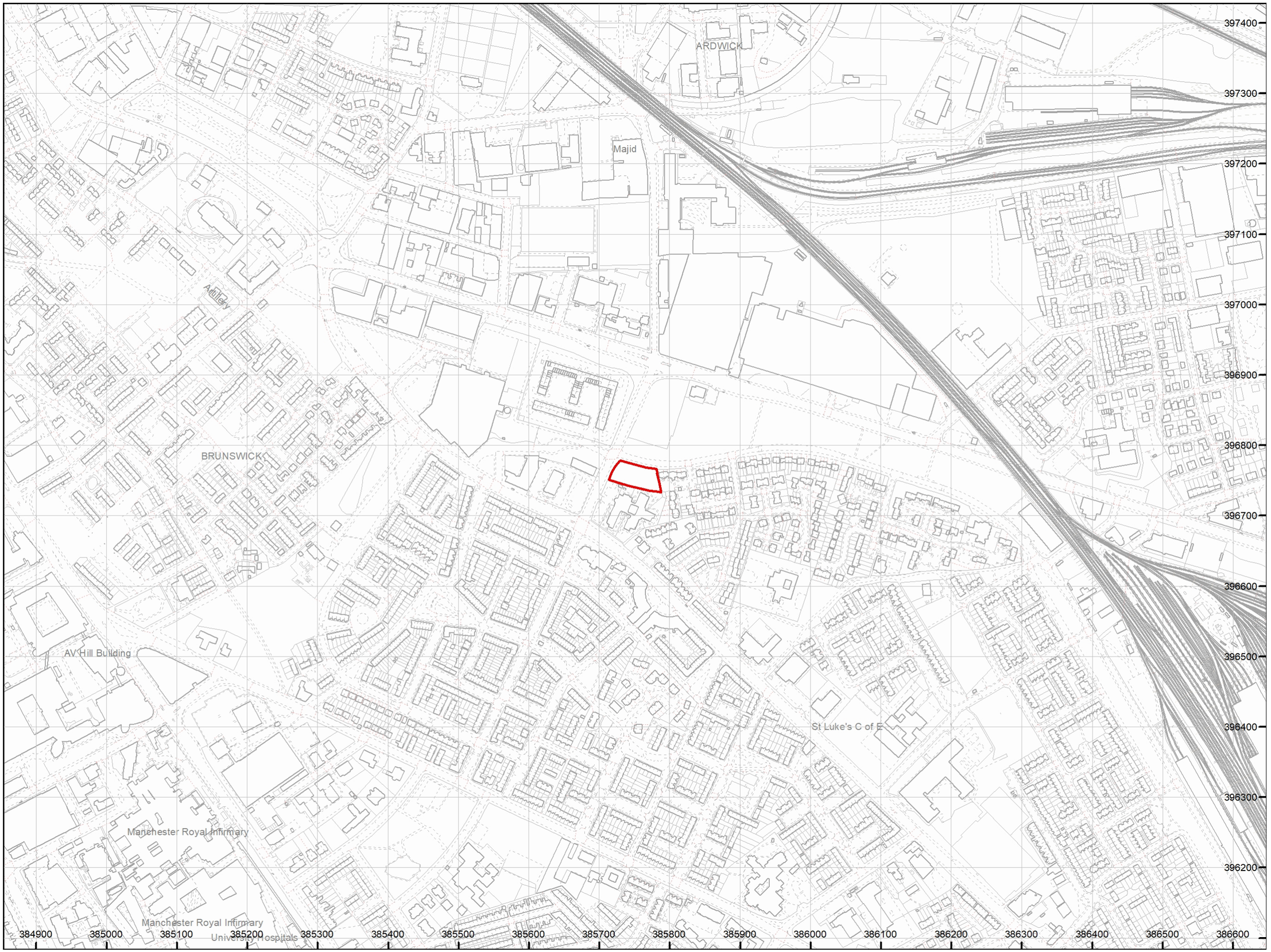
The map highlights any specific surface or subsurface features within or near to the boundary of the site.

## Key

Approximate position of the enquiry boundary shown

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## Drawing Ref. – 1326-002 - Existing Layout (DK-Architects)

Devonshire Street
Jigsaw Homes

| | |
|---|---|
| Drawing Title: | Existing Site Plan |
| Date: | 06.06.2023 |
| Drawing no: | 1326-002 |
| Scale: | 1:500 @ A3 |
| Drawn: | NS |

revision:
revision notes:

N

0m 5m 10m 25m 50m

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## 1326 – 100 Rev C – Proposed Site Plan

Devonshire Street
Jigsaw Homes

Drawing Title: Proposed Site Plan
Date: 06/06/2023
Drawing no: 1326-100
Scale: 1:500 @ A3
Drawn: NS

revision: C
revision notes:

| | | |
|---|---|---|
| A | 20/09/2023 | Building position updated due to drainage easement |
| B | 25/09/2023 | Building position adjusted to suit easement. |
| C | 12/10/2023 | Parking and cycle provision updated |

N

0m 5m 10m 25m 50m


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