

# COAL MINING RISK ASSESSMENT

HEALEY LANE, BATELY

For Planned Contracts Ltd

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April 2018

## Coal Mining Risk Assessment

Healey Lane, Batley

For

Planned Contracts Ltd

|            |                                                 |
|------------|-------------------------------------------------|
| H17075CMRA | Coal Mining Risk Assessment Healey Lane, Batley |
|------------|-------------------------------------------------|

| Revision | Date of issue | Comments  | Prepared by | Checked by |
|----------|---------------|-----------|-------------|------------|
| 0        | 05.04.18      | 1st issue | ACV         | JR         |
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## 1.0 INTRODUCTION

Patrick Parsons Limited (PPL) have been commissioned by Planned Contracts Ltd (PCL) to prepare a Coal Mining Risk Assessment (CMRA) for a proposed residential development of a parcel of land at Healey Lane, Batley. A proposed layout plan by Chris Finn Architect, Dwg. No. 2605-02-01C December 2017 is appended to this report. This report provides regulators with information on historic coal mining together with an assessment of its potential impact on land stability.

### Limitations

This CMRA is based on and limited to an assessment of the information presented here. PPL is not responsible for potential ground conditions not revealed during this review. It has been prepared for PCL and is not to be relied upon by any third parties without the express written permission of PPL.

### Proposed Development

It is proposed to construct 15 no. low rise detached and terraced residential properties with associated areas of hardstanding, parking and soft landscaping together with an access road.

### Site Location and Description

The site is located near the junction of Healey Lane and West Park Road(B6123), adjacent and to the southwest of Healey Junior, Infant and Nursery School. The site lies approximately 1.5km southwest of Batley town centre and is centred at NGR 422713mE, 423986mN and has an area of approximately 0.57 hectare.

The site comprises an irregular parcel of land, having been cleared of former buildings and trees. It is primarily under grass and coarse vegetation with areas of tarmac hardstanding. Immature to mature trees are present along the southern and northwestern site boundaries. Areas of predominantly tarmac hardstanding are located within the northwest of the site and are associated with the former development.

The southern and eastern boundaries of the site are secured by metal palisade fencing with the western boundary secured by walls and fencing from adjacent residential dwellings. The northwestern boundary is marked by a low stone wall (around 0.5m in height) with an access area from Healey Lane currently blocked by a felled tree.

Levels across the site fall gently from approximately 135.0m in the north to approximately 130.0m AOD in the south. An embankment is present along the northeastern boundary, approximately 1 to 2m high and rising towards the higher adjacent land. Along the southern boundary, levels fall further by approximately 1.0m towards West Park Road.

A site location plan as Dwg. H17075-701 together with a site features plan as Dwg. H17075-702 are both appended to this report.

### Scope of the Coal Mining Risk Assessment

The purpose of this Coal Mining Risk Assessment is to:

- Present a desk based review of available information of the coal mining and other mining issues, which are relevant to the application site;
- To use that information to identify and assess the risks to the proposed development from mining, including the cumulative impact of issues;

- Set out appropriate mitigation measures to address the mining legacy issues affecting the site, including any remedial works and/or to demonstrate how mining issues might influence the proposed development; and,
- Demonstrate to the Local Planning Authority that the application site is or can be made safe and stable to meet the requirements of national policy with regard to development on unstable land.

## 2.0 SOURCES OF INFORMATION

The following sources of information have been referred to during the preparation of this coal mining risk assessment:

- Coal Authority (CA) Consultants Mining Report (ref: 51001808263001) dated March 2018;
- CA online Interactive Map Viewer;
- British Geological Survey (BGS) Sheet 77 (Huddersfield) 1:50,000 scale solid and drift map;
- BGS Sheet SE22SW 1:10,000 scale solid and drift, and Sheet 232SW 1:10,560 County Series solid and drift maps;
- BGS Memoir 'The Geology of the Country around Huddersfield and Halifax', 1930;
- BGS Geology Viewer and Borehole Records within close proximity to the site;
- The Midland Institute of Mining Engineers 'Sections of Strata of the Coal Measures of Yorkshire' 1950;
- On-line Ordnance Survey (OS) historical mapping; and,
- Kirklees Council on-line planning application searches.

## 3.0 IDENTIFICATION AND ASSESSMENT OF SITE SPECIFIC MINING RISKS

### Site History

The salient historical mining-related features either on or within 250m of the site have been reviewed and are presented in the table below.

| Dates       | Coal Mining Features                                                     |                                                                                                                                                                                                                                                                   |
|-------------|--------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | On Site                                                                  | Off Site (within 250m)                                                                                                                                                                                                                                            |
| 1892 – 1955 | None, the site is undeveloped land. In 1938 it becomes a cricket ground. | Roche colliery and shaft approximately 800m north. The colliery is marked as disused in 1931.<br>Coal Pit Lane approximately 100m west.<br>Shafts approximately 500m northwest.<br>Clay pit approximately 200m northwest.<br>Quarry approximately 750m southwest. |
| 1967 - 2002 | None, the site is a school comprising four buildings.                    | The shaft approximately 800m north is marked as disused in 1967.                                                                                                                                                                                                  |

| Dates          | Coal Mining Features                |                                   |
|----------------|-------------------------------------|-----------------------------------|
|                | On Site                             | Off Site (within 250m)            |
| 2010 – Present | None, all buildings are demolished. | Coal Pit Lane is no longer shown. |

The historical maps indicate during the late 19<sup>th</sup> century, coal mining activities were prevalent in the surrounding area. In addition, a former shaft is recorded immediately adjacent to the site's southeastern boundary (see CA consultants mining report summary below).

### Geology

Made ground is recorded within the extreme eastern/northeastern part of the site. No superficial deposits are indicated. However granular residual soils are anticipated from the weathering of the underlying solid strata.

Published BGS information indicates the site as being directly underlain by Carboniferous Middle Coal Measures strata, specifically the Thornhill Rock sandstone. The strata are shown to dip locally at approximately 3° to the east/southeast.

The Joan coal seam is recorded as outcropping approximately 100m west of the site and may potentially underlie the site at shallow depth. Regionally the Joan coal seam is recorded between 0.6 to 1.3m thick, however it is recorded as rarely of sufficient thickness or quality to have been worked. Records of the White Lee Colliery approximately 1.5km north of the site, indicate the Joan coal seam to be approximately 0.33m thick and lies approximately 11m above the Flockton Thick coal seam.

The Flockton Thick coal seam is recorded as outcropping approximately 260m west of the site and the Coal Authority records this seam to lie around 70m below the site. Regionally, the seam is recorded between 0.3 to 1.5m thick on the geological memoir. Records of the White Lee Colliery indicate the Flockton Thick coal seam is approximately 0.66m thick.

A fault is present immediately north of the site striking southwest and northeast and downthrowing to the south.

### Coal Seams and Supporting Historical Intrusive Information

The following BGS historical boreholes indicate shallow coal near the site. Historic borehole SE22SW358 is located approximately 150m southwest where coal was encountered at 6.4m below ground level (bgl) with a thickness of 0.5m and again at 8.10m bgl with a thickness of 0.4m with intermediate fireclay and mudstone. Approximately 10.0m below these coals, mineworkings were proved. These coal seams are thought to represent the Flockton Thick coal (upper coals) and the underlying Flockton Thin coal seam (lower worked coal). Historic borehole SE22SW359 is located approximately 170m southwest where coal was encountered at 8.5m bgl with a thickness of 0.5m and again at 9.9m bgl with a thickness of 0.4m. Historic borehole SE22SW360 located in a similar location, proved mineworkings at between 6.5 and 8.7m bgl. The latter boreholes are considered to prove the Flockton Thick coal seam, both intact and worked.

### Summary of Coal Authority Mining Report

A CA consultants mining report (attached) records the site as:

- Past recorded underground coal mining at depths of between 77 and 93m. This is associated with extraction of the Flockton Thick coal (seam thickness 1.2 to 1.3m) and the Flockton Thin coal seam (seam thickness of 0.9m).;
- However, the site is in an area considered as being affected by probable unrecorded shallow workings (less than 30m depth);
- No present or future underground mining is recorded beneath the site;
- One mine entry is recorded on or within 20m of the site boundary, specifically adjacent to the site's southeastern boundary. There are no records of what steps, if any, have been taken to treat this mine entry;
- No spine roadways are recorded at shallow depth (less than 30m deep) beneath the site;
- No opencast coal mining is recorded within 500m of the site;
- There are no records of any mine gas emissions requiring action within 500m of the enquiry boundary;
- A fault is indicated as present within the northern/northeastern part of the site;
- There have been no subsidence damage notices or claims associated with, or within 50m, of the enquiry boundary, and;
- The site, or any within 50m of the site, have not been subject to remedial works by the CA.

#### Coal Authority Interactive Map Viewer (web-based)

Information available on the CA interactive map viewer identifies the extreme northwestern edge of the site to lie within a Development High Risk Area (DHRA). Likewise, the site is shown to be affected by probable past shallow coal mining.

There are several former mine entries (shafts) recorded within 150m off the site's northwestern, western and southern boundaries. In particular, the shaft identified in the CA consultants mining report adjacent to the southeastern site boundary, is recorded as being approximately 2.5m diameter and approximately 55.0m depth.

#### Mining Risk Assessment

| Mining Issue                                         | Risk |    | Risk Assessment and Risk Rating                                                                                                                                                                                                   |
|------------------------------------------------------|------|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                      | Yes  | No |                                                                                                                                                                                                                                   |
| Underground Coal Mining (recorded at shallow depths) | -    | No | The CA does not record historic shallow mining beneath the site. However, the extreme northwestern edge of the site lies within a DHRA – <b>Low</b>                                                                               |
| Underground Coal Mining (probable at shallow depths) | Yes  | -  | The CA indicates the extreme northwestern edge of the site to lie within a DHRA and an area of probable shallow coal mine workings. . The Joan coal seam is present beneath the site at shallow depth. Nearby historical borehole |

|                                                  |     |    |                                                                                                                                                                                                                                                                                                      |
|--------------------------------------------------|-----|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                  |     |    | records indicate shallow coal and mineworkings, although associated with the deeper Flockton coal seams – <b>Low to Moderate</b>                                                                                                                                                                     |
| Mine Entries (shafts)                            | Yes | -  | The CA report identifies 1 former mine entry (shaft) adjacent to the southeastern site boundary. As such, there is a risk that this recorded shaft, and potentially further unrecorded mine entries, may be present on the site itself – <b>High</b>                                                 |
| Coal Mining Geology (fissures)                   | -   | No | CA information does not indicate any geological weaknesses on site due to mining related activities. However, a fault may be present within the northern/northeastern part of the site – <b>Low</b>                                                                                                  |
| Record of past mine gas emissions                | Yes | -  | CA information states no mine gas related issues have been recorded within 500m of the site. However, there is a potential for the presence and migration of mine gases from shallow mine workings if they are present beneath the site together with historic mine entries – <b>Low to Moderate</b> |
| Recorded coal mining surface hazards             | -   | No | CA information shows there is no indication of the presence of any coal mining surface hazards within the site – <b>Low</b>                                                                                                                                                                          |
| Surface mining (quarrying and opencast workings) | -   | No | No historic opencast coal mining has been recorded within or close to the site.– <b>Low</b>                                                                                                                                                                                                          |

#### 4.0 CONCLUSIONS AND RECOMMENDATIONS (INCLUDING MITIGATION STRATEGY)

The above risk assessment has identified the site as potentially being affected by several mining legacy related issues, which include probable shallow underground coal mining, recorded and/or unrecorded former mine entries and potential for mine gases. These are discussed further below.

##### Probable Shallow Mining

The CA indicates the site lies close or within Development High Risk Area and probable shallow coal mine workings. The Joan coal seam is present beneath the site at shallow depth. Nearby historic borehole records indicate the presence of shallow worked coal. A shaft is also shown to be present adjacent to the southeastern boundary of the site.

The historic boreholes indicate the Flockton Thick coal seam and associated workings to be present at shallow depth approximately 150m southwest of the site, which deepens to in excess of 30m depth beneath the site itself and is not recorded to underlie the site at shallow depth. The overlying Joan coal seam is present at shallow depth beneath the site and may potentially have been historically mined.

Published geological information indicates that the Joan coal seam varies in thickness between 0.6 and 1.3m and outcrops just west and northwest of the site and is likely to be present within 10m depth beneath the western and northwestern parts of the site and most probably historically worked.

Assuming shallow rockhead (1 to 2m depth), there is therefore considered to be inadequate thickness of competent rock cover above the Joan coal seam, if historically worked, to maintain surface stability. *(CIRIA Special Publication 32, Construction Over Abandoned Mine Workings states that the maximum height of collapse is often taken as five to ten times the intact coal seam thickness. This is further reiterated in the Garrard and Taylor paper: 'Collapse mechanisms of shallow coal-mine workings from field measurement', 1988. It is normal engineering practice to assume that there is a risk of surface instability if there is less than ten times intact seam thickness cover above any worked coal seam. It should be noted that competent cover means rock (and superficial deposits such as glacial till do not contribute to this cover)).*

The surface stability of the site cannot be guaranteed in the absence of intrusive investigation, which would be required in order to fully assess these potential risks across the site. It is recommended that a series of rotary boreholes are put down to a maximum of 30m depth with all such works undertaken with an appropriate CA licence. In the event of a risk to surface stability being proved, subsequent treatment of shallow mine workings by drill and grout may be necessary to achieve ground consolidation prior to development and foundations may need to be reinforced. Any design of such mitigation measures for the presence of shallow mine workings would need to be undertaken in consultation with the Coal Authority.

### **Mine Entries**

The CA indicates a former shaft to be present adjacent to the southeast boundary of the site, several more shafts are recorded within 150m off the site's northwestern, western and southern boundaries. Due to possible inaccuracies associated with the positioning of the recorded former shaft, it may be that the shaft is present within the site itself. Given the site's setting within a historically mined area, there is potential for the presence of unrecorded mine entries on site which may have been put down to exploit the underlying shallow and deeper coal seams.

The presence of such features is considered as presenting a potential risk to development by way of surface instability and potential collapse. A zone of influence is associated with former mine entries (either present on site or adjacent to the site) whereby any development within the zone would be affected by potential surface instability. The nature of any proposed development on the site requires assessing in terms of the potential risk presented by any such features to that specific development layout.

The presence of the recorded shaft within the southeastern part of the site should be confirmed during intrusive investigation works at the site. In addition, during site enabling works and a site strip the exposed subsoils should be checked for the presence of disturbed and potentially unstable ground associated with backfilling of such features. If mine entries are identified on the site, or adjacent to the site, then these may require treatment by drill and grout and subsequent capping or partial excavation and incorporation of a geotextile reinforcement spanning their extent and potential zone of influence, as appropriate. Any design of such mitigation measures for the presence of mine entries would need to be undertaken in consultation with the Coal Authority.

### **Mine Gases**

There is a potential for the presence and migration of mine gases from shallow mine workings if they are present beneath the site, which may present a future human health risk to end users. Deep made ground, if present on or adjacent to the site, may also present a ground gas source.

With regard to the proposed development, any potential mine gases that may affect the building could be mitigated by the incorporation of robust gas protection measures (gas barriers) during construction,



subject to regulatory approval. The installation of gas wells and the undertaking of a gas monitoring programme is considered warranted with any recommendations subject to regulatory approval.

## **5.0 SUMMARY**

The site is assessed as potentially at risk from historic mining issues, mainly possible recorded shallow mine workings, recorded and unrecorded mine entries and mine gases.

Adequate mitigation of these risks will require a targeted intrusive investigatory drilling and trial pitting programme to confirm the presence of shallow mineworkings and/or former mine entries and may require a further drill and grouting programme, subject to findings. Appropriately designed foundations are considered necessary. Vigilance will be necessary during the site strip and site enabling works as to the potential presence of disturbed ground associated with the collapse of shallow mine workings or the backfilling of historic unrecorded mine entries. If confirmed as present, drilling and grouting or other mitigation measures with regard to identified mine entries may be necessary.

The use of gas protection measures is potentially considered warranted, subject to the results of intrusive investigations and regulatory advice.

## **Attachments**

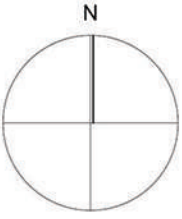
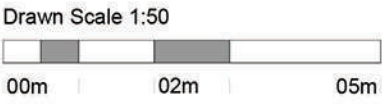
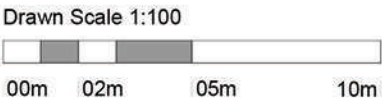
Drawings:

- H17075-701 Site Location Plan
- H17075-702 Site Features Plan
- Proposed layout plan

Coal Authority Consultants Mining Report



"For the purposes of Planning Consent the following applies to any copy of this drawing made by the Local Authority:  
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Issue Purpose: PLANNING APPLICATION

|                                                   |  |                                                                                                                                                                    |  |
|---------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Project: 2340 : Healey Lane : Outline Application |  | Issued From:                                                                                                                                                       |  |
| Title: Proposed Site Plan                         |  | Date: July 2022                                                                                                                                                    |  |
|                                                   |  | Scale: 1:200 @ A1                                                                                                                                                  |  |
|                                                   |  | Drawn: BH Auth: BH                                                                                                                                                 |  |
| Drawing Number: 2340 - D - 20 - 003               |  | Revision:                                                                                                                                                          |  |
|                                                   |  | Do not scale from this drawing. Work to stated dimensions, and any discrepancy is to be reported to the Architect. Refer to larger scale drawings where available. |  |

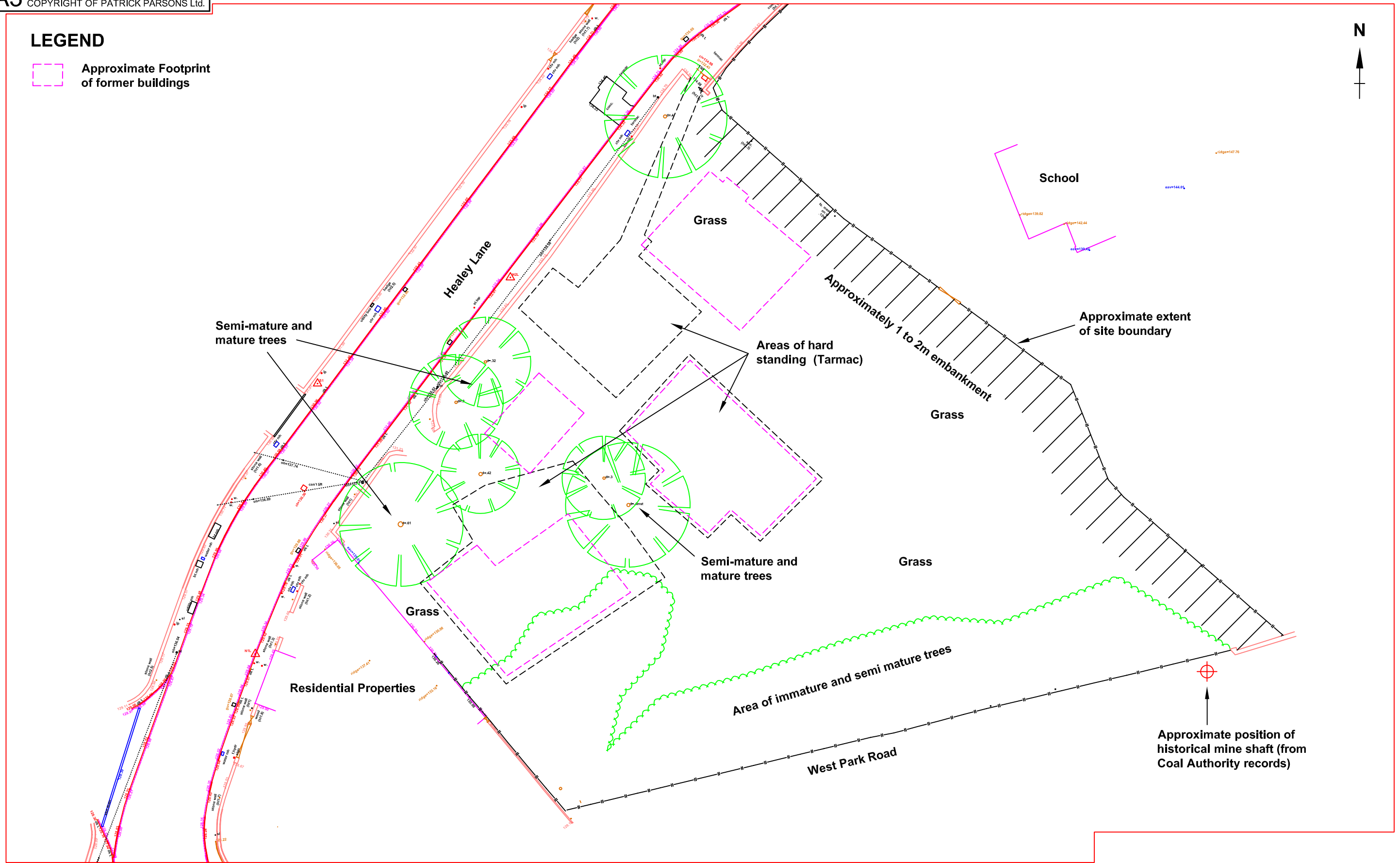




|                                                                                                                                                                                                        |                                       |                                      |                               |                                       |         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|--------------------------------------|-------------------------------|---------------------------------------|---------|
| <br><b>PATRICK PARSONS</b><br>T. +44 (0)1484 516 977<br>E. info@patrickparsons.co.uk<br>W. www.patrickparsons.co.uk | Client <b>PLANNED CONTRACTS LTD</b>   | Drawing<br><b>SITE LOCATION PLAN</b> | Scales <b>NTS</b>             | Drawn <b>ACV</b><br><b>MARCH 2018</b> | Checked |
|                                                                                                                                                                                                        | Project<br><b>HEALEY LANE, BATLEY</b> |                                      | Drawing No. <b>H17075-701</b> | Rev. <b>P1</b>                        |         |

LEGEND

 Approximate Footprint  
of former buildings



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Client **PLANNED CONTRACTS LTD**

Project  
**HEALEY LANE, BATLEY**

Drawing  
**SITE FEATURES PLAN**

Scales **NTS**

Drawn **ACV**  
March 2018

Checked **JR**

Drawing No. **H17075-702**

Rev. **P1**





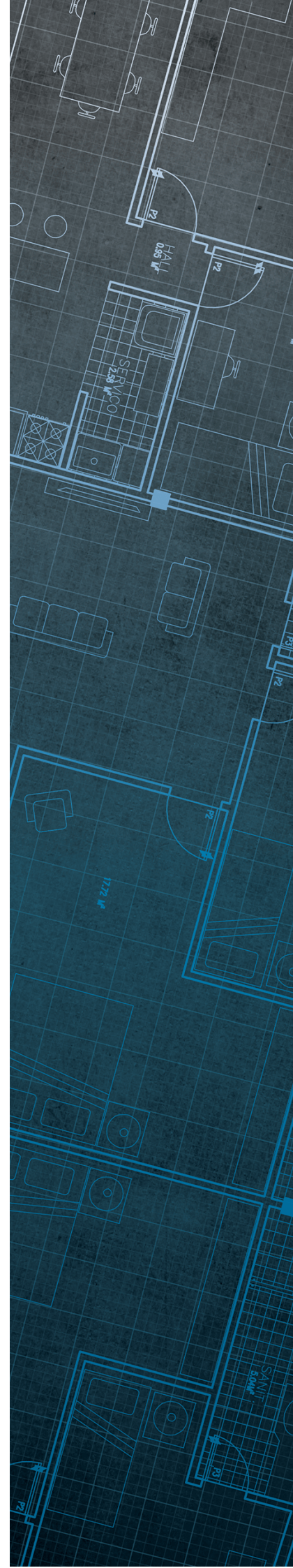
The Coal  
Authority

# Consultants Coal Mining Report

Land At  
Healey Lane  
Batley  
West Yorkshire  
WF17 8BN

|                        |               |
|------------------------|---------------|
| Date of enquiry:       | 14 March 2018 |
| Date enquiry received: | 14 March 2018 |
| Issue date:            | 14 March 2018 |

|                 |                |
|-----------------|----------------|
| Our reference:  | 51001808263001 |
| Your reference: | H17075/JR/2979 |



# 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

Patrick Parsons Limited

### Enquiry address

Land At  
Healey Lane  
Batley  
West Yorkshire  
WF17 8BN

### How to contact us

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 @coalauthority

 /company/the-coal-authority

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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 |
|----------|----------------|---------|--------------------------|-----------|----------------------|---------------------------------------|---------------------------------|---------------------------|-----------------|
| unnamed  | FLOCKTON THICK | Coal    | 6O4S                     | 77        | Beneath Property     | 0.0                                   | East                            | 120                       | 1870            |
| unnamed  | FLOCKTON THICK | Coal    | 6ZLC                     | 79        | Beneath Property     | 0.0                                   | East                            | 130                       | 1870            |
| unnamed  | FLOCKTON THIN  | Coal    | 6O4T                     | 93        | Beneath Property     | 0.0                                   | East                            | 90                        | 1870            |
| unnamed  | FLOCKTON THIN  | Coal    | 6ZLE                     | 93        | Beneath Property     | 0.0                                   | East                            | 90                        | 1870            |

## Probable unrecorded shallow workings

Yes.

## 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      | 422423-005 | 422760 423955  |                       | Coal    |                      |

## Abandoned mine plan catalogue numbers

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

|        |        |        |
|--------|--------|--------|
| FGB569 | FGB568 | FGB567 |
| PO0    | FGB427 |        |

**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**

Please refer to the 'Summary of findings' map (on separate sheet) for details of any geological faults, fissures or breaklines either within or intersecting the enquiry boundary.

Fault under or close to the property 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

| Distance to site investigation (m) | Direction  |
|------------------------------------|------------|
| 12.5                               | North-West |

See Section 4 for further information.

### 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 31st October 1994.

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

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

### Mine gas

None recorded within 500 metres of the enquiry boundary.

### Mine water treatment schemes

None recorded within 500 metres of the enquiry boundary.

## Section 3 – Licensing and future mining activity

### Future underground mining

None recorded.

### Coal mining licensing

None recorded within 200 metres of the enquiry boundary.

### Court orders

None recorded.

### Section 46 notices

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

### Withdrawal of support notices

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

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

### Payments to owners of former copyhold land

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

## Section 4 – Further information

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

### Development advice

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

### Site investigations

The site is within an area of previous interest. It is close to where the Coal Authority has received information relating to past site investigations.

The site requires further investigation and may influence how you approach your risk assessment.

**For further information on specific site or ground investigations in relation to any issues raised in Section 4, please call us on 0345 762 6848 or email us at [groundstability@coal.gov.uk](mailto:groundstability@coal.gov.uk).**

## Section 5 – Data definitions

The datasets used in this report have limitations and assumptions within their results. For more guidance on the data and the results specific to the enquiry boundary, please **call us on 0345 762 6848** or **email us at [groundstability@coal.gov.uk](mailto:groundstability@coal.gov.uk)**.

### Past underground coal mining

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

### Probable unrecorded shallow workings

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

### Spine roadways at shallow depth

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

### Mine entries

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

### Abandoned mine plan catalogue numbers

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

### Outcrops

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

### Geological faults, fissures and breaklines

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



### **Opencast mines**

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

### **Coal Authority managed tips**

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

### **Site investigations**

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

### **Remediated sites**

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

### **Coal mining subsidence**

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

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

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

### **Mine gas**

Reports of alleged mine gas emissions received by the Coal Authority, either within or within 500 metres of the enquiry boundary that subsequently required investigation and action by the Coal Authority to mitigate the effects of the mine gas emission.

### **Mine water treatment schemes**

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

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

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

### **Future underground mining**

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

### **Coal mining licensing**

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

### **Court orders**

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

### **Section 46 notices**

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

### **Withdrawal of support notices**

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

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

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

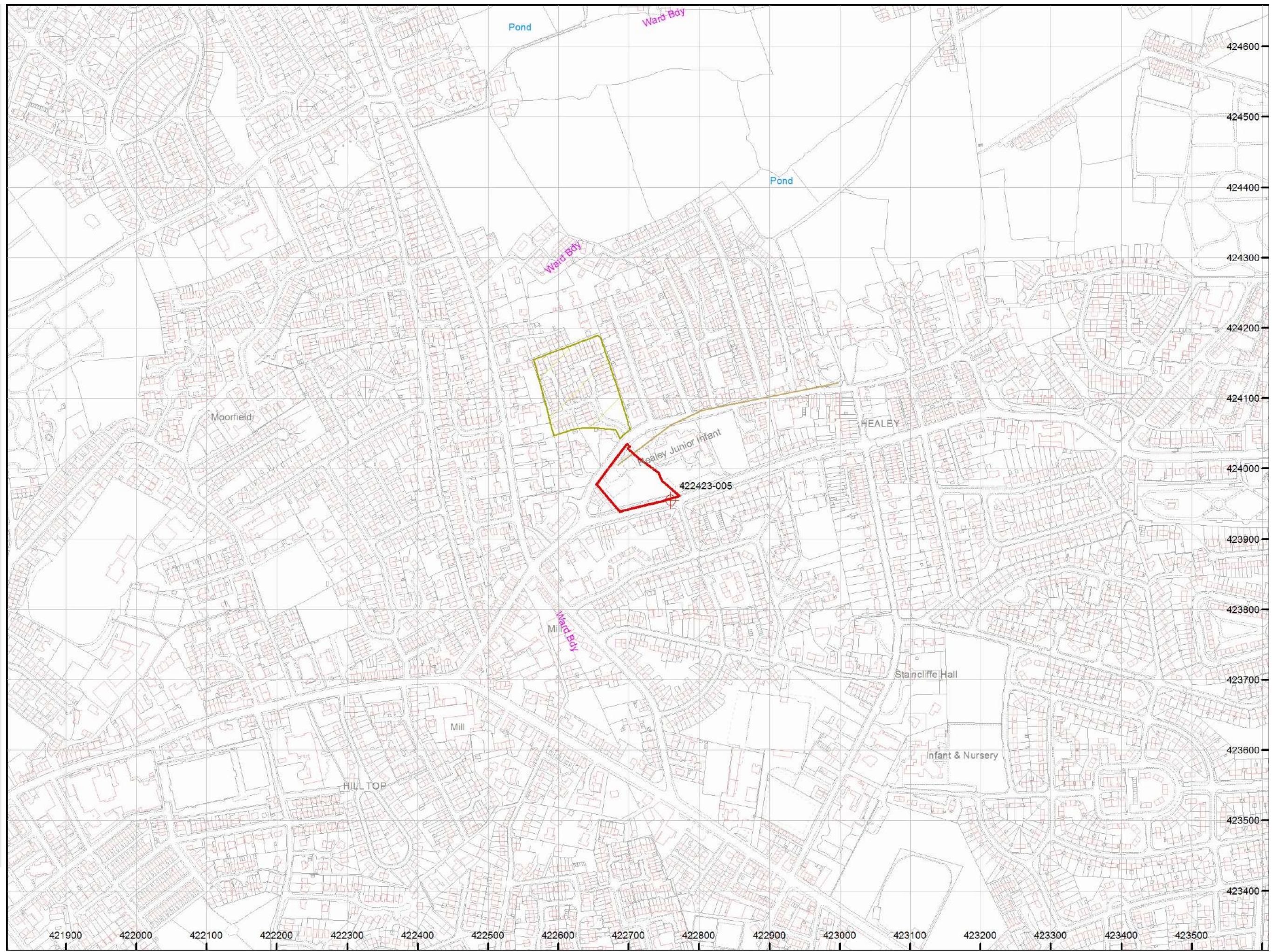


The map highlights any specific surface or subsurface features within or near to the boundary of the site.

**Key**

- Approximate position of the enquiry boundary shown 
- Disused mine shaft 
- Geological faults 
- Site investigations 

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