Morrisons Heckmondwike Service Station

Coal Mining Risk Assessment

Motor Fuel Group Ltd

Prepared by:

SLR Consulting Limited

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SLR Project No.: 405.065470.00001

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Revision: 01

Basis of Report

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1.0 Introduction

1.1 Appointment

SLR Consulting Limited (SLR) was commissioned by Motor Fuel Group Ltd (MFG), to undertake a Coal Mining Risk Assessment (CMRA) of FS2042, Morrisons Heckmondwike Service Station, Heckmondwike, WF16 0HL (the site) in support of a planning application for proposed re-development for continued commercial use. A CMRA has been requested to assess potential historical mining activities that may impact the proposed development.

The location of the proposed development is shown on Drawing 01. The site boundary is shown in red on Drawing 14314-2042-BP - Block Plan included within Appendix A, which also provides detail on the site's existing layout.

1.2 Proposed Development

The planning authority has requested that the planning application is supported by a CMRA to address potential risks to the proposed development associated with historical mining. The proposed development, in outline, will comprise:

- Construction of a single storey shop building extension (63m2) to the existing filling station shop building.
- Construction of six EV charging bays and GRP cabinet, GRP LV enclosure and GRP substation enclosure.
- Construction of four jetwash bays and two valet bays.

The existing petrol filling station (PFS) forecourt and fuel storage and dispensing infrastructure are located out with the site boundary with respect to the planning application (Appendix A).

This assessment is based on the assumption that a standard shallow foundation solution (strip foundation/pad) will be suitable for the shop extension and substation. Construction of the EV bays and electrical infrastructure is unlikely to require deep foundations and is considered predominantly surface works.

Drawing 14314-2042-201- Proposed Site Layout, presented in Appendix B, shows the proposed development layout.

1.3 Background

The proposed development is located within a Coal Mining Reporting Area, indicating it is underlain by Carboniferous coal bearing strata (Coal Measures). The proposed development is also in an area classed as a Development High Risk Area (DHRA), which is defined as a coal mine reporting area which contains one or more recorded coal mining features which have potential for instability or a degree of risk to the surface from the legacy of coal mining operations. This potential risk could arise from a combination of features which could include:

- mine entries;
- shallow coal workings (recorded and probable);
- recorded coal mining related hazards;
- recorded gas sites; and
- fissures and breaklines and previous surface mining sites.

The proposed development site comprises an area of land to the south of the junction between Regent Street and Union Street, west of the existing Morrisons Heckmondwike superstore and

within an urban area. The surrounding topography is generally flat, with a gentle slope down to the southwest. The approximate elevation of the proposed development is 60mAOD.

A review of historical maps indicates the proposed development site and surrounding area were occupied by commercial and residential properties from the late 19th century with a foundry located in the north of the site. Later maps depict residential properties locally, and recent maps show the commercial use of the present day.

To complete this CMRA, a Coal Authority Consultants Report was reviewed along with geological information from the British Geological Survey[1] (BGS), historical mapping and relevant mining memoirs. A review of available BGS borehole records (Appendix C) was also carried out. The Coal Authority Consultants Report is provided in Appendix D.

This report provides a review of the likelihood of mining activity (including traditional underground and opencast mining, both recorded and potentially unrecorded) which may have taken place beneath the proposed development.

The geological setting and mining framework of the development area and the surrounding area are described in Section 2.0, which is followed by the Mining Assessment in Section 3.0. Conclusions are presented in Section 4.0.

1 BGS, 1999. SE22SW. Solid and Drift. 1:10,000 Series

2.0 Geological and Hydrogeological Setting

2.1 Geology

Information on geology and mining has been obtained from the BGS online map viewer, BGS borehole logs and published geological maps of the site and surrounding area. There is no borehole information available for the site itself.

2.1.1 Superficial Deposits

The geological mapping (BGS) indicates that Alluvium is present beneath the west of the site, with no superficial deposits recorded beneath the remainder. No BGS boreholes are located within 50m of the site. However other records indicate that where superficial deposits are recorded as absent, firm to stiff clay nevertheless overlies bedrock at depths between 4m and 5m bgl.

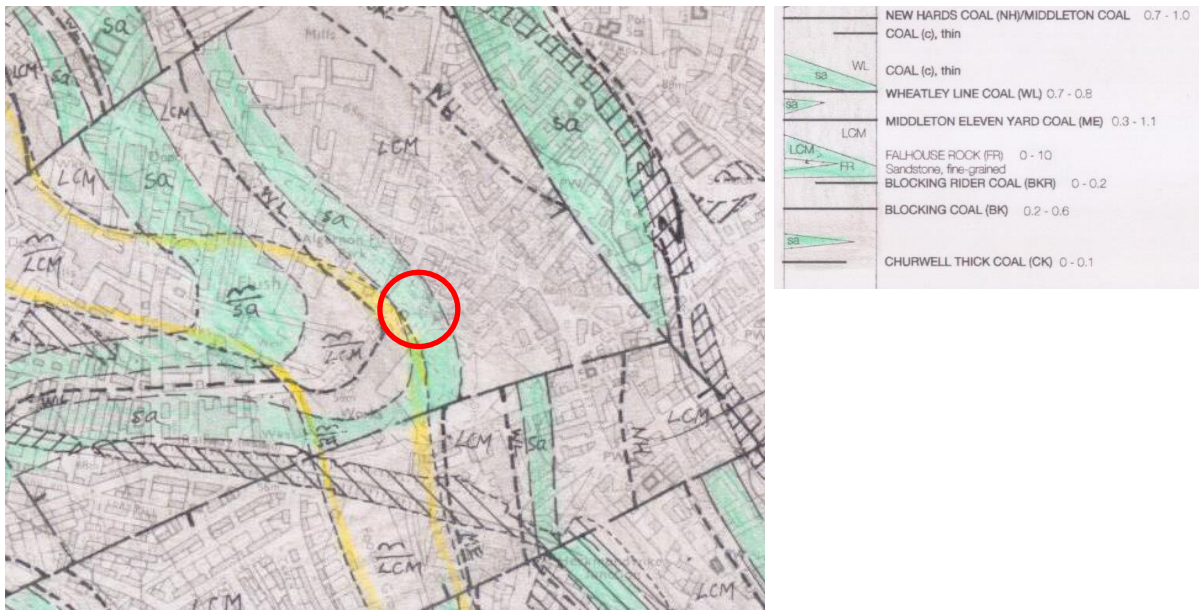
Borehole logs obtained from the BGS are provided in Appendix C.

2.1.2 Solid Geology

The site is located on an extensive Carboniferous basin; within a thick sequence of Westphalian age Coal Measures comprising the Pennine Lower Coal Measures (LCM). The site is underlain by strata of the LCM, comprising mainly cyclic sequences of sandstone, siltstone and mudstone with bands of coals. The geology recorded by the BGS indicates strata with a moderate dip to the northeast, with the site located on the northern limb of a northwest to southeast trending tightly folded anticline, as presented on Figure 2-1.

A series of southwest to northeast trending faults occurs within the surrounding area at spacings between 250m and 500m, latterly offset by a northwest to southeast trending series of faulting.

Figure 2-1: 1:10,000 SE22SW Extract[1] (Proposed Development Location in Red)



The shallowest coal identified in the sequence below the site is the Wheatley Lime Coal, which is projected to subcrop 20m beyond the site's west boundary. The underlying coal includes the Middleton Eleven Yard coal that, whilst not mapped, is stratigraphically located 3 to 5m below the Wheatley Lime Coal. Further coals include the Blocking Rider Coal and Blocking Coal.

Information on coal seam stratigraphy has been obtained from mining memoir for the Yorkshire Coalfield[2] and local stratigraphic sections[3] of the LCM. In the absence of structural information for the stratigraphy beneath the site, the coal seam separation when correlated within the mapped seam subcrop and borehole records can be used to determine an approximate dip in the stratigraphy locally, further discussed conceptually within Section 3.0.

2.2 Borehole Records

2.2.1 BGS Borehole Logs

Whilst no BGS borehole records are located on the site or immediate area offsite, logs from the wider area can provide an overview and indications of the superficial and bedrock geology beneath the site. A summary of borehole records is presented in Table 2-1 below and provided in full in Appendix C.

Table 2-1: BGS Borehole Records

Borehole Reference	Distance to Site and Direction	Borehole Depth (m bgl)	Recorded Geology and Depth Range (m bgl)
SE22SW272	192m E	7.0	Made Ground to 1.8m bgl[4] Stiff dark brown sandy gravelly clay 1.8 to 4.3m bgl Bedrock – mudstone from 4.3m
SE22SW1546	212m W	5.7	Made Ground to 2.9m bgl Sandy clay from 2.9m to 3.2m bgl Bedrock – weathered mudstone and sandstone to 5.7m bgl
SE22SW27	320m NW	182	Made Ground above sandy clay to 1.1mbgl Bedrock – interbedded sequence of sandstone, mudstone, shale and siltstone, with coal seams as follows: Wheatley Lime Coal @54.6m bgl Blocking Coal @80.4m bgl Lousey Coal @104m bgl

Borehole logs within the surrounding area, available on the BGS online viewer, confirm the likely presence of made ground soils. Despite no superficial soils being recorded by the BGS at the locations of each borehole, the borehole logs record made ground onto a layer of cohesive soils overlying shallow bedrock at thicknesses between 0.3m and 2.5m.

A single borehole log, as outlined in Table 2-1, records the presence of an intact coal seam approximately 320m northwest of the site. The log infers that the borehole intercepted the Wheatley Lime Coal at a depth of 54.6m bgl. Based on this recorded depth and when correlated with the seams projected outcrop approximately 120m to the southwest, the calculated stratigraphic dip is 23^0, which is considered representative of the strata beneath the site.

[2] HMSO, London, 1878. The geology of the Yorkshire Coalfield

[3] Geological Survey Office, London, 1871. Strata between the Haigh Moor and Blocking Coals near Flockton and Leeds (Yorkshire)

2.3 Coal Mining History

The surrounding area lies within the Yorkshire Coalfield and there is a long history of coal exploitation regionally. A number of economic coal seams are present in the strata locally, with a number of workings present dating from the mid-19th century, predominantly to the southeast and southwest of Heckmondwike. There is limited evidence of coal mine legacy features noted in the surrounding area, such as spoil tips or large excavations. A single colliery is located on historical maps within 1km of the site, located 400m southwest, and labelled as disused on mapping from the end of the 19th century.

The mining memoir for the Yorkshire Coalfield[2] provides limited information regarding the worked extent of the Wheatley Lime Coal, Middleton Eleven Yard Coal and Blocking Coal seams locally. This is likely a reflection of the limited extraction history of these seams, particularly during the time of urban expansion in Heckmondwike.

2.4 Coal Mining Report

SLR obtained a Coal Mining Report from the Coal Authority, see report reference 51003455146001 (Appendix D). Key sections of the Coal Mining Report are reproduced below.

2.4.1 Mining Activity and Geology

Past Underground Mining – Recorded Workings

Table 2-2: Past Underground Mining

Colliery	Coal Seam	Coal Authority Reference	Depth (mbgl)	Direction of working	Dipping rate of seam worked (degrees)	Dipped direction of seam worked	Extraction thickness (cm)	Year last mined
Unnamed	Better Bed	6I02	238	South	5.0	East	48	1919

Probable Underground Mining – Unrecorded Workings

The property is not considered to have probable unrecorded shallow workings (<30m depth).

Mine entries

There are no recorded mine entries within 100 metres of the boundary of the property. There may however be mine entries/additional mine entries in the local area which the Coal Authority has no knowledge of.

Outcrops

One recorded within 50m of the enquiry boundary.

Table 2-3: Coal Outcrops

Seam Name	Seam Workable	Distance to Outcrop (m)	Direction to Outcrop	Outcrop Bearing (°)
Wheatley Lime	Yes	20.4	SW	151

Opencast Coal Mining

None recorded within 500m of the enquiry boundary.

Mine Gas

There is no record of a mine gas emission requiring action by the Coal Authority within the boundary of the property nor 500m from the enquiry boundary.

2.5 Geology and Mining Summary

The site is located in the historical urban centre of Heckmondwike and the proposed development comprises a single storey shop extension, new jet wash facilities, new EV charging bays and a new substation enclosure. The ground conditions likely comprise shallow made ground onto a locally variable thickness of unrecorded superficial clayey soils and alluvium overlying bedrock, as determined from BGS borehole logs and published maps. Therefore, depth to bedrock is estimated to be 3 to 5m below ground level.

The local coal seam stratigraphy and mapping indicate the Wheatley Lime Coal subcrops 20m beyond the western boundary of the site, dipping at approximately 23^{O} to the northeast towards the site. A number of further seams are projected to underlie the Wheatley Lime Coal, including the Middleton Eleven Yard Coal and Blocking Coal, each anticipated to occur at depths of less than 50m beneath the site.

The Coal Mining Report records no workings of the shallow seams discussed above, and hence any workings if present would be considered unrecorded. There are deeper recorded workings, however these likely occur at depths greater than 200m, beyond any potential influence at surface level. Indicators of mine workings locally are limited to a single former colliery located 400m to the southwest, dating from the mid-19^{th} century.

3.0 Coal Mining Risk Assessment

For the purposes of this mining risk assessment, all available sources, including CA reports, borehole records and other publicly available information, have been assessed and assigned a relative degree of risk to highlight potential areas of concern based on identified features and potential future actions.

3.1 Risk Assessment

Table 3-1 presents the framework used to complete the assessment.

Table 3-1: Risk Assessment Framework

Risk Status	Action
No Risk	Identified feature(s) not considered to pose any risk to proposed development. No further action required.
Low Risk	Identified feature(s) are unlikely to pose a risk to any future proposed development although further action may be required, such as intrusive site investigation.
Medium Risk	Identified feature(s) may present a risk to any future proposed development and further actions are likely to be required including, but not limited to, intrusive site investigation and potentially ground improvement works.
High Risk	Identified feature(s) present a risk to any future proposed development and further actions are required including, but not limited to, intrusive site investigation and potentially ground improvement works.

Where mining is identified at less than 20m depth (approximately) from surface, this should be considered as a high risk for any potential future development. If the mining has taken place 20 to 30m from surface a medium risk and in excess of 30m from surface a low risk.

Depth to workings is not the only factor to consider. The coal mining technique used, the amount and type of rock cover, and the geological setting and dip of the coal strata are all significant factors which must also be considered. Finally, the most important consideration is the type of proposed end use, which will dictate the risk associated with historical mine workings. This assessment is based on the proposed development of a single storey shop extension, EV charging bays and substation, with the shop extension and substation assumed to require a shallow foundation solution.

The shallowest coal seam anticipated to occur beneath the site is the Wheatley Lime Coal, projected to occur at depths from 13.5m beneath the site, as presented on schematic section in Figure 3-1. The underlying Middleton Eleven Yard Coal is anticipated to occur at depths less than 20m below ground level. The above-mentioned shallow seams are not recorded or indicated to have been worked locally, based on Coal Authority records, a review of historical maps, memoirs and logs for boreholes located to the northwest. Therefore, in the event coal mining features are present beneath the site these would be considered as unrecorded workings, and hence further assessment regarding the likelihood of these workings being present is required to fully determine any associated risks.

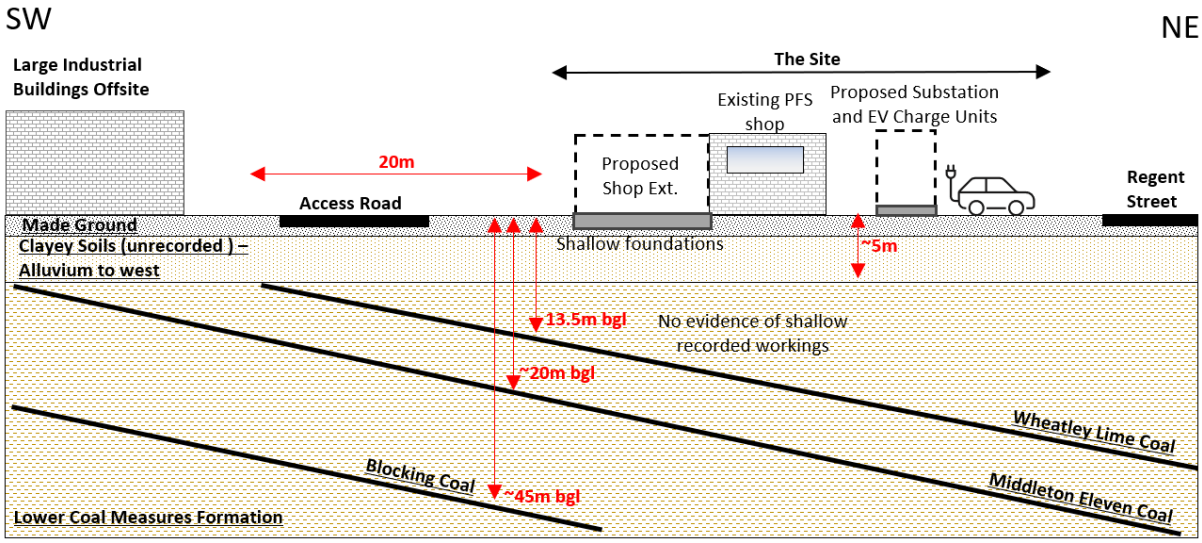
The shallowest seam is projected to continue beneath the western portion of the site at depths from 13.5m bgl, which in the event the seam has been worked could potentially pose a risk of void migration to the surface. However, SLR considers the likelihood of shallow workings occurring beneath the site to be low, due to:

- No evidence of this seam being worked locally, based on Coal Authority records, local mining memoirs[2] and historical mapping. The limited seam reference within the local

mining memoirs indicates the shallow seams beneath the site are of lower economic importance.

- No evidence of mineral extraction activities within the surrounding area, likely limited due to the urban site setting.
- The shallow nature of the seam would, if worked, pose increasing risks of instability and water ingress during mining activities making extraction non-viable in this locality.
- The recorded presence of tight folding of strata locally may limit the potential for mineral extraction, particularly at shallow depths due to the factors discussed above.

Figure 3-1: Schematic Cross Section



As discussed, based on the shallow depth of the projected seams beneath the proposed development, the likelihood of their being worked by underground methods is low, with any extraction, if present, likely to have been in the form of bell pits or opencast methods. In the event these seams have been worked from surface, this may present potential theoretical ground stability risks dependent on the nature of the backfilling or treatment. However, given the development history and current hard surfacing any issues would likely have materialised previously. This is further highlighted by the likely age of recorded workings in the surrounding area (from the mid-19th century) and the general urban site setting, which will have limited the potential for extensive mineral extraction particularly at shallow depths.

The shallowest recorded workings are beyond 200m depth and are not considered to pose a risk to surface. Furthermore, there are no recorded mine entries within 100m of the site.

In addition to the above regarding the low likelihood of workings of the shallow seams, the relatively small scale of the proposed development and anticipated low loadings indicate that the risks from underground workings are further reduced.

In summary, there are no shallow recorded workings beneath the proposed development and the likelihood of shallow unrecorded workings being present is low. Therefore, risks associated with mine legacy features are considered to be low for the proposed development.

3.2 Mine Gas Assessment

The proposed development is located within a DHRA, as classified by the Coal Authority. Therefore, when evaluating the potential risks, liabilities and costs associated with coal mining features, best practice is to consider site conditions using the principles of linkage between sources, pathways and receptors.

Hazardous ground gases may be present from any mine entries and shallow underlying mine workings that are present, although their presence is considered unlikely. Migration of gases

may occur via permeable made ground or preferential pathways. Receptors of hazardous gases include on-site human health and future buildings. However, the likelihood of a linkage from a mine gas source to the proposed development is low based on information summarised below:

- The coal seams projected to occur at shallow depths beneath the proposed shop extension are not considered a credible source of ground gas based on the latest guidance[5] regarding unworked coal measures. As discussed in Section 3.1, the likelihood of the seams being worked is low.
- In the event the shallow coal seams are worked, they would likely date from the 19th century and thus any potential mine gas generated would likely have dissipated and any high generation source capable of producing flow to the surface, no longer present.
- There is no record of mine gas emission requiring action as outlined within the Coal Authority Mining Report (Appendix C).
- Recorded coal workings in excess of 200m below ground level have limited potential for gas to migrate to surface.
- Limited foundation depths are anticipated and therefore there will be no preferential migration pathway to surface for potential mine gas from any underground workings.

Based on the information above, risks associated with mine gas are considered to be low.

[5] NHBC 2023. Hazardous Ground Gas; An Essential Guide for Housebuilders

4.0 Summary and Conclusions

This coal mining risk assessment for the proposed development at Morrisons Heckmondwike Service Station concludes that, based on the available information reviewed, the site is likely to be minerally stable. Whilst the proposed development is underlain at shallow depths by two coal seams, including one seam projected to subcrop 20m beyond the western limits of the site, these seams are considered unlikely to have been mined by underground methods locally given the urban setting, no historical indicators of mining and unfavourable mining conditions due to localised folding of the shallow strata.

There is no record of a mine gas emission requiring action within the boundary of the site according to the Coal Authority and SLR considers the risk associated with mine gas to be low.

Whilst the likelihood for shallow workings is low, the potential for unrecorded mine entries in the form of bell pits/adits and shallow open cast workings cannot be fully discounted. Therefore, it is recommended that given the projected coal seams occur at shallow depths, a watching brief is undertaken during groundworks to identify potential ground stability issues, soft spots within the made ground, unrecorded mine entries or unanticipated ground conditions.

Based on the information reviewed, SLR considers that there is no requirement for further assessment from a mining perspective as the risks are low for a development of this nature. In addition, should the ground conditions beneath the development be considered suitable and an appropriate foundation design implemented following geotechnical assessment, this should be sufficient to prevent residual stability risk from mining from impacting the development.

SLR would only recommend intrusive investigations to determine the mineral stability of the underlying bedrock should the development be altered to a building with a greater footprint and or with deep foundations.

Drawing 01 Site Location Plan

Morrisons Heckmondwike Service Station

Coal Mining Risk Assessment

Motor Fuel Group Ltd

SLR Project No.: 405.065470.00001

10 October 2024



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Coal Mine Risk Assessment

Figure Title: Site Location Plan

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Appendix A Site Layout Plan (Client Supplied)

Morrisons Heckmondwike Service Station

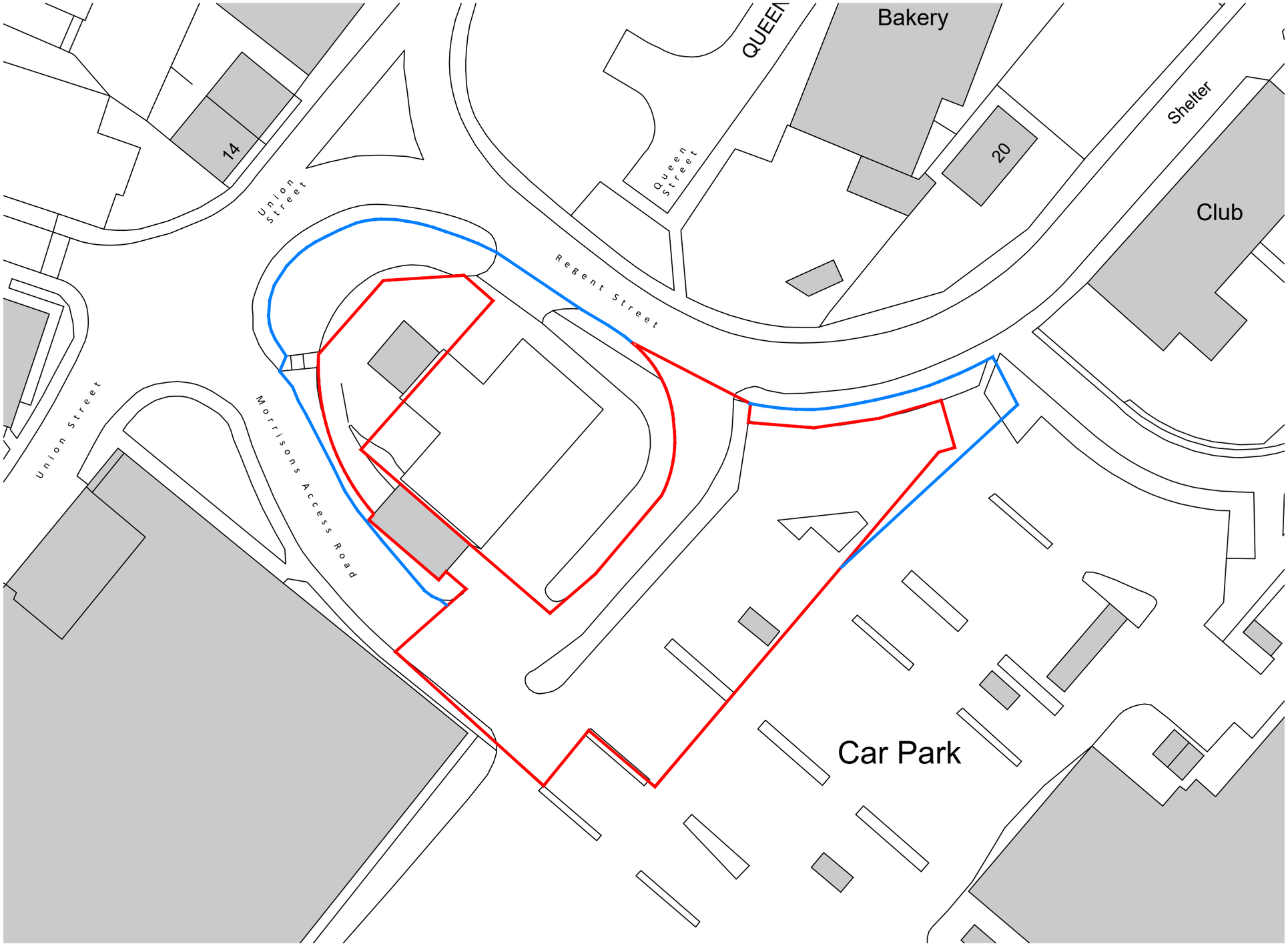
Coal Mining Risk Assessment

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10 October 2024

NORTH



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KEY PLAN:

APPLICANTS LAND OWNERSHIP LINE
AREA - 2986 SQM - 0.2986 HECTARES

APPLICATION SITE BOUNDARY LINE
AREA - 1831 SQM - 0.1831 HECTARES

SCALE BAR 1:500@A3

0 10 20 30 40 50

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PROJECT
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17 UNION STREET
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WF16 0HL

DRAWING TITLE
BLOCK PLAN

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PT	28.08.2024	1:500	A3
CHECKED BY	DRAWING NUMBER		REV.
KL	14314-2042-BP		-

NORTH

14

Union Street

Queen Street

Bakery

20

Regent Street

FL

Sign.

Exit Crossover

Pole Sign

FL

FL

Sales Building

JET WASH

CAR WASH

Jet Wash

Sign

P1

P2

P3

P4

P7

P8

Sign.

P5

P6

P9

P10

P11

P12

Air unit

Vent Stack

Tank Farm

T

Car Wash

Line Of Canopy

FL

Offset Fills

FL

Entrance Crossover

PETROL ONLY

NO ENTRY

Sign

Parking

Sign

FL

Sign.

Tanker Exit Crossover Only

Sign

FL

FL

Parking

Parking

Parking

Parking

Parking

Trolley Bay

Trolley Bay

Parking

Parking

Trolley Bay

Morrisons Access Road

Entrance/Exit Crossover

Entrance/Exit Crossover

Entrance/Exit Crossover

Entrance/Exit Crossover

Entrance/Exit Crossover

Entrance/Exit Crossover

Morrisons

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GENERAL NOTES

1. This drawing has been prepared for the sole purpose of obtaining planning permission.
2. This drawing is to be read in conjunction with drawings numbered:

14314-2042-LP	Location Plan
14314-2042-BP	Block Plan
14314-2042-200	Existing Site Plan
14314-2042-201	Proposed Site Plan
14314-2042-202	Existing Sales Building Layout
14314-2042-203	Existing Sales Building Elevations
14314-2042-204	Proposed Sales Building Layout
14314-2042-205	Proposed Sales Building Elevations
14314-2042-206	EV Charger Details
14314-2042-207	Substation Enclosure Details
14314-2042-208	LV Enclosure Details
14314-2042-209	Meter Cabinet Details
14314-2042-210	Jet Wash Plan and Elevations
14314-2042-211	Air/Water and Vac Deatils
14314-2042-212	Plant Room Elevations

3. Any advertisements are indicative and are subject to a separate advertisement application
4. Any neighbouring buildings shown on the elevations are diagrammatic and have been extrapolated from site photographs. They have not been measured.

SCHEDULE OF EXISTING FINISHES

BUILDING EXTERNAL WALLS
Fairfaced Brickwork external wall finish.

BUILDING ROOF
Flat roof.

SHOPFRONT
Green aluminum framed glazing with push door

CANOPY
Traditional steel framed canopy over forecourt w/o signage fascia.

SURFACING
Mixture of concrete and Asphalt, with various drainage channels / gullies.

0 10 20
SCALE - METRES - 1:200 @ A1

REV	DATE	DESCRIPTION	DRAWN/CHECKED
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17 UNION STREET
HECKMONDWIKE
WF16 0HL

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EXISTING SITE PLAN

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KL	14314-2042-200		-

Appendix B Proposed Site Layout (Client Supplied)

Morrisons Heckmondwike Service Station

Coal Mining Risk Assessment

Motor Fuel Group Ltd

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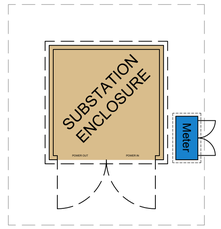
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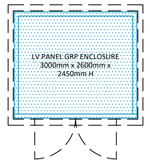
DRAWING LEGEND

- EXISTING KERB
- PROPOSED KERB
- PROPOSED DROPPED KERB
- DEMOLISHED
- EXISTING LINE WORK
- PROPOSED LINE WORKS
- PROPOSED EV BOLLARD - RAL 5015
- EXISTING FLOOD LIGHT
- PROPOSED FLOOD LIGHT
- EXISTING FENCE LINE
- PROPOSED FENCE LINE

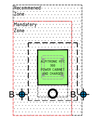
EV INFRASTRUCTURE LEGEND



DENOTES DNO HV/LV SUBSTATION
Typial GRP Enclosure 2.8m x 2.8m
All to service provider standard details
TO ICP DETAILS



DENOTES BESPOKE LV PANEL GRP ENCLOSURE
TO BE SPECIFIED BY ELECTRICIAN
Unit Size 3000mm x 2600mm x
2450mm H GRP unit allowed for
currently



DENOTES CHARGING POST
ALPITRONICS HYC 300

ESS
14
Union Street
Queen Street
Regent Street
Morrisons Access Road
Proposed Hedges.
Road marking to be removed.
Sign.
FL
Exit Crossover
Pole Sign
Proposed Kerb.
New Bin Store
Sales Building
Proposed Extension 63 SQM
Entrance
Existing Jet Wash to be removed.
Existing Jet Wash lane to be removed.
Car Wash
Line Of Canopy
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
P11
P12
Air unit
Vent Stack
Tank Farm
Offset Fills
Entrance Crossover
Proposed Relocated Pedestrian crossing.
Tanker Exit Crossover Only
10No. Existing parking bay to removed
6No. New EV bay to be outlined 3m x 5m - Blue RAL 5015.
3No. Proposed Alpitronic HYC 300 Chargers.
Parking
Denotes LV panel GRP enclosure
New meter cabinet to be installed.
Trolley Bay
Proposed GRP substation enclosure.
2No. Proposed Valet bay.
27No. Existing parking bays to be removed.
Proposed Plant Room.
Trolley Bay to be removed.
4No. Proposed Istobal Jet Washes. 1 No. Opened & 3 No. Closed
Proposed extended Pedestrian crossing.
Proposed Kerb.
Entrance/Exit Crossover
Morrisons
PETROL ONLY
ENTRY

DRAWING NOTES

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This drawing has been produced for the project listed below, is submitted in support of this application application to the Local Planning Authority and is not intended for use by any other person or for any other purpose.

Every effort has been made to ensure the accuracy of these drawings, however MBH Design Studio Ltd. accept no responsibility for any discrepancies arising from the reuse of survey information and preliminary drawings commissioned by the Applicant from others.

GENERAL NOTES

1. This drawing has been prepared for the sole purpose of obtaining planning permission.
2. This drawing is to be read in conjunction with drawings numbered:

14314-2042-LP	Location Plan
14314-2042-BP	Block Plan
14314-2042-200	Existing Site Plan
14314-2042-201	Proposed Site Plan
14314-2042-202	Existing Sales Building Layout
14314-2042-203	Existing Sales Building Elevations
14314-2042-204	Proposed Sales Building Layout
14314-2042-205	Proposed Sales Building Elevations
14314-2042-206	EV Charger Details
14314-2042-207	Substation Enclosure Details
14314-2042-208	LV Enclosure Details
14314-2042-209	Meter Cabinet Details
14314-2042-210	Jet Wash Plan and Elevations
14314-2042-211	Air/Water and Vac Deatils
14314-2042-212	Plant Room Elevations

3. Any advertisements are indicative and are subject to a separate advertisement application
4. Any neighbouring buildings shown on the elevations are diagrammatic and have been extrapolated from site photographs. They have not been measured.

SCHEDULE OF PROPOSED FINISHES

BUILDING EXTERNAL WALLS
Masonry brickwork to match existing external finish. Entire building to be decorated Grey RAL 7016

BUILDING ROOF
Existing sales building flat roof to be retained. New flat roof to be installed over proposed extension.

SHOPFRONT
Part New Shopfront frames to be finished in Grey (RAL7016)
New fully glazed, single auto-sliding door, frames to be finished in Grey (RAL 7016)

CANOPY
Traditional steel framed canopy over forecourt w/o signage to be retained as is.
Canopy to be uplifted to 5.2m High

SURFACING
Existing forecourt surfacing retained as is. Install Asphalt to new footpath and kerbed areas.

BIN STORE
Proposed new bin store

0 10 20
SCALE - METRES - 1:200 @ A1

REV	DATE	DESCRIPTION	DRAWN/CHECKED
-	-	-	-
REVISION NOTES			

PLANNING

mbh
MBH Design Studio Ltd.
Rosemount House, Rosemount Avenue, West Byfleet, Surrey, KT14 6LB
www.mbhltd.com t: 01932 352 727 f: 01932 351 545

CLIENT
mfg motor fuel group

PROJECT
FS2042 - HECKMONDWIKE MORRISONS
17 UNION STREET
HECKMONDWIKE
WF16 0HL

DRAWING TITLE
PROPOSED SITE PLAN

DRAWN BY	DATE	SCALE	PAPER SIZE
PT	28.08.2024	1:200	A1
CHECKED BY	DRAWING NUMBER		REV.
KL	14314-2042-201		-

Appendix C Borehole Logs – BGS

Morrisons Heckmondwike Service Station

Coal Mining Risk Assessment

Motor Fuel Group Ltd

SLR Project No.: 405.065470.00001

10 October 2024

British Geological Survey

BGS ID: 77511 : BGS Reference: SE22SW27
British National Grid (27700) : 421200,423737

SE 22 SW 1/27

77/266

(For Institute use only) Geological Classification	Nature of Strata. If measurements start below ground surface, state how far.	Thickness Feet	Inches	Metres	Depth Feet	Inches	Metre
MADE GROUND	Fill	1	6	.457	1	6	.457
DRIFT	Sandy Clay	2	0	.609	3	6	1.066
LOWER COAL MEASURES (WESTPHALIAN A)	Sandstone & Shale	2	6	.762	6	0	1.828
	Sandstone	10	0	3.048	16	0	4.876
	Flag Sandstone	13	0	3.962	29	0	8.839
	Shale	3	0	.914	32	0	9.753
? see below Cromwell Coal or ? Birstall Rock	Grey Sandstone	8	0	2.438	40	0	12.192
	Shale	3	0	.914	43	0	13.106
	Grey Sandstone	22	0	6.705	65	0	19.812
	Shale	4	0	1.219	69	0	21.031
	Grey Sandstone & Shale	5	0	1.524	74	0	22.555
	Sandstone	5	0	1.524	79	0	24.079
	Coal		4"	.100	79	4	24.179
	Sandstone & Shale Beds	21	8	6.601	101	0	30.784
	Black Shale & Coal Traces	6	0	1.828	107	0	32.612
	Shale and Hard Sandstone Beds	24	0	7.315	131	0	39.928
	Grey Shale with Traces of coal at 150	40	0	12.192	171	0	52.120
	Black Shale	4	0	1.219	175	0	53.340
? LIME	Coal	4	0	1.219	179	0	54.559
	Grey Shale & Sandstone Beds	18	0	5.486	197	0	60.045
	Grey Sandstone	4	0	1.219	201	0	61.264
	Shale	2	0	.609	203	0	61.874
	Shale & Sandstone Beds	24	0	7.315	227	0	69.189
	Sandstone Grey	33	0	10.058	250	0	79.248
	Shale	2	0	.609	262	0	79.857
? BLOCKING COAL	Coal	2	0	.609	264	0	80.467
	Shale	1	0	.304	265	0	80.772
	Sandstone & Shale Beds	3	0	.914	268	0	81.686
	Shale	10	6	3.200	278	0	84.886
	Black Shale	1	6	.457	280	0	85.344
	Shale	3	0	.914	283	0	86.258
	Sandstone & Shale Beds	35	0	10.668	318	0	96.926
	Black Shale	20	0	6.096	338	0	103.022
	Shale	3	0	.914	341	0	103.936
? LOUGH [illegible]	Black Shale & Coal Traces						

Contact BGS: ngdc@bgs.ac.uk

British Geological Survey

BGS ID: 77511 : BGS Reference: SE22SW27
British National Grid (27700) : 421200,423737

SE 22 SW/27 77/266

(For Institute use only) Geological Classification	NATURE OF STRATA If measurements start below ground surface, state how far.	Thickness Feet	Inches	Metres	Depth Feet	Inches	Metre
Lower Coal Measures (Westphalian A)	Grey Shale	10	0	3.048	358	0	109.118
	Blue Shale	12	0	3.657	370	0	112.776
	Shale & Sandstone Beds	42	0	12.801	412	0	125.577
	Shale	32	0	9.753	444	0	135.331
? Clifton Rock	Sandstone & Shale Beds	69	0	21.031	513	0	156.362
	Grey Shale	42	0	12.801	555	0	169.164
	Hard Grey Shale	11	0	3.352	566	0	172.516
	Black Shale	12	0	3.657	578	0	176.174
	Hard Grey Shale	8	0	2.438	586	0	178.612
	Black Shale	14.0	0	4.266	600	0	182.880

Redacted

April 1979

Contact BGS: ngdc@bgs.ac.uk

British Geological Survey

BGS ID: 18157880 : BGS Reference: SE22SW1546
British National Grid (27700) : 421141,423392

DUNELM DRILLING CO.

BOREHOLE RECORD

Contract No. C 4199 Client CALDER STRUCTURES LTD

Ground Level ..... Location RIGBY MARYLAND LTD - LIVERSEDGE

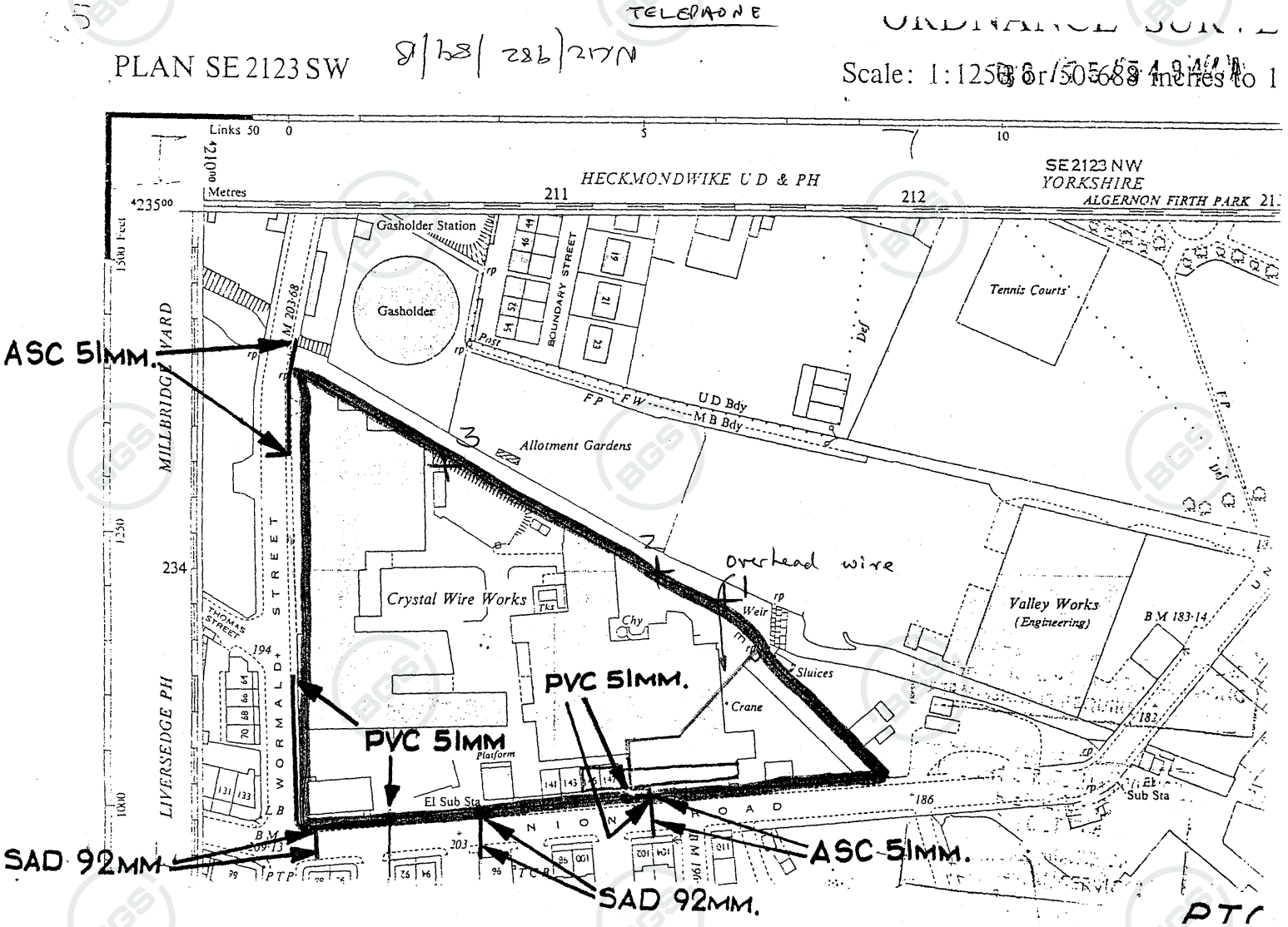
Date NOVEMBER 1989 BOREHOLE No. 1

Depth	Thick-ness	Legend	Description of Strata	Type of Sample	C kN/m²	M %	Ø	Density Kg/m³	N
	0.80		MEDIUM DENSE ASH FILL	P 0.75					7
0.80									
			LOOSE TO MEDIUM DENSE MIXED ASH, CLAY + MUDSTONE FILL	P 1.50					7
	2.10			P 2.50					5
2.90									
	0.40		SOFT VERY SANDY CLAY OR CLAYEY SAND	U 3.20	78.0	15.0	10°	2080	
3.30									
	1.80		THIN BANDS OF BROWN SANDSTONE WITH BANDS OF FIRM DK SHALY CLAY	P 4.50					55
5.10									
	0.80		HARD BROWN + GREY SANDSTONE	P 5.70	FOR 0.20m PENETRATION.				94
5.90									

CHISELLING ROCK 1½ HRS.

Water Struck at 5.00m Standing Water Level 4.50m

Contact BGS: ngdc@bgs.ac.uk


PLAN SE 2123 SW
TELEPHONE
Scale: 1:1250 or 50.688 inches to 1
Links 50
Metres
HECKMONDWIKE U D & PH
SE 2123 NW
YORKSHIRE
ALGERNON FIRTH PARK
Gasholder Station
Gasholder
BOUNDARY STREET
Tennis Courts
UD Bdy
MB Bdy
Allotment Gardens
MILLBRIDGE YARD
LIVERSEDGE PH
WORMALD STREET
THOMAS STREET
Crystal Wire Works
Overhead wire
Weir
Sluices
Crane
Valley Works
(Engineering)
BM 183·14
Platform
El Sub Sta
Sub Sta
ASC 51MM.
PVC 51MM.
PVC 51MM
SAD 92MM
SAD 92MM.
ASC 51MM.
PTC

British Geological Survey

BGS ID: 77756 : BGS Reference: SE22SW272
British National Grid (27700) : 421610,423380

Norwest Holst Soil Engineering Ltd.

Borehole No. 4

BOREHOLE LOG

Contract No. F5090
Location Alfred Street, Heckmondwyke
Client J.B.P. Specialist Services
Method of Boring Percussion
Diameter of Borehole 150mm

SE22SW 272
2161 2338

Sheet 1 of 1
Chainage
Ground Level 66.50 m.A.O.D.
Date 25/11/81

Description of Strata	Legend	Depth Below G.L.(m)	O.D. Level (m)	Casing Depth at Sampling	Sampling and Coring	"N"/ R.Q.D.%	Daily Progress
MADE GROUND: Ash and brick rubble.					0.60	5	
		1.80	64.7		1.60	15	
Stiff dark brown sandy stony CLAY with sandstone fragments.					2.40	26	
		4.30	62.2		3.90	53	
Highly weathered brown MUDSTONE.					5.35	82for 215mm	
		7.00	59.5		6.50	128for 360mm	

Type of Sample

- Is S.P.T.
- Ic. C.P.T.
- O Jar
- ● Bulk
- ■ Undisturbed
- ✕ Vane
- Δ Water
- Piezometer

Remarks (Observations of Ground Water etc.)

Borehole dry.

Water levels are subject to seasonal or tidal variations and should not be taken as constant

Contact BGS: ngdc@bgs.ac.uk

Appendix D Coal Authority Mining Report

Morrisons Heckmondwike Service Station

Coal Mining Risk Assessment

Motor Fuel Group Ltd

SLR Project No.: 405.065470.00001

10 October 2024

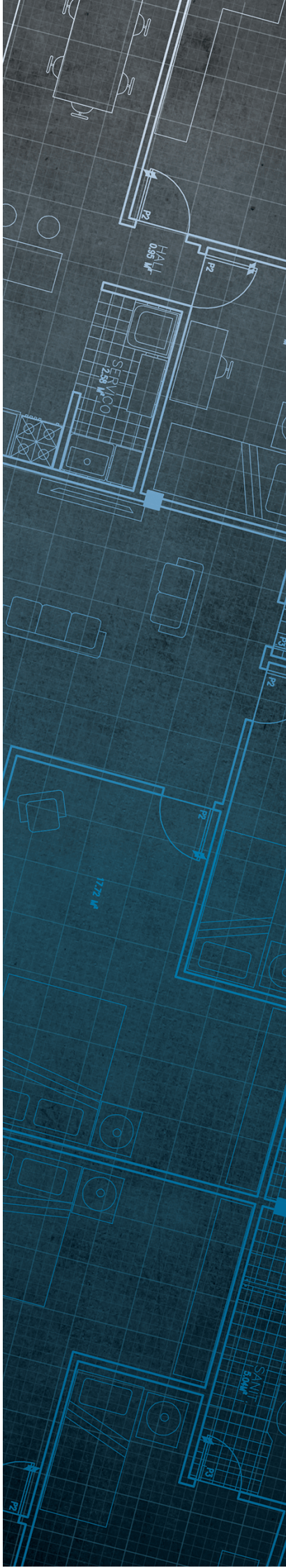
The Coal Authority

Consultants

Coal Mining Report

Petrol Filling Station
Union Street
Heckmondwike
Kirklees
WF16 0HL

Date of enquiry:	**8 October 2024**
Date enquiry received:	**8 October 2024**
Issue date:	**8 October 2024**
Our reference:	**51003455146001**
Your reference:	**Heckmondwike**



Consultants

Coal Mining Report

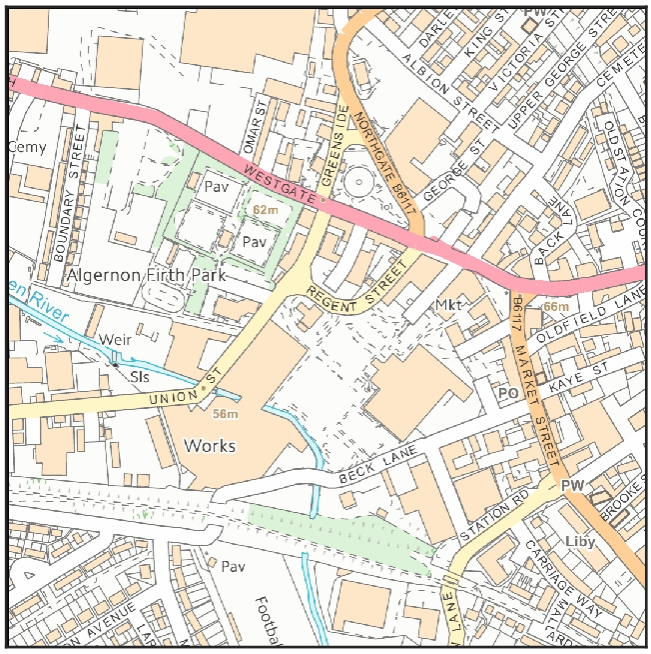
This report is based on and limited to the records held by the Coal Authority at the time the report was produced.

Client name

Josh Stinson

Enquiry address

Petrol Filling Station
Union Street
Heckmondwike
Kirklees
WF16 0HL



Approximate position of property

Map data

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How to contact us

0345 762 6848 (UK)
+44 (0)1623 637 000 (International)

200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

www.groundstability.com

@coalauthority
/company/the-coal-authority
/thecoalauthority
/thecoalauthority

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	BETTER BED	Coal	6I02	238	South	5.0	East	48	1919

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:

5879	5253	M49
PO0	6957	M31

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

Outcrops

Seam name	Mineral	Seam workable	Distance to outcrop (m)	Direction to outcrop	Bearing of outcrop
WHEATLEY LIME	Coal	Yes	20.4	South-West	151

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

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.

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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

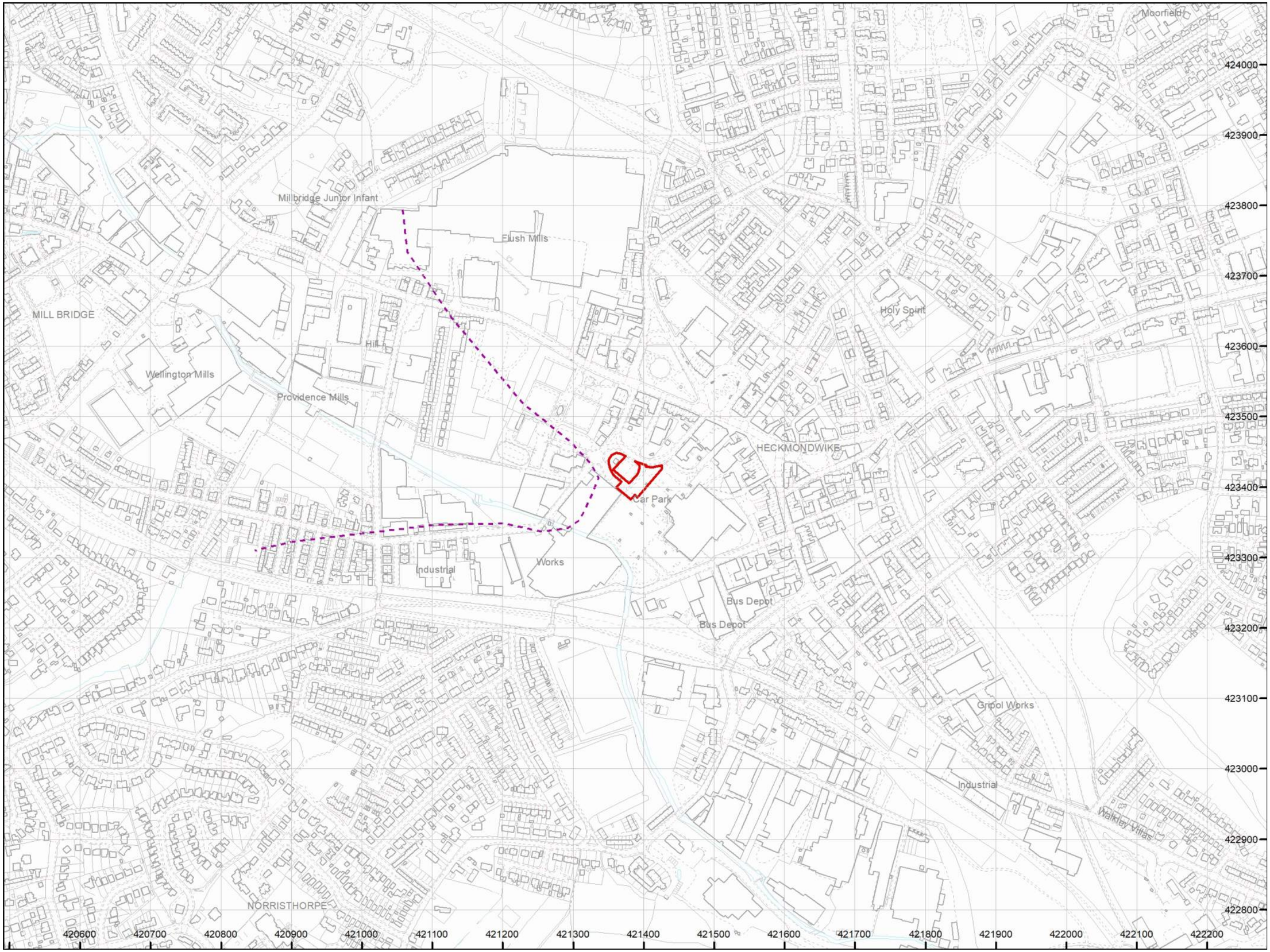
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The map highlights any specific surface or subsurface features within or near to the boundary of the site.

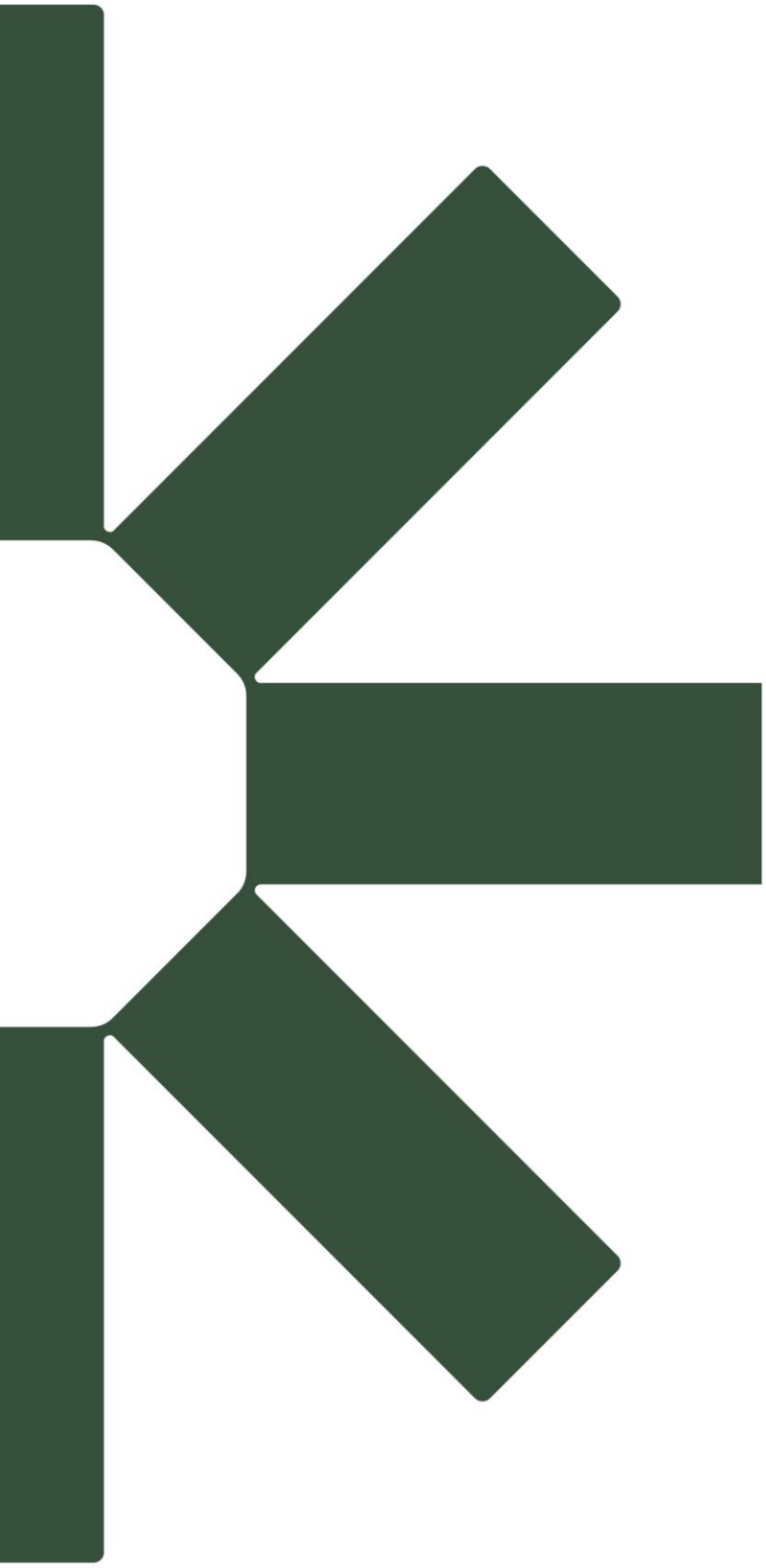
Key

Approximate position of the enquiry boundary shown

Outcrop (Conjectured)



How to contact us
0345 762 6848 (UK)
+44 (0)1623 637 000 (International)
www.groundstability.com



Making Sustainability Happen