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Mr W. Hadfield
Hadfield Developments,
Oak Lodge,
Redbrook Road
Barnsley
S75 2RS

KRP/AJK/45245-001

12 August 2020

Dear Mr Hadfield,

Chambers Road, Platts Common
Coal Mining Risk Assessment

We write to provide a risk assessment against the possibility of shallow coal mining affecting the above site. This risk assessment is based on a review and our interpretation of geological maps and memoirs, as well as a Consultants Coal Mining Report specific to this site. We have not visited the site.

It is proposed to develop the site with small industrial units, with associate car parking and hard surfaced service yards.

The Site

The site is located to the north of Chambers Road, near its junction with Wombwell Road in Platts Common, which is located approximately 3.3 miles south east of Barnsley town centre. The site is irregular in shape on plan, and is centred around grid reference 437050 401407. It appears to slope from approximately 85 m AOD on the western site boundary to approximately 82 m AOD at the southern boundary. Google Earth Imagery shows the site to have been covered by trees and vegetation, but that this has now been removed to reveal made ground comprising hardcore, red shale and rubble at surface.

Site History

Historical maps have been reviewed, which show the site to comprise land within Hoyland Silkstone Collieries by 1892. Railway sidings are shown across the northern boundary of the site, and a shaft is labelled to the west, possibly within the site boundary.

By 1903, buildings have been constructed across the site, encompassing the shaft. Coke ovens are shown to the west of the site.

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M Young MA, CEng, MICE, MIStructE **C A Wood** BSc, CEng, MIStructE, MICE
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P A Harrison BEng, CEng, MIStructE **M P Chappell** BEng, IEng, AMIStructE **M Dyson** BSc, CEng, MIStructE

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The site layout remains the same until aorudn1956, when the rail sidings are removed and the buildings demolished. The shaft is no longer labelled, and so has potentially been filled by this time. The colliery buildings across the wider area have also been removed, suggesting cessation of workings.

From the early 1960s, the site begins to be redeveloped as an industrial estate. New warehouses are shown to the north west by 1962 and the site is indicated to have been plateaued. Buildings continue to be constructed around the site through the 1970s, 1980s and 1990s, although no structures are built on the site itself.

Geological Review

The geological map sheet SE 30 SE (1:10,000 scale) covers the area. The map shows the site to overlie strata of the Pennine Middle Coal Measures series, with undifferentiated mudstone/siltstone shown directly beneath the site. Sandstone beds are shown immediately north and south of the site. The strata are indicated to dip southwards at around 5° by annotations on the map.

No faults or superficial deposits are shown to cross the site at surface. However, the local area is crossed by many faults, and colliery spoil deposits are indicated across the land to the south and south west.

The Abdy Coal is conjectured to outcrop just north of the site, although the site is underlain by strata older than the seam, suggesting that it is unlikely that the Abdy Coal will be present. The shallowest seam of coal expected below the site is the Top Beamshaw Coal, at a depth of around a few metres, although it is not shown to outcrop. The coal is recorded in the geological memoirs for Barnsley as being poorly exposed, and not often worked, being around 300 mm thick in the area between Barnsley and north Rotherham. The Low Beamshaw Coal is also expected to be present, some 15-18 m below the Top coal, and so at a similar depth below ground level beneath the site. The Low Beamshaw coal is between 400 and 600 mm thick, but again is not often worked. A thin coal may also exist between the two main Beamshaw coals in this area.

The next seam of coal expected below the site is the Kent's Thin Coal. This is anticipated at a depth of around 35 m below ground level. The seam is around 600 mm thick, although the memoirs do not record any workings to have been undertaken.

The Kent's Thick Coal is then present a further 20-25 m below the Kent's Thin seam (55-60 m below ground level). The seam is between 750 mm and 900 mm thick, and has locally been worked in the Hoyland area.

The geological map also indicates three colliery shafts in close proximity to the site. These are labelled as the Hoyland Silkstone Colliery “Silkstone Shaft”, the “Flockton Shaft” and “Parkgate Shaft”. The Silkstone Shaft is noted to be 465 m deep, serving workings in the Silkstone seam. The Flockton Shaft served the Flockton/Lidgett Coal seam at a depth of around 235 m bgl, and the Parkgate Shaft served the Parkgate seam, but also extended to the Thorncliffe Coal at a depth of around 395 m bgl.

Coal Authority Report

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

The report states that there are recorded mine workings in five seams of coal beneath the site. The shallowest workings are within the Barnsley or Top Hard coal, at a depth of 115 m below surface. The seam was 2.5 m thick. Workings are also recorded in the Lidgett Coal, the Parkgate Coal, the Thorncliffe Coal and the Silkstone Coal at depth s of between 223 m and 447 m below ground level. The last date of working is given as 1895, from an unknown colliery. Workings within a further three seams are also recorded in the vicinity of the site at depths of between 160 m and 345 m bgl.

The report states that there is not likely to be any unrecorded workings at shallow depth. No spine roadways are recorded within any workings at shallow depth.

There are three mine entries (shafts) recorded in very close proximity to the site. Two are located on or adjacent to the north western boundary of the site, with the third being just to the south east within the entrance to the adjacent industrial estate. One of the shafts on the north west boundary is recorded to have been filled and capped with concrete previously, but no details of any treatment are recorded for the other two shafts.

Two further shafts are located of site to the north west, both of which were record as being filled, and one also being capped. There is also always the possibility that further, unrecorded shafts are present of which the Coal Authority has no knowledge.

There are no recorded coal outcrops on the site, and no faults fissures or breaklines recorded.

The site is not within an area where workings are currently being undertaken, or where future underground workings are currently proposed. The site is not within an area where opencast workings are recorded to have been undertaken.

There have been no claims of alleged mining related subsidence made on the site, and no remediated sites, mine gas emissions or mine water treatment schemes are present within 5000 m of the site.

Risk Assessment

It is possible that the Beamshaw Coals are present at shallow depth below the site, but is seems highly unlikely that they will have been worked, given the low economic importance of these coals.

The Kent's Thin and Thick seams are the shallowest seams of any significant thickness, but these area at depths of between around 35 m and 60 m bgl, and therefore these seams will be too deep to affect surface developments if workings are present, although none are recorded.

The shallowest recorded workings are within the Barnsley Seam at a depth of 115 m below surface. This is again sufficiently deep to be considered to potentially present a risk to the site. Drilling and grouting of mine workings will not be necessary, and borehole investigations to determine the depths and condition of shallow coal seams is not required.

There are, however, at least two mine shafts in close proximity to the north western edge of the site, with a third shaft to the south east. It is possible that these shafts will present a risk to the proposed development. Based on the coordinates provided by the Coal Authority, one of these shafts may lie just north west of the site within the adjacent property, but shaft reference 437401-002 may lie within the site boundary. The supplied coordinate is roughly coincidental to an existing concrete slab which is note don the topographical survey.

The proposed development will need to avoid placing buildings over any of the shafts or their caps, and should ensure that no foundation loads are transferred to the shaft cap or edges of the shaft itself. It will be necessary to investigate the actual location of the shafts to determine if they are present on site or not, and to determine the depth to competent ground to allow a suitable foundation to be designed.

It is noted from the proposed layout (copy attached) that the buildings are positioned to the east of the indicated shaft position. However, depending on the amount of made ground present, it is possible that piled foundations could be required to transfer foundation loads to the bedrock. Car parking is shown over the shaft, and this may need to be relocated, depending on the shaft cap construction and whether this can be proven to be satisfactory to accept direct vehicle loadings.

Conclusion

The site is not expected to be affected by past coal mining at shallow depth, and borehole investigations and/or drilling and grouting works to stabilise old workings are not considered to be necessary.

However, there is at least one mine shaft expected within the site boundary, and this will need to be accurately locate dot ensure that it does not underlie the proposed buildings. The mine shaft cap should also be investigated to determine its thickness and size, and to confirm if it has been constructed on competent ground. A trial pit investigation is considered appropriate for this. It would also be prudent to undertake trial pits targeting the points of the site nearest to the other recorded shafts to confirm that these do not encroach onto the site.

The proposed building will need to be founded on competent bedrock in order to prevent any foundation loads being transferred to the nearest shaft. This may mean that piled foundations are required if the depth to bedrock is significant. The trial pit investigation will need to confirm the depth to the bedrock.

Any investigative/remedial works will be subject to the issuing of an appropriate permit by the Coal Authority.

This risk assessment should be submitted to the regulators for their review.

Yours sincerely



Andrew Kerslake

Enc. Consultants Coal Mining Report
Copy: Mr M Cook – Windle Cook Architects

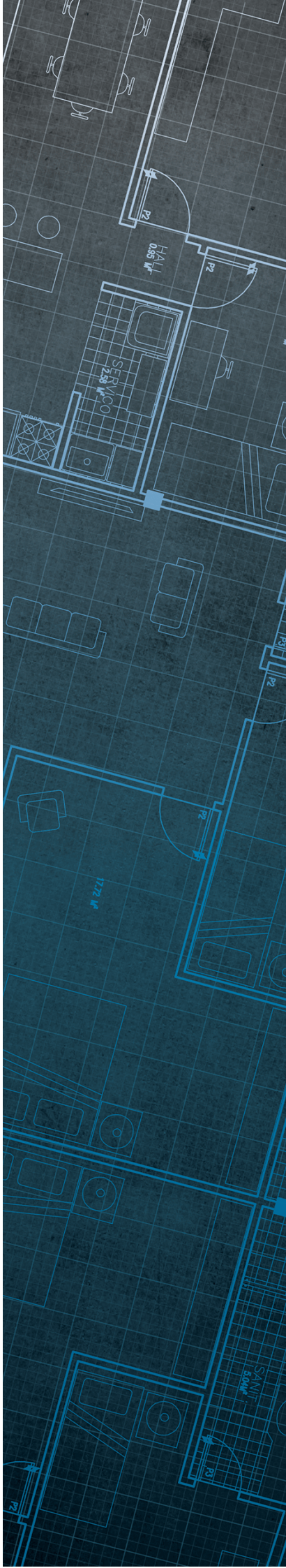
The Coal Authority

Consultants

Coal Mining Report

Gatehouse, Three Ts Business Park
Platts Common
Chambers Road
Barnsley
South Yorkshire
S74 9DG

Date of enquiry:	**11 August 2020**
Date enquiry received:	**11 August 2020**
Issue date:	**11 August 2020**
Our reference:	**51002303281001**
Your reference:	**251706598_1**



Consultants

Coal Mining Report

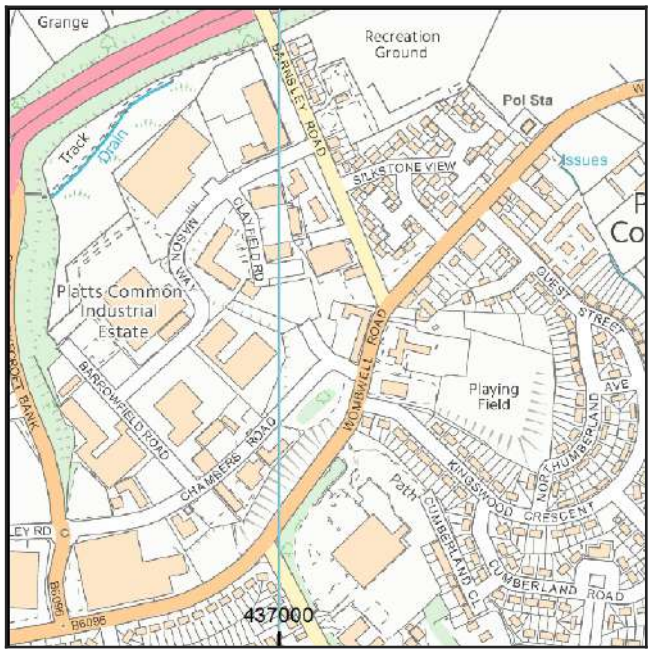
This report is based on and limited to the records held by the Coal Authority at the time the report was produced.

Client name

NLIS Hub

Enquiry address

Gatehouse, Three Ts Business Park
Platts Common
Chambers Road
Barnsley
South Yorkshire
S74 9DG



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	TOP HARD BARNSLEY	Coal	5QMB	115	Beneath Property	4.1	North-East	250	1804
HOYLAND SILKSTONE	SWALLOW WOOD	Coal	4TJS	160	South-East	6.2	North-East	90	1926
HOYLAND SILKSTONE	LIDGETT	Coal	5NMG	223	Beneath Property	3.7	North-East	103	1892
ROCKINGHAM	LOW FENTON	Coal	5OY9	339	South-East	4.5	North-East	107	1970
HOYLAND SILKSTONE	TOP FENTON	Coal	5NMJ	345	South-East	4.3	North-East	104	1908
unnamed	PARKGATE	Coal	5QEC	365	Beneath Property	4.3	North-East	145	1895
HOYLAND SILKSTONE	THORNCLIFFE	Coal	5OYD	389	Beneath Property	5.4	North-East	140	1883
HOYLAND	SILKSTONE	Coal	5OYJ	447	Beneath Property	5.9	North-East	161	1894

Probable unrecorded shallow workings

None.

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	436401-001	436954 401483	was filled by British Coal in 1980/81	Coal	
Shaft	437401-001	437026 401454	was filled and capped with concrete prior to 1976	Coal	
Shaft	437401-002	437039 401420	has been filled and capped with concrete	Coal	
Shaft	437401-003	437029 401421		Coal	
Shaft	437401-004	437065 401377		Coal	

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Abandoned mine plan catalogue numbers

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

14371	16596	M432
NE855	9039	9339
NE853	2250	SY164

Our records show we have more plans than those shown above which could affect the enquiry boundary.

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

Outcrops

No outcrops recorded.

Geological faults, fissures and breaklines

No faults, fissures or breaklines recorded.

Opencast mines

Please refer to the "Summary of findings" map (on separate sheet) for details of any opencast areas 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.

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.

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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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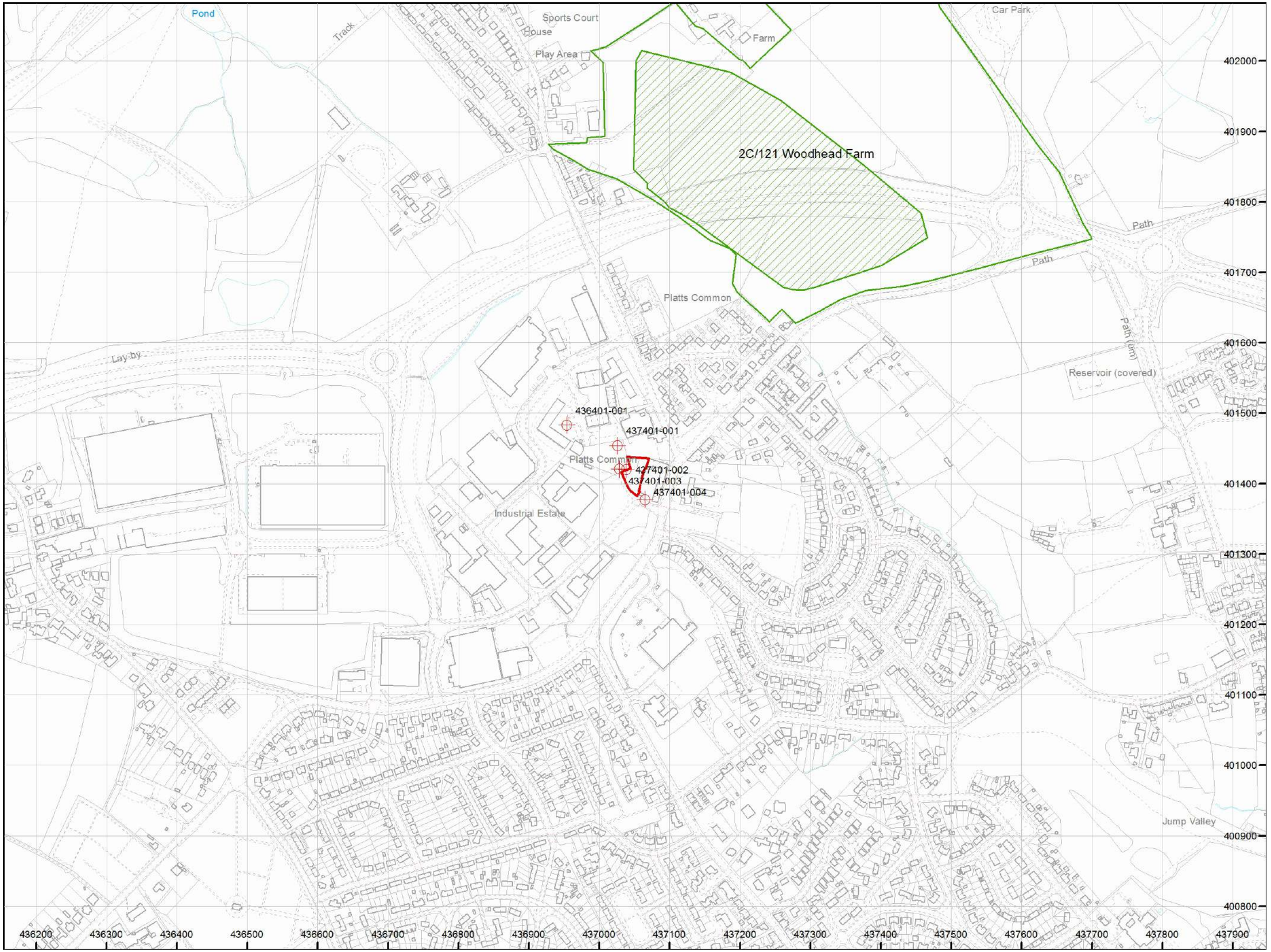
Summary of findings

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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
- Disused mine shaft
- Opencast mine licence area
- Unlicensed opencast site



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