

JPG Limited

Higham Lane Retaining Wall, Dodworth

Ground Investigation Report

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Project 2971
Higham Lane Retaining Wall, Dodworth
Ground Investigation Report

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1 INTRODUCTION

Name of Scheme: Higham Lane Retaining Wall, Dodworth

1.1 Site Location and Description

The site is located approximately 3km to the west of Barnsley town centre where Higham Lane intersects and crosses over the M1 motorway. The approximate centre of the site is located at NGR 431460, 406470. A location plan, aerial photograph and proposed layout for the wider site and retaining wall are presented in Appendix A.

The site currently comprises farmland adjoining the M1 motorway and is proposed to be developed for industrial units/warehousing. The wider proposals comprise two large industrial buildings with service yards, car parking space and soft landscaping areas. A retaining wall is required to retain the engineered fill forming the development platform for the northern building, which is henceforth referred to as Unit 1 in this report, and is proposed to be situated approximately 30m to the south-west of the M1 northbound carriageway.

1.2 Objectives

The objectives of this Ground Investigation Report are to:

- Confirm the Geotechnical Category of the retaining wall in accordance with CD 622 (Managing Geotechnical Risk)
- Provide a summary interpretation of all of the ground investigation information available for the retaining wall and the characteristic material parameters.
- Provide an engineering assessment of the geotechnical and geoenvironmental information gathered for the retaining wall, including a brief description and justification of the geotechnical options that have been considered.
- Summarise and assess ground-related risks to inform the design of the retaining wall and boundary slope; an updated Geotechnical Risk Register is included within Appendix E.

1.3 Previous Geotechnical Studies and Project Changes

A combined Statement of Intent and Preliminary Sources Study Report (Doc. Ref. 2971-BEL-XX-XX-RP-Y-0002; GDMS No. 61727), which included a Ground Investigation Scoping Report, was produced for the scheme in September 2025. Reference should be made to that report for a detailed review of all relevant previous geotechnical studies.

The ground investigation proposed for the retaining wall has been undertaken since the production of the combined Statement of Intent and Preliminary Sources Study Report. There are no other significant project changes.

1.4 Geotechnical Category

The project in its current form falls within Geotechnical Category 2. This is described in Eurocode 7: Geotechnical design - Part 1: General rules as:

“Geotechnical Category 2 should include conventional types of structure and foundation with no exceptional risk or difficult ground or loading conditions. Designs

for structures in Geotechnical Category 2 should normally include quantitative geotechnical data and analysis to ensure that the fundamental requirements are satisfied. Routine procedures for field and laboratory testing and for design and execution may be used for Geotechnical Category 2 designs”.

2 EXISTING INFORMATION

The combined Statement of Intent and Preliminary Sources Study Report provides a detailed review of the existing information relating to the site; reference should be made to that report for a detailed review of all the existing information.

Although the existing information is not of a time-limited nature and the review within the combined Statement of Intent and Preliminary Sources Study Report remains valid, the following points are highlighted because the new ground investigation data has provided further information:

- The topography of the site has been confirmed to vary between 144.45mAOD and 150.35mAOD over the footprint of the Unit 1 building by the exploratory hole ground level elevations.
- The bedrock geology has been confirmed to comprise the Pennine Middle Coal Measures (PMCM) Formation consisting of undifferentiated mudstone, siltstone, sandstone and coal seams. Exploratory Hole DSRC303 only encountered a thin band of yellowish brown sandstone, which could be a layer within the PMCM Formation or it may be the Haigh Moor Rock known to outcrop in the south of the site. The latter is unlikely, however, as the exploratory holes on other side of DSRC303 did not identify a similar rock material.

3 FIELD AND LABORATORY STUDIES

The ground investigation for the wider site was undertaken between 28th July 2005 and 12th August 2025 by JPG Limited on behalf of Commercial Development Projects Limited. The ground investigation for the Higham Lane Retaining Wall was undertaken as part of this wider ground investigation.

The Higham Lane Retaining Wall ground investigation comprises exploratory holes to determine the location-specific stratigraphy along with in-situ testing and laboratory testing to determine the engineering properties of the ground, as required, for the design of the retaining wall.

The ground investigation factual report (Doc. Ref. 4173-JPG-XX-XX-RP-G-0609-S2-P03) is included in Appendix B. It should be noted that this also includes the ground investigation data for the wider site.

3.1 Description of Fieldwork

Table 1 summarises the ground investigation undertaken on the footprint of the Unit 1 building.

Table 1: Summary of Ground Investigation

Investigation Method	No. of Positions	Maximum Depth (m)
Trial Pits	1 No. (TP302)	2.20
Trial Trenches	2 No. (TT301 and TT303)	3.20 (approx.)
Window Sample Boreholes	7 No. (WS301 to WS303, WS315, WS317 to WS319)	2.65
Cable Percussive Boreholes	2 No. (BH301 to BH302)	2.38
Rotary Cored Boreholes	6 No. (DSRC301 to DSRC306)	12.90
Rotary Open-Hole Boreholes	1 No. (DSRO301)	20.00

Monitoring wells were installed to 12.0m depth in DSRC301 and DSRC304 and to 20.0m depth in DSRO301.

All exploratory hole locations were surveyed using Leica GPS equipment, which accurate to +/- 10mm.

The location of the exploratory hole locations, including the historical exploratory hole locations, are provided on Drawing 4173-JPG-ZZ-ZZ-DR-G-1104 included in Appendix B.

3.2 Results of In-Situ Tests

31 No. in-situ Standard Penetration Tests (SPTs) were undertaken within the window sample boreholes, cable percussive boreholes and rotary open-hole boreholes on the footprint of the Unit 1 building. These are reported on the logs in the factual ground investigation report in Appendix B and are summarised in Section 4.

3.3 Laboratory Testing

The following geotechnical and geo-environmental testing was undertaken on soil and rock samples from the footprint of the Unit 1 building.

- 3 No. Atterberg tests.
- 2 No. undrained shear strength in triaxial compression tests (without measurement of pore pressure).
- 35 No. point load test.
- 11 No. water-soluble sulphate and pH tests.

The laboratory test result certificates are reported in the factual ground investigation report included in Appendix B and are summarised in Section 4.

4 GROUND SUMMARY

The findings and results of all the ground investigation data available are interpreted and summarised in this section.

It should be noted that whilst all the data from the side-wide ground investigation has been reviewed, this report focuses on the ground investigation data from the footprint of the Unit 1 building. For any particular properties where this dataset is considered to be inadequately small, results from the site-wide ground investigation are also drawn upon.

4.1 Ground Investigation Data

A preliminary ground investigation was undertaken for the wider site by Hydrock in March to April 2022 on behalf of Scannell Management UK Limited, which included 3 No. rotary open-hole boreholes undertaken on the footprint of the Unit 1 building. These have been combined with 17 No. exploratory holes undertaken on the footprint of the Unit 1 building from the site-specific ground investigation by JPG Limited in July to August 2025, as listed in Table 1 (excluding the trial trenches).

The locations of all 20 No. exploratory holes are shown on Drawing 4173-JPG-ZZ-ZZ-DR-G-1104.

All the exploratory holes undertaken recorded Topsoil over Pennine Middle Coal Measures (PMCM) Formation, with the upper PMCM Formation having weathered to a clay.

Data from the exploratory holes is summarised in Table 2 and is presented graphically in Drawing 2971-DWG-001 in Appendix F.

Table 2: Summary of Ground Investigation

Hole	Ground Level (mOD)	Layer thickness (m) & Elevation at the base of the layer in brackets (mOD)		
		Made Ground	Weathered PMCM	PMCM
DSRC301	144.45	0.3 (144.15)	1.80 (142.65)	12.00 NP (132.45 NP)
WS317	144.96	0.25 (144.71)	1.65 (143.31)	2.00 NP (142.96 NP)
WS301	144.96	0.25 (144.71)	2.36 (142.60)	2.65 NP (142.31 NP)
DSRC302	145.37	0.20 (145.17)	2.3 (143.07)	12.30 NP (133.07 NP)
WS318	145.77	0.25 (145.52)	1.50 (144.27)	2.38 NP (143.39 NP)
WS302	146.02	0.20 (145.82)	0.84 (145.18)	2.00 NP (144.02 NP)
DSRC303	146.69	0.20 (146.49)	1.30 (145.39)	12.90 NP* (133.79 NP)
WS319	147.08	0.25 (146.83)	1.46 (145.62)	2.28 NP (144.80 NP)

Table 2: Summary of Ground Investigation

Hole	Ground Level (mOD)	Layer thickness (m) & Elevation at the base of the layer in brackets (mOD)		
		Made Ground	Weathered PMCM	PMCM
WS303	147.44	0.25 (147.19)	1.50 (145.94)	2.20 NP (145.24 NP)
DSRC304	148.62	0.20 (148.42)	2.66 (145.96)	12.70 NP (135.92 NP)
RO201	144.48	0.40 (144.08)	0.60 (143.48)	9.00 NP (134.48 NP)
BH301	145.40	0.20 (145.20)	2.32 (143.08)	-
RO202	145.80	0.30 (145.5)	0.70 (144.80)	9.00 NP (135.80 NP)
BH302	146.68	0.30 (146.38)	2.38 (144.30)	-
RO104	147.71	0.40 (147.31)	1.60 (145.71)	28.00 NP (117.71 NP)
TP302	149.23	0.30 (148.93)	2.00 (147.23)	2.20 (147.03)
DSRC305	145.37	0.20 (145.17)	1.90 (143.47)	8.00 (137.37)
WS315	145.76	0.22 (145.54)	1.60 (144.16)	2.00 (143.76)
DSRO301	147.54	0.20 (147.34)	5.30 (142.24)	20.00 (127.54)
DSRC306	150.35	0.20 (150.15)	2.30 (148.05)	7.80 (142.55)

'NP' implies 'base not proven'.

*Recorded 0.25m of yellowish-brown SANDSTONE at the top of the PMCM layer.

The descriptions and engineering properties of the strata are provided in more detail below.

4.2 Geotechnical Properties

4.2.1 Topsoil

Topsoil is encountered in all exploratory holes with thicknesses varying between 0.20m and 0.40m. It is present from ground level across the site. The logs classify it as Made Ground but note topsoil within the descriptions. The Topsoil is described as dark brown slightly sandy slightly gravelly CLAY with rootlets and fine to coarse, subangular to angular mudstone gravel.

No in-situ or laboratory testing has been undertaken in the topsoil.

Furthermore, it is recommended that any topsoil is stripped before the construction of the Higham Lane Retaining Wall.

4.2.2 Weathered PMCM

Weathered PMCM is encountered in all exploratory holes with thicknesses varying between 0.60m and 5.30m. The latter value appears to be an outlier; the thickness of the Weathered PMCM layer is typically less than 3.0m. It underlies the Topsoil in all cases. It is described as firm to stiff dark greyish brown slightly sandy gravelly CLAY with fine to coarse, subangular to angular mudstone and coal gravel.

16 No. SPT tests have been undertaken in the Weathered PMCM under the footprint of the Unit 1 building. These range from 13 to 125 with an average of 33.

Figure D1 presents a chart of SPT versus depth for the location-specific data.

Plasticity Index

3 No. Atterberg tests have been undertaken in the Weathered PMCM under the footprint of the Unit 1 building. The plasticity index values range from 24% to 38% with an average of 31% indicating an intermediate to high plasticity clay.

Since this dataset is inadequately small, plasticity data from the wider site has also been evaluated. In total, 8 No. Atterberg tests have been undertaken in the Weathered PMCM across the wider site. The plasticity index values range from 24% to 38% with an average of 30% and therefore confirm an intermediate to high plasticity clay.

Figures D2 and D3 present charts of plasticity index values versus depth for the location-specific and sitewide data respectively and indicate a characteristic plasticity index of 30%.

Angle of Friction

Based on a correlation of the characteristic PI value of 30% with BS 8002:2015 Table 2 and an assessment of the likely angle of dilation, a characteristic constant-volume angle of friction of 24° has been adopted and a characteristic peak angle of friction of 25° has been adopted.

Undrained Shear Strength

2 No. undrained shear strength triaxial compression tests (without measurement of pore pressure) were undertaken in the Weathered PMCM under the footprint of the Unit 1 building. The undrained shear strength values range from 160kPa to 225kPa indicating a very high strength clay.

According to Stroud & Butler (1975), the SPT N values can be correlated to the undrained shear strength, c_u , by the formula $c_u = f_1 \times N$, where f_1 is a factor depending on the plasticity index of the clay. SPT N values within the Weathered PMCM range from 13 to 125 with an average of 33. For a plasticity index of 30%, $f_1=4.5$ which corresponds to a c_u ranging from 59kPa and 563kPa with an average of 149kPa indicating a high to very high strength clay.

Figure D4 presents a chart of undrained shear strength versus depth for the location-specific data and indicates a characteristic undrained shear strength of $60 + 37.5z$ kPa where z is measured from the top the layer.

Stiffness

Based on Tomlinson (2007) and a characteristic plasticity index of 30%, the ratio of undrained Young's Modulus, E_u , to undrained shear strength, c_u , has conservatively been assumed to be $E_u/c_u = 500$. Similarly, the drained stiffness, E' , has been correlated to E_u by $E' = (1+\nu') E_u / (1+\nu_u)$. Assuming $\nu' = 0.2$, a characteristic drained stiffness of $24 + 15z$ MPa has been derived where z is measured from the top the layer.

4.2.3 PMCM Formation

The PMCM Formation is encountered in all exploratory holes except BH301 and BH302, which were only 2.32m and 2.38m deep respectively, with thicknesses varying between 2.00m (not proven) and 28.00m (not proven). It underlies the Topsoil and weathered PMCM in all cases. It is typically described as extremely weak to weak light to dark grey MUDSTONE, but also varies to include weathering, lamination and the presence of sandstone layers and coal layers typically up to 1.0m thick.

15 No. SPT tests have been undertaken in the PMCM under the footprint of the Unit 1 building. These range from 36 to 429 with an average of 174.

Figure D1 presents a chart of SPT versus depth for the location-specific data.

Unconfined Compressive Strength (UCS)

No UCS tests were successfully undertaken in the PMCM layer; 2 No. samples that were submitted for UCS testing were deemed unsuitable due to fragmentation.

35 No. Point Load Tests have been undertaken in the PMCM layer under the footprint of the Unit 1 building; 18 No. were axial tests and 17 No. were diametral. A conversion factor, k , of 10 was used to convert the I_{S50} Point Load test results to UCS strengths, based on the recommendations of CIRIA R181. The calculated UCS values from the axial tests range from 0.80MPa to 8.50MPa with an average of 2.77MPa indicating extremely weak to very weak rock. The calculated UCS values from the diametral tests range from 0.30MPa to 12.80MPa with an average of 4.08MPa indicating extremely weak to very weak rock.

Figure D5 presents a chart of UCS versus depth for the location-specific data and indicates a characteristic UCS of 1.0MPa.

Stiffness

According to Rowe and Armitage (1987), the rock mass stiffness modulus, E_m , can be estimated from $E_m = 215 \times (UCS)^{0.5}$, which corresponds to a value of E_m of 215MPa based on a characteristic UCS of 1.0MPa. Another method, presented in CIRIA R181, is $E_m = j \times M_r \times UCS$, where j is the mass factor and M_r is the modulus ratio. Adopting $j = 0.3$ and $M_r = 150$, based on the log descriptions and core photographs, and $UCS = 1.0$ MPa, this method estimates a value of E_m of 45MPa.

Based on engineering judgement, and the difficulties associated with estimating the input parameters for the latter method, a characteristic E_m of 75MPa is adopted. It should be noted, however, that an upper bound estimate should be considered when assessing drilling and/or driveability through the rock material.

4.3 Groundwater

Groundwater was not encountered during the drilling of the exploratory holes on the footprint of the Unit 1 building.

Groundwater monitoring was undertaken on a total of 4 No. exploratory holes from the footprint of the of the Unit 1 building (1 No. from the 2022 Hydrock GI and 3 No. from the 2025 JPG Limited GI). The results of the groundwater monitoring are summarised in Table 3.

Table 3: Summary of Groundwater Monitoring Results

Hole ID	Depth of Water Level During Monitoring (m bgl) and Elevation in brackets (mAOD)					
Hydrock GI, 2022						
	21/03/22		30/03/22		04/04/22	
RO104	10.34 (137.37)		11.41 (136.30)		10.25 (137.46)	
JPG Limited GI, 2025						
	20/08/25	26/08/25	05/09/25	12/09/25	23/09/25	29/09/25
DSRC301	9.15 (135.30)	9.30 (135.15)	9.40 (135.05)	9.40 (135.05)	5.50 (138.95)	9.52 (134.93)
DSRC304	8.15 (140.47)	9.20 (139.42)	8.70 (139.92)	9.00 (139.62)	6.80 (141.82)	8.29 (140.33)
DSRO301	17.70 (129.84)	18.60 (128.94)	18.70 (128.84)	15.50 (132.04)	17.10 (130.44)	17.75 (129.79)

4.4 Characteristic Material Parameters

The following geotechnical design parameters have been derived from stratum descriptions, in-situ and laboratory test data, correlation to published data, as described in Section 4.2, and engineering judgement.

Table 4: Summary of Characteristic Material Parameters

Layer	Unit Weight, λ (kN/m ³)	Undrained Shear Strength, c_u (kPa)	Angle of Friction, ϕ' (°)	Cohesion, c' (kPa)	UCS (MPa)	Youngs Modulus, E' (MPa)	Poisson's Ratio, ν'
Weathered PMCM	20	60+37.5z	24 (cv) 25 (peak)	0 (cv) 0 (peak)	-	24+15z	0.2
PMCM	21	500	24 (cv) 25 (peak)	0 (v) 3 (peak)	1.0	75	0.2

4.5 Ground Model

The following design ground model has been derived for the full length of the retaining wall based on the relevant exploratory holes summarised in Table 2, with a particular emphasis on the exploratory holes from the retaining wall alignment itself.

Table 5: Summary of Ground Model

Layer	Depth below Existing Ground Level (m)
Topsoil	0 – 0.30
Weathered PMCM	0.30 – 2.70
PMCM	> 2.70

It may be necessary to perform sensitivity analyses during detailed design to assess the impact of the thickness of the Weathered PMCM. As stated in Section 4.2, DSRO301 recorded a thickness of 5.30m for the Weathered PMCM, but this is an outlier and, furthermore, DSRO301 is offset by approximately 55m from the retaining wall alignment.

It is assumed that granular fill will be placed immediately behind the wall to build up the ground from the existing level (which varies between approx. 144.5mOD and 148.6mOD) to the proposed building floor level (150.7mAOD). The Topsoil layer should also be stripped and replaced with engineered fill.

Based on the groundwater strike and groundwater monitoring information summarised in Table 3, a design groundwater level of 3.00m below existing ground level has been derived.

4.6 Geochemistry

2 No. sulphate and pH tests were undertaken in the Weathered PMCM in accordance with BRE SD1 (2005). The sulphate results range from 52mg/l to 110mg/l and the pH results range from 7.5 to 8.1. The oxidisable sulphides results range from 0.04% to 0.08% and are both less than 0.3% so no further assessment was undertaken for the total potential sulphate in the Weathered PMCM.

9 No. sulphate and pH tests were undertaken in the PMCM in accordance with BRE SD1 (2005). The sulphate results range from 190mg/l to 980mg/l and the pH results range from 7.5 to 8.3. The oxidisable sulphides results range from 0.77% to 0.98% and the total potential sulphate results range from 0.93% to 1.35%.

No sulphate and pH testing was undertaken in the Topsoil, which has been assumed to be a non-aggressive natural material.

The characteristic sulphate and pH values have been determined as per Clause C5.1.1 of BRE SD1 (2005) and these have subsequently been used to derive the Design Sulphate (DS) and Aggressive Chemical Environment for Concrete (ACEC) class for the ground in accordance with Table C1 of BRE SD1 (2005). The results of the assessment are summarised in Table 6.

Table 6: Summary of Sulphate and pH Testing Assessment in Accordance with BRE SD1 (2005)

Material	Characteristic Values			Classification (Undisturbed Ground)		Classification (Disturbed Ground)	
	pH	Water Soluble Sulphate (mg/l)	Total potential sulphate (%)	DS Class	ACEC Class	DS Class	ACEC Class
Weathered PMCM	8.1	110	-	DS-2	AC-1	-	-
PMCM	8.3	920	1.35	DS-2	AC-2	DS-4	AC-4

In summary, if concrete will not be exposed to disturbed ground, then it should be designed to DS Class DS-2 and ACEC Class AC-2. If concrete will not be exposed to disturbed ground, then it should be designed to DS Class DS-4 and ACEC Class AC-4.

5 GEOTECHNICAL RISK REGISTER

An updated Geotechnical Risk Register is included in Appendix E.

6 ENGINEERING ASSESSMENT

Drawing 4173-JPG-ZZ-ZZ-DR-G-1120, which is included within Appendix A, presents preliminary plan and section drawings of the proposed Unit 1 building and retaining wall. The drawing also gives an indication of the slope profile and distance to the M1 motorway boundary, and the thickness of fill required to achieve the proposed development platform behind the wall.

The current outline design of the retaining wall can be summarised as follows:

- Top of wall elevation is 150.7mAOD.
- Existing ground level varies between approximately 144.5mOD and 148.6mOD to give retained heights that vary between approximately 2.1m and 6.2m.
- Total length of is approximately 157m, including a return length of approximately 11m towards the north-east.

Based on the findings of this Ground Investigation Report, the ground conditions at the site are likely to comprise up to 0.3m of Topsoil underlain by up to 2.7m Weathered PMCM, which will subsequently be underlain by the PMCM Formation bedrock comprising mudstone, siltstone and sandstone.

The unweathered PMCM is likely to provide a competent founding stratum for the foundations of gravity walls and/or other structures.

A range of structural forms are being considered for the Higham Lane Retaining Wall; the key options are listed as follows:

- Sheet pile retaining wall.
- Reinforced concrete retaining wall.
- Gabion/gravity retaining wall.
- Reinforced earth retaining wall.

A detailed Options Report will be produced to identify the preferred option.

Slope stability assessment(s) will be required for temporary and/or permanent works for all potential solutions considered.

7 REFERENCES

BS 8002:2015 – Code of Practice for Earth Retaining Structures, British Standards Institution, London.

BS EN 1997-1 (2004) + A1 (2013) – Eurocode 7: Geotechnical design – Part 1, General Rules.

National Annex to BS EN 1997-1 (2004) + A1 (2013).

CIRIA R143 (1995). The standard penetration test (SPT): methods and use.

CIRIA R181 (1999). Piled Foundations in Weak Rock.

Rowe and Armitage. A design method for drilled piers in soft rock. Can. Geotech. J. 24, 126-142 (1987).

Stroud and Butler (1975). The Standard Penetration Test and the Engineering Properties of Glacial Materials.

Tomlinson and Woodward (2007). Pile Design and Construction Practice, Fifth Edition. Taylor & Francis e-Library.

8 DRAWINGS AND PHOTOGRAPHS

8.1 List of Drawings and Documents accompanying the Submission

Appendix A: Location Plan, Aerial Photograph, Site Layout Plans

Appendix B: JPG Factual Ground Investigation Report, 2025

- 4173-JPG-XX-XX-RP-G-0609-S2-P03 - JPG, Factual Report on a Geoenvironmental & Geotechnical Ground Investigation, Higham Lane North, Dodworth, Barnsley, September 2025

Appendix C: JPG Ground Investigation Report, 2025

- 4173-JPG-XX-XX-RP-G-0610-S2-P01 - JPG, Interpretative Report on a Geoenvironmental & Geotechnical Ground Investigation, Higham Lane North, Dodworth, Barnsley, November 2025.

Appendix D: Geotechnical Parameter Plots

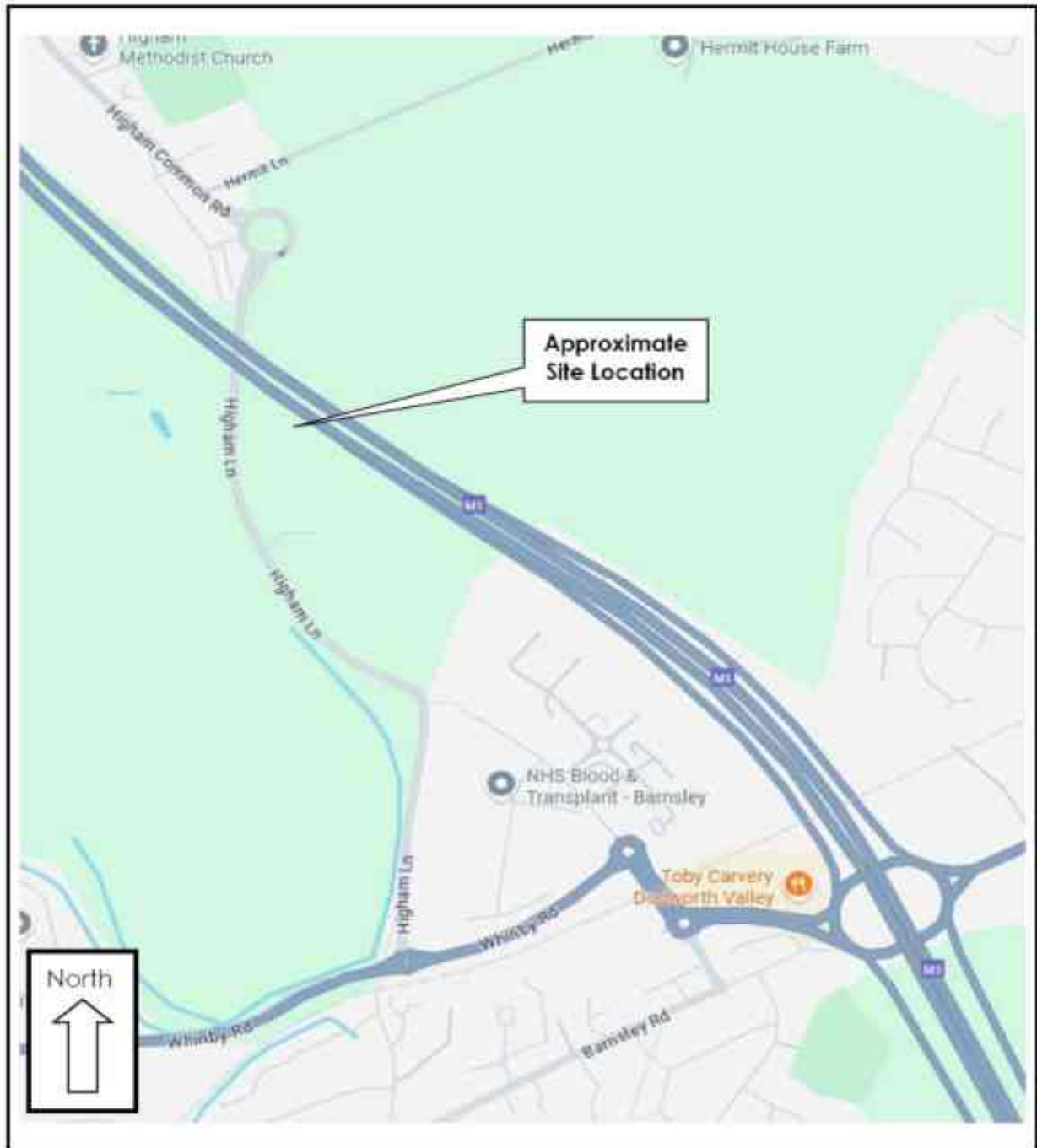
Appendix E: Geotechnical Risk Register

Appendix F: Geological Sections Drawing

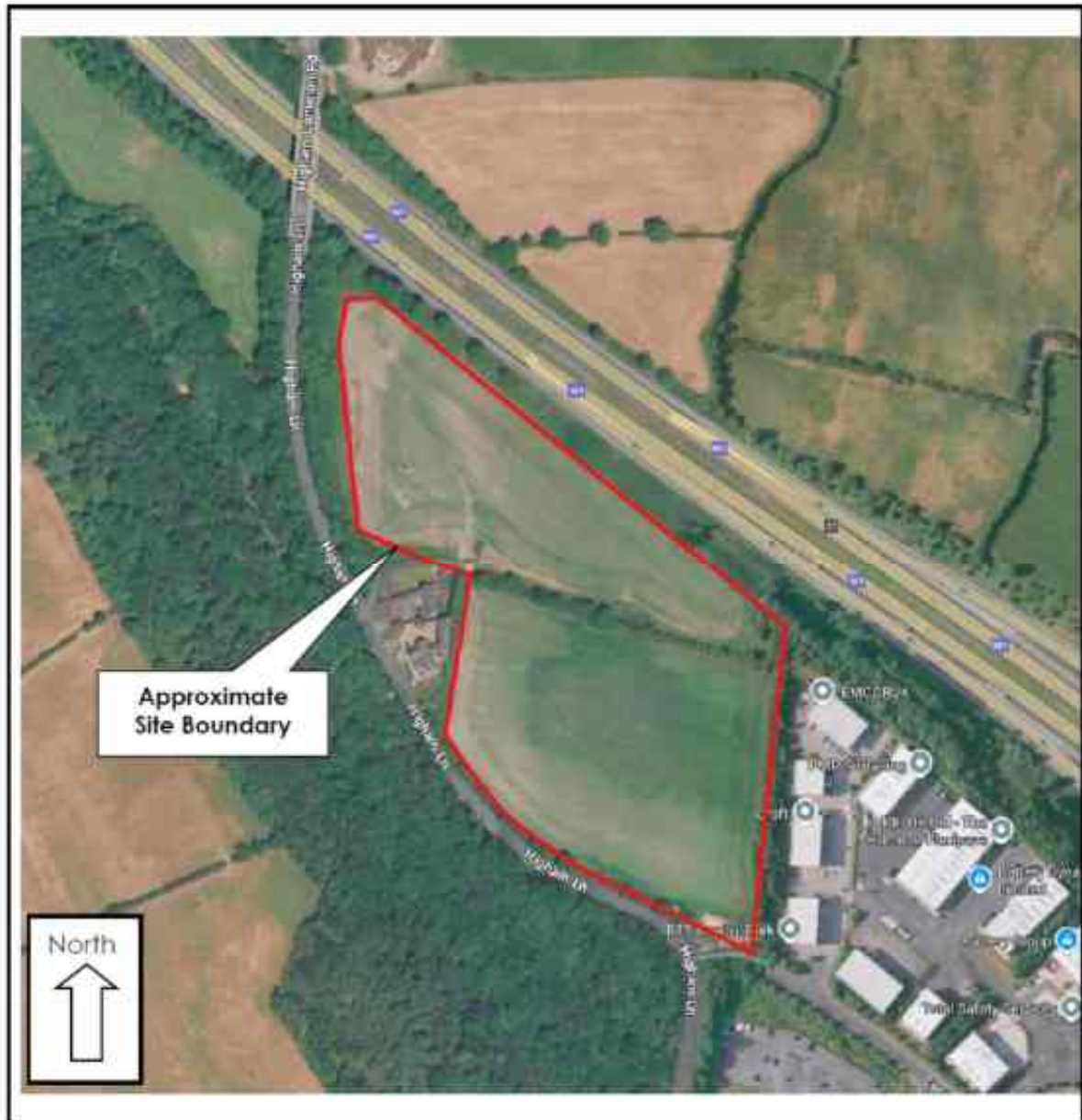
- 2971-DWG-001 Exploratory Hole Location Plan & Geological Sections

Appendix A

Location Plan, Aerial Photograph, Site Layout Plans



Site Location Plan



Aerial Photograph

Site Plan 1:500

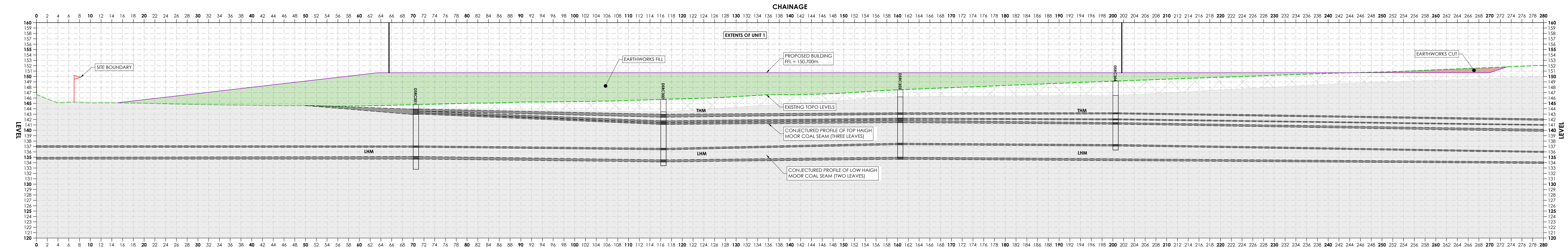
This drawing is copyright and may not be reproduced in whole or part without written authority. The Warts Group Ltd does not accept liability for any deviation from our drawings or specifications.

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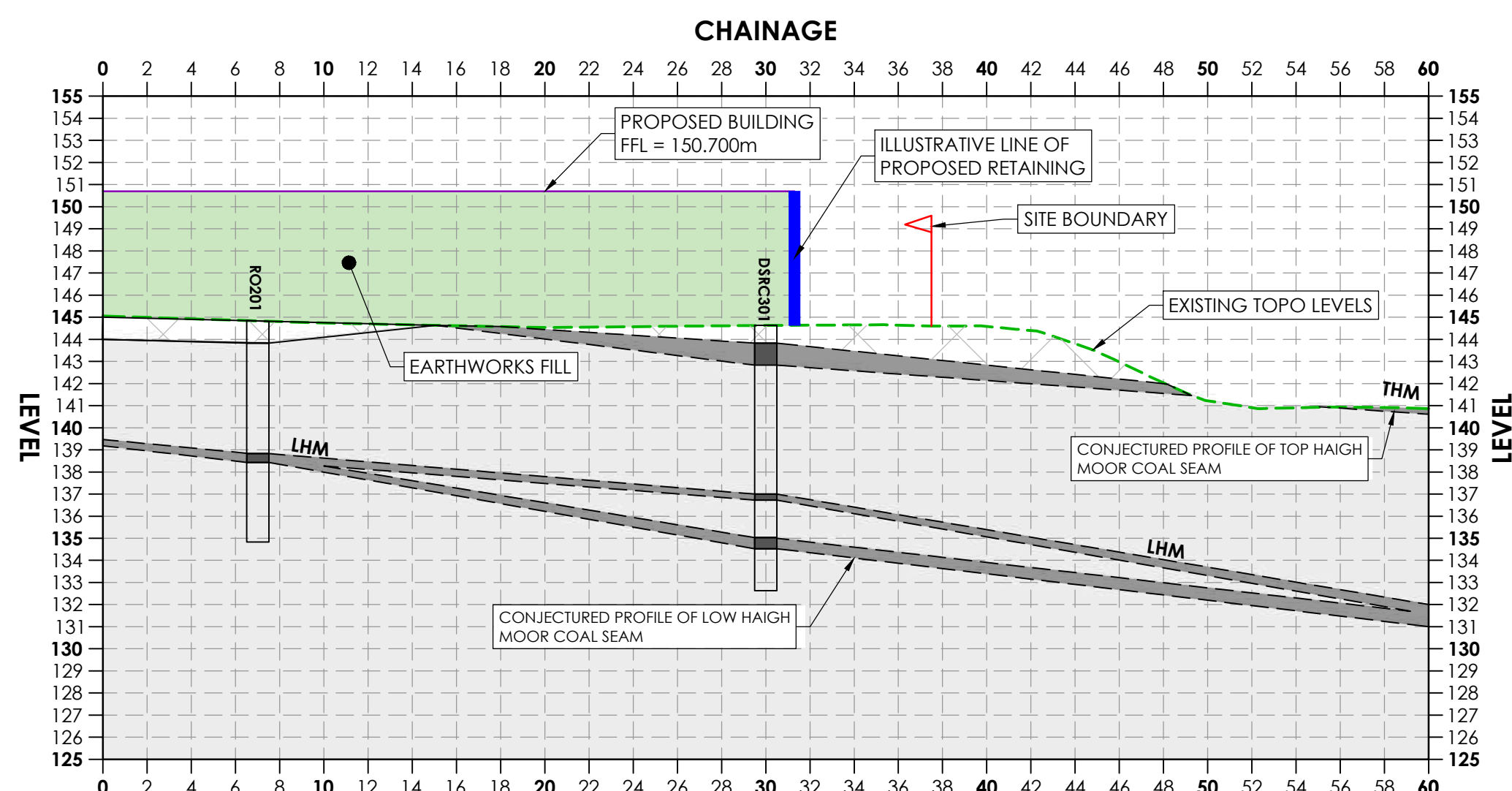
Note:
Information is based on OS map and received information. Assumed site boundary and site constraints subject to confirmation. Legal easements and extent of existing underground locations are subject to confirmation.

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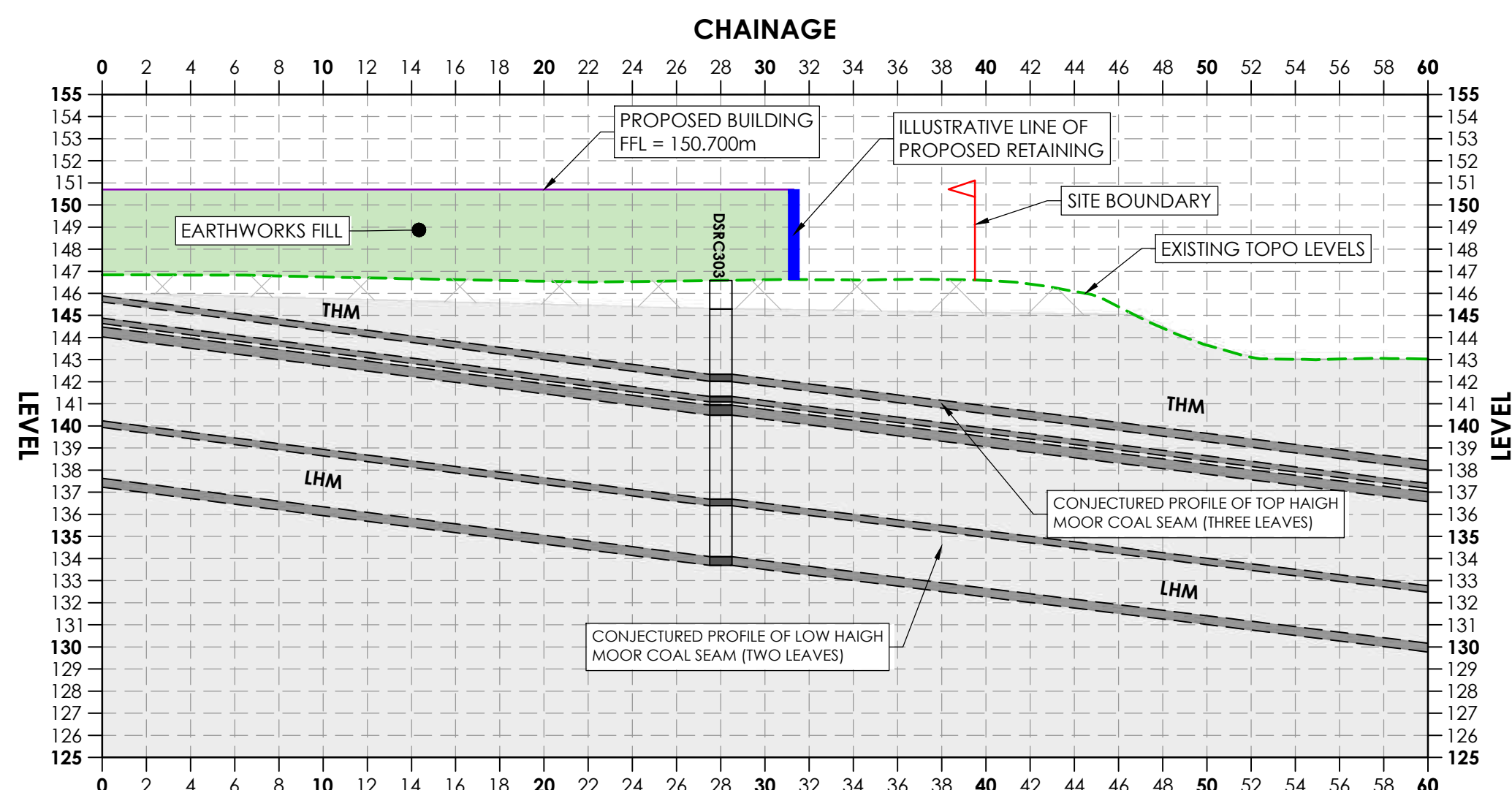
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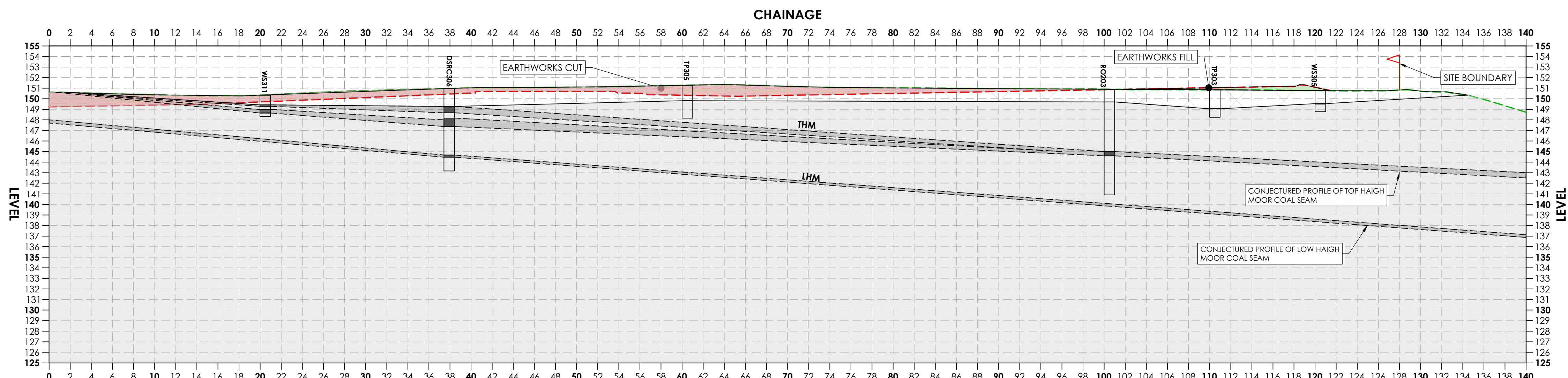
SECTION 1 PROFILE
SCALE 1:250



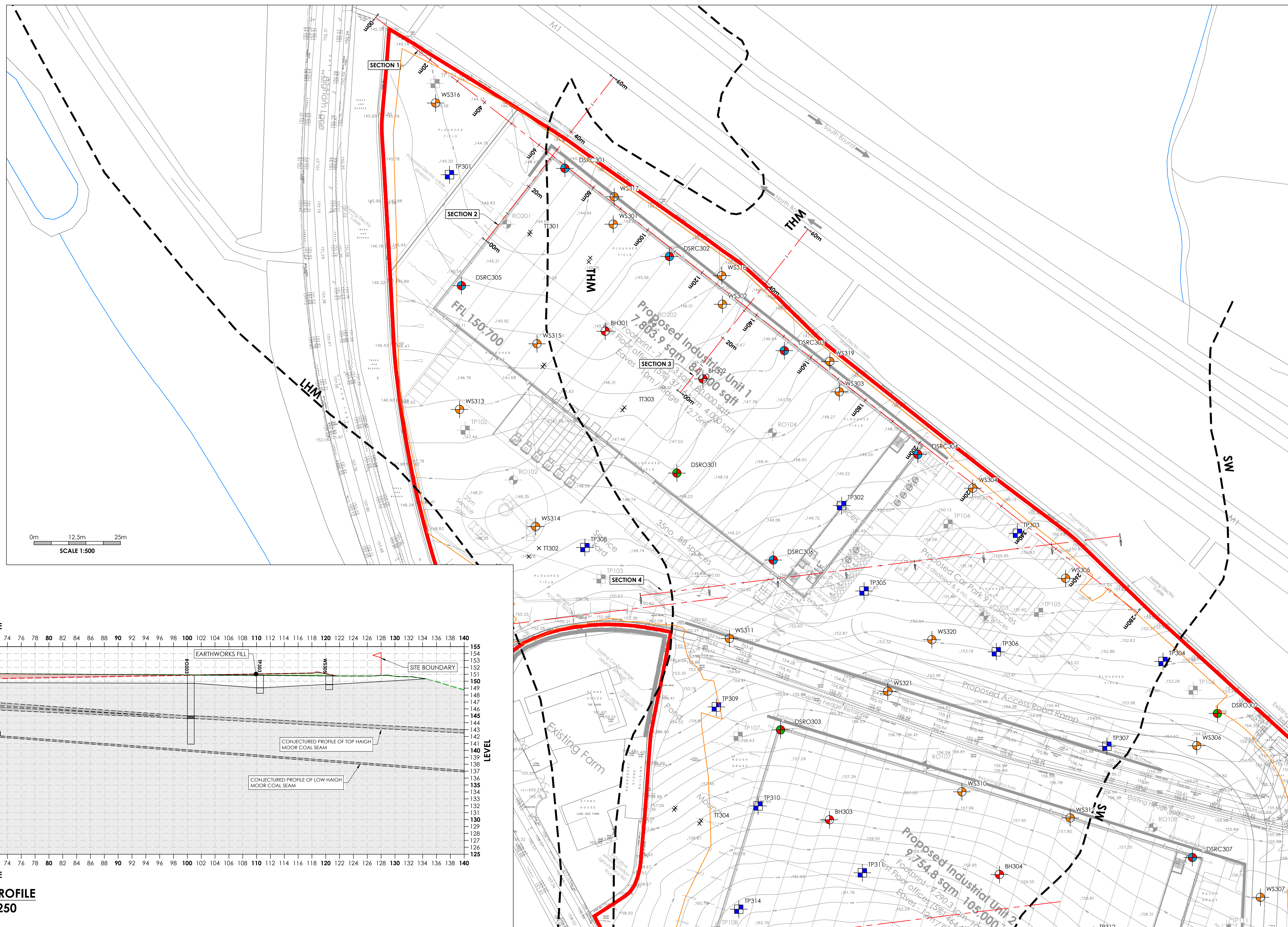
SECTION 2 PROFILE
SCALE 1:250



SECTION 3 PROFILE
SCALE 1:250



SECTION 4 PROFILE
SCALE 1:250



- GENERAL NOTES**
1. ALL MATERIALS AND WORKMANSHIP IS TO COMPLY WITH JPG CONSULTANTS STANDARD SPECIFICATION & ALL RELEVANT BRITISH & EUROPEAN STANDARDS.
 2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, M & E CONSULTANTS AND JPG CONSULTANTS DRAWINGS.
 3. ANY DISCREPANCIES SHOULD BE REPORTED TO THE ENGINEER IMMEDIATELY SO THAT CLARIFICATION CAN BE SOUGHT PRIOR TO COMMENCEMENT OF WORKS.

- JPG INVESTIGATION 2025**
- BH CABLE PERCUSSIVE BOREHOLE
 - WS WINDOW SAMPLE BOREHOLE
 - DSRO DYNAMIC SAMPLE BOREHOLE WITH ROTARY OPEN HOLE FOLLOW-ON
 - DSRC DYNAMIC SAMPLE BOREHOLE WITH ROTARY CORED BOREHOLE
 - TP TRIAL PIT

- HYDROCK INVESTIGATION 2022**
- TP TRIAL PIT
 - RO ROTARY OPEN HOLE BOREHOLE

- LEGEND**
- BEDROCK (PENNINE MIDDLE COAL MEASURES)
 - CONJECTURED COAL SEAM
 - OVERBURDEN (COHESIVE SOILS AND MADE GROUND)
 - RED LINE DENOTES SITE BOUNDARY
 - PURPLE LINE DENOTES PROPOSED FINISHED LEVELS
 - DASHED GREEN LINE DENOTES EXISTING TOPO LEVELS
 - DASHED BLACK LINE DENOTES COAL SEAM OUTCROP

REV	DESCRIPTION	DATE	CHK	BY
P03	SECTION 4 EXTENDED	18.10.25	JBW	EJS
P02	UPDATED WITH BOREHOLE DATA	24.09.25	JBW	EJS
P01	FIRST ISSUE	25.07.25	EJS	LSG

Project
**HIGHAM LANE
BARNSELEY**

Drawing Title
**UNIT 1
GEOLOGICAL SITE SECTIONS**

Appendix B

JPG Factual Ground Investigation Report, 2025



FACTUAL REPORT ON GEOENVIRONMENTAL & GEOTECHNICAL GROUND INVESTIGATION

Higham Lane North Dodworth

Reference

4173-JPG-XX-XX-RP-G-0609-S2-P03

Date

September 2025

Author

EJS

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LS12 6QA

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APPENDICES

Appendix A Figures/Drawings

Figure 1 - Site Location Plan

Figure 2 - Aerial Photograph

JPG (Leeds) Limited. Composite Exploratory Hole Location Plan. Commercial Plot, Higham Lane North, Dodworth. Ref. 4173-JPG-ZZ-ZZ-DR-G-1104-S2-P07, dated 22 August 2025.

Appendix B Exploratory Hole Logs

Appendix C Chemical Analysis Certificates

Appendix D Geotechnical Testing Results

Appendix E Gas and Groundwater Monitoring

Appendix F Notes on Limitations



CONFIDENTIALITY STATEMENT

This report is addressed to and may be relied upon by the following:

Commercial Development Projects Limited
Huddersfield Road
ELLAND
HX5 9BW

This report has been prepared for the sole use and reliance of the above-named party. This report shall not be relied upon or transferred to any other parties without the express written authorisation of JPG (Leeds) Limited. No responsibility will be accepted where this report is used, either in its entirety or in part, by any other party.

DOCUMENT HISTORY

Revision	Date	Revision Details	Status	Author(s)	Approved
P01	19.09.25	First Issue - Interim	Information	EJS	JBW
P02	10.10.25	Second Issue	Information	EJS	JBW
P03	31.10.25	Third Issue	Information	EJS	JBW



1.0 INTRODUCTION

1.1 Instruction

JPG (Leeds) Limited (JPG) has been instructed by Commercial Development Projects Limited to provide a Factual Geoenvironmental Ground Investigation Report for a proposed commercial development at Higham Lane, Dodworth.

1.2 Objectives

The main objective of this report is to provide all of the factual ground investigation information for the site in a single document. The information provided in this report can then be used to inform the interpretative report(s) for the site.

1.3 Location

The site is located approximately 3km west of Barnsley town centre. The approximate centre of the site is located at NGR 431541, 406356.

A site location plan is given as Figure 1 in Appendix A.

1.4 Site Description and Topography

The site is irregular in shape and occupies an area of approximately 5.96 hectares. It generally consists of sloping arable farmland, which is divided into two similar sized fields by mature trees and overgrown hedgerows.

The site can be accessed via two farm tracks off Higham Lane, located in the south and east of the site. The northern field falls gradually to the northwest, with ground levels of approximately 155m AOD in the south falling to approximately 145m AOD in the north. A hill is present in the southern field, the highest point of which is approximately 163m AOD.

An overhead telecoms line crosses the northern field from the northwest to the east, before continuing to follow the eastern boundary of the southern field. There is also a telecoms transmitter, surrounded by a metal post and chain link fence, in the eastern corner of the site.

The northeastern boundary of the site comprises a wooden fence running parallel to the M1 motorway, which is located within a cutting adjacent to the site. Higham Lane abuts the southwestern boundary of the site. Higham Lane is raised on an embankment adjacent to the northwest of the site before crossing the M1 via an overbridge. The eastern, southern and western boundaries consist of mature trees and overgrown hedgerows.

Higham Manor and Lane Side Farm are large residential properties halfway along the southwestern boundary of the site. Higham Manor and Lane Side Farm are surrounded by a stone walls, wooden fences and thick hedgerows, separating them from the site. Capitol Park, a commercial development, is present to the east.



An aerial photograph of the site is included as Figure 2 in Appendix A.

1.5 Development Proposals

It is proposed to develop the site for an industrial end use, comprising two large units with associated service yards, car park spacing and soft landscaping areas.

A proposed site layout plan showing the location of the proposed development is referenced below, a copy of which is presented in Appendix A of this report.

- The Harris Partnership. Proposed Industrial Development. Capitol Park, Junction 37 M1, Higham Lane, Barnsley. Reference, 11138-1-(P)111. Revision E. Date 08.2022.

1.6 Previous Reports

A Desk Study Report has been prepared by JPG for the site, this is referenced below:

- JPG (Leeds) Limited. Geoenvironmental Desk Study Report. Higham Lane North, Dodworth, Barnsley. Report Ref 4173-JPG-XX-XX-RP-G-0605-S2-P01. Dated July 2025.

1.7 Limitations

The general limitations to the nature of the investigation are outlined in Appendix F.



2.0 FIELDWORK

The ground investigation was carried out between 28 July and 12 August 2025.

The works undertaken are summarised in Table 2.1 below.

Table 2.1 – Summary of Ground Investigation

Investigation Method	No of Positions	Maximum Depth (m bgl)	Monitoring Wells	Monitoring
Trial Pits	26 (TP301 to TP326)	3.60	-	-
Trial Trenches	4 (TT301 to TT304)	2.80	-	-
Window Sample boreholes	8 (WS101 to WS108)	3.00	1	GG, WL
Cable Percussive Boreholes	4 (BH301 to BH304)	2.93	-	-
Rotary Cored Boreholes	9 (DSRC301 to DSRC309)	12.90	4 x 150mm	GG, WL
Rotary Open hole Boreholes	3 (DSRO301 to DSRO303)	20.00	2 x 150mm	GG, WL

bgl – below ground level.

GG – ground gas monitoring (methane, carbon dioxide, oxygen, hydrogen sulphide, gas flow and atmospheric pressure using a portable gas meter).

WL – standing groundwater level using an electric contact dipmeter.

The rationale of the works undertaken are summarised in Table 2.2 below.

Table 2.2 – Exploratory Hole Rationale

Rationale	Exploratory Holes
Trial pits to assess near the surface ground conditions and to obtain soil samples to submit for geotechnical testing and chemical analysis.	TP301 to TP326
Trial trenches to locate recorded coal seam outcrops on site.	TT301 to TT304
Window sample boreholes to assess the ground conditions and obtain soil and groundwater samples to submit for geotechnical testing and chemical analysis. The boreholes were also used for the installation of shallow hazardous ground gas and groundwater monitoring wells.	WS301 to WS321
Cable percussive boreholes to assess the ground conditions and obtain soil and groundwater samples to submit for geotechnical testing and chemical analysis.	BH301 to BH304
Rotary cored boreholes targeting the proposed development to assess the strength and nature of the underlying bedrock to inform foundation design.	DSRC301 to DSRC309
Rotary open hole boreholes to investigate the underlying coal seams and confirm the absence of opencast coal mining encroaching onto the north of the site.	DSRO301 to DSRO303

Soil and groundwater samples were obtained and submitted to the laboratory for geotechnical testing and chemical analysis. Rock core samples were also submitted for strength testing.

Groundwater and hazardous ground gas monitoring wells were installed in one window sample borehole, four rotary cored boreholes and two rotary open hole boreholes. Hazardous ground gas monitoring has been undertaken on six occasions between 20 August and 29 September 2025.

The ground investigation was undertaken in general accordance with the techniques outlined in BS5930:2015+A1:2020 *Code of Practice for Ground Investigations*.



An exploratory hole location plan is provided in Appendix A and exploratory hole logs are provided in Appendix B. Photographs of the rock core are provided in Appendix B.

The works were carried out under the full-time supervision of an engineer from JPG.

Exploratory locations were surveyed using Leica GPS equipment (accuracy +/- 10mm). The surveyed positions were then transferred onto the survey drawing.



3.0 LABORATORY TESTING

Soil and groundwater samples obtained during the ground investigation were submitted to the laboratory for chemical analysis and geotechnical testing.

3.1 Chemical Analysis

Chemical testing was carried out for the following determinands by i2 Analytical Testing Services Limited. Chemical analysis certificates are provided in Appendix C.

Soils – General

Selected samples of soil were analysed for the following contaminants on a total concentration basis:

Arsenic	Mercury	Copper
Cadmium	Lead	Nickel
Chromium	Zinc	Selenium
Hexavalent Chromium	Cyanide (free)	Phenol
Speciated Poly Aromatic Hydrocarbons (PAHs)		
Soil Organic Matter	Asbestos Screen	
Water Soluble Sulphate and pH	Water Soluble Chloride	
Total Sulphate		
Calorific Value	Total Sulphide	
Pesticides and herbicides		

Waters – General

Selected samples of soil leachate and groundwater were analysed for the following contaminants:

Arsenic	Mercury	Copper
Cadmium	Lead	Nickel
Chromium	Zinc	Selenium
Hexavalent Chromium	Cyanide (free)	Phenol
Speciated Poly Aromatic Hydrocarbons (PAH)		
Sulphate and pH		

3.2 Geotechnical Testing

In-situ standard penetration tests (SPT) were performed within the window sample, cable percussive and rotary cored boreholes. The results are presented on the exploratory hole logs provided in Appendix B.



Laboratory geotechnical testing was carried out by PSL in Doncaster, in order to determine the physical characteristics of the substrata and comprised the following.

- Moisture content and Atterberg Limits testing to classify the materials.
- Particle size distribution/sedimentation to confirm the field descriptions of the soils encountered.
- Compaction testing (2.5kg and 4.5kg) and particle density testing to assess the suitability of the soils for re-use on site as engineered fill.
- California Bearing Ratio (CBR) test (2.5kg unsoaked) to determine the bearing characteristics of the material.
- Moisture Condition Value (1 point and 5 point) to inform earthworks design.
- Consolidated drained triaxial tests to inform stability of the existing soils in use of retaining wall construction.
- One dimensional consolidation tests to inform settlement characteristics of the underlying soils.
- Rock strength testing comprising point load indices on samples of rock core.
- Water-soluble sulphate, pH, total sulphate, total sulphur and organic content.

The geotechnical testing was carried out in accordance with BS1377:1990, "*Methods of Test for Soils for Civil Engineering Purposes*". The results of the geotechnical testing are provided in Appendix D.



4.0 GROUNDWATER AND GROUND GAS MONITORING

Hazardous ground gas monitoring has been undertaken on six occasions between 20 August and 29 September 2025. The works were carried out using a portable gas meter in accordance with the standard JPG methodology and included measurements of methane, carbon dioxide, oxygen, hydrogen sulphide, carbon monoxide, gas flows and atmospheric pressure.

Results of gas and groundwater monitoring to date are included in Appendix E of this report.



Appendix A Figures/Drawings

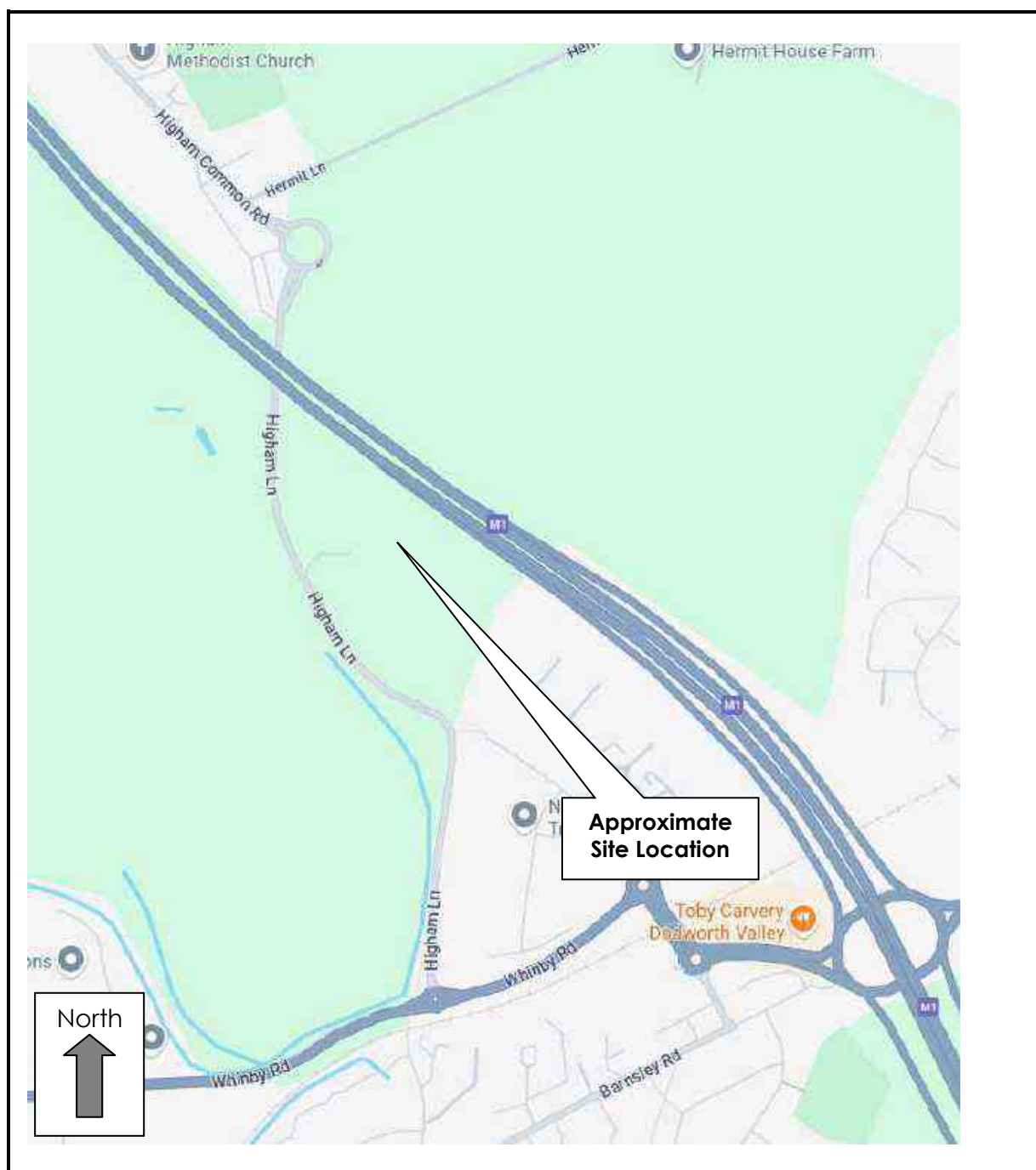


Figure 1 – Site Location Plan

Site	Higham Lane North, Dodworth, Barnsley
Client	Commercial Development Projects Limited
Job Number	4173
Scale	NTS

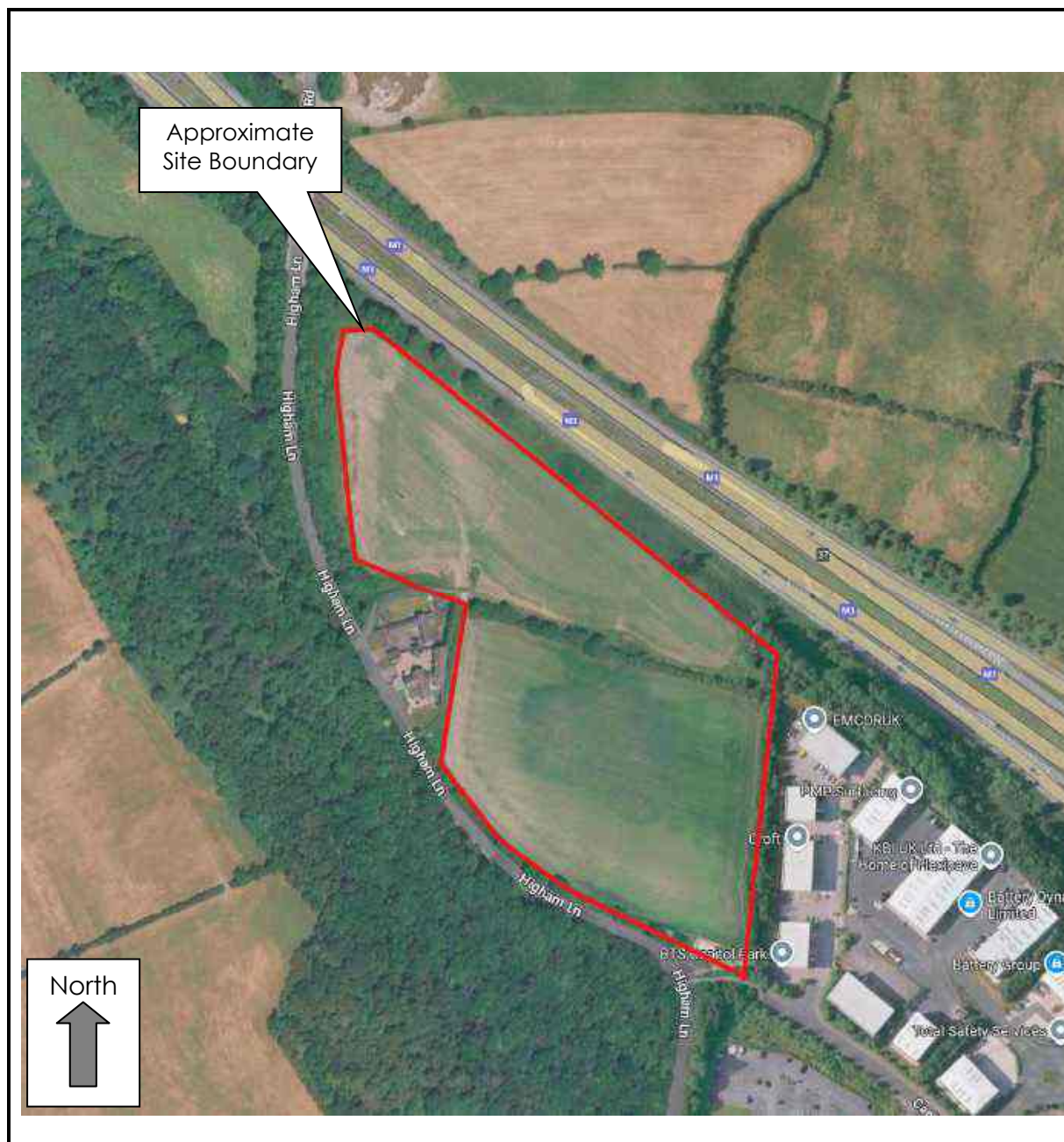
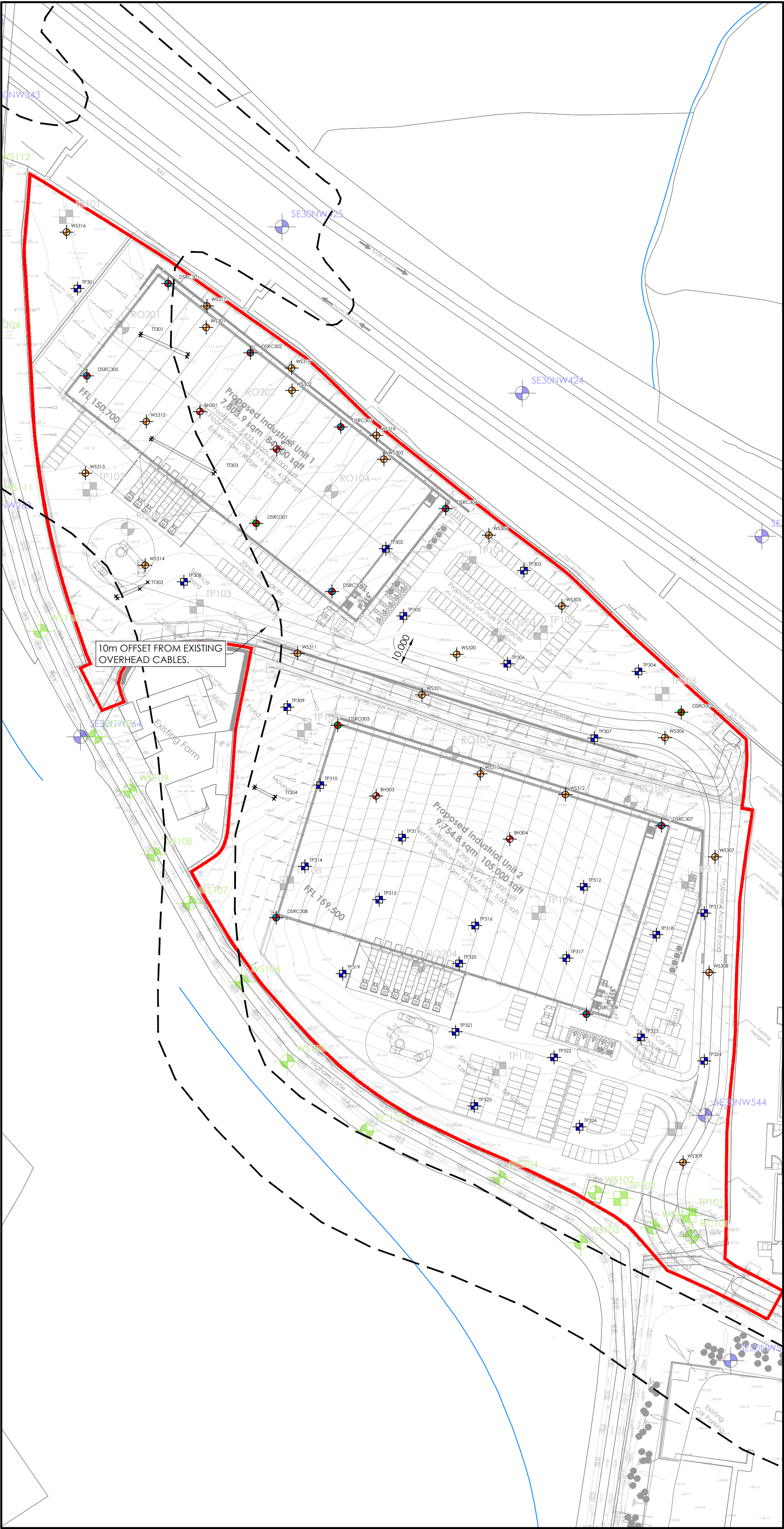


Figure 2 – Aerial Photograph

Site	Higham Lane North, Dodworth, Barnsley
Client	Commercial Development Projects Limited
Job Number	4173
Scale	NTS



DO NOT SCALE (A2)

NOTES

PROPOSED JPG INVESTIGATION 2025

- BH CABLE PERCUSSIVE BOREHOLE
- WS WINDOW SAMPLE BOREHOLE
- DSRO DYNAMIC SAMPLE BOREHOLE WITH ROTARY OPEN HOLE FOLLOW ON
- DSRC DYNAMIC SAMPLE BOREHOLE WITH ROTARY CORED BOREHOLE
- TP TRIAL PIT
- TT TRIAL TRENCH

BGS BOREHOLES

- SENW BGS BOREHOLE

JPG HIGHWAYS INVESTIGATION 2023

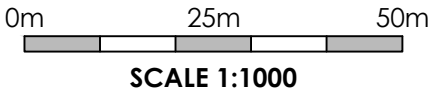
- WS WINDOW SAMPLE BOREHOLE
- RO ROTARY OPEN HOLE BOREHOLE
- TP TRIAL PIT

HYDROCK INVESTIGATION 2022

- TP TRIAL PIT
- RO ROTARY OPEN HOLE BOREHOLE

LEGEND

- CONJECTURED COAL SEAM OUTCROP



P07	AS BUILT	22.08.25	JBW	EJS
P06	ADDITIONAL WINDOW SAMPLES ADDED.	30.07.25	JBW	LSG
P05	WINDOW SAMPLES RE-NUMBERED.	28.07.25	JBW	LSG
P04	UPDATED TO AVOID SERVICE ROUTES	25.07.25	JBW	EJS
P03	BYLAND COMMENTS	21.07.25	JBW	EJS
P02	UPDATED	11.07.25	JBW	EJS
P01	FIRST ISSUE	09.07.25	JBW	EJS
REV	DESCRIPTION	DATE	CHK	BY

Project
COMMERCIAL PLOT
HIGHAM LANE NORTH
DODWORTH

Drawing Title
COMPOSITE EXPLORATORY HOLE
LOCATION PLAN

INFORMATION



E admin@jpg.group | T +44 (0)113 263 1155



Appendix B Exploratory Hole Logs



Trial Pit Log

Client: Commercial Development Projects Limited

Co-ords: E431418.29 N406525.85

Contractor:

Crew Name: Hather Plant Hire Ltd

Equipment: JCB 3CX

Location Type
TP

Level
144.90m AoD

Logged By
DJW&EJS

Scale
1:20

Page Number
Sheet 1 of 1

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
3.00	0.50	Stable					

Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered





Trial Pit Log

Client: Commercial Development Projects
Limited

Date: 06/08/2025

Contractor:	Co-ords: E431532.81 N406427.97
-------------	--------------------------------

Crew Name: Hather Plant Hire Ltd	Equipment: JCB 3CX
----------------------------------	--------------------

Location Number TP302	Location Type TP	Level 149.23m AoD	Logged By DJW&EJS	Scale 1:20	Page Number Sheet 1 of 1
---------------------------------	---------------------	----------------------	----------------------	---------------	-----------------------------

[illegible]

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
3.00	0.50	Stable					

Remarks	
Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered	



5 John Charles Way
Leeds
LS12 6QA

Trial Pit Log

Project Name: Higham Lane North		Client: Commercial Development Projects Limited		Date: 06/08/2025	
Location: Higham Lane, Dodworth, Barnsley		Contractor:		Co-ords: E431418.29 N406525.85	
Project No. : 4173.2		Crew Name: Hather Plant Hire Ltd		Equipment: JCB 3CX	
Location Number TP303	Location Type TP	Level 150.00m AoD	Logged By DJW&EJS	Scale 1:20	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.30	149.70		MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)	1
								Firm becoming stiff orangish brown and mottled grey slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone.	
					1.80	148.20		Light greyish brown thinly and thickly laminated MUDSTONE. Recovered as fine to coarse, subangular to angular gravel.	
					2.60	147.40		End of Trial Pit at 2.60m	2
									3
									4

Dimensions		Trench Support and Comment				Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks		Date	Rate	Remarks
3.00	0.50	Stable						

Remarks
Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered





Trial Pit Log

Client: Commercial Development Projects Limited

Co-ords: E431625.89 N406382.80

Contractor:

Crew Name: Hather Plant Hire Ltd

Equipment: JCB 3CX

Location Type
TP

Level
152.42m AoD

Logged By
DJW&EJS

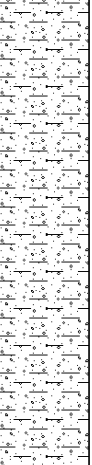
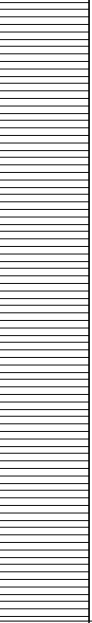
Scale
1:20

Page Number
Sheet 1 of 1

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
3.00	0.50	Stable					

Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered



		5 John Charles Way Leeds LS12 6QA		Trial Pit Log					
Project Name: Higham Lane North				Client: Commercial Development Projects Limited			Date: 05/08/2025		
Location: Higham Lane, Dodworth, Barnsley				Contractor:			Co-ords: E431539.30 N406403.22		
Project No. : 4173.2				Crew Name: Hather Plant Hire Ltd			Equipment: JCB 3CX		
Location Number TP305		Location Type TP		Level 151.38m AoD		Logged By DJW&EJS		Scale 1:20	Page Number Sheet 1 of 1
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.20	151.18		MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)	1
								Firm light greyish brown and orangish brown slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone.	
					1.45	149.93		Light orangish brown and greyish brown distinctly weathered MUDSTONE. Recovered as a fine to coarse, subangular to angular gravel of mudstone.	2
					3.10	148.28		End of Trial Pit at 3.10m	3
									4
Dimensions		Trench Support and Comment				Pumping Data			
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks			Date	Rate	Remarks
3.00	0.50	Stable							
Remarks									
Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered									



5 John Charles Way
Leeds
LS12 6QA

Trial Pit Log

Project Name: Higham Lane North		Client: Commercial Development Projects Limited		Date: 05/08/2025	
Location: Higham Lane, Dodworth, Barnsley		Contractor:		Co-ords: E431577.60 N406385.61	
Project No. : 4173.2		Crew Name: Hather Plant Hire Ltd		Equipment: JCB 3CX	
Location Number TP306	Location Type TP	Level 152.46m AoD	Logged By DJW&EJS	Scale 1:20	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.90 0.90	B D		0.30	152.16		MADE GROUND: Dark brown slightly sandy gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone and coal. (TOPSOIL)	1
					1.60	150.86		Firm light orangish brown and mottled grey slightly sandy gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone.	
								Light greyish brown and orangish brown distinctly weathered MUDSTONE. Recovered as a fine to coarse, subangular to angular gravel of mudstone.	
					3.00	149.46		End of Trial Pit at 3.00m	3
									4

Dimensions		Trench Support and Comment				Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks		Date	Rate	Remarks
3.00	0.50	Stable						

Remarks
Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered





Trial Pit Log

Client: Commercial Development Projects Limited

Date: 06/08/2025

Contractor:

Co-ords: E431609.62 N406358.25

Crew Name: Hather Plant Hire Ltd

Equipment: JCB 3CX

Location Number
TP307

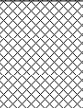
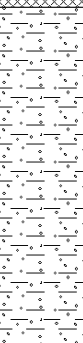
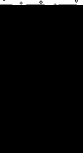
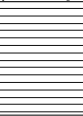
Location Type
TP

Level
154.21m AoD

Logged By
DJW&EJS

Scale
1:20

Page Number
Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.20	E		0.30	153.91		MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone and coal. (TOPSOIL)	1
								Firm becoming stiff orangish brown and mottled grey slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone.	
		1.20	153.01		Black locally dark grey distinctly weathered COAL. Recovered as a fine to coarse, subangular to angular gravel of coal.				
		1.60	152.61		Stiff orangish brown gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone.				
		1.70	152.51		Light greyish brown and orangish brown distinctly weathered MUDSTONE. Recovered as a fine to coarse, subangular to angular gravel of mudstone.				
		2.00	152.21		End of Trial Pit at 2.00m	2			
									3
									4

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
3.00	0.50	Stable					

Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered





5 John Charles Way
Leeds
LS12 6QA

Trial Pit Log

Project Name: Higham Lane North		Client: Commercial Development Projects Limited		Date: 06/08/2025								
Location: Higham Lane, Dodworth, Barnsley		Contractor:		Co-ords: E431458.47 N406415.80								
Project No. : 4173.2		Crew Name: Hather Plant Hire Ltd		Equipment: JCB 3CX								
Location Number TP308		Location Type TP		Level 149.31m AoD		Logged By DJW&EJS		Scale 1:20		Page Number Sheet 1 of 1		
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description				
		Depth (m)	Type	Results								
					0.25	149.06		MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone and coal. (TOPSOIL)		1		
								Stiff clay light orangish brown and mottled grey slightly gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone.				
							1.50 1.55	147.81 147.76			Black locally dark grey distinctly weathered COAL. Recovered as a fine to coarse, subangular to angular gravel.	
								Very weak light grey thinly laminated MUDSTONE interlaminated with coal. Recovered as fine to coarse, subangular to angular gravel of mudstone and coal.		2		
					3.00	146.31		End of Trial Pit at 3.00m		3		
										4		
Dimensions				Trench Support and Comment				Pumping Data				
Pit Length 3.00		Pit Width 0.50		Pit Stability Stable		Shoring Used		Remarks		Date	Rate	Remarks
Remarks												
Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered												



5 John Charles Way
Leeds
LS12 6QA

Trial Pit Log

Project Name: Higham Lane North		Client: Commercial Development Projects Limited		Date: 05/08/2025	
Location: Higham Lane, Dodworth, Barnsley		Contractor:		Co-ords: E431496.54 N406369.64	
Project No. : 4173.2		Crew Name: Hather Plant Hire Ltd		Equipment: JCB 3CX	
Location Number TP309	Location Type TP	Level 154.52m AoD	Logged By DJW&EJS	Scale 1:20	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.30	154.22		MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone and coal. (TOPSOIL)	1
					0.60	153.92		Firm light greyish brown and orangish brown slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone.	
					1.10	153.42		Black locally dark grey distinctly weathered COAL. Recovered as a fine to coarse, subangular to angular gravel.	
					1.40	153.12		Firm light greyish brown and orangish brown slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular gravel of mudstone.	
					1.55	152.97		Black locally dark grey distinctly weathered COAL. Recovered as a fine to coarse, subangular to angular gravel.	
					2.00	152.52		Firm light greyish brown and orangish brown slightly sandy gravelly CLAY with rare coal fragments. Gravel is fine to coarse, subangular to angular of mudstone and coal.	2
					2.35	152.17		Black locally dark grey distinctly weathered COAL. Recovered as a fine to coarse, subangular to angular gravel.	
								Light greyish brown distinctly weathered MUDSTONE. Recovered as a fine to coarse, subangular to angular gravel.	3
					3.20	151.32		End of Trial Pit at 3.20m	4

Dimensions		Trench Support and Comment				Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks		Date	Rate	Remarks
3.00	0.50	Stable						

Remarks

Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered





5 John Charles Way
Leeds
LS12 6QA

Trial Pit Log

Project Name: Higham Lane North		Client: Commercial Development Projects Limited		Date: 05/08/2025	
Location: Higham Lane, Dodworth, Barnsley		Contractor:		Co-ords: E431508.61 N406340.94	
Project No. : 4173.2		Crew Name: Hather Plant Hire Ltd		Equipment: JCB 3CX	
Location Number TP310	Location Type TP	Level 158.39m AoD	Logged By DJW&EJS	Scale 1:20	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.20	E		0.25	158.14		MADE GROUND: Dark brown sightly sandy gravelly CLAY with rootlets and high cobble content. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)	1
		0.70 0.70	B D					Firm light greyish brown and orangish brown slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone.	
					2.00	156.39		Very weak distinctly weathered light brown MUDSTONE recovered as gravel with high cobble content. Gravel is fine to coarse, subrounded to angular.	
					3.10	155.29		End of Trial Pit at 3.10m	3
									4

Dimensions		Trench Support and Comment				Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks		Date	Rate	Remarks
3.00	0.50	Stable						

Remarks
Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered





Trial Pit Log

Client: Commercial Development Projects Limited

Co-ords: E431538.82 N406321.57

Contractor:

Crew Name: Hather Plant Hire Ltd

Equipment: JCB 3CX

Location Number
TP311

Location Type
TP

Level
160.28m AoD

Logged By
DJW&EJS

Scale
1:20

Page Number
Sheet 1 of 1

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
3.00	0.50	Stable					

Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered





5 John Charles Way
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LS12 6QA

Trial Pit Log

Project Name: Higham Lane North

Client: Commercial Development Projects Limited

Date: 05/08/2025

Location: Higham Lane, Dodworth, Barnsley

Contractor:

Co-ords: E431605.72 N406303.47

Project No. : 4173.2

Crew Name: Hather Plant Hire Ltd

Equipment: JCB 3CX

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP312	TP	158.51m AoD	DJW&EJS	1:20	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.40	158.11		MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)	
					1.20	157.31		Light yellowish brown sandy GRAVEL and COBBLES of sandstone. Gravel is fine to coarse, subrounded to angular of sandstone.	1
								End of Trial Pit at 1.20m	2
									3
									4

Dimensions		Trench Support and Comment				Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks		Date	Rate	Remarks
3.00	0.50	Stable						

Remarks

Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered





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Trial Pit Log

Project Name: Higham Lane North		Client: Commercial Development Projects Limited		Date: 05/08/2025	
Location: Higham Lane, Dodworth, Barnsley		Contractor:		Co-ords: E431650.10 N406293.80	
Project No. : 4173.2		Crew Name: Hather Plant Hire Ltd		Equipment: JCB 3CX	
Location Number TP313	Location Type TP	Level 157.57m AoD	Logged By DJW&EJS	Scale 1:20	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.20	E					MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)	
					0.40	157.17		Light yellowish brown sandy GRAVEL and COBBLES of sandstone. Gravel is fine to coarse, subrounded to angular of sandstone.	1
					1.15	156.42		End of Trial Pit at 1.15m	4

Dimensions		Trench Support and Comment				Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks		Date	Rate	Remarks
3.00	0.50	Stable						

Remarks
Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered





5 John Charles Way
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Trial Pit Log

Project Name: Higham Lane North		Client: Commercial Development Projects Limited		Date: 05/08/2025	
Location: Higham Lane, Dodworth, Barnsley		Contractor:		Co-ords: E431503.02 N406311.02	
Project No. : 4173.2		Crew Name: Hather Plant Hire Ltd		Equipment: JCB 3CX	
Location Number TP314	Location Type TP	Level 160.91m AoD	Logged By DJW&EJS	Scale 1:20	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.20	E		0.20	160.71		MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)	1
								Firm light greyish brown and orangish brown slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone.	
					1.10	159.81		Light greyish brown and orangish brown sandy slightly clayey GRAVEL of mudstone. Gravel is fine to coarse, subangular to angular of mudstone.	
					1.70	159.21		Light greyish brown distinctly weathered MUDSTONE. Recovered as a fine to coarse, subangular to angular gravel.	2
		3.00 3.00 3.00	B D E						3
					3.30	157.61		End of Trial Pit at 3.30m	4

Dimensions		Trench Support and Comment				Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks		Date	Rate	Remarks
3.00	0.50	Stable						

Remarks
Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered





5 John Charles Way
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Trial Pit Log

Project Name: Higham Lane North		Client: Commercial Development Projects Limited		Date: 05/08/2025	
Location: Higham Lane, Dodworth, Barnsley		Contractor:		Co-ords: E431530.37 N406298.74	
Project No. : 4173.2		Crew Name: Hather Plant Hire Ltd		Equipment: JCB 3CX	
Location Number TP315	Location Type TP	Level 162.75m AoD	Logged By DJW&EJS	Scale 1:20	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.30	162.45		MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)	1
								Light grey fine slightly sandy GRAVEL. Gravel is fine to coarse, subangular to angular or sandstone.	
					0.80	161.95		Black locally dark grey distinctly weathered COAL. Recovered as a fine to coarse, subangular to angular gravel.	
					1.30	161.45		Light grey distinctly weathered MUDSTONE. Recovered as firm gravelly clay.	
					2.70	160.05		End of Trial Pit at 2.70m	2
									3
									4

Dimensions		Trench Support and Comment				Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks		Date	Rate	Remarks
3.00	0.50	Stable						

Remarks

Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered





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Trial Pit Log

Project Name: Higham Lane North		Client: Commercial Development Projects Limited		Date: 04/08/2025	
Location: Higham Lane, Dodworth, Barnsley		Contractor:		Co-ords: E431565.74 N406289.20	
Project No. : 4173.2		Crew Name: Hather Plant Hire Ltd		Equipment: JCB 3CX	
Location Number TP316	Location Type TP	Level 162.36m AoD	Logged By DJW&EJS	Scale 1:20	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.30	162.06		MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)	1
								Light grey fine grained SANDSTONE. Recovered as fine to coarse, subangular to angular gravel.	
					1.40	160.96		Black and blueish grey destructured COAL recovered as gravel.	
					1.70	160.66		Very weak greyish brown distinctly weathered MUDSTONE recovered as gravelly clay. Gravel is fine to coarse, subangular to angular of mudstone.	
					2.50	159.86		End of Trial Pit at 2.50m	2
									3
									4

Dimensions		Trench Support and Comment				Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks		Date	Rate	Remarks
3.00	0.50	Stable						

Remarks

Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered





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Trial Pit Log

Project Name: Higham Lane North		Client: Commercial Development Projects Limited		Date: 04/08/2025	
Location: Higham Lane, Dodworth, Barnsley		Contractor:		Co-ords: E431599.31 N406277.22	
Project No. : 4173.2		Crew Name: Hather Plant Hire Ltd		Equipment: JCB 3CX	
Location Number TP317	Location Type TP	Level 161.11m AoD	Logged By DJW&EJS	Scale 1:20	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.75	B D E		0.30	160.81		MADE GROUND: Dark brown slightly sandy gravelly CLAY low cobble content of mudstone. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)	1
		0.75						Light yellowish brown sandy GRAVEL and COBBLES of sandstone. Gravel is fine to coarse, subrounded to angular of sandstone.	
		0.75			1.10	160.01		End of Trial Pit at 1.10m	
									2
									3
									4

Dimensions		Trench Support and Comment				Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks		Date	Rate	Remarks
3.00	0.50	Stable						

Remarks

Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered





5 John Charles Way
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LS12 6QA

Trial Pit Log

Project Name: Higham Lane North

Client: Commercial Development Projects Limited

Date: 05/08/2025

Location: Higham Lane, Dodworth, Barnsley

Contractor:

Co-ords: E431632.47 N406285.85

Project No. : 4173.2

Crew Name: Hather Plant Hire Ltd

Equipment: JCB 3CX

Location Number TP318	Location Type TP	Level 158.91m AoD	Logged By DJW&EJS	Scale 1:20	Page Number Sheet 1 of 1
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Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.30	B D		0.30	158.61		MADE GROUND: Dark brown slightly sandy gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone and coal. (TOPSOIL)	1
		0.60 0.60						Light yellowish brown sandy GRAVEL and COBBLES of sandstone. Gravel is fine to coarse, subrounded to angular of sandstone.	
					1.15	157.76		End of Trial Pit at 1.15m	4

Dimensions		Trench Support and Comment				Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks		Date	Rate	Remarks
3.00	0.50	Stable						

Remarks

Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered





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Trial Pit Log

Project Name: Higham Lane North		Client: Commercial Development Projects Limited		Date: 05/08/2025	
Location: Higham Lane, Dodworth, Barnsley		Contractor:		Co-ords: E431516.93 N406271.48	
Project No. : 4173.2		Crew Name: Hather Plant Hire Ltd		Equipment: JCB 3CX	
Location Number TP319	Location Type TP	Level 162.59m AoD	Logged By DJW&EJS	Scale 1:20	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.60 0.60	B D		0.25	162.34		MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)	1
								Stiff light grey brown slightly gravelly CLAY with relict rootlets. Gravel is fine to coarse, subangular to angular of mudstone.	
					1.00	161.59		Light greyish brown and orangish brown destructured MUDSTONE. Recovered as sandy cobbles and gravel. Gravel is fine to coarse, subangular to angular.	
					2.70	159.89		End of Trial Pit at 2.70m	4

Dimensions		Trench Support and Comment				Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks		Date	Rate	Remarks
3.00	0.50	Stable						

Remarks
Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered





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Trial Pit Log

Project Name: Higham Lane North		Client: Commercial Development Projects Limited		Date: 04/08/2025	
Location: Higham Lane, Dodworth, Barnsley		Contractor:		Co-ords: E431559.82 N406275.23	
Project No. : 4173.2		Crew Name: Hather Plant Hire Ltd		Equipment: JCB 3CX	
Location Number TP320	Location Type TP	Level 162.75m AoD	Logged By DJW&EJS	Scale 1:20	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.20	E		0.30	162.45		MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)	
					1.00	161.75		Light grey sandy GRAVEL. Gravel is as fine to coarse, subangular to angular of sandstone.	1
					2.30	160.45		Firm light greyish brown and orangish brown slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone.	2
								End of Trial Pit at 2.30m	3
									4

Dimensions		Trench Support and Comment				Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks		Date	Rate	Remarks
3.00	0.50	Stable						

Remarks

Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered





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Trial Pit Log

Project Name: Higham Lane North

Client: Commercial Development Projects Limited

Date: 04/08/2025

Location: Higham Lane, Dodworth, Barnsley

Contractor:

Co-ords: E431558.51 N406250.06

Project No. : 4173.2

Crew Name: Hather Plant Hire Ltd

Equipment: JCB 3CX

Location Number
TP321

Location Type
TP

Level
162.12m AoD

Logged By
DJW&EJS

Scale
1:20

Page Number
Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		2.25 2.25	B D		0.30	161.82		MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone and coal. (TOPSOIL)	1
					1.60	160.52		Firm light greyish brown and orangish brown slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone.	
								Light greyish brown distinctly weathered MUDSTONE. Recovered as a fine to coarse, subangular to angular gravel.	
					3.30	158.82		End of Trial Pit at 3.30m	
									4

Dimensions		Trench Support and Comment				Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks		Date	Rate	Remarks
3.00	0.50	Stable						

Remarks

Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered





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Trial Pit Log

Project Name: Higham Lane North		Client: Commercial Development Projects Limited		Date: 04/08/2025	
Location: Higham Lane, Dodworth, Barnsley		Contractor:		Co-ords: E431594.78 N406240.65	
Project No. : 4173.2		Crew Name: Hather Plant Hire Ltd		Equipment: JCB 3CX	
Location Number TP322	Location Type TP	Level 161.83m AoD	Logged By DJW&EJS	Scale 1:20	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.35	161.48		MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)	1
								Firm light orangish brown and mottled grey slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone. At 0.50m bgl: two land drains encountered, dry.	
					1.80	160.03		Orangish brown and mottled grey MUDSTONE. Recovered fine to coarse, subangular to angular gravel.	
					2.90	158.93		End of Trial Pit at 2.90m	3
									4

Dimensions		Trench Support and Comment				Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks		Date	Rate	Remarks
3.00	0.50	Stable						

Remarks
Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered. Red clay land drains encountered at 0.50m bgl, dry.





Trial Pit Log

Client: Commercial Development Projects Limited

Co-ords: E431626.82 N406248.01

Contractor:

Crew Name: Hather Plant Hire Ltd

Equipment: JCB 3CX

Location Type
TP

Level
161.00m AoD

Logged By
DJW&EJS

Scale
1:20

Page Number
Sheet 1 of 1

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
3.00	0.50	Stable					

Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered





5 John Charles Way
Leeds
LS12 6QA

Trial Pit Log

Project Name: Higham Lane North		Client: Commercial Development Projects Limited		Date: 04/08/2025	
Location: Higham Lane, Dodworth, Barnsley		Contractor:		Co-ords: E431650.10 N406239.36	
Project No. : 4173.2		Crew Name: Hather Plant Hire Ltd		Equipment: JCB 3CX	
Location Number TP324	Location Type TP	Level 160.22m AoD	Logged By DJW&EJS	Scale 1:20	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		2.00 2.00 2.00	B D E		0.35	159.87		MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)	1
					0.95	159.27		Firm light greyish brown and orangish brown slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone.	
								Black distinctly weathered COAL recovered as gravel. Gravel is fine to coarse, subangular to angular.	
					1.25	158.97		Firm light greyish brown and orangish brown slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone and coal.	
					2.40	157.82		End of Trial Pit at 2.40m	2
									3
									4

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
3.00	0.50	Stable					

Remarks

Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered





Trial Pit Log

Client: Commercial Development Projects
Limited

Date: 04/08/2025

Co-ords: E431565.43 N406222.76

Equipment: JCB 3CX

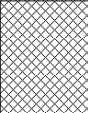
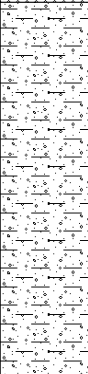
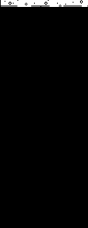
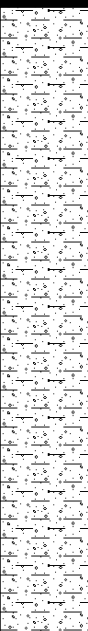
Location Type
TP

Level
160.27m AoD

Logged By
DJW&EJS

Scale
1:20

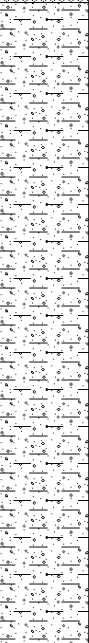
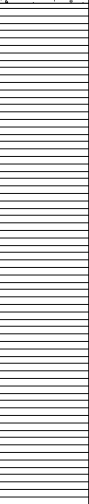
Page Number
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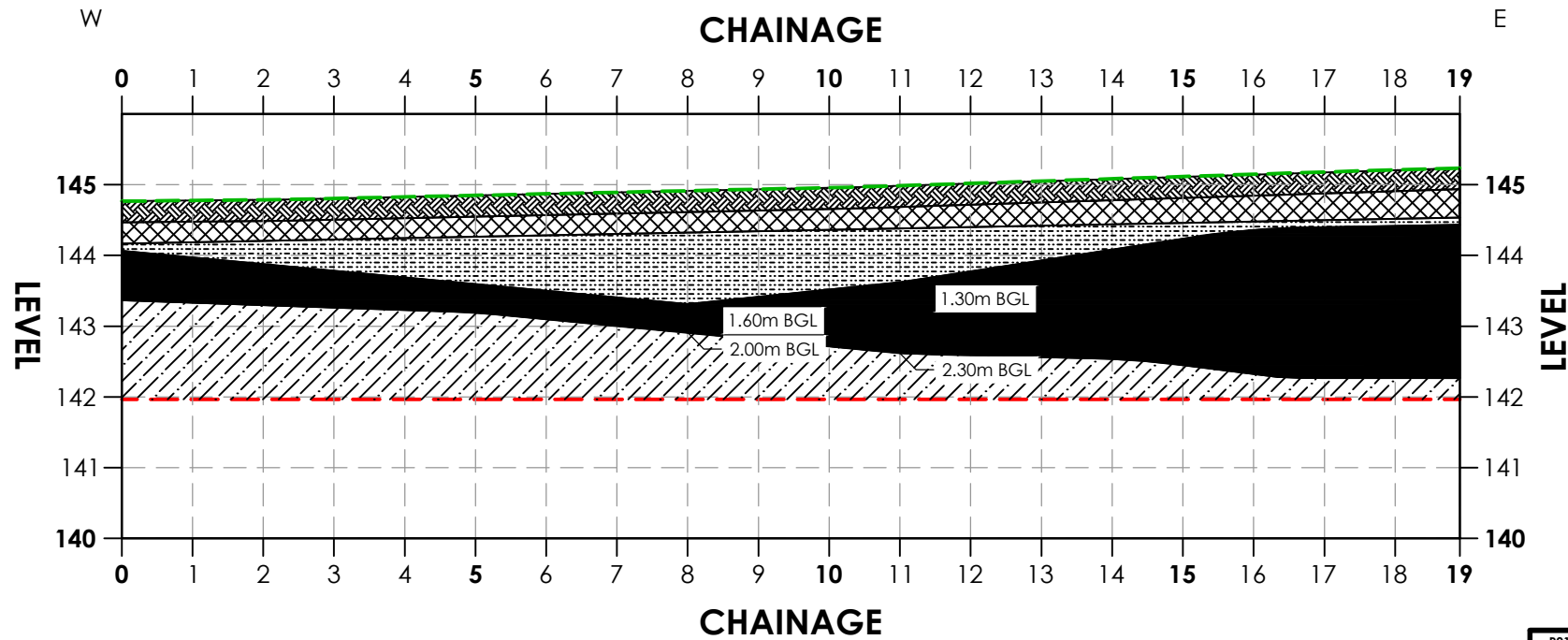
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.30	159.97		MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)	1
								Firm light greyish brown and orangish brown slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone.	
								Black destructured COAL. Recovered as a slightly sandy gravelly clay. Gravel is fine to coarse, subangular to angular.	
								Soft yellowish brown slightly sandy gravelly CLAY frequently interbedded with bands of coal. Gravel is fine to coarse, subangular to angular of mudstone and coal.	
								End of Trial Pit at 3.60m	
					3.60	156.67			4

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
3.00	0.50	Stable					

Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered



		5 John Charles Way Leeds LS12 6QA		Trial Pit Log								
Project Name: Higham Lane North				Client: Commercial Development Projects Limited			Date: 04/08/2025					
Location: Higham Lane, Dodworth, Barnsley				Contractor:			Co-ords: E431604.16 N406215.06					
Project No. : 4173.2				Crew Name: Hather Plant Hire Ltd			Equipment: JCB 3CX					
Location Number TP326		Location Type TP		Level 160.19m AoD		Logged By DJW&EJS		Scale 1:20	Page Number Sheet 1 of 1			
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description				
		Depth (m)	Type	Results								
		0.10	E		0.20	159.99		MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)	1			
								Firm light greyish brown and orangish brown slightly sandy gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone.				
		1.50 1.50	B D		1.90	158.29		Light greyish brown distinctly weathered MUDSTONE. Recovered as a slightly sandy gravel. Gravel is fine to coarse, subangular to angular of mudstone.		2		
								Black locally dark grey distinctly weathered COAL. Recovered as a fine to coarse, subangular to angular gravel. End of Trial Pit at 3.30m		3		
					3.25 3.30	156.94 156.89			4			
Dimensions		Trench Support and Comment								Pumping Data		
Pit Length 3.00	Pit Width 0.50	Pit Stability Stable	Shoring Used	Remarks				Date	Rate	Remarks		
Remarks												
Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered. Base of coal not proven due to difficulty to dig.												



TRIAL TRENCH 301

SCALE 1:100

GROUND TYPE KEY



BROWN SANDY GRAVELLY
CLAY (TOPSOIL)



BLACK COAL, RECOVERED AS
ANGULAR TABULAR SANDY FINE TO
COARSE GRAVEL



MADE GROUND, LIGHT BROWN
CLAYEY SANDY GRAVEL
(REWORKED NATURAL)



LIGHT GREYISH BROWN MUDSTONE,
RECOVERED AS A SLIGHTLY SANDY
GRAVEL



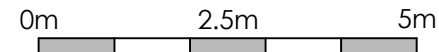
STIFF LIGHT GREYISH BROWN
MOTTLED ORANGE SLIGHTLY
SANDY GRAVELLY CLAY



GROUND LEVEL



BOTTOM OF EXCAVATION



SCALE 1:100

P01	FIRST ISSUE.	19.09.25	EJS	ODW
REV	DESCRIPTION	DATE	CHK	BY

Project
HIGHAM LANE NORTH
DODWORTH

Drawing Title
TRIAL TRENCH 301

INFORMATION



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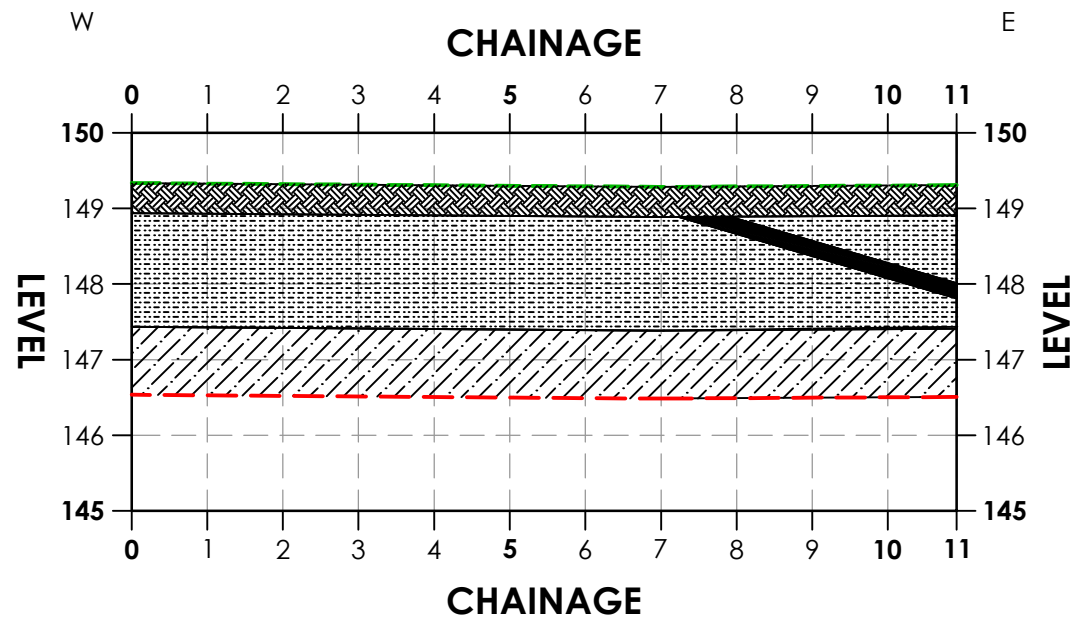
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S2

P01

DO NOT SCALE (A4)

NOTES



GROUND TYPE KEY

-  BROWN, SLIGHTLY SANDY GRAVELLY CLAY WITH ROOTLETS (TOPSOIL)
-  FIRM BECOMING STIFF. LIGHT BROWN GREY, MOTTLED ORANGE SLIGHTLY SANDY GRAVELLY CLAY
-  BLACK COAL. RECOVERED AS SLIGHTLY SANDY ANGULAR TABULAR GRAVEL
-  LIGHT GREYISH BROWN MUDSTONE. RECOVERED AS A SLIGHTLY SANDY GRAVEL
-  GROUND LEVEL
-  BOTTOM OF EXCAVATION

TRIAL TRENCH 302
SCALE 1:100

0m 2.5m 5m

SCALE 1:100

P01	FIRST ISSUE.	19.09.25	EJS	ODW
REV	DESCRIPTION	DATE	CHK	BY

Project
HIGHAM LANE NORTH
DODWORTH

Drawing Title
TRIAL TRENCH 302

INFORMATION

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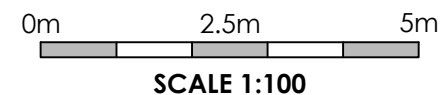
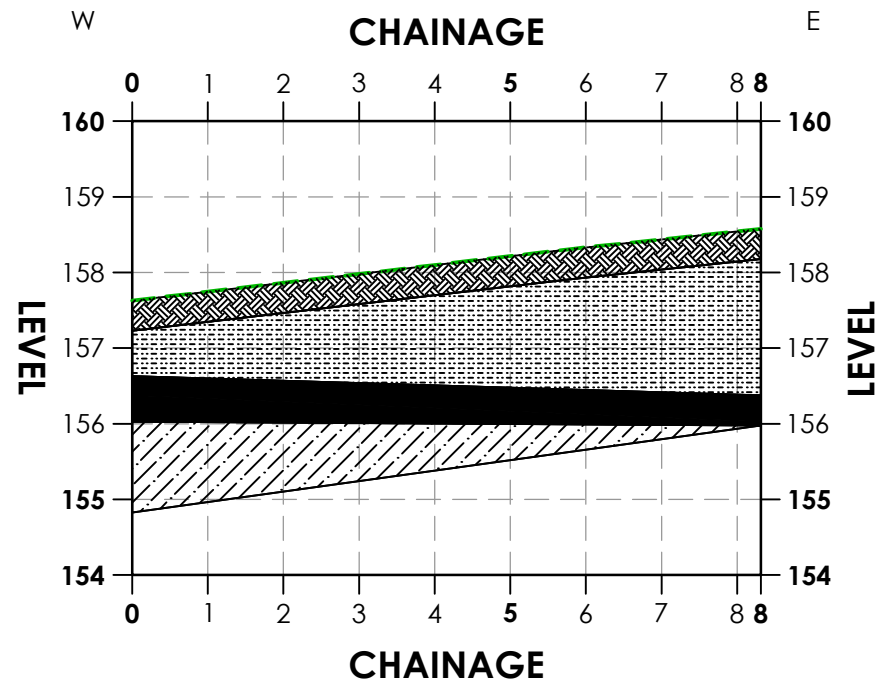
4173-JPG-XX-XX-SK-G-1002 S2 P01

DO NOT SCALE (A4)

NOTES

GROUND TYPE KEY

-  BROWN SANDY GRAVELLY CLAY WITH ROOTLETS (TOPSOIL)
-  FIRM BECOMING STIFF BROWN GREY MOTTLED ORANGE SLIGHTLY SANDY GRAVELLY CLAY
-  BLACK COAL, RECOVERED AS ANGULAR TABULAR GRAVEL
-  MUDSTONE
-  GROUND LEVEL



P01	FIRST ISSUE.	19.09.25	EJS	ODW
REV	DESCRIPTION	DATE	CHK	BY

Project
HIGHAM LANE NORTH
DODWORTH

Drawing Title
TRIAL TRENCH 304

INFORMATION



4173-JPG-XX-XX-SK-G-1003 S2 P01



5 John Charles Way
Leeds
LS12 6QA

Window Sampler Log

Project Name: Higham Lane North

Client: Commercial Development Projects
Limited

Date: 30/07/2025

Location: Higham Lane, Dodworth, Barnsley

Contractor:

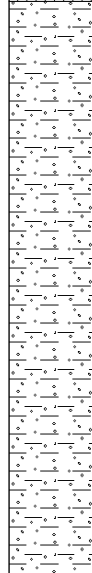
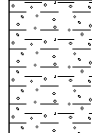
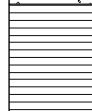
Co-ords: E431466.67 N406509.48

Project No. : 4173.2

Crew Name: RP DRILLING

Drilling Equipment: Window sample rig RP03

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS301	WS	144.96m AoD	DJW&EJS	1:20	Sheet 1 of 1

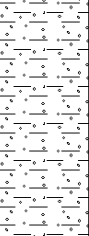
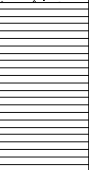
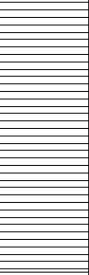
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
		Depth (m)	Type	Results						
		1.00	SPT	N=16 (2.2/4,4,4,4)	0.25	144.71		MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)	1	
								Firm orangish brown and mottled grey gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone.		
		2.00	SPT	N=21 (4,4/4,4,5,8)	1.77	143.19		Black, locally dark grey distinctly weathered COAL. Recovered as fine to coarse, subangular to angular slightly clayey sandy gravel.	2	
								Firm light grey gravelly CLAY interbedded with coal. Gravel is fine to coarse, subangular to angular of mudstone and coal.		
		2.60	SPT	50 (25 for 115mm/50 for 190mm)	2.36	142.60		Very weak greyish brown distinctly weathered MUDSTONE recovered as gravel. Gravel is fine to coarse, subangular to angular of mudstone and coal.		
					2.65	142.31		End of Borehole at 2.65m	3	
										4

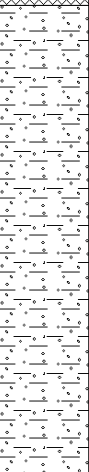
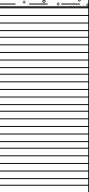
Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered.



		5 John Charles Way Leeds LS12 6QA		Window Sampler Log							
Project Name: Higham Lane North				Client: Commercial Development Projects Limited				Date: 30/07/2025			
Location: Higham Lane, Dodworth, Barnsley				Contractor:				Co-ords: E431498.29 N406486.27			
Project No. : 4173.2				Crew Name: RP DRILLING				Drilling Equipment: Window sample rig RP03			
Borehole Number WS302		Hole Type WS		Level 146.02m AoD		Logged By DJW&EJS		Scale 1:20		Page Number Sheet 1 of 1	
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description			
		Depth (m)	Type	Results							
		0.20			0.20	145.82		MADE GROUND: Dark brown slightly sandy gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)		1	
		0.84			0.84	145.18		Light orangish brown and mottled grey gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone and rare coal.			
		1.00	SPT	N=36 (6,8/10,9,9,8)				Light brown and mottled grey destructured MUDSTONE. Recovered as gravelly clay. Gravel is fine to coarse and subangular to angular of mudstone and coal.		2	
		2.00	SPT	N=50 (8,14/50 for 230mm)	2.00	144.02		At 1.30m bgl: brown to grey in colour. At 1.80m bgl: ironstone staining.			
		End of Borehole at 2.00m								3	
										4	
Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation
Remarks											
Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered.											

		5 John Charles Way Leeds LS12 6QA		Window Sampler Log								
Project Name: Higham Lane North				Client: Commercial Development Projects Limited				Date: 30/07/2025				
Location: Higham Lane, Dodworth, Barnsley				Contractor:				Co-ords: E431532.14 N406460.90				
Project No. : 4173.2				Crew Name: RP DRILLING				Drilling Equipment: Window sample rig RP03				
Borehole Number WS303		Hole Type WS		Level 147.44m AoD		Logged By DJW&EJS		Scale 1:20		Page Number Sheet 1 of 1		
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description				
		Depth (m)	Type	Results								
		1.00	SPT	N=14 (2,4/4,4,3,3)	0.25	147.19		MADE GROUND: Dark brown sandy gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)		1		
								Firm orangish brown and mottled grey slightly gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone.				
		2.00	SPT	50 (25 for 60mm/50 for 40mm)	1.50	145.94		Light greyish brown distinctly weathered MUDSTONE. Recovered as a fine to coarse, subangular to angular gravel.				
					2.00	145.44		End of Borehole at 2.00m				
												2
												3
												4
Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	
Remarks												
Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered.												



5 John Charles Way
Leeds
LS12 6QA

Window Sampler Log

Project Name: Higham Lane North		Client: Commercial Development Projects Limited		Date: 01/08/2025	
Location: Higham Lane, Dodworth, Barnsley		Contractor:		Co-ords: E431570.79 N406433.00	
Project No. : 4173.2		Crew Name: RP DRILLING		Drilling Equipment: Window sample rig RP03	
Borehole Number WS304	Hole Type WS	Level 149.15m AoD	Logged By DJW&EJS	Scale 1:20	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.25			0.25	148.90		MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone and coal.(TOPSOIL)	
		1.00	SPT	N=13 (2,2/2,3,4,4)				Firm dark orangish brown and mottled grey slightly gravelly sandy firm CLAY with rare coal fragments. Gravel is fine to coarse and subangular to angular mudstone and coal.	1
		2.00	SPT	N=50 (5,7/50 for 235mm)	2.00	147.15		At 2.00m bgl: Assumed refusal on to extremely weak bedrock. End of Borehole at 2.00m	2
									3
									4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered.





5 John Charles Way
Leeds
LS12 6QA

Window Sampler Log

Project Name: Higham Lane North		Client: Commercial Development Projects Limited		Date: 01/08/2025	
Location: Higham Lane, Dodworth, Barnsley		Contractor:		Co-ords: E431597.67 N406406.87	
Project No. : 4173.2		Crew Name: RP DRILLING		Drilling Equipment: Window sample rig RP03	
Borehole Number WS305	Hole Type WS	Level 150.45m AoD	Logged By DJW&EJS	Scale 1:20	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.37	SPT	N=13 (1,2/2,2,4,5)	0.37	150.08		MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)	1
		1.00			1.24 1.28	149.21 149.17	 	Light orangish brown and mottled grey slightly sandy gravelly CLAY with low cobble content of sandstone. Gravel is fine to coarse and subangular to angular of coal, mudstone and sandstone. At 1.05m bgl: frequent gravel of coal encountered. Black distinctly weathered COAL. Recovered as a fine to coarse, subangular to angular sandy gravel. Dark orangish brown and mottled grey distinctly weathered MUDSTONE. Recovered as slightly sandy gravel. Gravel is fine to coarse, subangular to angular of mudstone.	
		2.00	SPT	50 (9,11/50 for 210mm)	2.00	148.45		End of Borehole at 2.00m	2
									3
									4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered.





5 John Charles Way
Leeds
LS12 6QA

Window Sampler Log

Project Name: Higham Lane North		Client: Commercial Development Projects Limited		Date: 01/08/2025	
Location: Higham Lane, Dodworth, Barnsley		Contractor:		Co-ords: E431635.64 N406358.40	
Project No. : 4173.2		Crew Name: RP DRILLING		Drilling Equipment: Window sample rig RP03	
Borehole Number WS306	Hole Type WS	Level 153.79m AoD	Logged By DJW&EJS	Scale 1:20	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		1.00	SPT	N=11 (2,3/3,2,2,4)	0.30	153.49		MADE GROUND: Dark brown sandy gravelly CLAY with rootlets. Gravel is fine to coarse and subangular to angular of mudstone and coal.	1
								Mottled grey and orange slightly gravelly firm CLAY. Gravel is fine to coarse and subangular to angular of mudstone.	
		2.00	SPT	N=50 (8,9/50 for 245mm)	1.60	152.19		At 0.70m bgl: red clay pipe land drain encountered, dry.	
					1.80	151.99		Black distinctly weathered COAL. Recovered as fine to coarse, subangular to angular slightly sandy gravel.	
		2.00	SPT	N=50 (8,9/50 for 245mm)	2.00	151.79		Firm dark grey and black slightly gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone and coal.	2
								End of Borehole at 2.00m	
									3
									4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered. At 0.70m bgl: red clay pipe land drain encountered, dry.





5 John Charles Way
Leeds
LS12 6QA

Window Sampler Log

Project Name: Higham Lane North		Client: Commercial Development Projects Limited		Date: 30/07/2025	
Location: Higham Lane, Dodworth, Barnsley		Contractor:		Co-ords: E431654.08 N406314.47	
Project No. : 4173.2		Crew Name: RP DRILLING		Drilling Equipment: Window sample rig RP03	
Borehole Number WS307	Hole Type WS	Level 156.42m AoD	Logged By DJW&EJS	Scale 1:20	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.20	156.22		MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone and coal. (TOPSOIL)	1
					0.40	156.02		Firm dark orangish brown and greyish brown slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular of sandstone and coal.	
								Firm light yellowish brown and mottled grey slightly gravelly silty CLAY. Gravel is fine to coarse, subangular to angular of mudstone.	
		1.00	SPT	N=38 (10,10/8,8,8,14)	1.00	155.42		Extremely weak light greyish brown distinctly weathered MUDSTONE recovered as gravel. Gravel is fine to coarse and subangular to angular of mudstone.	
		1.50	SPT	50 (25 for 20mm/50 for 10mm)	1.54	154.88		End of Borehole at 1.53m	2
									3
									4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered.





5 John Charles Way
Leeds
LS12 6QA

Window Sampler Log

Project Name: Higham Lane North		Client: Commercial Development Projects Limited		Date: 30/07/2025	
Location: Higham Lane, Dodworth, Barnsley		Contractor:		Co-ords: E431651.89 N406271.91	
Project No. : 4173.2		Crew Name: RP DRILLING		Drilling Equipment: Window sample rig RP03	
Borehole Number WS308	Hole Type WS	Level 158.66m AoD	Logged By DJW&EJS	Scale 1:20	Page Number Sheet 1 of 1

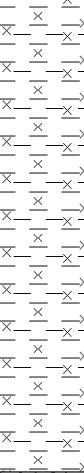
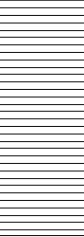
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		1.00	SPT	N=14 (2,1/1,2,2,9)	0.35	158.31		MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)	1
					0.85	157.81		Light yellowish brown sandy GRAVEL. Gravel is fine to coarse, subangular to angular of mudstone.	
		1.50	SPT	50 (25 for 30mm/50 for 10mm)	1.54	157.12		Firm light orangish brown and greyish brown slightly sandy gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone.	
								At 1.54m bgl: Assumed refusal on to extremely weak bedrock. End of Borehole at 1.54m	
									2
									3
									4

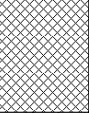
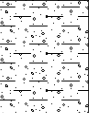
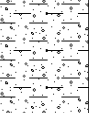
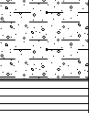
Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered.



		5 John Charles Way Leeds LS12 6QA		Window Sampler Log							
Project Name: Higham Lane North				Client: Commercial Development Projects Limited				Date: 30/07/2025			
Location: Higham Lane, Dodworth, Barnsley				Contractor:				Co-ords: E431642.30 N406201.95			
Project No. : 4173.2				Crew Name: RP DRILLING				Drilling Equipment: Window sample rig RP03			
Borehole Number WS309		Hole Type WS		Level 159.54m AoD		Logged By DJW&EJS		Scale 1:20		Page Number Sheet 1 of 1	
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description			
		Depth (m)	Type	Results							
		1.00	SPT	N=37 (4,6/7,8,10,12)	0.24	159.30		MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL) Light yellowish brown sandy GRAVEL. Gravel is fine to coarse, subangular to angular of mudstone.			
											
		2.00	SPT	N=50 (7,7/50 for 245mm)	1.50	158.04		Dark orangish brown slightly sandy GRAVEL and COBBLES of sandstone. Gravel is fine to coarse, subangular to angular of sandstone of mudstone. Light greyish brown of distinctly weathered MUDSTONE. Recovered as slightly clayey sandy gravel. Gravel is fine to coarse, subangular to angular.			
					1.67	157.87					
					2.30	157.24		End of Borehole at 2.30m			
1 2 3 4											
Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation
Remarks											
Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered.											

		5 John Charles Way Leeds LS12 6QA		Window Sampler Log							
Project Name: Higham Lane North				Client: Commercial Development Projects Limited				Date: 30/07/2025			
Location: Higham Lane, Dodworth, Barnsley				Contractor:				Co-ords: E431567.64 N406345.04			
Project No. : 4173.2				Crew Name: RP DRILLING				Drilling Equipment: Window sample rig RP03			
Borehole Number WS310		Hole Type WS		Level 156.84m AoD		Logged By DJW&EJS		Scale 1:20		Page Number Sheet 1 of 1	
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description			
		Depth (m)	Type	Results							
		1.00	SPT	N=18 (2,2/3,4,4,7)	0.30	156.54		MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL) Firm light orangish brown and greyish brown slightly sandy gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. Dark grey and black distinctly weathered COAL. Recovered as a fine to coarse, subangular to angular gravel. Firm light orangish brown and greyish brown slightly sandy gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. Light greyish brown distinctly weathered MUDSTONE. Recovered as a fine to coarse, subangular to angular gravel.			
					0.60	156.24					
					0.85	155.99					
					1.40	155.44					
					2.00	154.84					
		2.00	SPT	50 (9,13/50 for 155mm)	2.00	154.84	End of Borehole at 2.00m				
Remarks Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered. 											



5 John Charles Way
Leeds
LS12 6QA

Window Sampler Log

Project Name: Higham Lane North		Client: Commercial Development Projects Limited		Date: 30/07/2025	
Location: Higham Lane, Dodworth, Barnsley		Contractor:		Co-ords: E431500.31 N406389.45	
Project No. : 4173.2		Crew Name: RP DRILLING		Drilling Equipment: Window sample rig RP03	
Borehole Number WS311	Hole Type WS	Level 153.00m AoD	Logged By DJW&EJS	Scale 1:20	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		1.00	SPT	N=21 (2,3/4,5,6,6)	0.13	152.87		MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)	1
					0.37	152.63		Firm light orangish brown and greyish brown slightly sandy gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone, sandstone, wood and tile.	
								Firm light greyish brown sandy slightly gravelly CLAY. Gravel is fine to coarse, subangular to angular of sandstone.	
					0.91	152.09		Black locally dark grey distinctly weathered COAL. Recovered as a fine to coarse subangular to angular gravel.	
					1.05	151.95		Firm light orangish grey slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular of sandstone.	
					1.35	151.65		Dark brown and black distinctly weathered COAL. Recovered as a fine to coarse, subangular to angular gravel.	
		2.00	SPT	N=50 (3,3/50 for 255mm)	1.68	151.32		Firm light orangish brown and greyish brown slightly sandy gravelly CLAY interbedded with gravel coal. Gravel is fine to coarse, subangular to angular of mudstone and coal.	2
					2.00	151.00		End of Borehole at 2.00m	
									3
									4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered.





5 John Charles Way
Leeds
LS12 6QA

Window Sampler Log

Project Name: Higham Lane North		Client: Commercial Development Projects Limited		Date: 30/07/2025	
Location: Higham Lane, Dodworth, Barnsley		Contractor:		Co-ords: E431599.00 N406337.46	
Project No. : 4173.2		Crew Name: RP DRILLING		Drilling Equipment: Window sample rig RP03	
Borehole Number WS312	Hole Type WS	Level 156.80m AoD	Logged By DJW&EJS	Scale 1:20	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		1.00	SPT	N=22 (3,3/4,5,6,7)	0.21	156.59		MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)	1
					0.90	155.90		Firm light orangish brown slightly silty gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone and coal.	
		2.00	SPT	N=42 (3,4/6,8,13,15)	1.92	154.88		Light greyish brown distinctly weathered SANDSTONE. Recovered as gravel and cobbles.	2
					2.25	154.55		Black locally dark grey distinctly weathered COAL. Recovered as a fine to coarse, subangular to angular gravel.	
		2.50	SPT	50 (25 for 20mm/50 for 30mm)	2.55	154.25		Light greyish brown distinctly weathered MUDSTONE. Recovered as a fine to coarse, subangular to angular gravel.	
								End of Borehole at 2.55m	3
									4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

Well installed to 2.0m bgl on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered.





Window Sampler Log

Client: Commercial Development Projects Limited

Date: 30/07/2025

Contractor:

Co-ords: E431422.19 N406455.81

Crew Name: RP DRILLING

Drilling Equipment: Window sample rig RP03

Borehole Number
WS313

Hole Type	WS
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Level
147.26m AoD

Logged By
DJW&EJS

Scale
1:20

Page Number
Sheet 1 of 1

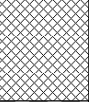
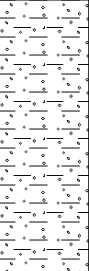
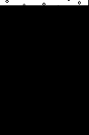
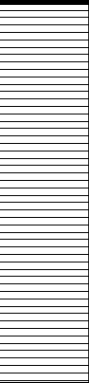
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		1.00	SPT	N=14 (5,5/5.3,3,3)	0.20	147.06	[Cross-hatch pattern]	MADE GROUND: Dark brown sandy gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)
							[Gravel pattern]	Firm orangish brown gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone.
							[Coal pattern]	Black locally dark grey, distinctly weathered COAL. Recovered as a fine to coarse, subangular to angular gravel.
		2.00	SPT	N=31 (5,7/7,7,8,9)	1.37	145.89	[Clay pattern]	Dark greyish brown firm slightly gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone and coal.
							[Mudstone pattern]	Light greyish brown distinctly weathered MUDSTONE. Recovered as slightly gravelly clay.
							[Empty pattern]	
		3.00	SPT	50 (7,8/50 for 125mm)	3.00	144.26	[Empty pattern]	End of Borehole at 3.00m

[illegible]

Remarks

Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered.



		5 John Charles Way Leeds LS12 6QA		Window Sampler Log							
Project Name: Higham Lane North				Client: Commercial Development Projects Limited				Date: 30/07/2025			
Location: Higham Lane, Dodworth, Barnsley				Contractor:				Co-ords: E431444.21 N406421.87			
Project No. : 4173.2				Crew Name: RP DRILLING				Drilling Equipment: Window sample rig RP03			
Borehole Number WS314		Hole Type WS		Level 148.16m AoD		Logged By DJW&EJS		Scale 1:20		Page Number Sheet 1 of 1	
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description			
		Depth (m)	Type	Results							
		1.00	SPT	N=12 (4,4/3,3,3,3)	0.27	147.90		MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)		1	
								Light orangeish brown and greyish brown slightly gravelly CLAY with rootlets. Gravel is fine to coarse and subangular to angular of mudstone.			
								Black and locally dark grey distinctly weathered COAL. Recovered as a fine to coarse, subangular to angular gravel.			
								Light greyish brown distinctly weathered MUDSTONE. Recovered as slightly gravelly clay.			
		2.00	SPT	N=50 (5,9/50 for 245mm)	1.35	146.82				2	
					2.35	145.82		End of Borehole at 2.35m		3	
4											
Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation
Remarks											
Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered.											



5 John Charles Way
Leeds
LS12 6QA

Window Sampler Log

Project Name: Higham Lane North

Client: Commercial Development Projects
Limited

Date: 30/07/2025

Location: Higham Lane, Dodworth, Barnsley

Contractor:

Co-ords: E431444.60 N406474.82

Project No. : 4173.2

Crew Name: RP DRILLING

Drilling Equipment: Window sample rig RP03

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS315	WS	145.76m AoD	DJW&EJS	1:20	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.22	145.54		MADE GROUND: Dark brown sandy gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)	
								Light greyish brown and orangish brown slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone and coal.	
								Light greyish brown and orangish brown distinctly weathered MUDSTONE. Recovered as a fine to coarse, subangular to angular gravel.	
		1.00	SPT	N=13 (2,3/2,3,4,4)		144.16			1
					1.60	144.16			
		2.00	SPT	50 (25 for 105mm/50 for 115mm)	2.00	143.76		End of Borehole at 2.00m	2
									3
									4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered.





5 John Charles Way
Leeds
LS12 6QA

Window Sampler Log

Project Name: Higham Lane North		Client: Commercial Development Projects Limited		Date: 30/07/2025	
Location: Higham Lane, Dodworth, Barnsley		Contractor:		Co-ords: E431415.22 N406544.58	
Project No. : 4173.2		Crew Name: RP DRILLING		Drilling Equipment: Window sample rig RP03	
Borehole Number WS316	Hole Type WS	Level 144.74m AoD	Logged By DJW&EJS	Scale 1:20	Page Number Sheet 1 of 1

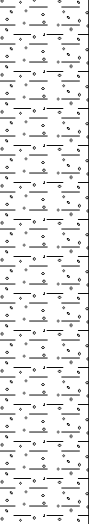
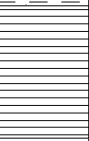
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		1.00	SPT	N=7 (1,1/2,1,2,2)	0.26	144.48		MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)	1
					0.85	143.89		Firm dark greyish brown and orangish brown slightly sandy gravelly CLAY. Gravel is fine to coarse, rounded to angular of limestone, coal and sandstone.	
					2.00	142.74		Light greyish brown distinctly weathered MUDSTONE. Recovered as a fine to coarse, subangular to angular gravel.	
		2.00	SPT	50 (25 for 105mm/50 for 105mm)	2.00	142.74		End of Borehole at 2.00m	2
									3
									4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered.



		5 John Charles Way Leeds LS12 6QA		Window Sampler Log							
Project Name: Higham Lane North				Client: Commercial Development Projects Limited				Date: 30/07/2025			
Location: Higham Lane, Dodworth, Barnsley				Contractor:				Co-ords: E431466.96 N406517.41			
Project No. : 4173.2				Crew Name: RP DRILLING				Drilling Equipment: Window sample rig RP03			
Borehole Number WS317		Hole Type WS		Level 144.96m AoD		Logged By DJW&EJS		Scale 1:20		Page Number Sheet 1 of 1	
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description			
		Depth (m)	Type	Results							
		0.25			0.25	144.71		MADE GROUND: Dark brown sandy gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)		1	
								Firm light greyish brown and orangish brown slightly sandy gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone.			
								Dark grey distinctly weathered MUDSTONE with iron staining. Recovered as fine to coarse, subangular to angular clayey gravel.			
								End of Borehole at 2.00m			
		1.00	SPT	N=17 (3,3/3,4,4,6)							
		1.65			1.65	143.31					
		2.00	SPT	50 (5,12/50 for 115mm)	2.00	142.96				2	
										3	
										4	
Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation
Remarks											
Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered.											



5 John Charles Way
Leeds
LS12 6QA

Window Sampler Log

Project Name: Higham Lane North

Client: Commercial Development Projects
Limited

Date: 30/07/2025

Location: Higham Lane, Dodworth, Barnsley

Contractor:

Co-ords: E431498.11 N406494.54

Project No. : 4173.2

Crew Name: RP DRILLING

Drilling Equipment: Window sample rig RP03

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS318	WS	145.77m AoD		1:20	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.25			0.25	145.52		MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)	
		1.00	SPT	N=17 (3,3/3,4,5,5)				Firm light orangish brown and mottled grey gravelly CLAY with low cobble content of mudstone. Gravel is fine to coarse, subangular to angular of mudstone.	1
		1.50			1.50	144.27		Light greyish brown distinctly weathered MUDSTONE. Recovered as fine to coarse, subangular to angular sandy gravel.	2
		2.00	SPT	N=50 (4,7/50 for 230mm)					
		2.38			2.38	143.39		End of Borehole at 2.38m	3
									4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered.





Window Sampler Log

Client: Commercial Development Projects Limited

Date: 30/07/2025

Contractor:

Co-ords: E431529.39 N406469.73

Crew Name: RP DRILLING

Drilling Equipment: Window sample rig RP03

Hole Type	WS
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Level
147.08m AoD

Logged By

Scale
1:20

Page Number
Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		1.00	SPT	N=13 (4,3/3,3,3,4)	0.25	146.83		MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)	1
					1.10	145.98		Firm light orangish grey gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone and ironstone.	
		2.00	SPT	50 (18,7/50 for 180mm)	1.46	145.62		Firm dark orangish brown slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone.	2
					2.28	144.80		Extremely weak light greyish brown distinctly weathered MUDSTONE recovered as gravel. Gravel is fine to coarse, subangular to angular of mudstone.	
							End of Borehole at 2.28m		3
									4

Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered.





5 John Charles Way
Leeds
LS12 6QA

Window Sampler Log

Project Name: Higham Lane North		Client: Commercial Development Projects Limited		Date: 01/08/2025	
Location: Higham Lane, Dodworth, Barnsley		Contractor:		Co-ords: E431558.94 N406389.08	
Project No. : 4173.2		Crew Name: RP DRILLING		Drilling Equipment: Window sample rig RP03	
Borehole Number WS320	Hole Type WS	Level 152.32m AoD	Logged By DJW&EJS	Scale 1:20	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		1.00	SPT	N=17 (3,3/4,4,4,5)	0.30	152.02		MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)	1
					0.95	151.37		Firm light orangish brown and mottled grey slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone.	
					1.60	150.72		Firm dark grey gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone and coal.	
					2.00	150.32		Extremely weak light greyish brown distinctly weathered MUDSTONE recovered as gravelly clay. Gravel is fine to coarse and subangular to angular of mudstone.	
		2.00	SPT	50 (9,11/50 for 200mm)	2.00	150.32		End of Borehole at 2.00m	2
									3
									4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered.





5 John Charles Way
Leeds
LS12 6QA

Window Sampler Log

Project Name: Higham Lane North

Client: Commercial Development Projects
Limited

Date: 30/07/2025

Location: Higham Lane, Dodworth, Barnsley

Contractor:

Co-ords: E431546.17 N406374.16

Project No. : 4173.2

Crew Name: RP DRILLING

Drilling Equipment: Window sample rig RP03

Borehole Number
WS321

Hole Type
WS

Level
154.01m AoD

Logged By
DJW&EJS

Scale
1:20

Page Number
Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.20			0.20	153.81		MADE GROUND: Dark brown slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular. (TOPSOIL)	
		1.00	SPT	N=15 (2,2/3,3,4,5)				Firm light orangish brown and mottled grey slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone.	1
		1.60			1.60	152.41		Extremely weak light greyish brown distinctly weathered MUDSTONE recovered as gravelly clay. Gravel is fine to coarse and subangular to angular of mudstone.	
		2.00	SPT	50 (9,11/50 for 160mm)	2.00	152.01		End of Borehole at 2.00m	2
									3
									4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered.





5 John Charles Way
Leeds
LS12 6QA

Borehole Log

Project Name: Higham Lane North

Client: Commercial Development Projects
Limited

Date: 31/07/2025

Location: Higham Lane, Dodworth, Barnsley

Contractor:

Co-ords: E431464.36 N406478.47

Project No. : 4173.2

Crew Name: Strata Geotechnics

Drilling Equipment: D2500

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
BH301	BH	145.40m AoD	ES & DJW	1:20	Sheet 1 of 1

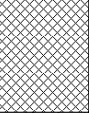
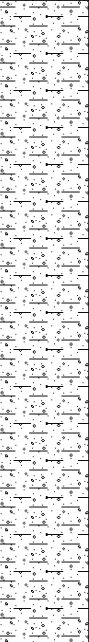
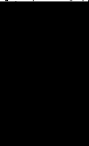
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.20 - 0.60	B		0.20	145.20		MADE GROUND: Dark brown slightly sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)	
		0.30 - 1.00	B					Stiff dark oragnish brown and mottled grey gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone.	
		0.60	D						
		1.10	D						
		1.20 - 1.60	B						
		1.20	SPT	N=19 (5,5/3,3,4,9)					
		1.65	D		1.70	143.70		Firm yellowish brown and locally dark grey slightly sandy gravelly CLAY. Gravel is fine to coarse, rounded to subangular of mudstone, ironstone and coal.	
		1.70	D						
		1.70 - 2.00	B						
		2.00	D						
		2.00	SPT	50 (5,6/50 for 40mm)				At 2.00m bgl: Possible mudstone bedrock	
		2.20	D						
		2.20	SPT	50 (25 for 75mm/50 for 45mm)	2.32	143.08		End of Borehole at 2.32m	

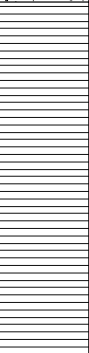
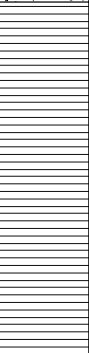
Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation
				2.00	2.20	01:00		0.00	2.32	90	

Remarks

Backfilled with arisings and bentonite on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered.



		5 John Charles Way Leeds LS12 6QA		Borehole Log							
Project Name: Higham Lane North				Client: Commercial Development Projects Limited				Date: 31/07/2025			
Location: Higham Lane, Dodworth, Barnsley				Contractor:				Co-ords: E431492.63 N406464.64			
Project No. : 4173.2				Crew Name: Strata Geotechnics				Drilling Equipment: D2500			
Borehole Number BH302		Hole Type BH		Level 146.68m AoD		Logged By ES & DJW		Scale 1:20		Page Number Sheet 1 of 1	
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description			
		Depth (m)	Type	Results							
		0.00 - 0.30	B		0.30	146.38		MADE GROUND: Dark brown slightly sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)		1	
		0.40	D								
		0.50 - 1.00	B					Stiff dark orangish brown and greyish brown slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone. (residual soil)			
		1.20 - 1.65	UT								
		1.65	D								
		1.80 - 2.00	B		50 (5,6/50 for 150mm)	2.00	144.68		Black COAL. Recovered as fine to coarse sand.		2
1.80	SPT										
2.00	D	50 (6,5/50 for 120mm)	2.38	144.30				End of Borehole at 2.38m		3	
2.00	SPT										
											4
Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation
				1.80	2.00	01:00		0.00	2.38	90	
Remarks											
Backfilled with arisings and bentonite on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered.											

		5 John Charles Way Leeds LS12 6QA		Borehole Log																																											
Project Name: Higham Lane North				Client: Commercial Development Projects Limited				Date: 30/07/2025																																							
Location: Higham Lane, Dodworth, Barnsley				Contractor:				Co-ords: E431529.29 N406336.93																																							
Project No. : 4173.2				Crew Name: Strata Geotechnics				Drilling Equipment: D2500																																							
Borehole Number BH303		Hole Type BH		Level 158.25m AoD		Logged By ES & DJW		Scale 1:20		Page Number Sheet 1 of 1																																					
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description																																							
		Depth (m)	Type	Results																																											
		0.20 - 0.40	B		0.20	158.05		MADE GROUND: Dark brown slightly sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL) Firm becoming stiff light greyish brown and orangish brown slightly sandy gravelly CLAY with low cobble content of sandstone. Gravel is fine to coarse, subangular to angular of coal and mudstone. <u>At 1.20m bgl: UT attempted, failed.</u>		1																																					
		0.50	D																																												
		0.50 - 1.00	B																																												
		0.65	D																																												
		1.20 - 1.65	UT																																												
		1.70 - 2.00	B																																												
		2.00	D																																												
		2.00	SPT																																												
		2.50 - 2.70	B																																												
		2.50	SPT																																												
		2.70	SPT	50 (10,15/50 for 215mm) 50 (20,5/50 for 80mm)	2.00	156.25		Light grey distinctly weathered MUDSTONE. Recovered as slightly sandy fine to coarse, subangular to angular gravel of mudstone.		2																																					
		2.80	D																																												
		2.93																																													
		2.93																																													
					2.93	155.32		End of Borehole at 2.93m		3																																					
<table><tr><td colspan="2">Hole Diameter</td><td colspan="2">Casing Diameter</td><td colspan="4">Chiselling</td><td colspan="4">Inclination and Orientation</td></tr><tr><td>Depth Base</td><td>Diameter</td><td>Depth Base</td><td>Diameter</td><td>Depth Top</td><td>Depth Base</td><td>Duration</td><td>Tool</td><td>Depth Top</td><td>Depth Base</td><td>Inclination</td><td>Orientation</td></tr><tr><td></td><td></td><td></td><td></td><td>2.50</td><td>2.70</td><td>01:00</td><td></td><td>0.00</td><td>2.93</td><td>90</td><td></td></tr></table>												Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation					2.50	2.70	01:00		0.00	2.93	90	
Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation																																							
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation																																				
				2.50	2.70	01:00		0.00	2.93	90																																					
Remarks Backfilled with arisings and bentonite on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered.																																															



5 John Charles Way
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LS12 6QA

Borehole Log

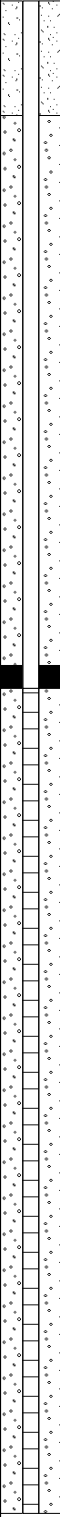
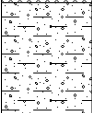
Project Name: Higham Lane North		Client: Commercial Development Projects Limited		Date: 30/07/2025	
Location: Higham Lane, Dodworth, Barnsley		Contractor:		Co-ords: E431578.51 N406321.06	
Project No. : 4173.2		Crew Name: Strata Geotechnics		Drilling Equipment: D2500	
Borehole Number BH304	Hole Type BH	Level 158.41m AoD	Logged By ES & DJW	Scale 1:20	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.20	D	Ublow=50	0.20	158.21		MADE GROUND: Dark brown slightly sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)	1
		0.20 - 0.40	B		0.40	158.01		Orangish brown fine to coarse slightly clayey SAND	
		0.50	D					Firm dark yellowish brown slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular of sandstone.	
		0.60 - 1.10	B					At 1.20m bgl: UT attempted, failed.	
		1.20 - 1.40	UT		1.40	157.01		End of Borehole at 1.40m	2
									3
									4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation
								0.00	1.40	90	

Remarks
Backfilled with arisings and bentonite on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered.



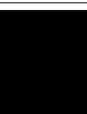
		5 John Charles Leeds LS12 6QA		Rotary Core Log													
Project Name: Higham Lane North				Client: Commercial Development Projects Limited								Date: 08/08/2025					
Location: Higham Lane, Dodworth, Barnsley				Contractor:								Co-ords: E431452.67 N406525.64					
Project No. : 4173.2				Crew Name: Strata Geotechnics								Drilling Equipment: Comacchio 205					
Borehole Number DSRC301		Hole Type RC		Level 144.45m AoD				Logged By ES & DJW		Scale 1:33		Page Number Sheet 1 of 2					
Well	Water	Depth (m)	Type /Fl	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description						
				TCR	SCR	RQD											
								0.30	144.15		MADE GROUND: Dark brown slightly sandy slightly gravelly CLAY wth rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL) Firm dark greyish brown slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone and sandstone. Black destructured COAL, recovered as slightly clayey subangular to angular gravel.		1				
							0.80	143.65									
							1.80	142.65									
												Extremely weak greyish brown destructured MUDSTONE. Recovered as slightly gravelly clay.		2			
			2.00 - 3.50				73	21	16					3			
			3.40 - 3.45	C						3.23	141.22		Very weak greyish brown and orangish brown MUDSTONE with ironstone nodules. Highly fractured with clay infill.				
			3.50 - 5.00	2 5 10			100	79	69						Between 4.20 and 4.98m bgl, vertical fracture, clay infill.		
			5.28 - 5.34	C									5				
			5.78 - 5.88	C			90	87	87					6			
		6.10 - 6.13	C														
Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
								0.00	12.00	90				12.00	Air/Mist		
Remarks																	
Monitoring well installed to 12.00m bgl. No groundwater encountered during drilling. No visual or olfactory evidence of hydrocarbon contamination encountered.																	
																	



5 John Charles
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LS12 6QA

Rotary Core Log

Project Name: Higham Lane North		Client: Commercial Development Projects Limited		Date: 08/08/2025	
Location: Higham Lane, Dodworth, Barnsley		Contractor:		Co-ords: E431452.67 N406525.64	
Project No. : 4173.2		Crew Name: Strata Geotechnics		Drilling Equipment: Comacchio 205	
Borehole Number DSRC301	Hole Type RC	Level 144.45m AoD	Logged By ES & DJW	Scale 1:33	Page Number Sheet 2 of 2

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description		
				TCR	SCR	RQD							
		6.50 - 8.00		87	61	51		7.63	136.82		Very weak greyish brown and orangish brown MUDSTONE with ironstone nodules. Highly fractured with clay infill.	7	
								7.90	136.55		Black COAL.		
		8.00 - 9.50 8.88 - 9.08	C	73	49	49						Weak thinly laminated greyish brown MUDSTONE.	8
										Between 8.70m and 8.80m bgl, recovered as gravel.			9
		9.50 - 9.55	C					9.60	134.85		Black destructured COAL, recovered as fine to coarse, subangular to angular gravel.		
		9.50 - 11.00		89	31	31		10.10	134.35		Extremely weak dark greyish brown destructured MUDSTONE. Recovered as gravelly clay.	10	
								10.40	134.05		Weak light greyish brown thinly laminated MUDSTONE. Frequently fractured with clay infill, high cobble content of ironstone nodules.		
											At 10.86m bgl, cobble of quartz encountered.	11	
		11.00 - 12.00		100	65	59							
								12.00	132.45		End of Borehole at 12.00m	12	
													13

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
								0.00	12.00	90			12.00	Air/Mist			

Remarks

Monitoring well installed to 12.00m bgl. No groundwater encountered during drilling. No visual or olfactory evidence of hydrocarbon contamination encountered.





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LS12 6QA

Rotary Core Log

Project Name: Higham Lane North

Client: Commercial Development Projects
Limited

Date: 05/08/2025

Location: Higham Lane, Dodworth, Barnsley

Contractor:

Co-ords: E431482.94 N406500.11

Project No. : 4173.2

Crew Name: Strata Geotechnics

Drilling Equipment: Comacchio 205

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
DSRC302	RC	145.37m AoD	ES & DJW	1:33	Sheet 1 of 2

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		1.20 - 1.70	UT					0.20	145.17		MADE GROUND: Dark brown slightly sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL) Stiff dark greyish brown gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone.	1
		2.30 - 3.80					51 (25 for 95mm/ 51 for 85mm)	2.30	143.07		Very weak light greyish brown distinctly weathered MUDSTONE, recovered as gravelly clay.	2
								2.73	142.64		Distinctly weathered black thinly laminated COAL. Recovered as sandy fine to coarse, angular gravel.	3
								3.30	142.07		Extremely weak light grey destructured MUDSTONE. Recovered as clayey gravel.	
								3.37	142.00		Destructured black COAL. Recovered as fine to coarse, subangular to angular gravel.	
								3.40	141.97		Extremely weak greyish brown destructured MUDSTONE. Recovered as slightly sandy gravel.	
								3.95	141.42		Black distinctly weathered COAL. Recovered as gravel and cobbles.	
		3.80 - 5.30	C					4.27	141.10		Extremely weak dark greyish brown destructured MUDSTONE. Recovered as gravelly clay.	
								4.40	140.97		Between 4.30m and 4.34m bgl, weathered gravel of black coal.	
								4.64	140.73		Black destructured COAL. Recovered as gravel of coal and rare pyrite.	
								5.10	140.27		Medium strong light grey and mottled brown fine grained SANDSTONE.	
		5.30 - 6.80	C				50 (25 for 75mm/ 50 for 85mm)				Very weak very thinly laminated dark grey partially weathered MUDSTONE. Frequent irregular fractures with sand infill.	
											Between 5.50m and 5.65m bgl, recovered as fine to coarse, subangular to angular gravel of mudstone.	
		6.15 - 6.25										6

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
		1.20						0.00	12.30	90		2.30	12.30	Air/Mist		100	100

Remarks

Backfilled with bentonite on completion. No groundwater strikes encountered. No visual or olfactory evidence of hydrocarbon contamination encountered.





5 John Charles
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LS12 6QA

Rotary Core Log

Project Name: Higham Lane North				Client: Commercial Development Projects Limited				Date: 05/08/2025			
Location: Higham Lane, Dodworth, Barnsley				Contractor:				Co-ords: E431482.94 N406500.11			
Project No. : 4173.2				Crew Name: Strata Geotechnics				Drilling Equipment: Comacchio 205			
Borehole Number DSRC302		Hole Type RC		Level 145.37m AoD		Logged By ES & DJW		Scale 1:33		Page Number Sheet 2 of 2	

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		7.45 - 7.49 6.80 - 8.30 7.65	C C	100	43	0					Very weak very thinly laminated dark grey partially weathered MUDSTONE. Frequent irregular fractures with sand infill.	7
		8.30 - 9.80		100	31	0		9.05	136.32	Between 8.20m and 8.30m bgl, recovered as fine to coarse, subangular to angular gravel of mudstone. Between 8.40m and 8.50m bgl, recovered as fine to coarse, subangular to angular gravel of mudstone, possibly drilling induced.	9	
		9.65 - 9.70	C					9.35	136.02	Black locally dark grey COAL. Rare specks of pyrite encountered. Weak dark grey thinly laminated MUDSTONE with clay infill.		
		9.80 - 11.30 10.60 - 10.87	C	100	1	0		11.20	134.17	At 11.15m bgl, 20mm of black coal gravel. Dark grey COAL. Between 11.30m and 11.50m bgl, recovered as gravel, potential drilling induced.	11	
		11.30 - 12.30		100	60	45		11.60	133.77	Weak dark greyish brown MUDSTONE interlaminated with thin bands of black coal, clay infill in fractures.	12	
		12.10 - 12.20	C					12.30	133.07	End of Borehole at 12.30m		

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
		1.20						0.00	12.30	90		2.30	12.30	Air/Mist		100	100

Remarks

Backfilled with bentonite on completion. No groundwater strikes encountered. No visual or olfactory evidence of hydrocarbon contamination encountered.





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LS12 6QA

Rotary Core Log

Project Name: Higham Lane North				Client: Commercial Development Projects Limited				Date: 05/08/2025 - 06/08/2025			
Location: Higham Lane, Dodworth, Barnsley				Contractor:				Co-ords: E431516.23 N406472.83			
Project No. : 4173.2				Crew Name: Strata Geotechnics				Drilling Equipment: Comacchio 205			
Borehole Number DSRC303		Hole Type RC		Level 146.69m AoD		Logged By ES & DJW		Scale 1:33		Page Number Sheet 1 of 2	

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description				
				TCR	SCR	RQD									
		1.40 - 2.90	C				50 (25 for 10mm/ 50 for 35mm)	0.20	146.49		MADE GROUND: Dark brown slightly sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)	1			
								1.30	145.39		Stiff dark greyish brown slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone.				
								1.55	145.14		Yellowish brown destructured fine to coarse grained SANDSTONE. Recovered as gravel and cobbles.				
		2.90 - 4.40		100	73	18							Very weak thickly laminated dark greyish brown distinctly weathered MUDSTONE. Heavily fractured and non intact with clay infill.	2	
													At 1.20m bgl: High strength		
													At 1.90m bgl, iron stone nodule encountered.		
		4.40 - 5.90		100	0	0									3
6.22 - 6.44								4.25	142.44		Black locally dark grey COAL. Recovered as clayey gravel.	4			
								4.57	142.12		Very weak dark grey destructured MUDSTONE with frequent bands of thinly laminated coal. Recovered as gravelly clay.				
								5.25	141.44		Black locally dark grey distinctly weathered COAL. Recovered as slightly clayey gravel.				
								5.50	141.19		Extremely weak dark grey destructured weathered MUDSTONE. Recovered as clayey gravel.				
								5.65	141.04		Black locally dark grey distinctly weathered COAL. Recovered as slightly clayey gravel.				
								6.10	140.59		Between 5.90m and 6.05m bgl, recovered as slightly clayey gravel, potentially drilling induced.	6			
										Very weak thinly laminated dark grey					

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
		1.20						0.00	12.90	90		1.40	12.90	Air/Mist		100	100

Remarks

Backfilled with bentonite on completion. No groundwater strikes encountered. No visual or olfactory evidence of hydrocarbon contamination encountered.





5 John Charles
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LS12 6QA

Rotary Core Log

Project Name: Higham Lane North		Client: Commercial Development Projects Limited		Date: 05/08/2025 - 06/08/2025	
Location: Higham Lane, Dodworth, Barnsley		Contractor:		Co-ords: E431516.23 N406472.83	
Project No. : 4173.2		Crew Name: Strata Geotechnics		Drilling Equipment: Comacchio 205	
Borehole Number DSRC303	Hole Type RC	Level 146.69m AoD	Logged By ES & DJW	Scale 1:33	Page Number Sheet 2 of 2

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		5.90 - 7.40		100	61	23					Very weak thinly laminated dark grey MUDSTONE. Irregular fracturing with sand and silt infill. <u>Between 6.25m and 6.30m bgl, gravel of black coal encountered.</u>	7
		7.40 - 8.90	3 5 12	100	59	8					<u>Between 8.00m and 8.35m bgl, recovered as slightly clayey gravel.</u>	8
		8.68 - 8.80	C								<u>From 8.68m bgl: Becoming weak</u>	
		8.90 - 10.40	2 3 5	100	37	37		9.90	136.79		<u>Between 8.90m and 9.05m bgl, recovered as clayey gravel.</u> <u>Between 9.23m and 9.25m bgl, gravel of black coal encountered.</u>	9
		10.73 - 10.80	C					10.20	136.49		Black COAL.	10
		10.40 - 11.40		100	70	0					Weak finely laminated light grey MUDSTONE. Heavily fractured with clay infill. Yellow and orange ironstone staining encountered throughout. <u>Between 11.21m and 11.40m bgl, recovered as slightly clayey gravel.</u>	11
		11.90 - 12.00	3 6 11								<u>At 11.90m bgl: Very weak</u>	12
		11.40 - 12.90		100	70	10		12.50	134.19		<u>Between 12.10m and 12.30m bgl, subvertical fracture with clay infill.</u>	
								12.90	133.79		Black locally dark grey COAL.	
											End of Borehole at 12.90m	13

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
		1.20						0.00	12.90	90		1.40	12.90	Air/Mist		100	100

Remarks
Backfilled with bentonite on completion. No groundwater strikes encountered. No visual or olfactory evidence of hydrocarbon contamination encountered.





5 John Charles
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LS12 6QA

Rotary Core Log

Project Name: Higham Lane North		Client: Commercial Development Projects Limited		Date: 06/08/2025 - 07/08/2025	
Location: Higham Lane, Dodworth, Barnsley		Contractor:		Co-ords: E431554.88 N406442.77	
Project No. : 4173.2		Crew Name: Strata Geotechnics		Drilling Equipment: Comacchio 205	
Borehole Number DSRC304	Hole Type RC	Level 148.62m AoD	Logged By ES & DJW	Scale 1:33	Page Number Sheet 1 of 2

Well	Water	Depth (m)	Type /FI	Coring			Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD					
							0.20	148.42		MADE GROUND: Dark brown slightly sandy slightly gravelly CLAY wth rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)	
										Firm light greyish brown and orangish brown slightly sandy gravelly CLAY with low cobble content of sandstone. Gravel is fine to coarse, subangular to angular of coal and mudstone.	1
		1.20 - 2.20		100	43	36				At 1.00m bgl: Becoming stiff	
											2
		2.74 - 2.76	C				2.66	145.96			
		2.20 - 3.70		97	67	61				Weak light greyish brown destructured MUDSTONE, recovered as gravelly clay.	3
		3.70 - 5.20		100	30	12				Between 3.85m and 3.95m bgl, recovered as gravelly clay.	4
											5
		5.20 - 6.70		93	51	51	5.87	142.75		Black COAL	6
		6.40 - 6.46	C				6.10	142.52		Weak light grey distinctly weathered MUDSTONE. Heavily fractured with clay infill.	

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
		1.20						0.00	12.70	90		2.20	12.70	Air/Mist		100	100

Remarks

Monitoring well installed to 12.00m bgl. No groundwater encountered during drilling. No visual or olfactory evidence of hydrocarbon contamination encountered.

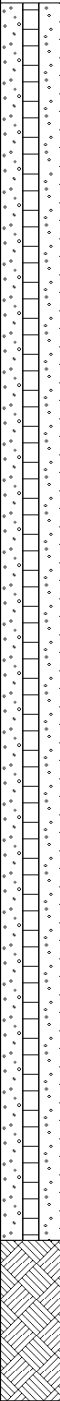




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LS12 6QA

Rotary Core Log

Project Name: Higham Lane North				Client: Commercial Development Projects Limited				Date: 06/08/2025 - 07/08/2025			
Location: Higham Lane, Dodworth, Barnsley				Contractor:				Co-ords: E431554.88 N406442.77			
Project No. : 4173.2				Crew Name: Strata Geotechnics				Drilling Equipment: Comacchio 205			
Borehole Number DSRC304		Hole Type RC		Level 148.62m AoD		Logged By ES & DJW		Scale 1:33		Page Number Sheet 2 of 2	

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description		
				TCR	SCR	RQD							
											Weak light grey distinctly weathered MUDSTONE. Heavily fractured with clay infill.	7	
								6.90	141.72		Black COAL.		
								7.10	141.52		Weak light grey destructured MUDSTONE. Recovered as gravelly clay.		
			6.70 - 8.20		91	73	73		7.60	141.02		Black partially weathered COAL.	8
			7.70 - 7.76	C					7.90	140.72		Weak thinly laminated light grey MUDSTONE.	
			8.06 - 8.08	C									
			8.20 - 9.70		98	45	31					Between 9.05m and 9.08m bgl, recovered as gravel.	9
			9.37 - 9.40 9.43 - 9.45	C C									
			10.30 - 10.43 9.70 - 11.20	C	72	34	29					Between 10.53m and 10.60m bgl, black gravel of coal.	
									11.66	136.96		Black COAL.	12
			11.20 - 12.70		100	82	82		11.95	136.67		Weak thinly laminated light grey MUDSTONE. Clay infill in fractures.	
			12.30 - 12.40	C									
			12.60 - 12.70	C					12.70	135.92		End of Borehole at 12.70m	13

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
		1.20						0.00	12.70	90		2.20	12.70	Air/Mist		100	100

Remarks

Monitoring well installed to 12.00m bgl. No groundwater encountered during drilling. No visual or olfactory evidence of hydrocarbon contamination encountered.



		5 John Charles Leeds LS12 6QA		Rotary Core Log													
Project Name: Higham Lane North				Client: Commercial Development Projects Limited								Date: 31/07/2025 - 01/08/2025					
Location: Higham Lane, Dodworth, Barnsley				Contractor:								Co-ords: E431422.71 N406491.66					
Project No. : 4173.2				Crew Name: Strata Geotechnics								Drilling Equipment: Comacchio 205					
Borehole Number DSRC305		Hole Type RC		Level 145.37m AoD				Logged By ES & DJW		Scale 1:33		Page Number Sheet 1 of 2					
Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description						
				TCR	SCR	RQD											
		0.20					(18)	145.17			MADE GROUND: Dark brown slightly sandy slightly gravelly CLAY wth rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL) Firm light greyish brown and orangish brown slightly sandy gravelly CLAY with low cobble content of sandstone. Gravel is fine to coarse, subangular to angular of coal and mudstone. <u>At 1.00m bgl: Becoming stiff</u>	1					
		1.90				50 (14.11/ 50 for 135mm)	143.47		Weak dark orangish brown destructured MUDSTONE with ironstone staining. Recovered as fine to coarse, subrounded to angular clayey gravel.	2							
		2.00 - 3.50		100	0	0					3						
		3.26 - 3.32	2 5 10														
		3.62 - 3.82	C														
		3.50 - 5.00		100	63	63						4					
		4.16															
		4.48															
		5.00 - 6.50		100	75	46					5						
											6						
Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
		1.20						0.00	8.00	90		2.00	8.00	Air/Mist		100	100
Remarks																	
Backfilled with bentonite on completion. No groundwater strikes encountered. No visual or olfactory evidence of hydrocarbon contamination encountered.																	
																	



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Rotary Core Log

Project Name: Higham Lane North

Client: Commercial Development Projects
Limited

Date: 31/07/2025 - 01/08/2025

Location: Higham Lane, Dodworth, Barnsley

Contractor:

Co-ords: E431422.71 N406491.66

Project No. : 4173.2

Crew Name: Strata Geotechnics

Drilling Equipment: Comacchio 205

Borehole Number DSRC305			Hole Type RC			Level 145.37m AoD		Logged By ES & DJW		Scale 1:33		Page Number Sheet 2 of 2					
Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description						
				TCR	SCR	RQD											
		6.50 - 8.00	C	100	49	49		6.70	138.67		Weak thinly to very thinly laminated dark grey MUDSTONE. Highly fractured with clay infill. Black locally dark grey COAL.		7				
								7.14	138.23		Weak thinly laminated dark grey MUDSTONE with rare coal laminations.						
				7.75							8.00	137.37		End of Borehole at 8.00m		8	
													9				
													10				
													11				
													12				
													13				
Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
		1.20						0.00	8.00	90		2.00	8.00	Air/Mist		100	100

Remarks

Backfilled with bentonite on completion. No groundwater strikes encountered. No visual or olfactory evidence of hydrocarbon contamination encountered.





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Rotary Core Log

Project Name: Higham Lane North				Client: Commercial Development Projects Limited				Date: 31/07/2025			
Location: Higham Lane, Dodworth, Barnsley				Contractor:				Co-ords: E431513.02 N406412.18			
Project No. : 4173.2				Crew Name: Strata Geotechnics				Drilling Equipment: Comacchio 205			
Borehole Number DSRC306		Hole Type RC		Level 150.35m AoD		Logged By ES & DJW		Scale 1:33		Page Number Sheet 1 of 2	

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description		
				TCR	SCR	RQD							
		0.50 - 1.00	UT				100%	0.20	150.15		MADE GROUND: Dark brown slightly sandy slightly gravelly CLAY wth rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)	1	
								1.70	148.65		Dense black destructured COAL. Recovered as slightly clayey fine to coarse, subangular to angular gravel.	2	
		2.40 1.80 - 3.30	C				N=46 (10,15/46 for 285mm)	2.30	148.05		Very weak thickly laminated light grey and orangish brown distinctly weathered MUDSTONE. Highly fractured with clay infill.		
								2.80	147.55		Black, locally dark grey COAL.	3	
		3.30 - 4.80						3.60	146.75		Weak thinly laminated light greyish brown and orangish brown distinctly weathered MUDSTONE with iron staining.	4	
		4.35	C										
		4.80 - 6.30										5	
		5.95	C									6	
									6.30	144.05		Black distinctly weathered COAL. Recovered as fine to coarse,	
									6.50	143.85		Recovered as fine to coarse,	

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
		1.50						0.00	7.80	90		1.80	7.80	Air/Mist		100	100

Remarks

Backfilled with bentonite on completion. No groundwater strikes encountered. No visual or olfactory evidence of hydrocarbon contamination encountered.





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Rotary Core Log

Project Name: Higham Lane North

Client: Commercial Development Projects
Limited

Date: 31/07/2025

Location: Higham Lane, Dodworth, Barnsley

Contractor:

Co-ords: E431513.02 N406412.18

Project No. : 4173.2

Crew Name: Strata Geotechnics

Drilling Equipment: Comacchio 205

Borehole Number DSRC306			Hole Type RC			Level 150.35m AoD			Logged By ES & DJW			Scale 1:33			Page Number Sheet 2 of 2		
Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description						
				TCR	SCR	RQD											
		6.30 - 7.80	C	97	0	0		7.80	142.55		Black distinctly weathered COAL. Recovered as fine to coarse, subangular to angular gravel. Weak thinly laminated light greyish brown and orangish brown distinctly weathered MUDSTONE with iron staining.			7			
		7.50															
											End of Borehole at 7.80m			8			
														9			
														10			
														11			
														12			
														13			
Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
		1.50						0.00	7.80	90		1.80	7.80	Air/Mist		100	100

Remarks

Backfilled with bentonite on completion. No groundwater strikes encountered. No visual or olfactory evidence of hydrocarbon contamination encountered.





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Rotary Core Log

Project Name: Higham Lane North		Client: Commercial Development Projects Limited		Date: 29/07/2025 - 30/07/2025	
Location: Higham Lane, Dodworth, Barnsley		Contractor:		Co-ords: E431634.37 N406326.00	
Project No. : 4173.2		Crew Name: Strata Geotechnics		Drilling Equipment: Comacchio 205	
Borehole Number DSRC307	Hole Type RC	Level 156.06m AoD	Logged By ES & DJW	Scale 1:33	Page Number Sheet 1 of 2

Well	Water	Depth (m)	Type /FI	Coring			Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD					
							0.20	155.86		MADE GROUND: Dark brown slightly sandy slightly gravelly CLAY wth rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)	1
							1.60	154.46		Firm light greyish brown and orangish brown slightly sandy gravelly CLAY with low cobble content of sandstone. Gravel is fine to coarse, subangular to angular of coal and mudstone.	
		1.60 - 3.10	1	90	60	8				Medium strong thinly bedded yellowish brown fine grained SANDSTONE.	2
		2.50 - 2.62	4								
		3.10 - 3.25	12								
							3.00	153.06		Black and dark grey destructed COAL. Recovered as slightly sandy fine to coarse gravel.	3
		3.10 - 4.10	C				3.10	152.96		Weak thinly laminated light grey MUDSTONE. Highly fractured with clay infill.	
				84	24	0				Between 3.10m and 3.25m bgl, recovered as gravelly clay.	
										Between 4.10m and 4.35m bgl, recovered as clayey gravel.	4
		4.10 - 5.60		100	43	0					
										Between 5.60m and 5.84m bgl, recovered as clayey gravel.	
										Between 6.27m and 6.57m, subvertical fracture with clay infill.	6
		5.60 - 6.10	C	100	27	0					

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
								0.00	8.10	90		1.60	8.10	Air/Mist		100	100

Remarks
Backfilled with bentonite on completion. No groundwater strikes encountered. No visual or olfactory evidence of hydrocarbon contamination encountered.





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Rotary Core Log

Project Name: Higham Lane North

Client: Commercial Development Projects
Limited

Date: 29/07/2025 - 30/07/2025

Location: Higham Lane, Dodworth, Barnsley

Contractor:

Co-ords: E431634.37 N406326.00

Project No. : 4173.2

Crew Name: Strata Geotechnics

Drilling Equipment: Comacchio 205

Borehole Number DSRC307		Hole Type RC		Level 156.06m AoD		Logged By ES & DJW		Scale 1:33		Page Number Sheet 2 of 2							
Well	Water	Depth (m)	Type /Fl	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description						
				TCR	SCR	RQD											
		7.10 - 8.10		100	0	0		8.10	147.96		Weak thinly laminated light grey MUDSTONE. Highly fractured with clay infill.	7					
													8				
											End of Borehole at 8.10m	9					
												10					
												11					
												12					
												13					
Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
								0.00	8.10	90		1.60	8.10	Air/Mist		100	100
Remarks																	
Backfilled with bentonite on completion. No groundwater strikes encountered. No visual or olfactory evidence of hydrocarbon contamination encountered.																	





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Rotary Core Log

Project Name: Higham Lane North				Client: Commercial Development Projects Limited				Date: 30/07/2025									
Location: Higham Lane, Dodworth, Barnsley				Contractor:				Co-ords: E431492.44 N406292.10									
Project No. : 4173.2				Crew Name: Strata Geotechnics				Drilling Equipment: Comacchio 205									
Borehole Number DSRC308		Hole Type RC		Level 161.24m AoD		Logged By ES & DJW		Scale 1:33		Page Number Sheet 1 of 2							
Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description						
				TCR	SCR	RQD											
		0.20						161.04			MADE GROUND: Dark brown slightly sandy slightly gravelly CLAY wth rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL) Firm light greyish brown and orangish brown slightly sandy gravelly CLAY with low cobble content of sandstone. Gravel is fine to coarse, subangular to angular of coal and mudstone. <u>At 1.00m bgl: Becoming stiff</u>	1					
		1.90 - 2.40	UT									2					
		2.80 - 4.30		90	43	9	50 (16 for 75mm/ 50 for 75mm)	3.10	158.14		Black distinctly weathered COAL with iron staining. Recovered as clayey fine to coarse, subangular to angular gravel.	3					
		3.90	C					3.66	157.57		Extremely weak dark greyish brown and orangish brown destructed MUDSTONE. Recovered as gravelly clay.	4					
								3.95	157.28		Black COAL.						
								4.00	157.24		Very weak dark greyish brown and orangish brown MUDSTONE. Highly fractured with clay infill.						
								4.25	156.99		Black distinctly weathered COAL. Recovered as gravelly clay.						
		4.30 - 5.80		94	27	19		4.70	156.54		Very weak thickly laminated light grey and orangish brown MUDSTONE. Highly fractured with clay infill and rare coal fragments.	5					
								4.85	156.38		Black distinctly weathered COAL. Recovered as gravel.						
		5.55	C								Very weak thinly laminated light greyish MUDSTONE. Frequently fractured with clay infill, high cobble content of ironstone nodules.	6					
		5.80 - 7.30 6.30	C	100	38	29					<u>At 6.30m bgl: Becoming weak</u>						
	Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush				
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
								0.00	8.80	90		2.80	8.80	Air/Mist		100	100
Remarks																	
Monitoring well installed to 8.80m bgl. No groundwater encountered during drilling. No visual or olfactory evidence of hydrocarbon contamination encountered.																	

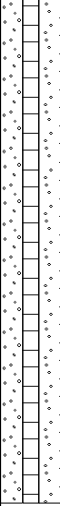




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LS12 6QA

Rotary Core Log

Project Name: Higham Lane North				Client: Commercial Development Projects Limited				Date: 30/07/2025			
Location: Higham Lane, Dodworth, Barnsley				Contractor:				Co-ords: E431492.44 N406292.10			
Project No. : 4173.2				Crew Name: Strata Geotechnics				Drilling Equipment: Comacchio 205			
Borehole Number DSRC308		Hole Type RC		Level 161.24m AoD		Logged By ES & DJW		Scale 1:33		Page Number Sheet 2 of 2	

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description					
				TCR	SCR	RQD										
			C						152.64 152.58 152.44		Very weak thinly laminated light greyish MUDSTONE. Frequently fractured with clay infill, high cobble content of ironstone nodules.	7				
		7.40														
		7.30 - 8.80		100	19	19										8
								8.60 8.65 8.80			Dark grey distinctly weathered COAL. Recovered as gravelly clay. Light greyish brown thinly laminated MUDSTONE. End of Borehole at 8.80m	9				
												10				
												11				
												12				
												13				

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
								0.00	8.80	90		2.80	8.80	Air/Mist		100	100

Remarks

Monitoring well installed to 8.80m bgl. No groundwater encountered during drilling. No visual or olfactory evidence of hydrocarbon contamination encountered.





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Rotary Core Log

Project Name: Higham Lane North		Client: Commercial Development Projects Limited		Date: 29/07/2025	
Location: Higham Lane, Dodworth, Barnsley		Contractor:		Co-ords: E431606.73 N406256.55	
Project No. : 4173.2		Crew Name: Strata Geotechnics		Drilling Equipment: Comacchio 205	
Borehole Number DSRC309	Hole Type RC	Level 161.62m AoD	Logged By ES & DJW	Scale 1:33	Page Number Sheet 1 of 2

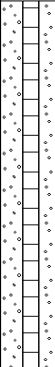
Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
								0.20	161.42		MADE GROUND: Dark brown slightly sandy slightly gravelly CLAY wth rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)	
											Firm light greyish brown and orangish brown slightly sandy gravelly CLAY with low cobble content of mudstone. Gravel is fine to coarse, subangular to angular of coal and mudstone.	1
								2.20	159.42		Extremely weak thinly laminated light greyish brown distinctly weathered MUDSTONE. Frequently fractured with clay infill, high cobble content of ironstone nodules.	2
		2.20 - 3.70 3.15 - 3.25	C	100	18	0						3
		3.70 - 5.20		87	16	8	60 (25 for 80mm/ 60 for 100mm)					4
		5.70 5.20 - 6.70	C	96	17	17	50 (25 for 75mm/ 50 for 75mm)					6
		6.50 - 6.54										
Between 4.70m and 4.80m bgl, recovered as clayey gravel.												5
Between 5.20m and 5.40m bgl, recovered as clayey gravel.												
At 5.70m bgl: Becoming weak												
At 5.80m bgl, ironstone boulder encountered.												

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
								0.00	8.20	90		2.20	8.20	Air/Mist		100	100

Remarks

Monitoring well installed to 8.00m bgl. No groundwater encountered during drilling. No visual or olfactory evidence of hydrocarbon contamination encountered.



		5 John Charles Leeds LS12 6QA		Rotary Core Log													
Project Name: Higham Lane North				Client: Commercial Development Projects Limited								Date: 29/07/2025					
Location: Higham Lane, Dodworth, Barnsley				Contractor:								Co-ords: E431606.73 N406256.55					
Project No. : 4173.2				Crew Name: Strata Geotechnics								Drilling Equipment: Comacchio 205					
Borehole Number DSRC309		Hole Type RC		Level 161.62m AoD				Logged By ES & DJW		Scale 1:33		Page Number Sheet 2 of 2					
Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description						
				TCR	SCR	RQD											
			C				50 (25 for 75mm/ 50 for 75mm)	7.20	154.42		Extremely weak thinly laminated light greyish brown distinctly weathered MUDSTONE. Frequently fractured with clay infill, high cobble content of ironstone nodules.		7				
										Black COAL.							
		6.70 - 8.20		100	32	27		7.50	154.12		Weak thinly laminated dark grey MUDSTONE. Irregular fracturing with clay infill and rare gravel of coal.						
		8.00 - 8.08						8.20	153.42		At 8.00m bgl: Very weak		8				
											End of Borehole at 8.20m		9				
													10				
													11				
													12				
													13				
Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
								0.00	8.20	90		2.20	8.20	Air/Mist		100	100
Remarks																	
Monitoring well installed to 8.00m bgl. No groundwater encountered during drilling. No visual or olfactory evidence of hydrocarbon contamination encountered.																	
																	



5 John Charles Way
Leeds
LS12 6QA

Rotary Open Hole Log

Project Name: Higham Lane North		Client: Commercial Development Projects Limited		Date: 07/08/2025	
Location: Higham Lane, Dodworth, Barnsley		Contractor:		Co-ords: E431485.10 N406437.35	
Project No. : 4173.2		Crew Name: Strata Geotechnics		Drilling Equipment: Comacchio 205	
Borehole Number DSRO301	Hole Type RO	Level 147.54m AoD	Logged By ES & DJW	Scale 1:55	Page Number Sheet 1 of 2

Well	Water Strikes	In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		1.20	SPT	N=18 (4,3/3,4,4,7)	0.20	147.34		MADE GROUND: Dark brown slightly sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)	
						Firm orangish brown clayey GRAVEL Gravel is fine to coarse, subangular to angular of mudstone.			
					At 1.20m bgl: Medium dense				
						Black COAL			
						5.00	142.54		
					5.30	142.24			
					9.00	138.54		Black COAL	
					9.80	137.74		Dark grey MUDSTONE	

Hole Diameter		Drill Bit Type	Casing Diameter		Inclination & Orientation				Drilling Flush		
Depth Base (m)	Diameter (mm)	Bit Type	Depth Base (m)	Diameter (mm)	Depth Top (m)	Depth Base (m)	Inclination	Orientation	Depth Top (m)	Depth Base (m)	Flush Type
			1.20		0.00	20.00	90		1.50	20.00	Air/Mist

Remarks

Monitoring well installed to 20.00m bgl. No groundwater encountered during drilling. No visual or olfactory evidence of hydrocarbon contamination encountered. Logs based primarily on drillers description.





5 John Charles Way
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LS12 6QA

Rotary Open Hole Log

Project Name: Higham Lane North		Client: Commercial Development Projects Limited		Date: 07/08/2025	
Location: Higham Lane, Dodworth, Barnsley		Contractor:		Co-ords: E431485.10 N406437.35	
Project No. : 4173.2		Crew Name: Strata Geotechnics		Drilling Equipment: Comacchio 205	
Borehole Number DSRO301	Hole Type RO	Level 147.54m AoD	Logged By ES & DJW	Scale 1:55	Page Number Sheet 2 of 2

Well	Water Strikes	In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
								Dark grey MUDSTONE	12
									13
									14
									15
									16
									17
									18
									19
									20
									21
									22
					20.00	127.54		End of Borehole at 20.00m	20
									21
									22

Hole Diameter		Drill Bit Type	Casing Diameter		Inclination & Orientation				Drilling Flush		
Depth Base (m)	Diameter (mm)	Bit Type	Depth Base (m)	Diameter (mm)	Depth Top (m)	Depth Base (m)	Inclination	Orientation	Depth Top (m)	Depth Base (m)	Flush Type
			1.20		0.00	20.00	90		1.50	20.00	Air/Mist

Remarks
Monitoring well installed to 20.00m bgl. No groundwater encountered during drilling. No visual or olfactory evidence of hydrocarbon contamination encountered. Logs based primarily on drillers description.





5 John Charles Way
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Rotary Open Hole Log

Project Name: Higham Lane North		Client: Commercial Development Projects Limited		Date: 11/08/2025	
Location: Higham Lane, Dodworth, Barnsley		Contractor:		Co-ords: E431641.65 N406367.74	
Project No. : 4173.2		Crew Name: Strata Geotechnics		Drilling Equipment: Comacchio 205	
Borehole Number DSRO302	Hole Type RO	Level 153.20m AoD	Logged By ES & DJW	Scale 1:55	Page Number Sheet 1 of 2

Well	Water Strikes	In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.20	153.00		MADE GROUND: Dark brown slightly sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)	
					0.80	152.40		Firm light greyish brown and orangish brown slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular of coal and mudstone.	1
					1.20	152.00		Black COAL	
					1.80	151.40		Grey MUDSTONE.	
					2.00	151.20		Black COAL	2
								Grey MUDSTONE.	
								Black COAL	
								Grey MUDSTONE.	
								Black COAL	
								Grey MUDSTONE.	
								Black COAL	
					9.00	144.20		Black COAL	9
					10.80	142.40		Grey MUDSTONE.	11

Hole Diameter		Drill Bit Type		Casing Diameter		Inclination & Orientation				Drilling Flush		
Depth Base (m)	Diameter (mm)	Bit Type		Depth Base (m)	Diameter (mm)	Depth Top (m)	Depth Base (m)	Inclination	Orientation	Depth Top (m)	Depth Base (m)	Flush Type
						0.00	20.00	90			20.00	Air/Mist

Remarks
Monitoring well installed to 20.00m bgl. No groundwater encountered during drilling. No visual or olfactory evidence of hydrocarbon contamination encountered. Logs based primarily on drillers description.





Rotary Open Hole Log

Project Name: Higham Lane North

Client: Commercial Development Projects Limited

Date: 11/08/2025

Location: Higham Lane, Dodworth, Barnsley

Contractor:

Co-ords: E431641.65 N406367.74

Project No. : 4173.2

Crew Name: Strata Geotechnics

Drilling Equipment: Comacchio 205

Borehole Number
DSRO302

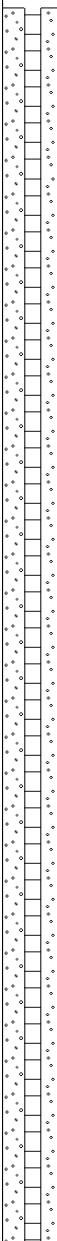
Hole Type
RO

Level
153.20m AoD

Logged By
ES & DJW

Scale
1:55

Page Number
Sheet 2 of 2

Well	Water Strikes	In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description													
		Depth (m)	Type	Results																	
					20.00	133.20		Grey MUDSTONE.	12												
									13												
									14												
									15												
									16												
									17												
									18												
									19												
									20												
									21												
									22												
									End of Borehole at 20.00m								20				
																	21				
																	22				
									Hole Diameter		Drill Bit Type		Casing Diameter		Inclination & Orientation			Drilling Flush			
									Depth Base (m)	Diameter (mm)	Bit Type		Depth Base (m)	Diameter (mm)	Depth Top (m)	Depth Base (m)	Inclination	Orientation	Depth Top (m)	Depth Base (m)	Flush Type
															0.00	20.00	90			20.00	Air/Mist

Remarks

Monitoring well installed to 20.00m bgl. No groundwater encountered during drilling. No visual or olfactory evidence of hydrocarbon contamination encountered. Logs based primarily on drillers description.





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Rotary Open Hole Log

Project Name: Higham Lane North		Client: Commercial Development Projects Limited		Date: 07/08/2025	
Location: Higham Lane, Dodworth, Barnsley		Contractor:		Co-ords: E431515.13 N406362.97	
Project No. : 4173.2		Crew Name: Strata Geotechnics		Drilling Equipment: Comacchio 206	
Borehole Number DSRO303	Hole Type RO	Level 155.79m AoD	Logged By ES & DJW	Scale 1:55	Page Number Sheet 1 of 2

Well	Water Strikes	In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		1.20	SPT	N=16 (3,3/4,4,4,4)	0.30	155.49		MADE GROUND: Dark brown slightly sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)	1 2 3 4 5 6 7 8 9 10 11
					1.80	153.99		Stiff dark greyish brown slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone.	
								Grey MUDSTONE.	
					3.50	152.29		Black COAL	
					4.00	151.79		Grey MUDSTONE.	
					4.50	151.29		Black COAL	
					5.40	150.39		Grey MUDSTONE.	

Hole Diameter		Drill Bit Type	Casing Diameter		Inclination & Orientation				Drilling Flush		
Depth Base (m)	Diameter (mm)	Bit Type	Depth Base (m)	Diameter (mm)	Depth Top (m)	Depth Base (m)	Inclination	Orientation	Depth Top (m)	Depth Base (m)	Flush Type
					0.00	20.00	90			20.00	Water

Remarks
Backfilled with bentonite on completion. No groundwater strikes encountered. No visual or olfactory evidence of hydrocarbon contamination encountered. Logs based primarily on drillers description.





5 John Charles Way
Leeds
LS12 6QA

Rotary Open Hole Log

Project Name: Higham Lane North		Client: Commercial Development Projects Limited		Date: 07/08/2025	
Location: Higham Lane, Dodworth, Barnsley		Contractor:		Co-ords: E431515.13 N406362.97	
Project No. : 4173.2		Crew Name: Strata Geotechnics		Drilling Equipment: Comacchio 206	
Borehole Number DSRO303	Hole Type RO	Level 155.79m AoD	Logged By ES & DJW	Scale 1:55	Page Number Sheet 2 of 2

Well	Water Strikes	In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
								Grey MUDSTONE.	12
					20.00	135.79		End of Borehole at 20.00m	20
									21
									22

Hole Diameter		Drill Bit Type	Casing Diameter		Inclination & Orientation				Drilling Flush		
Depth Base (m)	Diameter (mm)	Bit Type	Depth Base (m)	Diameter (mm)	Depth Top (m)	Depth Base (m)	Inclination	Orientation	Depth Top (m)	Depth Base (m)	Flush Type
					0.00	20.00	90			20.00	Water

Remarks
Backfilled with bentonite on completion. No groundwater strikes encountered. No visual or olfactory evidence of hydrocarbon contamination encountered. Logs based primarily on drillers description.



ROCK CORE PHOTOGRAPHIC RECORD



Project: 4173 Higham Lane		DSRC301
Location: Higham Lane, Dodworth, Barnsley		
Client: Commercial Development Projects Limited	Date: 8 August 2025	Sheet: 1 of 1

2.00m – 5.00m bgl

5.00m – 8.00m bgl

8.00m – 11.00m bgl

11.00m – 12.00m bgl

ROCK CORE PHOTOGRAPHIC RECORD



Project: 4173 Higham Lane

DSRC302

Location: Higham Lane, Dodworth, Barnsley

Client: Commercial Development Projects Limited

Date: 11 August 2015

Sheet: 1 of 1

2.30m – 5.30m bgl



5.30m – 8.30m bgl



8.30m – 11.80m bgl



11.30m – 12.30m bgl



ROCK CORE PHOTOGRAPHIC RECORD



Project: 4173 Higham Lane

Location: Higham Lane, Dodworth, Barnsley

DSRC303

Client: Commercial Development Projects Limited

Date: 11 August 2025

Sheet: 1 of 1

1.40m – 4.40m bgl



4.40m – 7.40m bgl



7.40m – 10.40m bgl



10.40m – 12.90m bgl



ROCK CORE PHOTOGRAPHIC RECORD



Project: 4173 Higham Lane		DSRC304
Location: Higham Lane, Dodworth, Barnsley		
Client: Commercial Development Projects Limited	Date: 11 August 2025	Sheet: 1 of 1

2.20m – 5.20m bgl

5.20m – 8.20m bgl

7.40m – 10.40m bgl

11.20m – 12.20m bgl

ROCK CORE PHOTOGRAPHIC RECORD



Project: 4173 Higham Lane		DSRC305
Location: Higham Lane, Dodworth, Barnsley		
Client: Commercial Development Projects Limited	Date: 1 August 2025	Sheet: 1 of 1

2.00m – 5.00m bgl



5.00m – 8.00m bgl



ROCK CORE PHOTOGRAPHIC RECORD



Project: 4173 Higham Lane		DSRC306
Location: Higham Lane, Dodworth, Barnsley		
Client: Commercial Development Projects Limited	Date: 31 July 2025	Sheet: 1 of 1

1.80m – 4.30m bgl



4.30m – 7.80m bgl

