FACTUAL REPORT ON GEOENVIRONMENTAL & GEOTECHNICAL GROUND INVESTIGATION

Higham Lane North
Dodworth

Reference	**4173-JPG-XX-XX-RP-G-0609-S2-P04**
Date	**September 2025**
Author	**EJS**

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CONTENTS

APPENDICES

CONFIDENTIALITY STATEMENT

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

Commercial Development Projects Limited
Huddersfield Road
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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
P04	04.03.26	Updated Topographic Survey	Final	EJS	RJM

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 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

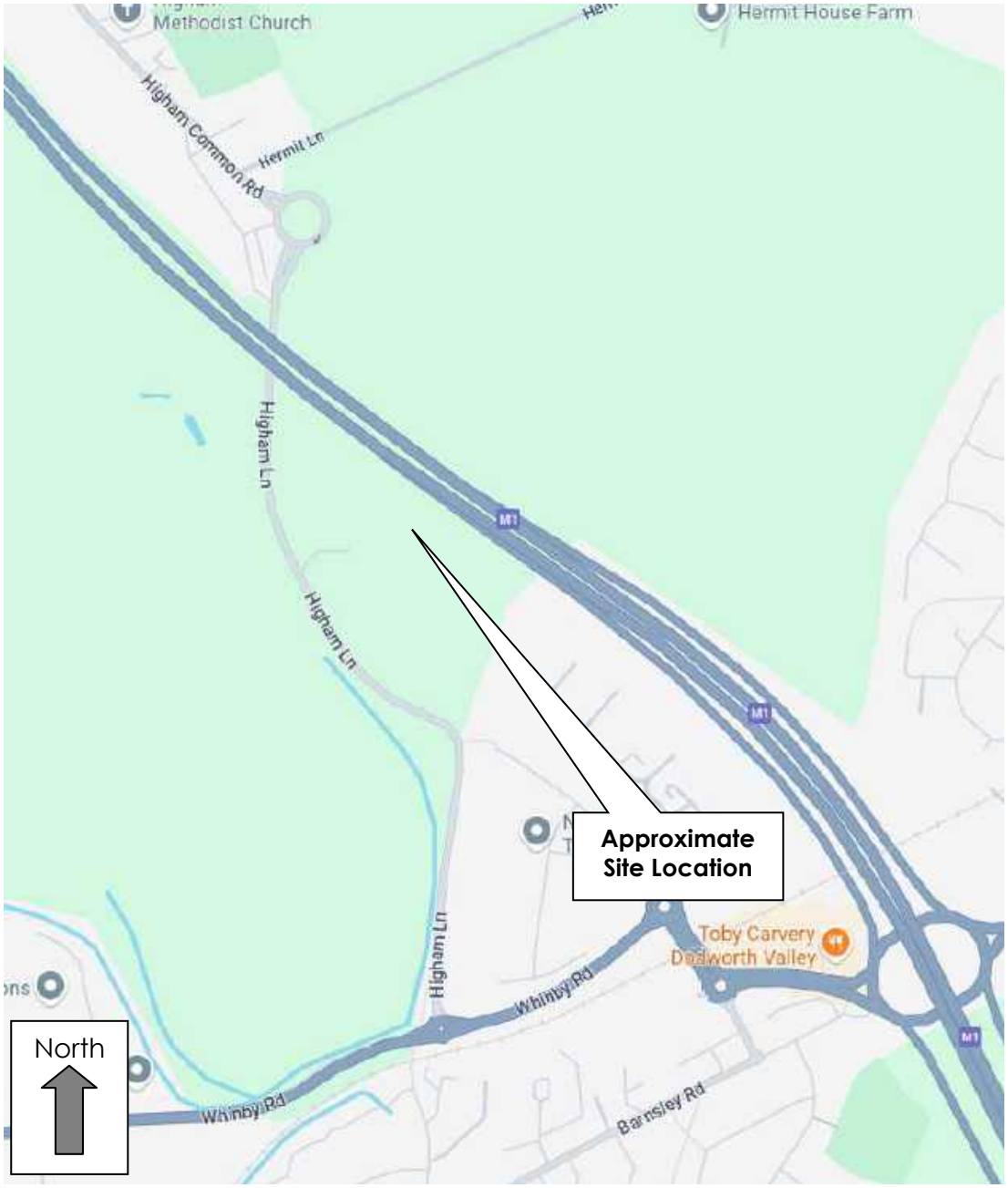

Figure 1 – Site Location Plan	
Site	**Higham Lane North, Dodworth, Barnsley**
Client	**Commercial Development Projects Limited**
Job Number	**4173**
Scale	**NTS**

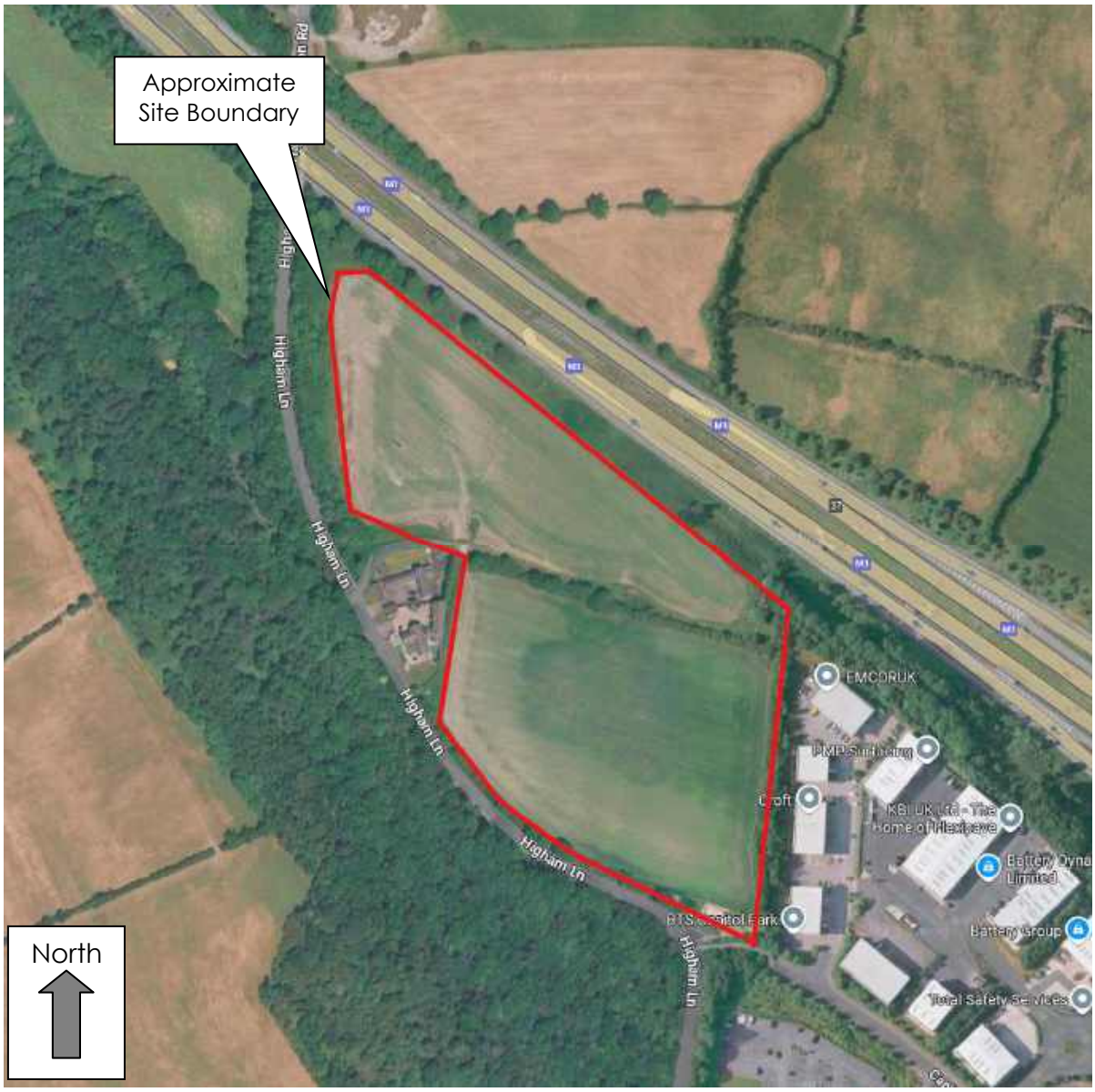

Figure 2 – Aerial Photograph	
Site	**Higham Lane North, Dodworth, Barnsley**
Client	**Commercial Development Projects Limited**
Job Number	**4173**
Scale	**NTS**

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

0m 25m 50m

SCALE 1:1000

REV	DESCRIPTION	DATE	CHK	BY
P08	UPDATED TOPOGRAPHIC SURVEY	27.02.26	MDP	EJS
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

Project
COMMERCIAL PLOT
HIGHAM LANE NORTH
DODWORTH

Drawing Title
COMPOSITE EXPLORATORY HOLE LOCATION PLAN

INFORMATION

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4173-JPG-ZZ-ZZ-DR-G-1104 | S2 | **P08**

Appendix B Exploratory Hole Logs

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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	Location Type	Level	Logged By	Scale	Page Number
TP301	TP	144.90m 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				
					0.30	144.60		MADE GROUND: Dark brown sightly sandy gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone and coal. (TOPSOIL)
		0.40	E					MADE GROUND: Dark brown clayey sandy GRAVEL. Low angular boulder content of concrete (up to 0.60m x 0.20m x 0.40m), timber (up to 0.60m x 0.20m x 0.20m) , sandstone and masonry.
					0.70	144.21		Firm becoming stiff orangish brown and mottled grey slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone.
					1.90	143.00		Light brown extremely weak, thinly laminated MUDSTONE. Recovered as fine to coarse, subangular to angular gravel of mudstone.
					2.00	142.90		End of Trial Pit at 2.00m

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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: 06/08/2025
Location: Higham Lane, Dodworth, Barnsley	Contractor:	Co-ords: E431532.81 N406427.97
Project No. : 4173.2	Crew Name: Hather Plant Hire Ltd	Equipment: JCB 3CX

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

Well	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
		0.20	E		0.30	148.93		MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)
		0.70 0.70	B D		2.00	147.23		Firm becoming stiff orangish brown and mottled grey slightly sandy slightly gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone.
					2.20	147.03		Extremely weak light greyish brown thinly and thickly laminated MUDSTONE. Recovered as fine to coarse, subangular to angular gravel. End of Trial Pit at 2.20m

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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: 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	Location Type	Level	Logged By	Scale	Page Number
TP303	TP	150.00m 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				
								MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)
					0.30	149.70		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

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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JPG 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: E431625.89 N406382.80
Project No. : 4173.2	Crew Name: Hather Plant Hire Ltd	Equipment: JCB 3CX

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP304	TP	152.42m 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				
								MADE GROUND: Dark brown sightly sandy gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone and coal. (TOPSOIL)
					0.40	152.02		Firm becoming stiff light greyish brown and orangish brown slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone.
								At 1.10m bgl: Land drain encountered, dry. Sandstone boulder recovered (0.50m x 0.30m x 0.30m).
		1.30 1.30	B D					
					1.55	150.87		Black COAL. Recovered as a fine to coarse, subangular to angular gravel of coal.
					1.75	150.67		Light grey MUDSTONE. Recovered as sandy gravelly cobbles and gravel. Gravel is fine to coarse, subangular to angular of mudstone.
					2.30	150.12		End of Trial Pit at 2.30m

1 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: E431539.30 N406403.22
Project No. : 4173.2	Crew Name: Hather Plant Hire Ltd	Equipment: JCB 3CX

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP305	TP	151.38m 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				
					0.20	151.18		MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)
								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.
					3.10	148.28		End of Trial Pit at 3.10m

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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: E431577.60 N406385.61
Project No. : 4173.2	Crew Name: Hather Plant Hire Ltd	Equipment: JCB 3CX

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP306	TP	152.46m 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				
					0.30	152.16		MADE GROUND: Dark brown sightly sandy gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone and coal. (TOPSOIL)
		0.90 0.90	B D					Firm light orangish brown and mottled grey slightly sandy gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone.
					1.60	150.86		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

1 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: 06/08/2025
Location: Higham Lane, Dodworth, Barnsley	Contractor:	Co-ords: E431609.62 N406358.25
Project No. : 4173.2	Crew Name: Hather Plant Hire Ltd	Equipment: JCB 3CX

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP307	TP	154.21m 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				
		0.20	E					MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone and coal. (TOPSOIL)
					0.30	153.91		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

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: 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	Location Type	Level	Logged By	Scale	Page Number
TP308	TP	149.31m 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				
					0.25	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)
								Stiff clay light orangish brown and mottled grey slightly gravelly CLAY. Gravel is fine to course, subangular to angular of mudstone.
					1.50	147.81		Black locally dark grey distinctly weathered COAL. Recovered as a fine to coarse, subangular to angular gravel.
					1.55	147.76		Very weak light grey thinly laminated MUDSTONE interlaminated with coal. Recovered as fine to coarse, subangular to angular gravel of mudstone and coal.
					3.00	146.31		End of Trial Pit at 3.00m

1
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: E431496.54 N406369.64
Project No. : 4173.2	Crew Name: Hather Plant Hire Ltd	Equipment: JCB 3CX

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP309	TP	154.52m 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				
								MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone and coal. (TOPSOIL)
					0.30	154.22		Firm light greyish brown and orangish brown slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone.
					0.60	153.92		Black locally dark grey distinctly weathered COAL. Recovered as a fine to coarse, subangular to angular gravel.
					1.10	153.42		Firm light greyish brown and orangish brown slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular gravel of mudstone.
					1.40	153.12		Black locally dark grey distinctly weathered COAL. Recovered as a fine to coarse, subangular to angular gravel.
					1.55	152.97		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.
					2.00	152.52		Black locally dark grey distinctly weathered COAL. Recovered as a fine to coarse, subangular to angular gravel.
					2.35	152.17		Light greyish brown distinctly weathered MUDSTONE. Recovered as a fine to coarse, subangular to angular gravell.
					3.20	151.32		End of Trial Pit at 3.20m

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: E431508.61 N406340.94
Project No. : 4173.2	Crew Name: Hather Plant Hire Ltd	Equipment: JCB 3CX

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP310	TP	158.39m AoD	DJW&EJS	1:20	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
		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)
		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

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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: E431538.82 N406321.57
Project No. : 4173.2	Crew Name: Hather Plant Hire Ltd	Equipment: JCB 3CX

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP311	TP	160.28m 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				
								MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)
					0.30	159.98		Firm light greyish brown and orangish brown slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular of sandstone.
					0.65	159.63		Black locally dark grey weathered COAL. Recovered as a fine to coarse, subangular to angular gravel
					0.75	159.53		Soft dark grey slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone.
					1.00	159.28		Black locally dark grey distinctly weathered COAL. Recovered as a fine to coarse, subangular to angular gravel.
					1.05	159.23		Soft dark grey slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone.
					1.30	158.98		Light greyish brown distinctly weathered MUDSTONE. Recovered as a fine to coarse, subangular to angular gravel.
		1.40	B					
		1.40	D					
					2.25	158.03		End of Trial Pit at 2.25m

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: 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				
								MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)
					0.40	158.11		Light yellowish brown sandy GRAVEL and COBBLES of sandstone. Gravel is fine to coarse, subrounded to angular of sandstone.
					1.20	157.31		End of Trial Pit at 1.20m

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	Location Type	Level	Logged By	Scale	Page Number
TP313	TP	157.57m 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				
		0.20	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.
					1.15	156.42		End of Trial Pit at 1.15m

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: E431503.02 N406311.02
Project No. : 4173.2	Crew Name: Hather Plant Hire Ltd	Equipment: JCB 3CX

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP314	TP	160.91m AoD	DJW&EJS	1:20	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
		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)
								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.
		3.00 3.00 3.00	B D E					
					3.30	157.61		End of Trial Pit at 3.30m

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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: E431530.37 N406298.74
Project No. : 4173.2	Crew Name: Hather Plant Hire Ltd	Equipment: JCB 3CX

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP315	TP	162.75m 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				
								MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)
					0.30	162.45		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

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	Location Type	Level	Logged By	Scale	Page Number
TP316	TP	162.36m 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				
								MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)
					0.30	162.06		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

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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	Location Type	Level	Logged By	Scale	Page Number
TP317	TP	161.11m 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				
					0.30	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)
		0.75 0.75 0.75	B D E					Light yellowish brown sandy GRAVEL and COBBLES of sandstone. Gravel is fine to coarse, subrounded to angular of sandstone.
					1.10	160.01		End of Trial Pit at 1.10m

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: E431632.47 N406285.85
Project No. : 4173.2	Crew Name: Hather Plant Hire Ltd	Equipment: JCB 3CX

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP318	TP	158.91m 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				
					0.30	158.61		MADE GROUND: Dark brown sightly sandy gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone and coal. (TOPSOIL)
		0.60 0.60	B D					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

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	Location Type	Level	Logged By	Scale	Page Number
TP319	TP	162.59m 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				
					0.25	162.34		MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)
		0.60 0.60	B D					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

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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	Location Type	Level	Logged By	Scale	Page Number
TP320	TP	162.75m 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				
		0.20	E					MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)
					0.30	162.45		Light grey sandy GRAVEL. Gravel is as fine to coarse, subangular to angular of sandstone.
					1.00	161.75		Firm light greyish brown and orangish brown slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone.
					2.30	160.45		End of Trial Pit at 2.30m

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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	Location Type	Level	Logged By	Scale	Page Number
TP321	TP	162.12m AoD	DJW&EJS	1:20	Sheet 1 of 1

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

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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	Location Type	Level	Logged By	Scale	Page Number
TP322	TP	161.83m 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				
								MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)
					0.35	161.48		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

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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.

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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: E431626.82 N406248.01
Project No. : 4173.2	Crew Name: Hather Plant Hire Ltd	Equipment: JCB 3CX

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP323	TP	161.00m 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				
								MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)
					0.30	160.70		Light grey fine grained SANDSTONE. Recovered as fine to coarse, subangular to angular gravel.
					0.90	160.10		Greyish brown and locally blakc destructured MUDSTONE. Recovered as slightly gravelly clay, gravel is fine to coarse, subangular to angular of mudstone and coal.
					1.15	159.84		Light greyish brown distinctly weathered MUDSTONE. Recovered as fine to coarse, subangular to angular clayey gravel.
					2.40	158.60		End of Trial Pit at 2.40m

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: E431650.10 N406239.36
Project No. : 4173.2	Crew Name: Hather Plant Hire Ltd	Equipment: JCB 3CX

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP324	TP	160.22m AoD	DJW&EJS	1:20	Sheet 1 of 1

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

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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: E431565.43 N406222.76
Project No. : 4173.2	Crew Name: Hather Plant Hire Ltd	Equipment: JCB 3CX

Location Number	Location Type	Level	Logged By	Scale	Page Number
TP325	TP	160.27m 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				
								MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)
					0.30	159.97		Firm light greyish brown and orangish brown slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone.
					1.30	158.97		Black destructured COAL. Recovered as a slightly sandy gravelly clay. Gravel is fine to coarse, subangular to angular.
					1.90	158.37		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.
					3.60	156.67		End of Trial Pit at 3.60m

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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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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	Location Type	Level	Logged By	Scale	Page Number
TP326	TP	160.19m 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				
		0.10	E					MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)
					0.20	159.99		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	B					
		1.50	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.
					3.25	156.94		Black locally dark grey distinctly weathered COAL. Recovered as a fine to coarse, subangular to angular gravel.
					3.30	156.89		End of Trial Pit at 3.30m

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

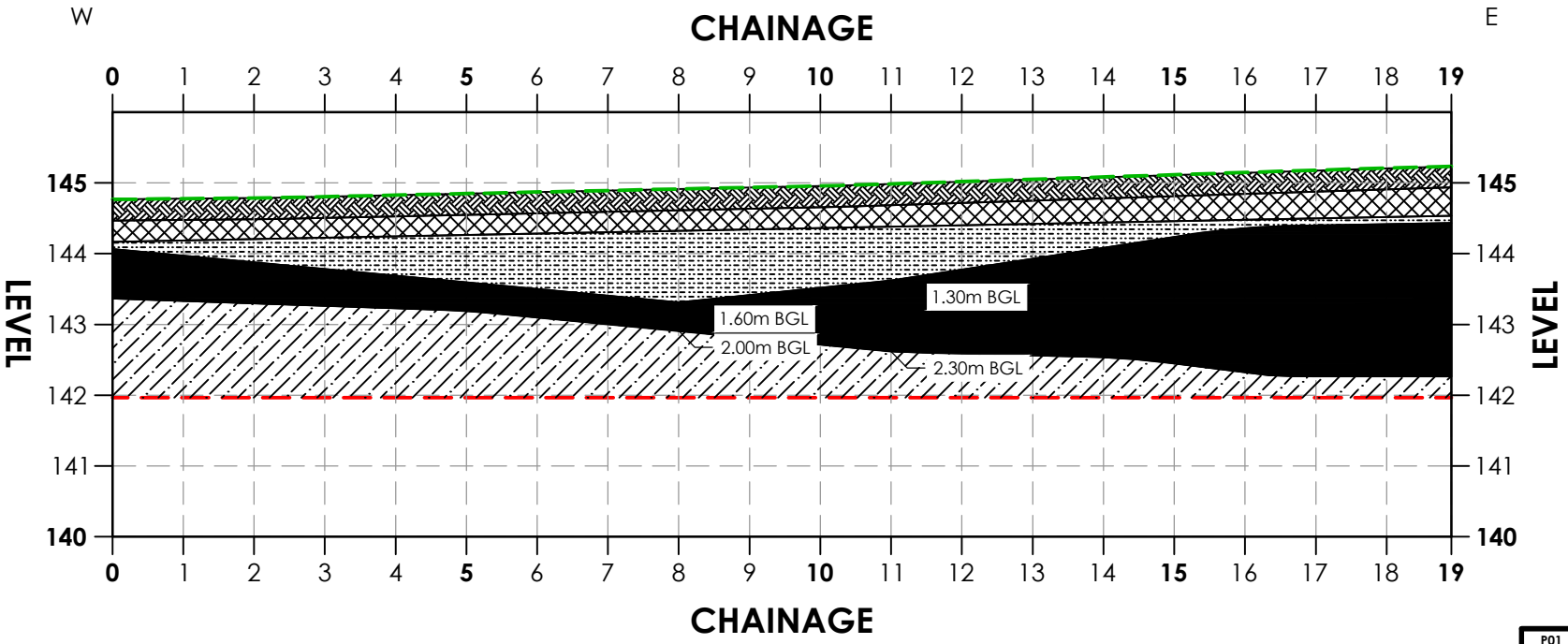
Remarks

Backfilled with arisings on completion. No groundwater encountered. No visual or olfactory evidence of hydrocarbon contamination encountered. Base of coal not proven due to difficulty to dig.

AGS

DO NOT SCALE (A4)

NOTES



TRIAL TRENCH 301
SCALE 1:100

GROUND TYPE KEY

- BROWN SANDY GRAVELLY CLAY (TOPSOIL)
- MADE GROUND. LIGHT BROWN CLAYEY SANDY GRAVEL (REWORKED NATURAL)
- STIFF LIGHT GREYISH BROWN MOTTLED ORANGE SLIGHTLY SANDY GRAVELLY CLAY
- BLACK COAL. RECOVERED AS ANGULAR TABULAR SANDY FINE TO COURSE GRAVEL
- LIGHT GREYISH BROWN MUDSTONE. RECOVERED AS A SLIGHTLY SANDY GRAVEL
- GROUND LEVEL
- BOTTOM OF EXCAVATION

0m 2.5m 5m

SCALE 1:100

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

Project
HIGHAM LANE NORTH
DODWORTH

Drawing Title
TRIAL TRENCH 301

INFORMATION

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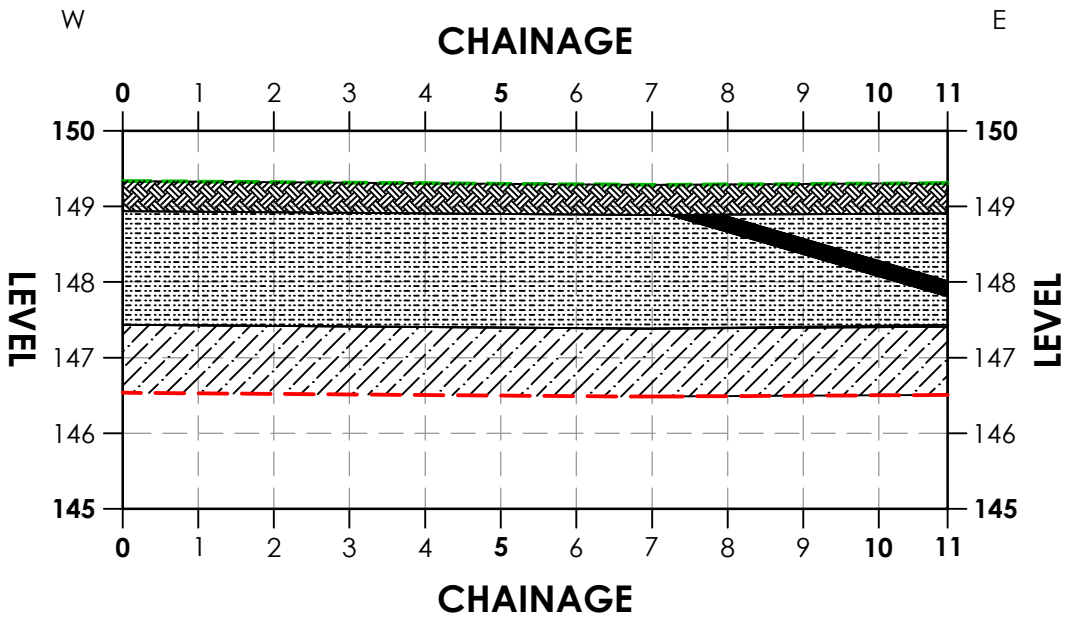
4173-JPG-XX-XX-SK-G-1001 | S2 | **P01**

DO NOT SCALE (A4)

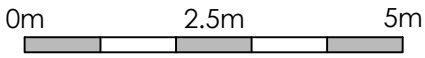
NOTES



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



SCALE 1:100

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

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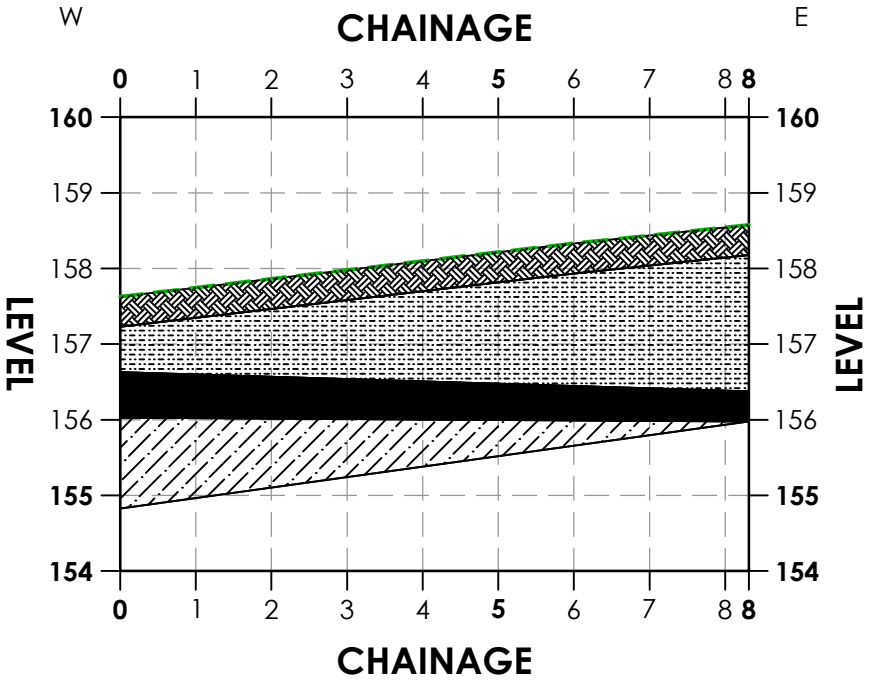
4173-JPG-XX-XX-SK-G-1002 | S2 | **P01**

DO NOT SCALE (A4)

NOTES



TRIAL TRENCH 304
SCALE 1:100

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

0m 2.5m 5m

SCALE 1:100

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

Project
HIGHAM LANE NORTH
DODWORTH

Drawing Title
TRIAL TRENCH 304

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

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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)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
					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)
		1.00	SPT	N=16 (2,2/4,4,4,4)				Firm orangish brown and mottled grey gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone.
					1.77	143.19		Black, locally dark grey distinctly weathered COAL. Recovered as fine to coarse, subangular to angular slightly clayey sandy gravel.
		2.00	SPT	N=21 (4,4/4,4,5,8)	2.00	142.96		Firm light grey gravelly CLAY interbedded with coal. Gravel is fine to coarse, subangular to angular of mudstone and coal.
					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.
		2.60	SPT	50 (25 for 115mm/50 for 190mm)	2.65	142.31		End of Borehole at 2.65m

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.

AGS

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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	Hole Type	Level	Logged By	Scale	Page Number
WS302	WS	146.02m 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				
					0.20	145.82		MADE GROUND: Dark brown slightly sandy gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)
								Light orangish brown and mottled grey gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone and rare coal.
					0.84	145.18		Light brown and mottled grey destructured MUDSTONE. Recovered as gravelly clay. Gravel is fine to coarse and subangular to angular of mudstone and coal.
		1.00	SPT	N=36 (6,8/10,9,9,8)				
								At 1.30m bgl: brown to grey in colour.
								At 1.80m bgl: ironstone staining.
		2.00	SPT	N=50 (8,14/50 for 230mm)	2.00	144.02		End of Borehole at 2.00m

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.

AGS

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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	Hole Type	Level	Logged By	Scale	Page Number
WS303	WS	147.44m AoD	DJW&EJS	1:20	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
					0.25	147.19		MADE GROUND: Dark brown sandy gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)
		1.00	SPT	N=14 (2,4/4,4,3,3)				Firm orangish brown and mottled grey slightly gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone.
					1.50	145.94		Light greyish brown distinctly weathered MUDSTONE. Recovered as a fine to coarse, subangular to angular gravel.
		2.00	SPT	50 (25 for 60mm/50 for 40mm)	2.00	145.44		End of Borehole at 2.00m

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.

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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	Hole Type	Level	Logged By	Scale	Page Number
WS304	WS	149.15m AoD	DJW&EJS	1:20	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
					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.
		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

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.

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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	Hole Type	Level	Logged By	Scale	Page Number
WS305	WS	150.45m 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				
								MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)
					0.37	150.08		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.
		1.00	SPT	N=13 (1,2/2,2,4,5)				At 1.05m bgl:frequent gravel of coal encountered.
					1.24	149.21		Black distinctly weathered COAL. Recovered as a fine to coarse, subangular to angular sandy gravel.
					1.28	149.17		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

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.

AGS

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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	Hole Type	Level	Logged By	Scale	Page Number
WS306	WS	153.79m 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				
					0.30	153.49		MADE GROUND: Dark brown sandy gravelly CLAY with rootlets. Gravel is fine to coarse and subangular to angular of mudstone and coal.
								Mottled grey and orange slightly gravelly firm CLAY. Gravel is fine to coarse and subangular to angular of mudstone.
								At 0.70m bgl: red clay pipe land drain encountered, dry.
		1.00	SPT	N=11 (2,3/3,2,2,4)				
					1.60	152.19		Black distinctly weathered COAL. Recovered as fine to coarse, subangular to angular slightly sandy gravel.
					1.80	151.99		Firm dark grey and black slightly gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone and coal.
		2.00	SPT	N=50 (8,9/50 for 245mm)	2.00	151.79		End of Borehole at 2.00m

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.

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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	Hole Type	Level	Logged By	Scale	Page Number
WS307	WS	156.42m AoD	DJW&EJS	1:20	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
					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)
					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

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.

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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	Hole Type	Level	Logged By	Scale	Page Number
WS308	WS	158.66m 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				
					0.35	158.31		MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)
					0.85	157.81		Light yellowish brown sandy GRAVEL. Gravel is fine to coarse, subangular to angular of mudstone.
		1.00	SPT	N=14 (2,1/1,2,2,9)				Firm light orangish brown and greyish brown slightly sandy gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone.
		1.50	SPT	50 (25 for 30mm/50 for 10mm)	1.54	157.12		At 1.54m bgl: Assumed refusal on to extremely weak bedrock.
								End of Borehole at 1.54m

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.

JPG	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	Hole Type	Level	Logged By	Scale	Page Number
WS309	WS	159.54m 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				
					0.24	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.
		1.00	SPT	N=37 (4,6/7,8,10,12)				
					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.
					1.67	157.87		Light greyish brown of distinctly weathered MUDSTONE. Recovered as slightly clayey sandy gravel. Gravel is fine to coarse, subangular to angular.
		2.00	SPT	N=50 (7,7/50 for 245mm)				
					2.30	157.24		End of Borehole at 2.30m

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.

AGS

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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	Hole Type	Level	Logged By	Scale	Page Number
WS310	WS	156.84m 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				
								MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)
					0.30	156.54		Firm light orangish brown and greyish brown slightly sandy gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone.
					0.60	156.24		Dark grey and black distinctly weathered COAL. Recovered as a fine to coarse, subangular to angular gravel.
					0.85	155.99		Firm light orangish brown and greyish brown slightly sandy gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone.
		1.00	SPT	N=18 (2,2/3,4,4,7)				
					1.40	155.44		Light greyish brown distinctly weathered MUDSTONE. Recovered as a fine to coarse, subangular to angular gravel.
		2.00	SPT	50 (9,13/50 for 155mm)	2.00	154.84		End of Borehole at 2.00m

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.

AGS

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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	Hole Type	Level	Logged By	Scale	Page Number
WS311	WS	153.00m AoD	DJW&EJS	1:20	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
					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)
					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.
					0.91	152.09		Firm light greyish brown sandy slightly gravelly CLAY. Gravel is fine to coarse, subangular to angular of sandstone.
		1.00	SPT	N=21 (2,3/4,5,6,6)	1.05	151.95		Black locally dark grey distinctly weathered COAL. Recovered as a fine to coarse subangular to angular gravel.
					1.35	151.65		Firm light orangish grey slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular of sandstone.
					1.68	151.32		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)	2.00	151.00		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.
								End of Borehole at 2.00m

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.

AGS

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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	Hole Type	Level	Logged By	Scale	Page Number
WS312	WS	156.80m AoD	DJW&EJS	1:20	Sheet 1 of 1

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

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.

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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: E431422.19 N406455.81
Project No. : 4173.2	Crew Name: RP DRILLING	Drilling Equipment: Window sample rig RP03

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS313	WS	147.26m AoD	DJW&EJS	1:20	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
					0.20	147.06		MADE GROUND: Dark brown sandy gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)
								Firm orangish brown gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone.
		1.00	SPT	N=14 (5,5/5,3,3,3)	1.00	146.26		Black locally dark grey, distinctly weathered COAL. Recovered as a fine to coarse, subangular to angular gravel.
					1.05	146.21		Dark greyish brown firm slightly gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone and coal.
					1.37	145.89		Light greyish brown distinctly weathered MUDSTONE. Recovered as slightly gravelly clay.
		2.00	SPT	N=31 (5,7/7,7,8,9)				
		3.00	SPT	50 (7,8/50 for 125mm)	3.00	144.26		End of Borehole at 3.00m

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.

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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	Hole Type	Level	Logged By	Scale	Page Number
WS314	WS	148.16m AoD	DJW&EJS	1:20	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
					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)
								Light orangish brown and greyish brown slightly gravelly CLAY with rootlets. Gravel is fine to coarse and subangular to angular of mudstone.
		1.00	SPT	N=12 (4,4/3,3,3,3)	1.00	147.16		Black and locally dark grey distinctly weathered COAL. Recovered as a fine to coarse, subangular to angular gravel.
					1.35	146.82		Light greyish brown distinctly weathered MUDSTONE. Recovered as slightly gravelly clay.
		2.00	SPT	N=50 (5,9/50 for 245mm)				
					2.35	145.82		End of Borehole at 2.35m

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.

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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)
		1.00	SPT	N=13 (2,3/2,3,4,4)				Light greyish brown and orangish brown slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone and coal.
					1.60	144.16		Light greyish brown and orangish brown distinctly weathered MUDSTONE. Recovered as a fine to coarse, subangular to angular gravel.
		2.00	SPT	50 (25 for 105mm/50 for 115mm)	2.00	143.76		End of Borehole at 2.00m

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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.

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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	Hole Type	Level	Logged By	Scale	Page Number
WS316	WS	144.74m 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				
					0.26	144.48		MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)
					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.
		1.00	SPT	N=7 (1,1/2,1,2,2)				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

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.

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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	Hole Type	Level	Logged By	Scale	Page Number
WS317	WS	144.96m AoD	DJW&EJS	1:20	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
					0.25	144.71		MADE GROUND: Dark brown sandy gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)
		1.00	SPT	N=17 (3,3/3,4,4,6)				Firm light greyish brown and orangish brown slightly sandy gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone.
					1.65	143.31		Dark grey distinctly weathered MUDSTONE with iron staining. Recovered as fine to coarse, subangular to angular clayey gravel.
		2.00	SPT	50 (5,12/50 for 115mm)	2.00	142.96		End of Borehole at 2.00m

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.

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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	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.
					1.50	144.27		Light greyish brown distinctly weathered MUDSTONE. Recovered as fine to coarse, subangular to angular sandy gravel.
		2.00	SPT	N=50 (4,7/50 for 230mm)				
					2.38	143.39		End of Borehole at 2.38m

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.

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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: E431529.39 N406469.73
Project No. : 4173.2	Crew Name: RP DRILLING	Drilling Equipment: Window sample rig RP03

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
WS319	WS	147.08m AoD		1:20	Sheet 1 of 1

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

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.

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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	Hole Type	Level	Logged By	Scale	Page Number
WS320	WS	152.32m 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				
								MADE GROUND: Dark brown sandy slightly gravelly CLAY with rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)
					0.30	152.02		Firm light orangish brown and mottled grey slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone.
		1.00	SPT	N=17 (3,3/4,4,4,5)	0.95	151.37		Firm dark grey gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone and coal.
					1.60	150.72		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

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.

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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	Hole Type	Level	Logged By	Scale	Page Number
WS321	WS	154.01m AoD	DJW&EJS	1:20	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
					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.
					1.60	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

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.

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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 wth 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	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 - 2.00	B					
		2.00	D					At 2.00m bgl: Possible mudstone bedrock
		2.00	SPT	50 (5,6/50 for 40mm)				
		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.

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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	Hole Type	Level	Logged By	Scale	Page Number
BH302	BH	146.68m 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				
		0.00 - 0.30	B					MADE GROUND: Dark brown slightly sandy slightly gravelly CLAY wth rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)
					0.30	146.38		
		0.40	D					Stiff dark orangish brown and greyish brown slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone. (residual soil)
		0.50 - 1.00	B					
		1.20 - 1.65	UT					
		1.65	D					
		1.80 - 2.00	B					
		1.80	SPT	50 (5,6/50 for 150mm)				
		2.00	D		2.00	144.68		Black COAL. Recovered as fine to coarse sand.
		2.00	SPT	50 (6,5/50 for 120mm)				
					2.38	144.30		End of Borehole at 2.38m

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.

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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	Hole Type	Level	Logged By	Scale	Page Number
BH303	BH	158.25m AoD	ES & DJW	1:20	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
		0.20 - 0.40	B		0.20	158.05		MADE GROUND: Dark brown slightly sandy slightly gravelly CLAY wth rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)
		0.50	D					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.
		0.50 - 1.00	B					
		0.65	D					
		1.20 - 1.65	UT					At 1.20m bgl: UT attempted, failed.
		1.70 - 2.00	B					
		2.00	D		2.00	156.25		Light grey distinctly weathered MUDSTONE. Recovered as slightly sandy fine to coarse, subangular to angular gravel of mudstone.
		2.00	SPT	N=50 (4,5/5,15,15,15)				
		2.50 - 2.70	B					
		2.50	SPT	50 (10,15/50 for 215mm)				
		2.70	SPT	50 (20,5/50 for 80mm)				
		2.80	D					
					2.93	155.32		End of Borehole at 2.93m

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.

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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	Hole Type	Level	Logged By	Scale	Page Number
BH304	BH	158.41m AoD	ES & DJW	1:20	Sheet 1 of 1

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

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.

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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	Hole Type	Level	Logged By	Scale	Page Number
DSRC301	RC	144.45m AoD	ES & DJW	1:33	Sheet 1 of 2

Well	Water	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
								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)
								0.80	143.65		Firm dark greyish brown slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone and sandstone.
							(28)				Black destructured COAL, recovered as slightly clayey subangular to angular gravel.
								1.80	142.65		Extremely weak greyish brown destructured MUDSTONE. Recovered as slightly gravelly clay.
		2.00 - 3.50		73	21	16	(39)				
		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, vertcal fracture, clay infill.
		5.28 - 5.34	C								
		5.70 - 5.80 5.00 - 6.50	C	90	87	87					
		6.10 - 6.13	C								From 6.40m bgl: Becoming weak

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.

AGS

JPG 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	Hole Type	Level	Logged By	Scale	Page Number
DSRC301	RC	144.45m AoD	ES & DJW	1:33	Sheet 2 of 2

Well	Water	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
		6.50 - 8.00		87	61	51					Very weak greyish brown and orangish brown MUDSTONE with ironstone nodules. Highly fractured with clay infill.
								7.63	136.82		Black COAL.
								7.90	136.55		Weak thinly laminated greyish brown MUDSTONE.
		8.00 - 9.50 8.88 - 9.08	C	73	49	49					Between 8.70m and 8.80m bgl, recovered as gravel.
		~~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 destructed MUDSTONE. Recovered as gravelly clay.
								10.40	134.05		Weak light greyish brown thinly laminated MUDSTONE. Frequently fractured with clay infill, high cobble content of ironstone nodules.
		11.00 - 12.00		100	65	59					At 10.86m bgl, cobble of quartz encountered.
								12.00	132.45		End of Borehole at 12.00m

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.

AGS

JPG	5 John Charles Leeds 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 /Fl	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
								0.20	145.17		MADE GROUND: Dark brown slightly sandy slightly gravelly CLAY wth rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)
		1.20 - 1.70	UT								Stiff dark greyish brown gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone.
							51 (25 for 95mm/ 51 for 85mm)	2.30	143.07		Very weak light greyish brown distinctly weathered MUDSTONE, recovered as gravelly clay.
		2.30 - 3.80		100	69	45		2.73	142.64		Distinclty weathered black thinly laminated COAL. Recovered as sandy fine to coarse, angular gravel.
								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		67	10	10		4.27	141.10		Extremely weak dark greyish brown destructured MUDSTONE. Recovered as gravelly clay.
		4.75 - 4.90	C					4.40	140.97		Between 4.30m and 4.34m bgl, weathered gravel of black coal.
								4.64	140.73		Black destructred COAL. Recovered as gravel of coal and rare pyrite.
								5.10	140.27		Medium strong light grey and mottled brown fine grained SANDSTONE.
							50 (25 for 75mm/ 50 for 85mm)				Very weak very thinly laminated dark grey partially weathered MUDSTONE. Frequent irregular fractures with sand infill.
		5.30 - 6.80		100	64	10					Between 5.50m and 5.65m bgl, recovered as fine to coarse, subangular to angular gravel of mudstone.
		6.15 - 6.25	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 (%)
		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.

AGS

JPG	5 John Charles Leeds 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 2 of 2

Well	Water	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
											Very weak very thinly laminated dark grey partially weathered MUDSTONE. Frequent irregular fractures with sand infill.
		7.45 - 7.49 6.80 - 8.30 7.65	C C	100	43	0					
											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.
		8.30 - 9.80		100	31	0		9.05	136.32		Black locally dark grey COAL. Rare specks of pyrite encountered.
								9.35	136.02		Weak dark grey thinly laminated MUDSTONE with clay infill.
		9.65 - 9.70	C								
		9.80 - 11.30 10.60 - 10.67	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, potentiall drilling induced.
								11.60	133.77		Weak dark greyish brown MUDSTONE interlaminated with thin bands of black coal, clay infill in fractures.
		11.30 - 12.30		100	60	45					
		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.

AGS

JPG 5 John Charles Leeds 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	Hole Type	Level	Logged By	Scale	Page Number
DSRC303	RC	146.69m AoD	ES & DJW	1:33	Sheet 1 of 2

Well	Water	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
								0.20	146.49		MADE GROUND: Dark brown slightly sandy slightly gravelly CLAY wth rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)
											Stiff dark greyish brown slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone.
								1.30	145.39		At 1.20m bgl: High strength
		1.40 - 2.90		100	73	18		1.55	145.14		Yellowish brown destructed fine to coarse grained SANDSTONE. Recovered as gravel and cobbles.
											Very weak thickly laminated dark greyish brown distinctly weathered MUDSTONE. Heavily fractured and non intact with clay infill.
											At 1.90m bgl, iron stone nodule encountered.
		2.90 - 4.40		100	0	0					
								4.25	142.44		Black locally dark grey COAL. Recovered as clayey gravel.
							50 (25 for 10mm/ 50 for 35mm)	4.57	142.12		Very weak dark grey destructured MUDSTONE with frequent bands of thinly laminated coal. Recovered as gravelly clay.
		4.40 - 5.90		100	80	0					
								5.25	141.44		Black locally dark grey distinctly weathered COAL. Recovered as slightly clayey gravel.
								5.50	141.19		
								5.65	141.04		Extremely weak dark grey destructured weathered MUDSTONE. Recovered as clayey gravel.
		6.22 - 6.44	C					6.10	140.59		Black locally dark grey distinctly weathered COAL. Recovered as slightly clayey gravel.
											Between 5.90m and 6.05m bgl, recovered as slightly clayey gravel, potentially drilling induced.
											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.

AGS

JPG	5 John Charles Leeds 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	Hole Type	Level	Logged By	Scale	Page Number
DSRC303	RC	146.69m AoD	ES & DJW	1:33	Sheet 2 of 2

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

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.

AGS

JPG	5 John Charles Leeds 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	Hole Type	Level	Logged By	Scale	Page Number
DSRC304	RC	148.62m AoD	ES & DJW	1:33	Sheet 1 of 2

Well	Water	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
								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.
											At 1.00m bgl: Becoming stiff
		1.20 - 2.20		100	43	36	(29) (33)				
		2.74 - 2.76	C					2.66	145.96		Weak light greyish brown destructured MUDSTONE, recovered as gravelly clay.
		2.20 - 3.70		97	67	61					
											Between 3.85m and 3.95m bgl, recovered as gravelly clay.
		3.70 - 5.20		100	30	12					
		5.20 - 6.70		93	51	51		5.87	142.75		Black COAL
								6.10	142.52		Weak light grey distinctly weathered MUDSTONE. Heavily fractured with clay infill.
		6.40 - 6.46	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 (%)
		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.

AGS

JPG 5 John Charles Leeds 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	Hole Type	Level	Logged By	Scale	Page Number
DSRC304	RC	148.62m AoD	ES & DJW	1:33	Sheet 2 of 2

Well	Water	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
								6.90	141.72		Weak light grey distinctly weathered MUDSTONE. Heavily fractured with clay infill.
								7.10	141.52		Black COAL.
		6.70 - 8.20		91	73	73					Weak light grey destructured MUDSTONE. Recovered as gravelly clay.
		7.70 - 7.76	C					7.60	141.02		Black partially weathered COAL.
		8.06 - 8.08	C					7.90	140.72		Weak thinly laminated light grey MUDSTONE.
		8.20 - 9.70		98	45	31					Between 9.05m and 9.08m bgl, recovered as gravel.
		9.37 - 9.40	C								
		9.43 - 9.45	C								
		10.30 - 10.43	C								
		9.70 - 11.20		72	34	29					Between 10.53m and 10.60m bgl, black gravel of coal.
								11.66	136.96		Black COAL.
		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

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.

JPG	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	Hole Type	Level	Logged By	Scale	Page Number
DSRC305	RC	145.37m AoD	ES & DJW	1:33	Sheet 1 of 2

Well	Water	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
								0.20	145.17		MADE GROUND: Dark brown slightly sandy slightly gravelly CLAY wth rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)
							(18)				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.
											At 1.00m bgl: Becoming stiff
								1.90	143.47		Weak dark orangish brown destructured MUDSTONE with ironstone staining. Recovered as fine to coarse, subrounded to angular clayey gravel.
		2.00 - 3.50		100	0	0	50 (14,11/ 50 for 135mm)				
		3.26 - 3.32	2 5 10								
		3.62 - 3.82	C								
		3.50 - 5.00		100	63	63		4.16	141.21		Black COAL with rare specks of pyrite.
								4.48	140.89		Weak thinly to very thinly laminated dark grey MUDSTONE. Highly fractured with clay infill.
		5.00 - 6.50		100	75	46					Between 5.80m and 5.90m bgl, recovered as slightly clayey gravel.

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.

AGS

JPG 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	Hole Type	Level	Logged By	Scale	Page Number
DSRC305	RC	145.37m AoD	ES & DJW	1:33	Sheet 2 of 2

Well	Water	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
								6.70	138.67		Weak thinly to very thinly laminated dark grey MUDSTONE. Highly fractured with clay infill.
											Black locally dark grey COAL.
								7.14	138.23		Weak thinly laminated dark grey MUDSTONE with rare coal laminations.
		6.50 - 8.00		100	49	49					
		7.75	C								
								8.00	137.37		End of Borehole at 8.00m

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.

AGS

JPG 5 John Charles Leeds LS12 6QA	**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	Hole Type	Level	Logged By	Scale	Page Number
DSRC306	RC	150.35m AoD	ES & DJW	1:33	Sheet 1 of 2

Well	Water	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
								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)
		0.50 - 1.00	UT				100%				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.
								1.70	148.65		Dense black destructed COAL. Recovered as slightly clayey fine to coarse, subangular to angular gravel.
		2.40	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.
		1.80 - 3.30		87	17	9					
								2.80	147.55		Black, locally dark grey COAL.
								3.60	146.75		Weak thinly laminated light greyish brown and orangish brown distinctly weathered MUDSTONE with iron staining.
		3.30 - 4.80		77	34	26					
		4.35	C								
											Between 5.10m and 5.20m bgl, recovered as gravelly clay.
		4.80 - 6.30		100	22	8					
		5.95	C								
								6.30	144.05		Black distinctly weathered COAL. Recovered as fine to coarse,
								6.50	143.85		

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.

AGS

JPG 5 John Charles Leeds LS12 6QA	**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	Hole Type	Level	Logged By	Scale	Page Number
DSRC306	RC	150.35m AoD	ES & DJW	1:33	Sheet 2 of 2

Well	Water	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
		6.30 - 7.80		97	0	0					Black distinctly weathered COAL. Recovered as fine to coarse, subangular to angular gravel.
		7.50	C					7.80	142.55		Weak thinly laminated light greyish brown and orangish brown distinctly weathered MUDSTONE with iron staining.
											End of Borehole at 7.80m

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.

AGS

JPG 5 John Charles Leeds LS12 6QA	**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	Hole Type	Level	Logged By	Scale	Page Number
DSRC307	RC	156.06m AoD	ES & DJW	1:33	Sheet 1 of 2

Well	Water	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
								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)
							(44)				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	154.46		Medium strong thinly bedded yellowish brown fine grained SANDSTONE.
		1.60 - 3.10 2.50 - 2.62	1 4 12	90	60	8					
		~~3.10 - 3.25~~	C				50 (25 for 110mm /50 for 115mm)	3.00 3.10	153.06 152.96		Black and dark grey destructed COAL. Recovered as slightly sandy fine to coarse gravel.
		3.10 - 4.10		84	24	0					Weak thinly laminated light grey MUDSTONE. Highly fractured with clay infill.
											Between 3.10m and 3.25m bgl, recovered as gravelly clay.
											Between 4.10m and 4.35m bgl, recovered as clayey gravel.
		4.10 - 5.60		100	43	0					
											Between 5.60m and 5.84m bgl, recovered as clayey gravel.
		5.60 - 6.10	C	100	27	0					
											Between 6.27m and 6.57m, subvertical fracture 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 (%)
								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.

AGS

JPG	5 John Charles Leeds LS12 6QA	**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	Hole Type	Level	Logged By	Scale	Page Number
DSRC307	RC	156.06m AoD	ES & DJW	1:33	Sheet 2 of 2

Well	Water	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
											Weak thinly laminated light grey MUDSTONE. Highly fractured with clay infill.
		7.10 - 8.10		100	0	0					
								8.10	147.96		End of Borehole at 8.10m

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.

AGS

JPG	5 John Charles Leeds 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	Hole Type	Level	Logged By	Scale	Page Number
DSRC308	RC	161.24m AoD	ES & DJW	1:33	Sheet 1 of 2

Well	Water	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
								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)
							(20)				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.
											At 1.00m bgl: Becoming stiff
		1.90 - 2.40	UT								
							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.
		2.80 - 4.30		90	43	9		3.66	157.57		Extremely weak dark greyish brown and orangish brown destructed MUDSTONE. Recovered as gravelly clay.
		3.90	C					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.
								4.70	156.54		Very weak thickly laminated light grey and orangish brown MUDSTONE. Highly fractured with clay infill and rare coal fragments.
		4.30 - 5.80		94	27	19		4.85	156.38		Black distinctly weathered COAL. Recovered as gravel.
								5.05	156.18		Very weak thinly laminated light greyish MUDSTONE. Frequently fractured with clay infill, high cobble content of ironstone nodules.
		5.55	C								
		5.80 - 7.30		100	38	29					
		6.30	C								At 6.30m bgl: Becoming weak

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.

AGS

JPG	5 John Charles Leeds 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	Hole Type	Level	Logged By	Scale	Page Number
DSRC308	RC	161.24m AoD	ES & DJW	1:33	Sheet 2 of 2

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

7 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 (%)
								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.

AGS

JPG 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	Hole Type	Level	Logged By	Scale	Page Number
DSRC309	RC	161.62m AoD	ES & DJW	1:33	Sheet 1 of 2

Well	Water	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
								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.
		2.20 - 3.70 3.15 - 3.25	C	100	18	0		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.
		3.70 - 5.20		87	16	8	60 (25 for 80mm/ 60 for 100mm)				Between 4.70m and 4.80m bgl, recovered as clayey gravel.
		5.70 5.20 - 6.70	C	96	17	17	50 (25 for 75mm/ 50 for 75mm)				Between 5.20m and 5.40m bgl, recovered as clayey gravel. At 5.70m bgl: Becoming weak At 5.80m bgl, ironstone boulder encountered.
		6.50 - 6.54									

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.

AGS

JPG	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	Hole Type	Level	Logged By	Scale	Page Number
DSRC309	RC	161.62m AoD	ES & DJW	1:33	Sheet 2 of 2

Well	Water	Depth (m)	Type /Fl	Coring TCR	Coring SCR	Coring RQD	Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
							50 (25 for 75mm/ 50 for 75mm)				Extremely weak thinly laminated light greyish brown distinctly weathered MUDSTONE. Frequently fractured with clay infill, high cobble content of ironstone nodules.
								7.20	154.42		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	C								At 8.00m bgl: Very weak
								8.20	153.42		End of Borehole at 8.20m

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.

AGS

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	Hole Type	Level	Logged By	Scale	Page Number
DSRO301	RO	147.54m AoD	ES & DJW	1:55	Sheet 1 of 2

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

AGS

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	Hole Type	Level	Logged By	Scale	Page Number
DSRO301	RO	147.54m AoD	ES & DJW	1:55	Sheet 2 of 2

Well	Water Strikes	In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				Dark grey MUDSTONE
					20.00	127.54		End of Borehole at 20.00m

12 13 14 15 16 17 18 19 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.

AGS

JPG
5 John Charles Way
Leeds
LS12 6QA

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	Hole Type	Level	Logged By	Scale	Page Number
DSRO302	RO	153.20m AoD	ES & DJW	1:55	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 wth 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.
					1.20	152.00		Black COAL
								Grey MUDSTONE.
					1.80	151.40		Black COAL
					2.00	151.20		Grey MUDSTONE.
					9.00	144.20		Black COAL
					10.80	142.40		Grey MUDSTONE.

1 2 3 4 5 6 7 8 9 10 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.

AGS

JPG
5 John Charles Way
Leeds
LS12 6QA

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	Hole Type	Level	Logged By	Scale	Page Number
DSRO302	RO	153.20m AoD	ES & DJW	1:55	Sheet 2 of 2

Well	Water Strikes	In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				Grey MUDSTONE.
					20.00	133.20		End of Borehole at 20.00m

12 13 14 15 16 17 18 19 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.

AGS

JPG
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	Hole Type	Level	Logged By	Scale	Page Number
DSRO303	RO	155.79m AoD	ES & DJW	1:55	Sheet 1 of 2

Well	Water Strikes	In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.30	155.49		MADE GROUND: Dark brown slightly sandy slightly gravelly CLAY wth rootlets. Gravel is fine to coarse, subangular to angular of mudstone. (TOPSOIL)
		1.20	SPT	N=16 (3,3/4,4,4,4)				Stiff dark greyish brown slightly sandy gravelly CLAY. Gravel is fine to coarse, subangular to angular of mudstone.
					1.80	153.99		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.

AGS

JPG
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	Hole Type	Level	Logged By	Scale	Page Number
DSRO303	RO	155.79m AoD	ES & DJW	1:55	Sheet 2 of 2

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

12 13 14 15 16 17 18 19 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.

AGS

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

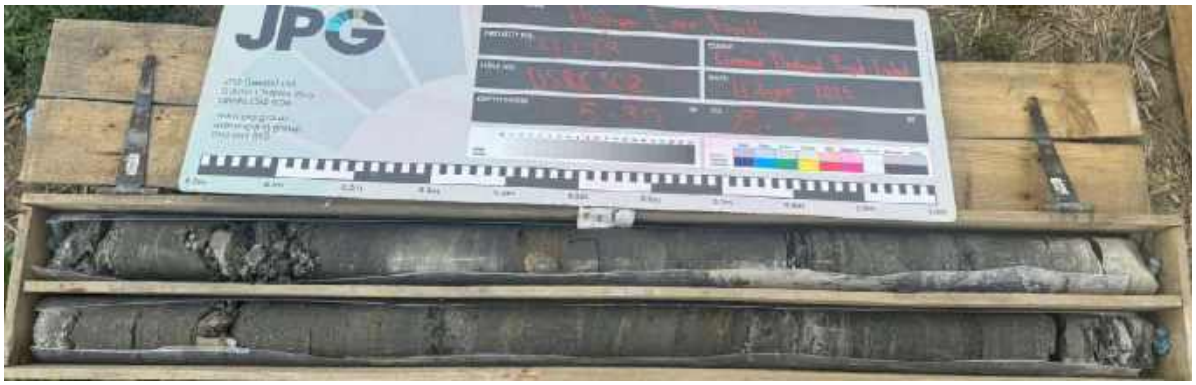
11.00m – 12.00m bgl

ROCK CORE PHOTOGRAPHIC RECORD

Project: 4173 Higham Lane		**DSRC302**
Location: Higham Lane, Dodworth, Barnsley		
Client: Commercial Development Projects Limited	Date: 11 August 2025	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		**DSRC303**
Location: Higham Lane, Dodworth, Barnsley		
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

ROCK CORE PHOTOGRAPHIC RECORD

Project: 4173 Higham Lane		**DSRC307**
Location: Higham Lane, Dodworth, Barnsley		
Client: Commercial Development Projects Limited	Date: 8 August 2025	Sheet: 1 of 1

1.10m – 4.10m bgl

4.10m – 7.10m bgl

7.10m – 8.10m bgl

ROCK CORE PHOTOGRAPHIC RECORD

Project: 4173 Higham Lane		**DSRC308**
Location: Higham Lane, Dodworth, Barnsley		
Client: Commercial Development Projects Limited	Date: 30 July 2025	Sheet: 1 of 1

2.80m – 4.30m bgl

4.30m – 5.80m bgl

5.80m – 7.30m bgl

7.30m – 8.80m bgl

ROCK CORE PHOTOGRAPHIC RECORD

Project: 4173 Higham Lane		**DSRC309**
Location: Higham Lane, Dodworth, Barnsley		
Client: Commercial Development Projects Limited	Date: 29 July 2025	Sheet: 1 of 1

2.20m – 3.70m bgl

3.70m – 5.20m bgl

5.20m – 6.70m bgl

5.20m – 6.70m bgl

Appendix C Chemical Analysis Certificates

STATISTICAL ASSESSMENT OF CHEMICAL ANALYSIS

The results of the chemical analysis have been assessed in accordance with CL:AIRE (Contaminated Land: Applications in Real Environments) 'Guidance on Comparing Soil Contamination Data with a Critical Concentration' published by the CIEH, May 2008.

This guidance provides a statistical approach to objectively evaluate the evidence for and against particular propositions/hypothesis and has the useful attribute of enabling decision makers to reach conclusions about the available evidence, with at least some understanding of the validity of the results.

The guidance approaches this in the context of assessing the results from two different perspectives, the Planning Scenario and Part 2A.

When assessing in terms of the Planning Scenario, the key question would be 'can we confidently say that the level of contamination on this land is low relative to some appropriate measure of risk?' Under Part 2A, the question would be 'can we confidently say that the level of contamination is high relative to some appropriate measure of risk?'

These questions are addressed through the use of formal hypothesis – the "Null Hypothesis" and the "Alternative Hypothesis".

This assessment will be carried out in accordance with the Planning Scenario, where the aim is to demonstrate 'suitability for use'. The Null Hypothesis is that the level of contamination is the same as, or higher than the critical concentration/GAC. The Alternative Hypothesis is that the level of contamination is lower than the critical concentration/GAC. Under Part 2A the opposite set of propositions are applicable.

By convention, the Null Hypothesis is the starting proposition against which the key question, as expressed by the Alternative Hypothesis, can be tested.

The assessment of the results relies on there being a normal distribution of results for a particular contaminant and that the data set under consideration is representative of the particular material which is being assessed. If more than one dataset is present, then the hypothesis should be applied individually for each data set.

Under the Planning Scenario, the statistical test is used to demonstrate that there is a 95% probability that the true population mean falls below the critical concentration/GAC.

Appropriate data sets must be created to enable the statistical testing to be carried out, and three key elements must be considered prior to statistical analysis. These are as follows:

- Dealing with non-detects.
- Understanding the statistical distribution of data; and
- Dealing with outliers.

The results can then be assessed, and the results will be compared against the following:

- Sample Mean – if the sample mean of the data set is in excess of the GAC, then the Upper Confidence Limit of the true population mean will be higher than the critical concentration.
- 95% of the Upper Confidence Limit.
- One Sample T Test (parametric test) carried out at the 95% confidence level.

On the basis of these tests, the validity of the Null Hypothesis can be assessed.

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Analytical Report Number : 25-042929

Project / Site name:	Higham Lane North	**Samples received on:**	11/08/2025
Your job number:	4173	**Samples instructed on/ Analysis started on:**	13/08/2025
Your order number:	4173	**Analysis completed by:**	22/08/2025
Report Issue Number:	1	**Report issued on:**	22/08/2025
Samples Analysed:	10 soil samples - 4 leachate samples		

Signed:

Rafał Szczepańczyk
Technical Reviewer
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41-711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting
air	- once the analysis is complete

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Retention period for records and reports is minimum 6 years from the date of issue of the final report.
Some records may be kept for longer according to other legal/best practice requirements.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 25-042929
Project / Site name: Higham Lane North
Your Order No: 4173

Lab Sample Number				645904	645905	645906	645907	645908
Sample Reference				TP301	TP302	TP303	TP307	TP310
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				0.40	0.20	0.20	0.20	0.10
Date Sampled				06/08/2025	06/08/2025	07/08/2025	06/08/2025	05/08/2025
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Test Limit of detection**	**Test Accreditation Status**					
Stone Content	%	0.1	NONE	12.9	< 0.1	< 0.1	11.9	5.6
Moisture Content	%	0.01	NONE	16	18	15	14	13
Total mass of sample received	kg	0.1	NONE	0.5	0.6	1.4	1.5	1.4
Asbestos								
Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	KKR	KKR	KKR	KKR	KKR
Analysis completed	N/A	N/A	N/A	22/08/2025	22/08/2025	22/08/2025	22/08/2025	22/08/2025
General Inorganics								
pH (L099)	pH Units	N/A	MCERTS	7.2	7.4	7.3	7.7	7.1
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO_4	mg/kg	50	MCERTS	400	-	670	-	600
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	83	33	59	54	38
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	41.7	16.7	29.5	26.8	19.1
Sulphide	mg/kg	1	MCERTS	1	-	1.4	-	< 1.0
Total Chloride	mg/kg	5	NONE	28	-	21	-	7
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5	-	< 0.5	-	< 0.5
Organic Matter (automated)	%	0.1	MCERTS	3.4	4.7	4.4	4	3.9
Calorific Value	MJ/Kg	0.12	ISO 17025	< 0.120	-	< 0.120	-	< 0.120
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	0.2	0.07	< 0.05	0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	0.06	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	0.63	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	0.77	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	8.8	0.25	0.11	0.17	0.13
Anthracene	mg/kg	0.05	MCERTS	2.6	0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	13	0.5	0.24	0.31	0.28
Pyrene	mg/kg	0.05	MCERTS	11	0.42	0.2	0.27	0.25
Benzo(a)anthracene	mg/kg	0.05	MCERTS	5.6	0.35	0.15	0.2	0.19
Chrysene	mg/kg	0.05	MCERTS	4.8	0.35	0.15	0.23	0.2
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	5.7	0.52	0.25	0.3	0.29
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	2.3	0.18	0.09	0.11	0.08
Benzo(a)pyrene	mg/kg	0.05	MCERTS	4.7	0.35	0.15	0.2	0.17
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	2.2	0.24	0.09	0.12	0.12
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.59	0.07	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	2.4	0.27	0.11	0.16	0.13
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	65.8	3.64	1.54	2.11	1.83

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Lab Sample Number				645904	645905	645906	645907	645908
Sample Reference				TP301	TP302	TP303	TP307	TP310
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				0.40	0.20	0.20	0.20	0.10
Date Sampled				06/08/2025	06/08/2025	07/08/2025	06/08/2025	05/08/2025
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Test Limit of detection**	**Test Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	13	20	14	20	16
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	U/S *U/S g	< 1.8	U/S *U/S g	U/S *U/S g	U/S *U/S g
Chromium (VI) by IC	mg/kg	1.8	NONE	< 1.80	-	< 1.80	< 1.80	< 1.80
Chromium (III) by IC	mg/kg	1	NONE	37	-	25	24	21
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	37	28	25	24	21
Copper (aqua regia extractable)	mg/kg	1	MCERTS	38	46	30	50	27
Lead (aqua regia extractable)	mg/kg	1	MCERTS	41	54	46	43	39
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	28	18	18	20	17
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	1.7	1.9	1.4	1.7	1.3
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	100	110	97	100	83
Pesticides (GC-MS)								
Alpha-BHC (Benzene Hexachloride)	µg/kg	10	NONE	-	< 10	-	< 10	-
Alachlor	µg/kg	10	NONE	-	< 10	-	< 10	-
Gamma-BHC (Lindane, gamma HCH)	µg/kg	10	NONE	-	< 10	-	< 10	-
Omethoate	µg/kg	10	NONE	-	< 10	-	< 10	-
1,2,3-Trichlorobenzene	µg/kg	10	NONE	-	< 10	-	< 10	-
1,3,5-Trichlorobenzene	µg/kg	10	NONE	-	< 10	-	< 10	-
2,6-Dichlorobenzonitrile	µg/kg	10	NONE	-	< 10	-	< 10	-
Dimethylvinphos	µg/kg	10	NONE	-	< 10	-	< 10	-
Demeton-O	µg/kg	10	NONE	-	< 10	-	< 10	-
Demeton-S	µg/kg	10	NONE	-	< 10	-	< 10	-
Endrin Aldehyde	µg/kg	10	NONE	-	< 10	-	< 10	-
Endrin Ketone	µg/kg	10	NONE	-	< 10	-	< 10	-
Hexachlorobutadiene	µg/kg	10	NONE	-	< 10	-	< 10	-
Phosphamidon (Sum)	µg/kg	10	NONE	-	< 10	-	< 10	-
1,2,4,5-Tetrachlorobenzene	µg/kg	10	NONE	-	< 10	-	< 10	-
Endosulfan sulfate	µg/kg	10	NONE	-	< 10	-	< 10	-
Etrimfos	µg/kg	10	NONE	-	< 10	-	< 10	-
Fenvalerate (Sum)	µg/kg	10	NONE	-	< 10	-	< 10	-
Hexachlorobenzene	µg/kg	10	NONE	-	< 10	-	< 10	-
Mevinphos, E+Z	µg/kg	10	NONE	-	< 10	-	< 10	-
Pentachlorobenzene	µg/kg	10	NONE	-	< 10	-	< 10	-
Pirimiphos-ethyl	µg/kg	10	NONE	-	< 10	-	< 10	-
Propetamphos	µg/kg	10	NONE	-	< 10	-	< 10	-
Tecnazene	µg/kg	10	NONE	-	< 10	-	< 10	-
Aldrin	µg/kg	10	NONE	-	< 10	-	< 10	-
Azinphos-methyl	µg/kg	10	NONE	-	< 10	-	< 10	-
Beta-BHC	µg/kg	10	NONE	-	< 10	-	< 10	-
Cis-Chlordane	µg/kg	10	NONE	-	< 10	-	< 10	-
Chlorfenvinphos	µg/kg	10	NONE	-	< 10	-	< 10	-
Chlorpyrifos	µg/kg	10	NONE	-	< 10	-	< 10	-
Chlorothalonil	µg/kg	10	NONE	-	< 10	-	< 10	-
Carbophenothion	µg/kg	10	NONE	-	< 10	-	< 10	-
Delta-BHC	µg/kg	10	NONE	-	< 10	-	< 10	-

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Sample Reference				TP301	TP302	TP303	TP307	TP310
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				0.40	0.20	0.20	0.20	0.10
Date Sampled				06/08/2025	06/08/2025	07/08/2025	06/08/2025	05/08/2025
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Test Limit of detection**	**Test Accreditation Status**					
Dieldrin	µg/kg	10	NONE	-	< 10	-	< 10	-
Heptachlor Exo-epoxide	µg/kg	10	NONE	-	< 10	-	< 10	-
Endrin	µg/kg	10	NONE	-	< 10	-	< 10	-
Endosulfan I (alpha isomer)	µg/kg	10	NONE	-	< 10	-	< 10	-
Endosulfan II (beta isomer)	µg/kg	10	NONE	-	< 10	-	< 10	-
Fenthion	µg/kg	10	NONE	-	< 10	-	< 10	-
Isodrin	µg/kg	10	NONE	-	< 10	-	< 10	-
Methacrifos	µg/kg	10	NONE	-	< 10	-	< 10	-
O,p'-DDD	µg/kg	10	NONE	-	< 10	-	< 10	-
O,p'-DDE	µg/kg	10	NONE	-	< 10	-	< 10	-
O,p'-DDT	µg/kg	10	NONE	-	< 10	-	< 10	-
Parathion	µg/kg	10	NONE	-	< 10	-	< 10	-
Parathion-methyl	µg/kg	10	NONE	-	< 10	-	< 10	-
Phorate	µg/kg	10	NONE	-	< 10	-	< 10	-
Phosalone	µg/kg	10	NONE	-	< 10	-	< 10	-
P,p'-DDD	µg/kg	10	NONE	-	< 10	-	< 10	-
P,p'-DDE	µg/kg	10	NONE	-	< 10	-	< 10	-
P,p'-DDT	µg/kg	10	NONE	-	< 10	-	< 10	-
P,p'-Methoxychlor	µg/kg	10	NONE	-	< 10	-	< 10	-
Triazophos	µg/kg	10	NONE	-	< 10	-	< 10	-
Trans-Chlordane	µg/kg	10	NONE	-	< 10	-	< 10	-
Dichlorvos	µg/kg	10	NONE	-	< 10	-	< 10	-
Dimethoate	µg/kg	10	NONE	-	< 10	-	< 10	-
Diazinon	µg/kg	10	NONE	-	< 10	-	< 10	-
Ethion	µg/kg	10	NONE	-	< 10	-	< 10	-
Fenitrothion	µg/kg	10	NONE	-	< 10	-	< 10	-
Malathion	µg/kg	10	NONE	-	< 10	-	< 10	-
Pirimiphos-methyl	µg/kg	10	NONE	-	< 10	-	< 10	-
Trifluralin	µg/kg	10	NONE	-	< 10	-	< 10	-
Azinphos-ethyl	µg/kg	10	NONE	-	< 10	-	< 10	-
Pesticides (LC-MS)								
Terbutryn	µg/kg	10	NONE	-	< 10	-	< 10	-
Prometryn	µg/kg	10	NONE	-	< 10	-	< 10	-
Propazine	µg/kg	10	NONE	-	< 10	-	< 10	-
Trietazine	µg/kg	10	NONE	-	< 10	-	< 10	-
Atrazine	µg/kg	10	NONE	-	< 10	-	< 10	-
Cyanazine	µg/kg	10	NONE	-	< 10	-	< 10	-
Simazine	µg/kg	10	NONE	-	< 10	-	< 10	-
Terbuthylazine	µg/kg	10	NONE	-	< 10	-	< 10	-

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number: 25-042929
Project / Site name: Higham Lane North
Your Order No: 4173

Lab Sample Number				645909	645910	645911	645912	645913
Sample Reference				TP313	TP314	TP315	TP320	TP326
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				0.20	0.20	0.50	0.20	0.10
Date Sampled				05/08/2025	05/08/2025	05/08/2025	04/08/2025	04/08/2025
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Test Limit of detection**	**Test Accreditation Status**					
Stone Content	%	0.1	NONE	26.4	< 0.1	31.3	23.6	4.8
Moisture Content	%	0.01	NONE	13	17	9.2	12	16
Total mass of sample received	kg	0.1	NONE	1.5	1.4	1.8	1.2	1.2
Asbestos								
Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	KKR	KKR	KKR	KKR	KKR
Analysis completed	N/A	N/A	N/A	22/08/2025	22/08/2025	22/08/2025	22/08/2025	22/08/2025
General Inorganics								
pH (L099)	pH Units	N/A	MCERTS	7.8	7.2	7.4	7.1	7.6
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO_4	mg/kg	50	MCERTS	-	-	520	-	700
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	30	40	20	26	36
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	14.9	20.1	9.88	13.2	18
Sulphide	mg/kg	1	MCERTS	-	-	< 1.0	-	< 1.0
Total Chloride	mg/kg	5	NONE	-	-	35	-	28
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	-	-	< 0.5	-	< 0.5
Organic Matter (automated)	%	0.1	MCERTS	4.4	4.6	6.7	4.4	5.4
Calorific Value	MJ/Kg	0.12	ISO 17025	-	-	< 0.120	-	< 0.120
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	0.4	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	0.07	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	0.06	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	0.1	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	1	0.18	0.19	0.19	0.42
Anthracene	mg/kg	0.05	MCERTS	0.26	< 0.05	< 0.05	< 0.05	0.09
Fluoranthene	mg/kg	0.05	MCERTS	1.5	0.46	0.14	0.55	0.77
Pyrene	mg/kg	0.05	MCERTS	1.2	0.45	0.11	0.54	0.69
Benzo(a)anthracene	mg/kg	0.05	MCERTS	1.1	0.26	0.08	0.33	0.41
Chrysene	mg/kg	0.05	MCERTS	1.1	0.33	0.1	0.37	0.48
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	1.5	0.46	0.11	0.46	0.6
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.44	0.14	< 0.05	0.21	0.21
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.94	0.29	0.06	0.36	0.43
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.59	0.21	< 0.05	0.25	0.27
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.18	0.06	< 0.05	0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.62	0.24	0.06	0.28	0.3
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	11.1	3.07	0.84	3.59	4.68

Analytical Report Number: 25-042929
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Lab Sample Number				645909	645910	645911	645912	645913
Sample Reference				TP313	TP314	TP315	TP320	TP326
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				0.20	0.20	0.50	0.20	0.10
Date Sampled				05/08/2025	05/08/2025	05/08/2025	04/08/2025	04/08/2025
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Test Limit of detection**	**Test Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	19	18	13	16	21
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	U/S *U/S g	U/S *U/S g	U/S *U/S g	U/S *U/S g	U/S *U/S g
Chromium (VI) by IC	mg/kg	1.8	NONE	< 1.80	< 1.80	< 1.80	< 1.80	< 1.80
Chromium (III) by IC	mg/kg	1	NONE	19	24	17	18	26
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	19	24	17	18	26
Copper (aqua regia extractable)	mg/kg	1	MCERTS	32	28	24	32	39
Lead (aqua regia extractable)	mg/kg	1	MCERTS	53	41	25	41	49
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	17	18	20	17	22
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	1.6	1.1	1.3	1.9	1.2
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	110	93	59	86	110
Pesticides (GC-MS)								
Alpha-BHC (Benzene Hexachloride)	µg/kg	10	NONE	-	< 10	-	-	< 10
Alachlor	µg/kg	10	NONE	-	< 10	-	-	< 10
Gamma-BHC (Lindane, gamma HCH)	µg/kg	10	NONE	-	< 10	-	-	< 10
Omethoate	µg/kg	10	NONE	-	< 10	-	-	< 10
1,2,3-Trichlorobenzene	µg/kg	10	NONE	-	< 10	-	-	< 10
1,3,5-Trichlorobenzene	µg/kg	10	NONE	-	< 10	-	-	< 10
2,6-Dichlorobenzonitrile	µg/kg	10	NONE	-	< 10	-	-	< 10
Dimethylvinphos	µg/kg	10	NONE	-	< 10	-	-	< 10
Demeton-O	µg/kg	10	NONE	-	< 10	-	-	< 10
Demeton-S	µg/kg	10	NONE	-	< 10	-	-	< 10
Endrin Aldehyde	µg/kg	10	NONE	-	< 10	-	-	< 10
Endrin Ketone	µg/kg	10	NONE	-	< 10	-	-	< 10
Hexachlorobutadiene	µg/kg	10	NONE	-	< 10	-	-	< 10
Phosphamidon (Sum)	µg/kg	10	NONE	-	< 10	-	-	< 10
1,2,4,5-Tetrachlorobenzene	µg/kg	10	NONE	-	< 10	-	-	< 10
Endosulfan sulfate	µg/kg	10	NONE	-	< 10	-	-	< 10
Etrimfos	µg/kg	10	NONE	-	< 10	-	-	< 10
Fenvalerate (Sum)	µg/kg	10	NONE	-	< 10	-	-	< 10
Hexachlorobenzene	µg/kg	10	NONE	-	< 10	-	-	< 10
Mevinphos, E+Z	µg/kg	10	NONE	-	< 10	-	-	< 10
Pentachlorobenzene	µg/kg	10	NONE	-	< 10	-	-	< 10
Pirimiphos-ethyl	µg/kg	10	NONE	-	< 10	-	-	< 10
Propetamphos	µg/kg	10	NONE	-	< 10	-	-	< 10
Tecnazene	µg/kg	10	NONE	-	< 10	-	-	< 10
Aldrin	µg/kg	10	NONE	-	< 10	-	-	< 10
Azinphos-methyl	µg/kg	10	NONE	-	< 10	-	-	< 10
Beta-BHC	µg/kg	10	NONE	-	< 10	-	-	< 10
Cis-Chlordane	µg/kg	10	NONE	-	< 10	-	-	< 10
Chlorfenvinphos	µg/kg	10	NONE	-	< 10	-	-	< 10
Chlorpyrifos	µg/kg	10	NONE	-	< 10	-	-	< 10
Chlorothalonil	µg/kg	10	NONE	-	< 10	-	-	< 10
Carbophenothion	µg/kg	10	NONE	-	< 10	-	-	< 10
Delta-BHC	µg/kg	10	NONE	-	< 10	-	-	< 10

Analytical Report Number: 25-042929
Project / Site name: Higham Lane North
Your Order No: 4173

Lab Sample Number				645909	645910	645911	645912	645913
Sample Reference				TP313	TP314	TP315	TP320	TP326
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				0.20	0.20	0.50	0.20	0.10
Date Sampled				05/08/2025	05/08/2025	05/08/2025	04/08/2025	04/08/2025
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Test Limit of detection**	**Test Accreditation Status**					
Dieldrin	µg/kg	10	NONE	-	< 10	-	-	< 10
Heptachlor Exo-epoxide	µg/kg	10	NONE	-	< 10	-	-	< 10
Endrin	µg/kg	10	NONE	-	< 10	-	-	< 10
Endosulfan I (alpha isomer)	µg/kg	10	NONE	-	< 10	-	-	< 10
Endosulfan II (beta isomer)	µg/kg	10	NONE	-	< 10	-	-	< 10
Fenthion	µg/kg	10	NONE	-	< 10	-	-	< 10
Isodrin	µg/kg	10	NONE	-	< 10	-	-	< 10
Methacrifos	µg/kg	10	NONE	-	< 10	-	-	< 10
O,p'-DDD	µg/kg	10	NONE	-	< 10	-	-	< 10
O,p'-DDE	µg/kg	10	NONE	-	< 10	-	-	< 10
O,p'-DDT	µg/kg	10	NONE	-	< 10	-	-	< 10
Parathion	µg/kg	10	NONE	-	< 10	-	-	< 10
Parathion-methyl	µg/kg	10	NONE	-	< 10	-	-	< 10
Phorate	µg/kg	10	NONE	-	< 10	-	-	< 10
Phosalone	µg/kg	10	NONE	-	< 10	-	-	< 10
P,p'-DDD	µg/kg	10	NONE	-	< 10	-	-	< 10
P,p'-DDE	µg/kg	10	NONE	-	< 10	-	-	< 10
P,p'-DDT	µg/kg	10	NONE	-	< 10	-	-	< 10
P,p'-Methoxychlor	µg/kg	10	NONE	-	< 10	-	-	< 10
Triazophos	µg/kg	10	NONE	-	< 10	-	-	< 10
Trans-Chlordane	µg/kg	10	NONE	-	< 10	-	-	< 10
Dichlorvos	µg/kg	10	NONE	-	< 10	-	-	< 10
Dimethoate	µg/kg	10	NONE	-	< 10	-	-	< 10
Diazinon	µg/kg	10	NONE	-	< 10	-	-	< 10
Ethion	µg/kg	10	NONE	-	< 10	-	-	< 10
Fenitrothion	µg/kg	10	NONE	-	< 10	-	-	< 10
Malathion	µg/kg	10	NONE	-	< 10	-	-	< 10
Pirimiphos-methyl	µg/kg	10	NONE	-	< 10	-	-	< 10
Trifluralin	µg/kg	10	NONE	-	< 10	-	-	< 10
Azinphos-ethyl	µg/kg	10	NONE	-	< 10	-	-	< 10
Pesticides (LC-MS)								
Terbutryn	µg/kg	10	NONE	-	< 10	-	-	< 10
Prometryn	µg/kg	10	NONE	-	< 10	-	-	< 10
Propazine	µg/kg	10	NONE	-	< 10	-	-	< 10
Trietazine	µg/kg	10	NONE	-	< 10	-	-	< 10
Atrazine	µg/kg	10	NONE	-	< 10	-	-	< 10
Cyanazine	µg/kg	10	NONE	-	< 10	-	-	< 10
Simazine	µg/kg	10	NONE	-	< 10	-	-	< 10
Terbuthylazine	µg/kg	10	NONE	-	< 10	-	-	< 10

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number: 25-042929
Project / Site name: Higham Lane North

Your Order No: 4173

Lab Sample Number				645904	645906	645908	645911
Sample Reference				TP301	TP303	TP310	TP315
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A
Depth (m)				0.40	0.20	0.10	0.50
Date Sampled				06/08/2025	07/08/2025	05/08/2025	05/08/2025
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	**Units**	**Test Limit of detection**	**Test Accreditation Status**				
General Inorganics							
pH (automated)	pH Units	N/A	ISO 17025	7.7	6.7	6.9	6.6
Free Cyanide (Low Level 1 µg/l)	µg/l	1	NONE	< 1	< 1	< 1	< 1
Sulphate as SO_4	mg/l	0.045	ISO 17025	4.75	2.17	2.11	1.16
Total Phenols							
Total Phenols (monohydric) low level	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs							
Naphthalene	µg/l	0.01	NONE	< 0.01	1	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	NONE	0.04	< 0.01	0.14	< 0.01
Fluorene	µg/l	0.01	NONE	0.03	< 0.01	0.06	< 0.01
Phenanthrene	µg/l	0.01	NONE	0.05	< 0.01	0.15	< 0.01
Anthracene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH							
Total EPA-16 PAHs	µg/l	0.16	NONE	< 0.16	1.04	0.35	< 0.16
Heavy Metals / Metalloids							
Arsenic (dissolved)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	2.4
Cadmium (dissolved)	µg/l	0.08	ISO 17025	< 0.08	< 0.08	< 0.08	< 0.08
Chromium (dissolved)	µg/l	0.4	ISO 17025	3	1.8	4.3	1.3
Copper (dissolved)	µg/l	0.7	ISO 17025	15	30	29	25
Lead (dissolved)	µg/l	1	ISO 17025	1	1.6	2	< 1.0
Mercury (dissolved)	µg/l	0.5	ISO 17025	< 0.5	< 0.5	< 0.5	< 0.5
Nickel (dissolved)	µg/l	0.3	ISO 17025	1.9	1.7	1.8	1.1
Selenium (dissolved)	µg/l	4	ISO 17025	< 4.0	< 4.0	< 4.0	< 4.0
Zinc (dissolved)	µg/l	0.4	ISO 17025	10	7.1	26	5.2

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number : 25-042929
Project / Site name: Higham Lane North

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
645904	TP301	None Supplied	0.4	Brown loam and sand with gravel and vegetation
645905	TP302	None Supplied	0.2	Brown loam and clay with gravel and vegetation
645906	TP303	None Supplied	0.2	Brown loam and clay with gravel and vegetation
645907	TP307	None Supplied	0.2	Brown loam and clay with gravel and vegetation
645908	TP310	None Supplied	0.1	Brown loam and clay with gravel and vegetation
645909	TP313	None Supplied	0.2	Brown loam and sand with gravel and vegetation
645910	TP314	None Supplied	0.2	Brown loam and clay with gravel and vegetation
645911	TP315	None Supplied	0.5	Brown loam and clay with gravel and vegetation
645912	TP320	None Supplied	0.2	Brown loam and clay with gravel and vegetation
645913	TP326	None Supplied	0.1	Brown clay and loam with gravel and vegetation

Analytical Report Number : 25-042929
Project / Site name: Higham Lane North

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)
Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in Soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques	In-house method based on HSG 248, 2021	A001B	D	ISO 17025
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate (Walkley Black Method)	In-house method	L009B	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode	In-house method	L010-PL	D	MCERTS
Calorific Value of soil	Determination of the calorific value of soil by combustion in a controlled environment	Calorific Value of Soil by Bomb Calorimeter	L013B	D	ISO 17025
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and MCERTS requirements.	L019B	D	NONE
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L038B	D	MCERTS
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES	In-house method	L038B	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Sulphate, water soluble, in soil (16hr extraction)	In-house method	L038B	D	MCERTS
Metals by ICP-OES in leachate	Determination of metals in leachate by acidification followed by ICP-OES	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L039B	W	ISO 17025
Cr(VI) in soils by Ion chromatography	Determination of hexavalent chromium in alkaline soil extract by use of ion chromatography with spectrophotometric detection	In-house method	L130B	W	NONE
Speciated PAHs and/or Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS	In-house method based on USEPA 8270	L064B	D	MCERTS
Chloride in soil	Determination of acid soluble chloride in soil by extraction with nitric acid, addition of silver nitrate followed by titration against thiocyanate	In-house method	L075B	D	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in NaOH and addition of 1,5 diphenylcarbazide followed by colorimetry	In-house method	L080-PL	W	MCERTS
Free cyanide (low level) in leachate	Determination of free cyanide by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS

Analytical Report Number : 25-042929
Project / Site name: Higham Lane North

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)
Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Monohydric phenols (low level) in leachate	Determination of phenols in leachate by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method,10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082B	W	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement	In-house method	L099-PL	D	MCERTS
pH at 20°C in leachate (automated)	Determination of pH in leachate by electrometric measurement	In-house method	L099-PL	W	ISO 17025
Speciated PAHs and/or Semi-volatile organic compounds in leachate	SVOCs and PAHs in leachate	In-house method	L102B		NONE
NRA Leachate 10:1		In-house method based on interim NRA guidance (1994)	L020B	W	NONE
Soil Descriptions	Textural classification	In-house method	L019B	W	NONE
Pesticides by GC-MS/MS	Detemination of Pesticides in soil by GC MS/MS	In-house method	L055B	W	NONE
Pesticides by LC-MS	Detemination of Pesticides in soil by LC-MS	In-house method	L056B	W	NONE

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Quality control parameter failure associated with individual result applies to calculated sum of individuals.
The result for sum should be interpreted with caution

*U/S g- Unsuitable for analysis due to high colour intensity.

Sample Deviation Report

Analytical Report Number : 25-042929
Project / Site name: Higham Lane North

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis.Please note that the associated result(s) may be unreliable and should be interpreted with care.

Key: a - No sampling date b - Incorrect container/Insufficient material provided c - Holding time d - Headspace e - Temperature

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
TP301	N/A	S	645904	bc	Asbestos identification in Soil	A001B	b
TP301	N/A	S	645904	bc	Sulphide in soil	L010-PL	c
TP302	N/A	S	645905	b	Asbestos identification in Soil	A001B	b
TP303	N/A	S	645906	bc	Asbestos identification in Soil	A001B	b
TP303	N/A	S	645906	bc	Sulphide in soil	L010-PL	c
TP307	N/A	S	645907	b	Asbestos identification in Soil	A001B	b
TP310	N/A	S	645908	bc	Asbestos identification in Soil	A001B	b
TP310	N/A	S	645908	bc	Sulphide in soil	L010-PL	c
TP313	N/A	S	645909	b	Asbestos identification in Soil	A001B	b
TP314	N/A	S	645910	b	Asbestos identification in Soil	A001B	b
TP315	N/A	S	645911	bc	Asbestos identification in Soil	A001B	b
TP315	N/A	S	645911	bc	Sulphide in soil	L010-PL	c
TP320	N/A	S	645912	bc	Asbestos identification in Soil	A001B	b
TP320	N/A	S	645912	bc	Free cyanide in soil	L080-PL	c
TP320	N/A	S	645912	bc	Monohydric phenols in soil	L080-PL	c
TP320	N/A	S	645912	bc	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	c
TP326	N/A	S	645913	bc	Asbestos identification in Soil	A001B	b
TP326	N/A	S	645913	bc	Free cyanide in soil	L080-PL	c
TP326	N/A	S	645913	bc	Monohydric phenols in soil	L080-PL	c
TP326	N/A	S	645913	bc	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	c
TP326	N/A	S	645913	bc	Sulphide in soil	L010-PL	c

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Analytical Report Number : 25-044773

Project / Site name:	Higham Lane	**Samples received on:**	21/08/2025
Your job number:	4173	**Samples instructed on/ Analysis started on:**	21/08/2025
Your order number:	4173	**Analysis completed by:**	27/08/2025
Report Issue Number:	1	**Report issued on:**	27/08/2025
Samples Analysed:	3 water samples		

Signed:

Rafał Szczepańczyk
Technical Reviewer
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41-711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting
air	- once the analysis is complete

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Retention period for records and reports is minimum 6 years from the date of issue of the final report.
Some records may be kept for longer according to other legal/best practice requirements.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 25-044773
Project / Site name: Higham Lane

Your Order No: 4173

Lab Sample Number				656077	656078	656079
Sample Reference				DSRC301	DSRC304	RO302 (DSRO302)
Sample Number				None Supplied	None Supplied	None Supplied
Water Matrix				Other water	Other water	Other water
Depth (m)				9.15	6.90	5.60
Date Sampled				20/08/2025	20/08/2025	20/08/2025
Time Taken				1330	1400	1430
Analytical Parameter (Water Analysis)	**Units**	**Test Limit of detection**	**Test Accreditation Status**			
General Inorganics						
pH (L099)	pH Units	N/A	NONE	7	6.4	7
Free Cyanide (Low Level)	µg/l	1	NONE	< 1.0	< 1.0	< 1.0
Sulphate as SO_4	mg/l	0.045	NONE	187	174	78.9
Total Phenols						
Total Phenols (Monohydric) Low Level	µg/l	1	NONE	3.7	< 1.0	< 1.0
Speciated PAHs						
Naphthalene	µg/l	0.01	NONE	5.4	250	< 0.01
Acenaphthylene	µg/l	0.01	NONE	0.07	5	< 0.01
Acenaphthene	µg/l	0.01	NONE	0.08	<2 [&]	< 0.01
Fluorene	µg/l	0.01	NONE	0.41	20	< 0.01
Phenanthrene	µg/l	0.01	NONE	1.4	88	< 0.01
Anthracene	µg/l	0.01	NONE	< 0.01	<2 [&]	< 0.01
Fluoranthene	µg/l	0.01	NONE	0.15	17	< 0.01
Pyrene	µg/l	0.01	NONE	0.21	<2 [&]	< 0.01
Benzo(a)anthracene	µg/l	0.01	NONE	< 0.01	9.6	< 0.01
Chrysene	µg/l	0.01	NONE	< 0.01	16	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	NONE	< 0.01	<2 [&]	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	NONE	< 0.01	<2 [&]	< 0.01
Benzo(a)pyrene	µg/l	0.01	NONE	< 0.01	<2 [&]	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	NONE	< 0.01	<2 [&]	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	NONE	< 0.01	<2 [&]	< 0.01
Benzo(ghi)perylene	µg/l	0.01	NONE	< 0.01	<2 [&]	< 0.01
Total PAH						
Total EPA-16 PAHs	µg/l	0.16	NONE	7.79	406	< 0.16
Heavy Metals / Metalloids						
Arsenic (dissolved)	µg/l	0.15	NONE	3.11	1.08	0.57
Cadmium (dissolved)	µg/l	0.02	NONE	0.11	0.03	3.5
Chromium (dissolved)	µg/l	0.2	NONE	< 0.2	< 0.2	< 0.2
Copper (dissolved)	µg/l	0.5	NONE	18	2.7	1.9
Lead (dissolved)	µg/l	0.2	NONE	1.4	< 0.2	0.3
Mercury (dissolved)	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	NONE	5.6	23	6.3
Selenium (dissolved)	µg/l	0.6	NONE	< 0.6	< 0.6	< 0.6
Zinc (dissolved)	µg/l	0.5	NONE	6.4	9.7	17

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number : 25-044773
Project / Site name: Higham Lane

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)
Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited matrices: SW, PW, GW, except B - SW,GW, Hg - SW,PW, Al - SW,PW	In-house method based on USEPA Method 6020 & 200.8 for the determination of trace elements in water by ICP-MS	L012B	W	NONE
Free cyanide (low level) in water	Determination of free cyanide in water by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	NONE
Monohydric phenols (low level) in water	Determination of phenols in water by continuous flow analyser	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	NONE
pH of water at 20°C (automated)	Determination of pH of water by electrochemical measurement. Accredited matrices: SW, PW, GW, FSE, LL	In-house method	L099-PL	W	NONE
Speciated PAHs and/or Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds (including PAHs) in water by extraction in dichloromethane followed by GC-MS. Accredited matrices (PAHs): SW, PW, GW	In-house method based on USEPA 8270	L102B	W	NONE
Sulphate in water	Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited matrices: SW, PW, GW, PrW, DI PrW, FSE, LL	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L039B	W	NONE

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Quality control parameter failure associated with individual result applies to calculated sum of individuals.
The result for sum should be interpreted with caution

&- Sample required dilution above the concentration range for the procedure due to matrix effect/ analyte concentration. The method limit of detection has been raised in line with the dilution. The result should be considered deviating and should be interpreted with caution. The result is not accredited.

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Analytical Report Number : 25-052560

Project / Site name:	Higham Lane	**Samples received on:**	30/09/2025
Your job number:	4173	**Samples instructed on/ Analysis started on:**	30/09/2025
Your order number:	4173	**Analysis completed by:**	06/10/2025
Report Issue Number:	1	**Report issued on:**	06/10/2025
Samples Analysed:	1 water sample		

Signed:

Anna Goc
PL Head of Reporting Team
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41-711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting
air	- once the analysis is complete

Excel copies of reports are only valid when accompanied by this PDF certificate.

Retention period for records and reports is minimum 6 years from the date of issue of the final report.
Some records may be kept for longer according to other legal/best practice requirements.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 25-052560
Project / Site name: Higham Lane

Your Order No: 4173

Lab Sample Number				699127
Sample Reference				DSRC304
Sample Number				None Supplied
Water Matrix				Other water
Depth (m)				8.29
Date Sampled				29/09/2025
Time Taken				0730
Analytical Parameter (Water Analysis)	**Units**	**Test Limit of detection**	**Test Accreditation Status**	
Speciated PAHs				
Naphthalene	µg/l	0.01	NONE	0.72
Acenaphthylene	µg/l	0.01	NONE	< 0.01
Acenaphthene	µg/l	0.01	NONE	< 0.01
Fluorene	µg/l	0.01	NONE	0.12
Phenanthrene	µg/l	0.01	NONE	0.28
Anthracene	µg/l	0.01	NONE	< 0.01
Fluoranthene	µg/l	0.01	NONE	< 0.01
Pyrene	µg/l	0.01	NONE	0.04
Benzo(a)anthracene	µg/l	0.01	NONE	< 0.01
Chrysene	µg/l	0.01	NONE	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	NONE	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	NONE	< 0.01
Benzo(a)pyrene	µg/l	0.01	NONE	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	NONE	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	NONE	< 0.01
Benzo(ghi)perylene	µg/l	0.01	NONE	< 0.01
Total PAH				
Total EPA-16 PAHs	µg/l	0.16	NONE	1.16
Petroleum Hydrocarbons				
TPH - Aliphatic >EC5 - EC6 $_{HS\_1D\_AL}$	µg/l	1	NONE	< 1.0
TPH - Aliphatic >EC6 - EC8 $_{HS\_1D\_AL}$	µg/l	1	NONE	< 1.0
TPH - Aliphatic >EC8 - EC10 $_{HS\_1D\_AL}$	µg/l	1	NONE	< 1.0
TPH - Aliphatic >EC10 - EC12 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	10
TPH - Aliphatic >EC12 - EC16 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	30
TPH - Aliphatic >EC16 - EC21 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	32
TPH - Aliphatic >EC21 - EC35 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	23
TPH - Aliphatic >EC5 - EC35 $_{HS+EH\_1D\_AL\_MS}$	µg/l	10	NONE	95
TPH - Aromatic >EC5 - EC7 $_{HS\_1D\_AR}$	µg/l	1	NONE	< 1.0
TPH - Aromatic >EC7 - EC8 $_{HS\_1D\_AR}$	µg/l	1	NONE	< 1.0
TPH - Aromatic >EC8 - EC10 $_{HS\_1D\_AR}$	µg/l	1	NONE	< 1.0
TPH - Aromatic >EC10 - EC12 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10
TPH - Aromatic >EC12 - EC16 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	25
TPH - Aromatic >EC16 - EC21 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	29
TPH - Aromatic >EC21 - EC35 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10
TPH - Aromatic >EC5 - EC35 $_{HS+EH\_1D\_AR\_MS}$	µg/l	10	NONE	54
VOCs				
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	NONE	< 3.0
Benzene	µg/l	1	NONE	< 1.0
Toluene	µg/l	1	NONE	< 1.0
Ethylbenzene	µg/l	1	NONE	< 1.0
p & m-xylene	µg/l	1	NONE	< 1.0
o-xylene	µg/l	1	NONE	< 1.0

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number : 25-052560
Project / Site name: Higham Lane

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)
Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Total Petroleum Hydrocarbons with carbon banding in water by GC-MS	Determination of total petroleum hydrocarbons in water by GC-MS with carbon banding aliphatic and aromatic	In-house method	L070B	W	NONE
Total Petroleum Hydrocarbons with carbon banding in water by GC-MS/HS-GC-MS	Determination of total petroleum hydrocarbons in water by GC-MS/HS-GC-MS with carbon banding aliphatic and aromatic (Summed Bands)	Calculation	L070B/L088-PL	W	NONE
BTEX and/or Volatile Organic Compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW, PW, GW	In-house method based on USEPA 8260	L073B	W	NONE
Total Petroleum Hydrocarbons in water by HS-GC/MS	Determination of total petroleum hydrocarbons in water by headspace HS-GC/MS . Accredited matrices: SW, PW, GW	In-house method	L088-PL	W	NONE
Speciated PAHs and/or Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds (including PAHs) in water by extraction in dichloromethane followed by GC-MS. Accredited matrices (PAHs): SW, PW, GW	In-house method based on USEPA 8270	L102B	W	NONE

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

Acronym	Descriptions
HS	Headspace Analysis
MS	Mass spectrometry
FID	Flame Ionisation Detector
GC	Gas Chromatography
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))
CU	Clean-up - e.g. by Florisil®, silica gel
1D	GC - Single coil/column gas chromatography
2D	GC-GC - Double coil/column gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics
AR	Aromatics
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total

Quality control parameter failure associated with individual result applies to calculated sum of individuals.
The result for sum should be interpreted with caution

Appendix D Geotechnical Testing Results

LABORATORY REPORT

Contract Number: PSL25/6230

Report Date: 19 September 2025

Client's Reference: 4173

Client Name: JPG Leeds
5 John Charles Way
Leeds
West Yorkshire
LS12 6QD

For the attention of: Emily Sykes

Contract Title: Higham Lane North

Date Received: 20/8/2025
Date Commenced: 20/8/2025
Date Completed: 19/9/2025

Notes: Opinions and Interpretations are outside the UKAS Accreditation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced other than in full, without the prior written approval of the laboratory.

Checked and Approved Signatories:

A Watkins (Managing Director)
R Berriman (Associate Director)
S Royle (Laboratory Manager)
L Knight (Assistant Laboratory Manager)
S Eyre (Senior Technician)
S Braithwaite (Senior Technician)

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SUMMARY OF POINT LOAD TEST RESULTS

ISRM Suggested Methods : 2007

Borehole Number	Depth (m)	Test Type	Orientation	Dimensions (mm)		Area	D_e^2	D_e	Failure Load (P)		I_s	Corr Fac	I_{s50}	Failure Type	Remarks
			Par / Perp	W	D	(mm2)		(mm)	(Mpa)	(kN)	(MPa)	F	(MPa)		
DSRC302	7.45	A	Perp	89	45	4005	5099.32	71.41	-	1.23	0.23	1.174	0.27	Valid	
									-						
DSRC303	2.50	A	Perp	88	37	3256	4145.67	64.39	-	0.59	0.14	1.121	0.15	Valid	
DSRC303	6.22	A	Perp	89	47	4183	5325.96	72.98	-	1.15	0.21	1.186	0.25	Valid	
DSRC303	10.73	A	Perp	89	51	4539	5779.23	76.02	-	1.37	0.23	1.207	0.28	Valid	
									-						

Note All testing carried out on samples at as received water content

Par = parallel, Perp = perpendicular, U = Random

A = Axial, D = Diametral, I = Irregular

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No:

PSL25/6230

Client Ref:

4173

SUMMARY OF POINT LOAD TEST RESULTS

ISRM Suggested Methods : 2007

Borehole Number	Depth (m)	Test Type	Orientation	Dimensions (mm)		D_e^2	D_e	Failure Load		I_s	Corr Fac	I_{s50}	Failure Type	Remarks
			Par / Perp	L	D		(mm)	(Mpa)	(kN)	(MPa)	F	(MPa)		
DSRC301	6.40	D	Par	-	89	7921	89.00	-	5.15	0.627	1.296	0.81	Valid	
DSRC301	7.70	D	Par	-	89	7921	89.00	-	2.17	0.264	1.296	0.34	Valid	
DSRC301	8.06	D	Par	-	88	7744	88.00	-	3.33	0.415	1.290	0.54	Valid	
DSRC301	9.37	D	Par	-	89	7921	89.00	-	2.91	0.355	1.296	0.46	Valid	
				-				-						
DSRC302	4.75	D	Par	-	89	7921	89.00	-	8.13	0.990	1.296	1.28	Valid	
DSRC302	6.15	D	Par	-	90	8100	90.00	-	2.46	0.293	1.303	0.38	Valid	
				-				-						
DSRC303	6.22	D	Par	-	89	7921	89.00	-	0.45	0.055	1.296	0.07	Valid	
DSRC303	8.68	D	Par	-	89	7921	89.00	-	1.59	0.194	1.296	0.25	Valid	
				-				-						
DSRC304	2.79	D	Par	-	89	7921	89.00	-	3.40	0.414	1.296	0.54	Valid	
DSRC304	3.40	D	Par	-	89	7921	89.00	-	2.77	0.337	1.296	0.44	Valid	
DSRC304	5.28	D	Par	-	89	7921	89.00	-	1.98	0.241	1.296	0.31	Valid	
DSRC304	6.10	D	Par	-	89	7921	89.00	-	3.94	0.480	1.296	0.62	Valid	
DSRC304	9.50	D	Par	-	88	7744	88.00	-	2.50	0.312	1.290	0.40	Valid	

Note All testing carried out on samples at as received water content

Par = parallel, Perp = perpendicular, U = Random

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No:

PSL25/6230

Client Ref:

4173

LABORATORY REPORT

Contract Number: PSL25/6231

Report Date: 29 September 2025

Client's Reference: 4173

Client Name: JPG Leeds
5 John Charles Way
Leeds
West Yorkshire
LS12 6QD

For the attention of: Emily Sykes

Contract Title: Higham Lane North

Date Received: 20/8/2025
Date Commenced: 20/8/2025
Date Completed: 29/9/2025

Notes: Opinions and Interpretations are outside the UKAS Accreditation

Checked and Approved Signatories:

A Watkins (Managing Director)
R Berriman (Associate Director)
S Royle (Laboratory Manager)

L Knight (Assistant Laboratory Manager)
S Eyre (Senior Technician)
T Watkins (Senior Technician)

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SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
TP302		B D	0.70		Brown mottled grey slightly sandy slightly gravelly CLAY.
TP304		B D	1.30		Brown mottled grey highly weathered MUDSTONE.
TP306		B D	0.90		Brown mottled grey highly weathered MUDSTONE.
TP310		D	0.70		Brown GRAVEL.
TP311		B D	1.40		Brown highly weathered MUDSTONE.
TP314		B D	3.00		Brown highly weathered MUDSTONE.
TP315		B D	2.70		Brown highly weathered MUDSTONE.
TP317		B D	0.75		Brown slightly silty slightly sandy GRAVEL of cobbles.
TP318		B D	0.60		Brown slightly silty slightly sandy GRAVEL of cobbles.
TP319		B D	0.50		Brown mottled grey slightly sandy CLAY.
TP321		B D	2.25		Brown highly weathered MUDSTONE.
TP324		B D	2.00		Brown highly weathered MUDSTONE.
TP326		B D	1.50		Brown highly weathered MUDSTONE.
DSRC302		UT	1.20		Very stiff brown highly weathered MUDSTONE.
DSRC306		UT	0.50		Very stiff brown highly weathered MUDSTONE.
DSRC308		UT	1.90		Very stiff brown highly weathered MUDSTONE.

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No:
PSL25/6231
Client Ref:
4173

SUMMARY OF SOIL CLASSIFICATION TESTS

BS 1377 - Part 2 : 2022 in accordance with BS EN ISO 17892 (as below)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Water Content %	Linear Shrinkage	Particle Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index %	Passing 0.425mm %	Remarks
TP302		B D	0.70		21.8		2.68	65	27	38	92	High Plasticity CIH
TP304		B D	1.30		15.4		2.71					
TP306		B D	0.90		16.9		2.68	57	25	32	94	High Plasticity CIH
TP310		D	0.70		1.9				NP			
TP311		B D	1.40		11.7		2.61					
TP314		B D	3.00		11.8		2.56					
TP315		B D	2.70		7.9		2.54	37	18	19	34	Medium Plasticity CIM
TP317		B D	0.75		4.3							
TP318		B D	0.60		2.1							
TP319		B D	0.50		22.2		2.68	62	27	35	100	High Plasticity CIH
TP321		B D	2.25		7.8		2.60				30	
TP324		B D	2.00		14.7		2.67	44	20	24	93	Medium Plasticity CIM
TP326		B D	1.50		13.2		2.69	41	20	21	78	Medium Plasticity CIM
DSRC302		UT	1.20		13.2			47	23	24	81	Medium Plasticity CIM
DSRC306		UT	0.50		17.7			56	25	31	84	High Plasticity CIH

Water Content - BS 1377 - Part 2 : 2022 : Clause 4 in accordance with BS EN ISO 17892 - 1 : 2014 + A1 : 2022
Linear Shrinkage - BS 1377 - Part 2 : 2022 : Clause 7
Particle Density (Gas Jar method) - BS 1377 - Part 2 : 2022 : Clause 9
Liquid, Plastic Limit & Plasticity Index - BS 1377 - Part 2 : 2022 : Clause 5 & 6 in accordance with BS EN ISO 17892 - 12 : 2018 + A2 : 2022

SYMBOLS : NP = Non Plastic

UKAS TESTING 4043

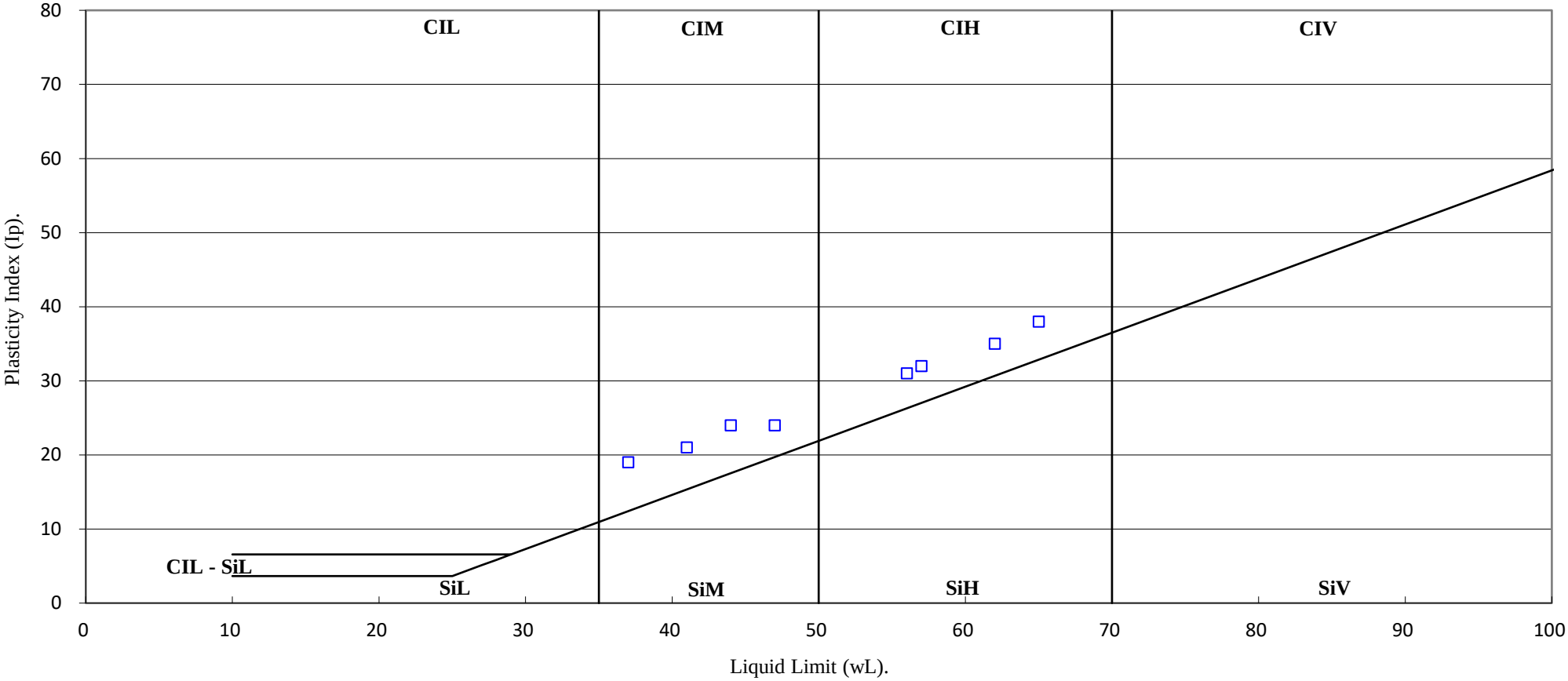
PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No:
PSL25/6231
Client Ref:
4173

PLASTICITY CHART

BS EN ISO 14688-2:2017 Clause 4.4



UKAS TESTING 4043 / PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY	**Higham Lane North**	**Contract No:** **PSL25/6231** **Client Ref:** **4173**

SUMMARY OF SOIL CLASSIFICATION TESTS

BS 1377 - Part 2 : 2022 in accordance with BS EN ISO 17892 (as below)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Water Content %	Linear Shrinkage	Particle Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index %	Passing 0.425mm %	Remarks
DSRC308		**UT**	**1.90**		**11.4**			**57**	**25**	**32**	**73**	**High Plasticity CIH**

Water Content - BS 1377 - Part 2 : 2022 : Clause 4 in accordance with BS EN ISO 17892 - 1 : 2014 + A1 : 2022
Linear Shrinkage - BS 1377 - Part 2 : 2022 : Clause 7
Particle Density (Gas Jar method) - BS 1377 - Part 2 : 2022 : Clause 9
Liquid, Plastic Limit & Plasticity Index - BS 1377 - Part 2 : 2022 : Clause 5 & 6 in accordance with BS EN ISO 17892 - 12 : 2018 + A2 : 2022

SYMBOLS : NP = Non Plastic

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No:

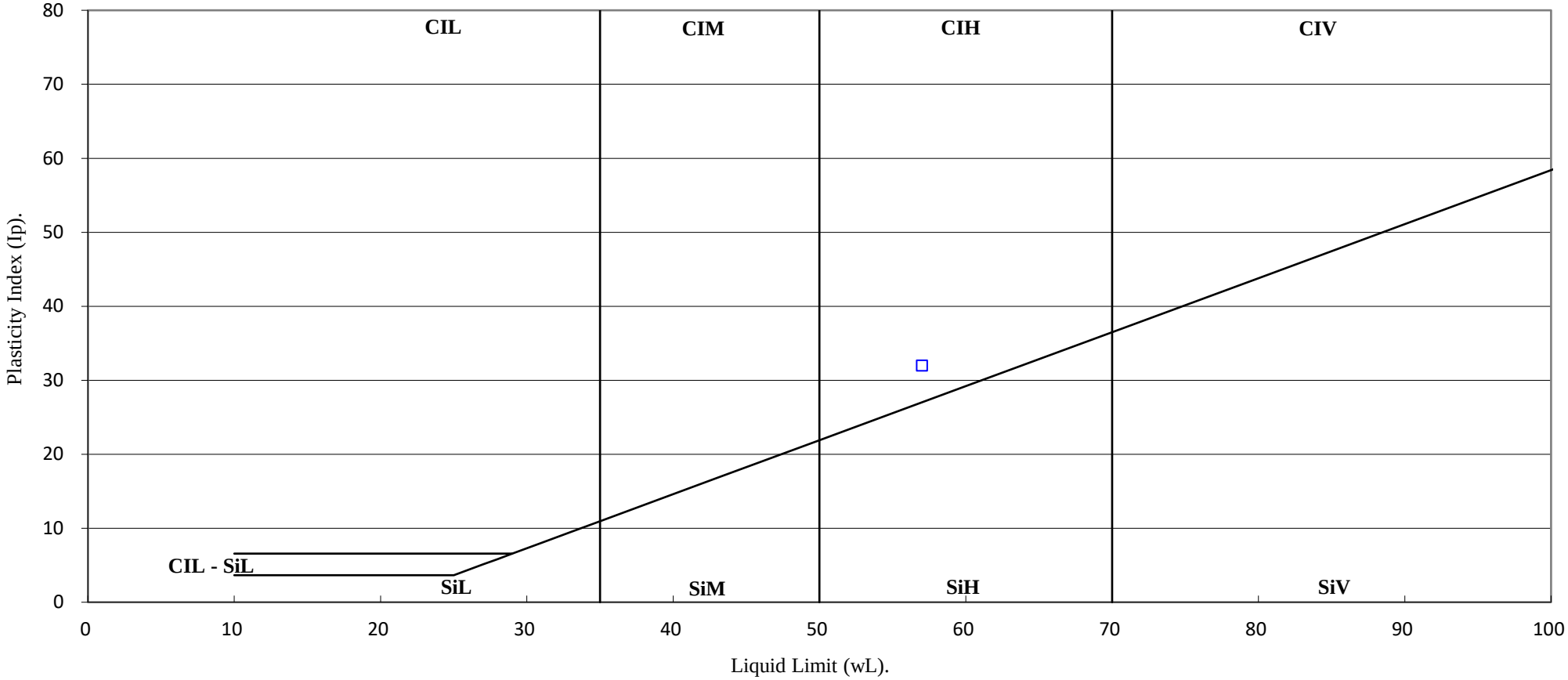
PSL25/6231

Client Ref:

4173

PLASTICITY CHART

BS EN ISO 14688-2:2017 Clause 4.4



UKAS TESTING 4043 / PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY	**Higham Lane North**	**Contract No:** **PSL25/6231** **Client Ref:** **4173**

PARTICLE SIZE DISTRIBUTION TEST

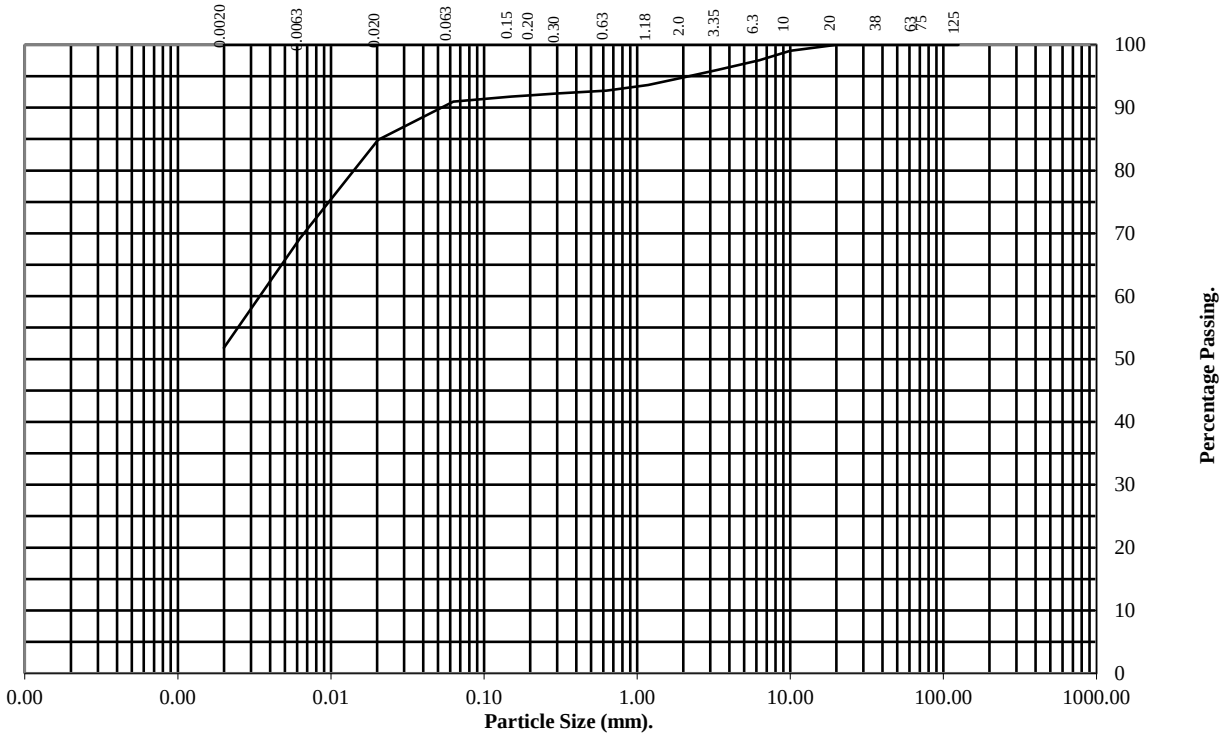
BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number: **TP302** **Top Depth (m):** **0.70**

Sample Number: **Base Depth (m):**

Sample Type: **B D**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	99
6.3	98
3.35	96
2	95
1.18	94
0.63	93
0.3	92
0.2	92
0.15	92
0.063	91

Particle Diameter	Percentage Passing
0.020	85
0.0063	69
0.0020	52
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	5
Sand	4
Silt	39
Clay	52

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No:
PSL25/6231
Client Ref:
4173

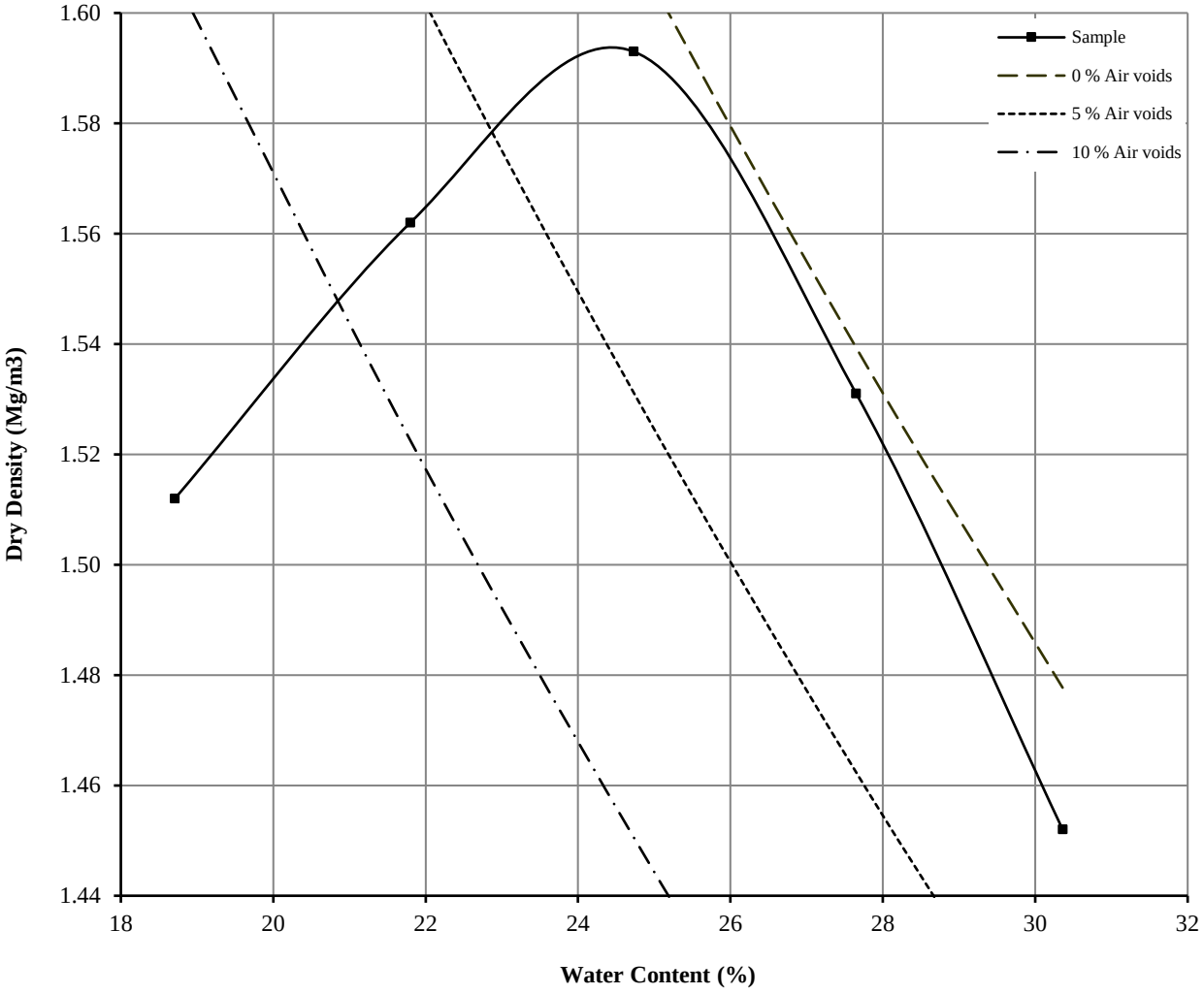
DRY DENSITY/WATER CONTENT RELATIONSHIP

BS 1377 - Part 2 : Clause 11 : 2022

Hole Number: TP302 **Top Depth (m):** 0.70

Sample Number: **Base Depth (m):**

Sample Type: B D



Initial Water Content:		21.8	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.68	Measured	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.59	Material Retained on 20.0 mm Test Sieve (%):		0
Optimum Water Content (%):		25	Grading Zone:		1
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No.
PSL25/6231
Client Ref
4173

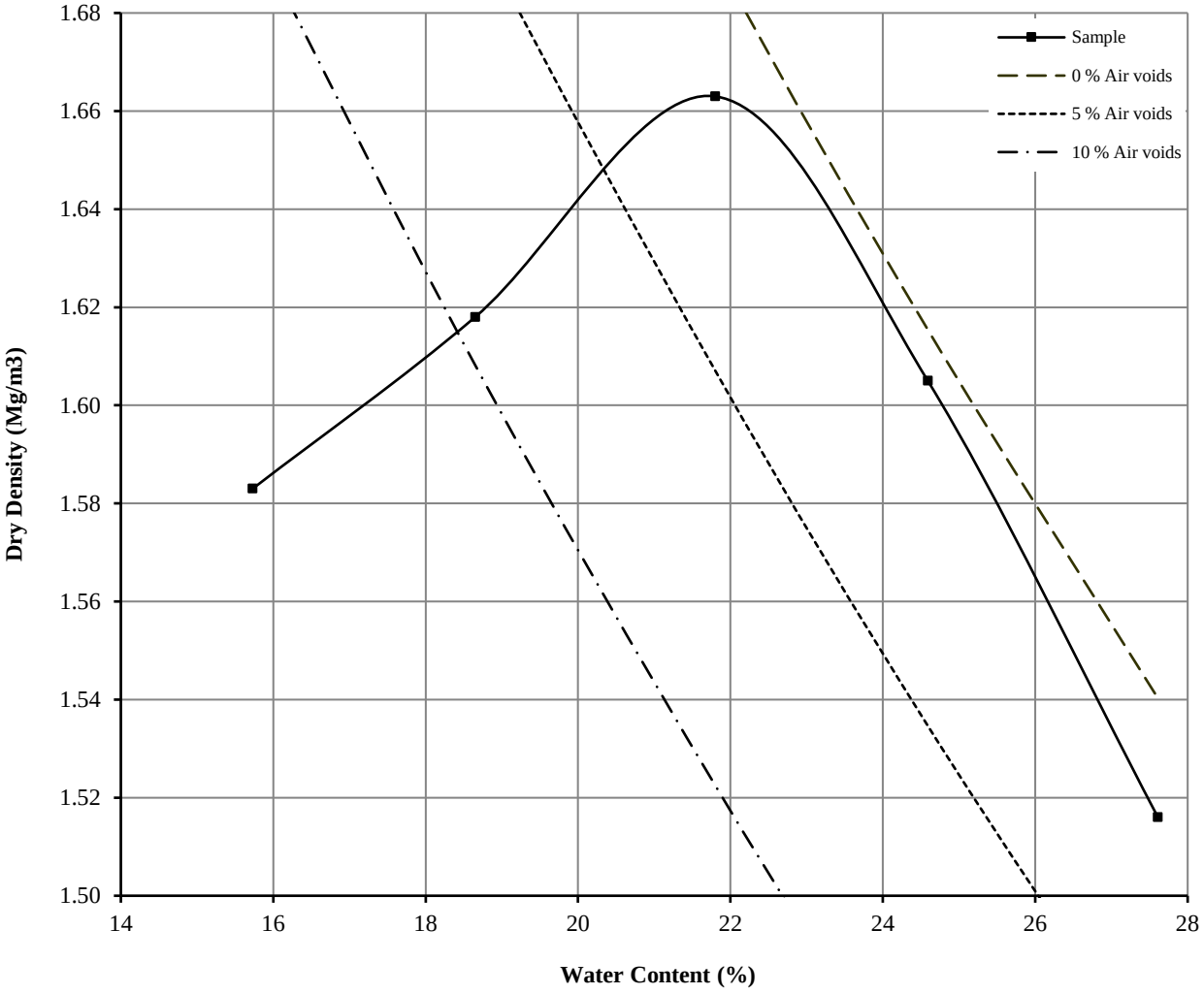
DRY DENSITY/WATER CONTENT RELATIONSHIP

BS 1377 - Part 2 : Clause 11 : 2022

Hole Number: TP302 **Top Depth (m):** 0.70

Sample Number: **Base Depth (m):**

Sample Type: B D



Initial Water Content:		21.8	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.68	Measured	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.66	Material Retained on 20.0 mm Test Sieve (%):		0
Optimum Water Content (%):		22	Grading Zone:		1
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No.
PSL25/6231
Client Ref
4173

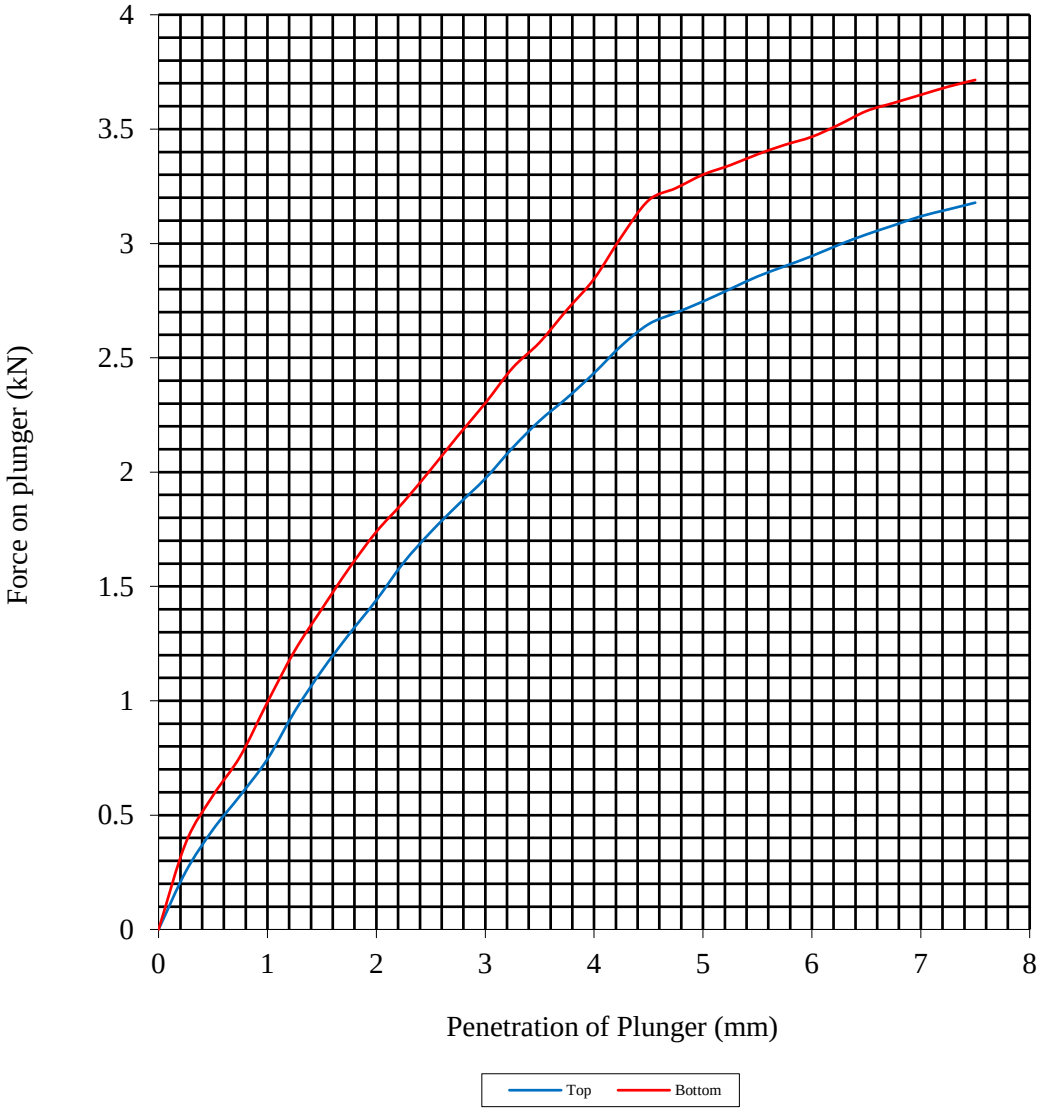
CALIFORNIA BEARING RATIO (CBR)

BS 1377 - Part 2 : Clause 15 : 2022

Hole Number: TP302 **Top Depth (m):** 0.70

Sample Number: **Base Depth (m):**

Sample Type: B D



Initial Sample Conditions		Sample Preparation		Final Water Content %		C.B.R. Value %	
Water Content:	21.8	Surcharge Kg:	0.00	Sample Top	21.7	Sample Top	13.7
Bulk Density Mg/m3:	1.91	Soaking Time hrs	0	Sample Bottom	22.0	Sample Bottom	16.5
Dry Density Mg/m3:	1.56	Swelling mm:	0	Remarks : See Summary of Soil Descriptions.			
Percentage retained on 20mm BS test sieve:			0				
Compaction Conditions		2.5kg					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No: PSL25/6231

Client Ref: 4173

MCV/WATER CONTENT RELATION OF SOIL

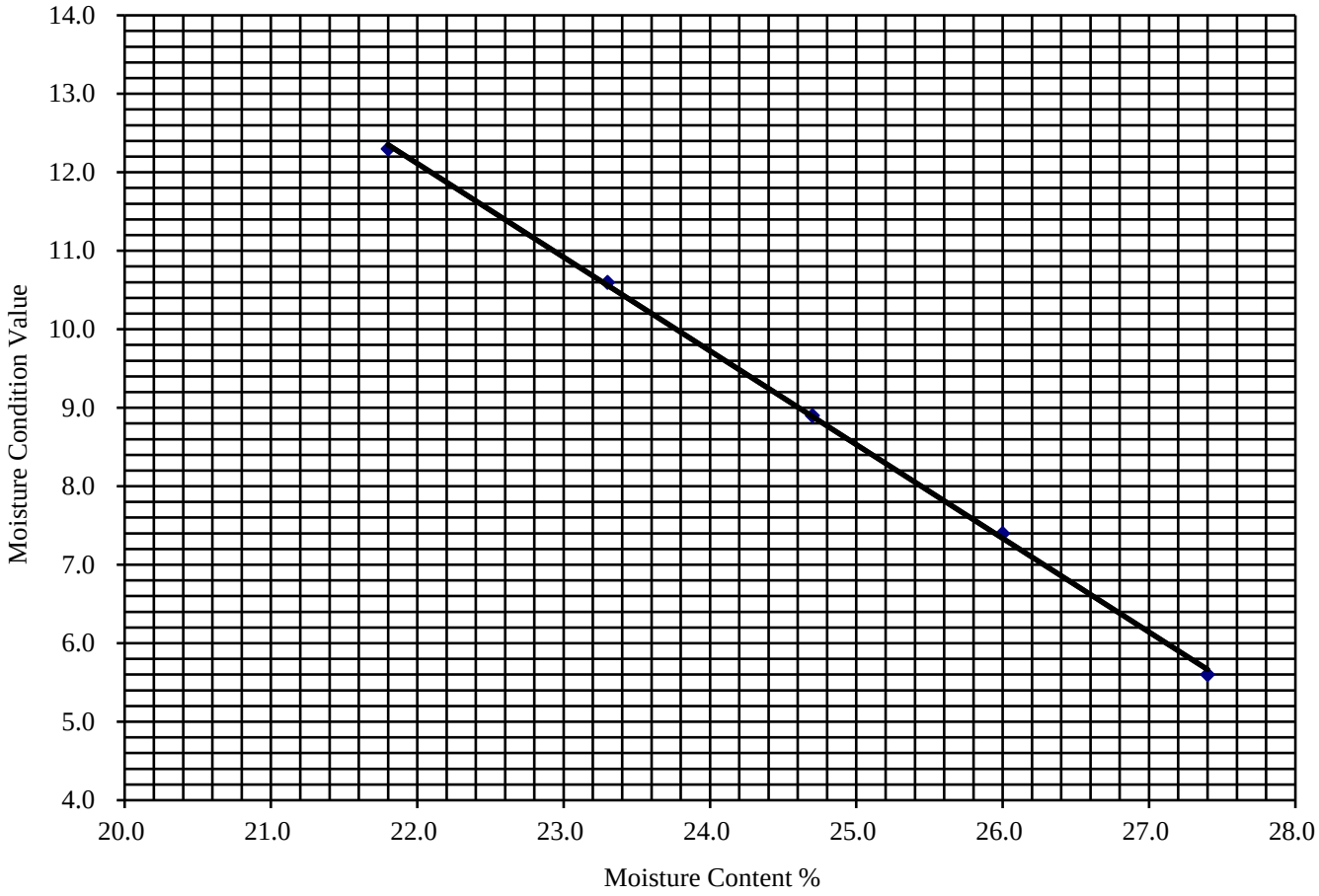
BS1377 - Part 2 : 2022 Clause 13.5

Hole Number: **TP302** **Top Depth (m):** **0.70**

Sample Number: **Base Depth (m):**

Sample Type: **B D**

Initial Water Content (%):	21.8
Single/Separate Samples Tested	Separate
Material Retained on the 20mm BS Test Sieve (%):	0



Test Results.

Test Number	1	2	3	4	5
Water Content (%)	21.8	23.3	24.7	26.0	27.4
MCV	12.3	10.6	8.9	7.4	5.6

PARTICLE SIZE DISTRIBUTION TEST

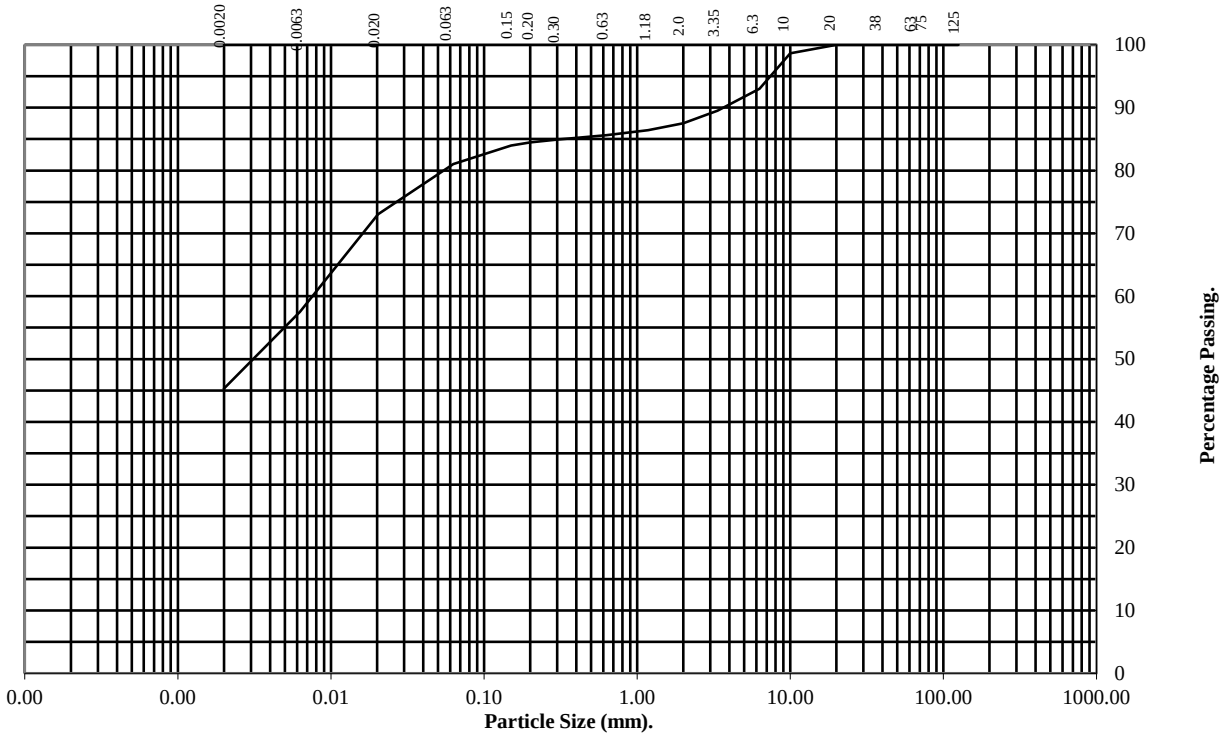
BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number: TP304 **Top Depth (m):** 1.30

Sample Number: **Base Depth (m):**

Sample Type: B D



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	99
6.3	93
3.35	90
2	88
1.18	86
0.63	86
0.3	85
0.2	84
0.15	84
0.063	81

Particle Diameter	Percentage Passing
0.020	73
0.0063	58
0.0020	45
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	12
Sand	7
Silt	36
Clay	45

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No: PSL25/6231

Client Ref: 4173

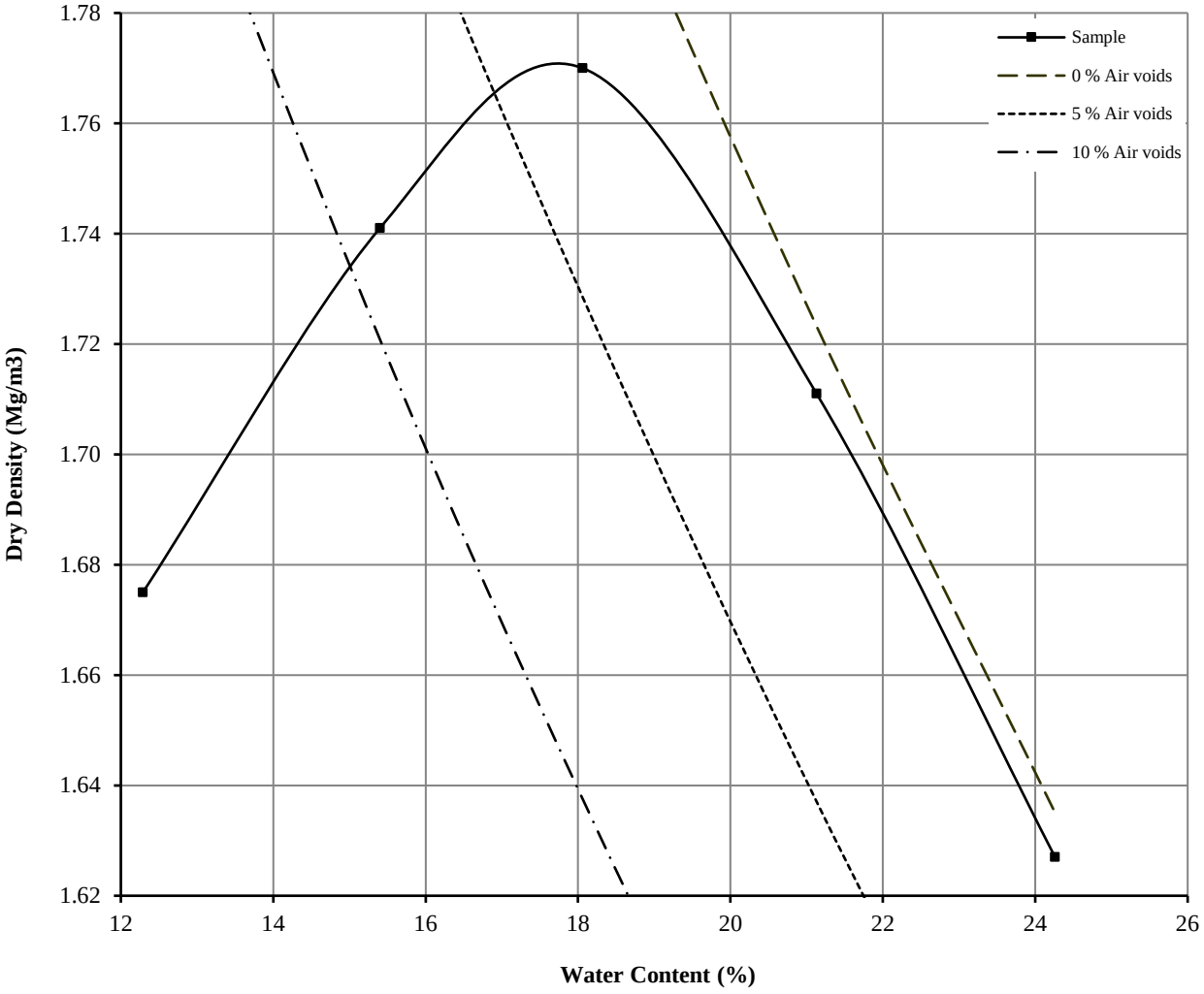
DRY DENSITY/WATER CONTENT RELATIONSHIP

BS 1377 - Part 2 : Clause 11 : 2022

Hole Number: TP304 **Top Depth (m):** 1.30

Sample Number: **Base Depth (m):**

Sample Type: B D



Initial Water Content:		15.4	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.71	Measured	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.77	Material Retained on 20.0 mm Test Sieve (%):		0
Optimum Water Content (%):		18	Grading Zone:		1
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No. PSL25/6231

Client Ref 4173

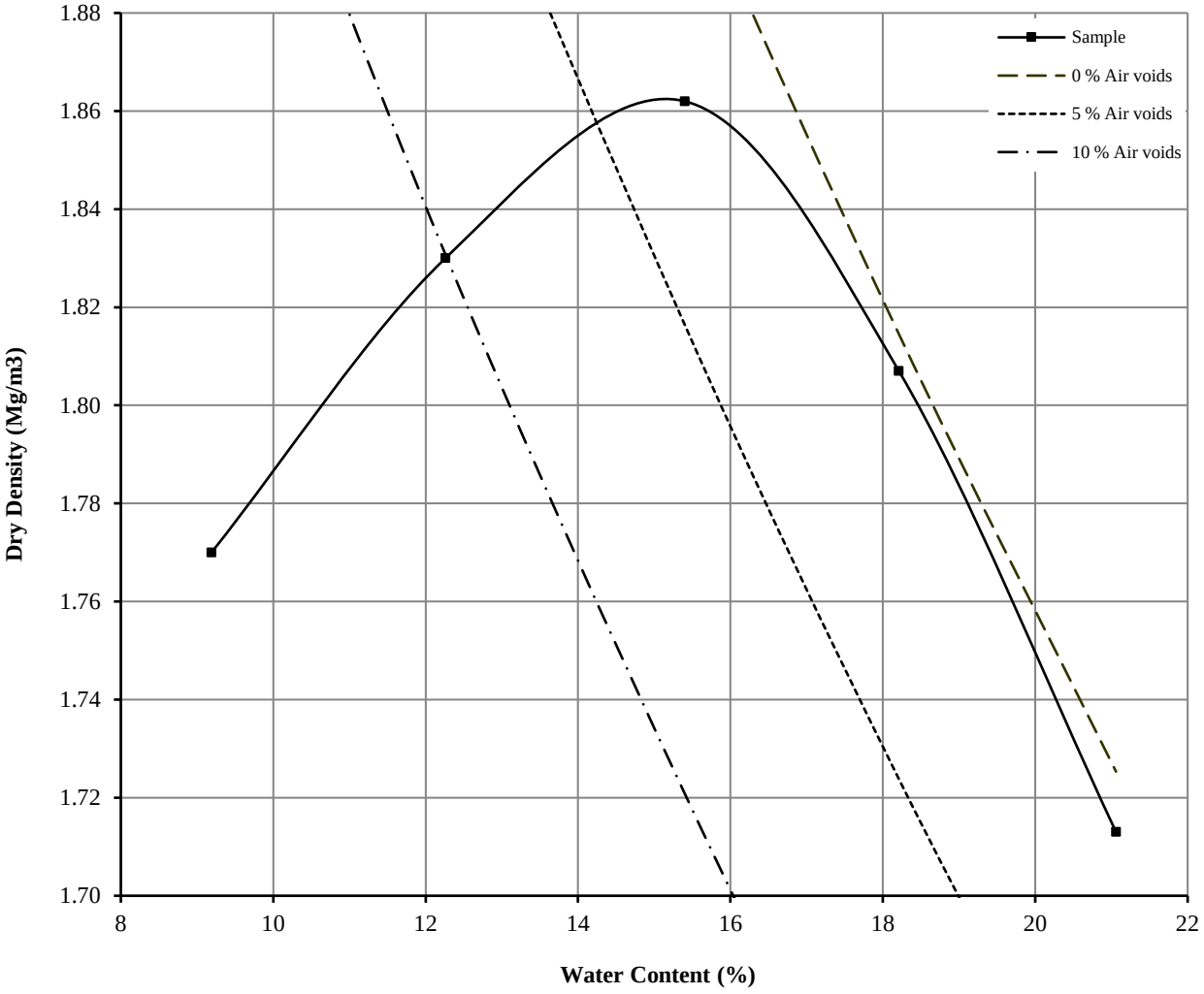
DRY DENSITY/WATER CONTENT RELATIONSHIP

BS 1377 - Part 2 : Clause 11 : 2022

Hole Number: TP304 **Top Depth (m):** 1.30

Sample Number: **Base Depth (m):**

Sample Type: B D



Initial Water Content:		15.4	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.71	Measured	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.86	Material Retained on 20.0 mm Test Sieve (%):		0
Optimum Water Content (%):		15	Grading Zone:		1
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No.
PSL25/6231
Client Ref
4173

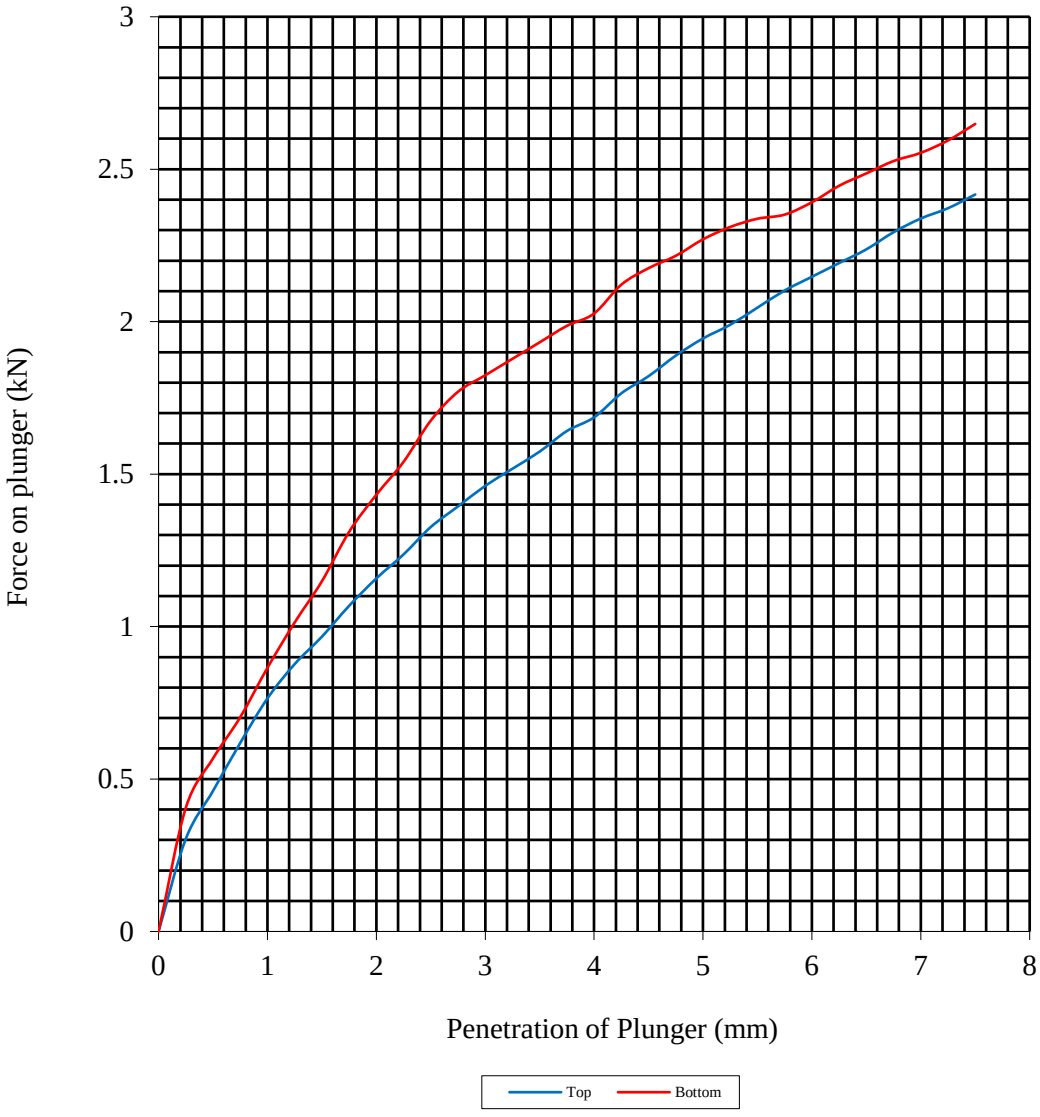
CALIFORNIA BEARING RATIO (CBR)

BS 1377 - Part 2 : Clause 15 : 2022

Hole Number: TP304 **Top Depth (m):** 1.30

Sample Number: **Base Depth (m):**

Sample Type: B D



Initial Sample Conditions		Sample Preparation		Final Water Content %		C.B.R. Value %	
Water Content:	15.4	Surcharge Kg:	4.00	Sample Top	15.4	Sample Top	10.0
Bulk Density Mg/m3:	1.99	Soaking Time hrs	0	Sample Bottom	15.5	Sample Bottom	12.7
Dry Density Mg/m3:	1.73	Swelling mm:	0	Remarks : See Summary of Soil Descriptions.			
Percentage retained on 20mm BS test sieve:			0				
Compaction Conditions		2.5kg					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No: PSL25/6231

Client Ref: 4173

PARTICLE SIZE DISTRIBUTION TEST

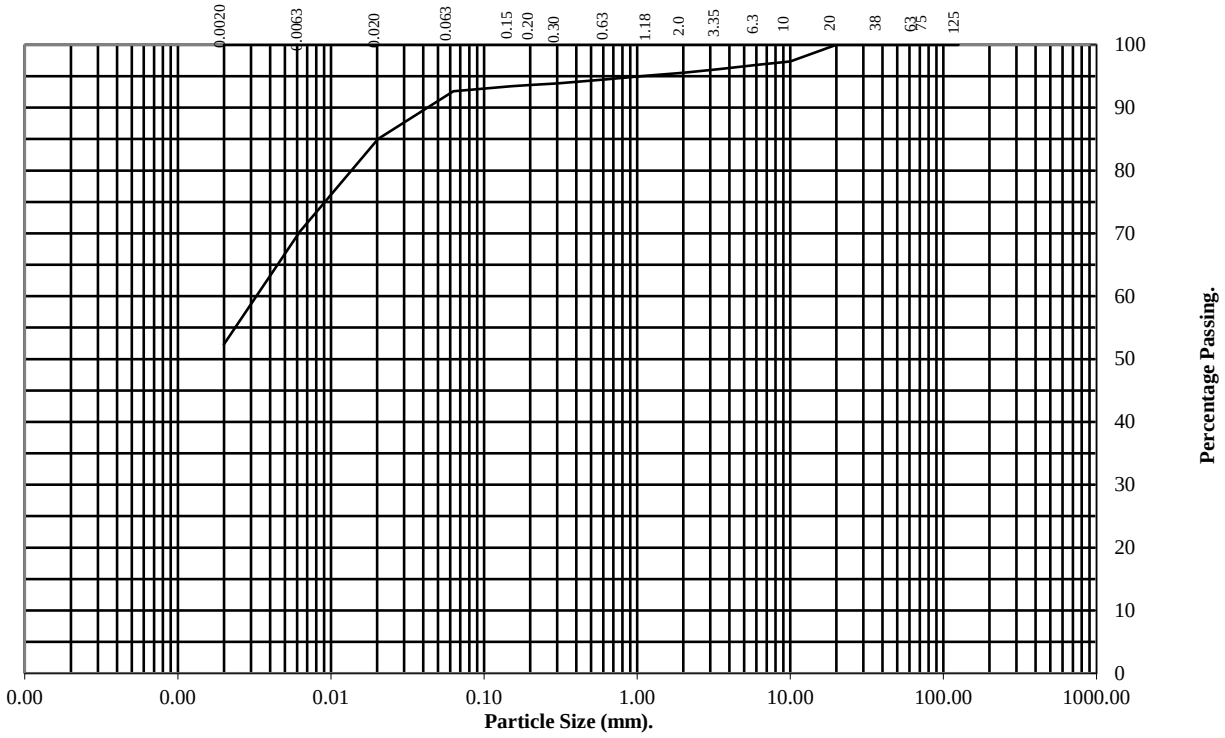
BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number: **TP306** **Top Depth (m):** **0.90**

Sample Number: **Base Depth (m):**

Sample Type: **B D**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	97
6.3	97
3.35	96
2	96
1.18	95
0.63	94
0.3	94
0.2	94
0.15	93
0.063	93

Particle Diameter	Percentage Passing
0.020	85
0.0063	70
0.0020	52
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	4
Sand	3
Silt	41
Clay	52

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No: **PSL25/6231**

Client Ref: **4173**

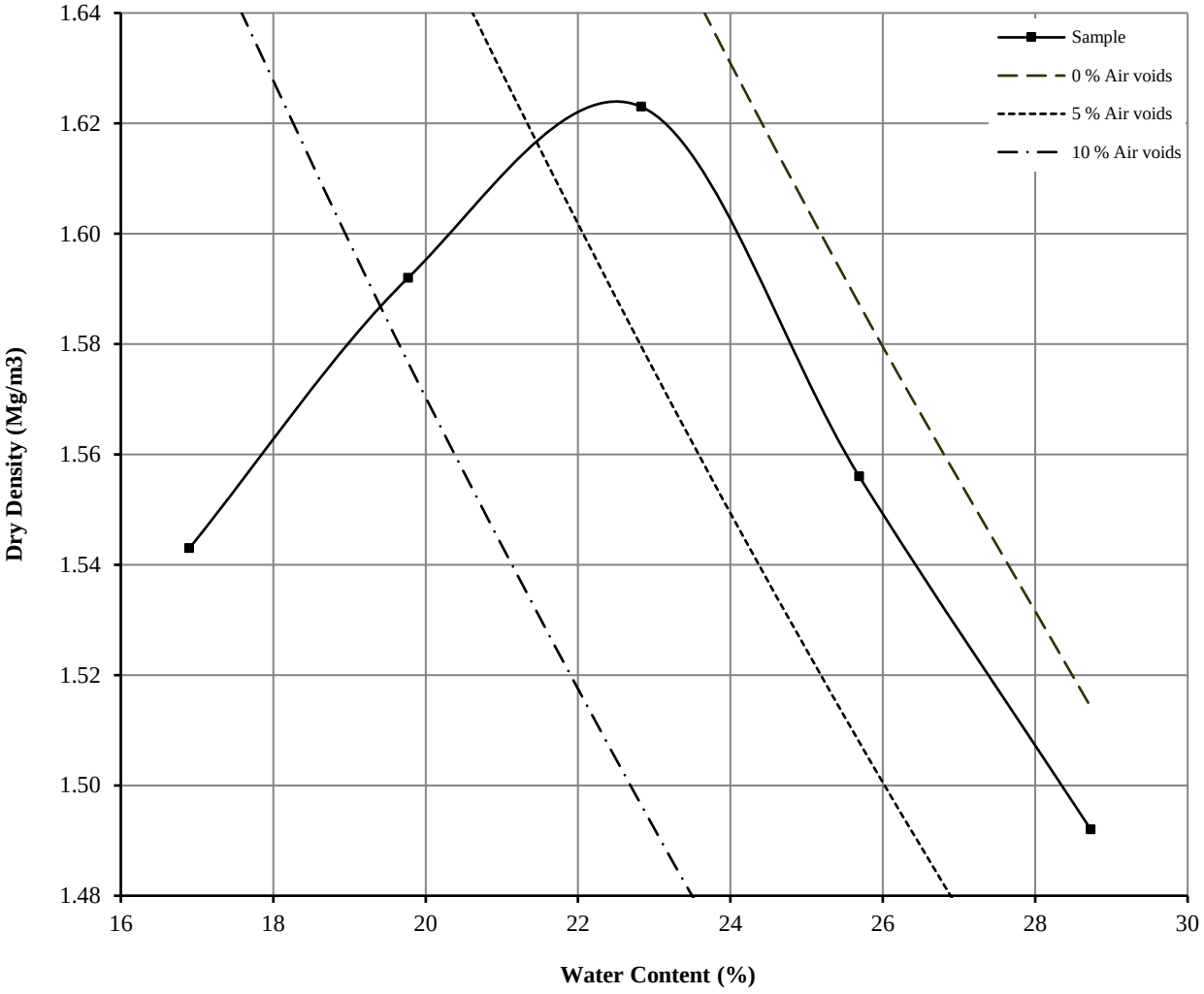
DRY DENSITY/WATER CONTENT RELATIONSHIP

BS 1377 - Part 2 : Clause 11 : 2022

Hole Number: TP306 **Top Depth (m):** 0.90

Sample Number: **Base Depth (m):**

Sample Type: B D



Initial Water Content:		16.9	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.68	Measured	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.62	Material Retained on 20.0 mm Test Sieve (%):		0
Optimum Water Content (%):		23	Grading Zone:		1
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No.
PSL25/6231
Client Ref
4173

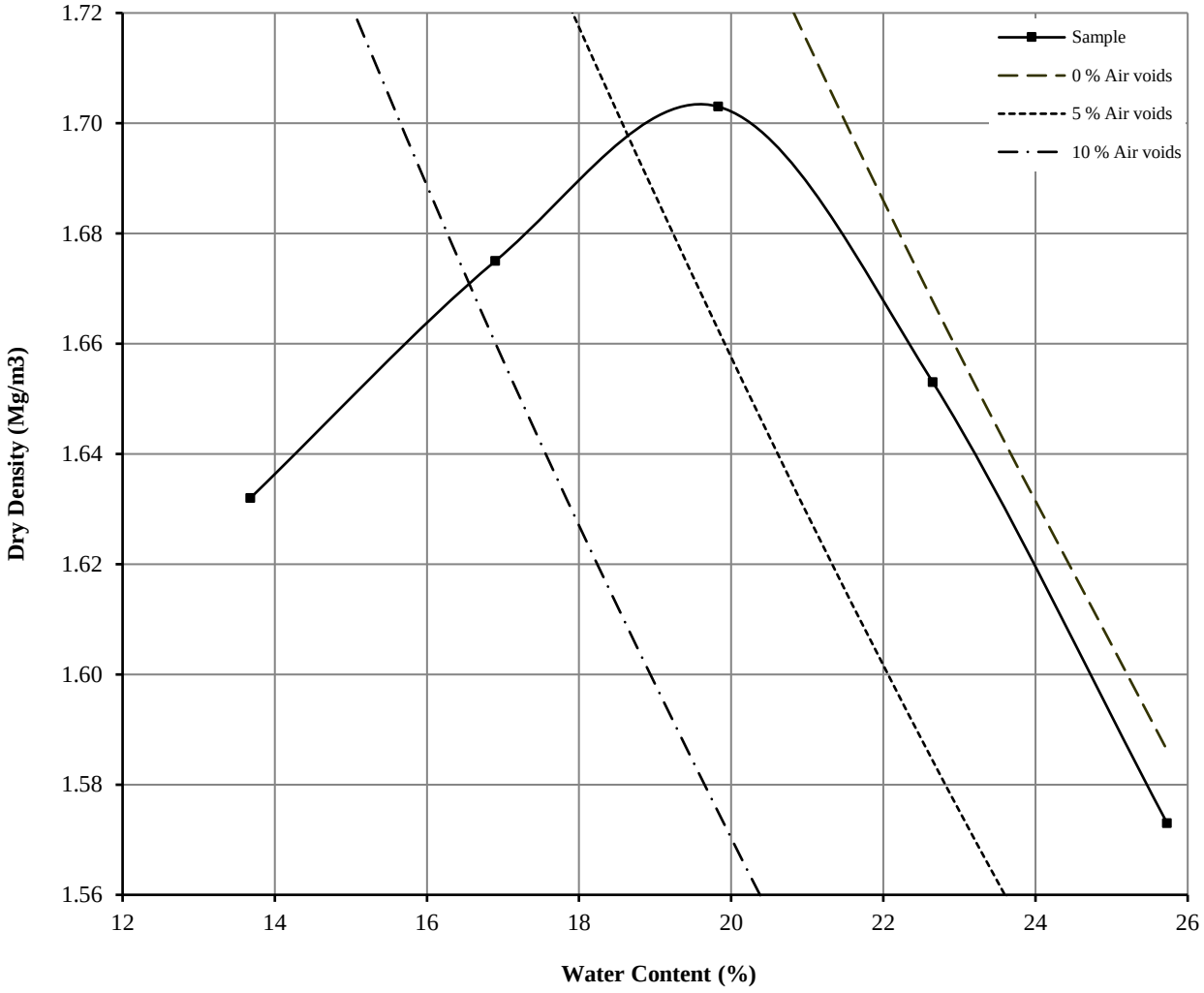
DRY DENSITY/WATER CONTENT RELATIONSHIP

BS 1377 - Part 2 : Clause 11 : 2022

Hole Number: TP306 **Top Depth (m):** 0.90

Sample Number: **Base Depth (m):**

Sample Type: B D



Initial Water Content:		16.9	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.68	Measured	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.70	Material Retained on 20.0 mm Test Sieve (%):		0
Optimum Water Content (%):		20	Grading Zone:		1
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No.
PSL25/6231
Client Ref
4173

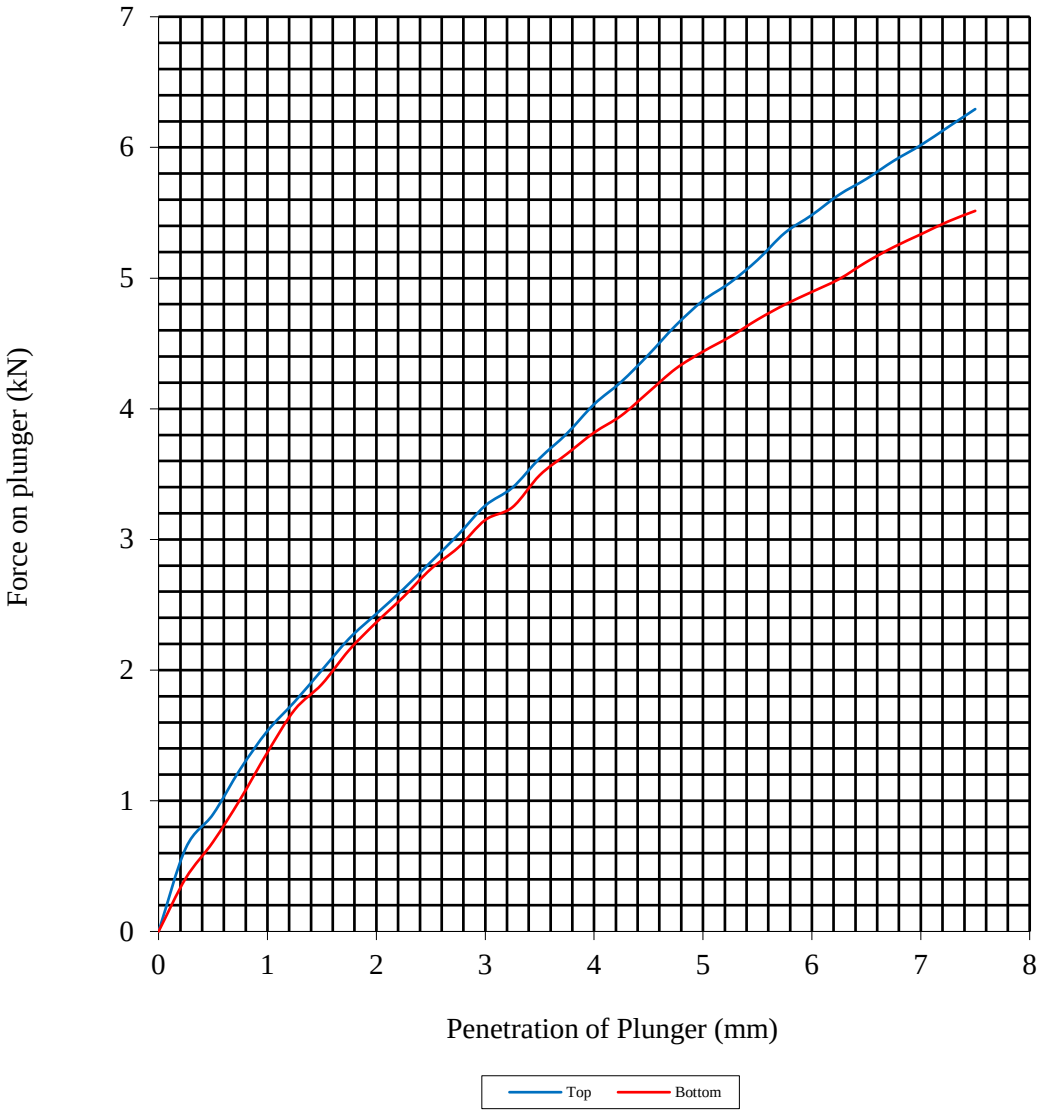
CALIFORNIA BEARING RATIO (CBR)

BS 1377 - Part 2 : Clause 15 : 2022

Hole Number: TP306 **Top Depth (m):** 0.90

Sample Number: **Base Depth (m):**

Sample Type: B D



Initial Sample Conditions		Sample Preparation		Final Water Content %		C.B.R. Value %	
Water Content:	16.9	Surcharge Kg:	4.00	Sample Top	16.7	Sample Top	24.1
Bulk Density Mg/m3:	1.81	Soaking Time hrs	0	Sample Bottom	17.4	Sample Bottom	22.2
Dry Density Mg/m3:	1.55	Swelling mm:	0	Remarks : See Summary of Soil Descriptions.			
Percentage retained on 20mm BS test sieve:			0				
Compaction Conditions		2.5kg					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No: PSL25/6231

Client Ref: 4173

MOISTURE CONDITION VALUE (MCV)

BS1377 - Part 2 : 2022 : Clause 13

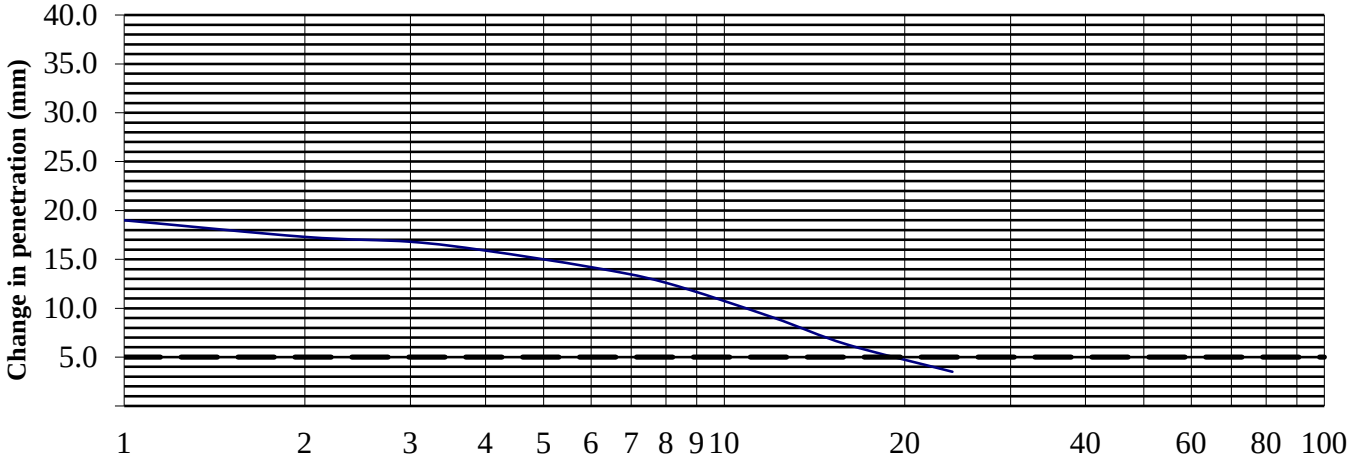
Hole Number: **TP306** **Top Depth (m):** **0.90**

Sample Number: **Base Depth (m):**

Sample Type: **B D**

Material Retained on the 20mm BS Test Sieve (%):	0
Interpretation based on steepest straight line intercept with 5mm change in penetration.	

MCV Determination



Blows (N)	Penetration (mm)	n to 4n (mm)
1	82.6	19.0
2	73.1	17.3
3	67.9	16.8
4	63.6	15.9
6	58.8	14.2
8	55.8	12.6
12	51.1	9.1
16	47.7	6.3
24	44.6	3.5
32	43.2	
48	42.0	
64	41.4	
96	41.1	
128		
192		
256		

Test Results.

Water Content (%)	16.9
MCV	12.7

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No: **PSL25/6231**

Client Ref: **4173**

PARTICLE SIZE DISTRIBUTION TEST

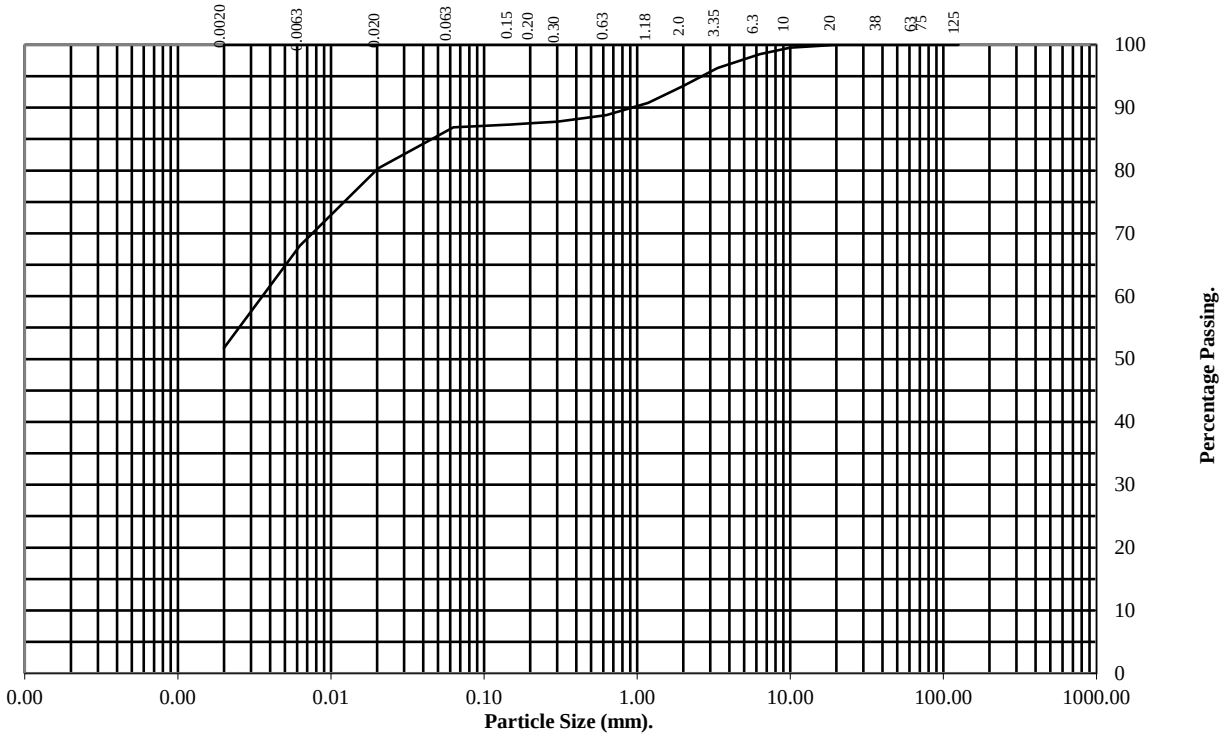
BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number: TP311 **Top Depth (m):** 1.40

Sample Number: **Base Depth (m):**

Sample Type: B D



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	98
3.35	96
2	93
1.18	91
0.63	89
0.3	88
0.2	87
0.15	87
0.063	87

Particle Diameter	Percentage Passing
0.020	80
0.0063	68
0.0020	52
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	7
Sand	6
Silt	35
Clay	52

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No: PSL25/6231

Client Ref: 4173

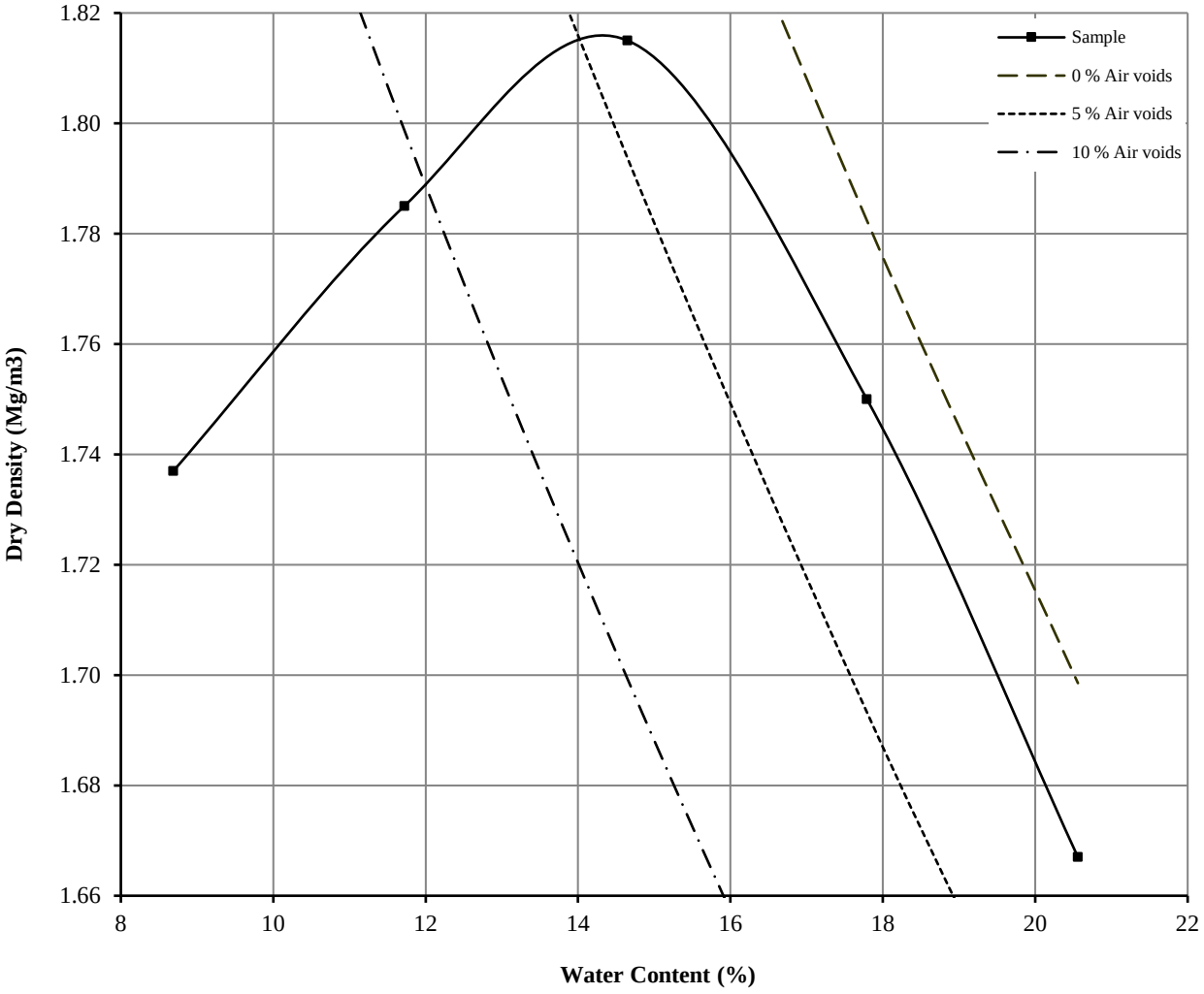
DRY DENSITY/WATER CONTENT RELATIONSHIP

BS 1377 - Part 2 : Clause 11 : 2022

Hole Number: TP311 **Top Depth (m):** 1.40

Sample Number: **Base Depth (m):**

Sample Type: B D



Initial Water Content:		11.7	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.61	Measured	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.82	Material Retained on 20.0 mm Test Sieve (%):		0
Optimum Water Content (%):		15	Grading Zone:		1
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No. PSL25/6231

Client Ref 4173

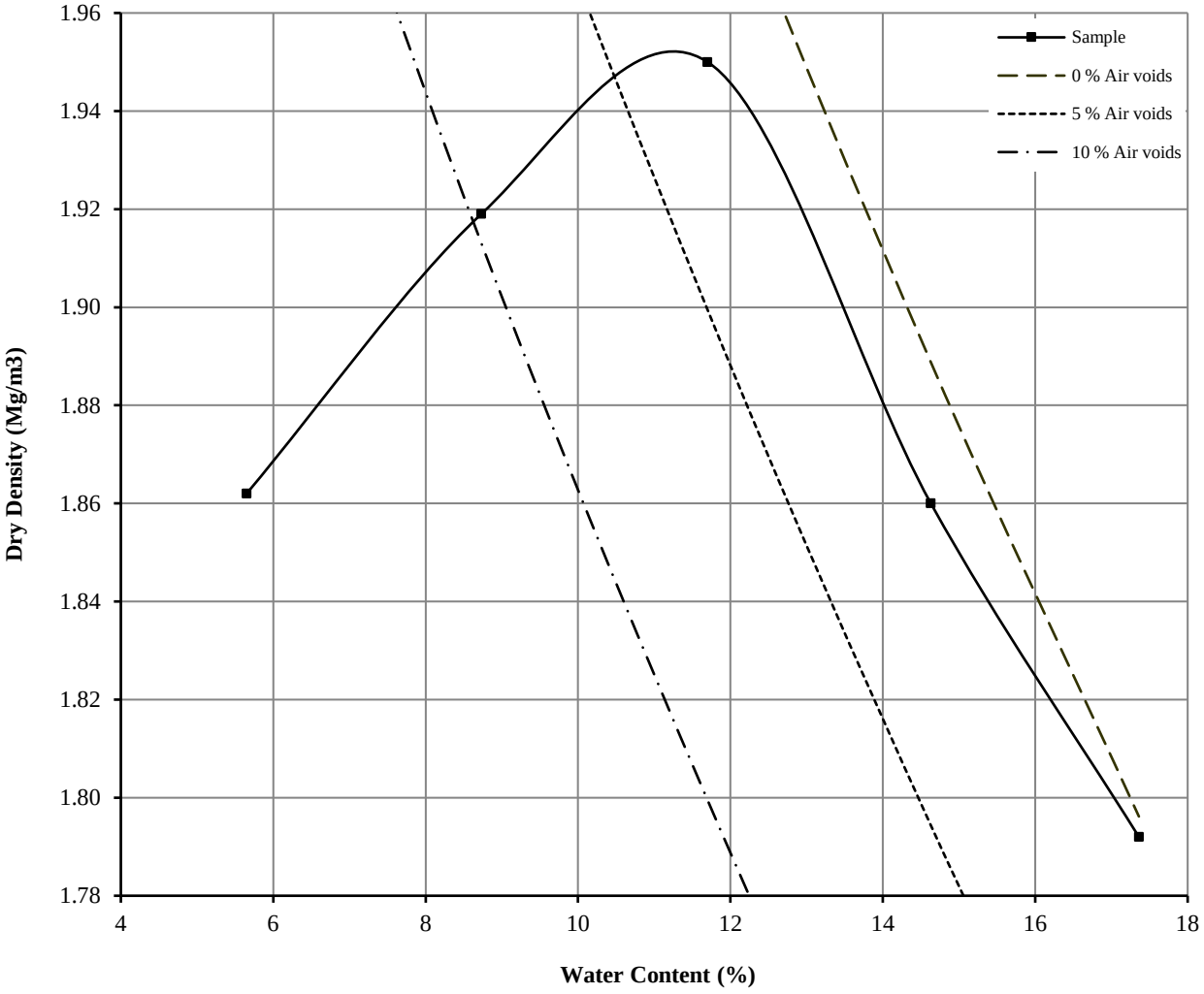
DRY DENSITY/WATER CONTENT RELATIONSHIP

BS 1377 - Part 2 : Clause 11 : 2022

Hole Number: TP311 **Top Depth (m):** 1.40

Sample Number: **Base Depth (m):**

Sample Type: B D



Initial Water Content:		11.7	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.61	Measured	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.95	Material Retained on 20.0 mm Test Sieve (%):		0
Optimum Water Content (%):		12	Grading Zone:		1
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No.
PSL25/6231
Client Ref
4173

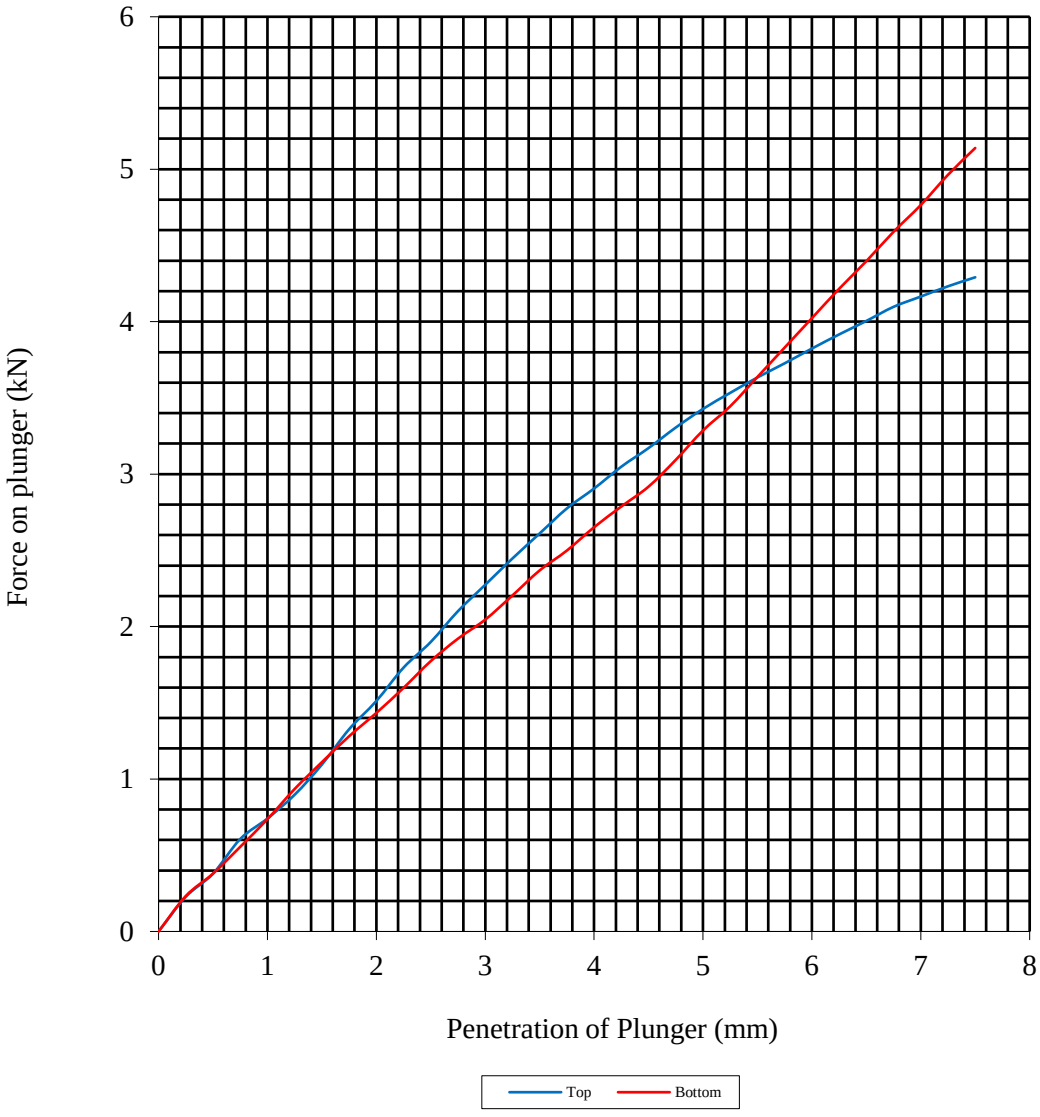
CALIFORNIA BEARING RATIO (CBR)

BS 1377 - Part 2 : Clause 15 : 2022

Hole Number: TP311 **Top Depth (m):** 1.40

Sample Number: **Base Depth (m):**

Sample Type: B D



Initial Sample Conditions		Sample Preparation		Final Water Content %		C.B.R. Value %	
Water Content:	11.7	Surcharge Kg:	4.00	Sample Top	11.5	Sample Top	17.1
Bulk Density Mg/m3:	2.00	Soaking Time hrs	0	Sample Bottom	12.0	Sample Bottom	16.4
Dry Density Mg/m3:	1.79	Swelling mm:	0	Remarks : See Summary of Soil Descriptions.			
Percentage retained on 20mm BS test sieve:			0				
Compaction Conditions		2.5kg					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No: PSL25/6231

Client Ref: 4173

MCV/WATER CONTENT RELATION OF SOIL

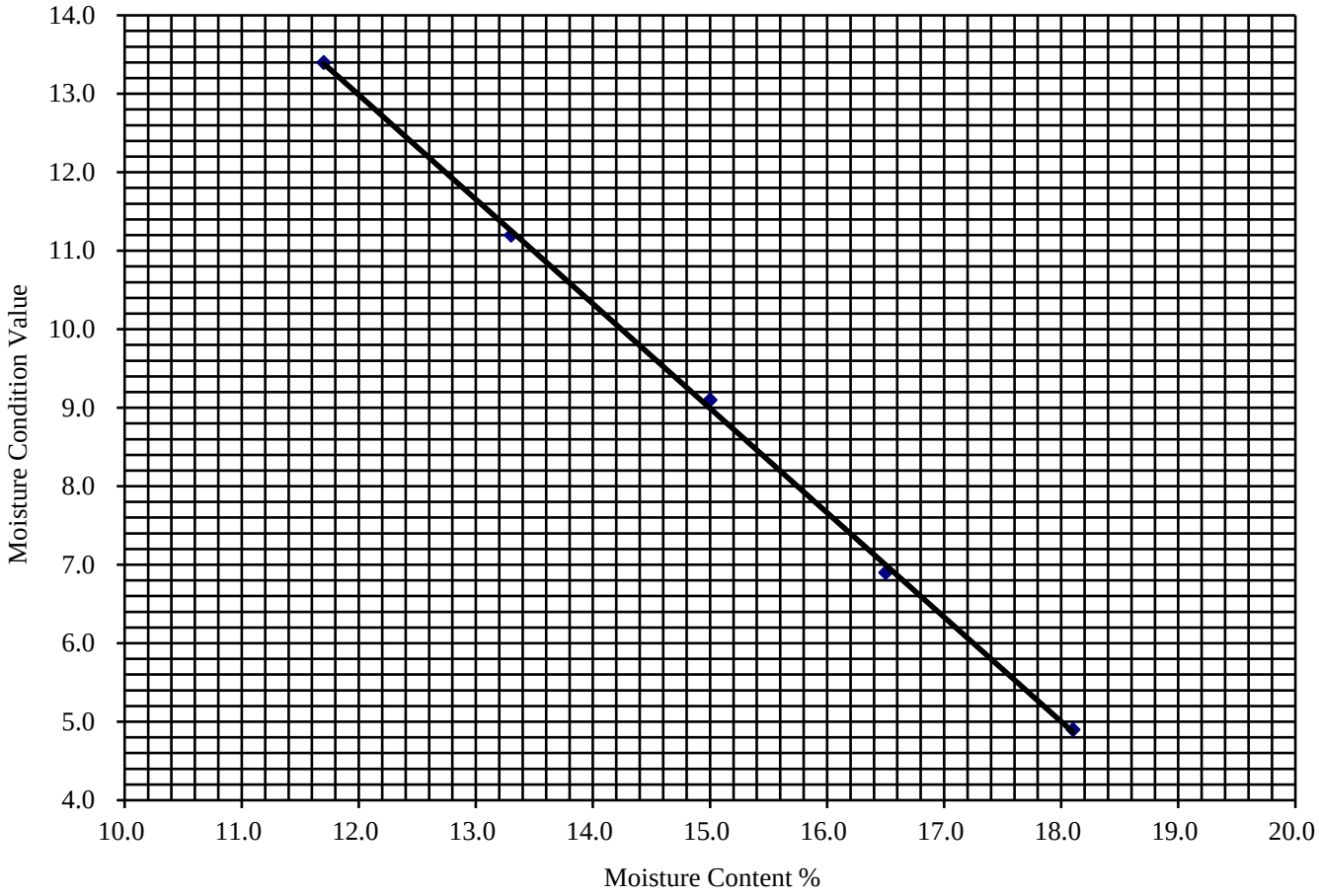
BS1377 - Part 2 : 2022 Clause 13.5

Hole Number: **TP311** **Top Depth (m):** **1.40**

Sample Number: **Base Depth (m):**

Sample Type: **B D**

Initial Water Content (%):	11.7
Single/Separate Samples Tested	Separate
Material Retained on the 20mm BS Test Sieve (%):	0



Test Results.

Test Number	1	2	3	4	5
Water Content (%)	11.7	13.3	15.0	16.5	18.1
MCV	13.4	11.2	9.1	6.9	4.9

PARTICLE SIZE DISTRIBUTION TEST

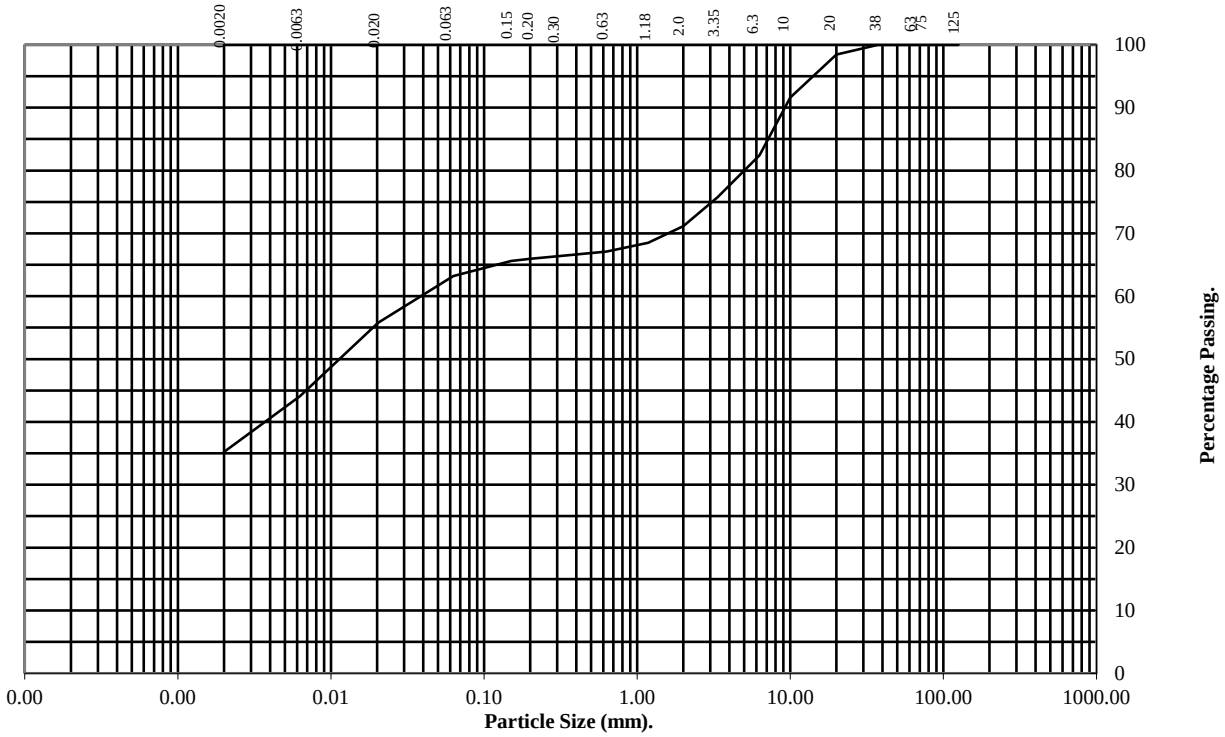
BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number: **TP314** **Top Depth (m):** **3.00**

Sample Number: **Base Depth (m):**

Sample Type: **B D**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	98
10	92
6.3	82
3.35	76
2	71
1.18	68
0.63	67
0.3	66
0.2	66
0.15	66
0.063	63

Particle Diameter	Percentage Passing
0.020	56
0.0063	44
0.0020	35
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	29
Sand	8
Silt	28
Clay	35

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No: **PSL25/6231**

Client Ref: **4173**

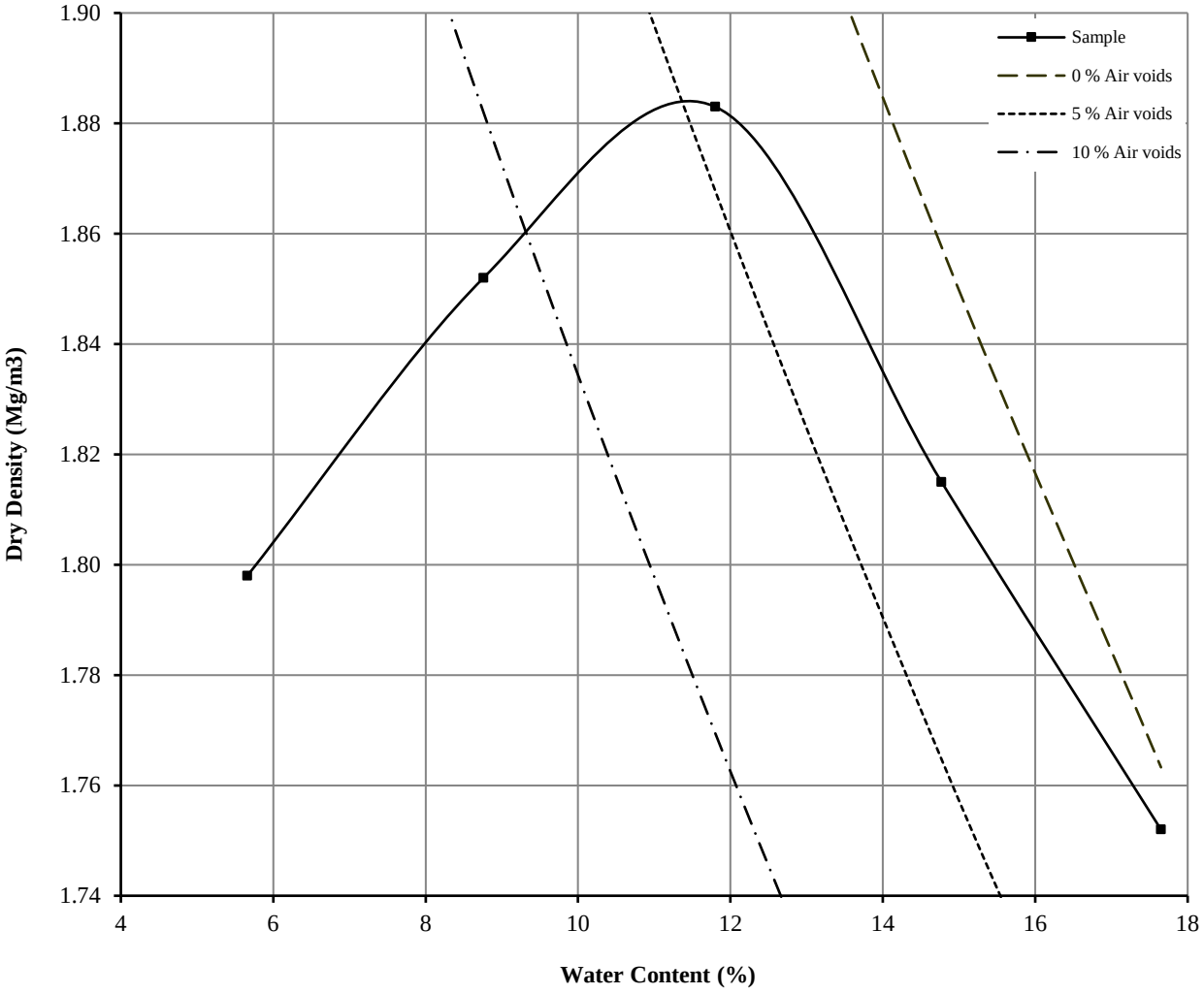
DRY DENSITY/WATER CONTENT RELATIONSHIP

BS 1377 - Part 2 : Clause 11 : 2022

Hole Number: TP314 **Top Depth (m):** 3.00

Sample Number: **Base Depth (m):**

Sample Type: B D



Initial Water Content:		11.8	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.56	Measured	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.88	Material Retained on 20.0 mm Test Sieve (%):		2
Optimum Water Content (%):		12	Grading Zone:		2
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No.
PSL25/6231
Client Ref
4173

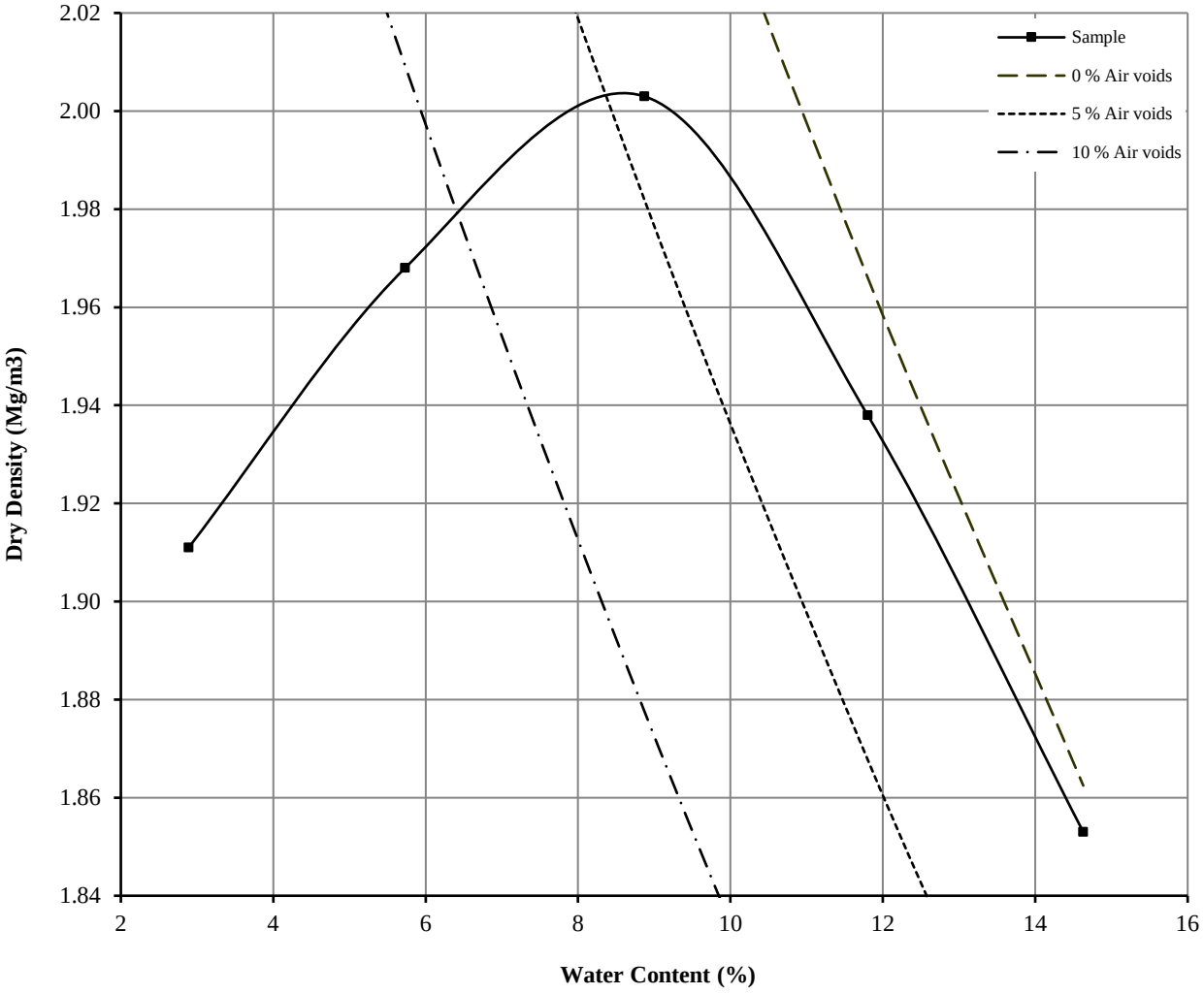
DRY DENSITY/WATER CONTENT RELATIONSHIP

BS 1377 - Part 2 : Clause 11 : 2022

Hole Number: TP314 **Top Depth (m):** 3.00

Sample Number: **Base Depth (m):**

Sample Type: B D



Initial Water Content:		11.8	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.56	Measured	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		2.00	Material Retained on 20.0 mm Test Sieve (%):		2
Optimum Water Content (%):		9	Grading Zone:		2
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No.
PSL25/6231
Client Ref
4173

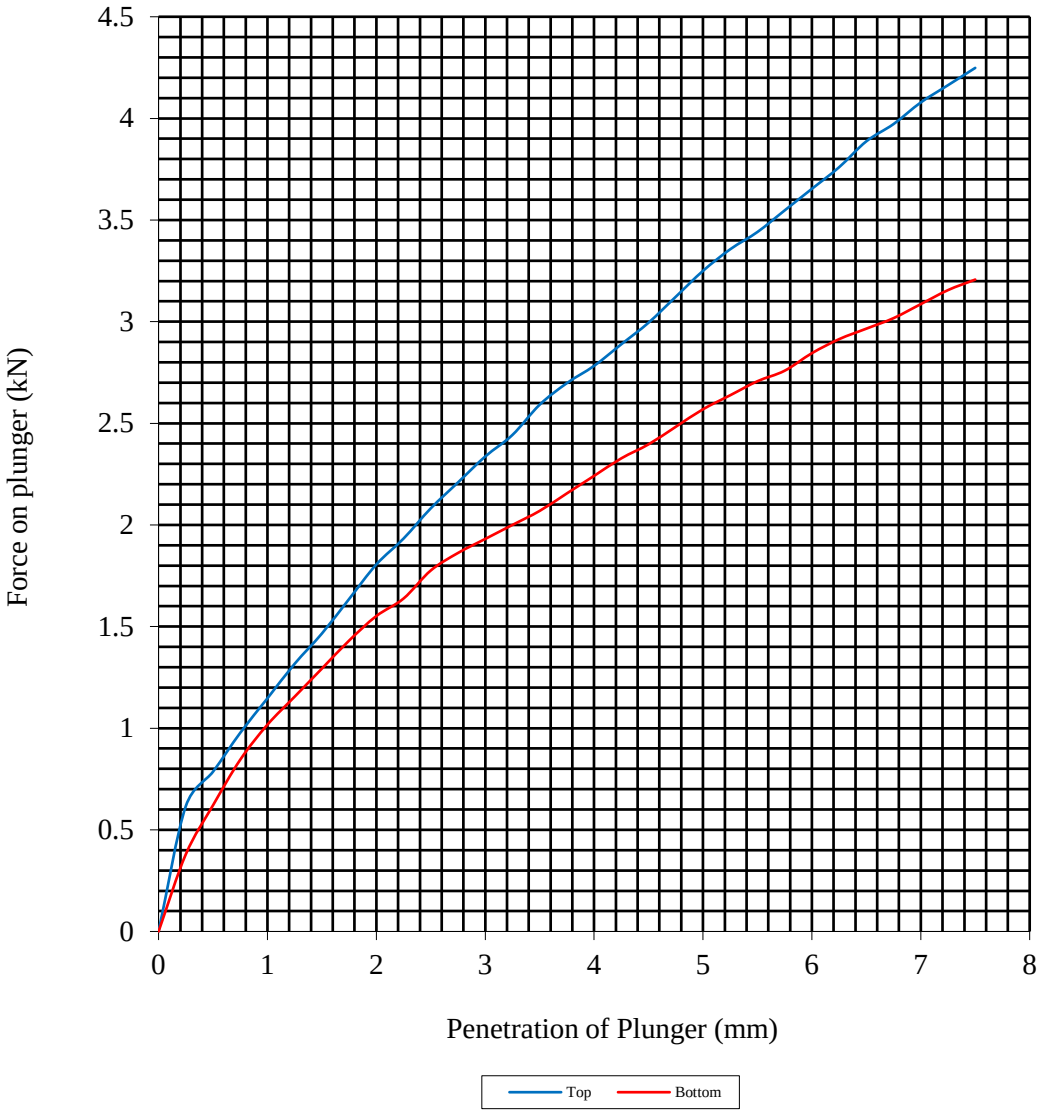
CALIFORNIA BEARING RATIO (CBR)

BS 1377 - Part 2 : Clause 15 : 2022

Hole Number: TP314 **Top Depth (m):** 3.00

Sample Number: **Base Depth (m):**

Sample Type: B D



Initial Sample Conditions		Sample Preparation		Final Water Content %		C.B.R. Value %	
Water Content:	11.8	Surcharge Kg:	4.00	Sample Top	11.6	Sample Top	16.3
Bulk Density Mg/m3:	2.09	Soaking Time hrs	0	Sample Bottom	12.1	Sample Bottom	13.5
Dry Density Mg/m3:	1.87	Swelling mm:	0	Remarks : See Summary of Soil Descriptions.			
Percentage retained on 20mm BS test sieve:			2				
Compaction Conditions		2.5kg					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No: PSL25/6231

Client Ref: 4173

MOISTURE CONDITION VALUE (MCV)

BS1377 - Part 2 : 2022 : Clause 13

Hole Number: **TP314** **Top Depth (m):** **3.00**

Sample Number: **Base Depth (m):**

Sample Type: **B D**

Material Retained on the 20mm BS Test Sieve (%):	2
Interpretation based on steepest straight line intercept with 5mm change in penetration.	

MCV Determination

Blows (N)	Penetration (mm)	n to 4n (mm)
1	70.4	14.3
2	63.4	14.5
3	59.2	14.2
4	56.1	13.4
6	51.6	11.2
8	48.9	9.8
12	45.0	7.8
16	42.7	6.3
24	40.4	4.3
32	39.1	
48	37.2	
64	36.4	
96	36.1	
128		
192		
256		

Test Results.

Water Content (%)	12.0
MCV	12.4

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No: **PSL25/6231**

Client Ref: **4173**

PARTICLE SIZE DISTRIBUTION TEST

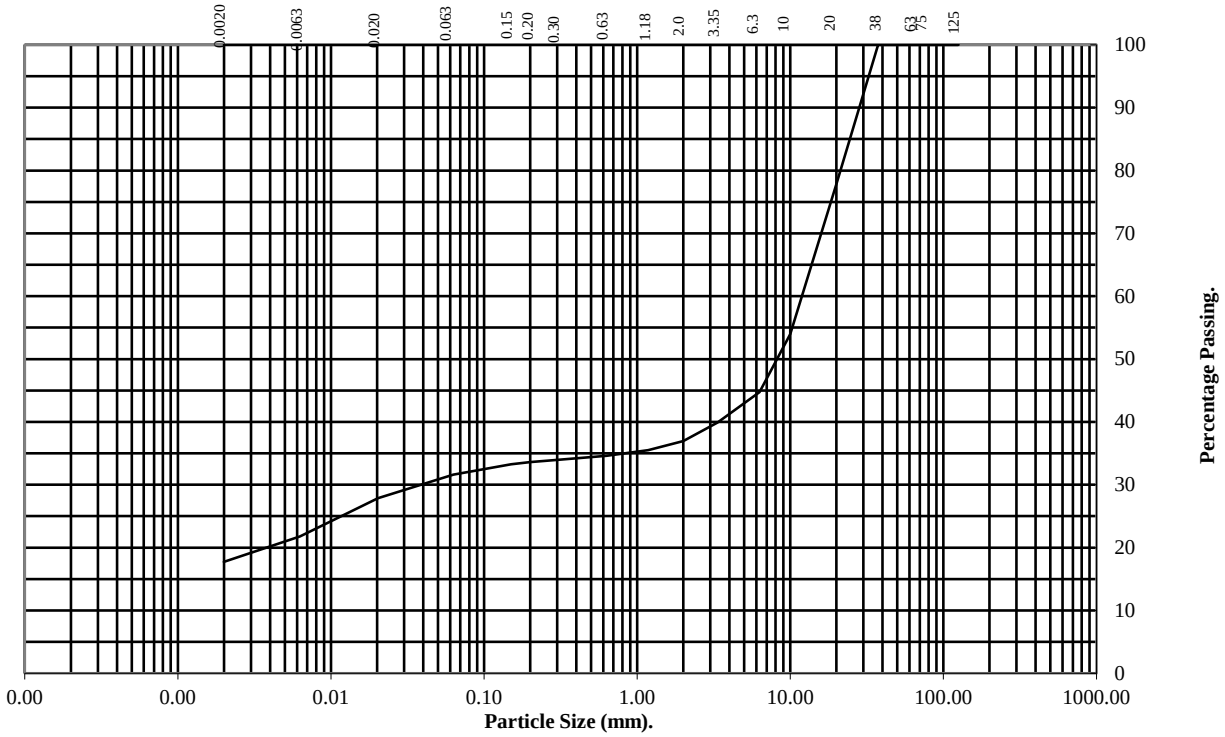
BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number: TP315 **Top Depth (m):** 2.70

Sample Number: **Base Depth (m):**

Sample Type: B D



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	78
10	54
6.3	45
3.35	40
2	37
1.18	35
0.63	35
0.3	34
0.2	34
0.15	33
0.063	32

Particle Diameter	Percentage Passing
0.020	28
0.0063	22
0.0020	18
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	63
Sand	5
Silt	14
Clay	18

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No: PSL25/6231

Client Ref: 4173

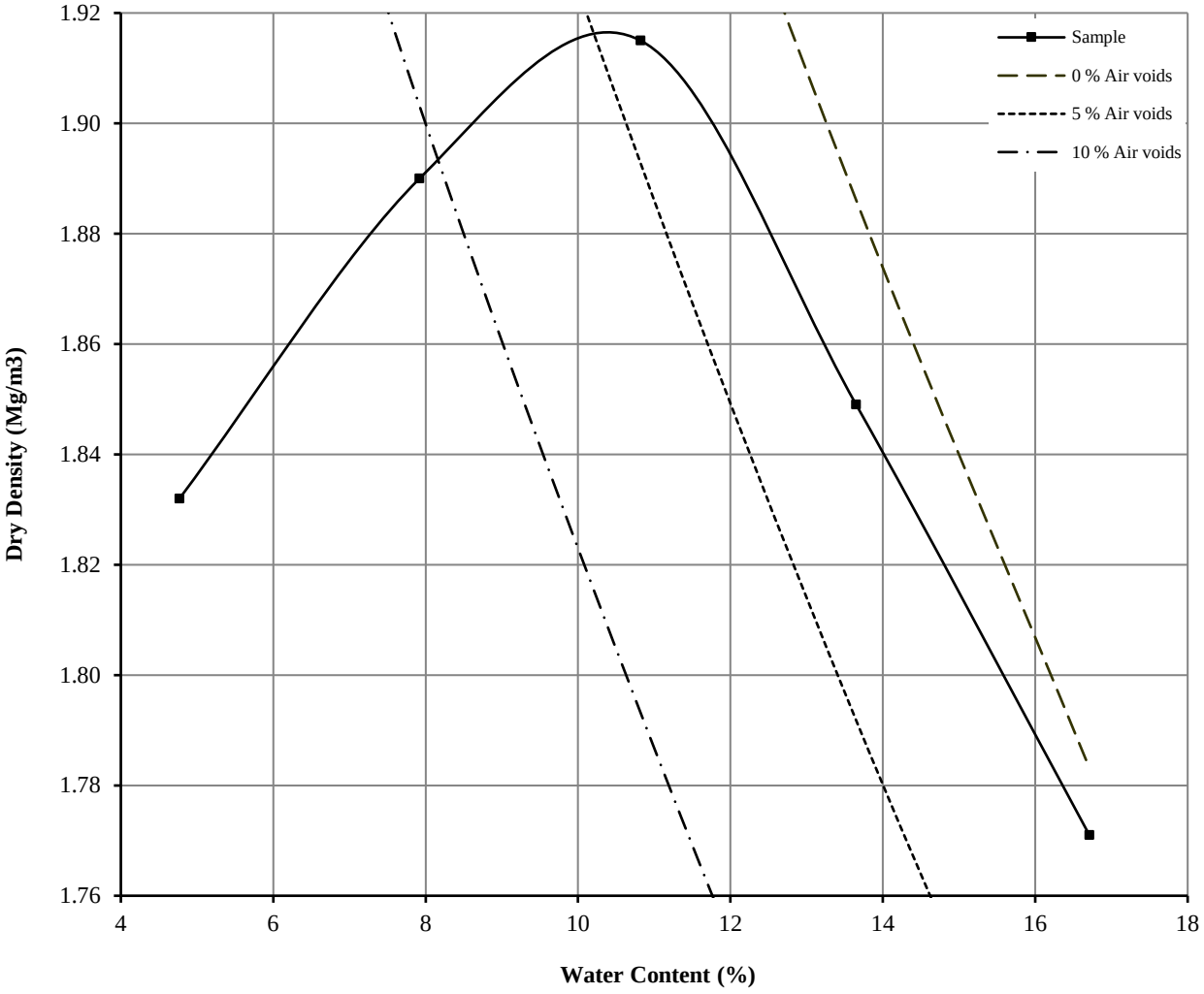
DRY DENSITY/WATER CONTENT RELATIONSHIP

BS 1377 - Part 2 : Clause 11 : 2022

Hole Number: TP315 **Top Depth (m):** 2.70

Sample Number: **Base Depth (m):**

Sample Type: B D



Initial Water Content:		7.9	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.54	Measured	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.92	Material Retained on 20.0 mm Test Sieve (%):		22
Optimum Water Content (%):		11	Grading Zone:		3
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No.
PSL25/6231
Client Ref
4173

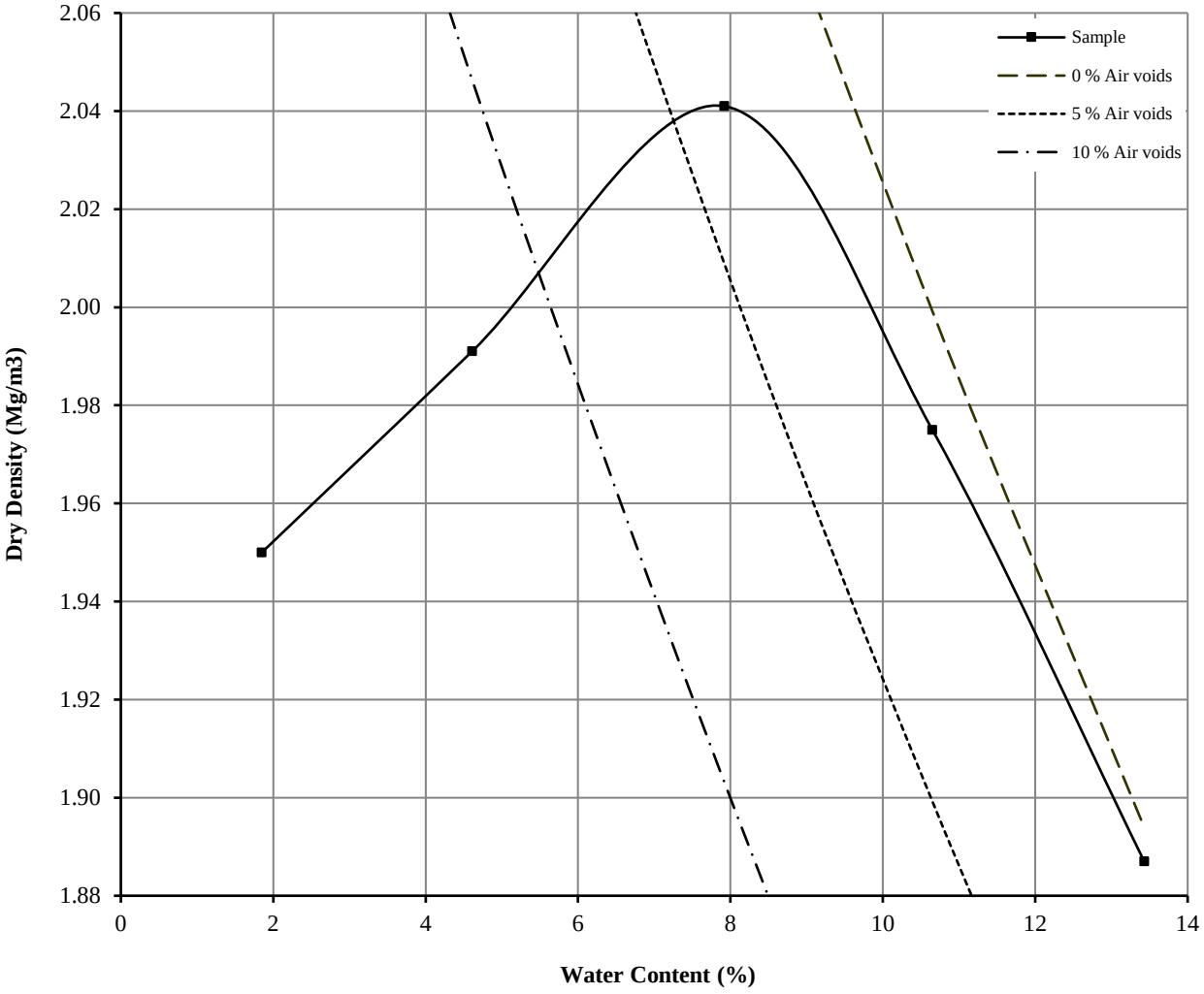
DRY DENSITY/WATER CONTENT RELATIONSHIP

BS 1377 - Part 2 : Clause 11 : 2022

Hole Number: TP315 **Top Depth (m):** 2.70

Sample Number: **Base Depth (m):**

Sample Type: B D



Initial Water Content:		7.9	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.54	Measured	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		2.04	Material Retained on 20.0 mm Test Sieve (%):		22
Optimum Water Content (%):		8	Grading Zone:		3
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No.
PSL25/6231
Client Ref
4173

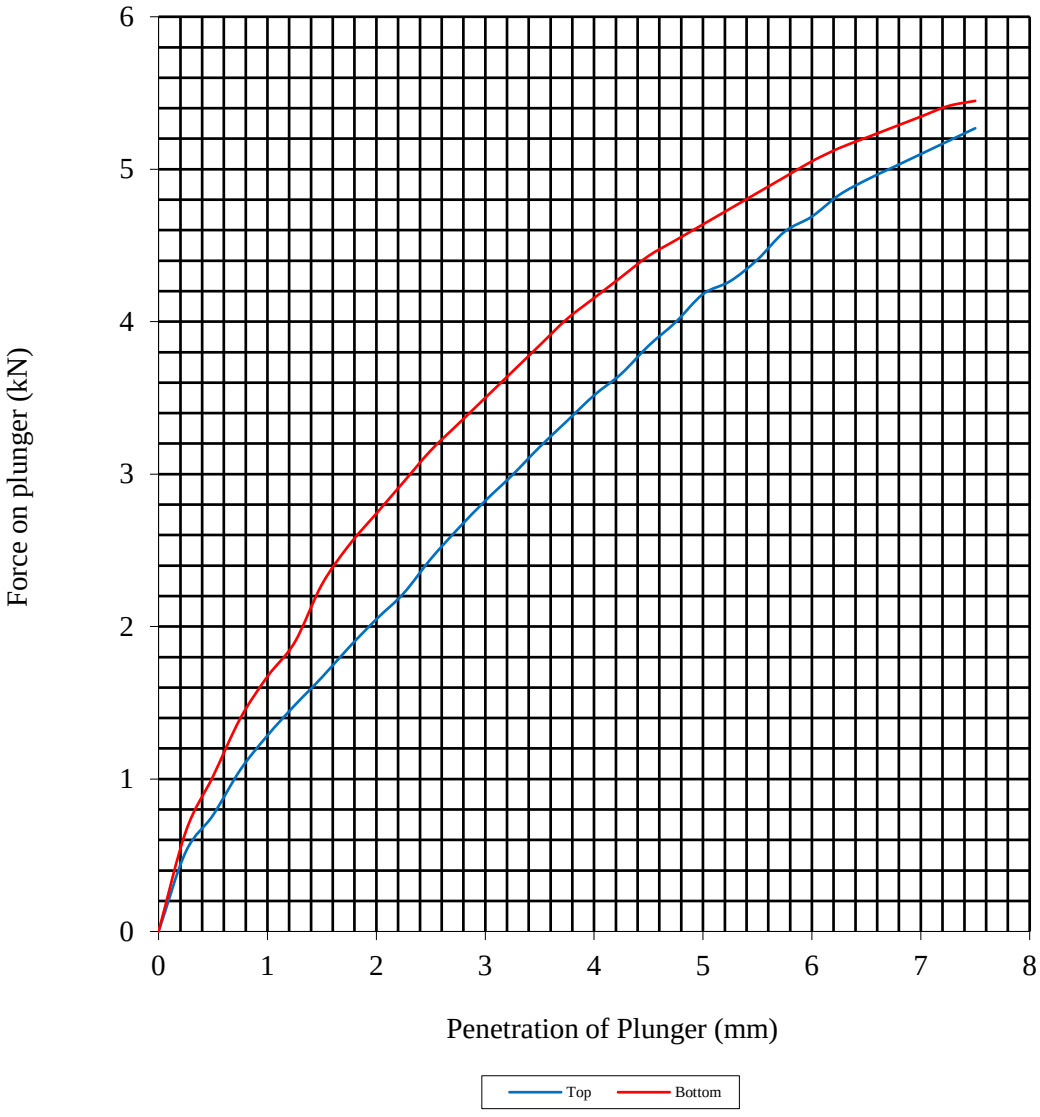
CALIFORNIA BEARING RATIO (CBR)

BS 1377 - Part 2 : Clause 15 : 2022

Hole Number: TP315 **Top Depth (m):** 2.70

Sample Number: **Base Depth (m):**

Sample Type: B D



Initial Sample Conditions		Sample Preparation		Final Water Content %		C.B.R. Value %	
Water Content:	7.4	Surcharge Kg:	4.00	Sample Top	7.3	Sample Top	20.9
Bulk Density Mg/m3:	2.03	Soaking Time hrs	0	Sample Bottom	7.7	Sample Bottom	23.9
Dry Density Mg/m3:	1.89	Swelling mm:	0	Remarks : See Summary of Soil Descriptions.			
Percentage retained on 20mm BS test sieve:			22				
Compaction Conditions		2.5kg					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No: PSL25/6231

Client Ref: 4173

MCV/WATER CONTENT RELATION OF SOIL

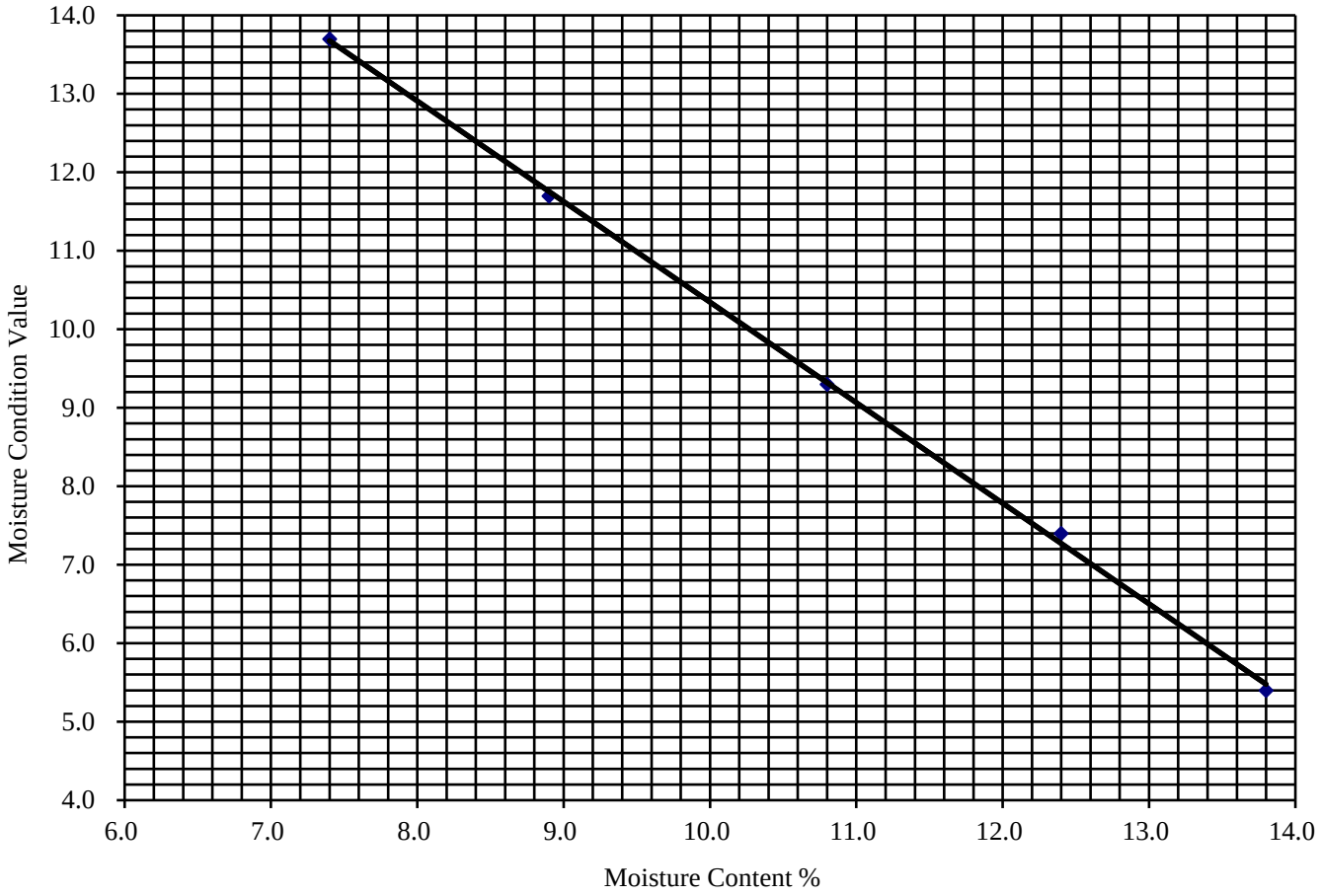
BS1377 - Part 2 : 2022 Clause 13.5

Hole Number: **TP315** **Top Depth (m):** **2.70**

Sample Number: **Base Depth (m):**

Sample Type: **B D**

Initial Water Content (%):	7.4
Single/Separate Samples Tested	Separate
Material Retained on the 20mm BS Test Sieve (%):	22



Test Results.

Test Number	1	2	3	4	5
Water Content (%)	7.4	8.9	10.8	12.4	13.8
MCV	13.7	11.7	9.3	7.4	5.4

PARTICLE SIZE DISTRIBUTION TEST

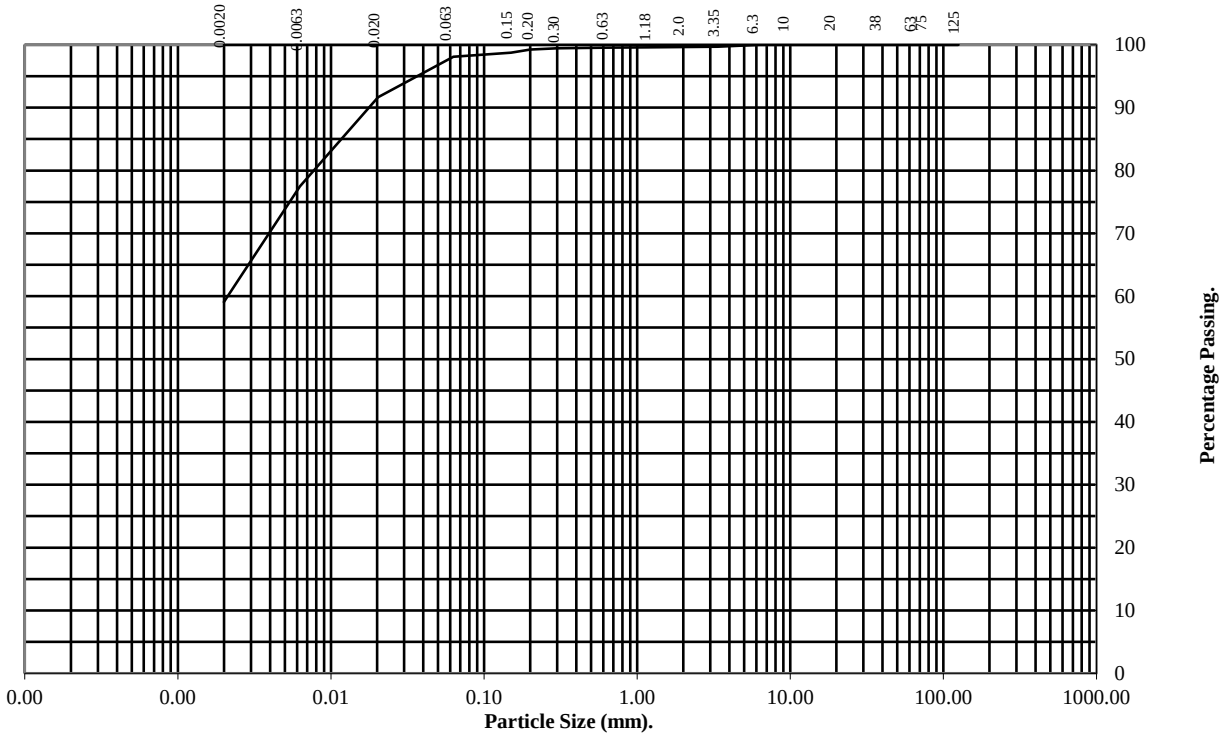
BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number: TP319 **Top Depth (m):** 0.50

Sample Number: **Base Depth (m):**

Sample Type: B D



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	100
2	100
1.18	100
0.63	100
0.3	99
0.2	99
0.15	99
0.063	98

Particle Diameter	Percentage Passing
0.020	92
0.0063	78
0.0020	59
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	0
Sand	2
Silt	39
Clay	59

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No:
PSL25/6231
Client Ref:
4173

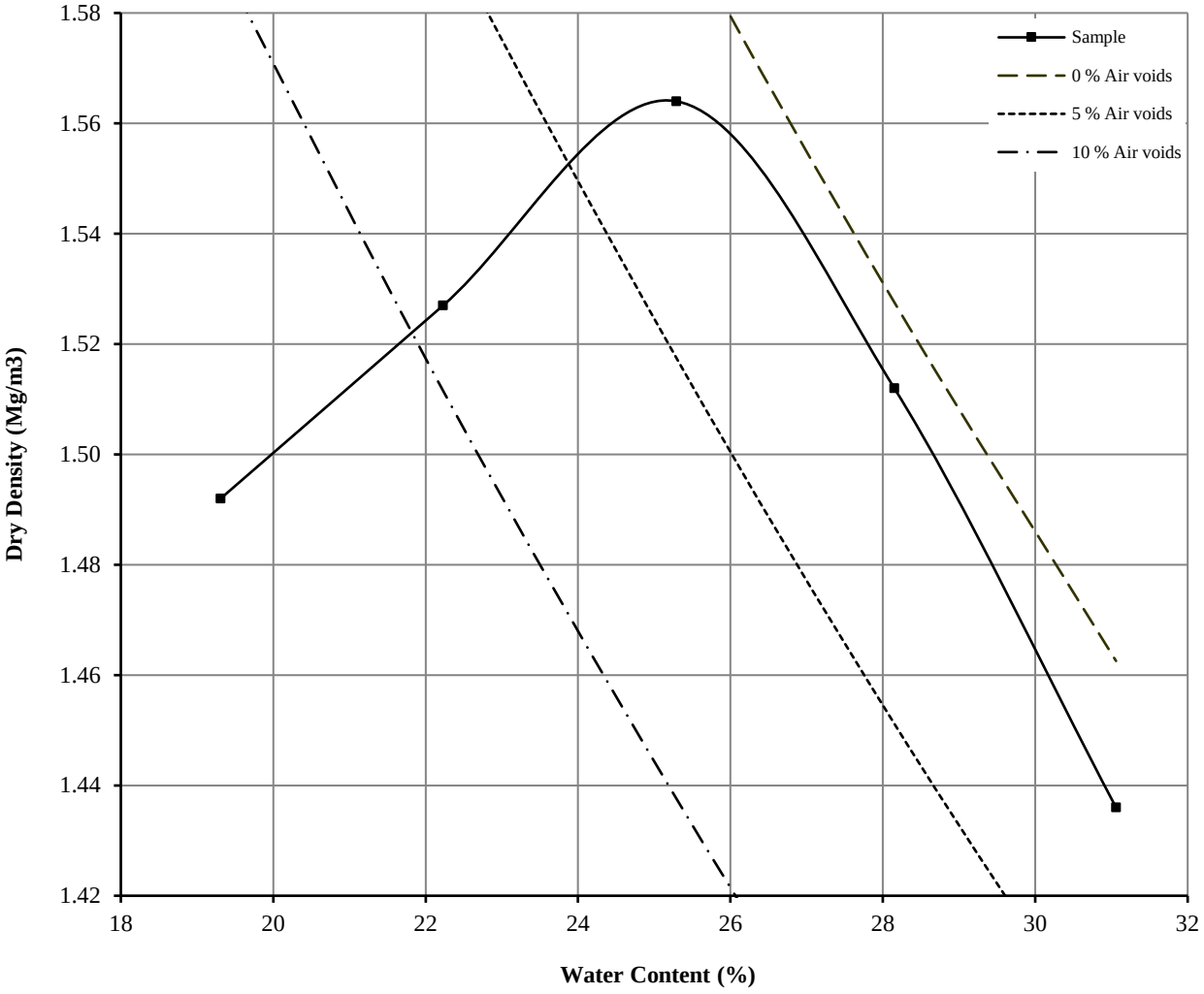
DRY DENSITY/WATER CONTENT RELATIONSHIP

BS 1377 - Part 2 : Clause 11 : 2022

Hole Number: TP319 **Top Depth (m):** 0.50

Sample Number: **Base Depth (m):**

Sample Type: B D



Initial Water Content:		22.2	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.68	Measured	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.56	Material Retained on 20.0 mm Test Sieve (%):		0
Optimum Water Content (%):		25	Grading Zone:		1
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No.
PSL25/6231
Client Ref
4173

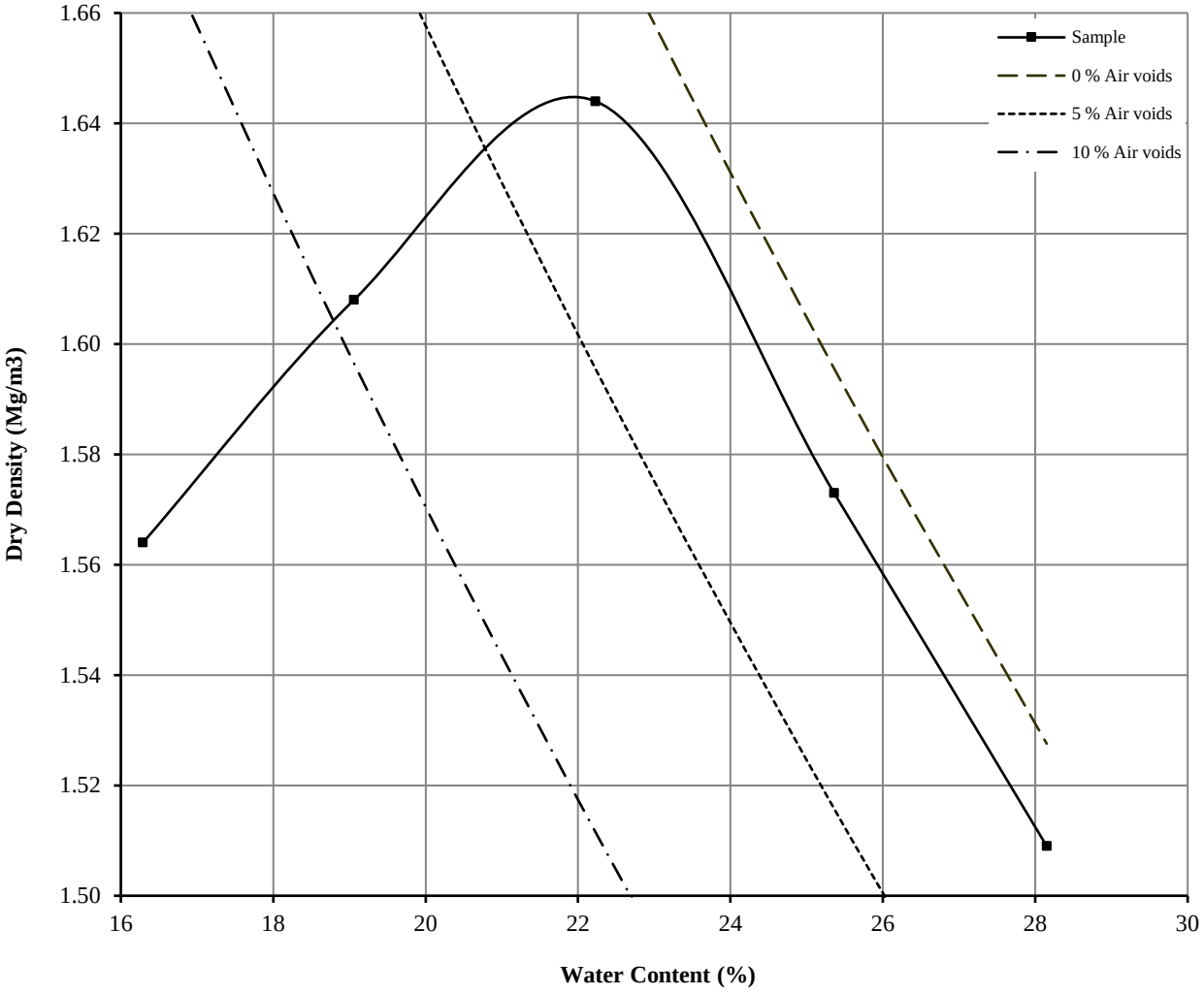
DRY DENSITY/WATER CONTENT RELATIONSHIP

BS 1377 - Part 2 : Clause 11 : 2022

Hole Number: TP319 **Top Depth (m):** 0.50

Sample Number: **Base Depth (m):**

Sample Type: B D



Initial Water Content:		22.2	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.68	Measured	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.64	Material Retained on 20.0 mm Test Sieve (%):		0
Optimum Water Content (%):		22	Grading Zone:		1
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No.
PSL25/6231
Client Ref
4173

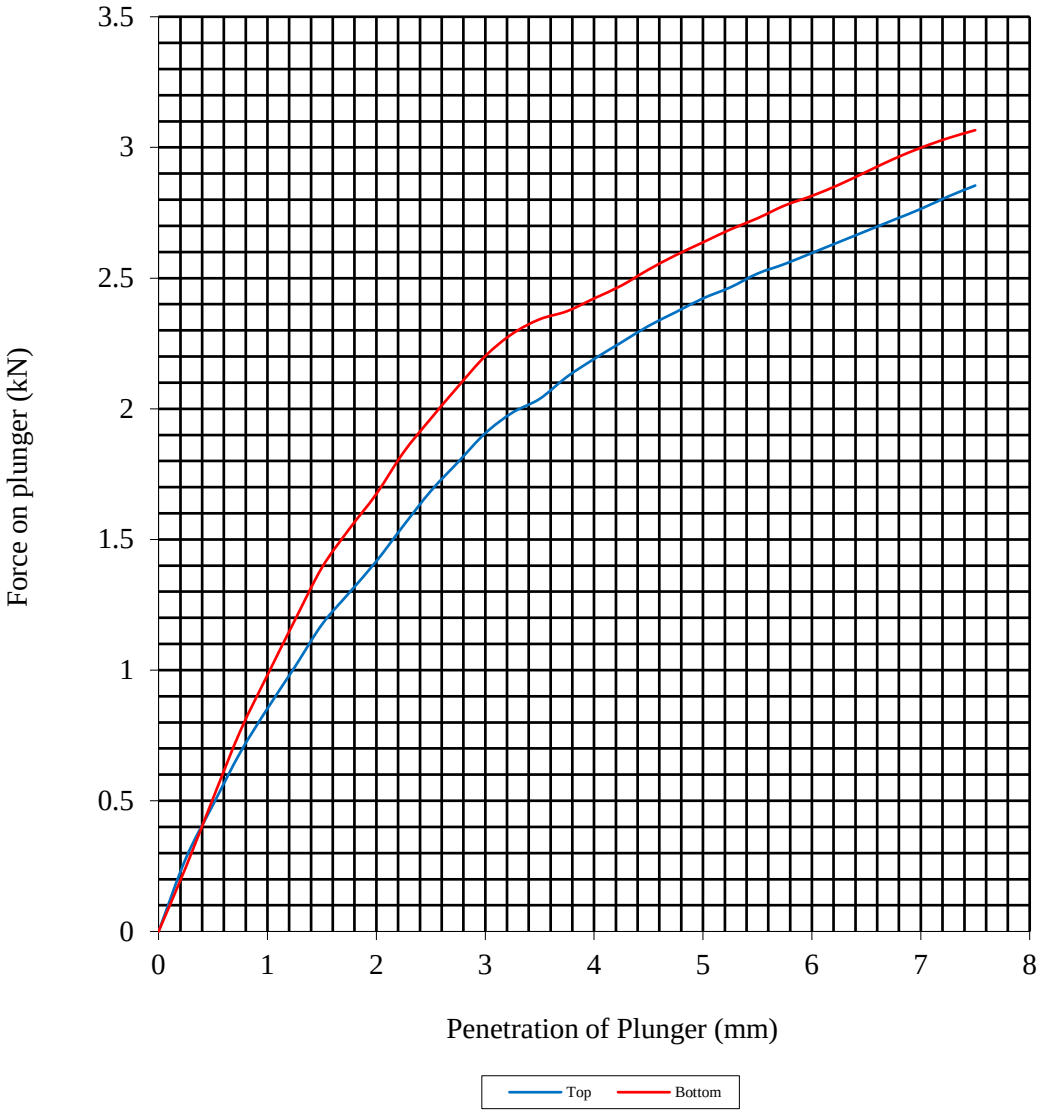
CALIFORNIA BEARING RATIO (CBR)

BS 1377 - Part 2 : Clause 15 : 2022

Hole Number: TP319 **Top Depth (m):** 0.50

Sample Number: **Base Depth (m):**

Sample Type: B D



Initial Sample Conditions		Sample Preparation		Final Water Content %		C.B.R. Value %	
Water Content:	22.2	Surcharge Kg:	0.00	Sample Top	22.1	Sample Top	12.8
Bulk Density Mg/m3:	1.87	Soaking Time hrs	0	Sample Bottom	20.8	Sample Bottom	14.9
Dry Density Mg/m3:	1.53	Swelling mm:	0	Remarks : See Summary of Soil Descriptions.			
Percentage retained on 20mm BS test sieve:			0				
Compaction Conditions		2.5kg					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No: PSL25/6231

Client Ref: 4173

MCV/WATER CONTENT RELATION OF SOIL

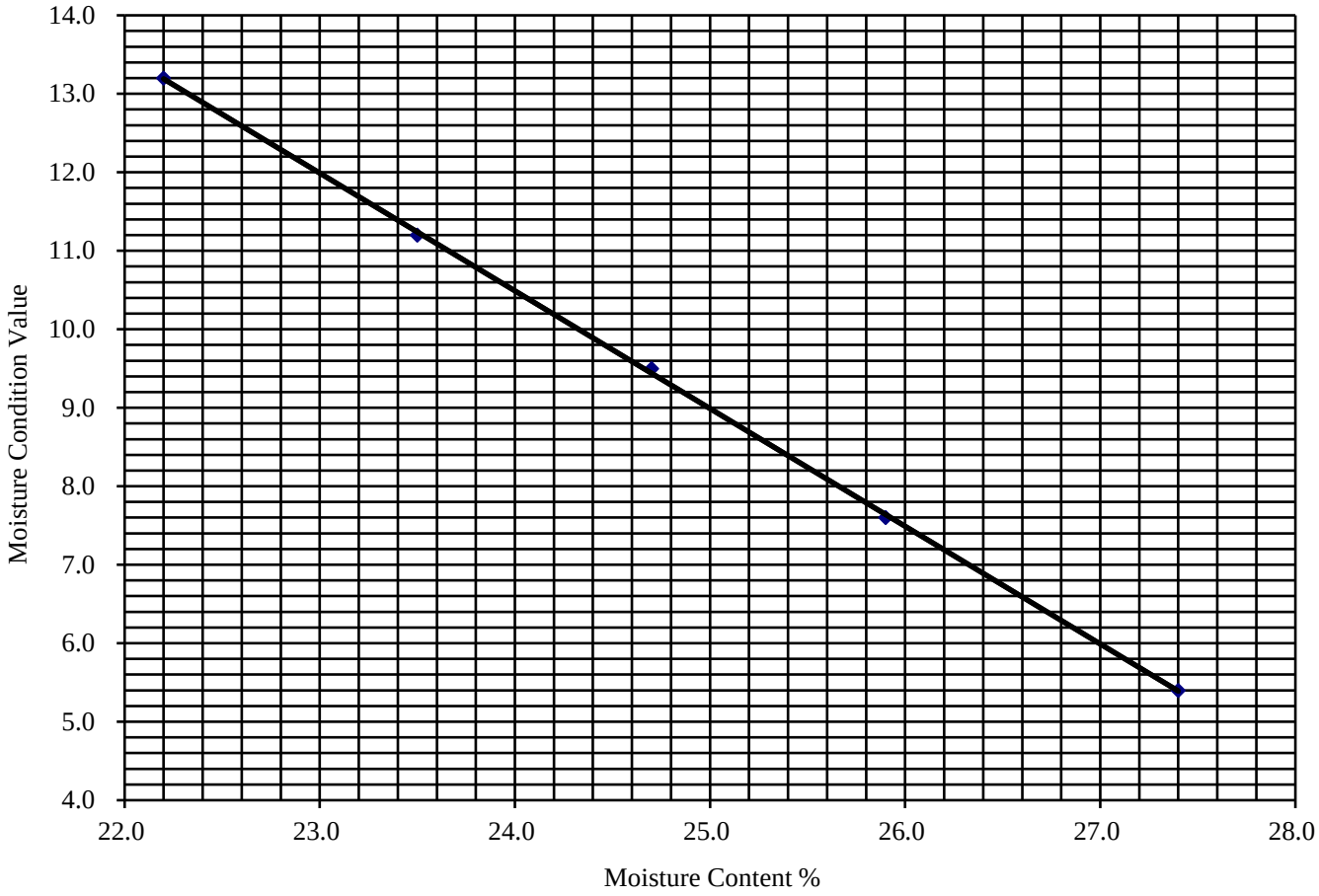
BS1377 - Part 2 : 2022 Clause 13.5

Hole Number: **TP319** **Top Depth (m):** **0.50**

Sample Number: **Base Depth (m):**

Sample Type: **B D**

Initial Water Content (%):	22.2
Single/Separate Samples Tested	Separate
Material Retained on the 20mm BS Test Sieve (%):	0



Test Results.

Test Number	1	2	3	4	5
Water Content (%)	22.2	23.5	24.7	25.9	27.4
MCV	13.2	11.2	9.5	7.6	5.4

PARTICLE SIZE DISTRIBUTION TEST

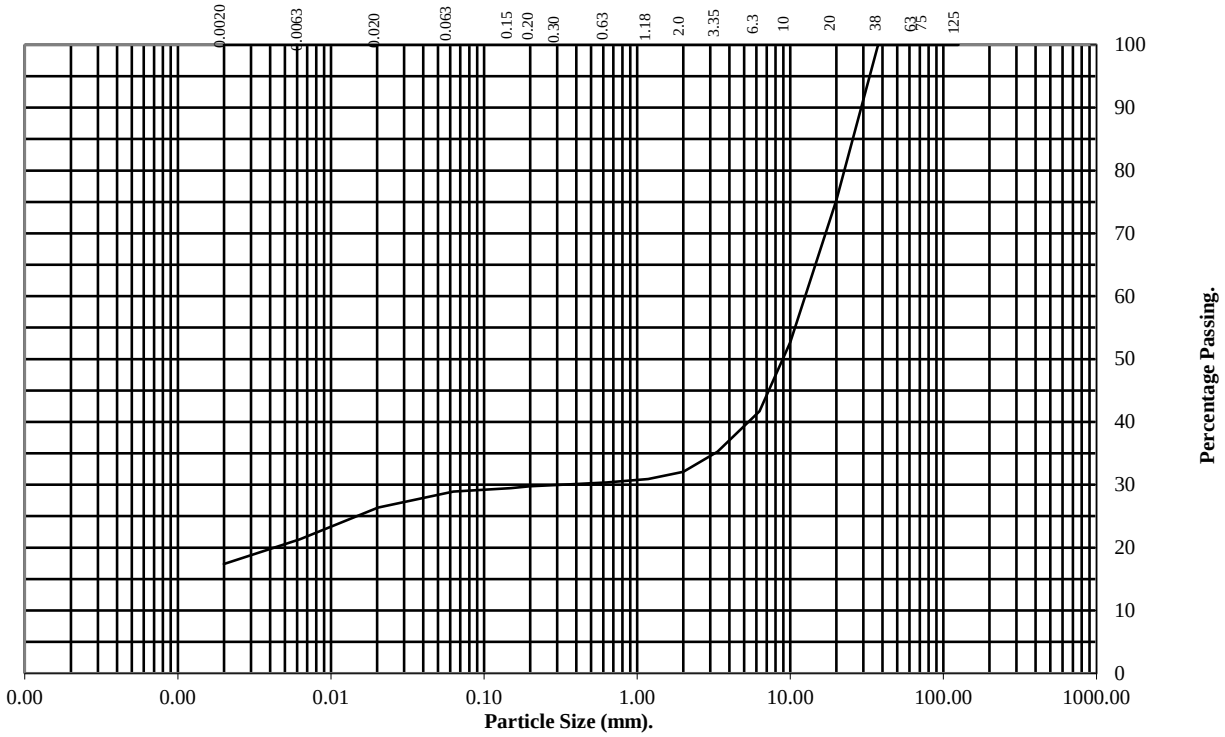
BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number: TP321 **Top Depth (m):** 2.25

Sample Number: **Base Depth (m):**

Sample Type: B D



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	75
10	53
6.3	42
3.35	35
2	32
1.18	31
0.63	30
0.3	30
0.2	30
0.15	29
0.063	29

Particle Diameter	Percentage Passing
0.020	26
0.0063	21
0.0020	17
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	68
Sand	3
Silt	12
Clay	17

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No: PSL25/6231

Client Ref: 4173

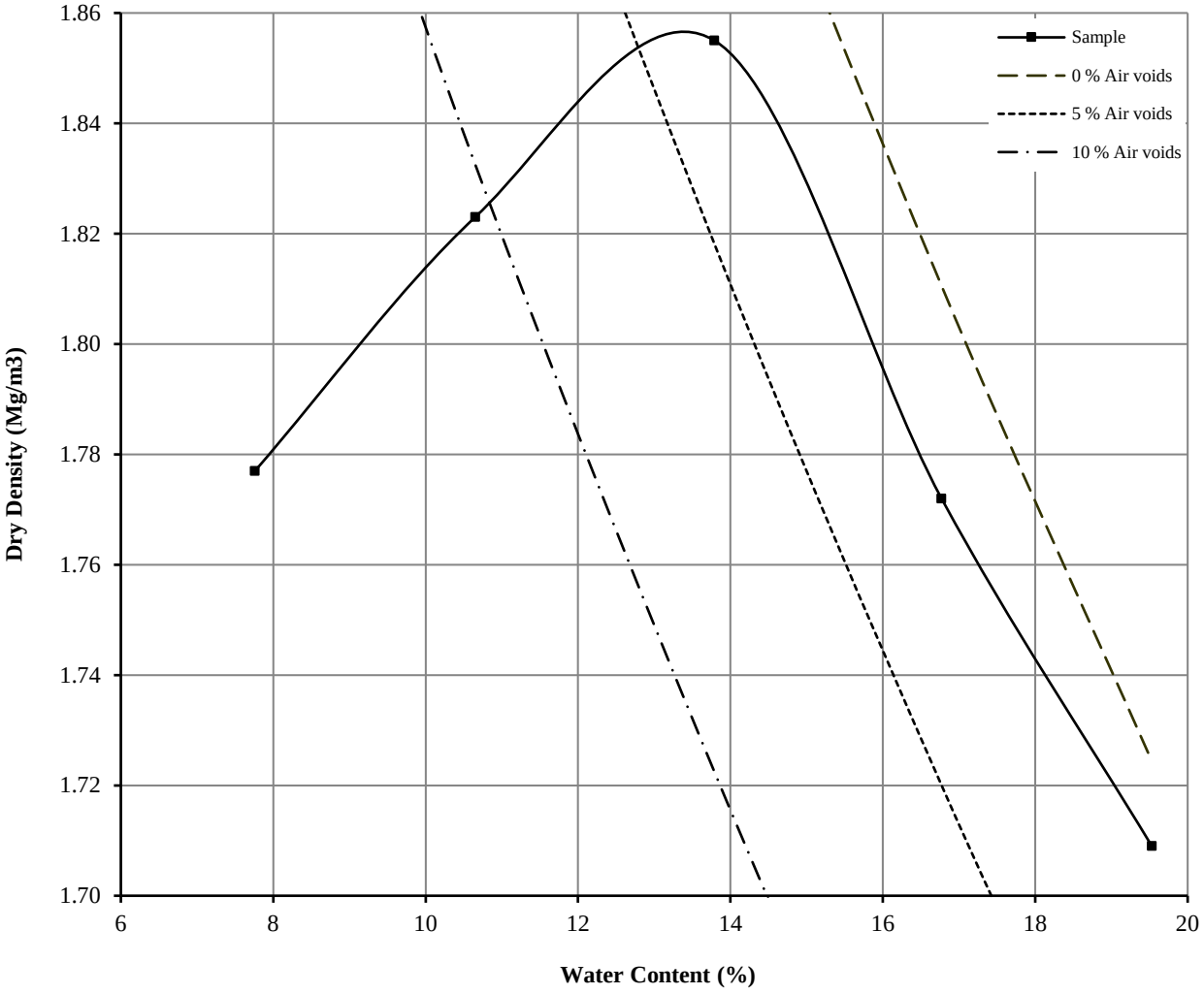
DRY DENSITY/WATER CONTENT RELATIONSHIP

BS 1377 - Part 2 : Clause 11 : 2022

Hole Number: TP321 **Top Depth (m):** 2.25

Sample Number: **Base Depth (m):**

Sample Type: B D



Initial Water Content:		7.8	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.60	Measured	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.86	Material Retained on 20.0 mm Test Sieve (%):		25
Optimum Water Content (%):		14	Grading Zone:		3
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No.
PSL25/6231
Client Ref
4173

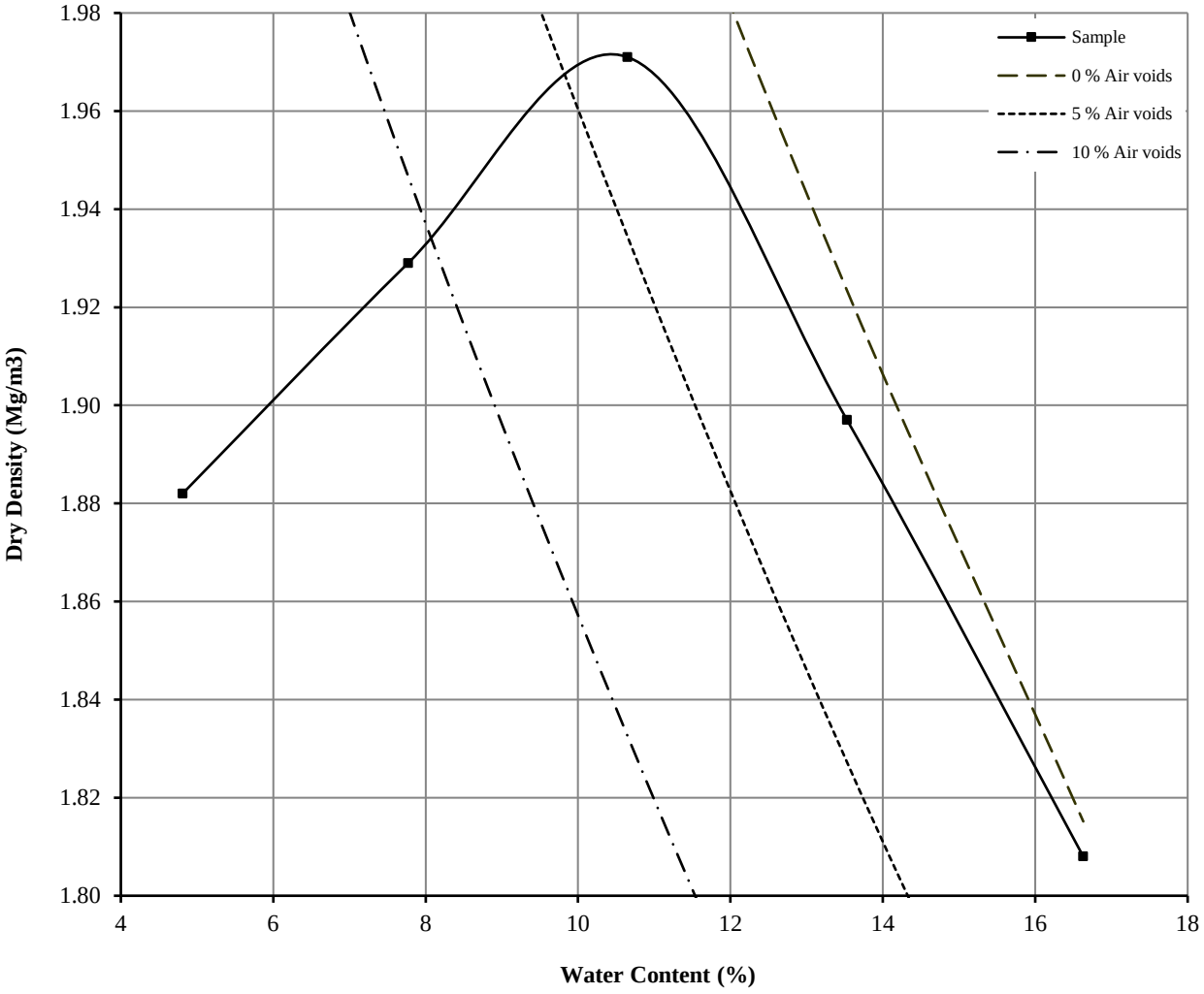
DRY DENSITY/WATER CONTENT RELATIONSHIP

BS 1377 - Part 2 : Clause 11 : 2022

Hole Number: TP321 **Top Depth (m):** 2.25

Sample Number: **Base Depth (m):**

Sample Type: B D



Initial Water Content:		7.8	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.60	Measured	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.97	Material Retained on 20.0 mm Test Sieve (%):		25
Optimum Water Content (%):		11	Grading Zone:		3
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No.
PSL25/6231
Client Ref
4173

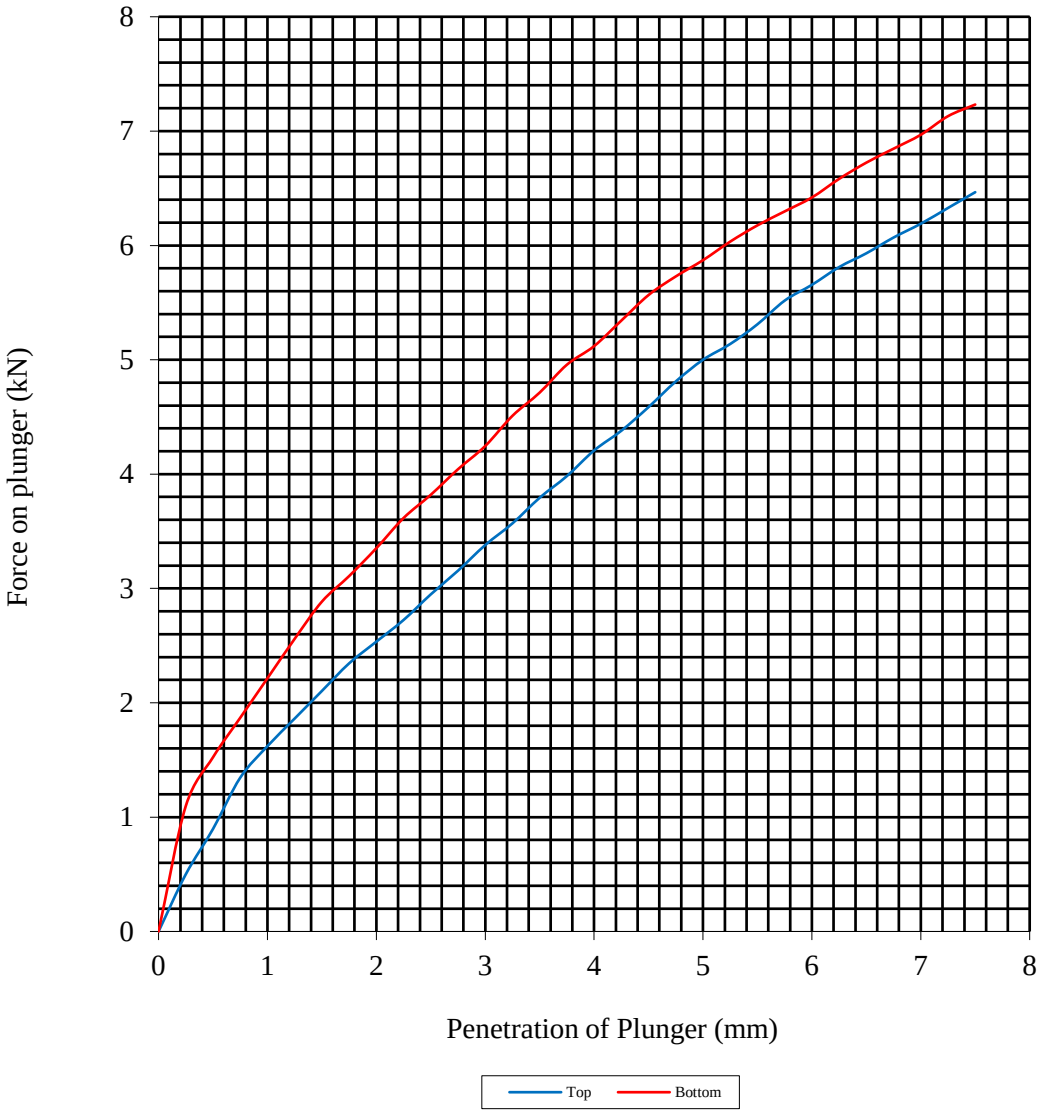
CALIFORNIA BEARING RATIO (CBR)

BS 1377 - Part 2 : Clause 15 : 2022

Hole Number: TP321 **Top Depth (m):** 2.25

Sample Number: **Base Depth (m):**

Sample Type: B D



Initial Sample Conditions		Sample Preparation		Final Water Content %		C.B.R. Value %	
Water Content:	7.8	Surcharge Kg:	4.00	Sample Top	7.7	Sample Top	25.0
Bulk Density Mg/m3:	1.91	Soaking Time hrs	0	Sample Bottom	8.0	Sample Bottom	29.4
Dry Density Mg/m3:	1.78	Swelling mm:	0	Remarks : See Summary of Soil Descriptions.			
Percentage retained on 20mm BS test sieve:			25				
Compaction Conditions		2.5kg					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No: PSL25/6231

Client Ref: 4173

MOISTURE CONDITION VALUE (MCV)

BS1377 - Part 2 : 2022 : Clause 13

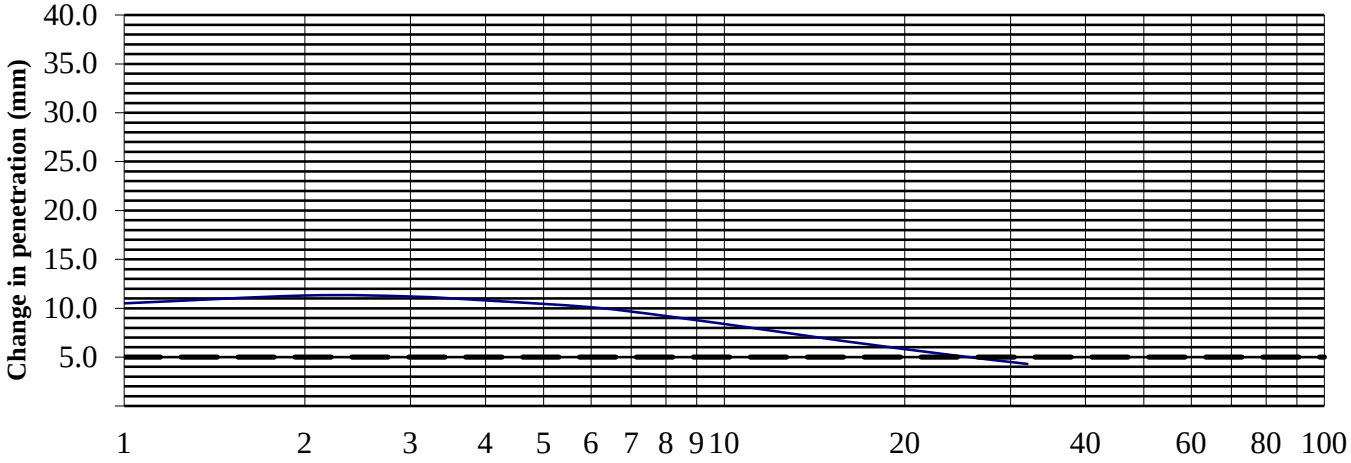
Hole Number: **TP321** **Top Depth (m):** **2.25**

Sample Number: **Base Depth (m):**

Sample Type: **B D**

Material Retained on the 20mm BS Test Sieve (%):	25
Interpretation based on steepest straight line intercept with 5mm change in penetration.	

MCV Determination



Blows (N)	Penetration (mm)	n to 4n (mm)
1	67.0	10.5
2	62.3	11.3
3	58.9	11.2
4	56.5	10.8
6	53.3	10.1
8	51.0	9.2
12	47.7	7.7
16	45.7	6.6
24	43.2	5.2
32	41.8	4.3
48	40.0	
64	39.1	
96	38.0	
128	37.5	
192		
256		

Test Results.

Water Content (%)	7.8
MCV	13.9

PARTICLE SIZE DISTRIBUTION TEST

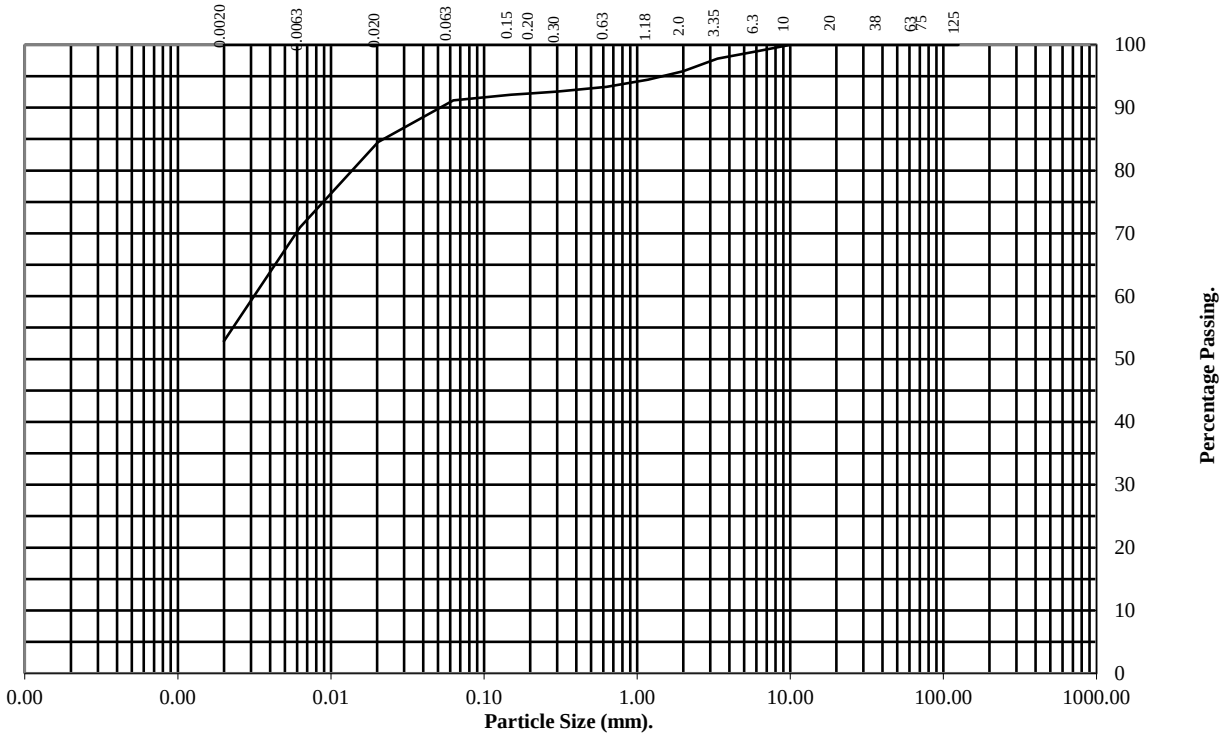
BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number: TP324 **Top Depth (m):** 2.00

Sample Number: **Base Depth (m):**

Sample Type: B D



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	99
3.35	98
2	96
1.18	94
0.63	93
0.3	93
0.2	92
0.15	92
0.063	91

Particle Diameter	Percentage Passing
0.020	85
0.0063	71
0.0020	53
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	4
Sand	5
Silt	38
Clay	53

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No: PSL25/6231

Client Ref: 4173

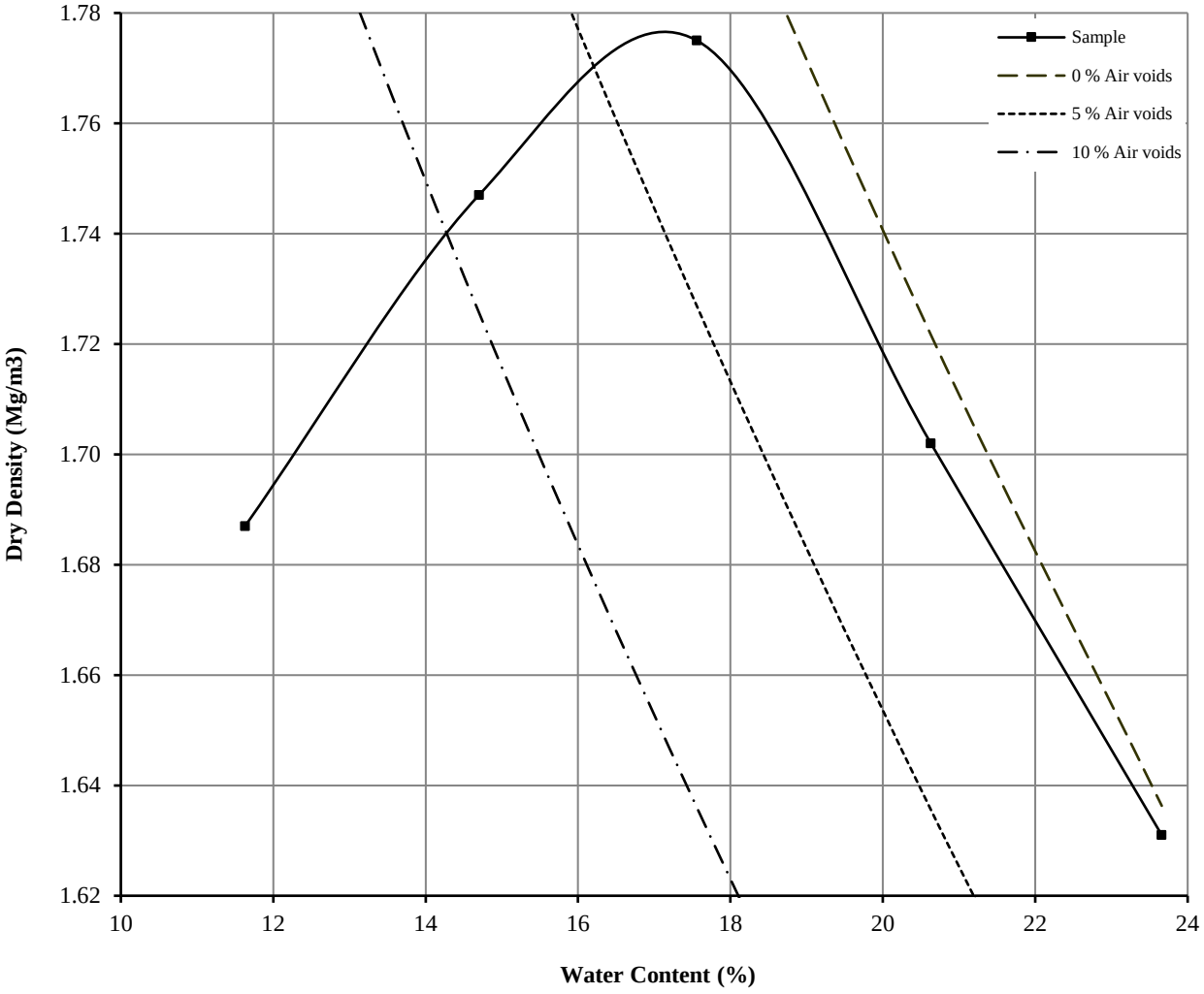
DRY DENSITY/WATER CONTENT RELATIONSHIP

BS 1377 - Part 2 : Clause 11 : 2022

Hole Number: TP324 **Top Depth (m):** 2.00

Sample Number: **Base Depth (m):**

Sample Type: B D



Initial Water Content:		14.7	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.67	Measured	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.78	Material Retained on 20.0 mm Test Sieve (%):		0
Optimum Water Content (%):		18	Grading Zone:		1
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No.
PSL25/6231
Client Ref
4173

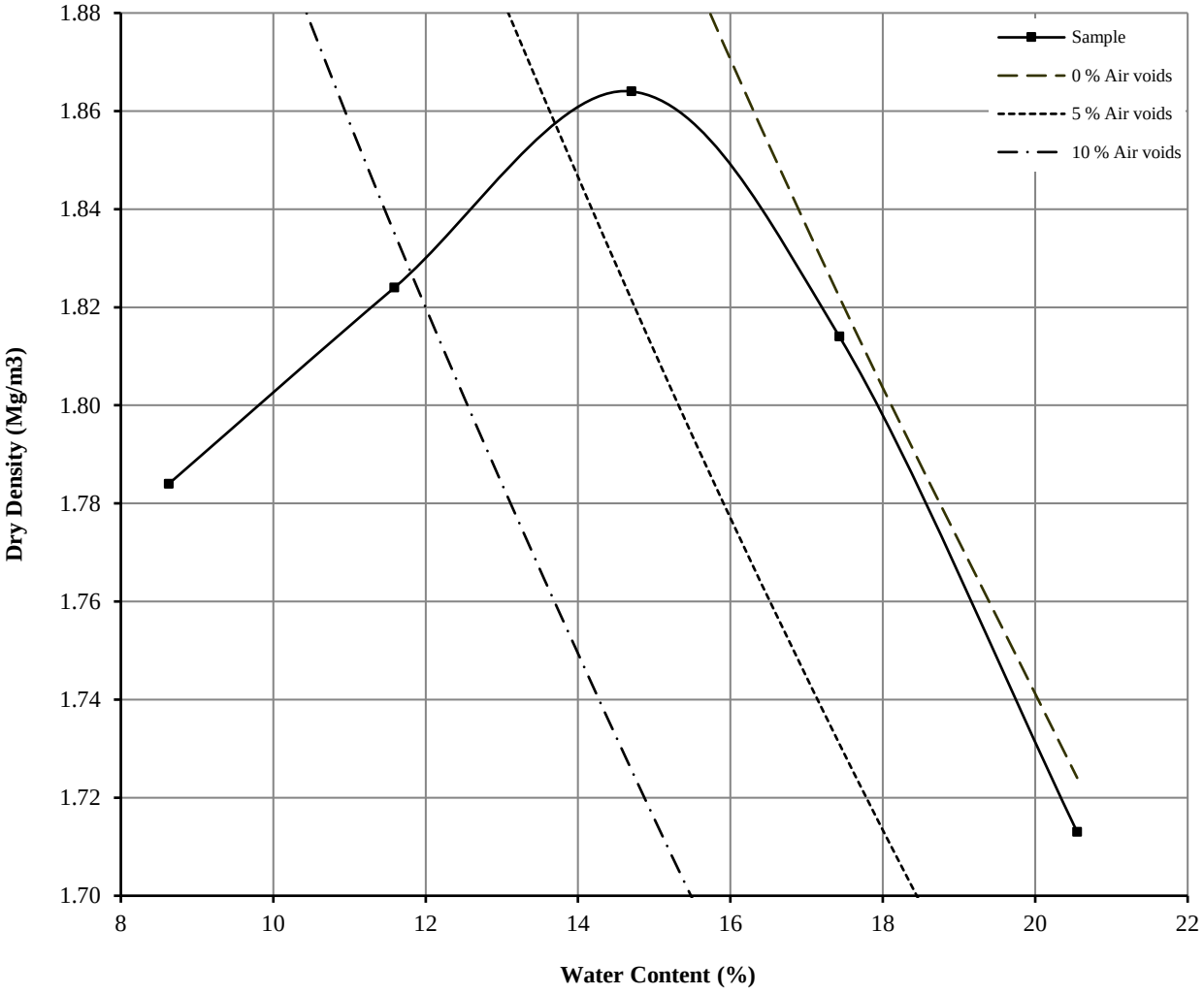
DRY DENSITY/WATER CONTENT RELATIONSHIP

BS 1377 - Part 2 : Clause 11 : 2022

Hole Number: TP324 **Top Depth (m):** 2.00

Sample Number: **Base Depth (m):**

Sample Type: B D



Initial Water Content:		14.7	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.67	Measured	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.86	Material Retained on 20.0 mm Test Sieve (%):		0
Optimum Water Content (%):		15	Grading Zone:		1
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No.
PSL25/6231
Client Ref
4173

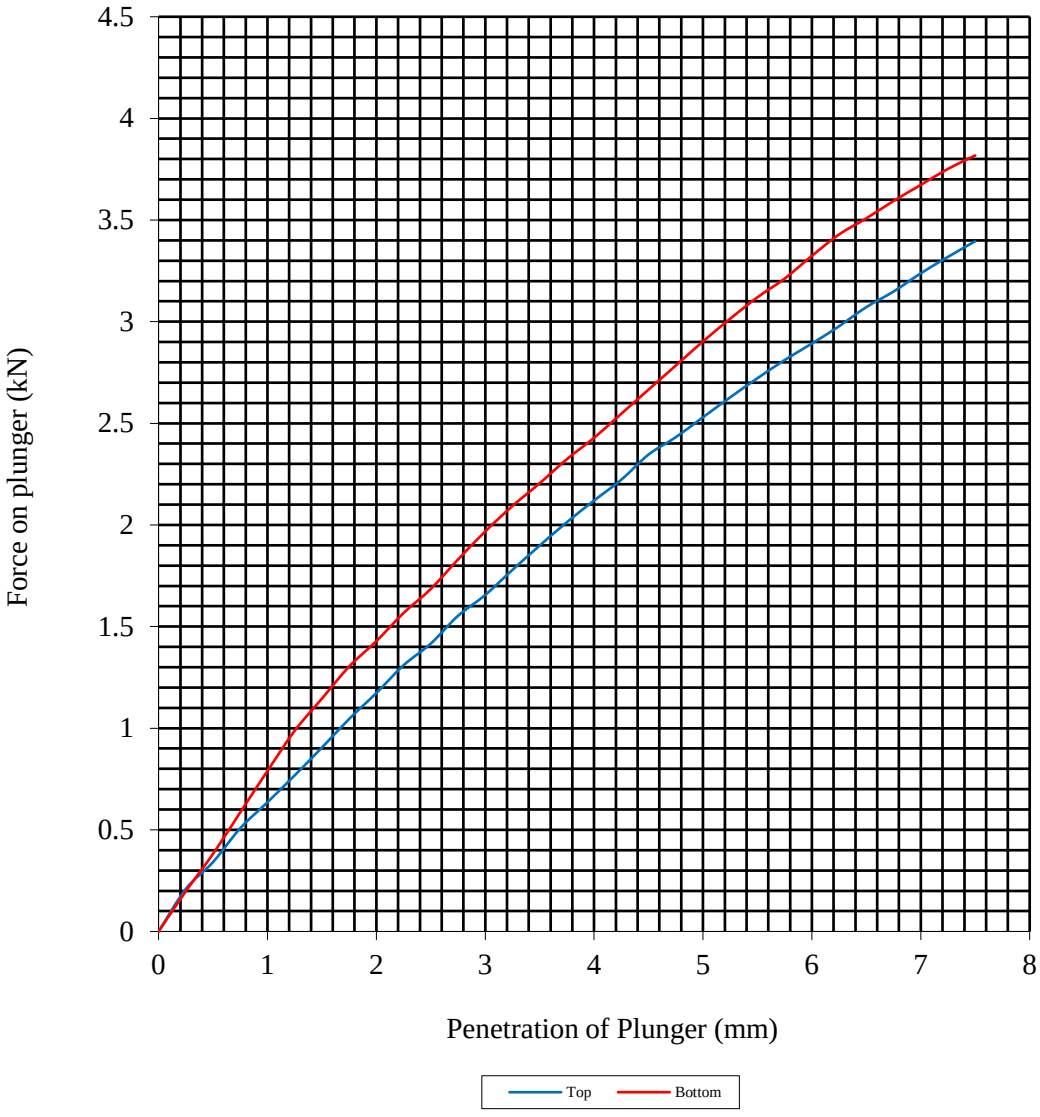
CALIFORNIA BEARING RATIO (CBR)

BS 1377 - Part 2 : Clause 15 : 2022

Hole Number: TP324 **Top Depth (m):** 2.00

Sample Number: **Base Depth (m):**

Sample Type: B D



Initial Sample Conditions		Sample Preparation		Final Water Content %		C.B.R. Value %	
Water Content:	14.7	Surcharge Kg:	4.00	Sample Top	14.6	Sample Top	12.6
Bulk Density Mg/m3:	2.00	Soaking Time hrs	0	Sample Bottom	15.0	Sample Bottom	14.5
Dry Density Mg/m3:	1.75	Swelling mm:	0	Remarks : See Summary of Soil Descriptions.			
Percentage retained on 20mm BS test sieve:			0				
Compaction Conditions		2.5kg					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No: PSL25/6231

Client Ref: 4173

MCV/WATER CONTENT RELATION OF SOIL

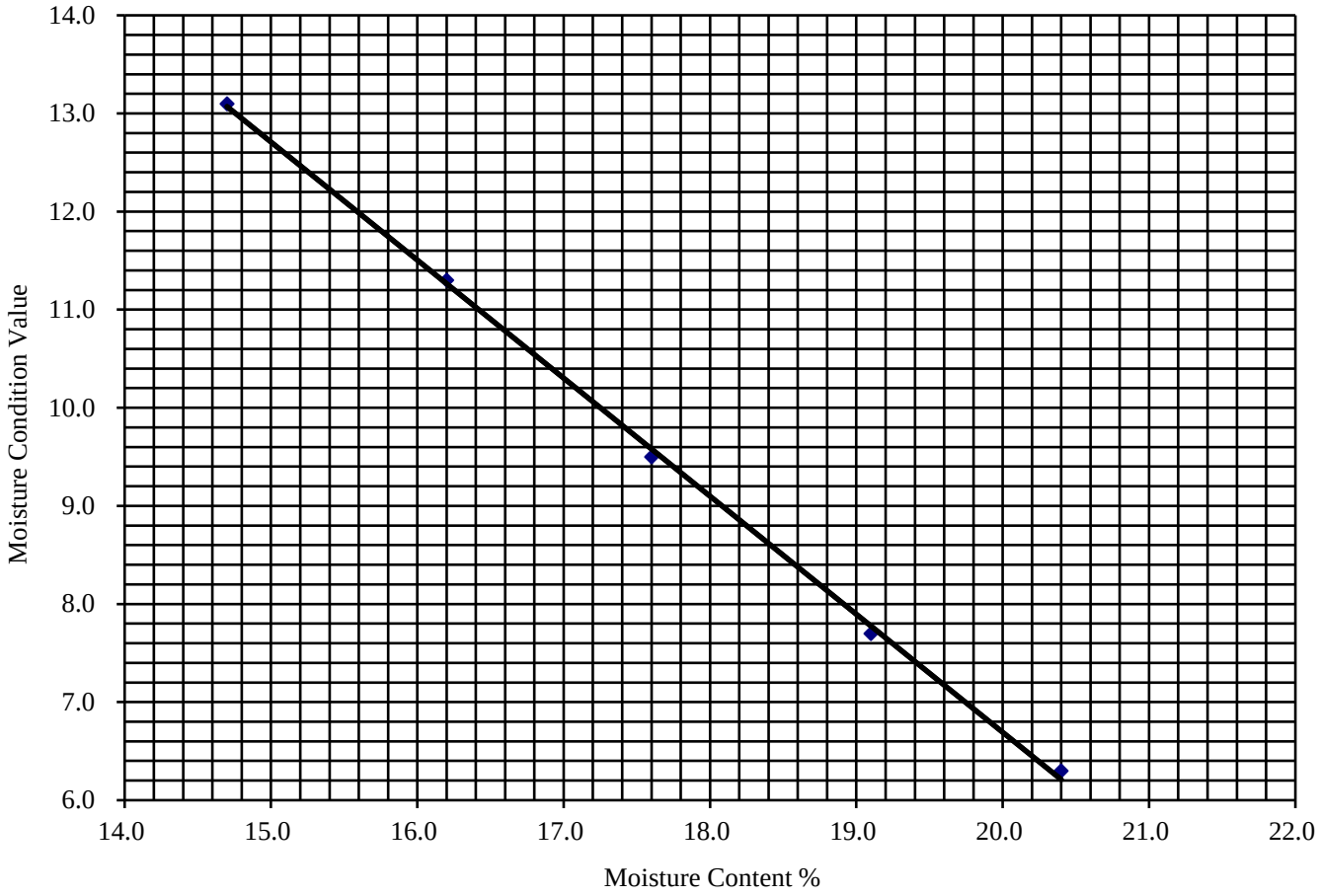
BS1377 - Part 2 : 2022 Clause 13.5

Hole Number: **TP324** **Top Depth (m):** **2.00**

Sample Number: **Base Depth (m):**

Sample Type: **B D**

Initial Water Content (%):	14.7
Single/Separate Samples Tested	Separate
Material Retained on the 20mm BS Test Sieve (%):	



Test Results.

Test Number	1	2	3	4	5
Water Content (%)	14.7	16.2	17.6	19.1	20.4
MCV	13.1	11.3	9.5	7.7	6.3

PARTICLE SIZE DISTRIBUTION TEST

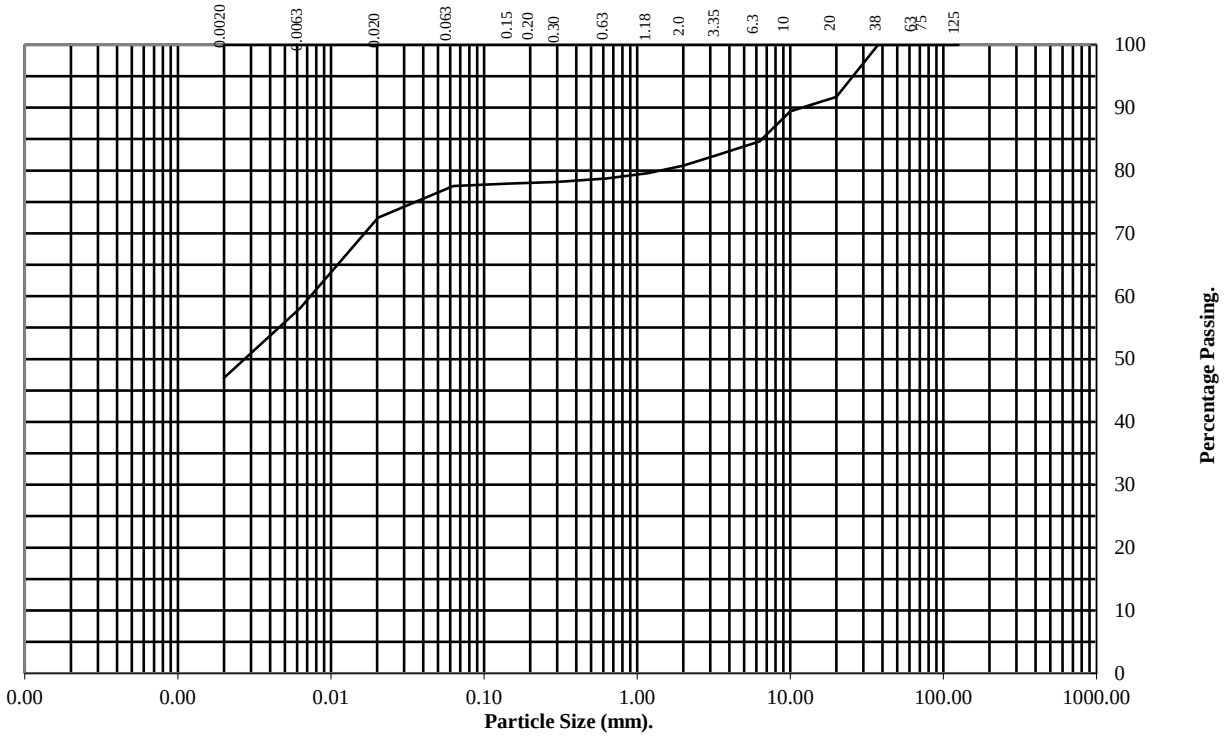
BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2 & Pipette Method, Clause 5.4

Hole Number: TP326 **Top Depth (m):** 1.50

Sample Number: **Base Depth (m):**

Sample Type: B D



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	92
10	89
6.3	85
3.35	82
2	81
1.18	80
0.63	79
0.3	78
0.2	78
0.15	78
0.063	78

Particle Diameter	Percentage Passing
0.020	72
0.0063	58
0.0020	47
Particle Density - 2.65 Mg/m3 assumed	

Soil Fraction	Total Percentage
Cobbles	0
Gravel	19
Sand	3
Silt	31
Clay	47

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No: PSL25/6231

Client Ref: 4173

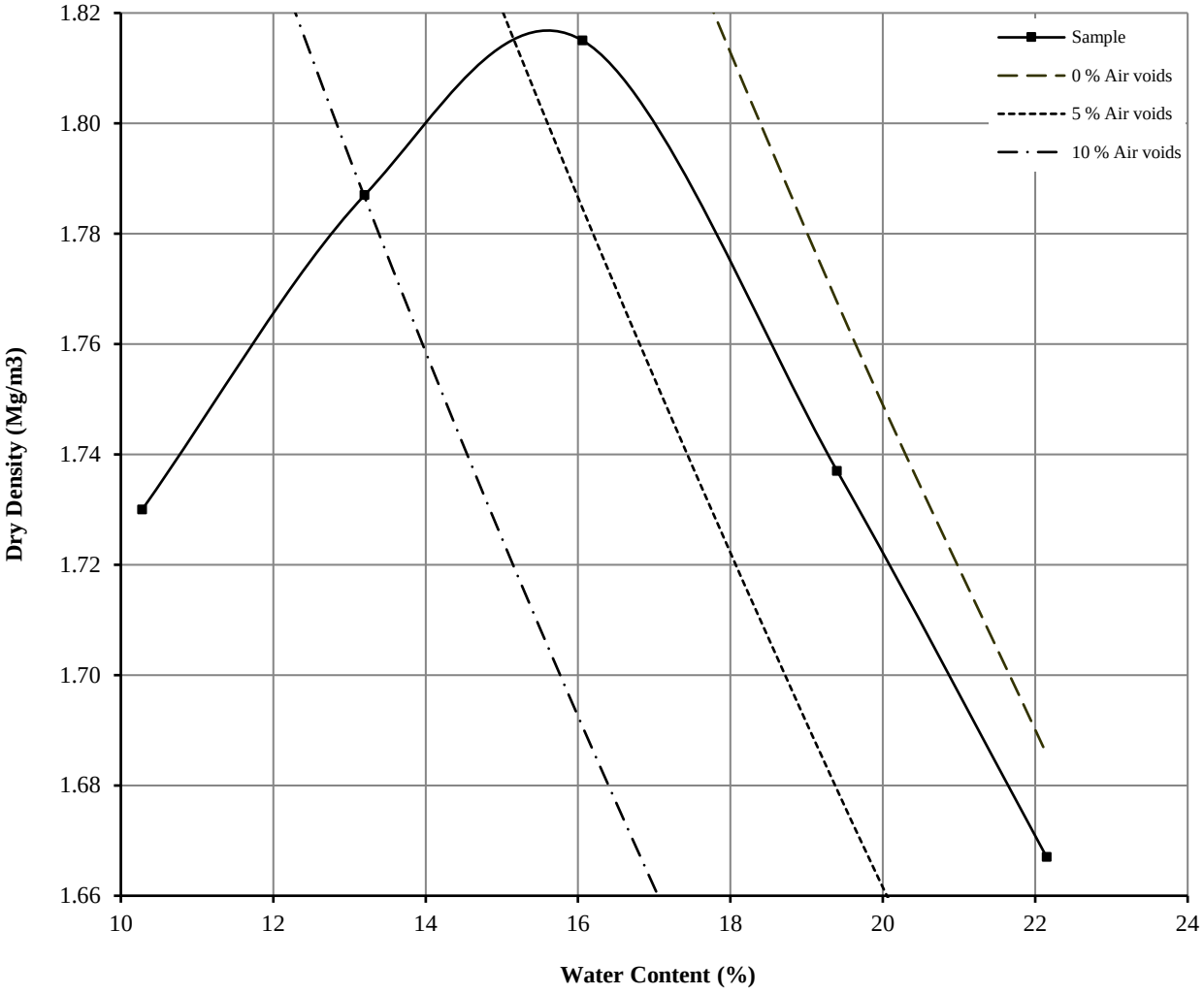
DRY DENSITY/WATER CONTENT RELATIONSHIP

BS 1377 - Part 2 : Clause 11 : 2022

Hole Number: TP326 **Top Depth (m):** 1.50

Sample Number: **Base Depth (m):**

Sample Type: B D



Initial Water Content:		13.2	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.69	Measured	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.82	Material Retained on 20.0 mm Test Sieve (%):		8
Optimum Water Content (%):		16	Grading Zone:		3
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No.
PSL25/6231
Client Ref
4173

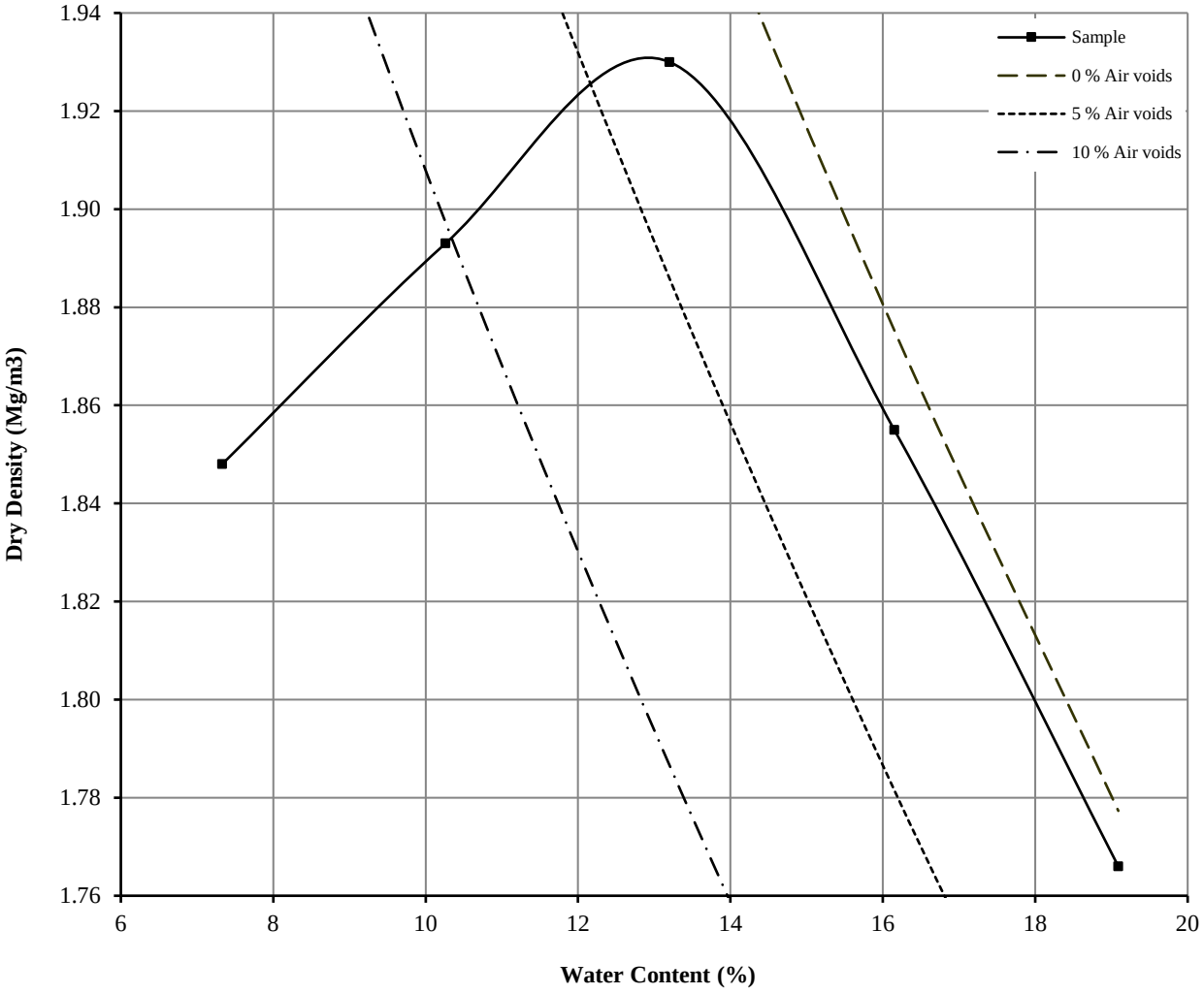
DRY DENSITY/WATER CONTENT RELATIONSHIP

BS 1377 - Part 2 : Clause 11 : 2022

Hole Number: TP326 **Top Depth (m):** 1.50

Sample Number: **Base Depth (m):**

Sample Type: B D



Initial Water Content:		13.2	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.69	Measured	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.93	Material Retained on 20.0 mm Test Sieve (%):		8
Optimum Water Content (%):		13	Grading Zone:		3
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No.
PSL25/6231
Client Ref
4173

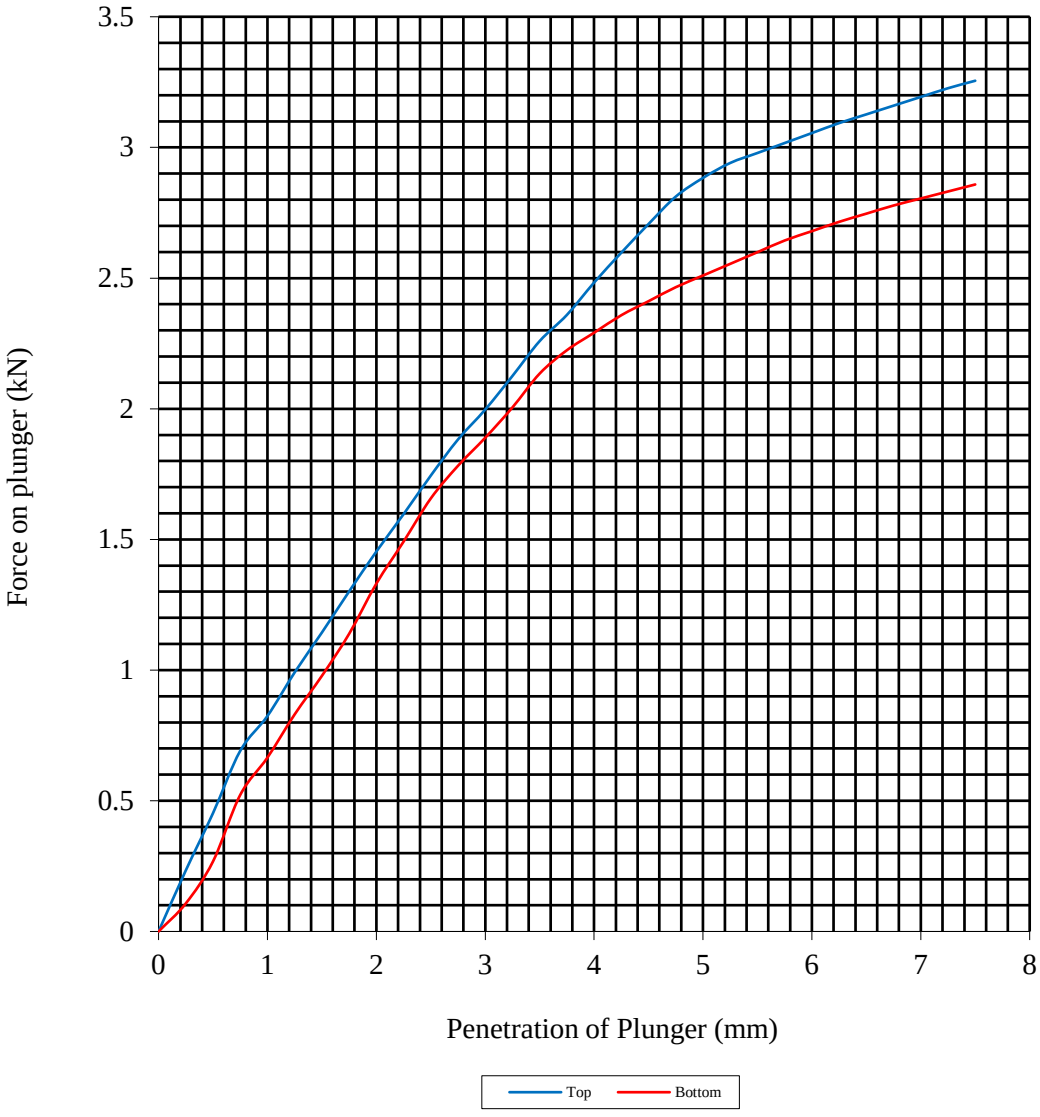
CALIFORNIA BEARING RATIO (CBR)

BS 1377 - Part 2 : Clause 15 : 2022

Hole Number: TP326 **Top Depth (m):** 1.50

Sample Number: **Base Depth (m):**

Sample Type: B D



Initial Sample Conditions		Sample Preparation		Final Water Content %		C.B.R. Value %	
Water Content:	13.2	Surcharge Kg:	4.00	Sample Top	13.1	Sample Top	14.4
Bulk Density Mg/m3:	2.03	Soaking Time hrs	0	Sample Bottom	13.3	Sample Bottom	12.6
Dry Density Mg/m3:	1.79	Swelling mm:	0	Remarks : See Summary of Soil Descriptions.			
Percentage retained on 20mm BS test sieve:			8				
Compaction Conditions		2.5kg					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No: PSL25/6231

Client Ref: 4173

MOISTURE CONDITION VALUE (MCV)

BS1377 - Part 2 : 2022 : Clause 13

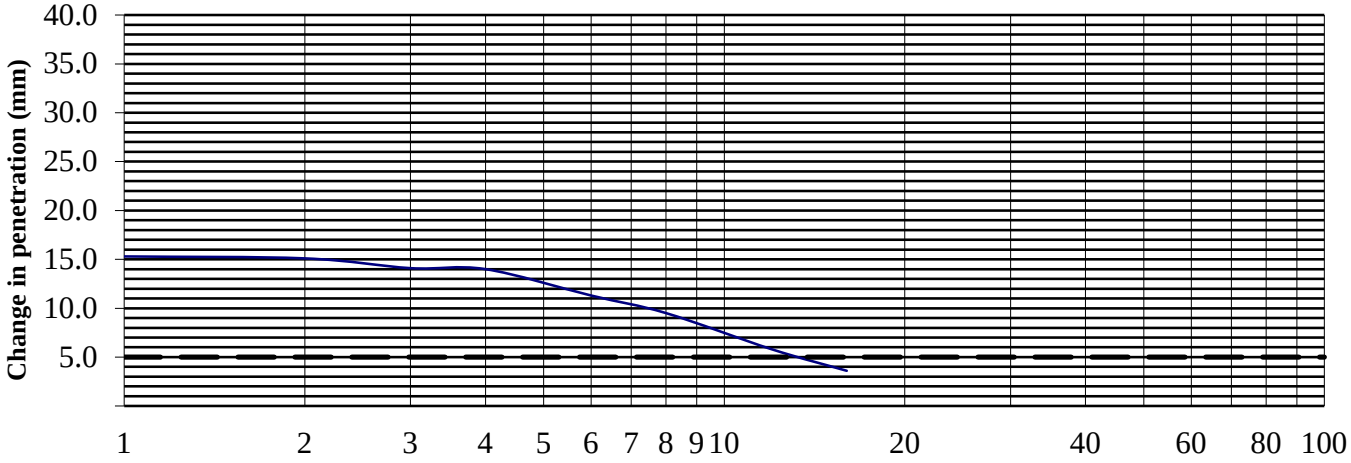
Hole Number: **TP326** **Top Depth (m):** **1.50**

Sample Number: **Base Depth (m):**

Sample Type: **B D**

Material Retained on the 20mm BS Test Sieve (%):	8
Interpretation based on steepest straight line intercept with 5mm change in penetration.	

MCV Determination



Blows (N)	Penetration (mm)	n to 4n (mm)
1	72.9	15.3
2	65.3	15.1
3	60.2	14.1
4	57.6	14.0
6	52.5	11.3
8	50.2	9.5
12	46.1	5.8
16	43.6	3.6
24	41.2	
32	40.7	
48	40.3	
64	40.0	
96		
128		
192		
256		

Test Results.

Water Content (%)	13.2
MCV	11.0

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No: **PSL25/6231**

Client Ref: **4173**

PARTICLE SIZE DISTRIBUTION TEST

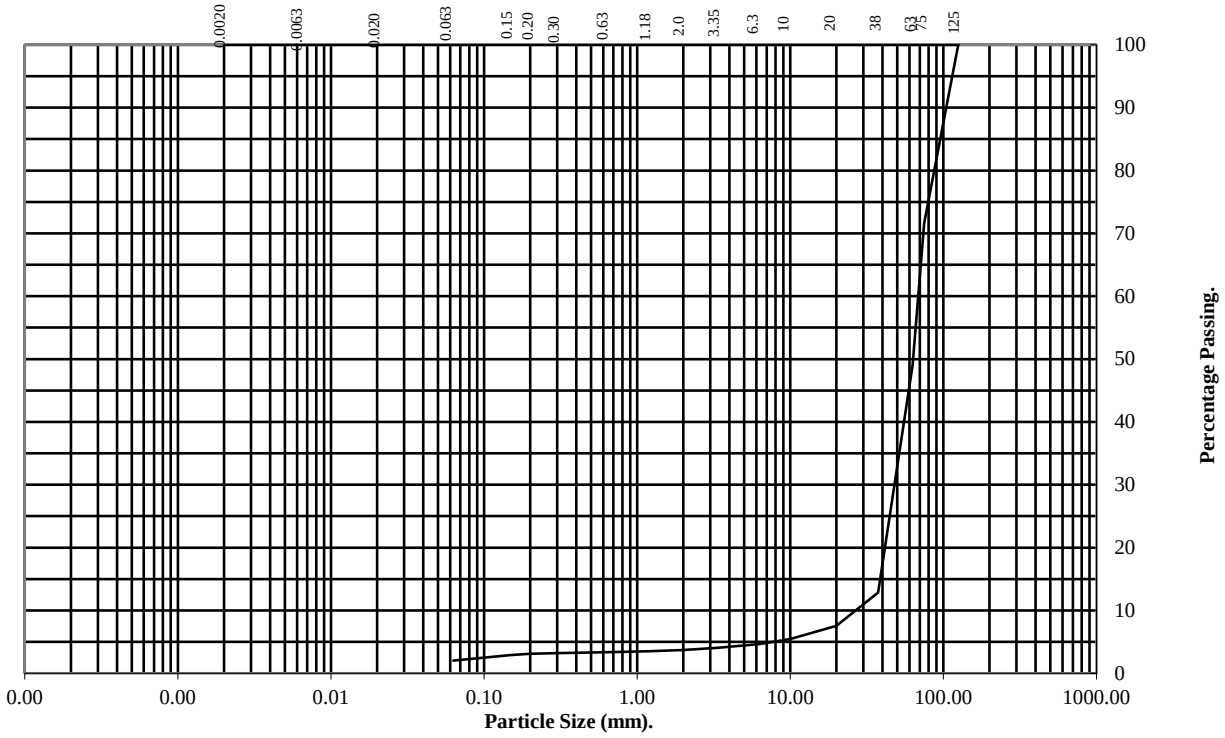
BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2

Hole Number: TP317 **Top Depth (m):** 0.75

Sample Number: **Base Depth (m):**

Sample Type: B D



BS Test Sieve (mm)	Percentage Passing
125	100
75	72
63	49
37.5	13
20	8
10	5
6.3	5
3.35	4
2	4
1.18	3
0.63	3
0.3	3
0.2	3
0.15	3
0.063	2

Soil Fraction	Total Percentage
Cobbles	51
Gravel	45
Sand	2
Silt/Clay	2

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No: PSL25/6231

Client Ref: 4173

PARTICLE SIZE DISTRIBUTION TEST

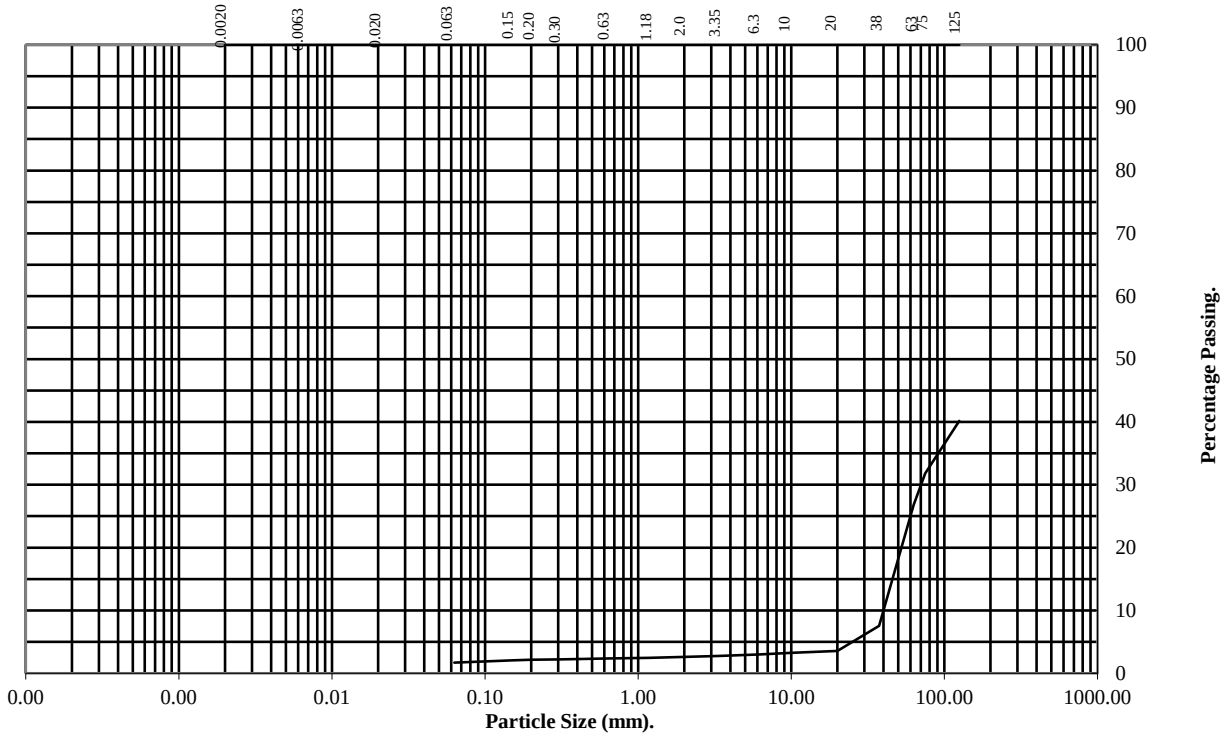
BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2

Hole Number: TP318 **Top Depth (m):** 0.60

Sample Number: **Base Depth (m):**

Sample Type: B D



BS Test Sieve (mm)	Percentage Passing
125	40
75	32
63	27
37.5	8
20	4
10	3
6.3	3
3.35	3
2	3
1.18	2
0.63	2
0.3	2
0.2	2
0.15	2
0.063	2

Soil Fraction	Total Percentage
Cobbles	73
Gravel	24
Sand	1
Silt/Clay	2

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No: PSL25/6231

Client Ref: 4173

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

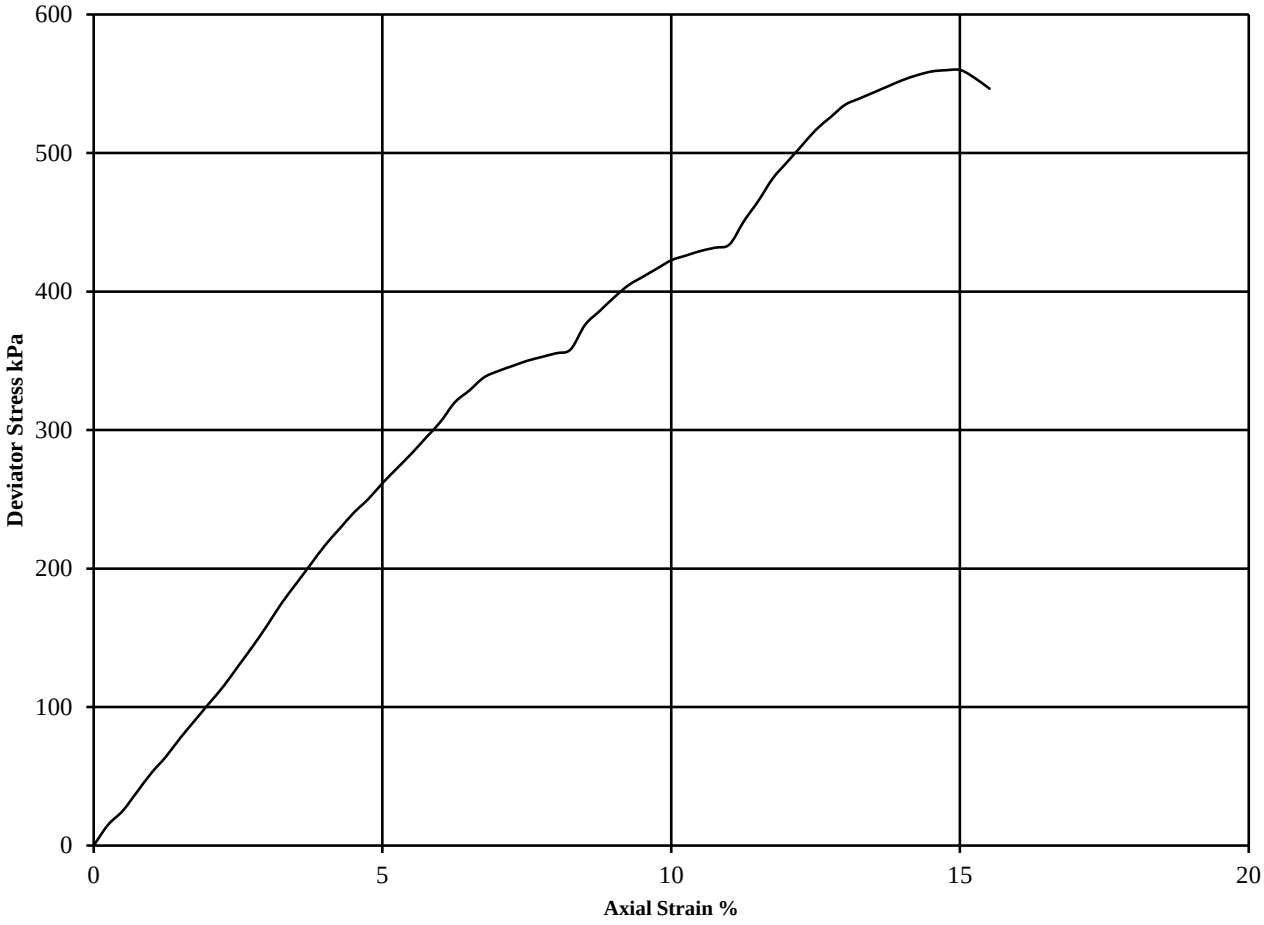
WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 9

Hole Number: **DSRC302** **Top Depth (m):** **1.20**

Sample Number: **Base Depth (m):**

Sample Type **UT**



Diameter (mm):		102.1275	Height (mm):		204.09	Test:	UU Multistage		Remarks
Specimen	Moisture Content (%)	Bulk Density (Mg/m3)	Dry Density (Mg/m3)	Cell Pressure (kPa) θ_3	Corr. Max. Deviator Stress (kPa) $(\theta_1-\theta_3)_f$	Shear Strength Cu (kPa) $^1/_2(\theta_1-\theta_3)_f$	Failure Strain (%)	Mode of Failure	Undisturbed Sample Sample taken from top of tube Rate of strain = 2 %/min Latex Membrane used 0.2 mm thick Membrane Correction applied (kPa)
1	13	2.12	1.88	50	358	179	8.3		0.36 0.35 0.34
				100	434	217	11.0		See summary of soil descriptions
				200	560	280	15.0	Brittle	

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No:
PSL25/6231
Client Ref:
4173

INCREMENTAL LOADING OEDOMETER TEST

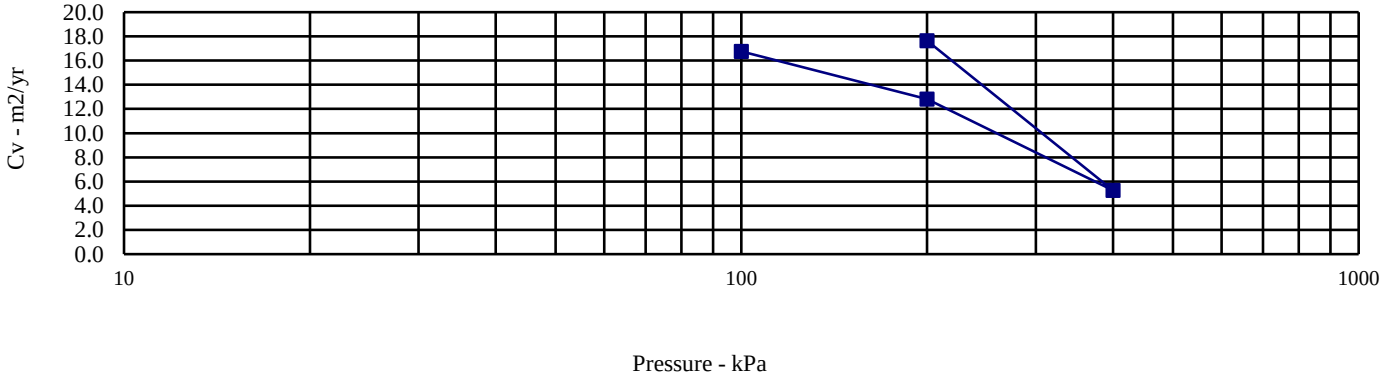
BS 1377 - Part 2 : 2022 : Clause 16 in accordance with BS EN ISO 17892 - 5 : 2017

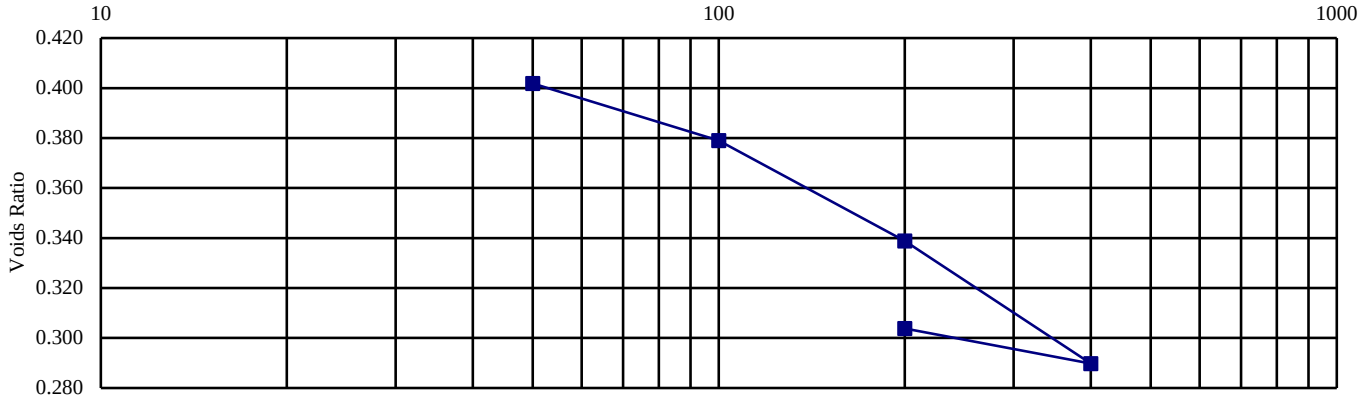
Hole Number: **DSRC302** **Top Depth (m):** **1.20**

Sample Number: **Base Depth (m) :**

Sample Type: **UT**

Initial Conditions		Pressure Range kPa		Mv m2/MN	Cv m2/yr	Specimen location within tube:	Top Vertical
Water Content (%):	13.8						
Bulk Density (Mg/m3):	2.09	0	50	Swelling	Swelling	Method of preparation:	Trimmed from extruded material
Dry Density (Mg/m3):	1.84	50	100	0.326	16.771		
Voids Ratio:	0.440	100	200	0.291	12.818	Method used to determine CV:	T90
Degree of saturation:	82.7	200	400	0.183	5.273		
Height (mm):	20.018	400	200	0.054	17.646	Nominal temperature during test ' C:	20
Diameter (mm)	75.013						
Particle Density (Mg/m3): Assumed	2.65					Results correct against equipment deformation	Yes





UKAS TESTING 4043 / PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY	**Higham Lane North**	**Contract No:** **PSL25/6231** **Client Ref:** **4173**

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

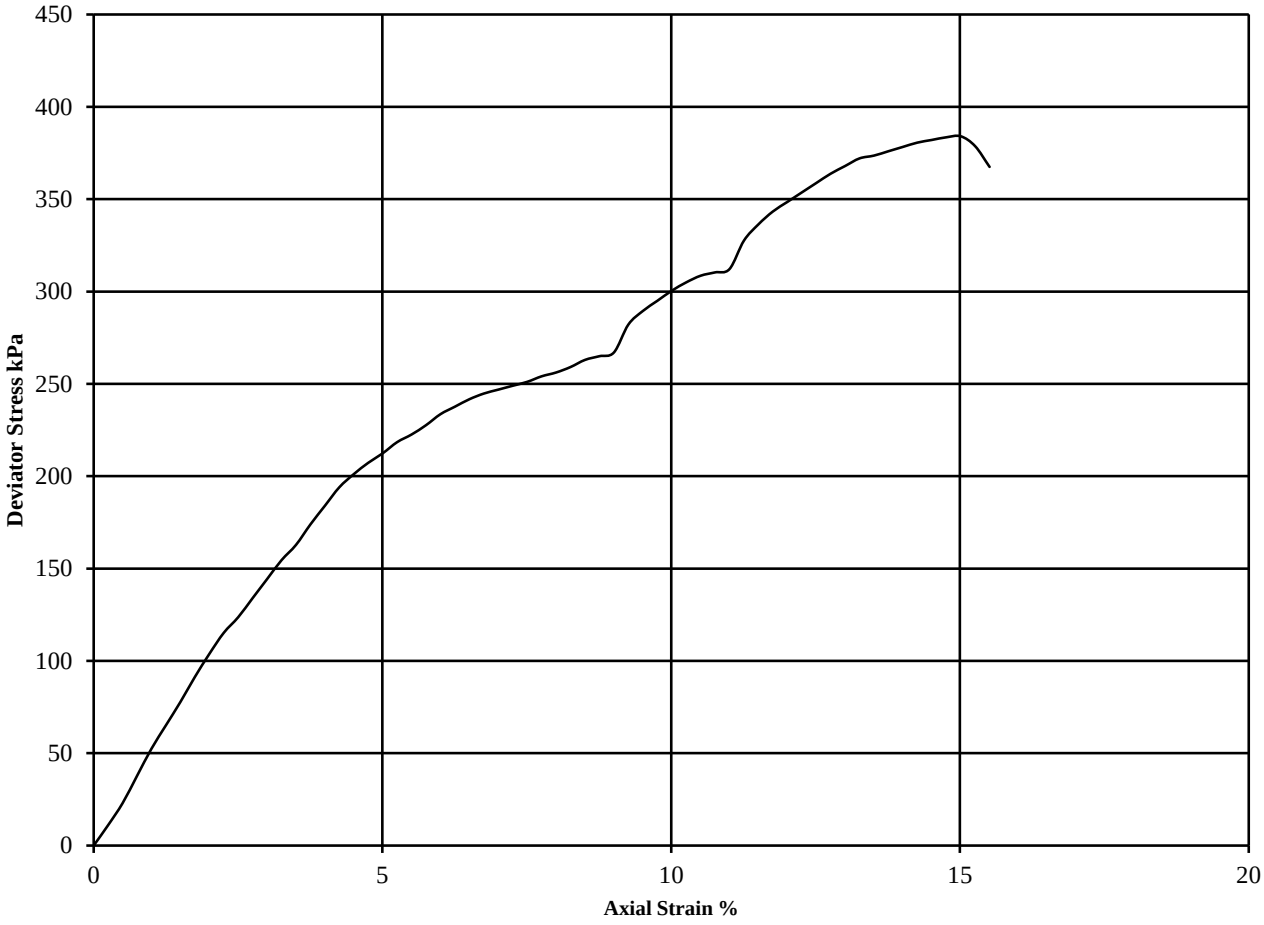
WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 9

Hole Number: **DSRC306** **Top Depth (m):** **0.50**

Sample Number: **Base Depth (m):**

Sample Type **UT**



Diameter (mm):		102.1525	Height (mm):		204.1425	Test:	UU Multistage		Remarks
Specimen	Moisture Content (%)	Bulk Density (Mg/m3)	Dry Density (Mg/m3)	Cell Pressure (kPa) θ_3	Corr. Max. Deviator Stress (kPa) $(\theta_1-\theta_3)_f$	Shear Strength Cu (kPa) $^1/_2(\theta_1-\theta_3)_f$	Failure Strain (%)	Mode of Failure	Undisturbed Sample Sample taken from top of tube Rate of strain = 2 %/min Latex Membrane used 0.2 mm thick Membrane Correction applied (kPa)
1	18	2.08	1.77	25	267	133	9.0		0.35 0.35 0.34
				50	312	156	11.0		See summary of soil descriptions
				100	384	192	15.0	Brittle	

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No: **PSL25/6231**

Client Ref: **4173**

INCREMENTAL LOADING OEDOMETER TEST

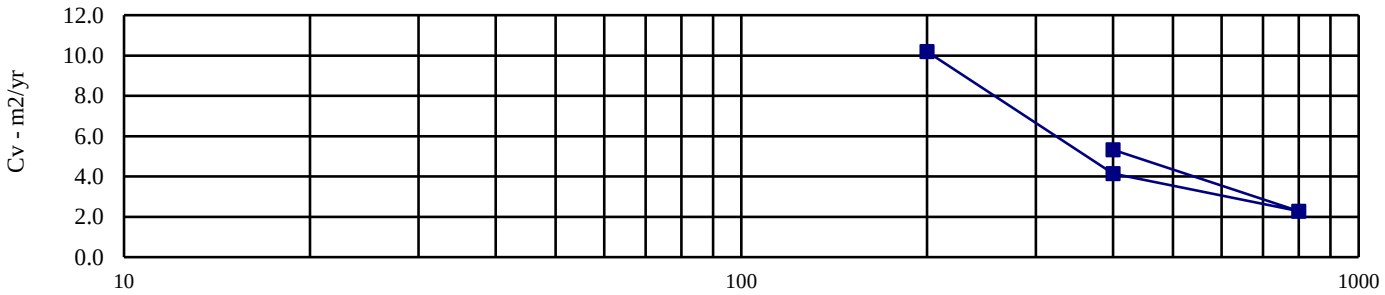
BS 1377 - Part 2 : 2022 : Clause 16 in accordance with BS EN ISO 17892 - 5 : 2017

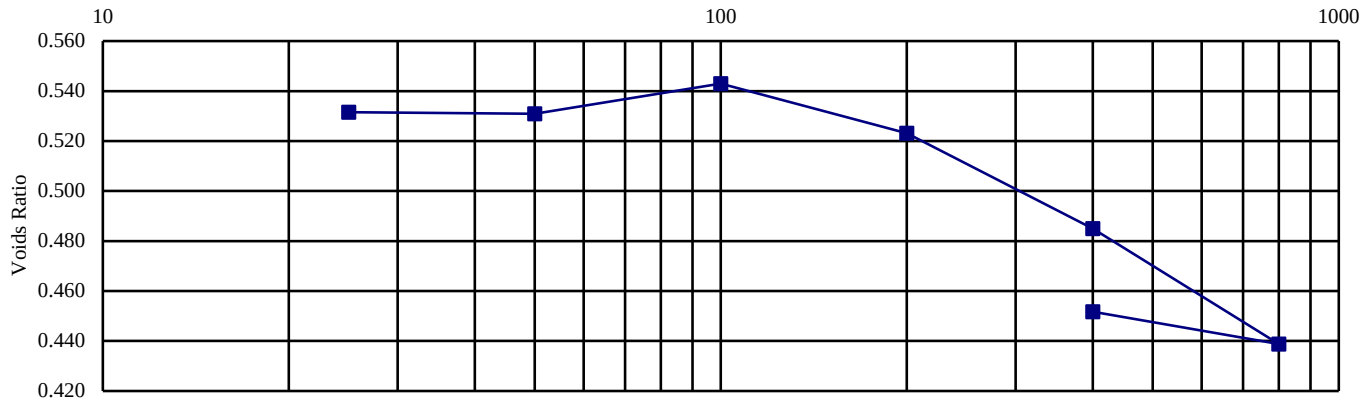
Hole Number: **DSRC306** **Top Depth (m):** **0.50**

Sample Number: **Base Depth (m) :**

Sample Type: **UT**

Initial Conditions		Pressure Range kPa		Mv m2/MN	Cv m2/yr	Specimen location within tube:	Top Vertical
Water Content (%):	18.7						
Bulk Density (Mg/m3):	2.05	0	25	Swelling	Swelling	Method of preparation:	Trimmed from extruded material
Dry Density (Mg/m3):	1.72	25	50	Swelling	Swelling		
Voids Ratio:	0.537	50	100	Swelling	Swelling	Method used to determine CV:	T90
Degree of saturation:	92.1	100	200	0.129	10.188		
Height (mm):	20.01	200	400	0.125	4.148	Nominal temperature during test ' C:	20
Diameter (mm)	75.008	400	800	0.078	2.281		
Particle Density (Mg/m3): Assumed	2.65	800	400	0.022	5.328	Results correct against equipment deformation	Yes





UKAS TESTING 4043 / PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY	**Higham Lane North**	**Contract No:** **PSL25/6231** **Client Ref:** **4173**

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

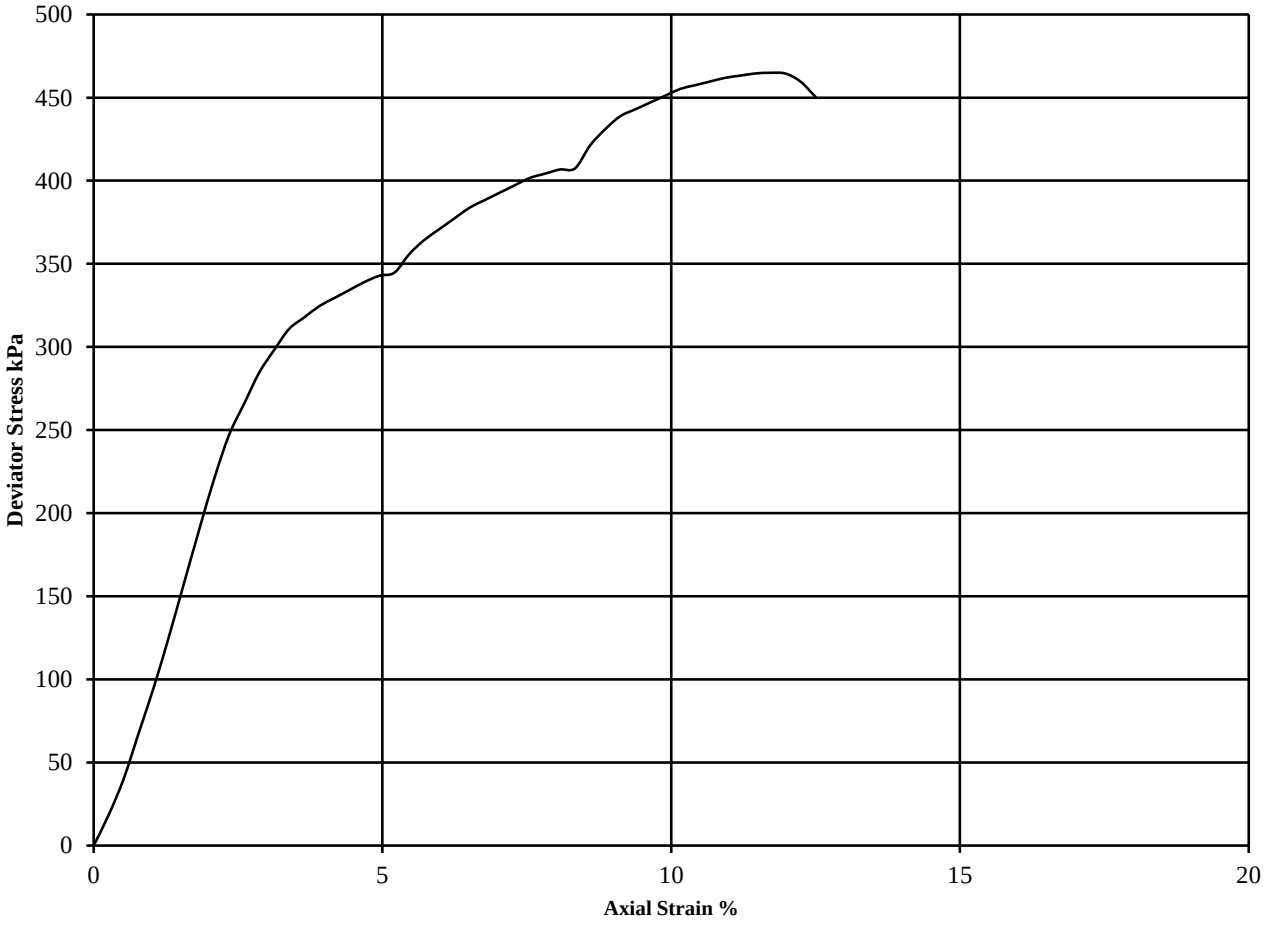
WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 9

Hole Number: **DSRC308** **Top Depth (m):** **1.90**

Sample Number: **Base Depth (m):**

Sample Type **UT**



Diameter (mm):		102.16	Height (mm):		196.1225	Test:	UU Multistage		Remarks
Specimen	Moisture Content (%)	Bulk Density (Mg/m3)	Dry Density (Mg/m3)	Cell Pressure (kPa) θ_3	Corr. Max. Deviator Stress (kPa) $(\theta_1-\theta_3)_f$	Shear Strength Cu (kPa) $^1/_2(\theta_1-\theta_3)_f$	Failure Strain (%)	Mode of Failure	Undisturbed Sample Sample taken from top of tube Rate of strain = 2 %/min Latex Membrane used 0.2 mm thick Membrane Correction applied (kPa)
1	11	2.18	1.96	50	345	172	5.2		0.36 0.36 0.35
				100	407	204	8.3		See summary of soil descriptions
				200	465	232	11.7	Brittle	

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No: **PSL25/6231**

Client Ref: **4173**

INCREMENTAL LOADING OEDOMETER TEST

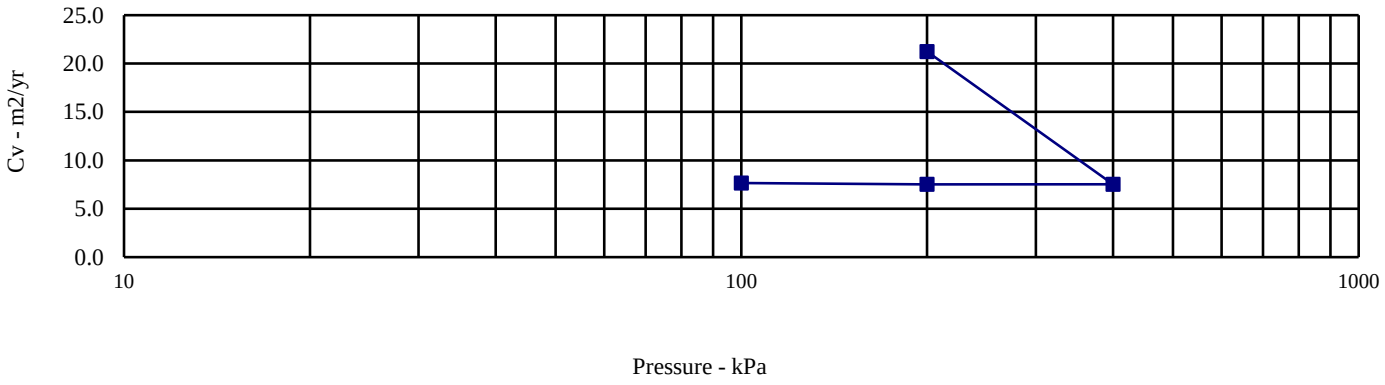
BS 1377 - Part 2 : 2022 : Clause 16 in accordance with BS EN ISO 17892 - 5 : 2017

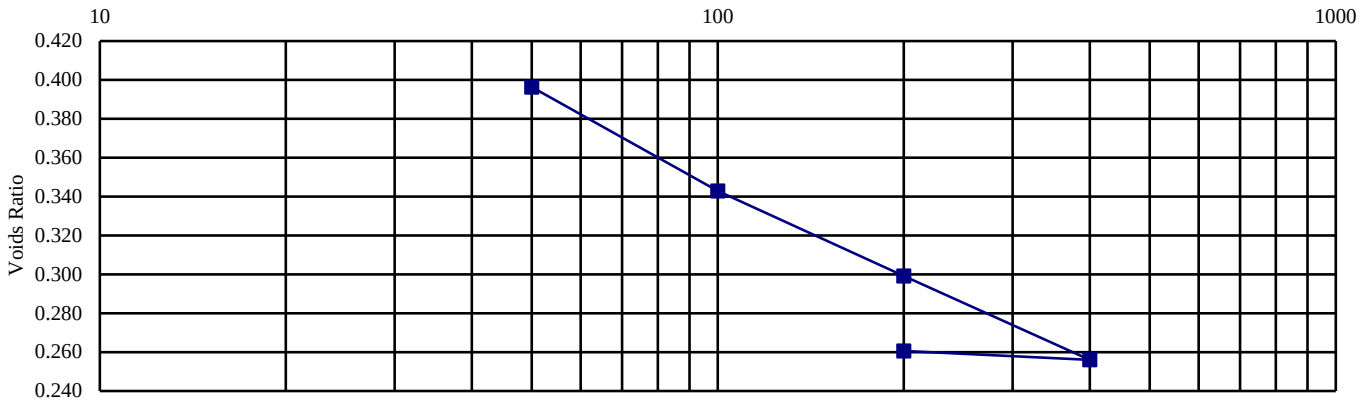
Hole Number: **DSRC308** **Top Depth (m):** **1.90**

Sample Number: **Base Depth (m) :**

Sample Type: **UT**

Initial Conditions		Pressure Range kPa		Mv m2/MN	Cv m2/yr	Specimen location within tube:	Top Vertical
Water Content (%):	12.3						
Bulk Density (Mg/m3):	2.13	0	50	Swelling	Swelling	Method of preparation:	Trimmed from extruded material
Dry Density (Mg/m3):	1.90	50	100	0.766	7.667		
Voids Ratio:	0.396	100	200	0.326	7.518	Method used to determine CV:	T90
Degree of saturation:	82.2	200	400	0.166	7.542		
Height (mm):	20.006	400	200	0.018	21.247	Nominal temperature during test ' C:	20
Diameter (mm)	75.005						
Particle Density (Mg/m3): Assumed	2.65					Results correct against equipment deformation	Yes





UKAS TESTING 4043 / PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY	**Higham Lane North**	**Contract No:** **PSL25/6231** **Client Ref:** **4173**

Professional Soils Laboratory
5/7 Hexthorpe Road
Hexthorpe
Doncaster
DN4 0AR

7 - 11 Harding Street
Leicester
LE1 4DH

Analytical Test Report: L25/09655/PSL - 25-82080

Your Project Reference:	**PSL25/6231 Higham Lane North**		
Your Order Number:	PSL25/6231	Samples Received / Instructed:	16/09/2025 / 16/09/2025
Report Issue Number:	1	Sample Tested:	16/09 to 23/09/2025
Samples Analysed:	5 sample(s)	Report issued:	23/09/2025

Signed

James Gane
Analytical Services Manager
CTS

Notes:

General

Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Moisture Content was determined in accordance with CTS method statement MS - CL - Sample Prep, oven dried at <30˚C.

Moisture Content is reported as a percentage of the dry mass of soil, this calculation is in accordance with BS1377, Part 2, 1990, Clause 3.2

Stone Content was determined in accordance with CTS method statement MS - CL - Sample Prep and refers to the percentage of stones retained on a 10mm BS test sieve.

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Samples were supplied by customer, results apply to the samples as received.

Deviating Samples

On receipt samples are compared against our sample holding and handling protocols, where any deviations have been noted these are reported on our deviating sample page (if present)

Accreditation Key

This report shall not be reproduce except in full

UKAS = UKAS Accreditation, MCERTS = MCERTS Accreditation, u = Unaccredited, subUKAS - Subcontracted to a laboratory UKAS accredited for this test, subMCERTS - Subcontracted to a laboratory MCERTS accredited for this test

MCERTS Accreditation only covers the SAND, CLAY and LOAM matrices

UKAS accreditation on waters only covers the Ground water and Surface water matrices

Date of Issue: 27.08.25

Issued by: J. Gane

Issue No: 4

Rev No: 27

7 - 11 Harding Street
Leicester
LE1 4DH

L25/09655/PSL - 25-82080

Project Reference - PSL25/6231 Higham Lane North

Analytical Test Results - Solid

Lab Reference			593817	593818	593819	593821
Client Sample ID			-	-	-	-
Client Sample Location			TP302	TP311	TP318	TP326
Client Sample Type			BD	BD	BD	BD
Client Sample Number			-	-	-	-
Depth - Top (m)			0.70	1.40	0.60	1.50
Depth - Bottom (m)			0.70	1.40	0.60	1.50
Date of Sampling			-	-	-	-
Time of Sampling			-	-	-	-
Sample Matrix			Clay	Clay	Other	Clay
Determinant	**Units**	**Accreditation**				
SOM (via TOC)	(%)	UKAS	< 0.9	< 0.9	< 0.9	< 0.9

7 - 11 Harding Street
Leicester
LE1 4DH

L25/09655/PSL - 25-82080

Project Reference - PSL25/6231 Higham Lane North

Analytical Test Results - Chemical Analysis

Lab Reference			593817	593818	593819	593820	593821
Client Sample ID			-	-	-	-	-
Client Sample Location			TP302	TP311	TP318	TP321	TP326
Client Sample Type			BD	BD	BD	BD	BD
Client Sample Number			-	-	-	-	-
Depth - Top (m)			0.70	1.40	0.60	2.25	1.50
Depth - Bottom (m)			0.70	1.40	0.60	2.25	1.50
Date of Sampling			-	-	-	-	-
Time of Sampling			-	-	-	-	-
Sample Matrix			Clay	Clay	Other	Other	Clay
Determinant	**Units**	**Accreditation**					
Water soluble sulphate (as SO_4)	(mg/l)	u	57	13	< 10	50	58
Acid Soluble Sulphate	(%)	u	0.02	0.01	< 0.01	0.01	0.01
Total Sulphur	(%)	UKAS	0.02	0.01	< 0.01	0.01	0.01
pH Value	pH Units	MCERTS	7.5	5.8	6.2	6.2	6.4
Water Soluble Chloride	(mg/l)	u	1.7	1.6	1.4	-	3.9

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L25/09655/PSL - 25-82080

Project Reference - PSL25/6231 Higham Lane North

Sample Descriptions

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
593817	-	TP302	BD	-	Greyish brown silty clay	17	< 0.1	100
593818	-	TP311	BD	-	Brown silty clay with occasional mudstone	9.3	< 0.1	100
593819	-	TP318	BD	-	Cream crushed rock	1.3	< 0.1	100
593820	-	TP321	BD	-	Greyish brown crushed rock	-	-	100
593821	-	TP326	BD	-	Greyish brown silty clay with occasional mudstone	9.7	< 0.1	100

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L25/09655/PSL - 25-82080

Project Reference - PSL25/6231 Higham Lane North

Sample Comments

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Comments
593817	-	TP302	BD	-	
593818	-	TP311	BD	-	
593819	-	TP318	BD	-	
593820	-	TP321	BD	-	
593821	-	TP326	BD	-	

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L25/09655/PSL - 25-82080

Project Reference - PSL25/6231 Higham Lane North

Analysis Methodologies - Please refer to sample comments page (if present) for any changes to methods

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preparation	Test Details
ANIONSS	MS - CL - Anions by Aquakem (2:1Extract)	Oven dried	Passing 2mm test sieve	Determination of Anions (inc Sulphate, chloride etc.) in soils by Aquakem. Analysis is based on a 2:1 water to soil extraction ratio
PHS	MS - CL - pH in Soils	As received	Passing 10mm test sieve	Determination of pH in soils using a pH probe (using a 1:3 soil to water extraction)
ASSO4S	MS - CL - Acid Soluble Sulphate	Oven Dried	Passing 2mm test sieve	Determination of total sulphate in soils by acid extraction followed by ICP analysis
TOCS	MS - CL - TOC Eltra	Air Dried	Passing 10mm test sieve	Determination of Total Organic Carbon in soils
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Preparation of samples (including determination of moisture content) to allow for subsequent analysis
1377TS-ELT	BS1377 Total Sulphur Content by HTC	Oven dried	BS1377 : Part 1 : 2016	Total Sulphur Content testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 7.10 (using Eltra CS-800 Analyser)

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Project Reference - PSL25/6231 Higham Lane North

Sample Deviations

Deviations are listed below against each sample and associated test method, where deviation(s) are noted it means data may not be representative of the sample at the time of sampling and it is possible that results provided may be compromised.

Observations on receipt

A - No date of sampling provided
W - No time of sampling provided for water sample
C - Received in inappropriate container
H - Contains headspace
T - Temperature on receipt exceeds storage temperature
R - Sample(s) received with less than 96 hours for testing to commence/complete, any result formally classed as deviating will be marked with an X against the applicable test (i.e. RX)

Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
593817	-	TP302	BD	-		A
593818	-	TP311	BD	-		A
593819	-	TP318	BD	-		A
593820	-	TP321	BD	-		A
593821	-	TP326	BD	-		A

LABORATORY REPORT

Contract Number: PSL25/6230

Report Date:	28 October 2025
Client's Reference:	4173
Client Name:	JPG Leeds 5 John Charles Way Leeds West Yorkshire LS12 6QD
For the attention of:	**Emily Sykes**
Contract Title:	Higham Lane North
Date Received:	20/8/2025
Date Commenced:	20/8/2025
Date Completed:	3/10/2025
Notes:	**Opinions and Interpretations are outside the UKAS Accreditation**

Checked and Approved Signatories:

A Watkins (Managing Director)	R Berriman (Associate Director)	S Royle (Laboratory Manager)
L Knight (Assistant Laboratory Manager)	S Eyre (Senior Technician)	T Watkins (Senior Technician)

5 – 7 Hexthorpe Road,
Hexthorpe,
Doncaster,
DN4 0AR
Tel: 01302 768098
Email: rberriman@prosoils.co.uk
awatkins@prosoils.co.uk

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
DSRC302		UT	1.20		Grey slightly sandy gravelly CLAY.

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No:

PSL25/6230

Client Ref:

4173

SUMMARY OF POINT LOAD TEST RESULTS

ISRM Suggested Methods : 2007

Borehole Number	Depth (m)	Test Type	Orientation	Dimensions (mm)		Area	D_e^2	D_e	Failure Load (P)		I_s	Corr Fac	I_{s50}	Failure Type	Remarks
			Par / Perp	W	D	(mm2)		(mm)	(Mpa)	(kN)	(MPa)	F	(MPa)		
DSRC301	10.30	A	Perp	89	45	4005	5099.32	71.41	-	0.65	0.12	1.174	0.14	Valid	
DSRC301	12.30	A	Perp	89	38	3382	4306.10	65.62	-	0.89	0.20	1.130	0.23	Valid	
DSRC302	7.45	A	Perp	89	45	4005	5099.32	71.41	-	1.23	0.23	1.174	0.27	Valid	
DSRC302	9.65	A	Perp	89	49	4361	5552.60	74.52	-	1.37	0.24	1.197	0.28	Valid	
DSRC302	10.60	A	Perp	87	67	5829	7421.71	86.15	-	1.16	0.15	1.277	0.19	Valid	
DSRC302	12.10	A	Perp	89	43	3827	4872.69	69.80	-	1.25	0.25	1.162	0.29	Valid	
DSRC303	2.50	A	Perp	88	37	3256	4145.67	64.39	-	0.59	0.14	1.121	0.15	Valid	
DSRC303	6.22	A	Perp	89	47	4183	5325.96	72.98	-	1.15	0.21	1.186	0.25	Valid	
DSRC303	10.73	A	Perp	89	51	4539	5779.23	76.02	-	1.37	0.23	1.207	0.28	Valid	
DSRC303	11.90	A	Perp	88	36	3168	4033.62	63.51	-	0.40	0.10	1.114	0.11	Valid	
DSRC304	5.70	A	Perp	89	50	4450	5665.92	75.27	-	1.01	0.17	1.202	0.21	Valid	
DSRC305	3.26	A	Perp	88	47	4136	5266.12	72.57	-	1.14	0.21	1.182	0.25	Valid	
DSRC305	7.75	A	Perp	89	51	4539	5779.23	76.02	-	2.13	0.36	1.207	0.43	Valid	
DSRC306	2.40	A	Perp	90	38	3420	4354.48	65.99	-	0.33	0.07	1.133	0.08	Valid	
DSRC306	4.35	A	Perp	89	42	3738	4759.37	68.99	-	3.63	0.74	1.156	0.85	Valid	
DSRC306	5.95	A	Perp	88	51	4488	5714.30	75.59	-	1.89	0.32	1.204	0.38	Valid	
DSRC306	7.50	A	Perp	91	52	4732	6024.97	77.62	-	2.10	0.34	1.219	0.41	Valid	
DSRC307	2.50	A	Perp	90	41	3690	4698.25	68.54	-	4.71	0.97	1.153	1.11	Valid	
DSRC307	3.10	A	Perp	89	31	2759	3512.87	59.27	-	1.22	0.34	1.080	0.36	Valid	
DSRC307	6.10	A	Perp	89	62	5518	7025.74	83.82	-	3.27	0.45	1.262	0.57	Valid	
DSRC308	3.90	A	Perp	89	35	3115	3966.14	62.98	-	0.13	0.03	1.109	0.04	Valid	
DSRC308	5.50	A	Perp	91	41	3731	4750.46	68.92	-	0.56	0.11	1.155	0.13	Valid	

Note All testing carried out on samples at as received water content Par = parallel, Perp = perpendicular, U = Random A = Axial, D = Diametral, I = Irregular

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No:

PSL25/6230

Client Ref:

4173

SUMMARY OF POINT LOAD TEST RESULTS

ISRM Suggested Methods : 2007

Borehole Number	Depth (m)	Test Type	Orientation	Dimensions (mm)		D_e^2	D_e	Failure Load		I_s	Corr Fac	I_{s50}	Failure Type	Remarks
			Par / Perp	L	D		(mm)	(Mpa)	(kN)	(MPa)	F	(MPa)		
DSRC301	6.40	D	Par	-	89	7921	89.00	-	5.15	0.627	1.296	0.81	Valid	
DSRC301	7.70	D	Par	-	89	7921	89.00	-	2.17	0.264	1.296	0.34	Valid	
DSRC301	8.06	D	Par	-	88	7744	88.00	-	3.33	0.415	1.290	0.54	Valid	
DSRC301	9.37	D	Par	-	89	7921	89.00	-	2.91	0.355	1.296	0.46	Valid	
DSRC301	9.43	D	Par	-	88	7744	88.00	-	1.77	0.221	1.290	0.28	Valid	
DSRC301	12.60	D	Par	-	90	8100	90.00	-	0.22	0.026	1.303	0.03	Valid	
DSRC302	4.75	D	Par	-	89	7921	89.00	-	8.13	0.990	1.296	1.28	Valid	
DSRC302	6.15	D	Par	-	90	8100	90.00	-	2.46	0.293	1.303	0.38	Valid	
DSRC302	7.65	D	Par	-	91	8281	91.00	-	0.45	0.052	1.309	0.07	Valid	
DSRC303	6.22	D	Par	-	89	7921	89.00	-	0.45	0.055	1.296	0.07	Valid	
DSRC303	8.68	D	Par	-	89	7921	89.00	-	1.59	0.194	1.296	0.25	Valid	
DSRC304	2.74	D	Par	-	89	7921	89.00	-	3.40	0.414	1.296	0.54	Valid	
DSRC304	3.40	D	Par	-	89	7921	89.00	-	2.77	0.337	1.296	0.44	Valid	
DSRC304	5.28	D	Par	-	89	7921	89.00	-	1.98	0.241	1.296	0.31	Valid	
DSRC304	6.10	D	Par	-	89	7921	89.00	-	3.94	0.480	1.296	0.62	Valid	
DSRC304	9.50	D	Par	-	88	7744	88.00	-	2.50	0.312	1.290	0.40	Valid	
DSRC305	3.62	D	Par	-	89	7921	89.00	-	0.67	0.082	1.296	0.11	Valid	

Note All testing carried out on samples at as received water content

Par = parallel, Perp = perpendicular, U = Random

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No:

PSL25/6230

Client Ref:

4173

SUMMARY OF POINT LOAD TEST RESULTS

ISRM Suggested Methods : 2007

Borehole Number	Depth (m)	Test Type	Orientation	Dimensions (mm)		Area	D_e^2	D_e	Failure Load (P)		I_s	Corr Fac	I_{s50}	Failure Type	Remarks
			Par / Perp	W	D	(mm2)		(mm)	(Mpa)	(kN)	(MPa)	F	(MPa)		
DSRC308	6.30	A	Perp	87	42	3654	4652.42	68.21	-	1.55	0.32	1.150	0.37	Valid	
DSRC308	7.40	A	Perp	88	38	3344	4257.71	65.25	-	0.89	0.20	1.127	0.23	Valid	
DSRC309	3.15	A	Perp	89	65	5785	7365.69	85.82	-	0.23	0.03	1.275	0.04	Valid	
DSRC309	5.70	A	Perp	89	44	3916	4986.01	70.61	-	0.95	0.18	1.168	0.21	Valid	
DSRC309	6.50	A	Perp	84	38	3192	4064.18	63.75	-	0.91	0.22	1.116	0.24	Valid	
DSRC309	8.00	A	Perp	87	35	3045	3877.01	62.27	-	0.24	0.06	1.104	0.07	Valid	
DSRC304	8.88	A	Perp	89	51	4539	5779.23	76.02	-	0.89	0.15	1.207	0.18	Valid	

Note All testing carried out on samples at as received water content

Par = parallel, Perp = perpendicular, U = Random

A = Axial, D = Diametral, I = Irregular

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Higham Lane North

Contract No:

PSL25/6230

Client Ref:

4173

Effective Stress Triaxial Compression

Consolidated Drained

Summary Report

Sample Details

sketch showing specimen location in original sample

Depth			1.20m UT	
Description			Grey slightly sandy gravelly CLAY.	
Type			Undisturbed, vertical orientation.	
Initial Sample Length	L_0	(mm)	200.0	
Initial Sample Diameter	D_0	(mm)	100.0	
Initial Sample Weight	W_0	(gr)	3304.0	
Initial Bulk Density	ρ_0	(Mg/m3)	2.10	
Particle Density	ρ_s	(Mg/m3)	2.65	Assumed

Initial Conditions			Stage 1	2	3	4
Initial Cell Pressure	σ_{3i}	(kPa)	700	750	850	
Initial Back Pressure	U_{bi}	(kPa)	650	650	650	
Membrane Thickness	m_b	(mm)	0.400			
Displacement Input	L_{IP}	(mm)	CH 2			
Load Input	N_{IP}	(N)	CH 1			
Pore Water Pressure Input	u_{pwp}	(kPa)	CH 3			
Sample Volume	V	(cc)	CH 6			
Initial Moisture	ω_i	(%)	11.6			
Initial Dry Density	ρ_{di}	(Mg/m3)	1.89			
Initial Voids Ratio	e_i	.	0.403			
Initial Degree of Saturation	S_i	(%)	75			
B Value	B	.	0.95			

Final Conditions						
Final Moisture	ω_f	(%)	16.3			
Final Dry Density	ρ_{df}	(Mg/m3)	1.97			
Final Voids Ratio	e_f	.	0.343			
Final Degree of Saturation	S_f	(%)	100.0			
			Stage 1	2	3	4
Failure Criteria		.	Max. Dev.	Max. Dev.	Max. Dev.	
Strain At Failure	ε_f	(%)	7.80	15.15	20.00	
Stress At Failure	$(\sigma_1-\sigma_3)$	(kPa)	107.2	161.6	270.8	
Minor Stress At Failure	σ_3'	(kPa)	50.0	100.0	200.0	
Major Stress At Failure	σ_1'	(kPa)	157.2	261.6	470.8	
Principal Stress Ratio At Failure	σ_1'/σ_3'		3.143	2.616	2.354	
PwP At Failure Criteria	u_f		650.0	649.0	650.0	

Notes

Plastic

Test Method	BS 1377-2: 2022 tested in accordance with BS EN ISO 17892-9.	Test Name	DSRC302 1.20m UT
		Test Date	10/10/2025
		Borehole	DSRC302
Jobfile	Higham Lane North	Sample	1.20m UT
Client	JPG Leeds	Depth	1.20m UT

Operator	David Burton	Checked	S.Royle	Approved	S.Royle

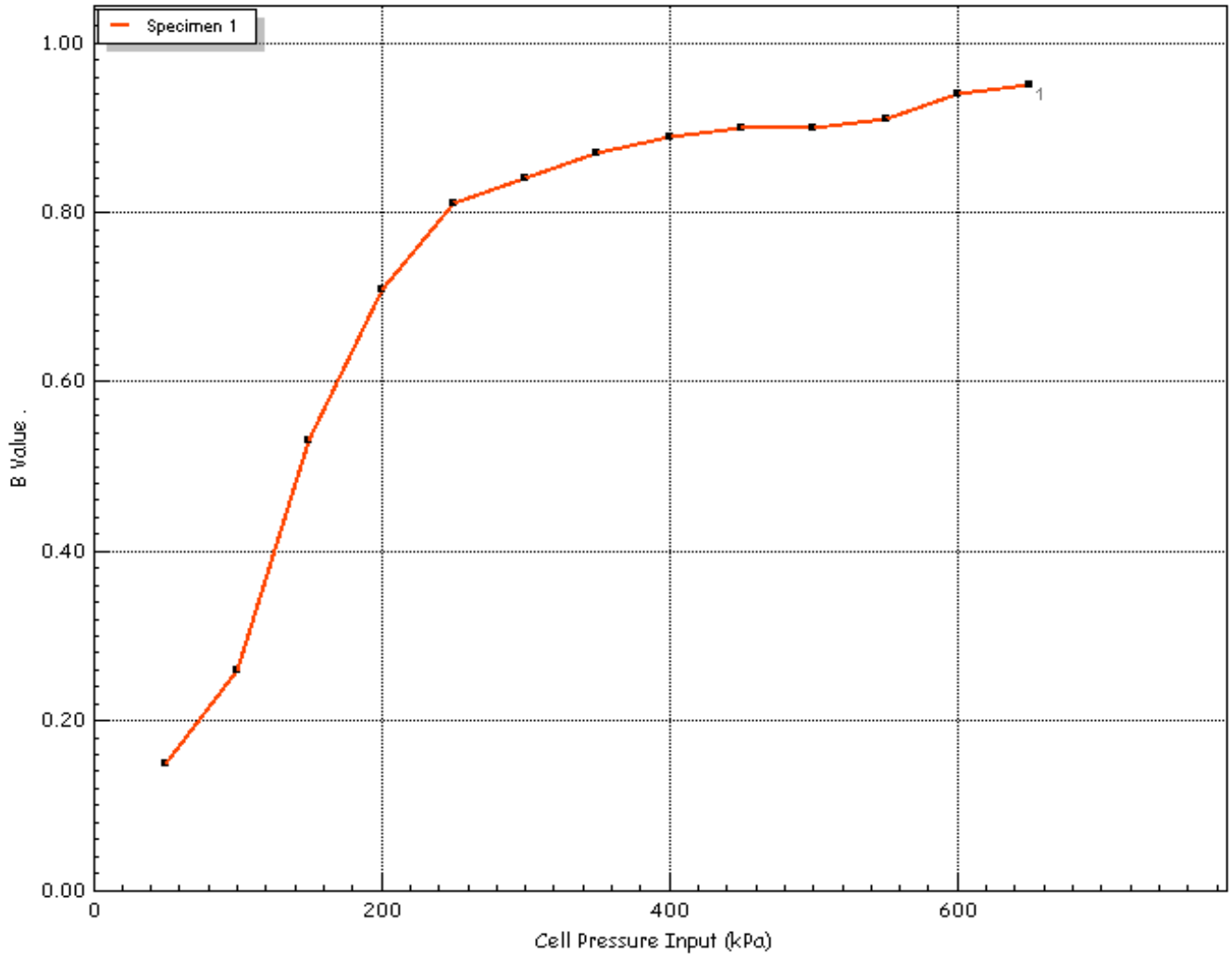
PSL Laboratory

Effective Stress Triaxial Compression

Consolidated Drained

Saturation Plots

Saturation Method			Stepped
Cell Pressure Input	σ	(kPa)	650
Pore Water Pressure Input	u pwp	(kPa)	628
B Value	B	.	0.95



Test Method	BS 1377-2: 2022 tested in accordance with BS EN ISO 17892-9.			Test Name	DSRC302 1.20m UT
				Test Date	10/10/2025
				Borehole	DSRC302
Jobfile	Higham Lane North			Sample	1.20m UT
Client	JPG Leeds			Depth	1.20m UT
Operator	David Burton	Checked	S.Royle	Approved	S.Royle

PSL Laboratory

Effective Stress Triaxial Compression

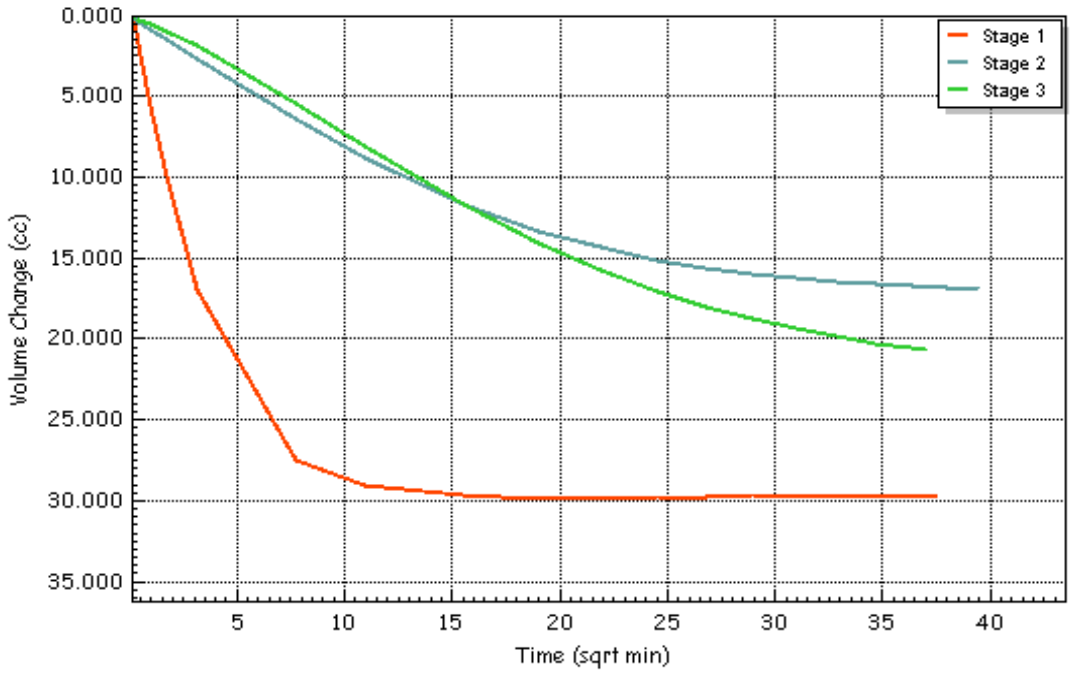
Consolidated Drained

Consolidation Plots

Initial Conditions			Stage 1	2	3
Initial Cell Pressure	σ_3	(kPa)	700	750	850
Initial Back Pressure	u_{bi}	(kPa)	650	650	650
Pore Water Pressure Input	u_{pwp}	(kPa)	674	716	719
Drainage Method			Radial+One End		

Final Conditions			Stage 1	2	3
PWP Dissipation %	U%	(%)	100.00	100.00	100.00
Volumetric Strain	ε_v%	(%)	1.89	1.08	1.32
Corrected Length	L_C	(mm)	198.7	182.6	166.0
Corrected Area	A_C	(cm2)	77.55	83.49	90.55
Corrected Volume	V_C	(cc)	1541.160	1524.255	1503.553
t100	t_{100}	(min)	27.84	443.08	27.84
Consolidation	c_v	(m2/year)	0.073	0.005	0.086
Compressibility	m_v	(m2/MN)	0.781	0.163	0.191
Test Time	t_F	(h:m:s)	06:29:45	103:23:07	06:29:45
Estimated Strain to Failure	ε%	(%)	5.0	5.0	5.0
Shear Machine Speed	d_r	(mm/min)	0.02550	0.00147	0.02130

Notes



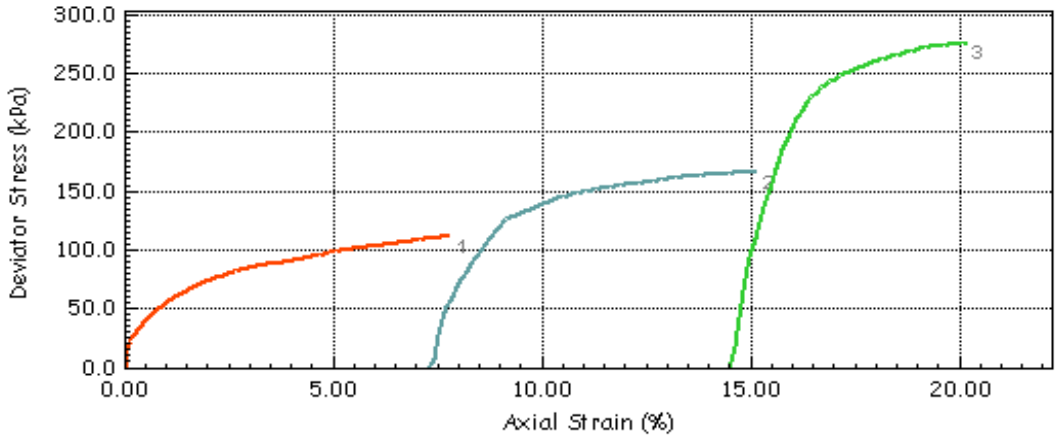
Test Method	BS 1377-2: 2022 tested in accordance with BS EN ISO 17892-9.			Test Name	DSRC302 1.20m UT
				Test Date	10/10/2025
				Borehole	DSRC302
Jobfile	Higham Lane North			Sample	1.20m UT
Client	JPG Leeds			Depth	1.20m UT
Operator	David Burton	Checked	S.Royle	Approved	S.Royle

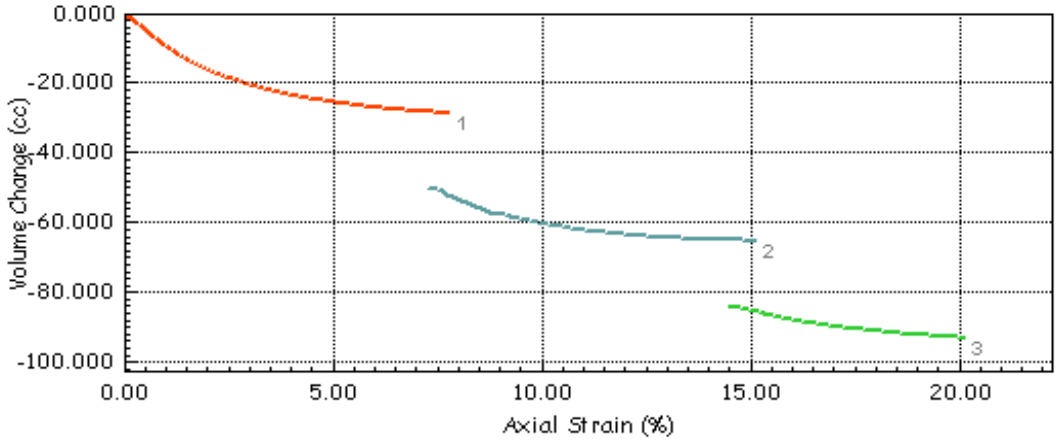
PSL Laboratory

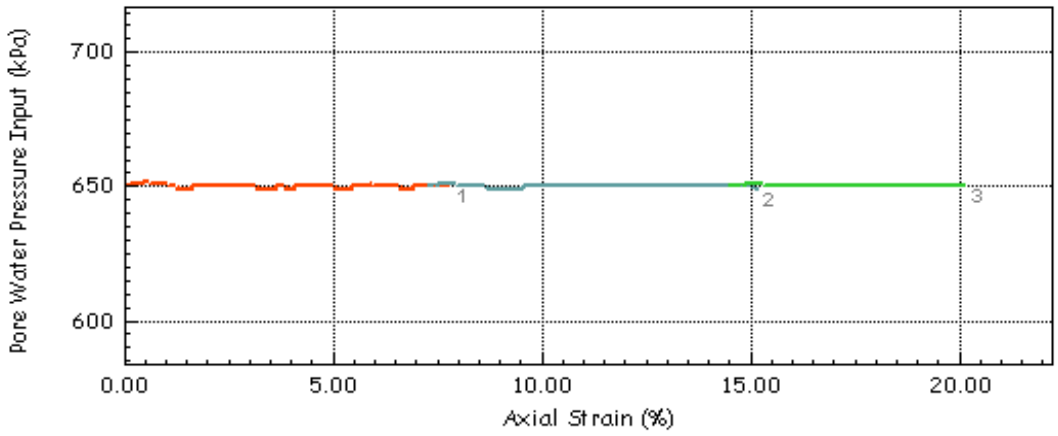
Effective Stress Triaxial Compression

Consolidated Drained

Shear Stage Plots







PSL PROFESSIONAL SOILS LABORATORY UKAS 4043	Test Method	BS 1377-2: 2022 tested in accordance with BS EN ISO 17892-9.		Test Name	DSRC302 1.20m UT
				Test Date	10/10/2025
				Borehole	DSRC302
	Jobfile	Higham Lane North		Sample	1.20m UT
	Client	JPG Leeds		Depth	1.20m UT
	Operator	David Burton	Checked	S.Royle	Approved S.Royle

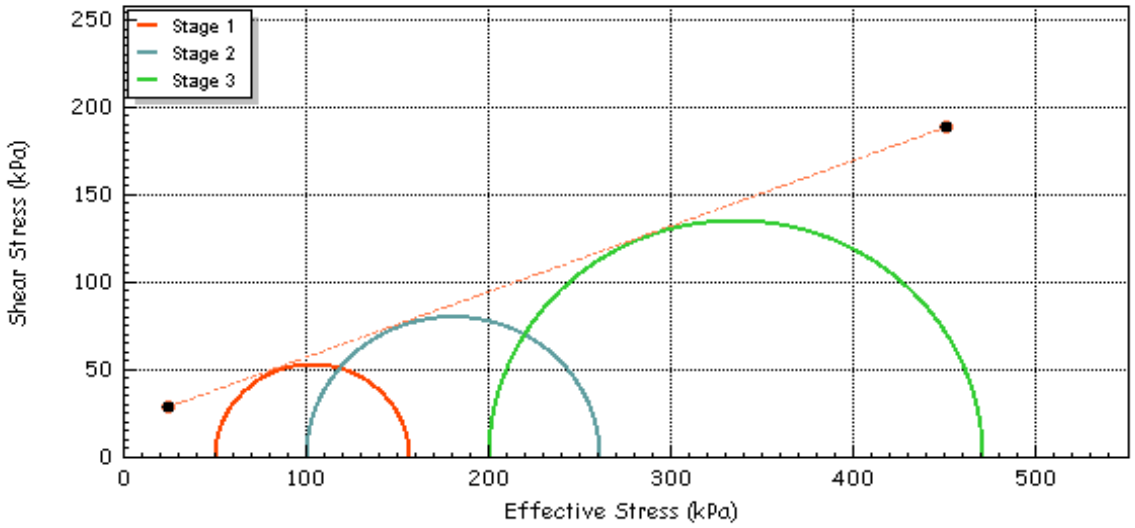
PSL Laboratory

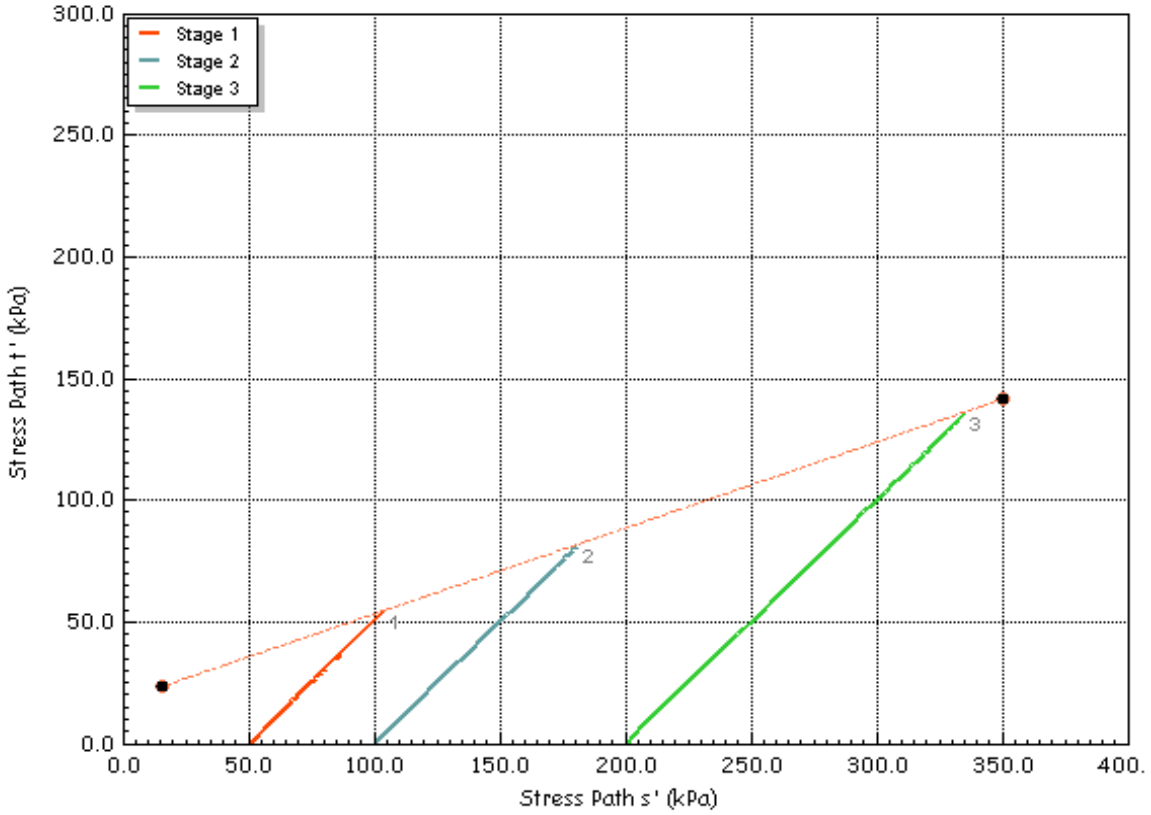
Effective Stress Triaxial Compression

Consolidated Drained

Shear Stage Plots

Effective	c'	(kPa)	18.90	Effective Cohesion	c'	(kPa)	18.90
Effective Friction	ϕ'	(deg)	20.7	Effective Friction	ϕ'	(deg)	20.7





Test Method	BS 1377-2: 2022 tested in accordance with BS EN ISO 17892-9. -		Test Name	DSRC302 1.20m UT	
			Test Date	10/10/2025	
Site Reference			Borehole	DSRC302	
Jobfile	Higham Lane North		Sample	1.20m UT	
Client	JPG Leeds		Depth	1.20m UT	
Operator	David Burton	Checked S.Royle	Approved	S.Royle	

Professional Soils Laboratory
5/7 Hexthorpe Road
Hexthorpe
Doncaster
DN4 0AR

7 - 11 Harding Street
Leicester
LE1 4DH

Analytical Test Report: L25/10455/PSL - 25-84681

Your Project Reference:	**PSL25/6230 Higham Lane North**		
Your Order Number:	PSL25/6230	Samples Received / Instructed:	06/10/2025 / 06/10/2025
Report Issue Number:	1	Sample Tested:	06/10 to 13/10/2025
Samples Analysed:	3 sample(s)	Report issued:	13/10/2025

Signed

James Gane
Analytical Services Manager
CTS

Notes:

General

Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Moisture Content was determined in accordance with CTS method statement MS - CL - Sample Prep, oven dried at <30˚C.

Moisture Content is reported as a percentage of the dry mass of soil, this calculation is in accordance with BS1377, Part 2, 1990, Clause 3.2

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Samples were supplied by customer, results apply to the samples as received.

Deviating Samples

On receipt samples are compared against our sample holding and handling protocols, where any deviations have been noted these are reported on our deviating sample page (if present)

Accreditation Key

This report shall not be reproduce except in full

UKAS = UKAS Accreditation, MCERTS = MCERTS Accreditation, u = Unaccredited, subUKAS - Subcontracted to a laboratory UKAS accredited for this test, subMCERTS - Subcontracted to a laboratory MCERTS accredited for this test

MCERTS Accreditation only covers the SAND, CLAY and LOAM matrices

UKAS accreditation on waters only covers the Ground water and Surface water matrices

Date of Issue: 27.08.25

Issued by: J. Gane

Issue No: 4

Rev No: 27

7 - 11 Harding Street
Leicester
LE1 4DH

L25/10455/PSL - 25-84681

Project Reference - PSL25/6230 Higham Lane North

Analytical Test Results - Solid

Lab Reference			609329	609330	609331
Client Sample ID			-	-	-
Client Sample Location			DSRC307	DSRC308	DSRC309
Client Sample Type			-	-	-
Client Sample Number			-	-	-
Depth - Top (m)			2.50	3.90	3.15
Depth - Bottom (m)			2.62	3.90	3.25
Date of Sampling			-	-	-
Time of Sampling			-	-	-
Sample Matrix			Other	Other	Other
Determinant	**Units**	**Accreditation**			
Sulphate (Acid Soluble)	(%)	u	< 0.01	0.02	< 0.01
Sulphur (Total)	(%)	UKAS	< 0.01	0.04	0.01

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L25/10455/PSL - 25-84681

Project Reference - PSL25/6230 Higham Lane North

Analytical Test Results - Chemical Analysis

Lab Reference			609329	609330	609331
Client Sample ID			-	-	-
Client Sample Location			DSRC307	DSRC308	DSRC309
Client Sample Type			-	-	-
Client Sample Number			-	-	-
Depth - Top (m)			2.50	3.90	3.15
Depth - Bottom (m)			2.62	3.90	3.25
Date of Sampling			-	-	-
Time of Sampling			-	-	-
Sample Matrix			Other	Other	Other
Determinant	**Units**	**Accreditation**			
Water soluble sulphate (as SO_4)	(mg/l)	u	10	41	49
pH Value	pH Units	MCERTS	8.0	6.9	6.9

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L25/10455/PSL - 25-84681

Project Reference - PSL25/6230 Higham Lane North

Sample Descriptions

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
609329	-	DSRC307	-	-	Brown sandstone	-	-	100
609330	-	DSRC308	-	-	Grey mudstone	-	-	100
609331	-	DSRC309	-	-	Brown mudstone	-	-	100

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L25/10455/PSL - 25-84681

Project Reference - PSL25/6230 Higham Lane North

Sample Comments

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Comments
609329	-	DSRC307	-	-	
609330	-	DSRC308	-	-	
609331	-	DSRC309	-	-	

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L25/10455/PSL - 25-84681

Project Reference - PSL25/6230 Higham Lane North

Analysis Methodologies - Please refer to sample comments page (if present) for any changes to methods

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preparation	Test Details
ANIONSS	MS - CL - Anions by Aquakem (2:1Extract)	Oven dried	Passing 2mm test sieve	Determination of Anions (inc Sulphate, chloride etc.) in soils by Aquakem. Analysis is based on a 2:1 water to soil extraction ratio
PHS	MS - CL - pH in Soils	As received	Passing 10mm test sieve	Determination of pH in soils using a pH probe (using a 1:3 soil to water extraction)
ASSO4S	MS - CL - Acid Soluble Sulphate	Oven Dried	Passing 2mm test sieve	Determination of total sulphate in soils by acid extraction followed by ICP analysis
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Preparation of samples (including determination of moisture content) to allow for subsequent analysis
1377TS-ELT	BS1377 Total Sulphur Content by HTC	Oven dried	BS1377 : Part 1 : 2016	Total Sulphur Content testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 7.10 (using Eltra CS-800 Analyser)

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L25/10455/PSL - 25-84681

Project Reference - PSL25/6230 Higham Lane North

Sample Deviations

Deviations are listed below against each sample and associated test method, where deviation(s) are noted it means data may not be representative of the sample at the time of sampling and it is possible that results provided may be compromised.

Observations on receipt

A - No date of sampling provided
W - No time of sampling provided for water sample
C - Received in inappropriate container
H - Contains headspace
T - Temperature on receipt exceeds storage temperature
R - Sample(s) received with less than 96 hours for testing to commence/complete, any result formally classed as deviating will be marked with an X against the applicable test (i.e. RX)

Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
609329	-	DSRC307	-	-		A
609330	-	DSRC308	-	-		A
609331	-	DSRC309	-	-		A

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Professional Soils Laboratory
5/7 Hexthorpe Road
Hexthorpe
Doncaster
DN4 0AR

Analytical Test Report:	**L25/10777/PSL - 25-85927**

Your Project Reference:	**PSL25/6230 Higlan Lane North**		
Your Order Number:	PSL25/6230	Samples Received / Instructed:	13/10/2025 / 13/10/2025
Report Issue Number:	1	Sample Tested:	13/10 to 21/10/2025
Samples Analysed:	1 sample(s)	Report issued:	21/10/2025

Signed

James Gane
Analytical Services Manager
CTS

Notes:

General

Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Moisture Content was determined in accordance with CTS method statement MS - CL - Sample Prep, oven dried at <30˚C.

Moisture Content is reported as a percentage of the dry mass of soil, this calculation is in accordance with BS1377, Part 2, 1990, Clause 3.2

Stone Content was determined in accordance with CTS method statement MS - CL - Sample Prep and refers to the percentage of stones retained on a 10mm BS test sieve.

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Samples were supplied by customer, results apply to the samples as received.

Deviating Samples

On receipt samples are compared against our sample holding and handling protocols, where any deviations have been noted these are reported on our deviating sample page (if present)

Accreditation Key

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UKAS accreditation on waters only covers the Ground water and Surface water matrices

Date of Issue: 27.08.25

Issued by: J. Gane

Issue No: 4

Rev No: 27

7 - 11 Harding Street
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L25/10777/PSL - 25-85927

Project Reference - PSL25/6230 Higlan Lane North

Analytical Test Results - Solid

Lab Reference			614344
Client Sample ID			-
Client Sample Location			DSRC302
Client Sample Type			UT
Client Sample Number			-
Depth - Top (m)			1.20
Depth - Bottom (m)			1.20
Date of Sampling			-
Time of Sampling			-
Sample Matrix			Other
Determinant	**Units**	**Accreditation**	
SOM (via TOC)	(%)	UKAS	< 0.9

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L25/10777/PSL - 25-85927

Project Reference - PSL25/6230 Higlan Lane North

Analytical Test Results - Chemical Analysis

Lab Reference			614344
Client Sample ID			-
Client Sample Location			DSRC302
Client Sample Type			UT
Client Sample Number			-
Depth - Top (m)			1.20
Depth - Bottom (m)			1.20
Date of Sampling			-
Time of Sampling			-
Sample Matrix			Other
Determinant	**Units**	**Accreditation**	
Water soluble sulphate (as SO_4)	(mg/l)	u	110
Acid Soluble Sulphate	(%)	u	0.04
Total Sulphur	(%)	UKAS	0.04
pH Value	pH Units	MCERTS	8.1
Water Soluble Chloride	(mg/l)	u	8.1

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L25/10777/PSL - 25-85927

Project Reference - PSL25/6230 Higlan Lane North

Sample Descriptions

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
614344	-	DSRC302	UT	-	Grey mudstone	5.0	< 0.1	100

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L25/10777/PSL - 25-85927

Project Reference - PSL25/6230 Higlan Lane North

Sample Comments

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Comments
614344	-	DSRC302	UT	-	

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L25/10777/PSL - 25-85927

Project Reference - PSL25/6230 Higlan Lane North

Analysis Methodologies - Please refer to sample comments page (if present) for any changes to methods

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preparation	Test Details
ANIONSS	MS - CL - Anions by Aquakem (2:1Extract)	Oven dried	Passing 2mm test sieve	Determination of Anions (inc Sulphate, chloride etc.) in soils by Aquakem. Analysis is based on a 2:1 water to soil extraction ratio
PHS	MS - CL - pH in Soils	As received	Passing 10mm test sieve	Determination of pH in soils using a pH probe (using a 1:3 soil to water extraction)
ASSO4S	MS - CL - Acid Soluble Sulphate	Oven Dried	Passing 2mm test sieve	Determination of total sulphate in soils by acid extraction followed by ICP analysis
TOCS	MS - CL - TOC Eltra	Air Dried	Passing 10mm test sieve	Determination of Total Organic Carbon in soils
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Preparation of samples (including determination of moisture content) to allow for subsequent analysis
1377TS-ELT	BS1377 Total Sulphur Content by HTC	Oven dried	BS1377 : Part 1 : 2016	Total Sulphur Content testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 7.10 (using Eltra CS-800 Analyser)

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L25/10777/PSL - 25-85927

Project Reference - PSL25/6230 Higlan Lane North

Sample Deviations

Deviations are listed below against each sample and associated test method, where deviation(s) are noted it means data may not be representative of the sample at the time of sampling and it is possible that results provided may be compromised.

Observations on receipt

A - No date of sampling provided
W - No time of sampling provided for water sample
C - Received in inappropriate container
H - Contains headspace
T - Temperature on receipt exceeds storage temperature
R - Sample(s) received with less than 96 hours for testing to commence/complete, any result formally classed as deviating will be marked with an X against the applicable test (i.e. RX)

Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
614344	-	DSRC302	UT	-		A

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Professional Soils Laboratory
5/7 Hexthorpe Road
Hexthorpe
Doncaster
DN4 0AR

Analytical Test Report:	**L25/11006/PSL - 25-86765**

Your Project Reference:	**PSL25/6230 Higham Lane**		
Your Order Number:	PSL25/6230	Samples Received / Instructed:	17/10/2025 / 17/10/2025
Report Issue Number:	1	Sample Tested:	17/10 to 28/10/2025
Samples Analysed:	12 sample(s)	Report issued:	28/10/2025

Signed

James Gane
Analytical Services Manager
CTS

Notes:

General

Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Moisture Content was determined in accordance with CTS method statement MS - CL - Sample Prep, oven dried at <30˚C.

Moisture Content is reported as a percentage of the dry mass of soil, this calculation is in accordance with BS1377, Part 2, 1990, Clause 3.2

Stone Content was determined in accordance with CTS method statement MS - CL - Sample Prep and refers to the percentage of stones retained on a 10mm BS test sieve.

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Samples were supplied by customer, results apply to the samples as received.

Deviating Samples

On receipt samples are compared against our sample holding and handling protocols, where any deviations have been noted these are reported on our deviating sample page (if present)

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Date of Issue: 27.08.25

Issued by: J. Gane

Issue No: 4

Rev No: 27

7 - 11 Harding Street
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L25/11006/PSL - 25-86765

Project Reference - PSL25/6230 Higham Lane

Analytical Test Results - Solid

Lab Reference			618720	618721	618722	618723	618724	618725	618726
Client Sample ID			-	-	-	-	-	-	-
Client Sample Location			DSRC301	DSRC301	DSRC301	DSRC302	DSRC302	DSRC303	DSRC303
Client Sample Type			C	C	C	C	C	C	C
Client Sample Number			-	-	-	-	-	-	-
Depth - Top (m)			6.40	7.70	9.37	4.75	6.15	2.50	6.22
Depth - Bottom (m)			6.46	7.76	9.40	4.90	6.25	2.60	6.44
Date of Sampling			-	-	-	-	-	-	-
Time of Sampling			-	-	-	-	-	-	-
Sample Matrix			Other	Other	Other	Other	Other	Other	Other
Determinant	**Units**	**Accreditation**							
SOM (via TOC)	(%)	UKAS	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9

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L25/11006/PSL - 25-86765

Project Reference - PSL25/6230 Higham Lane

Analytical Test Results - Solid

Lab Reference			618727	618728
Client Sample ID			-	-
Client Sample Location			DSRC304	DSRC304
Client Sample Type			C	C
Client Sample Number			-	-
Depth - Top (m)			2.74	3.40
Depth - Bottom (m)			2.76	3.45
Date of Sampling			-	-
Time of Sampling			-	-
Sample Matrix			Other	Other
Determinant	**Units**	**Accreditation**		
SOM (via TOC)	(%)	UKAS	< 0.9	< 0.9

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L25/11006/PSL - 25-86765

Project Reference - PSL25/6230 Higham Lane

Analytical Test Results - Chemical Analysis

Lab Reference			618720	618721	618722	618723	618724	618725	618726
Client Sample ID			-	-	-	-	-	-	-
Client Sample Location			DSRC301	DSRC301	DSRC301	DSRC302	DSRC302	DSRC303	DSRC303
Client Sample Type			C	C	C	C	C	C	C
Client Sample Number			-	-	-	-	-	-	-
Depth - Top (m)			6.40	7.70	9.37	4.75	6.15	2.50	6.22
Depth - Bottom (m)			6.46	7.76	9.40	4.90	6.25	2.60	6.44
Date of Sampling			-	-	-	-	-	-	-
Time of Sampling			-	-	-	-	-	-	-
Sample Matrix			Other	Other	Other	Other	Other	Other	Other
Determinant	**Units**	**Accreditation**							
Water soluble sulphate (as SO_4)	(mg/l)	u	230	340	470	980	270	750	190
Acid Soluble Sulphate	(%)	u	0.16	0.18	0.26	0.44	0.18	0.34	0.16
Total Sulphur	(%)	UKAS	0.31	0.35	0.38	0.45	0.34	0.42	0.31
pH Value	pH Units	MCERTS	7.7	7.5	7.7	7.8	7.7	7.8	8.2

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L25/11006/PSL - 25-86765

Project Reference - PSL25/6230 Higham Lane

Analytical Test Results - Chemical Analysis

Lab Reference			618727	618728
Client Sample ID			-	-
Client Sample Location			DSRC304	DSRC304
Client Sample Type			C	C
Client Sample Number			-	-
Depth - Top (m)			2.74	3.40
Depth - Bottom (m)			2.76	3.45
Date of Sampling			-	-
Time of Sampling			-	-
Sample Matrix			Other	Other
Determinant	**Units**	**Accreditation**		
Water soluble sulphate (as SO_4)	(mg/l)	u	860	220
Acid Soluble Sulphate	(%)	u	0.37	0.18
Total Sulphur	(%)	UKAS	0.45	0.37
pH Value	pH Units	MCERTS	7.9	8.3

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L25/11006/PSL - 25-86765

Project Reference - PSL25/6230 Higham Lane

Sample Descriptions

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
618720	-	DSRC301	C	-	Grey crushed rock	0.9	< 0.1	100
618721	-	DSRC301	C	-	Grey crushed rock	2.2	< 0.1	100
618722	-	DSRC301	C	-	Grey crushed rock	1.9	< 0.1	100
618723	-	DSRC302	C	-	Grey crushed rock	1.1	< 0.1	100
618724	-	DSRC302	C	-	Grey crushed rock	1.7	< 0.1	100
618725	-	DSRC303	C	-	Grey crushed rock	1.9	< 0.1	100
618726	-	DSRC303	C	-	Grey crushed rock	1.2	< 0.1	100
618727	-	DSRC304	C	-	Grey crushed rock	1.6	< 0.1	100
618728	-	DSRC304	C	-	Grey crushed rock	1.3	< 0.1	100

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L25/11006/PSL - 25-86765

Project Reference - PSL25/6230 Higham Lane

Sample Comments

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Comments
618720	-	DSRC301	C	-	
618721	-	DSRC301	C	-	
618722	-	DSRC301	C	-	
618723	-	DSRC302	C	-	
618724	-	DSRC302	C	-	
618725	-	DSRC303	C	-	
618726	-	DSRC303	C	-	
618727	-	DSRC304	C	-	
618728	-	DSRC304	C	-	

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L25/11006/PSL - 25-86765

Project Reference - PSL25/6230 Higham Lane

Analysis Methodologies - Please refer to sample comments page (if present) for any changes to methods

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preparation	Test Details
ANIONSS	MS - CL - Anions by Aquakem (2:1Extract)	Oven dried	Passing 2mm test sieve	Determination of Anions (inc Sulphate, chloride etc.) in soils by Aquakem. Analysis is based on a 2:1 water to soil extraction ratio
PHS	MS - CL - pH in Soils	As received	Passing 10mm test sieve	Determination of pH in soils using a pH probe (using a 1:3 soil to water extraction)
ASSO4S	MS - CL - Acid Soluble Sulphate	Oven Dried	Passing 2mm test sieve	Determination of total sulphate in soils by acid extraction followed by ICP analysis
TOCS	MS - CL - TOC Eltra	Air Dried	Passing 10mm test sieve	Determination of Total Organic Carbon in soils
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Preparation of samples (including determination of moisture content) to allow for subsequent analysis
1377TS-ELT	BS1377 Total Sulphur Content by HTC	Oven dried	BS1377 : Part 1 : 2016	Total Sulphur Content testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 7.10 (using Eltra CS-800 Analyser)

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L25/11006/PSL - 25-86765

Project Reference - PSL25/6230 Higham Lane

Sample Deviations

Deviations are listed below against each sample and associated test method, where deviation(s) are noted it means data may not be representative of the sample at the time of sampling and it is possible that results provided may be compromised.

Observations on receipt

A - No date of sampling provided
W - No time of sampling provided for water sample
C - Received in inappropriate container
H - Contains headspace
T - Temperature on receipt exceeds storage temperature
R - Sample(s) received with less than 96 hours for testing to commence/complete, any result formally classed as deviating will be marked with an X against the applicable test (i.e. RX)

Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
618720	-	DSRC301	C	-		A
618721	-	DSRC301	C	-		A
618722	-	DSRC301	C	-		A
618723	-	DSRC302	C	-		A
618724	-	DSRC302	C	-		A
618725	-	DSRC303	C	-		A
618726	-	DSRC303	C	-		A
618727	-	DSRC304	C	-		A
618728	-	DSRC304	C	-		A

Test Amendment Notice

Date:	3.10.25
PSL Contract Reference:	6230
Contract Title:	Higham Lane
Engineer/Client Details:	Emily Sykes
Sample Details:	OSRC303 @ 6.22-6.44 OSRC304 @ 8.88-9.08
Testing required:	UCS

Details of Unsuitability

The above sample cannot be performed due to the following reasons:

1 The Sample has not been received

2 There is insufficient material for the required testing:

Sample Mass received (g) .....

Sample Mass required (g) .....

3 The sample has been previously tested

4 The sample has been misplaced in the laboratory

5 The sample is unsuitable for testing becaus the cores are at insufficient dimensions due to fragmentation.

.....

Please advise action required:

1 Perform the testing on the following sampl .....

2 Combine samples has follows for testing: .....

3 Perform the following alternative testing: .....

4 Perform a non standard test:

5 Take no further action

6 Undertake the following instructions: .....

.....

.....

Signed ..... Date .....

(Project Engineer)

PSL PROFESSIONAL SOILS LABORATORY

Professional Soils Laboratory
5/7 Hexthorpe Road
Hexthorpe
Doncaster
DN4 0AR

7 - 11 Harding Street
Leicester
LE1 4DH

Analytical Test Report: L25/10455/PSL - 25-84681

Your Project Reference:	**PSL25/6230 Higham Lane North**		
Your Order Number:	PSL25/6230	Samples Received / Instructed:	06/10/2025 / 06/10/2025
Report Issue Number:	1	Sample Tested:	06/10 to 13/10/2025
Samples Analysed:	3 sample(s)	Report issued:	13/10/2025

Signed

James Gane
Analytical Services Manager
CTS

Notes:

General

Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Moisture Content was determined in accordance with CTS method statement MS - CL - Sample Prep, oven dried at <30˚C.

Moisture Content is reported as a percentage of the dry mass of soil, this calculation is in accordance with BS1377, Part 2, 1990, Clause 3.2

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Uncertainty of measurement values are available on request.

Samples were supplied by customer, results apply to the samples as received.

Deviating Samples

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UKAS accreditation on waters only covers the Ground water and Surface water matrices

Date of Issue: 27.08.25

Issued by: J. Gane

Issue No: 4

Rev No: 27

7 - 11 Harding Street
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L25/10455/PSL - 25-84681

Project Reference - PSL25/6230 Higham Lane North

Analytical Test Results - Solid

Lab Reference			609329	609330	609331
Client Sample ID			-	-	-
Client Sample Location			DSRC307	DSRC308	DSRC309
Client Sample Type			-	-	-
Client Sample Number			-	-	-
Depth - Top (m)			2.50	3.90	3.15
Depth - Bottom (m)			2.62	3.90	3.25
Date of Sampling			-	-	-
Time of Sampling			-	-	-
Sample Matrix			Other	Other	Other
Determinant	**Units**	**Accreditation**			
Sulphate (Acid Soluble)	(%)	u	< 0.01	0.02	< 0.01
Sulphur (Total)	(%)	UKAS	< 0.01	0.04	0.01

7 - 11 Harding Street
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L25/10455/PSL - 25-84681

Project Reference - PSL25/6230 Higham Lane North

Analytical Test Results - Chemical Analysis

Lab Reference			609329	609330	609331
Client Sample ID			-	-	-
Client Sample Location			DSRC307	DSRC308	DSRC309
Client Sample Type			-	-	-
Client Sample Number			-	-	-
Depth - Top (m)			2.50	3.90	3.15
Depth - Bottom (m)			2.62	3.90	3.25
Date of Sampling			-	-	-
Time of Sampling			-	-	-
Sample Matrix			Other	Other	Other
Determinant	**Units**	**Accreditation**			
Water soluble sulphate (as SO_4)	(mg/l)	u	10	41	49
pH Value	pH Units	MCERTS	8.0	6.9	6.9

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LE1 4DH

L25/10455/PSL - 25-84681

Project Reference - PSL25/6230 Higham Lane North

Sample Descriptions

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
609329	-	DSRC307	-	-	Brown sandstone	-	-	100
609330	-	DSRC308	-	-	Grey mudstone	-	-	100
609331	-	DSRC309	-	-	Brown mudstone	-	-	100

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L25/10455/PSL - 25-84681

Project Reference - PSL25/6230 Higham Lane North

Sample Comments

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Comments
609329	-	DSRC307	-	-	
609330	-	DSRC308	-	-	
609331	-	DSRC309	-	-	

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Analysis Methodologies - Please refer to sample comments page (if present) for any changes to methods

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preparation	Test Details
ANIONSS	MS - CL - Anions by Aquakem (2:1Extract)	Oven dried	Passing 2mm test sieve	Determination of Anions (inc Sulphate, chloride etc.) in soils by Aquakem. Analysis is based on a 2:1 water to soil extraction ratio
PHS	MS - CL - pH in Soils	As received	Passing 10mm test sieve	Determination of pH in soils using a pH probe (using a 1:3 soil to water extraction)
ASSO4S	MS - CL - Acid Soluble Sulphate	Oven Dried	Passing 2mm test sieve	Determination of total sulphate in soils by acid extraction followed by ICP analysis
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Preparation of samples (including determination of moisture content) to allow for subsequent analysis
1377TS-ELT	BS1377 Total Sulphur Content by HTC	Oven dried	BS1377 : Part 1 : 2016	Total Sulphur Content testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 7.10 (using Eltra CS-800 Analyser)

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Sample Deviations

Deviations are listed below against each sample and associated test method, where deviation(s) are noted it means data may not be representative of the sample at the time of sampling and it is possible that results provided may be compromised.

Observations on receipt

A - No date of sampling provided
W - No time of sampling provided for water sample
C - Received in inappropriate container
H - Contains headspace
T - Temperature on receipt exceeds storage temperature
R - Sample(s) received with less than 96 hours for testing to commence/complete, any result formally classed as deviating will be marked with an X against the applicable test (i.e. RX)

Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
609329	-	DSRC307	-	-		A
609330	-	DSRC308	-	-		A
609331	-	DSRC309	-	-		A

Appendix E Gas and Groundwater Monitoring

GAS AND GROUNDWATER MONITORING RESULTS

Site: Higham Lane North, Dodworth

Job No: 4173 **Client:** Commercial Development Projects Limited

Visit No: 1 **Date:** 20/08/2025

Monitoring Location	Gas Concentration									Gas Emission Rate		GWL	Base of Standpipe
	Peak			Steady			Highest	Highest	Lowest				
BH	CH_4		CO_2	CH_4		CO_2	H_2S	CO	O_2	Litre/Hour			
	% lel	%v/v	%	% lel	%v/v	%	ppm	ppm	%	Peak	Steady	(m) bgl	
WS312	0.0	0.0	3.6	0.0	0.0	3.5	0	0	16.0	0.0	0.0	2.10	3.20
DSRC301	0.0	0.0	5.3	0.0	0.0	5.0	7	34	5.5	0.0	0.0	9.15	12.10
DSRC304	0.0	0.0	2.8	0.0	0.0	2.8	3	25	15.8	0.0	0.0	8.15	12.00
DSRC308	0.0	0.0	3.0	0.0	0.0	2.9	0	0	19.4	0.0	0.0	Dry	8.70
DSRC309	0.0	0.0	1.2	0.0	0.0	1.2	4	33	18.3	0.0	0.0	Dry	8.25
DSRO301	0.0	0.0	0.3	0.0	0.0	0.2	0	0	20.5	0.0	0.0	17.7	20.50
DSRO302	0	0	6.1	0	0	5.6	1	3	12.3	0	0	4.70	19.95

Ambient Concentration (% volume):		CH_4	0.2	%v/v	0.0	%v/v
		O_2	21.2	%v/v		
Barometric Pressure:	**Start**	997		**Monitoring Equipment:**		GA5000
	End	1002		**Serial Number of Equipment:**		G505491
Barometric Pressure Trend:		Locally rising, regionally steady		**Date of Last Calibration:**		14.Jan.2025
Weather:		Cloudy, warm		**Operator:**		EJS

Key	**Remarks**
NR - Not Recorded NA - Not Applicable	

Checked:	JBW	**Approved:**	**JBW**				

GAS AND GROUNDWATER MONITORING RESULTS

Site: Higham Lane North, Dodworth

Job No: 4173 **Client:** Commercial Development Projects Limited

Visit No: 2 **Date:** 26/08/2025

Monitoring Location	Gas Concentration									Gas Emission Rate		GWL	Base of Standpipe
	Peak			Steady			Highest	Highest	Lowest				
BH	CH_4		CO_2	CH_4		CO_2	H_2S	CO	O_2	Litre/Hour			
	% lel	%v/v	%	% lel	%v/v	%	ppm	ppm	%	Peak	Steady	(m) bgl	
WS312	0.0	0.0	2.6	0.0	0.0	2.5	1	0	18.0	0.0	0.0	2.10	3.20
DSRC301	0.0	0.0	6.3	0.0	0.0	6.1	2	3	0.7	0.0	0.0	9.30	12.10
DSRC304	0.0	0.0	3.3	0.0	0.0	3.3	2	1	13.3	0.1	0.1	9.20	12.00
DSRC308	0.0	0.0	12.2	0.0	0.0	12.2	0	0	3.6	0.0	0.0	7.00	8.70
DSRC309	0.0	0.0	1.4	0.0	0.0	1.2	1	4	5.9	0.1	0.1	Dry	8.25
DSRO301	0.0	0.0	4.6	0.0	0.0	4.6	1	0	9.8	0.0	0.0	18.6	20.50
DSRO302	0.0	0.0	4.3	0.0	0.0	4.1	2	2	11.0	0.1	0.1	5.50	19.95

Ambient Concentration (% volume):			**CH_4**	0.1	%v/v	**CO_2**	0.1	%v/v
			O_2	20.8	%v/v			
Barometric Pressure:	**Start**	984				**Monitoring Equipment:**	GA5000	
	End	989				**Serial Number of Equipment:**	G505491	
Barometric Pressure Trend:		Locally steady, regionally falling				**Date of Last Calibration:**	14.Jan.2025	
Weather:		Sunny and warm				**Operator:**	DJW	

Key	**Remarks**					
NR - Not Recorded NA - Not Applicable						
	Checked:	JBW	**Approved:**	**JBW**		

GAS AND GROUNDWATER MONITORING RESULTS

Site: Higham Lane North, Dodworth

Job No: 4173 **Client:** Commercial Development Projects Limited

Visit No: 3 **Date:** 05/09/2025

Monitoring Location	Gas Concentration									Gas Emission Rate		GWL	Base of Standpipe
	Peak			Steady			Highest	Highest	Lowest				
BH	CH_4		CO_2	CH_4		CO_2	H_2S	CO	O_2	Litre/Hour			
	% lel	%v/v	%	% lel	%v/v	%	ppm	ppm	%	Peak	Steady	(m) bgl	
WS312	0.0	0.0	1.2	0.0	0.0	1.2	0	0	20.1	0	0	Dry	3.20
DSRC301	0.0	0.0	2.4	0.0	0.0	2.4	1	2	16.2	0.3	0.2	9.40	12.10
DSRC304	0.0	0.0	5.2	0.0	0.0	5.2	0	2	10.2	0.1	0.1	8.70	12.00
DSRC308	0.0	0.0	0.7	0.0	0.0	0.7	0	1	20.7	0.0	0.0	7.10	8.70
DSRC309	0.0	0.0	0.5	0.0	0.0	0.5	0	2	20.4	0.1	0.1	Dry	8.25
DSRO301	0.0	0.0	0.1	0.0	0.0	0.1	0	1	20.6	0.3	0.3	18.70	20.50
DSRO302	0.0	0.0	6.8	0.0	0.0	6.8	0	1	5.1	0.1	0	5.50	19.95

Ambient Concentration (% volume):			**CH_4**	0.0	%v/v	**CO_2**	0.1	%v/v
			O_2	20.8	%v/v			
Barometric Pressure:	**Start**	995				**Monitoring Equipment:**	GA5000	
	End	1003				**Serial Number of Equipment:**	G505491	
Barometric Pressure Trend:		Locally rising, regionally rising.				**Date of Last Calibration:**	14.Jan.2025	
Weather:		Dry and Sunny.				**Operator:**	DJW	

Key	**Remarks**
NR - Not Recorded NA - Not Applicable	

Checked:	JBW	**Approved:**	**JBW**				

GAS AND GROUNDWATER MONITORING RESULTS

Site: Higham Lane North, Dodworth

Job No: 4173 **Client:** Commercial Development Projects Limited

Visit No: 4 **Date:** 12/09/2025

Monitoring Location	Gas Concentration									Gas Emission Rate		GWL	Base of Standpipe
	Peak			Steady			Highest	Highest	Lowest				
BH	CH_4		CO_2	CH_4		CO_2	H_2S	CO	O_2	Litre/Hour			
	% lel	%v/v	%	% lel	%v/v	%	ppm	ppm	%	Peak	Steady	(m) bgl	
WS312	0.0	0.0	1.9	0.0	0.0	1.9	0	4	19.8	0.0	0.0	Dry	3.20
DSRC301	0.0	0.0	4.1	0.0	0.0	4.1	0	0	9.8	0.0	0.0	9.40	12.10
DSRC304	0.0	0.0	5.3	0.0	0.0	5.3	0	0	11.5	0.0	0.0	9.00	12.00
DSRC308	0.0	0.0	1.7	0.0	0.0	1.7	0	0	20.2	0.0	0.0	6.80	8.70
DSRC309	0.0	0.0	0.8	0.0	0.0	0.8	0	0	20.6	0.1	0.1	Dry	8.25
DSRO301	0.0	0.0	0.4	0.0	0.0	0.3	0	0	20.5	-0.8	-0.8	15.50	20.50
DSRO302	0	0	7.7	0	0	7.7	0	0	3.6	0	0	5.55	19.95

Ambient Concentration (% volume): **CH_4** %v/v **CO_2** %v/v **O_2** %v/v

Barometric Pressure: **Start** 980 **End** 983

Barometric Pressure Trend: Locally rising, regionally rising.

Weather: Overcast

Monitoring Equipment: GA5000

Serial Number of Equipment: G505491

Date of Last Calibration: 14.Jan.2025

Operator: EJS

Key	Remarks
NR - Not Recorded NA - Not Applicable	

Checked: JBW **Approved:** JBW

GAS AND GROUNDWATER MONITORING RESULTS

Site: Higham Lane North, Dodworth

Job No: 4173 **Client:** Commercial Development Projects Limited

Visit No: 5 **Date:** 23/09/2025

Monitoring Location	Gas Concentration									Gas Emission Rate		GWL	Base of Standpipe
	Peak			Steady			Highest	Highest	Lowest				
BH	CH_4		CO_2	CH_4		CO_2	H_2S	CO	O_2	Litre/Hour			
	% lel	%v/v	%	% lel	%v/v	%	ppm	ppm	%	Peak	Steady	(m) bgl	
WS312	0.0	0.0	0.3	0.0	0.0	0.3	0	0	20.00	-0.1	-0.1	0.80	3.20
DSRC301	0.0	0.0	2.5	0.0	0.0	2.5	0	0	14.80	0.0	0.0	5.50	12.10
DSRC304	0.0	0.0	1.5	0.0	0.0	1.5	0	0	19.90	0.0	0.0	6.80	12.00
DSRC308	0.0	0.0	0.3	0.0	0.0	0.3	0	0	20.80	0.0	0.0	7.95	8.70
DSRC309	0.0	0.0	0.3	0.0	0.0	0.2	0	0	1.90	0.0	0.0	Dry	8.25
DSRO301	0.0	0.0	1.4	0.0	0.0	0.7	0	0	20.30	0.0	0.0	17.10	20.50
DSRO302	0	0	7.6	0.0	0.0	7.6	0	0	19.0	0	0	5.75	19.95

Ambient Concentration (% volume): **CH_4** %v/v **CO_2** %v/v **O_2** %v/v

Barometric Pressure: **Start** 1005 **End** 1010

Barometric Pressure Trend: Locally rising, regionally rising

Weather: Sunny

Monitoring Equipment: GA5000

Serial Number of Equipment: G505491

Date of Last Calibration: 14.Jan.2025

Operator: EJS

Key	Remarks
NR - Not Recorded NA - Not Applicable	

Checked: JBW **Approved:** JBW

GAS AND GROUNDWATER MONITORING RESULTS

Site: Higham Lane North, Dodworth

Job No: 4173 **Client:** Commercial Development Projects Limited

Visit No: 6 **Date:** 29/09/2025

Monitoring Location	Gas Concentration									Gas Emission Rate		GWL	Base of Standpipe
	Peak			Steady			Highest	Highest	Lowest				
BH	CH_4		CO_2	CH_4		CO_2	H_2S	CO	O_2	Litre/Hour			
	% lel	%v/v	%	% lel	%v/v	%	ppm	ppm	%	Peak	Steady	(m) bgl	
WS312	0.0	0.0	0.5	0.0	0.0	0.3	1	0	20.6	0.0	0.0	Dry	3.20
DSRC301	0.0	0.0	3.7	0.0	0.0	3.7	1	0	9.1	0.1	0.1	9.52	12.10
DSRC304	0.0	0.0	4.0	0.0	0.0	4.0	1	0	11.6	0.1	0.1	8.29	12.00
DSRC308	0.0	0.0	1.8	0.0	0.0	1.8	0	0	20.2	0.0	0.0	7.06	8.70
DSRC309	0.0	0.0	2.4	0.0	0.0	2.4	0	1	16.6	0.0	0.0	Dry	8.25
DSRO301	0.0	0.0	0.3	0.0	0.0	0.3	1	0	20.6	0.1	0.1	17.75	20.50
DSRO302	0.0	0.0	6.9	0.0	0.0	6.9	1	0	2.3	0.1	0.1	5.74	19.95

Ambient Concentration (% volume):		**CH_4**	0.1	%v/v	**CO_2**	0.2 %v/v
		O_2	20.8	%v/v		
Barometric Pressure:	**Start**	1003		**Monitoring Equipment:**		GA5000
	End	1005		**Serial Number of Equipment:**		G505491
Barometric Pressure Trend:		Locally rising, regionally falling.		**Date of Last Calibration:**		14.Jan.2025
Weather:		Sunny.		**Operator:**		DMH

Key	Remarks
NR - Not Recorded NA - Not Applicable	Borehole DSRC304 purged and water sample taken.

Checked:	JBW	Approved:	JBW

Appendix F Notes on Limitations

General

JPG (Leeds) Limited have prepared this report solely for the use of the Client and those parties with whom a warranty agreement has been executed, or with whom an assignment has been agreed. Should any third party wish to use or rely upon the contents of the report, written approval must be sought from JPG (Leeds) Limited; a charge may be levied against such approval.

JPG (Leeds) Limited accepts no responsibility or liability for:

a) The consequences of this document being used for any purpose or project other than for which it was commissioned, and
b) The use of this document by any third party with whom an agreement has not been executed.

Phase I Desk Study Reports

The work undertaken to provide the basis of this report comprised a study of available documented information from a variety of sources (including any information provided by the Client), together with (where appropriate) a brief walk over inspection of the site and meetings and discussions with relevant authorities and other interested parties where appropriate. The opinions given in this report have been dictated by the finite data on which they are based and are relevant only for the purpose for which the report was commissioned. The information reviewed should not be considered exhaustive and has been accepted in good faith as providing true and representative data pertaining to site conditions. Should additional information become available which may affect the opinions expressed in this report, JPG (Leeds) Limited reserves the right to review such information and, if warranted, to modify the opinions accordingly.

It should be noted that any risks identified in this report are perceived risks based on the information reviewed; actual risks can only be assessed following a physical investigation of the site.

Phase II Geo-Environmental Investigations

The investigation of the site has been carried out to provide sufficient information concerning the type and degree of contamination, geotechnical characteristics and ground and groundwater conditions to allow a reasonable assessment of the environmental risks together with engineering and development implications.

The objectives of the investigation have been limited to establishing the risks associated with potential human receptors, building materials, the environment (including adjacent land) and controlled waters (surface water and groundwater).

The number of sampling points and the methods of sampling and testing do not preclude the existence of localised "hotspots" of contamination where concentrations may be significantly higher than those actually encountered.

The risk assessment and opinions provided, inter alia, take into consideration currently available guidance values relating to acceptable contamination concentrations; no liability can be accepted for the retrospective effects of any future changes or amendments to these values.

The scope of the investigation was selected on the basis of the specific development proposed by the Client and may be inappropriate to another form of development or scheme.

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