Factual GI Report for 42 Durham Road, Coatham Mundeville

Rev 02



33 Sandy Lane Skelmersdale, Lancashire WN8 8LA

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DOCUMENT CONTROL	-
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Report title:	SEP Rail Services 42 Durham Road, Coatham Mundeville Factual Ground Investigation Report		
Revision number:	02		
Issue Date:	21 March 2022		
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	on behalf of SEP Technical		
Client:	Rod Farrow		



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Document Revision Status

Revision	Date	Comments
01	18 March 2022	Initial version issued for comments.
02	21 March 2022	Final version with amendments.

Important note about your report

The sole purpose and the associated services performed by SEP Technical is to complete a ground investigation and report the factual findings of the investigation in relation to the 42 Durham Road Enabling Works, in accordance with the scope of services set out in the contract between SEP Technical and Rod Farrow.

SEP Technical has prepared this report in accordance with the usual care and thoroughness of the consulting profession, for the sole purpose described above and by reference to applicable standards, guidelines, procedures and practices at the date of issue of this report. For the reasons outlined above, however, no other warranty or guarantee, whether expressed or implied, is made as to the data, observations and findings expressed in this report, to the extent permitted by law.

This report should be read in full, and no excerpts are to be taken as representative of the findings. No responsibility is accepted by SEP Technical for use of any part of this report in any other context.

The report is based on the available information provided to date and issued in accordance with the provisions of the contract between SEP Technical and Rod Farrow.

SEP Technical accepts no liability or responsibility whatsoever for, or in respect of, any use of, or reliance upon, this report by any third party.



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CONTENTS

Appendix 1

Appendix 2

Appendix 3

1.0	Introdu	ction
	1.1 1.2 1.3	General Background Scope Limitations
2.0	Site Se	etting
	2.1 2.2 2.3	Site Location and Description Geology Hydrogeology and Hydrology
3.0	Site Inv	vestigation
	3.1 3.2 3.3 3.4 3.5	General Window Sample Boreholes Soil Logging and Sampling Contamination Laboratory Analysis Geotechnical Laboratory Analysis
4.0	Ground	d Conditions
	4.1 4.2 4.3	Ground Conditions Groundwater Field Evidence of Contamination
5.0	Ground	I Engineering Assessment
	5.1 5.2 5.3	Plasticity Index Ground Stability Soluble Sulphate and pH
Tables		
Table 1 Table 2 Table 3 Table 4 Table 5	2 3 4 5	Summary of Contamination Laboratory Analysis Summary of Geotechnical Laboratory Analysis Summary of Ground Conditions Material Properties Plasticity Testing Results Soluble Sulphate and pH Classification
Figure	S	
Figure Figure		Site Location Plan Exploratory Hole Location Plan
Appen	dices	

Window Sample Borehole Logs

Contamination Laboratory Analysis Results

Geotechnical Laboratory Analysis Results



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1.0 INTRODUCTION

1.1 General Background

SEP Technical (SEP) was instructed by Rod Farrow (RF) to conduct an intrusive ground investigation on plot of land at 42 Durham Road in Coatham Mundeville (hereafter referred to as the "Site").

The purpose of the investigation works is to clarify the ground conditions of the site and assess for any signs of contamination.

The proposed development for the site is a residential bungalow property with access from Durham Road.

1.2 Scope

In summary, the scope of works of the ground investigation was given by the client as the following:

- Four number window sample boreholes to a target depth of 6.00mbgl.
- SPTs carried out in 1.00m intervals from 1.00mbgl.
- Disturbed samples taken at 1.00m intervals.
- A factual report including relevant logs, as-built location plan and laboratory testing certificates.

All sampling, logging and testing of soils was undertaken in accordance with BS 5930:2015 'Code of Practice for Site Investigations' and BS10175:2011+A1:2013 'Investigation of Potentially Contaminated Sites – Code of Practice'.

1.3 Limitations

The assessments and interpretation have been made in line with legislation and guidelines in force at the time of writing, representing best practice at that time.

All of the comments and opinions contained in this report, including any conclusions, are based on the information obtained by SEP Technical (SEP) from the ground investigation.

Except as otherwise requested by the Client, SEP Technical (SEP) is not obliged and disclaims any obligation to update the report for events taking place after:

- a) the date on which the ground investigation was undertaken; and
- b) the date on which the final report is delivered.

SEP Technical (SEP) makes no representation whatsoever concerning the legal significance of its findings or to other legal matters referred to in this report.



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2.0 SITE SETTING

2.1 Site Location and Description

The site location is shown on **Figure 1** and location details are as follows:

Centred National Grid Reference (NGR): TL 73745 09362.

Address:

42 Durham Road, Coatham Mundeville, Darlington, County Durham, DL1 3LZ

The development site is between 2 residential properties which were developed in the 1950s. The owner of one of these properties is also the owner of the development site.

The area surrounding the site is predominantly agricultural.

2.2 Geology

The geological setting of the site can be found on the BGS GeoIndex.

Superficial deposits can be described as the following:

Till, Devensian - Diamicton

Bedrock can be described as the following:

Ford Formation - Dolostone

2.3 Hydrogeology and Hydrology

According to the Environment Agency groundwater vulnerability maps, the superficial deposits are designated as Secondary Undifferentiated Aquifer. The underlying bedrock is designated as a Principal Aquifer. Overall, the groundwater vulnerability on site is medium.



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3.0 SITE INVESTIGATION

3.1 General

The fieldwork was carried out in general accordance with BS5930, Amendment (2010).

The locations of the exploratory holes were determined on the Site by the SEP Technical's (SEP) geoenvironmental engineer. The approximate locations of the exploratory holes are shown on the site plan presented as **Figure 2**.

3.2 Window Sample Boreholes

Four window sample boreholes referenced BH1 to BH4 inclusive were advanced using a Dando Terrier window sampling rig to a maximum depth of 6.45mbgl. The site investigation was carried out on Saturday 15th January 2022 under the supervision of SEP Technical's (SEP) geoenvironmental engineer. Specific hole details are as follows:

BH1

Final Depth: 6.45mbgl

BH₂

Final Depth: 6.45mbgl

BH3

Final Depth: 6.45mbgl

BH4

Final Depth: 6.45mbgl

On completion, the borehole was backfilled with bentonite. The borehole logs are included in **Appendix 1**.

3.3 Soil Logging and Sampling

All sampling, logging and testing of soils was undertaken in accordance with BS 5930:2015 'Code of Practice for Site Investigations' and BS10175:2011+A1:2013 'Investigation of Potentially Contaminated Sites – Code of Practice'.

The environmental soil samples were stored on site in temperature-controlled conditions. Soil descriptions are presented in the exploratory hole logs together with details of sampling and relevant comments on drilling techniques presented in **Appendix 1**.

Soil samples were recovered for contamination laboratory analysis at selected intervals during the advancement of the exploratory holes. Samples were stored and transported in appropriate containers to prevent degradation of sample quality.



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3.4 Contamination Laboratory Analysis

No visual or olfactory evidence of contamination was encountered or observed during this ground investigation at all the exploratory hole locations.

A range of contamination laboratory tests were chosen for a selected number of soil samples. Testing was carried out in accordance with British Standards. In total, 2 number soil samples were selected for contamination analysis and the location, depth and suite of analysis selected for each soil sample and location are presented in **Table 1**.

Table 1 Summary of Contamination Laboratory Analysis

Sample Location	Depth (mbgl)	Strata	Analysis	UKAS Accredited
BH1 U * (BH3 U)			рН	Yes
			Chloride (2:1 water soluble)	Yes
	5.00 – 5.30	Clay	Chloride (total)	No
			Sulphate (2:1 water soluble)	Yes
			Sulphate (total)	Yes
BH3 U * (BH1 U)	2.00 – 2.45		Sulphur (total)	No
		2.00 – 2.45 Clay	Total Organic Carbon (TOC)	No
			Estimate of OMC (calculated from TOC)	No
			Loss On Ignition at 440°C	Yes

^{*} Incorrect sample ID on Lab Results (Correct Sample ID in Brackets)

No contaminants of concern (CoC's) were detected upon analyzing the contamination lab results.

Testing was carried out in accordance with ISO 17025 for most analysis and the full set of laboratory contamination analytical results are presented in **Appendix 2**.



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3.5 Geotechnical Laboratory Analysis

A range of geotechnical laboratory tests were chosen for a selected number of soil samples. Testing was carried out in accordance with British Standards. In total, 2 number soil samples were selected for geotechnical analysis and the location, depth and suite of analysis selected for each soil sample and location are presented in **Table 2**.

Table 2 Summary of Geotechnical Laboratory Analysis

Sample Location	Depth (mbgl)	Strata	Analysis	UKAS Accredited
BH1 U	2.00 – 2.45	Clay	Moisture Content	Yes
BH3 U	5.00 - 5.30	Clay	Atterberg Limits PSD Wet Sieve Analysis	Yes

The full set of laboratory geotechnical analytical results are presented in Appendix 3.



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4.0 GROUND CONDITIONS

4.1 Ground Conditions

Full details of the ground conditions encountered during the investigation are shown on the exploratory hole logs included in **Appendix 1**.

Made Ground

Made Ground was not present in any of the exploratory hole locations.

Superficial Deposits (Till, Devensian)

Superficial deposits resembling till deposits were present in all the exploratory hole locations from 0.20mbgl to a maximum depth of 6.45mbgl. Till deposits encountered consisted of firm to stiff brown mottled grey and yellow sandy gravelly clay.

Bedrock

Bedrock was not encountered at any of the exploratory hole locations.

The ground conditions taken from the exploratory hole locations are summarised in **Table 3** below.

Table 3 Summary of Ground Conditions

Strata	Thickness (m)	Comments
Surface Cover	0.20	Topsoil
Made Ground	N/A	Not encountered.
Superficial Deposits (Till, Devensian)	6.25	Firm to stiff brown mottled grey and yellow sandy gravelly clay.
Bedrock	N/A	Not encountered.

In-situ Standard Penetration Tests (SPT's) were undertaken in accordance with BS1377 (1990) within the boreholes. The characteristic values for the ground are shown below in **Table 4**.

Table 4 Material Properties

Property	No. of Tests	Range	Average SPT N Value
SPT N Values CLAY	22	9 – 28	18



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4.2 Groundwater

Groundwater was not encountered at any of the exploratory hole locations which were recorded as dry on completion of ground investigation works.

4.3 Field Evidence of Contamination

No visual (in particular contamination associated with asbestos) or olfactory evidence of contamination was encountered or observed during this ground investigation at all the exploratory hole locations.



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5.0 GROUND ENGINEERING ASSESSMENT

5.1 Plasticity Index

A total of 2 samples were tested to determine the plasticity index of the underlying natural strata across the site and taken from depths of between 2.00mbgl and 5.30mbgl.

The plasticity test results are given in Table 5 and the test reports are included in Appendix 3.

Table 5 Plasticity Testing Results

Sample ID	Sample Depth (mbgl)	Strata	Plasticity Index	Plasticity
BH1 U	2.00 – 2.45	Clay	21%	16%
BH3 U	5.00 - 5.30	Clay	21%	18%

5.2 Ground Stability

No evidence of instability was noted during formation of the exploratory holes that were undertaken on site.

5.3 Soluble Sulphate and pH

Due to the lack of made ground, samples taken from the natural strata have been submitted for pH and water-soluble sulphate (2:1 soil/water extract) analysis.

The highest water-soluble sulphate concentration and the lowest pH value for the natural strata are shown in **Table 6**.

Table 6 Soluble Sulphate and pH Classification

Soil Type	Lowest pH Values	Highest Soluble Sulphate Concentration (g/l)
Clay	8.20	0.016

END OF REPORT

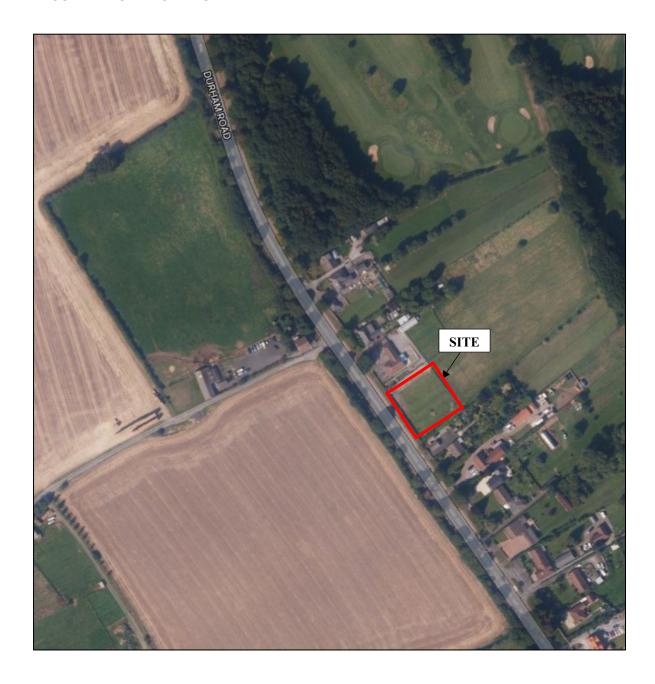
March 2022



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FIGURE 1 - SITE LOCATION PLAN





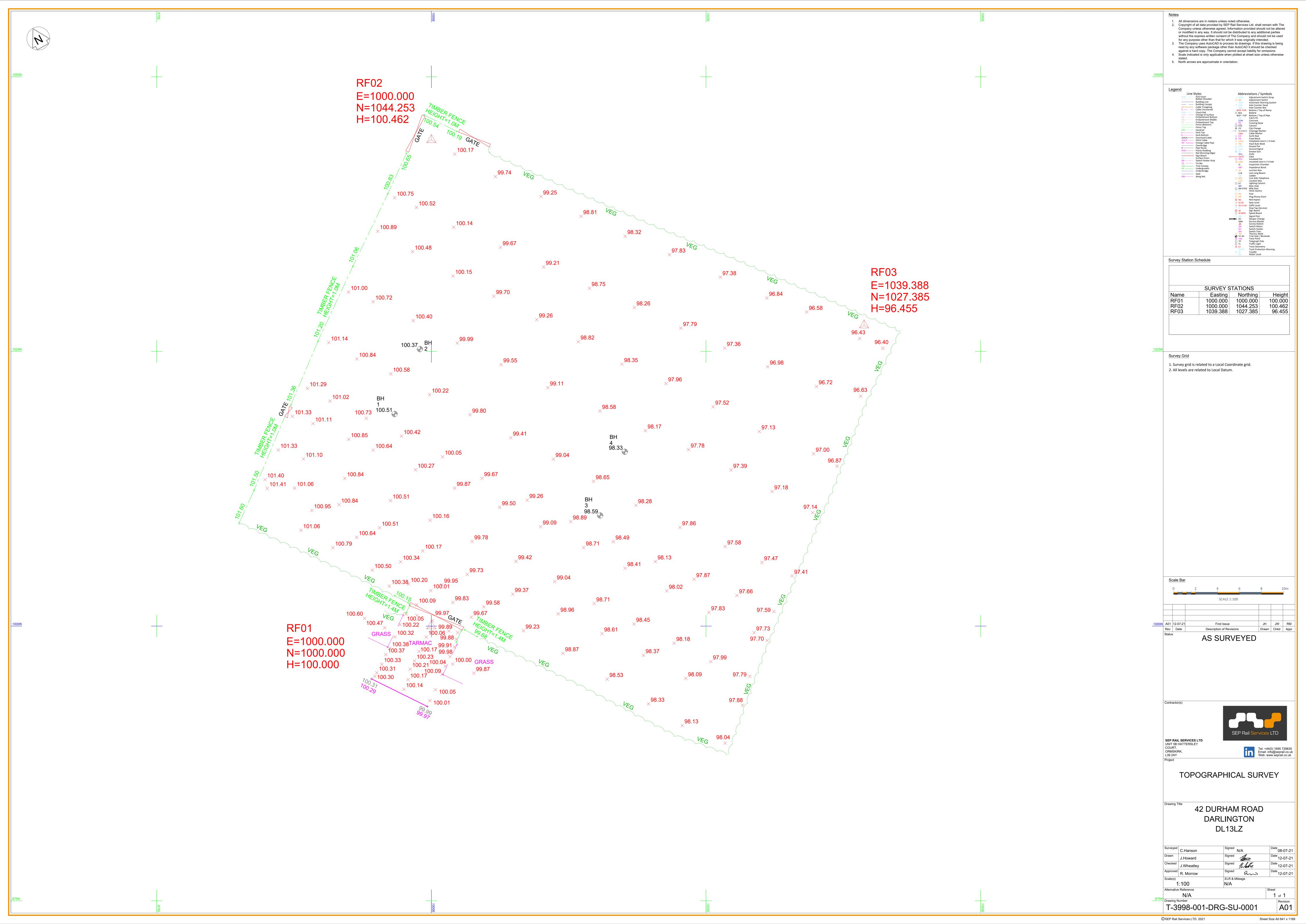
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FIGURE 2 - EXPLORATORY HOLE LOCATION PLAN



See Topographic Survey below for as-built borehole locations.





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APPENDIX 1 – WINDOW SAMPLE BOREHOLE LOGS



Site				
42 Durham Ro	ad, Coatham Mundevil	le DL1 3LZ		BH1
Job No	Dates Start 15-01-22 Finish 15-01-22	Ground Level (m)	Co-Ordinates	БПІ
Client				Sheet
Rod Farrow				1 of 1

14/-11	Water	Samples & Ir	n Situ Tes	sting	Depth	Level	1 1	Christians Decembring	
Well	Levels	Depth (m)	No/Type	Results	(m)	(mAD)	Legend	Stratum Description	o
					0.20			MADE GROUND: Grass over TOPSOIL.	冿 ゛
								(Firm to stiff) brown mottled grey gravelly CLAY. Gravel is subangular limestone, coal and occasional limestone cobbles.	Ē
		0.70	D	HV 38 N 17					E
		1.00 1.00 - 1.45	D SPTLS	(2,3,5,4	,4,4)			1.00 - 1.45 Stiff, medium strength.	<u>-</u> 1
		2.00	D						- 2
		2.00 - 2.35	U76					2.00 - 2.45 Firm, low strength.	
		2.50	D	HV 56					Ē
		3.00 3.00 - 3.45	D SPTLS	N 21 (2,4,5,5	,5,6)			3.00 - 3.45 Stiff, high strength.	3
		4.00 4.00 - 4.45	D SPTLS	N 18 (2,3,3,4	,5,6)			4.00 - 4.45 Stiff, medium strength.	- - - - - 4
		5.00 - 5.45	SPTLS	N 19 3 (2,3,4,4	,5,6)			5.00 - 5.45 Stiff, high strength.	_ _ _ 5
		5.50	D						Ē
		6.00 - 6.45	SPTLS	N 21 (2,3,4,6	5,6)			6.00 - 6.45 Stiff, high strength.	6
					6.45			Borehole completed at 6.45m.	+
								·	- - - 7
									E'
									Ė
					{8.00}				- 8

1.0 SEP WS LOG SEP DURHAM.GPJ 17/3/22

EQUIPMENT: Dando Terrier compact window sampling tracked rig.

METHOD: Hand dug inspection pit 0.00m-1.00m begl. Dynamic sampled 1.00m-6.00m begl.

CASING: No casing used.

GROUNDWATER: Groundwater not encountered.

BACKFILL: On completion, the borehole was backfilled with bentonite.

Groundwater	Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)	

All dimensions in metres Scale 1:50

Logged By KM



Site				
42 Durham Roa	BH2			
Job No	Dates Start 15-01-22 Finish 15-01-22	Ground Level (m)	Co-Ordinates	БПZ
Client				Sheet
Rod Farrow				1 of 1

Well	Water	Samples &			Depth	Level	Legend	Stratum Description
VVCII	Levels	Depth (m)	No/Type	Results	(m)	(mAD)	Legend	·
					0.20			MADE GROUND: Grass over organic TOPSOIL.
		1.00 1.00 - 1.45	D SPTLS	N 11 (1,2,2,3	3,3)			(Firm to stiff) brown mottled grey occasionally slightly sandy gravelly CLAY. Gravel is subangular and rounded limestone, occasional coal and sandstone. Sand is fine. 1.00 - 1.45 Firm, medium strength.
		2.00 2.00 - 2.45 2.50	D SPTLS	N 13 (1,2,2,3	4,4)			2.00 - 2.45 Firm, medium strength.
		3.00 - 3.45		N 15 (2,3,3,4	4,4)			3.00 - 3.45 Firm to stiff, medium strength.
		3.50 4.00 - 4.45	SPTLS	N 19 (2,3,5,4	5,5)			4.00 - 4.45 Stiff, high strength.
		4.50 5.00 - 5.45	D SPTLS	N 18 (2,4,4,5	4,5)			5.00 - 5.45 Stiff, medium strength.
		5.50	D	N 19				
		6.00 - 6.45	SPTLS	(3,4,5,4	5,5) 6.45			6.00 - 6.45 Stiff, high strength.
								Borehole completed at 6.45m.
					{8.00}			

EQUIPMENT: Dando Terrier compact window sampling tracked rig.

METHOD: Hand dug inspection pit 0.00m-1.00m begl. Dynamic sampled 1.00m-6.00m begl.

CASING: No casing used.

GROUNDWATER: Groundwater not encountered.

BACKFILL: On completion, the borehole was backfilled with bentonite.

Groundwater	Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)	
All dimensions in metres Scale 1:50					Logged By KM

1.0 SEP WS LOG SEP DURHAM.GPJ 17/3/22



Site				
42 Durham Roa	ВПЗ			
Job No	Dates Start 15-01-22 Finish 15-01-22	Ground Level (m)	Co-Ordinates	BH3
Client				Sheet
Rod Farrow				1 of 1

	Water	Samples & I	n Situ Tes	sting	Depth	Level			
Well	Levels	Depth (m)		Results	(m)	(mAD)	Legend	Stratum Description	0
					0.20			MADE GROUND: Grass over organic TOPSOIL.	Ŧ °
		0.70 1.00 - 1.45	D SPTLS	N 14 5 (2,3,3,3	.4,4)			(Firm to stiff) brown mottled grey occasionally cobbly gravelly CLAY. Gravel is subangular and rounded limestone and sandstone, occasional limestone and sandstone cobbles. 1.00 - 1.45 Firm, medium strength.	- 1
		2.00 2.00 - 2.45	D SPTLS	N 17 (2,3,4,4	,4,5)			2.00 - 2.45 Stiff, medium strength.	- 2
		3.00 3.00 - 3.45	D SPTLS	N 23 (3,3,5,5	,5,8)			3.00 - 3.45 Stiff, high strength.	3
		4.00 4.00 - 4.45	D SPTLS	N 20 (3,4,5,4	,5,6)			4.00 - 4.45 Stiff, high strength.	- - - 4 -
		5.00 - 5.30	U76						- - - - 5
		5.50	D						
		6.00 - 6.45	SPTLS	N 21 S (2,4,4,5				6.00 - 6.45 Stiff, high strength.	6
					6.45			Borehole completed at 6.45m.	<u>-</u>
					{8.00}				- 7 - - - - - - - - - 8

1.0 SEP WS LOG SEP DURHAM.GPJ 17/3/22

EQUIPMENT: Dando Terrier compact window sampling tracked rig.

METHOD: Hand dug inspection pit 0.00m-1.00m begl. Dynamic sampled 1.00m-6.00m begl.

CASING: No casing used.

GROUNDWATER: Groundwater not encountered.

BACKFILL: On completion, the borehole was backfilled with bentonite.

Groundwater	Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)	

All dimensions in metres Scale 1:50

Logged By KM



Site				
42 Durham Roa	BH4			
Job No	Dates Start 15-01-22 Finish 15-01-22	Ground Level (m)	Co-Ordinates	БП4
Client				Sheet
Rod Farrow				1 of 1

Well	Water	Samples &			Depth	Level	Legend	Stratum Description	
V V CII	Levels	Depth (m)	No/Type	Results	(m)	(mAD)	XXXXXX	·	L 0
					0.20			MADE GROUND: Grass over TOPSOIL.	Ė
				N 11				(Firm to stiff) brown mottled grey and yellow gravelly CLAY. Gravel is subangular and rounded limestone, sandstone, and occasional coal.	
		1.00 1.00 - 1.45	D SPTLS	(2,2,2,3	3,3)			1.00 - 1.45 Firm, medium strength.	- <i>'</i>
		2.00 2.00 - 2.45	D SPTLS	N 9 (2,3,2,2	2,3)			2.00 - 2.45 Firm, low strength.	
		3.00 3.00 - 3.45	D SPTLS	N 18 (3,5,5,4	4,5)			2.00 2.45 0///	
				N 28				3.00 - 3.45 Stiff, medium strength.	-
		4.00 4.00 - 4.45	D SPTLS	(2,3,5,1	1,7,5)			4.00 - 4.45 Stiff, high strength.	
		5.00 - 5.45		N 20 (3,4,4,5	5,6)			5.00 - 5.45 Stiff, high strength.	
		5.50	D	N 21					
		6.00 - 6.45	SPILS	(2,3,4,6	6.45			6.00 - 6.45 Stiff, high strength.	
					20			Borehole completed at 6.45m.	
					{8.00}				

1.0 SEP WS LOG SEP DURHAM.GPJ 17/3/22

EQUIPMENT: Dando Terrier compact window sampling tracked rig.

METHOD: Hand dug inspection pit 0.00m-1.00m begl. Dynamic sampled 1.00m-6.00m begl.

CASING: No casing used.

GROUNDWATER: Groundwater not encountered.

BACKFILL: On completion, the borehole was backfilled with bentonite.

Groundwater	Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)	
All dimensions in metres Scale 1:50					Logged By KM



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APPENDIX 2 - CONTAMINATION LABORATORY ANALYSIS RESULTS





ANALYTICAL TEST REPORT

Contract no: 106194

Contract name: Durham Road

Client reference: PSL22/0563

Clients name: Professional Soils Laboratory

Clients address: 5/7 Hexthorpe Road

Doncaster DN4 0AR

Samples received: 21 February 2022

Analysis started: 21 February 2022

Analysis completed: 28 February 2022

Report issued: 28 February 2022

Key U UKAS accredited test

M MCERTS & UKAS accredited test

\$ Test carried out by an approved subcontractor

I/S Insufficient sample to carry out test

N/S Sample not suitable for testing

Approved by:

111.610MM

Megan Harris

Senior Reporting Administrator

SOILS

Lab number			106194-1	106194-2
Sample id	BH1	BH3		
Depth (m)			5.00-5.30	2.00-2.45
Sample Type			U	U
Date sampled			-	-
Test	Method	Units		
рН	CE004 ^U	units	8.6	8.2
Chloride (2:1 water soluble)	CE049 ^U	mg/l Cl	16	4.2
Chloride (total)	CE229	% w/w Cl	<0.05	<0.05
Sulphate (2:1 water soluble)	CE061 ^U	mg/l SO ₄	21	33
Sulphate (total)	CE062 ^U	mg/kg SO ₄	146	299
Sulphur (total)	CE119	mg/kg S	123	187
Total Organic Carbon (TOC)	CE197	% w/w C	1.0	1.0
Estimate of OMC (calculated from TOC)	CE197	% w/w	1.7	1.7
Loss On Ignition at 440°C	CE006 ^U	% w/w	4.0	3.6

METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
CE004	рН	Based on BS 1377, pH Meter	As received	U	-	units
CE049	Chloride (2:1 water soluble)	Aqueous extraction, IC-COND	Dry	U	1	mg/l Cl
CE229	Chloride (total)	Acid extraction, Ion Chromatography	Dry		0.05	% w/w Cl
CE061	Sulphate (2:1 water soluble)	Aqueous extraction, ICP-OES	Dry	U	10	mg/I SO ₄
CE062	Sulphate (total)	Acid extraction, ICP-OES	Dry	U	100	mg/kg SO ₄
CE119	Sulphur (total)	Acid extraction, ICP-OES	Dry		100	mg/kg S
CE197	Total Organic Carbon (TOC)	Carbon Analyser	Dry		0.1	% w/w C
CE197	Estimate of OMC (calculated from TOC)	Calculation from Total Organic Carbon	Dry		0.1	% w/w
CE006	Loss On Ignition at 440°C	Based on BS 1377, Gravimetry	Dry	U	0.1	% w/w

DEVIATING SAMPLE INFORMATION

Comments

Sample deviation is determined in accordance with the UKAS note "Guidance on Deviating Samples" and based on reference standards and laboratory trials.

For samples identified as deviating, test result(s) may be compromised and may not be representative of the sample at the time of sampling.

Chemtech Environmental Ltd cannot be held responsible for the integrity of sample(s) received if Chemtech Environmental Ltd did not undertake the sampling. Such samples may be deviating.

Key

N No (not deviating sample)
Y Yes (deviating sample)
NSD Sampling date not provided

NST Sampling time not provided (waters only)

EHT Sample exceeded holding time(s)

IC Sample not received in appropriate containers HP Headspace present in sample container

NCF Sample not chemically fixed (where appropriate)

OR Other (specify)

Lab ref	Sample id	Depth (m)	Deviating Tests (Reason for deviation)			
106194-1	BH1	5.00-5.30	Υ	All (NSD)		
106194-2	ВН3	2.00-2.45	Υ	All (NSD)		

ADDITIONAL INFORMATION

Notes

Opinions and interpretations expressed herein are outside the UKAS accreditation scope.

Unless otherwise stated, Chemtech Environmental Ltd was not responsible for sampling.

All testing carried out at Unit 6 Parkhead, Stanley, DH9 7YB, except for subcontracted testing.

Methods, procedures and performance data are available on request.

Results reported herein relate only to the material supplied to the laboratory.

This report shall not be reproduced except in full, without prior written approval.

Samples will be disposed of 6 weeks from initial receipt unless otherwise instructed.

For soils and solids, all results are reported on a dry basis. Samples dried at no more than 30°C in a drying cabinet.

Analytical results are inclusive of stones, where applicable.



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APPENDIX 3 – GEOTECHNICAL LABORATORY ANALYSIS RESULTS



LABORATORY REPORT



4043

Contract Number: PSL22/0563

Report Date: 24 February 2022

Client's Reference: 001

Client Name: SEP Ltd

Site Engineering Personnel Ltd

33 Sandy Lane Skelmersdale Lancashire WN8 8LA

For the attention of: Carl Housbey

Contract Title: Durham Road

Date Received: 24/1/2022
Date Commenced: 24/1/2022
Date Completed: 24/02/2022

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 R Berriman S Royle (Director) (Quality Manager) (Laboratory Manager)

Att.

L Knight S Eyre M Fennell
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SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample	
BH1	1	U	2.00	2.45	Brown slightly gravelly sandy CLAY.	
ВН3	1	U	5.00	5.30	Reddish brown slightly gravelly sandy CLAY.	



Durham Road

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1

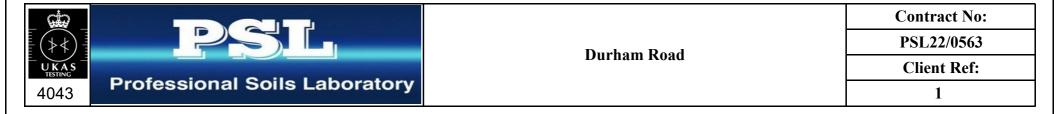
SUMMARY OF SOIL CLASSIFICATION TESTS

(BS1377: PART 2: 1990)

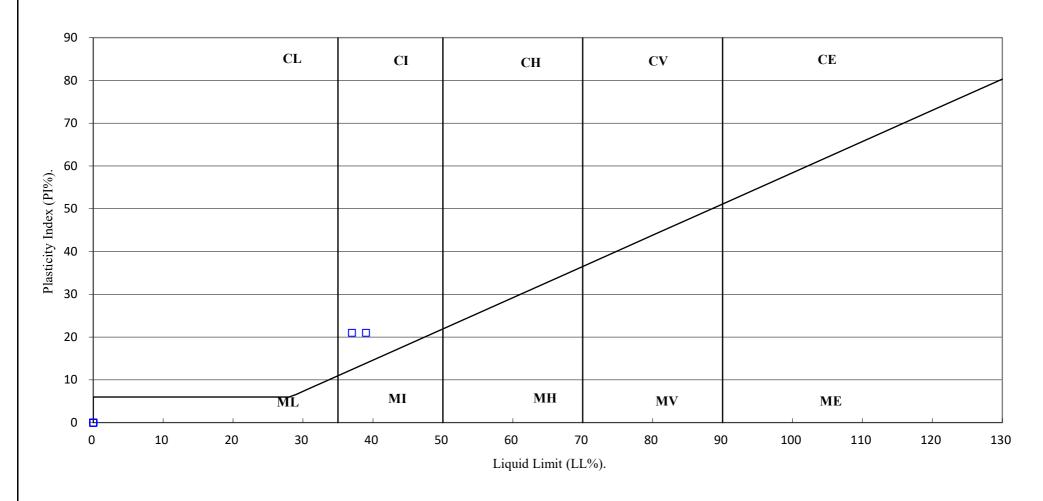
Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Moisture Content % Clause 3.2	Linear Shrinkage % Clause 6.5	Particle Density Mg/m ³ Clause 8.2	Liquid Limit % Clause 4.3/4	Plastic Limit % Clause 5.3	Plasticity Index % Clause 5.4	Passing .425mm	Remarks
BH1	1	U	2.00	2.45	14	Clause 0.5	Clause 6.2	37	16	21	97	Intermediate Plasticity CI
ВН3	1	U	5.00	5.30	15			39	18	21	96	Intermediate Plasticity CI

SYMBOLS: NP: Non Plastic

^{*:} Liquid Limit and Plastic Limit Wet Sieved.



PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.





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