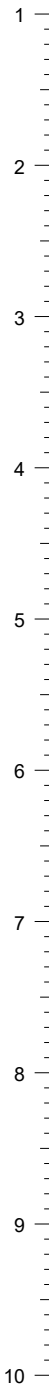


Percussion Drilling Log

Project Name: Milford Haven		Client: Lidl Great Britain Ltd		Date: 22/10/2020	
Location: Milford Haven		Contractor:		Co-ords: E190885.00 N206158.00	
Project No. : 798		Crew Name:		Drilling Equipment:	
Borehole Number WS5	Hole Type WS	Level 49.10m AoD	Logged By WP	Scale 1:50	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.09 - 0.45	ES		0.12	48.98		MADE GROUND. Asphalt.
					0.50	48.60		MADE GROUND: Brown sandy angular to subrounded medium to coarse gravel.
							End of Borehole at 0.500m	



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
 1. No groundwater encountered.
 2. Backfilled with arisings upon completion.
 3. Terminated on suspected concrete obstruction at 0.5m bgl.



Percussion Drilling Log

Project Name: Milford Haven		Client: Lidl Great Britain Ltd		Date: 22/10/2020	
Location: Milford Haven		Contractor:		Co-ords: E190843.00 N206113.00	
Project No. : 798		Crew Name:		Drilling Equipment:	
Borehole Number WS6	Hole Type WS	Level 50.00m AoD	Logged By WP	Scale 1:50	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
		Depth (m)	Type	Results						
		0.10 - 0.80	ES		0.10	49.90		MADE GROUND. Asphalt.		
		0.50 - 0.80	ES		0.50	49.50		MADE GROUND: Brown sandy angular to subrounded medium to coarse gravel.		
		1.00 - 1.50	D	N=8 (1,1/1,2,2,3)					Soft to firm reddish brown sandy gravelly CLAY.	1
		1.00	SPT							
		1.50 - 2.00	B							
	2.00 - 3.00	B	N=17 (3,3/4,4,4,5)	2.00	48.00			Firm becoming stiff brown sandy gravelly CLAY.	2	
	2.00	SPT								
	3.00	SPT	50 (25 for 50mm/50 for 75mm)	3.00	47.00			End of Borehole at 3.000m	3	
									4	
									5	
									6	
									7	
									8	
									9	
									10	









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
 1.No groundwater encountered.
 2. Backfilled with arisings upon completion and surface re-instated.



Percussion Drilling Log

Project Name: Milford Haven		Client: Lidl Great Britain Ltd		Date: 23/10/2020	
Location: Milford Haven		Contractor:		Co-ords: E190870.00 N206183.00	
Project No. : 798		Crew Name:		Drilling Equipment:	
Borehole Number WS7	Hole Type WS	Level 48.72m AoD	Logged By WP	Scale 1:50	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
		Depth (m)	Type	Results						
		0.00 - 0.30	ES		0.30	48.42		Grass over dark brown sand TOPSOIL with occasional rootlets and rare roots.		
					0.50	48.22		Dark grey mottled brown slightly gravelly fine to medium SAND. Gravel is angular to subangular fine to coarse of sandstone and mudstone.		
		1.00 - 1.50	B		0.80	47.92		Firm reddish brown slightly gravelly sandy CLAY.	1	
		1.00	SPT	N=10 (2,2/2,2,3,3)	1.50	47.22		Loose light brown mottled reddish brown clayey sandy angular to subrounded medium to coarse GRAVEL predominantly of sandstone.		
		1.55 - 2.00	U		2.00	46.72		Firm brown slightly gravelly sandy CLAY.	2	
		2.00	SPT	N=22 (7,7/8,5,5,4)	2.40	46.32		Medium dense brown clayey sandy angular to subangular medium to coarse GRAVEL predominantly of sandstone.		
		2.55 - 3.00	U		3.00	45.72		Stiff brown sandy gravelly CLAY with pockets and bands of light brown medium sand.	3	
	3.00	SPT	50 (25 for 50mm/50 for 75mm)	End of Borehole at 3.000m						
									4	
									5	
									6	
									7	
									8	
									9	
									10	

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
 1.No groundwater encountered.
 2. Backfilled with arisings.



Percussion Drilling Log

Project Name: Milford Haven		Client: Lidl Great Britain Ltd		Date: 23/10/2020	
Location: Milford Haven		Contractor:		Co-ords: E190871.00 N206209.00	
Project No. : 798		Crew Name:		Drilling Equipment:	
Borehole Number WS8	Hole Type WS	Level 47.89m AoD	Logged By WP	Scale 1:50	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.00 - 0.30	ES		0.30	47.59		Grass over dark brown sand TOPSOIL with occasional rootlets and rare roots.	
					0.50	47.39		Dark grey mottled brown slightly gravelly fine to medium SAND. Gravel is angular to subangular fine to coarse of sandstone and mudstone.	
		1.00	SPT	N=22 (5,5/6,5,5,6)				Firm to stiff reddish brown slightly gravelly sandy CLAY.	1
		1.55 - 2.00	U						
		2.00 - 3.00 2.00	B SPT	N=35 (5,6/8,8,9,10)	2.00	45.89		Medium dense becoming dense brown clayey sandy angular to subangular medium to coarse GRAVEL predominantly of sandstone.	2
	3.00	SPT	50 (8,11/50 for 185mm)	3.00	44.89		End of Borehole at 3.000m	3	
								4	
								5	
								6	
								7	
								8	
								9	
								10	

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
 1.No groundwater encountered.
 2. Backfilled with bentonite upon completion and surface re-instated.



Percussion Drilling Log

Project Name: Milford Haven		Client: Lidl Great Britain Ltd		Date: 23/10/2020	
Location: Milford Haven		Contractor:		Co-ords: E190885.00 N206176.00	
Project No. : 798		Crew Name:		Drilling Equipment:	
Borehole Number WS9	Hole Type WS	Level 48.83m AoD	Logged By WP	Scale 1:50	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.00 - 0.08 0.08 - 0.30	ES ES		0.08 0.30	48.75 48.53	MADE GROUND: Asphalt. MADE GROUND: Brown sandy angular to subrounded medium to coarse gravel of limestone and quartz.		
		1.00 - 1.40 1.00 - 1.45 1.00	D U SPT	N=5 (1,1/1,1,1,2)	0.80	48.03	MADE GROUND: Dark brown gravelly medium to coarse sand. Gravel is angular to subangular fine to coarse of mixed lithologies including quartz.	1	
		1.60 - 2.40	B		1.45	47.38	Soft reddish brown slightly gravelly sandy CLAY. Gravel is angular fine of rare coal fragments.		
		2.00	SPT	N=16 (4,4/4,5,4,3)			Firm becoming stiff reddish brown sandy CLAY.	2	
		3.00	SPT	50 (10,12/50 for 105mm)	3.00	45.83	End of Borehole at 3.000m	3	
								4	
								5	
								6	
								7	
								8	
								9	
								10	

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
 1.No groundwater encountered.
 2. Installation to 3.0m bgl; 1.0m plain pipe, 2.0m slotted pipe.



Percussion Drilling Log

Project Name: Milford Haven		Client: Lidl Great Britain Ltd		Date: 23/10/2020	
Location: Milford Haven		Contractor:		Co-ords: E190888.00 N206194.00	
Project No. : 798		Crew Name:		Drilling Equipment:	
Borehole Number WS10	Hole Type WS	Level	Logged By WP	Scale 1:50	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
[Pattern]		0.08 - 0.50	ES		0.15		MADE GROUND: Reinforced concrete.		
		0.55 - 1.00	U		0.40		MADE GROUND: Brown sandy angular to subrounded medium to coarse gravel of limestone and quartz.		
		1.00	SPT	N=24 (3,4/5,6,6,7)	1.30		Firm reddish brown sandy gravelly CLAY. Gravel is angular to subrounded fine to medium of sandstone and mudstone.	1	
		2.00 - 3.00	B SPT	N=22 (5,6/6,5,5,6)	2.00		Medium dense reddish brown clayey fine SAND.	2	
		2.00	SPT	50 (15,10/50 for 75mm)	3.00		Medium dense becoming dense reddish brown silty gravelly SAND. Gravel is angular to subangular medium of sandstone.	3	
		3.00	SPT				End of Borehole at 3.000m	3	
								4	
								5	
								6	
								7	
								8	
								9	
								10	

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
 1.No groundwater encountered.
 2. Backfilled with arisings upon completion and surface re-instated.





Appendix A

SPT Calibration Certificate

SPT Hammer Energy Test Report

in accordance with BSEN ISO 22476-3:2005

ARCHWAY ENGINEERING (UK) LTD
AINLEYS INDUSTRIAL ESTATE
ELLAND
WEST YORKSHIRE
HX5 9JP

SPT Hammer Ref: 110.120
Test Date: 17/07/2020
Report Date: 17/07/2020
File Name: 110.120.spt
Test Operator: KM

Instrumented Rod Data

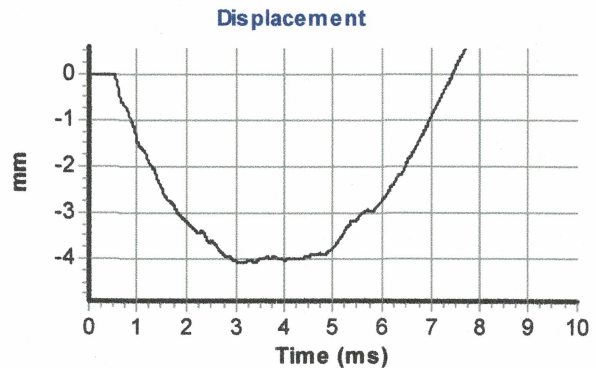
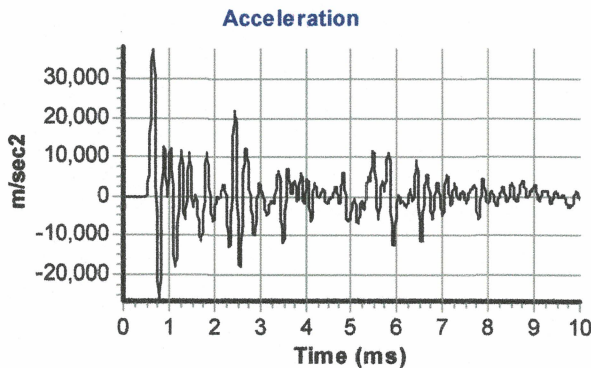
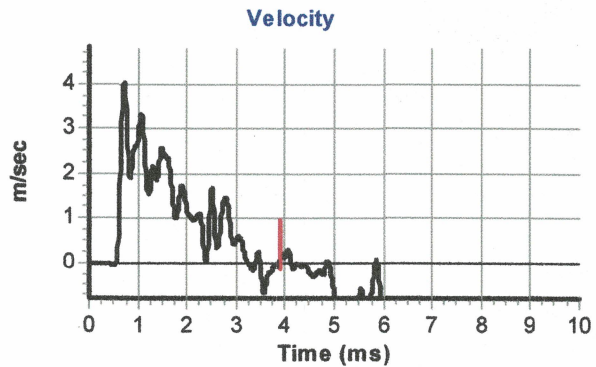
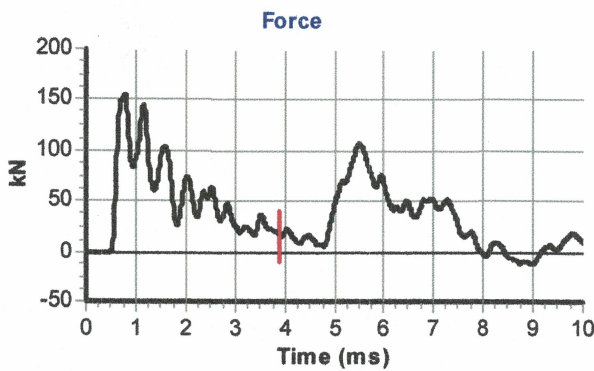
Diameter d_r (mm): 54
Wall Thickness t_r (mm): 6.0
Assumed Modulus E_a (GPa): 208
Accelerometer No.1: 7080
Accelerometer No.2: 11609

SPT Hammer Information

Hammer Mass m (kg): 63.5
Falling Height h (mm): 760
SPT String Length L (m): 12.0

Comments / Location

REGIONAL DRILLING



Calculations

Area of Rod A (mm^2): 905
Theoretical Energy E_{theor} (J): 473
Measured Energy E_{meas} (J): 335

Energy Ratio E_r (%): **71**


Signed: K.McDONALD
Title: SENIOR ENGINEER

The recommended calibration interval is 12 months



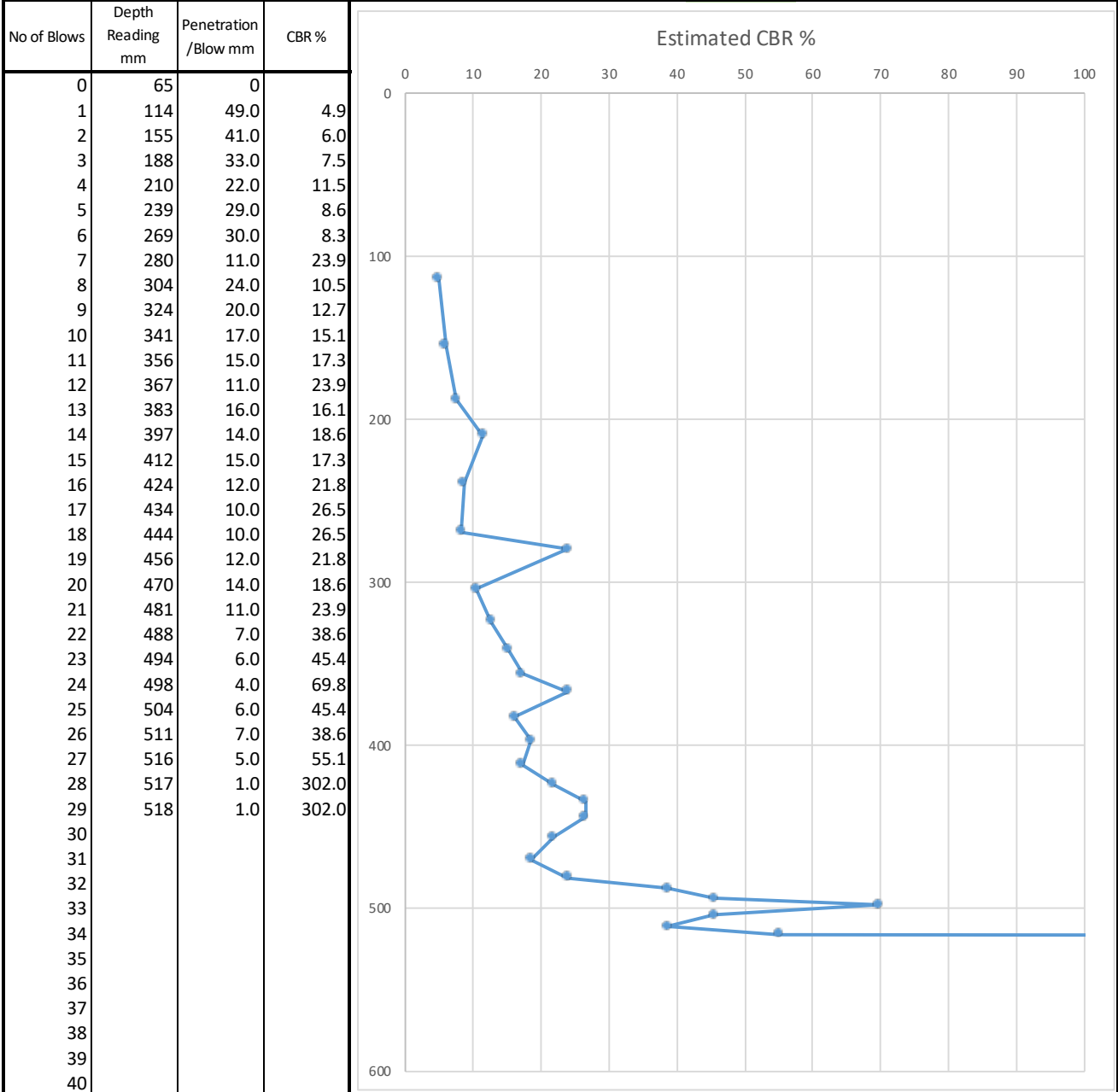
Appendix B

Dynamic Cone Penetrometer Test Results

TRL Dynamic Cone Penetrometer Test Results

Remada

Client:	Lidl Great Britain Ltd	Struct' Eng':		Test No:	CBR1	Location:	
Project No:	798.02 Milford Haven	Date:	24.10.2020	Start Depth:	Ground Level	Test Strata:	From surface
$Log_{10}(CBR) = 2.480 - 1.057 \times Log_{10}(mm/blow)$						Weather:	Dry Sunny



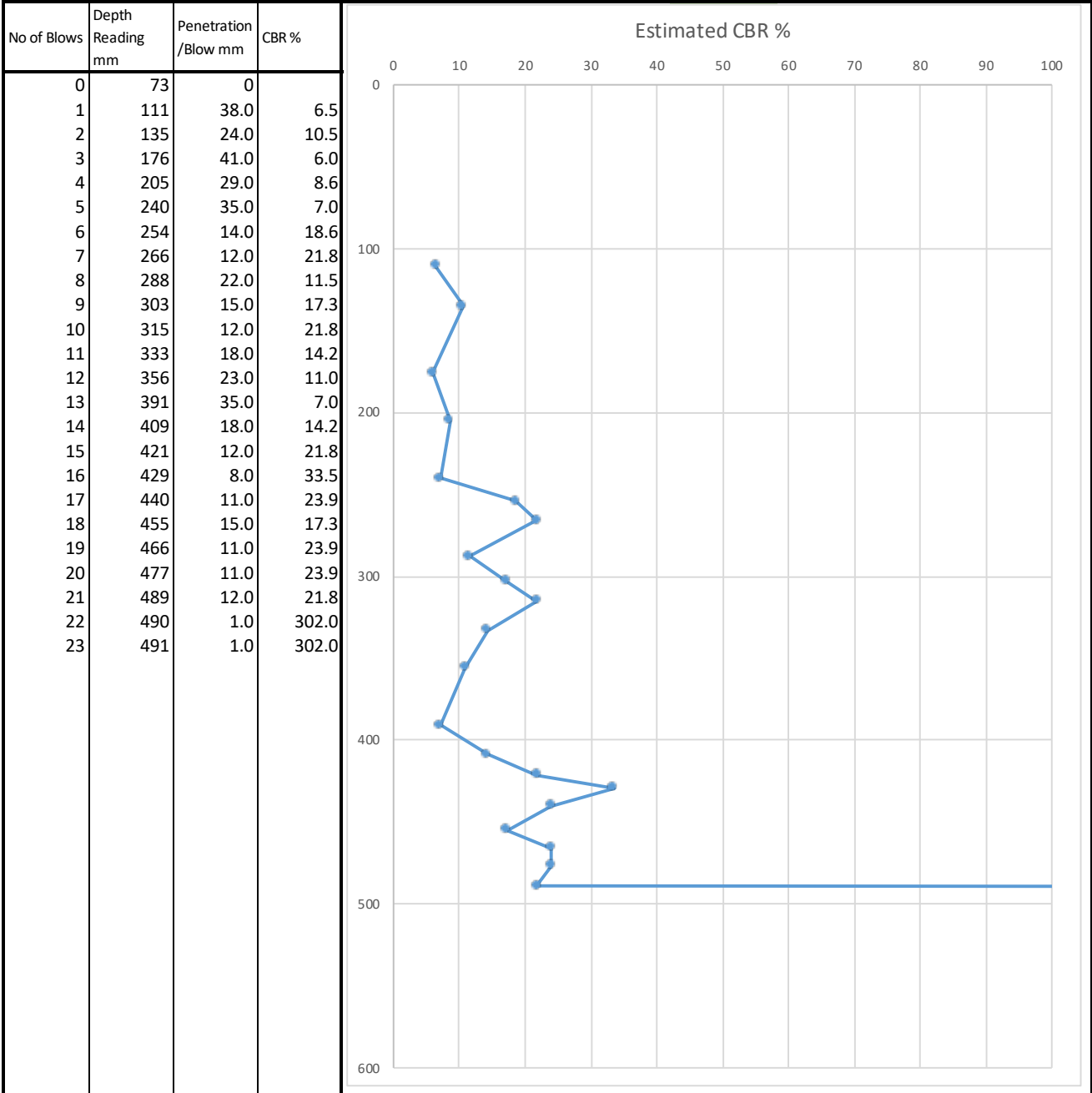
Notes:

Tested by W Phillips Date: 24.10.2020	Checked by: P Dickinson Date: 01.11.2020
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TRL Dynamic Cone Penetrometer Test Results

Remada

Client:	Lidl Great Britain Ltd	Struct' Eng':		Test No:	CBR2	Location:	
Project No:	798.02 Milford Haven	Date:	24.10.2020	Start Depth:	Ground Level	Test Strata:	Within Footprint of Proposed Store Extension
<i>Log10(CBR) = 2.480 - 1.057 x Log10(mm/blow)</i>						Weather:	Dry Sunny



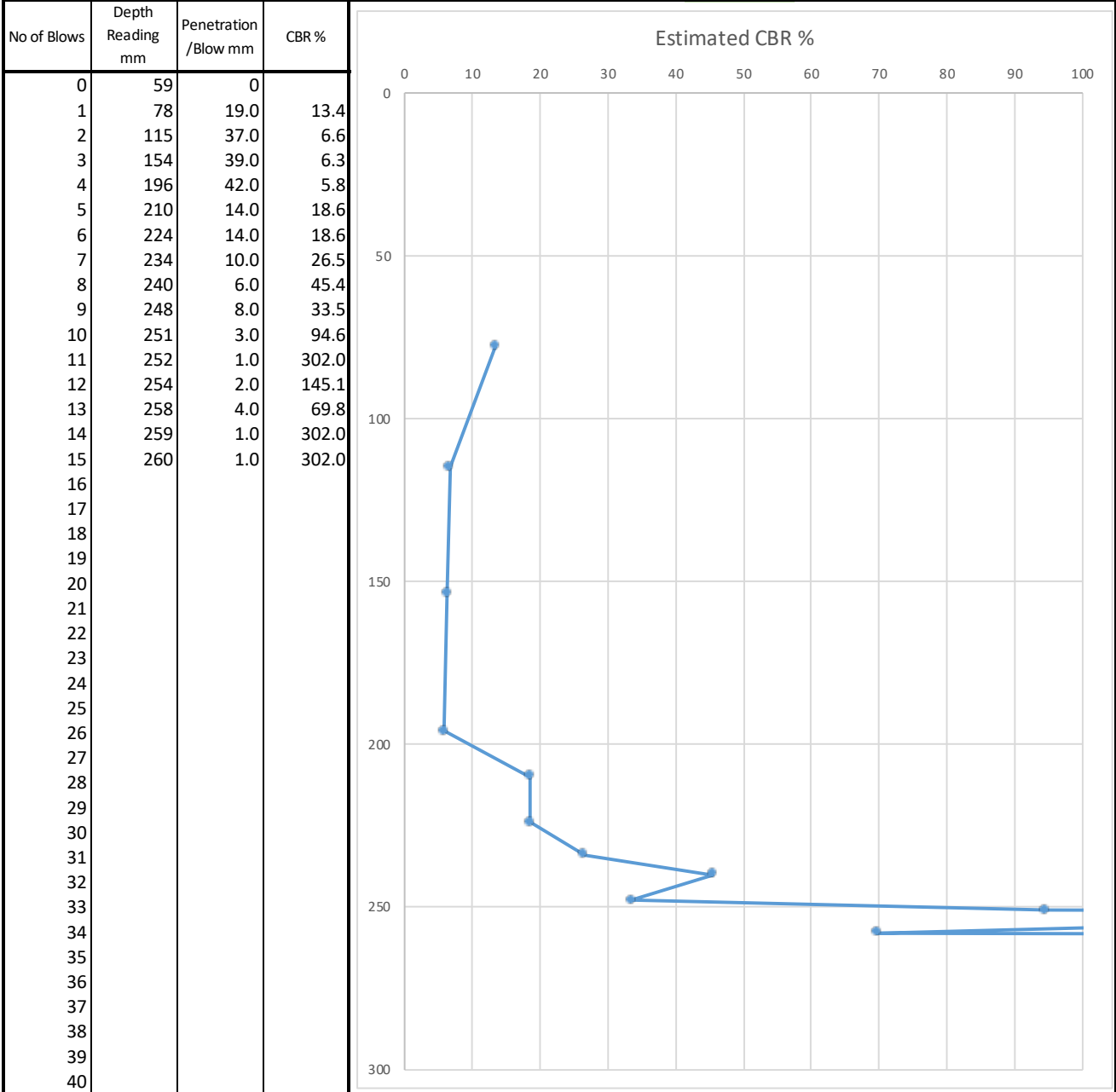
Notes:

Tested by W Phillips	Checked by: P Dickinson
Date: 24.10.2020	Date: 01.11.2020

TRL Dynamic Cone Penetrometer Test Results

Remada

Client:	Lidl Great Britain Ltd	Struct' Eng':		Test No:	CBR3	Location:	
Project No:	798.02 Milford Haven	Date:	24.10.2020	Start Depth:	Ground Level	Test Strata:	
$Log_{10}(CBR) = 2.480 - 1.057 \times Log_{10}(mm/blow)$						Weather:	Dry Sunny



Notes:

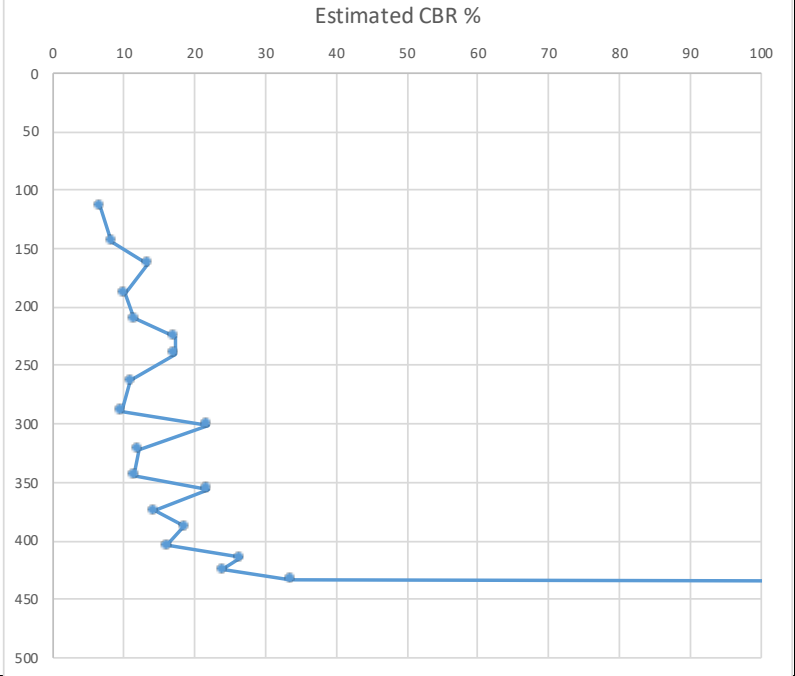
Tested by W Phillips Date: 24.10.2020	Checked by: P Dickinson Date: 01.11.2020
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TRL Dynamic Cone Penetrometer Test Results

Remada

Client:	Lidl Great Britain Ltd	Struct' Eng':		Test No:	CBR4	Location:	
Project No:	798.02 Milford Haven	Date:	24.10.2020	Start Depth:	Ground Level	Test Strata:	
$Log_{10}(CBR) = 2.480 - 1.057 \times Log_{10}(mm/blow)$						Weather:	Dry Sunny

No of Blows	Depth Reading mm	Penetration /Blow mm	CBR %
0	77	0	
1	114	37.0	6.6
2	144	30.0	8.3
3	163	19.0	13.4
4	188	25.0	10.1
5	210	22.0	11.5
6	225	15.0	17.3
7	240	15.0	17.3
8	263	23.0	11.0
9	289	26.0	9.6
10	301	12.0	21.8
11	322	21.0	12.1
12	344	22.0	11.5
13	356	12.0	21.8
14	374	18.0	14.2
15	388	14.0	18.6
16	404	16.0	16.1
17	414	10.0	26.5
18	425	11.0	23.9
19	433	8.0	33.5
20	435	2.0	145.1
21	437	2.0	145.1
22	438	1.0	302.0
23	439	1.0	302.0



Notes:

Tested by W Phillips

Checked by: P Dickinson



APPENDIX C

Laboratory Chemical Analyses



Final Report

Report No.: 20-29293-1
Initial Date of Issue: 06-Nov-2020
Client: Remada Ltd
Client Address: Forward House
17 High Street
Henley in Arden
B95 5AA
Contact(s): Greg Jones
Peter Dickinson
Project: 798.01 Milford Haven
Quotation No.: **Date Received:** 29-Oct-2020
Order No.: 798.01 **Date Instructed:** 02-Nov-2020
No. of Samples: 11
Turnaround (Wkdays): 5 **Results Due:** 06-Nov-2020
Date Approved: 06-Nov-2020

Approved By:

Details: Glynn Harvey, Technical Manager

Results - Soil

Project: 798.01 Milford Haven

Client: Remada Ltd		Chemtest Job No.:		20-29293	20-29293	20-29293	20-29293	20-29293	20-29293	20-29293	20-29293	20-29293
Quotation No.:		Chemtest Sample ID.:		1088537	1088538	1088539	1088540	1088541	1088542	1088543	1088544	1088544
Order No.: 798.01		Client Sample Ref.:		798.01	798.01	798.01	798.01	798.01	798.01	798.01	798.01	798.01
		Sample Location:		WS1	WS2	WS3	WS5	WS6	WS7	WS8	WS9	WS9
		Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):		0.3	0.5	0.5	0.09	0.5	0	0	0	0
		Bottom Depth (m):		0.7	1.0	0.8	0.45	0.8	0.3	0.3	0.08	0.08
		Date Sampled:		23-Oct-2020	23-Oct-2020	23-Oct-2020	23-Oct-2020	23-Oct-2020	24-Oct-2020	24-Oct-2020	24-Oct-2020	24-Oct-2020
		Asbestos Lab:		DURHAM	DURHAM		DURHAM	DURHAM	DURHAM			DURHAM
Determinand	Accred.	SOP	Units	LOD								
ACM Type	U	2192		N/A	-	-		-	-	-		-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected		No Asbestos Detected	No Asbestos Detected	No Asbestos Detected		No Asbestos Detected
ACM Detection Stage	U	2192		N/A	-	-		-	-	-		-
Moisture	N	2030	%	0.020	14	13	12	5.9	14	13	10	2.4
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	None	Stones	Stones	Stones	Stones and Roots	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
Chromatogram (TPH)	N			N/A	See Attached	See Attached		See Attached	See Attached	See Attached		See Attached
pH	M	2010		4.0	8.3	8.4	8.3	9.4	8.4	7.8		9.3
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	0.46	< 0.40		0.53	0.66	0.60		< 0.40
Magnesium (Water Soluble)	N	2120	g/l	0.010			< 0.010					
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010			0.096					
Total Sulphur	M	2175	%	0.010			0.022					
Chloride (Water Soluble)	M	2220	g/l	0.010			0.010					
Nitrate (Water Soluble)	N	2220	g/l	0.010			0.012					
Ammonium (Water Soluble)	M	2120	g/l	0.01			< 0.01					
Sulphate (Acid Soluble)	M	2430	%	0.010			0.057					
Arsenic	M	2450	mg/kg	1.0	< 1.0	< 1.0		6.5	4.6	13		23
Beryllium	U	2450	mg/kg	1.0	< 1.0	< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
Cadmium	M	2450	mg/kg	0.10	< 0.10	< 0.10		< 0.10	< 0.10	0.84		0.27
Copper	M	2450	mg/kg	0.50	9.3	5.0		94	20	73		3.7
Mercury	M	2450	mg/kg	0.10	< 0.10	< 0.10		< 0.10	0.11	0.44		< 0.10
Nickel	M	2450	mg/kg	0.50	16	9.3		29	23	42		10
Lead	M	2450	mg/kg	0.50	7.2	4.0		13	27	320		6.1
Selenium	M	2450	mg/kg	0.20	< 0.20	< 0.20		< 0.20	0.23	0.39		< 0.20
Vanadium	U	2450	mg/kg	5.0	30	18		120	35	39		17
Zinc	M	2450	mg/kg	0.50	28	17		62	44	750		17
Chromium (Trivalent)	N	2490	mg/kg	1.0	19	12		45	25	36		13
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50		< 0.50	< 0.50	< 0.50		< 0.50
Fraction of Organic Carbon	M	2625		0.0010	0.0020	< 0.0010		0.0096	0.012	0.047		0.071
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0		< 1.0	< 1.0	< 1.0		< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0		< 1.0	< 1.0	< 1.0		21
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0		< 1.0	< 1.0	< 1.0		8.4
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0		< 1.0	< 1.0	< 1.0		10

Results - Soil

Project: 798.01 Milford Haven

Client: Remada Ltd		Chemtest Job No.:		20-29293	20-29293	20-29293	20-29293	20-29293	20-29293	20-29293	20-29293
Quotation No.:		Chemtest Sample ID.:		1088537	1088538	1088539	1088540	1088541	1088542	1088543	1088544
Order No.: 798.01		Client Sample Ref.:		798.01	798.01	798.01	798.01	798.01	798.01	798.01	798.01
		Sample Location:		WS1	WS2	WS3	WS5	WS6	WS7	WS8	WS9
		Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):		0.3	0.5	0.5	0.09	0.5	0	0	0
		Bottom Depth (m):		0.7	1.0	0.8	0.45	0.8	0.3	0.3	0.08
		Date Sampled:		23-Oct-2020	23-Oct-2020	23-Oct-2020	23-Oct-2020	23-Oct-2020	24-Oct-2020	24-Oct-2020	24-Oct-2020
		Asbestos Lab:		DURHAM	DURHAM		DURHAM	DURHAM	DURHAM		DURHAM
Determinand	Accred.	SOP	Units	LOD							
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		7.7
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	18		42
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		30
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	18		120
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		72
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		30
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		30
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	3.8		37
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	140		360
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		210
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	150		740
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	< 10	< 10	170		860
Naphthalene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.3	< 0.10	< 0.10
Anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.19	< 0.10	< 0.10
Fluoranthene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	3.2	0.83	< 0.10
Pyrene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	3.9	1.1	< 0.10
Benzo[a]anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	2.0	0.39	< 0.10
Chrysene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	2.9	0.47	< 0.10
Benzo[b]fluoranthene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	3.6	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	3.2	< 0.10	< 0.10
Benzo[a]pyrene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	2.9	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.7	< 0.10	< 0.10
Dibenz(a,h)Anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.46	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	2.1	< 0.10	< 0.10
Coronene	N	2700	mg/kg	0.10						< 0.10	
Total Of 16 PAH's	M	2700	mg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	28		< 2.0
Total Of 17 PAH's	N	2700	mg/kg	2.0						2.8	
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0

Results - Soil

Project: 798.01 Milford Haven

Client: Remada Ltd	Chemtest Job No.:		20-29293	20-29293	20-29293	20-29293	20-29293	20-29293	20-29293	20-29293
Quotation No.:	Chemtest Sample ID.:		1088537	1088538	1088539	1088540	1088541	1088542	1088543	1088544
Order No.: 798.01	Client Sample Ref.:		798.01	798.01	798.01	798.01	798.01	798.01	798.01	798.01
	Sample Location:		WS1	WS2	WS3	WS5	WS6	WS7	WS8	WS9
	Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):		0.3	0.5	0.5	0.09	0.5	0	0	0
	Bottom Depth (m):		0.7	1.0	0.8	0.45	0.8	0.3	0.3	0.08
	Date Sampled:		23-Oct-2020	23-Oct-2020	23-Oct-2020	23-Oct-2020	23-Oct-2020	24-Oct-2020	24-Oct-2020	24-Oct-2020
	Asbestos Lab:		DURHAM	DURHAM		DURHAM	DURHAM	DURHAM		DURHAM
Determinand	Accred.	SOP	Units	LOD						
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Phenols	M	2920	mg/kg	0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30

Results - Soil

Project: 798.01 Milford Haven

Client: Remada Ltd		Chemtest Job No.:		20-29293	20-29293	20-29293
Quotation No.:		Chemtest Sample ID.:		1088545	1088546	1088547
Order No.: 798.01		Client Sample Ref.:		798.01	798.01	798.01
		Sample Location:		WS9	WS10	WS4
		Sample Type:		SOIL	SOIL	SOIL
		Top Depth (m):		0	0.08	0.5
		Bottom Depth (m):		0.3	0.5	0.8
		Date Sampled:		24-Oct-2020	24-Oct-2020	22-Oct-2020
		Asbestos Lab:		DURHAM	DURHAM	
Determinand	Accred.	SOP	Units	LOD		
ACM Type	U	2192		N/A	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected
ACM Detection Stage	U	2192		N/A	-	-
Moisture	N	2030	%	0.020	18	2.3
Soil Colour	N	2040		N/A	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand
Chromatogram (TPH)	N			N/A	See Attached	See Attached
pH	M	2010		4.0	8.3	8.3
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	0.46	0.57
Magnesium (Water Soluble)	N	2120	g/l	0.010		< 0.010
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010		0.088
Total Sulphur	M	2175	%	0.010		0.027
Chloride (Water Soluble)	M	2220	g/l	0.010		< 0.010
Nitrate (Water Soluble)	N	2220	g/l	0.010		< 0.010
Ammonium (Water Soluble)	M	2120	g/l	0.01		< 0.01
Sulphate (Acid Soluble)	M	2430	%	0.010		0.067
Arsenic	M	2450	mg/kg	1.0	8.7	4.5
Beryllium	U	2450	mg/kg	1.0	< 1.0	< 1.0
Cadmium	M	2450	mg/kg	0.10	0.30	0.22
Copper	M	2450	mg/kg	0.50	10	7.5
Mercury	M	2450	mg/kg	0.10	< 0.10	< 0.10
Nickel	M	2450	mg/kg	0.50	17	15
Lead	M	2450	mg/kg	0.50	11	9.3
Selenium	M	2450	mg/kg	0.20	< 0.20	< 0.20
Vanadium	U	2450	mg/kg	5.0	24	20
Zinc	M	2450	mg/kg	0.50	54	40
Chromium (Trivalent)	N	2490	mg/kg	1.0	14	11
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50
Fraction of Organic Carbon	M	2625		0.0010	0.0042	0.0017
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	29
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	13
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	12

Results - Soil

Project: 798.01 Milford Haven

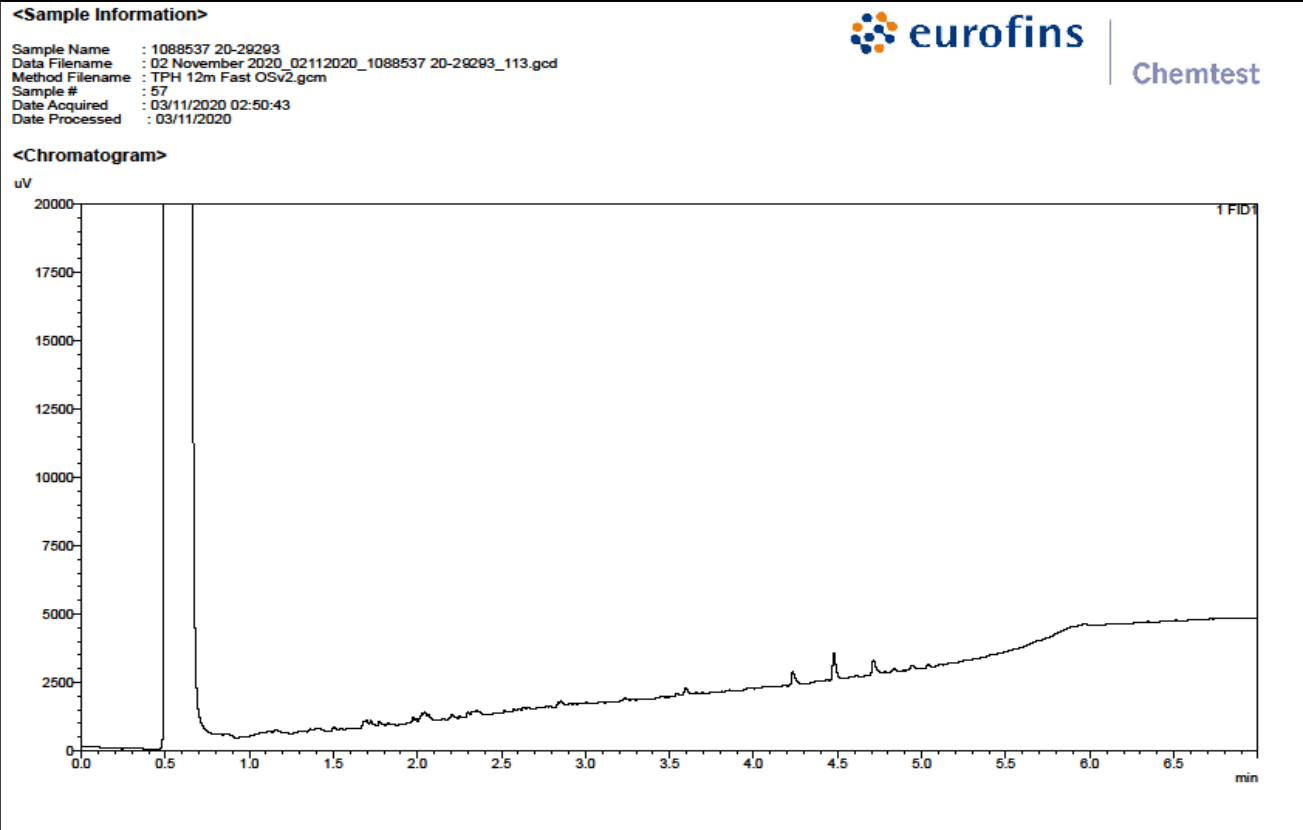
Client: Remada Ltd		Chemtest Job No.:		20-29293	20-29293	20-29293
Quotation No.:		Chemtest Sample ID.:		1088545	1088546	1088547
Order No.: 798.01		Client Sample Ref.:		798.01	798.01	798.01
		Sample Location:		WS9	WS10	WS4
		Sample Type:		SOIL	SOIL	SOIL
		Top Depth (m):		0	0.08	0.5
		Bottom Depth (m):		0.3	0.5	0.8
		Date Sampled:		24-Oct-2020	24-Oct-2020	22-Oct-2020
		Asbestos Lab:		DURHAM	DURHAM	
Determinand	Accred.	SOP	Units	LOD		
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	9.2
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	38	230
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	47
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	38	340
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	120
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	50
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	35
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	40
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	54	2700
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	840
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	54	3800
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	91	4100
Naphthalene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Acenaphthylene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Acenaphthene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Fluorene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Phenanthrene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Fluoranthene	M	2700	mg/kg	0.10	< 0.10	0.59
Pyrene	M	2700	mg/kg	0.10	< 0.10	0.69
Benzo[a]anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Chrysene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Benzo[b]fluoranthene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Benzo[a]pyrene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Coronene	N	2700	mg/kg	0.10		
Total Of 16 PAH's	M	2700	mg/kg	2.0	< 2.0	< 2.0
Total Of 17 PAH's	N	2700	mg/kg	2.0		
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0

Results - Soil

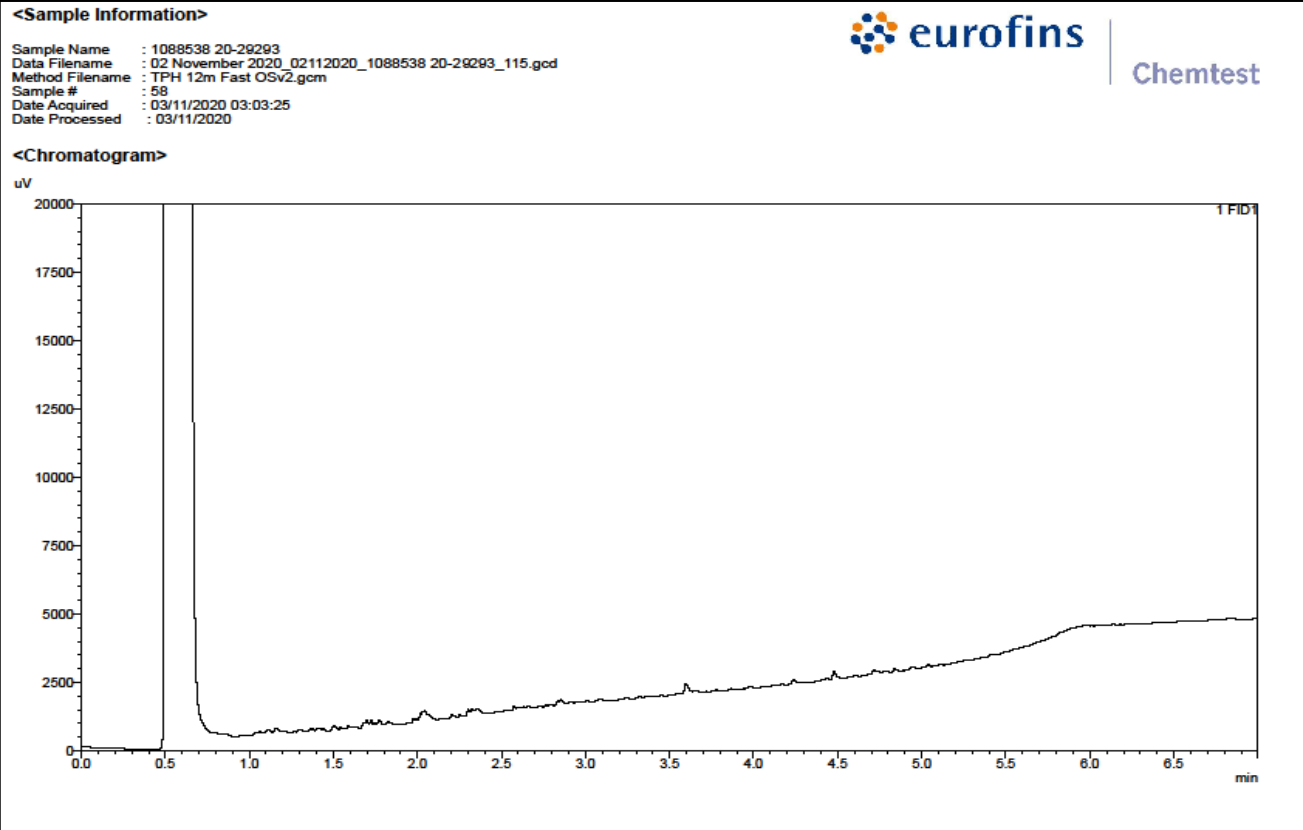
Project: 798.01 Milford Haven

Client: Remada Ltd	Chemtest Job No.:		20-29293	20-29293	20-29293
Quotation No.:	Chemtest Sample ID.:		1088545	1088546	1088547
Order No.: 798.01	Client Sample Ref.:		798.01	798.01	798.01
	Sample Location:		WS9	WS10	WS4
	Sample Type:		SOIL	SOIL	SOIL
	Top Depth (m):		0	0.08	0.5
	Bottom Depth (m):		0.3	0.5	0.8
	Date Sampled:		24-Oct-2020	24-Oct-2020	22-Oct-2020
	Asbestos Lab:		DURHAM	DURHAM	
Determinand	Accred.	SOP	Units	LOD	
o-Xylene	M	2760	µg/kg	1.0	< 1.0
Total Phenols	M	2920	mg/kg	0.30	< 0.30

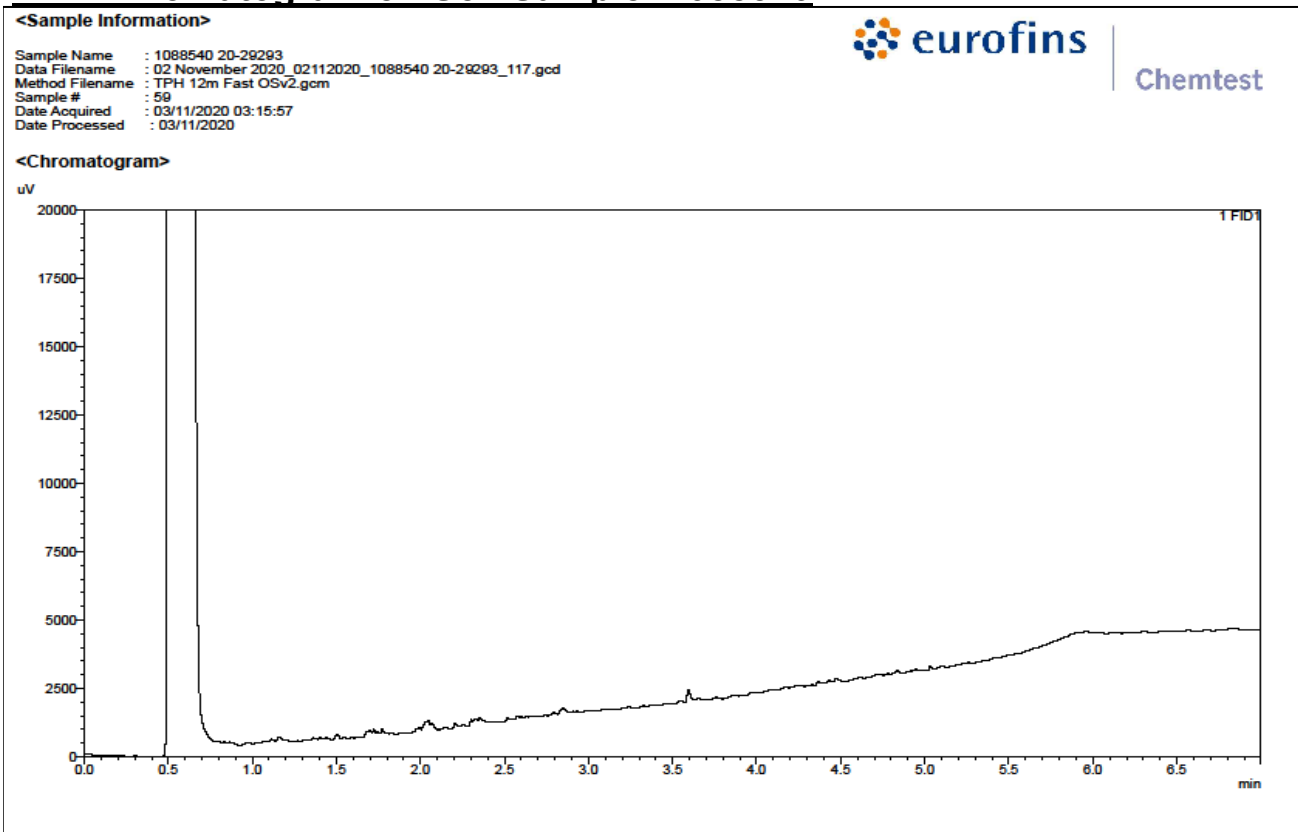
TPH Chromatogram on Soil Sample: 1088537



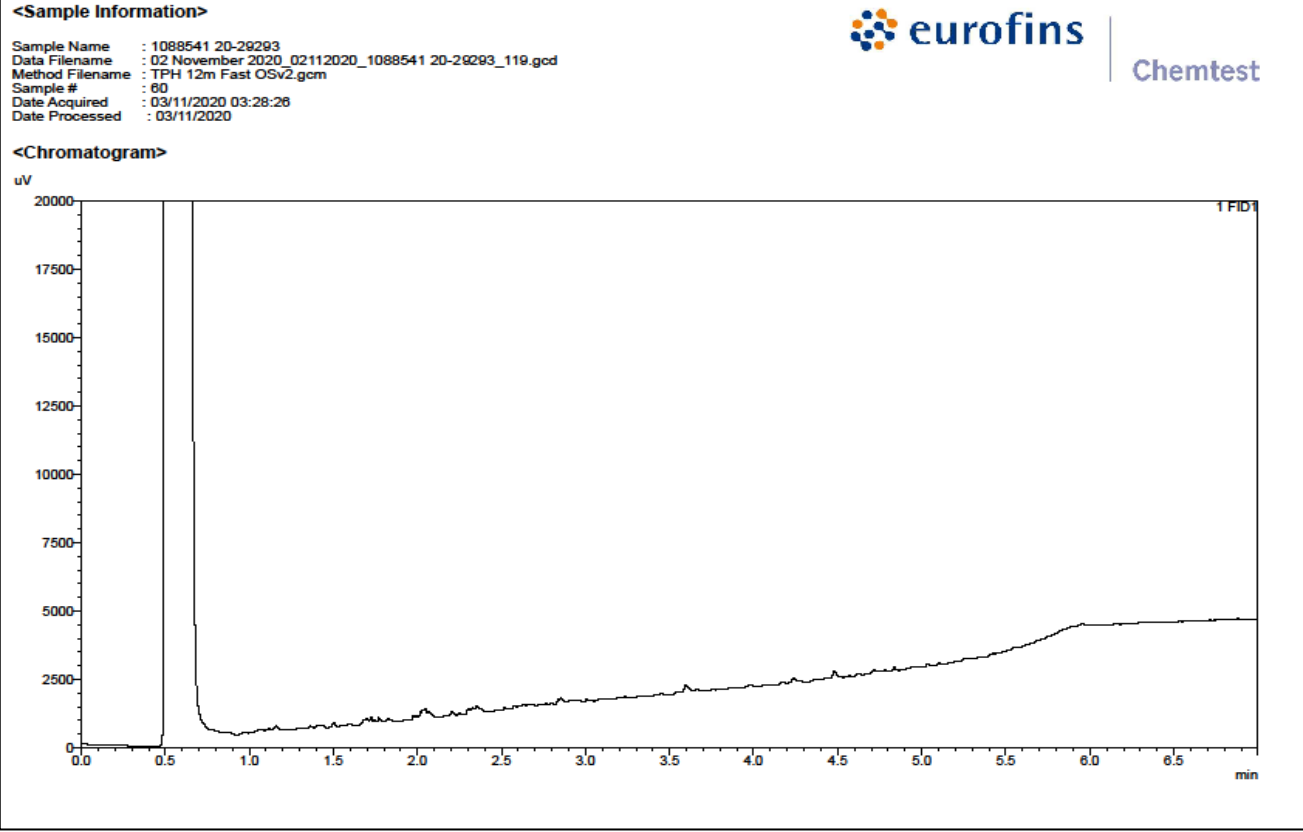
TPH Chromatogram on Soil Sample: 1088538



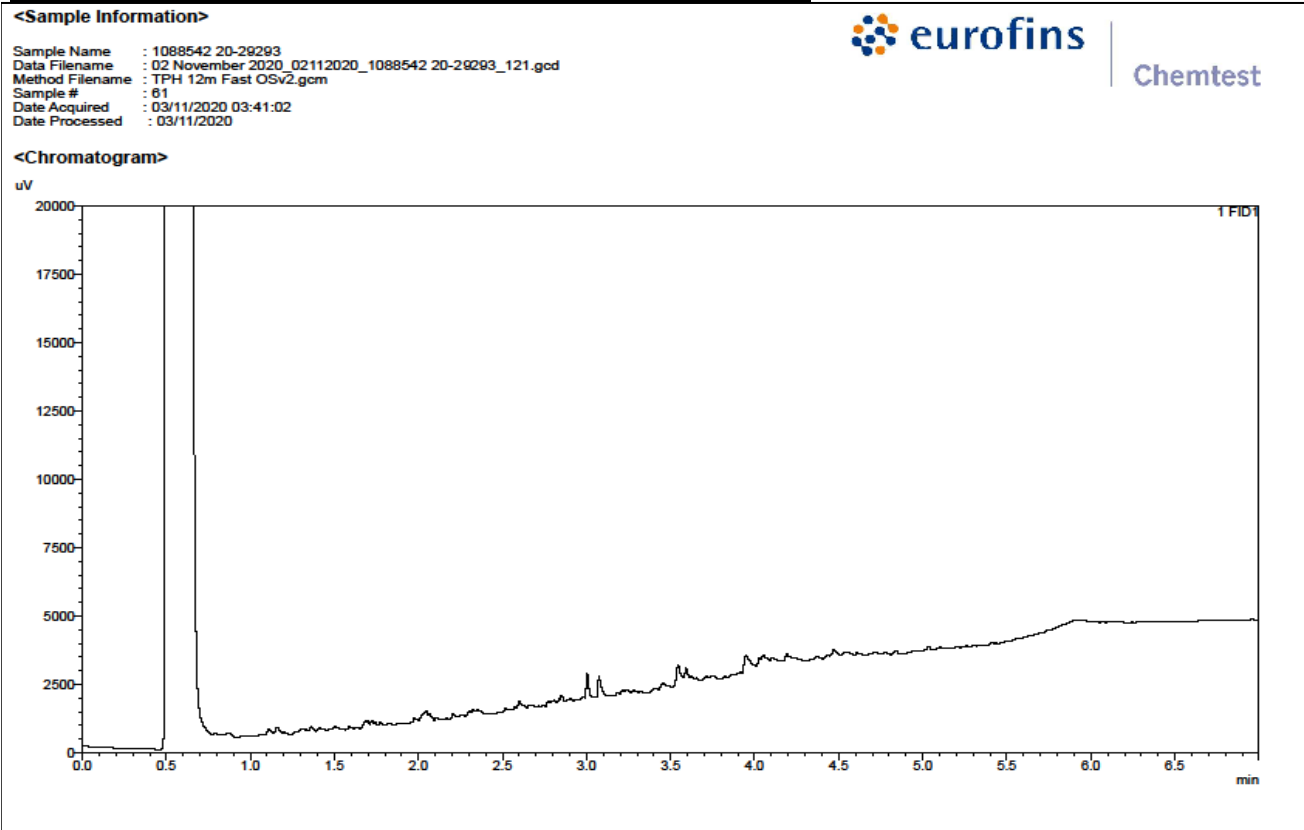
TPH Chromatogram on Soil Sample: 1088540



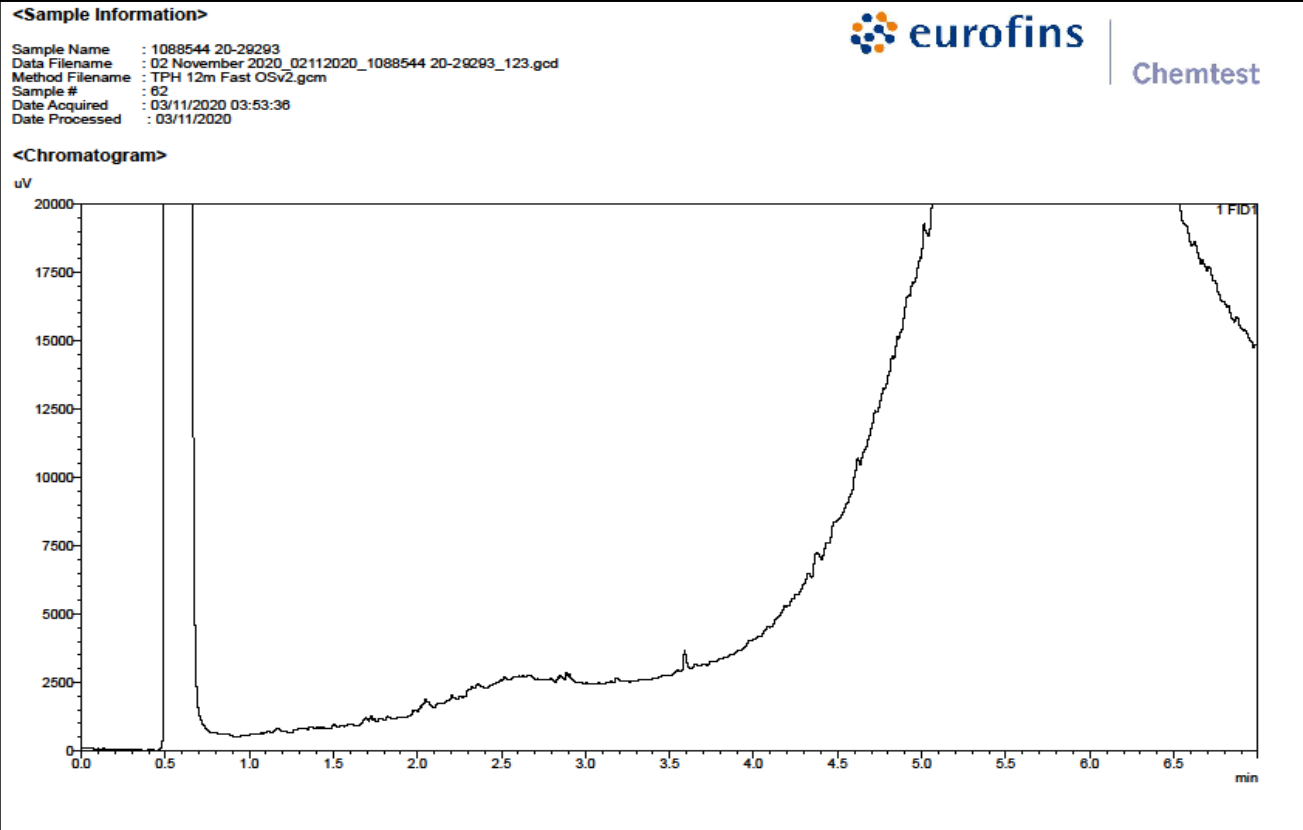
TPH Chromatogram on Soil Sample: 1088541



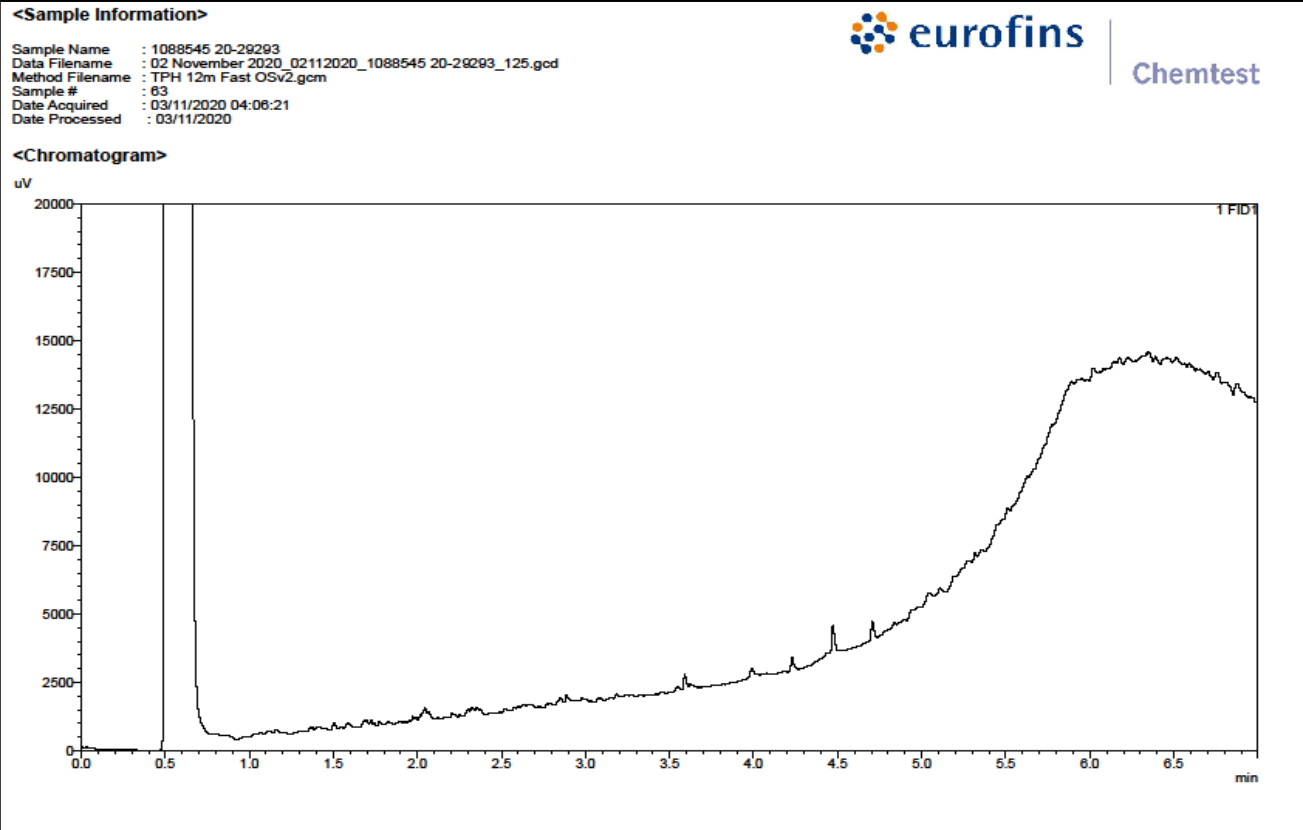
TPH Chromatogram on Soil Sample: 1088542



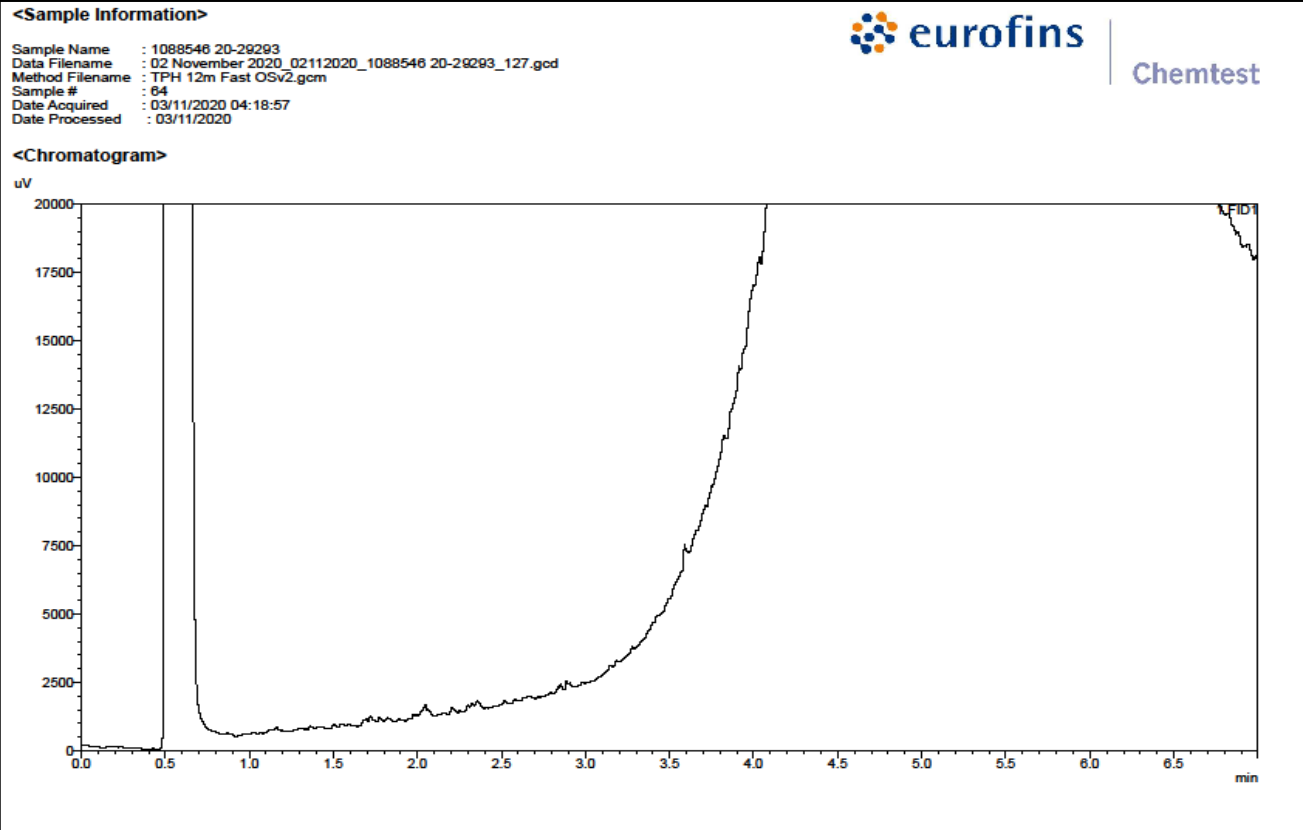
TPH Chromatogram on Soil Sample: 1088544



TPH Chromatogram on Soil Sample: 1088545



TPH Chromatogram on Soil Sample: 1088546



Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2175	Total Sulphur in Soils	Total Sulphur	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2220	Water soluble Chloride in Soils	Chloride	Aqueous extraction and measurement by 'Aquakem 600' Discrete Analyser using ferric nitrate / mercuric thiocyanate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazine.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5-C6, >C6-C8,>C8-C10, >C10-C12, >C12-C16, >C16-C21, >C21-C35, >C35- C44Aromatics: >C5-C7, >C7-C8, >C8- C10, >C10-C12, >C12-C16, >C16- C21, >C21- C35, >C35- C44	Dichloromethane extraction / GCxGC FID detection
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenzo[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at the indicated laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers
- D - Broken Container
- E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 45 days from the date of receipt

All water samples will be retained for 14 days from the date of receipt

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.com



APPENDIX D

Laboratory Geotechnical Tests



LABORATORY REPORT



4043

Contract Number: PSL20/6191

Report Date: 16 November 2020

Client's Reference: 798

Client Name: Remada Ltd
Forward House
17 High Street
Henley-in-Arden
Warwickshire
B95 5AA

For the attention of: Peter Dickinson

Contract Title: Milford Haven

Date Received: 5/11/2020
Date Commenced: 5/11/2020
Date Completed: 16/11/2020

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:

H Daniels
(Senior Technician)

A Watkins
(Director)

R Berriman
(Quality Manager)

S Royle
(Laboratory Manager)

S Eyre
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Page 1 of

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
WS1		U	2.55	3.00	Firm reddish brown CLAY.
WS2		D	0.40	0.50	Reddish brown slightly gravelly sandy CLAY.
WS2		B	1.50	3.00	Reddish brown gravelly very sandy CLAY.
WS3		D	0.80	1.00	Reddish brown slightly gravelly sandy CLAY.
WS3		B	1.30	2.40	Reddish brown very sandy very clayey GRAVEL.
WS6		D	1.00	1.50	Reddish brown gravelly sandy CLAY.
WS6		B	1.50	2.00	Reddish brown very gravelly very sandy CLAY.
WS6		B	2.00	3.00	Brown very gravelly very sandy CLAY.
WS7		B	1.00	1.50	Brown very sandy clayey GRAVEL.
WS8		B	2.00	3.00	Reddish brown very sandy very clayey GRAVEL.
WS9		D	1.00	1.40	Reddish brown slightly gravelly very sandy CLAY.
WS9		B	1.60	2.40	Brown slightly gravelly very clayey SAND.
WS9		U	1.00	1.45	Soft reddish brown slightly gravelly very sandy CLAY.
WS10		U	0.55	1.00	Firm reddish brown gravelly sandy CLAY.
WS10		B	2.00	3.00	Reddish brown very gravelly very silty SAND.



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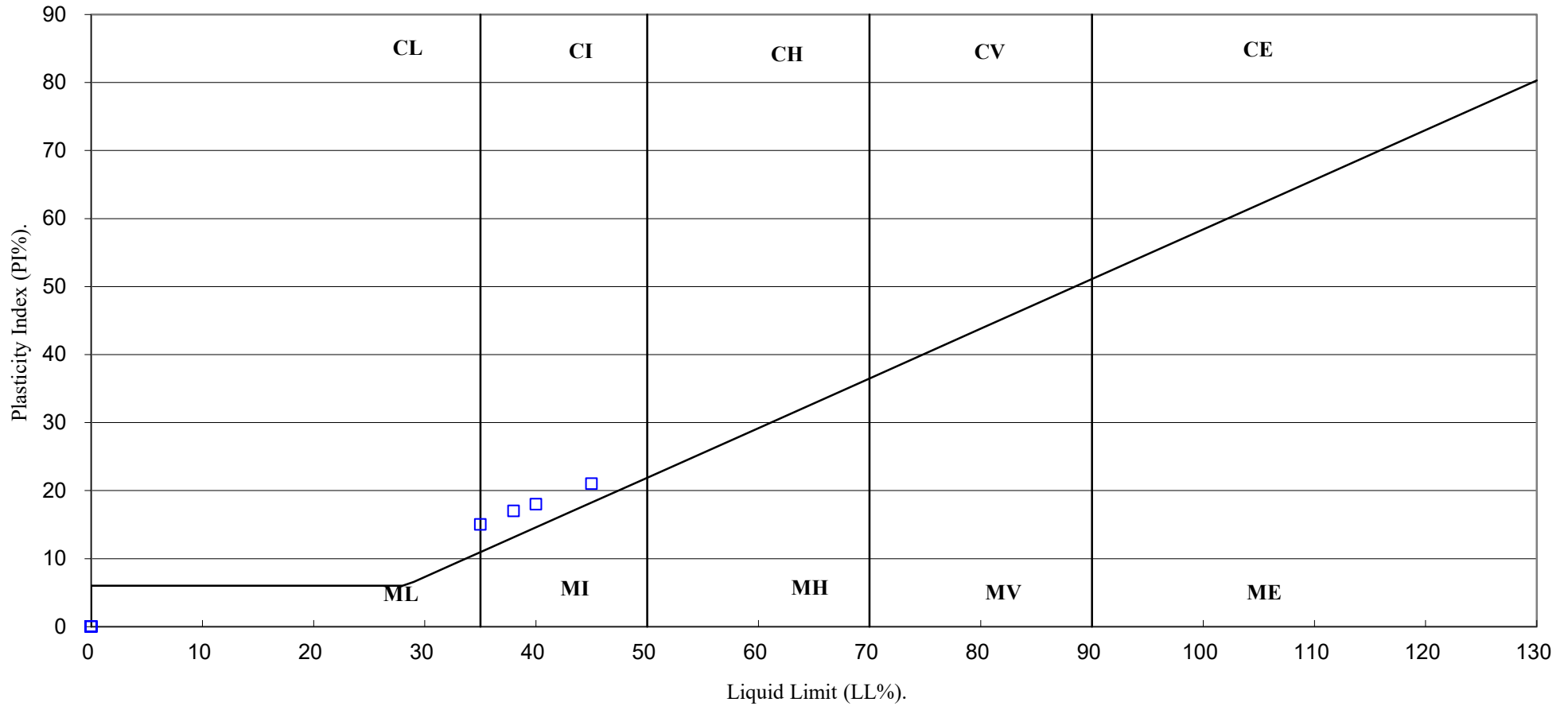
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PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.



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PARTICLE SIZE DISTRIBUTION TEST

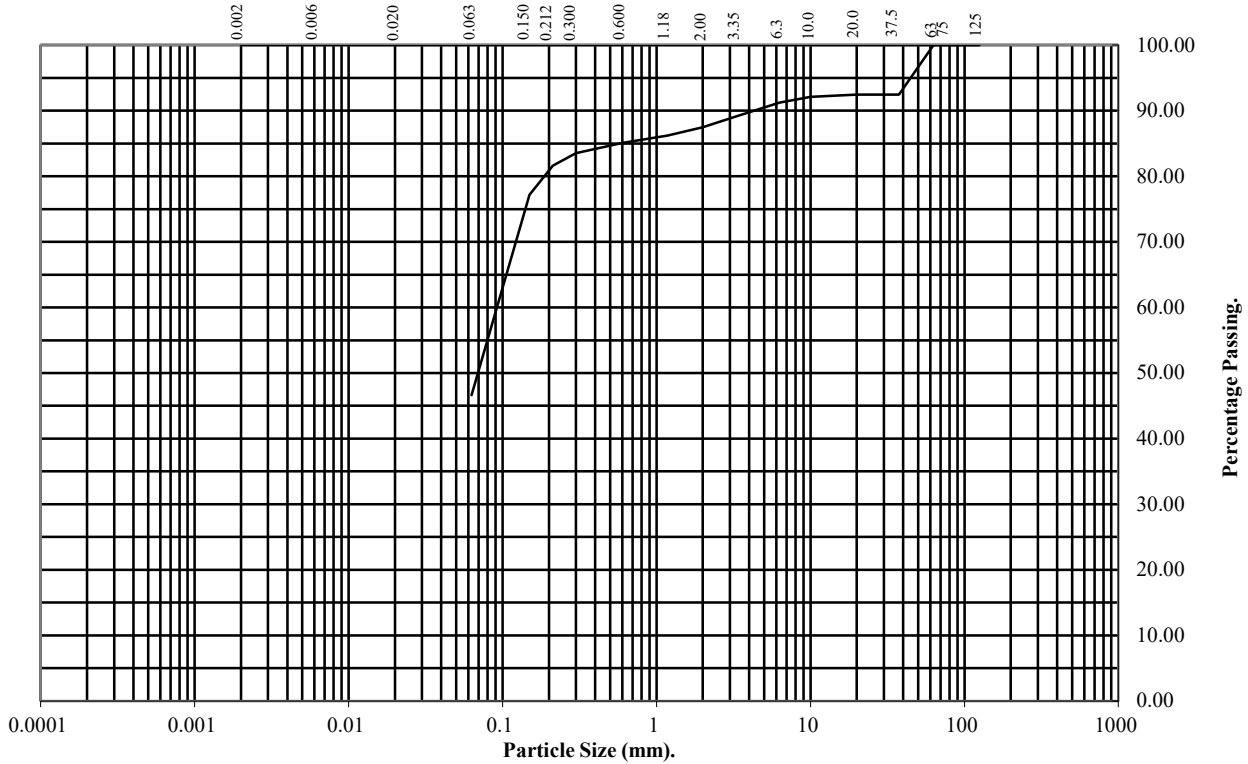
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: **WS2** **Top Depth (m):** **1.50**

Sample Number: **Base Depth(m):** **3.00**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	92
20	92
10	92
6.3	91
3.35	89
2	87
1.18	86
0.6	85
0.3	84
0.212	82
0.15	77
0.063	47

Soil Fraction	Total Percentage
Cobbles	0
Gravel	13
Sand	40
Silt/Clay	47

Remarks:
See Summary of Soil Descriptions



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PARTICLE SIZE DISTRIBUTION TEST

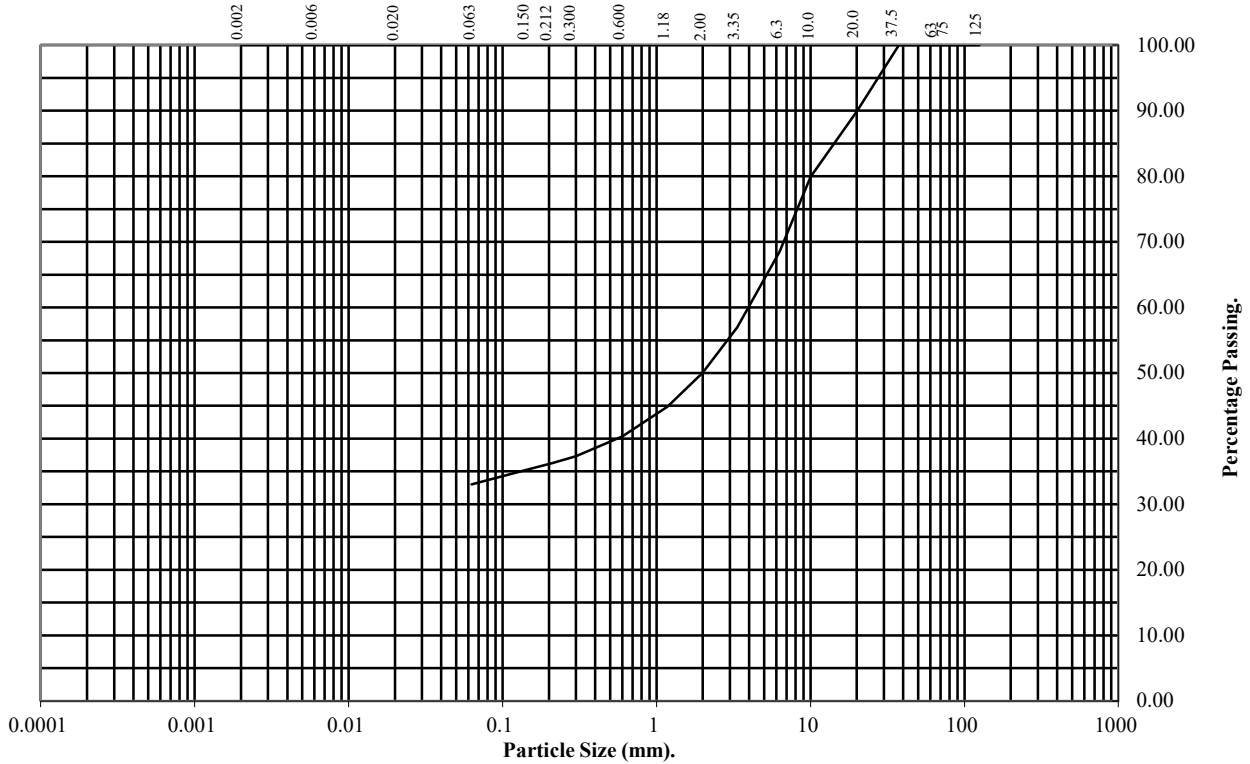
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: **WS3** Top Depth (m): **1.30**

Sample Number: Base Depth(m): **2.40**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	90
10	80
6.3	68
3.35	57
2	50
1.18	45
0.6	40
0.3	37
0.212	36
0.15	35
0.063	33

Soil Fraction	Total Percentage
Cobbles	0
Gravel	50
Sand	17
Silt/Clay	33

Remarks:
See Summary of Soil Descriptions



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PARTICLE SIZE DISTRIBUTION TEST

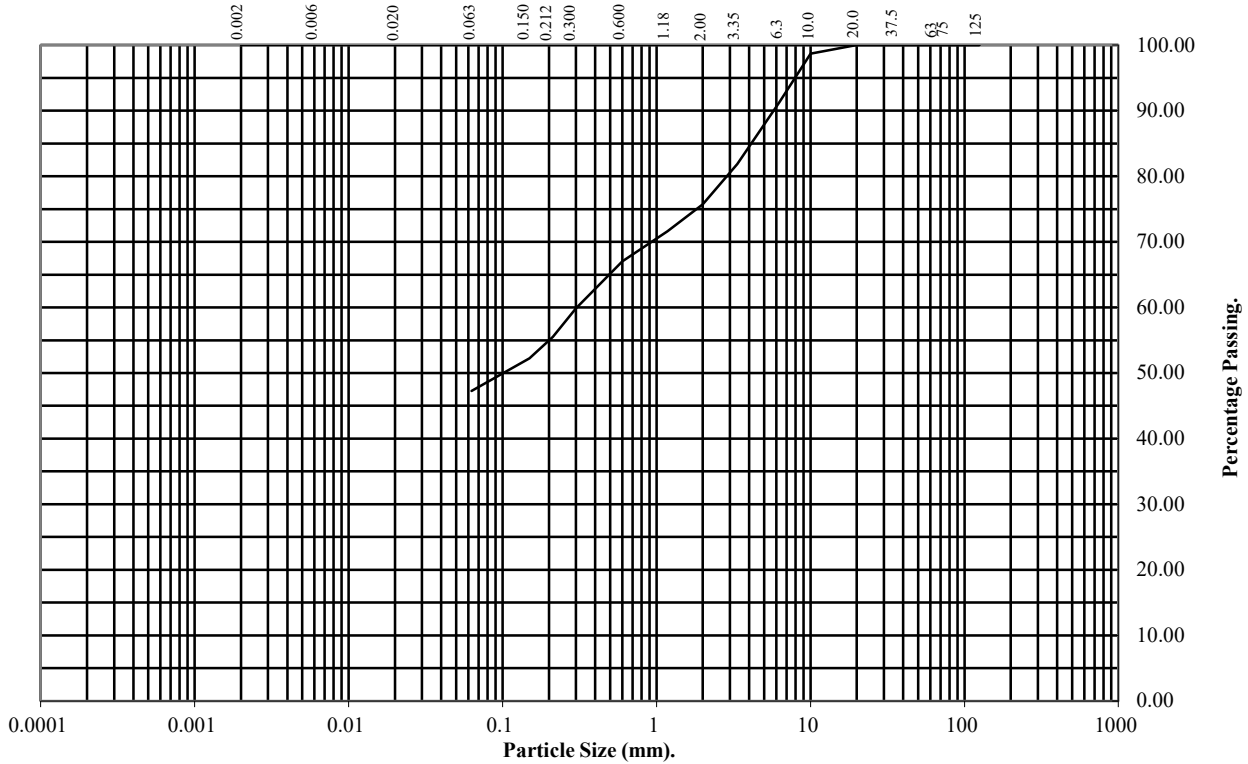
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: **WS6** Top Depth (m): **1.50**

Sample Number: Base Depth(m): **2.00**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	99
6.3	91
3.35	82
2	76
1.18	72
0.6	67
0.3	60
0.212	56
0.15	52
0.063	47

Soil Fraction	Total Percentage
Cobbles	0
Gravel	24
Sand	29
Silt/Clay	47

Remarks:
See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

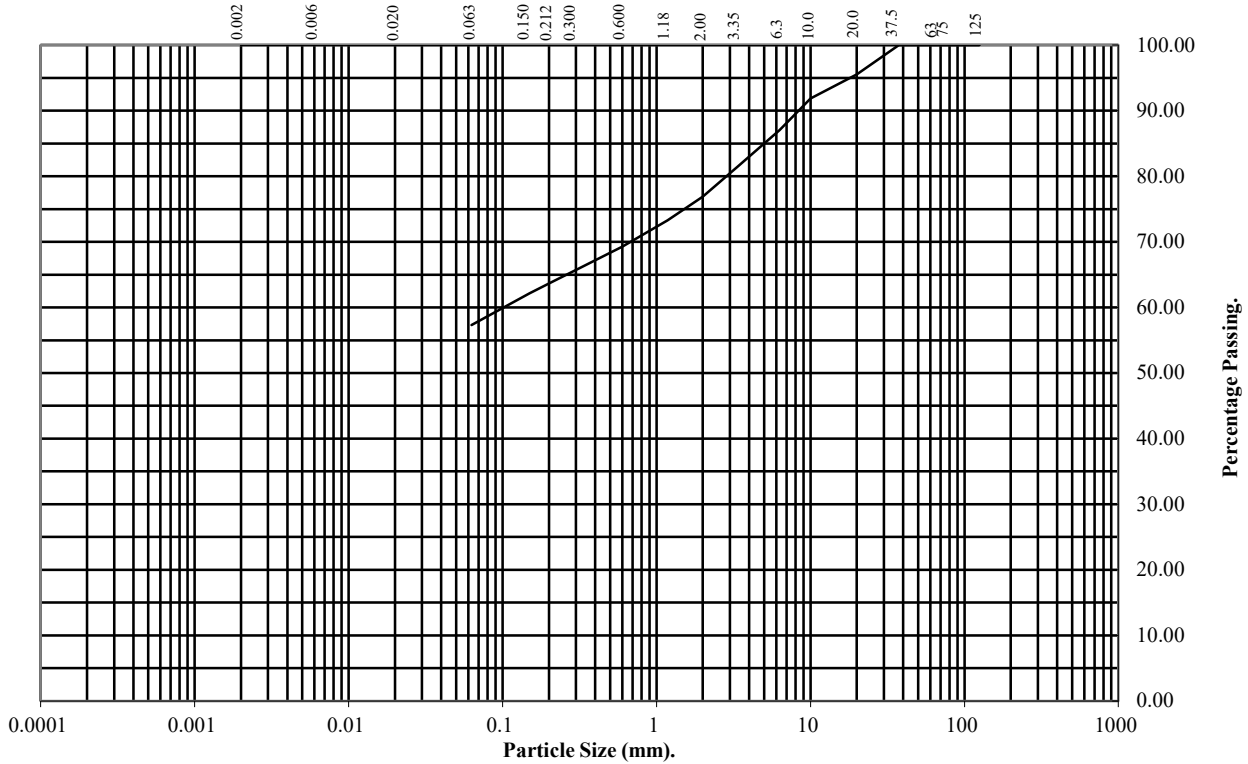
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: **WS6** Top Depth (m): **2.00**

Sample Number: Base Depth(m): **3.00**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	96
10	92
6.3	87
3.35	81
2	77
1.18	73
0.6	69
0.3	66
0.212	64
0.15	62
0.063	57

Soil Fraction	Total Percentage
Cobbles	0
Gravel	23
Sand	20
Silt/Clay	57

Remarks:
See Summary of Soil Descriptions



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PARTICLE SIZE DISTRIBUTION TEST

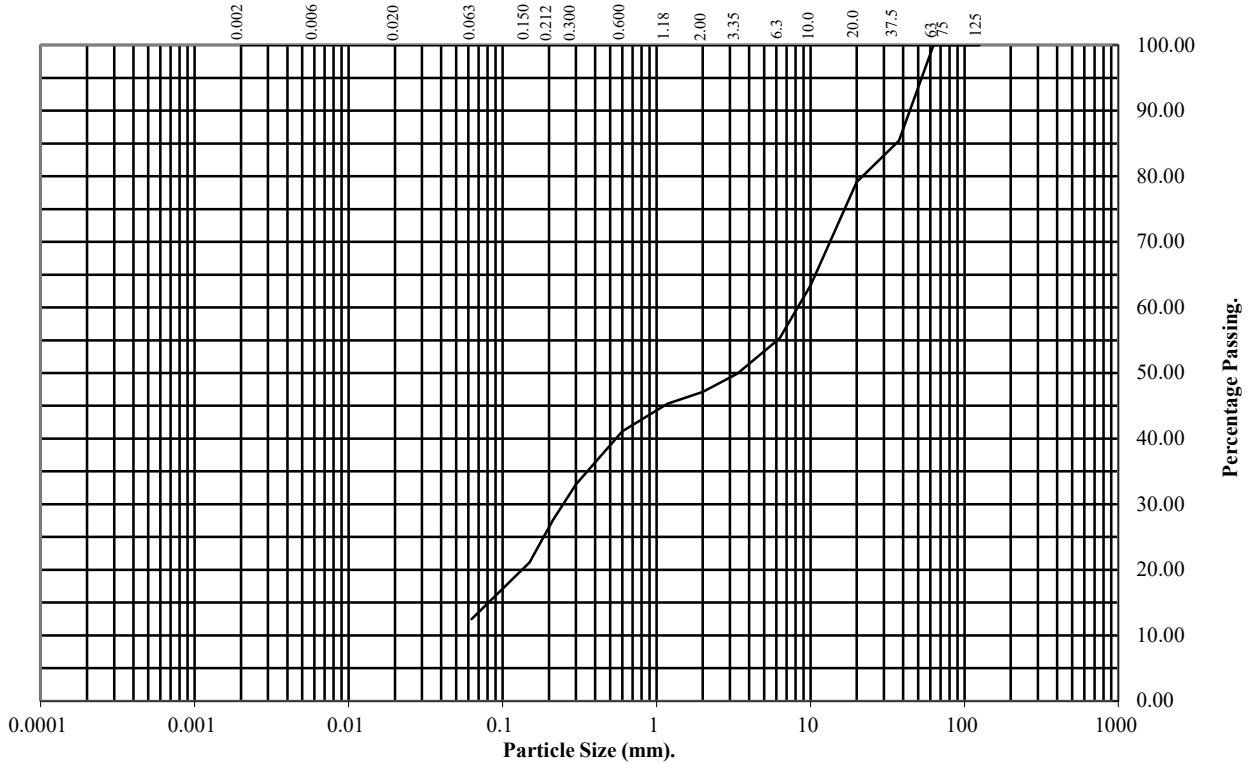
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: **WS7** Top Depth (m): **1.00**

Sample Number: Base Depth(m): **1.50**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	85
20	79
10	63
6.3	55
3.35	50
2	47
1.18	45
0.6	41
0.3	33
0.212	28
0.15	21
0.063	12

Soil Fraction	Total Percentage
Cobbles	0
Gravel	53
Sand	35
Silt/Clay	12

Remarks:
See Summary of Soil Descriptions



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PARTICLE SIZE DISTRIBUTION TEST

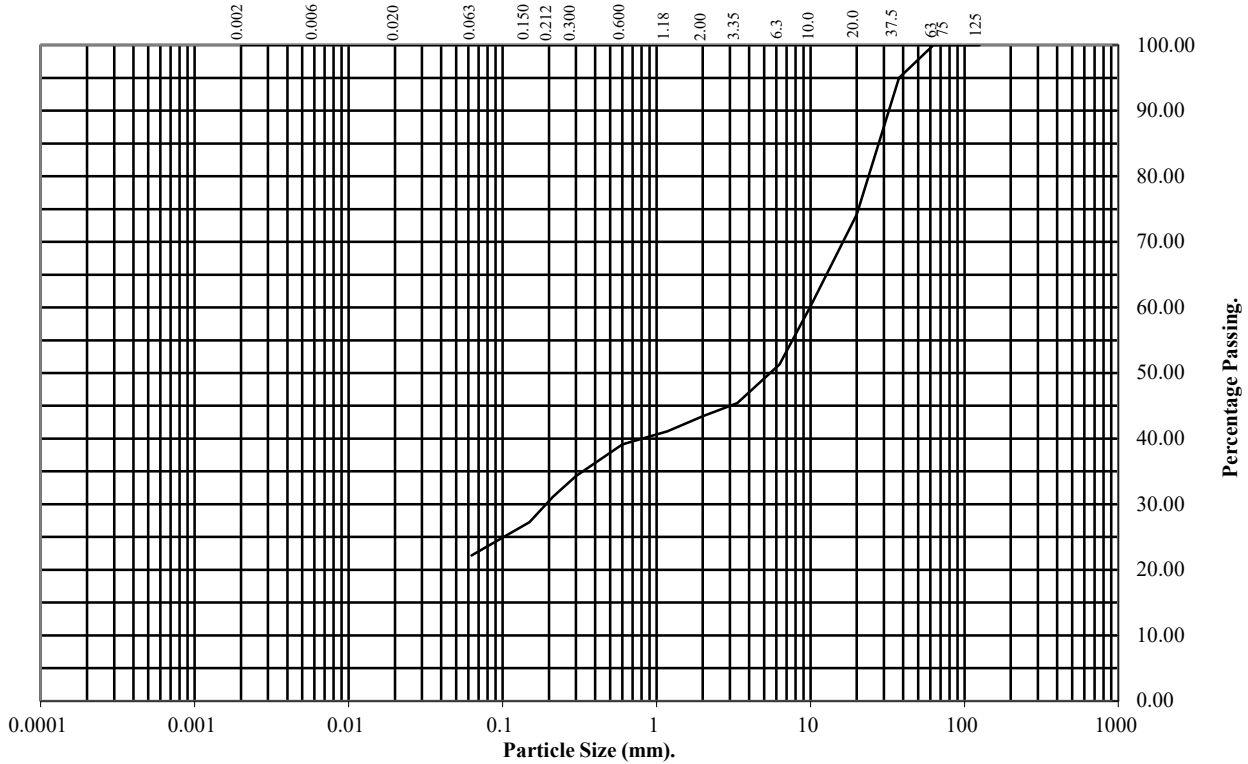
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: **WS8** **Top Depth (m):** **2.00**

Sample Number: **Base Depth(m):** **3.00**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	95
20	74
10	60
6.3	51
3.35	45
2	43
1.18	41
0.6	39
0.3	34
0.212	31
0.15	27
0.063	22

Soil Fraction	Total Percentage
Cobbles	0
Gravel	57
Sand	21
Silt/Clay	22

Remarks:
See Summary of Soil Descriptions



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PARTICLE SIZE DISTRIBUTION TEST

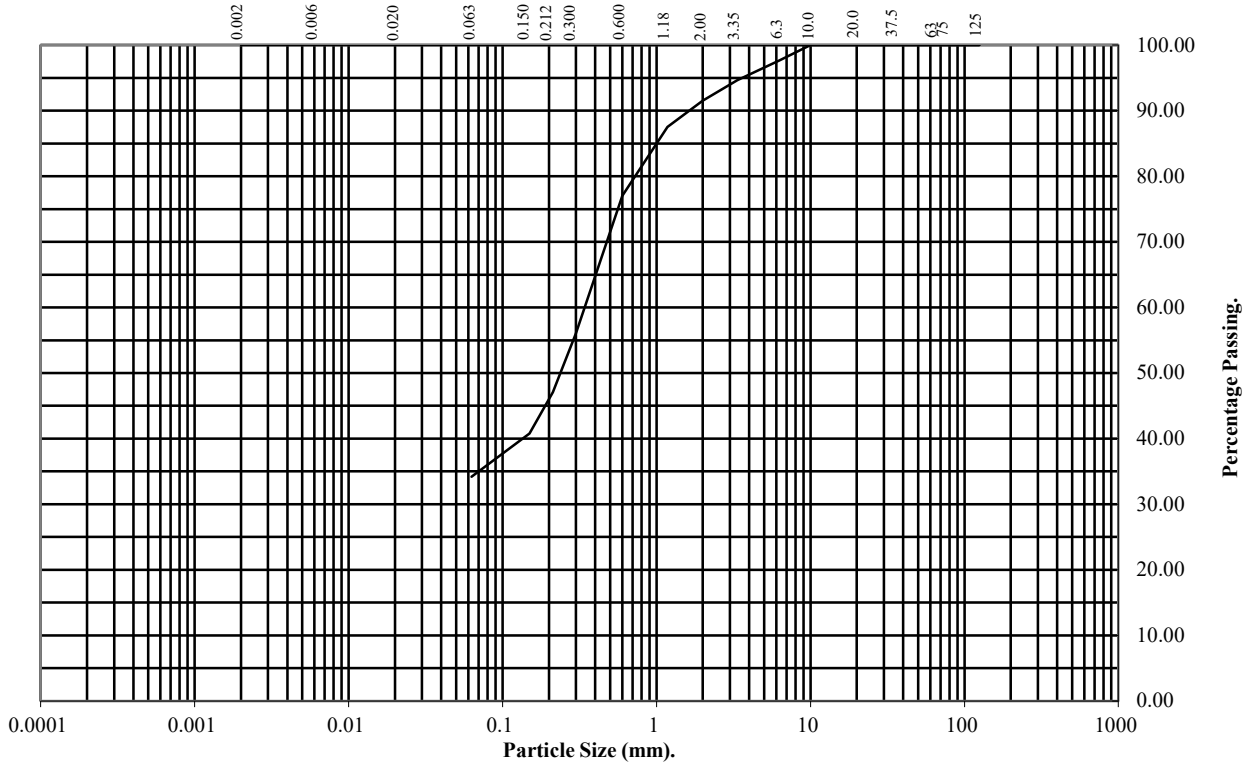
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: **WS9** Top Depth (m): **1.60**

Sample Number: Base Depth(m): **2.40**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	98
3.35	95
2	92
1.18	88
0.6	77
0.3	56
0.212	47
0.15	41
0.063	34

Soil Fraction	Total Percentage
Cobbles	0
Gravel	8
Sand	58
Silt/Clay	34

Remarks:
See Summary of Soil Descriptions



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PARTICLE SIZE DISTRIBUTION TEST

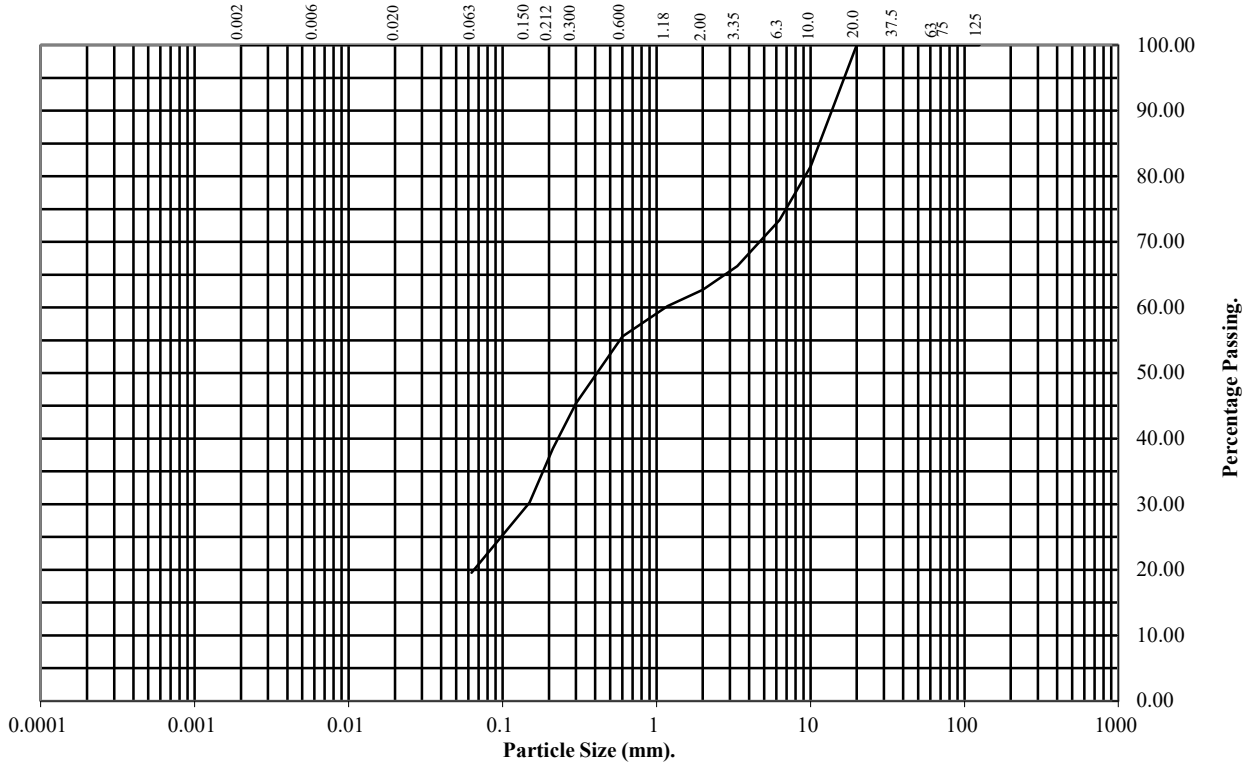
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: **WS10** Top Depth (m): **2.00**

Sample Number: Base Depth(m): **3.00**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	81
6.3	73
3.35	66
2	63
1.18	60
0.6	56
0.3	45
0.212	39
0.15	30
0.063	20

Soil Fraction	Total Percentage
Cobbles	0
Gravel	37
Sand	43
Silt/Clay	20

Remarks:

See Summary of Soil Descriptions



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UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

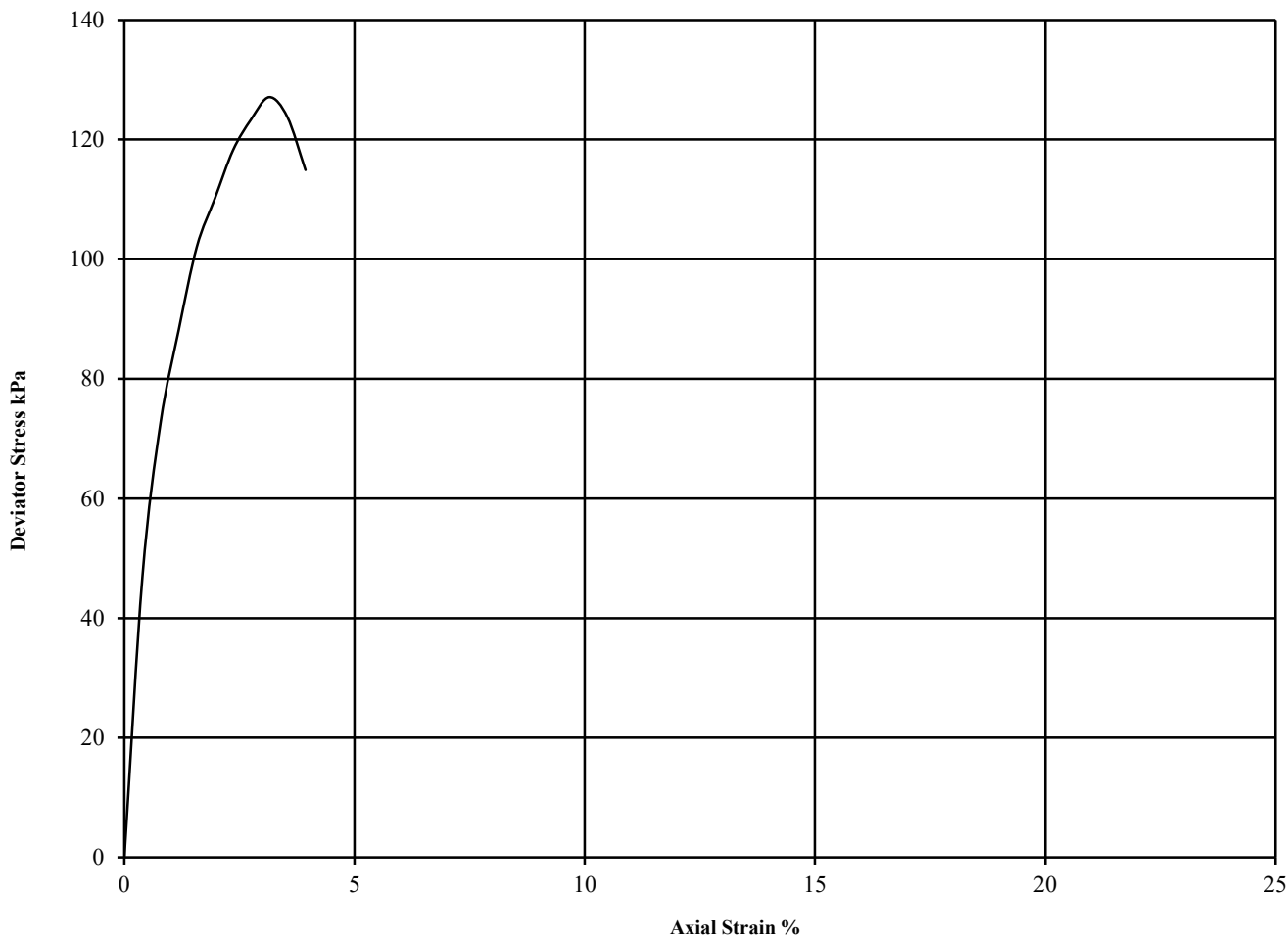
WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 8

Hole Number: **WS1** Top Depth (m): **2.55**

Sample Number: Base Depth (m): **3.00**

Sample Type **U**



Diameter (mm):		59			Height (mm):		150			Test:	UU Single Stage		Remarks:
Specimen	Moisture Content (%)	Bulk Density (Mg/m ³)	Dry Density (Mg/m ³)	Cell Pressure (kPa)	Corr. Max. Deviator Stress (kPa)	Shear Strength Cu (kPa)	Failure Strain (%)	Mode of Failure	θ_3	$(\theta_1 - \theta_3)_f$	$\frac{1}{2}(\theta_1 - \theta_3)_f$		Undisturbed Sample Sample taken from top of tube Rate of strain = 2 %/min Latex Membrane used 0.2 mm thick, Correction applied 0.63 See summary of soil descriptions
1	16	2.17	1.86	50	127	64	3.1	Brittle					

Sample failed on the first stage due to the material being too brittle.

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UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

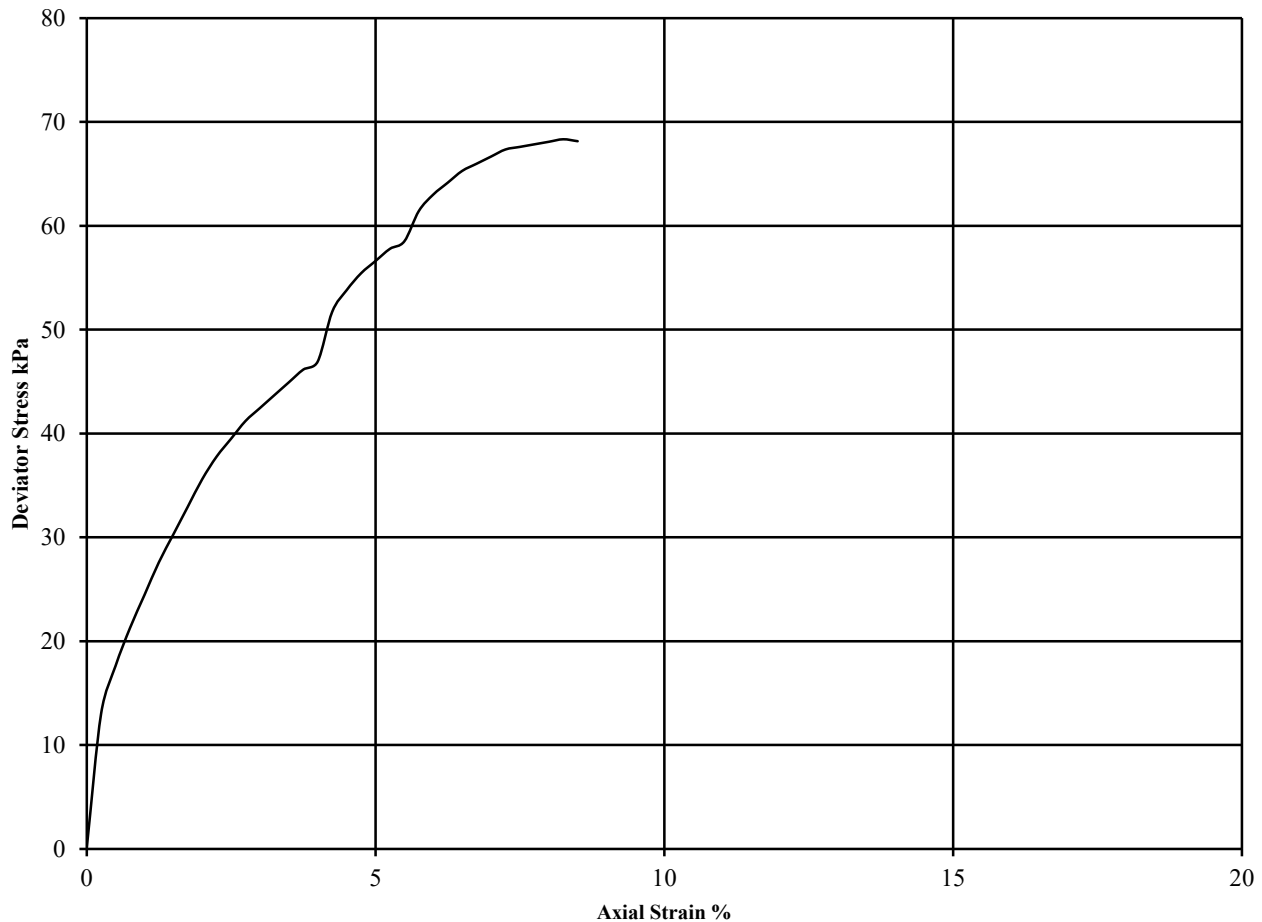
WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 9

Hole Number: WS9 Top Depth (m): 1.00

Sample Number: Base Depth (m): 1.45

Sample Type U



Diameter (mm):		85		Height (mm):		170		Test:		UU Multistage		Remarks		
Specimen	Moisture Content (%)	Bulk Density (Mg/m ³)	Dry Density (Mg/m ³)	Cell Pressure (kPa)	Corr. Max. Deviator Stress (kPa)	Shear Strength Cu (kPa)	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) 0.44 0.43 0.43 See summary of soil descriptions					
				θ_3	$(\theta_1 - \theta_3)_f$	$\frac{1}{2}(\theta_1 - \theta_3)_f$								
	1	20	2.08	1.74	20	47	23	4.0						
					40	59	29	5.5						
				80	68	34	8.3	Intermediate						



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UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

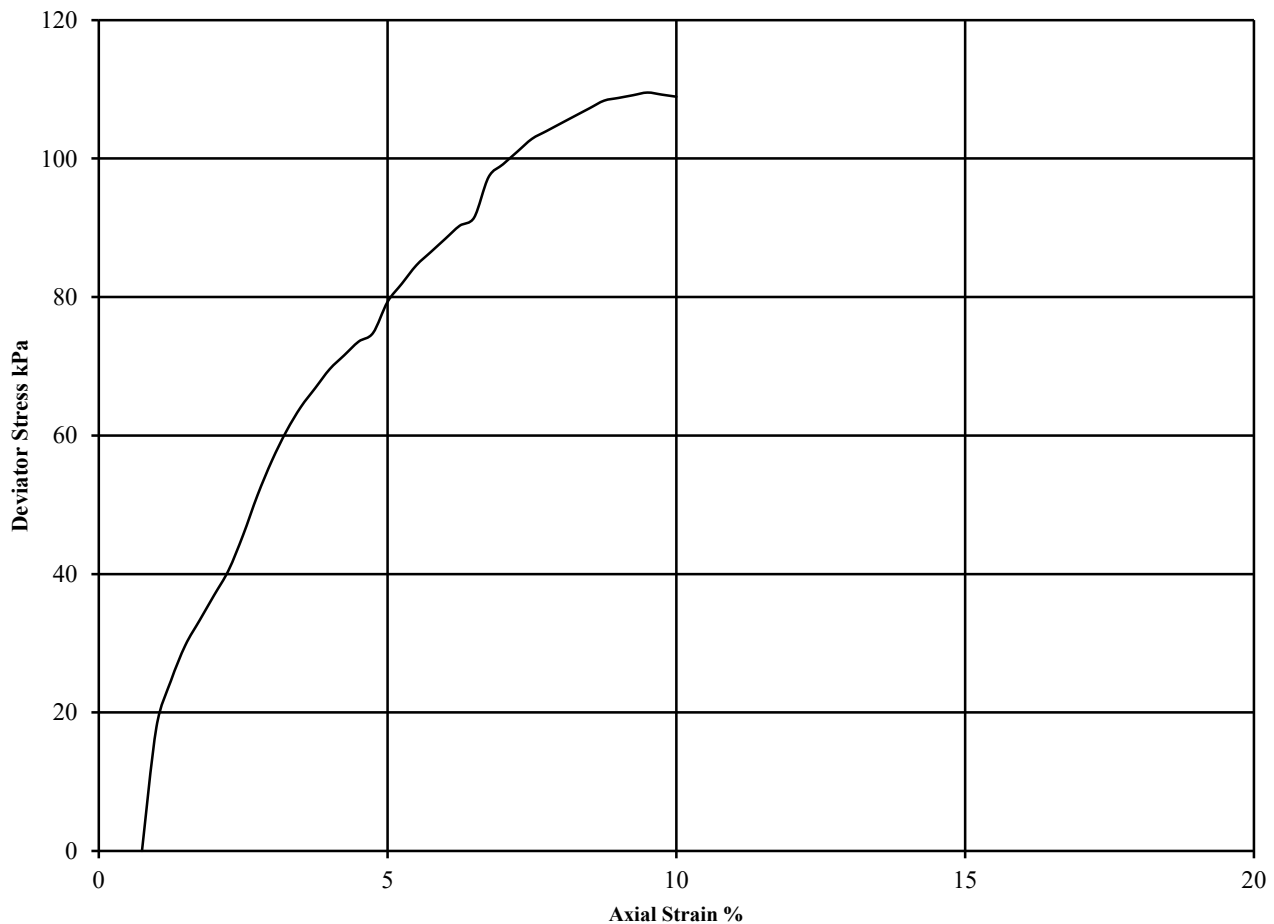
WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 9

Hole Number: **WS10** Top Depth (m): **0.55**

Sample Number: Base Depth (m): **1.00**

Sample Type **U**



Diameter (mm):		82		Height (mm):		164		Test:		UU Multistage		Remarks	
Specimen	Moisture Content (%)	Bulk Density (Mg/m ³)	Dry Density (Mg/m ³)	Cell Pressure (kPa)	Corr. Max. Deviator Stress (kPa)	Shear Strength Cu (kPa)	Failure Strain (%)	Mode of Failure					
1	25	2.00	1.60	10	75	37	4.0		Undisturbed Sample				
				20	91	46	5.8		Sample taken from top of tube				
				40	110	55	8.8	Plastic	Rate of strain = 2 %/min				
									Latex Membrane used 0.2 mm thick				
									Membrane Correction applied (kPa)				
									0.45	0.45	0.44		
									See summary of soil descriptions				



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