

Client	LCC	Lab Ref	
Project	COTTAM PARKWAY	Job	CCG C 21
	STATION		12093
Borehole	CP03	Sample	1

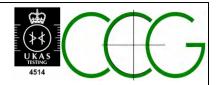
Initial Moisture	18.3 %	Final Moisture Content	16.7 %
Content*			
Initial Bulk Density	2.16 Mg/m <sup>3</sup>	Final Bulk Density	2.24 Mg/m <sup>3</sup>
Initial Dry Density	1.82 Mg/m <sup>3</sup>	Final Dry Density	1.87 Mg/m <sup>3</sup>
Initial Void Ratio	0.4523	Final Void Ratio	0.3900
Initial Degree of	107.20 %	Final Degree of Saturation	112.60 %
Saturation		-	

\* Calculated from initial and dry weights of whole specimen

Pressure (Loading Stages)	Coefficient of Volume Compressibility (m <sub>v</sub> )	Coefficient of Consolidation (c <sub>v</sub> )
0.00		
30.0 kPa	0.60 m <sup>2</sup> /MN	<b>0.61 m<sup>2</sup>/ yr</b>
60.0 kPa	0.41 m <sup>2</sup> /MN	<b>0.84 m<sup>2</sup>/ yr</b>
120.0 kPa	0.22 m <sup>2</sup> /MN	<b>1.2 m<sup>2</sup>/ yr</b>

Method of Time Fitting Used

Tested by and Date:	DK 19.04.21
Checked by and Date:	DK 19.04.21
Approved by and Date:	CB 19.04.21

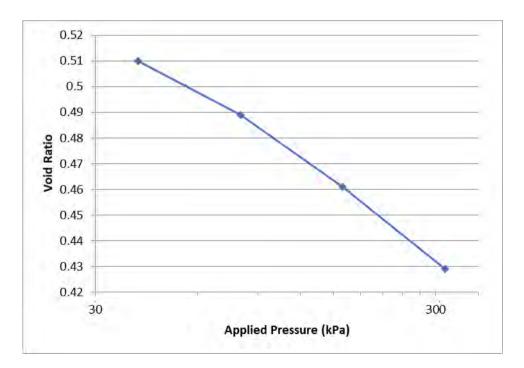


Client	LCC	Lab Ref	
Project	COTTAM PARKWAY	Job	CCG C 21
	STATION		12093
Borehole	CP03	Sample	1

Test Details				
Standard	BS 1377: Part 5: 1990: Clause 3	Particle Density (assumed)	2.65 Mg/m3	
Sample Type	Undisturbed sample - open drive	Lab Temperature	20.0 deg.C	
Sample Depth	8.00 m			
Sample Description	Brown slightly sandy silty CLAY			
Variations from Procedure	None			

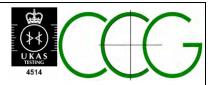
Specimen Details			
Specimen Reference	A	Description	
Depth within Sample	0.00 mm	Orientation within Sample	
Specimen Mass	186.10 g	Condition	Natural Moisture
Specimen Height	20.01 mm	Preparation	
Comments			

Test Apparatus			
Ring Number	1	Ring Diameter	74.95 mm
Ring Height	20.01 mm	Ring Weight	129.34 g
Lever Ratio	9.00: 1		



Height of Solid Particles 12.79 mm

Swelling Pressure



Client	LCC	Lab Ref	
Project	COTTAM PARKWAY	Job	CCG C 21
	STATION		12093
Borehole	CP03	Sample	1

Initial Moisture	24.5 %	Final Moisture Content	21.6 %
Content*			
Initial Bulk Density	2.11 Mg/m <sup>3</sup>	Final Bulk Density	2.25 Mg/m <sup>3</sup>
Initial Dry Density	1.69 Mg/m <sup>3</sup>	Final Dry Density	1.85 Mg/m <sup>3</sup>
Initial Void Ratio	0.5648	Final Void Ratio	0.4289
Initial Degree of	114.83 %	Final Degree of Saturation	133.39 %
Saturation		-	

\* Calculated from initial and dry weights of whole specimen

Pressure (Loading Stages)	Coefficient of Volume Compressibility (m <sub>v</sub> )	Coefficient of Consolidation (c <sub>v</sub> )
0.00		
40.0 kPa	0.87 m <sup>2</sup> /MN	<b>0.74 m<sup>2</sup>/ yr</b>
80.0 kPa	0.35 m <sup>2</sup> /MN	<b>1.4 m<sup>2</sup>/ yr</b>
160.0 kPa	0.23 m <sup>2</sup> /MN	<b>1.8 m<sup>2</sup>/ yr</b>
320.0 kPa	0.14 m <sup>2</sup> /MN	<b>2.3 m<sup>2</sup>/ yr</b>

Method of Time Fitting Used

Tested by and Date:	DK 19.04.21
Checked by and Date:	DK 19.04.21
Approved by and Date:	CB 19.04.21

## SUMMARY OF LABORATORY SOIL TEST RESULTS

BH / TP /	Sample	Depth	Depth	Moisture	Bulk	Dry	Shear	Liquid	Plastic	Plasticity	Passing	Soil	UKAS	Description / Test Method
WS	Туре	From	То	Content	Density	Density	Strength	Limit	Limit		0.425mm	Classification		Samples described in accordance with BS EN ISO 14688-2 2004
Number		(m)	(m)	(%)	(Mg/m³)	(Mg/m³)	(kN/m²)	(%)	(%)	(%)	(%)		test (Y/N)	
CP04	В	1.50	1.50	18	-	-	-	33	16	17	96	CL	Y	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2,4.4,5)
CP04	U	2.00	2.45	15	2.25	1.95	155	-	-	-	-	-	Y	Brown slightly sandy slightly gravelly silty CLAY of very high undrained shear strength. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2,Pt7:9)
CP04	D	3.00	3.00	21	-	-	-	-	-	-	-	-	Y	Brown very silty slightly clayey slightly gravelly SAND. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2,9.2,9.5)
CP04	В	5.50	5.50	17	-	-	-	30	15	15	95	CL	Y	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2,4.4,5)
CP04	U	6.00	6.45	16	2.20	1.91	123	-	-	-	-	-	Y	Brown slightly sandy slightly gravelly silty CLAY of high undrained shear strength. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2,Pt7:8)
CP04	В	8.50	8.50	24	-	-	-	-	-	-	-	-	Y	Brown sandy slightly gravelly slightly clayey SILT. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2,9.2,9.5)
CP04	В	9.50	9.50	27	-	-	-	39	18	21	96	CI	Y	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2,4.4,5)
CP04	U	10.00	10.45	19	2.16	1.82	59	-	-	-	-	-	Y	Brown slightly sandy slightly gravelly silty CLAY of medium undrained shear strength. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2,Pt7:9)
CP04	В	13.50	13.50	26	-	-	-	-	-	-	-	-	Y	Brown very silty clayey gravelly SAND. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2,9.2,9.5)
CP04	U	14.50	14.95	16	2.17	1.87	131	-	-	-	-	-	Y	Brown slightly sandy slightly gravelly silty CLAY of high undrained shear strength. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2,Pt7:9)

SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CLIENT: LCC DATE: 29.04.21



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Key:- BD = Bulk Disturbed; SD = Small Disturbed; U100 = Undisturbed 100mm; WS = Window Sample

CL = Low Plasticity; CI = Intermediate; CH = High; CV = Very high; CE = Extremely high; NP = Non-plastic

(\* Denotes Hand Shear Vane test result)

Sample description not accredited by UKAS

### SUMMARY OF LABORATORY SOIL TEST RESULTS

BH / TP /	Sample	Depth	Depth	Moisture	Bulk	Dry	Shear	Liquid	Plastic	Plasticity	Passing	Soil	UKAS	Description / Test Method
WS	Туре	From	To	Content	Density	Density	Strength		Limit	Index	0.425mm	Classification	accredited	Samples described in accordance with BS EN ISO 14688-2 2004
Number	51	(m)	(m)			$(Mg/m^3)$	(kN/m²)	(%)	(%)	(%)	(%)		test (Y/N)	
		(/	()		(	(	( /	()	(,)		(,,,,)			
CP04	В	15.00	15.00	19	-	-	-	33	16	17	92	CL		Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2,4.4,5)
CP04	В	16.50	16.50	16	-	-	-	-	-	-	-	-		Brown very gravelly silty clayey SAND. Gravel is fine to coarse subangular to subrounded sandstone. (BS1377Pt2:3.2,9.2,9.5)

SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CLIENT: LCC DATE: 29.04.21





Key:- BD = Bulk Disturbed; SD = Small Disturbed; U100 = Undisturbed 100mm; WS = Window Sample

CL = Low Plasticity; CI = Intermediate; CH = High; CV = Very high; CE = Extremely high; NP = Non-plastic

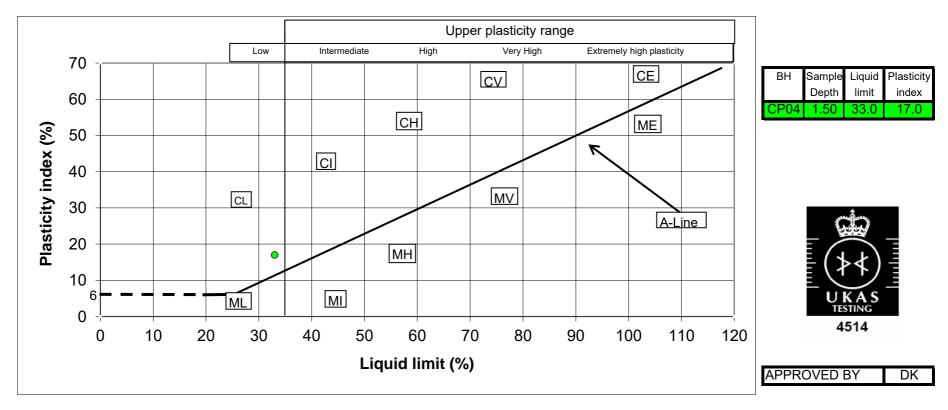
(\* Denotes Hand Shear Vane test result)

Sample description not accredited by UKAS



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.

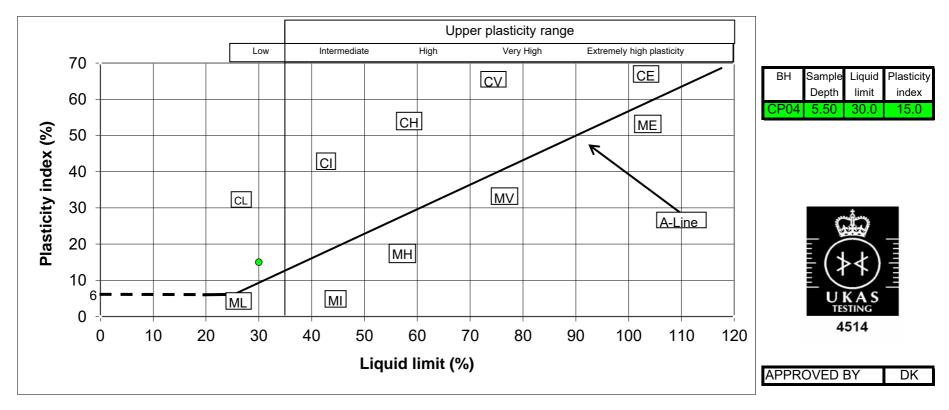


CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CCG-CMS-FO-204 Issue 2



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.

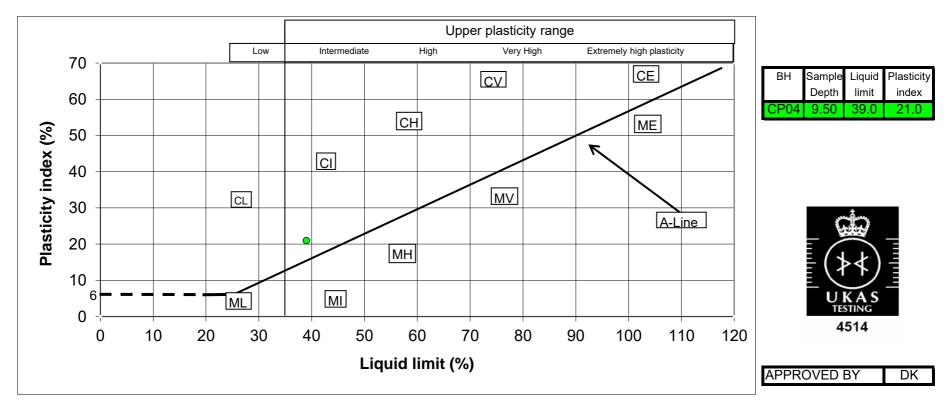


CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093)



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.

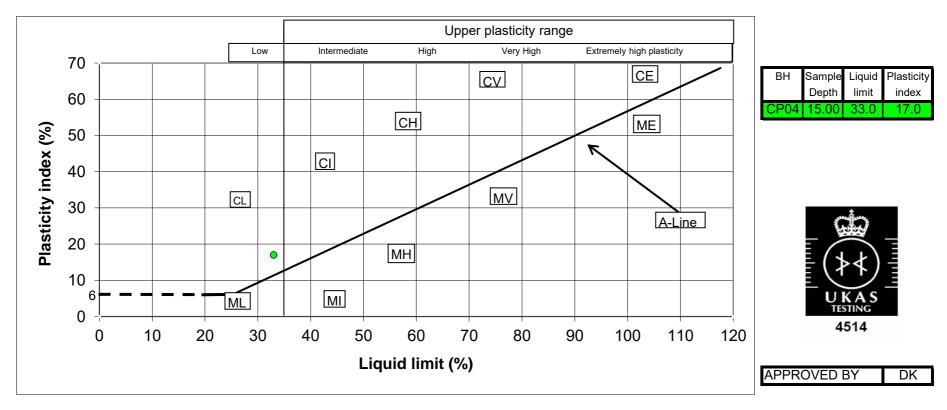


CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093)



BS 1377:Part 2:1990:cl 4.4,5

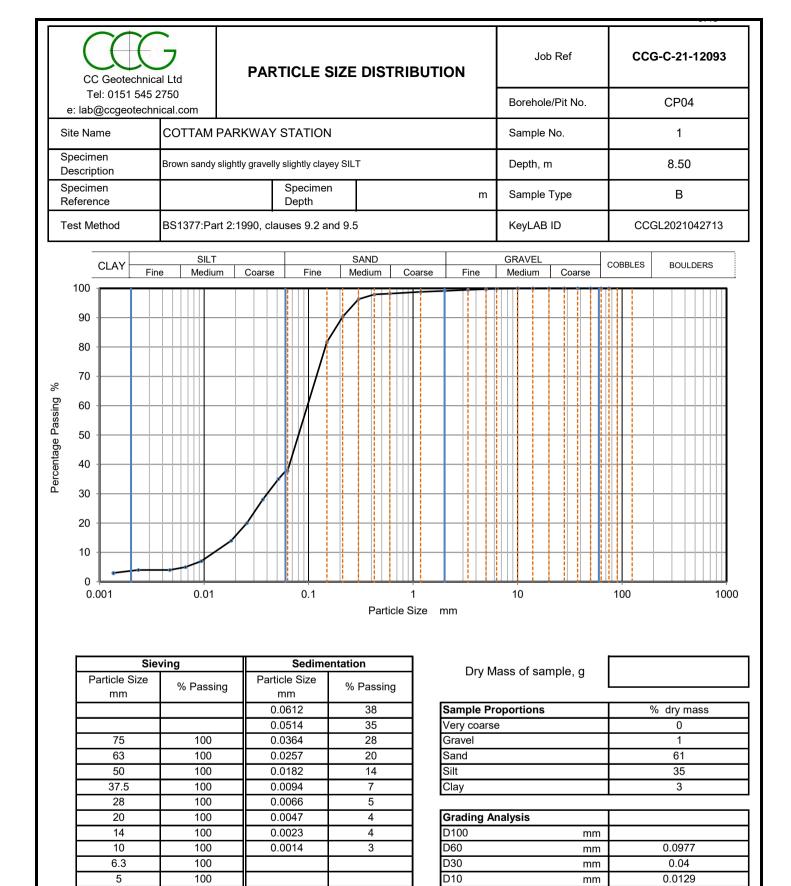
SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.



CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093)

	CC Geotechnie Tel: 0151 545	2750	PARTICLE	SIZE DISTRI	BUTION	Job Ref Borehole/Pit No.	cco	G-C-21-12093	
	e: lab@ccgeotech ite Name		KWAY STATION	N		Sample No.		1	
	pecimen	Brown very silty slig	htly clayey slightly gra	avelly SAND		Depth, m		3.00	
S	escription pecimen		Specime		Sample Type		В		
	eference est Method	BS1377 <sup>.</sup> Part 2 <sup>.</sup> 1	Depth 990, clauses 9.2 a	ind 9 5		KeyLAB ID	CCC	GL2021042712	
	CLAY F	SILT ine Medium	Coarse Fine	SAND Medium C	oarse Fine	GRAVEL Medium Coarse	COBBLES	BOULDERS	
	90								
	80								
	70								
% bi	60								
Percentage Passing									
tage I	50								
ercen	40								
Ф.	30								
	20								
	10								
	0.001	0.01	0.1		1 1	10	100	1000	
					Size mm				
		eving		entation	Dry M	lass of sample, g			
	Particle Size mm	% Passing	Particle Size mm	% Passing		1 . 0			
			0.0612	34	Sample Pr		9	6 dry mass	
			0.0514	31	Very coars	e		0	
	75	100	0.0364	25	Gravel		_	1	
	63	100	0.0257	18	Sand			65	
	50 37.5	100	0.0182	12 6	Silt			31 3	
	28	100	0.0094 0.0066	5	Clay		I	J	
	20	100	0.0000	4	Grading A	nalvsis			
	14	100	0.0047	3	D100	mn	n		
	14	100	0.0023	3	D100	mn	-	0.104	
	6.3	100			D30	mn	-	0.0479	
	5	100	1		D10	mm 0.0142			
	3.35	100	1			ty Coefficient 7.4			
	2	99	1			re Coefficient 1.6			
	1.18	99	1		1				
	0.6	99	Particle density	(assumed)	Remarks				
	0.425	99	2.65	Mg/m3		d testing in accordance with	BS1377 unless	noted below	
	0.3	97	1	-	1				
	0.212	89	]						
	0.15	79	]						
	0.063	34	1						

Operator	Checked	Approved	Sheet printed	Fig	1
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Operator	Checked	Approved	Sheet printed	Fig	1
JE	DK	DK	29/04/2021 08:54	Sheet	

Particle density (assumed)

Mg/m3

2.65

Uniformity Coefficient

Curvature Coefficient

Preparation and testing in accordance with BS1377 unless noted below

Remarks

7.6

1.3

3.35

2

1.18

0.6

0.425

0.3

0.212 0.15

0.063

100

99

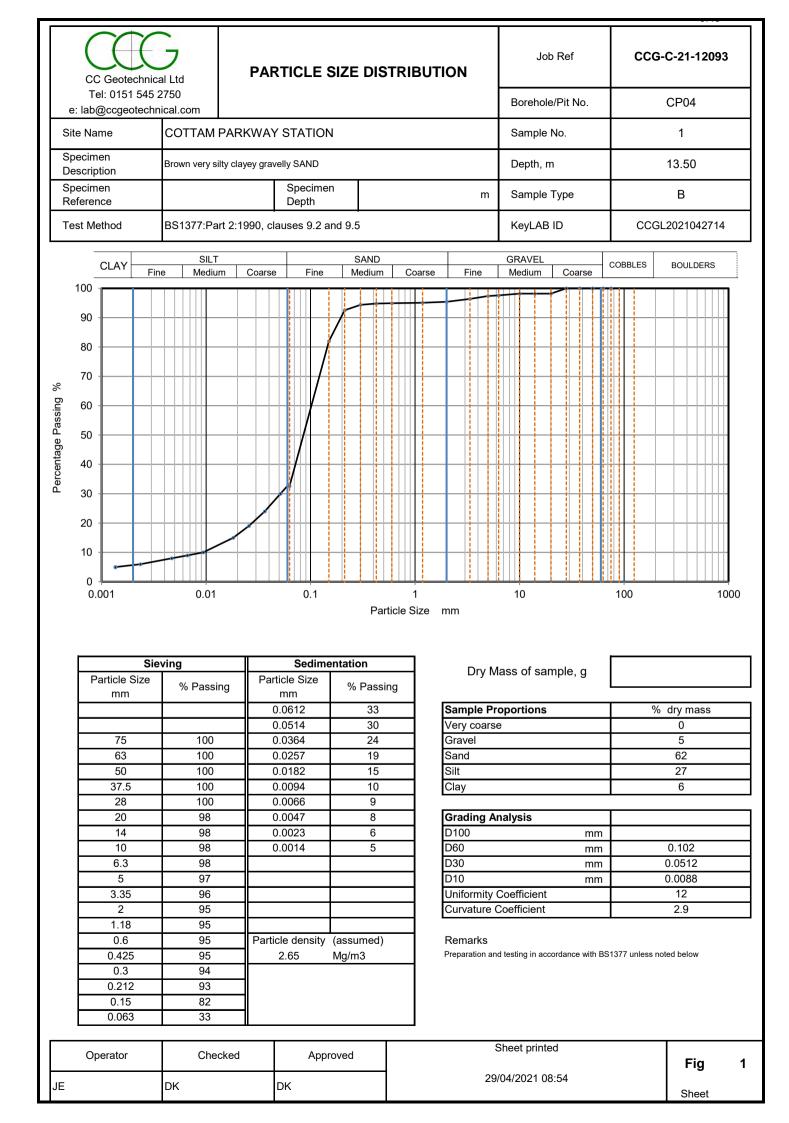
99

98

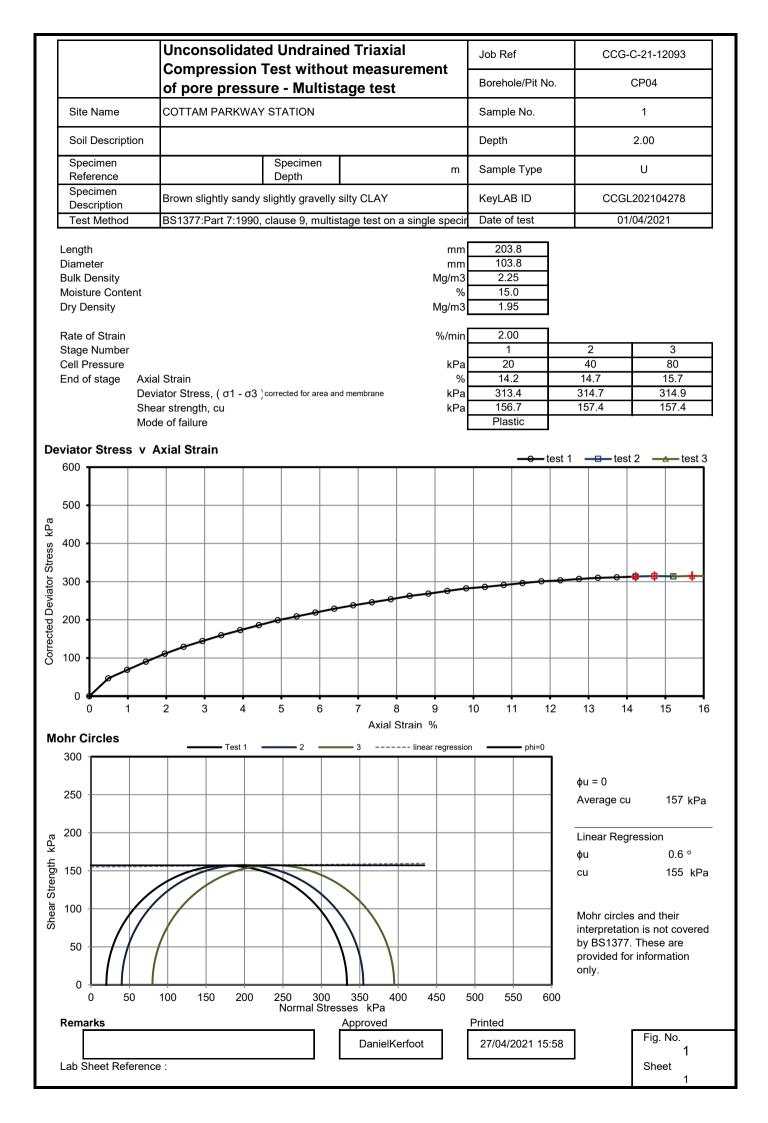
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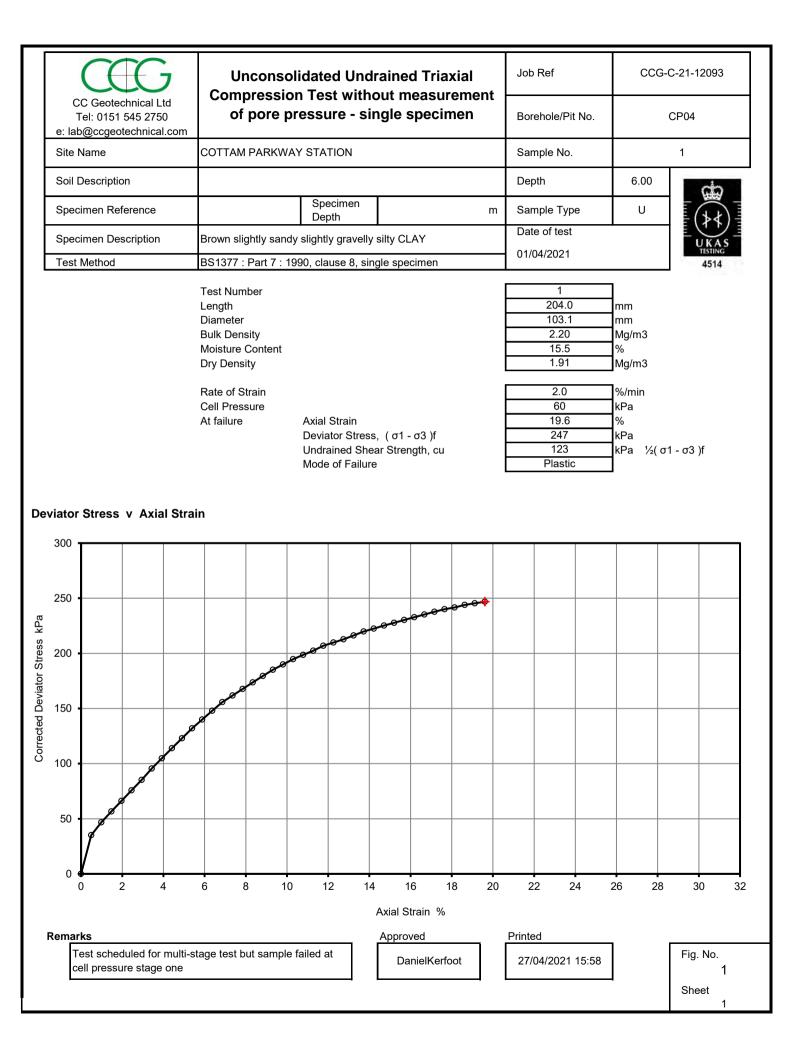
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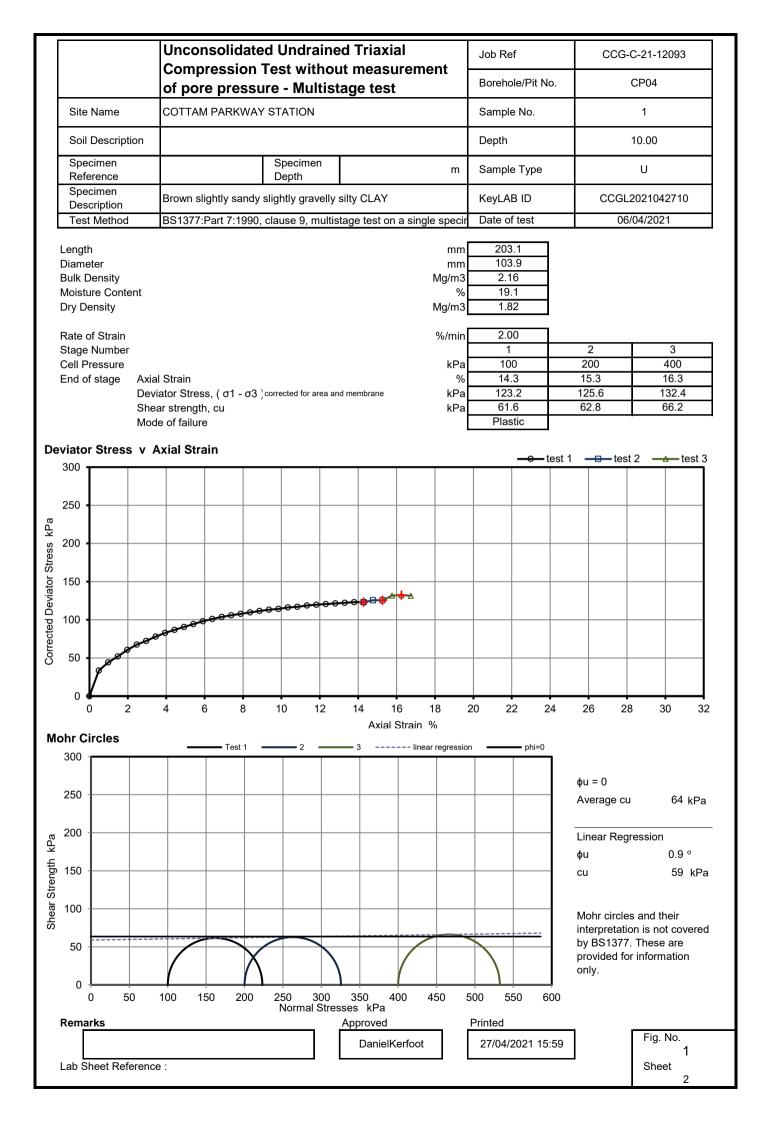
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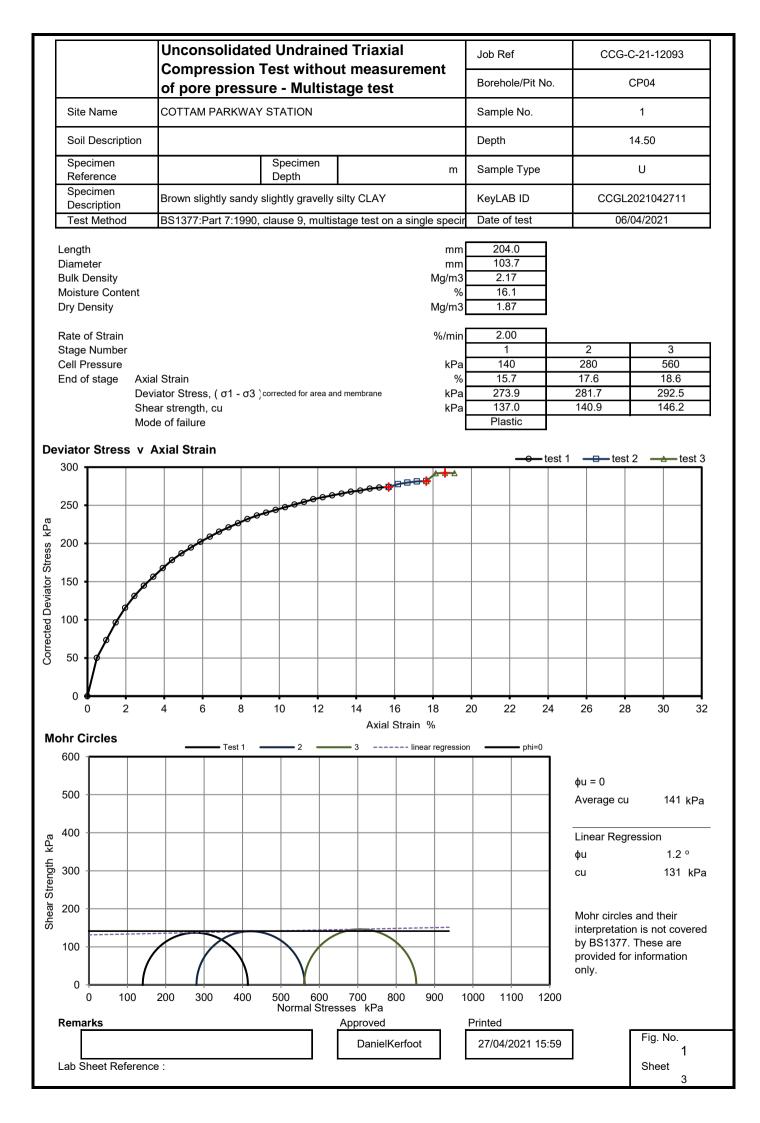


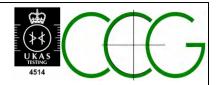
	CC Geoter			PAF	RTICLE	SIZE DIS	TRIBU	ΓΙΟΝ	Job Ref	CCG-	C-21-12093
	Tel: 0151 e: lab@ccgeo								Borehole/Pit No.		CP04
S	ite Name		COTTAM F	PARKWAY	STATION	N			Sample No.		1
	pecimen escription		Brown very gra	avelly silty cla	yey SAND				Depth, m		16.50
	Specimen Reference			Specime Depth	n		m	Sample Type		В	
т	Test Method BS1377:Part 2		t 2:1990, cl	auses 9.2 a	ind 9.5			KeyLAB ID	CCGL	2021042715	
						SAND	1		GRAVEL	COBBLES	BOULDERS
	100	Fin	e Mediun	n Coarse	e Fine	Medium	Coarse	Fine	Medium Coarse		
	90 -										
	80 -				-						
% E	70							/			
assing	60 -					/					
tage P	50					1					
Percentage Passing	40					/					
	30										
	20										
		•									
	0.001		0.01		0.1	Par	1 ticle Size	mm	10	100	1000
			ving		Sedimentation			Dry Mass of sample, g			
	Particle S mm	Size	% Passir	ng	ticle Size mm	% Passi	ng				
					).0612 ).0514	19 18		Sample Pr Very coars	•	%	dry mass 0
	75		100	(	0.0364	17		Gravel			31
	63 50		100 100		).0257 ).0182	14 13		Sand Silt			50 12
	37.5		100		0.0094	13		Clay			7
	28		100	(	0.0066	9				ļ	
	20		93		0.0047	8		Grading A			
	14 10		89 86		).0023 ).0014	76		D100 D60	mm mm	<u> </u>	0.561
	6.3		82	—    — `		, , , , , , , , , , , , , , , , , , ,		D30	mm		0.145
	5		79					D10	mm	(	0.00821
	3.35 75								<u> </u>	68	
	2 69 1.18 65						Curvature	Coemcient	ļ	4.6	
			Parti	cle density	(assumed)		Remarks				
	0.425 57			2.65	Mg/m3		Preparation an	nd testing in accordance with BS	31377 unless no	ted below	
	0.3 50 0.212 39										
	0.212 39 0.15 30										
	0.063 19										
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	Operator							29	/04/2021 08:54		Fig
JE			DK		DK						Sheet









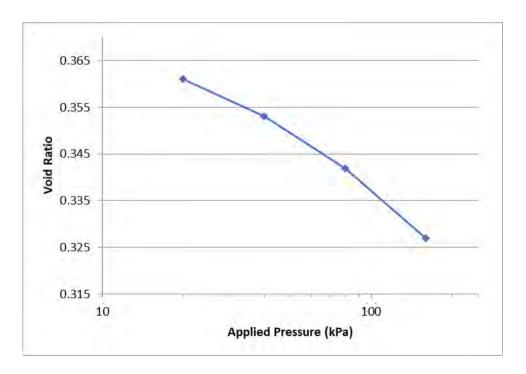


Client	LCC	Lab Ref	
Project	COTTAM PARKWAY	Job	CCG C 21
	STATION		12093
Borehole	CP04	Sample	1

	Test Details									
Standard	BS 1377: Part 5: 1990: Clause 3	Particle Density	2.65 Mg/m3							
		(assumed)								
Sample Type	Undisturbed sample - open drive	Lab Temperature 2								
Sample Depth	4.00 m									
Sample Description	Brown slightly sandy slightly gravelly silty CLAY									
Variations from Procedure	None									

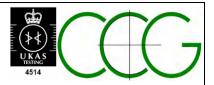
Specimen Details								
Specimen Reference	А	Description						
Depth within Sample	0.00 mm	Orientation within Sample						
Specimen Mass	187.30 g	Condition	Natural Moisture					
Specimen Height	19.08 mm	Preparation						
Comments								

Test Apparatus								
Ring Number	8	Ring Diameter	74.92 mm					
Ring Height	19.08 mm	Ring Weight	117.39 g					
Lever Ratio	9.00: 1							



 Height of Solid Particles
 13.95 mm
 Swelling Pressure

 CC Geotechnical Page 1 of 2



Client	LCC	Lab Ref	
Project	COTTAM PARKWAY	Job	CCG C 21
	STATION		12093
Borehole	CP04	Sample	1

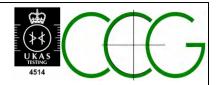
Initial Moisture	15.0 %	Final Moisture Content	15.0 %
Content*			
Initial Bulk Density	2.23 Mg/m <sup>3</sup>	Final Bulk Density	2.30 Mg/m <sup>3</sup>
Initial Dry Density	1.94 Mg/m <sup>3</sup>	Final Dry Density	2.00 Mg/m <sup>3</sup>
Initial Void Ratio	0.3682	Final Void Ratio	0.3268
Initial Degree of	107.71 %	Final Degree of Saturation	121.49 %
Saturation			

\* Calculated from initial and dry weights of whole specimen

Pressure (Loading Stages)	Coefficient of Volume Compressibility (m <sub>v</sub> )	Coefficient of Consolidation (c <sub>v</sub> )
0.00		
20.0 kPa	0.27 m <sup>2</sup> /MN	<b>19 m<sup>2</sup>/ yr</b>
40.0 kPa	0.26 m <sup>2</sup> /MN	<b>1.9 m<sup>2</sup>/ yr</b>
80.0 kPa	0.21 m <sup>2</sup> /MN	<b>2.2 m<sup>2</sup>/ yr</b>
160.0 kPa	0.14 m <sup>2</sup> /MN	<b>2.0 m<sup>2</sup>/ yr</b>

Method of Time Fitting Used

Tested by and Date:	DK 29.03.21
Checked by and Date:	DK 29.03.21
Approved by and Date:	CB 29.03.21

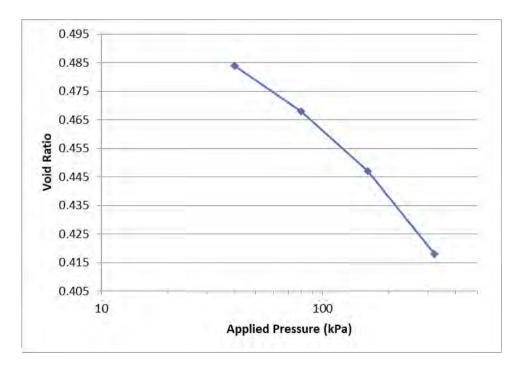


Client	LCC	Lab Ref	
Project	COTTAM PARKWAY	Job	CCG C 21
	STATION		12093
Borehole	CP04	Sample	1

	Test Details								
Standard	BS 1377: Part 5: 1990: Clause 3	Particle Density	2.65 Mg/m3						
		(assumed)							
Sample Type	Undisturbed sample - open drive	Lab Temperature	20.0 deg.C						
Sample Depth	8.00 m								
Sample Description	Brown slightly sandy slightly gravelly silty CLAY								
Variations from Procedure	None								

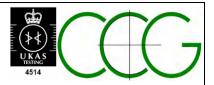
Specimen Details								
Specimen Reference A Description								
Depth within Sample	0.00 mm	Orientation within Sample						
Specimen Mass	190.15 g	Condition	Natural Moisture					
Specimen Height	20.22 mm	Preparation						
Comments								

Test Apparatus							
Ring Number	9	Ring Diameter	75.01 mm				
Ring Height	20.22 mm	Ring Weight	127.43 g				
Lever Ratio	9.00: 1						



Height of Solid Particles 13.28 mm

Swelling Pressure



Client	LCC	Lab Ref	
Project	COTTAM PARKWAY	Job	CCG C 21
	STATION		12093
Borehole	CP04	Sample	1

Initial Moisture	22.3 %	Final Moisture Content	20.1 %
Content*			
Initial Bulk Density	2.13 Mg/m <sup>3</sup>	Final Bulk Density	2.24 Mg/m <sup>3</sup>
Initial Dry Density	1.74 Mg/m <sup>3</sup>	Final Dry Density	1.87 Mg/m <sup>3</sup>
Initial Void Ratio	0.5228	Final Void Ratio	0.4175
Initial Degree of	112.98 %	Final Degree of Saturation	127.27 %
Saturation		-	

\* Calculated from initial and dry weights of whole specimen

Pressure (Loading Stages)	Coefficient of Volume Compressibility (m <sub>v</sub> )	Coefficient of Consolidation (c <sub>v</sub> )
0.00		
40.0 kPa	0.65 m <sup>2</sup> /MN	<b>1.1 m<sup>2</sup>/ yr</b>
80.0 kPa	0.26 m <sup>2</sup> /MN	<b>1.3 m<sup>2</sup>/ yr</b>
160.0 kPa	0.18 m <sup>2</sup> /MN	<b>2.0 m<sup>2</sup>/ yr</b>
320.0 kPa	0.13 m <sup>2</sup> /MN	<b>2.5 m<sup>2</sup>/ yr</b>

Method of Time Fitting Used

Tested by and Date:	DK 29.03.21
Checked by and Date:	DK 29.03.21
Approved by and Date:	CB 29.03.21

### SUMMARY OF LABORATORY SOIL TEST RESULTS

BH / TP /	Sample	Depth	Depth	Moisture	Bulk	Dry	Shear	Liquid	Plastic	Plasticity	Passing	Soil	UKAS	Description / Test Method
WS	Туре	From	То	Content	Density	Density	Strength	Limit	Limit	Index	0.425mm	Classification	accredited	Samples described in accordance with BS EN ISO 14688-2 2004
Number	• •	(m)	(m)	(%)	$(Mg/m^3)$	(Mg/m <sup>3</sup> )	(kN/m <sup>2</sup> )	(%)	(%)	(%)	(%)		test (Y/N)	
		· · /	· · /	. ,	× U /	× 0 /	``´´	· · /	· · ·	. ,	. ,			
CP05	В	1.00	1.00	20	-	-	-	40	18	22	96	CI	Y	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2,4.4,5)
CP05	U	3.00	3.45	17	2.26	1.93	121	-	-	-	-	-	Y	Brown slightly sandy slightly gravelly silty CLAY of high undrained shear strength. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2,Pt7:9)
CP05	D	4.00	4.00	18	-	-	-	31	15	16	96	CL	Y	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2,4.4,5)
CP05	U	5.00	5.00	16	2.21	1.90	94	-	-	-	-	-	Y	Brown slightly sandy slightly gravelly silty CLAY of high undrained shear strength. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2,Pt7:9)
CP05	В	6.00	6.00	16	-	-	-	32	16	16	95	CL	Y	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2,4.4,5)
CP05	U	7.00	7.45	14	2.27	2.00	51	-	-	-	-	-	Y	Brown slightly sandy slightly gravelly silty CLAY of medium undrained shear strength. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2,Pt7:9)
CP05	В	8.50	8.50	24	-	-	-	37	17	20	95	CI	Y	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2,4.4,5)
CP05	В	10.50	10.50	20	-	-	-	41	19	22	99	CI	Y	Brown slightly sandy silty CLAY. (BS1377Pt2:3.2,4.4,5)
CP05	В	12.80	12.80	25	-	-	-	-	-	-	-	-	Y	Brown very silty clayey SAND. (BS1377Pt2:3.2,9.2,9.5)
CP05	В	17.50	17.50	17	-	-	-	-	-	-	-	-	Y	Brown very gravelly silty SAND. Gravel is fine to medium subangular to subrounded sandstone. (BS1377Pt2:3.2,9.2)

### SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CLIENT: LCC

DATE: 29.04.21





Key:- BD = Bulk Disturbed; SD = Small Disturbed; U100 = Undisturbed 100mm; WS = Window Sample

CL = Low Plasticity; CI = Intermediate; CH = High; CV = Very high; CE = Extremely high; NP = Non-plastic

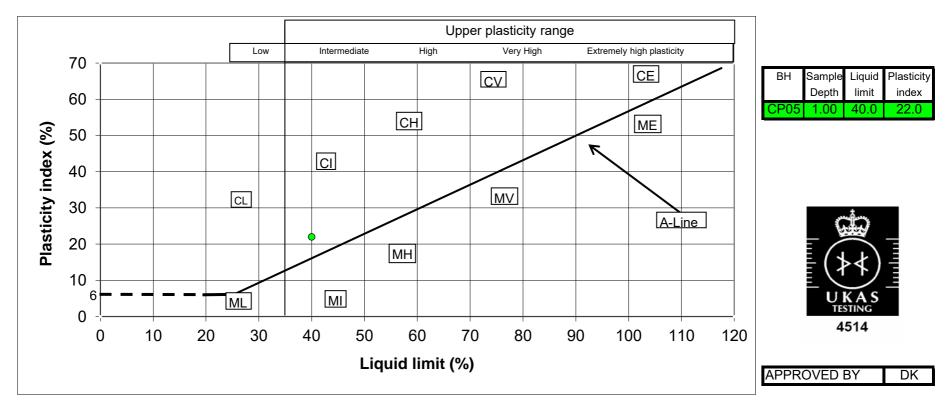
(\* Denotes Hand Shear Vane test result)

Sample description not accredited by UKAS



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.

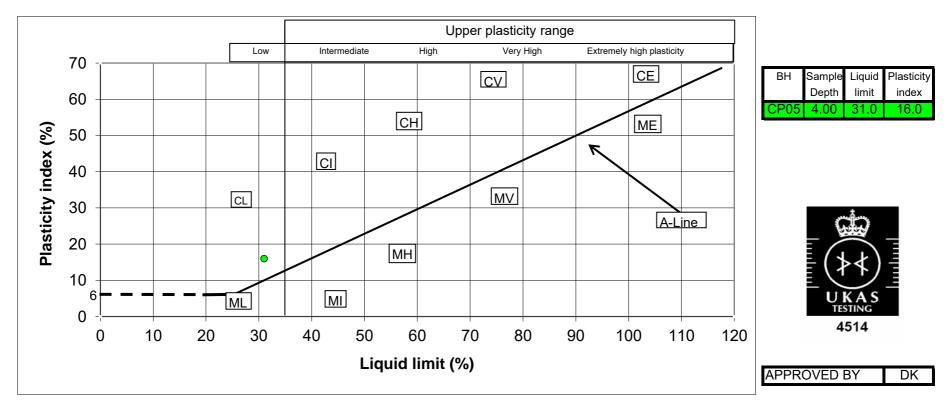


CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CCG-CMS-FO-204 Issue 2



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.

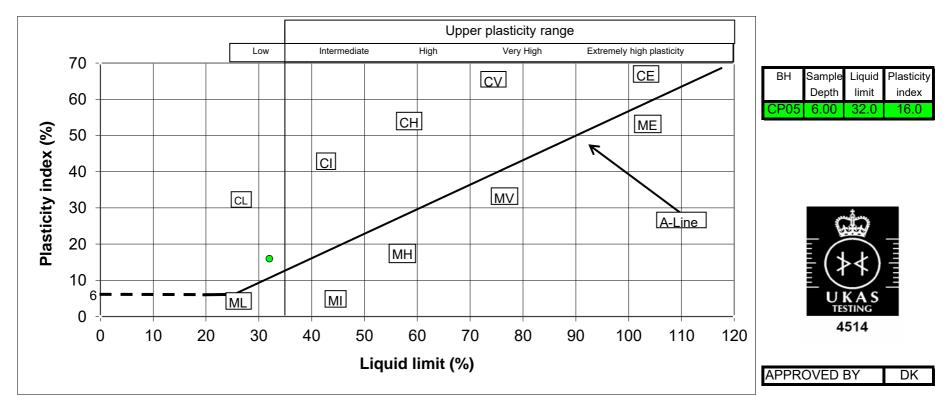


CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093)



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.

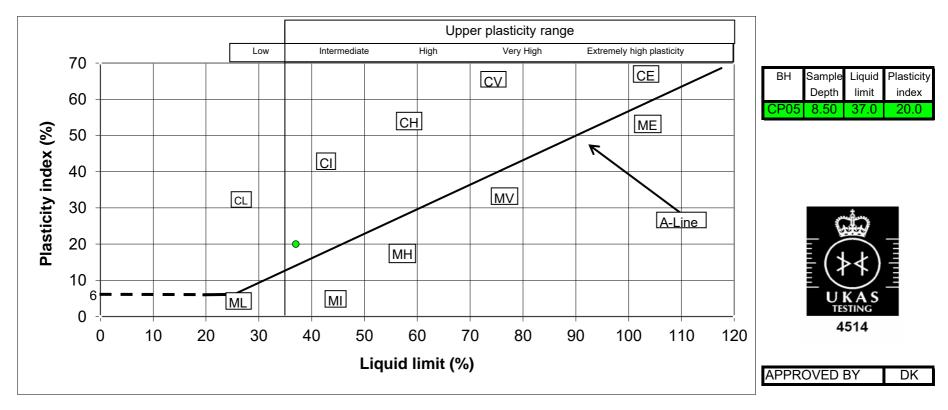


CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093)



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.

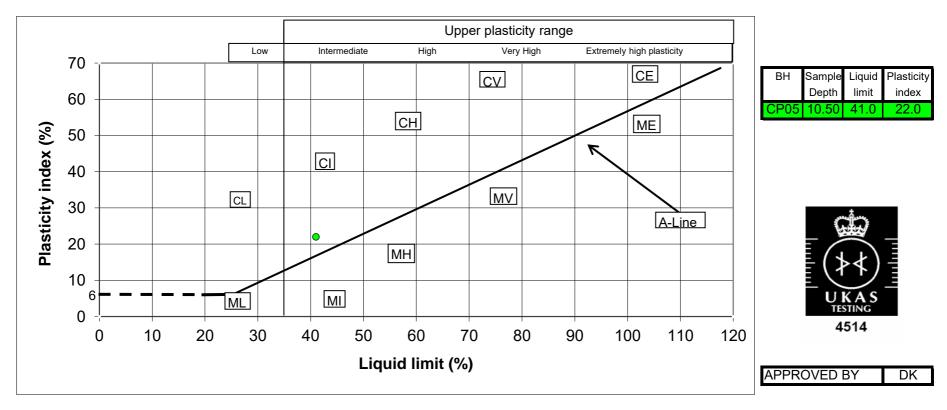


CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093)

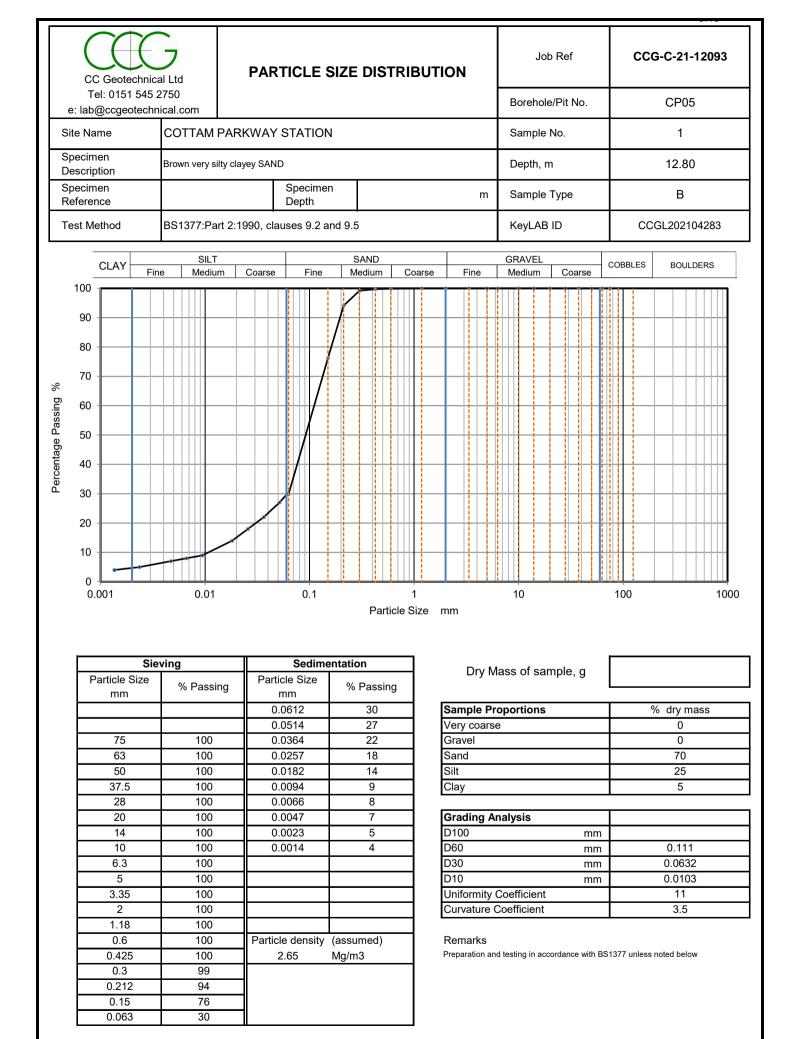


BS 1377:Part 2:1990:cl 4.4,5

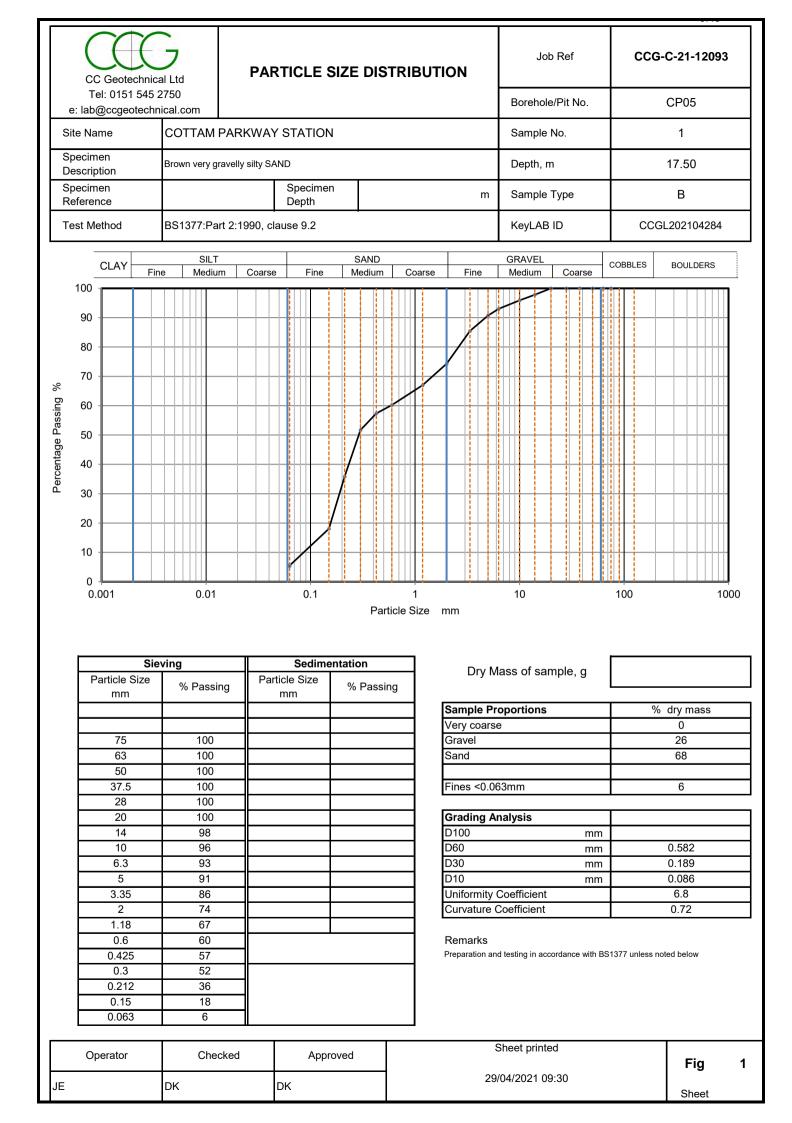
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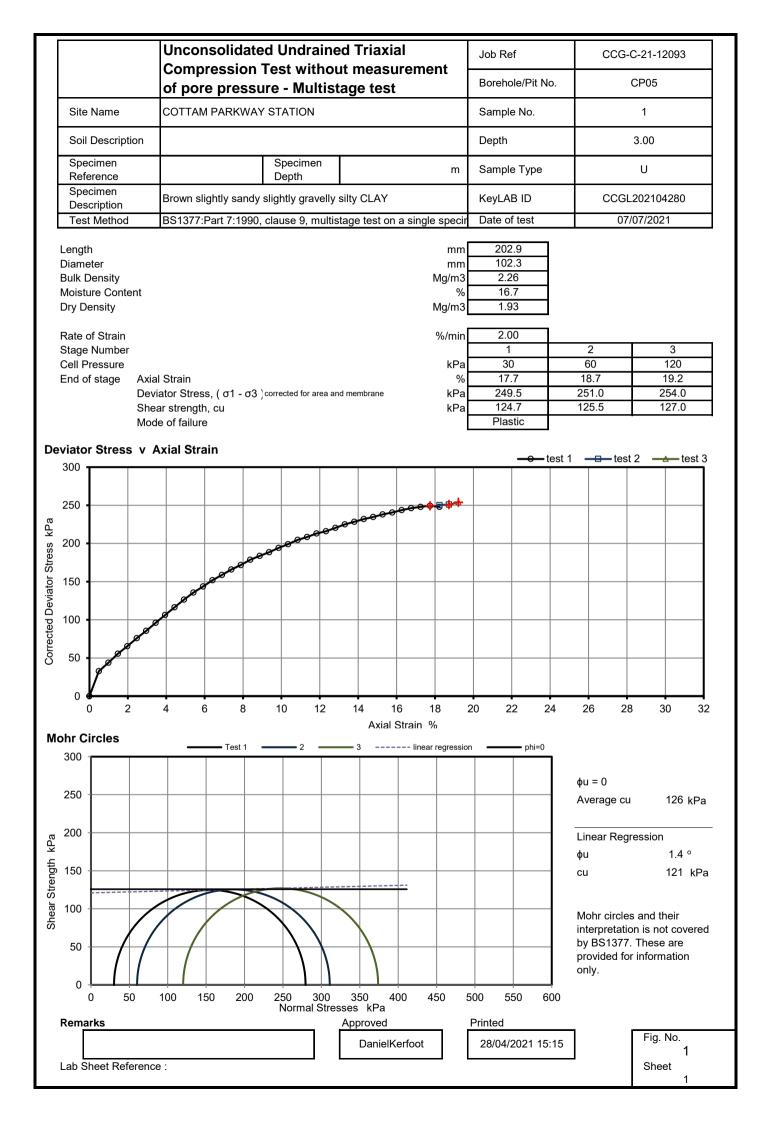


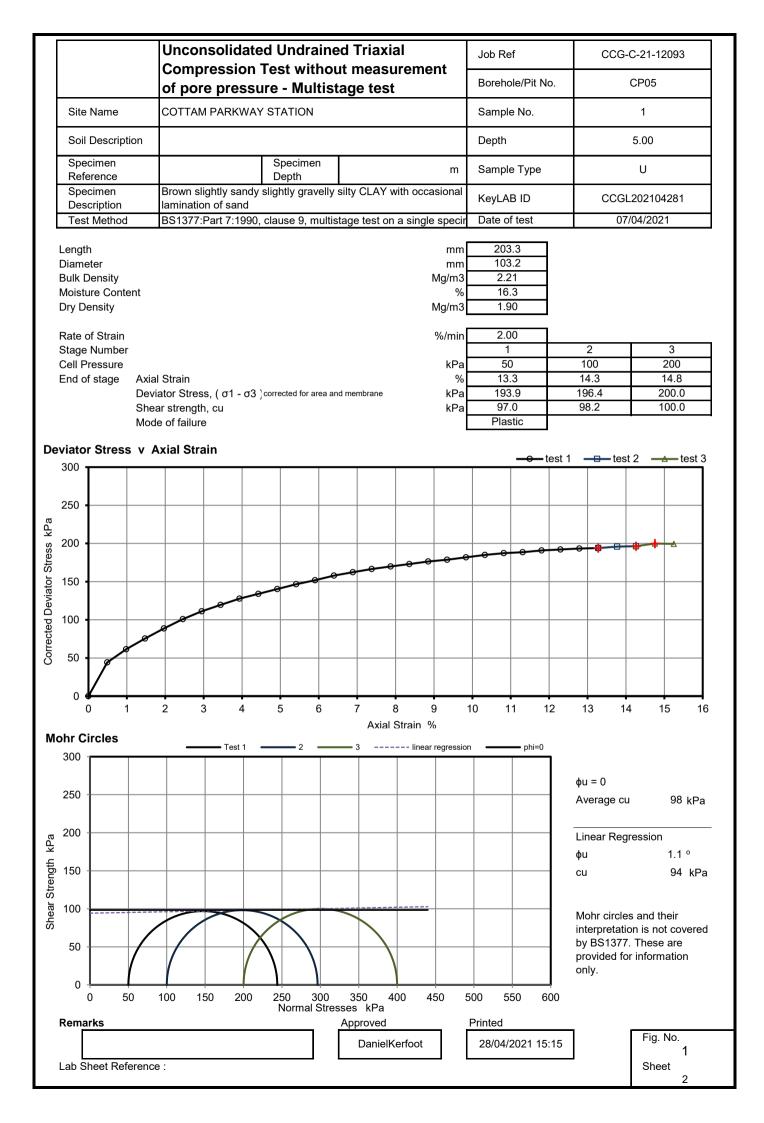
CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093)

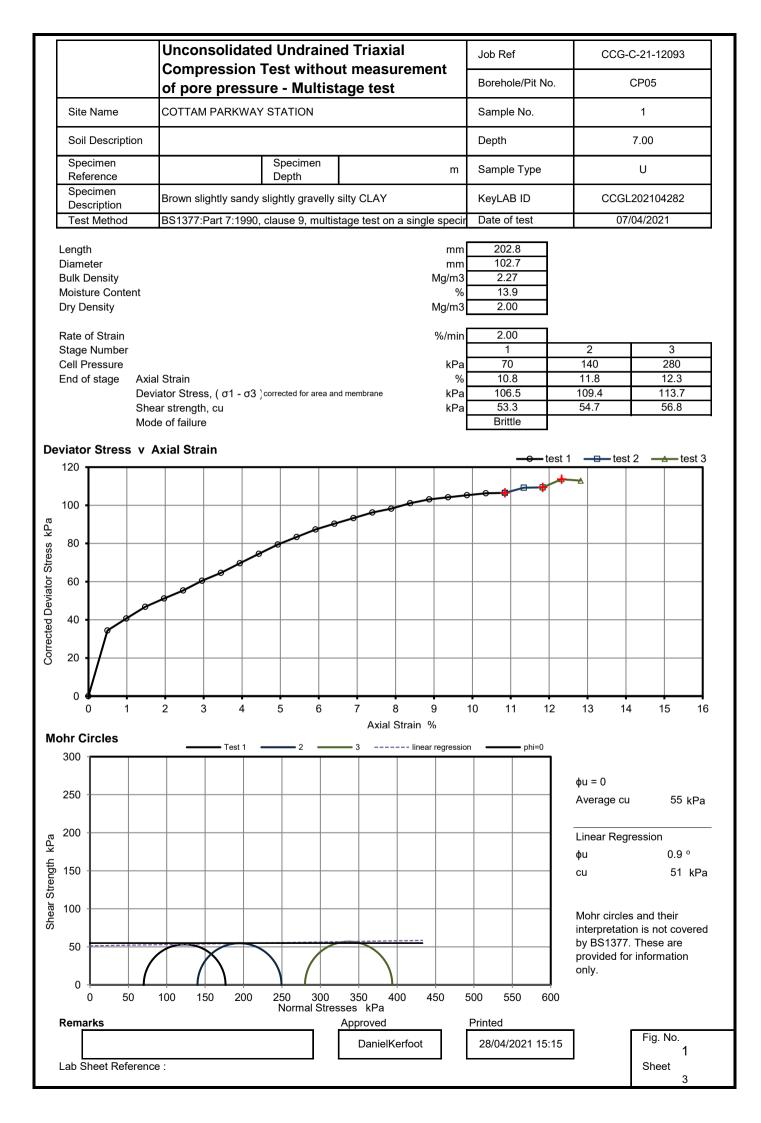


Operator	Checked Approved		Sheet printed	Fig	1
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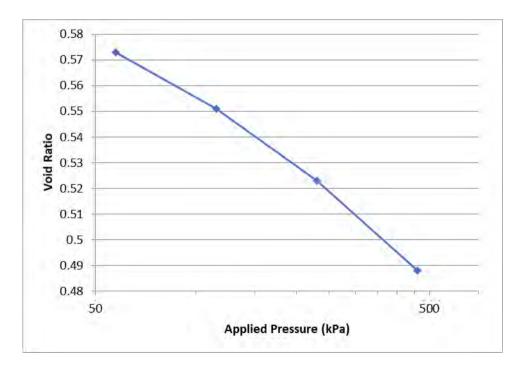


Client	LCC	Lab Ref	
Project	COTTAM PARKWAY	Job	CCG C 21
	STATION		12093
Borehole	CP05	Sample	1

Test Details					
Standard	BS 1377: Part 5: 1990: Clause 3	Particle Density	2.65 Mg/m3		
		(assumed)			
Sample Type	Undisturbed sample - open drive	Lab Temperature	20.0 deg.C		
Sample Depth	11.50 m				
Sample Description	Brown slightly sandy slightly gravelly silty CLAY				
Variations from Procedure	None				

Specimen Details				
Specimen Reference	A	Description		
Depth within Sample	0.00 mm	Orientation within Sample		
Specimen Mass	182.76 g	Condition	Natural Moisture	
Specimen Height	20.20 mm	Preparation		
Comments				

Test Apparatus						
Ring Number	10	Ring Diameter	75.08 mm			
Ring Height	20.20 mm	Ring Weight	126.76 g			
Lever Ratio						



Height of Solid Particles 12.63 mm

Swelling Pressure

CC Geotechnical Page 1 of 2



Client	LCC	Lab Ref	
Project	COTTAM PARKWAY	Job	CCG C 21
	STATION		12093
Borehole	CP05	Sample	1

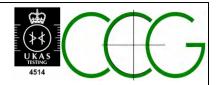
Initial Moisture	23.3 %	Final Moisture Content	21.6 %
Content*			
Initial Bulk Density	2.04 Mg/m <sup>3</sup>	Final Bulk Density	2.17 Mg/m <sup>3</sup>
Initial Dry Density	1.66 Mg/m <sup>3</sup>	Final Dry Density	1.78 Mg/m <sup>3</sup>
Initial Void Ratio	0.5995	Final Void Ratio	0.4879
Initial Degree of	103.20 %	Final Degree of Saturation	117.26 %
Saturation		_	

\* Calculated from initial and dry weights of whole specimen

Pressure (Loading Stages)	Coefficient of Volume Compressibility (m <sub>v</sub> )	Coefficient of Consolidation (c <sub>v</sub> )
0.00		
57.5 kPa	0.29 m <sup>2</sup> /MN	<b>2.7 m<sup>2</sup>/ yr</b>
115.0 kPa	0.25 m <sup>2</sup> /MN	<b>1.4 m<sup>2</sup>/ yr</b>
230.0 kPa	0.15 m <sup>2</sup> /MN	<b>1.4 m<sup>2</sup>/ yr</b>
460.0 kPa	0.10 m <sup>2</sup> /MN	<b>1.5 m<sup>2</sup>/ yr</b>

Method of Time Fitting Used

Tested by and Date:	DK 29.03.21
Checked by and Date:	DK 29.03.21
Approved by and Date:	CB 29.03.21

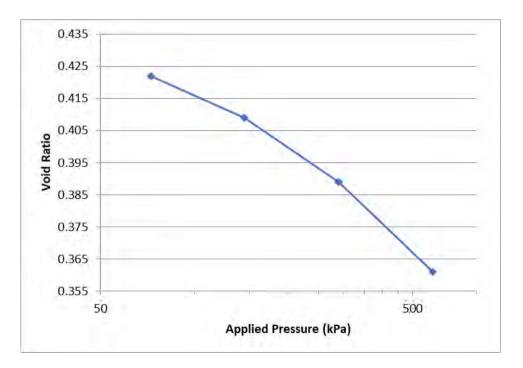


Client	LCC	Lab Ref	
Project	COTTAM PARKWAY	Job	CCG C 21
	STATION		12093
Borehole	CP05	Sample	1

Test Details					
Standard	BS 1377: Part 5: 1990: Clause 3	Particle Density (assumed)	2.65 Mg/m3		
Sample Type	Undisturbed sample - open drive	Lab Temperature	20.0 deg.C		
Sample Depth	14.50 m				
Sample Description	Brown slightly sandy slightly gravelly silty CLAY				
Variations from Procedure	None				

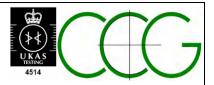
Specimen Details				
Specimen Reference	A	Description		
Depth within Sample	0.00 mm	Orientation within Sample		
Specimen Mass	192.46 g	Condition	Natural Moisture	
Specimen Height	20.01 mm	Preparation		
Comments				

Test Apparatus						
Ring Number         1         Ring Diameter         74.95 mm						
Ring Height	20.01 mm	Ring Weight	129.34 g			
Lever Ratio						



Height of Solid Particles 13.87 mm

Swelling Pressure



Client	LCC	Lab Ref	
Project	COTTAM PARKWAY	Job	CCG C 21
	STATION		12093
Borehole	CP05	Sample	1

Initial Moisture	18.7 %	Final Moisture Content	17.7 %
Content*			
Initial Bulk Density	2.18 Mg/m <sup>3</sup>	Final Bulk Density	2.29 Mg/m <sup>3</sup>
Initial Dry Density	1.84 Mg/m <sup>3</sup>	Final Dry Density	1.95 Mg/m <sup>3</sup>
Initial Void Ratio	0.4428	Final Void Ratio	0.3607
Initial Degree of	111.87 %	Final Degree of Saturation	129.93 %
Saturation		-	

\* Calculated from initial and dry weights of whole specimen

Pressure (Loading Stages)	Coefficient of Volume Compressibility (m <sub>v</sub> )	Coefficient of Consolidation (c <sub>v</sub> )
0.00		
72.5 kPa	0.20 m <sup>2</sup> /MN	<b>8.5 m<sup>2</sup>/ yr</b>
145.0 kPa	0.12 m <sup>2</sup> /MN	<b>1.8 m<sup>2</sup>/ yr</b>
290.0 kPa	0.10 m <sup>2</sup> /MN	<b>1.5 m<sup>2</sup>/ yr</b>
580.0 kPa	0.070 m <sup>2</sup> /MN	<b>1.4 m<sup>2</sup>/ yr</b>

Method of Time Fitting Used

Tested by and Date:	DK 07.04.21
Checked by and Date:	DK 07.04.21
Approved by and Date:	CB 07.04.21

BH / TP /	Sample	Depth	Depth	Moisture	Bulk	Dry	Shear	Liquid	Plastic	Plasticity	Passing	Soil	UKAS	Description / Test Method
WS	Туре	From	То	Content	Density	Density	Strength	Limit	Limit	Index	0.425mm	Classification	accredited	Samples described in accordance with BS EN ISO 14688-2 2004
Number		(m)	(m)	(%)	(Mg/m <sup>3</sup> )	(Mg/m <sup>3</sup> )	(kN/m <sup>2</sup> )	(%)	(%)	(%)	(%)		test (Y/N)	
CP06	В	1.00	1.00	18	-	-	-	37	17	20	97	CI	Y	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2,4.4,5)
CP06	U	2.00	2.45	15	-	-	>110*	-	-	-	-	-	Y	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2)
CP06	В	3.50	3.50	24	-	-	-	-	-	-	-	-	Y	Brown silty slightly clayey SAND. (BS1377Pt2:3.2,9.2,9.5)
CP06	U	4.00	4.45	15	2.22	1.92	109	-	-	-	-	-	Y	Brown slightly sandy slightly gravelly silty CLAY of high undrained shear strength. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2,Pt7:9)
CP06	D	5.00	5.00	18	-	-	-	32	16	16	95	CL	Y	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2,4.4,5)
CP06	В	6.50	6.50	19	-	-	-	33	16	17	97	CL	Y	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2,4.4,5)
CP06	U	8.00	8.45	24	2.14	1.73	33	-	-	-	-	-	Y	Brown slightly sandy silty CLAY of low undrained shear strength with frequent laminations of silt. (BS1377Pt2:3.2,Pt7:8)
CP06	U	10.00	10.45	19	2.19	1.85	104	-	-	-	-	-	Y	Brown slightly sandy slightly gravelly silty CLAY of high undrained shear strength with frequent pockets of sand. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2,Pt7:9)
CP06	В	10.50	10.50	25	-	-	-	44	20	24	99	CI	Y	Brown slightly sandy silty CLAY. (BS1377Pt2:3.2,4.4,5)
CP06	В	13.50	13.50	24	-	-	-	-	-	-	-	-	Y	Brown sandy clayey SILT. (BS1377Pt2:3.2,9.2,9.5)

### SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CLIENT: LCC

DATE: 29.04.21



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Key:- BD = Bulk Disturbed; SD = Small Disturbed; U100 = Undisturbed 100mm; WS = Window Sample

CL = Low Plasticity; CI = Intermediate; CH = High; CV = Very high; CE = Extremely high; NP = Non-plastic

(\* Denotes Hand Shear Vane test result)

BH / TP /	Sample	Depth	Depth	Moisture	Bulk	Dry	Shear	Liquid	Plastic	Plasticity	Passing	Soil	UKAS	Description / Test Method
WS	Туре	From	То	Content	Density	Density	Strength	Limit	Limit	Index	0.425mm	Classification	accredited	Samples described in accordance with BS EN ISO 14688-2 2004
Number		(m)	(m)	(%)		(Mg/m <sup>3</sup> )		(%)	(%)	(%)	(%)		test (Y/N)	
							· · · · ·							
CP06	В	15.50	15.50	21	-	-	-	40	18	22	99	CI	Y	Brown slightly sandy silty CLAY. (BS1377Pt2:3.2,4.4,5)
CP06	В	16.50	16.50	21	-	-	-	-	-	-	-	-	Y	Brown very sandy silty GRAVEL. Gravel is fine to coarse subangular
														to subrounded sandstone. (BS1377Pt2:3.2,9.2)

SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CLIENT: LCC DATE: 28.04.21





Key:- BD = Bulk Disturbed; SD = Small Disturbed; U100 = Undisturbed 100mm; WS = Window Sample

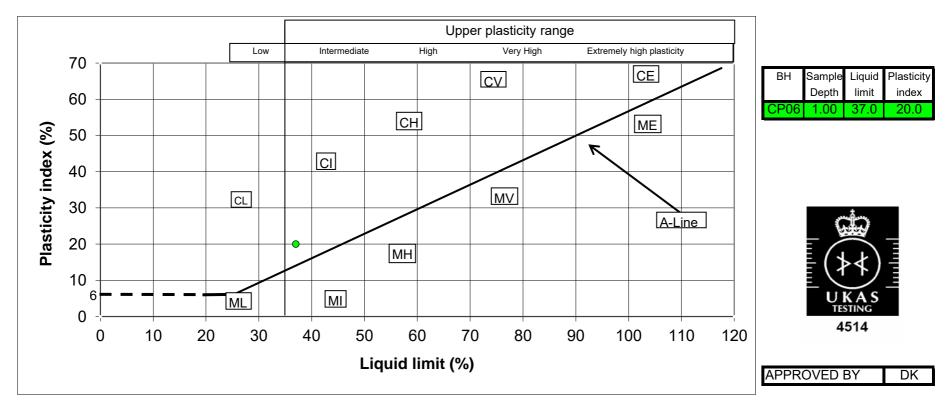
CL = Low Plasticity; CI = Intermediate; CH = High; CV = Very high; CE = Extremely high; NP = Non-plastic

(\* Denotes Hand Shear Vane test result)



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.

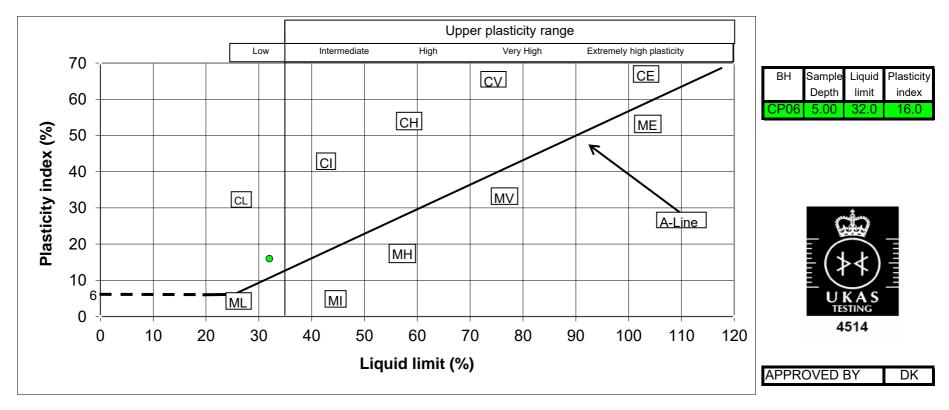


CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093)



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.

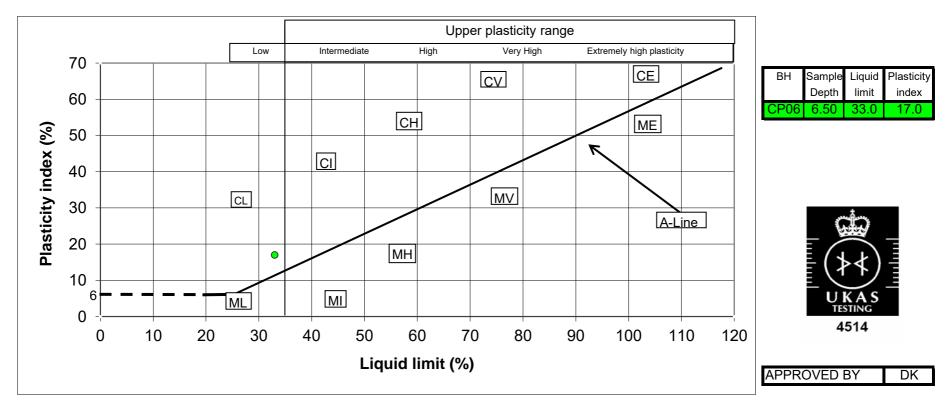


CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093)



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.

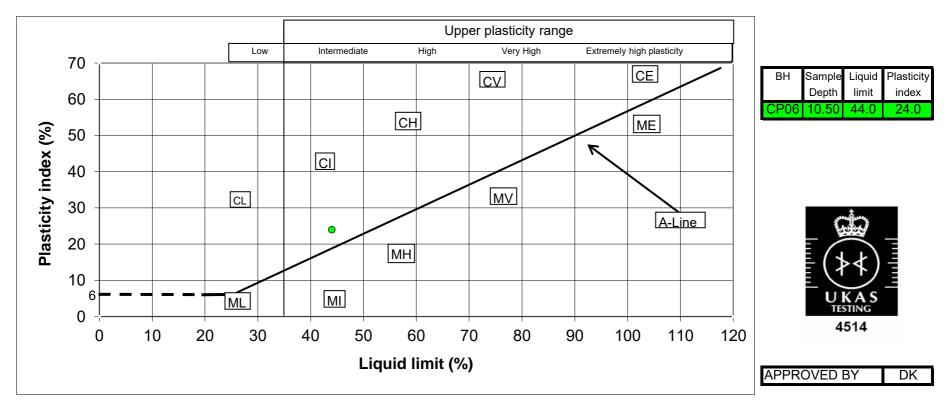


CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093)



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.

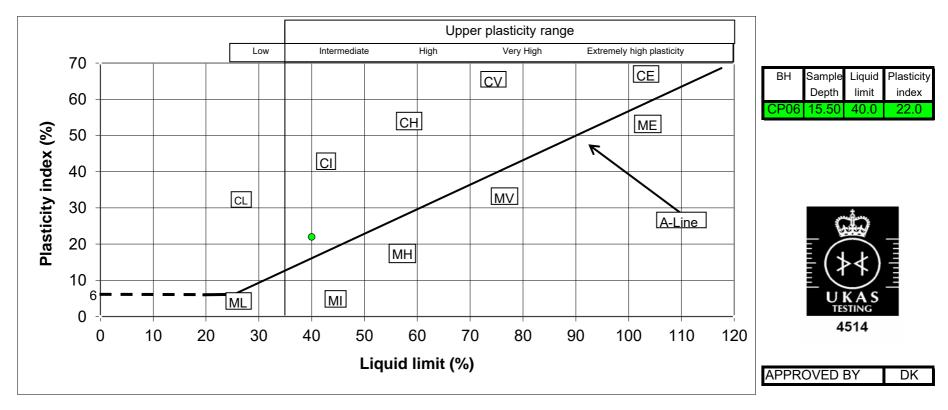


CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CCG-CMS-FO-204 Issue 2

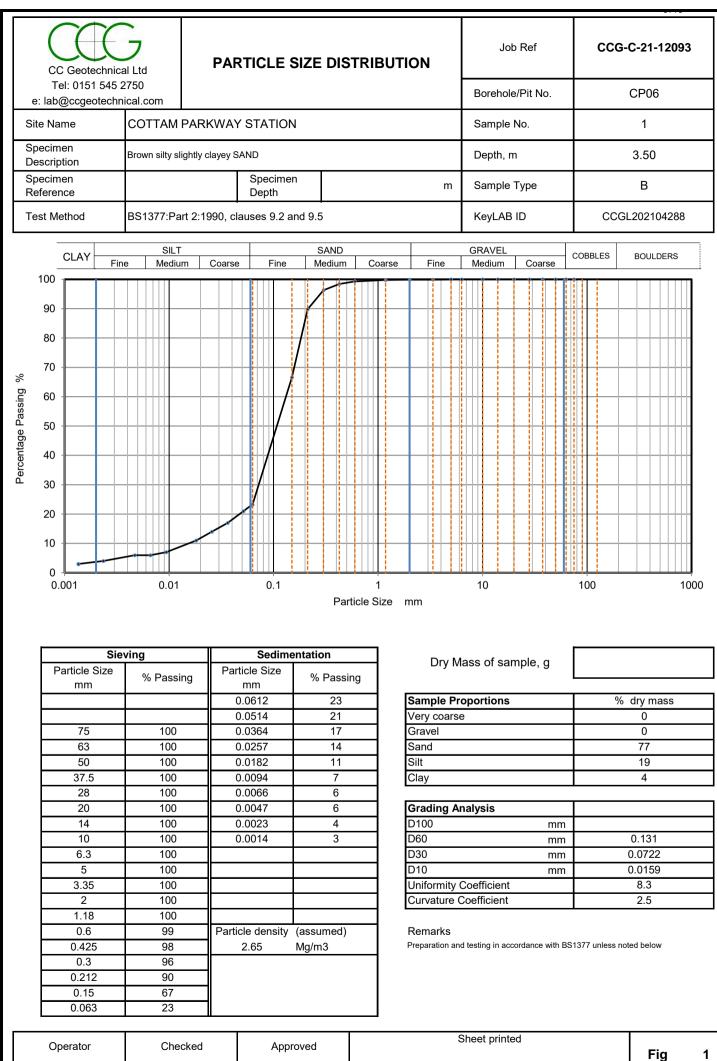


BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.



CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CCG-CMS-FO-204 Issue 2



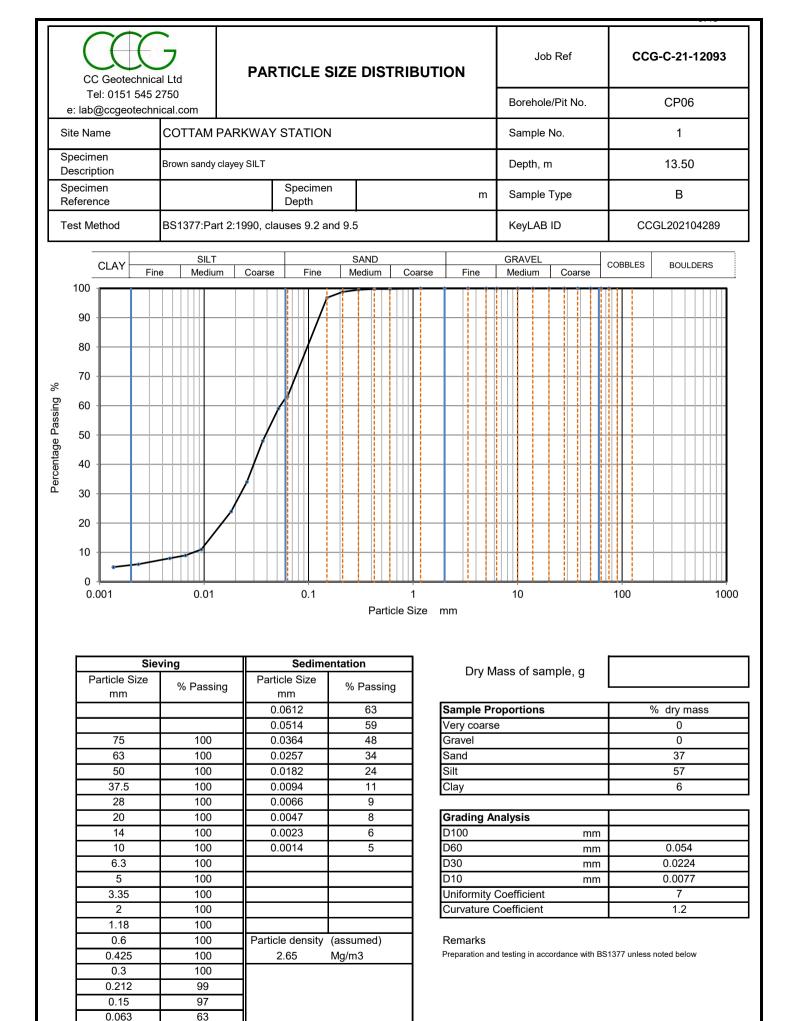
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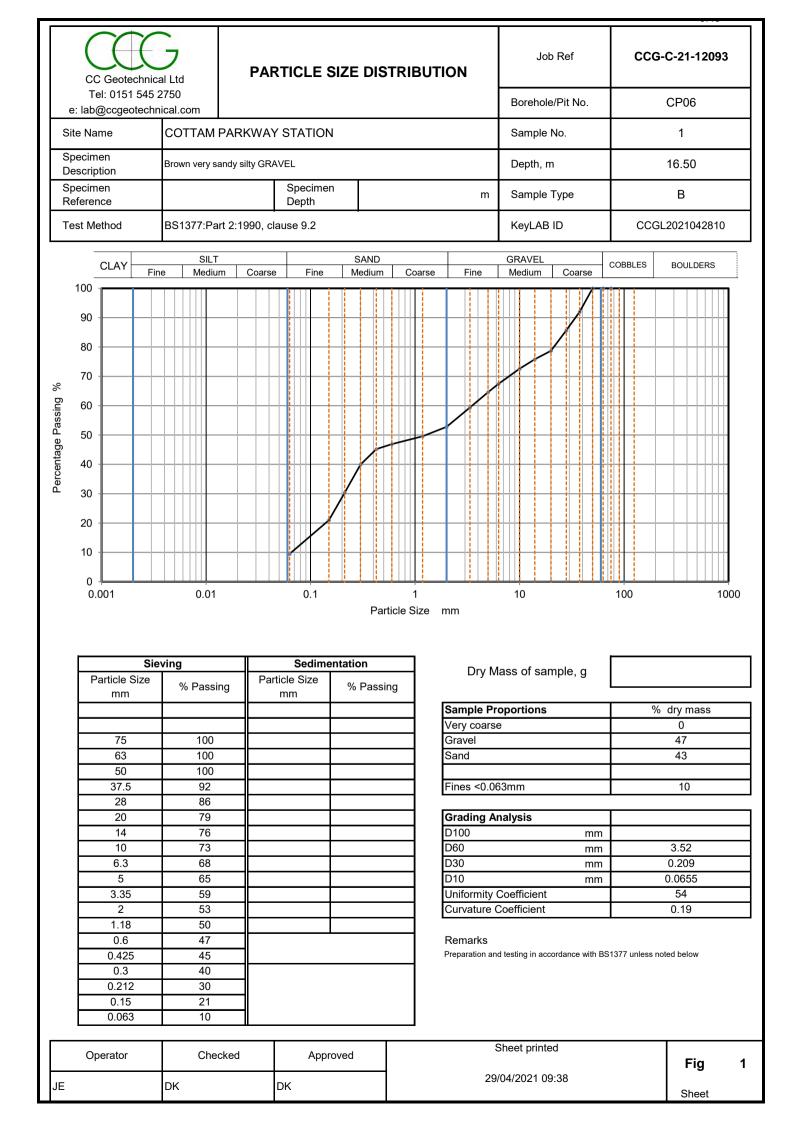
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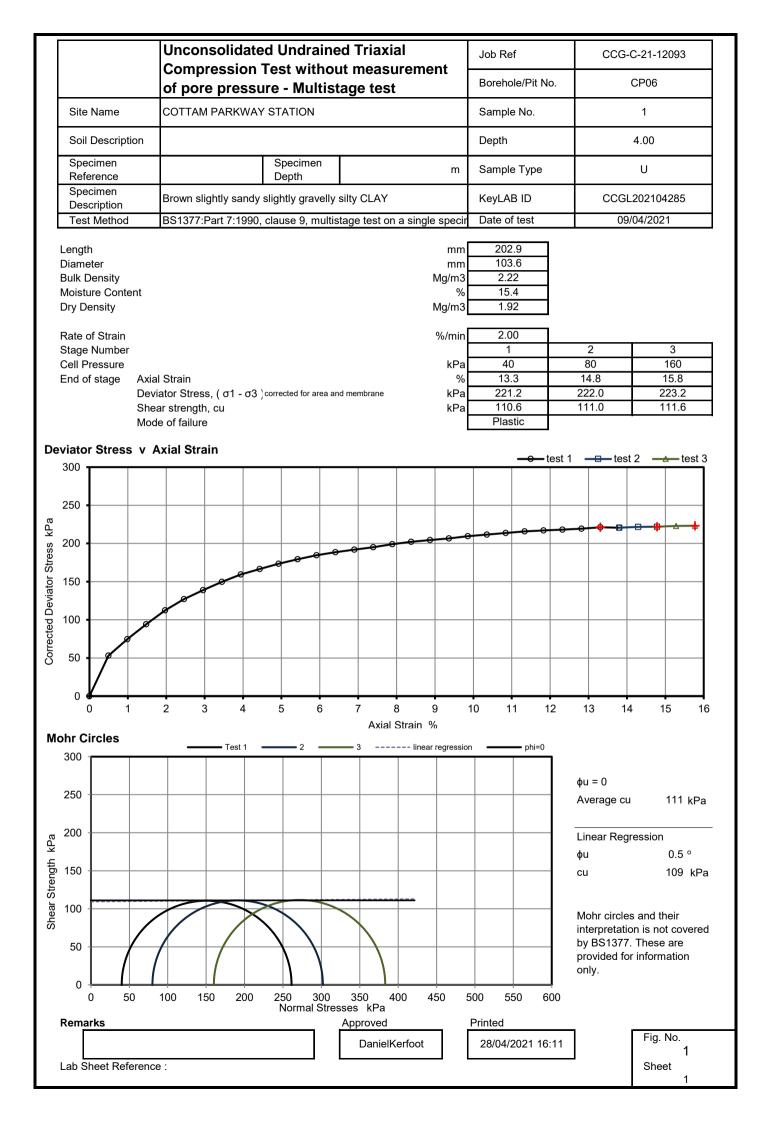
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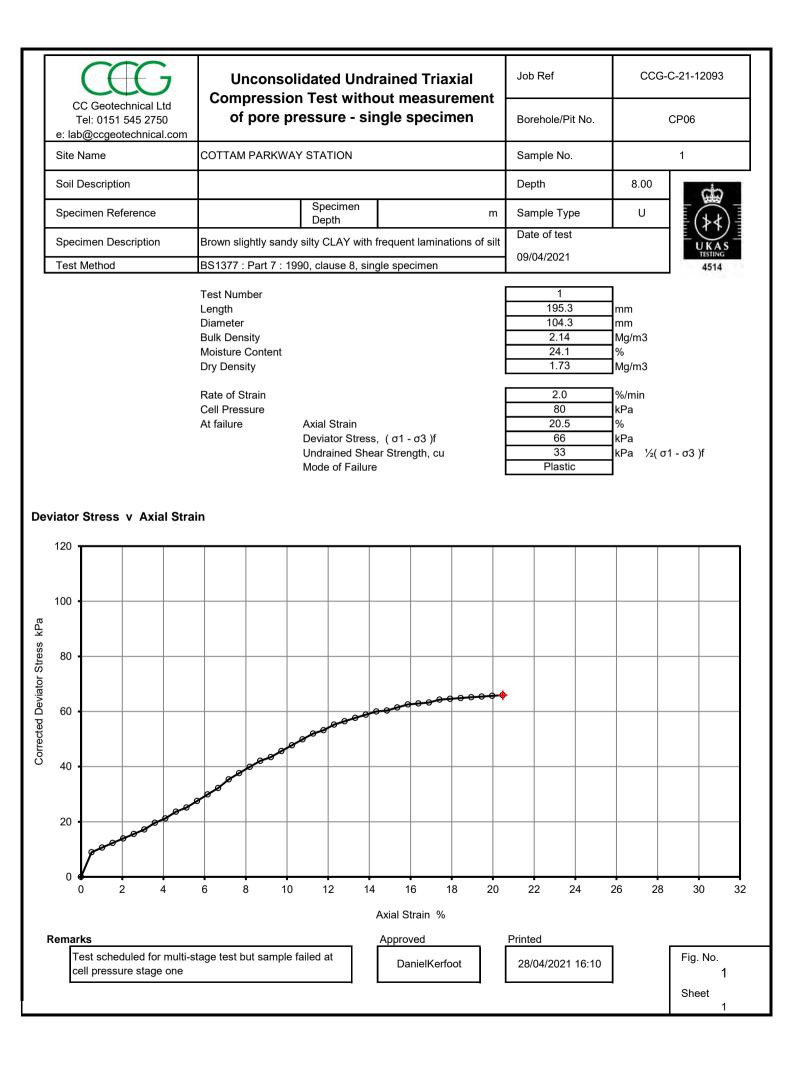
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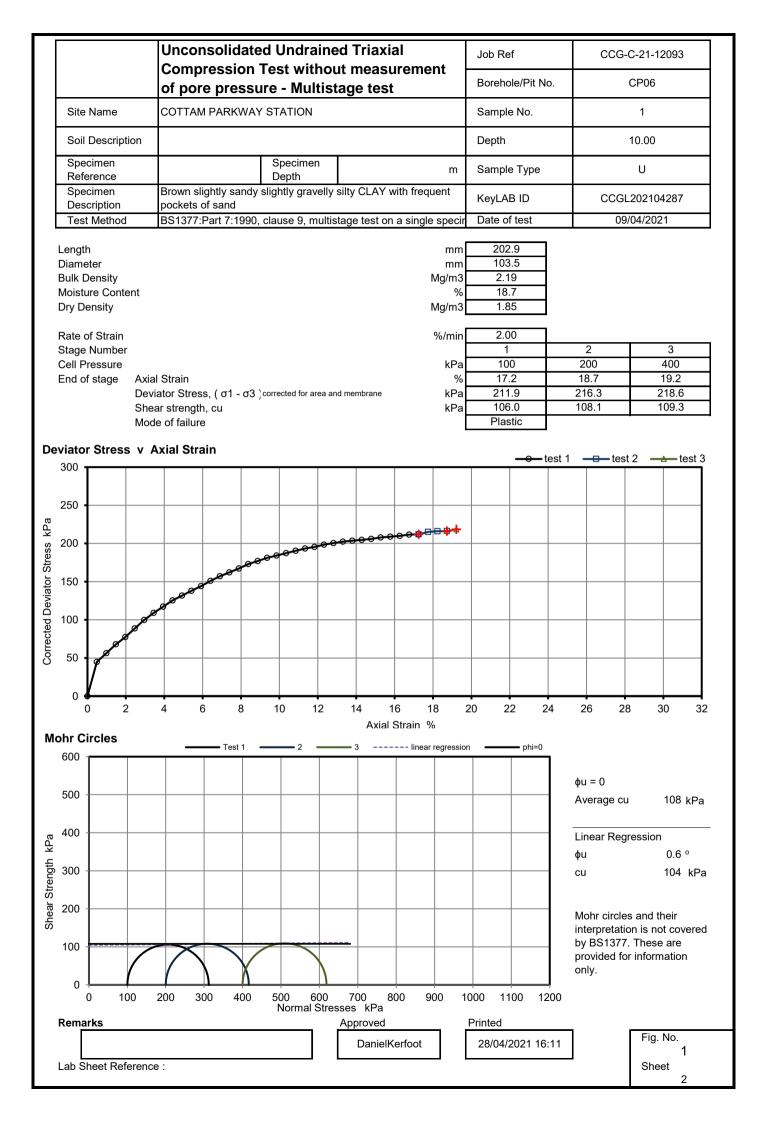


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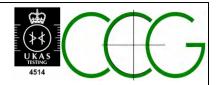








# One Dimensional Consolidation Properties (Oedometer)

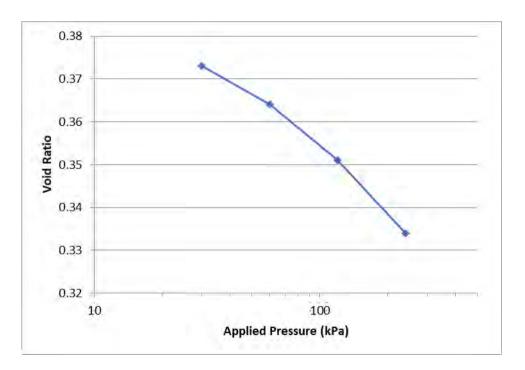


Client	LCC	Lab Ref	
Project	COTTAM PARKWAY	Job	CCG C 21
	STATION		12093
Borehole	CP06	Sample	1

	Test Details											
Standard	BS 1377: Part 5: 1990: Clause 3	Particle Density (assumed)	2.65 Mg/m3									
Sample Type	Undisturbed sample - open drive	Lab Temperature	20.0 deg.C									
Sample Depth	6.00 m											
Sample Description	Brown slightly sandy slightly gravelly silty CLAY											
Variations from Procedure	None											

	Specimen Details										
Specimen Reference	A	Description									
Depth within Sample	0.00 mm	Orientation within Sample									
Specimen Mass	197.58 g	Condition	Natural Moisture								
Specimen Height	20.22 mm	Preparation									
Comments											

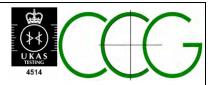
Test Apparatus										
Ring Number	9	Ring Diameter	75.01 mm							
Ring Height	20.22 mm	Ring Weight	127.43 g							
Lever Ratio	9.00: 1									



Height of Solid Particles 14.58 mm S

Swelling Pressure

# One Dimensional Consolidation Properties (Oedometer)



Client	LCC	Lab Ref	
Project	COTTAM PARKWAY	Job	CCG C 21
	STATION		12093
Borehole	CP06	Sample	1

Initial Moisture	15.7 %	Final Moisture Content	15.1 %
Content*			
Initial Bulk Density	2.21 Mg/m <sup>3</sup>	Final Bulk Density	2.29 Mg/m <sup>3</sup>
Initial Dry Density	1.91 Mg/m <sup>3</sup>	Final Dry Density	1.99 Mg/m <sup>3</sup>
Initial Void Ratio	0.3864	Final Void Ratio	0.3336
Initial Degree of	107.57 %	Final Degree of Saturation	119.68 %
Saturation		-	

\* Calculated from initial and dry weights of whole specimen

Pressure (Loading Stages)	Coefficient of Volume Compressibility (m <sub>v</sub> )	Coefficient of Consolidation (c <sub>v</sub> )
0.00		
30.0 kPa	0.33 m <sup>2</sup> /MN	<b>2.7 m<sup>2</sup>/ yr</b>
60.0 kPa	0.22 m <sup>2</sup> /MN	<b>1.9 m<sup>2</sup>/ yr</b>
120.0 kPa	0.16 m <sup>2</sup> /MN	<b>2.2 m<sup>2</sup>/ yr</b>
240.0 kPa	0.11 m <sup>2</sup> /MN	<b>2.2 m<sup>2</sup>/ yr</b>

Method of Time Fitting Used

Log time

Tested by and Date:	DK 07.04.21
Checked by and Date:	DK 07.04.21
Approved by and Date:	CB 07.04.21

BH / TP /	Sample	Depth	Depth	Moisture	Bulk	Dry	Shear	Liquid	Plastic	Plasticity	Passing	Soil	UKAS	Description / Test Method
WS	Туре	From	То	Content	Density	Density	Strength	Limit	Limit	Index	0.425mm	Classification	accredited	Samples described in accordance with BS EN ISO 14688-2 2004
Number	• •	(m)	(m)	(%)		(Mg/m <sup>3</sup> )		(%)	(%)	(%)	(%)		test (Y/N)	
					×υ ,	×υ,	``´´							
TP01	В	1.20	1.20	16	-	-	-	35	16	19	96	CL / CI	Y	Brown/grey mottled slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse subrounded sandstone and mudstone. (BS1377Pt2:3.2,4.4,5)
														coarse subrounded sandstone and mudstone. (BS13//Pt2:3.2,4.4,5)

### SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CLIENT: LANCASHIRE COUNTY COUNCIL

DATE: 28.04.21



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Key:- BD = Bulk Disturbed; SD = Small Disturbed; U100 = Undisturbed 100mm; WS = Window Sample

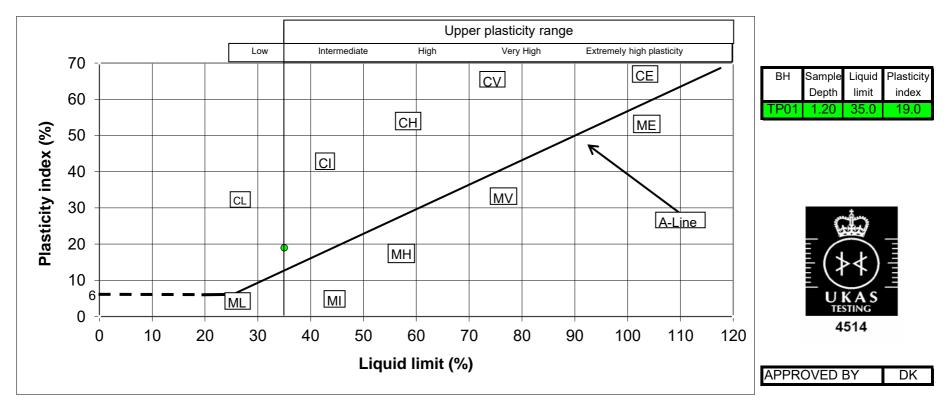
CL = Low Plasticity; CI = Intermediate; CH = High; CV = Very high; CE = Extremely high; NP = Non-plastic

(\* Denotes Hand Shear Vane test result)



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.



CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CCG-CMS-FO-204 Issue 2

BH / TP /	Sample	Depth	Depth	Moisture	Bulk	Dry	Shear	Liquid	Plastic	Plasticity	Passing	Soil	UKAS	Description / Test Method
WS		From	То	Content		Density	Strength		Limit	Index	0.425mm	Classification	accredited	Samples described in accordance with BS EN ISO 14688-2 2004
Number	• •	(m)	(m)	(%)		(Mg/m <sup>3</sup> )	(kN/m²)	(%)	(%)	(%)	(%)		test (Y/N)	
TP02	В	0.50	0.50	20	-	-	-	40	19	21	93	CI	Y	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse subrounded sandstone and mudstone. (BS1377Pt2:3.2,4.4,5)

### SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CLIENT: LANCASHIRE COUNTY COUNCIL

DATE: 28.04.21



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Key:- BD = Bulk Disturbed; SD = Small Disturbed; U100 = Undisturbed 100mm; WS = Window Sample

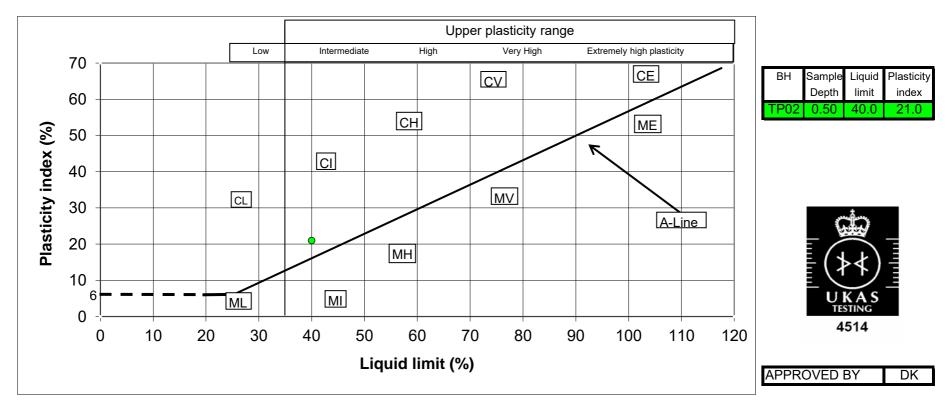
CL = Low Plasticity; CI = Intermediate; CH = High; CV = Very high; CE = Extremely high; NP = Non-plastic

(\* Denotes Hand Shear Vane test result)



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.



CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093)

BH / TP /	Sample	Depth	Depth	Moisture	Bulk	Dry	Shear	Liquid	Plastic	Plasticity	Passing	Soil	UKAS	Description / Test Method
WS	Туре	From	То	Content	Density	Density	Strength	Limit	Limit	Index	0.425mm	Classification	accredited	Samples described in accordance with BS EN ISO 14688-2 2004
Number		(m)	(m)	(%)	$(Mg/m^3)$	$(Mg/m^3)$	(kN/m²)	(%)	(%)	(%)	(%)		test (Y/N)	
TP03	В	0.50	0.50	19	-	-	-	38	18	20	90	CI		Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse subrounded sandstone and mudstone. (BS1377Pt2:3.2,4.4,5)
TP03	В	1.00	1.00	17	_		_	36	17	19	90	CI	Y	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse
1105	D	1.00	1.00	17	-	-	-	50	17	19	90	CI		subrounded sandstone and mudstone. (BS1377Pt2:3.2,4.4,5)

### SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CLIENT: LANCASHIRE COUNTY COUNCIL

DATE: 28.04.21





Key:- BD = Bulk Disturbed; SD = Small Disturbed; U100 = Undisturbed 100mm; WS = Window Sample

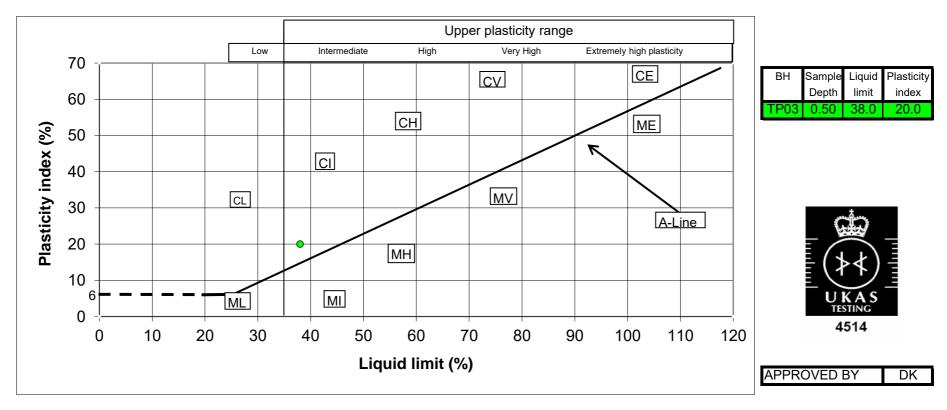
CL = Low Plasticity; CI = Intermediate; CH = High; CV = Very high; CE = Extremely high; NP = Non-plastic

(\* Denotes Hand Shear Vane test result)



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.

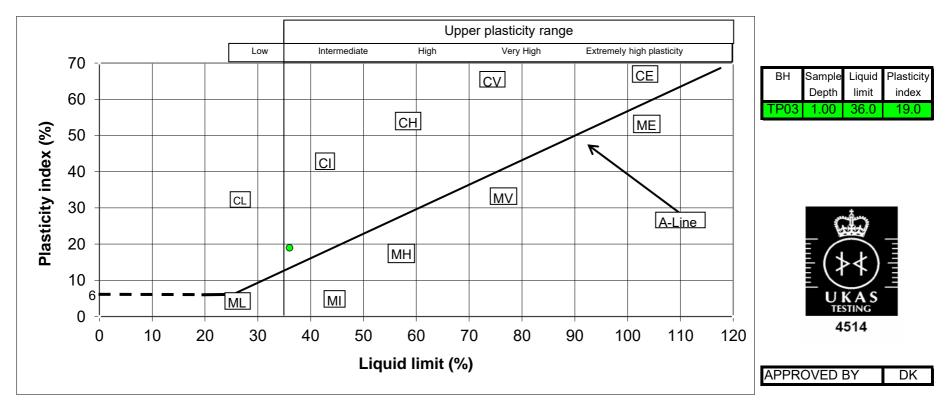


CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093)



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.



CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093)

BH / TP /	Sample	Depth	Depth	Moisture	Bulk	Dry	Shear	Liquid	Plastic	Plasticity	Passing	Soil	UKAS	Description / Test Method
WS		From	То	Content		Density	Strength		Limit	Index	0.425mm	Classification	accredited	Samples described in accordance with BS EN ISO 14688-2 2004
Number	•1	(m)	(m)	(%)	(Mg/m <sup>3</sup> )	$(Mg/m^3)$	(kN/m <sup>2</sup> )	(%)	(%)	(%)	(%)		test (Y/N)	
		、 <i>,</i>	~ /	· · ·	× 0 /	× 0 /	` '	· · /	~ /	. ,	~ /			
TP04	В	1.00	1.00	14	-	-	-	32	17	15	95	CL	Y	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse subrounded sandstone and mudstone. (BS1377Pt2:3.2,4.4,5)

### SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CLIENT: LANCASHIRE COUNTY COUNCIL

DATE: 28.04.21



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Key:- BD = Bulk Disturbed; SD = Small Disturbed; U100 = Undisturbed 100mm; WS = Window Sample

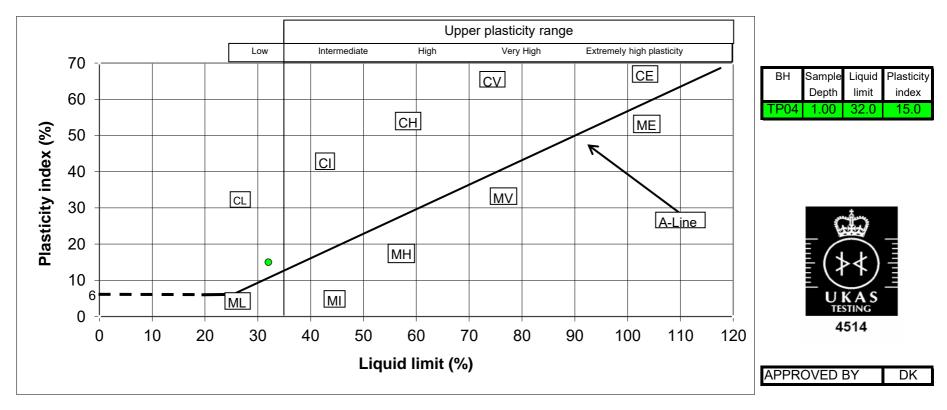
CL = Low Plasticity; CI = Intermediate; CH = High; CV = Very high; CE = Extremely high; NP = Non-plastic

(\* Denotes Hand Shear Vane test result)



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.



CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093)

BH / TP /	Sample	Depth	Depth	Moisture	Bulk	Dry	Shear	Liquid	Plastic	Plasticity	Passing	Soil	UKAS	Description / Test Method
WS	Туре	From	To	Content		-		Limit	Limit	Index	0.425mm	Classification	accredited	Samples described in accordance with BS EN ISO 14688-2 2004
Number	51	(m)	(m)			(Mg/m <sup>3</sup> )		(%)	(%)	(%)	(%)		test (Y/N)	
					× U /	× 0 /	` ´							
TP05	В	0.90	0.90	14	-	-	-	35	18	17	88	CL / CI	Y	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse subrounded sandstone and mudstone. (BS1377Pt2:3.2,4.4,5)

### SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CLIENT: LANCASHIRE COUNTY COUNCIL

DATE: 28.04.21



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Key:- BD = Bulk Disturbed; SD = Small Disturbed; U100 = Undisturbed 100mm; WS = Window Sample

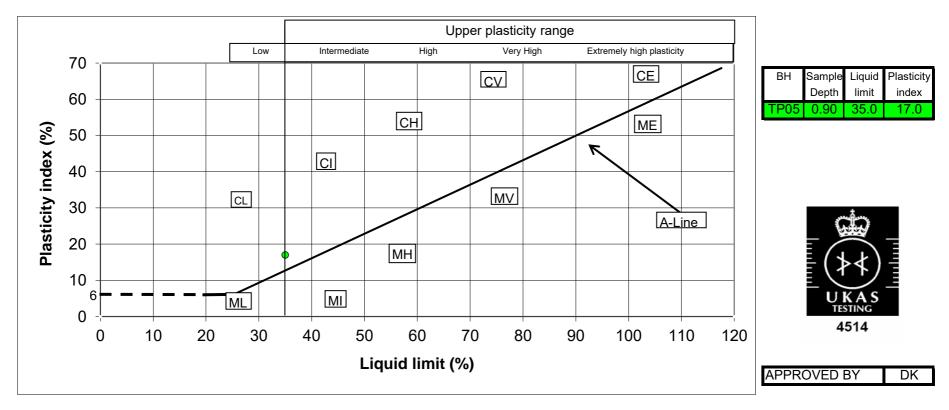
CL = Low Plasticity; CI = Intermediate; CH = High; CV = Very high; CE = Extremely high; NP = Non-plastic

(\* Denotes Hand Shear Vane test result)



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.



CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093)

				Moisture		Dry				Plasticity	Passing	Soil	UKAS	Description / Test Method
WS	Туре	From	То	Content	Density		Strength		Limit			Classification	accredited	Samples described in accordance with BS EN ISO 14688-2 2004
Number		(m)	(m)	(%)	(Mg/m <sup>3</sup> )	$(Mg/m^3)$	(kN/m²)	(%)	(%)	(%)	(%)		test (Y/N)	
WS01	D	1.50	1.50	15	-	-	-	-	-	-	-	-		Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2)
WS01	D	2.50	2.50	15	-	-	-	31	16	15	92	CL		Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse subrounded sandstone. (BS1377Pt2:3.2,4.4,5)

### SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CLIENT: LANCASHIRE COUNTY COUNCIL

DATE: 28.04.21





Key:- BD = Bulk Disturbed; SD = Small Disturbed; U100 = Undisturbed 100mm; WS = Window Sample

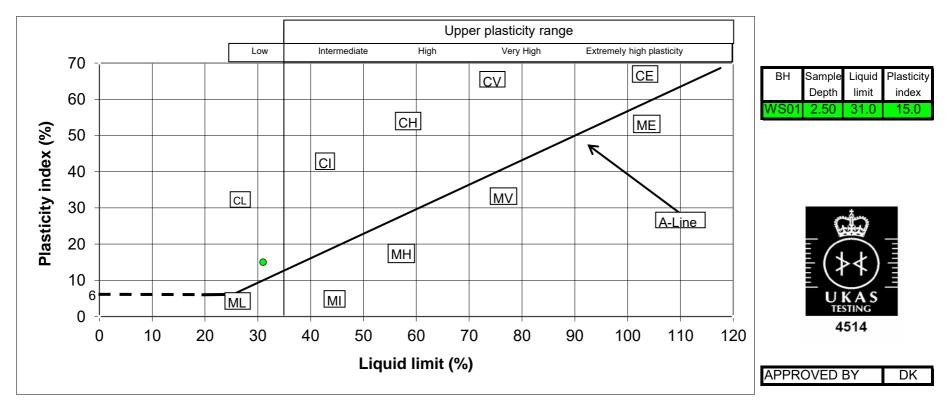
CL = Low Plasticity; CI = Intermediate; CH = High; CV = Very high; CE = Extremely high; NP = Non-plastic

(\* Denotes Hand Shear Vane test result)



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.



CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093)

BH / TP /	Sample	Depth	Depth	Moisture	Bulk	Dry			Plastic	Plasticity	Passing	Soil	UKAS	Description / Test Method
WS	Туре	From	То	Content	Density	Density	Strength	Limit	Limit	Index	0.425mm	Classification	accredited	Samples described in accordance with BS EN ISO 14688-2 2004
Number		(m)	(m)	(%)	$(Mg/m^3)$	$(Mg/m^3)$	(kN/m²)	(%)	(%)	(%)	(%)		test (Y/N)	
WS02	D	1.50	1.50	15	-	-	-	31	15	16	94	CL		Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse subrounded sandstone. (BS1377Pt2:3.2,4.4,5)
WS02	D	3.50	3.50	15	-	-	-	30	15	15	96	CL	Y	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse subrounded sandstone. (BS1377Pt2:3.2,4.4,5)

### SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CLIENT: LANCASHIRE COUNTY COUNCIL

DATE: 28.04.21





Key:- BD = Bulk Disturbed; SD = Small Disturbed; U100 = Undisturbed 100mm; WS = Window Sample

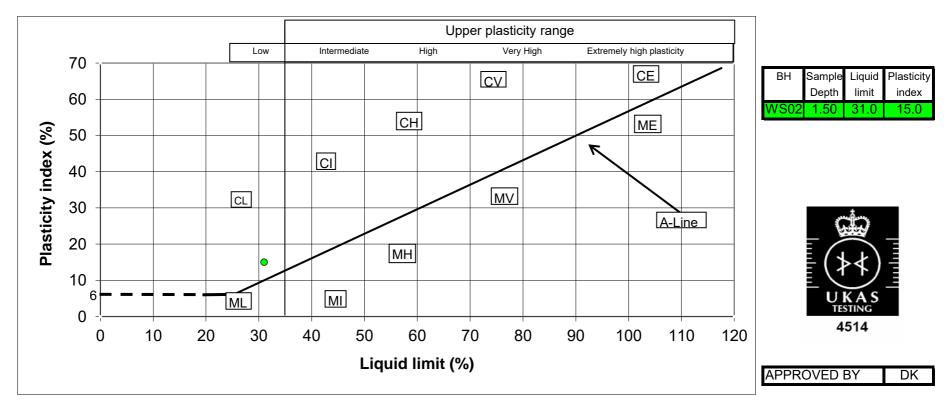
CL = Low Plasticity; CI = Intermediate; CH = High; CV = Very high; CE = Extremely high; NP = Non-plastic

(\* Denotes Hand Shear Vane test result)



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.

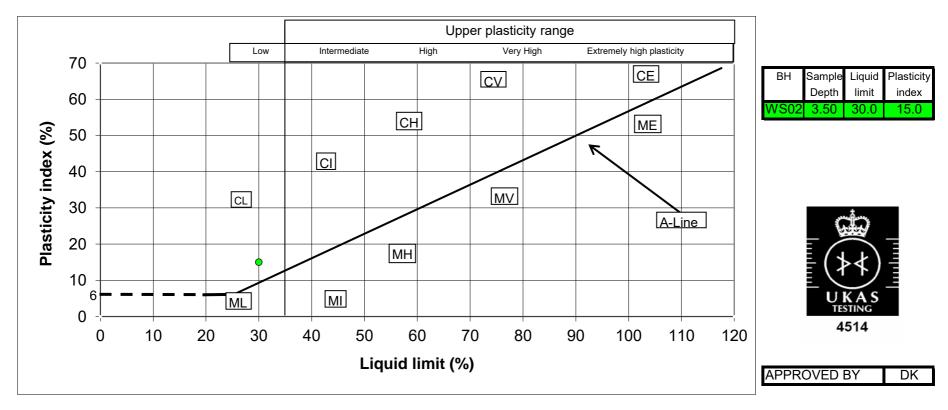


CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093)



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.



CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093)

BH / TP /	Sample	Depth	Depth	Moisture	Bulk	Dry	Shear	Liquid	Plastic	Plasticity	Passing	Soil	UKAS	Description / Test Method
WS	Туре	From	То	Content	Density	Density	Strength	Limit	Limit	Index	0.425mm	Classification	accredited	Samples described in accordance with BS EN ISO 14688-2 2004
Number		(m)	(m)	(%)	$(Mg/m^3)$	$(Mg/m^3)$	(kN/m²)	(%)	(%)	(%)	(%)		test (Y/N)	
WS03	D	2.00	2.00	16	-	-	-	32	16	16	95	CL	Y	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2,4.4,5)
WS03	D	3.50	3.50	17	-	-	-	34	16	18	91	CL		Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2,4.4,5)

### SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CLIENT: LANCASHIRE COUNTY COUNCIL

DATE: 28.04.21





Key:- BD = Bulk Disturbed; SD = Small Disturbed; U100 = Undisturbed 100mm; WS = Window Sample

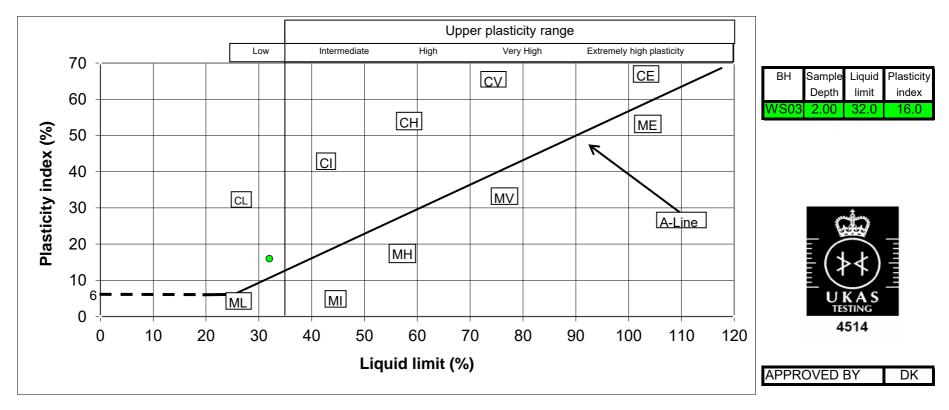
CL = Low Plasticity; CI = Intermediate; CH = High; CV = Very high; CE = Extremely high; NP = Non-plastic

(\* Denotes Hand Shear Vane test result)



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.

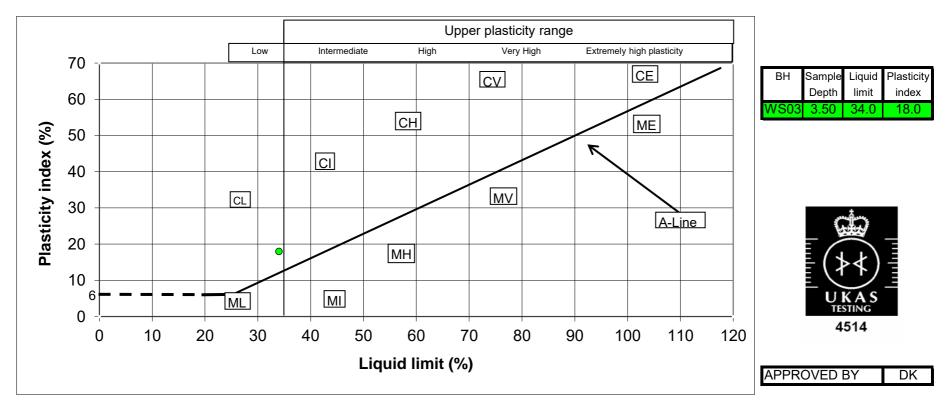


CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093)



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.



CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093)

BH / TP /	Sample	Depth	Depth	Moisture	Bulk	Dry	Shear	Liquid	Plastic	Plasticity	Passing	Soil	UKAS	Description / Test Method
WS	Туре	From	To	Content		-	Strength		Limit	Index	0.425mm	Classification	accredited	Samples described in accordance with BS EN ISO 14688-2 2004
Number	JT -	(m)	(m)	(%)			(kN/m²)	(%)	(%)	(%)	(%)		test (Y/N)	
i (unicor		(111)	(111)	(/0)	(1118/111)	(119,111)	(	(,,,,)	(/*)	(/0)	(,,,,)			
WS04	D	2.50	2.50	15	-	-	-	31	16	15	91	CL	Y	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2,4.4,5)

### SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CLIENT: LANCASHIRE COUNTY COUNCIL

DATE: 28.04.21





Key:- BD = Bulk Disturbed; SD = Small Disturbed; U100 = Undisturbed 100mm; WS = Window Sample

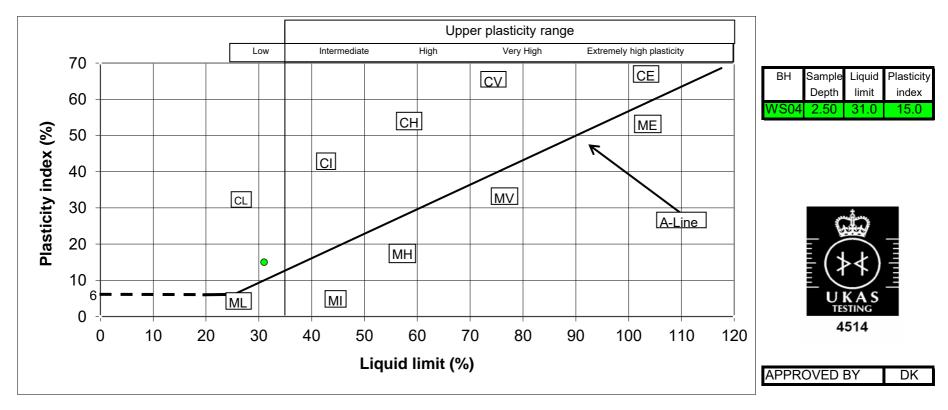
CL = Low Plasticity; CI = Intermediate; CH = High; CV = Very high; CE = Extremely high; NP = Non-plastic

(\* Denotes Hand Shear Vane test result)



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.



CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093)

				Moisture		Dry				Plasticity	Passing	Soil	UKAS	Description / Test Method
WS	Туре	From	То	Content		Density	Strength		Limit			Classification	accredited test (Y/N)	Samples described in accordance with BS EN ISO 14688-2 2004
Number		(m)	(m)	(%)	(Mg/m³)	(Mg/m³)	(kN/m²)	(%)	(%)	(%)	(%)		ust (1/11)	
WS05	В	1.20	1.20	15	-	-	-	-	-	-	-	-		Brown very silty clayey slightly gravelly SAND. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2,9.2,9.5)
WS05	D	2.00	2.00	17	-	-	-	33	16	17	95	CL	Y	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse subrounded sandstone. (BS1377Pt2:3.2,4.4,5)

### SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CLIENT: LANCASHIRE COUNTY COUNCIL

DATE: 29.04.21





Key:- BD = Bulk Disturbed; SD = Small Disturbed; U100 = Undisturbed 100mm; WS = Window Sample

CL = Low Plasticity; CI = Intermediate; CH = High; CV = Very high; CE = Extremely high; NP = Non-plastic

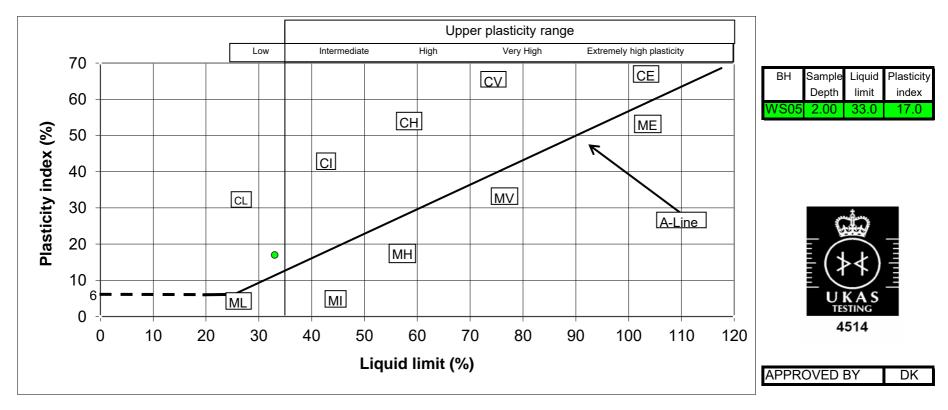
(\* Denotes Hand Shear Vane test result)

	CC Geotechnic		PARTICLE	SIZE DIS	TRIBUT	ION	Job Ref	CCG-	C-21-12093	
e	Tel: 0151 545 2 e: lab@ccgeotechr						Borehole/Pit No.		WS05	
	te Name	COTTAM PAR	KWAY STATION	1			Sample No.		1	
	pecimen escription	Brown very silty cla	yey slightly gravelly S	AND			Depth, m		1.20	
	pecimen eference		Specime Depth	n		m	Sample Type		В	
	est Method	BS1377:Part 2:1	990, clauses 9.2 a	nd 9.5			KeyLAB ID	CCG	_202104290	
		SILT		SAND			GRAVEL	COBBLES		
	CLAY Fin	ne Medium	Coarse Fine	Medium	Coarse	Fine	Medium Coarse		BOULDERS	_
	90									
	80									
%	70									
ssing	60		/							
ge Pa	50									
Percentage Passing	40		/							
Ре	30			_						
	20									
	10									
	0.001	0.01	0.1		1		10	100	 100	0
				Pa	ticle Size	mm				•
		-								
	Sie Particle Size	wing % Passing	Sedime Particle Size	entation % Passi	na	Dry M	ass of sample, g			
	mm	70 T d35ling	mm 0.0612	34		Sample Pr	oportions	%	dry mass	
			0.0514	32		Very coarse	-		0	
	75	100	0.0364	28		Gravel			2	
	63 50	100 100	0.0257 0.0182	25 22		Sand Silt			64 22	
	37.5	100	0.0094	18		Clay			12	
	28	100	0.0066	16				ļ		
	20	100	0.0047	14		Grading A	nalysis			
	14	99	0.0023	12		D100	mm		0.465	
	10	99	0.0014	10		D60	mm		0.133	
	6.3 5	98 98				D30 D10	mm mm		0.0429	
	3.35	98				Uniformity (		<u> </u>		
	2	98				Curvature 0				
	1.18	97								
	0.6	95	Particle density			Remarks				
	0.425	94	2.65	Mg/m3		Preparation and	d testing in accordance with E	351377 unless no	ted below	
	0.3	89 79	╢							
	0.15	64	╢							
	0.063	34	1							
					•					
	Operator	Checked	Appr	oved			Sheet printed		Fig	1
JE		DK	DK			29/	/04/2021 12:26		Sheet	



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.



CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CCG-CMS-FO-204 Issue 2

BH / TP /	Sample	Depth	Depth	Moisture	Bulk	Dry	Shear	Liquid	Plastic	Plasticity	Passing	Soil	UKAS	Description / Test Method
WS	Туре	From	To	Content		Density	Strength		Limit	Index	0.425mm	Classification	accredited	Samples described in accordance with BS EN ISO 14688-2 2004
Number	• •	(m)	(m)	(%)		$(Mg/m^3)$	(kN/m <sup>2</sup> )	(%)	(%)	(%)	(%)		test (Y/N)	
					× U /	× 0 /	· · ·							
WS06	D	1.50	1.50	14	-	-	-	31	16	15	89	CL		Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse subrounded sandstone. (BS1377Pt2:3.2,4.4,5)
WS06	D	3.50	3.50	15	-	-	-	33	16	17	93	CL	Y	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse subrounded sandstone. (BS1377Pt2:3.2,4.4,5)

### SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CLIENT: LANCASHIRE COUNTY COUNCIL

DATE: 29.04.21



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Key:- BD = Bulk Disturbed; SD = Small Disturbed; U100 = Undisturbed 100mm; WS = Window Sample

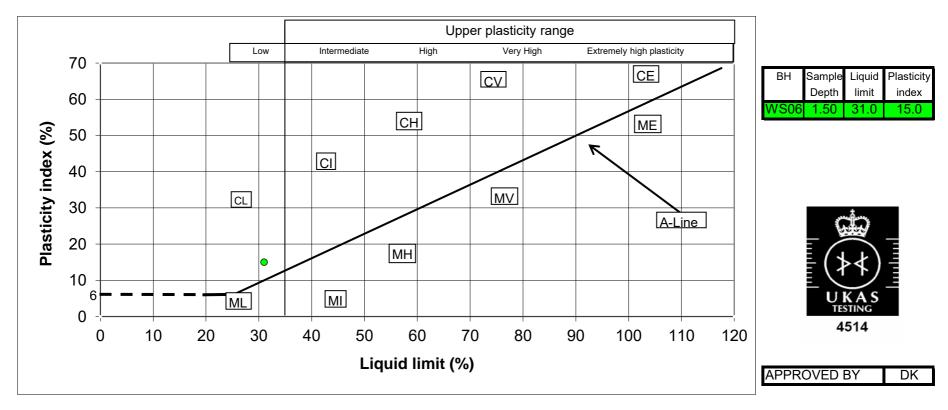
CL = Low Plasticity; CI = Intermediate; CH = High; CV = Very high; CE = Extremely high; NP = Non-plastic

(\* Denotes Hand Shear Vane test result)



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.

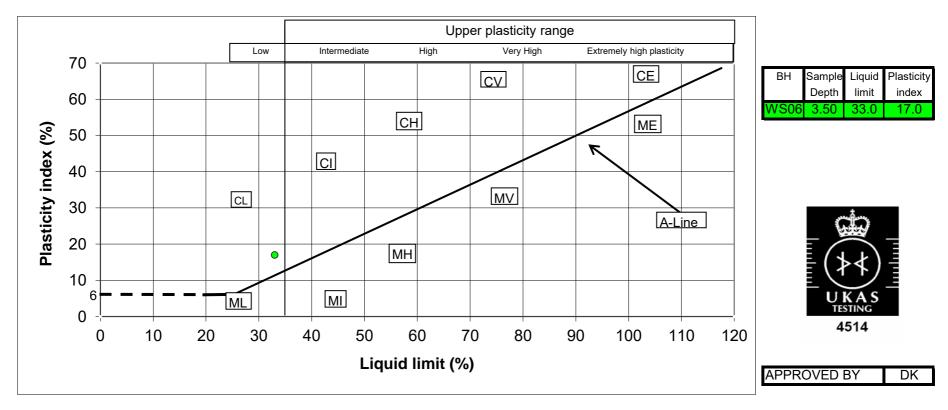


CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093)



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.



CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CCG-CMS-FO-204 Issue 2

BH / TP /	Sample	Depth	Depth	Moisture	Bulk	Dry	Shear	Liquid	Plastic	Plasticity	Passing	Soil	UKAS	Description / Test Method
WS	Туре	From	To	Content		Density	Strength		Limit	Index	0.425mm	Classification	accredited	Samples described in accordance with BS EN ISO 14688-2 2004
Number	51	(m)	(m)	(%)		$(Mg/m^3)$	(kN/m²)	(%)	(%)	(%)	(%)		test (Y/N)	
1,0110,01		(111)	(11)	(/0)	(1118,111)	(1118/111)	(	(/0)	(/0)	(,,,)	(/0)			
WS07	D	1.50	1.50	14	-	-	-	30	16	14	94	CL		Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse subrounded sandstone. (BS1377Pt2:3.2,4.4,5)
WS07	D	2.50	2.50	15	-	-	-	-	-	-	-	-	Y	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2)

### SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CLIENT: LANCASHIRE COUNTY COUNCIL

DATE: 29.04.21





Key:- BD = Bulk Disturbed; SD = Small Disturbed; U100 = Undisturbed 100mm; WS = Window Sample

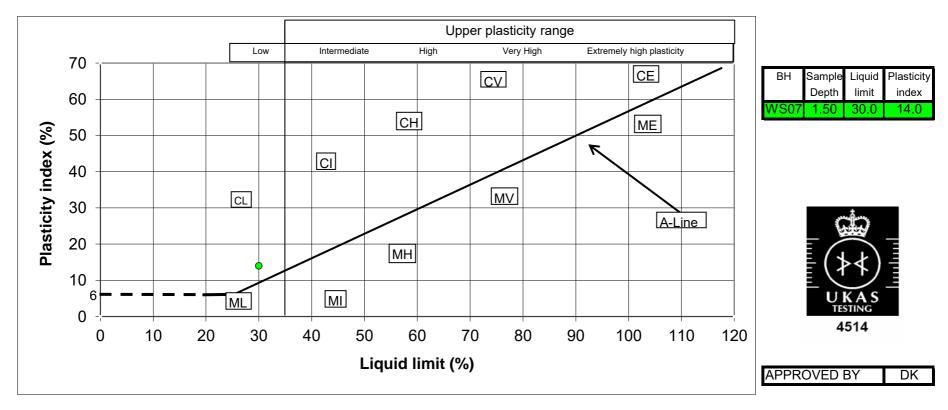
CL = Low Plasticity; CI = Intermediate; CH = High; CV = Very high; CE = Extremely high; NP = Non-plastic

(\* Denotes Hand Shear Vane test result)



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.



CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093)

BH / TP /	Sample	Depth	Depth	Moisture	Bulk	Dry	Shear	Liquid	Plastic	Plasticity	Passing	Soil	UKAS	Description / Test Method
WS	Туре	From	To	Content	Density	-	Strength	Limit	Limit	Index	0.425mm	Classification	accredited	Samples described in accordance with BS EN ISO 14688-2 2004
Number	51	(m)	(m)	(%)		(Mg/m <sup>3</sup> )	(kN/m <sup>2</sup> )	(%)	(%)	(%)	(%)		test (Y/N)	
					× U /		``´´	. ,	~ /	. ,	~ /			
WS08	D	1.50	1.50	15	-	-	-	-	-	-	-	-	Y	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse subrounded sandstone. (BS1377Pt2:3.2)
WS08	D	2.50	2.50	15	-	-	-	30	15	15	93	CL	Y	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse subrounded sandstone. (BS1377Pt2:3.2,4.4,5)

### SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CLIENT: LANCASHIRE COUNTY COUNCIL

DATE: 29.04.21



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Key:- BD = Bulk Disturbed; SD = Small Disturbed; U100 = Undisturbed 100mm; WS = Window Sample

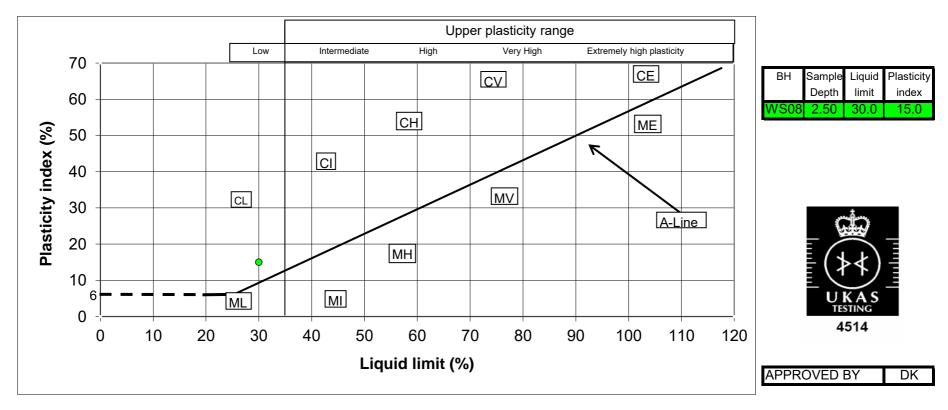
CL = Low Plasticity; CI = Intermediate; CH = High; CV = Very high; CE = Extremely high; NP = Non-plastic

(\* Denotes Hand Shear Vane test result)



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.



CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093)

BH / TP /	Sample	Depth	Depth	Moisture	Bulk	Dry	Shear	Liquid	Plastic	Plasticity	Passing	Soil	UKAS	Description / Test Method
WS	Туре	From	To	Content	Density	-	Strength	Limit	Limit	Index	0.425mm	Classification	accredited	Samples described in accordance with BS EN ISO 14688-2 2004
Number	51	(m)	(m)	(%)	(Mg/m <sup>3</sup> )		(kN/m <sup>2</sup> )	(%)	(%)	(%)	(%)		test (Y/N)	
		~ /				× 8 /		(···)			()			
WS09	WS	1.50	1.50	15	-	-	-	-	-	-	-	-	Y	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2)
WS09	WS	3.50	3.50	17	-	-	-	34	17	17	97	CL		Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2,4.4,5)

### SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CLIENT: LANCASHIRE COUNTY COUNCIL

DATE: 29.04.21



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Key:- BD = Bulk Disturbed; SD = Small Disturbed; U100 = Undisturbed 100mm; WS = Window Sample

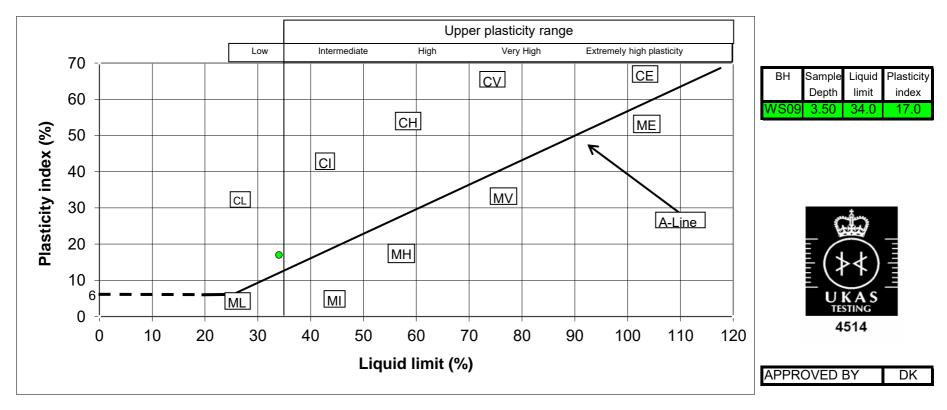
CL = Low Plasticity; CI = Intermediate; CH = High; CV = Very high; CE = Extremely high; NP = Non-plastic

(\* Denotes Hand Shear Vane test result)



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.



CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093)

BH / TP /	Sample	Depth	Depth	Moisture	Bulk	Dry	Shear	Liquid	Plastic	Plasticity	Passing	Soil	UKAS	Description / Test Method
WS	Туре	From	To	Content	Density	Density	Strength	Limit	Limit	Index	0.425mm	Classification	accredited	Samples described in accordance with BS EN ISO 14688-2 2004
Number	51	(m)	(m)	(%)		(Mg/m <sup>3</sup> )	$(kN/m^2)$	(%)	(%)	(%)	(%)		test (Y/N)	
i (unito er		(111)	(111)	(/0)	(119,111)	(119,111)	(111 () 111 )	(/0)	(/0)	(/0)	(/0)			
WS10	D	1.50	1.50	17	-	-	-	34	16	18	96	CL		Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2,4.4,5)
WS10	D	2.50	2.50	17	-	-	-	-	-	-	-	-		Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2)

### SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CLIENT: LANCASHIRE COUNTY COUNCIL

DATE: 29.04.21





Key:- BD = Bulk Disturbed; SD = Small Disturbed; U100 = Undisturbed 100mm; WS = Window Sample

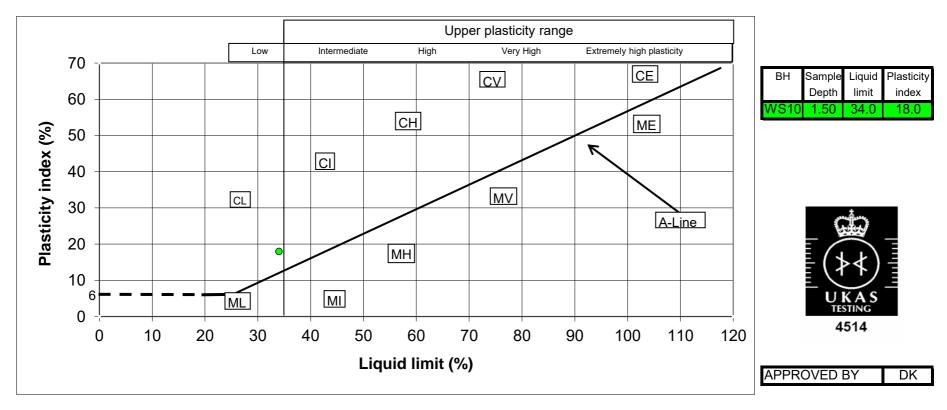
CL = Low Plasticity; CI = Intermediate; CH = High; CV = Very high; CE = Extremely high; NP = Non-plastic

(\* Denotes Hand Shear Vane test result)



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.



CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CCG-CMS-FO-204 Issue 2

BH / TP /	Sample	Depth	Depth	Moisture	Bulk	Dry	Shear	Liquid	Plastic	Plasticity	Passing	Soil	UKAS	Description / Test Method
WS	Туре	From	To	Content	Density	Density	Strength	Limit	Limit	Index	0.425mm	Classification		Samples described in accordance with BS EN ISO 14688-2 2004
Number	• •	(m)	(m)	(%)	(Mg/m <sup>3</sup> )	$(Mg/m^3)$	(kN/m <sup>2</sup> )	(%)	(%)	(%)	(%)		test (Y/N)	
							Ì.							
WS11	D	1.50	1.50	14	-	-	-	34	17	17	94	CL	Y	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse subrounded sandstone. (BS1377Pt2:3.2,4.4,5)
WS11	D	2.50	2.50	16	-	-	-	-	-	-	-	-	Y	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2)
WS11	D	3.50	3.50	24	-	-	-	-	-	-	-	-	Y	Brown slightly sandy silty CLAY. (BS1377Pt2:3.2)
WS11	D	4.50	4.50	30	-	-	-	45	20	25	100	CI	Y	Brown slightly sandy silty CLAY. (BS1377Pt2:3.2,4.4,5)

### SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CLIENT: LANCASHIRE COUNTY COUNCIL

DATE: 29.04.21





Key:- BD = Bulk Disturbed; SD = Small Disturbed; U100 = Undisturbed 100mm; WS = Window Sample

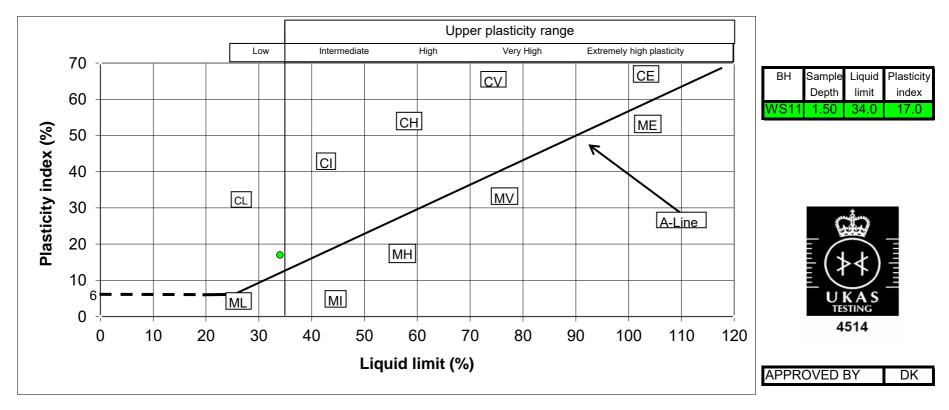
CL = Low Plasticity; CI = Intermediate; CH = High; CV = Very high; CE = Extremely high; NP = Non-plastic

(\* Denotes Hand Shear Vane test result)



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.

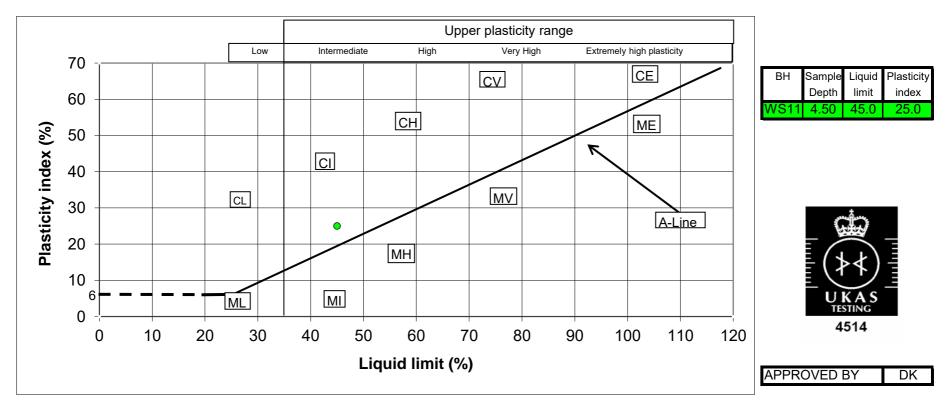


CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093)



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.



CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093)

BH / TP /	Sample	Depth	Depth	Moisture	Bulk	Dry	Shear	Liquid	Plastic	Plasticity	Passing	Soil	UKAS	Description / Test Method
WS	Туре	From	To	Content	Density	Density	Strength	Limit	Limit	Index	0.425mm	Classification	accredited	Samples described in accordance with BS EN ISO 14688-2 2004
Number		(m)	(m)	(%)	-			(%)	(%)	(%)	(%)		test (Y/N)	
					× U /	× 0 /	` ´	. ,	~ /	. ,	· · /			
WS12	D	1.50	1.50	16	-	-	-	-	-	-	-	-		Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse subrounded sandstone. (BS1377Pt2:3.2)
WS12	D	3.00	3.00	18	-	-	-	36	17	19	97	CI		Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2,4.4,5)
WS12	D	4.50	4.50	16	-	-	-	-	-	-	-	-		Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2)
WS12	D	5.50	5.50	31	-	-	-	49	21	28	100	CI	Y	Brown slightly sandy silty CLAY. (BS1377Pt2:3.2,4.4,5)
										<u> </u>				

### SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CLIENT: LANCASHIRE COUNTY COUNCIL

DATE: 29.04.21



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Key:- BD = Bulk Disturbed; SD = Small Disturbed; U100 = Undisturbed 100mm; WS = Window Sample

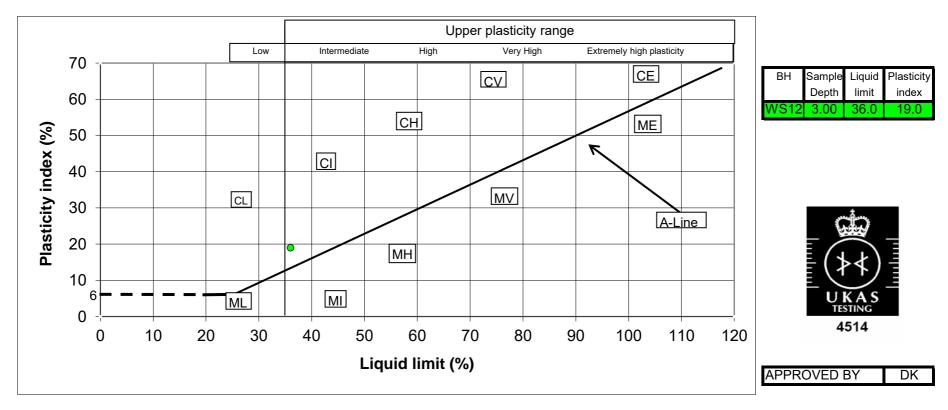
CL = Low Plasticity; CI = Intermediate; CH = High; CV = Very high; CE = Extremely high; NP = Non-plastic

(\* Denotes Hand Shear Vane test result)



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.

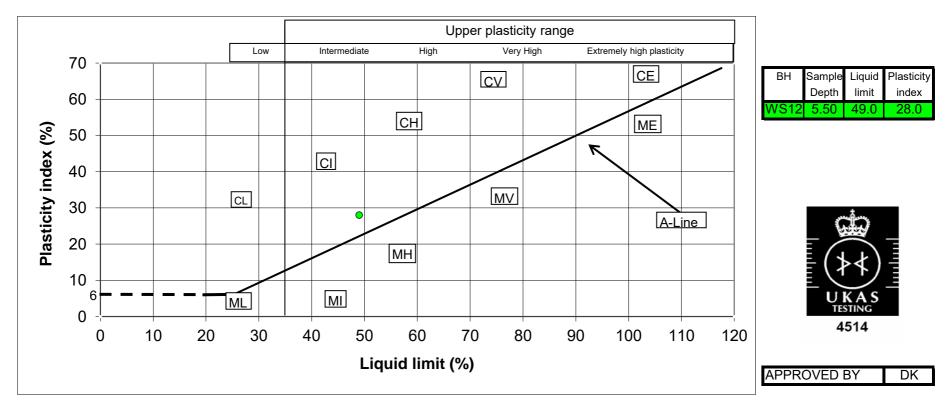


CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CCG-CMS-FO-204 Issue 2



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.



CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093)

BH / TP /	Sample	Depth	Depth	Moisture	Bulk	Dry	Shear	Liquid	Plastic	Plasticity	Passing	Soil	UKAS	Description / Test Method
WS		From	To	Content	Density	-	Strength	Limit	Limit	Index	0.425mm	Classification	accredited	Samples described in accordance with BS EN ISO 14688-2 2004
Number	51	(m)	(m)	(%)	-	(Mg/m <sup>3</sup> )	(kN/m <sup>2</sup> )	(%)	(%)	(%)	(%)		test (Y/N)	
							( , ,							
WS13	D	1.50	1.50	16	-	-	-	32	16	16	94	CL		Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2,4.4,5)
WS13	D	2.50	2.50	18	-	-	-	-	-	-	-	-		Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2)

## SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CLIENT: LANCASHIRE COUNTY COUNCIL

DATE: 29.04.21





Key:- BD = Bulk Disturbed; SD = Small Disturbed; U100 = Undisturbed 100mm; WS = Window Sample

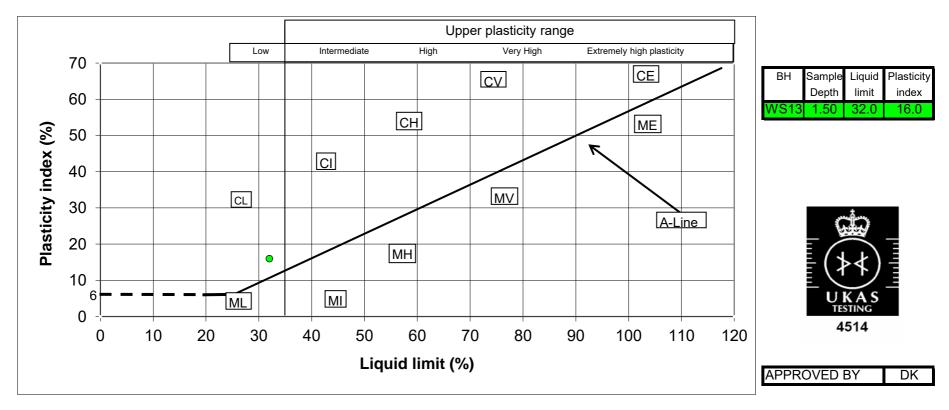
CL = Low Plasticity; CI = Intermediate; CH = High; CV = Very high; CE = Extremely high; NP = Non-plastic

(\* Denotes Hand Shear Vane test result)



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.



CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093)

WS NumberTypeFrom (m)To (m)Content (%)Density (Mg/m³)Density (Mg/m³)Strength (Mg/m³)Limit (%)Index (%)0.425mm (%)Classification (%)accredited test (Y/N)Samples described in accordance with BS EN ISC (%)WS14D1.501.501.6YBrown slightly sandy slightly gravelly silty CLAY. C coarse subrounded sandstone. (BS1377Pt2:3.2)WS14D2.502.501633151792CLYBrown slightly sandy slightly gravelly silty CLAY. C coarse subrounded sandstone. (BS1377Pt2:3.2)		Description / Test Method	UKAS	Soil	Passing	Plasticity	Plastic	Liquid	Shear	Dry	Bulk	Moisture	Depth	Depth	Sample	BH / TP /
Number         (m)         (m)         (M)         (Mg/m³)         (Mg/m³)         (M)         (%)         (%)         (%)         (%)         test (Y/N)           WS14         D         1.50         1.50         16         -         -         -         -         -         Y         Brown slightly sandy slightly gravelly slity CLAY. Ocarse subrounded sandstone. (BS1377Pt2:3.2)           WS14         D         2.50         2.50         16         -         -         33         15         17         92         CL         Y         Brown slightly sandy slightly gravelly slity CLAY. Ocarse subrounded sandstone. (BS1377Pt2:3.2, 4.4.5)           WS14         D         4.50         4.50         32         -         -         47         20         27         100         CI         Y         Brown slightly sandy slightly sandy slightly ft2:3.2, 4.5	0 14688-2 2004	Samples described in accordance with BS EN ISO 14688	accredited	Classification	0.425mm	-			Strength	Density	Density	Content	To	From	Туре	WS
WS14       D       1.50       1.50       16       -       -       -       -       -       -       Y       Brown slightly sandy slightly gravelly silty CLAY. Coarse subrounded sandstone. (BS1377Pt2:3.2)         WS14       D       2.50       2.50       16       -       -       33       15       17       92       CL       Y       Brown slightly sandy slightly gravelly silty CLAY. Coarse subrounded sandstone. (BS1377Pt2:3.2)         WS14       D       4.50       4.50       32       -       -       47       20       27       100       CI       Y       Brown slightly sandy slightly gravelly silty CLAY. (BS1377Pt2:3.2, 4.4, 5)         WS14       D       4.50       4.50       32       -       -       47       20       27       100       CI       Y       Brown slightly sandy silty CLAY. (BS1377Pt2:3.2, 4.4, 5)			test (Y/N)			(%)	(%)			$(Mg/m^3)$	$(Mg/m^3)$	(%)	(m)	(m)	• •	Number
WS14D2.502.501633151792CLYBrown slightly sandy slightly gravelly silty CLAY. Coarse subrounded sandstone. (BS1377Pt2:3.2, 4.4, 5)WS14D4.504.5032472027100CIYBrown slightly sandy silty CLAY. (BS1377Pt2:3.2, 4.4, 5)								· /								
WS14D2.502.501633151792CLYBrown slightly sandy slightly gravelly silty CLAY. Coarse subrounded sandstone. (BS1377Pt2:3.2,4.4,5)WS14D4.504.5032472027100CIYBrown slightly sandy silty CLAY. (BS1377Pt2:3.2,4.4,5)	dravel is fine to		Y	-	-	-	-	-	-	-	-	16	1.50	1.50	D	WS14
WS14       D       4.50       4.50       32       -       -       47       20       27       100       CI       Y       Brown slightly sandy silty CLAY. (BS1377Pt2:3.2,4.4,5)		coarse subrounded sandstone. (DS15771(2.5.2)														
WS14       D       4.50       4.50       32       -       -       47       20       27       100       CI       Y       Brown slightly sandy silty CLAY. (BS1377Pt2:3.2,4)		Brown slightly sandy slightly gravelly silty CLAY. Gravel is	Y	CL	92	17	15	33	-	-	-	16	2.50	2.50	D	WS14
	)	coarse subrounded sandstone. (BS1377Pt2:3.2,4.4,5)														
															_	
Image: Note of the state of the st	.4,5)	Brown slightly sandy silty CLAY. (BS137/Pt2:3.2,4.4,5)	Y	CI	100	27	20	47	-	-	-	32	4.50	4.50	D	WS14
WS14         D         5.50         5.50         30         -         -         -         -         Y         Brown slightly sandy silty CLAY. (BS1377Pt2:3.2)           Image: Second structure         Y         Brown slightly sandy silty CLAY. (BS1377Pt2:3.2)           Image: Second structure         Y         Brown slightly sandy silty CLAY. (BS1377Pt2:3.2)         Image: Second structure         Image: Second structure         Y         Image: Second structure																
		Brown slightly sandy silty CLAY. (BS1377Pt2:3.2)	Y	-	-	-	-	-	-	-	-	30	5.50	5.50	D	WS14

### SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CLIENT: LANCASHIRE COUNTY COUNCIL

DATE: 29.04.21





Key:- BD = Bulk Disturbed; SD = Small Disturbed; U100 = Undisturbed 100mm; WS = Window Sample

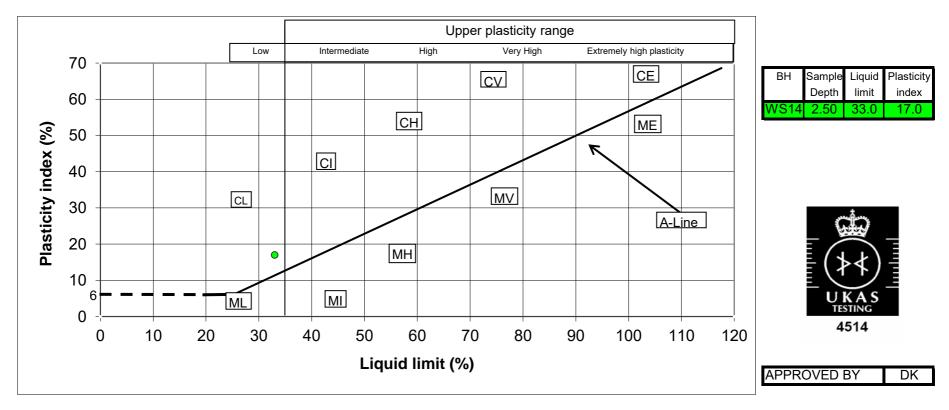
CL = Low Plasticity; CI = Intermediate; CH = High; CV = Very high; CE = Extremely high; NP = Non-plastic

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BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.

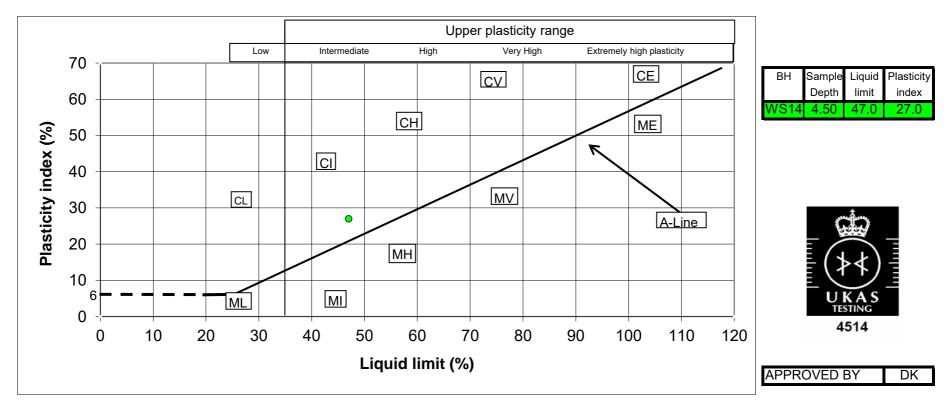


CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CCG-CMS-FO-204 Issue 2



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.



CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CCG-CMS-FO-204 Issue 2

BH / TP /	Sample	Depth	Depth	Moisture	Bulk	Dry	Shear	Liquid	Plastic	Plasticity	Passing	Soil	UKAS	Description / Test Method
WS	Туре	From	То	Content		Density	Strength		Limit	Index	0.425mm	Classification	accredited	Samples described in accordance with BS EN ISO 14688-2 2004
Number	51	(m)	(m)	(%)		(Mg/m <sup>3</sup> )	$(kN/m^2)$	(%)	(%)	(%)	(%)		test (Y/N)	
		()	()		(	(	( /	(,-)	()	(/-/	(,,,,)			
WS15	D	1.50	1.50	16	-	-	-	32	16	16	96	CL		Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2,4.4,5)
WS15	D	2.50	2.50	17	-	-	-	-	-	-	-	-		Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2)

### SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CLIENT: LANCASHIRE COUNTY COUNCIL

DATE: 29.04.21



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Key:- BD = Bulk Disturbed; SD = Small Disturbed; U100 = Undisturbed 100mm; WS = Window Sample

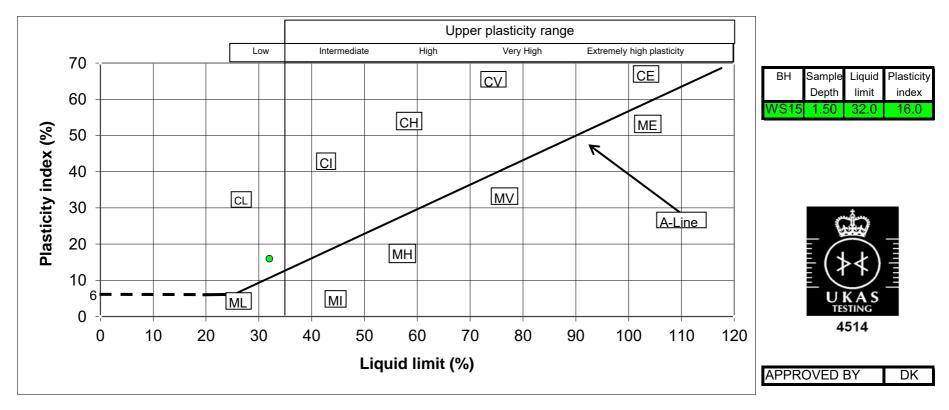
CL = Low Plasticity; CI = Intermediate; CH = High; CV = Very high; CE = Extremely high; NP = Non-plastic

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BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.



CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093)

BH / TP /	Sample	Depth	Depth	Moisture	Bulk	Dry	Shear	Liquid	Plastic	Plasticity	Passing	Soil	UKAS	Description / Test Method
WS	Туре	From	To	Content	Density	-	Strength		Limit	Index	0.425mm	Classification	accredited	Samples described in accordance with BS EN ISO 14688-2 2004
Number	51	(m)	(m)	(%)		(Mg/m <sup>3</sup> )		(%)	(%)	(%)	(%)		test (Y/N)	
					× U /	× U /	``´´	~ /	~ /	. ,	~ /			
WS16	D	1.50	1.50	16	-	-	-	-	-	-	-	-	Y	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse subrounded sandstone. (BS1377Pt2:3.2)
WS16	D	2.50	2.50	15	-	-	-	31	15	16	93	CL	Y	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse subrounded sandstone. (BS1377Pt2:3.2,4.4,5)

### SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CLIENT: LANCASHIRE COUNTY COUNCIL

DATE: 29.04.21



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Key:- BD = Bulk Disturbed; SD = Small Disturbed; U100 = Undisturbed 100mm; WS = Window Sample

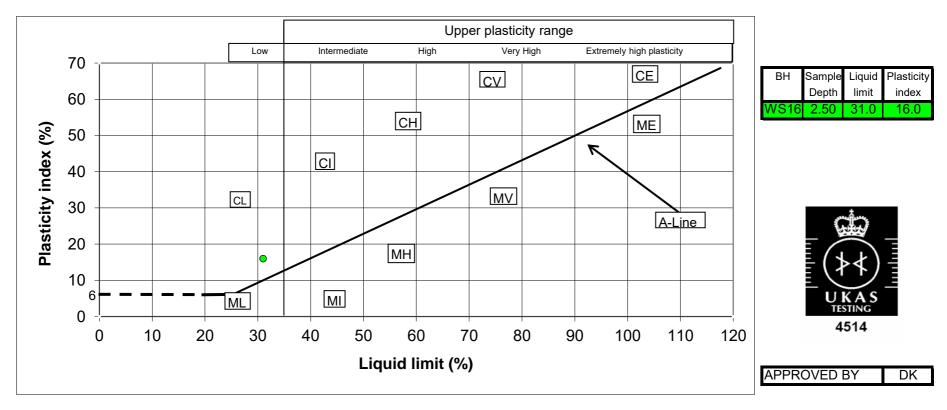
CL = Low Plasticity; CI = Intermediate; CH = High; CV = Very high; CE = Extremely high; NP = Non-plastic

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BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.



CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093)

BH / TP /	Sample	Depth	Depth	Moisture	Bulk	Dry	Shear	Liquid	Plastic	Plasticity	Passing	Soil	UKAS	Description / Test Method
WS		From	To	Content		-	Strength	Limit	Limit	Index	0.425mm	Classification	accredited	Samples described in accordance with BS EN ISO 14688-2 2004
Number	51	(m)	(m)		(Mg/m <sup>3</sup> )	-		(%)	(%)	(%)	(%)		test (Y/N)	
							( , ,							
WS17	D	1.50	1.50	15	-	-	-	30	15	15	91	CL	Y	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse subrounded sandstone. (BS1377Pt2:3.2,4.4,5)
WS17	D	2.50	2.50	16	-	-	-	-	-	-	-	-		Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to medium subrounded sandstone. (BS1377Pt2:3.2)

## SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CLIENT: LANCASHIRE COUNTY COUNCIL

DATE: 29.04.21



ŒG

Key:- BD = Bulk Disturbed; SD = Small Disturbed; U100 = Undisturbed 100mm; WS = Window Sample

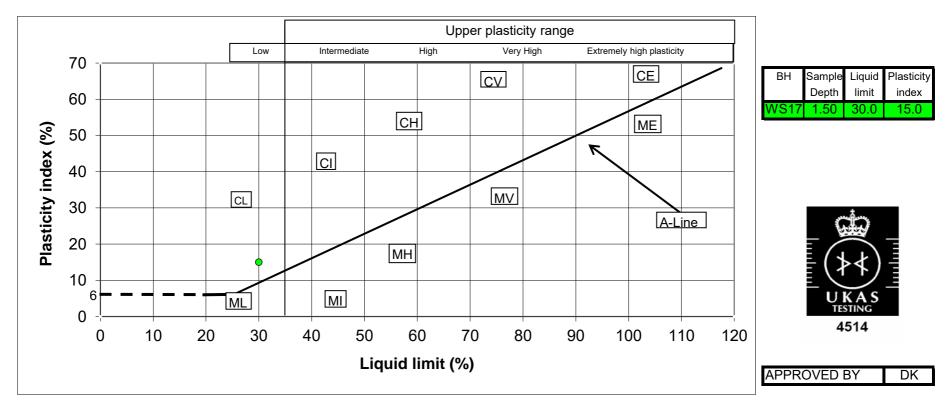
CL = Low Plasticity; CI = Intermediate; CH = High; CV = Very high; CE = Extremely high; NP = Non-plastic

(\* Denotes Hand Shear Vane test result)



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.



CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093)

BH / TP /	Sample	Depth	Depth	Moisture	Bulk	Dry	Shear	Liquid	Plastic	Plasticity	Passing	Soil	UKAS	Description / Test Method
WS	Туре	From	To	Content	Density	-	Strength	Limit	Limit	Index	0.425mm	Classification	accredited	Samples described in accordance with BS EN ISO 14688-2 2004
Number	51	(m)	(m)	(%)	(Mg/m <sup>3</sup> )		(kN/m <sup>2</sup> )	(%)	(%)	(%)	(%)		test (Y/N)	
					× U /	× 0 /	``´´	. ,	~ /	. ,	~ /			
WS18	D	1.50	1.50	15	-	-	-	-	-	-	-	-	Y	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse subrounded sandstone. (BS1377Pt2:3.2)
WS18	D	2.50	2.50	15	-	-	-	29	14	15	90	CL	Y	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse subrounded sandstone. (BS1377Pt2:3.2,4.4,5)

### SITE: COTTAM PARKWAY STATION (CCG-C-21-12093) CLIENT: LANCASHIRE COUNTY COUNCIL

DATE: 29.04.21



ŒG

Key:- BD = Bulk Disturbed; SD = Small Disturbed; U100 = Undisturbed 100mm; WS = Window Sample

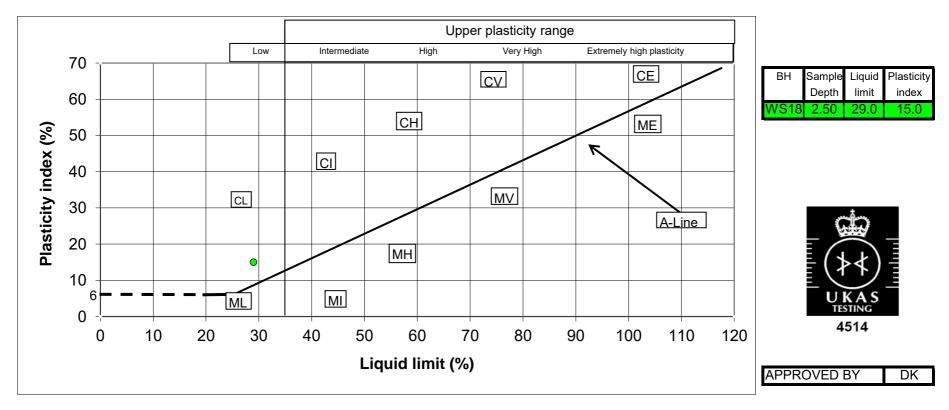
CL = Low Plasticity; CI = Intermediate; CH = High; CV = Very high; CE = Extremely high; NP = Non-plastic

(\* Denotes Hand Shear Vane test result)



BS 1377:Part 2:1990:cl 4.4,5

SILT (M-SOIL), M plots below A-Line , CLAY, C, plots above A-Line, M and C may be combined as FINE SOIL, F.



CLIENT: LANCASHIRE COUNTY COUNCIL SITE: COTTAM PARKWAY STATION (CCG-C-21-12093)



APPENDIX G

SOIL CHEMICAL TEST LAB REPORT



Unit A2 Windmill Road Ponswood Industrial Estate St Leonards on Sea East Sussex TN38 9BY Telephone: (01424) 718618

> cs@elab-uk.co.uk info@elab-uk.co.uk

### THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-33089
Issue:	1
Date of Issue:	15/04/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	08/04/2021
Date Approved:	15/04/2021
Details:	Cottam Parkway Station
Approved by:	e Na

Mike Varley, Technical Manager

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683

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# Sample Summary

Report No.: 21-33089, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
232858	CP01 1.50	12/03/2021	08/04/2021	Silty loam	
232859	CP01 4.00	12/03/2021	08/04/2021	Silty clayey loam	
232860	CP01 8.50	12/03/2021	08/04/2021	Silty clayey loam	
232861	CP01 15.00	12/03/2021	08/04/2021	Silty clayey loam	



# Report No.: 21-33089, issue number 1

	ELAB Reference						232861
	Customer Reference						
	BULK	DISTURBED	BULK	BULK			
	Sample Location						
	Sample Depth (m)					8.50	15.00
	Sampling Date			12/03/2021	12/03/2021	12/03/2021	12/03/2021
Determinand	Codes	Units	LOD				
Soil sample preparation paramet	ers						
Material removed	Ν	%	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Description of Inert material removed	N		0	None	None	None	None
Anions							
Water Soluble Sulphate	М	g/l	0.02	< 0.02	0.03	0.04	0.03
Inorganics							
Acid Soluble Sulphate (SO4)	U	%	0.02	0.02	0.04	0.05	0.04



Method Summary Report No.: 21-33089, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Acid Soluble Sulphate	U	Air dried sample	15/04/2021	115	Ion Chromatography
Water soluble anions	М	Air dried sample	13/04/2021	172	Ion Chromatography



# **Report Information**

## Report No.: 21-33089, issue number 1

Key

Key	
U	hold UKAS accreditation
М	hold MCERTS and UKAS accreditation
Ν	do not currently hold UKAS accreditation
۸	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination.
	Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed.
	ELAB are unable to provide an interpretation or opinion on the content of this report.
	The results relate only to the sample received.
	PCB congener results may include any coeluting PCBs
	Uncertainty of measurement for the determinands tested are available upon request Unless otherwise stated, sample information has been provided by the client. This may
	affect the validity of the results.
Deviation	Codes
а	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
С	Sample not received in appropriate containers

- d Sample not received in cooled condition
- e The container has been incorrectly filled
- f Sample age exceeds stability time (sampling to receipt)
- g Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

### Sample Retention and Disposal

All soil samples will be retained for a period of one month All water samples will be retained for 7 days following the date of the test report Charges may apply to extended sample storage



Unit A2 Windmill Road Ponswood Industrial Estate St Leonards on Sea East Sussex TN38 9BY Telephone: (01424) 718618

> cs@elab-uk.co.uk info@elab-uk.co.uk

## THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-32690
Issue:	1
Date of Issue:	24/03/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-10293
Date Received:	17/03/2021
Date Approved:	24/03/2021
Details:	Cottam Parkway Station
Approved by:	SUVA-

Mike Varley, Technical Manager

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# Sample Summary

Report No.: 21-32690, issue number 1

Elab No.	Client's Ref.	<b>Date Sampled</b>	Date Scheduled	Description	Deviations
230658	CP01 0.20	12/03/2021	17/03/2021	Silty loam	
230659	CP01 0.80	12/03/2021	17/03/2021	Silty clayey loam	



Report No.: 21-32690, issue number 1

•		ELAB	Reference	230658	230659
	C	Customer	Reference		
		:	Sample ID		
			mple Type	SOIL	SOIL
			e Location	CP01	CP01
		•			
			Depth (m)	0.20	0.80
		Sam	pling Date	12/03/2021	12/03/2021
Determinand	Codes	Units	LOD		
Soil sample preparation paramet	ers				
Material removed	N	%	0.1	< 0.1	< 0.1
Description of Inert material removed	N		0	None	None
Metals					
Arsenic	M	mg/kg	1	8.5	12.2
Cadmium	M	mg/kg	0.5	< 0.5	< 0.5
Chromium	М	mg/kg	5	29.3	46.7
Copper	M	mg/kg	5	23.3	21.5
Lead	M	mg/kg	5	24.6	15.9
Mercury	M	mg/kg	0.5	< 0.5	< 0.5
Nickel	M	mg/kg	5	22.9	34.1
Selenium	M	mg/kg	1	< 1.0	< 1.0
Zinc	M	mg/kg	5	47.4	41.6
Inorganics					
Total Sulphide	N	mg/kg	2	< 2	< 2
Acid Soluble Sulphate (SO4)	U	%	0.02	0.04	0.03
Water Soluble Boron	N	mg/kg	0.5	0.6	< 0.5
Miscellaneous					
Fraction of Organic Carbon	N		0.0001	0.0152	0.0041
pH	М	pH units	0.1	6.5	7.0
Polyaromatic hydrocarbons					
Naphthalene	M	mg/kg	0.1	< 0.1	< 0.1
Acenaphthylene	М	mg/kg	0.1	< 0.1	< 0.1
Acenaphthene	М	mg/kg	0.1	< 0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	< 0.1	< 0.1
Anthracene	M	mg/kg	0.1	< 0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	< 0.1	< 0.1
Pyrene	М	mg/kg	0.1	< 0.1	< 0.1
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1	< 0.1
Chrysene	М	mg/kg	0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	М	mg/kg	0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	М	mg/kg	0.1	< 0.1	< 0.1
Benzo(a)pyrene	М	mg/kg	0.1	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	М	mg/kg	0.1	< 0.1	< 0.1
Dibenzo(a,h)anthracene	М	mg/kg	0.1	< 0.1	< 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	< 0.1	< 0.1
Total PAH(16)	M	mg/kg	0.4	< 0.4	< 0.4



# Report No.: 21-32690, issue number 1

	Reference	230658	230659				
	C	Sustomer	Reference				
			Sample ID				
	Sample Type						
		Sampl	e Location	CP01	CP01		
		•	Depth (m)		0.80		
			pling Date		12/03/2021		
				12/03/2021	12/03/2021		
Determinand	Codes	Units	LOD				
TPH CWG							
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01	< 0.01		
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01	< 0.01		
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0	< 1.0		
>C10-C12 Aliphatic	N	mg/kg	1	< 1.0	< 1.0		
>C12-C16 Aliphatic	N	mg/kg	1	< 1.0	< 1.0		
>C16-C21 Aliphatic	N	mg/kg	1	< 1.0	< 1.0		
>C21-C35 Aliphatic	N	mg/kg	1	< 1.0	< 1.0		
>C35-C40 Aliphatic	N	mg/kg	1	< 1.0	< 1.0		
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01	< 0.01		
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01	< 0.01		
>C8-C10 Aromatic	N	mg/kg	1	< 1.0	< 1.0		
>C10-C12 Aromatic	N	mg/kg	1	< 1.0	< 1.0		
>C12-C16 Aromatic	N	mg/kg	1	< 1.0	< 1.0		
>C16-C21 Aromatic	N	mg/kg	1	< 1.0	< 1.0		
>C21-C35 Aromatic	N	mg/kg	1	< 1.0	< 1.0		
>C35-C40 Aromatic	N	mg/kg	1	< 1.0	< 1.0		
Total (>C5-C40) Ali/Aro	N	mg/kg	1	< 1.0	< 1.0		
Total Petroleum Hydrocarbons							
PAH Fingerprint	N	n/a	0	n/a	n/a		
TPH Fingerprint	N	n/a	0	n/a	n/a		



Unit A2, Windmill Road, Ponswood Industrial Estate, St Leonards on Sea, East Sussex, TN38 9BY Tel: +44 (0)1424 718618, Email: info@elab-uk.co.uk, Web: www.elab-uk.co.uk

### **Results Summary**

Report No.: 21-32690, issue number 1

### Asbestos Results

Analytical result only applies to the sample as submitted by the client. Any comments, opinions or interpretations (marked #) in this report are outside UKAS accreditation (Accreditation No2683). They are subjective comments only which must be verified by the client

Elab No	Depth (m)	<b>Clients Reference</b>	Description of Sample Matrix #	Asbestos	Gravimetric Analysis Total	Gravimetric Analysis by ACM Type	Free Fibre Analysis	Total Asbestos
230658	0.20	CP01	Brown soil	No asbestos detected	n/t	n/t	n/t	n/t
230659	0.80	CP01	Brown soil	No asbestos detected	n/t	n/t	n/t	n/t



Method Summary Report No.: 21-32690, issue number 1

Parameter	Codes	Analysis Undertaken	Date	Method	Technique
0.11		On	Tested	Number	· ·
Soil					
Sulphide	N	As submitted sample	22/03/2021	109	Colorimetry
рН	М	Air dried sample	23/03/2021	113	Electromeric
Acid Soluble Sulphate	U	Air dried sample	19/03/2021	115	Ion Chromatography
PAH (GC-FID)	М	As submitted sample	18/03/2021	133	GC-FID
Low range Aliphatic hydrocarbons soil	N	As submitted sample	19/03/2021	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	19/03/2021	181	GC-MS
Water soluble boron	N	Air dried sample	18/03/2021	202	Colorimetry
Total organic carbon/Total sulphur	N	Air dried sample	19/03/2021	210	IR
Aliphatic hydrocarbons in soil	N	As submitted sample	18/03/2021	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	19/03/2021	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	18/03/2021	214	GC-FID
Asbestos identification	U	Air dried sample	19/03/2021	280	Microscopy
Aqua regia extractable metals	М	Air dried sample	18/03/2021	300	ICPMS

Tests marked N are not UKAS accredited



# **Report Information**

## Report No.: 21-32690, issue number 1

Key

Key	
U	hold UKAS accreditation
М	hold MCERTS and UKAS accreditation
Ν	do not currently hold UKAS accreditation
۸	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	<ul> <li>LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination.</li> <li>Soil sample results are expressed on an air dried basis (dried at &lt; 30°C), and are uncorrected for inert material removed.</li> <li>ELAB are unable to provide an interpretation or opinion on the content of this report. The results relate only to the sample received.</li> <li>PCB congener results may include any coeluting PCBs</li> <li>Uncertainty of measurement for the determinands tested are available upon request Unless otherwise stated, sample information has been provided by the client. This may</li> </ul>
	affect the validity of the results.
Deviation	
a	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
С	Sample not received in appropriate containers

- d Sample not received in cooled condition
- e The container has been incorrectly filled
- f Sample age exceeds stability time (sampling to receipt)
- g Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

### Sample Retention and Disposal

All soil samples will be retained for a period of one month All water samples will be retained for 7 days following the date of the test report Charges may apply to extended sample storage



Unit A2 Windmill Road Ponswood Industrial Estate St Leonards on Sea East Sussex TN38 9BY Telephone: (01424) 718618

> cs@elab-uk.co.uk info@elab-uk.co.uk

## THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-33090
Issue:	1
Date of Issue:	15/04/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	08/04/2021
Date Approved:	15/04/2021
Details:	Cottam Parkway Station
Approved by:	e Na

Mike Varley, Technical Manager

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683

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# Sample Summary

Report No.: 21-33090, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
232862	CP02 0.50	19/03/2021	08/04/2021	Silty loam	
232863	CP02 5.00	19/03/2021	08/04/2021	Silty clayey loam	
232864	CP02 10.00	19/03/2021	08/04/2021	Silty clayey loam	
232865	CP02 17.00	19/03/2021	08/04/2021	Silty clayey loam	



# Report No.: 21-33090, issue number 1

	ELAB Reference						232865
	Customer Reference						
	Sample ID						
Sample Type					DISTURBED	DISTURBED	DISTURBED
		Sampl	e Location	CP02	CP02	CP02	CP02
	Sample Depth (m)				5.00	10.00	17.00
Sampling Date			19/03/2021	19/03/2021	19/03/2021	19/03/2021	
Determinand	Codes	Units	LOD				
Soil sample preparation paramet	ers						
Material removed	N	%	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Description of Inert material removed	N		0	None	None	None	None
Anions							
Water Soluble Sulphate	М	g/l	0.02	< 0.02	0.03	0.03	0.03
Inorganics							
Acid Soluble Sulphate (SO4)	U	%	0.02	< 0.02	0.04	0.04	0.04



Method Summary Report No.: 21-33090, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Acid Soluble Sulphate	U	Air dried sample	15/04/2021	115	Ion Chromatography
Water soluble anions	М	Air dried sample	13/04/2021	172	Ion Chromatography



# **Report Information**

## Report No.: 21-33090, issue number 1

Key

Key	
U	hold UKAS accreditation
М	hold MCERTS and UKAS accreditation
Ν	do not currently hold UKAS accreditation
۸	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination. Soil sample results are expressed on an air dried basis (dried at < 30°C), and are
	uncorrected for inert material removed.
	ELAB are unable to provide an interpretation or opinion on the content of this report. The results relate only to the sample received.
	PCB congener results may include any coeluting PCBs
	Uncertainty of measurement for the determinands tested are available upon request Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.
Deviation	Codes
а	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
С	Sample not received in appropriate containers

- d Sample not received in cooled condition
- e The container has been incorrectly filled
- f Sample age exceeds stability time (sampling to receipt)
- g Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

### Sample Retention and Disposal

All soil samples will be retained for a period of one month All water samples will be retained for 7 days following the date of the test report Charges may apply to extended sample storage



Unit A2 Windmill Road Ponswood Industrial Estate St Leonards on Sea East Sussex TN38 9BY Telephone: (01424) 718618

> cs@elab-uk.co.uk info@elab-uk.co.uk

## THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-32809
Issue:	1
Date of Issue:	31/03/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	21-12093
Date Received:	24/03/2021
Date Approved:	31/03/2021
Details:	Cottam Parkway Station
Approved by:	JVn

Mike Varley, Technical Manager

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683

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# Sample Summary

Report No.: 21-32809, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
231424	CP02 Natural 3.50	19/03/2021	24/03/2021	Sandy clayey loam	



Report No.: 21-32809, issue number 1

			1		
		231424			
	Customer Reference				
			Sample ID		
		Sa	mple Type	SOIL	
			e Location	CP02	
			Depth (m)	3.50	
			pling Date	19/03/2021	
Determinand	Codes	Units	LOD		
Soil sample preparation parame	ters				
Material removed	N	%	0.1	< 0.1	
Description of Inert material removed	N		0	None	
Metals					
Arsenic	M	mg/kg	1	5.1	
Cadmium	M	mg/kg	0.5	< 0.5	
Chromium	М	mg/kg	5	20.3	
Copper	M	mg/kg	5	10.2	
Lead	M	mg/kg	5	8.3	
Mercury	M	mg/kg	0.5	< 0.5	
Nickel	M	mg/kg	5	17.7	
Selenium	M	mg/kg	1	< 1.0	
Zinc	М	mg/kg	5	31.1	
Inorganics					
Total Sulphide	N	mg/kg	2	< 2	
Acid Soluble Sulphate (SO4)	U	%	0.02	0.04	
Water Soluble Boron	N	mg/kg	0.5	< 0.5	
Miscellaneous					
Fraction of Organic Carbon	N		0.0001	0.0021	
PH	М	pH units	0.1	8.8	
Polyaromatic hydrocarbons					
Naphthalene	M	mg/kg	0.1	< 0.1	
Acenaphthylene	М	mg/kg	0.1	< 0.1	
Acenaphthene	М	mg/kg	0.1	< 0.1	
Fluorene	М	mg/kg	0.1	< 0.1	
Phenanthrene	М	mg/kg	0.1	< 0.1	
Anthracene	М	mg/kg	0.1	< 0.1	
Fluoranthene	М	mg/kg	0.1	< 0.1	
Pyrene	М	mg/kg	0.1	< 0.1	
Benzo(a)anthracene	М	mg/kg	0.1	< 0.1	
Chrysene	М	mg/kg	0.1	< 0.1	
Benzo(b)fluoranthene	М	mg/kg	0.1	< 0.1	
Benzo(k)fluoranthene	М	mg/kg	0.1	< 0.1	
Benzo(a)pyrene	М	mg/kg	0.1	< 0.1	
Indeno(1,2,3-cd)pyrene	М	mg/kg	0.1	< 0.1	
Dibenzo(a,h)anthracene	М	mg/kg	0.1	< 0.1	
Benzo[g,h,i]perylene	М	mg/kg	0.1	< 0.1	
Total PAH(16)	M	mg/kg	0.4	< 0.4	



# Report No.: 21-32809, issue number 1

		ELAB	Reference	231424			
	C	Customer	Reference	Natural			
Sample ID							
Sample Type							
			e Location	CP02			
		•	Depth (m)	3.50			
		•	pling Date				
				19/03/2021			
Determinand	Codes	Units	LOD				
TPH CWG							
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01			
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01			
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0			
>C10-C12 Aliphatic	N	mg/kg	1	< 1.0			
>C12-C16 Aliphatic	N	mg/kg	1	< 1.0			
>C16-C21 Aliphatic	N	mg/kg	1	< 1.0			
>C21-C35 Aliphatic	N	mg/kg	1	3.0			
>C35-C40 Aliphatic	N	mg/kg	1	1.2			
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01			
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01			
>C8-C10 Aromatic	N	mg/kg	1	< 1.0			
>C10-C12 Aromatic	N	mg/kg	1	< 1.0			
>C12-C16 Aromatic	N	mg/kg	1	< 1.0			
>C16-C21 Aromatic	N	mg/kg	1	< 1.0			
>C21-C35 Aromatic	N	mg/kg	1	< 1.0			
>C35-C40 Aromatic	N	mg/kg	1	< 1.0			
Total (>C5-C40) Ali/Aro	N	mg/kg	1	4.2			
Total Petroleum Hydrocarbons							
PAH Fingerprint	N	n/a	0	n/a			
TPH Fingerprint	N	n/a	0	n/a			



Unit A2, Windmill Road, Ponswood Industrial Estate, St Leonards on Sea, East Sussex, TN38 9BY Tel: +44 (0)1424 718618, Email: info@elab-uk.co.uk, Web: www.elab-uk.co.uk

### **Results Summary**

Report No.: 21-32809, issue number 1

### Asbestos Results

Analytical result only applies to the sample as submitted by the client. Any comments, opinions or interpretations (marked #)

in this report are outside UKAS accreditation (Accreditation No2683). They are subjective comments only which must be verified by the client

Elab No Depth (m)	<b>Clients Reference</b>	Description of Sample Matrix #	Asbestos	Gravimetric Analysis Total	Gravimetric Analysis by ACM Type	Free Fibre Analysis	Total Asbestos
231424 3.50	CP02 Natural	Brown sandy Soil,Stones	No asbestos detected	n/t	n/t	n/t	n/t



Method Summary Report No.: 21-32809, issue number 1

Parameter	Codes	Analysis Undertaken	Date	Method	Technique
Soil		On	Tested	Number	
501					
Sulphide	N	As submitted sample	25/03/2021	109	Colorimetry
рН	М	Air dried sample	26/03/2021	113	Electromeric
Acid Soluble Sulphate	U	Air dried sample	26/03/2021	115	Ion Chromatography
PAH (GC-FID)	М	As submitted sample	25/03/2021	133	GC-FID
Low range Aliphatic hydrocarbons soil	N	As submitted sample	25/03/2021	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	25/03/2021	181	GC-MS
Water soluble boron	N	Air dried sample	25/03/2021	202	Colorimetry
Total organic carbon/Total sulphur	N	Air dried sample	26/03/2021	210	IR
Aliphatic hydrocarbons in soil	N	As submitted sample	25/03/2021	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	26/03/2021	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	25/03/2021	214	GC-FID
Asbestos identification	U	Air dried sample	29/03/2021	280	Microscopy
Aqua regia extractable metals	М	Air dried sample	25/03/2021	300	ICPMS

Tests marked N are not UKAS accredited



# **Report Information**

## Report No.: 21-32809, issue number 1

Key

Key	
U	hold UKAS accreditation
М	hold MCERTS and UKAS accreditation
Ν	do not currently hold UKAS accreditation
۸	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination. Soil sample results are expressed on an air dried basis (dried at < 30°C), and are
	uncorrected for inert material removed.
	ELAB are unable to provide an interpretation or opinion on the content of this report.
	The results relate only to the sample received.
	PCB congener results may include any coeluting PCBs
	Uncertainty of measurement for the determinands tested are available upon request Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.
Deviation	
а	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
С	Sample not received in appropriate containers

- d Sample not received in cooled condition
- e The container has been incorrectly filled
- f Sample age exceeds stability time (sampling to receipt)
- g Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

### Sample Retention and Disposal

All soil samples will be retained for a period of one month All water samples will be retained for 7 days following the date of the test report Charges may apply to extended sample storage



Unit A2 Windmill Road Ponswood Industrial Estate St Leonards on Sea East Sussex TN38 9BY Telephone: (01424) 718618

> cs@elab-uk.co.uk info@elab-uk.co.uk

## THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-33091
Issue:	1
Date of Issue:	15/04/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	08/04/2021
Date Approved:	15/04/2021
Details:	Cottam Parkway Station
Approved by:	JVn

Mike Varley, Technical Manager

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# Sample Summary

Report No.: 21-33091, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
232866	CP03 3.00	19/03/2021	08/04/2021	Silty clayey loam	
232867	CP03 6.00	19/03/2021	08/04/2021	Silty clayey loam	
232868	CP03 12.00	19/03/2021	08/04/2021	Silty clayey loam	



Report No.: 21-33091, issue number 1

	Reference	232866	232867	232868		
	Reference					
		:	Sample ID			
		Sa	mple Type	DISTURBED	DISTURBED	DISTURBED
		Sampl	e Location	CP03	CP03	CP03
	5	Sample	Depth (m)	3.00	6.00	12.00
		Sam	pling Date	19/03/2021	19/03/2021	19/03/2021
Determinand	Codes	Units	LOD			
Soil sample preparation paramet	ers					
Material removed	N	%	0.1	< 0.1	< 0.1	< 0.1
Description of Inert material removed	N		0	None	None	None
Anions						
Water Soluble Sulphate M g/l 0.02				0.02	0.03	0.03
Inorganics						
Acid Soluble Sulphate (SO4)	U	%	0.02	0.03	0.03	0.03



Method Summary Report No.: 21-33091, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Acid Soluble Sulphate	U	Air dried sample	15/04/2021	115	Ion Chromatography
Water soluble anions	М	Air dried sample	13/04/2021	172	Ion Chromatography



# **Report Information**

# Report No.: 21-33091, issue number 1

Key

Key	
U	hold UKAS accreditation
М	hold MCERTS and UKAS accreditation
N	do not currently hold UKAS accreditation
۸	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination. Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed. ELAB are unable to provide an interpretation or opinion on the content of this report. The results relate only to the sample received. PCB congener results may include any coeluting PCBs Uncertainty of measurement for the determinands tested are available upon request Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.
Deviation	•
а	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
С	Sample not received in appropriate containers

- d Sample not received in cooled condition
- e The container has been incorrectly filled
- f Sample age exceeds stability time (sampling to receipt)
- g Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

### Sample Retention and Disposal

All soil samples will be retained for a period of one month All water samples will be retained for 7 days following the date of the test report Charges may apply to extended sample storage



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> cs@elab-uk.co.uk info@elab-uk.co.uk

## THE ENVIRONMENTAL LABORATORY LTD

Analytical R	eport Number	21-32768
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- Issue:
- **Date of Issue:** 29/03/2021
- Contact: Sam Parry
- Customer Details: CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool

1

Liverpool MersevsideL33 7BA

- **Quotation No:** Q17-00806
- Order No: Not Supplied
- Customer Reference: CCG-C-21-12093
- **Date Received:** 22/03/2021
- **Date Approved:** 29/03/2021

Cottam Parkway Station

Approved by:

**Details:** 

Mike Varley, Technical Manager

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# Sample Summary

Report No.: 21-32768, issue number 1

Elab No.	Client's Ref.	<b>Date Sampled</b>	Date Scheduled	Description	Deviations
231140	CP03 0.15	17/03/2021	22/03/2021	Silty loam	
231141	CP03 1.80	17/03/2021	22/03/2021	Silty clayey loam	



Report No.: 21-32768, issue number 1

	ELAB Refere			231140	231141
	c		Reference	201110	201111
	C				
		:	Sample ID		
		Sai	mple Type	SOIL	SOIL
		Sample	e Location	CP03	CP03
		Sample	Depth (m)	0.15	1.80
				17/03/2021	17/03/2021
Determinand	Codes	Units	LOD	11/00/2021	11/00/2021
Soil sample preparation paramet					
Material removed	< 0.1	< 0.1			
Description of Inert material removed	N N	%	0.1	None	None
· · · · · · · · · · · · · · · · · · ·			0	NONE	None
Metals					
Arsenic	M	mg/kg	1	13.9	11.1
Cadmium	M	mg/kg	0.5	< 0.5	< 0.5
Chromium	M	mg/kg	5	37.8	41.1
Copper	M	mg/kg	5	36.7	20.4
Lead	M	mg/kg	5	81.3	15.8
Mercury	M	mg/kg	0.5	< 0.5	< 0.5
Nickel	M	mg/kg	5	26.7	37.1
Selenium	M	mg/kg	1	< 1.0	< 1.0
Zinc	M	mg/kg	5	92.0	52.7
Inorganics					
Total Sulphide	N	mg/kg	2	< 2	< 2
Acid Soluble Sulphate (SO4)	U	%	0.02	0.09	0.04
Water Soluble Boron	N	mg/kg	0.5	0.9	< 0.5
Miscellaneous					
Fraction of Organic Carbon	N		0.0001	0.0290	0.0028
pH	М	pH units	0.1	6.7	8.1
Polyaromatic hydrocarbons					
Naphthalene	M	mg/kg	0.1	< 0.1	< 0.1
Acenaphthylene	М	mg/kg	0.1	< 0.1	< 0.1
Acenaphthene	М	mg/kg	0.1	< 0.1	< 0.1
Fluorene	М	mg/kg	0.1	< 0.1	< 0.1
Phenanthrene	М	mg/kg	0.1	0.1	< 0.1
Anthracene	М	mg/kg	0.1	< 0.1	< 0.1
Fluoranthene	М	mg/kg	0.1	0.2	< 0.1
Pyrene	М	mg/kg	0.1	0.2	< 0.1
Benzo(a)anthracene	М	mg/kg	0.1	0.1	< 0.1
Chrysene	М	mg/kg	0.1	0.1	< 0.1
Benzo(b)fluoranthene	М	mg/kg	0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	М	mg/kg	0.1	< 0.1	< 0.1
Benzo(a)pyrene	М	mg/kg	0.1	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	М	mg/kg	0.1	< 0.1	< 0.1
Dibenzo(a,h)anthracene	М	mg/kg	0.1	< 0.1	< 0.1
Benzo[g,h,i]perylene	М	mg/kg	0.1	< 0.1	< 0.1
Total PAH(16)	М	mg/kg	0.4	0.8	< 0.4



# Report No.: 21-32768, issue number 1

	Reference	231140	231141		
		Sa	mple Type	SOIL	SOIL
			e Location		CP03
		•	Depth (m)		1.80
			• • • •		
r			pling Date	17/03/2021	17/03/2021
Determinand	Codes	Units	LOD		
TPH CWG					
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01	< 0.01
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01	< 0.01
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0	< 1.0
>C10-C12 Aliphatic	N	mg/kg	1	< 1.0	< 1.0
>C12-C16 Aliphatic	N	mg/kg	1	< 1.0	< 1.0
>C16-C21 Aliphatic	N	mg/kg	1	< 1.0	< 1.0
>C21-C35 Aliphatic	N	mg/kg	1	< 1.0	< 1.0
>C35-C40 Aliphatic	N	mg/kg	1	< 1.0	< 1.0
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01	< 0.01
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01	< 0.01
>C8-C10 Aromatic	N	mg/kg	1	< 1.0	< 1.0
>C10-C12 Aromatic	N	mg/kg	1	< 1.0	< 1.0
>C12-C16 Aromatic	N	mg/kg	1	< 1.0	< 1.0
>C16-C21 Aromatic	N	mg/kg	1	< 1.0	< 1.0
>C21-C35 Aromatic	N	mg/kg	1	< 1.0	< 1.0
>C35-C40 Aromatic	N	mg/kg	1	< 1.0	< 1.0
Total (>C5-C40) Ali/Aro	N	mg/kg	1	< 1.0	< 1.0
Total Petroleum Hydrocarbons					
PAH Fingerprint	N	n/a	0	n/a	n/a
TPH Fingerprint	N	n/a	0	n/a	n/a



Unit A2, Windmill Road, Ponswood Industrial Estate, St Leonards on Sea, East Sussex, TN38 9BY Tel: +44 (0)1424 718618, Email: info@elab-uk.co.uk, Web: www.elab-uk.co.uk

# **Results Summary**

Report No.: 21-32768, issue number 1

### **Asbestos Results**

Analytical result only applies to the sample as submitted by the client. Any comments, opinions or interpretations (marked #) in this report are outside UKAS accreditation (Accreditation No2683). They are subjective comments only which must be verified by the client.

Elab No	Depth (m)	Clients Reference	Description of Sample Matrix #	Asbestos Identification	Gravimetric	Gravimetric	Free Fibre	Total
					Analysis Total	Analysis by ACM	Analysis	Asbestos
					(%)	Type (%)	(%)	(%)
231140	0.15	CP03	Brown sandy Soil	No asbestos detected	n/t	n/t	n/t	n/t
231141	1.80	CP03	Brown Soil	No asbestos detected	n/t	n/t	n/t	n/t



Method Summary Report No.: 21-32768, issue number 1

Parameter		Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Sulphide	N	As submitted sample	24/03/2021	109	Colorimetry
рН	М	Air dried sample	24/03/2021	113	Electromeric
Acid Soluble Sulphate	U	Air dried sample	24/03/2021	115	Ion Chromatography
PAH (GC-FID)	М	As submitted sample	23/03/2021	133	GC-FID
Low range Aliphatic hydrocarbons soil	N	As submitted sample	23/03/2021	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	23/03/2021	181	GC-MS
Water soluble boron	N	Air dried sample	23/03/2021	202	Colorimetry
Total organic carbon/Total sulphur	N	Air dried sample	24/03/2021	210	IR
Aliphatic hydrocarbons in soil	N	As submitted sample	23/03/2021	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	24/03/2021	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	23/03/2021	214	GC-FID
Asbestos identification	U	Air dried sample	25/03/2021	280	Microscopy
Aqua regia extractable metals	М	Air dried sample	23/03/2021	300	ICPMS

Tests marked N are not UKAS accredited



# **Report Information**

## Report No.: 21-32768, issue number 1

### Key

,	
U	hold UKAS accreditation
М	hold MCERTS and UKAS accreditation
N	do not currently hold UKAS accreditation
٨	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination.
	Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed.
	ELAB are unable to provide an interpretation or opinion on the content of this report.
	The results relate only to the sample received.
	PCB congener results may include any coeluting PCBs
	Uncertainty of measurement for the determinands tested are available upon request
	Unless otherwise stated, sample information has been provided by the client. This may
	affect the validity of the results.
Deviation	Codes

- a No date of sampling supplied
- b No time of sampling supplied (Waters Only)
- c Sample not received in appropriate containers
- d Sample not received in cooled condition
- e The container has been incorrectly filled
- f Sample age exceeds stability time (sampling to receipt)
- g Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

### Sample Retention and Disposal

All soil samples will be retained for a period of one month All water samples will be retained for 7 days following the date of the test report Charges may apply to extended sample storage



Unit A2 Windmill Road Ponswood Industrial Estate St Leonards on Sea East Sussex TN38 9BY Telephone: (01424) 718618

> cs@elab-uk.co.uk info@elab-uk.co.uk

## THE ENVIRONMENTAL LABORATORY LTD

Analytical Report I	Number:	21-32578
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- Issue:
- **Date of Issue:** 17/03/2021
- Contact: Sam Parry
- Customer Details: CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool

MersevsideL33 7BA

1

- **Quotation No:** Q17-00806
- Order No: Not Supplied
- Customer Reference: CCG-C-21-12093

**Date Received:** 09/03/2021

**Date Approved:** 17/03/2021

Cottam Parkway Station

Approved by:

**Details:** 

Mike Varley, Technical Manager

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683

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# Sample Summary

Report No.: 21-32578, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
230021	CP04 0.50	04/03/2021	10/03/2021		
230022	CP04 2.50	04/03/2021	10/03/2021	Silty clayey loam	
230023	CP04 3.50	04/03/2021	10/03/2021		
230024	CP04 4.50	04/03/2021	10/03/2021		
230025	CP04 5.50	04/03/2021	10/03/2021		
230026	CP04 6.50	04/03/2021	10/03/2021		
230027	CP04 7.50	04/03/2021	10/03/2021		
230028	CP04 8.50	04/03/2021	10/03/2021		
230029	CP04 9.50	04/03/2021	10/03/2021		
230030	CP04 1.50	04/03/2021	10/03/2021		



•		230022		
	C			
			Sample ID mple Type	SOIL
			e Location	CP04
		•		2.50
			Depth (m)	
[			pling Date	04/03/2021
Determinand	Codes	Units	LOD	
Soil sample preparation paramet	ers			
Material removed	N	%	0.1	< 0.1
Description of Inert material removed	N		0	None
Metals				
Arsenic	M	mg/kg	1	12.1
Cadmium	M	mg/kg	0.5	< 0.5
Chromium	М	mg/kg	5	26.3
Copper	M	mg/kg	5	21.0
Lead	M	mg/kg	5	11.4
Mercury	M	mg/kg	0.5	< 0.5
Nickel	M	mg/kg	5	29.2
Selenium	M	mg/kg	1	< 1.0
Zinc	M	mg/kg	5	48.0
Inorganics				
Total Sulphide	N	mg/kg	2	< 2
Acid Soluble Sulphate (SO4)	U	%	0.02	0.02
Water Soluble Boron	N	mg/kg	0.5	< 0.5
Miscellaneous				
Fraction of Organic Carbon	N		0.0001	0.0020
pH	М	pH units	0.1	8.3
Polyaromatic hydrocarbons				
Naphthalene	M	mg/kg	0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1
Fluorene	М	mg/kg	0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	< 0.1
Anthracene	M	mg/kg	0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	< 0.1
Pyrene	М	mg/kg	0.1	< 0.1
Benzo(a)anthracene	М	mg/kg	0.1	< 0.1
Chrysene	M	mg/kg	0.1	< 0.1
Benzo(b)fluoranthene	M	mg/kg	0.1	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	< 0.1
Benzo(a)pyrene	M	mg/kg	0.1	< 0.1
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	< 0.1
Dibenzo(a,h)anthracene	М	mg/kg	0.1	< 0.1
Benzo[g,h,i]perylene	М	mg/kg	0.1	< 0.1
Total PAH(16)	M	mg/kg	0.4	< 0.4



ELAB Reference					
Customer Reference					
			Sample ID		
		Sa	mple Type	SOIL	
			e Location	CP04	
		•	Depth (m)	2.50	
			• • • •		
r			pling Date	04/03/2021	
Determinand	Codes	Units	LOD		
TPH CWG					
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01	
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01	
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0	
>C10-C12 Aliphatic	N	mg/kg	1	< 1.0	
>C12-C16 Aliphatic	N	mg/kg	1	< 1.0	
>C16-C21 Aliphatic	N	mg/kg	1	< 1.0	
>C21-C35 Aliphatic	N	mg/kg	1	< 1.0	
>C35-C40 Aliphatic	N	mg/kg	1	< 1.0	
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01	
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01	
>C8-C10 Aromatic	N	mg/kg	1	< 1.0	
>C10-C12 Aromatic	N	mg/kg	1	< 1.0	
>C12-C16 Aromatic	N	mg/kg	1	< 1.0	
>C16-C21 Aromatic	N	mg/kg	1	< 1.0	
>C21-C35 Aromatic	N	mg/kg	1	1.4	
>C35-C40 Aromatic	N	mg/kg	1	< 1.0	
Total (>C5-C40) Ali/Aro N mg/kg 1					
Total Petroleum Hydrocarbons					
PAH Fingerprint	N	n/a	0	n/a	
TPH Fingerprint	N	n/a	0	n/a	



Unit A2, Windmill Road, Ponswood Industrial Estate, St Leonards on Sea, East Sussex, TN38 9BY Tel: +44 (0)1424 718618, Email: info@elab-uk.co.uk, Web: www.elab-uk.co.uk

## **Results Summary**

Report No.: 21-32578, issue number 1

#### **Asbestos Results**

Analytical result only applies to the sample as submitted by the client. Any comments, opinions or interpretations (marked #) in this report are outside UKAS accreditation (Accreditation No2683). They are subjective comments only which must be verified by the client.

Elab No	Depth (m)	Clients Reference	Description of Sample Matrix #	Asbestos Identification	Gravimetric	Gravimetric	Free Fibre	Total
					Analysis Total	Analysis by ACM	Analysis	Asbestos
					(%)	Type (%)	(%)	(%)
230022	2.50	CP04	Brown Soil,Stones	No asbestos detected	n/t	n/t	n/t	n/t



Method Summary Report No.: 21-32578, issue number 1

Parameter	Codes	Analysis Undertaken	Date	Method	Technique
		On	Tested	Number	
Soil					
Sulphide	N	As submitted sample	11/03/2021	109	Colorimetry
рН	М	Air dried sample	15/03/2021	113	Electromeric
Acid Soluble Sulphate	U	Air dried sample	12/03/2021	115	Ion Chromatography
PAH (GC-FID)	М	As submitted sample	11/03/2021	133	GC-FID
Low range Aliphatic hydrocarbons soil	N	As submitted sample	15/03/2021	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	15/03/2021	181	GC-MS
Water soluble boron	N	Air dried sample	11/03/2021	202	Colorimetry
Total organic carbon/Total sulphur	N	Air dried sample	12/03/2021	210	IR
Aliphatic hydrocarbons in soil	N	As submitted sample	11/03/2021	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	15/03/2021	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	11/03/2021	214	GC-FID
Asbestos identification	U	Air dried sample	12/03/2021	280	Microscopy
Aqua regia extractable metals	М	Air dried sample	11/03/2021	300	ICPMS

Tests marked N are not UKAS accredited



## **Report Information**

## Report No.: 21-32578, issue number 1

Key

Key	
U	hold UKAS accreditation
М	hold MCERTS and UKAS accreditation
Ν	do not currently hold UKAS accreditation
۸	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination.
	Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed.
	ELAB are unable to provide an interpretation or opinion on the content of this report.
	The results relate only to the sample received.
	PCB congener results may include any coeluting PCBs
	Uncertainty of measurement for the determinands tested are available upon request Unless otherwise stated, sample information has been provided by the client. This may
	affect the validity of the results.
Deviation	Codes
а	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
С	Sample not received in appropriate containers

- d Sample not received in cooled condition
- e The container has been incorrectly filled
- f Sample age exceeds stability time (sampling to receipt)
- g Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

### Sample Retention and Disposal

All soil samples will be retained for a period of one month All water samples will be retained for 7 days following the date of the test report Charges may apply to extended sample storage



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## THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number: 21-32479

- Issue:
- **Date of Issue:** 09/03/2021
- Contact: Sam Parry
- Customer Details: CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool

MersevsideL33 7BA

1

- **Quotation No:** Q17-00806
- Order No: Not Supplied

Customer Reference: CCG-C-21-12093

**Date Received:** 05/03/2021

**Date Approved:** 09/03/2021

Cottam Parkway Station

Approved by:

**Details:** 

Mike Varley, Technical Manager

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683

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## Sample Summary

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
229443	CP05 0.20	01/03/2021	05/03/2021	Silty loam	
229444	CP05 0.70	01/03/2021	05/03/2021	Silty clayey loam	
229445	CP05 1.20	01/03/2021	05/03/2021		
229446	CP05 2.50	01/03/2021	05/03/2021		
229447	CP05 2.50	01/03/2021	05/03/2021		
229448	CP05 5.50	01/03/2021	05/03/2021	Silty clayey loam	



•	ELAB Reference				229444	229448
Customer Reference						
	Sample ID					
		Sa	mple Type	SOIL	SOIL	SOIL
			e Location	CP05	CP05	CP05
			Depth (m)		0.70	5.50
		Sam	pling Date	01/03/2021	01/03/2021	01/03/2021
Determinand	Codes	Units	LOD			
Soil sample preparation paramet	ers					
Material removed	N	%	0.1	< 0.1	< 0.1	< 0.1
Description of Inert material removed	N		0	None	None	None
Metals						
Arsenic	M	mg/kg	1	10.0	11.1	9.2
Cadmium	M	mg/kg	0.5	< 0.5	< 0.5	< 0.5
Chromium	М	mg/kg	5	32.2	42.2	34.2
Copper	М	mg/kg	5	25.6	19.1	18.5
Lead	М	mg/kg	5	54.5	18.2	14.9
Mercury	М	mg/kg	0.5	< 0.5	< 0.5	< 0.5
Nickel	М	mg/kg	5	24.6	28.7	31.6
Selenium	М	mg/kg	1	< 1.0	< 1.0	< 1.0
Zinc	М	mg/kg	5	77.4	41.6	53.6
Inorganics						
Total Sulphide	N	mg/kg	2	< 2	< 2	< 2
Acid Soluble Sulphate (SO4)	U	%	0.02	0.03	0.02	0.04
Water Soluble Boron	N	mg/kg	0.5	1.0	0.9	1.3
Miscellaneous	-					
Fraction of Organic Carbon	N		0.0001	0.0121	0.0035	0.0028
pH	М	pH units	0.1	6.8	7.0	8.4
Polyaromatic hydrocarbons						
Naphthalene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	М	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	М	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Fluorene	М	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	М	mg/kg	0.1	0.4	< 0.1	< 0.1
Anthracene	М	mg/kg	0.1	0.1	< 0.1	< 0.1
Fluoranthene	М	mg/kg	0.1	0.6	< 0.1	< 0.1
Pyrene	M	mg/kg	0.1	0.5	< 0.1	< 0.1
Benzo(a)anthracene	M	mg/kg	0.1	0.3	< 0.1	< 0.1
Chrysene	M	mg/kg	0.1	0.3	< 0.1	< 0.1
Benzo(b)fluoranthene	M	mg/kg	0.1	0.3	< 0.1	< 0.1
Benzo(k)fluoranthene	М	mg/kg	0.1	0.3	< 0.1	< 0.1
Benzo(a)pyrene	М	mg/kg	0.1	0.2	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	0.1	< 0.1	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	0.1	< 0.1	< 0.1
Total PAH(16)	M	mg/kg	0.4	3.6	< 0.4	< 0.4



	ELAB Reference					229448
			Sample ID			
			, mple Type	SOIL	SOIL	SOIL
			e Location	CP05	CP05	CP05
		•	Depth (m)		0.70	5.50
		Sam	pling Date	01/03/2021	01/03/2021	01/03/2021
Determinand	Codes	Units	LOD			
TPH CWG						
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C10-C12 Aliphatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C12-C16 Aliphatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C16-C21 Aliphatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C21-C35 Aliphatic	N	mg/kg	1	7.5	3.0	< 1.0
>C35-C40 Aliphatic	N	mg/kg	1	3.3	1.5	< 1.0
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
>C8-C10 Aromatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C10-C12 Aromatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C12-C16 Aromatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C16-C21 Aromatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C21-C35 Aromatic	N	mg/kg	1	3.8	< 1.0	< 1.0
>C35-C40 Aromatic	N	mg/kg	1	2.0	< 1.0	< 1.0
Total (>C5-C40) Ali/Aro	tal (>C5-C40) Ali/Aro N mg/kg 1					< 1.0
Total Petroleum Hydrocarbons						
PAH Fingerprint	N	n/a	0	n/a	n/a	n/a
TPH Fingerprint	N	n/a	0	n/a	n/a	n/a



		ELAB Reference		
	C	Customer	Reference	
		\$	Sample ID	
		Sai	mple Type	WATER
		Sample	e Location	CP05
		Sample	Depth (m)	2.50
		Sam	pling Date	01/03/2021
Determinand	Codes	Units	LOD	
Anions				
Sulphate	U	U mg/l 0.5		
Miscellaneous				
рН	U	pH units	0.1	7.3



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## **Results Summary**

Report No.: 21-32479, issue number 1

#### **Asbestos Results**

Analytical result only applies to the sample as submitted by the client. Any comments, opinions or interpretations (marked #) in this report are outside UKAS accreditation (Accreditation No2683). They are subjective comments only which must be verified by the client.

Elab No	Depth (m)	Clients Reference	Description of Sample Matrix #	Asbestos Identification	Gravimetric	Gravimetric	Free Fibre	Total
					Analysis Total	Analysis by ACM	Analysis	Asbestos
					(%)	Type (%)	(%)	(%)
229443	0.20	CP05	Brown soil, stones	No asbestos detected	n/t	n/t	n/t	n/t
229444	0.70	CP05	Brown soil (clay)	No asbestos detected	n/t	n/t	n/t	n/t
229448	5.50	CP05	Brown soil (clay), stones	No asbestos detected	n/t	n/t	n/t	n/t



Method Summary Report No.: 21-32479, issue number 1

Parameter	Codes	Analysis Undertaken	Date	Method	Technique
	Coues	On	Tested	Number	recinique
Soil					
Sulphide	N	As submitted sample	08/03/2021	109	Colorimetry
рН	M	Air dried sample	09/03/2021	113	Electromeric
Acid Soluble Sulphate	U	Air dried sample	09/03/2021	115	Ion Chromatography
PAH (GC-FID)	M	As submitted sample	08/03/2021	133	GC-FID
Low range Aliphatic hydrocarbons soil	N	As submitted sample	09/03/2021	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	09/03/2021	181	GC-MS
Water soluble boron	N	Air dried sample	08/03/2021	202	Colorimetry
Total organic carbon/Total sulphur	N	Air dried sample	09/03/2021	210	IR
Aliphatic hydrocarbons in soil	N	As submitted sample	08/03/2021	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	09/03/2021	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	08/03/2021	214	GC-FID
Asbestos identification	U	Air dried sample	08/03/2021	280	Microscopy
Aqua regia extractable metals	M	Air dried sample	08/03/2021	300	ICPMS
Water					
pH of waters	U		08/03/2021	113	Electromeric
Anions	U		08/03/2021	270	Ion Chromatography

Tests marked N are not UKAS accredited



## **Report Information**

## Report No.: 21-32479, issue number 1

Key

Key	
U	hold UKAS accreditation
М	hold MCERTS and UKAS accreditation
Ν	do not currently hold UKAS accreditation
۸	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination.
	Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed.
	ELAB are unable to provide an interpretation or opinion on the content of this report.
	The results relate only to the sample received.
	PCB congener results may include any coeluting PCBs
	Uncertainty of measurement for the determinands tested are available upon request Unless otherwise stated, sample information has been provided by the client. This may
	affect the validity of the results.
Deviation	Codes
а	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
С	Sample not received in appropriate containers

- d Sample not received in cooled condition
- e The container has been incorrectly filled
- f Sample age exceeds stability time (sampling to receipt)
- g Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

### Sample Retention and Disposal

All soil samples will be retained for a period of one month All water samples will be retained for 7 days following the date of the test report Charges may apply to extended sample storage



Unit A2 Windmill Road Ponswood Industrial Estate St Leonards on Sea East Sussex TN38 9BY Telephone: (01424) 718618

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## THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number: 21-32810

- Issue:
- **Date of Issue:** 29/03/2021
- Contact: Sam Parry
- Customer Details: CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool

1

Liverpool MersevsideL33 7BA

- **Quotation No:** Q17-00806
- Order No: Not Supplied
- Customer Reference: 21-12093

**Date Received:** 24/03/2021

**Date Approved:** 29/03/2021

Cottam Parkway Station

Approved by:

**Details:** 

Mike Varley, Technical Manager

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683

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## Sample Summary

Elab No.	Client's Ref.	<b>Date Sampled</b>	Date Scheduled	Description	Deviations
231425	CP05 Natural 6.50	01/03/2021	24/03/2021	Silty clayey loam	



Report No.: 21-32810, issue number 1

		ELAB	Reference	231425		
	Customer Reference					
	Sample ID					
Sample Type DIS						
		Sampl	e Location	CP05		
	5	Sample	Depth (m)	6.50		
		Sam	pling Date	01/03/2021		
Determinand	Codes	Units	LOD			
Soil sample preparation parame	ters					
Material removed	N	%	0.1	< 0.1		
Description of Inert material removed	N		0	None		
Anions						
Water Soluble Sulphate	M	g/l	0.02	0.04		
Inorganics						
Acid Soluble Sulphate (SO4)	U	%	0.02	0.04		



Method Summary Report No.: 21-32810, issue number 1

Parameter		Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Acid Soluble Sulphate	U	Air dried sample	26/03/2021	115	Ion Chromatography
Water soluble anions	М	Air dried sample	25/03/2021	172	Ion Chromatography



## **Report Information**

## Report No.: 21-32810, issue number 1

Key

Key	
U	hold UKAS accreditation
М	hold MCERTS and UKAS accreditation
Ν	do not currently hold UKAS accreditation
۸	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination. Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed. ELAB are unable to provide an interpretation or opinion on the content of this report. The results relate only to the sample received. PCB congener results may include any coeluting PCBs Uncertainty of measurement for the determinands tested are available upon request Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.
Deviation	•
а	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
С	Sample not received in appropriate containers

- d Sample not received in cooled condition
- e The container has been incorrectly filled
- f Sample age exceeds stability time (sampling to receipt)
- g Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

### Sample Retention and Disposal

All soil samples will be retained for a period of one month All water samples will be retained for 7 days following the date of the test report Charges may apply to extended sample storage



Unit A2 Windmill Road Ponswood Industrial Estate St Leonards on Sea East Sussex TN38 9BY Telephone: (01424) 718618

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## THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-32591
Issue:	1
Date of Issue:	17/03/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	11/03/2021
Date Approved:	17/03/2021
Details:	Cottam Parkway Station
Approved by:	2 Nm

Mike Varley, Technical Manager

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## Sample Summary

Elab No.	Client's Ref.	<b>Date Sampled</b>	Date Scheduled	Description	Deviations
230095	CP06 0.15	09/03/2021	11/03/2021	Silty loam	
230096	CP06 0.15	09/03/2021	11/03/2021	Sand	
230097	CP06 3.70	09/03/2021	11/03/2021		



•		ELAB	230095	230096	
	C	Customer	Reference		
		:	Sample ID		
			mple Type	SOIL	SOIL
		•	e Location	CP06	CP06
		Sample	Depth (m)	0.15	0.15
		Sam	pling Date	09/03/2021	09/03/2021
Determinand	Codes	Units	LOD		
Soil sample preparation paramet	ers				
Material removed	N	%	0.1	< 0.1	< 0.1
Description of Inert material removed	N		0	None	None
Metals					
Arsenic	M	mg/kg	1	9.5	5.6
Cadmium	M	mg/kg	0.5	< 0.5	< 0.5
Chromium	M	mg/kg	5	25.4	14.2
Copper	M	mg/kg	5	23.6	10.4
Lead	M	mg/kg	5	41.9	9.4
Mercury	M	mg/kg	0.5	< 0.5	< 0.5
Nickel	M	mg/kg	5	16.2	13.8
Selenium	M	mg/kg	1	< 1.0	< 1.0
Zinc	M	mg/kg	5	64.4	24.4
Inorganics					
Total Sulphide	N	ma/ka	2	< 2	< 2
Acid Soluble Sulphate (SO4)	U	mg/kg %	2	0.05	0.02
Water Soluble Boron	N		0.02	0.05	< 0.5
	IN	mg/kg	0.5	0.9	< 0.5
Miscellaneous					
Fraction of Organic Carbon	N		0.0001	0.0282	0.0012
pH	M	pH units	0.1	6.7	8.5
Polyaromatic hydrocarbons					
Naphthalene	M	mg/kg	0.1	< 0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	0.2	< 0.1
Anthracene	М	mg/kg	0.1	< 0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	0.4	< 0.1
Pyrene	М	mg/kg	0.1	0.4	< 0.1
Benzo(a)anthracene	M	mg/kg	0.1	0.2	< 0.1
Chrysene	М	mg/kg	0.1	0.3	< 0.1
Benzo(b)fluoranthene	М	mg/kg	0.1	0.3	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	0.4	< 0.1
Benzo(a)pyrene	M	mg/kg	0.1	0.2	< 0.1
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	0.2	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1	< 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	0.1	< 0.1
Total PAH(16)	M	mg/kg	0.4	2.9	< 0.4



	Reference	230095	230096		
	Reference				
	Sample ID				
		Sa	mple Type	SOIL	SOIL
		Sampl	le Location	CP06	CP06
		•	Depth (m)		0.15
		•	• • •		
				09/03/2021	09/03/2021
Determinand	Codes	Units	LOD		
TPH CWG					
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01	< 0.01
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01	< 0.01
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0	< 1.0
>C10-C12 Aliphatic	N	mg/kg	1	< 1.0	< 1.0
>C12-C16 Aliphatic	N	mg/kg	1	< 1.0	< 1.0
>C16-C21 Aliphatic	N	mg/kg	1	< 1.0	< 1.0
>C21-C35 Aliphatic	N	mg/kg	1	< 1.0	< 1.0
>C35-C40 Aliphatic	N	mg/kg	1	< 1.0	< 1.0
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01	< 0.01
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01	< 0.01
>C8-C10 Aromatic	N	mg/kg	1	< 1.0	< 1.0
>C10-C12 Aromatic	N	mg/kg	1	< 1.0	< 1.0
>C12-C16 Aromatic	N	mg/kg	1	< 1.0	< 1.0
>C16-C21 Aromatic	N	mg/kg	1	< 1.0	< 1.0
>C21-C35 Aromatic	N	mg/kg	1	< 1.0	< 1.0
>C35-C40 Aromatic	N	mg/kg	1	< 1.0	< 1.0
Total (>C5-C40) Ali/Aro	N	mg/kg	1	< 1.0	< 1.0
Total Petroleum Hydrocarbons					
PAH Fingerprint	N	n/a	0	n/a	n/a
TPH Fingerprint	N	n/a	0	n/a	n/a



		ELAB Reference			
	C	Customer Reference			
		\$	Sample ID		
		mple Type	WATER		
	Sample Location				
		Sample	Depth (m)	3.70	
		Sam	pling Date	09/03/2021	
Determinand	Codes	Units	LOD		
Anions					
Sulphate	U	U mg/l 0.5			
Miscellaneous					
рН	U	pH units	0.1	7.5	



Unit A2, Windmill Road, Ponswood Industrial Estate, St Leonards on Sea, East Sussex, TN38 9BY Tel: +44 (0)1424 718618, Email: info@elab-uk.co.uk, Web: www.elab-uk.co.uk

## **Results Summary**

Report No.: 21-32591, issue number 1

#### **Asbestos Results**

Analytical result only applies to the sample as submitted by the client. Any comments, opinions or interpretations (marked #) in this report are outside UKAS accreditation (Accreditation No2683). They are subjective comments only which must be verified by the client.

Elab No	Depth (m)	Clients Reference	Description of Sample Matrix #	Asbestos Identification	Gravimetric	Gravimetric	Free Fibre	Total
					Analysis Total	Analysis by ACM	Analysis	Asbestos
					(%)	Type (%)	(%)	(%)
230095	0.15	CP06	Brown Sandy Soil, Stones	No asbestos detected	n/t	n/t	n/t	n/t
230096	0.15	CP06	Brown Sandy Soil	No asbestos detected	n/t	n/t	n/t	n/t



Method Summary Report No.: 21-32591, issue number 1

Parameter	Codes	Analysis Undertaken	Date	Method	Technique
	ooues	On	Tested	Number	rechnique
Soil					
Sulphide	N	As submitted sample	12/03/2021	109	Colorimetry
рН	M	Air dried sample	15/03/2021	113	Electromeric
Acid Soluble Sulphate	U	Air dried sample	15/03/2021	115	Ion Chromatography
PAH (GC-FID)	M	As submitted sample	12/03/2021	133	GC-FID
Low range Aliphatic hydrocarbons soil	N	As submitted sample	15/03/2021	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	15/03/2021	181	GC-MS
Water soluble boron	N	Air dried sample	12/03/2021	202	Colorimetry
Total organic carbon/Total sulphur	N	Air dried sample	15/03/2021	210	IR
Aliphatic hydrocarbons in soil	N	As submitted sample	12/03/2021	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	15/03/2021	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	12/03/2021	214	GC-FID
Asbestos identification	U	Air dried sample	15/03/2021	280	Microscopy
Aqua regia extractable metals	M	Air dried sample	12/03/2021	300	ICPMS
Water					
pH of waters	U		12/03/2021	113	Electromeric
Anions	U		12/03/2021	270	Ion Chromatography

Tests marked N are not UKAS accredited



## **Report Information**

## Report No.: 21-32591, issue number 1

Key

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U	hold UKAS accreditation
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Ν	do not currently hold UKAS accreditation
^	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
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SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination. Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed. ELAB are unable to provide an interpretation or opinion on the content of this report. The results relate only to the sample received. PCB congener results may include any coeluting PCBs Uncertainty of measurement for the determinands tested are available upon request Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.
Deviation	
а	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
С	Sample not received in appropriate containers

- d Sample not received in cooled condition
- e The container has been incorrectly filled
- f Sample age exceeds stability time (sampling to receipt)
- g Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

### Sample Retention and Disposal

All soil samples will be retained for a period of one month All water samples will be retained for 7 days following the date of the test report Charges may apply to extended sample storage



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## THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number: 21-32811

- Issue:
- **Date of Issue:** 29/03/2021
- Contact: Sam Parry
- Customer Details: CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool

MersevsideL33 7BA

1

**Quotation No:** Q17-00806

Order No: Not Supplied

Customer Reference: 21-12093

**Date Received:** 24/03/2021

**Date Approved:** 29/03/2021

Cottam Parkway Station

Approved by:

**Details:** 

Mike Varley, Technical Manager

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683

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## Sample Summary

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
231426	CP06 Natural 6.00	09/03/2021	24/03/2021	Silty clayey loam	



		ELAB	Reference	231426	
	Natural				
			Sample ID		
		Sa	mple Type	DISTURBED	
		Sampl	e Location	CP06	
	5	Sample	Depth (m)	6.00	
		Sam	pling Date	09/03/2021	
Determinand	Codes	Units	LOD		
Soil sample preparation parameters					
Material removed	N	%	0.1	< 0.1	
Description of Inert material removed	N		0	None	
Anions					
Water Soluble Sulphate	М	g/l	0.02	0.03	
Inorganics					
Acid Soluble Sulphate (SO4)	U	%	0.02	0.05	



Method Summary Report No.: 21-32811, issue number 1

Parameter		Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Acid Soluble Sulphate	U	Air dried sample	26/03/2021	115	Ion Chromatography
Water soluble anions		Air dried sample	25/03/2021	172	Ion Chromatography



## **Report Information**

## Report No.: 21-32811, issue number 1

Key

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М	hold MCERTS and UKAS accreditation
Ν	do not currently hold UKAS accreditation
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SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
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>	means "greater than"
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Deviation	•
а	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
С	Sample not received in appropriate containers

- d Sample not received in cooled condition
- e The container has been incorrectly filled
- f Sample age exceeds stability time (sampling to receipt)
- g Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

### Sample Retention and Disposal

All soil samples will be retained for a period of one month All water samples will be retained for 7 days following the date of the test report Charges may apply to extended sample storage



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## THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-33082
Issue:	1
Date of Issue:	15/04/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	08/04/2021
Date Approved:	15/04/2021
Details:	Cottam Parkway Station
Approved by:	E Vr

Mike Varley, Technical Manager

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# Sample Summary

Elab No.	Client's Ref.	Date Sampled	Date Schedule	d Description	Deviations
232849	TP01 0.40	23/03/2021	08/04/2021	Silty loam	



Report No.: 21-33082, issue number 1

		ELAB	Reference	232849
			Sample ID	
		Sa	mple Type	BULK
		Sampl	e Location	TP01
	5	Sample	Depth (m)	0.40
		Sam	pling Date	23/03/2021
Determinand	Codes	Units	LOD	
Soil sample preparation paramet	ers			
Material removed	N	%	0.1	< 0.1
Description of Inert material removed	N		0	None
Anions				
Water Soluble Sulphate	М	g/l	0.02	< 0.02
Inorganics				
Acid Soluble Sulphate (SO4)	U	%	0.02	0.02

1



Method Summary Report No.: 21-33082, issue number 1

Parameter		Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Acid Soluble Sulphate	U	Air dried sample	15/04/2021	115	Ion Chromatography
Water soluble anions		Air dried sample	13/04/2021	172	Ion Chromatography



## **Report Information**

## Report No.: 21-33082, issue number 1

Key

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М	hold MCERTS and UKAS accreditation
Ν	do not currently hold UKAS accreditation
۸	MCERTS accreditation not applicable for sample matrix
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S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
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LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination. Soil sample results are expressed on an air dried basis (dried at < 30°C), and are
	uncorrected for inert material removed.
	ELAB are unable to provide an interpretation or opinion on the content of this report.
	The results relate only to the sample received.
	PCB congener results may include any coeluting PCBs
	Uncertainty of measurement for the determinands tested are available upon request Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.
Deviation	
а	No date of sampling supplied
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С	Sample not received in appropriate containers

- d Sample not received in cooled condition
- e The container has been incorrectly filled
- f Sample age exceeds stability time (sampling to receipt)
- g Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

### Sample Retention and Disposal

All soil samples will be retained for a period of one month All water samples will be retained for 7 days following the date of the test report Charges may apply to extended sample storage



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### THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-32885
Issue:	1
Date of Issue:	06/04/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	29/03/2021
Date Approved:	06/04/2021
Details:	Cottam Parkway Station
Approved by:	e JVn

Mike Varley, Technical Manager

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# Sample Summary

Report No.: 21-32885, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
231869	TP01 0.50	23/03/2021	29/03/2021	Silty clayey loam	



Report No.: 21-32885, issue number 1

•	ELAB Reference					
	Customer Reference					
			Sample ID			
			•	SOIL		
Sample Type						
		Sampl	e Location	TP01		
		Sample	Depth (m)	0.50		
		Sam	pling Date	23/03/2021		
Determinand	Codes	Units	LOD			
Soil sample preparation paramet	ters					
Material removed	N	%	0.1	< 0.1		
Description of Inert material removed	N	70	0	None		
Metals			•			
	N4	ma m/l cm	1	0.0		
Arsenic	M	mg/kg	0.5	8.3 < 0.5		
Cadmium	M	mg/kg				
Chromium	M	mg/kg	5	40.2		
Copper	M	mg/kg	5 5	15.7		
Lead Mercury	M	mg/kg	0.5	15.0 < 0.5		
Nickel	M	mg/kg mg/kg	5	39.6		
Selenium	M		1	< 1.0		
Zinc	M	mg/kg mg/kg	5	43.6		
	IVI	шу/ку	5	43.0		
Inorganics						
Total Sulphide	N	mg/kg	2	< 2		
Acid Soluble Sulphate (SO4)	U	%	0.02	< 0.02		
Water Soluble Boron	N	mg/kg	0.5	< 0.5		
Miscellaneous						
Fraction of Organic Carbon	N		0.0001	0.0032		
pH	M	pH units	0.1	8.2		
Polyaromatic hydrocarbons	-					
Naphthalene	M	mg/kg	0.1	< 0.1		
Acenaphthylene	М	mg/kg	0.1	< 0.1		
Acenaphthene	M	mg/kg	0.1	< 0.1		
Fluorene	M	mg/kg	0.1	< 0.1		
Phenanthrene	M	mg/kg	0.1	< 0.1		
Anthracene	М	mg/kg	0.1	< 0.1		
Fluoranthene	M	mg/kg	0.1	< 0.1		
Pyrene	М	mg/kg	0.1	< 0.1		
Benzo(a)anthracene	М	mg/kg	0.1	< 0.1		
Chrysene	М	mg/kg	0.1	< 0.1		
Benzo(b)fluoranthene	М	mg/kg	0.1	< 0.1		
Benzo(k)fluoranthene	М	mg/kg	0.1	< 0.1		
Benzo(a)pyrene	M	mg/kg	0.1	< 0.1		
Indeno(1,2,3-cd)pyrene	М	mg/kg	0.1	< 0.1		
Dibenzo(a,h)anthracene	М	mg/kg	0.1	< 0.1		
Benzo[g,h,i]perylene	M	mg/kg	0.1	< 0.1		
Total PAH(16)	M	mg/kg	0.4	< 0.4		



### Report No.: 21-32885, issue number 1

ELAB Reference					
Customer Reference					
Sample ID					
		Sa	mple Type	SOIL	
		Sampl	e Location	TP01	
		Sample	Depth (m)	0.50	
		Sam	pling Date	23/03/2021	
Determinand	Codes	Units	LOD		
TPH CWG					
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01	
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01	
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0	
>C10-C12 Aliphatic	N	mg/kg	1	< 1.0	
>C12-C16 Aliphatic	N	mg/kg	1	< 1.0	
>C16-C21 Aliphatic	N	mg/kg	1	< 1.0	
>C21-C35 Aliphatic	N	mg/kg	1	< 1.0	
>C35-C40 Aliphatic	N	mg/kg	1	< 1.0	
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01	
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01	
>C8-C10 Aromatic	N	mg/kg	1	< 1.0	
>C10-C12 Aromatic	N	mg/kg	1	< 1.0	
>C12-C16 Aromatic	N	mg/kg	1	< 1.0	
>C16-C21 Aromatic	N	mg/kg	1	< 1.0	
>C21-C35 Aromatic	N	mg/kg	1	< 1.0	
>C35-C40 Aromatic	N	mg/kg	1	< 1.0	
Total (>C5-C40) Ali/Aro	N	mg/kg	1	< 1.0	
Total Petroleum Hydrocarbons					
PAH Fingerprint	N	n/a	0	n/a	
TPH Fingerprint	N	n/a	0	n/a	



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#### **Results Summary**

Report No.: 21-32885, issue number 1

#### Asbestos Results

Analytical result only applies to the sample as submitted by the client. Any comments, opinions or interpretations (marked #)

in this report are outside UKAS accreditation (Accreditation No2683). They are subjective comments only which must be verified by the client

Elab No Depth (m)	<b>Clients Reference</b>	Description of Sample Matrix #	Asbestos	Gravimetric Analysis Total	Gravimetric Analysis by ACM Type	Free Fibre Analysis	Total Asbestos
231869 0.50	TP01	Brown soil, stones	No asbestos detected	n/t	n/t	n/t	n/t



Method Summary Report No.: 21-32885, issue number 1

Parameter	Codes	Analysis Undertaken	Date	Method	Technique
- ···		On	Tested	Number	· ·
Soil					
Sulphide	N	As submitted sample	30/03/2021	109	Colorimetry
рН	М	Air dried sample	01/04/2021	113	Electromeric
Acid Soluble Sulphate	U	Air dried sample	31/03/2021	115	Ion Chromatography
PAH (GC-FID)	М	As submitted sample	30/03/2021	133	GC-FID
Low range Aliphatic hydrocarbons soil	N	As submitted sample	31/03/2021	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	31/03/2021	181	GC-MS
Water soluble boron	N	Air dried sample	30/03/2021	202	Colorimetry
Total organic carbon/Total sulphur	N	Air dried sample	31/03/2021	210	IR
Aliphatic hydrocarbons in soil	N	As submitted sample	30/03/2021	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	31/03/2021	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	30/03/2021	214	GC-FID
Asbestos identification	U	Air dried sample	31/03/2021	280	Microscopy
Aqua regia extractable metals	М	Air dried sample	30/03/2021	300	ICPMS

Tests marked N are not UKAS accredited



### **Report Information**

#### Report No.: 21-32885, issue number 1

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### THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-33084
Issue:	1
Date of Issue:	15/04/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	08/04/2021
Date Approved:	15/04/2021
Details:	Cottam Parkway Station
Approved by:	SUVA-

Mike Varley, Technical Manager

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# Sample Summary

Report No.: 21-33084, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
232850	TP02 1.00	23/03/2021	08/04/2021	Silty loam	



Report No.: 21-33084, issue number 1

ELAB Reference					
	Reference				
			Sample ID		
		Sa	mple Type	BULK	
		Sampl	e Location	TP02	
	5	Sample	Depth (m)	1.00	
	Sampling Date 2				
Determinand Codes Units LOD					
Soil sample preparation parameters					
Material removed	N	%	0.1	< 0.1	
Description of Inert material removed	escription of Inert material removed N 0				
Anions					
Water Soluble Sulphate M g/l 0.02					
Inorganics					
Acid Soluble Sulphate (SO4)	U	%	0.02	< 0.02	

1



Method Summary Report No.: 21-33084, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Acid Soluble Sulphate	U	Air dried sample	15/04/2021	115	Ion Chromatography
Water soluble anions	М	Air dried sample	13/04/2021	172	Ion Chromatography



### **Report Information**

#### Report No.: 21-33084, issue number 1

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<b>-</b>	affect the validity of the results.
Deviation	Codes

- a No date of sampling supplied
- b No time of sampling supplied (Waters Only)
- c Sample not received in appropriate containers
- d Sample not received in cooled condition
- e The container has been incorrectly filled
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### THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-32886
Issue:	1
Date of Issue:	06/04/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	29/03/2021
Date Approved:	06/04/2021
Details:	Cottam Parkway Station
Approved by:	e Nazer

Mike Varley, Technical Manager

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# Sample Summary

Report No.: 21-32886, issue number 1

Elab No.	Client's Ref.	<b>Date Sampled</b>	Date Scheduled	Description	Deviations
231870	TP02 1.50	23/03/2021	29/03/2021	Sandy silty loam	



Report No.: 21-32886, issue number 1

• •				
		Reference	231870	
	(	Customer	Reference	
		:	Sample ID	
			mple Type	SOIL
			e Location	TP02
		•		-
			Depth (m)	1.50
		Sam	pling Date	23/03/2021
Determinand	Codes	Units	LOD	
Soil sample preparation parame	ters			
Material removed	N	%	0.1	< 0.1
Description of Inert material removed	N		0	None
Metals				
Arsenic	М	mg/kg	1	10.9
Cadmium	М	mg/kg	0.5	< 0.5
Chromium	М	mg/kg	5	37.0
Copper	М	mg/kg	5	21.2
Lead	М	mg/kg	5	12.8
Mercury	M	mg/kg	0.5	< 0.5
Nickel	M	mg/kg	5	40.4
Selenium	M	mg/kg	1	< 1.0
Zinc	M	mg/kg	5	52.1
Inorganics				
Total Sulphide	N	mg/kg	2	< 2
Acid Soluble Sulphate (SO4)	U	%	0.02	< 0.02
Water Soluble Boron	N	mg/kg	0.5	< 0.5
Miscellaneous				
Fraction of Organic Carbon	N		0.0001	0.0017
pH	M	pH units	0.1	8.1
Polyaromatic hydrocarbons				
Naphthalene	M	mg/kg	0.1	< 0.1
Acenaphthylene	М	mg/kg	0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1
Phenanthrene	М	mg/kg	0.1	< 0.1
Anthracene	М	mg/kg	0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	< 0.1
Pyrene	M	mg/kg	0.1	< 0.1
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1
Chrysene	М	mg/kg	0.1	< 0.1
Benzo(b)fluoranthene	М	mg/kg	0.1	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	< 0.1
Benzo(a)pyrene	М	mg/kg	0.1	< 0.1
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	< 0.1
Total PAH(16)	M	mg/kg	0.4	< 0.4



### Report No.: 21-32886, issue number 1

ELAB Reference						
	C	Sustomer	Reference			
			Sample ID			
	Sample Type					
			e Location	TP02		
			Depth (m)	1.50		
		•				
			pling Date	23/03/2021		
Determinand	Codes	Units	LOD			
TPH CWG						
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01		
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01		
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0		
>C10-C12 Aliphatic	N	mg/kg	1	< 1.0		
>C12-C16 Aliphatic	N	mg/kg	1	< 1.0		
>C16-C21 Aliphatic	N	mg/kg	1	< 1.0		
>C21-C35 Aliphatic	N	mg/kg	1	< 1.0		
>C35-C40 Aliphatic	N	mg/kg	1	< 1.0		
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01		
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01		
>C8-C10 Aromatic	N	mg/kg	1	< 1.0		
>C10-C12 Aromatic	N	mg/kg	1	< 1.0		
>C12-C16 Aromatic	N	mg/kg	1	< 1.0		
>C16-C21 Aromatic	N	mg/kg	1	< 1.0		
>C21-C35 Aromatic	N	mg/kg	1	< 1.0		
>C35-C40 Aromatic	N	mg/kg	1	< 1.0		
Total (>C5-C40) Ali/Aro	N	mg/kg	1	< 1.0		
Total Petroleum Hydrocarbons						
PAH Fingerprint	N	n/a	0	n/a		
TPH Fingerprint	N	n/a	0	n/a		



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#### **Results Summary**

Report No.: 21-32886, issue number 1

#### Asbestos Results

Analytical result only applies to the sample as submitted by the client. Any comments, opinions or interpretations (marked #)

in this report are outside UKAS accreditation (Accreditation No2683). They are subjective comments only which must be verified by the client

Elab No Depth	(m) Clients Reference	Description of Sample Matrix #	Asbestos	Gravimetric Analysis Total	Gravimetric Analysis by ACM Type	Free Fibre Analysis	Total Asbestos
231870 1.50	TP02	Brown soil	No asbestos detected	n/t	n/t	n/t	n/t



Method Summary Report No.: 21-32886, issue number 1

Parameter	Codes	Analysis Undertaken	Date	Method	Technique
0		On	Tested	Number	
Soil					
Sulphide	N	As submitted sample	30/03/2021	109	Colorimetry
рН	М	Air dried sample	01/04/2021	113	Electromeric
Acid Soluble Sulphate	U	Air dried sample	31/03/2021	115	Ion Chromatography
PAH (GC-FID)	М	As submitted sample	30/03/2021	133	GC-FID
Low range Aliphatic hydrocarbons soil	N	As submitted sample	31/03/2021	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	31/03/2021	181	GC-MS
Water soluble boron	N	Air dried sample	30/03/2021	202	Colorimetry
Total organic carbon/Total sulphur	N	Air dried sample	31/03/2021	210	IR
Aliphatic hydrocarbons in soil	N	As submitted sample	30/03/2021	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	31/03/2021	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	30/03/2021	214	GC-FID
Asbestos identification	U	Air dried sample	01/04/2021	280	Microscopy
Aqua regia extractable metals	М	Air dried sample	30/03/2021	300	ICPMS

Tests marked N are not UKAS accredited



### **Report Information**

#### Report No.: 21-32886, issue number 1

Key

Key	
U	hold UKAS accreditation
М	hold MCERTS and UKAS accreditation
N	do not currently hold UKAS accreditation
۸	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination. Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed. ELAB are unable to provide an interpretation or opinion on the content of this report. The results relate only to the sample received. PCB congener results may include any coeluting PCBs Uncertainty of measurement for the determinands tested are available upon request Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.
Deviation	•
а	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
С	Sample not received in appropriate containers

- d Sample not received in cooled condition
- e The container has been incorrectly filled
- f Sample age exceeds stability time (sampling to receipt)
- g Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

#### Sample Retention and Disposal

All soil samples will be retained for a period of one month All water samples will be retained for 7 days following the date of the test report Charges may apply to extended sample storage



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### THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-32895
Issue:	1
Date of Issue:	06/04/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	29/03/2021
Date Approved:	06/04/2021
Details:	Cottam Parkway Station
Approved by:	e Nr

Mike Varley, Technical Manager

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683

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# Sample Summary

Report No.: 21-32895, issue number 1

Elab No.	Client's Ref.	<b>Date Sampled</b>	Date Scheduled	Description	Deviations
231893	TP03 Natural 0.40	23/03/2021	29/03/2021	Silty loam	



Report No.: 21-32895, issue number 1

			1	
		Reference	231893	
	(	Customer	Reference	Natural
		:	Sample ID	
		Sa	mple Type	SOIL
		Sampl	e Location	TP03
		•	Depth (m)	0.40
				23/03/2021
		1		23/03/2021
Determinand	Codes	Units	LOD	
Soil sample preparation parame	ters			
Material removed	N	%	0.1	< 0.1
Description of Inert material removed	N		0	None
Metals				
Arsenic	M	mg/kg	1	10.7
Cadmium	M	mg/kg	0.5	< 0.5
Chromium	M	mg/kg	5	42.1
Copper	M	mg/kg	5	17.1
Lead	M	mg/kg	5	14.6
Mercury	M	mg/kg	0.5	< 0.5
Nickel	M	mg/kg	5	35.4
Selenium	M	mg/kg	1	< 1.0
Zinc	M	mg/kg	5	52.8
Inorganics				
Total Sulphide	N	mg/kg	2	< 2
Acid Soluble Sulphate (SO4)	U	%	0.02	0.02
Water Soluble Boron	N	mg/kg	0.5	< 0.5
Miscellaneous	-			
Fraction of Organic Carbon	N		0.0001	0.0023
pH	М	pH units	0.1	7.7
Polyaromatic hydrocarbons				
Naphthalene	M	mg/kg	0.1	< 0.1
Acenaphthylene	М	mg/kg	0.1	< 0.1
Acenaphthene	М	mg/kg	0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	< 0.1
Anthracene	M	mg/kg	0.1	< 0.1
Fluoranthene	М	mg/kg	0.1	< 0.1
Pyrene	M	mg/kg	0.1	< 0.1
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1
Chrysene	М	mg/kg	0.1	< 0.1
Benzo(b)fluoranthene	M	mg/kg	0.1	< 0.1
Benzo(k)fluoranthene	М	mg/kg	0.1	< 0.1
Benzo(a)pyrene	M	mg/kg	0.1	< 0.1
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	< 0.1
Dibenzo(a,h)anthracene	М	mg/kg	0.1	< 0.1
Benzo[g,h,i]perylene	М	mg/kg	0.1	< 0.1
Total PAH(16)	M	mg/kg	0.4	< 0.4



### Report No.: 21-32895, issue number 1

• •				
ELAB Reference				
	C	Customer	Reference	Natural
			Sample ID	
			mple Type	SOIL
			le Location	TP03
		•	Depth (m)	0.40
		•	• • •	
		Sam	pling Date	23/03/2021
Determinand	Codes	Units	LOD	
TPH CWG				
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0
>C10-C12 Aliphatic	N	mg/kg	1	< 1.0
>C12-C16 Aliphatic	N	mg/kg	1	< 1.0
>C16-C21 Aliphatic	N	mg/kg	1	< 1.0
>C21-C35 Aliphatic	N	mg/kg	1	< 1.0
>C35-C40 Aliphatic	N	mg/kg	1	< 1.0
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01
>C8-C10 Aromatic	N	mg/kg	1	< 1.0
>C10-C12 Aromatic	N	mg/kg	1	< 1.0
>C12-C16 Aromatic	N	mg/kg	1	< 1.0
>C16-C21 Aromatic	N	mg/kg	1	< 1.0
>C21-C35 Aromatic	N	mg/kg	1	< 1.0
>C35-C40 Aromatic	N	mg/kg	1	< 1.0
Total (>C5-C40) Ali/Aro	N	mg/kg	1	< 1.0
Total Petroleum Hydrocarbons				
PAH Fingerprint	N	n/a	0	n/a
TPH Fingerprint	N	n/a	0	n/a



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#### **Results Summary**

Report No.: 21-32895, issue number 1

#### Asbestos Results

Analytical result only applies to the sample as submitted by the client. Any comments, opinions or interpretations (marked #)

in this report are outside UKAS accreditation (Accreditation No2683). They are subjective comments only which must be verified by the client

Elab No Depth (m)	Clients Reference	Description of Sample Matrix #	Asbestos	Gravimetric Analysis Total	Gravimetric Analysis by ACM Type	Free Fibre Analysis	Total Asbestos
231893 0.40	TP03 Natural	Brown Soil	No asbestos detected	n/t	n/t	n/t	n/t



Method Summary Report No.: 21-32895, issue number 1

Parameter	Codes	Analysis Undertaken	Date	Method	Technique
0		On	Tested	Number	· ·
Soil					
Sulphide	N	As submitted sample	30/03/2021	109	Colorimetry
рН	М	Air dried sample	01/04/2021	113	Electromeric
Acid Soluble Sulphate	U	Air dried sample	31/03/2021	115	Ion Chromatography
PAH (GC-FID)	М	As submitted sample	30/03/2021	133	GC-FID
Low range Aliphatic hydrocarbons soil	N	As submitted sample	31/03/2021	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	31/03/2021	181	GC-MS
Water soluble boron	N	Air dried sample	30/03/2021	202	Colorimetry
Total organic carbon/Total sulphur	N	Air dried sample	31/03/2021	210	IR
Aliphatic hydrocarbons in soil	N	As submitted sample	30/03/2021	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	31/03/2021	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	30/03/2021	214	GC-FID
Asbestos identification	U	Air dried sample	01/04/2021	280	Microscopy
Aqua regia extractable metals	М	Air dried sample	30/03/2021	300	ICPMS

Tests marked N are not UKAS accredited



### **Report Information**

#### Report No.: 21-32895, issue number 1

Key

Key	
U	hold UKAS accreditation
М	hold MCERTS and UKAS accreditation
Ν	do not currently hold UKAS accreditation
۸	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination.
	Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed.
	ELAB are unable to provide an interpretation or opinion on the content of this report. The results relate only to the sample received.
	PCB congener results may include any coeluting PCBs
	Uncertainty of measurement for the determinands tested are available upon request Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.
Deviation	Codes
а	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
С	Sample not received in appropriate containers

- d Sample not received in cooled condition
- e The container has been incorrectly filled
- f Sample age exceeds stability time (sampling to receipt)
- g Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

#### Sample Retention and Disposal

All soil samples will be retained for a period of one month All water samples will be retained for 7 days following the date of the test report Charges may apply to extended sample storage



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### THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-33086
Issue:	1
Date of Issue:	15/04/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	08/04/2021
Date Approved:	15/04/2021
Details:	Cottam Parkway Station
Approved by:	e Nazer

Mike Varley, Technical Manager

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# Sample Summary

Report No.: 21-33086, issue number 1

Elab No.	Client's Ref.	<b>Date Sampled</b>	Date Scheduled	Description	Deviations
232855	TP04 0.60	23/03/2021	08/04/2021	Silty loam	



Report No.: 21-33086, issue number 1

ELAB Reference					
Customer Reference					
			Sample ID		
		Sa	mple Type	BULK	
		Sampl	e Location	TP04	
	5	Sample	Depth (m)	0.60	
		Sam	pling Date	23/03/2021	
Determinand	Codes	Units	LOD		
Soil sample preparation paramet	ers				
Material removed	N	%	0.1	< 0.1	
Description of Inert material removed	N		0	None	
Anions					
Water Soluble Sulphate	M	g/l	0.02	< 0.02	
Inorganics					
Acid Soluble Sulphate (SO4)	U	%	0.02	< 0.02	

-



Method Summary Report No.: 21-33086, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Acid Soluble Sulphate	U	Air dried sample	15/04/2021	115	Ion Chromatography
Water soluble anions	М	Air dried sample	13/04/2021	172	Ion Chromatography



### **Report Information**

#### Report No.: 21-33086, issue number 1

Key

Key	
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М	hold MCERTS and UKAS accreditation
Ν	do not currently hold UKAS accreditation
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U/S	Unsuitable sample
n/t	Not tested
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>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination. Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed. ELAB are unable to provide an interpretation or opinion on the content of this report. The results relate only to the sample received. PCB congener results may include any coeluting PCBs Uncertainty of measurement for the determinands tested are available upon request Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.
Deviation	•
а	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
С	Sample not received in appropriate containers

- d Sample not received in cooled condition
- e The container has been incorrectly filled
- f Sample age exceeds stability time (sampling to receipt)
- g Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

#### Sample Retention and Disposal

All soil samples will be retained for a period of one month All water samples will be retained for 7 days following the date of the test report Charges may apply to extended sample storage



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### THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-33087
Issue:	1
Date of Issue:	15/04/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	08/04/2021
Date Approved:	15/04/2021
Details:	Cottam Parkway Station
Approved by:	SUVA-

Mike Varley, Technical Manager

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# Sample Summary

Report No.: 21-33087, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Schedule	d Description	Deviations
232856	TP05 0.50	24/03/2021	08/04/2021	Silty loam	



Report No.: 21-33087, issue number 1

ELAB Reference				
			Sample ID	
		Sa	mple Type	BULK
		Sampl	e Location	TP05
	Sample Depth (m)			
		Sam	pling Date	24/03/2021
Determinand	Codes	Units	LOD	
Soil sample preparation parame	ters			
Material removed	N	%	0.1	< 0.1
Description of Inert material removed	N		0	None
Anions				
Water Soluble Sulphate	М	g/l	0.02	< 0.02
Inorganics				
Acid Soluble Sulphate (SO4)	U	%	0.02	0.02

-



Method Summary Report No.: 21-33087, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Acid Soluble Sulphate	U	Air dried sample	15/04/2021	115	Ion Chromatography
Water soluble anions	М	Air dried sample	13/04/2021	172	Ion Chromatography



### **Report Information**

### Report No.: 21-33087, issue number 1

Key

Key	
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М	hold MCERTS and UKAS accreditation
Ν	do not currently hold UKAS accreditation
۸	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination. Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed. ELAB are unable to provide an interpretation or opinion on the content of this report. The results relate only to the sample received. PCB congener results may include any coeluting PCBs Uncertainty of measurement for the determinands tested are available upon request Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.
Deviation	•
а	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
С	Sample not received in appropriate containers

- d Sample not received in cooled condition
- e The container has been incorrectly filled
- f Sample age exceeds stability time (sampling to receipt)
- g Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

#### Sample Retention and Disposal

All soil samples will be retained for a period of one month All water samples will be retained for 7 days following the date of the test report Charges may apply to extended sample storage



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## THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-33088
Issue:	1
Date of Issue:	15/04/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	08/04/2021
Date Approved:	15/04/2021
Details:	Cottam Parkway Station
Approved by:	e Nazer

Mike Varley, Technical Manager

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# Sample Summary

Report No.: 21-33088, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
232857	TP06 1.00	24/03/2021	08/04/2021	Silty loam	



Report No.: 21-33088, issue number 1

	232857			
			Sample ID	
		Sa	mple Type	DISTURBED
		Sampl	e Location	TP06
	5	Sample	Depth (m)	1.00
		Sam	pling Date	24/03/2021
Determinand	Codes	Units	LOD	
Soil sample preparation paramet	ers			
Material removed	N	%	0.1	< 0.1
Description of Inert material removed	N		0	None
Anions				
Water Soluble Sulphate M g/l 0.02				< 0.02
Inorganics				
Acid Soluble Sulphate (SO4)	U	%	0.02	< 0.02

-



Method Summary Report No.: 21-33088, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Acid Soluble Sulphate	U	Air dried sample	15/04/2021	115	Ion Chromatography
Water soluble anions	М	Air dried sample	13/04/2021	172	Ion Chromatography



## **Report Information**

## Report No.: 21-33088, issue number 1

Key

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М	hold MCERTS and UKAS accreditation
Ν	do not currently hold UKAS accreditation
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S	Subcontracted to approved laboratory UKAS Accredited for the test
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I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
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LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination. Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed. ELAB are unable to provide an interpretation or opinion on the content of this report. The results relate only to the sample received. PCB congener results may include any coeluting PCBs Uncertainty of measurement for the determinands tested are available upon request Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.
Deviation	•
а	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
С	Sample not received in appropriate containers

- d Sample not received in cooled condition
- e The container has been incorrectly filled
- f Sample age exceeds stability time (sampling to receipt)
- g Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

## Sample Retention and Disposal

All soil samples will be retained for a period of one month All water samples will be retained for 7 days following the date of the test report Charges may apply to extended sample storage



Analytical Report Number: 21-32897

Unit A2 Windmill Road **Ponswood Industrial Estate** St Leonards on Sea **East Sussex TN38 9BY** Telephone: (01424) 718618

> cs@elab-uk.co.uk info@elab-uk.co.uk

## THE ENVIRONMENTAL LABORATORY LTD

	21 02001
Issue:	1
Date of Issue:	06/04/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	29/03/2021
Date Approved:	06/04/2021
Details:	Cottam Parkway Station

Approved by:

) Vn

Mike Varley, Technical Manager

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683

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# Sample Summary

Report No.: 21-32897, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Schedule	Description	Deviations
231900	TP06 Natural 0.25	23/03/2021	29/03/2021	Silty loam	



Report No.: 21-32897, issue number 1

• •		231900				
	C	Reference	Natural			
	Sample ID					
	Sample Type					
		Sampl	e Location	TP06		
		Sample	Depth (m)	0.25		
			pling Date	23/03/2021		
Determinand	Codes	Units	LOD	20,00,2021		
Soil sample preparation paramet		•				
Material removed	N	%	0.1	< 0.1		
Description of Inert material removed	N	70	0.1	None		
			0	None		
Metals						
Arsenic	M	mg/kg	1	12.1		
Cadmium	M	mg/kg	0.5	< 0.5		
Chromium	M	mg/kg	5	27.8		
Copper	M	mg/kg	5	28.9		
Lead	M	mg/kg	5	41.6		
Mercury	M	mg/kg	0.5	< 0.5		
Nickel	M	mg/kg	5	21.1		
Selenium	M	mg/kg	1	< 1.0		
Zinc	M	mg/kg	5	72.6		
Inorganics						
Total Sulphide	N	mg/kg	2	< 2		
Acid Soluble Sulphate (SO4)	U	%	0.02	0.03		
Water Soluble Boron	N	mg/kg	0.5	< 0.5		
Miscellaneous						
Fraction of Organic Carbon	N		0.0001	0.0271		
pH	М	pH units	0.1	6.3		
Polyaromatic hydrocarbons						
Naphthalene	М	mg/kg	0.1	< 0.1		
Acenaphthylene	М	mg/kg	0.1	< 0.1		
Acenaphthene	М	mg/kg	0.1	< 0.1		
Fluorene	М	mg/kg	0.1	< 0.1		
Phenanthrene	М	mg/kg	0.1	< 0.1		
Anthracene	M	mg/kg	0.1	< 0.1		
Fluoranthene	М	mg/kg	0.1	0.1		
Pyrene	М	mg/kg	0.1	0.1		
Benzo(a)anthracene	М	mg/kg	0.1	< 0.1		
Chrysene	М	mg/kg	0.1	< 0.1		
Benzo(b)fluoranthene	М	mg/kg	0.1	< 0.1		
Benzo(k)fluoranthene	М	mg/kg	0.1	< 0.1		
Benzo(a)pyrene	М	mg/kg	0.1	< 0.1		
Indeno(1,2,3-cd)pyrene	М	mg/kg	0.1	< 0.1		
Dibenzo(a,h)anthracene	М	mg/kg	0.1	< 0.1		
Benzo[g,h,i]perylene	M	mg/kg	0.1	< 0.1		
Total PAH(16)	M	mg/kg	0.4	0.5		



Report No.: 21-32897, issue number 1

ELAB Reference					
	Customer Reference				
Sample ID					
		Sa	mple Type	SOIL	
		Sampl	e Location	TP06	
		Sample	Depth (m)	0.25	
		Sam	pling Date	23/03/2021	
Determinand	Codes	Units	LOD		
TPH CWG					
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01	
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01	
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0	
>C10-C12 Aliphatic	N	mg/kg	1	< 1.0	
>C12-C16 Aliphatic	N	mg/kg	1	< 1.0	
>C16-C21 Aliphatic	N	mg/kg	1	< 1.0	
>C21-C35 Aliphatic	N	mg/kg	1	< 1.0	
>C35-C40 Aliphatic	N	mg/kg	1	< 1.0	
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01	
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01	
>C8-C10 Aromatic	N	mg/kg	1	< 1.0	
>C10-C12 Aromatic	N	mg/kg	1	< 1.0	
>C12-C16 Aromatic	N	mg/kg	1	< 1.0	
>C16-C21 Aromatic	N	mg/kg	1	< 1.0	
>C21-C35 Aromatic	N	mg/kg	1	< 1.0	
>C35-C40 Aromatic	N	mg/kg	1	< 1.0	
Total (>C5-C40) Ali/Aro	N	mg/kg	1	< 1.0	
Total Petroleum Hydrocarbons					
PAH Fingerprint	N	n/a	0	n/a	
TPH Fingerprint	N	n/a	0	n/a	



Unit A2, Windmill Road, Ponswood Industrial Estate, St Leonards on Sea, East Sussex, TN38 9BY Tel: +44 (0)1424 718618, Email: info@elab-uk.co.uk, Web: www.elab-uk.co.uk

#### **Results Summary**

Report No.: 21-32897, issue number 1

#### Asbestos Results

Analytical result only applies to the sample as submitted by the client. Any comments, opinions or interpretations (marked #)

in this report are outside UKAS accreditation (Accreditation No2683). They are subjective comments only which must be verified by the client

Elab No Depth (m)	<b>Clients Reference</b>	Description of Sample Matrix #	Asbestos	Gravimetric Analysis Total	Gravimetric Analysis by ACM Type	Free Fibre Analysis	Total Asbestos
231900 0.25	TP06 Natural	Brown Soil,Root	No asbestos detected	n/t	n/t	n/t	n/t



Method Summary Report No.: 21-32897, issue number 1

Parameter		Analysis Undertaken On	Date Tested	Method Number	Technique
Soil			Testeu	Humber	1
Sulphide	N	As submitted sample	30/03/2021	109	Colorimetry
рН	М	Air dried sample	01/04/2021	113	Electromeric
Acid Soluble Sulphate	U	Air dried sample	31/03/2021	115	Ion Chromatography
PAH (GC-FID)	М	As submitted sample	30/03/2021	133	GC-FID
Low range Aliphatic hydrocarbons soil	N	As submitted sample	31/03/2021	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	31/03/2021	181	GC-MS
Water soluble boron	N	Air dried sample	30/03/2021	202	Colorimetry
Total organic carbon/Total sulphur	N	Air dried sample	31/03/2021	210	IR
Aliphatic hydrocarbons in soil	N	As submitted sample	30/03/2021	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	31/03/2021	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	30/03/2021	214	GC-FID
Asbestos identification	U	Air dried sample	01/04/2021	280	Microscopy
Aqua regia extractable metals	М	Air dried sample	30/03/2021	300	ICPMS

Tests marked N are not UKAS accredited



## **Report Information**

## Report No.: 21-32897, issue number 1

Key

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I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination.
	Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed.
	ELAB are unable to provide an interpretation or opinion on the content of this report.
	The results relate only to the sample received.
	PCB congener results may include any coeluting PCBs
	Uncertainty of measurement for the determinands tested are available upon request Unless otherwise stated, sample information has been provided by the client. This may
Deviation	affect the validity of the results.
Deviation	
a	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
С	Sample not received in appropriate containers

- d Sample not received in cooled condition
- e The container has been incorrectly filled
- f Sample age exceeds stability time (sampling to receipt)
- g Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

## Sample Retention and Disposal

All soil samples will be retained for a period of one month All water samples will be retained for 7 days following the date of the test report Charges may apply to extended sample storage



Unit A2 Windmill Road Ponswood Industrial Estate St Leonards on Sea East Sussex TN38 9BY Telephone: (01424) 718618

> cs@elab-uk.co.uk info@elab-uk.co.uk

## THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-32949
Issue:	1
Date of Issue:	07/04/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	31/03/2021
Date Approved:	07/04/2021
Details:	Cottam Parkway Station
Approved by:	SVN

Mike Varley, Technical Manager

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## Sample Summary

Report No.: 21-32949, issue number 1

Elab No.	Client's Ref.	<b>Date Sampled</b>	Date Scheduled	Description	Deviations
232148	WS01 0.10	25/03/2021	31/03/2021	Silty loam	



Report No.: 21-32949, issue number 1

•	ELAB Reference				
Sample ID					
Sample Type					
			e Location	WS01	
		•		0.10	
			Depth (m)		
[				25/03/2021	
Determinand	Codes	Units	LOD		
Soil sample preparation paramet	ers				
Material removed	N	%	0.1	< 0.1	
Description of Inert material removed	N		0	None	
Metals					
Arsenic	M	mg/kg	1	39.8	
Cadmium	M	mg/kg	0.5	< 0.5	
Chromium	M	mg/kg	5	33.3	
Copper	M	mg/kg	5	31.5	
Lead	M	mg/kg	5	58.8	
Mercury	M	mg/kg	0.5	< 0.5	
Nickel	M	mg/kg	5	23.8	
Selenium	M	mg/kg	1	< 1.0	
Zinc	M	mg/kg	5	93.1	
Inorganics					
Total Sulphide	N	mg/kg	2	< 2	
Acid Soluble Sulphate (SO4)	U	%	0.02	0.02	
Water Soluble Boron	N	mg/kg	0.5	0.6	
Miscellaneous					
Fraction of Organic Carbon	N		0.0001	0.0212	
pH	М	pH units	0.1	6.7	
Polyaromatic hydrocarbons					
Naphthalene	M	mg/kg	0.1	< 0.1	
Acenaphthylene	М	mg/kg	0.1	< 0.1	
Acenaphthene	М	mg/kg	0.1	< 0.1	
Fluorene	М	mg/kg	0.1	< 0.1	
Phenanthrene	M	mg/kg	0.1	< 0.1	
Anthracene	M	mg/kg	0.1	< 0.1	
Fluoranthene	M	mg/kg	0.1	< 0.1	
Pyrene	M	mg/kg	0.1	< 0.1	
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1	
Chrysene	М	mg/kg	0.1	< 0.1	
Benzo(b)fluoranthene	M	mg/kg	0.1	< 0.1	
Benzo(k)fluoranthene	М	mg/kg	0.1	< 0.1	
Benzo(a)pyrene	М	mg/kg	0.1	< 0.1	
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	< 0.1	
Dibenzo(a,h)anthracene	М	mg/kg	0.1	< 0.1	
Benzo[g,h,i]perylene	М	mg/kg	0.1	< 0.1	
Total PAH(16)	M	mg/kg	0.4	< 0.4	



Report No.: 21-32949, issue number 1

ELAB Reference				
Customer Reference				
Sample ID				
			, mple Type	SOIL
			e Location	WS01
		•		
		Sample	Depth (m)	0.10
		Sam	pling Date	25/03/2021
Determinand	Codes	Units	LOD	
TPH CWG				
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0
>C10-C12 Aliphatic	N	mg/kg	1	< 1.0
>C12-C16 Aliphatic	N	mg/kg	1	< 1.0
>C16-C21 Aliphatic	N	mg/kg	1	< 1.0
>C21-C35 Aliphatic	N	mg/kg	1	2.2
>C35-C40 Aliphatic	N	mg/kg	1	< 1.0
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01
>C8-C10 Aromatic	N	mg/kg	1	< 1.0
>C10-C12 Aromatic	N	mg/kg	1	< 1.0
>C12-C16 Aromatic	N	mg/kg	1	< 1.0
>C16-C21 Aromatic	N	mg/kg	1	< 1.0
>C21-C35 Aromatic	N	mg/kg	1	< 1.0
>C35-C40 Aromatic	N	mg/kg	1	< 1.0
Total (>C5-C40) Ali/Aro	N	mg/kg	1	2.2
Total Petroleum Hydrocarbons				
PAH Fingerprint	N	n/a	0	n/a
TPH Fingerprint	N	n/a	0	n/a

-



Unit A2, Windmill Road, Ponswood Industrial Estate, St Leonards on Sea, East Sussex, TN38 9BY Tel: +44 (0)1424 718618, Email: info@elab-uk.co.uk, Web: www.elab-uk.co.uk

## **Results Summary**

Report No.: 21-32949, issue number 1

### **Asbestos Results**

Analytical result only applies to the sample as submitted by the client. Any comments, opinions or interpretations (marked #) in this report are outside UKAS accreditation (Accreditation No2683). They are subjective comments only which must be verified by the client.

Elab No	Depth (m)	Clients Reference	Description of Sample Matrix #	Asbestos Identification	Gravimetric	Gravimetric	Free Fibre	Total
					Analysis Total	Analysis by ACM	Analysis	Asbestos
					(%)	Type (%)	(%)	(%)
232148	0.10	WS01	Brown soil	No asbestos detected	n/t	n/t	n/t	n/t



Method Summary Report No.: 21-32949, issue number 1

Parameter	Codes	Analysis Undertaken	Date	Method	Technique	
		On	Tested	Number		
Soil						
Sulphide	N	As submitted sample	01/04/2021	109	Colorimetry	
рН	М	Air dried sample	06/04/2021	113	Electromeric	
Acid Soluble Sulphate	U	Air dried sample	06/04/2021	115	Ion Chromatography	
PAH (GC-FID)	М	As submitted sample	01/04/2021	133	GC-FID	
Low range Aliphatic hydrocarbons soil	N	As submitted sample	01/04/2021	181	GC-MS	
Low range Aromatic hydrocarbons soil	N	As submitted sample	01/04/2021	181	GC-MS	
Water soluble boron	N	Air dried sample	01/04/2021	202	Colorimetry	
Total organic carbon/Total sulphur	N	Air dried sample	06/04/2021	210	IR	
Aliphatic hydrocarbons in soil	N	As submitted sample	01/04/2021	214	GC-FID	
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	06/04/2021	214	GC-FID	
Aromatic hydrocarbons in soil	N	As submitted sample	01/04/2021	214	GC-FID	
Asbestos identification	U	Air dried sample	07/04/2021	280	Microscopy	
Aqua regia extractable metals	М	Air dried sample	01/04/2021	300	ICPMS	

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## **Report Information**

## Report No.: 21-32949, issue number 1

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