

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/m³)	(Mg/m^3)	(kN/m²)	(%)	(%)	(%)	(%)		test (Y/N)	
TD02	D	0.50	0.50	10				20	10	20	00	CI	V	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse
1P03	В	0.50	0.50	19	-	-	-	38	18	20	90	CI	Ŷ	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
	_													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 / WS Number	Sample Type	Depth From	Depth To (m)	Moisture Content	Bulk Density (Mg/m ³)	Dry Density (Mg/m ³)	Shear Strength	Liquid Limit	Plastic Limit	Plasticity Index (%)	Passing 0.425mm	Soil Classification	UKAS accredited test (Y/N)	Description / Test Method Samples described in accordance with BS EN ISO 14688-2 2004
TP04	В	1.00	1.00	(%)	(lvig/III ^e) -	(wig/m ²)	-	(%)	(%)	(%)	95	CL	Y	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to 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



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 / WS Number	Sample Type	Depth From (m)	Depth To (m)	Moisture Content (%)	Bulk Density (Mg/m ³)	Dry Density (Mg/m ³)	Shear Strength (kN/m ²)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 0.425mm (%)	Soil Classification	UKAS accredited test (Y/N)	Description / Test Method Samples described in accordance with BS EN ISO 14688-2 2004
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



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	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)	
WS01	D	1.50	1.50	15	-	-	-	-	-	-	-	-	Y	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	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)

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 (1/N)	
WS02	D	1.50	1.50	15	-	-	-	31	15	16	94	CL	Y	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse
														subrounded sandstone. (BS137/Pt2:3.2,4.4,5)
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
11502	D	5.50	5.50	15				50	10	15	70	CL	-	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/m³)	(kN/m²)	(%)	(%)	(%)	(%)		test (1/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)
WS02	D	2.50	2.50	17				24	16	19	01	CI	V	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to medium
w 303	D	5.50	5.50	17	-	-	-	54	10	18	91	CL	I	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 / WS	Sample Type	Depth From	Depth To	Moisture Content	Bulk Density	Dry Density	Shear Strength	Liquid Limit	Plastic L imit	Plasticity Index	Passing	Soil Classification	UKAS accredited	Description / Test Method Samples described in accordance with BS EN ISO 14688-2 2004
Number	турс	(m)	(m)	(%)	(Mg/m ³)	(Mg/m ³)	(kN/m ²)	(%)	(%)	(%)	(%)		test (Y/N)	1
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)

BH / TP /	Sample	Depth	Depth	Moisture	Bulk	Dry	Shear	Liquid	Plastic	Plasticity	Passing	Soil	UKAS	Description / Test Method
WS Number	Туре	From (m)	To (m)	Content (%)	Density (Mg/m^3)	Density (Mg/m^3)	Strength (kN/m^2)	Limit	Limit	Index (%)	0.425mm	Classification	test (Y/N)	Samples described in accordance with BS EN ISO 14688-2 2004
TNUITIDEI		(111)	(111)	(70)	(wig/iii)	(1 v 1g/11 ^p)		(70)	(70)	(70)	(70)			
WS05	В	1.20	1.20	15	-	-	-	-	-	-	-	-	Y	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	2 al Ltd	PARTICLE	SIZE DIS	TRIBUT	ION	Job Ref	CCG-	C-21-12093	
e	Tel: 0151 545 2 e: lab@ccgeotechr	2750 nical.com					Borehole/Pit No.		WS05	
Si	te Name	COTTAM PAR	KWAY STATION	1			Sample No.		1	
Sp De	pecimen escription	Brown very silty cla	yey slightly gravelly S	AND			Depth, m		1.20	
Sp Re	pecimen eference		Specime Depth	n		m	Sample Type		В	
Te	est Method	BS1377:Part 2:1	990, clauses 9.2 a	nd 9.5			KeyLAB ID	CCG	_202104290	
		SILT		SAND			GRAVEL	COPPLES		
	100 Fin	ne Medium	Coarse Fine	Medium	Coarse	Fine	Medium Coarse		BOULDERS	_
	90									
	80									
%	70									
ssing	60		/							
ge Pa	50									
rcenta	40		/							
Ре	30			_						
	20									
	10									
	0 001	0.01	01		1		10	100	100	0
				Pa	ticle Size	mm				•
		-								
	Sie Particle Size	% 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	• 9		0	
	75	100	0.0364	28		Gravel			2	
	50 50	100	0.0257	25		Sano Silt			04 22	
	37.5	100	0.0094	18		Clav			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	
	0.3 5	98 98				D30	mm	·	0.0429	
	3.35	98				Uniformity (Coefficient	<u> </u>		
	2	98				Curvature 0	Coefficient			
	1.18	97								
	0.6	95	Particle density	(assumed)		Remarks				
	0.425	94	2.65	Mg/m3		Preparation and	a 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 Classification	UKAS	Description / Test Method
WS Number	Туре	From (m)	To (m)	Content (%)	Density (Mg/m^3)	Density (Mg/m^3)	Strength (kN/m^2)	Limit	Limit (%)	Index	0.425mm	Classification	test (Y/N)	Samples described in accordance with BS EN ISO 14688-2 2004
number		(111)	(111)	(%)	(Mg/III ³)	(wig/m ²)	(KIN/III ²)	(%)	(%)	(%)	(%)		(
WS06	D	1.50	1.50	14	-	-	-	31	16	15	89	CL	Y	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



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)



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 From	Depth To	Moisture Content	Bulk Density	Dry Density	Shear Strength	Liquid Limit	Plastic L imit	Plasticity Index	Passing	Soil Classification	UKAS accredited	Description / Test Method Samples described in accordance with BS EN ISO 14688-2 2004
Number	турс	(m)	(m)	(%)	(Mg/m ³)	(Mg/m ³)	(kN/m ²)	(%)	(%)	(%)	(%)		test (Y/N)	
WS07	D	1.50	1.50	14	-	-	-	30	16	14	94	CL	Y	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 Number	Туре	From (m)	To (m)	Content (%)	Density (Mg/m^3)	Density (Ma/m^3)	Strength (kN/m^2)	Limit	Limit	Index	0.425mm	Classification	test (Y/N)	Samples described in accordance with BS EN ISO 14688-2 2004
number		(11)	(111)	(70)	(wig/iii)	(1918/1119)		(70)	(70)	(70)	(70)			
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



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	То	Content	Density	Density	Strength	Limit	Limit	Index	0.425mm	Classification	accredited test (\mathbf{V}/\mathbf{N})	Samples described in accordance with BS EN ISO 14688-2 2004
Number		(m)	(m)	(%)	(Mg/m ³)	(Mg/m ³)	(kN/m²)	(%)	(%)	(%)	(%)		lest (1/IN)	
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	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: 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 Erom	Depth	Moisture	Bulk	Dry Donsity	Shear Strongth	Liquid Limit	Plastic Limit	Plasticity	Passing	Soil Classification	UKAS accredited	Description / Test Method Samples described in accordance with BS EN ISO 14688-2 2004
Number	Туре	(m)	(m)	(%)	(Mg/m ³)	(Mg/m ³)	(kN/m ²)	(%)	(%)	(%)	(%)		test (Y/N)	
WS10	D	1.50	1.50	17	-	-	-	34	16	18	96	CL	Y	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	-	-	-	-	-	-	-	-	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) 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	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)	
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	•1	(m)	(m)	(%)	(Mg/m^3)	(Mg/m^3)	(kN/m ²)	(%)	(%)	(%)	(%)		test (Y/N)	
			, í					. ,			`´´			
WS12	D	1.50	1.50	16	-	-	-	-	-	-	-	-	Y	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	Y	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to
														medium subrounded sandstone. (BS13//Pt2:3.2,4.4,5)
WS12	D	4.50	4.50	16	-	_	-	-	-	-	-	-	Y	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to
														medium subrounded sandstone. (BS1377Pt2:3.2)
WS12	D	5 50	5 50	31				/0	21	28	100	CI	v	Brown slightly sandy silty CLAY (BS1377Pt2:32445)
W512	D	5.50	5.50	51			-	47	21	20	100	CI	1	

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) 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

SUMMARY OF LABORATORY SOIL TEST RESULTS

BH / TP /	Sample	Depth	Depth	Moisture	Bulk	Dry	Shear	Liquid	Plastic	Plasticity	Passing	Soil Classification	UKAS	Description / Test Method
WS Number	Туре	From (m)	To (m)	Content (%)	Density (Mg/m ³)	Density (Mg/m ³)	Strength (kN/m ²)	Limit (%)	Limit (%)	Index (%)	0.425mm (%)	Ciassification	test (Y/N)	Samples described in accordance with BS EN ISO 14688-2 2004
WS13	D	1.50	1.50	16	-	-	-	32	16	16	94	CL	Y	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	-	-	-	-	-	-	-	-	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)

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

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	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)	
WS14	D	1.50	1.50	16	-	-	-	-	-	-	-	-	Y	Brown slightly sandy slightly gravelly silty CLAY. Gravel is fine to 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. Gravel is fine to coarse subrounded sandstone. (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)
WS14	D	5.50	5.50	30	-	-	-	-	-	-	-	-	Y	Brown slightly sandy silty CLAY. (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)

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) CCG-CMS-FO-204 Issue 2

SUMMARY OF LABORATORY SOIL TEST RESULTS

BH / TP / WS	Sample Type	Depth From	Depth To	Moisture Content	Bulk Density	Dry Density	Shear Strength	Liquid Limit	Plastic L imit	Plasticity Index	Passing	Soil Classification	UKAS accredited	Description / Test Method Samples described in accordance with BS EN ISO 14688-2 2004
Number	Type	(m)	(m)	(%)	(Mg/m ³)	(Mg/m ³)	(kN/m ²)	(%)	(%)	(%)	(%)		test (Y/N)	
WS15	D	1.50	1.50	16	-	-	-	32	16	16	96	CL	Y	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	-	-	-	-	-	-	-	-	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



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)

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

SUMMARY OF LABORATORY SOIL TEST RESULTS

BH / TP /	Sample	Depth	Depth	Moisture	Bulk	Dry	Shear	Liquid	Plastic	Plasticity	Passing	Soil Classification	UKAS	Description / Test Method
ws Number	Гуре	(m)	10 (m)	(%)	(Mg/m ³)	(Mg/m ³)	Strength (kN/m ²)	Limit (%)	Limit (%)	(%)	(%)	Classification	test (Y/N)	Samples described in accordance with DS EN ISO 14088-2 2004
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



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)

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

SUMMARY OF LABORATORY SOIL TEST RESULTS

BH / TP /	Sample	Depth	Depth	Moisture	Bulk	Dry	Shear	Liquid	Plastic	Plasticity	Passing	Soil Classification	UKAS	Description / Test Method Samples described in accordance with BS EN ISO 14688-2 2004
ws Number	1 ype	From (m)	10 (m)	(%)	(Mg/m ³)	(Mg/m ³)	(kN/m ²)	(%)	(%)	(%)	(%)	Classification	test (Y/N)	Samples described in accordance with DS EN ISO 14088-2 2004
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	-	-	-	-	-	-	-	-	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



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)

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

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 Number	Туре	From	To (m)	Content	Density	Density	Strength	Limit	Limit	Index	0.425mm	Classification	test (Y/N)	Samples described in accordance with BS EN ISO 14688-2 2004
number		(m)	(m)	(%)	(Mg/m ³)	(wig/m ³)	(KIN/III ²)	(%)	(%)	(%)	(%)			
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)

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



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 Naze.

Mike Varley, Technical Manager

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

This report may only be reproduced in full



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	



Results Summary

Report No.: 21-33089, issue number 1

	ELAB Reference								
	Customer Reference								
		:	Sample ID						
		Sa	mple Type	BULK	DISTURBED	BULK	BULK		
		Sampl	e Location	CP01	CP01	CP01	CP01		
	5	Sample	Depth (m)	1.50	4.00	8.50	15.00		
		Sam	pling Date	12/03/2021	12/03/2021	12/03/2021	12/03/2021		
Determinand	Codes	Units	LOD						
Soil sample preparation parameter	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	0.04	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	M	Air dried sample	13/04/2021	172	Ion Chromatography



Report Information

Report No.: 21-33089, issue number 1

Key

Rey	
U	hold UKAS accreditation
М	hold MCERTS and UKAS accreditation
Ν	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 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:	L)Vn

Mike Varley, Technical Manager

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

This report may only be reproduced in full



Sample Summary

Report No.: 21-32690, issue number 1

Elab No.	Client's Ref.	Date Sampled	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	



Results Summary

Report No.: 21-32690, issue number 1

	Reference	230658	230659		
	Reference				
	Sample ID				
	, mple Type	SOIL	SOIL		
		Sampl	e Location	CP01	CP01
		Sample	Denth (m)	0.20	0.80
		Som	nling Doto	12/02/2021	12/02/2021
_	• •	Sam		12/03/2021	12/03/2021
Determinand	Codes	Units	LOD		
Soli sample preparation paramet	ers				
Material removed	N	%	0.1	< 0.1	< 0.1
Description of Inert material removed	N		0	None	None
Metals					
Arsenic	М	mg/kg	1	8.5	12.2
Cadmium	М	mg/kg	0.5	< 0.5	< 0.5
Chromium	M	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
рН	М	pH units	0.1	6.5	7.0
Polyaromatic hydrocarbons					
Naphthalene	М	mg/kg	0.1	< 0.1	< 0.1
Acenaphthylene	М	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	< 0.1	< 0.1
Anthracene	M	mg/kg	0.1	< 0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	< 0.1	< 0.1
Pyrene	M	mg/kg	0.1	< 0.1	< 0.1
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1	< 0.1
Chrysene	M	mg/kg	0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	M	mg/kg	0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	< 0.1	< 0.1
Benzo(a)pyrene	IVI N4	mg/kg	0.1	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	IVI M4	mg/kg	0.1	< 0.1	< 0.1
Dipenzo(a,n)anthracene	IVI N4	mg/kg	0.1	< 0.1	< 0.1
Denzolg,n,ijperviene		i ma/ka l	0.1	< 0.1	< 0.1
Total DALI(16)	N.4	maller	0.4	101	< 0.4



Results Summary

Report No.: 21-32690, issue number 1

	Reference	230658	230659					
	Sample ID							
		Sa	, mple Type	SOIL	SOIL			
		Sampl	o Location	CP01	CP01			
		Sampi						
		Sample	Depth (m)	0.20	0.80			
		Sam	pling Date	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	C35-C40 Aromatic N mg/kg 1							
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)	Clients Reference	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

Baramatar	Codeo	Analysis Undertaken	Date	Method	Teebnique
	Coues	On	Tested	Number	rechnique
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	M	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

ney	
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:	21-33090
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 Naze.

Mike Varley, Technical Manager

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

This report may only be reproduced in full



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	



Results Summary

Report No.: 21-33090, issue number 1

	ELAB Reference				232863	232864	232865
	Customer Reference						
		5	Sample ID				
		Sa	mple Type	BULK	DISTURBED	DISTURBED	DISTURBED
		Sample	e Location	CP02	CP02	CP02	CP02
	S	Sample	Depth (m)	0.50	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	M 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	M	Air dried sample	13/04/2021	172	Ion Chromatography



Report Information

Report No.: 21-33090, issue number 1

Key

ney	
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
Doviation	
Deviation	
a	No date of sampling supplied
u	No ume 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 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:	e Na

Mike Varley, Technical Manager

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

This report may only be reproduced in full



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	



Results Summary

Report No.: 21-32809, issue number 1

		231424					
	Customer Reference						
	SOIL						
	CP02						
		Sample	Depth (m)	3.50			
		Sam	nling Date	19/03/2021			
Determinand	Codes	Units					
Soil sample preparation parameters							
		0/2	0.1	< 0.1			
Description of Inert material removed	N	70	0.1	None			
			0				
Arsenic	M	mg/kg	1	5.1			
	M	mg/kg	0.5	< 0.5			
Chromium	M	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	M	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	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	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)	М	mg/kg	0.4	< 0.4			


Report No.: 21-32809, issue number 1

ELAB Reference							
	C	Customer	Reference	Natural			
		:	Sample ID				
	Sample Type						
		Sampl	e Location	CP02			
		Sample	Denth (m)	3 50			
		Som	pling Data	10/02/2021			
Deferminend	O de la c	Justa		19/03/2021			
	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)	Clients Reference	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

Baramatar	Codeo	Analysis Undertaken	Date	Method	Teebrique
	Coues	On	Tested	Number	rechnique
Soil					
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	M	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

ney	
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:	21-33091
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:	e Vr

Mike Varley, Technical Manager

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

This report may only be reproduced in full



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

	ELAB Reference					
	Customer 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
	Sampling 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	М	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 Cod		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

ney	
U	hold UKAS accreditation
Μ	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:	21-32768
------------	--------	---------	----------

- 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

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

This report may only be reproduced in full



Sample Summary

Report No.: 21-32768, issue number 1

Elab No.	Client's Ref.	Date Sampled	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

	Reference	231140	231141		
	C	Customer	Reference		
		:	Sample ID		
		Sa	mple Type	SOIL	SOIL
		Sampl	e Location	CP03	CP03
		Sample	Denth (m)	0.15	1.80
		Campic	nling Data	17/02/2024	17/02/2024
		Sam	pling Date	17/03/2021	17/03/2021
Determinand	Codes	Units	LOD		
Soil sample preparation parameter					
Material removed	N	%	0.1	< 0.1	< 0.1
Description of Inert material removed	N		0	None	None
Metals					
Arsenic	М	mg/kg	1	13.9	11.1
Cadmium	M	mg/kg	0.5	< 0.5	< 0.5
Chromium	М	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	М	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
рН	M	pH units	0.1	6.7	8.1
Polyaromatic hydrocarbons					
Naphthalene	М	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	0.1	< 0.1
Anthracene	M	mg/kg	0.1	< 0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	0.2	< 0.1
Pyrene	M	mg/kg	0.1	0.2	< 0.1
Benzo(a)anthracene	M	mg/kg	0.1	0.1	< 0.1
Chrysene	M	mg/kg	0.1	0.1	< 0.1
Benzo(b)fluoranthene	M	mg/kg	0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	< 0.1	< 0.1
Benzo(a)pyrene	M	mg/kg	0.1	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	< 0.1	< 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	0.8	< 0.4



Report No.: 21-32768, issue number 1

	ELAB Reference						
	Customer Reference						
	Sample Type						
		Sampl	e I ocation	CP03	CP03		
		Sample	Depth (m)	0.15	1.80		
		Oampie		47/00/0004	1.00		
		Sam	ipling 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

Paramotor	Codes	Analysis Undertaken	Date	Method	Tochnique	
		On	On Tested		rechnique	
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	M	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
Ν	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 Number: 21-32	578
---------------------------------	-----

- 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

This report may only be reproduced in full



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		