



Site Investigation (SI) Test Results

Steeven's Lane 110kV Substation

The Electricity Supply Board (ESB)

August 2026

Contract No: 5735		Cable Percussion Borehole Log										Borehole No: BH01			
Contract:		Site Development					Easting:		713810.898		Date Started:		24/06/2020		
Location:		Steevens Lane, Dublin 8					Northing:		734002.279		Date Completed:		25/06/2020		
Client:		Cushman & Wakefield					Elevation:		12.28		Drilled By:		J. O'Toole		
Engineer:		-					Borehole Diameter:		200mm		Status:		FINAL		
Depth (m)		Stratum Description					Legend	Level (mOD)		Samples and Insitu Tests				Water Strike	Backfill
Scale	Depth							Scale	Depth	Depth	Type	Result			
	0.10	MADE GROUND: tarmacadam.						12.18							
	0.25	MADE GROUND: concrete.						12.03							
0.5		MADE GROUND: brown silty very sandy gravel with some red brick, concrete and timber.													
1.0										1.00	B	JOT01			
1.5										1.20	C	N=5 (1,1/1,1,1,2)			
2.0															
2.5										2.00	B	JOT02			
3.0										2.00	C	N=9 (1,2/2,2,2,3)			
3.5															
4.0															
4.5										3.00	B	JOT03			
5.0										3.00	C	N=14 (2,3/2,3,4,5)			
5.5															
6.0										4.00	B	JOT04			
6.5										4.00	C	N=13 (1,2/3,3,3,4)			
7.0															
7.5										5.00	B	JOT05			
8.0										5.00	C	N=16 (2,3/3,4,4,5)			
8.5															
9.0										6.00	B	JOT06			
9.5										6.00	C	N=16 (2,3/4,4,4,4)			
										7.00	B	JOT07			
										7.00	C	N=18 (3,4/5,4,5,4)			
										8.00	B	JOT08			
										8.00	C	N=41 (6,7/9,10,11,11)			
										3.48					
										3.28					
										9.00	B	JOT09			
										9.00	C	50 (25 for 5mm/50 for 5mm)			

Contract No: 5735		Cable Percussion Borehole Log										Borehole No: BH02						
Contract:		Site Development				Easting:		713795.371		Date Started:		25/06/2020						
Location:		Steevens Lane, Dublin 8				Northing:		734015.878		Date Completed:		26/06/2020						
Client:		Cushman & Wakefield				Elevation:		11.59		Drilled By:		J. O'Toole						
Engineer:		-				Borehole Diameter:		200mm		Status:		FINAL						
Depth (m)		Stratum Description				Legend	Level (mOD)		Samples and Insitu Tests				Water Strike	Backfill				
Scale	Depth						Scale	Depth	Depth	Type	Result							
	0.10	MADE GROUND: tarmacadam.					11.5	11.49										
	0.20	MADE GROUND: concrete.						11.39										
0.5		MADE GROUND: brown silty very sandy gravel with some red brick, concrete and timber.																
1.0									1.00	B	JOT10							
1.5									1.20	C	N=11 (2,3/4,2,2,3)							
2.0									2.00	B	JOT11							
2.5									2.00	C	N=11 (1,2/2,3,3,3)							
2.80		MADE GROUND: brown slightly sandy gravelly clayey silt with some red brick, concrete, mortar and timber.						8.79										
3.0									3.00	B	JOT12							
3.5									3.00	C	N=13 (1,2/2,3,4,4)							
4.0									4.00	B	JOT13							
4.5									4.00	C	N=17 (2,3/4,4,5,4)							
4.50		MADE GROUND: brown slightly sandy slightly gravelly silty clay with low cobble content and some red brick.						7.09										
5.0									5.00	B	JOT14							
5.5									5.00	C	N=15 (2,2/3,4,4,4)							
6.0									6.00	B	JOT15							
6.5									6.00	C	N=34 (4,5/7,9,9,9)							
7.0									7.00	B	JOT16							
7.5									7.00	C	N=50 (3,6/50 for 90mm)							
7.50		Very stiff brown sandy slightly gravelly silty CLAY with low cobble content.						4.09	7.50	C	50 (25 for 5mm/50 for 0mm)							
7.90		Obstruction - possible boulders.						3.69	7.90	B	JOT17							
8.00		End of Borehole at 8.00m						3.59										
8.5																		
9.0																		
9.5																		
		Chiselling:		Water Strikes:		Water Details:		Installation:		Backfill:		Remarks:		Legend: B: Bulk D: Disturbed U: Undisturbed ES: Environmental W: Water C: Cone SPT S: Split spoon SPT				
		From:	To:	Time:	Strike:	Rose:	Depth Sealed	Date:	Hole Depth:	Water Depth:	From:	To:	Pipe:		From:	To:	Type:	
		7.90	8.00	01:00				25/06	5.60	Dry					0.00	8.00		Arisings
								26/06	5.60	Dry								

Contract No: 5735		Window Sample and Dynamic Probe Log						Corehole No: WS01					
Contract:		Site Development			Easting:		713811.664		Date Started:		23/06/2020		
Location:		Steevens Lane, Dublin 8			Northing:		734013.988		Logged By:		J. Moriarty		
Client:		Cushman & Wakefield			Elevation:		11.78		Scale:		1:40		
Engineer:		-			Rig Type:		Competitor 130		Sheet No:		Sheet 1 of 1		
Depth (m)		Strata Description			Legend	Level (mOD)		Probe					
Scale	Depth					Scale	Depth	5	10	15	20	25	30
0.5		No recovery.				11.5							
1.0						10.78		  					
1.5		MADE GROUND: black silty sandy gravel with medium cobble content and some red brick fragments.				11.0		        					
2.0						10.5		                                                               					
2.5		9.68		                                                               									
3.0						8.78		                                                     					
3.5						7.5		                                                  					
4.0						7.0		                                    					

Contract No: 5735		Window Sample and Dynamic Probe Log						Corehole No: WS02						
Contract:		Site Development			Easting:		713792.162		Date Started:		23/06/2020			
Location:		Steevens Lane, Dublin 8			Northing:		734006.571		Logged By:		J. Moriarty			
Client:		Cushman & Wakefield			Elevation:		11.64		Scale:		1:40			
Engineer:		-			Rig Type:		Competitor 130		Sheet No:		Sheet 1 of 1			
Depth (m)		Strata Description			Legend		Level (mOD)		Probe					
Scale	Depth						Scale	Depth	5	10	15	20	25	30
0.5		No recovery.					11.5							
1.0							11.0		11					
1.5							10.5		12					
2.0							10.0		5					
2.5							9.5		5					
3.0							9.0		1					
3.5							8.5		4					
4.0							8.0		7					
4.5							7.5		3					
5.0							7.0		2					
5.5		MADE GROUND: black silty sandy gravel with medium cobble content and some mortar and red brick fragments.					10.24		2					
6.0							10.0		1					
6.5							9.5		2					
7.0							9.0		3					
7.5							8.5		5					
8.0							8.0		2					
8.5							7.5		2					
9.0							7.0		3					
9.5							6.5		2					
10.0							6.0		2					
10.5		MADE GROUND: grey brown sandy gravelly silty clay with low cobble content and some red brick fragments.					9.64		2					
11.0							9.5		3					
11.5							9.0		2					
12.0							8.5		3					
12.5							8.0		1					
13.0							7.5		2					
13.5							7.0		2					
14.0							6.5		3					
14.5							6.0		5					
15.0							5.5		2					
15.5							8.64		32					
16.0							8.5		29					
16.5							8.0		23					
17.0							7.5		35					
17.5							7.0							
18.0							6.5							
18.5							6.0							
19.0							5.5							
19.5							5.0							
20.0							4.5							
20.5		4.0												
21.0		3.5												
21.5		3.0												
22.0		2.5												
22.5		2.0												
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160.5		-136.0												
161.0		-136.5												
16														

Contract No: 5735		Window Sample and Dynamic Probe Log						Corehole No: WS03						
Contract:		Site Development			Easting:		713802.467		Date Started:		23/06/2020			
Location:		Steevens Lane, Dublin 8			Northing:		733993.171		Logged By:		J. Moriarty			
Client:		Cushman & Wakefield			Elevation:		13.94		Scale:		1:40			
Engineer:		-			Rig Type:		Competitor 130		Sheet No:		Sheet 1 of 1			
Depth (m)		Strata Description			Legend		Level (mOD)		Probe					
Scale	Depth						Scale	Depth	5	10	15	20	25	30
0.5		No recovery.					13.5		2 3 8 6 4					
1.0							12.94							
1.5		MADE GROUND: black silty sandy gravel with medium cobble content and some red brick fragments.					12.5							
1.80							12.14		3 14 6 4 3 2					
2.0		MADE GROUND: grey brown sandy gravelly silty clay with low cobble content and some red brick fragments.					12.0							
2.5							11.5							
3.0							11.0							
3.5							10.5							
4.0							10.0							
4.5							9.5							
5.0							9.0		11 17					
5.5							8.5							
6.0							8.0							
6.5							7.5							
7.0							7.0		14 23 35					
7.5							6.5							
8.0							6.0							
		Probe Details:			Remarks:									
		Type:	Mass:	Drop:	Dynamic probe completed adjacent to window sample.									
		DPH	50kg	500mm										

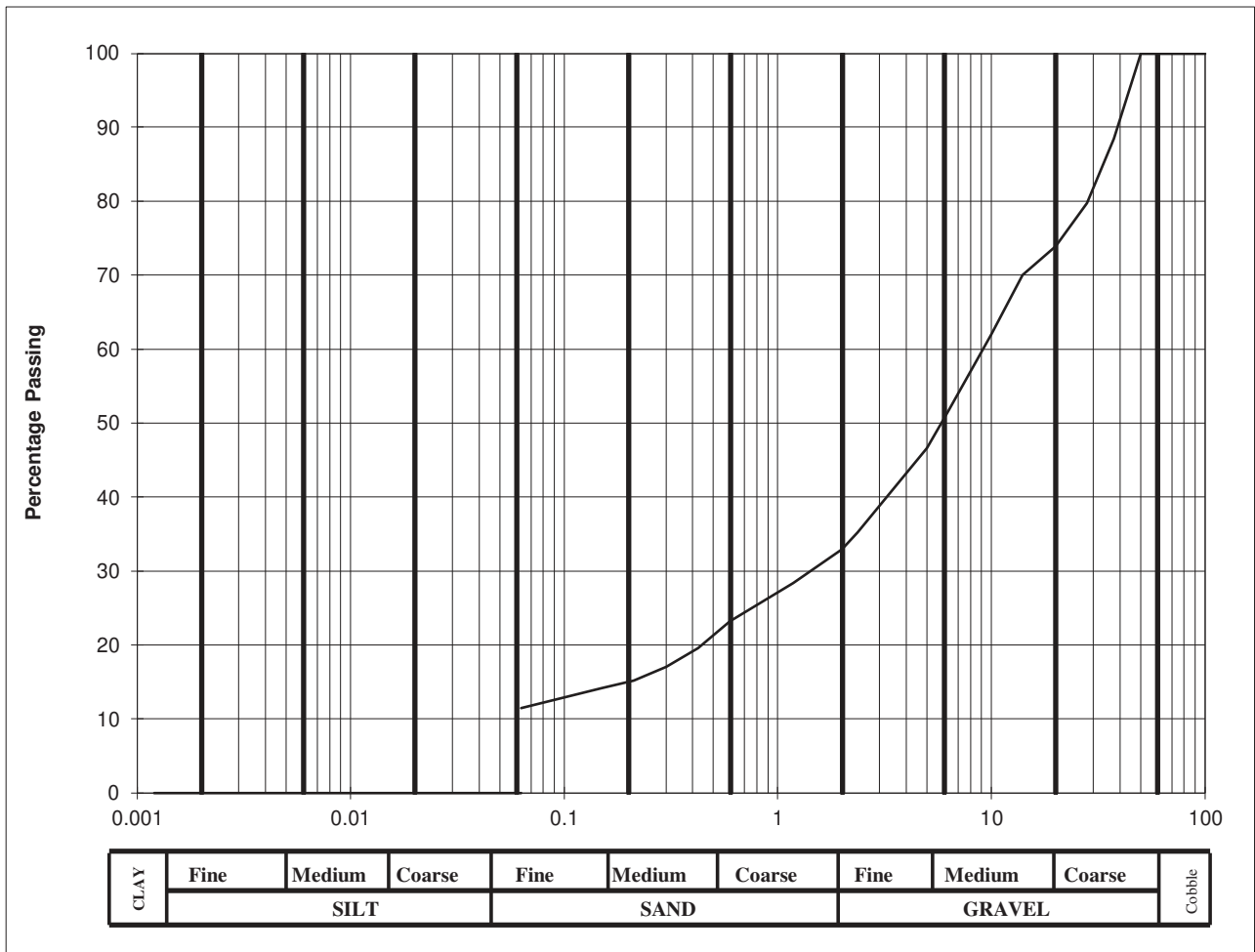
Classification Tests in accordance with BS1377: Part 4

Client	Cushman Wakeman
Site	Steven's Lane
S.I. File No	5735 / 20
Test Lab	Site Investigations Ltd., Carhugar The Grange, 12th Lock Rd., Lucan Co. Dublin. Tel (01) 6108768 Email info@siteinvestigations.ie
Report Date	24th July 2020

Hole ID	Depth	Sample No	Lab Ref No.	Sample Type	Natural Moisture Content %	Liquid Limit %	Plastic Limit %	Plastic Index %	Min. Dry Density Mg/m ³	Particle Density Mg/m ³	% passing 425um	Comments	Remarks C=Clay; M=Silt Plasticity: L=Low; I=Intermediate; H=High; V=Very High; E=Extremely High
BH01	1.00	JOT01	20/485	B	12.5	27	22	5			19.6		ML
BH01	6.00	JOT06	20/486	B	13.5	27	NP				42.6		
BH01	8.00	JOT08	20/487	B	12.2	32	20	12			43.4		CL
BH02	1.00	JOT10	20/488	B	15.1	28	NP				16.7		
BH02	3.00	JOT12	20/489	B	26.0	29	23	6			35.7		ML
BH02	5.00	JOT14	20/490	B	29.9	42	22	20			68.9		CI
BH02	7.90	JOT17	20/491	B	9.1	26	NP				23.2		

BS Sieve size, mm	Percent passing	Hydrometer analysis	
		Diameter, mm	% passing
100	100	0.0630	
90	100	0.0200	
75	100	0.0060	
63	100	0.0020	
50	100		
37.5	88.4		
28	79.7		
20	73.9		
14	70		
10	62		
6.3	51.6		
5.0	46.6		
2.36	35.2		
2.00	32.9		
1.18	28.4		
0.600	23.2		
0.425	19.6		
0.300	17		
0.212	15.2		
0.150	14.2		
0.063	12		

Cobbles, %	0
Gravel, %	67
Sand, %	21
Clay / Silt, %	12



Client :	Cushman Wakeman
Project :	Steven's Lane

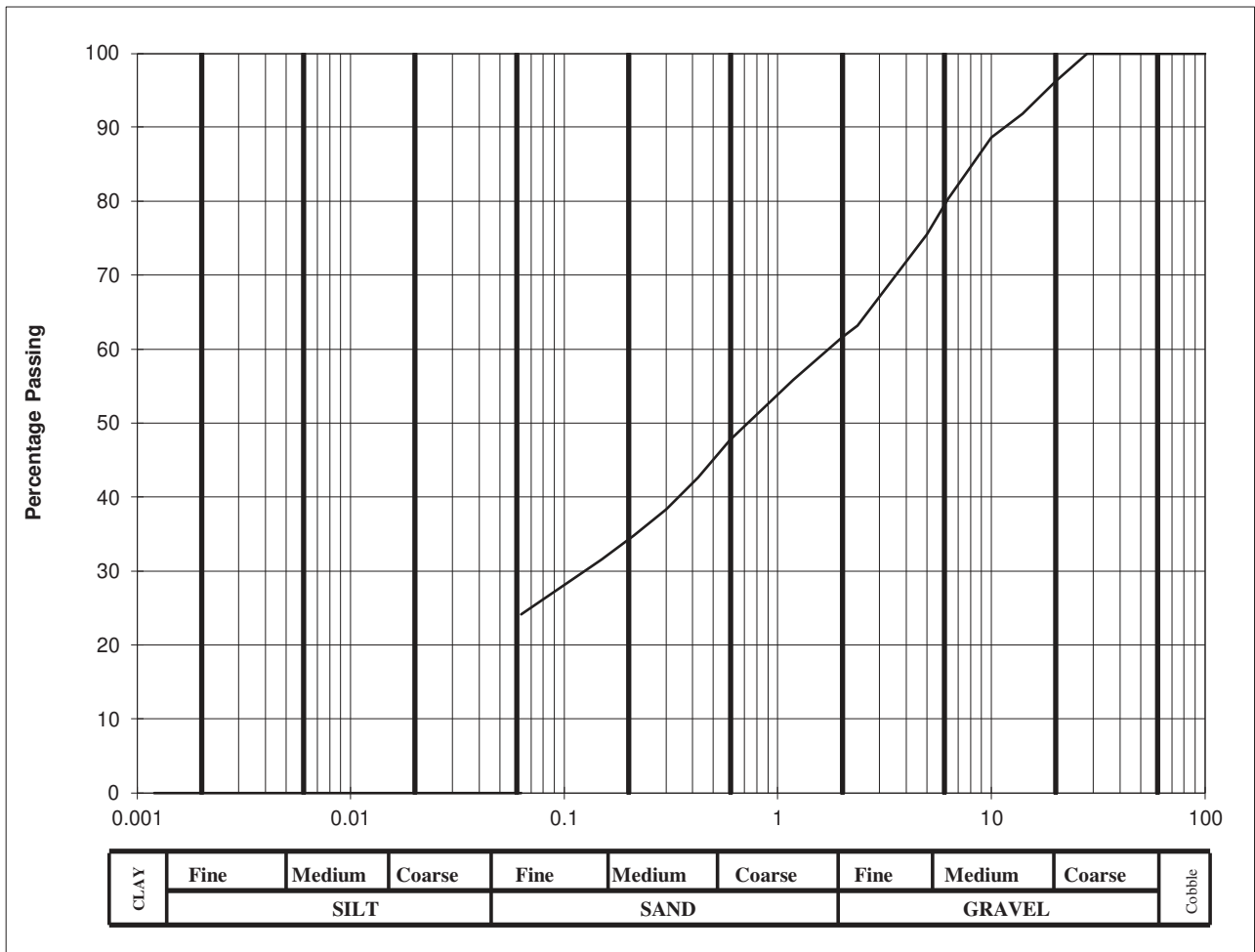
Lab. No :	20/485
Sample No :	JOT01

Hole ID :	BH 01
Depth, m :	1.00

Material description :	silty very sandy GRAVEL
Remarks :	Soils with clay or silt content between 15% - 35% can be classified as clay or silt depending on the field Engineers assessment of in-situ behaviour. Where material is for re-use and therefore disturbed, only soils with clay or silt >35% are classified as clay or silt

BS Sieve size, mm	Percent passing	Hydrometer analysis	
		Diameter, mm	% passing
100	100	0.0630	
90	100	0.0200	
75	100	0.0060	
63	100	0.0020	
50	100		
37.5	100		
28	100		
20	96.2		
14	91.8		
10	88.6		
6.3	80.3		
5.0	75.5		
2.36	63.2		
2.00	61.6		
1.18	55.8		
0.600	47.7		
0.425	42.6		
0.300	38.3		
0.212	34.8		
0.150	31.6		
0.063	24		

Cobbles, %	0
Gravel, %	38
Sand, %	38
Clay / Silt, %	24



Client :	Cushman Wakeman
Project :	Steven's Lane

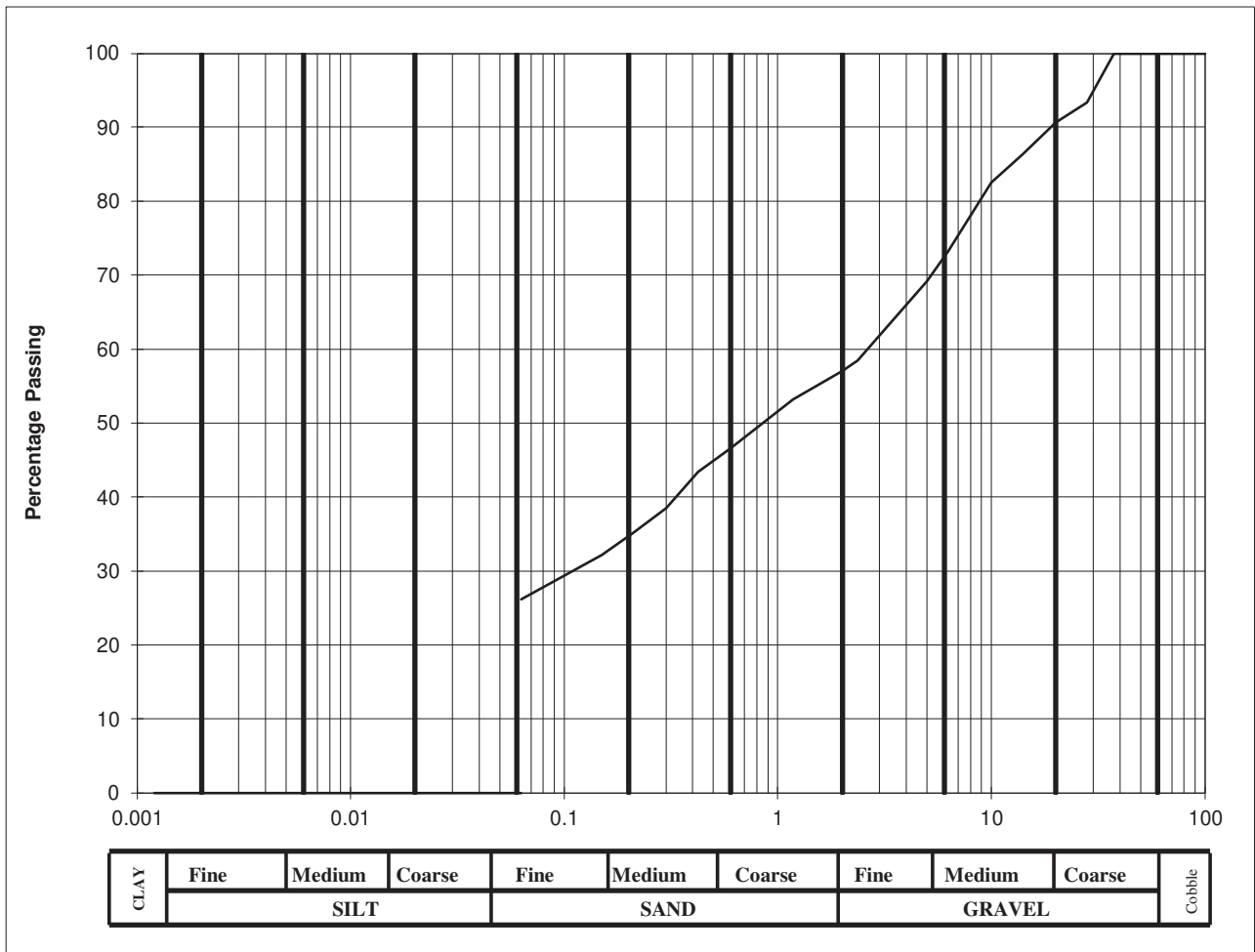
Lab. No :	20/486
Sample No :	JOT06

Hole ID :	BH 01
Depth, m :	6.00

Material description :	very silty very sandy GRAVEL
Remarks :	Soils with clay or silt content between 15% - 35% can be classified as clay or silt depending on the field Engineers assessment of in-situ behaviour. Where material is for re-use and therefore disturbed, only soils with clay or silt >35% are classified as clay or silt

BS Sieve size, mm	Percent passing	Hydrometer analysis	
		Diameter, mm	% passing
100	100	0.0630	
90	100	0.0200	
75	100	0.0060	
63	100	0.0020	
50	100		
37.5	100		
28	93.3		
20	90.6		
14	86.3		
10	82.5		
6.3	73.2		
5.0	69.2		
2.36	58.4		
2.00	57		
1.18	53.2		
0.600	46.5		
0.425	43.4		
0.300	38.5		
0.212	35.2		
0.150	32.2		
0.063	26		

Cobbles, %	0
Gravel, %	43
Sand, %	31
Clay / Silt, %	26



Client :	Cushman Wakeman
Project :	Steven's Lane

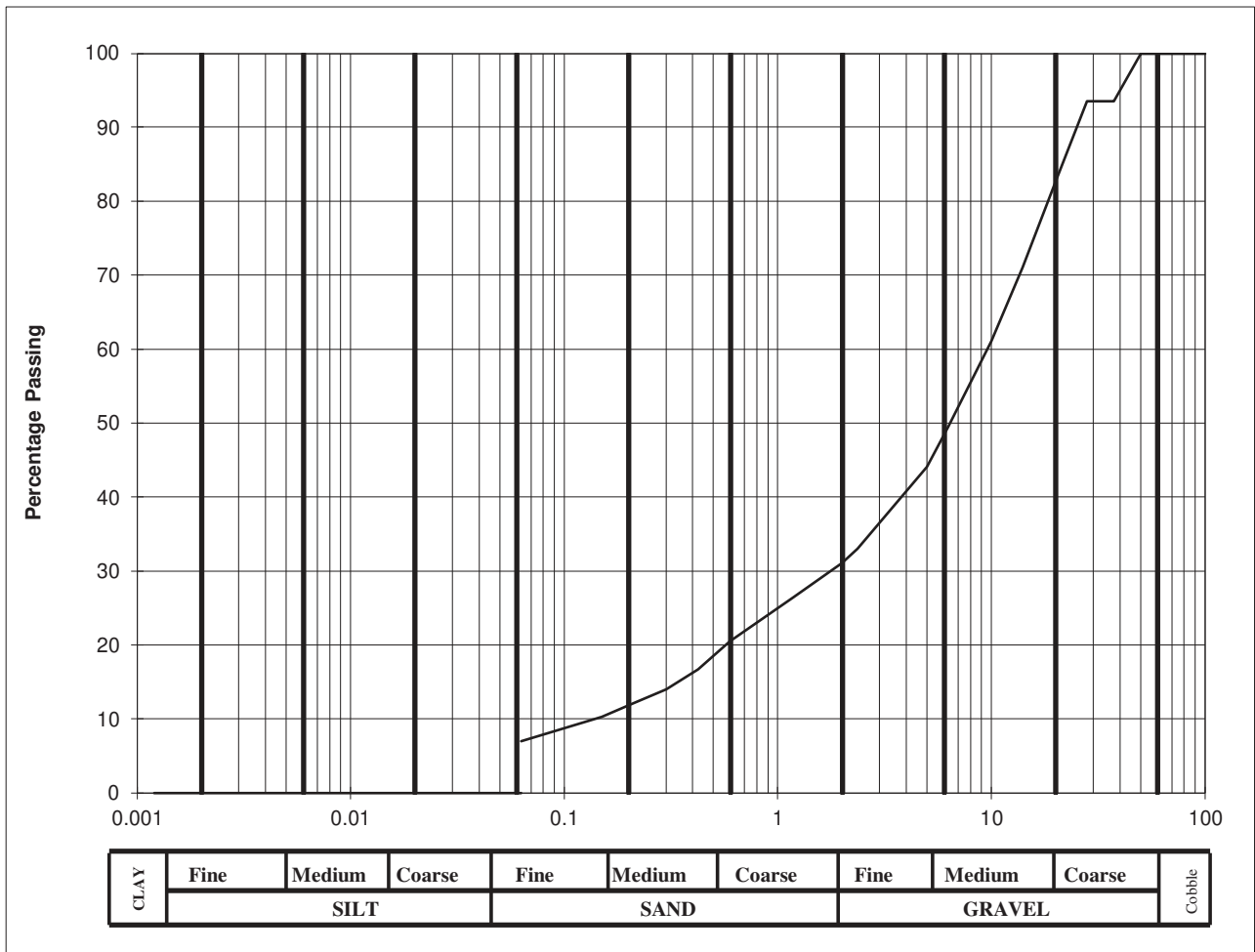
Lab. No :	20/487
Sample No :	JOT08

Hole ID :	BH 01
Depth, m :	8.00

Material description :	slightly sandy gravelly silty CLAY
Remarks :	Soils with clay or silt content between 15% - 35% can be classified as clay or silt depending on the field Engineers assessment of in-situ behaviour. Where material is for re-use and therefore disturbed, only soils with clay or silt >35% are classified as clay or silt

BS Sieve size, mm	Percent passing	Hydrometer analysis	
		Diameter, mm	% passing
100	100	0.0630	
90	100	0.0200	
75	100	0.0060	
63	100	0.0020	
50	100		
37.5	93.5		
28	93.5		
20	82.7		
14	71		
10	61.1		
6.3	49.5		
5.0	44.1		
2.36	33		
2.00	31.1		
1.18	26.4		
0.600	20.5		
0.425	16.7		
0.300	14		
0.212	12.1		
0.150	10.3		
0.063	7		

Cobbles, %	0
Gravel, %	69
Sand, %	24
Clay / Silt, %	7



Client :	Cushman Wakeman
Project :	Steven's Lane

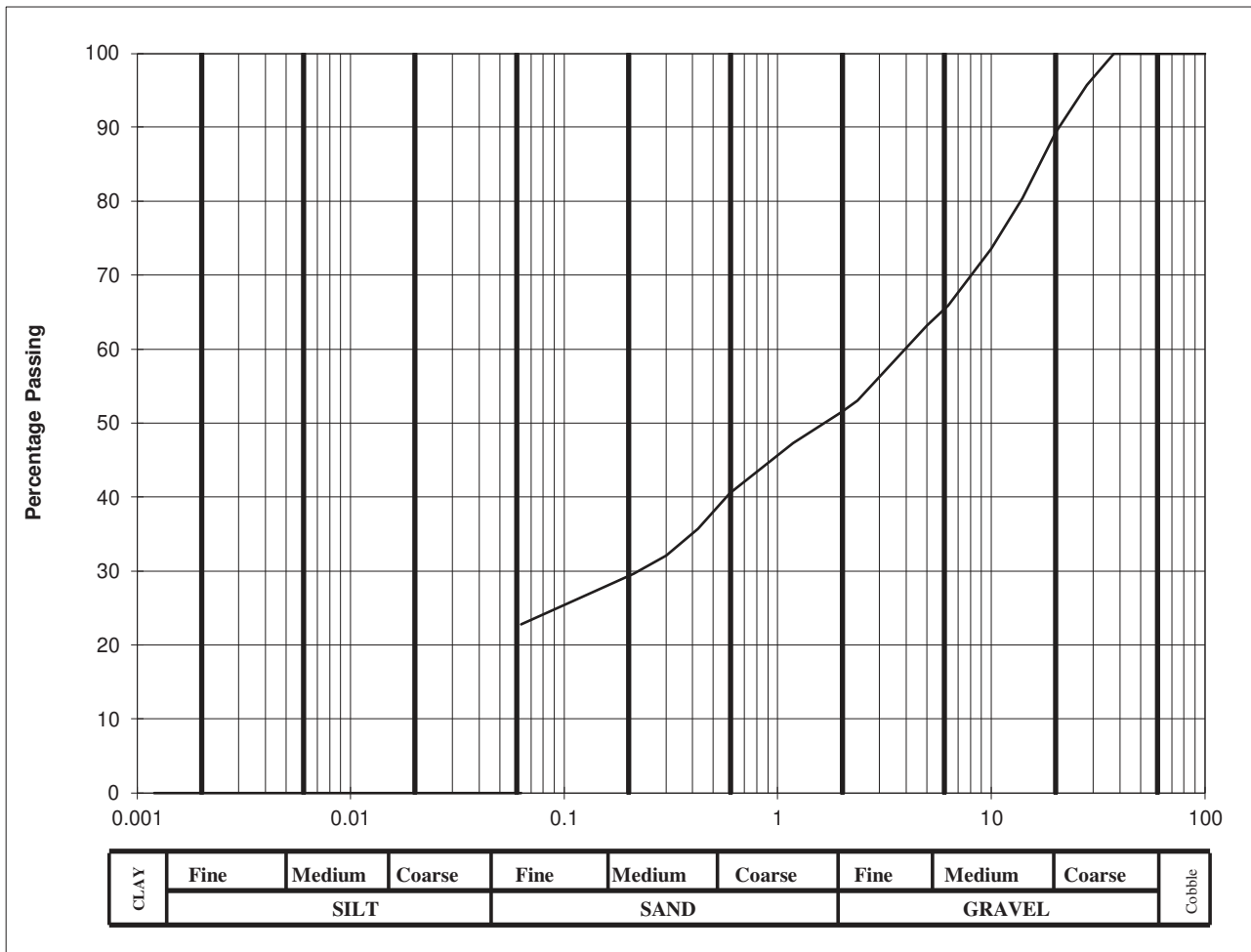
Lab. No :	20/488
Sample No :	JOT10

Hole ID :	BH 02
Depth, m :	1.00

Material description :	silty very sandy GRAVEL
Remarks :	Soils with clay or silt content between 15% - 35% can be classified as clay or silt depending on the field Engineers assessment of in-situ behaviour. Where material is for re-use and therefore disturbed, only soils with clay or silt >35% are classified as clay or silt

BS Sieve size, mm	Percent passing	Hydrometer analysis	
		Diameter, mm	% passing
100	100	0.0630	
90	100	0.0200	
75	100	0.0060	
63	100	0.0020	
50	100		
37.5	100		
28	95.7		
20	89.3		
14	80.4		
10	73.6		
6.3	65.9		
5.0	63.2		
2.36	53		
2.00	51.5		
1.18	47.3		
0.600	40.5		
0.425	35.7		
0.300	32.1		
0.212	29.6		
0.150	27.7		
0.063	23		

Cobbles, %	0
Gravel, %	49
Sand, %	29
Clay / Silt, %	23



Client :	Cushman Wakeman
Project :	Steven's Lane

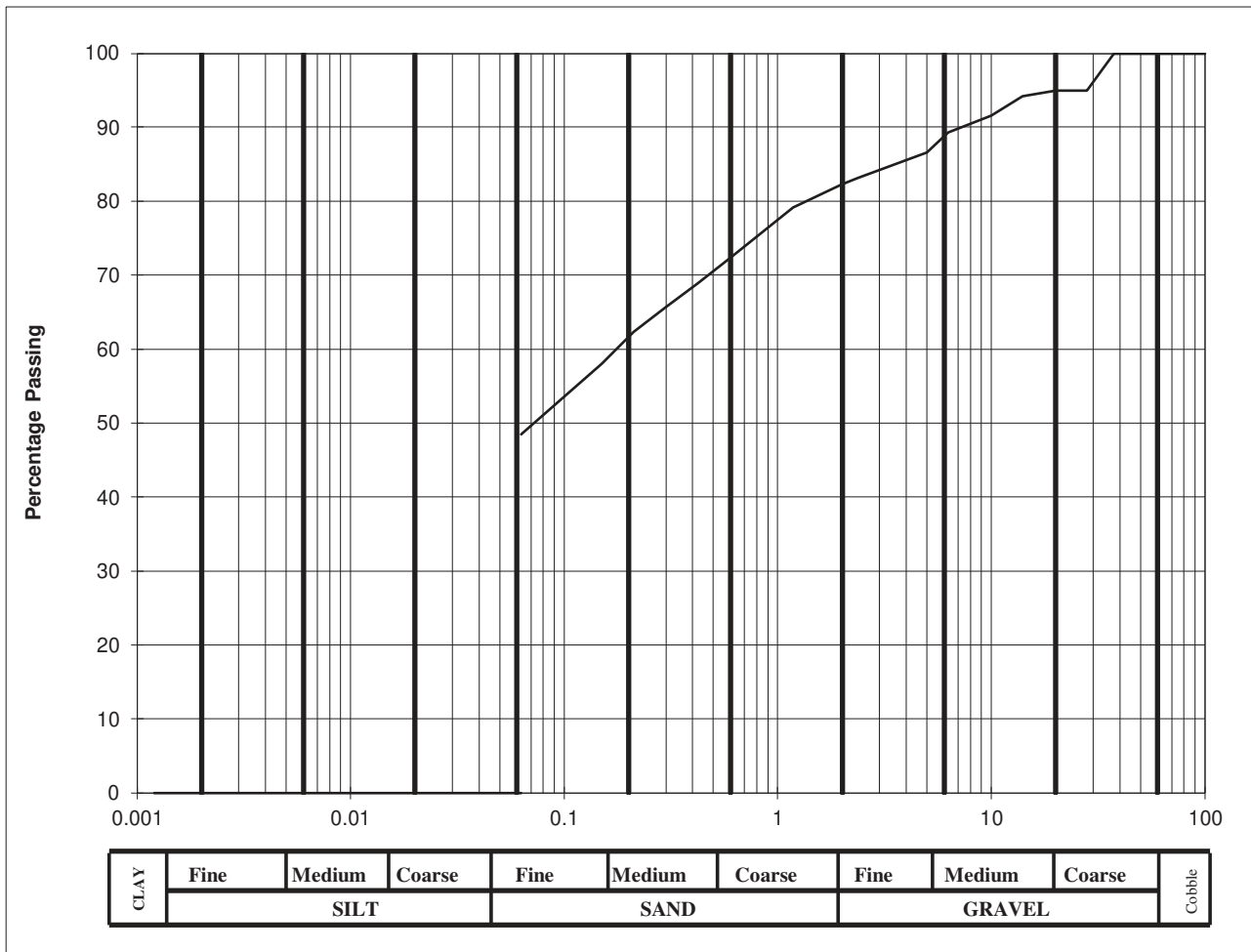
Lab. No :	20/489
Sample No :	JOT12

Hole ID :	BH 02
Depth, m :	3.00

Material description :	slightly sandy gravelly clayey SILT
Remarks :	Soils with clay or silt content between 15% - 35% can be classified as clay or silt depending on the field Engineers assessment of in-situ behaviour. Where material is for re-use and therefore disturbed, only soils with clay or silt >35% are classified as clay or silt

BS Sieve size, mm	Percent passing	Hydrometer analysis	
		Diameter, mm	% passing
100	100	0.0630	
90	100	0.0200	
75	100	0.0060	
63	100	0.0020	
50	100		
37.5	100		
28	94.9		
20	94.9		
14	94.2		
10	91.6		
6.3	89.3		
5.0	86.6		
2.36	83.1		
2.00	82.3		
1.18	79.1		
0.600	72.3		
0.425	68.9		
0.300	65.7		
0.212	62.3		
0.150	58		
0.063	49		

Cobbles, %	0
Gravel, %	18
Sand, %	33
Clay / Silt, %	49



Client :	Cushman Wakeman
Project :	Steven's Lane

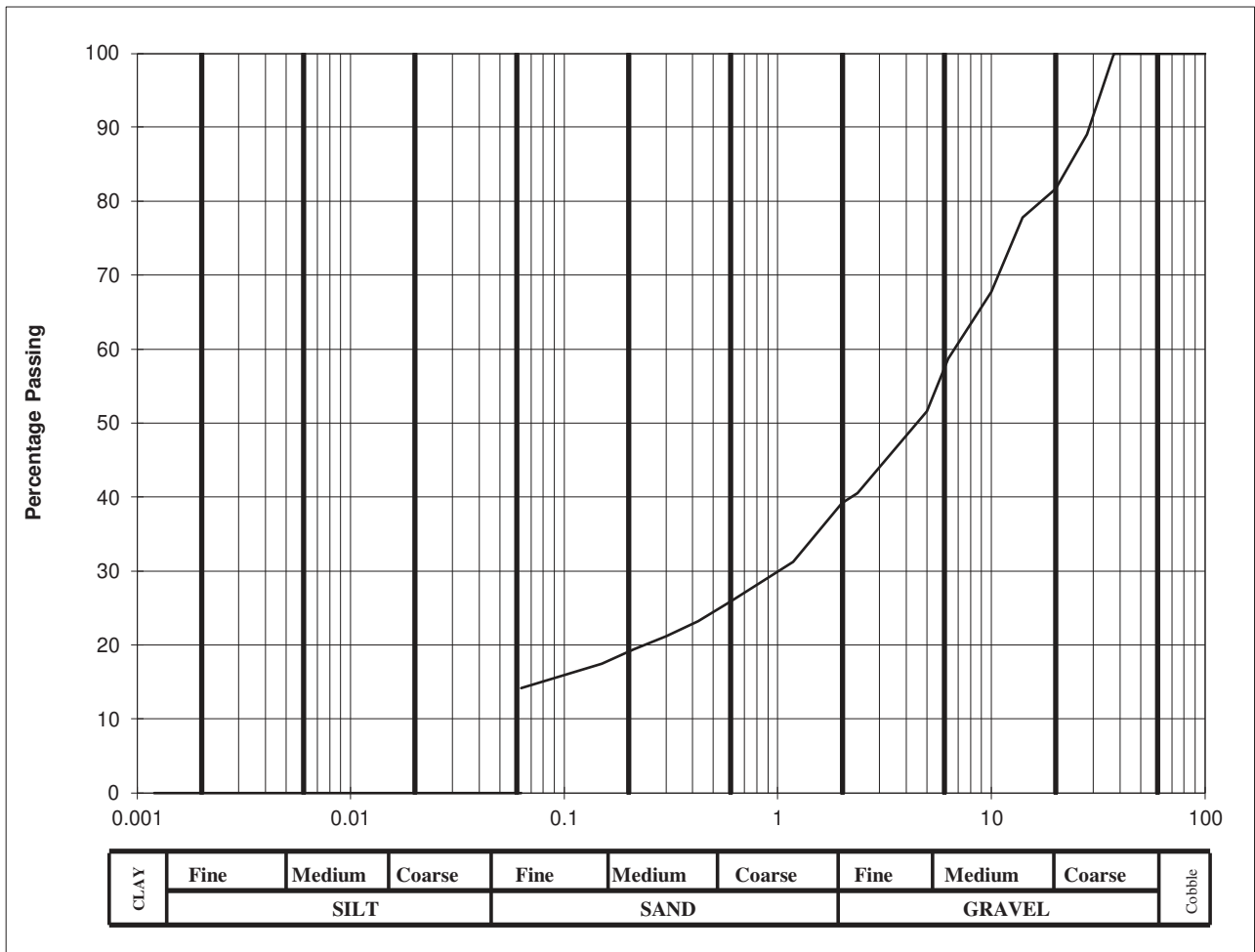
Lab. No :	20/490
Sample No :	JOT14

Hole ID :	BH 02
Depth, m :	5.00

Material description :	slightly sandy slightly gravelly silty CLAY
Remarks :	Soils with clay or silt content between 15% - 35% can be classified as clay or silt depending on the field Engineers assessment of in-situ behaviour. Where material is for re-use and therefore disturbed, only soils with clay or silt >35% are classified as clay or silt

BS Sieve size, mm	Percent passing	Hydrometer analysis	
		Diameter, mm	% passing
100	100	0.0630	
90	100	0.0200	
75	100	0.0060	
63	100	0.0020	
50	100		
37.5	100		
28	89		
20	81.7		
14	77.8		
10	67.7		
6.3	58.7		
5.0	51.6		
2.36	40.5		
2.00	39.2		
1.18	31.2		
0.600	25.8		
0.425	23.2		
0.300	21.2		
0.212	19.4		
0.150	17.5		
0.063	14		

Cobbles, %	0
Gravel, %	61
Sand, %	25
Clay / Silt, %	14



Client :	Cushman Wakeman
Project :	Steven's Lane

Lab. No :	20/491
Sample No :	JOT17

Hole ID :	BH 02
Depth, m :	7.90

Material description :	silty very sandy GRAVEL
Remarks :	Soils with clay or silt content between 15% - 35% can be classified as clay or silt depending on the field Engineers assessment of in-situ behaviour. Where material is for re-use and therefore disturbed, only soils with clay or silt >35% are classified as clay or silt

Chemical Testing
In accordance with BS 1377: Part 3

Client	Cushman Wakeman
Site	Steven's Lane
S.I. File No	5735 / 20
Test Lab	Site Investigations Ltd., Carhugar The Grange, 12th Lock Rd., Lucan Co. Dublin. Tel (01) 6108768 Email:info@siteinvestigations.ie
Report Date	24th July 2020

Hole Id	Depth (mBGL)	Sample No	Lab Ref	pH Value	Water Soluble Sulphate Content (2:1 Water-soil extract) (SO ₃) g/L	Water Soluble Sulphate Content (2:1 Water-soil extract) (SO ₃) %	Loss on Ignition (Organic Content) %	Chloride ion Content (water:soil ratio 2:1) %	% passing 2mm	Remarks
BH01	1.00	JOT01	20/485	8.32	0.130	0.043			32.9	
BH02	1.00	JOT10	20/488	8.65	0.126	0.039			31.1	



CERTIFICATE OF ANALYSIS

SDG: 200704-77
Location: Stevens Lane**Client Reference:** 5725
Order Number: 66/A/20**Report Number:** 559525
Superseded Report: 559181

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm
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Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
22423323	BH 01	1.00 - 1.00	Dark Brown	Clay Loam	Stones	Vegetation
22423324	BH 02	1.00 - 1.00	Dark Brown	Sandy Loam	Stones	Vegetation

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.



CERTIFICATE OF ANALYSIS

Validated

SDG: 200704-77
Location: Stevens LaneClient Reference: 5725
Order Number: 66/A/20Report Number: 559525
Superseded Report: 559181

Results Legend			Customer Sample Ref.		BH 01		BH 02					
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference		1.00 - 1.00		1.00 - 1.00					
M	mCERTS accredited.				Soil/Solid (S)		Soil/Solid (S)					
aq	Aqueous / settled sample.				03/07/2020		03/07/2020					
diss.filt	Dissolved / filtered sample.				04/07/2020		04/07/2020					
tot.unfilt	Total / unfiltered sample.				200704-77		200704-77					
*	Subcontracted - refer to subcontractor report for accreditation status.				22423323		22423324					
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery											
(F)	Trigger breach confirmed											
1-3*5@	Sample deviation (see appendix)											
Component	LOD/Units	Method										
Moisture Content Ratio (% of as received sample)	%	PM024	14		11							
Loss on ignition	<0.7 %	TM018	3.77		6.48							
			M		M							
Organic Carbon, Total	<0.2 %	TM132	1.64		6.23							
			M		M							
Chromium, Hexavalent	<0.6 mg/kg	TM151	<0.6		<0.6							
			#		#							
PCB congener 28	<3 µg/kg	TM168	<30		<30							
			M		M							
PCB congener 52	<3 µg/kg	TM168	<30		<30							
			M		M							
PCB congener 101	<3 µg/kg	TM168	<30		<30							
			M		M							
PCB congener 118	<3 µg/kg	TM168	<30		<30							
			M		M							
PCB congener 138	<3 µg/kg	TM168	<30		<30							
			M		M							
PCB congener 153	<3 µg/kg	TM168	<30		<30							
			M		M							
PCB congener 180	<3 µg/kg	TM168	<30		<30							
			M		M							
Sum of detected PCB 7 Congeners	<21 µg/kg	TM168	<210		<210							
Chromium, Trivalent	<0.9 mg/kg	TM181	13.3		19.8							
Antimony	<0.6 mg/kg	TM181	<0.6		5.71							
			#		#							
Arsenic	<0.6 mg/kg	TM181	37.8		22.4							
			M		M							
Barium	<0.6 mg/kg	TM181	42.8		410							
			#		#							
Cadmium	<0.02 mg/kg	TM181	0.537		1.2							
			M		M							
Chromium	<0.9 mg/kg	TM181	13.3		19.8							
			M		M							
Copper	<1.4 mg/kg	TM181	42.8		42.7							
			M		M							
Lead	<0.7 mg/kg	TM181	71.5		234							
			M		M							
Mercury	<0.14 mg/kg	TM181	<0.14		<0.14							
			M		M							
Molybdenum	<0.1 mg/kg	TM181	0.724		1.08							
			#		#							
Nickel	<0.2 mg/kg	TM181	33.1		30.4							
			M		M							
Selenium	<1 mg/kg	TM181	<1		<1							
			#		#							
Zinc	<1.9 mg/kg	TM181	133		315							
			M		M							
Coronene	<200 µg/kg	TM410	282		2330							
Mineral Oil >C10-C40	<5 mg/kg	TM415	203		1070							



CERTIFICATE OF ANALYSIS

Validated

SDG: 200704-77
Location: Stevens LaneClient Reference: 5725
Order Number: 66/A/20Report Number: 559525
Superseded Report: 559181

TPH CWG (S)

Results Legend			Customer Sample Ref.		BH 01	BH 02			
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference		1.00 - 1.00	1.00 - 1.00			
M	mCERTS accredited.				Soil/Solid (S)	Soil/Solid (S)			
aq	Aqueous / settled sample.				03/07/2020	03/07/2020			
diss.filt	Dissolved / filtered sample.								
tot.unfilt	Total / unfiltered sample.				04/07/2020	04/07/2020			
*	Subcontracted - refer to subcontractor report for accreditation status.				200704-77	200704-77			
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery				22423323	22423324			
(F)	Trigger breach confirmed								
1-3*5@	Sample deviation (see appendix)								
Component	LOD/Units	Method							
GRO Surrogate % recovery**	%	TM089			78.4	102			
Aliphatics >C5-C6	<10 µg/kg	TM089			10.4	<100			
Aliphatics >C6-C8	<10 µg/kg	TM089			369	415			
Aliphatics >C8-C10	<10 µg/kg	TM089			788	17500			
Aliphatics >C10-C12	<1000 µg/kg	TM414			16300	368000			
Aliphatics >C12-C16	<1000 µg/kg	TM414			61300	139000			
Aliphatics >C16-C21	<1000 µg/kg	TM414			70100	90300			
Aliphatics >C21-C35	<1000 µg/kg	TM414			52800	237000			
Aliphatics >C35-C44	<1000 µg/kg	TM414			24000	244000			
Total Aliphatics >C10-C44	<5000 µg/kg	TM414			224000	1080000			
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414			419000	4660000			
Aromatics >EC5-EC7	<10 µg/kg	TM089			<10	<100			
Aromatics >EC7-EC8	<10 µg/kg	TM089			15.1	110			
Aromatics >EC8-EC10	<10 µg/kg	TM089			524	11600			
Aromatics > EC10-EC12	<1000 µg/kg	TM414			2630	293000			
Aromatics > EC12-EC16	<1000 µg/kg	TM414			27700	704000			
Aromatics > EC16-EC21	<1000 µg/kg	TM414			39800	1160000			
Aromatics > EC21-EC35	<1000 µg/kg	TM414			95700	1360000			
Aromatics >EC35-EC44	<1000 µg/kg	TM414			28400	70600			
Aromatics > EC40-EC44	<1000 µg/kg	TM414			11500	11100			
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414			194000	3590000			
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414			420000	4690000			
GRO >C5-C6	<20 µg/kg	TM089			<20	<200			
GRO >C6-C7	<20 µg/kg	TM089			108	217			
GRO >C7-C8	<20 µg/kg	TM089			276	320			
GRO >C8-C10	<20 µg/kg	TM089			1310	29100			
GRO >C10-C12	<20 µg/kg	TM089			1890	67600			
Total Aliphatics >C5-C10	<50 µg/kg	TM089			1170	17900			
Total Aromatics >EC5-EC10	<50 µg/kg	TM089			539	11800			
GRO >C5-C10	<20 µg/kg	TM089			1710	29600			



CERTIFICATE OF ANALYSIS

Validated

SDG: 200704-77
Location: Stevens Lane

Client Reference: 5725
Order Number: 66/A/20

Report Number: 559525
Superseded Report: 559181

CEN 10:1 SINGLE STAGE LEACHATE TEST

WAC ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		Site Location	Stevens Lane
Mass Sample taken (kg)	0.111	Natural Moisture Content (%)	24.2
Mass of dry sample (kg)	0.090	Dry Matter Content (%)	80.5
Particle Size <4mm	>95%		

Case		Landfill Waste Acceptance Criteria Limits	
SDG	200704-77		
Lab Sample Number(s)	22423323		
Sampled Date	03-Jul-2020		
Customer Sample Ref.	BH 01		
Depth (m)	1.00 - 1.00		

Solid Waste Analysis	Result	Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
Total Organic Carbon (%)	1.64	3	5	6
Loss on Ignition (%)	3.77	-	-	10
Sum of BTEX (mg/kg)	-	-	-	-
Sum of 7 PCBs (mg/kg)	<0.21	1	-	-
Mineral Oil (mg/kg)	203	500	-	-
PAH Sum of 17 (mg/kg)	-	-	-	-
pH (pH Units)	-	-	-	-
ANC to pH 6 (mol/kg)	-	-	-	-
ANC to pH 4 (mol/kg)	-	-	-	-

Eluate Analysis	C ₂ Conc ⁿ in 10:1 eluate (mg/l)		A ₂ 10:1 conc ⁿ leached (mg/kg)		Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg		
	Result	Limit of Detection	Result	Limit of Detection			
Arsenic	0.0158	<0.0005	0.158	<0.005	0.5	2	25
Barium	0.0032	<0.0002	0.032	<0.002	20	100	300
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	0.04	1	5
Chromium	0.00534	<0.001	0.0534	<0.01	0.5	10	70
Copper	0.0195	<0.0003	0.195	<0.003	2	50	100
Mercury Dissolved (CVAf)	0.0000169	<0.00001	0.000169	<0.0001	0.01	0.2	2
Molybdenum	0.0207	<0.003	0.207	<0.03	0.5	10	30
Nickel	0.00255	<0.0004	0.0255	<0.004	0.4	10	40
Lead	<0.0002	<0.0002	<0.002	<0.002	0.5	10	50
Antimony	0.00136	<0.001	0.0136	<0.01	0.06	0.7	5
Selenium	0.00174	<0.001	0.0174	<0.01	0.1	0.5	7
Zinc	0.00219	<0.001	0.0219	<0.01	4	50	200
Chloride	7.2	<2	72	<20	800	15000	25000
Fluoride	<0.5	<0.5	<5	<5	10	150	500
Sulphate (soluble)	93	<2	930	<20	1000	20000	50000
Total Dissolved Solids	240	<10	2400	<100	4000	60000	100000
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	1	-	-
Dissolved Organic Carbon	7.38	<3	73.8	<30	500	800	1000

Leach Test Information

Date Prepared	07-Jul-2020
pH (pH Units)	10.80
Conductivity (µS/cm)	379.00
Temperature (°C)	16.90
Volume Leachant (Litres)	0.879

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable
Stated limits are for guidance only and ALS Environmental cannot be held responsible for any discrepancies with current legislation
Mcerts Certification does not apply to leachates
18/07/2020 09:08:03

09:07:29 18/07/2020



CERTIFICATE OF ANALYSIS

Validated

SDG: 200704-77
Location: Stevens Lane

Client Reference: 5725
Order Number: 66/A/20

Report Number: 559525
Superseded Report: 559181

CEN 10:1 SINGLE STAGE LEACHATE TEST

WAC ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference	
Mass Sample taken (kg)	0.105
Mass of dry sample (kg)	0.090
Particle Size <4mm	>95%

Site Location	Stevens Lane
Natural Moisture Content (%)	16.3
Dry Matter Content (%)	86

Case	
SDG	200704-77
Lab Sample Number(s)	22423324
Sampled Date	03-Jul-2020
Customer Sample Ref.	BH 02
Depth (m)	1.00 - 1.00

Landfill Waste Acceptance Criteria Limits

Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
3	5	6
-	-	10
-	-	-
1	-	-
500	-	-
-	-	-
-	-	-
-	-	-
-	-	-

Solid Waste Analysis	Result
Total Organic Carbon (%)	6.23
Loss on Ignition (%)	6.48
Sum of BTEX (mg/kg)	-
Sum of 7 PCBs (mg/kg)	<0.21
Mineral Oil (mg/kg)	1070
PAH Sum of 17 (mg/kg)	-
pH (pH Units)	-
ANC to pH 6 (mol/kg)	-
ANC to pH 4 (mol/kg)	-

Eluate Analysis	C ₂ Conc ⁿ in 10:1 eluate (mg/l)		A ₂ 10:1 conc ⁿ leached (mg/kg)		Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg		
	Result	Limit of Detection	Result	Limit of Detection			
Arsenic	0.0213	<0.0005	0.213	<0.005	0.5	2	25
Barium	0.0145	<0.0002	0.145	<0.002	20	100	300
Cadmium	0.000121	<0.00008	0.00121	<0.0008	0.04	1	5
Chromium	0.00485	<0.001	0.0485	<0.01	0.5	10	70
Copper	0.00346	<0.0003	0.0346	<0.003	2	50	100
Mercury Dissolved (CVAf)	<0.00001	<0.00001	<0.0001	<0.0001	0.01	0.2	2
Molybdenum	0.0173	<0.003	0.173	<0.03	0.5	10	30
Nickel	0.00349	<0.0004	0.0349	<0.004	0.4	10	40
Lead	0.000779	<0.0002	0.00779	<0.002	0.5	10	50
Antimony	0.0274	<0.001	0.274	<0.01	0.06	0.7	5
Selenium	0.00207	<0.001	0.0207	<0.01	0.1	0.5	7
Zinc	0.0893	<0.001	0.893	<0.01	4	50	200
Chloride	12.8	<2	128	<20	800	15000	25000
Fluoride	<0.5	<0.5	<5	<5	10	150	500
Sulphate (soluble)	96.8	<2	968	<20	1000	20000	50000
Total Dissolved Solids	265	<10	2650	<100	4000	60000	100000
Total Monohydric Phenols (W)	1.56	<0.016	15.6	<0.16	1	-	-
Dissolved Organic Carbon	29.9	<3	299	<30	500	800	1000

Leach Test Information

Date Prepared	07-Jul-2020
pH (pH Units)	10.59
Conductivity (µS/cm)	377.00
Temperature (°C)	16.40
Volume Leachant (Litres)	0.885

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable
Stated limits are for guidance only and ALS Environmental cannot be held responsible for any discrepancies with current legislation
Mcerts Certification does not apply to leachates
18/07/2020 09:08:03

09:07:29 18/07/2020



Classification of sample: BH 01-030720-1.00-1.00

*** Potentially Hazardous Waste**
Classified as **17 05 04** or **17 05 03 ***
in the List of Waste

Sample details

Sample Name:	LoW Code:	
BH 01-030720-1.00-1.00	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Moisture content:	Entry:	17 05 04 or 17 05 03 * (Soil and stones other than those mentioned in 17 05 03 or Soil and stones containing hazardous substances)
14% (wet weight correction)		

Hazard properties (substances considered hazardous until shown otherwise)

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinands:

toluene: (conc.: 1.46e-06%)

ethylbenzene: (conc.: 8.77e-07%)

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinands:

TPH (C6 to C40) petroleum group: (conc.: 0.042%)

o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]: (conc.: 2.91e-06%)

Determinands

Moisture content: 14% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
1	TPH (C6 to C40) petroleum group				420 mg/kg		420 mg/kg		0.042 %		
			TPH								
2	confirm TPH has NOT arisen from diesel or petrol				☒						
3	antimony { antimony trioxide }				<0.6 mg/kg	1.197	<0.718 mg/kg		<0.0000718 %		<LOD
	051-005-00-X	215-175-0	1309-64-4								
4	arsenic { arsenic pentoxide }				37.8 mg/kg	1.534	49.863 mg/kg		0.00499 %	✓	
	033-004-00-6	215-116-9	1303-28-2								
5	barium { barium sulphide }				42.8 mg/kg	1.233	45.402 mg/kg		0.00454 %	✓	
	016-002-00-X	244-214-4	21109-95-5								
6	cadmium { cadmium sulfate }				0.537 mg/kg	1.855	0.856 mg/kg		0.0000856 %	✓	
	048-009-00-9	233-331-6	10124-36-4								
7	copper { dicopper oxide; copper (I) oxide }				42.8 mg/kg	1.126	41.442 mg/kg		0.00414 %	✓	
	029-002-00-X	215-270-7	1317-39-1								
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	71.5 mg/kg		61.49 mg/kg		0.00615 %	✓	
	082-001-00-6										
9	mercury { mercury dichloride }				<0.14 mg/kg	1.353	<0.189 mg/kg		<0.0000189 %		<LOD
	080-010-00-X	231-299-8	7487-94-7								



#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number									
10	molybdenum { molybdenum(VI) oxide }				0.724	mg/kg	1.5	0.934	mg/kg	0.0000934 %	✓	
	042-001-00-9	215-204-7	1313-27-5									
11	nickel { nickel sulfate }				33.1	mg/kg	2.637	75.056	mg/kg	0.00751 %	✓	
	028-009-00-5	232-104-9	7786-81-4									
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<LOD
	034-002-00-8											
13	zinc { zinc sulphate }				133	mg/kg	2.469	282.438	mg/kg	0.0282 %	✓	
	030-006-00-9	231-793-3 [1]	7446-19-7 [1]									
		231-793-3 [2]	7733-02-0 [2]									
14	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				13.3	mg/kg	1.462	16.717	mg/kg	0.00167 %	✓	
		215-160-9	1308-38-9									
15	chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.6	mg/kg	1.923	<1.154	mg/kg	<0.000115 %		<LOD
	024-001-00-0	215-607-8	1333-82-0									
16	naphthalene				0.307	mg/kg		0.264	mg/kg	0.0000264 %	✓	
	601-052-00-2	202-049-5	91-20-3									
17	acenaphthylene				0.196	mg/kg		0.169	mg/kg	0.0000169 %	✓	
		205-917-1	208-96-8									
18	acenaphthene				0.316	mg/kg		0.272	mg/kg	0.0000272 %	✓	
		201-469-6	83-32-9									
19	fluorene				0.396	mg/kg		0.341	mg/kg	0.0000341 %	✓	
		201-695-5	86-73-7									
20	phenanthrene				2.05	mg/kg		1.763	mg/kg	0.000176 %	✓	
		201-581-5	85-01-8									
21	anthracene				0.489	mg/kg		0.421	mg/kg	0.0000421 %	✓	
		204-371-1	120-12-7									
22	fluoranthene				3.22	mg/kg		2.769	mg/kg	0.000277 %	✓	
		205-912-4	206-44-0									
23	pyrene				2.88	mg/kg		2.477	mg/kg	0.000248 %	✓	
		204-927-3	129-00-0									
24	benzo[a]anthracene				1.74	mg/kg		1.496	mg/kg	0.00015 %	✓	
	601-033-00-9	200-280-6	56-55-3									
25	chrysene				1.63	mg/kg		1.402	mg/kg	0.00014 %	✓	
	601-048-00-0	205-923-4	218-01-9									
26	benzo[b]fluoranthene				2.55	mg/kg		2.193	mg/kg	0.000219 %	✓	
	601-034-00-4	205-911-9	205-99-2									
27	benzo[k]fluoranthene				0.906	mg/kg		0.779	mg/kg	0.0000779 %	✓	
	601-036-00-5	205-916-6	207-08-9									
28	benzo[a]pyrene; benzo[def]chrysene				1.54	mg/kg		1.324	mg/kg	0.000132 %	✓	
	601-032-00-3	200-028-5	50-32-8									
29	indeno[123-cd]pyrene				1.35	mg/kg		1.161	mg/kg	0.000116 %	✓	
		205-893-2	193-39-5									
30	dibenz[a,h]anthracene				<0.23	mg/kg		<0.23	mg/kg	<0.000023 %		<LOD
	601-041-00-2	200-181-8	53-70-3									
31	benzo[ghi]perylene				1.14	mg/kg		0.98	mg/kg	0.000098 %	✓	
		205-883-8	191-24-2									
32	polychlorobiphenyls; PCB				<0.21	mg/kg		<0.21	mg/kg	<0.000021 %		<LOD
	602-039-00-4	215-648-1	1336-36-3									
33	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	603-181-00-X	216-653-1	1634-04-4									
34	benzene				<0.009	mg/kg		<0.009	mg/kg	<0.0000009 %		<LOD
	601-020-00-8	200-753-7	71-43-2									
35	toluene				0.017	mg/kg		0.0146	mg/kg	0.00000146 %	✓	
	601-021-00-3	203-625-9	108-88-3									
36	ethylbenzene				0.0102	mg/kg		0.0087	mg/kg	0.000000877 %	✓	
	601-023-00-4	202-849-4	100-41-4									



#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
37	coronene				0.282 mg/kg		0.243 mg/kg	0.0000243 %	✓	
		205-881-7	191-07-1							
38	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]				0.0338 mg/kg		0.0291 mg/kg	0.00000291 %	✓	
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]							
Total:								0.102 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Potentially Hazardous result
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification



Classification of sample: BH 02-030720-1.00-1.00

 **Hazardous Waste**
Classified as **17 05 03 ***
in the List of Waste

Sample details

Sample Name:	LoW Code:	
BH 02-030720-1.00-1.00	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Moisture content:	Entry:	17 05 03 * (Soil and stones containing hazardous substances)
11% (wet weight correction)		

Hazard properties

HP 7: Carcinogenic "waste which induces cancer or increases its incidence"

Hazard Statements hit:

Carc. 1B; H350 "May cause cancer [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.469%)

HP 11: Mutagenic "waste which may cause a mutation, that is a permanent change in the amount or structure of the genetic material in a cell"

Hazard Statements hit:

Muta. 1B; H340 "May cause genetic defects [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.469%)

Hazard properties (substances considered hazardous until shown otherwise)

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinands:

TPH (C6 to C40) petroleum group: (conc.: 0.469%)

o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]: (conc.: 0.00002%)

Determinands

Moisture content: 11% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	TPH (C6 to C40) petroleum group		TPH		4690 mg/kg		4690 mg/kg	0.469 %		
2	confirm TPH has NOT arisen from diesel or petrol				☒					
3	antimony { antimony trioxide }				5.71 mg/kg	1.197	6.084 mg/kg	0.000608 %	✓	
	051-005-00-X	215-175-0	1309-64-4							



#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number									
4	arsenic { arsenic pentoxide }	033-004-00-6	215-116-9	1303-28-2	22.4	mg/kg	1.534	30.579	mg/kg	0.00306 %	✓	
5	barium { barium sulphide }	016-002-00-X	244-214-4	21109-95-5	410	mg/kg	1.233	450.102	mg/kg	0.045 %	✓	
6	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4	1.2	mg/kg	1.855	1.981	mg/kg	0.000198 %	✓	
7	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1	42.7	mg/kg	1.126	42.787	mg/kg	0.00428 %	✓	
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			234	mg/kg		208.26	mg/kg	0.0208 %	✓	
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7	<0.14	mg/kg	1.353	<0.189	mg/kg	<0.0000189 %		<LOD
10	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5	1.08	mg/kg	1.5	1.442	mg/kg	0.000144 %	✓	
11	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4	30.4	mg/kg	2.637	71.338	mg/kg	0.00713 %	✓	
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8			<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<LOD
13	zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]	315	mg/kg	2.469	692.267	mg/kg	0.0692 %	✓	
14	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9	19.8	mg/kg	1.462	25.756	mg/kg	0.00258 %	✓	
15	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	<0.6	mg/kg	1.923	<1.154	mg/kg	<0.000115 %		<LOD
16	naphthalene	601-052-00-2	202-049-5	91-20-3	83.5	mg/kg		74.315	mg/kg	0.00743 %	✓	
17	acenaphthylene		205-917-1	208-96-8	1.99	mg/kg		1.771	mg/kg	0.000177 %	✓	
18	acenaphthene		201-469-6	83-32-9	32.7	mg/kg		29.103	mg/kg	0.00291 %	✓	
19	fluorene		201-695-5	86-73-7	35.1	mg/kg		31.239	mg/kg	0.00312 %	✓	
20	phenanthrene		201-581-5	85-01-8	127	mg/kg		113.03	mg/kg	0.0113 %	✓	
21	anthracene		204-371-1	120-12-7	40.8	mg/kg		36.312	mg/kg	0.00363 %	✓	
22	fluoranthene		205-912-4	206-44-0	95.3	mg/kg		84.817	mg/kg	0.00848 %	✓	
23	pyrene		204-927-3	129-00-0	76.7	mg/kg		68.263	mg/kg	0.00683 %	✓	
24	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	33.2	mg/kg		29.548	mg/kg	0.00295 %	✓	
25	chrysene	601-048-00-0	205-923-4	218-01-9	28.8	mg/kg		25.632	mg/kg	0.00256 %	✓	
26	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	34.8	mg/kg		30.972	mg/kg	0.0031 %	✓	
27	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	12.6	mg/kg		11.214	mg/kg	0.00112 %	✓	
28	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	27.9	mg/kg		24.831	mg/kg	0.00248 %	✓	
29	indeno[123-cd]pyrene		205-893-2	193-39-5	18	mg/kg		16.02	mg/kg	0.0016 %	✓	
30	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	2.72	mg/kg		2.421	mg/kg	0.000242 %	✓	



#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
31	benzo[ghi]perylene				15.4 mg/kg		13.706 mg/kg	0.00137 %	✓	
		205-883-8	191-24-2							
32	polychlorobiphenyls; PCB				<0.21 mg/kg		<0.21 mg/kg	<0.000021 %		<LOD
		602-039-00-4	215-648-1							
			1336-36-3							
33	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD
		603-181-00-X	216-653-1							
			1634-04-4							
34	benzene				<0.18 mg/kg		<0.18 mg/kg	<0.000018 %		<LOD
		601-020-00-8	200-753-7							
			71-43-2							
35	toluene				<0.14 mg/kg		<0.14 mg/kg	<0.000014 %		<LOD
		601-021-00-3	203-625-9							
			108-88-3							
36	ethylbenzene				<0.08 mg/kg		<0.08 mg/kg	<0.000008 %		<LOD
		601-023-00-4	202-849-4							
			100-41-4							
37	coronene				2.33 mg/kg		2.074 mg/kg	0.000207 %	✓	
		205-881-7	191-07-1							
38	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]				0.308 mg/kg		0.274 mg/kg	0.0000274 %	✓	
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]							
			95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]							
Total:								0.682 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
	Potentially Hazardous result
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification



CERTIFICATE OF ANALYSIS

Validated

SDG: 221206-6
Client Ref.: 6067

Report Number: 672759
Location: Stephens Lane

Superseded Report:

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm
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Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
27265972	STEPHENS LANE TP1	0.50 - 0.50	Dark Brown	Silt Loam	Stones	Vegetation
27265973	STEPHENS LANE TP2	0.50 - 0.50	Light Brown	Sandy Silt Loam	Stones	Vegetation
27265974	STEPHENS LANE TP3	0.50 - 0.50	Dark Brown	Stone/Soil	Stones	Vegetation
27265975	STEPHENS LANE TP4	0.50 - 0.50	Dark Brown	Silt Loam	Stones	Vegetation

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.



CERTIFICATE OF ANALYSIS

SDG: 221206-6
Client Ref.: 6067Report Number: 672759
Location: Stephens Lane

Superseded Report:

Results Legend		Customer Sample Ref.	STEPHENS LANE TP1	STEPHENS LANE TP2	STEPHENS LANE TP3	STEPHENS LANE TP4		
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.fltr Dissolved / filtered sample. tot.unfltr Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*5@ Sample deviation (see appendix)		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.50 - 0.50 Soil/Solid (S) 02/12/2022 05/12/2022 221206-6 27265972	0.50 - 0.50 Soil/Solid (S) 02/12/2022 05/12/2022 221206-6 27265973	0.50 - 0.50 Soil/Solid (S) 02/12/2022 05/12/2022 221206-6 27265974	0.50 - 0.50 Soil/Solid (S) 02/12/2022 05/12/2022 221206-6 27265975		
Component	LOD/Units	Method						
Moisture Content Ratio (% of as received sample)	%	PM024	15	20	7.2	10		
Loss on ignition	<0.7 %	TM018	16.1 M	9.09 M	2.14 #	9.5 M		
Organic Carbon, Total	<0.2 %	TM132	23.6 M	9.76 M	0.579 #	12.2 M		
pH	1 pH Units	TM133	7.88 M	10 M	8.78 #	10.1 M		
Chromium, Hexavalent	<0.6 mg/kg	TM151	<0.6 M	0.987 M	<0.6 #	2.94 M		
PCB congener 28	<3 µg/kg	TM168	<150 M	<30 M	<6 #	<60 M		
PCB congener 52	<3 µg/kg	TM168	<150 M	<30 M	<6 #	<60 M		
PCB congener 101	<3 µg/kg	TM168	<150 M	<30 M	<6 #	<60 M		
PCB congener 118	<3 µg/kg	TM168	<150 M	<30 M	<6 #	<60 M		
PCB congener 138	<3 µg/kg	TM168	<150 M	<30 M	<6 #	<60 M		
PCB congener 153	<3 µg/kg	TM168	<150 M	<30 M	<6 #	<60 M		
PCB congener 180	<3 µg/kg	TM168	<150 M	<30 M	<6 #	<60 M		
Sum of detected PCB 7 Congeners	<21 µg/kg	TM168	<1050	<210	<42	<420		
Chromium, Trivalent	<0.9 mg/kg	TM181	55	11.8	8.03	28.1		
Antimony	<0.6 mg/kg	TM181	90.6 #	12.6 #	1.32 #	37.8 #		
Arsenic	<0.6 mg/kg	TM181	35.6 M	31 M	5.84 #	26.3 M		
Barium	<0.6 mg/kg	TM181	1360 #	454 #	375 #	1500 #		
Cadmium	<0.02 mg/kg	TM181	1.07 M	1.13 M	1.38 #	1.55 M		
Chromium	<0.9 mg/kg	TM181	55 M	12.8 M	8.03 #	31.1 M		
Copper	<1.4 mg/kg	TM181	210 M	144 M	18.5 #	78.2 M		
Lead	<0.7 mg/kg	TM181	1410 M	576 M	59.5 #	906 M		
Mercury	<0.1 mg/kg	TM181	0.637 M	1.25 M	<0.1 #	<0.1 M		
Molybdenum	<0.1 mg/kg	TM181	4.91 #	3.64 #	1.89 #	2.36 #		
Nickel	<0.2 mg/kg	TM181	46.4 M	38.8 M	20.5 #	32.7 M		
Selenium	<1 mg/kg	TM181	1.59 #	1.87 #	2.42 #	2.28 #		
Zinc	<1.9 mg/kg	TM181	1440 M	413 M	229 #	1030 M		
PAH Total 17 (inc Coronene) Moisture Corrected	<10 mg/kg	TM410	1450	89.9	<10	1680		
Coronene	<200 µg/kg	TM410	8650	910	<200	6440		
Mineral Oil >C10-C40 (EH_2D_AL)	<5 mg/kg	TM415	277	52.6	6.07	546		



CERTIFICATE OF ANALYSIS

Validated

SDG: 221206-6
Client Ref.: 6067Report Number: 672759
Location: Stephens Lane

Superseded Report:

TPH CWG (S)

Results Legend		Customer Sample Ref.	STEPHENS LANE TP1	STEPHENS LANE TP2	STEPHENS LANE TP3	STEPHENS LANE TP4		
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.fltr Dissolved / filtered sample. tot.unfltr Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*§@ Sample deviation (see appendix)		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.50 - 0.50 Soil/Solid (S) 02/12/2022 05/12/2022 221206-6 27265972	0.50 - 0.50 Soil/Solid (S) 02/12/2022 05/12/2022 221206-6 27265973	0.50 - 0.50 Soil/Solid (S) 02/12/2022 05/12/2022 221206-6 27265974	0.50 - 0.50 Soil/Solid (S) 02/12/2022 05/12/2022 221206-6 27265975		
Component	LOD/Units	Method						
GRO Surrogate % recovery**	%	TM089	42 4	73.9	20.2 4	87.9		
Aliphatics >C5-C6 (HS_1D_AL)	<10 µg/kg	TM089	30.7 4	12.5	<10 4	132		
Aliphatics >C6-C8 (HS_1D_AL)	<10 µg/kg	TM089	106 4	113	<10 4	951		
Aliphatics >C8-C10 (HS_1D_AL)	<10 µg/kg	TM089	2690 4	331	<10 4	19800		
Aliphatics >C10-C12 (EH_2D_AL_#1)	<1000 µg/kg	TM414	233000	<5000 #	<1000 #	272000		
Aliphatics >C12-C16 (EH_2D_AL_#1)	<1000 µg/kg	TM414	79000	<5000 #	<1000 #	174000		
Aliphatics >C16-C21 (EH_2D_AL_#1)	<1000 µg/kg	TM414	113000	<5000 #	<1000 #	115000		
Aliphatics >C21-C35 (EH_2D_AL_#1)	<1000 µg/kg	TM414	192000	<5000 #	5120 #	208000		
Aliphatics >C35-C44 (EH_2D_AL_#1)	<1000 µg/kg	TM414	226000	<5000	6170	193000		
Total Aliphatics >C10-C44 (EH_2D_AR_#1)	<5000 µg/kg	TM414	843000	<25000	12500	961000		
Total Aliphatics & Aromatics >C10-C44 (EH_2D_Total_#1)	<10000 µg/kg	TM414	8150000	1280000	54800	11700000		
Aromatics >EC5-EC7 (HS_1D_AR)	<10 µg/kg	TM089	<10 4	<10	<10 4	<50		
Aromatics >EC7-EC8 (HS_1D_AR)	<10 µg/kg	TM089	18.9 4	<10	<10 4	<50		
Aromatics >EC8-EC10 (HS_1D_AR)	<10 µg/kg	TM089	1790 4	221	<10 4	13200		
Aromatics > EC10-EC12 (EH_2D_AR_#1)	<1000 µg/kg	TM414	149000	<5000 #	<1000 #	676000		
Aromatics > EC12-EC16 (EH_2D_AR_#1)	<1000 µg/kg	TM414	978000	76500 #	<1000 #	1940000		
Aromatics > EC16-EC21 (EH_2D_AR_#1)	<1000 µg/kg	TM414	1730000	403000 #	2940 #	3610000		
Aromatics > EC21-EC35 (EH_2D_AR_#1)	<1000 µg/kg	TM414	3060000	719000 #	18100 #	4080000		
Aromatics >EC35-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414	1390000	67400	20900	469000		
Aromatics > EC40-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414	556000	11600	7700	119000		
Total Aromatics > EC10-EC44 (EH_2D_AR_#1)	<5000 µg/kg	TM414	7310000	1270000	42300	10800000		
Total Aliphatics & Aromatics >C5-C44 (EH_2D_Total_#1+HS_1D_Total)	<10000 µg/kg	TM414	8160000	1280000	54800	11800000		
GRO >C5-C6 (HS_1D)	<20 µg/kg	TM089	30.7 4	<20	<20 4	132		
GRO >C6-C7 (HS_1D)	<20 µg/kg	TM089	36.6 4	72.5	<20 4	200		
GRO >C7-C8 (HS_1D)	<20 µg/kg	TM089	93.2 4	40	<20 4	753		
GRO >C8-C10 (HS_1D)	<20 µg/kg	TM089	4490 4	553	<20 4	33100		
GRO >C10-C12 (HS_1D)	<20 µg/kg	TM089	8850 4	1020	<20 4	56200		
Total Aliphatics >C5-C10 (HS_1D_AL_TOTAL)	<50 µg/kg	TM089	2830 4	456	<50 4	20900		
Total Aromatics >EC5-EC10 (HS_1D_AR_TOTAL)	<50 µg/kg	TM089	1810 4	221	<50 4	13200		
GRO >C5-C10 (HS_1D_TOTAL)	<20 µg/kg	TM089	4640 4	678	<20 4	34100		



CERTIFICATE OF ANALYSIS

Validated

SDG: 221206-6
Client Ref.: 6067Report Number: 672759
Location: Stephens Lane

Superseded Report:

CEN 10:1 SINGLE STAGE LEACHATE TEST

WAC ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference

Mass Sample taken (kg) 0.110

Mass of dry sample (kg) 0.090

Particle Size <4mm >95%

Site Location

Stephens Lane

Natural Moisture Content (%) 21.3

Dry Matter Content (%) 82.4

Case

SDG 221206-6

Lab Sample Number(s) 27265972

Sampled Date 02-Dec-2022

Customer Sample Ref. STEPHENS LANE TP1

Depth (m) 0.50 - 0.50

Landfill Waste Acceptance
Criteria Limits

Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non- Hazardous Landfill	Hazardous Waste Landfill
3	5	6
-	-	10
-	-	-
1	-	-
500	-	-
100	-	-
-	>6	-
-	-	-
-	-	-

Solid Waste Analysis

Result

Total Organic Carbon (%)	23.6
Loss on Ignition (%)	16.1
Sum of BTEX (mg/kg)	-
Sum of 7 PCBs (mg/kg)	<1.05
Mineral Oil (mg/kg) (EH_2D_AL)	277
PAH Sum of 17 (mg/kg)	1450
pH (pH Units)	7.88
ANC to pH 6 (mol/kg)	-
ANC to pH 4 (mol/kg)	-

Eluate Analysis

C₂Concⁿ in 10:1 eluate (mg/l)A₂10:1 concⁿ leached (mg/kg)Limit values for compliance leaching test
using BS EN 12457-3 at L/S 10 l/kg

	Result	Limit of Detection	Result	Limit of Detection			
Arsenic	0.00239	<0.0005	0.0239	<0.005	0.5	2	25
Barium	0.123	<0.0002	1.23	<0.002	20	100	300
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	0.04	1	5
Chromium	0.0108	<0.001	0.108	<0.01	0.5	10	70
Copper	0.0218	<0.0003	0.218	<0.003	2	50	100
Mercury Dissolved (CVAf)	0.0000105	<0.00001	0.000105	<0.0001	0.01	0.2	2
Molybdenum	0.0122	<0.003	0.122	<0.03	0.5	10	30
Nickel	0.00553	<0.0004	0.0553	<0.004	0.4	10	40
Lead	0.00916	<0.0002	0.0916	<0.002	0.5	10	50
Antimony	0.115	<0.00182	1.15	<0.0182	0.06	0.7	5
Selenium	<0.001	<0.001	<0.01	<0.01	0.1	0.5	7
Zinc	0.0647	<0.001	0.647	<0.01	4	50	200
Chloride	3.7	<2	37	<20	800	15000	25000
Fluoride	0.632	<0.5	6.32	<5	10	150	500
Sulphate (soluble)	61.1	<2	611	<20	1000	20000	50000
Total Dissolved Solids	213	<10	2130	<100	4000	60000	100000
Total Monohydric Phenols (W)	0.07	<0.016	0.7	<0.16	1	-	-
Dissolved Organic Carbon	16.8	<3	168	<30	500	800	1000

Leach Test Information

Date Prepared	06-Dec-2022
pH (pH Units)	8.32
Conductivity (µS/cm)	281
Volume Leachant (Litres)	0.880

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C)

Stated limits are for guidance only and ALS Laboratories (UK) Limited cannot be held responsible for any discrepancies with current legislation

19/12/2022 16:46:48

16:46:34 19/12/2022



CERTIFICATE OF ANALYSIS

Validated

SDG: 221206-6
Client Ref.: 6067Report Number: 672759
Location: Stephens Lane

Superseded Report:

CEN 10:1 SINGLE STAGE LEACHATE TEST

WAC ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		Site Location	Stephens Lane
Mass Sample taken (kg)	0.106	Natural Moisture Content (%)	18
Mass of dry sample (kg)	0.090	Dry Matter Content (%)	84.7
Particle Size <4mm	>95%		

Case	
SDG	221206-6
Lab Sample Number(s)	27265973
Sampled Date	02-Dec-2022
Customer Sample Ref.	STEPHENS LANE TP2
Depth (m)	0.50 - 0.50

Landfill Waste Acceptance
Criteria Limits

Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non- Hazardous Landfill	Hazardous Waste Landfill
3	5	6
-	-	10
-	-	-
1	-	-
500	-	-
100	-	-
-	>6	-
-	-	-
-	-	-

Solid Waste Analysis	Result
Total Organic Carbon (%)	9.76
Loss on Ignition (%)	9.09
Sum of BTEX (mg/kg)	-
Sum of 7 PCBs (mg/kg)	<0.21
Mineral Oil (mg/kg) (EH_2D_AL)	52.6
PAH Sum of 17 (mg/kg)	89.9
pH (pH Units)	10
ANC to pH 6 (mol/kg)	-
ANC to pH 4 (mol/kg)	-

Eluate Analysis	C ₂ Conc ⁿ in 10:1 eluate (mg/l)		A ₂ 10:1 conc ⁿ leached (mg/kg)		Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg		
	Result	Limit of Detection	Result	Limit of Detection			
Arsenic	0.0304	<0.0005	0.304	<0.005	0.5	2	25
Barium	0.00634	<0.0002	0.0634	<0.002	20	100	300
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	0.04	1	5
Chromium	0.0248	<0.001	0.248	<0.01	0.5	10	70
Copper	0.0729	<0.0003	0.729	<0.003	2	50	100
Mercury Dissolved (CVAf)	0.000133	<0.00001	0.00133	<0.0001	0.01	0.2	2
Molybdenum	0.00667	<0.003	0.0667	<0.03	0.5	10	30
Nickel	0.00553	<0.0004	0.0553	<0.004	0.4	10	40
Lead	0.00618	<0.0002	0.0618	<0.002	0.5	10	50
Antimony	0.0347	<0.001	0.347	<0.01	0.06	0.7	5
Selenium	0.0016	<0.001	0.016	<0.01	0.1	0.5	7
Zinc	0.00305	<0.001	0.0305	<0.01	4	50	200
Chloride	3.7	<2	37	<20	800	15000	25000
Fluoride	<0.5	<0.5	<5	<5	10	150	500
Sulphate (soluble)	21.3	<2	213	<20	1000	20000	50000
Total Dissolved Solids	97.4	<10	974	<100	4000	60000	100000
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	1	-	-
Dissolved Organic Carbon	14.8	<3	148	<30	500	800	1000

Leach Test Information

Date Prepared	06-Dec-2022
pH (pH Units)	10.20
Conductivity (µS/cm)	148
Volume Leachant (Litres)	0.884

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C)

Stated limits are for guidance only and ALS Laboratories (UK) Limited cannot be held responsible for any discrepancies with current legislation

19/12/2022 16:46:48

16:46:34 19/12/2022



CERTIFICATE OF ANALYSIS

Validated

SDG: 221206-6
Client Ref.: 6067Report Number: 672759
Location: Stephens Lane

Superseded Report:

CEN 10:1 SINGLE STAGE LEACHATE TEST

WAC ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference

Mass Sample taken (kg) 0.097

Mass of dry sample (kg) 0.090

Particle Size <4mm >95%

Site Location

Stephens Lane

Natural Moisture Content (%) 8.58

Dry Matter Content (%) 92.1

Case

SDG 221206-6

Lab Sample Number(s) 27265974

Sampled Date 02-Dec-2022

Customer Sample Ref. STEPHENS LANE TP3

Depth (m) 0.50 - 0.50

Landfill Waste Acceptance
Criteria Limits

Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non- Hazardous Landfill	Hazardous Waste Landfill
3	5	6
-	-	10
-	-	-
1	-	-
500	-	-
100	-	-
-	>6	-
-	-	-
-	-	-

Solid Waste Analysis

Result

Total Organic Carbon (%) 0.579

Loss on Ignition (%) 2.14

Sum of BTEX (mg/kg) -

Sum of 7 PCBs (mg/kg) <0.042

Mineral Oil (mg/kg) (EH_2D_AL) 6.07

PAH Sum of 17 (mg/kg) <10

pH (pH Units) 8.78

ANC to pH 6 (mol/kg) -

ANC to pH 4 (mol/kg) -

Eluate Analysis

C₂Concⁿ in 10:1 eluate (mg/l)A₂10:1 concⁿ leached (mg/kg)Limit values for compliance leaching test
using BS EN 12457-3 at L/S 10 l/kg

	Result	Limit of Detection	Result	Limit of Detection			
Arsenic	<0.0005	<0.0005	<0.005	<0.005	0.5	2	25
Barium	0.158	<0.0002	1.58	<0.002	20	100	300
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	0.04	1	5
Chromium	0.002	<0.001	0.02	<0.01	0.5	10	70
Copper	0.00124	<0.0003	0.0124	<0.003	2	50	100
Mercury Dissolved (CVAf)	<0.00001	<0.00001	<0.0001	<0.0001	0.01	0.2	2
Molybdenum	0.0189	<0.003	0.189	<0.03	0.5	10	30
Nickel	0.000606	<0.0004	0.00606	<0.004	0.4	10	40
Lead	<0.0002	<0.0002	<0.002	<0.002	0.5	10	50
Antimony	0.00102	<0.001	0.0102	<0.01	0.06	0.7	5
Selenium	0.0035	<0.001	0.035	<0.01	0.1	0.5	7
Zinc	0.00139	<0.001	0.0139	<0.01	4	50	200
Chloride	<2	<2	<20	<20	800	15000	25000
Fluoride	0.696	<0.5	6.96	<5	10	150	500
Sulphate (soluble)	6.3	<2	63	<20	1000	20000	50000
Total Dissolved Solids	59.6	<10	596	<100	4000	60000	100000
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	1	-	-
Dissolved Organic Carbon	<3	<3	<30	<30	500	800	1000

Leach Test Information

Date Prepared 06-Dec-2022
pH (pH Units) 8.67
Conductivity (µS/cm) 82
Volume Leachant (Litres) 0.892

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C)

Stated limits are for guidance only and ALS Laboratories (UK) Limited cannot be held responsible for any discrepancies with current legislation

19/12/2022 16:46:48

16:46:34 19/12/2022



CERTIFICATE OF ANALYSIS

Validated

SDG: 221206-6
Client Ref.: 6067Report Number: 672759
Location: Stephens Lane

Superseded Report:

CEN 10:1 SINGLE STAGE LEACHATE TEST

WAC ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		Site Location	Stephens Lane
Mass Sample taken (kg)	0.102	Natural Moisture Content (%)	13.2
Mass of dry sample (kg)	0.090	Dry Matter Content (%)	88.3
Particle Size <4mm	>95%		

Case	
SDG	221206-6
Lab Sample Number(s)	27265975
Sampled Date	02-Dec-2022
Customer Sample Ref.	STEPHENS LANE TP4
Depth (m)	0.50 - 0.50

Landfill Waste Acceptance
Criteria Limits

Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non- Hazardous Landfill	Hazardous Waste Landfill
3	5	6
-	-	10
-	-	-
1	-	-
500	-	-
100	-	-
-	>6	-
-	-	-
-	-	-

Solid Waste Analysis	Result
Total Organic Carbon (%)	12.2
Loss on Ignition (%)	9.5
Sum of BTEX (mg/kg)	-
Sum of 7 PCBs (mg/kg)	<0.42
Mineral Oil (mg/kg) (EH_2D_AL)	546
PAH Sum of 17 (mg/kg)	1680
pH (pH Units)	10.1
ANC to pH 6 (mol/kg)	-
ANC to pH 4 (mol/kg)	-

Eluate Analysis	C ₂ Conc ⁿ in 10:1 eluate (mg/l)		A ₂ 10:1 conc ⁿ leached (mg/kg)		Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg		
	Result	Limit of Detection	Result	Limit of Detection			
Arsenic	0.0313	<0.0005	0.313	<0.005	0.5	2	25
Barium	0.0132	<0.0002	0.132	<0.002	20	100	300
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	0.04	1	5
Chromium	0.141	<0.001	1.41	<0.01	0.5	10	70
Copper	0.047	<0.0003	0.47	<0.003	2	50	100
Mercury Dissolved (CVAf)	0.0000121	<0.00001	0.000121	<0.0001	0.01	0.2	2
Molybdenum	0.0108	<0.003	0.108	<0.03	0.5	10	30
Nickel	0.00458	<0.0004	0.0458	<0.004	0.4	10	40
Lead	0.00485	<0.0002	0.0485	<0.002	0.5	10	50
Antimony	0.13	<0.00216	1.3	<0.0216	0.06	0.7	5
Selenium	0.0028	<0.001	0.028	<0.01	0.1	0.5	7
Zinc	0.0042	<0.001	0.042	<0.01	4	50	200
Chloride	6.3	<2	63	<20	800	15000	25000
Fluoride	<0.5	<0.5	<5	<5	10	150	500
Sulphate (soluble)	28.1	<2	281	<20	1000	20000	50000
Total Dissolved Solids	117	<10	1170	<100	4000	60000	100000
Total Monohydric Phenols (W)	0.65	<0.016	6.5	<0.16	1	-	-
Dissolved Organic Carbon	19.6	<3	196	<30	500	800	1000

Leach Test Information

Date Prepared	06-Dec-2022
pH (pH Units)	10.24
Conductivity (µS/cm)	168
Volume Leachant (Litres)	0.888

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C)

Stated limits are for guidance only and ALS Laboratories (UK) Limited cannot be held responsible for any discrepancies with current legislation

19/12/2022 16:46:48

16:46:34 19/12/2022

Steeven's Lane Waste Acceptance Assessment for compliance with Landfill Directive			Landfill Waste Acceptance Criteria Limits		ALS Lab Report for Site Investigations Ltd (report reference 672759 issued 19/12/22)			
					TP1	TP2	TP3	TP4
Test	Parameter	Units	Inert	Stable Non-reactive	0.50m	0.50m	0.50m	0.50m
					02/12/22	02/12/22	02/12/22	02/12/22
Solid Waste Analysis	Total Organic Carbon (%)	%	3	5	23.6	9.76	0.579	12.2
	Sum of BTEX (mg/kg)	mg/kg	6	-	<6 *	<6 *	<6 *	<6 *
	Sum of 7 PCBs (mg/kg)	mg/kg	1	-	<1.05	<0.21	<0.042	<0.42
	Mineral Oil (mg/kg)	mg/kg	500	-	277	52.6	6.07	546
	PAH Sum of 17 (mg/kg)	mg/kg	100	-	1450	89.9	<10	1680
	pH		-	>6	8.32	10.2	8.67	10.24
	Loss on Ignition (%)	%			16.1	9.09	2.14	9.5
Eluate Analysis	Arsenic	mg/kg	0.5	2	0.0239	0.304	<0.005	0.313
	Barium	mg/kg	20	100	1.23	0.0634	1.58	0.132
	Cadmium	mg/kg	0.04	1	<0.0008	<0.0008	<0.0008	<0.0008
	Chromium	mg/kg	0.5	10	0.108	0.248	0.02	1.41
	Copper	mg/kg	2	50	0.218	0.729	0.0124	0.47
	Mercury	mg/kg	0.01	0.2	0.000105	0.00133	<0.0001	0.000121
	Molybdenum	mg/kg	0.5	10	0.122	0.0667	0.189	0.108
	Nickel	mg/kg	0.4	10	0.0553	0.0553	0.00606	0.0458
	Lead	mg/kg	0.5	10	0.0916	0.0618	<0.002	0.0485
	Antimony	mg/kg	0.06	0.7	1.15	0.347	0.0102	1.3
	Selenium	mg/kg	0.1	0.5	<0.01	0.016	0.035	0.028
	Zinc	mg/kg	4	50	0.647	0.0305	0.0139	0.042
	Chloride	mg/kg	800	15000	37	37	<20	63
	Fluoride	mg/kg	10	150	6.32	<5	6.96	<5
	Sulphate as SO ₄	mg/kg	1000	20000	611	213	63	281
	Total Dissolved Solids	mg/kg	4000	60000	2130	974	596	1170
	Phenol	mg/kg	1	-	0.7	<0.16	<0.16	6.5
	Dissolved Organic Carbon	mg/kg	500	800	168	148	<30	196
Asbestos screening					No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected
Assessment using waste acceptance criteria thresholds					> Non-hazardous	> Non-hazardous	Inert	> Non-hazardous
Options available for consignment of 'non-hazardous' classified material to inert facilities with increased threshold allowance (Category B2)					No	No	Not applicable	No
Assessment using HazWasteOnline software (Clements Report Reference: Classification Report-Steeven's Lane 221206-6 dated 07/02/2023)					Hazardous (TPH; Lead)	Hazardous (TPH)	Non (not) hazardous	Hazardous (TPH)
European List of Waste Code					17 05 03 - Soil & Stone	17 05 03 - Soil & Stone	17 05 04 - Soil & Stone	17 05 03 - Soil & Stone
Final recommended waste classification and facility (subject to approval by selected Waste Receiver(s) and receipt of letter of acceptance) (Usage of non-regulatory categories A, B, C & D may be used by some waste receivers)					Export for treatment or to hazardous landfill (Cat.D1)	Export for treatment or to hazardous landfill (Cat.D1)	Consignment to inert landfill facility (Cat.B1)	Export for treatment or to hazardous landfill (Cat.D1)
Notes: - This assessment is a data review only. Clements Environmental has not been involved in the sampling process or visited the site during the works. - Sample analysis by ALS has been undertaken on behalf of Site Investigations Ltd. - Assessment against waste acceptance criteria and using the HazWasteOnline tool has been undertaken for 4 samples. - Total BTEX concentration not reported, however the individual compounds including less than detection limits is less than inert threshold of 6mg/kg. - Location of TP3 inert sample to be considered in relation to other 3 hazardous TP locations, to determine if delineation is required to avoid contaminated material being consigned to an inert facility.								

Increased thresholds available at some inert facilities (Cat.B2)

6.0
1.5
1.5
0.18
0.3
2400
3000
12000

Non-regulatory categories that may be used by some Waste Receivers

- A - Inert (undisturbed, uncontaminated, Greenfield)
- B1 - Inert
- B2 - Inert (up to 3 times inert thresholds on certain parameters)
- C1 - Non-hazardous
- C2 - Non-hazardous with asbestos (<0.001%)
- C3 - Non-hazardous with asbestos (<0.1% >0.001%)
- D1 - Hazardous
- D2 - Hazardous with asbestos (>0.1%)
- D3 - Hazardous with asbestos (ACMs)

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