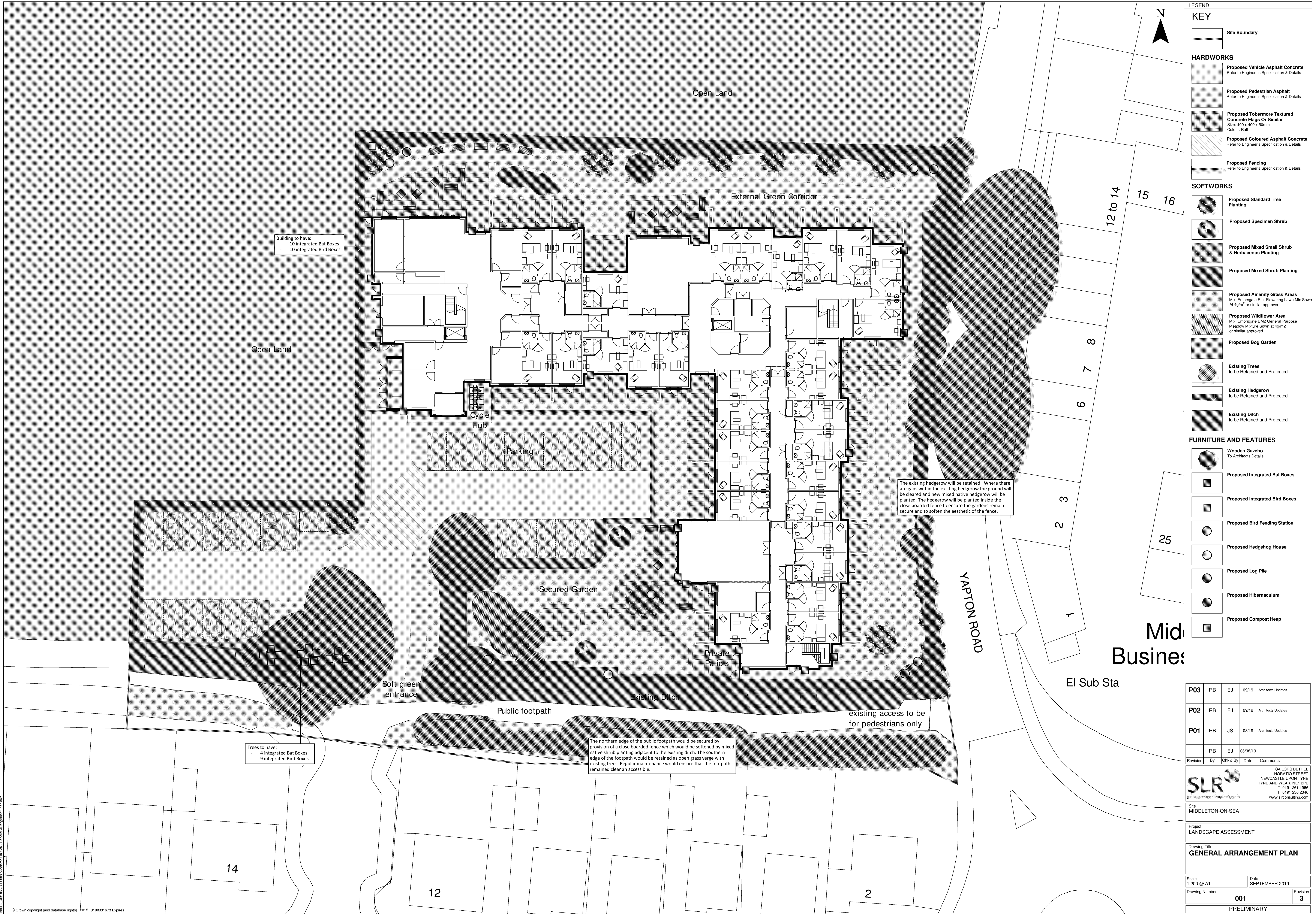

APPENDIX 01

Proposed Development Layout



APPENDIX 02

Exploratory Hole Logs

BOREHOLE LOG				BOREHOLE No. WS-01	
Client: FRONTIER					
Project No: Yapton Road Farm		Date: 01/05/19	Ground Level: 4.80maOD	Co-ordinates: E497364 N100776	
Project: GROUND INVESTIGATION					
					Sheet: 1 of 1

SAMPLES & TESTS						Water	STRATA				Instrument/ Backfill
Depth	Type No	HS(ppm)	HV(kPa)	PP(kPa)	SPT-N		Reduced Level	Legend (Thick-ness)	Depth	DESCRIPTION	
0.00	BAG	1				↓	4.60		0.20	Grey brown slightly sandy clay SILT with occasional rootlets. (TOPSOIL)	

Boring Progress and Water Observations				Casing		Chiselling			Water Added		General Remarks
Date	Time	Depth	Water Dpt	Depth	Dia. mm	From	To	Hours	From	To	
01-05-19	10.00		3.20								Hand pit to 1.2mbg
01-05-19	10.30		1.95								
07-05-19	15.00		1.545								

All dimensions in metres Scale 1:34.375		Contractor: ESL Plant:		Method: Windowless Sampler Hole Size: 200mm		Logged By: JG	Approved By: BAJ
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BOREHOLE LOG				BOREHOLE No. WS-02	
Client: FRONTIER					
Project No: Yapton Road Farm		Date: 01/05/19	Ground Level: 5.01maOD	Co-ordinates: E497413 N100782	
Project: GROUND INVESTIGATION					
					Sheet: 1 of 1

SAMPLES & TESTS							Water	STRATA				Instrument/ Backfill
Depth	Type No	HS(ppm)	HV(kPa)	PP(kPa)	SPT-N	Reduced Level		Legend (Thick-ness)	Depth	DESCRIPTION		
0.00	BAG	1							Grey brown slightly sandy clay SILT with occasional rootlets. (TOPSOIL)			
0.20	J					4.76		0.25	Firm, orangey brown, sandy slightly clayey SILT.			
								(0.75)				
1.00	BAG	1				4.01		1.00	Firm, orangey brown, slightly gravelly, sandy slightly clayey SILT. Gravel consists of angular to rounded, fine to medium chalk and flint, moist.			
1.30	J							(0.60)				
						3.41		1.60	Firm, orangey brown, sandy gravelly SILT. Gravel consists of angular fine to medium chalk and flint, moist to wet.			
								(0.60)				
2.00	BAG	0				2.81		2.20	Firm, mottled orange and white, slightly gravelly sandy SILT. Gravel consists of rounded fine to medium chalk and flint, moist to wet.			
2.30	J							(1.30)				
3.00	BAG	0						3.50	Soft to firm, brown changing to grey slightly gravelly sandy SILT. Occasional sand lenses. Wet.			
3.10	J							(1.10)				
3.90	J							4.60	Grey to white sandy, silty, GRAVEL. Gravel consists of angular fine chalk and flint, wet.			
4.00	BAG	0				0.41		(0.60)				
5.00	BAG	0				-0.19		5.20	Borehole complete at 5.20m			

Boring Progress and Water Observations				Casing		Chiselling			Water Added		General Remarks
Date	Time	Depth	Water Dpt	Depth	Dia. mm	From	To	Hours	From	To	
01-05-19	13.00		2.511								
01-05-19	13.30		1.992								Hand pit to 1.2mbg
07-05-19	15.05		1.853								
All dimensions in metres Scale 1:34.375				Contractor: ESL Plant:		Method: Windowless Sampler Hole Size: 200mm				Logged By: JG	Approved By: BAJ

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BOREHOLE LOG				BOREHOLE No. WS-03	
Client: FRONTIER					
Project No: Yapton Road Farm		Date: 01/05/19	Ground Level: 4.81maOD	Co-ordinates: E497348 N100731	
Project: GROUND INVESTIGATION					
					Sheet: 1 of 1

SAMPLES & TESTS						Water	STRATA				Instrument/ Backfill
Depth	Type No	HS(ppm)	HV(kPa)	PP(kPa)	SPT-N		Reduced Level	Legend (Thick- ness)	Depth	DESCRIPTION	
1											

Boring Progress and Water Observations				Casing		Chiselling			Water Added		General Remarks
Date	Time	Depth	Water Dpt	Depth	Dia. mm	From	To	Hours	From	To	
01-05-19	08.30		3.11								Hand pit to 1.2mbg
01-05-19	09.15		2.31								
07-05-19	15.10		1.53								
All dimensions in metres Scale 1:34.375				Contractor: ESL Plant:		Method: Windowless Sampler Hole Size: 200mm			Logged By: JG		Approved By: BAJ

TRIAL PIT LOG				TRIAL PIT No TP-02	
Client: FRONTIER					
Project: GROUND INVESTIGATION					
Project No: Yapton Road Farm		Date: 29/04/19	Ground Level:	Co-ordinates: E 497400 N 100775	Sheet: 1 of 1

SAMPLES & TESTS				Water	STRATA			Instrument/ Backfill	
Depth	Type No	Test Type	Test Result		Reduced Level	Legend	Depth (Thick-ness)		DESCRIPTION
0.00	BAG	HS	0ppm				0.20	Grey brown slightly sandy clay SILT with occasional rootlets. (TOPSOIL).	
0.20	J						(1.45)	Firm, light brown, slightly gravelly, sandy SILT with rare clay. Gravel consists of angular to subrounded fine chalk and flint, moist.	
0.80	DIST B								
0.90									
1.00	BAG	HS	0ppm				1.70	Firm, mottled brown and white, slightly gravelly, sandy SILT. Gravel consists of angular fine chalk and flint, moist.	
2									
2.00	BAG	HS	1ppm			(1.50)			
2.10	DIST								
2.50	B								
3									
3.00	BAG	HS	0ppm			3.20			

GENERAL REMARKS: Trial pit dry.		Trial Pit Dimensions:
KEY: V = Hand Vane Shear Strength PP = Pocket Penetrometer Shear Strength J = Jar Sample D = Small Disturbed Sample B = Large Bulk Sample HS = Head Space Measurement		

All dimensions in metres Scale 1:34.375	Contractor : ESL Plant: JCB 3CX	Method: Trial Pit/trench	Logged By: JG	Approved By: BAJ
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Form SLR AGS3 UK TP File MIDDLETON_FINAL GPJ 29-05-19

TRIAL PIT LOG				TRIAL PIT No TP-03	
Client: FRONTIER					
Project: GROUND INVESTIGATION					
Project No: Yapton Road Farm		Date: 29/04/19	Ground Level: 4.88mAOD	Co-ordinates: E 497365 N 497365	Sheet: 1 of 1

SAMPLES & TESTS				Water	STRATA			Instrument/ Backfill
Depth	Type No	Test Type	Test Result		Reduced Level	Legend	Depth (Thick- ness)	
1	0.00	BAG J	HS	0ppm			0.15	Grey brown slightly sandy clay SILT with occasional rootlets. (TOPSOIL).
						(0.65)	Firm, light brown, slightly gravelly sandy SILT. Gravel consists of angular fine chalk and flint. Dry.	
	0.90	B B	HS	1ppm			(0.60)	Light brown, silty fine to medium SAND.
	1.00						1.40	1.20 - 1.30 fine to medium lense of sand.
2	2.00	BAG	HS	0ppm			(0.70)	Firm, mottled orange white sandy SILT. moist.
						2.78	2.10	Firm, mottled orange white, slightly gravelly SILT with rare clay and sand. Gravel consists of fine to medium chalk and flint. Moist.
3	3.00	BAG	HS	0ppm			(1.10)	
						1.68	3.20	
4								Trial Pit complete at 3.20m
5								

GENERAL REMARKS: Trial pit dry.		Trial Pit Dimensions: Shoring/Support: None Stability: Pit Stable
KEY: V = Hand Vane Shear Strength PP = Pocket Penetrometer Shear Strength J = Jar Sample D = Small Disturbed Sample B = Large Bulk Sample HS = Head Space Measurement		

All dimensions in metres Scale 1:34.375	Contractor : ESL Plant: JCB 3CX	Method: Trial Pit/trench	Logged By: JG	Approved By: BAJ
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Form SLR AGS3 UK TP File MIDDLETON_FINAL GPJ 29-05-19

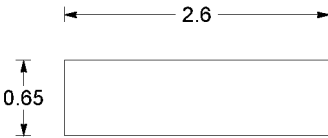
TRIAL PIT LOG				TRIAL PIT No TP-05	
Client: FRONTIER					
Project: GROUND INVESTIGATION					
Project No: Yapton Road Farm		Date: 30/04/19	Ground Level: 4.91mAOD	Co-ordinates: E 497365 N 100746	Sheet: 1 of 1

SAMPLES & TESTS				Water	STRATA			Instrument/ Backfill	
Depth	Type No	Test Type	Test Result		Reduced Level	Legend	Depth (Thick-ness)		DESCRIPTION
1	0.00	BAG	HS	0ppm			0.20	Grey brown slightly sandy clay SILT with occasional rootlets. (TOPSOIL)	
	0.20	J					(0.45)	Firm, light brown, slightly gravelly sandy SILT. Gravel consists of fine chalk and flint. Dry.	
							0.65	Light brown, silty SAND. Moist.	
	0.90 1.00	B B	HS	1ppm			(0.50)	1.15	
2	2.00	BAG	HS	0ppm			(2.05)		
	2.50	B							
3	3.00	BAG	HS	0ppm			1.71	3.20	
4									
5									

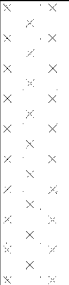
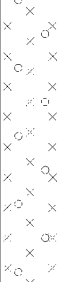
GENERAL REMARKS: Trial pit dry.		Trial Pit Dimensions: 0.6 ↑ ↓ Shoring/Support: None Stability: Pit Stable
KEY: V = Hand Vane Shear Strength PP = Pocket Penetrometer Shear Strength J = Jar Sample D = Small Disturbed Sample B = Large Bulk Sample HS = Head Space Measurement		

All dimensions in metres Scale 1:34.375	Contractor : ESL Plant: JCB 3CX	Method: Trial Pit/trench	Logged By: JG	Approved By: BAJ
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Form SLR AGS3 UK TP File MIDDLETON_FINAL GPJ 29-05-19

TRIAL PIT LOG										TRIAL PIT No TP-06	
Client: FRONTIER											
Project: GROUND INVESTIGATION											
Project No: Yapton Road Farm			Date: 30/04/19		Ground Level: 5.10m AOD		Co-ordinates: E 497378 N 100730			Sheet: 1 of 1	
SAMPLES & TESTS				Water	STRATA					Instrument/ Backfill	
Depth	Type No	Test Type	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION			
0.00	BAG	HS	0ppm		4.95		0.15	Grey brown slightly sandy SILT with occasional rootlets (TOPSOIL)			
0.20	J				4.65		(0.30) 0.45	Light brown, silty SAND with rare gravel. Gravel consists of brick and rare charcoal. Moist (MADE GROUND).			
0.70	DIST						(1.05)	Firm, orangey brown, slightly gravelly sandy SILT with rare clay. Gravel consists of angular fine chalk and flint. Moist.			
0.90	B				3.60		1.50	Orange brown, gravelly silty SAND. Gravel is angular to rounded fine chalk, moist.			
2.00	BAG	HS	0ppm				(1.70)	2.20 - 3.20 becoming increasingly gravelly with depth.			
2.30	DIST										
2.30	J	HS	0ppm								
2.40	B										
3.00	BAG	HS	0ppm		1.90		3.20	Trial Pit complete at 3.20m			
GENERAL REMARKS: Trial pit dry.								Trial Pit Dimensions: 			
KEY: V = Hand Vane Shear Strength PP = Pocket Penetrometer Shear Strength J = Jar Sample D = Small Disturbed Sample B = Large Bulk Sample HS = Head Space Measurement								Shoring/Support: None Stability: Pit Stable			
All dimensions in metres Scale 1:34.375		Contractor : ESL Plant: JCB 3CX			Method: Trial Pit/trench			Logged By: JG	Approved By: BAJ		

TRIAL PIT LOG				TRIAL PIT No TP-07	
Client: FRONTIER					
Project: GROUND INVESTIGATION					
Project No: Yapton Road Farm		Date: 30/04/19	Ground Level: 5.11mAOD	Co-ordinates: E 497411 N 100753	Sheet: 1 of 1

SAMPLES & TESTS				Water	STRATA			Instrument/ Backfill		
Depth	Type No	Test Type	Test Result		Reduced Level	Legend	Depth (Thick-ness)		DESCRIPTION	
0.00	BAG	HS	0ppm		4.96		0.15	Grey brown slightly gravelly sandy clay SILT with occasional rootlets. Gravel concists of chalk and rare charcoal and brick. Dry. (MADE GROUND) Orangey brown, silty SAND. Moist. Firm, orangey brown, slightly clayey, gravelly sandy SILT. Gravel consists of angular to rounded fine chalk and flint. Moist.		
0.30	J				4.81		0.30			
0.80	DIST					 (1.40)				
0.80	J									
0.90	B									
					3.41		1.70			
						 (1.50)		Firm, mottled orange white, gravelly, slightly sandy SILT. Gravel consists of fine to medium chalk and flint.		
2	2.00	BAG	HS	0ppm						
	2.30	DIST								
	2.40	B	HS	0ppm						
3	3.00	BAG	HS	0ppm						
					1.91		3.20			
								Trial Pit complete at 3.20m		
4										
5										

GENERAL REMARKS: Trial pit dry.		Trial Pit Dimensions: 0.5 ↑ ↓ Shoring/Support: None Stability: Pit Stable							
KEY: V = Hand Vane Shear Strength PP = Pocket Penetrometer Shear Strength J = Jar Sample D = Small Disturbed Sample B = Large Bulk Sample HS = Head Space Measurement									
All dimensions in metres Scale 1:34.375		Contractor : ESL Plant: JCB 3CX		Method: Trial Pit/trench		Logged By: JG		Approved By: BAJ	

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TRIAL PIT LOG				TRIAL PIT No TP-09	
Client: FRONTIER					
Project: GROUND INVESTIGATION					
Project No: Yapton Road Farm		Date: 30/04/19	Ground Level: 5.10mAOD	Co-ordinates: E 497389 N 100745	Sheet: 1 of 1

SAMPLES & TESTS				Water	STRATA				Instrument/ Backfill
Depth	Type No	Test Type	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION	
0.00	BAG	HS	0ppm		5.00		0.10	Grey brown slightly sandy SILT with occasional rootlets (TOPSOIL).	
0.30	J				4.70		(0.30) 0.40	Light brown gravelly silty SAND. Gravel is fine to coarse, angular to sub angular of charcoal and brick. Frequent fragments of fibre cement sheet (may contain asbestos. (MADE GROUND)	
0.80 0.80	B DIST						(1.20)	Firm, orangey brown, slightly sandy slightly gravelly clayey SILT. Gravel consists of angular fine chalk and flint. Moist.	
					3.50		1.60		
2.00 2.10	BAG B	HS HS	0ppm 0ppm				(1.20)	Firm, mottled orange white, slightly gravelly, sandy SILT. Gravel consists of fine to medium chalk and flint. Wet from 2.10m.	
2.30 2.30	DIST J								
2.60	B				2.30		2.80		
3.00	BAG	HS	1ppm				(0.40)	Soft off white sandy gravelly SILT. Gravel is fine to coarse, angular to sub angular of chalk and flint.	
					1.90		3.20		
								Trial Pit complete at 3.20m	

GENERAL REMARKS: Trial pit dry.		Trial Pit Dimensions: Shoring/Support: None Stability: Pit Stable		
KEY: V = Hand Vane Shear Strength PP = Pocket Penetrometer Shear Strength J = Jar Sample D = Small Disturbed Sample B = Large Bulk Sample HS = Head Space Measurement				
All dimensions in metres Scale 1:34.375	Contractor : ESL Plant: JCB 3CX	Method: Trial Pit/trench	Logged By: JG	Approved By: BAJ

Form SLR AGS3 UK TP File MIDDLETON_FINAL GPJ 29-05-19

APPENDIX 03

Chemical Laboratory Test Certificates

Client Name: SLR Consulting Ltd
Reference:
Location: Middleton
Contact: Will Anstey
JE Job No.: 19/7324

Report : Solid**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	4-7	8-10	15-17	24-26	27-30	31-33	37-39	40-43	46-49	53-56	Please see attached notes for all abbreviations and acronyms		
Sample ID	TP-02	TP-02	TP-04	TP-05	TP-06	TP-06	TP-07	TP-08	TP-09	TP-01			
Depth	0.20	0.80	0.20	0.60	0.20	2.30	0.80	0.20	0.30	0.25			
COC No / misc													
Containers	V J T	V J	V J T	V J	V J T	V J	V J	V J T	V T B	V J T			
Sample Date	30/04/2019	30/04/2019	29/04/2019	29/04/2019	30/04/2019	30/04/2019	30/04/2019	29/04/2019	30/04/2019	29/04/2019			
Sample Type	Clay	Clay	Clay	Clay	Clayey Loam	Clay	Clay	Clay	Clay	Clay			
Batch Number	1	1	1	1	1	1	1	1	1	1	LOD/LOR	Units	Method No.
Date of Receipt	04/05/2019	04/05/2019	04/05/2019	04/05/2019	04/05/2019	04/05/2019	04/05/2019	04/05/2019	04/05/2019	04/05/2019			
Arsenic ^{#M}	8.3	12	NDP	12	-	4.5	6.3	8.6	NDP	3.8	<0.5	mg/kg	TM30/PM15
Cadmium ^{#M}	0.1	0.1	NDP	<0.1	-	0.2	<0.1	0.2	NDP	0.5	<0.1	mg/kg	TM30/PM15
Chromium ^{#M}	85	43	NDP	52	-	26	37	89	NDP	82	<0.5	mg/kg	TM30/PM15
Copper ^{#M}	19	14	NDP	18	-	7	8	15	NDP	34	<1	mg/kg	TM30/PM15
Lead ^{#M}	18	14	NDP	15	-	7	11	20	NDP	68	<5	mg/kg	TM30/PM15
Mercury ^{#M}	<0.1	<0.1	NDP	<0.1	-	<0.1	<0.1	<0.1	NDP	<0.1	<0.1	mg/kg	TM30/PM15
Nickel ^{#M}	17	40	NDP	51	-	14	14	18	NDP	12	<0.7	mg/kg	TM30/PM15
Selenium ^{#M}	<1	1	NDP	1	-	<1	<1	<1	NDP	1	<1	mg/kg	TM30/PM15
Zinc ^{#M}	120	58	NDP	71	-	32	47	80	NDP	390	<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene ^{#M}	<0.04	<0.04	<0.04	<0.04	-	<0.04	<0.04	<0.04	1.3 ^{AA}	1.3	<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03	<0.03	<0.03	-	<0.03	<0.03	<0.03	3.0 ^{AA}	0.09	<0.03	mg/kg	TM4/PM8
Acenaphthene ^{#M}	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	15 ^{AA}	0.23	<0.05	mg/kg	TM4/PM8
Fluorene ^{#M}	<0.04	<0.04	<0.04	<0.04	-	<0.04	<0.04	<0.04	10 ^{AA}	0.20	<0.04	mg/kg	TM4/PM8
Phenanthrene ^{#M}	<0.03	<0.03	0.07	<0.03	-	<0.03	<0.03	0.05	120 ^{AA}	2.0	<0.03	mg/kg	TM4/PM8
Anthracene [#]	<0.04	<0.04	<0.04	<0.04	-	<0.04	<0.04	<0.04	39 ^{AA}	0.27	<0.04	mg/kg	TM4/PM8
Fluoranthene ^{#M}	0.10	<0.03	0.20	<0.03	-	<0.03	<0.03	0.13	160 ^{AA}	4.3	<0.03	mg/kg	TM4/PM8
Pyrene [#]	0.09	<0.03	0.18	<0.03	-	<0.03	<0.03	0.12	140 ^{AA}	3.3	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene [#]	0.07	<0.06	0.12	<0.06	-	<0.06	<0.06	0.10	86 ^{AA}	2.0	<0.06	mg/kg	TM4/PM8
Chrysene ^{#M}	0.07	<0.02	0.13	<0.02	-	<0.02	<0.02	0.10	63 ^{AA}	3.6	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene ^{#M}	0.11	<0.07	0.23	<0.07	-	<0.07	<0.07	<0.07	120 ^{AA}	7.3	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene [#]	0.06	<0.04	0.10	<0.04	-	<0.04	<0.04	<0.04	64 ^{AA}	3.6	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene ^{#M}	<0.04	<0.04	0.09	<0.04	-	<0.04	<0.04	<0.04	47 ^{AA}	3.1	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene [#]	<0.04	<0.04	<0.04	<0.04	-	<0.04	<0.04	<0.04	7.3 ^{AA}	0.43	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene [#]	<0.04	<0.04	0.09	<0.04	-	<0.04	<0.04	<0.04	43 ^{AA}	2.7	<0.04	mg/kg	TM4/PM8
PAH 16 Total	<0.6	<0.6	1.2	<0.6	-	<0.6	<0.6	<0.6	918.6 ^{AA}	34.4	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.08	<0.05	0.17	<0.05	-	<0.05	<0.05	<0.05	86 ^{AA}	5.3	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.03	<0.02	0.06	<0.02	-	<0.02	<0.02	<0.02	34 ^{AA}	2.0	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	94	91	83	84	-	76	95	96	90 ^{AA}	97	<0	%	TM4/PM8
MTBE [#]	-	-	-	-	<0.005	<0.005	-	-	-	-	<0.005	mg/kg	TM31/PM12
Benzene [#]	-	-	-	-	<0.005	<0.005	-	-	-	-	<0.005	mg/kg	TM31/PM12
Toluene [#]	-	-	-	-	<0.005	<0.005	-	-	-	-	<0.005	mg/kg	TM31/PM12
Ethylbenzene [#]	-	-	-	-	<0.005	<0.005	-	-	-	-	<0.005	mg/kg	TM31/PM12
m/p-Xylene [#]	-	-	-	-	<0.005	<0.005	-	-	-	-	<0.005	mg/kg	TM31/PM12
o-Xylene [#]	-	-	-	-	<0.005	<0.005	-	-	-	-	<0.005	mg/kg	TM31/PM12
Xylenes (sum of isomers) [#]	-	-	-	-	<0.01	<0.01	-	-	-	-	<0.01	mg/kg	TM31/PM12

Please include all sections of this report if it is reproduced

Client Name: SLR Consulting Ltd
Reference:
Location: Middleton
Contact: Will Anstey
JE Job No.: 19/7324

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	4-7	8-10	15-17	24-26	27-30	31-33	37-39	40-43	46-49	53-56	Please see attached notes for all abbreviations and acronyms		
Sample ID	TP-02	TP-02	TP-04	TP-05	TP-06	TP-06	TP-07	TP-08	TP-09	TP-01			
Depth	0.20	0.80	0.20	0.60	0.20	2.30	0.80	0.20	0.30	0.25			
COC No / misc													
Containers	V J T	V J	V J T	V J	V J T	V J	V J	V J T	V T B	V J T			
Sample Date	30/04/2019	30/04/2019	29/04/2019	29/04/2019	30/04/2019	30/04/2019	30/04/2019	29/04/2019	30/04/2019	29/04/2019			
Sample Type	Clay	Clay	Clay	Clay	Clayey Loam	Clay	Clay	Clay	Clay	Clay			
Batch Number	1	1	1	1	1	1	1	1	1	1	LOD/LOR	Units	Method No.
Date of Receipt	04/05/2019	04/05/2019	04/05/2019	04/05/2019	04/05/2019	04/05/2019	04/05/2019	04/05/2019	04/05/2019	04/05/2019			
TPH CWG													
Aliphatics													
>C5-C6 ^{#M}	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	mg/kg	TM36/PM12
>C6-C8 ^{#M}	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	mg/kg	TM36/PM12
>C8-C10	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	mg/kg	TM36/PM12
>C10-C12 ^{#M}	-	-	-	-	<0.2	<0.2	-	-	-	-	<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 ^{#M}	-	-	-	-	<4	<4	-	-	-	-	<4	mg/kg	TM5/PM8/PM16
>C16-C21 ^{#M}	-	-	-	-	<7	<7	-	-	-	-	<7	mg/kg	TM5/PM8/PM16
>C21-C35 ^{#M}	-	-	-	-	<7	<7	-	-	-	-	<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35	-	-	-	-	<19	<19	-	-	-	-	<19	mg/kg	TM5/PM8/PM16/PM12/PM10
Aromatics													
>C5-EC7 [#]	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	mg/kg	TM36/PM12
>EC7-EC8 [#]	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	mg/kg	TM36/PM12
>EC8-EC10 ^{#M}	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	mg/kg	TM36/PM12
>EC10-EC12 [#]	-	-	-	-	<0.2	<0.2	-	-	-	-	<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 [#]	-	-	-	-	<4	<4	-	-	-	-	<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 [#]	-	-	-	-	20	<7	-	-	-	-	<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 [#]	-	-	-	-	110	<7	-	-	-	-	<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 [#]	-	-	-	-	130	<19	-	-	-	-	<19	mg/kg	TM5/PM8/PM16/PM12/PM10
Total aliphatics and aromatics (C5-35)	-	-	-	-	130	<38	-	-	-	-	<38	mg/kg	TM5/PM8/PM16/PM12/PM10
Natural Moisture Content	21.4	20.7	22.1	23.8	14.9	18.8	21.4	22.4	8.4	42.5	<0.1	%	PM4/PM0
Hexavalent Chromium [#]	<0.3	<0.3	<0.3	<0.3	-	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	mg/kg	TM38/PM20
Sample Type	Clay	Clay	Clay	Clay	Clayey Loam	Clay	Clay	Clay	Clay	Clay		None	PM13/PM0
Sample Colour	Light Brown	Light Brown	Medium Brown	Light Brown	Medium Brown	Light Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown		None	PM13/PM0
Other Items	stones and roots	stones	roots and vegetation	stones	stones and brick fragment	stones and chalk	none	vegetation, stones	vegetation, stones	vegetation		None	PM13/PM0
Arsenic	-	-	25	-	-	-	-	-	9.3	-	<0.5	mg/kg	TM30/PM62
Cadmium	-	-	0.4	-	-	-	-	-	1.1	-	<0.1	mg/kg	TM30/PM62
Chromium	-	-	35	-	-	-	-	-	24	-	<0.5	mg/kg	TM30/PM62
Copper	-	-	60	-	-	-	-	-	54	-	<1	mg/kg	TM30/PM62
Lead	-	-	110	-	-	-	-	-	130	-	<5	mg/kg	TM30/PM62
Mercury	-	-	<0.1	-	-	-	-	-	<0.1	-	<0.1	mg/kg	TM30/PM62
Nickel	-	-	20	-	-	-	-	-	22	-	<0.7	mg/kg	TM30/PM62
Selenium	-	-	<1	-	-	-	-	-	<1	-	<1	mg/kg	TM30/PM62
Zinc	-	-	470	-	-	-	-	-	510	-	<5	mg/kg	TM30/PM62
pH ^{#M}	8.2	8.4	7.5	8.6	-	9.0	8.1	8.1	7.7	7.5	<0.01	pH units	TM73/PM11

Please include all sections of this report if it is reproduced

Client Name: SLR Consulting Ltd
 Reference:
 Location: Middleton
 Contact: Will Anstey
 JE Job No.: 19/7324

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	57-58	59-62	66-69	70-72	77-79	80-83	84-86				Please see attached notes for all abbreviations and acronyms		
Sample ID	TP-07	WS-01	WS-02	WS-02	WS-03	WS-04	WS-04						
Depth	0.30	0.20	0.25	2.30	2.30	0.25	3.10						
COC No / misc													
Containers	J T	V J T	V J T	V J	V J	V J T	V J						
Sample Date	30/04/2019	01/05/2019	01/05/2019	01/05/2019	01/05/2019	01/05/2019	01/05/2019						
Sample Type	Clay	Clayey Loam	Clayey Loam	Clay	Clayey Sand	Sandy Loam	Clay						
Batch Number	1	1	1	1	1	1	1				LOD/LOR	Units	Method No.
Date of Receipt	04/05/2019	04/05/2019	04/05/2019	04/05/2019	04/05/2019	04/05/2019	04/05/2019						
Arsenic ^{#M}	6.0	NDP	NDP	-	-	NDP	-				<0.5	mg/kg	TM30/PM15
Cadmium ^{#M}	0.5	NDP	NDP	-	-	NDP	-				<0.1	mg/kg	TM30/PM15
Chromium ^{#M}	67	NDP	NDP	-	-	NDP	-				<0.5	mg/kg	TM30/PM15
Copper ^{#M}	30	NDP	NDP	-	-	NDP	-				<1	mg/kg	TM30/PM15
Lead ^{#M}	56	NDP	NDP	-	-	NDP	-				<5	mg/kg	TM30/PM15
Mercury ^{#M}	<0.1	NDP	NDP	-	-	NDP	-				<0.1	mg/kg	TM30/PM15
Nickel ^{#M}	33	NDP	NDP	-	-	NDP	-				<0.7	mg/kg	TM30/PM15
Selenium ^{#M}	<1	NDP	NDP	-	-	NDP	-				<1	mg/kg	TM30/PM15
Zinc ^{#M}	240	NDP	NDP	-	-	NDP	-				<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene ^{#M}	0.75	<0.04	<0.04	-	<0.04	0.19	-				<0.04	mg/kg	TM4/PM8
Acenaphthylene	1.9 _{AB}	<0.03	<0.03	-	<0.03	0.63	-				<0.03	mg/kg	TM4/PM8
Acenaphthene ^{#M}	2.8 _{AB}	<0.05	<0.05	-	<0.05	0.45	-				<0.05	mg/kg	TM4/PM8
Fluorene ^{#M}	1.9 _{AB}	<0.04	<0.04	-	<0.04	0.34	-				<0.04	mg/kg	TM4/PM8
Phenanthrene ^{#M}	34 _{AB}	0.33	0.22	-	<0.03	4.1	-				<0.03	mg/kg	TM4/PM8
Anthracene [#]	12 _{AB}	<0.04	<0.04	-	<0.04	1.6	-				<0.04	mg/kg	TM4/PM8
Fluoranthene ^{#M}	92 _{AB}	0.49	0.43	-	<0.03	12	-				<0.03	mg/kg	TM4/PM8
Pyrene [#]	82 _{AB}	0.37	0.38	-	<0.03	11	-				<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene [#]	33 _{AB}	0.20	0.21	-	<0.06	8.1	-				<0.06	mg/kg	TM4/PM8
Chrysene ^{#M}	34 _{AB}	0.42	0.32	-	<0.02	6.6	-				<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene ^{#M}	68 _{AB}	0.79	0.63	-	<0.07	15	-				<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene [#]	41 _{AB}	0.26	0.27	-	<0.04	9.1	-				<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene ^{#M}	29 _{AB}	0.29	0.21	-	<0.04	6.6	-				<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene [#]	3.0 _{AB}	0.07	<0.04	-	<0.04	1.5	-				<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene [#]	28 _{AB}	0.27	0.21	-	<0.04	6.6	-				<0.04	mg/kg	TM4/PM8
PAH 16 Total	463.4	3.5	2.9	-	<0.6	83.8	-				<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	49 _{AB}	0.57	0.45	-	<0.05	11	-				<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	19 _{AB}	0.22	0.18	-	<0.02	4.2	-				<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	96	90	95	-	89	93	-				<0	%	TM4/PM8
MTBE [#]	-	<0.005	-	<0.005	<0.005	<0.005	<0.005				<0.005	mg/kg	TM31/PM12
Benzene [#]	-	<0.005	-	<0.005	<0.005	<0.005	<0.005				<0.005	mg/kg	TM31/PM12
Toluene [#]	-	<0.005	-	<0.005	<0.005	<0.005	<0.005				<0.005	mg/kg	TM31/PM12
Ethylbenzene [#]	-	<0.005	-	<0.005	<0.005	<0.005	<0.005				<0.005	mg/kg	TM31/PM12
m/p-Xylene [#]	-	<0.005	-	<0.005	<0.005	<0.005	<0.005				<0.005	mg/kg	TM31/PM12
o-Xylene [#]	-	<0.005	-	<0.005	<0.005	<0.005	<0.005				<0.005	mg/kg	TM31/PM12
Xylenes (sum of isomers) [#]	-	<0.01	-	<0.01	<0.01	<0.01	<0.01				<0.01	mg/kg	TM31/PM12

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Client Name: SLR Consulting Ltd
 Reference:
 Location: Middleton
 Contact: Will Anstey
 JE Job No.: 19/7324

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	57-58	59-62	66-69	70-72	77-79	80-83	84-86				Please see attached notes for all abbreviations and acronyms		
Sample ID	TP-07	WS-01	WS-02	WS-02	WS-03	WS-04	WS-04						
Depth	0.30	0.20	0.25	2.30	2.30	0.25	3.10						
COC No / misc													
Containers	J T	V J T	V J T	V J	V J	V J T	V J						
Sample Date	30/04/2019	01/05/2019	01/05/2019	01/05/2019	01/05/2019	01/05/2019	01/05/2019						
Sample Type	Clay	Clayey Loam	Clayey Loam	Clay	Clayey Sand	Sandy Loam	Clay						
Batch Number	1	1	1	1	1	1	1				LOD/LOR	Units	Method No.
Date of Receipt	04/05/2019	04/05/2019	04/05/2019	04/05/2019	04/05/2019	04/05/2019	04/05/2019						
TPH CWG													
Aliphatics													
>C5-C6 ^{#M}	-	<0.1	-	<0.1	<0.1	<0.1	<0.1				<0.1	mg/kg	TM36/PM12
>C6-C8 ^{#M}	-	<0.1	-	<0.1	<0.1	<0.1	<0.1				<0.1	mg/kg	TM36/PM12
>C8-C10	-	<0.1	-	<0.1	<0.1	<0.1	<0.1				<0.1	mg/kg	TM36/PM12
>C10-C12 ^{#M}	-	<0.2	-	<0.2	<0.2	<0.2	<0.2				<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 ^{#M}	-	<4	-	<4	<4	<4	<4				<4	mg/kg	TM5/PM8/PM16
>C16-C21 ^{#M}	-	12	-	<7	<7	<7	<7				<7	mg/kg	TM5/PM8/PM16
>C21-C35 ^{#M}	-	22	-	<7	<7	64	<7				<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35	-	34	-	<19	<19	64	<19				<19	mg/kg	TM5/PM8/PM16
Aromatics													
>C5-EC7 [#]	-	<0.1	-	<0.1	<0.1	<0.1	<0.1				<0.1	mg/kg	TM36/PM12
>EC7-EC8 [#]	-	<0.1	-	<0.1	<0.1	<0.1	<0.1				<0.1	mg/kg	TM36/PM12
>EC8-EC10 ^{#M}	-	<0.1	-	<0.1	<0.1	<0.1	<0.1				<0.1	mg/kg	TM36/PM12
>EC10-EC12 [#]	-	<0.2	-	<0.2	<0.2	<0.2	<0.2				<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 [#]	-	<4	-	<4	<4	9	<4				<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 [#]	-	<7	-	<7	<7	66	<7				<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 [#]	-	<7	-	<7	<7	580	<7				<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 [#]	-	<19	-	<19	<19	655	<19				<19	mg/kg	TM5/PM8/PM16
Total aliphatics and aromatics (C5-35)	-	<38	-	<38	<38	719	<38				<38	mg/kg	TM5/PM8/PM16
Natural Moisture Content	21.0	35.8	40.2	18.0	19.3	16.2	25.0				<0.1	%	PM4/PM0
Hexavalent Chromium [#]	<0.3	<0.3	<0.3	-	-	<0.3	-				<0.3	mg/kg	TM38/PM20
Sample Type	Clay	Clayey Loam	Clayey Loam	Clay	Clayey Sand	Sandy Loam	Clay					None	PM13/PM0
Sample Colour	Medium Brown	Dark Brown	Medium Brown	Light Brown	Light Brown	Medium Brown	Light Brown					None	PM13/PM0
Other Items	stones, vegetation	roots	stones and roots	sand	none	stones and roots	stones, clots, sand and water					None	PM13/PM0
Arsenic	-	8.3	5.2	-	-	6.7	-				<0.5	mg/kg	TM30/PM62
Cadmium	-	0.3	1.1	-	-	0.7	-				<0.1	mg/kg	TM30/PM62
Chromium	-	26	21	-	-	17	-				<0.5	mg/kg	TM30/PM62
Copper	-	24	190	-	-	42	-				<1	mg/kg	TM30/PM62
Lead	-	15	93	-	-	62	-				<5	mg/kg	TM30/PM62
Mercury	-	<0.1	<0.1	-	-	<0.1	-				<0.1	mg/kg	TM30/PM62
Nickel	-	31	15	-	-	13	-				<0.7	mg/kg	TM30/PM62
Selenium	-	<1	1	-	-	<1	-				<1	mg/kg	TM30/PM62
Zinc	-	110	870	-	-	520	-				<5	mg/kg	TM30/PM62
pH ^{#M}	8.1	8.1	7.4	-	-	7.8	-				<0.01	pH units	TM73/PM11

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Client Name: SLR Consulting Ltd
Reference:
Location: Middleton
Contact: Will Anstey

Note:

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level less than 0.1%, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

Signed on behalf of Jones Environmental Laboratory:

Ryan Butterworth
 Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
19/7324	1	TP-02	0.20	7	10/05/2019	General Description (Bulk Analysis)	soil.stones
					10/05/2019	Asbestos Fibres	NAD
					10/05/2019	Asbestos ACM	NAD
					10/05/2019	Asbestos Type	NAD
					10/05/2019	Asbestos Level Screen	NAD
19/7324	1	TP-03	0.15	14	10/05/2019	General Description (Bulk Analysis)	soil.stones
					10/05/2019	Asbestos Fibres	NAD
					10/05/2019	Asbestos ACM	NAD
					10/05/2019	Asbestos Type	NAD
					10/05/2019	Asbestos Level Screen	NAD
19/7324	1	TP-04	0.20	17	10/05/2019	General Description (Bulk Analysis)	soil.stones
					10/05/2019	Asbestos Fibres	Fibre Bundles
					10/05/2019	Asbestos ACM	NAD
					10/05/2019	Asbestos Type	Chrysotile
					10/05/2019	Asbestos Level Screen	Asbestos level cannot be determined from Screen. Quantification required.
					15/05/2019	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					15/05/2019	Total Detailed Gravimetric Quantification (% Asb)	0.001 (mass %)
19/7324	1	TP-05	0.10	23	15/05/2019	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	0.001 (mass %)
					10/05/2019	General Description (Bulk Analysis)	soil.stones
					10/05/2019	Asbestos Fibres	NAD
					10/05/2019	Asbestos ACM	NAD
					10/05/2019	Asbestos Type	NAD
					10/05/2019	Asbestos Level Screen	NAD
					10/05/2019	General Description (Bulk Analysis)	soil.stones
19/7324	1	TP-06	0.20	30	10/05/2019	Asbestos Fibres	Fibre Bundles
					10/05/2019	Asbestos ACM	NAD
					10/05/2019	Asbestos Type	Chrysotile
					10/05/2019	Asbestos Level Screen	less than 0.1%
					15/05/2019	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					15/05/2019	Total Detailed Gravimetric Quantification (% Asb)	<0.001 (mass %)
					15/05/2019	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	<0.001 (mass %)
19/7324	1	TP-07	0.20	36	10/05/2019	General Description (Bulk Analysis)	soil.stones
					10/05/2019	Asbestos Fibres	Fibre Bundles
					10/05/2019	Asbestos ACM	NAD

Client Name: SLR Consulting Ltd
 Reference:
 Location: Middleton
 Contact: Will Anstey

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
19/7324	1	TP-07	0.20	36	10/05/2019	Asbestos Type	Chrysotile
					10/05/2019	Asbestos Level Screen	less than 0.1%
					15/05/2019	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					15/05/2019	Total Detailed Gravimetric Quantification (% Asb)	<0.001 (mass %)
					15/05/2019	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	<0.001 (mass %)
19/7324	1	TP-08	0.20	43	10/05/2019	General Description (Bulk Analysis)	soil-stones
					10/05/2019	Asbestos Fibres	NAD
					10/05/2019	Asbestos ACM	NAD
					10/05/2019	Asbestos Type	NAD
					10/05/2019	Asbestos Level Screen	NAD
19/7324	1	TP-09	0.30	49	10/05/2019	General Description (Bulk Analysis)	Soil/Stones
					10/05/2019	Asbestos Fibres	Fibre Bundles
					10/05/2019	Asbestos ACM	Asbestos Cement
					10/05/2019	Asbestos Type	Chrysotile
					10/05/2019	Asbestos Level Screen	Asbestos level cannot be determined from Screen. Quantification required.
					15/05/2019	Total ACM Gravimetric Quantification (% Asb)	2.200 (mass %)
					15/05/2019	Total Detailed Gravimetric Quantification (% Asb)	0.001 (mass %)
19/7324	1	TP-01	0.25	56	10/05/2019	General Description (Bulk Analysis)	soil-stones
					10/05/2019	Asbestos Fibres	NAD
					10/05/2019	Asbestos ACM	NAD
					10/05/2019	Asbestos Type	NAD
					10/05/2019	Asbestos Level Screen	NAD
19/7324	1	TP-07	0.30	58	10/05/2019	General Description (Bulk Analysis)	soil-stones
					10/05/2019	Asbestos Fibres	NAD
					10/05/2019	Asbestos ACM	NAD
					10/05/2019	Asbestos Type	NAD
					10/05/2019	Asbestos Level Screen	NAD
19/7324	1	WS-01	0.20	62	10/05/2019	General Description (Bulk Analysis)	Soil/Stones
					10/05/2019	Asbestos Fibres	Fibre Bundles
					10/05/2019	Asbestos ACM	ACM Debris
					10/05/2019	Asbestos Type	Chrysotile
					10/05/2019	Asbestos Level Screen	Asbestos level cannot be determined from Screen. Quantification required.
					15/05/2019	Total ACM Gravimetric Quantification (% Asb)	4.100 (mass %)
					15/05/2019	Total Detailed Gravimetric Quantification (% Asb)	<0.001 (mass %)
19/7324	1	WS-02	0.25	69	15/05/2019	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	4.100 (mass %)
					10/05/2019	General Description (Bulk Analysis)	soil-stones
					10/05/2019	Asbestos Fibres	Fibre Bundles
					10/05/2019	Asbestos ACM	NAD
					10/05/2019	Asbestos Type	Chrysotile
19/7324	1	WS-03	2.30	79	10/05/2019	Asbestos Level Screen	less than 0.1%
					15/05/2019	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					15/05/2019	Total Detailed Gravimetric Quantification (% Asb)	<0.001 (mass %)
					15/05/2019	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	<0.001 (mass %)
					10/05/2019	General Description (Bulk Analysis)	soil.stones
19/7324	1	WS-03	2.30	79	10/05/2019	Asbestos Fibres	NAD

Client Name: SLR Consulting Ltd
Reference:
Location: Middleton
Contact: Will Anstey

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
19/7324	1	WS-03	2.30	79	10/05/2019	Asbestos ACM	NAD
					10/05/2019	Asbestos Type	NAD
					10/05/2019	Asbestos Level Screen	NAD
19/7324	1	WS-04	0.25	83	10/05/2019	General Description (Bulk Analysis)	Soil/Stones
					10/05/2019	Asbestos Fibres	Fibre Bundles
					10/05/2019	Asbestos ACM	NAD
					10/05/2019	Asbestos Type	Chrysotile
					10/05/2019	Asbestos Level Screen	less than 0.1%
					15/05/2019	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					15/05/2019	Total Detailed Gravimetric Quantification (% Asb)	<0.001 (mass %)
					15/05/2019	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	<0.001 (mass %)

Matrix : Solid

Reference:

Location: Middleton

Contact: Will Anstey

[illegible]

Contact: Will Anstey

[illegible]

10 of 14

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 19/7324

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Please include all sections of this report if it is reproduced

All solid results are expressed on a dry weight basis unless stated otherwise.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to an Exova Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x10 Dilution
AB	x20 Dilution

JE Job No: 19/7324

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5	Modified 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8/PM16	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required/Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5	Modified 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8/PM16	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required/Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes	Yes	AR	Yes
TM5/TM36	please refer to TM5 and TM36 for method details	PM8/PM12/PM16	please refer to PM8/PM16 and PM12 for method details			AR	Yes
TM5/TM36	please refer to TM5 and TM36 for method details	PM8/PM12/PM16	please refer to PM8/PM16 and PM12 for method details	Yes		AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	No
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7, 6010B and BS EN ISO 11885 2009	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes

JE Job No: 19/7324

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7, 6010B and BS EN ISO 11885 2009	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes
TM31	Modified USEPA 8015B. Determination of Methylterbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GC/FID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results can be confirmed using GCMS.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GC/FID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results can be confirmed using GCMS.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GC/FID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results can be confirmed using GCMS.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods 325.2 (Chloride), 375.4 (Sulphate), 365.2 (o-Phosphate), 353.1 (TON), 354.1 (Nitrite), 350.1 (NH4+) comparable to BS ISO 15923-1, 7196A (Hex Cr)	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM73	Modified US EPA methods 150.1 and 9045D and BS1377:1990. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes	Yes	AR	No
TM131	Quantification of Asbestos Fibres and ACM, based on HSG248 and SCA method.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	Yes

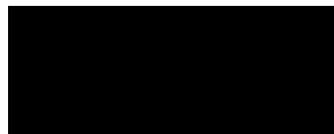


Exova Jones Environmental

Registered Office: Treewood House, Rowden Lane, Bradford on Avon, Wiltshire, BA15 2UA

Unit 3 Deeside Point
Zone 3
Deeside Industrial Park
Deeside
CH5 2UA

SLR Consulting Ltd
Treewood House
Rowden Lane
Bradford on Avon
BA15 2UA



Attention : Will Anstey
Date : 17th May, 2019
Your reference :
Our reference : Test Report 19/7324 Batch 1 Schedule B
Location : Middleton
Date samples received : 4th May, 2019
Status : Final report
Issue : 1

Twenty seven samples were received for analysis on 4th May, 2019 of which seven were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied. All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:



Paul Boden BSc
Senior Project Manager

Client Name: SLR Consulting Ltd
Reference:
Location: Middleton
Contact: Will Anstey

Note:

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level less than 0.1%, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

Signed on behalf of Jones Environmental Laboratory:

Ryan Butterworth
 Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
19/7324	1	TP-04	0.20	17	15/05/2019	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					15/05/2019	Total Detailed Gravimetric Quantification (% Asb)	0.001 (mass %)
					15/05/2019	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	0.001 (mass %)
					16/05/2019	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					16/05/2019	Asbestos Gravimetric & PCOM Total	0.001 (mass %)
19/7324	1	TP-06	0.20	30	15/05/2019	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					15/05/2019	Total Detailed Gravimetric Quantification (% Asb)	<0.001 (mass %)
					15/05/2019	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	<0.001 (mass %)
					16/05/2019	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					16/05/2019	Asbestos Gravimetric & PCOM Total	<0.001 (mass %)
19/7324	1	TP-07	0.20	36	15/05/2019	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					15/05/2019	Total Detailed Gravimetric Quantification (% Asb)	<0.001 (mass %)
					15/05/2019	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	<0.001 (mass %)
					16/05/2019	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					16/05/2019	Asbestos Gravimetric & PCOM Total	<0.001 (mass %)
19/7324	1	TP-09	0.30	49	15/05/2019	Total ACM Gravimetric Quantification (% Asb)	2.200 (mass %)
					15/05/2019	Total Detailed Gravimetric Quantification (% Asb)	0.001 (mass %)
					15/05/2019	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	2.201 (mass %)
19/7324	1	WS-01	0.20	62	15/05/2019	Total ACM Gravimetric Quantification (% Asb)	4.100 (mass %)
					15/05/2019	Total Detailed Gravimetric Quantification (% Asb)	<0.001 (mass %)
					15/05/2019	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	4.100 (mass %)
19/7324	1	WS-02	0.25	69	15/05/2019	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					15/05/2019	Total Detailed Gravimetric Quantification (% Asb)	<0.001 (mass %)
					15/05/2019	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	<0.001 (mass %)
					16/05/2019	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					16/05/2019	Asbestos Gravimetric & PCOM Total	<0.001 (mass %)
19/7324	1	WS-04	0.25	83	15/05/2019	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					15/05/2019	Total Detailed Gravimetric Quantification (% Asb)	<0.001 (mass %)
					15/05/2019	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	<0.001 (mass %)
					16/05/2019	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					16/05/2019	Asbestos Gravimetric & PCOM Total	<0.001 (mass %)

Client Name: SLR Consulting Ltd

Reference:

Location: Middleton

Contact: Will Anstey

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 19/7324

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Please include all sections of this report if it is reproduced

All solid results are expressed on a dry weight basis unless stated otherwise.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to an Exova Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

JE Job No: 19/7324

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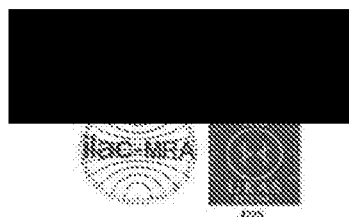


Exova Jones Environmental

Exova Jones Environmental Limited, 10th Floor, The Brew House, Jacob Street, Bristol, BS2 0EQ. Tel: 0117 924 1014

Unit 3 Deeside Point
Zone 3
Deeside Industrial Park
Deeside
CH5 2UA

SLR Consulting Ltd
3rd Floor
The Brew House
Jacob Street
Bristol
BS2 0EQ



Attention :	Will Anstey
Date :	15th May, 2019
Your reference :	402.06594.00008
Our reference :	Test Report 19/7429 Batch 1
Location :	Middleton-On-Sea
Date samples received :	8th May, 2019
Status :	Final report
Issue :	1

Four samples were received for analysis on 8th May, 2019 of which four were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Simon Gomery BSc
Project Manager

Client Name: SLR Consulting Ltd
 Reference: 402.06594.00008
 Location: Middleton-On-Sea
 Contact: Will Anstey
 JE Job No.: 19/7429

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
 H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HNO₃

J E Sample No.	1-5	6-10	11-15	16-20									
Sample ID	WS01	WS02	WS03	MW01									
Depth													
COC No / misc													
Containers	V P G	V P G	V P G	V P G									
Sample Date	07/05/2019	07/05/2019	07/05/2019	07/05/2019									
Sample Type	Ground Water	Ground Water	Ground Water	Ground Water									
Batch Number	1	1	1	1									
Date of Receipt	08/05/2019	08/05/2019	08/05/2019	08/05/2019									
											LOD/LOR	Units	Method No.
Dissolved Arsenic #	0.0019	<0.0009	<0.0009	<0.0009							<0.0009	mg/l	TM30/PM14
Dissolved Cadmium #	<0.00003	<0.00003	<0.00003	<0.00003							<0.00003	mg/l	TM30/PM14
Total Dissolved Chromium #	0.0004	0.0006	0.0005	0.0003							<0.0002	mg/l	TM30/PM14
Dissolved Copper #	<0.003	<0.003	<0.003	<0.003							<0.003	mg/l	TM30/PM14
Dissolved Lead #	<0.0004	<0.0004	<0.0004	<0.0004							<0.0004	mg/l	TM30/PM14
Dissolved Mercury #	<0.0005	<0.0005	<0.0005	<0.0005							<0.0005	mg/l	TM30/PM14
Dissolved Nickel #	0.002	0.0028	0.0018	0.0007							<0.0002	mg/l	TM30/PM14
Dissolved Selenium #	<0.0012	<0.0012	<0.0012	<0.0012							<0.0012	mg/l	TM30/PM14
Dissolved Zinc #	<0.0015	<0.0015	<0.0015	<0.0015							<0.0015	mg/l	TM30/PM14
Methyl Tertiary Butyl Ether #	-	<0.0001	<0.0001	<0.0001							<0.0001	mg/l	TM15/PM10
Benzene #	-	<0.0005	<0.0005	<0.0005							<0.0005	mg/l	TM15/PM10
Toluene #	-	<0.005	<0.005	<0.005							<0.005	mg/l	TM15/PM10
Ethylbenzene #	-	<0.001	<0.001	<0.001							<0.001	mg/l	TM15/PM10
m/p-Xylene #	-	<0.002	<0.002	<0.002							<0.002	mg/l	TM15/PM10
o-Xylene #	-	<0.001	<0.001	<0.001							<0.001	mg/l	TM15/PM10
Total Xylenes #	-	<0.003	<0.003	<0.003							<0.003	mg/l	TM15/PM10
Surrogate Recovery Toluene D8	-	110	110	110							<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	-	100	100	110							<0	%	TM15/PM10
TPH CWG													
Aliphatics													
>C5-C6 #	-	<0.01	<0.01	<0.01							<0.01	mg/l	TM36/PM12
>C6-C8 #	-	<0.01	<0.01	<0.01							<0.01	mg/l	TM36/PM12
>C8-C10 #	-	<0.01	<0.01	<0.01							<0.01	mg/l	TM36/PM12
>C10-C12 #	-	<0.005	<0.005	<0.005							<0.005	mg/l	TM5/PM18/PM30
>C12-C16 #	-	<0.01	<0.01	<0.01							<0.01	mg/l	TM5/PM18/PM30
>C16-C21 #	-	<0.01	<0.01	<0.01							<0.01	mg/l	TM5/PM18/PM30
>C21-C35 #	-	<0.01	<0.01	<0.01							<0.01	mg/l	TM5/PM18/PM30
Total aliphatics C5-35 #	-	<0.01	<0.01	<0.01							<0.01	mg/l	TM5/PM18/PM30
Aromatics													
>C5-EC7 #	-	<0.01	<0.01	<0.01							<0.01	mg/l	TM36/PM12
>EC7-EC8 #	-	<0.01	<0.01	<0.01							<0.01	mg/l	TM36/PM12
>EC8-EC10 #	-	<0.01	<0.01	<0.01							<0.01	mg/l	TM36/PM12
>EC10-EC12 #	-	<0.005	<0.005	<0.005							<0.005	mg/l	TM5/PM18/PM30
>EC12-EC16 #	-	<0.01	<0.01	<0.01							<0.01	mg/l	TM5/PM18/PM30
>EC16-EC21 #	-	<0.01	<0.01	0.01							<0.01	mg/l	TM5/PM18/PM30
>EC21-EC35 #	-	<0.01	<0.01	<0.01							<0.01	mg/l	TM5/PM18/PM30
Total aromatics C5-35 #	-	<0.01	<0.01	0.01							<0.01	mg/l	TM5/PM18/PM30
Total aliphatics and aromatics(C5-35) #	-	<0.01	<0.01	0.01							<0.01	mg/l	TM5/PM18/PM30
Nitrate as NO3 #	190	29	66	5.8							<0.2	mg/l	TM38/PM0
Ammoniacal Nitrogen as NH4 #	1.31	0.05	<0.03	1.92							<0.03	mg/l	TM38/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: SLR Consulting Ltd
Reference: 402.06594.00008
Location: Middleton-On-Sea
Contact: Will Anstey
JE Job No.: 19/7429

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
 H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HNO₃

J E Sample No.	1-5	6-10	11-15	16-20								
Sample ID	WS01	WS02	WS03	MW01								
Depth												
COC No / misc												
Containers	V P G	V P G	V P G	V P G								
Sample Date	07/05/2019	07/05/2019	07/05/2019	07/05/2019								
Sample Type	Ground Water	Ground Water	Ground Water	Ground Water								
Batch Number	1	1	1	1								
Date of Receipt	08/05/2019	08/05/2019	08/05/2019	08/05/2019								
										LOD/LOR	Units	Method No.
pH #	7.5	7.4	7.4	7.8						<0.01	pH units	TM73/PM0
PAH MS												
Napthalene #	-	<0.0001	<0.0001	-						<0.0001	mg/l	TM4/PM30
Acenaphthylene #	-	<0.000013	<0.000013	-						<0.000013	mg/l	TM4/PM30
Acenaphthene #	-	<0.000013	0.000021	-						<0.000013	mg/l	TM4/PM30
Fluorene #	-	<0.000014	0.00002	-						<0.000014	mg/l	TM4/PM30
Phenanthrene #	-	0.000025	0.00007	-						<0.000011	mg/l	TM4/PM30
Anthracene #	-	<0.000013	<0.000013	-						<0.000013	mg/l	TM4/PM30
Fluoranthene #	-	0.000012	0.000052	-						<0.000012	mg/l	TM4/PM30
Pyrene #	-	<0.000013	0.000043	-						<0.000013	mg/l	TM4/PM30
Benzo(a)anthracene #	-	<0.000015	<0.000015	-						<0.000015	mg/l	TM4/PM30
Chrysene #	-	<0.000011	0.00002	-						<0.000011	mg/l	TM4/PM30
Benzo(bk)fluoranthene #	-	<0.000018	0.000027	-						<0.000018	mg/l	TM4/PM30
Benzo(a)pyrene #	-	<0.000016	<0.000016	-						<0.000016	mg/l	TM4/PM30
Indeno(123cd)pyrene #	-	<0.000011	<0.000011	-						<0.000011	mg/l	TM4/PM30
Dibenzo(ah)anthracene #	-	<0.00001	<0.00001	-						<0.00001	mg/l	TM4/PM30
Benzo(ghi)perylene #	-	<0.000011	<0.000011	-						<0.000011	mg/l	TM4/PM30
PAH 16 Total #	-	<0.000195	0.000253	-						<0.000195	mg/l	TM4/PM30
Benzo(b)fluoranthene	-	<0.00001	0.00002	-						<0.00001	mg/l	TM4/PM30
Benzo(k)fluoranthene	-	<0.00001	<0.00001	-						<0.00001	mg/l	TM4/PM30
PAH Surrogate % Recovery	-	91	82	-						<0	%	TM4/PM30
Hexavalent Chromium	<0.002	<0.002	<0.002	<0.002						<0.002	mg/l	TM38/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: SLR Consulting Ltd

Reference: 402.06594.00008

Location: Middleton-On-Sea

Contact: Will Anstey

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.

Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 19/7429

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Please include all sections of this report if it is reproduced

All solid results are expressed on a dry weight basis unless stated otherwise.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to an Exova Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

JE Job No: 19/7429

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			
TM5	Modified 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GC/FID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM16/PM30	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE/Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			
TM5/TM36	please refer to TM5 and TM36 for method details	PM12/PM16/PM30	please refer to PM16/PM30 and PM12 for method details	Yes			
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.				
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes			
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7, 6010B and BS EN ISO 11885 2009	PM14	Analysis of waters and leachates for metals by ICP OES/ICP MS. Samples are filtered for dissolved metals and acidified if required.	Yes			
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GC/FID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results can be confirmed using GC/MS.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes			
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods 325.2 (Chloride), 375.4 (Sulphate), 365.2 (o-Phosphate), 353.1 (TON), 354.1 (Nitrite), 350.1 (NH4+) comparable to BS ISO 15923-1, 7196A (Hex Cr)	PM0	No preparation is required.				
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods 325.2 (Chloride), 375.4 (Sulphate), 365.2 (o-Phosphate), 353.1 (TON), 354.1 (Nitrite), 350.1 (NH4+) comparable to BS ISO 15923-1, 7196A (Hex Cr)	PM0	No preparation is required.	Yes			

JE Job No: 19/7429

[illegible]

APPENDIX 04

Human Health Risk Assessment – GQRA

Generic Risk Assessment - Soils
Lab Data Screening

SLR

	Exceeds GAC
	Exceeds LOD
Client Name	Frontier
Site Name	apton Road, Middleton-on-Sea
Job Number	402.06594.00008
Date	12:00:00 AM
Description of Data Assessment / Zoning	
Selected Screening Value and Land Use	S4UL - Residential without plant uptake

Sample ID	TP-01	TP-02	TP-02	TP-03	TP-04	TP-05	TP-05	TP-06	TP-06	TP-07	TP-07	TP-07	TP-08	TP-09	WS-01
Depth	0.25	0.2	0.8	0.15	0.2	0.1	0.6	0.2	2.30	0.2	0.3	0.8	0.2	0.3	0.2
Sample Type	Clay	Clay	Clay	Soil	Clay	Soil	Clay	Clayey Loam	Clay	Soil	Clay	Clay	Clay	Clay	Clayey Loam
Sampled Date	29/04/2019	30/04/2019	30/04/2019	29/04/2019	29/04/2019	29/04/2019	29/04/2019	30/04/2019	30/04/2019	30 April 2019	30 April 2019	30 April 2019	29 April 2019	30 April 2019	01 May 2019
Sample Received Date	04 May 2019	04 May 2019	04 May 2019	04 May 2019	04 May 2019	04 May 2019	04 May 2019	04 May 2019	04 May 2019	04 May 2019	04 May 2019	04 May 2019	04 May 2019	04 May 2019	04 May 2019
J E Sample No	53-56	4-7	8-10	11-14	15-17	21-23	24-26	27-30	31-33	34-36	57-58	37-39	40-43	46-49	59-62
Batch Number	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Strata / Zone	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Test	Units	LOD	Selected GAC	No. Above GAC													
Arsenic	mg/kg	<0.5	40	0	3.8	6.3	12	-	25	-	12	-	4.9	-	8	6.3	8.8
Cadmium	mg/kg	<0.1	85	0	0.5	0.1	0.1	-	0.4	-	<0.1	-	0.5	<0.1	0.2	0.2	0.3
Chromium	mg/kg	<0.5	910	0	82	89	42	-	35	-	92	-	87	37	89	24	28
Copper	mg/kg	<1	7100	0	34	19	14	-	80	-	18	-	7	-	30	8	15
Lead	mg/kg	<5	310	0	86	18	14	-	110	-	16	-	7	-	56	11	20
Mercury	mg/kg	<0.1	56	0	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	<0.7	180	0	12	17	40	-	20	-	51	-	14	-	33	18	22
Selenium	mg/kg	<1	430	0	1	<1	1	-	<1	-	1	-	<1	<1	<1	<1	<1
Zinc	mg/kg	<5	40000	0	390	120	58	-	470	-	71	-	32	-	240	47	86
Hexavalent Chromium	mg/kg	<0.3	6	0	<0.3	<0.3	<0.3	-	<0.3	-	<0.3	-	<0.3	<0.3	<0.3	<0.3	<0.3
PAH MS					-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	mg/kg	<0.04	2.3	0	1.3	<0.04	<0.04	-	<0.04	-	<0.04	-	0.73	<0.04	<0.04	1.3	<0.04
Acenaphthylene	mg/kg	<0.03	2900	0	0.89	<0.03	<0.03	-	<0.03	-	<0.03	-	1.9	<0.03	<0.03	3	<0.03
Acenaphthene	mg/kg	<0.05	3000	0	0.23	<0.05	<0.05	-	<0.05	-	<0.05	-	2.8	<0.05	<0.05	15	<0.05
Fluorene	mg/kg	<0.04	2800	0	0.2	<0.04	<0.04	-	<0.04	-	<0.04	-	1.9	<0.04	<0.04	10	<0.04
Phenanthrene	mg/kg	<0.03	1300	0	2	<0.03	<0.03	-	<0.03	-	<0.03	-	34	<0.03	<0.03	120	<0.03
Anthracene	mg/kg	<0.04	31000	0	0.27	<0.04	<0.04	-	<0.04	-	<0.04	-	12	<0.04	<0.04	28	<0.04
Fluoranthene	mg/kg	<0.03	1500	0	0.2	<0.03	<0.03	-	<0.03	-	<0.03	-	92	<0.03	0.13	103	0.48
Pyrene	mg/kg	<0.03	3700	0	1.3	0.06	<0.03	-	0.18	-	<0.03	-	82	<0.03	0.12	120	0.37
Benzo(a)anthracene	mg/kg	<0.06	11	2	2	0.07	<0.06	-	0.12	-	<0.06	-	33	<0.06	0.1	89	0.2
Chrysene	mg/kg	<0.02	30	2	3.6	0.07	<0.02	-	0.13	-	<0.02	-	54	<0.02	0.1	25	0.42
Benzo(b)fluoranthene	mg/kg	<0.07			1.3	0.11	<0.07	-	0.23	-	<0.07	-	86	<0.07	<0.07	120	0.79
Benzo(a)pyrene	mg/kg	<0.04	3.2	4	3.6	0.06	<0.04	-	0.1	-	<0.04	-	51	<0.04	<0.04	69	0.26
Indeno(123cd)pyrene	mg/kg	<0.04	45	1	3.1	<0.04	<0.04	-	0.89	-	<0.04	-	29	<0.04	<0.04	17	0.29
Dibenzo(ah)anthracene	mg/kg	<0.04	0.31	4	0.23	<0.04	<0.04	-	<0.04	-	<0.04	-	3	<0.04	<0.04	2.3	0.07
Benzo(ghi)perylene	mg/kg	<0.04	360	0	1.7	<0.04	<0.04	-	0.09	-	<0.04	-	28	<0.04	<0.04	45	0.37
PAH 16 Total	mg/kg	<0.6			24.4	<0.6	<0.6	-	1.2	-	<0.6	-	483.2	<0.6	<0.6	916.6	1.6
Benzo(b)fluoranthene	mg/kg	<0.05	3.9	4	0.2	0.08	<0.05	-	0.17	-	<0.05	-	39	<0.05	<0.05	56	0.67
Benzo(k)fluoranthene	mg/kg	<0.02	110	0	1	0.03	<0.02	-	0.06	-	<0.02	-	19	<0.02	<0.02	34	0.22
PAH Surrogate % Recovery	%	<0			97	94	91	-	83	-	84	-	76	-	96	95	96
Methyl Tertiary Butyl Ether	mg/kg	<0.005	ND	0	-	-	-	-	-	-	<0.005	-	-	-	-	-	<0.005
Benzene	mg/kg	<0.005	0.38	0	-	-	-	-	-	-	<0.005	-	-	-	-	-	<0.005
Toluene	mg/kg	<0.005	880	0	-	-	-	-	-	-	<0.005	-	-	-	-	-	<0.005
Ethylbenzene	mg/kg	<0.005	83	0	-	-	-	-	-	-	<0.005	-	-	-	-	-	<0.005
m & p Xylene	mg/kg	<0.005	79	0	-	-	-	-	-	-	<0.005	-	-	-	-	-	<0.005
o-Xylene	mg/kg	<0.005	88	0	-	-	-	-	-	-	<0.005	-	-	-	-	-	<0.005
Total Xylenes	mg/kg	<0.01			-	-	-	-	-	-	<0.01	-	-	-	-	-	<0.01
TPH CWG					-	-	-	-	-	-	-	-	-	-	-	-	-
Aliphatics					-	-	-	-	-	-	-	-	-	-	-	-	-
aliphatics >C5-C6	mg/kg	<0.1	42	0	-	-	-	-	-	-	<0.1	-	-	-	-	-	<0.1
aliphatics >C6-C8	mg/kg	<0.1	100	0	-	-	-	-	-	-	<0.1	-	-	-	-	-	<0.1
aliphatics >C8-C10	mg/kg	<0.1	27	0	-	-	-	-	-	-	<0.1	-	-	-	-	-	<0.1
aliphatics >C10-C12	mg/kg	<0.2	130	0	-	-	-	-	-	-	<0.2	-	-	-	-	-	<0.2
aliphatics >C12-C16	mg/kg	<4	1100	0	-	-	-	-	-	-	<4	-	-	-	-	-	<4
aliphatics >C16-C21	mg/kg	<7	-	0	-	-	-	-	-	-	<7	-	-	-	-	-	12
aliphatics >C21-C35	mg/kg	<7	-	0	-	-	-	-	-	-	<7	-	-	-	-	-	22
Total aliphatics C5-35	mg/kg	<19			-	-	-	-	-	-	<19	-	-	-	-	-	34
Aromatics					-	-	-	-	-	-	-	-	-	-	-	-	-
aromatics >EC5-EC7	mg/kg	<0.1	370	0	-	-	-	-	-	-	<0.1	-	-	-	-	-	<0.1
aromatics >EC7-EC8	mg/kg	<0.1	860	0	-	-	-	-	-	-	<0.1	-	-	-	-	-	<0.1
aromatics >EC8-EC10	mg/kg	<0.1	47	0	-	-	-	-	-	-	<0.1	-	-	-	-	-	<0.1
aromatics >EC10-EC12	mg/kg	<0.2	260	0	-	-	-	-	-	-	<0.2	-	-	-	-	-	<0.2
aromatics >EC12-EC16	mg/kg	<4	1800	0	-	-	-	-	-	-	<4	-	-	-	-	-	<4
aromatics >EC16-EC21	mg/kg	<7	1900	0	-	-	-	-	-	-	<7	-	-	-	-	-	<7
aromatics >EC21-EC35	mg/kg	<7	1900	0	-	-	-	-	-	-	<7	-	-	-	-	-	<7
Total aromatics C5-35	mg/kg	<19			-	-	-	-	-	-	<19	-	-	-	-	-	<19
Total aliphatics and aromatics(C5-35)	mg/kg	<38			-	-	-	-	-	-	<38	-	-	-	-	-	<38
Natural Moisture Content	%	<0.1			42.5	21.4	20.7	-	22.1	-	23.8	-	14.9	-	18.8	-	21
Sample Type	None				Clay	Clay	Clay	-	Clay	-	Clay	-	Clay	-	Clay	-	Clay
Sample Colour	None				Medium Brown	Light Brown	Light Brown	-	Medium Brown	-	Light Brown	-	Medium Brown	-	Medium Brown	-	Medium Brown
Other Items	None				vegetation	stones and roots	stones	-	roots and vegetation	-	stones	-	stones, vegetation	-	none	-	vegetation, stones
pH	pH units	<0.01			7.5	8.2	8.4	-	7.9	-	8.6	-	8	-	8.1	-	8.1
Asbestos Screen & Identification					-	-	-	-	-	-	-	-	-	-	-	-	-
General Description (Bulk Analysis) #	None				soil-stones	soil-stones	-	soil-stones	soil-stones	-	soil-stones	-	soil-stones	-	soil-stones	-	soil-stones
Asbestos Fibres #	None				NAD	NAD	-	NAD	Fibre Bundles	-	Fibre Bundles	-	Fibre Bundles	-	NAD	-	NAD
Asbestos ACM #	None				NAD	NAD	-	NAD	NAD	-	NAD	-	NAD	-	NAD	-	NAD
Asbestos Type #	None				NAD	NAD	-	NAD	Chrysotile	-	Chrysotile	-	Chrysotile	-	NAD	-	NAD
Asbestos Level Screen #	0				NAD	NAD	-	NAD	less than 0.1 %	-	less than 0.1 %	-	less than 0.1 %	-	NAD	-	NAD
Asbestos Detailed Gravimetric					-	-	-	-	-	-	-	-	-	-	-	-	-
Total ACM Gravimetric Quantification (% Asb) #	mass %	<0.001			-	-	-	-	<0.001	-	-	-	<0.001	-	-	-	2.2
Total Detailed Gravimetric Quantification (% Asb) #	mass %	<0.001			-	-	-	-	0.001	-	-	-	<0.001	-	-	-	0.001
Total Gravimetric Quantification (ACM + Detailed) (% Asb) #	mass %	<0.001			-	-	-	-	0.001	-	-	-	<0.001	-	-	-	2.201
Asbestos PCOM Quantification					-	-	-	-	-	-	-	-	-	-	-	-	-
Asbestos PCOM Quantification (Fibres) #	mass %	<0.001			-	-	-	-	-	-	-	-	-	-	-	-	-
Asbestos Gravimetric & PCOM Total #	mass %	<0.001			-	-	-	-	-	-	-	-	-	-	-	-	-

Generic Risk Assessment - Soils
Lab Data Screening

SLR

	Exceeds GAC
	Exceeds LOD
Client Name	Frontier
Site Name	Capton Road, Middleton-on-Sea
Job Number	402.06594.00008
Date	12.00.00 AM
Description of Data Assessment / Zoning	
Selected Screening Value and Land Use	S4UL - Residential without plant uptake

Sample ID	WS-02	WS-02	WS-03	WS-04	WS-04
Depth	0.25	2.3	2.3	0.25	3.10
Sample Type	Clayey Loam	Clay	Clayey Sand	Sandy Loam	Clay
Sampled Date	01 May 2019	43586	43586	43586	43586
Sample Received Date	04 May 2019	04/05/2019	04/05/2019	04/05/2019	04/05/2019
J E Sample No	66-69	70-72	77-79	80-83	84-86
Batch Number	1	1	1	1	1
Strata / Zone	-	-	-	-	-

Test	Units	LOD	Selected GAC	No. Above GAC					
Arsenic	mg/kg	<0.5	40	0	5.2	-	-	6.7	-
Cadmium	mg/kg	<0.1	85	0	1.1	-	-	0.7	-
Chromium	mg/kg	<0.5	910	0	21	-	-	17	-
Copper	mg/kg	<1	7100	0	190	-	-	42	-
Lead	mg/kg	<5	310	0	93	-	-	52	-
Mercury	mg/kg	<0.1	56	0	<0.1	-	-	<0.1	-
Nickel	mg/kg	<0.7	180	0	15	-	-	13	-
Selenium	mg/kg	<1	430	0	1	-	-	<1	-
Zinc	mg/kg	<5	40000	0	570	-	-	520	-
Hexavalent Chromium	mg/kg	<0.3	6	0	<0.3	-	-	<0.3	-
PAH MS					-	-	-	-	-
Naphthalene	mg/kg	<0.04	2.3	0	<0.04	-	<0.04	0.18	-
Acenaphthylene	mg/kg	<0.03	2900	0	<0.03	-	<0.03	0.82	-
Acenaphthene	mg/kg	<0.05	3000	0	<0.05	-	<0.05	0.45	-
Fluorene	mg/kg	<0.04	2800	0	<0.04	-	<0.04	0.34	-
Phenanthrene	mg/kg	<0.03	1300	0	0.32	-	<0.03	4.1	-
Anthracene	mg/kg	<0.04	31000	0	<0.04	-	<0.04	1.8	-
Fluoranthene	mg/kg	<0.03	1500	0	2.42	-	<0.03	12	-
Pyrene	mg/kg	<0.03	3700	0	0.25	-	<0.03	1.1	-
Benzo(a)anthracene	mg/kg	<0.06	11	2	0.41	-	<0.06	5.1	-
Chrysene	mg/kg	<0.02	30	2	0.32	-	<0.02	6.8	-
Benzo(b)fluoranthene	mg/kg	<0.07	3	2	0.63	-	<0.07	15	-
Benzo(a)pyrene	mg/kg	<0.04	3.2	2	0.27	-	<0.04	9.1	-
Indeno(1,2,3-cd)pyrene	mg/kg	<0.04	45	2	0.21	-	<0.04	5.8	-
Dibenzo(a,h)anthracene	mg/kg	<0.04	0.31	2	<0.04	-	<0.04	1.5	-
Benzo(ghi)perylene	mg/kg	<0.04	360	0	0.21	-	<0.04	0.5	-
PAH 16 Total	mg/kg	<0.6	-	-	2.9	-	<0.6	83.5	-
Benzo(b)fluoranthene	mg/kg	<0.05	3.9	2	0.44	-	<0.05	1.1	-
Benzo(k)fluoranthene	mg/kg	<0.02	110	0	0.15	-	<0.02	4.2	-
PAH Surrogate % Recovery	%	<0	-	-	95	-	89	93	-
Methyl Tertiary Butyl Ether	mg/kg	<0.005	ND	0	-	<0.005	<0.005	<0.005	<0.005
Benzene	mg/kg	<0.005	0.38	0	-	<0.005	<0.005	<0.005	<0.005
Toluene	mg/kg	<0.005	880	0	-	<0.005	<0.005	<0.005	<0.005
Ethylbenzene	mg/kg	<0.005	83	0	-	<0.005	<0.005	<0.005	<0.005
m & p Xylene	mg/kg	<0.005	79	0	-	<0.005	<0.005	<0.005	<0.005
o-Xylene	mg/kg	<0.005	88	0	-	<0.005	<0.005	<0.005	<0.005
Total Xylenes	mg/kg	<0.01	-	-	-	<0.01	<0.01	<0.01	<0.01
TPH CWG					-	-	-	-	-
Aliphatics					-	-	-	-	-
aliphatics >C5-C6	mg/kg	<0.1	42	0	-	<0.1	<0.1	<0.1	<0.1
aliphatics >C6-C8	mg/kg	<0.1	100	0	-	<0.1	<0.1	<0.1	<0.1
aliphatics >C8-C10	mg/kg	<0.1	27	0	-	<0.1	<0.1	<0.1	<0.1
aliphatics >C10-C12	mg/kg	<0.2	130	0	-	<0.2	<0.2	<0.2	<0.2
aliphatics >C12-C16	mg/kg	<4	1100	0	-	<4	<4	<4	<4
aliphatics >C16-C21	mg/kg	<7	-	0	-	<7	<7	<7	<7
aliphatics >C21-C35	mg/kg	<7	-	0	-	<7	<7	84	<7
Total aliphatics C5-35	mg/kg	<19	-	-	-	<19	<19	84	<19
Aromatics					-	-	-	-	-
aromatics >EC5-EC7	mg/kg	<0.1	370	0	-	<0.1	<0.1	<0.1	<0.1
aromatics >EC7-EC8	mg/kg	<0.1	860	0	-	<0.1	<0.1	<0.1	<0.1
aromatics >EC8-EC10	mg/kg	<0.1	47	0	-	<0.1	<0.1	<0.1	<0.1
aromatics >EC10-EC12	mg/kg	<0.2	250	0	-	<0.2	<0.2	<0.2	<0.2
aromatics >EC12-EC16	mg/kg	<4	1800	0	-	<4	<4	8	<4
aromatics >EC16-EC21	mg/kg	<7	1900	0	-	<7	<7	86	<7
aromatics >EC21-EC35	mg/kg	<7	1900	0	-	<7	<7	589	<7
Total aromatics C5-35	mg/kg	<19	-	-	-	<19	<19	863	<19
Total aliphatics and aromatics(C5-35)	mg/kg	<38	-	-	-	<38	<38	713	<38
Natural Moisture Content	%	<0.1	-	-	40.2	18	19.3	16.2	25
Sample Type	None				Clayey Loam	Clay	Clayey Sand	Sandy Loam	Clay
Sample Colour	None				Medium Brown	Light Brown	Light Brown	Medium Brown	Light Brown
Other Items	None				stones and roots	sand	none	stones and roots	stones, chalk, sand and water
pH	pH units	<0.01			7.4	-	-	7.8	-
Asbestos Screen & Identification					-	-	-	-	-
General Description (Bulk Analysis) #	None				soil-stones	-	soil-stones	Soil/Stones	-
Asbestos Fibres #	None				Fibre Bundles	-	NAD	Fibre Bundles	-
Asbestos ACM #	None				NAD	-	NAD	NAD	-
Asbestos Type #	None				Chrysotile	-	NAD	Chrysotile	-
Asbestos Level Screen #	0				less than 0.1%	-	NAD	less than 0.1%	-
Asbestos Detailed Gravimetric					-	-	-	-	-
Total ACM Gravimetric Quantification (% Asb) #	mass %	<0.001			<0.001	-	-	<0.001	-
Total Detailed Gravimetric Quantification (% Asb) #	mass %	<0.001			<0.001	-	-	<0.001	-
Total Gravimetric Quantification (ACM + Detailed) (% Asb) #	mass %	<0.001			<0.001	-	-	<0.001	-
Asbestos PCOM Quantification					-	-	-	-	-
Asbestos PCOM Quantification (Fibres) #	mass %	<0.001			-	-	-	-	-
Asbestos Gravimetric & PCOM Total #	mass %	<0.001			-	-	-	-	-

APPENDIX 05

Controlled Waters Risk Assessment – GQRA

Compiled Water Quality Data

Exceeds WQS
Exceeds LOD
BOLD

Exceeds WQS
Exceeds LOD
Exceeds MRV

Client Name	Frontier
Site Name	Yapton Road, Middleton-on-Sea
Job Number	402.05594-00005
Date	24/05/2019
Media	Groundwater
WQS Type	Lowest Applicable WQS

Sample ID	WS01	WS02	WS03	MW01
Depth				
Sample Type	Ground Water	Ground Water	Ground Water	Ground Water
Sampled Date	07/05/19	07/05/19	07/05/19	07/05/19
Sample Received Date	08/05/19	08/05/19	08/05/19	08/05/19
J E Sample No	1-5	6-10	11-15	16-20
Batch Number	1	1	1	1

Test	Units (converted to mg/l)	LOD (mg/l)	Selected WQS Value (mg/l)	WQS Type	Unit Exceeding WQS				
Dissolved Arsenic	mg/l	<0.0009	0.01	UK DWS (2000)		0.0019	<0.0009	<0.0009	<0.0009
Dissolved Cadmium	mg/l	<0.00003	0.00008	UK EQS (WFD 2015) (<40mg/l CaCO3)		<0.00003	<0.00003	<0.00003	<0.00003
Total Dissolved Chromium	mg/l	<0.0002	0.0047	UK EQS (WFD 2015) (CrIII)		0.0004	0.0006	0.0005	0.0003
Dissolved Copper	mg/l	<0.003	0.001	UK EQS (WFD 2015) (mBAT)		<0.003	<0.003	<0.003	<0.003
Dissolved Lead	mg/l	<0.0004	0.0012	UK EQS (WFD 2015) (mBAT)		<0.0004	<0.0004	<0.0004	<0.0004
Dissolved Mercury	mg/l	<0.0005	0.00007	UK EQS (WFD 2015) (MAC)		<0.0005	<0.0005	<0.0005	<0.0005
Dissolved Nickel	mg/l	<0.0002	0.004	UK EQS (WFD 2015) (mBAT)		0.002	0.0024	0.0016	0.0007
Dissolved Selenium	mg/l	<0.0012	0.01	UK DWS (2000)		<0.0012	<0.0012	<0.0012	<0.0012
Dissolved Zinc	mg/l	<0.0015	0.0109	UK EQS (WFD 2015) (mBAT) plus ambient background concentration		<0.0015	<0.0015	<0.0015	<0.0015
Methyl Tertiary Butyl Ether	mg/l	<0.0001	0.015	Taste / odour threshold	-	-	<0.0001	<0.0001	<0.0001
Benzene	mg/l	<0.0005	0.001	UK DWS (2000)	-	-	<0.0005	<0.0005	<0.0005
Toluene	mg/l	<0.0005	0.074	UK EQS (WFD 2015)	-	-	<0.0005	<0.0005	<0.0005
Ethylbenzene	mg/l	<0.001	0.02	Proposed EQS	-	-	<0.001	<0.001	<0.001
m,p-Xylene	mg/l	<0.002			-	-	<0.002	<0.002	<0.002
o-Xylene	mg/l	<0.001			-	-	<0.001	<0.001	<0.001
Total Xylenes	mg/l	<0.003	0.03	UK EQS	-	-	<0.003	<0.003	<0.003
Surrogate Recovery Toluene D8	%	<0			-	-	110	110	110
Surrogate Recovery 4-Bromofluorobenzene	%	<0			-	-	100	100	110
TPH CWG					-	-			
Aliphatics					-	-			
Aliphatics >C5-C6	mg/l	<0.01	0.01	Typical LoD	-	-	<0.01	<0.01	<0.01
Aliphatics >C6-C8	mg/l	<0.01	0.01	Typical LoD	-	-	<0.01	<0.01	<0.01
Aliphatics >C8-C10	mg/l	<0.01	0.01	Typical LoD	-	-	<0.01	<0.01	<0.01
Aliphatics >C10-C12	mg/l	<0.005	0.01	Typical LoD	-	-	<0.005	<0.005	<0.005
Aliphatics >C12-C16	mg/l	<0.01	0.01	Typical LoD	-	-	<0.01	<0.01	<0.01
Aliphatics >C16-C21	mg/l	<0.01	0.01	Typical LoD	-	-	<0.01	<0.01	<0.01
Aliphatics >C21-C35	mg/l	<0.01	0.01	Typical LoD	-	-	<0.01	<0.01	<0.01
Total aliphatics C5-35	mg/l	<0.01			-	-	<0.01	<0.01	<0.01
Aromatics					-	-			
Aromatics >EC5-EC7	mg/l	<0.01	0.001	WHO DWS (2006) /	-	-	<0.01	<0.01	<0.01
Aromatics >EC7-EC8	mg/l	<0.01	0.01	Typical LoD	-	-	<0.01	<0.01	<0.01
Aromatics >EC8-EC10	mg/l	<0.01	0.01	Typical LoD	-	-	<0.01	<0.01	<0.01
Aromatics >EC10-EC12	mg/l	<0.005	0.01	Typical LoD	-	-	<0.005	<0.005	<0.005
Aromatics >EC12-EC16	mg/l	<0.01	0.01	Typical LoD	-	-	<0.01	<0.01	<0.01
Aromatics >EC16-EC21	mg/l	<0.01	0.01	Typical LoD	-	-	<0.01	<0.01	<0.01
Aromatics >EC21-EC35	mg/l	<0.01	0.01	Typical LoD	-	-	<0.01	<0.01	<0.01
Total aromatics C5-35	mg/l	<0.01			-	-	<0.01	<0.01	0.01
Total aliphatics and aromatics (C5-35)	mg/l	<0.01			-	-	<0.01	<0.01	0.01
Nitrate as NO3	mg/l	<0.2	50	UK DWS (2000)	2	184	29	56	5.9
Ammoniacal Nitrogen as NH4	mg/l	<0.03	0.5	UK DWS 2000	2	13.1	0.05	<0.03	0.02
pH	pH units	<0.01				7.5	7.4	7.4	7.8
PAH MS					-	-			
Naphthalene	mg/l	<0.0001	0.002	UK EQS (WFD 2015)	-	-	<0.0001	<0.0001	-
Acenaphthylene	mg/l	<0.000013			-	-	<0.000013	<0.000013	-
Acenaphthene	mg/l	<0.000013			-	-	<0.000013	0.000021	-
Fluorene	mg/l	<0.000014			-	-	<0.000014	0.00002	-
Phenanthrene	mg/l	<0.000011			-	-	0.000025	0.00007	-
Anthracene	mg/l	<0.000013	0.0001	UK EQS (WFD 2015)	-	-	<0.000013	<0.000013	-
Fluoranthene	mg/l	<0.000012	0.0000063	UK EQS (WFD 2015)	2	0.000013	0.000002	0.000002	-
Pyrene	mg/l	<0.000013			-	-	<0.000013	0.000043	-
Benzo(a)anthracene	mg/l	<0.000015			-	-	<0.000015	<0.000015	-
Chrysene	mg/l	<0.000011			-	-	<0.000011	0.00002	-
Benzo(b)fluoranthene	mg/l	<0.000018	0.0001	UK DWS (2000)	-	-	<0.000018	0.000027	-
Benzo(a)pyrene	mg/l	<0.000016	0.00001	UK DWS (2000)	-	-	<0.000016	<0.000016	-
Indeno(123cd)pyrene	mg/l	<0.000011	0.0001	UK DWS (2000)	-	-	<0.000011	<0.000011	-
Dibenzo(a,h)anthracene	mg/l	<0.00001			-	-	<0.00001	<0.00001	-
Benzo(k)fluoranthene	mg/l	<0.000011	0.0001	UK DWS (2000)	-	-	<0.000011	<0.000011	-
PAH 15 Total	mg/l	<0.000195			-	-	<0.000195	0.000253	-
Benzo(b)fluoranthene	mg/l	<0.00001	0.0001	UK DWS (2000)	-	-	<0.00001	0.00002	-
Benzo(k)fluoranthene	mg/l	<0.00001	0.0001	UK DWS (2000)	-	-	<0.00001	<0.00001	-
PAH Surrogate % Recovery	%	<0			-	-	91	82	-
Hexavalent Chromium	mg/l	<0.002	0.0034	UK EQS (WFD 2015)		<0.002	<0.002	<0.002	<0.002

APPENDIX 06

HazWaste Online Output Sheets

Waste Classification Report



JKZVY-RWYKR-ZNZ3D

Job name

Middleton

Description/Comments

Project

Site

Related Documents

#	Name	Description
None		

Waste Stream Template

JA HA Suite July 2018

Classified by

Name:

Bob Hughes

Date:

23 May 2019 08:55 GMT

Company:

SLR Consulting
7 Wornal Park
Menmarsh Road, Worminghall
Aylesbury
HP18 9PH

Report

Created by: Bob Hughes

Created date: 23 May 2019 08:55 GMT

Job summary

#	Sample Name	Depth [m]	Classification Result	Hazard properties	Page
1	TP-02	0.20	Non Hazardous		3
2	TP-02[2]	0.80	Non Hazardous		5
3	TP-04	0.20	Non Hazardous		7
4	TP-05	0.60	Non Hazardous		9
5	TP-06	0.20	Non Hazardous		11
6	TP-06[2]	2.30	Non Hazardous		13
7	TP-07	0.80	Non Hazardous		15
8	TP-08	0.20	Non Hazardous		17
9	TP-09	0.30	Non Hazardous		19
10	TP-01	0.25	Non Hazardous		21
11	TP-07[2]	0.30	Non Hazardous		23

#	Sample Name	Depth [m]	Classification Result	Hazard properties	Page
12	WS-01	0.20	Non Hazardous		25
13	WS-02	0.25	Non Hazardous		27
14	WS-02[2]	2.30	Non Hazardous		29
15	WS-03	2.30	Non Hazardous		30
16	WS-04	0.25	Non Hazardous		32
17	WS-04[2]	3.10	Non Hazardous		35

Appendices	Page
Appendix A: Classifier defined and non CLP determinands	36
Appendix B: Rationale for selection of metal species	37
Appendix C: Version	37

Classification of sample: TP-02

☉ Non Hazardous Waste
Classified as 17 05 04
in the List of Waste

Sample details

Sample Name: TP-02 LoW Code: Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth: 0.20 m Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
Moisture content: 21.4%
(dry weight correction)

Hazard properties

None identified

Determinands

Moisture content: 21.4% Dry 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	☉ pH				8.2	pH		8.2	pH	8.2 pH		
2	☉ arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3	8.3	mg/kg	1.32	9.027	mg/kg	0.000903 %	✓	
3	☉ cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-8	1	0.1	mg/kg	1.285	0.106	mg/kg	0.00000824 %	✓
4	☉ chromium { ☉ chromium(III) oxide }		215-160-9	1308-38-9	85	mg/kg	1.462	102.333	mg/kg	0.0102 %	✓	
5	☉ copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1	19	mg/kg	1.126	17.621	mg/kg	0.00176 %	✓	
6	☉ lead { lead chromate }	062-004-00-2	231-846-0	7758-97-6	1	18	mg/kg	1.56	23.127	mg/kg	0.00148 %	✓
7	☉ mercury { mercury dichloride }	080-010-00-X	231-289-8	7487-94-7		<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %	<LOD
8	☉ nickel { nickel dihydroxide }	026-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]	17	mg/kg	1.579	22.118	mg/kg	0.00221 %	✓	
9	☉ 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
10	☉ zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2	120	mg/kg	1.245	123.036	mg/kg	0.0123 %	✓	
11	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %	<LOD
12	☉ acenaphthylene		205-917-1	206-98-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %	<LOD
13	☉ acenaphthene		201-469-8	83-32-9		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %	<LOD
14	☉ fluorene		201-695-5	86-73-7		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %	<LOD

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	M/C Applied	Conc. Not Used
	CLP Index number	EC Number	CAS Number									
15	phenanthrene	201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
16	anthracene	204-371-1	120-12-7		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
17	fluoranthene	205-912-4	206-44-0		0.1	mg/kg		0.0824	mg/kg	0.00000824 %	✓	
18	pyrene	204-927-3	129-00-0		0.09	mg/kg		0.0741	mg/kg	0.00000741 %	✓	
19	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.07	mg/kg		0.0577	mg/kg	0.00000577 %	✓	
20	chrysene	601-048-00-0	205-923-4	218-01-9	0.07	mg/kg		0.0577	mg/kg	0.00000577 %	✓	
21	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-026-8	50-32-8	0.06	mg/kg		0.0494	mg/kg	0.00000494 %	✓	
22	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
23	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
24	benzo[ghi]perylene	205-883-8	191-24-2		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
25	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.08	mg/kg		0.0659	mg/kg	0.00000659 %	✓	
26	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	0.03	mg/kg		0.0247	mg/kg	0.00000247 %	✓	
Total:										0.0292 %		

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- 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
- CLP: Note 1 Only the metal concentration has been used for classification

Classification of sample: TP-02[2]

☉ Non Hazardous Waste
Classified as 17 05 04
in the List of Waste

Sample details

Sample Name:	LoW Code:
TP-02[2]	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.80 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
20.7%	
(dry weight correction)	

Hazard properties

None identified

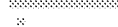
Determinands

Moisture content: 20.7% Dry 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	☉ pH				8.4	pH		8.4	pH	8.4 pH		
2	☉ arsenic { arsenic trioxide }				12	mg/kg	1.32	13.127	mg/kg	0.00131 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
3	☉ cadmium { cadmium sulfide }			1	0.1	mg/kg	1.285	0.106	mg/kg	0.00000829 %	✓	
	048-010-00-4	215-147-6	1306-23-6									
4	☉ chromium { ☉ chromium(III) oxide }				43	mg/kg	1.462	52.069	mg/kg	0.00521 %	✓	
		215-160-9	1308-38-9									
5	☉ copper { dicopper oxide; copper (I) oxide }				14	mg/kg	1.126	13.059	mg/kg	0.00131 %	✓	
	029-002-00-X	215-270-7	1317-39-1									
6	☉ lead { lead chromate }			1	14	mg/kg	1.56	18.092	mg/kg	0.00116 %	✓	
	062-004-00-2	231-846-0	7756-97-6									
7	☉ mercury { mercury dichloride }				<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7									
8	☉ nickel { nickel dihydroxide }				40	mg/kg	1.579	52.345	mg/kg	0.00523 %	✓	
	026-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
9	☉ selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				1	mg/kg	2.554	2.116	mg/kg	0.000212 %	✓	
	034-002-00-8											
10	☉ zinc { zinc oxide }				58	mg/kg	1.245	59.812	mg/kg	0.00598 %	✓	
	030-013-00-7	215-222-5	1314-13-2									
11	naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
	601-052-00-2	202-049-5	91-20-3									
12	☉ acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		205-917-1	206-98-8									
13	☉ acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		201-469-6	83-32-9									
14	☉ fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		201-695-5	86-73-7									

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	M/C Applied	Conc. Not Used
	CLP Index number	EC Number	CAS Number									
15	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		201-581-5	85-01-8									
16	anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		204-371-1	120-12-7									
17	fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		205-912-4	206-44-0									
18	pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		204-927-3	129-00-0									
19	benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6									
20	chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4									
21	benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-026-8									
22	indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		205-893-2	193-39-5									
23	dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8									
24	benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		205-883-8	191-24-2									
25	benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9									
26	benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-918-8									
Total:										0.0205 %		

Key

-  User supplied data
-  Determinand values ignored for classification, see column 'Conc. Not Used' for reason
-  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
- CLP: Note 1 Only the metal concentration has been used for classification

Classification of sample: TP-04

☉ Non Hazardous Waste
Classified as 17 05 04
in the List of Waste

Sample details

Sample Name:	LoW Code:
TP-04	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.20 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
22.1%	
(dry weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 22.1% Dry 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	☉ pH		PH4		7.5	pH		7.5	pH	7.5 pH		
2	☉ arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3	25	mg/kg	1.32	27.034	mg/kg	0.0027 %	✓	
3	☉ cadmium { cadmium sulfide }	048-010-00-4	215-147-6	1306-23-6	1	0.4	mg/kg	1.285	0.421	mg/kg	0.0000328 %	✓
4	☉ chromium { ☉ chromium(III) oxide }		215-160-9	1308-38-9	35	mg/kg	1.462	41.896	mg/kg	0.00419 %	✓	
5	☉ copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1	60	mg/kg	1.126	55.326	mg/kg	0.00553 %	✓	
6	☉ lead { lead chromate }	062-004-00-2	231-846-0	7756-97-6	1	110	mg/kg	1.56	140.524	mg/kg	0.00901 %	✓
7	☉ mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %	<LOD
8	☉ nickel { nickel dihydroxide }	026-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]	20	mg/kg	1.579	25.872	mg/kg	0.00259 %	✓	
9	☉ 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	<0.0000255 %		<LOD
10	☉ zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2	470	mg/kg	1.245	479.128	mg/kg	0.0479 %	✓	
11	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %	<LOD
12	☉ acenaphthylene		205-917-1	206-96-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %	<LOD
13	☉ acenaphthene		201-469-6	83-32-9		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %	<LOD
14	☉ fluorene		201-695-5	86-73-7		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %	<LOD

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	M/C Applied	Conc. Not Used
	CLP Index number	EC Number	CAS Number									
15	phenanthrene	201-581-5	85-01-8		0.07	mg/kg		0.0573	mg/kg	0.00000573 %	✓	
16	anthracene	204-371-1	120-12-7		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
17	fluoranthene	205-912-4	206-44-0		0.2	mg/kg		0.164	mg/kg	0.0000164 %	✓	
18	pyrene	204-927-3	129-00-0		0.18	mg/kg		0.147	mg/kg	0.0000147 %	✓	
19	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.12	mg/kg		0.0983	mg/kg	0.00000983 %	✓	
20	chrysene	601-048-00-0	205-923-4	218-01-9	0.13	mg/kg		0.106	mg/kg	0.0000106 %	✓	
21	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-026-8	50-32-8	0.1	mg/kg		0.0819	mg/kg	0.00000819 %	✓	
22	indeno[123-cd]pyrene	205-893-2	193-39-5		0.09	mg/kg		0.0737	mg/kg	0.00000737 %	✓	
23	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
24	benzo[ghi]perylene	205-883-8	191-24-2		0.09	mg/kg		0.0737	mg/kg	0.00000737 %	✓	
25	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.17	mg/kg		0.139	mg/kg	0.0000139 %	✓	
26	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	0.06	mg/kg		0.0491	mg/kg	0.00000491 %	✓	
Total:										0.0724 %		

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- 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
- CLP: Note 1 Only the metal concentration has been used for classification

Classification of sample: TP-05

☉ Non Hazardous Waste
Classified as 17 05 04
in the List of Waste

Sample details

Sample Name:	LoW Code:
TP-05	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.60 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
23.8%	
(dry weight correction)	

Hazard properties

None identified

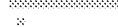
Determinands

Moisture content: 23.8% Dry 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	☉ pH				8.6	pH		8.6	pH	8.6 pH		
2	☉ arsenic { arsenic trioxide }				12	mg/kg	1.32	12.798	mg/kg	0.00128 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
3	☉ cadmium { cadmium sulfide }			1	<0.1	mg/kg	1.285	<0.129	mg/kg	<0.00001 %		<LOD
	048-010-00-4	215-147-6	1306-23-6									
4	☉ chromium { ☉ chromium(III) oxide }				52	mg/kg	1.462	61.39	mg/kg	0.00614 %	✓	
		215-160-9	1308-38-9									
5	☉ copper { dicopper oxide; copper (I) oxide }				18	mg/kg	1.126	16.37	mg/kg	0.00164 %	✓	
	029-002-00-X	215-270-7	1317-39-1									
6	☉ lead { lead chromate }			1	15	mg/kg	1.56	18.899	mg/kg	0.00121 %	✓	
	062-004-00-2	231-846-0	7756-97-6									
7	☉ mercury { mercury dichloride }				<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7									
8	☉ nickel { nickel dihydroxide }				51	mg/kg	1.579	65.068	mg/kg	0.00651 %	✓	
	026-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
9	☉ selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				1	mg/kg	2.554	2.063	mg/kg	0.000206 %	✓	
	034-002-00-8											
10	☉ zinc { zinc oxide }				71	mg/kg	1.245	71.385	mg/kg	0.00714 %	✓	
	030-013-00-7	215-222-5	1314-13-2									
11	naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
	601-052-00-2	202-049-5	91-20-3									
12	☉ acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		205-917-1	206-96-8									
13	☉ acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		201-469-6	83-32-9									
14	☉ fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		201-695-5	86-73-7									

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	M/C Applied	Conc. Not Used
	CLP Index number	EC Number	CAS Number									
15	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		201-581-5	85-01-8									
16	anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		204-371-1	120-12-7									
17	fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		205-912-4	206-44-0									
18	pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		204-927-3	129-00-0									
19	benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6									
20	chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4									
21	benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-026-8									
22	indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		205-893-2	193-39-5									
23	dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8									
24	benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		205-883-8	191-24-2									
25	benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9									
26	benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-918-8									
Total:										0.0242 %		

Key

-  User supplied data
-  Determinand values ignored for classification, see column 'Conc. Not Used' for reason
-  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
- CLP: Note 1 Only the metal concentration has been used for classification

Classification of sample: TP-06

☉ Non Hazardous Waste
Classified as 17 05 04
in the List of Waste

Sample details

Sample Name:	LoW Code:
TP-06	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.20 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
14.9%	
(dry weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 14.9% Dry 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	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	603-181-00-X	215-653-1	1634-04-4							
2	benzene				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-020-00-8	200-763-7	71-43-2							
3	toluene				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-021-00-3	200-625-9	108-88-3							
4	* ethylbenzene				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-023-00-4	202-549-4	100-41-4							
5	xylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-022-00-6	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]							
6	* TPH (C6 to C40) petroleum group				130 mg/kg		113.142 mg/kg	0.0113 %	✓	
			TPH							
Total:								0.0113 %		

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- * Determinand defined or amended by HazWasteOnline (see Appendix A)
- <LOD Below limit of detection

Supplementary Hazardous Property Information

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"

Force this Hazardous property to non hazardous because No free phase product observed. BTEX less than detection

Hazard Statements hit:

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



Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0113%)

Classification of sample: TP-06[2]

☉ Non Hazardous Waste
Classified as 17 05 04
in the List of Waste

Sample details

Sample Name:	LoW Code:
TP-06[2]	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
2.30 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
18.8%	
(dry weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 18.8% Dry 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	☉ pH				9	pH		9	pH	9pH		
2	☉ arsenic { arsenic trioxide }				4.5	mg/kg	1.32	5.001	mg/kg	0.0005 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
3	☉ cadmium { cadmium sulfide }			1	0.2	mg/kg	1.285	0.216	mg/kg	0.0000168 %	✓	
	048-010-00-4	215-147-8	1306-23-8									
4	☉ chromium { ☉ chromium(III) oxide }				26	mg/kg	1.462	31.987	mg/kg	0.0032 %	✓	
		215-160-9	1308-38-9									
5	☉ copper { dicopper oxide; copper (I) oxide }				7	mg/kg	1.126	6.634	mg/kg	0.000663 %	✓	
	029-002-00-X	215-270-7	1317-39-1									
6	☉ lead { lead chromate }			1	7	mg/kg	1.56	9.191	mg/kg	0.000589 %	✓	
	062-004-00-2	231-846-0	7758-97-6									
7	☉ mercury { mercury dichloride }				<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<LOD
	080-010-00-X	231-289-8	7487-94-7									
8	☉ nickel { nickel dihydroxide }				14	mg/kg	1.579	18.614	mg/kg	0.00186 %	✓	
	026-008-00-X	235-068-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
9	☉ 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											
10	☉ zinc { zinc oxide }				32	mg/kg	1.245	33.528	mg/kg	0.00335 %	✓	
	030-013-00-7	215-222-5	1314-13-2									
11	naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
	601-052-00-2	202-049-5	91-20-3									
12	☉ acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		205-917-1	206-98-8									
13	☉ acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		201-469-6	83-32-9									
14	☉ fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		201-695-5	86-73-7									

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	M/C Applied	Conc. Not Used
	CLP Index number	EC Number	CAS Number									
15	phenanthrene	201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
16	anthracene	204-371-1	120-12-7		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
17	fluoranthene	205-912-4	206-44-0		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
18	pyrene	204-927-3	129-00-0		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
19	benzo[a]anthracene	601-033-00-9	200-280-6		<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
20	chrysene	601-048-00-0	205-923-4		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
21	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-026-8		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
22	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
23	dibenz[a,h]anthracene	601-041-00-2	200-181-8		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
24	benzo[ghi]perylene	205-883-8	191-24-2		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
25	benzo[b]fluoranthene	601-034-00-4	205-911-9		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
26	benzo[k]fluoranthene	601-036-00-5	205-918-8		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
27	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-853-1		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
28	benzene	601-020-00-8	200-753-7		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
29	toluene	601-021-00-3	203-625-9		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
30	ethylbenzene	601-023-00-4	202-849-4		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
31	xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
32	TPH (C6 to C40) petroleum group		TPH		<38	mg/kg		<38	mg/kg	<0.0038 %		<LOD
Total:										0.0143 %		

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- 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
- CLP: Note 1 Only the metal concentration has been used for classification

Classification of sample: TP-07

☉ Non Hazardous Waste
Classified as 17 05 04
in the List of Waste

Sample details

Sample Name: TP-07 LoW Code: Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth: 0.80 m Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
Moisture content: 21.4%
(dry weight correction)

Hazard properties

None identified

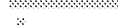
Determinands

Moisture content: 21.4% Dry 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	☉	pH				8.1	pH		8.1	pH	8.1 pH		
				PH									
2	☹	arsenic { arsenic trioxide }				6.3	mg/kg	1.32	6.852	mg/kg	0.000685 %	✓	
		033-003-00-0	215-481-4	1327-53-3									
3	☹	cadmium { cadmium sulfide }			1	<0.1	mg/kg	1.285	<0.129	mg/kg	<0.00001 %		<LOD
		048-010-00-4	215-147-6	1306-23-6									
4	☹	chromium { ☉ chromium(III) oxide }				37	mg/kg	1.462	44.545	mg/kg	0.00445 %	✓	
			215-160-9	1308-38-9									
5	☹	copper { dicopper oxide; copper (I) oxide }				8	mg/kg	1.126	7.419	mg/kg	0.000742 %	✓	
		029-002-00-X	215-270-7	1317-39-1									
6	☹	lead { lead chromate }			1	11	mg/kg	1.56	14.133	mg/kg	0.000906 %	✓	
		062-004-00-2	231-846-0	7756-97-6									
7	☹	mercury { mercury dichloride }				<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<LOD
		080-010-00-X	231-299-8	7487-94-7									
8	☹	nickel { nickel dihydroxide }				14	mg/kg	1.579	18.215	mg/kg	0.00182 %	✓	
		026-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
9	☹	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											
10	☹	zinc { zinc oxide }				47	mg/kg	1.245	48.189	mg/kg	0.00482 %	✓	
		030-013-00-7	215-222-5	1314-13-2									
11		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
12	☉	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	206-96-8									
13	☉	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
14	☉	fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	M/C Applied	Conc. Not Used
	CLP Index number	EC Number	CAS Number									
15	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		201-581-5	85-01-8									
16	anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		204-371-1	120-12-7									
17	fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		205-912-4	206-44-0									
18	pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		204-927-3	129-00-0									
19	benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
	601-033-00-9	200-280-6	56-55-3									
20	chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-048-00-0	205-923-4	218-01-9									
21	benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
	601-032-00-3	200-026-8	50-32-8									
22	indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		205-893-2	193-39-5									
23	dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
	601-041-00-2	200-181-8	53-70-3									
24	benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		205-883-8	191-24-2									
25	benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
	601-034-00-4	205-911-9	205-99-2									
26	benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-036-00-5	205-918-8	207-08-9									
Total:										0.0138 %		

Key

-  User supplied data
-  Determinand values ignored for classification, see column 'Conc. Not Used' for reason
-  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
- CLP: Note 1 Only the metal concentration has been used for classification

Classification of sample: TP-08

☉ Non Hazardous Waste
Classified as 17 05 04
in the List of Waste

Sample details

Sample Name:	LoW Code:
TP-08	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.20 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
22.4%	
(dry weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 22.4% Dry 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	☉ pH				8.1	pH		8.1	pH	8.1 pH		
2	☉ arsenic { arsenic trioxide }				8.6	mg/kg	1.32	9.277	mg/kg	0.000928 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
3	☉ cadmium { cadmium sulfide }			1	0.2	mg/kg	1.285	0.21	mg/kg	0.0000163 %	✓	
	048-010-00-4	215-147-8	1306-23-8									
4	☉ chromium { ☉ chromium(III) oxide }				89	mg/kg	1.462	106.273	mg/kg	0.0106 %	✓	
		215-160-9	1308-38-9									
5	☉ copper { dicopper oxide; copper (I) oxide }				15	mg/kg	1.126	13.798	mg/kg	0.00138 %	✓	
	029-002-00-X	215-270-7	1317-39-1									
6	☉ lead { lead chromate }			1	20	mg/kg	1.56	25.487	mg/kg	0.00163 %	✓	
	062-004-00-2	231-846-0	7758-97-6									
7	☉ mercury { mercury dichloride }				<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<LOD
	080-010-00-X	231-289-8	7487-94-7									
8	☉ nickel { nickel dihydroxide }				18	mg/kg	1.579	23.228	mg/kg	0.00232 %	✓	
	026-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
9	☉ 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											
10	☉ zinc { zinc oxide }				80	mg/kg	1.245	81.354	mg/kg	0.00814 %	✓	
	030-013-00-7	215-222-5	1314-13-2									
11	naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
	601-052-00-2	202-049-5	91-20-3									
12	☉ acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		205-917-1	206-98-8									
13	☉ acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		201-469-6	83-32-9									
14	☉ fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		201-695-5	86-73-7									

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	M/C Applied	Conc. Not Used
	CLP Index number	EC Number	CAS Number									
15	phenanthrene	201-581-5	85-01-8		0.05	mg/kg		0.0408	mg/kg	0.00000408 %	✓	
16	anthracene	204-371-1	120-12-7		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
17	fluoranthene	205-912-4	206-44-0		0.13	mg/kg		0.106	mg/kg	0.0000106 %	✓	
18	pyrene	204-927-3	129-00-0		0.12	mg/kg		0.098	mg/kg	0.0000098 %	✓	
19	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.1	mg/kg		0.0817	mg/kg	0.00000817 %	✓	
20	chrysene	601-048-00-0	205-923-4	218-01-9	0.1	mg/kg		0.0817	mg/kg	0.00000817 %	✓	
21	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-026-8	50-32-8	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
22	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
23	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
24	benzo[ghi]perylene	205-883-8	191-24-2		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
25	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
26	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
Total:										0.0254 %		

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- 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
- CLP: Note 1 Only the metal concentration has been used for classification

Classification of sample: TP-09

☉ Non Hazardous Waste
Classified as 17 05 04
in the List of Waste

Sample details

Sample Name:	LoW Code:
TP-09	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.30 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
8.4%	
(dry weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 8.4% Dry 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	☉ pH				7.7	pH		7.7	pH	7.7 pH		
2	☉ arsenic { arsenic trioxide }				9.3	mg/kg	1.32	11.328	mg/kg	0.00113 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
3	☉ cadmium { cadmium sulfide }			1	1.1	mg/kg	1.285	1.304	mg/kg	0.000101 %	✓	
	048-010-00-4	215-147-6	1306-23-6									
4	☉ chromium { ☉ chromium(III) oxide }				24	mg/kg	1.462	32.359	mg/kg	0.00324 %	✓	
		215-160-9	1308-38-9									
5	☉ copper { dicopper oxide; copper (I) oxide }				54	mg/kg	1.126	56.087	mg/kg	0.00561 %	✓	
	029-002-00-X	215-270-7	1317-39-1									
6	☉ lead { lead chromate }			1	130	mg/kg	1.56	187.063	mg/kg	0.012 %	✓	
	062-004-00-2	231-846-0	7756-97-6									
7	☉ mercury { mercury dichloride }				<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<LOD
	080-010-00-X	231-289-8	7487-94-7									
8	☉ nickel { nickel dihydroxide }				22	mg/kg	1.579	32.056	mg/kg	0.00321 %	✓	
	026-008-00-X	235-068-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
9	☉ 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											
10	☉ zinc { zinc oxide }				510	mg/kg	1.245	585.613	mg/kg	0.0586 %	✓	
	030-013-00-7	215-222-5	1314-13-2									
11	naphthalene				1.3	mg/kg		1.199	mg/kg	0.00012 %	✓	
	601-052-00-2	202-049-5	91-20-3									
12	☉ acenaphthylene				3	mg/kg		2.768	mg/kg	0.000277 %	✓	
		205-917-1	206-98-8									
13	☉ acenaphthene				15	mg/kg		13.838	mg/kg	0.00138 %	✓	
		201-469-6	83-32-9									
14	☉ fluorene				10	mg/kg		9.225	mg/kg	0.000923 %	✓	
		201-665-5	86-73-7									

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	M/C Applied	Conc. Not Used
	CLP Index number	EC Number	CAS Number									
15	phenanthrene	201-581-5	85-01-8		120	mg/kg		110.701	mg/kg	0.0111 %	✓	
16	anthracene	204-371-1	120-12-7		39	mg/kg		35.978	mg/kg	0.0036 %	✓	
17	fluoranthene	205-912-4	206-44-0		160	mg/kg		147.601	mg/kg	0.0148 %	✓	
18	pyrene	204-927-3	129-00-0		140	mg/kg		129.151	mg/kg	0.0129 %	✓	
19	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	86	mg/kg		79.336	mg/kg	0.00793 %	✓	
20	chrysene	601-048-00-0	205-923-4	218-01-9	63	mg/kg		58.118	mg/kg	0.00581 %	✓	
21	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-026-8	50-32-8	64	mg/kg		59.041	mg/kg	0.0059 %	✓	
22	indeno[123-cd]pyrene	205-893-2	193-39-5		47	mg/kg		43.358	mg/kg	0.00434 %	✓	
23	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	7.3	mg/kg		6.734	mg/kg	0.000673 %	✓	
24	benzo[ghi]perylene	205-883-8	191-24-2		43	mg/kg		39.668	mg/kg	0.00397 %	✓	
25	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	86	mg/kg		79.336	mg/kg	0.00793 %	✓	
26	benzo[k]fluoranthene	601-036-00-5	205-918-8	207-08-9	34	mg/kg		31.365	mg/kg	0.00314 %	✓	
Total:										0.169 %		

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- 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
- CLP: Note 1 Only the metal concentration has been used for classification

Classification of sample: TP-01

☉ Non Hazardous Waste
Classified as 17 05 04
in the List of Waste

Sample details

Sample Name: **TP-01** LoW Code: Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth: **0.25 m** Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
Moisture content: **42.5%**
(dry weight correction)

Hazard properties

None identified

Determinands

Moisture content: 42.5% Dry 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	☉ pH		PH		7.5	pH		7.5	pH	7.5 pH		
2	☉ arsenic { arsenic trioxide }	039-003-00-0	215-481-4	1327-53-3	3.8	mg/kg	1.32	3.521	mg/kg	0.000352 %	✓	
3	☉ cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-8	1	0.5	mg/kg	1.285	0.451	mg/kg	0.0000351 %	✓
4	☉ chromium { ☉ chromium(III) oxide }		215-160-9	1308-38-9	82	mg/kg	1.462	84.104	mg/kg	0.00841 %	✓	
5	☉ copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1	34	mg/kg	1.126	26.863	mg/kg	0.00269 %	✓	
6	☉ lead { lead chromate }	062-004-00-2	231-846-0	7758-97-6	1	68	mg/kg	1.56	74.433	mg/kg	0.00477 %	✓
7	☉ mercury { mercury dichloride }	080-010-00-X	231-289-8	7487-94-7		<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %	<LOD
8	☉ nickel { nickel dihydroxide }	026-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]	12	mg/kg	1.579	13.301	mg/kg	0.00133 %	✓	
9	☉ 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	1.792	mg/kg	0.000179 %	✓	
10	☉ zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2	390	mg/kg	1.245	340.659	mg/kg	0.0341 %	✓	
11	☉ naphthalene	601-052-00-2	202-049-5	91-20-3	1.3	mg/kg		0.912	mg/kg	0.0000912 %	✓	
12	☉ acenaphthylene		205-917-1	206-98-8	0.09	mg/kg		0.0632	mg/kg	0.00000632 %	✓	
13	☉ acenaphthene		201-469-6	83-32-9	0.23	mg/kg		0.161	mg/kg	0.0000161 %	✓	
14	☉ fluorene		201-665-5	86-73-7	0.2	mg/kg		0.14	mg/kg	0.000014 %	✓	

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	M/C Applied	Conc. Not Used
	CLP Index number	EC Number	CAS Number									
15	phenanthrene	201-581-5	85-01-8		2	mg/kg		1.404	mg/kg	0.00014 %	✓	
16	anthracene	204-371-1	120-12-7		0.27	mg/kg		0.189	mg/kg	0.0000189 %	✓	
17	fluoranthene	205-912-4	206-44-0		4.3	mg/kg		3.018	mg/kg	0.000302 %	✓	
18	pyrene	204-927-3	129-00-0		3.3	mg/kg		2.316	mg/kg	0.000232 %	✓	
19	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	2	mg/kg		1.404	mg/kg	0.00014 %	✓	
20	chrysene	601-048-00-0	205-923-4	218-01-9	3.6	mg/kg		2.526	mg/kg	0.000253 %	✓	
21	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-026-8	50-32-8	3.6	mg/kg		2.526	mg/kg	0.000253 %	✓	
22	indeno[123-cd]pyrene	205-893-2	193-39-5		3.1	mg/kg		2.175	mg/kg	0.000218 %	✓	
23	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	0.43	mg/kg		0.302	mg/kg	0.0000302 %	✓	
24	benzo[ghi]perylene	205-883-8	191-24-2		2.7	mg/kg		1.895	mg/kg	0.000189 %	✓	
25	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	5.3	mg/kg		3.719	mg/kg	0.000372 %	✓	
26	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	2	mg/kg		1.404	mg/kg	0.00014 %	✓	
Total:										0.0543 %		

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- 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
- CLP: Note 1 Only the metal concentration has been used for classification

Classification of sample: TP-07[2]

☉ Non Hazardous Waste
Classified as 17 05 04
in the List of Waste

Sample details

Sample Name:	LoW Code:
TP-07[2]	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.30 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
21%	
(dry weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 21% Dry 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	☉ pH		PH4		8.1	pH		8.1	pH	8.1 pH		
2	☉ arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3	6	mg/kg	1.32	6.547	mg/kg	0.000655 %	✓	
3	☉ cadmium { cadmium sulfide }	048-010-00-4	215-147-6	1306-23-6	1	0.5	mg/kg	1.285	0.531	mg/kg	0.0000413 %	✓
4	☉ chromium { ☉ chromium(III) oxide }		215-160-9	1308-38-9	67	mg/kg	1.462	80.929	mg/kg	0.00809 %	✓	
5	☉ copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1	30	mg/kg	1.126	27.915	mg/kg	0.00279 %	✓	
6	☉ lead { lead chromate }	062-004-00-2	231-846-0	7756-97-6	1	56	mg/kg	1.56	72.19	mg/kg	0.00463 %	✓
7	☉ mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %	<LOD
8	☉ nickel { nickel dihydroxide }	026-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]	33	mg/kg	1.579	43.077	mg/kg	0.00431 %	✓	
9	☉ 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
10	☉ zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2	240	mg/kg	1.245	246.885	mg/kg	0.0247 %	✓	
11	naphthalene	601-052-00-2	202-049-5	91-20-3	0.75	mg/kg		0.62	mg/kg	0.000062 %	✓	
12	☉ acenaphthylene		205-917-1	206-98-8	1.9	mg/kg		1.57	mg/kg	0.000157 %	✓	
13	☉ acenaphthene		201-469-6	83-32-9	2.8	mg/kg		2.314	mg/kg	0.000231 %	✓	
14	☉ fluorene		201-665-5	86-73-7	1.9	mg/kg		1.57	mg/kg	0.000157 %	✓	

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	M/C Applied	Conc. Not Used
	CLP Index number	EC Number	CAS Number									
15	phenanthrene	201-581-5	85-01-8		34	mg/kg		28.099	mg/kg	0.00281 %	✓	
16	anthracene	204-371-1	120-12-7		12	mg/kg		9.917	mg/kg	0.000992 %	✓	
17	fluoranthene	205-912-4	206-44-0		92	mg/kg		76.033	mg/kg	0.0076 %	✓	
18	pyrene	204-927-3	129-00-0		82	mg/kg		67.769	mg/kg	0.00678 %	✓	
19	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	33	mg/kg		27.273	mg/kg	0.00273 %	✓	
20	chrysene	601-048-00-0	205-923-4	218-01-9	34	mg/kg		28.099	mg/kg	0.00281 %	✓	
21	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-026-8	50-32-8	41	mg/kg		33.884	mg/kg	0.00339 %	✓	
22	indeno[123-cd]pyrene	205-893-2	193-39-5		29	mg/kg		23.967	mg/kg	0.0024 %	✓	
23	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	3	mg/kg		2.479	mg/kg	0.000248 %	✓	
24	benzo[ghi]perylene	205-883-8	191-24-2		28	mg/kg		23.14	mg/kg	0.00231 %	✓	
25	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	49	mg/kg		40.496	mg/kg	0.00405 %	✓	
26	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	19	mg/kg		15.702	mg/kg	0.00157 %	✓	
Total:										0.0838 %		

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- 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
- CLP: Note 1 Only the metal concentration has been used for classification

Classification of sample: WS-01

☉ Non Hazardous Waste
Classified as 17 05 04
in the List of Waste

Sample details

Sample Name:	LoW Code:
WS-01	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.20 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
35.8%	
(dry weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 35.8% Dry 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	☉ pH				8.1	pH		8.1	pH	8.1 pH		
2	☉ arsenic { arsenic trioxide }				8.3	mg/kg	1.32	8.07	mg/kg	0.000807 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
3	☉ cadmium { cadmium sulfide }			1	0.3	mg/kg	1.285	0.284	mg/kg	0.0000221 %	✓	
	048-010-00-4	215-147-8	1306-23-6									
4	☉ chromium { ☉ chromium(III) oxide }				26	mg/kg	1.462	27.983	mg/kg	0.0028 %	✓	
		215-160-9	1308-38-9									
5	☉ copper { dicopper oxide; copper (I) oxide }				24	mg/kg	1.126	19.898	mg/kg	0.00199 %	✓	
	029-002-00-X	215-270-7	1317-39-1									
6	☉ lead { lead chromate }			1	15	mg/kg	1.56	17.229	mg/kg	0.0011 %	✓	
	062-004-00-2	231-846-0	7756-97-6									
7	☉ mercury { mercury dichloride }				<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7									
8	☉ nickel { nickel dihydroxide }				31	mg/kg	1.579	36.056	mg/kg	0.00361 %	✓	
	026-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
9	☉ 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	<0.0000255 %		<LOD
	034-002-00-8											
10	☉ zinc { zinc oxide }				110	mg/kg	1.245	100.824	mg/kg	0.0101 %	✓	
	030-013-00-7	215-222-5	1314-13-2									
11	naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
	601-052-00-2	202-049-5	91-20-3									
12	☉ acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		205-917-1	206-98-8									
13	☉ acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		201-469-6	83-32-9									
14	☉ fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		201-695-5	86-73-7									

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	M/C Applied	Conc. Not Used
	CLP Index number	EC Number	CAS Number									
15	phenanthrene	201-581-5	85-01-8		0.33	mg/kg		0.243	mg/kg	0.0000243 %	✓	
16	anthracene	204-371-1	120-12-7		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
17	fluoranthene	205-912-4	206-44-0		0.49	mg/kg		0.361	mg/kg	0.0000361 %	✓	
18	pyrene	204-927-3	129-00-0		0.37	mg/kg		0.272	mg/kg	0.0000272 %	✓	
19	benzo[a]anthracene	601-033-00-9	200-280-6		0.2	mg/kg		0.147	mg/kg	0.0000147 %	✓	
20	chrysene	601-048-00-0	205-923-4		0.42	mg/kg		0.309	mg/kg	0.0000309 %	✓	
21	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-026-8		0.26	mg/kg		0.191	mg/kg	0.0000191 %	✓	
22	indeno[123-cd]pyrene	205-893-2	193-39-5		0.29	mg/kg		0.214	mg/kg	0.0000214 %	✓	
23	dibenz[a,h]anthracene	601-041-00-2	200-181-8		0.07	mg/kg		0.0515	mg/kg	0.00000515 %	✓	
24	benzo[ghi]perylene	205-883-8	191-24-2		0.27	mg/kg		0.199	mg/kg	0.0000199 %	✓	
25	benzo[b]fluoranthene	601-034-00-4	205-911-9		0.57	mg/kg		0.42	mg/kg	0.000042 %	✓	
26	benzo[k]fluoranthene	601-036-00-5	205-918-8		0.22	mg/kg		0.162	mg/kg	0.0000162 %	✓	
27	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-853-1		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
28	benzene	601-020-00-8	200-753-7		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
29	toluene	601-021-00-3	203-625-9		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
30	ethylbenzene	601-023-00-4	202-849-4		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
31	xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
32	TPH (C6 to C40) petroleum group		TPH		<38	mg/kg		<38	mg/kg	<0.0038 %		<LOD
Total:										0.0248 %		

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- 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
- CLP: Note 1 Only the metal concentration has been used for classification

Classification of sample: WS-02

☉ Non Hazardous Waste
Classified as 17 05 04
in the List of Waste

Sample details

Sample Name:	LoW Code:
WS-02	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.25 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
40.2%	
(dry weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 40.2% Dry 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	☉ pH				7.4	pH		7.4	pH	7.4 pH		
2	☉ arsenic { arsenic trioxide }				5.2	mg/kg	1.32	4.897	mg/kg	0.00049 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
3	☉ cadmium { cadmium sulfide }			1	1.1	mg/kg	1.285	1.008	mg/kg	0.0000785 %	✓	
	048-010-00-4	215-147-6	1306-23-6									
4	☉ chromium { ☉ chromium(III) oxide }				21	mg/kg	1.462	21.892	mg/kg	0.00219 %	✓	
		215-160-9	1308-38-9									
5	☉ copper { dicopper oxide; copper (I) oxide }				190	mg/kg	1.126	152.581	mg/kg	0.0153 %	✓	
	029-002-00-X	215-270-7	1317-39-1									
6	☉ lead { lead chromate }			1	93	mg/kg	1.56	103.468	mg/kg	0.00663 %	✓	
	062-004-00-2	231-846-0	7758-97-6									
7	☉ mercury { mercury dichloride }				<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7									
8	☉ nickel { nickel dihydroxide }				15	mg/kg	1.579	16.899	mg/kg	0.00169 %	✓	
	026-008-00-X	235-068-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
9	☉ selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				1	mg/kg	2.554	1.821	mg/kg	0.000182 %	✓	
	034-002-00-8											
10	☉ zinc { zinc oxide }				870	mg/kg	1.245	772.397	mg/kg	0.0772 %	✓	
	030-013-00-7	215-222-5	1314-13-2									
11	naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
	601-052-00-2	202-049-5	91-20-3									
12	☉ acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		205-917-1	206-98-8									
13	☉ acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		201-469-6	83-32-9									
14	☉ fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		201-695-5	86-73-7									

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	M/C Applied	Conc. Not Used
	CLP Index number	EC Number	CAS Number									
15	phenanthrene	201-581-5	85-01-8		0.22	mg/kg		0.157	mg/kg	0.0000157 %	✓	
16	anthracene	204-371-1	120-12-7		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
17	fluoranthene	205-912-4	206-44-0		0.43	mg/kg		0.307	mg/kg	0.0000307 %	✓	
18	pyrene	204-927-3	129-00-0		0.38	mg/kg		0.271	mg/kg	0.0000271 %	✓	
19	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.21	mg/kg		0.15	mg/kg	0.000015 %	✓	
20	chrysene	601-048-00-0	205-923-4	218-01-9	0.32	mg/kg		0.228	mg/kg	0.0000228 %	✓	
21	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-026-8	50-32-8	0.27	mg/kg		0.193	mg/kg	0.0000193 %	✓	
22	indeno[123-cd]pyrene	205-893-2	193-39-5		0.21	mg/kg		0.15	mg/kg	0.000015 %	✓	
23	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
24	benzo[ghi]perylene	205-883-8	191-24-2		0.21	mg/kg		0.15	mg/kg	0.000015 %	✓	
25	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.45	mg/kg		0.321	mg/kg	0.0000321 %	✓	
26	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	0.18	mg/kg		0.128	mg/kg	0.0000128 %	✓	
Total:										0.104 %		

Key

-  User supplied data
-  Determinand values ignored for classification, see column 'Conc. Not Used' for reason
-  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
- CLP: Note 1 Only the metal concentration has been used for classification

Classification of sample: WS-02[2]

Non Hazardous Waste
Classified as 17 05 04
in the List of Waste

Sample details

Sample Name: **WS-02[2]** LoW Code: Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth: **2.30 m** Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
Moisture content: **18%**
(dry weight correction)

Hazard properties

None identified

Determinands

Moisture content: 18% Dry 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	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	215-653-1	1634-04-4	<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
2	benzene	601-020-00-8	200-763-7	71-43-2	<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
3	toluene	601-021-00-3	200-625-9	108-88-3	<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
4	ethylbenzene	601-023-00-4	202-549-4	100-41-4	<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
5	xylene	601-022-00-6	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 106-38-3 [3] 1330-20-7 [4]	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
6	TPH (C6 to C40) petroleum group			TPH	<38 mg/kg		<38 mg/kg	<0.0038 %		<LOD
Total:								0.0038 %		

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- Determinand defined or amended by HazWasteOnline (see Appendix A)
- <LOD Below limit of detection

Classification of sample: WS-03

Non Hazardous Waste
Classified as 17 05 04
in the List of Waste

Sample details

Sample Name: **WS-03** LoW Code: Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth: **2.30 m** Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
Moisture content: **19.3%**
(dry weight correction)

Hazard properties

None identified

Determinands

Moisture content: 19.3% Dry 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	naphthalene 601-052-00-2	202-049-5	91-20-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
2	acenaphthylene 205-917-1	209-96-8			<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
3	acenaphthene 201-469-6	83-32-9			<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
4	fluorene 201-695-5	86-73-7			<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
5	phenanthrene 201-581-5	85-01-8			<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
6	anthracene 204-371-1	120-12-7			<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
7	fluoranthene 205-912-4	206-44-0			<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
8	pyrene 204-927-3	129-00-0			<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
9	benzo[a]anthracene 601-033-00-9	200-250-6	56-55-3		<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
10	chrysene 601-046-00-0	205-923-4	218-01-9		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
11	benzo[a]pyrene; benzo[def]chrysene 601-032-00-3	200-028-5	50-32-8		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
12	indeno[123-cd]pyrene 205-933-2	193-39-5			<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
13	dibenz[a,h]anthracene 601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
14	benzo[ghi]perylene 205-983-8	191-24-2			<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
15	benzo[b]fluoranthene 601-034-00-4	205-911-9	205-99-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
16	benzo[k]fluoranthene 601-036-00-5	205-916-6	207-06-9		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number							
17		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane 603-181-00-X 216-653-1 1634-04-4				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
18		benzene 601-020-00-8 200-753-7 71-43-2				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
19		toluene 601-021-00-3 203-625-9 108-88-3				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
20	*	ethylbenzene 601-023-00-4 202-849-4 100-41-4				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
21		xylene 601-022-00-9 202-422-2 [1] 95-47-6 [1] 203-396-5 [2] 106-42-3 [2] 203-576-3 [3] 108-98-3 [3] 215-595-7 [4] 1330-20-7 [4]				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
22	*	TPH (C6 to C40) petroleum group TPH				<38 mg/kg		<38 mg/kg	<0.0038 %		<LOD
Total:									0.00386 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
*	Determinand defined or amended by HazWasteOnline (see Appendix A)
<LOD	Below limit of detection

Classification of sample: WS-04

 **Non Hazardous Waste**
Classified as 17 05 04
in the List of Waste

Sample details

Sample Name:	LoW Code:
WS-04	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.25 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
16.2%	
(dry weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 16.2% Dry 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	∞	pH			7.8	pH		7.8	pH	7.8 pH		
2	☒	arsenic { arsenic trioxide }			6.7	mg/kg	1.32	7.613	mg/kg	0.000761 %	✓	
		033-003-00-0	215-481-4									
			1327-53-3									
3	☒	cadmium { cadmium sulfide }		1	0.7	mg/kg	1.285	0.774	mg/kg	0.0000602 %	✓	
		048-010-00-4	215-147-8									
			1308-23-6									
4	☒	chromium { ∞ chromium(III) oxide }			17	mg/kg	1.462	21.382	mg/kg	0.00214 %	✓	
			215-160-9									
			1308-38-9									
5	☒	copper { dicopper oxide; copper (I) oxide }			42	mg/kg	1.126	40.695	mg/kg	0.00407 %	✓	
		029-002-00-X	215-270-7									
			1317-39-1									
6	☒	lead { lead chromate }		1	62	mg/kg	1.56	83.226	mg/kg	0.00534 %	✓	
		062-004-00-2	231-848-0									
			7753-97-6									
7	☒	mercury { mercury dichloride }			<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<LOD
		090-010-00-X	231-299-8									
			7487-94-7									
8	☒	nickel { nickel dihydroxide }			13	mg/kg	1.579	17.671	mg/kg	0.00177 %	✓	
		028-008-00-X	235-008-5 [1]									
			234-346-1 [2]									
			11113-74-9 [2]									
9	☒	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										
10	☒	zinc { zinc oxide }			520	mg/kg	1.245	557.015	mg/kg	0.0557 %	✓	
		030-013-00-7	215-222-5									
			1314-13-2									
11		naphthalene			0.19	mg/kg		0.164	mg/kg	0.0000164 %	✓	
		601-052-00-2	202-049-5									
			91-20-3									
12	∞	acenaphthylene			0.63	mg/kg		0.542	mg/kg	0.0000542 %	✓	
			205-917-1									
			208-96-8									
13	∞	acenaphthene			0.45	mg/kg		0.387	mg/kg	0.0000387 %	✓	
			201-489-8									
			83-32-9									
14	∞	fluorene			0.34	mg/kg		0.293	mg/kg	0.0000293 %	✓	
			201-695-5									
			36-73-7									

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number									
15	* phenanthrene	201-581-5	85-01-8		4.1	mg/kg		3.528	mg/kg	0.000353 %	✓	
16	* anthracene	204-371-1	120-12-7		1.6	mg/kg		1.377	mg/kg	0.000138 %	✓	
17	* fluoranthene	205-912-4	206-44-0		12	mg/kg		10.327	mg/kg	0.00103 %	✓	
18	* pyrene	204-927-3	129-00-0		11	mg/kg		9.466	mg/kg	0.000947 %	✓	
19	benzo[a]anthracene	601-033-00-9	200-260-6		8.1	mg/kg		6.971	mg/kg	0.000697 %	✓	
20	chrysene	601-048-00-0	205-923-4		6.6	mg/kg		5.68	mg/kg	0.000568 %	✓	
21	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		9.1	mg/kg		7.831	mg/kg	0.000783 %	✓	
22	* indeno[123-cd]pyrene	205-883-2	193-39-5		6.6	mg/kg		5.68	mg/kg	0.000568 %	✓	
23	dibenz[a,h]anthracene	601-041-00-2	200-181-8		1.5	mg/kg		1.291	mg/kg	0.000129 %	✓	
24	* benzo[ghi]perylene	205-883-8	191-24-2		6.6	mg/kg		5.68	mg/kg	0.000568 %	✓	
25	benzo[b]fluoranthene	601-034-00-4	205-911-9		11	mg/kg		9.466	mg/kg	0.000947 %	✓	
26	benzo[k]fluoranthene	601-036-00-5	205-916-8		4.2	mg/kg		3.614	mg/kg	0.000361 %	✓	
27	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
28	benzene	601-020-00-8	200-753-7		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
29	toluene	601-021-00-3	203-625-9		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
30	* ethylbenzene	601-023-00-4	202-849-4		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
31	xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
32	* TPH (C6 to C40) petroleum group		TPH		719	mg/kg		618.761	mg/kg	0.0619 %	✓	
Total:										0.139 %		

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- * 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
- CLP: Note 1 Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

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"

Force this Hazardous property to non hazardous because No free phase product observed. BTEX less than detection

Hazard Statements hit:

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



Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0619%)

Classification of sample: WS-04[2]

☉ Non Hazardous Waste
Classified as 17 05 04
in the List of Waste

Sample details

Sample Name:	LoW Code:
WS-04[2]	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
3.10 m	
Moisture content:	
25%	
(dry weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 25% Dry 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	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	603-181-00-X	215-653-1	1634-04-4							
2	benzene				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-020-00-8	200-763-7	71-43-2							
3	toluene				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-021-00-3	200-625-9	108-88-3							
4	ethylbenzene				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-023-00-4	202-549-4	100-41-4							
5	xylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-022-00-6	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 106-38-3 [3] 1330-20-7 [4]							
6	TPH (C6 to C40) petroleum group				<38 mg/kg		<38 mg/kg	<0.0038 %		<LOD
			TPH							
Total:								0.0038 %		

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- * Determinand defined or amended by HazWasteOnline (see Appendix A)
- <LOD Below limit of detection

Appendix A: Classifier defined and non CLP determinands

* **pH** (CAS Number: PH)

Description/Comments: Appendix C4
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: None.

* **chromium(III) oxide** (EC Number: 215-160-9, CAS Number: 1308-38-9)

Conversion factor: 1.462
Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 17 Jul 2015
Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Repr. 1B H360FD , Skin Sens. 1 H317 , Resp. Sens. 1 H334 , Skin Irrit. 2 H315 , STOT SE 3 H335 , Eye Irrit. 2 H319 , Acute Tox. 4 H302 , Acute Tox. 4 H332

* **acenaphthylene** (EC Number: 205-917-1, CAS Number: 208-96-8)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 17 Jul 2015
Hazard Statements: Skin Irrit. 2 H315 , STOT SE 3 H335 , Eye Irrit. 2 H319 , Acute Tox. 1 H310 , Acute Tox. 1 H330 , Acute Tox. 4 H302

* **acenaphthene** (EC Number: 201-469-6, CAS Number: 83-32-9)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 17 Jul 2015
Hazard Statements: Aquatic Chronic 2 H411 , Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Skin Irrit. 2 H315 , STOT SE 3 H335 , Eye Irrit. 2 H319

* **fluorene** (EC Number: 201-695-5, CAS Number: 86-73-7)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 06 Aug 2015
Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400

* **phenanthrene** (EC Number: 201-581-5, CAS Number: 85-01-8)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 06 Aug 2015
Hazard Statements: Skin Irrit. 2 H315 , Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Skin Sens. 1 H317 , Carc. 2 H351 , STOT SE 3 H335 , Eye Irrit. 2 H319 , Acute Tox. 4 H302

* **anthracene** (EC Number: 204-371-1, CAS Number: 120-12-7)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 17 Jul 2015
Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Skin Sens. 1 H317 , Skin Irrit. 2 H315 , STOT SE 3 H335 , Eye Irrit. 2 H319

* **fluoranthene** (EC Number: 205-912-4, CAS Number: 206-44-0)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 21 Aug 2015
Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Acute Tox. 4 H302

* **pyrene** (EC Number: 204-927-3, CAS Number: 129-00-0)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 2014
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 21 Aug 2015
Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , STOT SE 3 H335 , Eye Irrit. 2 H319 , Skin Irrit. 2 H315

✧ **indeno[123-cd]pyrene** (EC Number: 205-893-2, CAS Number: 193-39-5)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 06 Aug 2015

Hazard Statements: Carc. 2 H351

✧ **benzo[ghi]perylene** (EC Number: 205-883-8, CAS Number: 191-24-2)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 23 Jul 2015

Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400

✧ **ethylbenzene** (EC Number: 202-849-4, CAS Number: 100-41-4)

CLP index number: 601-023-00-4

Description/Comments:

Data source: Commission Regulation (EU) No 605/2014 – 6th Adaptation to Technical Progress for Regulation (EC) No 1272/2008. (ATP6)

Additional Hazard Statement(s): Carc. 2 H351

Reason for additional Hazards Statement(s)/Risk Phrase(s):

03 Jun 2015 - Carc. 2 H351 hazard statement sourced from: IARC Group 2B (77) 2000

✧ **TPH (C6 to C40) petroleum group** (CAS Number: TPH)

Description/Comments: Hazard statements taken from WM3 1st Edition 2015; Risk phrases: WM2 3rd Edition 2013

Data source: WM3 1st Edition 2015

Data source date: 25 May 2015

Hazard Statements: Aquatic Chronic 2 H411 , Repr. 2 H361d , Carc. 1B H350 , Muta. 1B H340 , STOT RE 2 H373 , Asp. Tox. 1 H304 , Flam. Liq. 3 H226

Appendix B: Rationale for selection of metal species

arsenic {arsenic trioxide}

Worst case species based on risk phrases

cadmium {cadmium sulfide}

Worst case species based on risk phrases

chromium {chromium(III) oxide}

Worst case species based on risk phrases

copper {dicopper oxide; copper (I) oxide}

Most likely common species

lead {lead chromate}

Worst case

mercury {mercury dichloride}

Worst case species based on risk phrases

nickel {nickel dihydroxide}

Worst case species based on risk phrases

selenium {selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex}

Worst case species based on risk phrases

zinc {zinc oxide}

Chromate levels low

Appendix C: Version

HazWasteOnline Classification Engine: WM3 1st Edition v1.1, May 2018

HazWasteOnline Classification Engine Version: 2019.142.3866.7875 (22 May 2019)

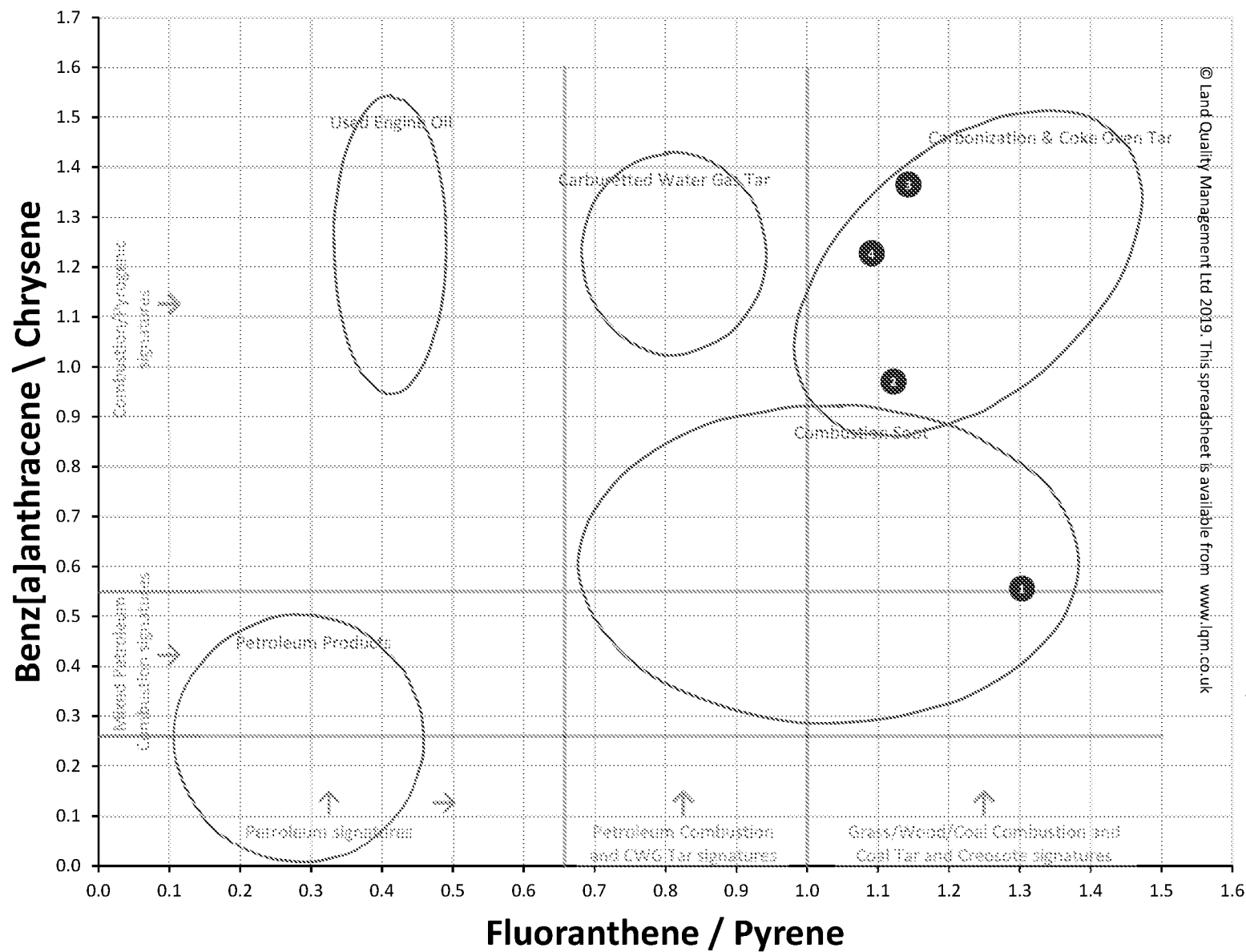
HazWasteOnline Database: 2019.142.3866.7875 (22 May 2019)

This classification utilises the following guidance and legislation:

WM3 v1.1 - Waste Classification - 1st Edition v1.1 - May 2018
CLP Regulation - Regulation 1272/2008/EC of 16 December 2008
1st ATP - Regulation 790/2009/EC of 10 August 2009
2nd ATP - Regulation 286/2011/EC of 10 March 2011
3rd ATP - Regulation 618/2012/EU of 10 July 2012
4th ATP - Regulation 487/2013/EU of 8 May 2013
Correction to 1st ATP - Regulation 758/2013/EU of 7 August 2013
5th ATP - Regulation 944/2013/EU of 2 October 2013
6th ATP - Regulation 605/2014/EU of 5 June 2014
WFD Annex III replacement - Regulation 1357/2014/EU of 18 December 2014
Revised List of Wastes 2014 - Decision 2014/955/EU of 18 December 2014
7th ATP - Regulation 2015/1221/EU of 24 July 2015
8th ATP - Regulation (EU) 2016/918 of 19 May 2016
9th ATP - Regulation (EU) 2016/1179 of 19 July 2016
10th ATP - Regulation (EU) 2017/776 of 4 May 2017
HP14 amendment - Regulation (EU) 2017/997 of 8 June 2017
13th ATP - Regulation (EU) 2018/1480 of 4 October 2018
POPs Regulation 2004 - Regulation 850/2004/EC of 29 April 2004
1st ATP to POPs Regulation - Regulation 756/2010/EU of 24 August 2010
2nd ATP to POPs Regulation - Regulation 757/2010/EU of 24 August 2010

APPENDIX 07

PAH Double Ratio Plots

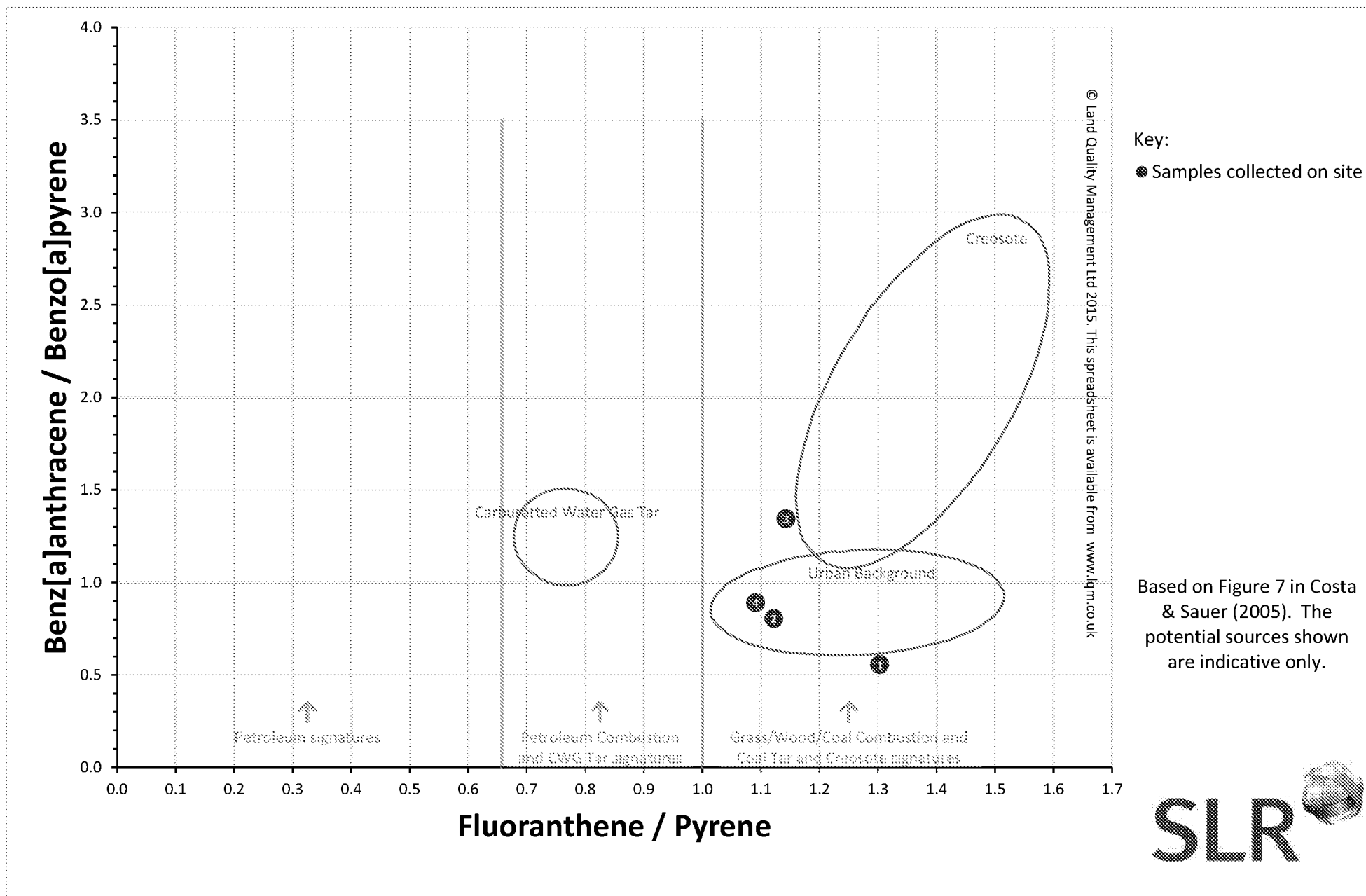


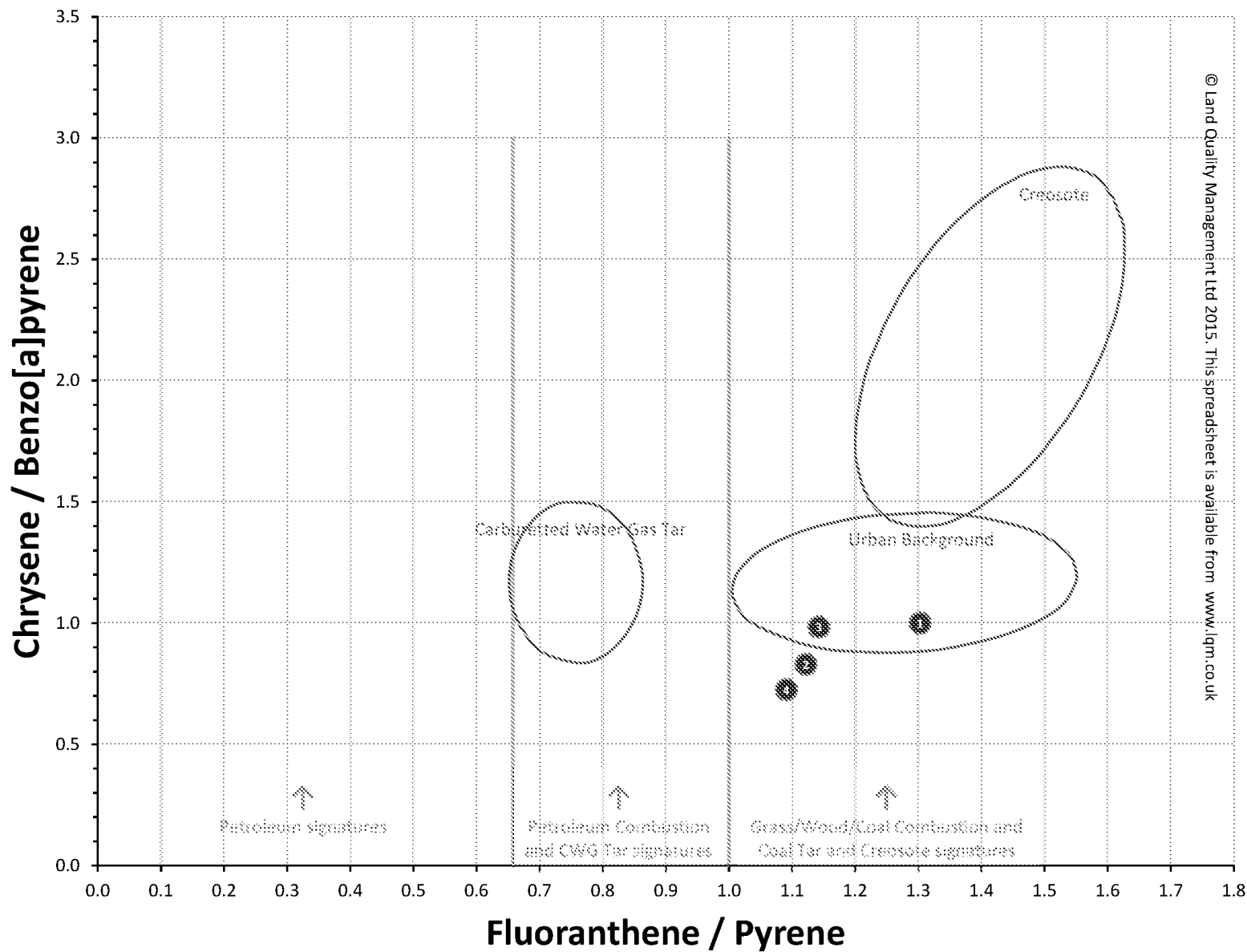
Key:

● Samples collected on site

Based on Figure 6 in Costa & Sauer (2005) with additional details based on a conference presentation by Costa (2005) in San Diego. The potential sources shown are indicative only.







Key:

● Samples collected on site

Based on Figure 8 in Costa & Sauer (2005). The potential sources shown are indicative only.



APPENDIX 08

Asbestos Quantitative Risk Assessment

ASBESTOS QUANTITATIVE RISK ASSESSMENT

Yapton Road, Middleton-on-Sea

1.0 Background

In the UK, there is no published Soil Guidelines Value, Category 4 Screening Level or other Generic Assessment Criteria for asbestos that would allow screening.

Although strictly not applicable in a UK context, a concentration of <0.001% is utilised in other countries as a conservative screening criteria. In Western Australia 0.001% is utilised as a screening criteria for friable asbestos in all land usesⁱ, and the Dutch adopt a value of 0.01% as an intervention valueⁱⁱ. It should be noted that these values should be used with caution as they were derived for a different regulatory framework/climate/soil conditions to those present within the UK. In the absence of alternative values, and provided significant visible asbestos is not present within the ground, asbestos concentrations at >0.001% wt/wt SLR considers further investigation or assessment is required.

Where asbestos concentrations are revealed that exceed the limit of quantification of the laboratory, more detailed quantitative risk assessment may be necessary to inform risk assessment for both the proposed end users of the site, and the risk posed to construction workers who may be exposed to airborne asbestos during earthworks/groundworks. Risk assessment has been carried out in accordance with current UK Guidanceⁱⁱⁱ

2.0 Contaminants of Concern (CoC)

The term “asbestos” refers mainly to six fibrous minerals known to cause harm to human health when inhaled. There are three main commercially exploited forms of asbestos commonly analysed by laboratories: Chrysotile (white asbestos), amosite (brown asbestos) and crocidolite (blue asbestos).

Chrysotile asbestos is a serpentine mineral. It is a magnesium silicate, and the fibres are typically flexible and curved. Amosite and crocidolite are amphiboles, and the fibres have a rod or needle shaped appearance.

Asbestos was widely used in the construction industry throughout the 20th century, but most widely used in the 1960s to the 1980s. Due to the known toxicological effects of asbestos its use was phased out, until the use of chrysotile asbestos was prohibited in 1999. Common uses for asbestos include spray coatings, lagging, insulation board, rope, gaskets, textile, ceiling and floor tile and fibre cement sheeting, amongst others.

The exposure pathway of concern with regards to asbestos is the inhalation of airborne free fibres. Both indoor and outdoor exposure should be considered, due to the potential for asbestos containing soils being tracked back into buildings, drying and generating indoor dust.

Exposure to airborne asbestos can lead to respiratory diseases including mesothelioma, lung cancer and asbestosis (it should be noted asbestosis usually only occurs as a result of heavy industrial exposure to airborne asbestos, and is not considered to be a concern at environmental exposure levels). With regards to asbestos type, it is generally accepted that chrysotile asbestos poses a lower risk than the amphiboles.

Asbestos is a non-threshold substance (that is to say there is no “safe” level of airborne asbestos fibre exposure).

3.0 Exposure estimate

The risks associated with asbestos are linked to the inhalation of airborne asbestos fibres. Due to the physical and toxicological nature of asbestos, assessment of potential harm from asbestos should be based on either measured or predicted airborne fibre concentration, usually expressed as fibres/ml.

The ease that asbestos within the soil becomes airborne is linked to a number of factors including:

- ✧ Nature of asbestos
 - Asbestos form
 - Asbestos type
 - Degree of weathering
 - Quantity in the soil
- ✧ Soil Conditions
 - Soil type
 - Moisture content of the soil
 - Composition of the soil (i.e. construction demolition rubble, granular Made Ground, cohesive Made Ground etc.)
 - Vegetation cover
- ✧ Local climatic factors
 - Prevailing rainfall
 - Wind direction
 - Number of dry days
- ✧ Proposed End Use
 - Hardstanding, communal soft landscaping, private gardens etc.

The risks to human health from airborne asbestos fibres are related to cumulative exposure, which is dictated by the magnitude and duration of exposures. Cumulative exposure is expressed as fibre/ml.hours or fibre/ml.years.

In order to calculate the cumulative exposure, first we must calculate the annual exposure, using the following equation:

Figure 3-1
Calculation for Annual Exposure

$$E_i = C_i \times F_i \times T_i$$

Where E_i =annual exposure. C_i =estimated fibre concentration for an event. F_i =Frequency of the event per year. T_i =Period of time the event lasts per hour.

Where air monitoring data is unavailable, estimated fibre concentrations for an event is derived from modelled free fibre release based on predictive modelling. The study used to estimate risk is Addison et al, 1988^{iv}, where laboratory based data is published on the relationship between the release of free fibres and asbestos in soil concentration for dry soils (0% moisture).

Using the predicted annual exposure, the cumulative exposure can then be calculated using the following equation:

Figure 3-2
Calculation for Cumulative Exposure

$$CE_i = E_i \times Y_i$$

Where CE_i =cumulative exposure. E_i =annual exposure. Y_i =number of years that the event will occur.

The toxicological studies used to estimate risk from airborne asbestos are based on the number of hours in an occupational working year, fibre/ml.hours must be expressed as fibre/ml years. This is done by dividing by the number of working hours in a year, normally assumed to be 2000 hours.

4.0 Risk Estimation and Evaluation

In order to interpret the significance of exposure to airborne asbestos, it is necessary to make an estimate of extra lifetime risk that may result from exposure to asbestos within the Made Ground on a site.

In terms of acceptable risk within a UK context, the level of risk will depend on the regulatory framework in which the assessment is being carried out (i.e. significant possibility of significant harm under Part 2A of the Environmental Protection Act (1990), safe and suitable for use under the National Planning Policy Framework etc.)

The Soil Guideline Values produced by the Environment Agency for other contaminants adopt an acceptable excess lifetime cancer risk of 1 in 100,000 for a minimal risk threshold. For consistency, SLR has also adopted 1 in 100,000.

Asbestos is unusual in there is an abundance of data on the relationship between exposure and incidence of disease. Quantitative assessment of risk from asbestos typically derives two figures; one for risk of lung cancer and one for risk of mesothelioma. A generally accepted approach is to draw upon tabulated risk summaries generated from models to estimate risk at the relevant cumulative exposure (f/ml.years)^Y.

As the Hodgson & Darnton studies show risk to a 30 year old, the identified risk must be adjusted to account for the age of the critical receptor. These are provided in Table 2. It is normal practice to assume that risks persist for 80 years.

At this stage an assessment must be made as to the critical receptor onsite. For residential land use it is generally accepted that the most sensitive receptor is a child (aged 0-6). The large correction factors applied to younger people (provided in Table 2), are indicative of uncertainty in extrapolating exposures below 20 years of age, as the Hodgson and Darnton Study did not include children.

Table 4-1
 Risk Summary Table – Mesothelioma (Hodgson and Darnton, 2000)

Cumulative Exposure (from age 30, over 5 years)	Mesothelioma – Lifetime risk per 100,000 exposed		
	Fibre/ml.years	Crocidolite	Amosite
100	40000 (up to 2-fold uncertainty)	6500 (up to 2-fold uncertainty)	200 (up to 3-fold uncertainty)
10	4000 (up to 2 fold uncertainty)	650 (up to 2-fold uncertainty)	20 (up to 3-fold uncertainty)
1	650 (highest arguable estimate 1500, lowest 250)	90 (highest arguable estimate 300, lowest 15)	5 (highest arguable estimate 20, lowest 1)
0.1	100 (highest arguable estimate 350, lowest 2)	15 (highest arguable estimate 80, lowest 2)	(highest 4)
0.01	20 (highest arguable estimate 100, lowest 2)	3 (highest 20)	
0.005	About 10 (highest arguable estimate 55, lowest insignificant)	About 2 (highest arguable about 15)	Insignificant
0.00007		Highest arguable becomes insignificant	
0.000006	Highest arguable becomes insignificant		

- 1) Cumulative exposures (fibre/ml.years) are expressed in terms of occupational years which are assumed to be about 2000 hours.
- 2) The risks all apply to exposure starting at age 30, for exposures starting at younger ages the appropriate age adjustment factor from Table 2 should be applied
- 3) The term insignificant is used in a colloquial rather than legal sense by Hodgson and Darnton (2000).

Table 4-2
 Age Adjustment Factors – Mesothelioma (Adapted from HEI, 1991)

Age at Which Exposure Commences	Factor – to adjust from Table 1	
	(taking risk as persisting for 60 years)	(taking risk as persisting for 80 years)
0	2.8	6.6
5	2.7	5.2
10	2.6	4
15	2.5	3

Age at Which Exposure Commences	Factor – to adjust from Table 1	
	(taking risk as persisting for 60 years)	(taking risk as persisting for 30 years)
20	2.1	2.1
25	1.5	1.5
30	1	1
35	0.6	0.6
40	0.4	0.4
45	0.3	0.3
50	0.2	0.2
55	0.1	0.1

Table 4-3
 Risk Summary Table – Lung Cancer (Hodgson and Darnton, 2000)

Cumulative Exposure (from age 30, over 5 years)	Mesothelioma – Lifetime risk per 100,000 exposed		
	Fibre/ml.years	Crocidolite	Amosite
100	35000 (55000 to 25000)	Same as for crocidolite	Chrysotile
10	1500 (1000 to 2500)	Same as for crocidolite	500, perhaps 3000, in exceptional circumstances 10000
1	85 (20 to 250)	Same as for crocidolite	50, perhaps 300, in exceptional circumstances 1000
0.1	4 (<1 to 25)	Same as for crocidolite	2 perhaps 30, in exceptional circumstances 100
0.01	1 to 3 (mesothelioma now dominant)	Same as for crocidolite	Probably insignificant, perhaps 3, in exceptional circumstances 10

5.0 Site Specific Assessment

5.1 Site Data

Quantifiable asbestos fibre bundles have been identified within the shallow topsoil in two locations (albeit at a very low concentration of 0.001% wt/wt). Visible asbestos cement sheet has also been identified in in localised areas, likely to be present as a result of the construction and demolition of agricultural buildings.

Table 5-1 details the asbestos found during the investigation:

Table 5-1
 Summary of Soil Data – Asbestos

BH/TP	Depth (m BGL)	Visible Asbestos		Asbestos in Soil Result		
		Type	Description	Type		Quantity (% wt/wt)
TP04	0.20	NAD	-	Chrysotile bundles	fibre	0.001
TP06	0.20	NAD	-	Chrysotile bundles	fibre	<0.001
TP07	0.20	NAD	-	NAD		-
TP09	0.30m	Asbestos cement sheet	Multiple cement sheet fragments. Good condition, limited weathering. Sheet in sample weighs 23.5grams (2.2% of sample).	Chrysotile bundles	fibre	0.001
WS01	0.20	Asbestos cement sheet	Single cement sheet fragment. Good condition, weighs 48.6 grams (4.1% of sample)	Chrysotile bundles	fibre	<0.001
WS02	0.25	NAD	-	Chrysotile bundles	fibre	<0.001
WS04	0.25	NAD	-	Chrysotile bundles	fibre	<0.001

NAD=No asbestos detected. Asbestos quantified using detailed gravimetric analysis and phase contract optical microscopy.

5.2 Assessment– Unbound Asbestos

Assessment of chronic asbestos exposure has been made in accordance with CIRA 733 - Asbestos in Soil and Made Ground: A Guide to Understanding and Managing Risk. Exposure is estimated by modelling possible free fibre release, assessing exposure to estimate chronic risk.

Although some exposure would be expected from direct exposure from gardening activities, exposure is transient and infrequent. It is considered likely a much higher exposure would be expected indoors; where asbestos contaminated soil is tracked inside on shoes and clothing.

Having referenced the proposed land use, SLR consider there to be two sensitive receptors on-site; the proposed workers, and the elderly residents. Assessment criteria have therefore been calculated for both, and the lowest will be adopted as a site criterion.

The trace concentrations (<0.001%) of free fibre chrysotile asbestos are unlikely to pose a significant risk to human health.

In order to calculate annual exposure (E_i) the estimated fibre release concentration is required. This has been estimated from predictive exposure modelling based on the Addison et al (1988) study. The soil type is assumed to be a sand with 0% moisture content; representative of indoor dust.

Figure 5-1
 Predicted Fibre Release –Chrysotile Asbestos in Sandy Soil (Addison et al (1988))

The below graph indicates the predicted normalised fibre concentration would be 0.01 f/ml per mg/m^3 . The concentration of soil dust in homes is assumed at $50 \text{ ug}/\text{m}^3$ (CLEA assumption). C_i is therefore estimated at 0.0005 f/ml.

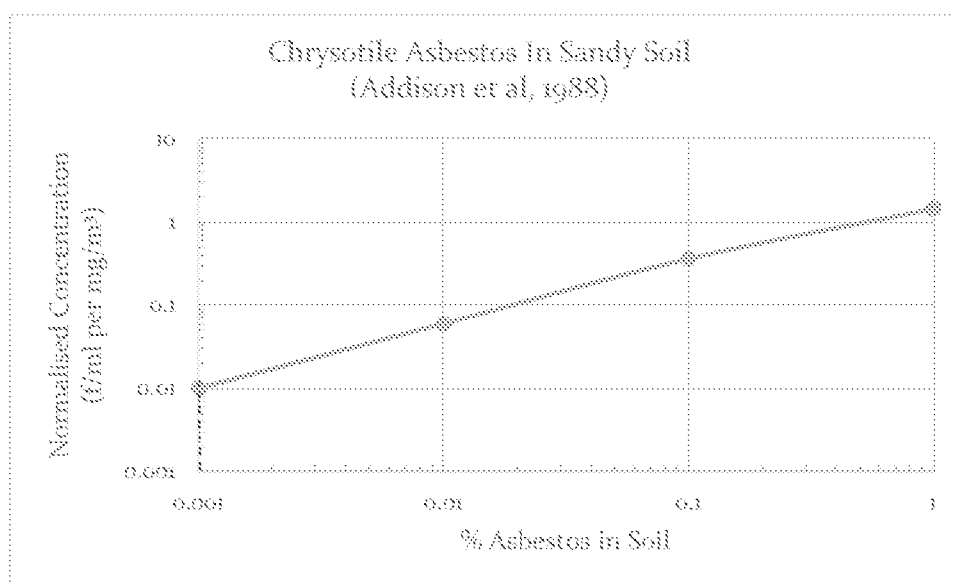


Table 5-2 below summarises the exposure frequencies adopted for this assessment. These have been sourced from default assumptions made within the CLEA model.

Table 5-2
 Summary of Soil Data – Asbestos

Parameter	Value		Unit
	Commercial	Elderly Resident	
Exposure Frequency (F_i)	230	365	Day yr
Occupancy Period (T_i)	8.3	23	Hr day

Parameter	Value		Unit
	Commercial	Elderly Resident	
Years of exposure (Y _i)	49	10	Years

Using the input parameters above, the calculations for annual and cumulative exposure are provided below:

Commercial

Annual Exposure

$$E_i = C_i \times F_i \times T_i$$

$$E_i = 0.01 \times 230 \times 8.3$$

$$E_i = 0.95 \text{ f/ml.hour/year}$$

Cumulative Exposure

$$CE_i = E_i \times Y_i$$

$$CE_i = 0.95 \times 49$$

$$CE_i = 46.55 \text{ fibre/ml.hours}$$

$$CE_i = 0.023 \text{ fibre/ml years}$$

Using the correction factor as shown in table 2, it is assumed exposure may occur from 20 years old, so a corrected cumulative exposure of **0.048 fibre/ml.years** has been adopted.

Using the risk estimated tables (Tables 1 & 3), the lifetime risk to commercial workers from mesothelioma & lung cancer is **insignificant**.

The excess lifetime risk is the sum of the mesothelioma and lung cancer risk, which equals **~110 per 100,000 exposed**. This is an order of magnitude higher than the acceptable level of 1 per 100,000, therefore **remediation in relation to asbestos within the shallow Made Ground in TP3 is necessary**.

Residents

Annual Exposure

$$E_i = C_i \times F_i \times T_i$$

$$E_i = 0.0005 \times 365 \times 23$$

$$E_i = 4.2 \text{ f/ml.hour/year}$$

Cumulative Exposure

$$CE_i = E_i \times Y_i$$

$$CE_i = 4.2 \times 10$$

$$CE_i = 42 \text{ fibre/ml.hours}$$

$$CE_i = 0.021 \text{ fibre/ml years}$$

No correction factor is required given the age of the residents, so a cumulative exposure of **0.021 fibre/ml.years** has been adopted.

Using the risk estimated tables (Tables 1 & 3), the lifetime risk to commercial workers from mesothelioma & lung cancer is **insignificant**.

5.3 Assessment-- Cement Bound Asbestos

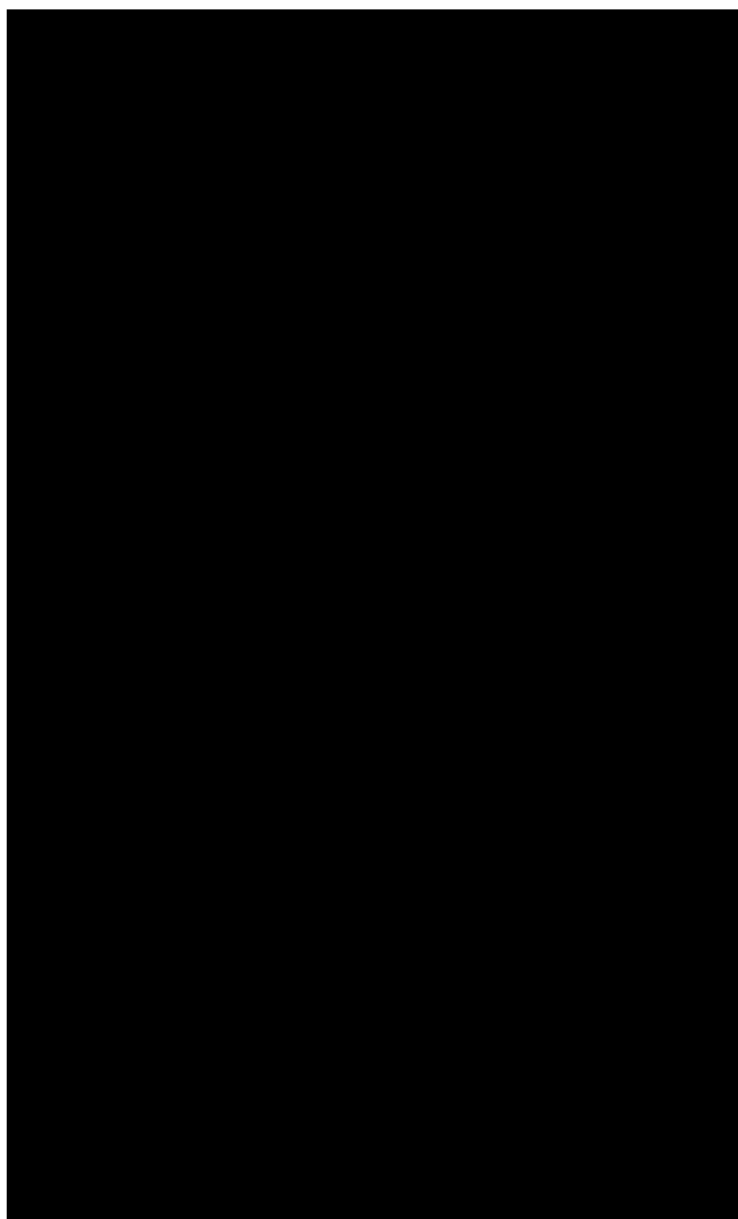
The application of the above approach for cement bound asbestos is not appropriate due to the lack of consideration of the potentially significant difference in free fibre release from asbestos bound in cement when compared with free fibres in soil.

The unbound assessment has found that free fibres at a concentration of 0.001% do not pose a risk to the proposed redevelopment. SLR has therefore adopted a criterion of 0.1% (two orders of magnitude higher) for cement bound asbestos. This is supported by evidence published by RIVM¹ and Swartjes and Tromp (2008)^{vi}.

References:

- ¹ Western Australia (2009). *Guidance for the assessment, remediation and management of asbestos contaminated sites in Western Australia*, Environmental Health Directorate, Department of Health, Perth, Australia.
- ¹ RIVM (2003) *Assessment of the risks of soil contamination with asbestos*, RIVM Report 711701034, National Institute of Public Health and Environment, RIVM, Bilthoven, the Netherlands.
- ¹ CIRIA (2014) *Asbestos in Soil and Made Ground: A Guide to Understanding and Managing Risk*. Report C733.
- ¹ Addison J, Davies LST, Robertson A & Willey RJ (1988). *The Release of Dispersed Asbestos Fibres from Soils*. Institute of Occupational Medicine.
- ¹ Hodgson, J T and Darnton, A (2000), *The Quantitative Risks of Mesothelioma and Lung Cancer in Relation to Asbestos Exposure*. Annals of Occupational Hygiene, vol 44, 8, Oxford Journals, Oxford, UK, pp 565-601.
- ¹ Swarjes, F A and Tromp, P (2008). *"a tiered approach for the assessment of the human health risks of asbestos in soils"*. Soil and Sediment Contamination, vol 17, 2, Taylor & Francis Online, UK. pp 17-149.

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