

Appendix F Analytical Results

Client Name: Soilfix Limited
Reference: C411
Location: Yapton
Contact: Sophie Goldwin
JE Job No.: 18/5358

Report : Solid

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

J E Sample No.	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24			Please see attached notes for all abbreviations and acronyms		
Sample ID	SF TP01	SF TP02	SF TP03	SF TP04	SF TP05	SF TP06	SF TP07	SF TP08					
Depth													
COC No / misc													
Containers	V J B	V J B	V J B	V J B	V J B	V J B	V J B	V J B					
Sample Date	11/04/2018	11/04/2018	11/04/2018	11/04/2018	11/04/2018	11/04/2018	11/04/2018	11/04/2018					
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil					
Batch Number	1	1	1	1	1	1	1	1					
Date of Receipt	12/04/2018	12/04/2018	12/04/2018	12/04/2018	12/04/2018	12/04/2018	12/04/2018	12/04/2018					
Arsenic [#]	-	9.4	-	-	7.5	11.2	16.3	8.0			<0.5	mg/kg	TM30/PM15
Cadmium [#]	-	0.3	-	-	0.3	0.3	0.3	<0.1			<0.1	mg/kg	TM30/PM15
Chromium [#]	-	89.1	-	-	98.6	97.8	106.4	203.4			<0.5	mg/kg	TM30/PM15
Copper [#]	-	51	-	-	13	84	197	117			<1	mg/kg	TM30/PM15
Lead [#]	-	240	-	-	36	211	327	297			<5	mg/kg	TM30/PM15
Mercury [#]	-	<0.1	-	-	<0.1	<0.1	<0.1	0.6			<0.1	mg/kg	TM30/PM15
Nickel [#]	-	15.9	-	-	20.0	20.6	21.9	11.4			<0.7	mg/kg	TM30/PM15
Selenium [#]	-	<1	-	-	<1	<1	<1	<1			<1	mg/kg	TM30/PM15
Zinc [#]	-	144	-	-	83	124	209	54			<5	mg/kg	TM30/PM15
Arsenic	33.2	-	27.1	61.3	-	-	-	-			<0.5	mg/kg	TM30/PM62
Cadmium	0.7	-	3.4	1.7	-	-	-	-			<0.1	mg/kg	TM30/PM62
Chromium	14.4	-	30.9	21.8	-	-	-	-			<0.5	mg/kg	TM30/PM62
Copper	3093 ^{AB}	-	233	3692 ^{AB}	-	-	-	-			<1	mg/kg	TM30/PM62
Lead	1074	-	1095	3917 ^{AA}	-	-	-	-			<5	mg/kg	TM30/PM62
Mercury	0.3	-	0.6	5.5	-	-	-	-			<0.1	mg/kg	TM30/PM62
Nickel	26.8	-	32.1	128.4	-	-	-	-			<0.7	mg/kg	TM30/PM62
Selenium	<1	-	1	3	-	-	-	-			<1	mg/kg	TM30/PM62
Zinc	561	-	561	773	-	-	-	-			<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene [#]	0.38	0.34	0.13	0.49	<0.04	0.30	1.14	0.19			<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.29	0.69	0.31	3.06	<0.03	0.53	1.66	0.11			<0.03	mg/kg	TM4/PM8
Acenaphthene [#]	<0.05	0.15	<0.05	0.21	<0.05	<0.05	0.23	<0.05			<0.05	mg/kg	TM4/PM8
Fluorene [#]	0.08	0.12	<0.04	0.34	<0.04	0.17	0.25	<0.04			<0.04	mg/kg	TM4/PM8
Phenanthrene [#]	1.13	2.62	0.82	5.16	0.12	2.67	3.57	0.49			<0.03	mg/kg	TM4/PM8
Anthracene [#]	0.38	1.24	0.28	3.65	<0.04	3.06	1.99	0.12			<0.04	mg/kg	TM4/PM8
Fluoranthene [#]	1.75	12.58	2.66	17.12	0.25	12.09	9.07	0.57			<0.03	mg/kg	TM4/PM8
Pyrene [#]	1.66	12.81	2.84	15.24	0.22	10.73	10.09	0.56			<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene [#]	0.77	9.32	1.15	8.32	<0.06	5.21	7.37	0.26			<0.06	mg/kg	TM4/PM8
Chrysene [#]	1.15	7.53	1.87	9.56	0.12	4.59	6.71	0.44			<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene [#]	2.48	21.62	3.40	19.26	0.21	11.73	20.32	0.96			<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene [#]	1.11	12.36	1.56	10.57	0.09	6.14	12.21	0.40			<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene [#]	0.07	8.94	1.19	7.38	0.07	4.10	9.80	0.41			<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene [#]	0.22	1.96	0.37	1.58	<0.04	0.81	1.93	0.08			<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene [#]	1.21	8.76	1.32	7.30	0.08	3.74	9.27	0.49			<0.04	mg/kg	TM4/PM8
Coronene	-	-	-	1.94	<0.04	-	-	-			<0.04	mg/kg	TM4/PM8
PAH 16 Total	12.7	101.0	17.9	109.2	1.2	65.9	95.6	5.1			<0.6	mg/kg	TM4/PM8
PAH 17 Total	-	-	-	111.18	1.16	-	-	-			<0.64	mg/kg	TM4/PM8
Benzo(b)fluoranthene	1.79	15.57	2.45	13.87	0.15	8.45	14.63	0.69			<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.69	6.05	0.95	5.39	0.06	3.28	5.69	0.27			<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	93	88	92	92	98	97	95	101			<0	%	TM4/PM8
Mineral Oil (C10-C40)	-	-	-	300	<30	-	-	-			<30	mg/kg	TM5/PM8/PM16

Please see attached notes for all abbreviations and acronyms

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JE Job No.: 18/5358

Report : Solid

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

J E Sample No.	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24				
Sample ID	SF TP01	SF TP02	SF TP03	SF TP04	SF TP05	SF TP06	SF TP07	SF TP08				
Depth												
COC No / misc												
Containers	V J B	V J B	V J B	V J B	V J B	V J B	V J B	V J B				
Sample Date	11/04/2018	11/04/2018	11/04/2018	11/04/2018	11/04/2018	11/04/2018	11/04/2018	11/04/2018				
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil				
Batch Number	1	1	1	1	1	1	1	1				
Date of Receipt	12/04/2018	12/04/2018	12/04/2018	12/04/2018	12/04/2018	12/04/2018	12/04/2018	12/04/2018				
										Lab No	Lab Unit	Lab Ref
TPH CWG												
Aliphatics												
>C5-C6 #	<0.1 ^{SV}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 ^{SV}	<0.1	mg/kg	TM36/PM12	
>C6-C8 #	<0.1 ^{SV}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 ^{SV}	<0.1	mg/kg	TM36/PM12	
>C8-C10	<0.1 ^{SV}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 ^{SV}	<0.1	mg/kg	TM36/PM12	
>C10-C12 #	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM8/PM16	
>C12-C16 #	13	<4	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM8/PM16	
>C16-C21 #	49	<7	<7	18	<7	<7	14	<7	<7	mg/kg	TM5/PM8/PM16	
>C21-C35 #	131	<7	82	268	<7	<7	60	50	<7	mg/kg	TM5/PM8/PM16	
Total aliphatics C5-35	193	<19	82	286	<19	<19	74	50	<19	mg/kg	TM5/PM8/PM16/PM12/PM4	
Aromatics												
>C5-EC7 #	<0.1 ^{SV}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 ^{SV}	<0.1	mg/kg	TM36/PM12	
>EC7-EC8 #	<0.1 ^{SV}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 ^{SV}	<0.1	mg/kg	TM36/PM12	
>EC8-EC10 #	<0.1 ^{SV}	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 ^{SV}	<0.1	mg/kg	TM36/PM12	
>EC10-EC12 #	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM8/PM16	
>EC12-EC16 #	6	<4	<4	<4	<4	<4	10	9	<4	mg/kg	TM5/PM8/PM16	
>EC16-EC21 #	23	48	24	67	<7	<7	71	15	<7	mg/kg	TM5/PM8/PM16	
>EC21-EC35 #	119	222	199	537	<7	<7	357	73	<7	mg/kg	TM5/PM8/PM16	
Total aromatics C5-35 #	148	270	223	604	<19	<19	438	97	<19	mg/kg	TM5/PM8/PM16/PM12/PM4	
Total aliphatics and aromatics(C5-35)	341	270	305	890	<38	<38	512	147	<38	mg/kg	TM5/PM8/PM16/PM12/PM4	
MTBE #	<5 ^{SV}	<5	<5	<5	<5	<5	<5	<5 ^{SV}	<5	ug/kg	TM31/PM12	
Benzene #	<5 ^{SV}	<5	<5	<5	<5	<5	<5	<5 ^{SV}	<5	ug/kg	TM31/PM12	
Toluene #	<5 ^{SV}	<5	<5	<5	<5	<5	<5	<5 ^{SV}	<5	ug/kg	TM31/PM12	
Ethylbenzene #	<5 ^{SV}	<5	<5	<5	<5	<5	<5	<5 ^{SV}	<5	ug/kg	TM31/PM12	
m/p-Xylene #	<5 ^{SV}	<5	<5	<5	<5	<5	<5	<5 ^{SV}	<5	ug/kg	TM31/PM12	
o-Xylene #	<5 ^{SV}	<5	<5	<5	<5	<5	<5	<5 ^{SV}	<5	ug/kg	TM31/PM12	
PCB 28 #	-	-	-	<5	<5	-	-	-	<5	ug/kg	TM17/PM8	
PCB 52 #	-	-	-	<5	<5	-	-	-	<5	ug/kg	TM17/PM8	
PCB 101 #	-	-	-	<5	<5	-	-	-	<5	ug/kg	TM17/PM8	
PCB 118 #	-	-	-	<5	<5	-	-	-	<5	ug/kg	TM17/PM8	
PCB 138 #	-	-	-	<5	<5	-	-	-	<5	ug/kg	TM17/PM8	
PCB 153 #	-	-	-	<5	<5	-	-	-	<5	ug/kg	TM17/PM8	
PCB 180 #	-	-	-	<5	<5	-	-	-	<5	ug/kg	TM17/PM8	
Total 7 PCBs #	-	-	-	<35	<35	-	-	-	<35	ug/kg	TM17/PM8	
Natural Moisture Content	-	21.4	-	-	22.4	27.3	18.9	4.0	<0.1	%	PM4/PM0	
Natural Moisture Content	16.0	-	47.2	31.3	-	-	-	-	<0.1	%	PM4/PM0	
Total Organic Carbon #	-	-	-	NOP	0.81	-	-	-	<0.02	%	TM21/PM24	
Total Organic Carbon	-	-	-	12.96	-	-	-	-	<0.02	%	TM21/PM89	
ANC at pH4	-	-	-	0.67	-	-	-	-	<0.03	mol/kg	TM77/PM0	

Please see attached notes for all abbreviations and acronyms

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Mass of sample taken (kg)	-	Moisture Content Ratio (%) =	35.6
Mass of dry sample (kg) =	0.09	Dry Matter Content Ratio (%) =	73.7
Particle Size <4mm =	>95%		
JEFL Job No	18/5358	Landfill Waste Acceptance Criteria Limits	
Sample No	12		
Client Sample No	SF TP04		
Depth/Other			
Sample Date	11/04/2018		
Batch No	1		
Solid Waste Analysis		Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non- Hazardous Landfill
Total Organic Carbon (%)	12.96	3	5
Loss on Ignition (%)	NDP	-	10
Sum of BTEX (mg/kg)	<0.025	6	-
Sum of 7 PCBs (mg/kg)	<0.035	1	-
Mineral Oil (mg/kg)	300	500	-
PAH Sum of 17(mg/kg)	111.18	100	-
pH (pH Units)	7.84	-	>6
ANC to pH 7 (mol/kg)	-	-	to be evaluated
ANC to pH 4 (mol/kg)	0.67	-	to be evaluated
Eluate Analysis	10:1 conc ⁿ leached		Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg
	C ₁₀ mg/l	A ₁₀ mg/kg	
Arsenic	0.0066	0.066	0.5
Barium	0.047	0.47	20
Cadmium	<0.0005	<0.005	0.04
Chromium	0.0039	0.039	0.5
Copper	0.051	0.51	2
Mercury	<0.001	<0.01	0.01
Molybdenum	0.004	0.04	0.5
Nickel	<0.002	<0.02	0.4
Lead	0.010	0.10	0.5
Antimony	0.025	0.25	0.06
Selenium	<0.003	<0.03	0.1
Zinc	0.012	0.12	4
Chloride	0.9	9	800
Fluoride	<0.3	<3	10
Sulphate as SO ₄	0.79	7.9	1000
Total Dissolved Solids	203	2030	4000
Phenol	<0.01	<0.1	1
Dissolved Organic Carbon	8	80	500

Mass of sample taken (kg)	-	Moisture Content Ratio (%) =	24.5
Mass of dry sample (kg) =	0.09	Dry Matter Content Ratio (%) =	80.3
Particle Size <4mm =	>95%		
JEFL Job No	18/5358	Landfill Waste Acceptance Criteria Limits	
Sample No	15		
Client Sample No	SF TP05		
Depth/Other			
Sample Date	11/04/2018		
Batch No	1		
Solid Waste Analysis		Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non- Hazardous Landfill
Total Organic Carbon (%)	0.81	3	5
Loss on Ignition (%)	-	-	10
Sum of BTEX (mg/kg)	<0.025	6	-
Sum of 7 PCBs (mg/kg)	<0.035	1	-
Mineral Oil (mg/kg)	<30	500	-
PAH Sum of 17(mg/kg)	1.16	100	-
pH (pH Units)	-	-	>6
ANC to pH 7 (mol/kg)	-	-	to be evaluated
ANC to pH 4 (mol/kg)	-	-	to be evaluated
Eluate Analysis	10:1 conc ⁿ leached		Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg
	C ₁₀ mg/l	A ₁₀ mg/kg	
Arsenic	<0.0025	<0.025	0.5
Barium	0.010	0.10	20
Cadmium	<0.0005	<0.005	0.04
Chromium	<0.0015	<0.015	0.5
Copper	<0.007	<0.07	2
Mercury	<0.001	<0.01	0.01
Molybdenum	<0.002	<0.02	0.5
Nickel	<0.002	<0.02	0.4
Lead	<0.005	<0.05	0.5
Antimony	<0.002	<0.02	0.06
Selenium	<0.003	<0.03	0.1
Zinc	<0.003	<0.03	4
Chloride	1.1	11	800
Fluoride	<0.3	<3	10
Sulphate as SO ₄	0.20	2.0	1000
Total Dissolved Solids	101	1010	4000
Phenol	<0.01	<0.1	1
Dissolved Organic Carbon	7	70	500

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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, 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.

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J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
18/5358	1	SF TP01		3	13/04/2018	General Description (Bulk Analysis)	soil-stones
					13/04/2018	Asbestos Fibres	Fibre Bundles
					13/04/2018	Asbestos ACM	NAD
					13/04/2018	Asbestos Type	Chrysotile
					13/04/2018	Asbestos Level Screen	less than 0.1%
					16/04/2018	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					16/04/2018	Total Detailed Gravimetric Quantification (% Asb)	<0.001 (mass %)
					16/04/2018	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	<0.001 (mass %)
					16/04/2018	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					16/04/2018	Asbestos Gravimetric & PCOM Total	<0.001 (mass %)
18/5358	1	SF TP02		6	13/04/2018	General Description (Bulk Analysis)	soil-stones
					13/04/2018	Asbestos Fibres	NAD
					13/04/2018	Asbestos Fibres (2)	NAD
					13/04/2018	Asbestos ACM	NAD
					13/04/2018	Asbestos ACM (2)	NAD
					13/04/2018	Asbestos Type	NAD
					13/04/2018	Asbestos Type (2)	NAD
					13/04/2018	Asbestos Level Screen	NAD
18/5358	1	SF TP03		9	13/04/2018	General Description (Bulk Analysis)	soil-stones
					13/04/2018	Asbestos Fibres	Fibre Bundles
					13/04/2018	Asbestos ACM	NAD
					13/04/2018	Asbestos Type	Chrysotile
					13/04/2018	Asbestos Level Screen	less than 0.1%
					16/04/2018	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					16/04/2018	Total Detailed Gravimetric Quantification (% Asb)	<0.001 (mass %)
					16/04/2018	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	<0.001 (mass %)
					16/04/2018	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					16/04/2018	Asbestos Gravimetric & PCOM Total	<0.001 (mass %)
18/5358	1	SF TP04		11	13/04/2018	General Description (Bulk Analysis)	soil-stones
					13/04/2018	Asbestos Fibres	Fibre Bundles
					13/04/2018	Asbestos ACM	insulation Debris
					13/04/2018	Asbestos Type	Chrysotile
					16/04/2018	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					16/04/2018	Total Detailed Gravimetric Quantification (% Asb)	0.007 (mass %)
					16/04/2018	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	0.007 (mass %)

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J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
18/5358	1	SF TP04		11	16/04/2018	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					16/04/2018	Asbestos Gravimetric & PCOM Total	0.007 (mass %)
18/5358	1	SF TP05		15	13/04/2018	General Description (Bulk Analysis)	soil.stones
					13/04/2018	Asbestos Fibres	NAD
					13/04/2018	Asbestos Fibres (2)	NAD
					13/04/2018	Asbestos ACM	NAD
					13/04/2018	Asbestos ACM (2)	NAD
					13/04/2018	Asbestos Type	NAD
					13/04/2018	Asbestos Type (2)	NAD
					13/04/2018	Asbestos Level Screen	NAD
18/5358	1	SF TP06		18	13/04/2018	General Description (Bulk Analysis)	soil.stones
					13/04/2018	Asbestos Fibres	NAD
					13/04/2018	Asbestos Fibres (2)	NAD
					13/04/2018	Asbestos ACM	NAD
					13/04/2018	Asbestos ACM (2)	NAD
					13/04/2018	Asbestos Type	NAD
					13/04/2018	Asbestos Type (2)	NAD
					13/04/2018	Asbestos Level Screen	NAD
18/5358	1	SF TP07		21	13/04/2018	General Description (Bulk Analysis)	soil.stones
					13/04/2018	Asbestos Fibres	NAD
					13/04/2018	Asbestos Fibres (2)	NAD
					13/04/2018	Asbestos ACM	NAD
					13/04/2018	Asbestos ACM (2)	NAD
					13/04/2018	Asbestos Type	NAD
					13/04/2018	Asbestos Type (2)	NAD
					13/04/2018	Asbestos Level Screen	NAD
18/5358	1	SF TP08		24	13/04/2018	General Description (Bulk Analysis)	soil.stones
					13/04/2018	Asbestos Fibres	NAD
					13/04/2018	Asbestos Fibres (2)	NAD
					13/04/2018	Asbestos ACM	NAD
					13/04/2018	Asbestos ACM (2)	NAD
					13/04/2018	Asbestos Type	NAD
					13/04/2018	Asbestos Type (2)	NAD
					13/04/2018	Asbestos Level Screen	NAD

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Matrix : Solid

[illegible]

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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.: 18/5358

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

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

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 a 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	x5 Dilution
AB	x20 Dilution

JE Job No: 18/5358

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/IS 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.				
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
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	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.			AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	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/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
TM17	Modified US EPA method 8270. Determination of specific Polychlorinated Biphenyl congeners 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
TM20	Modified BS 1377-3: 1990/USEPA 160.3 Gravimetric determination of Total Dissolved Solids/Total Solids	PM0	No preparation is required.			AR	Yes

JE Job No: 18/5358

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/IS ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC turnacelanalyser in the presence of oxygen. The CO ₂ generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC turnacelanalyser in the presence of oxygen. The CO ₂ generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM69	Preparation of positive asbestos samples for Eltra analysis			AD	Yes
TM22	Modified USEPA 180.4. Gravimetric determination of Loss on Ignition by temperature controlled Muffle Furnace (450°C)	PM0	No preparation is required.	Yes		AD	Yes
TM26	Determination of phreols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM0	No preparation is required.			AR	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	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		AD	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	PM17	Modified method EM12457-2. As received solid samples are leached with water in a 10:1 water to soil ratio for 24 hours, the moisture content of the sample is included in the ratio.	Yes		AR	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	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.			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.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes

JE Job No: 18/5358

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/IS ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquametric Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 385.2, 353.1, 354.1	PM0	No preparation is required.	Yes		AR	Yes
TM60	Modified USEPA 9060. Determination of TOC by calculation from Total Carbon and Inorganic Carbon using a TOC analyser, the carbon in the sample is converted to CO2 and then passed through a non-dispersive infrared gas analyser (NDIR).	PM0	No preparation is required.			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 BS1377:1980. 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		AR	No
TM77	Modified DDCEN/TS method 15364-2006. Determination of Acid Neutralization Capacity by Metrohm automated probe analyser.	PM0	No preparation is required.			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
TM173	Analysis of fluoride by ISE (Ion Selective Electrode) using modified ISE method 340.2	PM0	No preparation is required.			AR	Yes
NONE	No Method Code	PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.			AR	



Exova Jones Environmental

Regd and Authd: Issues 010 011, 012, 013, 014, 015, 016, 017, 018, 019, 020, 021, 022, 023, 024, 025, 026, 027, 028, 029, 030, 031, 032, 033, 034, 035, 036, 037, 038, 039, 040, 041, 042, 043, 044, 045, 046, 047, 048, 049, 050, 051, 052, 053, 054, 055, 056, 057, 058, 059, 060, 061, 062, 063, 064, 065, 066, 067, 068, 069, 070, 071, 072, 073, 074, 075, 076, 077, 078, 079, 080, 081, 082, 083, 084, 085, 086, 087, 088, 089, 090, 091, 092, 093, 094, 095, 096, 097, 098, 099, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

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

Soilfix Limited
10 St. Martins Ind. Park
Bristol
BS11 0RS



Attention : Sophie Goldwin
Date : 26th April, 2018
Your reference : C411
Our reference : Test Report 18/6236 Batch 1
Location : Yapton
Date samples received : 26th April, 2018
Status : Final report
Issue : 1

Two samples were received for analysis on 26th April, 2018 of which two 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:



Phil Sommerton BSc
Project Manager

Client Name: Soilfix Limited
Reference: C411
Location: Yapton
Contact: Sophie Goldwin

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, 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
18/6236	1	BS01		1	26/04/2018	General Description (Bulk Analysis)	A/B
					26/04/2018	Asbestos Fibres	NAD
					26/04/2018	Asbestos ACM	Asbestos Insulating Board
					26/04/2018	Asbestos Type	Amosite
					26/04/2018	Asbestos Level Screen	Asbestos level cannot be determined from Screen. Quantification required.
18/6236	1	BS02		2	26/04/2018	General Description (Bulk Analysis)	A/B
					26/04/2018	Asbestos Fibres	NAD
					26/04/2018	Asbestos ACM	Asbestos Insulating Board
					26/04/2018	Asbestos Type	Amosite
					26/04/2018	Asbestos Level Screen	Asbestos level cannot be determined from Screen. Quantification required.

Contact: Sophie Goldwin

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.: 18/6236

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.

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DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

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

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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.

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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

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NDP	No Determination Possible
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++	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: 18/6236

[illegible]



Exova Jones Environmental

Soil and Sediment Analysis (SQA) Ltd, Deeside Industrial Park, Newbridge, Wiltshire, SN10 3PL

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

Soilfix Limited
10 St. Martins Ind. Park
Bristol
BS11 0RS



Attention :	Sophie Goldwin
Date :	3rd May, 2018
Your reference :	C411
Our reference :	Test Report 18/6238 Batch 1
Location :	Yapton
Date samples received :	26th April, 2018
Status :	Final report
Issue :	1

Two samples were received for analysis on 26th April, 2018 of which one was 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:



Bruce Leslie
Project Co-ordinator

Please see attached notes for all abbreviations and acronyms

Note:

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

Signed on behalf of Jones Environmental Laboratory:

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
18/6238	1	SP02		3	02/05/2018	General Description (Bulk Analysis)	soil stones
					02/05/2018	Asbestos Fibres	Fibre Bundles
					02/05/2018	Asbestos ACM	insulation Debris
					02/05/2018	Asbestos Type	Chrysotile
					02/05/2018	Asbestos Level Screen	less than 0.1%
					02/05/2018	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					02/05/2018	Total Detailed Gravimetric Quantification (% Asb)	0.015 (mass %)
					02/05/2018	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	0.015 (mass %)
					02/05/2018	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					02/05/2018	Asbestos Gravimetric & PCOM Total	0.015 (mass %)

Matrix : Solid

C411

Yapton

Sophie Goldwin

[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.: 18/6238

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

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

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: 18/6238

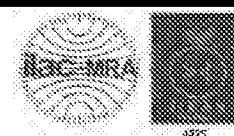
Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/IS ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM3	No preparation is required.			AR	
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM6	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
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	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/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
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 11865 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
TM35	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	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.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes

JE Job No: 18/6238

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/IS ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM38	Soluble ion analysis using the Thermo Aquameter Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 385.2, 385.1, 384.1	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 analyses 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 TM65.	Yes		AR	
TM73	Modified US EPA methods 150.1 and 8045D 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		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 TM65.	Yes		AR	Yes

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

Soilfix Limited
10 St. Martins Ind. Park
Bristol
BS11 0BS



Attention :	Sophie Goldwin
Date :	8th May, 2018
Your reference :	C411
Our reference :	Test Report 18/6314 Batch 1
Location :	Yapton
Date samples received :	27th April, 2018
Status :	Final report
Issue :	1

Three samples were received for analysis on 27th April, 2018 of which three 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:



Please see attached notes for all abbreviations and acronyms

Client Name: Soilfix Limited
Reference: C411
Location: Yapton
Contact: Sophie Goldwin

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, 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
18/6314	1	P9		3	03/05/2018	General Description (Bulk Analysis)	Soil/Stone
					03/05/2018	Asbestos Fibres	NAD
					03/05/2018	Asbestos Fibres (2)	NAD
					03/05/2018	Asbestos ACM	NAD
					03/05/2018	Asbestos ACM (2)	NAD
					03/05/2018	Asbestos Type	NAD
					03/05/2018	Asbestos Type (2)	NAD
					03/05/2018	Asbestos Level Screen	NAD
18/6314	1	P10		6	03/05/2018	General Description (Bulk Analysis)	Soil/Stone
					03/05/2018	Asbestos Fibres	NAD
					03/05/2018	Asbestos Fibres (2)	NAD
					03/05/2018	Asbestos ACM	NAD
					03/05/2018	Asbestos ACM (2)	NAD
					03/05/2018	Asbestos Type	NAD
					03/05/2018	Asbestos Type (2)	NAD
					03/05/2018	Asbestos Level Screen	NAD
18/6314	1	P11		9	03/05/2018	General Description (Bulk Analysis)	Soil/Stone
					03/05/2018	Asbestos Fibres	NAD
					03/05/2018	Asbestos Fibres (2)	NAD
					03/05/2018	Asbestos ACM	NAD
					03/05/2018	Asbestos ACM (2)	NAD
					03/05/2018	Asbestos Type	NAD
					03/05/2018	Asbestos Type (2)	NAD
					03/05/2018	Asbestos Level Screen	NAD

Contact: Sophie Goldwin

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.: 18/6314

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

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

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: 18/6314

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/IS 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.	PM3	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
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	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/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
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		AD	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
TM35	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	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.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes

JE Job No: 18/6314

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/IS ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM38	Solution analysis using the Thermo Aquagem Photometric Automatic Analyser. Modified US EPA methods 305.2, 375.4, 365.2, 353.1, 354.1	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 analyses 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 TM65.	Yes		AR	
TM73	Modified US EPA methods 150.1 and 8045D 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		AR	No



Exova Jones Environmental

Soilfix and Soilfix+ (SQA) Ltd, Deeside Industrial Estate, Newbridge, Netherdale, LD16 5PL

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

Soilfix Limited
10 St. Martins Ind. Park
Bristol
BS11 0RS



Attention :	Sophie Goldwin
Date :	29th May, 2018
Your reference :	C411
Our reference :	Test Report 18/7134 Batch 1
Location :	Yapton
Date samples received :	11th May, 2018
Status :	Final report
Issue :	2

Two samples were received for analysis on 11th May, 2018 of which two 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:



Lucas Halliwell
Project Co-ordinator

Please include all sections of this report if it is reproduced

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

Please see attached notes for all abbreviations and acronyms

Please see attached notes for all abbreviations and acronyms

Client Name: Soilfix Limited
Reference: C411
Location: Yapton
Contact: Sophie Goldwin

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, 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
18/7134	1	RE 02 S1		3	16/05/2018	General Description (Bulk Analysis)	soil/stones
					16/05/2018	Asbestos Fibres	Fibre Bundles
					16/05/2018	Asbestos ACM	NAD
					16/05/2018	Asbestos Type	Chrysotile
					16/05/2018	Asbestos Level Screen	less than 0.1%
					29/05/2018	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					29/05/2018	Total Detailed Gravimetric Quantification (% Asb)	<0.001 (mass %)
					29/05/2018	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	<0.001 (mass %)
					29/05/2018	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					29/05/2018	Asbestos Gravimetric & PCOM Total	<0.001 (mass %)
18/7134	1	RE 02 S2		5	16/05/2018	General Description (Bulk Analysis)	soil/stones
					16/05/2018	Asbestos Fibres	Fibre Bundles
					16/05/2018	Asbestos ACM	NAD
					16/05/2018	Asbestos Type	Chrysotile
					16/05/2018	Asbestos Level Screen	less than 0.1%
					29/05/2018	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					29/05/2018	Total Detailed Gravimetric Quantification (% Asb)	<0.001 (mass %)
					29/05/2018	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	<0.001 (mass %)
					29/05/2018	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					29/05/2018	Asbestos Gravimetric & PCOM Total	<0.001 (mass %)

Matrix : Solid

C411

Yapton

Sophie Goldwin

[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.: 18/7134

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

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

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: 18/7134

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/IS 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.	PM3	No preparation is required.			AR	
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM6	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
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	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/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
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 11365 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
TM35	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	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.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes

JE Job No: 18/7134

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/IS ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM38	Soluble ion analysis using the Thermo Aquagem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 385.2, 385.1, 384.1	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 analyses 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 TM65.	Yes		AR	
TM73	Modified US EPA methods 150.1 and 8045D 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		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 TM65.	Yes		AR	Yes

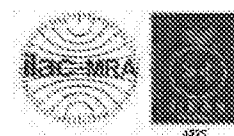


Exova Jones Environmental

Soilfix and Soilfix+ (SQA) Ltd, Deeside Industrial Park, Newbridge, Wiltshire, SN12 8PL

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

Soilfix Limited
10 St. Martins Ind. Park
Bristol
BS11 0RS



Attention :	Sophie Goldwin
Date :	29th May, 2018
Your reference :	C411
Our reference :	Test Report 18/7135 Batch 1
Location :	Yapton
Date samples received :	11th May, 2018
Status :	Final report
Issue :	1

Five samples were received for analysis on 11th May, 2018 of which five 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:



Lucas Halliwell
Project Co-ordinator

Please include all sections of this report if it is reproduced

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

Please see attached notes for all abbreviations and acronyms

Please see attached notes for all abbreviations and acronyms

Client Name: Soilfix Limited
Reference: C411
Location: Yapton
Contact: Sophie Goldwin

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, 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
18/7135	1	P1		3	17/05/2018	General Description (Bulk Analysis)	soil-stones
					17/05/2018	Asbestos Fibres	NAD
					17/05/2018	Asbestos Fibres (2)	NAD
					17/05/2018	Asbestos ACM	NAD
					17/05/2018	Asbestos ACM (2)	NAD
					17/05/2018	Asbestos Type	NAD
					17/05/2018	Asbestos Type (2)	NAD
					17/05/2018	Asbestos Level Screen	NAD
18/7135	1	RE01 S1		6	17/05/2018	General Description (Bulk Analysis)	soil-stones
					17/05/2018	Asbestos Fibres	Fibre Bundles
					17/05/2018	Asbestos ACM	NAD
					17/05/2018	Asbestos Type	Chrysotile
					17/05/2018	Asbestos Level Screen	less than 0.1%
					29/05/2018	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					29/05/2018	Total Detailed Gravimetric Quantification (% Asb)	<0.001 (mass %)
					29/05/2018	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	<0.001 (mass %)
18/7135	1	RE01 S2		9	17/05/2018	General Description (Bulk Analysis)	soil-stones
					17/05/2018	Asbestos Fibres	NAD
					17/05/2018	Asbestos Fibres (2)	NAD
					17/05/2018	Asbestos ACM	NAD
					17/05/2018	Asbestos ACM (2)	NAD
					17/05/2018	Asbestos Type	NAD
					17/05/2018	Asbestos Type (2)	NAD
					17/05/2018	Asbestos Level Screen	NAD
18/7135	1	SP04 S1		12	17/05/2018	General Description (Bulk Analysis)	soil-stones
					17/05/2018	Asbestos Fibres	NAD
					17/05/2018	Asbestos Fibres (2)	NAD
					17/05/2018	Asbestos ACM	NAD
					17/05/2018	Asbestos ACM (2)	NAD
					17/05/2018	Asbestos Type	NAD
					17/05/2018	Asbestos Type (2)	NAD
					17/05/2018	Asbestos Level Screen	NAD

Asbestos Analysis

Asbestos Analysis

Matrix : Solid

[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.: 18/7135

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

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

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: 18/7135

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/IS 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.	PM3	No preparation is required.			AR	
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM6	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
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	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/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
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		AD	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	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.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes

JE Job No: 18/7135

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/IS ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquatem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	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 TM665.	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		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 TM665.	Yes		AR	Yes



Exova Jones Environmental

Soil and Sediment Analysis (UK) Ltd, Deeside Industrial Estate, Newbridge, Wrexham, L21 3 9H.

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

Soilfix Limited
10 St. Martins Ind. Park
Bristol
BS11 0RS



Attention :	Sophie Goldwin
Date :	29th May, 2018
Your reference :	C411
Our reference :	Test Report 18/7474 Batch 1
Location :	Yapton
Date samples received :	17th May, 2018
Status :	Final report
Issue :	1

Four samples were received for analysis on 17th May, 2018 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:



Lucas Halliwell
Project Co-ordinator

Please include all sections of this report if it is reproduced

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

2 of 9

Client Name: Soilfix Limited
Reference: C411
Location: Yapton
Contact: Sophie Goldwin

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, 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
18/7474	1	SFTP9		2	21/05/2018	General Description (Bulk Analysis)	Soil/Stones
					21/05/2018	Asbestos Fibres	Fibre Bundles
					21/05/2018	Asbestos ACM	NAD
					21/05/2018	Asbestos Type	Chrysotile
					21/05/2018	Asbestos Level Screen	less than 0.1%
					29/05/2018	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					29/05/2018	Total Detailed Gravimetric Quantification (% Asb)	0.002 (mass %)
					29/05/2018	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	0.002 (mass %)
					29/05/2018	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					29/05/2018	Asbestos Gravimetric & PCOM Total	0.002 (mass %)
18/7474	1	SFTP10 S1		4	21/05/2018	General Description (Bulk Analysis)	Soil/Stones
					21/05/2018	Asbestos Fibres	Fibre Bundles
					21/05/2018	Asbestos ACM	NAD
					21/05/2018	Asbestos Type	Chrysotile
					21/05/2018	Asbestos Level Screen	less than 0.1%
					29/05/2018	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					29/05/2018	Total Detailed Gravimetric Quantification (% Asb)	<0.001 (mass %)
					29/05/2018	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	<0.001 (mass %)
					29/05/2018	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					29/05/2018	Asbestos Gravimetric & PCOM Total	<0.001 (mass %)
18/7474	1	SFTP10 S2		5	21/05/2018	General Description (Bulk Analysis)	soil stones
					21/05/2018	Asbestos Fibres	NAD
					21/05/2018	Asbestos Fibres (2)	NAD
					21/05/2018	Asbestos ACM	NAD
					21/05/2018	Asbestos ACM (2)	NAD
					21/05/2018	Asbestos Type	NAD
					21/05/2018	Asbestos Type (2)	NAD
					21/05/2018	Asbestos Level Screen	NAD
18/7474	1	SFTP11		7	21/05/2018	General Description (Bulk Analysis)	soil stones
					21/05/2018	Asbestos Fibres	NAD
					21/05/2018	Asbestos Fibres (2)	NAD
					21/05/2018	Asbestos ACM	NAD
					21/05/2018	Asbestos ACM (2)	NAD
					21/05/2018	Asbestos Type	NAD
					21/05/2018	Asbestos Type (2)	NAD
					21/05/2018	Asbestos Level Screen	NAD

Matrix : Solid

[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.: 18/7474

SOILS

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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

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

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	x50 Dilution

JE Job No: 1817474

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/IS 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.	PM3	No preparation is required.			AR	
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM6	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
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	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/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
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		AD	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	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.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes

JE Job No: 18/7474

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/IS ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
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TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	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 TM665.	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		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 TM665.	Yes		AR	Yes

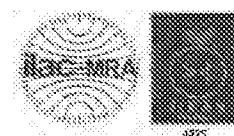


Exova Jones Environmental

Soil and Sediment Analysis (SQA) Ltd, Deeside Industrial Park, Newbridge, Wiltshire, SN10 9PL

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

Soilfix Limited
10 St. Martins Ind. Park
Bristol
BS11 0RS



Attention :	Sophie Goldwin
Date :	30th May, 2018
Your reference :	C411
Our reference :	Test Report 18/7916 Batch 1
Location :	Yapton
Date samples received :	24th May, 2018
Status :	Final report
Issue :	1

Five samples were received for analysis on 24th May, 2018 of which five 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:



Phil Sommerton BSc
Project Manager

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

Please see attached notes for all abbreviations and acronyms

Contact: Sophie Goldwin

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JE Job No.: 18/7916

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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.
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+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
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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

JE Job No: 18/7916

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/IS ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
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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
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	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/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
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21	As received solid or water samples are extracted in Methanol: Sodium Hydroxide (0.1M NaOH) (60:40) by orbital shaker.			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
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