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Our Ref: 18-13690
Your Ref: PO350/SKD

Analysis Report

Client: L & S Waste Management Ltd
Laveys Lane
Pegham Industrial Park
Fareham
Hampshire
PO15 6SD

Sample Details: 2 soil samples for Waste Acceptance Criteria (WAC) analysis

Date report issued: 17 December 2018

Number of pages (including this one): 7

Accreditation
All analytes marked M have been analysed under the scope of our MCERTS accreditation
All analytes marked U have been analysed under the scope of our UKAS accreditation
All analytes marked m have been subcontracted and analysed under the scope of their MCERTS accreditation
All analytes marked u have been subcontracted and analysed under the scope of their UKAS accreditation
All results labelled with an asterisk (*) are non-conforming due to incorrect sample storage or handling. The result may be invalid.
All comments are beyond the scope of our accrediation.

Signed on behalf of Envirochem by an authorised signatory

[redacted]

Dr James Drynan

Authorised Signatory

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Table 3: parameters determined on aqua regia digest (all results in mg/kg dry weight)

Analyte	Method	Sample Lab Ref: Job: 18-13690 Samp. 36603	*Soil Guideline Values*		
			Residential	*Allotment*	*Commercial*
Arsenic M	5.16, 6.08	11.5	*37†*	*43 †*	*640 †*
Antimony	5.16, 6.08	< 5.0	.	.	.
Barium M	5.16, 6.08	339 *	---	---	---
Cadmium M	5.16, 6.08	< 1.0 *	*11†*	*1.9†*	*190†*
Chromium (total) M	5.16, 6.08	30.8 *	.	.	.
Cobalt	5.16, 6.08	7.9	.	.	.
Copper M	5.16, 6.08	23.2 *	*2400†*	*520†*	*68000†*
Mercury M	5.16, 6.08	< 1.00	*1.2 †*	*21†*	*25.8†*
Molybdenum M	5.16, 6.08	< 5.0	---	.	.
Nickel M	5.16, 6.08	27.3 *	*180 †*	*230 †*	*980 †*
Lead M	5.16, 6.08	< 60.0 *	*210 ††*	*84 ††*	*1100 ††*
Selenium M	5.16, 6.08	< 2.0	*250 †*	*88 †*	*12000 †*
Thallium M	5.16, 6.08	< 2.0	.	.	.
Vanadium M	5.16, 6.08	64.0	*410 †*	*91 †*	*9000 †*
Zinc M	5.16, 6.08	118 *	*3700 ††*	*620 ††*	*73000 ††*

All analytes marked U have been analysed under the scope of our UKAS accreditation

Comments: (comments are beyond the scope of UKAS accreditation)

Limits labelled '†' are LQM/CIEH S4ULs (suitable 4 use levels) taken from The LQM/CIEH S4ULs for Human Risk Assessment published by Land Quality Press 2015

Limits labelled '††' are provisional C4SLs (Category 4 Screeninig Levels) taken from Appendix H Provisional C4SLs for Lead, these are based upon soil giudeline values publised by DEFRA and the HPA Compendium of Chemical Hazards document

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Table 4: PAH in soil (all results in mg/kg dry weight)

Analyte	Method	Sample Lab Ref: Job: 18-13690 Samp. 36603	*Soil Guideline Values*		
			Residential	*Allotment*	*Commercial*
PAH (total)	6.05	< 10.0	---	---	---
Naphthalene	6.05	< 0.10	*2.3*	*4.1*	*190*
Acenaphthylene	6.05	< 0.10	*170*	*28*	*83000*
Acenaphthene	6.05	0.11	*210*	*34*	*84000*
Fluorene	6.05	< 0.10	*170*	*27*	*63000*
Phenanthrene	6.05	< 0.10	*95*	*15*	*22000*
Anthracene	6.05	1.00	*2400*	*380*	*520000*
Fluoranthene	6.05	1.99	*280*	*52*	*23000*
Pyrene	6.05	1.74	*620*	*110*	*54000*
Benz(a)anthracene	6.05	1.11	*7.2*	*2.9*	*170*
Chrysene	6.05	0.13	*15*	*4.1*	*350*
Benzo(b)fluoranthene	6.05	< 0.10	*2.6*	*0.99*	*44*
Benzo(k)fluoranthene	6.05	0.13	*77*	*37*	*1200*
Benzo(a)pyrene	6.05	1.12	*2.2*	*0.97*	*35*
Dibenz(a,h)anthracene	6.05	< 0.10	*0.24*	*0.14*	*3.5*
Benzo(g,h,i)perylene	6.05	0.12	*320*	*290*	*3900*
Indeno(1,2,3-c,d)pyrene	6.05	0.49	*27*	*9.5*	*500*

Comments: (comments are beyond the scope of UKAS accreditation)

Limits are LQM/CIEH S4ULs (suitable 4 use levels) taken from "The LQM/CIEH S4ULs for Human Risk Assessment published by Land Quality Press 2015" and based upon 1% Soil Organic Matter

Table 5: TPH in soil (all results in mg/kg dry weight)

Analyte	Method	Sample Lab Ref: Job: 18-13690 Samp. 36603	*Soil Guideline Values*		
			Residential	*Allotment*	*Commercial*
TPH total (C10 - C40)	6.04	443	---	---	---
TPH aromatic (C8 - C10)	6.04	< 5.00	*34*	*8.6*	*3500*
TPH aromatic (C10 - C12)	6.04	< 5.0	*74*	*13*	*16000*
TPH aromatic (C12 - C16)	6.04	8.8	*140*	*23*	*36000*
TPH aromatic (C16 - C21)	6.04	48.2	*260*	*46*	*28000*
TPH aromatic (C21 - C40)	6.04	280	*1100*	*370*	*28000*
TPH aliphatic (C8 - C10)	6.04	< 5.00	*27*	*320*	*2000*
TPH aliphatic (C10 - C12)	6.04	< 5.0	*130*	*2200*	*9700*
TPH aliphatic (C12 - C16)	6.04	10.5	*1100*	*11000*	*59000*
TPH aliphatic (C16 - C21)	6.04	17.7	*65000*	*260000*	*1600000*
TPH aliphatic (C21 - C40)	6.04	71.5	*65000*	*260000*	*1600000*

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Table 3: parameters determined on aqua regia digest (all results in mg/kg dry weight)

Analyte	Method	Sample Lab Ref: Job: 18-13690 Samp. 36604	*Soil Guideline Values*		
			Residential	*Allotment*	*Commercial*
Arsenic M	5.16, 6.08	10.4	*37†*	*43 †*	*640 †*
Antimony	5.16, 6.08	< 5.0	.	.	.
Barium M	5.16, 6.08	101 *	---	---	---
Cadmium M	5.16, 6.08	< 1.0 *	*11†*	*1.9†*	*190†*
Chromium (total) M	5.16, 6.08	30.5 *	.	.	.
Cobalt	5.16, 6.08	12.1	.	.	.
Copper M	5.16, 6.08	18.4 *	*2400†*	*520†*	*68000†*
Mercury M	5.16, 6.08	< 1.00	*1.2 †*	*21†*	*25.8†*
Molybdenum M	5.16, 6.08	< 5.0	---	.	.
Nickel M	5.16, 6.08	14.8 *	*180 †*	*230 †*	*980 †*
Lead M	5.16, 6.08	87.5 *	*210 ††*	*84 ††*	*1100 ††*
Selenium M	5.16, 6.08	213	*250 †*	*88 †*	*12000 †*
Thallium M	5.16, 6.08	< 2.0	.	.	.
Vanadium M	5.16, 6.08	40.5	*410 †*	*91 †*	*9000 †*
Zinc M	5.16, 6.08	143 *	*3700 ††*	*620 ††*	*73000 ††*

All analytes marked U have been analysed under the scope of our UKAS accreditation

Comments: (comments are beyond the scope of UKAS accreditation)

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			Residential	*Allotment*	*Commercial*
PAH (total)	6.05	< 10.0	---	---	---
Naphthalene	6.05	< 0.10	*2.3*	*4.1*	*190*
Acenaphthylene	6.05	< 0.10	*170*	*28*	*83000*
Acenaphthene	6.05	< 0.10	*210*	*34*	*84000*
Fluorene	6.05	< 0.10	*170*	*27*	*63000*
Phenanthrene	6.05	< 0.10	*95*	*15*	*22000*
Anthracene	6.05	< 0.10	*2400*	*380*	*520000*
Fluoranthene	6.05	0.31	*280*	*52*	*23000*
Pyrene	6.05	0.30	*620*	*110*	*54000*
Benz(a)anthracene	6.05	0.30	*7.2*	*2.9*	*170*
Chrysene	6.05	< 0.10	*15*	*4.1*	*350*
Benzo(b)fluoranthene	6.05	< 0.10	*2.6*	*0.99*	*44*
Benzo(k)fluoranthene	6.05	< 0.10	*77*	*37*	*1200*
Benzo(a)pyrene	6.05	0.12	*2.2*	*0.97*	*35*
Dibenz(a,h)anthracene	6.05	< 0.10	*0.24*	*0.14*	*3.5*
Benzo(g,h,i)perylene	6.05	0.10	*320*	*290*	*3900*
Indeno(1,2,3-c,d)pyrene	6.05	< 0.10	*27*	*9.5*	*500*

Comments: (comments are beyond the scope of UKAS accreditation)

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Table 5: TPH in soil (all results in mg/kg dry weight)

Analyte	Method	Sample Lab Ref: Job: 18-13690 Samp. 36604	*Soil Guideline Values*		
			Residential	*Allotment*	*Commercial*
TPH total (C10 - C40)	6.04	92.3	---	---	---
TPH aromatic (C8 - C10)	6.04	< 5.00	*34*	*8.6*	*3500*
TPH aromatic (C10 - C12)	6.04	< 5.0	*74*	*13*	*16000*
TPH aromatic (C12 - C16)	6.04	< 5.0	*140*	*23*	*36000*
TPH aromatic (C16 - C21)	6.04	10.5	*260*	*46*	*28000*
TPH aromatic (C21 - C40)	6.04	42.3	*1100*	*370*	*28000*
TPH aliphatic (C8 - C10)	6.04	< 5.00	*27*	*320*	*2000*
TPH aliphatic (C10 - C12)	6.04	< 5.0	*130*	*2200*	*9700*
TPH aliphatic (C12 - C16)	6.04	< 5.0	*1100*	*11000*	*59000*
TPH aliphatic (C16 - C21)	6.04	5.8	*65000*	*260000*	*1600000*
TPH aliphatic (C21 - C40)	6.04	21.8	*65000*	*260000*	*1600000*

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