Unit 7-8 Hawarden Business Park
Manor Road (off Manor Lane)
Hawarden
Deeside
CH5 3US
Tel: (01244) 528700
Fax: (01244) 528701
email: hawardencustomerservices@alsglobal.com
Website: www.alsenvironmental.co.uk

Newport City Council
Civic Centre
Newport
NP20 4UR

Attention: Meirion Humphreys

CERTIFICATE OF ANALYSIS

Date:	03 December 2018
Customer:	H_NCC_NPT
Sample Delivery Group (SDG):	181120-12
Your Reference:	
Location:	Docksway Landfill Site
Report No:	483738

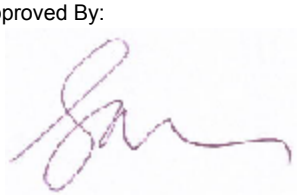
This report has been revised and directly supersedes 483377 in its entirety.

We received 12 samples on Tuesday November 20, 2018 and 12 of these samples were scheduled for analysis which was completed on Monday December 03, 2018. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Environmental Hawarden (Method codes TM) or ALS Environmental Aberdeen (Method codes S).

Approved By:



Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	181120-12	**Client Reference:**		**Report Number:**	483738
Location:	Docksway Landfill Site	**Order Number:**	700124102	**Superseded Report:**	483377

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
18774166	C3_Asb		0.00 - 0.00	19/11/2018
18774189	C2B		0.00 - 0.00	19/11/2018
18774261	GW03_02		0.00 - 0.00	19/11/2018
18774147	GW03_05		0.00 - 0.00	19/11/2018
18774219	LF11_02		0.00 - 0.00	19/11/2018
18774246	LF11_04		0.00 - 0.00	19/11/2018
18774232	LF11_07		0.00 - 0.00	19/11/2018
18774203	LF Cell_1_C		0.00 - 0.00	19/11/2018
18774161	SW11		0.00 - 0.00	19/11/2018
18774142	SW_23		0.00 - 0.00	19/11/2018
18774171	SW_24		0.00 - 0.00	19/11/2018
18774182	SW_1A		0.00 - 0.00	19/11/2018

Maximum Sample/Coolbox Temperature (°C) : **9.0**

ISO5667-3 Water quality - Sampling - Part3 -
During Transportation samples shall be stored in a cooling device capable of maintaining a temperature of (5±3)°C.

ALS have data which show that a cool box with 4 frozen icepacks is capable of maintaining pre-chilled samples at a temperature of (5±3)°C for a period of up to 24hrs.

Only received samples which have had analysis scheduled will be shown on the following pages.

CERTIFICATE OF ANALYSIS

SDG:	181120-12	**Client Reference:**		**Report Number:**	483738
Location:	Docksway Landfill Site	**Order Number:**	700124102	**Superseded Report:**	483377

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			18774166					18774189									18774261						18774147	
Customer Sample Reference			C3_Asb					C2B									GW03_02						GW03_05	
AGS Reference																								
Depth (m)			0.00 - 0.00					0.00 - 0.00									0.00 - 0.00						0.00 - 0.00	
Container			250ml BOD (ALE212)	500ml Plastic (ALE208)	H2SO4 (ALE244)	0.5l glass bottle (ALE227)	250ml BOD (ALE212)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	ZnAc (ALE246)	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	H2SO4 (ALE244)		
Sample Type			SW	SW	SW	LE	LE	LE	LE	LE	LE	LE	LE	GW	GW	GW	GW	GW	GW	GW	GW	GW		
Alkalinity as CaCO3	All	NDPs: 0 Tests: 2													X						X			
Alkalinity Filtered as CaCO3	All	NDPs: 0 Tests: 2						X																
Ammoniacal Nitrogen	All	NDPs: 0 Tests: 12			X				X							X						X		
Anions by Kone (w)	All	NDPs: 0 Tests: 9		X				X							X						X			
Asbestos in Water*	All	NDPs: 0 Tests: 1		X																				
BOD*	All	NDPs: 0 Tests: 6	X				X																	
COD Unfiltered	All	NDPs: 0 Tests: 9	X				X								X						X			
Conductivity (at 20 deg.C)	All	NDPs: 0 Tests: 9		X				X							X						X			
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 7									X							X						
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 7								X							X						
EPH (DRO) (C10-C40) Aqueous (W)	All	NDPs: 0 Tests: 7				X								X						X				
Ionic Balance	All	NDPs: 0 Tests: 2						X																
Mercury Dissolved	All	NDPs: 0 Tests: 7								X							X							
Nitrite by Kone (w)	All	NDPs: 0 Tests: 2									X													
Organotins in Aqueous Samples	All	NDPs: 0 Tests: 4				X									X						X			

18774203	LF Cell_1_C		0.00 - 0.00	250ml BOD (ALE212)	LE							X	X												
				0.5l glass bottle (ALE227)	LE													X							X
18774232	LF11_07		0.00 - 0.00	Vial (ALE297)	LE																				
				NaOH (ALE245)	LE										X										
				HNO3 Filtered (ALE204)	LE											X					X				
				H2SO4 (ALE244)	LE			X																	
				0.5l glass bottle (ALE227)	LE													X							
18774246	LF11_04		0.00 - 0.00	Vial (ALE297)	LE																				
				NaOH (ALE245)	LE										X										
				HNO3 Filtered (ALE204)	LE											X					X				
				H2SO4 (ALE244)	LE			X																	
				0.5l glass bottle (ALE227)	LE													X							
18774219	LF11_02		0.00 - 0.00	Vial (ALE297)	LE																				
				NaOH (ALE245)	LE										X										
				HNO3 Filtered (ALE204)	LE											X					X				
				H2SO4 (ALE244)	LE			X																	
				0.5l glass bottle (ALE227)	LE													X							
18774147	GW03_05		0.00 - 0.00	Vial (ALE297)	GW																				
				NaOH (ALE245)	GW										X										
				HNO3 Filtered (ALE204)	GW											X					X				

CERTIFICATE OF ANALYSIS

SDG:	181120-12	**Client Reference:**		**Report Number:**	483738
Location:	Docksway Landfill Site	**Order Number:**	700124102	**Superseded Report:**	483377

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)				18774166				18774189								18774261						18774147		
Customer Sample Reference				C3_Asb				C2B								GW03_02						GW03_05		
AGS Reference																								
Depth (m)				0.00 - 0.00				0.00 - 0.00								0.00 - 0.00						0.00 - 0.00		
Container				250ml BOD (ALE212)	500ml Plastic (ALE208)	H2SO4 (ALE244)	0.5l glass bottle (ALE227)	250ml BOD (ALE212)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	ZnAc (ALE246)	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	500ml Plastic (ALE208)	H2SO4 (ALE244)
Sample Type				SW	SW	SW	LE	LE	LE	LE	LE	LE	LE	LE	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
PAH Spec MS - Aqueous (W)	All	NDPs: 0 Tests: 2					X																	
Pesticides (Suite I) by GCMS	All	NDPs: 0 Tests: 7							X						X						X			
Pesticides (Suite II) by GCMS	All	NDPs: 0 Tests: 7					X								X						X			
Pesticides (Suite III) by GCMS	All	NDPs: 0 Tests: 7							X						X						X			
pH Value	All	NDPs: 0 Tests: 9		X					X							X						X		
Phenols by HPLC (W)	All	NDPs: 0 Tests: 7								X							X							X
Phosphate by Kone (w)	All	NDPs: 0 Tests: 2							X															
Sulphide	All	NDPs: 0 Tests: 2												X										
SVOC MS (W) - Aqueous	All	NDPs: 0 Tests: 7					X								X						X			
Total Organic and Inorganic Carbon	All	NDPs: 0 Tests: 4								X							X							X
VOC MS (W)	All	NDPs: 0 Tests: 7											X							X				

18774203	LF Cell_1_C		0.00 - 0.00	250ml BOD (ALE212)	LE												
				0.5l glass bottle (ALE227)	LE		x	x	x	x					x		
18774232	LF11_07		0.00 - 0.00	Vial (ALE297)	LE												x
				NaOH (ALE245)	LE												
				HNO3 Filtered (ALE204)	LE												
				H2SO4 (ALE244)	LE						x						
				0.5l glass bottle (ALE227)	LE		x	x	x						x		
18774246	LF11_04		0.00 - 0.00	Vial (ALE297)	LE												x
				NaOH (ALE245)	LE												
				HNO3 Filtered (ALE204)	LE												
				H2SO4 (ALE244)	LE						x						
				0.5l glass bottle (ALE227)	LE		x	x	x						x		
18774219	LF11_02		0.00 - 0.00	Vial (ALE297)	LE												x
				NaOH (ALE245)	LE												
				HNO3 Filtered (ALE204)	LE												
				H2SO4 (ALE244)	LE						x						
				0.5l glass bottle (ALE227)	LE		x	x	x						x		
18774147	GW03_05		0.00 - 0.00	Vial (ALE297)	GW												x
				NaOH (ALE245)	GW												
				HNO3 Filtered (ALE204)	GW												

CERTIFICATE OF ANALYSIS

SDG:	181120-12	**Client Reference:**		**Report Number:**	483738
Location:	Docksway Landfill Site	**Order Number:**	700124102	**Superseded Report:**	483377

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)							18774203			18774161			18774142			18774171			18774182	
Customer Sample Reference							LF Cell_1_C			SW11			SW_23			SW_24			SW_1A	
AGS Reference																				
Depth (m)							0.00 - 0.00			0.00 - 0.00			0.00 - 0.00			0.00 - 0.00			0.00 - 0.00	
Container							500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	ZnAc (ALE246)	0.5l glass bottle (ALE227)	250ml BOD (ALE212)	H2SO4 (ALE244)	250ml BOD (ALE212)	500ml Plastic (ALE208)	H2SO4 (ALE244)	250ml BOD (ALE212)	500ml Plastic (ALE208)	500ml Plastic (ALE208)	H2SO4 (ALE244)
Sample Type							LE	LE	LE	LE	LE	LE	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
Alkalinity Filtered as CaCO3	All	NDPs: 0 Tests: 2					X															
Ammoniacal Nitrogen	All	NDPs: 0 Tests: 12						X							X			X				X
Anions by Kone (w)	All	NDPs: 0 Tests: 9					X						X				X				X	
BOD True Total	All	NDPs: 0 Tests: 1														X						
BOD*	All	NDPs: 0 Tests: 6												X		X				X		
COD Unfiltered	All	NDPs: 0 Tests: 9												X		X			X		X	
Conductivity (at 20 deg.C)	All	NDPs: 0 Tests: 9					X						X				X				X	
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 7								X												
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 7							X													
Ionic Balance	All	NDPs: 0 Tests: 2					X															
Mercury Dissolved	All	NDPs: 0 Tests: 7							X													
Nitrite by Kone (w)	All	NDPs: 0 Tests: 2								X												
pH Value	All	NDPs: 0 Tests: 9					X						X				X				X	
Phenols by HPLC (W)	All	NDPs: 0 Tests: 7						X														
Phosphate by Kone (w)	All	NDPs: 0 Tests: 2					X															

CERTIFICATE OF ANALYSIS

SDG:	181120-12	**Client Reference:**		**Report Number:**	483738
Location:	Docksway Landfill Site	**Order Number:**	700124102	**Superseded Report:**	483377

Results Legend

X **Test**

N **No Determination Possible**

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			18774203	18774161	18774142	18774171	18774182												
Customer Sample Reference			LF Cell_1_C	SW11	SW_23	SW_24	SW_1A												
AGS Reference																			
Depth (m)			0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00												
Container			500ml Plastic (ALE208)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	NaOH (ALE245)	Vial (ALE297)	ZnAc (ALE246)	0.5l glass bottle (ALE227)	250ml BOD (ALE212)	H2SO4 (ALE244)	250ml BOD (ALE212)	500ml Plastic (ALE208)	H2SO4 (ALE244)	250ml BOD (ALE212)	500ml Plastic (ALE208)	H2SO4 (ALE244)	250ml BOD (ALE212)	500ml Plastic (ALE208)	H2SO4 (ALE244)
Sample Type			LE	LE	LE	LE	LE	LE	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
Sulphide	All	NDPs: 0 Tests: 2						X												
Total Organic and Inorganic Carbon	All	NDPs: 0 Tests: 4		X																
VOC MS (W)	All	NDPs: 0 Tests: 7					X													

Validated

CERTIFICATE OF ANALYSIS

SDG:	181120-12	**Client Reference:**		**Report Number:**	483738
Location:	Docksway Landfill Site	**Order Number:**	700124102	**Superseded Report:**	483377

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	C3_Asb	C2B	GW03_02	GW03_05	LF11_02	LF11_04
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Land Leachate (LE)	Ground Water (GW)	Ground Water (GW)	Land Leachate (LE)	Land Leachate (LE)
			Date Sampled	19/11/2018	19/11/2018	19/11/2018	19/11/2018	19/11/2018	19/11/2018
			Sampled Time	.	.	.	.	.	.
			Date Received	20/11/2018	20/11/2018	20/11/2018	20/11/2018	20/11/2018	20/11/2018
			SDG Ref	181120-12	181120-12	181120-12	181120-12	181120-12	181120-12
			Lab Sample No.(s)	18774166	18774189	18774261	18774147	18774219	18774246
			AGS Reference						
Ionic balance	% Diff	Calulation			0.000708				
BOD*	<1 mg/l	SUB		<1 #	90 #				
Description of Sample*		SUB (ASB)		See Attached					
Asbestos Identification*		SUB (ASB)		See Attached					
Alkalinity, Total as CaCO3	<2 mg/l	TM043				885 #	1100 #		
Alkalinity,Total as CaCO3 (diss.filt)	<2 mg/l	TM043			6980				
Organic Carbon, Total	<3 mg/l	TM090			465 ♦	10.3 #	20.3 ♦ #		
Ammoniacal Nitrogen as N	<0.2 mg/l	TM099		0.309 #	1210	26.8 #	44.7 #	384	2090
Sulphide	<0.01 mg/l	TM101			0.251				
COD, unfiltered	<7 mg/l	TM107		62.4 #	1470 #	39 #	89.4 #		
Conductivity @ 20 deg.C	<0.005 mS/cm	TM120		1.87 #	15.3 #	1.55 #	2.09 #		
Arsenic (diss.filt)	<0.5 µg/l	TM152			49.8 #	3.06 #	2.8 #	4.8 #	17.3 #
Boron (diss.filt)	<10 µg/l	TM152			8580 #				
Cadmium (diss.filt)	<0.08 µg/l	TM152			0.0948 #	<0.08 #	<0.08 #		
Chromium (diss.filt)	<1 µg/l	TM152			137 #	<1 #	<1 #		
Copper (diss.filt)	<0.3 µg/l	TM152			0.594 #	2.95 #	3.02 #		
Lead (diss.filt)	<0.2 µg/l	TM152			0.5 #	3.15 #	<0.2 #		
Manganese (diss.filt)	<3 µg/l	TM152			705 #	810 #	438 #		
Nickel (diss.filt)	<0.4 µg/l	TM152			167 #	5.4 #	6.07 #	13.6 #	328 #
Selenium (diss.filt)	<1 µg/l	TM152			1.29 #				
Zinc (diss.filt)	<1 µg/l	TM152			27.2 #	11.1 #	8.49 #		
Sodium (Dis.Filt)	<0.076 mg/l	TM152				56.6 #	189 #		
Magnesium (Dis.Filt)	<0.036 mg/l	TM152				57.8 #	72.3 #		
Potassium (Dis.Filt)	<0.2 mg/l	TM152			633 #	26.7 #	36 #	248 #	960 #
Calcium (Dis.Filt)	<0.2 mg/l	TM152				185 #	187 #		
Iron (Dis.Filt)	<0.019 mg/l	TM152			4.76 #				
Hardness, Total as CaCO3	<0.65 mg/l	TM152			1250				
EPH Range >C10 - C40 (aq)	<100 µg/l	TM172			1760	263	191	14700	8720
Mercury (diss.filt)	<0.01 µg/l	TM183			<0.01 #	<0.01 #	<0.01 #	<0.01 #	<0.01 #
Nitrite as NO2	<0.05 mg/l	TM184			<0.05				
Phosphate (Ortho as PO4)	<0.05 mg/l	TM184			10.3				
Sulphate	<2 mg/l	TM184			<10	2.5 #	4 #		

CERTIFICATE OF ANALYSIS

SDG:	181120-12	**Client Reference:**		**Report Number:**	483738
Location:	Docksway Landfill Site	**Order Number:**	700124102	**Superseded Report:**	483377

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	C3_Asb	C2B	GW03_02	GW03_05	LF11_02	LF11_04
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Land Leachate (LE)	Ground Water (GW)	Ground Water (GW)	Land Leachate (LE)	Land Leachate (LE)
			Date Sampled	19/11/2018	19/11/2018	19/11/2018	19/11/2018	19/11/2018	19/11/2018
			Sampled Time	.	.	.	.	.	.
			Date Received	20/11/2018	20/11/2018	20/11/2018	20/11/2018	20/11/2018	20/11/2018
			SDG Ref	181120-12	181120-12	181120-12	181120-12	181120-12	181120-12
			Lab Sample No.(s)	18774166	18774189	18774261	18774147	18774219	18774246
			AGS Reference						
Chloride	<2 mg/l	TM184		279 #	2140	67.7 #	197 #		
Nitrate as NO3	<0.3 mg/l	TM184			1.84				
Total Oxidised Nitrogen as N	<0.1 mg/l	TM184			<0.5	<0.1 #	0.135 #		
Cyanide, Total	<0.05 mg/l	TM227			<0.05 #	<0.05 #	<0.05 #	<0.05 #	0.06 #
Cyanide, Free	<0.05 mg/l	TM227				<0.05 #	<0.05 #	<0.05 #	<0.05 #
pH	<1 pH Units	TM256		8.14 #	7.91 #	6.98 #	7.55 #		
Phenols, Total Detected monohydric	<0.016 mg/l	TM259			0.18 #	<0.016 #	<0.016 #	0.02 #	0.11 #
Dibutyl tin	<5 ng/l	TM328			<30	<5	<5		
Tributyl tin	<1 ng/l	TM328			<6	<1	<1		
Tetrabutyl tin	<2 ng/l	TM328			<12	<2	<2		
Triphenyl tin	<1 ng/l	TM328			<6	<1	<1		
Surrogate	%	TM328			77.7	102	76.9		
Trifluralin	<0.01 µg/l	TM343			<0.2	<0.01	<0.01	<0.01	<0.01
alpha-HCH	<0.01 µg/l	TM343			<0.1	<0.01	<0.01	<0.01	<0.01
gamma-HCH (Lindane)	<0.01 µg/l	TM343			<0.1	<0.01	<0.01	<0.01	<0.01
Heptachlor	<0.01 µg/l	TM343			<0.1	<0.01	<0.01	<0.01	<0.01
Aldrin	<0.01 µg/l	TM343			<0.1	<0.01	<0.01	<0.01	<0.01
beta-HCH	<0.01 µg/l	TM343			<0.1	<0.01	<0.01	<0.01	<0.01
Isodrin	<0.01 µg/l	TM343			<0.1	<0.01	<0.01	<0.01	<0.01
delta-HCH	<0.01 µg/l	TM343			<0.1	<0.01	<0.01	<0.01	<0.01
Heptachlor epoxide	<0.01 µg/l	TM343			<0.1	<0.01	<0.01	<0.01	<0.01
o,p'-DDE	<0.01 µg/l	TM343			<0.1	<0.01	<0.01	<0.01	<0.01
Endosulphan I	<0.01 µg/l	TM343			<0.1	<0.01	<0.01	<0.01	<0.01
trans-Chlordane	<0.01 µg/l	TM343			<0.1	<0.01	<0.01	<0.01	<0.01
cis-Chlordane	<0.01 µg/l	TM343			<0.1	<0.01	<0.01	<0.01	<0.01
p,p'-DDE	<0.01 µg/l	TM343			<0.1	<0.01	<0.01	<0.01	<0.01
Dieldrin	<0.01 µg/l	TM343			<0.1	<0.01	<0.01	<0.01	<0.01
o,p'-DDD (TDE)	<0.01 µg/l	TM343			<0.1	<0.01	<0.01	<0.01	<0.01
Endrin	<0.01 µg/l	TM343			<0.1	<0.01	<0.01	<0.01	<0.01
o,p'-DDT	<0.01 µg/l	TM343			<0.1	<0.01	<0.01	<0.01	<0.01
p,p'-DDD (TDE)	<0.01 µg/l	TM343			<0.1	<0.01	<0.01	<0.01	<0.01
Endosulphan II	<0.02 µg/l	TM343			<0.2	<0.02	<0.02	<0.02	<0.02

CERTIFICATE OF ANALYSIS

SDG:	181120-12	**Client Reference:**		**Report Number:**	483738
Location:	Docksway Landfill Site	**Order Number:**	700124102	**Superseded Report:**	483377

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	C3_Asb	C2B	GW03_02	GW03_05	LF11_02	LF11_04
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Land Leachate (LE)	Ground Water (GW)	Ground Water (GW)	Land Leachate (LE)	Land Leachate (LE)
			Date Sampled	19/11/2018	19/11/2018	19/11/2018	19/11/2018	19/11/2018	19/11/2018
			Sampled Time	-	-	-	-	-	-
			Date Received	20/11/2018	20/11/2018	20/11/2018	20/11/2018	20/11/2018	20/11/2018
			SDG Ref	181120-12	181120-12	181120-12	181120-12	181120-12	181120-12
			Lab Sample No.(s)	18774166	18774189	18774261	18774147	18774219	18774246
			AGS Reference						
p,p'-DDT	<0.01 µg/l	TM343		<0.1	<0.01	<0.01	<0.01	<0.01	
o,p'-Methoxychlor	<0.01 µg/l	TM343		<0.1	<0.01	<0.01	<0.01	<0.01	
p,p'-Methoxychlor	<0.01 µg/l	TM343		<0.1	<0.01	<0.01	<0.01	<0.01	
Endosulphan Sulphate	<0.02 µg/l	TM343		<0.2	<0.02	<0.02	<0.02	<0.02	
Permethrin I	<0.01 µg/l	TM343		<0.1	<0.01	<0.01	<0.01	<0.01	
Permethrin II	<0.01 µg/l	TM343		<0.1	<0.01	<0.01	<0.01	<0.01	
1,3,5-Trichlorobenzene	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Hexachlorobutadiene	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
1,2,4-Trichlorobenzene	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	0.0365	0.0208	
1,2,3-Trichlorobenzene	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Dichlorvos	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Dichlobenil	<0.01 µg/l	TM344		<0.01	2.12	<0.01	<0.01	<0.01	
Mevinphos	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Tecnazene	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Hexachlorobenzene	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Demeton-S-methyl	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Phorate	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Diazinon	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Triallate	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Atrazine	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Simazine	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Disulfoton	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Propetamphos	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Chlorpyriphos-methyl	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Dimethoate	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Pirimiphos-methyl	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Chlorpyriphos	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Methyl Parathion	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Malathion	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Fenthion	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Fenitrothion	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	
Triadimefon	<0.01 µg/l	TM344		<0.01	<0.01	<0.01	<0.01	<0.01	

Validated

CERTIFICATE OF ANALYSIS

SDG:	181120-12	**Client Reference:**		**Report Number:**	483738
Location:	Docksway Landfill Site	**Order Number:**	700124102	**Superseded Report:**	483377

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	C3_Asb	C2B	GW03_02	GW03_05	LF11_02	LF11_04
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Land Leachate (LE)	Ground Water (GW)	Ground Water (GW)	Land Leachate (LE)	Land Leachate (LE)
			Date Sampled	19/11/2018	19/11/2018	19/11/2018	19/11/2018	19/11/2018	19/11/2018
			Sampled Time	-	-	-	-	-	-
			Date Received	20/11/2018	20/11/2018	20/11/2018	20/11/2018	20/11/2018	20/11/2018
			SDG Ref	181120-12	181120-12	181120-12	181120-12	181120-12	181120-12
			Lab Sample No.(s)	18774166	18774189	18774261	18774147	18774219	18774246
			AGS Reference						
Parathion	<0.01 µg/l	TM344			<0.01	<0.01	<0.01	<0.01	<0.01
Chlorfenvinphos	<0.01 µg/l	TM344			<0.01	<0.01	<0.01	<0.01	<0.01
Ethion	<0.01 µg/l	TM344			<0.01	<0.01	<0.01	<0.01	<0.01
Carbophenothion	<0.01 µg/l	TM344			<0.01	<0.01	<0.01	<0.01	<0.01
Triazophos	<0.01 µg/l	TM344			<0.01	<0.01	<0.01	<0.01	<0.01
Phosalone	<0.01 µg/l	TM344			<0.01	<0.01	<0.02	<0.02	<0.01
Azinphos methyl	<0.02 µg/l	TM344			<0.02	<0.02	<0.1	<0.1	<0.02
Azinphos ethyl	<0.02 µg/l	TM344			<0.02	0.11	<0.02	<0.02	<0.02
Etridiazole	<0.01 µg/l	TM345			<0.01	<0.01	<0.01	<0.01	<0.01
Propachlor	<0.01 µg/l	TM345			<0.01	<0.01	<0.01	<0.01	<0.01
Omethoate	<0.01 µg/l	TM345			<0.01	<0.01	<0.01	<0.01	<0.01
Propazine	<0.01 µg/l	TM345			<0.01	<0.01	<0.01	<0.01	<0.01
Alachlor	<0.01 µg/l	TM345			<0.01	<0.01	<0.01	<0.01	<0.01
Prometryn	<0.01 µg/l	TM345			<0.01	<0.01	<0.01	<0.01	<0.01
Terbutryn	<0.01 µg/l	TM345			<0.01	<0.01	<0.01	<0.01	<0.01
Chlorothalonil	<0.01 µg/l	TM345			<0.01	<0.01	<0.01	<0.01	<0.01
Trietazine	<0.01 µg/l	TM345			<0.01	<0.01	<0.01	<0.01	<0.01
Coumaphos	<0.01 µg/l	TM345			<0.01	<0.01	<0.01	<0.01	<0.01

Validated

CERTIFICATE OF ANALYSIS

SDG:	181120-12	**Client Reference:**		**Report Number:**	483738
Location:	Docksway Landfill Site	**Order Number:**	700124102	**Superseded Report:**	483377

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	LF11_07	LF Cell_1_C	SW11	SW_23	SW_24	SW_1A
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Land Leachate (LE)	Land Leachate (LE)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	19/11/2018	19/11/2018	19/11/2018	19/11/2018	19/11/2018	19/11/2018
			Sampled Time	.	.	.	.	.	.
			Date Received	20/11/2018	20/11/2018	20/11/2018	20/11/2018	20/11/2018	20/11/2018
			SDG Ref	181120-12	181120-12	181120-12	181120-12	181120-12	181120-12
			Lab Sample No.(s)	18774232	18774203	18774161	18774142	18774171	18774182
			AGS Reference						
Ionic balance	% Diff	Calulation			-0.677				
BOD*	<1 mg/l	SUB			89 #	2 #	<1 #		<1 #
Alkalinity,Total as CaCO3 (diss.filt)	<2 mg/l	TM043			6240				
BOD, unfiltered	<1 mg/l	TM045						4.21 #	
Organic Carbon, Total	<3 mg/l	TM090			510 ♦				
Ammoniacal Nitrogen as N	<0.2 mg/l	TM099		1440	1150	0.701 #	21.1 #	0.344 #	<0.2 #
Sulphide	<0.01 mg/l	TM101			0.0407				
COD, unfiltered	<7 mg/l	TM107			1460 #	32.3 #	46.7 #	37 #	9.33 #
Conductivity @ 20 deg.C	<0.005 mS/cm	TM120			14.1 #	0.314 #	1.61 #	0.531 #	0.377 #
Arsenic (diss.filt)	<0.5 µg/l	TM152		55.2 #	20.8 #				
Boron (diss.filt)	<10 µg/l	TM152			4350 #				
Cadmium (diss.filt)	<0.08 µg/l	TM152			<0.08 #				
Chromium (diss.filt)	<1 µg/l	TM152			73.1 #				
Copper (diss.filt)	<0.3 µg/l	TM152			<0.3 #				
Lead (diss.filt)	<0.2 µg/l	TM152			0.588 #				
Manganese (diss.filt)	<3 µg/l	TM152			507 #				
Nickel (diss.filt)	<0.4 µg/l	TM152		378 #	142 #				
Selenium (diss.filt)	<1 µg/l	TM152			<1 #				
Zinc (diss.filt)	<1 µg/l	TM152			107 #				
Potassium (Dis.Filt)	<0.2 mg/l	TM152		637 #	546 #				
Iron (Dis.Filt)	<0.019 mg/l	TM152			3.43 #				
Hardness, Total as CaCO3	<0.65 mg/l	TM152			704				
EPH Range >C10 - C40 (aq)	<100 µg/l	TM172		13300	1200				
Mercury (diss.filt)	<0.01 µg/l	TM183		<0.01 #	<0.1 #				
Nitrite as NO2	<0.05 mg/l	TM184			<0.05				
Phosphate (Ortho as PO4)	<0.05 mg/l	TM184			12.4				
Sulphate	<2 mg/l	TM184			<10				
Chloride	<2 mg/l	TM184			1780	9.2 #	179 #	44.6 #	30 #
Nitrate as NO3	<0.3 mg/l	TM184			1.81				
Total Oxidised Nitrogen as N	<0.1 mg/l	TM184			<0.5				
Cyanide, Total	<0.05 mg/l	TM227		<0.05 #	<0.05 #				
Cyanide, Free	<0.05 mg/l	TM227		<0.05 #					

CERTIFICATE OF ANALYSIS

SDG:	181120-12	**Client Reference:**		**Report Number:**	483738
Location:	Docksway Landfill Site	**Order Number:**	700124102	**Superseded Report:**	483377

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	LF11_07	LF Cell_1_C	SW11	SW_23	SW_24	SW_1A
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Land Leachate (LE)	Land Leachate (LE)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	19/11/2018	19/11/2018	19/11/2018	19/11/2018	19/11/2018	19/11/2018
			Sampled Time	-	-	-	-	-	-
			Date Received	20/11/2018	20/11/2018	20/11/2018	20/11/2018	20/11/2018	20/11/2018
			SDG Ref	181120-12	181120-12	181120-12	181120-12	181120-12	181120-12
			Lab Sample No.(s)	18774232	18774203	18774161	18774142	18774171	18774182
			AGS Reference						
pH	<1 pH Units	TM256			7.6 #	7.83 #	7.8 #	7.83 #	7.57 #
Phenols, Total Detected monohydric	<0.016 mg/l	TM259		0.14 #	0.05 #				
Dibutyl tin	<5 ng/l	TM328			<30				
Tributyl tin	<1 ng/l	TM328			<6				
Tetrabutyl tin	<2 ng/l	TM328			<12				
Triphenyl tin	<1 ng/l	TM328			<6				
Surrogate	%	TM328			84.3				
Trifluralin	<0.01 µg/l	TM343		<0.01	<0.01				
alpha-HCH	<0.01 µg/l	TM343		<0.01	<0.01				
gamma-HCH (Lindane)	<0.01 µg/l	TM343		<0.01	<0.01				
Heptachlor	<0.01 µg/l	TM343		<0.01	<0.01				
Aldrin	<0.01 µg/l	TM343		<0.01	<0.01				
beta-HCH	<0.01 µg/l	TM343		<0.01	<0.01				
Isodrin	<0.01 µg/l	TM343		<0.01	<0.01				
delta-HCH	<0.01 µg/l	TM343		<0.01	<0.01				
Heptachlor epoxide	<0.01 µg/l	TM343		<0.01	<0.01				
o,p'-DDE	<0.01 µg/l	TM343		<0.01	<0.01				
Endosulphan I	<0.01 µg/l	TM343		<0.01	<0.01				
trans-Chlordane	<0.01 µg/l	TM343		<0.01	<0.01				
cis-Chlordane	<0.01 µg/l	TM343		<0.01	<0.01				
p,p'-DDE	<0.01 µg/l	TM343		<0.01	<0.01				
Dieldrin	<0.01 µg/l	TM343		<0.01	<0.01				
o,p'-DDD (TDE)	<0.01 µg/l	TM343		<0.01	<0.01				
Endrin	<0.01 µg/l	TM343		<0.01	<0.01				
o,p'-DDT	<0.01 µg/l	TM343		<0.01	<0.01				
p,p'-DDD (TDE)	<0.01 µg/l	TM343		<0.01	<0.01				
Endosulphan II	<0.02 µg/l	TM343		<0.02	<0.02				
p,p'-DDT	<0.01 µg/l	TM343		<0.01	<0.01				
o,p'-Methoxychlor	<0.01 µg/l	TM343		<0.01	<0.01				
p,p'-Methoxychlor	<0.01 µg/l	TM343		<0.01	<0.01				
Endosulphan Sulphate	<0.02 µg/l	TM343		<0.02	<0.02				
Permethrin I	<0.01 µg/l	TM343		<0.01	<0.01				

CERTIFICATE OF ANALYSIS

SDG:	181120-12	**Client Reference:**		**Report Number:**	483738
Location:	Docksway Landfill Site	**Order Number:**	700124102	**Superseded Report:**	483377

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
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*	Subcontracted test.
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Component	LOD/Units	Method	Customer Sample Ref.	LF11_07	LF Cell_1_C	SW11	SW_23	SW_24	SW_1A
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Land Leachate (LE)	Land Leachate (LE)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	19/11/2018	19/11/2018	19/11/2018	19/11/2018	19/11/2018	19/11/2018
			Sampled Time	-	-	-	-	-	-
			Date Received	20/11/2018	20/11/2018	20/11/2018	20/11/2018	20/11/2018	20/11/2018
			SDG Ref	181120-12	181120-12	181120-12	181120-12	181120-12	181120-12
			Lab Sample No.(s)	18774232	18774203	18774161	18774142	18774171	18774182
			AGS Reference						
Permethrin II	<0.01 µg/l	TM343		<0.01	<0.01				
1,3,5-Trichlorobenzene	<0.01 µg/l	TM344		<0.01	<0.01				
Hexachlorobutadiene	<0.01 µg/l	TM344		<0.01	<0.01				
1,2,4-Trichlorobenzene	<0.01 µg/l	TM344		<0.01	<0.01				
1,2,3-Trichlorobenzene	<0.01 µg/l	TM344		<0.01	<0.01				
Dichlorvos	<0.01 µg/l	TM344		<0.01	<0.01				
Dichlobenil	<0.01 µg/l	TM344		<0.01	<0.01				
Mevinphos	<0.01 µg/l	TM344		<0.01	<0.01				
Tecnazene	<0.01 µg/l	TM344		<0.01	<0.01				
Hexachlorobenzene	<0.01 µg/l	TM344		<0.01	<0.01				
Demeton-S-methyl	<0.01 µg/l	TM344		<0.01	<0.01				
Phorate	<0.01 µg/l	TM344		<0.01	<0.01				
Diazinon	<0.01 µg/l	TM344		<0.01	<0.01				
Triallate	<0.01 µg/l	TM344		<0.01	<0.01				
Atrazine	<0.01 µg/l	TM344		<0.01	<0.01				
Simazine	<0.01 µg/l	TM344		<0.01	<0.01				
Disulfoton	<0.01 µg/l	TM344		<0.01	<0.01				
Propetamphos	<0.01 µg/l	TM344		<0.01	<0.01				
Chlorpyriphos-methyl	<0.01 µg/l	TM344		<0.01	<0.01				
Dimethoate	<0.01 µg/l	TM344		<0.01	<0.01				
Pirimiphos-methyl	<0.01 µg/l	TM344		<0.01	<0.01				
Chlorpyriphos	<0.01 µg/l	TM344		<0.01	<0.01				
Methyl Parathion	<0.01 µg/l	TM344		<0.01	<0.01				
Malathion	<0.01 µg/l	TM344		<0.01	<0.01				
Fenthion	<0.01 µg/l	TM344		<0.01	<0.01				
Fenitrothion	<0.01 µg/l	TM344		<0.01	<0.01				
Triadimefon	<0.01 µg/l	TM344		<0.01	<0.01				
Parathion	<0.01 µg/l	TM344		<0.01	<0.01				
Chlorfenvinphos	<0.01 µg/l	TM344		<0.01	<0.01				
Ethion	<0.01 µg/l	TM344		<0.01	<0.01				
Carbophenothion	<0.01 µg/l	TM344		<0.01	<0.01				
Triazophos	<0.01 µg/l	TM344		<0.01	<0.01				

CERTIFICATE OF ANALYSIS

SDG:	181120-12	**Client Reference:**		**Report Number:**	483738
Location:	Docksway Landfill Site	**Order Number:**	700124102	**Superseded Report:**	483377

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	LF11_07	LF Cell_1_C	SW11	SW_23	SW_24	SW_1A
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Land Leachate (LE)	Land Leachate (LE)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	19/11/2018	19/11/2018	19/11/2018	19/11/2018	19/11/2018	19/11/2018
			Sampled Time	-	-	-	-	-	-
			Date Received	20/11/2018	20/11/2018	20/11/2018	20/11/2018	20/11/2018	20/11/2018
			SDG Ref	181120-12	181120-12	181120-12	181120-12	181120-12	181120-12
			Lab Sample No.(s)	18774232	18774203	18774161	18774142	18774171	18774182
			AGS Reference						
Phosalone	<0.01 µg/l	TM344		<0.02	<0.01				
Azinphos methyl	<0.02 µg/l	TM344		<0.1	<0.02				
Azinphos ethyl	<0.02 µg/l	TM344		<0.02	<0.02				
Etridiazole	<0.01 µg/l	TM345		<0.01	<0.01				
Propachlor	<0.01 µg/l	TM345		<0.01	<0.01				
Omethoate	<0.01 µg/l	TM345		<0.01	<0.01				
Propazine	<0.01 µg/l	TM345		<0.01	<0.01				
Alachlor	<0.01 µg/l	TM345		<0.01	<0.01				
Prometryn	<0.01 µg/l	TM345		<0.01	<0.01				
Terbutryn	<0.01 µg/l	TM345		<0.01	<0.01				
Chlorothalonil	<0.01 µg/l	TM345		<0.01	<0.01				
Trietazine	<0.01 µg/l	TM345		<0.01	<0.01				
Coumaphos	<0.01 µg/l	TM345		<0.01	<0.01				

CERTIFICATE OF ANALYSIS

SDG:	181120-12	**Client Reference:**		**Report Number:**	483738
Location:	Docksway Landfill Site	**Order Number:**	700124102	**Superseded Report:**	483377

PAH Spec MS - Aqueous (W)

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	C2B	LF Cell_1_C
			Depth (m)	0.00 - 0.00	0.00 - 0.00
			Sample Type	Land Leachate (LE)	Land Leachate (LE)
			Date Sampled	19/11/2018	19/11/2018
			Sampled Time	.	.
			Date Received	20/11/2018	20/11/2018
			SDG Ref	181120-12	181120-12
			Lab Sample No.(s)	18774189	18774203
			AGS Reference		
Naphthalene (aq)	<0.01 µg/l	TM178		1.07	0.895

CERTIFICATE OF ANALYSIS

SDG:	181120-12	**Client Reference:**		**Report Number:**	483738
Location:	Docksway Landfill Site	**Order Number:**	700124102	**Superseded Report:**	483377

SVOC MS (W) - Aqueous

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	C2B	GW03_02	GW03_05	LF11_02	LF11_04	LF11_07
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Land Leachate (LE)	Ground Water (GW)	Ground Water (GW)	Land Leachate (LE)	Land Leachate (LE)	Land Leachate (LE)
			Date Sampled	19/11/2018	19/11/2018	19/11/2018	19/11/2018	19/11/2018	19/11/2018
			Sampled Time	.	.	.	.	.	.
			Date Received	20/11/2018	20/11/2018	20/11/2018	20/11/2018	20/11/2018	20/11/2018
			SDG Ref	181120-12	181120-12	181120-12	181120-12	181120-12	181120-12
			Lab Sample No.(s)	18774189	18774261	18774147	18774219	18774246	18774232
			AGS Reference						
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
2,4-Dichlorophenol (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
2,4-Dimethylphenol (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
2-Chloronaphthalene (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
2-Chlorophenol (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
2-Methylnaphthalene (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
2-Methylphenol (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
2-Nitroaniline (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
2-Nitrophenol (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
3-Nitroaniline (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
4-Bromophenylphenylether (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
4-Chloroaniline (aq)	<1 µg/l	TM176		<8	<1	<1	<1	<50	<50
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
4-Methylphenol (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
4-Nitroaniline (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
4-Nitrophenol (aq)	<1 µg/l	TM176		<8	<1	<1	<1	<50	<50
Azobenzene (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
Acenaphthylene (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
Acenaphthene (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
Anthracene (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176		48.2	4.41 #	<4 #	90.3	285	1240
Butylbenzyl phthalate (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50

CERTIFICATE OF ANALYSIS

SDG:	181120-12	**Client Reference:**		**Report Number:**	483738
Location:	Docksway Landfill Site	**Order Number:**	700124102	**Superseded Report:**	483377

SVOC MS (W) - Aqueous

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	C2B	GW03_02	GW03_05	LF11_02	LF11_04	LF11_07
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Land Leachate (LE)	Ground Water (GW)	Ground Water (GW)	Land Leachate (LE)	Land Leachate (LE)	Land Leachate (LE)
			Date Sampled	19/11/2018	19/11/2018	19/11/2018	19/11/2018	19/11/2018	19/11/2018
			Sampled Time	-	-	-	-	-	-
			Date Received	20/11/2018	20/11/2018	20/11/2018	20/11/2018	20/11/2018	20/11/2018
			SDG Ref	181120-12	181120-12	181120-12	181120-12	181120-12	181120-12
			Lab Sample No.(s)	18774189	18774261	18774147	18774219	18774246	18774232
			AGS Reference						
Benzo(a)anthracene (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
Benzo(b)fluoranthene (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
Benzo(k)fluoranthene (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
Benzo(a)pyrene (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
Benzo(g,h,i)perylene (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
Carbazole (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
Chrysene (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
Dibenzofuran (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
n-Dibutyl phthalate (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
Diethyl phthalate (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
Dibenzo(a,h)anthracene (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
Dimethyl phthalate (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
n-Dioctyl phthalate (aq)	<5 µg/l	TM176		<40	<5 #	<5 #	<5	<250	<250
Fluoranthene (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
Fluorene (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
Hexachlorobenzene (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
Hexachlorobutadiene (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
Pentachlorophenol (aq)	<1 µg/l	TM176		<8	<1	<1	<1	<50	<50
Phenol (aq)	<1 µg/l	TM176		<8	<1	<1	<1	<50	<50
n-Nitroso-n-dipropylamine (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
Hexachloroethane (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
Nitrobenzene (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
Naphthalene (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
Isophorone (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
Hexachlorocyclopentadiene (aq)	<1 µg/l	TM176		<8	<1	<1	<1	<50	<50
Phenanthrene (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
Indeno(1,2,3-cd)pyrene (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50
Pyrene (aq)	<1 µg/l	TM176		<8	<1 #	<1 #	<1	<50	<50

CERTIFICATE OF ANALYSIS

SDG:	181120-12	**Client Reference:**		**Report Number:**	483738
Location:	Docksway Landfill Site	**Order Number:**	700124102	**Superseded Report:**	483377

SVOC MS (W) - Aqueous

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Customer Sample Ref.	LF Cell_1_C
Depth (m)	0.00 - 0.00
Sample Type	Land Leachate (LE)
Date Sampled	19/11/2018
Sampled Time	.
Date Received	20/11/2018
SDG Ref	181120-12
Lab Sample No.(s)	18774203
AGS Reference	

Component	LOD/Units	Method					
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176	<1				
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176	<1				
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176	<1				
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176	<1				
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176	<1				
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176	<1				
2,4-Dichlorophenol (aq)	<1 µg/l	TM176	<1				
2,4-Dimethylphenol (aq)	<1 µg/l	TM176	<1				
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176	<1				
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176	<1				
2-Chloronaphthalene (aq)	<1 µg/l	TM176	<1				
2-Chlorophenol (aq)	<1 µg/l	TM176	<1				
2-Methylnaphthalene (aq)	<1 µg/l	TM176	<1				
2-Methylphenol (aq)	<1 µg/l	TM176	<1				
2-Nitroaniline (aq)	<1 µg/l	TM176	<1				
2-Nitrophenol (aq)	<1 µg/l	TM176	<1				
3-Nitroaniline (aq)	<1 µg/l	TM176	<1				
4-Bromophenylphenylether (aq)	<1 µg/l	TM176	<1				
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176	<1				
4-Chloroaniline (aq)	<1 µg/l	TM176	<1				
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176	<1				
4-Methylphenol (aq)	<1 µg/l	TM176	<1				
4-Nitroaniline (aq)	<1 µg/l	TM176	<1				
4-Nitrophenol (aq)	<1 µg/l	TM176	<1				
Azobenzene (aq)	<1 µg/l	TM176	<1				
Acenaphthylene (aq)	<1 µg/l	TM176	<1				
Acenaphthene (aq)	<1 µg/l	TM176	<1				
Anthracene (aq)	<1 µg/l	TM176	<1				
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176	<1				
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176	<1				
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176	9.5				
Butylbenzyl phthalate (aq)	<1 µg/l	TM176	<1				

CERTIFICATE OF ANALYSIS

SDG:	181120-12	**Client Reference:**		**Report Number:**	483738
Location:	Docksway Landfill Site	**Order Number:**	700124102	**Superseded Report:**	483377

SVOC MS (W) - Aqueous

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Customer Sample Ref.	LF Cell_1_C							
Depth (m)	0.00 - 0.00							
Sample Type	Land Leachate (LE)							
Date Sampled	19/11/2018							
Sampled Time	-							
Date Received	20/11/2018							
SDG Ref	181120-12							
Lab Sample No.(s)	18774203							
AGS Reference								
Component	**LOD/Units**	**Method**						
Benzo(a)anthracene (aq)	<1 µg/l	TM176	<1					
Benzo(b)fluoranthene (aq)	<1 µg/l	TM176	<1					
Benzo(k)fluoranthene (aq)	<1 µg/l	TM176	<1					
Benzo(a)pyrene (aq)	<1 µg/l	TM176	<1					
Benzo(g,h,i)perylene (aq)	<1 µg/l	TM176	<1					
Carbazole (aq)	<1 µg/l	TM176	<1					
Chrysene (aq)	<1 µg/l	TM176	<1					
Dibenzofuran (aq)	<1 µg/l	TM176	<1					
n-Dibutyl phthalate (aq)	<1 µg/l	TM176	<1					
Diethyl phthalate (aq)	<1 µg/l	TM176	<1					
Dibenzo(a,h)anthracene (aq)	<1 µg/l	TM176	<1					
Dimethyl phthalate (aq)	<1 µg/l	TM176	<1					
n-Dioctyl phthalate (aq)	<5 µg/l	TM176	<5					
Fluoranthene (aq)	<1 µg/l	TM176	<1					
Fluorene (aq)	<1 µg/l	TM176	<1					
Hexachlorobenzene (aq)	<1 µg/l	TM176	<1					
Hexachlorobutadiene (aq)	<1 µg/l	TM176	<1					
Pentachlorophenol (aq)	<1 µg/l	TM176	<1					
Phenol (aq)	<1 µg/l	TM176	<1					
n-Nitroso-n-dipropylamine (aq)	<1 µg/l	TM176	<1					
Hexachloroethane (aq)	<1 µg/l	TM176	<1					
Nitrobenzene (aq)	<1 µg/l	TM176	<1					
Naphthalene (aq)	<1 µg/l	TM176	<1					
Isophorone (aq)	<1 µg/l	TM176	<1					
Hexachlorocyclopentadiene (aq)	<1 µg/l	TM176	<1					
Phenanthrene (aq)	<1 µg/l	TM176	<1					
Indeno(1,2,3-cd)pyrene (aq)	<1 µg/l	TM176	<1					
Pyrene (aq)	<1 µg/l	TM176	<1					

CERTIFICATE OF ANALYSIS

SDG:	181120-12	**Client Reference:**		**Report Number:**	483738
Location:	Docksway Landfill Site	**Order Number:**	700124102	**Superseded Report:**	483377

VOC MS (W)

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	C2B	GW03_02	GW03_05	LF11_02	LF11_04	LF11_07
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Land Leachate (LE)	Ground Water (GW)	Ground Water (GW)	Land Leachate (LE)	Land Leachate (LE)	Land Leachate (LE)
			Date Sampled	19/11/2018	19/11/2018	19/11/2018	19/11/2018	19/11/2018	19/11/2018
			Sampled Time	.	.	.	.	.	.
			Date Received	20/11/2018	20/11/2018	20/11/2018	20/11/2018	20/11/2018	20/11/2018
			SDG Ref	181120-12	181120-12	181120-12	181120-12	181120-12	181120-12
			Lab Sample No.(s)	18774189	18774261	18774147	18774219	18774246	18774232
			AGS Reference						
Dibromofluoromethane**	%	TM208		102	108	107	108	103	104
Toluene-d8**	%	TM208		97.8	97.7	98.2	97.9	96.2	96.8
4-Bromofluorobenzene**	%	TM208		100	99.1	102	101	98	96.7
Dichlorodifluoromethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Chloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Vinyl chloride	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Bromomethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Chloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Trichlorofluoromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Carbon disulphide	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Dichloromethane	<3 µg/l	TM208		<3 #	<3 #	<3 #	<3 #	<3 #	<3 #
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	1.23 #	<1 #
trans-1,2-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
cis-1,2-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	1.76 #
2,2-Dichloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Bromochloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Chloroform	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1,1-Trichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Carbontetrachloride	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Benzene	<1 µg/l	TM208		4.62 #	<1 #	<1 #	3.63 #	5.04 #	3.9 #
Trichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Dibromomethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Bromodichloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
cis-1,3-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Toluene	<1 µg/l	TM208		3.89 #	<1 #	<1 #	1.33 #	10.5 #	<1 #
trans-1,3-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1,2-Trichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #

CERTIFICATE OF ANALYSIS

SDG:	181120-12	**Client Reference:**		**Report Number:**	483738
Location:	Docksway Landfill Site	**Order Number:**	700124102	**Superseded Report:**	483377

VOC MS (W)

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	C2B	GW03_02	GW03_05	LF11_02	LF11_04	LF11_07
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Land Leachate (LE)	Ground Water (GW)	Ground Water (GW)	Land Leachate (LE)	Land Leachate (LE)	Land Leachate (LE)
			Date Sampled	19/11/2018	19/11/2018	19/11/2018	19/11/2018	19/11/2018	19/11/2018
			Sampled Time	-	-	-	-	-	-
			Date Received	20/11/2018	20/11/2018	20/11/2018	20/11/2018	20/11/2018	20/11/2018
			SDG Ref	181120-12	181120-12	181120-12	181120-12	181120-12	181120-12
			Lab Sample No.(s)	18774189	18774261	18774147	18774219	18774246	18774232
			AGS Reference						
1,3-Dichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Tetrachloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Dibromochloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dibromoethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Chlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	3.12 #	<1 #	<1 #
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Ethylbenzene	<1 µg/l	TM208		4.54 #	<1 #	<1 #	1.37 #	10 #	<1 #
m,p-Xylene	<1 µg/l	TM208		4.2 #	<1 #	<1 #	11.8 #	21.2 #	9.57 #
o-Xylene	<1 µg/l	TM208		3.06 #	<1 #	<1 #	3.31 #	12.2 #	12 #
Styrene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Bromoform	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Isopropylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	1.35 #	<1 #	<1 #
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2,3-Trichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Bromobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Propylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
2-Chlorotoluene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,3,5-Trimethylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	3.03 #	2.83 #
4-Chlorotoluene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
tert-Butylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2,4-Trimethylbenzene	<1 µg/l	TM208		1.4 #	<1 #	<1 #	4.32 #	11.7 #	6.01 #
sec-Butylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
4-iso-Propyltoluene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	3.54 #	<1 #
1,3-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,4-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
n-Butylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	1.56 #	<1 #	<1 #
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Hexachlorobutadiene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Naphthalene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	2.01 #	3.06 #

CERTIFICATE OF ANALYSIS

SDG:	181120-12	**Client Reference:**		**Report Number:**	483738
Location:	Docksway Landfill Site	**Order Number:**	700124102	**Superseded Report:**	483377

VOC MS (W)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	C2B	GW03_02	GW03_05	LF11_02	LF11_04	LF11_07
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Land Leachate (LE)	Ground Water (GW)	Ground Water (GW)	Land Leachate (LE)	Land Leachate (LE)	Land Leachate (LE)
			Date Sampled	19/11/2018	19/11/2018	19/11/2018	19/11/2018	19/11/2018	19/11/2018
			Sampled Time	-	-	-	-	-	-
			Date Received	20/11/2018	20/11/2018	20/11/2018	20/11/2018	20/11/2018	20/11/2018
			SDG Ref	181120-12	181120-12	181120-12	181120-12	181120-12	181120-12
			Lab Sample No.(s)	18774189	18774261	18774147	18774219	18774246	18774232
			AGS Reference						
1,2,3-Trichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,3,5-Trichlorobenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1

CERTIFICATE OF ANALYSIS

SDG:	181120-12	**Client Reference:**		**Report Number:**	483738
Location:	Docksway Landfill Site	**Order Number:**	700124102	**Superseded Report:**	483377

VOC MS (W)

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Customer Sample Ref.	LF Cell_1_C
Depth (m)	0.00 - 0.00
Sample Type	Land Leachate (LE)
Date Sampled	19/11/2018
Sampled Time	.
Date Received	20/11/2018
SDG Ref	181120-12
Lab Sample No.(s)	18774203
AGS Reference	

Component	LOD/Units	Method	
Dibromofluoromethane**	%	TM208	106
Toluene-d8**	%	TM208	98.7
4-Bromofluorobenzene**	%	TM208	98.7
Dichlorodifluoromethane	<1 µg/l	TM208	<1
Chloromethane	<1 µg/l	TM208	<1 #
Vinyl chloride	<1 µg/l	TM208	<1 #
Bromomethane	<1 µg/l	TM208	<1 #
Chloroethane	<1 µg/l	TM208	<1 #
Trichlorofluoromethane	<1 µg/l	TM208	<1 #
1,1-Dichloroethene	<1 µg/l	TM208	<1 #
Carbon disulphide	<1 µg/l	TM208	<1 #
Dichloromethane	<3 µg/l	TM208	<3 #
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208	3.98 #
trans-1,2-Dichloroethene	<1 µg/l	TM208	<1 #
1,1-Dichloroethane	<1 µg/l	TM208	<1 #
cis-1,2-Dichloroethene	<1 µg/l	TM208	<1 #
2,2-Dichloropropane	<1 µg/l	TM208	<1
Bromochloromethane	<1 µg/l	TM208	<1 #
Chloroform	<1 µg/l	TM208	<1 #
1,1,1-Trichloroethane	<1 µg/l	TM208	<1 #
1,1-Dichloropropene	<1 µg/l	TM208	<1 #
Carbontetrachloride	<1 µg/l	TM208	<1 #
1,2-Dichloroethane	<1 µg/l	TM208	<1 #
Benzene	<1 µg/l	TM208	6.09 #
Trichloroethene	<1 µg/l	TM208	<1 #
1,2-Dichloropropane	<1 µg/l	TM208	<1 #
Dibromomethane	<1 µg/l	TM208	<1 #
Bromodichloromethane	<1 µg/l	TM208	<1 #
cis-1,3-Dichloropropene	<1 µg/l	TM208	<1 #
Toluene	<1 µg/l	TM208	<1 #
trans-1,3-Dichloropropene	<1 µg/l	TM208	<1 #
1,1,2-Trichloroethane	<1 µg/l	TM208	<1 #

CERTIFICATE OF ANALYSIS

SDG:	181120-12	**Client Reference:**		**Report Number:**	483738
Location:	Docksway Landfill Site	**Order Number:**	700124102	**Superseded Report:**	483377

VOC MS (W)

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Customer Sample Ref.	LF Cell_1_C
Depth (m)	0.00 - 0.00
Sample Type	Land Leachate (LE)
Date Sampled	19/11/2018
Sampled Time	-
Date Received	20/11/2018
SDG Ref	181120-12
Lab Sample No.(s)	18774203
AGS Reference	

Component	LOD/Units	Method	
1,3-Dichloropropane	<1 µg/l	TM208	<1 #
Tetrachloroethene	<1 µg/l	TM208	<1 #
Dibromochloromethane	<1 µg/l	TM208	<1 #
1,2-Dibromoethane	<1 µg/l	TM208	<1 #
Chlorobenzene	<1 µg/l	TM208	2.62 #
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208	<1 #
Ethylbenzene	<1 µg/l	TM208	5.07 #
m,p-Xylene	<1 µg/l	TM208	7.43 #
o-Xylene	<1 µg/l	TM208	5.89 #
Styrene	<1 µg/l	TM208	<1 #
Bromoform	<1 µg/l	TM208	<1 #
Isopropylbenzene	<1 µg/l	TM208	<1 #
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208	<1 #
1,2,3-Trichloropropane	<1 µg/l	TM208	<1 #
Bromobenzene	<1 µg/l	TM208	<1 #
Propylbenzene	<1 µg/l	TM208	<1 #
2-Chlorotoluene	<1 µg/l	TM208	<1 #
1,3,5-Trimethylbenzene	<1 µg/l	TM208	<1 #
4-Chlorotoluene	<1 µg/l	TM208	<1 #
tert-Butylbenzene	<1 µg/l	TM208	<1 #
1,2,4-Trimethylbenzene	<1 µg/l	TM208	2.75 #
sec-Butylbenzene	<1 µg/l	TM208	<1 #
4-iso-Propyltoluene	<1 µg/l	TM208	<1 #
1,3-Dichlorobenzene	<1 µg/l	TM208	<1 #
1,4-Dichlorobenzene	<1 µg/l	TM208	<1 #
n-Butylbenzene	<1 µg/l	TM208	<1 #
1,2-Dichlorobenzene	<1 µg/l	TM208	<1 #
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208	<1
1,2,4-Trichlorobenzene	<1 µg/l	TM208	<1 #
Hexachlorobutadiene	<1 µg/l	TM208	<1 #
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208	<1 #
Naphthalene	<1 µg/l	TM208	1.58 #

CERTIFICATE OF ANALYSIS

SDG:	181120-12	**Client Reference:**		**Report Number:**	483738
Location:	Docksway Landfill Site	**Order Number:**	700124102	**Superseded Report:**	483377

VOC MS (W)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Customer Sample Ref.	LF Cell_1_C
Depth (m)	0.00 - 0.00
Sample Type	Land Leachate (LE)
Date Sampled	19/11/2018
Sampled Time	-
Date Received	20/11/2018
SDG Ref	181120-12
Lab Sample No.(s)	18774203
AGS Reference	

Component	LOD/Units	Method	
1,2,3-Trichlorobenzene	<1 µg/l	TM208	<1 #
1,3,5-Trichlorobenzene	<1 µg/l	TM208	<1

CERTIFICATE OF ANALYSIS

SDG:	181120-12	**Client Reference:**		**Report Number:**	483738
Location:	Docksway Landfill Site	**Order Number:**	700124102	**Superseded Report:**	483377

Table of Results - Appendix

Method No	Reference	Description
Calulation		
SUB		Subcontracted Test
SUB (ASB)		
TM043	Method 2320B, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part109 1984	Determination of alkalinity in aqueous samples
TM045	MEWAM BOD5 2nd Ed.HMSO 1988 / Method 5210B, AWWA/APHA, 20th Ed., 1999; SCA Blue Book 130	Determination of BOD5 (ATU) Filtered by Oxygen Meter on liquids
TM061	Method for the Determination of EPH,Massachusetts Dept.of EP, 1998	Determination of Extractable Petroleum Hydrocarbons by GC-FID (C10-C40)
TM090	Method 5310, AWWA/APHA, 20th Ed., 1999 / Modified: US EPA Method 415.1 & 9060	Determination of Total Organic Carbon/Total Inorganic Carbon in Water and Waste Water
TM099	BS 2690: Part 7:1968 / BS 6068: Part2.11:1984	Determination of Ammonium in Water Samples using the Kone Analyser
TM101	Method 4500B & C, AWWA/APHA, 20th Ed., 1999	Determination of Sulphide in soil and water samples using the Kone Analyser
TM107	ISO 6060-1989	Determination of Chemical Oxygen Demand using COD Dr Lange Kit
TM120	Method 2510B, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part 9:1970	Determination of Electrical Conductivity using a Conductivity Meter
TM152	Method 3125B, AWWA/APHA, 20th Ed., 1999	Analysis of Aqueous Samples by ICP-MS
TM172	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	EPH in Waters
TM176	EPA 8270D Semi-Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)	Determination of SVOCs in Water by GCMS
TM178	Modified: US EPA Method 8100	Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters
TM183	BS EN 23506:2002, (BS 6068-2.74:2002) ISBN 0 580 38924 3	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry
TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers
TM208	Modified: US EPA Method 8260b & 624	Determination of Volatile Organic Compounds by Headspace / GC-MS in Waters
TM227	Standard methods for the examination of waters and wastewaters 20th Edition, AWWA/APHA Method 4500.	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate
TM256	The measurement of Electrical Conductivity and the Laboratory determination of pH Value of Natural, Treated and Wastewaters. HMSO, 1978. ISBN 011 751428 4.	Determination of pH in Water and Leachate using the GLpH pH Meter
TM259	by HPLC	Determination of Phenols in Waters and Leachates by HPLC
TM328		
TM343	EPA 8270D - Semi-Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)	Determination of Selected Pesticides (Suite I) in Liquids by GCMS
TM344	EPA 8270D – Semi-Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)	Determination of selected pesticides (Suite II) by GCMS
TM345	EPA 8270D – Semi-Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)	Determination of selected pesticides (Suite III) by GCMS

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Environmental Hawarden (Method codes TM) or ALS Environmental Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	181120-12	**Client Reference:**		**Report Number:**	483738
Location:	Docksway Landfill Site	**Order Number:**	700124102	**Superseded Report:**	483377

Test Completion Dates

Lab Sample No(s)	18774166	18774189	18774261	18774147	18774203	18774219	18774246	18774232	18774161	18774142
Customer Sample Ref.	C3_Asb	C2B	GW03_02	GW03_05	LF Cell_1_C	LF11_02	LF11_04	LF11_07	SW11	SW_23
AGS Ref.										
Depth	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
Type	Surface Water	Land Leachate	Ground Water	Ground Water	Land Leachate	Land Leachate	Land Leachate	Land Leachate	Surface Water	Surface Water
Alkalinity as CaCO3			26-Nov-2018	26-Nov-2018						
Alkalinity Filtered as CaCO3		28-Nov-2018			28-Nov-2018					
Ammoniacal Nitrogen	27-Nov-2018	27-Nov-2018	27-Nov-2018	27-Nov-2018	27-Nov-2018	27-Nov-2018	27-Nov-2018	28-Nov-2018	27-Nov-2018	26-Nov-2018
Anions by Kone (w)	02-Dec-2018	03-Dec-2018	03-Dec-2018	02-Dec-2018	03-Dec-2018				02-Dec-2018	02-Dec-2018
Asbestos in Water*	28-Nov-2018									
BOD*	30-Nov-2018	30-Nov-2018			30-Nov-2018				30-Nov-2018	30-Nov-2018
COD Unfiltered	29-Nov-2018	29-Nov-2018	29-Nov-2018	29-Nov-2018	29-Nov-2018				29-Nov-2018	29-Nov-2018
Conductivity (at 20 deg.C)	28-Nov-2018	28-Nov-2018	28-Nov-2018	28-Nov-2018	28-Nov-2018				28-Nov-2018	28-Nov-2018
Cyanide Comp/Free/Total/Thiocyanate		22-Nov-2018	22-Nov-2018	22-Nov-2018	22-Nov-2018	22-Nov-2018	22-Nov-2018	22-Nov-2018		
Dissolved Metals by ICP-MS		29-Nov-2018	29-Nov-2018	29-Nov-2018	29-Nov-2018	29-Nov-2018	29-Nov-2018	29-Nov-2018		
EPH (DRO) (C10-C40) Aqueous (W)		28-Nov-2018	28-Nov-2018	28-Nov-2018	28-Nov-2018	28-Nov-2018	28-Nov-2018	28-Nov-2018		
Ionic Balance		03-Dec-2018			03-Dec-2018					
Mercury Dissolved		29-Nov-2018	28-Nov-2018	28-Nov-2018	29-Nov-2018	28-Nov-2018	29-Nov-2018	29-Nov-2018		
Nitrite by Kone (w)		28-Nov-2018			28-Nov-2018					
Organotins in Aqueous Samples		26-Nov-2018	26-Nov-2018	26-Nov-2018	26-Nov-2018					
PAH Spec MS - Aqueous (W)		28-Nov-2018			28-Nov-2018					
Pesticides (Suite I) by GCMS		30-Nov-2018	26-Nov-2018	26-Nov-2018	26-Nov-2018	26-Nov-2018	26-Nov-2018	26-Nov-2018		
Pesticides (Suite II) by GCMS		03-Dec-2018	26-Nov-2018	26-Nov-2018	26-Nov-2018	26-Nov-2018	23-Nov-2018	26-Nov-2018		
Pesticides (Suite III) by GCMS		29-Nov-2018	27-Nov-2018	27-Nov-2018	28-Nov-2018	27-Nov-2018	28-Nov-2018	28-Nov-2018		
pH Value	27-Nov-2018	27-Nov-2018	27-Nov-2018	27-Nov-2018	27-Nov-2018				27-Nov-2018	27-Nov-2018
Phenols by HPLC (W)		28-Nov-2018	28-Nov-2018	28-Nov-2018	28-Nov-2018	28-Nov-2018	28-Nov-2018	28-Nov-2018		
Phosphate by Kone (w)		29-Nov-2018			29-Nov-2018					
Sulphide		30-Nov-2018			30-Nov-2018					
SVOC MS (W) - Aqueous		30-Nov-2018	30-Nov-2018	29-Nov-2018	30-Nov-2018	30-Nov-2018	30-Nov-2018	30-Nov-2018		
Total Organic and Inorganic Carbon		28-Nov-2018	27-Nov-2018	28-Nov-2018	28-Nov-2018					
VOC MS (W)		28-Nov-2018	28-Nov-2018	28-Nov-2018	28-Nov-2018	28-Nov-2018	28-Nov-2018	28-Nov-2018		

Lab Sample No(s)	18774171	18774182
Customer Sample Ref.	SW_24	SW_1A
AGS Ref.		
Depth	0.00 - 0.00	0.00 - 0.00
Type	Surface Water	Surface Water
Ammoniacal Nitrogen	27-Nov-2018	26-Nov-2018
Anions by Kone (w)	02-Dec-2018	02-Dec-2018
BOD True Total	26-Nov-2018	
BOD*		30-Nov-2018
COD Unfiltered	29-Nov-2018	29-Nov-2018
Conductivity (at 20 deg.C)	28-Nov-2018	28-Nov-2018
pH Value	27-Nov-2018	27-Nov-2018

CERTIFICATE OF ANALYSIS

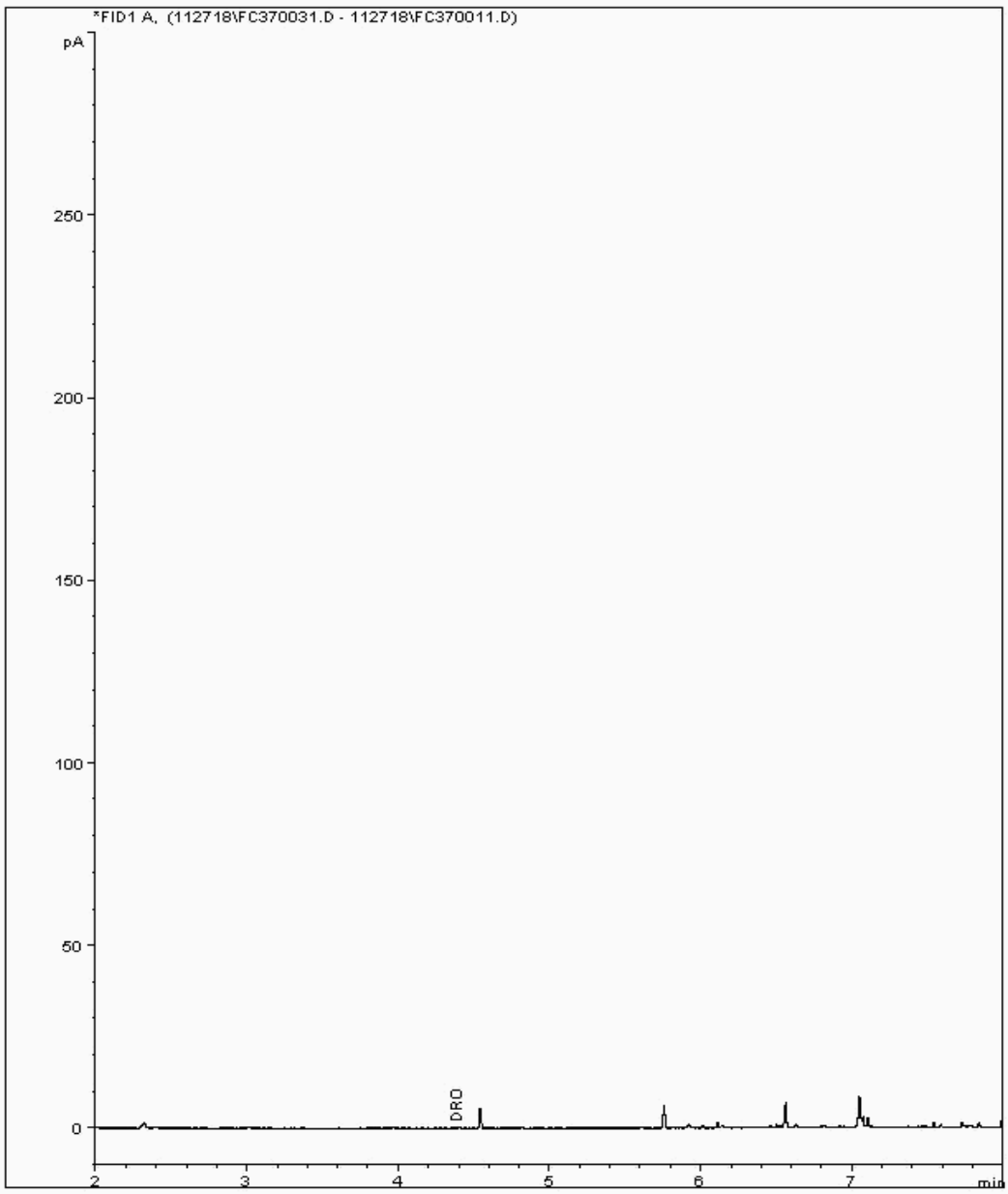
SDG:	181120-12	**Client Reference:**		**Report Number:**	483738
Location:	Docksway Landfill Site	**Order Number:**	700124102	**Superseded Report:**	483377

Chromatogram

Analysis: EPH (DRO) (C10-C40) Aqueous (W) **Sample No :** 18777107 **Sample ID :** GW03_05 **Depth :** 0.00 - 0.00

EPH Range Organics (C10 - C40)

Sample Identity: 17635101-
Date Acquired : 28/11/2018 02:31:39 PM
Units : ppm



CERTIFICATE OF ANALYSIS

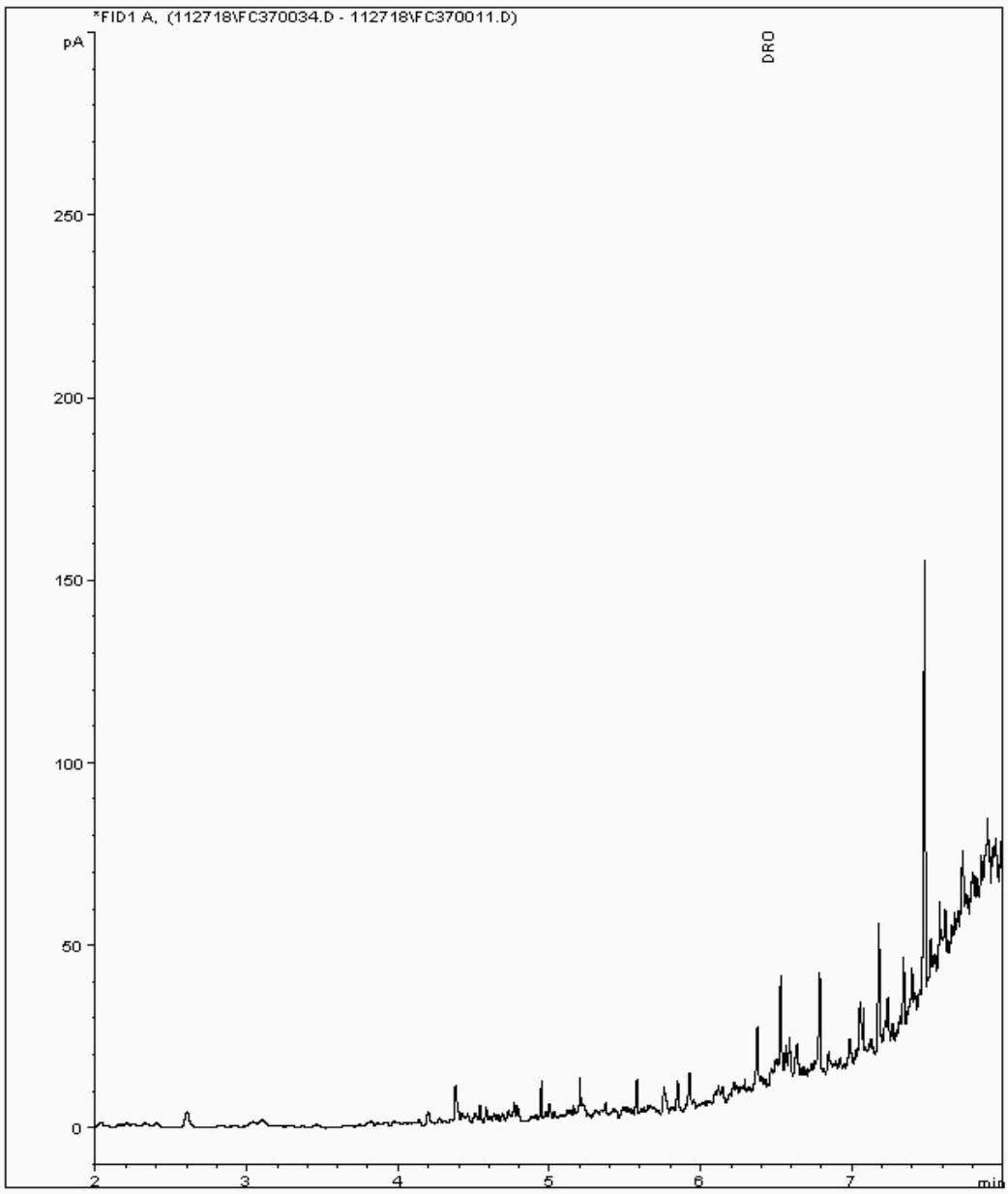
SDG:	181120-12	**Client Reference:**		**Report Number:**	483738
Location:	Docksway Landfill Site	**Order Number:**	700124102	**Superseded Report:**	483377

Chromatogram

Analysis: EPH (DRO) (C10-C40) Aqueous (W) **Sample No :** 18777400 **Sample ID :** LF11_02 **Depth :** 0.00 - 0.00

EPH Range Organics (C10 - C40)

Sample Identity: 17635198-
Date Acquired : 28/11/2018 03:42:47 PM
Units : ppm



CERTIFICATE OF ANALYSIS

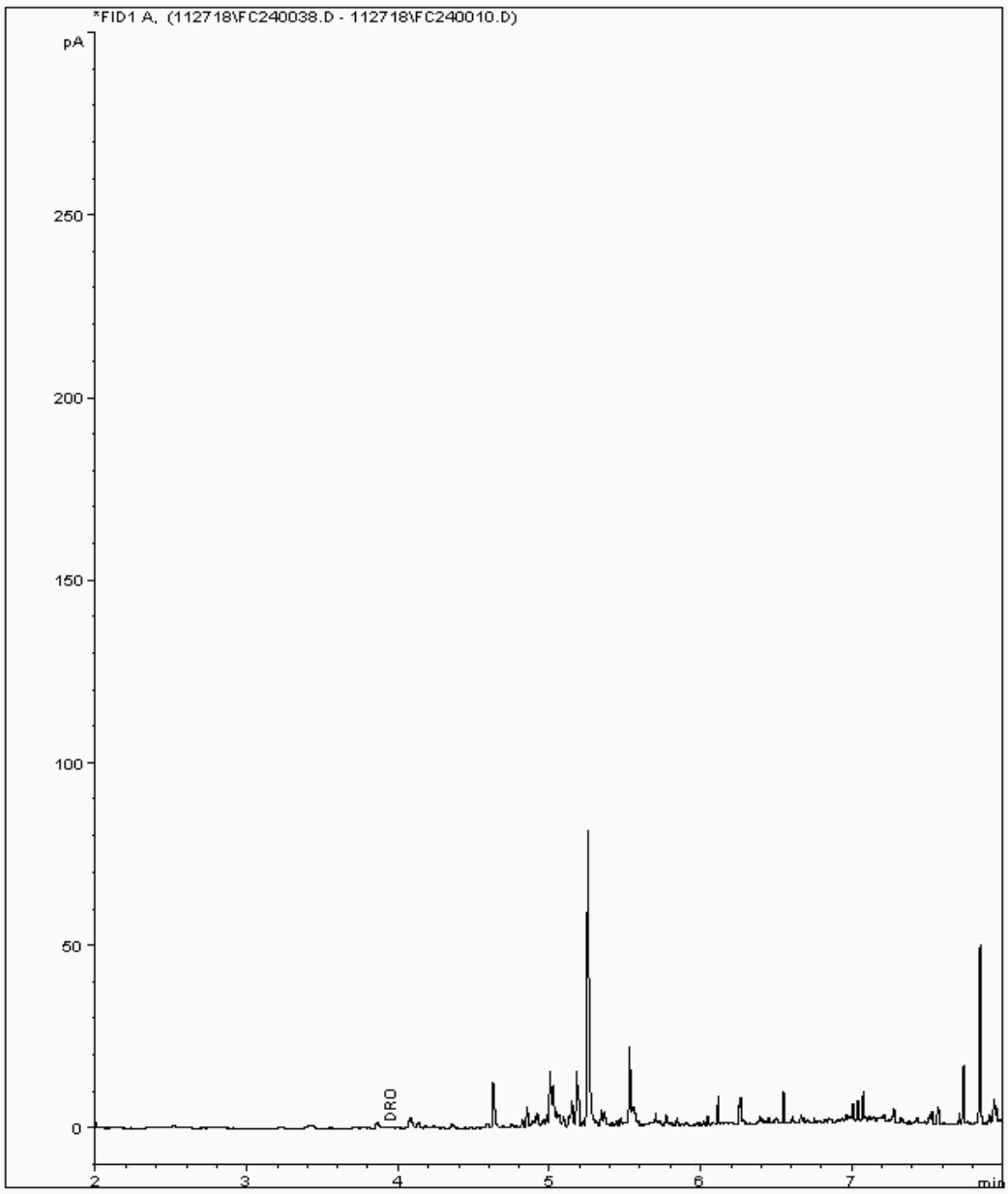
SDG:	181120-12	**Client Reference:**		**Report Number:**	483738
Location:	Docksway Landfill Site	**Order Number:**	700124102	**Superseded Report:**	483377

Chromatogram

Analysis: EPH (DRO) (C10-C40) Aqueous (W) **Sample No :** 18777530 **Sample ID :** LF Cell_1_C **Depth :** 0.00 - 0.00

EPH Range Organics (C10 - C40)

Sample Identity: 17635172-
Date Acquired : 28/11/2018 05:35:14 PM
Units : ppm



CERTIFICATE OF ANALYSIS

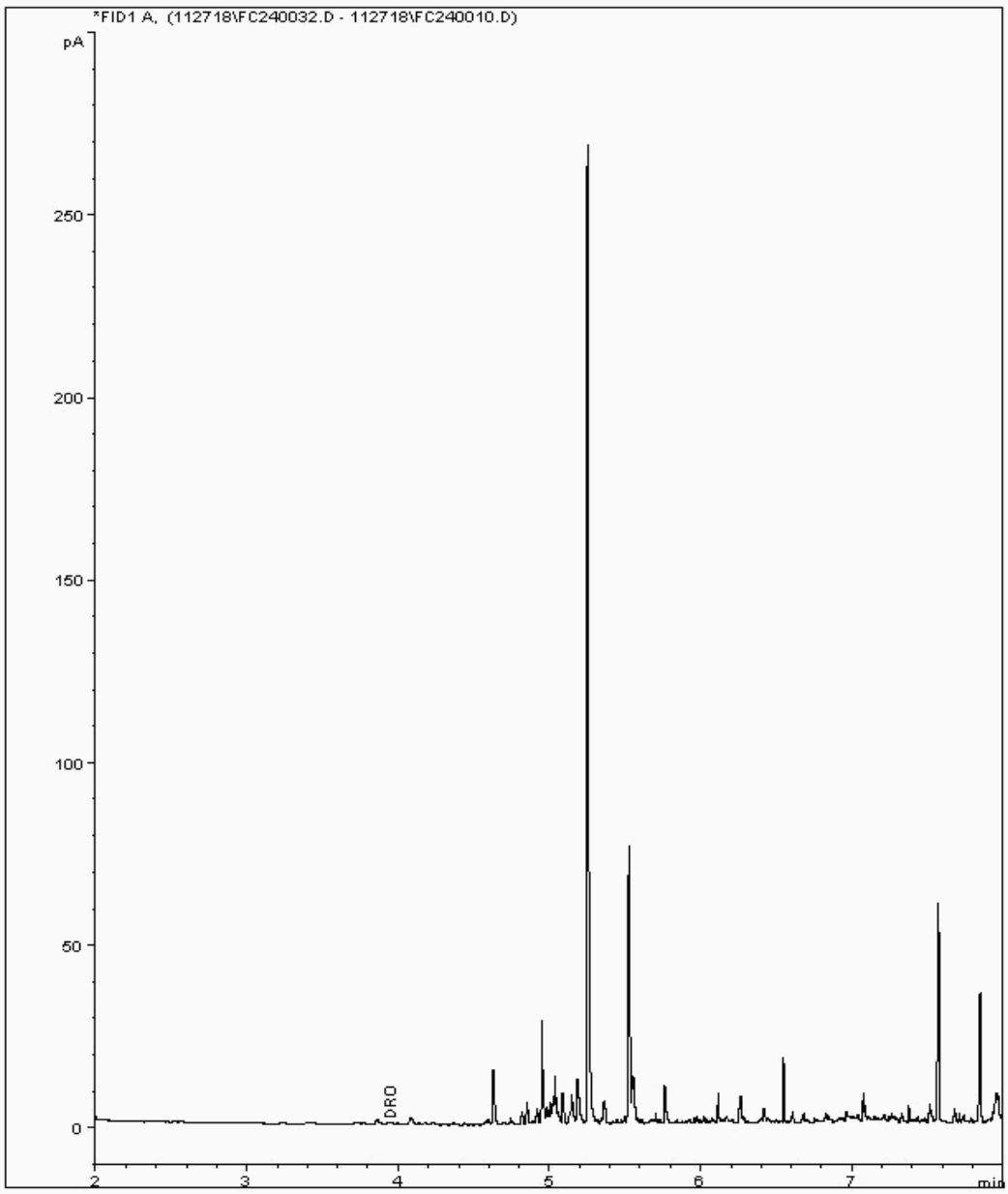
SDG:	181120-12	**Client Reference:**		**Report Number:**	483738
Location:	Docksway Landfill Site	**Order Number:**	700124102	**Superseded Report:**	483377

Chromatogram

Analysis: EPH (DRO) (C10-C40) Aqueous (W) **Sample No :** 18777556 **Depth :** 0.00 - 0.00
Sample ID : C2B

EPH Range Organics (C10 - C40)

Sample Identity: 17635147-
Date Acquired : 28/11/2018 03:12:25 PM
Units : ppm



CERTIFICATE OF ANALYSIS

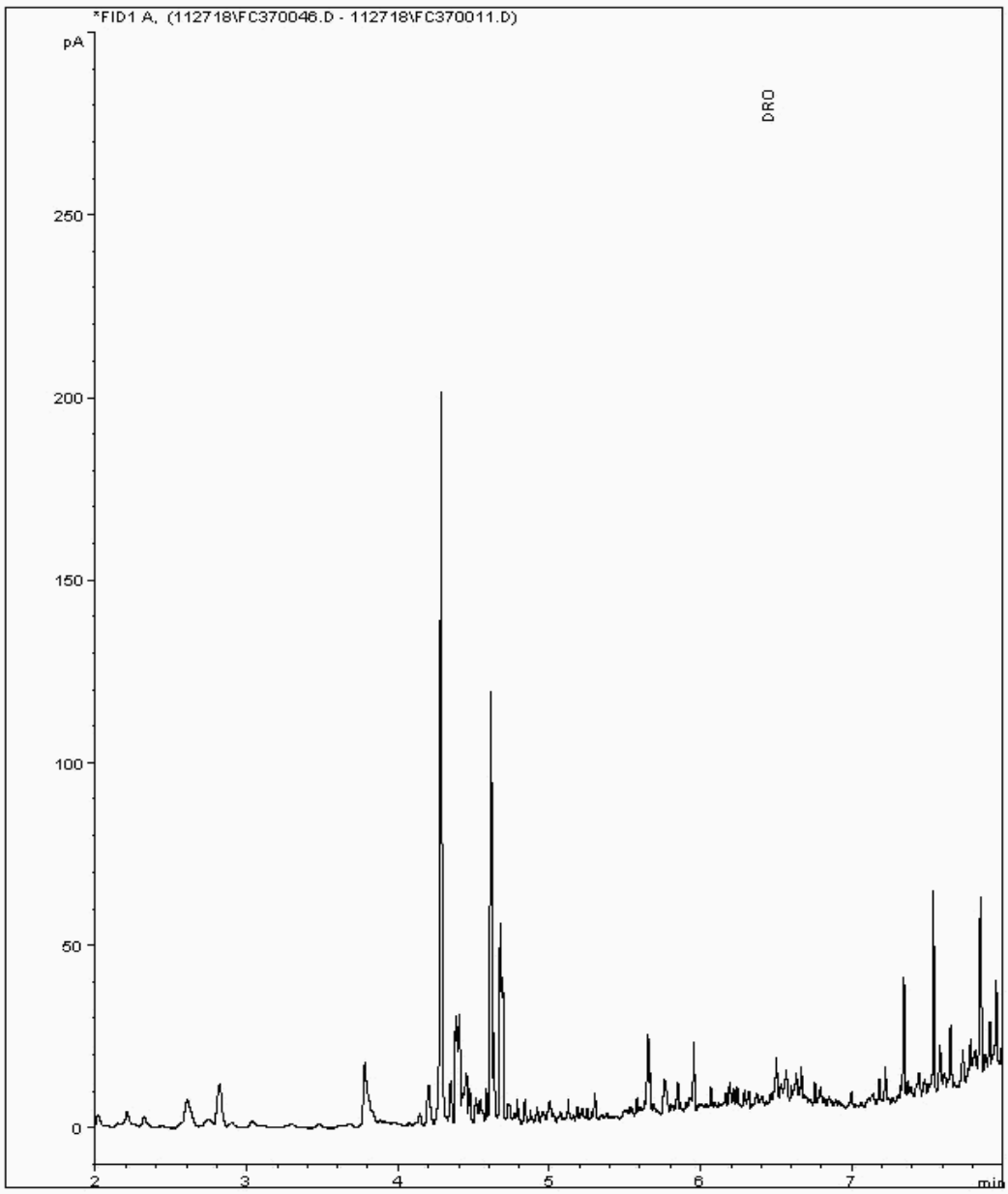
SDG:	181120-12	**Client Reference:**		**Report Number:**	483738
Location:	Docksway Landfill Site	**Order Number:**	700124102	**Superseded Report:**	483377

Chromatogram

Analysis: EPH (DRO) (C10-C40) Aqueous (W) **Sample No :** 18777813 **Sample ID :** LF11_04 **Depth :** 0.00 - 0.00

EPH Range Organics (C10 - C40)

Sample Identity: 17635222-
Date Acquired : 28/11/2018 08:28:02 PM
Units : ppm



CERTIFICATE OF ANALYSIS

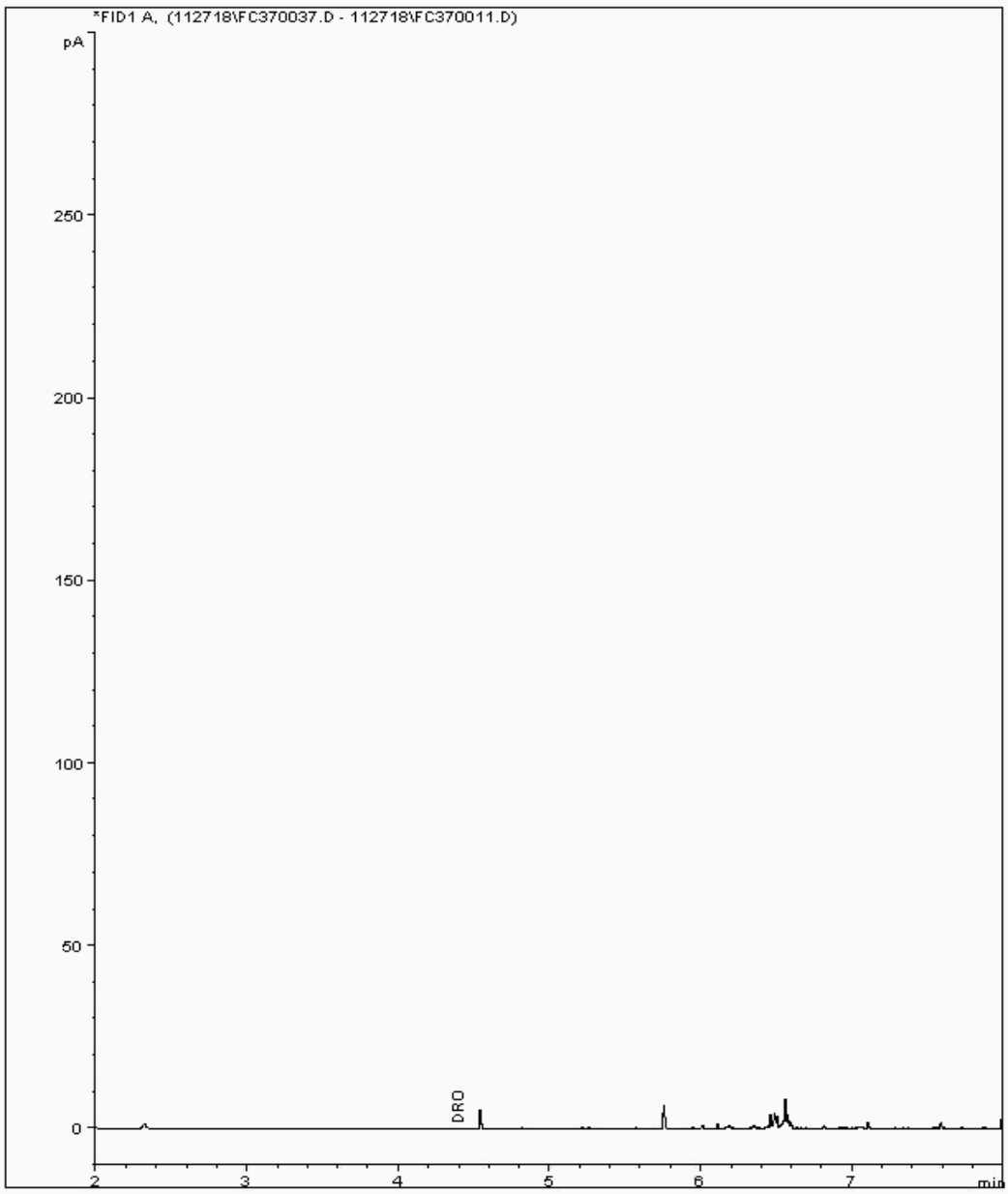
SDG:	181120-12	**Client Reference:**		**Report Number:**	483738
Location:	Docksway Landfill Site	**Order Number:**	700124102	**Superseded Report:**	483377

Chromatogram

Analysis: EPH (DRO) (C10-C40) Aqueous (W) **Sample No :** 18777870 **Sample ID :** GW03_02 **Depth :** 0.00 - 0.00

EPH Range Organics (C10 - C40)

Sample Identity: 17635236-
Date Acquired : 28/11/2018 04:53:46 PM
Units : ppm



CERTIFICATE OF ANALYSIS

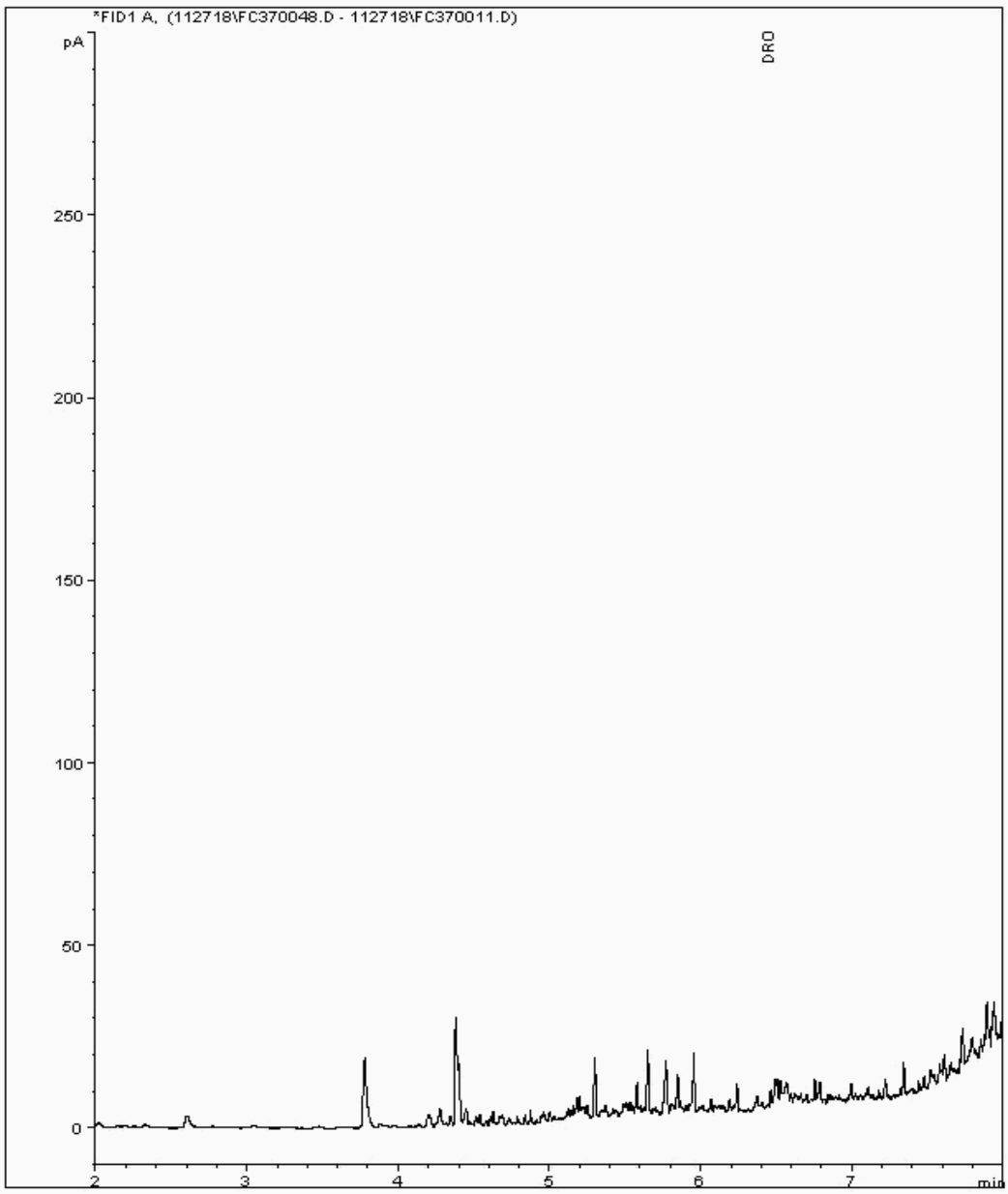
SDG:	181120-12	**Client Reference:**		**Report Number:**	483738
Location:	Docksway Landfill Site	**Order Number:**	700124102	**Superseded Report:**	483377

Chromatogram

Analysis: EPH (DRO) (C10-C40) Aqueous (W) **Sample No :** 18777915 **Sample ID :** LF11_07 **Depth :** 0.00 - 0.00

EPH Range Organics (C10 - C40)

Sample Identity: 17635210-
Date Acquired : 28/11/2018 09:16:31 PM
Units : ppm



ALS Environmental Ltd
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www.alsenvironmental.co.uk

Subcon Results
ALS Life Sciences Limited
Torrington Avenue
Tile Hill CV4 9GU

28 November 2018

Test Report: COV/1639649/2018

Dear Subcon Results

Analysis of your sample(s) submitted on 21 November 2018 is now complete and we have pleasure in enclosing the appropriate test report(s).

An invoice for the analysis carried out will be sent under separate cover.

Should you have any queries regarding this report(s) or any part of our service, please contact Customer Services on +44 (0)24 7642 1213 who will be happy to discuss your requirements.

If you would like to arrange any further analysis, please contact Customer Services. To arrange container delivery or sample collection, please call the Couriers Department directly on 024 7685 6562.

Thank you for using ALS Environmental Ltd and we look forward to receiving your next samples.

Yours Sincerely,

Signed:

Name: A. Zunzunegui

Title: Organic Team Leader

Report Summary

ANALYSED BY

Hawarden Subcon Results
ALS Life Sciences Limited
Torrington Avenue
Tile Hill
CV4 9GU

Date of Issue: **28 November 2018**

Report Number: **COV/1639649/2018** Issue **1**

This issue replaces all previous issues

Job Description: 2017-2018 Analysis

Number of Samples included in this report **1**

Number of Test Results included in this report **2**

Job Received: **21 November 2018**

Analysis Commenced: **27 November 2018**

Signed:

Name: **A. Zunzunegui** Date: **28 November 2018**

Title: **Organic Team Leader**

ALS Environmental Ltd was not responsible for sampling unless otherwise stated.

Information on the methods of analysis and performance characteristics are available on request.
Opinions and interpretations expressed herein are outside the scope of UKAS accreditation. The results relate only to the items tested.
Tests marked 'Not UKAS Accredited' in this Report/Certificate are not included in the UKAS Accreditation Schedule for our laboratory.

Certificate of Analysis

ANALYSED BY

Report Number:	**COV/1639649/2018**	Issue	**1**
Laboratory Number:	**17707303**	Sample	**1** of **1**
Sample Source:	**ALS Life Sciences Limited**		
Sample Point Description:			
Sample Description:	**18784801 C3_Asb**		
Sample Matrix:	**Surface Water**		
Sample Date/Time:	**19 November 2018**		
Sample Received:	**21 November 2018**		
Analysis Complete:	**28 November 2018**		

Test Description	Result	Units	Analysis Date	Accreditation	Method
Description of Sample	Analyst Com	Text	27/11/2018	N Cov	70
Asbestos Identification	Analyst Com	Text	27/11/2018	N Cov	70

Analyst Comments for 17707303: ASBESTOS COMMENTS Asbestos ID: Non Detected, Description of Sample: Water

This issue replaces all previous issues
Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.
Analysed at: CHE = Chester(CH5 3US), CTD = Coatbridge(ML5 4FR), COV = Coventry(CV4 9GU), OTT = Otterbourne(SO21 2SW), S = Subcontracted, TRB = Subcontracted to Trowbridge(BA14 0XD), WAK = Wakefield(WF5 9TG).
For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered.
I/S=Insufficient sample For soil/sludge samples: AR=As received, DW=Dry weight.

Signed: Name: **A. Zunzunegui** Date: **28 November 2018**

Title: **Organic Team Leader**

ANALYST COMMENTS FOR REPORT COV/1639649/2018

Issue 1 This issue replaces all previous issues

Date of Issue: **28 November 2018**

Sample No	Analysis Comments
17707303	ASBESTOS COMMENTS Asbestos ID: Non Detected, Description of Sample: Water

Signed: 

Name: **A. Zunzunegui** Date: **28 November 2018**

Title: **Organic Team Leader**

DETERMINAND COMMENTS FOR REPORT COV/1639649/2018

ISSUE 1

This issue replaces all previous issues

Date of Issue: 28 November 2018

Sample No	Description	Determinand	Comments
17707303	18784801 C3_Asb	Asbestos Identification	{/*}Non Detected{*/}
17707303	18784801 C3_Asb	Description of Sample	{/*}Water{*/}

Signed: 

Name: **A. Zunzunegui** Date: **28 November 2018**

Title: **Organic Team Leader**

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Subcon Results
ALS Life Sciences Limited
Torrington Avenue
Tile Hill CV4 9GU

30 November 2018

Test Report: COV/1640755/2018

Dear Subcon Results

Analysis of your sample(s) submitted on 23 November 2018 is now complete and we have pleasure in enclosing the appropriate test report(s).

An invoice for the analysis carried out will be sent under separate cover.

Should you have any queries regarding this report(s) or any part of our service, please contact Customer Services on +44 (0)24 7642 1213 who will be happy to discuss your requirements.

If you would like to arrange any further analysis, please contact Customer Services. To arrange container delivery or sample collection, please call the Couriers Department directly on 024 7685 6562.

Thank you for using ALS Environmental Ltd and we look forward to receiving your next samples.

Yours Sincerely,

Signed:

Name: L. Jones

Title: Organic Team Leader

Report Summary

ANALYSED BY

Hawarden Subcon Results
ALS Life Sciences Limited
Torrington Avenue
Tile Hill
CV4 9GU

Date of Issue: **30 November 2018**

Report Number: **COV/1640755/2018** Issue **1**

This issue replaces all previous issues

Job Description: 2017-2018 Analysis

Job Location: Geotrace

Number of Samples included in this report **6**

Job Received: **23 November 2018**

Number of Test Results included in this report **6**

Analysis Commenced: **24 November 2018**

Signed:

Name: **L. Jones** Date: **30 November 2018**

Title: **Organic Team Leader**

ALS Environmental Ltd was not responsible for sampling unless otherwise stated.

Information on the methods of analysis and performance characteristics are available on request.
Opinions and interpretations expressed herein are outside the scope of UKAS accreditation. The results relate only to the items tested.
Tests marked 'Not UKAS Accredited' in this Report/Certificate are not included in the UKAS Accreditation Schedule for our laboratory.

Certificate of Analysis

ANALYSED BY

Report Number:	**COV/1640755/2018**	Issue	**1**
Laboratory Number:	**17715280**	Sample	**1** of **6**
Sample Source:	**ALS Life Sciences Limited**		
Sample Point Description:			
Sample Description:	**18776905**		
Sample Matrix:	**Not Specified**		
Sample Date/Time:			
Sample Received:	**23 November 2018**		
Analysis Complete:	**30 November 2018**		

Test Description	Result	Units	Analysis Date	Accreditation	Method
BOD + ATU (5 day)	90	mg/l	29/11/2018	N Cov	WAS001

Analyst Comments for 17715280: The date of sampling has not been provided and therefore sample stability times cannot be assessed. It is therefore possible that the results provided may be compromised.

This issue replaces all previous issues
Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.
Analysed at: CHE = Chester(CH5 3US), CTD = Coatbridge(ML5 4FR), COV = Coventry(CV4 9GU), OTT = Otterbourne(SO21 2SW), S = Subcontracted, TRB = Subcontracted to Trowbridge(BA14 0XD), WAK = Wakefield(WF5 9TG).
For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered.
I/S=Insufficient sample For soil/sludge samples: AR=As received, DW=Dry weight.

Signed: L Jones

Name: **L. Jones** Date: **30 November 2018**

Title: **Organic Team Leader**

Certificate of Analysis

ANALYSED BY

Report Number:	**COV/1640755/2018**	Issue	**1**
Laboratory Number:	**17715281**	Sample	**2** of **6**
Sample Source:	**ALS Life Sciences Limited**		
Sample Point Description:			
Sample Description:	**18777598**		
Sample Matrix:	**Not Specified**		
Sample Date/Time:			
Sample Received:	**23 November 2018**		
Analysis Complete:	**30 November 2018**		

Test Description	Result	Units	Analysis Date	Accreditation	Method
BOD + ATU (5 day)	2	mg/l	29/11/2018	N Cov	WAS001

Analyst Comments for 17715281: The date of sampling has not been provided and therefore sample stability times cannot be assessed. It is therefore possible that the results provided may be compromised.

This issue replaces all previous issues
Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.
Analysed at: CHE = Chester(CH5 3US), CTD = Coatbridge(ML5 4FR), COV = Coventry(CV4 9GU), OTT = Otterbourne(SO21 2SW), S = Subcontracted, TRB = Subcontracted to Trowbridge(BA14 0XD), WAK = Wakefield(WF5 9TG).
For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered.
I/S=Insufficient sample For soil/sludge samples: AR=As received, DW=Dry weight.

Signed: L Jones

Name: **L. Jones** Date: **30 November 2018**

Title: **Organic Team Leader**

Certificate of Analysis

ANALYSED BY

Report Number:	**COV/1640755/2018**	Issue	**1**
Laboratory Number:	**17715282**	Sample	**3** of **6**
Sample Source:	**ALS Life Sciences Limited**		
Sample Point Description:			
Sample Description:	**18777594**		
Sample Matrix:	**Not Specified**		
Sample Date/Time:			
Sample Received:	**23 November 2018**		
Analysis Complete:	**30 November 2018**		

Test Description	Result	Units	Analysis Date	Accreditation	Method
BOD + ATU (5 day)	<1	mg/l	29/11/2018	N Cov	WAS001

Analyst Comments for 17715282: The date of sampling has not been provided and therefore sample stability times cannot be assessed. It is therefore possible that the results provided may be compromised.

This issue replaces all previous issues
Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.
Analysed at: CHE = Chester(CH5 3US), CTD = Coatbridge(ML5 4FR), COV = Coventry(CV4 9GU), OTT = Otterbourne(SO21 2SW), S = Subcontracted, TRB = Subcontracted to Trowbridge(BA14 0XD), WAK = Wakefield(WF5 9TG).
For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered.
I/S=Insufficient sample For soil/sludge samples: AR=As received, DW=Dry weight.

Signed: L Jones

Name: **L. Jones** Date: **30 November 2018**

Title: **Organic Team Leader**

Certificate of Analysis

ANALYSED BY

Report Number:	**COV/1640755/2018**	Issue	**1**
Laboratory Number:	**17715283**	Sample	**4** of **6**
Sample Source:	**ALS Life Sciences Limited**		
Sample Point Description:			
Sample Description:	**18776876**		
Sample Matrix:	**Not Specified**		
Sample Date/Time:			
Sample Received:	**23 November 2018**		
Analysis Complete:	**30 November 2018**		

Test Description	Result	Units	Analysis Date	Accreditation	Method
BOD + ATU (5 day)	<1	mg/l	29/11/2018	N Cov	WAS001

Analyst Comments for 17715283: The date of sampling has not been provided and therefore sample stability times cannot be assessed. It is therefore possible that the results provided may be compromised.

This issue replaces all previous issues
Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.
Analysed at: CHE = Chester(CH5 3US), CTD = Coatbridge(ML5 4FR), COV = Coventry(CV4 9GU), OTT = Otterbourne(SO21 2SW), S = Subcontracted, TRB = Subcontracted to Trowbridge(BA14 0XD), WAK = Wakefield(WF5 9TG).
For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered.
I/S=Insufficient sample For soil/sludge samples: AR=As received, DW=Dry weight.

Signed: LJones

Name: **L. Jones** Date: **30 November 2018**

Title: **Organic Team Leader**

Certificate of Analysis

ANALYSED BY

Report Number:	**COV/1640755/2018**	Issue	**1**
Laboratory Number:	**17715284**	Sample	**5** of **6**
Sample Source:	**ALS Life Sciences Limited**		
Sample Point Description:			
Sample Description:	**18777586**		
Sample Matrix:	**Not Specified**		
Sample Date/Time:			
Sample Received:	**23 November 2018**		
Analysis Complete:	**30 November 2018**		

Test Description	Result	Units	Analysis Date	Accreditation	Method
BOD + ATU (5 day)	<1	mg/l	29/11/2018	N Cov	WAS001

Analyst Comments for 17715284: The date of sampling has not been provided and therefore sample stability times cannot be assessed. It is therefore possible that the results provided may be compromised.

This issue replaces all previous issues
Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.
Analysed at: CHE = Chester(CH5 3US), CTD = Coatbridge(ML5 4FR), COV = Coventry(CV4 9GU), OTT = Otterbourne(SO21 2SW), S = Subcontracted, TRB = Subcontracted to Trowbridge(BA14 0XD), WAK = Wakefield(WF5 9TG).
For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered.
I/S=Insufficient sample For soil/sludge samples: AR=As received, DW=Dry weight.

Signed: L Jones

Name: **L. Jones** Date: **30 November 2018**

Title: **Organic Team Leader**

ALS Environmental Ltd
Torrington Avenue, Coventry, CV4 9GU
Tel:+44 (0)24 7642 1213 Fax:+44 (0)24 7685 6575

Certificate of Analysis

ANALYSED BY

Report Number:	**COV/1640755/2018**	Issue	**1**
Laboratory Number:	**17715285**	Sample	**6** of **6**
Sample Source:	**ALS Life Sciences Limited**		
Sample Point Description:			
Sample Description:	**18777290**		
Sample Matrix:	**Not Specified**		
Sample Date/Time:			
Sample Received:	**23 November 2018**		
Analysis Complete:	**30 November 2018**		

Test Description	Result	Units	Analysis Date	Accreditation	Method
BOD + ATU (5 day)	89	mg/l	29/11/2018	N Cov	WAS001

Analyst Comments for 17715285: The date of sampling has not been provided and therefore sample stability times cannot be assessed. It is therefore possible that the results provided may be compromised.

This issue replaces all previous issues
Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.
Analysed at: CHE = Chester(CH5 3US), CTD = Coatbridge(ML5 4FR), COV = Coventry(CV4 9GU), OTT = Otterbourne(SO21 2SW), S = Subcontracted, TRB = Subcontracted to Trowbridge(BA14 0XD), WAK = Wakefield(WF5 9TG).
For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered.
I/S=Insufficient sample For soil/sludge samples: AR=As received, DW=Dry weight.

Signed: L Jones

Name: **L. Jones** Date: **30 November 2018**

Title: **Organic Team Leader**

ANALYST COMMENTS FOR REPORT COV/1640755/2018

Issue 1 This issue replaces all previous issues

Date of Issue: **30 November 2018**

Sample No	Analysis Comments
17715280	The date of sampling has not been provided and therefore sample stability times cannot be assessed. It is therefore possible that the results provided may be compromised.
17715281	The date of sampling has not been provided and therefore sample stability times cannot be assessed. It is therefore possible that the results provided may be compromised.
17715282	The date of sampling has not been provided and therefore sample stability times cannot be assessed. It is therefore possible that the results provided may be compromised.
17715283	The date of sampling has not been provided and therefore sample stability times cannot be assessed. It is therefore possible that the results provided may be compromised.
17715284	The date of sampling has not been provided and therefore sample stability times cannot be assessed. It is therefore possible that the results provided may be compromised.
17715285	The date of sampling has not been provided and therefore sample stability times cannot be assessed. It is therefore possible that the results provided may be compromised.

Signed: Name: **L. Jones** Date: **30 November 2018**

Title: **Organic Team Leader**

DETERMINAND COMMENTS FOR REPORT COV/1640755/2018

ISSUE 1

This issue replaces all previous issues

Date of Issue: 30 November 2018

Sample No	Description	Determinand	Comments

Signed: 

Name: **L. Jones** Date: **30 November 2018**

Title: **Organic Team Leader**

Appendix

General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. Samples will be run in duplicate upon request, but an additional charge may be incurred.

3. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

4. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

5. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

6. When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as “Not detected”. If no asbestos fibre types are found all will be reported as “Not detected” and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

7. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.

9. NDP - No determination possible due to insufficient/unsuitable sample.

10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals - total metals must be requested separately.

11. Results relate only to the items tested.

12. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

13. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

14. **Product analyses** - Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors employed.

15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethyphenol, 3,5 Dimethylphenol).

16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 15).

17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

18. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

19. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

20. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

21. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

22. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

23. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

24. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as “mixed hydrocarbons”. Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

Sample Deviations

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Holding time exceeded before sample received**
5	**Samples exceeded holding time before presevation was performed**
§	**Sampled on date not provided**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to sampled on date**
&	**Sample Holding Time exceeded - Late arrival of instructions.**

Asbestos

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.