

ALS Environmental Ltd
Torrington Avenue
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www.alsenvironmental.co.uk

Mr Griffiths
Rhondda Cynon Taf County
Borough Council
Environmental Services Group
Sardis House
Sardis Road
Pontypridd CF37 1DU

30 March 2017

Test Report: COV/1372607/2017

Dear Mr Griffiths

Analysis of your sample(s) submitted on 16 March 2017 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. Horobin

Title: Organic Operations Manager



Report Summary

Mr Owen Griffiths
Rhondda Cynon Taf County Borough
Council
Environmental Services Group
Sardis House
Sardis Road
Pontypridd
CF37 1DU



Date of Issue: **30 March 2017**

Report Number: **COV/1372607/2017**

Issue **1**

This issue replaces all previous issues

Number of Samples
included in this report: **15**
Number of Test Results
included in this report: **485**

Site Name:
Job Received: **16 March 2017**
Analysis Commenced: **17 March 2017**
Order No: **307935**

Signed:

A. Horobin

Name: **A. Horobin**

Date: **30 March 2017**

Title: **Organic Operations Manager**

ALS Environmental Ltd was not responsible for sampling unless otherwise stated. Sampling is not covered by our UKAS accreditation.

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.

This communication has been sent to you by ALS Environmental Ltd. Registered in England and Wales. Registration No. 02148934. Registered Office: ALS Environmental Limited, Torrington Avenue, Coventry, CV4 9GU.

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Certificate of Analysis



Report Number: COV/1372607/2017

Issue 1

Site Name:

					Not Specified																			
					15956565	15956566	15956567	15956568	15956569	15956570	15956571	15956572	15956573	15956574										
					Holding Tank	Discharge Point	GW1	GW3	GW4	GW6	GW8	GW9	GW10	GW11										
Group	Determinand	Unit	Method / Analysis Site		14/03/2017	14/03/2017	13/03/2017	13/03/2017	13/03/2017	14/03/2017	13/03/2017	13/03/2017	13/03/2017	13/03/2017	13/03/2017									
Metals	Sulphate as SO4	g/l	WAS036	Cov	N	0.1526	N	3.0891	N	0.0512	N	0.0088	N	0.0087	N	0.1966	N	0.0444	N	0.0221	N	0.0285	N	0.0209
	Sulphide as S	ug/l	WAS033	Cov		-	N	<20.0		-		-		-		-		-		-		-		-
	Chromium, Filtered as Cr	ug/l	WAS049	Cov	N	<2.00		-		-		-		-		-		-		-		-		-
	Copper, Filtered as Cu	ug/l	WAS049	Cov	N	<9.00		-		-		-		-		-		-		-		-		-
	Iron, Filtered as Fe	ug/l	WAS049	Cov		-	N	<230	N	<230	N	<230	N	<230	N	14100	N	<230	N	<230	N	<230	N	<230
	Iron , Total as Fe	mg/l	WAS049	Cov		-	N	27.3	N	14.3	N	3.49	N	0.58	N	106	N	49.5	N	63.7	N	192	N	9.89
	Lead, Filtered as Pb	ug/l	WAS049	Cov	N	<6.00		-		-		-		-		-		-		-		-		-
Inorganics	Nickel, Filtered as Ni	ug/l	WAS049	Cov	N	<3.00		-		-		-		-		-		-		-		-		-
	Zinc, Filtered as Zn	ug/l	WAS049	Cov	N	<18.0		-		-		-		-		-		-		-		-		-
	pH	pH units	WAS039	Cov	N	8.4	N	6.5	N	6.6	N	7.3	N	6.5	N	5.6	N	7.4	N	6.4	N	7.0	N	6.1
	Conductivity- Electrical 20C	uS/cm	WAS039	Cov		-		-	N	322	N	153	N	117	N	493	N	917	N	153	N	398	N	165
	Ammoniacal Nitrogen as N (LL)	mg/l	WAS067	Cov	N	<0.06	N	8.15	N	<0.06	N	<0.06	N	<0.06	N	0.25	N	<0.06	N	<0.06	N	<0.06	N	<0.06
	Nitrogen, Total Oxidised as N	mg/l	WAS036	Cov	N	<0.7		-		-		-		-		-		-		-		-		-
	Total Suspended Solids	mg/l	WAS006	Cov		-	N	72.0		-		-		-		-		-		-		-		-
	COD (Filtered)	mg/l	WAS040	Cov	N	<11.0		-		-		-		-		-		-		-		-		-
	Cyanide, Free as CN	mg/l	WAS018	Cov	N	<0.008	N	0.015	N	<0.008	N	<0.008	N	<0.008	N	<0.008	N	<0.008	N	<0.008	N	<0.008	N	<0.008
	Cyanide, Total as CN	mg/l	WAS018	Cov	N	<0.009		-		-		-		-		-		-		-		-		-
	Phenols Mono (Phenol Index)	mg/l	WAS019	Cov	N	<0.10	N	<0.10	N	<0.10	N	<0.10	N	<0.10	N	<0.10	N	<0.10	N	<0.10	N	<0.10	N	<0.10
	Sulphide as S	mg/l	WAS033	Cov	N	<0.020		-		-		-		-		-		-		-		-		-
	Chlor. Solvents	Benzene	ug/l	GEO56	Cov		-	N	<0.10	N	<0.10	N	<0.10	N	<0.10	N	<0.10	N	<0.10	N	<0.10	N	<0.10	N
Ethyl Benzene		ug/l	GEO56	Cov		-	N	<0.10	N	<0.10	N	<0.10	N	<0.10	N	<0.10	N	<0.10	N	<0.10	N	<0.10	N	<0.10
TPH	EH >C6 - C40	ug/l	GEO35	Cov	N	<10	N	<40	N	<10	N	<10	N	<10	N	<20	N	15	N	<10	N	<10	N	<20
	EH >C6 - C8	ug/l	GEO35	Cov	N	<10		-		-		-		-		-		-		-		-		-
	EH >C8 - C10	ug/l	GEO35	Cov	N	<10		-		-		-		-		-		-		-		-		-
	EH >C16 - C24	ug/l	GEO35	Cov	N	<10		-		-		-		-		-		-		-		-		-

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Certificate of Analysis



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Issue 1

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					Holding Tank	Discharge Point	GW1	GW3	GW4	GW6	GW8	GW9	GW10	GW11														
Group	Determinand	Unit	Method / Analysis Site		14/03/2017	14/03/2017	13/03/2017	13/03/2017	13/03/2017	14/03/2017	13/03/2017	13/03/2017	13/03/2017	13/03/2017	13/03/2017													
TPH	EH >C24 - C40	ug/l	GEO35	Cov	N	<10	-	-	-	-	-	-	-	-	-													
	EH >C10 - C16	ug/l	GEO35	Cov	N	<10	-	-	-	-	-	-	-	-	-													
PAH	Acenaphthene	ug/l	GEO19	Cov	N	<0.01	N	<0.10	N	<0.01	N	<0.01	N	<0.01	N	<0.02												
	Acenaphthylene	ug/l	GEO19	Cov	N	<0.01	N	<0.10	N	<0.01	N	<0.01	N	<0.01	N	<0.02												
	Anthracene	ug/l	GEO19	Cov	N	<0.01	N	<0.10	N	<0.01	N	<0.01	N	<0.01	N	<0.02												
	Benzo (a) anthracene	ug/l	GEO19	Cov	N	0.014	N	<0.10	N	<0.01	N	<0.01	N	0.013	N	<0.01	N	<0.01	N	<0.02								
	Benzo (g,h,i) perylene	ug/l	GEO19	Cov	N	0.012	N	<0.10	N	<0.01	N	<0.01	N	<0.01	N	<0.01	N	<0.01	N	<0.02								
	Benzo (a) pyrene	ug/l	GEO19	Cov	N	0.011	N	<0.10	N	<0.01	N	<0.01	N	<0.01	N	0.013	N	<0.01	N	<0.01	N	<0.02						
	Benzo (b) fluoranthene	ug/l	GEO19	Cov	N	0.016	N	<0.10	N	<0.01	N	0.013	N	<0.01	N	<0.02	N	0.017	N	<0.01	N	<0.01	N	<0.02				
	Benzo (k) fluoranthene	ug/l	GEO19	Cov	N	<0.01	N	<0.10	N	<0.01	N	<0.01	N	<0.01	N	<0.02	N	<0.01	N	<0.01	N	<0.01	N	<0.02				
	Chrysene	ug/l	GEO19	Cov	N	0.018	N	<0.10	N	<0.01	N	<0.01	N	<0.01	N	<0.02	N	0.012	N	<0.01	N	<0.01	N	<0.01	N	<0.02		
	Dibenz (a,h) anthracene	ug/l	GEO19	Cov	N	<0.01	N	<0.10	N	<0.01	N	<0.01	N	<0.01	N	<0.02	N	<0.01	N	<0.01	N	<0.01	N	<0.01	N	<0.02		
	Fluoranthene	ug/l	GEO19	Cov	N	0.046	N	0.735	N	<0.01	N	0.014	N	<0.01	N	<0.02	N	0.021	N	0.010	N	<0.01	N	<0.01	N	<0.02		
	Fluorene	ug/l	GEO19	Cov	N	<0.01	N	0.135	N	<0.01	N	<0.01	N	<0.01	N	<0.02	N	<0.01	N	<0.01	N	<0.01	N	<0.01	N	<0.02		
	Indeno (1,2,3) cd pyrene	ug/l	GEO19	Cov	N	<0.01	N	<0.10	N	<0.01	N	<0.01	N	<0.01	N	<0.02	N	<0.01	N	<0.01	N	<0.01	N	<0.01	N	<0.02		
	Naphthalene	ug/l	GEO19	Cov	N	0.018	N	<0.10	N	<0.01	N	<0.01	N	<0.01	N	<0.02	N	<0.01	N	<0.01	N	<0.01	N	<0.01	N	<0.02		
	Phenanthrene	ug/l	GEO19	Cov	N	0.026	N	<0.10	N	<0.01	N	0.018	N	<0.01	N	<0.02	N	0.033	N	<0.01	N	<0.01	N	<0.01	N	<0.02		
	Pyrene	ug/l	GEO19	Cov	N	0.030	N	0.406	N	<0.01	N	0.011	N	<0.01	N	<0.02	N	0.018	N	0.012	N	<0.01	N	<0.01	N	<0.02		
	PAH, Total	ug/l	GEO19	Cov	N	0.190	N	1.28	N	<0.01	N	0.057	N	<0.01	N	<0.02	N	0.128	N	0.022	N	<0.01	N	<0.01	N	<0.02		
	Other	Toluene	ug/l	GEO56	Cov	-	N	<0.10	N	<0.10	N	<0.10	N	<0.10	N	<0.10	N	<0.10	N	<0.10	N	<0.10	N	<0.10	N	<0.10	N	<0.10
		m&p Xylene	ug/l	GEO56	Cov	-	N	<0.20	N	<0.20	N	<0.20	N	<0.20	N	<0.20	N	<0.20	N	<0.20	N	<0.20	N	<0.20	N	<0.20	N	<0.20
		o-Xylene	ug/l	GEO56	Cov	-	N	<0.10	N	<0.10	N	<0.10	N	<0.10	N	<0.10	N	<0.10	N	<0.10	N	<0.10	N	<0.10	N	<0.10	N	<0.10
Total Xylenes		ug/l	GEO56	Cov	-	N	<0.20	N	<0.20	N	<0.20	N	<0.20	N	<0.20	N	<0.20	N	<0.20	N	<0.20	N	<0.20	N	<0.20	N	<0.20	

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Certificate of Analysis



Report Number: **COV/1372607/2017**

Issue **1**

Site Name:

					Not Specified					
					15956575	15956576	15956577	15956578	15956579	
					GW12	GW13	GW15	GW17	SW1	
Group	Determinand	Unit	Method / Analysis Site		14/03/2017	14/03/2017	14/03/2017	14/03/2017	14/03/2017	
Metals	Sulphate as SO4	g/l	WAS036	Cov	N 0.0101	N 0.0079	N <0.0044	N 0.0166	N 0.0157	
	Iron, Filtered as Fe	ug/l	WAS049	Cov	N <230	N <230	N 699	N <230	N <230	
	Iron , Total as Fe	mg/l	WAS049	Cov	N 26.5	N 83.8	N 437	N 17.9	N 0.32	
Inorganics	pH	pH units	WAS039	Cov	N 6.4	N 7.6	N 6.7	N 6.3	N 8.6	
	Conductivity- Electrical 20C	uS/cm	WAS039	Cov	N 154	N 442	N 274	N 179	N 143	
	Ammoniacal Nitrogen as N (LL)	mg/l	WAS067	Cov	N <0.06	N <0.06	N <0.06	N 0.07	N <0.06	
	Cyanide, Free as CN	mg/l	WAS018	Cov	N <0.008	N <0.008	N <0.008	N <0.008	N <0.008	
	Phenols Mono (Phenol Index)	mg/l	WAS019	Cov	N <0.10	N <0.10	N <0.10	N <0.10	N <0.10	
	Chlor. Solvents	Benzene	ug/l	GEO56	Cov	N <0.10	N <0.10	N <0.10	N <0.10	N <0.10
	Ethyl Benzene	ug/l	GEO56	Cov	N <0.10	N <0.10	N <0.10	N <0.10	N <0.10	
	TPH	EH >C6 - C40	ug/l	GEO35	Cov	N <10	N <40	N <40	N <10	-
PAH	Acenaphthene	ug/l	GEO19	Cov	N <0.01	N <0.04	N <0.04	N <0.01	N <0.01	
	Acenaphthylene	ug/l	GEO19	Cov	N <0.01	N <0.04	N <0.04	N <0.01	N <0.01	
	Anthracene	ug/l	GEO19	Cov	N <0.01	N <0.04	N <0.04	N <0.01	N <0.01	
	Benzo (a) anthracene	ug/l	GEO19	Cov	N <0.01	N 0.063	N <0.04	N <0.01	N <0.01	
	Benzo (g,h,i) perylene	ug/l	GEO19	Cov	N <0.01	N 0.042	N <0.04	N <0.01	N <0.01	
	Benzo (a) pyrene	ug/l	GEO19	Cov	N <0.01	N 0.051	N <0.04	N <0.01	N <0.01	
	Benzo (b) fluoranthene	ug/l	GEO19	Cov	N <0.01	N 0.050	N <0.04	N <0.01	N <0.01	
	Benzo (k) fluoranthene	ug/l	GEO19	Cov	N <0.01	N <0.04	N <0.04	N <0.01	N <0.01	
	Chrysene	ug/l	GEO19	Cov	N <0.01	N 0.066	N <0.04	N <0.01	N <0.01	
	Dibenz (a,h) anthracene	ug/l	GEO19	Cov	N <0.01	N <0.04	N <0.04	N <0.01	N <0.01	
	Fluoranthene	ug/l	GEO19	Cov	N <0.01	N 0.079	N <0.04	N <0.01	N <0.01	
	Fluorene	ug/l	GEO19	Cov	N <0.01	N <0.04	N <0.04	N <0.01	N <0.01	
	Indeno (1,2,3) cd pyrene	ug/l	GEO19	Cov	N <0.01	N <0.04	N <0.04	N <0.01	N <0.01	
	Naphthalene	ug/l	GEO19	Cov	N <0.01	N <0.04	N <0.04	N <0.01	N 0.045	

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					GW12	GW13	GW15	GW17	SW1					
Group	Determinand	Unit	Method / Analysis Site		14/03/2017	14/03/2017	14/03/2017	14/03/2017	14/03/2017					
PAH	Phenanthrene	ug/l	GEO19	Cov	N	<0.01	N	0.096	N	<0.04	N	<0.01	N	0.013
	Pyrene	ug/l	GEO19	Cov	N	<0.01	N	0.062	N	<0.04	N	<0.01	N	<0.01
	PAH, Total	ug/l	GEO19	Cov	N	<0.01	N	0.508	N	<0.04	N	<0.01	N	0.058
Other	Toluene	ug/l	GEO56	Cov	N	<0.10	N	<0.10	N	<0.10	N	<0.10	N	<0.10
	m&p Xylene	ug/l	GEO56	Cov	N	<0.20	N	<0.20	N	<0.20	N	<0.20	N	<0.20
	o-Xylene	ug/l	GEO56	Cov	N	<0.10	N	<0.10	N	<0.10	N	<0.10	N	<0.10
	Total Xylenes	ug/l	GEO56	Cov	N	<0.20	N	<0.20	N	<0.20	N	<0.20	N	<0.20

Signed:

A I Horobin

Name: **A. Horobin**

Date: **30 March 2017**

Title: **Organic Operations Manager**

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ANALYST COMMENTS FOR REPORT

COV/1372607/2017

Issue 1

Date of Issue: 30 March 2017

Sample No	Analyst Comments
15956565	This sample has been analysed for PAH Waters method GEO19, pH outside recommended stability times. It is therefore possible that the results provided may be compromised.
15956566	This sample has been analysed for PAH Waters method GEO19, pH outside recommended stability times. It is therefore possible that the results provided may be compromised. Reporting limits raised for EH and PAH analysis due to nature of sample matrix. This sample was re-analysed for PAH outside recommended stability times due to quality failure on the original sample. It is therefore possible that the results provided could be compromised.
15956567	This sample has been analysed for PAH Waters method GEO19, pH outside recommended stability times. It is therefore possible that the results provided may be compromised.
15956568	This sample has been analysed for PAH Waters method GEO19, pH outside recommended stability times. It is therefore possible that the results provided may be compromised.
15956569	This sample has been analysed for PAH Waters method GEO19, pH outside recommended stability times. It is therefore possible that the results provided may be compromised.
15956570	This sample has been analysed for PAH Waters method GEO19, pH outside recommended stability times. It is therefore possible that the results provided may be compromised. Reporting limits raised for PAH due to nature of sample matrix. The reporting limit has been raised for metals due to interference with the internal standard. Reporting limits raised for EH analysis due to nature of sample matrix.
15956571	This sample has been analysed for PAH Waters method GEO19, pH outside recommended stability times. It is therefore possible that the results provided may be compromised.
15956572	This sample has been analysed for PAH Waters method GEO19, pH outside recommended stability times. It is therefore possible that the results provided may be compromised.
15956573	This sample has been analysed for PAH Waters method GEO19, pH outside recommended stability times. It is therefore possible that the results provided may be compromised.
15956574	This sample has been analysed for PAH Waters method GEO19, pH outside recommended stability times. It is therefore possible that the results provided may be compromised. Reporting limits raised for PAH due to nature of sample matrix. Reporting limits raised for EH analysis due to nature of sample matrix.
15956575	This sample has been analysed for PAH Waters method GEO19, pH outside recommended stability times. It is therefore possible that the results provided may be compromised. The reporting limit has been raised for metals due to interference with the internal standard
15956576	This sample has been analysed for PAH Waters method GEO19, pH outside recommended stability times. It is therefore possible that the results provided may be compromised. Reporting limits raised for PAH due to nature of sample matrix. Reporting limits raised for EH analysis due to nature of sample matrix.
15956577	This sample has been analysed for PAH Waters method GEO19, pH outside recommended stability times. It is therefore possible that the results provided may be compromised. Reporting limits raised for PAH due to nature of sample matrix. Reporting limits raised for EH analysis due to nature of sample matrix. The reporting limit has been raised for metals due to interference with the internal standard
15956578	This sample has been analysed for PAH Waters method GEO19, pH outside recommended stability times. It is therefore possible that the results provided may be compromised.
15956579	This sample has been analysed for PAH Waters method GEO19, pH outside recommended stability times. It is therefore possible that the results provided may be compromised.

Signed: A I Horobin

Name: A. Horobin

Date: 30 March 2017

Title: Organic Operations Manager

DETERMINAND COMMENTS FOR REPORT COV/1372607/2017

ISSUE 1



Date of Issue : 30 March 2017

Sample No	Description	Determinand	Comments

Signed: A I Horobin

Name: A. Horobin

Date: 30 March 2017

Title: Organic Operations Manager