ALS Environmental Ltd
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Mr Jenkins
Rhondda Cynon Taf County
Borough Council
Sardis House,
Sardis Road,
Pontypridd CF37 1DU

28 December 2017

Test Report: COV/1478278/2017

Dear Mr Jenkins

Analysis of your sample(s) submitted on 07 December 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. Zunzunegui

Title: Organic Team Leader

Report Summary

Mr Ieuan Jenkins
Rhondda Cynon Taf County Borough Council
Sardis House,
Sardis Road,
Pontypridd
CF37 1DU

UKAS TESTING
1314
0897
4409

ALS Environmental

Date of Issue: **28 December 2017**

Report Number: **COV/1478278/2017** Issue **1** This issue replaces all previous issues

Number of Samples included in this report:	**11**	Site Name:	**E355 Coed Ely**
Number of Test Results included in this report:	**352**	Job Received:	**07 December 2017**
		Analysis Commenced:	**11 December 2017**
		Order No:	**307935**

Signed: Name: **A. Zunzunegui** Date: **28 December 2017**

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

Report Number: Issue

Site Name:

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Certificate of Analysis

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ALS Environmental

Report Number: **COV/1478278/2017** Issue **1**
Site Name: **E355 Coed Ely**

					Ground Water									
					16664376	16664377	16664378	16664379	16664380	16664381	16664382	16664383	16664384	16664385
					GW1	GW3	GW4	GW8	GW9	GW10	GW11	GW12	GW13	GW15
Group	**Determinand**	**Unit**	**Method / Analysis Site**		04/12/2017	04/12/2017	04/12/2017	04/12/2017	04/12/2017	04/12/2017	04/12/2017	04/12/2017	04/12/2017	04/12/2017
	Sulphate as SO4	g/l	WAS036	Cov	N 0.0475	N 0.0063	N 0.0093	N 0.0277	N 0.0106	N 0.0550	N 0.0196	N 0.0692	N <0.0044	-
Metals	Iron, Filtered as Fe	ug/l	WAS049	Cov	Y <230	Y <230	Y <230	Y <230	Y <230	Y <230	Y 4340	Y <230	Y <230	Y <230
	Iron , Total as Fe	mg/l	WAS049	Cov	Y 11.4	Y 2.04	Y 0.71	Y 83.6	Y 81.8	Y 82.4	Y 10.1	Y 17.2	Y 17.0	Y 327
Inorganics	pH	pH units	WAS039	Cov	Y 6.5	Y 6.8	Y 6.3	Y 7.1	Y 6.3	Y 7.1	Y 6.3	Y 6.2	Y 7.5	Y 6.6
	Conductivity- Electrical 20C	uS/cm	WAS039	Cov	Y 323	Y 179	Y 148	Y 861	Y 136	Y 915	Y 140	Y 157	Y 401	Y 294
	Ammoniacal Nitrogen as N (LL)	mg/l	WAS067	Cov	Y <0.06	Y <0.06	Y <0.06	Y 0.07	Y <0.06	Y <0.06	Y <0.06	Y <0.06	Y <0.06	Y <0.06
	Sulphate, total as SO4 by I.C.	mg/l	CON27	Cov	-	-	-	-	-	-	-	-	-	Y 13.88
	Cyanide, Free as CN	mg/l	WAS018	Cov	Y <0.008	Y <0.008	Y <0.008	Y <0.008	Y <0.008	Y <0.008	Y <0.008	Y <0.008	Y <0.008	Y <0.008
	Phenols Mono (Phenol Index)	mg/l	WAS019	Cov	Y <0.10	Y <0.10	Y <0.10	Y <0.10	Y <0.10	Y <0.10	Y <0.10	Y <0.10	Y <0.10	Y <0.10
Chlor. Solvents	Benzene	ug/l	GEO56	Cov	Y <0.10	Y <0.10	Y <0.10	Y <0.10	Y <0.10	Y <0.10	Y <0.10	Y <0.10	Y <0.10	Y <0.10
	Ethyl Benzene	ug/l	GEO56	Cov	Y <0.10	Y <0.10	Y <0.10	Y <0.10	Y <0.10	Y <0.10	Y <0.10	Y <0.10	Y <0.10	Y <0.10
TPH	EH >C6 - C40	ug/l	GEO35	Cov	N <10	N <10	N <10	N <10	N <10	N <10	N <20	N <10	N <10	N <20
PAH	Acenaphthene	ug/l	GEO19	Cov	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.02	Y <0.01	Y <0.01	Y <0.02
	Acenaphthylene	ug/l	GEO19	Cov	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.02	Y <0.01	Y <0.01	Y <0.02
	Anthracene	ug/l	GEO19	Cov	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.02	Y <0.01	Y <0.01	Y <0.02
	Benzo (a) anthracene	ug/l	GEO19	Cov	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.02	Y <0.01	Y 0.022	Y <0.02
	Benzo (g,h,i) perylene	ug/l	GEO19	Cov	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.02	Y <0.01	Y 0.016	Y <0.02
	Benzo (a) pyrene	ug/l	GEO19	Cov	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.02	Y <0.01	Y 0.021	Y <0.02
	Benzo (b) fluoranthene	ug/l	GEO19	Cov	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.02	Y <0.01	Y 0.030	Y <0.02
	Benzo (k) fluoranthene	ug/l	GEO19	Cov	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.02	Y <0.01	Y 0.014	Y <0.02
	Chrysene	ug/l	GEO19	Cov	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.02	Y <0.01	Y 0.021	Y <0.02
	Dibenz (a,h) anthracene	ug/l	GEO19	Cov	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.02	Y <0.01	Y <0.01	Y <0.02
	Fluoranthene	ug/l	GEO19	Cov	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y 0.020	Y <0.01	Y <0.02	Y <0.01	Y 0.029	Y <0.02
	Fluorene	ug/l	GEO19	Cov	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.02	Y <0.01	Y <0.01	Y <0.02

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Certificate of Analysis

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Report Number: **COV/1478278/2017** Issue **1**

Site Name: **E355 Coed Ely**

					Ground Water									
					16664376	16664377	16664378	16664379	16664380	16664381	16664382	16664383	16664384	16664385
					GW1	GW3	GW4	GW8	GW9	GW10	GW11	GW12	GW13	GW15
Group	**Determinand**	**Unit**	**Method / Analysis**	**Site**	04/12/2017	04/12/2017	04/12/2017	04/12/2017	04/12/2017	04/12/2017	04/12/2017	04/12/2017	04/12/2017	04/12/2017
PAH	Indeno (1,2,3) cd pyrene	ug/l	GEO19	Cov	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.02	Y <0.01	Y 0.014	Y <0.02
	Naphthalene	ug/l	GEO19	Cov	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y <0.02	Y <0.01	Y 0.013	Y <0.02
	Phenanthrene	ug/l	GEO19	Cov	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y 0.011	Y <0.01	Y <0.02	Y <0.01	Y 0.034	Y <0.02
	Pyrene	ug/l	GEO19	Cov	Y <0.01	Y <0.01	Y <0.01	Y <0.01	Y 0.022	Y <0.01	Y <0.02	Y <0.01	Y 0.025	Y <0.02
	PAH, Total	ug/l	GEO19	Cov	N <0.01	N <0.01	N <0.01	N <0.01	N 0.053	N <0.01	N <0.02	N <0.01	N 0.238	N <0.02
Other	Toluene	ug/l	GEO56	Cov	Y <0.10	Y <0.10	Y <0.10	Y <0.10	Y <0.10	Y <0.10	Y <0.10	Y <0.10	Y <0.10	Y <0.10
	m&p Xylene	ug/l	GEO56	Cov	Y <0.20	Y <0.20	Y <0.20	Y <0.20	Y <0.20	Y <0.20	Y <0.20	Y <0.20	Y <0.20	Y <0.20
	o-Xylene	ug/l	GEO56	Cov	Y <0.10	Y <0.10	Y <0.10	Y <0.10	Y <0.10	Y <0.10	Y <0.10	Y <0.10	Y <0.10	Y <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

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Site Name: **E355 Coed Ely**

Group	Determinand	Unit	Method / Analysis Site			Ground Water 16664386 GW17 04/12/2017
	Sulphate as SO4	g/l	WAS036	Cov	N	0.0138
Metals	Iron, Filtered as Fe	ug/l	WAS049	Cov	Y	<230
	Iron , Total as Fe	mg/l	WAS049	Cov	Y	20.6
Inorganics	pH	pH units	WAS039	Cov	Y	6.1
	Conductivity- Electrical 20C	uS/cm	WAS039	Cov	Y	174
	Ammoniacal Nitrogen as N (LL)	mg/l	WAS067	Cov	Y	<0.06
	Cyanide, Free as CN	mg/l	WAS018	Cov	Y	<0.008
	Phenols Mono (Phenol Index)	mg/l	WAS019	Cov	Y	<0.10
Chlor. Solvents	Benzene	ug/l	GEO56	Cov	Y	<0.10
	Ethyl Benzene	ug/l	GEO56	Cov	Y	<0.10
TPH	EH >C6 - C40	ug/l	GEO35	Cov	N	<10
PAH	Acenaphthene	ug/l	GEO19	Cov	Y	<0.01
	Acenaphthylene	ug/l	GEO19	Cov	Y	<0.01
	Anthracene	ug/l	GEO19	Cov	Y	<0.01
	Benzo (a) anthracene	ug/l	GEO19	Cov	Y	<0.01
	Benzo (g,h,i) perylene	ug/l	GEO19	Cov	Y	<0.01
	Benzo (a) pyrene	ug/l	GEO19	Cov	Y	<0.01
	Benzo (b) fluoranthene	ug/l	GEO19	Cov	Y	<0.01
	Benzo (k) fluoranthene	ug/l	GEO19	Cov	Y	<0.01
	Chrysene	ug/l	GEO19	Cov	Y	<0.01
	Dibenz (a,h) anthracene	ug/l	GEO19	Cov	Y	<0.01
	Fluoranthene	ug/l	GEO19	Cov	Y	<0.01
	Fluorene	ug/l	GEO19	Cov	Y	<0.01
	Indeno (1,2,3) cd pyrene	ug/l	GEO19	Cov	Y	<0.01

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Report Number: **COV/1478278/2017** Issue **1**

Site Name: **E355 Coed Ely**

Group	Determinand	Unit	Method / Analysis Site		Ground Water 16664386 GW17 04/12/2017	
PAH	Naphthalene	ug/l	GEO19	Cov	Y	<0.01
	Phenanthrene	ug/l	GEO19	Cov	Y	<0.01
	Pyrene	ug/l	GEO19	Cov	Y	<0.01
	PAH, Total	ug/l	GEO19	Cov	N	<0.01
Other	Toluene	ug/l	GEO56	Cov	Y	<0.10
	m&p Xylene	ug/l	GEO56	Cov	Y	<0.20
	o-Xylene	ug/l	GEO56	Cov	Y	<0.10
	Total Xylenes	ug/l	GEO56	Cov	N	<0.20

Signed: 

Name: **A. Zunzunegui** Date: **28 December 2017**

Title: **Organic Team Leader**

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ANALYST COMMENTS FOR REPORT COV/1478278/2017 Issue 1

This issue replaces all previous issues

Date of Issue: **28 December 2017**

Sample No	Analyst Comments
16664376	This sample has been analysed for PAH Waters method GEO19, BTEX Waters method GEO56, pH, Ammoniacal Nitrogen as N (LL) outside recommended stability times. It is therefore possible that the results provided may be compromised.
16664377	This sample has been analysed for PAH Waters method GEO19, BTEX Waters method GEO56, pH, Ammoniacal Nitrogen as N (LL) outside recommended stability times. It is therefore possible that the results provided may be compromised.
16664378	This sample has been analysed for PAH Waters method GEO19, BTEX Waters method GEO56, pH, Ammoniacal Nitrogen as N (LL) outside recommended stability times. It is therefore possible that the results provided may be compromised.
16664379	This sample has been analysed for PAH Waters method GEO19, BTEX Waters method GEO56, pH, Ammoniacal Nitrogen as N (LL) outside recommended stability times. It is therefore possible that the results provided may be compromised.
16664380	This sample has been analysed for PAH Waters method GEO19, BTEX Waters method GEO56, pH, Ammoniacal Nitrogen as N (LL) outside recommended stability times. It is therefore possible that the results provided may be compromised.
16664381	This sample has been analysed for PAH Waters method GEO19, BTEX Waters method GEO56, pH, Ammoniacal Nitrogen as N (LL) outside recommended stability times. It is therefore possible that the results provided may be compromised.
16664382	This sample has been analysed for PAH Waters method GEO19, BTEX Waters method GEO56, pH, Ammoniacal Nitrogen as N (LL) 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.
16664383	This sample has been analysed for PAH Waters method GEO19, BTEX Waters method GEO56, pH, Ammoniacal Nitrogen as N (LL) outside recommended stability times. It is therefore possible that the results provided may be compromised.
16664384	This sample has been analysed for PAH Waters method GEO19, BTEX Waters method GEO56, pH, Ammoniacal Nitrogen as N (LL) outside recommended stability times. It is therefore possible that the results provided may be compromised.
16664385	This sample has been analysed for PAH Waters method GEO19, BTEX Waters method GEO56, pH, Ammoniacal Nitrogen as N (LL) outside recommended stability times. It is therefore possible that the results provided may be compromised. {/*}Sulphate analysed by ion chromatography due to interference with turbidmetric determination{*/}Reporting limits raised for EH and PAH analysis due to nature of sample matrix.
16664386	This sample has been analysed for PAH Waters method GEO19, BTEX Waters method GEO56, pH, Ammoniacal Nitrogen as N (LL) outside recommended stability times. It is therefore possible that the results provided may be compromised.

Signed: 

Name: **A. Zunzunegui** Date: **28 December 2017**

Title: **Organic Team Leader**

DETERMINAND COMMENTS FOR REPORT COV/1478278/2017

ISSUE 1 This issue replaces all previous issues

Date of Issue : 28 December 2017

Sample No	Description	Determinand	Comments

Signed: 

Name: **A. Zunzunegui** Date: **28 December 2017**

Title: **Organic Team Leader**