



comhairle chontae na mí
meath county council

Ballivor Waste Water Works



Annual Environmental Report

For

EPA Waste Water Discharge Licence D0254-01

01/01/2013 to 31/12/2013

Table of Contents

Section 1 Introduction & Background

Section 1.1: Executive Summary

Section 2 Monitoring Reports Summary

Section 2.1 Summary Report on Monthly Influent Monitoring

Section 2.2 Discharges from the Agglomeration

Section 2.3 Ambient Monitoring Summary

Section 2.4 Data Collection and Reporting Requirements under the Urban Waste Water Treatment Directive

Section 2.5 Pollutant Release and Transfer Register (PRTR)

Section 3 Operational Reports Summary

Section 3.1 Treatment Efficiency Report

Section 3.2 Treatment Capacity Report

Section 3.3 Extent of Agglomeration Report

Section 3.4 Complaints Summary

Section 3.5 Reported Incidents Summary

Section 3.6 Sludge/Other Inputs to the WWTP

Section 4 Infrastructural Assessments and Programme of Improvements

Section 4.1 Storm water overflow identification and inspection report

Section 4.2 Report on progress made and proposals being developed to meet the improvement programme requirements.

Section 5 Licence Specific Reports

Section 5.1 Priority Substances Assessment

Section 5.2 Drinking Water Abstraction Point Risk Assessment

Section 5.3 Shellfish Impact Assessment Report

Section 5.4 Toxicity / Leachate Management

Section 5.5 Toxicity of the Final Effluent Report

Section 5.6 Pearl Mussel Measures Report

Section 5.7 Habitats Impact Assessment Report

Section 6 Certification and Sign Off

Section 6.1 Report Check List

Section 6.2 Certification and Sign Off

Section 7 Appendix

Section 7.1 Priority Substance Screening Results

SECTION 1:

INTRODUCTION & BACKGROUND

SECTION 1.1: EXECUTIVE SUMMARY.

Introduction:

Ballivor Waste Water Treatment Plant (WwTP) is operated and maintained by Meath County Council. The waste water treatment plant was built to serve the agglomeration of Ballivor Co. Meath. It is designed for a population equivalent (p.e.) of 2,000 with a licensed p.e. of 2,000.

The following Annual Environmental Report (AER) has been prepared as per Condition 6.10 of Meath County Council's Discharge Licence D0254-01 and includes all information requested under schedule D of this licence.

Plant Details:

Ballivor WwTP includes screening, two diffused aeration tanks, two clarifiers, ferric dosing, sludge thickening & dewatering and a storm water tank. The primary discharge from the WwTP is to the River Ballivor a tributary of the Stonyford River.

Compliance Issues:

There were a number of Emission Limit Value (ELV) exceedances recorded during the reporting period 01/01/13 to 31/12/13. These exceedances mainly relate to cBOD. All exceedances were reported to the Agency and all incidents reports are available for inspection at the Environment & Water Services Offices in Navan, Co.Meath.

Complaints Received:

There were no complaints received during the reporting period 01/01/13 to 31/12/13.

Projected Completed:

There were no significant improvements works or project carried out at the Treatment Works during the reporting period 01/01/13 to 31/12/13.

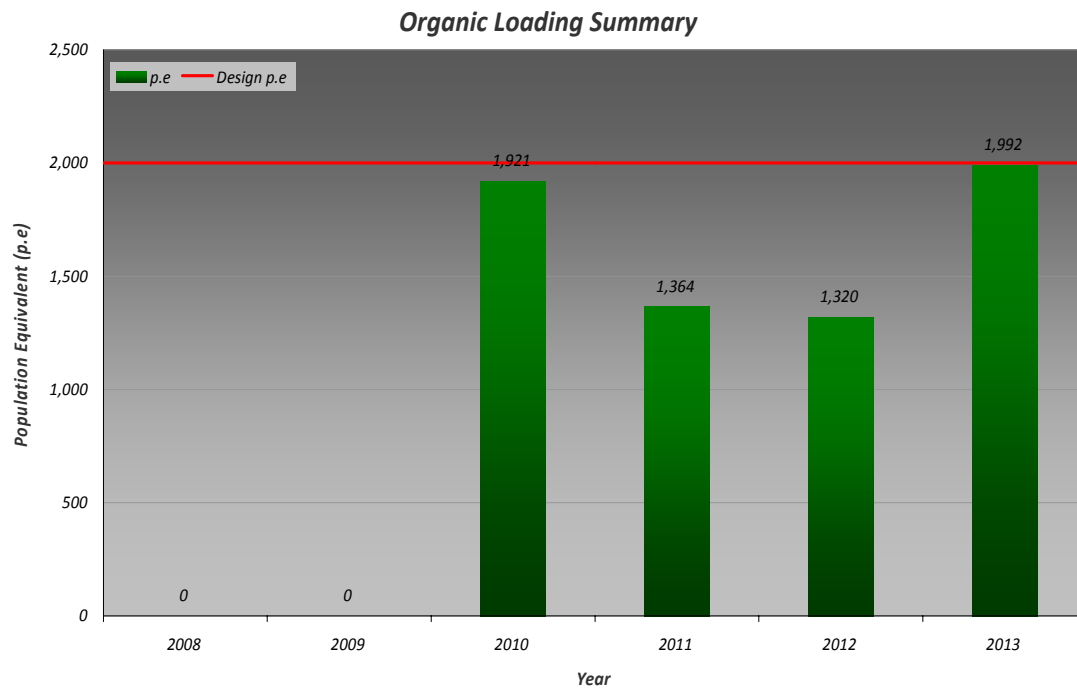
SECTION 2:

MONITORING REPORTS SUMMARY.

Section 2.1: Summary Report on Monthly Influent Monitoring.

Influent Results Table:

	Influent Results (mg/l)					Hydraulic Loading (m3/d)	Organic Loading (p.e/d)
	BOD	COD	TSS	TP	TN		
No. Samples	7	7	7	7	6		
Max. Result	316	1267	1,723	38	139	1314	-
Avg. Result	218	550	379	10	50	548	1,992



Summary of Results:

As can be seen from the 'Influent Results Table' and the 'Organic Loading Summary' chart Ballivor WwTP is operating within its licensed capacity of 2,000 P.E.

Section 2.2: Discharges from the Agglomeration Report.

Parameter:	Flow	BOD	COD	TSS	TN	NH4	TP	OP	N03	N02	TON
Units:	m ³ /d	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	kg/d
Average Results for 2012	548	9	30	15	N/A	0.164	N/A	0.24	N/A	N/A	N/a
WWDL ELV	N/A	5	125	35	N/A	1	N/A	0.5	N/A	N/A	N/A
ELV (Condition 2)	N/A	10	250	88	N/A	1.2	N/A	0.6	N/A	N/A	N/A
Annual Mean ELV	548	9	30	15	N/A	0.164	N/A	0.24	N/A	N/A	N/A
No. of Results	N/A	8	8	8	8	8	N/A	8	N/A	N/A	N/A
WWDL ELV Exceedances	N/A	7	0	1	N/A	0	N/A	1	N/A	N/A	N/A
ELV (Condition 2) Exceedances	N/A	3	0	0	N/A	0	N/A	0	N/A	N/A	N/A
Allowable Exceedances	N/A	2	2	2	N/A	2	N/A	2	N/A	N/A	N/A
Overall Compliance	N/A	Fail	Pass	Pass	N/A	Pass	N/A	Pass	N/A	N/A	N/A

Section 2.3: Ambient Monitoring Summary Report.

Report

From: Kieran Cunningham

Re: Ballivor WWTP (D0254-01)
u/s and d/s Ambient river monitoring 2013

Below is the data from monitoring the River Ballivor (tributary of the River Stoneyford) upstream and downstream of Ballivor WWTP in 2013 as required by Schedule B of the licence.

Schedule B requires that 10 samples per year of the receiving water are taken. In 2013 the River Ballivor was sampled on 10 occasions.

		Date		Ammonia	Ortho P	DO	BOD	Total N
				mgN/L	mgP/L	% Sat	mg/L	mg/L
13990102	U/S BALLIVOR	21/03/2013				86.3	1.84	1.81
13990117	U/S BALLIVOR	17/04/2013				82.3	1.45	2.16
13990245	U/S BALLIVOR	14/06/2013		0.215	0.040	80.9	2.52	1.62
13990268	U/S BALLIVOR	27/06/2013		0.014	0.021	65.6	5.02	0.918
13990286	U/S BALLIVOR	24/07/2013		0.749	0.075	24.9	5.47	
13990417	U/S BALLIVOR	16/08/2013		0.105	0.068	58.3	2.55	
13990450	U/S BALLIVOR	11/09/2013		0.261	0.044	47.8	2.55	
13990481	U/S BALLIVOR	30/10/2013		0.081	0.043	79.2	2.14	
13990530	U/S BALLIVOR	14/11/2013		0.095	0.050	86.5	1.82	1.71
13-717	U/S BALLIVOR	17/12/2013		0.262	0.040		2.6	1.7
			Mean	0.223	0.048	67.978	2.796	1.653
			95% ile	0.579	0.073	86.420	5.268	2.073
13990103	D/S BALLIVOR	21/03/2013				86.3	2.96	3.18
13990118	D/S BALLIVOR	17/04/2013				87.5	1.5	2.49
13990246	D/S BALLIVOR	14/06/2013		0.235	0.051	83.3	2.72	2.97
13990269	D/S BALLIVOR	27/06/2013		0.014	0.039	82.6	6.95	4.2
13990287	D/S BALLIVOR	24/07/2013		0.144	0.252	62.6	4.85	
13990418	D/S BALLIVOR	16/08/2013		0.071	0.209	71.3	7.08	
13990451	D/S BALLIVOR	11/09/2013		0.107	0.084	72.4	3.32	
13990482	D/S BALLIVOR	30/10/2013		0.089	0.051	83.8	2.01	
13990531	D/S BALLIVOR	14/11/2013		0.105	0.043	95.1	3.09	2.67
13-718	D/S BALLIVOR	17/12/2013		0.215	0.042		2.56	2.33
			Mean	0.123	0.096	80.544	3.704	2.973
			95% ile	0.228	0.237	92.060	7.022	3.945

EQS as per EC Environmental Objectives (Surface Water) Regulations 2009:

<u>Ammonia</u>	High Status	≤ 0.040 mgN/L (mean) ≤ 0.090mgN/L (95% ile)	Good Status	≤ 0.060 mgN/L (mean) ≤ 0.14 mgN/L (95% ile)
<u>Ortho P</u>	High Status	≤ 0.025 mgP/L (mean) ≤0.045 mgP/L (95% ile)	Good Status	≤ 0.035 mgP/L (mean) ≤ 0.075 mgP/L (95% ile)
<u>B.O.D.</u>	High Status	≤ 1.3 mgO2/L (mean) ≤ 2.2 mgO2/L (95% ile)	Good Status	≤ 1.5 mgO2/L (mean) ≤ 2.2 mgO2/L (95% ile)
<u>D.O.</u>	Lower Limit	80 % saturation (95% ile)		
	Upper Limit	120 % saturation (95% ile)		

In terms of impact on waters the existing discharge is causing an increase in 95%-ile Ortho P concentrations where the receiving waters upstream concentration rises from 0.073 mg/l to 0.237 mg/l causing the receiving waters to deteriorate from Good Status to less than Good Status in terms of this parameter alone.

The existing discharge has caused a reduction in Ammonia concentrations in the receiving waters.

Section 2.4: Data Collection and Reporting Requirements under the Urban Waste Water Treatment Directive

The Environmental Section of Meath County Council is responsible for all the data collection and reporting requirement under the Urban Waste Water Treatment Directive. All results have been submitted via EDEN and the Online Urban Waste Water System.

Section 2.5: Pollutant Release and Transfer Register

Not required as PE is not greater than 2000p.e.

SECTION 3:

OPERATIONAL REPORTS SUMMARY

SECTION 3.1: TREATMENT EFFICIENCY REPORT

<u>Results:</u>	<u>Units</u>	<u>cBOD</u>	<u>COD</u>	<u>TSS</u>	<u>Total P</u>	<u>Total N</u>	<u>Comment</u>
<i>Average Influent Mass Loading</i>	kg/year	43,604	110,011	75,808	2,000	9,941	-
<i>Average Effluent Mass Emission</i>	kg/year	1,866	6,001	2,960	86	2,796	-
<i>Average Treatment % Efficiency</i>	% reduction on Influent Load	96%	95%	96%	96%	72%	-
<i>Target Treatment % Efficiency</i>	Minimum % reduction on Influent Load	70-90%	75%	90%	80%	70-80%	<i>Ref: Second Schedule (Part 1 and Part 2) of the Urban Waste Water Treatment Regulations, 2001.</i>

SECTION 3.2: TREATMENT CAPACITY REPORT

Parameter		m ³ /day / PE
Hydraulic Capacity: (m ³ /day)	Design	-
	Current	-
	Remaining	-
Organic Capacity: (PE)	Design	2,000
	Current	1,992
	Remaining	8
Will the capacity be exceeded in the next three years? (Yes / No)		No

SECTION 3.3: EXTENT OF AGGLOMERATION SUMMARY REPORT

	% of total load generated in the agglomeration
Load generated in the agglomeration that is collected in the sewer network	100
Load collected in the agglomerations that enters treatment plant	100
Load generated in the agglomeration going to individual and appropriate treatment systems	0
Load generated in the agglomeration that is not collected and not individually treated	0
Individual and Appropriate System (IAS)	0
Load generated in the agglomeration	100

SECTION 3.4: COMPLAINTS SUMMARY

<i>Number</i>	<i>Date & Time</i>	<i>Nature of Complaint</i>	<i>Cause of Complaint</i>	<i>Actions Taken</i>	<i>Closed (Y/N)</i>

There were no complaints recorded in during the reporting period 01/01/13 to 31/12/13.

SECTION 3.5: REPORTED INCIDENTS SUMMARY

<i>Date & Time</i>	<i>Incident Description</i>	<i>Cause</i>	<i>Corrective Action</i>	<i>Authorities Contacted</i>	<i>Reported to EPA (Yes/No)</i>	<i>Closed (Y/N)</i>
May-13	Ref 10052 – BOD ELV Exceedance	Operational difficulties with tertiary sand filter	No longer pumping the final effluent to the river. The final effluent is now diverted to a final effluent sump where the solids are allowed settle out and the clear final effluent overflows to river.	ERFB*	Yes	Yes
Sep-13	Ref 10052 – BOD ELV Exceedance	Operational difficulties with tertiary sand filter	No longer pumping the final effluent to the river. The final effluent is now diverted to a final effluent sump where the solids are allowed settle out and the clear final effluent overflows to river.	No	Yes	Yes
Nov-13	Ref 10052 – BOD ELV Exceedance	Operational difficulties with tertiary sand filter	No longer pumping the final effluent to the river. The final effluent is now diverted to a final effluent sump where the solids are allowed settle out and the clear final effluent overflows to river.	No	Yes	Yes

Table 1

- Eastern River Fisheries Board

Number of Incidents	3
Number of Incidents Reported to EPA via EDEN in 2013	3
Explanation of any discrepancies between the two numbers	

Table 2

SECTION 3.6: SLUDGE/ OTHER INPUTS TO THE WWTP

Input Type	M3/Year	PE/Year	% of Load
Domestic/Septic Tank Sludge	N/A	N/A	N/A
Industrial/Commercial Sludge	N/A	N/A	N/A
Landfill Leachate (delivered by tanker)	N/A	N/A	N/A
Landfill Leachate (delivered by sewer network)	N/A	N/A	N/A
Other (specify)	N/A	N/A	N/A

SECTION 4:

INFRASTRUCTURAL ASSESSMENTS AND PROGRAMME OF IMPROVEMENTS

SECTION 4.1: STORM WATER OVERFLOW IDENTIFICATION AND INSPECTION REPORT

SWO Identification and Inspection Summary Report Table:

WWDI Name/ Code for Storm Water Overflow	Irish Grid Reference	Included in Schedule A.4 of the WWDL	Compliance with DoEHLG Criteria	No. of times activated in 2013 (No. of events)	Total volume discharged in 2013 (m ³)	Total volume discharged in 2013 (PE)	Estimated/ Measured data
D0254-01/SW2	E269017 N253830	A.4	Not yet completed				Estimated

Table A

Note: A storm water review assessment report will be forwarded to The Agency in 2014

How much sewage was discharged via SWOs in the agglomeration in the year (m ³ /yr)	
How much sewage was discharged via SWOs in the agglomeration in the year (p.e.)	
What % of the total volume of sewage generated in the agglomeration was discharged via SWOs in the agglomeration in 2013?	
Is each SWO identified as non-compliant with DoEHLG Guidance included in the Programme of Improvements?	Report due
The SWO assessment includes the requirements of Schedule A.3 & C.3	N/A
Have the EPA been advised of any additional SWOs/ changes to Schedule C.3 and A.4 under Condition 1.7?	N/A

Table B

SECTION 4.2: REPORT ON PROGRESS MADE AND PROPOSALS BEING DEVELOPED TO MEET THE IMPROVEMENT PROGRAMME REQUIREMENTS.

Licence Condition 5.1: Programme of Infrastructural Improvements.

There is no planned programme for infrastructure improvements at Ballivor WwTP.

Licence Condition 5.2: Assessing the Programme of Infrastructural Improvements.

There is no planned programme for infrastructure improvements at Ballivor WwTP.

Licence Condition 5.3: Plan for Implementation of Infrastructural Improvements.

There is no planned programme for infrastructure improvements at Ballivor WwTP.

Licence Condition 5.4: Programme of Measures for Gathering, Recording, and Retention of Information

As-Constructed drawings and Mechanical & Electrical drawing are available for inspection at Meath County Council Headquarters. The information includes all the infrastructural components of the waste water works.

SECTION 5:

LICENCE SPECIFIC REPORTS

SECTION 5: LICENCE SPECIFIC REPORTS SUMMARY

<i>Licence Specific Reports</i>	<i>Required in 2013 AER</i>	<i>Included in 2013 AER</i>	<i>Location in 2013 AER</i>
<i>Priority Substances Assessment</i>	No	No	Report Not Required
<i>Drinking Water Abstraction Point Risk Assessment Report</i>	No	No	Report Not Required
<i>Habitats Impact Assessment Report</i>	No	No	Report Not Required
<i>Shellfish Impact Assessment Report.</i>	No	No	Report Not Required
<i>Pearl Mussel Report</i>	No	No	Report Not Required
<i>Toxicity / Leachate Management.</i>	No	No	Report Not Required
<i>Toxicity of the Final Effluent Report</i>	No	No	Report Not Required

SECTION 6:

CERTIFICATION AND SIGN OFF

SECTION 6.1:**REPORT CHECK LIST**

Does the AER include an executive summary?	Yes
Does the AER include an assessment of the performance of the Waste Water Works (i.e. have the results of assessments been interpreted against WWDL requirements and or Environmental Quality Standards?	Yes
Is there a need to advise the EPA for consideration of a technical amendment /review of the licence?	No
List reason (e.g. additional SWO identified)	N/A
Is there a need to request/advise the EPA of any modifications to the existing WWDL? (See Condition 1.7 (changes to works/discharges) & Condition 4 (changes to monitoring location, frequency etc.)	No
List the reason (e.g. failure to complete specified works within dates specified in the licence, changes to monitoring requirements)	No
Have these processes commenced? (i.e. Request for Technical Amendment / Licence Review / Change Request)	N/A
Are all outstanding reports and assessments from previous AERs included as an appendix to this AER?	No

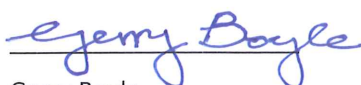
SECTION 6.2:**CERTIFICATION AND SIGN OFF**

As required under EPA Waste Water Discharge Licensing, I certify that the above report is true and accurate.

Prepared By: Declan Mooney

Reviewed By: David Byrne

Approved By:



Gerry Boyle
Senior Engineer
Environment and Water Services Section
Meath County Council

SECTION 7:

APPENDIX

SECTION 7.1:

PRIORITY SUBSTANCE SCREENING RESULTS

ALS Environmental Ltd
Torrington Avenue,
Coventry, CV4 9GU

T: +44 (0)24 7642 1213
F: +44 (0)24 7685 6575

www.alsenvironmental.co.uk

Mr McMoreland
Meath County Council
Meath CoCo. Projects Office
Unit 41/42
Enterprise Centre
Navan Meath

21 October 2013

Test Report: COV/959433/2013

Dear Mr McMoreland

Analysis of your sample(s) submitted on 02 October 2013 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: J. Fell

Title: Chemistry Operations Manager



Report Summary



1314
0897
4409



**Mr Kealan McMoreland
Meath County Council
Meath CoCo. Projects Office
Unit 41/42
Enterprise Centre
Navan
Meath**

Date of Issue: **21 October 2013**

Report Number: **COV/959433/2013**

Issue **1**

Job Description: WW Discharge

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

Job Received: **02 October 2013**

Number of Test Results
included in this report **134**

Analysis Commenced: **04 October 2013**

Signed:

Name: **J. Fell**

Date: **21 October 2013**

Title: **Chemistry 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.

(c) ALS Environmental Ltd 2013. All rights reserved. We, ALS Environmental Ltd, are the owner of all copyright in this report. You must not copy, reproduce, amend or adapt this report, its contents or any format in which it is delivered without our prior written agreement. If you copy, reproduce, amend, or adapt this report in any way without our agreement you will be liable for any damage or loss to us. In the event of a dispute the copy of the report held by us shall be the reference copy.

Certificate of Analysis



1314
0897
4409



Report Number: **COV/959433/2013**

Issue **1**

Laboratory Number: **13724695**

Sample **1** of **1**

Sample Source: **Meath County Council**

Sample Point Description:

Sample Description: **D0254**

Sample Matrix: **Waste waters**

Sample Date/Time: **02 October 2013**

Sample Received: **02 October 2013**

Analysis Complete: **21 October 2013**

Test Description	Result	Units	Accreditation		Method
Glyphosate	<0.50	ug/l	N	S	SUBCON
Di(2-ethylhexyl)phthalate	<10	ug/l	N	S	SUBCON
2,6-dichlorobenzamide (BAM)	<0.10	ug/l	N	S	SUBCON
Barium, Total as Ba	0.0425	mg/l	Y	Cov	WAS049
Boron, Total as B	<0.23	mg/l	Y	Cov	WAS049
Cadmium , Total as Cd	<0.0006	mg/l	Y	Cov	WAS049
Chromium , Total as Cr	<0.0020	mg/l	Y	Cov	WAS049
Cobalt , Total as Co	<0.0020	mg/l	Y	Cov	WAS049
Copper, Total as Cu	0.019	mg/l	Y	Cov	WAS049
Lead , Total as Pb	<0.006	mg/l	Y	Cov	WAS049
Mercury, Total as Hg	<0.10	ug/l	Y	Cov	WAS013
Molybdenum , Total as Mo	<0.003	mg/l	Y	Cov	WAS049
Nickel , Total as Ni	0.020	mg/l	Y	Cov	WAS049
Tin , Total as Sn	<0.007	mg/l	Y	Cov	WAS049
Vanadium , Total as V	<0.004	mg/l	Y	Cov	WAS049
Zinc, Total as Zn	0.222	mg/l	Y	Cov	WAS049
pH	7.5	pH units	Y	Cov	WAS039
Conductivity- Electrical 20C	918	uS/cm	Y	Cov	WAS039
Total Hardness as CaCO3	319	mg/l	Y	Cov	WAS049
Chloride as Cl	145	mg/l	Y	Cov	WAS036
TOC as C	4.7	mg/l	Y	Cov	WAS005
Cyanide, Total as CN	<0.009	mg/l	Y	Cov	WAS018
Fluoride as F	0.4	mg/l	Y	Cov	WAS029
Diuron	0.14	ug/l	Y	Cov	GEO37
Isoproturon	<0.05	ug/l	Y	Cov	GEO37
Dichlobenil	<2	ng/l	Y	Cov	GEO47
Dieldrin	<4	ng/l	Y	Cov	GEO47
Isodrin	<4	ng/l	Y	Cov	GEO47
PCB 28	<2	ng/l	Y	Cov	GEO47
Linuron	<0.05	ug/l	Y	Cov	GEO37
PCB 52	<2	ng/l	Y	Cov	GEO47

ALS Environmental Ltd

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

Certificate of Analysis



1314
0897
4409



Report Number: **COV/959433/2013**

Issue **1**

Laboratory Number: **13724695**

Sample **1** of **1**

Sample Source: **Meath County Council**

Sample Point Description:

Sample Description: **D0254**

Sample Matrix: **Waste waters**

Sample Date/Time: **02 October 2013**

Sample Received: **02 October 2013**

Analysis Complete: **21 October 2013**

Test Description	Result	Units	Accreditation	Method
PCB 101	<2	ng/l	Y Cov	GEO47
PCB 118	<3	ng/l	Y Cov	GEO47
PCB 138	<2	ng/l	Y Cov	GEO47
PCB 153	<2	ng/l	Y Cov	GEO47
PCB 180	<3	ng/l	Y Cov	GEO47
Atrazine	<0.020	ug/l	Y Cov	GEO47
Simazine	0.066	ug/l	Y Cov	GEO47
2,4 - D	<0.05	ug/l	Y Cov	GEO20
MCPA	<0.05	ug/l	Y Cov	GEO20
Mecoprop	0.11	ug/l	Y Cov	GEO20
2 - Chlorophenol	<1.00	ug/l	Y Cov	GEO18
2 - Methylphenol	<1.00	ug/l	Y Cov	GEO18
2,4 - Dichlorophenol	<1.00	ug/l	Y Cov	GEO18
2,4 - Dimethylphenol	<1.00	ug/l	Y Cov	GEO18
2,4,6 - Trichlorophenol	<1.00	ug/l	Y Cov	GEO18
3,5-Dimethylphenol	<1.00	ug/l	Y Cov	GEO18
4-Chlorophenol	<1.00	ug/l	Y Cov	GEO18
3+4-Methylphenol	<1.00	ug/l	Y Cov	GEO18
Phenol	<5.00	ug/l	Y Cov	GEO18
Acenaphthene	<0.01	ug/l	Y Cov	GEO19
Acenaphthylene	<0.01	ug/l	Y Cov	GEO19
Anthracene	<0.01	ug/l	Y Cov	GEO19
Benzo (a) anthracene	<0.01	ug/l	Y Cov	GEO19
Benzo (g,h,i) perylene	<0.01	ug/l	Y Cov	GEO19
Benzo (a) pyrene	<0.01	ug/l	Y Cov	GEO19
Benzo (b) fluoranthene	<0.01	ug/l	Y Cov	GEO19
Benzo (k) fluoranthene	<0.01	ug/l	Y Cov	GEO19
Chrysene	<0.01	ug/l	Y Cov	GEO19
Dibenz (a,h) anthracene	<0.01	ug/l	Y Cov	GEO19
Fluoranthene	<0.01	ug/l	Y Cov	GEO19
Fluorene	<0.01	ug/l	Y Cov	GEO19
Indeno (1,2,3) cd pyrene	<0.01	ug/l	Y Cov	GEO19

ALS Environmental Ltd

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

Certificate of Analysis



1314
0897
4409



Report Number: **COV/959433/2013**

Issue **1**

Laboratory Number: **13724695**

Sample **1** of **1**

Sample Source: **Meath County Council**

Sample Point Description:

Sample Description: **D0254**

Sample Matrix: **Waste waters**

Sample Date/Time: **02 October 2013**

Sample Received: **02 October 2013**

Analysis Complete: **21 October 2013**

Test Description	Result	Units	Accreditation	Method
Naphthalene	<0.01	ug/l	Y Cov	GEO19
Phenanthrene	<0.01	ug/l	Y Cov	GEO19
Pyrene	<0.01	ug/l	Y Cov	GEO19
PAH, Total	<0.01	ug/l	N Cov	GEO19
VOC	Y	ug/l	Y Cov	GEO32
Dichlorodifluoromethane	<1.0	ug/l	Y Cov	GEO32
Chloromethane	<1.0	ug/l	Y Cov	GEO32
Chloroethane	<1.0	ug/l	Y Cov	GEO32
Bromomethane	<1.0	ug/l	Y Cov	GEO32
Trichlorofluoromethane	<1.0	ug/l	Y Cov	GEO32
1,1-Dichloroethene	<1.0	ug/l	Y Cov	GEO32
Dichloromethane	<1.0	ug/l	Y Cov	GEO32
1,1-Dichloroethane	<1.0	ug/l	Y Cov	GEO32
cis-1,2-Dichloroethene	<1.0	ug/l	Y Cov	GEO32
2,2-Dichloropropane	<1.0	ug/l	N Cov	GEO32
Chloroform	<1.0	ug/l	Y Cov	GEO32
Bromochloromethane	<1.0	ug/l	Y Cov	GEO32
1,1,1-Trichloroethane	<1.0	ug/l	Y Cov	GEO32
1,1-Dichloropropene	<1.0	ug/l	Y Cov	GEO32
1,2-Dichloroethane	<1.0	ug/l	Y Cov	GEO32
Benzene	<1.0	ug/l	Y Cov	GEO32
1,2-Dichloropropane	<1.0	ug/l	Y Cov	GEO32
Trichloroethene	<1.0	ug/l	Y Cov	GEO32
Bromodichloromethane	<1.0	ug/l	Y Cov	GEO32
Dibromomethane	<1.0	ug/l	Y Cov	GEO32
cis-1,3-Dichloropropene	<1.0	ug/l	Y Cov	GEO32
Toluene	<1.0	ug/l	Y Cov	GEO32
trans-1,3-Dichloropropene	<1.0	ug/l	Y Cov	GEO32
1,1,2-Trichloroethane	<1.0	ug/l	Y Cov	GEO32
Carbon Tetrachloride	<1.0	ug/l	Y Cov	GEO32
Vinyl Chloride	<0.5	ug/l	Y Cov	GEO32
1,3-Dichloropropane	<1.0	ug/l	Y Cov	GEO32

ALS Environmental Ltd

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

Certificate of Analysis



1314
0897
4409



Report Number: **COV/959433/2013**

Issue **1**

Laboratory Number: **13724695**

Sample **1** of **1**

Sample Source: **Meath County Council**

Sample Point Description:

Sample Description: **D0254**

Sample Matrix: **Waste waters**

Sample Date/Time: **02 October 2013**

Sample Received: **02 October 2013**

Analysis Complete: **21 October 2013**

Test Description	Result	Units	Accreditation	Method
Tetrachloroethene	<1.0	ug/l	Y Cov	GEO32
Dibromochloromethane	<1.0	ug/l	Y Cov	GEO32
1,2-Dibromoethane	<1.0	ug/l	Y Cov	GEO32
Chlorobenzene	<1.0	ug/l	Y Cov	GEO32
1,1,1,2-Tetrachloroethane	<1.0	ug/l	Y Cov	GEO32
Ethyl Benzene	<1.0	ug/l	Y Cov	GEO32
m&p-Xylene	<1.0	ug/l	Y Cov	GEO32
o-Xylene	<1.0	ug/l	Y Cov	GEO32
Styrene	<1.0	ug/l	Y Cov	GEO32
Bromoform	<1.0	ug/l	Y Cov	GEO32
trans-1,2-Dichloroethene	<1.0	ug/l	Y Cov	GEO32
Isopropylbenzene	<1.0	ug/l	Y Cov	GEO32
1,1,2,2-Tetrachloroethane	<1.0	ug/l	Y Cov	GEO32
1,2,3-Trichloropropane	<1.0	ug/l	Y Cov	GEO32
n-Propylbenzene	<1.0	ug/l	Y Cov	GEO32
Bromobenzene	<1.0	ug/l	Y Cov	GEO32
2-Chlorotoluene	<1.0	ug/l	Y Cov	GEO32
1,3,5-Trimethylbenzene	<1.0	ug/l	Y Cov	GEO32
4-Chlorotoluene	<1.0	ug/l	Y Cov	GEO32
tert-Butylbenzene	<1.0	ug/l	Y Cov	GEO32
1,2,4-Trimethylbenzene	<1.0	ug/l	Y Cov	GEO32
sec-Butylbenzene	<1.0	ug/l	Y Cov	GEO32
p-Isopropyltoluene	<1.0	ug/l	Y Cov	GEO32
1,3-Dichlorobenzene	<1.0	ug/l	Y Cov	GEO32
1,4-Dichlorobenzene	<1.0	ug/l	Y Cov	GEO32
n-Butylbenzene	<1.0	ug/l	Y Cov	GEO32
1,2-Dichlorobenzene	<1.0	ug/l	Y Cov	GEO32
1,2-Dibromo-3-chloropropane	<2.0	ug/l	Y Cov	GEO32
1,2,4-Trichlorobenzene	<1.0	ug/l	Y Cov	GEO32
Hexachlorobutadiene	<1.0	ug/l	Y Cov	GEO32
Naphthalene	<1.0	ug/l	Y Cov	GEO32
1,2,3-Trichlorobenzene	<1.0	ug/l	Y Cov	GEO32

ALS Environmental Ltd

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

Certificate of Analysis



1314
0897
4409



Report Number: **COV/959433/2013**

Laboratory Number: **13724695**

Issue **1**

Sample **1** of **1**

Sample Source: **Meath County Council**

Sample Point Description:

Sample Description: **D0254**

Sample Matrix: **Waste waters**

Sample Date/Time: **02 October 2013**

Sample Received: **02 October 2013**

Analysis Complete: **21 October 2013**

Test Description	Result	Units	Accreditation	Method
MTBE	8.4	ug/l	Y Cov	GEO32
Dibromofluoromethane	102.0	%Recovery	N Cov	GEO32
Toluene-d8	100.9	%Recovery	N Cov	GEO32
4-Bromofluorobenzene	88.2	%Recovery	N Cov	GEO32
Antimony, Total as Sb	0.00233	mg/l	Y Cov	WAS051
Selenium, Total as Se	<0.0016	mg/l	Y Cov	WAS051
Arsenic, Total as As	<0.0014	mg/l	Y Cov	WAS051

Analyst Comments for 13724695:

This sample has been analysed for Pesticides method GEO47 outside recommended stability times. It is therefore possible that the results provided may be compromised.

Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.

Analysed at: Cov = Coventry(CV4 9GU), Run = Runcorn(WA7 1SL), S = Subcontracted, Wak = Wakefield(WF5 9TG).

For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered. The LOD for the Legionella analysis will increase where the volume analysed is

<1000g (1g is approximately equivalent to 1ml for sample volume analysed).

I/S=Insufficient sample For soil/sludge samples: AR=As received, DW=Dry weight.

Signed:

Name: **J. Fell**

Date: **21 October 2013**

Title: **Chemistry Operations Manager**

ALS Environmental Ltd

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